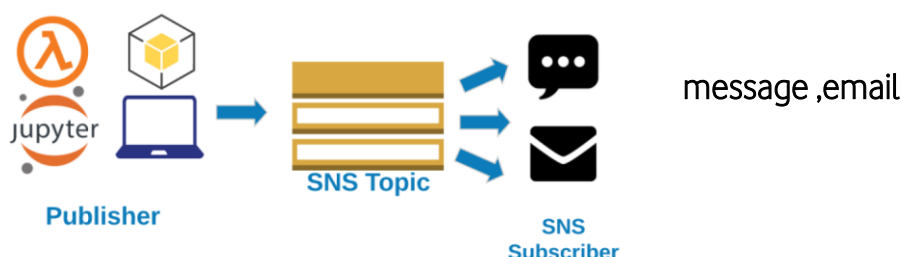




1. **what is SNS?** Amazon Simple Notification Service (Amazon SNS) is a managed service that provides message delivery from publishers to subscribers (also known as *producers* and *consumers*). Publishers communicate asynchronously with subscribers by sending messages to a *topic*, which is a logical access point and communication channel. Clients can subscribe to the SNS topic and receive published messages using a supported endpoint type, such as Amazon Kinesis Data Firehose, Amazon SQS, AWS Lambda, HTTP, email, mobile push notifications, and mobile text messages (SMS).

2. Explain how sns work?

Understanding SNS



3. how can we create an SNS Topic using boto3?

```
sns = boto3.client('sns',
                    region_name='us-east-1',
                    aws_access_key_id=AWS_KEY_ID,
                    aws_secret_access_key=AWS_SECRET)
```

```
response = sns.create_topic(Name='city_alerts')
```

4. how can we list topics using boto3?

```
response = sns.list_topics()
```

5. how can we delete topic using boto3?

```
sns.delete_topic(TopicArn='arn:aws:sns:us-east-1:320333787981:city_alerts')
```



6. what a Subscription, available protocols?

Subscriptions (2)				
<div>Q Search</div>				
<div><div>Edit</div><div>Delete</div><div>Request confirmation</div><div>Confirm subscription</div><div>Create subscription</div></div>				
<div>< 1 > ⚙</div>				
ID	Endpoint	Status	Protocol	
<div><input type="radio"/> Pending confirmation</div>	max@maksimize.com	<div>⌚ Pending confirmation</div>	EMAIL	
<div><input type="radio"/> 9f2dad1d-8844-4fe8-86f7-3f627ae8420f</div>	+17736777755	<div>✅ Confirmed</div>	SMS	

7. how can we create subscription in boto3?

Creating an SMS subscription.

```
sns = boto3.client('sns',
                    region_name='us-east-1',
                    aws_access_key_id=AWS_KEY_ID,
                    aws_secret_access_key=AWS_SECRET)
```

```
response = sns.subscribe(
    TopicArn = 'arn:aws:sns:us-east-1:320333787981:city_alerts',
    Protocol = 'SMS',
    Endpoint = '+13125551123')
```

Creating an email subscription

```
response = sns.subscribe(
    TopicArn = 'arn:aws:sns:us-east-1:320333787981:city_alerts',
    Protocol='email',
    Endpoint='max@maksimize.com')
```

8. how can we list subscriptions by topic?

Listing subscriptions by Topic

```
sns.list_subscriptions_by_topic(
    TopicArn='arn:aws:sns:us-east-1:320333787981:city_alerts')
```

9. how can we list subscriptions?

```
sns.list_subscriptions()['Subscriptions']
```



10. how can we delete subscriptions ?

Deleting subscriptions

```
sns.unsubscribe(  
    SubscriptionArn='arn:aws:sns:us-east-1:320333787981:city_alerts:9f2dad1d-8844-4fe8'  
)
```

11. how can we delete multiple subscriptions ?

Deleting multiple subscriptions

Get list of subscriptions

```
response = sns.list_subscriptions_by_topic(  
    TopicArn='arn:aws:sns:us-east-1:320333787981:city_alerts')  
subs = response['Subscriptions']
```

Unsubscribe SMS subscriptions

```
for sub in subs:  
    if sub['Protocol'] == 'sms':  
        sns.unsubscribe(sub['SubscriptionArn'])
```

12. compare between SMS ,Email?

SMS

- Protocol='sms'
- Endpoint='+13122334433'
- Status: 'confirmed'

Email

- Protocol='email'
- `Endpoint='email@address.com'`
- Status: 'confirmed'
- Status: 'pending confirmation'

13. compare between publish to the topic and send custom message ?



Publish to Topic vs Single SMS

Publish to a topic

- Have to have a topic
- Our topic has to have subscriptions
- Better for multiple receivers
- Easier list management



SMS



email

Send a single SMS

- Don't need a topic
- Don't need subscriptions
- Just sends a message to a phone number
- Email option not available



SMS

Publishing to a Topic

```
response = sns.publish(  
    TopicArn = 'arn:aws:sns:us-east-1:320333787981:city_alerts',  
    Message = 'Body text of SMS or e-mail',  
    Subject = 'Subject Line for Email'  
)
```



SMS



email

Sending a single SMS

```
response = sns.publish(  
    PhoneNumber = '+13121233211',  
    Message = 'Body text of SMS or e-mail'  
)
```



SMS