



ondia

The logo for 'ondia' is centered on a white background. The word is written in a lowercase, rounded sans-serif font. The letters 'o', 'n', and 'd' are a medium purple, while 'i' and 'a' are a darker blue. A light blue and teal graphic element, resembling a stylized 'd' or a corner bracket, is positioned behind the 'd'. The background features four purple triangular corner accents pointing towards the center.



AWS

SQS & SNS

AGENDA



▶ **SQS**

▶ **SNS**



SQS

SQS

What is SQS?



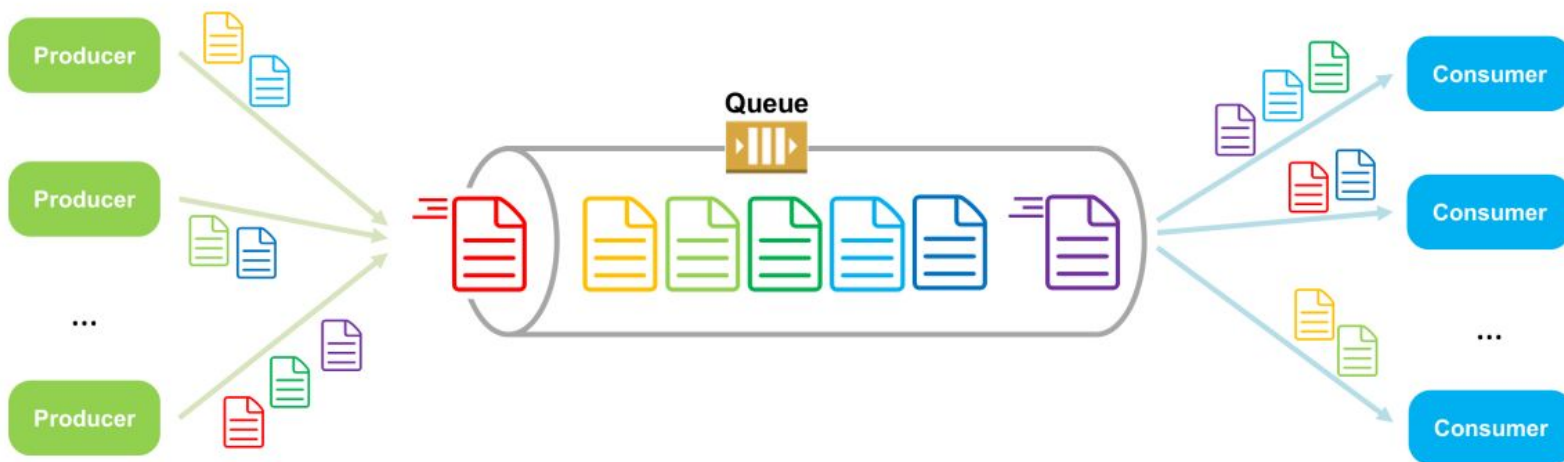
amazon
SQS

- Amazon **Simple Queue Service (SQS)** is a fully managed **message queuing service** that enables you to decouple and scale microservices, distributed systems, and serverless applications.



SQS

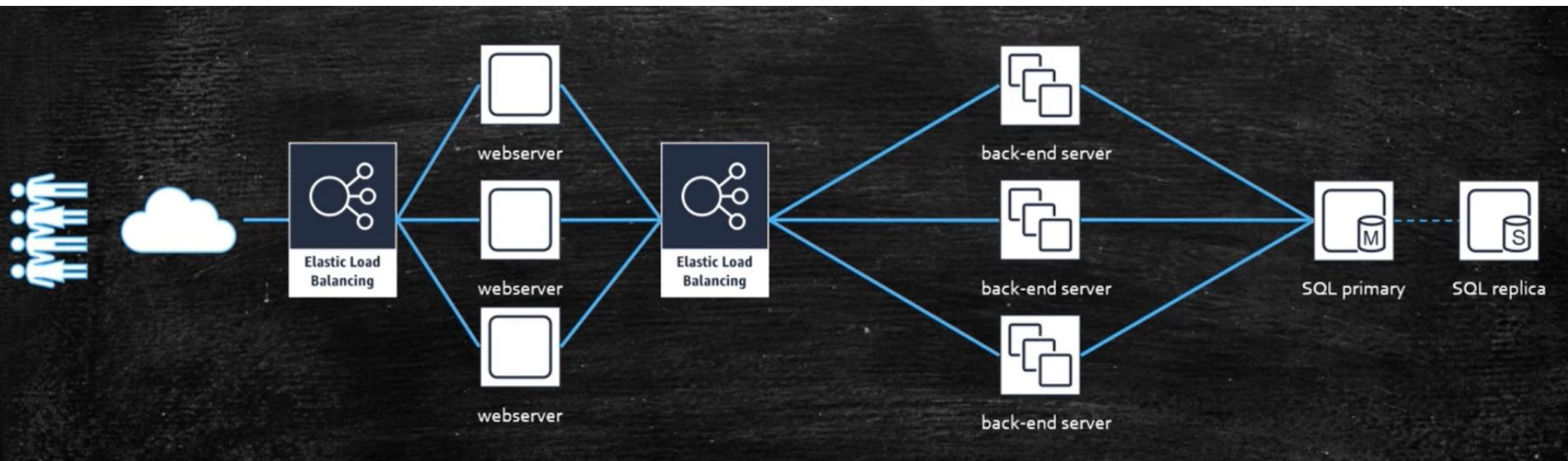
What is SQS?





SQS

What is SQS?

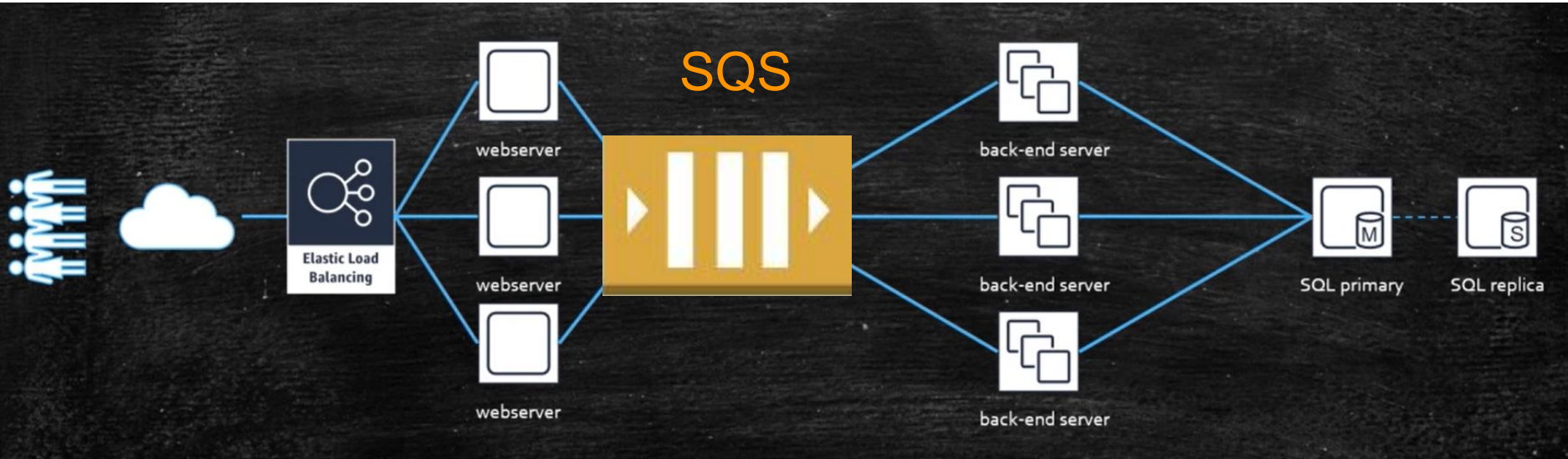


SQS

What is SQS?



Decoupling





SQS

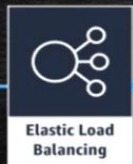
What is SQS?



CloudWatch Metric – Queue Length
ApproximateNumberOfMessages

ASG

SQS



webserver



webserver



webserver



back-end server



back-end server



back-end server



SQL primary



SQL replica

SQS

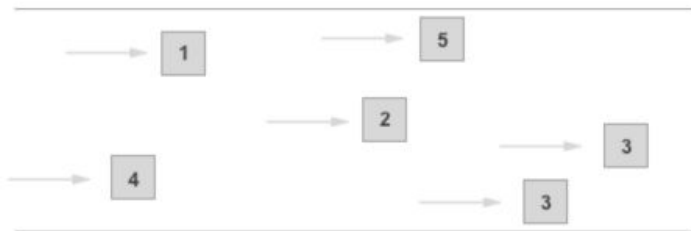


Standard Queue

High Throughput: Standard queues have nearly-unlimited transactions per second (TPS).

At-Least-Once Delivery: A message is delivered at least once, but occasionally more than one copy or a message is delivered.

Best-Effort Ordering: Occasionally, messages are delivered in an order different from which they were sent.



Send data between applications when the throughput is important, for example:

- Decouple live user requests from intensive background work: let users upload media while resizing or encoding it.
- Allocate tasks to multiple worker nodes: process a high number of credit card validation requests.
- Batch messages for future processing: schedule multiple entries to be added to a database.

FIFO Queue

First-In-First-out Delivery: The order in which messages are sent and received is strictly preserved.

Exactly-Once Processing: A message is guaranteed to be delivered at least once, but all duplicates of the message are removed.

Limited Throughput: 300 transactions per second (TPS).

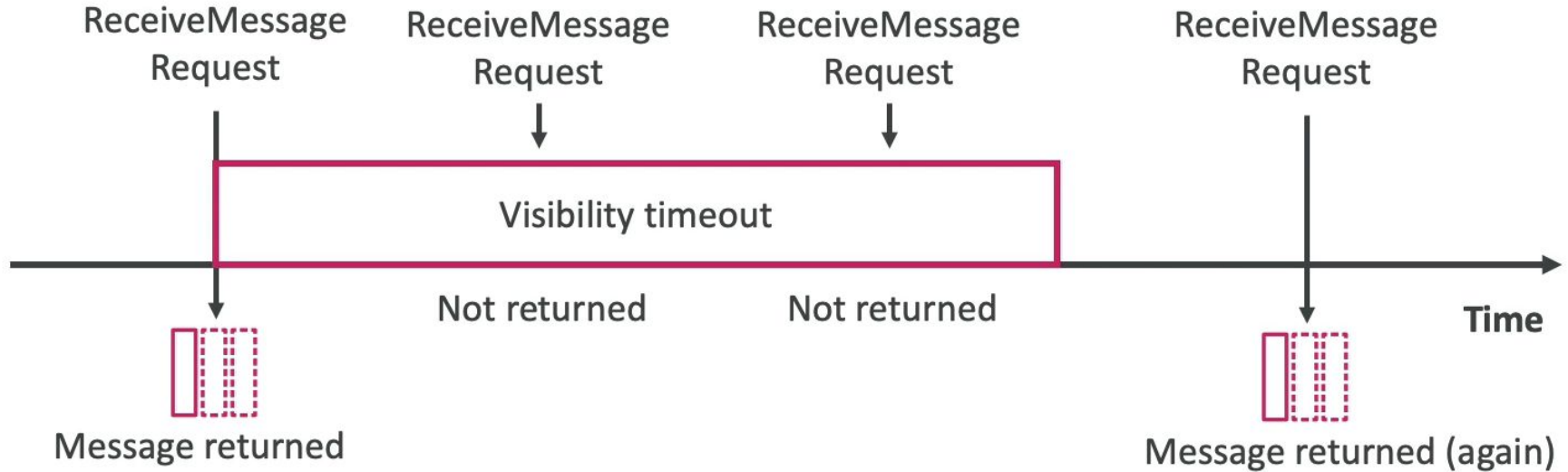


Send data between applications when the order of events is important, for example:

- Ensure that user-entered commands are executed in the right order.
- Display the correct product price by sending price modifications in the right order.
- Prevent a student from enrolling in a course before registering for an account.

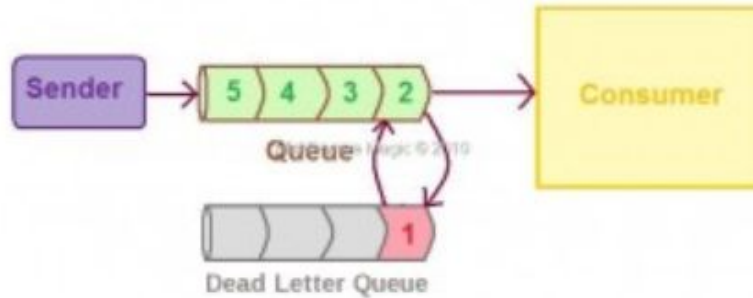
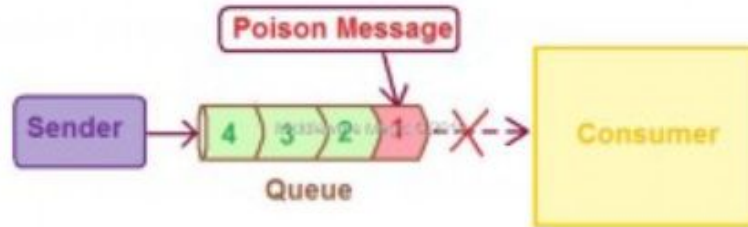
SQS

Message Visibility Timeout



SQS

Dead Letter Queue (DLQ)



SQS

Pricing



- Pay only for what you use
- AWS **Free Tier** includes **1 million requests** with Amazon Simple Queue Service (SQS).



SNS

SNS

What is SNS?

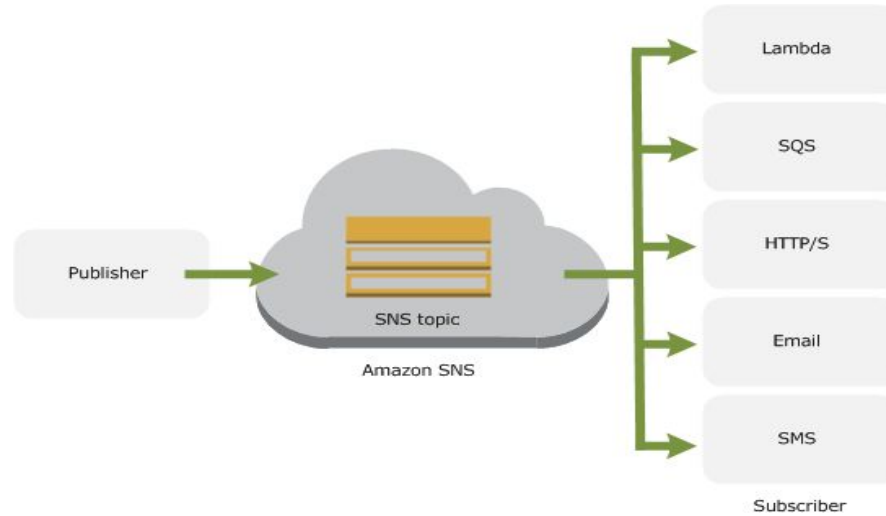


Amazon
SNS

- Amazon **Simple Notification Service** (Amazon SNS) is a managed service that provides message delivery from **publishers** to **subscribers** (also known as **producers** and **consumers**).

SNS

What is SNS?



- Clients can subscribe to the **SNS topic** and receive published messages using a supported protocol, such as Amazon SQS, AWS Lambda, HTTP, email, mobile push notifications, and mobile text messages (SMS).



SNS

What is SNS?

Application-to-Application (A2A)



SNS

What is SNS?

Application-to-Person (A2P)



SNS

What is SNS?

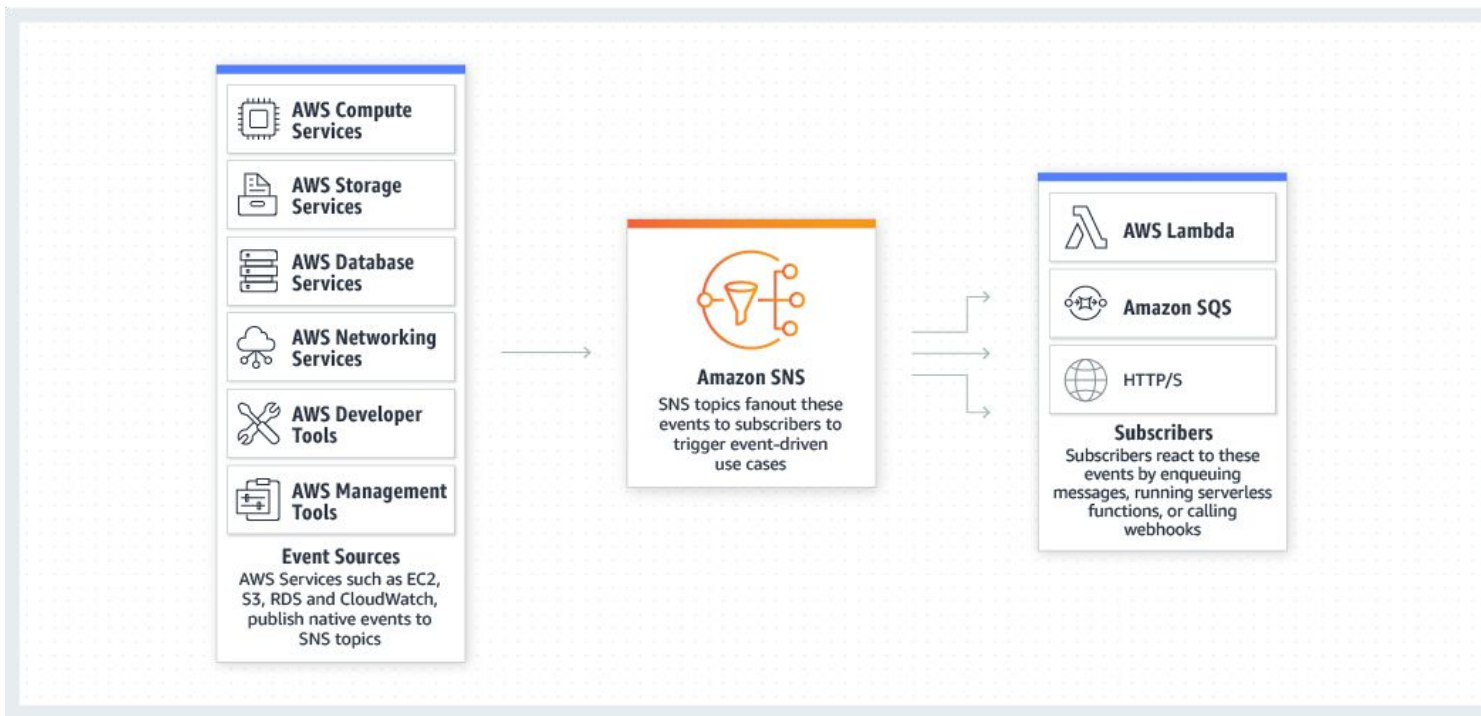
SNS is integrated with many AWS Services

- CloudWatch (Alarms/Events)
- S3 (Bucket Events)
- CloudFormation (State changes etc.)
- Auto Scaling Groups
- And many others **can invoke SNS.**



SNS

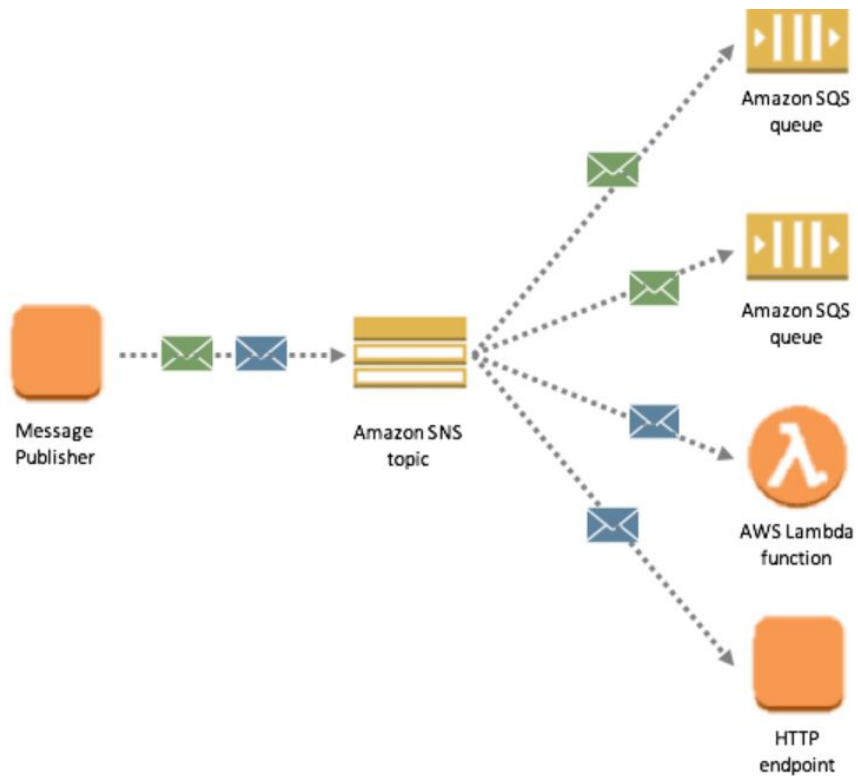
What is SNS?





SNS

Fan Out with SNS



SNS

Pricing



- Amazon SNS has **no upfront costs** and you can **pay as you go**.
- You pay based on the number of notifications you publish, the number of notifications you deliver, and any additional API calls for managing topics and subscriptions.
- Delivery [pricing varies by endpoint type](#). You can get started for free with the SNS free tier.

SQS & SNS

Hands on



- Hands-on!!!
- Let's go to the AWS Management Console



THANKS!

Any questions?

