

## Session 1 : SNS Theory

- SNS is a fast,flexible,fully managed push notification service
- It is a web service that co-ordinates and manages the delivery or sending of messages to subscribing endpoints or clients
- It allows for sending individual messages or fan-out messages to a large number of recipients or to other distributed AWS service
- Message published to an SNS topics will be delivered to the subscriber immediately
- Inexpensive,pay as you go model with no upfront cost
- Reliable: At least three copies of the data are stored across multiple AZ in same region
- It is a way of sending messages.When we are using autoscaling,it triggers an SNS service which will email us that 'our EC2 instance is growing'

Publisher-----SNS Topic----->1.Lambda.....2.SQS.....3.HTTP/S.....4.Email.....5.SMS

**Publisher :** Publishers are also known as producers that produce and send the message to the SNS which is a logical access point

**Subscriber :** Subscribers such as webserver,email addresses,amazon SQS queues,AWS Lambda,Receive the message or notification from the SNS over one of the supported protocols(Amazon SQS,email, lambda,https,sms)

### SNS Topic :

- Is a logical access point and communication channel
- Each topic has a unique name
- A topic name is limited to 256 alphanumeric characters
- The topic name need to be unique within the AWS account
- Each topic is assigned an AWS ARN once it gets created
- A topic can support subscribers and notification delivers over multiple protocols
- Messages/request published to a single topic can be delivered over multiple protocols as configured when creating each subscriber
- Delivery formats/transport protocols(endpoints)
  - ☐ SMS
  - ☐ Email
  - ☐ Email-JSON-For Applications
  - ☐ HTTP/HTTPS
  - ☐ SQS
  - ☐ AWS Lambda
- When using Amazon SNS,we(as the owner) create a topic and control access to it by defining access policies that determine which publishers and subscribers can communicate with the topic
- Instead of including a specific destination address in each message,a publisher sends messages to topic that they have created or to topics they have permission to publish to
- Amazon SNS matches the topic to a list of subscribers who have subscribed to that topic,and delivers the message to each of these subscriber
- Each topic has a unique name that identifies the Amazon SNS endpoint for publisher to post messages and subscribers to register for notifications
- Subscribers receive all messages published to the topics to which they subscribe,and all subscribers to a topic receive the same messages
- By default,only the topic owner(who created it) can publish to the SNS topic
- The owner set/change permissions to one or more users(with valid AWS ID) to publish to his topic
- Only the owner of the topic can grant/change permission for the topic
- Subscribers can be those with/without AWS ID.Only subscriber with AWS ID can request subscription
- Both publishers and subscribers can use SSL to help secure the channel to send and receive messages

## Supported Push Notification Platforms :

- ☐ Amazon Device Messaging
- ☐ Apple push notification service
- ☐ Google cloud messaging
- ☐ Windows push notification service
- ☐ Baidu cloud push for Android

- SNS topic can have subscribers from any supported push notification platform, as well as any other endpoint type such as SMS or email
- When we publish a notification to a topic, SNS will send identical copies of that message to each endpoint subscribed to the topic

## Amazon SNS Alternatives

- ☐ Amazon Kinesis Data Stream
- ☐ Amazon Managed Queue Service (AWS MQ)
- ☐ Apache Kafka
- ☐ Twilio
- ☐ Pusher

## Amazon SNS Pricing :

1. Publish Action : Each 64kb of request payload count as one request. So, 256kb payload will be charged as four payloads
2. Mobile Push Notification : Ex : \$0.50/million request
3. SMS : Price depends on country
4. Email : \$ 2/1,00,000
5. HTTP/HTTPS Notification : \$0.60/million requests
6. SQS and Lambda calls are free. These are charged at SQS and Lambda roles
7. Data Transfer

## LAB :

## Session 2 : Sending Email and SMS from SNS