



PESAPI NON-OFFICIAL DOCUMENTATION

Written by Kanyi

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Introduction

I heard of guys who don't sleep. They code!!! I didn't look far, I just looked at my bed. It was empty, I was coding.

This time the challenge was not a "challenge" as such, as another brilliant mind, probably more brilliant than I would ever become had done most of the work for me.

Michael Pederson of Plus People developed the MPESA Open Source API called PESAPI. The main goal was in order to open MPESA to developers and as a result increase innovation and enhance online payment via MPESA.

Since its launch, PESAPI has now grown and expanded to 6 countries.



Michael Pederson

The guy behind PESAPI

The guy is great!!! We must all agree on that.

Pesapi

PesaPi is an unofficial open source API released under the BSD (lite) license.

PesaPi enables MPESA accounts to communicate with other systems.

Pesapi Resources

Pesapi relies on some other resources in order to work perfectly.

1. **PHP Version 5.3.0 or above**
2. **Mysql version 5 or above**
3. **Curl & PHP_cURL**
4. **Webserver**

Even as PESAPI comes with a great solution to online payments, many developers still find it hard to configure and use. Most developers run for other solutions which charge a great deal of commission per transaction.

You should be aware that you can use PESAPI quite well even for **personal** MPESA numbers and **till numbers**.

So in the rest of this document I will illustrate how to download, install, configure and use PESAPI

How to setup PESAPI

First things first!! In order to set up PESAPI, make sure you have a suited hosting/server setup for where you want PesaPi running from, then verify that the above requirements are fulfilled i.e.(PHP VERSION, MYSQL, etc)

If you don't have hosting/server setup, you can consider getting the same from a good hosting company i.e. Sasahost, EAC directories or Blue Host.

Download PesaPi

Pesapi can be downloaded from github using the link below

<https://github.com/pluspeople/pesaPi>

For this tutorial, download the .zip folder

Upload PesaPi

Next you need to ensure that PesaPi is installed in the chosen server/location. It is the content from the php subfolder you want to copy to the server specifically:

- webroot
- documentation
- include
- cron
- examples

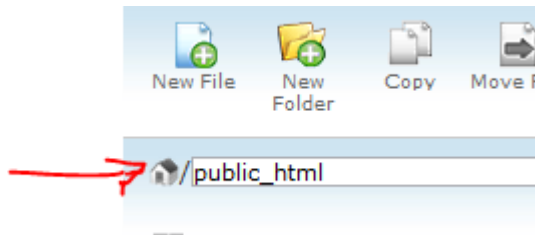
In particular you want it so that the content of webroot is located in what is the webroot of your hosting setup (in many cases public_html of the cpanel) and then you want include and cron subfolders to be in the parent directories (best practice is to keep those outside the webroot)

Step by step procedure for the above

1. Login to your domain cpanel
2. Go to **public_html** or **file manager**
3. Click on upload on the top left section
4. Locate the folder webroot from the pesapi folder you downloaded from github(You must have unzipped the pesapi folder first)
5. Upload all contents of the folder in file manager of public_html (You can upload the files one by one if you are a beginner but expert users of cpanel can upload a zip to webroot, extract and move it to the root folder)
6. While still in cpanel, inside public_html, go back one step by clicking "up one level button" and make sure you are in the parent directory. [**PAUSE**]

Image illustrations for the above last two steps

While uploading webroot contents, make sure the top right shows this.
public_html/ means you are uploading the webroot contents of the pesapi zipped folder correctly in webroot.



When you are done, you click on “Up One Level”

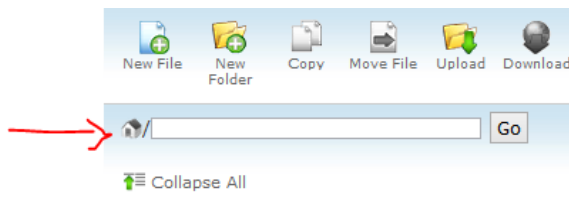
This is the up one level button



After you upload all contents of PESAPI webroot, upload the include and cron folders in the parent directory.

TIP: You can zip the folders, upload them and then extract them online in the cpanel.

The parent directory is not like the webroot, you will have to make sure that the parent directory is showing the top left as below

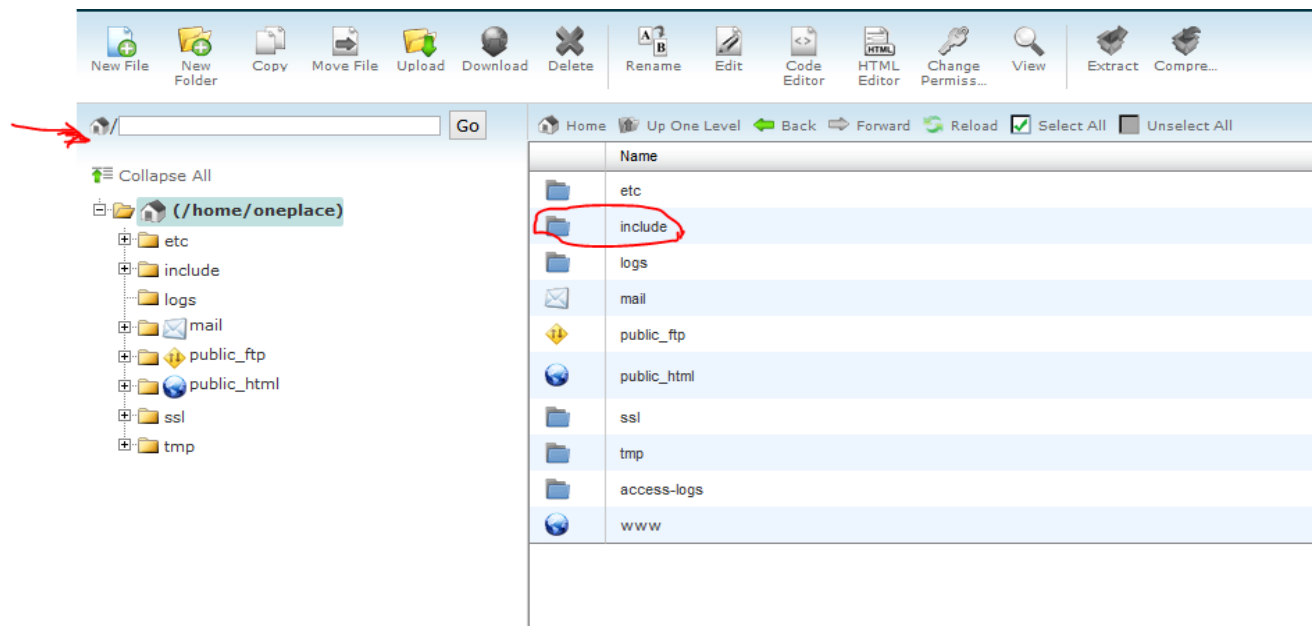
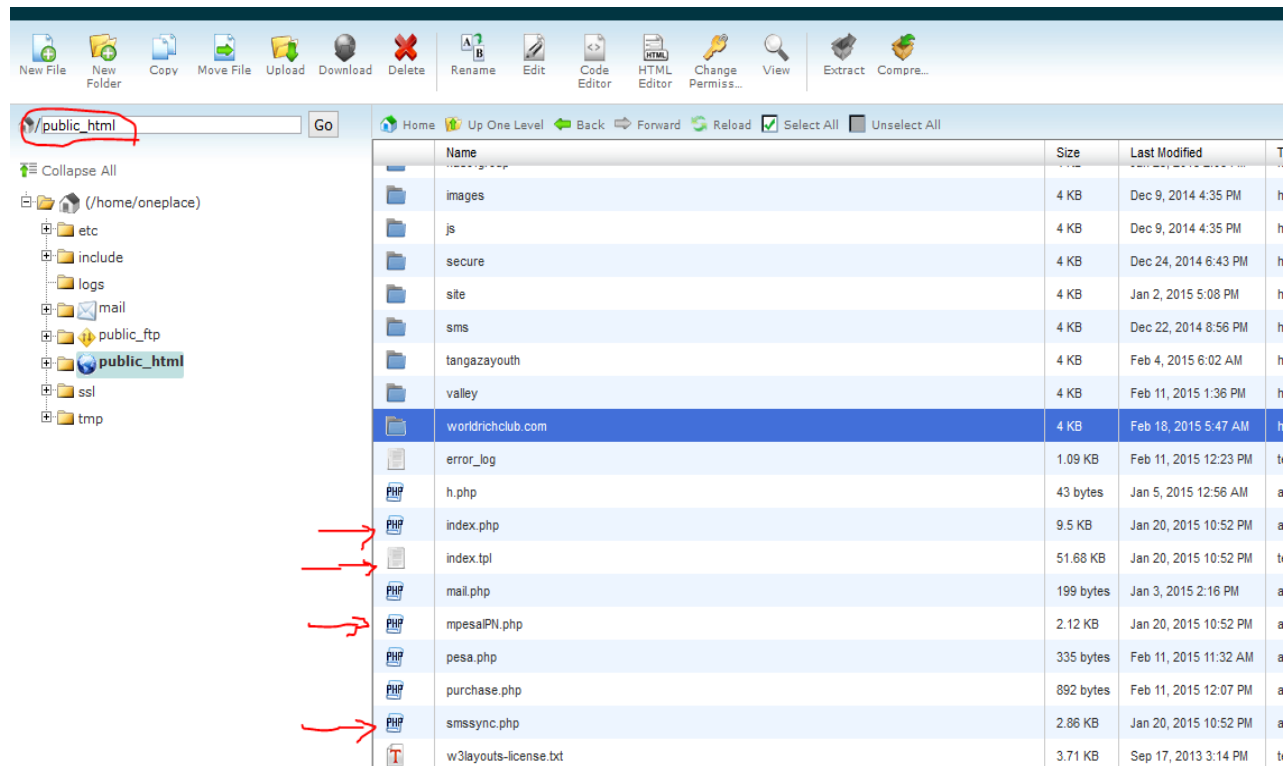


You can note that now we do not have the public_html.

[PLAY]

7. Upload the cron and include folders as explained above.

Are you done? Okay, Now check that your webroot folder looks like mine (except of course other folders you may have in your file manager)



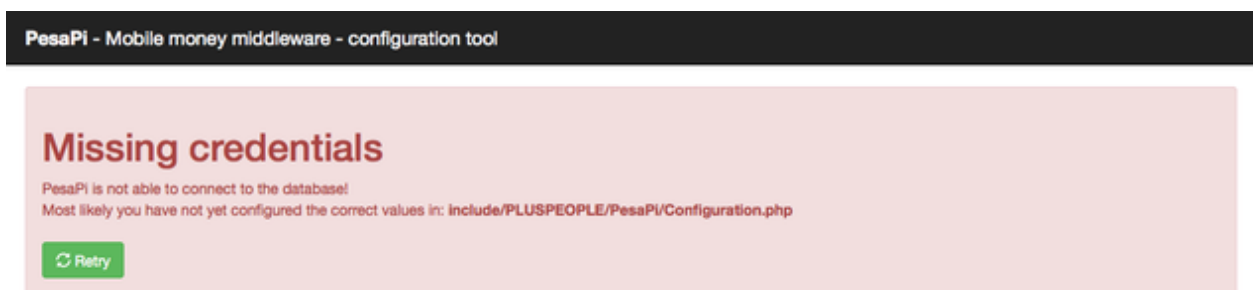
If yes, we can continue. Note the circled and pointed objects and make sure they match exactly with what you have.

In some situations you may not even need a Webserver to run PesaPi, in particular when dealing with commercial account types (i.e. MPESA Paybill) but you will need it initially for the next step.

Access the configuration tool

At this point you should be able to access configuration tool - that is the index.php file in webroot. So if you just type in the url of the site you should now be able to see the configurator.

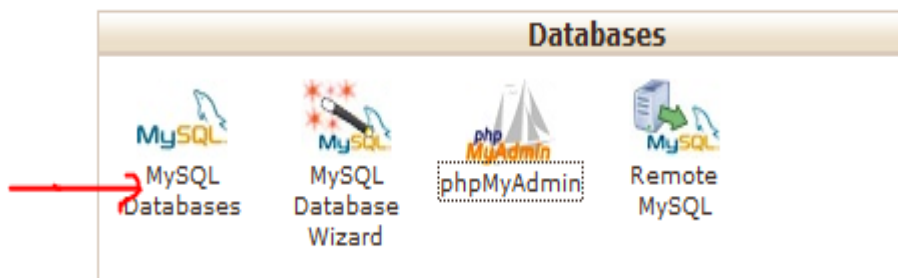
Assuming you domain was **kanyi.com/index.php** type **kanyi.com** in a web browser and the configuration tool will open like shown below.



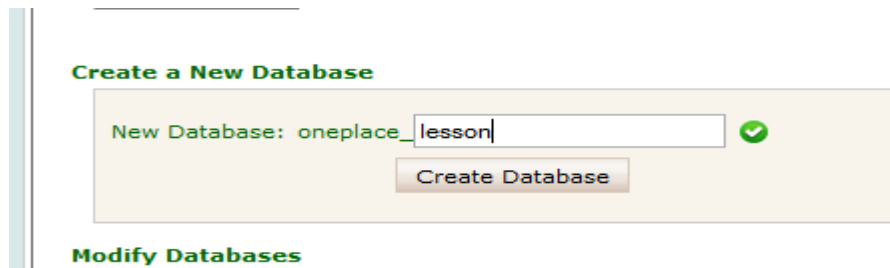
The configurator will complain that it does not have access to the database (as you have not configured it) hence create an empty database and database-user then follow the instructions to modify Configuration.php with the correct database information - once done click reload

How to create an empty database in cpanel

1. Locate Mysql Databases from the cpanel home and click on it.



2. Write Your database name and create



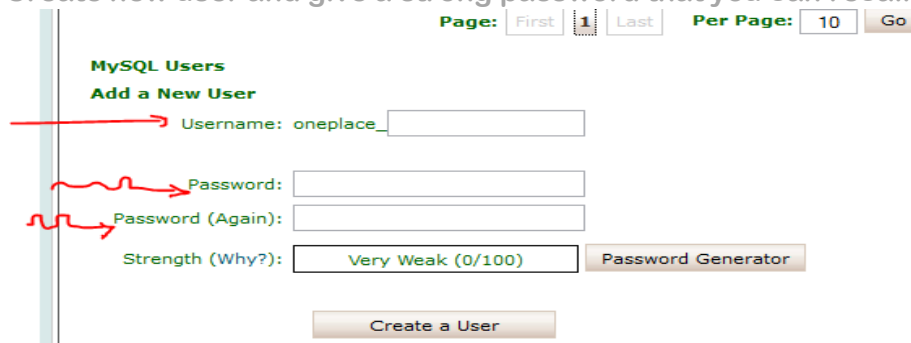
Create a New Database

New Database: oneplace_lesson ✓

Create Database

Modify Databases

3. Click on “Go Back” on the next screen
4. Locate “Mysql_users” by scrolling down abit.
5. Create new user and give a strong password that you can recall



Page: First 1 Last Per Page: 10 Go

MySQL Users

Add a New User

Username: oneplace_lesson

Password:

Password (Again):

Strength (Why?): Very Weak (0/100) Password Generator

Create a User

6. After creating go back and just below Mysql_users locate “Add user to database” and from the dropdowns select the user and the database and click on Add. Mark all privileges and Make Changes.

Hurray!!!! Now you are almost done with this!

Configuring the database

Now click on the home icon, on the top left of the cpanel and go back to home.

1. Locate file manager and click on it
2. Once the file manager has opened, click on “back one level” to take you back to the parent directory.
3. Now locate the folder include and open it.
4. Open PLUSPEOPLE
5. Open PesaPi
6. Locate Configuration.php
7. Right click on Configuration.php and select code editor

Now, do you remember the database you just created and how you called it? Do you remember the user you created and the password you just gave to that user?

I suppose you do. You should do actually. The database was **oneplace_lesson** for me and the user was **oneplace_user**.

Remember the name had a prefix i.e. **oneplace**, followed by an underscore and then the name that you chose. So the full database name, like in my case is **oneplace_lesson** and the username is **oneplace_user**.

8. Now change the database name, username and password of Configuration.php to match yours. See the example below

Before Editing

```
***** Configuration system *****
/ Enable this feature when in production - in order to disable debuginformation
"ProductionMode" => false,

// Enable this feature when you want to run the API against the simulator
// The simulator does not use SSL and is more easy to get up and running.
"SimulationMode" => false,

// Database settings follow - please note that they are repeated twice
"DatabaseHostRead" => "localhost",
"DatabaseUserRead" => "DB-USER",
"DatabasePasswordRead" => "DB-PASSWORD",
"DatabaseDatabaseRead" => "DB-DATABASE",
"DatabaseHostWrite" => "localhost",
"DatabaseUserWrite" => "DB-USER",
"DatabasePasswordWrite" => "DB-PASSWORD",
"DatabaseDatabaseWrite" => "DB-DATABASE",

/*****
Payment systems configuration
*****/
"AdminEmail" => "your@email.com"
```

After Editing

```
*****
/ Enable this feature when in production - in order to disable debuginformation
"ProductionMode" => false,

// Enable this feature when you want to run the API against the simulator
// The simulator does not use SSL and is more easy to get up and running.
"SimulationMode" => false,

// Database settings follow - please note that they are repeated twice
"DatabaseHostRead" => "localhost",
"DatabaseUserRead" => "oneplace_pesa",
"DatabasePasswordRead" => "kanyik",
"DatabaseDatabaseRead" => "oneplace_pesa",
"DatabaseHostWrite" => "localhost",
"DatabaseUserWrite" => "oneplace_pesa",
"DatabasePasswordWrite" => "kanyik",
"DatabaseDatabaseWrite" => "oneplace_pesa",

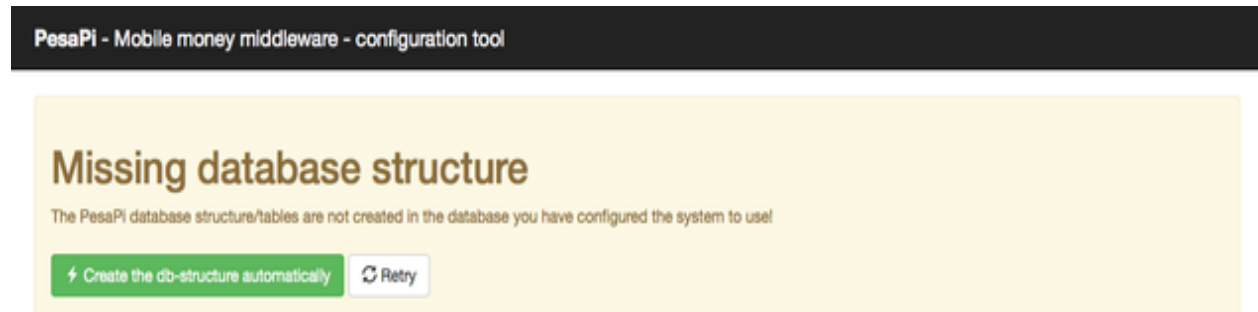
/*****
Payment systems configuration
*****/
"AdminEmail" => "kanyikennedy@gmail.com"
```

Remember to leave line 48 and 52 as “localhost”

Also don’t forget that you input the username and password twice in this file.

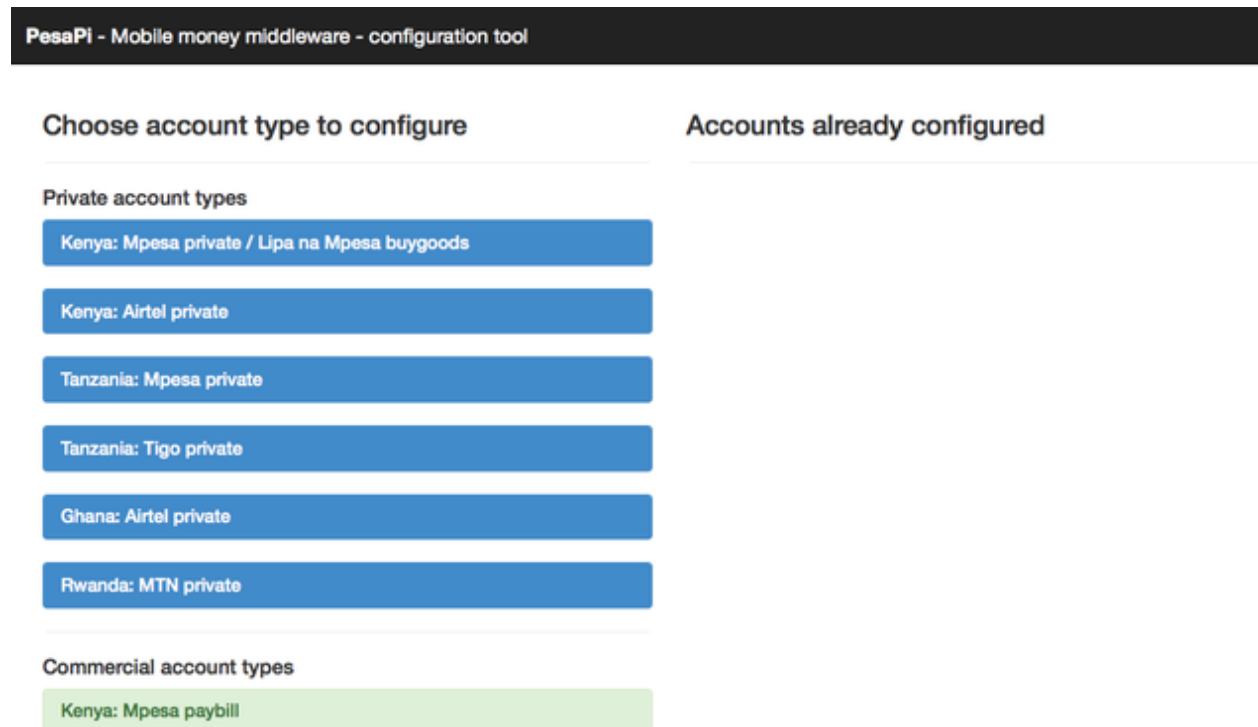
Are you done with that? You are two steps away now!

Go back to the browser and click on “Retry” and PAP, the database configuration is almost done and you get a screen like this.



Click on Create the db-structure automatically.

You should then get this



You have successfully configured the database now

For this lesson, I will show you how to configure your own private number.

Process

- i. Click on the first option “Kenya Mpesa private/Lipa na Mpesa buygoods
This is what you get

Private account types

Kenya: Mpesa private / Lipa na Mpesa buygoods

This option is for private/personal Mpesa accounts or for "Lipa na Mpesa" (buy goods) accounts. In short if the only way you are "notified" about transactions is through SMS's from Mpesa then this is the type to use.
Notice you will need to install SMS-Sync on an android phone to forward the SMS's to PesaPi

Name	
Identifier	
<input checked="" type="checkbox"/>	PUSH notification when money come in
URL	http://www.yourdomain.com/in.php
Secret	
<input type="checkbox"/>	PUSH notification when money go out
<input type="checkbox"/>	PUSH notification on actions where money neither come in or go out

Register Account

I will explain every section

1. Name: This is the name of your Push Notification. You can write your name or any other name you feel like.
2. Identifier: This is the unique identifier for this particular account.
Now check PUSH notification when money come in
3. In the URL, write www.yourdomain.yourextension/smssync.php

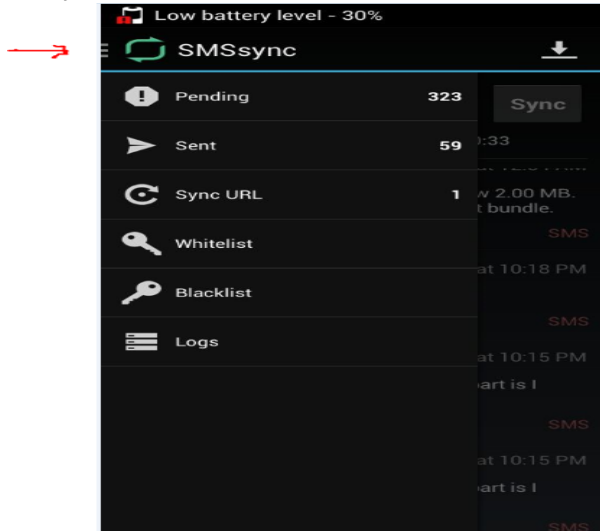
Mine is <http://www.oneplacetechologies.com/smssync.php>
4. Write your secret and remember it.
5. Now leave the rest and click on Register Account.

Do you have coffee? I guess now you can consider taking a cup as you prepare for the best moment here.

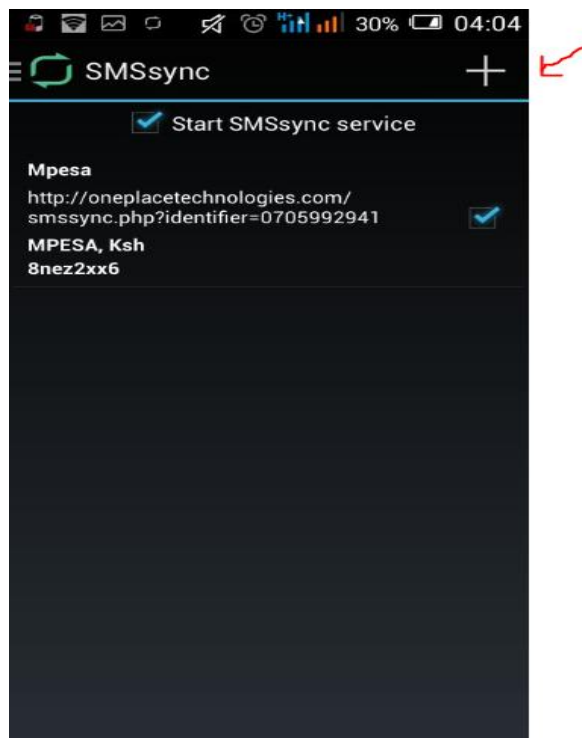
Setting Up SMSSYNC

And as you take coffee, kindly install an app called **SMSSYNC** from Ushahidi. It's the next thing you will require here.

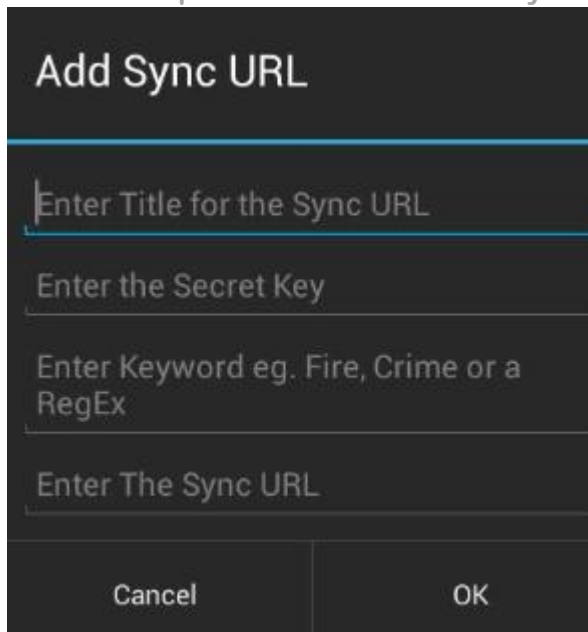
1. When you are done installing SMSSYNC, launch it and go to menu (on the left side)



2. Select sync URL



3. Click on the plus button to add new Sync URL



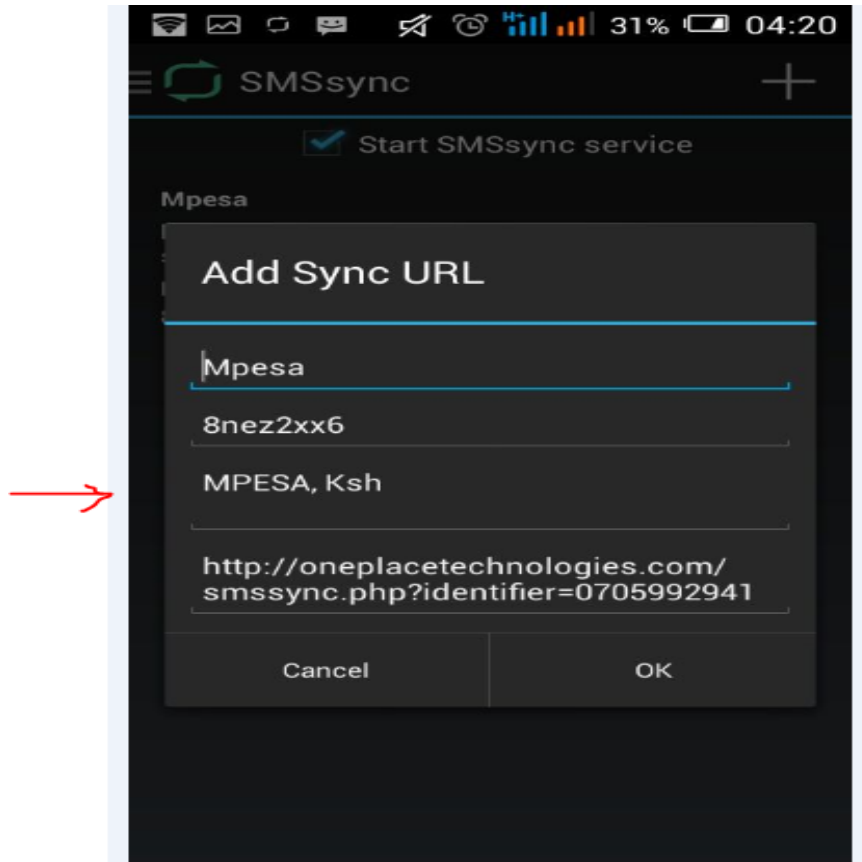
This is how to fill the pop up form

1. In the **EnterTitle for the Sync URL**, input a title of your choice e.g. MPESA or My Account
2. In the **Enter the Secret Key** section, input the key generated by the system for you. Kindly find an example below.

PUSH Outgoing	OFF
PUSH Neutral	OFF
SMS-Sync settings	
Sync URL	http://oneplacetechologies.com/smssync.php?identifier=0705992941
Sync secret	8nez2xx6

In case you don't see your key, open a new tab in your browser and type your domain name so that the info section can be displayed on the right of the configuration section.

3. In the **Keyword** section, write the unique thing concerning the message you want pushed to the online database. As for me, I have set the keywords to MPESA and Ksh. You can have more than one keywords if you separate them with a comma and no space.



4. In the **Sync URL** section, input the Sync URL exactly as given in your browser and avoid spaces.

PUSH Outgoing	OFF
PUSH Neutral	OFF
SMS-Sync settings	
Sync URL	http://oneplacetechnologies.com/smssync.php?identifier=0705992941

5. Click OK

Haiya!!!!

6. Now tick the check box on the right of you Sync URL and the one at the top written Start SMSsync service
7. Click menu and select Pending.
8. From the next screen that comes, click on Sync.
9. You are done with that.....

Q: Now how do I see my messages in the database?

A: I guess you are a beginner. You can see your messages in the table pesapi_payment

Q: Where is the table?

A: In the database 😊

Q: Come on!! Be serious

A: I am 😞😞😞

Q: Where exactly can I locate the table?

A: Okay dude. First login to your cpanel if you had logged out, locate phpmyadmin, select your database, select your table and you are done

This was just a simple illustration of how to install PESAPI successfully. Next one will be a great one on how to really receive payments using PESAPI and actually link the payments to certain accounts or users.



In case you get any problem, feel free to contact me on:

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Software Developer | Web Design | SMS | USSD | Voice

"The quieter you become, the more you are able to hear"

If you love the explanation and it has worked for you, send cheers to my email asap!!

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