Amazon Simple Notification Service

BY GROUP NO:1

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INTRODUCTION TO AWS

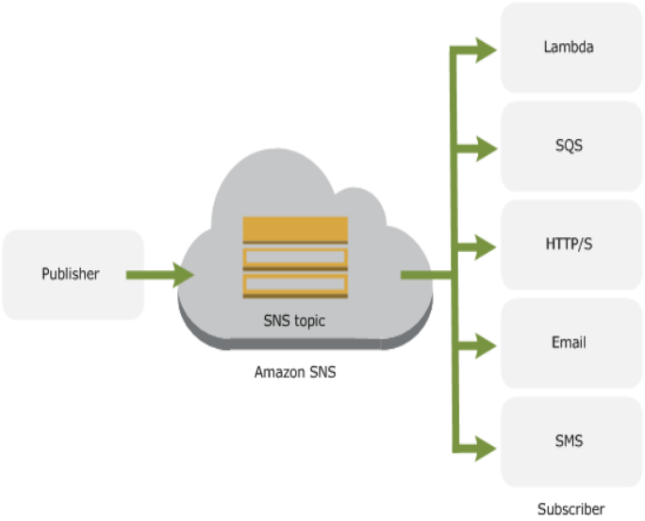
Managing the unique and groundbreaking changes in both technology and business over the past decade has created an ongoing IT infrastructure challenge for many senior technology executives. Indeed, over the past ten years, the typical business application architecture has evolved from a desktop-centric installation, then to client/server solutions, and now to loosely coupled web services and service-oriented architectures (SOA). Each evolutionary step has built on the previous one while adding new challenges, dimensions, and opportunities for IT departments and their business partners.

Recently, virtualization has become a widely accepted way to reduce operating costs and increase the reliability of enterprise IT. In addition, grid computing makes a completely new class of analytics, data crunching, and business intelligence tasks possible that were previously cost and time prohibitive. Along with these technology changes, the speed of innovation and unprecedented acceleration in the introduction of new products has fundamentally changed the way markets work. Along with the wide acceptance of software as a service (SaaS) offerings, these changes have paved the way for the latest IT infrastructure challenge: cloud computing.

Amazon Web Services (AWS) is Amazon's cloud web hosting platform that offers flexible, reliable, scalable, easy-to-use, and cost-effective solutions. This tutorial covers various important topics illustrating how AWS works and how it is beneficial to run your website on Amazon Web Services.

PROJECT DECRIPTION:

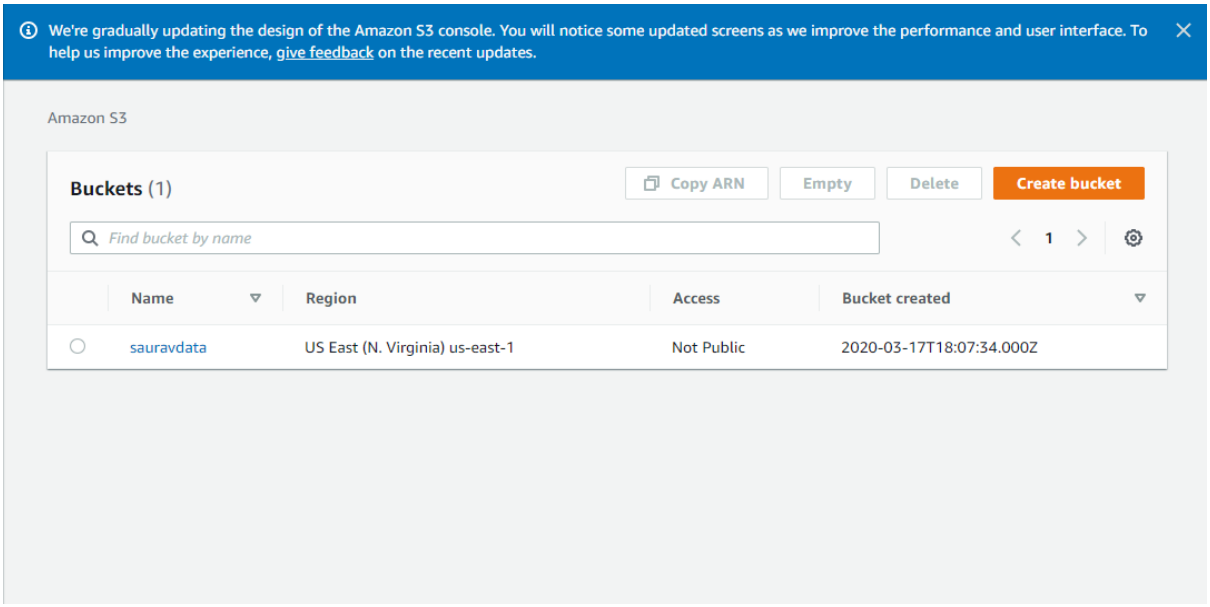
Amazon Simple Notification Service (Amazon SNS) is a web service that coordinates and manages the delivery or sending of messages to subscribing endpoints or clients. In Amazon SNS, there are two types of clients—publishers and subscribers—also referred to as producers and consumers. Publishers communicate asynchronously with subscribers by producing and sending a message to a topic, which is a logical access point and communication channel. Subscribers (that is, web servers, email addresses, Amazon SQS queues, AWS Lambda functions) consume or receive the message or notification over one of the supported protocols (that is, Amazon SQS, HTTP/S, email, SMS, Lambda) when they are subscribed to the topic.



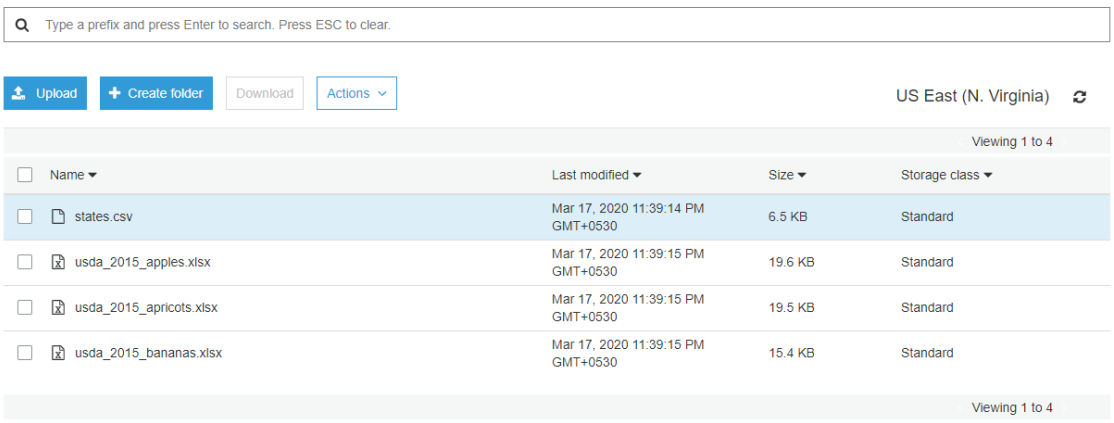
When using Amazon SNS, you (as the owner) create a topic and control access to it by defining policies that determine which publishers and subscribers can communicate with the topic. A publisher sends messages to topics that they have created or to topics they have permission to publish to. Instead of including a specific destination address in each message, a publisher sends a message to the topic. Amazon SNS matches the topic to a list of subscribers who have subscribed to that topic, and delivers the message to each of those subscribers. Each topic has a unique name that identifies the Amazon SNS endpoint for publishers to post messages and subscribers to register for notifications. Subscribers receive all messages published to the topics to which they subscribe, and all subscribers to a topic receive the same messages.

Getting Started with Amazon SNS:

Step 1: Create a S3 Bucket

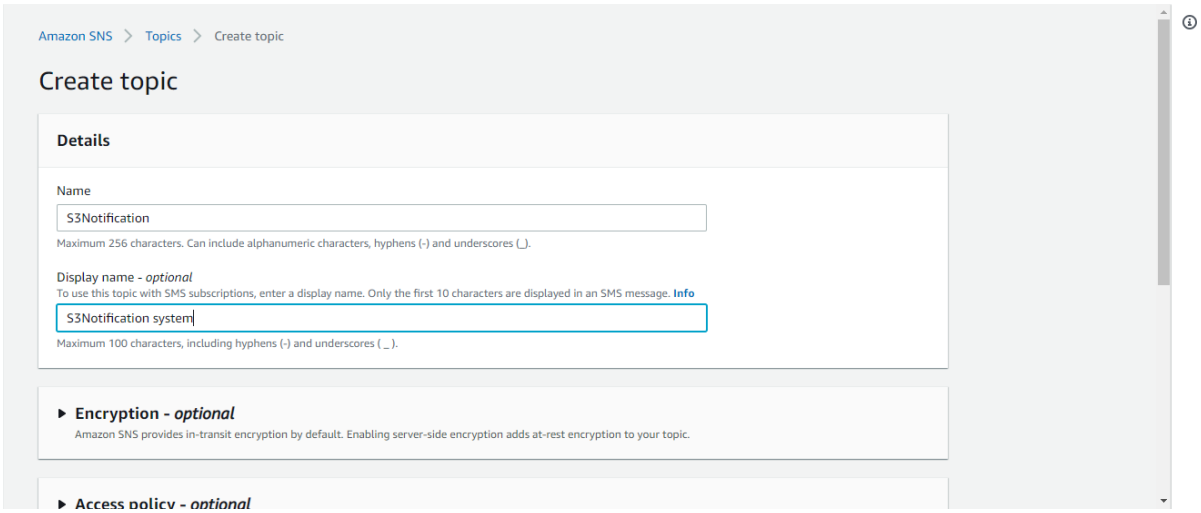


Step 2: Upload the Data



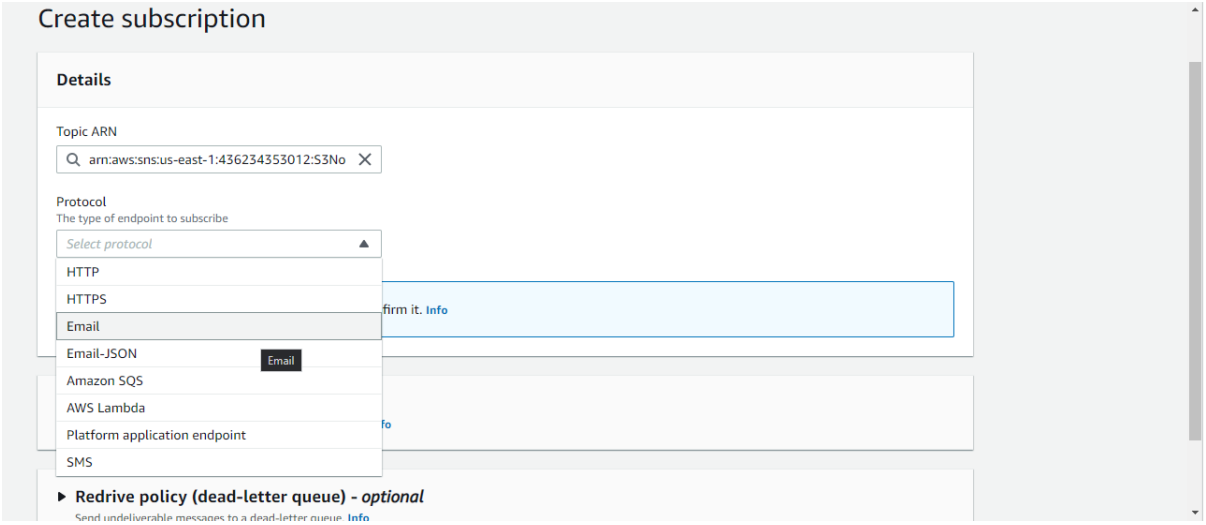
Step 3: Create a Topic

- Sign in to the Amazon SNS console.
- In the **Create topic** section, enter a **Topic name**, for example ***S3Notification***.
- Choose **Create topic**.
- The topic is created and the ***S3Notification*** page is displayed.
- The topic's **Name**, **ARN**, (optional) **Display name**, and **Topic owner**'s AWS account ID are displayed in the **Details** section.
- Copy the topic ARN to the clipboard.

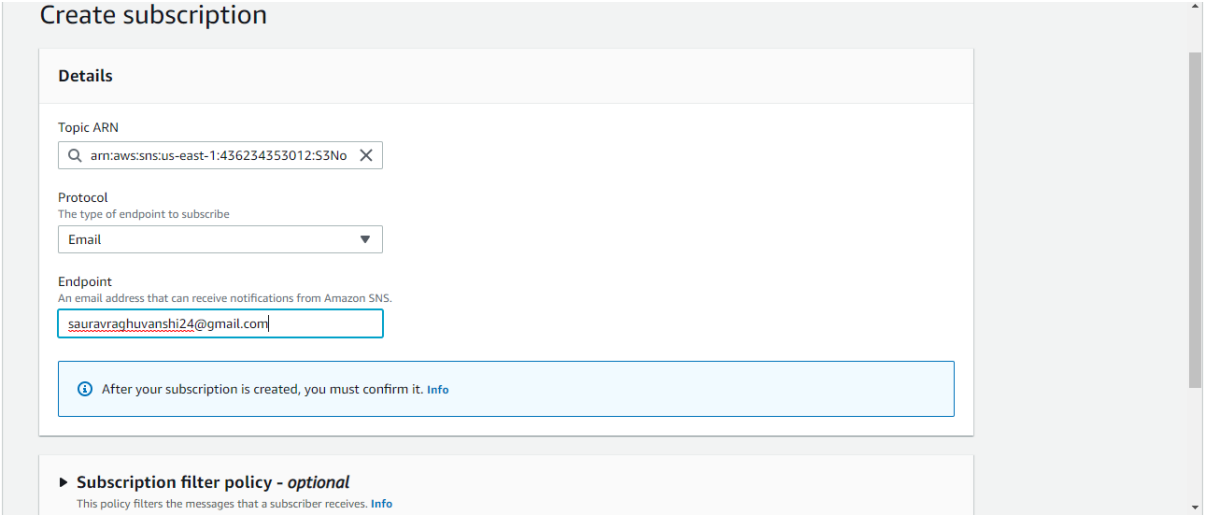


Step 4: Create a Subscription for an Endpoint to the Topic

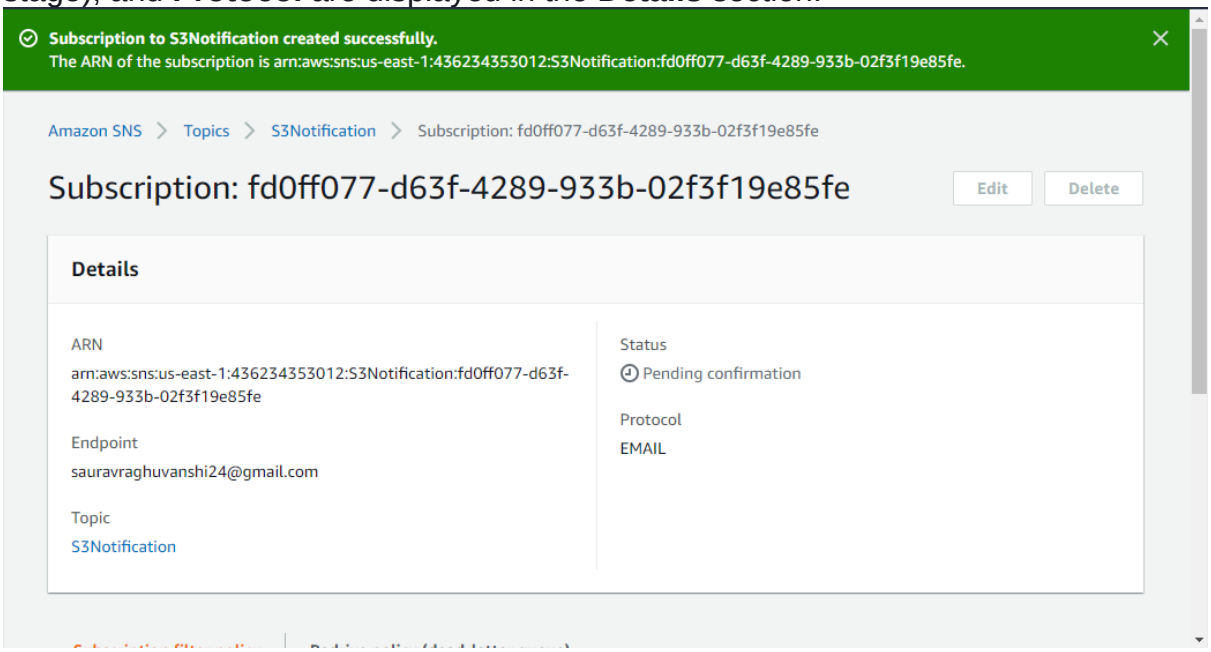
- On the navigation panel, choose **Subscriptions**.
- On the **Subscriptions** page, choose **Create subscription**.
- On the **Create subscription** page, do the following:
    - Enter the **Topic ARN** of the topic you created earlier, for example:



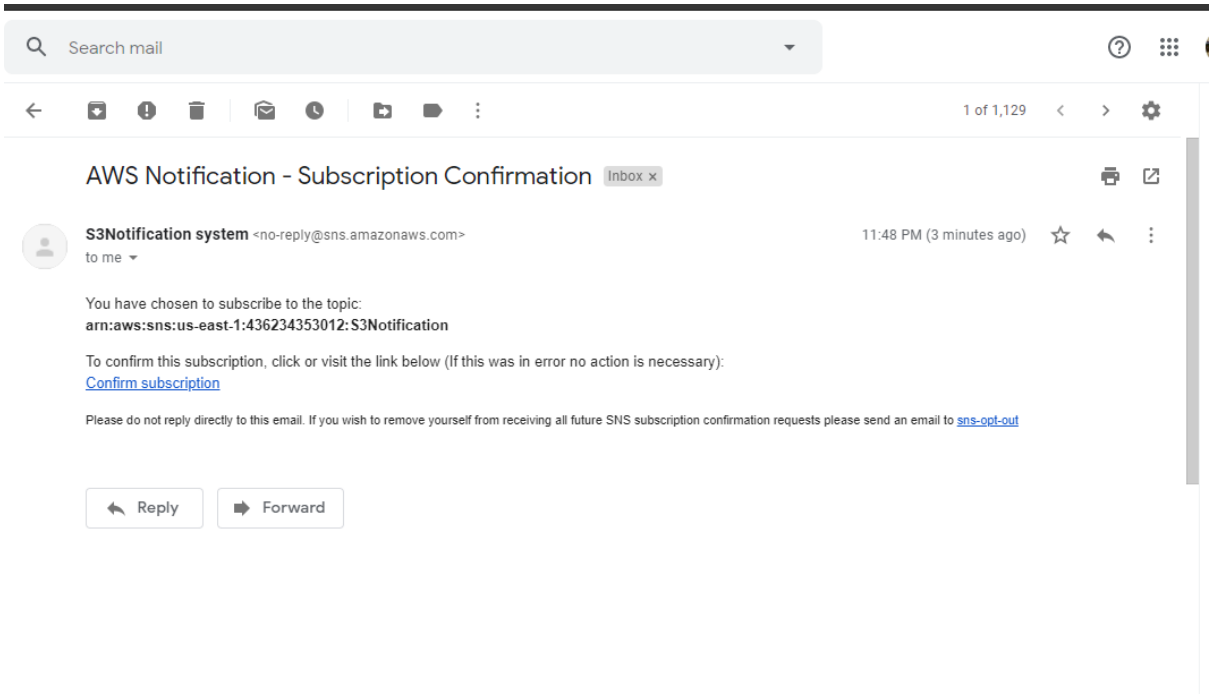
- For **Protocol**, choose an endpoint type, for example **Email**.
- For **Endpoint**, enter an email address that can receive notifications, for example:



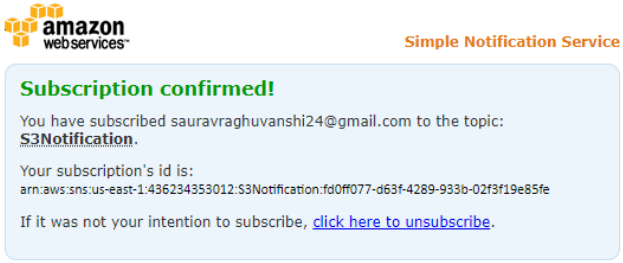
- Choose **Create subscription**.
- The subscription is created and the `Subscription: fd0ff077-d63f-4289-933b-02f3f19285fe` page is displayed.
- The subscription's **ARN**, **Endpoint**, **Topic**, **Status** (**Pending confirmation** at this stage), and **Protocol** are displayed in the **Details** section.



➢ In your email client, check the email address that you specified and choose **Confirm subscription** in the email from Amazon SNS.

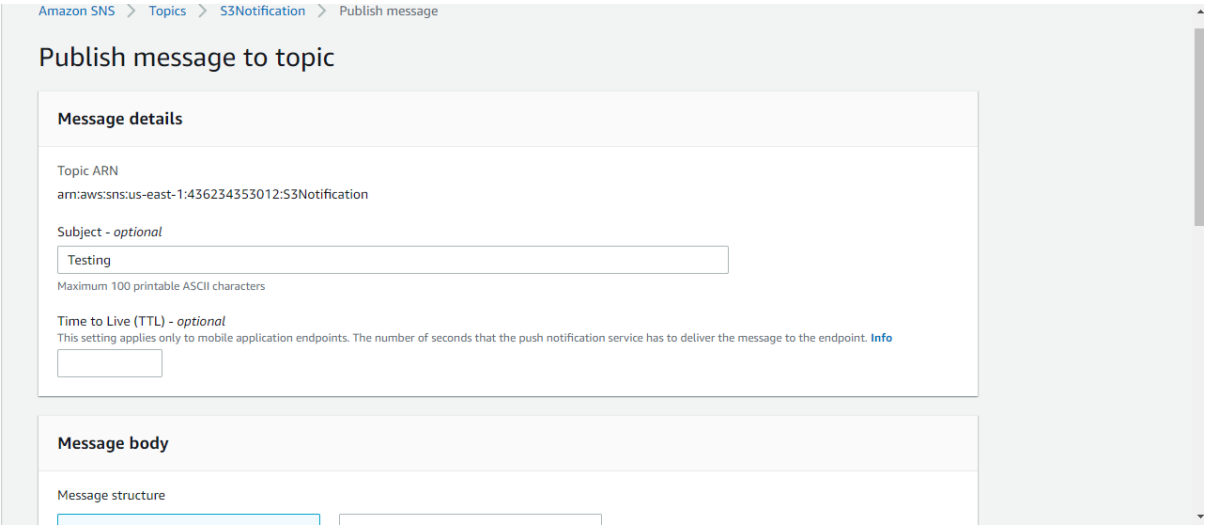


- In your web browser, a subscription confirmation with your subscription ID is displayed.

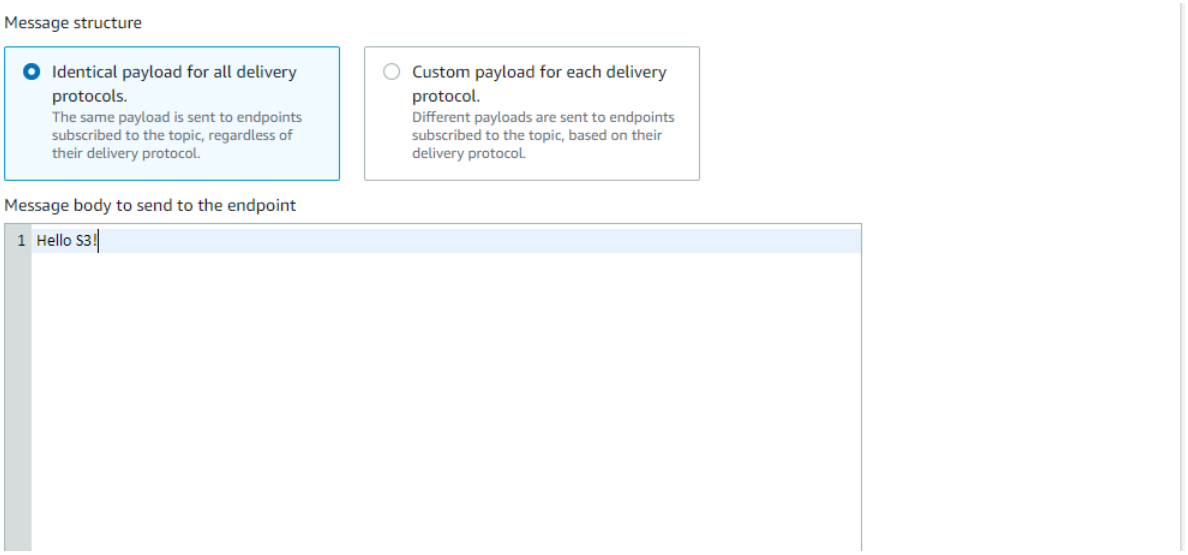


Step 5: Publish a Message to the Topic

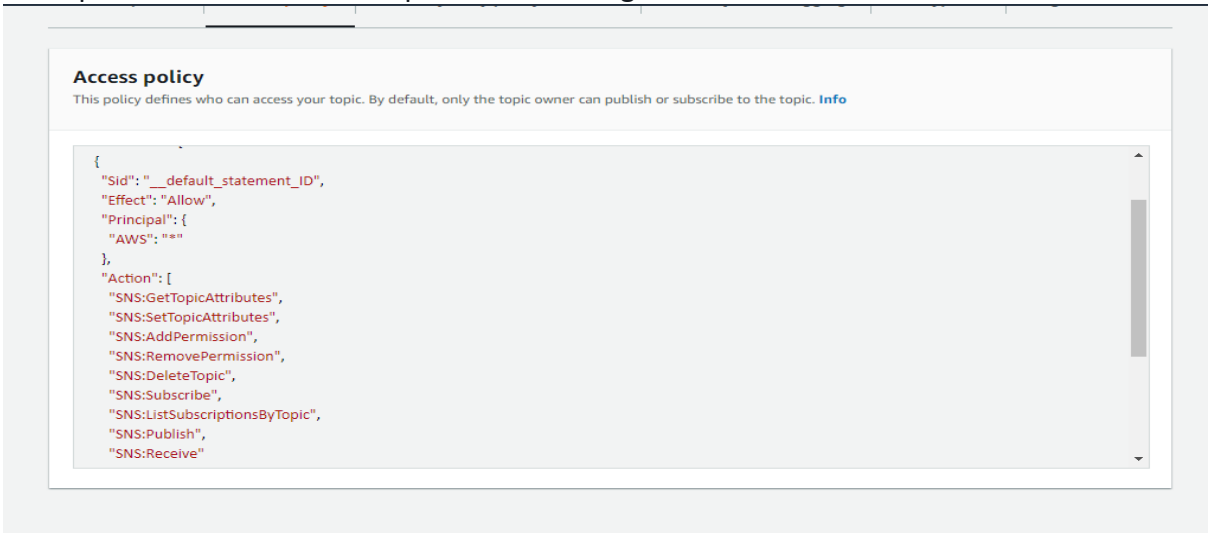
- On the navigation panel, choose **Topics**.
- On the **Topics** page, choose the topic you created earlier and then choose **Publish message**.
- On the **Publish message to topic** page, do the following:
    - In the **Message details** section, enter the **Subject**, for example:



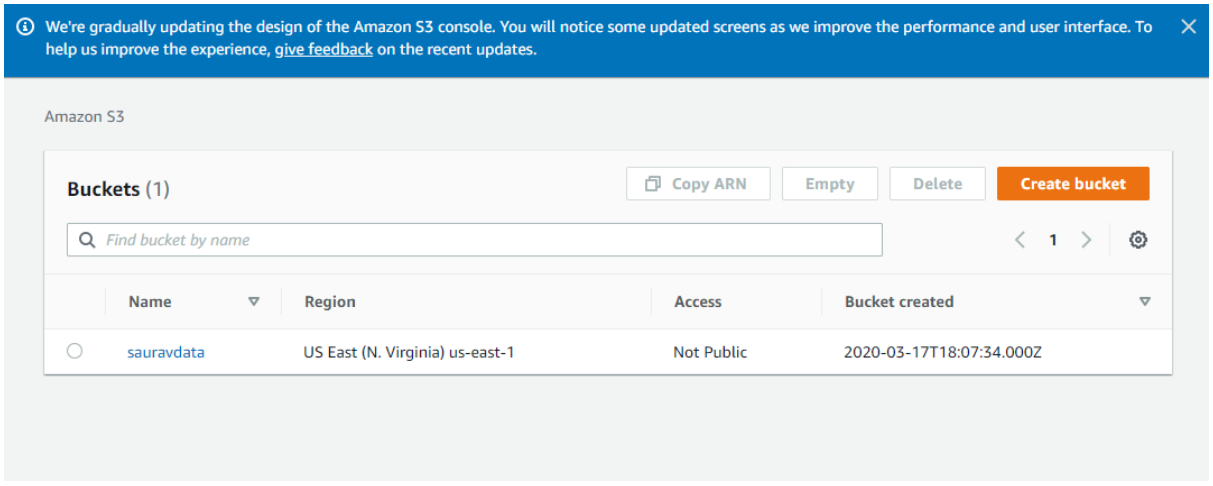
- In the **Message body** section, do one of the following :
    - Choose **Identical payload for all delivery protocols** and then enter the message, for example:

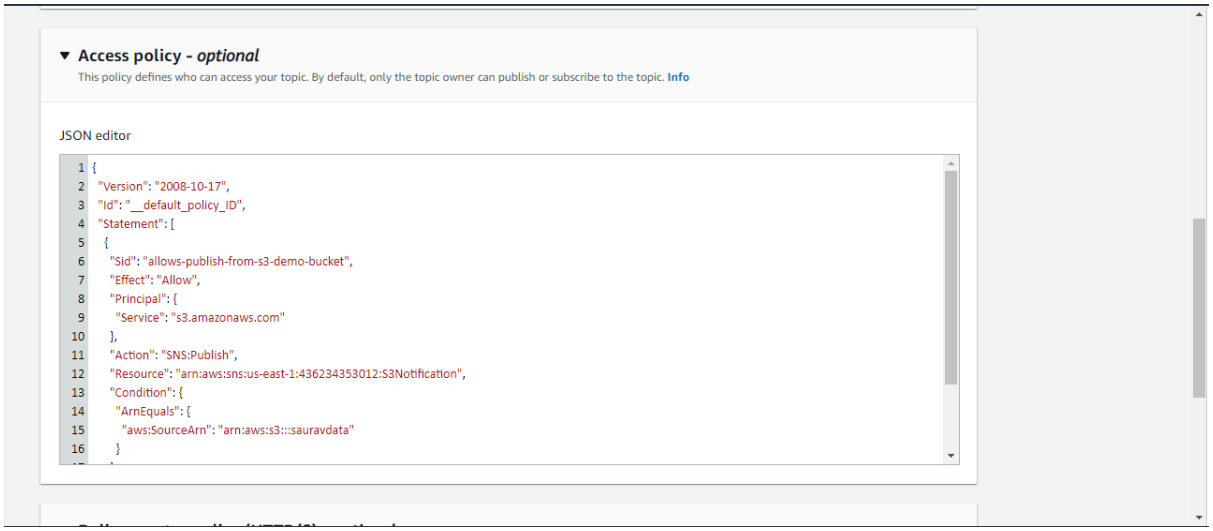


- In the **Message attributes** section, add any attributes that you want Amazon SNS to match with the subscription attribute Filter Policy to decide whether the subscribed endpoint is interested in the published message.

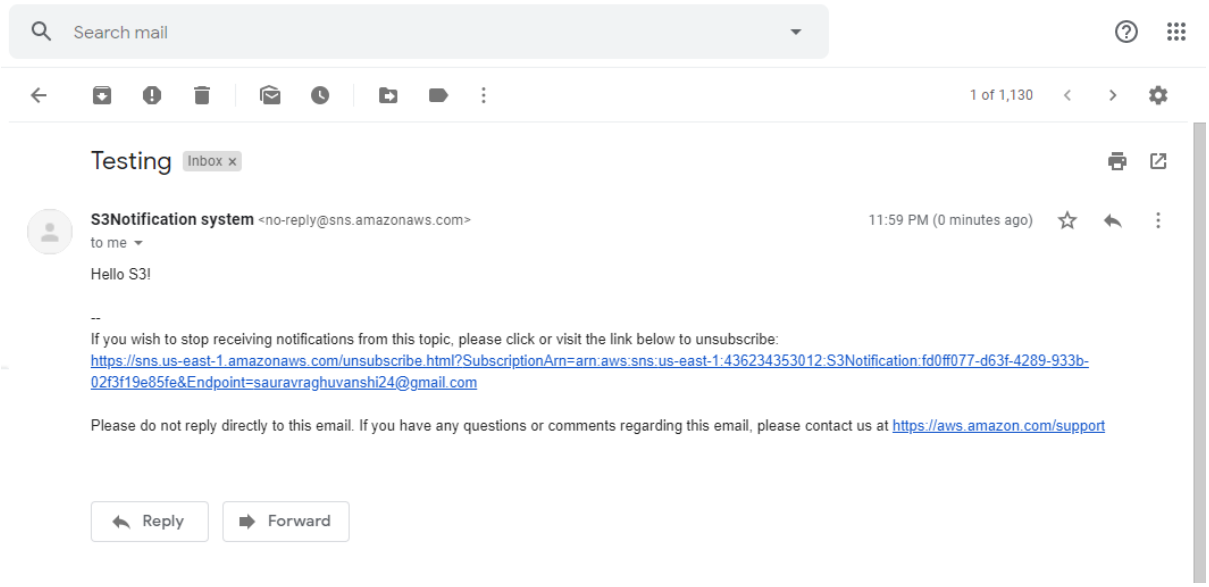


- Choose **Publish message**.
    - The message is published to the topic and the *MyTopic* page is displayed.
    - The topic's **Name**, **ARN**, (optional) **Display name**, and **Topic owner**'s AWS account ID are displayed in the **Details** section.



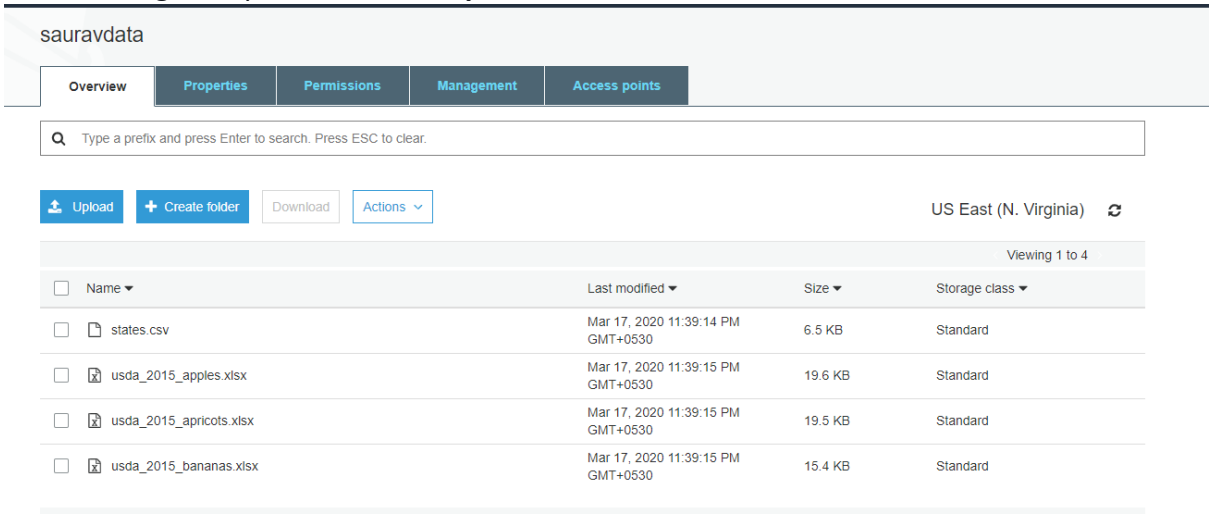


➢ In your email client, check the email address that you specified earlier and read the email from Amazon SNS.

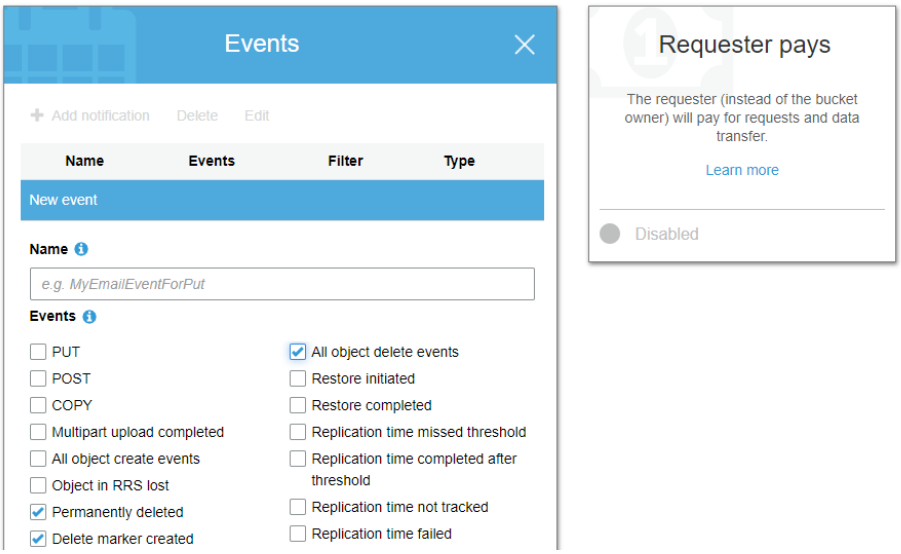


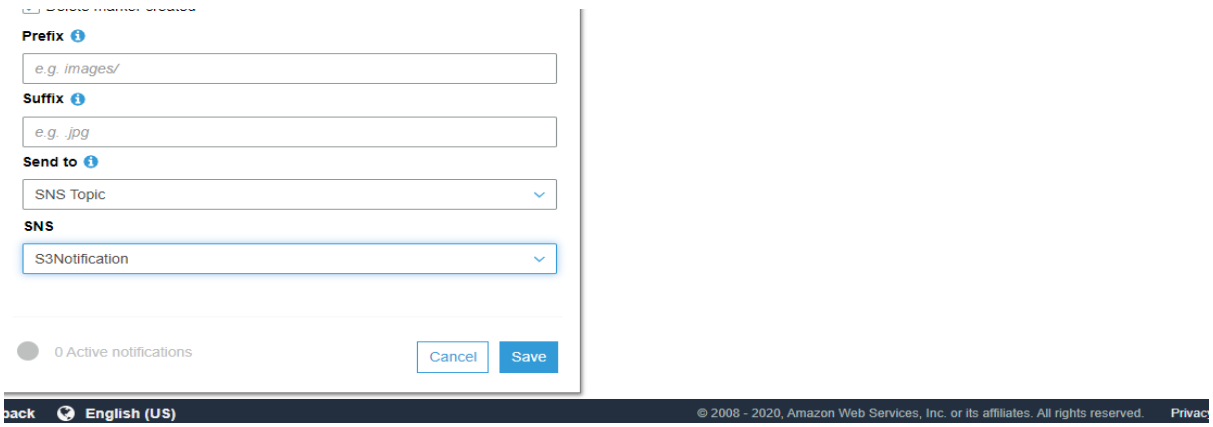
Step 6: Delete the Subscription and Topic

- On the navigation panel, choose **Subscriptions**.
- On the **Subscriptions** page, choose a *confirmed* subscription and then choose **Delete**.
- In the **Delete subscription** dialog box, choose **Delete**.
    - The subscription is deleted.
- On the navigation panel, choose **Topics**.

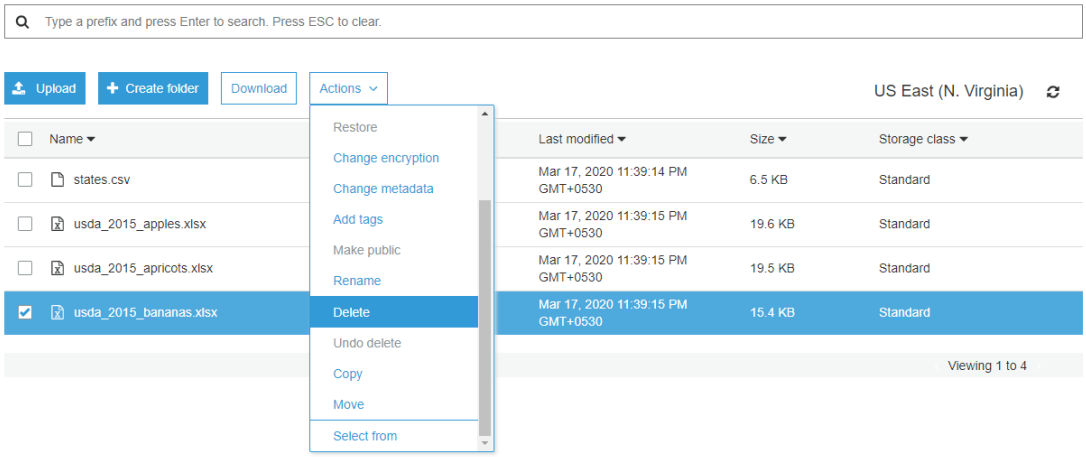


- On the **Topics** page, choose a topic and then choose **Delete**.

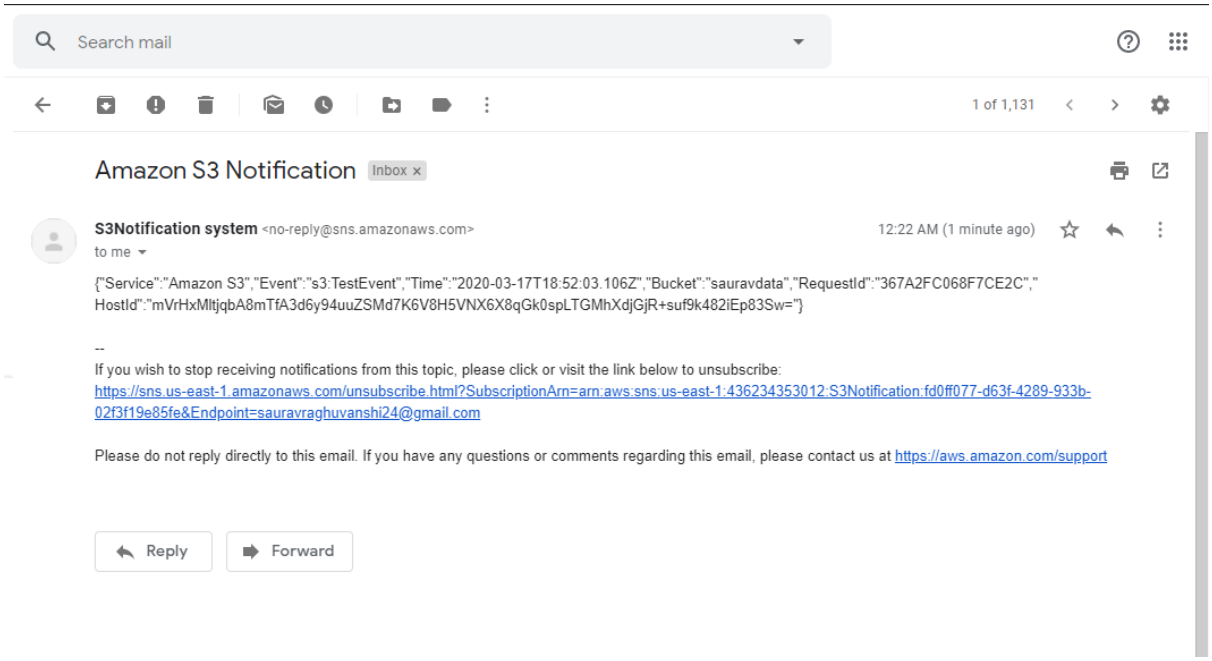




- On the **Delete topic** *S3Notification* dialog box, enter delete me and then choose **Delete**.



- The topic is deleted.



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- https://docs.aws.amazon.com/sns/latest/dg/welcome.html
- https://docs.aws.amazon.com/sns/latest/dg/sns-getting-started.html