CLOUD COMPUTING APPLICATIONS

Amazon Simple Notification Service

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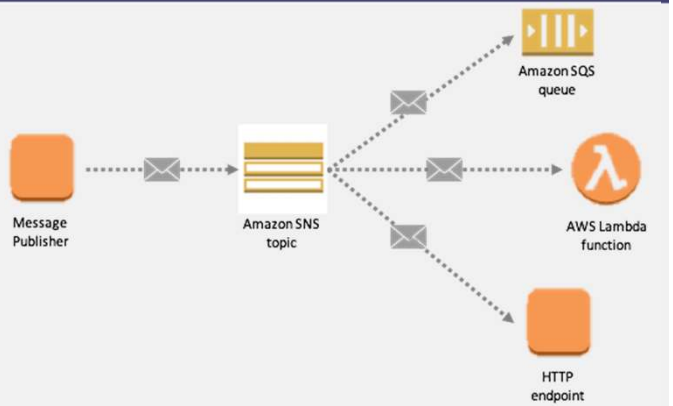
Amazon SNS

- SNS: Simple Notification Service
- PubSub model
  - push
- One to many
- Fan-out architecture
- Endpoint Protocols
  - SQS
  - Lambda
  - HTTP, HTTPs endpoint
  - Email
  - SMS
  - Mobile Device Push Notification



SNS Topic

- A publisher sends a message to an SNS topic
- Subscribers subscribe to SNS topics
- Each SNS topic can have multiple subscribers
  - Each subscriber may use the same protocols or different protocols
- SNS will “push” messages to all sbscribers

SNS Messages

- Subject
- Time to live (TTL)
  - It specifies the time to expire for a message
  - Within a specified time, **Apple Push Notification Service** (**APNS**) or **Google Cloud Messaging** (**GCM**) must deliver messages to the endpoint.
  - If the message is not delivered within the specified time frame, the message will be dropped with no further attempts to deliver the message
- Payload
  - Can be the same, or different for each endpoint protocol type

Managing Access

- AWS uses a mechanism based on policies
  - Policy: JSON document, consisting of statements
  - Statement: describes a single permission written in an access policy language
    - In JSON
- E.g. the user with AWS account 1111-2222-3333 can publish messages to the topic action (for example, Publish)

```
{
  "Statement": [{
    "Sid": "grant-1234-publish",
    "Effect": "Allow",
    "Principal": {
      "AWS": "111122223333"
    },
    "Action": ["sns:Publish"],
    "Resource": "arn:aws:sns:us-east-2:444455556666:MyTopic"
  }]
}
```