To set up your WordPress and MySQL microservices on two EC2 instances, we need to:

- 1. \*\*Configure the security groups\*\* for both the WordPress and MySQL instances.
- 2. \*\*Deploy WordPress\*\* and configure it to connect to the MySQL database.
- 3. \*\*Create a WordPress homepage\*\* that users can log in to.

### Security Groups Configuration

- 1. \*\*WordPress EC2 Instance (3.90.208.9)\*\*
  - \*\*Inbound Rules: \*\*
  - HTTP (port 80) from `0.0.0.0/0` (for public web access)
  - HTTPS (port 443) from `0.0.0.0/0` (for secure web access if using SSL)
  - SSH (port 22) from `49.205.209.240/32` (your IP for secure SSH access)
- MySQL/Aurora (port 3306) from `172.31.31.200/32` (allow the WordPress instance to communicate with the MySQL instance)
  - \*\*Outbound Rules:\*\*
  - All traffic allowed by default (for internet access, updates, etc.)
- 2. \*\*MySQL EC2 Instance (54.82.112.9)\*\*
  - \*\*Inbound Rules:\*\*
- MySQL/Aurora (port 3306) from `172.31.22.186/32` (allow the WordPress instance to communicate with the database)
  - SSH (port 22) from `49.205.209.240/32` (your IP for secure SSH access)
  - \*\*Outbound Rules:\*\*
  - All traffic allowed by default (for package updates, etc.)

### WordPress Setup

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1. **Launch the EC2 Instances:**
 - Launch two EC2 instances using the `t2.micro` instance type and Ubuntu AMI (`ubuntu-*`).
 - Assign the security groups you just configured to each instance.
2. **Set up the MySQL database:**
 - SSH into your MySQL instance using your private key:
  ssh -i your-key.pem ubuntu@54.82.112.9
 - Install MySQL:
  sudo apt update
  sudo apt install mysql-server -y
 - Log into MySQL as root:
  sudo mysql -u root -p
 - Create the WordPress database and user:
  CREATE DATABASE wordpress;
  CREATE USER 'wp_user'@'%' IDENTIFIED BY 'varshasr';
  GRANT ALL PRIVILEGES ON wordpress.* TO 'wp_user'@'%';
  FLUSH PRIVILEGES;
  EXIT;
 - Configure MySQL to allow connections from the WordPress instance. Edit the MySQL config file:
  sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
 - Change the bind address to:
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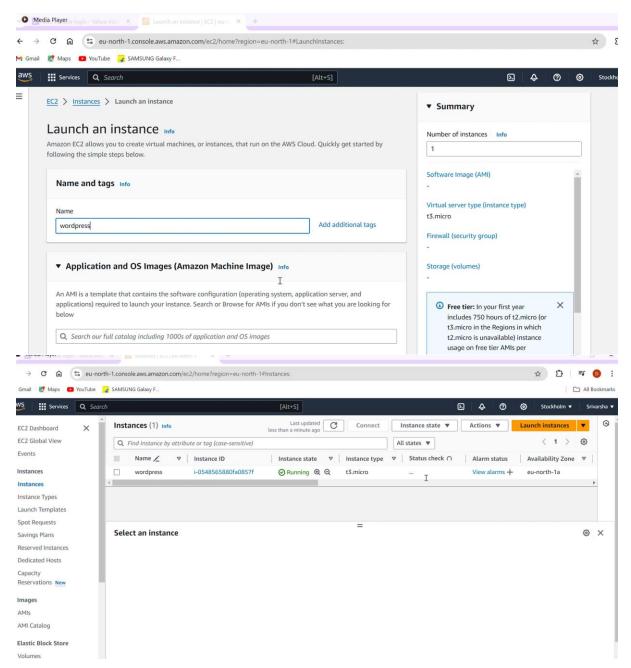
```
bind-address = 0.0.0.0
 - Restart MySQL:
  sudo systemctl restart mysql
3. **Set up WordPress:**
 - SSH into your WordPress instance using your private key:
  ssh -i your-key.pem ubuntu@3.90.208.9
 - Install Apache, PHP, and necessary PHP extensions:
  sudo apt update
  sudo apt install apache2 php php-mysql -y
 - Download WordPress:
  wget https://wordpress.org/latest.tar.gz
  tar -xvzf latest.tar.gz
  sudo mv wordpress/* /var/www/html/
 - Configure WordPress to connect to the MySQL database. Edit the WordPress config file:
  sudo nano /var/www/html/wp-config.php
  Set the database details:
  php
  define('DB_NAME', 'wordpress');
```

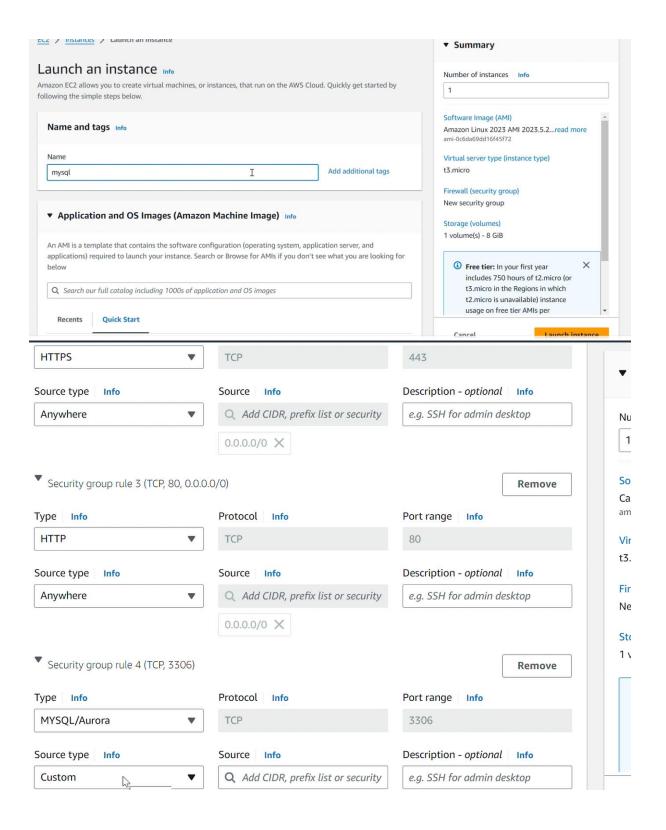
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define('DB_USER', 'wp_user');
  define('DB_PASSWORD', 'varshasr');
  define('DB_HOST', '172.31.31.200');
 - Set the proper permissions:
  sudo chown -R www-data:www-data/var/www/html/
  sudo chmod -R 755 /var/www/html/
 - Restart Apache:
  sudo systemctl restart apache2
4. **Create a Welcome Page:**
 - Access your WordPress site by navigating to `http://3.90.208.9` in a browser.
if apache comes then,
Verify WordPress Installation: Ensure that WordPress files are in the /var/www/html/ directory.
SSH into your WordPress instance:
ssh -i your-key.pem ubuntu@3.90.208.9
Check the contents of the /var/www/html/ directory:
Is /var/www/html/
You should see WordPress files such as index.php, wp-config.php, wp-admin, wp-content, etc.
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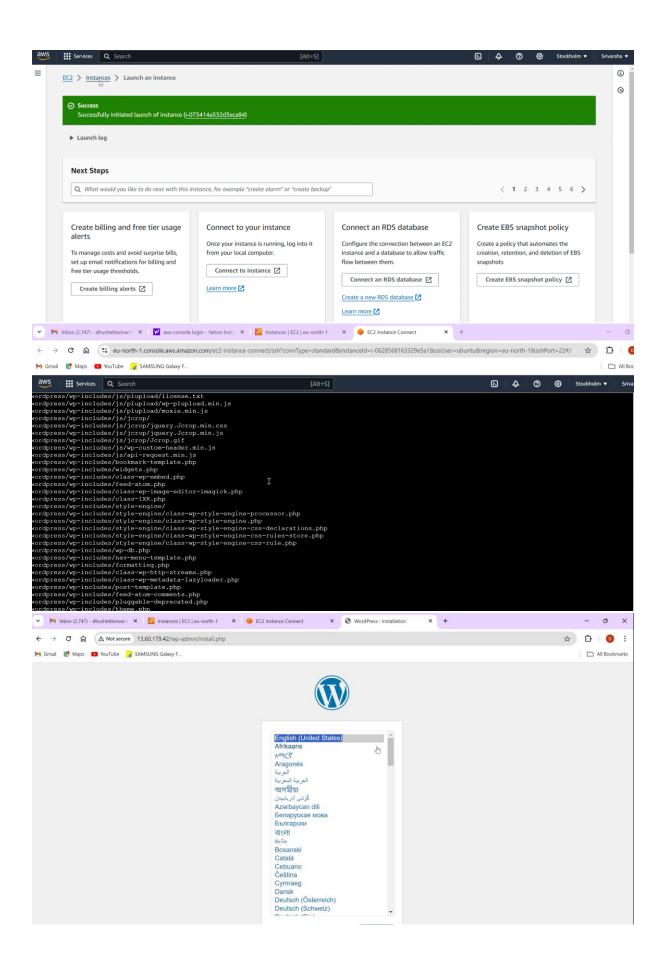
If you see the default index.html file from Apache, it's causing the default page to show. You should remove it: bash sudo rm /var/www/html/index.html Move WordPress Files: If you haven't already, download and extract the WordPress package: wget https://wordpress.org/latest.tar.gz tar -xvzf latest.tar.gz sudo mv wordpress/\* /var/www/html/ Set File Permissions: Set the correct permissions for the WordPress files: sudo chown -R www-data:www-data/var/www/html/ sudo chmod -R 755 /var/www/html/ Configure WordPress Database Connection: Make sure the wp-config.php file is properly configured with the database details. If you haven't done this yet, you can create the wp-config.php file by copying the sample configuration file: sudo cp /var/www/html/wp-config-sample.php /var/www/html/wp-config.php sudo nano /var/www/html/wp-config.php Update the database connection details: define('DB\_NAME', 'wordpress'); define('DB\_USER', 'wp\_user'); define('DB\_PASSWORD', 'varshasr'); define('DB\_HOST', '172.31.31.200'); // MySQL instance private IP

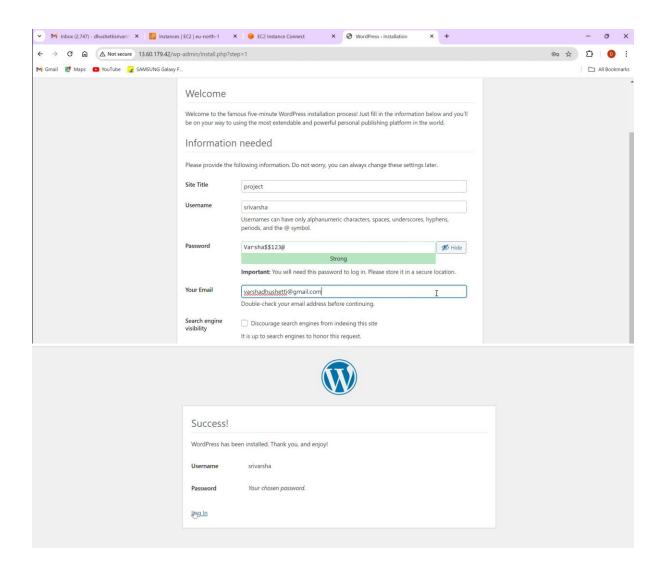
Restart Apache: After making all these changes, restart Apache:

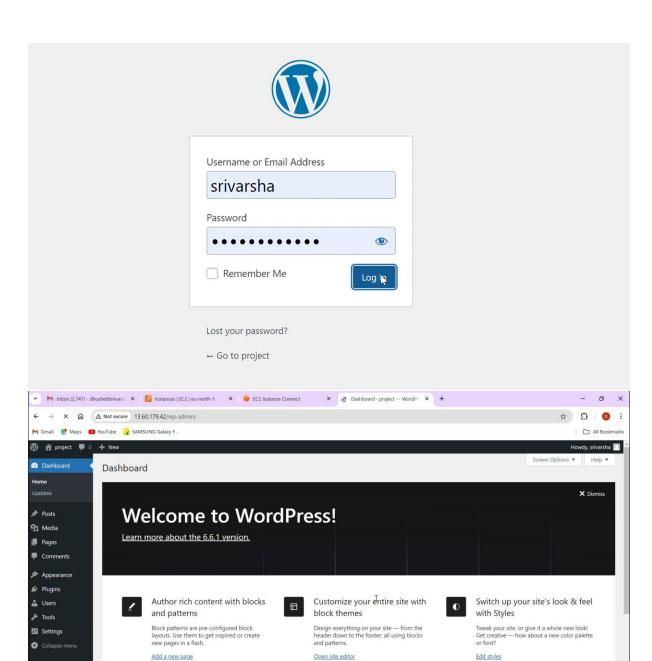
## sudo systemctl restart apache2











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