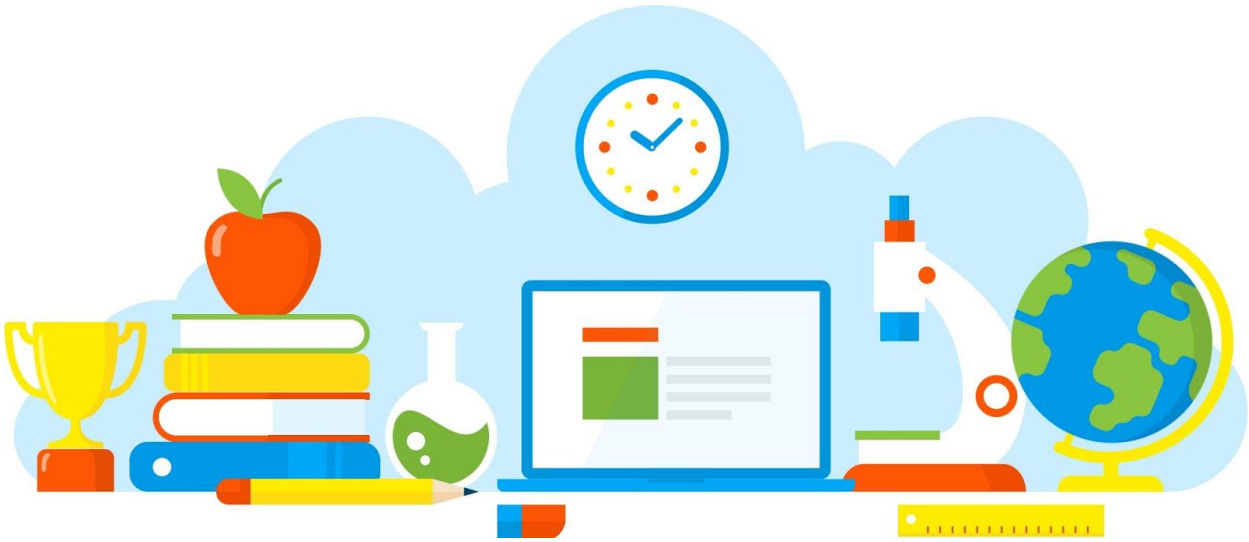


Chatbots AWS LEX with Lambda

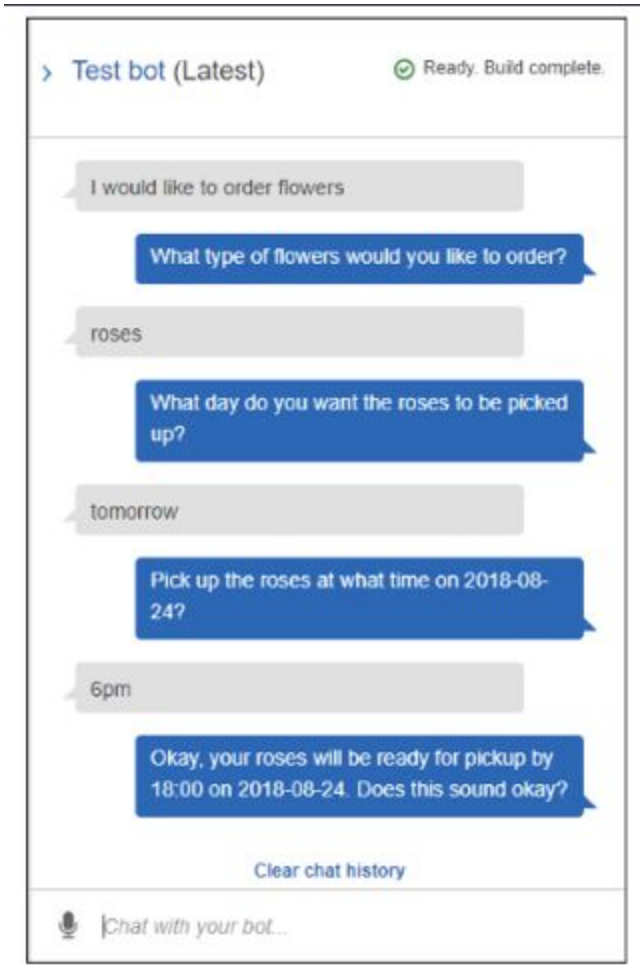
What Is Amazon Lex

Amazon Lex is an AWS service for building conversational interfaces for applications using voice and text. With Amazon Lex, the same conversational engine that powers Amazon Alexa is now available to any developer, enabling you to build sophisticated, natural language chatbots into your new and existing applications. Amazon Lex provides the deep functionality and flexibility of natural language understanding (NLU) and automatic speech recognition (ASR) so you can build highly engaging user experiences with lifelike, conversational interactions, and create new categories of products.

Set up an Amazon Lex Bot (Console)

To set up an Amazon Lex bot (console)

- Sign in to the AWS Management Console and open the Amazon Lex console at https://console.aws.amazon.com/lex/.
- If this is your first bot, choose to Get Started; otherwise, on the Bots page, choose to Create.
- On the Create your Lex bot page, provide the following information and then choose to Create.
- Choose the OrderFlowers blueprint.
- Leave the default bot name (OrderFlowers).
- For COPPA, choose No.
- Choose to Create. The console makes the necessary requests to Amazon Lex to save the configuration. The console then displays the bot editor window.
- Wait for confirmation that your bot was built.
- Test the bot.


Test bot (Latest)
Ready. Build complete.
I would like to order flowers
What type of flowers would you like to order?
roses
What day do you want the roses to be picked up?
tomorrow
Pick up the roses at what time on 2018-08-24?
6pm
Okay, your roses will be ready for pickup by 18:00 on 2018-08-24. Does this sound okay?
Clear chat history
Chat with your bot...

Setup Lambda Function AWS

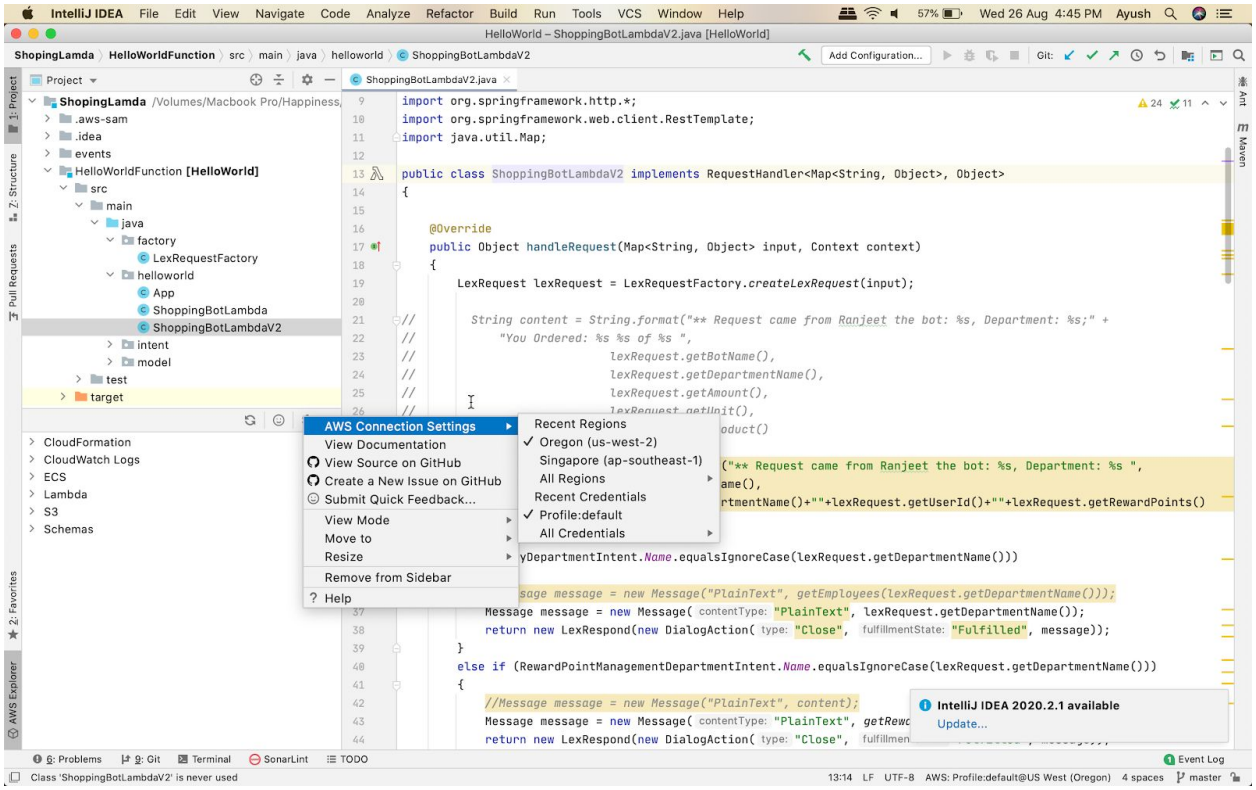
Step 1: Install AWS Toolkit in Intelli J IDE

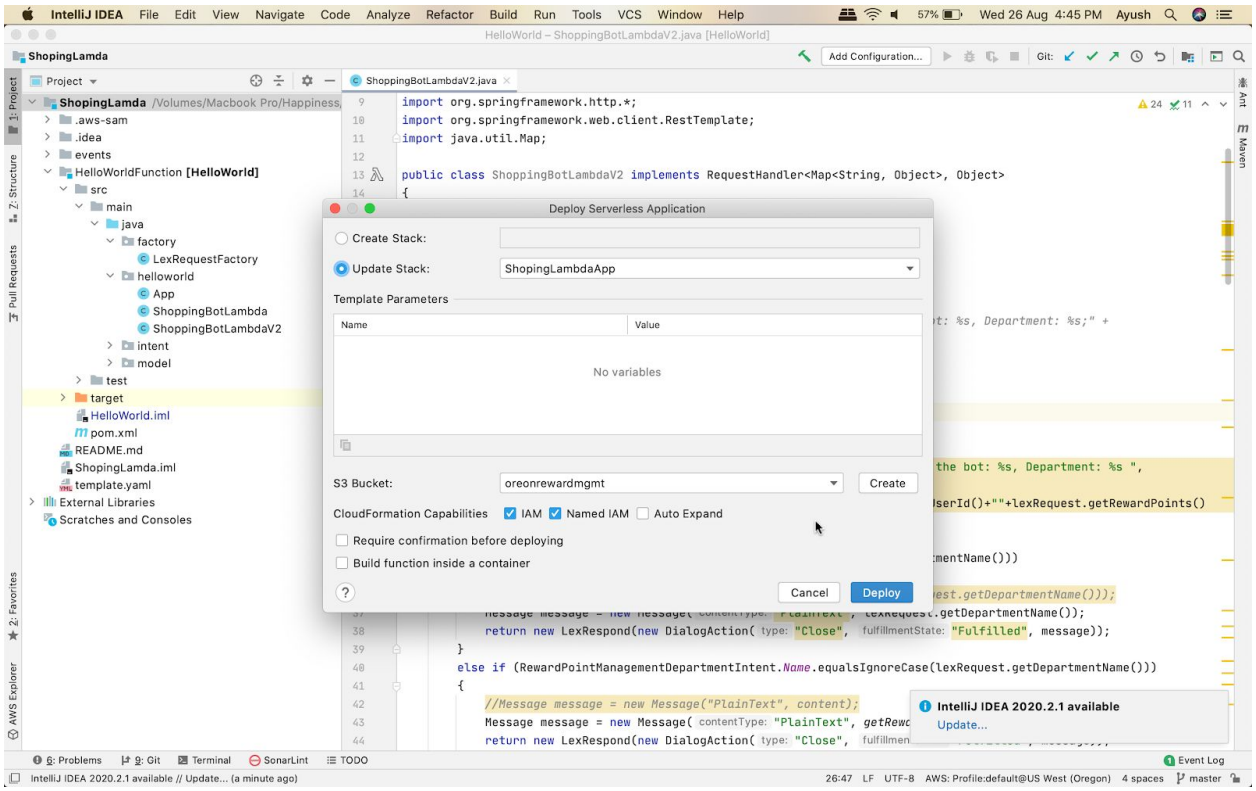
Step 2: Setup a new AWS Project and fill the SSH Keys that you get from AWS administrator.

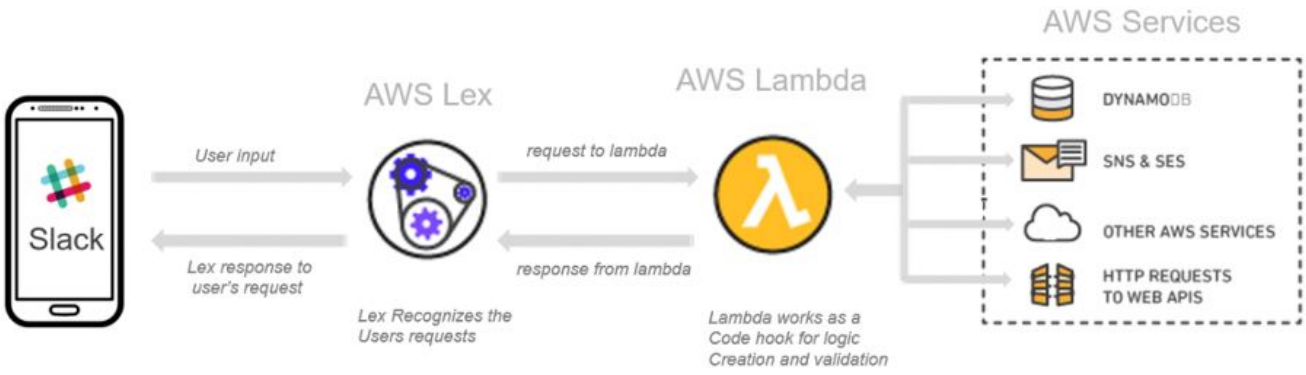
Step 3: Choose the AWS deployment region.

Step 4: Deploy Lamda by creating a stack name & create an S3 bucket.

Step 5: Log in to AWS Lambda and test by giving JSON Request and test response.




Deploy Serverless Application
Create Stack:
Update Stack:
ShopingLambdaApp
Template Parameters
Name
Value
No variables
S3 Bucket:
oreonrewardmgmt
Create
CloudFormation Capabilities
IAM
Named IAM
Auto Expand
Require confirmation before deploying
Build function inside a container
Cancel
Deploy
IntelliJ IDEA 2020.2.1 available
Update...



AWS Lex Chatbot UseCase

Q- Hi?

Ans- How I can help you.

Q- I want to know my redeem points?

Ans- Reedeem point for 1 is successfully fetched. Total Reward Points are 9999.0

Q- How much amount is equal to 8000 Reards Points?

Ans- Rewards Point 8000 equals to 80 Indian Rupees.

Q- What is the minimum reward points for reedeem?

Ans- You can reedeem minimum of 100 Rewards Points.

Q- I want to add 80 Rewards point in userId 1 account?

Ans - 80 Rewards points added successfully for userid 1 account. Total Rewards Points are 880.

Q- Reedeem reward points for userId 1?

Ans -

If (rewardPoint > 100)

{

Your reward points redeemed successfully. Amount of 999 Indian Rupees will be credited in your Bank Account.

}

if (rewardPoint< 100)

{

Sorry, You cannot reedeem your reward point. Minimum points are required 100 for redemption.

}

Twilio integration with Amazon Lex and WhatsApp

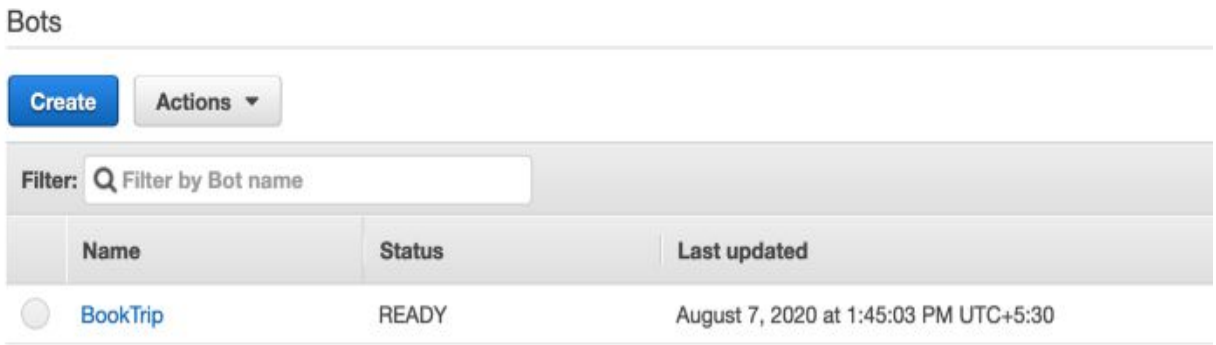
Setting-up Twilio account for SMS and WhatsApp messages

Twilio provides a trial account, So, We can sign up for an account (Reference). I got myself registered by following these instructions.
All I ensured was to save Account SID, and Auth Token for ready reference later. They will be required later for setup.
Twilio allows you to leverage WhatsApp Sandbox.

Setup Amazon Lex Channel for WhatsApp

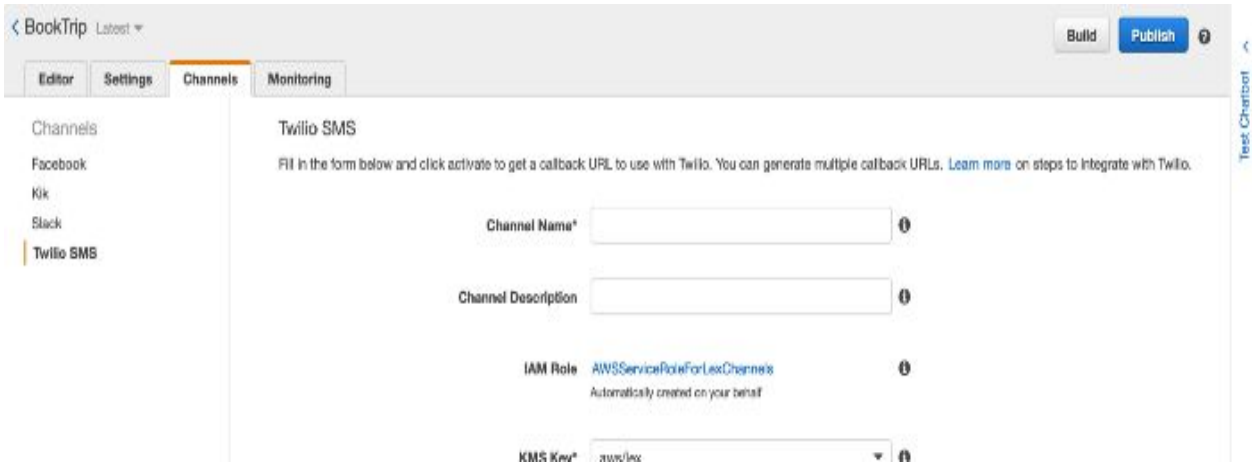
We will establish a channel between Twilio and Amazon Lex, using the Twilio SMS channel. How do you go about it? here is how.

5. Login to Amazon Lex console
6. This will list the bots created. Click on hyperlink of recently created "**BookTrip**" bot.

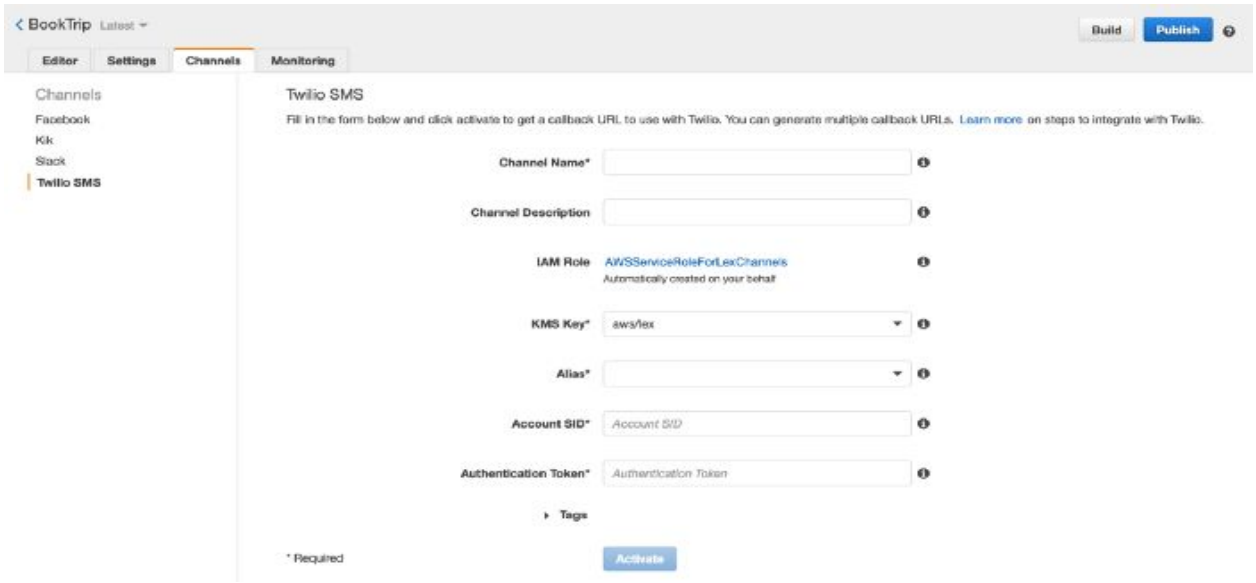


3. This leads to a screen that allows you to create and configure bot. It shows multiple tabs like “Editor”, “Settings”, “Channels” and “Monitoring”. We will be selecting the **“Channels”** tab.

4. Left-hand side will show a pane with a list of available channels. We will select the **“Twilio SMS” channel** in the context of this article. This will show a Twilio channel configuration page, like one below.



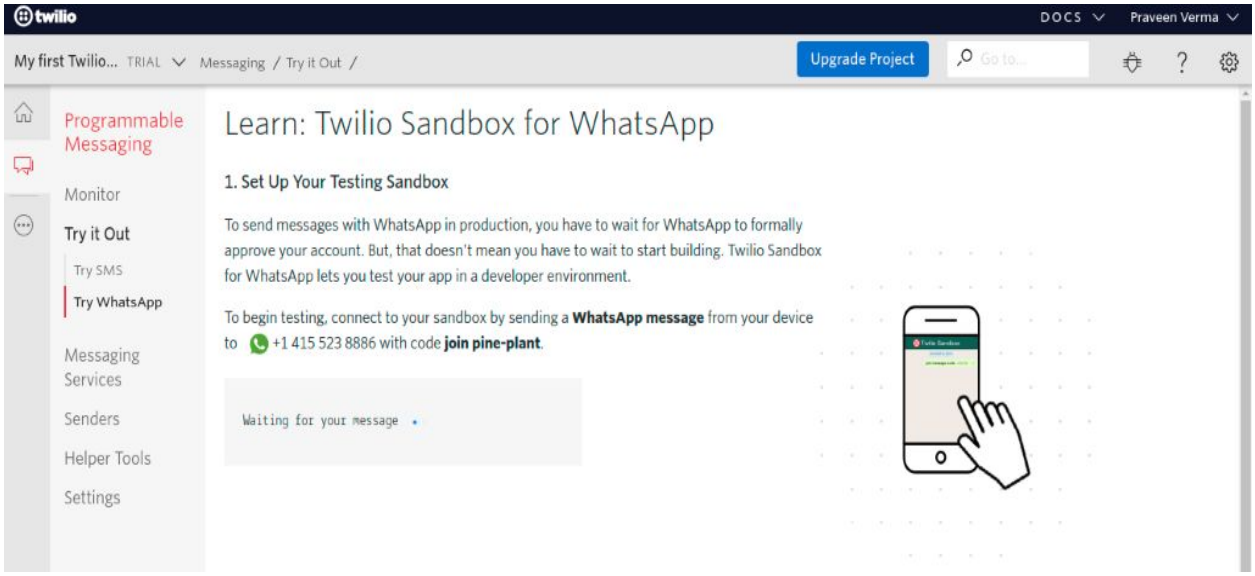
5. I proceeded quickly with adding channel name, a brief description, IAM Role (default value), KMS Key (Default value), Alias (used latest published version of the bot). I added Twilio Account SID & Auth Token that was saved earlier. Click on **“Activate”** button.



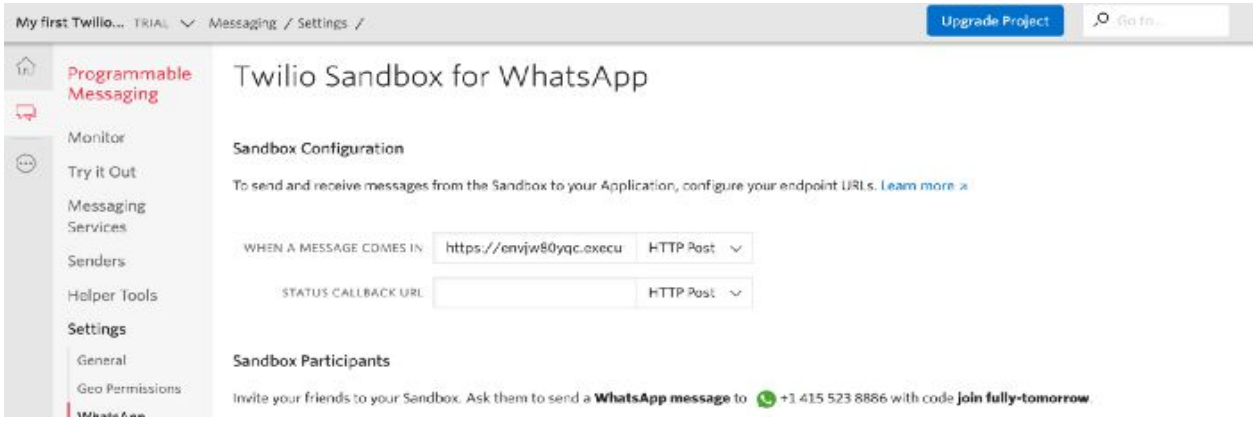
This generates an Endpoint URL, that we will require to configure Twilio WhatsApp Sandbox. after all, we want to leverage WhatsApp as an interface for this Bot :).

Finally, Integrate Amazon Lex Bot's Twilio SMS Channel with Twilio WhatsApp Sandbox

1. Login to Twilio console
2. Navigate to WhatsApp sandbox console



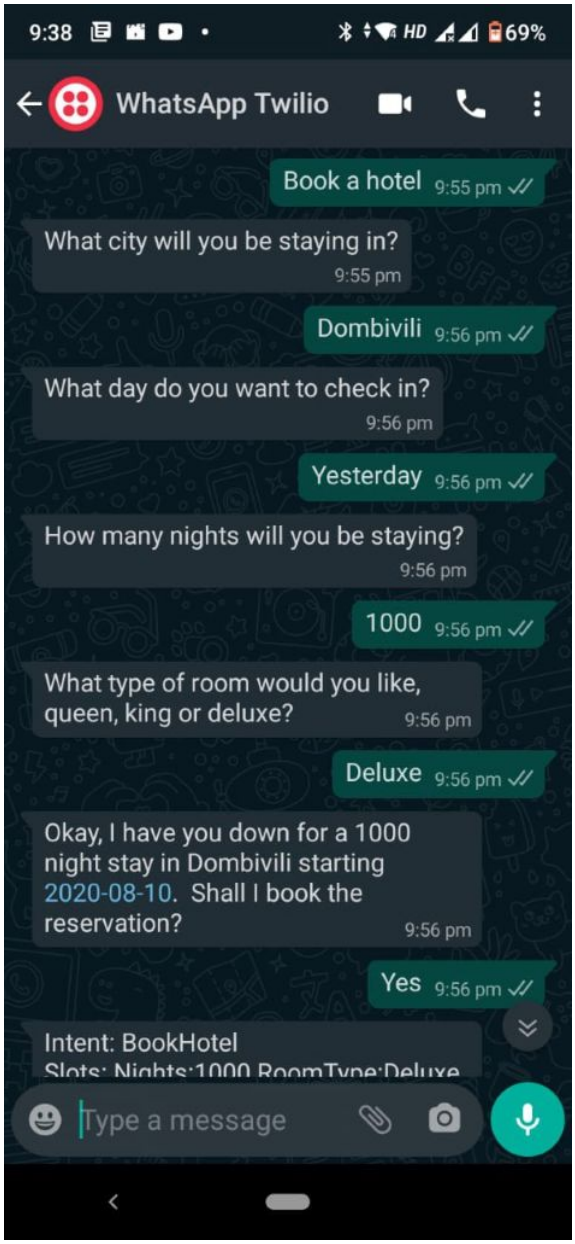
3. Navigate to Twilio sandbox configuration, by clicking "**Settings**" and then "**WhatsApp Sandbox settings**".



4. Paste the Endpoint URL from the previous section in "WHEN A MESSAGE COMES IN" textbox and save the settings.

We are done with the configuration. We need to now test.

Testing the Setup via WhatsApp


9:38
69%
WhatsApp Twilio
Book a hotel 9:55 pm
What city will you be staying in? 9:55 pm
Dombivili 9:56 pm
What day do you want to check in? 9:56 pm
Yesterday 9:56 pm
How many nights will you be staying? 9:56 pm
1000 9:56 pm
What type of room would you like, queen, king or deluxe? 9:56 pm
Deluxe 9:56 pm
Okay, I have you down for a 1000 night stay in Dombivili starting 2020-08-10. Shall I book the reservation? 9:56 pm
Yes 9:56 pm
Intent: BookHotel
Type a message

Thankyou.