Idempotency and SQS Consumer

What I have in mind,

* Why do I think it’s crucial for SQS consumer operations to be idempotent?
* What part does visibility timeout have when operations are non-idempotent?

SQS Queues: Standard Queues

Let’s say, We are building an order fulfillment feature for shipment for a logistics company.

Once the papers are cleared out in the network, our SQS receives a message to load and process the shipment.

Basic queue consumer workflow:

1. A worker (consumer) picks up a message from the queue.
2. The worker performs some task according to the message
3. Upon performing the task, the worker then deletes the message, removing it from the queue

Let’s say somehow the shipment was loaded but before the message was deleted, something broke.

Once the visibility timeout expires, the message will be visible to be picked up by another worker. Another worker (consumer) sees this message again in the queue and starts processing the shipment.

**Voillaaaa, Your customer is being charged for double shipments, and you know what happens next, a big loss , maybe losing a few customers even.**

This is why I think it’s crucial for SQS consumer operations to be idempotent.