Amazon Simple Email Service (Amazon SES)

Amazon Simple Email Service (Amazon SES) is a cloud-based email sending service provided by Amazon Web Services (AWS). SES is designed to make it easy for developers to send transactional, promotional, and marketing emails, as well as receive messages and process them.

Key Features of Amazon SES:

1. **Email Sending:** SES enables users to send emails through the AWS Management Console, the AWS SDKs (Software Development Kits), or the SES API.

2. **Scalability:** SES is highly scalable, allowing users to send a virtually unlimited number of emails. It is suitable for both small-scale use cases and large-scale applications.

3. **Deliverability:** Amazon SES is designed to help improve email deliverability by providing features like content filtering, feedback loops, and dedicated IP addresses.

4. **Cost-Effective:** With a pay-as-you-go pricing model, SES is cost-effective for businesses of all sizes. Users pay only for the emails they send, and there are no upfront fees or minimum charges.

5. **Integration with AWS Services:** SES seamlessly integrates with other AWS services like Amazon S3, AWS Lambda, and Amazon Simple Notification Service (SNS), allowing for a comprehensive email solution within the AWS ecosystem.

6. **Content Filtering:** SES provides content filtering options to prevent the delivery of unwanted or harmful content. This helps maintain a positive sending reputation.

7. **Feedback Loops:** SES offers feedback loops to help users monitor their email sending reputation by providing notifications about bounced and complaint events.

8. **Email Receiving:** Apart from sending emails, SES also includes the capability to receive emails. Users can configure SES to receive emails and then process them using AWS Lambda or store them in an Amazon S3 bucket.

Amazon SES is a versatile solution for businesses and developers who need a reliable and scalable platform for sending and receiving emails. It is commonly used in various applications, including transactional emails, marketing campaigns, and communication with customers.

SES documentation
https://docs.aws.amazon.com/ses/latest/dg/request-production-access.html

Process to use SES:

Creating and using an email account with Amazon Simple Email Service (SES) involves several steps. Here's a basic guide to help you set up an email account and use it with AWS SES:

Step 1: Sign into the AWS Management Console

1. Navigate to the [AWS Management Console](#).

2. Sign in with your AWS account credentials.

Step 2: Access Amazon SES

1. In the AWS Management Console, navigate to the "Services" dropdown.

2. Under the "Application Integration" section, select "Simple Email Service (SES)."

Step 3: Verify a New Email Address

1. In the SES dashboard, go to the "Email Addresses" section.

2. Click on the "Verify a New Email Address" button.

3. Enter the email address you want to verify and click "Verify This Email Address."

4. Amazon SES will send a verification email to the specified address. Open the email and click on the verification link to confirm.

Step 4: Send a Test Email

1. In the SES dashboard, go to the "Email Addresses" section.

2. Click on the verified email address.

3. In the "Send a Test Email" section, enter the recipient email address, subject, and body of the test email.

4. Click on the "Send Test Email" button.

Step 5: Set Up SMTP Credentials (Optional)

If you want to use SES for sending emails programmatically via SMTP, you need to set up SMTP credentials:

1. In the SES dashboard, go to the "SMTP Settings" section.

2. Click on "Create My SMTP Credentials."

3. Follow the instructions to create an IAM user and obtain SMTP credentials.

Step 6: Use SES SMTP to Send Email (Optional)

Once you have SMTP credentials, you can configure your email client or application to send emails using SES:

- **SMTP Server:** Use the SES SMTP server for your region (e.g., smtp.us-west-2.amazonaws.com).

- **SMTP Port:** 587 (STARTTLS) or 2587 (TLS).

- **SMTP Username:** Your SES SMTP username.

- **SMTP Password:** Your SES SMTP password.

Note:

- Ensure that your AWS account is out of the SES sandbox to send emails to non-verified email addresses.

- Monitor your SES sending limits and adhere to best practices to maintain deliverability.

Remember that SES is primarily designed for transactional and bulk email sending. If you plan to send marketing emails, consider using the SES features and settings that comply with email marketing regulations.

SES does not use for create and hosting we use WorkMail for creating and hosting email service in AWS:

We can not sue SES for creating an email id or hosting email service for that purpose we use WorkMail. Amazon SES (Simple Email Service) is primarily designed for sending emails, not for creating or hosting email accounts. SES allows you to send transactional, promotional, and marketing emails, but it doesn't provide the infrastructure for creating and managing email accounts with inboxes.

If you need email hosting services, you might want to consider other AWS services or external email hosting providers. Amazon WorkMail is an AWS service that provides email and calendaring functionality. It allows you to set up and manage email accounts for your organization.

Here's a brief overview of Amazon WorkMail:

1. **Sign into AWS Management Console:**

   - Navigate to the AWS Management Console.

   - Go to "Services" and select "WorkMail."

2. **Create an organization:**

   - In the WorkMail dashboard, choose "Quick Setup" to create a new organization.

   - Enter your organization details.

3. **Create Users and Email Accounts:**

   - After creating the organization, you can add users and create email accounts for them.

4. **Configure Email Clients:**

   - Once the email accounts are set up, users can configure their email clients (such as Outlook, Thunderbird, etc.) to access their email.

It's important to note that while SES is suitable for sending emails, especially in a programmatic and automated way, for managing and hosting email accounts, services like Amazon WorkMail or other dedicated email hosting providers would be more appropriate.

Open SES from console

If we choose verified by email

Create identity

A *verified 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.

Email address

rajivsiddiqui21@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**

If we choose verified by domain

Create identity

A *verified 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.

Domain

rajivsiddiqui.com

Domain name can contain up to 253 alphanumeric characters.

☐ 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.

☑ Use a custom MAIL FROM domain
Configuring a custom MAIL FROM domain for messages sent from this identity enables the MAIL FROM address to align with the From address. Domain alignment must be achieved in order to be DMARC compliant.

Messages you send through SES use a subdomain of amazonses.com as the default MAIL FROM domain. Setting the MAIL FROM to a domain you own enables you to comply with Domain-based Message Authentication, Reporting and Conformance (DMARC).

MAIL FROM domain

Enter a subdomain   .rajivsiddiqui.com

The MAIL FROM domain must be a subdomain of the verified identity from which you're sending.

Behavior on MX failure
Choose which action Amazon SES should take if it cannot detect the required MX record at the time of sending.

- ● Use default MAIL FROM domain
- ○ Reject message

Publish DNS records to Route53
Amazon SES will automatically publish the required records to your domain's DNS settings in Route53 if your domain is registered.
- ☑ Enabled

Verifying your domain

DKIM-based domain verification

DomainKeys Identified Mail (DKIM) is an email authentication method that Amazon SES uses to verify domain ownership and that receiving mail servers use to validate email authenticity. You must configure DKIM as part of the domain verification process.

Configuring DKIM

Following identity creation, Amazon SES will provide a set of DNS records. These records must be published to your domain's DNS server in order to successfully configure DKIM and verify ownership of your domain. For more information, see Verifying a domain with Amazon SES ↗.

ⓘ If your domain is registered with **Amazon Route 53,** Amazon SES will automatically update your domain's DNS server with the necessary records. This can be disabled by expanding the **Advanced DKIM settings** and unchecking **Publish DNS records to Route53** in the **Easy DKIM** selection.

▼ Advanced DKIM settings

Identity type

- ● Easy DKIM
  To set up Easy DKIM, you have to modify the DNS settings for your domain.
- ○ Provide DKIM authentication token (BYODKIM)
  Configure DKIM for this domain by providing your own private key.

DKIM signing key length
Signing key length is bits required in sign-in algorithm. DKIM 2048 is the recommended way to enhance security.
- ○ RSA_2048_BIT
- ● RSA_1024_BIT

Publish DNS records to Route53
Amazon SES will automatically publish the required CNAME records to your domain's DNS settings in Route53 if your domain is registered.
- ☑ Enabled

DKIM signatures
DKIM signatures help validate that a message was not forged or altered in transit. Disabling this feature is not recommended.
- ☑ Enabled

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.

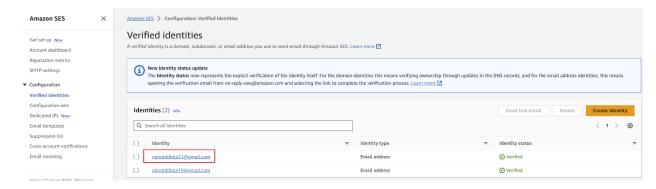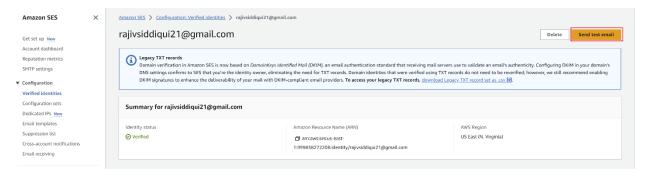Cancel   **Create identity**

After clicking Create identity if you choose verified by email then you will get and email to that email id so just go to that email id and accept that email which you get from SES.So, this email is now verified so you can use this email

But if you verified by domain then it will take 24-72 hours and you need to make sure one good website is showing to that domain, and you also need to request AWS to move your domain form sandbox then you can send any email from that domain.
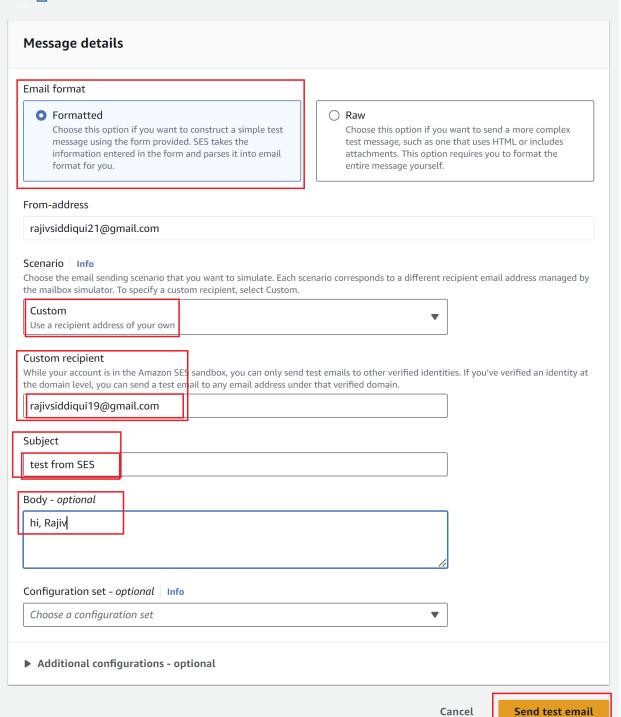
Send email from AWS SES website

Next
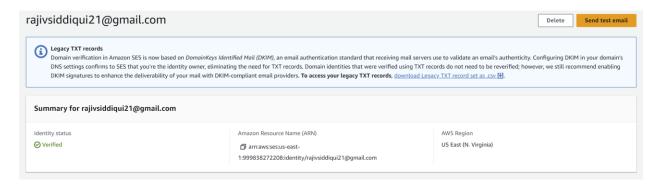

Next

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 ⬈
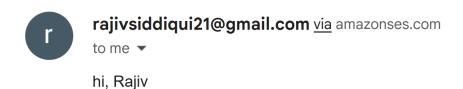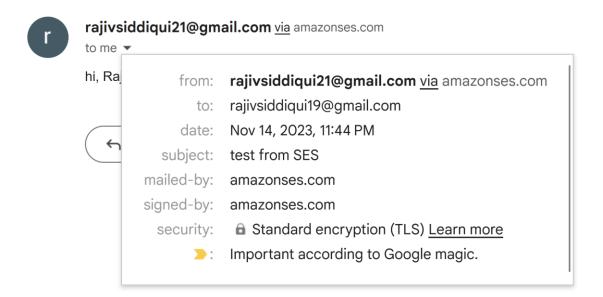

Message details

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

    rajivsiddiqui21@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.

    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.

    rajivsiddiqui19@gmail.com

Subject

    test from SES

Body - *optional*

    hi, Rajiv

Configuration set - *optional*   Info

    Choose a configuration set   ▼

▶ **Additional configurations - optional**

Cancel   **Send test email**
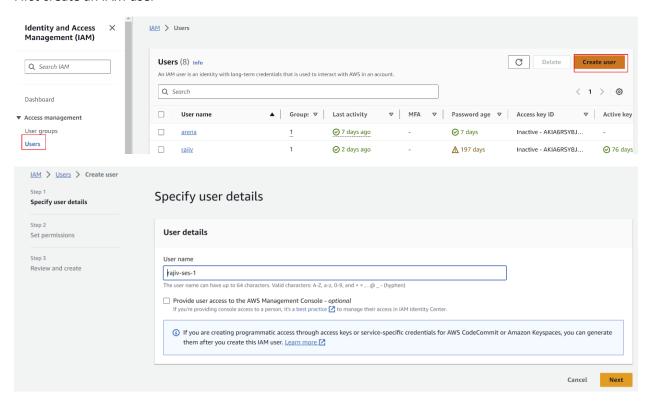
Now go to email and check

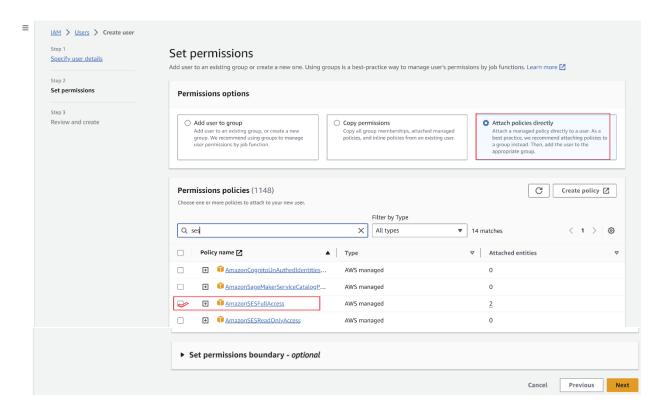## Now we can setup or domain or email id in magnetic mailer

For testing and sending email by any website we can use the following website and then we need authenticate by few way we can use smtp account or we can create an IAM user account with attach **AmazonSESFullAccess** policy and create a access key and secret access key and put it as below and then we can use and test email from that website.

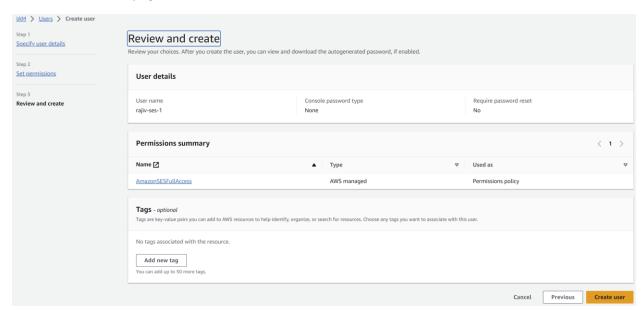## Create a IAM role with access key and secret accesskey

Create IAM role and attached **AmazonSESFullAccess** permission > then create a credentials and we use this credentials which is access key and secret access key use in the magneticmailer.com
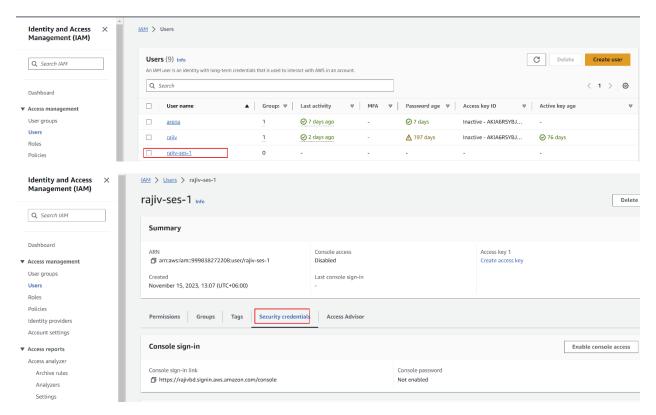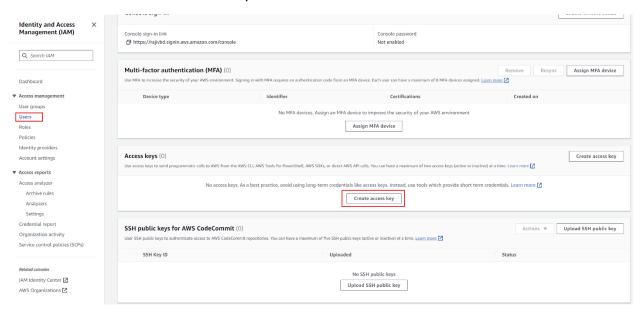
First create an IAM user
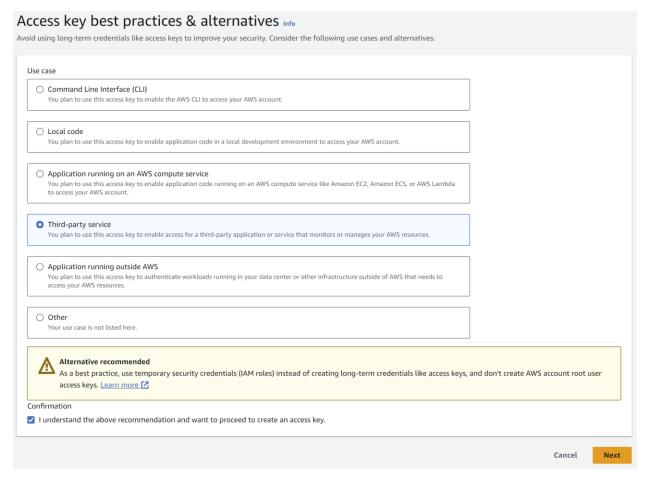
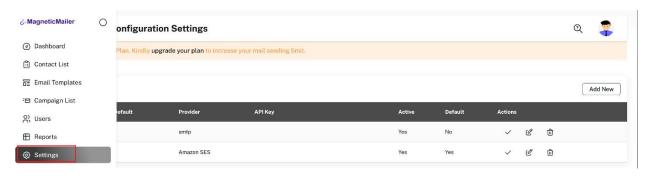Click next then next page click create user button

Now click the user

Scroll own and click Create an access key

Access key best practices & alternatives Info

Avoid using long-term credentials like access keys to improve your security. Consider the following use cases and alternatives.

Use case

○ **Command Line Interface (CLI)**
You plan to use this access key to enable the AWS CLI to access your AWS account.

○ **Local code**
You plan to use this access key to enable application code in a local development environment to access your AWS account.

○ **Application running on an AWS compute service**
You plan to use this access key to enable application code running on an AWS compute service like Amazon EC2, Amazon ECS, or AWS Lambda to access your AWS account.

● **Third-party service**
You plan to use this access key to enable access for a third-party application or service that monitors or manages your AWS resources.

○ **Application running outside AWS**
You plan to use this access key to authenticate workloads running in your data center or other infrastructure outside of AWS that needs to access your AWS resources.

○ **Other**
Your use case is not listed here.

⚠ **Alternative recommended**
As a best practice, use temporary security credentials (IAM roles) instead of creating long-term credentials like access keys, and don't create AWS account root user access keys. Learn more [↗]

Confirmation

☑ I understand the above recommendation and want to proceed to create an access key.

Cancel   **Next**

Now user this access key in magnetic mailer

magneticmailer.com

Edit Configuration Setting

API Provider

Amazon SES	⌄

Kindly add your Amazon(AWS) SES Configuration settings below.
Click here to Refer the Step-by-Step Setup Guide.

Access Key :

Put your access key here

Secret Key :

Put your secret access here

Region :

us-east-1   put region name where you create SES

From Email id :

no-reply@ your-domain-name-.com

From Name:

Name you want to show in your email

Reply To Email id:

your-email-id

◉ Active   ○ Deactivate

Submit

After setup we can test an email

Campaign Configuration Settings

Add New

S.No	Make Default	Provider	API Key	Active	Default	Actions
1	○	smtp		Yes	No	✓ ✎ 🗑
2	◉	Amazon SES	AKIAS4ONLJTH7BXW7AJQ	Yes	Yes	✓ ✎ 🗑

Campaign Configuration Settings

S.No	Make Default	Provider	API Key	Activ
1	○	smtp		Yes
2	◉	Amazon SES		Yes

Test your Settings   ✕

To Email ID :

rajiv@bu.edu

Subject :

Test email send from rajiv

Mail Content :*

Hi,

This is a simple email validation from rajiv.
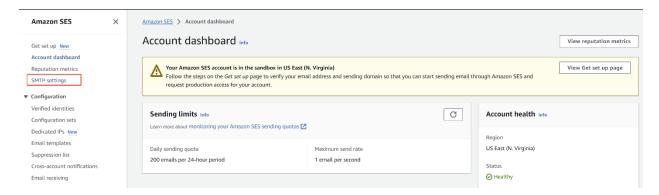
Send Test Mail

We also create an SMTP user credentials for use it in our coding

We can create and mage SMTP account from here and also we get SMTP server endpoint and port we need to use