COEN 241 HW-1B

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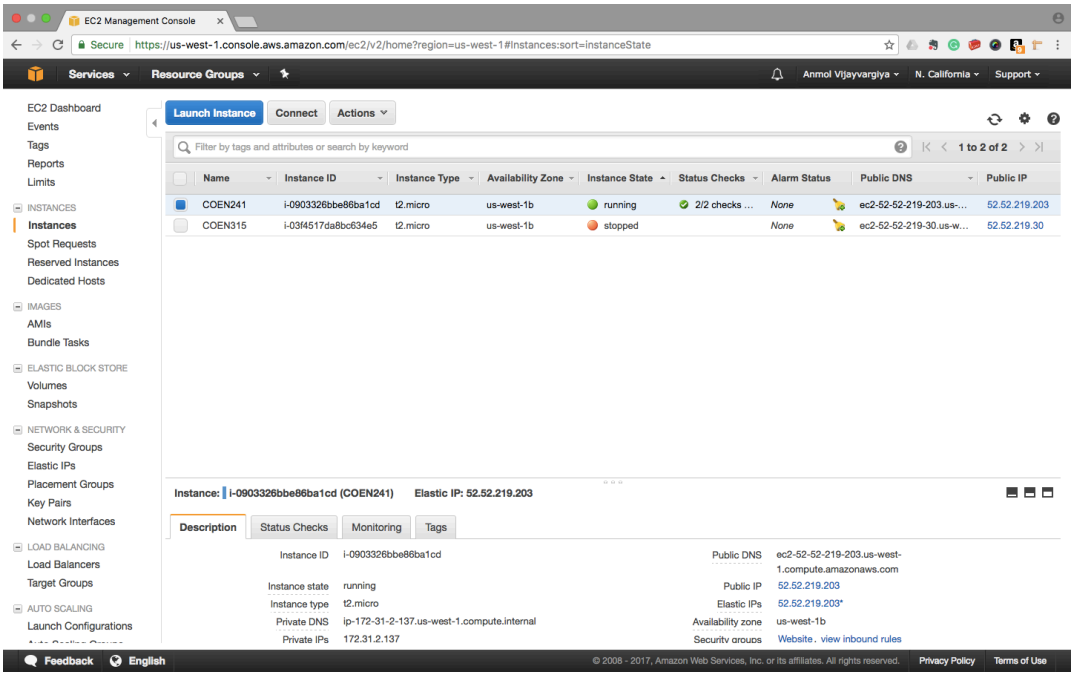
Steps Performed to Launch an Amazon EC2 Instance:

1. Login to amazon AWS console and choose the EC2 option under Services tab on the top left corner.
2. Click Instance under INSTANCES in the menu on the left.
3. Click Launch Instance
4. Chose one of the free machine images under free tier (Ubuntu 16.04) by clicking select to the right of its name.
5. On next page chose instance type as t2.micro which is free tier eligible. Then click button named “Next: Configure Instance Detail”.
6. Leave the settings as they are and click the button named “Next: Add Storage”.
7. Leave settings as they are and click the button named “Next: Add Tags”
8. Type the name for your EC2 machine in the text field titled Value. Then click the button named “Next: Configure Security Group”.
9. Give a name and definition for your security group in the respective text field (Note: Here, “Create a new security Group” must be the selected radio button). “SSH” would be selected as a default rule here. Use add rule button under it to add rule for HTTP and HTTPS. Then click the button named “Review and Launch”
10. Click “Launch” on next page. A pop-up will open asking “Select an existing key pair or create a new key pair”. In the first drop down choose create a new key pair. Give a name for your key pair in the text box that shows up under it. Now select download key pair. A file with the name you gave your key pair with an extension of “.pem” will be downloaded. Next click Launch Instance. Wait till all the checks on the Instance are completed before you proceed.



Screenshot 1: EC2 instance (COEN241) in running state

Steps Performed to start an SSH connection with the EC2 Instance created in the previous step:

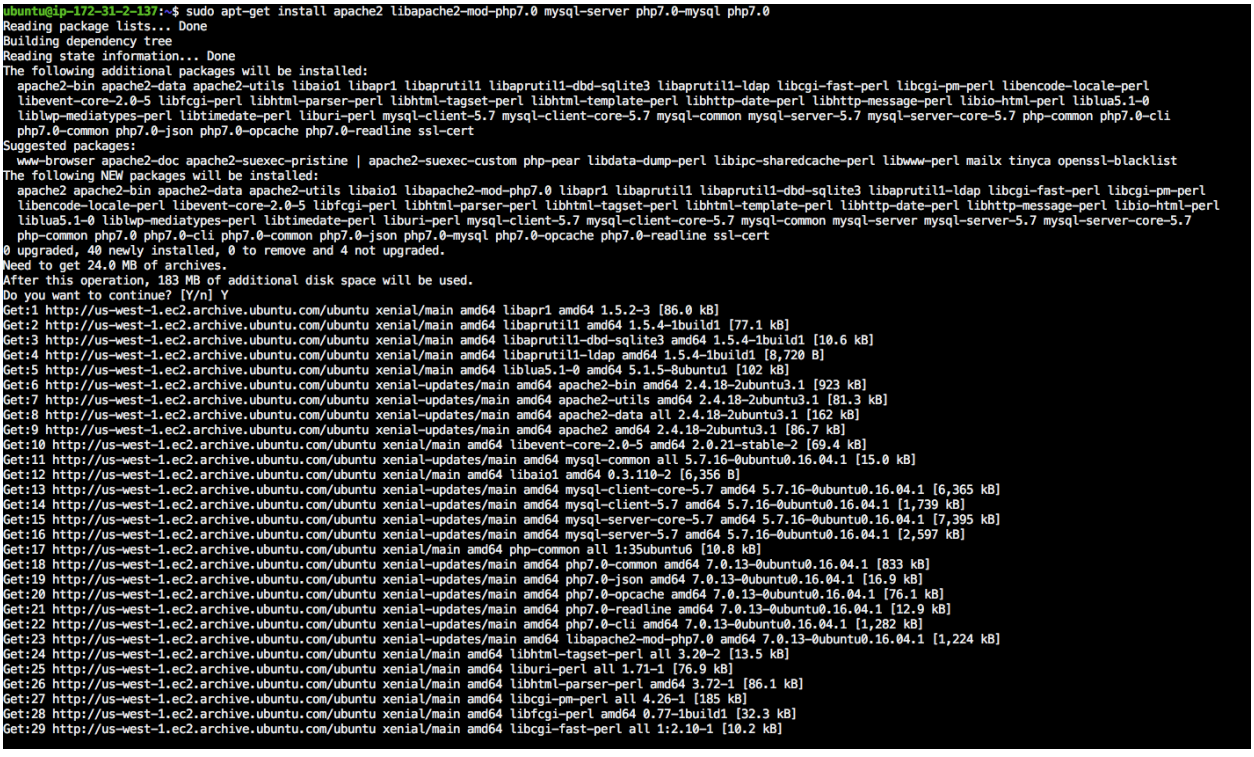
1. Open terminal and change directory to the location where you stored the key pair file with the extension of ".pem"
2. To start SSH session type the following command and press enter-
   $ ssh -I <keypairfile.pem> <hostname>@<Public IP of Instance>
   Here-

Keypairfile:	The file you downloaded with the extension ".pem"
Hostname:	"Ubuntu" is the hostname for Ubuntu Linux EC2 Instance
Public IP of the Instance:	This can be found in the bottom right corner of the amazon EC2 console when you click on your instance

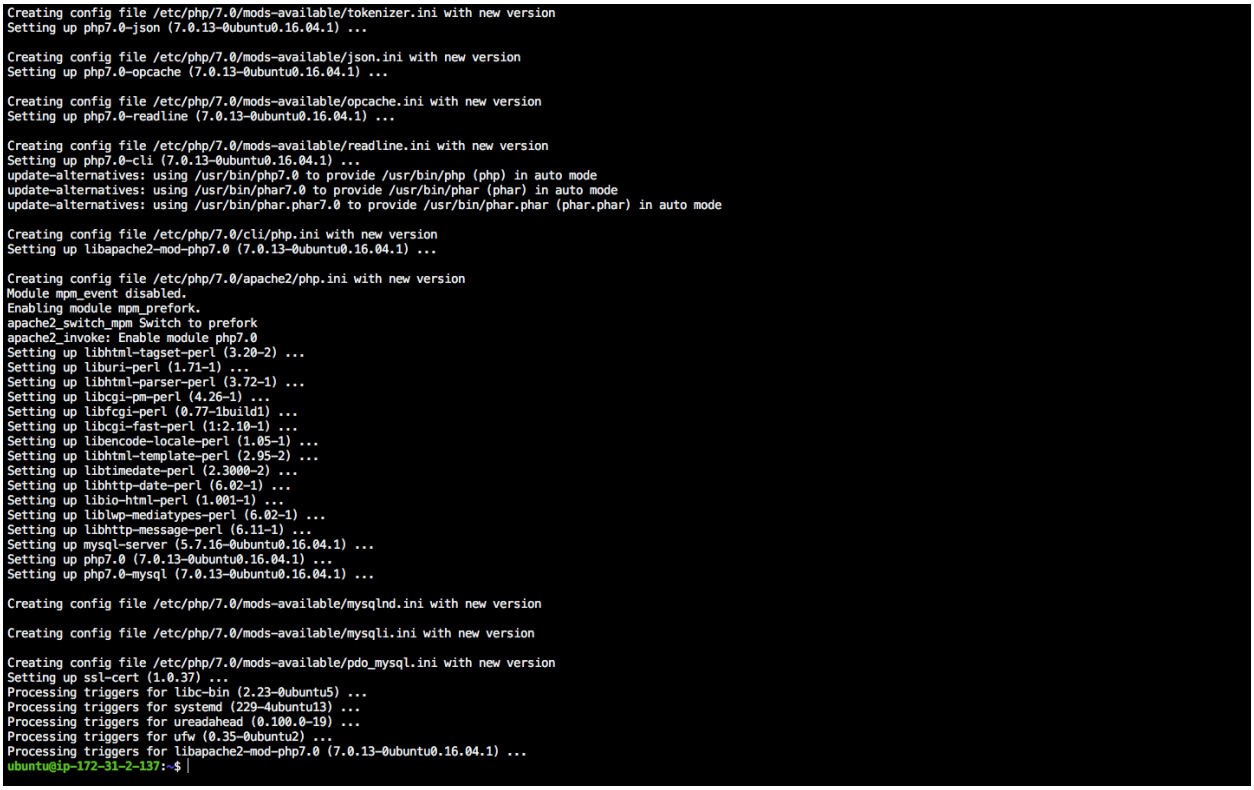
Screenshot 2: Successful SSH connection to the EC2 Instance

Steps performed to install Apache2, PHP7.0 and MySQL onto the EC2 instance created in preceding steps:

1. Type the following command after the dollar symbol and click enter-
   $ sudo apt-get update
   It downloads the package lists from the repositories and "updates" them to get information on the newest versions of packages and their dependencies.
2. Next, type the following command and click enter-
   $ sudo apt-get upgrade
   It will fetch new versions of packages existing on the machine if APT knows about these new versions by way of apt-get update in the last command.
3. Type 'y' when prompted and press enter again.
4. Next type the following command to install Apache2, MySQL as well as PHP7.0 dependencies all in one command.
   $ Sudo apt-get install apache2 libapache2-mod-php7.0 mysql-server php7.0-mysql php7.0
   Here:
   libapache2-mod-php7.0 is a package that provide php7.0 module for apache2 server
   Php7.0-mysql is a package that connects MySQL-server to php7.0

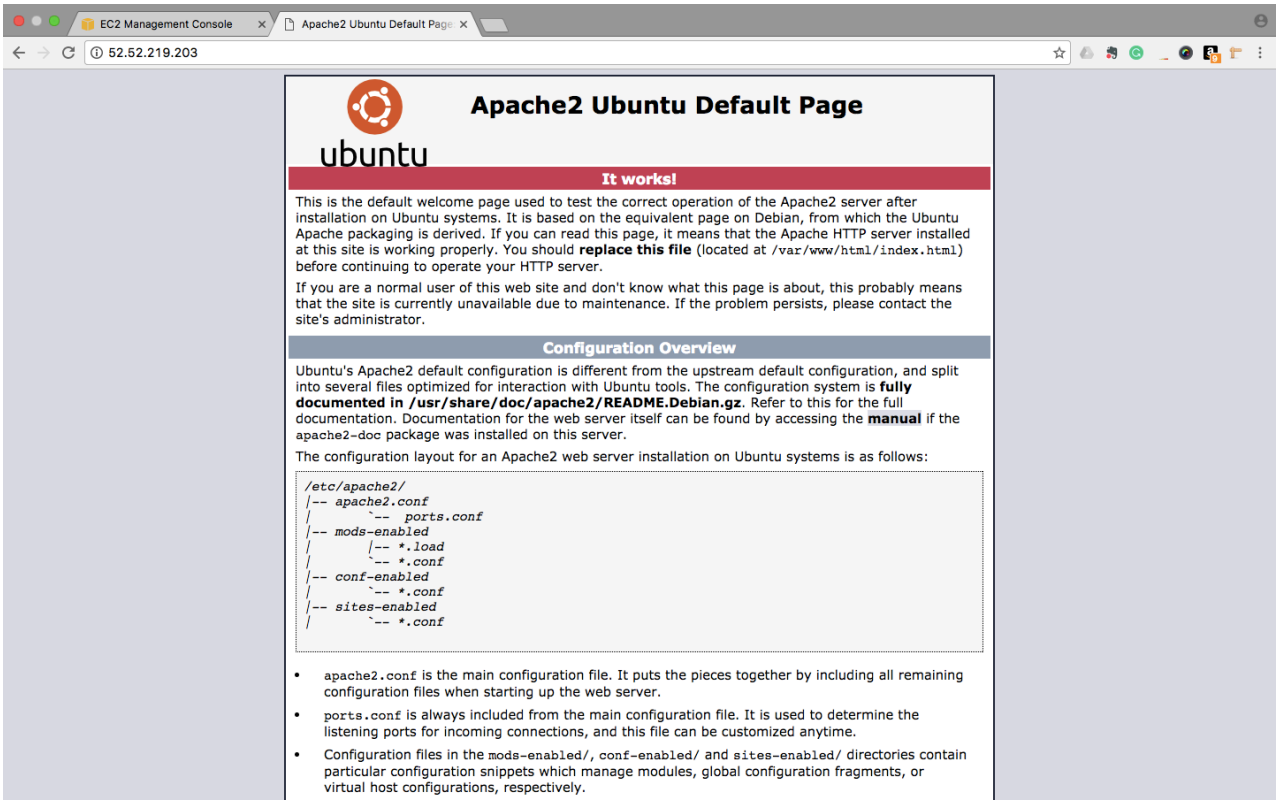


Screenshot 3: Apche2,MySQL & PHP7.0 installed in single command



Screenshot 4: LAMP stack installation successfully completed

5. Follow on screen commands to setup root password for mysql when prompted.
6. Once the installation in the previous step is over, restart Apache2 using the following command- *$ sudo service apache2 restart*
7. Login to amazon EC2 console in the browser and click the instance that you create in the previous steps. Find the public IP associated with your instance in the bottom right corner of the screen. Copy and paste this IP in a new browser tab and press enter. Since everything went right, we are greeted with the Apache2 page as shown below.



Screenshot 5: Apche2 default page shown at IP 52.52.219.203