

# 1 Starting Information

## 1.1 Deploying a Vultr Server

### 1.1.1 Choosing Server Location

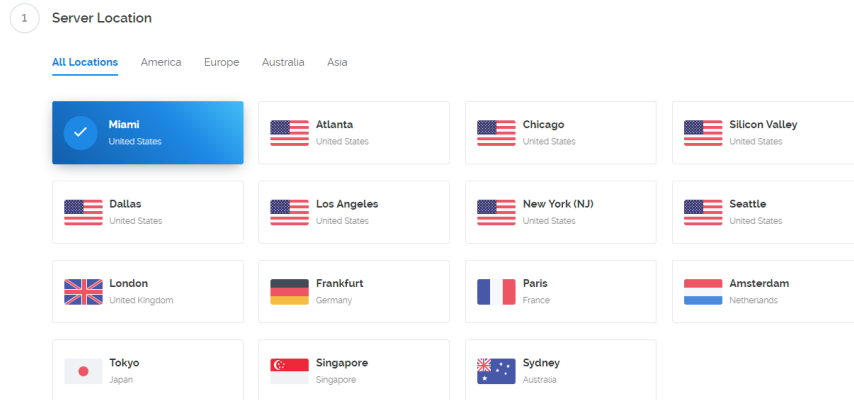


Figure 1: Server Location Screen

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

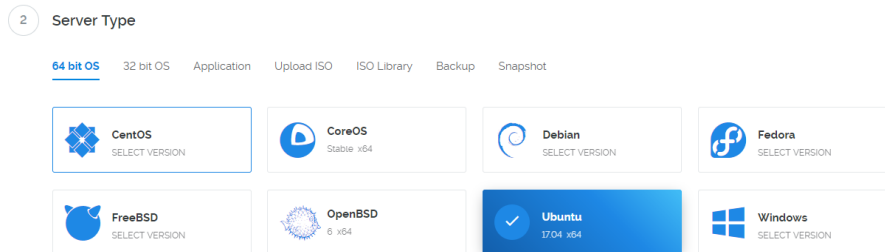


Figure 2: OS Option Screen

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.

3 Server Size

20 GB SSD <b>\$2.50/mo</b> \$0.004/h  1 CPU 512MB Memory 500GB Bandwidth	25 GB SSD <b>\$5/mo</b> \$0.007/h  1 CPU 1024MB Memory 1000GB Bandwidth	40 GB SSD <b>\$10/mo</b> \$0.015/h  1 CPU 2048MB Memory 2000GB Bandwidth	60 GB SSD <b>\$20/mo</b> \$0.03/h  2 CPU 4096MB Memory 3000GB Bandwidth
100 GB SSD <b>\$40/mo</b> \$0.06/h  4 CPU 8192MB Memory 4000GB Bandwidth	200 GB SSD <b>\$80/mo</b> \$0.119/h  6 CPU 16384MB Memory 5000GB Bandwidth	300 GB SSD <b>\$160/mo</b> \$0.238/h  8 CPU 32768MB Memory 6000GB Bandwidth	400 GB SSD <b>\$320/mo</b> \$0.476/h  16 CPU 65536MB Memory 10000GB Bandwidth

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

7 Server Hostname & Label

Servers Qty:

-
1
+

Summary:  
**\$5.00/mo** (\$0.007/hr)

Deploy Now

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



<input type="checkbox"/>	Server	OS	Location	Charges	Status
<input type="checkbox"/>	<b>fatebot</b> 1024 MB Server - 45.32.89.235		 Los Angeles	---	<span>● Running</span> <a href="#">Manage</a>

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




<b>Bandwidth Usage</b> 0GB/1000GB	<b>CPU Usage</b> --	<b>Current Charges</b> \$0.01
Location:  Los Angeles	CPU: 1 vCore	Label: <a href="#">fatebot</a>
IP Address: 	RAM: 1024 MB	Tag: <a href="#">[Click here to set]</a>
Username: root	Storage: 25 GB SSD	OS: Ubuntu 17.04 x64
Password: 	Bandwidth: 0 GB of 1000 GB (0%) <a href="#">(Show details)</a>	

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.

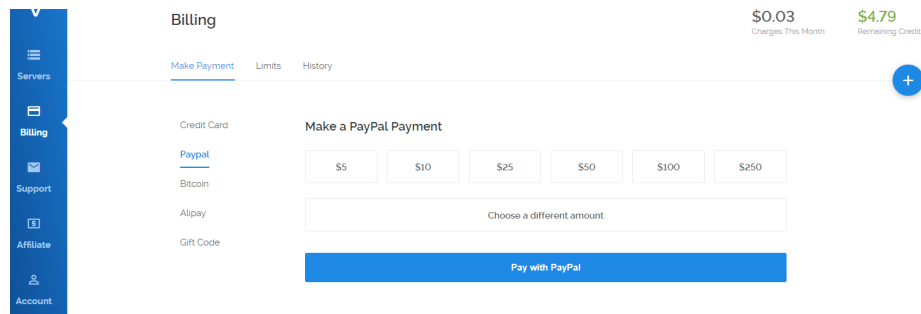


Figure 8: Payment Screen

### 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.

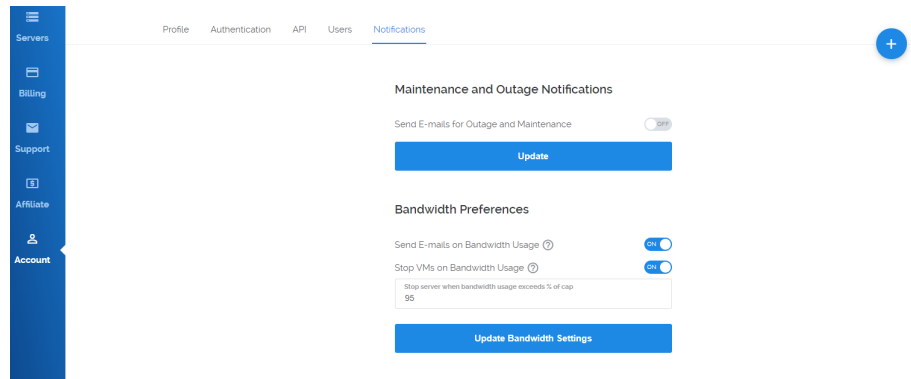


Figure 9: Bandwidth Notification Screen; Copy the options in the image limit possible issues with bandwidth overages.

## 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.

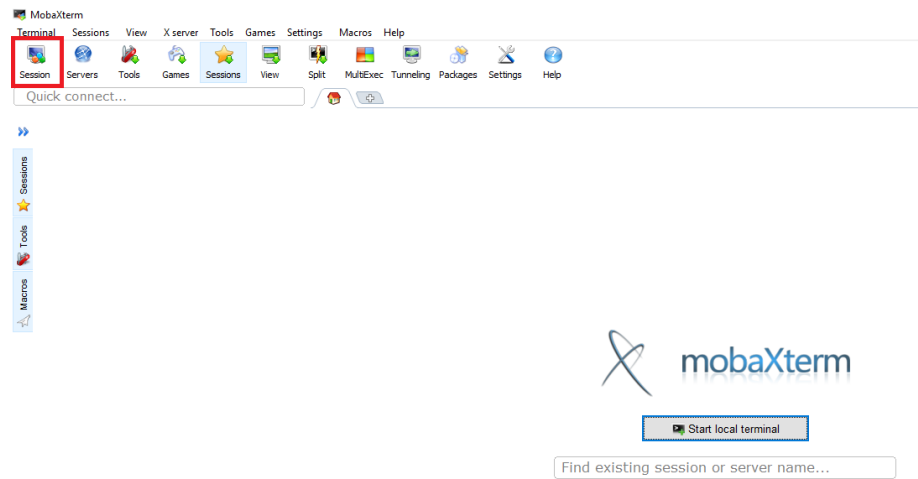
The screenshot shows the MobaxTerm website's pricing page. The navigation bar includes links for Home, Demo, Features, Download, Plugins, Help, and Contact, along with social media icons and buttons for 'Customer area' and 'Buy'. Two main pricing cards are displayed: 'Home Edition' (Free) and 'Professional Edition' (\$69 / 49€ per user\*).

Home Edition	Professional Edition
<b>Free</b>	<b>\$69 / 49€ per user*</b>
<ul style="list-style-type: none"><li>Full <b>X server</b> and <b>SSH</b> support</li><li>Remote desktop (RDP, VNC, Xdmcp)</li><li>Remote terminal (SSH, telnet, rlogin, Mosh)</li><li>X11-Forwarding</li><li>Automatic SFTP browser</li><li>Plugins support</li><li>Portable and installer versions</li><li>Full documentation</li><li>Max. <b>12</b> sessions</li><li>Max. <b>2</b> SSH tunnels</li><li>Max. <b>4</b> macros</li><li>Max. <b>360</b> seconds for Tftp, Nfs and Cron</li></ul>	<ul style="list-style-type: none"><li>* Volume discounts <a href="#">available</a></li><li><b>Every feature from Home Edition +</b></li><li>Customize your startup message and logo</li><li>Modify your profile script</li><li>Remove unwanted games, screensaver or tools</li><li>Unlimited number of sessions</li><li>Unlimited number of tunnels and macros</li><li>Unlimited run time for network daemons</li><li>Master password support</li><li>Professional support</li><li>Lifetime right to use</li></ul>
<a href="#">Download now</a>	<a href="#">Subscribe online / Get a quote</a>

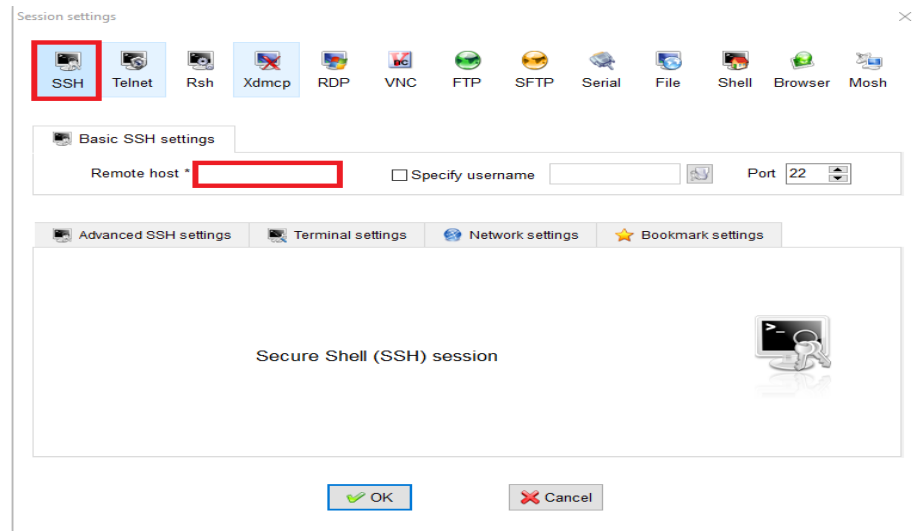
Figure 10: Download the home edition

### 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.

```
login as: root
root@[REDACTED]'s password: █
```

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

```
Welcome to Ubuntu 17.04 (GNU/Linux 4.10.0-28-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

* What are your preferred Linux desktop apps? Help us set the default
  desktop apps in Ubuntu 18.04 LTS:
  - https://ubu.one/apps1804

22 packages can be updated.
10 updates are security updates.

You have mail.
Last login: Thu Aug 31 03:08:48 2017 from [REDACTED]
```



### 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 necessary, 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 will be asked about your name and such. You can just leave these blank and press enter through them.

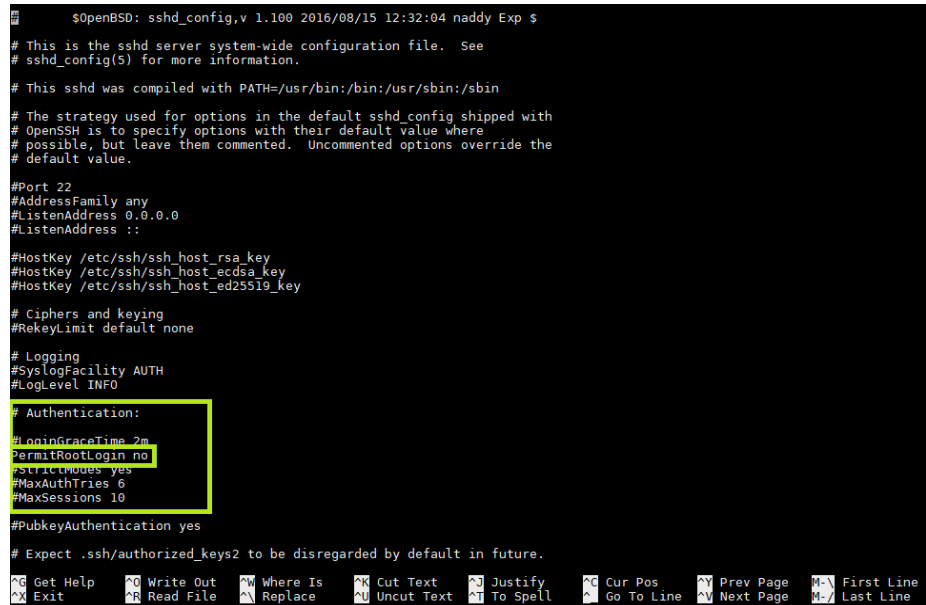
4. Enter command "usermod -aG sudo username".

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

5. Type "sudo nano /etc/ssh/sshd\_config" to open a file.

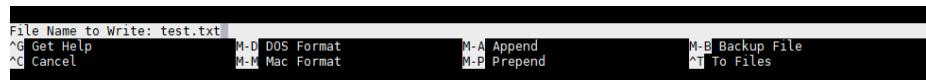
```
Adding package libssh14 done
tshark@fatebot:~$ sudo nano /etc/ssh/sshd_config
tshark@fatebot:~$ sudo systemctl reload sshd █
```

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



```
$OpenBSD: sshd_config,v 1.100 2016/08/15 12:32:04 naddy Exp $
# This is the sshd server system-wide configuration file. See
# sshd_config(5) for more information.
# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin
# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented. Uncommented options override the
# default value.
#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::
#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
#HostKey /etc/ssh/ssh_host_ed25519_key
# Ciphers and keying
#RekeyLimit default none
# Logging
#SyslogFacility AUTH
#LogLevel INFO
# Authentication:
# loginGraceTime 2m
PermitRootLogin no
StrictModes yes
#MaxAuthTries 6
#MaxSessions 10
#PubkeyAuthentication yes
# Expect .ssh/authorized_keys2 to be disregarded by default in future.
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify    ^C Cur Pos   ^V Prev Page  ^_ First Line
^X Exit      ^R Read File  ^N Replace   ^U Uncut Text ^T To Spell   ^G Go To Line ^N Next Page  ^M Last Line
```

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



```
File Name to Write: test.txt
^G Get Help  ^M-D DOS Format  ^M-A Append  ^M-B Backup File
^G Cancel    ^M-M Mac Format  ^M-P Prepend  ^M To Files
```

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.

```
tshark@fatebot:~$ sudo apt-get update
[sudo] password for tshark:
Get:1 http://security.ubuntu.com/ubuntu zesty-security InRelease [89.2 kB]
Hit:2 http://archive.ubuntu.com/ubuntu zesty InRelease
Get:3 http://archive.ubuntu.com/ubuntu zesty-updates InRelease [89.2 kB]
Get:4 http://archive.ubuntu.com/ubuntu zesty-backports InRelease [89.2 kB]
Fetched 268 kB in 0s (349 kB/s)
Reading package lists... Done
tshark@fatebot:~$
```

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.

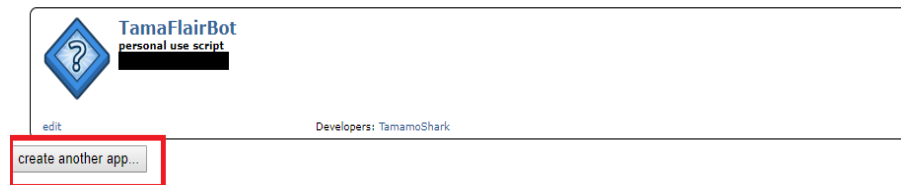
## 2 Actually Working on the Bot

### 2.1 Setup Bot Reddit Account

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

1. Select Create App

developed applications



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

### create application

Please read the [API usage guidelines](#) before creating your application. After creating, you will be required to [register](#) for production API use.

name

☐ web app A web based application  
☐ installed app An app intended for installation, such as on a mobile phone  
☒ script Script for personal use. Will only have access to the developers accounts

description

about url

redirect uri

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

**TamaFlairBot**  
personal use script

`client_id`

[change icon](#)

secret  Secret

developers TamamoShark (that's you!) [remove](#)

name

add developer:

description

about url

redirect uri

[delete app](#)

## 2.2 The Code

First of all, download Notepad++ ([notepad-plus-plus.org](https://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
```

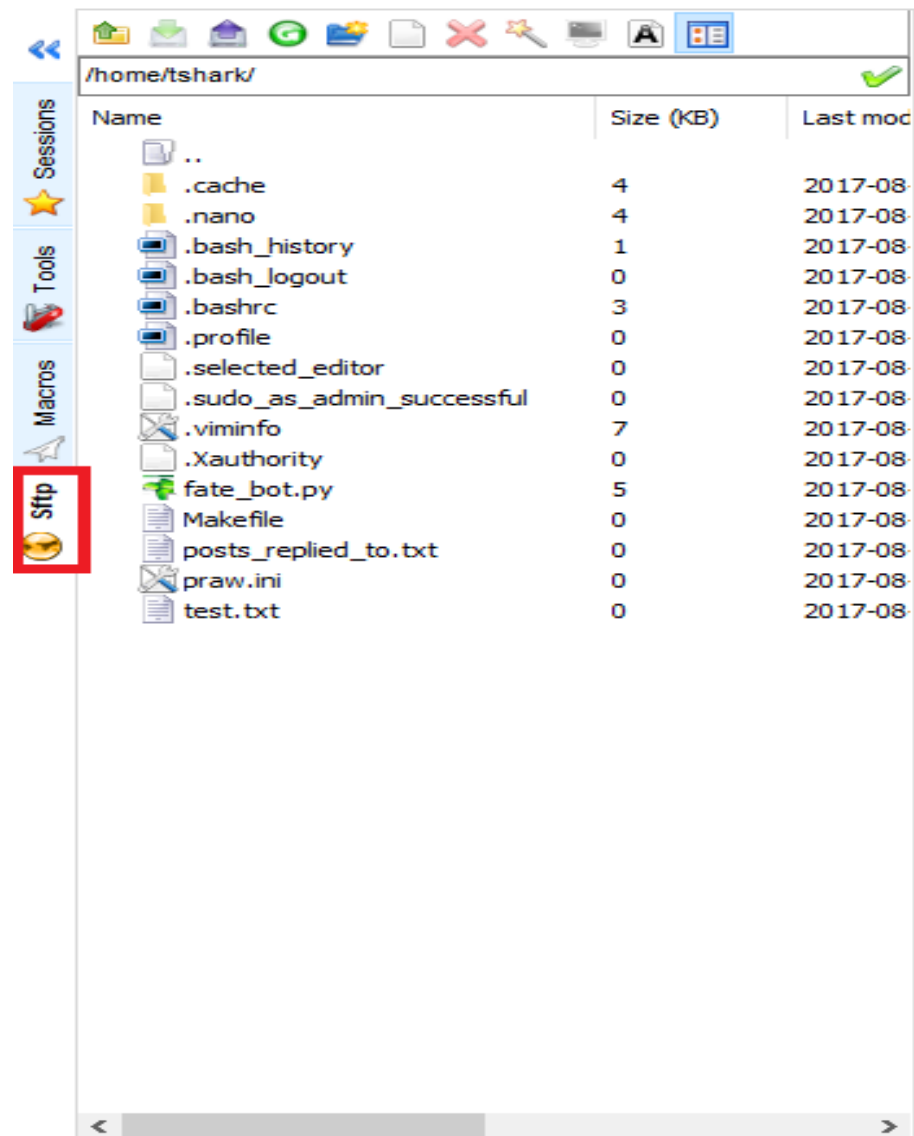
2. In the `fate_bot.py`, scroll down to the main section. In this section, you are able to change the `subreddit_name`, the number of posts checked, the time limit before the bot leaves a message, the time limit for the bot to stop checking the unflaired posts for comment flairs, and the message. For 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.



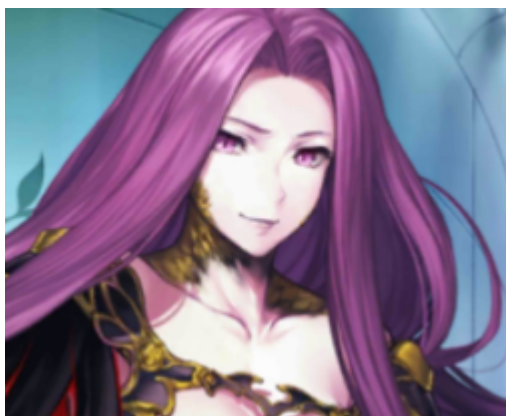
7. To check if it is working, enter command "sudo grep CRON /var/log/syslog" at the five minute marks to check if it worked. If successful, it will look like the below image.

```
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