

Configure Contact Center Enterprise Virtual Agent Voice with Dialogflow CX

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Background](#)

[Configure](#)

[Create Google Project and Dialogflow CX Agent](#)

[Create Virtual Agent Profile](#)

[Location - US / Global](#)

[Webex Control Hub Configuration](#)

[CCE Configuration](#)

[Dialogflow CX Agent Welcome Event](#)

[Verify](#)

[Troubleshoot](#)

[Related Information](#)

Introduction

This document describes how to configure Contact Center Enterprise (CCE) Virtual Agent integrated with Google Contact Center Artificial Intelligence (CCAI) Dialogflow Customer Experience version (CX).

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Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Contact Center Enterprise (UCCE) Release 12.6
- Cisco Package Contact Center Enterprise (PCCE) Release 12.6
- Customer Voice Portal (CVP)
- Google Dialogflow CX
- Control Hub
- Postman tool

Components Used

The information in this document is based on these software versions:

- UCCE Release 12.6(1)
- CVP 12.6(1) ES8
- Cloud Connect 12.6(1)
- Cisco Virtual Voice Browser (VVB) 12.6(1) ES 3
- Cisco Unified Call Studio 12.6(1) patch: [Software Download - Cisco Systems - Call Studio Patch](#)
- Google Dialogflow CX
- Control Hub

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background

A [Dialogflow CX agent](#) is a virtual agent that handles concurrent conversations with your end-users. It is a natural language understanding module that understands the nuances of human language. Dialogflow translates end-user text or audio during a conversation to structured data that your apps and services can understand. You design and build a Dialogflow agent to handle the types of conversations required for your system.

A Dialogflow agent is similar to a human call center agent. You train them both to handle expected conversation scenarios, and your training does not need to be overly explicit.

Dialogflow CX, provides a new way to design agents, which changes from a state machine (static conversations) approach to a more “agent”-design one. This gives you clear and explicit control over a conversation, a better end-user experience, and a better development workflow when you build a conversational AI experience for your environment.

 **Note:** Dialogflow CX agent is supported only for OEM (Cisco billed).

Configure

Create Google Project and Dialogflow CX Agent

A Google Project needs to be created and provision with Cisco, in addition a Virtual Agent (Dialogflow CX) needs to be created before you can start the integration with CCE. When a project is provisioned to Cisco you are considered a OEM customer (Cisco billed). If you need information on how to create and provision the project, and how to create the Dialogflow CX agent visit: [Create Google Project and Dialogflow CX Agent](#)

Create Virtual Agent Profile

When you create the Dialogflow Virtual agent you select the Google Data Center location. The steps to create the conversation profile depend on the Dialogflow CX location.

Location - US / Global

Create agent

Display name *

Dialogflow CX Agent Test



Once an agent is created, its [location](#) cannot change.

Location *

us-central1 (Iowa, USA)

us-east1 (South Carolina, USA)

us-west1 (Oregon, USA)

asia-northeast1 (Tokyo, Japan)

asia-south1 (Mumbai, India)

asia-southeast1 (Jurong West, Singapore)

View



Create agent

Display name *

Dialogflow CX Agent Test



Once an agent is created, its [location](#) cannot change.

Location *

australia-southeast1 (Sydney, Australia)

View

northamerica-northeast1 (Montréal, Québec, Canada)

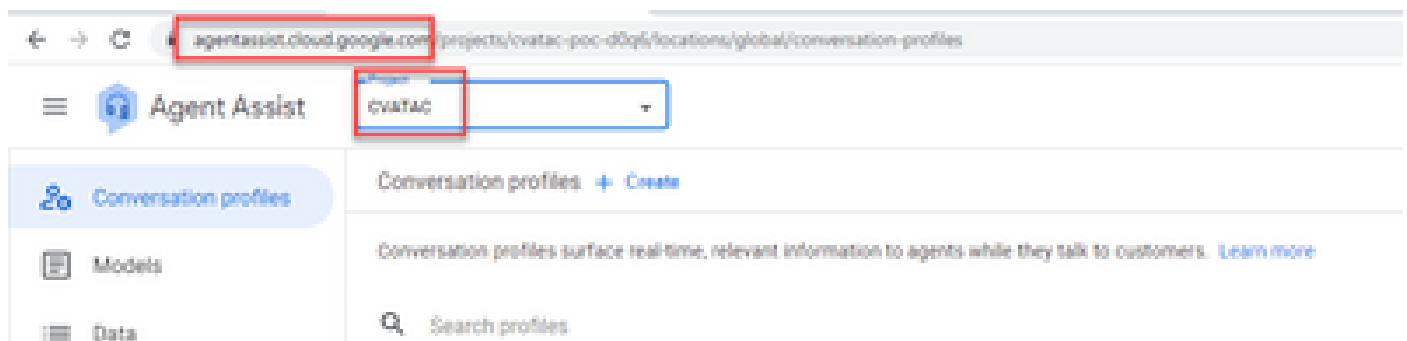
europa-west1 (St. Ghislain, Belgium)

europa-west2 (London, England, UK)

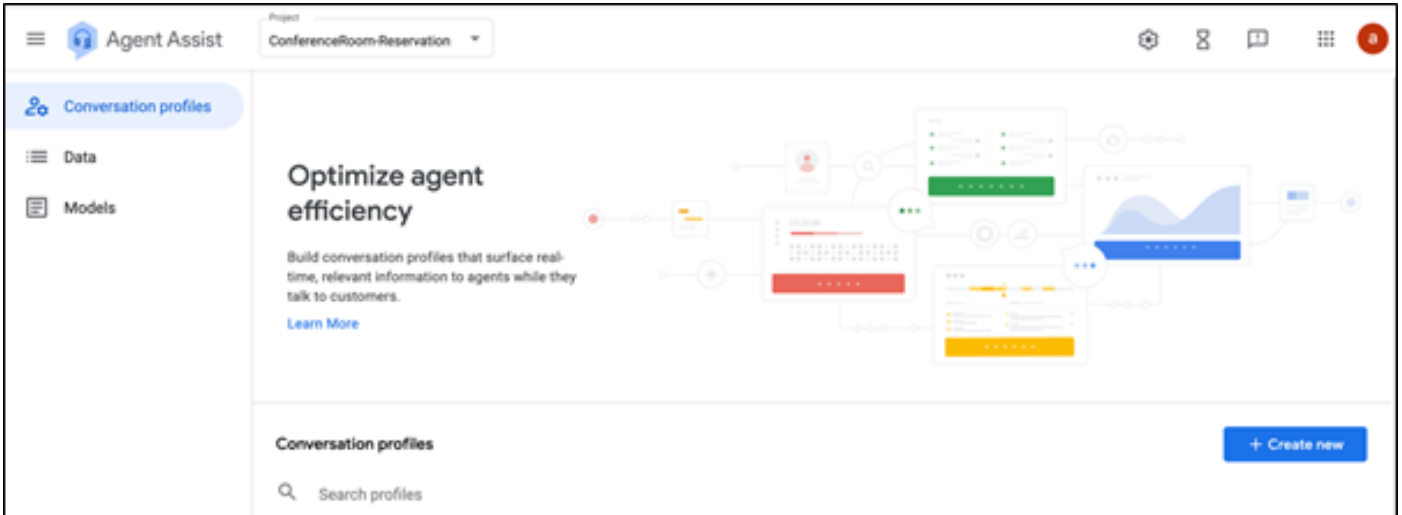
europa-west3 (Frankfurt, Germany)

global (Global serving, data-at-rest in US)

Step 1. Log in to [Google Agent Assist](#) and choose the project which was used when you created the Dialogflow CX agent.



Step 2. Select the **Conversation profiles** and click **Create new** as shown in the image.



Step 3. Ensure the Agent Assist URL uses the same location as the agent you want to create the conversation profile for. In this example, you see that the URL is in location global.



The agent you previously created was on **global** location, so you do not have to change the location in the URL.

Step 4. Add the name and the language.

← New conversation profile

Display name

This will help you find this profile in the conversation profiles list

Display name

CPDialogflowCXagent

Language

Specify a language for your conversation profile

Language *

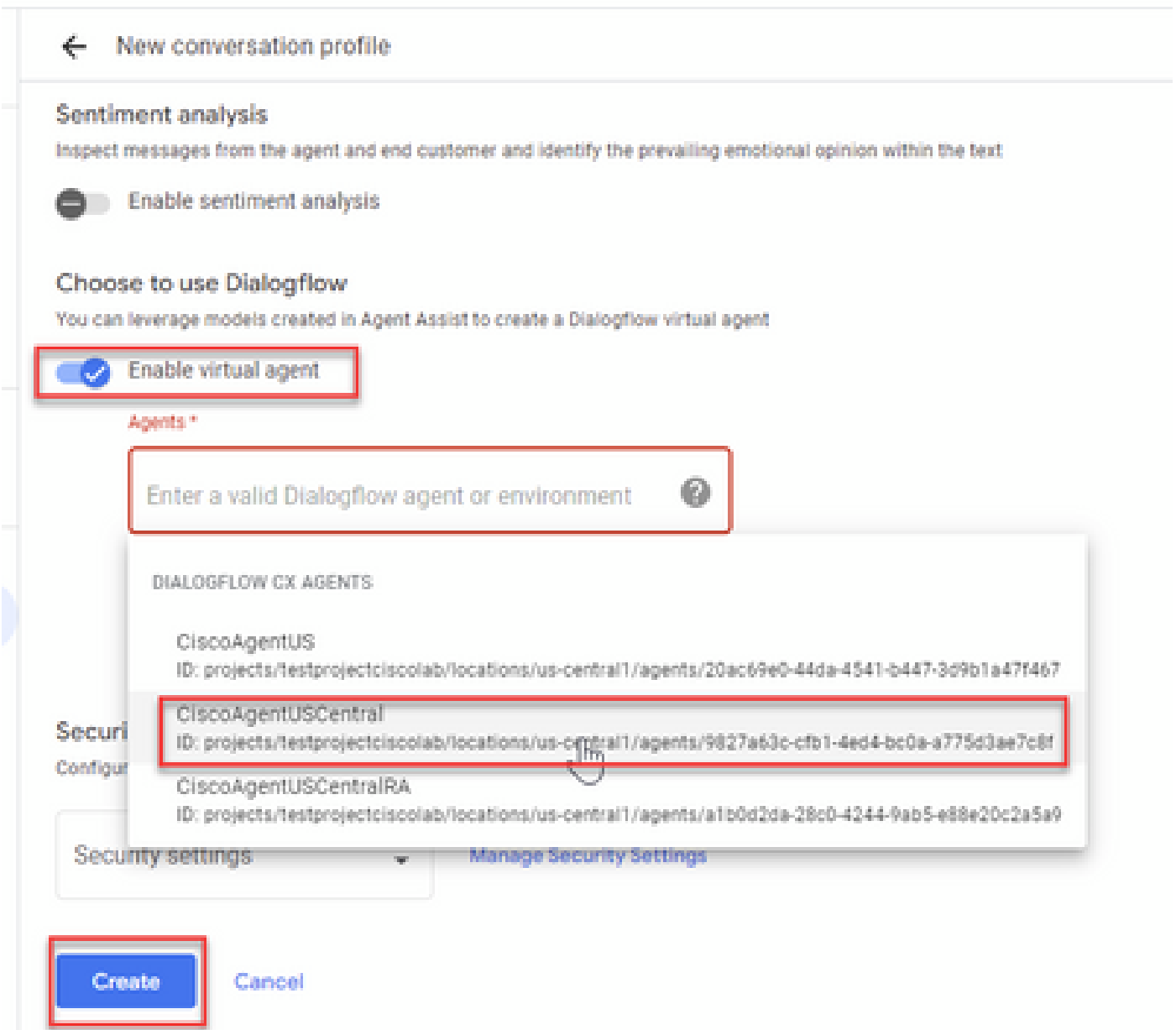
English (United States)

Suggestion types

Select all of the kinds of assistance you would like this profile to surface to agents

- Smart reply**
Surface pre-written responses
- Article suggestion**
Surface articles contextual to the conversation
- FAQs**
Auto-surface answers to customer questions
- Conversation summarization** ⓘ
Generate a summary of a conversation

Step 5. Scroll down and select Enable Virtual agent and then select the Dialogflow CX agent.



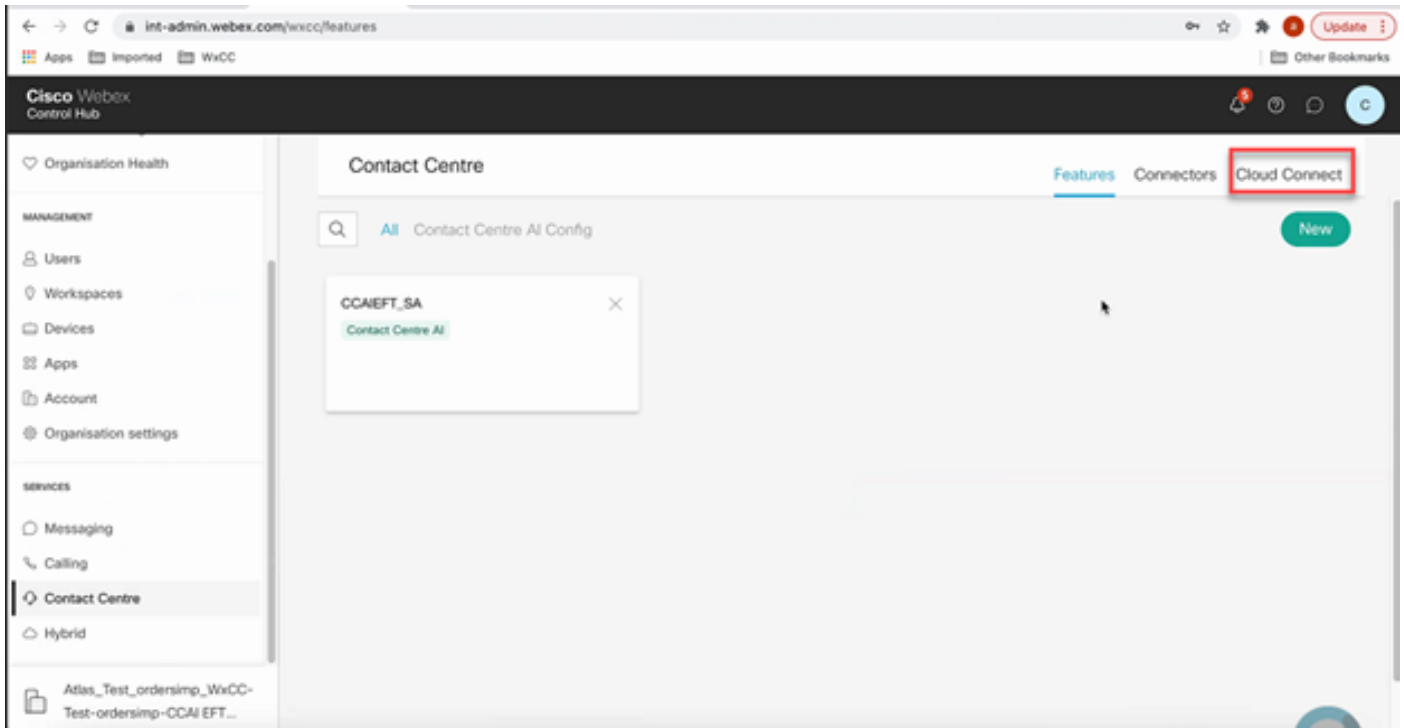
Now the conversation profile is created for the agent.

Webex Control Hub Configuration

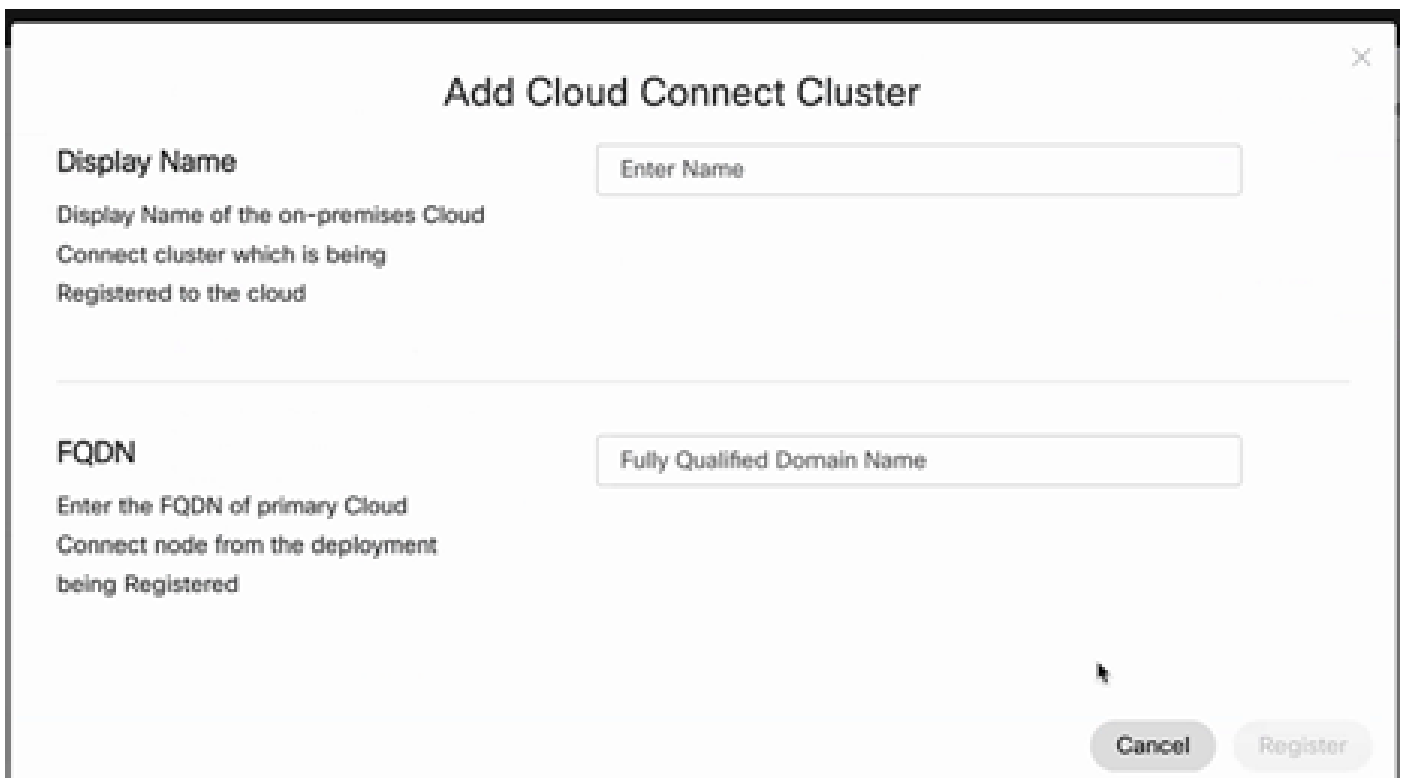
Create a CCAI configuration in Cisco Webex Control Hub at [Control Hub](#) . A CCAI configuration leverages CCAI Connectors to invoke the CCAI services. For details, visit the *Configure Contact Center AI* article at [Webex Help Center](#)

Step 1. Ensure that the Cloud Connect publisher and subscriber are installed. For more information, visit the *Install Cloud Connect* section in [Cisco Unified Contact Center Enterprise Installation and Upgrade Guide](#).

Step 2. Log in to Webex Control Hub. Navigate to Contact Center and click **Cloud Connect**.

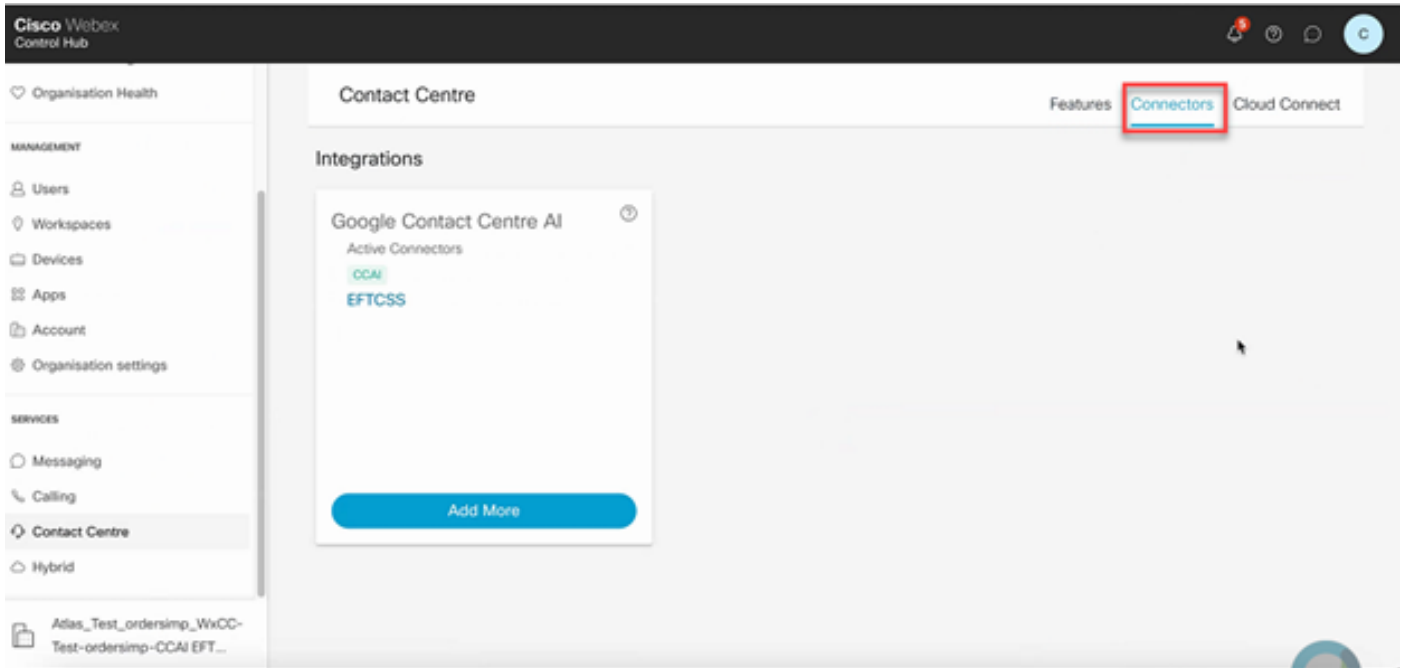


Step 3. On Cloud Connect window enter the name and the Fully Qualified Domain Name (FQDN) of Primary Cloud connect.



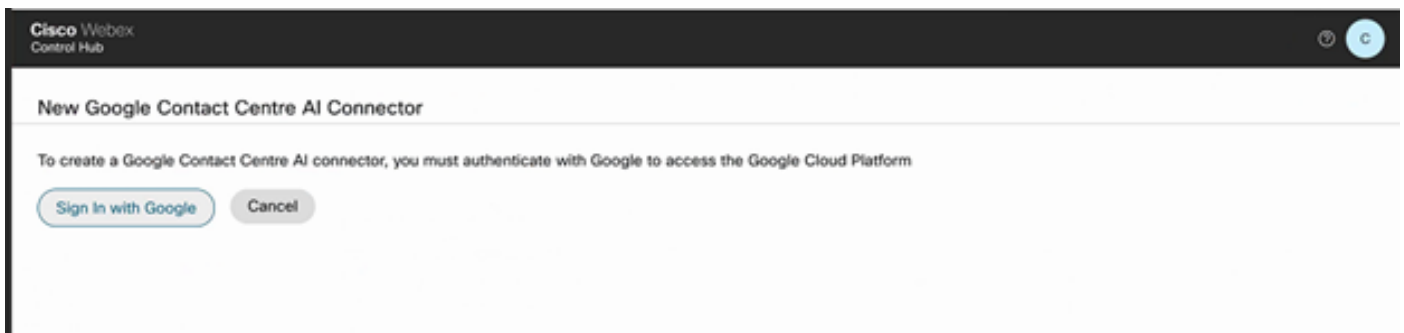
Step 4. On Cloud Connect window enter the name and the FQDN of Primary Cloud connect and click **Register**.

Step 5. Add a Connector. On the Contact Center window select the **Connectors** tab.



Step 6. If a connector is already added and you need to add one more, click **Add More**. Sign in with Google and provide the information requested.

 **Note:** The user account that you sign in with Google must have the owner role of the google project.



Cisco Webex
Control Hub

New Google Contact Centre AI Connector

Name
CCACXTACTOI

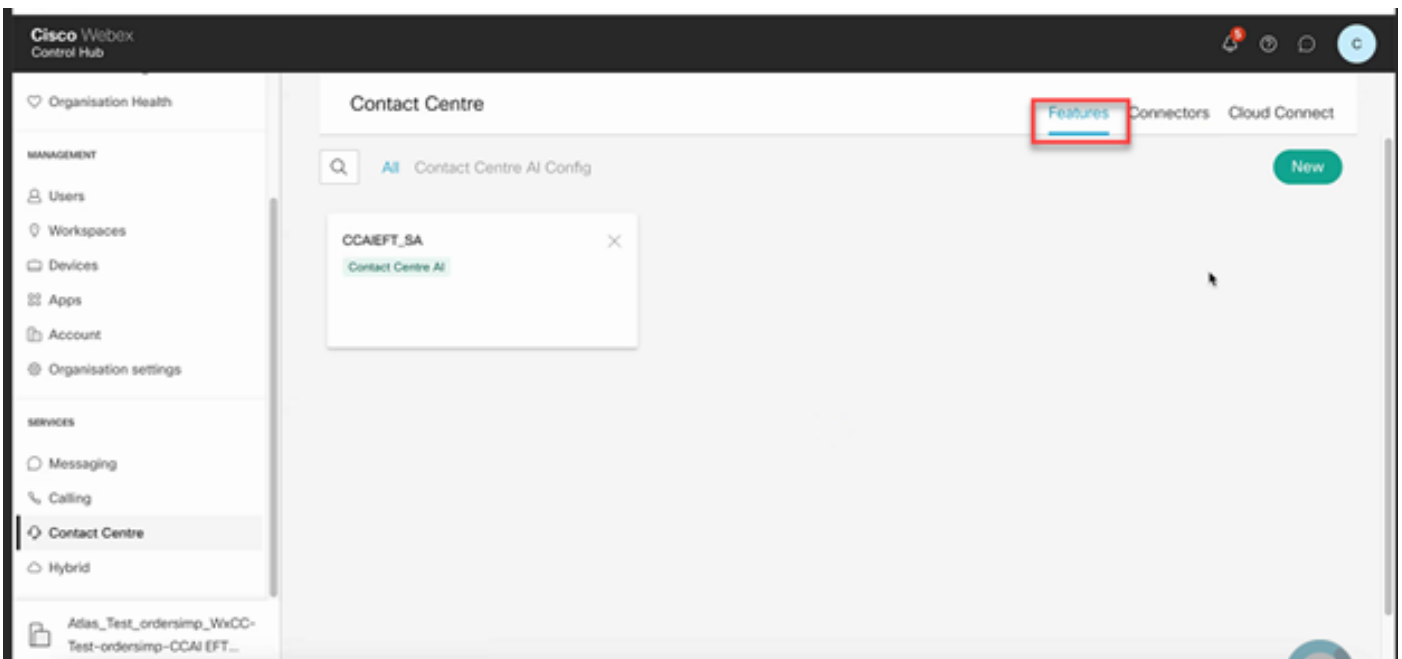
CCAI Project Name
TACProjectRTP2020

Cisco-Provided Project Name
TAC Project

Google Cloud Service Account
ciscotac-global-service-accou...

[Cancel](#) [Save](#)

Step 7. Now add the features. On the **Contact Center** page, click **Features** and click **New**.



Step 8. You are now in the Create a New Contact Center Feature page. Click **Contact Center AI Config**.

Create a new Contact Centre feature



ecto



Contact Centre AI Config

Create configurations that can provide AI capability to your flow.

Step 9. Provide the features information, select the connector already added and the Google Profile created.

The screenshot displays the Cisco Webex Control Hub interface. On the left is a navigation sidebar with sections for 'MANAGEMENT' (Users, Workspaces, Devices, Apps, Account, Organisation settings) and 'services' (Messaging, Calling, Contact Centre, Hybrid). The 'Contact Centre' service is selected. The main content area is titled 'Features' and shows a form for 'New Contact Centre AI Config'. The form includes the following fields:

- Config name:** A text input field.
- Description:** A text area.
- Google Contact Centre AI Connectors:** A dropdown menu with the option 'Select a Connector'.
- Google Conversation profile:** A text input field.

Below the 'Google Conversation profile' field, there is a note: 'A Profile is the Google configuration for the conversation. To find out more, visit [here](#)'.

< Features

Config

CCAICXTACTOIFeature

Description

CCAICXTACTOIFeature

Google Contact Center AI Connectors

CCACXTACTOI

Google Conversation profile *

projects/tacprojectrtp2020/locations/us-central1/conversationProfiles/d

A Profile is the Google configuration for the conversation. To know more visit [here](#)

Cancel Save

In this example, this is the Config id to be used in the call studio application, if this is not the default virtual agent:

AX6y7LMImle_zBsXzeJM

< Features

Edit Contact Center AI Config

ID

AX6y7LMImle_zBsXzeJM

Config Name *

CCAICXTACTOIFeature

Description

CCAICXTACTOIFeature

Google Contact Center AI Connectors

CCACXTACTOI

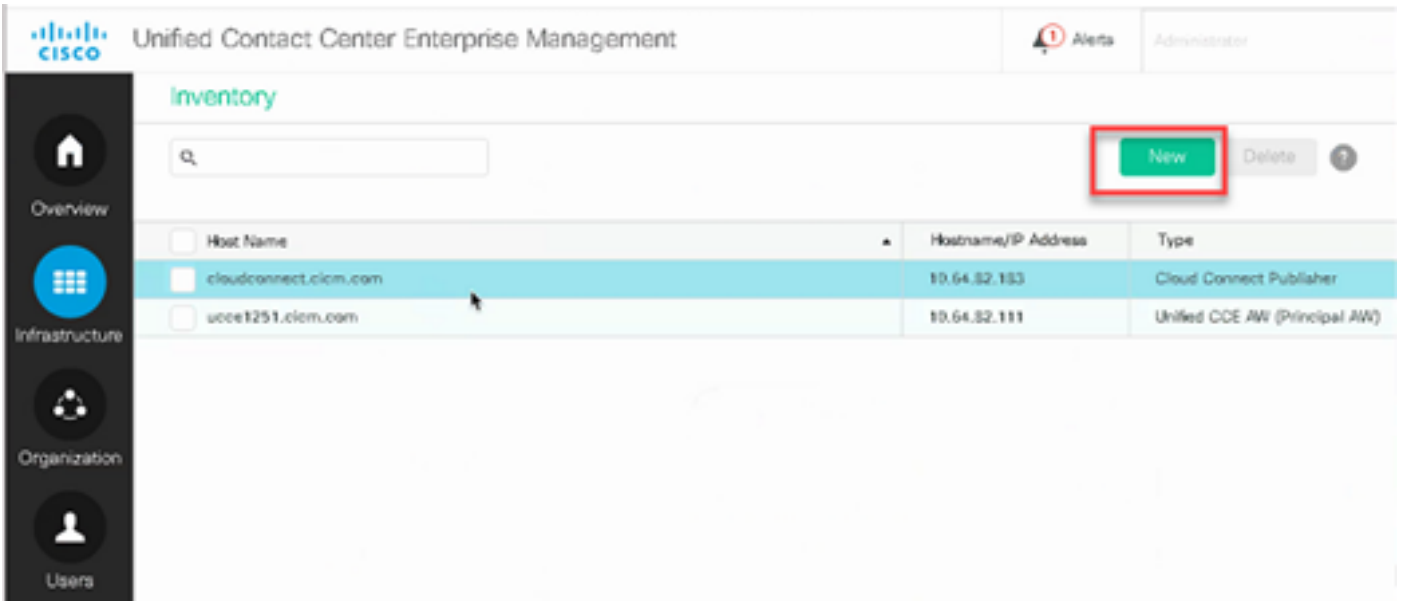
Google Conversation profile *

projects/tacprojectrtp2020/locations/us-central1/conversationProfiles/d

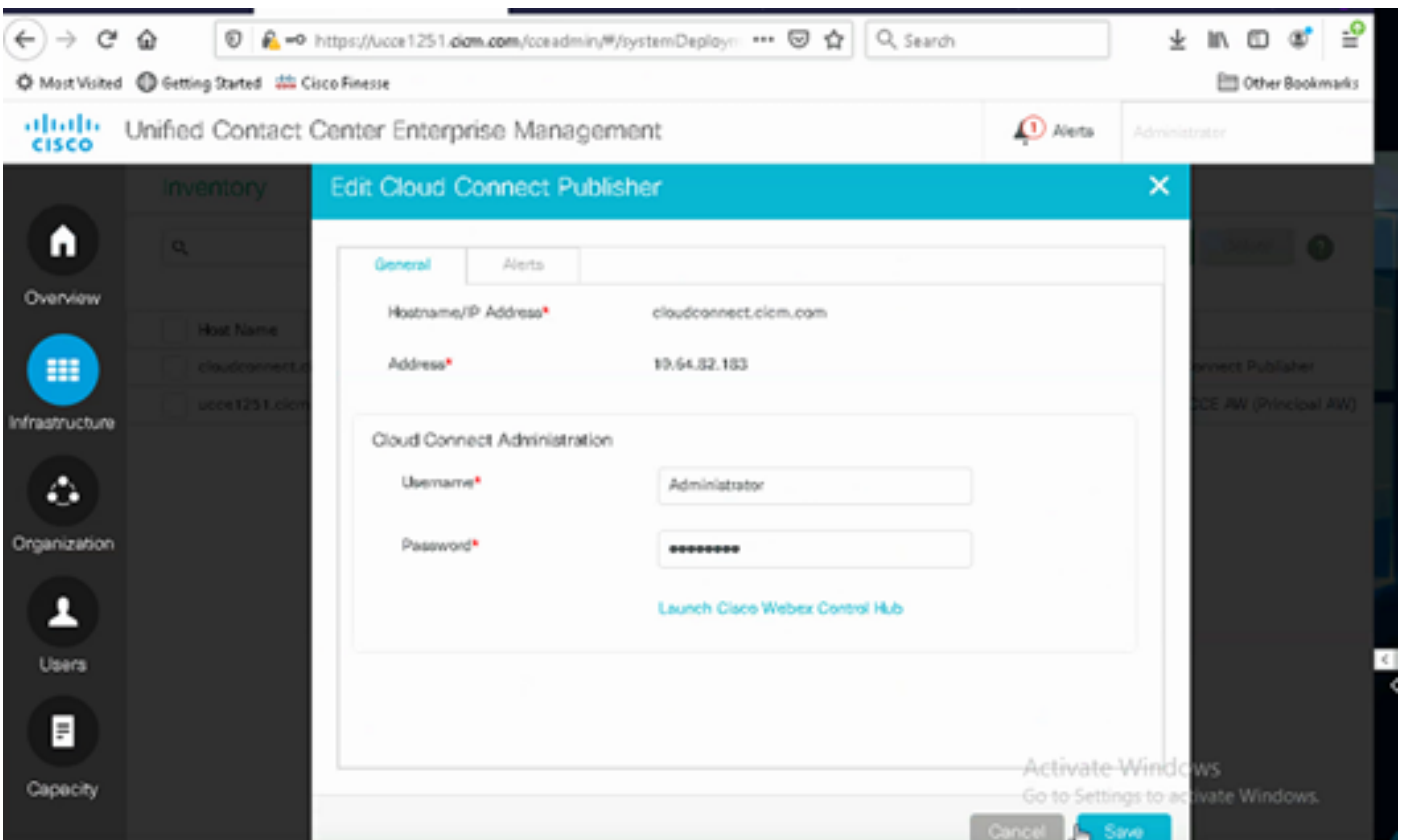
A Profile is the Google configuration for the conversation. To know more visit

CCE Configuration

Step 1. On UCCE AW, open Cisco Web Administration tool and navigate to Inventory. Click **New**.

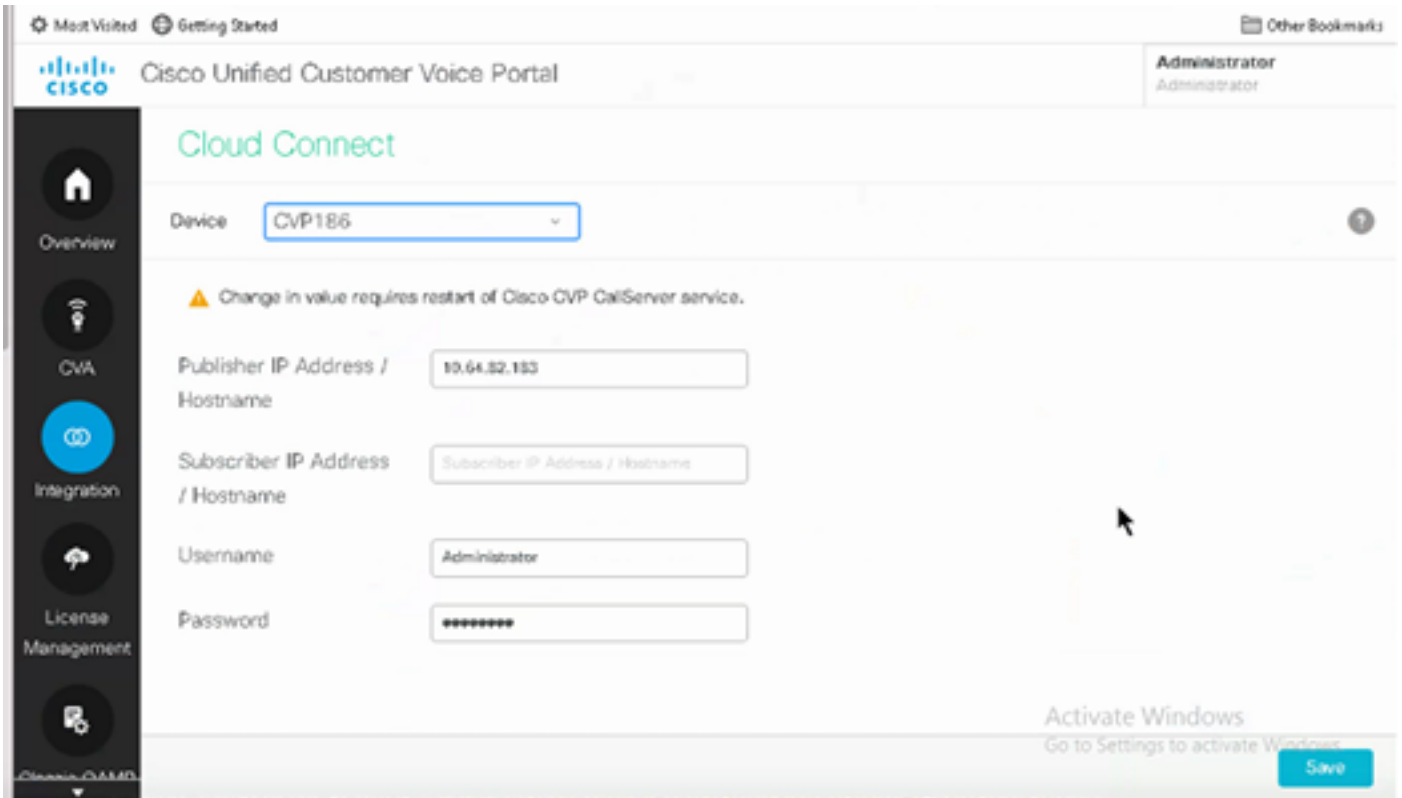


Step 2. Add Cloud Connect and provide the FQDN and credentials.



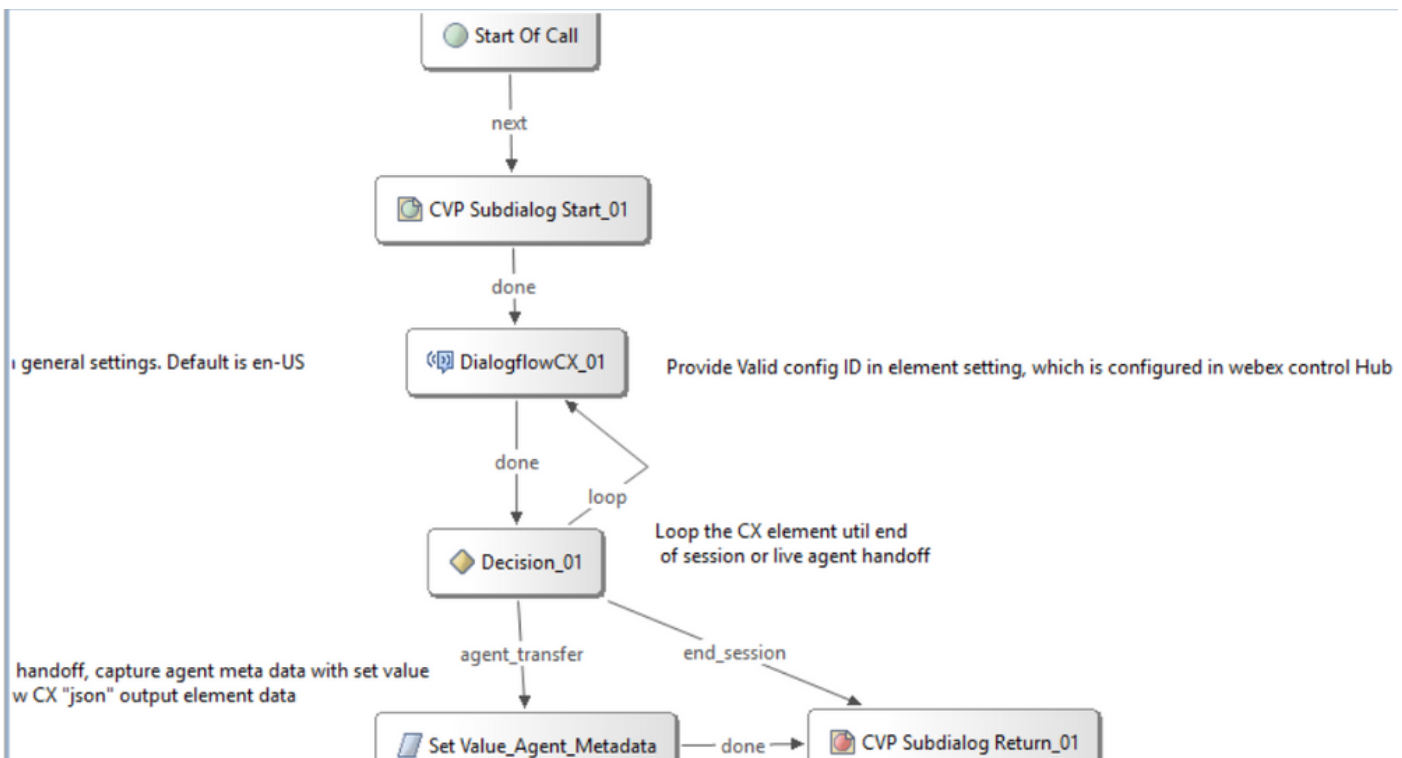
Note: Refer to these documents for Package CCE certificate exchange: [Self-Signed Certificates in a PCCE Solutions](#) and [Manage PCCE Components Certificate for SPOG](#). For Unified CCE refer to [Self-Signed Certificate Exchanged on UCCE](#).

Step 3. For UCCE configure Cloud Connect in the CVP Operations Console (OAMP). For details visit the section *Configure CVP Devices for Cloud Connect* in the [Administration Guide for Cisco Unified Customer Voice Portal](#).

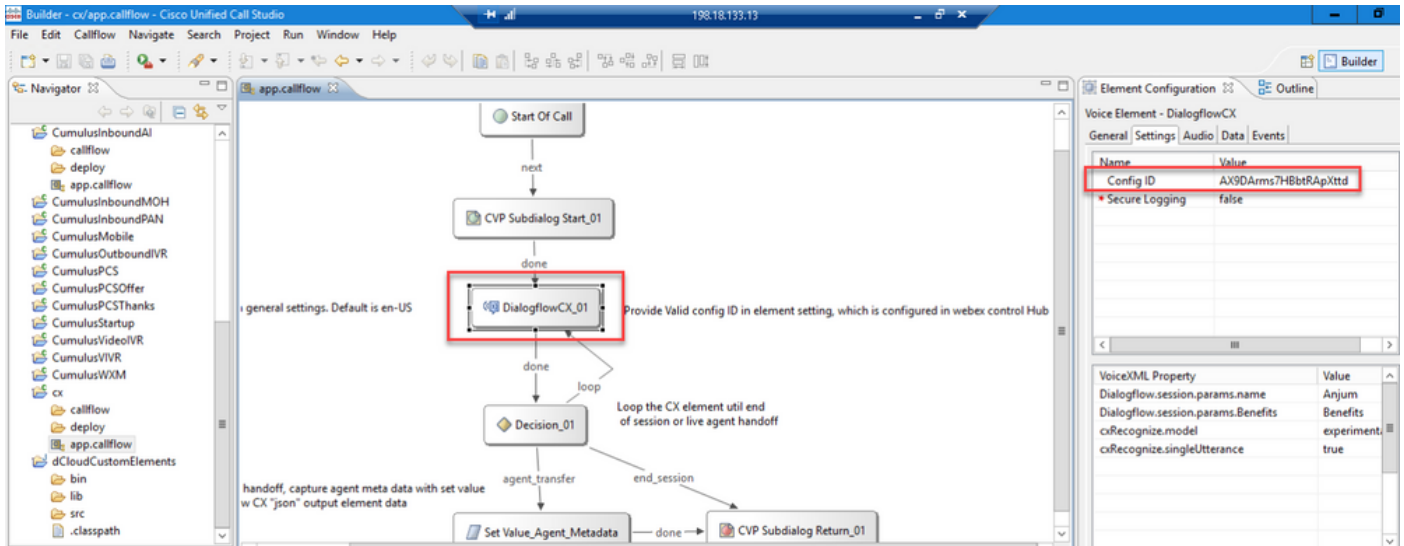


Step 4. Import the Cloud Connect certificate to the CVP server. For details, visit the section *Import Cloud Connect Certificate to Unified CVP Keystore* in the [Configuration Guide for Cisco Unified Customer Voice Portal](#).

Step 5. Open CVP Call Studio application and create a CVP application using the CX element as shown in the image.



Step 6. Click the CX element and add the Config id originated from the Control Hub features.



Dialogflow CX Agent Welcome Event

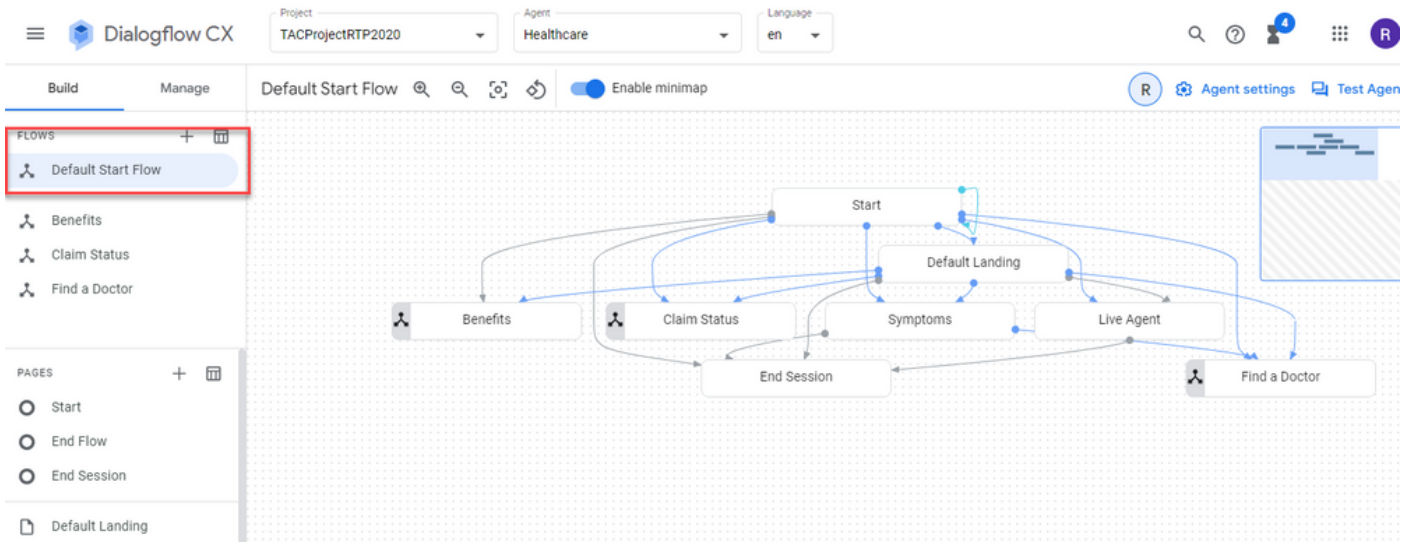
Create a welcome event to be played to the caller when a call is initiated.

Step 1. Open <https://dialogflow.cloud.google.com/cx/projects>.

Step 2. Select the project and agent for which the welcome event is to be configured.

Display name	Default language	Region
CX-DTMF-IT	it	us-central1 (Iowa, USA)
HealthcareTOI	en	us-central1 (Iowa, USA)
Healthcare	en	us-central1 (Iowa, USA)
Partner_Summit	en	us-central1 (Iowa, USA)
RamiroRaghu	en	us-central1 (Iowa, USA)
testwithramiro	en	us-central1 (Iowa, USA)
TACRTP2022CX	en	us-east1 (South Carolina, USA)

Step 3. In the Google Dialogflow CX Agent screen, click **Default Start Flow** in the left panel.



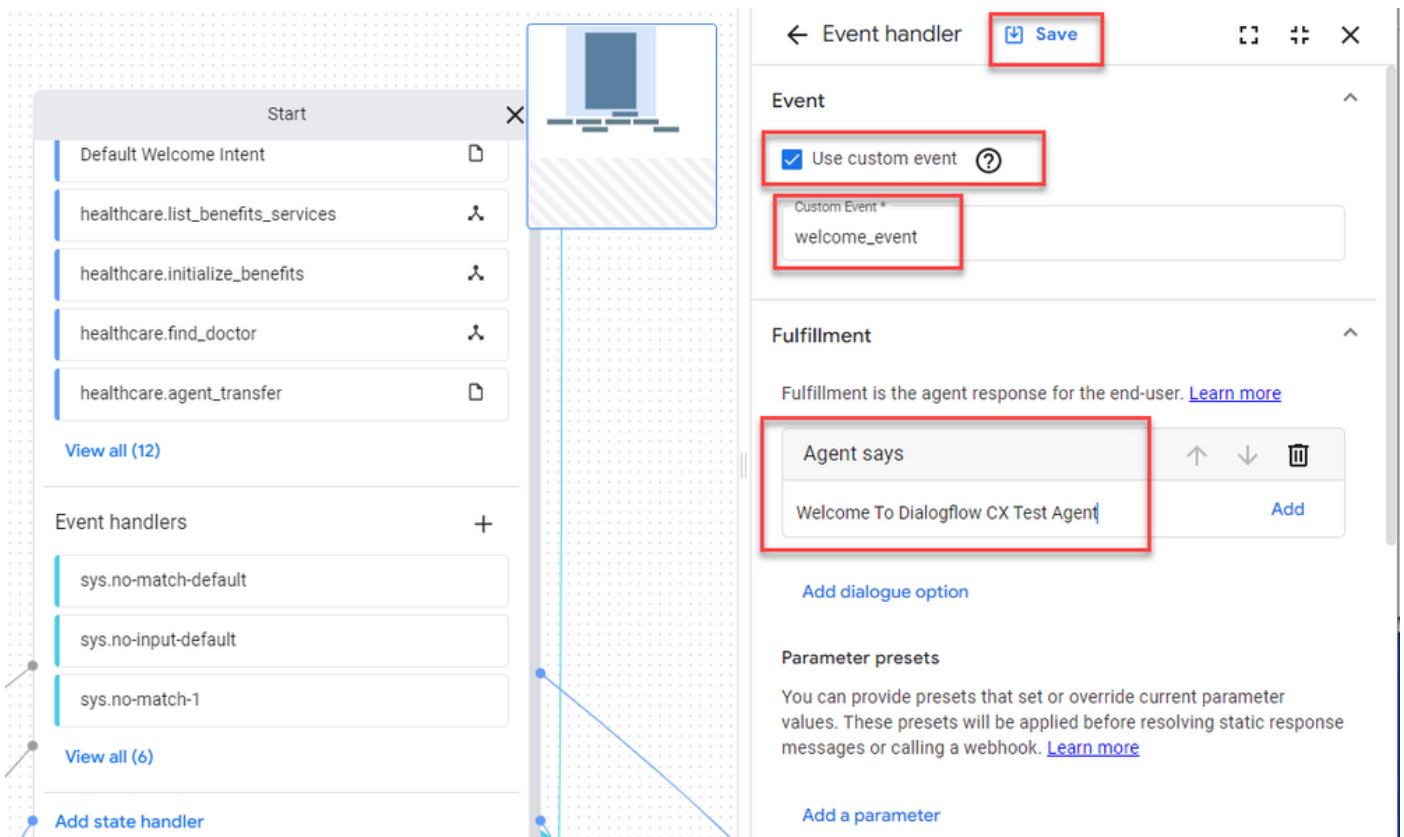
Step 4. Click **Start** > **Event handlers**.

Step 5. In the right panel, click **Add event handler**.

Step 6. Check the Use custom event box.

Step 7. In the Custom Event box, type **welcome_event**.

Step 8. In the Agent says box, type the welcome message to be played.



Step 9 Save the changes

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific information to troubleshoot available for this configuration.

Related Information

- [Cisco Contact Center Dialogflow CX Features Guide 12.6\(1\)](#)
- [What is Dialogflow CX?](#)
- [Introduce pages and transitions in Dialogflow CX - YouTube](#)
- [Create a single-flow conversational agent - YouTube](#)
- [Create a multi-flow agent with Dialogflow CX - YouTube](#)
- [Technical Support & Documentation - Cisco Systems](#)