Test Amazon SQS using AWS Lambda

1. Create an Amazon SQS queue

- 1. Login to AWS console https://console.aws.amazon.com
- 2. Type SQS in the Services search box and select Amazon SQS
- 3. On the SQS console home, click Create New Queue or click Get started
- 4. Enter < Your_Name>-LabQueue.fifo in the Queue Name textbox.
- 5. Select **FIFO Queue** under
- 6. Scroll down and click Create Queue
- 7. Your queue is now successfully created.
- 8. Copy the **URL** from the **Details** tab at the bottom of the screen and save it in a text editor. We will use this URL in the Lambda function we will create later.

2. Create a Python based Lambda function to send messages to SQS

- 1. Navigate to AWS Lambda
- 2. Click on Create function
- 3. Select Author from scratch
- 4. Name the funcion as **<Your_Name>-sendmessage**
- 5. Select **Python 3.6** as the runtime
- 6. Click **Create function**
- 7. Replace the default code with the code in the block below

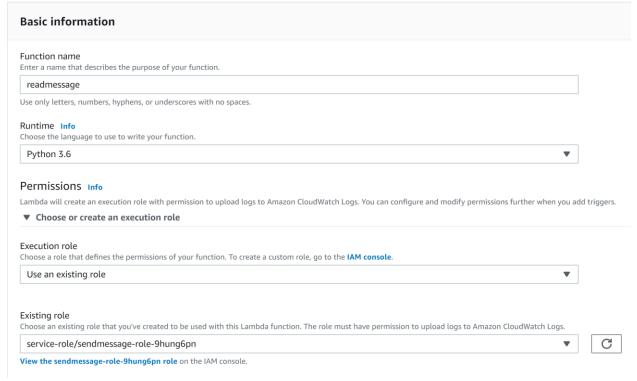
SendMessages

- 8. Replace **QUEUE_URL**> with the URL you saved into the text editor earlier
- 9. Click on **Save** at the top of the screen to save the code changes you just made.
- 10. Click on **Configuration** and go to **Permissions** tab on the left side of the screen.
- 11. On the **Execution role** section, you will see that a new IAM Role has been created for the Lambda function with some basic permissions.
- 12. For the Lambda function to be able to send messages to the SQS queue, it needs to have necessary permissions. Click on **View the sendmessage-role-...** link which will open a new tab and take you to the IAM console.
- 13. Click on Attach policies
- 14. Type sqs in the search textbox and select AmazonSQSFullAccess policy checkbox
- 15. Click **Attach policy**. Once the policy is saved, close the browser tab.

3. Create a Python based Lambda function to read messages from the Queue

- 1. Navigate to AWS Lambda console and click Create function
- 2. Name the function as **readmessage**
- 3. Select **Python 3.6** as the runtime
- 4. Expand Choose or create an execution role by clicking on it
- 5. Select Use an existing role under Execution role section

 Select the same role you created earlier for the <Your_Name>-sendmessage lambda function. See screenshot below for details



- 7. Click Create function
- 8. Replace the default code with the code below and click the **Save** button at the top right to save the changes

ReadMessages

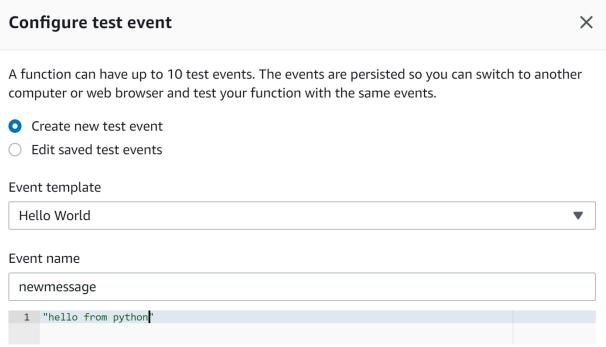
9. Replace **QUEUE_URL>** with the URL of the queue you created earlier in the exercise

Test everything

Send message to the SQS queue

- 1. Navigate to the **Your_Name>-sendmessage** Lambda function page
- 2. Click on the drop down near the **Test** button at the top right and select **Configure test** events
- 3. In the new popup, select Create new test event
- 4. Select **Hello World** template.
- 5. Name the event as **<Your_Name>-newmessage**

6. Clear the textbox with sample inpute json and enter any string within quotes. See screenshot below for details



- 7. Click **Save** at the bottom of the screen
- 8. Simply click on the **Test** button on the **<Your_Name>-sendmessage** Lambda function home page to send the message to SQS
- 9. You should see the user interface saying **Execution result:succeeded**. Click on it to see details of the execution.

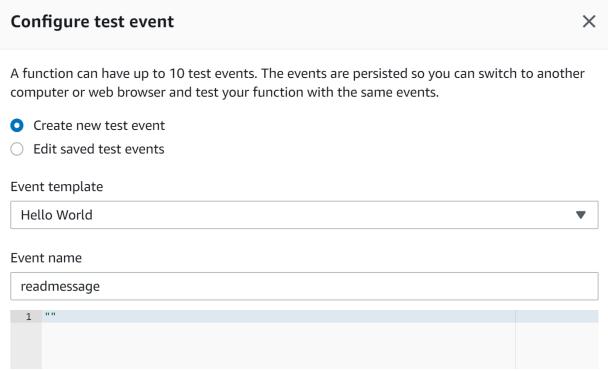
Check the message in SQS queue

- 1. Navigate to Amazon SQS home page and select LabQueue.info
- 2. Click on Send and receive messages and click Poll for messages
- 3. You should be able to see the message that you just sent from the Lambda function.

Read the message from the SQS queue

- 1. Navigate to the **<Your_Name>-readmessage** Lambda function page
- 2. Click on the drop down near the **Test** button at the top right and select **Configure test** events
- 3. In the new popup, select Create new test event
- 4. Select **Hello World** template.
- 5. Name the event as **readmessage**

6. Clear the textbox with sample inpute json and replace it with empty quotes



- 7. Click **Save** at the bottom of the screen
- 8. Simply click on the **Test** button on the **<Your_Name>-readmessage** Lambda function home page to send the message to SQS
- 9. You should see the user interface saying **Execution result:succeeded**. Expanding it will show the details of the execution along with the content of the SQS message in the **Log output** section.