Send a Sample Email in PHP Using SES

GOAL: send an email to the verified address using aws-SES with php

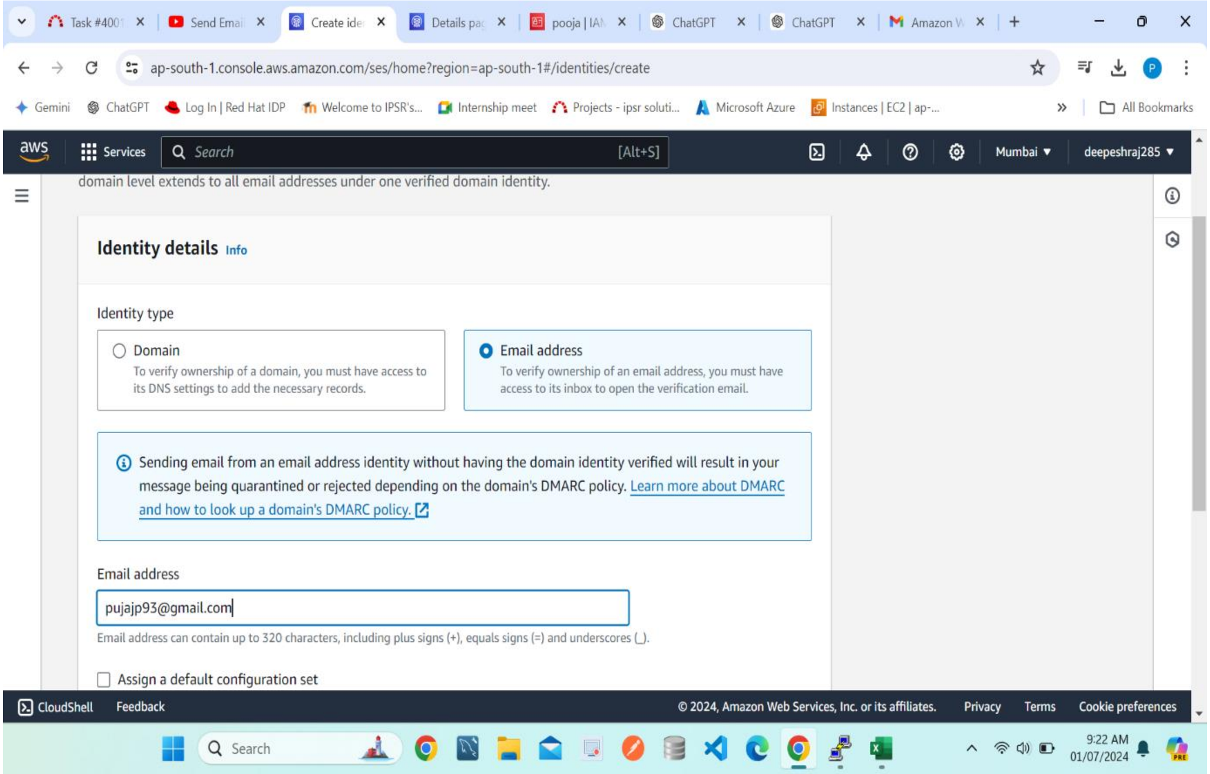
1. verify the recipient address inside simple email service [SES].

2. Get your smpt credentials (from SES console)

3. install php and other required dependencies in your machine

4. try to send mail by creating and executing a php file [refer aws docs for the information about the file and its contents]

1. Launch AWS Linux instance and configure necessary storage group such as inbound rule SMTP (25) and outbound rule port no 587 (SMTP with TLS).
2. Verify the Recipient and sender email Address in Simple Email Service (SES)
   - open the Amazon SES console
   - In the left navigation pane, choose Identity Management and create identity
   - Then Click on the email id and Verify a New Email Address button.
   - Amazon SES will send a verification email to the specified address. Open the email and click on the verification link.


ap-south-1.console.aws.amazon.com/ses/home?region=ap-south-1#/identities/create
Services
Search
[Alt+S]
Mumbai ▼
deepeshraj285 ▼
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
9:22 AM
01/07/2024

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.

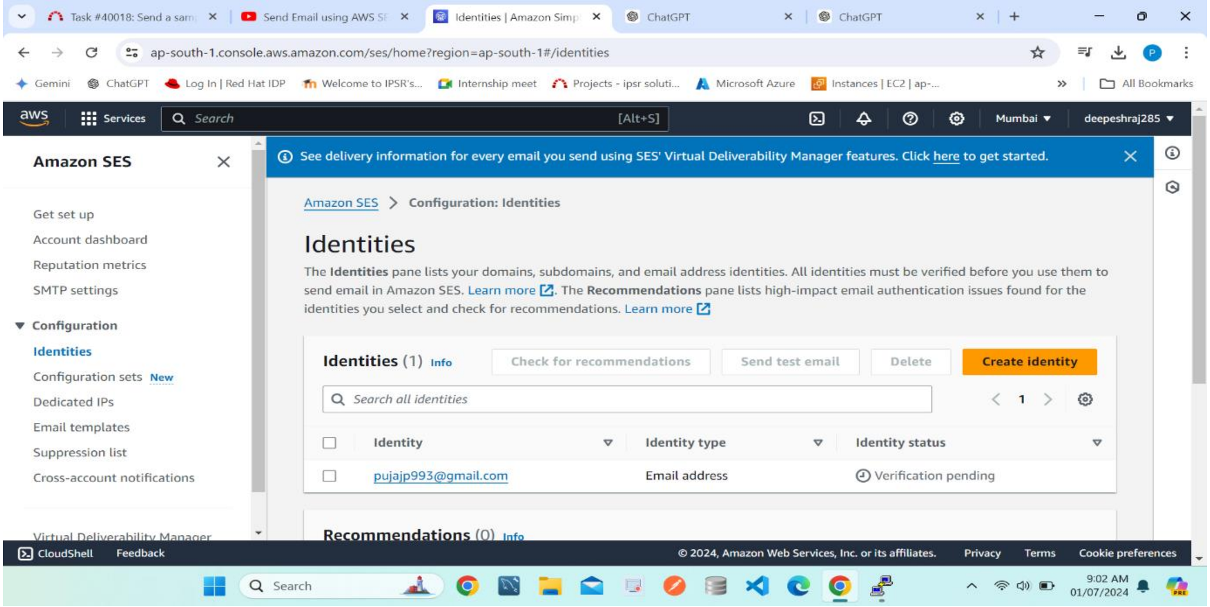
Email address

pujajp93@gmail.com

Email address can contain up to 320 characters, including plus signs (+), equals signs (=) and underscores (_).

□ Assign a default configuration set

Identity Created



See delivery information for every email you send using SES' Virtual Deliverability Manager features. Click here to get started.

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

□	Identity	Identity type	Identity status
□	pujajp993@gmail.com	Email address	Verification pending

Recommendations (0) Info

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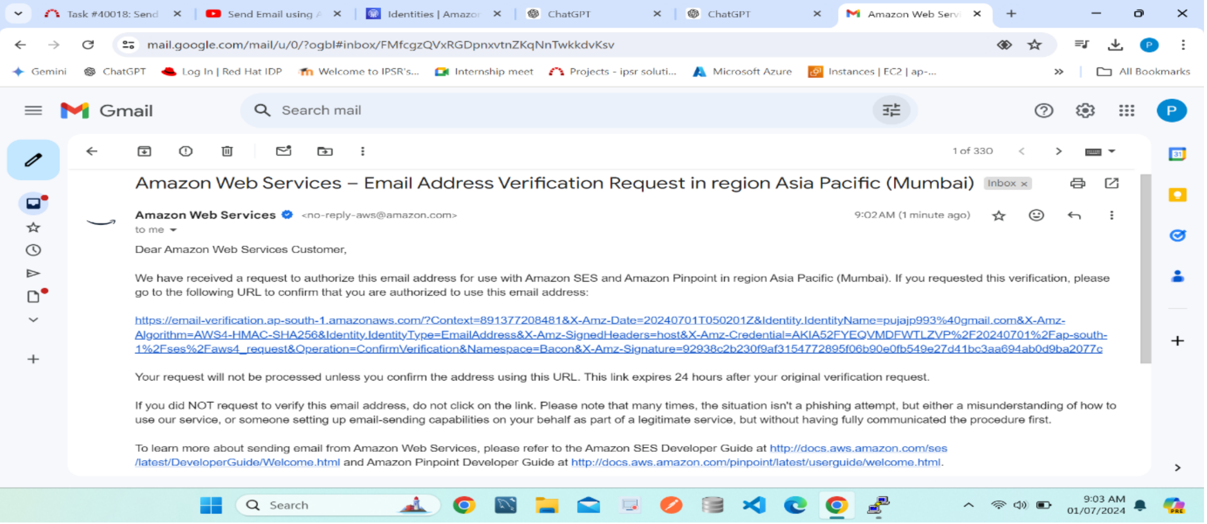
Verify the email



mail.google.com/mail/u/0/?ogbl#inbox/FMfcgzQVxRGDpnxvtnZKqNnTwkkdvKsv
Gmail
Search mail
1 of 330
Inbox

Amazon Web Services – Email Address Verification Request in region Asia Pacific (Mumbai)

Amazon Web Services <no-reply-aws@amazon.com> 9:02 AM (1 minute ago)
to me

Dear Amazon Web Services Customer,

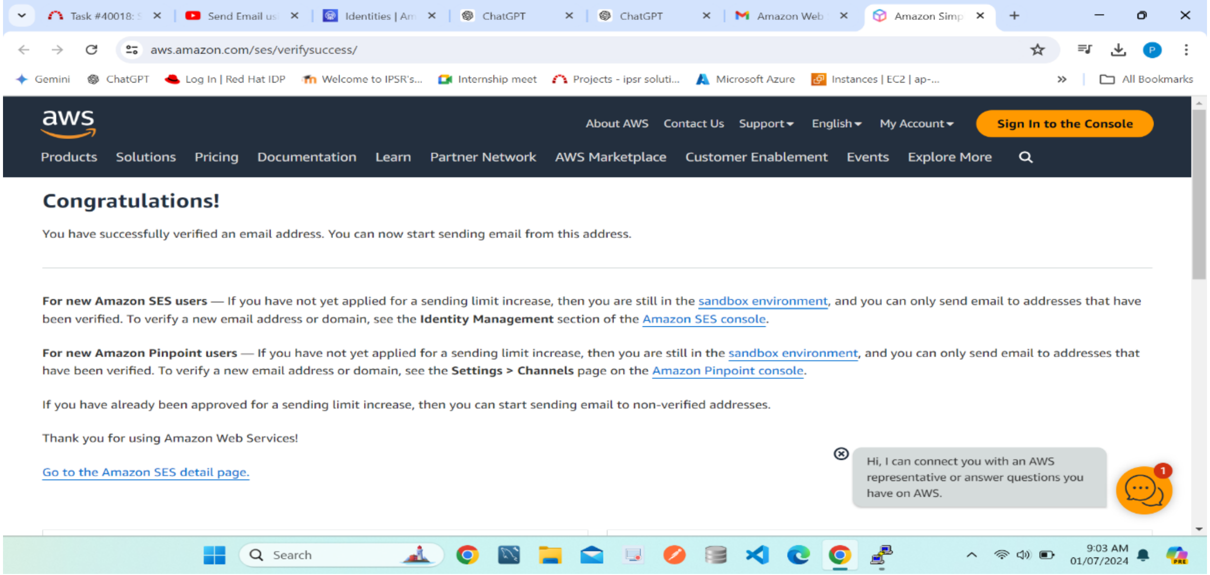
We have received a request to authorize this email address for use with Amazon SES and Amazon Pinpoint in region Asia Pacific (Mumbai). If you requested this verification, please go to the following URL to confirm that you are authorized to use this email address:

https://email-verification.ap-south-1.amazonaws.com/?Context=891377208481&X-Amz-Date=20240701T050201Z&Identity.IdentityName=pujajp993%40gmail.com&X-Amz-Algorithm=AWS4-HMAC-SHA256&Identity.IdentityType=EmailAddress&X-Amz-SignedHeaders=host&X-Amz-Credential=AKIA52FYEQVMDFWTLZVP%2F20240701%2Fap-south-1%2Fses%2Faws4_request&Operation=ConfirmVerification&Namespace=Bacon&X-Amz-Signature=92938c2b230f9af3154772895f06b90e0fb549e27d41bc3aa694ab0d9ba2077c

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.



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.

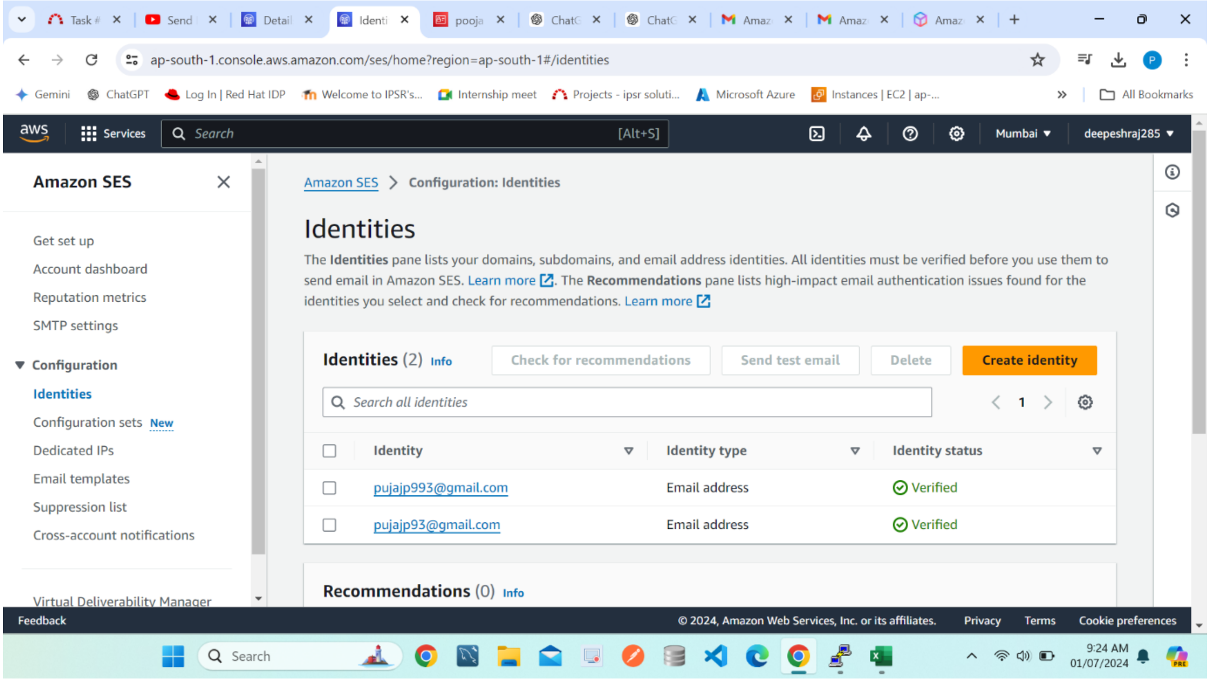
If you have already been approved for a sending limit increase, then you can start sending email to non-verified addresses.

Thank you for using Amazon Web Services!

Go to the Amazon SES detail page.

Hi, I can connect you with an AWS representative or answer questions you have on AWS.

Sender and Receiver email id verified



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 (2) Info

	Identity	Identity type	Identity status
□	pujajp993@gmail.com	Email address	✓ Verified
□	pujajp93@gmail.com	Email address	✓ Verified

Recommendations (0) Info

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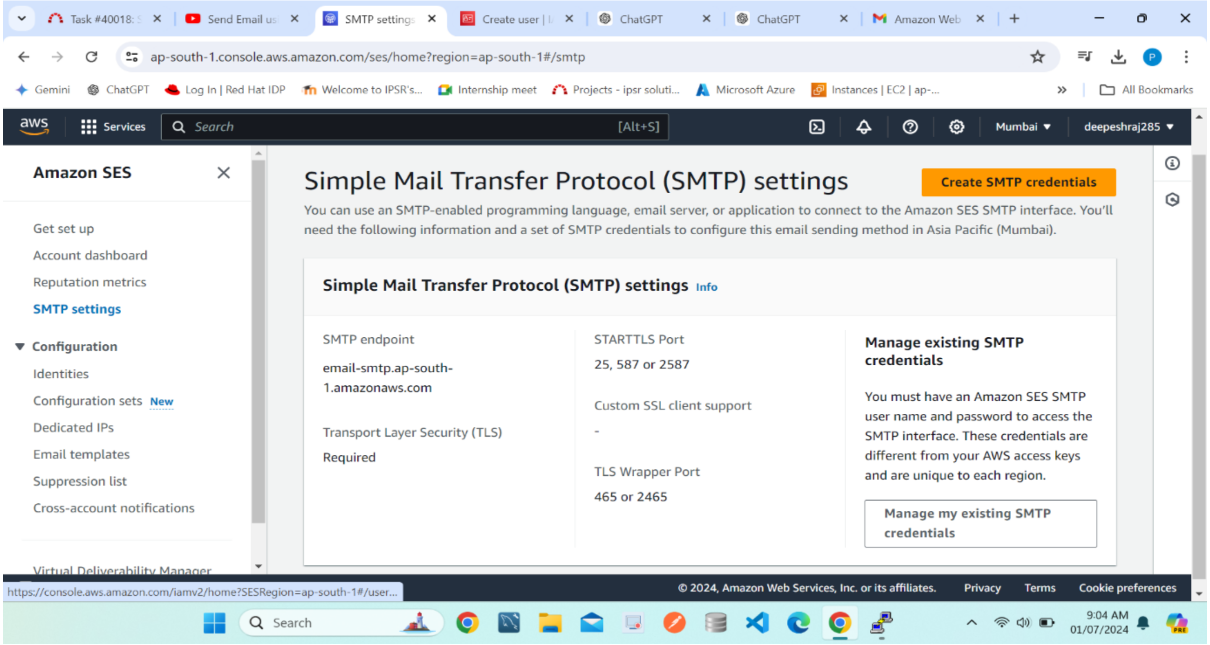
3. Get Your SMTP Credentials from SES Console
   - Open the Amazon SES console
   - In the left navigation pane, choose SMTP Settings.
   - Click on Create My SMTP Credentials.
   - Follow the on-screen instructions to create an IAM user with SES-specific permissions. Note down the SMTP username and password provided.



Simple Mail Transfer Protocol (SMTP) settings

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 Asia Pacific (Mumbai).

Simple Mail Transfer Protocol (SMTP) settings Info

SMTP endpoint: email-smtp.ap-south-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.

https://console.aws.amazon.com/iamv2/home?SESRegion=ap-south-1#/user...

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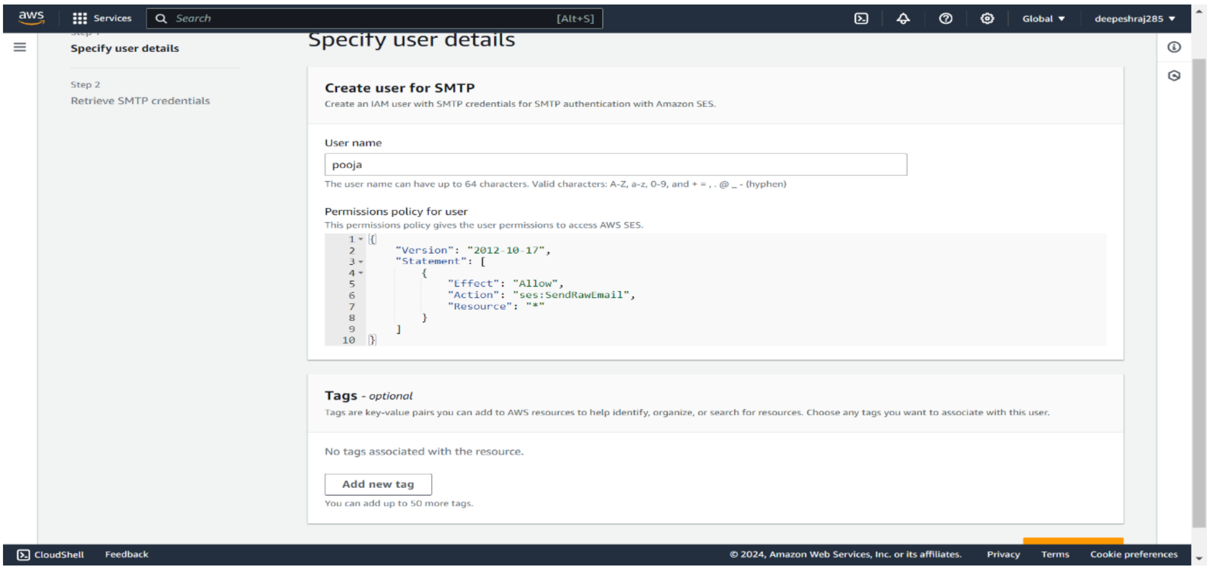
Create an IAM user with SES-specific permissions



Specify user details

Create user for SMTP

Create an IAM user with SMTP credentials for SMTP authentication with Amazon SES.

User name

pooja

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.

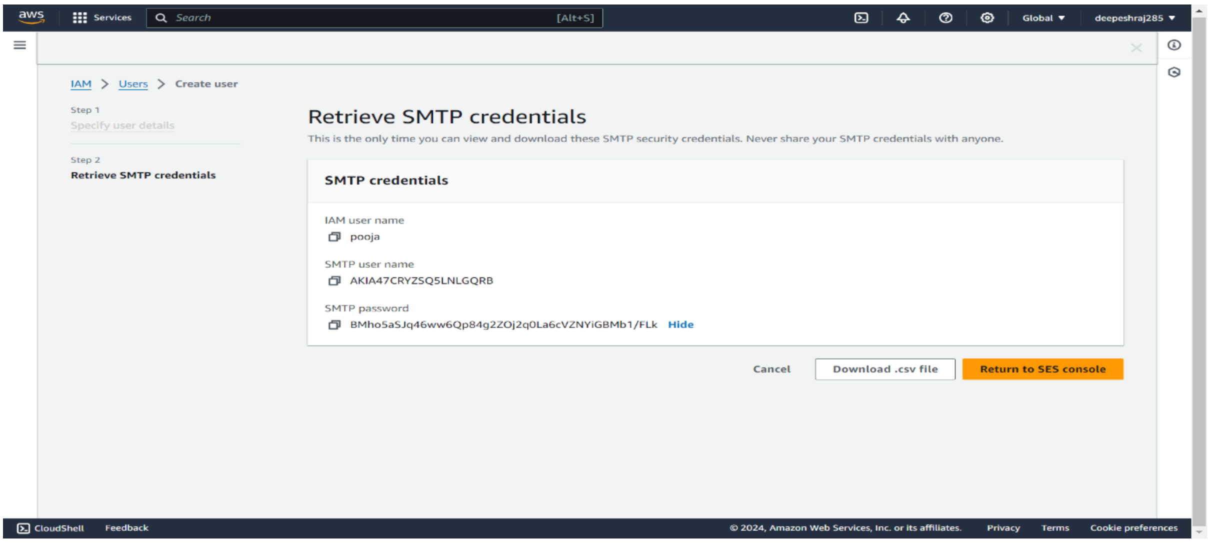
```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "ses:SendRawEmail",
            "Resource": "*"
        }
    ]
}
```

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.

You can add up to 50 more tags.



Retrieve SMTP credentials

This is the only time you can view and download these SMTP security credentials. Never share your SMTP credentials with anyone.

SMTP credentials

IAM user name

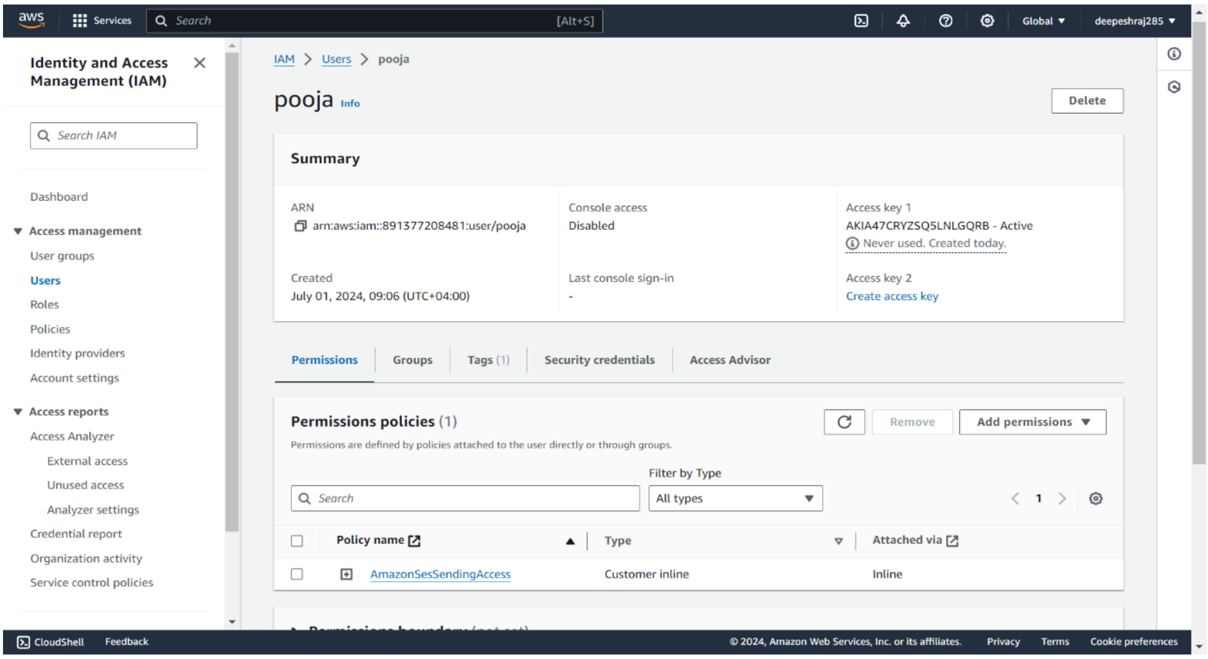
pooja

SMTP user name

AKIA47CRYZSQ5LNLGQRB

SMTP password

BMho5aSJq46ww6Qp84g2ZOj2q0La6cVZNYiGBMb1/FLk



pooja

Summary

ARN

arn:aws:iam::891377208481:user/pooja

Created

July 01, 2024, 09:06 (UTC+04:00)

Console access

Disabled

Last console sign-in

-

Access key 1

AKIA47CRYZSQ5LNLGQRB - Active

Never used. Created today.

Access key 2

Create access key

Permissions policies (1)

Permissions are defined by policies attached to the user directly or through groups.

Filter by Type

All types

□	Policy name	Type	Attached via
□	AmazonSesSendingAccess	Customer inline	Inline

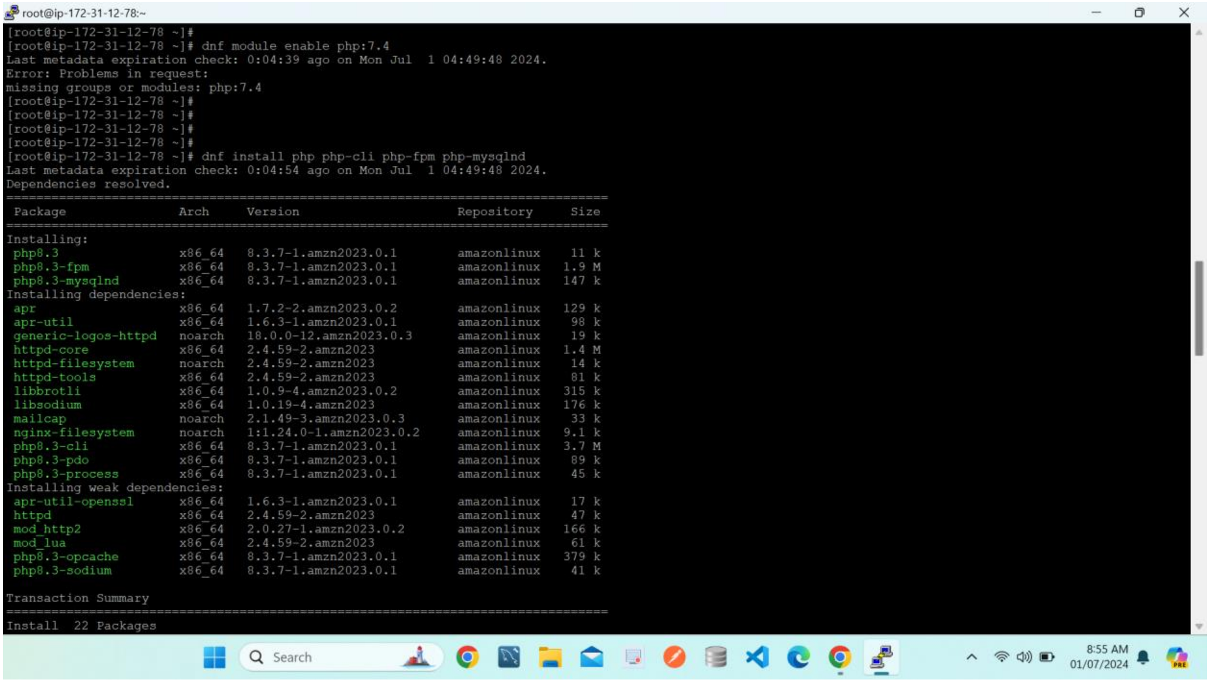
4. Install PHP and Other Required Dependencies on Your Machine

- Enable the PHP 7.4 module:

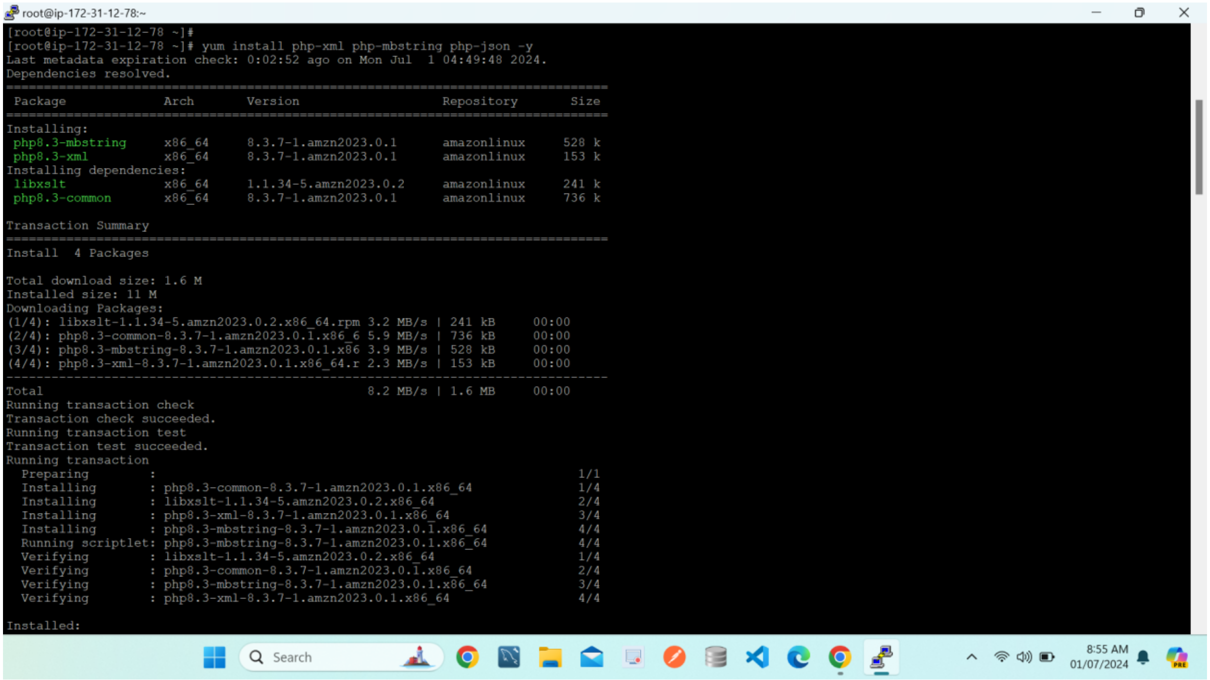
```
# dnf module enable php:7.4
```

- Install PHP 7.4:

```
# dnf install php php-cli php-fpm php-mysqlnd
```



```
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# dnf module enable php:7.4
Last metadata expiration check: 0:04:39 ago on Mon Jul  1 04:49:48 2024.
Error: Problems in request:
missing groups or modules: php:7.4
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# dnf install php php-cli php-fpm php-mysqlnd
Last metadata expiration check: 0:04:54 ago on Mon Jul  1 04:49:48 2024.
Dependencies resolved.
================================================================================
 Package               Arch     Version                     Repository     Size
================================================================================
Installing:
 php8.3                x86_64   8.3.7-1.amzn2023.0.1        amazonlinux    11 k
 php8.3-fpm            x86_64   8.3.7-1.amzn2023.0.1        amazonlinux   1.9 M
 php8.3-mysqlnd        x86_64   8.3.7-1.amzn2023.0.1        amazonlinux   147 k
Installing dependencies:
 apr                   x86_64   1.7.2-2.amzn2023.0.2        amazonlinux   129 k
 apr-util              x86_64   1.6.3-1.amzn2023.0.1        amazonlinux    98 k
 generic-logos-httpd   noarch   18.0.0-12.amzn2023.0.3      amazonlinux    19 k
 httpd-core            x86_64   2.4.59-2.amzn2023           amazonlinux   1.4 M
 httpd-filesystem      noarch   2.4.59-2.amzn2023           amazonlinux    14 k
 httpd-tools           x86_64   2.4.59-2.amzn2023           amazonlinux    81 k
 libbrotli             x86_64   1.0.9-4.amzn2023.0.2        amazonlinux   315 k
 libsodium             x86_64   1.0.19-4.amzn2023           amazonlinux   176 k
 mailcap               noarch   2.1.49-3.amzn2023.0.3       amazonlinux    33 k
 nginx-filesystem      noarch   1:1.24.0-1.amzn2023.0.2     amazonlinux   9.1 k
 php8.3-cli            x86_64   8.3.7-1.amzn2023.0.1        amazonlinux   3.7 M
 php8.3-pdo            x86_64   8.3.7-1.amzn2023.0.1        amazonlinux    89 k
 php8.3-process        x86_64   8.3.7-1.amzn2023.0.1        amazonlinux    45 k
Installing weak dependencies:
 apr-util-openssl      x86_64   1.6.3-1.amzn2023.0.1        amazonlinux    17 k
 httpd                 x86_64   2.4.59-2.amzn2023           amazonlinux    47 k
 mod_http2             x86_64   2.0.27-1.amzn2023.0.2       amazonlinux   166 k
 mod_lua               x86_64   2.4.59-2.amzn2023           amazonlinux    61 k
 php8.3-opcache        x86_64   8.3.7-1.amzn2023.0.1        amazonlinux   379 k
 php8.3-sodium         x86_64   8.3.7-1.amzn2023.0.1        amazonlinux    41 k

Transaction Summary
================================================================================
Install  22 Packages
```



```
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# yum install php-xml php-mbstring php-json -y
Last metadata expiration check: 0:02:52 ago on Mon Jul  1 04:49:48 2024.
Dependencies resolved.
================================================================================
 Package             Arch       Version                   Repository       Size
================================================================================
Installing:
 php8.3-mbstring     x86_64     8.3.7-1.amzn2023.0.1      amazonlinux     528 k
 php8.3-xml          x86_64     8.3.7-1.amzn2023.0.1      amazonlinux     153 k
Installing dependencies:
 libxslt             x86_64     1.1.34-5.amzn2023.0.2     amazonlinux     241 k
 php8.3-common       x86_64     8.3.7-1.amzn2023.0.1      amazonlinux     736 k

Transaction Summary
================================================================================
Install  4 Packages

Total download size: 1.6 M
Installed size: 11 M
Downloading Packages:
(1/4): libxslt-1.1.34-5.amzn2023.0.2.x86_64.rpm 3.2 MB/s | 241 kB     00:00
(2/4): php8.3-common-8.3.7-1.amzn2023.0.1.x86_6 5.9 MB/s | 736 kB     00:00
(3/4): php8.3-mbstring-8.3.7-1.amzn2023.0.1.x86 3.9 MB/s | 528 kB     00:00
(4/4): php8.3-xml-8.3.7-1.amzn2023.0.1.x86_64.r 2.3 MB/s | 153 kB     00:00
--------------------------------------------------------------------------------
Total                                           8.2 MB/s | 1.6 MB     00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Installing       : php8.3-common-8.3.7-1.amzn2023.0.1.x86_64              1/4
  Installing       : libxslt-1.1.34-5.amzn2023.0.2.x86_64                   2/4
  Installing       : php8.3-xml-8.3.7-1.amzn2023.0.1.x86_64                 3/4
  Installing       : php8.3-mbstring-8.3.7-1.amzn2023.0.1.x86_64            4/4
  Running scriptlet: php8.3-mbstring-8.3.7-1.amzn2023.0.1.x86_64            4/4
  Verifying        : libxslt-1.1.34-5.amzn2023.0.2.x86_64                   1/4
  Verifying        : php8.3-common-8.3.7-1.amzn2023.0.1.x86_64              2/4
  Verifying        : php8.3-mbstring-8.3.7-1.amzn2023.0.1.x86_64            3/4
  Verifying        : php8.3-xml-8.3.7-1.amzn2023.0.1.x86_64                 4/4

Installed:
```

5. Install PHPMailer via Compose

   - Download the Composer installer script:

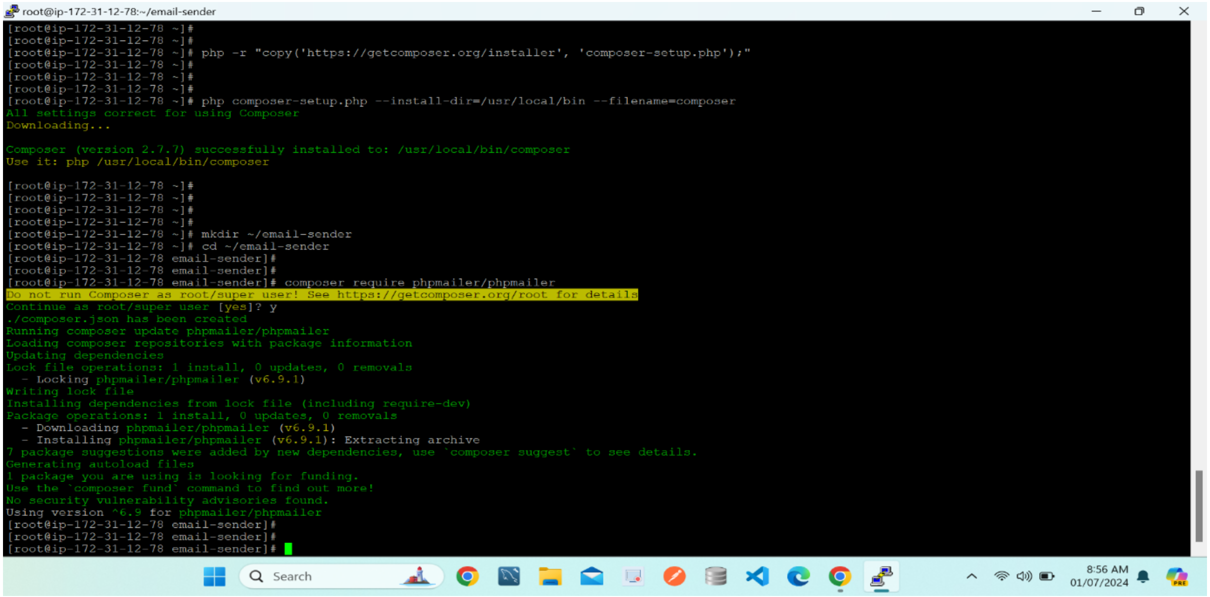
```
php -r "copy('https://getcomposer.org/installer', 'composer-setup.php');"
```

- Run the installer script to install Composer in /usr/local/bin with the filename composer

  # php composer-setup.php --install-dir=/usr/local/bin --filename=composer

- Then, install PHPMailer

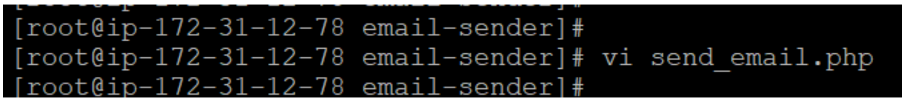
  # composer require phpmailer/phpmailer



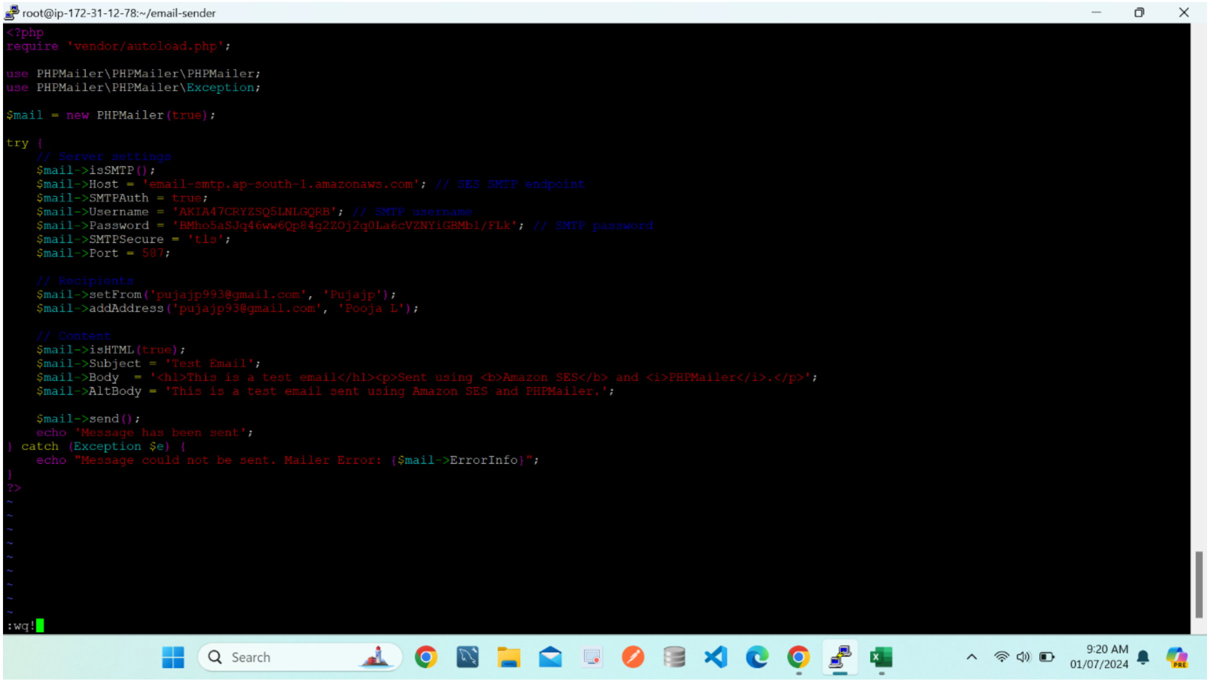
```
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# php -r "copy('https://getcomposer.org/installer', 'composer-setup.php');"
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# php composer-setup.php --install-dir=/usr/local/bin --filename=composer
All settings correct for using Composer
Downloading...

Composer (version 2.7.7) successfully installed to: /usr/local/bin/composer
Use it: php /usr/local/bin/composer

[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]#
[root@ip-172-31-12-78 ~]# mkdir ~/email-sender
[root@ip-172-31-12-78 ~]# cd ~/email-sender
[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]# composer require phpmailer/phpmailer
Do not run Composer as root/super user! See https://getcomposer.org/root for details
Continue as root/super user [yes]? y
./composer.json has been created
Running composer update phpmailer/phpmailer
Loading composer repositories with package information
Updating dependencies
Lock file operations: 1 install, 0 updates, 0 removals
  - Locking phpmailer/phpmailer (v6.9.1)
Writing lock file
Installing dependencies from lock file (including require-dev)
Package operations: 1 install, 0 updates, 0 removals
  - Downloading phpmailer/phpmailer (v6.9.1)
  - Installing phpmailer/phpmailer (v6.9.1): Extracting archive
7 package suggestions were added by new dependencies, use `composer suggest` to see details.
Generating autoload files
1 package you are using is looking for funding.
Use the `composer fund` command to find out more!
No security vulnerability advisories found.
Using version ^6.9 for phpmailer/phpmailer
[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]#
```

6. Create and execute a PHP File to Send Email

Create a PHP file send_email.php in the email-sender directory and add the necessary content to email.



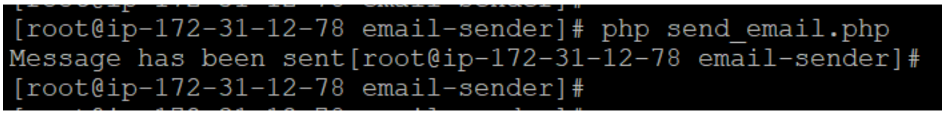
```
[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]# vi send_email.php
[root@ip-172-31-12-78 email-sender]#
```



```
<?php
require 'vendor/autoload.php';

use PHPMailer\PHPMailer\PHPMailer;
use PHPMailer\PHPMailer\Exception;

$mail = new PHPMailer(true);

try {
    // Server settings
    $mail->isSMTP();
    $mail->Host = 'email-smtp.ap-south-1.amazonaws.com'; // SES SMTP endpoint
    $mail->SMTPAuth = true;
    $mail->Username = 'AKIA47CRYZSQ5LNLGQRB'; // SMTP username
    $mail->Password = 'BMho5aSJq46ww6Qp84g2ZOj2q0La6cVZNYiGBMbl/FLk'; // SMTP password
    $mail->SMTPSecure = 'tls';
    $mail->Port = 587;

    // Recipients
    $mail->setFrom('pujajp993@gmail.com', 'Pujajp');
    $mail->addAddress('pujajp93@gmail.com', 'Pooja L');

    // Content
    $mail->isHTML(true);
    $mail->Subject = 'Test Email';
    $mail->Body  = '<h1>This is a test email</h1><p>Sent using <b>Amazon SES</b> and <i>PHPMailer</i>.</p>';
    $mail->AltBody = 'This is a test email sent using Amazon SES and PHPMailer.';

    $mail->send();
    echo 'Message has been sent';
} catch (Exception $e) {
    echo "Message could not be sent. Mailer Error: {$mail->ErrorInfo}";
}
?>
~
~
~
~
~
~
~
~
~
:wq!
```

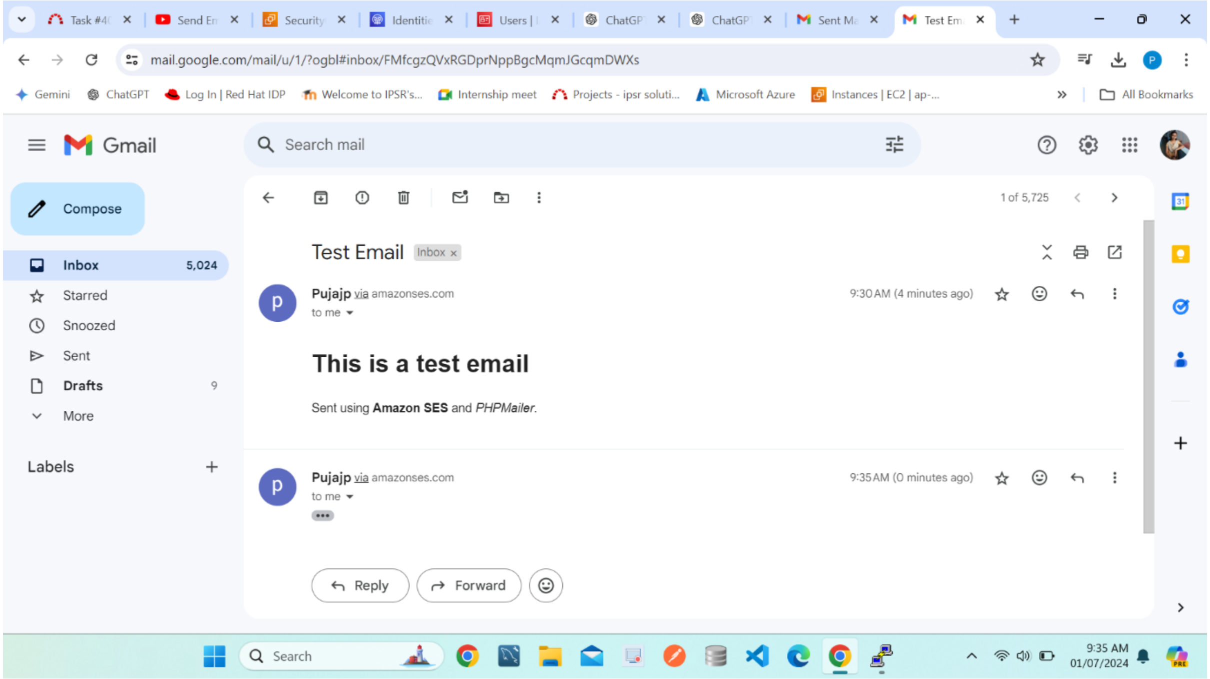
7. Run the PHP script

php send_email.php



```
[root@ip-172-31-12-78 email-sender]# php send_email.php
Message has been sent[root@ip-172-31-12-78 email-sender]#
[root@ip-172-31-12-78 email-sender]#
```

8. Check and verify by Recipient email



Test Email

Pujajp via amazonses.com
to me
9:30 AM (4 minutes ago)

This is a test email

Sent using **Amazon SES** and *PHPMailer*.

Pujajp via amazonses.com
to me
9:35 AM (0 minutes ago)