Installation of Apache OpenMeetings 3.3.0 on Ubuntu 14.04 LTS

This tutorial is made based on fresh installations of

ubuntu-14.04.2-desktop-amd64.iso

It is tested with positive result. We will use the Apache's
binary version OpenMeetings 3.3.0 stable, that is to say
will suppress his compilation. It is done step by step.

14-7-2017

Starting...

1)

First update and upgrade the OS:

sudo apt-get update

sudo apt-get upgrade

2)

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

OpenMeetings **3.3.0** need Java **1.8** to work. Add repository and install it:

sudo add-apt-repository ppa:webupd8team/java

sudo apt-get update

sudo apt-get install oracle-java8-installer

Will open a window. Press **Enter**.
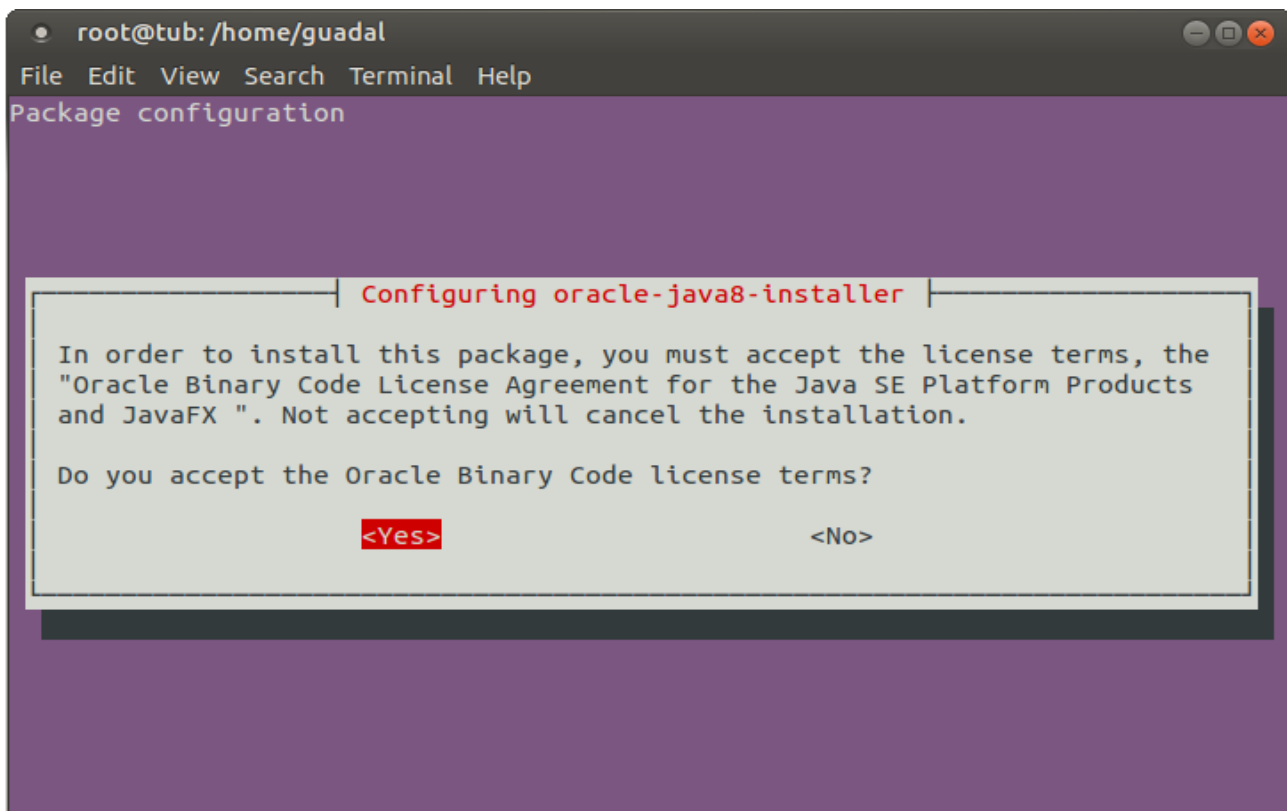
Will ask newly. Answer: **Yes → Enter**

If you have more than one java version installed, please choose Oracle Java 1.8:

sudo update-alternatives --config java

You can see the active java version:

java -version

To configure automaticaly the Java 8 Environment:

sudo apt-get install oracle-java8-set-default

3)

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

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

The ubuntu desktop iso have already LibreOffice installed, so don´t need install it.

This is only for server ubuntu iso.

sudo add-apt-repository ppa:libreoffice/ppa

sudo apt-get update

sudo apt-get install libreoffice

Now some kind of information only:

LibreOffice installation folder is /usr/lib/libreoffice.

4)

------ Installation ImageMagic, Sox and Swftools ------

ImageMagic, work the image files, jpg, png, gif, etc. Install it and some paquet and libraries.

(Only one line without space between both)

sudo apt-get install -y imagemagick libgif4 libjpeg62 zlib1g-dev liboil0.3 unzip make build-essential wget

Sox, work the sound. 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

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. Don´t use a newer version, surely have not pdf2swf. We install it:

For 64 bit:

cd /opt

(Only one line without space between both)

wget https://launchpad.net/ella-renaissance/ella-renaissance-beta/beta1/+download/swftools_0.9.1-1_amd64.deb

dpkg -i swftools_0.9.1-1_amd64.deb

echo "swftools hold" | sudo dpkg --set-selections   (To block version).

For 32 bit:

cd /opt

(Only one line without space between both)

wget https://launchpad.net/ella-renaissance/ella-renaissance-beta/beta1/+download/swftools_0.9.1-1_i386.deb

dpkg -i swftools_0.9.1-1_i386.deb

echo "swftools hold" | sudo dpkg --set-selections   (To block version)

5)

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

OpenMeetings even need Adobe Flash Player for rooms. Install it:

sudo apt-get install flashplugin-installer

6)

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

FFmpeg will work with video.

This compilation is based on:

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

Updated to 14-7-2017. Install libraries.

(Only one line with space between each one)

sudo apt-get -y --force-yes install autoconf automake build-essential 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 nmap

I made a script that it will download, compile and install ffmpeg. 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 announce it:

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 paste **from here**:

```
# FFmpeg compilation for Ubuntu and Debian.
# Alvaro Bustos. Thanks to Hunter.
# Updated 14-7-2017

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 http://downloads.xiph.org/releases/opus/opus-1.1.3.tar.gz
wget http://storage.googleapis.com/downloads.webmproject.org/releases/webm/libvpx-1.5.0.tar.bz2
git clone --depth 1 git://source.ffmpeg.org/ffmpeg

# 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/ffpmeg.sh
```

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

```
cd /opt
```

```
./ffmpeg.sh
```

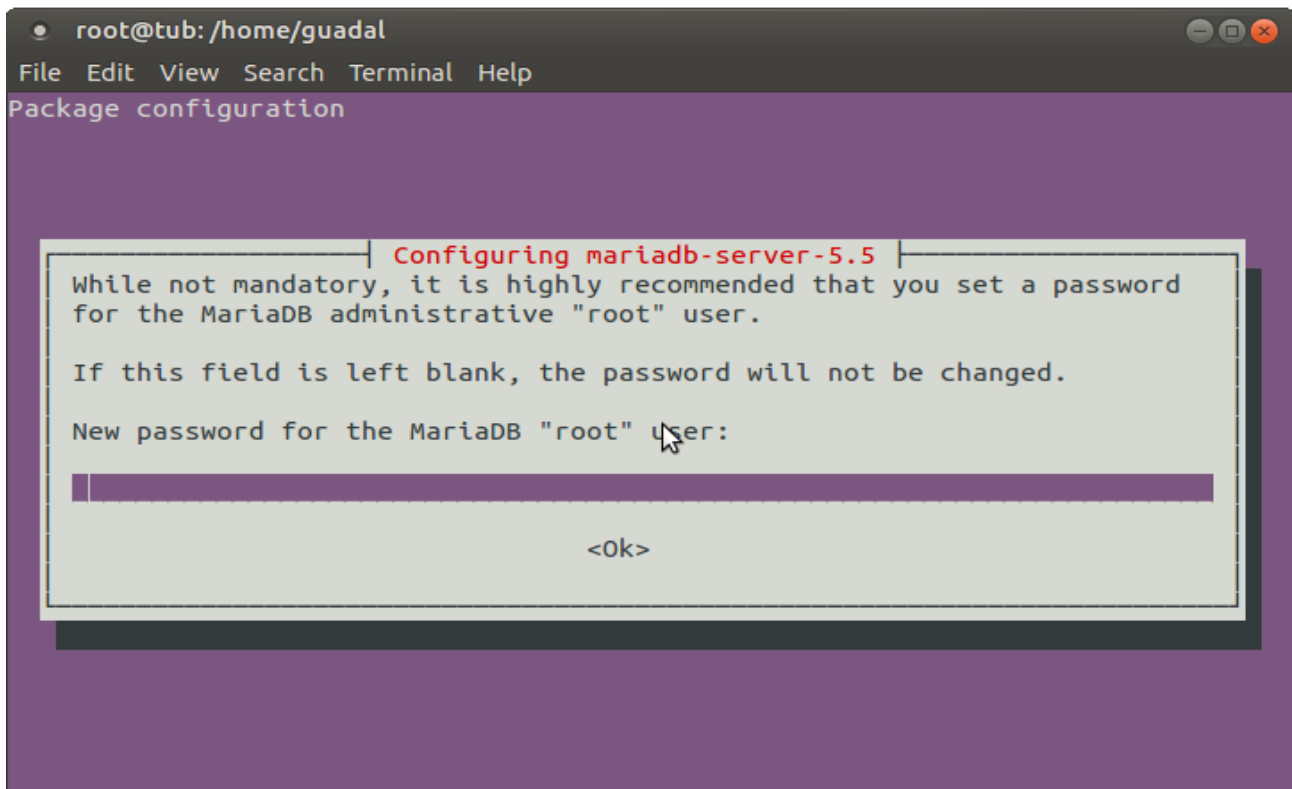All the compiled files are installed on: /usr/local/bin

7)
------ Installation and configuration of MariaDB data server ------

MariaDB is the data server. Will install it. (Versions 5.5 or 10.x):

sudo apt-get install python-software-properties software-properties-common
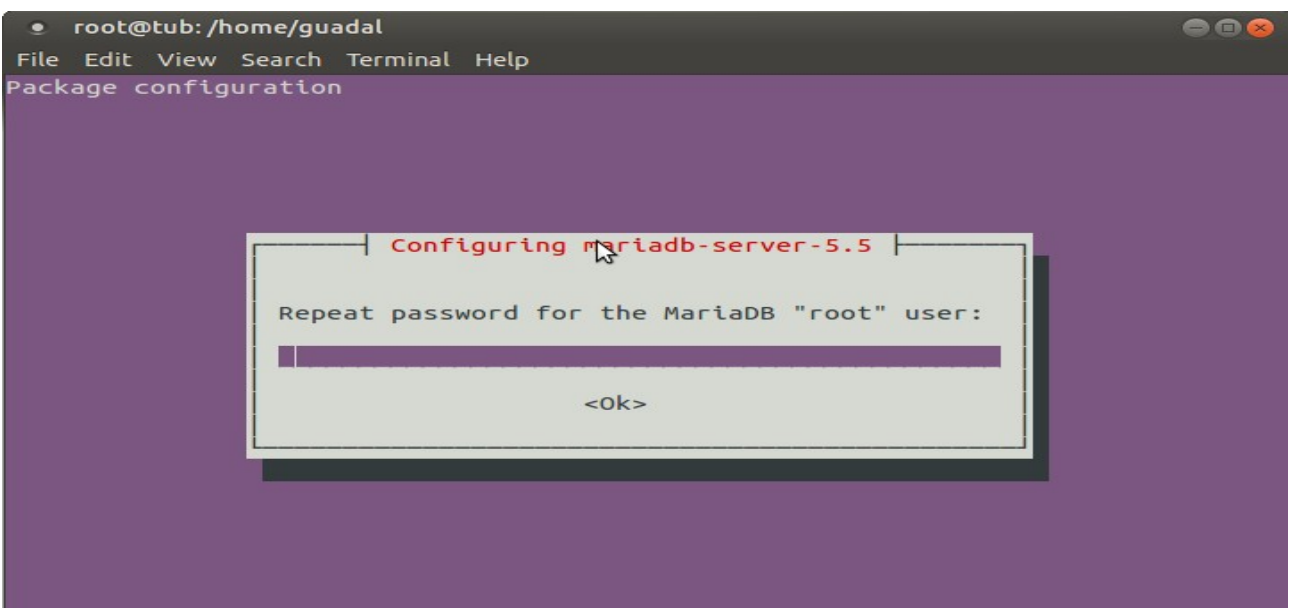
sudo apt-get install mariadb-server

Will open a window asking for a root MariaDB password.

Type one password → **OK** → **Enter**

Will ask repeat the password:

Run MariaDB:

/etc/init.d/mysql start

Make a database with his own user for OpenMeetings:

mysql -u root -p

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

MariaDB [(none)]> CREATE DATABASE open330 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open330.
Now we create a user on this database. User password must be of 8 digits minimum:

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open330.* TO 'hola'@'localhost'
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open330 ......is the database name.
* hola ………is the user name for the database.
* 1a2B3c4D ..is the password of that user

You can change the data...but remember it! Later well need it.

Now, we leave MariaDB:

MariaDB [(none)]> quit

8)

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

We´ll install OpenMeetings in /opt/red5330. All the following information will be based on this directory.
Call to our folder of installation red5330

Make the folder:

mkdir /opt/red5330

cd /opt/red5330

wget http://apache.miloslavbrada.cz/openmeetings/3.3.0/bin/apache-openmeetings-3.3.0.zip

unzip apache-openmeetings-3.3.0.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.3.0.zip /opt

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

chown -R nobody /opt/red5330

Unload 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/5.1.42/mysql-connector-java-5.1.42.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.42.jar /opt/red5330/webapps/openmeetings/WEB-INF/lib

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

gedit /opt/red5330/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modifique la linea 72:

, Url=jdbc:mysql://localhost:3306/openmeetings_3_3?

...a

, Url=jdbc:mysql://localhost:3306/open330?

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

Logically, if initially you chose another name and password for the database, you must change them here.

We protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red5330/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

9)

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

Please, unload 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

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 40 seconds at least, in order that red5 it is runing completely, and after can go to:

http://localhost:5080/openmeetings/install

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

OpenMeetings

1. Enabling import of PDFs into whiteboard

○ 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).
○ 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

If you have further questions or need support in installation or hosting:

Community-Support:

Mailing lists

Commercial-Support:

Commercial-Support

Press [>] button, (bottom), and will show the default configuration with Derby, but we

employ MySQL (MariaDB):

OpenMeetings

DB configuration

Recommendation for production environment

By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, PostgreSql, IBM DB2, MSSQL or Oracle.

NOTE Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type Apache Derby
Specify the name of the database openmeetings
Specify DB user
Specify DB password

Check

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

...and will show the 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 7, and his password:

Specify DB user   =   hola

Specify DB password   =   1a2B3c4D

Please, press   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 =   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.

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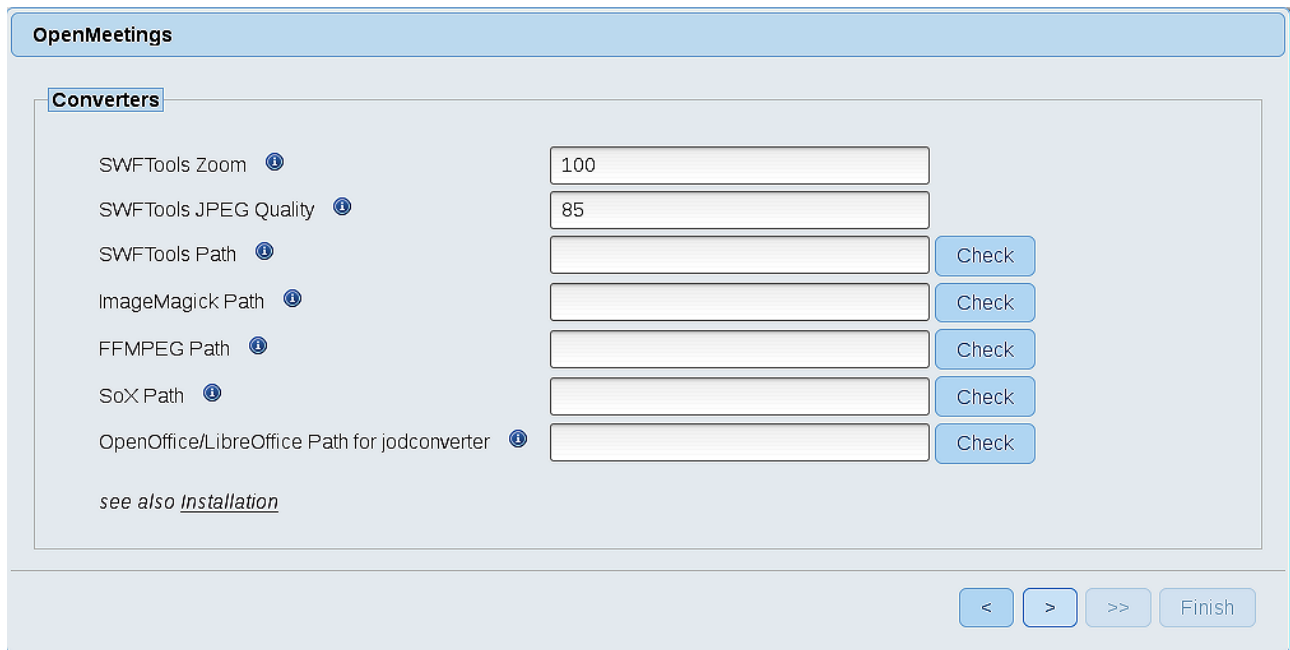
Mail-Refer (system_email_addr)   ==   john@gmail.com

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.

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

OpenMeetings

Converters

SWFTools Zoom ⓘ	100
SWFTools JPEG Quality ⓘ	85
SWFTools Path ⓘ	[ ] Check
ImageMagick Path ⓘ	[ ] Check
FFMPEG Path ⓘ	[ ] Check
SoX Path ⓘ	[ ] Check
OpenOffice/LibreOffice Path for jodconverter ⓘ	[ ] Check

see also *Installation*

`<` `>` `>>` `Finish`

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

SWFTools Path	==	/usr/local/bin
ImageMagick Path	==	/usr/bin
FFMPEG Path	==	/usr/local/bin
SOX Path	==	/usr/local/bin
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib/libreoffice **(32 y 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:

OpenMeetings

Crypt Type

Crypt Class   org.apache.openmeetings.util.crypt.SHA

*You can use this default crypt type which is equal to PHP-MD5 function or BSD-Style encryption by using:***org.apache.openmeetings.utils.crypt.MD5CryptImplementation** *for more information or to write your own Crypt-Style see: Custom Crypt Mechanism You can edit this value later BUT previous created Users and Sessions might be not usable anymore*

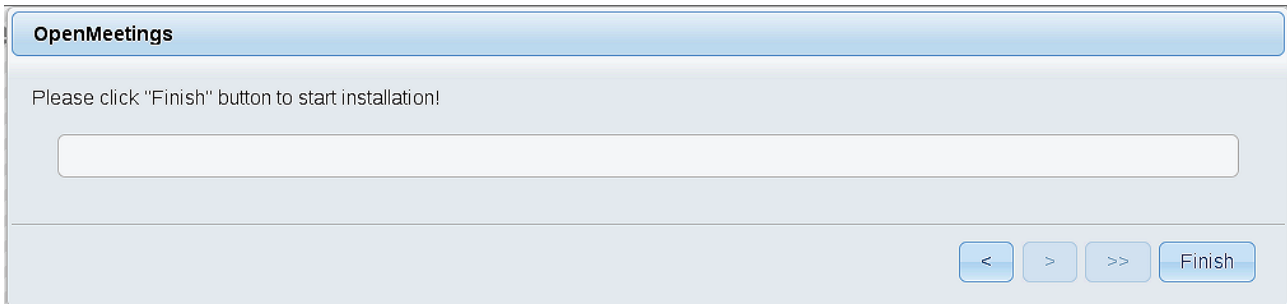**red5SIP Configuration**

Enable SIP   No ⌄

Enable red5SIP integration

SIP rooms prefix   400

Prefix for phone number of conference rooms

SIP extensions context   rooms

Context of Asterisk extensions
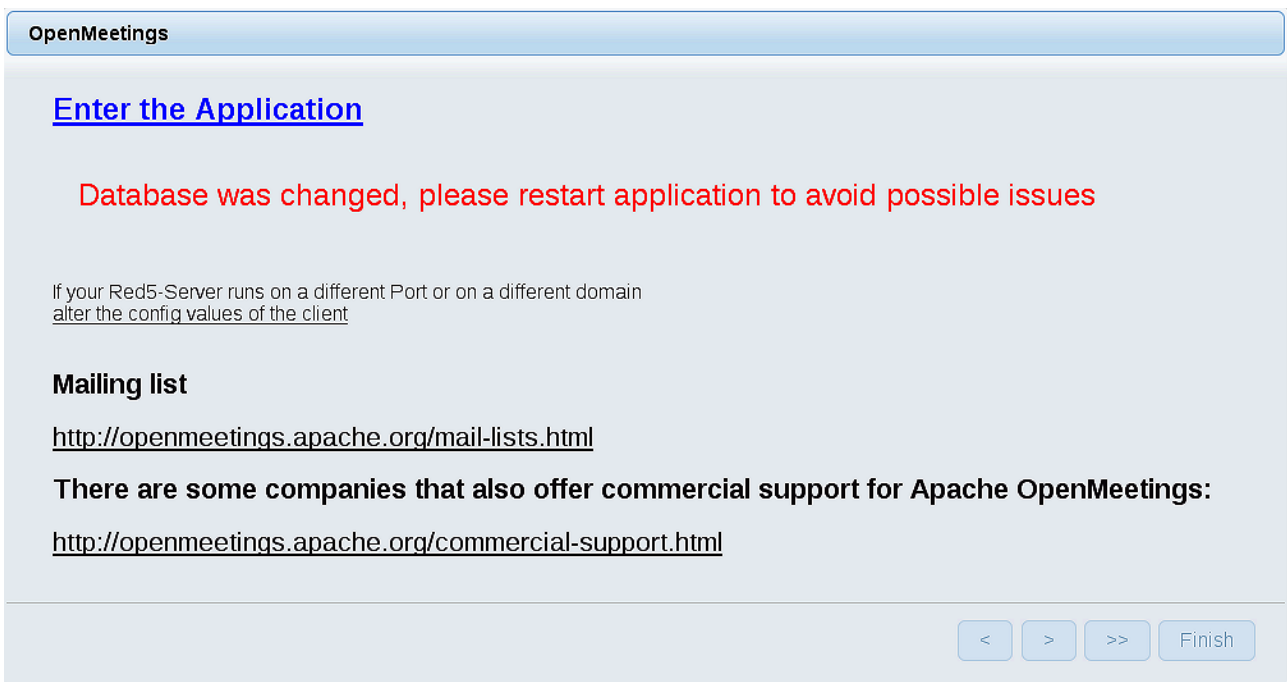
[<] [>] [>>] [Finish]

Now push the button [>] 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**.
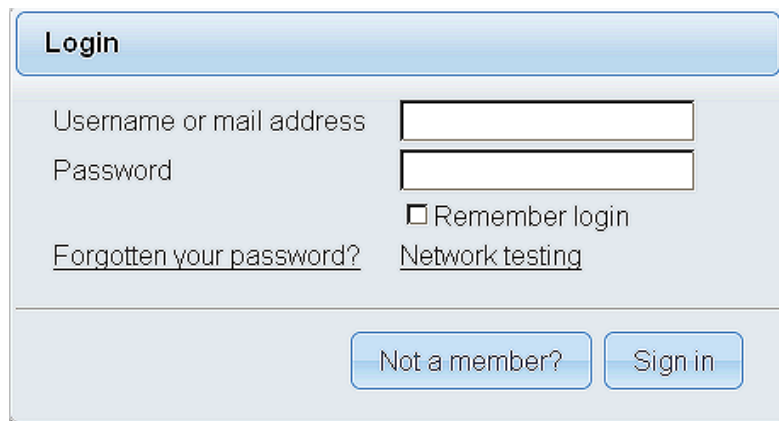First is need it to restart the server:

/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 **Sign in** button and…

...**Congratulations!**

The next time that you like to accede to 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.

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:

We are going to remove files and folders that already do not serve us, if you do not prefer to save them.

rm -f /opt/mysql-connector-java-5.1.42.jar

rm -f /opt/sox-14.4.2.tar.gz

rm -f -R /opt/sox-14.4.2

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