Assignment 7 – Lambda

Tomorrow's topic is DynamoDB. It would be great if you brush up your knowledge on NoSQL.
https://www.youtube.com/watch?v=ruz-vK8IesE

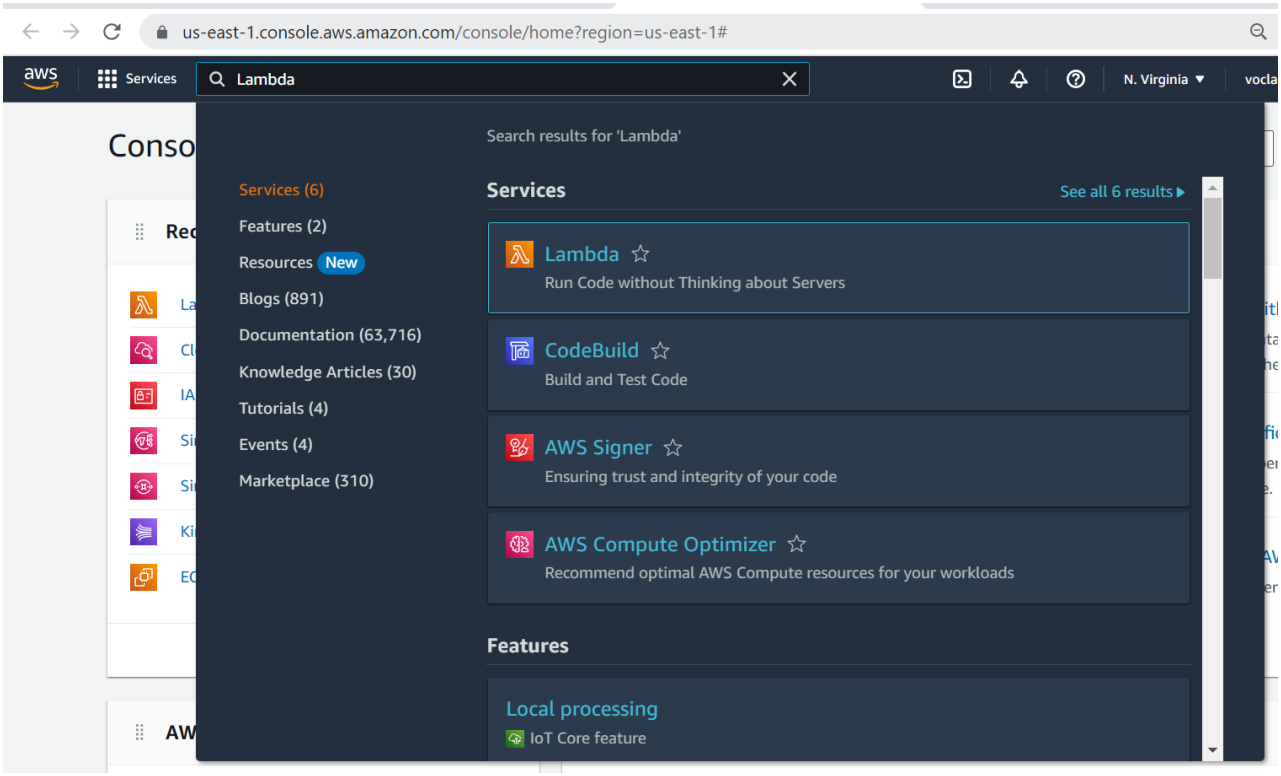
1. Practice versioning and aliasing in lambda. Different versions will print out different logs. In the alias, do **50:50 routing** (canary) to the lambda versions.
2. Synchronous trigger – Run 'hello world' lambda behind **ALB** in your AWS Academy account. You need to run your lambda in VPC. Do it in your default VPC. What do you think if you don't choose the VPC and subnets when creating the lambda in this case? It will immediately download the object when you hit the ALB URL. So include this in the response. *headers: {"content-type": "text/html"}*
3. Asynchronous trigger – The **SQS** will trigger the lambda. Add a **filter** in the trigger. Then the Lambda will send the event object via email to you. Study about event filters in lambda and play with it. https://www.youtube.com/watch?v=iAI6ScF119Q and https://docs.aws.amazon.com/lambda/latest/dg/invocation-eventfiltering.html
4. Event Source Mapping – Implement event source mapping that lets lambda read data from Kinesis data stream and logs that event out in CloudWatch. You can do your own research on **Kinesis** which is a trending and powerful technology.

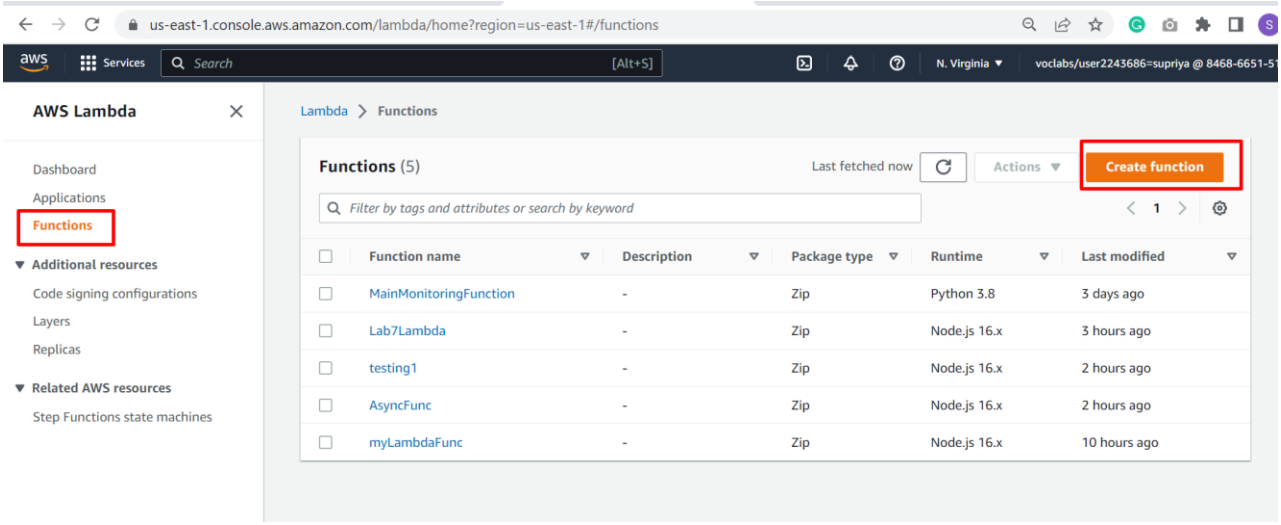
aws lambda create-event-source-mapping --function-name MyKinesisFunction --event-source arn:aws:kinesis:us-east-1:525718235721:stream/MyFirstDataStream --batch-size 100 --starting-position LATEST

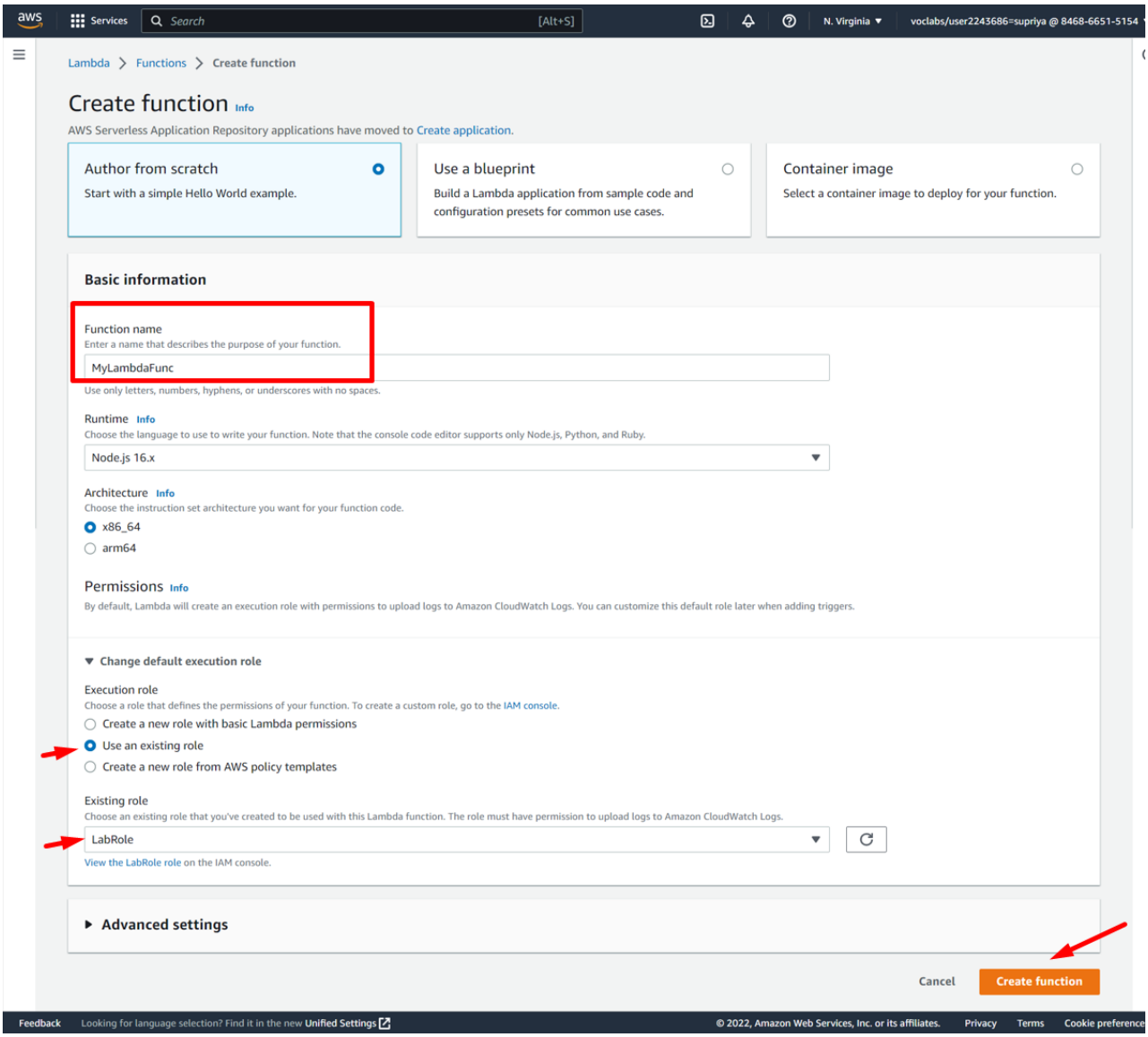
aws kinesis put-record --stream-name MyFirstDataStream --partition-key 1 --data "hello first record"

Read: https://docs.aws.amazon.com/lambda/latest/dg/invocation-eventsourcemapping.html

Versions and Alias






Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
Lambda > Functions > Create function
Create function Info
AWS Serverless Application Repository applications have moved to Create application.
Author from scratch
Start with a simple Hello World example.
Use a blueprint
Build a Lambda application from sample code and configuration presets for common use cases.
Container image
Select a container image to deploy for your function.
Basic information
Function name
Enter a name that describes the purpose of your function.
MyLambdaFunc
Use only letters, numbers, hyphens, or underscores with no spaces.
Runtime Info
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.
Node.js 16.x
Architecture Info
Choose the instruction set architecture you want for your function code.
x86_64
arm64
Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.
Change default execution role
Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the IAM console.
Create a new role with basic Lambda permissions
Use an existing role
Create a new role from AWS policy templates
Existing role
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.
LabRole
View the LabRole role on the IAM console.
Advanced settings
Cancel
Create function
Feedback
Looking for language selection? Find it in the new Unified Settings
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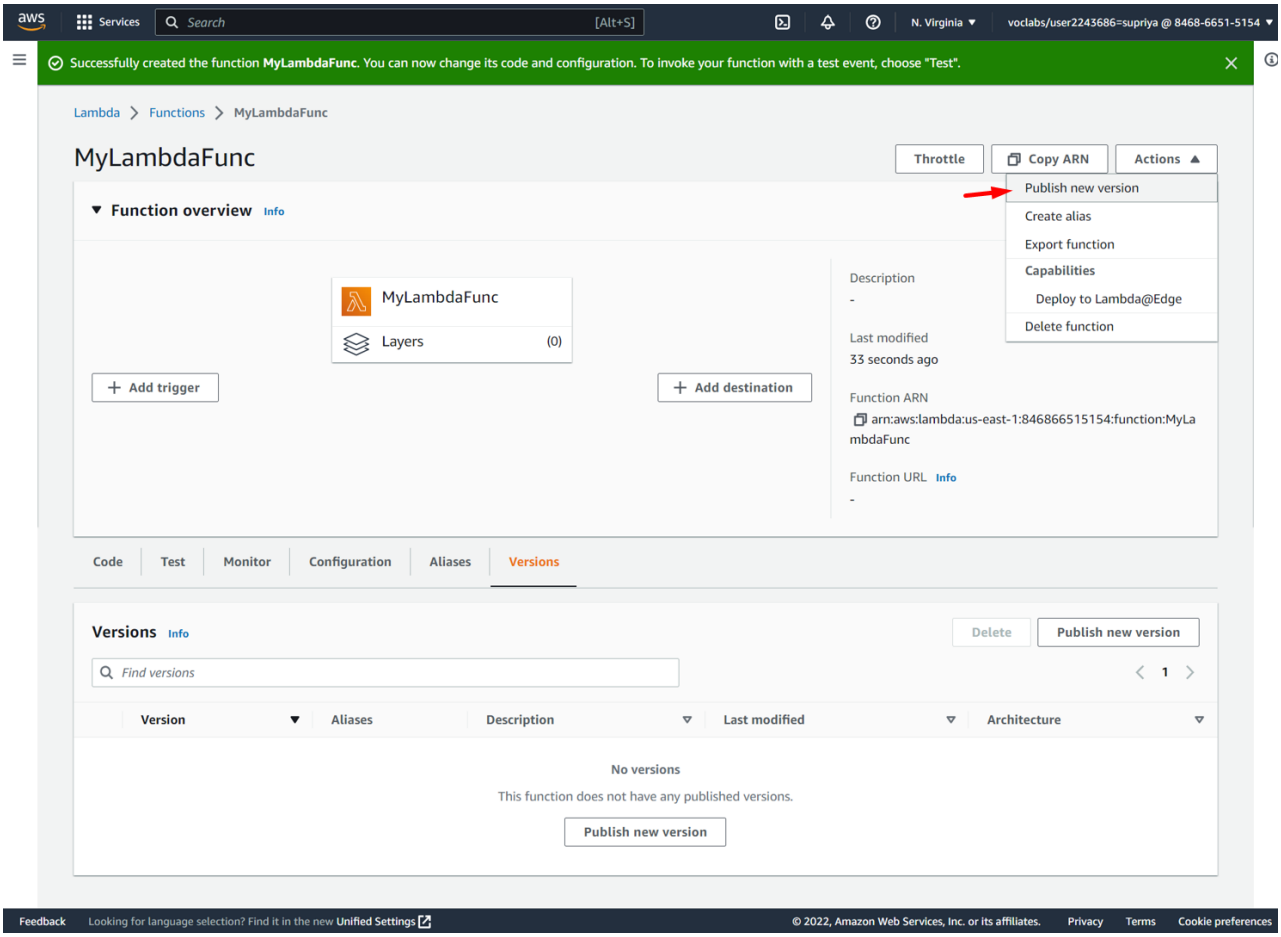
Privacy
Terms
Cookie preference


Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
Successfully created the function MyLambdaFunc. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Lambda > Functions > MyLambdaFunc
MyLambdaFunc
Throttle
Copy ARN
Actions
Publish new version
Create alias
Export function
Capabilities
Deploy to Lambda@Edge
Delete function
Function overview Info
MyLambdaFunc
Layers (0)
Add trigger
Add destination
Description
-
Last modified
33 seconds ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:MyLambdaFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Versions Info
Delete
Publish new version
Find versions
1
Version
Aliases
Description
Last modified
Architecture
No versions
This function does not have any published versions.
Publish new version
Feedback
Looking for language selection? Find it in the new Unified Settings
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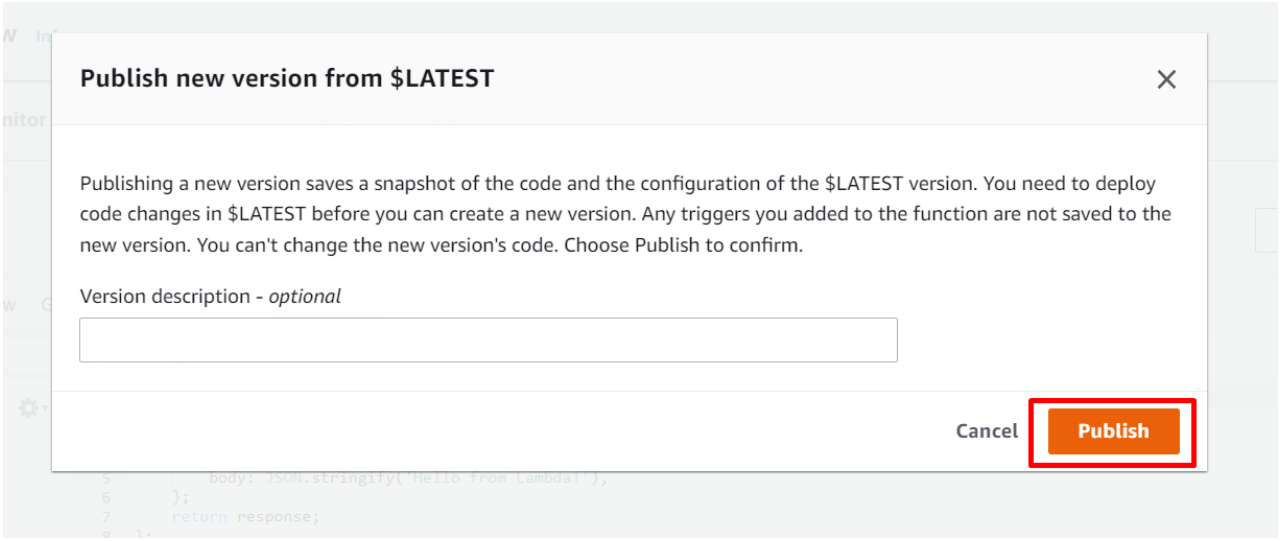
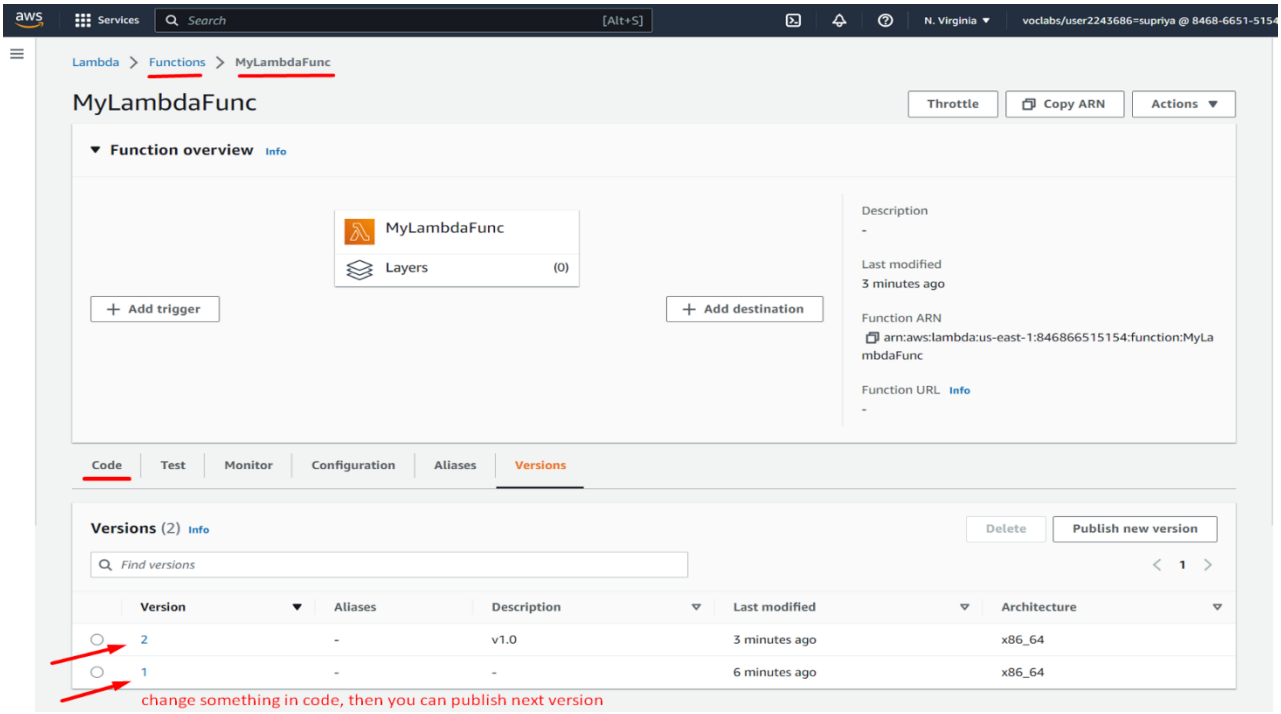
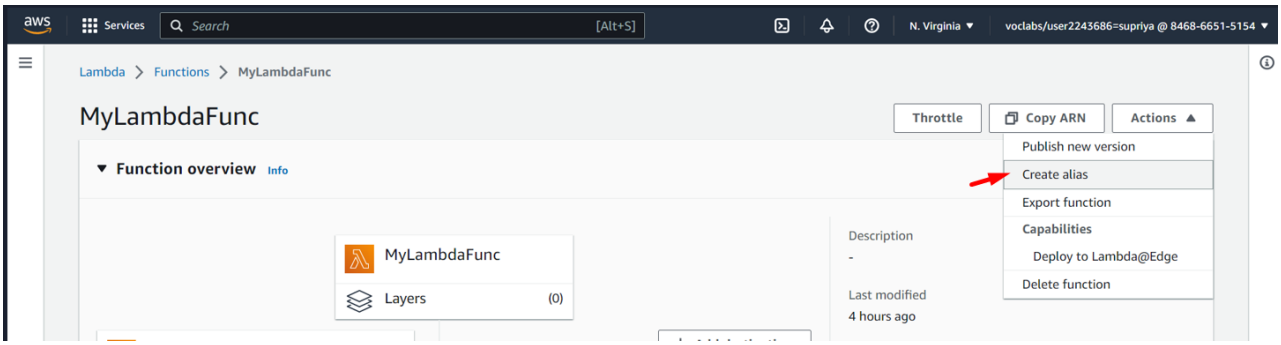
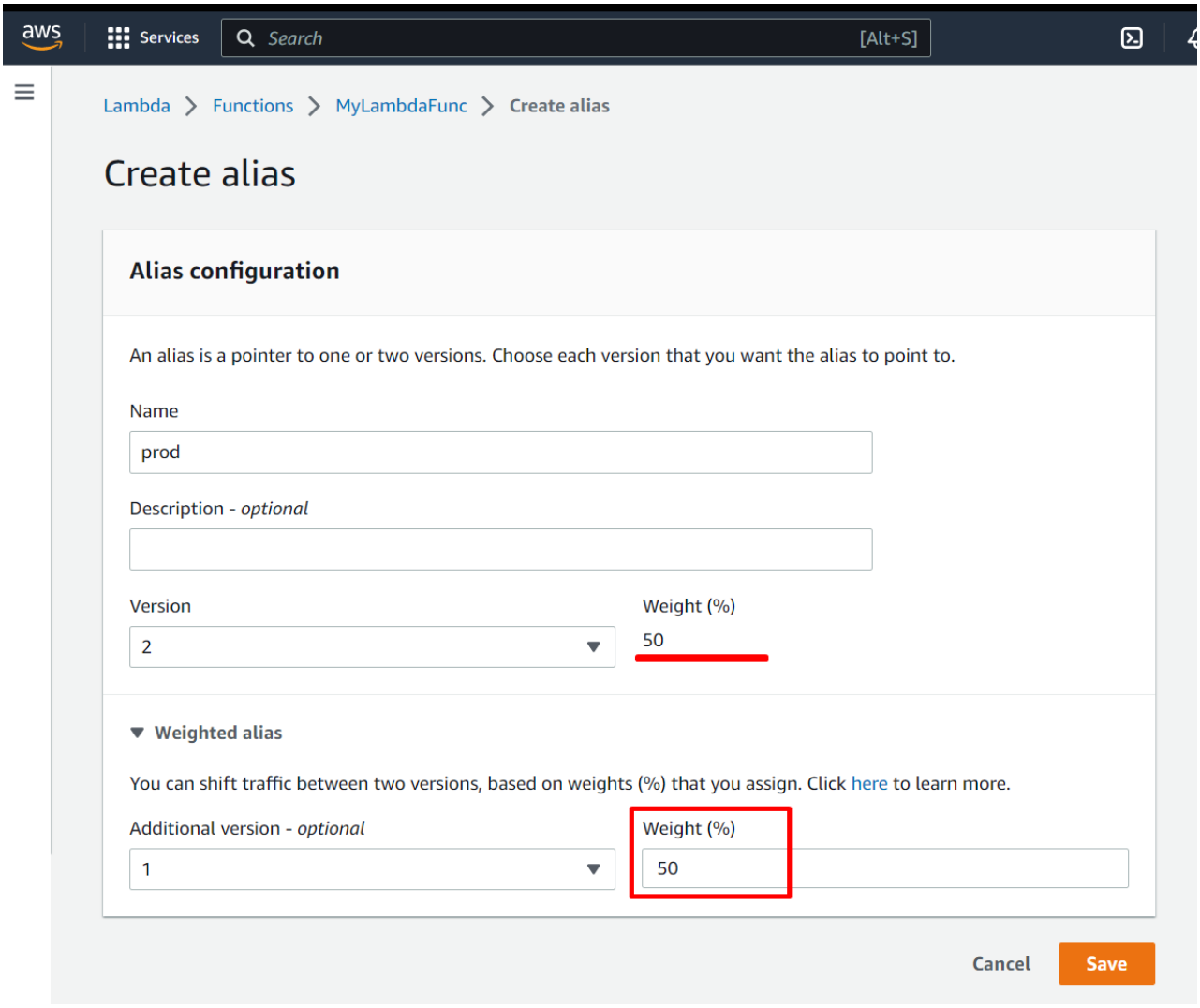
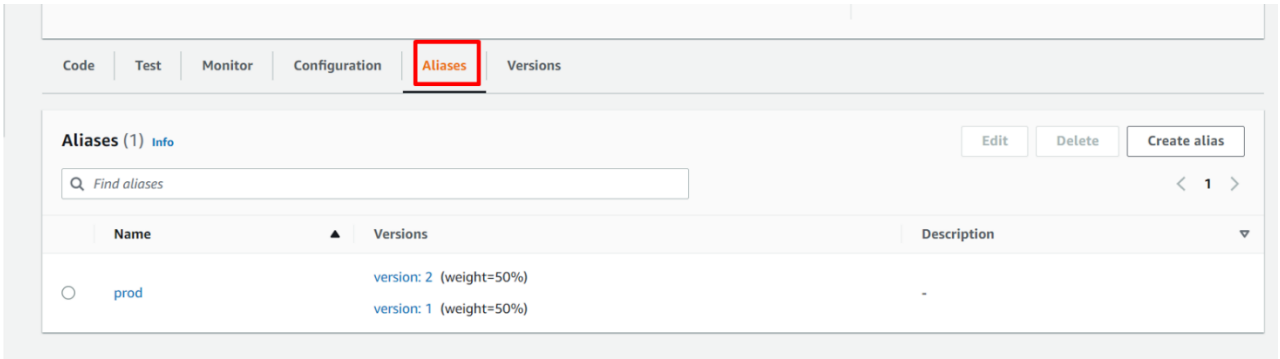
Privacy
Terms
Cookie preferences


Publish new version from $LATEST
Publishing a new version saves a snapshot of the code and the configuration of the $LATEST version. You need to deploy code changes in $LATEST before you can create a new version. Any triggers you added to the function are not saved to the new version. You can't change the new version's code. Choose Publish to confirm.
Version description - optional
Cancel
Publish


Services
Search
[Alt+S]
N. Virginia
Lambda > Functions > MyLambdaFunc
MyLambdaFunc
Throttle
Copy ARN
Actions
Function overview Info
MyLambdaFunc
Layers (0)
Add trigger
Add destination
Description
-
Last modified
3 minutes ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:MyLambdaFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Versions (2) Info
Delete
Publish new version
Find versions
Version
Aliases
Description
Last modified
Architecture
2
-
v1.0
3 minutes ago
x86_64
1
-
-
6 minutes ago
x86_64
change something in code, then you can publish next version

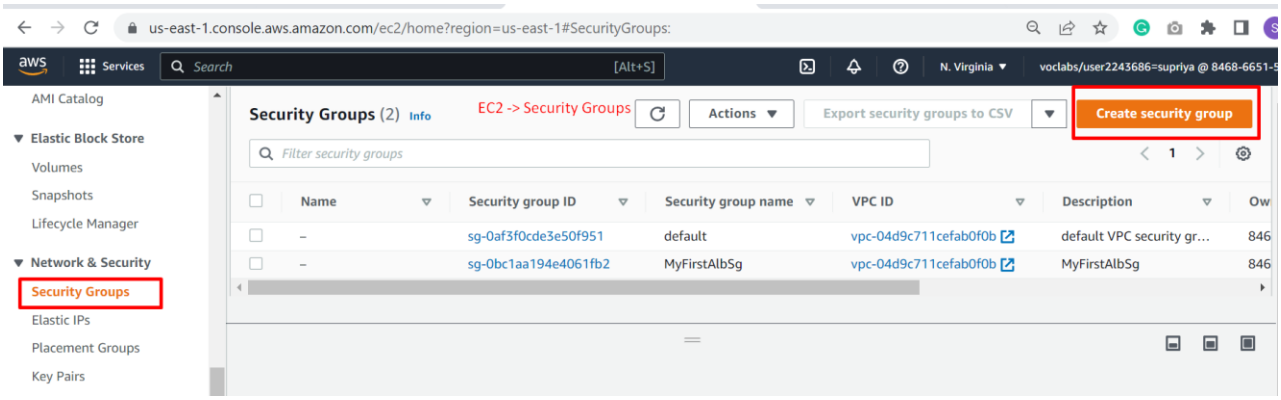

Services
Search
[Alt+S]
N. Virginia
Lambda > Functions > MyLambdaFunc
MyLambdaFunc
Throttle
Copy ARN
Actions
Publish new version
Create alias
Export function
Capabilities
Deploy to Lambda@Edge
Delete function
Function overview Info
MyLambdaFunc
Layers (0)
Description
-
Last modified
4 hours ago

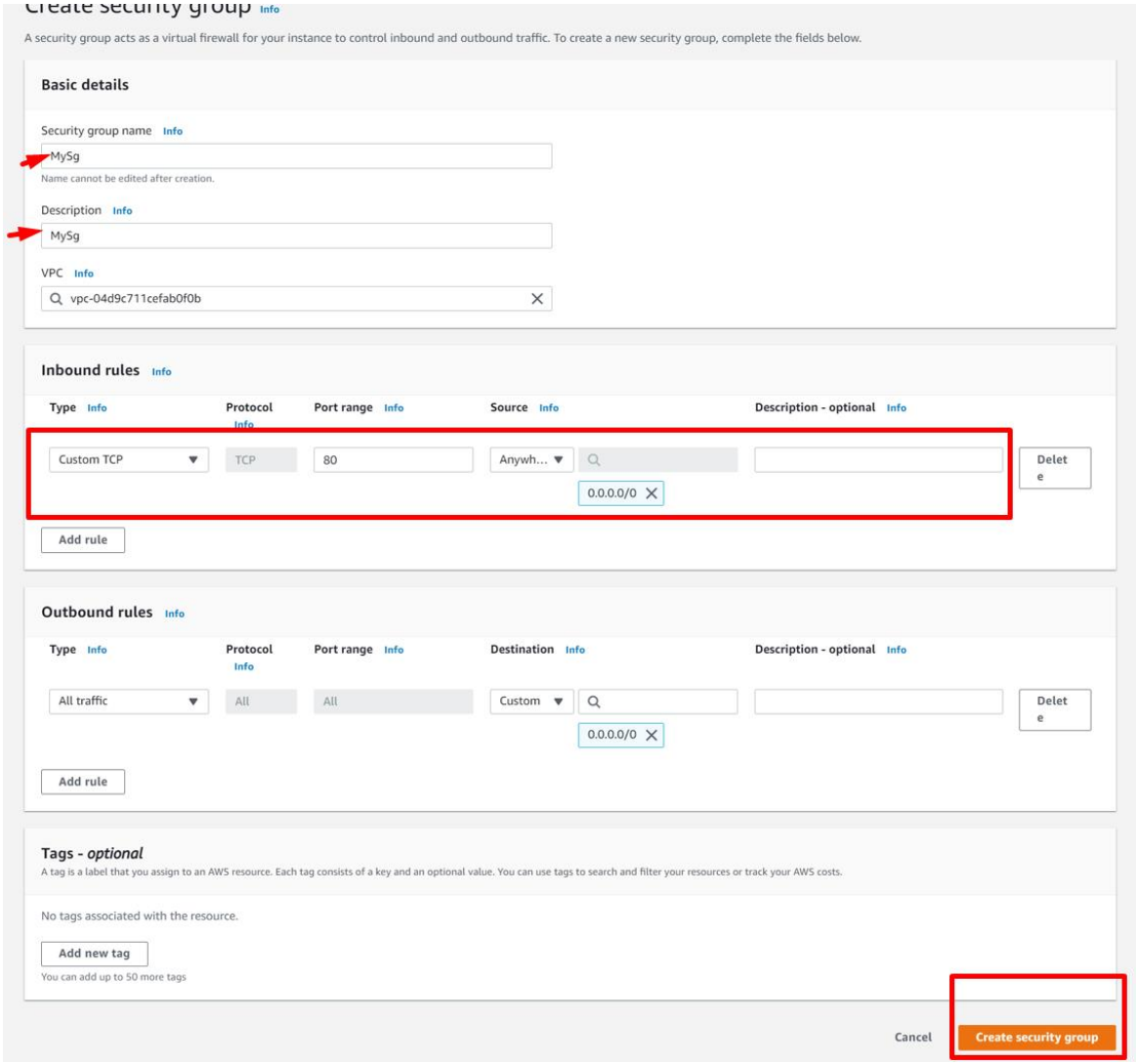

aws
Services
Search
[Alt+S]
Lambda > Functions > MyLambdaFunc > Create alias
Create alias
Alias configuration
An alias is a pointer to one or two versions. Choose each version that you want the alias to point to.
Name
prod
Description - optional
Version
2
Weight (%)
50
Weighted alias
You can shift traffic between two versions, based on weights (%) that you assign. Click here to learn more.
Additional version - optional
1
Weight (%)
50
Cancel
Save

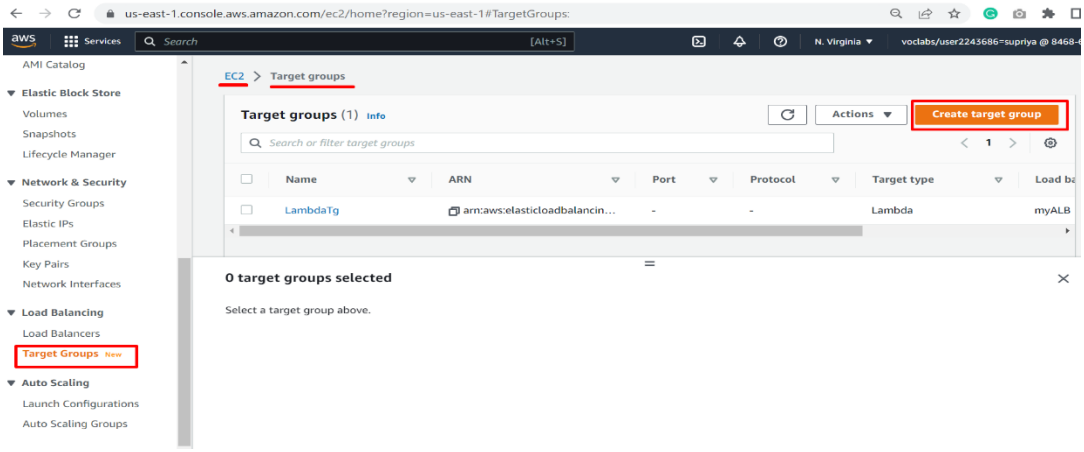

Code
Test
Monitor
Configuration
Aliases
Versions
Aliases (1) Info
Edit
Delete
Create alias
Find aliases
1
Name
Versions
Description
prod
version: 2 (weight=50%)
version: 1 (weight=50%)
-

ALB and Lambda

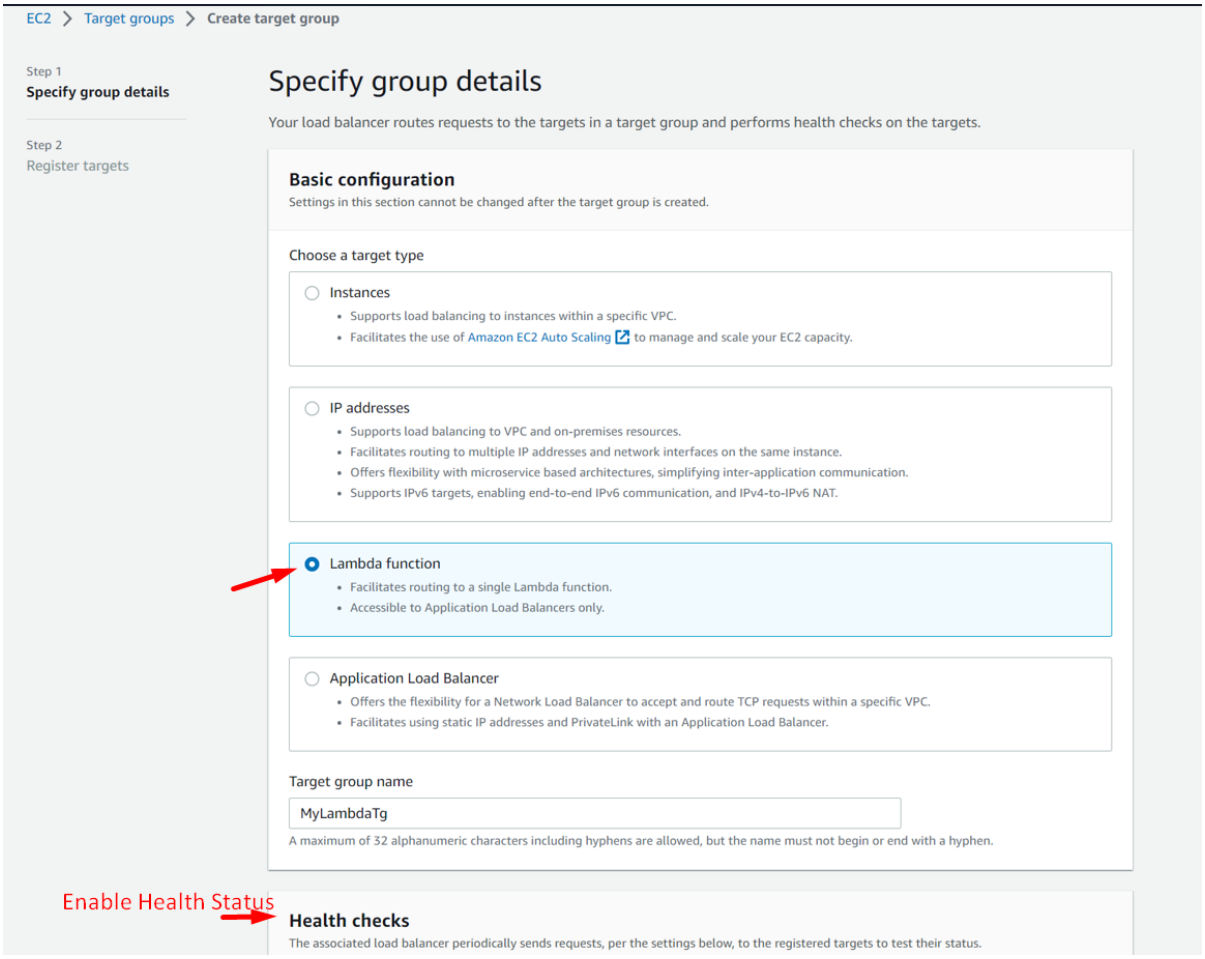
Run ‘hello world’ lambda behind **ALB** in your AWS Academy account. You need to run your lambda in VPC. Do it in your default VPC.

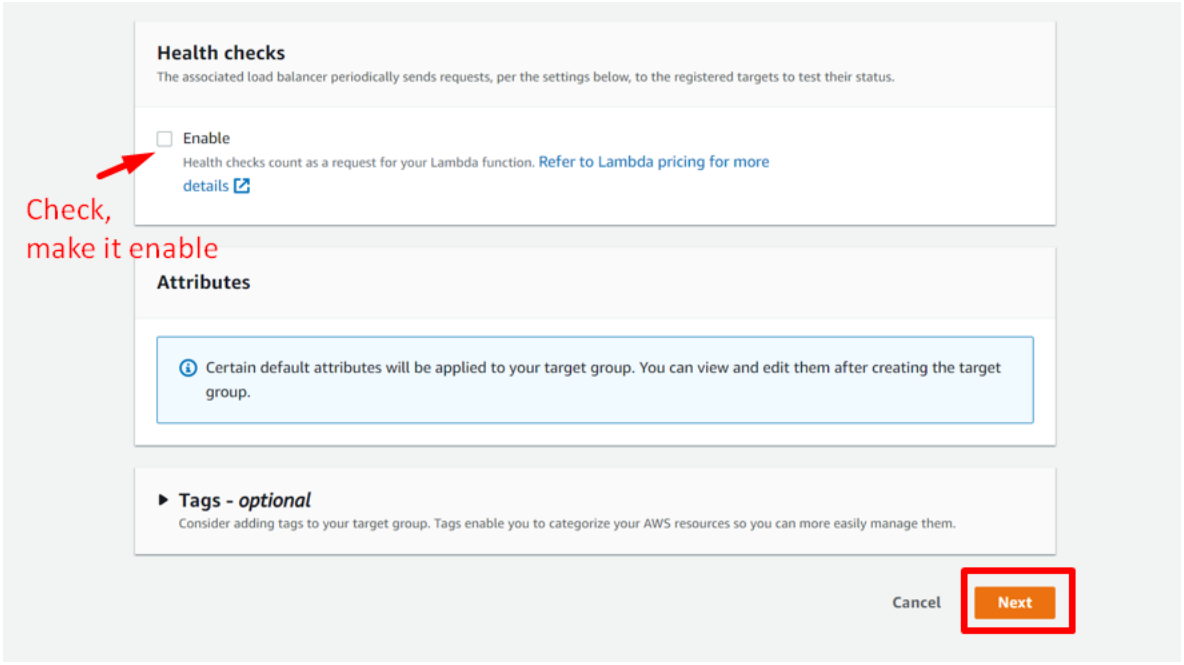


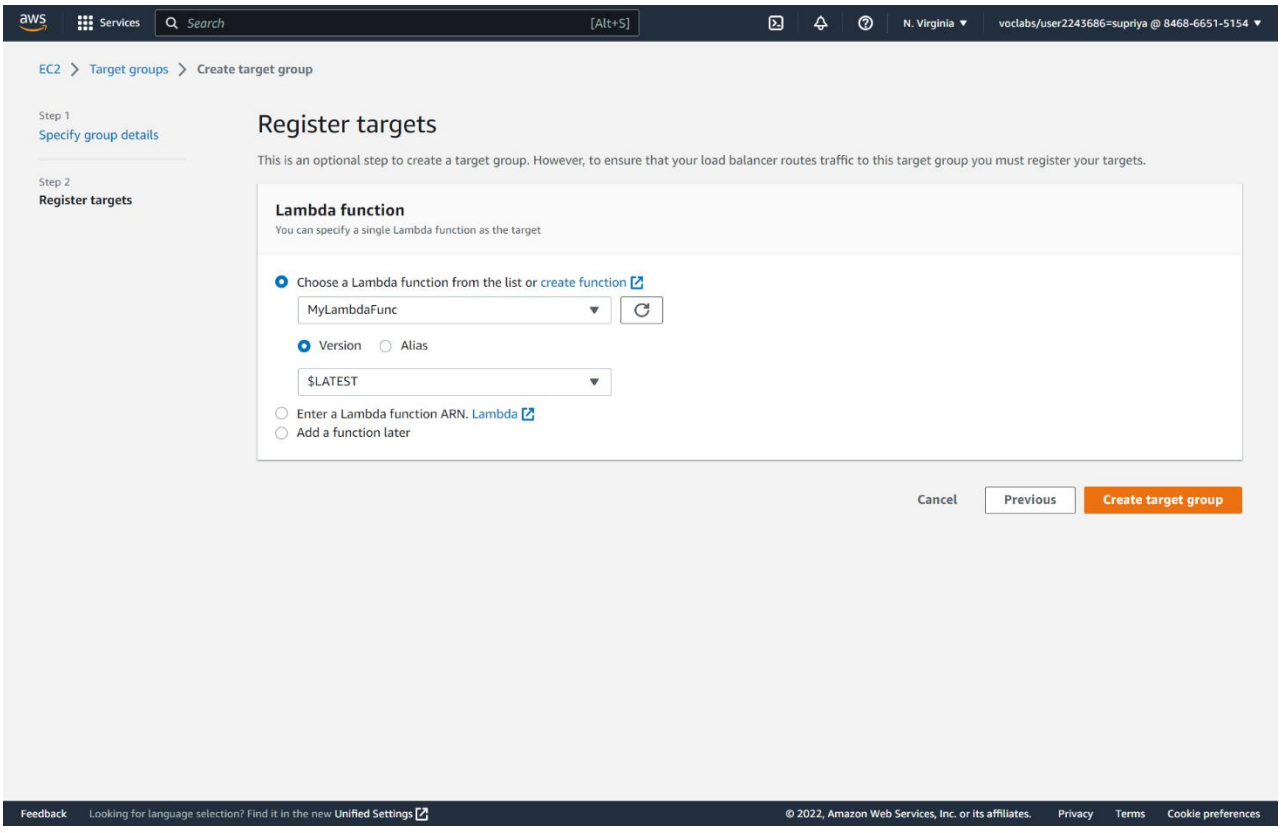




Create Target group with Lambda




Health checks
The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.
Enable
Health checks count as a request for your Lambda function. Refer to Lambda pricing for more details
Check, make it enable
Attributes
Certain default attributes will be applied to your target group. You can view and edit them after creating the target group.
Tags - optional
Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.
Cancel
Next


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
EC2 > Target groups > Create target group
Step 1
Specify group details
Step 2
Register targets
Register targets
This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.
Lambda function
You can specify a single Lambda function as the target
Choose a Lambda function from the list or create function
MyLambdaFunc
Version
Alias
$LATEST
Enter a Lambda function ARN. Lambda
Add a function later
Cancel
Previous
Create target group
Feedback
Looking for language selection? Find it in the new Unified Settings
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Privacy
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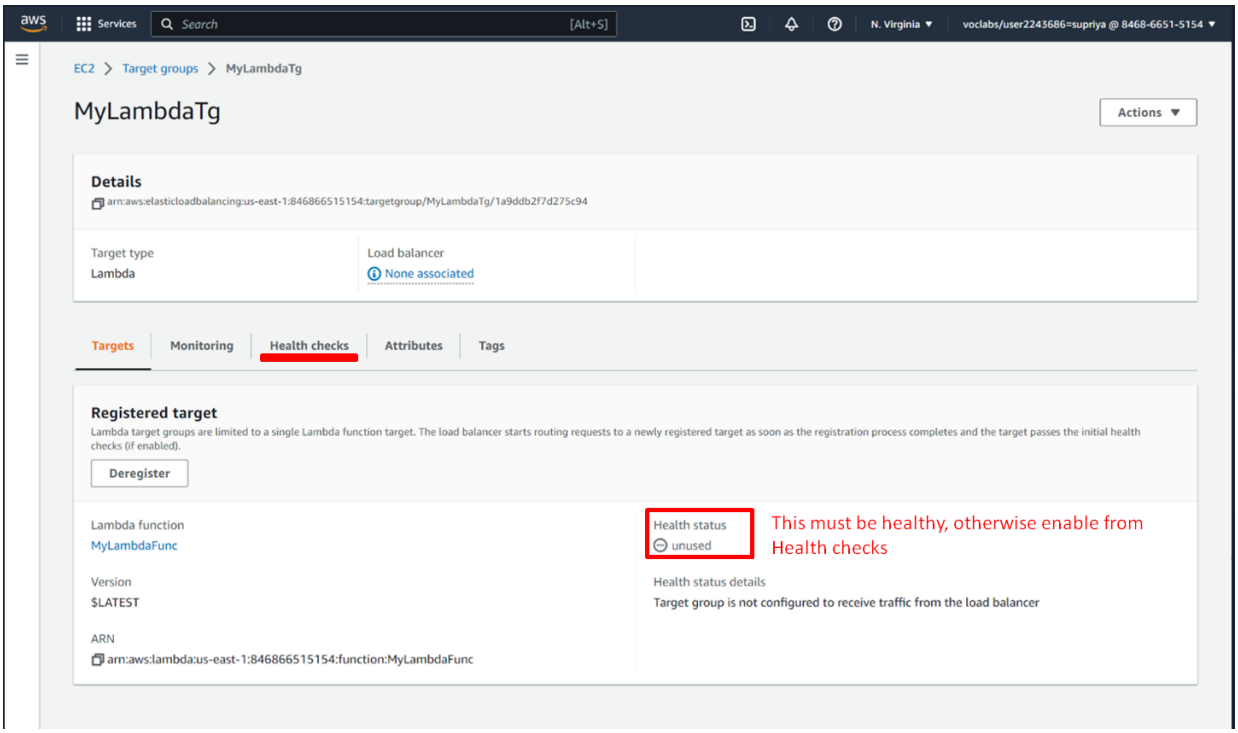
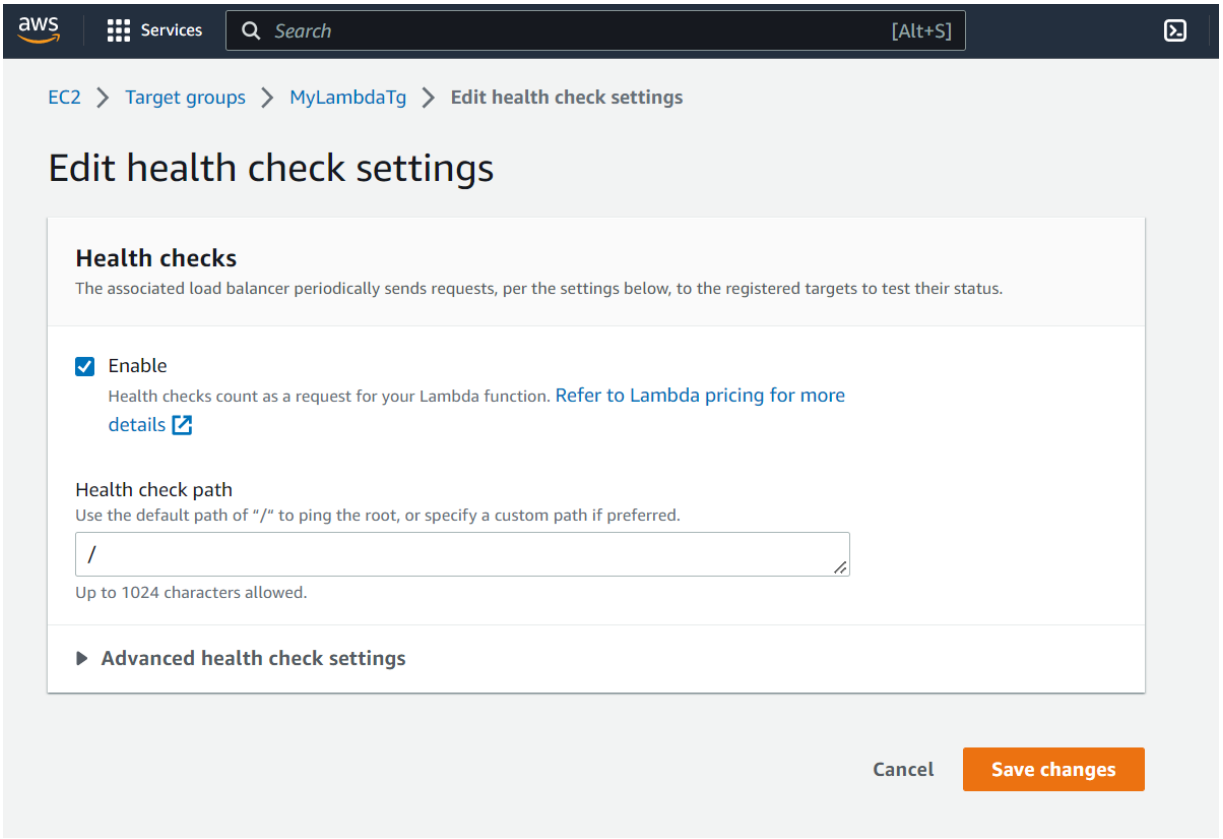
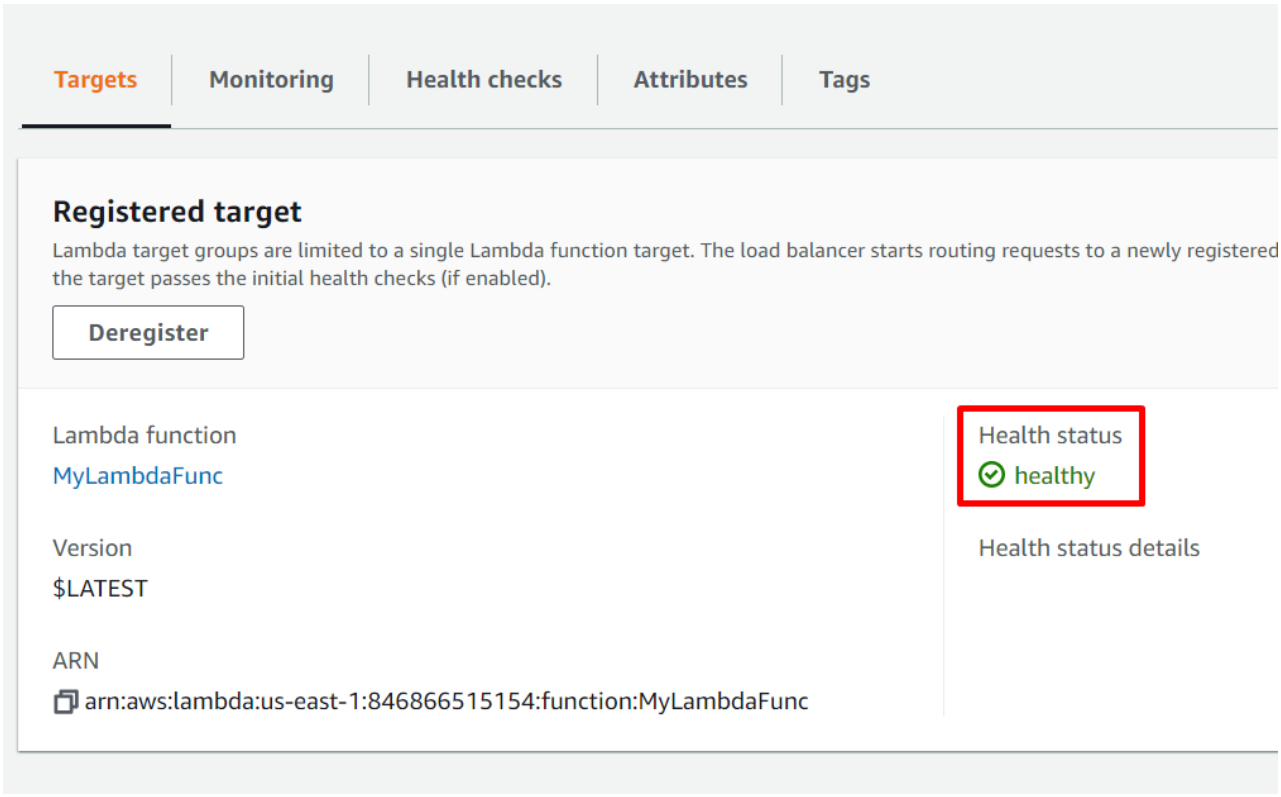
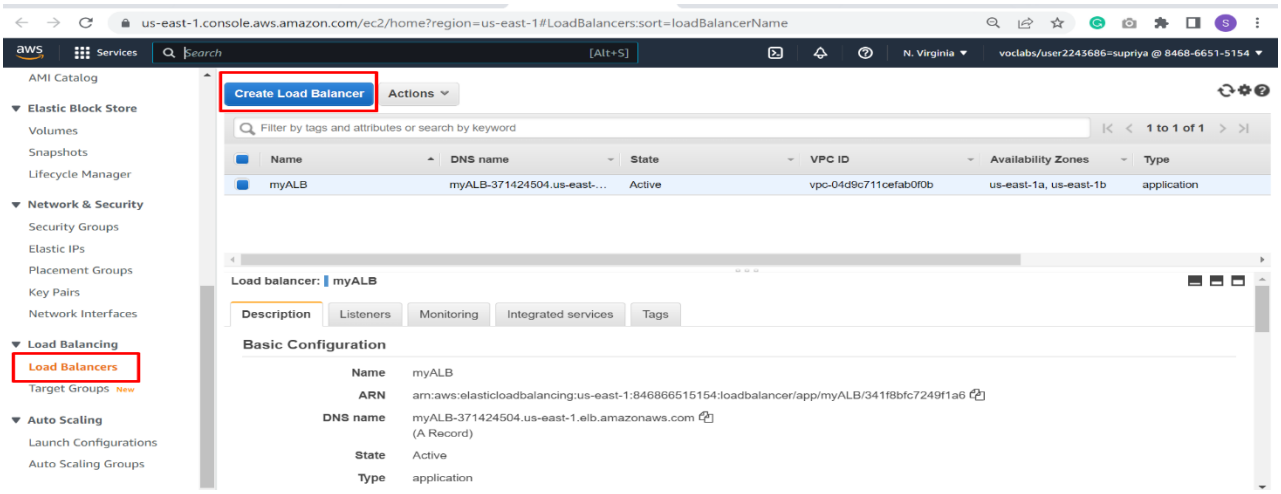

aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
EC2 > Target groups > MyLambdaTg
MyLambdaTg
Actions
Details
arn:aws:elasticloadbalancing:us-east-1:846866515154:targetgroup/MyLambdaTg/1a9ddb2f7d275c94
Target type
Lambda
Load balancer
None associated
Targets
Monitoring
Health checks
Attributes
Tags
Registered target
Lambda target groups are limited to a single Lambda function target. The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks (if enabled).
Deregister
Lambda function
MyLambdaFunc
Health status
unused
This must be healthy, otherwise enable from Health checks
Version
$LATEST
Health status details
Target group is not configured to receive traffic from the load balancer
ARN
arn:aws:lambda:us-east-1:846866515154:function:MyLambdaFunc


aws
Services
Search
[Alt+S]
EC2 > Target groups > MyLambdaTg > Edit health check settings
Edit health check settings
Health checks
The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.
Enable
Health checks count as a request for your Lambda function. Refer to Lambda pricing for more details
Health check path
Use the default path of "/" to ping the root, or specify a custom path if preferred.
/
Up to 1024 characters allowed.
Advanced health check settings
Cancel
Save changes


Targets
Monitoring
Health checks
Attributes
Tags
Registered target
Lambda target groups are limited to a single Lambda function target. The load balancer starts routing requests to a newly registered
the target passes the initial health checks (if enabled).
Deregister
Lambda function
MyLambdaFunc
Version
$LATEST
ARN
arn:aws:lambda:us-east-1:846866515154:function:MyLambdaFunc
Health status
healthy
Health status details


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers:sort=loadBalancerName
Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Auto Scaling
Launch Configurations
Auto Scaling Groups
Create Load Balancer
Actions
Filter by tags and attributes or search by keyword
1 to 1 of 1
Name
DNS name
State
VPC ID
Availability Zones
Type
myALB
myALB-371424504.us-east-...
Active
vpc-04d9c711cefab0f0b
us-east-1a, us-east-1b
application
Load balancer: myALB
Description
Listeners
Monitoring
Integrated services
Tags
Basic Configuration
Name
myALB
ARN
arn:aws:elasticloadbalancing:us-east-1:846866515154:loadbalancer/app/myALB/341f8bfc7249f1a6
DNS name
myALB-371424504.us-east-1.elb.amazonaws.com
(A Record)
State
Active
Type
application

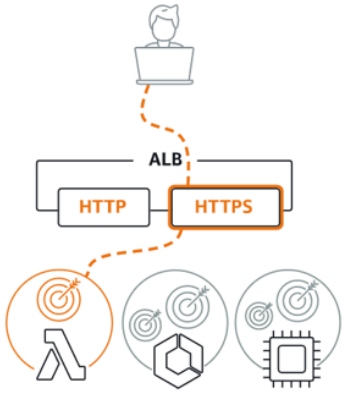
EC2 > Load balancers > Select load balancer type

Select load balancer type

A complete feature-by-feature comparison along with detailed highlights is also available. Learn more

Load balancer types

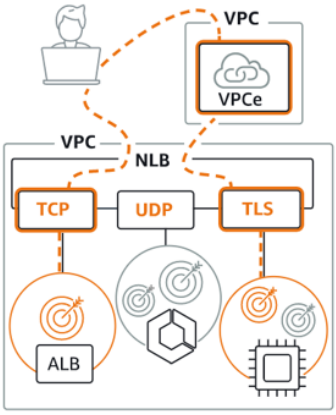
Application Load Balancer Info



Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.

Create

Network Load Balancer Info



Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

Create

Gateway Load Balancer Info

Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

Create

▶ Classic Load Balancer - *previous generation*

Close

EC2 > Load balancers > Create Application Load Balancer

Create Application Load Balancer Info

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

▶ **How Elastic Load balancing works**

Basic configuration

Load balancer name

Name must be unique within your AWS account and cannot be changed after the load balancer is created.

MyALB

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme Info

Scheme cannot be changed after the load balancer is created.

- Internet-facing
  An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. Learn more
- Internal
  An internal load balancer routes requests from clients to targets using private IP addresses.

IP address type Info

Select the type of IP addresses that your subnets use.

- IPv4
  Recommended for internal load balancers.
- Dualstack
  Includes IPv4 and IPv6 addresses.

Network mapping Info

The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

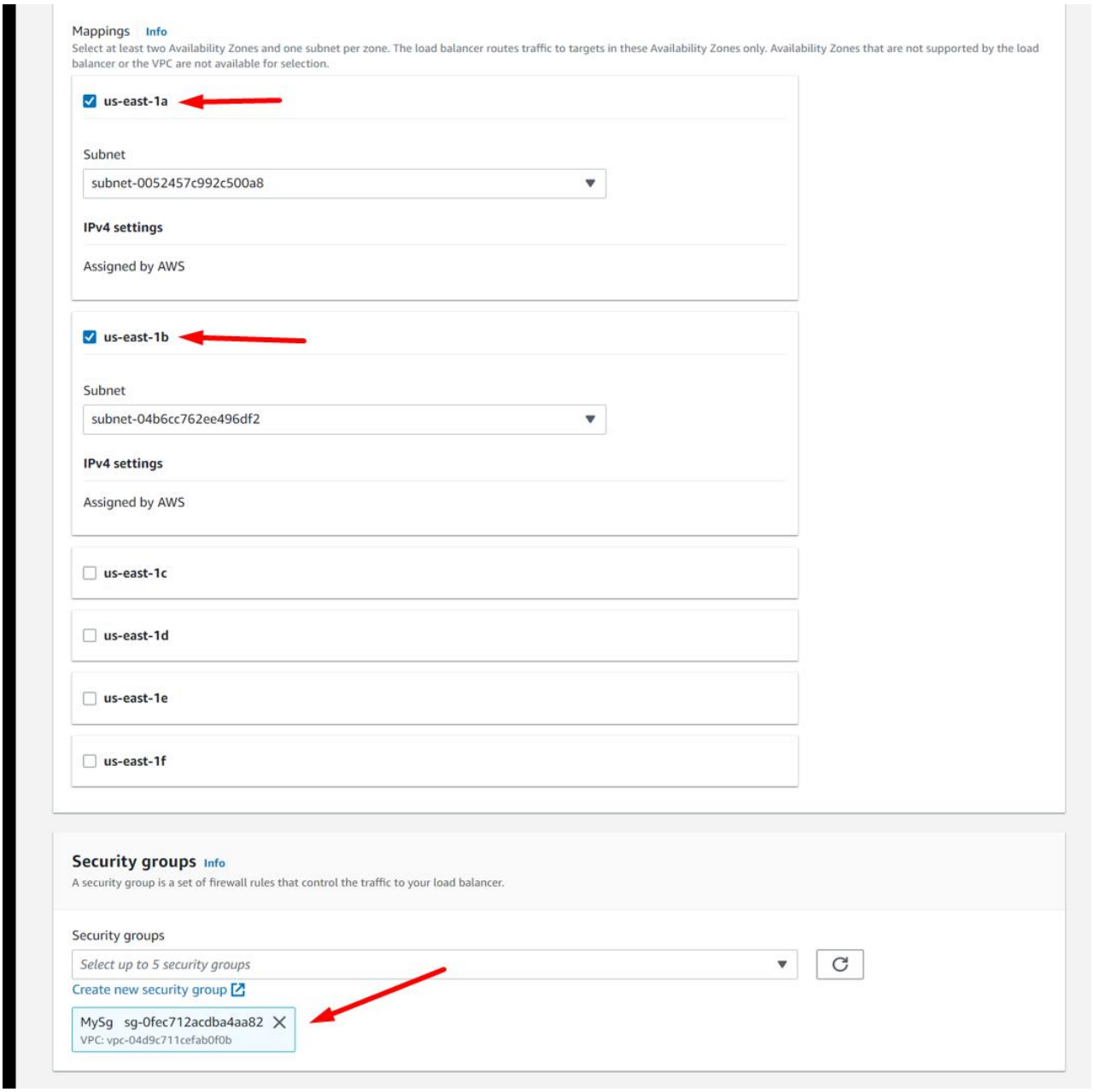
VPC Info

Select the virtual private cloud (VPC) for your targets. Only VPCs with an internet gateway are enabled for selection. The selected VPC cannot be changed after the load balancer is created. To confirm the VPC for your targets, view your target groups.

-
vpc-04d9c711cefab0f0b
IPv4: 172.31.0.0/16

Mappings Info

Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that are not supported by the load


Mappings Info
Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that are not supported by the load balancer or the VPC are not available for selection.
us-east-1a
Subnet
subnet-0052457c992c500a8
IPv4 settings
Assigned by AWS
us-east-1b
Subnet
subnet-04b6cc762ee496df2
IPv4 settings
Assigned by AWS
us-east-1c
us-east-1d
us-east-1e
us-east-1f
Security groups Info
A security group is a set of firewall rules that control the traffic to your load balancer.
Security groups
Select up to 5 security groups
Create new security group
MySg sg-0fec712acdba4aa82
VPC: vpc-04d9c711cefab0f0b

Listeners and routing Info

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener **HTTP:80** Remove

Protocol	Port	Default action Info
HTTP	80 (1-65535)	Forward to: MyLambdaTg, Target type: Lambda, IPv4

Create target group

Listener tags - *optional*

Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.

Add listener tag

You can add up to 50 more tags.

Add listener

▼ Add-on services - *optional*

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated Services" tab for the selected load balancer.

AWS Global Accelerator Info

☐ Create an accelerator to get static IP addresses and improve the performance and availability of your applications. Additional charges apply

▶ Tags - *optional*

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Summary

Review and confirm your configurations. Estimate cost

Basic configuration Edit

MyALB

- Internet-facing
- IPv4

Security groups Edit

- MySg
  sg-0fec712acdba4aa82

Network mapping Edit

VPC vpc-04d9c711cefab0f0b

- us-east-1a
  subnet-0052457c992c500a8
- us-east-1b
  subnet-04b6cc762ee496df2

Listeners and routing Edit

- HTTP:80 defaults to MyLambdaTg

Add-on services Edit

None

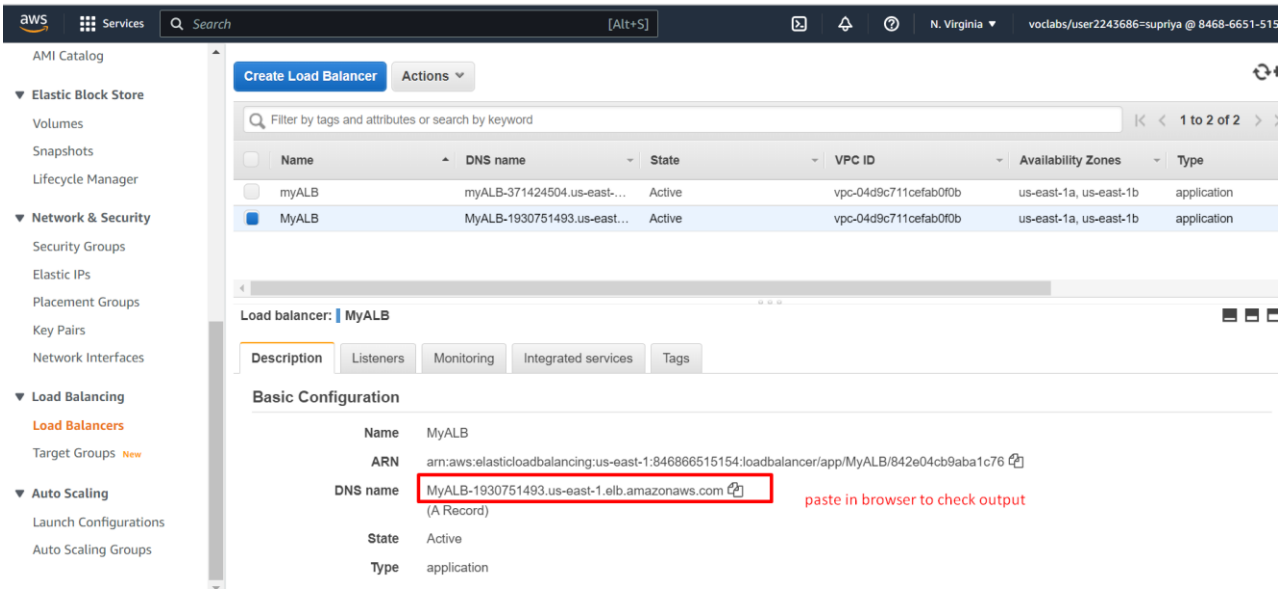
Tags Edit

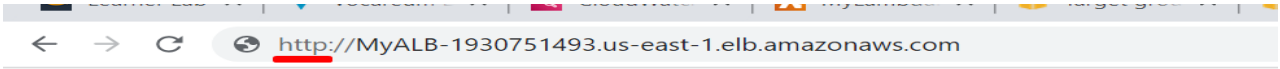
None

Attributes

ⓘ Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

Cancel **Create load balancer**

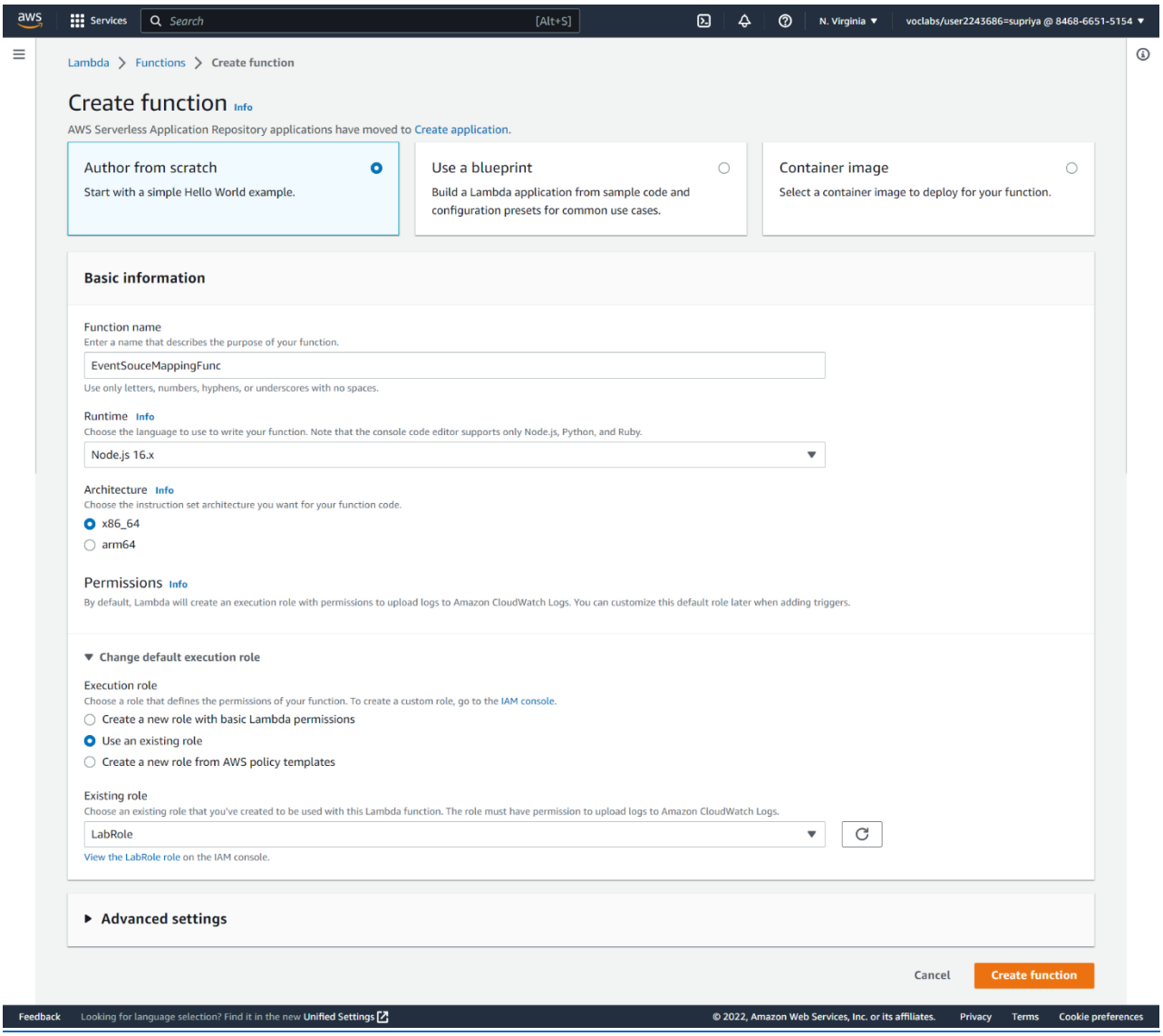


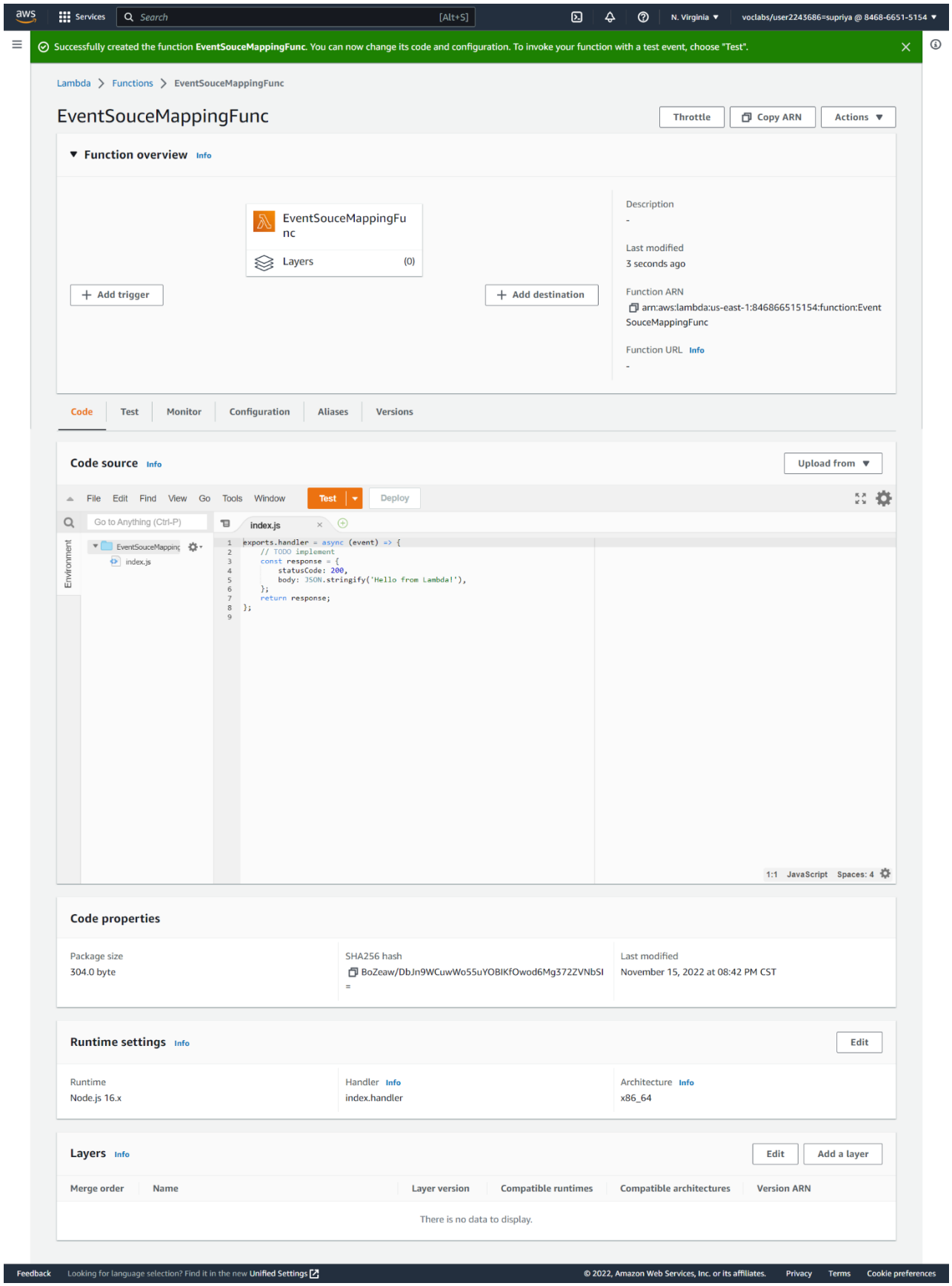


"Hello from Lambda - V2!"

Kinesis and Lambda

#. Creating function




Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
Successfully created the function EventSouceMappingFunc. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Lambda > Functions > EventSouceMappingFunc
EventSouceMappingFunc
Throttle
Copy ARN
Actions
Function overview Info
EventSouceMappingFunc
Layers (0)
Add trigger
Add destination
Description
-
Last modified
3 seconds ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:EventSouceMappingFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (Ctrl-P)
index.js
Environment
EventSouceMapping
index.js
exports.handler = async (event) => {
// TODO implement
const response = {
statusCode: 200,
body: JSON.stringify('Hello from Lambda!'),
};
return response;
};
1:1 JavaScript Spaces: 4
Code properties
Package size
304.0 byte
SHA256 hash
BoZeaw/DbJn9WCuwWo55uYOBIKfOwod6Mg372ZVNbSI=
Last modified
November 15, 2022 at 08:42 PM CST
Runtime settings Info
Edit
Runtime
Node.js 16.x
Handler Info
index.handler
Architecture Info
x86_64
Layers Info
Edit
Add a layer
Merge order
Name
Layer version
Compatible runtimes
Compatible architectures
Version ARN
There is no data to display.
Feedback
Looking for language selection? Find it in the new Unified Settings
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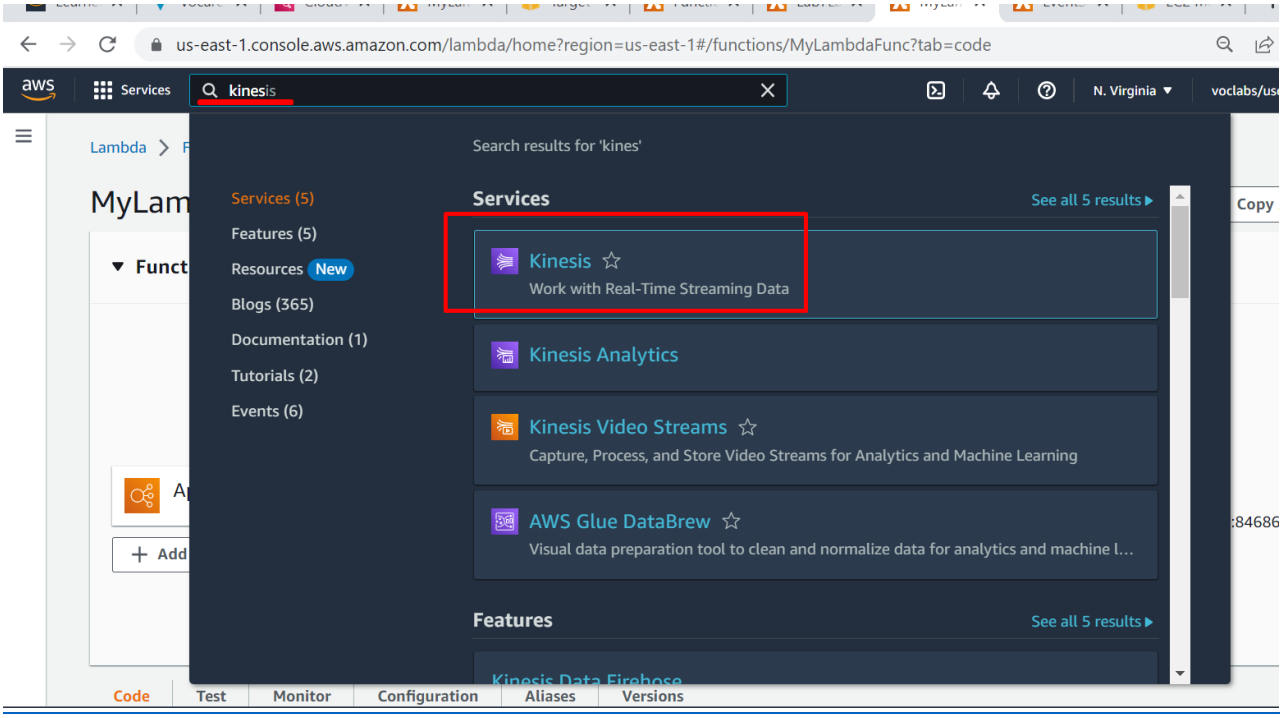
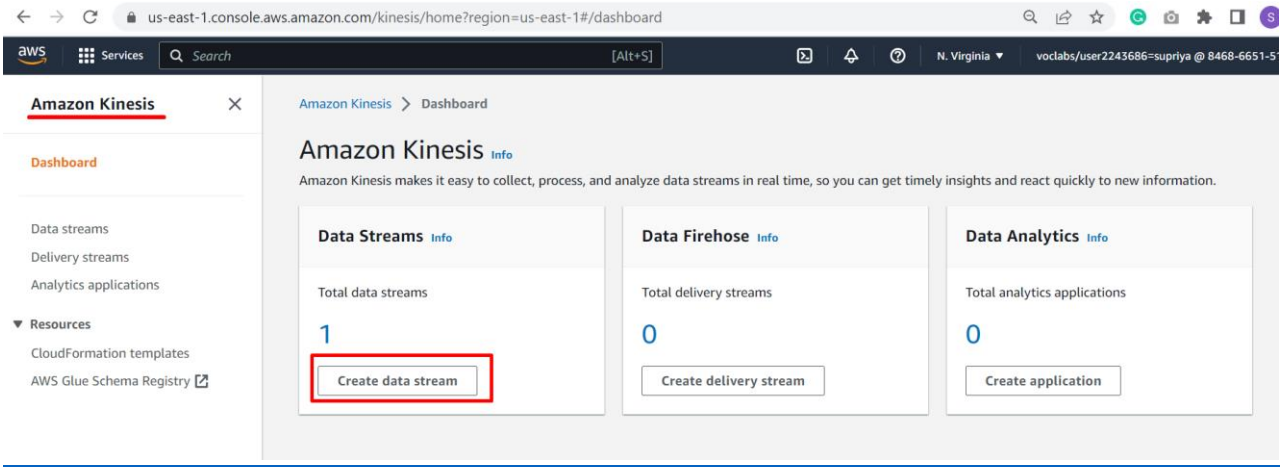
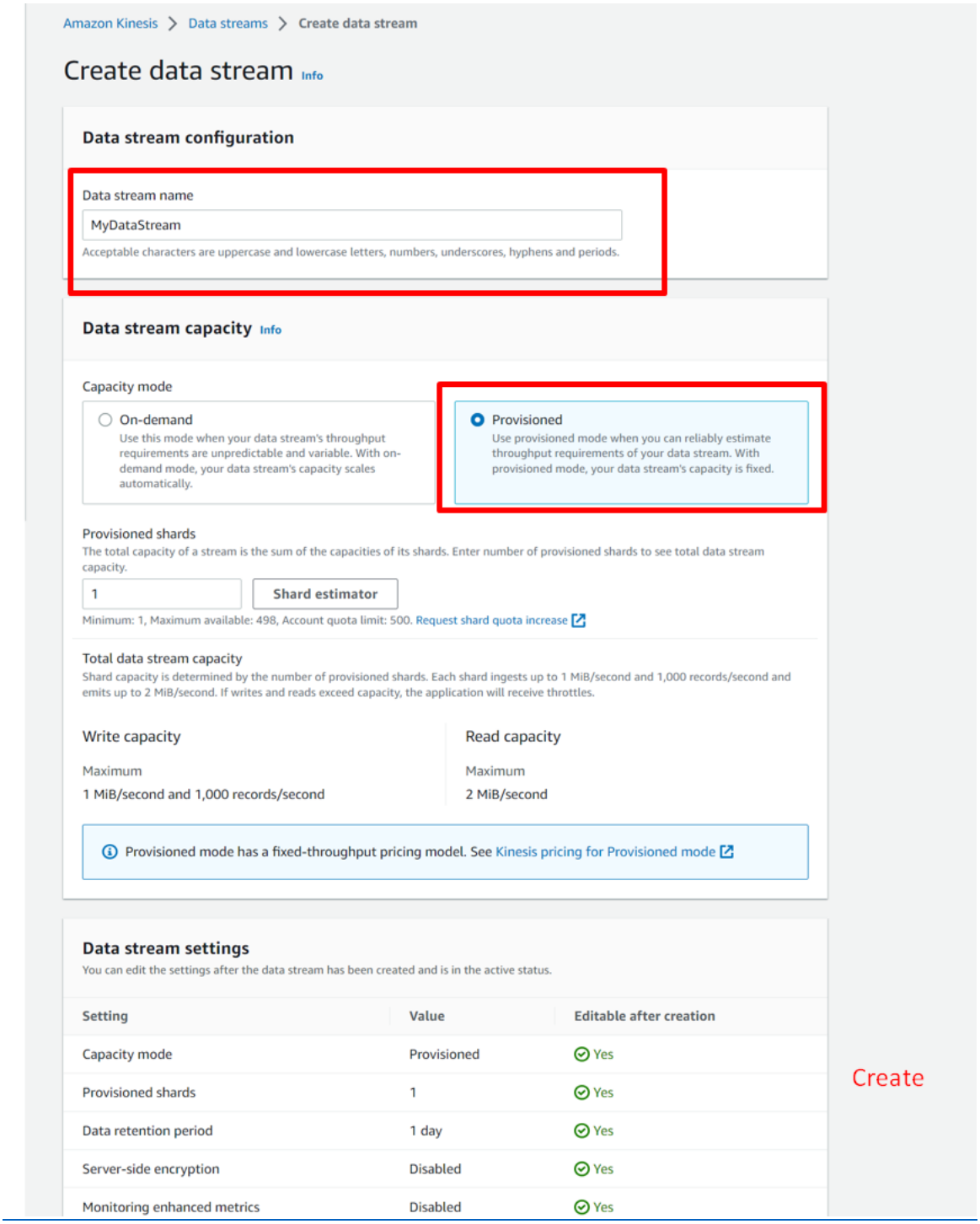
Privacy
Terms
Cookie preferences

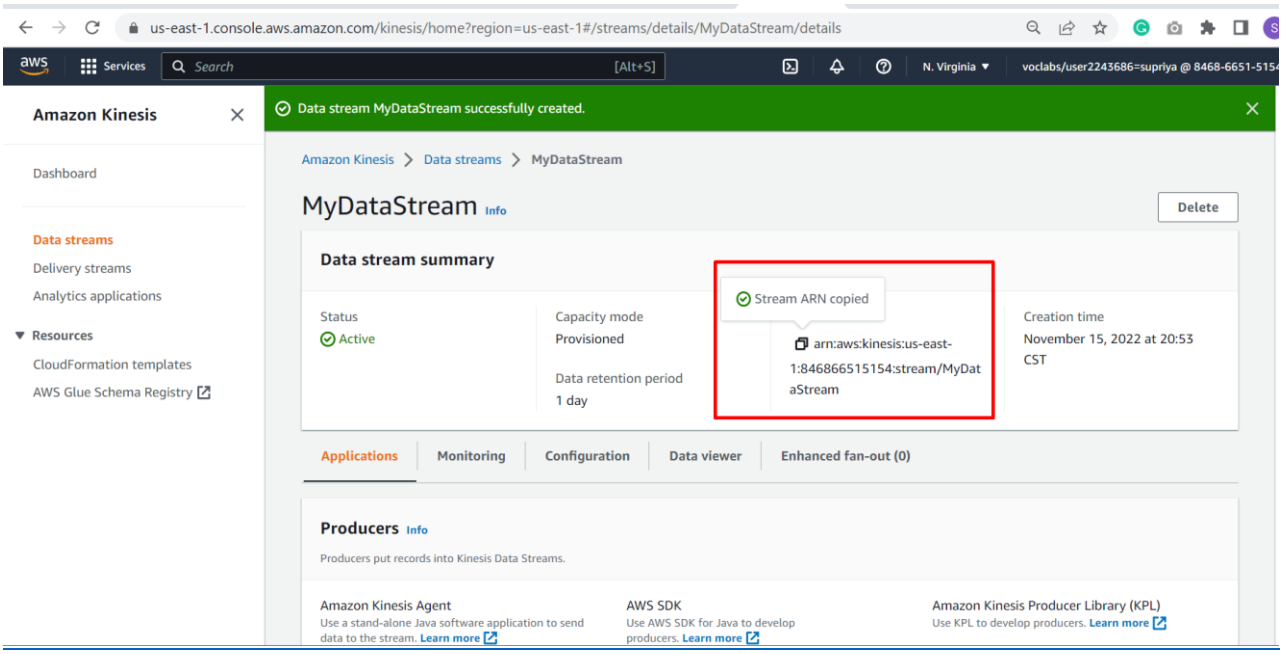


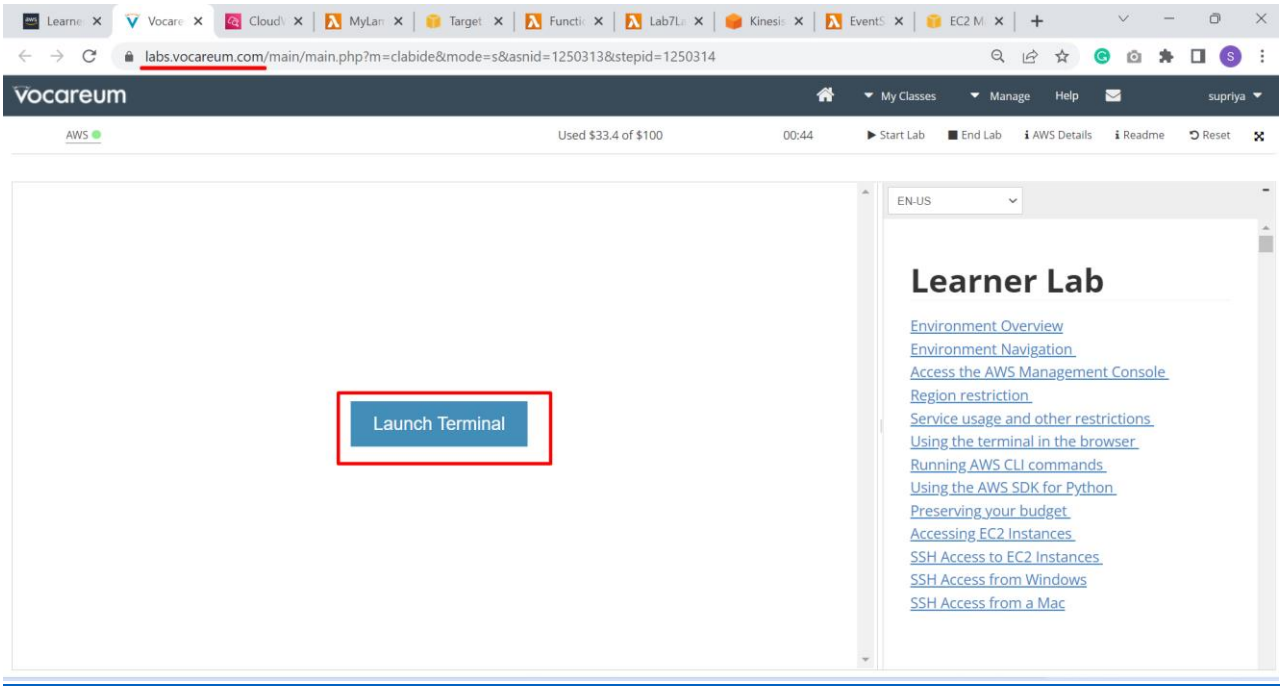
Kinesis Data Stream and Lambda




Amazon Kinesis > Data streams > Create data stream
Create data stream Info
Data stream configuration
Data stream name
MyDataStream
Acceptable characters are uppercase and lowercase letters, numbers, underscores, hyphens and periods.
Data stream capacity Info
Capacity mode
On-demand
Use this mode when your data stream's throughput requirements are unpredictable and variable. With on-demand mode, your data stream's capacity scales automatically.
Provisioned
Use provisioned mode when you can reliably estimate throughput requirements of your data stream. With provisioned mode, your data stream's capacity is fixed.
Provisioned shards
The total capacity of a stream is the sum of the capacities of its shards. Enter number of provisioned shards to see total data stream capacity.
1
Shard estimator
Minimum: 1, Maximum available: 498, Account quota limit: 500. Request shard quota increase
Total data stream capacity
Shard capacity is determined by the number of provisioned shards. Each shard ingests up to 1 MiB/second and 1,000 records/second and emits up to 2 MiB/second. If writes and reads exceed capacity, the application will receive throttles.
Write capacity
Maximum
1 MiB/second and 1,000 records/second
Read capacity
Maximum
2 MiB/second
Provisioned mode has a fixed-throughput pricing model. See Kinesis pricing for Provisioned mode
Data stream settings
You can edit the settings after the data stream has been created and is in the active status.
Setting
Value
Editable after creation
Capacity mode
Provisioned
Yes
Provisioned shards
1
Yes
Data retention period
1 day
Yes
Server-side encryption
Disabled
Yes
Monitoring enhanced metrics
Disabled
Yes

Create

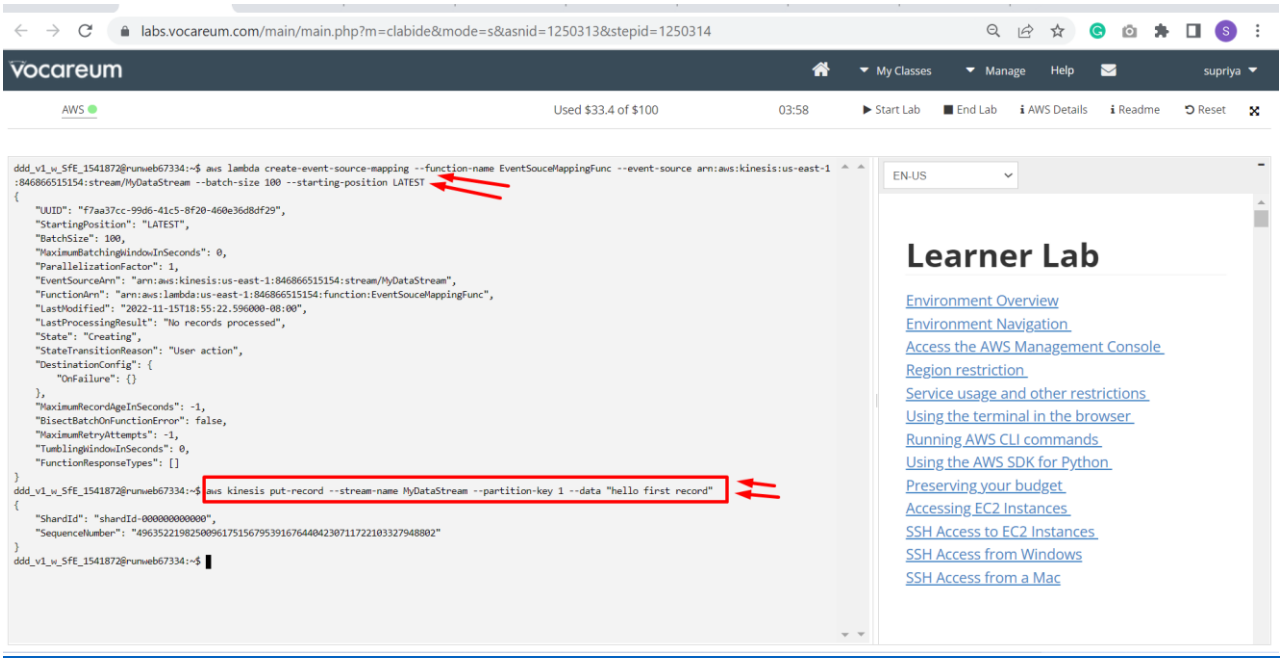




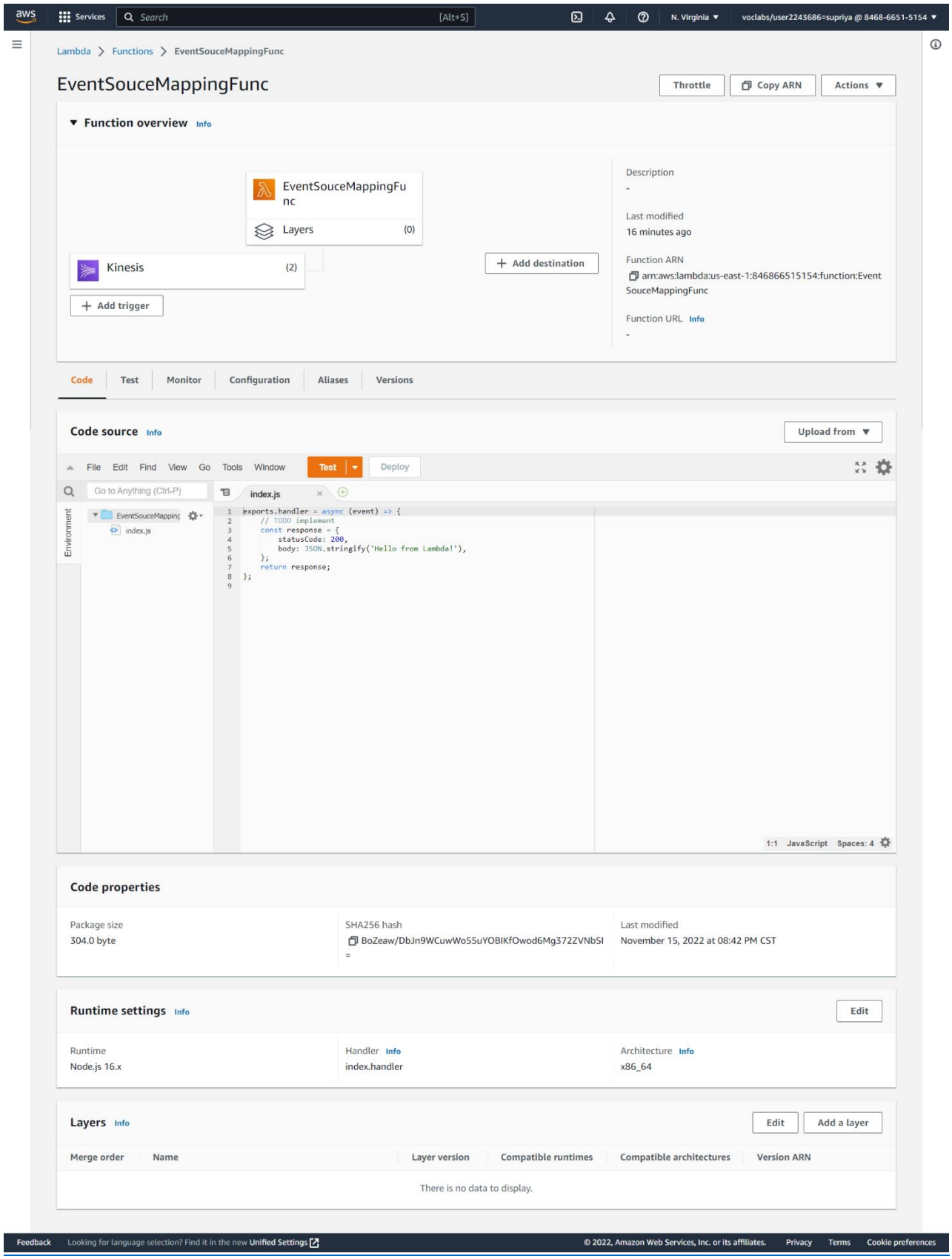
::::Change LambdaFunctionName and DataStreamARN in the following command line::::

aws lambda create-event-source-mapping --function-name MyKinesisFunction --event-source arn:aws:kinesis:us-east-1:525718235721:stream/MyDataStream --batch-size 100 --starting-position LATEST

aws kinesis put-record --stream-name MyDataStream --partition-key 1 --data "hello first record”



#. Kinesis trigger added in Lambda function


Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
Lambda > Functions > EventSouceMappingFunc
EventSouceMappingFunc
Throttle
Copy ARN
Actions
Function overview Info
EventSouceMappingFunc
Layers (0)
Kinesis (2)
Add trigger
Add destination
Description
-
Last modified
16 minutes ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:EventSouceMappingFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (Ctrl-P)
Environment
EventSouceMapping
index.js
index.js
exports.handler = async (event) => {
// TODO implement
const response = {
statusCode: 200,
body: JSON.stringify('Hello from Lambda!'),
};
return response;
};
1:1 JavaScript Spaces: 4
Code properties
Package size
304.0 byte
SHA256 hash
BoZeaw/DbJn9WCuwWo55uYOBIKfOwod6Mg372ZVNbSI=
Last modified
November 15, 2022 at 08:42 PM CST
Runtime settings Info
Edit
Runtime
Node.js 16.x
Handler Info
index.handler
Architecture Info
x86_64
Layers Info
Edit
Add a layer
Merge order
Name
Layer version
Compatible runtimes
Compatible architectures
Version ARN
There is no data to display.
Feedback
Looking for language selection? Find it in the new Unified Settings
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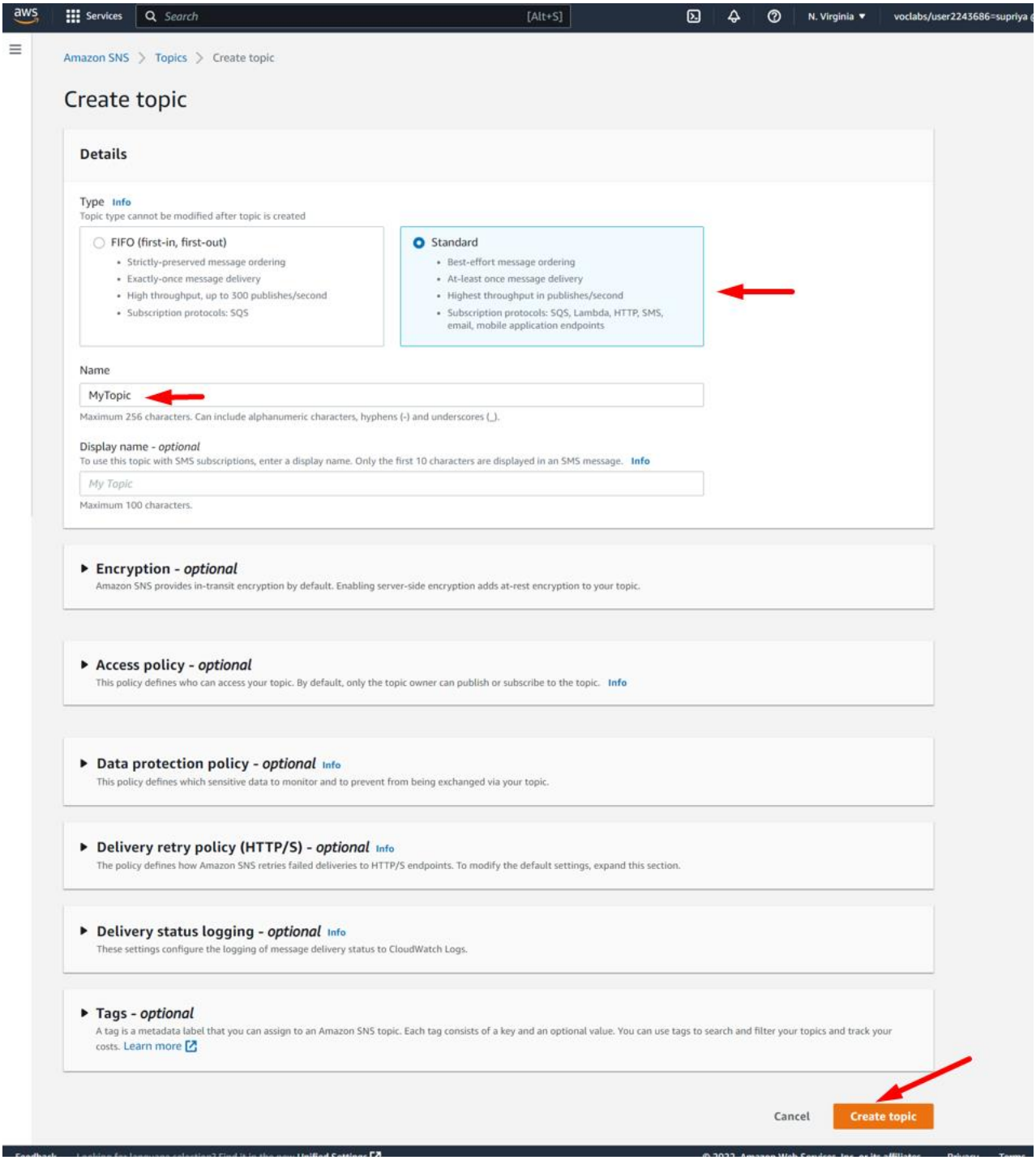
Privacy
Terms
Cookie preferences

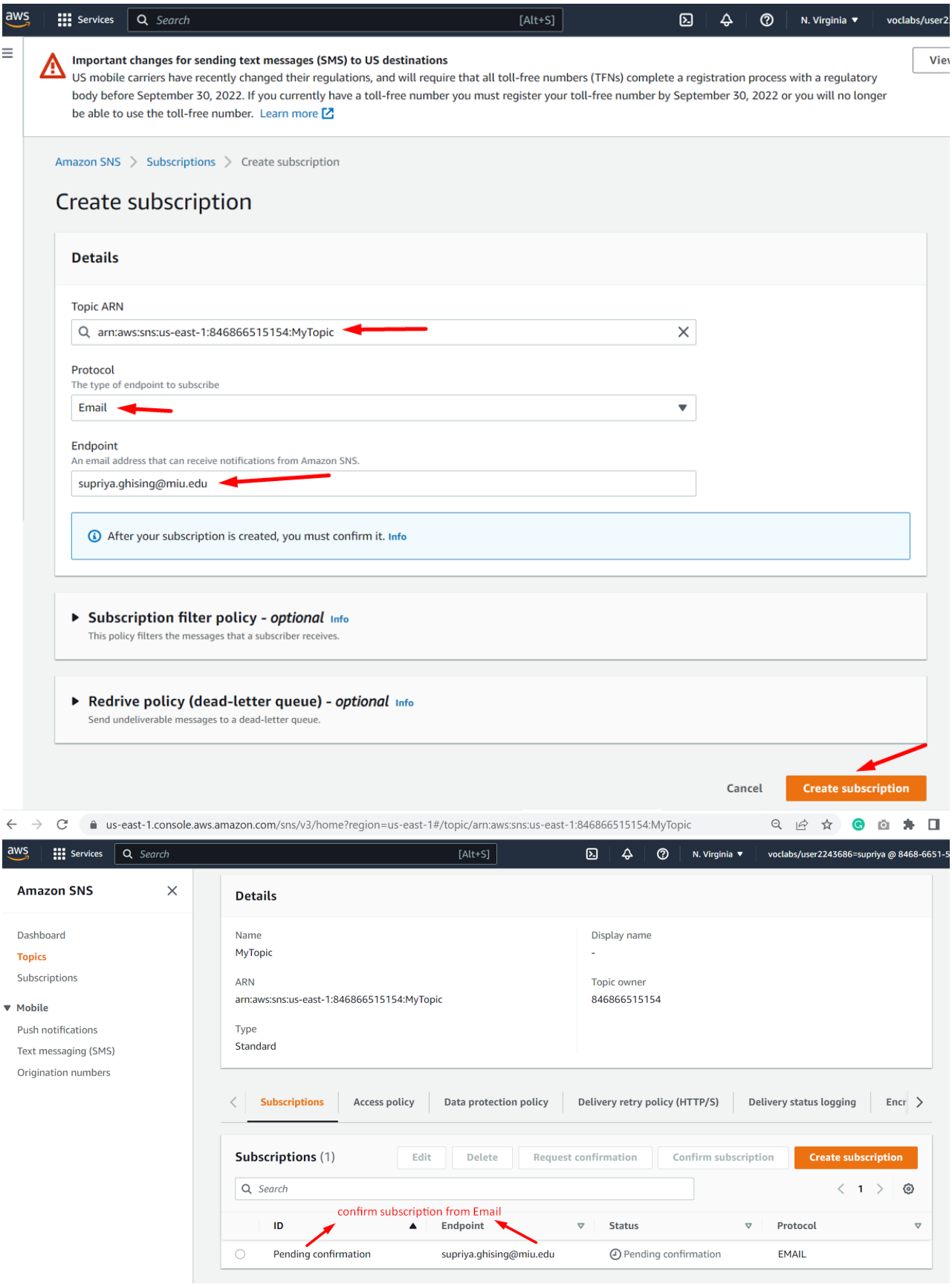
aws kinesis put-record --stream-name myDataStream --data test" --partition-key 1

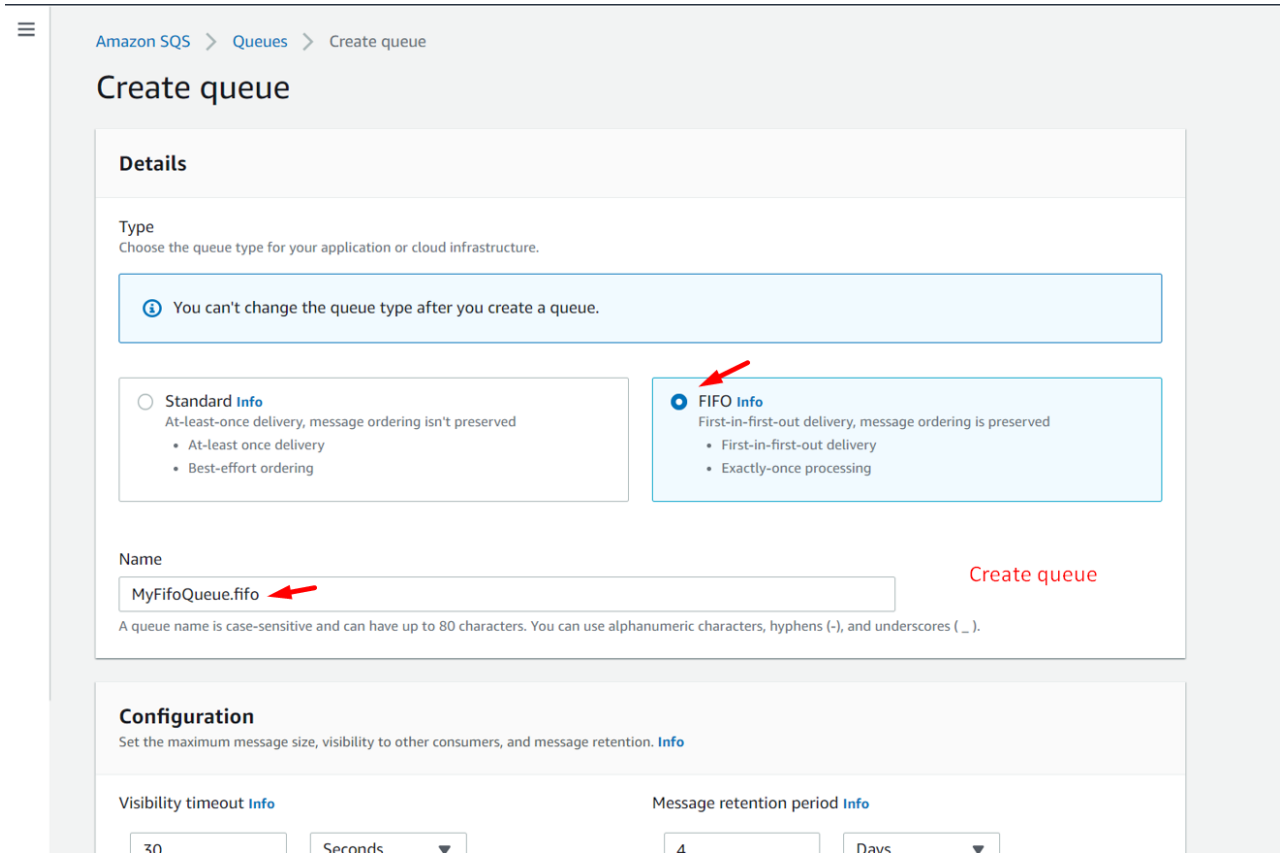
```
C:\Users\Asus\Downloads>aws kinesis put-record --stream-name myDataStream --data test --partition-key 1
{
    "ShardId": "shardId-000000000000",
    "SequenceNumber": "49629365934550496107114396096449191542083280193793818626"
}
```

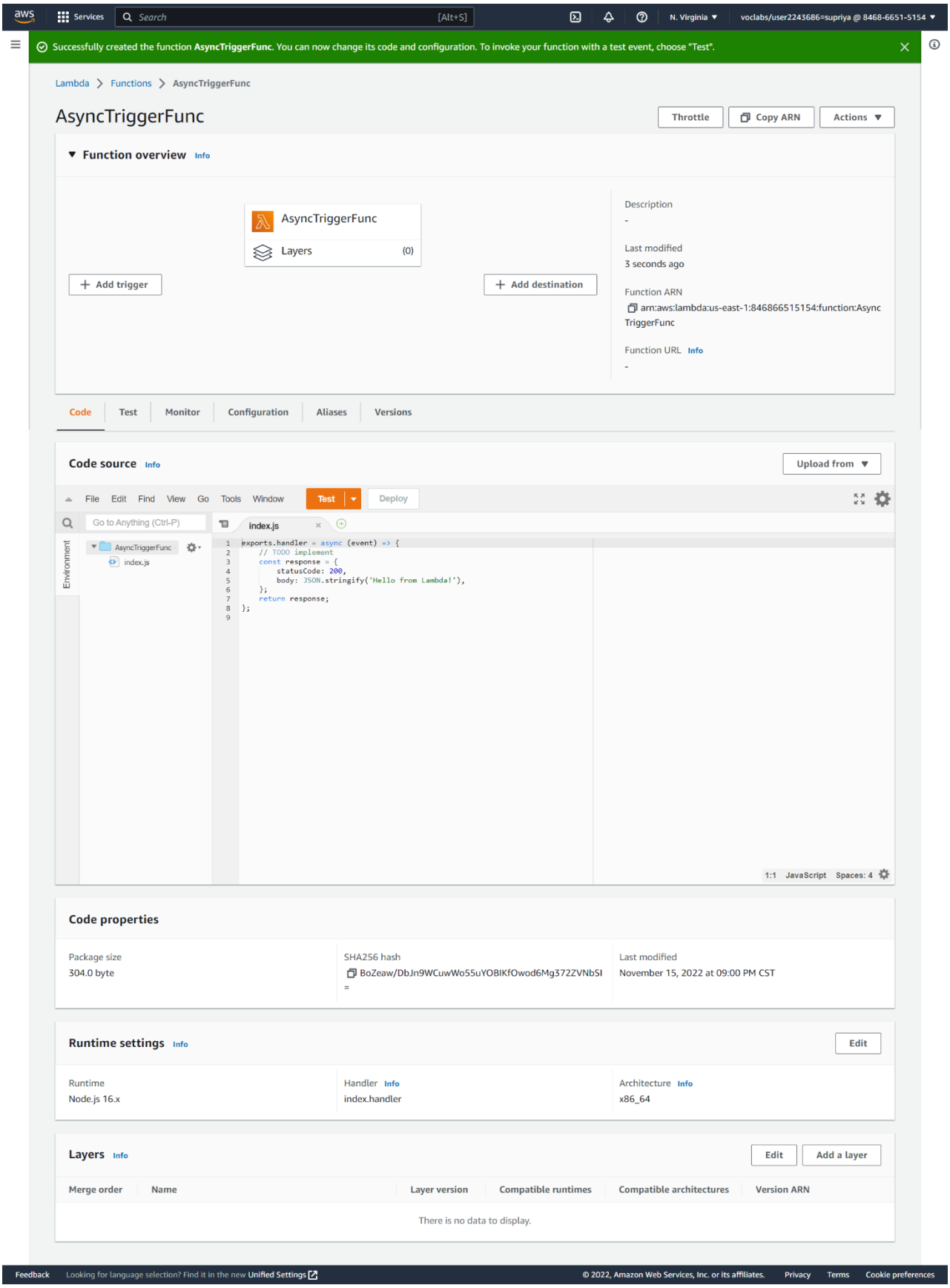
SQS, SNS and Lambda

```
const AWS = require("aws-sdk");
const sns = new AWS.SNS({apiVersion: '2010-03-31'});

exports.handler = async(event) => {
    console.log(JSON.stringify(event));
    var body = JSON.parse(event.Records[0].body);

    const params = {
        Message: body.message,
        Subject: body.subject,
        TopicArn: "arn:aws:sns:us-east-1:846866515154:MyTopic"
    };
    const res = await sns.publish(params).promise();

    const response = {
         statusCode: 200,
         body: params
    };
    return response;

};
```


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya
Amazon SNS > Topics > Create topic
Create topic
Details
Type Info
Topic type cannot be modified after topic is created
FIFO (first-in, first-out)
Strictly-preserved message ordering
Exactly-once message delivery
High throughput, up to 300 publishes/second
Subscription protocols: SQS
Standard
Best-effort message ordering
At-least once message delivery
Highest throughput in publishes/second
Subscription protocols: SQS, Lambda, HTTP, SMS, email, mobile application endpoints
Name
MyTopic
Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (_).
Display name - optional
To use this topic with SMS subscriptions, enter a display name. Only the first 10 characters are displayed in an SMS message. Info
My Topic
Maximum 100 characters.
Encryption - optional
Amazon SNS provides in-transit encryption by default. Enabling server-side encryption adds at-rest encryption to your topic.
Access policy - optional
This policy defines who can access your topic. By default, only the topic owner can publish or subscribe to the topic. Info
Data protection policy - optional Info
This policy defines which sensitive data to monitor and to prevent from being exchanged via your topic.
Delivery retry policy (HTTP/S) - optional Info
The policy defines how Amazon SNS retries failed deliveries to HTTP/S endpoints. To modify the default settings, expand this section.
Delivery status logging - optional Info
These settings configure the logging of message delivery status to CloudWatch Logs.
Tags - optional
A tag is a metadata label that you can assign to an Amazon SNS topic. Each tag consists of a key and an optional value. You can use tags to search and filter your topics and track your costs. Learn more
Cancel
Create topic


Services
Search
[Alt+S]
N. Virginia
voclabs/user2
Important changes for sending text messages (SMS) to US destinations
US mobile carriers have recently changed their regulations, and will require that all toll-free numbers (TFNs) complete a registration process with a regulatory body before September 30, 2022. If you currently have a toll-free number you must register your toll-free number by September 30, 2022 or you will no longer be able to use the toll-free number. Learn more
Amazon SNS > Subscriptions > Create subscription
Create subscription
Details
Topic ARN
arn:aws:sns:us-east-1:846866515154:MyTopic
Protocol
The type of endpoint to subscribe
Email
Endpoint
An email address that can receive notifications from Amazon SNS.
supriya.ghising@miu.edu
After your subscription is created, you must confirm it. Info
Subscription filter policy - optional Info
This policy filters the messages that a subscriber receives.
Redrive policy (dead-letter queue) - optional Info
Send undeliverable messages to a dead-letter queue.
Cancel
Create subscription
us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/topic/arn:aws:sns:us-east-1:846866515154:MyTopic
Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5
Amazon SNS
Dashboard
Topics
Subscriptions
Mobile
Push notifications
Text messaging (SMS)
Origination numbers
Details
Name
MyTopic
Display name
-
ARN
arn:aws:sns:us-east-1:846866515154:MyTopic
Topic owner
846866515154
Type
Standard
Subscriptions
Access policy
Data protection policy
Delivery retry policy (HTTP/S)
Delivery status logging
Encr
Subscriptions (1)
Edit
Delete
Request confirmation
Confirm subscription
Create subscription
Search
1
confirm subscription from Email
ID
Endpoint
Status
Protocol
Pending confirmation
supriya.ghising@miu.edu
Pending confirmation
EMAIL


Amazon SQS > Queues > Create queue
Create queue
Details
Type
Choose the queue type for your application or cloud infrastructure.
You can't change the queue type after you create a queue.
Standard Info
At-least-once delivery, message ordering isn't preserved
At-least once delivery
Best-effort ordering
FIFO Info
First-in-first-out delivery, message ordering is preserved
First-in-first-out delivery
Exactly-once processing
Name
MyFifoQueue.fifo
Create queue
A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (_).
Configuration
Set the maximum message size, visibility to other consumers, and message retention. Info
Visibility timeout Info
30
Seconds
Message retention period Info
4
Days


Services
Search
[Alt+S]
N. Virginia
voclabs/user2243686=supriya @ 8468-6651-5154
Successfully created the function AsyncTriggerFunc. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Lambda > Functions > AsyncTriggerFunc
AsyncTriggerFunc
Throttle
Copy ARN
Actions
Function overview Info
AsyncTriggerFunc
Layers (0)
Add trigger
Add destination
Description
-
Last modified
3 seconds ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:AsyncTriggerFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (Ctrl-P)
Environment
AsyncTriggerFunc
index.js
index.js
exports.handler = async (event) => {
// TODO implement
const response = {
statusCode: 200,
body: JSON.stringify('Hello from Lambda!'),
};
return response;
};
1:1 JavaScript Spaces: 4
Code properties
Package size
304.0 byte
SHA256 hash
BoZeaw/DbJn9WCuwWo55uYOBIKfOwod6Mg372ZVNbSI=
Last modified
November 15, 2022 at 09:00 PM CST
Runtime settings Info
Edit
Runtime
Node.js 16.x
Handler Info
index.handler
Architecture Info
x86_64
Layers Info
Edit
Add a layer
Merge order
Name
Layer version
Compatible runtimes
Compatible architectures
Version ARN
There is no data to display.
Feedback
Looking for language selection? Find it in the new Unified Settings
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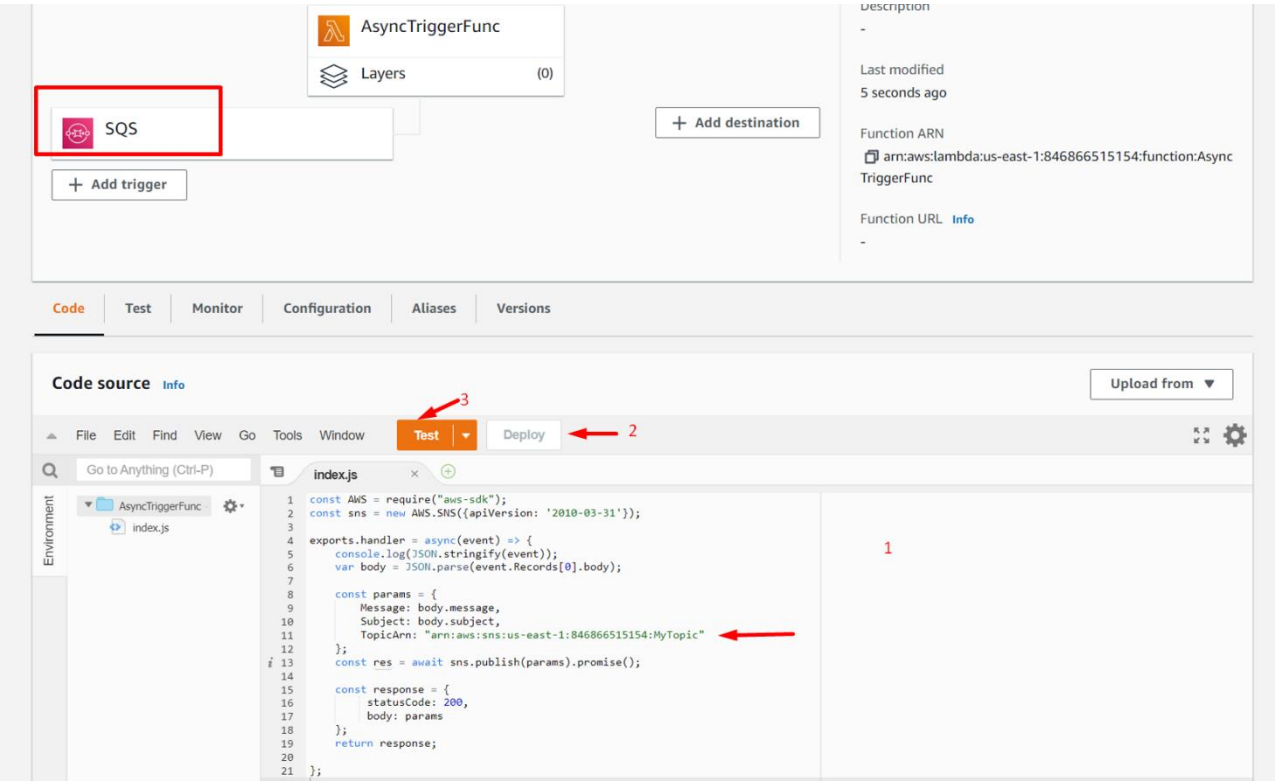
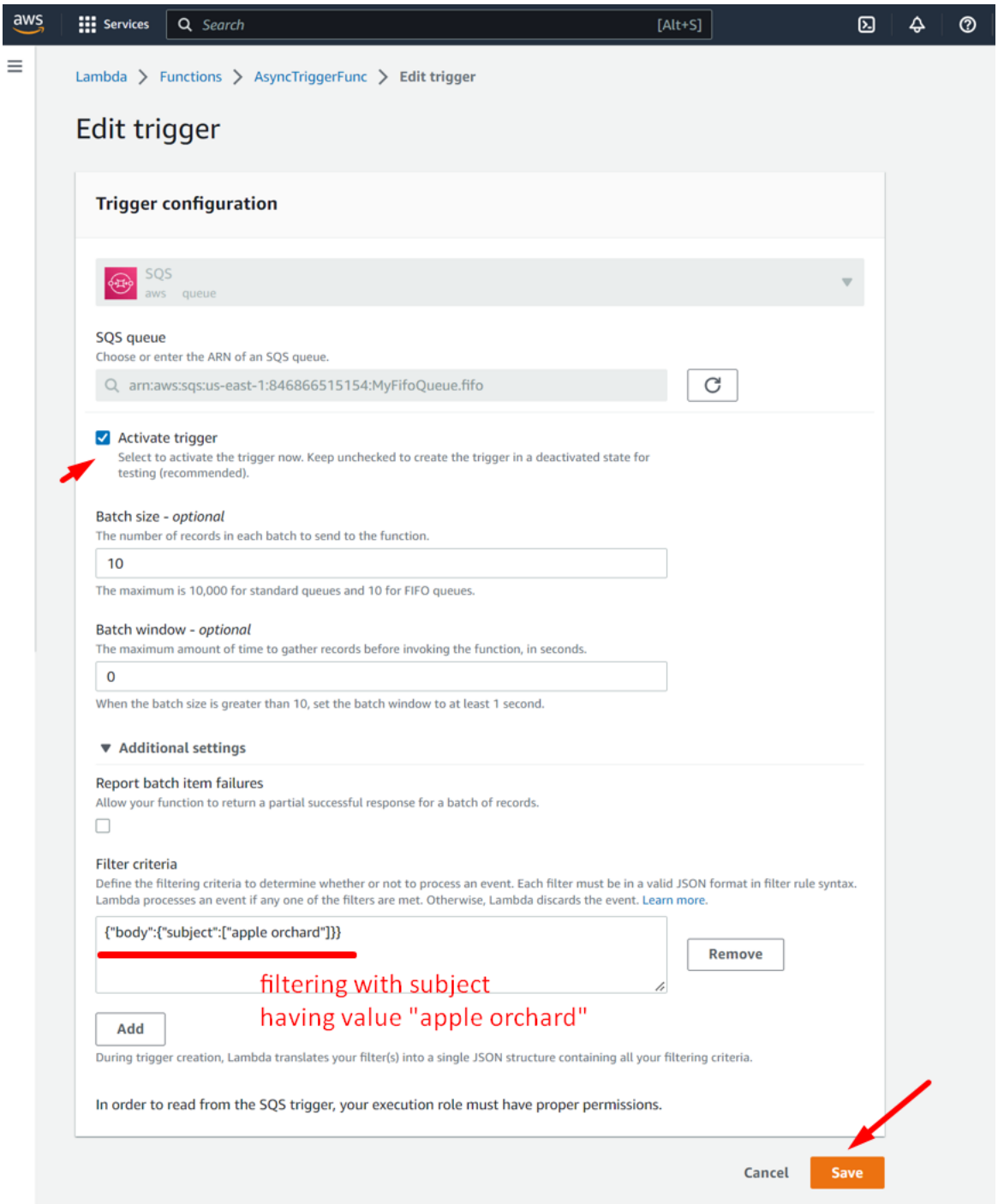
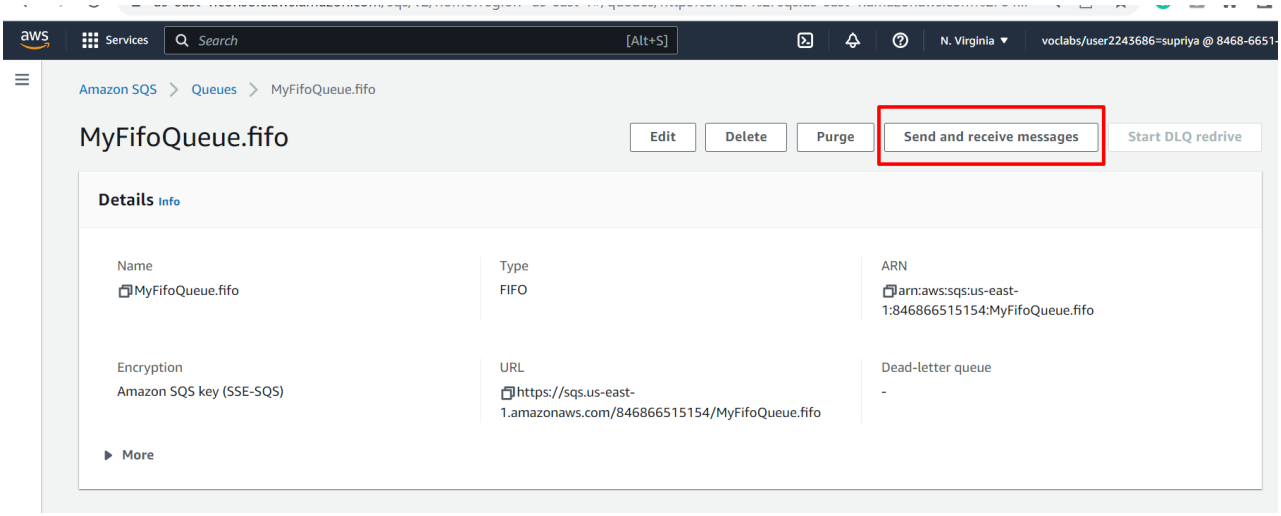
Terms
Cookie preferences

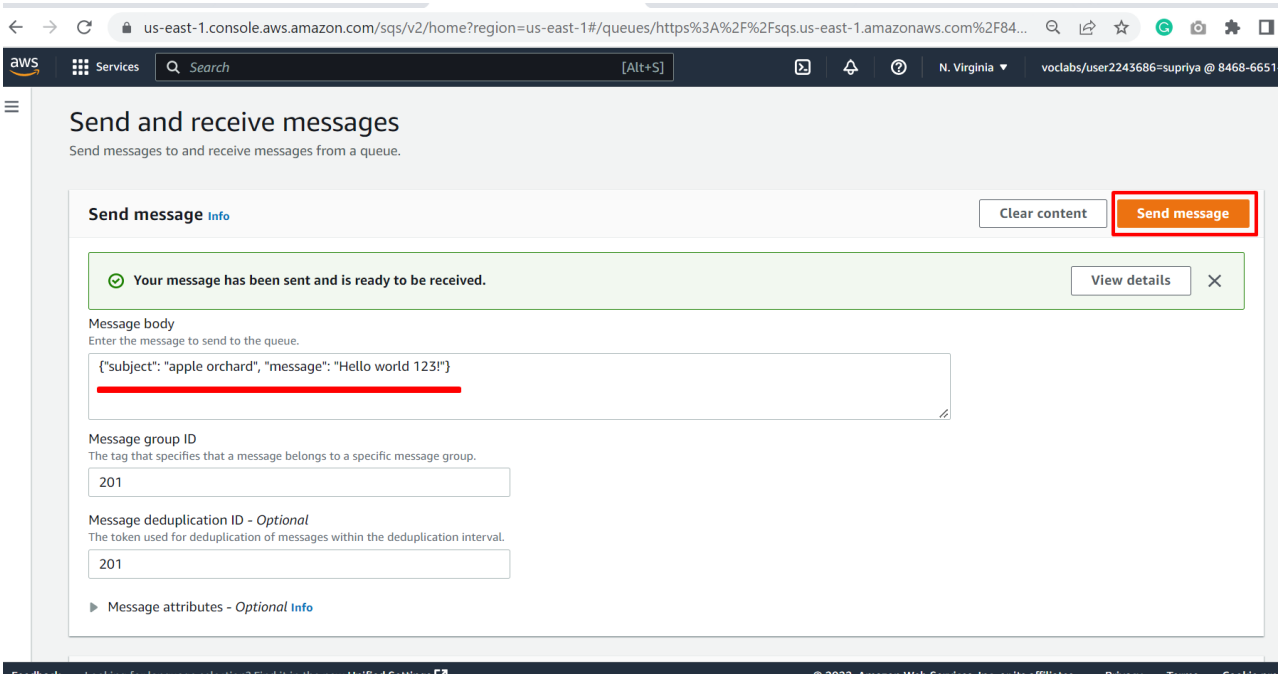

AsyncTriggerFunc
Layers (0)
SQS
Add trigger
Add destination
Description
-
Last modified
5 seconds ago
Function ARN
arn:aws:lambda:us-east-1:846866515154:function:AsyncTriggerFunc
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
2
3
1
Go to Anything (Ctrl-P)
index.js
Environment
AsyncTriggerFunc
index.js
const AWS = require("aws-sdk");
const sns = new AWS.SNS({apiVersion: '2010-03-31'});
exports.handler = async(event) => {
console.log(JSON.stringify(event));
var body = JSON.parse(event.Records[0].body);
const params = {
Message: body.message,
Subject: body.subject,
TopicArn: "arn:aws:sns:us-east-1:846866515154:MyTopic"
};
const res = await sns.publish(params).promise();
const response = {
statusCode: 200,
body: params
};
return response;
};

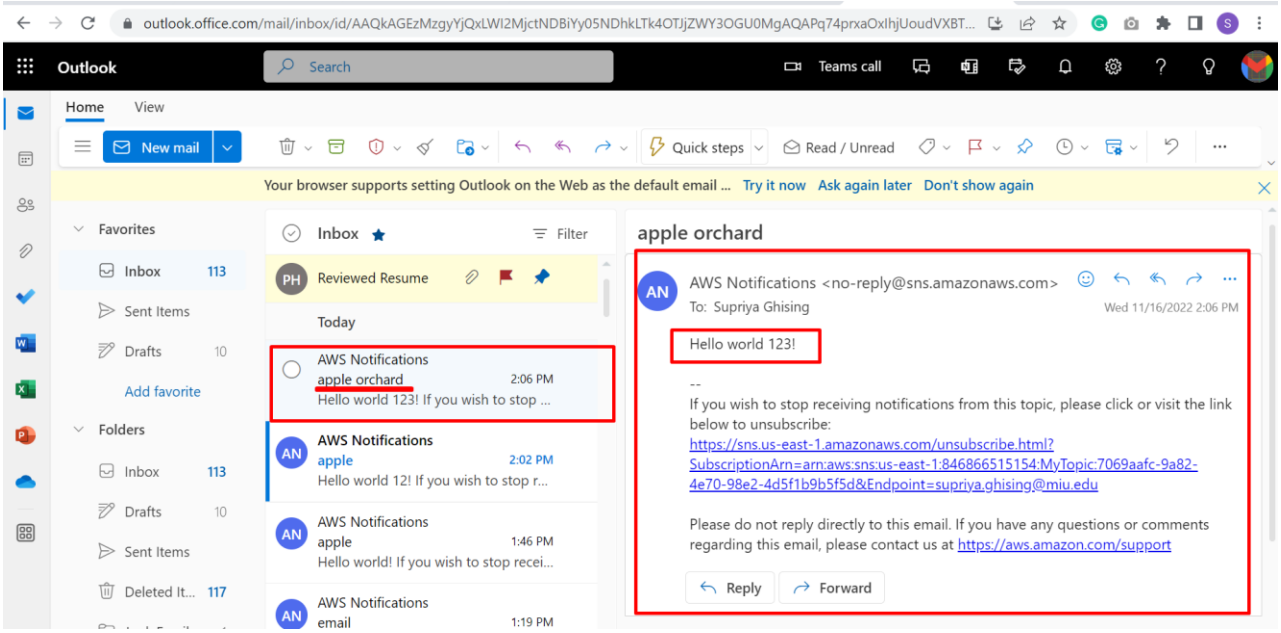


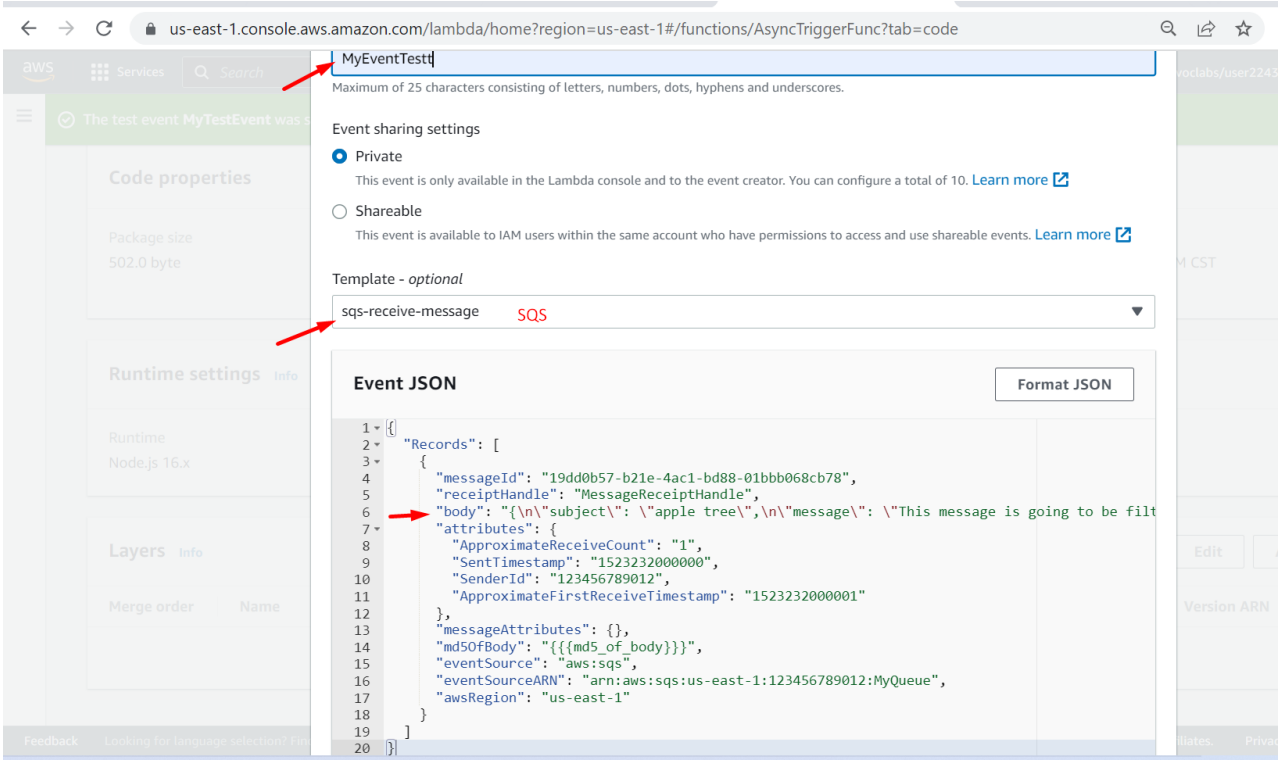
“body” -> indicates the message is coming from the body when you publish a message
“subject” -> indicates the key to filter
“apple orchard” -> indicates the value to find in filter



When publishing the message in SQS. You need to write the body in a JSON format and add the filter key value pair. See the Example below.




outlook.office.com/mail/inbox/id/AAQkAGEzMzgyYjQxLWI2MjctNDBiYy05NDhkLTk4OTJjZWY3OGU0MgAQAPq74prxaOxlhjUoudVXBT...
Outlook
Search
Teams call
Home
View
New mail
Quick steps
Read / Unread
Your browser supports setting Outlook on the Web as the default email ...
Try it now
Ask again later
Don't show again
Favorites
Inbox 113
Sent Items
Drafts 10
Add favorite
Folders
Inbox 113
Drafts 10
Sent Items
Deleted It... 117
Inbox
Filter
Reviewed Resume
Today
AWS Notifications
apple orchard
2:06 PM
Hello world 123! If you wish to stop ...
AWS Notifications
apple
2:02 PM
Hello world 12! If you wish to stop r...
AWS Notifications
apple
1:46 PM
Hello world! If you wish to stop recei...
AWS Notifications
email
1:19 PM
apple orchard
AWS Notifications <no-reply@sns.amazonaws.com>
To: Supriya Ghising
Wed 11/16/2022 2:06 PM
Hello world 123!
--
If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:
https://sns.us-east-1.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-east-1:846866515154:MyTopic:7069aafc-9a82-4e70-98e2-4d5f1b9b5f5d&Endpoint=supriya.ghising@miu.edu
Please do not reply directly to this email. If you have any questions or comments regarding this email, please contact us at https://aws.amazon.com/support
Reply
Forward


us-east-1.console.aws.amazon.com/lambda/home?region=us-east-1#/functions/AsyncTriggerFunc?tab=code
MyEventTestt
Maximum of 25 characters consisting of letters, numbers, dots, hyphens and underscores.
Event sharing settings
Private
This event is only available in the Lambda console and to the event creator. You can configure a total of 10. Learn more
Shareable
This event is available to IAM users within the same account who have permissions to access and use shareable events. Learn more
Template - optional
sqs-receive-message
SQS
Event JSON
Format JSON
{
"Records": [
{
"messageId": "19dd0b57-b21e-4ac1-bd88-01bbb068cb78",
"receiptHandle": "MessageReceiptHandle",
"body": "{\n\"subject\": \"apple tree\",\n\"message\": \"This message is going to be filt
"attributes": {
"ApproximateReceiveCount": "1",
"SentTimestamp": "1523232000000",
"SenderId": "123456789012",
"ApproximateFirstReceiveTimestamp": "1523232000001"
},
"messageAttributes": {},
"md5OfBody": "{{{md5_of_body}}}",
"eventSource": "aws:sqs",
"eventSourceARN": "arn:aws:sqs:us-east-1:123456789012:MyQueue",
"awsRegion": "us-east-1"
}
]
}