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TALK TO ME !

ColdFusion and Amazon Alexa

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Amazon Alexa

Alexa, the voice service that powers Amazon Echo, provides capabilities that enable customers to interact with devices in a more intuitive way using voice.

Alexa Voice Services is also becoming quite literally the voice of thousands of devices - from thermostats, cars to appliances and more.

Contents

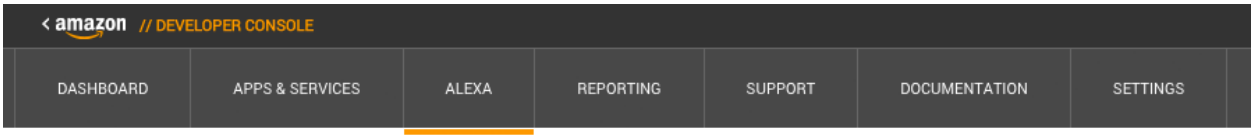
This guide will show you, step-by-step, how to setup an Alexa skill to a ColdFusion backend using Amazon Lambda service.

Step #1

Set up Your Alexa Skill in the Amazon Developer Portal

1. Go to the Amazon Developer Portal (developer.amazon.com).
   In the top-right corner of the screen, click the "Sign In" button.
   **If you don't already have an account, you will be able to create a new one for free*

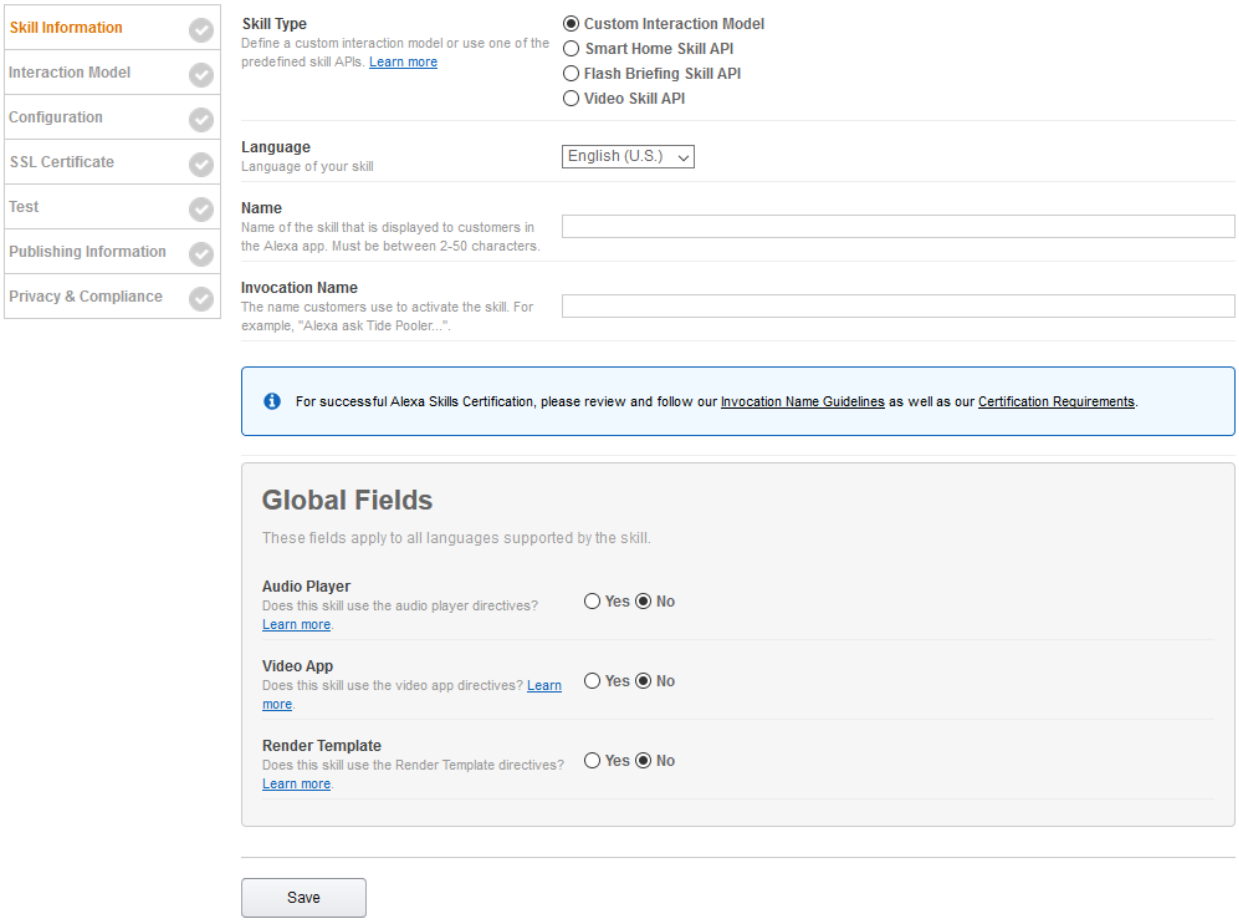
2. Once signed in, go to the 'Developer Console'. Click the Alexa button at the top menu of the screen.



3. Once on the Alexa page, click the "Get Started" button for the Alexa Skills Kit.

4. Select "Add A New Skill" near the top right corner of the page.

5. **"Skill Information"** **Follow instructions set out below.*



a. **Skill Type** Select the "Custom Interaction Model". This is the default choice.

b. **Language** Select English. (You can add additional languages in the future).

c. **Name** This is the name that will be shown in the Alexa Skills Store.

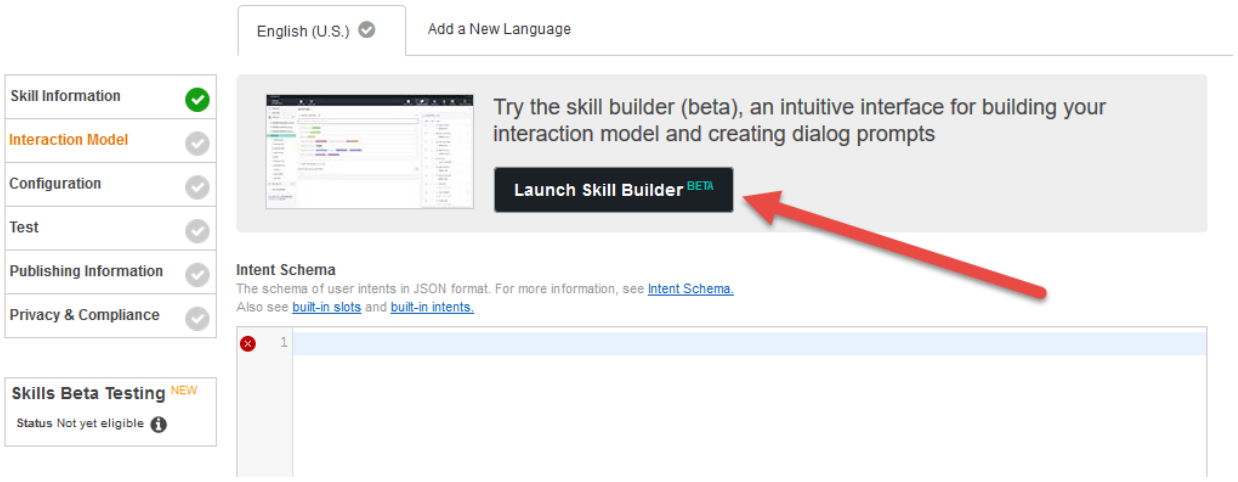
d. **Invocation Name** This is the name that your users will need to say to launch your skill.

e. **Global Fields** We won't be using Audio, Video, or Templates, so leave these options selected as 'No'.

6. Click Save and Next

7. "Interaction Model"

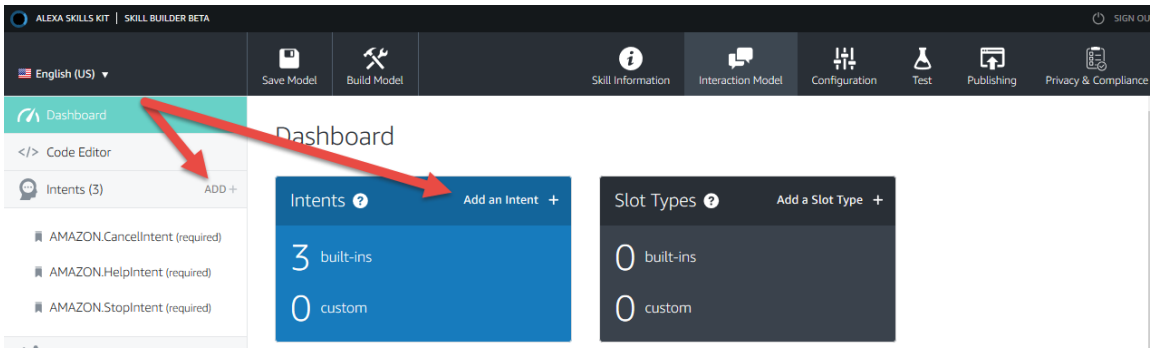
Click on the "Launch Skill Builder" button . This will launch the Skill Builder Dashboard.



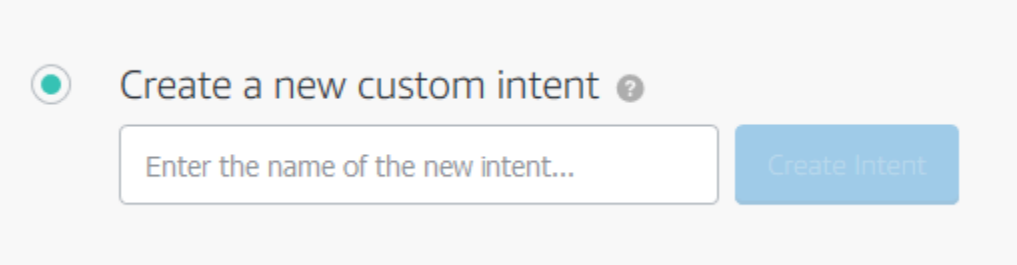
a. **Intents** **Think of "Intents" as functions*
You will see 3 intents already there. These are Amazons default intents and are required.

- AMAZON.CancelIntent
- AMAZON.HelpIntent
- AMAZON.StopIntent

a. Click on the "Add+" button near **Intents** on the top left corner of the dashboard, or the "Add an Intent" button in the dashboard's Intents ist



b. In the textbox, enter the new intent name: GetOccupancyIntent., and click the "Create Intent" button.

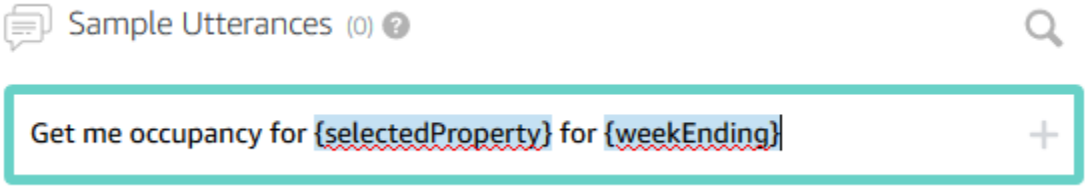


c. **Utterances**

Add 4 or 5 sample utterances for your intent. These are the things a user would say to trigger this intent. Here are a few examples:

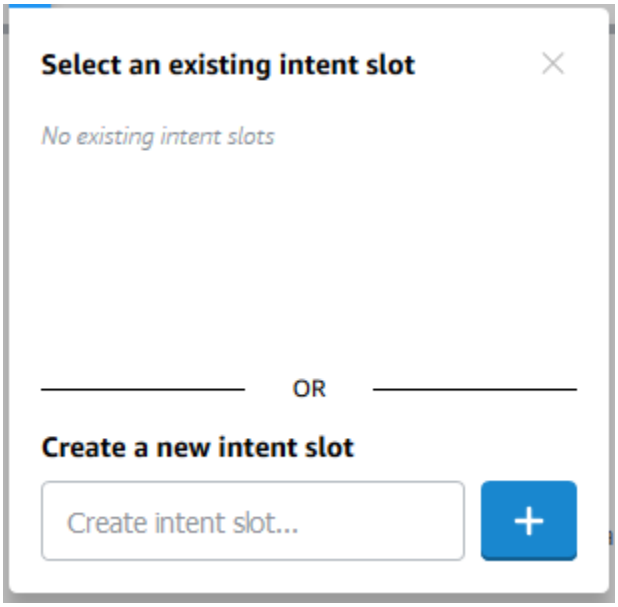
- "Get me occupancy for {selectedProperty} for {weekEnding}"
- "Whats the occupancy for {selectedProperty} for {weekEnding}"
- "What was the occupancy for {selectedProperty} for {weekEnding}"

**Slots are denoted within curly braces*

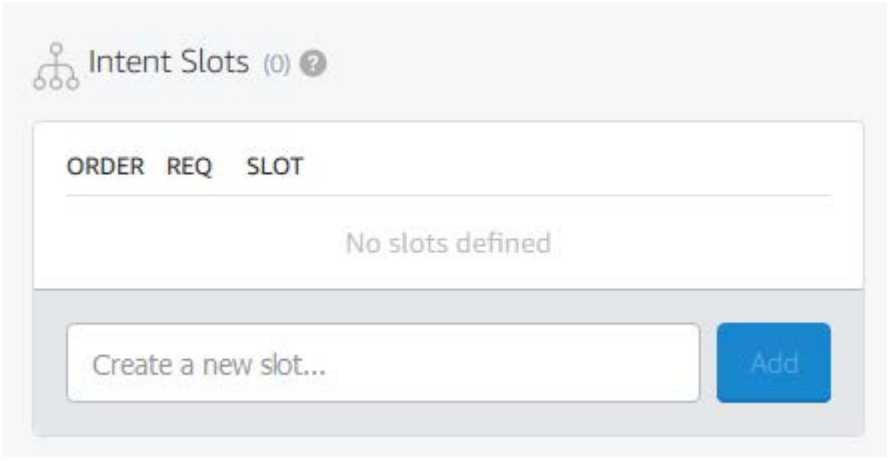


Click the "+" to add each utterance.

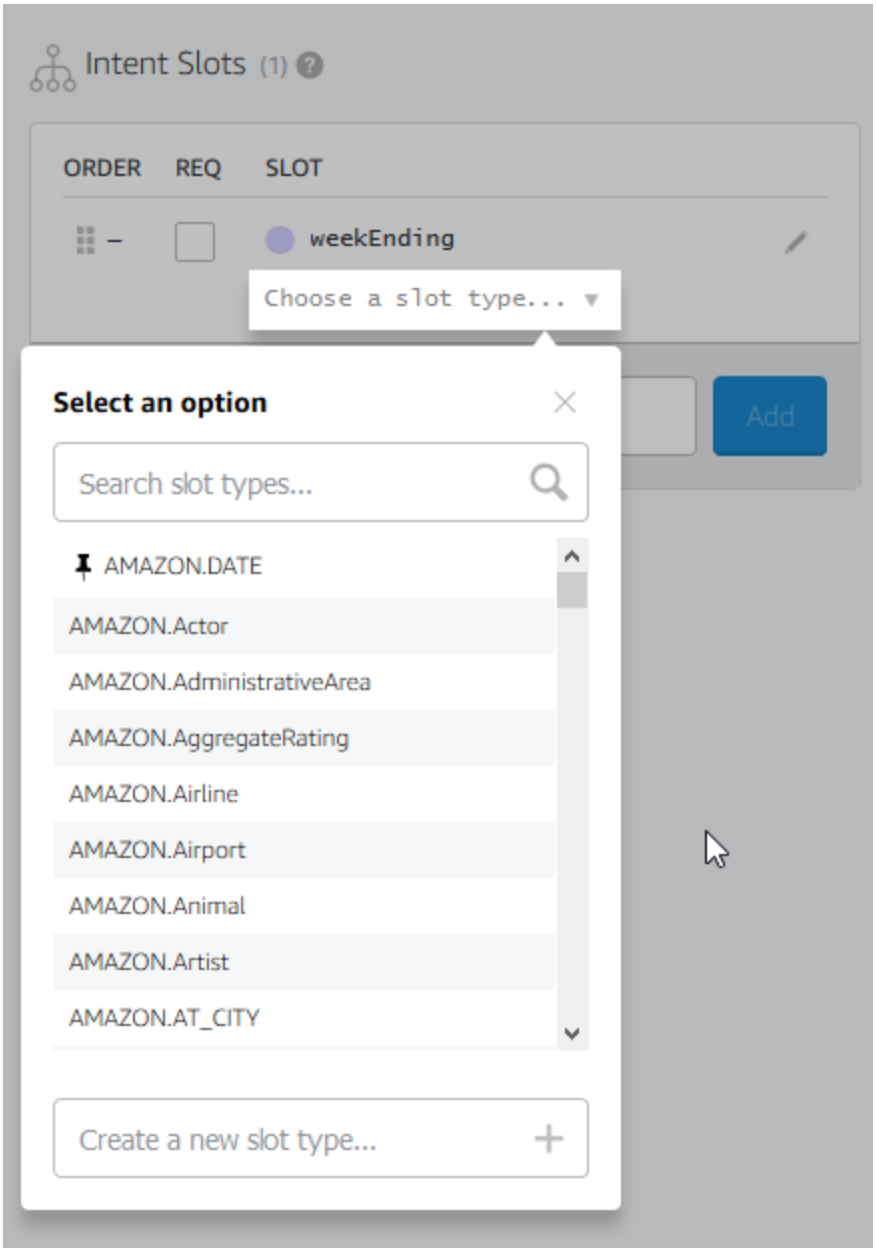
d. **Slots** **Think of "Slots" as variables to be passed in to Intents (functions)*
As you type curly braces, you will have the option to select any existing slots, or create a new one.



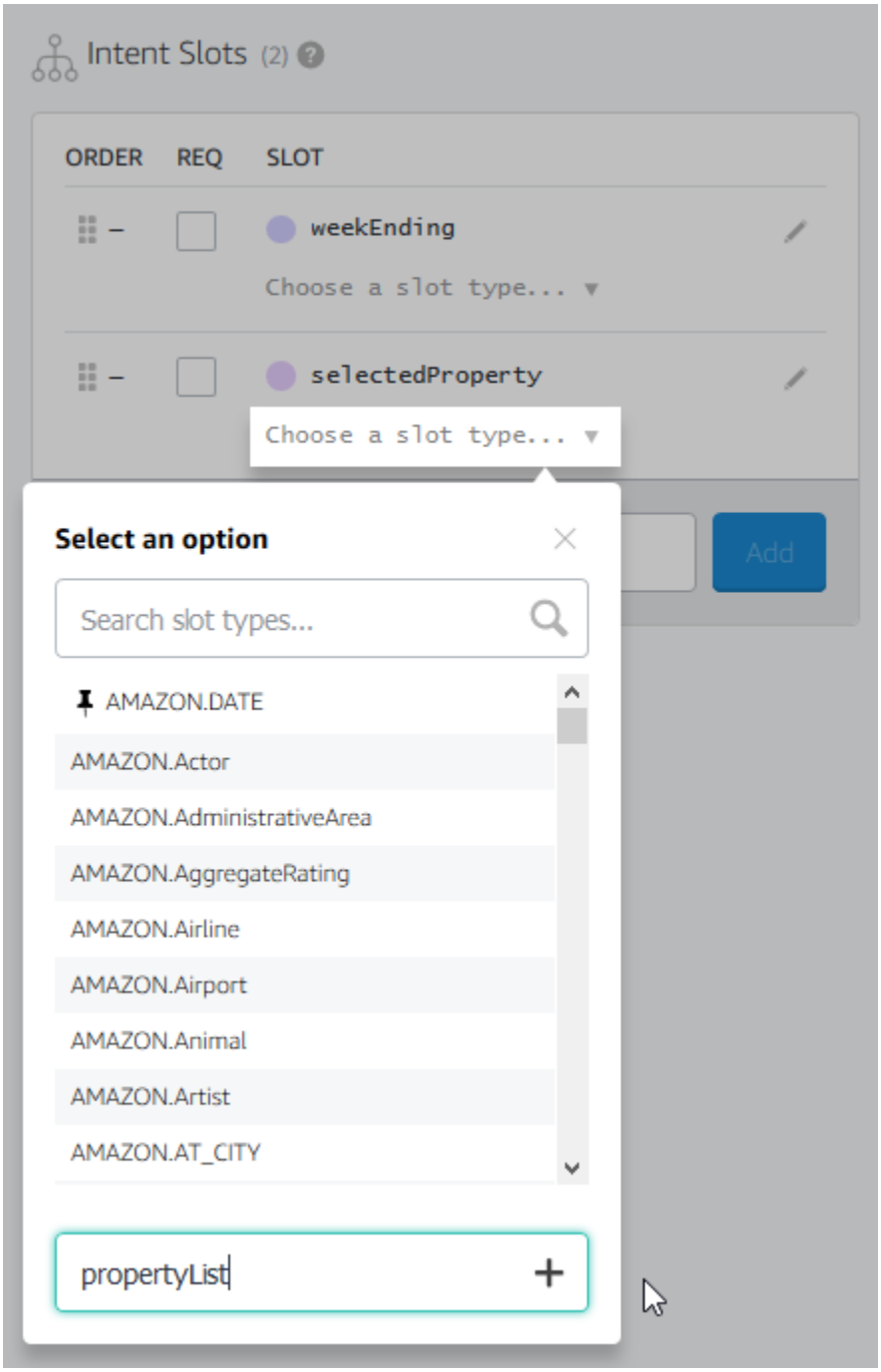
You can also add slots by entering the name and clicking "Add" in the "Intent Slots" section on the right of the page.



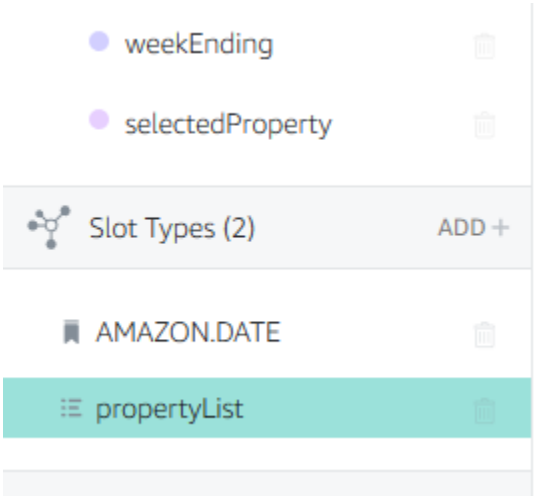
e. Create a new slot named “weekEnding”
Once added, select AMAZON.DATE as the slot type.



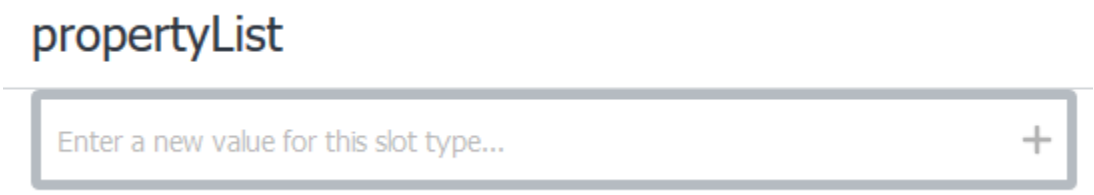
f. Create a new slot named “selectedProperty”
Once added, in the textbox saying “Create a new slot type....”
type “propertyList” as the slot name, and click the “+” sign.



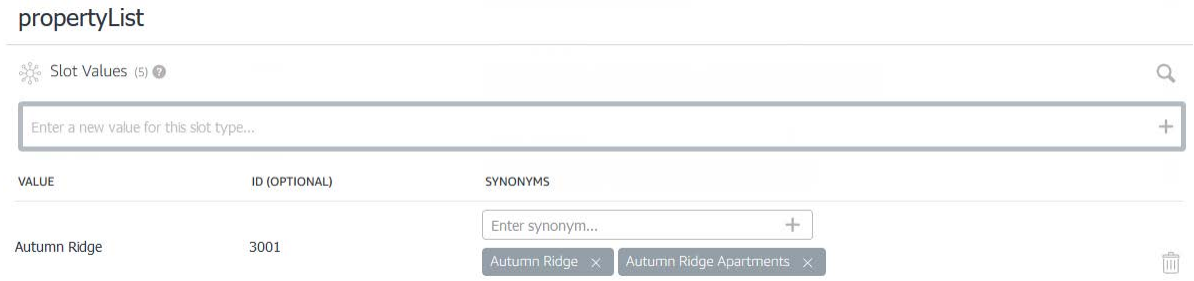
g. Click on the newly created slot on the left side menu, under “Slot Types”



h. In the textbox enter “Autumn Ridge” and click the “+” sign.



i. **Synonyms (Entity Resolution)**
Once added, you can also enter an ID value and add speech values that will map to the original list value. Add the ID and synonyms as shown below.



j. Repeat the process to add more list values as follows;

- Value: *Regency Park*
  ID: *3002*
  Synonym: *Recgency Park Apartments*
- Value: *Riverbend*
  ID: *3003*
  Synonym: *Riverbend Apartments*
- Value: *Lincoln Square*
  ID: *3004*
  Synonym: *Lincoln Square Apartments*
- Value: *Parkview*
  ID: *3005*
  Synonym: *Parkview Apartments*

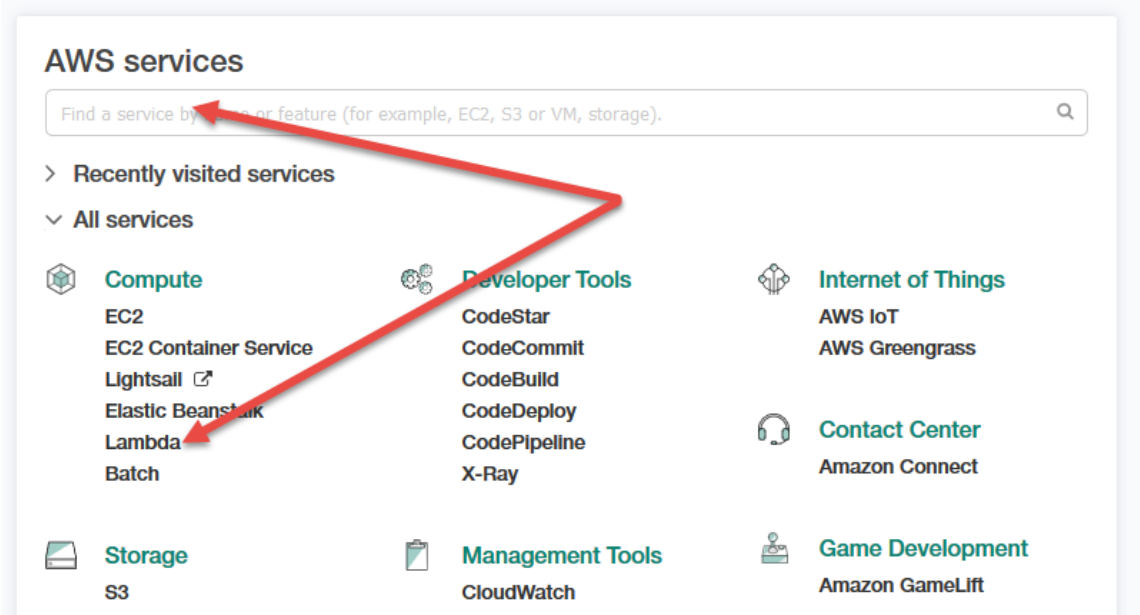
* To create the full skill interaction with all intents and slots and synonyms, cut and paste the following file into the 'code editor' - ***https://github.com/kevindwright/cf-alexa-http-web-service/blob/master/Alexa/alexa_skill.json***

Step #2

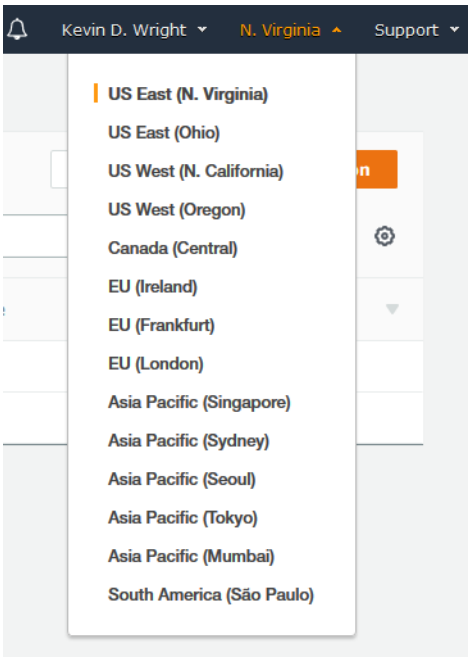
Set up Your Lambda function in the AWS Portal

1. Go to the Amazon Web Services Portal (aws.amazon.com).
   In the top-right corner of the screen, click the "Sign In to the Console" button.
   **If you don't already have an account, you will be able to create a new one for free*

2. Select “Lambda” from the list of services, or just start typing “Lambda” to filter the list.



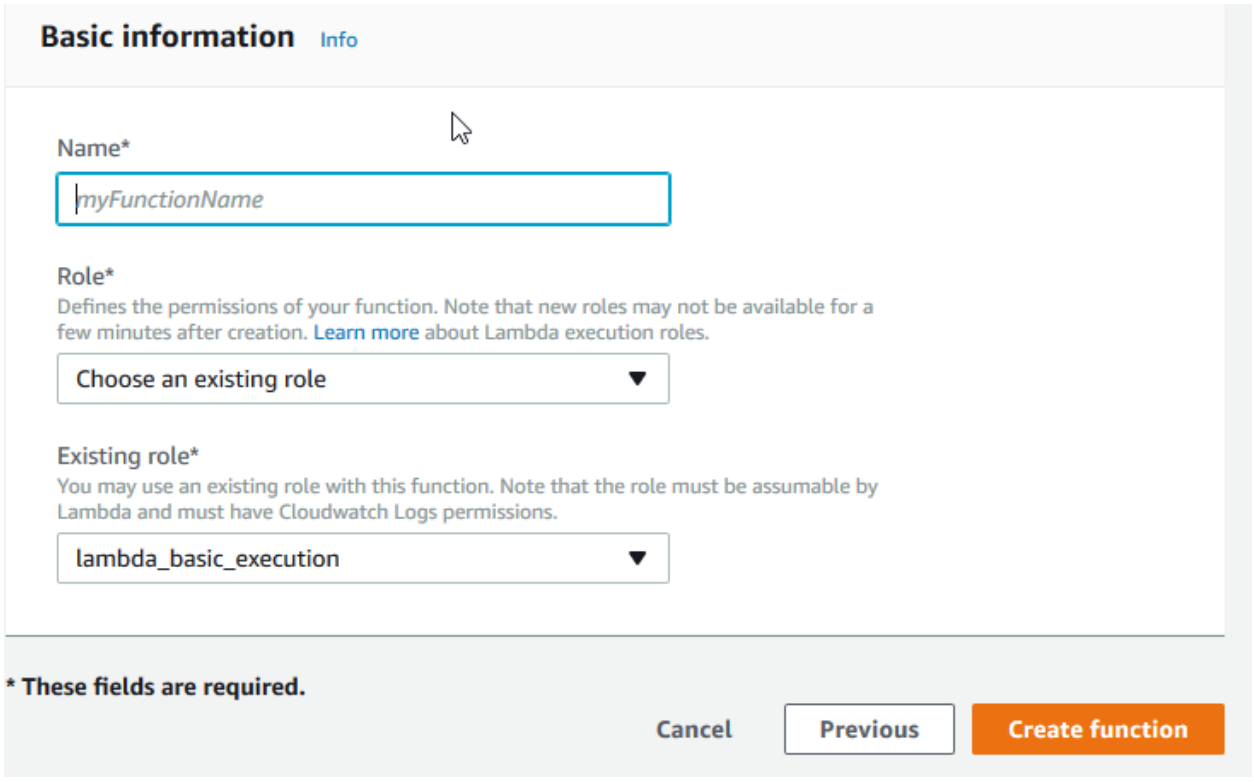
3. **Check your AWS region.** AWS Lambda only works with the Alexa Skills Kit in two regions: US East (N. Virginia) and EU (Ireland).



4. Click the "Create function" button. It should be near the top right of your screen. (If you don't see this button, it is because you haven't created a Lambda function before. Click the blue "Get Started" button near the center of your screen.)

5. Here you can select some boilerplate examples to get started. Skip these and click the “Author from scratch” button.

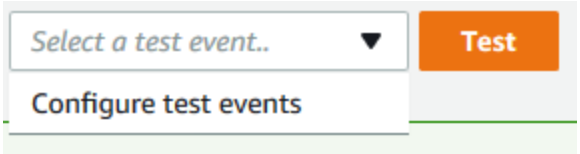
6. Give your function a name, select the “role” values as shown below and click “Create function”



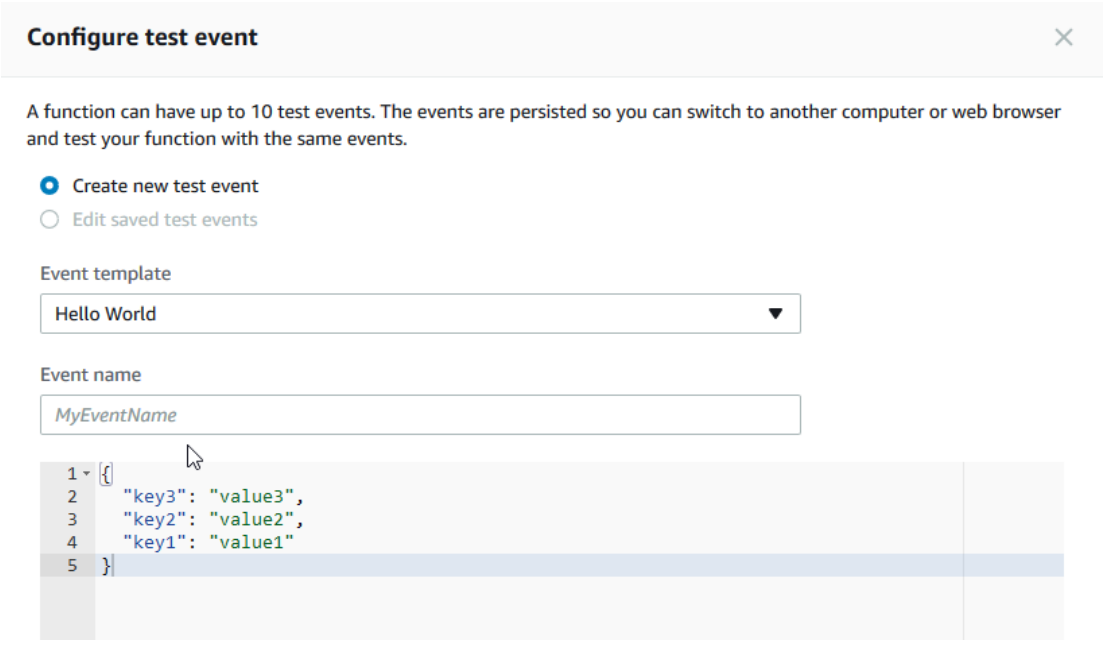
7. If it is'nt already selected, select "Edit code inline", Node.js 6.10 as the runtime and set index.handler as the Handler.

Cut and paste the contents of the following file, replacing all existing code.
https://github.com/kevindwright/cf-alexa-http-web-service/blob/master/Lambda/lambda.js

8. **Configure Tests**
Select "Configure test events" in the drop-down near the "test" button



9. Create 3 test events by cutting and pasting contents of the associated files, replacing the existing code.

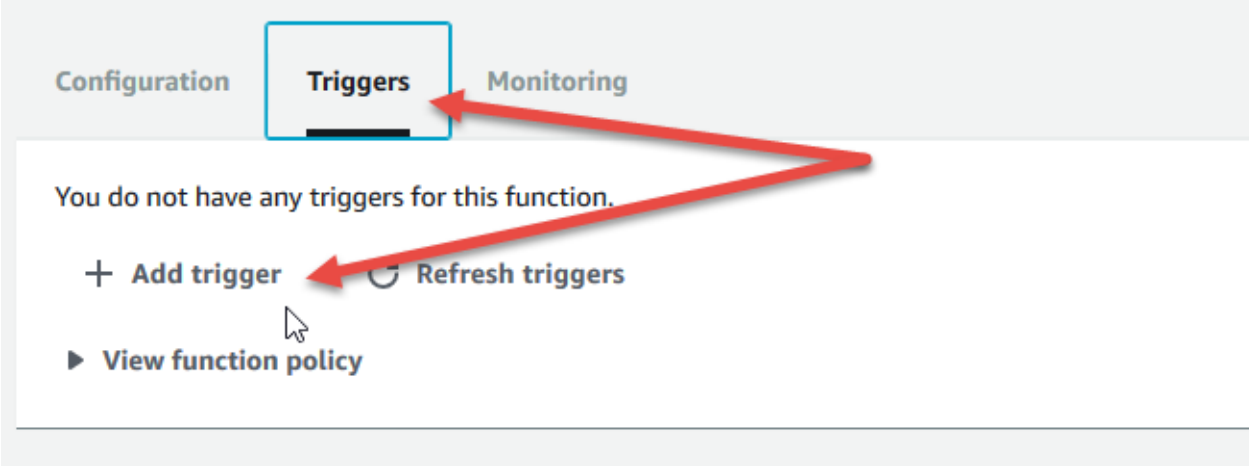


- Event name: **GetLocationTest**
  https://github.com/kevindwright/cf-alexa-http-web service/blob/master/Lambda/getLocationTest.json

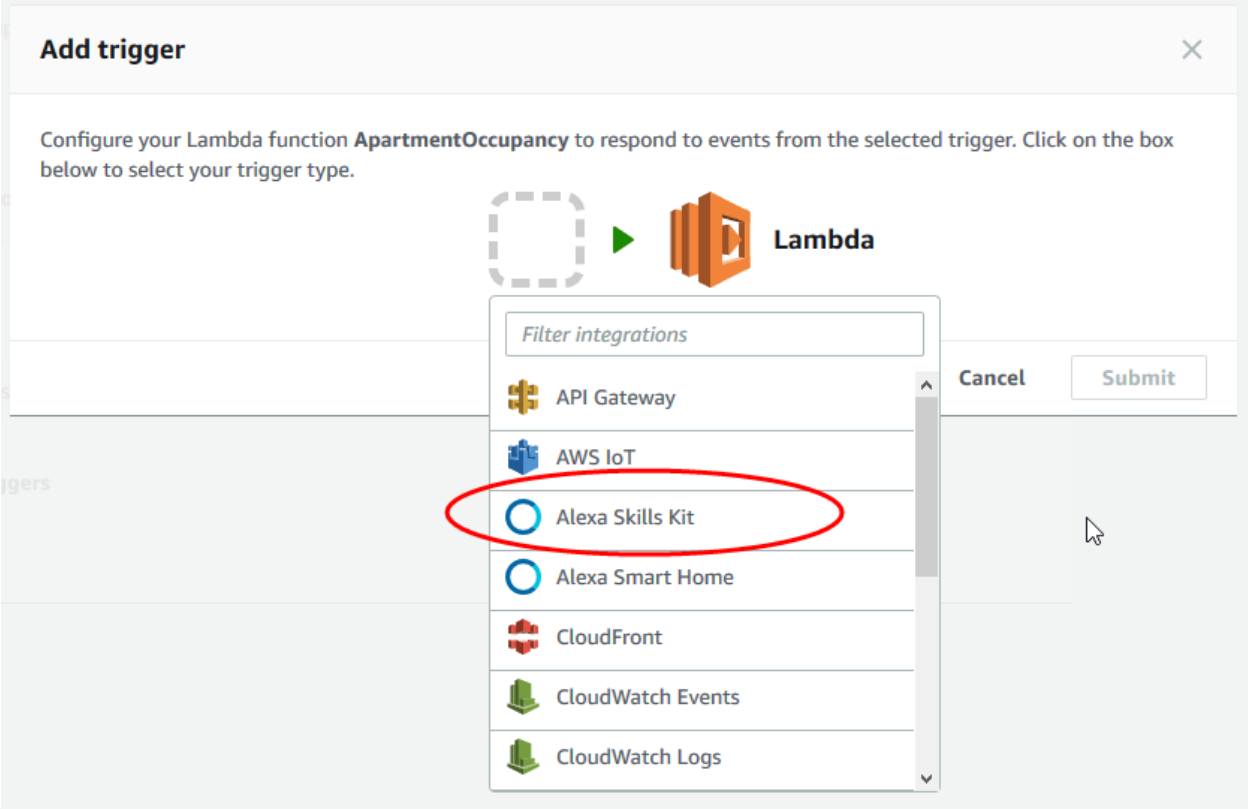
- Event name: **getOccupancyTest**
  https://github.com/kevindwright/cf-alexa-http-web-service/blob/master/Lambda/getOccupancyTest.json

- Event name: **getSummaryTest**
  https://github.com/kevindwright/cf-alexa-http-web-service/blob/master/Lambda/getSummaryTest.json

10. **Configure Trigger**
    Click on "Triggers" and click "+ Add trigger"



11. Click in the dashed box, and select Alexa Skills Kit from the list.

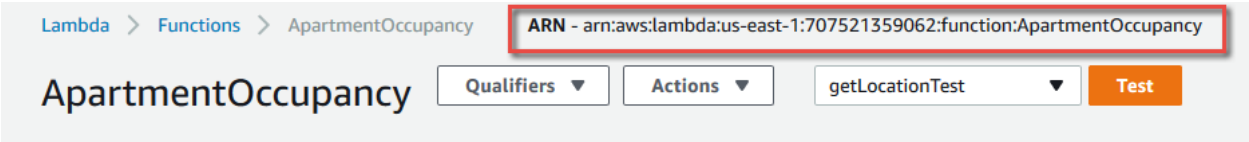


Click “Submit”

Step #3

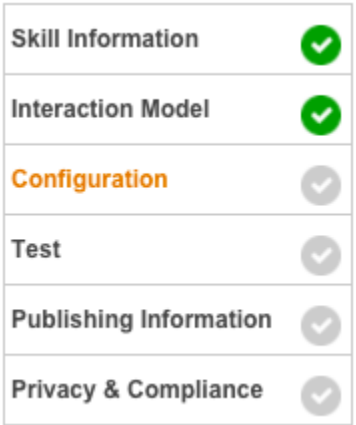
Connect your Alexa skill to your Lambda function.

1. After you have created your Lambda function, an ARN value appears in the top right corner. Copy this value for use in the next steps.



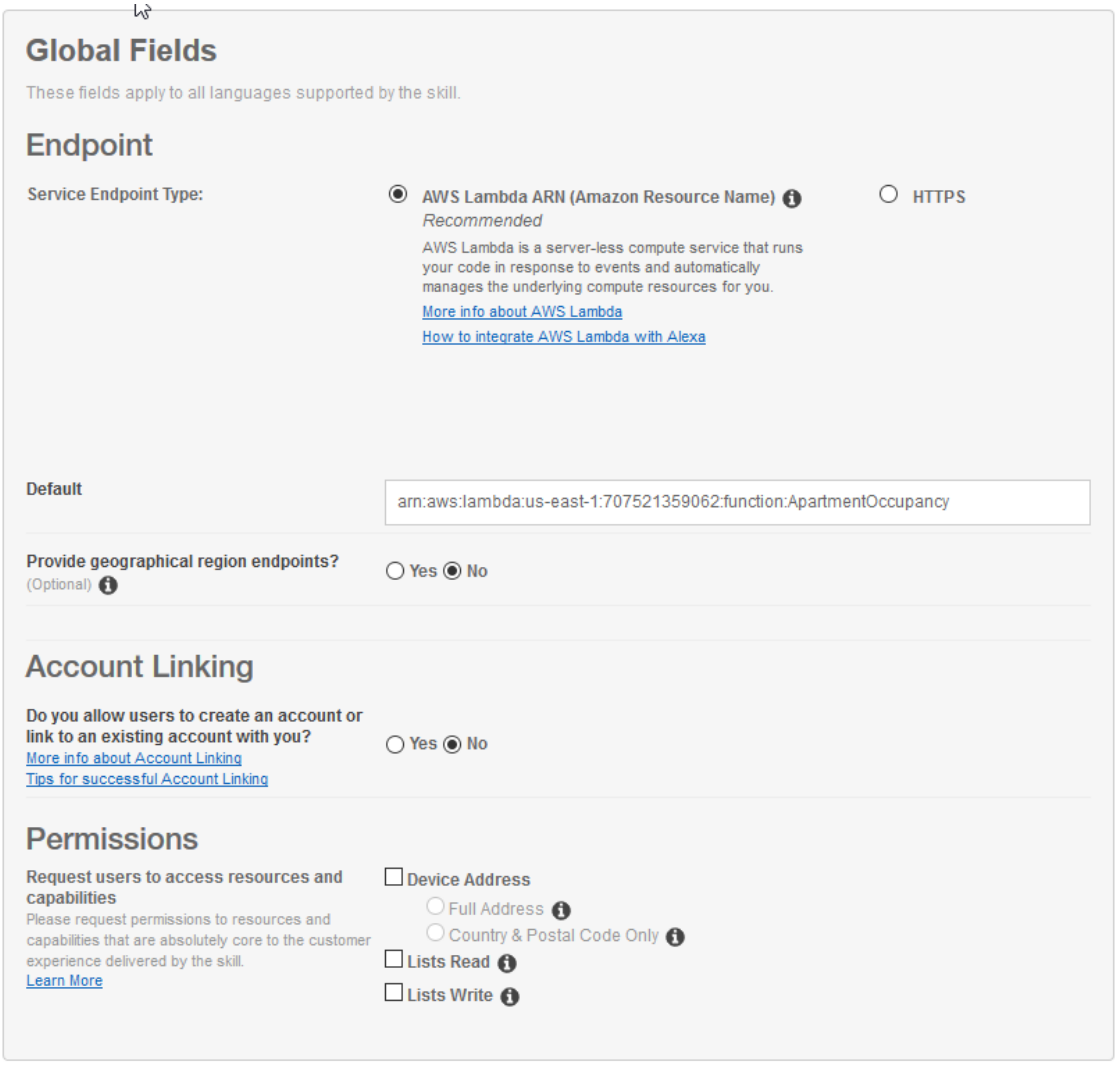
2. Go back to the Amazon Developer Portal and select your skill from the list. You may still have a browser tab open if you started at the beginning of this tutorial.

3. Open the "Configuration" tab on the left side.



4. **Configuration**

   a. Select the "AWS Lambda ARN" option for your endpoint.
   You have the ability to host your code anywhere that you would like using "https", but that is beyond the scope of this tutorial.
   b. Select "North America" as your geographical region.
   IMPORTANT: Make sure you select the same region that you created your Lambda function in.
   c. Paste your Lambda's ARN (Amazon Resource Name) into the textbox provided. It should look similar to the screenshot on the next page.
   d. Leave "Account Linking" set to "No". For this skill, we won't be using Account Linking, but you can learn more about Linking an Alexa User with a User in Your System.
   e. Leave all permissions options unchecked.



Step #4

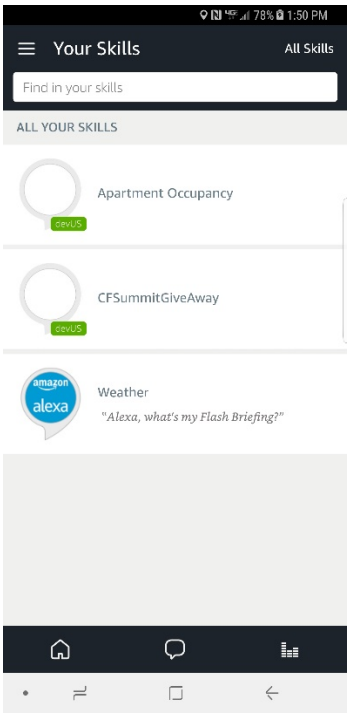
Testing your Alexa Skill

1. **Alexa Service Simulator**
   You can type an utterance within the 'service simulator' textbox on your skills "test" page. It will show you the JSON request and JSON response.

2. **Echoism.io** (https://echosim.io)
   The Amazon Echo Simulator (Echosim.io) is a browser-based interface to Alexa. Echosim.io is intended to allow developers who are working with the Alexa Skills Kit (ASK) to test skills in development. While Echosim.io allows you to interact with Alexa, it is not a substitute for Alexa-enabled devices, like the Amazon Echo. For example, Echosim.io does not stream music or support far-field voice recognition.

3. **Alexa-enabled Device**
   The best way to test your skill is with an Alexa-enabled device. On the Alexa App on your mobile device, go to "Your Skills". There you will see your skills listed.

   *IMPORTANT -
   You must sign-in to the Alexa App with the same email as you signed in with the developer.amazon.com console !!



Step #5

Where to go from here

1. **Alexa Skills Kit**
   Documentation, and code samples that makes it fast and easy for you to add skills to Alexa.
   https://developer.amazon.com/alexa-skills-kit

2. **Alexa Cookbook**
   A collection of tutorials and examples fro Rob McCauley,
   https://github.com/alexa/alexa-cookbook

3. **Hosting your own CF Code on HTTP**
   Steve Drucker from Fig Leaf Software's tutorial
   https://experts.adobeconnect.com/_a204547676/p8zcgm583fx/

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Our solutions are one part technology,
one part creativity,
and all business.