

Xerris Bootcamp Series

Introduction to AWS SNS

Simple Notification Service



ACCOLITE DIGITAL
Transforming The Future, Now

What is AWS Simple Notification Service (SNS)

Simple Notification Service

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



Simple Notification Service (SNS)

Service to Service Communications

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

Service to Person Communications

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



Simple Notification Service (SNS)

SNS is highly available

- SNS Messages are stored redundantly across several servers.
- SNS provides a configurable retry policy.

SNS is durable

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



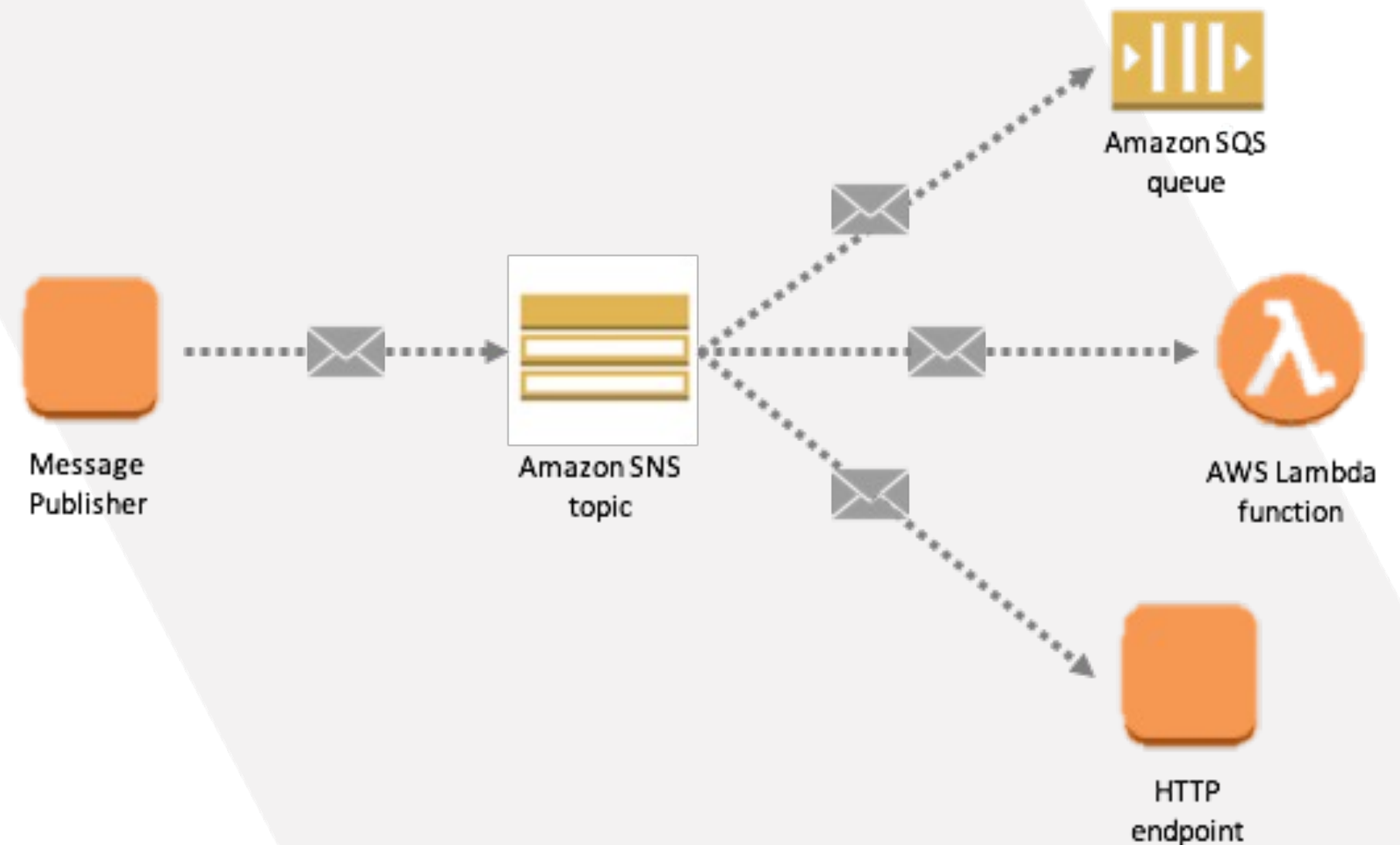
Simple Notification Service (SNS)

SNS provides a Fanout mechanism

- A single message in a topic can Fanout to multiple targets.

SNS Subscriptions

- Subscribers register interest in a topic through a subscription.
- When delivering a message on that topic, the subscribers receive a notification as the message is delivered.
- If the subscriber is not available, once available, the message is delivered.



SNS using the AWS CLI

Listing topics (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"  
}
```



SNS using the AWS CLI

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"  
}
```



SNS using the AWS CLI

SNS Subscription Confirmed



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](#).



Accelerating to 2025

SNS using the AWS CLI

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"  
}
```



SNS using the AWS CLI

SNS message received

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

 Inbox - Greg (Xerris) 8:14 AM

AWS Notification Message

To: Greg Cook 

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>



SNS using the AWS CLI

Deleting your topic (Mac OS)

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



AWS SNS Workshop

To do:

- Create an SNS topic using the CLI.
- Create an email subscription to your topic.
- In DotNet, publish this to a topic when adding a new song.
- Verify your email was received.

Bonus:

- Create an SQS queue and subscribe to the topic.
- Create a Lambda that subscribes to the SQS queue.
- Program the Lambda to add this song to a **DynamoDB** Table.
- Use **Terraform** to create the infrastructure for this.

