Installation of Apache OpenMeetings 4.0.0 on Debian 8

This tutorial is made based on fresh installations of

debian-8.6.0-amd64-CD-1.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 4.0.0 stable, that is to say will suppress his compilation. It is done step by step.

5-11-2017

Starting...

1)

First update and upgrade the OS:

apt-get update

apt-get upgrade

2)

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

OpenMeetings **4.0.0** need Java **1.8** to work. Add repository to install Oracle Java 1.8.

(Only one line with space between both)

echo "deb http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee /etc/apt/sources.list.d/webupd8team-java.list

echo "deb-src http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee -a /etc/apt/sources.list.d/webupd8team-java.list

apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys EEA14886

apt-get update

To accept the license automatically when install it:

(Only one line without space between both)

echo oracle-java8-installer shared/accepted-oracle-license-v1-1 select true | sudo /usr/bin/debconf-set-selections

...now install Oracle Java:

apt-get install oracle-java8-installer

Maybe you have installed various versions of Java. We select the just installed Oracle Java:

update-alternatives --config java

To know the active java version:

java -version

3)

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

LibreOffice is need it to convert to pdf the uploaded files.

apt-get install libreoffice

4)

------Installation ImageMagick y Sox ------

ImageMagic, work the image files jpg, png, gif, etc. Will install it and some paquets and libraries:

apt-get install imagemagick libgif4 libgif-dev zlib1g-dev liboil0.3 unzip make

apt-get install build-essential libfreetype6-dev wget

Sox, work the audio. Will compile.

cd /opt

wget http://sourceforge.net/projects/sox/files/sox/14.4.2/sox-14.4.2.tar.gz

tar xzvf sox-14.4.2.tar.gz

cd /opt/sox-14.4.2

./configure

make && make install

cd /opt

5)

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

OpenMeetings even need Adobe Flash Player for cam.
Add repository to can install it:

gedit /etc/apt/sources.list

...copy-paste these two lines and comment: # deb cdrom:[Debian GNU/Linux 8 _Jessie_ ...

deb http://ftp.us.debian.org/debian jessie contrib non-free
deb http://ftp.us.debian.org/debian jessie contrib

...save, update:

apt-get update

...and install:

apt-get install flashplugin-nonfree

6)

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

FFmpeg will work the video.

This compilation is based on:

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

Updated to 5-11-2017. Install libraries:

(Only one line with space between each one)

apt-get -y --force-yes install autoconf automake libass-dev libfreetype6-dev
libgpac-dev libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev
libxcb-shm0-dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev nasm libx264-dev cmake
mercurial libopus-dev curl git

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

Please, download the script.

cd /opt

(Only one line without space between both)

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

...concede permission of execution:

chmod +x ffmpeg-ubuntu-debian.sh

...and run it (be connected to Internet). The compilation will spend about 30 minutes:

./ffmpeg-ubuntu-debian.sh

When finish the compilation, a text will appear:

FFmpeg Compilation is Finished!

Then, please, go to **step** 7**).**

But if you prefer copy and paste (i **don´t advise**), here leave the commands script:

sudo gedit /opt/ffmpeg.sh

...copy and past **from here**:

```
# FFmpeg compilation for Ubuntu and Debian.
# Alvaro Bustos. Thanks to Hunter.
# Updated 5-11-2017

sudo apt-get update
sudo apt-get -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev
libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev libxcb-shm0-
dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev mercurial cmake

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

# Download the necessary sources.
wget ftp://ftp.gnome.org/mirror/xbmc.org/build-deps/sources/lame-3.99.5.tar.gz
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
hg clone https://bitbucket.org/multicoreware/x265
wget -O fdk-aac.tar.gz https://github.com/mstorsjo/fdk-aac/tarball/master
wget https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.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 yasm-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" && make && sudo make
install && make distclean; cd ..

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

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

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

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

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

cd libvpx
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --disable-examples
--disable-unit-tests && PATH="$HOME/bin:$PATH" make && sudo make install && make clean;
cd ..

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

cd ~/bin
cp ffmpeg ffprobe ffplay ffserver vsyasm x264 yasm ytasm /usr/local/bin
```

```
cd ~/ffmpeg_build/bin
cp lame x265 /usr/local/bin

echo "FFmpeg Compilation is Finished!"
```

...to here.

Concede permission of execution:

```
chmod +x /opt/ffmpeg.sh
```

Now be connected to Internet, run the script and wait some long minutes while the compilation:

```
cd /opt

./ffmpeg.sh
```

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

7)

------ Installation and configuration of MariaDB data server ------

MariaDB is the data server.

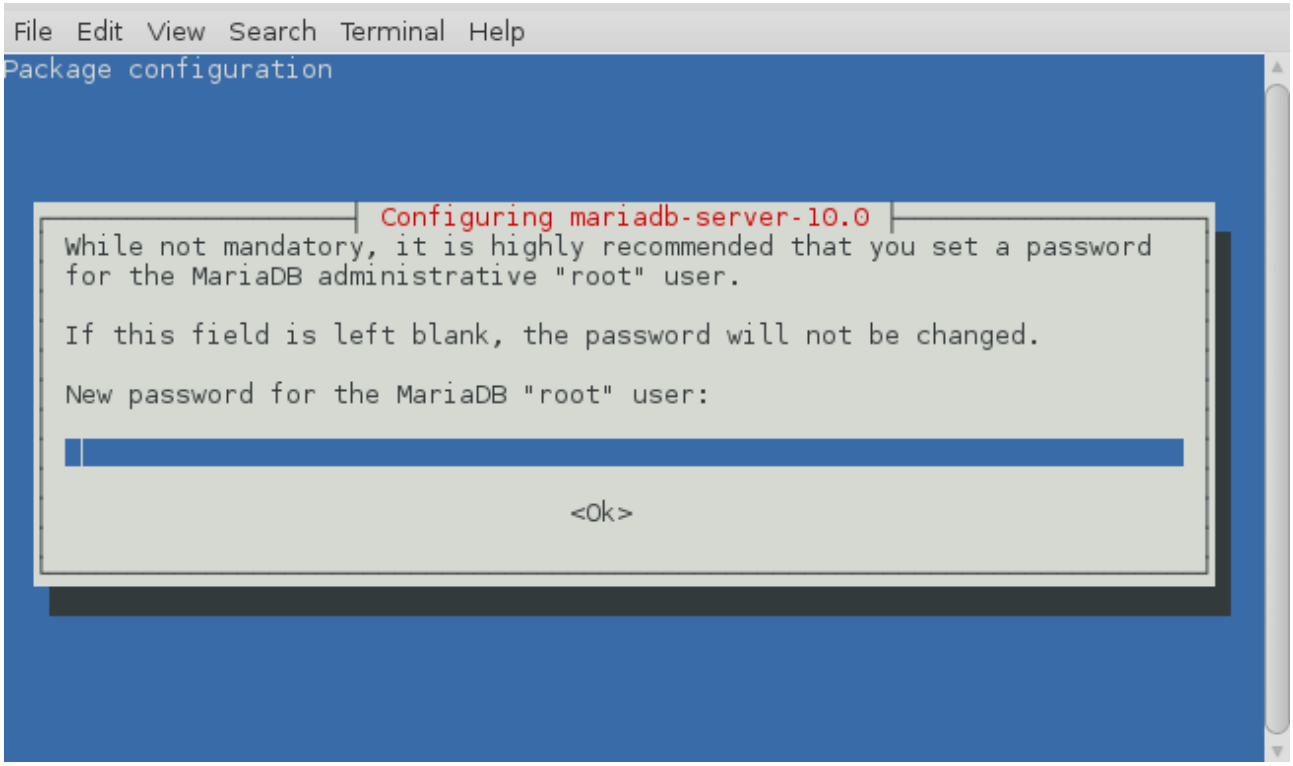
It is in Jessie repository. Install these packages:

```
sudo apt-get install python-software-properties software-properties-common
```

...and now MariaDB:

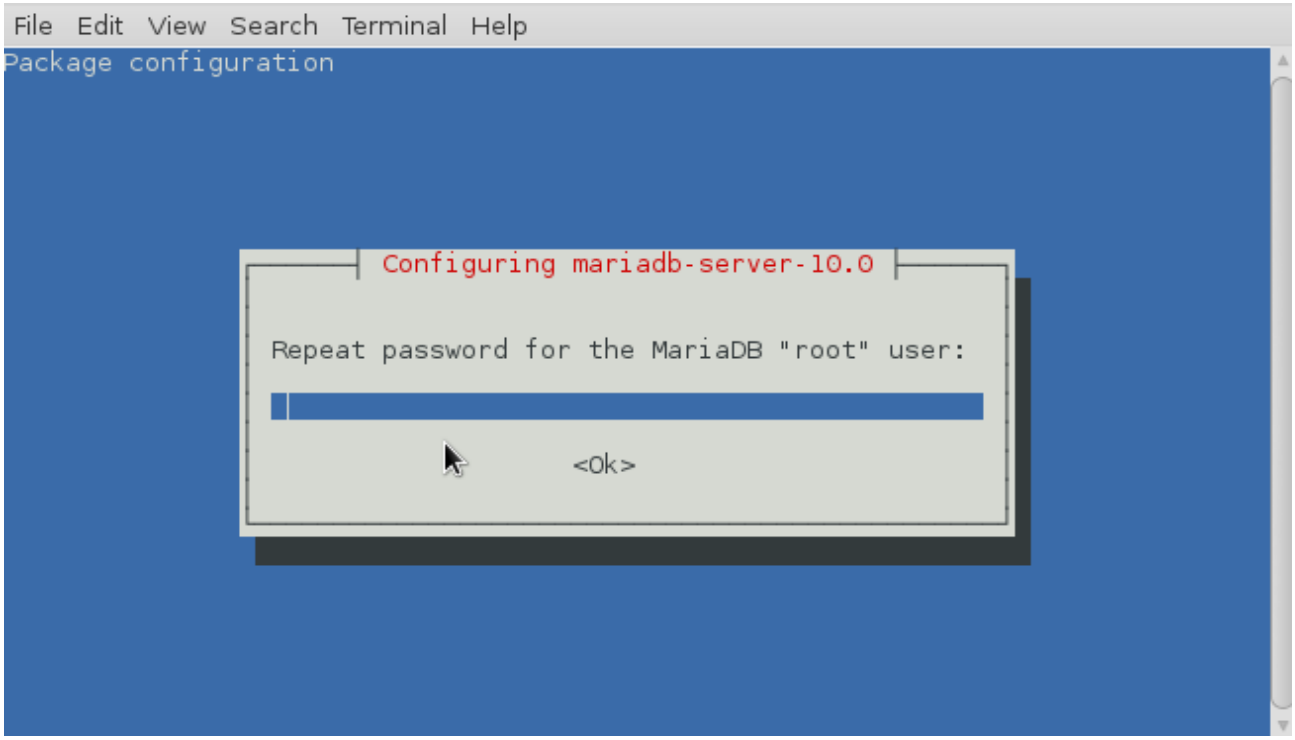
```
apt-get install mariadb-server
```

Will open a window asking for a root MariaDB password:



Type the password you like it → **Ok** → **Enter**

...will ask repeat the password:



Run MariaDB:

/etc/init.d/mysql start

Make a database for OpenMeetings. User password must be of 8 digits minimum:

mysql -u root -p

...will ask for the root password that we have just choosen, type it...

MariaDB [(none)]> CREATE DATABASE open40 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open40.
Now we create a user with all permission on this database.

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open40.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open40 .....is the database name.
* hola …….is the user name for this database.
* 1a2B3c4D ...is the password of this user.

You can change the data...but remember it! Later we´ll need it.

Now we leave MariaDB:

MariaDB [(none)]> quit

8)

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

We´ll install OpenMeetings in /opt/red540. All the following information will be based on this directory.

Call to our folder of installation red540

Make the folder:

mkdir /opt/red540

cd /opt/red540

wget http://apache.miloslavbrada.cz/openmeetings/4.0.0/bin/apache-openmeetings-4.0.0.zip

unzip apache-openmeetings-4.0.0.zip

...save the unloaded file to /opt:

mv apache-openmeetings-4.0.0.zip /opt

Do to **nobody** owner of the whole OpenMeetings folder installation, for security:

chown -R nobody /opt/red540

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/5.1.45/mysql-connector-java-5.1.45.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.45.jar /opt/red540/webapps/openmeetings/WEB-INF/lib

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

gedit /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify on line 72:

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

...to

, Url=jdbc:mysql://localhost:3306/open40?

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

If you choose another name for the database, please type it here. Save the changes.

We protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

9)

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

Please, download the red5 run script:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-ubdeb2

...and copy it to:

cp red5-ubdeb2 /etc/init.d/

Concede permission of execution:

chmod +x /etc/init.d/red5-ubdeb2

If you made the installation in any other different path to /opt/red540, please edit the script and modify the line:

RED5_HOME=/opt/red540

...to

RED5_HOME=/your-path-installation

10) **------ Run red5-OpenMeetings ------**

Start MariaDB if still it is not:

/etc/init.d/mysql start

...and now start red5-OpenMeetings:

/etc/init.d/red5-ubdeb2 start

...will appear two text lines in the shell:

start-stop-daemon: --start needs --exec or –startas

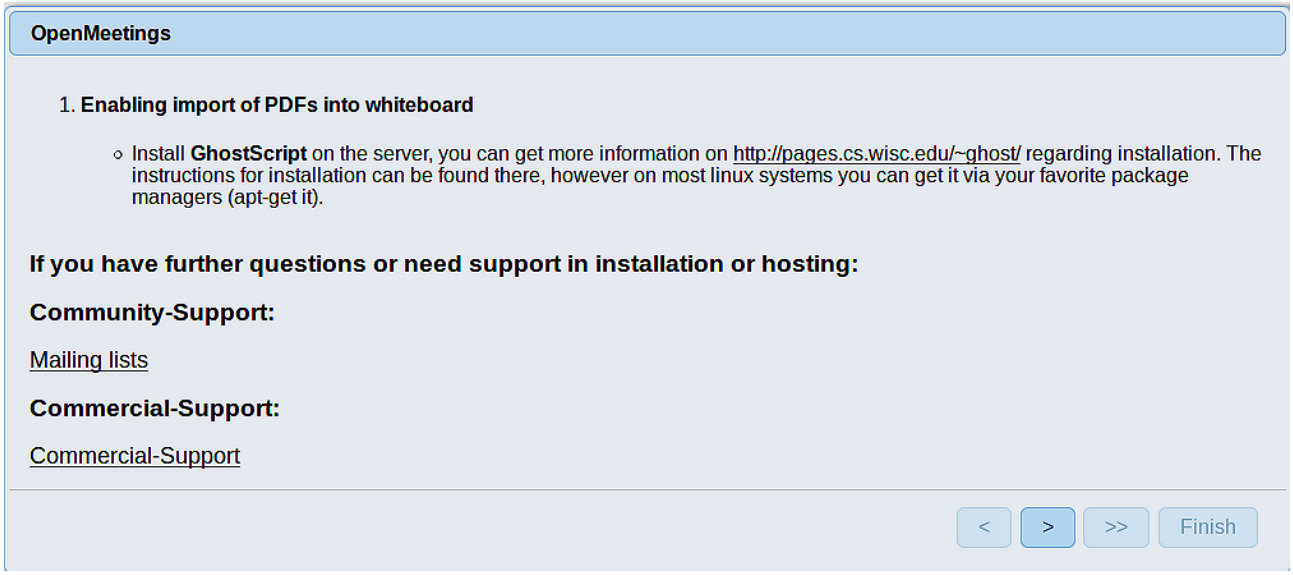
Try 'start-stop-daemon --help' for more information.

...you do nothing. Don´t worry, everything work right.

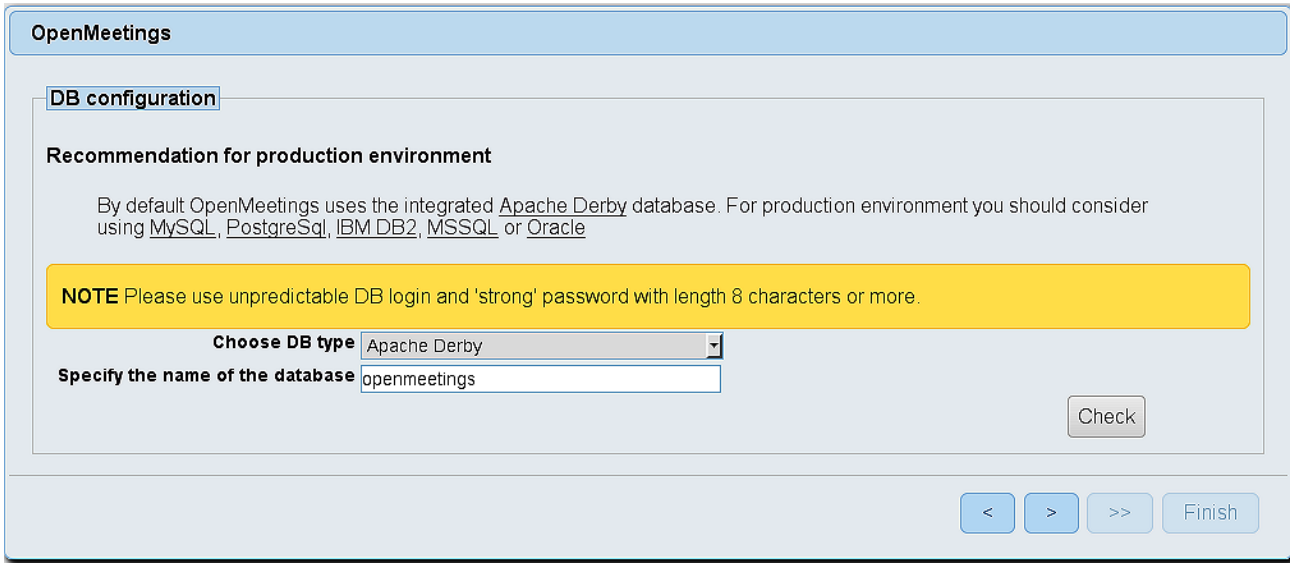
Wait about 40 seconds minimum, in order that red5 it is runing completely, and later can go to:

http://localhost:5080/openmeetings/install

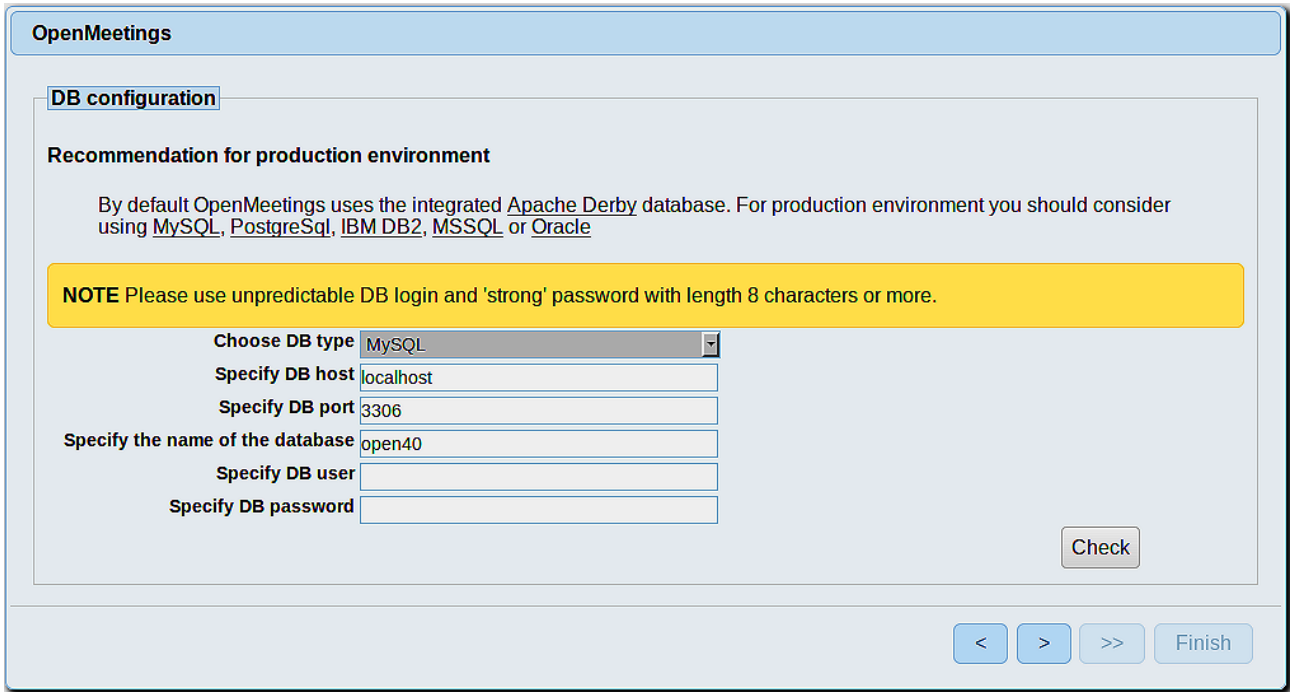
...there will appear a page similar to this one:



Push > button (bottom), and will show the default database configuration with Derby, but we employ MySQL (MariaDB):



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



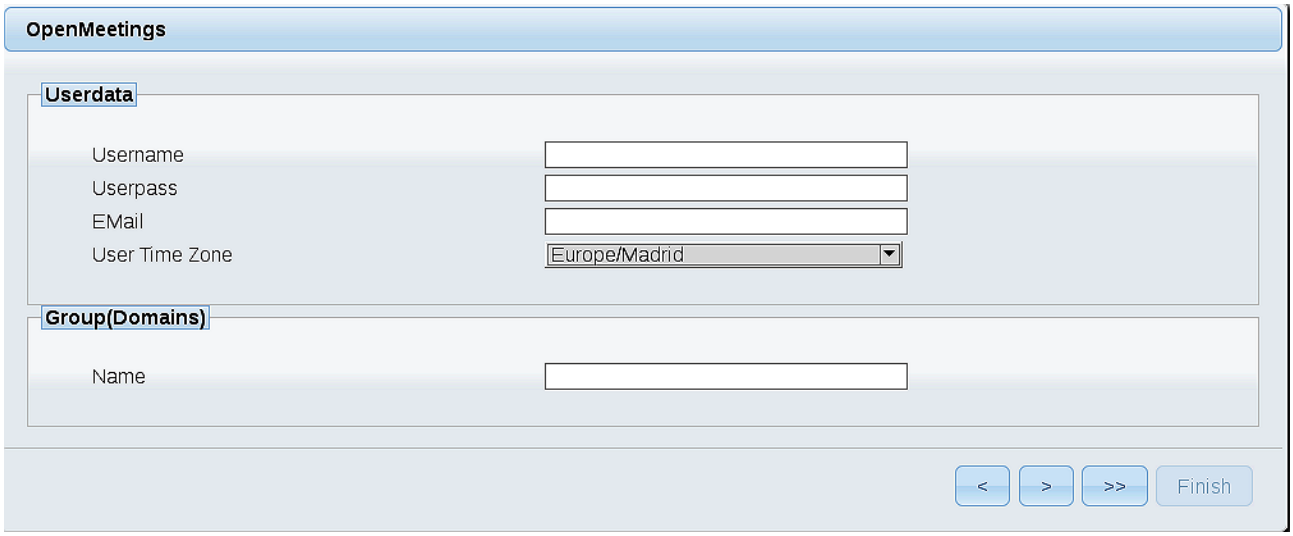
...and will show our data base configuration we made in step 8.

If you`ve choose any other different name for this, will show equally.
Now we must introduce the user name we did for our data base, at the step 8, and his password:

Specify DB user = hola

Specify DB password = 1a2B3c4D

Please, push > button, and will go to:



Here, we must introduce a user name for OpenMeetings, and his password. This must have 8 digits minimum, and at least 1 special symbol like: + (% # ! ...etc.

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

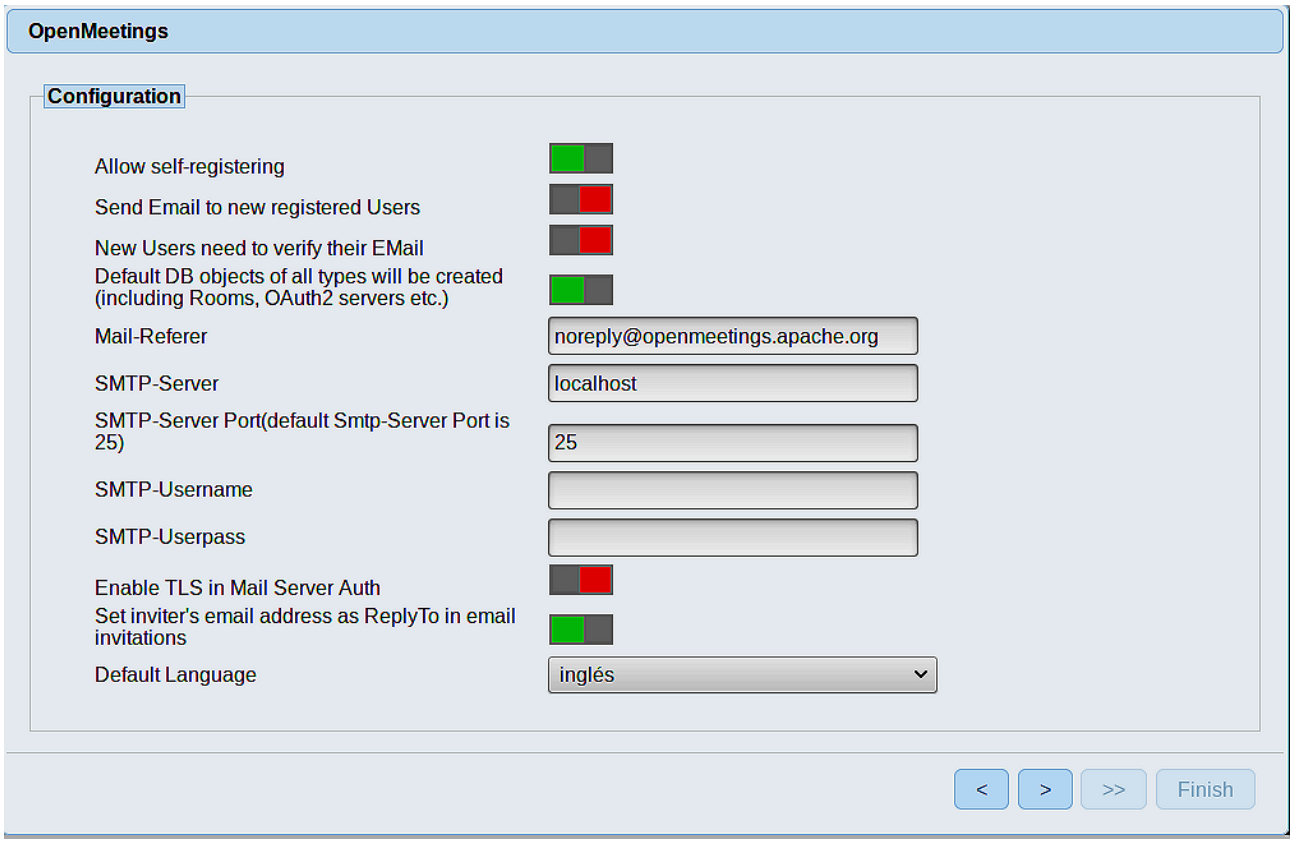
Userpass = a-password ...for the previous user.

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

User Time Zone = country where is this serve

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 == john@gmail.com

SMTP-Server == smtp.gmail.com

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

SMTP-Username == john@gmail.com

SMTP-Userpass == password of john@gmail.com

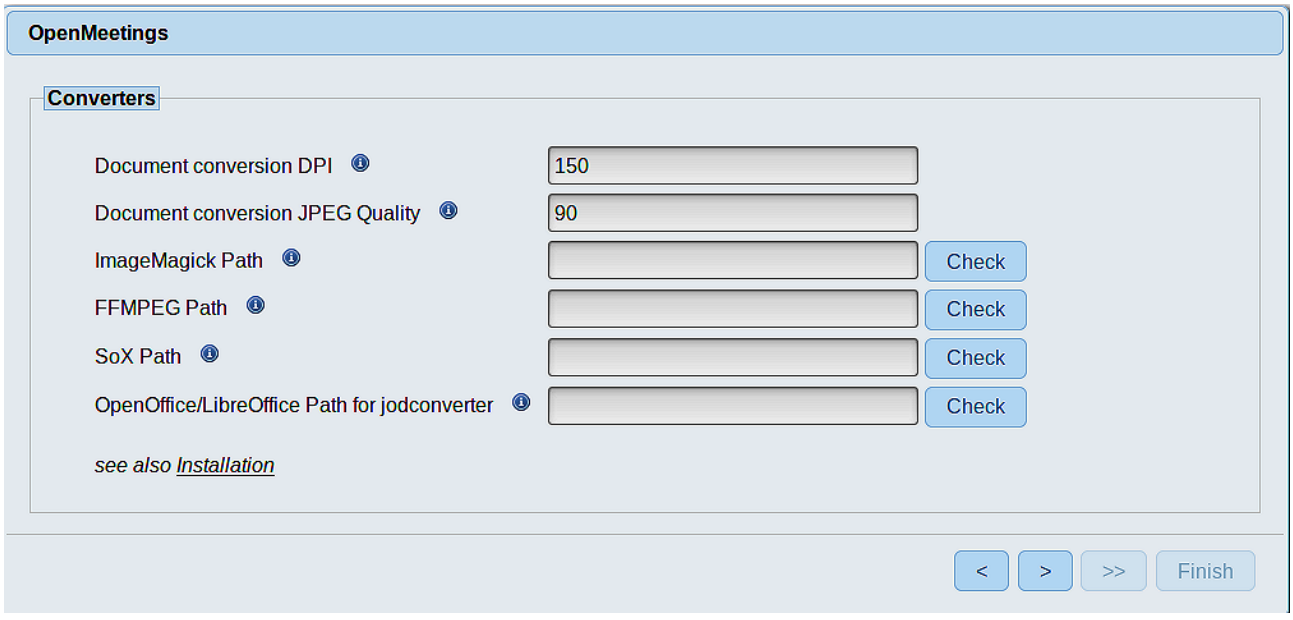
Enable TLS in Mail Server Auth == ...turn green the button to activate

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

Default Language == ...select your language

...the rest you can modify it as you like.

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:

ImageMagick Path == /usr/bin

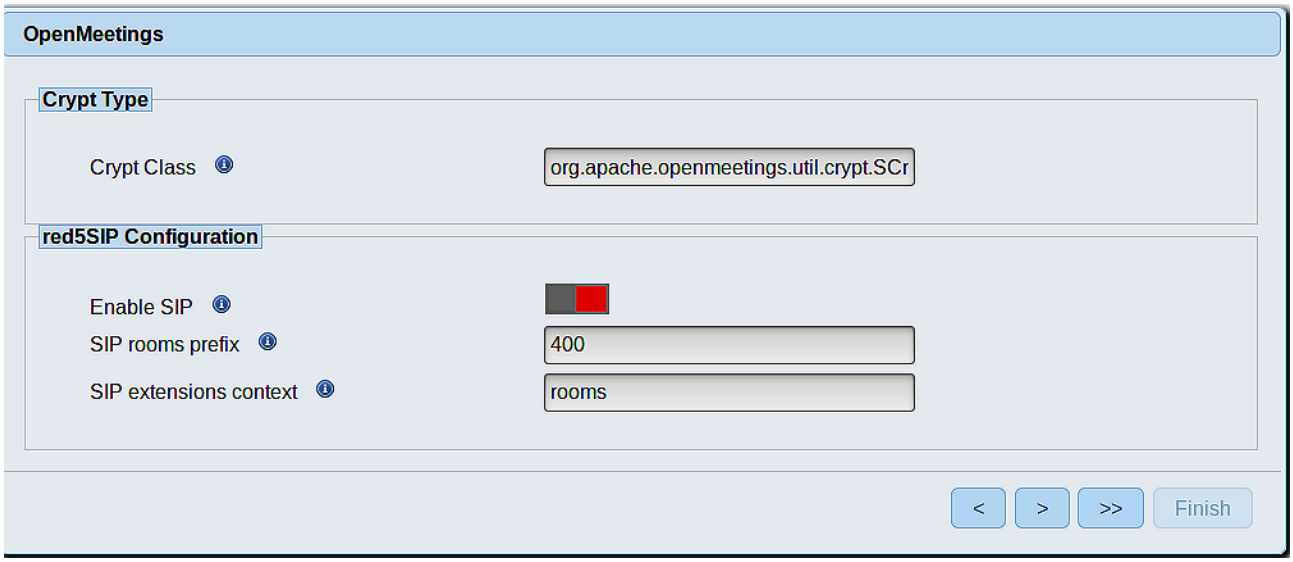
FFMPEG Path == /usr/local/bin

SOX Path == /usr/local/bin

OpenOffice/LibreOffice Path for jodconverter == /usr/lib/libreoffice **(32 - 64bits)**

As you go introducing paths, 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:

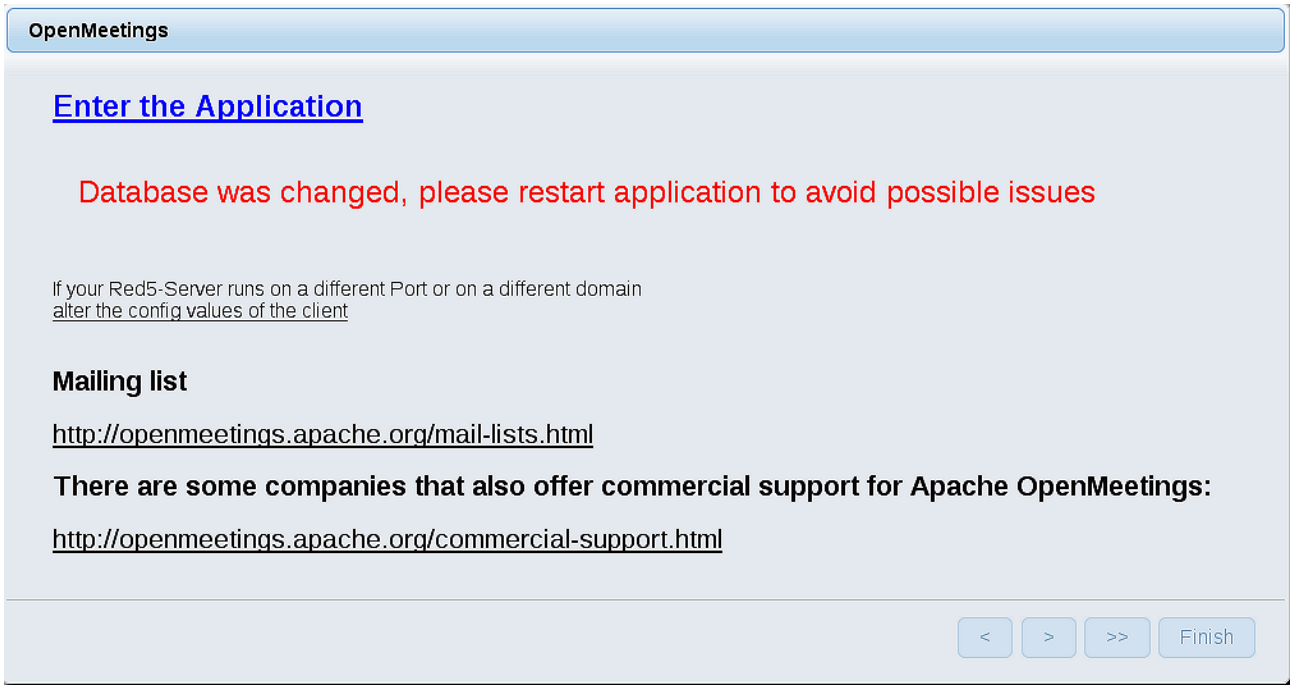


Now push the button > Will show this window:

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

When has concluded, this another page will appear. Don´t clic on **Enter the Application**.
First is need it to restart the server:

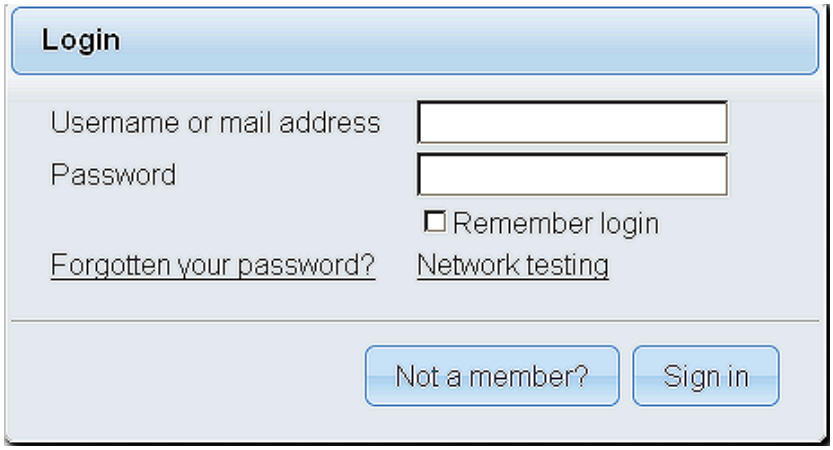
/etc/init.d/red5-ubdeb2 restart



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 chosen during the installation, push the **Sign in** button and…

...**Congratulations!**

The next time that you like to accede to OpenMeetings will be:

http://localhost:5080/openmeetings

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

1935 5080

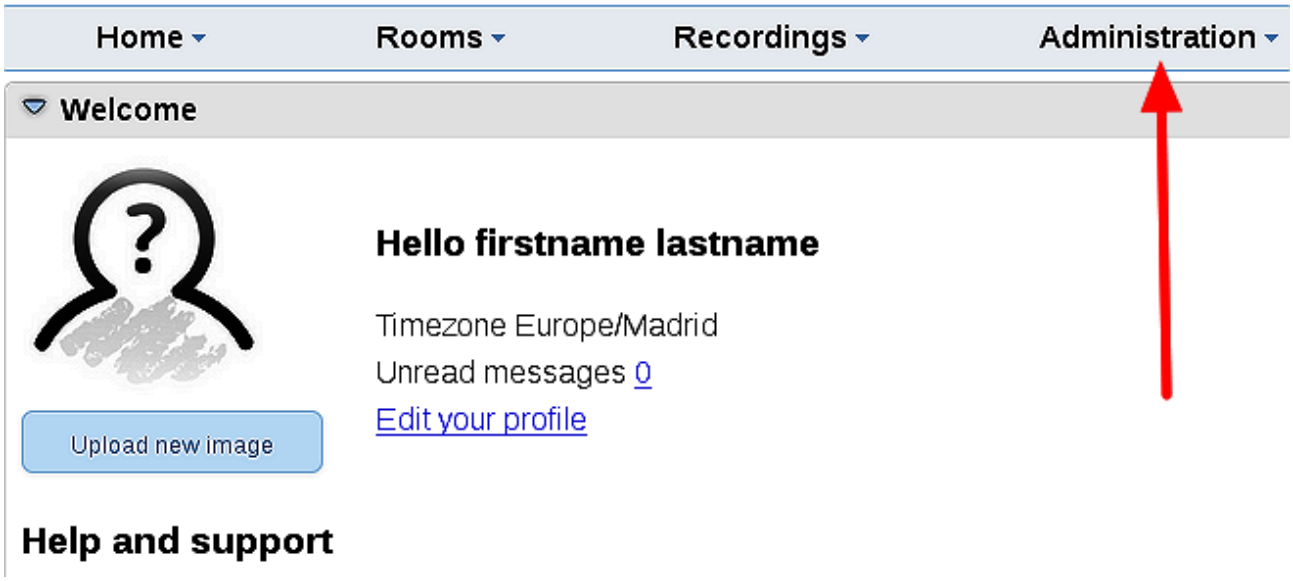
...in order that it could accede to OpenMeetings from other machines in Lan or from Internet.

11)

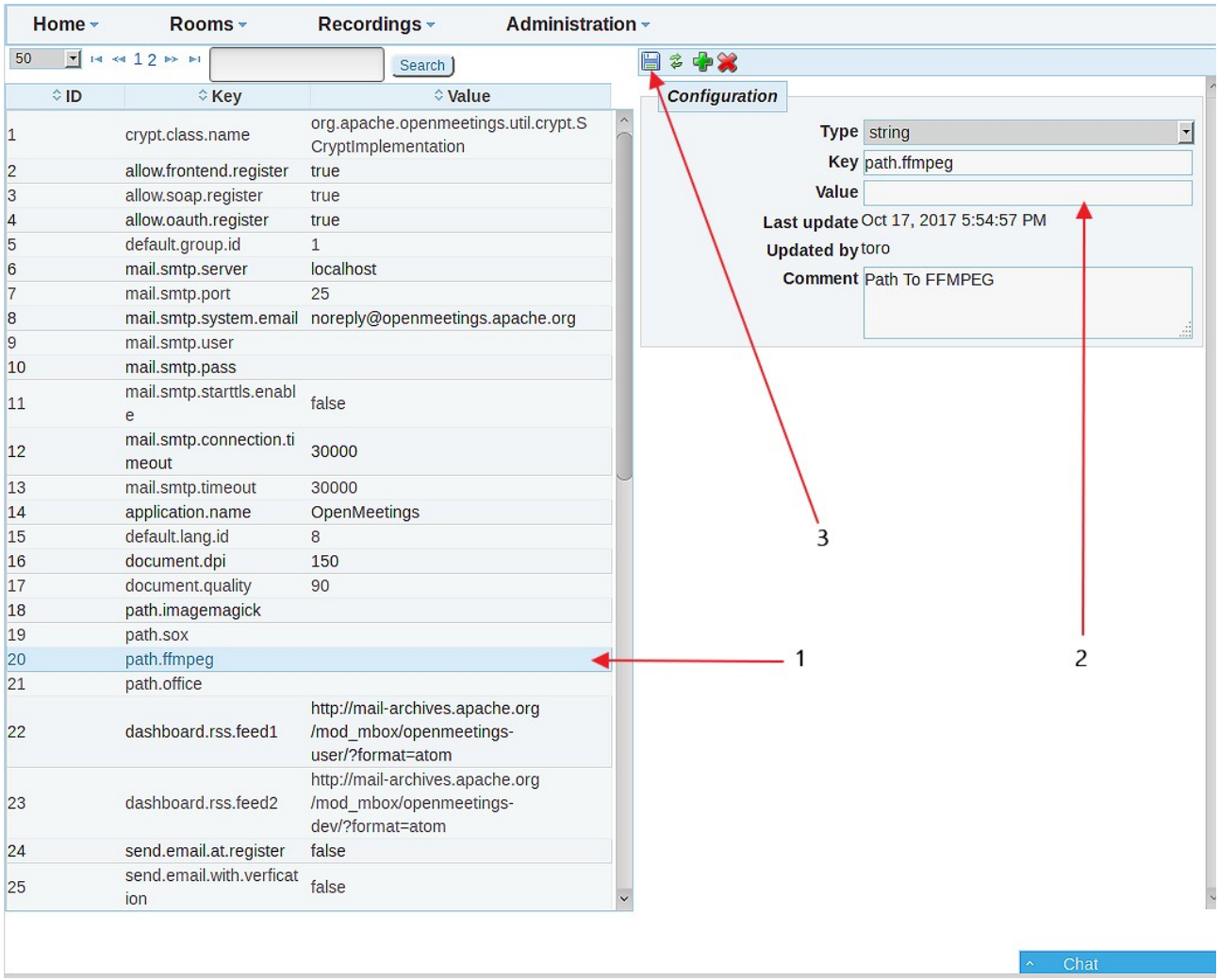
------ OpenMeetings's configuration ------

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