



## Installation of Apache OpenMeetings 3.0.x on Ubuntu 14.04 LTS

This tutorial is made based on fresh installations of

**ubuntu-14.04.1-desktop-amd64.iso**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.0.6 stable, that is to say will suppress his compilation. It is done step by step.

23-2-2015 updated 25-5-2015

Starting...

1)

First update and upgrade the OS:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

2)

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

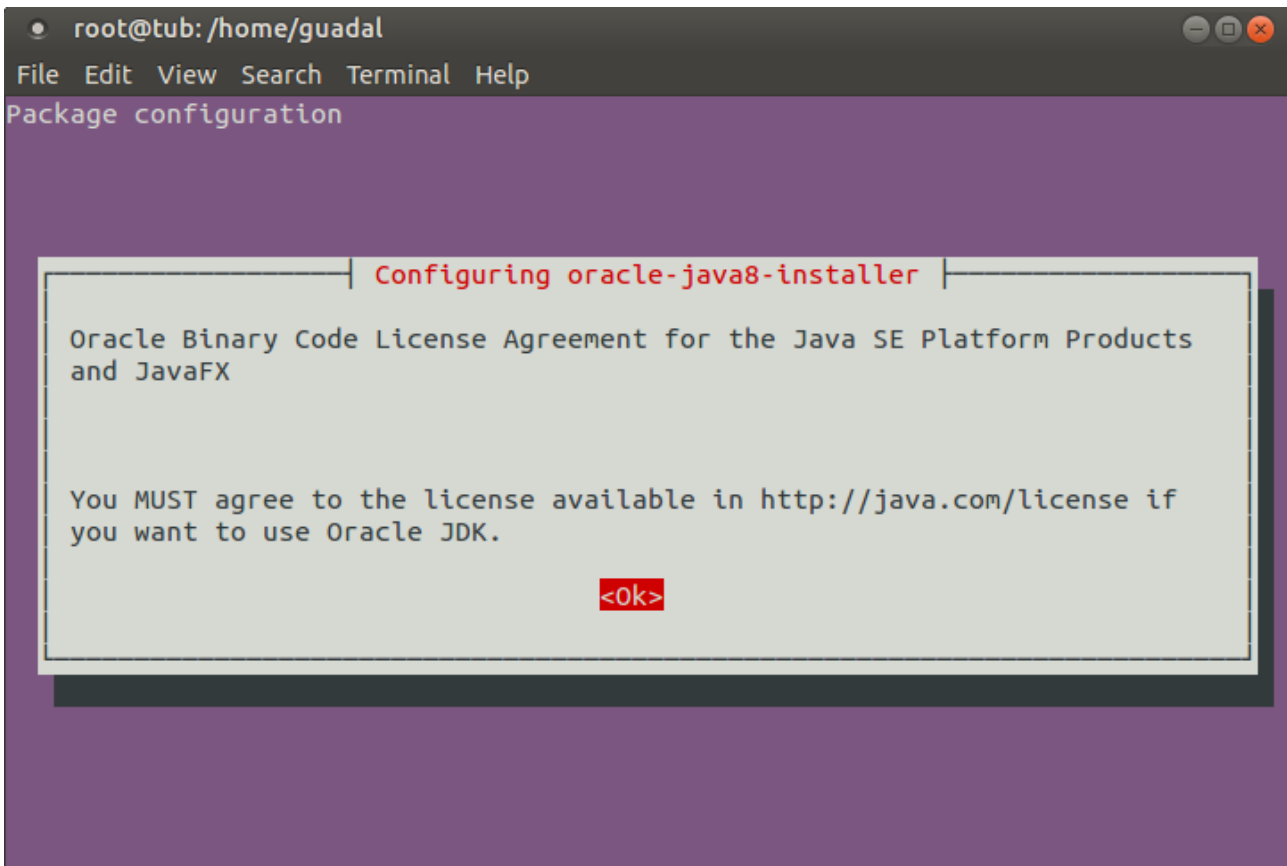
Red5-OM need Java to work. Add repository and install it:

```
sudo add-apt-repository ppa:webupd8team/java
```

```
sudo apt-get update
```

```
sudo apt-get install oracle-java8-installer
```

Will open a window. Press **Enter**.



```
root@tub: /home/guadal
File Edit View Search Terminal Help
Package configuration

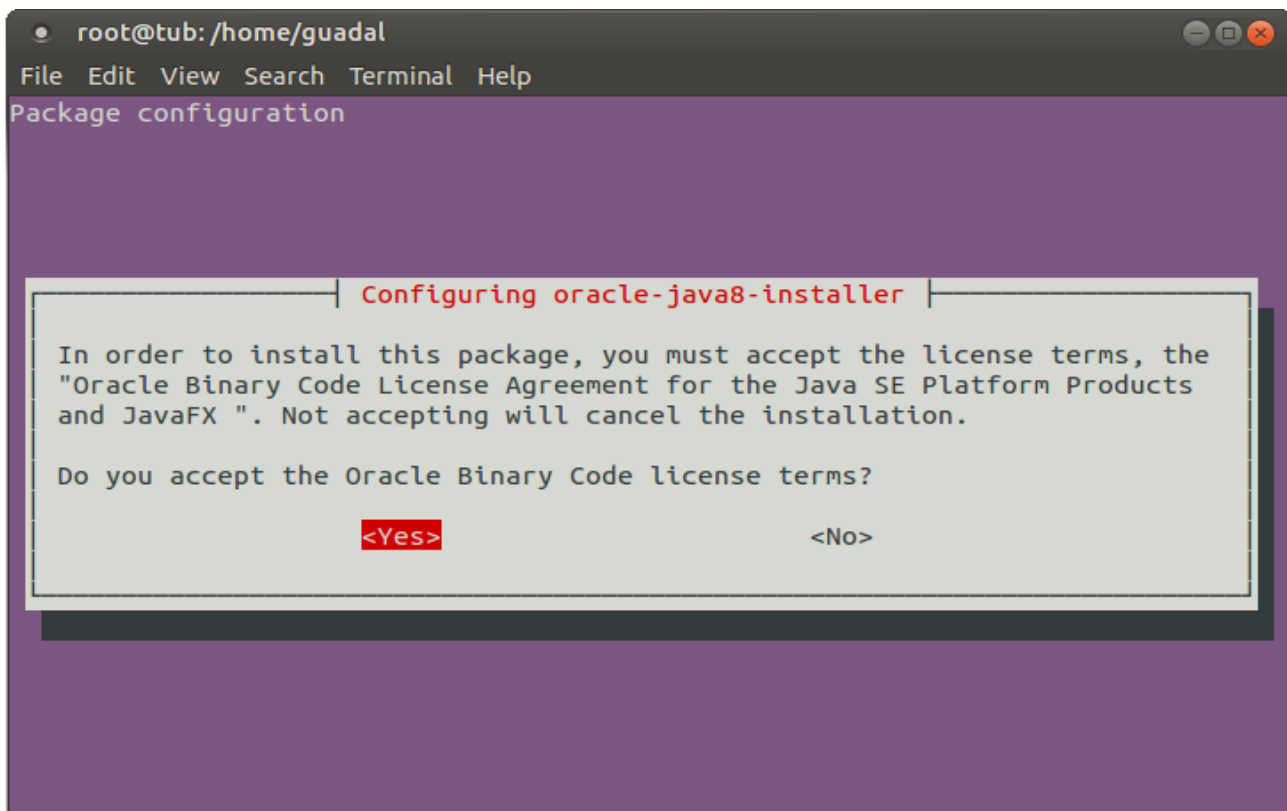
Configuring oracle-java8-installer

Oracle Binary Code License Agreement for the Java SE Platform Products
and JavaFX

You MUST agree to the license available in http://java.com/license if
you want to use Oracle JDK.

<Ok>
```

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



```
root@tub: /home/guadal
File Edit View Search Terminal Help
Package configuration

Configuring oracle-java8-installer

In order to install this package, you must accept the license terms, the
"Oracle Binary Code License Agreement for the Java SE Platform Products
and JavaFX ". Not accepting will cancel the installation.

Do you accept the Oracle Binary Code license terms?

<Yes> <No>
```

If you have more than one java version, please chose 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** will work the image files. Will install it and some more libraries.

```
sudo apt-get install imagemagick gdebi libgif4 libjpeg62 synaptic zlib1g-dev liboil0.3 unzip make build-essential
```

**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** work converting to swf the uploaded files.

Don't use a newer version swftools file. Don't have pdf2swf.

For **64** bit:

```
cd /opt
```

```
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
```

To block version: `echo "swftools hold" | sudo dpkg --set-selections`

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
```

To block version: `echo "swftools hold" | sudo dpkg --set-selections`

5)

---- **Installation of Adobe flash player** ----

OpenMeetings even need Adobe Flash Player for rooms.

```
sudo apt-get install flashplugin-installer
```

6)

---- 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
```

7)

---- Compilation of FFmpeg ----

**Ffmpeg** will work with video.

This compilation is based on:

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

Install libraries.

(In 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
```

We'll make a script that it should download, compile and install ffmpeg.

Today 8-6-2015, is a bug with the last x264 and ffmpeg versions when recording on OpenMeetings.  
Therefore we'll use versions from the end of the past year, that works rightly, i tested it.

If you update on the script the versions of x264 and ffmpeg, will find mp4 problems when recordings.

```
sudo gedit /opt/ffpmeg.sh
```

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

```
# Ffmpeg for Ubuntu, Debian 8 and Debian 7
# Alvaro Bustos. Thanks to Hunter.
# 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
wget http://download.videolan.org/pub/x264/snapshots/x264-snapshot-20141003-2245-
stable.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.tar.gz
wget http://webm.googlecode.com/files/libvpx-v1.3.0.tar.bz2
wget http://ffmpeg.org/releases/ffmpeg-2.5.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-snapshot*
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 ffmpegserver vsyasm x264 yasm yasm /usr/local/bin
```

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

```
echo ";Compilation 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

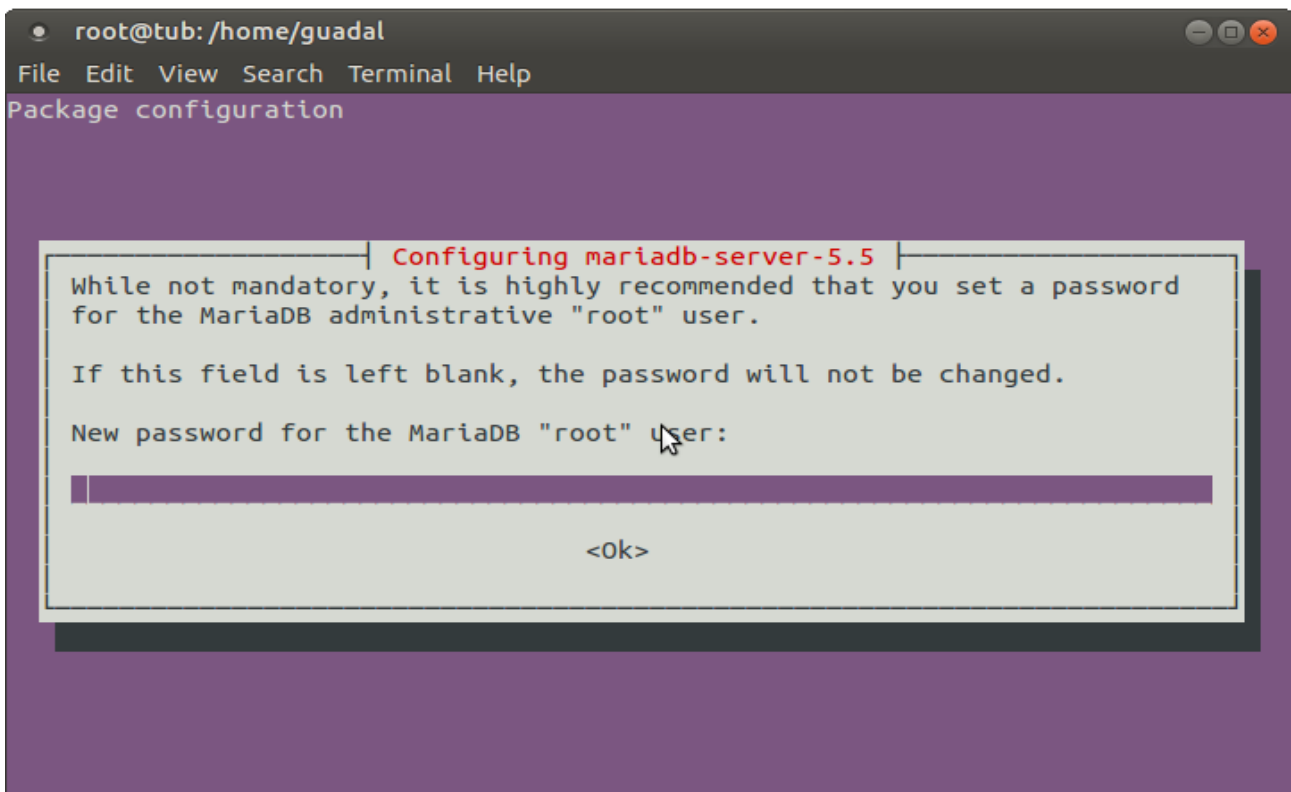
**8)**

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

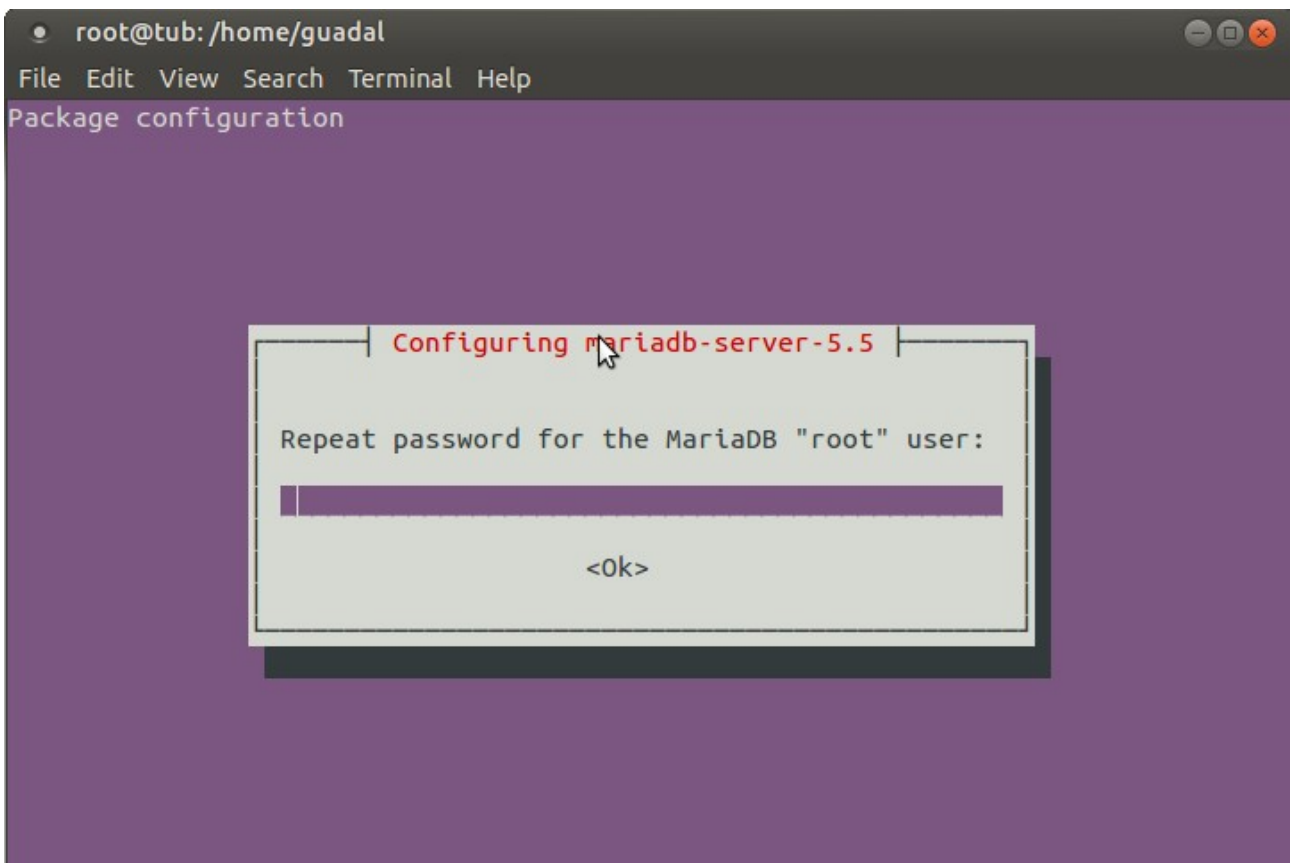
**MariaDB** is the database server. Will install it.

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

Will open a window asking for a root MariaDB password. Type it → 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 open306 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a called database open306 though you can choose another name to your wish.

Now we create a user with all the permission on this open306 database.

(In only one line with space)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open306.* TO 'openmeetings'@'localhost'  
IDENTIFIED BY '123456' WITH GRANT OPTION;
```

- \* open306 .....is the database name.
- \* openmeetings ...is the user name for the database.
- \* 123456 .....is the password of the user called openmeetings.

You can change the data...but remember it!

```
MariaDB [(none)]> quit
```

9)

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

We'll install OpenMeetings in /opt/red5306. All the following information will be based on this directory.

Call to our folder of installation **red5306**

Make the folder:

```
mkdir /opt/red5306
```

```
cd /opt/red5306
```

```
wget http://apache.rediris.es/openmeetings/3.0.6/bin/apache-openmeetings-3.0.6.zip
```

```
unzip apache-openmeetings-3.0.6.zip
```

...remove the unloaded file:

```
rm -f apache-openmeetings-3.0.6.zip
```

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

```
chown -R nobody /opt/red5306
```

Unload and install the connector between OpenMeetings and MariaDB:

```
cd /opt
```

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.35/mysql-connector-java-5.1.35.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.35.jar /opt/red5306/webapps/openmeetings/WEB-INF/lib
```

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

```
cd /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF
```

```
mv persistence.xml persistence.xml-ori
```

```
mv mysql_persistence.xml persistence.xml
```

```
gedit /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

...to modify on **line 78**

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

...to

```
, Url=jdbc:mysql://localhost:3306/open306
```

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

... to modify on **line 83**

```
, Username=root
```

```
...to
```

```
, Username=openmeetings
```

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

...to modify on **line 84**

```
, 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 will to change them here.

We protect the access to the file:

```
chmod 640 /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

10)

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

Please, unload the red5 run script:

```
cd /opt
```

(In one line only without space)

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5?version=2&modificationDate=1432719272000&api=v2
```

...when the download is finished press **Ctrl+c** keyboard.

Rename the file unloaded to red5:

```
mv red5?version=2 red5
```

...and copy it to:

```
cp red5 /etc/init.d/
```

Concede permission of execution:

```
chmod +x /etc/init.d/red5
```

11)

Start MariaDB if still it is not:

```
/etc/init.d/mysql start
```

...and now start red5-OpenMeetings:

```
/etc/init.d/red5 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 10 seconds *at least* 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:



## OpenMeetings

### OpenMeetings - Installation

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

- 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

- 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

#### 3. Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard


- **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

- Install **FFMpeg**. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from <http://ffmpeg.arozcru.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!

○ Install **SVT-av1** <http://www.svt-av1.org/>. You should install SVT in a up to date copy! SVT 1.0 will NOT work!

...clic on **Next** (bottom) and will show the database configuration we made:



## OpenMeetings - Installation

**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

Choose DB type	MySQL
Specify DB host	localhost
Specify DB port	3306
Specify the name of the database	
Specify DB user	
Specify DB password	

Check

< Previous    Next >    Last    Finish

...clic **Next** again:



## OpenMeetings - Installation

**Userdata**

Username	
Userpass	
E-Mail	
User Time Zone	Europe/Madrid

**Organisation(Domains)**

Name	
------	--

< Previous    Next >    Last    Finish

...here we must to introduce necessarily, to be able to continue, the following:

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

**Userpass** = **password** ...for the previous user.

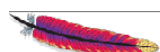
**Email** = **email-address** ...of the previous user.

**User Time Zone** = Country where is this server

Organisation(Domains)

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

Go below completely of the page and touch the button **Finish**



## OpenMeetings

OpenMeetings - Installation
Please click "Finish" button to start installation!
<input type="text"/>
<input data-bbox="954 1059 1094 1088" type="button" value=" &lt; Previous "/> <input data-bbox="1114 1059 1217 1088" type="button" value=" Next &gt; "/> <input data-bbox="1236 1059 1318 1088" type="button" value=" Last "/> <input data-bbox="1337 1059 1433 1088" type="button" value=" Finish "/>

...wait a seconds untill the tables are fill in the database.

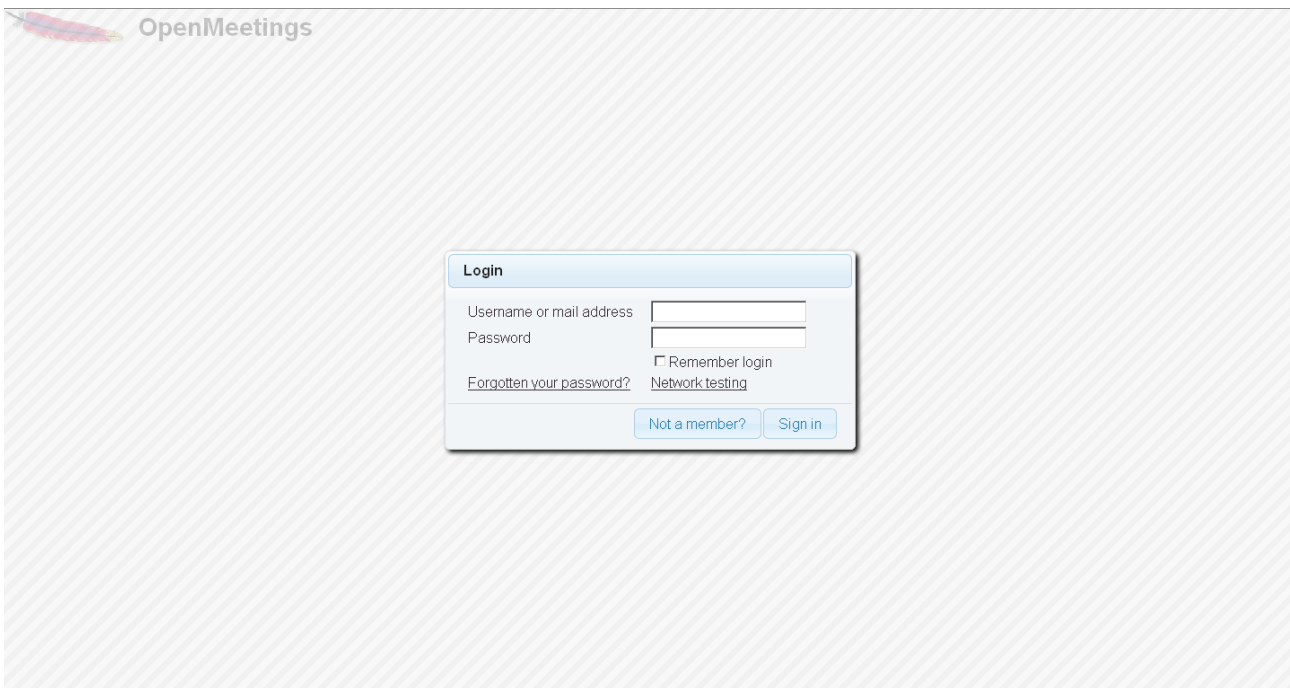
When has concluded, this another page will appear:



## OpenMeetings

OpenMeetings - Installation
<p><a href="#">Enter the Application</a></p> <p>If your Red5-Server runs on a different Port or on a different domain  <a href="#">alter the config values of the client</a></p> <p>Mailing list  <a href="http://openmeetings.apache.org/mail-lists.html">http://openmeetings.apache.org/mail-lists.html</a></p> <p>There are some companies that also offer commercial support for Apache OpenMeetings:  <a href="http://openmeetings.apache.org/commercial-support.html">http://openmeetings.apache.org/commercial-support.html</a></p>
<input data-bbox="941 1998 1082 2027" type="button" value=" &lt; Previous "/> <input data-bbox="1101 1998 1204 2027" type="button" value=" Next &gt; "/> <input data-bbox="1224 1998 1305 2027" type="button" value=" Last "/> <input data-bbox="1324 1998 1420 2027" type="button" value=" Finish "/>

...click on [Enter the Application](#)...and you should see OpenMeetings's entry:



Introduce the user's name and the password that you have chosen during the installation and  
**...Congratulations!**

The next time that you want to access OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember to open in the server the three following ports:

5080 1935 8088

...in order that it could access OpenMeetings from other machines.

12)

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

Once you access OpenMeetings go to:

**Administration → Configuration**

**OpenMeetings**

Home | Rooms | Recordings | Administration

Welcome

**Hello firstname lastname**

Timezone Europe/Madrid  
Unread messages 0  
[Edit your profile](#)

Upload new image

**Help and support**

[Project website \(http://openmeetings.apache.org\)](http://openmeetings.apache.org)  
[User mailing list \(http://openmeetings.apache.org/mail-lists.html\)](http://openmeetings.apache.org/mail-lists.html)  
[Network testing](#)

How to

- 1 Pres
- 2 C
- 3

OpenMe to enter meeting

**My rooms**

My conference room (for 1-16 users)  Users 0 / 25

My webinar room (for 1-120 users)  Users 0 / 150

Click on a room to get the room details

**Room #**

**Comment**

Users in this room

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

Home | Rooms | Recordings | Administration

50 | Search

ID	Key	Value
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default_lang_id	1
16	swftools_zoom	100
17	swftools_jpegquality	85
18	swftools_path	
19	imagemagick_path	
20	sox_path	
21	ffmpeg_path	
22	office.path	
23	jod.path	/opt/jod/lib
24	rss_feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
25	rss_feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
26	sendEmailAtRegister	0
27	sendEmailWithVerificationCode	0
28	default_export_font	TimesNewRoman
29	default.rpc.userid	1
30	application.base.url	http://localhost:5080/openmeetings/
31	red5sip.enable	no
32	red5sip.room_prefix	400

**Configuration**

Key:

Value:

Last update:

Updated by:

Comment:



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**

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-5.1.34.jar
```

```
rm -f /opt/sox-14.4.1.tar.gz
```

```
rm -f -R /opt/sox-14.4.1
```

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