

Informatica[®] Cloud Application Integration September 2024

Azure OpenAl Chat with History

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Preface

Use Azure OpenAl Chat with History to learn how to maintain chat history in a file and use it as context for the next user query and the Large Language Model's (LLM) response. This guide assumes that you have an understanding of the Azure OpenAl Connector concepts.

CHAPTER 1

Introduction to Azure OpenAl Chat with History recipe

The Azure OpenAl Chat with History recipe is initiated using an HTTP request. You can maintain the chat history in a file and use it as context for the next user query and the Large Language Model's (LLM) response.

The process maintains chat history in a file and uses it as context for the last user question and LLM answer. It reads input parameters to check if the file exists, retrieves the last user question and LLM answer, prepares a request, and sends it. If the file doesn't exist, it creates one and writes the user input and LLM answer to it.

You can use the following file formats:

.txt, .xml, .json, .html, .csv, .md, and .yaml

Azure OpenAI Chat with History recipe contents

The Azure OpenAl Chat with History recipe contains a process object, two app connections, and three processes.

The following image shows the assets that the Azure OpenAI Chat with History recipe package contains:

Exp	lore 🗡 All Projects 🔻 > 💼	> 💼 (Azure open AI chat with history				Imj
ure	open Al chat with history (6)						↓↑• 🖓 Find
	Nome	Туре	Updated On	Description	Tags	Status	Published
	👌 AzureAl Chat with History	Process	Sep 16, 2024, 6:31 PM	The process sets a prompt for the AI, saves the response, a		Valid	Published
	AzureOpenAlChatWithHistory	App Connection	Sep 16, 2024, 2:25 PM			Valid	Published
	K FileConnectionChatHistory	App Connection	Sep 16, 2024, 2:27 PM	File connection		Valid	Published
	GenerationConfig_AzureAl	Process Object	Sep 16, 2024, 2:05 PM	Process object to create the prompt request.		Valid	
2	💑 Read History From File	Process	Sep 16, 2024, 2:29 PM	The process reads history from a file if specified.		Valid	Published
	👶 Write Chat History in File	Process	Sep 16, 2024, 2:05 PM	Saves the chat history in a file or creates a new file if one d		Valid	Published

Azure OpenAI Chat with History recipe assets

The following table lists the assets that the Azure OpenAI Chat with History recipe package contains:

Asset Name	Asset Type	Description
AzureOpenAlChatWithHistory	App connection	Azure OpenAI connection
FileConnectionChatHistory	App connection	File connection
GenerationConfig_AzureAl	Process object	Creates the prompt request.
Azure OpenAI Chat with History	Process	The process sets a prompt, saves the response, and uses it as context for future questions. You must set up a Secure Agent to store and retrieve the history.
Read History from File	Process	The process reads history from a file if specified.
Write Chat History in File	Process	The process saves the chat history in a file or creates a new file if one doesn't exist.

Azure OpenAI Chat with History process

The Azure OpenAI Chat with History process is called by an HTTP request. It maintains chat history in a file and uses it as context for the last user question and LLM answer.

The process is called by an HTTP request using the following input parameters configured on the **Input Fields** tab of the **Start** Step:

- User_Prompt
- Path_To_File_With_History
- User_ID

The User_ID is used as the file name.

After configuring the prompt instructions, the process reads the file. If no file exists or the file is empty, the process prepares a request without history, and then creates or updates the file. It writes the last question and its LLM response in the following format:

```
Question_to_LLM: user question
Answer LLM: Azure OpenAI answer
```

If the file contains history, the process uses only the last question and response. The process then updates the file and appends the new question and answer. You can include additional parsing in a specific location and also include new changes to the request.

CHAPTER 2

Using the Azure OpenAI Chat with History recipe

To use the Azure OpenAI Chat with History recipe, you must perform the following steps manually:

- Step 1: Copy and access the recipe
- Step 2: Configure and publish the FileConnectionChatHistory connection
- Step 3: Configure and publish the AzureOpenAIChatWithHistory connection
- Step 4: Configure and publish the processes
- Step 5: Invoke the processes

Step 1: Copy and access the recipe

Copy the pre-configured assets in the recipe to a separate project or folder.

- 1. Open the Azure OpenAl Chat with History recipe and click Use.
- 2. Select the location where you want to copy the recipe, and then click Continue.
- 3. In the **Copying the recipe** dialog box, click **OK**.

It might take some time for the recipe to get copied. You will receive a notification when the recipe is ready for use.

- 4. After the recipe is copied, click **Explore** to access the recipe content.
- Navigate to the project or folder where you copied the recipe or enter the recipe name in the Find box. All the assets in the recipe are displayed as shown in the following image:

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	Nome	Туре	Updated On	Description	Tags	Status	Published
	👌 AzureAl Chat with History	Process	Sep 16, 2024, 6:31 PM	The process sets a prompt for the Al, saves the response, a		Valid	Published
-	AzureOpenAlChatWithHistory	App Connection	Sep 16, 2024, 2:25 PM			Valid	Published
	K FileConnectionChatHistory	App Connection	Sep 16, 2024, 2:27 PM	File connection		Valid	Published
-	GenerationConfig_AzureAl	Process Object	Sep 16, 2024, 2:05 PM	Process object to create the prompt request.		Valid	
	💑 Read History From File	Process	Sep 16, 2024, 2:29 PM	The process reads history from a file if specified.		Valid	Published
	👶 Write Chot History in File	Process	Sep 16. 2024, 2:05 PM	Saves the chat history in a file or creates a new file if one d		Valid	Published

Step 2: Configure and publish the FileConnectionChatHistory connection

Configure the file directory and specify the action to be taken if a file already exists. Then, publish the FileConnectionChatHistory connection.

- 1. Open the FileConnectionChatHistory connection.
- 2. From the Type list, select File.
- 3. From the Run On list, select any Secure Agent.
- 4. On the **Event Targets** tab, in the **Directory** field, enter the directory to store the files. In the **File Exists** field, select **Append**.
- 5. Save, test, and publish the connection.

Step 3: Configure and publish the AzureOpenAIChatWithHistory connection

Configure the endpoint URL and API key in the AzureOpenAIChatWithHistory connection, and then publish the connection.

- 1. Open the AzureOpenAlChatWithHistory connection.
- 2. From the Type list, select AzureOpenAI.
- 3. From the Run On list, select Cloud Server or any Secure Agent.
- 4. In the Connection Properties section, enter values for the following properties:

Property	Description				
Endpoint_URL	The REST API endpoint for Azure OpenAI. You can find this value in the Keys & Endpoint section when examining your resource from the Azure portal. Alternatively, you can find the value in Azure OpenAI Studio > Playground > Code View .				
API_Key	The API key to authenticate Azure OpenAI connection requests. You can find this value in the Keys & Endpoint section when examining your resource from the Azure portal. Alternatively, you can find the value in Azure OpenAI Studio > Playground > Code View .				

5. Save, test, and publish the connection.

Step 4: Configure and publish the processes

Configure the deployment details of the LLM model and publish the processes.

- 1. Open the Read History from File process.
- 2. On the **Start** tab of the **Start** step, select the same Secure Agent that you had selected in the **Run On** field for the **FileConnectionChatHistorydefault** connection.

- 3. Save and publish the process.
- 4. Open the Write Chat History in File process.
- 5. Optionally, in the **Prepare History to save in File** step, click the **Assignments** tab. Open the Expression Editor for the **File_Name** field and enter the format to save the file.

The following image shows the assignments of the File_Name input field:

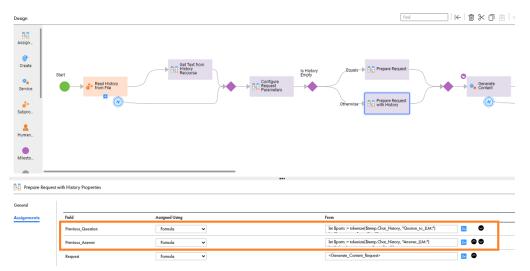
Design		Fin	
Assign			
Create			
*• Service	End		
çe Subpro	BC foreare History BC to save in File We File Writer		
Luman			
Milesto			
Prepare History	save in File Properties		
General			
Assignments	Field Assigned Using	From	
	File_PO Formula	<filewritetask></filewritetask>	
	File_Name Formula	\$input.File_Name ".txt"	

- 6. Save and publish the process.
- 7. Open the Chat with History parent process.
- 8. On the Temp Fields tab of the Start step, enter values for the following fields:
 - In the **api_version** field, enter the API version of the LLM model. Default is **2024-06-01**. You can optionally edit the api version.
 - In the deployment_id field, enter the user-specific deployment ID.
- 9. Optionally, in the **Configure Request Parameters** step, click the **Assignments** tab. Open the Expression Editor for the **Prompt_Configuration** field and enter the prompt instructions as shown in the following sample code:

For the **Prompt_Configuration** field, enter values for the following properties:

Property	Description
maxTokens	Defines the maximum number of tokens that the model can generate in its response. Setting a limit ensures that the response is concise and fits within the desired length constraints.
temperature	Controls the randomness of the model's output. A lower value makes the output more deterministic, while a higher value increases randomness and creativity. For example, a temperature of 0.9 balances between deterministic and creative outputs.
topP	An alternative to sampling with temperature where the model considers the results of the token with topP probability. For example, if topP is set to 0.1, the model considers only the top 10% most probable tokens at each step.

The following image shows the assignments of the **Previous_Question** and **Previous_Answer** input fields:



10. Save and publish the process.

Step 5: Invoke the process

The Chat with History process is called by an HTTP request. When you invoke the process, it creates a file with history after your first question.

To invoke the Chat with History process, perform the following steps:

- 1. Open the Chat with History process and click Actions > Properties Detail > Copy Service URL.
- Open a text editor and add the input fields and values to the service URL as shown in the following format:

```
<Cloud Application Integration POD URL>/active-bpel/public/rt/<API_name>?
User_Prompt=<User_Prompt>&Path_To_File_With_History=<C:/folder>/&User_ID=<User_ID>
```

3. Open a browser and paste the service URL.