# AWS SNS/SQS

SNS

"Amazon Simple Notification Service (Amazon SNS) is a fast, flexible, fully managed push notification service that lets you send individual messages or to fan-out messages to large numbers of recipients"

Amazon SNS makes it simple and cost effective to send push notifications to mobile device users, email recipients or even send messages to other distributed services.

SNS
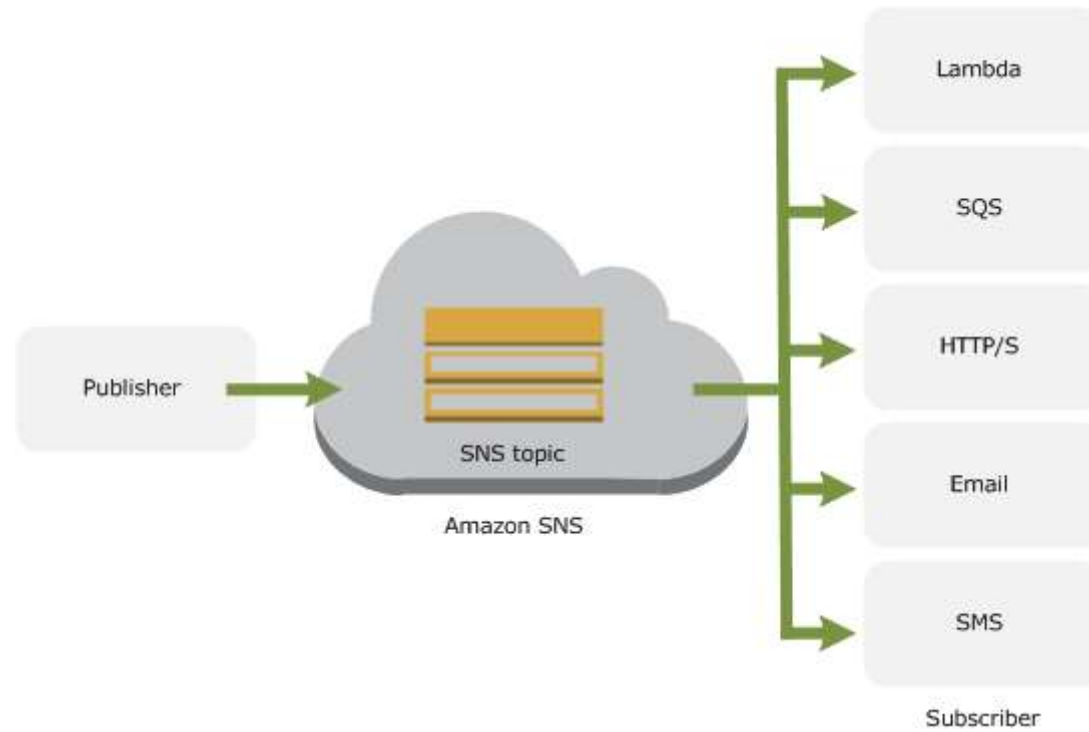
SNS

◦ Deliver messages instantly to applications or users and eliminate polling in your apps.

◦ Scale as you needs grow

◦ Send messages to individual devices or broadcast to multiple destinations at once.

◦ SDK available in iOS, Android, Java, Python, PHP, Node.js or .NET.

◦ Send notification to Apple, Android and other mobile devices and also destinations like SQS, Lambda and email address SMS and http endpoints.

◦ You can get delivery status information via cloud watch success and failure rates.

SNS

Developers can get started with Amazon SNS by using just three APIs:

CreateTopic,

Subscribe, and

Publish.

Additional APIs are available, which provide more advanced functionality.

SNS

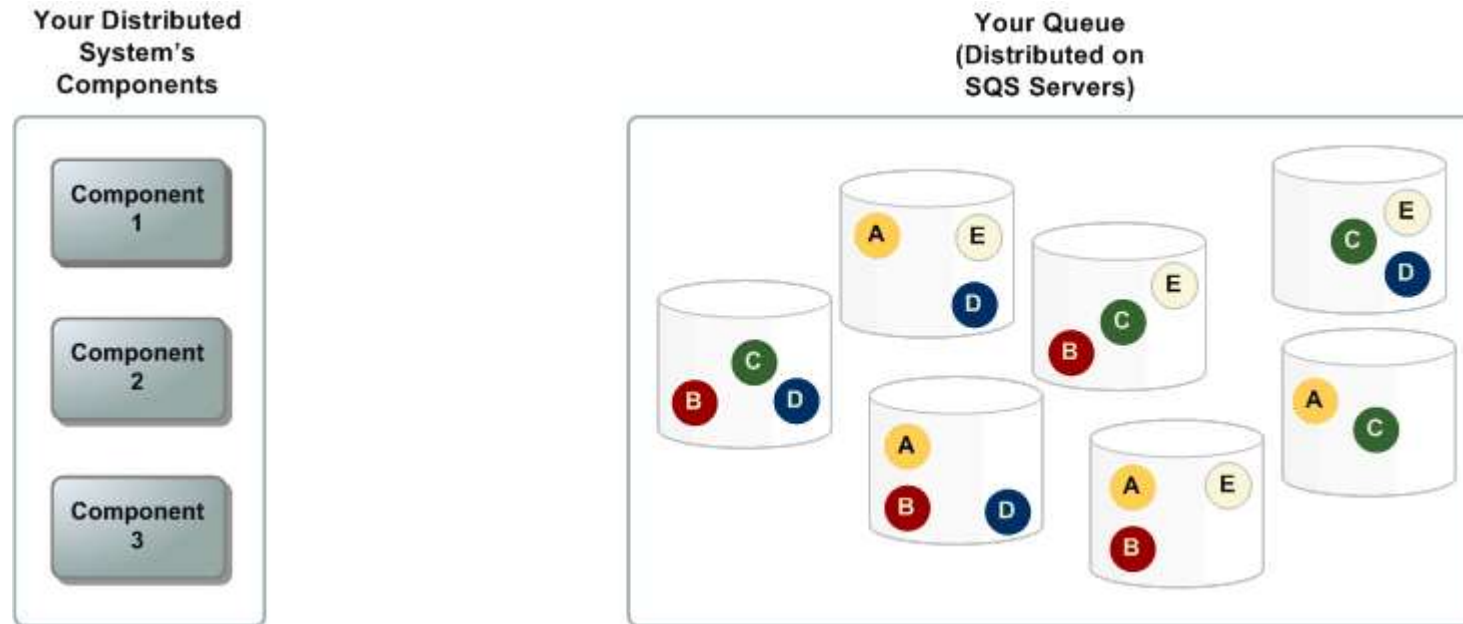Supported Transport protocols for subscribers :

- ◦ "HTTP", "HTTPS" (POST)
- ◦ "Email", "Email-JSON"
- ◦ "SQS" – Note that FIFO queues are not currently supported.
- ◦ "SMS Text Messages"

SQS

"Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, fully managed message queuing service."

"Amazon SQS can be used to transmit any volume of data."

SQS

The diagram shows that a single queue, which has its messages (labeled A-E), is redundantly saved across multiple Amazon SQS servers.

SQS

Features:

- Reliable
  - It runs within Amazon's high-availability data centers.
- Simple
  - Only three APIs to start: SendMessage, ReceiveMessage, and DeleteMessage
- Flexible
  - *Standard queues* for High throughput and *FIFO queues* for strict ordering
- Scalable
  - Automatically scales and unlimited queue and messages available
- Secure and Inexpensive
  - Similar like other AWS Products

SQS

..more

- ◦ Designed to provide high durability.
- ◦ Hold messages until you explicitly delete them
- ◦ Unlimited backlog up to 14 days
- ◦ Amazon CloudWatch metrics and alerts for queue depth, message rate and more.
- ◦ Payload size up to 256KB and more
- ◦ Message batching for higher throughput and reduced cost
- ◦ Support long polling for reduced cost and latency
- ◦ Cross–origin resource sharing support

SQS

Javascript SDK

```
var sqs = new AWS.SQS();

var params = { QueueName: 'STRING_VALUE', /* required */
  Attributes: { someKey: 'STRING_VALUE', /* anotherKey: ... */ }

};

sqs.createQueue(params, function (err, data) {

        if (err) console.log(err, err.stack); // an error occurred

        else console.log(data); // successful response

});
```

SQS

Types Of Queue

Standard Queue	FIFO Queues
Unlimited number of transactions per second	First-in-first-out delivery, limited to 300 transactions per second
Guarantee that a message is delivered at least once	Exactly-once processing
Ex: Schedule multiple entries to be added to a database.	Ex: Prevent a student from enrolling in a course before registering for an account.

SQS

Configuration

Question