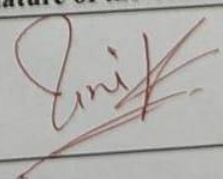


### Experiment 6

<b>Title:</b>	<b>Cloud Messaging with AWS: SQS and SNS</b>		<b>LO2</b>
<b>Student Name</b>	<u>Marc Lopez</u>	<b>Roll no.</b>	<u>9913</u>
Sign here to indicate that you have read all relevant material provided/ available on Moodle/ Classroom while performing and writing this experiment			

**Rubrics:**

Criteria	Excellent	Good	Satisfactory	Poor	Total Marks
<b>Creation and Configuration (R1)</b>	Successfully creates both SQS and SNS, with optimal settings. (6)	Creates SQS and SNS with minor issues in settings. (4-5)	Creates SQS and SNS, but with significant issues in settings. (3)	Fails to create SQS and SNS correctly. (1)	6
<b>Message Handling (R2)</b>	Efficiently sends, receives, and deletes messages in SQS; flawlessly integrates with SNS for message distribution. (6)	Sends, receives, and deletes messages with minor errors; integrates with SNS with minor issues. (4-5)	Manages basic sending and receiving of messages; struggles with integrating SNS effectively. (3)	Unable to send, receive, or delete messages correctly; fails to integrate SNS. (1)	5
<b>Error Handling and DLQ Usage (R3)</b>	Demonstrates advanced understanding of error handling, and uses DLQ effectively for failed messages. (6)	Uses DLQ correctly, but with limited understanding of error handling principles. (4-5)	Basic use of DLQ, with significant misunderstandings of error handling. (3)	Fails to implement DLQ or understand error handling concepts. (1)	5
<b>Timeliness of Submission (R4)</b>	On time (2)	1-week late (1)	2-weeks late (0)	More than 2 weeks late (Deduct up to 5 marks)	2
<b>Total Marks</b>					18

Date of Performance	Date of Submission	Signature of the Teacher
		

## Create queue

### Details

#### Type

Choose the queue type for your application or cloud infrastructure.

☒ **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


 You can't change the queue type after you create a queue.

#### Name

HighPriorityOrders

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

### Configuration [Info](#)

 Pricing and Cost Manage...

## Create queue

### Details

#### Type

Choose the queue type for your application or cloud infrastructure.

☒ **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

 You can't change the queue type after you create a queue.

#### Name

LowPriorityOrders

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

### Configuration [Info](#)

Set the maximum message size, visibility to other consumers, and message retention.

#### Visibility timeout [Info](#)

30

Seconds



Should be between 0 seconds and 12 hours.

#### Message retention period [Info](#)

4

Days



Should be between 1 minute and 14 days.

### Create queue

#### Details

Type

Choose the queue type for your application or cloud infrastructure.

☒ 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

You can't change the queue type after you create a queue.

Name

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

#### Configuration Info

Set the maximum message size, visibility to other consumers, and message retention.

Visibility timeout Info

Seconds ▼

Should be between 0 seconds and 12 hours.

Message retention period Info

Days ▼

Should be between 1 minute and 14 days.

Delivery delay Info

Maximum message size Info

### Create queue

#### Details

Type

Choose the queue type for your application or cloud infrastructure.

☒ 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

You can't change the queue type after you create a queue.

Name

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

#### Configuration Info

Set the maximum message size, visibility to other consumers, and message retention.

Visibility timeout Info

Seconds ▼

Should be between 0 seconds and 12 hours.

Message retention period Info

Days ▼

Should be between 1 minute and 14 days.

Delivery delay Info

Maximum message size Info

## Create queue

### Details

#### Type

Choose the queue type for your application or cloud infrastructure.

☒ **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

You can't change the queue type after you create a queue.

#### Name

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

### Configuration [Info](#)

Set the maximum message size, visibility to other consumers, and message retention.

#### Visibility timeout [Info](#)

Seconds



Should be between 0 seconds and 12 hours.

#### Message retention period [Info](#)

Days



Should be between 1 minute and 14 days.

[Delivery delay](#) [Info](#)

[Maximum message size](#) [Info](#)

## Create queue

### Details

#### Type

Choose the queue type for your application or cloud infrastructure.

☒ **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

You can't change the queue type after you create a queue.

#### Name

A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (\_).

### Configuration [Info](#)

Set the maximum message size, visibility to other consumers, and message retention.

#### Visibility timeout [Info](#)

Seconds



Should be between 0 seconds and 12 hours.

#### Message retention period [Info](#)

Days



Should be between 1 minute and 14 days.

**Redrive allow policy** - *Optional* [Info](#)

Identify which source queues can use this queue as the dead-letter queue.

Select which source queues can use this queue as the dead-letter queue.

- ☒ Disabled  
☐ Enabled

**Dead-letter queue** - *Optional* [Info](#)

Send undeliverable messages to a dead-letter queue.

Set this queue to receive undeliverable messages.

- ☐ Disabled  
☒ Enabled

Choose queue

arn:aws:sqs:ap-south-1:202533503126:high\_dlq

Maximum receives

3

Should be between 1 and 1000

**Redrive allow policy** - *Optional* [Info](#)

Identify which source queues can use this queue as the dead-letter queue.

Select which source queues can use this queue as the dead-letter queue.

- ☒ Disabled  
☐ Enabled

**Dead-letter queue** - *Optional* [Info](#)

Send undeliverable messages to a dead-letter queue.

Set this queue to receive undeliverable messages.

- ☐ Disabled  
☒ Enabled

Choose queue

arn:aws:sqs:ap-south-1:202533503126:low\_dlq

Maximum receives

3

Should be between 1 and 1000

**Dead-letter queue** - *Optional* [Info](#)

Send undeliverable messages to a dead-letter queue.

Set this queue to receive undeliverable messages.

- ☐ Disabled
- ☒ Enabled

Choose queue

arn:aws:sqs:ap-south-1:202533503126:normal\_dlq

Maximum receives

3

Should be between 1 and 1000

**Tags** - *Optional* [Info](#)**New Feature**

Amazon SNS now supports High Throughput FIFO topics. [Learn more](#)

**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
- Subscription protocols: SQS

☒ Standard

- Best-effort message ordering
- At-least once message delivery
- Subscription protocols: SQS, Lambda, Data Firehose, HTTP, SMS, email, mobile application endpoints

Name

orders

Maximum 256 characters. Can include alphanumeric characters, hyphens (-) and underscores (\_).

Display name - *optional* | [Info](#)

To use this topic with SMS subscriptions, enter a display name. Only the first 10 characters are displayed in an SMS message.

My Topic

Maximum 100 characters.

**New Feature**  
Amazon SNS now supports High Throughput FIFO topics. [Learn more](#)

## Create subscription

### Details

#### Topic ARN

arn:aws:sns:us-east-1:202533503126:Orders

#### Protocol

The type of endpoint to subscribe

Amazon SQS


#### Endpoint

Only Amazon SQS standard queues will be listed and can receive notifications from an Amazon SNS standard topic.

arn:aws:sqs:ap-south-1:202533503126:HighPriorityOrders

☐ Enable raw message delivery

After your subscription is created, you must confirm it. [Info](#)

 Billing and Cost Manage...

### Subscription filter policy

#### Filter policy scope [Info](#)

Determines how the filter policy will be applied to the message

- ☒ **Message attributes**  
Filter policy will be applied to the message attributes.

#### JSON editor

```
1 {  
2   "priority": [  
3     "high"  
4   ]  
5 }
```

**New Feature**

Amazon SNS now supports High Throughput FIFO topics. [Learn more](#)

## Create subscription

### Details

#### Topic ARN

arn:aws:sns:us-east-1:202533503126:Orders

#### Protocol

The type of endpoint to subscribe

Amazon SQS

#### Endpoint

Only Amazon SQS standard queues will be listed and can receive notifications from an Amazon SNS standard topic.

arn:aws:sqs:ap-south-1:202533503126:LowPriorityOrders

☐ Enable raw message delivery

After your subscription is created, you must confirm it. [Info](#)

### Filter policy scope [Info](#)

Determines how the filter policy will be applied to the message

☒ **Message attributes**

Filter policy will be applied to the message attributes.

### JSON editor

```
1 {  
2   "priority": [  
3     "low"  
4   ]  
5 }
```



**New Feature**Amazon SNS now supports High Throughput FIFO topics. [Learn more](#)

## Create subscription

### Details

**Topic ARN**

arn:aws:sns:us-east-1:202533503126:Orders

**Protocol**

The type of endpoint to subscribe

Amazon SQS

**Endpoint**

Only Amazon SQS standard queues will be listed and can receive notifications from an Amazon SNS standard topic.

arn:aws:sqs:ap-south-1:202533503126:NormalPriorityOrders

☐ Enable raw message delivery**Message attributes**

Filter policy will be applied to the message attributes.

### JSON editor

```
1 {  
2   "priority": [  
3     "normal"  
4   ]  
5 }
```

arn:aws:sns:us-east-1:202533503126:Orders

### Subject - optional

high\_test

Maximum 100 printable ASCII characters

### Time to Live (TTL) - optional | Info

This setting applies only to mobile application endpoints. The number of seconds that the push notification ser

## Message body

### Message structure

- ☒ Identical payload for all delivery protocols.  
The same payload is sent to endpoints subscribed to the topic, regardless of their delivery protocol.

- ☐ Custom payload  
Different payload for each endpoint based on their delivery protocol.

### Message body to send to the endpoint

1 testing for high

### Message attributes Info

Message attributes let you provide structured metadata items (such as timestamps, geospatial data, signatures, and identifiers) for the message.

Type	Name	Value	
String	priority	high	Remove
Add another attribute			

Cancel

Publish message

