

What Is SNS?

Simple Notification Service

- Fully managed messaging system.
 - Used for application-to-application communication
 - Used for application-to-person communication
- Decouples your applications
 - Systems can use a pub/sub event-driven mechanism
- Allows services to independently scale as their demand fluxuates



Simple Notification Service

Application to Application Communications

- Send messages between applications as part of a workflow
- Services scale automatically as demand increases

Application to Person Communications

- Send SMS text messages to users
- Send email messages to users



Simple Notification Service

SNS is highly available

- SNS Messages are stored redundantly across several servers
- SNS messages provide a retry policy that is configurable

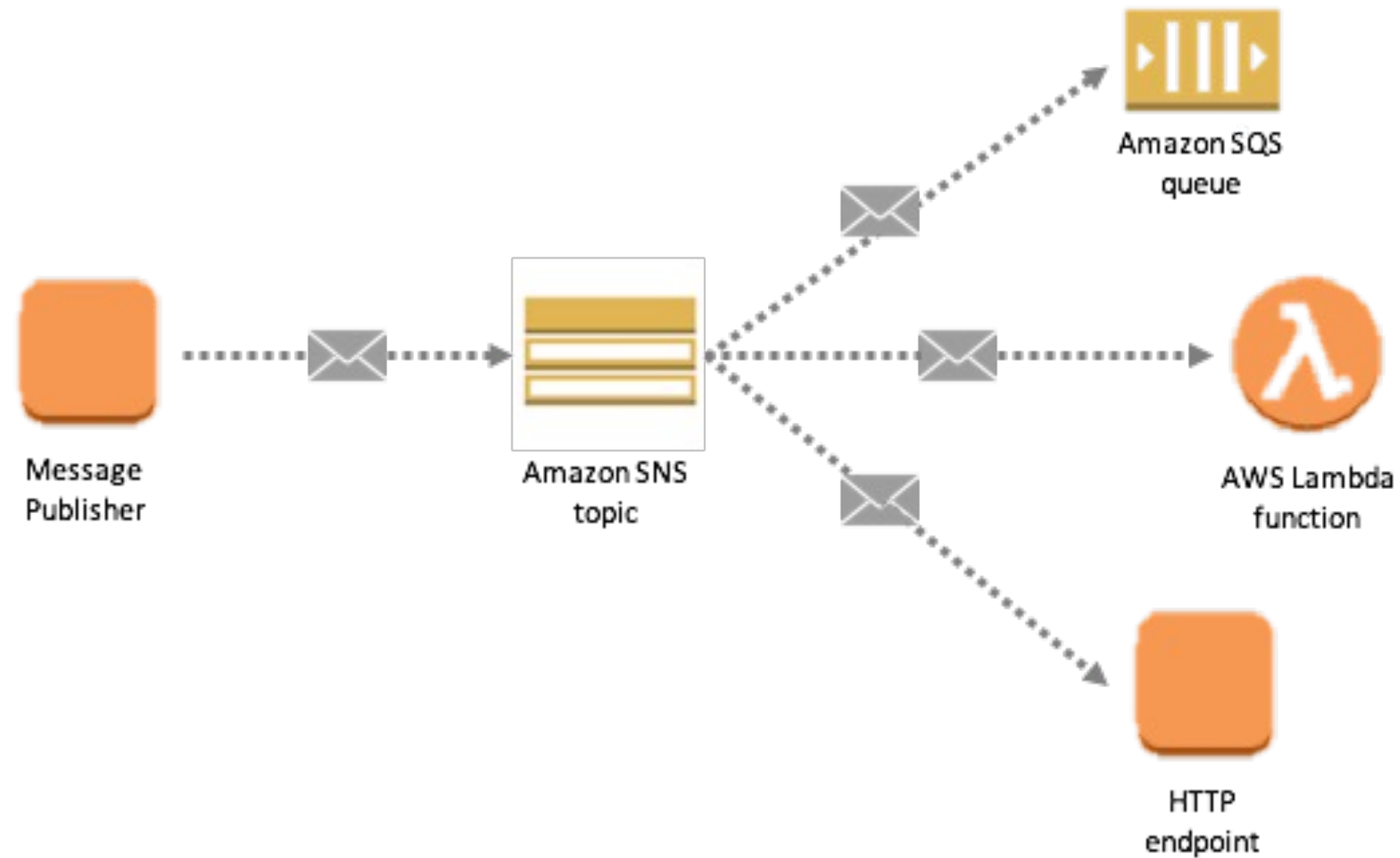
SNS is Durable

- Your SNS Messages are redundantly stored across Amazon SNS servers also.



SNS Architecture

Sample SNS Architecture (Fan Out)



Simple Notification Service

SNS Fanout

- Deliver a single message to multiple destinations using subscriptions

SNS Subscriptions

- Subscribers register interest in a topic through a subscription.
- When a message is delivered to that topic, the subscriber is notified and the message delivered.
- If the subscriber is not available, once available the message is delivered.

Simple Notification Service



Listing topics with AWS CLI (Mac OS)

```
aws sns list-topics
```

Creating a Topic (Mac OS)

```
aws sns create-topic --name add-song-topic
```

Returns:

```
{  
  "TopicArn": "arn:aws:sns:us-west-  
2:123456789:add-song-topic"  
}
```

Simple Notification Service



Subscribe to a topic (Mac OS)

```
aws sns subscribe \  
--topic-arn arn:aws:sns:us-west-2:123456789:add-  
song-topic \  
--protocol email \  
--notification-endpoint my-email@whatever.com
```

Results

```
{  
  "SubscriptionArn": "pending confirmation"  
}
```

Simple Notification Service

Confirm subscription (Email Protocol)



Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:

arn:aws:sns:us-west-2: [redacted]:add-song-topic:f738b044-b341-4fa6-8cbd-8936ee5aebdc

If it was not your intention to subscribe, [click here to unsubscribe](#).



Simple Notification Service

Publish message to your topic (Mac OS)

```
aws sns publish --topic-arn arn:aws:sns:us-west-2:123456789:add-song-topic \  
--message "Hello, from SNS"
```

Results:

```
{  
  "MessageId": "7dc56bff-2248-5642-b559-329972ce8129"  
}
```



Simple Notification Service

Email Message received



AWS Notifications <no-reply@sns.amazonaws.com>

AWS Notification Message

To: Greg Cook [REDACTED]

Inbox - Greg (Xerris) 8:14 AM

Hello, from SNS

--

If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:

[https://sns.us-west-2.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-west-2:\[REDACTED\]:add-song-topic:f738b044-b341-4fa6-8cbd-8936ee5aebdc&Endpoint=greg@xerris.com](https://sns.us-west-2.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-west-2:[REDACTED]:add-song-topic:f738b044-b341-4fa6-8cbd-8936ee5aebdc&Endpoint=greg@xerris.com)

Please do not reply directly to this email. If you have any questions or comments regarding this email, please contact us at <https://aws.amazon.com/support>

Simple Notification Service

Deleting your topic (Mac OS)

```
aws sns delete-topic \  
--topic-arn arn:aws:sns:us-west-2:123456789:add-  
song-topic
```



SNS Workshop

- To do:
 - Create SNS topic using the CLI
 - Create an email subscription to your topic
 - In DotNet when a new song is added publish to your topic
 - Verify your email was received
- Bonus
 - Create an SQS queue and subscribe to the topic
 - Add another song and verify it is received into the Queue
 - Create a Lambda to poll for messages from the Queue