# 1 Starting Information

## 1.1 Deploying a Vultr Server

### 1.1.1 Choosing Server Location

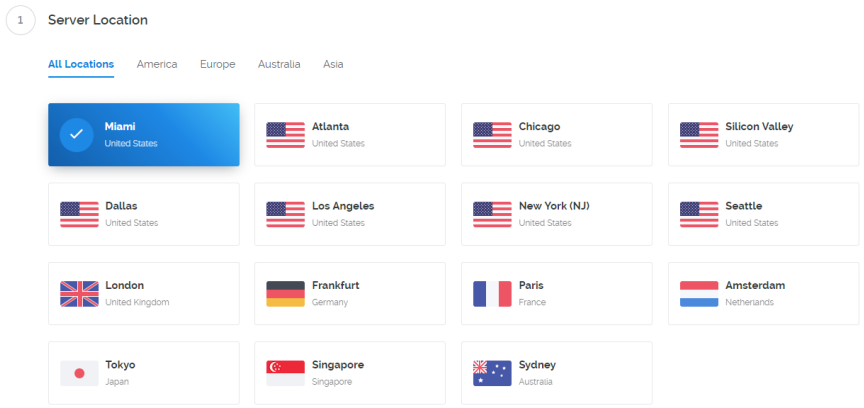



Figure 1: Server Location Screen

In this part, you get to choose the location of the server. The New York or Miami server should still have the $2.50 tier still available; if so, choose one of those options. The other US servers have the $5 tier, otherwise.

### 1.1.2 Choosing an Operating System

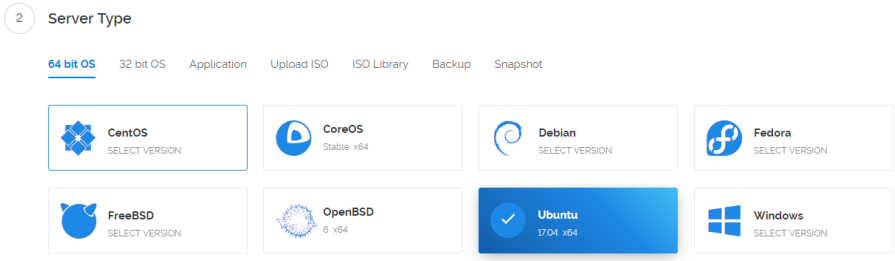



Figure 2: OS Option Screen

In this section, the operating system is chosen. Like in the image, choose the Ubuntu option. From there, a drop-down menu is presented; click on the 17.04 x64 option.

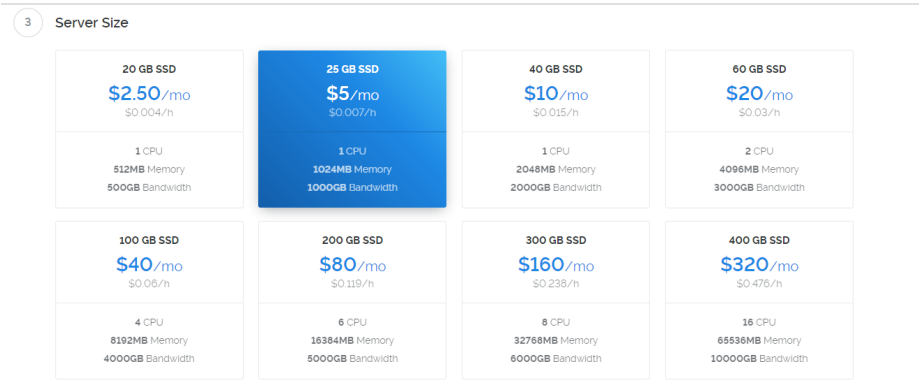



Figure 3: Tier Option Screen

### 1.1.3 Choosing Price Tier

Here you get to choose the the price tier. Choose whichever one you like the best (that is available).

### 1.1.4 Naming and Deployment

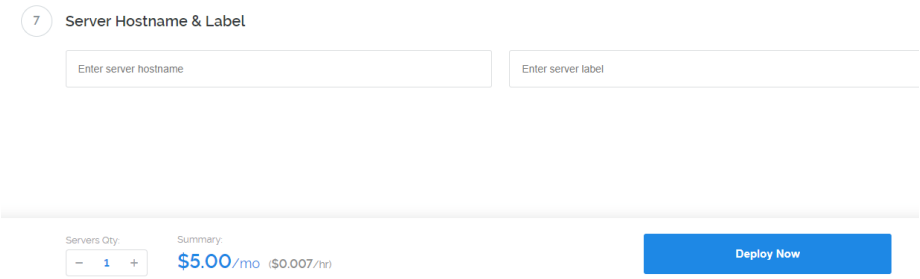



Figure 4: You get to name your server

Type your desired server name into the "Enter server hostname" box. Check the pricing and click "Deploy Now".

### 1.1.5 Deployment Screen

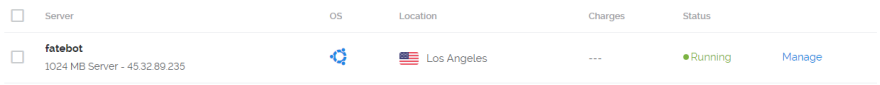



Figure 5: Server Management Screen

After about 10 minutes, the server should be running like in the above image. You can click on manage to look at the activity of your server.

### 1.1.6 Management Screen

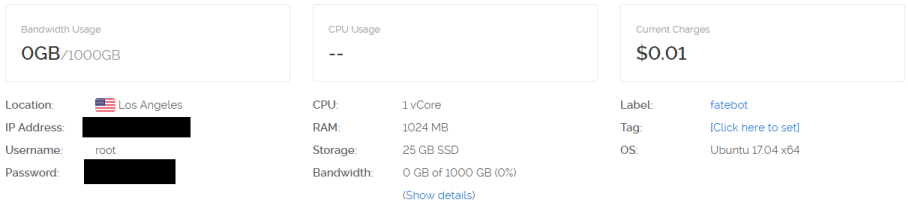



Figure 6: Management Screen


Figure 7: You can delete the server by clicking on the trash button; this prevents additional charges when you link a credit card

This screen shows you the activity and charges associate with your server. It also contains your IP address, username, and password; you will need this later.

## 1.2 Miscellaneous Vultr Information

### 1.2.1 Payment Options

You can link your credit card for the service, but there is a PayPal option. I would recommend this option because if you choose to stop using the Vultr, you won't have to worry about them having your credit card options. You might not have to worry about overage charges either, as will be discussed in the next section. However, as always, you can do as you like.

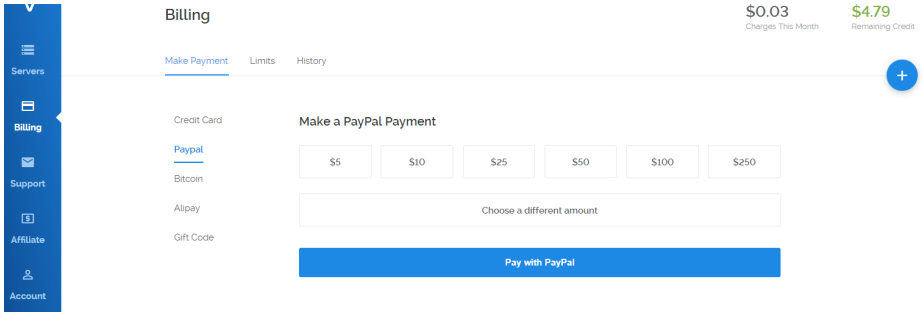



Figure 8: Payment Screen

### 1.2.2 Charges

The billing is hourly until the monthly cap; you billing should not exceed the monthly cap. The exception is charges for exceeding bandwidth limits. However, this should not happen due to the relatively high bandwidth limits. By pre-paying with PayPal, Vultr should not directly charge your credit card; it will only subtract from the pre-paid amount. Take pre-paid ramblings with a grain of salt, as I have not hit this issue while testing. Check https://www.vultr.com/faq/ for more billing information.

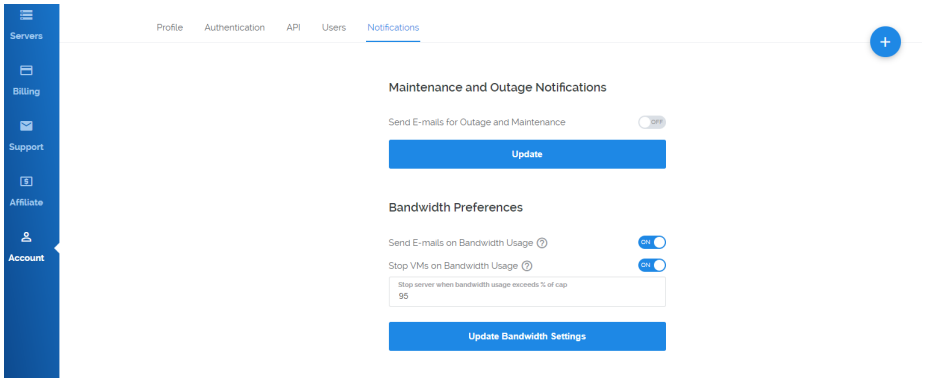



Figure 9: Bandwidth Notification Screen; Copy the options in the image limit possible issues with bandwidth overages.

## 1.3 Setting Up the Server

### 1.3.1 Things to Download

For this section, you have to download Mobaxterm (http://mobaxterm.mobatek.net/download.html) in order to access your server.

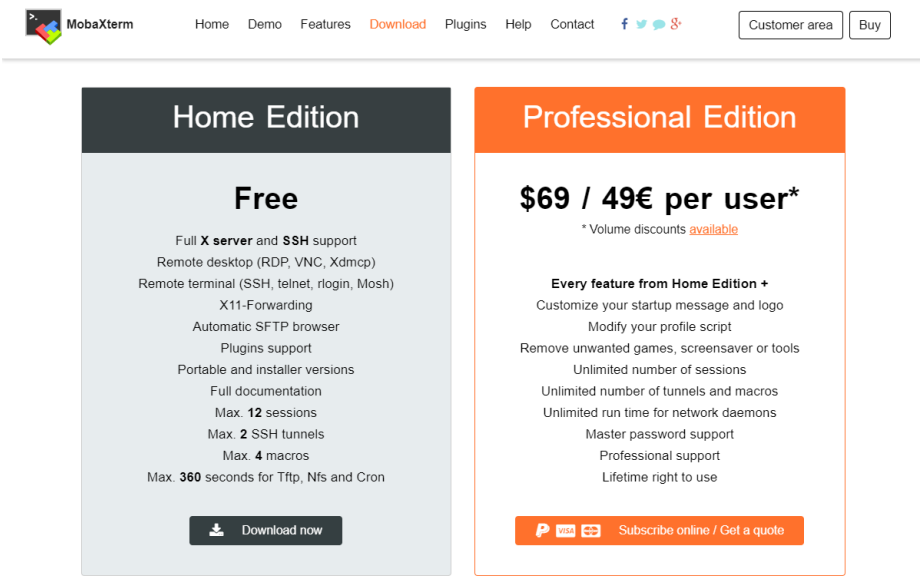
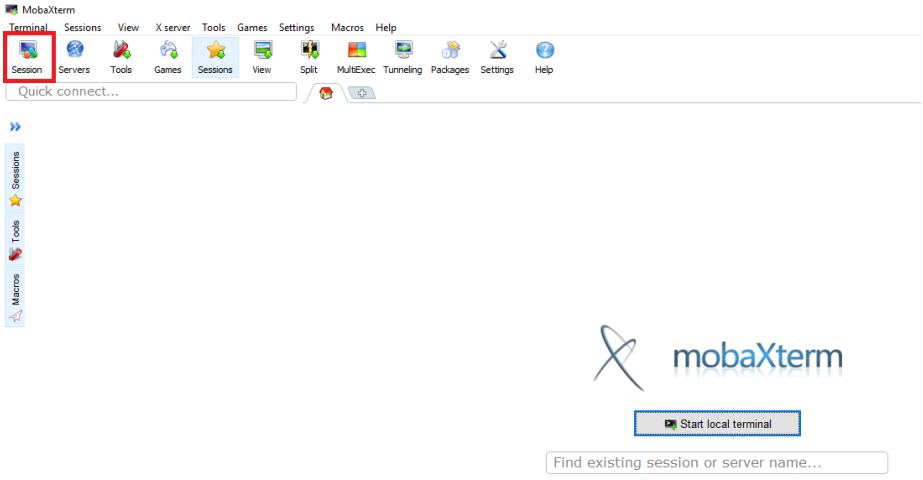


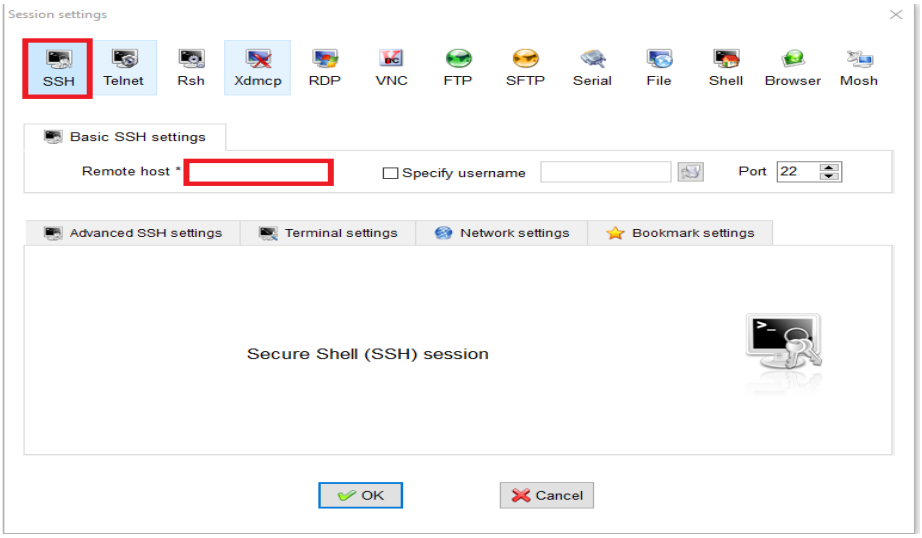

Figure 10: Download the home edition

### 1.3.2 Accessing the Server

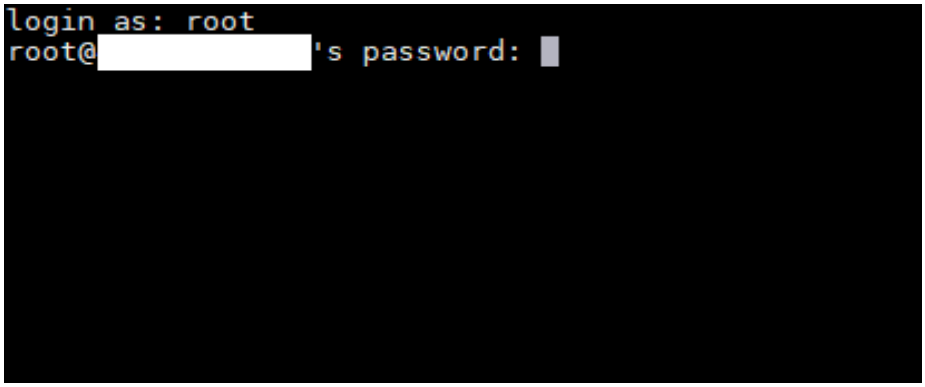
1. Open up Mobaxterm and click on Session.



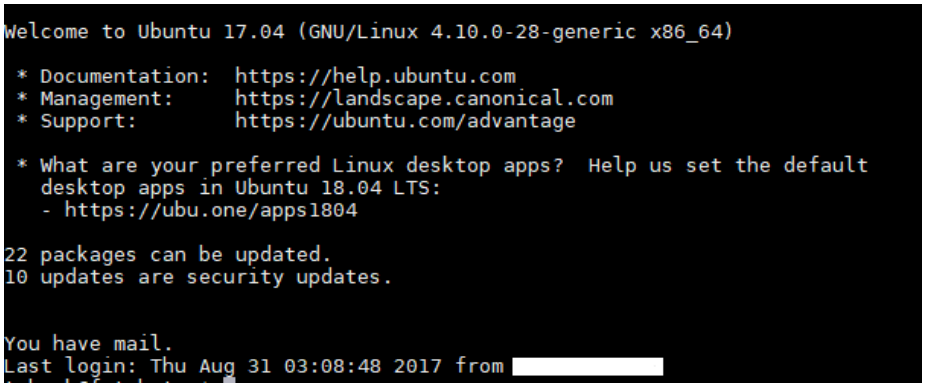

2. Click on SSH and enter the IP address from the Vultr server management page.



3. A login prompt should appear. Enter "root" as the first input and type the password from the Vultr server management page.




4. If successful, you should be greeted by this screen.



### 1.3.3 Brief Overview of Ubuntu Navigation

Navigation is different from the usual Windows or MacOS. First of all, navigation is purely done with the keyboard. Arrow keys are used to navigate. In order to input commands, type the command then press enter. The "root@servername: #" line indicates the computer to ready for a new command.

### 1.3.4 OPTIONAL: Security Side Note

Having root access can be a security risk. A person could potentially access your server if they somehow find out your IP address (so keep it secret) and crack your password. To solve this, you will need to cut-off root access. While this step is not neccessary, I will outline it as an option. Also it might be problematic if I messed up in my instructions to you.

1. adduser your chosen username

```
root@fatebot:~# adduser tshark
Adding user `tshark' ...
Adding new group `tshark' (1001) ...
Adding new user `tshark' (1001) with group `tshark' ...
Creating home directory `/home/tshark' ...
Copying files from `/etc/skel' ...
New password:
```

2. Enter your new custom password and press enter. Then you will be prompted to re-enter the password for confirmation and press enter.

3. You wil be asked about your name and such. You can just leave these blank and press enter through them.

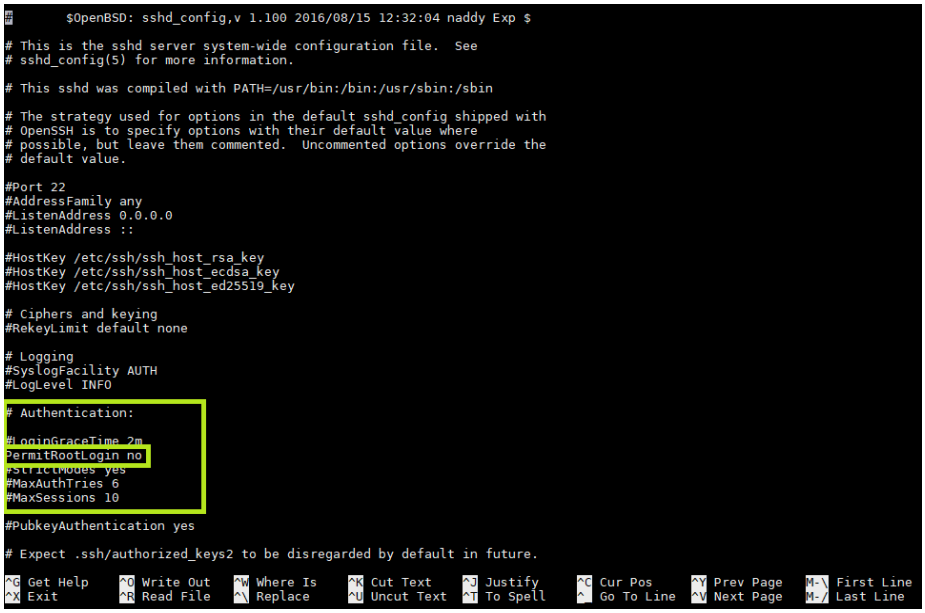
4. Enter command "usermod -aG sudo username".

```
root@fatebot:~# usermod -aG sudo tshark
root@fatebot:~#
```

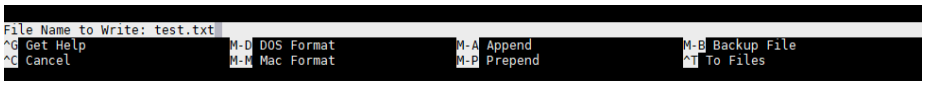
5. Type "sudo nano /etc/ssh/sshd_config" to open a file.

```
tshark@fatebot:~$ sudo nano /etc/ssh/sshd_config
tshark@fatebot:~$ sudo systemctl reload sshd
```

6. The file should look like the below image. Move the white cursor down to the Authentication section and change PermitRootLogin to no.




7. Press Ctrl+O and press enter to save the file.




8. Ctrl+x to exit.

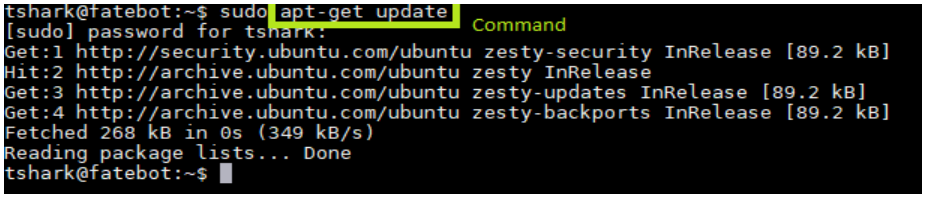
9. Enter "sudo systemctl reload ssh"

10. Close and re-open Mobaxterm. Use the new username and password to login. Now you can no longer use the root and that password to login.

11. For more security measures check out this video:
https://www.youtube.com/watch?v=G9ljxktp1XE

### 1.3.5 Setup for the Bot

1. Enter "sudo apt-get update." There shouldn't be another prompt for your password like in the image, but if there is, just re-enter your password.




2. Enter commands:

sudo apt-get install python-pip python-dev build-essential
sudo pip install --upgrade pip
sudo pip install --upgrade virtualenv
sudo pip install praw

You will be asked if you want to download these files. Type y and press enter.

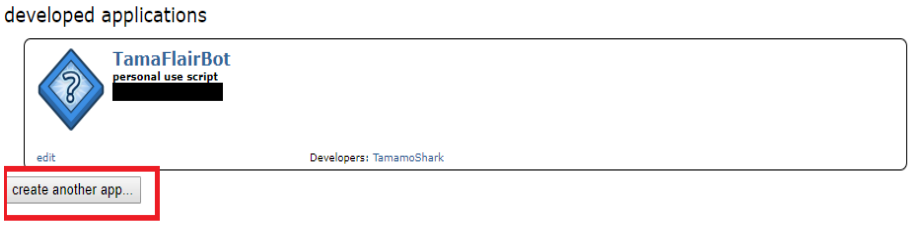
3. Keep Mobaxterm open. We'll come back to it soon.

# 2 Actually Working on the Bot

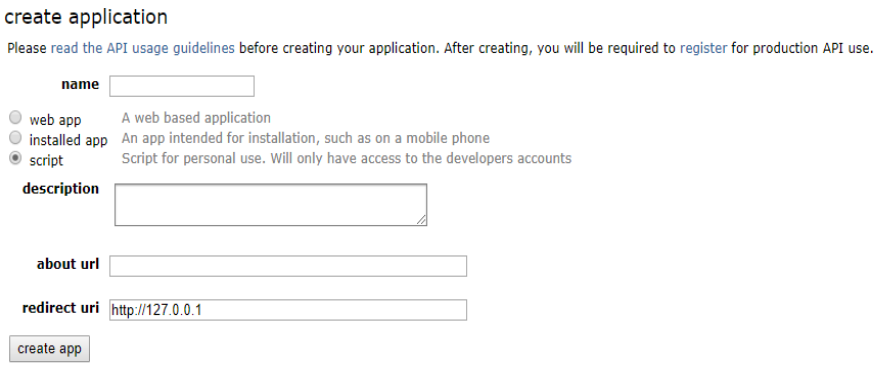
## 2.1 Setup Bot Reddit Account

Go to: https://www.reddit.com/prefs/apps/

1. Select Create App



2. Name the bot. Enter http://127.0.0.1 for the redirect uri and select script. Then click create app.




3.You will get a image like below. The client_id and secret will be used later on.


## 2.2 The Code

First of all, download Notepad++ (notepad-plus-plus.org). It will help you edit the code more easily. The files you will need will be available at: https://github.com/mtsng/Fbot

1. Enter the client_id, secret, password, and username into the praw.ini file.

```
[DEFAULT]
#boolean to indicate whether or not to check for package updates.
check_for_updates=True

# Object to kind mappings
comment_kind=t1
message_kind=t4
redditor_kind=t2
submission_kind=t3
subreddit_kind=t5

# The URL prefix for OAuth-related requests.
oauth_url=https://oauth.reddit.com

# The URL prefix for regular requests.
reddit_url=https://www.reddit.com

# The URL prefix for short URLs.
short_url=https://redd.it

[bot1]
client_id= #the client_id
client_secret= #the secret
password= #password of bot account
username= #username of bot account
user_agent=Tama Bot 0.1 #You can change this if you like, but keep the format
```

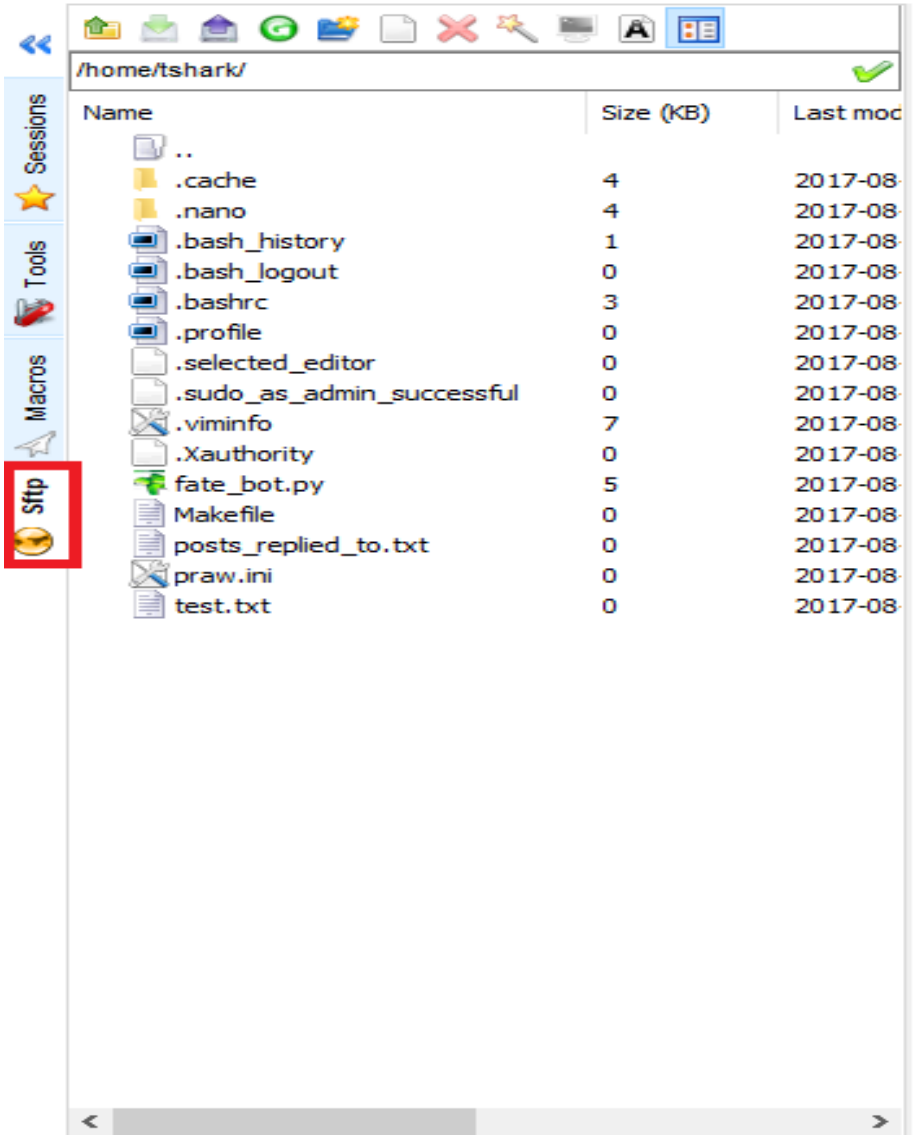
2. In the fate_bot.py, scroll down to the main section. In this section, you are able to change the subreddit_name, the number of posts checked, the time limit before the bot leaves a message, the time limit for the bot to stop checking the unflaired posts for comment flairs, and the message. For the message and subreddit_name, the quotation marks are required, so don't remove them. You can use reddit formatting in the message.

```
#Main Function
def main():
        bot = 'bot1'
        subreddit_name = "fgobottest"
        post_limit = 5 #number of posts to be checked at a time
        time_limit = 180 #time limit (in seconds) for unflaired post before bot comment
        drop_time_limit = 7200 #time limit (in seconds) for bot to stop checking a post for a flair
        message = "Please Flair" #Bot message
```

3. Remember to save.

## 3 Finally, it's almost over

1. Click on the sftp button and drag-drop the praw.ini and fate_bot.py file into the window.



3. Back in Mobaxterm, enter command "chmod +x fate_bot.py"

4. Then enter "crontab -e" and chose 2.

```
tshark@fatebot:~$ crontab -e
no crontab for tshark - using an empty one

Select an editor.  To change later, run 'select-editor'.
  1. /bin/ed
  2. /bin/nano        <---- easiest
  3. /usr/bin/vim.basic
  4. /usr/bin/vim.tiny

Choose 1-4 [2]: 2
```

5. Scroll down to the very bottom and type in "*/5 * * * * /home/{your username or root}/fate_bot.py". The */5 part means every five minutes, so you can change this if you like.

```
tshark@fatebot:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
*/5 * * * * /home/tshark/fate_bot.py
```

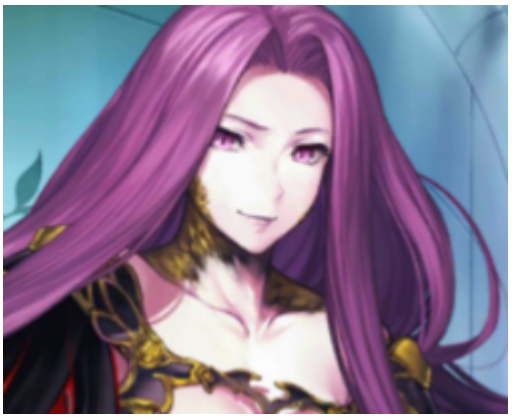
6. Ctrl+o and enter to save. Ctrl+x to exit.

7. To check if it is working, enter command "sudo grep CRON /var/log/syslog" at the five minute marks to check if it worked. If sucessful, it will look like the below image.

```
Sep  1 06:55:01 fatebot CRON[2417]: (tshark) CMD (/home/tshark/fate_bot.py)
Sep  1 07:00:01 fatebot CRON[2556]: (tshark) CMD (/home/tshark/fate_bot.py)
Sep  1 07:05:02 fatebot CRON[2588]: (tshark) CMD (/home/tshark/fate_bot.py)
Sep  1 07:10:01 fatebot CRON[2626]: (tshark) CMD (/home/tshark/fate_bot.py)
```

# 4 Thanks for Reading

Thanks for reading this long rambling



Or you just skipped to the end