Installation of Apache OpenMeetings 3.2.1 on Gentoo

This tutorial is based on a fresh installations on

stage3-amd64-20170202.tar.bz2

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.2.1 stable, that is to say will suppress his compilation. It is done step by step.

26-4-2017

Please, be connected to Internet during all the process tu run any server.

Starting...

1)

------ Update Operative System ------

Open a terminal as root:

su

...will ask for root password, and we update the operative system:

emerge -uaD world

2)

------ Installation of Oracle Java 1.8 ------

Java **1.8** it is necessary for OpenMeetings **3.2.1**. We´ll install Oracle Java.

cd /usr/portage/distfiles

...download the java file:

(All in one line only. 1ª and 2ª without space between them. A space to the 3ª. Together 3ª and 4ª)

wget --no-cookies --no-check-certificate --header "Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" http://download.oracle.com/otn-pub/java/jdk/8u131-b11/d54c1d3a095b4ff2b6607d096fa80163/jdk-8u131-linux-x64.tar.gz

...we install it:

emerge --verbose dev-java/oracle-jdk-bin:1.8

...maybe you have installed various versions of Java. We see it:

java-config –list-available-vms

...select the just installed Oracle Java:

java-config --set-system-vm oracle-jdk-bin-1.8

...and to see the active version:

java -version

3)

------ Installation of LibreOffice ------

OpenMeetings will need LibreOffice to convert to pdf the uploaded office files.

We install it (will spend about 35 minutes):

cd /opt

emerge libreoffice-bin

4)

------ Installation of necessary packages and libraries ------

Will install packages and libraries that we´ll need later:

emerge zlib libtool bzip2 autoconf automake pkgconfig tomcat-native nmap freetype nano

5)

------ Installation ImageMagick, Sox and Swftools ------

ImageMagick, will work with images files jpg, png, gif, etc. We install it:

emerge imagemagick

Sox, work the sound. Install it:

emerge sox

Swftools. LibreOffice convert to pdf the uploaded office files, and Swftools convert these pdf to swf (flash file), that later will show in the whiteboard. Also convert jpg2swf, png2swf, gif2swf, etc. After try compile different swftools source versions, get fail in all them.
Trying to install from Portage, also gave an error. To avoid it, please run these commands:

nano /etc/portage/package.accept_keywords

...and type, or copy in, this line:

media-gfx/swftools

...press in keyboard **Ctrl**+**x**, **Y** and **Enter**, to save and exit nano editor.

Now we can install swftools:

emerge swftools

We have swftools installed, but without pdf2swf file, that we need to convert pdf to swf files.
To solve it, i´ve ideaded a way, that without be very orthodox, yes it is efective. It is tested.
Please, run these commands:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/swf.zip

...this zip unloaded, contain two files: pdf2swf and libjpeg.so.8.1.2. Both copyed from my Arch Linux installation. Unzipe:

unzip swf.zip

...copy the two files mentioned, to his respective path:

cd swf

cp pdf2swf /usr/bin

cp libjpeg.so.8.1.2 /lib

...and we do a smylelink to libjpeg.so.8.1.2. It is the path that will look for pdf2swf to work:

ln -s /lib/libjpeg.so.8.1.2 /lib/libjpeg.so.8

cd /opt

6)

------ Installation of Adobe Flash Player ------

OpenMeetings even need Adobe Flash Player for rooms. We install it:

emerge adobe-flash

Prepare this plugin for Firefox. Please, change you-user by your real user name:

mkdir /home/you-user/.mozilla/plugins

ln -s /usr/lib64/nsbrowser/plugins/libflashplayer.so /home/you-user/.mozilla/plugins

7)

------ Compilation of FFmpeg ------

FFmpeg work with video. Will install a libraries and paquets:

emerge glibc faac faad2 gsm imlib2 cmake curl git mercurial yasm

The ffmpeg compilation it is based on this url, updated file versions 26-4-2017:

https://trac.ffmpeg.org/wiki/CompilationGuide/Centos

I made a script that will download, compile and install ffmpeg. It is tested and works ok.
The result of any recordings we do in OpenMeetings, will be in mp4 format.

When the compilation be finished, will appear a text announces it:

FFMPEG Compilation is Finished!

So, download the script:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-archlinux.sh

...concede execution permission to it:

chmod +x ffmpeg-archlinux.sh

...and run it (be connected to Internet):

./ffmpeg-archlinux.sh

The compilation will spend about 25 minutes.

When finished, please go to **step 8).**

But if you prefer, can copy and paste, though i **don´t advise.**
Leave here the commands script:

nano /opt/ffmpeg-arch.sh

...copy the green text **from here**:

```
# Script ffmpeg compile for Arch Linux and Gentoo
# Alvaro Bustos, thanks to Hunter.
# Updated 26-4-2017

# Create a temporary directory for sources.
SOURCES=$(mkdir ~/ffmpeg_sources)
cd ~/ffmpeg_sources

# Download the necessary sources.
# git clone --depth 1 git://git.videolan.org/x264
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
hg clone https://bitbucket.org/multicoreware/x265
git clone --depth 1 git://git.code.sf.net/p/opencore-amr/fdk-aac
curl -L -O http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
curl -O http://downloads.xiph.org/releases/opus/opus-1.1.3.tar.gz
curl -O http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
curl -O http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.5.tar.gz
wget http://downloads.xiph.org/releases/theora/libtheora-1.1.1.tar.gz
git clone --depth 1 https://chromium.googlesource.com/webm/libvpx.git
git clone --depth 1 git://source.ffmpeg.org/ffmpeg
# wget http://ffmpeg.org/releases/ffmpeg-3.1.1.tar.gz
```

```
# Unpack files
for file in `ls ~/ffmpeg_sources/*.tar.*`; do
tar -xvf $file
done

cd x264-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --enable-static && make &&
make install && make distclean; cd ..

cd x265/build/linux
cmake -G "Unix Makefiles" -DCMAKE_INSTALL_PREFIX="$HOME/ffmpeg_build"
-DENABLE_SHARED:bool=off ../../source && make && make install; cd ~/ffmpeg_sources

cd fdk-aac
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
make install && make distclean; cd ..

cd lame-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --disable-shared --enable-
nasm && make && make install && make distclean; cd ..

cd opus-*/
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
make install && make distclean; cd ..

cd libogg-*/
./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make && make install &&
make distclean; cd ..

cd libvorbis-*/
LDFLAGS="-L$HOME/ffmeg_build/lib" CPPFLAGS="-I$HOME/ffmpeg_build/include"
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-shared
&& make && make install && make distclean; cd ..

cd libtheora-*/
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-
examples --disable-shared --disable-sdltest --disable-vorbistest && make && make install; cd ..

cd libvpx
./configure --prefix="$HOME/ffmpeg_build" --disable-examples && make && make install &&
make clean; cd ..

cd ffmpeg
PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig" ./configure
--prefix="$HOME/ffmpeg_build" --extra-cflags="-I$HOME/ffmpeg_build/include" --extra-
ldflags="-L$HOME/ffmpeg_build/lib" --bindir="$HOME/bin" --pkg-config-flags="--static"
--enable-gpl --enable-nonfree --enable-libfdk_aac --enable-libfreetype --enable-libmp3lame
--enable-libopus --enable-libvorbis --enable-libvpx --enable-libx264 --enable-libx265 --enable-
libtheora && make && make install && make distclean && hash -r; cd ..
```

```
cd ~/bin
cp ffmpeg ffprobe ffserver lame x264 /usr/local/bin

cd ~/ffmpeg_build/bin

cp x265 /usr/local/bin

echo "FFmpeg Compilation is Finished!"
```

...**to here.**

Concede permission of execution:

```
chmod +x /opt/ffpmeg-arch.sh

cd /opt
```

Now be connected to Internet, run the script and wait about 30 minutes while the compilation is finished:

```
./ffmpeg-arch.sh
```

All the compiled files will be installed in: /usr/local/bin

8)

------ Installation of MariaDB data server ------

MariaDB is the data server. We install it:

```
emerge mariadb
```

ATTENTION! When MariaDB installation is finished, a lines before the last, in the shell, is a command tha we need to copy and run. Actualy is this, please check it, and if is the same run it:

```
emerge --config =dev-db/mariadb-10.0.29
```

...will ask for a new root mariadb password. Choose one you like it and type it twice.

Run MariaDB:

```
/etc/init.d/mysql start
```

...and access to MariaDB:

```
mysql -u root -p
```

...will ask for the password you does just now.

We make a database called open321, for OpenMeetings:

MariaDB [(none)]> CREATE DATABASE open321 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permission on this open321 database:

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open321.* TO 'hola'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;

* open321 ..... name of the database
* hola ..... user for that database
* 123456 .....password of this user

You can change the data, but...remember it! Later we´ll need it.
We exit MariaDB:

MariaDB [(none)]> quit

9)

------ Installation of OpenMeetings ------

We´ll install OpenMeetings in /opt/red5321. All the following information will be based on this directory.

Call to our folder of installation red5321

Make that folder:

mkdir /opt/red5321

cd /opt/red5321

...and download the OpenMeetings file:

wget http://apache.miloslavbrada.cz/openmeetings/3.2.1/bin/apache-openmeetings-3.2.1.zip

unzip apache-openmeetings-3.2.1.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.2.1.zip /opt

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

(Only one line without space between both)

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.39/mysql-connector-java-5.1.39.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.39.jar /opt/red5321/webapps/openmeetings/WEB-INF/lib

Now we are going to configure OpenMeetings for our database in MariaDB:

nano /opt/red5321/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify in line 72:

, Url=jdbc:mysql://localhost:3306/openmeetings?

...to

, Url=jdbc:mysql://localhost:3306/open321?

...it is the name of the database that we did initially.

Modify in line 77:

, Username=root

...to

, Username=hola

...is the user that we did initially for the database.

Modify in line 78:

, Password=" />

...to

, Password=123456" />

...it is the password that we did initially for the user "hola" in the database.

Press on keyboard, **Ctrl**+**x**, **Y** and **Enter,** to save changes and exit nano editor.

Logically, if initially you choose another user name, password or database name, you will change them here.

Protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red5321/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

10)

------ Script to launch red5-OpenMeetings ------

Download the script to run red5-OpenMeetings:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-2

...copy it to where must be:

cp red5-2 /etc/init.d/

...concede execution permission:

chmod +x /etc/init.d/red5-2

If you would made the installation in any other different path to /opt/red5321, please edit the script

and modify the line:

RED5_HOME=/opt/red5321

...to

RED5_HOME=/your-path-installation

11)

------ Run red5-OpenMeetings ------

Restart MariaDB:

/etc/init.d/mysql restart

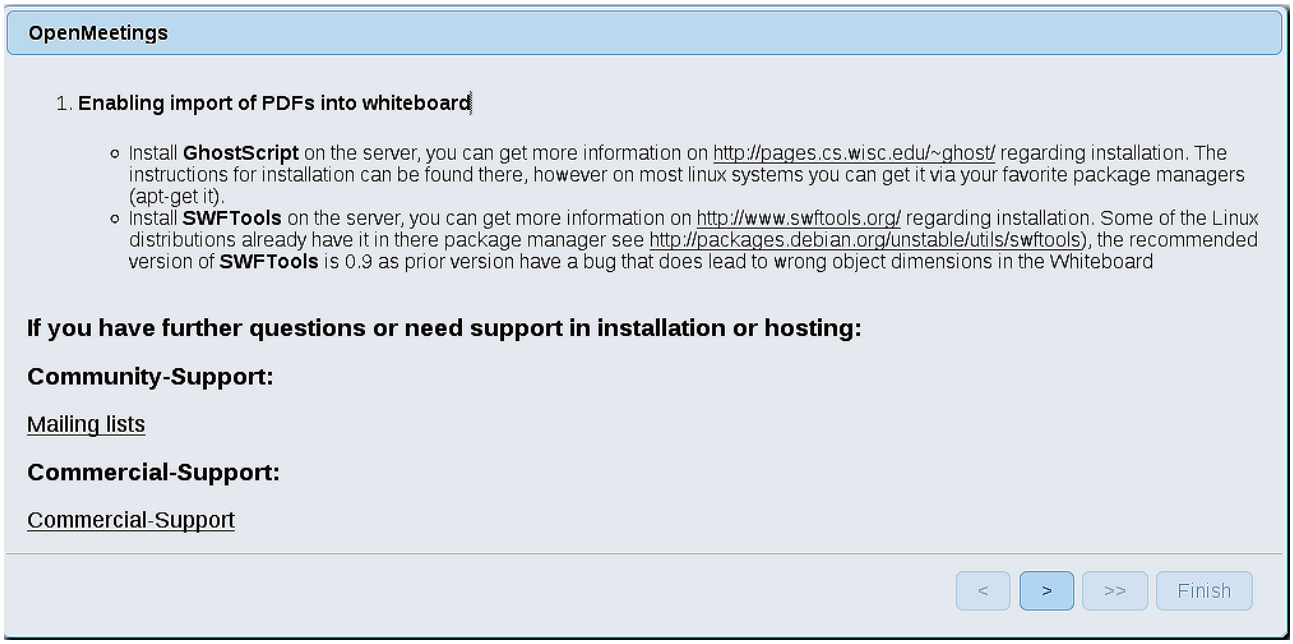
...and run red5-OpenMeetings. Please, open a new terminal as root, and be connected to Internet, so the running will be quick:

/etc/init.d/red5-2 start

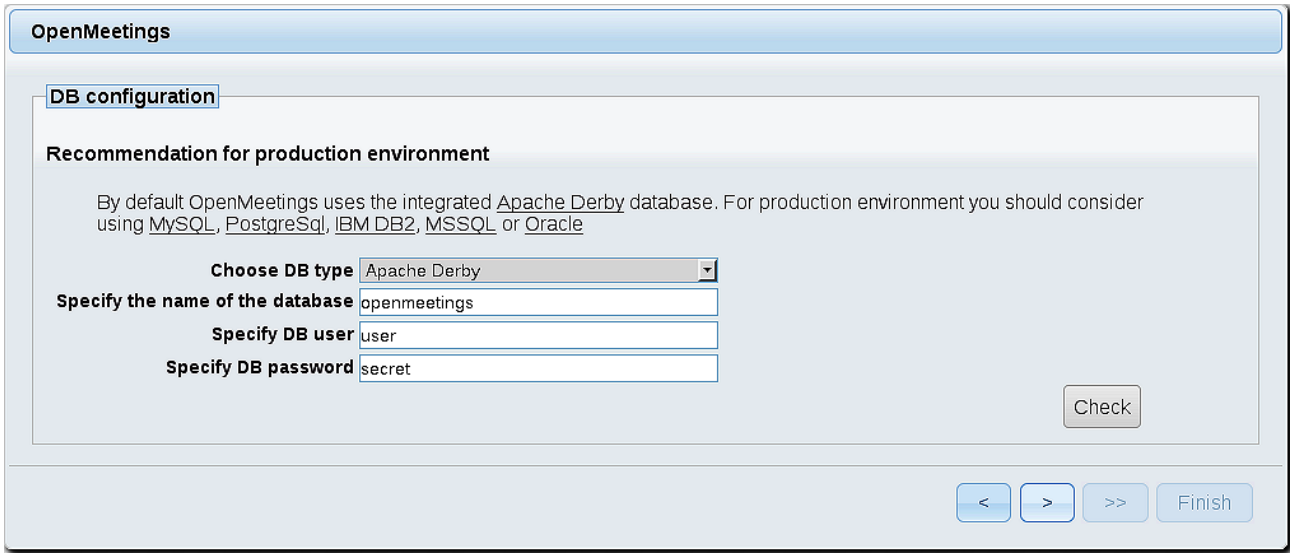
...wait untill the text "**clearSessionTable: 0**", it is the last in the shell. Then, go with the browser to:

http://localhost:5080/openmeetings/install

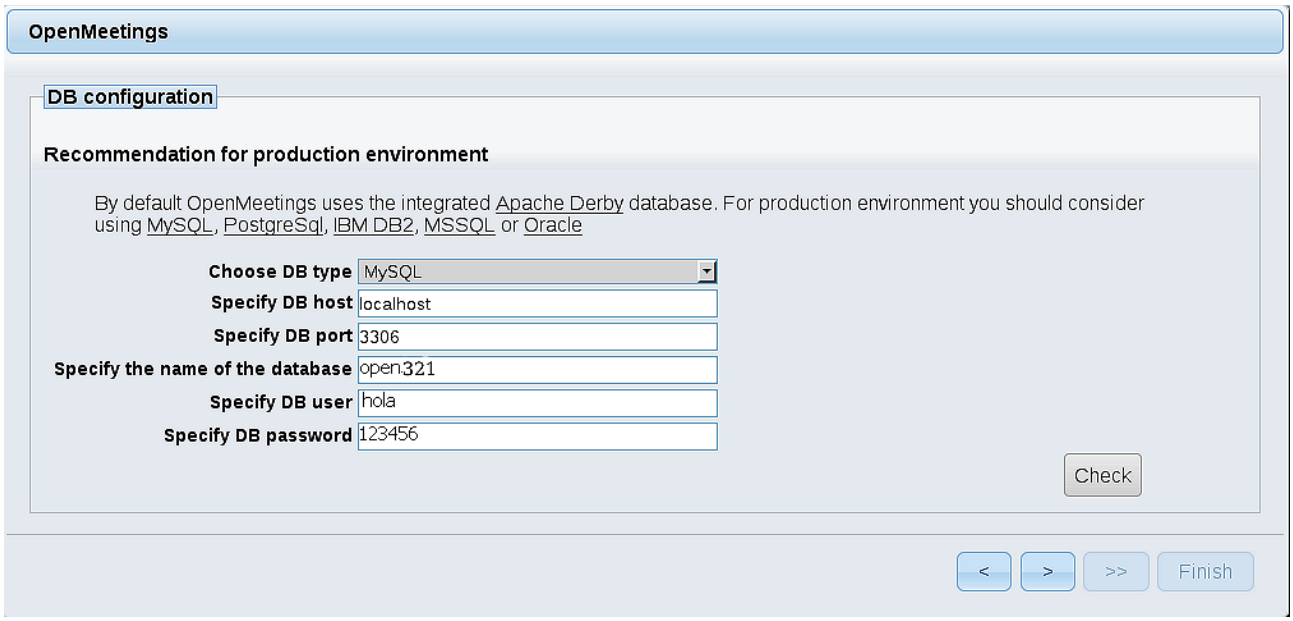
...there will appear a page similar to this one:



...push on > (bottom), and will show the default configuration with Derby, but we employ MySQL (MariaDB):



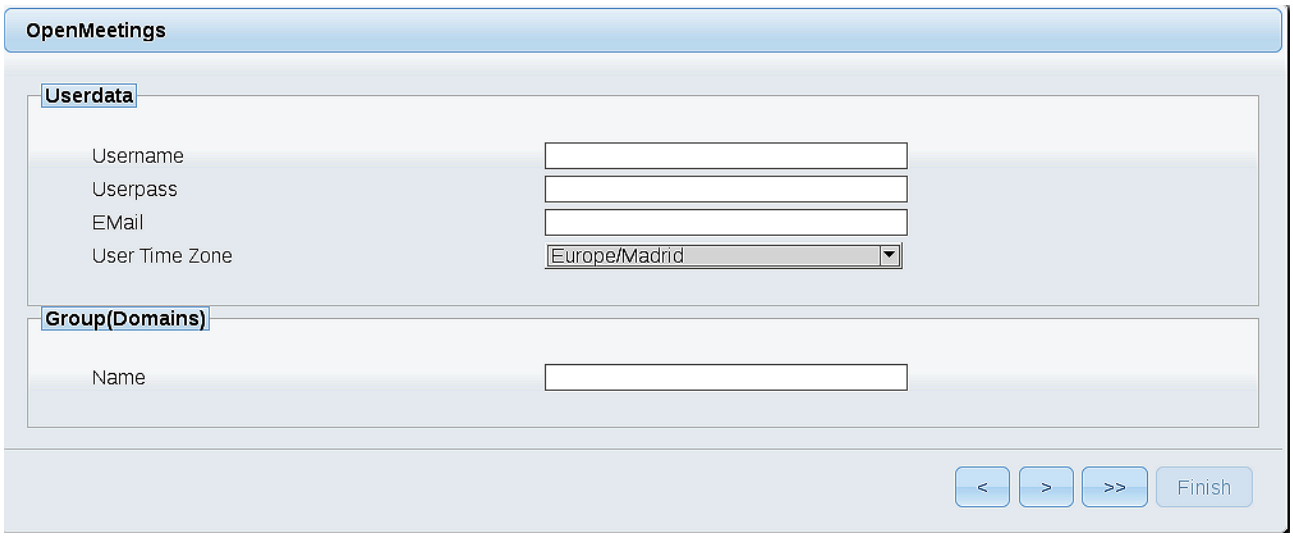
...so, scroll and **Choose DB type** to MySQL:



...will show the database configuration we made in the step 9.

If you`ve choose any other differents data, will show equally.

Please, press > button, and will go to:



Now we must introduce the followings data, in order can continue the installation:

Username = a-name ...this user will be administrator.

Userpass = a-password ...for the previous user.

Email = email-adress ...of this previous user.

User Time Zone = country where is this server.

Name = example-openmeetings ...group name to choose.

Press the button > and will lead us to a new page (below) where you can select the language for your OpenMeetings server, as well as other options such as the configuration of the mail server being used to send invitations or meetings from OpenMeetings.

A valid example to configure the mail server with Gmail, is as follows:
(replace **john@gmail.com** with your real Gmail account)

Mail-Refer (system_email_addr) == john@gmail.com

SMTP-Server (smtp_server) == smtp.gmail.com

SMTP-Server Port (default Smtp-Server Port is 25) (smtp_port) == 587

SMTP-Username (email_username) == john@gmail.com

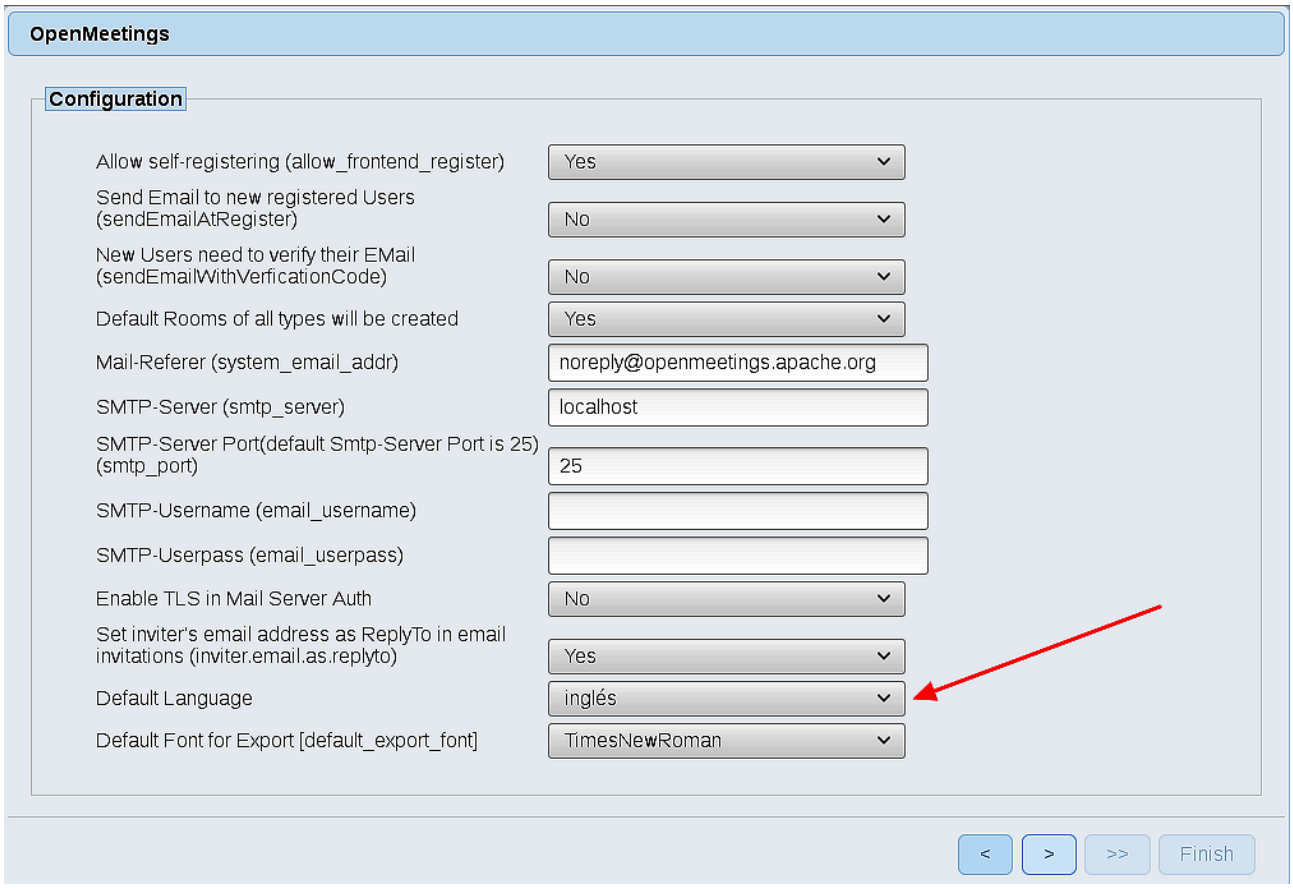
SMTP-Userpass (email_userpass) == password of john@gmail.com

Enable TLS in Mail Server Auth == Yes

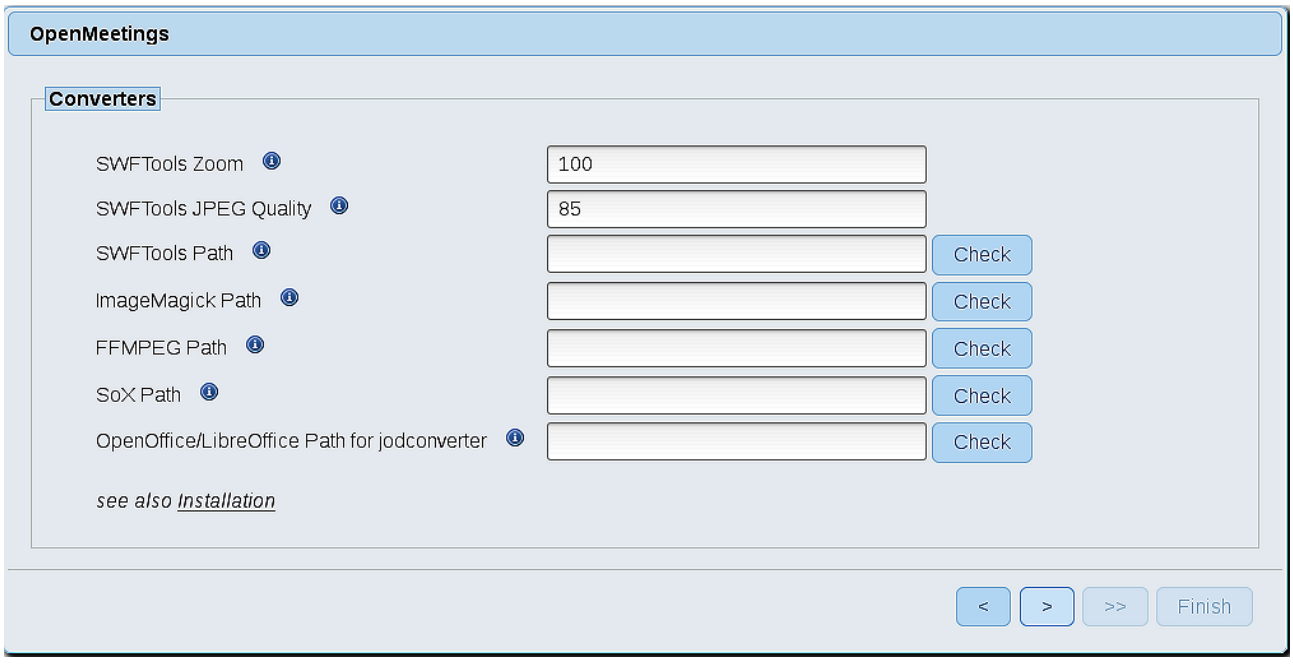
To select the language of your server OpenMeetings, please scroll on the line:

Default Language = english

...the rest we can leave as is. If necessary, can modify it as you like it:



Now press the button > and a new page will appear:

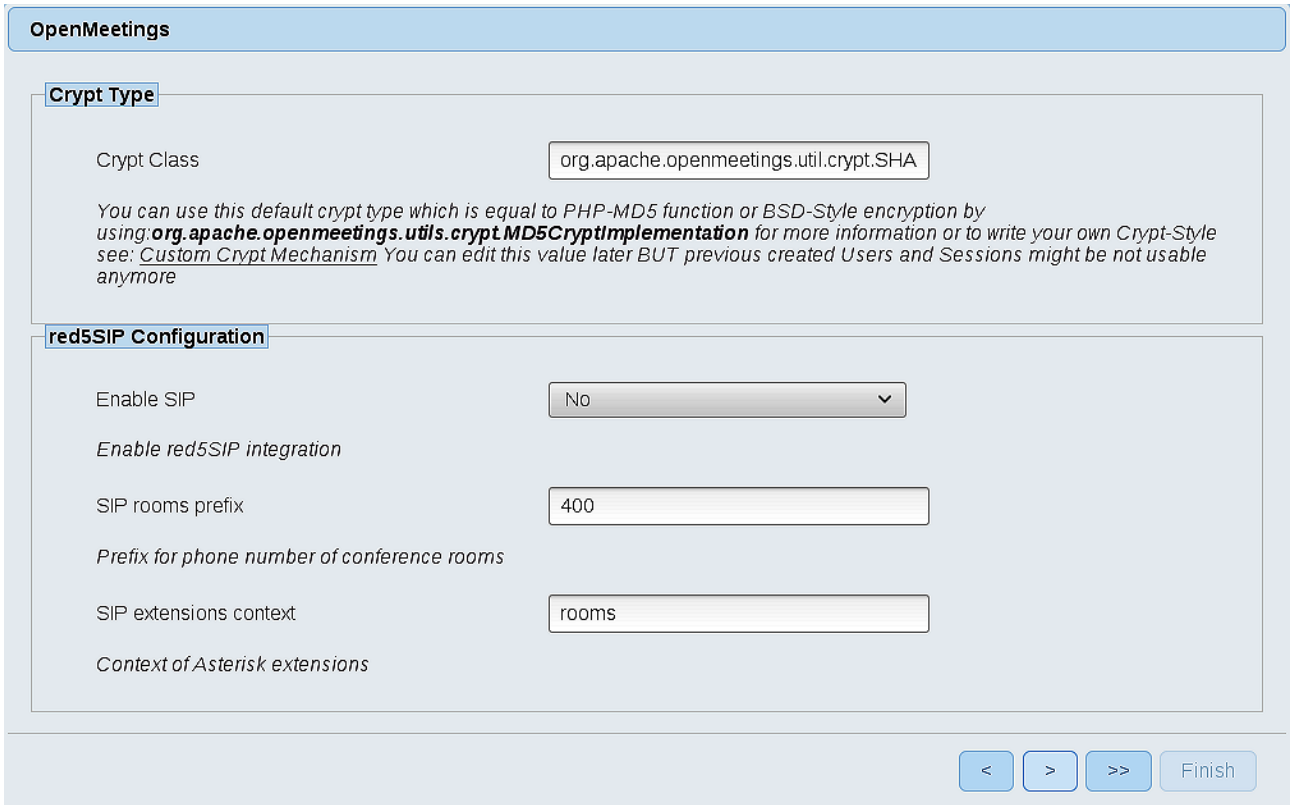


Here we´ll introduce the respective paths for the image, video, audio and conversion of uploaded files:

SWFTools Path	==	/usr/bin
ImageMagick Path	==	/usr/bin
FFMPEG Path	==	/usr/local/bin
SOX Path	==	/usr/bin
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib64/libreoffice

As you go introducing routes, you can check if they are correct, by pressing the button labeled **Check**. If it does not display any error message, that is OK.

Once completed the paths, please click the > button and move on to another page that would be to activate the SIP. We will leave it as is, unless you want to activate it knowing what it does:

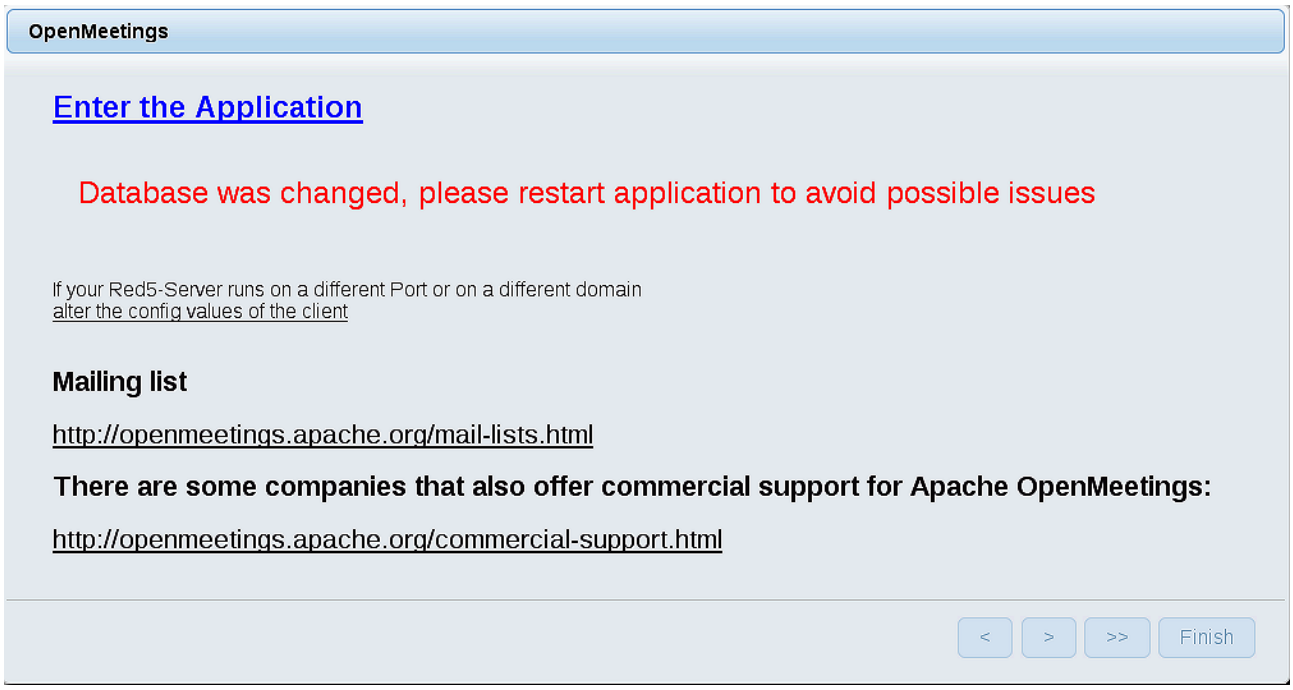


Now, touch the button > Will show this window:

Press **Finish** button...wait a seconds untill the tables are fill in our database.

When is concluded, this another page will appear. Don´t clic on **Enter the Application**.
First is need it to restart red5 server. Please, be connectd to Internet. Open a new terminal as root:

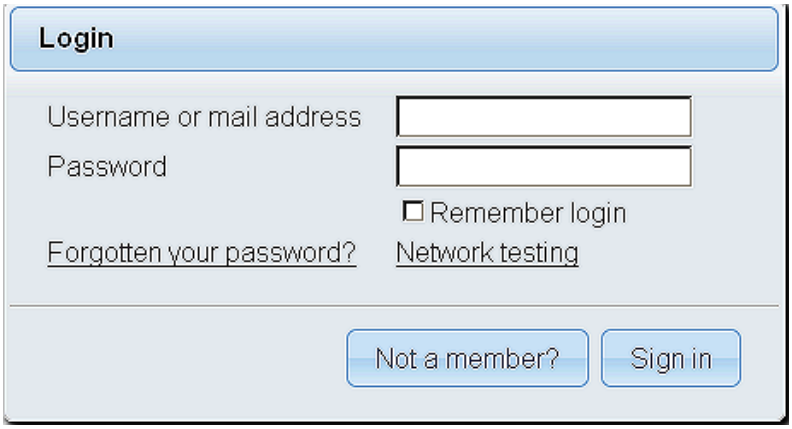
/etc/init.d/red5-2 restart



Now yes, you can clic on **Enter the Application**, or go with your browser to:

http://localhost:5080/openmeetings

...and will take us to the entry of OpenMeetings:



Introduce the user's name and the password, that you have choosen during the installation, push **Sign in** button, and…

...**Congratulations!**

The next time that you like to accede OpenMeetings, would be:

http://localhost:5080/openmeetings

Remember to open in the server, the two following ports:

1935 5080

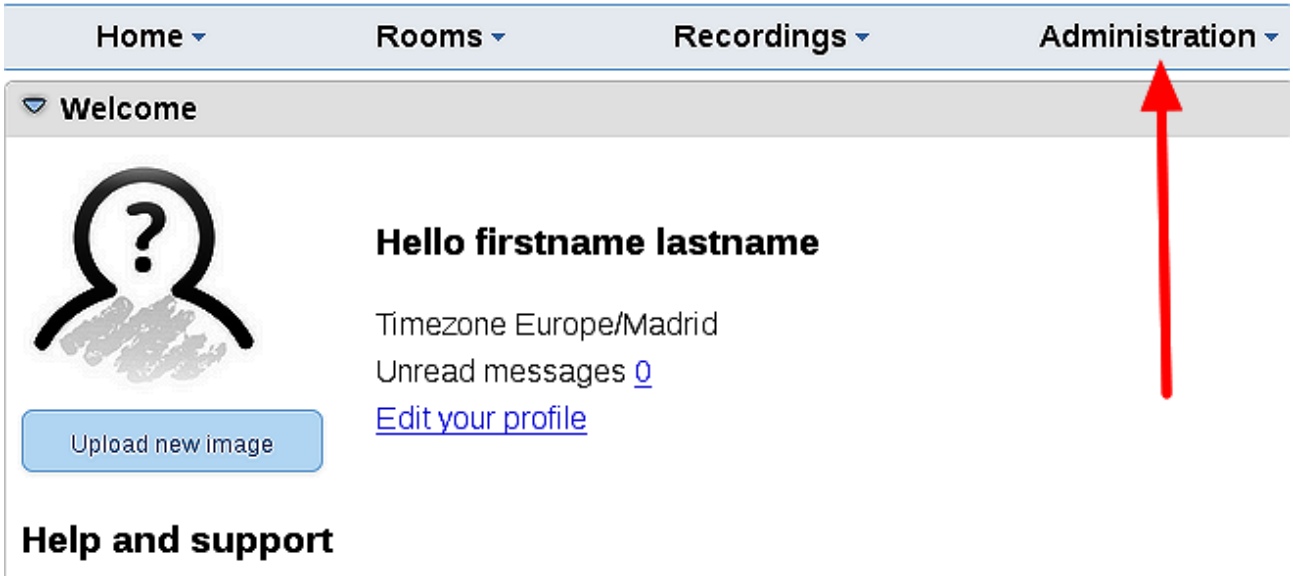
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

12)

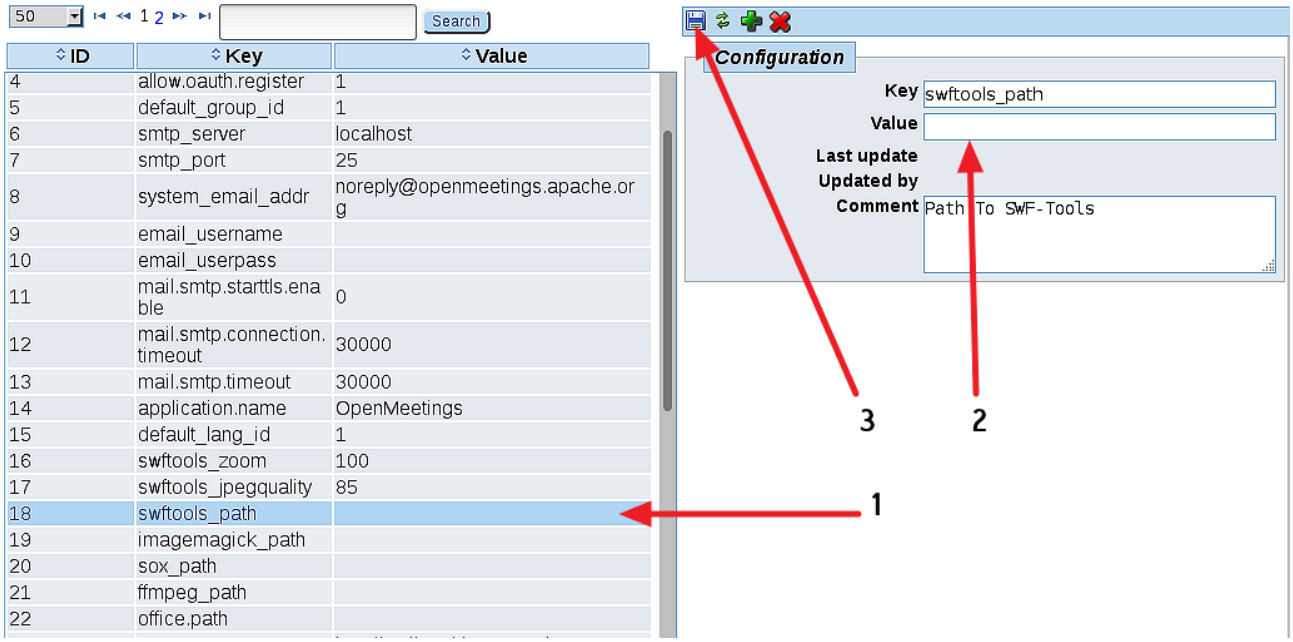
------ OpenMeetings's configuration ------

Once you acced to OpenMeetings, if you would like to do any modification in the configuration, please go to:

Administration → Configuration



...and following the order of the red arrows:



And this is all.

If you have some doubt or question, please raise it in the Apache OpenMeetings forums:

http://openmeetings.apache.org/mail-lists.html

Thank you.

Alvaro Bustos