**☁️ WordPress Hosting on AWS using EC2 + RDS**

**A hands-on project I did from scratch to host WordPress on Amazon EC2, using RDS for the database.**

**🔍 What I Wanted to Do**

I wanted to host a WordPress website on my own cloud server (AWS EC2), but I also wanted to use **Amazon RDS (Relational Database Service)** for storing the WordPress database instead of using local MySQL.

This helped me learn:

* Cloud architecture (frontend + backend separation)
* EC2, Apache, PHP setup
* RDS database connectivity
* Troubleshooting real-world issues

**🧩 Tech Stack Used**

* **Amazon EC2** (Amazon Linux 2)
* **Amazon RDS** (MySQL 8.0)
* **Apache Web Server**
* **PHP 7+**
* **MariaDB client (for connecting to RDS)**
* **WordPress (latest version)**

**✅ Step-by-Step Setup**

**1️⃣ EC2 Instance Setup**

* Launched a new **Amazon Linux 2 EC2 instance**
* Opened ports **80 (HTTP)** and **22 (SSH)** in the Security Group

**2️⃣ Installed Apache, PHP, and Required Modules**

sudo yum update -y

sudo yum install httpd -y

sudo systemctl start httpd

sudo systemctl enable httpd

sudo amazon-linux-extras enable php7.4

sudo yum clean metadata

sudo yum install php php-mysqlnd php-fpm php-json -y

**3️⃣ Downloaded & Configured WordPress**

cd /var/www/html

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

sudo tar -xzf latest.tar.gz

sudo cp -r wordpress/\* .

sudo chown -R apache:apache /var/www/html

**4️⃣ RDS Database Setup**

* Created an RDS instance (**MySQL 8.0**) with a new database called wordpress
* Made sure:
  + RDS is **Publicly Accessible**
  + Port **3306** is open in RDS Security Group
  + RDS and EC2 are in the **same VPC** (or reachable via proper route tables & SGs)

**5️⃣ Connected WordPress to RDS**

* Opened http://<EC2\_Public\_IP>/wp-admin/setup-config.php
* Entered:
  + **DB Name**: wordpress
  + **DB User**: admin
  + **DB Password**: (my RDS password)
  + **DB Host**: wordpress-server.cq10gwy0a4wc.us-east-1.rds.amazonaws.com

**⚠️ Problems I Faced & How I Solved Them**

| **Problem** | **Reason** | **Solution** |
| --- | --- | --- |
| 🔴 HTTP ERROR 500 | Old PHP version (5.4) | Installed PHP 7.4 via amazon-linux-extras |
| 🔴 mysql: command not found | MariaDB client not installed | Ran sudo yum install mariadb105 |
| 🔴 Can't connect to RDS | RDS was not publicly accessible | Made it public + opened port 3306 in SG |
| 🔴 Database does not exist | Wrong DB name or permissions | Created DB manually from MySQL CLI |
| 🔴 Only WordPress frontend showing | Misunderstood setup steps | Went to correct URL: /wp-admin/setup-config.php |

**✅ Final Result**

I was able to:

* Access WordPress setup wizard 🎉
* Complete installation successfully
* Log in to the WordPress dashboard
* Know that my **frontend (Apache)** and **backend (RDS)** are running separately and cleanly on the cloud ✅

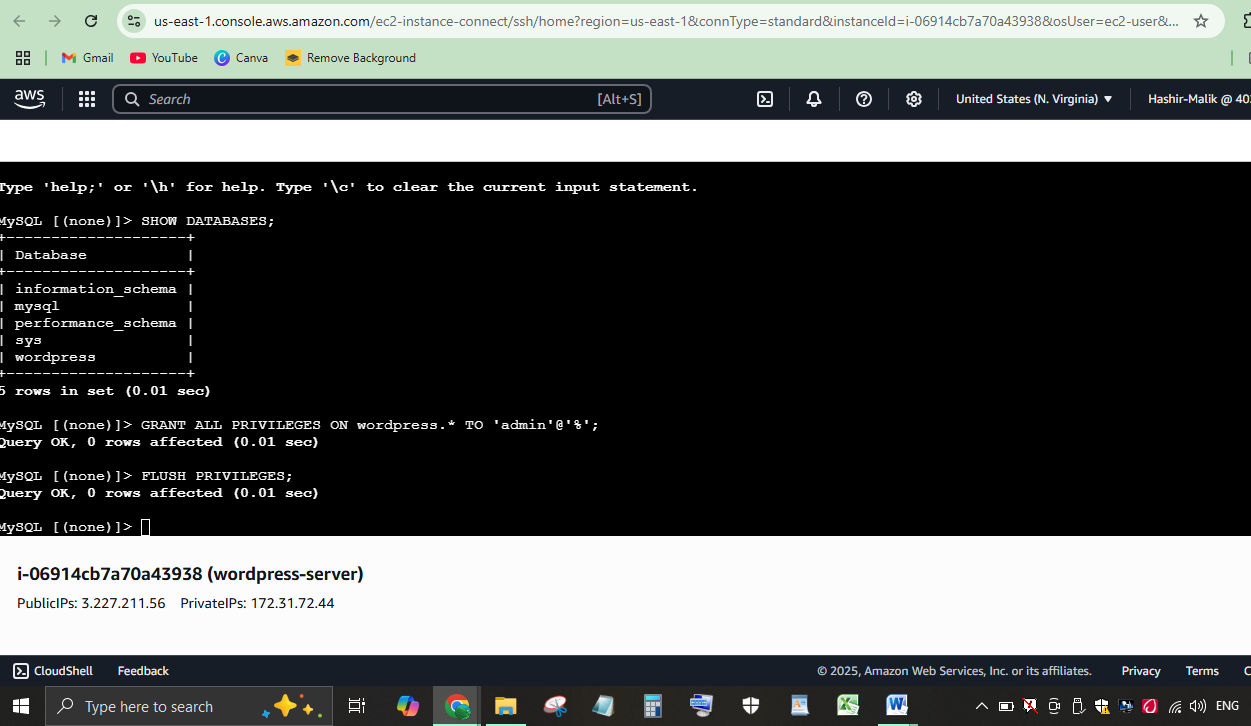
**📦 What's Next?**

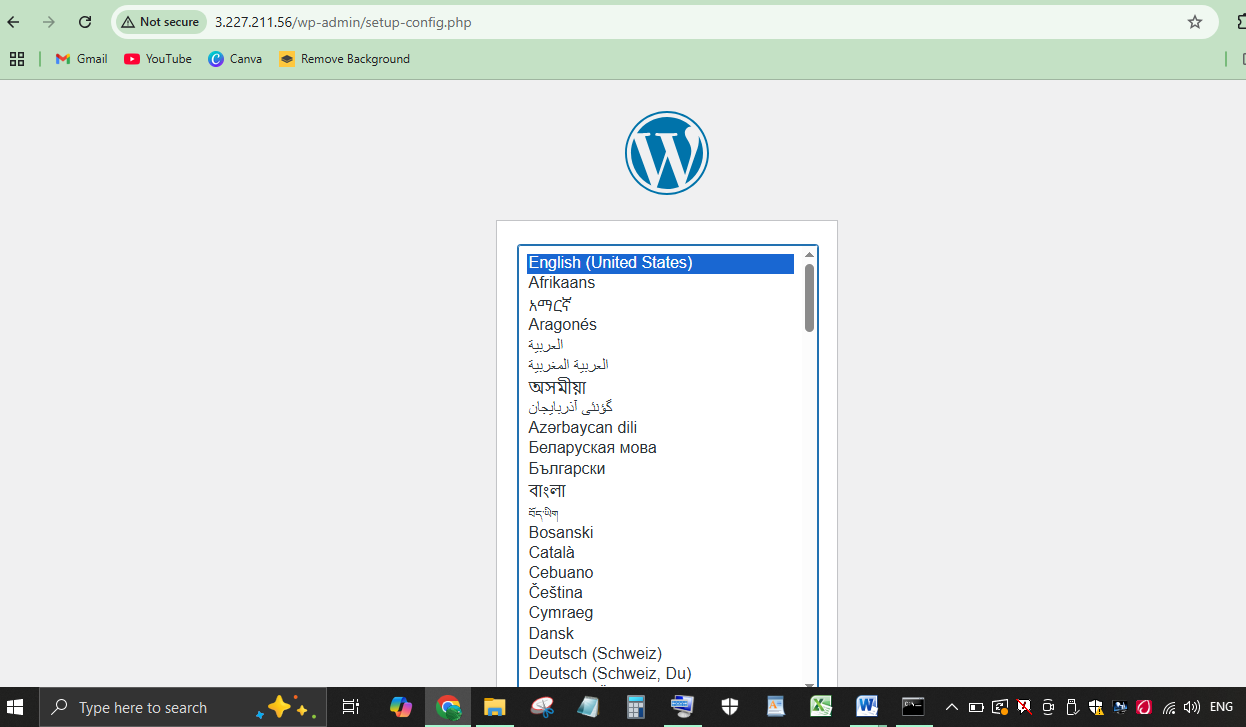
This was a **practice project**, so I’ll delete the EC2 & RDS to avoid charges.  
But I now understand **the real flow of full-stack WordPress hosting on AWS** 💡

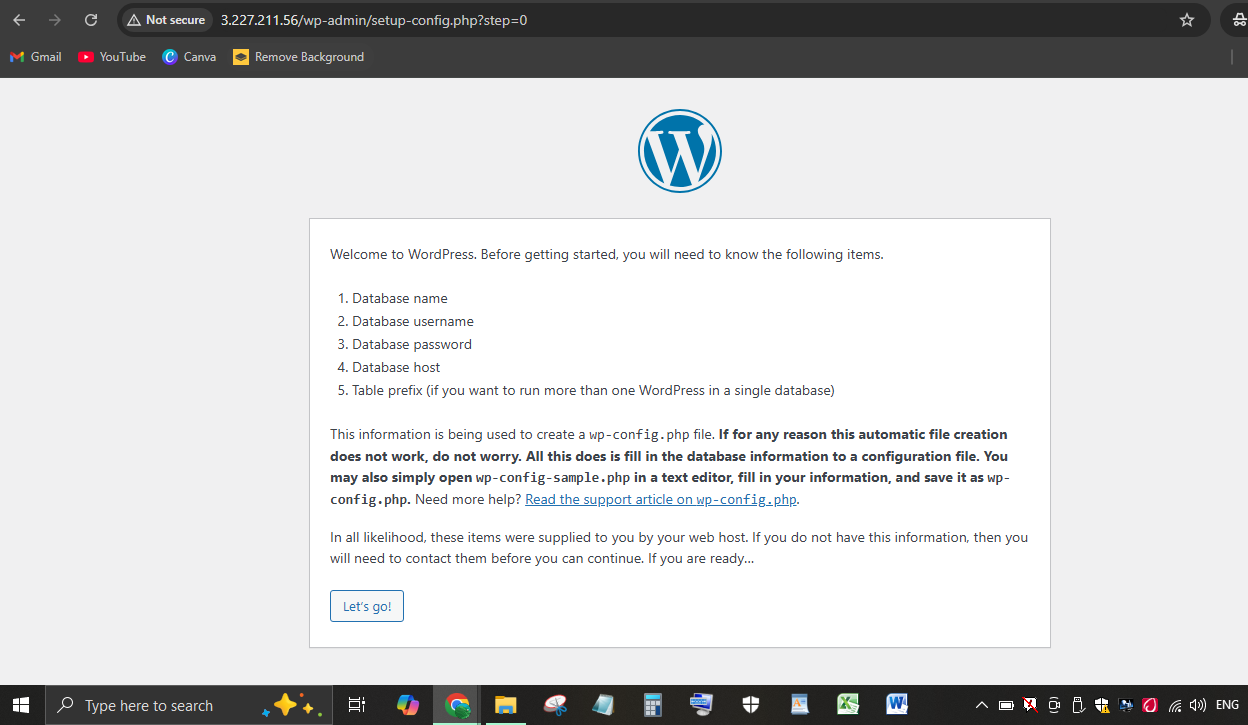
**📘 What I Learned**

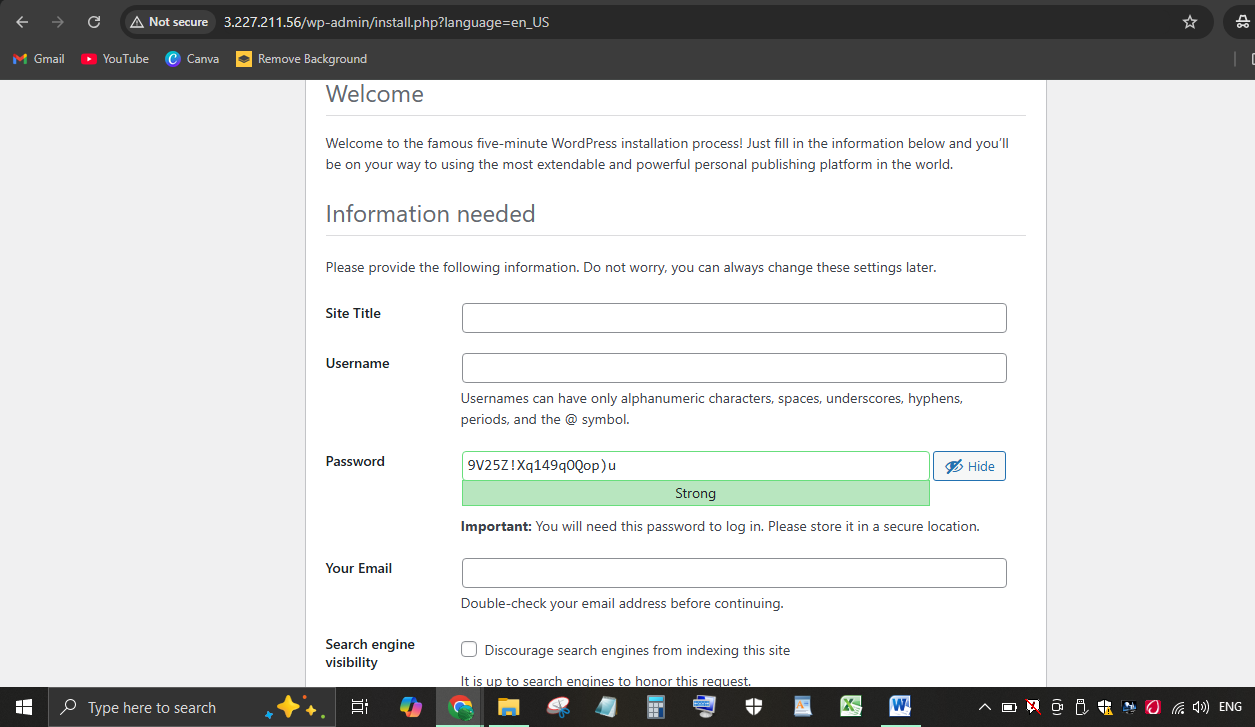
* Setting up a Linux server from scratch
* Installing Apache and PHP manually
* Using Amazon RDS and connecting it to external apps
* Solving real-time errors & understanding debugging
* Deploying a CMS (WordPress) in cloud architecture

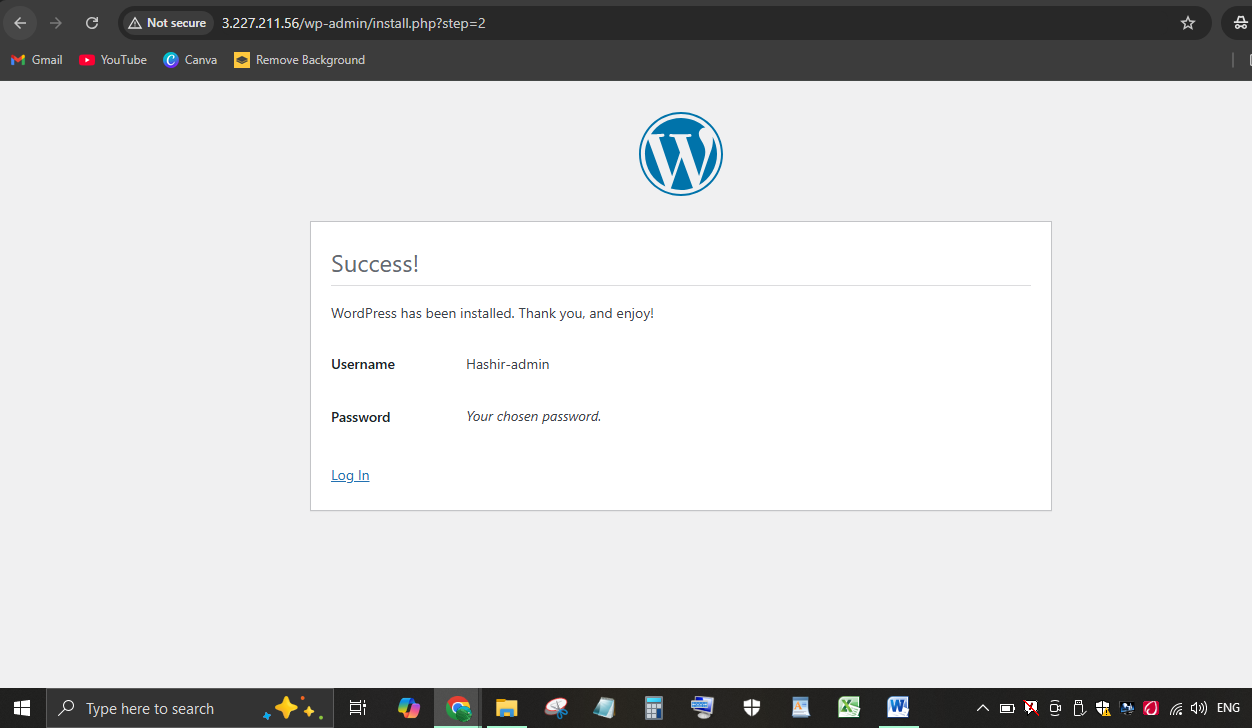
**ScreenShots:**

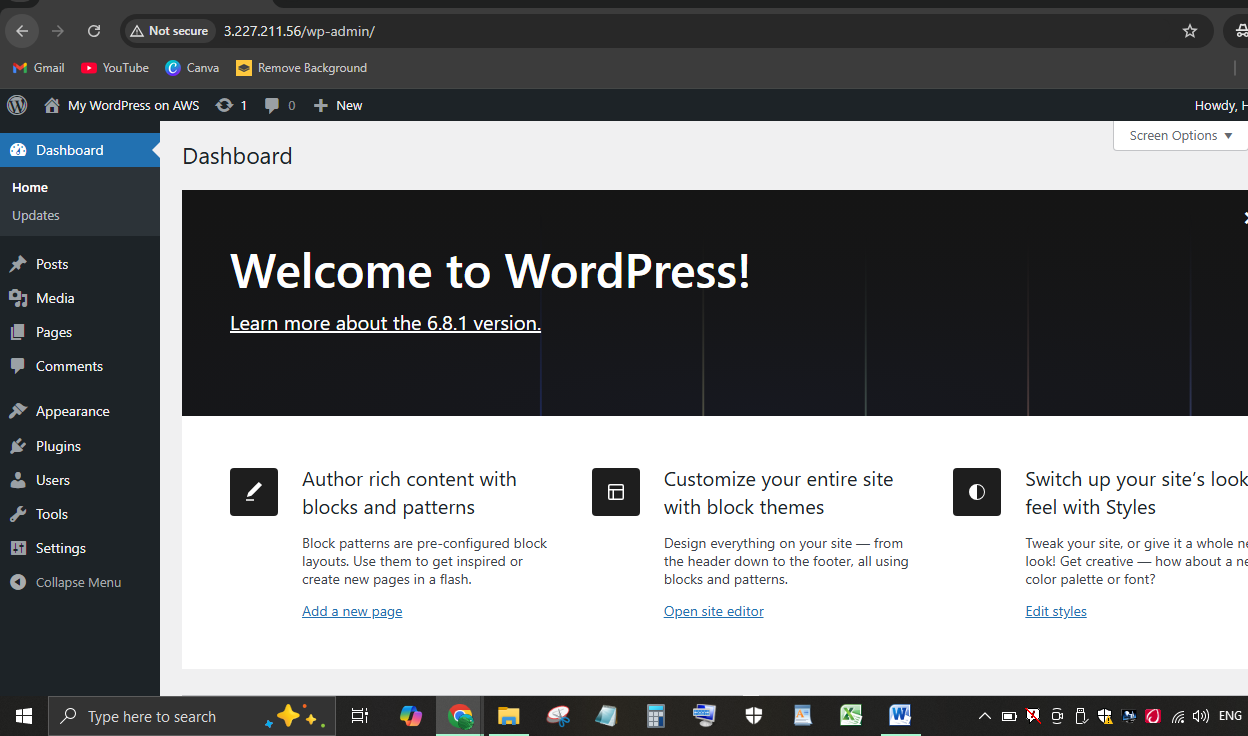
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