



## **CSCI 5409 – Cloud Computing**

### **Assignment 4**

**Work done by,**

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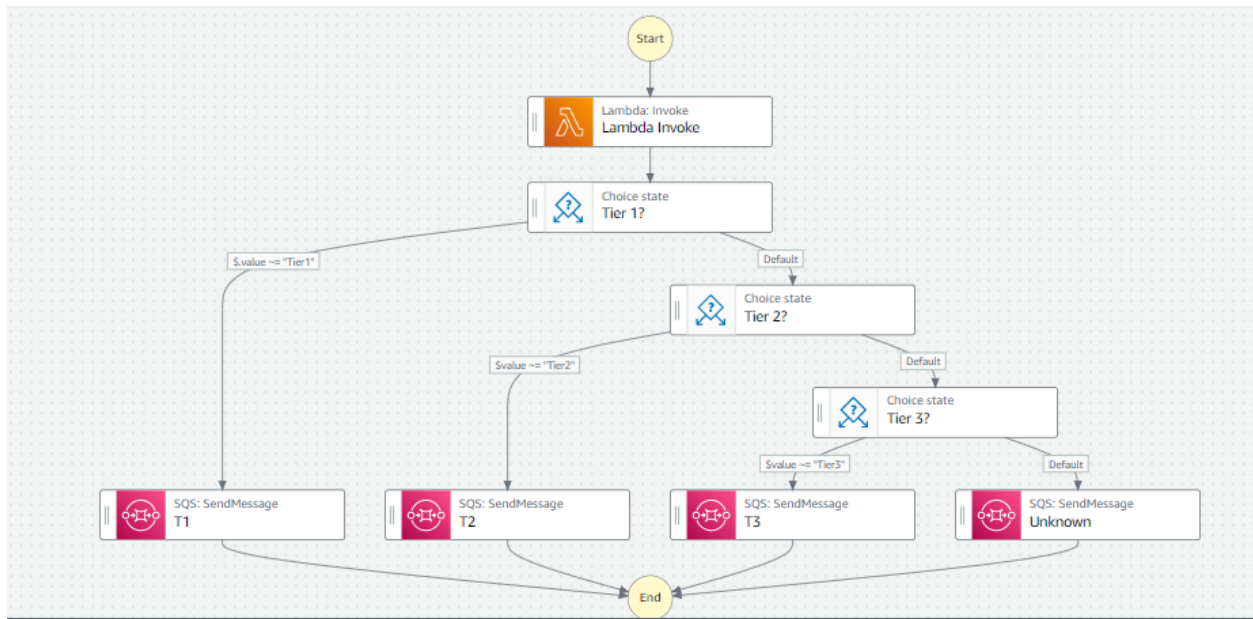
**Banner ID: B00871849**

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## **DECLARATION**

**I, Guturu Rama Mohan Vishnu, declare that in assignment 4 of CSCI 5409 course, I declare that all the work done was done by myself and I have not collaborated with anyone for the assignment.**

## Screenshot of the state machine diagram:



## Screenshot of SQS Queues before testing:

The screenshot shows the AWS Management Console for Amazon SQS. The 'Queues' page displays a table with 4 queues. The table columns are Name, Type, Created, Messages available, Messages in flight, Encryption, and Content-based deduplication. All queues are of type 'Standard' and have encryption disabled.

Name	Type	Created	Messages available	Messages in flight	Encryption	Content-based deduplication
T1	Standard	4/2/2022, 19:17:33 ADT	0	0	Disabled	-
T2	Standard	4/2/2022, 19:17:45 ADT	0	0	Disabled	-
T3	Standard	4/2/2022, 19:17:54 ADT	0	0	Disabled	-
Unknown	Standard	4/2/2022, 19:18:02 ADT	0	0	Disabled	-

## Screenshot of the test executions:

The screenshot shows the AWS Step Functions console for a state machine named 'Assignment-4'. The 'Executions' tab is selected, displaying a table of four successful test executions (Test1 to Test4). Each execution started at approximately 07:25 PM and ended at 07:26 PM on April 2, 2022.

Name	Status	Started	End Time
Test4	Succeeded	Apr 2, 2022 07:26:43.583 PM	Apr 2, 2022 07:26:44.139 PM
Test3	Succeeded	Apr 2, 2022 07:26:21.488 PM	Apr 2, 2022 07:26:21.914 PM
Test2	Succeeded	Apr 2, 2022 07:26:04.474 PM	Apr 2, 2022 07:26:04.791 PM
Test1	Succeeded	Apr 2, 2022 07:25:46.980 PM	Apr 2, 2022 07:25:47.726 PM

## Screenshot of SQS Queues after testing:

The screenshot shows the AWS SQS console for a region in N. Virginia. The 'Queues' tab is selected, displaying a table of four queues (T1, T2, T3, and Unknown). All queues are of type 'Standard' and have 1 message available. The 'Create queue' button is visible at the top right.

Name	Type	Created	Messages available	Messages in flight	Encryption	Content-based deduplication
T1	Standard	4/2/2022, 19:17:33 ADT	1	0	Disabled	-
T2	Standard	4/2/2022, 19:17:45 ADT	1	0	Disabled	-
T3	Standard	4/2/2022, 19:17:54 ADT	1	0	Disabled	-
Unknown	Standard	4/2/2022, 19:18:02 ADT	1	0	Disabled	-

## Screenshot of each queue:

### T1

The screenshot displays the AWS Management Console for an Amazon SQS queue named T1. The breadcrumb navigation shows the path: Amazon SQS > Queues > T1. The queue name T1 is prominently displayed at the top, along with buttons for Edit, Delete, Purge, Send and receive messages, and Start DLQ redrive. Below this, the Details section provides key information:

Property	Value
Name	T1
Type	Standard
ARN	arn:aws:sqs:us-east-1:301735857594:T1
Encryption	Disabled
URL	https://sqs.us-east-1.amazonaws.com/301735857594/T1
Dead-letter queue	-

Below the details, a horizontal menu allows navigation to various features: SNS subscriptions, Lambda triggers, Dead-letter queue, Monitoring, Tagging, Access policy, Encryption, and Dead-letter queue redrive tasks. The Subscription region is set to us-east-1.

The second screenshot shows the 'Send and receive messages' interface for the T1 queue. The breadcrumb navigation is: Amazon SQS > Queues > T1 > Send and receive messages. The page title is 'Send and receive messages' with a subtitle 'Send messages to and receive messages from a queue.' The interface is divided into two main sections:

- Send message:** Includes a 'Message body' input field with a placeholder 'Enter message', a 'Delivery delay' dropdown set to '0' seconds, and a 'Send message' button. A note indicates the delay should be between 0 seconds and 15 minutes.
- Receive messages:** Includes buttons for 'Edit poll settings', 'Stop polling', and 'Poll for messages'. Below these, there are tabs for 'Messages available', 'Polling duration', 'Maximum message count', and 'Polling progress'.

us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F301735857594%2FT1/send-receive

aws Services Search for services, features, blogs, docs, and more [Alt+S] N. Virginia voclabs/user1836864=rm286720@dal.ca @ 3017-3585-7594

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: 1 Polling duration: 30 Maximum message count: 10 Polling progress: 0 receives/second

Messages (1) View details Delete

Search messages

ID	Sent	Size	Receive count
eb5ad24d-672f-4d2e-b625-af91c3a897db	4/2/2022, 19:26:04 ADT	117 bytes	2

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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.amazonaws.com%2F301735857594%2FT1/send-receive/

Message: eb5ad24d-672f-4d2e-b625-af91c3a897db

Details Body Attributes

["statusCode":200,"value":"Tier1","email":"person@dal.ca","textToPass":"I do not remember my password! Please help!"]

Done

eb5ad24d-672f-4d2e-b625-af91c3a897db 4/2/2022, 19:26:04 ADT 117 bytes 2

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## T2

The image shows two screenshots of the Amazon SQS console. The top screenshot displays the 'Details' tab for a queue named 'T2'. The bottom screenshot shows the 'Send and receive messages' interface.

**Queue Details (T2):**

Name	Type	ARN
T2	Standard	arn:aws:sqs:us-east-1:301735857594:T2

Encryption	URL	Dead-letter queue
Disabled	https://sqs.us-east-1.amazonaws.com/301735857594/T2	-

**Send and receive messages interface:**

**Send message:**

Message body: Enter the message to send to the queue.

Delivery delay: 0 Seconds (Should be between 0 seconds and 15 minutes.)

**Receive messages:**

Messages available: 0, Polling duration: 30 seconds, Maximum message count: 10, Polling progress: 0%

us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F301735857594%2FT2/send-receive

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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 1 Polling duration 30 Maximum message count 10 Polling progress 1 receives/second

Messages (1) View details Delete

Search messages

ID	Sent	Size	Receive count
36dc4f29-69d9-4489-84bd-fc6acf884563	4/2/2022, 19:26:21 ADT	140 bytes	1

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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.amazonaws.com%2F301735857594%2FT2/send-receive/

Message: 36dc4f29-69d9-4489-84bd-fc6acf884563

Details Body Attributes

["statusCode":200,"value":{"Tier2","email":"person@dal.ca","textToPass":"My laptop computer broke and I cannot use my printer! Please help!"}]

Done

ID	Sent	Size	Receive count
36dc4f29-69d9-4489-84bd-fc6acf884563	4/2/2022, 19:26:21 ADT	140 bytes	1

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# T3

The image shows two screenshots of the Amazon SQS console. The top screenshot displays the 'Details' tab for a queue named 'T3'. The bottom screenshot shows the 'Send and receive messages' interface.

**Queue Details (T3):**

Name	Type	ARN
T3	Standard	arn:aws:sqs:us-east-1:301735857594:T3

Encryption	URL	Dead-letter queue
Disabled	https://sqs.us-east-1.amazonaws.com/301735857594/T3	-

**Send and receive messages interface:**

**Send message:**

Message body: Enter the message to send to the queue.

Delivery delay: 0 Seconds (Should be between 0 seconds and 15 minutes.)

**Receive messages:**

Messages available: 0, Polling duration: 30 seconds, Maximum message count: 10, Polling progress: 0%

us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F301735857594%2FT3/send-receive

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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 1 Polling duration 30 Maximum message count 10 Polling progress 0 receives/second

Messages (1) View details Delete

Search messages

ID	Sent	Size	Receive count
357b8bbb-390a-487d-9798-48336348d298	4/2/2022, 19:25:47 ADT	118 bytes	2

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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.amazonaws.com%2F301735857594%2FT3/send-receive/

Message: 357b8bbb-390a-487d-9798-48336348d298

Details Body Attributes

["statusCode":200,"value":"Tier3","email":"rhawkey@dal.ca","textToPass":"I do not remember my password! Please help!"]

Done

ID	Sent	Size	Receive count
357b8bbb-390a-487d-9798-48336348d298	4/2/2022, 19:25:47 ADT	118 bytes	2

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T4

us-east-1.console.aws.amazon.com/sqs/v2/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F301735857594%2FUnknown

Amazon SQS > Queues > Unknown

Unknown

Edit Delete Purge Send and receive messages Start DLQ redrive

Details Info

Name	Type	ARN
Unknown	Standard	arn:aws:sqs:us-east-1:301735857594:Unknown
Encryption	URL	Dead-letter queue
Disabled	https://sqs.us-east-1.amazonaws.com/301735857594/Unknown	-

► More

SNS subscriptions Lambda triggers Dead-letter queue Monitoring Tagging Access policy Encryption Dead-letter queue redrive tasks

Subscription region

us-east-1

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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.amazonaws.com%2F301735857594%2FUnknown/send-rec...

Amazon SQS > Queues > Unknown > Send and receive messages

Send and receive messages

Send messages to and receive messages from a queue.

Send message Info

Clear content Send message

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 Polling duration Maximum message count Polling progress

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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.amazonaws.com%2F301735857594%2FUnknown/send-rec...

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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 1 Polling duration 30 Maximum message count 10 Polling progress 0 receives/second

Messages (1) View details Delete

Search messages

ID	Sent	Size	Receive count
ecc2e66b-b466-4396-88f1-855ea1a56286	4/2/2022, 19:26:44 ADT	118 bytes	2

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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.amazonaws.com%2F301735857594%2FUnknown/send-rec...

Message: ecc2e66b-b466-4396-88f1-855ea1a56286

Details Body Attributes

["statusCode":200,"value":"Unknown","email":"person@dal.ca","textToPass":"The registrar system is down! Please help!"]

Done

ID	Sent	Size	Receive count
ecc2e66b-b466-4396-88f1-855ea1a56286	4/2/2022, 19:26:44 ADT	118 bytes	2

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