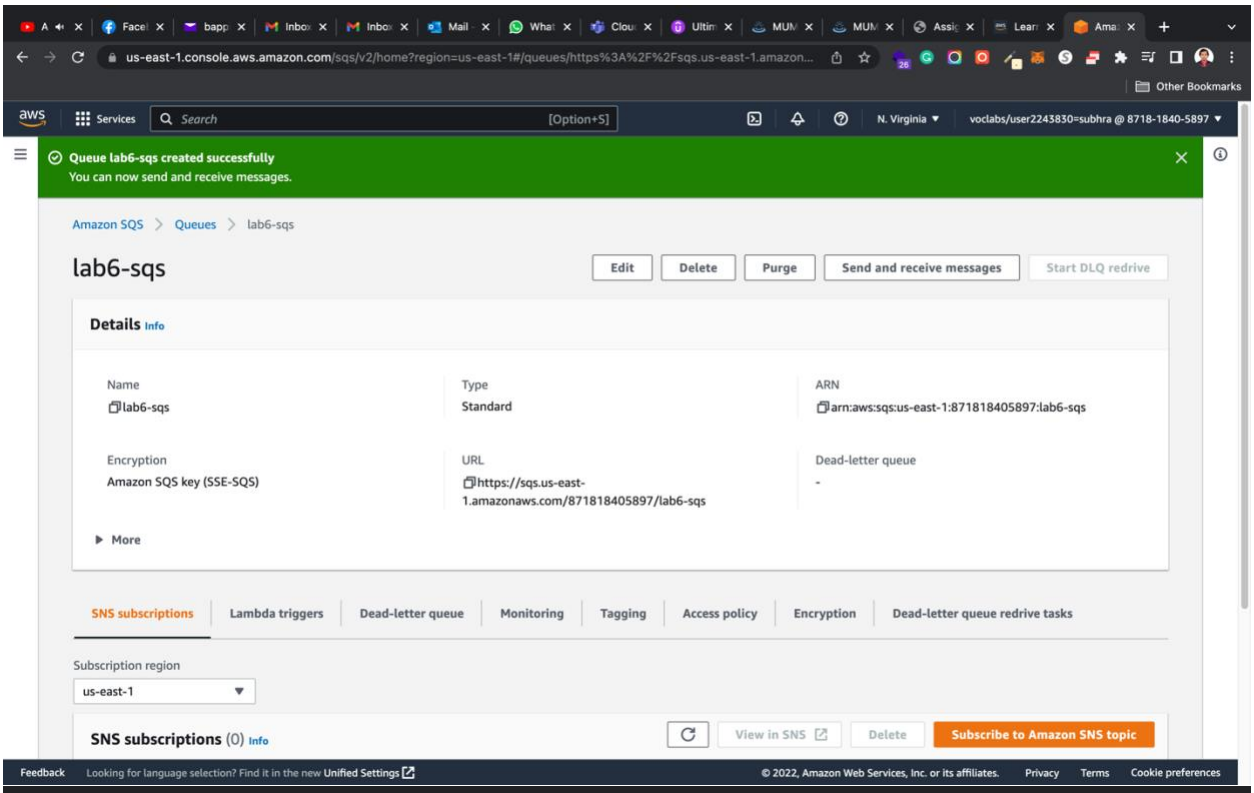
Assignment 6

Name: Subhra Dey

Student ID: 615206

Create 2 microservices decoupled with SQS. Once you received the message from the microservice 1 in the microservice 2, send the message to yourself via SNS.


us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Queue lab6-sqs created successfully
You can now send and receive messages.
Amazon SQS > Queues > lab6-sqs
lab6-sqs
Edit
Delete
Purge
Send and receive messages
Start DLQ redrive
Details Info
Name
lab6-sqs
Type
Standard
ARN
arn:aws:sqs:us-east-1:871818405897:lab6-sqs
Encryption
Amazon SQS key (SSE-SQS)
URL
https://sqs.us-east-1.amazonaws.com/871818405897/lab6-sqs
Dead-letter queue
-
More
SNS subscriptions
Lambda triggers
Dead-letter queue
Monitoring
Tagging
Access policy
Encryption
Dead-letter queue redrive tasks
Subscription region
us-east-1
SNS subscriptions (0) Info
View in SNS
Delete
Subscribe to Amazon SNS topic
Feedback
Looking for language selection? Find it in the new Unified Settings
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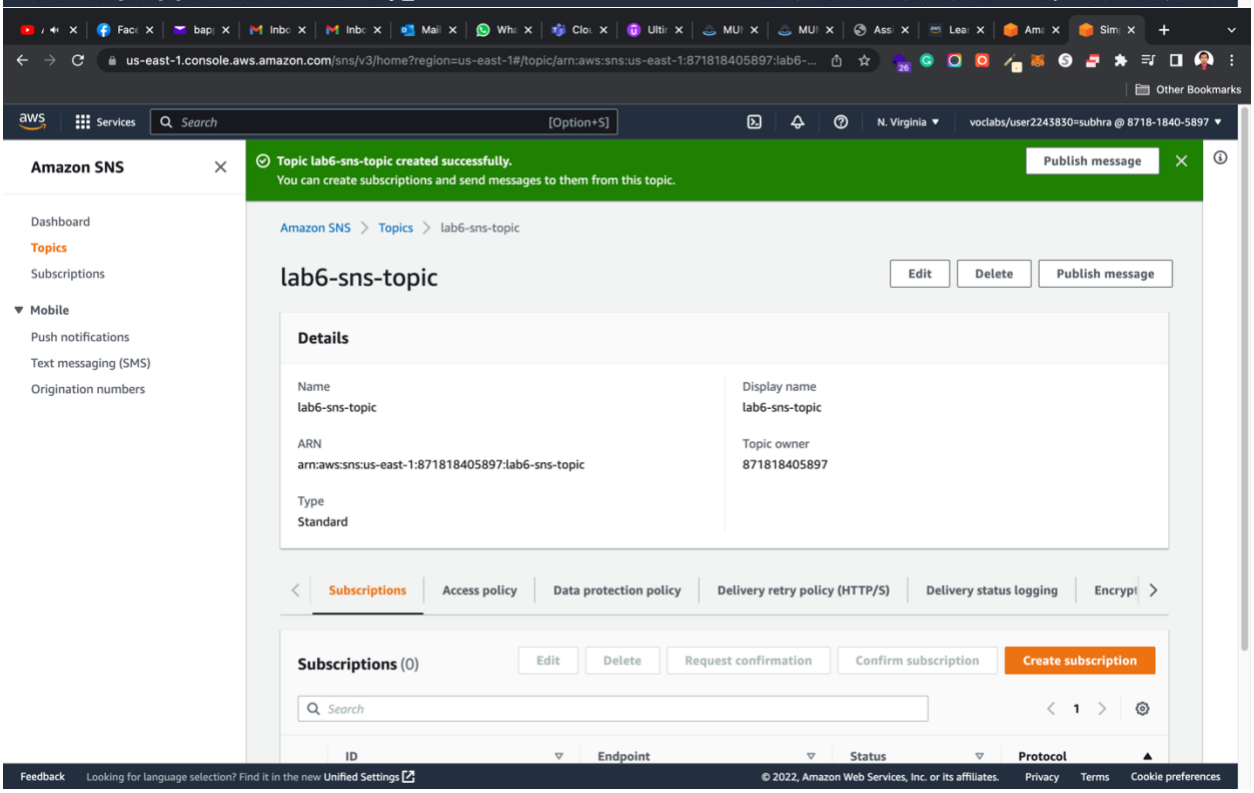
us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/topic/arn:aws:sns:us-east-1:871818405897:lab6-...
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Amazon SNS
Dashboard
Topics
Subscriptions
Mobile
Push notifications
Text messaging (SMS)
Origination numbers
Topic lab6-sns-topic created successfully.
You can create subscriptions and send messages to them from this topic.
Publish message
Amazon SNS > Topics > lab6-sns-topic
lab6-sns-topic
Edit
Delete
Publish message
Details
Name
lab6-sns-topic
Display name
lab6-sns-topic
ARN
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic
Topic owner
871818405897
Type
Standard
Subscriptions
Access policy
Data protection policy
Delivery retry policy (HTTP/S)
Delivery status logging
Encrypt
Subscriptions (0)
Edit
Delete
Request confirmation
Confirm subscription
Create subscription
Search
ID
Endpoint
Status
Protocol
Feedback
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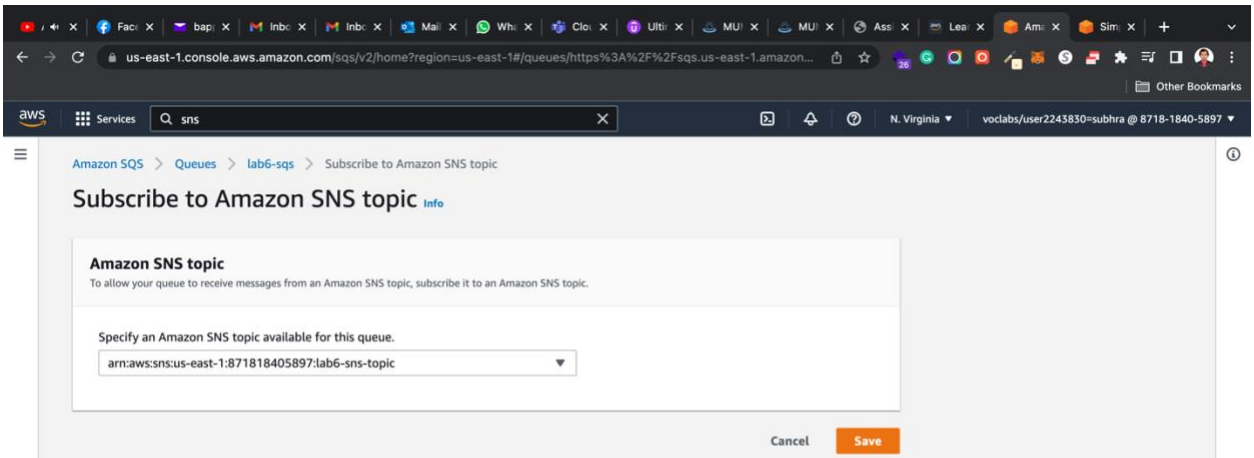
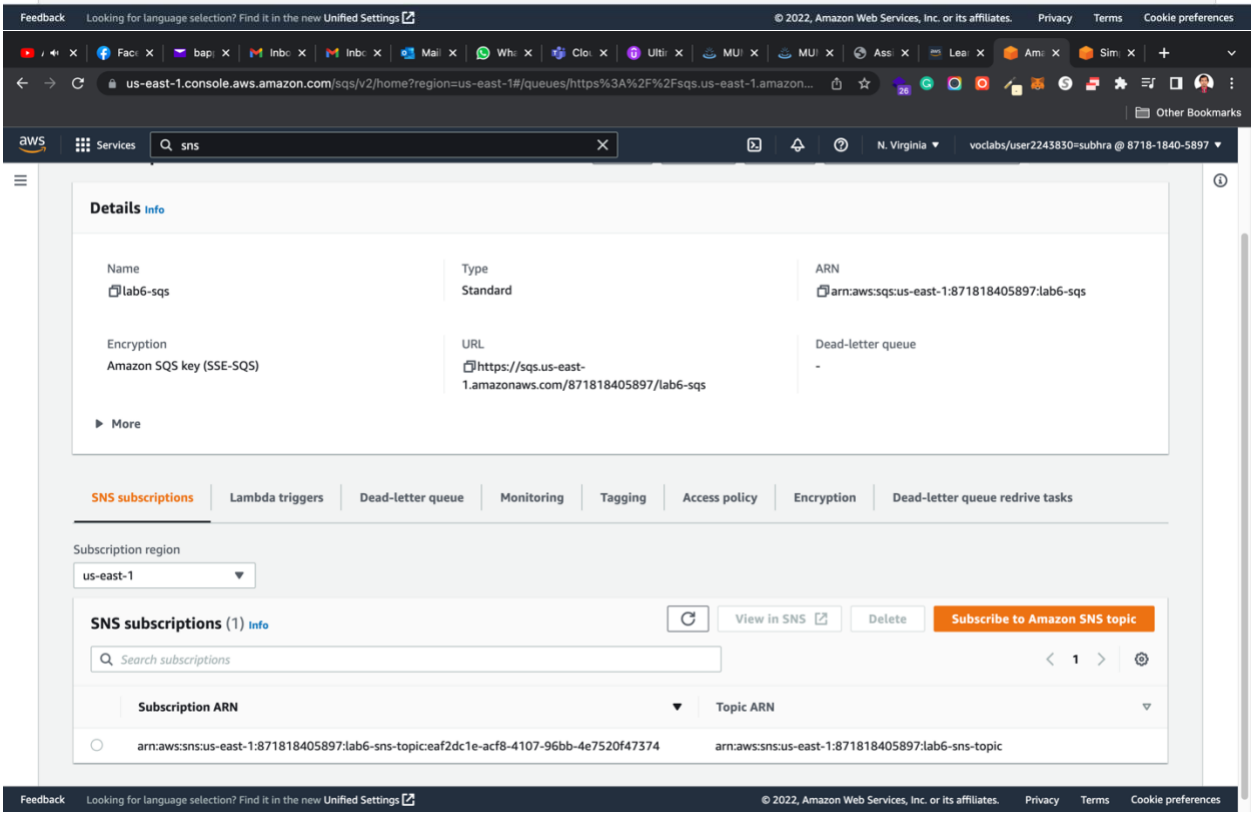

us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
aws
Services
sns
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Amazon SQS > Queues > lab6-sqs > Subscribe to Amazon SNS topic
Subscribe to Amazon SNS topic Info
Amazon SNS topic
To allow your queue to receive messages from an Amazon SNS topic, subscribe it to an Amazon SNS topic.
Specify an Amazon SNS topic available for this queue.
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic
Cancel
Save


Feedback
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Cookie preferences
us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
aws
Services
sns
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Details Info
Name
lab6-sqs
Type
Standard
ARN
arn:aws:sqs:us-east-1:871818405897:lab6-sqs
Encryption
Amazon SQS key (SSE-SQS)
URL
https://sqs.us-east-1.amazonaws.com/871818405897/lab6-sqs
Dead-letter queue
-
More
SNS subscriptions
Lambda triggers
Dead-letter queue
Monitoring
Tagging
Access policy
Encryption
Dead-letter queue redrive tasks
Subscription region
us-east-1
SNS subscriptions (1) Info
View in SNS
Delete
Subscribe to Amazon SNS topic
Search subscriptions
1
Subscription ARN
Topic ARN
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic:eaf2dc1e-acf8-4107-96bb-4e7520f47374
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic
Feedback
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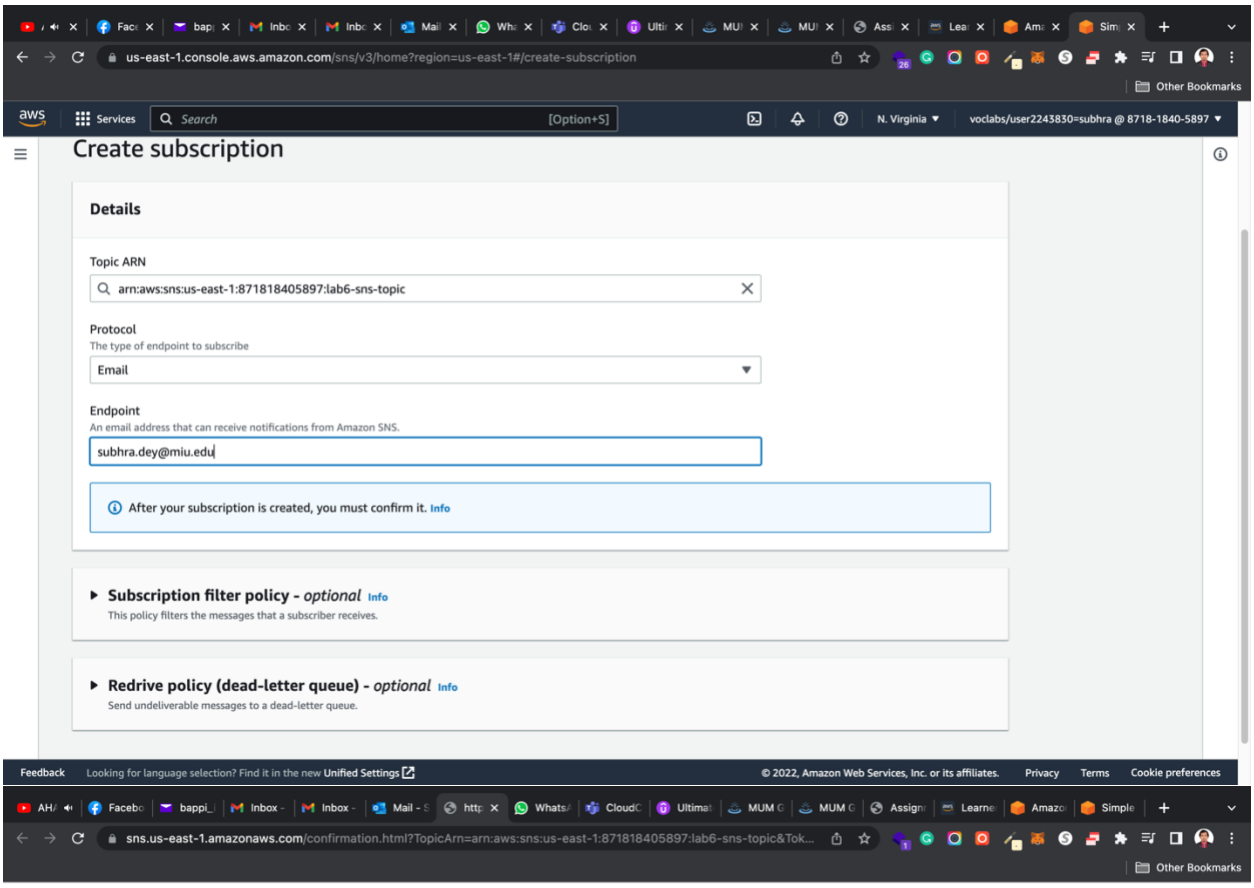


aws

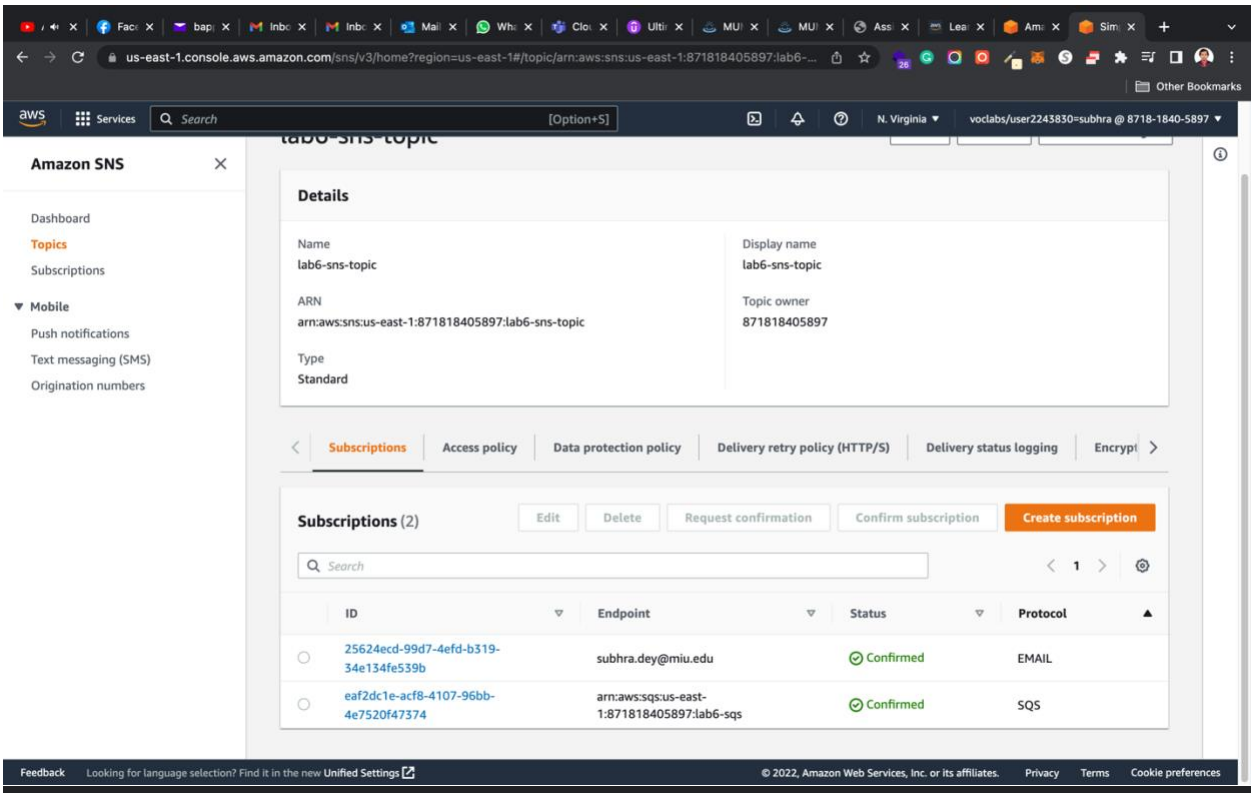
Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:
`arn:aws:sns:us-east-1:871818405897:lab6-sns-topic:25624ecd-99d7-4efd-b319-34e134fe539b`

If it was not your intention to subscribe, click here to unsubscribe.


us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/topic/arn:aws:sns:us-east-1:871818405897:lab6-...
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Amazon SNS
Dashboard
Topics
Subscriptions
Mobile
Push notifications
Text messaging (SMS)
Origination numbers
Details
Name
lab6-sns-topic
Display name
lab6-sns-topic
ARN
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic
Topic owner
871818405897
Type
Standard
Subscriptions
Access policy
Data protection policy
Delivery retry policy (HTTP/S)
Delivery status logging
Encrypt
Subscriptions (2)
Edit
Delete
Request confirmation
Confirm subscription
Create subscription
Search
ID
Endpoint
Status
Protocol
25624ecd-99d7-4efd-b319-34e134fe539b
subhra.dey@miu.edu
Confirmed
EMAIL
eaf2dc1e-acf8-4107-96bb-4e7520f47374
arn:aws:sqs:us-east-1:871818405897:lab6-sqs
Confirmed
SQS
Feedback
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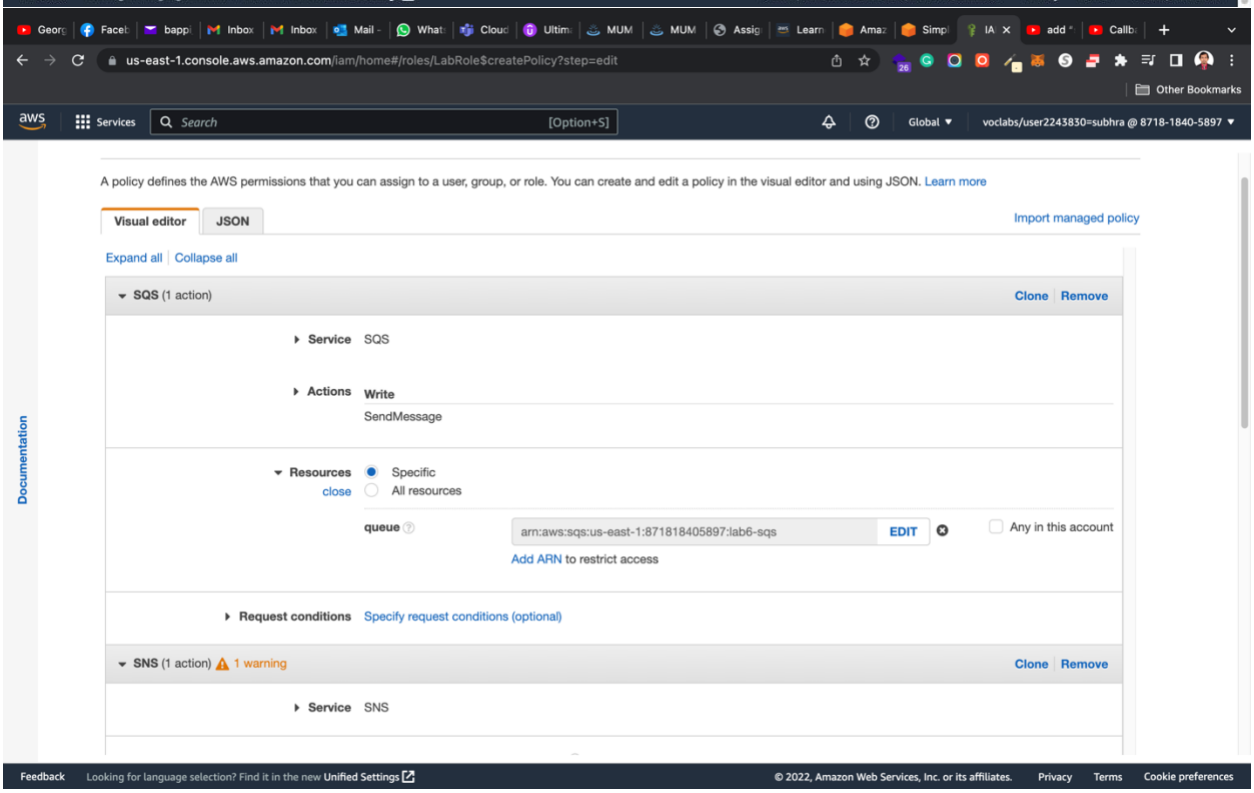
us-east-1.console.aws.amazon.com/iam/home#/roles/LabRole$createPolicy?step=edit
Other Bookmarks
Services
Search
[Option+S]
Global
voclabs/user2243830=subhra @ 8718-1840-5897
A policy defines the AWS permissions that you can assign to a user, group, or role. You can create and edit a policy in the visual editor and using JSON. Learn more
Visual editor
JSON
Import managed policy
Expand all
Collapse all
SQS (1 action)
Clone
Remove
Service
SQS
Actions
Write
SendMessage
Resources
close
Specific
All resources
queue
arn:aws:sqs:us-east-1:871818405897:lab6-sqs
EDIT
Any in this account
Add ARN to restrict access
Request conditions
Specify request conditions (optional)
SNS (1 action)
1 warning
Clone
Remove
Service
SNS
Documentation
Feedback
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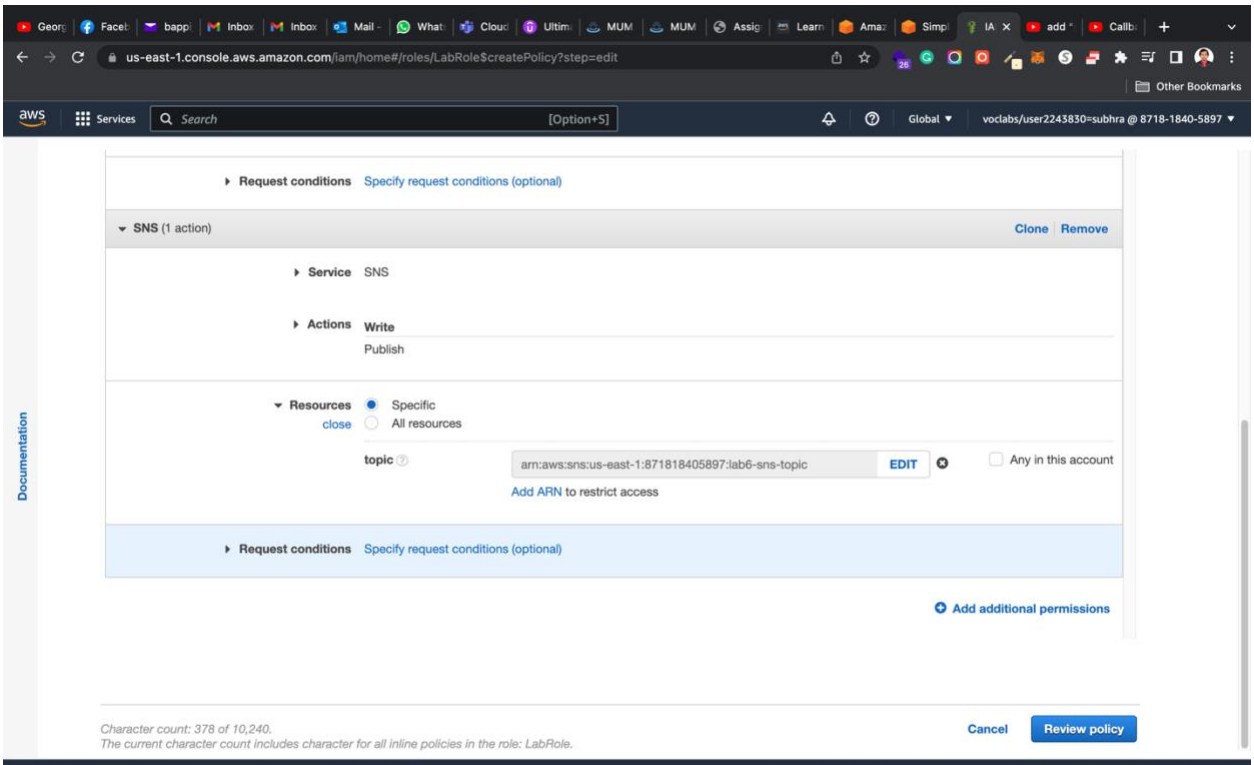
us-east-1.console.aws.amazon.com/iam/home#/roles/LabRole$createPolicy?step=edit
Services
Search
[Option+S]
Global
voclabs/user2243830=subhra @ 8718-1840-5897
Request conditions
Specify request conditions (optional)
SNS (1 action)
Clone
Remove
Service
SNS
Actions
Write
Publish
Resources
close
Specific
All resources
topic
arn:aws:sns:us-east-1:871818405897:lab6-sns-topic
EDIT
Any in this account
Add ARN to restrict access
Request conditions
Specify request conditions (optional)
Add additional permissions
Documentation
Character count: 378 of 10,240.
The current character count includes character for all inline policies in the role: LabRole.
Cancel
Review policy
Feedback
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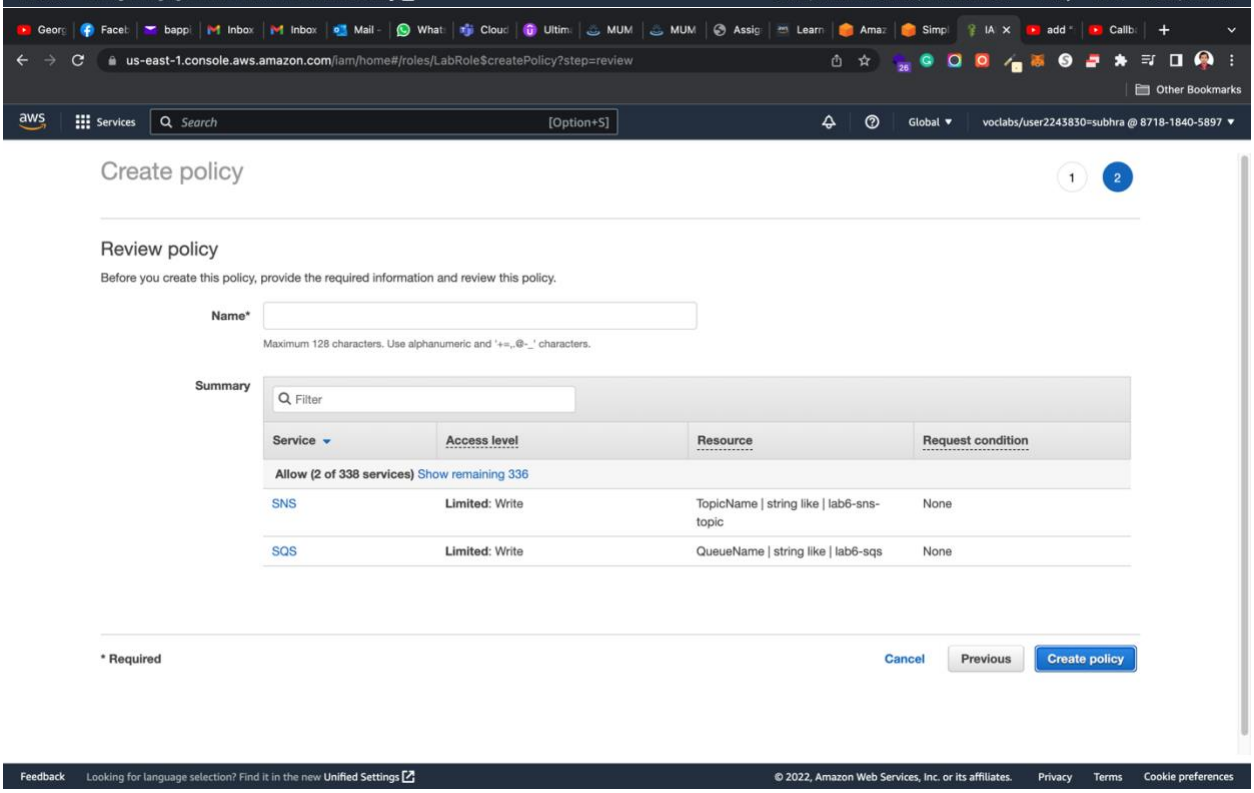
us-east-1.console.aws.amazon.com/iam/home#/roles/LabRole$createPolicy?step=review
Services
Search
[Option+S]
Global
voclabs/user2243830=subhra @ 8718-1840-5897
Create policy
1
2
Review policy
Before you create this policy, provide the required information and review this policy.
Name*
Maximum 128 characters. Use alphanumeric and '+=,.@-_' characters.
Summary
Filter
Service
Access level
Resource
Request condition
Allow (2 of 338 services) Show remaining 336
SNS
Limited: Write
TopicName | string like | lab6-sns-topic
None
SQS
Limited: Write
QueueName | string like | lab6-sqs
None
* Required
Cancel
Previous
Create policy
Feedback
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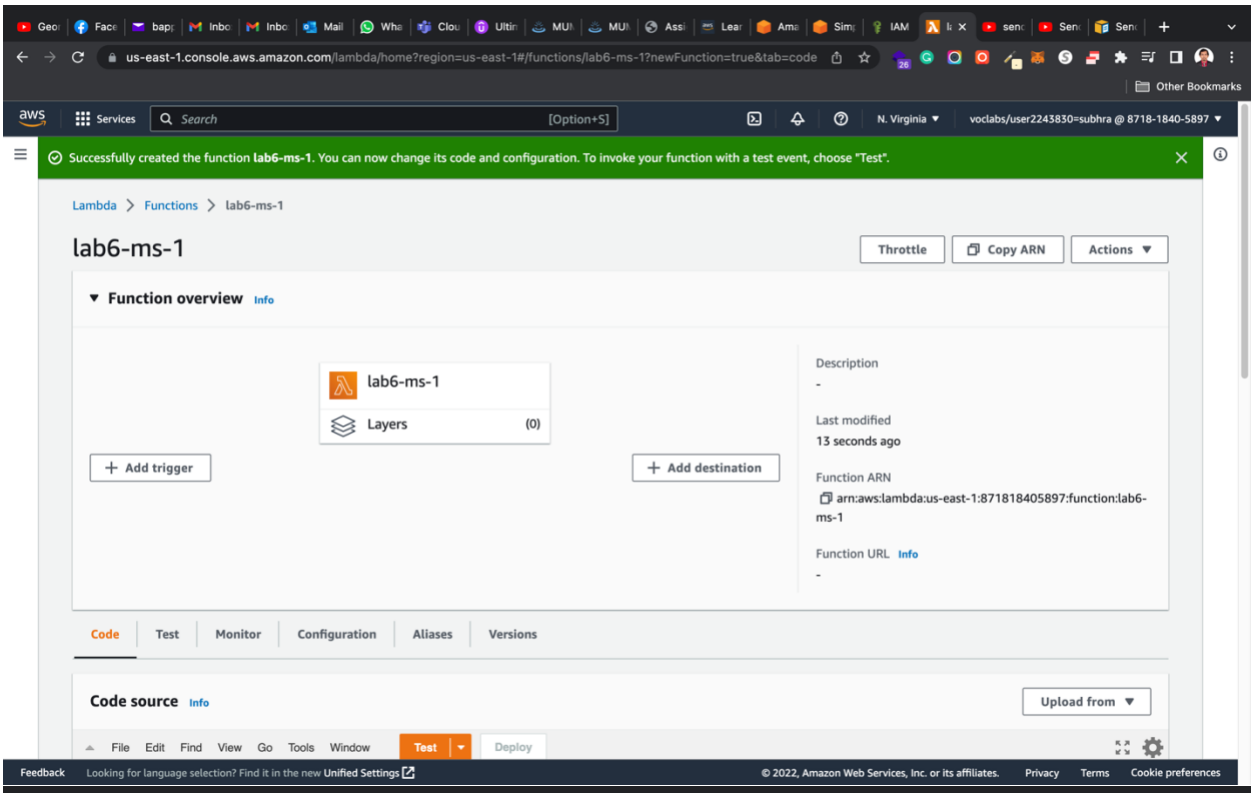
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-1?newFunction=true&tab=code
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Successfully created the function lab6-ms-1. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Lambda > Functions > lab6-ms-1
lab6-ms-1
Throttle
Copy ARN
Actions
Function overview Info
lab6-ms-1
Layers (0)
+ Add trigger
+ Add destination
Description
-
Last modified
13 seconds ago
Function ARN
arn:aws:lambda:us-east-1:871818405897:function:lab6-ms-1
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Feedback
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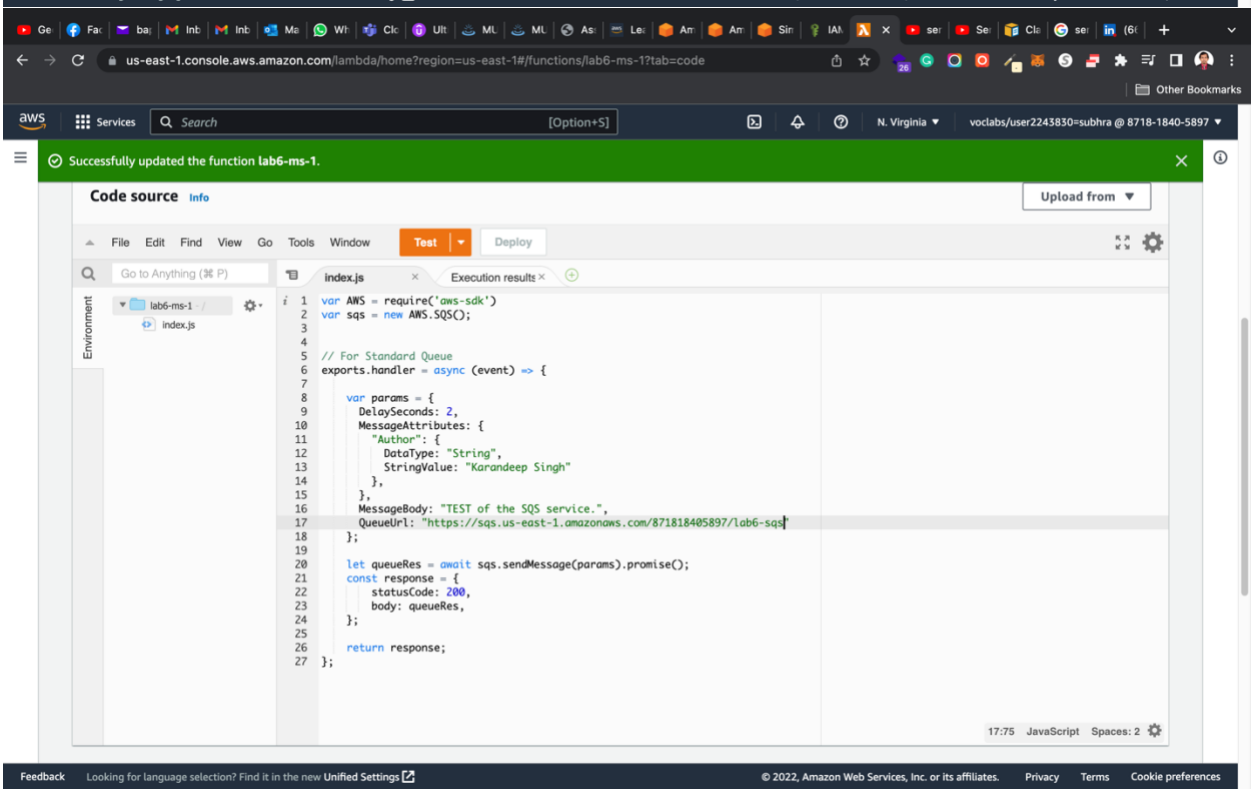
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-1?tab=code
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Successfully updated the function lab6-ms-1.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (⌘ P)
index.js
Execution results
Environment
lab6-ms-1
index.js
var AWS = require('aws-sdk')
var sqs = new AWS.SQS();
// For Standard Queue
exports.handler = async (event) => {
var params = {
DelaySeconds: 2,
MessageAttributes: {
"Author": {
DataType: "String",
StringValue: "Karandeep Singh"
},
},
MessageBody: "TEST of the SQS service.",
QueueUrl: "https://sqs.us-east-1.amazonaws.com/871818405897/lab6-sqs"
};
let queueRes = await sqs.sendMessage(params).promise();
const response = {
statusCode: 200,
body: queueRes,
};
return response;
};
17:75
JavaScript
Spaces: 2
Feedback
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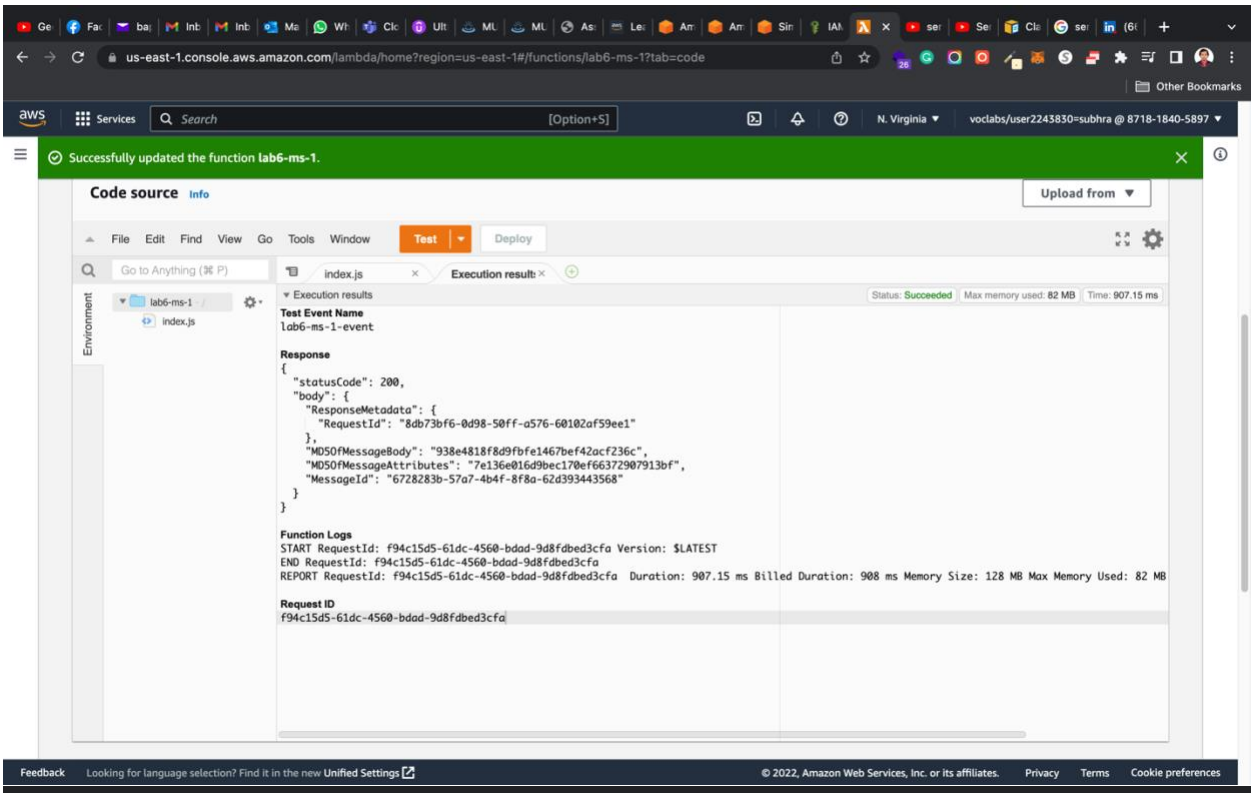
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-1?tab=code
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Successfully updated the function lab6-ms-1.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (⌘ P)
index.js
Execution result:
Environment
lab6-ms-1
index.js
Execution results
Status: Succeeded
Max memory used: 82 MB
Time: 907.15 ms
Test Event Name
lab6-ms-1-event
Response
{
"statusCode": 200,
"body": {
"ResponseMetadata": {
"RequestId": "8db73bf6-0d98-50ff-a576-60102af59ee1"
},
"MD5OfMessageBody": "938e4818f8d9fbfe1467bef42acf236c",
"MD5OfMessageAttributes": "7e136e016d9bec170ef66372907913bf",
"MessageId": "6728283b-57a7-4b4f-8f8a-62d393443568"
}
}
Function Logs
START RequestId: f94c15d5-61dc-4560-bdad-9d8fdbed3cfa Version: $LATEST
END RequestId: f94c15d5-61dc-4560-bdad-9d8fdbed3cfa
REPORT RequestId: f94c15d5-61dc-4560-bdad-9d8fdbed3cfa Duration: 907.15 ms Billed Duration: 908 ms Memory Size: 128 MB Max Memory Used: 82 MB
Request ID
f94c15d5-61dc-4560-bdad-9d8fdbed3cfa
Feedback
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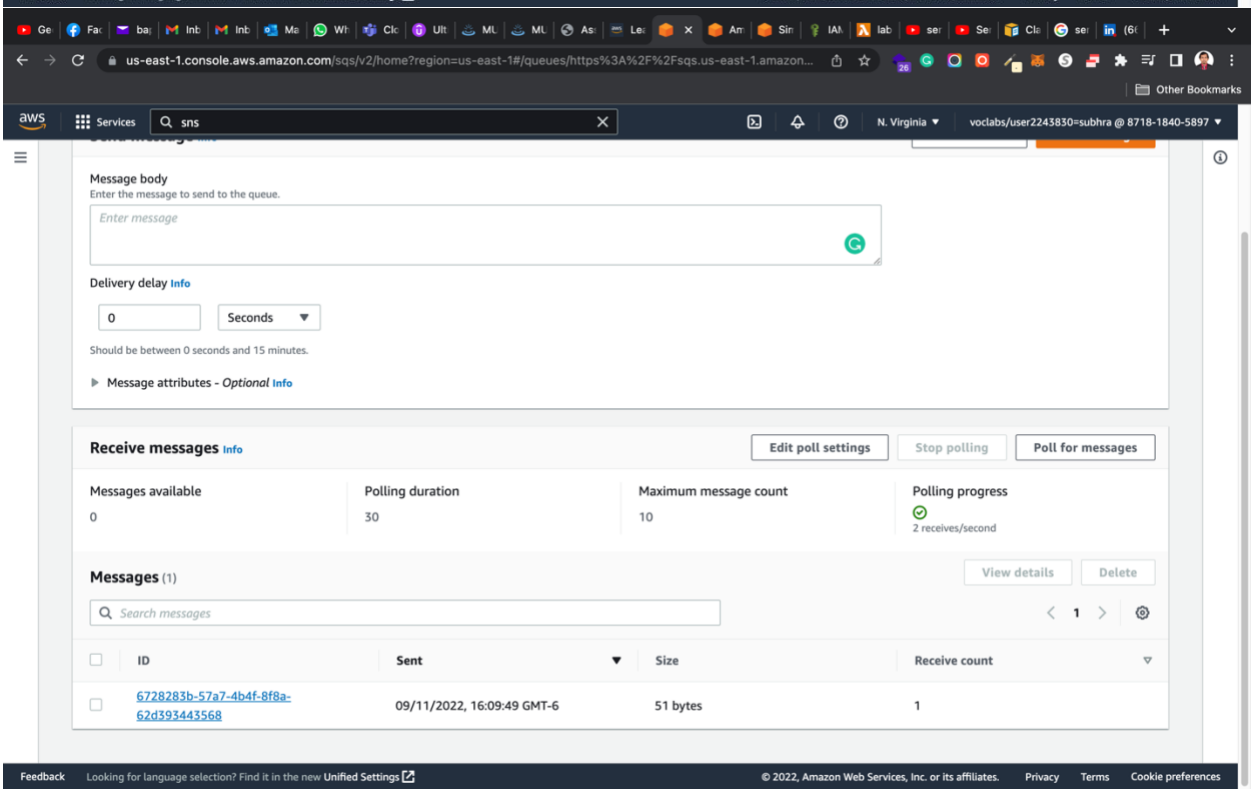
us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
Services
sns
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Message body
Enter the message to send to the queue.
Enter message
Delivery delay Info
0
Seconds
Should be between 0 seconds and 15 minutes.
Message attributes - Optional Info
Receive messages Info
Edit poll settings
Stop polling
Poll for messages
Messages available
0
Polling duration
30
Maximum message count
10
Polling progress
2 receives/second
Messages (1)
View details
Delete
Search messages
1
ID
Sent
Size
Receive count
6728283b-57a7-4b4f-8f8a-62d393443568
09/11/2022, 16:09:49 GMT-6
51 bytes
1
Feedback
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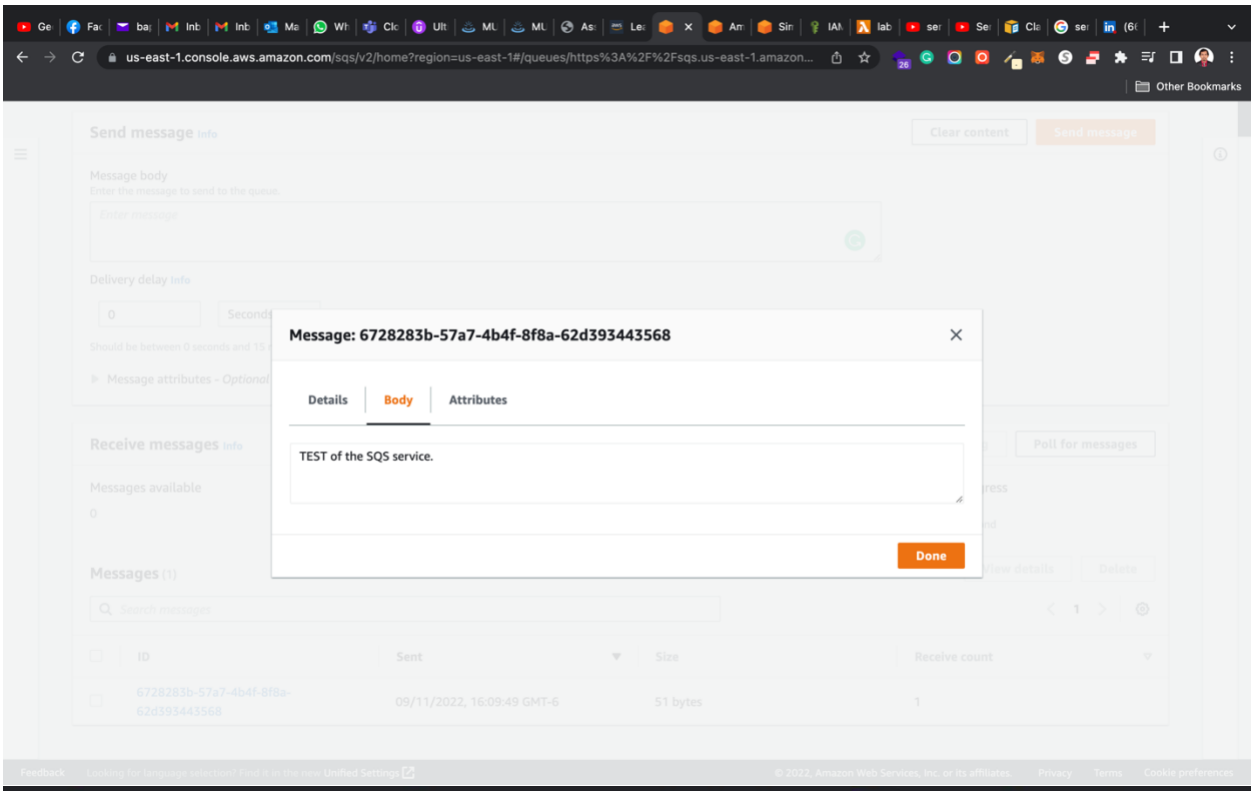
us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
Send message Info
Clear content
Send message
Message body
Enter the message to send to the queue.
Enter message
Delivery delay Info
Message attributes - Optional
Receive messages Info
Poll for messages
Messages available
Messages (1)
Search messages
ID
Sent
Size
Receive count
6728283b-57a7-4b4f-8f8a-62d393443568
09/11/2022, 16:09:49 GMT-6
51 bytes
1
Message: 6728283b-57a7-4b4f-8f8a-62d393443568
Details
Body
Attributes
TEST of the SQS service.
Done
Feedback
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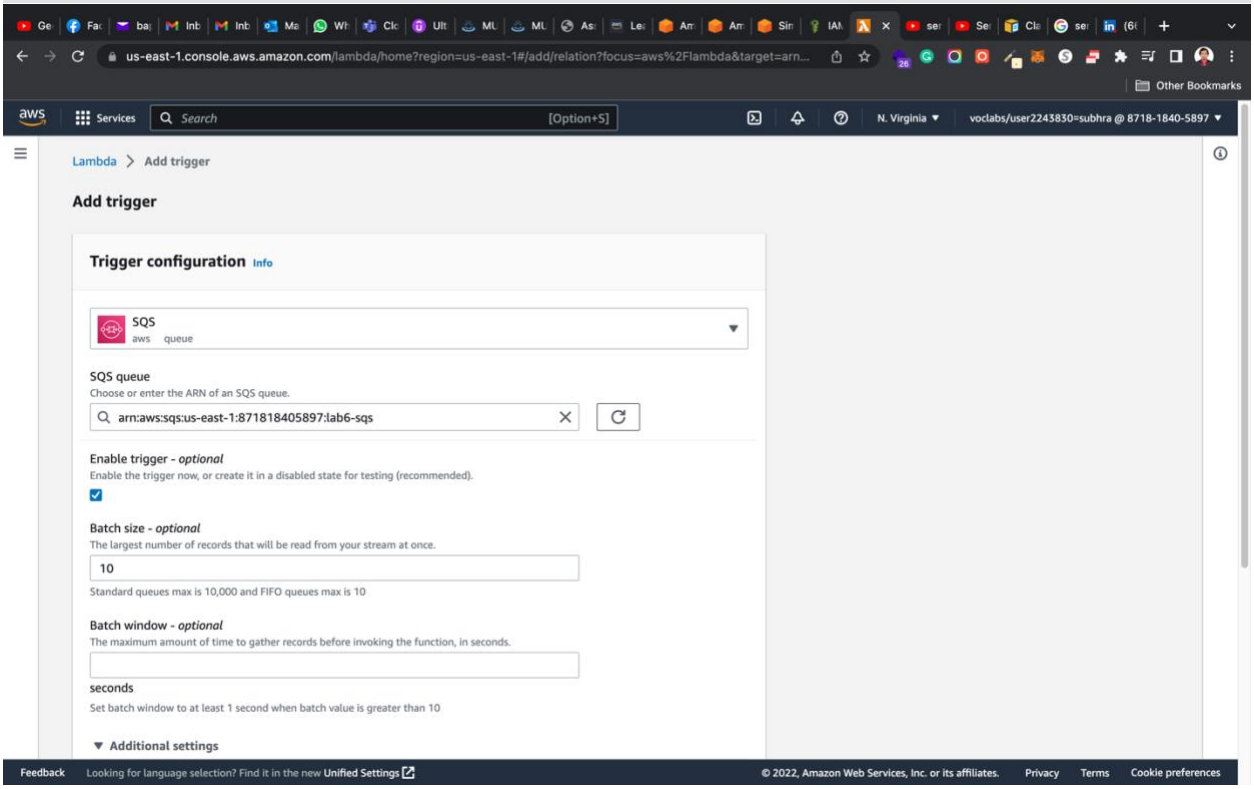
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/add/relation?focus=aws%2Flambda&target=arn...
Other Bookmarks
aws
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Lambda > Add trigger
Add trigger
Trigger configuration Info
SQS
aws queue
SQS queue
Choose or enter the ARN of an SQS queue.
arn:aws:sqs:us-east-1:871818405897:lab6-sqs
Enable trigger - optional
Enable the trigger now, or create it in a disabled state for testing (recommended).
Batch size - optional
The largest number of records that will be read from your stream at once.
10
Standard queues max is 10,000 and FIFO queues max is 10
Batch window - optional
The maximum amount of time to gather records before invoking the function, in seconds.
seconds
Set batch window to at least 1 second when batch value is greater than 10
Additional settings
Feedback
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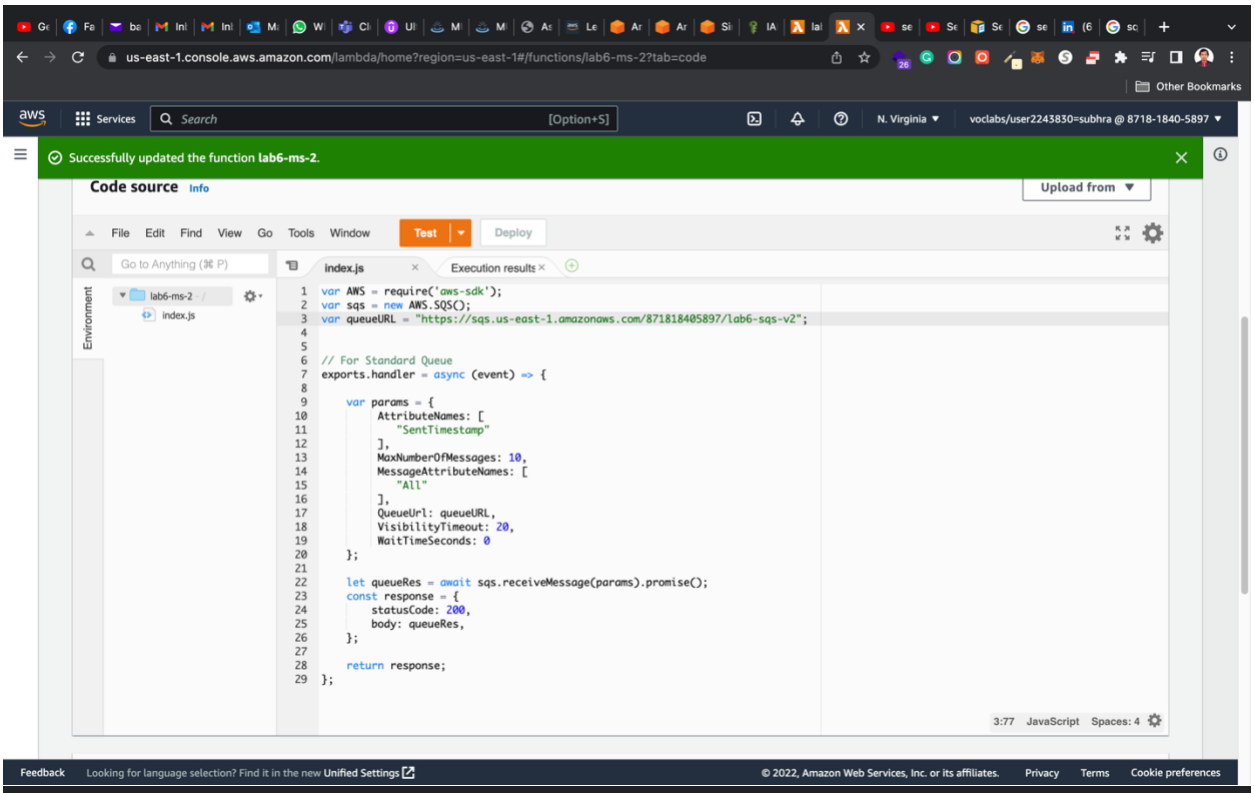
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-2?tab=code
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Successfully updated the function lab6-ms-2.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (⌘ P)
lab6-ms-2
index.js
Environment
index.js
Execution results
1 var AWS = require('aws-sdk');
2 var sqs = new AWS.SQS();
3 var queueURL = "https://sqs.us-east-1.amazonaws.com/871818405897/lab6-sqs-v2";
4
5
6 // For Standard Queue
7 exports.handler = async (event) => {
8
9 var params = {
10 AttributeNames: [
11 "SentTimestamp"
12],
13 MaxNumberOfMessages: 10,
14 MessageAttributeNames: [
15 "All"
16],
17 QueueUrl: queueURL,
18 VisibilityTimeout: 20,
19 WaitTimeSeconds: 0
20 };
21
22 let queueRes = await sqs.receiveMessage(params).promise();
23 const response = {
24 statusCode: 200,
25 body: queueRes,
26 };
27
28 return response;
29 };
3:77 JavaScript Spaces: 4
Feedback
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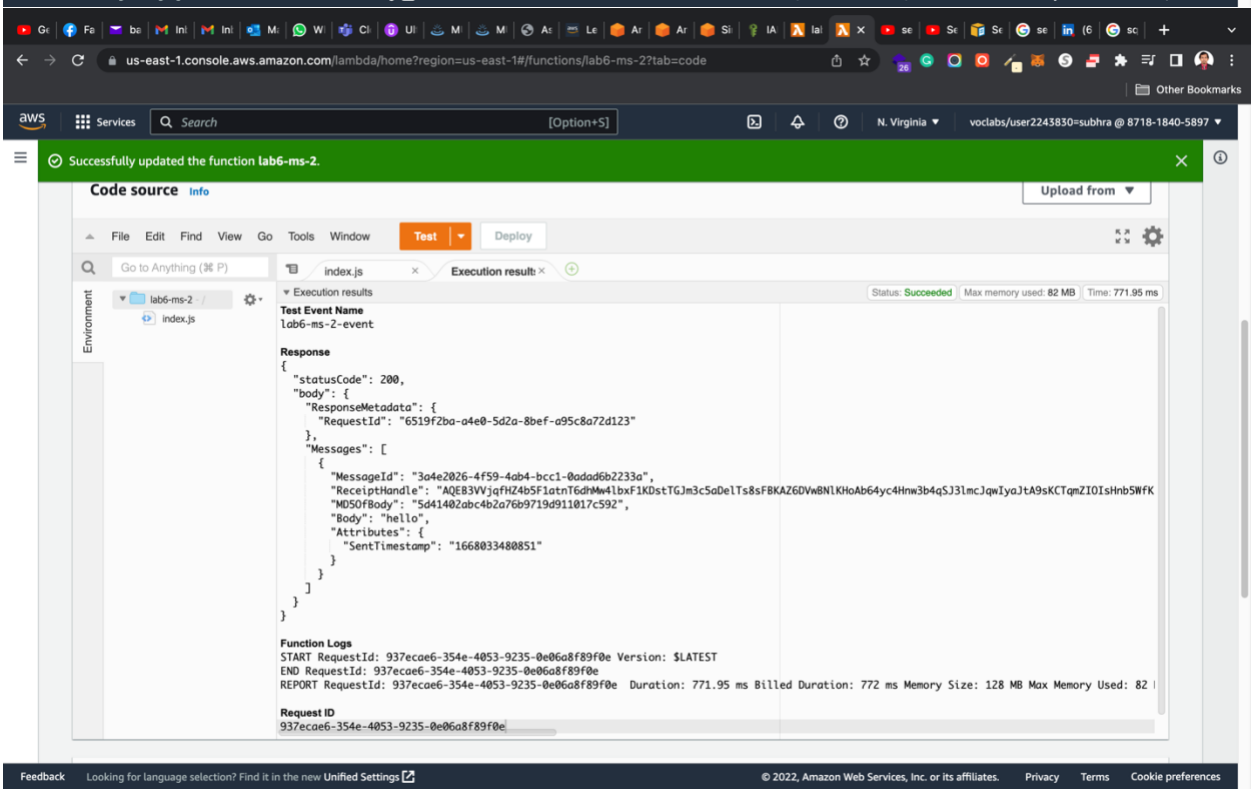
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-2?tab=code
Other Bookmarks
Services
Search
[Option+S]
N. Virginia
voclabs/user2243830=subhra @ 8718-1840-5897
Successfully updated the function lab6-ms-2.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (⌘ P)
lab6-ms-2
index.js
Environment
index.js
Execution results
Execution results
Status: Succeeded
Max memory used: 82 MB
Time: 771.95 ms
Test Event Name
lab6-ms-2-event
Response
{
"statusCode": 200,
"body": {
"ResponseMetadata": {
"RequestId": "6519f2ba-a4e0-5d2a-8bef-a95c8a72d123"
},
"Messages": [
{
"MessageId": "3a4e2026-4f59-4ab4-bcc1-0adad6b2233a",
"ReceiptHandle": "AQEB3VVjqfHZ4b5F1atnT6dhMw4lbxF1KDstTGJm3c5aDelTs8sFBKAZ6DVw8NlKHoAb64yc4Hnw3b4qSJ3lmcJqwIyaJtA9sKCTqmZIOIsHnb5WfK
"MD5OfBody": "5d41402abc4b2a76b9719d911017c592",
"Body": "hello",
"Attributes": {
"SentTimestamp": "1668033480851"
}
}
]
}
}
Function Logs
START RequestId: 937ecae6-354e-4053-9235-0e06a8f89f0e Version: $LATEST
END RequestId: 937ecae6-354e-4053-9235-0e06a8f89f0e
REPORT RequestId: 937ecae6-354e-4053-9235-0e06a8f89f0e Duration: 771.95 ms Billed Duration: 772 ms Memory Size: 128 MB Max Memory Used: 82
Request ID
937ecae6-354e-4053-9235-0e06a8f89f0e
Feedback
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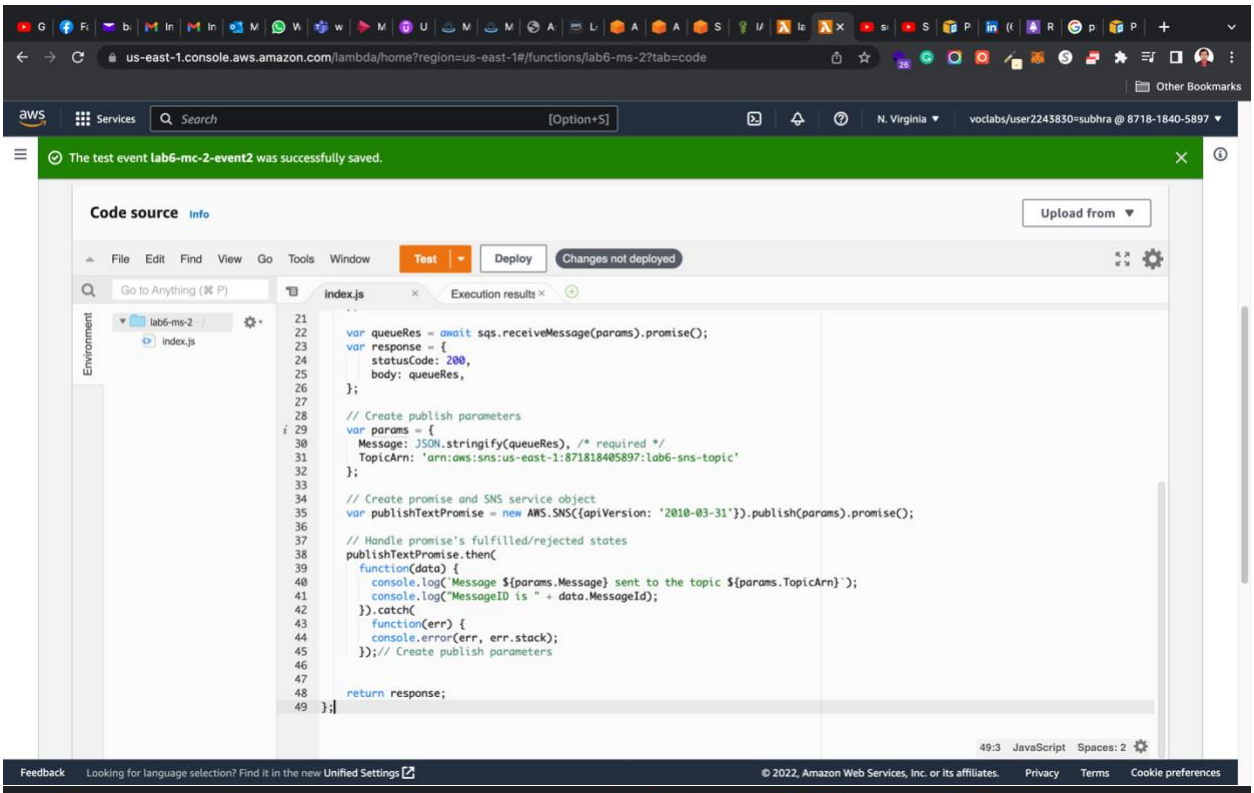
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-2?tab=code
The test event lab6-mc-2-event2 was successfully saved.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Changes not deployed
index.js
Execution results
lab6-ms-2
index.js
var queueRes = await sqs.receiveMessage(params).promise();
var response = {
statusCode: 200,
body: queueRes,
};
// Create publish parameters
var params = {
Message: JSON.stringify(queueRes), /* required */
TopicArn: 'arn:aws:sns:us-east-1:871818405897:lab6-sns-topic'
};
// Create promise and SNS service object
var publishTextPromise = new AWS.SNS({apiVersion: '2010-03-31'}).publish(params).promise();
// Handle promise's fulfilled/rejected states
publishTextPromise.then(
function(data) {
console.log(`Message ${params.Message} sent to the topic ${params.TopicArn}`);
console.log("MessageID is " + data.MessageId);
}).catch(
function(err) {
console.error(err, err.stack);
});// Create publish parameters
return response;
};
49:3 JavaScript Spaces: 2
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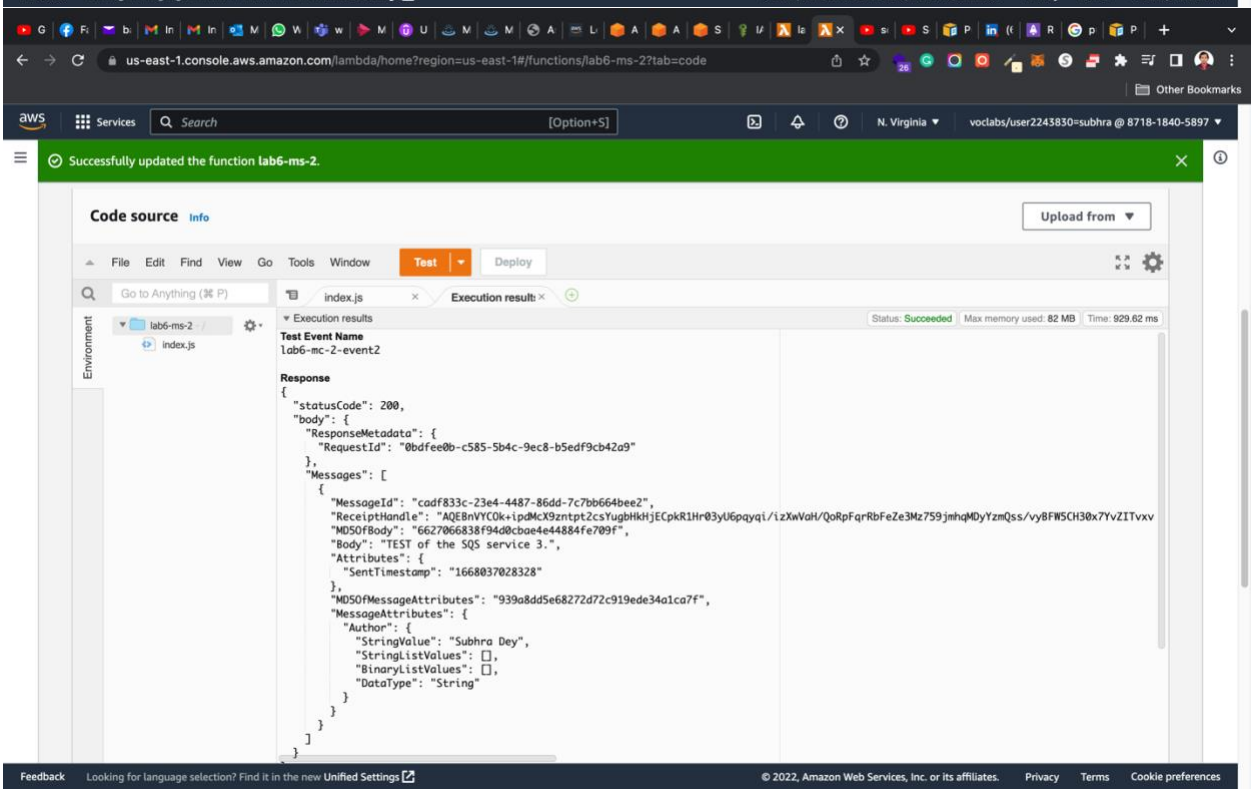
us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/lab6-ms-2?tab=code
Successfully updated the function lab6-ms-2.
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
index.js
Execution result
Execution results
Status: Succeeded
Max memory used: 82 MB
Time: 929.62 ms
Test Event Name
lab6-mc-2-event2
Response
{
"statusCode": 200,
"body": {
"ResponseMetadata": {
"RequestId": "0bdfee0b-c585-5b4c-9ec8-b5edf9cb42a9"
},
"Messages": [
{
"MessageId": "cadf833c-23e4-4487-86dd-7c7bb664bee2",
"ReceiptHandle": "AQEBnVYCOk+ipdMcX9zntpt2csYugbHkHjECpkR1Hr03yU6pqyqi/izXwVaH/QoRpFqrRbFeZe3Mz759jmhqMDyYzmQss/vyBFW5CH30x7YvZITvxv
"MD5OfBody": "6627066838f94d0cbae4e44884fe709f",
"Body": "TEST of the SQS service 3.",
"Attributes": {
"SentTimestamp": "1668037028328"
},
"MD5OfMessageAttributes": "939a8dd5e68272d72c919ede34a1ca7f",
"MessageAttributes": {
"Author": {
"StringValue": "Subhra Dey",
"StringListValues": [],
"BinaryListValues": [],
"DataType": "String"
}
}
}
]
}
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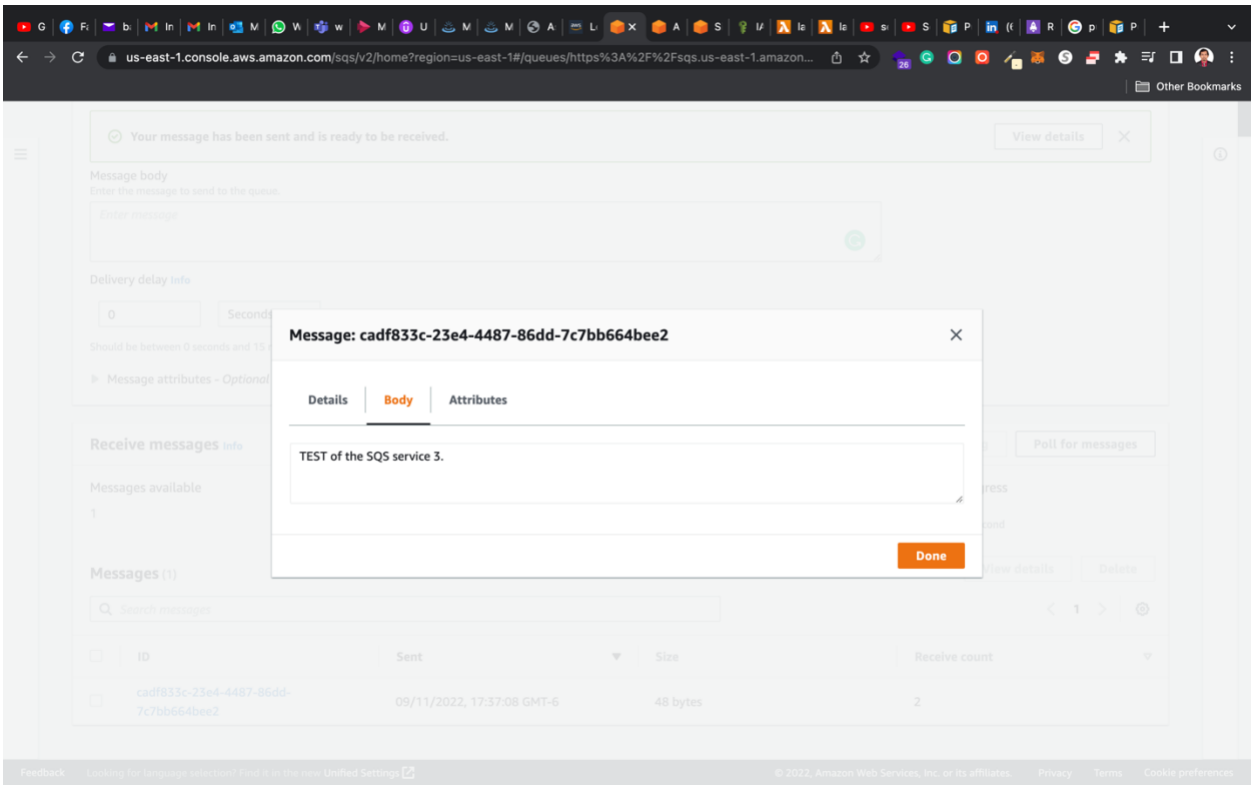
us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazon...
Other Bookmarks
Your message has been sent and is ready to be received.
View details
Message body
Enter the message to send to the queue.
Enter message
Delivery delay Info
0
Seconds
Should be between 0 seconds and 15
Message attributes - Optional
Receive messages Info
Poll for messages
Messages available
Messages (1)
Search messages
ID
Sent
Size
Receive count
cadf833c-23e4-4487-86dd-7c7bb664bee2
09/11/2022, 17:37:08 GMT-6
48 bytes
2
Message: cadf833c-23e4-4487-86dd-7c7bb664bee2
Details
Body
Attributes
TEST of the SQS service 3.
Done
Feedback
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