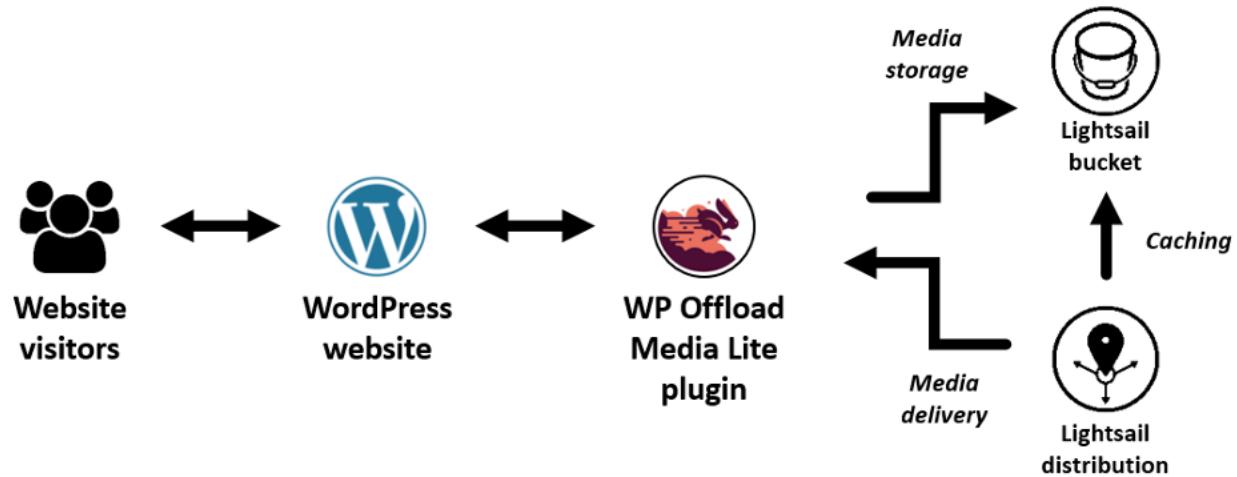


Project



Connecting a WordPress website to an Amazon Lightsail bucket and distribution

05.11.2023

Himanshu Nimje
Nagpur-440017

Overview

Connecting a WordPress website to Amazon Lightsail buckets and delivery includes integrating Amazon S3 to improve content delivery and reduce latency for static assets.

Benefits

1. Fast performance:- LightSail WordPress virtual servers are optimized for fast performance and security
2. Easy setup:- Built in Blueprints make it easy to set up a server for WordPress and install the software
3. Load balancing:- LightSail load balancing feature can optimize site and accommodate traffic variations
4. Improved Website Performance:- By offloading static assets (such as images, stylesheets, and JavaScript files) to an Amazon S3 bucket, It can reduce the load on the WordPress server. This allows the server to focus on generating dynamic content, improving the overall performance and responsiveness of the website.
5. Scalability and High Availability:- Amazon S3 provides a highly scalable and durable object storage solution. Storing static assets in an S3 bucket allows the website to scale more easily, and it ensures high availability and durability of assets across multiple AWS regions.
6. Enhanced Security:- By separating static assets from WordPress server, It can implement security best practices independently for each component. S3 provides fine-grained access control, and features such as SSL/TLS encryption for secure content delivery.

Service Used

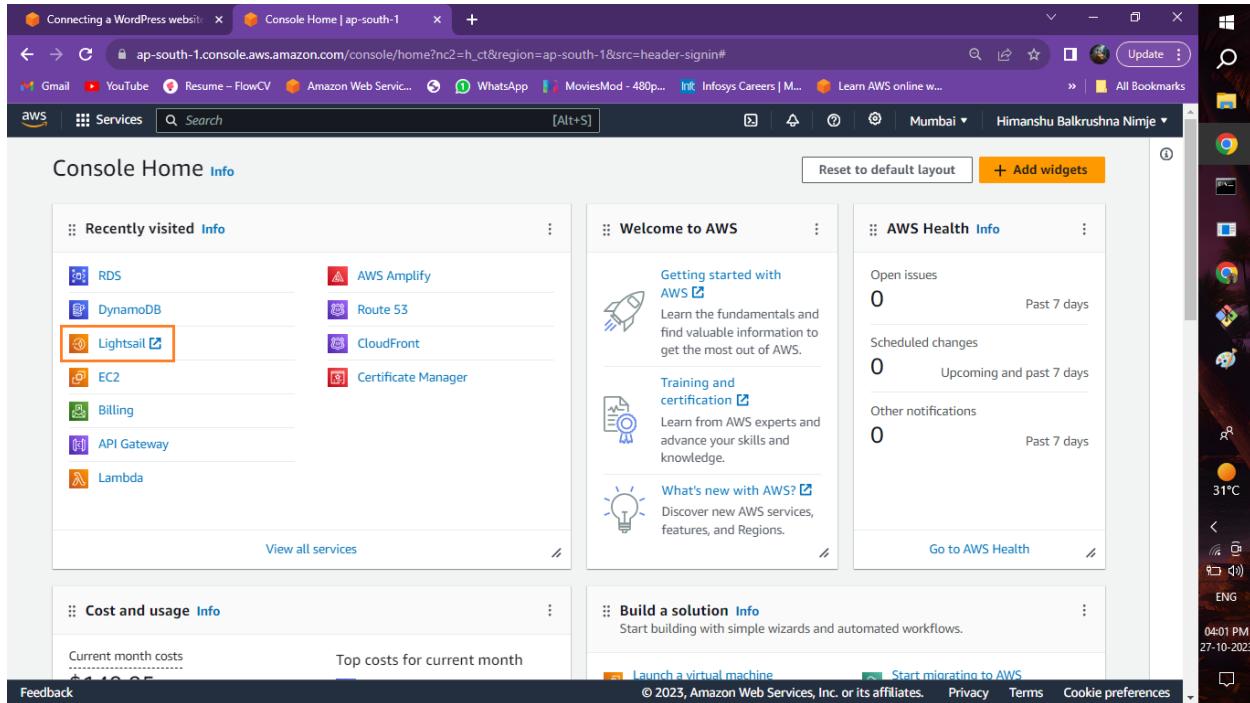
Amazon LightSail

Steps

1. Create and configure a WordPress instance in Lightsail
2. Create a bucket in the Lightsail object storage service
3. Modify your bucket permissions
4. Install the WP Offload Media Lite plugin on your WordPress website
5. Test the connection between WordPress website and Lightsail bucket

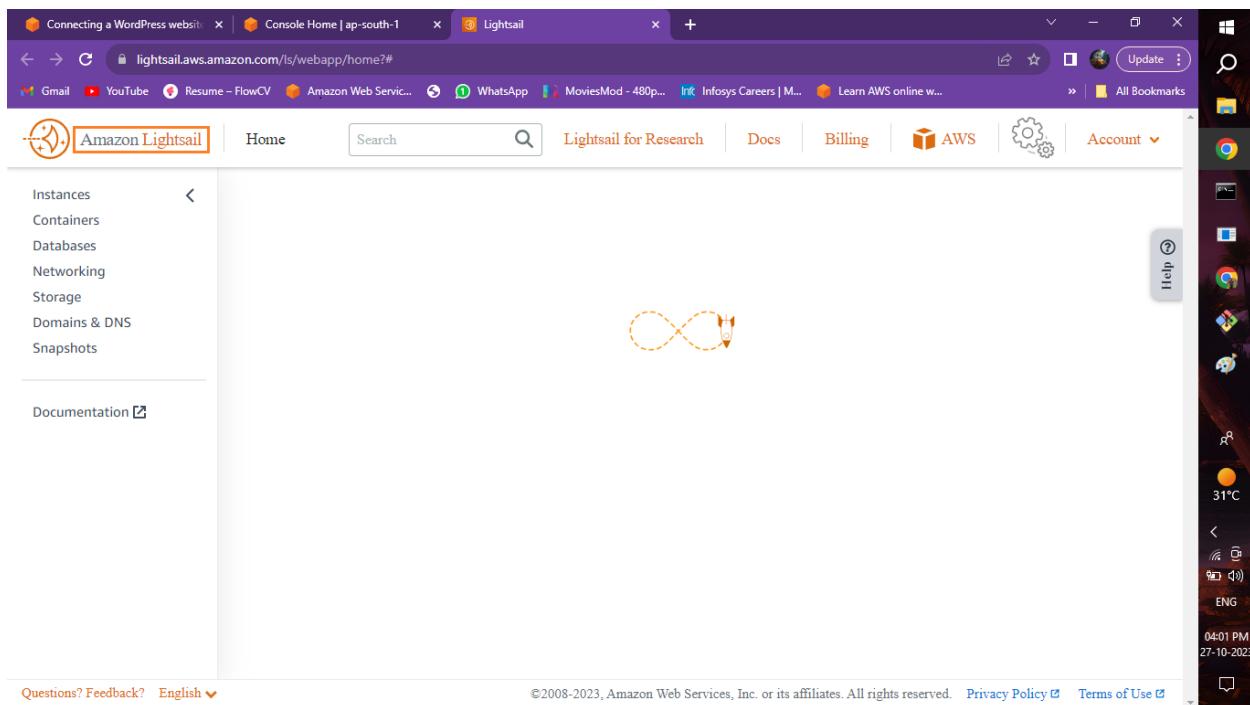
Implementation

Go to AWS console and click on Amazon LightSail



The screenshot shows the AWS Console Home page for the 'ap-south-1' region. On the left, under 'Recently visited', the 'Lightsail' icon is highlighted with a red box. The main dashboard features several sections: 'Welcome to AWS' (with links to Getting started with AWS, Training and certification, and What's new with AWS), 'AWS Health Info' (showing 0 open issues, 0 scheduled changes, and 0 other notifications), 'Cost and usage' (showing current month costs of ₹ 1,40,25), and 'Build a solution' (with a link to Launch a virtual machine). The bottom right corner of the screen shows a taskbar with various icons and a weather widget indicating 31°C.

Amazon LightSail Dashboard



The screenshot shows the Amazon LightSail Dashboard. The 'Amazon Lightsail' icon is highlighted with a red box in the top navigation bar. The left sidebar lists services: Instances, Containers, Databases, Networking, Storage, Domains & DNS, and Snapshots. Below this is a 'Documentation' section with a 'Documentation' link. The main content area features a large orange infinity symbol graphic. The bottom right corner of the screen shows a taskbar with various icons and a weather widget indicating 31°C.

Click on Create instance

The screenshot shows the Amazon Lightsail Instances page. On the left, there's a sidebar with links like Instances, Containers, Databases, Networking, Storage, Domains & DNS, and Snapshots. The main area has a "Good afternoon!" message at the top. Below it, there's a section with the text "You have no instances right now." and a "Create an instance and get started with Lightsail!" message. A large orange "Create instance" button is prominently displayed. To the right of the main content, there's a sidebar with various icons and system status information.

Select Instance location, Select Platform, select Blueprint (WordPress)

The screenshot shows the "Create an instance" wizard. The first step, "Instance location", shows that the instance is being created in Mumbai, Zone A (ap-south-1). The second step, "Select a platform", offers options for Linux/Unix (27 blueprints) and Microsoft Windows (6 blueprints). The third step, "Select a blueprint", shows several options: WordPress 6.3.1-23, Joomla 4.3.4-11, WordPress Multisite 6.3.1-25, Magento 2.4.6-52, LAMP (PHP 8) 8.1.24-4, MEAN 6.0.10-10, Node.js 18.18.1-0, and Drupal 10.1.5-1. The "WordPress" blueprint is highlighted with a red border.

Choose Instance plan

The screenshot shows the 'Create an instance' wizard on the Amazon Lightsail web interface. The current step is 'Choose your instance plan'. The user has selected the '\$5 USD' plan, which includes 'First 3 months free'. Other options shown are '\$3.50 USD', '\$10 USD', '\$20 USD', and '\$40 USD'. The interface includes a sidebar with various AWS services and a taskbar at the bottom.

Provide tag and click on Create Instance

The screenshot shows the 'Create an instance' wizard on the Amazon Lightsail web interface. The current step is 'Identify your instance'. The user has entered 'WordPress-1' as the instance name. Under 'TAGGING OPTIONS', a key-value tag 'Server_Name' with value 'Wordpress' is being added. A large orange 'Create instance' button is prominently displayed at the bottom of the form.

The Wordpress instance is in Running condition

Good afternoon!

Instances

WordPress-1
2 GB RAM, 2 vCPUs, 60 GB SSD
Running
13.234.239.19
2406:da1a:6e9:9100:54ad:68a1:2afe:8d
Mumbai, Zone A
Server_Name → Wordpress

Sort by Date ▾

Create instance

https://lightsailaws.amazon.com/ls/remote/ap-south-1/instances/WordPress-1/terminal?protocol=ssh

Click on the Mini option

Good afternoon!

Instances

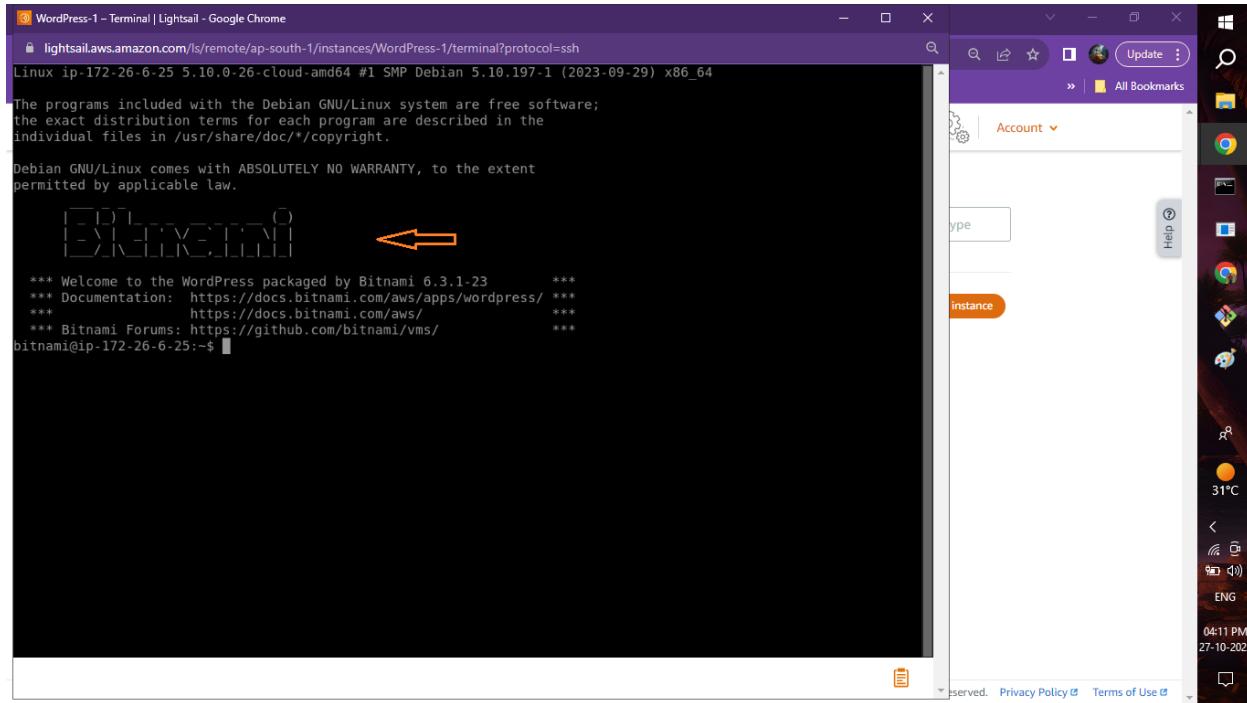
WordPress-1
2 GB RAM, 2 vCPUs, 60 GB SSD
Running
13.234.239.19
2406:da1a:6e9:9100:54ad:68a1:2afe:8d
Mumbai, Zone A
Server_Name → Wordpress

Sort by Date ▾

Create instance

https://lightsailaws.amazon.com/ls/remote/ap-south-1/instances/WordPress-1/terminal?protocol=ssh

The wordpress Terminal is open



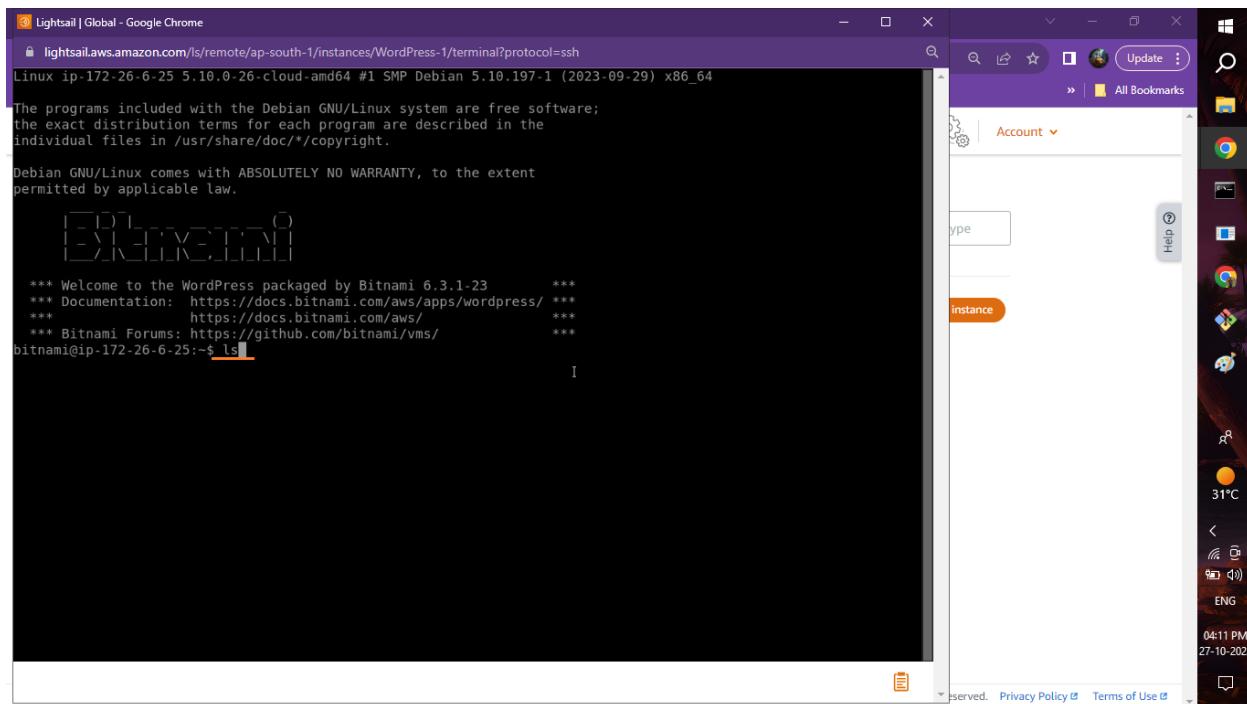
```
③ WordPress-1 - Terminal | Lightsail - Google Chrome
lightsail.aws.amazon.com/ls/remote/ap-south-1/instances/WordPress-1/terminal?protocol=ssh
Linux ip-172-26-6-25 5.10.0-26-cloud-amd64 #1 SMP Debian 5.10.197-1 (2023-09-29) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

[Terminal window content]
*** Welcome to the WordPress packaged by Bitnami 6.3.1-23      ***
*** Documentation: https://docs.bitnami.com/aws/apps/wordpress/ ***
*** https://docs.bitnami.com/aws/                                     ***
*** Bitnami Forums: https://github.com/bitnami/vms/               ***
bitnami@ip-172-26-6-25:~$
```

Enter command→ ls



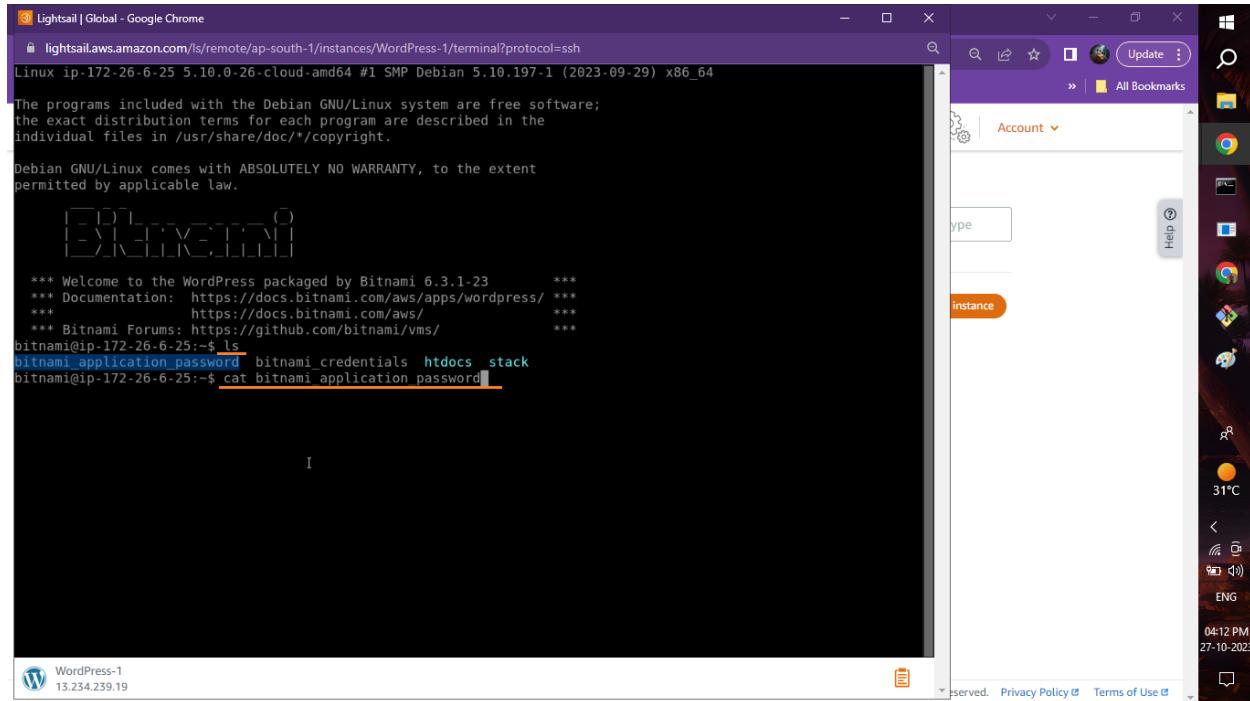
```
③ Lightsail | Global - Google Chrome
lightsail.aws.amazon.com/ls/remote/ap-south-1/instances/WordPress-1/terminal?protocol=ssh
Linux ip-172-26-6-25 5.10.0-26-cloud-amd64 #1 SMP Debian 5.10.197-1 (2023-09-29) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

[Terminal window content]
*** Welcome to the WordPress packaged by Bitnami 6.3.1-23      ***
*** Documentation: https://docs.bitnami.com/aws/apps/wordpress/ ***
*** https://docs.bitnami.com/aws/                                     ***
*** Bitnami Forums: https://github.com/bitnami/vms/               ***
bitnami@ip-172-26-6-25:~$ ls
```

Enter command → Cat_bitnami_application_password



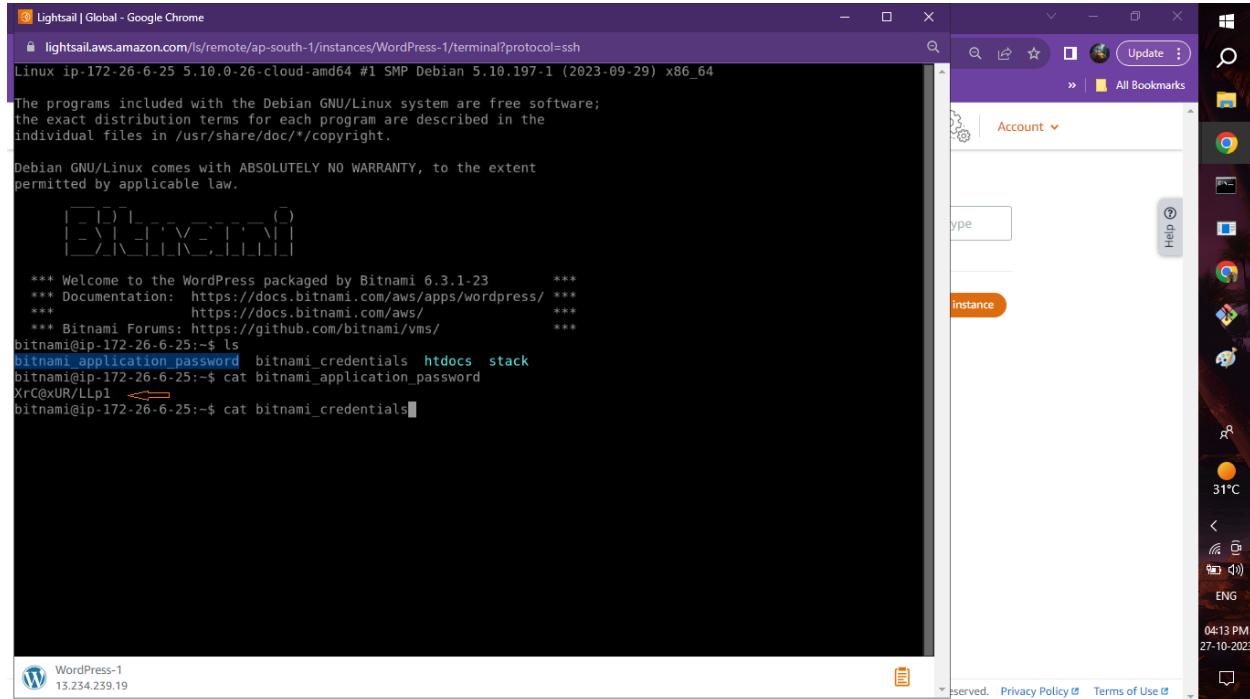
The screenshot shows a Windows desktop environment. On the left, a terminal window titled "Lightsail | Global - Google Chrome" is open, showing the command "cat bitnami_application_password" being run in a Linux terminal. The output of the command is visible in the terminal window. On the right, the Windows taskbar is visible, showing various pinned icons and the system tray with the date and time (04:12 PM, 27-10-2023) and temperature (31°C).

```
Linux ip-172-26-6-25 5.10.0-26-cloud-amd64 #1 SMP Debian 5.10.197-1 (2023-09-29) x86_64
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

[...]
*** Welcome to the WordPress packaged by Bitnami 6.3.1-23      ***
*** Documentation: https://docs.bitnami.com/aws/apps/wordpress/ ***
*** https://docs.bitnami.com/aws/                                 ***
*** Bitnami Forums: https://github.com/bitnami/vms/           ***
bitnami@ip-172-26-6-25:~$ ls
bitnami_application_password bitnami_credentials htdocs stack
bitnami@ip-172-26-6-25:~$ cat bitnami_application_password
```

Password



This screenshot is similar to the previous one, showing a Windows desktop with a terminal window in Google Chrome. The terminal window displays the command "cat bitnami_credentials" and its output. The Windows taskbar and system tray are visible on the right.

```
[...]
*** Welcome to the WordPress packaged by Bitnami 6.3.1-23      ***
*** Documentation: https://docs.bitnami.com/aws/apps/wordpress/ ***
*** https://docs.bitnami.com/aws/                                 ***
*** Bitnami Forums: https://github.com/bitnami/vms/           ***
bitnami@ip-172-26-6-25:~$ ls
bitnami_application_password bitnami_credentials htdocs stack
bitnami@ip-172-26-6-25:~$ cat bitnami_application_password
Xr@XUR/LLp1
bitnami@ip-172-26-6-25:~$ cat bitnami_credentials
```

Go to Amazon Lightsail, Wordpress instance

Connecting a WordPress website | Console Home | ap-south-1 | Lightsail | +

lightsail.aws.amazon.com/ls/webapp/ap-south-1/instances/WordPress-1/connect

Gmail YouTube Resume – FlowCV Amazon Web Service... WhatsApp MoviesMod - 480p... Infosys Careers | M... Learn AWS online w...

Amazon Lightsail | Home Search Lightsail for Research Docs Billing AWS Account

Instances

- Containers
- Databases
- Networking
- Storage
- Domains & DNS
- Snapshots

Documentation

WordPress-1

2 GB RAM, 2 vCPUs, 60 GB SSD
WordPress
Mumbai, Zone A (ap-south-1)

Stop Reboot Status: **Running**

Public IP: **13.234.239.19**
Private IP: 172.26.6.25
Public IPv6: 2406:da1a:6e9:9100:54ad:68a1:2afe:e8d
Learn more about IPv6

Connect Metrics Snapshots Storage Networking Domains

Hi! Welcome to your WordPress instance
Need help getting started? We recommend you read the [WordPress getting started guide](#) to learn more about your instance.
Okay, got it!

Connect to your instance ⓘ
You can connect using your browser, or your own compatible SSH client.

Use your browser

CloudShell Questions? Feedback? English ©2008-2023, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

Copy the Public IP

Connecting a WordPress website | Console Home | ap-south-1 | Lightsail | +

lightsail.aws.amazon.com/ls/webapp/ap-south-1/instances/WordPress-1/connect

Gmail YouTube Resume – FlowCV Amazon Web Service... WhatsApp MoviesMod - 480p... Infosys Careers | M... Learn AWS online w...

Amazon Lightsail | Home Search Lightsail for Research Docs Billing AWS Account

Instances

- Containers
- Databases
- Networking
- Storage
- Domains & DNS
- Snapshots

Documentation

WordPress-1

2 GB RAM, 2 vCPUs, 60 GB SSD
WordPress
Mumbai, Zone A (ap-south-1)

Stop Reboot Status: **Running**

Public IP: **13.234.239.19**
Private IP: 172.26.6.25
Public IPv6: 2406:da1a:6e9:9100:54ad:68a1:2afe:e8d
Learn more about IPv6

Connect Metrics Snapshots Storage Networking Domains

Hi! Welcome to your WordPress instance
Need help getting started? We recommend you read the [WordPress getting started guide](#) to learn more about your instance.
Okay, got it!

Connect to your instance ⓘ
You can connect using your browser, or your own compatible SSH client.

Use your browser

Connect using our browser-based SSH client

CloudShell Questions? Feedback? English ©2008-2023, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

And paste on the new Tab

Connecting a WordPress website | Console Home | ap-south-1 | Lightsail | New Tab

lightsail.aws.amazon.com/ls/webapp/ap-south-1/instances/WordPress-1/connect

Amazon Lightsail | Home | Search | Lightsail for Research | Docs | Billing | AWS | Account

Instances

- Containers
- Databases
- Networking
- Storage
- Domains & DNS
- Snapshots

Documentation

Connect to your instance [?](#)

You can connect using your browser, or your own compatible SSH client.

Use your browser

Connect using our browser-based SSH client

[Connect using SSH](#)

Use your own SSH client

Use the following credentials to connect to your instance.

Connect using an SSH client [?](#)

CONNECT TO

13.234.239.19

IPv6: 2406:da1a:6e9:9100:54ad:68a1:2afe:e8d

USER NAME

bitnami

SSH KEY

This instance was created with the personal SSH key named **Lightsailkey1**.

Manage your SSH keys from your [Account](#) page.

CloudShell Questions? Feedback? English ▾

©2008-2023, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Privacy Policy](#) [Terms of Use](#)

Connecting a WordPress website | Console Home | ap-south-1 | Lightsail | New Tab

13.234.239.19/wp-login.php

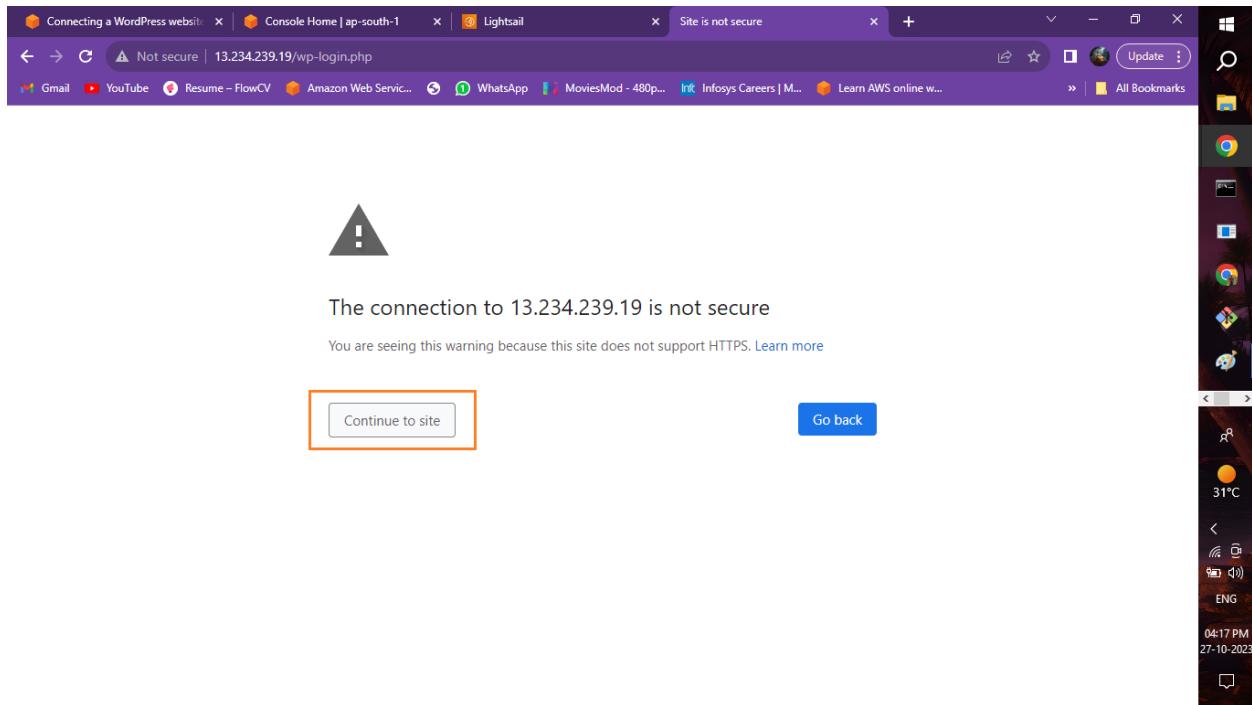
13.234.239.19/wp-login.php - Google Search

Search Google or type a URL

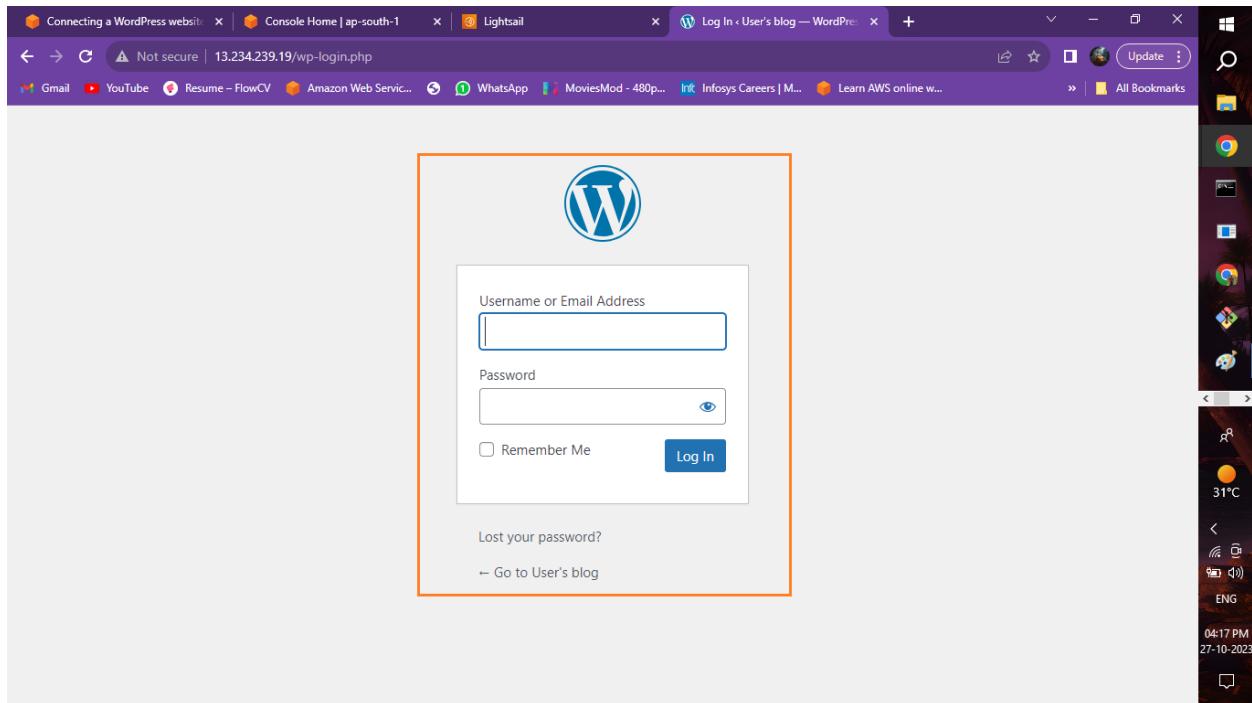
kite moneycont... Github Add shortcut

31°C ENG 04:17 PM 27-10-2023

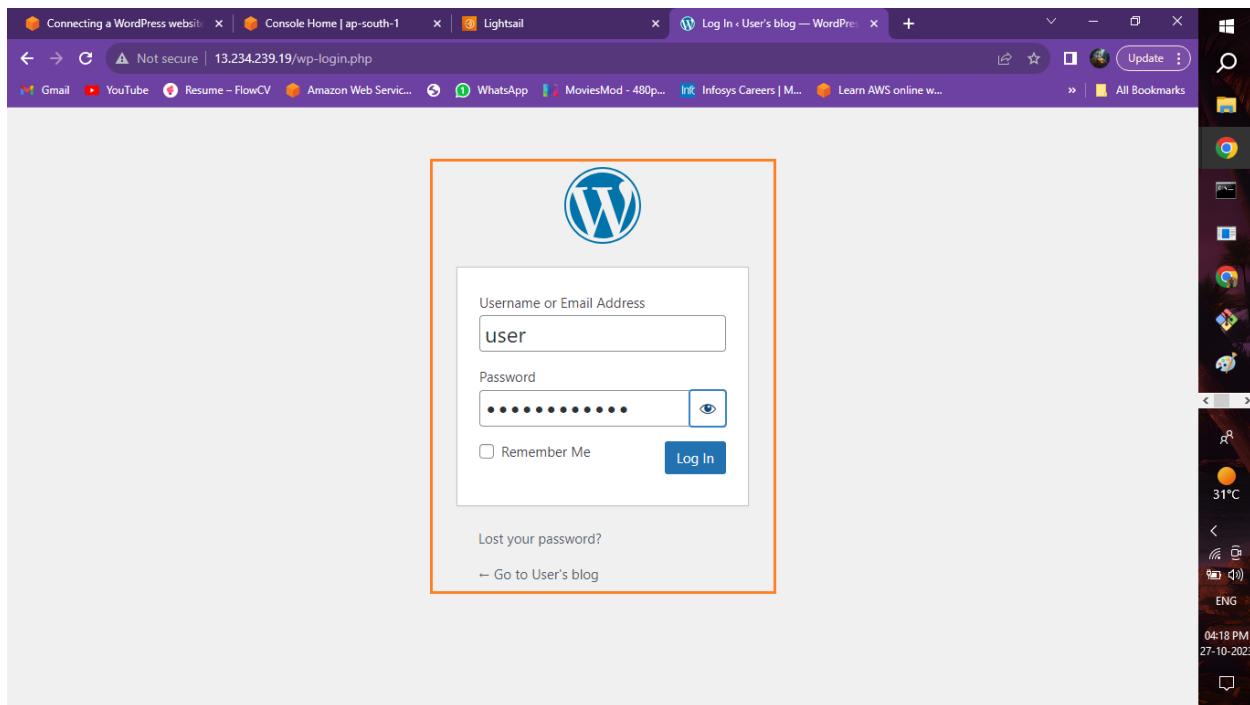
click on the continue to site



Here Wordpress login page



Enter Username and Password



Wordpress Dashboard

Provide static IP to WordPress application

The screenshot shows the Amazon Lightsail web interface. A WordPress instance named "WordPress-1" is running in a container with 2 GB RAM, 2 vCPUs, and 60 GB SSD. The container is located in Mumbai, Zone A (ap-south-1a). The status is "Running". The public IP is 13.234.239.19 and the private IP is 172.26.6.25. The Networking tab is selected. A callout box highlights the "Attach static IP" button next to the Public IP field.

Go to Networking

Click on the Attach Static IP

The screenshot shows the Amazon Lightsail web interface with the Networking tab selected. The Public IP field contains "13.234.239.19" with an orange border around the "Attach static IP" button. The Private IP field contains "172.26.6.25" with a "What is this for?" link. Below the IP fields, a note states: "Your public IPv4 address changes when you stop and start your instance. Attach a **static IPv4** address to your instance to keep it from changing." The IPv4 Firewall section is also visible at the bottom.

Click on create and attach

The screenshot shows the Amazon Lightsail interface. A modal window titled "Create and attach a static IP" is open. It contains instructions to "Create and attach a **Static IP** as a stable endpoint before assigning a domain to **WordPress-1**". Below this, there's a section titled "Identify your static IP" with the placeholder "Statidp-1". A note says "Your Lightsail resources must have unique names." At the bottom of the modal are "Cancel" and "Create and attach" buttons. The background shows the Lightsail dashboard with a public IP address of 13.234.239.19 and a private IP address of 172.26.6.25.

Click on continue

The screenshot shows the Amazon Lightsail interface after creating a static IP. A modal window titled "Static IP created" displays the message "Statidp-1 has been created and attached to **WordPress-1**". There is a "Continue" button at the bottom. The background shows the Lightsail dashboard with the static IP address 3.108.102.66 and the private IP address 172.26.6.25. A note at the bottom states: "The public IP address of your instance is accessible to the Internet. The private IP address is accessible only to other resources in your Lightsail account."

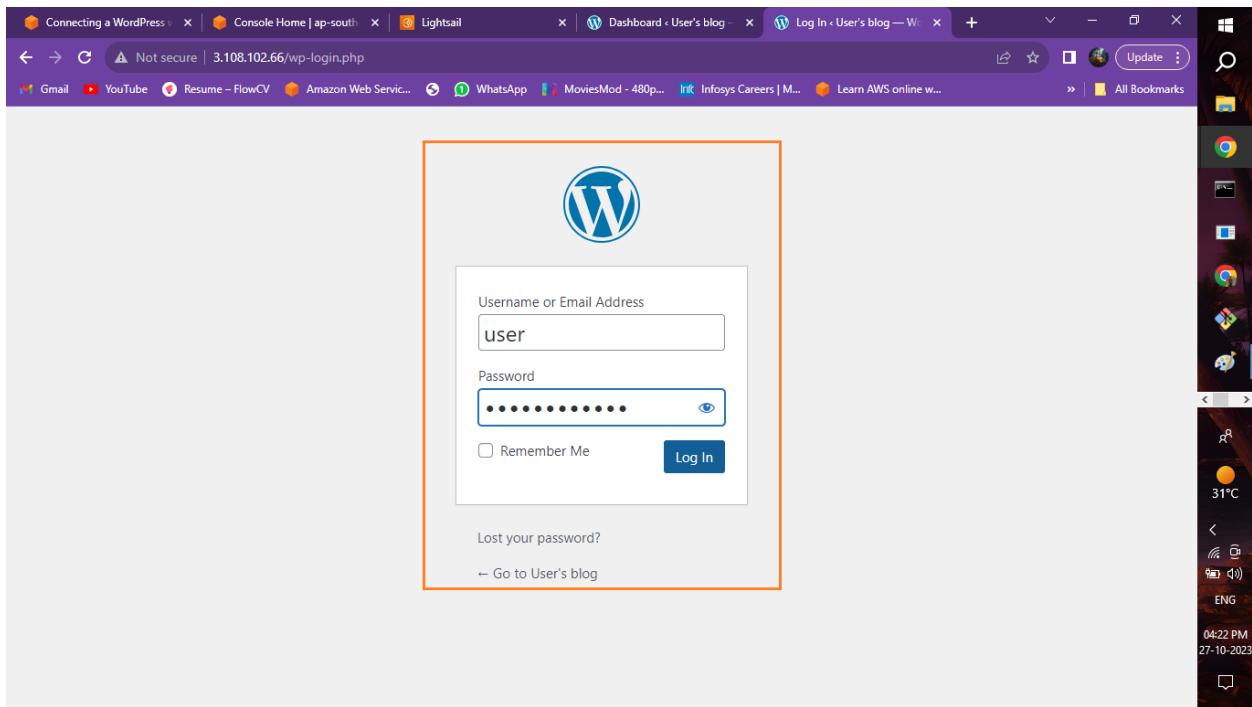
login to the WordPress application from static IP

The screenshot shows the Amazon Lightsail interface. On the left, a sidebar lists 'Instances', 'Containers', 'Databases', 'Networking', 'Storage', 'Domains & DNS', and 'Snapshots'. The main content area is titled 'IPv4 networking'. It displays the 'PUBLIC IP' as **3.108.102.66** and the 'PRIVATE IP' as **172.26.6.25**. A note states: 'Your instance is using a static IP as its public IPv4 address. A static IP doesn't change when you stop and start your instance.' Below this, there's a section for 'IPv4 Firewall' with a '+ Add rule' button. The status bar at the bottom indicates 'CloudShell Questions? Feedback? English ▾'.

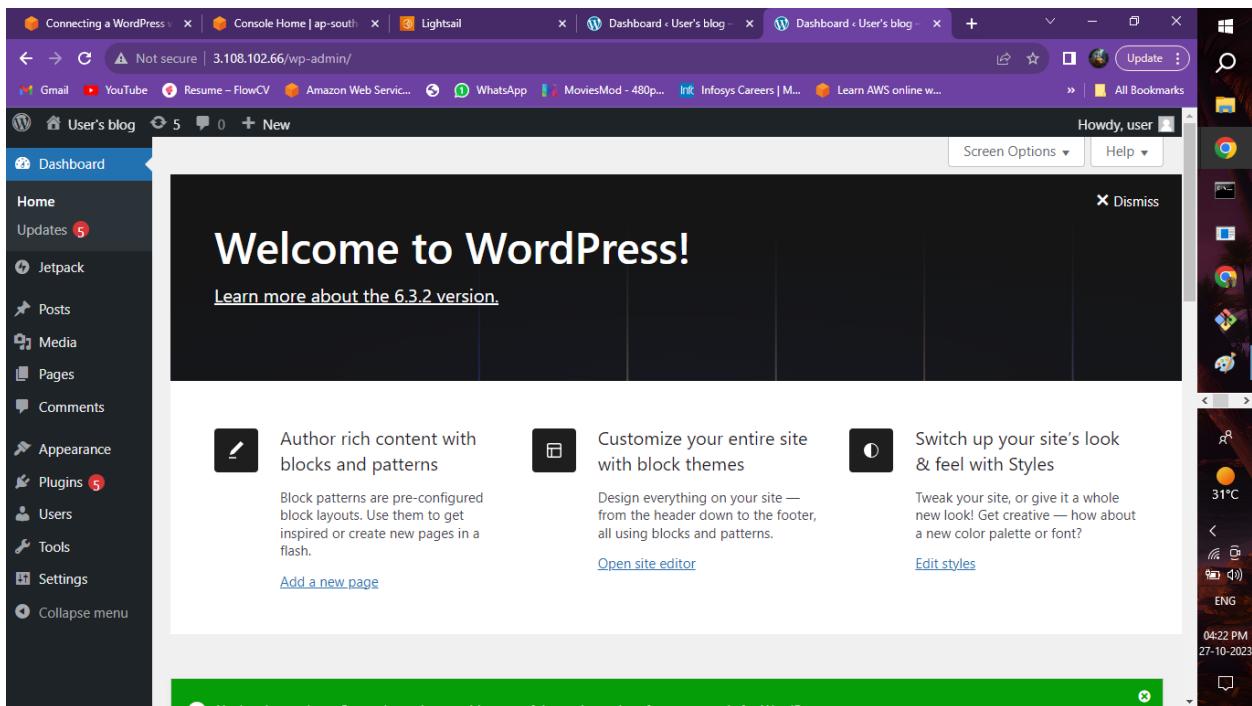
Click on continue to site

The screenshot shows a browser window with a warning message. The address bar shows 'Not secure | 3.108.102.66/wp-login.php'. The main content area features a large exclamation mark icon. The text reads: 'The connection to 3.108.102.66 is not secure. You are seeing this warning because this site does not support HTTPS. [Learn more](#)'.

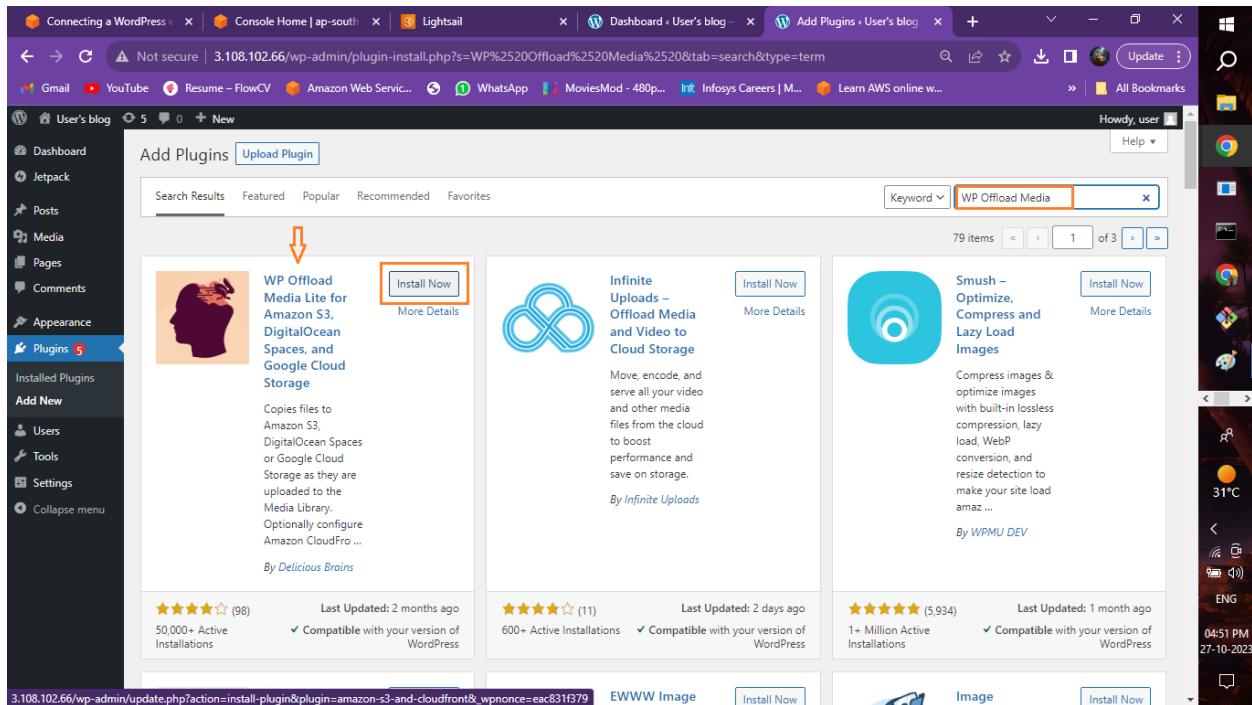
Two buttons are visible: 'Continue to site' (highlighted with a red box) and 'Go back'.



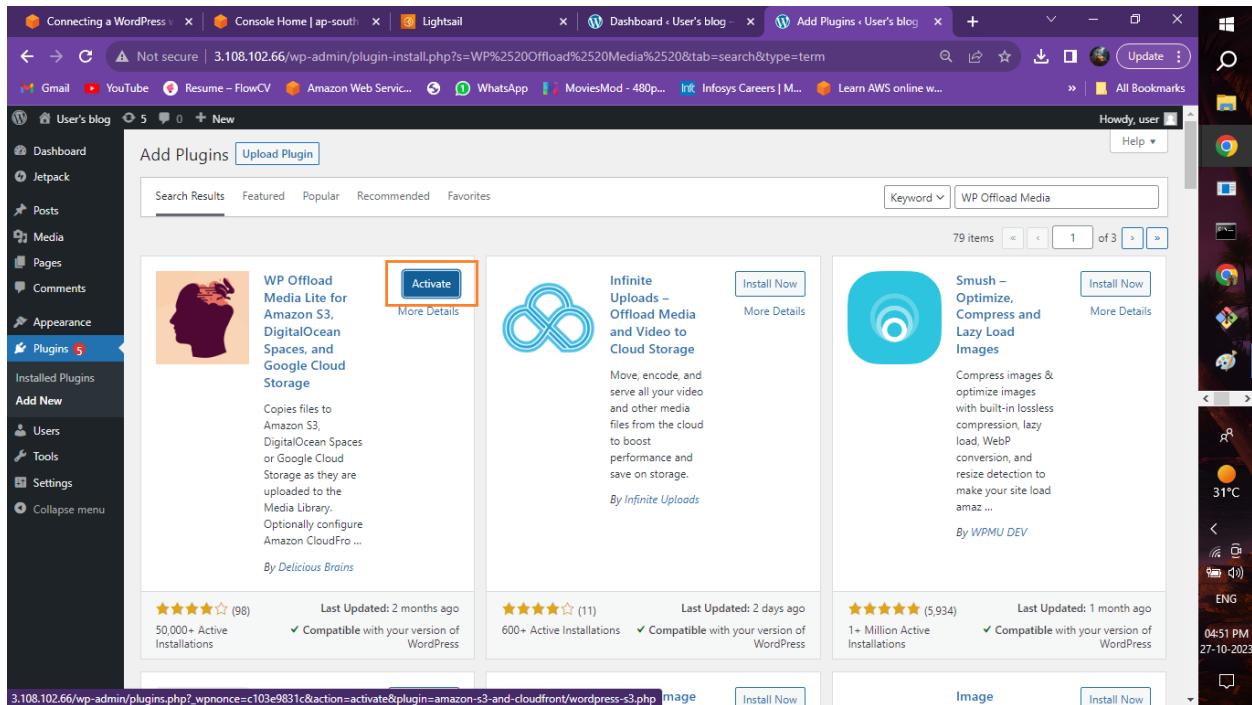
Successfully login WordPress application from static IP



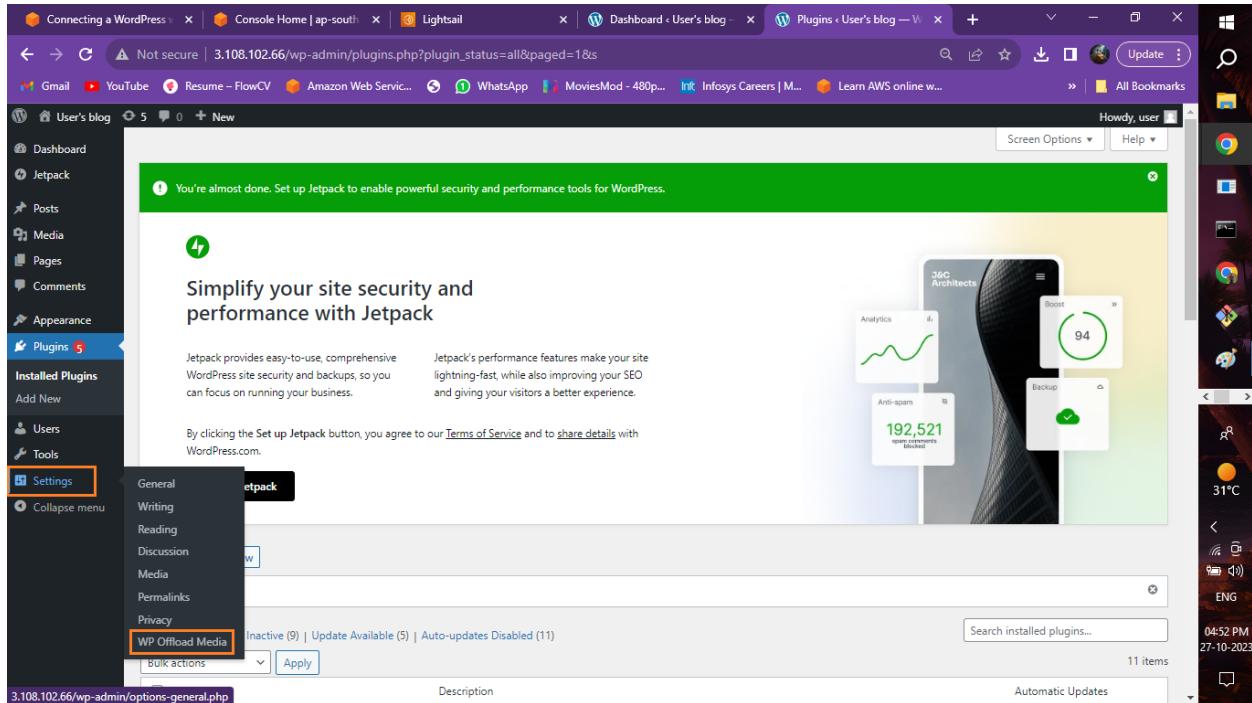
Install the WP Offload Media Lite



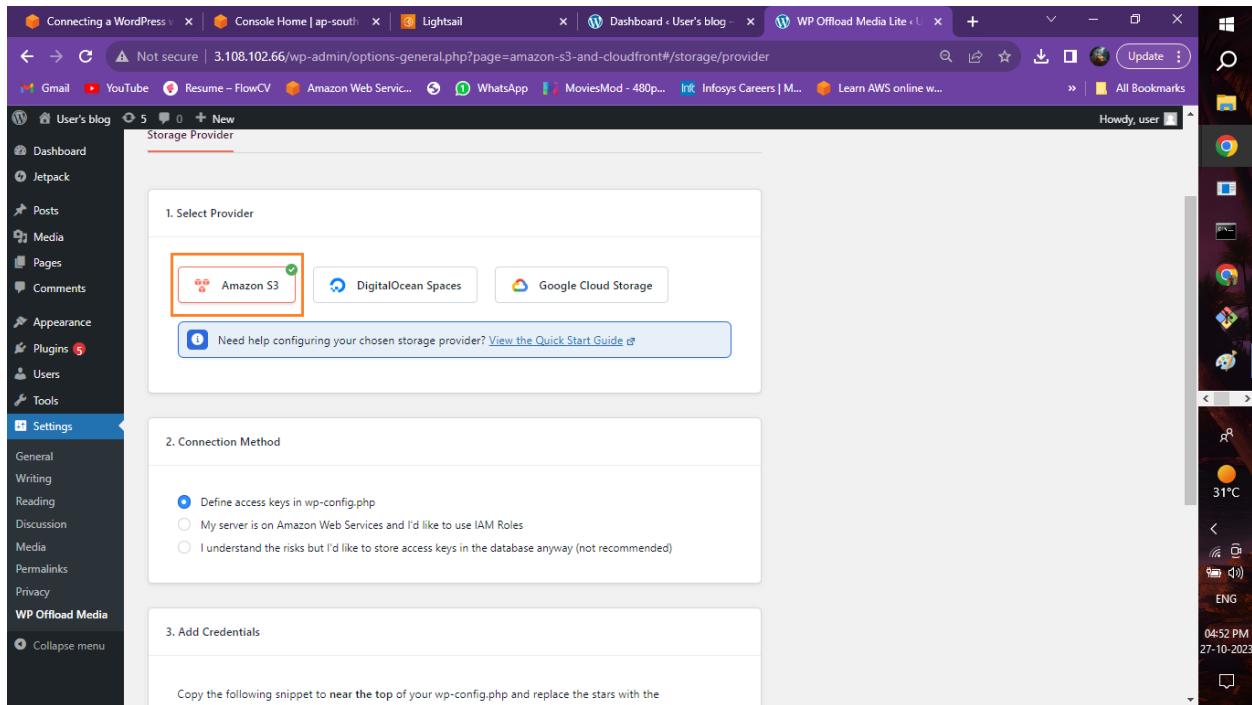
Click on Activate



Go to settings, Go to Wp Offload Media and click on



Click on the Amazon S3



Select Existing Bucket

The screenshot shows a multi-tab browser window. The active tab is '3.108.102.66/wp-admin/options-general.php?page=amazon-s3-and-cloudfront#storage/bucket'. The left sidebar has 'Settings' selected. The main content area has two steps: '1. New or Existing Bucket?' with 'Use Existing Bucket' highlighted, and '2. Select Bucket' with 'Amazon S3' highlighted. A red box highlights the 'Use Existing Bucket' button and the 'Amazon S3' tab.

Go to Amazon Lightsail, Go to Bucket access permission

Click on the (public and read only)

The screenshot shows the 'Bucket access permissions' page on lightsail.aws.amazon.com. It lists three options: 'All objects are private', 'Individual objects can be made public and read-only' (which is highlighted with a red box), and 'All objects are public and read-only'. At the bottom are 'Cancel' and 'Save' buttons, with 'Save' highlighted. A red box highlights the 'Individual objects can be made public and read-only' section and the 'Save' button.

And click on save

The screenshot shows the 'Bucket access permissions' section of the Amazon Lightsail console. A modal dialog box is open, asking 'Do you want to allow individual objects to be made public?'. It includes a note: 'Objects in this bucket will be private by default unless they have individual access permissions that make them public.' Below the dialog, there are two buttons: 'No, cancel' and 'Yes, save'. A tooltip below the dialog states: 'Individual objects can be made public and read-only. Your objects are readable only by you or anyone you give access to. But you can make individual objects readable by anyone in the world. Objects are private by default.' Another tooltip below that says: 'All objects are public and read-only. Your objects are public (read-only) to anyone in the world.' At the bottom right of the main page, there are 'Cancel' and 'Save' buttons.

Click on Attach instance

The screenshot shows the same 'Bucket access permissions' page as the previous one, but with a yellow arrow pointing to the 'Attach instance' button located under the 'Resource access' section. This section also includes a link to 'Learn more about resource access'. The rest of the page content is identical to the first screenshot.

Attached WordPress instance

The screenshot shows the 'Programmatic access' section of the Amazon Lightsail interface. A modal window titled 'Attach instance' is open, displaying a single item: 'WordPress-1' (2 GB RAM, 2 vCPUs, 60 GB SSD, WordPress instance). Below the modal, there are 'Cancel' and 'Attach' buttons. The 'Attach' button is highlighted with a green border.

Programmatic access

Programmatic access gives plugins, instances, and other resources full access to this bucket and its objects. You can grant programmatic access by using either of the following options.

Resource access

Attach instances to this bucket to give them access without the need to manage credentials.

[Learn more about resource access](#)

Access keys

Create access keys to generate credentials for this bucket that you can use in your code, plugins, and applications. You can have a maximum of 2 access keys at a time.

[Learn more about access keys](#)

CloudShell Questions? Feedback? English ▾

©2008-2023, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Privacy Policy](#) [Terms of Use](#)

Successfully attach the WordPress Instance

The screenshot shows the 'Programmatic access' section of the Amazon Lightsail interface after the instance has been attached. The 'Attach instance' modal is now closed, and the 'WordPress-1' item is listed with a 'Detach' button next to it. The 'Attach' button is no longer visible.

Programmatic access

Programmatic access gives plugins, instances, and other resources full access to this bucket and its objects. You can grant programmatic access by using either of the following options.

Resource access

Attach instances to this bucket to give them access without the need to manage credentials.

[Learn more about resource access](#)

Access keys

Create access keys to generate credentials for this bucket that you can use in your code, plugins, and applications. You can have a maximum of 2 access keys at a time.

[Learn more about access keys](#)

Cross-account access

Add cross-account access to give another AWS account access to this bucket without managing credentials. You can give a maximum of 10 accounts access to this bucket.

[Learn more about cross-account access](#)

CloudShell Questions? Feedback? English ▾

©2008-2023, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Privacy Policy](#) [Terms of Use](#)

Click on create distribution

Welcome to Lightsail object storage!

Create a distribution

Speed up the delivery of static content in your bucket by connecting it to a Lightsail content delivery network (CDN) distribution. Configuring your bucket as the origin of a distribution takes just a few clicks.

[Learn more about distributions](#)

[Create distribution](#)

Retain versions of your objects

Enable versioning to keep previous variants of your objects. You can restore an object to a previous version if you need to.

[Go to versioning](#)

https://lightsailaws.amazon.com/ls/webapp/create/distribution

Select 50GB plan, and click on create distribution

Choose your distribution plan

Choose how much data transfer your distribution needs each month.

50 GB/month First year free **200 GB/month** \$10 USD/month **500 GB/month** \$35 USD/month

This plan is free for your first 12 months of distribution usage. After 12 months, you will be charged \$2.50 USD per GB.

Identify your distribution

Distribution-1

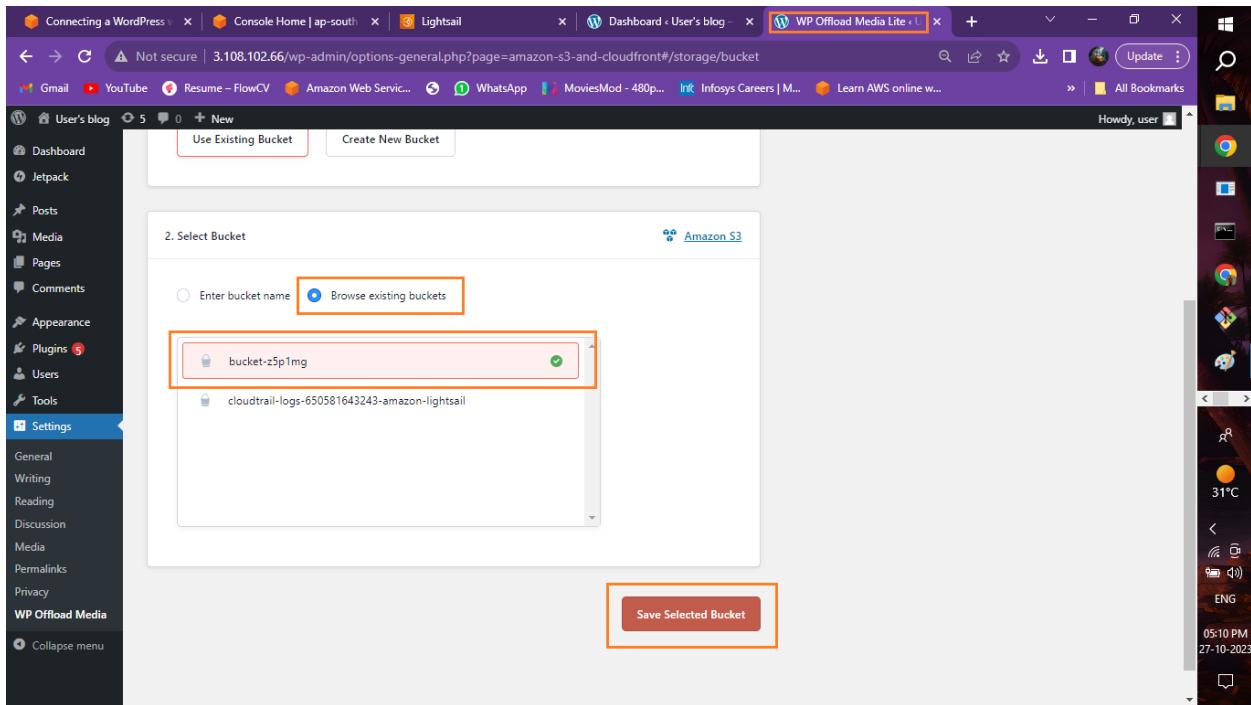
Summary

Free for your first 12 months of distribution usage. After 12 months, you will be charged \$2.50 USD per GB.

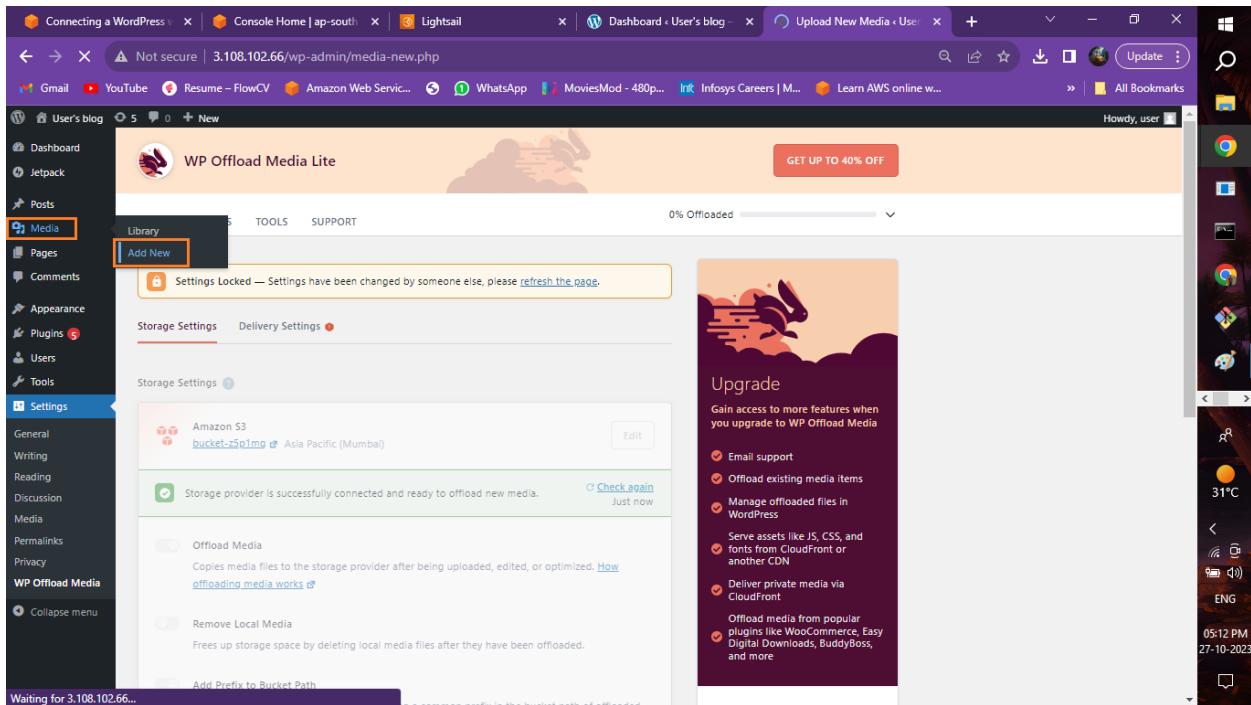
Includes:
50 GB data transfer per month.

[Create distribution](#)

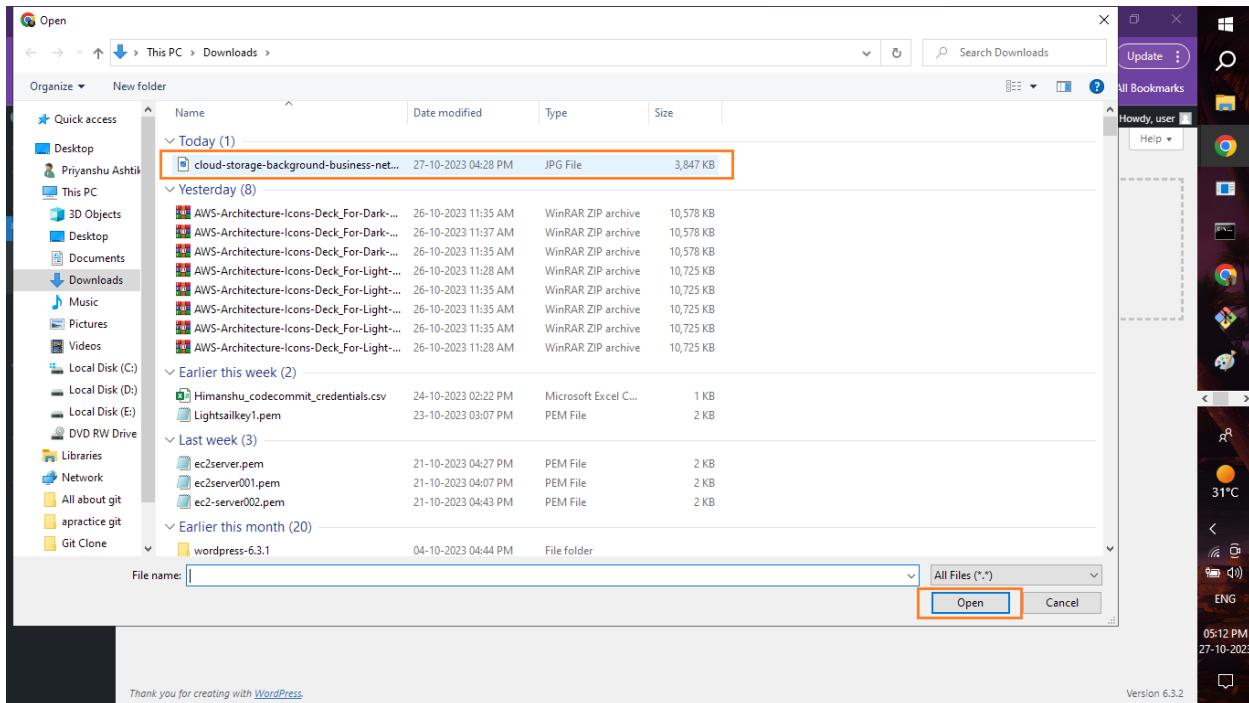
Go to Wordpress, select Bucket, and click on save selected bucket



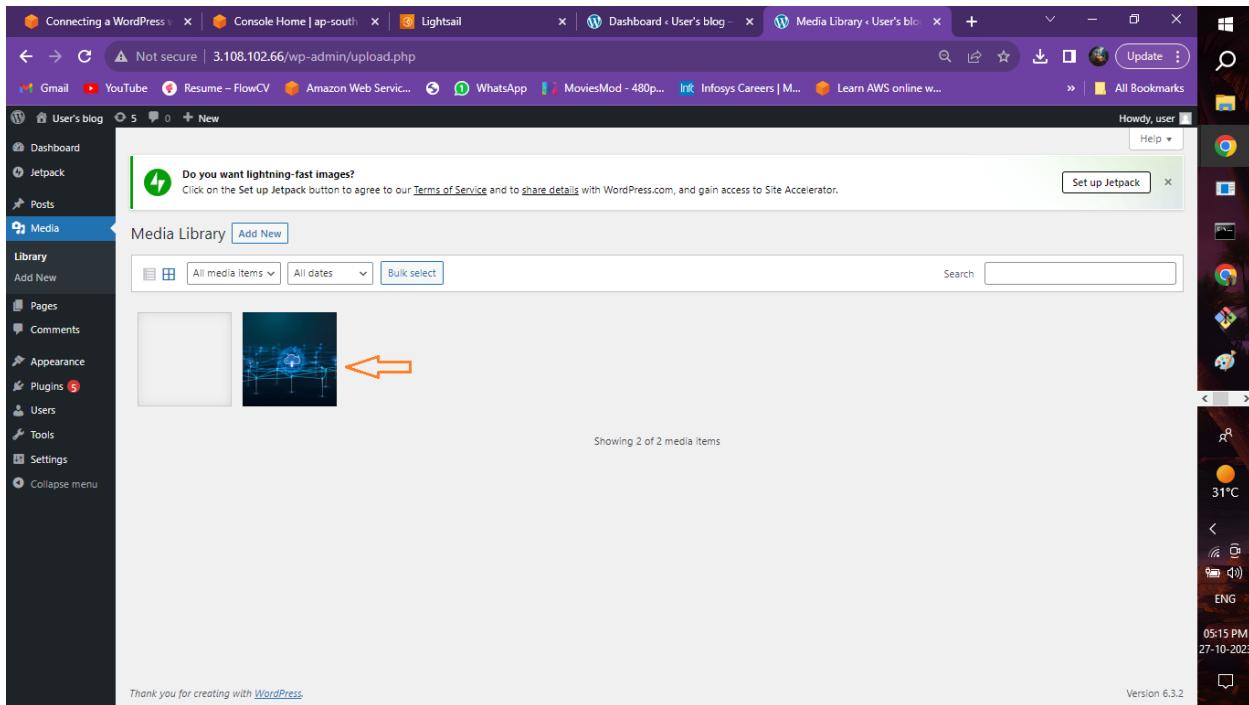
Add a file, Go to Media click on Add New



Select the file and click on the open



File has been uploaded





What I Learned

I learned many key concepts and gained practical experience in integrating WordPress with AWS services.

1. Bucket and Distribution Setup:- I learned how to create an Amazon S3 bucket to store static assets (e.g., images, stylesheets) for a WordPress site.
2. WordPress Installation on Lightsail:- I learned how to install WordPress on an Amazon Lightsail instance, including setting up the web server, database, and configuring WordPress settings.
3. Security and Permissions:- I learned about setting up proper permissions and security configuration for S3 bucket to ensure secure content delivery.

By completing this project, I gained practical experience in integrating a WordPress website with AWS services, improving performance, scalability, and reliability.