

## Google Cloud Skills Boost for Partners

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Integrate Vertex AI Search and Conversation into Voice and Chat Apps

Course · 5 hours 40% complete

Enable informed decision making with a conversational agent that uses generators and data stores

Conversational Agents with Generative Fallbacks

Create a chat and voice FAQ bot with Conversational Agent Playbooks and Data Stores

Search and Conversational AI in Vertex AI and Conversational Agents: Challenge Lab

Course > Integrate Vertex AI Search and Conversation into Voice and Chat Apps >

Quick tip: Review the prerequisites before you run the lab

[End Lab](#)

01:02:00

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

[Open Google Cloud Console](#)

Username

student-00-555cc4c6a313e

Password

jsnUC2hRkEWv

GCP Project ID

qwiklabs-gcp-03-d7f1c15:

# Create a chat and voice FAQ bot with Conversational Agent Playbooks and Data Stores

Lab 1 hour 30 minutes No cost Intermediate

★★★★☆ Rate Lab

This lab may incorporate AI tools to support your learning.

Lab Instructions and tasks

100/100

Overview

Setup and requirements

Task 1. Enable APIs

Task 2. Create a Conversational Agent Playbook and a data store

Task 3. Test your virtual agent

Task 4. Enable voice calls

Task 5. Enable chat widget

Task 6. Conversation analytics

Congratulations!

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## Overview

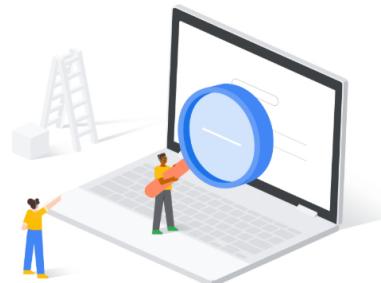
### What you'll build

In this lab, you'll use [Vertex AI Agent Builder data stores](#) to build, configure, and deploy a Conversational Agent that can assist customers who have questions about products and devices in the [Google Store](#), including phones, watches, laptops, smart home devices, and other consumer devices. Additionally, you'll connect your agent to a Conversational Phone Gateway to enable voice calls and a Chat Widget to enable customized chat solutions within your website.

### What are data stores?

Data stores are used by Conversational Agents to find answers for end-user's questions from your data. Data stores are a collection of websites and documents, each of which reference your data.

you can reference data stores from Playbook using tools and from Flows using data store handlers or webhooks. Your customers and end users can then have conversations with the Conversational Agent and ask questions about the content.



In this lab, you will learn how to perform the following tasks:

- Use Conversational Agents to create a Playbook
- Create a data store for your Playbook and add documents to it
- Enable voice and chat experiences for your agent
- Test your agent and simulate customer questions

- View conversation history and analytics for your agent

## Setup and requirements

In this task, you use Qwiklabs and perform initialization steps for your lab.

at no cost.

1. Make sure you signed into Qwiklabs using an **incognito window**.

2. Note the lab's access time (for example, **02:00:00** and make sure you can finish in that time block.

**Tip:** There is no pause feature. You can restart if needed, but you have to start at the beginning.

3. When ready, click **START LAB**.

4. Note your lab credentials. You will use them to sign in to the Google Cloud

**Open Google Console**

**Warning:** When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more](#).

Username	google2876526_student@qwiklabs.n	
Password	TG959yrKDX	
GCP Project ID	qwiklabs-gcp-0855e773352d3560	

[New to labs? View our introductory video!](#)

5. Click **Open Google Console**.

6. Click **Use another account** and copy/paste credentials for **this lab** into the prompts.

7. Accept the terms and skip the recovery resource page.

**Do not click End Lab unless you are finished with the lab or want to restart it. This clears your work and removes the project.**

## Google Cloud console

After you complete the initial sign-in steps, the project dashboard appears.

The screenshot shows the Google Cloud Platform Project Dashboard. At the top, there are tabs for DASHBOARD, ACTIVITY, and CUSTOMIZE. The DASHBOARD tab is selected. The dashboard features several cards:

- Project info:** Shows Project name: Spring ID Barcelona 2401, Project ID: springid18-bcn2401, and Project number: 1096330229841.
- APIs:** Shows Requests (requests/sec) over time, with a note: "No data is available for the selected time frame."
- Google Cloud Platform status:** Shows All services normal and a link to Go to Cloud status dashboard.
- Billing:** Shows a summary of charges.
- Resources:** Shows a message: "This project has no resources".
- Trace:** Shows a message: "No trace data from the past 7 days".
- Error Reporting:** Shows a message: "No sign of any errors. Have you set up Error Reporting?".

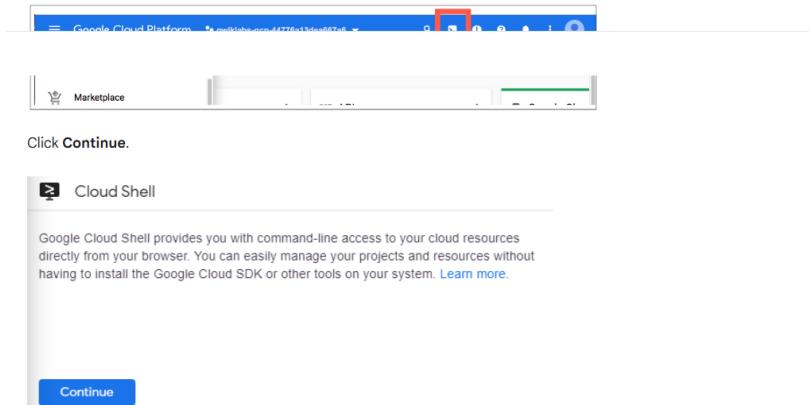
- Click **Select a project**, highlight your Google Cloud project ID, and click **OPEN**

to select your project.

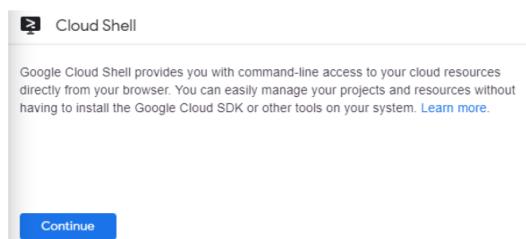
## Activate Cloud Shell

Cloud Shell is a virtual machine that is loaded with development tools. It offers a persistent 5GB home directory and runs on the Google Cloud. Cloud Shell provides command-line access to your Google Cloud resources.

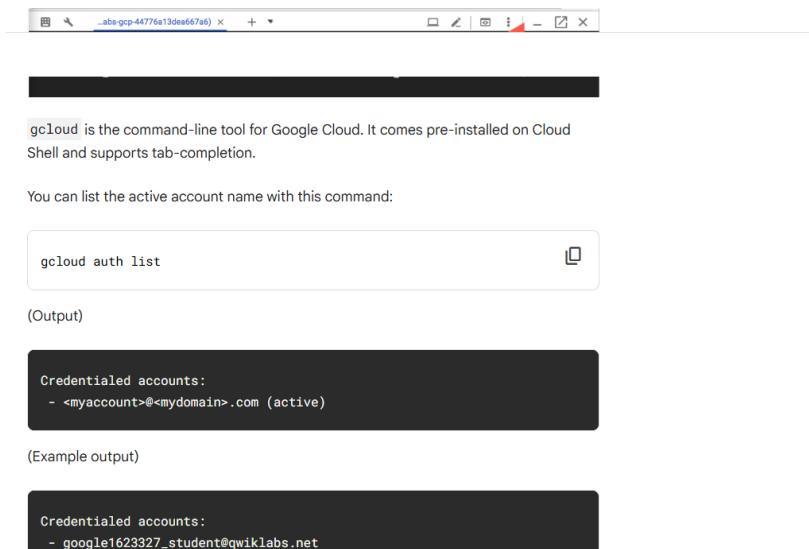
In the Cloud Console, in the top right toolbar, click the **Activate Cloud Shell** button.



Click **Continue**.



It takes a few moments to provision and connect to the environment. When you are connected, you are already authenticated, and the project is set to your *PROJECT\_ID*. For example:



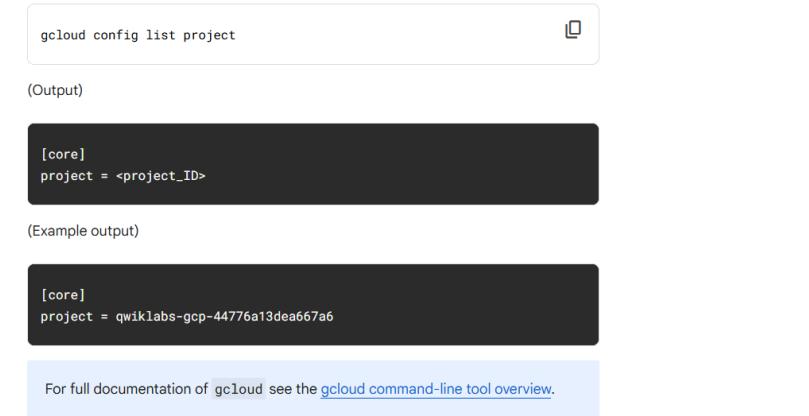
(Example output)

```
Credentialled accounts:  
- <myaccount>@<mydomain>.com (active)
```

(Output)

```
Credentialled accounts:  
- google1623327_student@qwiklabs.net
```

You can list the active account name with this command:



(Example output)

```
[core]  
project = <project_ID>
```

(Output)

```
[core]  
project = qwiklabs-gcp-44776a13dea667a6
```

For full documentation of gcloud see the [gcloud command-line tool overview](#).

## TASK 1. Enable APIs

In this task, you enable the Conversational Agents (prev. known as Dialogflow CX) and Vertex AI Agent Builder APIs in your Google Cloud project.

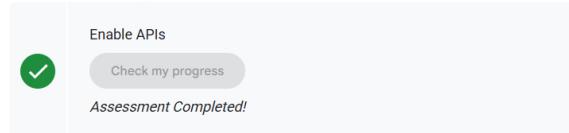
To enable the Conversational Agents APIs, follow these steps:

1. In your browser, navigate to the [Dialogflow API Service Details page](#).
2. If the **Enable** button is visible, then click the **Enable** button to enable the Dialogflow API in your Google Cloud project. If the **Enable** button is not visible, then the API is already enabled in your project.

To enable the Vertex AI Agent Builder APIs, follow these steps:

1. In the Google Cloud console, navigate to the [Vertex AI Agent Builder console](#).

Click **Check my progress** to verify the objectives.



## Task 2. Create a Conversational Agent Playbook and a data store

Now, you'll create a new Conversational Agent Playbook and configure it with a data store. The purpose of the agent that you'll build is to assist customers who have questions about products in the [Google Store](#).

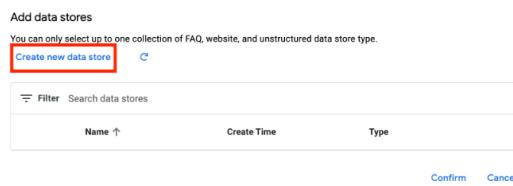
Perform the remaining steps in this lab to create, configure, and deploy a virtual agent that can handle questions and answers using a data store.

1. To create a new **Conversational Agent**, in [Vertex AI Agent Builder Apps Console](#) choose **Conversational agent** as the app type and click **Create**.
2. Click **Create agent**.
3. Select **Build your own** on Get started with Conversational Agents popup.
4. On **Create agent** page, enter a **Display name** as **Google Store**.
5. Select location as **global (Global serving, data-at-rest in US)**.
6. Ensure the default **Conversational start** type is selected as **Playbook**, and then click on **Create** button.
7. Click **+ Data store** under Available tools in Default Generative Playbook page.

**Note:** If you encounter a permission error while accessing the **Data Store** under

8. Click on **Add data stores** under **Data Stores** in the Tools page.

9. Click **Create new data store** in the pop-up window, and you will be redirected to the Agent Builder page.



10. Select **Cloud Storage** as the data source for your data store.



**Website Content**  
Automatically crawl public website content from a list of URLs you define.

**Cloud Storage**  
Import data from your storage bucket.

**API**  
Import data manually by calling the API.

**SELECT** **SELECT** **SEE DOCUMENTATION**

11. Select **Unstructured documents** as the type of data you are importing.

12. Specify the following Google **Cloud Storage folder** that contains sample data for this codelab, and note that the `gs://` prefix is not required:

**Create a Data Store**

**Source** Import data from Cloud Storage  
Specify the data you want to import to your data store.

**Data** What kind of data are you importing?  
 Unstructured documents (PDF, HTML, TXT and more)  
 Structured documents (CSV, JSON, XML, etc.)  
 Linked unstructured documents (JSONL with metadata)

**Configuration**

**FOLDER** **FILE**  
 cloud-training/specialized-training/vertex\_ai\_search\_and\_conversation/google-store **BROWSE**

**CONTINUE** **CANCEL**

**Note:** Currently, in the bucket there are html documents related to various Google Products like: Google Nest Cams, Nest Hub, Nest Audio, Nest Thermostat, Google Pixel 7, Google Smartwatches and Trackers, Pixel 7 Phone cases with variety of colors, Chromecast, Pixel Watch, Google Pixel Watch Woven Band, Doorbell and many other Google Products.

13. Click **Continue**.

14. Specify a **Data store name** as **Google Store**.

15. Click **Create** to create the data store.

16. In the list of data stores, select the newly created data store named **Google Store**.

17. Click on the **Activity** tab to see the progress of the data import.

**Note:** It can take up to 15 minutes for your documents to be available and ready for use by your agent.

18. Once the agent is created, navigate back to the **Conversational Agents Tools** console and refresh the page.

19. Enter the **Google\_store\_tool** in the **Tool name** field and choose **Data store** as the tool type in the drop-down menu.

**Create Tool** **Save**

Using tools, you can connect playbooks to external systems. These systems can augment the knowledge of playbooks and empower them to execute complex tasks efficiently. [Learn more](#)

**Tool name** **Google\_store\_tool**

**Type** **Data store**

**Description** Provide a description of this tool. This description is provided to the model as context informing how the tool is used.

**Description**

**Data stores**

Add data stores **Filter** Search data stores

20. Under **Data Stores**, click on **Add Data Stores**, check the checkbox for **Google Store**, then click **Confirm** and finally, click **Save**.

**Add data stores**

You can only select up to one collection of FAQ, website, and unstructured data store type.

**Create new data store** **C**

**1 data store selected.**

**Filter** Search data stores

Name ↑	Create Time	Type
<input checked="" type="checkbox"/> Google Store	Mar 6, 2025	Unstructured documents

**Confirm** **Cancel**

21. Navigate to the **Playbooks**, then click on **Default Generative Playbook**. Under **Available tools** choose the tool called **Google\_store\_tool** and click **Save**.

Conversational Agents [previous] Project **qwiklabs-gcp-0...** Agent **Google Store** Language **en**

**Default Generative Playbook** **Version history** **Save**

The screenshot shows the 'Create a new app' section of the Vertex AI Conversation app. It includes fields for 'Playbook name\*' (Default Generative Playbook), 'Goal\*' (Default goal), and 'Instructions'. Below these, there's a list of steps with a note about using 'unordered markdown list'. A 'Available tools' section is present, along with 'Data store' and 'Manage all tools' buttons.

Congratulations! You have finished building your knowledge-powered conversational agent that's ready to help your customers, so take a moment to celebrate!

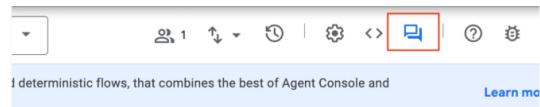
But there's still more work to do to make the bot accessible to your users. In the next section, you'll test your virtual agent and see how good it is at answering user questions about various products in the Google Store.

Click **Check my progress** to verify the objectives.

A modal window titled 'Create a new app' contains a green checkmark icon, a 'Check my progress' button, and the text 'Assessment Completed!'

Testing is an important part of working with conversational agents to find bugs, identify limitations, and simulate a customer experience. You can start an interactive session with your chatbot to see how it responds to various questions that a customer might ask.

1. In the Conversational Agents console within your agent, click **Toggle Simulator** icon to open the Simulator.



2. Type a greeting to your agent such as `Hello`.

3. Ask the agent some questions about various products such as:

- How long does the battery in the Pixel 7 Pro last?

- Can I display my Google Photos on a Nest Hub.

- Ask other questions about doorbells, thermostats, smart lighting, or other devices in the Google Store.

**Note:** If your agent is giving you responses from the default negative intent (e.g., "I'm sorry, I didn't get that." or "Can you rephrase your question?"), then be aware that it can take up to 4 hours for the agent to be ready for use while your domains, URLs, or documents are being indexed. Your documents should be indexed for the sake of this lab within 15 minutes.

A screenshot of the 'Conversational Agents' interface. The top bar shows 'Playbook: Default Generative Playbook', 'Agent: qwiklabs-grp-00...', 'Google Store', and 'Language: en'. The main area displays a conversation between a user ('Hello') and an AI agent ('Hi, how can I help you today?').

Great work! Notice that your virtual agent knows quite a bit about different products in the Google Store since it ingested information from the root domain that you specified earlier. Refer to the documentation for the [agent simulator](#) to learn more about testing your agent.

## Task 4. Enable voice calls

Now that you've tested your agent and are happy with its current level of functionality, you can add a phone gateway to your bot, which will make use of the [Speech-to-Text](#) and [Text-to-Speech](#) capabilities in Google Cloud.

from the sidebar.

- On the **Integrations** page, click **Manage** within the **Conversational Phone Gateway** section.

### Integrations

#### Conversational Phone Gateway

**Conversational Phone Gateway**  
The Conversational Phone Gateway feature provides a telephone interface to your agent. It is used to build conversational IVR (interactive voice response) solutions that integrate with the rest of your call center network. [Learn more](#)



**Manage**



- On the **Phone numbers** page, click **Create new** to start the process of creating a

- Select a country code and click **Request** to continue to the next step.

- Select one of the phone numbers that appears, input a display name, then click **Save**.

- Call your agent using the selected phone number from your own phone and ask it some questions!

- Do the Pixel 7 Pro and Pixel 7 both have face unlock?
- What coverage does Preferred Care provide for a Pixelbook Go laptop?
- Do the Pixel Buds Pro have active noise cancellation?
- Ask other questions about doorbells, thermostats, smart lighting, or other devices in the Google Store.

Congratulations, you gave your virtual agent its own phone number and voice! Refer to the documentation for [Conversational Agents Integrations](#) for more information on other available voice integrations.

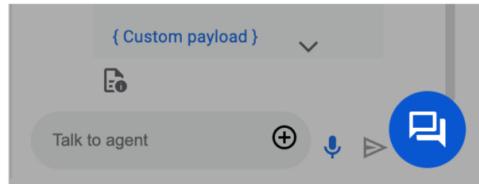
Click **Check my progress** to verify the objectives.

## Task 5. Enable chat widget

## TASK 5. ENABLE CHAT WIDGET

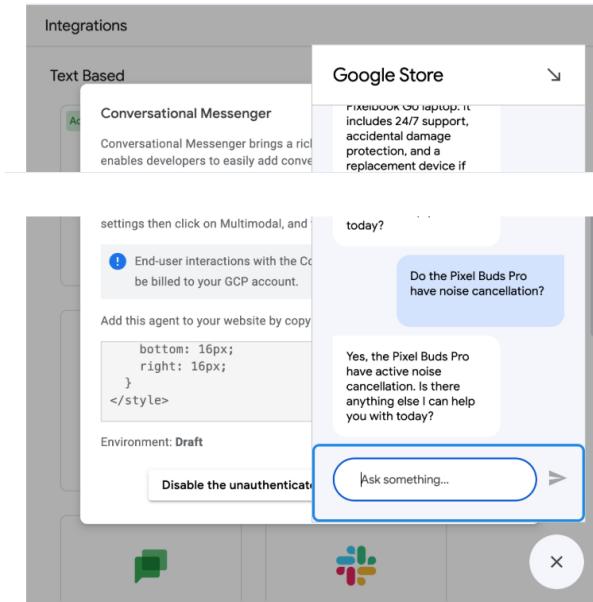
Now that your bot has a phone gateway for voice interactions, let's embed a chat widget on a website so customers can chat with it in addition to making a phone call to speak with it.

2. Click **Connect** under **Conversational Messenger** in the **Text Based** section of available integrations.
3. Click **Enable the unauthenticated API** in the dialog.
4. Click **Try it now** and then click the Conversational Messenger icon on the bottom-right of your window to expand the Conversational Messenger application.



- Do the Pixel 7 Pro and Pixel 7 both have face unlock?
- How does Preferred Care relate to a Pixelbook Go laptop?
- Do the Pixel Buds Pro have noise cancellation?
- Ask other questions about doorbells, thermostats, smart lighting, or other devices in the Google Store.

Now your virtual agent can now handle questions and answers from your customers via chat or voice, whichever they prefer! For more information on other available chat integrations, refer to the documentation for [Conversational Agents Integrations](#).



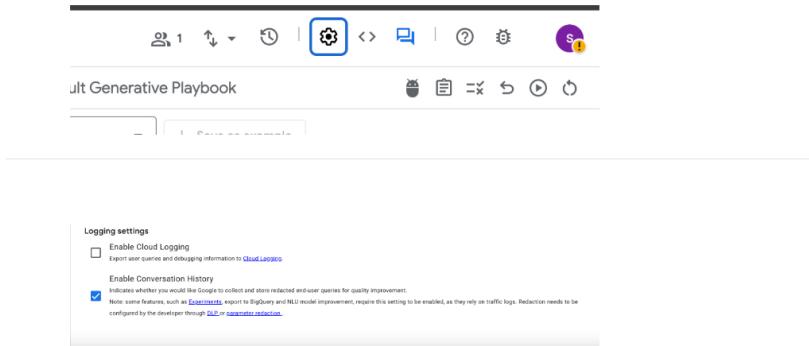
## Task 6. Conversation analytics

When testing your virtual agent, if you find that your bot's answers do not meet your expectations, you can always add more URLs to the data store to improve how your bot handles questions and answers.

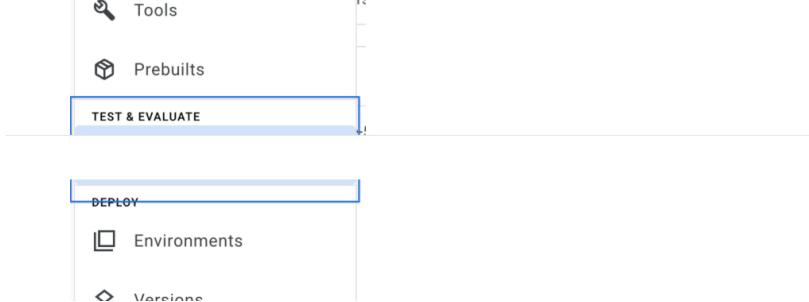
Other than testing many different paths that customers might take, how else can you determine where the problems and friction points are in your virtual agent? Conversation history and analytics can help!

1. In the Conversational Agents console and from within your agent, click **settings** in

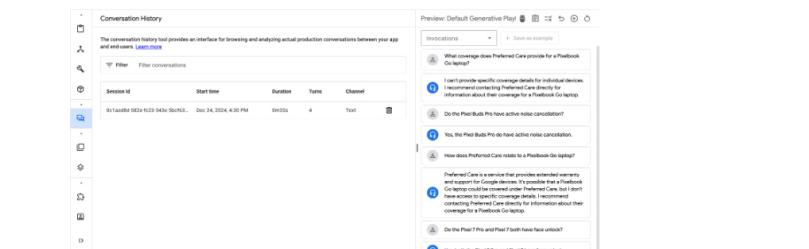
the menu.



3. Have a conversation with your bot via the agent simulator, voice integration, or chat integration, and ask it some questions.
4. After you end the conversation with your agent, in the Conversational Agents console within your agent, find the **TEST & EVALUATE** section in the sidebar and click the **Conversation history** tab.



5. Click one of the recent conversations, then review the conversation and note the duration of the conversation, the responses that were given by the agent, and which intents were matched along the way.



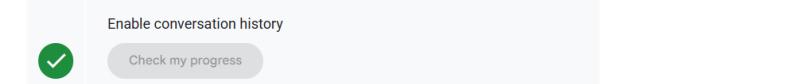
6. In the Conversational Agents console within your agent, click the **Conversation Profiles** tab in the sidebar.

As customers interact with your agent, this page will show a summary of various statistics related to agent requests and responses.

Great! Now you know how to look into specific conversations in more detail and review other metrics related to your agent responses and customer interactions. Refer to the documentation for [conversation history](#) and [conversation analytics](#) for more information on evaluating performance and viewing metrics for your agent.

This data helps you assess how your agent is being used in production and can be used to determine which websites and documents you might want to add to your knowledge base to improve your agent and customer experience.

Click **Check my progress** to verify the objectives.



## Congratulations!

By using data stores in Vertex AI Agent Builder and Conversational Agents, you've

successfully created a virtual agent, added data sources, and deployed a voice-enabled and chat-enabled agent to help your customers!

Your virtual agent can answer hundreds of different questions about products in the Google Store, and you didn't have to go through the manual process of creating a large number of intents, training phrases, response messages, etc.

Feel free to try out other data types in your data stores and explore the other functionality available related to [Vertex AI Agent Builder](#) and [Conversational Agents](#).

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Continue learning about conversational AI and generative AI with these guides and resources:

- [Documentation for Conversational Agents](#)
- [Overview of Agent Builder](#)
- [Documentation for data stores](#)
- [Documentation for Agent Builder](#)
- [Generative AI on Google Cloud](#)

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**Lab Last Tested March 12, 2025**

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