



Informatica® Cloud Application Integration
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GeminiAI Chat with File using Guide

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Preface

Use *GeminiAI Chat with File using Guide* to learn how to ask questions to the Gemini Large Language Model (LLM) based on an uploaded file's contents using a guide. This guide assumes that you have an understanding of the Gemini Connector concepts.

CHAPTER 1

Introduction to GeminiAI Chat with File using Guide recipe

The GeminiAI Chat with File using Guide recipe is based on REST and SOAP APIs. You can ask questions to the Gemini Large Language Model (LLM) based on an uploaded file's contents.

The recipe allows you to upload a file with context, provide a user prompt, read the text from the file, and answer the user's questions based on the contents of the file using the Gemini Large Language Model (LLM).

You can upload files of the following formats:

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

GeminiAI Chat with File using Guide recipe contents

The GeminiAI Chat with File using Guide recipe contains a process object, an app connection, a guide, and two processes.

The following image shows the assets that the GeminiAI Chat with File using Guide recipe package contains:

Name	Type	Updated On	Description	Tags	Status	Published
GeminiChatWithFileServerless	App Connection	Aug 20, 2024, 3	Gemini connection		Valid	Published
Question with Context	Guide	Aug 20, 2024, 4	Guide to ask questions to the LLM about the context from an uploaded file		Valid	Published
Chat with File	Process	Aug 20, 2024, 3	The process allows you to provide a file path and a user prompt. The process reads the text...		Valid	Published
Get Content from File	Process	Aug 20, 2024, 3	The process reads text from a file if specified		Valid	Published
GenerationConfig_PO	Process Object	Aug 20, 2024, 3	Process object to create the prompt request		Valid	

GeminiAI Chat with File using Guide recipe assets

The following table lists the assets that the GeminiAI Chat with File using Guide recipe package contains:

Asset Name	Asset Type	Description
GenerationConfig_PO	Process object	Creates the prompt request.
GeminiChatWithFileServerless	App connection	Gemini connection.
Get Content from File	Process	Subprocess that reads the text from the uploaded file.
Chat with File	Process	Process that reads the text from the uploaded file and answers the user's questions based on the contents of the file using the Gemini Large Language Model (LLM).
Question With Context	Guide	Guide that allows users to ask questions to the LLM about the context from an uploaded file.

CHAPTER 2

Using the GeminiAI Chat with File using Guide recipe

To use the GeminiAI Chat with File using Guide recipe, you must perform the following steps manually:

Step 1: Copy and access the recipe

Step 2: Configure and publish the GeminiChatWithFileServerless connection

Step 3: Configure and publish the processes

Step 4: Publish and run the guide

Copying and accessing the recipe

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

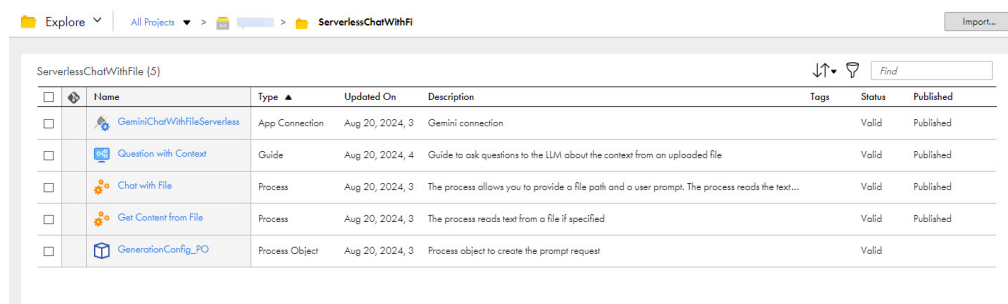
To copy and access the recipe content, perform the following steps:

1. Open the **GeminiAI Chat with File using Guide** 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.
5. 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:



Name	Type	Updated On	Description	Tags	Status	Published
GeminiChatWithFileServerless	App Connection	Aug 20, 2024, 3	Gemini connection		Valid	Published
Question with Context	Guide	Aug 20, 2024, 4	Guide to ask questions to the LLM about the context from an uploaded file		Valid	Published
Chat with File	Process	Aug 20, 2024, 3	The process allows you to provide a file path and a user prompt. The process reads the text...		Valid	Published
Get Content from File	Process	Aug 20, 2024, 3	The process reads text from a file if specified		Valid	Published
GenerationConfig_PO	Process Object	Aug 20, 2024, 3	Process object to create the prompt request		Valid	

Configuring and publishing the GeminiChatWithFileServerless connection

Configure the API key in the GeminiChatWithFileServerless connection, and then publish the connection.

To configure and publish the GeminiChatWithFileServerless connection, perform the following steps:

1. Open the **GeminiChatWithFileServerless** connection.
2. In the **Connection Properties** section, enter the API key in the **API_Key** property. The **API_Key** property authenticates Gemini connection requests.
3. Save and publish the connection.

Configuring and publishing the processes

To configure and publish the processes, perform the following steps:

1. To publish the **Get Content from File** process, click **Actions** in the row that contains the process and select **Publish**.
2. Open the **Chat with File** process.
3. On the **Temp Fields** tab of the Start step, the **Model_LLM** field is set to **gemini-1.5 pro** by default. You can optionally edit the model version. For information about changing the model version, see the Gemini documentation.
4. Optionally, in the **Prepare Request** step, enter the prompt instructions in the **Assignments** field by updating the **Prompt_Configuration** and **Request** fields using the Expression Editor, as shown in the following sample code:

```
For Prompt_Configuration:
<generationConfig>
  <candidateCount>1</candidateCount>
  <maxOutputTokens>500</maxOutputTokens>
  <temperature>0.5</temperature>
  <topP>0.5</topP>
  <topK>2</topK>
</generationConfig>

For Request:
<Generate_Content_Request>
  <contents>
    <parts>
      <text>Answer using only the context provided: {$temp.Content_From_File}.
      Question : {$input.User_Prompt}</text>
    </parts>
    <role>user</role>
  </contents>
  <generationConfig>
    <stopSequences>{$temp.Prompt_Configuration[1]/stopSequences}</stopSequences>
    <candidateCount>{$temp.Prompt_Configuration[1]/candidateCount }</
candidateCount>
    <maxOutputTokens>{$temp.Prompt_Configuration[1]/maxOutputTokens }</
maxOutputTokens>
    <temperature>{$temp.Prompt_Configuration[1]/temperature }</temperature>
    <topP>{$temp.Prompt_Configuration[1]/topP }</topP>
    <topK>{$temp.Prompt_Configuration[1]/topK }</topK>
  </generationConfig>
</Generate_Content_Request>
```

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

Property	Description
candidateCount	Specifies the number of response candidates that the model must generate. For example, if the value is set to 1, the model generates one response. If set to a higher number, the model generates that many alternative responses for the same input.
maxOutputTokens	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 close to 0 makes the output more deterministic, while a higher value close to 1 increases randomness and creativity. For example, if <code>temperature</code> is set to 0.5, the model balances between deterministic and creative outputs.
topP	Determines the cumulative probability threshold for token selection. The model considers the smallest set of tokens whose cumulative probability meets or exceeds <code>topP</code> . For example, if <code>topP</code> is set to 0.1, the model considers only the top 10% most probable tokens at each step.
topK	Limits the number of the highest-probability tokens to consider during response generation. For example, if <code>topK</code> is set to 2, the model considers only the top 2 tokens at each step, controlling output diversity and quality.

5. Save and publish the process.

Publishing and running the guide

You can ask questions to the LLM about the context from an uploaded file.

Note: You can use files of the following formats: `.txt`, `.xml`, `.json`, `.html`, `.csv`, `.md`, and `.yaml`

To publish and run the guide, perform the following steps:

1. Open the **Question with Context** guide.
2. On the **Start** tab of the Start step, ensure that the **Run As** field is set to **Current User**.
3. Save and publish the guide.
4. On the **Actions** menu, click **Run**. Alternatively, you can copy the execution URL from the **Properties Details** dialog box to run the guide.
5. On the **Instructions** page, select the context file that you want to upload from your machine.
6. In the **Enter your query below** field, enter a question based on the file contents.
7. Click **Continue**.
You will receive a response from the LLM.
8. To ask the next question, click **Next Question**.
9. Enter new questions with the same context and click **Continue**.

Note: If the uploaded file is empty or the question is not related to the file context, an error occurs.

You can also use the embed code to embed the guide into an HTML document of a third-party application.