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SER401

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**How to run a Python Program within an AWS EC2 instance**

If you don’t already have an AWS account, you will need to create one.

To create an AWS account:

1. Navigate to the AWS Free Tier Site [here](https://aws.amazon.com/free/?trk=78b916d7-7c94-4cab-98d9-0ce5e648dd5f&sc_channel=ps&s_kwcid=AL!4422!3!438195701024!p!!g!!aws%20free&ef_id=CjwKCAjw7eSZBhB8EiwA60kCW81xfnB9Ln6n6MCaMOzm8EXzGmA_kihXyvlRfNU81ExZKg4CY-eQsBoCLHQQAvD_BwE:G:s&s_kwcid=AL!4422!3!438195701024!p!!g!!aws%20free&all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=*all&awsf.Free%20Tier%20Categories=*all).
2. Click on **Create a Free Account**.
3. Sign up for AWS

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1. After you have verified your account, create a password for **Root user** (admin user).

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1. Select Business or personal and enter in your information

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1. Provide payment information

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1. Confirm your identity

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1. Select Plan. Choose Basic support – Free

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And you are done!

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1. Now we need to install Ubuntu on your AWS EC2 instance. While in AWS Management Console. Click on **Services** and search for **EC2** Click on EC2 when it comes up.

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1. Click on **Launch instance** and select **Launch instance**

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1. Type a **Name**, click on **Ubuntu** and fill out the **Key pair.** Key Pair will download a key to your machine you will use this in step 7. (I left every other default setting).

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1. Click on **Launch instance**

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1. Click on the link to your instance

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1. You will see he instance while it builds. Wait for the Instance State is **Running**

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1. Download and install PuttyGen, then open PuttyGen

* Click on **Load,** change file types to **All** then look for the file you downloaded in step 3
* Click on Save private key
* Click on Yes on the message about paraphrasing.
* Name it something, all lowercase and hit **save**.

1. On the Instances portal, scroll to the right until you find **Public IPv4 address**. Copy address.

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1. Open Putty (NOT PUTTYGEN). Navigate to SSH – Auth, click on **browse**.

* Look for the key you saved from **PuttyGen**.
* Mine is called willstestkey.ppkGraphical user interface, text, application

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1. Click on **Session** up to then enter in the Public IPv4 address from **your** Ubuntu instance.

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1. Click **Accept**

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1. In login as: type in **ubuntu**

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And now you have Ubuntu running on a AWS EC2 instance!

1. Once your instance is running run the following code to update it:
   1. sudo apt-get update
   2. sudo apt-get upgrade
   3. When prompted type y to complete the update.
2. Create a new directory
   1. Sudo mkdir <name of directory>
   2. After its created swich over to it with cd <name of directory>
3. Check AWS instance for the latest version of Python and install.
   1. Type in python3 –version
4. Now install the python environment into the current directory by typing in
   1. Sudo apt-get install python3 virtualenv
   2. When prompted type y to complete the update.
5. Create a python project within your directory.
   1. Type in sudo python3 -m virtualenv <project name>

It should look like this:

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1. Change directory to the project directory
   1. Source <project name>/bin/activate
   2. You will see your project to the left if you have entered it correctly.



1. Use VIM to write your python program.
   1. Type in sudo vim <file name>.py
   2. Type in **print (“Hello World”)**
   3. Then hit ESC and type in **:wq** and hit enter to exit vim.
2. How to run the Python program.
   1. Type in python <file name>.py
   2. You should see it print Hello world.

You have successfully created an AWS account, configured an EC2 instance, installed Ubuntu on the EC2 instance and created and ran a simple python program.