WordPress/EC2 Tutorial

HOW TO SET UP EC2 AND INSTALLING WORDPRESS.

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HOW TO SET UP WORDPRESS ON AWS EC2 AND ADD A SSL PROTOCOL?

What is Amazon AWS?
According to Amazon.ca, “Amazon Web Services (AWS) is a secure cloud services platform, offering compute power, database storage, content delivery and other functionality to help businesses scale and grow. Explore how millions of customers are currently leveraging AWS cloud products and solutions to build sophisticated applications with increased flexibility, scalability and reliability.”

But let’s make it simple, AWS are all the different options that Amazon provide us to perform different actions online using their cloud platform. One of the strongest reasons on why we should use AWS is because it scale automatically our servers if its needed it and we can set up our maximum budget to minimize the risk of extra expenses.

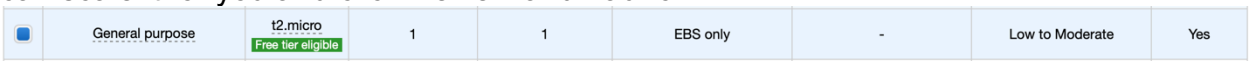
Let’s start!

I will be providing the easiest way to deploy a WordPress site on Amazon AWS and adding our SSL protocol to increase credibility in our website.

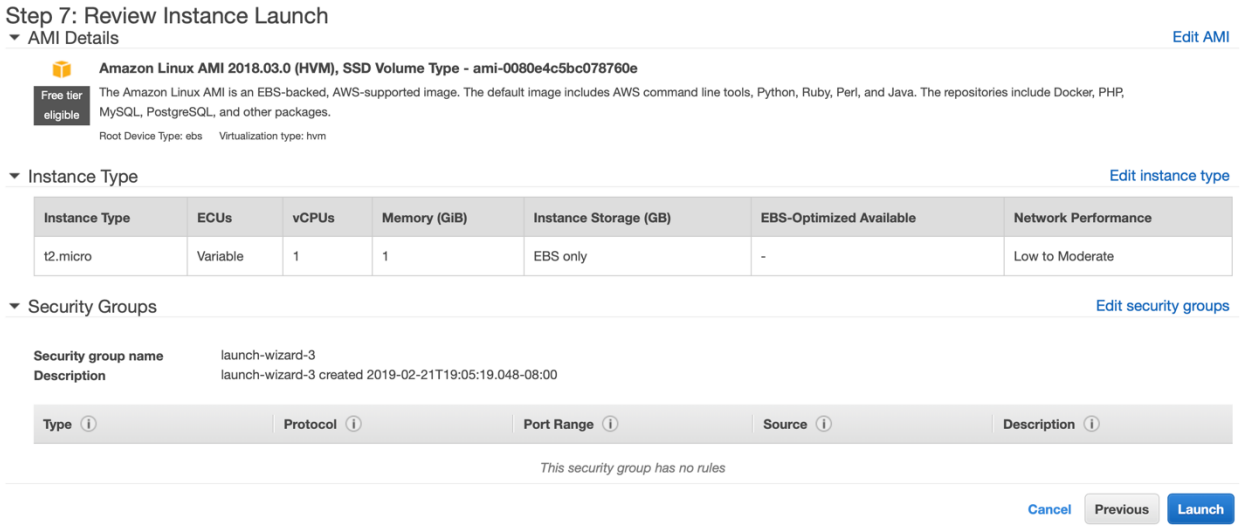
1. We are going to need to create an account on AWS and It will ask us for credit card information, 1 cad may be charged to be approved. Amazon Web Services

2. If you are already logged in, launch an EC2 instance on AWS following the next link. EC2
   2.1 Click the button Launch an instance and select the next option. (Make sure to select this option, It will decrease the amount of steps)

   2.3 Select the option for Free Tier for learning purposes, remember that AWS can scale it for you and click Review and Launch.

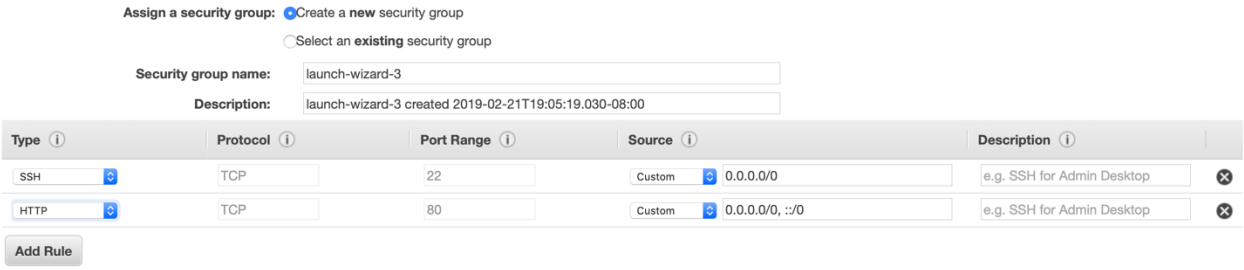


   2.4 We will need to add some security groups to our instance by clicking Edit Security Groups.

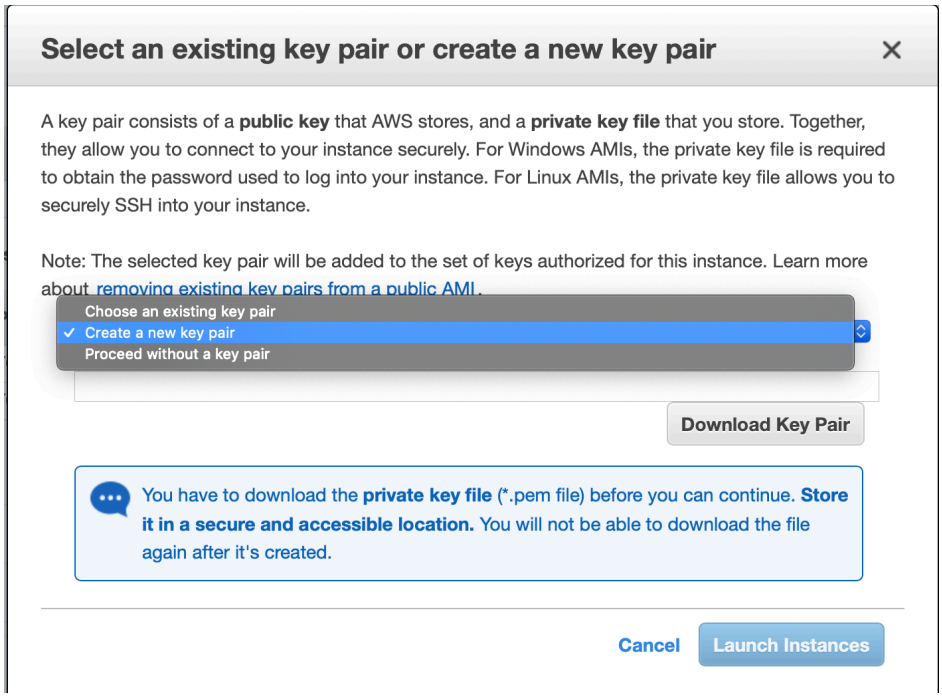


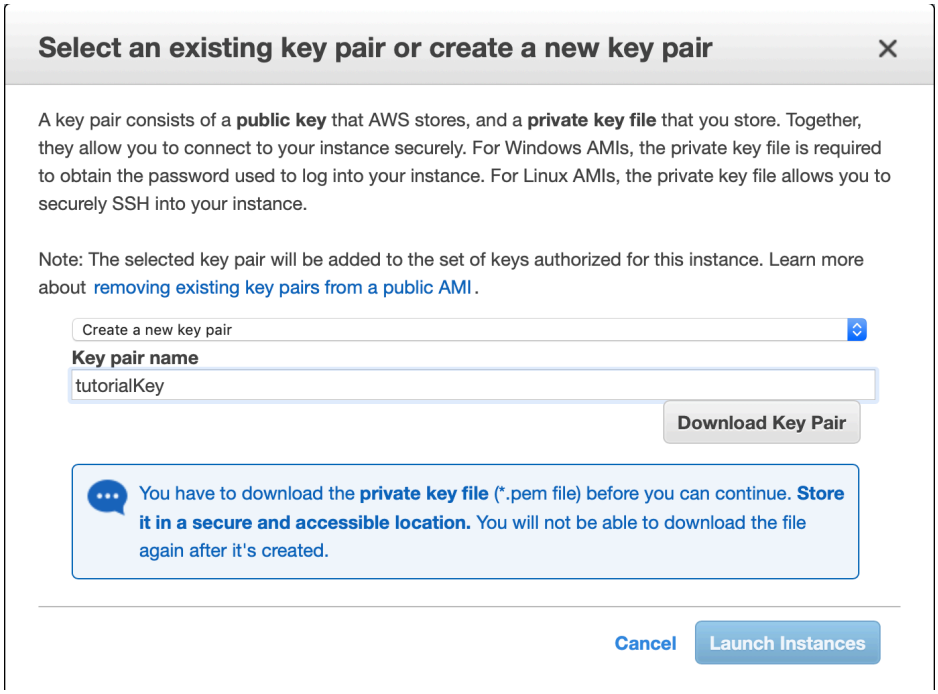
2.5 By default it should already include a port number 22(If it doesn't have it, we must add exactly the way we will add our port number 80). There is an option where we add a rule, we will select it and add exactly what I'm showing you on the picture. Make sure to add the right type of connection, SSH for 22 and HTTP for 80.

You can choose any name you want for the security group name. Launch it now.



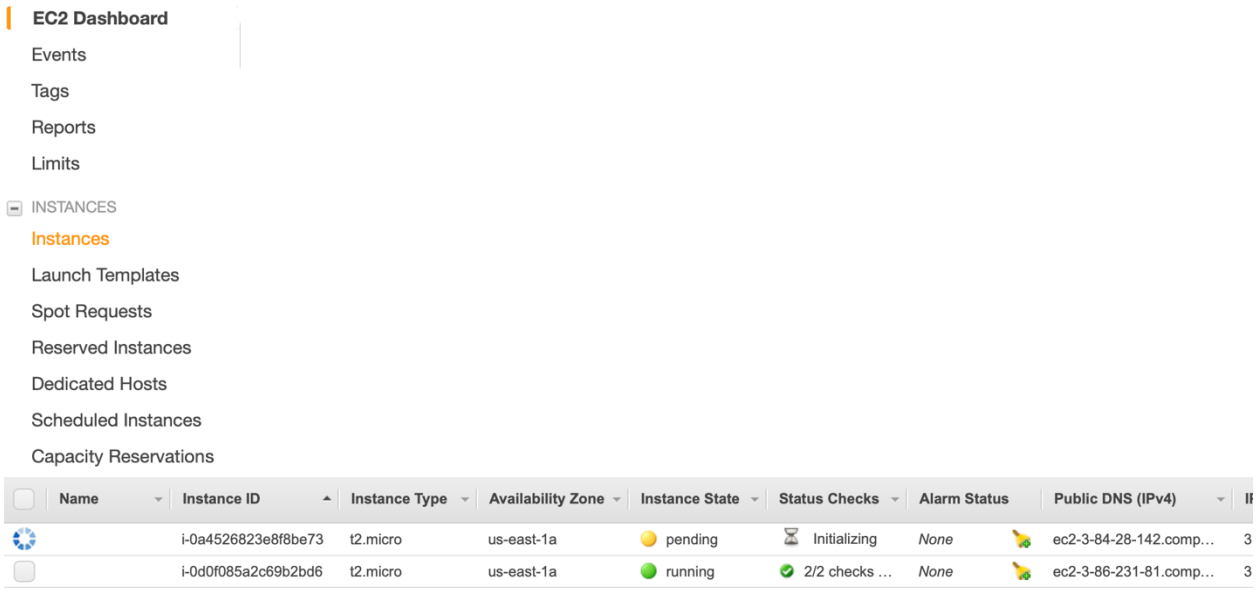
2.6 A pop alert will show up trying to select or create a key pair, we will assume that you don't have one for this tutorial. Select Create a new key pair, write a name for your key and download it, REMEMBER, if you didn't download, it will be lost.





After you downloaded and saved it in a place where only you can find it, click Launch Instances.

2.7 Go back to your EC2 instances and click instances on your dashboard to see the status of your instance. It make take a couple minutes to be ready.

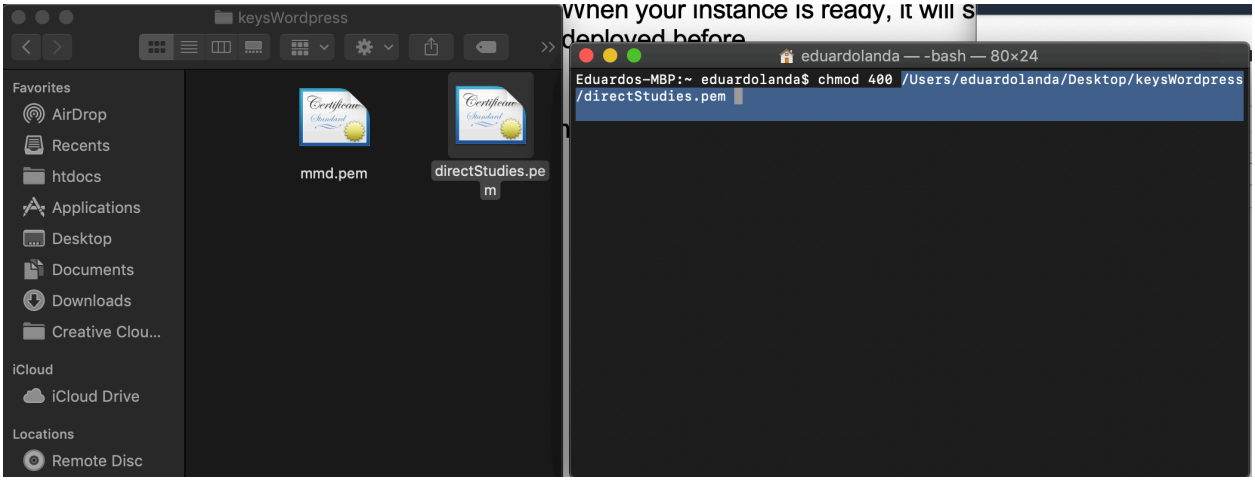


When your instance is ready, it will show up like the second instance that was deployed before.

3. The next step is to connect to our instance using our key through ssh with the terminal.
   3.1 We are going to open our terminal and copy this code and change the marked part to our key pair that we created before.

```
chmod 400 /path/my-key-pair.pem
```

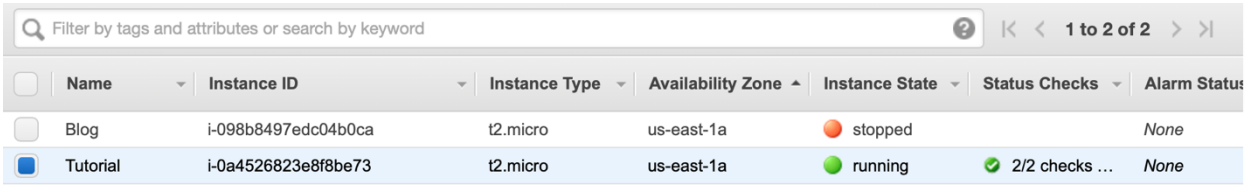
This screenshot will show exactly how it should look, remember that our key should have an extension .pem, if its different, you will need to remove the extra extension created. Example `/path/my-key-pair.pem.zip -> /path/my-key-pair.pem`



```
You will need to approve all the permissions to your key.
```

3.1 Now We will connect to our instance, after setting permissions to our key(Setting permissions to a key should be done only once). The next code will allow us to connect to our instance, we will need our key and our Public DNS(IPv4).

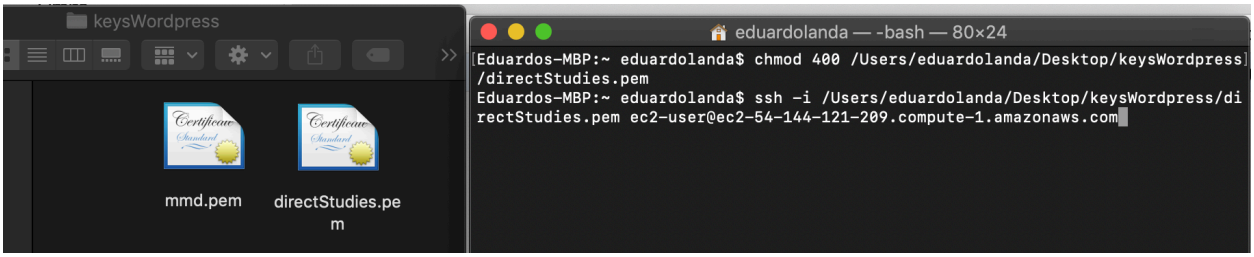
Public DNS is located here.



Code to connect:

```
ssh -i /path/my-key-pair.pem ec2-user@ec2-198-51-100-1.compute-1.amazonaws.com
```

Check the screenshot to see how it should look, remember to use your own key and public dns.



After entering this command, type yes to start the connection. If everything worked you will get a message like this, it means you were able to connect.

```
Warning: Permanently added 'ec2-54-145-112-164.compute-1.amazonaws.com,54.145.1
2.164' (ECDSA) to the list of known hosts.

       __|  __|_  )
       _|  (     /   Amazon Linux AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
10 package(s) needed for security, out of 12 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-45-172 ~]$
```

4. Time to install what we need for our instance.
   4.1 We are going to copy the next commands on the terminal, press enter after inserting each command. See at the screenshot.

```
sudo yum update -y
```

```
10 package(s) needed for security, out of 12 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-45-172 ~]$ sudo yum update -y
Loaded plugins: priorities, update-motd, upgrade-helper
amzn-main                                                | 2.1 kB     00:00
amzn-updates                                             | 2.5 kB     00:00
Resolving Dependencies
--> Running transaction check
---> Package amazon-ssm-agent.x86_64 0:2.3.68.0-1.amzn1 will be updated
---> Package amazon-ssm-agent.x86_64 0:2.3.274.0-1.amzn1 will be an update
---> Package aws-cfn-bootstrap.noarch 0:1.4-30.21.amzn1 will be updated
---> Package aws-cfn-bootstrap.noarch 0:1.4-31.22.amzn1 will be an update
---> Package curl.x86_64 0:7.53.1-16.84.amzn1 will be updated
---> Package curl.x86_64 0:7.61.1-7.91.amzn1 will be an update
---> Package glibc.x86_64 0:2.17-222.173.amzn1 will be updated
---> Package glibc.x86_64 0:2.17-260.175.amzn1 will be an update
---> Package glibc-common.x86_64 0:2.17-222.173.amzn1 will be updated
```

Repeat the same step with the next codes.

```
sudo yum install -y httpd24 php70 mysql56-server php70-mysqlnd
```

```
sudo service httpd start
```

```
sudo chkconfig httpd on
```

```
ls -l /var/www
```

```
sudo usermod -a -G apache ec2-user
```

```
exit
```

4.2 Connect to your instance again as It was shown in 3.1.

4.3 Enter the next commands on the terminal as we did before. (Make sure you are connected to your instance before typing the next commands)

```
groups
```

```
sudo chown -R ec2-user:apache /var/www
```

```
sudo chmod 2775 /var/www
```

```
find /var/www -type d -exec sudo chmod 2775 {} \;
```

```
find /var/www -type f -exec sudo chmod 0664 {} \;
```

So far we have installed Apache..

5. Now we will start the services using the next codes as before.

```
sudo service mysqld start
```

```
sudo mysql_secure_installation
```

Press enter when it asks the first time for a password, and then type the password you want to use.

```
Setting the root password ensures that nobody can log into the MySQL
root user without the proper authorisation.

Set root password? [Y/n] y
New password:
Re-enter new password:
```

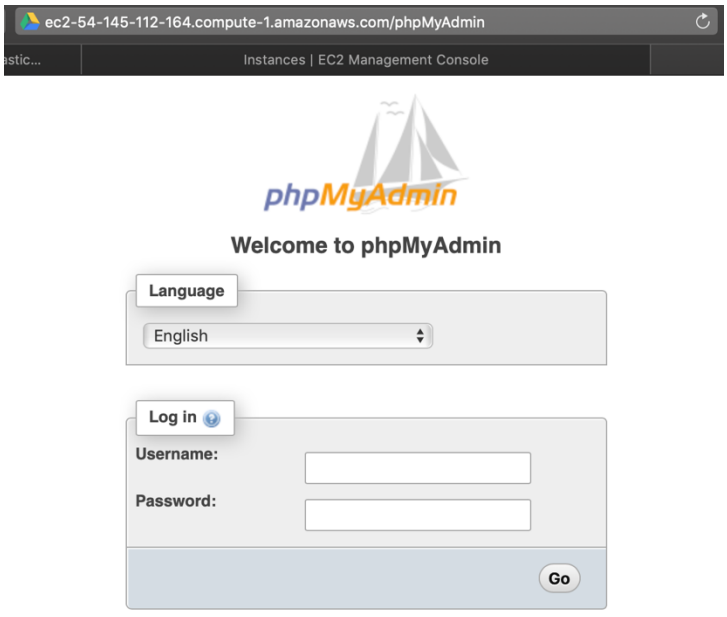
Type Yes to everything it ask on the last command.

6. The next step is to install phpMyAdmin and we will continue adding more commands to our terminal.

```
sudo yum install php70-mbstring.x86_64 php70-zip.x86_64 -y

sudo service httpd restart

cd /var/www/html

wget https://www.phpmyadmin.net/downloads/phpMyAdmin-latest-all-languages.tar.gz
mkdir phpMyAdmin && tar -xvzf phpMyAdmin-latest-all-languages.tar.gz -C phpMyAdmin --
strip-components 1

rm phpMyAdmin-latest-all-languages.tar.gz


sudo service mysqld start
```

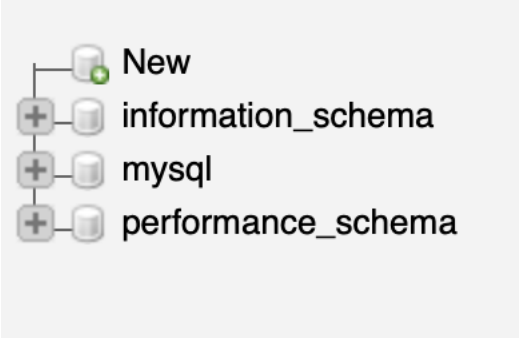
7. Now We can add our database with our phpMyAdmin link using our Public DNS(IPv4) and adding /phpMyAdmin

   Example: http://ec2-54-145-112-164.compute-1.amazonaws.com/phpMyAdmin

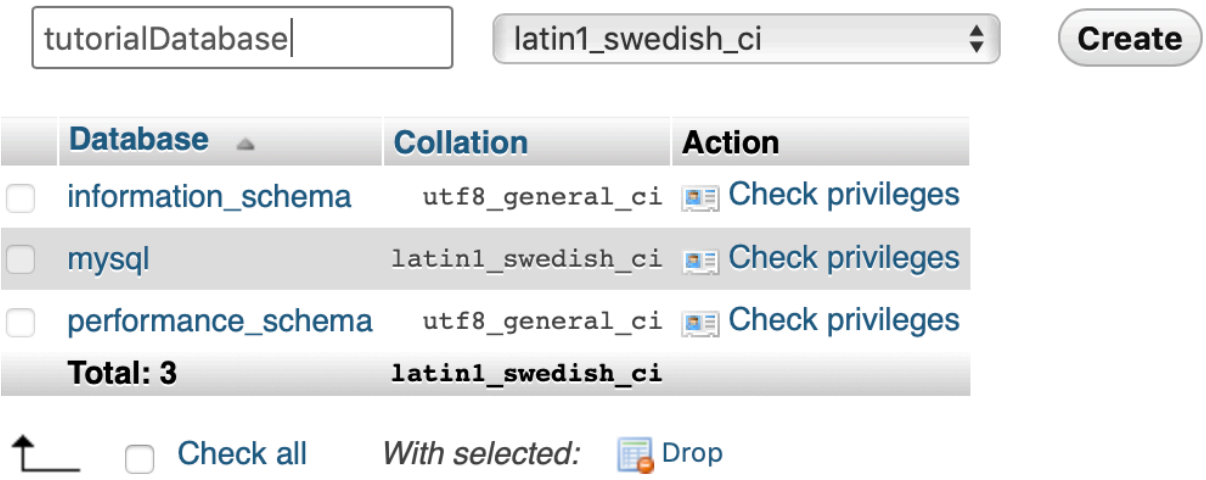


7.1 Our user name will be root and password will be the same password we assigned on the point 5.

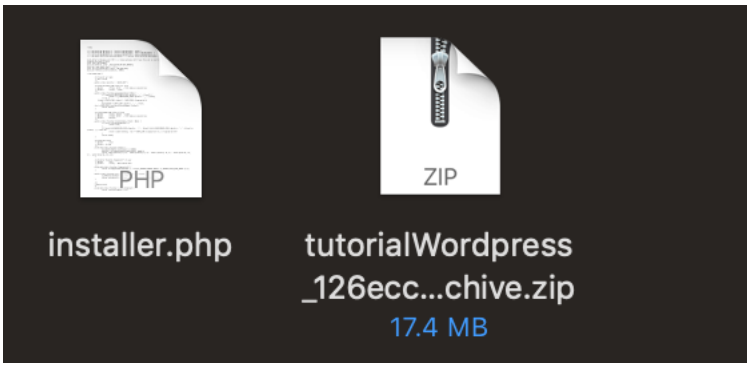
We will add a database clicking on new.



Then we will type the name we wish tou use our database and click create.



8. This tutorial assumes that you already have learnt on how to duplicate your local host wordpress and get the installer.php and the zip file.



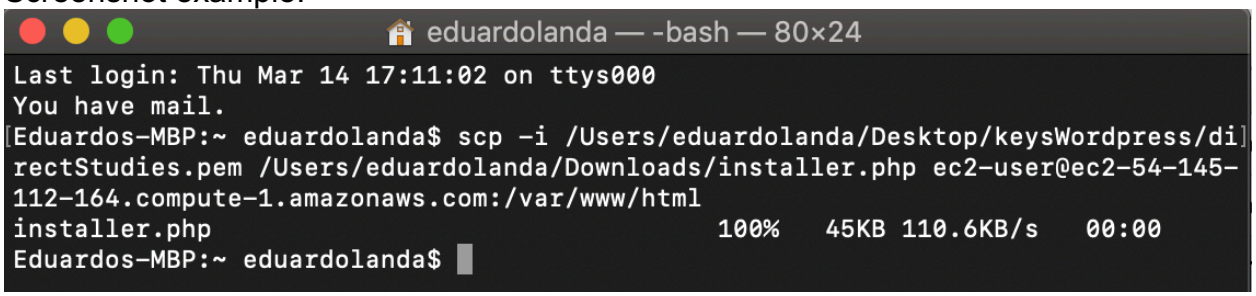
9. Once we have our files from the duplicator, we are ready to transfer them to our ec2 instance.

9.1 We will open our terminal and we will use this code to communicate to our ec2 instance.

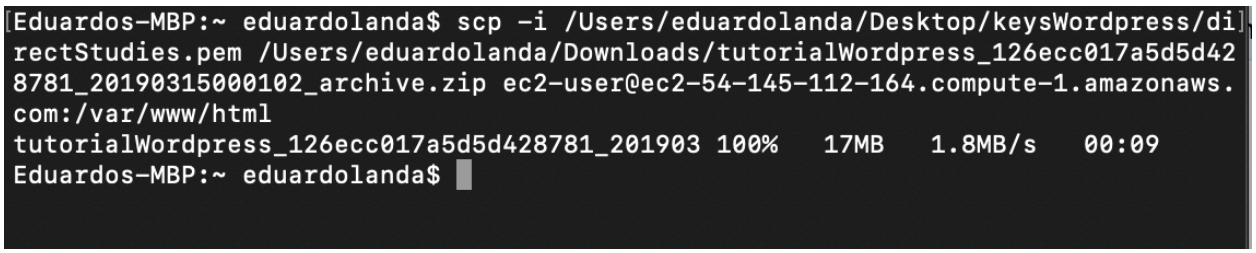
```
scp -i /Users/eduardolanda/Desktop/keysWordpress/directStudies.pem
/Users/eduardolanda/Downloads/installer.php ec2-user@ec2-54-145-
112-164.compute-1.amazonaws.com:/var/www/html
```

Color Yellow : Your key to your instance.
Color Green: Installer.php from the duplicator.
Color purple: Public DNS(IPv4) from your instance.

Screenshot example.

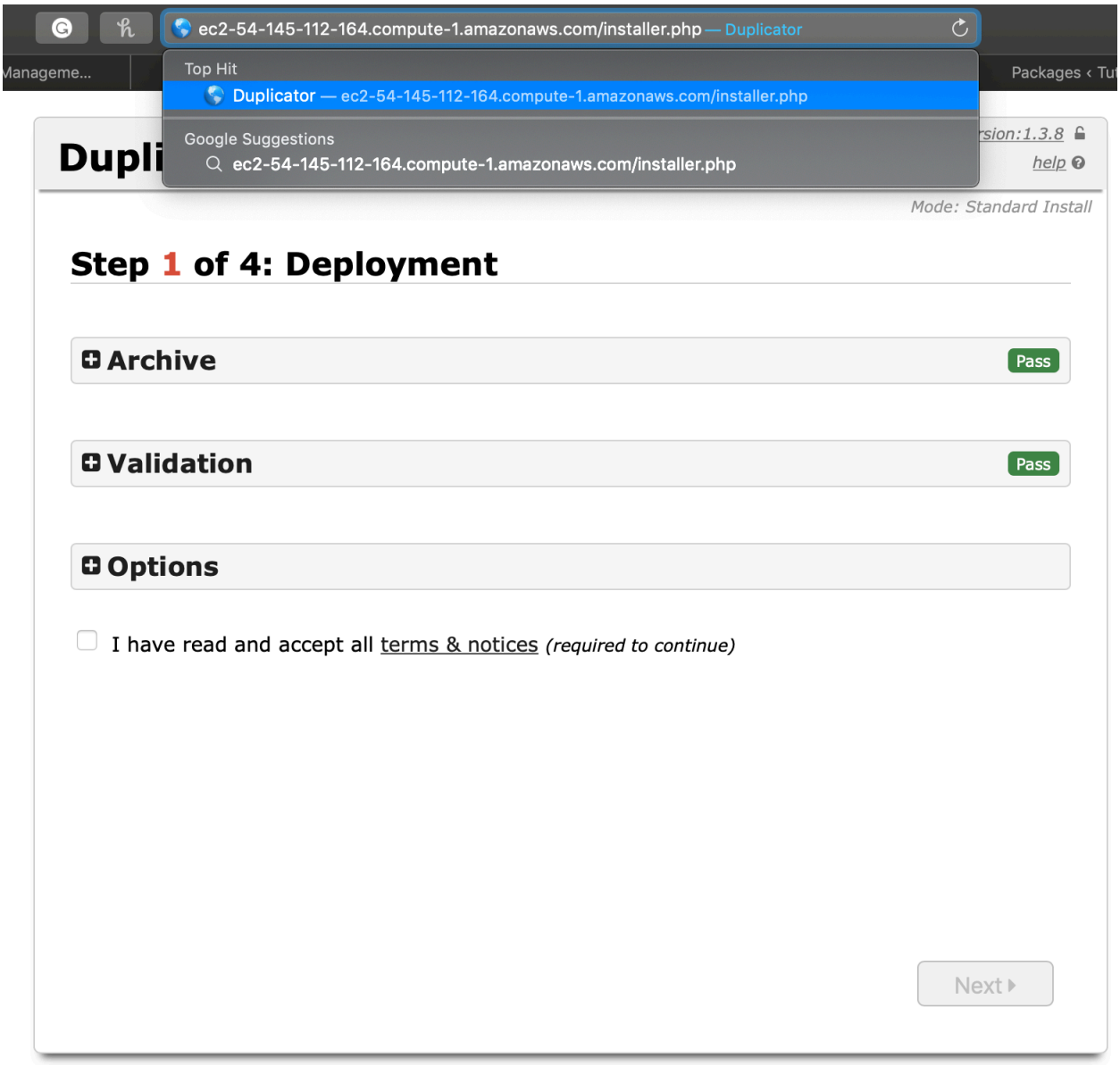


9.2 Now we are going to transfer our zip file to the same location, it will be the same procedure, instead of sending the installer we will send our zip file.



10. Installing our Wordpress, we will need to navigate to our file installer.php located on our new instance. The link should be like this, you will need to change it to your own Public DNS(IPv4).

    http://ec2-54-145-112-164.compute-1.amazonaws.com/installer.php



Select I have read and accept all terms and notices to continue.

And then fill the options as the next screenshot shows, the name of the database should be the one you created before for phpMyAdmin. Once you filled the fields, click test to verify your information.

Duplicator

version:1.3.8
help

Mode: Standard Install

Step 2 of 4: Install Database

dup-installer-log.txt

Basic | cPanel

Setup

Action: Connect and Remove All Data

Host: localhost

Database: tutorialDatabase

Warning: The selected 'Action' above will remove all data from this database!

User: root

Password: YOUR PASSWORD

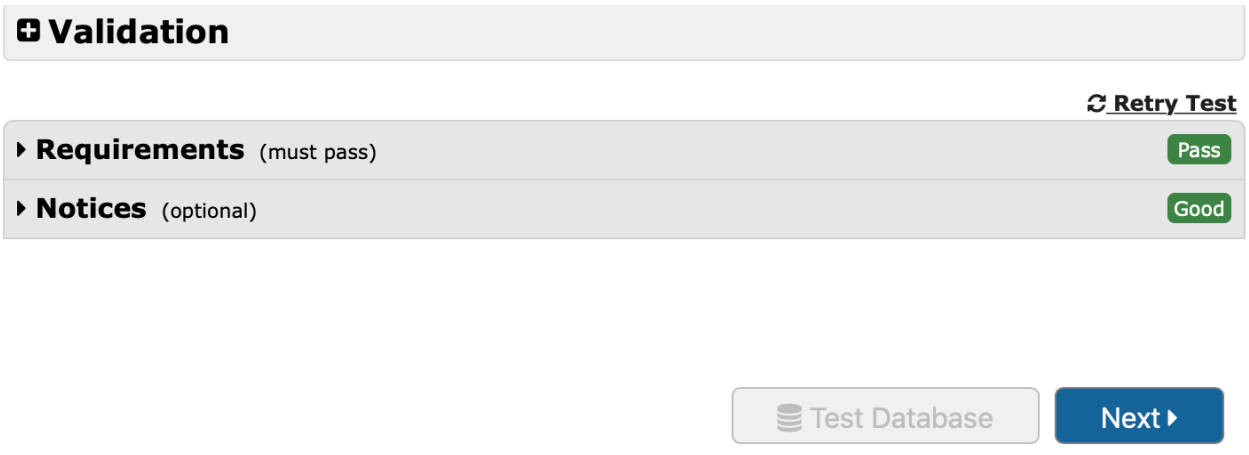
Options

Validation

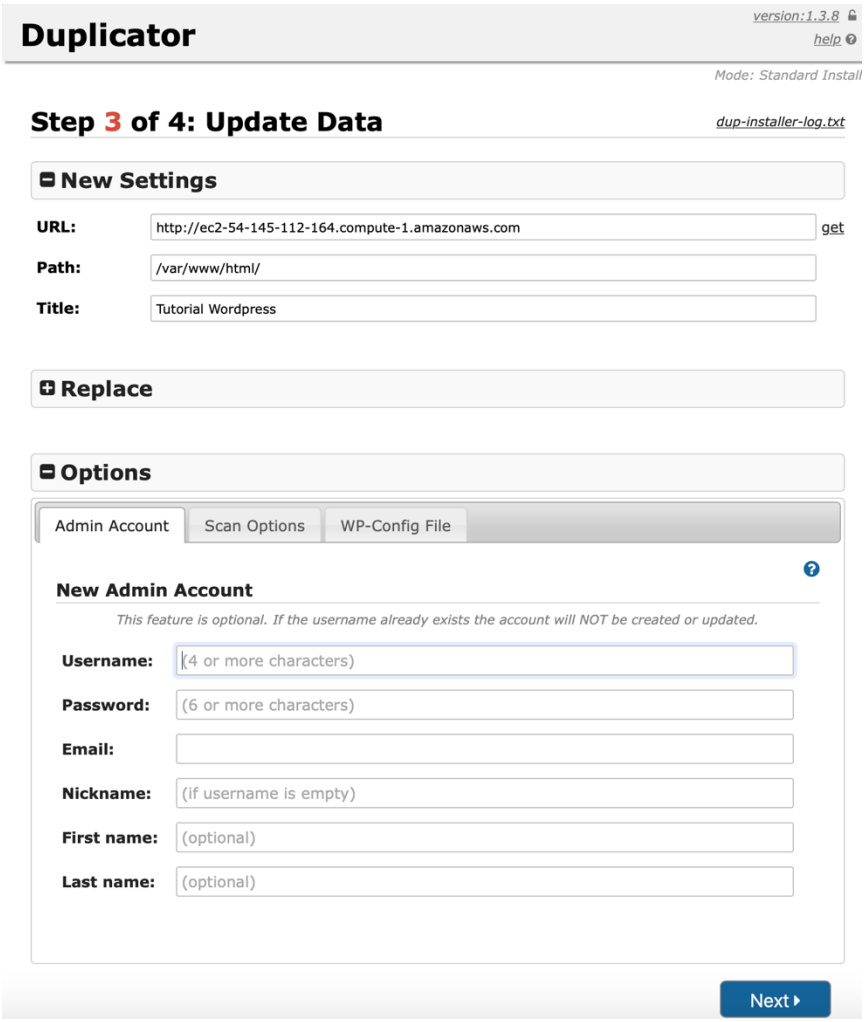
Retry Test

To continue click the 'Test Database' button to retest the database setup.

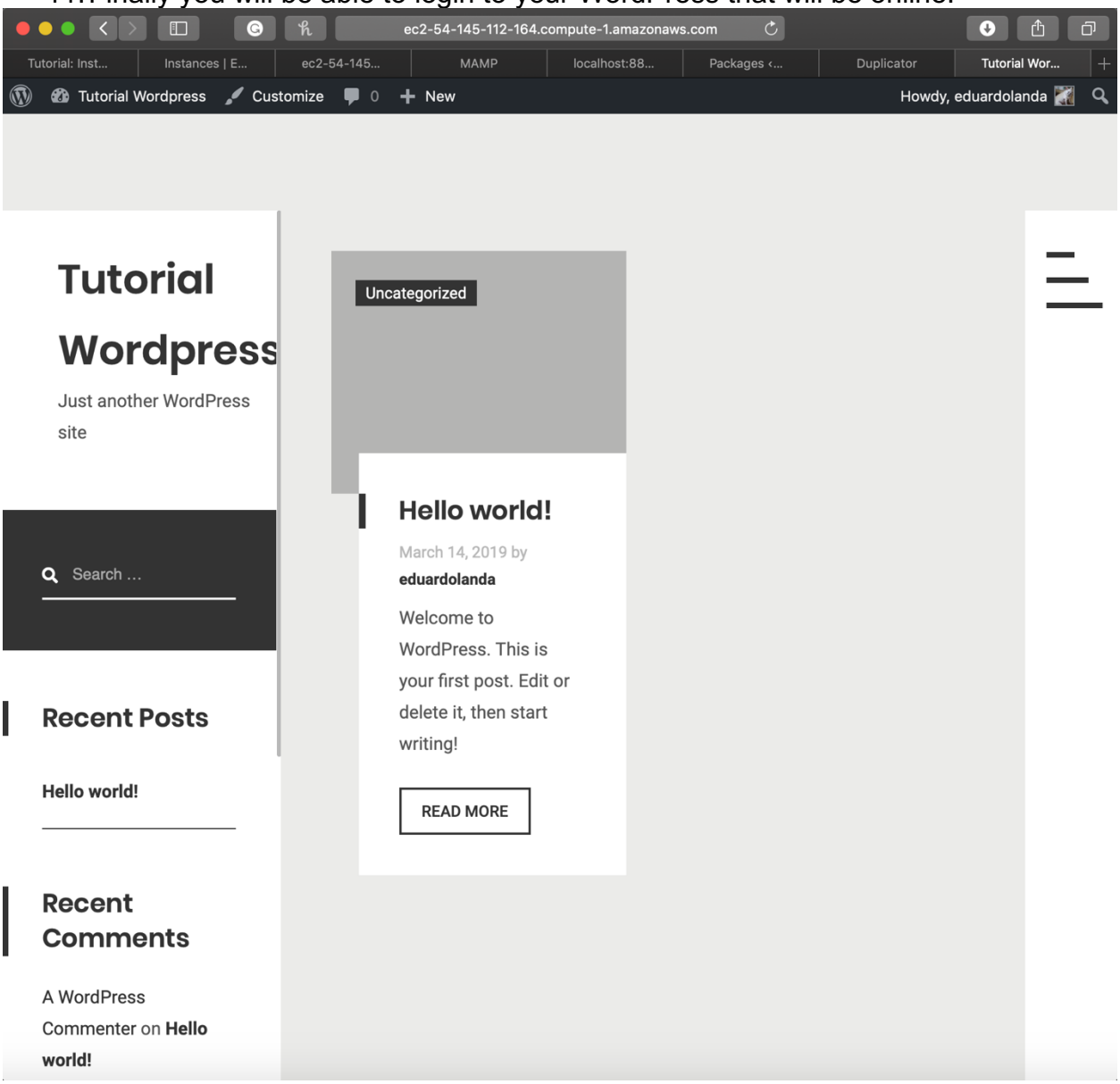
Test Database | Next



The next step is to add an user and password for your WordPress, you can decide what to use here.



11. Finally you will be able to login to your WordPress that will be online.



Thank you for reading my tutorial that I created to offer a clear and simple way to install an EC2 instance and install your WordPress.

If you are interested on linking your WordPress to your own domain or adding security to your WordPress, I will add soon tutorials on my webpage to help you.

www.eduardolanda.ca

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