Installation of Apache OpenMeetings 3.1.1 on openSUSE 13.2

This tutorial is made based on fresh installations of

openSUSE-13.2-KDE-Live-x86_64.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.1 stable, that is to say will suppress his compilation. It is done step by step.

19-5-2016

Starting...

1)

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

Update operative system:

zypper refresh

zypper update

2)

------ Installation of OpenJava ------

Java is necessary to work OpenMeetings. Should install OpenJava and the plugin icedtea-web for record conference room and share desktop:

zypper install -y java icedtea-web

3)

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

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

Maybe it is installed but for iso server:

zypper install -y libreoffice

4)

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

Should install packages and libraries we´ll need later:

(Only one line with space between both)

zypper install -y gcc ghostscript unzip freetype freetype-devel ncurses ncurses-devel make libz1 zlib-devel libtool bzip2 file-roller git autoconf automake pkg-config nmap wget

5)

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

ImageMagick will work with images files. Should install it and some more libraries:

zypper install -y ImageMagick giflib-devel

Sox work the sound:

zypper install sox

Swftools work converting to swf, flash file, the uploaded files. Don´t use a newer version, maybe hvae not pdf2swf.

Add media repo:

(Only one line with space between both)

zypper ar
http://download.opensuse.org/repositories/multimedia:/apps/openSUSE_13.2/multimedia:apps.repo

zypper refresh

...accept repository clave for ever, and we procede to install swftools:

zypper install -y swftools

Block the version, to prevent changes:

zypper al swftools

6)

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

OpenMeetings even need Adobe Flash Player for rooms.

Add Adobe repo:

rpm -ivh http://linuxdownload.adobe.com/adobe-release/adobe-release-x86_64-1.0-1.noarch.rpm

rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-adobe-linux

zypper refresh

...and install flash player:

zypper install -y flash-player

7)

------ Installation of Jodconverter ------

Jodconverter work to convert uploaded files.

cd /opt

wget http://jodconverter.googlecode.com/files/jodconverter-core-3.0-beta-4-dist.zip

unzip jodconverter-core-3.0-beta-4-dist.zip

8)

------ Compilation of Ffmpeg ------

FFmpeg work video. Will install paquets and libraries.

zypper install -y glibc imlib2 imlib2-devel mercurial cmake nano

zypper install -y freetype2-devel libfreetype6

zypper install -y libogg-devel libtheora-devel libvorbis-devel libvpx-devel

This ffmpeg compilation is based on this url, but updated file versions 19-5-2016:

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

As it is, the compilation in this url gives errors when compiling.
Then i supress one step in the url, add some one and modify others. Now works properly without error. Audio-video recording is syncronized. Mp4 and Ogg are right.
So, i made a script to download, compile and install ffmpeg on openSUSE 13.2. It is tested and is ok.
During the x265 compilation, will look like stop for a minutes, in a text that say: **41%,**
but not always. Don´t worry, everything is goeing right. Be patience.

Download the script:

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-opensuse.sh?version=1&modificationDate=1463725518178&api=v2

..push Ctrl+c in keyboard, when the download is finished.

Rename the script:

mv ffmpeg-opensuse.sh?version=1 ffmpeg-opensuse.sh

...concede execution permission:

chmod +x ffmpeg-opensuse.sh

...and run it. Will spend about 30 minutes in the compilation...remember, be patience:

./ffmpeg-opensuse.sh

When is finished, will appear a text: FFMPEG Compilation and Installation Finished!

Then, you can go to **step 9)**

But if you prefer copy and paste, i **don´t advise,** here is the text script:

nano /opt/ffmpeg-opensuse.sh

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

```
# Script ffmpeg compilation for openSUSE 13.2 and ApacheOpenMeetings tutorial
# Alvaro Bustos, thanks to Hunter.
# 19-5-2016
# Install libraries
zypper install -y autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial
nasm pkgconfig zlib-devel

# Install yasm from repos
zypper install -y yasm

# 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
wget http://download.videolan.org/pub/x264/snapshots/x264-snapshot-20160518-2245-
stable.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
git clone http://git.opus-codec.org/opus.git
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
wget http://ffmpeg.org/releases/ffmpeg-3.0.2.tar.gz

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

cd x264-snapshot*
./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$HOME/ffmeg_build/lib64" CPPFLAGS="-I$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 ..

cp /root/ffmpeg_build/lib/pkgconfig/x264.pc /root/ffmpeg_build/lib64/pkgconfig

cp /root/ffmpeg_build/lib/pkgconfig/x265.pc /root/ffmpeg_build/lib64/pkgconfig

cd ffmpeg-*/
PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib64/pkgconfig" ./configure
--prefix="$HOME/ffmpeg_build"  --extra-cflags="-I$HOME/ffmpeg_build/include" --extra-
ldflags="-L$HOME/ffmpeg_build/lib64" --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 and Installation Finished!"
```

...**to here.**

Concede permission of execution:

chmod +x /opt/ffpmeg-opensuse.sh

cd /opt

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

./ffmpeg-opensuse.sh

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

9)

------ Installation MariaDB database server ------

MariaDB is the database server.

We install it:

zypper install -y mariadb mariadb-tools

...and run mariadb:

systemctl start mysql.service

Give a password to mariadb root . Please, modify new-password by your own.

mysqladmin -u root password new-password

Make a database for OpenMeetings:

mysql -u root -p

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

CREATE DATABASE open311 DEFAULT CHARACTER SET 'utf8';

...now do a new user with his own password:

CREATE USER 'hola'@'localhost' IDENTIFIED BY '123456';

...and give privileges to this user on the open311 database:

GRANT ALL PRIVILEGES ON open311.* TO 'hola'@'localhost' WITH GRANT OPTION;

FLUSH PRIVILEGES;

quit

open311 ..... name of the database
hola ..... user for that database
123456 ..... password of that user

To start, restart or stop mariadb:

systemctl start mysql.service

systemctl restart mysql.service

systemctl stop mysql.service

10)

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

We´ll install OpenMeetings in /opt/red5311. All the following information will be based on this directory.

Make the folder:

mkdir /opt/red5311

cd /opt/red5311

...and download the OpenMeetings file:

wget http://apache.rediris.es/openmeetings/3.1.1/bin/apache-openmeetings-3.1.1.zip

unzip apache-openmeetings-3.1.1.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.1.1.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/5.1.38/mysql-connector-java-5.1.38.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.38.jar /opt/red5311/webapps/openmeetings/WEB-INF/lib

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

nano /opt/red5311/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/open311

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

Modify on line 77:

, Username=root

...to

, Username=hola

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

Modify on line 78:

, Password=" />

...to

, Password=123456" />

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

Logically if initially you choose another name and password for the database, you will to change them here.

Push **Ctrl+x**, **Y** and **Enter** in the keyboard, to leave nano.

We protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

11)

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

Build a script to start and stop red5-OpenMeetings, that we´ll call red5:

cd /opt

nano /etc/init.d/red5

...please, copy and past the text **from here**:

```
#
#!/bin/sh -e
#
# Startup script for Red5

export RED5_HOME=/opt/red5311

start_red5="$RED5_HOME/red5.sh start"
stop_red5="$RED5_HOME/red5-shutdown.sh stop"

 start() {
        echo -n "Starting Red5: "
        ${start_red5} &
        echo "done."
}
stop() {

echo -n "Shutting down Red5: "
        ${stop_red5}
        echo "done."
}

case "$1" in
  start)
        start
        ;;
  stop)
        stop
        ;;
  restart)
        stop
```

```
        sleep 10
        start
        ;;
  *)
        echo "Usage: $0 {start|stop|restart}"
esac

exit 0
```

...**to here**.

If you made the installation in any other path, can modify the line:

RED5_HOME=/opt/red5311

...to

RED5_HOME=/your-path-installation

Push **Ctrl+x**, **Y** and **Enter** in the keyboard, to save and leave nano.

Concede execution permission:

chmod +x /etc/init.d/red5

12)

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

Restart mariadb:

systemctl restart mysql.service

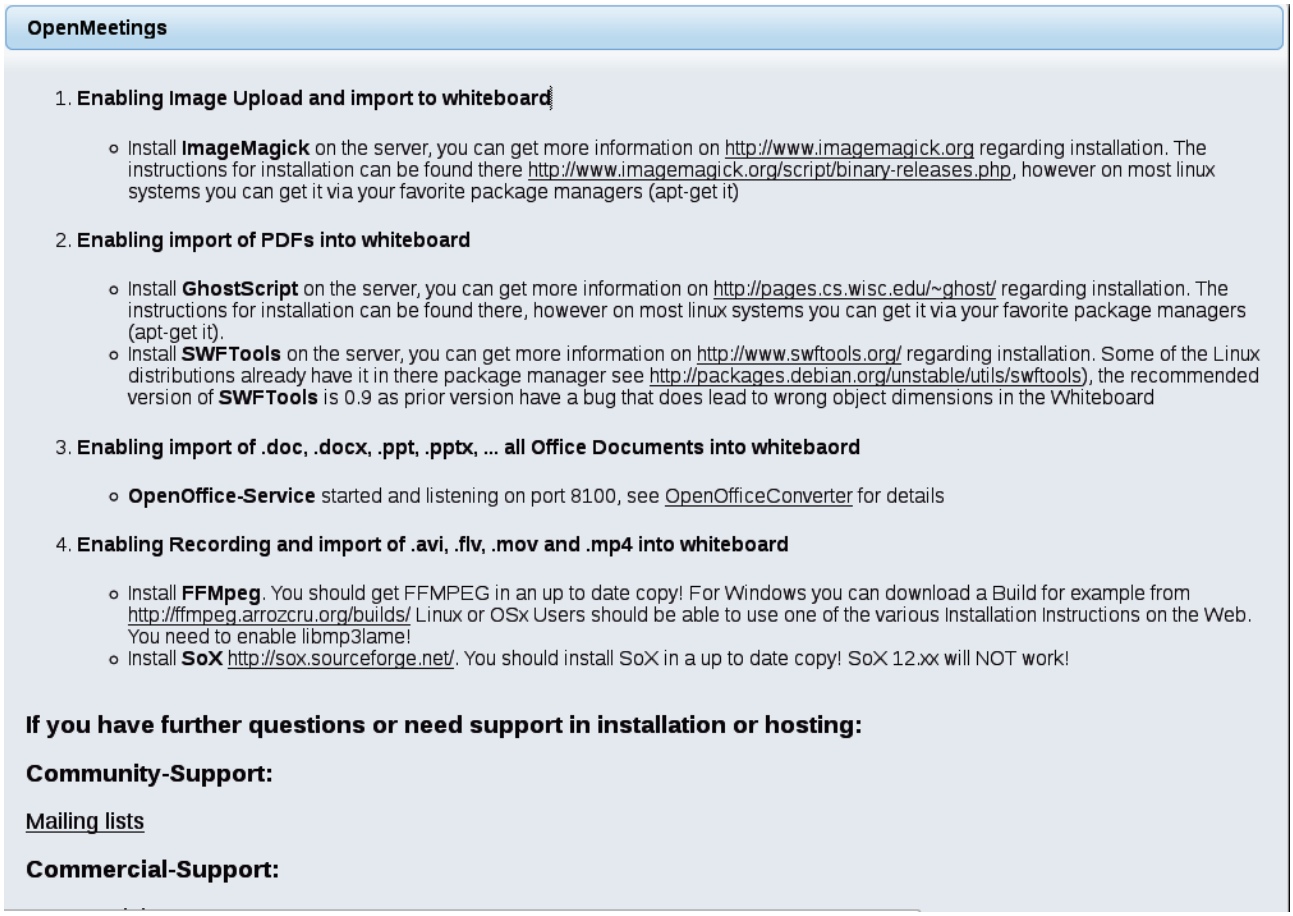
...and start red5-OpenMeetings, maybe in other window shell:

/etc/init.d/red5 start

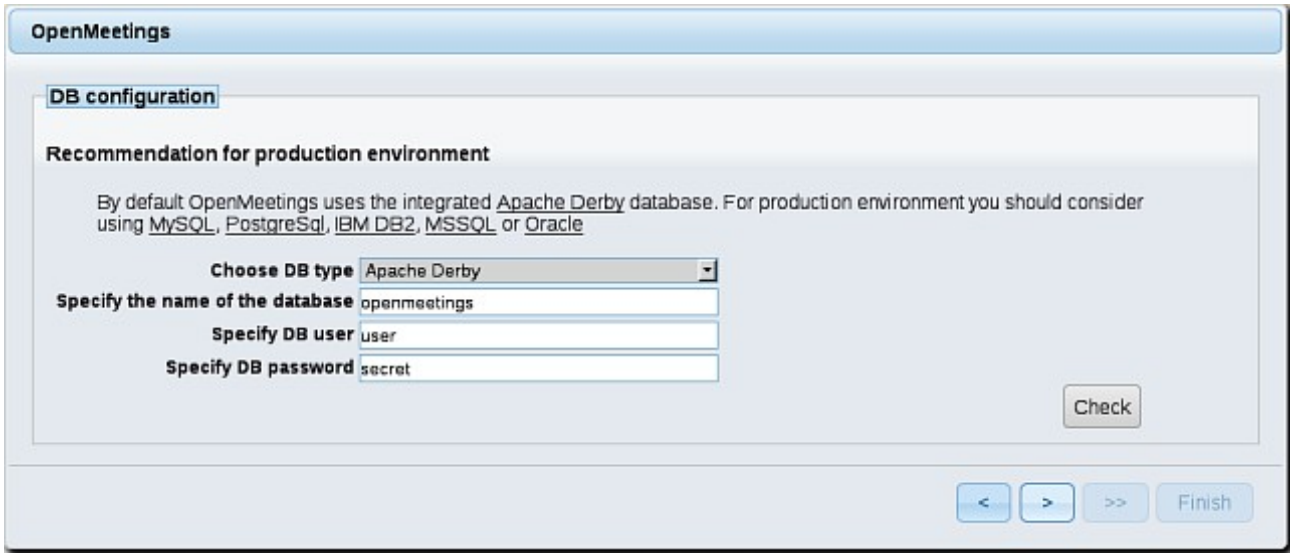
...wait 40 seconds at least, in order that red5 runing completely, and later can go to:

http://localhost:5080/openmeetings/install

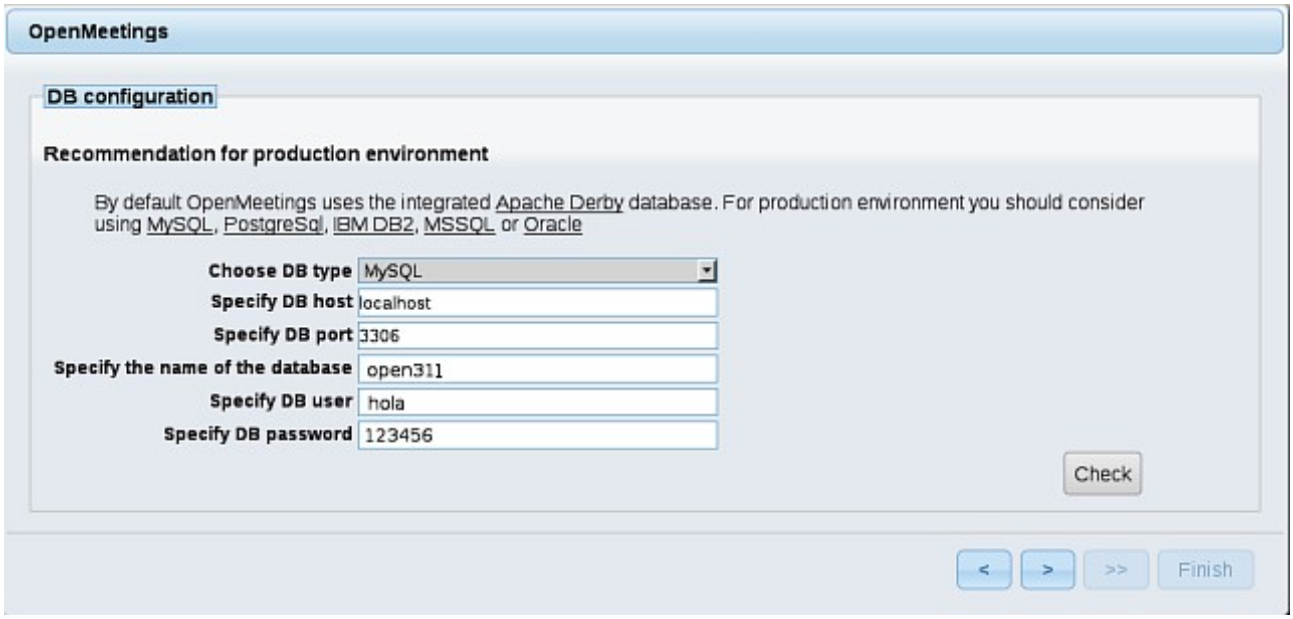
...there will appear a page similar to this one:



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

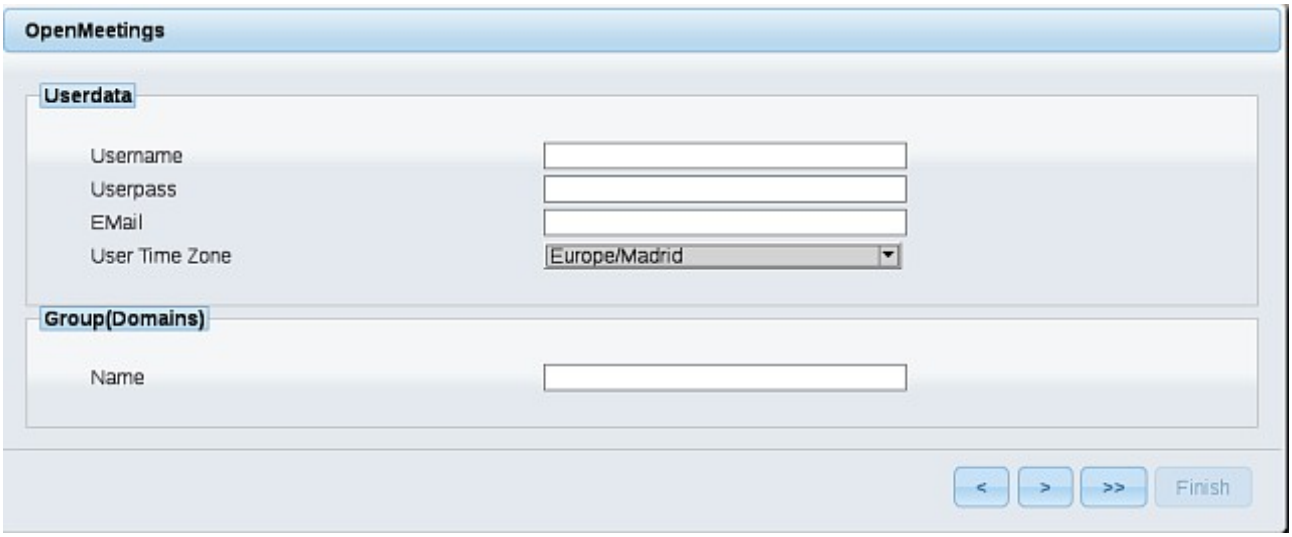


...then, scroll and **Choose DB type** to MySQL:



...will show the data base configuration we made in step 10, or with your own modifications.

Please, push > button and will go to:



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

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 server

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

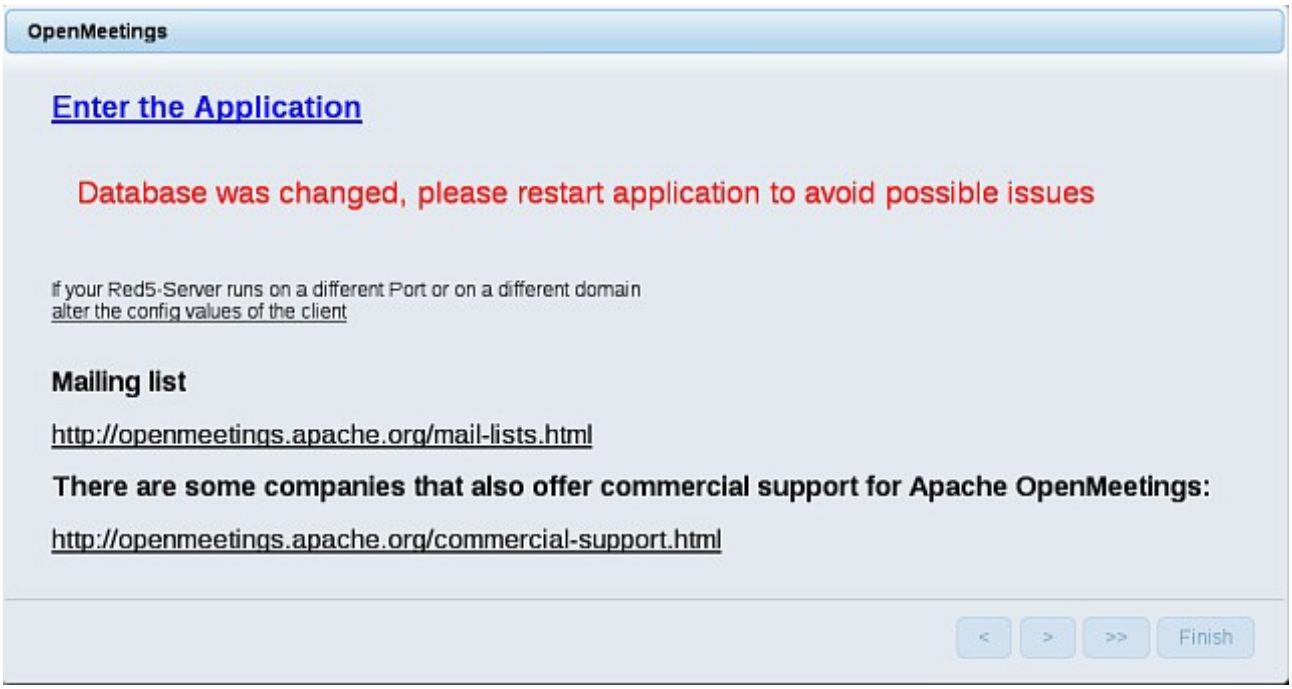
When the installation be finished, shouldd configure the rest.

Now go to bottom, and touch the button >> (double arrow). Will show this window:

Clic **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. Please, open a new terminal and restart red5:

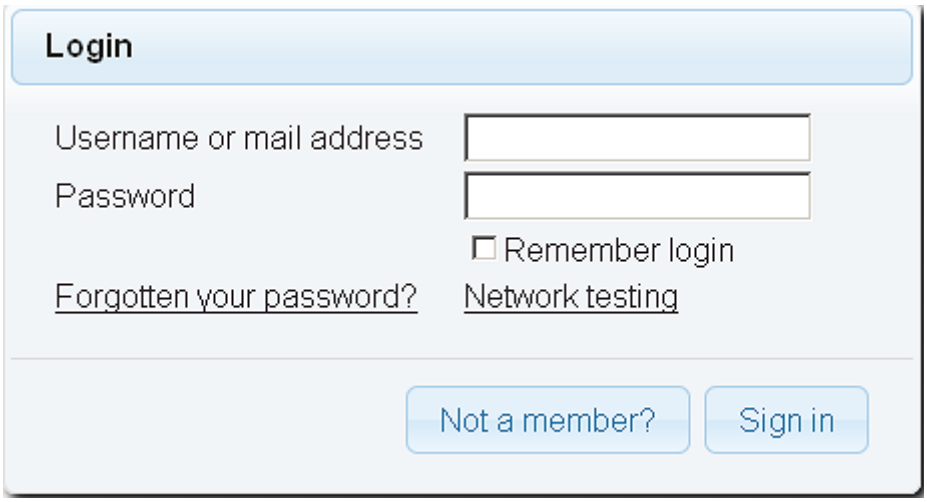
/etc/init.d/red5 restart



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** 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

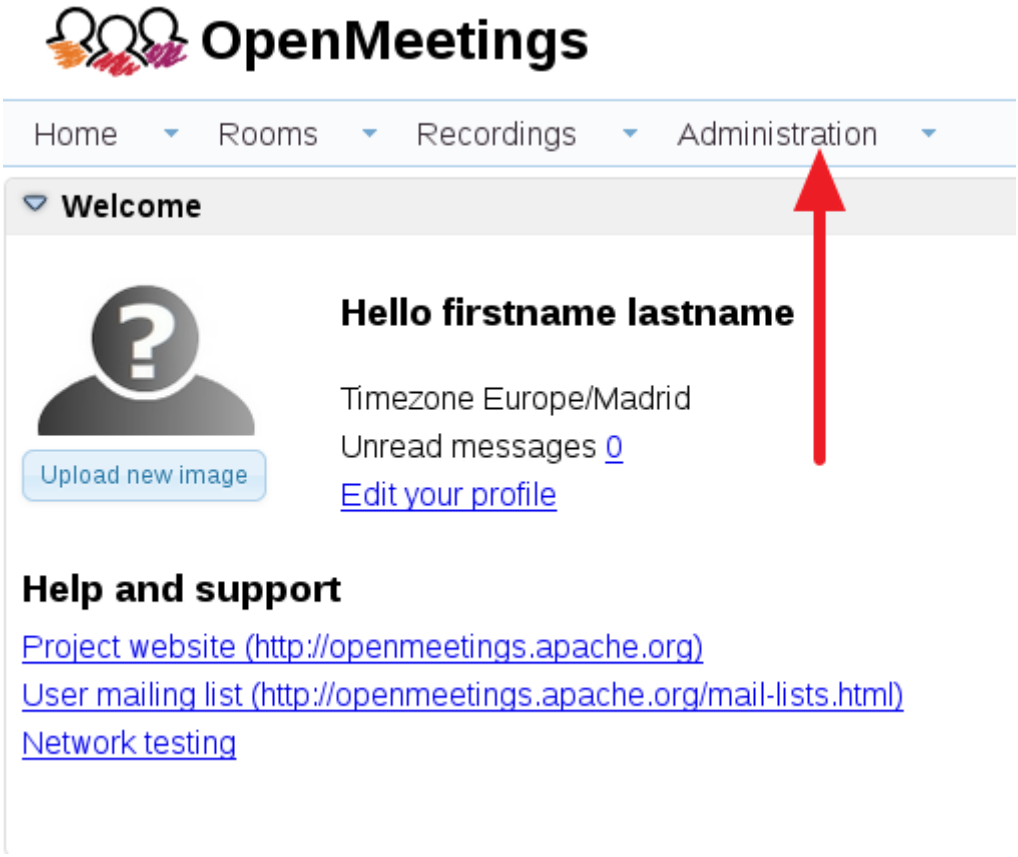
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

13)

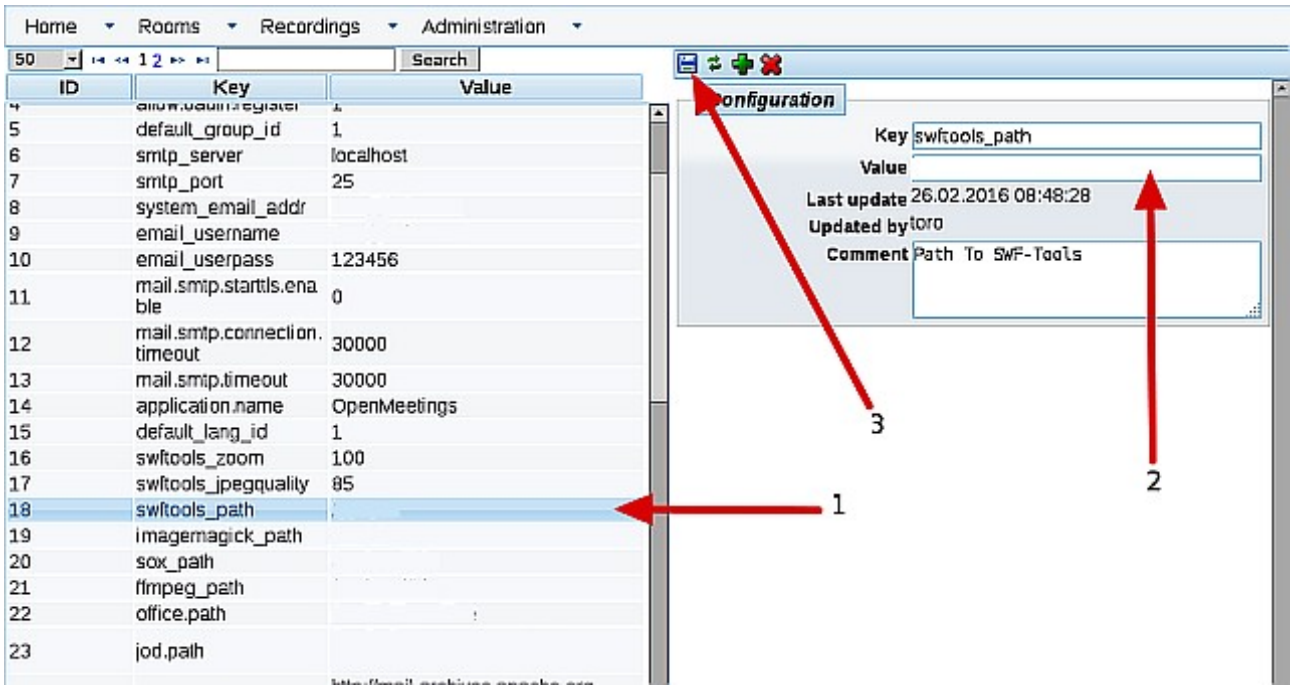
------- OpenMeetings's configuration -------

Once you acced to OpenMeetings, go to:

Administration → Configuration



...introduce the parameters for the conversion of files, the audio and the video:



Clic on: **swftools_path**...and to the right in **Value** type: /usr/bin

Clic on: **imagemagick_path**...and to the right in **Value** type: /usr/bin

Clic on: **sox_path**...and to the right in **Value** type: /usr/bin

Clic on: **ffmpeg_path**...and to the right in **Value** type: /usr/local/bin

Clic on: **office.path**...and to the right in **Value** type: /usr/lib64/libreoffice

Clic on: **jod.path**...and to the right in **Value** type: /opt/jodconverter-core-3.0-beta-4/lib

Remember save after each change (arrow number **3**, in the up screenshot).

Now there is OpenMeetings ready to work rightly.

We are going to remove files that already do not serve us, if you do not want to save them:

```
rm -f /opt/jodconverter-core-3.0-beta-4-dist.zip

rm -f /opt/mysql-connector-java-5.1.38.jar
```

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