# Assignment 7 – Lambda

- 1. Recite NoSQL.
- 2. 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.
- 3. 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.
- 4. Asynchronous trigger The **SQS** will trigger the lambda. Add a **filter** in the trigger. The lambda will send an email to you. <a href="https://www.youtube.com/watch?v=iAl6ScF119Q">https://www.youtube.com/watch?v=iAl6ScF119Q</a>.

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

const params = {
    Message: JSON.stringify({
        subject: body.subject,
        email: body.email,
        message: body.message
    }),
    Subject: emailSubject,
    TopicArn: topic
};

const res = await sns.publish(params).promise();
```

5. Event Source Mapping – Implement event source mapping that lets lambda read data from Kinesis data stream and logs that event out in CloudWatch.

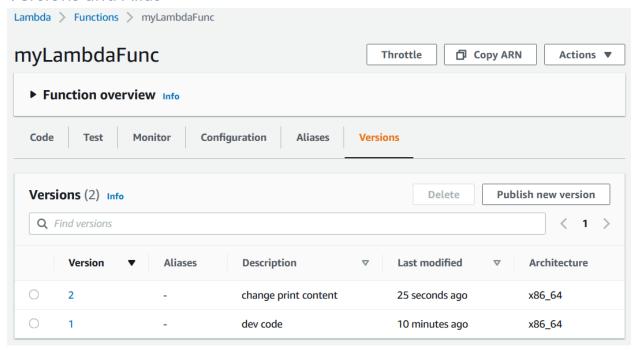
aws lambda create-event-source-mapping --function-name MyKinesisFunction --event-source arn:aws:kinesis:us-east-1:525718235721:stream/MyFirstDataStream --batch-size 100 --starting-position LATEST

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

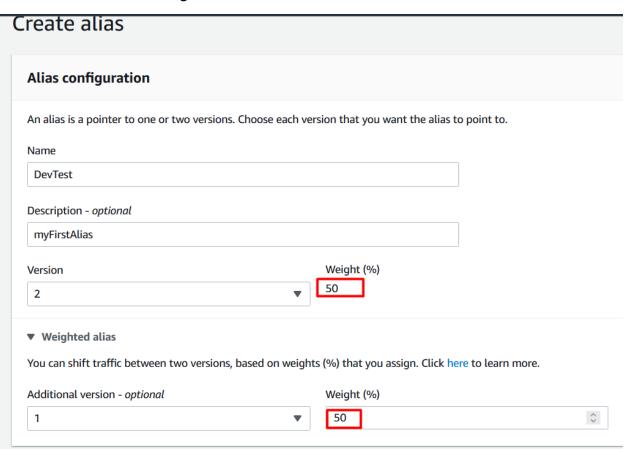
Read: <a href="https://docs.aws.amazon.com/lambda/latest/dg/invocation-eventsourcemapping.html">https://docs.aws.amazon.com/lambda/latest/dg/invocation-eventsourcemapping.html</a>

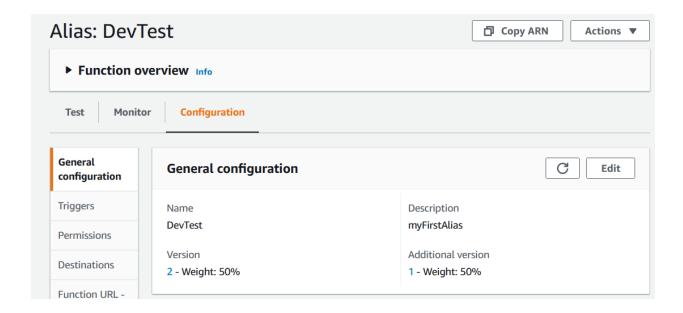
6. [Extra] Find an example of using step functions online and practice that.

# Versions and Alias

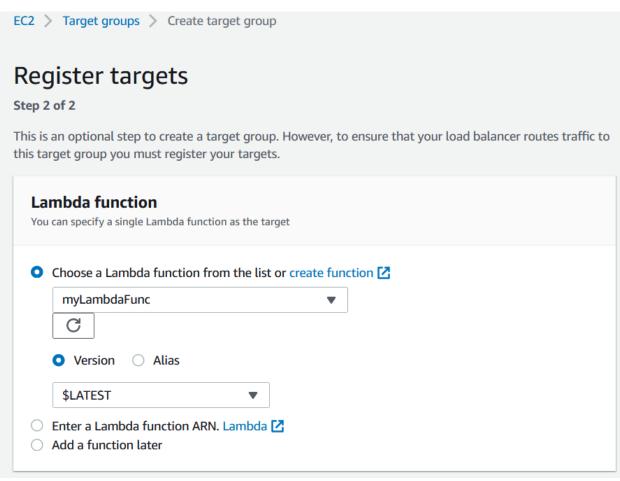


#### Create Alias with 50:50 routing

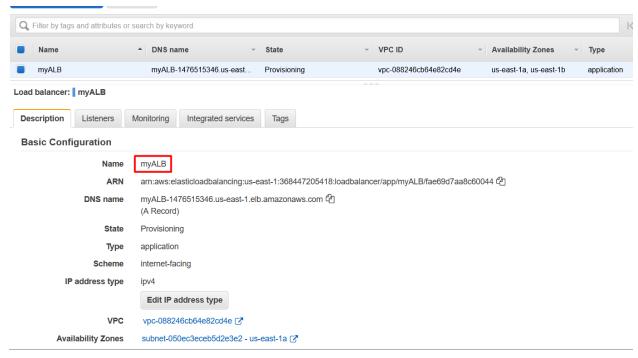




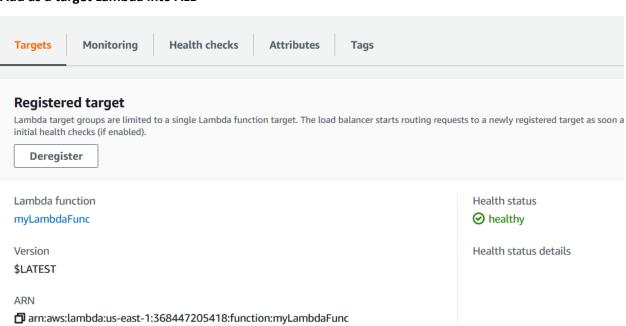
### **Create Target Group with Lambda**

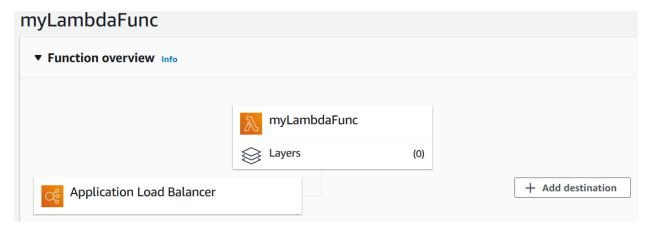


# ALB and Lambda

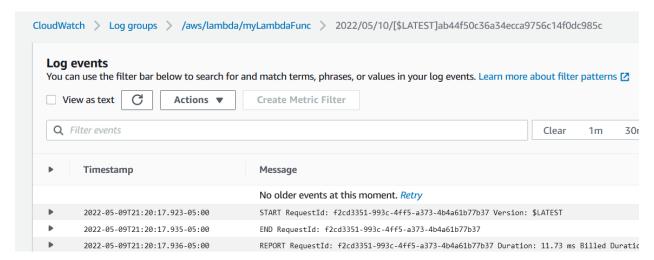


#### Add as a target Lambda into ALB

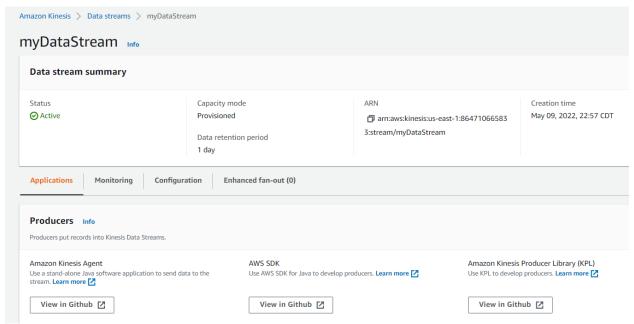




#### CloudWatch from Lambda

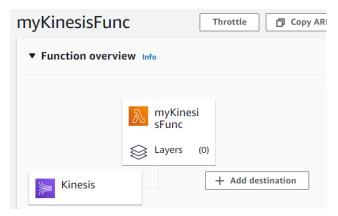


## Kinesis Data Stream and Lambda



aws lambda create-event-source-mapping --function-name myKinesisFunc --event-source arn:aws:kinesis:us-east-1:864710665833:stream/myDataStream --batch-size 100 --starting-position LATEST

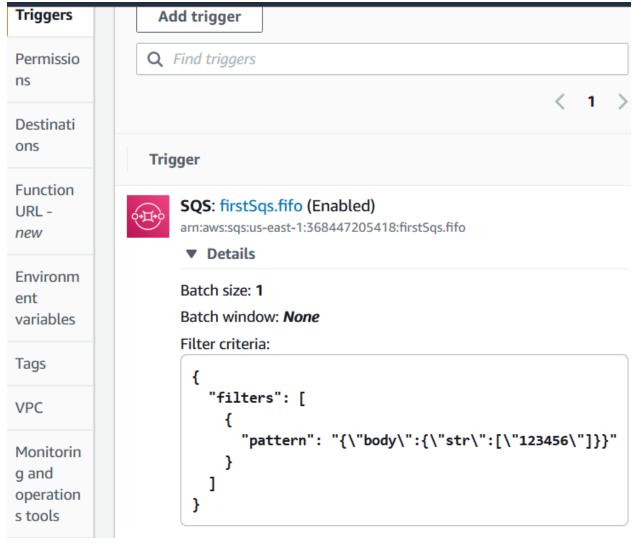
```
C:\Users\Asus>aws lambda create-event-source-mapping --function-name myKinesisFunc --event-source arn:aws:kinesis:us-east-1:864710665833:stream/myDataStream --batch-size 100 --starting-position LATEST
{
    "UUID": "fee79e80-a264-4435-9d45-1ff9a74ed1d5",
    "StartingPosition": "LATEST",
    "BatchSize": 100,
    "MaximumBatchingWindowInSeconds": 0,
    "ParallelizationFactor": 1,
    "EventSourceArn": "arn:aws:kinesis:us-east-1:864710665833:stream/myDataStream",
    "FunctionArn": "arn:aws:lambda:us-east-1:864710665833:function:myKinesisFunc",
    "LastModified": "2022-05-09T23:16:42.457000-05:00",
    "LastProcessingResult": "No records processed",
    "State": "Creating",
    "StateTransitionReason": "User action",
    "DestinationConfig": {
         "OnFailure": {}
    },
    "MaximumRecordAgeInSeconds": -1,
    "BisectBatchOnFunctionError": false,
    "MaximumRetryAttempts": -1,
    "TumblingWindowInSeconds": 0,
    "FunctionResponseTypes": []
}
```



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

# SQS and Lambda



#### {"str":"123456"}

