ICT 171-Introduction to Server Environments and Architectures

ASSIGNMENT 2

CLOUD SERVER PROJECT

Global IP Address:
54.151.182.193
DNS: 54.151.182.193
https://www.snapshare.one

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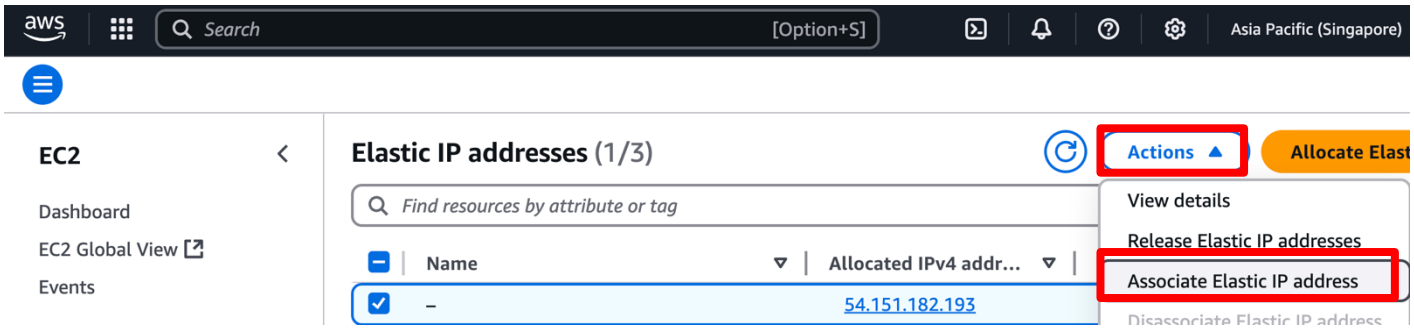
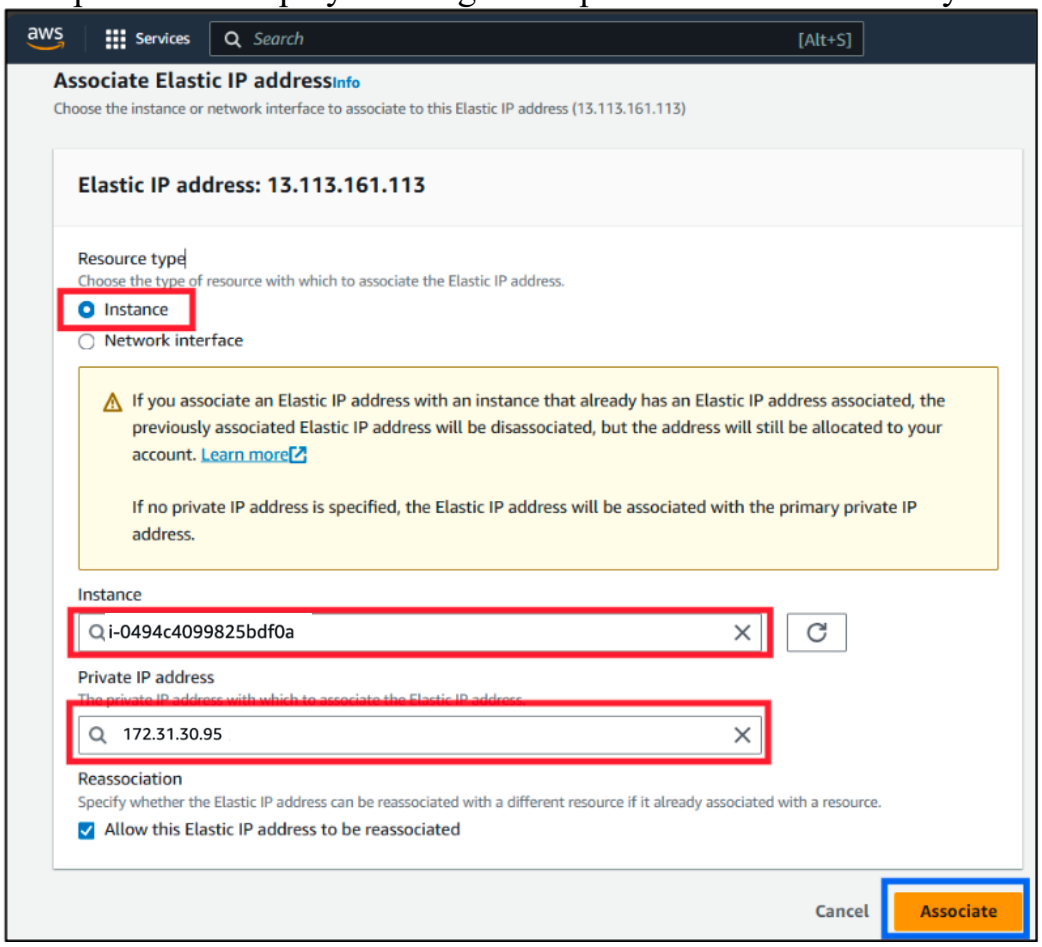
Setting up Web Server and Linking with a DNS Entry:

Launching Ubuntu instance and associating Elastic IP Address:



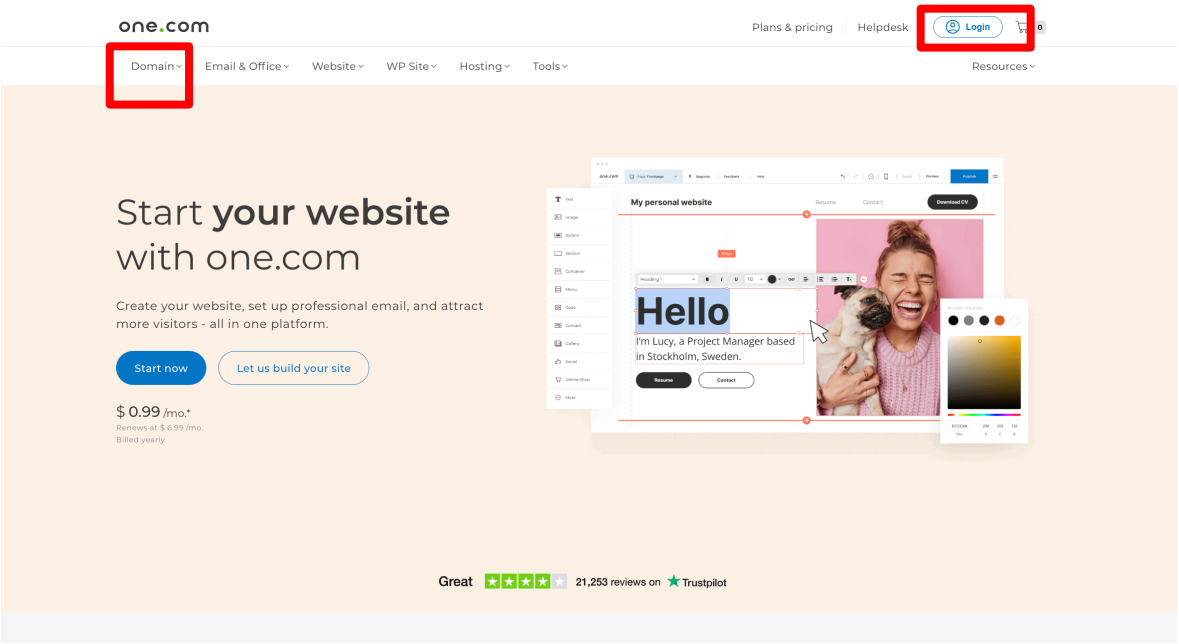
Complete this setup by entering the required details followed by clicking the associate button.



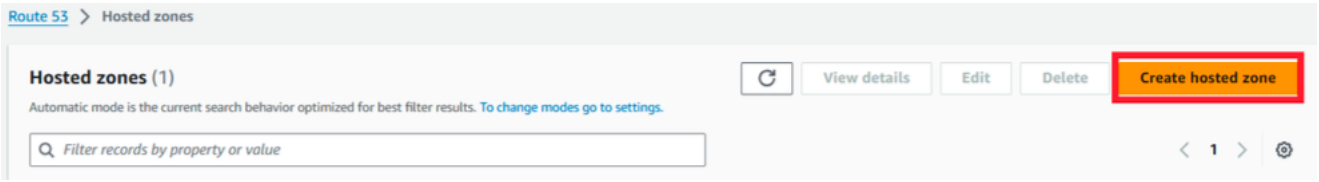
The elastic IP is now set.

Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring
54.151.182.193	54.151.182.193	–	disabled

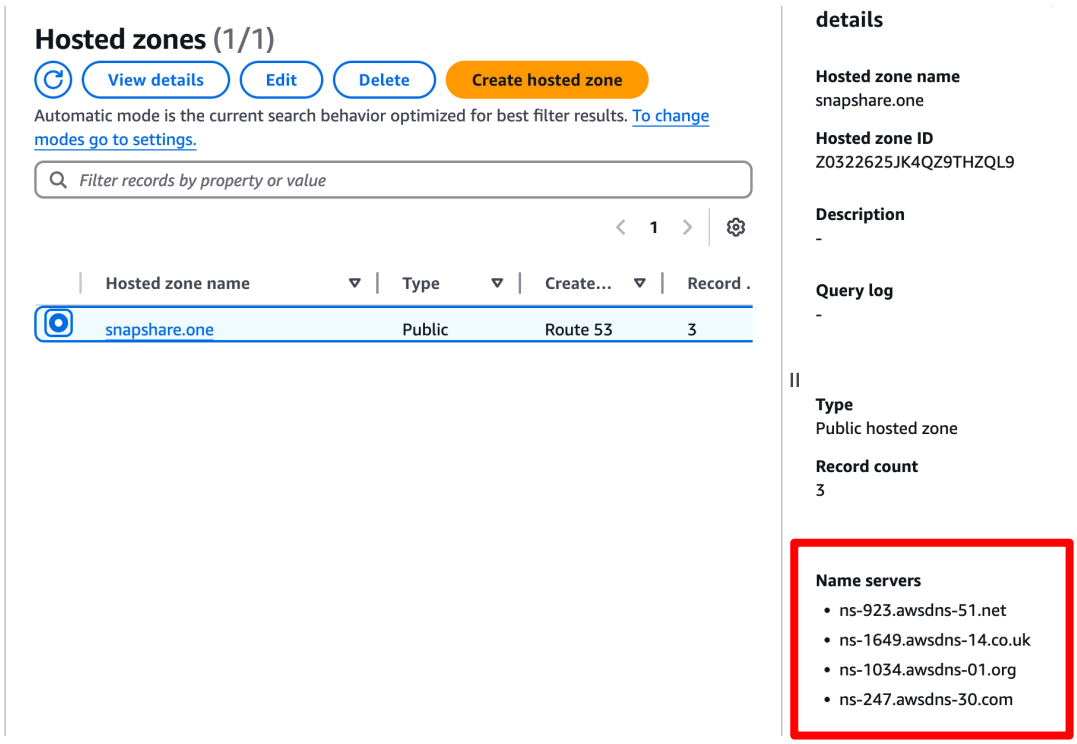
Login/Create an account and buy a domain from a website like one.com



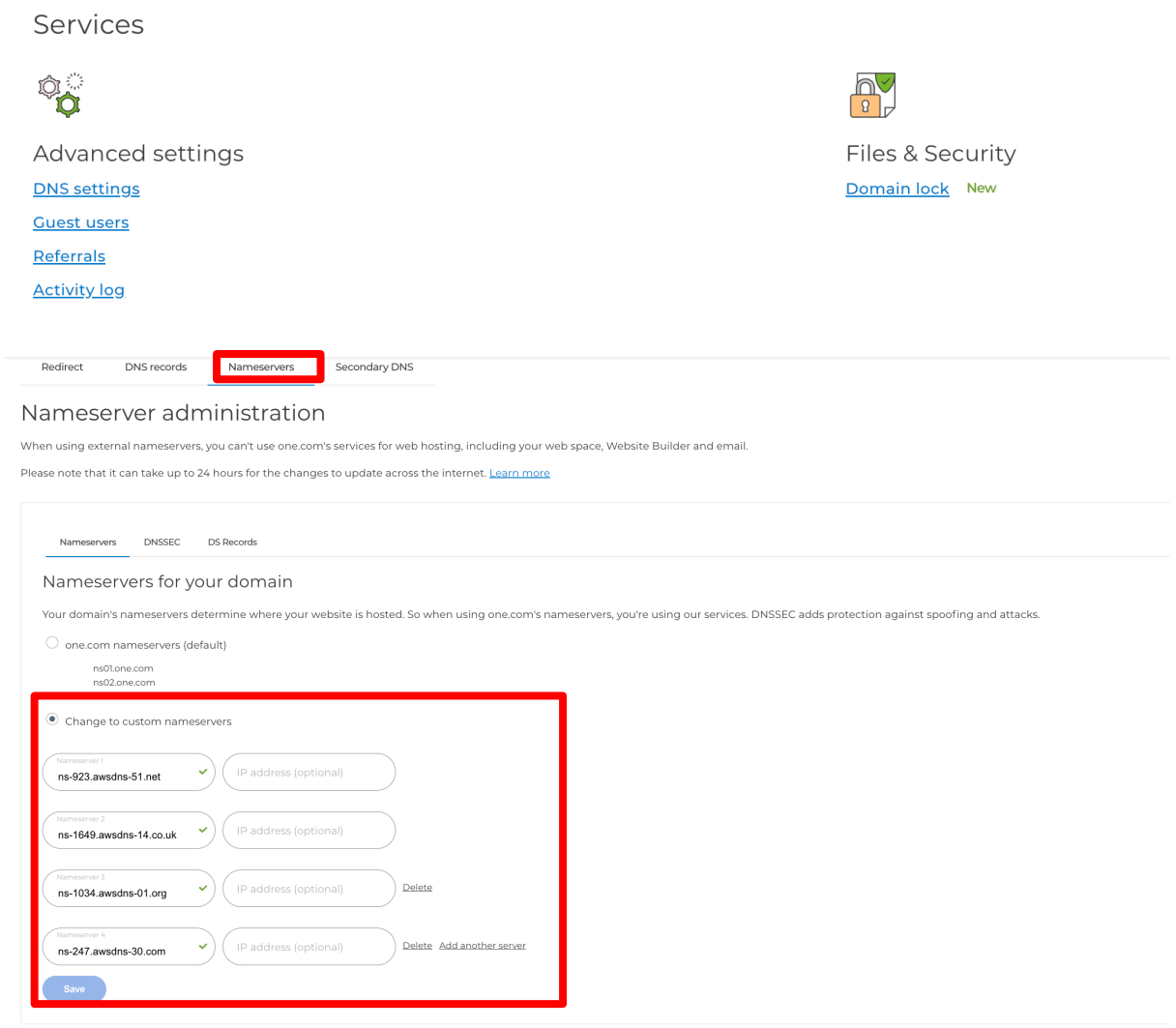
Side by side, purchase a domain and link it to the public IP address. Here's how:



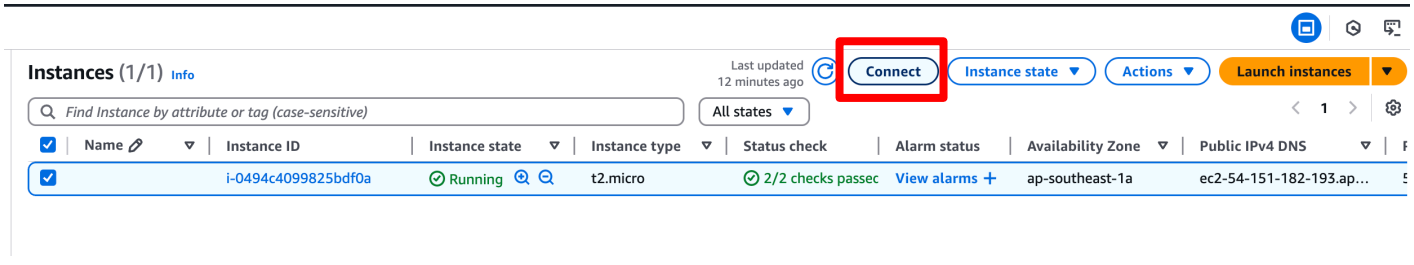
Link the domain bought to the public IP address using a hosted zone. The result should look like this:

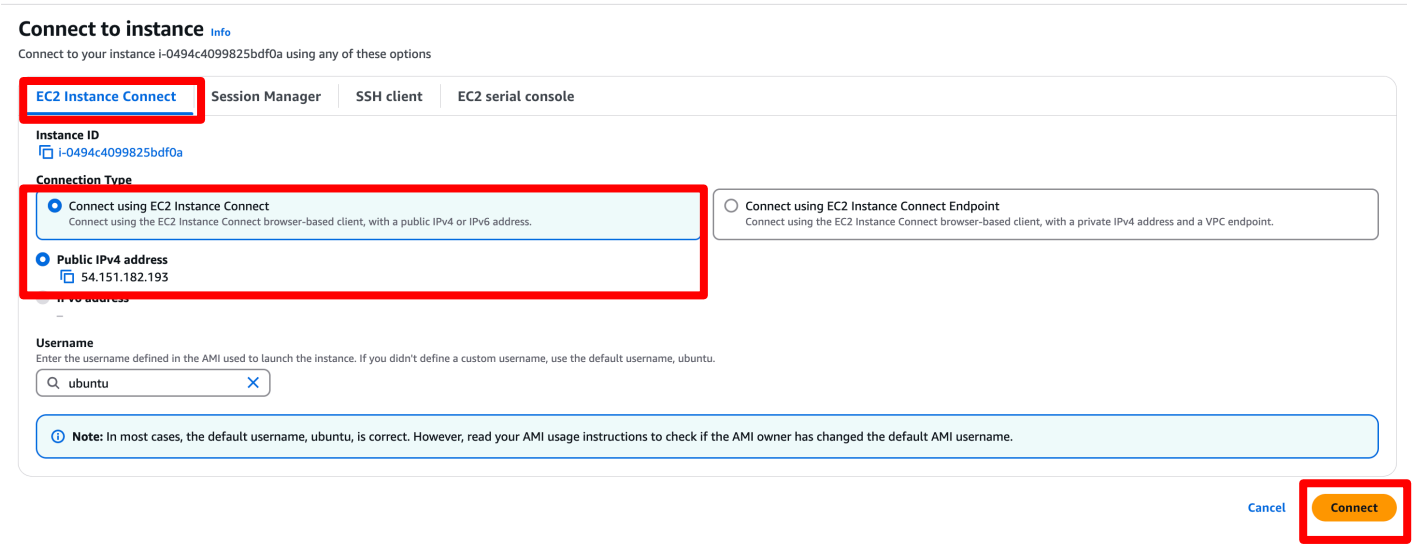


Go to DNS Settings on one.com and edit the name servers:

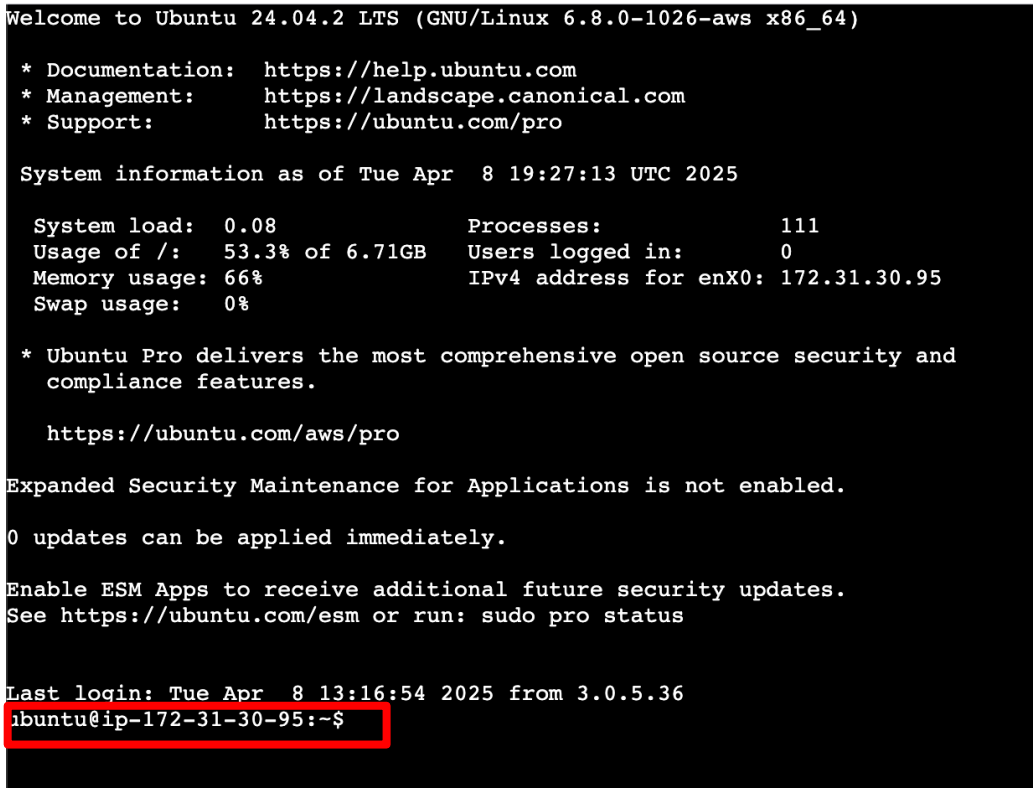


Come back to AWS and Click ‘Connect’ in order to connect using EC2 instance connect. This step is required for gaining access to the terminal.





The terminal will now open.



Run the following commands:

For installing Apache server on Ubuntu:

Update and upgrade packages:

```
sudo apt update
sudo apt upgrade -y
```

Install Apache server on Ubuntu:

```
sudo apt install apache2
```

Install PHP and PHP-FPM:

```
sudo apt install -y nginx php-dom php-simplexml php-ssh2 php-xml php-xmlreader php-curl php-exif php-ftp php-gd php-iconv php-imagick php-json php-mbstring php-posix php-sockets php-tokenizer php-fpm php-mysql php-gmp php-intl php-cli
```

Check PHP Version:

```
php --version
```

```
ubuntu@ip-172-31-30-95:~$ php --version
PHP 8.3.6 (cli) (built: Mar 19 2025 10:08:38) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.3.6, Copyright (c) Zend Technologies
    with Zend OPcache v8.3.6, Copyright (c), by Zend Technologies
ubuntu@ip-172-31-30-95:~$
```

Configure PHP:

```
sudo nano /etc/php/8.3/fpm/php.ini
```

Make the following changes in the file:

- upload_max_filesize = 200M
- post_max_filesize = 500M
- memory_limit = 512M
- cgi.fix_pathinfo = 0
- max_execution_time = 360

Save and Exit the File using:

```
ctrl 0 + ctrl x + y + enter key
```

Restart the PHP and enable it

```
sudo systemctl restart php8.3-fpm.service
```

```
sudo systemctl enable php8.3-fpm.service
```

Check the status of PHP-FPM and confirm if its running:

```
systemctl status php8.3-fpm.service
```

```
ubuntu@ip-172-31-30-95:~$ sudo systemctl restart php8.3-fpm.service
ubuntu@ip-172-31-30-95:~$ systemctl status php8.3-fpm.service
● php8.3-fpm.service - The PHP 8.3 FastCGI Process Manager
     Loaded: loaded (/usr/lib/systemd/system/php8.3-fpm.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-04-08 12:17:37 UTC; 38s ago
       Docs: man:php-fpm8.3(8)
    Process: 2430 ExecStartPost=/usr/lib/php/php-fpm-socket-helper install /run/php/php-fpm.sock /etc/php/8.3/fpm/pool.d/www.conf 83 (code=exited, status=0/SUCCESS)
   Main PID: 2427 (php-fpm8.3)
     Status: "Processes active: 0, idle: 2, Requests: 0, slow: 0, Traffic: 0req/sec"
      Tasks: 3 (limit: 1129)
     Memory: 11.7M (peak: 12.5M)
        CPU: 71ms
     CGroup: /system.slice/php8.3-fpm.service
             ├─2427 "php-fpm: master process (/etc/php/8.3/fpm/php-fpm.conf)"
             ├─2428 "php-fpm: pool www"
             └─2429 "php-fpm: pool www"

Apr 08 12:17:36 ip-172-31-30-95 systemd[1]: Starting php8.3-fpm.service - The PHP 8.3 FastCGI Process Manager...
Apr 08 12:17:37 ip-172-31-30-95 systemd[1]: Started php8.3-fpm.service - The PHP 8.3 FastCGI Process Manager.
ubuntu@ip-172-31-30-95:~$
```

Downloading Wordpress:

Download Wordpress using this command:

```
wget https://wordpress.org/latest.tar.gz
```

Extract the Wordpress Archive: not

```
tar -xvzf latest.tar.gz
```

Move Wordpress to Web Directory:

```
sudo mv wordpress /var/www/wordpress
```

Set Correct Permissions and assign ownership:

```
sudo chown -R www-data:www-data /var/www/wordpress/
```

```
sudo chmod -R 755 /var/www/wordpress/
```

Next, install MySQL:

```
sudo apt install mysql-server
```

Secure the installation:

```
sudo mysql_secure_installation
```

Check status:

```
sudo systemctl status mysql
```

Log in to MySQL:

```
sudo mysql
```

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY
'your_new_password’;
```

```
FLUSH PRIVILEGES;
```

```
EXIT;
```

```
mysql -u root -p
```

Create Database:

```
CREATE DATABASE wp_aiza;
```

Create a new user:

```
CREATE USER ‘wpuser@'localhost' IDENTIFIED WITH mysql_native_password BY
'your_new_password';
```

Grant permissions:

```
GRANT ALL ON wordpress.* TO 'wpuser@'localhost' WITH GRANT OPTION;
```

Apply changes and exit:

```
FLUSH PRIVILEGES;

EXIT;
```

Configure Nginx Web Server and switching it with Apache2.

Verify if apache is still running:

```
sudo systemctl status apache2
```

Install nginx:

```
sudo apt update

sudo apt install -y nginx
```

Disable Apache：

```
sudo systemctl stop apache2

sudo systemctl disable apache2
```

Start and enable Nginx:

```
sudo systemctl start nginx

sudo systemctl enable nginx
```

Check running status:

```
sudo systemctl status nginx
```

Create and configure a server block for wordpress and make necessary changes to the file (adding dns url and php version number)

```
sudo nano /etc/nginx/sites-enabled/wordpress
```

Test the configuration for errors:

```
sudo nginx -t
```

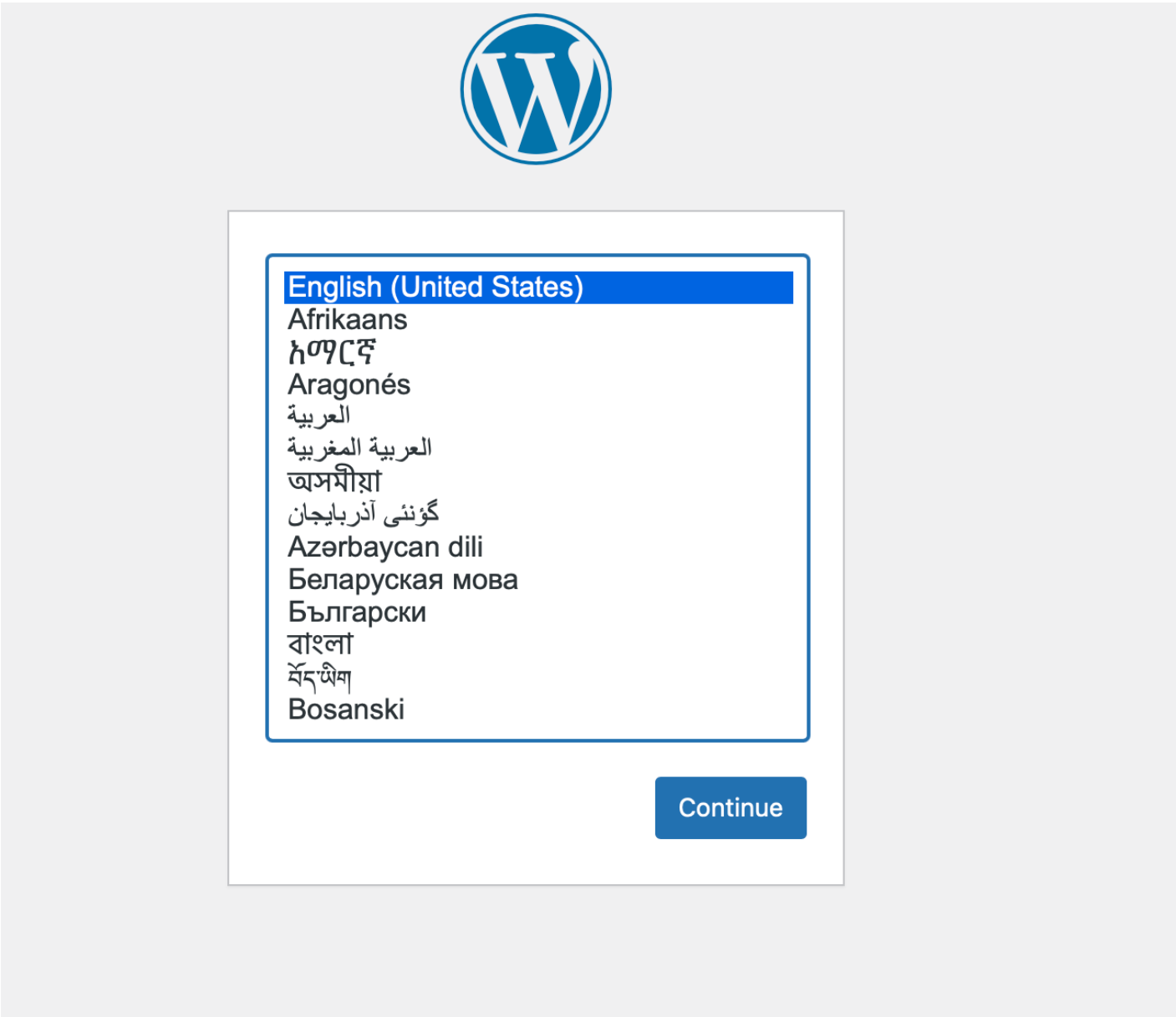
If successful, restart nginx:

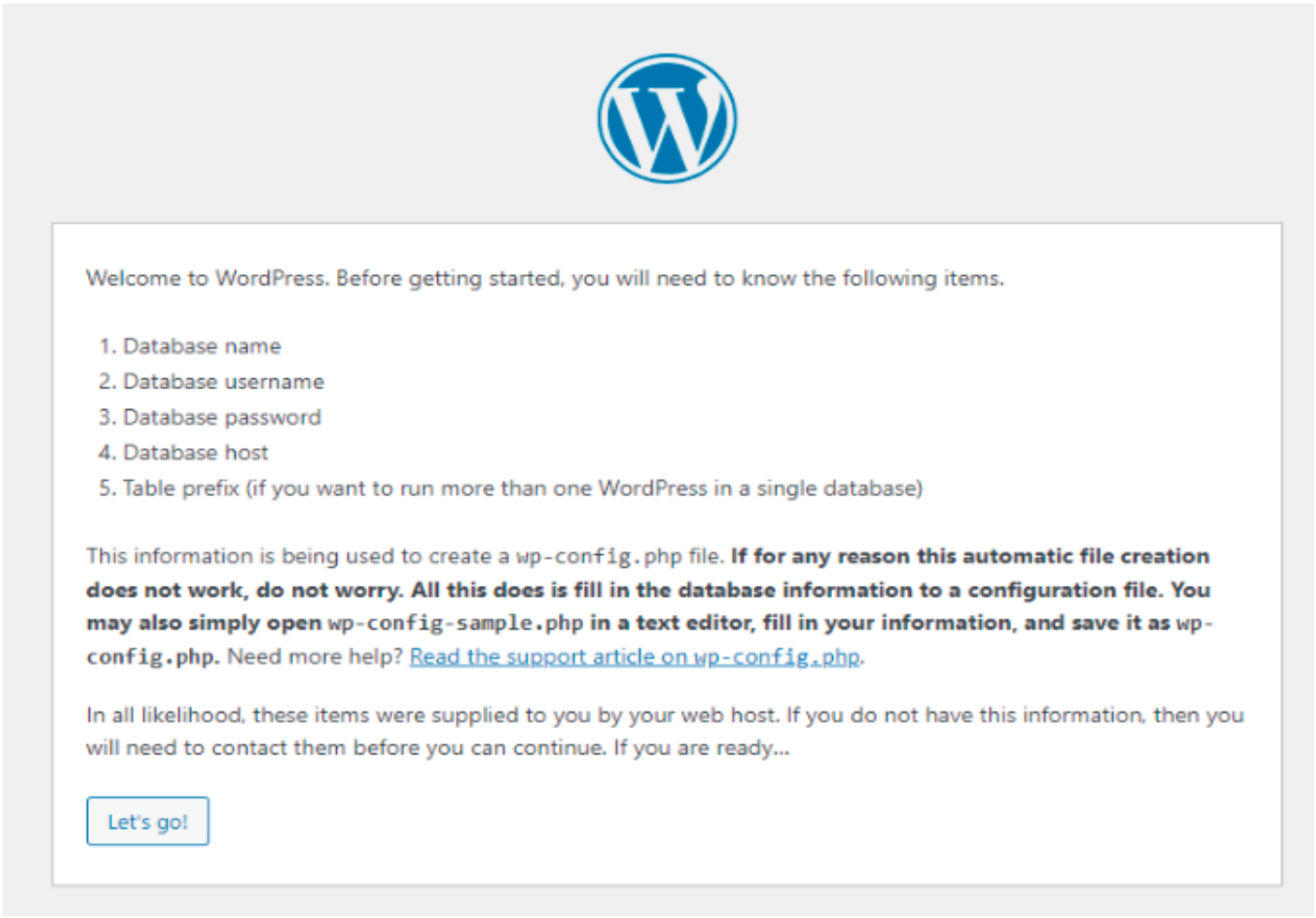
```
sudo systemctl restart nginx
```

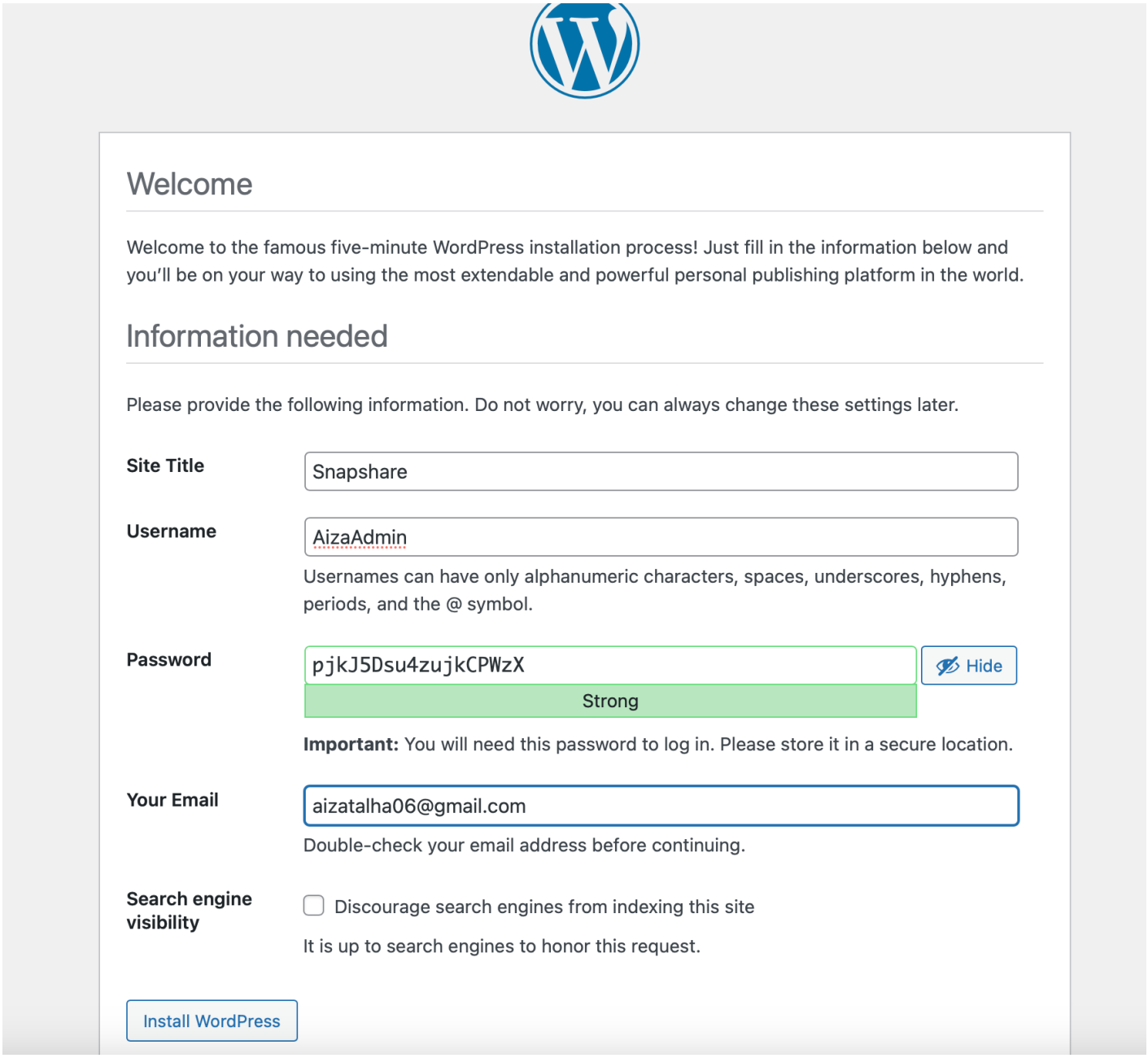
Setting up Wordpress:

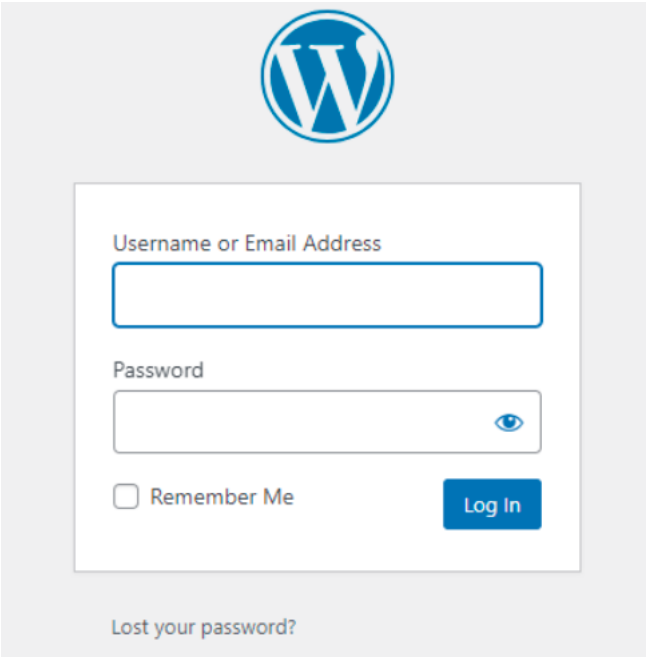
Enter your domain URL in a new tab:

Select English and continue:




Welcome to WordPress. Before getting started, you will need to know the following items.
1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)
This information is being used to create a wp-config.php file. If for any reason this automatic file creation does not work, do not worry. All this does is fill in the database information to a configuration file. You may also simply open wp-config-sample.php in a text editor, fill in your information, and save it as wp-config.php. Need more help? Read the support article on wp-config.php.
In all likelihood, these items were supplied to you by your web host. If you do not have this information, then you will need to contact them before you can continue. If you are ready...
Let's go!


Welcome
Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.
Information needed
Please provide the following information. Do not worry, you can always change these settings later.
Site Title
Snapshare
Username
AizaAdmin
Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.
Password
pjkJ5Dsu4zujkCPWzX
Hide
Strong
Important: You will need this password to log in. Please store it in a secure location.
Your Email
aizatalha06@gmail.com
Double-check your email address before continuing.
Search engine visibility
Discourage search engines from indexing this site
It is up to search engines to honor this request.
Install WordPress



Fill in the correct details and log in.

SSL/TLS Documentation

Enabling HTTPS with Certbot on Ubuntu 20.04 Using Apache.

Ensure that TCP ports 22 and 80 are available through the firewall:

Port 22: For SSH access.

Port 80: For HTTP access.

Install Snapd and refresh core:

```
sudo snap install core
sudo snap refresh core
```

Remove old certbot configurations:

```
sudo apt remove certbot
```

Install certbot via Snap:

```
sudo snap install --classic certbot
```

Create a symbolic link to ensure the certbot command can be run:

```
sudo ln -s /snap/bin/certbot /usr/bin/certbot
```

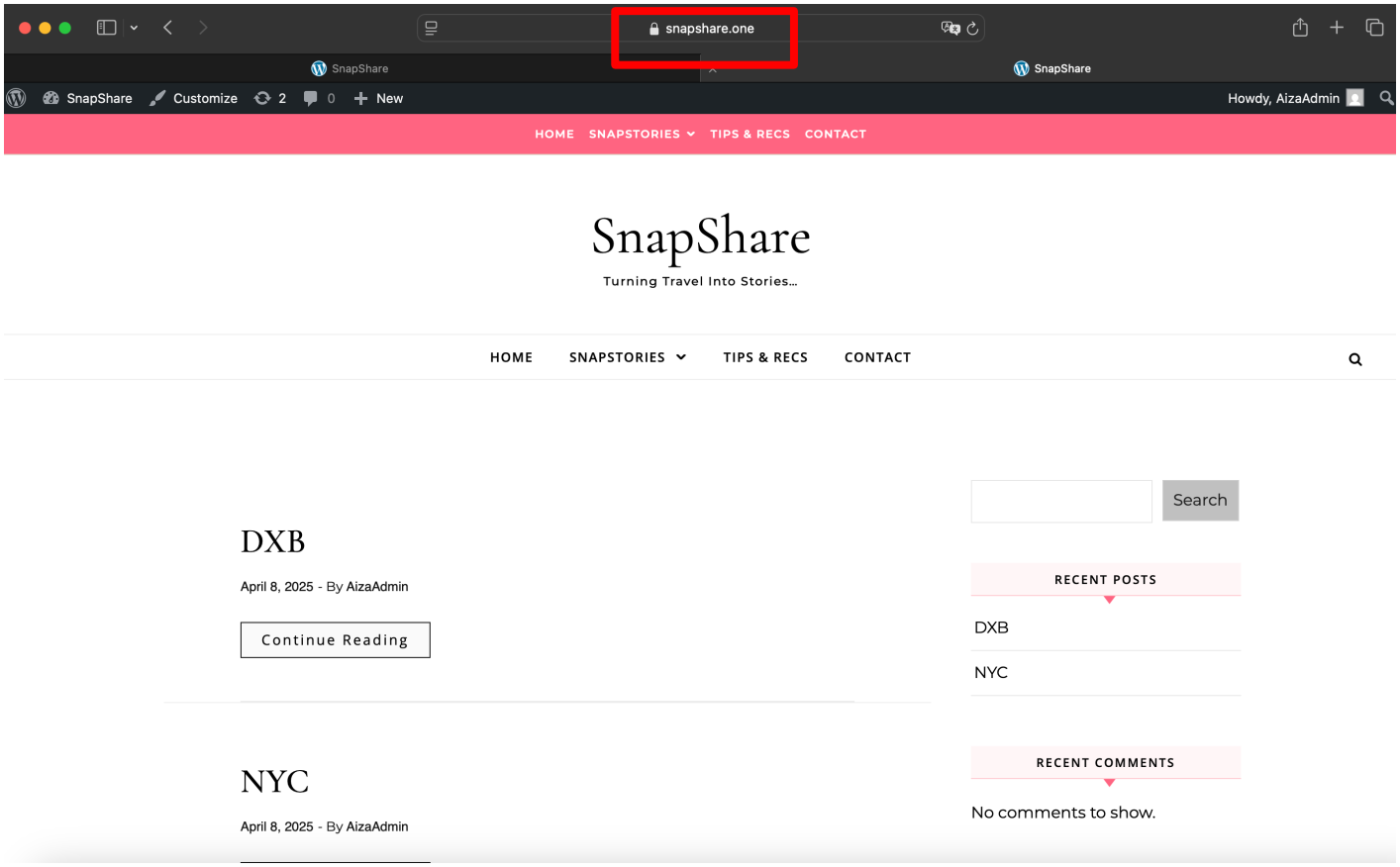
Run Certbot with Apache plugin to obtain and install the SSL certificate:

```
sudo certbot –apache
```

The output should look like this:

```
ubuntu@ip-172-31-30-95:~$ sudo certbot --nginx
Saving debug log to /var/log/letsencrypt/letsencrypt.log

Which names would you like to activate HTTPS for?
We recommend selecting either all domains, or all domains in a VirtualHost/server block.
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
1: snapshare.one
2: www.snapshare.one
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Select the appropriate numbers separated by commas and/or spaces, or leave input
blank to select all options shown (Enter 'c' to cancel): 2
Certificate not yet due for renewal

You have an existing certificate that has exactly the same domains or certificate name you requested and isn't close to expiry.
(ref: /etc/letsencrypt/renewal/www.snapshare.one.conf)

What would you like to do?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
1: Attempt to reinstall this existing certificate
2: Renew & replace the certificate (may be subject to CA rate limits)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Select the appropriate number [1-2] then [enter] (press 'c' to cancel): 1
Deploying certificate
Successfully deployed certificate for www.snapshare.one to /etc/nginx/nginx.conf
Congratulations! You have successfully enabled HTTPS on https://www.snapshare.one

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
If you like Certbot, please consider supporting our work by:
 * Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
 * Donating to EFF:                    https://eff.org/donate-le
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

Refresh your webpage:


snapshare.one
SnapShare
SnapShare
SnapShare Customize 2 0 New
Howdy, AizaAdmin
HOME SNAPSTORIES TIPS & RECS CONTACT
SnapShare
Turning Travel Into Stories...
HOME SNAPSTORIES TIPS & RECS CONTACT
DXB
April 8, 2025 - By AizaAdmin
Continue Reading
NYC
April 8, 2025 - By AizaAdmin
Search
RECENT POSTS
DXB
NYC
RECENT COMMENTS
No comments to show.