



## 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

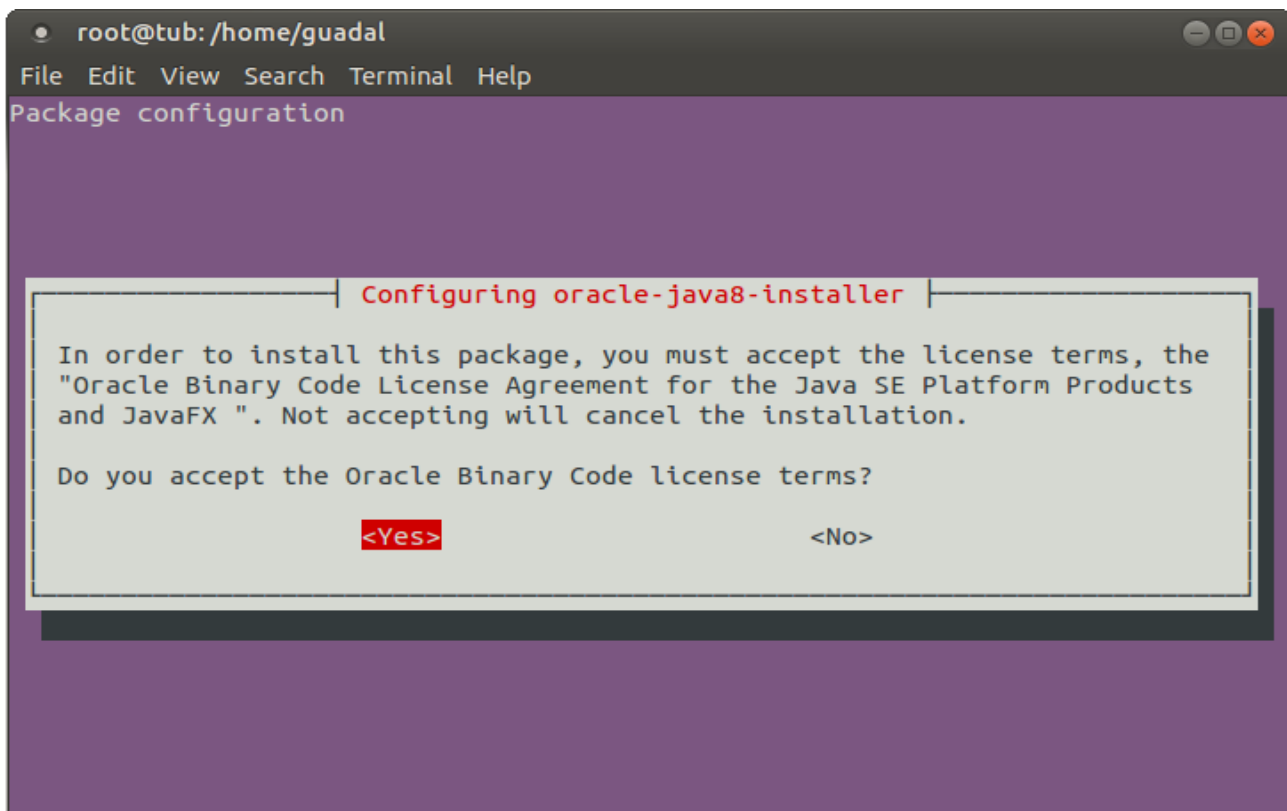
Configuring oracle-java8-installer

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
```

**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
```

Make a folder where download the necessary files to compile.

```
mkdir ~/ffmpeg_sources
```

```
cd ~/ffmpeg_sources
```

```
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
```

```
wget http://download.videolan.org/pub/x264/snapshots/last\_x264.tar.bz2
```

```
wget -O fdk-aac.zip https://github.com/mstorsjo/fdk-aac/zipball/master
```

```
wget http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
```

```
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-snapshot.tar.bz2>

Start to compile.

**1) --- Yasm ---**

```
cd ~/ffmpeg_sources
```

```
tar xzvf yasm-1.3.0.tar.gz
```

```
cd yasm-1.3.0
```

```
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"
```

```
make
```

```
make install
```

```
make distclean
```

**2) --- libx264 ---**

```
cd ~/ffmpeg_sources
```

```
tar xjvf last_x264.tar.bz2
```

```
cd x264-snapshot*
```

**(In only one line with space)**

```
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build"  
--bindir="$HOME/bin" --enable-static
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make distclean
```

**3) --- libfdk-aac ---**

```
cd ~/ffmpeg_sources
```

```
unzip fdk-aac.zip
```

```
cd mstorsjo-fdk-aac*
```

```
autoreconf -fiv
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

**4) --- libmp3lame ---**

```
cd ~/ffmpeg_sources
```

```
tar xzvf lame-3.99.5.tar.gz
```

```
cd lame-3.99.5
```

```
./configure --prefix="$HOME/ffmpeg_build" --enable-nasm --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

**5) --- libopus ---**

```
cd ~/ffmpeg_sources
```

```
tar xzvf opus-1.1.tar.gz
```

```
cd opus-1.1
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

6) --- libvpx ---

```
cd ~/ffmpeg_sources
tar xjvf libvpx-v1.3.0.tar.bz2
cd libvpx-v1.3.0
```

```
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --disable-examples
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make clean
```

7) --- ffmpeg ---

```
cd ~/ffmpeg_sources
tar xjvf ffmpeg-snapshot.tar.bz2
cd ffmpeg
```

(In only one line with space between each one)

```
PATH="$HOME/bin:$PATH" 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" --enable-gpl --enable-libass
--enable-libfdk-aac --enable-libfreetype --enable-libmp3lame --enable-libopus --enable-libtheora
--enable-libvorbis --enable-libvpx --enable-libx264 --enable-nonfree
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make distclean
```

```
hash -r
```

-----  
The compilation is finished.  
-----



Now we have the compiled files in: ~/bin

and: ~/ffmpeg\_build/bin

Should copy all them to /usr/local/bin to be enabled:

```
cd ~/bin
```

```
cp ffmpeg ffplay ffprobe ffmpegserver vsyasm x264 yasm ytasm /usr/local/bin
```

```
cd ~/ffmpeg_build/bin
```

```
cp lame /usr/local/bin
```

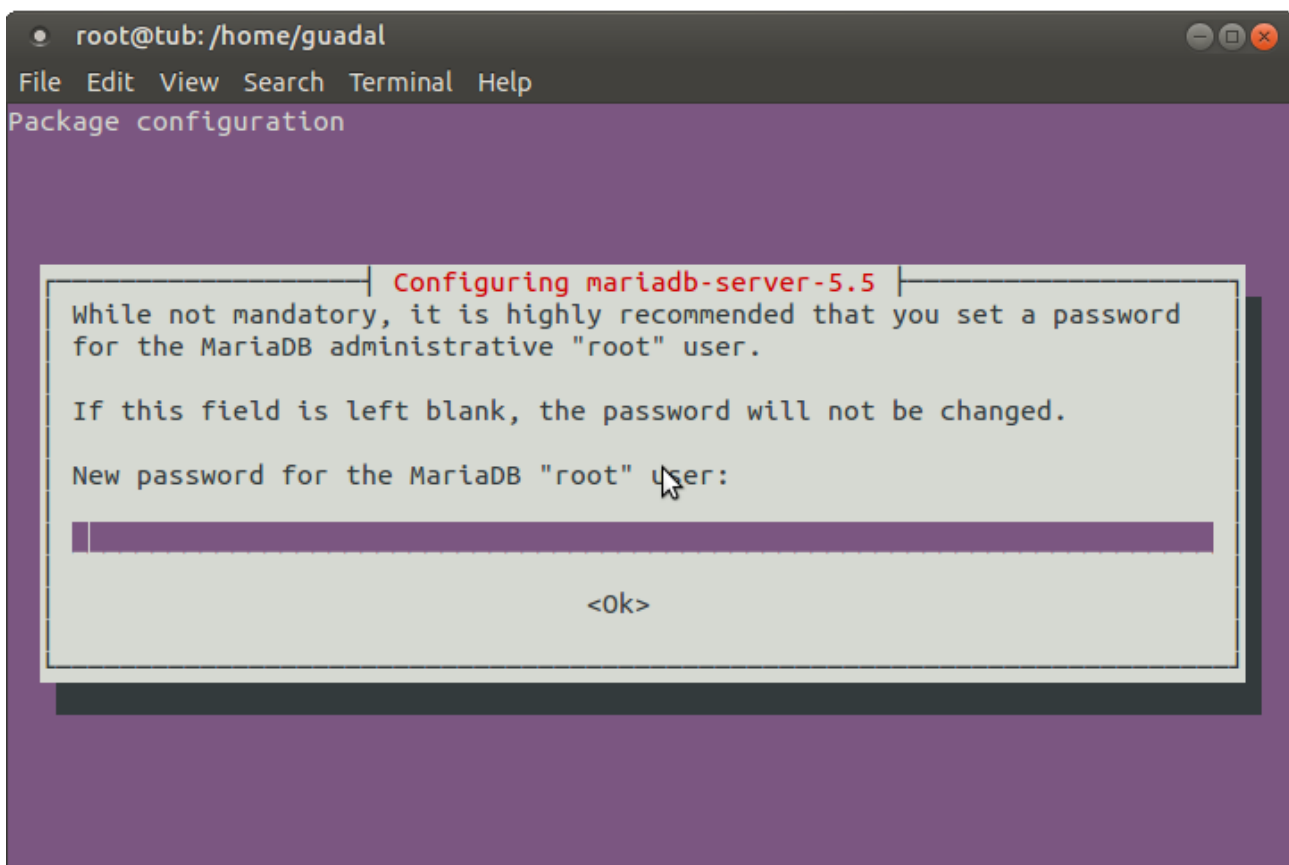
8)

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

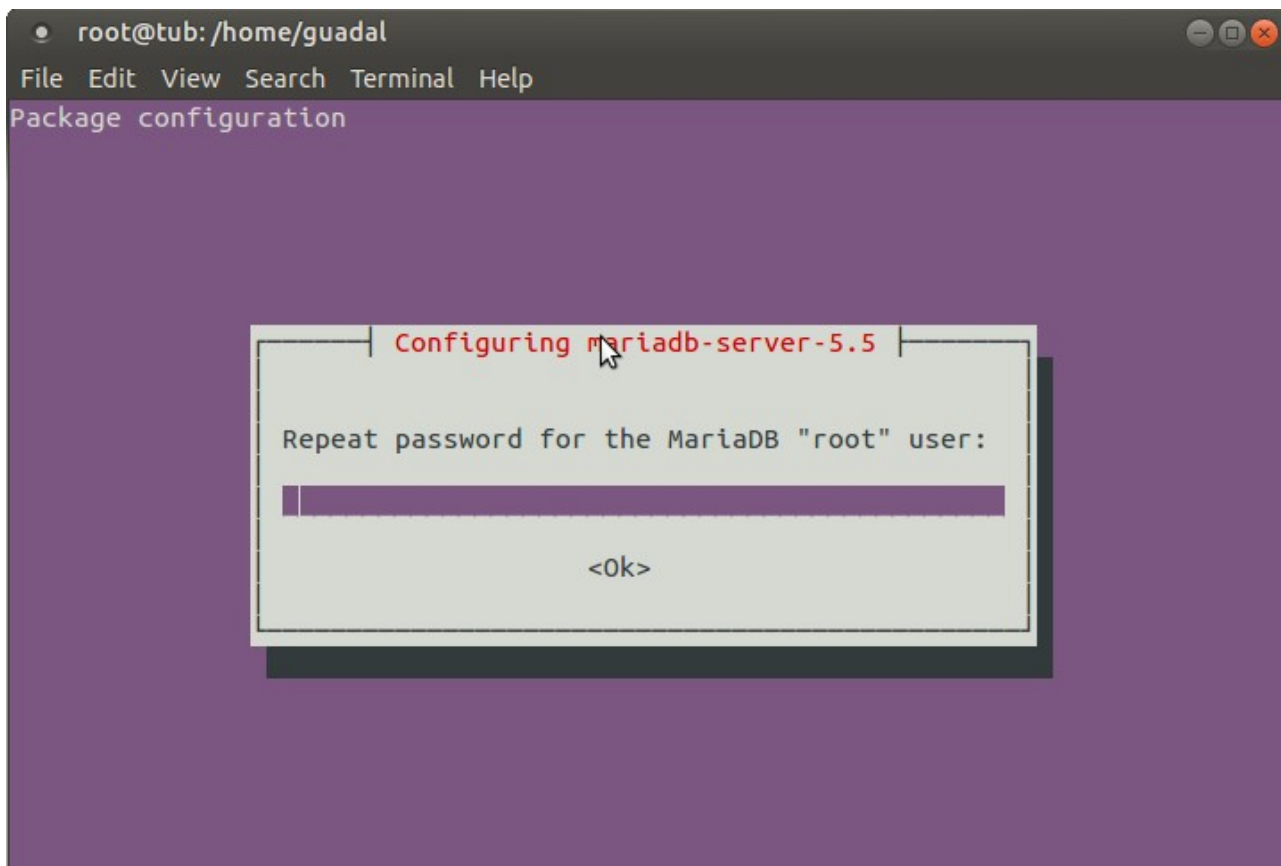
**MariaDB** is the database server. Will install it.

```
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 change 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 change on **line 83**

```
, Username=root
```

...to

```
, Username=openmeetings
```

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

...to change 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/
```

Give 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

- 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)
- 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
- Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard**
  - OpenOffice-Service** started and listening on port 8100, see [OpenOfficeConverter](#) for details
- 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 **CaY** <http://www.cayenne.org/>. You should install CaY in a up to date copy! CaY 4.0 you'll NOT work!

...clie on **Next** (botton) and will show the database configuration we made:



## OpenMeetings

### 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                   | <input type="text" value="MySQL"/>     |
| Specify DB host                  | <input type="text" value="localhost"/> |
| Specify DB port                  | <input type="text" value="3306"/>      |
| Specify the name of the database | <input type="text"/>                   |
| Specify DB user                  | <input type="text"/>                   |
| Specify DB password              | <input type="text"/>                   |

...clie **Next** again:



## OpenMeetings

### OpenMeetings - Installation

**Userdata**

|                |  |
|----------------|--|
| Username       | <input style="width: 70%;" type="text"/>                       |
| Userpass       | <input style="width: 70%;" type="password"/>                   |
| E-Mail         | <input style="width: 70%;" type="text"/>                       |
| User Time Zone | <input style="width: 70%;" type="text" value="Europe/Madrid"/> |

**Organisation(Domains)**

|      |  |
|------|--|
| Name | <input style="width: 70%;" type="text"/> |
|------|--|

...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.

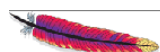
**Email** = **email-address** ...of the previous user.

**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!

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

When has concluded, this another page will appear:



## OpenMeetings

### OpenMeetings - Installation

**[Enter the Application](#)**

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>

< Previous    Next >    Last    Finish

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

OpenMeetings

#### Login

Username or mail address

Password

Remember login

Forgotten your password? [Network testing](#)

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.

14)

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

Once you access OpenMeetings go to:

**Administration → Configuration**

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

The screenshot shows the OpenMeetings web interface. At the top left is a feather logo and the text "OpenMeetings". Below this is a navigation bar with tabs: Home, Rooms, Recordings, and Administration. The Administration tab is highlighted with a red arrow pointing to it. Below the navigation bar is a "Welcome" section with a user profile area containing a question mark icon, a "Hello firstname lastname" greeting, and links for "Timezone Europe/Madrid", "Unread messages 0", and "Edit your profile". There is also a "Help and support" section with links to the project website, user mailing list, and network testing. On the right side, there is a "How to" section with a numbered list (1, 2, 3) and the text "OpenMe to enter meeting". At the bottom, there is a "My rooms" section with two room entries: "My conference room (for 1-16 users) Users 0 / 25" and "My webinar room (for 1-120 users) Users 0 / 150", each with an "Enter" button. To the right of these rooms is a details panel with a "Room #" field, a "Comment" field, and a "Users in this room" list.

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**

| 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   |

The configuration form on the right shows the following fields:

- Key: ffmpeg\_path
- Value: [Empty field]
- Last update: [Empty field]
- Updated by: [Empty field]
- Comment: Path To FFMPEG

Now there is OpenMeetings ready to work rightly.

## 15)

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