Quintrix

Amazon Connect Integration

WEEK 5 PROJECT – HOLIDAY ROUTING

1095 Morris Ave, SUITE 101, Union NJ 07083
646-762-0305 | INFO@QUINTRIXSOLUTIONS.COM

Amazon Connect – Routing

There are times when contact centers need to play messages like holiday, inclement weather, and emergency notifications to callers. For example, in the event of a fire alarm in a contact center, agents would have to evacuate the building immediately and would not be able to answer calls. As a result, the call center supervisor might invoke an emergency message to the callers.

In the case of such events, you may want to set up messages quickly and without changing your Contact Flows. This training will take you through the process of setting up your Amazon Connect instance to invoke message to inbound caller dynamically.

You will use the AWS Management Console to:

1. Create a user interface to set up a holiday message, using an AWS CloudFormation template.
2. Add a holiday message In the user interface and store it in an Amazon DynamoDB table.
3. Set up a Contact Flow in Amazon Connect and test the holiday message created using Amazon Polly.

Amazon Connect – Routing

Learning objectives

After completing this training, you will be able to:

- Use Amazon CloudFormation to build a website hosted on Amazon S3.
- Use Amazon Cognito to authenticate a login attempt to the website.
- Create and store emergency and holiday messages using Amazon DynamoDB.
- Create an Amazon Connect Contact Flow and test the holiday message playback using text to speech via Amazon Polly.

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

In this section you will create a web page based user interface to set up holiday and emergency messages. To do this you will use an Amazon CloudFormation template. The template will build the user interface and then you will use Amazon DynamoDB to store the text representation of the prompts.

The Amazon CloudFormation template will create these resources:

1. Amazon DynamoDB table
2. Amazon S3 bucket to store the user interface web contents.
3. Two AWS Lambda Functions.
4. Amazon Cognito User Pool and an Identity Pool

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Use the corresponding YAML file as a template within CloudFormation

https://drive.google.com/file/d/1OXrEeMuuqFdc2YftbjgWUe_PgCxfGKTu/view?usp=sharing

Quintrix

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Build the User Interface

Amazon CloudFormation

Login to the AWS Management Console and select the **Amazon CloudFormation** service.

Choose your region.

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

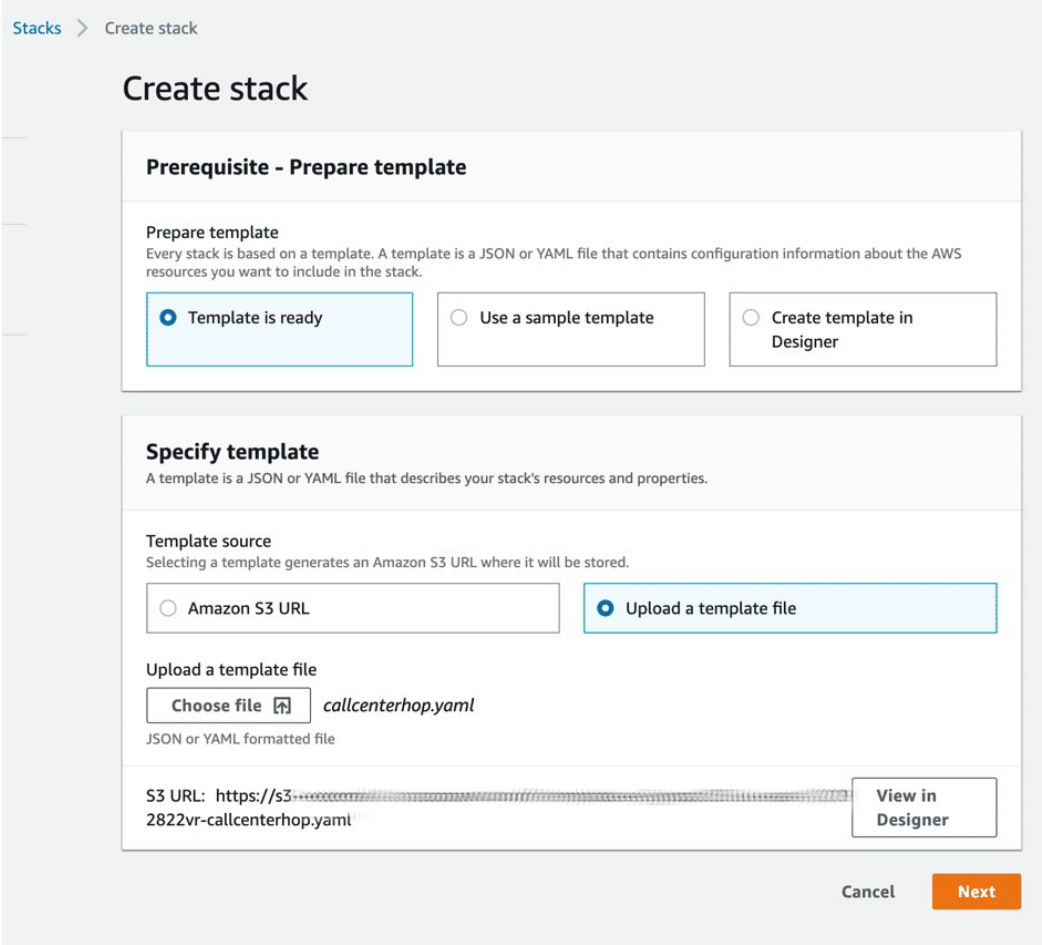
Create stack

Select the Create stack button and choose the With new resources (standard) option from the dropdown list.

Under Template Source, select Upload a template file.

Click the Choose file button and upload the callcenterhop.yaml file.

Scroll down and click Next.



Quintrix

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

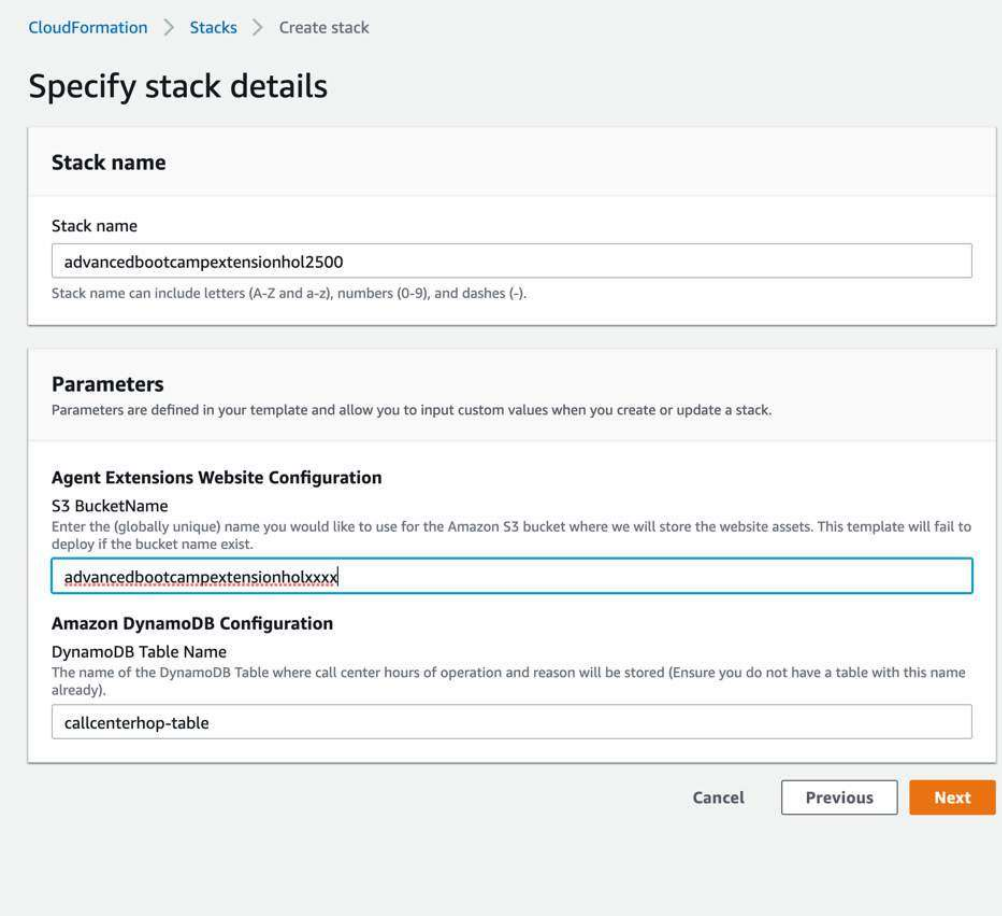
Specify stack details

Give both the stack and the Amazon S3 bucket a unique name.
We will use Amazon S3 to host the web user interface.

Leave the Amazon DynamoDB table name as callcenterhop-table.

We will store the emergency and holiday messages and the date / time when they are meant to be played in this table.

Click Next.



Quintrix

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

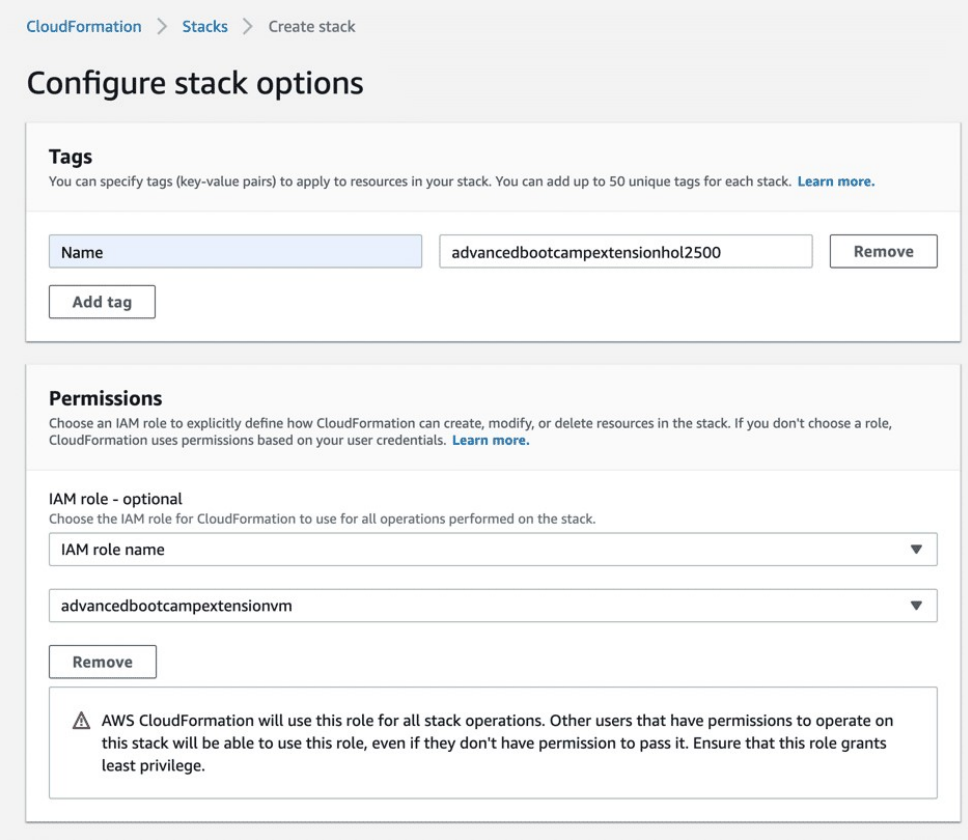
Configure stack options

Select or create an IAM role appropriate to execute this template. Tags are optional, not required. However, it is a best practice to add a tag for tracking / billing purposes.

The IAM role should have permissions to create:

- Amazon S3 buckets
- AWS Lambda functions
- Amazon Cognito user and identity pools
- Amazon DynamoDB tables

Click Next.



Quintrix

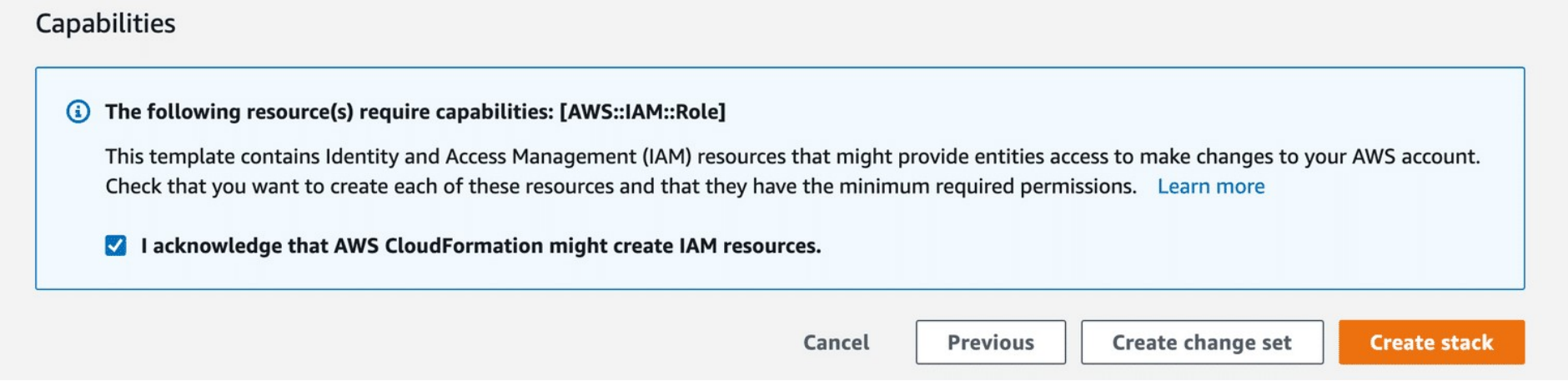
Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Create stack

Review your selections and if you are comfortable, select the acknowledgment check box at the bottom of the page.

Click Create stack.



Quintrix

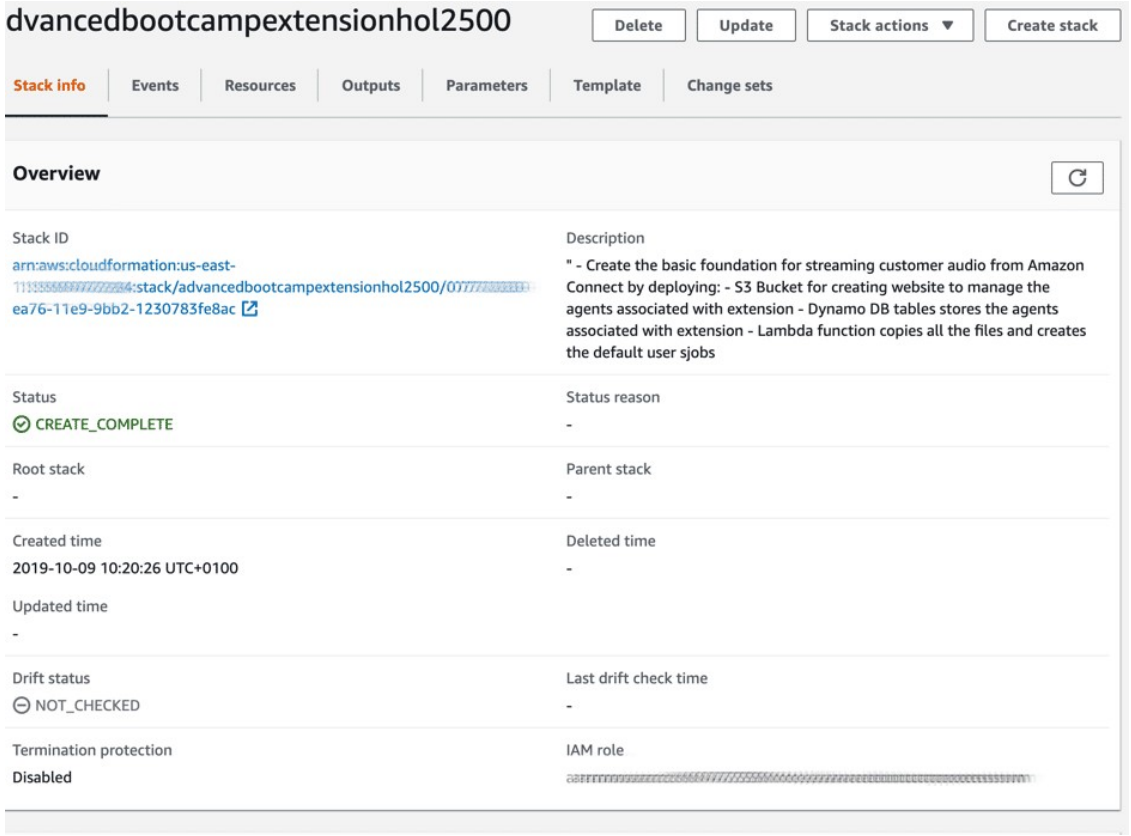
Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Create in progress

The AWS CloudFormation template starts creating Amazon DynamoDB tables, an Amazon S3 bucket, and hosts the website. It also creates Amazon Cognito user and identity pools.

The creation process will take about 5 minutes. You can click the refresh button to see the tasks as they are executing in the CF Stack. Check the stack status to ensure it says **CREATE_COMPLETE.**



Quintrix

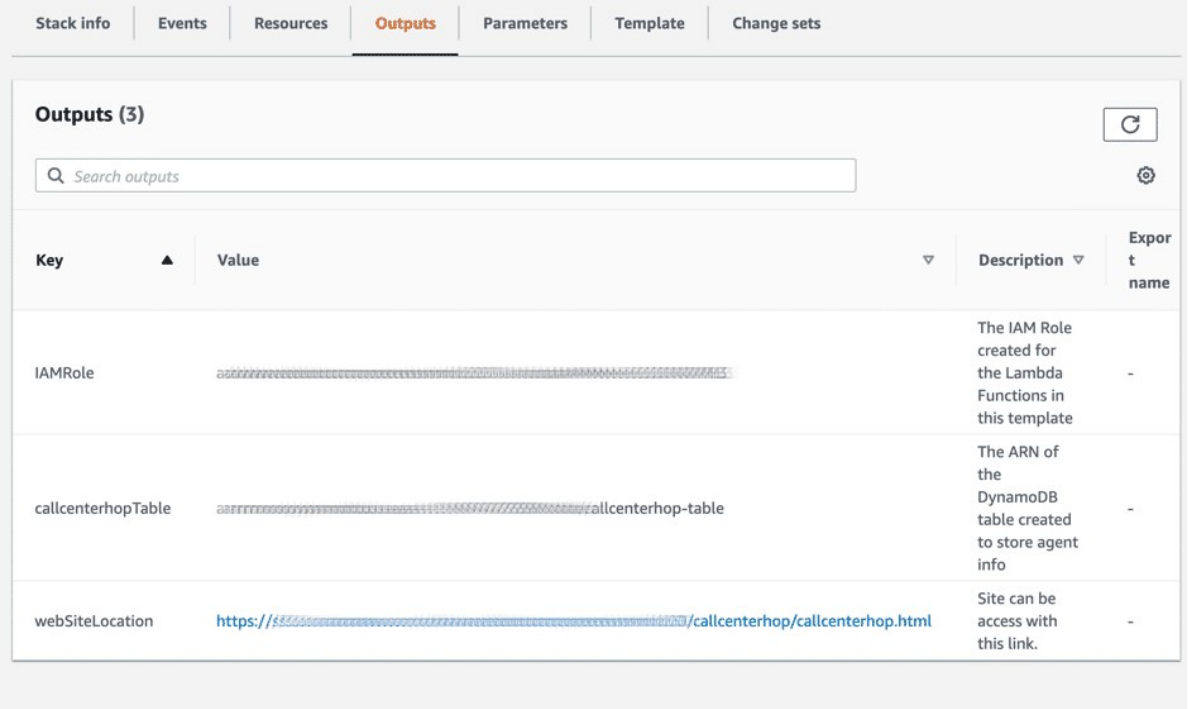
Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Note the website URL

Select the **Outputs** tab and make a note of the **webSiteLocation** value.

This is the URL where the user interface is hosted. Copy this location to a clipboard or open it in an new browser tab.



Quintrix

Amazon Connect – Routing

Build the User Interface to Set Dynamic Messages

Summary of resources created

The Amazon CloudFormation template has created a user interface with the following resources:

1. Amazon DynamoDB table: callcenterhop-table

2. Amazon S3 bucket to store the website contents

3. Two Lambda functions (****checkHoursOfOperation**** and ****webSiteCreator****)

4. Amazon Cognito User pool with a user name sjobs and an identity Pool – BootCampCognitoIDPool****

Amazon Connect – Routing

Configure a Holiday Message

You will use the user interface previously created to add a holiday message and store the message in the Amazon DynamoDB table.

Add a Holiday Message

Access the website

Browse to the website URL noted in slide 12

A user account has already been created within the Amazon Cognito User Pool. Login using the following details:

- Username: sjobs
- Password: password

Amazon Connect – Routing

Configure a Holiday Message

You will use the user interface previously created to add a holiday message and store the message in the Amazon DynamoDB table.

Add a Holiday Message

Access the website

Browse to the website URL noted in slide 12

A user account has already been created within the Amazon Cognito User Pool. Login using the following details:

- Username: sjobs
- Password: password

Amazon Connect – Routing

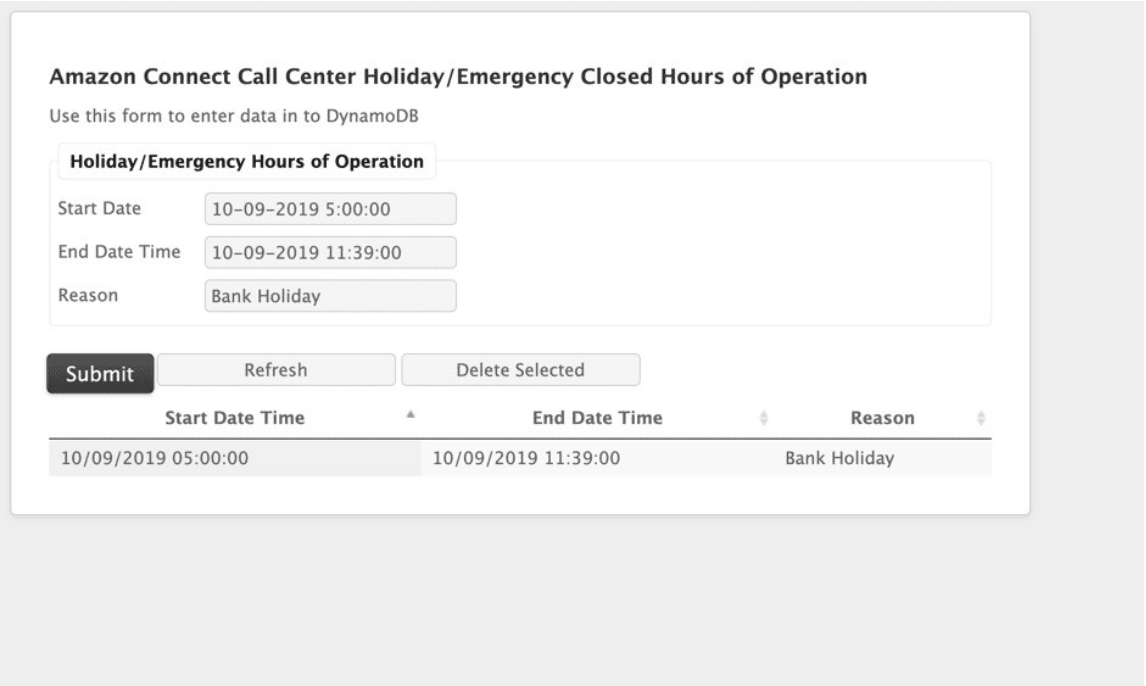
Create a holiday message

To create a holiday message, use the date and time picker to select a Start Date Time and End Date Time.

Enter a value in the Reason field.

Click Submit

If necessary, click Refresh to see the data you entered in the table below.



Quintrix

Amazon Connect – Routing

Confirm data has been saved

The message data entered will be stored in the Amazon DynamoDB table callcenterhop-table.

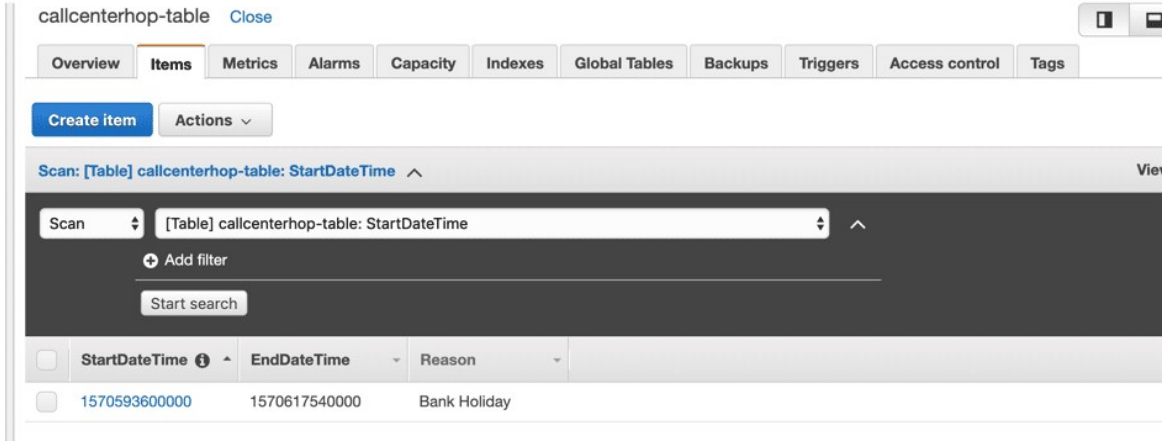
To verify this, open **Amazon DynamoDB (region N. Virginia),**

In the sidebar menu, select **Tables.**

Click **callcenterhop-table.**

Click on Items to view data in the DynamoDB table.

You should see the data you entered in your website.



Quintrix

Amazon Connect – Routing

Test the Message in Amazon Connect

In this section, you will use an Amazon Connect instance and Contact Flow to play the holiday message that you previously set. If you do not have a Contact Flow, you will need to create one before continuing. The steps to create one are covered in the Amazon Connect product documentation and in the prerequisite training.

Note: If you are having trouble building your Contact Flow, use the sample flow attached here. Please download it and import it to your Amazon Connect Contact Flow interface.

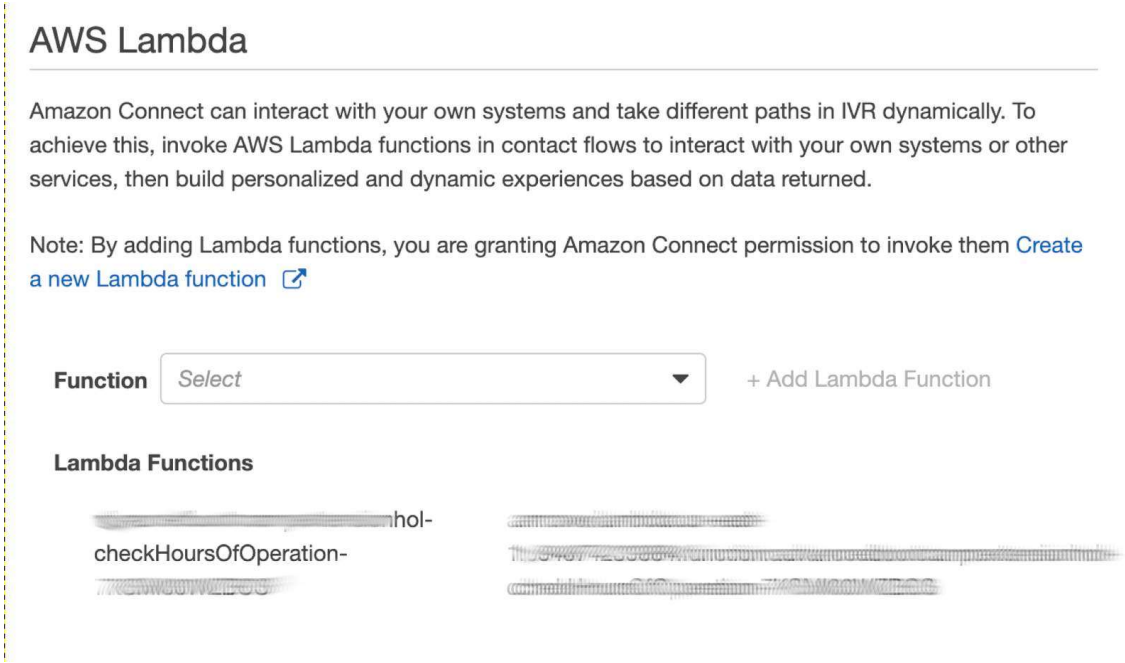
https://drive.google.com/file/d/1G9k6U0cur8J_wvdORmNSzZwvURNDHJ-9/view?usp=sharing

Amazon Connect – Routing

Access your Contact Flow and test the message

Allow list the Lambda function

Login to your Amazon Connect instance in N. Virginia, navigate to the Contact Flows page of the Instance configuration and allow the Lambda function: **check hours of operation** (your function name will have your Amazon CloudFormation stack name followed by checkHoursOfOperation and some numbers.)



Quintrix

Amazon Connect – Routing

Create the Contact Flow and invoke Lambda function

Within your Amazon Connect instance, create a contact flow that will invoke the AWS Lambda function: check hours of operation.

Note: If you are using the sample Contact Flow provided, update the AWS Lambda function you allowed in step 1.

Once the function has been successfully executed, use the **Check contact attributes** block to check if the attribute **holidayFound** returned by the function equals True.

If there is a No match, the call will be sent to the BasicQueue.

If there is a match, use the **Play prompt** block to play a message using TTS from the function attribute **holidayMessage** and then disconnect the call.

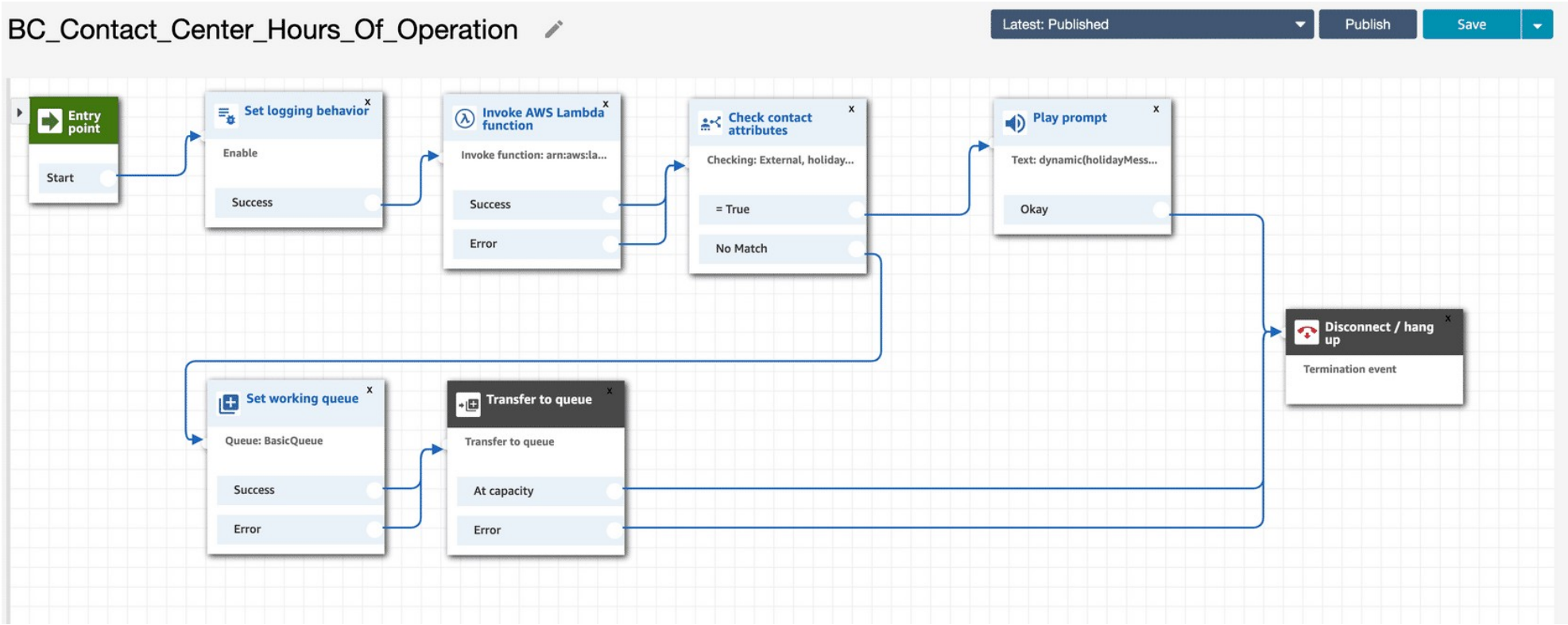
Above is a sample Contact Flow if you wish to follow.

Save and publish your Contact Flow. Assign it to a phone number.

Quintrix

Amazon Connect – Routing

Create the Contact Flow and invoke Lambda function



Quintrix

Amazon Connect – Routing

Test the message

To place or receive calls in your instance, you need to call the number you claimed.

Call the phone number. The message you set from the previous section plays. You can change this message dynamically by updating the website.

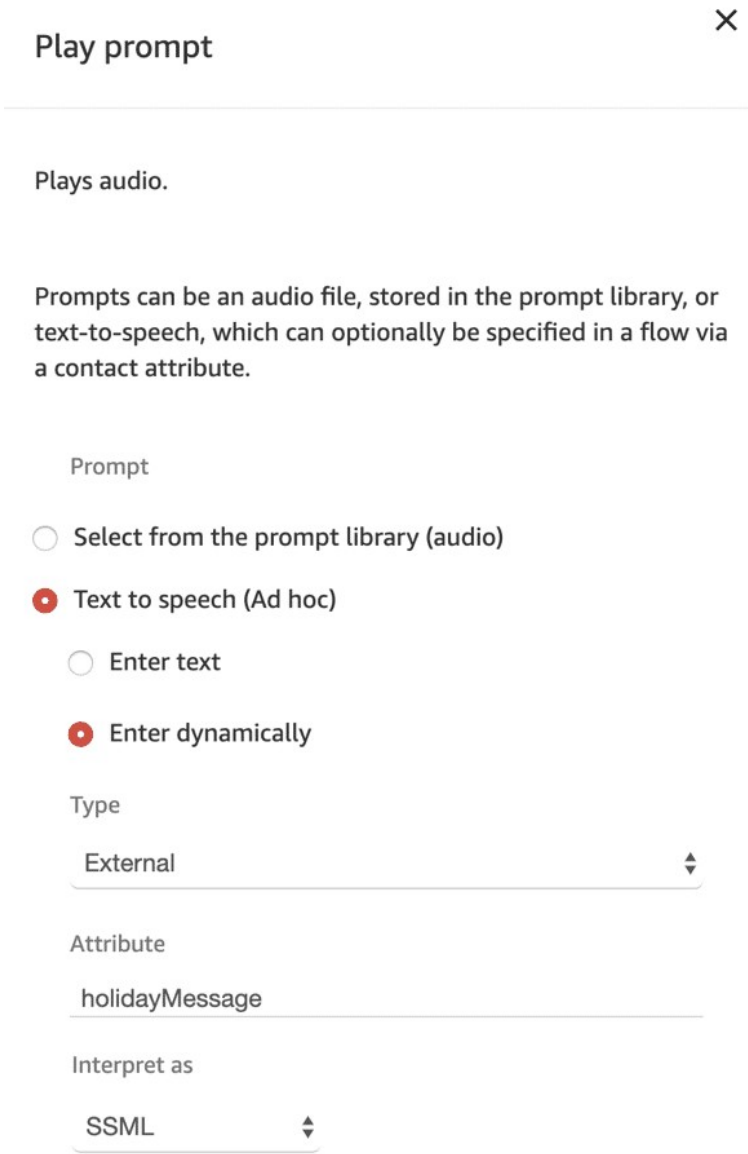
Amazon Connect – Routing

Play the message using SSML

You can use Amazon Polly to generate speech from either plain text or from documents marked up with Speech Synthesis Markup Language (SSML).

To play messages using SSML, you have to edit the contact flow, change the play prompt block, and select interpret as SSML.

Save and publish the Contact Flow.



Quintrix

Amazon Connect – Routing

Test the message

Enter the message with SSML

Go back to the website and enter a message with SSML tags, for example:

<speak>The call center is closed today <break time="3s"/> please call back tomorrow </speak>

Make a call to test your message is played with SSML.

Some layout options

1.4 Million
unfilled computing jobs by 2020(1)

75 Percent
of companies face disruption(2)

$116 Billion
lost productivity per year(3)

Current Options Are Not Solving the Problem

STAFFING AGENCY	CAMPUS HIRING	VISA TALENT	INTERNAL TRAINING	BOOTCAMPS
Do not help with shortage	Not enterprise ready	High compliance & legal costs; delays	Not core competency; bureaucratic	Demand-supply mismatch; fragmented

Quintrix

Sources: (1) Bureau of Labor Statistics. (2) Gartner. (3) CIO Magazine.