**Installation of Apache OpenMeetings 3.1.3 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 3.1.3 stable, that is to say will suppress his compilation. It is done step by step.

28-9-2016



Starting...


**1)**

First update and upgrade the OS:

sudo apt-get update

sudo apt-get upgrade



**2)**

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

OpenMeetings **3.1.3** 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**.
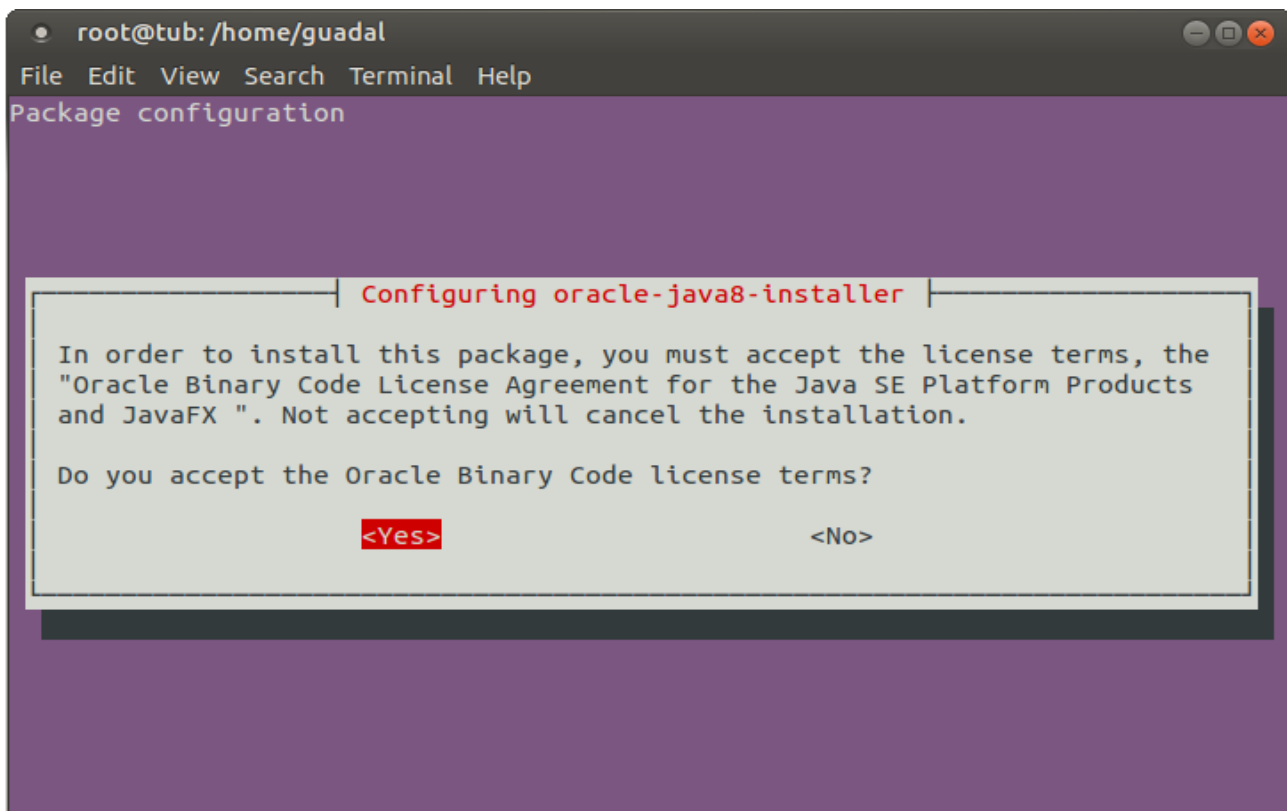


Will ask newly. Answer: **Yes → Enter**

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.

sudo apt-get install -y imagemagick gdebi libgif4 libjpeg62 synaptic 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

wget http://www.tataranovich.com/debian/pool/squeeze/main/s/swftools/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)**

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

**Jodconverter** participate 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

**7)**

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

**FFmpeg** will work with video.

This compilation is based on:

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

Updated to 28-9-2016. 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 avi, flv, mp4 and ogg formats.

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 8).**

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 12-8-2016

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-1.1.2.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

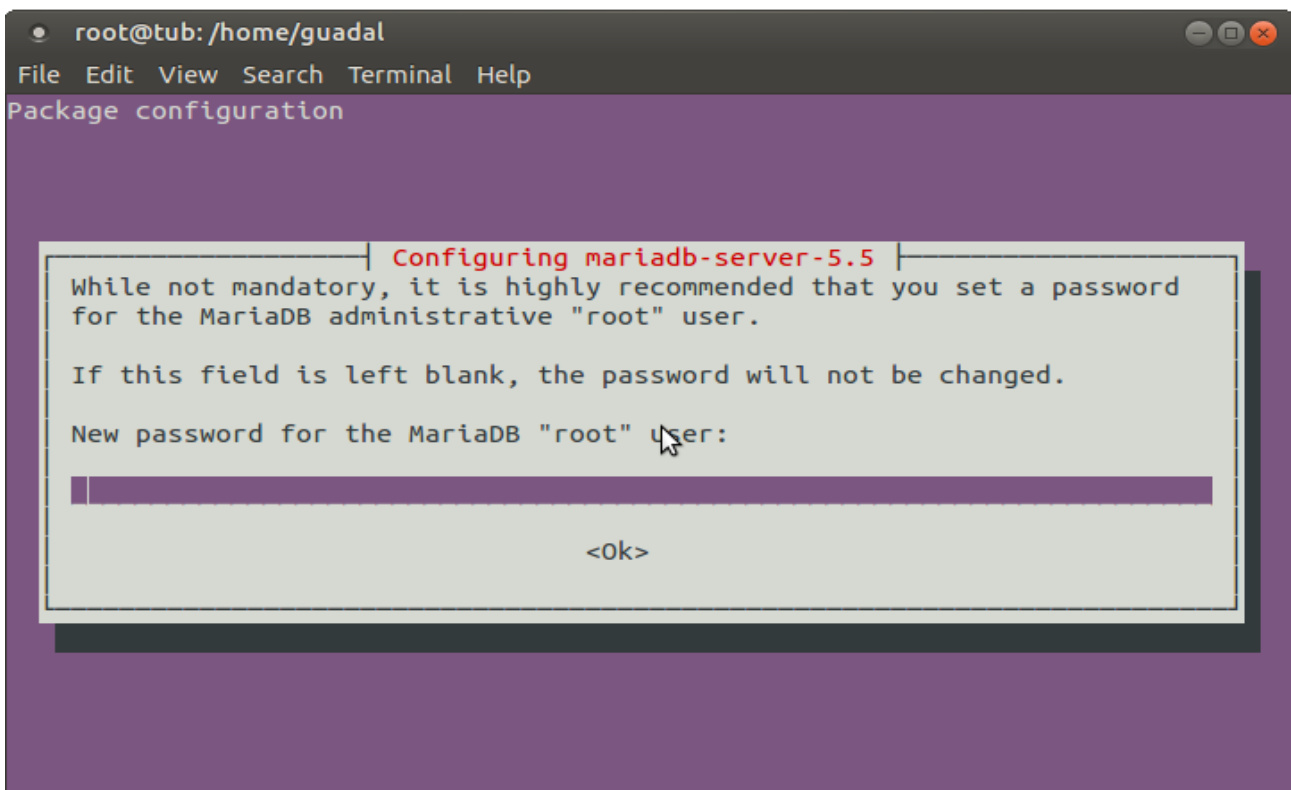All the compiled files are installed on:  /usr/local/bin

**8)**

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

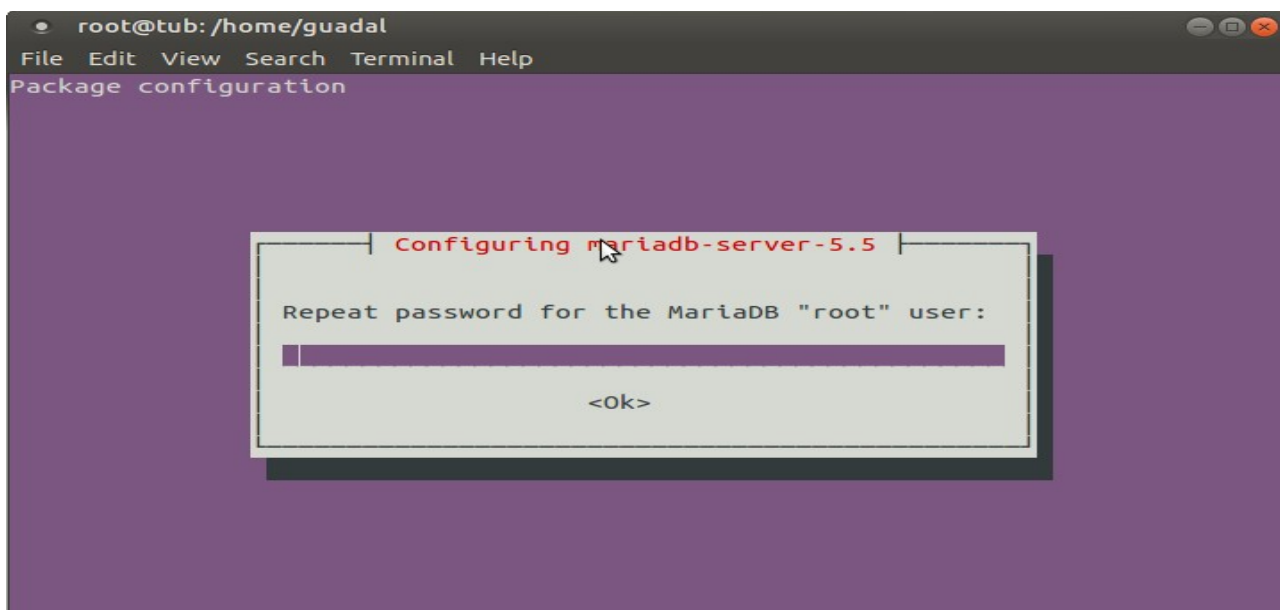**MariaDB** is the data server. Will install it. (Versions 5.5 or 10.x):

sudo apt-get install 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 open313 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open313.
Now we create a user with all permission on this database.

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open313.* TO 'hola'@'localhost'
IDENTIFIED BY '123456' WITH GRANT OPTION;

* open313 ......is the database name.
*  hola ………is the user name for the database.
* 123456 …....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


**9)**

<div align="center">

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

</div>

We´ll install OpenMeetings in /opt/red5313. All the following information will be based on this directory.

Call to our folder of installation red5313

Make the folder:

mkdir /opt/red5313

cd /opt/red5313

wget http://apache.miloslavbrada.cz/openmeetings/3.1.3/bin/apache-openmeetings-3.1.3.zip

unzip apache-openmeetings-3.1.3.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.1.3.zip /opt


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

chown -R nobody /opt/red5313

Unload and install the connector between OpenMeetings and MariaDB:

cd /opt

<div align="center">

(Only one line without space between both)

</div>

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/red5313/webapps/openmeetings/WEB-INF/lib


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


gedit /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

**Modify on line 71:**

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

...to

, Url=jdbc:mysql://localhost:3306/open313?

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


**Modify on line 76:**

, Username=root

...to

, Username=hola

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


**Modify on line 77:**

, Password=" />

...to

, Password=123456" />

...it is the password that we did initially for the user "openmeetings" in the database.
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/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml


**10)**
                        **------ Script to launch red5-OpenMeetings ------**

Please, unload the red5 run script:

cd /opt

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

...and copy it to:

cp red5-ubdeb /etc/init.d/

Concede permission of execution:

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

**11)**

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

Start MariaDB if still it is not:

/etc/init.d/mysql start

...and now start  red5-OpenMeetings:

/etc/init.d/red5-ubdeb 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.

**W**ait 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:

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

employ MySQL (MariaDB):

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



...will show the data base configuration we made in step 9, or with your own modifications.

Please, push [ > ] button, and will go to:



Now we must introduce the followings data:

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

**Userpass**    =    password ...for the previous user.
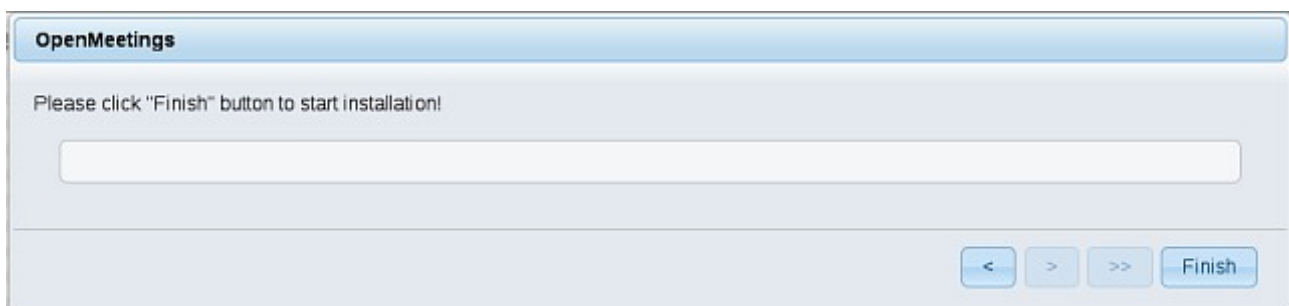
**Email**       =    email-adress ...of the previous user.

**User Time Zone** =  country where is this server.

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


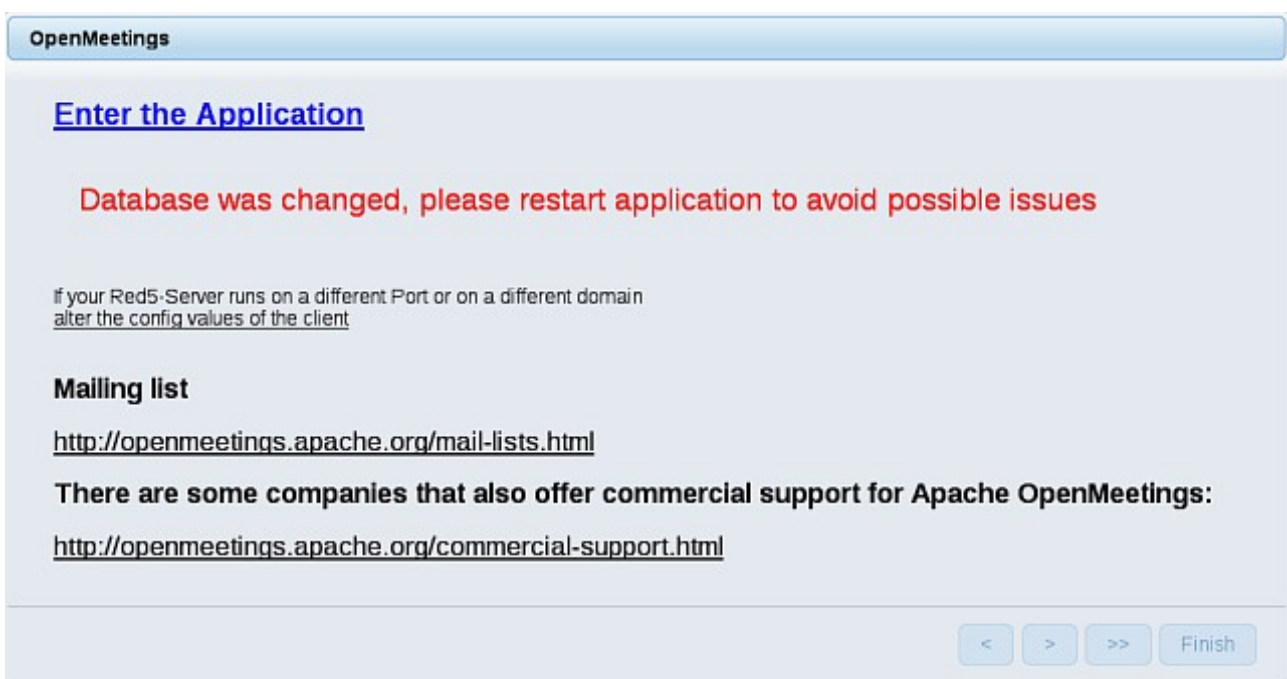When the installation be finished, we´ll configure the rest.

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

**OpenMeetings**

Please click "Finish" button to start installation!

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


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**.
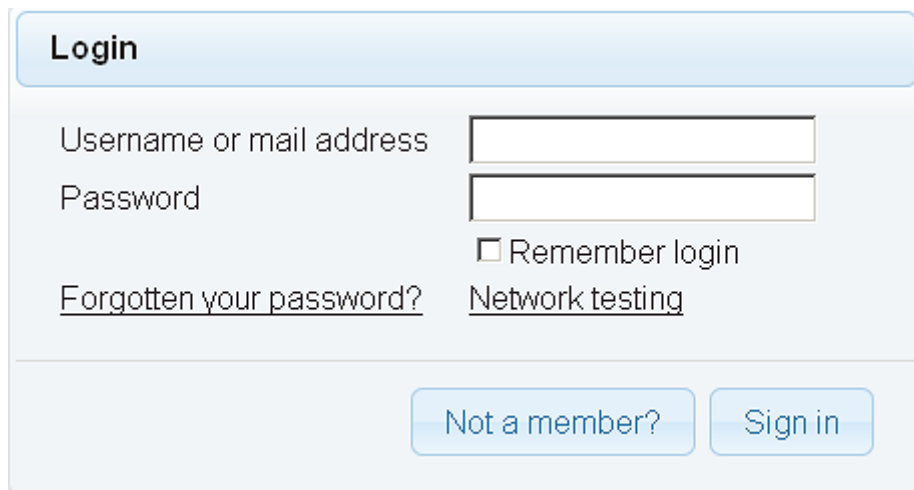First is need it to restart the server:

/etc/init.d/red5-ubdeb restart

**OpenMeetings**

## Enter the Application

**Database was changed, please restart application to avoid possible issues**

If your Red5-Server runs on a different Port or on a different domain
alter the config values of the client

**Mailing list**

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

**There are some companies that also offer commercial support for Apache OpenMeetings:**

http://openmeetings.apache.org/commercial-support.html

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

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 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.

**12)**

**------ 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/local/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 (32 bit): /usr/lib/libreoffice
Clic on:  **office.path**...and to the right in **Value** type (64 bit): /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 and folders 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-5.1.39.jar

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

rm -f -R /opt/sox-14.4.2


And this is all.


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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