

YFi Hotspot Manager Setup Guide for RHEL/CentOS 5.x

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Introduction

Many of you that used Hotcakes Hotspot Manager up to Beta-5 will know by now that *Dirk van der Walt* (dvdwalt as he is known) has been working very hard on the latest incarnation of Hotcakes Hotspot Manager code named “YFi Hotspot Manager”. It has been rewritten to address the limitations of Hotcakes Hotspot Manager and to include the latest technologies like Dojo, JSON, CakePHP framework etc. YFi Hotspot Manager Make’s extensive use of custom built Perl modules to control all the various internal workings of the application and to make it suitable for larger deployments (bigger ISPs and service providers alike). YFi Hotspot Manager has also been built on Ubuntu Linux which was why this guide was developed to help people coming from Red Hat based distros to still install, test and submit feedbacks to the developer, *Dirk van der Walt*. This will further strengthen the application and increase its user base by making it the most stable and most accepted FreeRADIUS Management tool for service providers and hotspot access providers.

Warning

Please note that this guide was tested by me (Mfawa Alfred Onen) on a fresh install of both CentOS 5.3 and Red Hat Enterprise Linux 5.3. This is as a result of my attempt to install and test the new YFi Hotspot Manager and so there is no guaranty that it might work for you, please be warned!!!

Where to get YFi Hotspot Manager Source code

Since YFi Hotspot Manager is still under active development, the developer is always making modifications to the code as new features are added which means the application is still released as “beta” software (presently **beta-2** as of the time of this writing). We have two ways of getting the source code:-

- Download from SourceForge
- Checking out the SVN version (*Not recommended for new users*)

Downloading from SourceForge

This is the best option for new comers of YFi Hotspot Manager even though it is still in “beta” for now. The “beta” version is meant for people who will like to just test the application for leisure and not serious work. Having said much, head over to

[http:// sourceforge.net/projects/hotcakes/](http://sourceforge.net/projects/hotcakes/)

Make sure you download the current version by clicking on the “**Download Now!**” button.



Checking out the SVN version

This option is suitable for other developers and major testers who will like to do massive testing and evaluation on the current development source code. This guide assumes that you are using the “*subversion*” package on your Linux distribution to download the SVN source code. To get the latest development version (usually revisions) of the source, simply issue the following command on a Linux terminal.

```
svn co https://hotcakes.svn.sourceforge.net/svnroot/hotcakes/yfi yfi
```

```
svn co https://hotcakes.svn.sourceforge.net/svnroot/hotcakes/yfi_cake yfi_cake
```

Note: For those trying to download the source code using Windows operating system, you can Google and download “RapidSVN” which is an open source windows based SVN client.

Also don’t forget to remove the extra “.svn” files from your source by running:

```
find -name ".svn" -exec rm -fdr {} \;
```

Installing/Upgrading dependencies for YFi Hotspot Manager

YFi Hotspot Manager as mentioned earlier makes use of custom built Perl modules for real time operation. This means we have to satisfy some Perl dependencies and ensure the system meets the requirement for a successful YFi Hotspot Manager Installation. Also we have to update some packages since RHEL/CentOS don’t usually have up to date packages i.e. PHP, MySQL etc.

To meet the required Perl Modules, ensure that the following packages are installed:-

- `perl-XML-Parser`
- `perl-XML-SAX`
- `perl-XML-Simple`
- `perl-XML-Namespacesupport`

- perl-XML-LibXML-*
- perl-suidperl
- perl-libxml
- perl-XML-Dumper
- perl-TimeDate
- perl-Carp-Clan
- perl-Archive-Zip
- perl-XML-Twig

Else just use yum to install them like so;

```
yum install perl-XML-Parser perl-XML-SAX perl-XML-Simple
perl-XML-Namespacesupport perl-XML-LibXML-* perl-suidperl perl-libxml
perl-XML-Dumper perl-TimeDate perl-Carp-Clan perl-Archive-Zip perl-XML-Twig httpd
mod_ssl ptpd ImageMagick
```

Note: I had to download the “**Mail::Sendmail**” Perl module from <http://search.cpan.org> and compile before satisfying the Mail::Sendmail requirement needed by YFi Hotcakes Manager. You will also have to setup the “**REMI EL5**” repository in order to upgrade your current version of PHP and MySQL. Just Google for the keyword “**REMI EL5 Repository**” and find the English version of the how-to. When installed, all you have to do is:

```
yum upgrade php-* mysql-*
```

Installing the individual components of YFi Hotspot Manager

The architecture of YFi Hotspot Manager now separates the PHP side of things with the DOJO side of things. Lay Man!!! Well YFi Hotspot Manager uses the CakePHP framework to generate JSON data and uses the DOJO JavaScript framework to create very cool user interface experience (like the animated look and feel of the YFi Hotspot Manager UI). Too much theory let us continue setting up our system/box/server. The components making up the YFi Hotspot Manager include:-

- CakePHP (+ yfi_cake)*
- Viewer Component (yfi)*
- RADIUS (FreeRADIUS 2.x)*
- PPTP (pptpd)*
- Cron (crond)*

Note: We will be following the order shown above and this setup guide relies heavily on the documentation provided on the YFi Hotspot Manager wiki page.

Setting up CakePHP and yfi_cake

Since we already have yfi_cake downloaded earlier (either from the SourceForge or SVN), we will need to download CakePHP from <http://cakephp.org> (**cake_1.2.5.tar.gz** as of the time of this writing). Copy and extract it inside the directory that Apache is serving its content from (DocumentRoot “/var/www/html” in RHEL/CentOS by default)

```
cake_1.2.5.tar.gz /var/www/html
cd /var/www/html
tar -xzvf cake_1.2.5.tar.gz
mv cake_1.2.5 c2
```

Enable the rewrite Apache module, also enable the compression module and the module that modifies the HTTP headers, they are used to vastly improve speed and performance of the web application. After enabling the modules, reload Apache's configuration.

Enabling Modules:

```
nano -w /etc/httpd/conf/httpd.conf
```

Uncomment the following

```
LoadModule rewrite_module modules/mod_rewrite.so
LoadModule deflate_module modules/mod_deflate.so
LoadModule headers_module modules/mod_headers.so
```

Reloading Apache 2:

```
service httpd reload
```

Setting Output Buffering:

```
nano -w /etc/php.ini
```

Uncomment this line and **change** from

```
output_buffering = Off
```

To

```
output_buffering = 4096
```

Enabling Short Tags in PHP:

```
short_open_tag = On
```

Add the following HTML codes to improve the response performance of the Dojo viewer component. You can copy and paste it to avoid any typo.

```
nano -w /etc/httpd/conf/httpd.conf
```

```

<Directory /var/www/html/c2>
    AllowOverride All
</Directory>

#-----COMPRESS CONTENT-----
# place filter 'DEFLATE' on all outgoing content
SetOutputFilter DEFLATE

# exclude uncompressible content via file type
SetEnvIfNoCase Request_URI \.(?:exe|t?gz|jpg|png|pdf|zip|bz2|sit|rar)$ no-gzip
#dont-vary

# Keep a log of compression ratio on each request
DeflateFilterNote Input instream
DeflateFilterNote Output outstream
DeflateFilterNote Ratio ratio
LogFormat "%r" %{outstream}n/{instream}n (%{ratio}n%)" deflate
CustomLog /var/log/httpd/deflate.log deflate

# Properly handle old browsers that do not support compression
BrowserMatch ^Mozilla/4 gzip-only-text/html
BrowserMatch ^Mozilla/4\.0[678] no-gzip
BrowserMatch \bMSIE !no-gzip !gzip-only-text/html
#-----

#-----ADD EXPIRY DATE-----
<FilesMatch "\.(ico|pdf|flv|jpg|jpeg|png|gif|js|css|swf)$">
    Header set Expires "Thu, 15 Apr 2020 20:00:00 GMT"
</FilesMatch>
#-----

#-----Remove ETags -----
FileETag none
#-----

```

Installing YFi CakePHP application:

Copy the yfi_cake directory into the CakePHP framework directory you downloaded earlier.

```
cd
cp -rf yfi_cake /var/www/html/c2
chown -R apache:apache /var/www/html/c2/yfi_cake/tmp
chown -R apache:apache /var/www/html/c2/yfi_cake/webroot/img/graphics
```

Configuring the Database:

If you have not protected your mysql database, you can go ahead and do that now. For the lazy ones here is a quickie:-

```
chkconfig mysqld on
service mysqld start
mysqldadmin -u root password '<MySQL ROOT PASSWORD>'
```

Now we are ready to setup the YFi Hotspot Manager Database connection. Create a database in MySQL and create a user to manager the database.

```
mysql -u root -p<MySQL ROOT PASSWORD>
mysql > CREATE DATABASE yfi;
mysql > GRANT ALL PRIVILEGES ON yfi.* to 'yfi'@'127.0.0.1' IDENTIFIED BY 'yfi';
mysql > GRANT ALL PRIVILEGES ON yfi.* to 'yfi'@'localhost' IDENTIFIED BY 'yfi';
mysql > quit
mysql -u root -p<MySQL ROOT PASSWORD> yfi < var/www/html/c2/yfi_cake/setup/yfi.sql
```

Some settings may need to be tweaked especially if you deviated from the standard wiki based install. They are all in one configuration file located at `/var/www/html/c2/yfi_cake/config/` called “**yfi.php**”. We will be doing some major editing to this configuration file later but for now, we should setup our SMTP email settings for YFi Hotspot Manager to send customer invoices later.

```
nano -w /var/www/html/c2/yfi_cake/config/yfi.php
```

Edit the swift mailer settings to suite your scenario.

```
//The swift mailer email component's settings

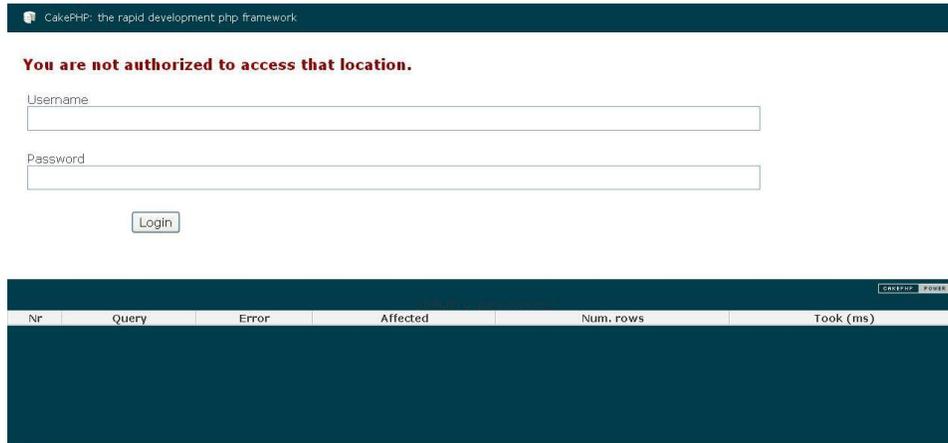
$config['email']['from']                = 'admin@yfi.co.za';
$config['email']['smtpHost']            = 'smtp.mail.co.za';
$config['email']['smtpPort']            = '25';
//Uncomment this when needed
//$config['email']['smtpUsername']        = 'username_here';
//$config['email']['smtpPassword']        = 'password_here';
//$config['email']['smtpEncryption']      = 'tls'; //or 'ssl';

?>
```

Testing the yfi_cake application:

Verify that everything works as intended by doing the following test. Go to the following URL and be sure that a login-page is displayed.

http://127.0.0.1/c2/yfi_cake/users



Note: You should replace “127.0.0.1” with the IP address of the server you installed YFi Hotspot Manager on.

Setting up the viewer component

The Viewer component of YFi Hotspot Manager creates a visually astonishing user interface based on Dojo. To set it up, just copy the “yfi” directory into your Apache’s document root (`/var/www/html`).

```
cp -rf /root/yfi /var/www/html
chown -R apache.apache /var/www/html/yfi
```

To test the viewer component, go to the following URL <http://127.0.0.1/yfi> (you may need to replace 127.0.0.1 with the IP address of the server you installed the YFi Hotspot Manager on. You should get a splash page which will change into a login page as shown below.



There are three users by default in the database; you can login either as the administrator, an Access Provider or as a permanent user. The following table displays the default username and password for each.

| Role | Username | Password |
|-----------------|------------|------------|
| Administrator | root | admin |
| Access Provider | ap | ap |
| Permanent User | dvdwalt@ri | dvdwalt@ri |

Setting up FreeRADIUS

FreeRADIUS is the world's most popular RADIUS server! That is one of the best statement I have done since the beginning of this guide. Since YFi Hotspot Manager is just another FreeRADIUS management tool. Anyways that is also a requirement for YFi Hotspot Manager and we will have to set it up. Unfortunately RHEL/CentOS don't ship with FreeRADIUS 2.x which is quite new and has been rewritten to have greater stability and has change in its implementations. i.e. FreeRADIUS 1.x is completely different from FreeRADIUS 2.x and so any implementation based on FreeRADIUS 1.x will not work properly in 2.x.

Now head over to <http://freeradius.org/download.html> and download the latest version of FreeRADIUS. We will take some timeout to create our own RPM from the source code since most of us prefer RPM because of the ease of management.

Copy the downloaded source code to `/usr/src/redhat/SOURCES`. Afterwards extract it and copy the spec file to `/usr/src/redhat/SPEC`

```
cp /root/freeradius-server-2.1.6.tar.bz2 /usr/src/redhat/SOURCES
cd /usr/src/redhat/SOURCES
tar -xjvf freeradius-server-2.1.6.tar.bz2
cd freeradius-server-2.1.6/redhat
cp freeradius.spec /usr/src/redhat/SPEC
```

Now its time to confirm the presence of “libtool-ltdl-devel” and actually make our own RPM package of FreeRADIUS.

```
yum install libtool-ltdl-devel
cd /usr/src/redhat/SPEC
rpm -bb freeradius.spec
```

Finally it is time to install the FreeRADIUS server, simply use rpm to install the package

```
rpm -ivh /usr/src/redhat/RPMS/i386/freeradius-server-2.1.6-i386.rpm (for a 32-bit OS)
ldconfig
```

We have to test if FreeRADIUS installed properly by testing if it can start without problems.

```
radiusd -XXXX
ctrl + c
```

If there were no errors, it means FreeRADIUS is ready to go to the next step...copying the FreeRADIUS configuration already created by *Dirk van der Walt* for YFi Hotcakes Manager.

```
mv /etc/raddb /etc/raddb.orig
cp /var/www/html/c2/yfi_cake/setup/radius/raddb.tar.gz /etc/
cd /etc/
tar -xzvf raddb.tar.gz
chown root.apache /etc/raddb/proxy.conf
chmod 664 /etc/raddb/proxy.conf
chmod 644 /etc/raddb/dictionary
sudo ldconfig
```

Note: You will have to modify the *radiusd.conf* file included with YFi Hotspot Manager to suite RHEL/CentOS 5.x. Make the following changes:-

```
nano -w /etc/raddb/radiusd.conf
```

Change

```
prefix = /usr/local
exec_prefix = ${prefix}
sysconfdir = ${prefix}/etc
localstatedir = ${prefix}/var
sbindir = ${exec_prefix}/sbin
logdir = ${localstatedir}/log/radius
raddbdir = ${sysconfdir}/raddb
radacctdir = ${logdir}/radacct
```

To

```
prefix = /usr
exec_prefix = /usr
sysconfdir = /etc
localstatedir = /var
sbindir = /usr/sbin
logdir = ${localstatedir}/log/radius
raddbdir = ${sysconfdir}/raddb
radacctdir = ${logdir}/radacct
```

Activating and changing the chillispot dictionary:

FreeRADIUS includes various dictionaries from different vendors. These dictionaries define attributes for the vendor's NAS devices. Dictionaries can be included or excluded by editing the `/usr/share/freeradius/dictionary` file. Add the following piece to include the “*dictionary.chillispot*” file.

```
$INCLUDE dictionary.xedia
$INCLUDE dictionary.xylan

#---YFI HOTSPOT-----
$INCLUDE dictionary.chillispot
#--END YFI HOTSPOT---

#
#       And finally the server internal attributes.
#
```

YFi Hotspot Manager uses some custom Voucher attributes defined. Add this custom attributes to the `/usr/share/freeradius/dictionary.chillispot` file. (YFi-Voucher, YFi-MAC-Reset, YFi-Data and YFi-Time).

```
ATTRIBUTE          ChilliSpot-Version          8          string
ATTRIBUTE          ChilliSpot-OriginalURL      9          string

#YFi Specific Attributes
ATTRIBUTE          YFi-Voucher                40         string
ATTRIBUTE          YFi-MAC-Reset              41         string
ATTRIBUTE          YFi-Data                    42         string
ATTRIBUTE          YFi-Time                    43         string

#YFi Various Counters
ATTRIBUTE          Max-Daily-Session           50         integer
ATTRIBUTE          Max-Monthly-Session         51         integer
ATTRIBUTE          Max-Weekly-Session          52         integer
ATTRIBUTE          Max-All-Session             53         integer

ATTRIBUTE          ChilliSpot-Max-Daily-Octets 60         integer
ATTRIBUTE          ChilliSpot-Max-Monthly-Octets 61         integer
ATTRIBUTE          ChilliSpot-Max-Weekly-Octets 62         integer
ATTRIBUTE          ChilliSpot-Max-All-Octets   63         integer

# Configuration management parameters (ChilliSpot Only)
ATTRIBUTE          ChilliSpot-UAM-Allowed      100        string
```

Tweaking the FreeRADIUS configuration files to suite RHEL/CentOS:

We will now have to spend some time editing the default configuration files in `/etc/raddb` to work with our FreeRADIUS RPM package.

```
nano -w /var/www/html/c2/yfi_cake/config/yfi.php
```

Change

```
$config['freeradius']['path_to_dictionary_files'] = '/usr/local/share/freeradius/';
$config['freeradius']['main_dictionary_file']     = '/usr/local/etc/raddb/dictionary';
$config['freeradius']['realms_file']              = '/usr/local/etc/raddb/proxy.conf';
$config['freeradius']['radtest_script']           = '/var/www/c2/yfi_cake/webroot/files/radscenario.pl';
$config['realm']['icon_directory']                = '/var/www/c2/yfi_cake/webroot/img/graphics/';
```

To

```
$config['freeradius']['path_to_dictionary_files'] = '/usr/share/freeradius/';  
$config['freeradius']['main_dictionary_file'] = '/etc/raddb/dictionary';  
$config['freeradius']['realms_file'] = '/etc/raddb/proxy.conf';  
$config['freeradius']['radtest_script'] = '/var/www/html/c2/yfi_cake/webroot/files/radscenario.pl';  
$config['realm']['icon_directory'] = '/var/www/html/c2/yfi_cake/webroot/img/graphics/';
```

```
nano -w /etc/raddb/rlm_perl_modules/conf/settings.conf
```

Change

```
<radius_conf>
```

```
<sql_counter_file>/usr/local/etc/raddb/rlm_perl_modules/sqlcounter.conf</sql_counter_file>  
</radius_conf>
```

To

```
<radius_conf>
```

```
<sql_counter_file>/etc/raddb/rlm_perl_modules/sqlcounter.conf</sql_counter_file>  
</radius_conf>
```

```
nano -w /etc/raddb/rlm_perl_modules/Attributes.pm
```

Change

```
#####  
##### CONFIGURATION DATA #####  
#####  
my $config_file = '/usr/local/etc/raddb/rlm_perl_modules/conf/settings.conf';  
#####  
##### END of Configuration Data #####  
#####
```

To

```
#####  
##### CONFIGURATION DATA #####  
#####  
my $config_file = '/etc/raddb/rlm_perl_modules/conf/settings.conf';  
#####  
##### END of Configuration Data #####  
#####
```

Also you YFi Hotspot manager use a script called “*radscenario.pl*” to disconnect users from the YFi user interface. We will have to edit the path to “radclient” so that the YFi application can successfully point to FreeRADIUS radclient on our RHEL/CentOS server.

```
nano -w /var/www/html/c2/yfi_cake/webroot/files/radscenario.pl
```

Change

```
my $radclient = "/usr/local/bin/radclient";
```

To

```
my $radclient = "/usr/bin/radclient";
```

You should now get the whole idea of editing the files to suite the RHEL/CentOS format. Now do the same to the following files:-

```
/etc/raddb/rlm_perl_modules/rlm_perl.pm  
/etc/raddb/rlm_perl_modules/sqlcounter.conf  
/etc/raddb/rlm_perl_modules/SQLCounter.pm  
/etc/raddb/rlm_perl_modules/Telkom.pm  
/etc/raddb/rlm_perl_modules/User.pm  
/etc/raddb/rlm_perl_modules/Voucher.pm
```

```
nano -w /etc/raddb/dictionary
```

Change

```
# The filename given here should be an absolute path.  
#  
$INCLUDE /usr/local/share/freeradius/dictionary
```

To

```
# The filename given here should be an absolute path.  
#  
$INCLUDE /usr/share/freeradius/dictionary
```

This will point to the right dictionary file in RHEL/CentOS.

Ok then, now comes the moment of truth; we are going to test FreeRADIUS for any errors and start the server.

```
radiusd -XXXA  
ctrl + c  
service radiusd start  
chkconfig radiusd on
```

This should make FreeRADIUS start at boot time after any reboot.

Setting up PPTPD for YFi Hotspot Manager

For those who don't know what PPTP is, you are advised to Google for some answers and get familiar with the technology. It has been implemented in YFi Hotspot Manager to solve the mystery of NAS devices behind NAT. Now if you have not installed pptpd from previous steps, then you need to do that before you can proceed. We have to edit “`/etc/pptpd.conf`” to create a virtual interface with the “localip” option. Below is an example from the wiki

```
nano -w /etc/pptpd.conf
```

```
# (Recommended)
#remoteip 10.20.30.2-10.20.30.254
#localip 192.168.0.1
#remoteip 192.168.0.234-238,192.168.0.245
# or
#localip 192.168.0.234-238,192.168.0.245
#remoteip 192.168.1.234-238,192.168.1.245
localip 10.20.30.1 ← (we create a virtual interface with 10.20.30.1)
```

Point to point virtual connections can be set-up from the NAS devices, using this IP when you specify the RADIUS server's IP. We have to make the file where the client to the pptpd program gets defined writable by the user running Apache.

```
chown root.apache /etc/ppp/chap-secrets
chmod 664 /etc/ppp/chap-secrets
```

Enable and Restart the pptpd program to apply the changes

```
chkconfig pptpd on
service pptpd start
```

Housekeeping for YFi Hotspot Manager with CRON

YFi Hotspot Manager requires a few scripts to run periodically in order to maintain a healthy and working system. Most of the scripts are CakePHP shell scripts. This makes it easy to interact with the MySQL database used by FreeRADIUS.

To enable/activate the CRON script, just copy the script from the “yfi_cake” directory

```
cp /var/www/html/c2/yfi_cake/setup/cron/yfi /etc/cron.d/
```

We will also have to modify the CRON script to suite RHEL/CentOS for the apache user

Change the section

```
* /5 * * * * www-data /var/www/c2/cake/console/cake -app
* /5 * * * * www-data /var/www/c2/cake/console/cake -app
0 */3 * * * * www-data /var/www/c2/cake/console/cake -app
* /5 * * * * root /var/www/c2/cake/console/cake -app
```

To

```
* /5 * * * * apache /var/www/html/c2/cake/console/cake -app
* /5 * * * * apache /var/www/html/c2/cake/console/cake -app
0 */3 * * * * apache /var/www/html/c2/cake/console/cake -app
* /5 * * * * root /var/www/html/c2/cake/console/cake -app
```

Testing the Waters!

If you have reached up to this point without any problem, you can clap for your self!!!

Now to take YFi Hotspot Manager for a spin, just type

<http://127.0.0.1/yfi>

Login with the Username=**root** and Password=**admin**

Vouchers

Exit

Username: root
Group: Administrators

Home

Quick Help

The administrative interface to **YFi Hotspot Manager**
Selecting an action on the left will result on feedback in this pane.
You can always close the feedback tabs to keep things simple.

Voucher Management
Batch Management

Permanent Users
Accounting
Realms & Providers
Profiles
Activity/Stats

Vouchers selected

Done

Troubleshooting

Since YFi Hotspot Manager is still under active development, the troubleshooting section will not contain much for now. Usually when some things don't work, always learn to check log files (a good place to start will be [/var/log/messages](#), [/var/log/radiusd/radiusd.log](#) or [/var/log/httpd/error.log](#)).

Problem #1

****Nas Tab not filling the column in YFi Hotspot manager workspace**

I notice this problem when I was testing the YFi Hotspot manager application. When I clicked on [Realms & Providers -> Nas Devices](#), I chose a Nas (127.0.0.1) and clicked Edit (the red capsule-like pen) the *compulsory info*, *optional info* and *availability* tab did not show anything.

Solution

Make sure you start the pptpd daemon (**service pptpd start**) and clear your browser cache and then retry.

Also, I found out that the symlinks created from the YFi Hotspot Manager Package had to be recreated. This is what I did:-

```
cd /var/www/vhost/c2/yfi_cake/vendors
rm -rf fpdf
rm -rf swift
ln -s fpdf16 fpdf
ln -s Swift-4.0.3 swift
```

Problem #2

I notice some weird error with php when checking my logs. I issued `tail -f /var/log/httpd/error.log` and found the following:-

```
[Web Aug 05 20:00:53 2009] [error] [client 192.168.1.40] PHP Warning: Call-time pass-by-reference has been deprecated in /var/www/vhost/c2/yfi_cake/controllers/components/swift_mailer.php on line 31, referer: http://192.168.1.1/yfi/
```

```
[Wed Aug 05 20:00:53 2009] [error] [client 192.168.1.40] PHP Warning: Call-time pass-by-reference has been deprecated in /var/www/vhost/c2/yfi_cake/controllers/components/swift_mailer.php on line 48, referer: http://192.168.1.1/yfi/
```

Solution (I need some help here Dirk)

The temporary solution was to trace the line given in the error log and modified it as follows:-

I edited Line 31

```
nano -w +31 /var/www/vhost/c2/yfi_cake/controllers/components/swift_mailer.php
```

I Changed

```
$message->setTo(&$to);
```

To

```
$message->setTo($to);
```

Also I edited Line 48

```
nano -w +48 /var/www/vhost/c2/yfi_cake/controllers/components/swift_mailer.php
```

I now changed

```
$message->setTo(&$to);
```

To

```
$message->setTo($to);
```

If there is any part of this guide that you feel will need more attention, please kindly drop me an email at muffycompoqm@gmail.com. Also the YFi Hotspot Manager forum at sourceforge.net has tons of information and a wiki section, so feel free to check it out.