Deploying a WordPress Application on Ubuntu using AWS EC2 and RDS

It's a complete conduct on deploying a WordPress website using Amazon Web Services (AWS) EC2 and RDS, specifically setting up a personal blog or website.

Prerequisites

1. AWS Account: The user must have an AWS account with the necessary permissions to create EC2 instances and RDS databases.

2. Basic Knowledge: Some familiarity with AWS and WordPress is beneficial but not mandatory.

1: Launching an EC2 Instance

- Logs into the AWS Management Console and navigates to the EC2 dashboard.
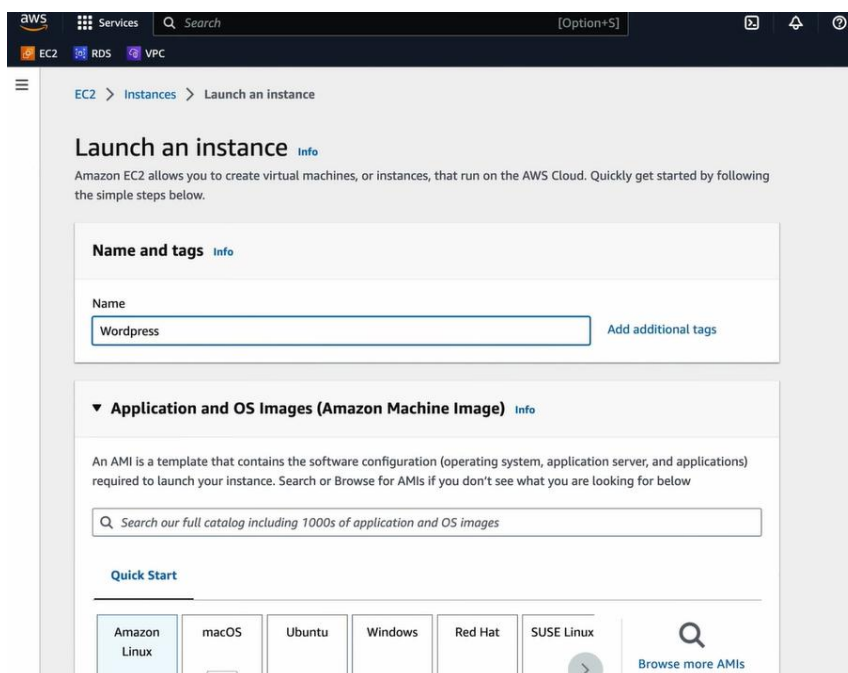
- Launching an Instance:

  - Clicks on "Launch Instance" and fills in the basic details, such as the instance name.

  - Selects the Amazon Machine Image (AMI), specifically Ubuntu, which is eligible for the free-tier.

- Configures instance details, including selecting a security group that allows HTTP and HTTPS traffic.

2: Setting Up RDS

- Set up the RDS instance:

  - Navigates to the RDS console and creates a new database instance.

  - Chooses the database engine, MySQL, and selects the MySQL version compatible with WordPress.

  - Configures the database settings, including the database name, username, and password.

  - Sets the instance type to a free-tier eligible option like t2.micro or t3.micro and allocates the storage.

  - Configures the security group for RDS to allow connections from the WordPress EC2 instance.
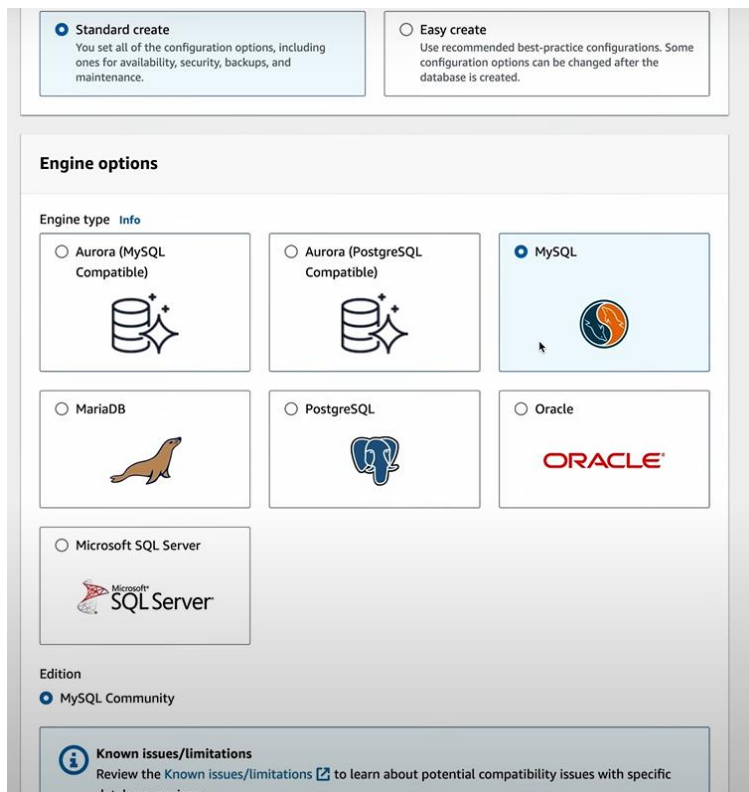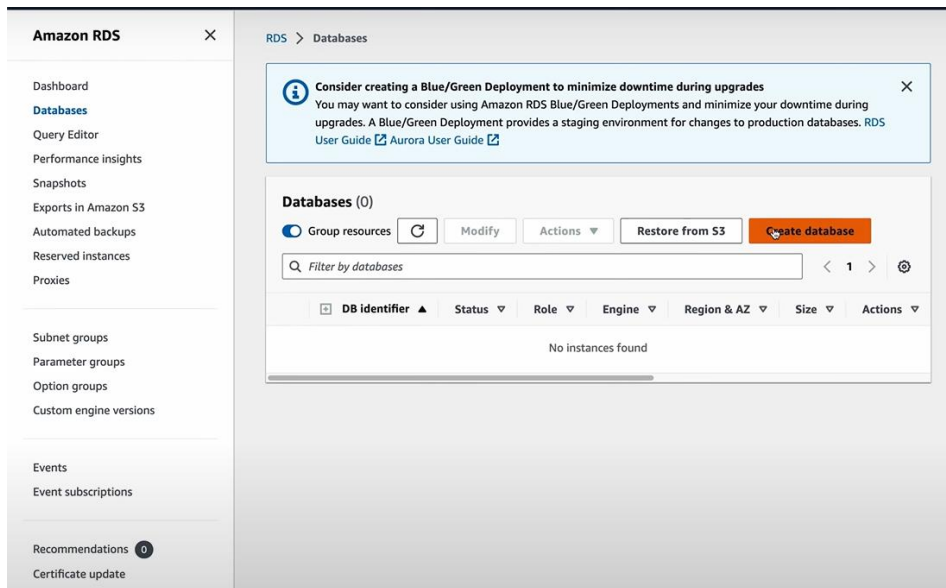
3: Setting Up the LAMP Stack(Linux, Apache, MySQL, and PHP)

- After the EC2 instance is running, connect it via SSH.

- Update the System: The first step is to update the package manager to ensure all libraries are up to date.

- Install Apache: Install the Apache web server, which will serve the WordPress site.

- Installing PHP and Required Libraries: Install PHP and the necessary libraries to enable WordPress functionality.

- Commands Used:

   1. Install Apache server on Ubuntu

   `sudo apt install apache2`

   2. Install PHP runtime and PHP MySQL connector

   `sudo apt install php libapache2-mod-php php-mysql`

   3. Install MySQL server

   `sudo apt install mysql-server`

   4. log in to the MySQL server

   `sudo mysql -u root`

   5. Change authentication plugin to mysql_native_password

   `ALTER USER 'root '@'localhost' IDENTIFIED WITH mysql native_password by '_password_';`

   6. Create a new database user for WordPress (change the password to something strong)

   `CREATE USER 'wp_user'@localhost IDENTIFIED BY '_password_';`

   7. Grant all privileges on the database 'wp' to the newly created user

   `GRANT ALL PRIVILEGES ON wp.* TO 'wp_user'@localhost;`

4: Arrange the Database

- Connects to the RDS database using the MySQL client and creates a new database for WordPress.

- The name for the database is set to "WordPress,". Exit the MySQL client after confirming the database creation.

5: Downloading and Configuring WordPress

- Download the latest version of WordPress from the official website.

- Extract the downloaded files, and necessary permissions are set for the WordPress directory.

6: Completing the WordPress Installation

- Navigate to the WordPress installation page in a web browser.

- Enter the database connection details, including the database name, username, and password, and host.

- The site title, admin username, password, and email are configured.

- The presenter completes the installation and logs into the WordPress admin dashboard.

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!

Below you should enter your database connection details. If you are not sure about these, contact your host.

Database Name	wordpress	The name of the database you want to use with WordPress.
Username	username	Your database username.
Password	password	Your database password.
Database Host	localhost	You should be able to get this info from your web host, if `localhost` does not work.
Table Prefix	wp_	If you want to run multiple WordPress installations in a single database, change this.

Submit

7: Customizing the WordPress Site as per your need