Microsoft Power Virtual Agents in a Day

Lab 07: Authentication

Hands-on Lab Step-by-Step

January 2022

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Power Virtual Agents

Goals for this lab

After this lesson you will be able to: • Set up Azure App Registration for authentication • Configure Power Virtual Agent authentication settings • Create a Flow in Power Automate to handle authentication requests on the server back end (Optional)	The time to complete this lab is [30] minutes.

This lab is subject to the Terms of Use on page 27 of this document.

Introduction: Authentication Scenario

By now, you have implemented your Power Virtual Agent and have seen a high impact in reducing the number of cases with generic questions your Customer Support Team is receiving. As a direct result, the business cost around customer support has been directly reduced.

However, your organization has begun rolling out a new customized user experience for each customer, requiring each user to have their own personal profile. The data shows there are an increasing number of cases being escalated to your Customer Support Team pertaining to this personalized experience, which is driving costs back up.

Solution: Enable Authentication in Power Virtual Agent

Authentication can be enabled in Power Virtual Agents to allow the user to log in for personalized experiences. Power Virtual Agents utilizes OAuth2 Authentication to provide a robust and secure authentication experience directly through the Power Virtual Agent conversation.

In this exercise, you will enable authentication in your Power Virtual Agent bot, create an authentication Flow, and create a dialog utilizing basic authentication.

Before we start…

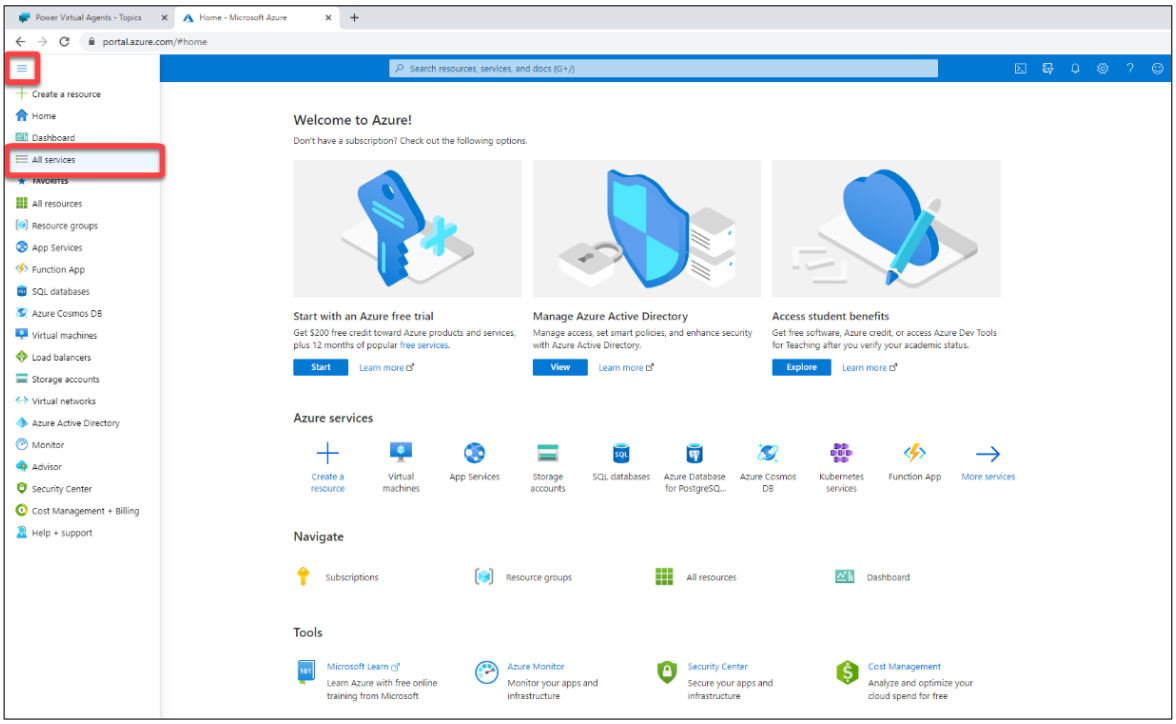
This lab will be walking through some features that require an active Azure subscription (free tier or higher). If you do not have an active Azure free trial or higher, you may run into permission issues within Task 1. If you observe permission issues during Task 1, check to make sure there is an active Azure subscription, or sign up for a free trial using your tenant account for the purpose of this lab – no charges will occur unless the account is explicitly upgraded at a later time.

Exercise 1: Configure Authentication settings

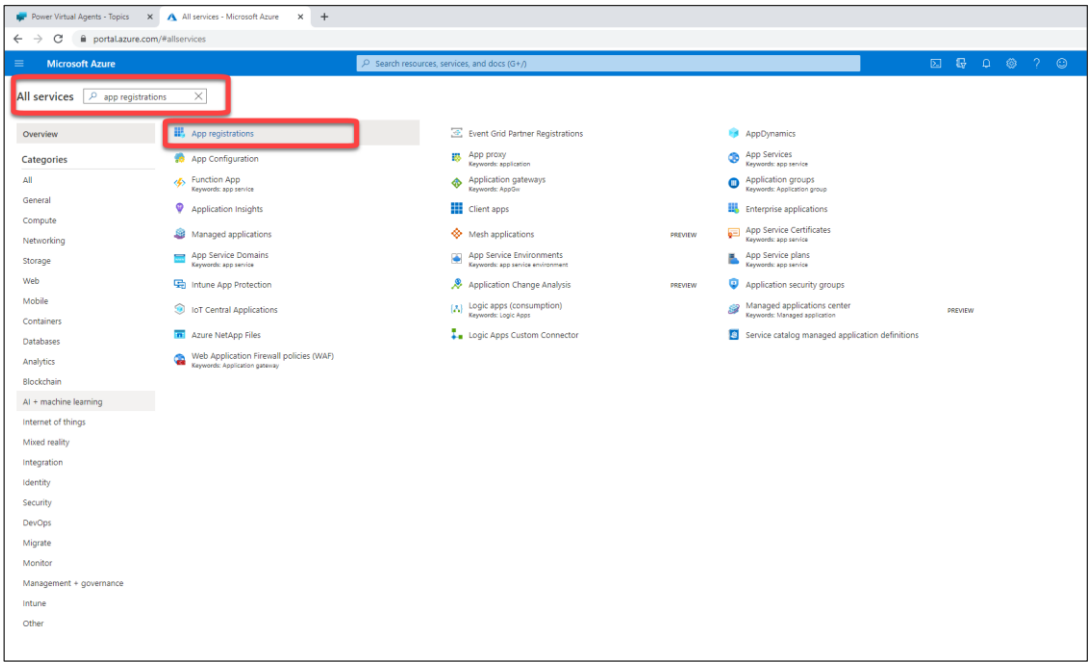
Task 1: Configure Azure App Registration Authentication settings

Authentication in the Power Virtual Agent uses the OAuth2 authentication through the Azure App Registration service. This task will focus on configuring the relevant settings in the Azure portal.

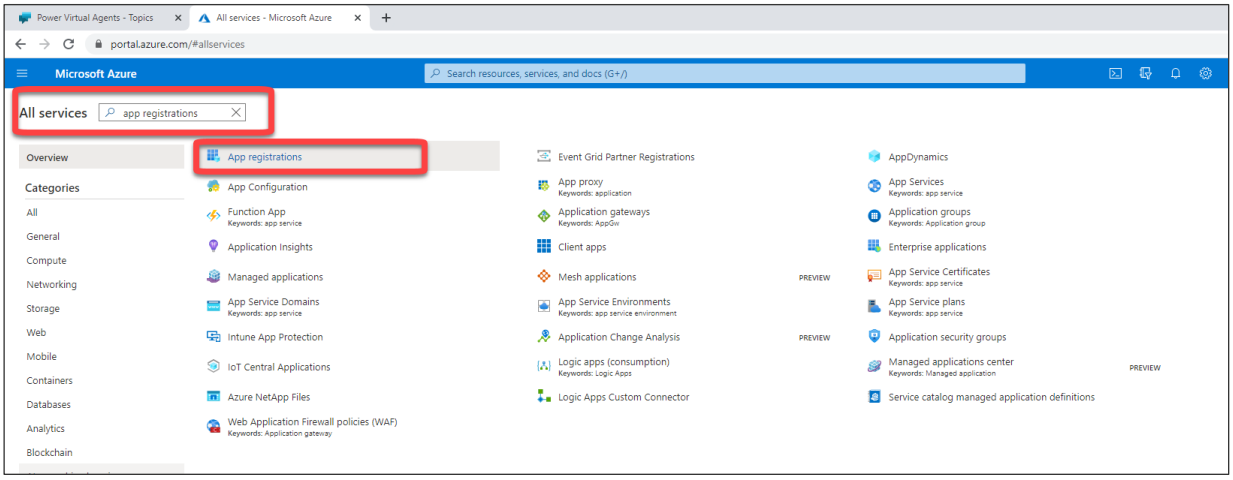
1. Open a new browser tab, navigate to portal.azure.com and sign in with the same credentials you have been using for the previous labs. Select the Menu Icon in the upper left corner and select **All services**.



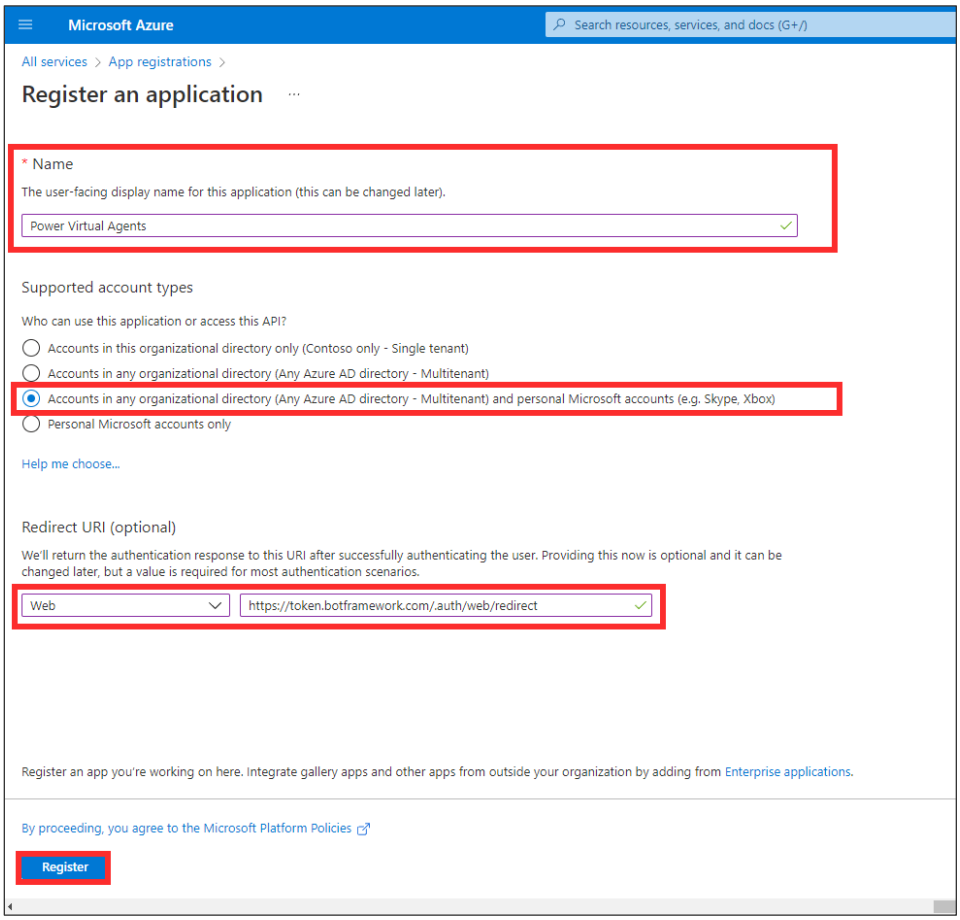
2. In the search field, type "**app registrations**" and select **App registrations**.



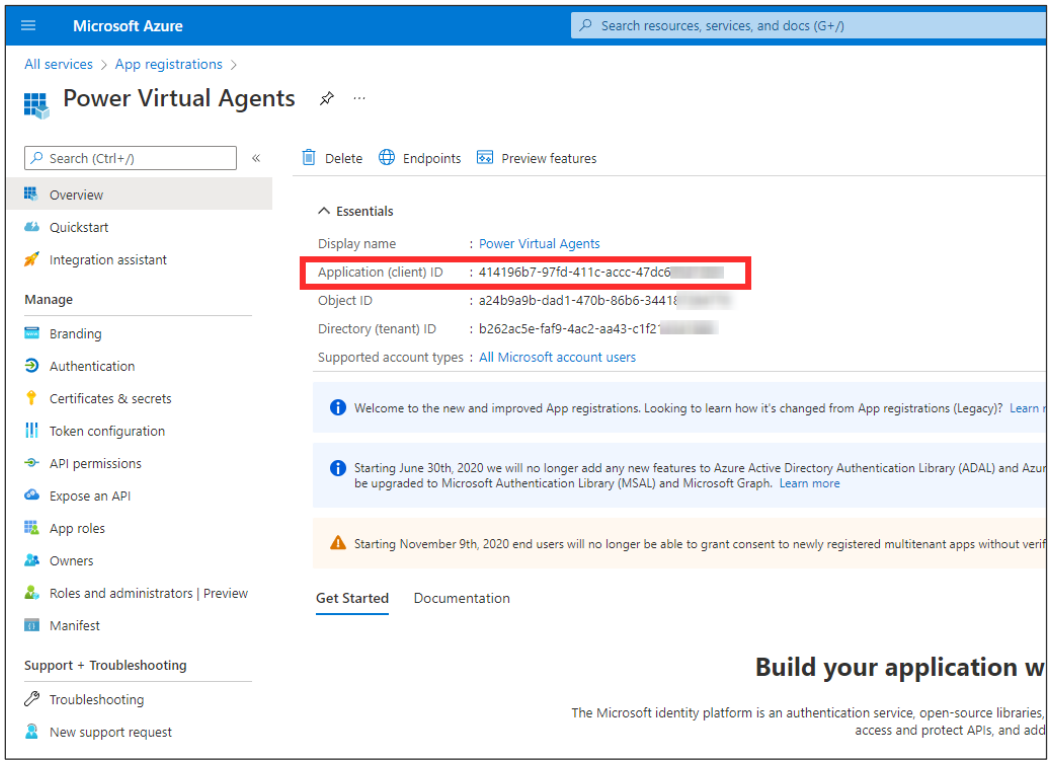
3. Select **New registration**.



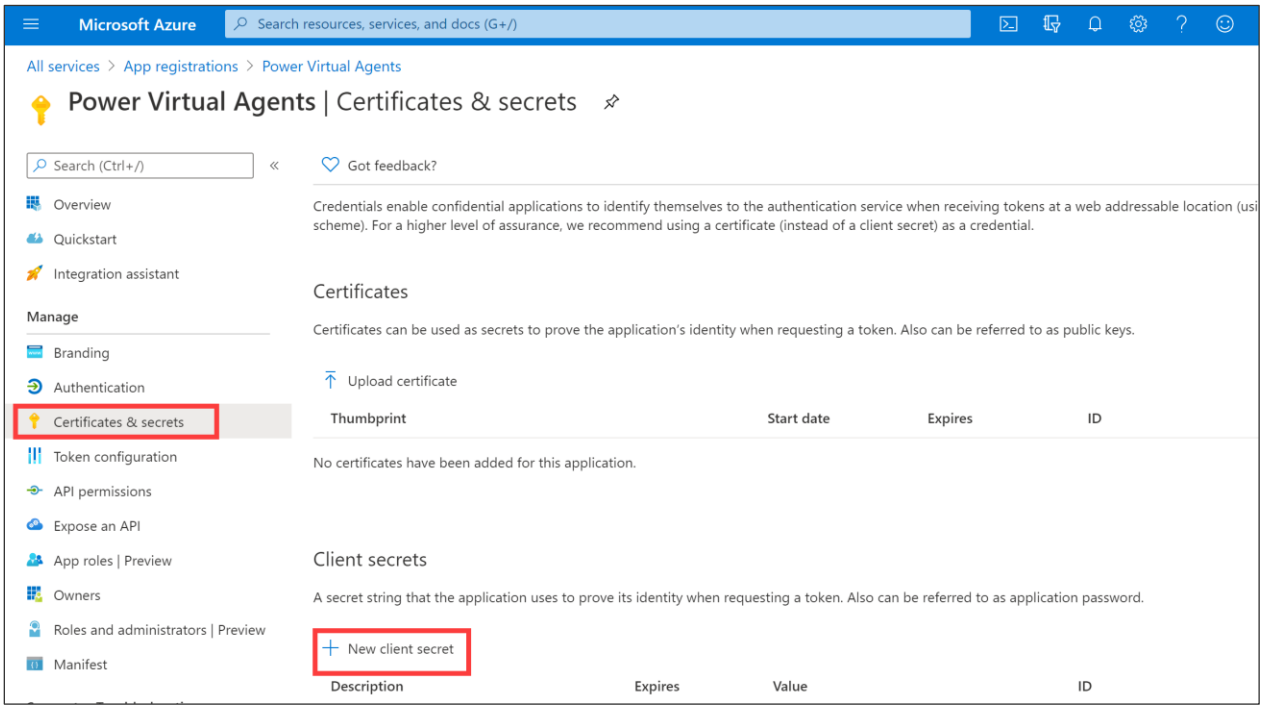
4. Click **+ New Registration**. Enter ***Power Virtual Agents*** as the **Name** for the App Registration, select the **Multi-tenant + Microsoft** account type (3rd option). Paste **https://token.botframework.com/.auth/web/redirect** into the **Redirect URI** field and select **Web** as the **platform**. Click **Register.**
Note: when you copy/paste the URL, make sure there is no space at the end, otherwise you'll get an error saying invalid URL



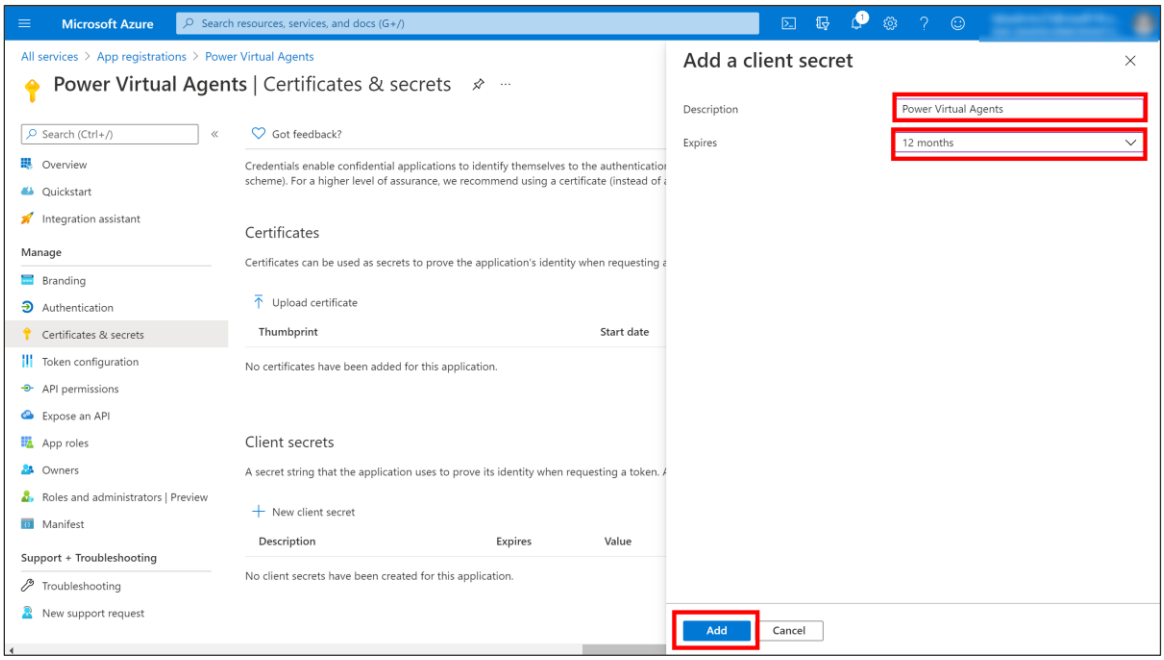
5. Copy the **Application (client) ID** and keep it for reference later.



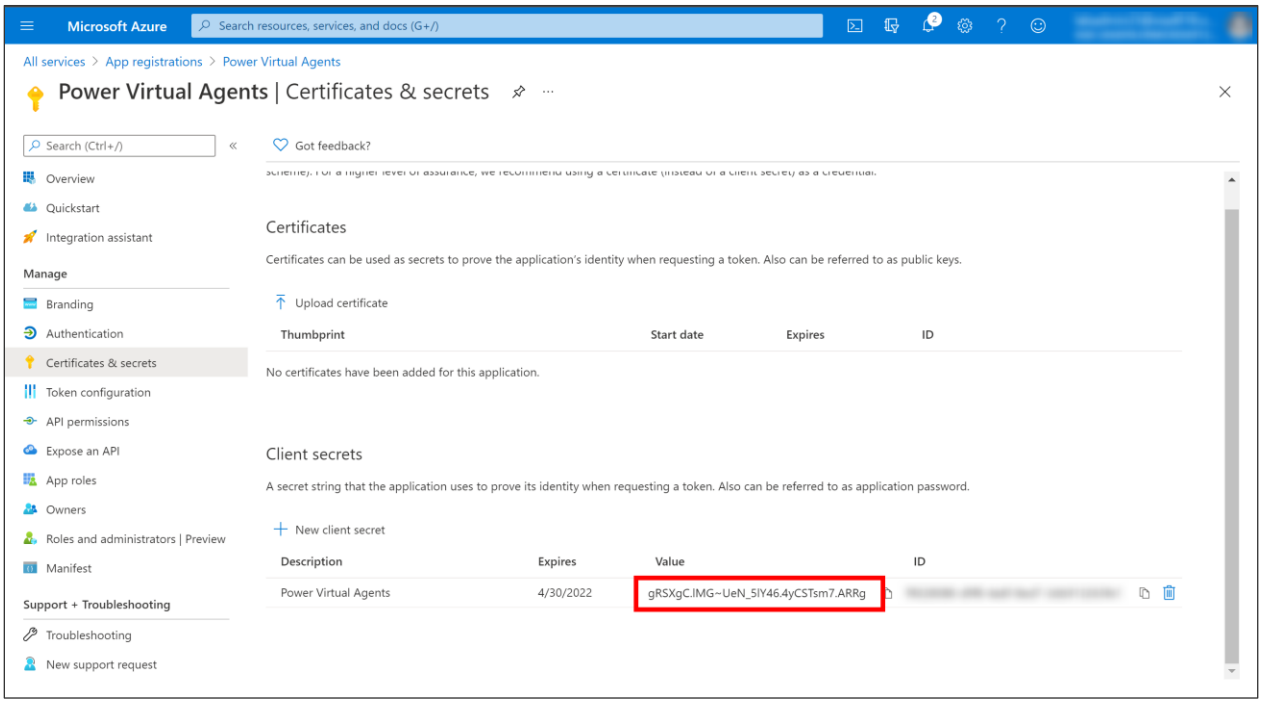
6. Select **Certificates & secrets** in the left navigation panel and click **New client secret**.



7. Enter **Power Virtual Agents** as the Description and set the Expires field to **12 months**. Click **Add**.



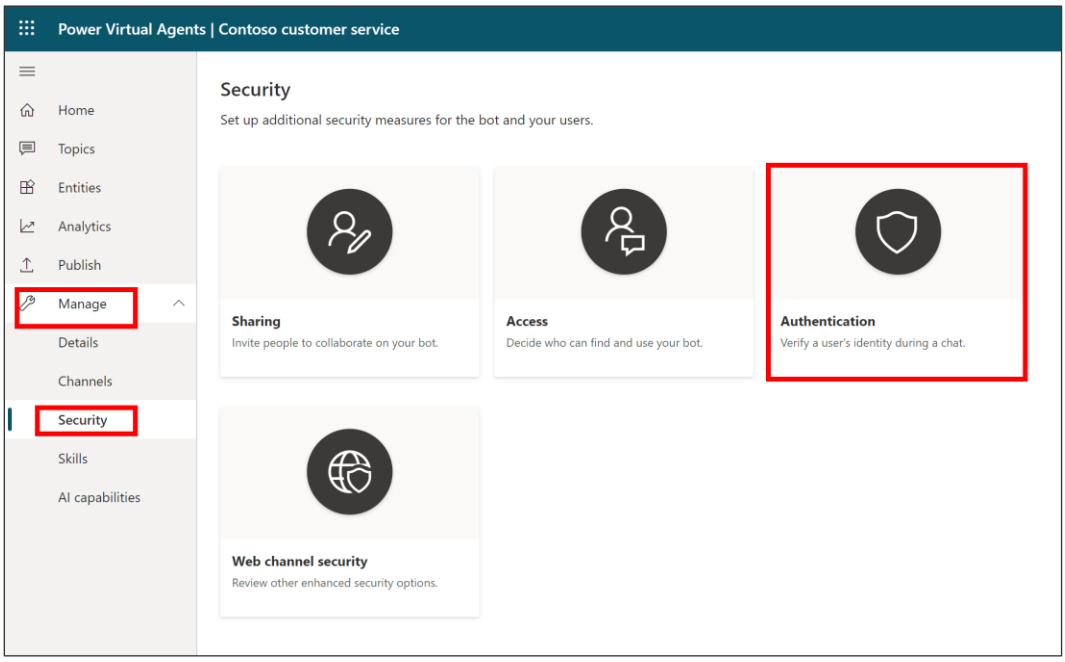
8. Copy the **client secret (value)** generated for later reference.



Task 2: Configure Authentication Settings in Power Virtual Agents

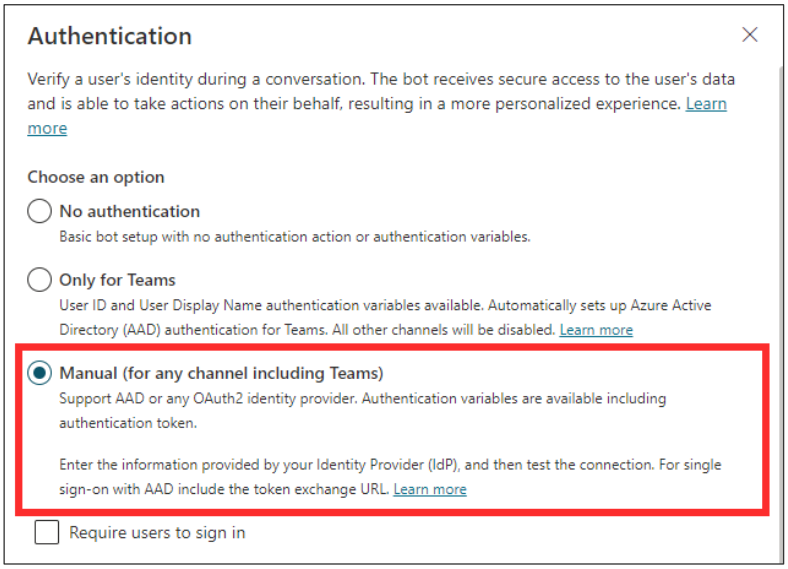
Now that Azure has been configured, the Power Virtual Agents Authentication settings can be populated.

1. Return to your tab where you were working in Power Virtual Agents, or navigate to powervirtualagents.microsoft.com. Go to **Manage**, select **Security** then **Authentication**.



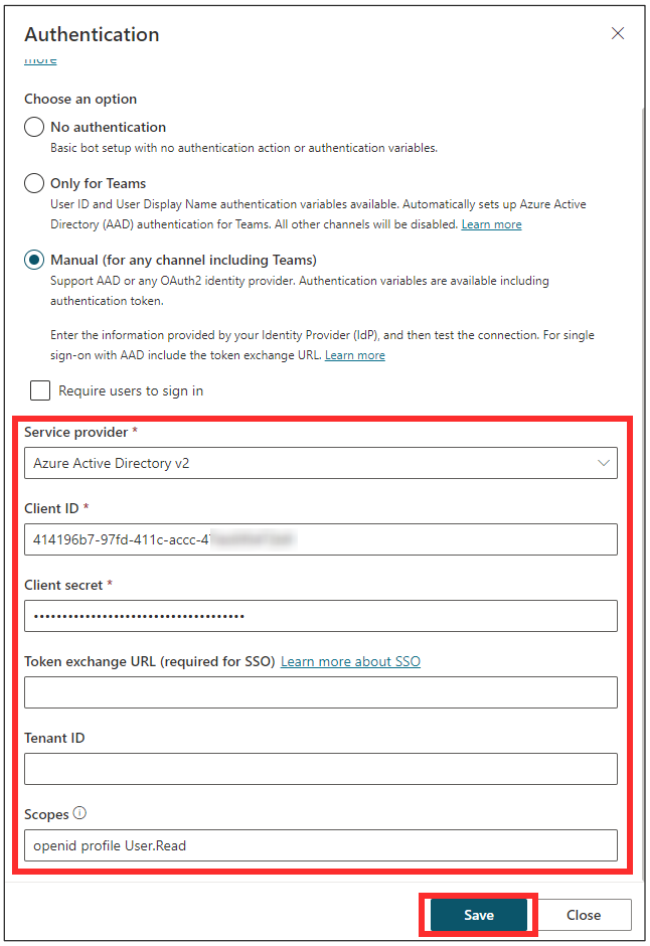
2. For the Authentication Choose an option field, select **Manual (for any channel including teams)**. Do not enable Require users to sign in.

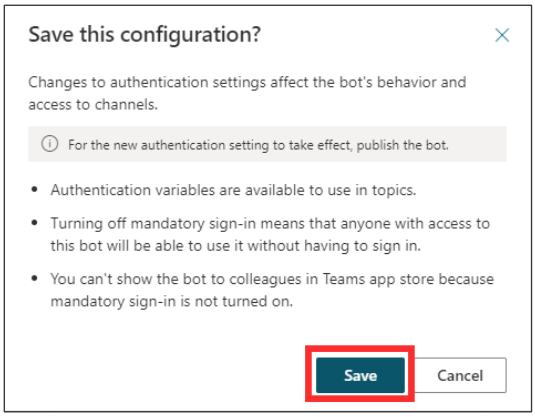
   Note: If you enable Require users to sign in, a system topic for **Require user to sign-in** will be created. This will prompt the user to sign in as soon as they begin the conversation with the bot. For demonstration purposes in this lab however, we will not enable this. Instead, we will add the authentication step to an individual topic.



3. Fill in the following fields with their respective values and then select **Save**.

Service Provider	Azure Active Directory v2
Client ID	*Your Application (client) ID from earlier*
Client Secret	*Your Client secret value from earlier*
Token exchange URL	*Leave this blank*
Tenant ID	*Leave this blank.*
Scopes	openid profile User.Read



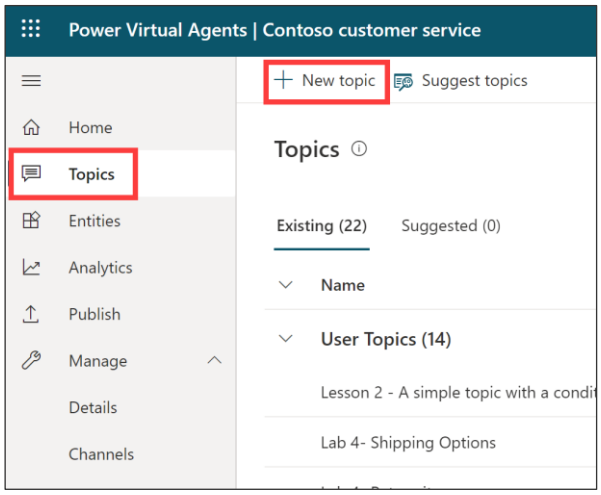


4. Publish the bot.

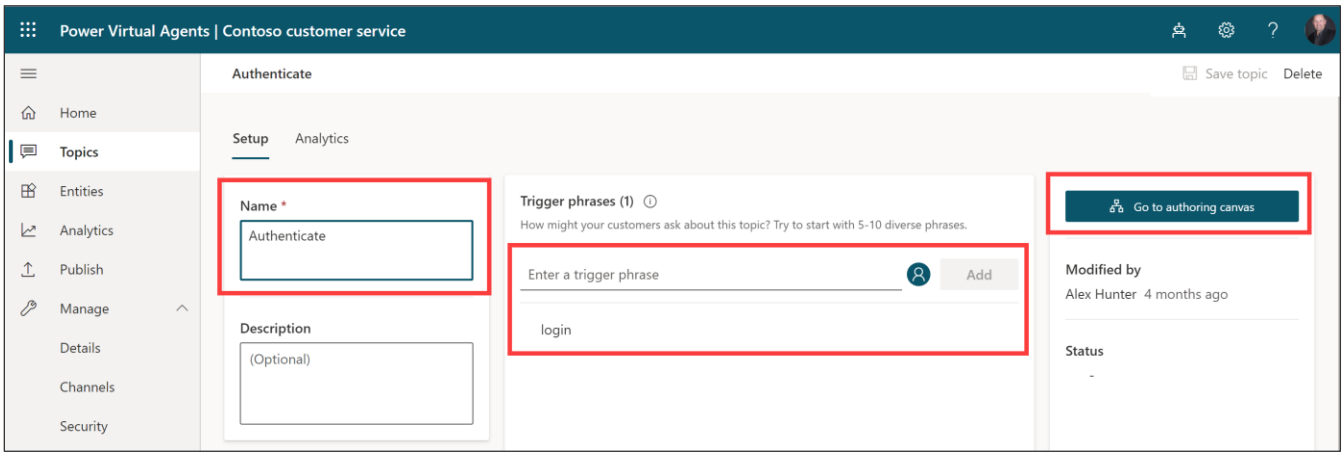
Task 3: Create Authentication Topic

Now that the authentication has been configured, we will set up a topic to use it. In this lab we will create a new topic where users can log in. In a real-word scenario, the authentication step could be added at any point in a topic. Once the user has logged in during the session, they will not be asked to log in again.

1. Select **Topics** in the left menu and select **New topic**.

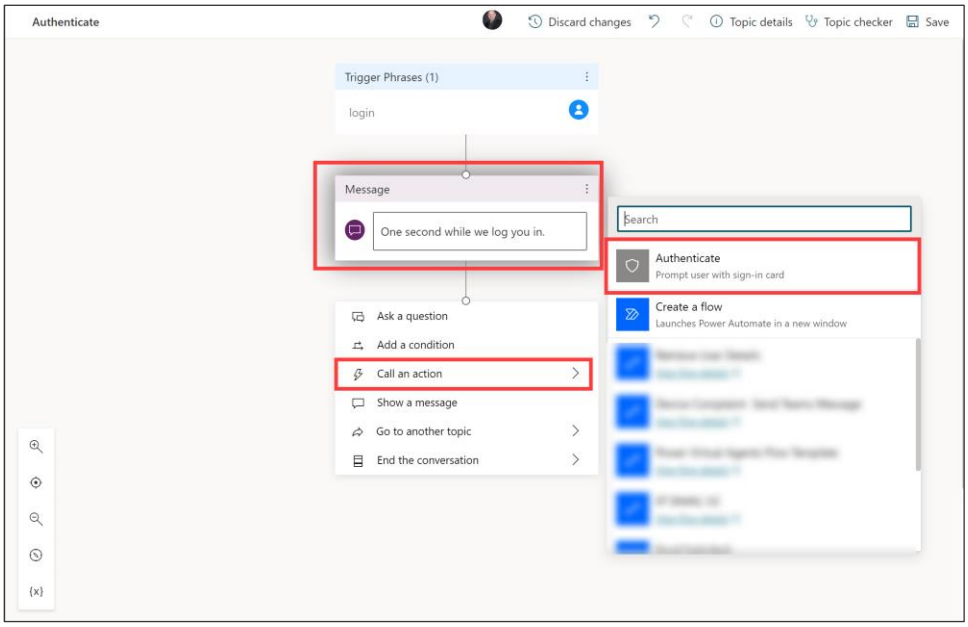


2. Name the topic "**Authenticate**", add a trigger phrase of "**login**" and select **Go to authoring canvas**.

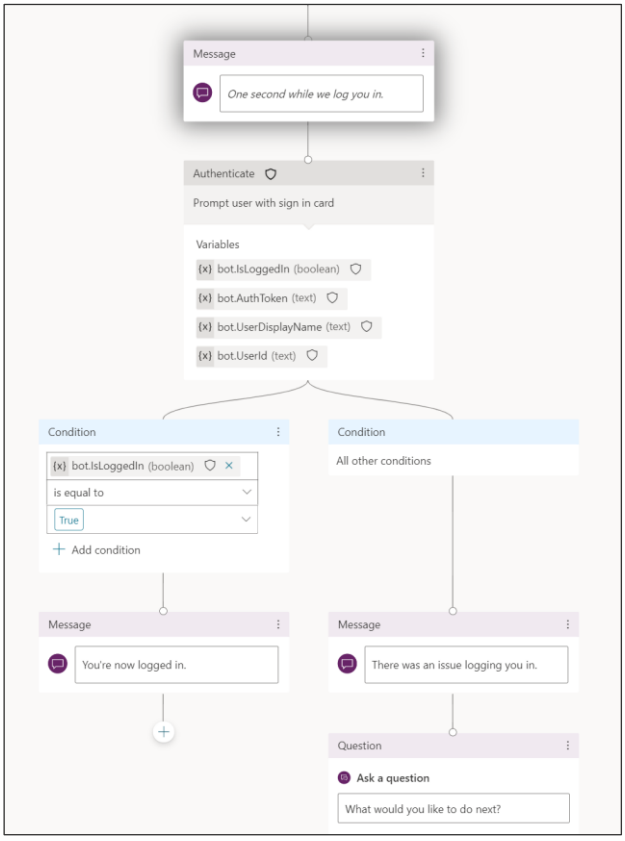


3. In the opening message, type: One second while we log you in.

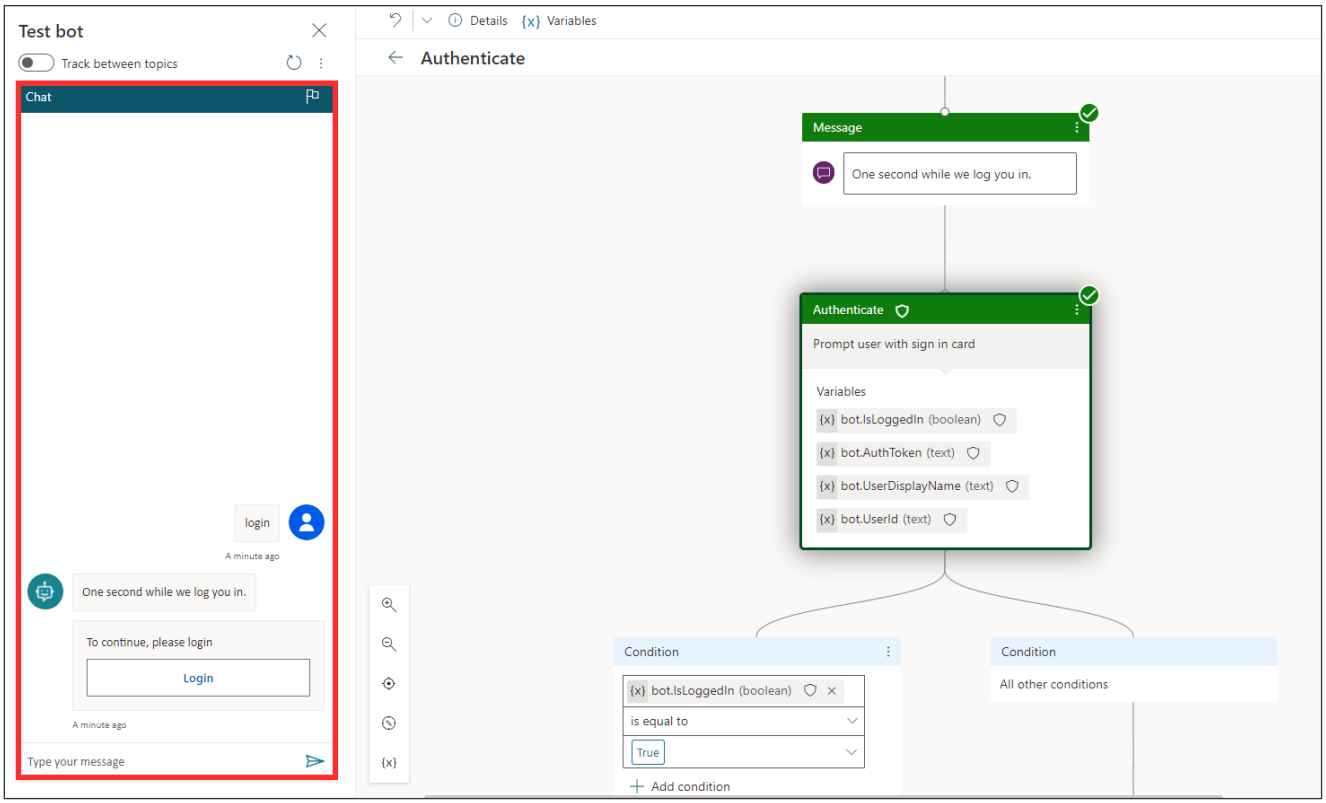
   Then select the + icon, select **Call an action**, and select **Authenticate**.



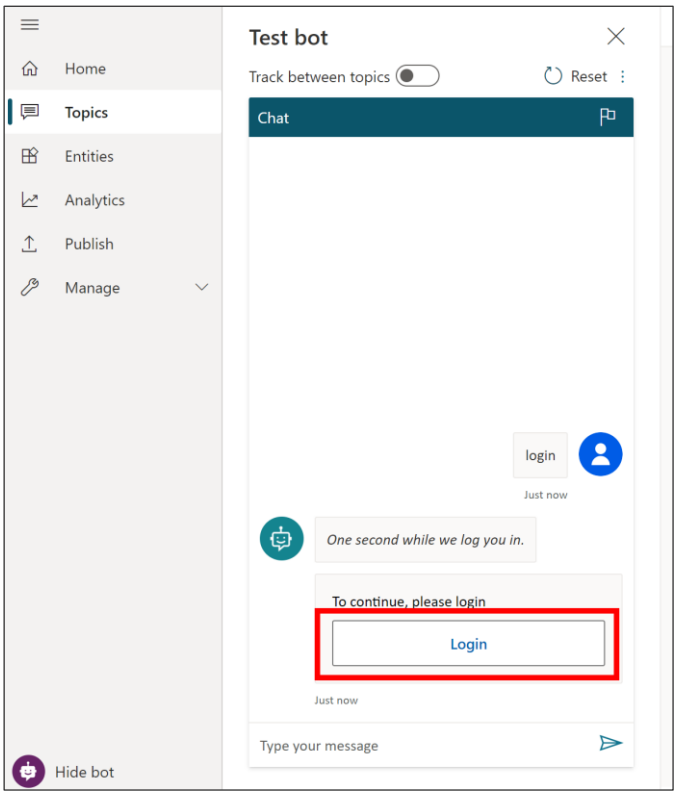
This will automatically set up conditional branching, with messages and variables related to the authentication. There is a variable that will store the authentication token when the user logs in, and a Boolean variable that stores whether or not the user has logged in:



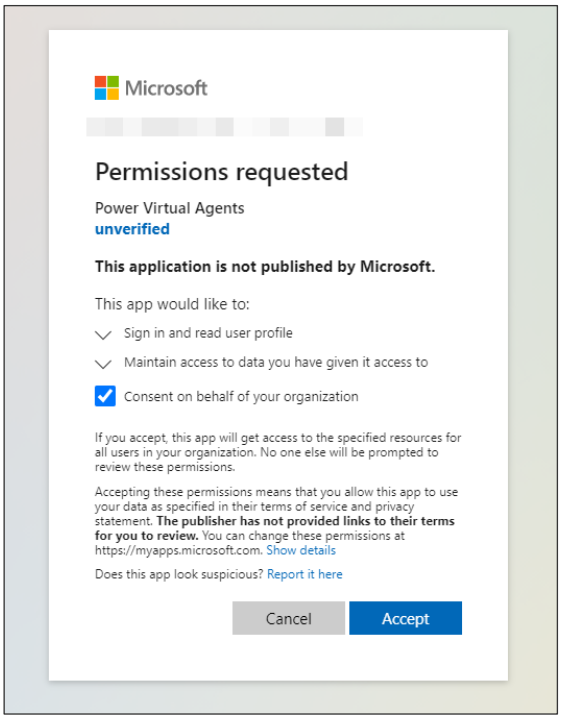
4. Save the topic and test by typing **login** into the Test bot pane.



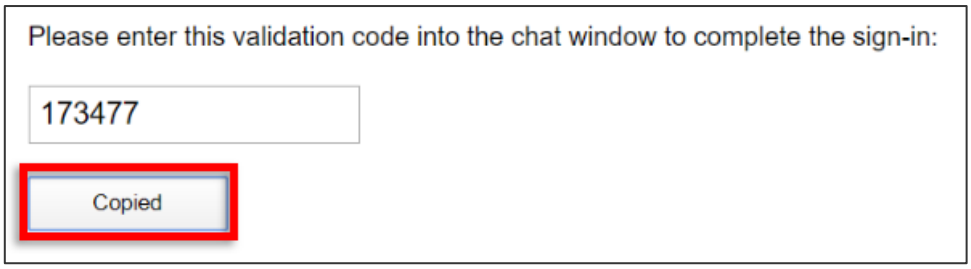
5. Select **Login**. A new tab will open to authenticate your session.

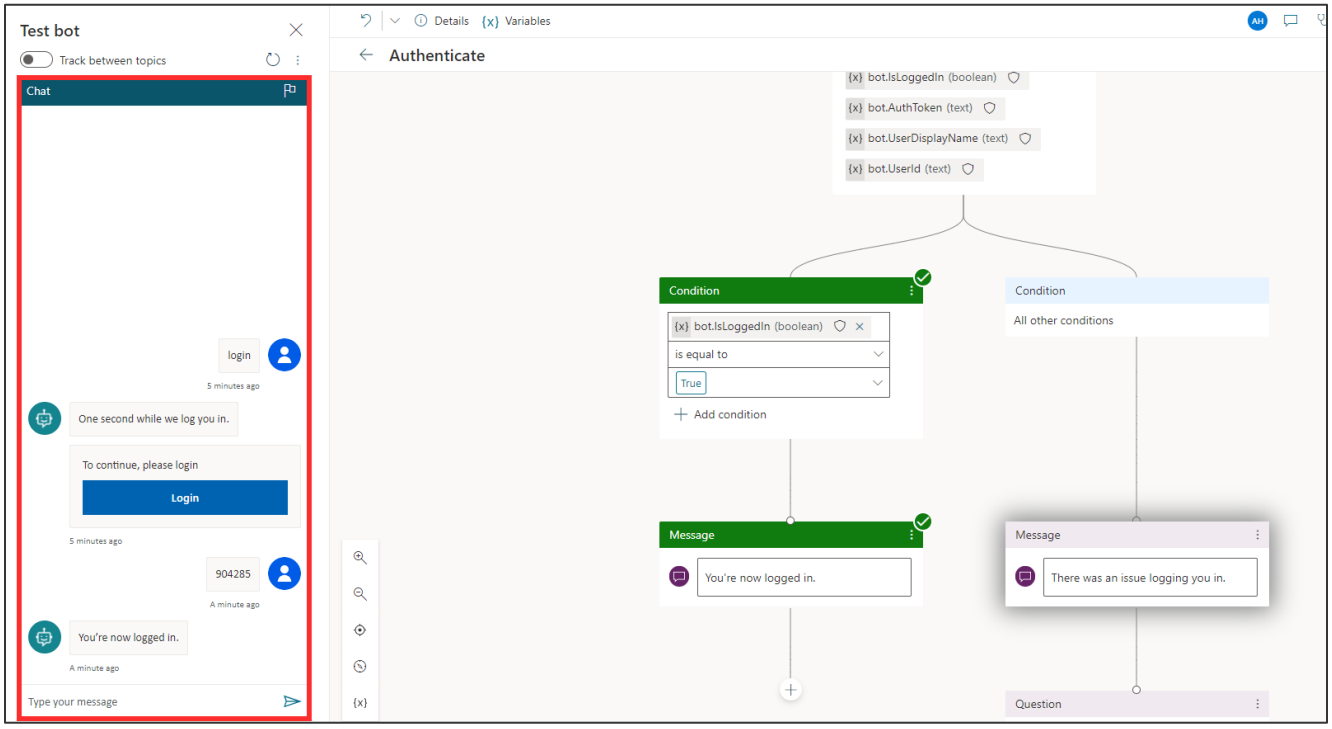


6. You will be prompted to sign in. Enter the credentials that you have been using for the lab. You may be prompted to accept permissions – click the accept button.

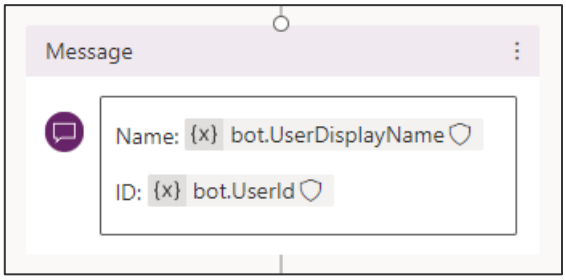


7. You will be presented with a validation code. Copy the code and paste it back into the chat session.





Note: From the authentication, you will retrieve variables such as the user's Display Name and ID, which can be used throughout the conversation.



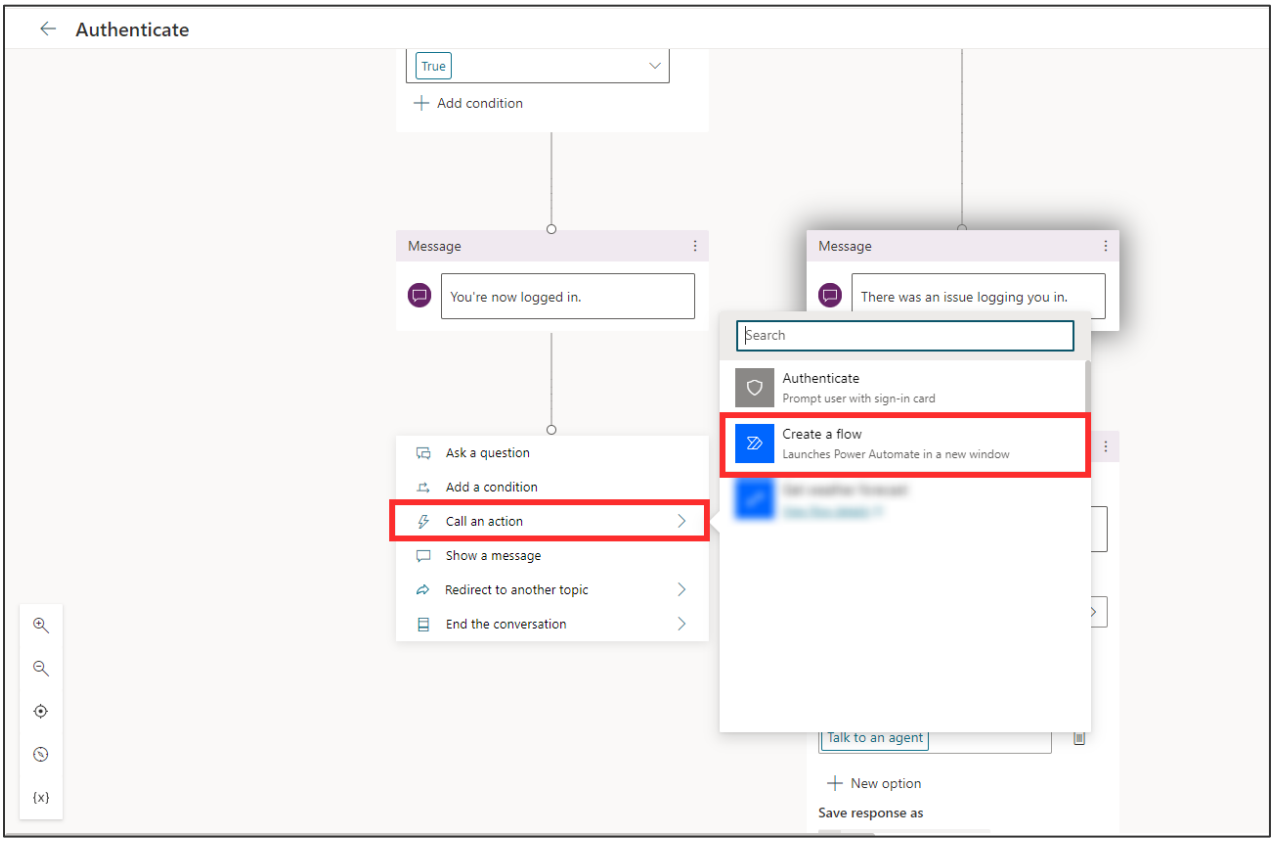
Congratulations, you have just completed setting up authentication from your virtual agent!

Exercise 2 (Advanced Optional): Create a flow

This is an optional exercise for this lab. When the user has logged in, you can use Power Automate to pass that authentication token to other systems, to allow the bot to act on behalf of the logged in user to retrieve data or take action. In this task, you will create a flow that passes the authentication token from the bot to the Microsoft Graph, to retrieve and return further user details.

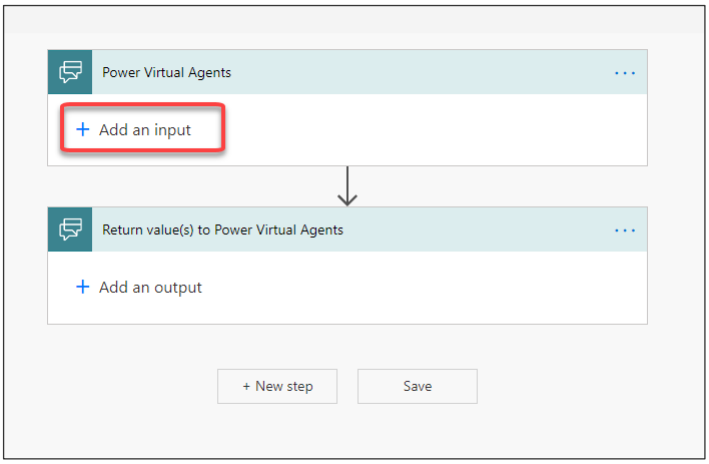
Task 1: Create a flow to pass the authentication token

1. Under **You're now logged in**, select the + icon, select **Call an action**, and choose Create a flow.

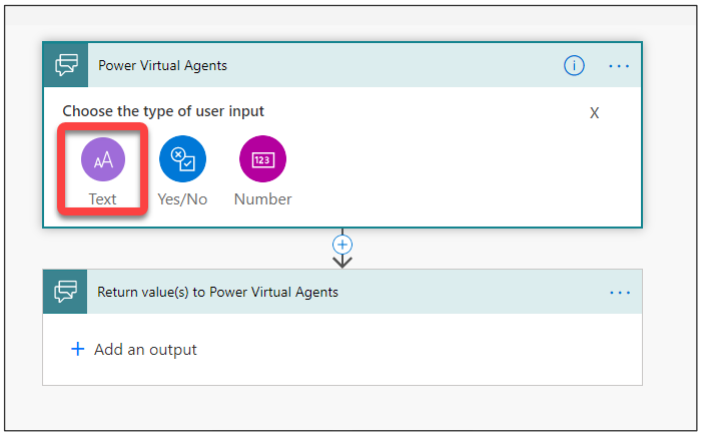


This will open Power Automate in a new tab.

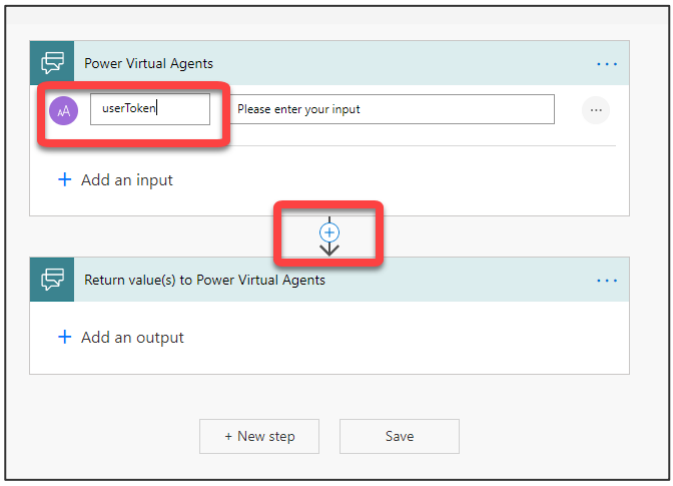
2. Click on **Add an Input** in the first stage of the flow.



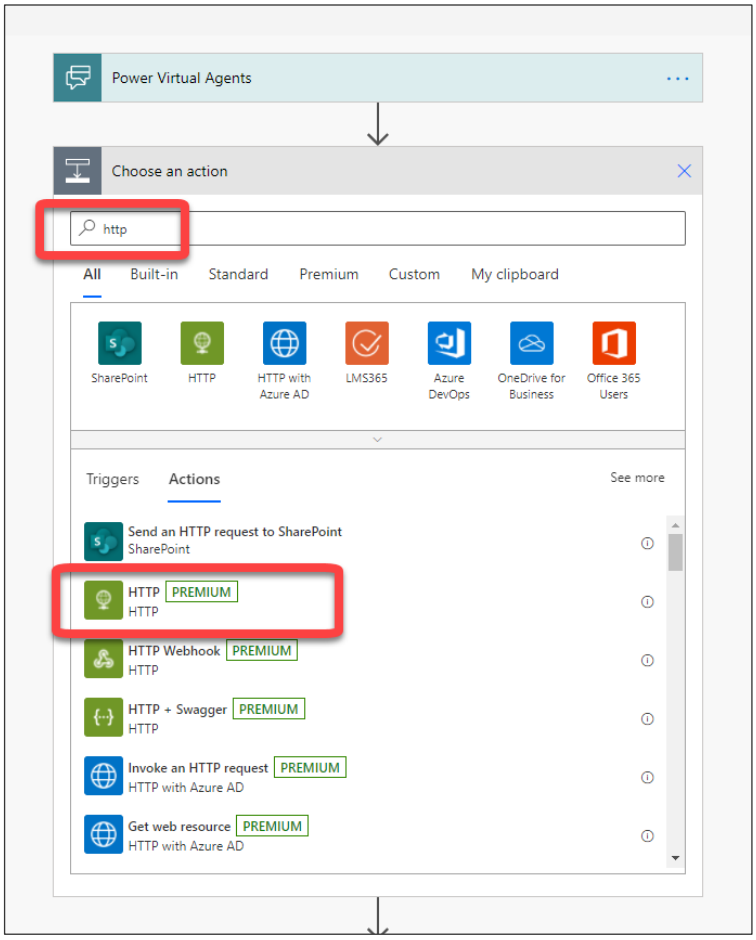
3. Select **Text**.



4. Name your input **userToken** then hover over the arrow between the two stages to reveal a  icon and click on it. Select **Add an action**.

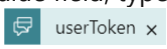


5. Search for HTTP and select the HTTP connector. We are going to use the HTTP connector to pass the authentication token from the logged in user to the Microsoft Graph API.



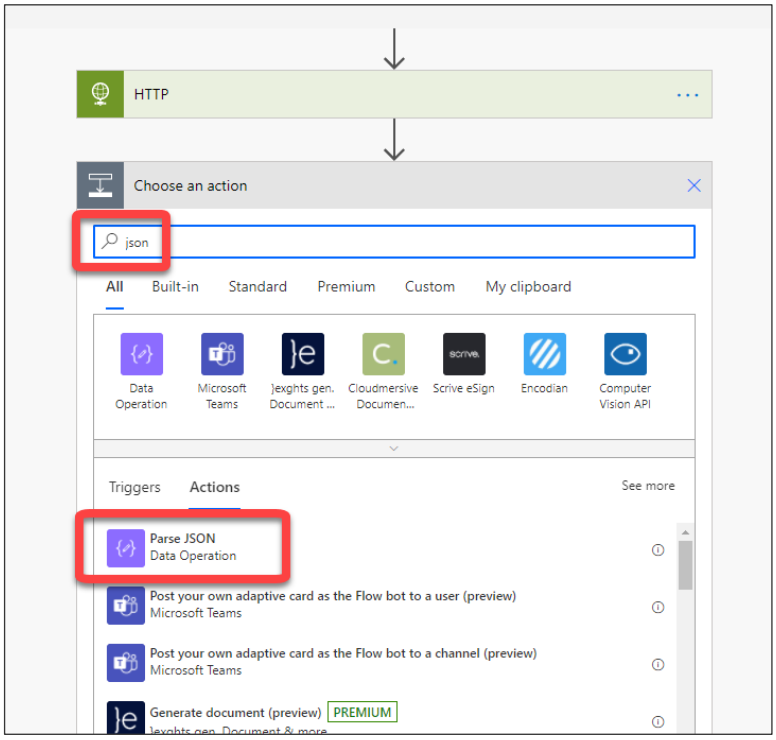
6. Fill in the details for this connector
    - Method: **GET** (select from dropdown)
    - URI: **https://graph.microsoft.com/v1.0/me**
    - Headers (as shown in the screenshot below):
        - **Content-Type**
        - **application/json**

    Click show advanced options to show and fill in the remaining fields:

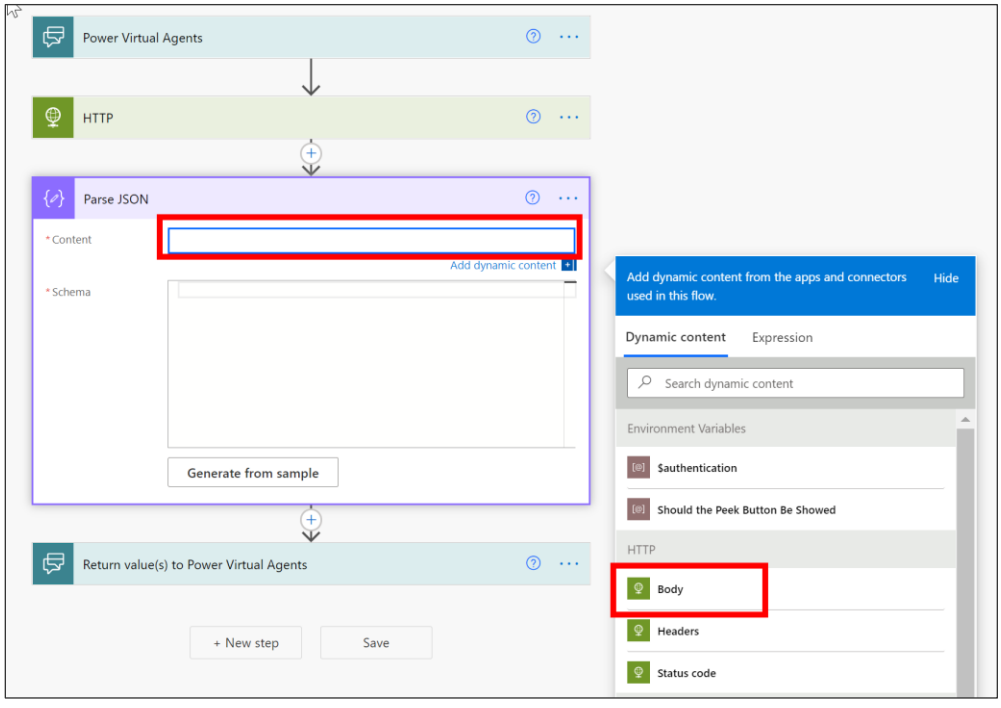
    - Authentication: **Raw** (select from dropdown)
    - To enter the Value field, type **Bearer** then leave a space, then select **userToken** from the Dynamic content. Bearer  (This is the authentication token that has been passed through from your chatbot when the user logged in)

Now we need to take the data that comes back from the Microsoft Graph API and turn it into a format that can be returned to the chatbot and displayed to the user. For this we will use the parse JSON action.

7. Click on the + icon and select **Add an action**. Search for **json** and select the **Parse JSON** action.

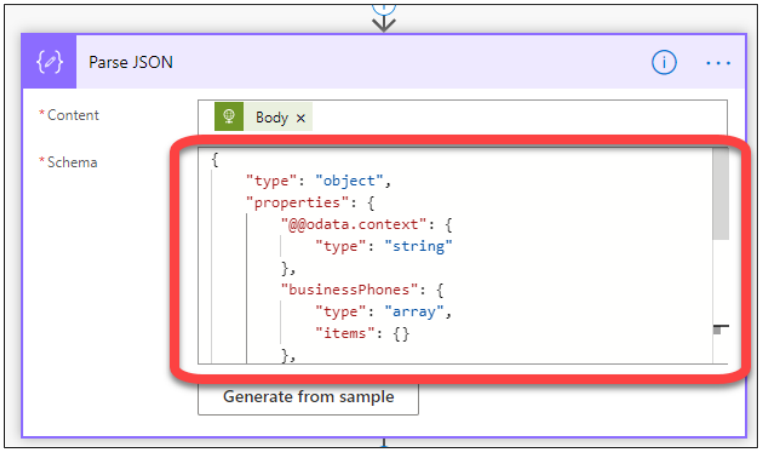


8. If you were building this with an API you were familiar with, you would generate the relevant JSON schema for that API and the data you want to work with. For this lab, we have prepared this for you. Click on the **Content** field and choose **Body** from the Dynamic content (make sure you choose Body from the HTTP Connector, as shown, not from the PVA connector).



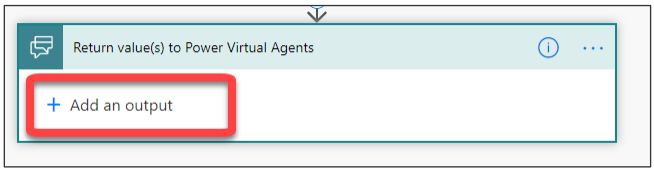
9. Paste the following into the **Schema** field.

```
{
    "type": "object",
    "properties": {
        "@@odata.context": {
            "type": "string"
        },
        "businessPhones": {
            "type": "array",
            "items": {}
        },
        "displayName": {},
        "givenName": {},
        "jobTitle": {},
        "mail": {},
        "mobilePhone": {},
        "officeLocation": {},
        "preferredLanguage": {},
        "surname": {},
        "userPrincipalName": {},
        "id": {}
    }
}
```



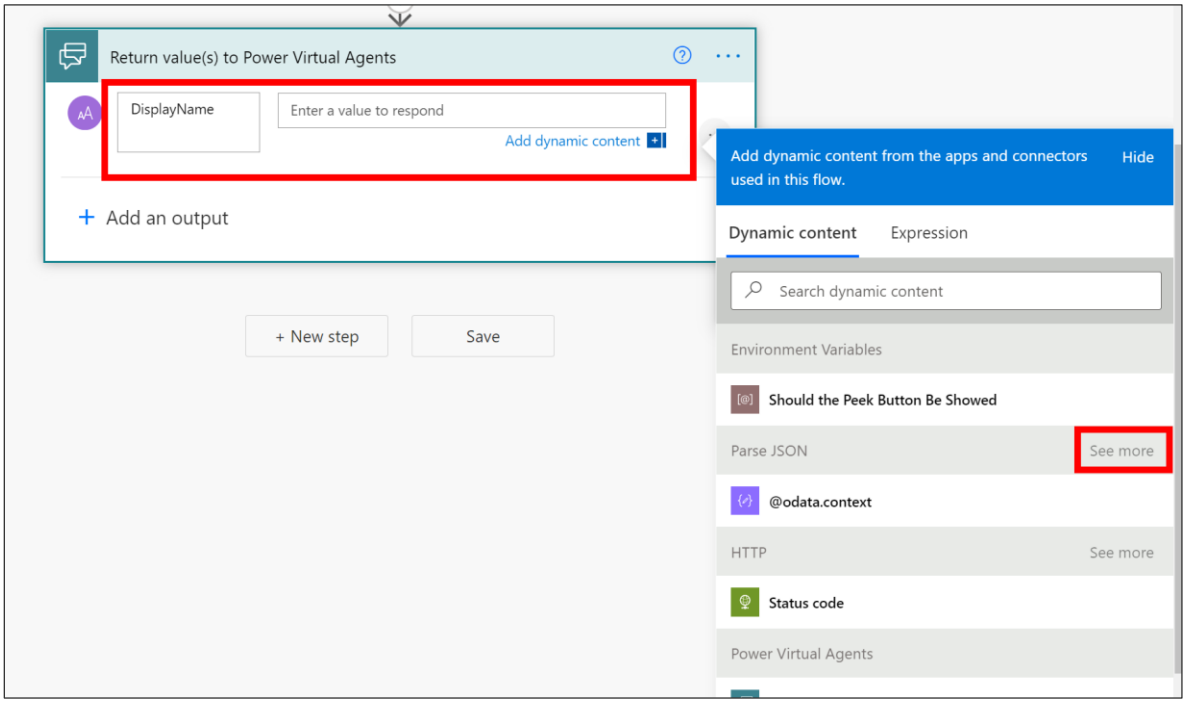
You will now select the data from the output of this step, to return to the chatbot and display to the logged in user.

9. Click on the **Return value(s) to Power Virtual Agents** action to open it up, and click on **Add an output**.

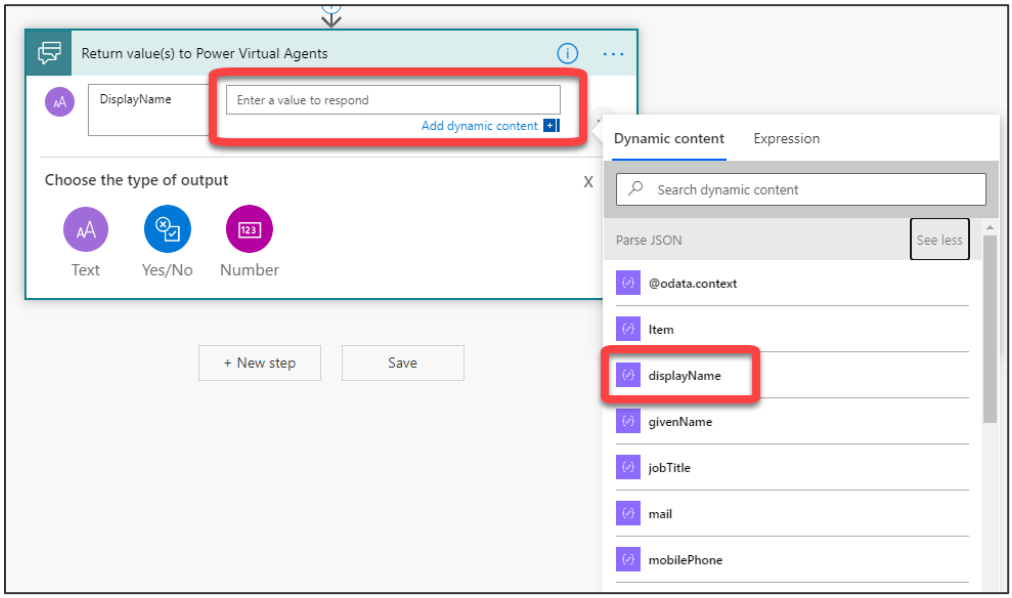


10. Select **Text**, and enter **DisplayName** in the Enter Title box. Then in the value, you will select from the Parse JSON output in the Dynamic content. If you can't see a full list of values from the JSON connector, click **See more**.

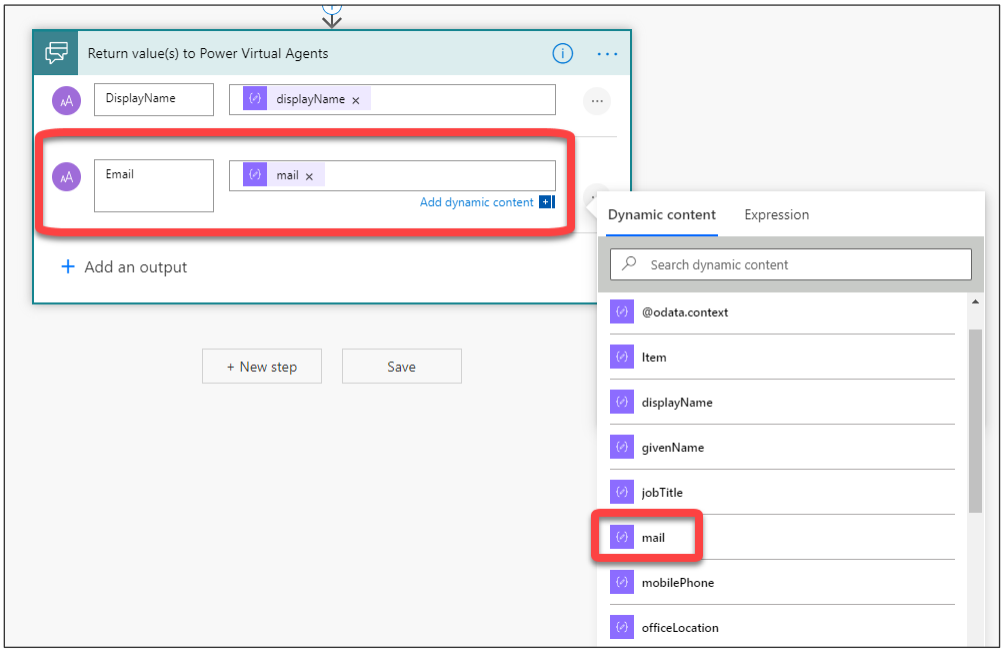
    Note: Here, you will notice the type of information you were able to retrieve about the user, as defined in the Parse JSON step. For the purpose of the lab, only DisplayName and Email will be returned to the bot.



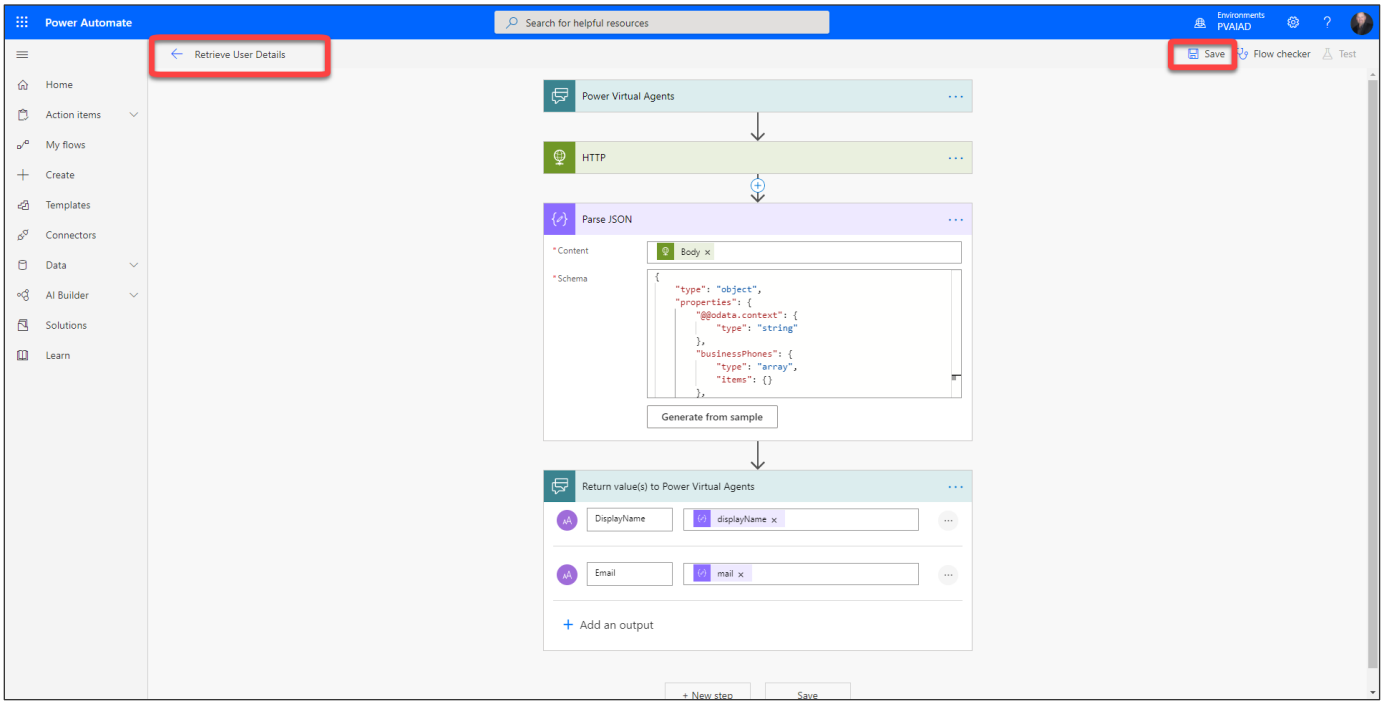
11. In the value field, Choose **displayName** from the Dynamic Content.



12. Now add another Text input and repeat these steps, creating the display name **Email** and choose **mail** from the Dynamic content.

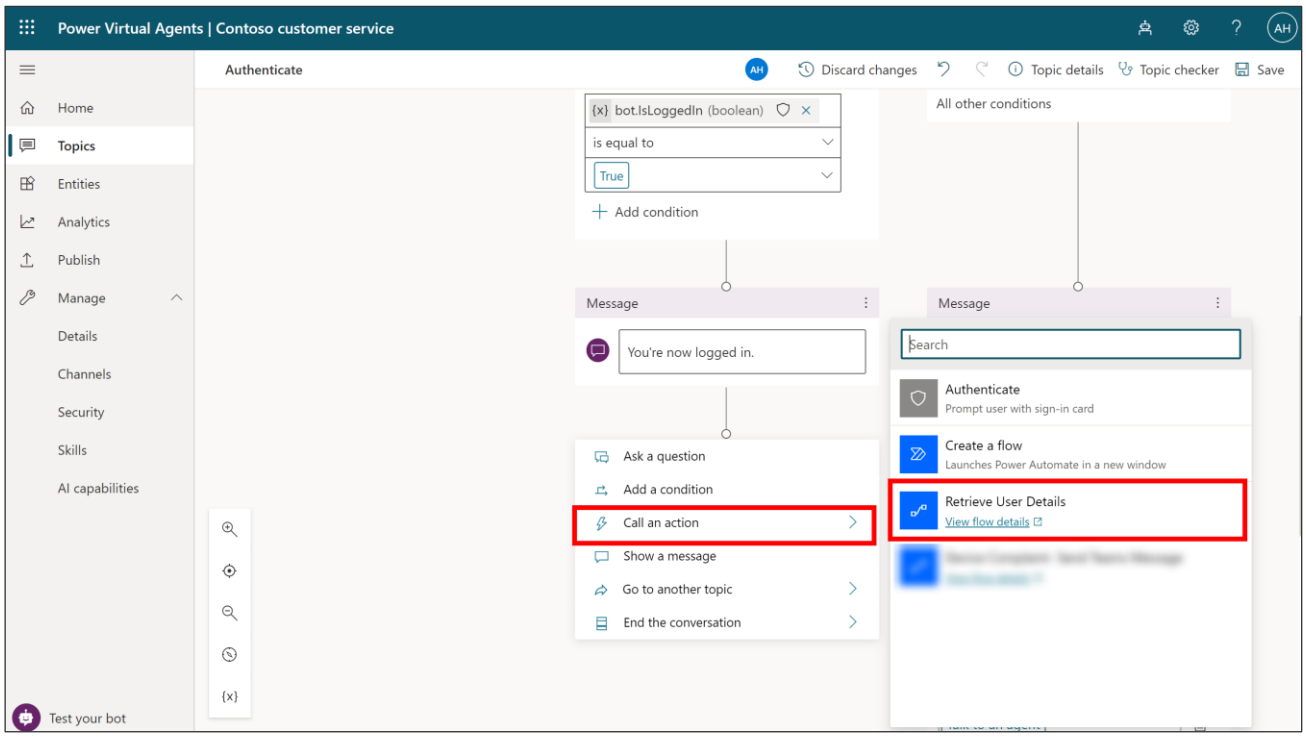


13. Scroll back up to the top and rename your flow to **Retrieve User Details** and then **Save** it. You can now close the Power Automate browser tab and return to Power Virtual Agents.

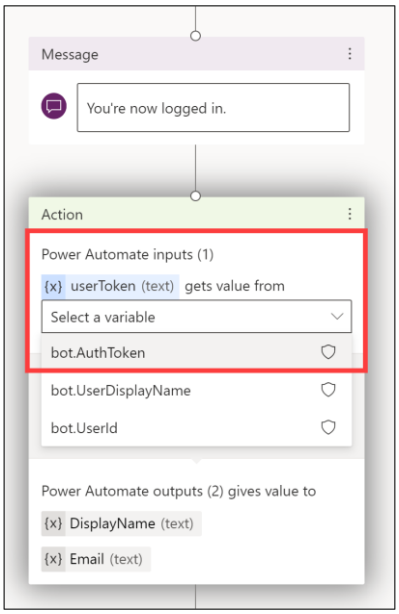


Task 2: Add your flow into your conversation topic

1. Return to your tab where you were working in Power Virtual Agents, or navigate to powervirtualagents.microsoft.com. Click on the + icon under the **You're now logged in** message, select **Call an action**, and then select the flow you just created.

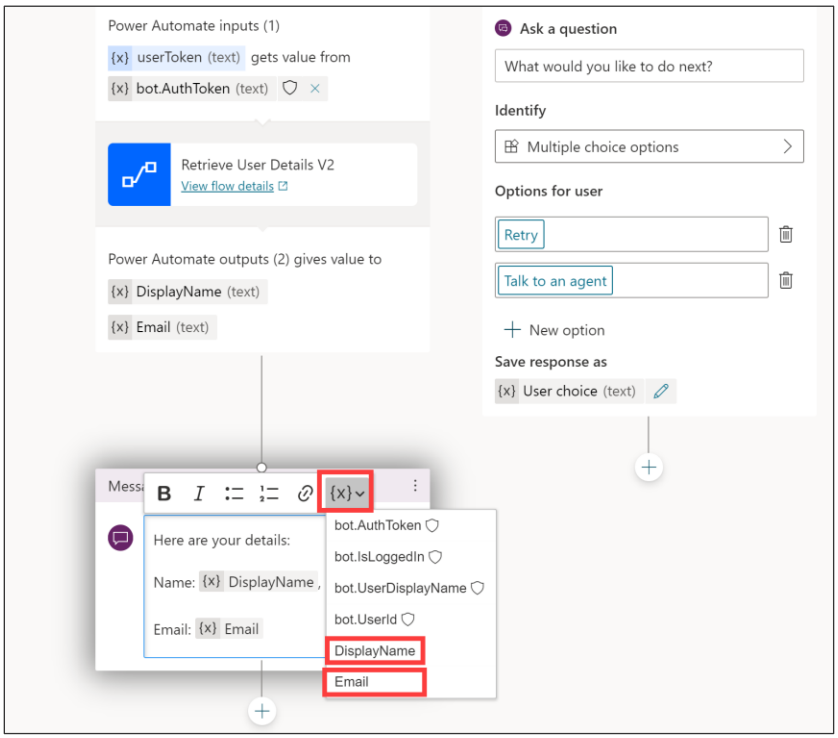


2. The flow is added to the authoring canvas. In the dropdown menu, select **bot.AuthToken** to link the Power Virtual Agents variable to the Power Automate input.

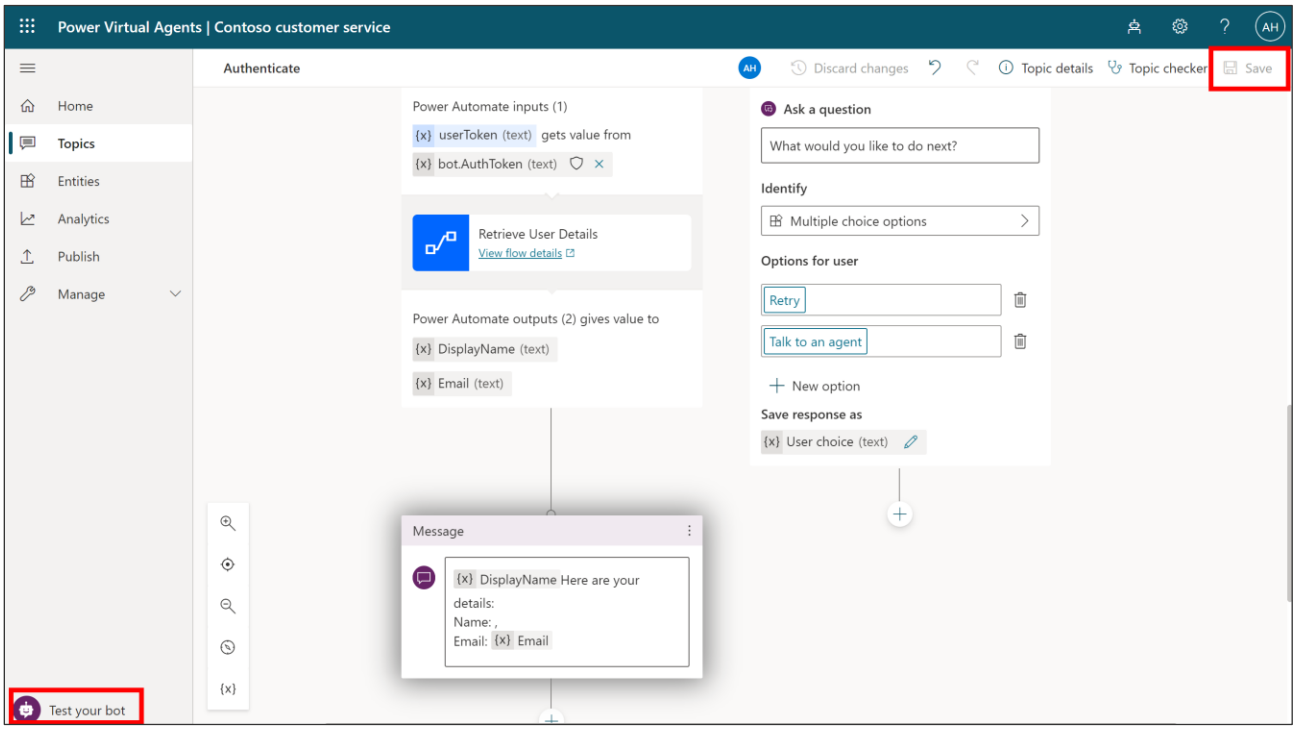


3. Underneath this step, click the + icon and select **Show a message**. Paste in the following text, and replace the "<<>>" with the dynamic variables **displayName** and **email**:

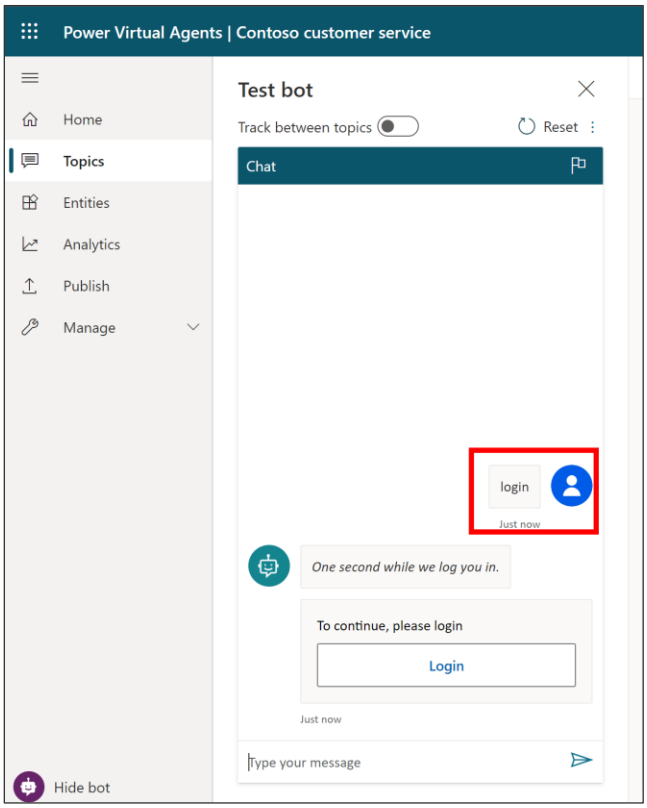
Here are your details: Name: <<>>, Email: <<>>



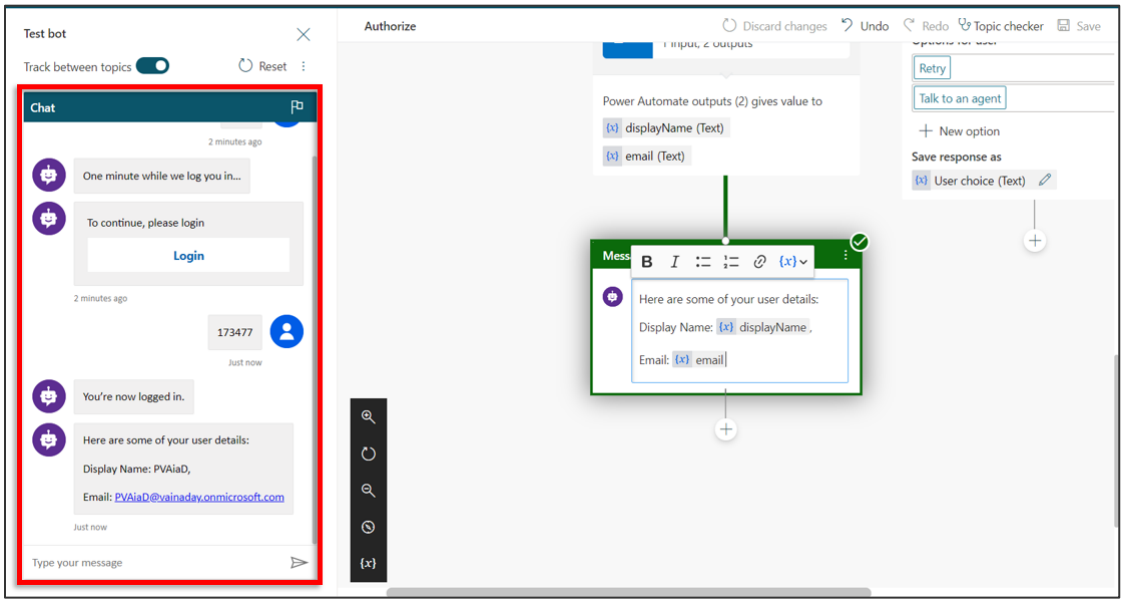
4. Select **Save** in the upper right corner, and select **Test your bot** in the lower left corner.



5. Type **login** in the chatbot test pane.



6. You will see a message stating "You're now logged in", followed by some of your user details presented within the chat session as a result of your flow.



Lab survey

We would appreciate your feedback on Power Virtual Agents and on this hands-on-lab, such as the quality of documentation and the usefulness of the learning experience.

Please use the survey at https://aka.ms/PVAiaDSurvey to share your feedback.

You may provide feedback for each module as you complete it or at the end once you've completed all the modules.

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