



# Microsoft Power Virtual Agents in a Day

Lab 06: Build Power Automate Flows for your Chatbot  
Hands-on Lab Step-by-Step

January 2022

# Contents

<b>Power Automate.....</b>	<b>1</b>
<i>Goals for this lab.....</i>	<i>1</i>
<i>Scenario.....</i>	<i>1</i>
<i>Before we start... ..</i>	<i>1</i>
<i>Task 1: Create a new entity .....</i>	<i>2</i>
<i>Task 2: Create a new topic.....</i>	<i>4</i>
<i>Task 3: Author the conversation.....</i>	<i>5</i>
<i>Task 4: Create a flow to send the customer's details to a user in Microsoft Teams .....</i>	<i>15</i>
<i>Task 5: Test your chatbot .....</i>	<i>27</i>
<i>Lab survey.....</i>	<i>28</i>
<i>Terms of Use .....</i>	<i>28</i>

# Power Automate

This lab is subject to the Terms of Use on page 28 of this document.

## Goals for this lab

What you'll learn:

- Create a Power Automate flow from the chatbot authoring canvas
- Create a topic that can send information obtained by the chatbot to a user in Microsoft Teams



The time to complete this lab is **[35]** minutes.

## Scenario

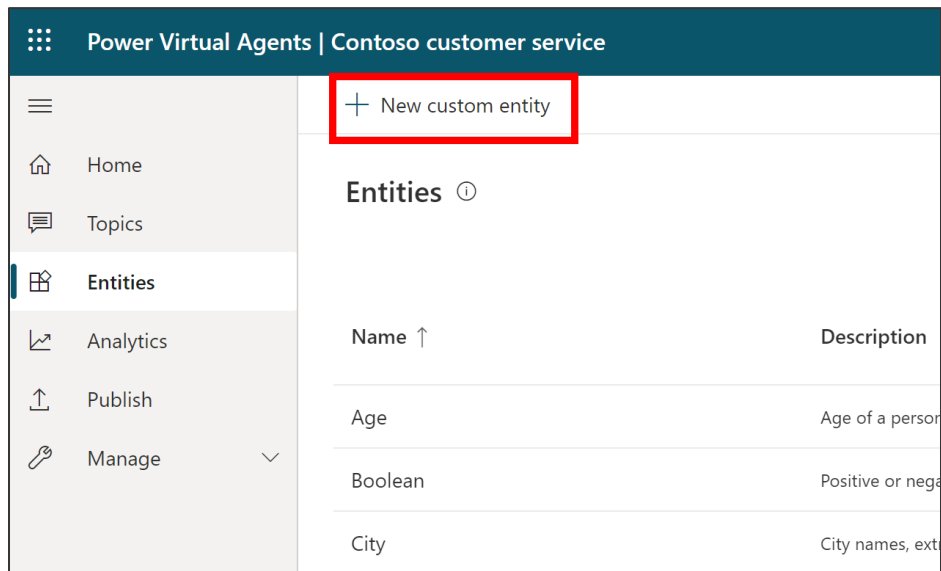
In this scenario, you will be creating a new topic for the chatbot for handling customer issues with their devices that they have purchased from the store. In this topic, the chatbot will collect information such as the customer's name, email address, what device they have, and a description of the issue. A flow will then send these details as a message in Microsoft Teams to the user who handles these issues.

## Before we start...

Navigate to <https://powerva.microsoft.com/> and sign in with your credentials.

## Task 1: Create a new entity

1. Click **Entities** in the left navigation pane.
2. You will create an entity for Device Manufacturers. To do this, click on **New entity**. Select the **Closed List** option.



3. Enter **Device Manufacturer** as the **Entity Name**. Ensure Smart matching is turned on. Add each of the following as an item in the entity:

Acer  
Asus  
Dell  
HP  
Microsoft  
Lenovo  
Samsung  
Sony  
Toshiba

### Device Manufacturer

**Name \***

Device Manufacturer

**Description**

Description (optional)

**Method**

List

The bot will try to match an item on the list based on what the customer says.

**Modified by**

2 minutes ago

**Smart matching**

☒ on

The Smart matching option enables the bot's understanding of natural language. This can help match misspellings, grammar variations, and words with similar meanings.  
If the bot isn't matching enough related words, enhance the bot's understanding further by adding synonyms to your list items.  
[Learn more about entities](#)

**List items**

Enter item

Add

Item	Synonyms
Acer	+ Synonyms
Asus	+ Synonyms
Dell	+ Synonyms
HP	+ Synonyms
Microsoft	+ Synonyms
Lenovo	+ Synonyms
Samsung	+ Synonyms
Sony	+ Synonyms
Toshiba	+ Synonyms

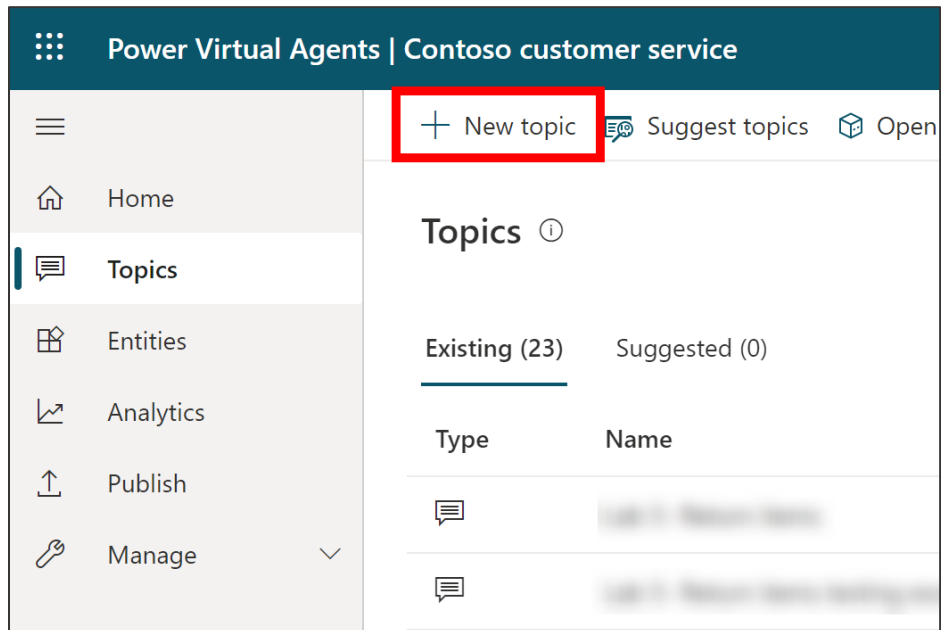
Save

Close

4. Save the entity and close the entity window.

## Task 2: Create a new topic

1. Click **Topics** in the left navigation pane and click on **New topic**.



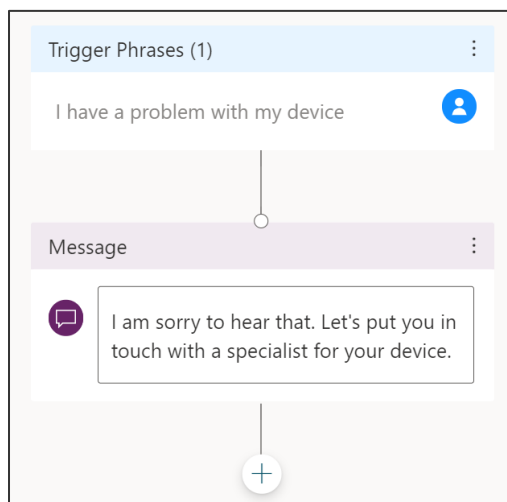
2. Enter **Device Complaints** as the topic name.
3. Add **I have a problem with my device** as a trigger phrase.
4. At the top right, click **Save topic**.

## Task 3: Author the conversation

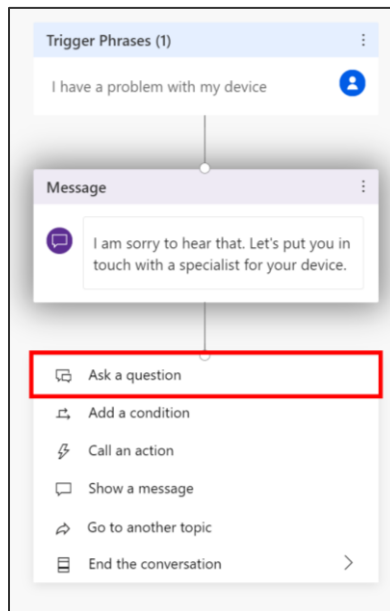
1. Click on **Go to authoring canvas**

The screenshot shows the 'Device Complaints' topic setup page in Power Virtual Agents. The page has a 'Setup' tab selected and an 'Analytics' tab. On the left, there are fields for 'Name' (containing 'Device Complaints') and 'Description' (with a placeholder 'Enter a description'). In the center, the 'Trigger phrases (1)' section shows a list with one phrase: 'I have a problem with my device'. Below this is an input field 'Enter a trigger phrase' and an 'Add' button. On the right, there is a 'Status' field. A red rectangle highlights a button labeled 'Go to authoring canvas' in the top right corner of the main content area.

2. In the first **Message node**, copy and paste the following text:  
I am sorry to hear that. Let's put you in touch with a specialist for your device.

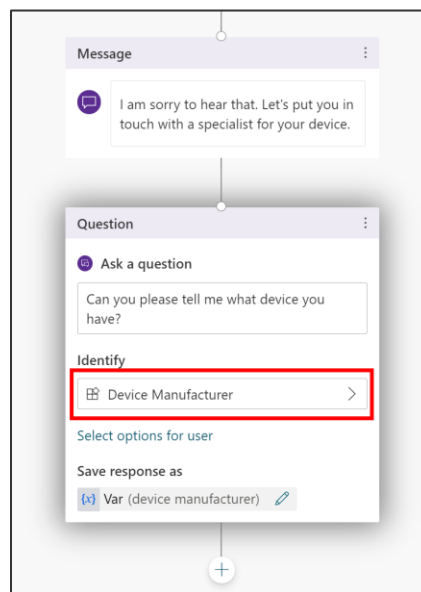


- Under the **Message node**, click the **Add node** button and select **Ask a question**.



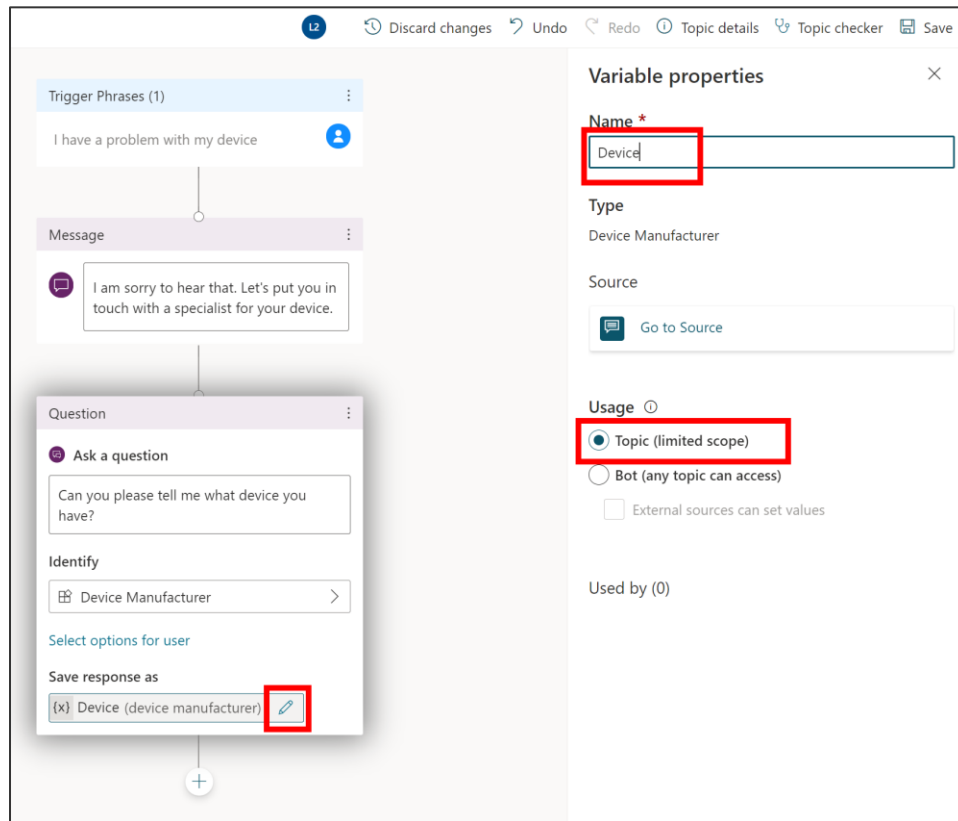
- In the **Ask a question** area of the **Question node**, copy and paste the following text:  
Can you please tell me what device you have?
- In the **Identify** area of the same Question node, select **Device Manufacturer**.

The chatbot will use the entity created in Task 1 to identify who the manufacturer of the device is based on the customer's response.



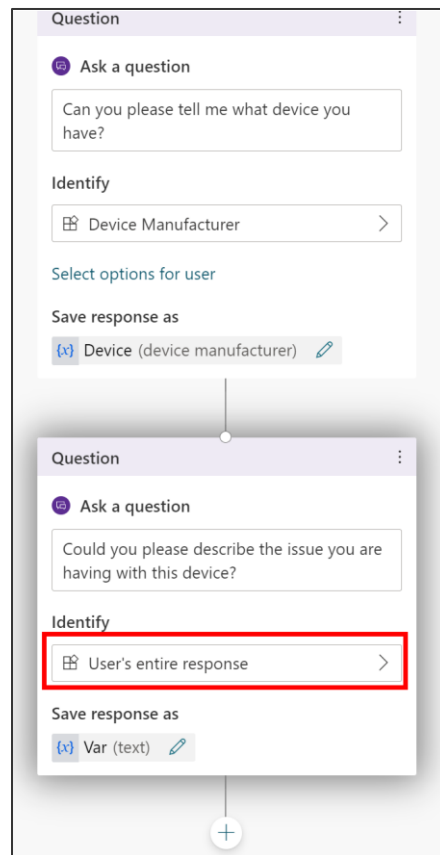


- In the **Save response as** field, click **Var 1 (device manufacturer)** to open the renaming pane. Rename the variable from **Var** to **Device**. Close the pane to save the new variable name.

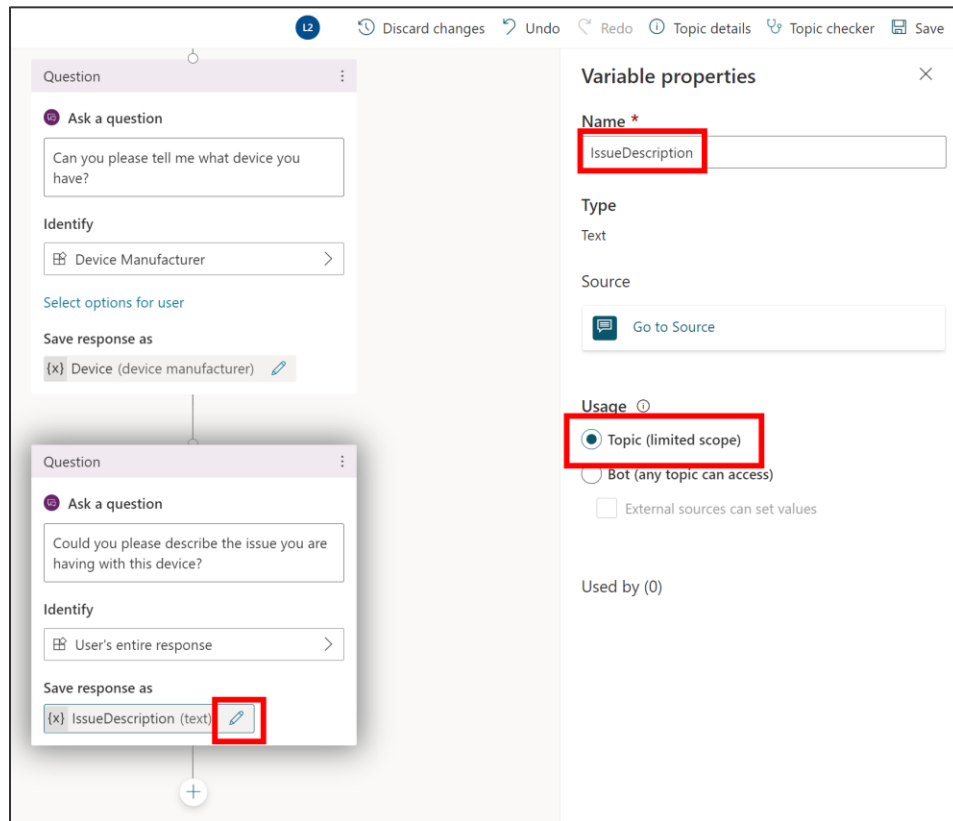


- Add a new **Question node** underneath. Copy and paste this text in the **Ask a question** area of the new node.  
Could you please describe the issue you are having with this device?

8. In the **Identify** area of the node, select **User's entire response**.



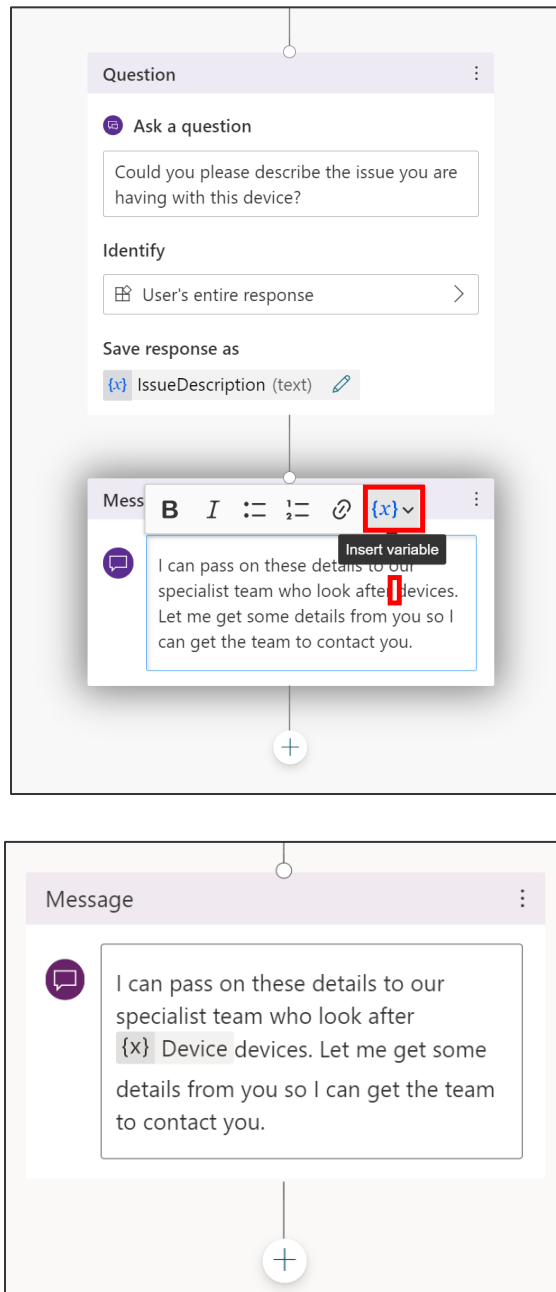
9. In the **Save response as** field, click **Var (text)** to open the renaming pane. Rename the variable from **Var** to **IssueDescription**. Close the pane to save the new variable name.



10. Add a new **Message node** underneath. Copy and paste this text in the new Message node.

I can pass on these details to our specialist team who look after devices. Let me get some details from you so I can get the team to contact you.

11. In the same **Message node**, place your cursor in between the words **after** and **devices**. You will insert the **Device variable** in between these two words. It should appear as below.



12. You will now add a few more questions to get information about the customer which will be sent to the user handling device complaints. Add a new **Question node** underneath the last Message node.

13. In the new **Question node**, copy and paste the following text in the **Ask a question** area.

What is your name?

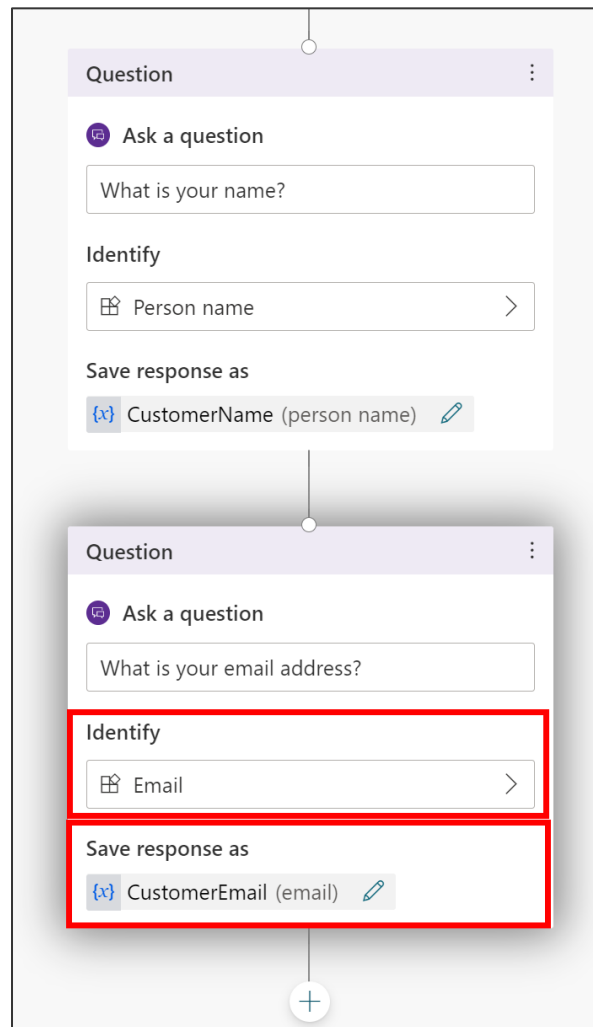
14. In the **Question node**, change the value of the **Identify** area to **Person name**. Rename the variable to **CustomerName**. It should appear as below.

The screenshot shows a Power Virtual Agents flow canvas. At the top is a 'Message' node with a speech bubble icon and the text: 'I can pass on these details to our specialist team who look after {x} Device devices. Let me get some details from you so I can get the team to contact you.' Below the Message node is a 'Question' node, which is highlighted with a red rectangular box. The Question node has a 'Ask a question' section with a text input field containing 'What is your name?'. Below this is an 'Identify' section with a dropdown menu showing 'Person name' and a right-pointing arrow. At the bottom of the red box is the 'Save response as' section, which shows a variable '{x} CustomerName (person name)' with a blue edit icon to its right. A plus sign icon is visible at the bottom of the flow canvas, indicating where to add new nodes.

15. Add a new **Question node** underneath. Copy and paste the following text in the **Ask a question** area.

What is your email address?

16. In the **Question node**, change the value of the **Identify** area to **Email**. Rename the variable to **CustomerEmail**. It should appear as below.

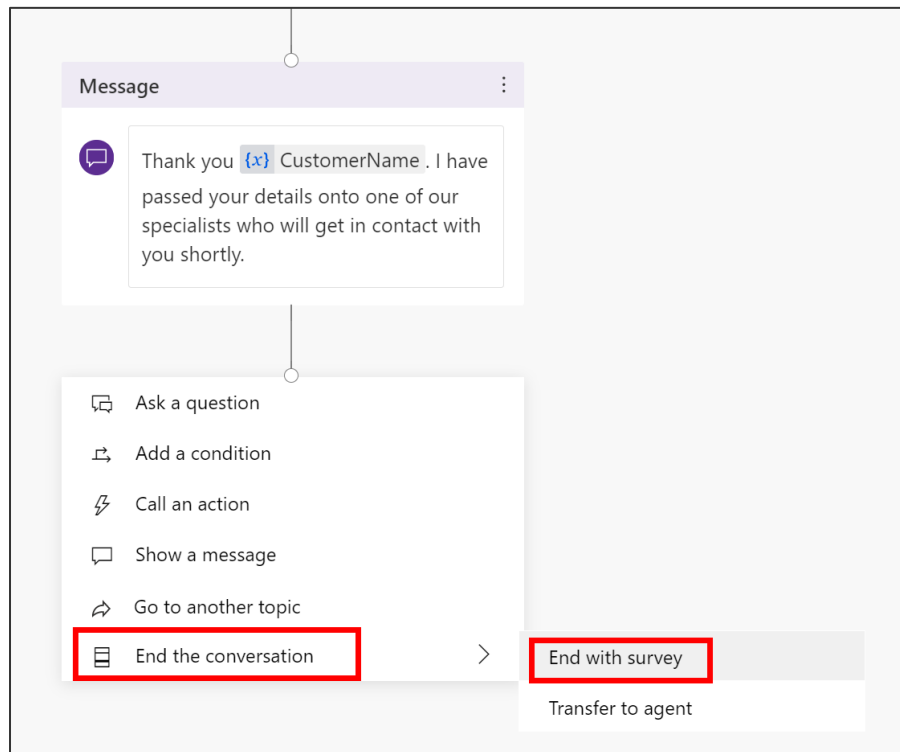


17. Add a new **Message node** underneath. Copy and paste the following text in the Message node.
- Thank you. I have passed your details onto one of our specialists who will get in contact with you shortly.

18. In the same **Message node**, place your cursor after the space after the word **Thank you**. You will insert the **CustomerName** variable here. It should appear as below.

The screenshot displays the Power Virtual Agents interface with two nodes connected by a vertical line. The top node is titled 'Question' and contains a speech bubble icon, the text 'Ask a question', a text input field with 'What is your email address?', an 'Identify' section with a dropdown menu showing 'Email', and a 'Save response as' section with a variable '{x} CustomerEmail (email)'. The bottom node is titled 'Message' and contains a speech bubble icon and a text box with the message: 'Thank you {x} CustomerName. I have passed your details onto one of our specialists who will get in contact with you shortly.' The variable '{x} CustomerName' is highlighted with a red rectangular box. A plus sign icon is visible at the bottom of the interface.

19. Add an **End the conversation > End with survey node** at the end.



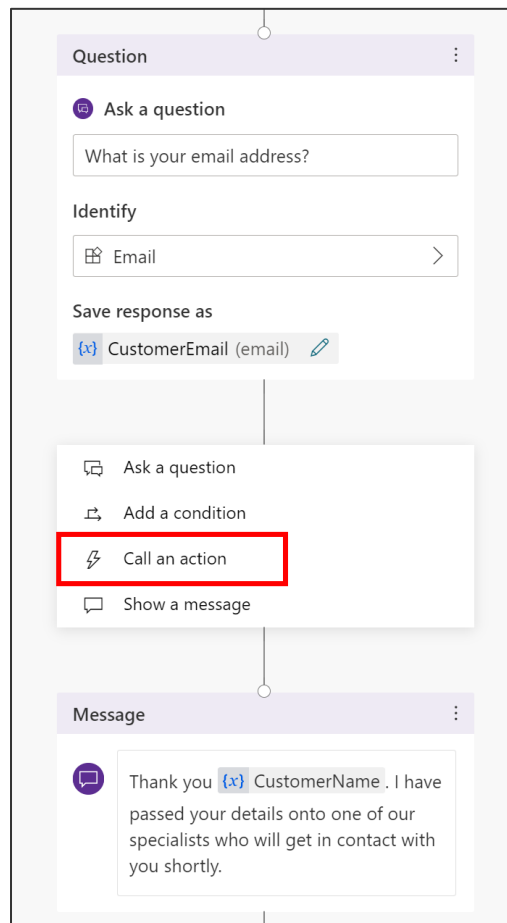
20. **Save** your chatbot.



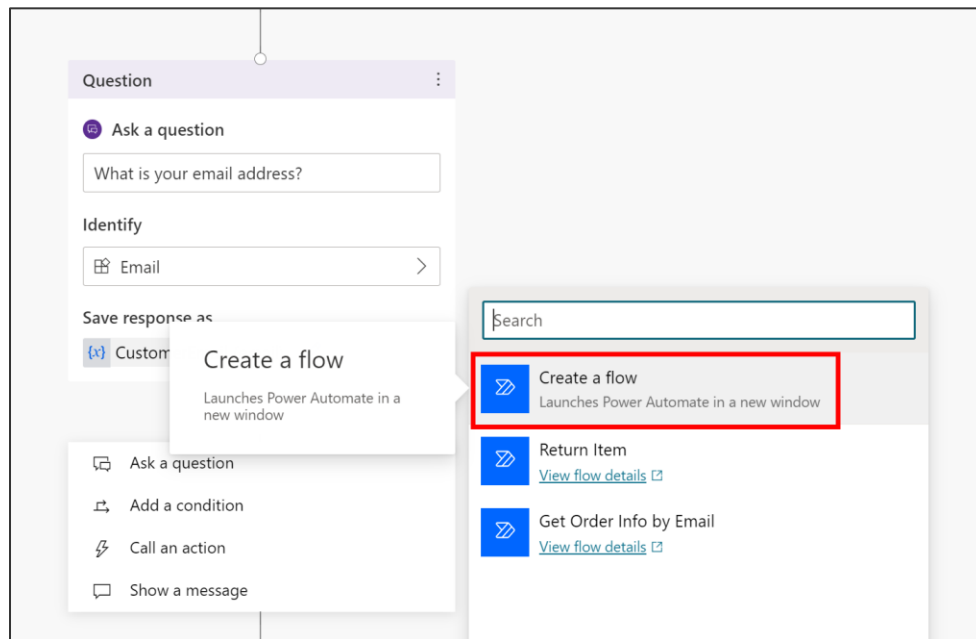
## Task 4: Create a flow to send the customer's details to a user in Microsoft Teams

Now that you have created the conversation for this topic, you will add in steps to trigger a flow that you will build in Power Automate. This flow will take the details that the customer has submitted during the conversation, and send these details as a message to a user in Microsoft Teams (i.e. the Specialist in this scenario). For the purpose of this lab, the message in Teams will be sent to you as the logged in user for this lab.

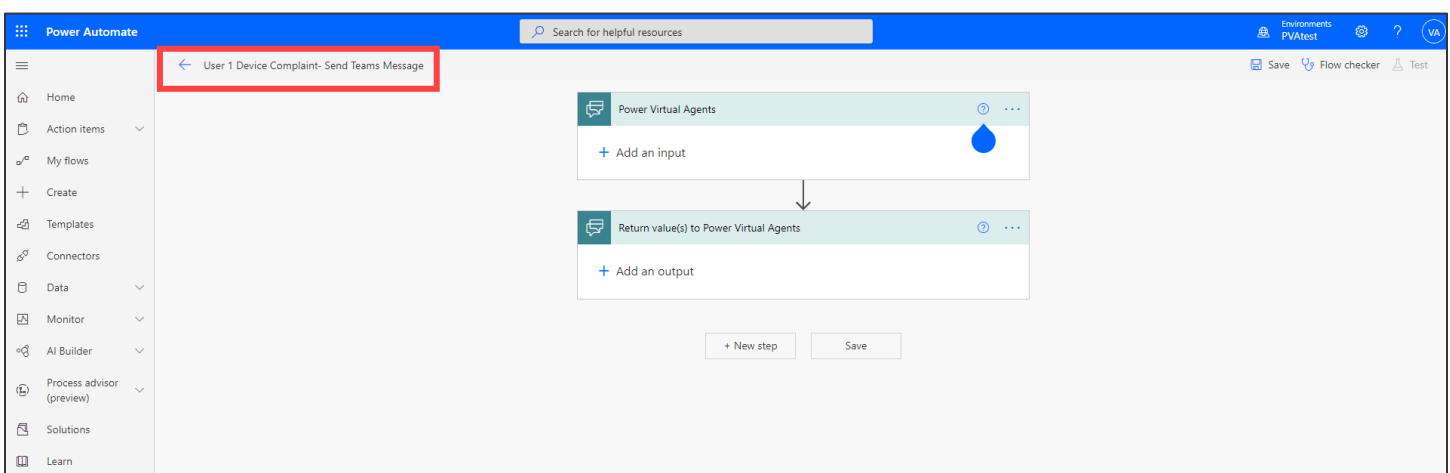
1. In your authoring canvas, add a new step in between the **Question node What is your email address?** and the last **Message node**. Click on **Call an action**.



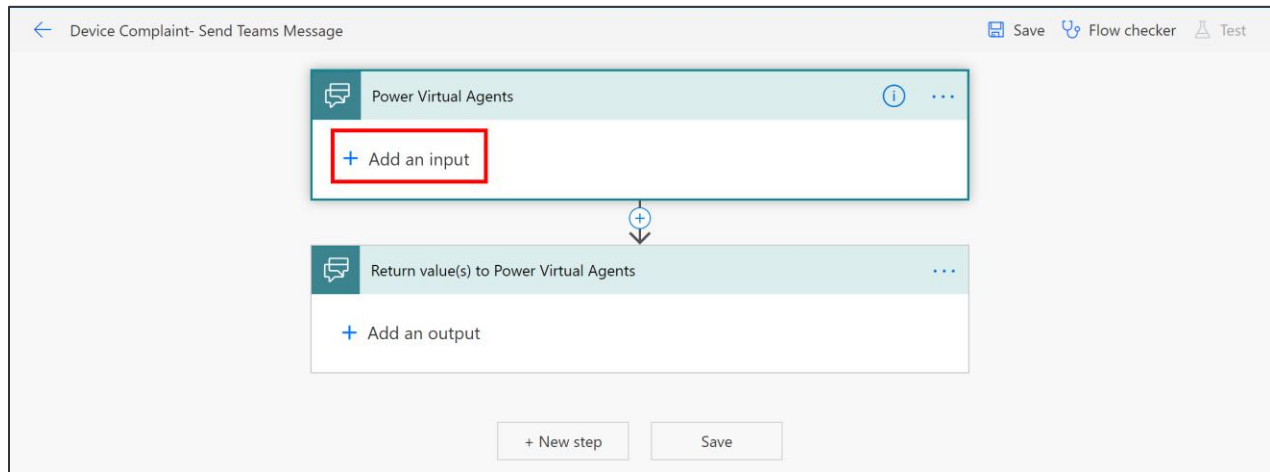
- In this task, you will be building the flow from scratch. Click on **Create a flow**. This will launch Power Automate in a new tab.



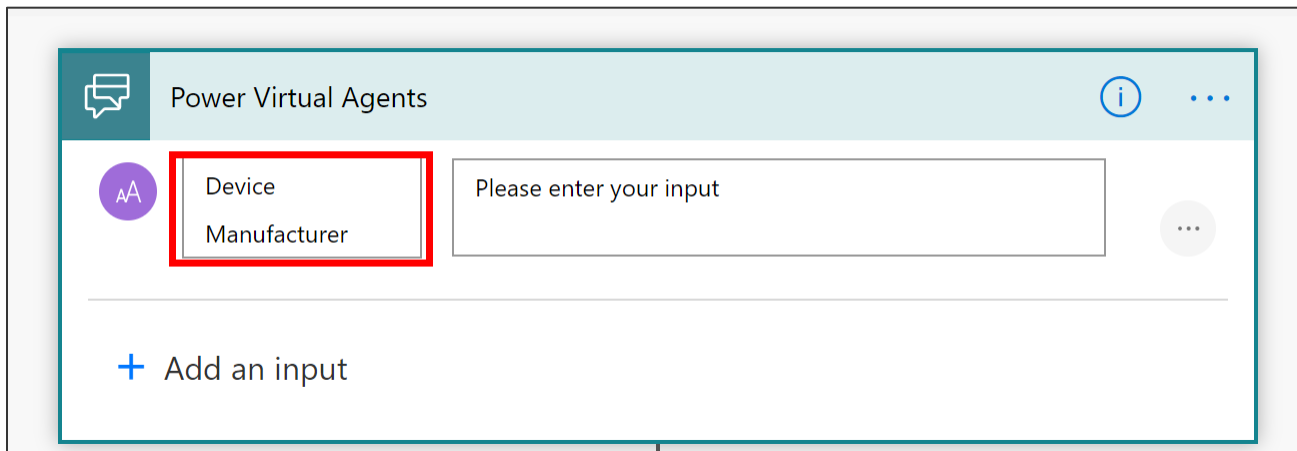
- Go to the Power Automate tab that launched. You will notice that this flow already has a trigger for Power Virtual Agents. You can now add in actions that you want the chatbot to take during the conversation with the customer.
- First, click on **Power Virtual Agents Flow Template** written on the top left of the flow canvas. Backspace this text and rename it. Put your User number at the start of the name so that you can easily find your flow later in the lab (other participants will also be creating their own version of this flow in this environment). Your flow name should be: **User # Device Complaint- Send Teams Message**. – e.g **User 1 Device Complaint- Send Teams Message**



5. In the trigger (first step of the flow), you will add inputs that you want the flow use. These are the variables that the customer has provided us during the conversation with the chatbot. In the **first step of the flow**, click on **Add an input**.



6. Select **Text** as the **input type**. Backspace the word Input from the first textbox that appears, and replace it with **Device Manufacturer**.



7. You will now add more inputs. Repeat step 5 & 6 to add the following inputs.


Customer Name

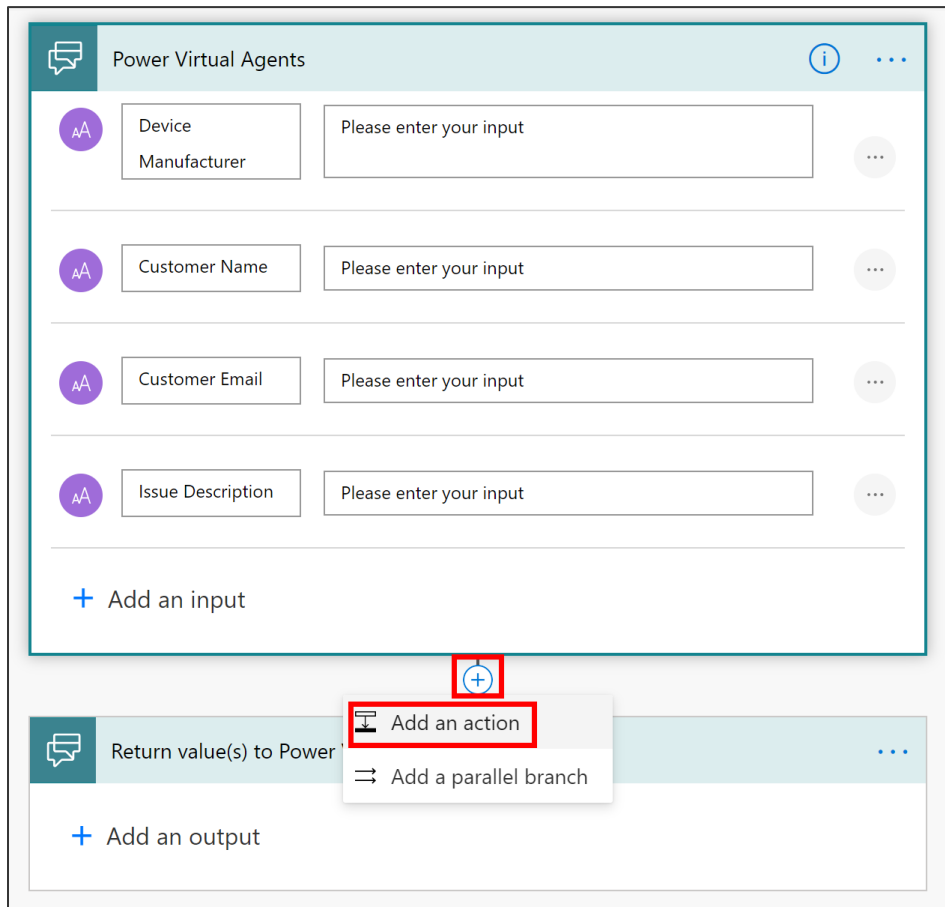
Customer Email

Issue Description

Your flow should appear as below.

The screenshot displays the Power Virtual Agents interface. The top section, titled "Power Virtual Agents", contains four input steps. Each step consists of a purple circle with "AA", a label box, an input field, and a three-dot menu. The steps are: 1. "Device" and "Manufacturer" with a combined input field. 2. "Customer Name". 3. "Customer Email". 4. "Issue Description". Below these is a "+ Add an input" button. A downward arrow with a plus sign connects this section to the bottom section, titled "Return value(s) to Power Virtual Agents". This bottom section contains a "+ Add an output" button.

8. Click on the  button that appears between the two Power Virtual Agent steps. Click **Add an action**.



The screenshot displays the Power Virtual Agents console interface. The top section, titled "Power Virtual Agents", contains four input steps, each with a purple "AA" icon, a label, and a text input field:

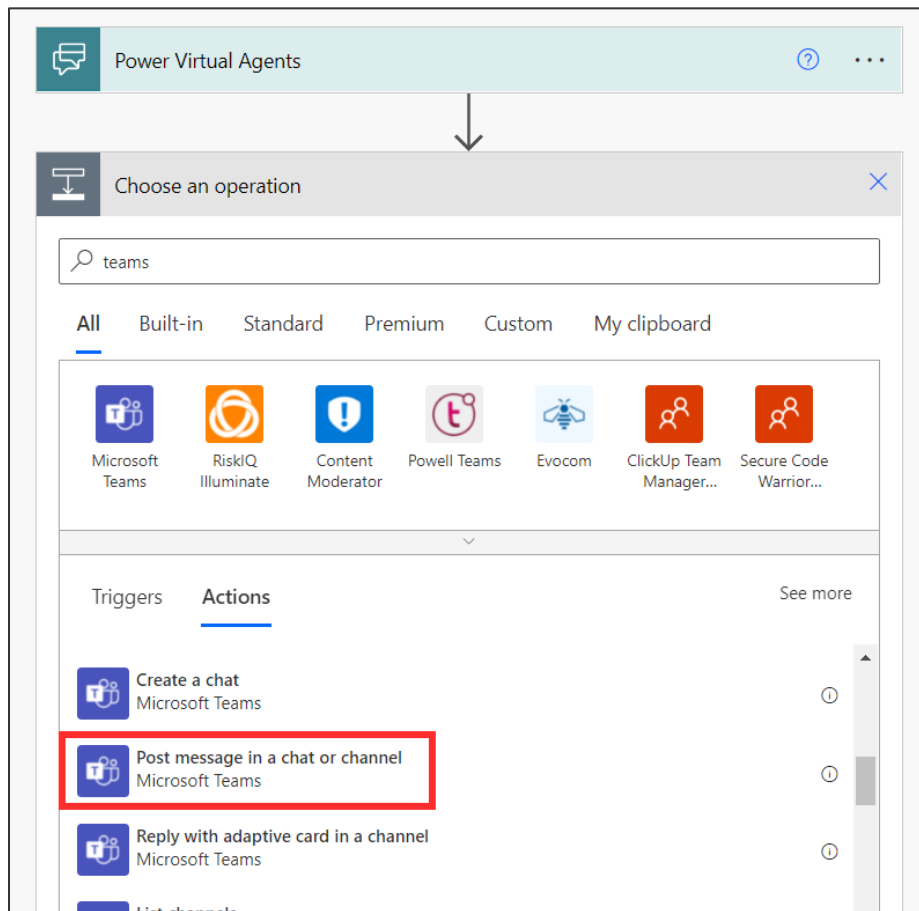
- Device Manufacturer: Please enter your input
- Customer Name: Please enter your input
- Customer Email: Please enter your input
- Issue Description: Please enter your input

Below these steps is a "+ Add an input" button. A red box highlights the "+ Add" button between the input section and the next step. A dropdown menu is open, showing two options:

- Add an action (highlighted with a red box)
- Add a parallel branch

The bottom section, titled "Return value(s) to Power", contains a "+ Add an output" button.

9. You will now add an action that will post a message to a Microsoft Teams user. In the search bar that appears, search **teams**. Select the action called **Post a message in a chat or channel**.



10. In the **Post as** dropdown, select **Flow bot**.
11. In the **Post in** dropdown, select **Chat with Flow bot**.
12. In the **Recipient textbox**, enter the email address of the user you are currently logged in as.

**Note:** The purpose of using your lab email address here is for training purposes only, so that you are able to see the result of the flow using your lab account.

13. Copy and paste the following text in the **Message** textbox.

A customer has reported an issue with their device. Please contact the customer to discuss.

Name:

Email:

Issue:

The screenshot displays the Power Virtual Agents interface with three main sections: 'Power Virtual Agents' at the top, 'Post message in a chat or channel' in the center, and 'Return value(s) to Power Virtual Agents' at the bottom. The central section is expanded, showing configuration fields for posting a message. The 'Post as' field is set to 'Flow bot', 'Post in' is set to 'Chat with Flow bot', and 'Recipient' is 'admin@pvainaday.com'. The 'Message' field contains the text: 'A customer has reported an issue with their device. Please contact the customer to discuss. Name: Email: Issue:'. The interface includes a rich text editor with various formatting options like bold, italic, underline, and link.

* Post as	Flow bot
* Post in	Chat with Flow bot
* Recipient	admin@pvainaday.com
* Message	<p>A customer has reported an issue with their device. Please contact the customer to discuss. Name: Email: Issue:</p>

14. You will now add the related dynamic content to this message. In the **Message** textbox, Place your cursor in between the words **their** and **device**. You should see a pop out appear with dynamic content values. Add the **Device Manufacturer** dynamic content.

**Note:** If you do not see the dynamic content pop out, you may need to zoom out of your browser screen.

The screenshot shows the Power Automate interface with a flow step titled "Post message in a chat or channel". The step configuration includes:

- Post as:** Flow bot
- Post in:** Chat with Flow bot
- Recipient:** admin@pvainaday.com
- Message:** A customer has reported an issue with their device. Please contact the customer to discuss.  
Name:  
Email:  
Issue:

Below the message field is a link that says "Add dynamic content".

Below the step configuration is a section titled "Return value(s) to Power Virtual Agents".

On the right side, a dynamic content panel is open, showing a search bar with the text "Device". Below the search bar, under the heading "Power Virtual Agents", the "Device Manufacturer" dynamic content is listed and selected.



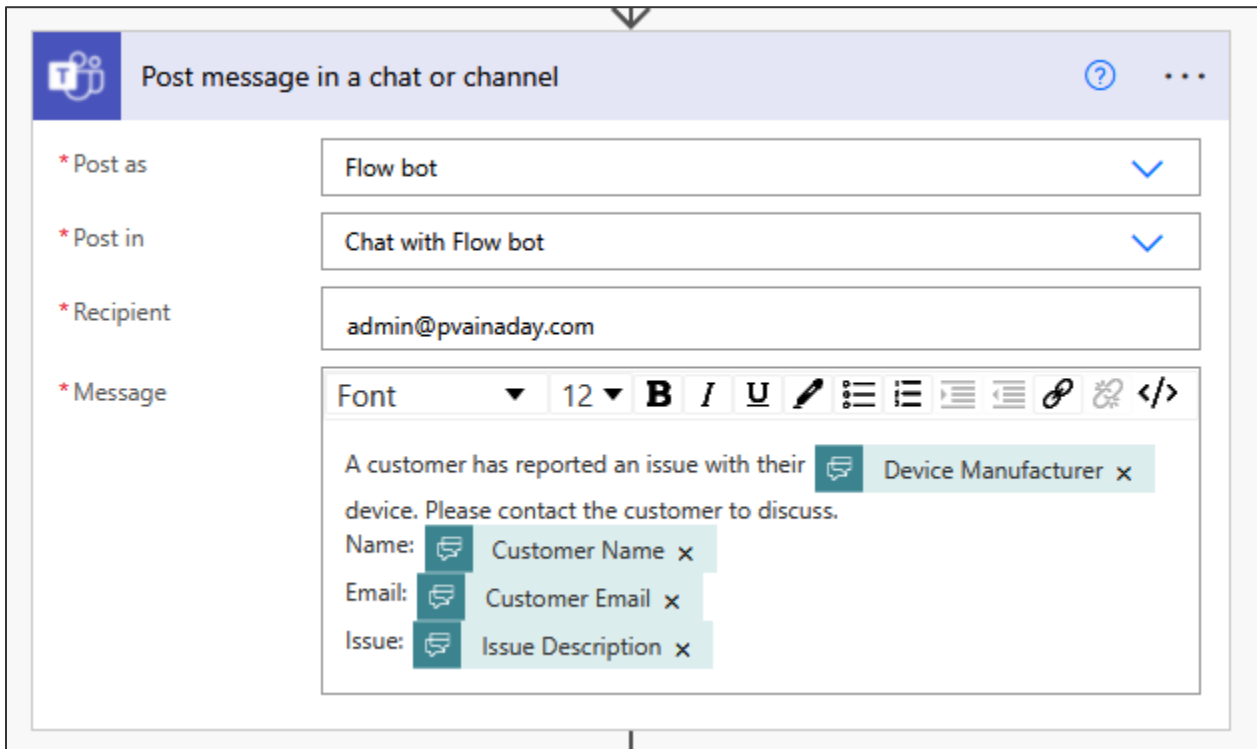
15. Add the following dynamic content next to the other words:

Name: **Customer Name**

Email: **Customer Email**

Issue: **Issue Description**

Your **Message** textbox should now appear as below.



Post message in a chat or channel

\* Post as: Flow bot

\* Post in: Chat with Flow bot

\* Recipient: admin@pvainaday.com

\* Message:

Font 12 **B** *I* U [Link] [Image] [List] [Table] [Code] [Quote] [Unlink] [Code]

A customer has reported an issue with their **Device Manufacturer** device. Please contact the customer to discuss.

Name: **Customer Name**

Email: **Customer Email**

Issue: **Issue Description**

16. You will add spacing in between each line of the **Message textbox** to improve the formatting of the message once posted to Teams. Place your cursor at each of the lines and press **Enter** on your keyboard to add a line space.

It should now appear as shown below.

Post message in a chat or channel

\* Post as: Flow bot

\* Post in: Chat with Flow bot

\* Recipient: admin@pvainaday.com

\* Message:

Font 12 **B** *I* U [Link] [Image] [Code]

A customer has reported an issue with their **Device Manufacturer** device. Please contact the customer to discuss.

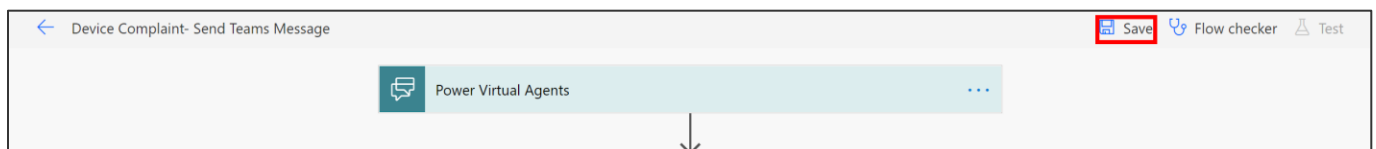
Name: **Customer Name**

Email: **Customer Email**

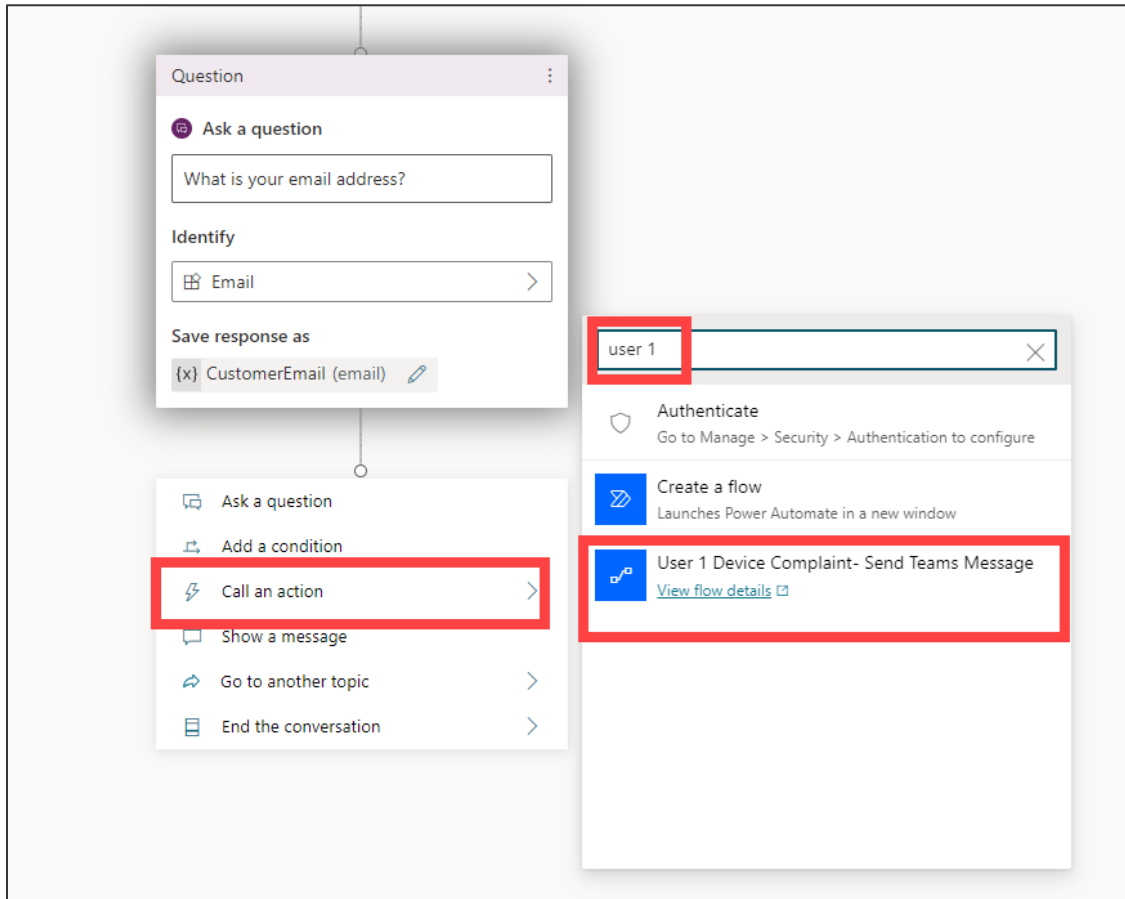
Issue: **Issue Description**

Add dynamic content

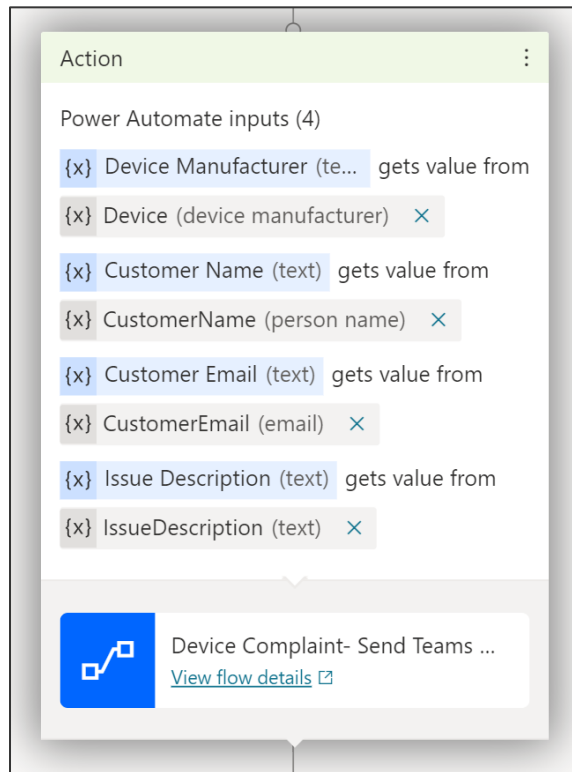
17. Click **Save** in the top right of your page



18. Go back to your Power Virtual Agents tab with your Device Complaints authoring canvas. Click on **Call an action** in between your **What is your email address? Question node** and the last **Message node**. Search for your user name (e.g. user 1) in the search box to find your flow. You should now see your newly created flow **Device Complaint- Send Teams Message** appear in your list of flows. Click on it.






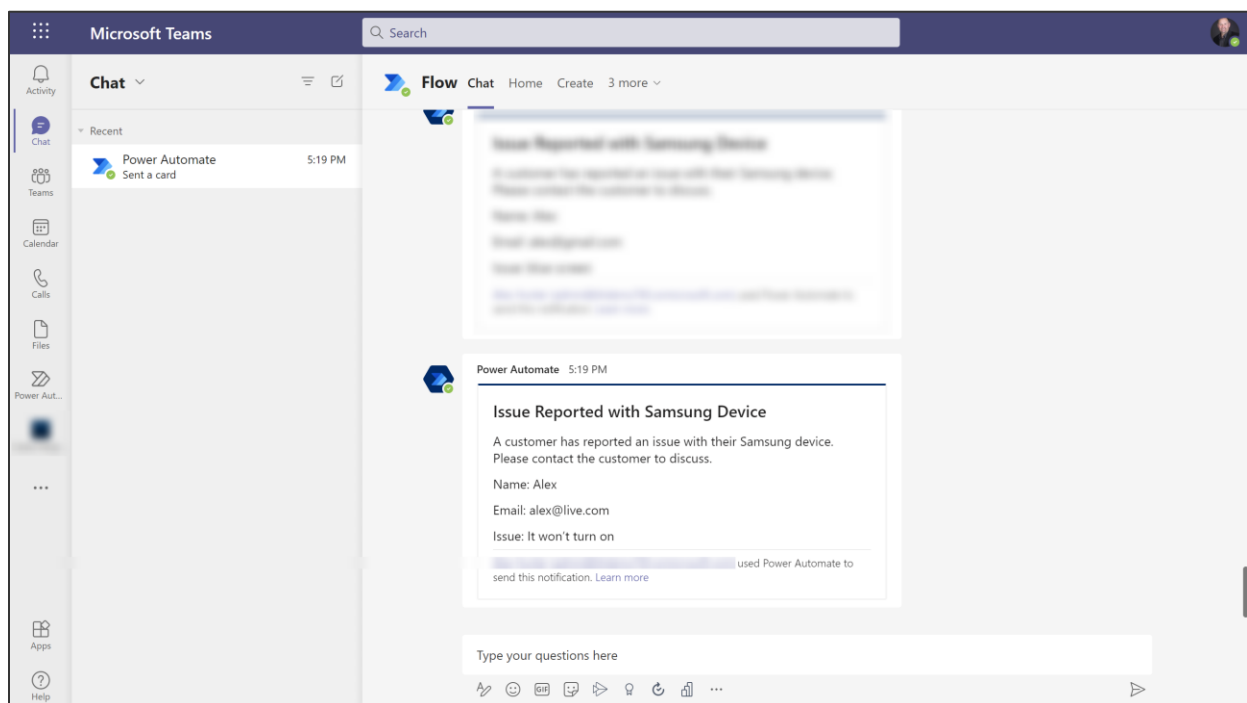
19. You will see an **Action node** appear containing the inputs you identified at the start of the flow. You will need to match these inputs to the variables obtained by the chatbot. Select the corresponding value for each of the 4 inputs as shown below.



20. **Save** your chatbot.

## Task 5: Test your chatbot

1. First, you will open Microsoft Teams in a new tab so you can see the flow work while testing your chatbot. Click on the **waffle icon**  in the top left of your screen to view your Microsoft applications. Click on the  icon next to Teams, and click **Open in a new tab**.
2. Go back to your Power Virtual Agents tab with your Device Complaints authoring canvas open. Test your chatbot using the following steps:
  - i. Enter the trigger phrase **I have a problem with my device**
  - ii. Use **Samsung Series 7** as your device (you can try another device based on the Device Manufacturer entity created in Task 1)
  - iii. Describe the issue you are having, e.g. **It won't turn on**
  - iv. Enter your name
  - v. Enter an email address (this can be any email address)
3. Check your Microsoft Teams tab. In the **Chat**  section, you should see a message posted from Flow that contains the details you entered during your chatbot session.



You will see that the chatbot has identified the manufacturer of the device based on the Device Manufacturer entity created at the start of the lab.

## 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. Thank you!

## Terms of Use

By using this document, in whole or in part, you agree to the following terms:

### **Notice**

Information and views expressed in this document, including (without limitation) URL and other Internet Web site references, may change without notice. Examples depicted herein, if any, are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred. This document does not provide you with any legal rights to any intellectual property in any Microsoft product.

### **Use Limitations**

Copying or reproduction, in whole or in part, of this document to any other server or location for further reproduction or redistribution is expressly prohibited. Microsoft provides you with this document for purposes of obtaining your suggestions, comments, input, ideas, or know-how, in any form, ("Feedback") and to provide you with a learning experience. You may use this document only to evaluate its content and provide feedback to Microsoft. You may not use this document for any other purpose. You may not modify, copy, distribute, transmit, display, perform, reproduce, publish, license, create derivative works from, transfer, or sell this document or any portion thereof. You may copy and use this document for your internal, reference purposes only.

### **Feedback**

If you give Microsoft any Feedback about this document or the subject matter herein (including, without limitation, any technology, features, functionality, and/or concepts), you give to Microsoft, without charge, the right to use, share, and freely commercialize Feedback in any way and for any purpose. You also give third parties, without charge, the right to use, or interface with, any Microsoft products or services that include the Feedback. You represent and warrant that you own or otherwise control all rights to such Feedback and that no such Feedback is subject to any third-party rights.

### **DISCLAIMERS**

CERTAIN SOFTWARE, TECHNOLOGY, PRODUCTS, FEATURES, AND FUNCTIONALITY (COLLECTIVELY "CONCEPTS"), INCLUDING POTENTIAL NEW CONCEPTS, REFERENCED IN THIS DOCUMENT ARE IN A SIMULATED ENVIRONMENT WITHOUT COMPLEX SET-UP OR INSTALLATION AND ARE INTENDED FOR FEEDBACK AND TRAINING PURPOSES ONLY. THE CONCEPTS REPRESENTED IN THIS DOCUMENT MAY NOT REPRESENT FULL FEATURE CONCEPTS AND MAY NOT WORK THE WAY A FINAL VERSION MAY WORK. MICROSOFT ALSO MAY NOT RELEASE A FINAL VERSION OF SUCH CONCEPTS. YOUR EXPERIENCE WITH USING SUCH CONCEPTS IN A PHYSICAL ENVIRONMENT MAY ALSO BE DIFFERENT.

THIS DOCUMENT, AND THE CONCEPTS AND TRAINING PROVIDED HEREIN, IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING (WITHOUT LIMITATION) THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NONINFRINGEMENT. MICROSOFT DOES NOT MAKE ANY ASSURANCES OR REPRESENTATIONS WITH REGARD TO THE ACCURACY OF THE RESULTS, THE OUTPUT THAT DERIVES FROM USE OF THIS DOCUMENT OR THE CONCEPTS, OR THE SUITABILITY OF THE CONCEPTS OR INFORMATION CONTAINED IN THIS DOCUMENT FOR ANY PURPOSE.

MICROSOFT POWER VIRTUAL AGENTS (1) IS NOT INTENDED OR MADE AVAILABLE AS A MEDICAL DEVICE FOR THE DIAGNOSIS OF DISEASE OR OTHER CONDITIONS, OR IN THE CURE, MITIGATION, TREATMENT OR PREVENTION OF DISEASE, OR OTHERWISE TO BE USED AS A COMPONENT OF ANY CLINICAL OFFERING OR PRODUCT, AND NO LICENSE OR RIGHT IS GRANTED TO USE MICROSOFT POWER VIRTUAL AGENTS FOR SUCH PURPOSES, (2) IS NOT DESIGNED OR INTENDED TO BE A SUBSTITUTE FOR PROFESSIONAL MEDICAL ADVICE, DIAGNOSIS, TREATMENT, OR JUDGMENT AND SHOULD NOT BE USED AS A SUBSTITUTE FOR, OR TO REPLACE, PROFESSIONAL MEDICAL ADVICE, DIAGNOSIS, TREATMENT, OR JUDGMENT, AND (3) SHOULD NOT BE USED FOR EMERGENCIES AND DOES NOT SUPPORT EMERGENCY CALLS. ANY CHATBOT YOU CREATE USING MICROSOFT POWER VIRTUAL AGENTS IS YOUR OWN PRODUCT OR SERVICE, SEPARATE AND APART FROM MICROSOFT POWER VIRTUAL AGENTS. YOU ARE SOLELY RESPONSIBLE FOR THE DESIGN, DEVELOPMENT, AND IMPLEMENTATION OF YOUR CHATBOT (INCLUDING INCORPORATION OF IT INTO ANY PRODUCT OR SERVICE INTENDED FOR MEDICAL OR CLINICAL USE) AND FOR EXPLICITLY PROVIDING END USERS WITH APPROPRIATE WARNINGS AND DISCLAIMERS PERTAINING TO USE OF YOUR CHATBOT. YOU ARE SOLELY RESPONSIBLE FOR ANY PERSONAL INJURY OR DEATH THAT MAY OCCUR AS A RESULT OF YOUR CHATBOT OR YOUR USE OF MICROSOFT POWER VIRTUAL AGENTS IN CONNECTION WITH YOUR CHATBOT, INCLUDING (WITHOUT LIMITATION) ANY SUCH INJURIES TO END USERS.