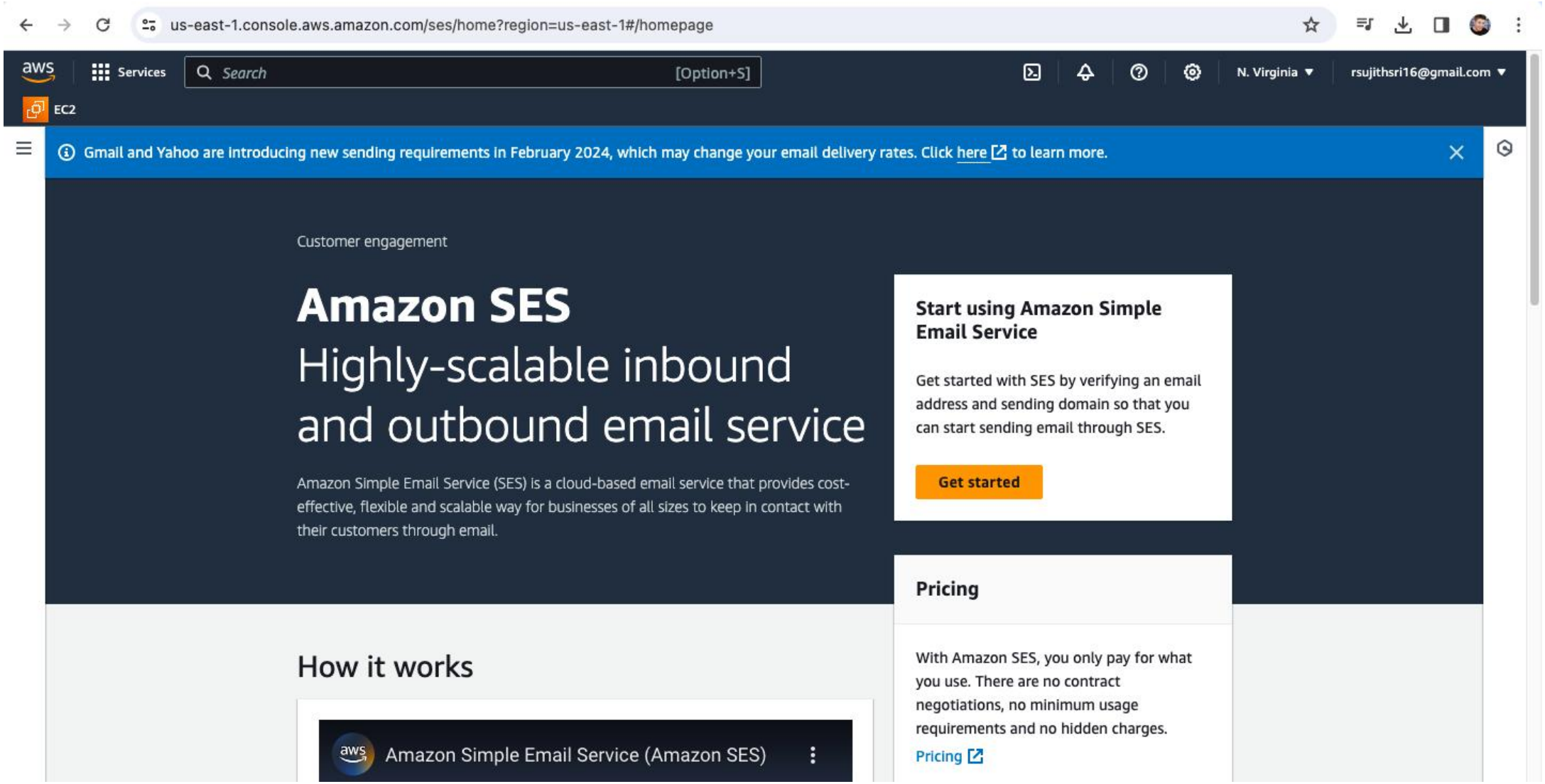
Problem Statement:

You work for XYZ Corporation. Your team is asked to deploy similar architecture multiple times for testing, development, and production purposes. Implement CloudFormation for the tasks assigned to you below.

Tasks To Be Performed:

1. Create a FIFO SQS queue and test by sending messages.
2. Register your mail in SES and send a test mail to yourself.


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/homepage
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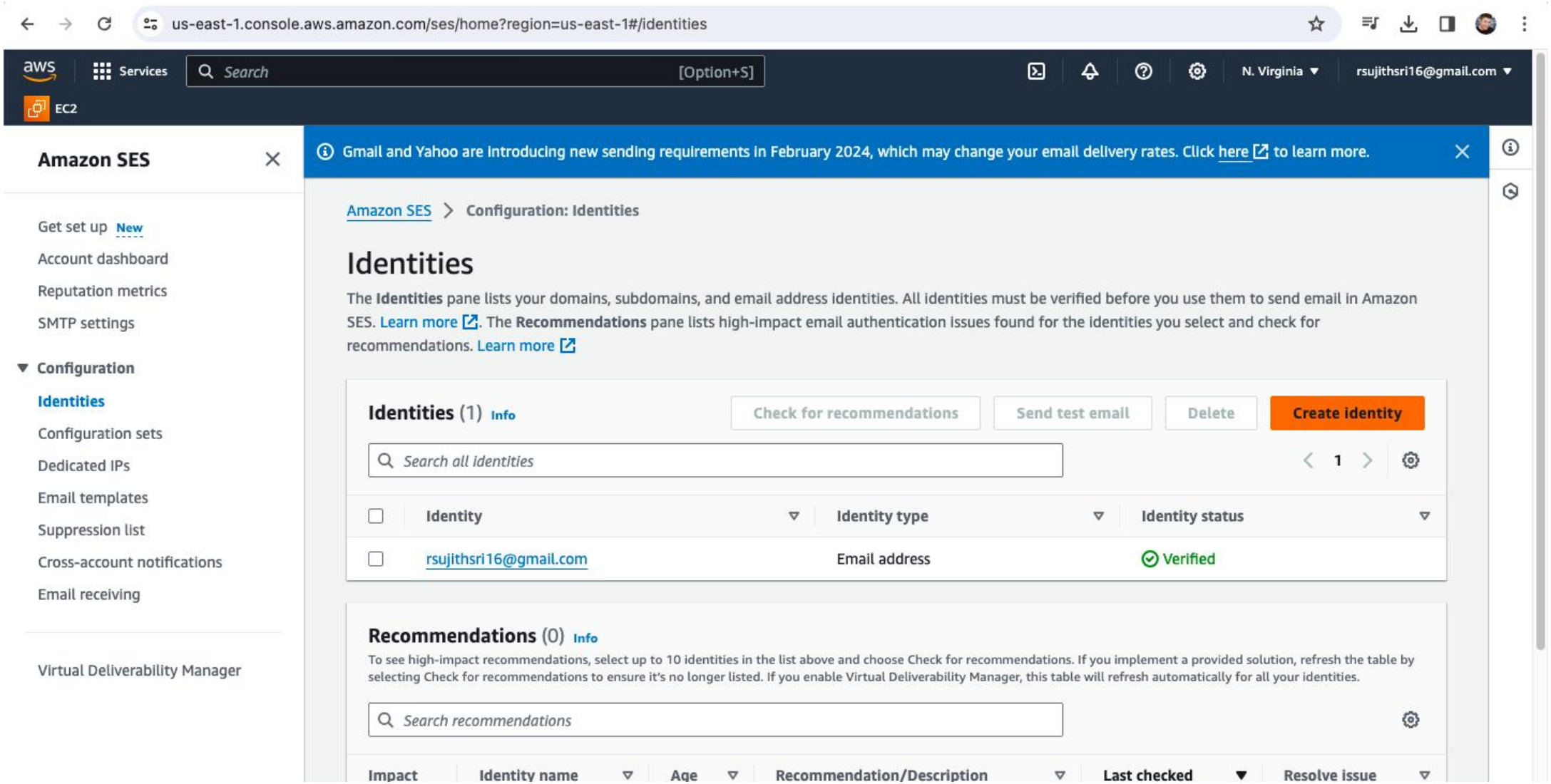
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Gmail and Yahoo are introducing new sending requirements in February 2024, which may change your email delivery rates. Click here to learn more.
Customer engagement
Amazon SES
Highly-scalable inbound and outbound email service
Amazon Simple Email Service (SES) is a cloud-based email service that provides cost-effective, flexible and scalable way for businesses of all sizes to keep in contact with their customers through email.
Start using Amazon Simple Email Service
Get started with SES by verifying an email address and sending domain so that you can start sending email through SES.
Get started
Pricing
With Amazon SES, you only pay for what you use. There are no contract negotiations, no minimum usage requirements and no hidden charges.
Pricing
How it works
Amazon Simple Email Service (Amazon SES)


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities
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EC2
Amazon SES
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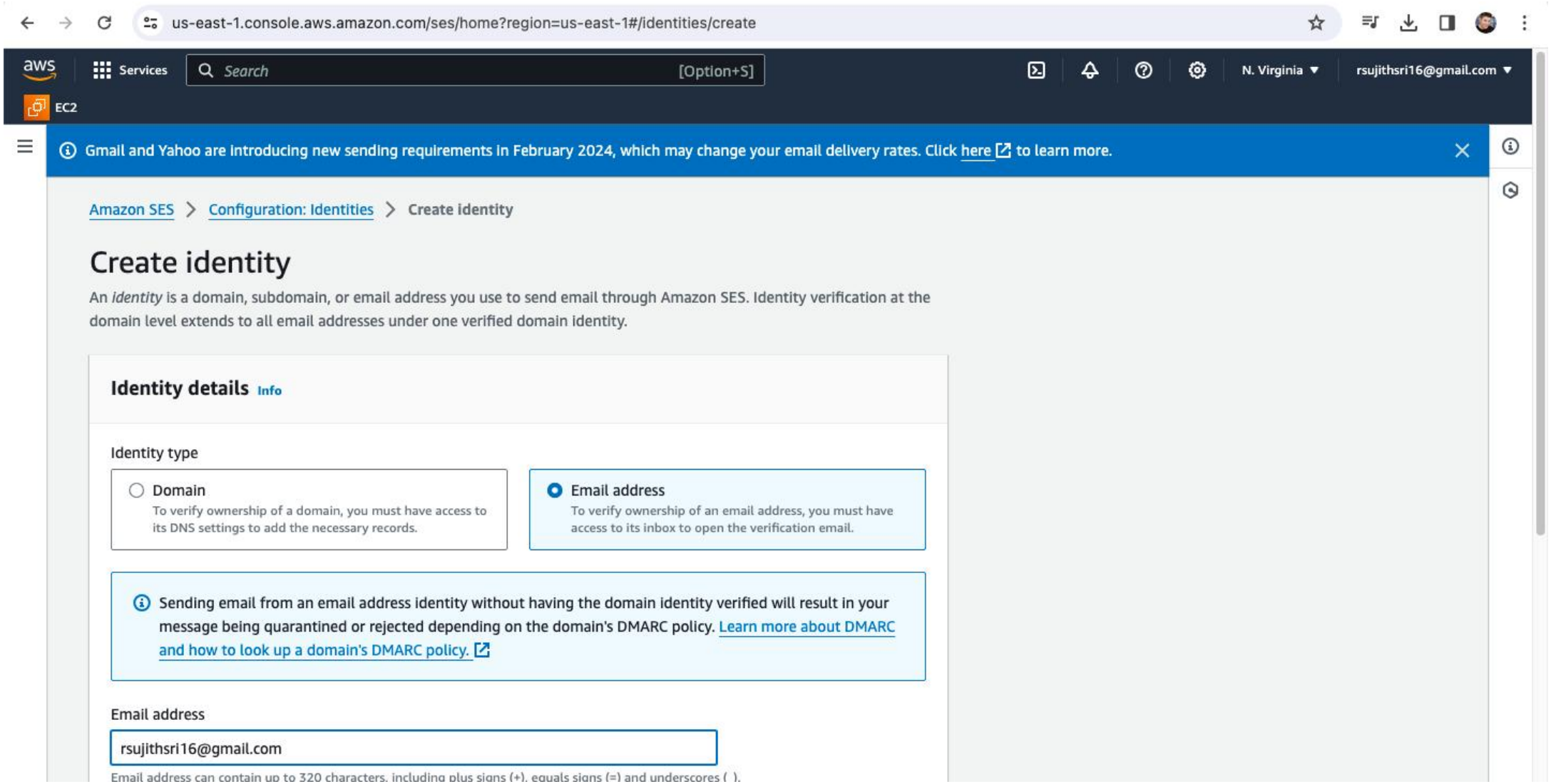
Get set up New
Account dashboard
Reputation metrics
SMTP settings
Configuration
Identities
Configuration sets
Dedicated IPs
Email templates
Suppression list
Cross-account notifications
Email receiving
Virtual Deliverability Manager
Amazon SES > Configuration: Identities
Identities
The Identities pane lists your domains, subdomains, and email address identities. All identities must be verified before you use them to send email in Amazon SES. Learn more. The Recommendations pane lists high-impact email authentication issues found for the identities you select and check for recommendations. Learn more
Identities (1) Info
Check for recommendations
Send test email
Delete
Create identity
Search all identities
1
Identity
Identity type
Identity status
rsujithsri16@gmail.com
Email address
Verified
Recommendations (0) Info
To see high-impact recommendations, select up to 10 identities in the list above and choose Check for recommendations. If you implement a provided solution, refresh the table by selecting Check for recommendations to ensure it's no longer listed. If you enable Virtual Deliverability Manager, this table will refresh automatically for all your identities.
Search recommendations
Impact
Identity name
Age
Recommendation/Description
Last checked
Resolve issue


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/create
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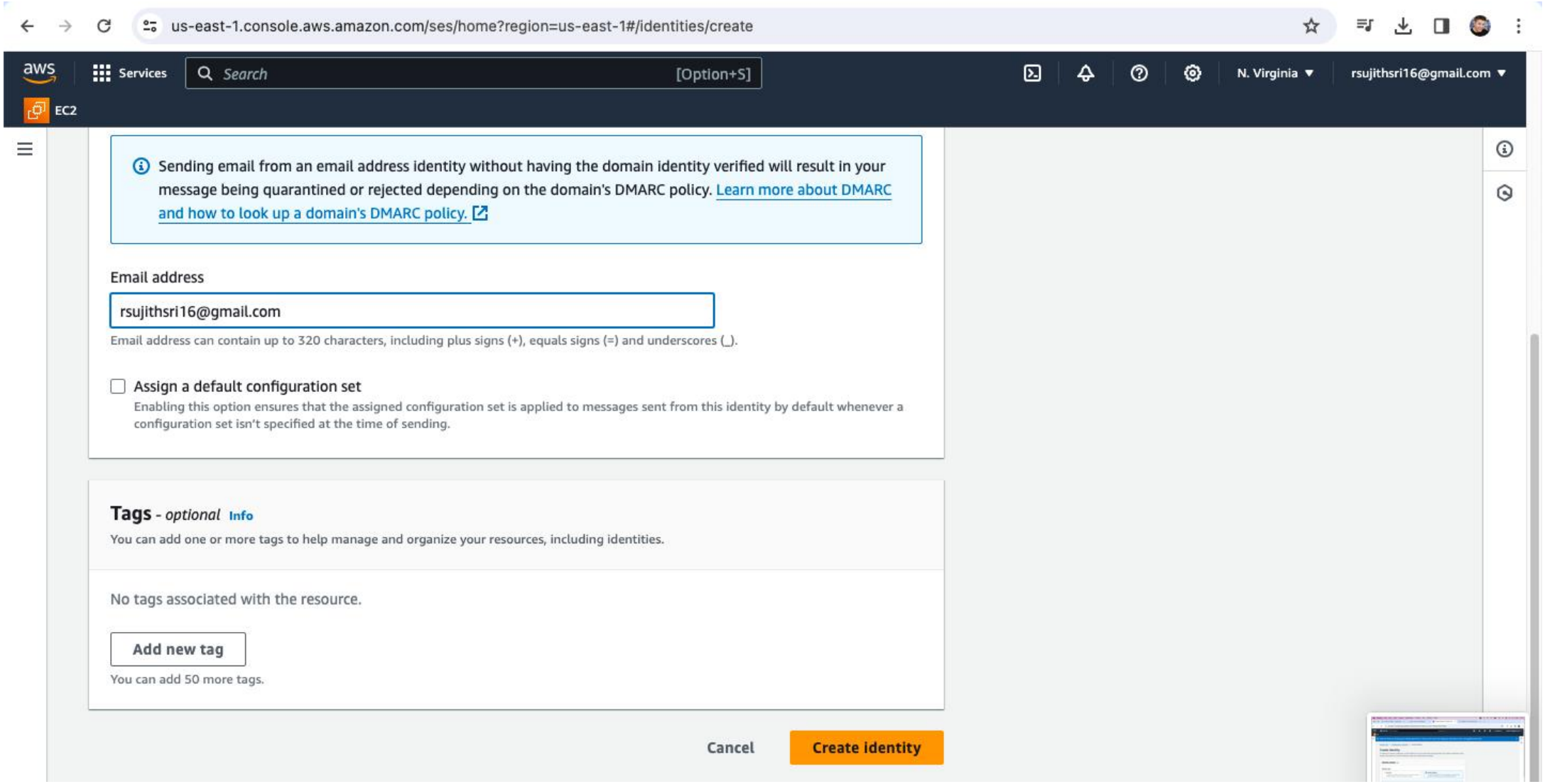
N. Virginia
rsujithsri16@gmail.com
EC2
Gmail and Yahoo are introducing new sending requirements in February 2024, which may change your email delivery rates. Click here to learn more.
Amazon SES
Configuration: Identities
Create identity
Create identity
An identity is a domain, subdomain, or email address you use to send email through Amazon SES. Identity verification at the domain level extends to all email addresses under one verified domain identity.
Identity details Info
Identity type
Domain
To verify ownership of a domain, you must have access to its DNS settings to add the necessary records.
Email address
To verify ownership of an email address, you must have access to its inbox to open the verification email.
Sending email from an email address identity without having the domain identity verified will result in your message being quarantined or rejected depending on the domain's DMARC policy. Learn more about DMARC and how to look up a domain's DMARC policy.
Email address
rsujithsri16@gmail.com
Email address can contain up to 320 characters, including plus signs (+), equals signs (=) and underscores (_).


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/create
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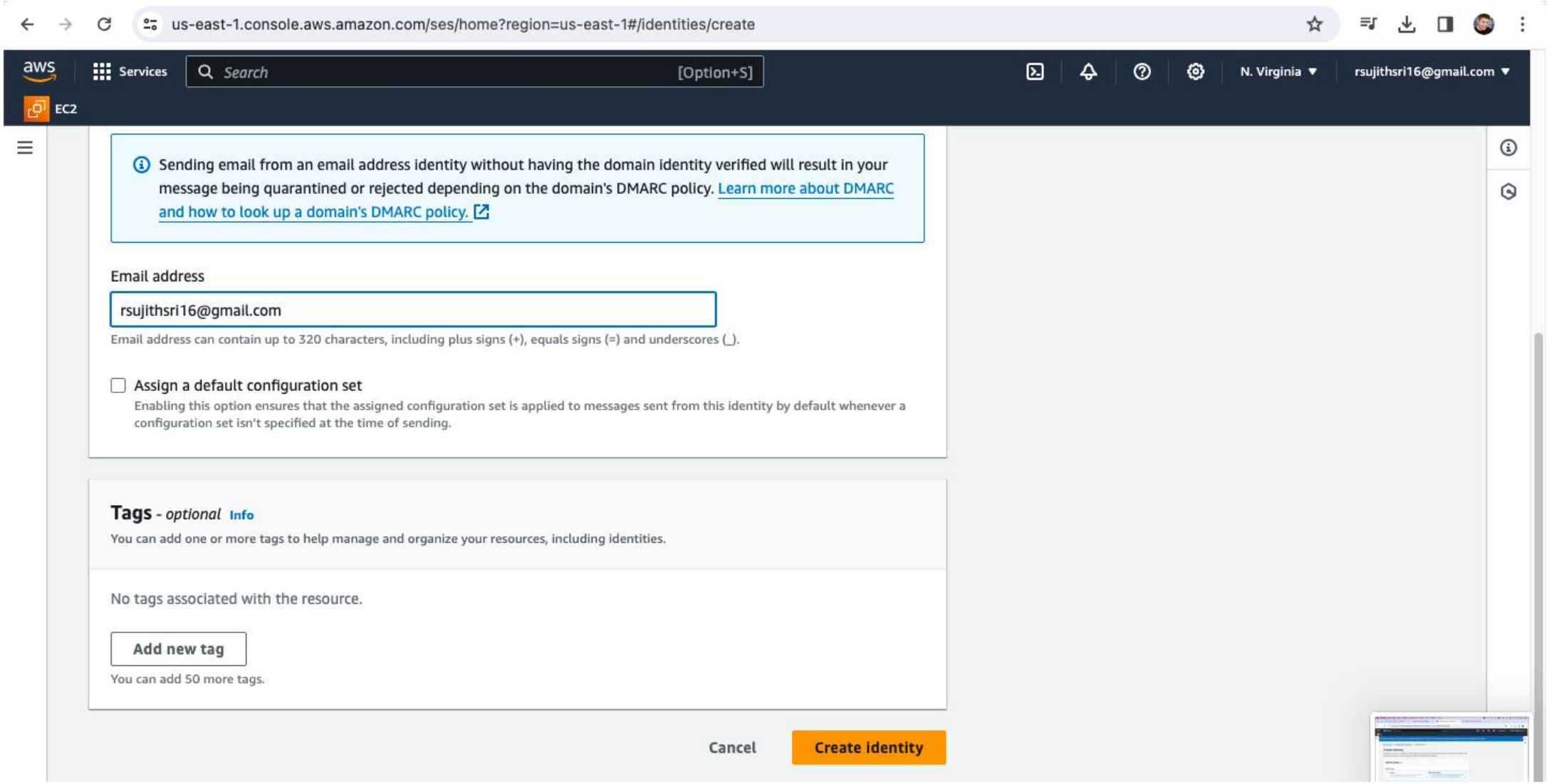
rsujithsri16@gmail.com
EC2
Sending email from an email address identity without having the domain identity verified will result in your message being quarantined or rejected depending on the domain's DMARC policy. Learn more about DMARC and how to look up a domain's DMARC policy.
Email address
rsujithsri16@gmail.com
Email address can contain up to 320 characters, including plus signs (+), equals signs (=) and underscores (_).
Assign a default configuration set
Enabling this option ensures that the assigned configuration set is applied to messages sent from this identity by default whenever a configuration set isn't specified at the time of sending.
Tags - optional Info
You can add one or more tags to help manage and organize your resources, including identities.
No tags associated with the resource.
Add new tag
You can add 50 more tags.
Cancel
Create identity


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/create
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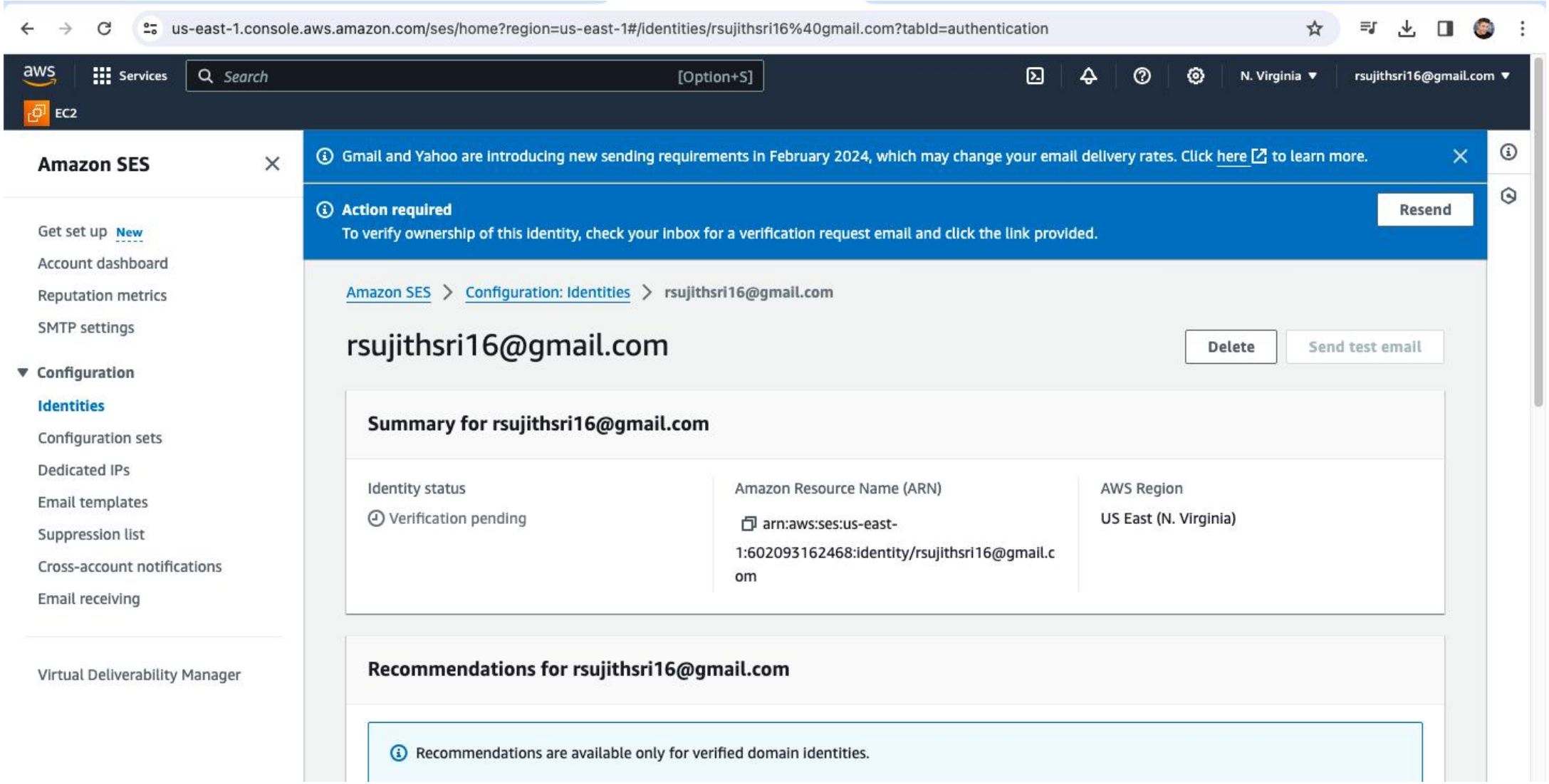
us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/rsujithsri16%40gmail.com?tabId=authentication
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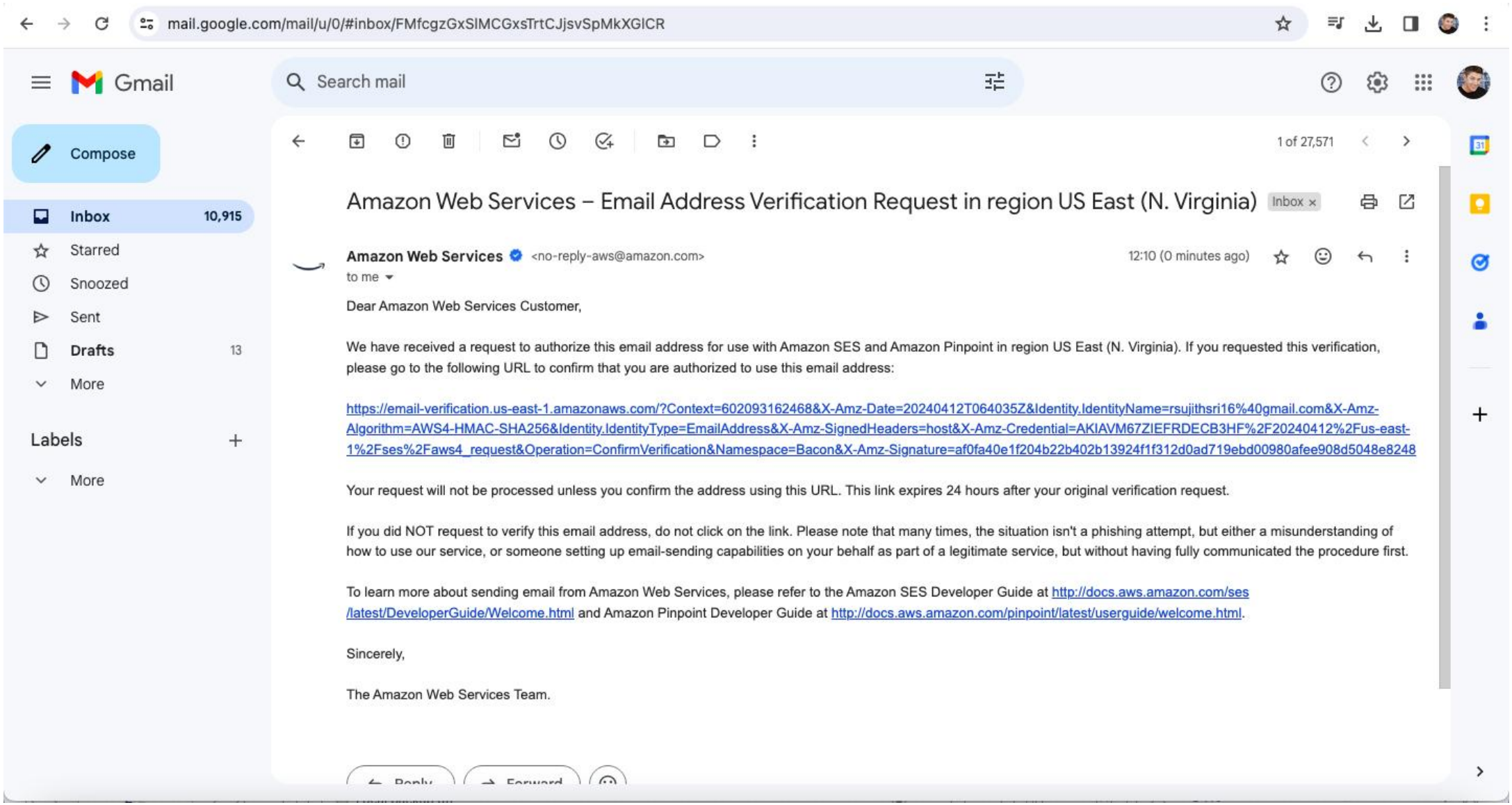
N. Virginia
rsujithsri16@gmail.com
EC2
Amazon SES
Gmail and Yahoo are introducing new sending requirements in February 2024, which may change your email delivery rates. Click here to learn more.
Action required
To verify ownership of this identity, check your inbox for a verification request email and click the link provided.
Resend
Get set up New
Account dashboard
Reputation metrics
SMTP settings
Configuration
Identities
Configuration sets
Dedicated IPs
Email templates
Suppression list
Cross-account notifications
Email receiving
Virtual Deliverability Manager
Amazon SES > Configuration: Identities > rsujithsri16@gmail.com
rsujithsri16@gmail.com
Delete
Send test email
Summary for rsujithsri16@gmail.com
Identity status
Verification pending
Amazon Resource Name (ARN)
arn:aws:ses:us-east-1:602093162468:identity/rsujithsri16@gmail.com
AWS Region
US East (N. Virginia)
Recommendations for rsujithsri16@gmail.com
Recommendations are available only for verified domain identities.


mail.google.com/mail/u/0/#inbox/FMfcgzGxSlMCGxsTrtCJjsvSpMkXGlCR
Gmail
Search mail
Compose
Inbox 10,915
Starred
Snoozed
Sent
Drafts 13
More
Labels
More
1 of 27,571
Amazon Web Services – Email Address Verification Request in region US East (N. Virginia)
Inbox ×
Amazon Web Services <no-reply-aws@amazon.com>
12:10 (0 minutes ago)
to me
Dear Amazon Web Services Customer,
We have received a request to authorize this email address for use with Amazon SES and Amazon Pinpoint in region US East (N. Virginia). If you requested this verification, please go to the following URL to confirm that you are authorized to use this email address:
https://email-verification.us-east-1.amazonaws.com/?Context=602093162468&X-Amz-Date=20240412T064035Z&Identity.IdentityName=rsujithsri16%40gmail.com&X-Amz-Algorithm=AWS4-HMAC-SHA256&Identity.IdentityType=EmailAddress&X-Amz-SignedHeaders=host&X-Amz-Credential=AKIAVM67ZIEFRDECB3HF%2F20240412%2Fus-east-1%2Fses%2Faws4_request&Operation=ConfirmVerification&Namespace=Bacon&X-Amz-Signature=af0fa40e1f204b22b402b13924f1f312d0ad719ebd00980afee908d5048e8248
Your request will not be processed unless you confirm the address using this URL. This link expires 24 hours after your original verification request.
If you did NOT request to verify this email address, do not click on the link. Please note that many times, the situation isn't a phishing attempt, but either a misunderstanding of how to use our service, or someone setting up email-sending capabilities on your behalf as part of a legitimate service, but without having fully communicated the procedure first.
To learn more about sending email from Amazon Web Services, please refer to the Amazon SES Developer Guide at http://docs.aws.amazon.com/ses/latest/DeveloperGuide/Welcome.html and Amazon Pinpoint Developer Guide at http://docs.aws.amazon.com/pinpoint/latest/userguide/welcome.html.
Sincerely,
The Amazon Web Services Team.

aws.amazon.com/ses/verifysuccess/

aws

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Congratulations!

You have successfully verified an email address. You can now start sending email from this address.

For new Amazon SES users — If you have not yet applied for a sending limit increase, then you are still in the sandbox environment, and you can only send email to addresses that have been verified. To verify a new email address or domain, see the **Identity Management** section of the Amazon SES console.

For new Amazon Pinpoint users — If you have not yet applied for a sending limit increase, then you are still in the sandbox environment, and you can only send email to addresses that have been verified. To verify a new email address or domain, see the **Settings > Channels** page on the Amazon Pinpoint console.

If you have already been approved for a sending limit increase, then you can start sending email to non-verified addresses.

Thank you for using Amazon Web Services!

Go to the Amazon SES detail page.

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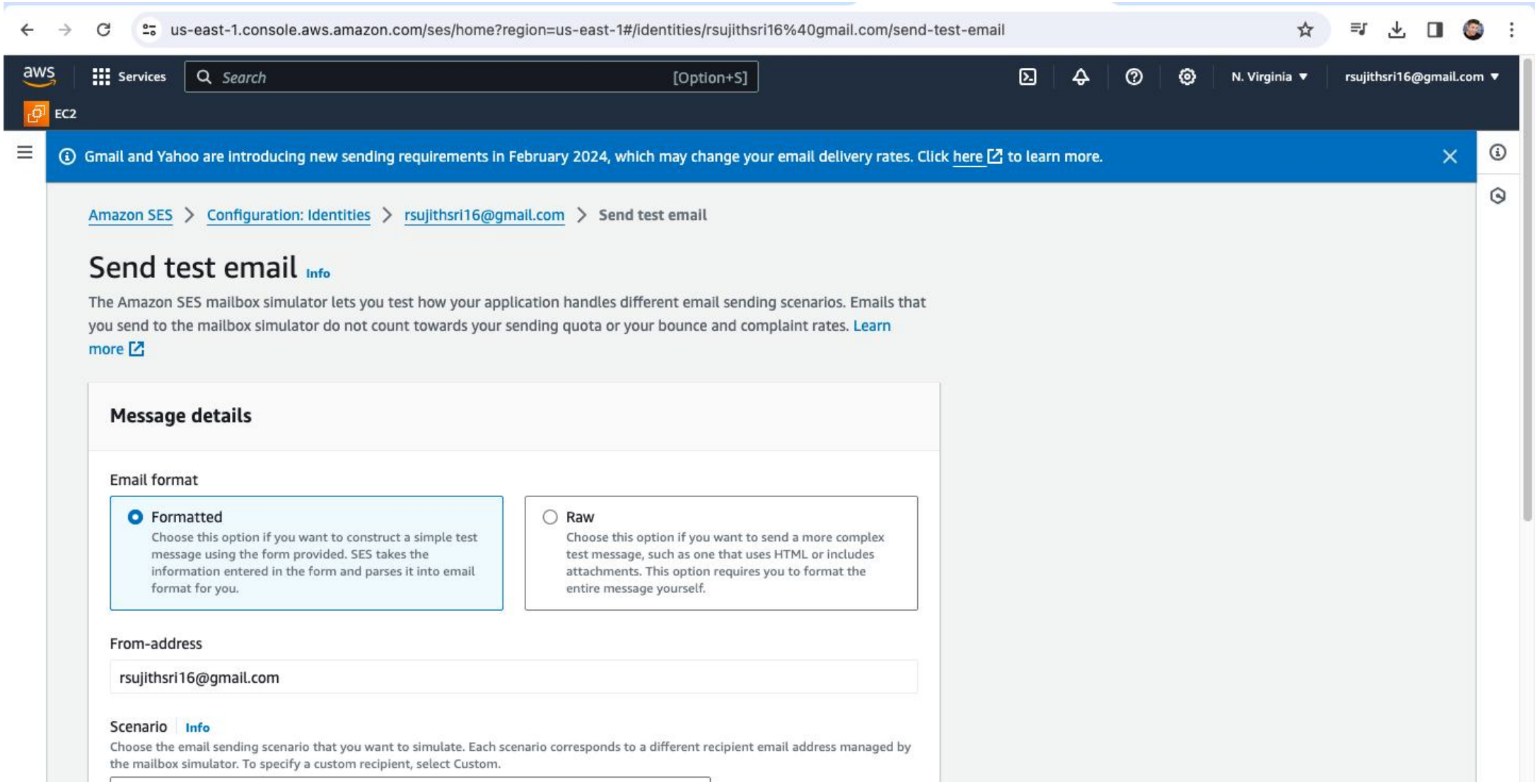
us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/rsujithsri16%40gmail.com/send-test-email
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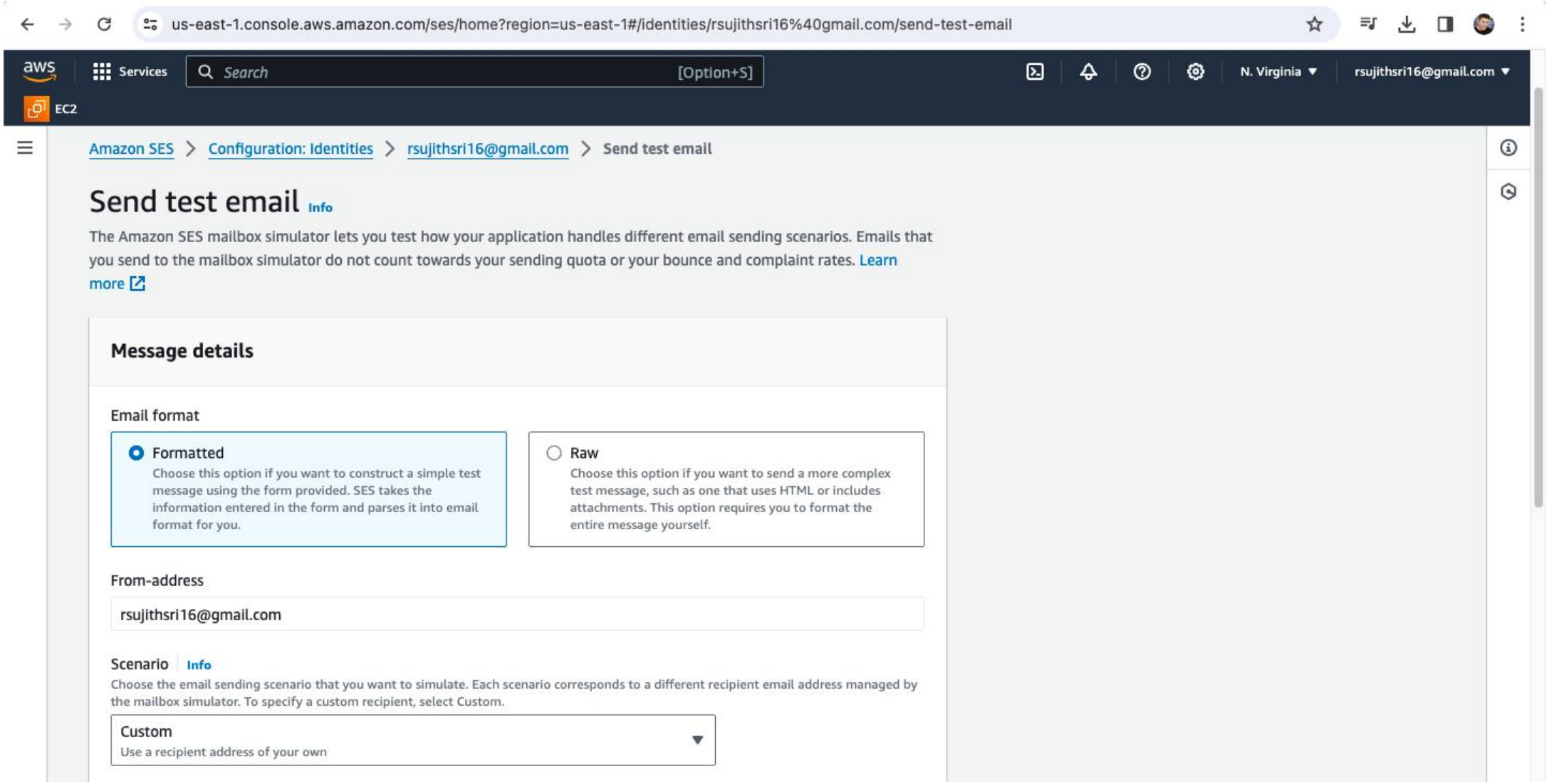
rsujithsri16@gmail.com
EC2
Gmail and Yahoo are introducing new sending requirements in February 2024, which may change your email delivery rates. Click here to learn more.
Amazon SES > Configuration: Identities > rsujithsri16@gmail.com > Send test email
Send test email Info
The Amazon SES mailbox simulator lets you test how your application handles different email sending scenarios. Emails that you send to the mailbox simulator do not count towards your sending quota or your bounce and complaint rates. Learn more
Message details
Email format
Formatted
Choose this option if you want to construct a simple test message using the form provided. SES takes the information entered in the form and parses it into email format for you.
Raw
Choose this option if you want to send a more complex test message, such as one that uses HTML or includes attachments. This option requires you to format the entire message yourself.
From-address
rsujithsri16@gmail.com
Scenario Info
Choose the email sending scenario that you want to simulate. Each scenario corresponds to a different recipient email address managed by the mailbox simulator. To specify a custom recipient, select Custom.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N. Virginia
rsujithsri16@gmail.com
EC2
Amazon SES
Configuration: Identities
rsujithsri16@gmail.com
Send test email
Send test email Info
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Scenario Info
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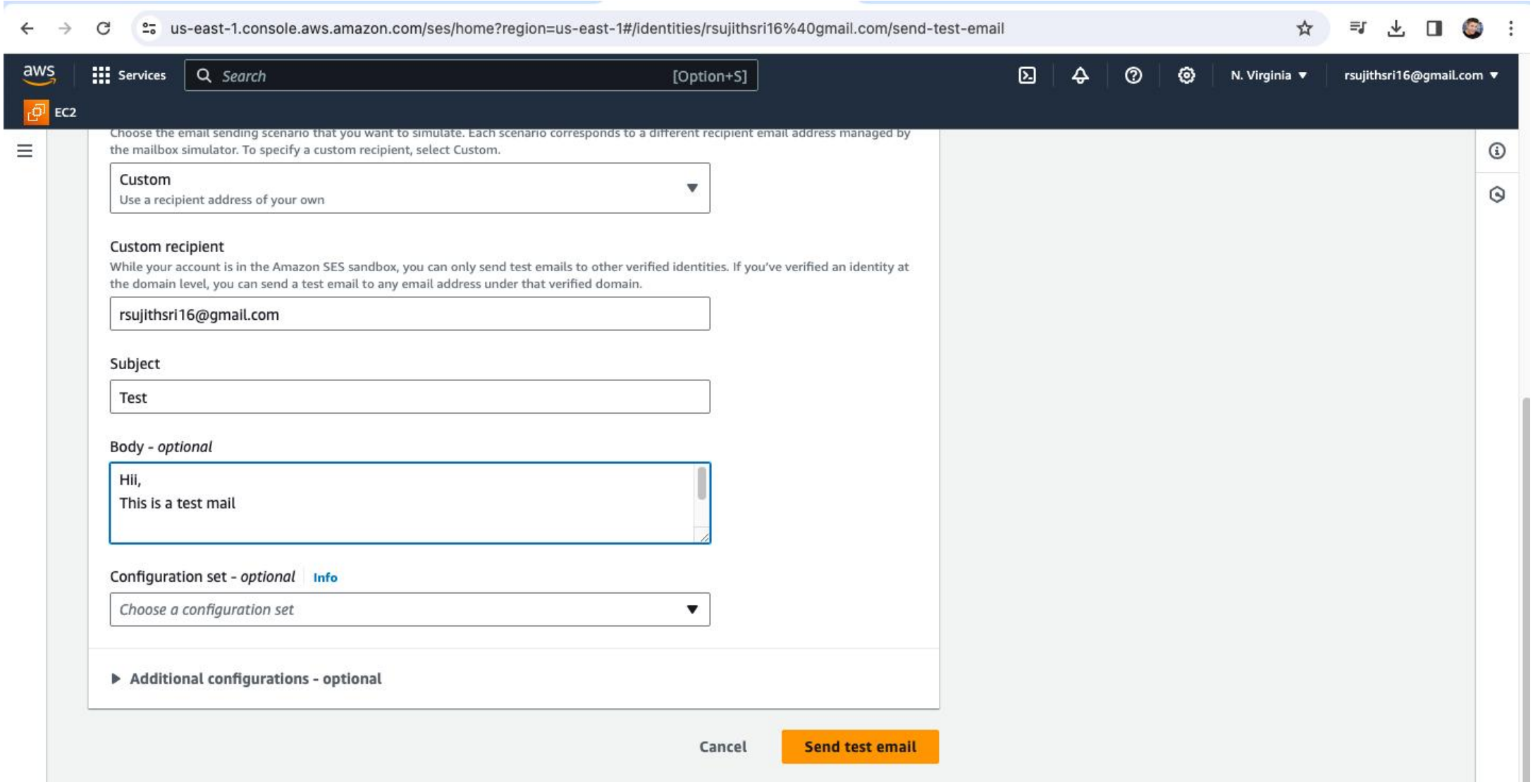
Custom
Use a recipient address of your own


us-east-1.console.aws.amazon.com/ses/home?region=us-east-1#/identities/rsujithsri16%40gmail.com/send-test-email
aws
Services
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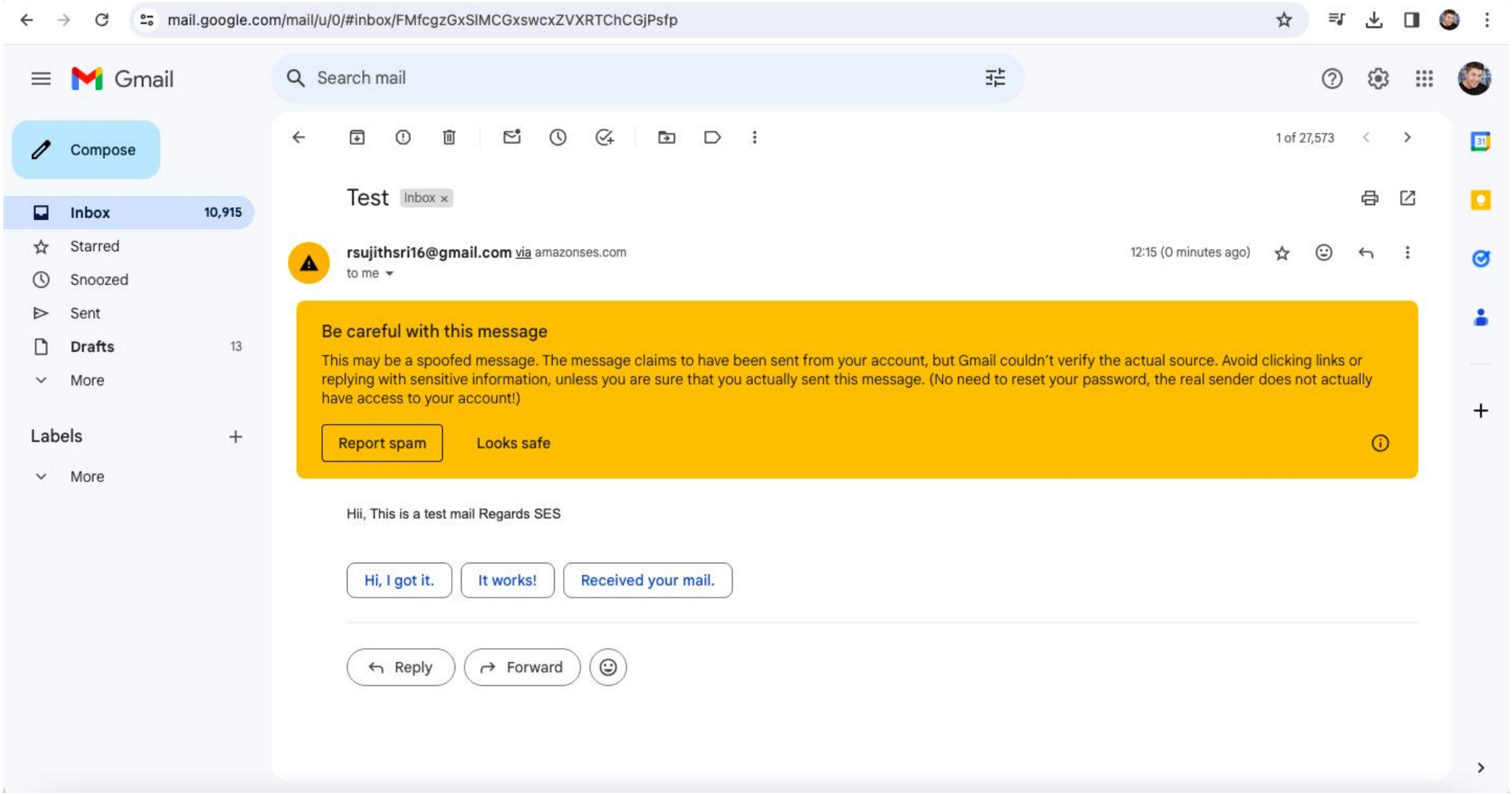
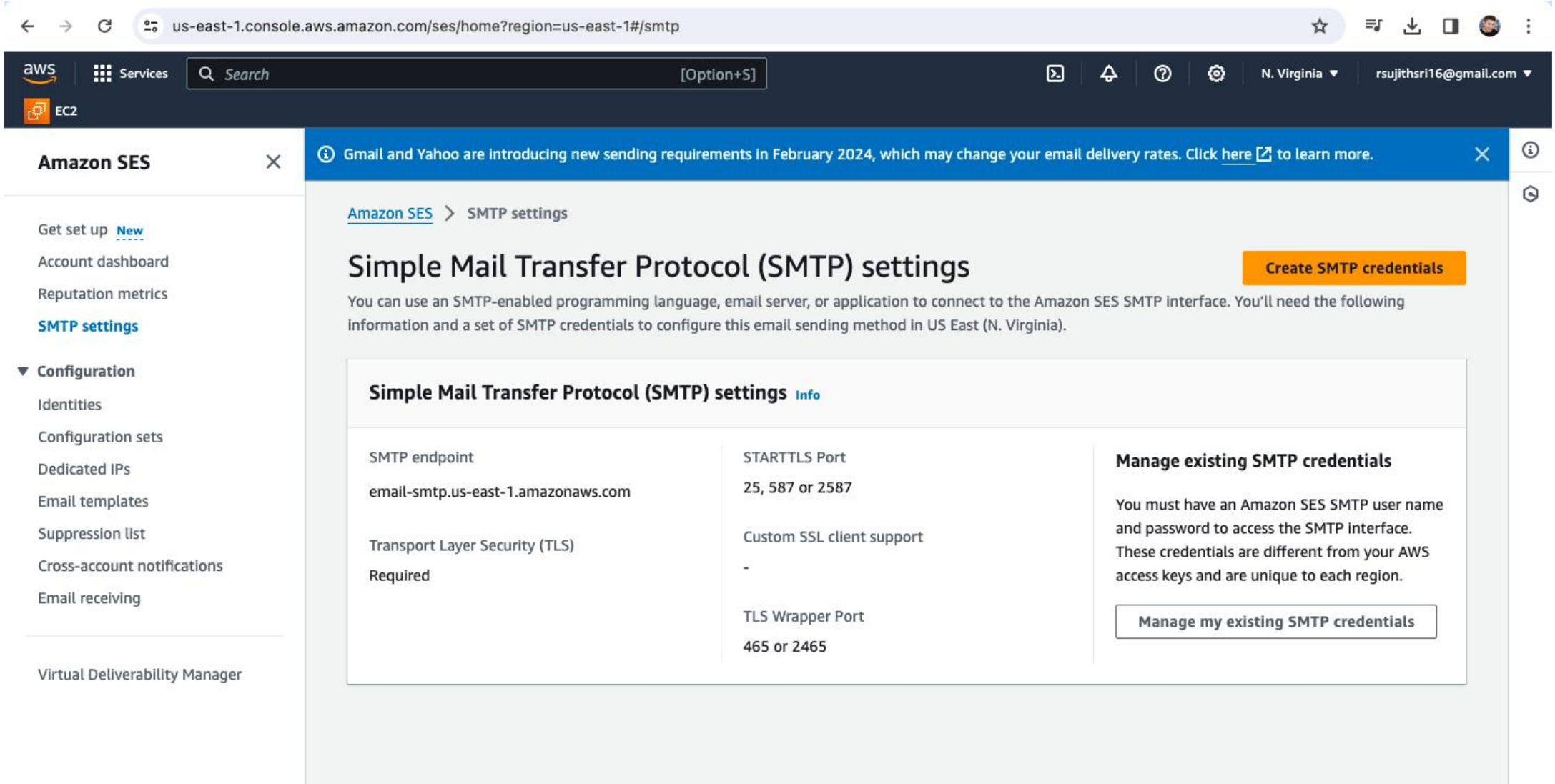
N. Virginia
rsujithsri16@gmail.com
EC2
Choose the email sending scenario that you want to simulate. Each scenario corresponds to a different recipient email address managed by the mailbox simulator. To specify a custom recipient, select Custom.
Custom
Use a recipient address of your own
Custom recipient
While your account is in the Amazon SES sandbox, you can only send test emails to other verified identities. If you've verified an identity at the domain level, you can send a test email to any email address under that verified domain.
rsujithsri16@gmail.com
Subject
Test
Body - optional
Hii,
This is a test mail
Configuration set - optional
Info
Choose a configuration set
Additional configurations - optional
Cancel
Send test email


mail.google.com/mail/u/0/#inbox/FMfcgzGxSlMCGxswcxZVXRTChCGjPsfp
Gmail
Search mail
Compose
Inbox 10,915
Starred
Snoozed
Sent
Drafts 13
More
Labels
More
1 of 27,573
Test
Inbox ×
rsujithsri16@gmail.com via amazonses.com
to me
12:15 (0 minutes ago)
Be careful with this message
This may be a spoofed message. The message claims to have been sent from your account, but Gmail couldn't verify the actual source. Avoid clicking links or replying with sensitive information, unless you are sure that you actually sent this message. (No need to reset your password, the real sender does not actually have access to your account!)
Report spam
Looks safe
Hii, This is a test mail Regards SES
Hi, I got it.
It works!
Received your mail.
Reply
Forward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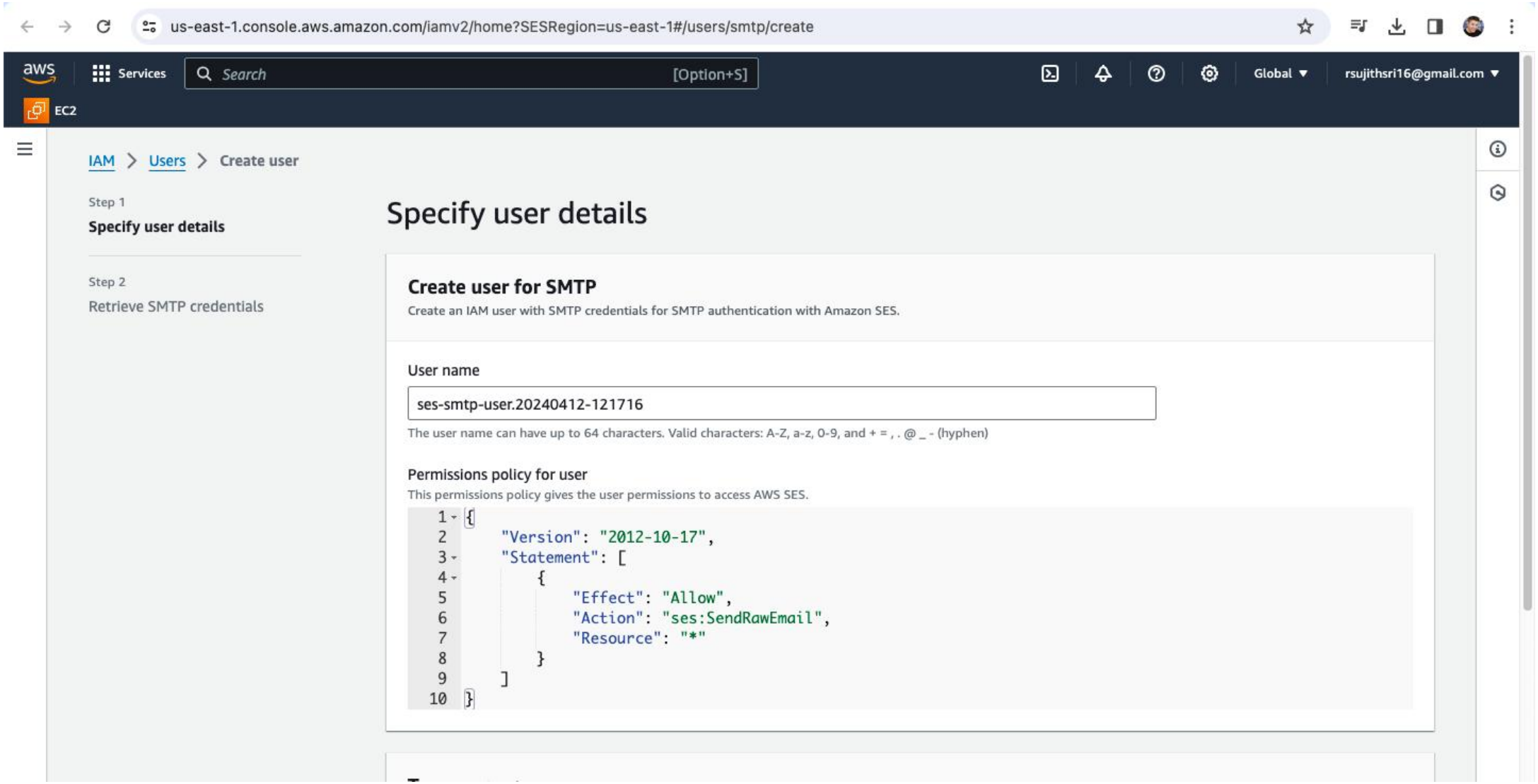
Email templates
Suppression list
Cross-account notifications
Email receiving
Virtual Deliverability Manager
Amazon SES > SMTP settings
Simple Mail Transfer Protocol (SMTP) settings
Create SMTP credentials
You can use an SMTP-enabled programming language, email server, or application to connect to the Amazon SES SMTP interface. You'll need the following information and a set of SMTP credentials to configure this email sending method in US East (N. Virginia).
Simple Mail Transfer Protocol (SMTP) settings Info
SMTP endpoint
email-smtp.us-east-1.amazonaws.com
Transport Layer Security (TLS)
Required
STARTTLS Port
25, 587 or 2587
Custom SSL client support
-
TLS Wrapper Port
465 or 2465
Manage existing SMTP credentials
You must have an Amazon SES SMTP user name and password to access the SMTP interface. These credentials are different from your AWS access keys and are unique to each region.
Manage my existing SMTP credentials


us-east-1.console.aws.amazon.com/iamv2/home?SESRegion=us-east-1#/users/smtp/create
aws
Services
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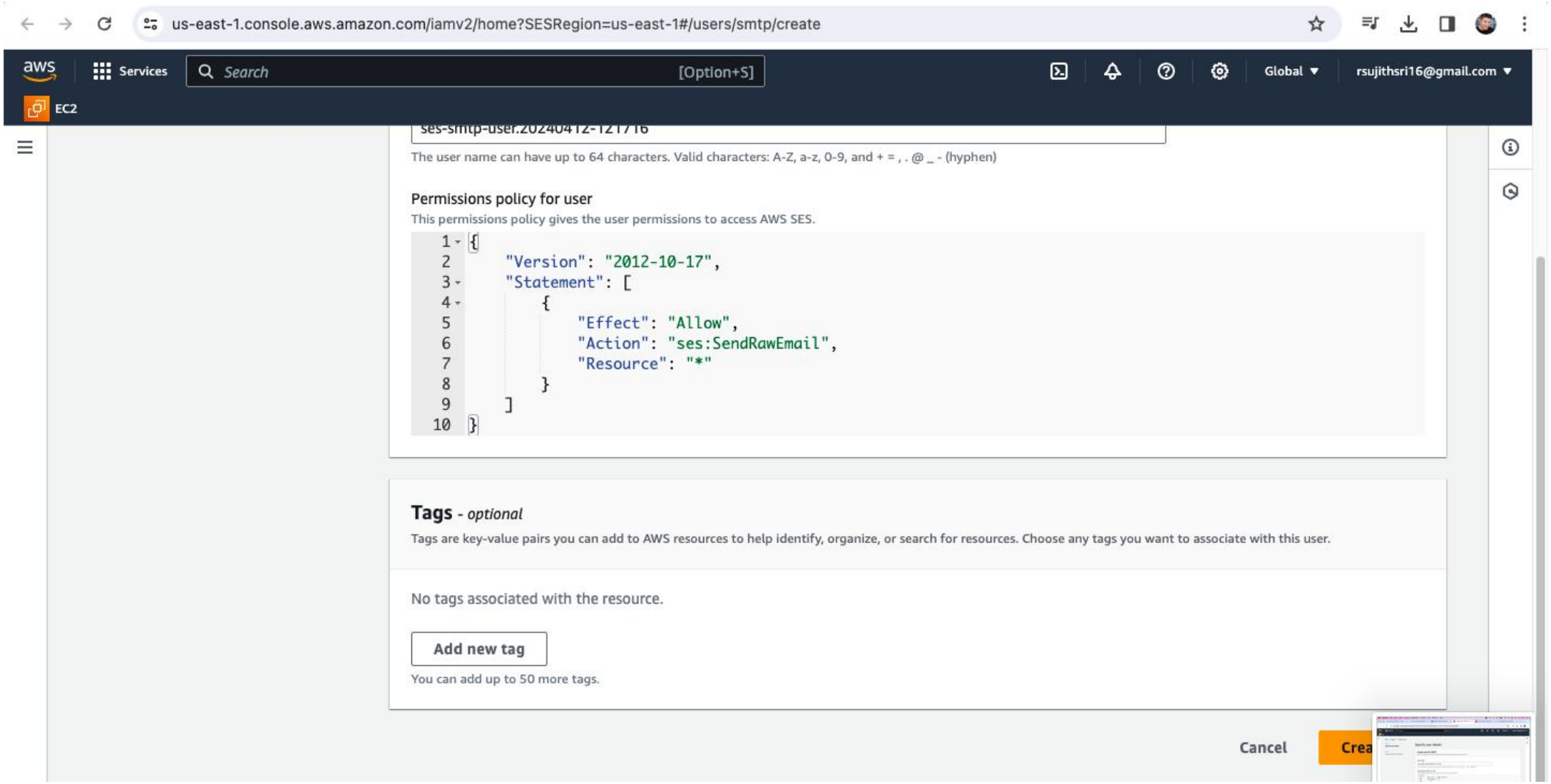
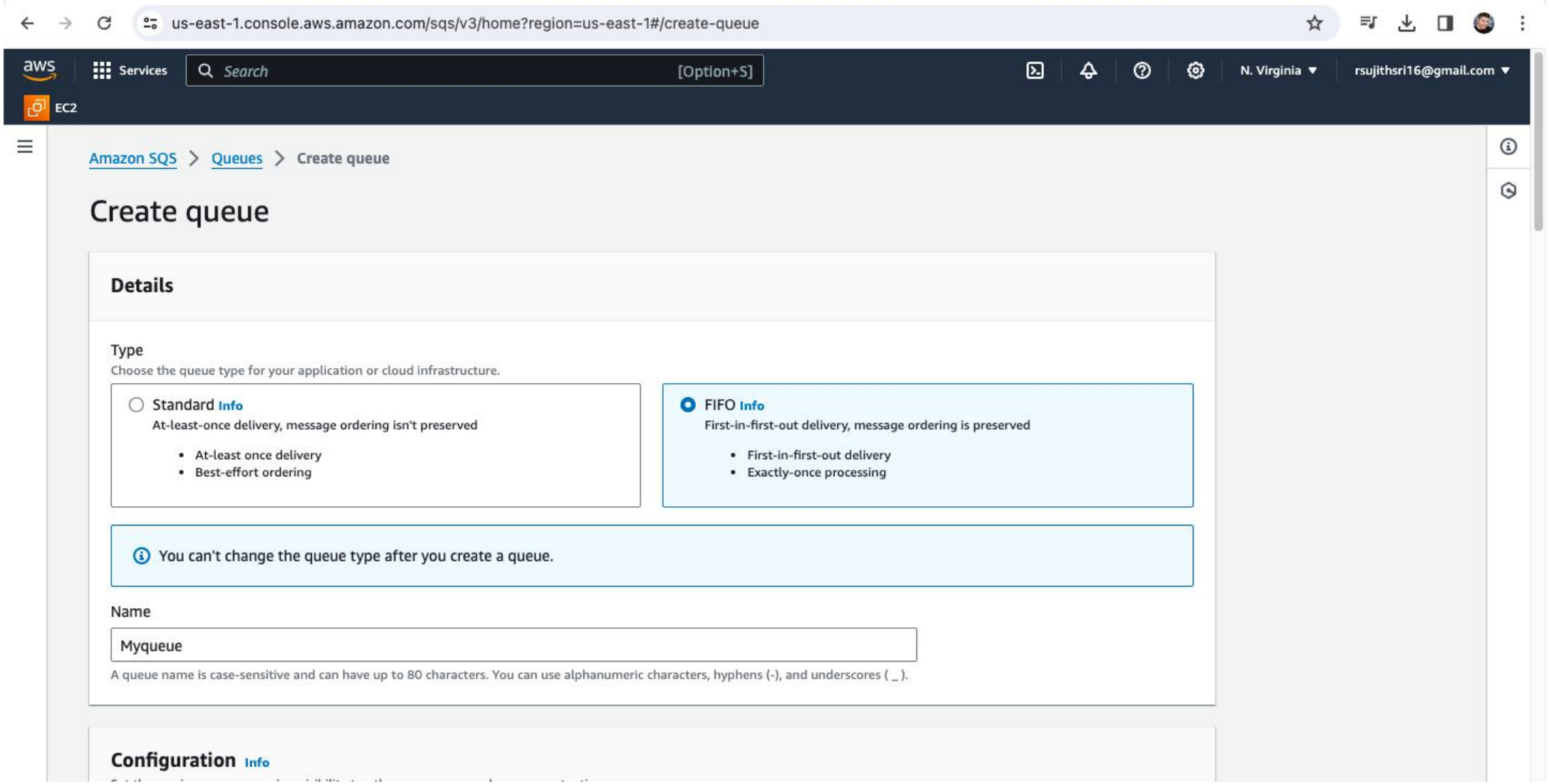
Global
rsujithsri16@gmail.com
EC2
IAM > Users > Create user
Step 1
Specify user details
Step 2
Retrieve SMTP credentials
Specify user details
Create user for SMTP
Create an IAM user with SMTP credentials for SMTP authentication with Amazon SES.
User name
ses-smtp-user.20240412-121716
The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)
Permissions policy for user
This permissions policy gives the user permissions to access AWS SES.
{
"Version": "2012-10-17",
"Statement": [
{
"Effect": "Allow",
"Action": "ses:SendRawEmail",
"Resource": "*"
}
]
}


us-east-1.console.aws.amazon.com/iamv2/home?SESRegion=us-east-1#/users/smtp/create
aws
Services
Search
[Option+S]
Global
rsujithsri16@gmail.com
EC2
ses-smtp-user.20240412-121716
The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)
Permissions policy for user
This permissions policy gives the user permissions to access AWS SES.
{
"Version": "2012-10-17",
"Statement": [
{
"Effect": "Allow",
"Action": "ses:SendRawEmail",
"Resource": "*"
}
]
}
Tags - optional
Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.
No tags associated with the resource.
Add new tag
You can add up to 50 more tags.
Cancel


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/create-queue
aws
Services
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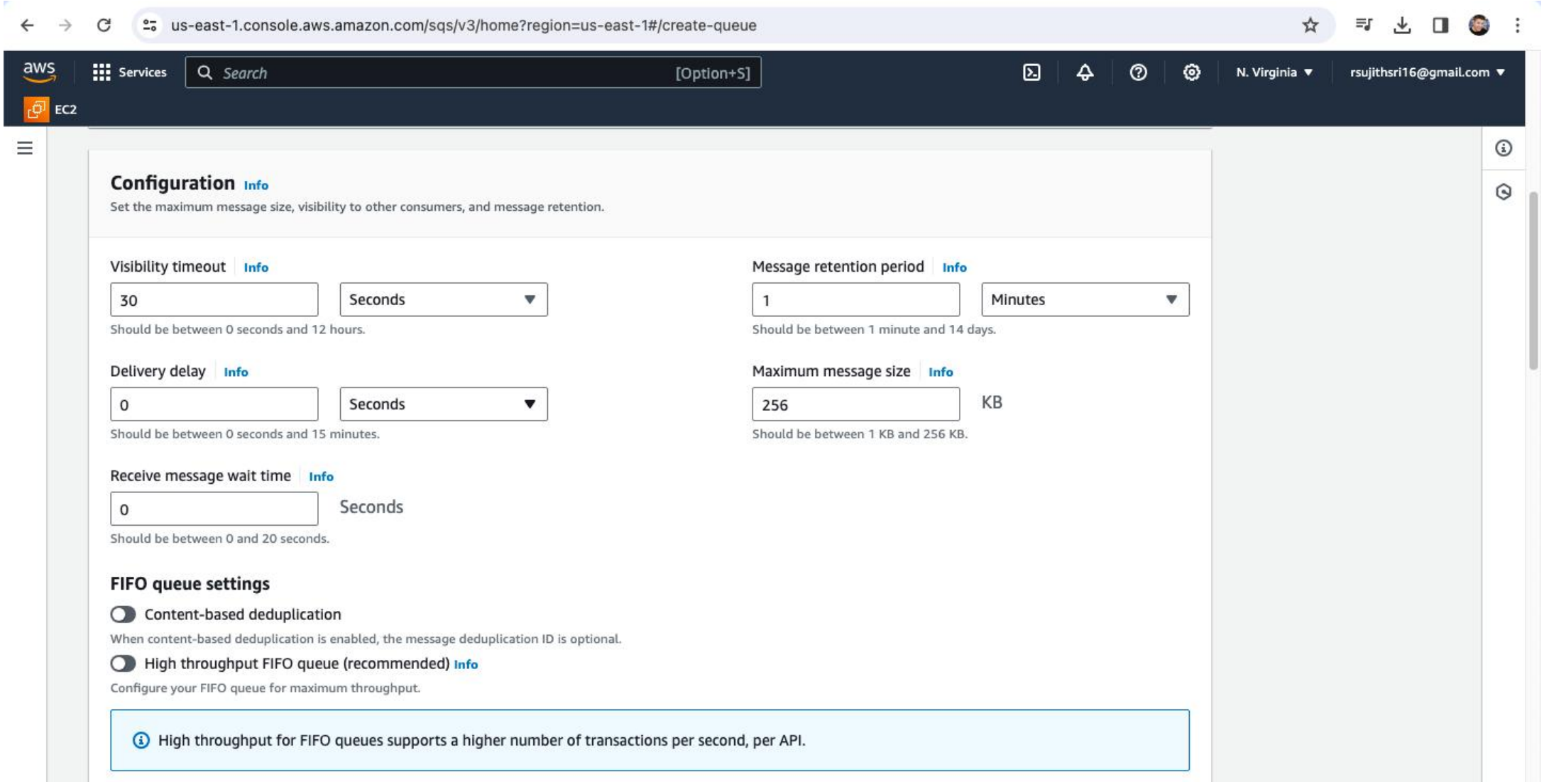
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Amazon SQS > Queues > Create queue
Create queue
Details
Type
Choose the queue type for your application or cloud infrastructure.
Standard Info
At-least-once delivery, message ordering isn't preserved
At-least once delivery
Best-effort ordering
FIFO Info
First-in-first-out delivery, message ordering is preserved
First-in-first-out delivery
Exactly-once processing
You can't change the queue type after you create a queue.
Name
Myqueue
A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (_).
Configuration Info


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/create-queue
aws
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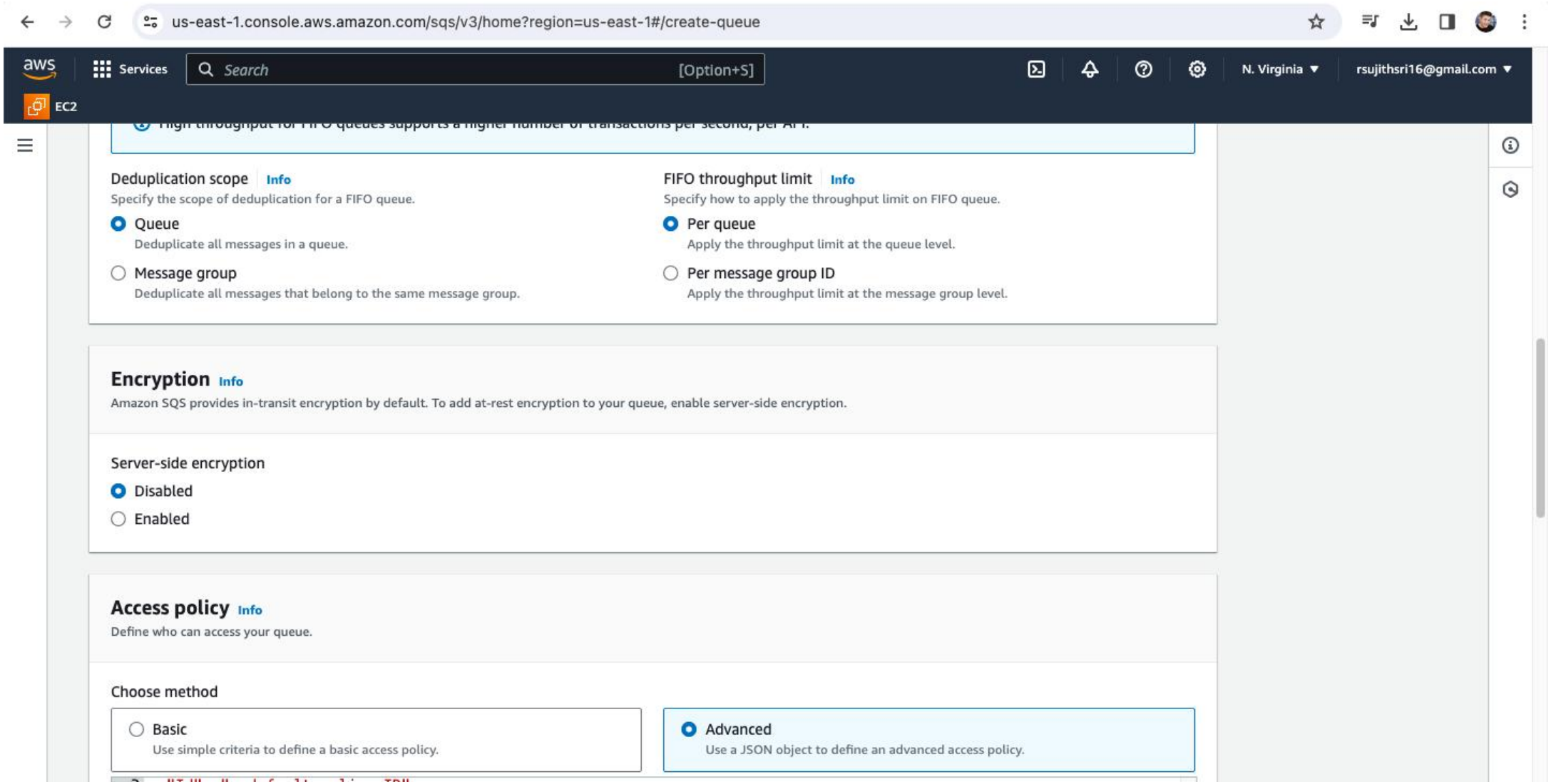
rsujithsri16@gmail.com
EC2
Configuration Info
Set the maximum message size, visibility to other consumers, and message retention.
Visibility timeout Info
30
Seconds
Should be between 0 seconds and 12 hours.
Message retention period Info
1
Minutes
Should be between 1 minute and 14 days.
Delivery delay Info
0
Seconds
Should be between 0 seconds and 15 minutes.
Maximum message size Info
256
KB
Should be between 1 KB and 256 KB.
Receive message wait time Info
0
Seconds
Should be between 0 and 20 seconds.
FIFO queue settings
Content-based deduplication
When content-based deduplication is enabled, the message deduplication ID is optional.
High throughput FIFO queue (recommended) Info
Configure your FIFO queue for maximum throughput.
High throughput for FIFO queues supports a higher number of transactions per second, per API.


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/create-queue
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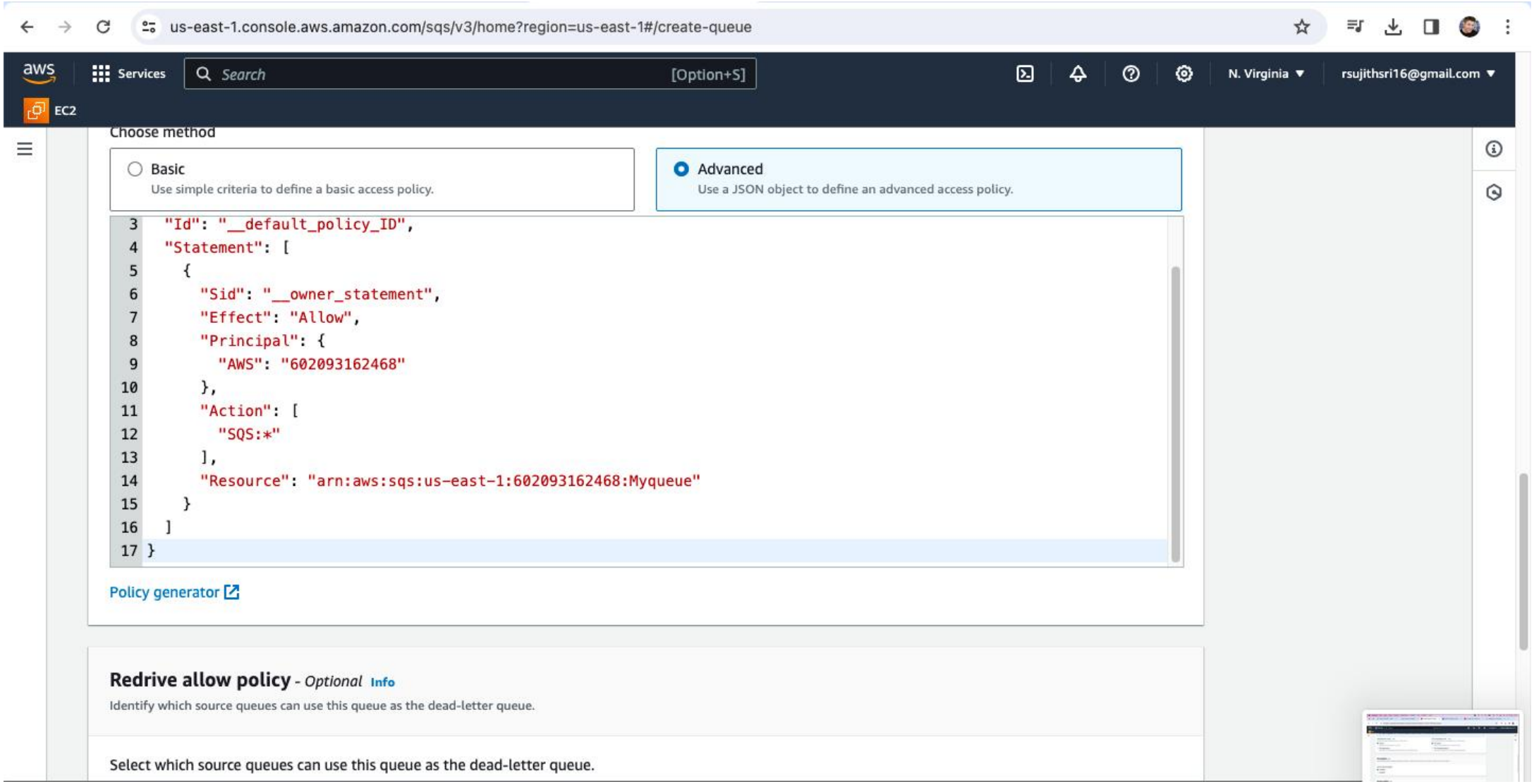
rsujithsri16@gmail.com
EC2
Deduplication scope Info
Specify the scope of deduplication for a FIFO queue.
Queue
Deduplicate all messages in a queue.
Message group
Deduplicate all messages that belong to the same message group.
FIFO throughput limit Info
Specify how to apply the throughput limit on FIFO queue.
Per queue
Apply the throughput limit at the queue level.
Per message group ID
Apply the throughput limit at the message group level.
Encryption Info
Amazon SQS provides in-transit encryption by default. To add at-rest encryption to your queue, enable server-side encryption.
Server-side encryption
Disabled
Enabled
Access policy Info
Define who can access your queue.
Choose method
Basic
Use simple criteria to define a basic access policy.
Advanced
Use a JSON object to define an advanced access policy.


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/create-queue
aws
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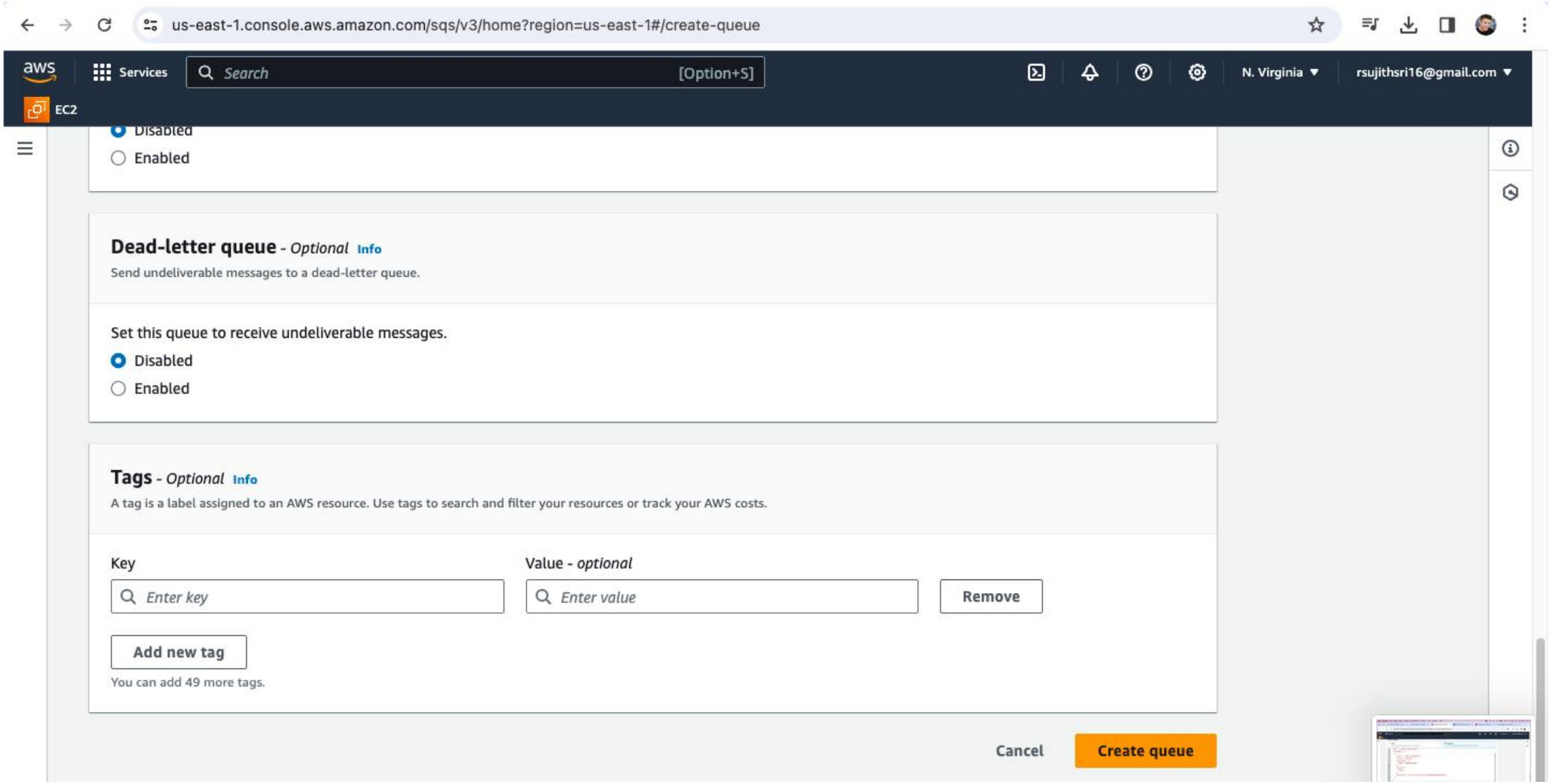
rsujithsri16@gmail.com
EC2
Choose method
Basic
Use simple criteria to define a basic access policy.
Advanced
Use a JSON object to define an advanced access policy.
"Id": "__default_policy_ID",
"Statement": [
{
"Sid": "__owner_statement",
"Effect": "Allow",
"Principal": {
"AWS": "602093162468"
},
"Action": [
"SQS:*"
],
"Resource": "arn:aws:sqs:us-east-1:602093162468:Myqueue"
}
]
}
Policy generator
Redrive allow policy - Optional Info
Identify which source queues can use this queue as the dead-letter queue.
Select which source queues can use this queue as the dead-letter queue.


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/create-queue
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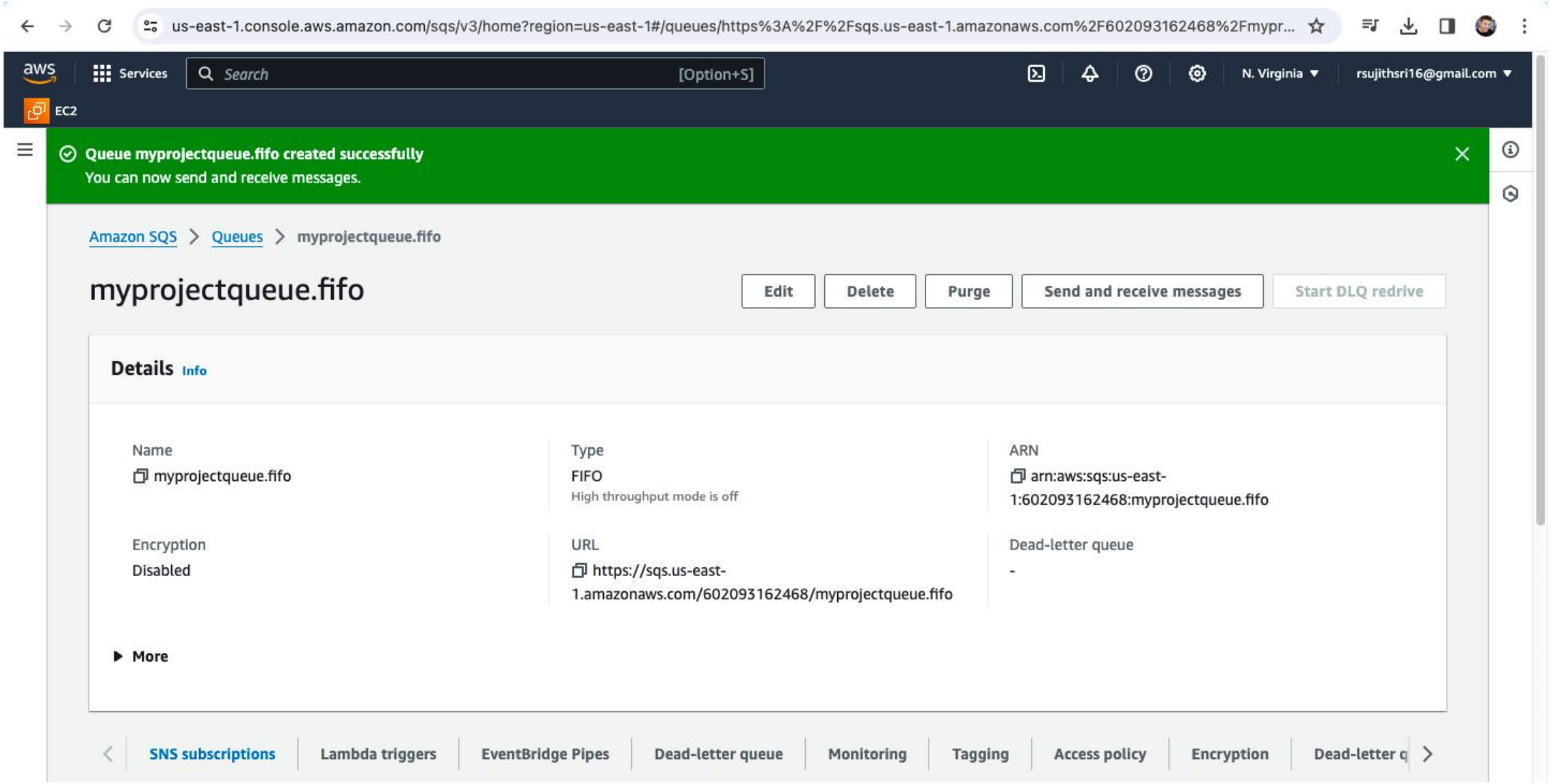
Disabled
Enabled
Dead-letter queue - Optional Info
Send undeliverable messages to a dead-letter queue.
Set this queue to receive undeliverable messages.
Disabled
Enabled
Tags - Optional Info
A tag is a label assigned to an AWS resource. Use tags to search and filter your resources or track your AWS costs.
Key
Value - optional
Enter key
Enter value
Remove
Add new tag
You can add 49 more tags.
Cancel
Create queue


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F602093162468%2Fmypr...
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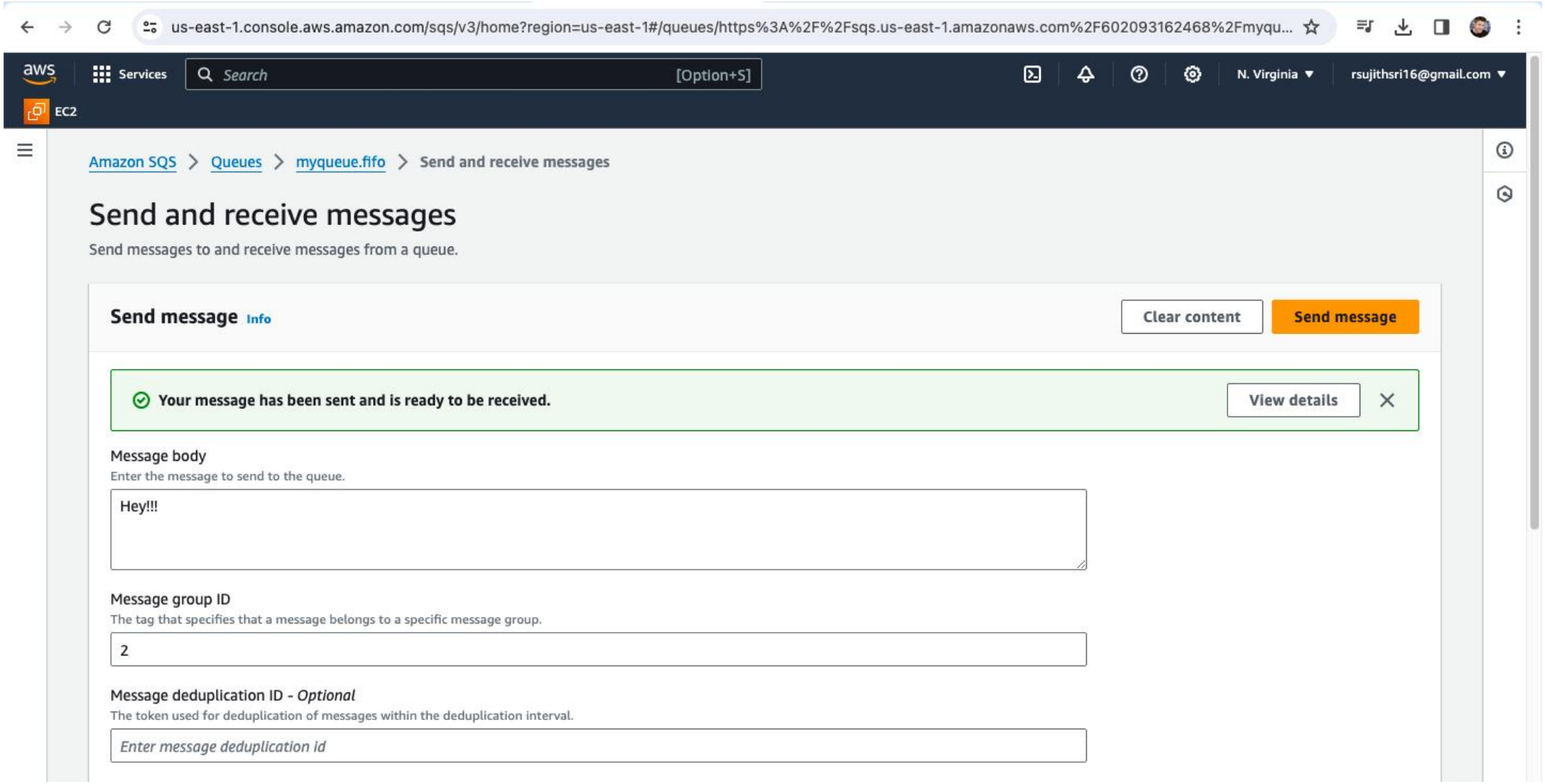
EC2
Queue myprojectqueue.fifo created successfully
You can now send and receive messages.
Amazon SQS > Queues > myprojectqueue.fifo
myprojectqueue.fifo
Edit
Delete
Purge
Send and receive messages
Start DLQ redrive
Details Info
Name
myprojectqueue.fifo
Type
FIFO
High throughput mode is off
ARN
arn:aws:sqs:us-east-1:602093162468:myprojectqueue.fifo
Encryption
Disabled
URL
https://sqs.us-east-1.amazonaws.com/602093162468/myprojectqueue.fifo
Dead-letter queue
-
More
SNS subscriptions
Lambda triggers
EventBridge Pipes
Dead-letter queue
Monitoring
Tagging
Access policy
Encryption
Dead-letter q


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F602093162468%2Fmyqu...
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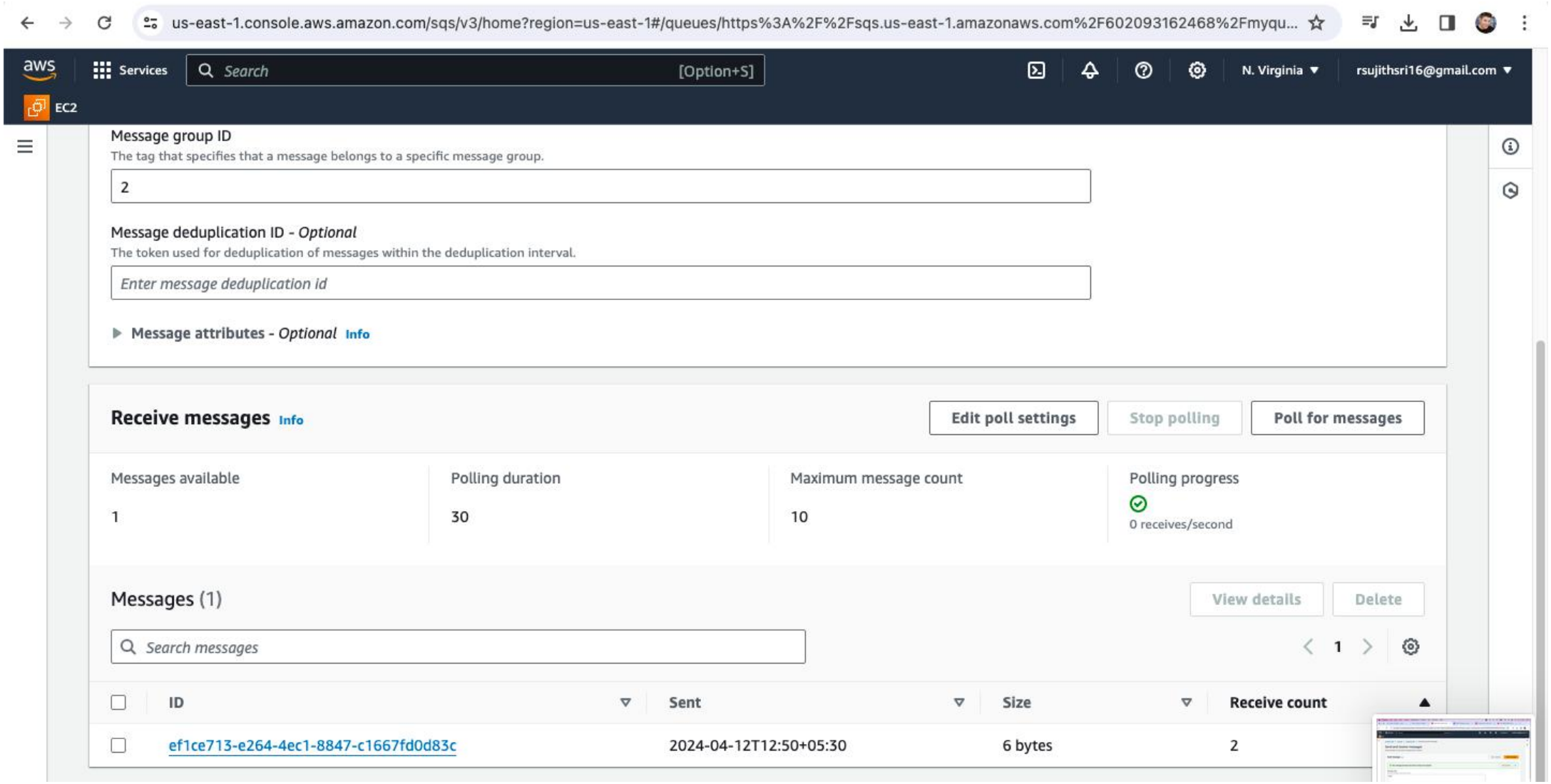
EC2
Amazon SQS > Queues > myqueue.fifo > Send and receive messages
Send and receive messages
Send messages to and receive messages from a queue.
Send message Info
Clear content
Send message
Your message has been sent and is ready to be received.
View details
Message body
Enter the message to send to the queue.
Hey!!!
Message group ID
The tag that specifies that a message belongs to a specific message group.
2
Message deduplication ID - Optional
The token used for deduplication of messages within the deduplication interval.
Enter message deduplication id


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F602093162468%2Fmyqu...
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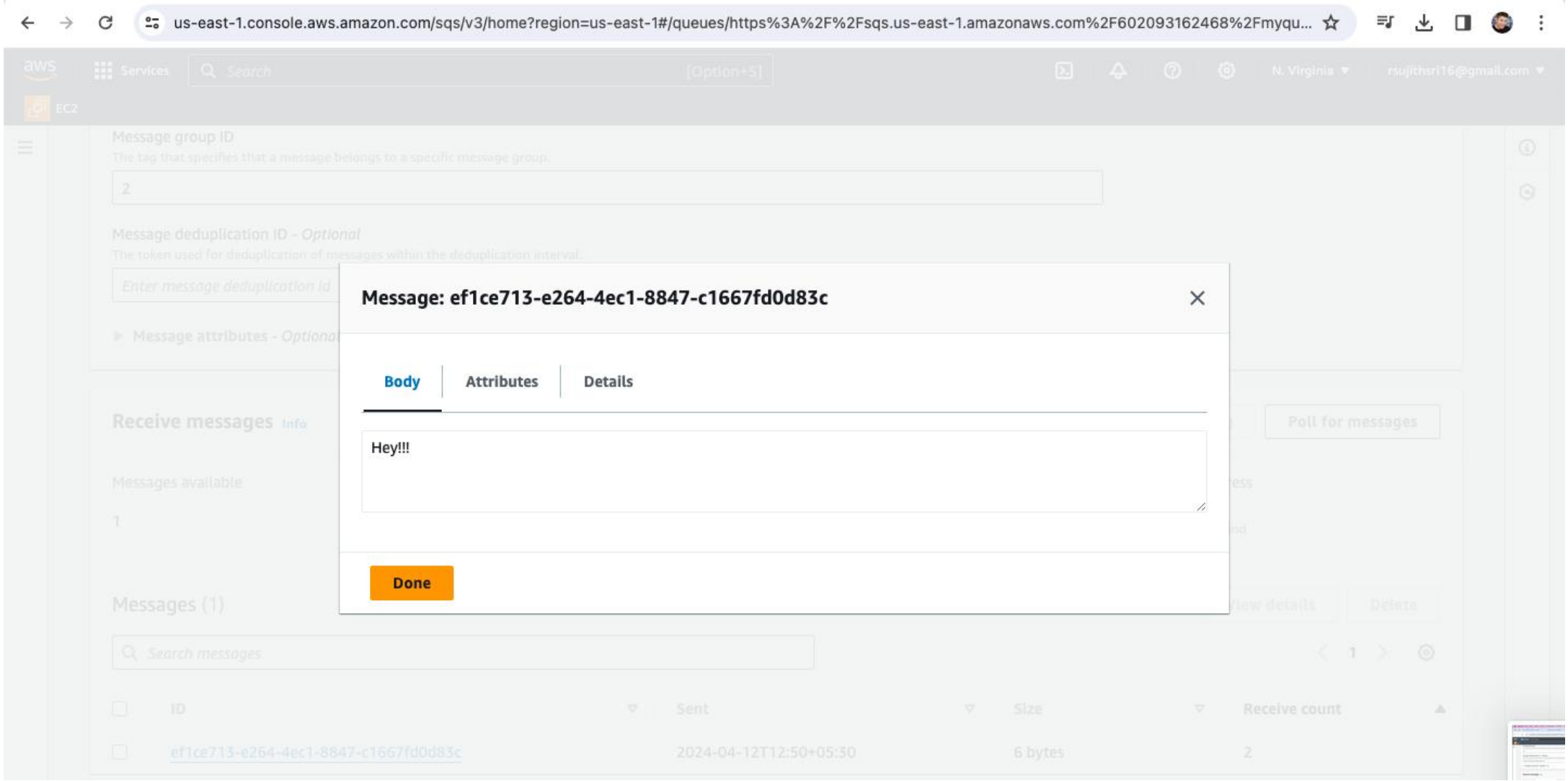
Message group ID
The tag that specifies that a message belongs to a specific message group.
2
Message deduplication ID - Optional
The token used for deduplication of messages within the deduplication interval.
Enter message deduplication id
Message attributes - Optional Info
Receive messages Info
Edit poll settings
Stop polling
Poll for messages
Messages available
1
Polling duration
30
Maximum message count
10
Polling progress
0 receives/second
Messages (1)
View details
Delete
Search messages
1
ID
Sent
Size
Receive count
ef1ce713-e264-4ec1-8847-c1667fd0d83c
2024-04-12T12:50+05:30
6 bytes
2


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F602093162468%2Fmyqu...
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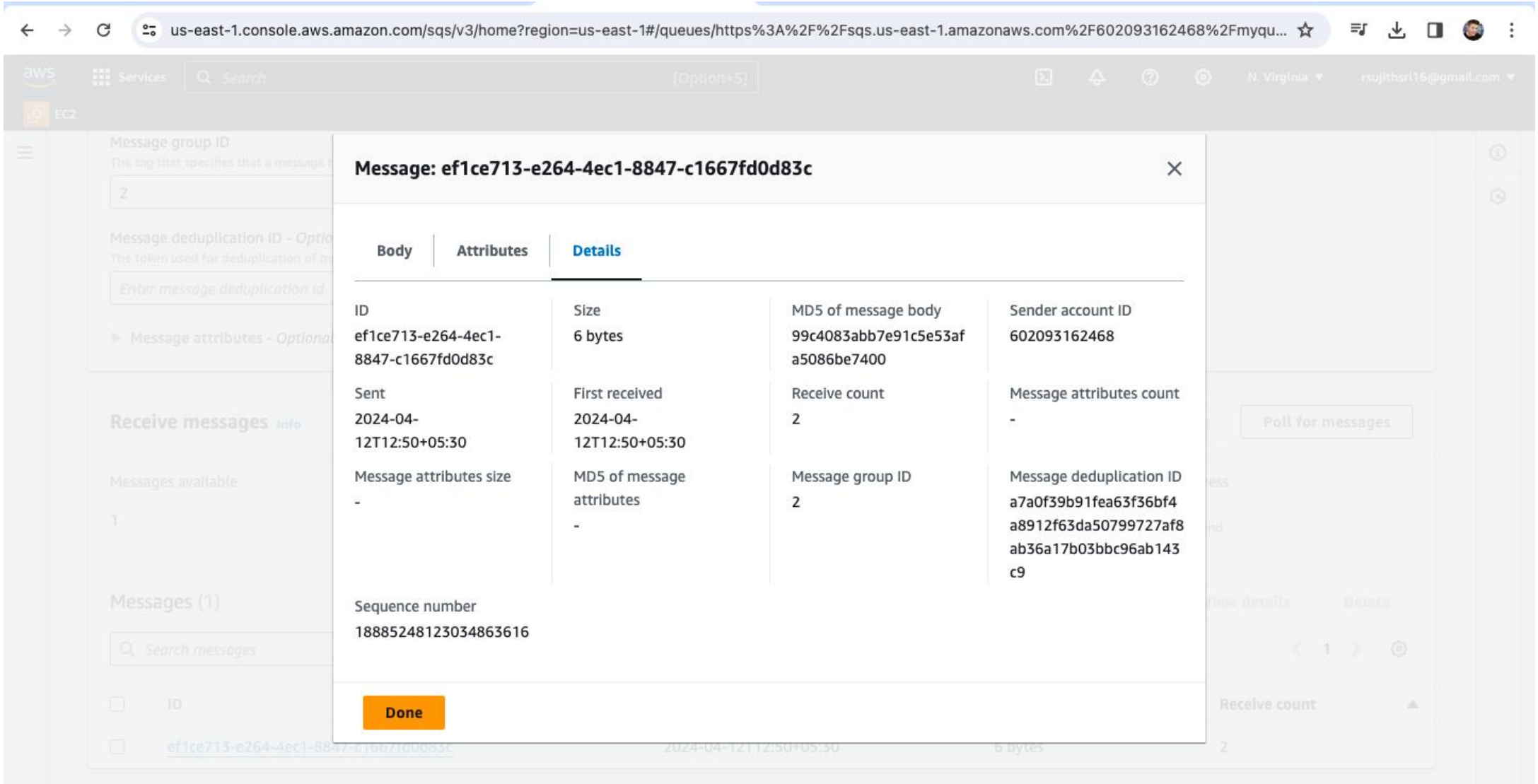
EC2
Message group ID
The tag that specifies that a message belongs to a specific message group.
2
Message deduplication ID - Optional
The token used for deduplication of messages within the deduplication interval.
Enter message deduplication Id
Message attributes - Optional
Receive messages Info
Poll for messages
Messages available
1
Messages (1)
Search messages
ID
Sent
Size
Receive count
ef1ce713-e264-4ec1-8847-c1667fd0d83c
2024-04-12T12:50+05:30
6 bytes
2
Message: ef1ce713-e264-4ec1-8847-c1667fd0d83c
Body
Attributes
Details
Hey!!!
Done


us-east-1.console.aws.amazon.com/sqs/v3/home?region=us-east-1#/queues/https%3A%2F%2Fsqs.us-east-1.amazonaws.com%2F602093162468%2Fmyqu...
Message: ef1ce713-e264-4ec1-8847-c1667fd0d83c
Body
Attributes
Details
ID
ef1ce713-e264-4ec1-8847-c1667fd0d83c
Size
6 bytes
MD5 of message body
99c4083abb7e91c5e53afa5086be7400
Sender account ID
602093162468
Sent
2024-04-12T12:50+05:30
First received
2024-04-12T12:50+05:30
Receive count
2
Message attributes count
-
Message attributes size
-
MD5 of message attributes
-
Message group ID
2
Message deduplication ID
a7a0f39b91fea63f36bf4a8912f63da50799727af8ab36a17b03bbc96ab143c9
Sequence number
18885248123034863616
Done