Installation of Apache OpenMeetings 3.1.2 on openSUSE 13.2

This tutorial is made based on fresh installations of

openSUSE-13.2-GNOME-Live-i686.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.2 stable, that is to say will suppress his compilation. It is done step by step.

12-8-2016

Starting…

1)

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

Update operative system:

zypper refresh

zypper update

2)

<div align="center">

------ Installation of Java ------

</div>

Java it is necessary to work red5-OpenMeetings. We install Oracle Java. Open Java gives an error in some OpenMeetings function. It is tested.

cd /opt

Download the file:

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

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/8u101-b13/jdk-8u101-linux-i586.rpm"

...and install it:

rpm -ivh jdk-8u101-linux-i586.rpm

zypper install update-alternatives

We do to Oracle, the default java system:

update-alternatives --install /usr/bin/java java /usr/java/jdk1.8.0_101/bin/java 1551

update-alternatives --install /usr/bin/javadoc javadoc /usr/java/jdk1.8.0_101/bin/javadoc 1551

update-alternatives --install /usr/bin/jar jar /usr/java/jdk1.8.0_101/bin/jar 1551

update-alternatives --install /usr/bin/javap javap /usr/java/jdk1.8.0_101/bin/javap 1551

update-alternatives --install /usr/bin/javac javac /usr/java/jdk1.8.0_101/bin/javac 1551

update-alternatives --install /usr/bin/javah javah /usr/java/jdk1.8.0_101/bin/javah 1551

update-alternatives --install /usr/bin/jarsigner jarsigner /usr/java/jdk1.8.0_101/bin/jarsigner 1551

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

update-alternatives --config java

And to see if the selected version is active:

java -version

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 ------

We install packages and libraries that 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 nano

5)

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

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

zypper install -y ImageMagick giflib-devel

Sox, work the sound. Will compile it, ´cause it is newer version than the repos:

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

Swftools. LibreOffice convert the uploaded office files to pdf, and Swftools convert these pdf to swf (flash file), that later will show in the whiteboard. Also convert jpg2swf, png2swf, gif2swf, etc. Don´t use a newer version, surely have 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

...and block the version, because this repo version, have pdf2swf

zypper al swftools

6)
------ Installation of Adobe Flash Player ------

OpenMeetings even need Adobe Flash Player for rooms. It find in the repos.
We install it:

zypper install -y flash-player

7)
------ Installation of Jodconverter ------

Jodconverter work in the process to convert uploaded files.

cd /opt

(Only one line without space between both)

wget https://storage.googleapis.com/google-code-archive-
downloads/v2/code.google.com/jodconverter/jodconverter-core-3.0-beta-4-dist.zip

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

8)
------ Compilation of FFmpeg ------

FFmpeg work video. We´ll compile. Now install paquets and libraries.

zypper install -y glibc imlib2 imlib2-devel mercurial cmake

zypper install -y freetype2-devel libfreetype6 curl git

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

This ffmpeg compilation is based on this url, updated file versions 12-8-2016:

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

We´ll employ a script that it will download, compile and install ffmpeg.
It is tested recordings, audio and video synchronized. MP4 and Ogg ok.

Download the script:

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-opensuse132-32bit.sh

...concede execution permission:

chmod +x ffmpeg-opensuse132-32bit.sh

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

./ffmpeg-opensuse132-32bit.sh

Will spend about 30 minutes. When is finished, will announce it:

FFMPEG Compilation is Finished!

Then, please go to **step 9)**.

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

nano /opt/ffmpeg-opensuse.sh

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

FFmpeg compilation for openSUSE 13.2, 32 bit only.
Alvaro Bustos, thanks to Hunter.
12-8-2016
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
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
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
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$HOME/ffmeg_build/lib64" CPPFLAGS="-I$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 ..

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-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 in: /usr/local/bin

9)

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

MariaDB is the data 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 with his own user for OpenMeetings:

mysql -u root -p

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

  MariaDB [(none)]> CREATE DATABASE open312 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open312.
Now we create a user with all permission on this database.

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open312.* TO 'hola'@'localhost'
IDENTIFIED BY '123456' WITH GRANT OPTION;

* open312 ......is the database name.
* hola ………is the user name for the database.
* 123456 …....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

10)

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

We´ll install OpenMeetings in /opt/red5312. All the following information will be based on this directory.

Make the folder:

mkdir /opt/red5312

cd /opt/red5312

...and download the OpenMeetings file:

wget http://ftp.cixug.es/apache/openmeetings/3.1.2/bin/apache-openmeetings-3.1.2.zip

unzip apache-openmeetings-3.1.2.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.1.2.zip /opt

Download and install the file 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/red5312/webapps/openmeetings/WEB-INF/lib

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

nano /opt/red5312/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify in line 71:

, Url=jdbc:mysql://localhost:3306/openmeetings_3_1?

...to

, Url=jdbc:mysql://localhost:3306/open312?

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

Modify in line 76:

, Username=root

...to

, Username=hola

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

Modify in line 77:

, 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 save and leave nano.

We protect the access to the file:

<p align="center">(Only one line without space between both)</p>

chmod 640 /opt/red5312/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

11)
<p align="center">------ Script to launch red5-OpenMeetings ------</p>

Please, download the red5 run script:

cd /opt

 wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-3

...copy it to:

cp red5-3 /etc/init.d/

...concede permission of execution:

chmod +x /etc/init.d/red5-3

If you made the installation in any other path, please, edit the script and modify the line:

RED5_HOME=/opt/red5312

...to

RED5_HOME=/your-path-installation

12)

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

Restart mariadb (be connected to Internet):

systemctl restart mysql.service

...and run red5-OpenMeetings. Please, in a new terminal and connected to Internet:

/etc/init.d/red5-3 start

...wait till, at the last, show this text: "**clearSessionTable:0".** After this, please, go to:

http://localhost:5080/openmeetings/install

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

OpenMeetings

1. **Enabling Image Upload and import to whiteboard**

   o Install **ImageMagick** on the server, you can get more information on http://www.imagemagick.org regarding installation. The instructions for installation can be found there http://www.imagemagick.org/script/binary-releases.php, however on most linux systems you can get it via your favorite package managers (apt-get it)

2. **Enabling import of PDFs into whiteboard**

   o Install **GhostScript** on the server, you can get more information on http://pages.cs.wisc.edu/~ghost/ regarding installation. The instructions for installation can be found there, however on most linux systems you can get it via your favorite package managers (apt-get it).
   o Install **SWFTools** on the server, you can get more information on http://www.swftools.org/ regarding installation. Some of the Linux distributions already have it in there package manager see http://packages.debian.org/unstable/utils/swftools), the recommended version of **SWFTools** is 0.9 as prior version have a bug that does lead to wrong object dimensions in the Whiteboard

3. **Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whitebaord**

   o **OpenOffice-Service** started and listening on port 8100, see OpenOfficeConverter for details

4. **Enabling Recording and import of .avi, .flv, .mov and .mp4 into whiteboard**

   o Install **FFMpeg**. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from http://ffmpeg.arrozcru.org/builds/ Linux or OSx Users should be able to use one of the various Installation Instructions on the Web. You need to enable libmp3lame!
   o Install **SoX** http://sox.sourceforge.net/. You should install SoX in a up to date copy! SoX 12.xx will NOT work!
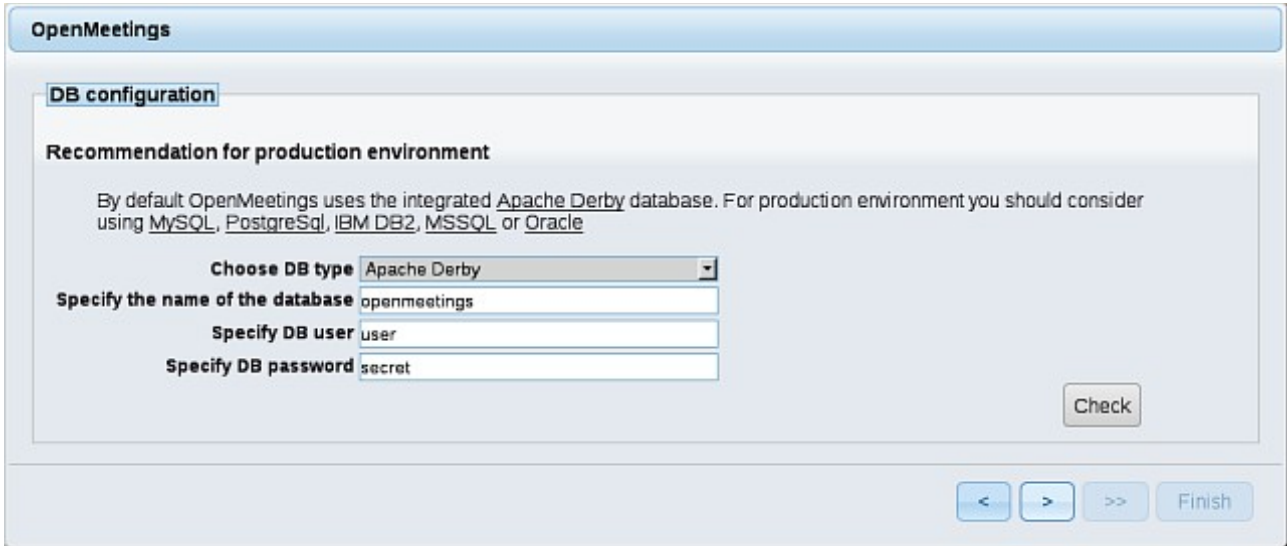
If you have further questions or need support in installation or hosting:
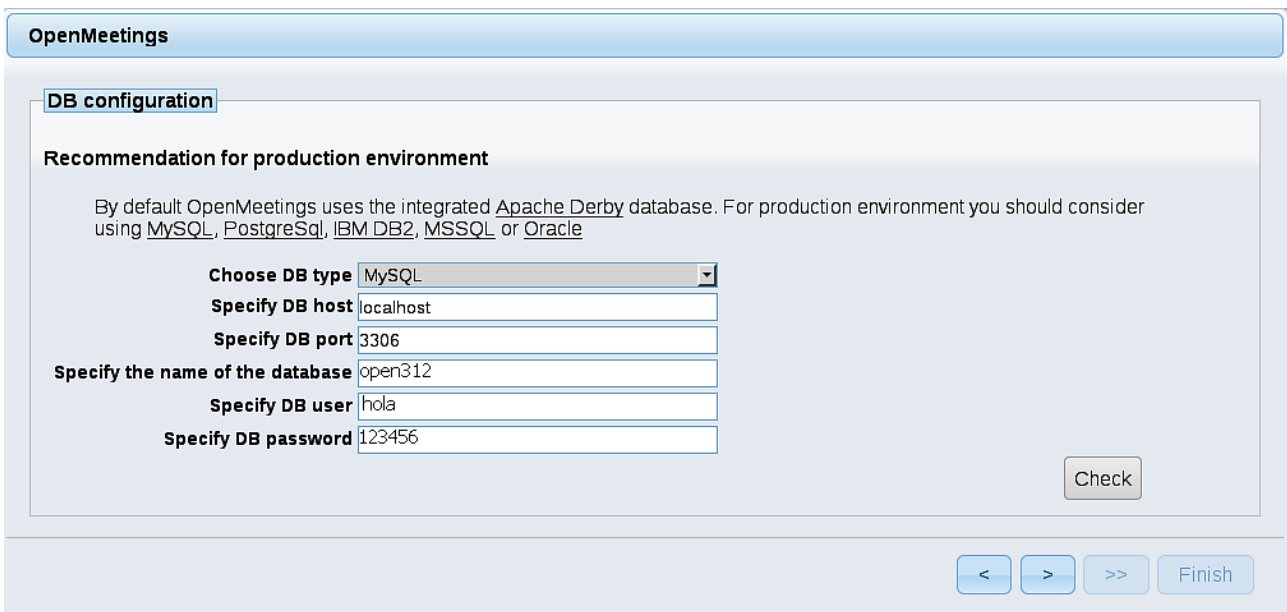
Community-Support:

Mailing lists

Commercial-Support:

...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 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, we´ll configure the rest.

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

Press **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 restart the server. Please, open a new terminal and restart red5, connected to Internet:

/etc/init.d/red5-3 restart
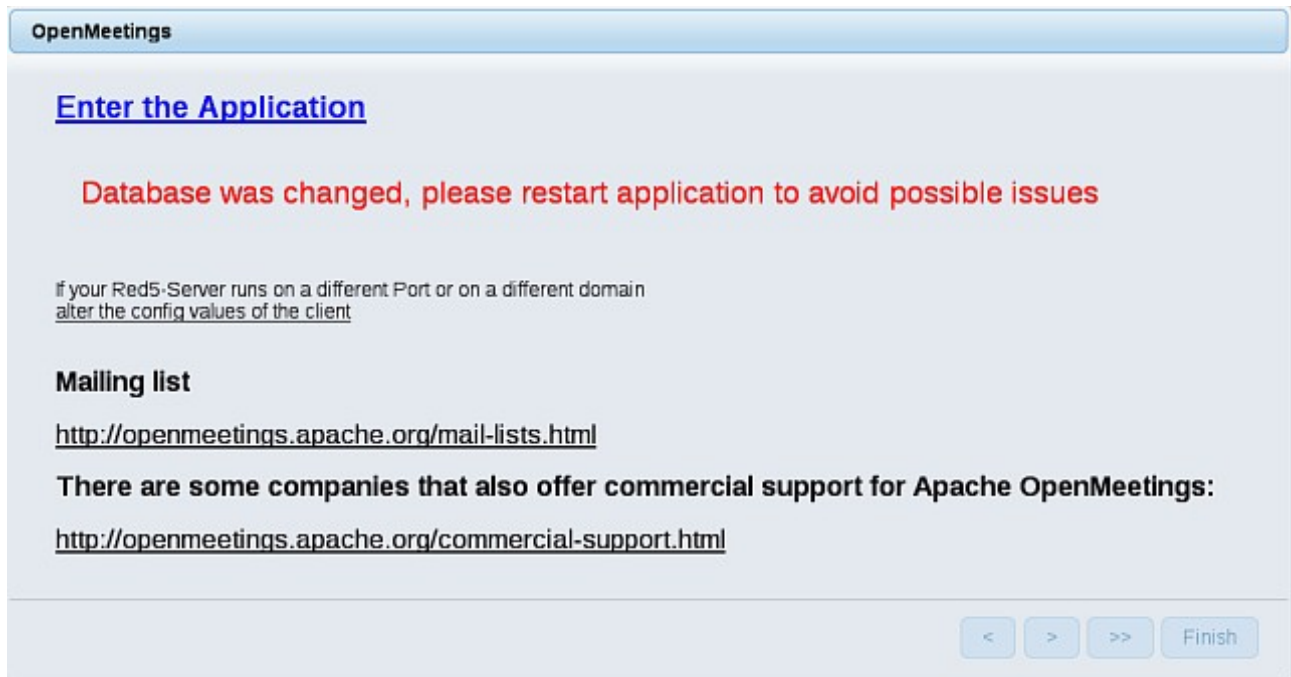
Now yes, you can clic on **Enter the Application**, or go with your browser to:

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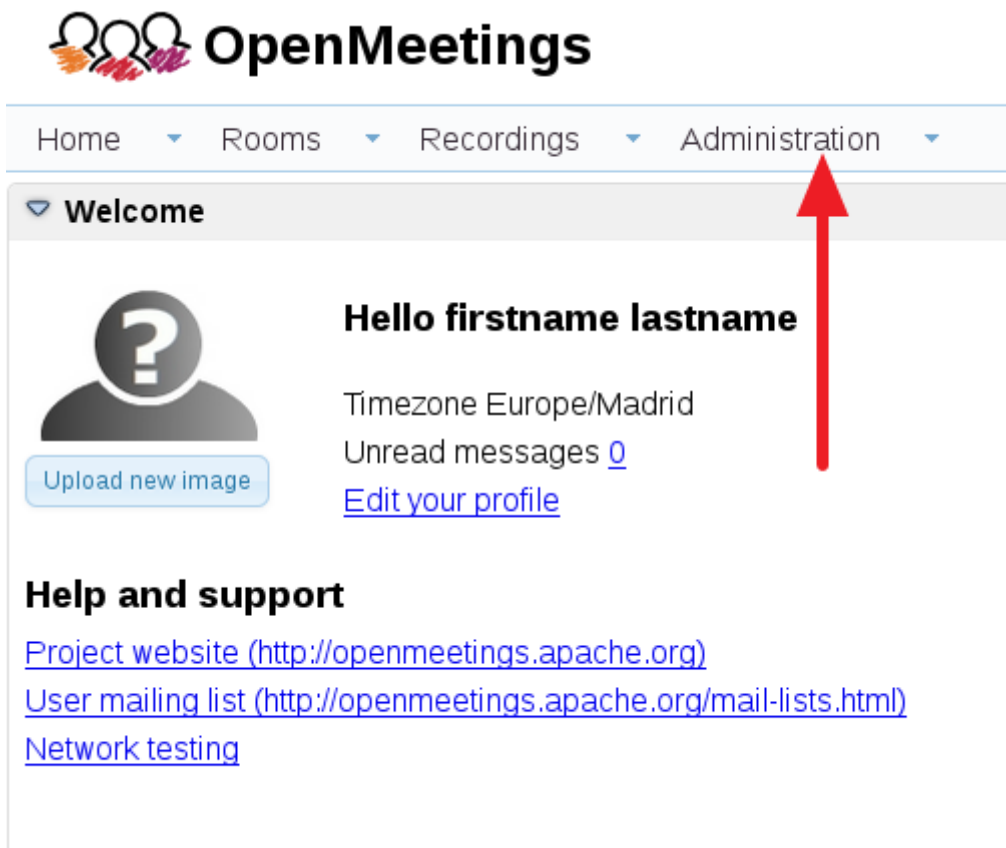
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

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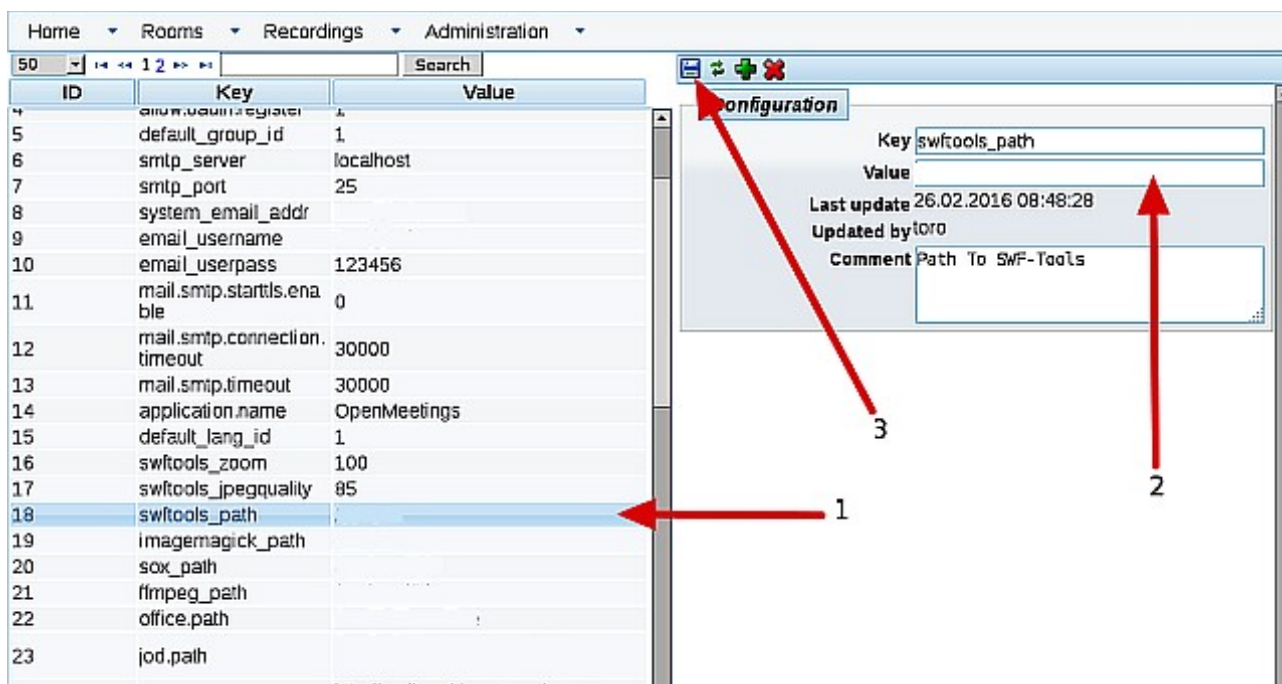
Clic on: **swftools_path**...and to the right in **Value** type: /usr/bin

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/local/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/lib/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 don´t like save them:

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

rm -f /opt/mysql-connector-java-5.1.39.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