

# Integrating Service Now Virtual Agent with Chat-GPT Open AI

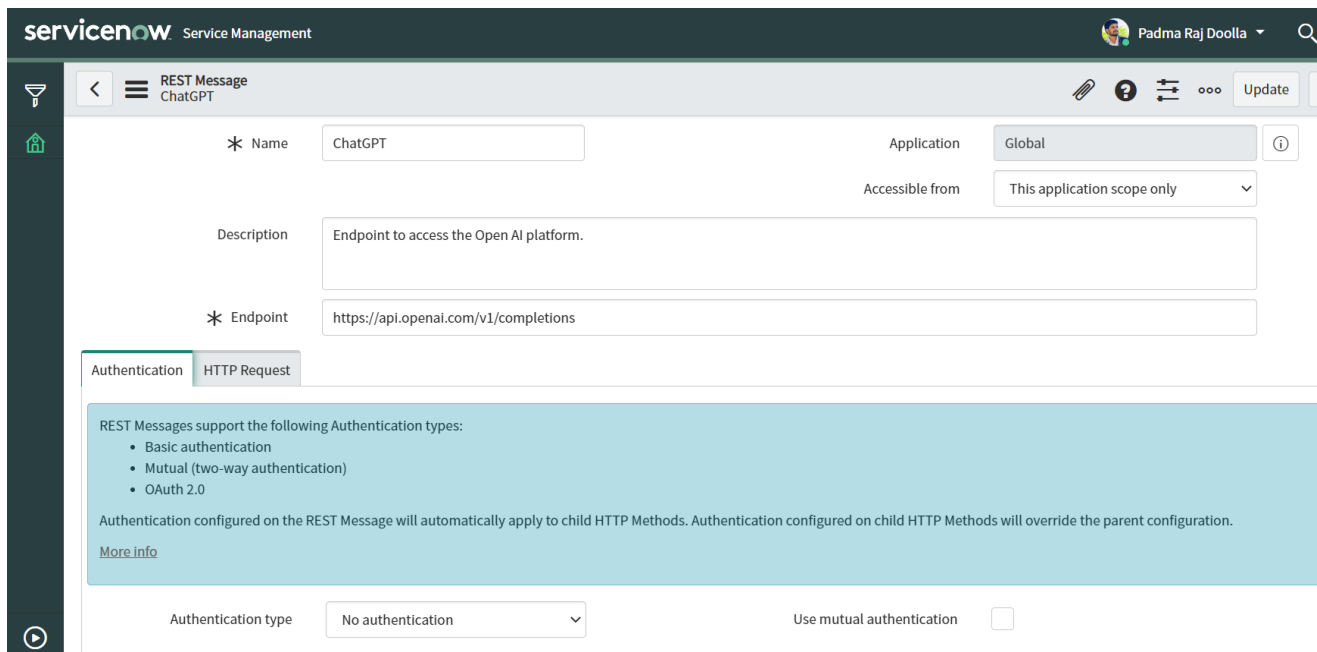
**Step1:** Accessing Open AI platform, follow the below steps

1. Register with Open AI platform for accessing the API of new AI models developed by OpenAI.  
<https://platform.openai.com/account/api-keys>
2. After successfully creating your account in OpenAI, simply log in with your credentials and generate an API key.

**Step2:** Create Rest Message in ServiceNow to integrate with Open AI platform, follow the below steps

Navigate to “Rest Message” under “System Web Services”, create a new Rest message with following endpoint.

Endpoint: <https://api.openai.com/v1/completions>



The screenshot shows the ServiceNow 'Service Management' console. The main header includes the 'servicenow' logo and the user 'Padma Raj Doolia'. The left sidebar contains navigation icons. The main content area is titled 'REST Message ChatGPT' and includes a breadcrumb trail. The configuration form has the following fields: 'Name' (ChatGPT), 'Application' (Global), 'Accessible from' (This application scope only), 'Description' (Endpoint to access the Open AI platform.), and 'Endpoint' (https://api.openai.com/v1/completions). Below these fields are tabs for 'Authentication' and 'HTTP Request'. The 'Authentication' tab is active, showing a list of supported authentication types: Basic authentication, Mutual (two-way authentication), and OAuth 2.0. A note states that authentication configured on the REST Message will automatically apply to child HTTP Methods, and authentication configured on child HTTP Methods will override the parent configuration. At the bottom, there is a dropdown for 'Authentication type' set to 'No authentication' and a checkbox for 'Use mutual authentication' which is unchecked.

Create a new “POST” HTTP method under Rest message and update the following.

HTTP Headers:

Authorization : Bearer “Api-key” (Generated in Open AI platform)

Content-Type : application/json

Update the content as stated following where temperature(parameter which is the focus degree of the ChatGPT model), max\_tokens(supports a maximum of 4,000 tokens approximately 3,000 words), model(Model referred to

ServiceNow

Service Management

Padma Raj Doolla

Q

<

HTTP Method

askChatGPTOpenAI

Update

REST Message

ChatGPT

Application

Global

\* Name

askChatGPTOpenAI

\* HTTP method

POST

Endpoint

https://api.openai.com/v1/completions

Authentication

HTTP Request

Use MID Server

HTTP Headers

1 to 2 of 2

|   | Name          | Value   |
|---|---------------|---|
| ✗ | Authorization | Bearer sk-proj- <u>daVincI-2024-08-01</u> ... |
| ✗ | Content-Type  | application/json                              |

servicenow

Service Management

Padma Raj Doolla

HTTP MethodaskChatGPTOpenAi

Update

|             |                                |                          |                                  |
|-------------|--------------------------------|--------------------------|----------------------------------|
| <div></div> | <div></div>                    | <div>Authorization</div> | <div>Bearer sk-<div></div></div> |
| <div></div> | <div></div>                    | <div>Content-Type</div>  | <div>application/json</div>      |
| <div></div> | <div>Insert a new row...</div> |                          |                                  |

HTTP Query Parameters

|             |                                |                  |                    |
|-------------|--------------------------------|------------------|--------------------|
| <div></div> | <div>Name</div>                | <div>Value</div> | <div>Order ▲</div> |
| <div></div> | <div>Insert a new row...</div> |                  |                    |

Content

{  
 "model": "\${model}",  
 "prompt": "\${prompt}",  
 "temperature": \${temperature},  
 "max\_tokens": \${max\_tokens}  
}

servicenow Service Management

HTTP Method  
askChatGPTOpenAi

[Auto-generate variables](#)  
[Preview Script Usage](#)  
[Set HTTP Log level](#)  
[Test](#)

Variable Substitutions (4) Test Runs

Variable Substitutions New Search Name Search 1 to 4 of 4

Method = askChatGPTOpenAi

| Name        | Escape type | Test value         |
|-------------|-------------|--------------------|
| max_tokens  | No escaping | 1024               |
| model       | No escaping | text-davinci-003   |
| prompt      | No escaping | What is ServiceNow |
| temperature | No escaping | 0.5                |

Actions on selected rows...

**Step3:** Create Script include to invoke the rest message method "askChatGPTOpenAi" to integrate with OpenAi platform..

servicenow Service Management

Script Include  
ChatGPTOpenAi

Name ChatGPTOpenAi Application Global

API Name global.ChatGPTOpenAi Accessible from This application scope only

Client callable ☐ Active ☒

Description askChatGPTOpenAi : function invokes the Rest Message method "askChatGPTOpenAi" to integrate with OpenAi platform.

servicenow Service Management

Script Include  
ChatGPTOpenAi

Script

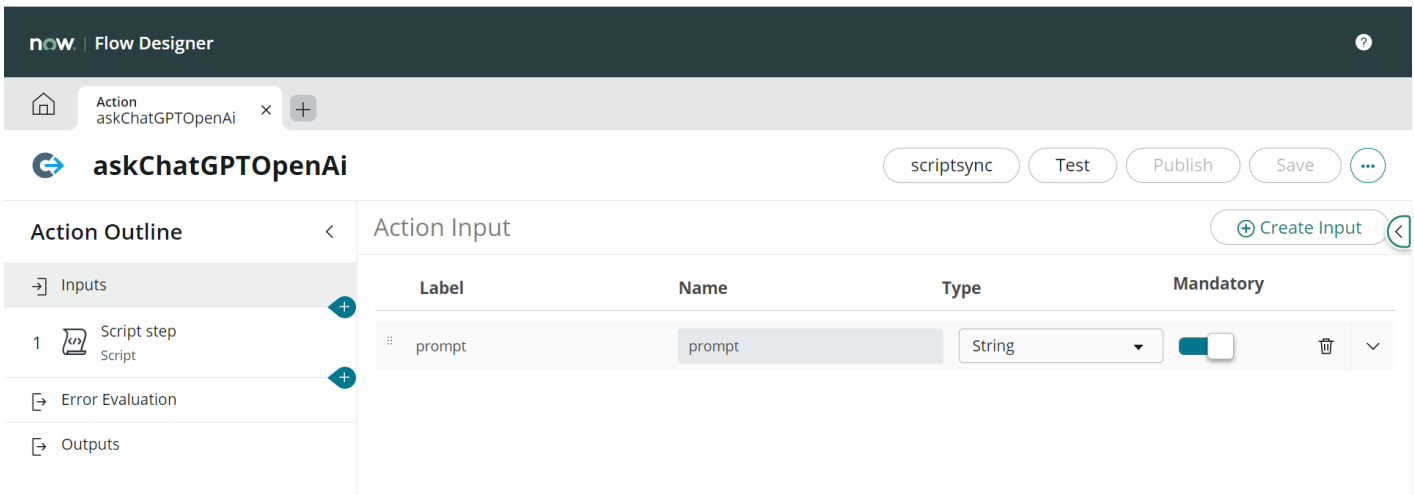
```

1 var ChatGPTOpenAi = Class.create();
2 ChatGPTOpenAi.prototype = {
3   initialize: function() {},
4
5   askChatGPTOpenAi: function(promptMessage) {
6     var request = new sn_ws.RESTMessageV2('ChatGPT', 'askChatGPTOpenAi');
7     var temperature = 0.5; //set temperature parameter which is the focus degree of the ChatGPT model
8     var max_tokens = 1024; //supports a maximum of 4,000 tokens (approximately 3,000 words)
9     var model = 'text-davinci-003'; //Model referred to as "GPT 3.5"
10
11     request.setStringParameterNoEscape('prompt', promptMessage);
12     request.setStringParameterNoEscape('model', model);
13     request.setStringParameterNoEscape('temperature', temperature);
14     request.setStringParameterNoEscape('max_tokens', max_tokens);
15
16     var response = request.execute();
17     var responseBody = response.getBody();
18     var responseObj = JSON.parse(responseBody);
19
20     var chatGptAnswer = responseObj.choices[0].text;
21     return chatGptAnswer;
22   },
23
24   type: 'ChatGPTOpenAi'
25 };
26

```

#### Step4: Create Flow-Designer Action as following

Action Inputs “prompt” with type “String”.

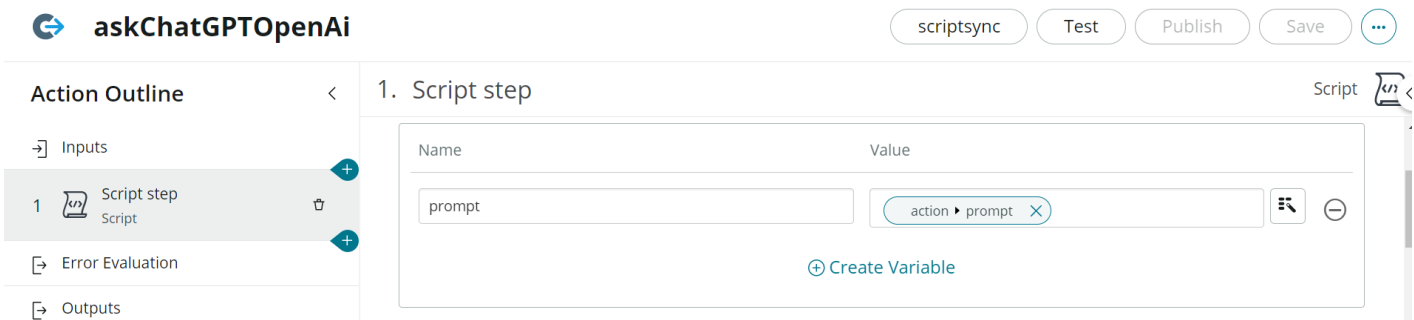


The screenshot shows the 'askChatGPTOpenAi' action configuration in the Flow Designer. The 'Action Input' section is active, displaying a table with one input:

| Label  | Name   | Type   | Mandatory                           |
|--------|--------|--------|-------------------------------------|
| prompt | prompt | String | <input checked="" type="checkbox"/> |

Buttons for 'scriptsync', 'Test', 'Publish', 'Save', and a menu icon are visible at the top right. The 'Action Outline' on the left shows the 'Script step' selected.

Script Step to invoke the script include function with Input variables and output variables which will further invoke the integration with OpenAI  
Input Variables

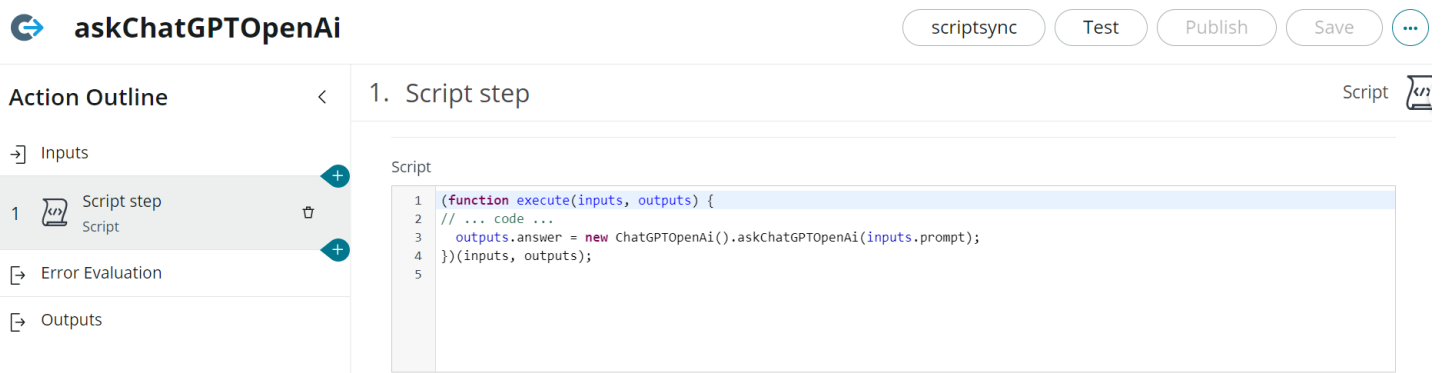


The screenshot shows the 'askChatGPTOpenAi' action configuration in the Flow Designer. The 'Script step' is active, displaying the 'Name' and 'Value' fields for the 'prompt' input variable. The 'Value' field contains the expression 'action > prompt'.

| Name   | Value           |
|--------|-----------------|
| prompt | action > prompt |

Buttons for 'scriptsync', 'Test', 'Publish', 'Save', and a menu icon are visible at the top right. The 'Action Outline' on the left shows the 'Script step' selected.

Script

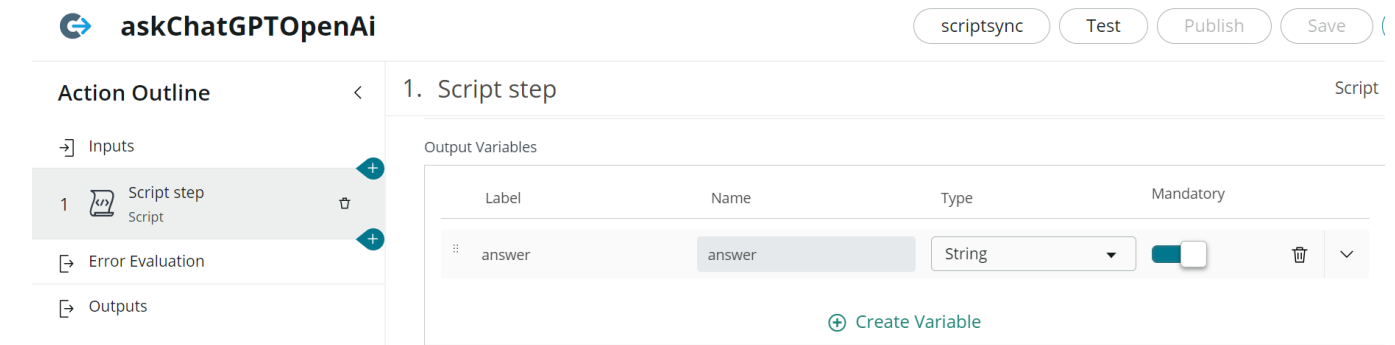


The screenshot shows the 'askChatGPTOpenAi' action configuration in the Flow Designer. The 'Script step' is active, displaying the 'Script' editor with a JavaScript function:

```
1 (function execute(inputs, outputs) {  
2 // ... code ...  
3 outputs.answer = new ChatGPTOpenAi().askChatGPTOpenAi(inputs.prompt);  
4 })(inputs, outputs);  
5
```

Buttons for 'scriptsync', 'Test', 'Publish', 'Save', and a menu icon are visible at the top right. The 'Action Outline' on the left shows the 'Script step' selected.

Output Variables



The screenshot shows the 'askChatGPTOpenAi' action configuration in the Flow Designer. The 'Script step' is active, displaying the 'Output Variables' section with one output:

| Label  | Name   | Type   | Mandatory                           |
|--------|--------|--------|-------------------------------------|
| answer | answer | String | <input checked="" type="checkbox"/> |

Buttons for 'scriptsync', 'Test', 'Publish', 'Save', and a menu icon are visible at the top right. The 'Action Outline' on the left shows the 'Script step' selected.

Action Output to store the response received from Open AI.

The screenshot shows the configuration interface for the 'askChatGPTOpenAi' action. On the left, the 'Action Outline' sidebar lists 'Inputs', 'Script step Script', 'Error Evaluation', and 'Outputs'. The main area, titled 'Action Output', contains a table with two rows:

| Label         | Name              | Type   | Mandatory                           |  |
|---------------|-------------------|--------|-------------------------------------|--|
| answer        | answer            | String | <input checked="" type="checkbox"/> |  |
| Action Status | __action_status__ | Object | <input type="checkbox"/>            |  |

Buttons at the top right include 'scriptsync', 'Test', 'Publish', 'Save', and a menu icon. The 'Action Output' header has '+ Create Output' and 'Exit Edit Mode' buttons.

**Step5:** Create a Virtual Agent topic “Ask ChatGPT” in Virtual agent designer.

The screenshot shows the 'Virtual Agent Designer' interface. The left sidebar lists 'Virtual Agent' options: 'Designer', 'Topic Recommendations', 'Recommendation Settings', 'Categories', 'Small Talk Definitions', 'Custom Control Definitions', and 'Conversational Analytics'. The main area has a search bar with 'ask' entered and a 'Test Active Topics' button. Below are filters for 'Type', 'Category', 'Status', and 'Created by me', along with a 'Sort by' dropdown set to 'Name'. A 'Create' button is shown in a dashed box, and a topic card for 'Ask ChatGPT' (Published an hour ago) is displayed.

Following are the Nodes :

User Question: Text Input to receive the prompt from End User.

Decision: Either to End the Conversation or send the input prompt to “AskChatGPT”

AskChatGPT: Action Utility to invoke the Flow designer action created in Previous step.



< Virtual Agent Designer

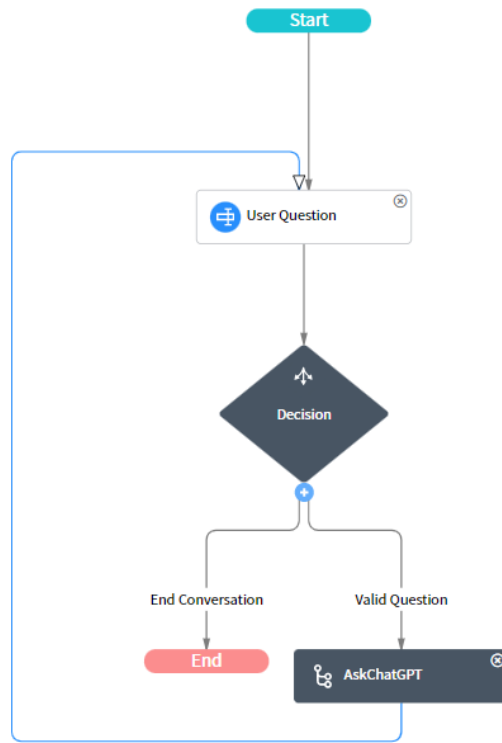
Ask ChatGPT



Flow

Properties

Languages



User Question Node:



Text input



Collect an input from the user. [Learn more](#)

\* Node name

User Question

Variable name: user\_question

\* Prompt ⓘ

`(function execute() { /* Return a quoted string. For e`



\* Input format ⓘ

Text

## Valid Question condition

Condition



All of these conditions must be met

OR

|               |                  |                  |  |                       |    |     |
|---------------|------------------|------------------|--|-----------------------|----|-----|
| User Question | does not contain | end conversation |  | <input type="radio"/> | or | and |
| User Question | does not contain | goodbye          |  | <input type="radio"/> | or | and |
| User Question | does not contain | end chat         |  | <input type="radio"/> | or | and |

or

New Criteria

Cancel

Save

## End Conversation condition

Condition



All of these conditions must be met

OR

|               |          |                  |  |                       |    |     |
|---------------|----------|------------------|--|-----------------------|----|-----|
| User Question | contains | end conversation |  | <input type="radio"/> | or | and |
| User Question | contains | end chat         |  | <input type="radio"/> | or | and |
| User Question | contains | goodbye          |  | <input type="radio"/> | or | and |

or

New Criteria

Cancel

Save

## AskChatGPT Action Utility



Action utility



Trigger automated workflows created in Flow Designer or downloaded as an IntegrationHub spoke. [Learn more](#)

\* Node name

AskChatGPT

\* Invoke Flow Designer object

☒ Action

☐ Subflow

\* Spoke

Global



\* Action

askChatGPTOpenAi



Open in Flow Designer for details: [askChatGPTOpenAi](#)

\* prompt (string)

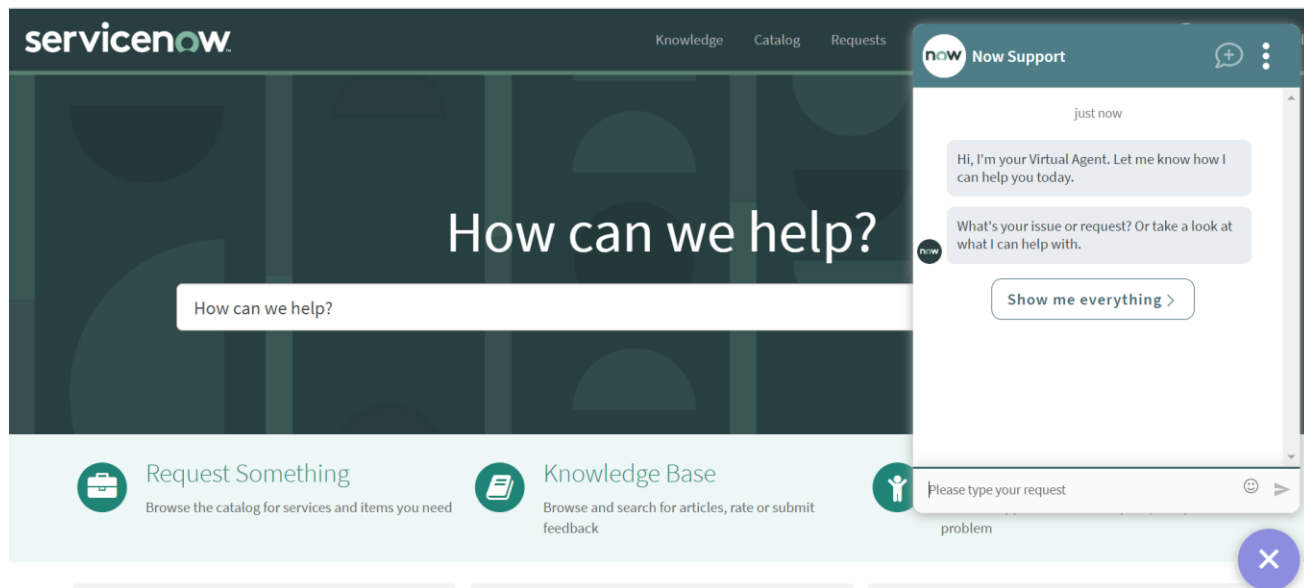
Input Variables → User Question



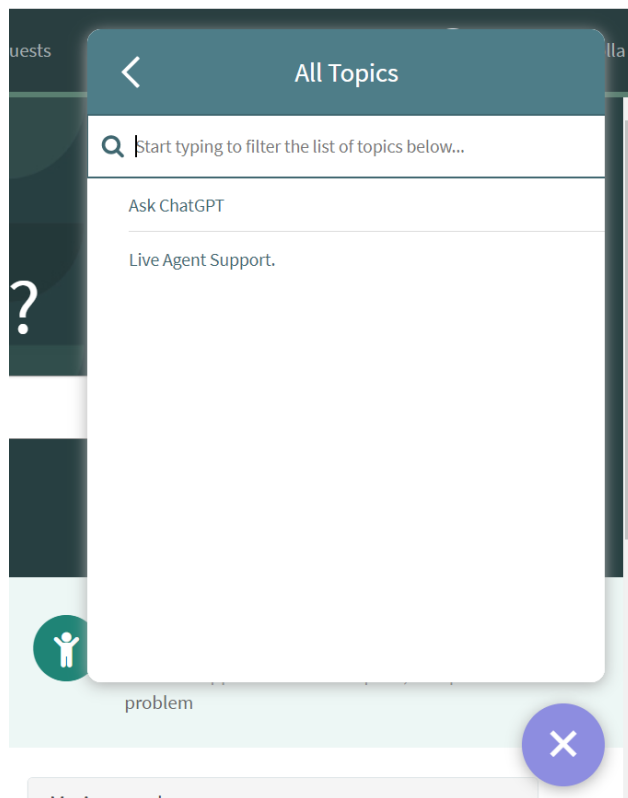
### Output mapping

| Enable                              | Name                           | Variable Name        |
|-------------------------------------|--------------------------------|----------------------|
| <input checked="" type="checkbox"/> | answer (string)                | Answer               |
| <input checked="" type="checkbox"/> | Action Status (object)         | Action Status        |
| <input checked="" type="checkbox"/> | Don't Treat as Error (boolean) | Don't Treat As Error |

## Final OutCome from ServiceNow Virtual Agent

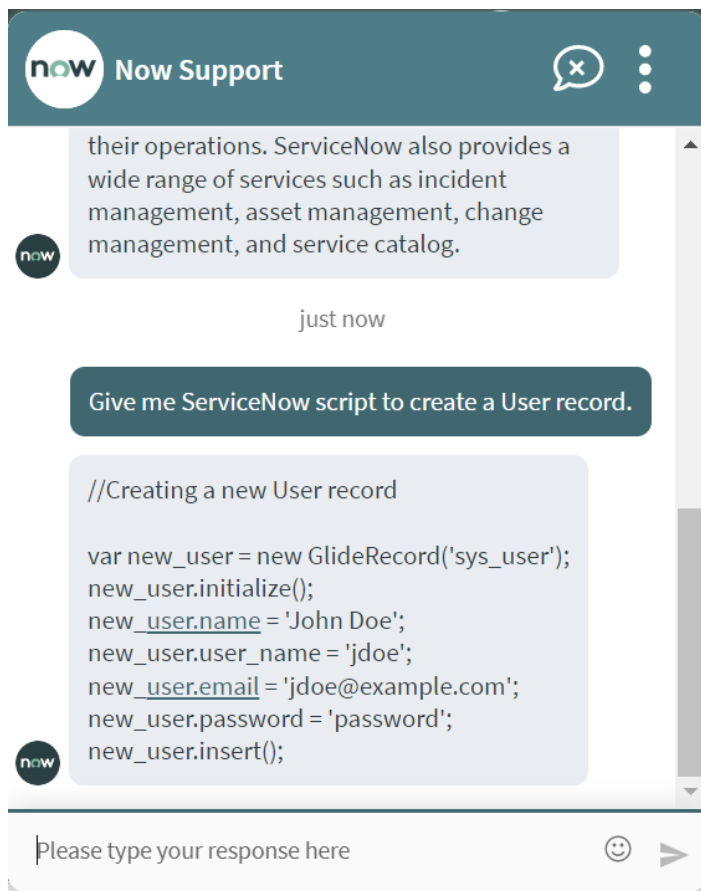
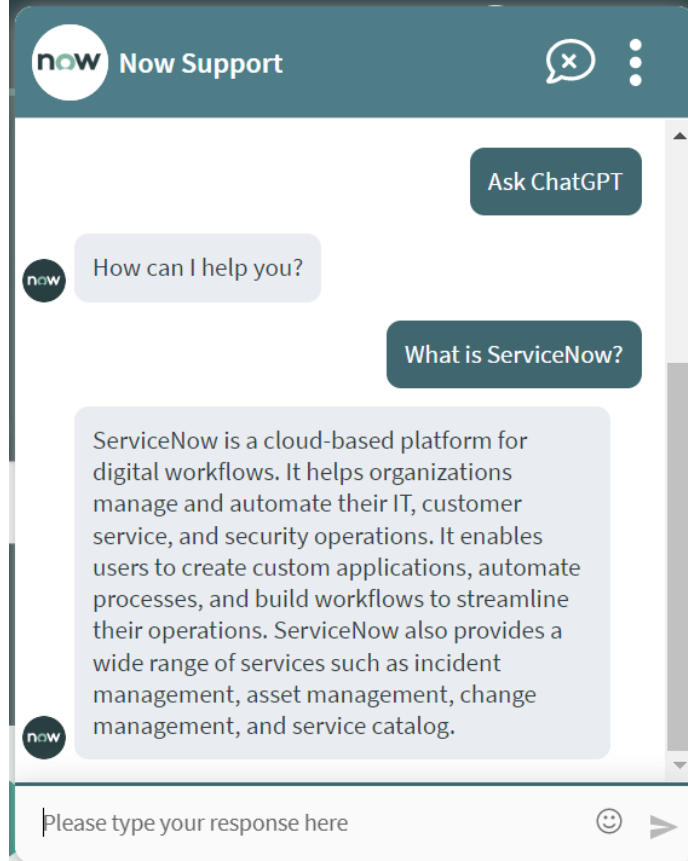


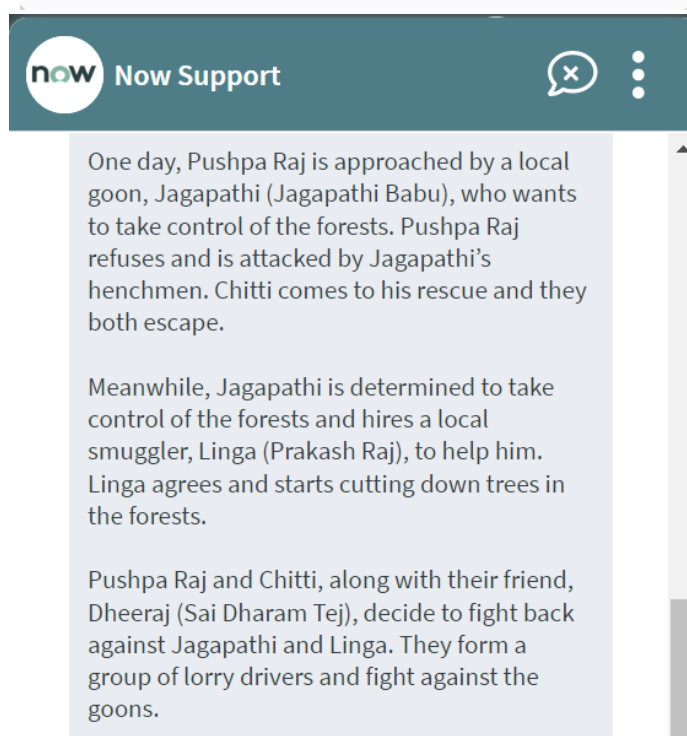
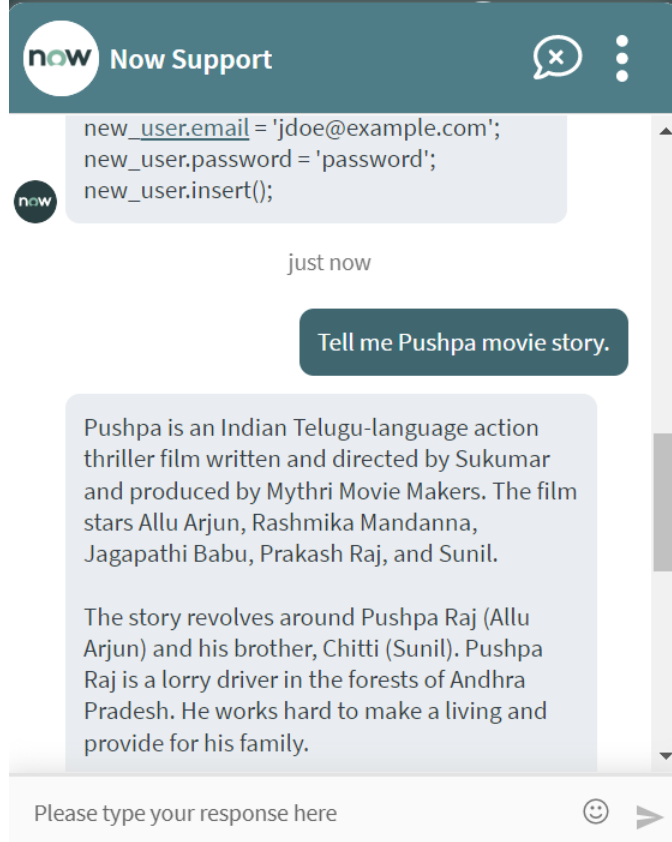
Hit on Show me everything select "Ask ChatGPT" or type in "Ask ChatGPT" and hit enter to ask OpenAI.

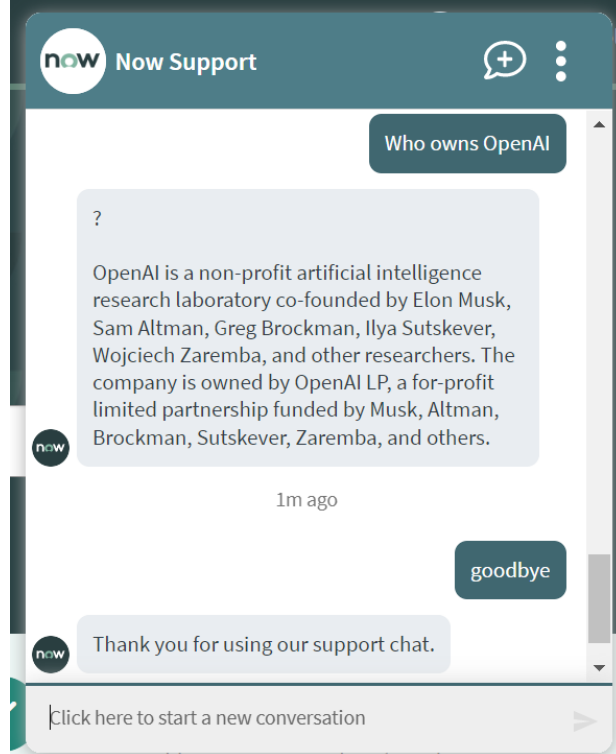


The moment you selected "Ask ChatGPT", it will prompt you "How can I help you?", Now it's time to start conversation with **ChatGPT**. Below are some random questions and you will see the responses from OpenAI









Thank You.