



Journey Into AWS

SQS - Simple Queue Service

Who am I?

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What is SQS?

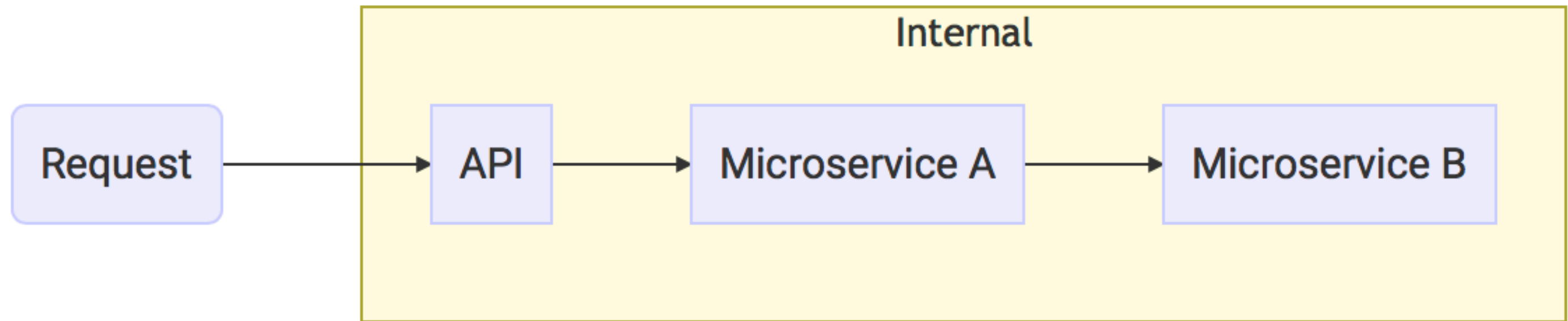
What is SQS (Simple Queue Service)?

- It's a **Service!**
- It's about **Queues!**
- It's **Simple!**

Why?

Why would you use it?

-  Decoupling the components of an application.
-  Decoupling heavy-work processing.



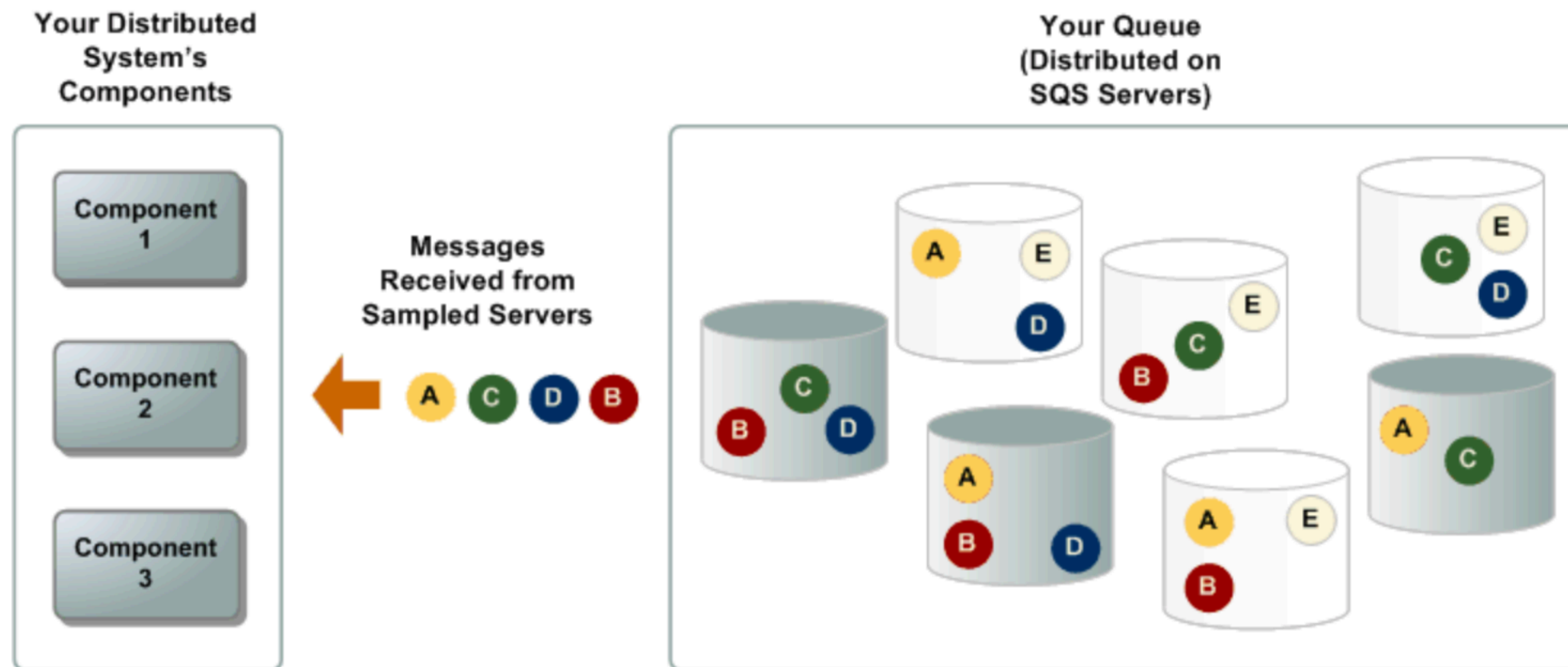
Anatomy of a Queue 🦴🔬

Anatomy of a Queue 🦴🔬

- QueueUrl
- Messages:
 - MessageID
 - ReceiptHandle

How Queues Work?

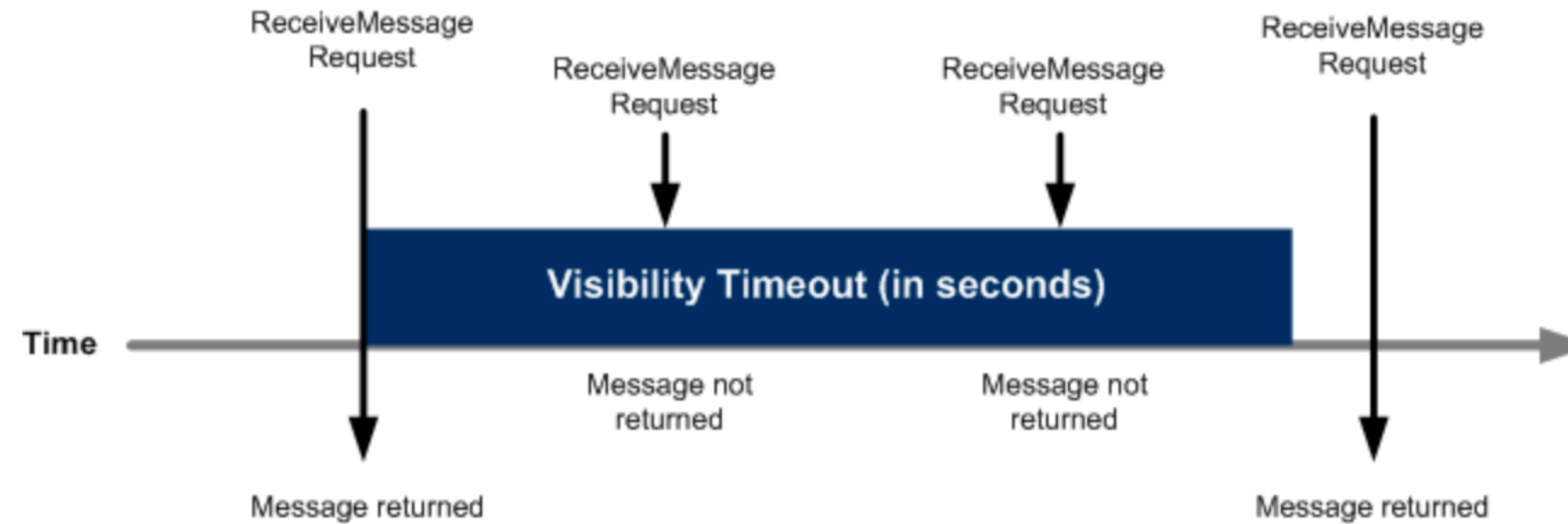
How Queues Work



At-Least-Once Delivery

- The same message can be delivered multiple times.
- Your application must have **Idempotency**.
- Idempotency: process multiple times, no harm done.

In-flight Messages and Visibility Timeout

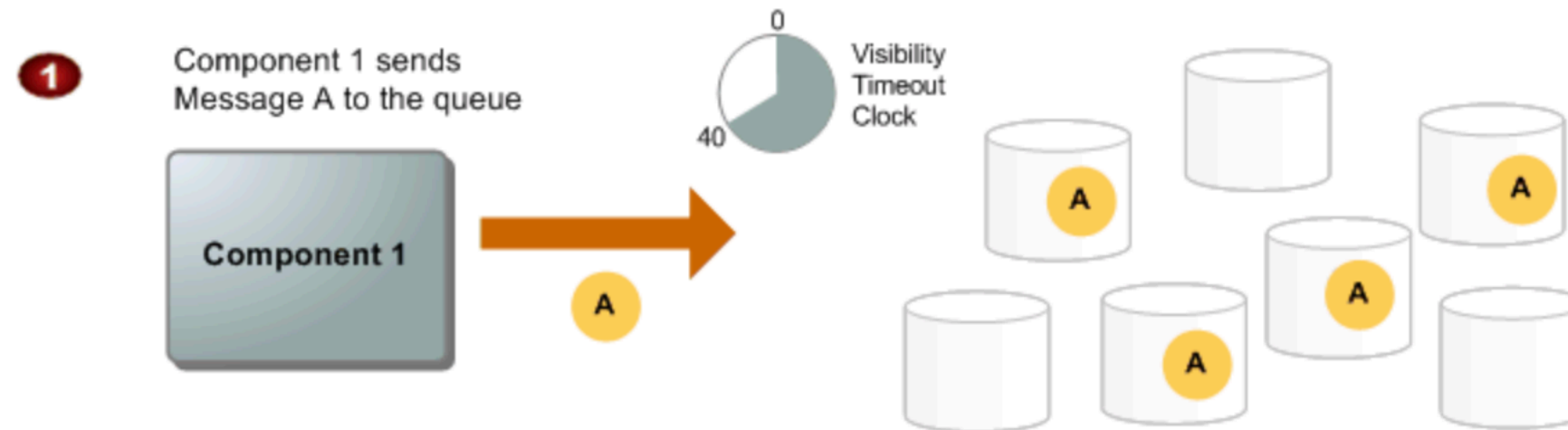


Changing Message Visibility

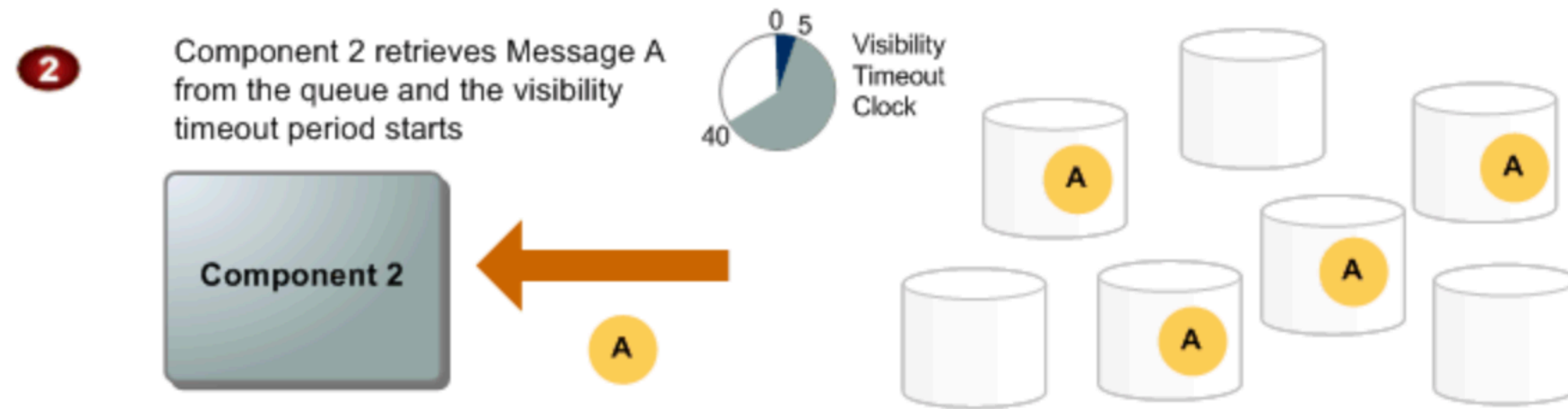
- Extending VisibilityTimeout
 - `ChangeMessageVisibility(15)`
- Terminating VisibilityTimeout
 - `ChangeMessageVisibility(0)`

Message Lifecycle

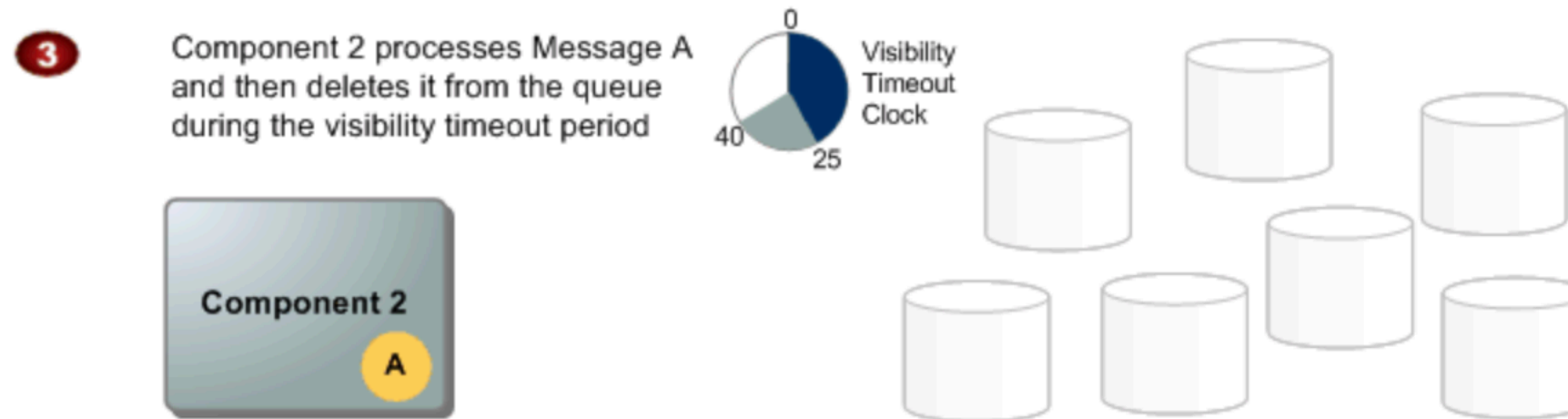
Message Lifecycle: post



Message Lifecycle: receive

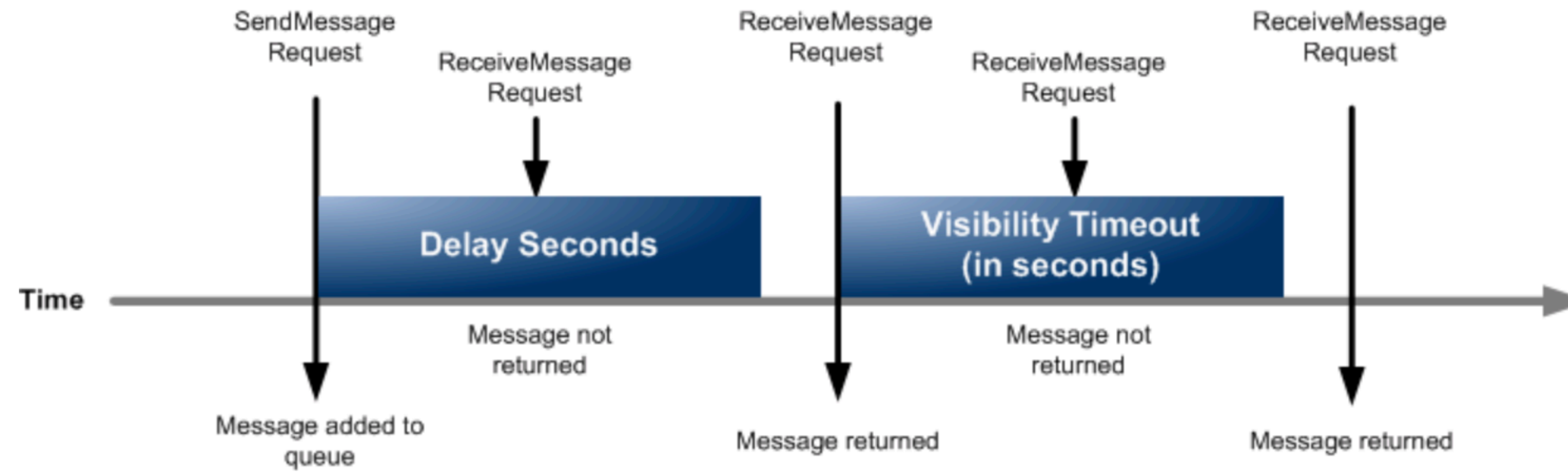


Message Lifecycle: delete



Delay Queues 🕒

Delay Queues 🕒



Dead Letter Queues

Dead Letter Queues

- Messages that can't be processed.
- RedrivePolicy
 - `deadLetterTargetArn`
 - `maxReceiveCount`

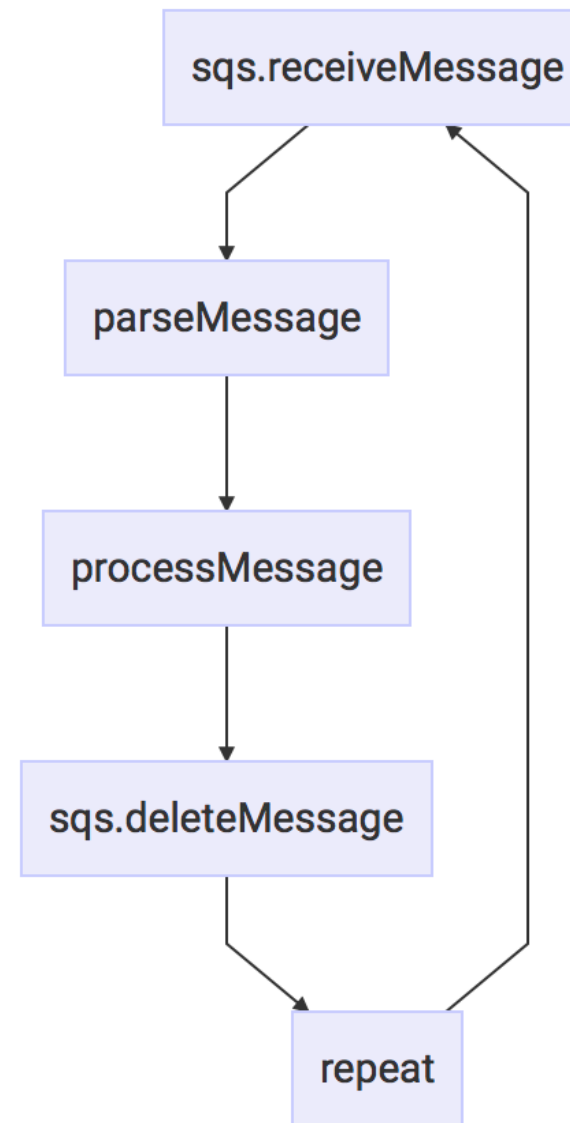
Short vs Long Polling 🏊

Short vs Long Polling 🏊

- **Short Polling (default):** does not wait for messages to come.
- **Long Polling:** wait n seconds for messages to come.
 - Queries **all** the servers
 - Less empty responses
 - Reduced costs

Process Queue Pattern

Process Queue Pattern



We can make this easier 

pagarme / sqs-quooler

Watch

4

Star

0

Fork

0

<> Code

Issues 1

Pull requests 0

Projects 0

Wiki

Pulse

Graphs

Settings

A complete queue consumer for SQS

Edit

sqs

consumer

aws

Manage topics

19 commits

2 branches

8 releases

2 contributors

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

greenboxal Update builded library

Latest commit 77df348 25 days ago

lib	Update builded library	25 days ago
src	Add remove message from sqs	a month ago
test	Add remove message from sqs	a month ago
.dockerignore	Add first version	5 months ago
.editorconfig	Add first version	5 months ago
.gitignore	Add first version	5 months ago
.travis.yml	Add first version	5 months ago
Dockerfile	Add first version	5 months ago
README.md	Improve README	5 months ago
docker-compose.yml	Add first version	5 months ago

<https://github.com/pagarme/sqs-quooler>

sqs-quooler: installing

```
$ npm install --save sqs-quooler
```

sqs-quooler: importing

```
import { Queue } from 'sqs-quooler'

const myQueue = new Queue({
  endpoint: 'https://sqs.amazonaws.com/queue/my-queue'
  concurrency: 10
})
```

sqs-quooler: pushing items

```
myQueue.push({ id: 123 })  
myQueue.push({ user: 'wx-78' })
```

sqs-quooler: processing the queue



```
const handler = (parsedItem, rawSQSMessage) => {  
    // Process the item  
    return processItem (parsedItem)  
}
```

```
const options = {  
    oneShot: false,  
    keepMessage: false  
}
```

```
myQueue.startProcessing(handler, options)
```


FIFO x Standard Queues

FIFO x Standard

	Standard	FIFO
Delivery	At-least-once	Exactly-once
Ordered	✗	✓
High Throughput	✓	✗ (300 t/s)
Price ¹		

¹ Standard Queue Pricing: \$0,40 per 1 million requests. [\[source\]](#)

 Thanks 

<https://github.com/grvcoelho/talks>