TNGS Learning Solutions
AWS Solutions Architect
Online Course
Simple Notification Service (SNS)

Simple Notification Service (SNS)

- **Publish-Subscribe Model**: Amazon SNS follows the publish-subscribe messaging model. In this model, messages (known as "topics" in SNS) are sent by publishers to topics, and subscribers (or endpoints) receive messages from topics they have subscribed to.
- **Multiple Message Formats**: SNS supports multiple message formats, including plaintext, JSON, and structured message formats like JSON and XML. This flexibility allows you to send different types of messages to subscribers.

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- **Message Filtering**: SNS provides message filtering capabilities, allowing subscribers to receive only the messages that match their specific criteria. You can filter messages based on message attributes or content.
- **Multiple Protocols and Endpoints**: SNS supports a wide range of protocols and endpoint types, including email, SMS text messages, application endpoints (e.g., Amazon SQS, AWS Lambda, HTTP/HTTPS), and mobile push notifications (e.g., Apple Push Notification Service, Firebase Cloud Messaging, Amazon Device Messaging).

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- **Message Fan-Out**: SNS can fan out messages to multiple subscribers simultaneously. This makes it suitable for scenarios where multiple consumers need to process the same message independently.
- **Message Attributes**: Messages can include custom attributes that provide additional metadata or information about the message content.
- **Cross-Region and Cross-Account**: You can use SNS to send messages to subscribers in different AWS regions or AWS accounts, making it versatile for various architectural setups.

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- **Delivery Retry**: SNS automatically retries message delivery to endpoints if delivery fails initially. You can configure retry policies to control the retry behavior.
- **Dead Letter Queue**: SNS allows you to specify a dead letter queue (DLQ) for failed message deliveries. Messages that cannot be successfully delivered after a specified number of retries can be sent to the DLQ for further analysis.

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- **Message Encryption**: SNS supports message encryption in transit and at rest. You can enable server-side encryption to protect message contents.
- **Access Control**: AWS Identity and Access Management (IAM) can be used to control who can publish messages to topics, subscribe to topics, or manage SNS resources.
- **Message Throttling**: SNS provides control over message throughput to prevent abuse or overloading of subscribers' endpoints.

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- **CloudWatch Integration**: SNS integrates with Amazon CloudWatch for monitoring and alerting on SNS metrics, such as message delivery rates and failure rates.
- **Mobile Push Notifications**: SNS simplifies sending push notifications to mobile devices, supporting multiple platforms, including iOS, Android, and Amazon devices.
- **Application Integration**: SNS can be used to integrate with various AWS services and application components, such as sending notifications from AWS Lambda functions or decoupling microservices.

Simple Notification Service (SNS)

- Amazon SNS is commonly used for building real-time notifications, event-driven architectures, and for decoupling components in distributed systems.
- It provides a reliable and scalable way to send messages or notifications to a wide range of endpoints, making it a valuable tool for building flexible and responsive applications.