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 recepients 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 charcters
• 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 detremine 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 past messages and subscribers to register for notifications
• Subscribers receive all messages published to the topics to which they subscribe,and all subscribes 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 notifaction service
□ Google cloud messaging
□ Windows piush 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 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/miilion 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