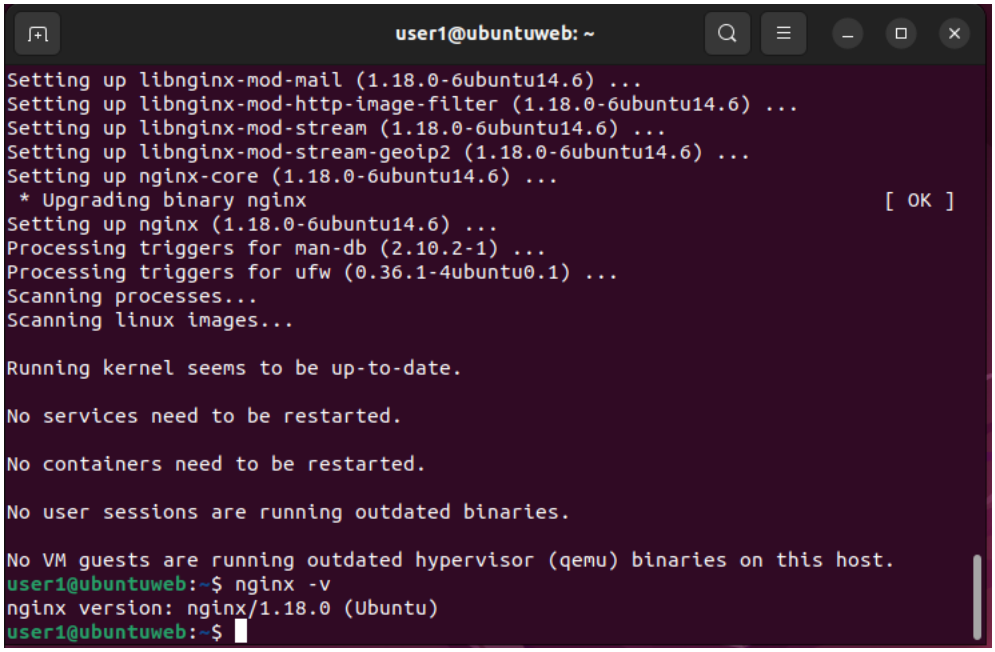
Ubuntu (WebServer) Setup – Nginx, PHP 8.2, MariaDB 10.6 and WordPress

1. Install Nginx

```
sudo apt update && sudo apt install nginx -y
```

Verify installation:

```
nginx -v
```



2. Install PHP

```
sudo apt install php8.2 php8.2-fpm php8.2-mysql php8.2-curl
php8.2-gd php8.2-mbstring php8.2-xml php8.2-zip -y
sudo systemctl enable php8.2-fpm
sudo systemctl start php8.2-fpm
```

If the above command doesn't work then the reason is this:
Ubuntu doesn't have PHP 8.2 by default so if the PHP installation with the above command doesn't work then do the following.

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

Add PHP Repository:

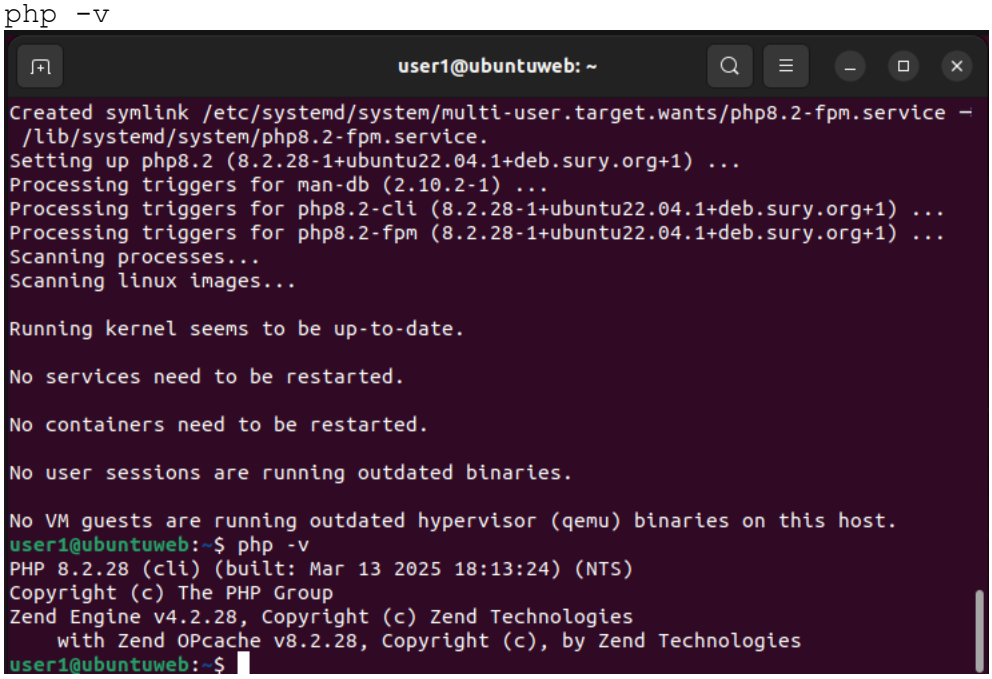
```
sudo add-apt-repository ppa:ondrej/php -y
sudo apt update
```

Install PHP 8.2 and required extensions:

```
sudo apt install php8.2 php8.2-fpm php8.2-mysql php8.2-curl
php8.2-gd php8.2-mbstring php8.2-xml php8.2-zip -y
sudo systemctl enable php8.2-fpm
sudo systemctl start php8.2-fpm
```

Verify Installation:

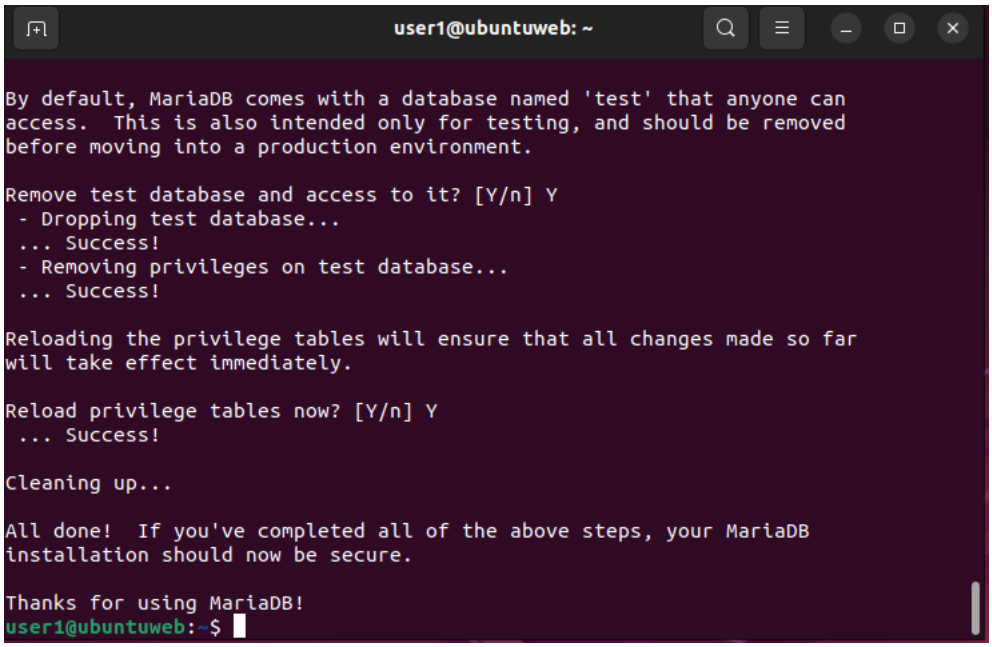
```
php -v
```



3. Install MariaDB:

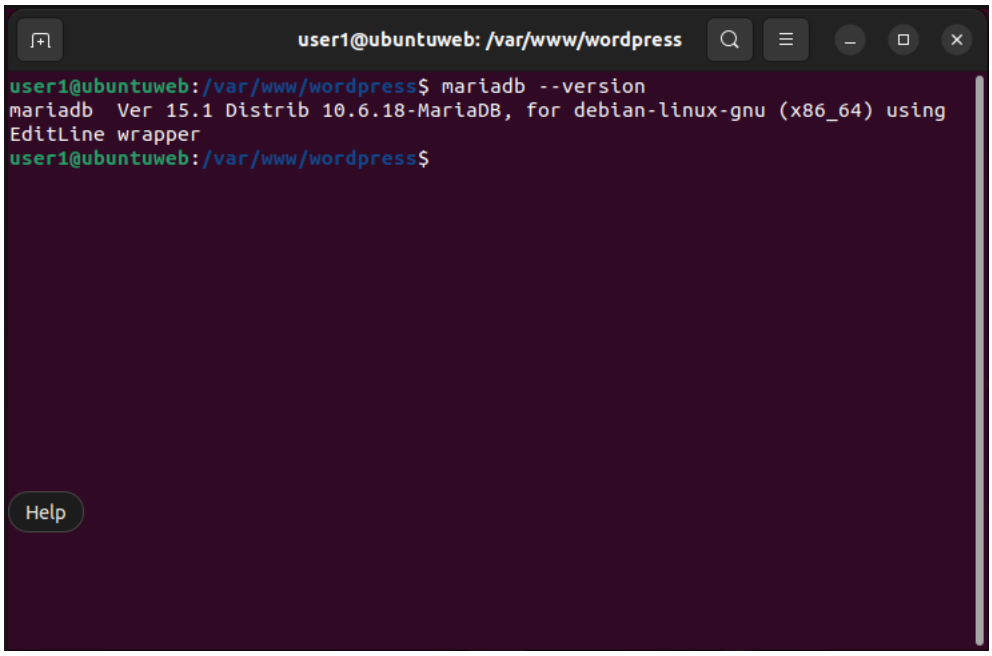
```
sudo apt install mariadb-server mariadb-client -y
sudo mysql_secure_installation
```

- Set the root password (if prompted).
- Remove anonymous users.
- Disallow remote root login.
- Remove test databases.
- Reload privileges.



Verify installation:

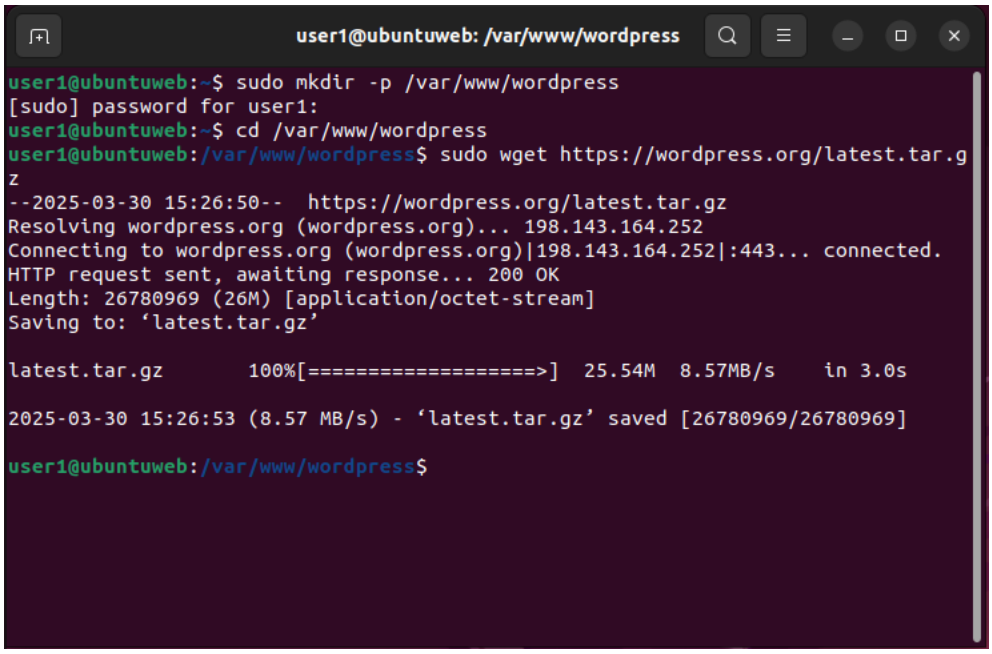
```
mariadb -version
```



4. Install WordPress & Configure Database

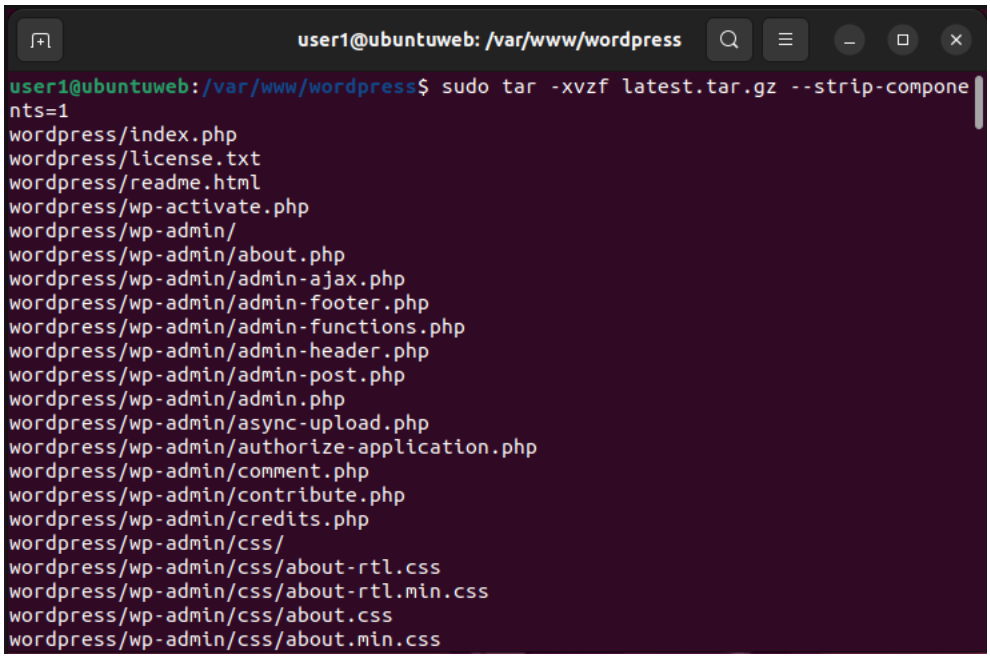
a) Download WordPress:

```
sudo mkdir -p /var/www/wordpress
cd /var/www/wordpress
sudo wget https://wordpress.org/latest.tar.gz
```



b) Extract WordPress tar gzip file:

```
sudo tar -xvzf latest.tar.gz --strip-components=1
```



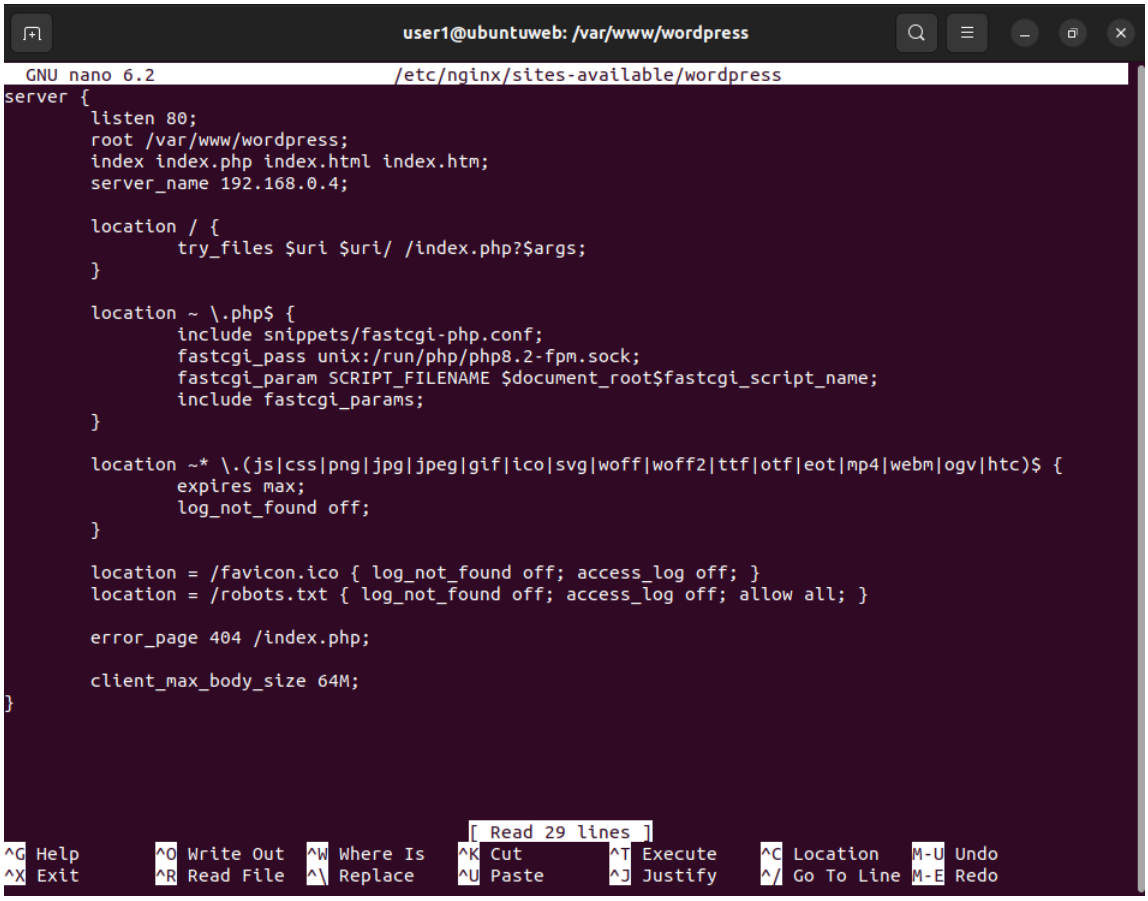
c) Change Owner/User Permissions:

```
sudo chown -R www-data:www-data /var/www/wordpress
sudo chmod -R  755 /var/www/wordpress
```

5. Configure Nginx for WordPress

a) Create an nginx configuration file for wordpress:

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



b) Create symbolic link to enable the site:

```
sudo ln -s /etc/nginx/sites-available/wordpress
/etc/nginx/sites-enabled/
```

c) Test Nginx Configuration:

```
sudo nginx -t
sudo systemctl restart nginx
```

6. Configure WordPress Database

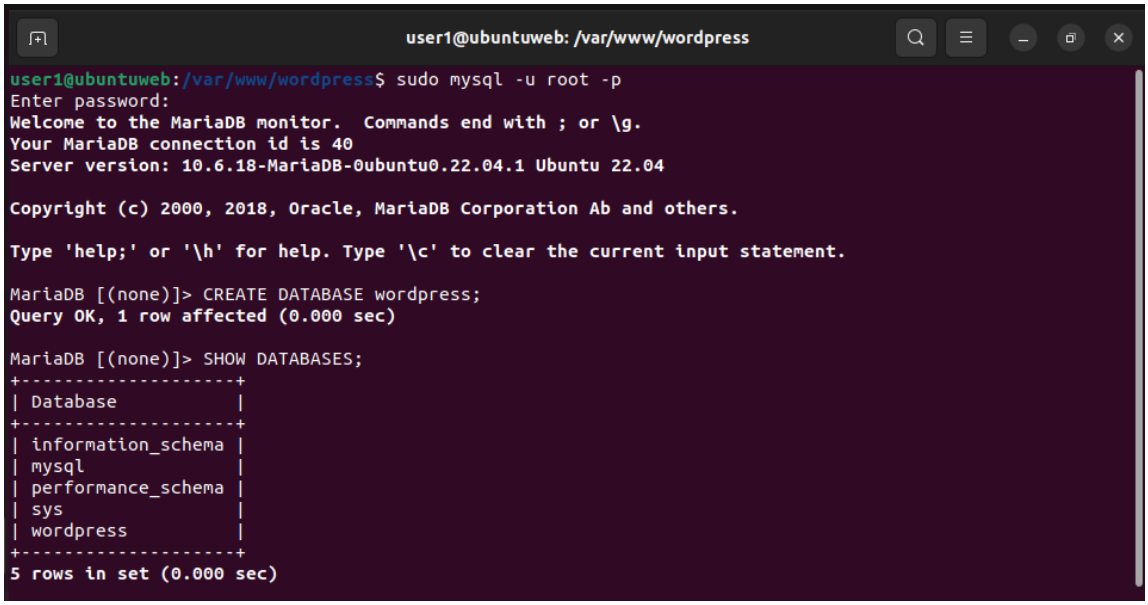
a) Login to MariaDB:

```
sudo mysql -u root -p
Enter password: [YOUR_PASSWORD]
```

b) Create a Database for WordPress:

```
CREATE DATABASE wordpress;
```

Check database: `SHOW DATABASES;`

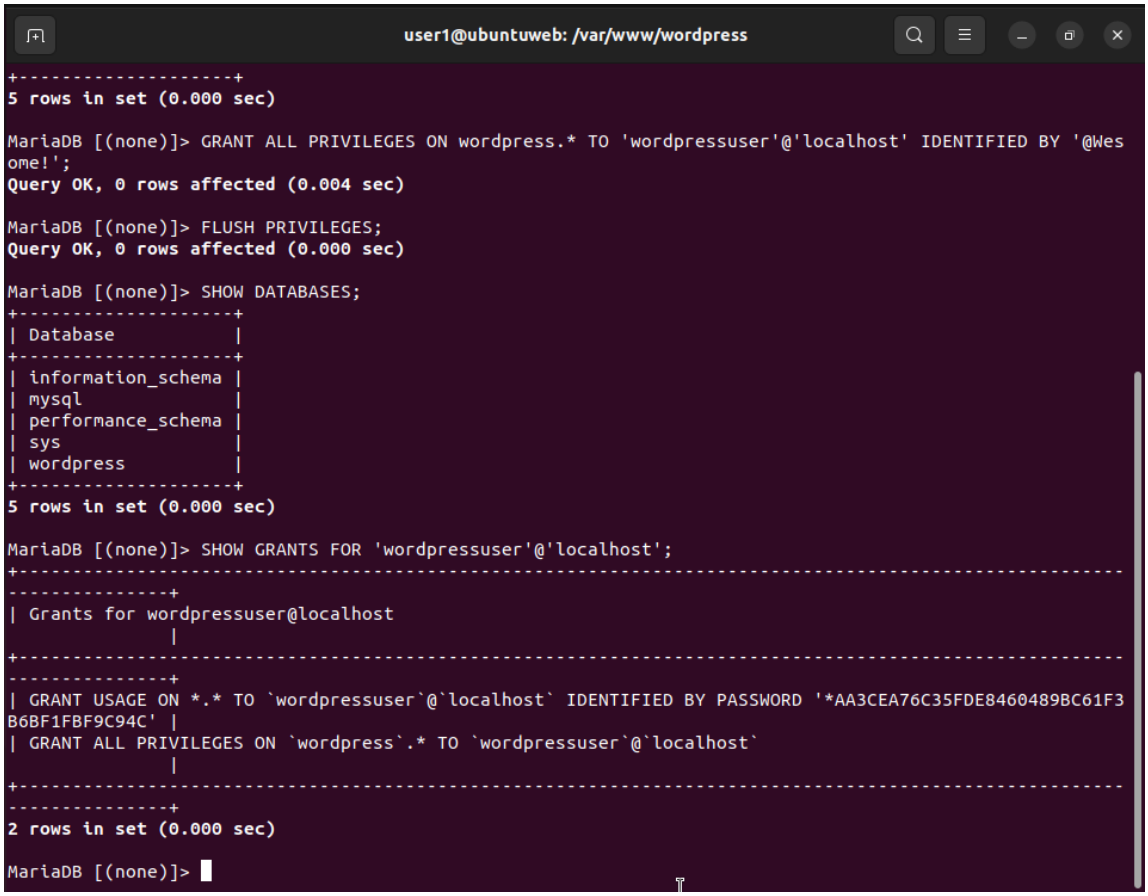


c) Provide Grant access for WordPress admin user:

```
GRANT ALL PRIVILEGES ON wordpress.* TO
'wordpressuser'@'localhost' IDENTIFIED BY 'your_password';
FLUSH PRIVILEGES;
EXIT;
```

Check the grant:

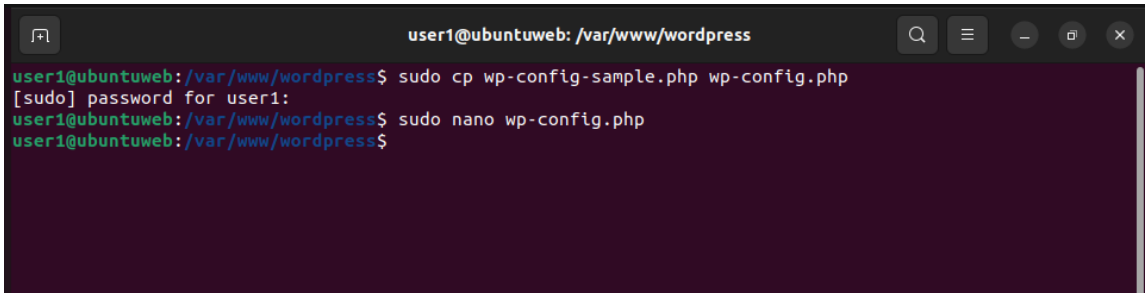
```
SHOW GRANTS FOR 'wordpressuser'@'localhost';
EXIT;
```



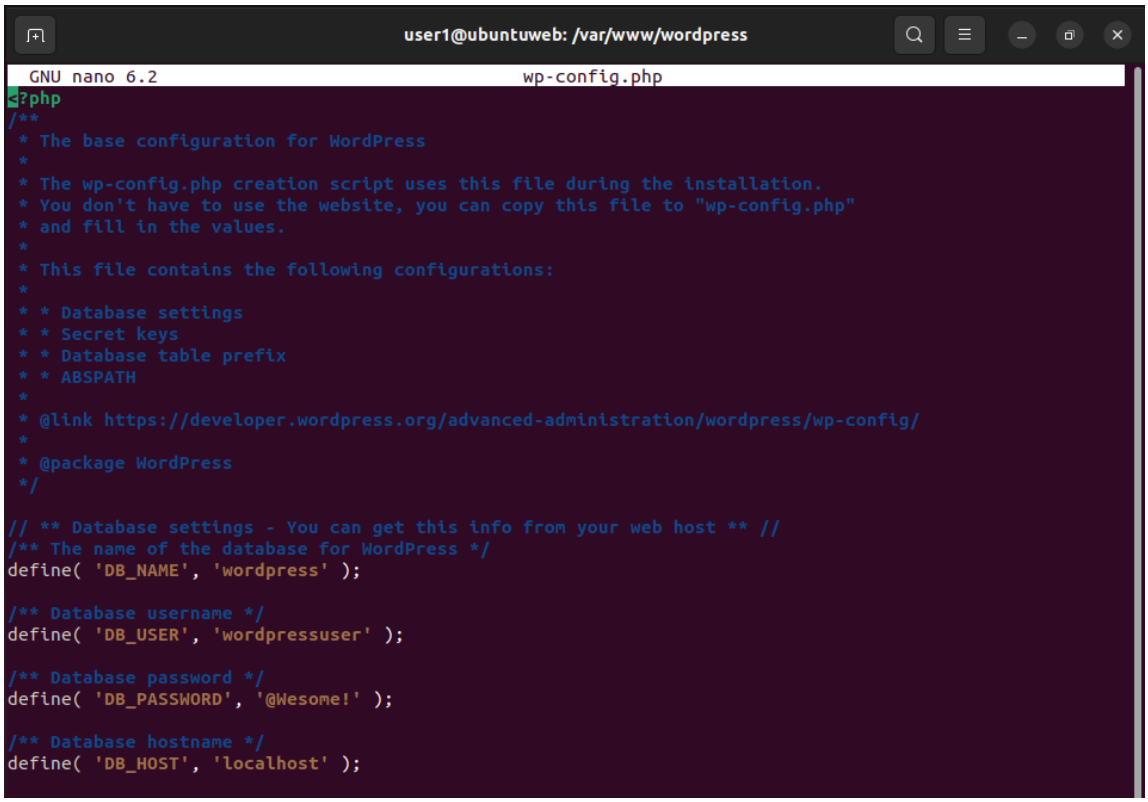
7. Configure WordPress:

a) Rename and Edit WordPress Config File:

```
sudo cp wp-config-sample.php wp-config.php
```

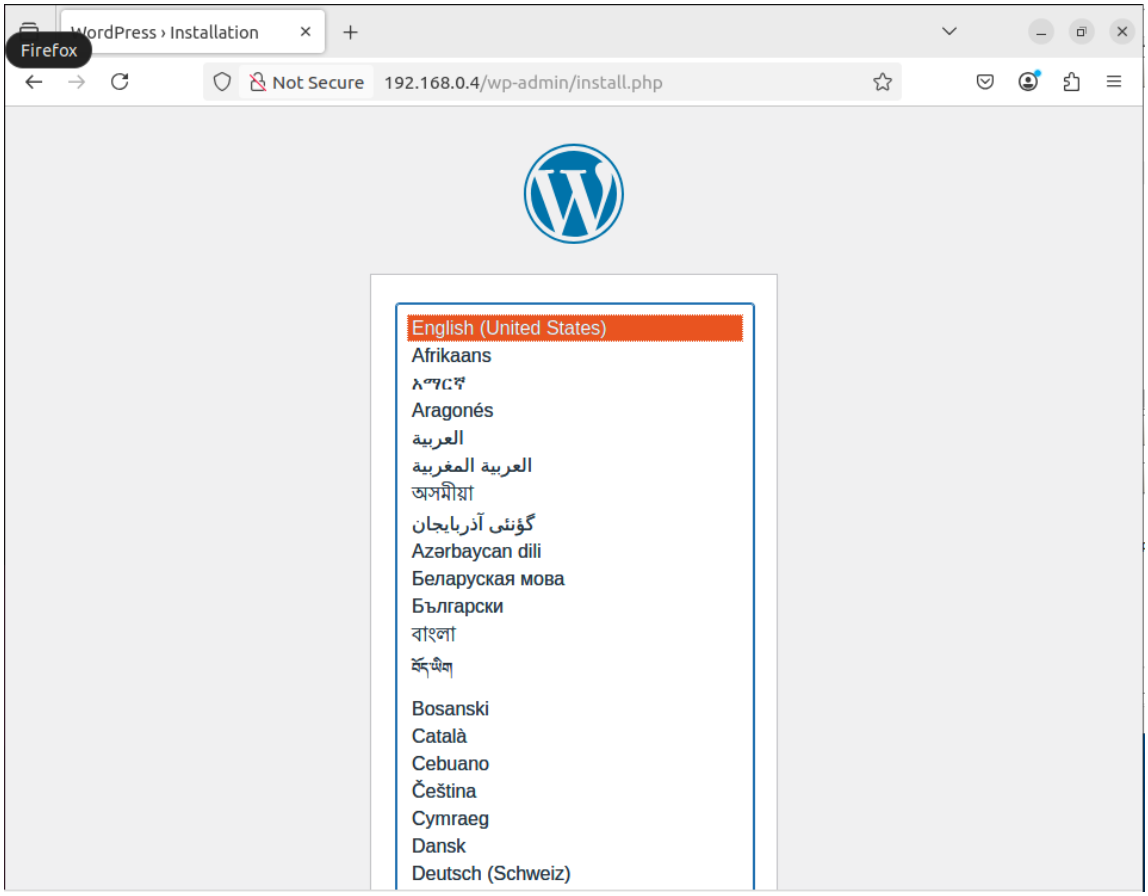


```
sudo nano wp-config.php
define('DB_NAME', 'wordpress');
define('DB_USER', 'wordpressuser');
define('DB_PASSWORD', 'StrongPassword');
define('DB_HOST', 'localhost');
```

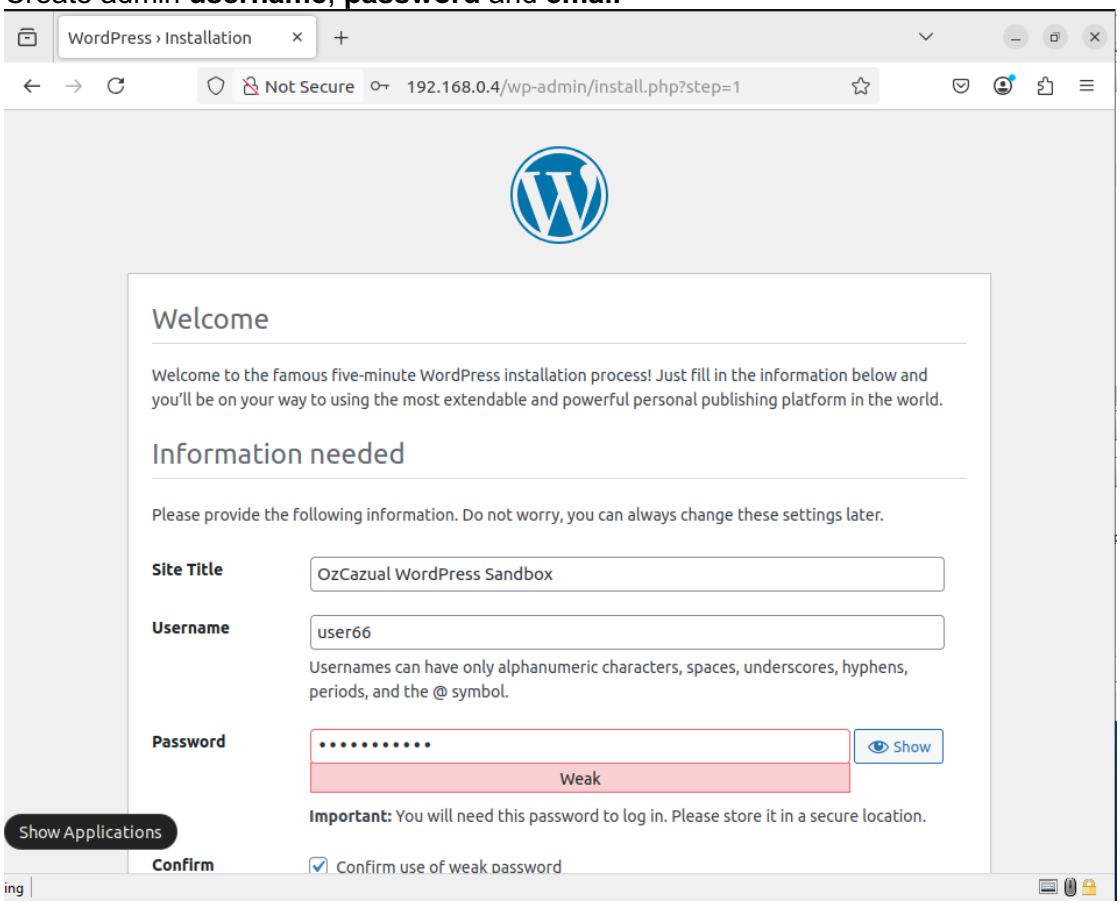


b) Finalize WordPress Installation:

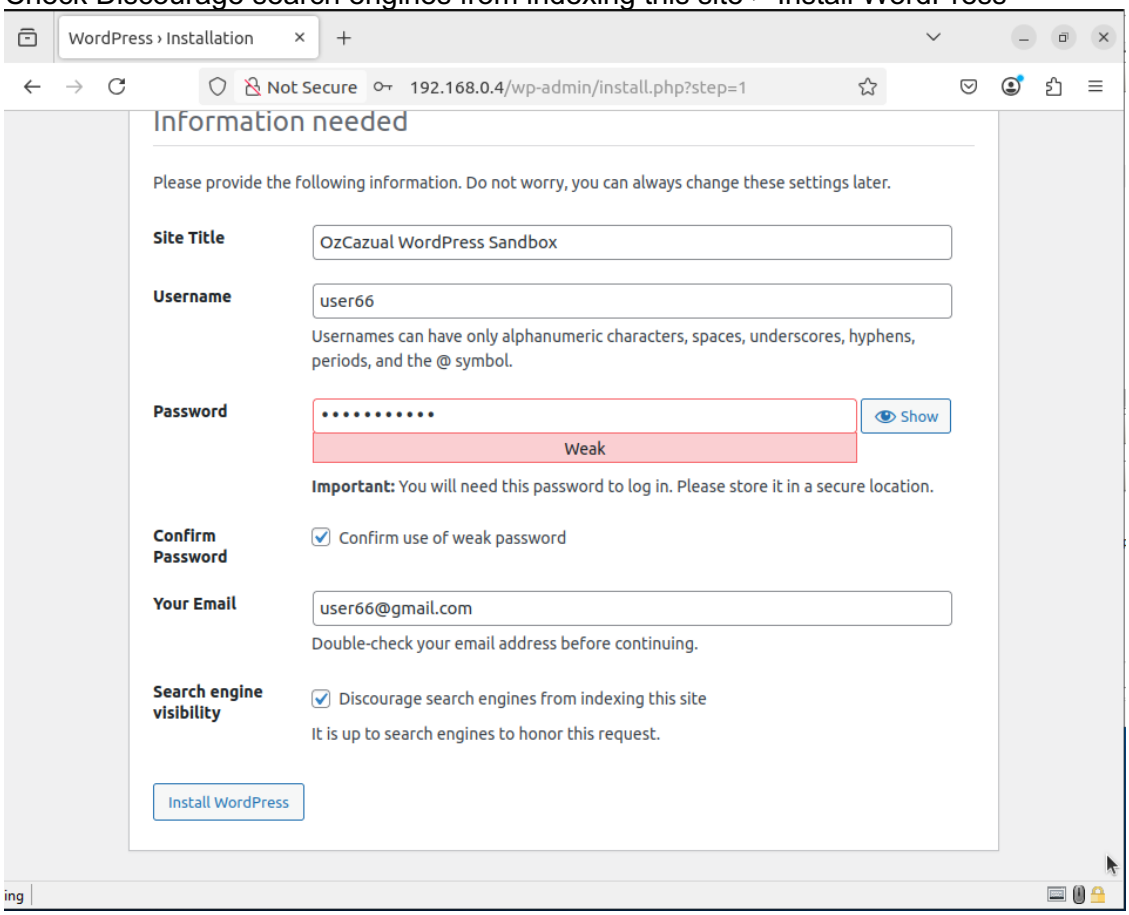
Open Firefox browser,
Go to **http://[server_ip]/wp-admin/install.php**
Select Language > **English** > Next



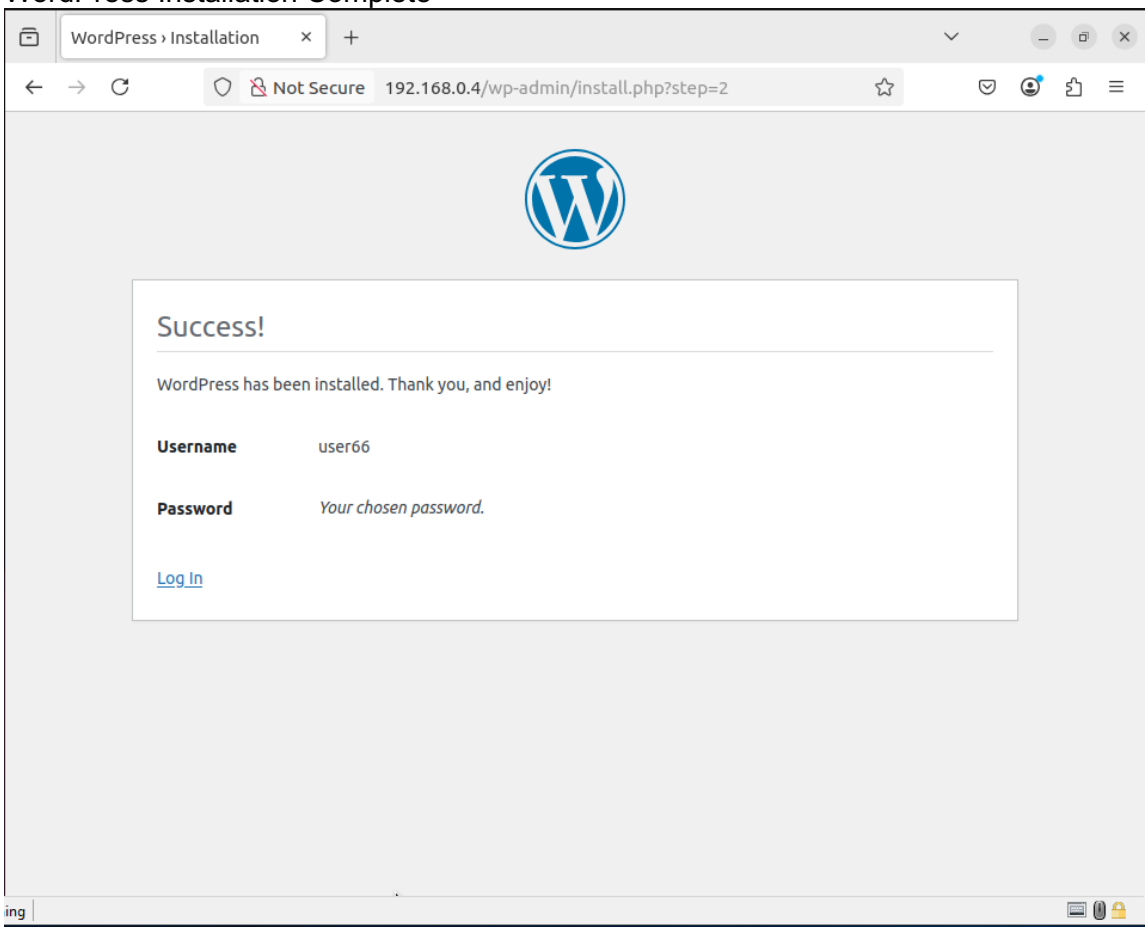
Create admin **username**, **password** and **email**



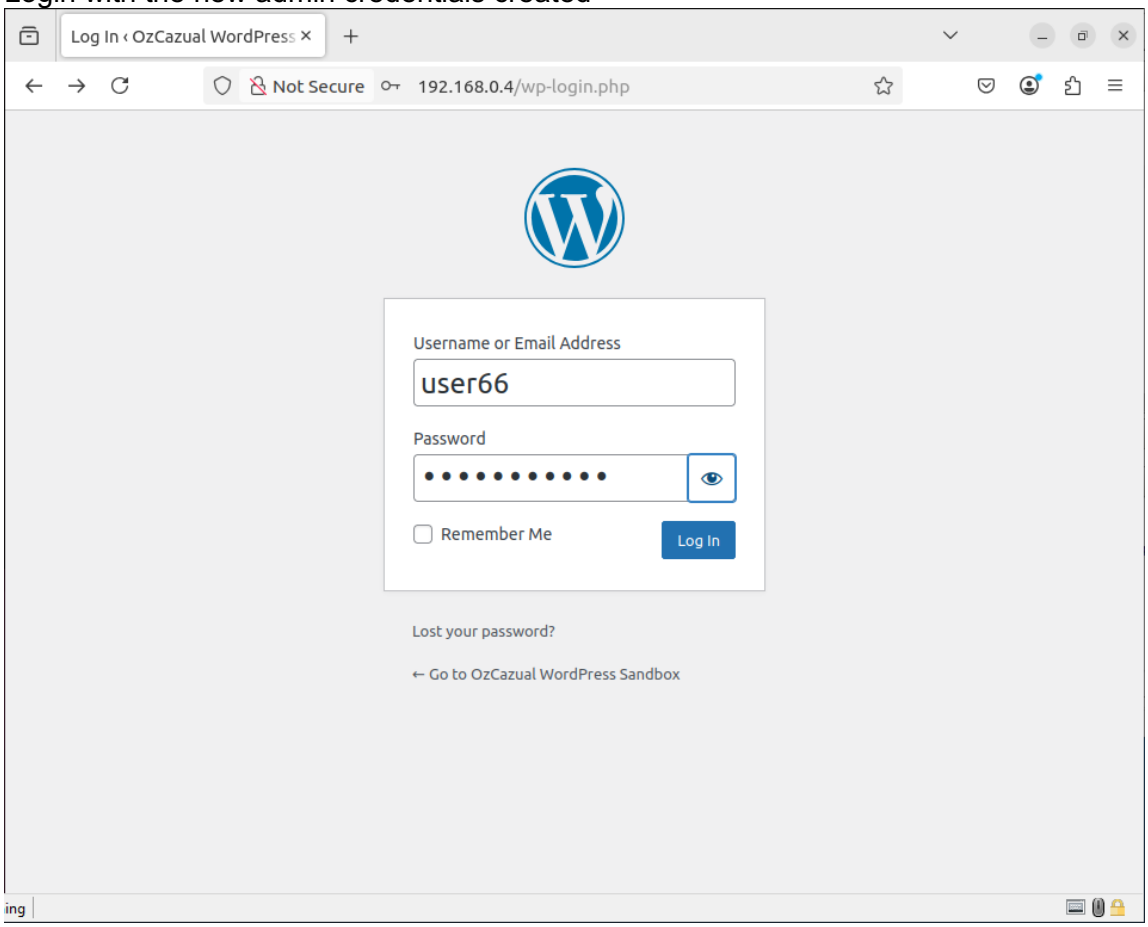
Check Discourage search engines from indexing this site > Install WordPress



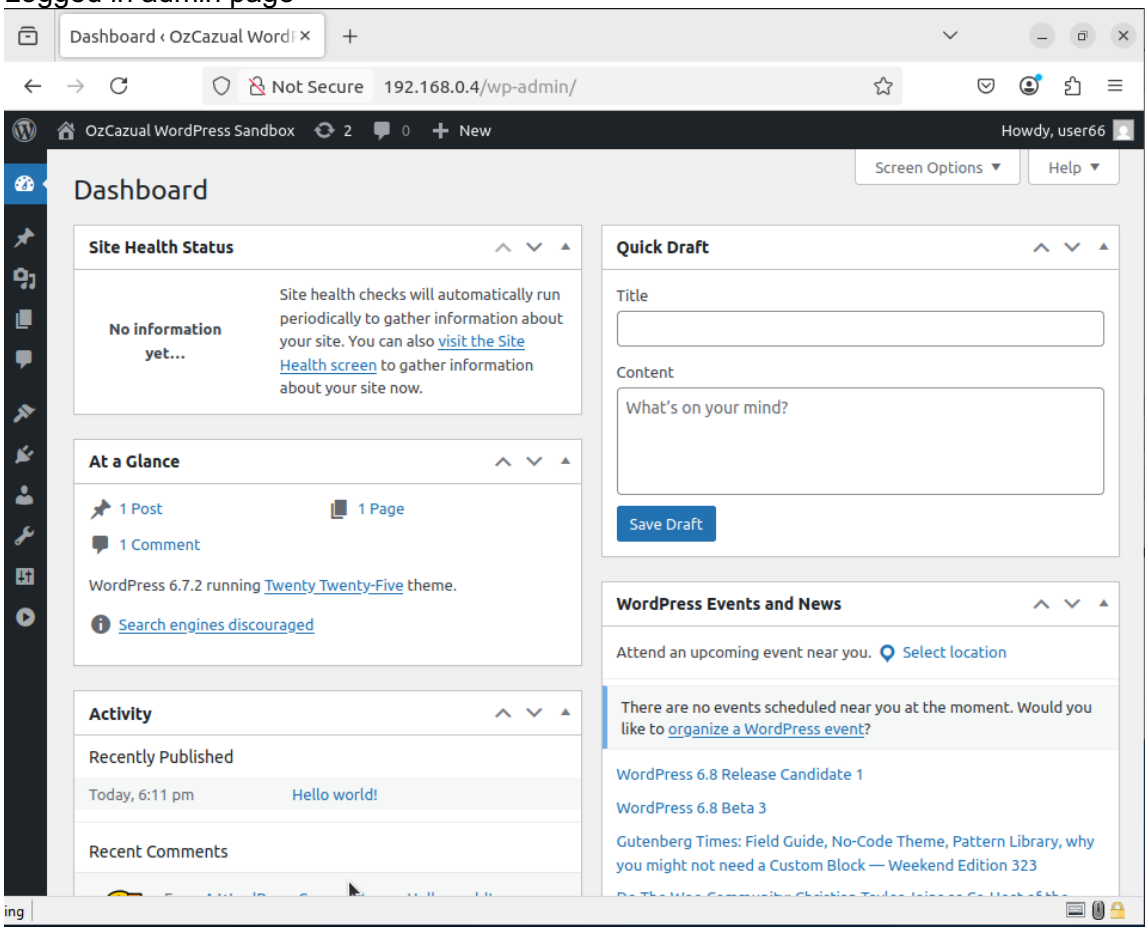
WordPress Installation Complete



Login with the new admin credentials created

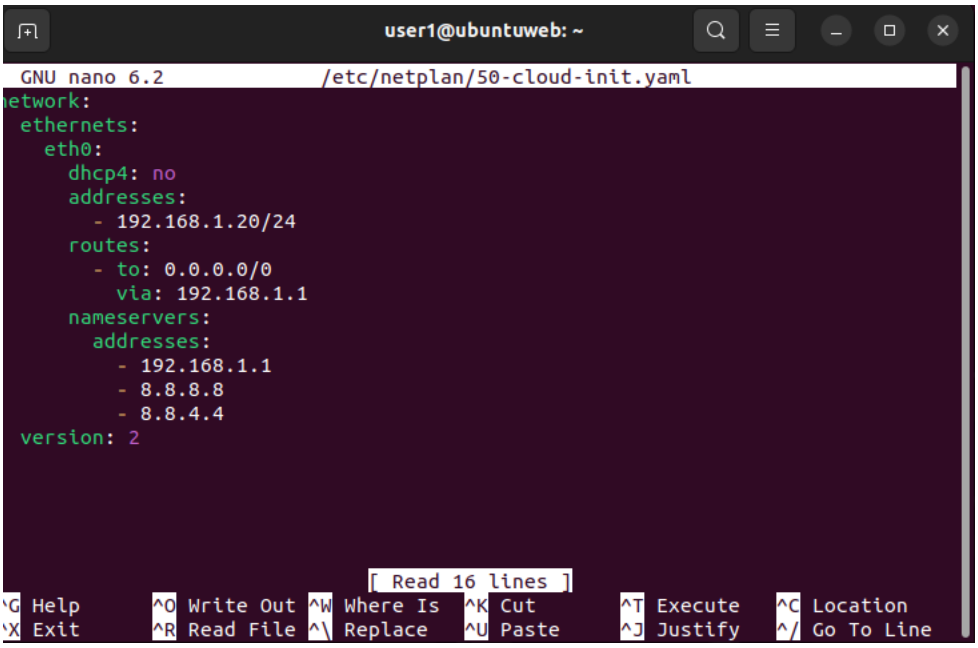


Logged in admin page



If you changed your IP after connecting to pfSense,
Say like this,

sudo nano /etc/netplan/50-cloud-init.yaml

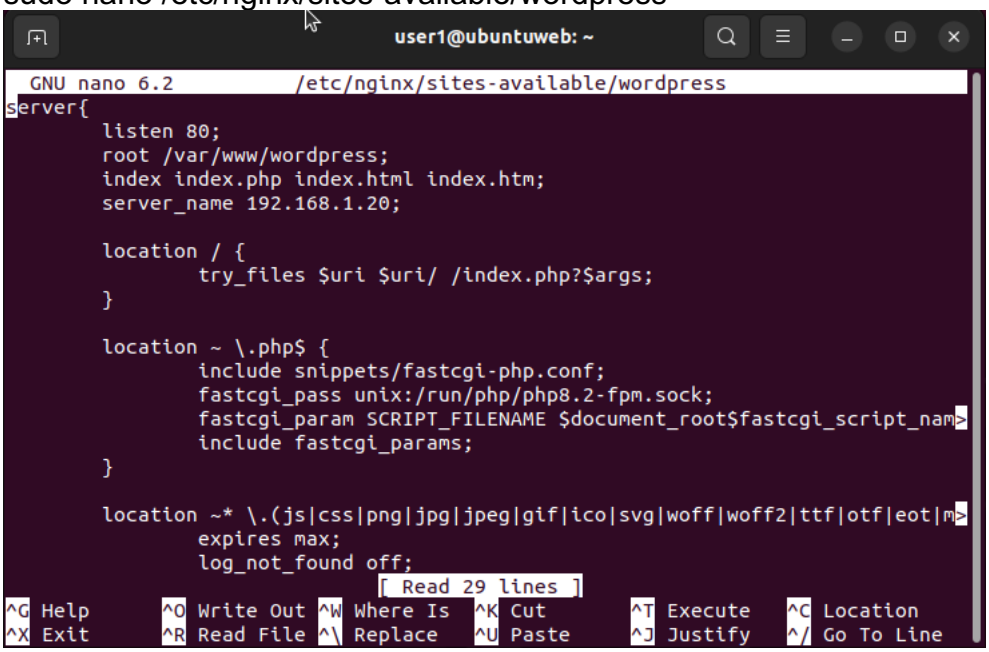


sudo netplan try
sudo netplan apply

sudo reboot

Check:
ip a

Configure the nginx to change the server name:
sudo nano /etc/nginx/sites-available/wordpress



sudo nginx -t
sudo systemctl reload nginx

Check if you have wp-cli installed:
wp --info

If not installed then install it:
curl -O https://raw.githubusercontent.com/wp-cli/builds/gh-pages/phar/wp-cli.phar
chmod +x wp-cli.phar
sudo mv wp-cli.phar /usr/local/bin/wp
wp --info

Make changes in the wordpress tables using mariadb:
sudo mysql -u root -p
[password]

SHOW DATABASES;
USE wordpress;
SHOW TABLES;
UPDATE wp_options SET option_value = ‘http://<new_IP>’ WHERE option_name = ‘siteurl’;
UPDATE wp_options SET option_value = ‘http://<new_IP>’ WHERE option_name = ‘home’;
FLUSH PRIVILEGES;
EXIT;

If it still shows old_IP in any links of wordpress website, then search the database tables like this:

```
sudo mysql -u root -p
[password]
USE wordpress;
SELECT * FROM wp_options WHERE option_value LIKE ‘%<old_IP>%’;
SELECT * FROM wp_posts WHERE post_content LIKE ‘%<old_IP>%’;
SELECT * FROM wp_postmeta WHERE meta_value LIKE ‘%<old_IP>%’;
SELECT * FROM wp_usermeta WHERE meta_value LIKE ‘%<old_IP>%’;
EXIT;
```

After updating the wordpress database tables, if you still see your old_IP in any of the wordpress links in the website:

```
wp search-replace ‘http://<old_IP>’ ‘http://<new_IP>’ --all-tables
```