



Installation of Apache OpenMeetings 3.1.x 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 3.1.1 stable, that is to say will suppress his compilation. It is done step by step.

25-3-2016

Starting...

1)

First update and upgrade the OS:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

2)

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

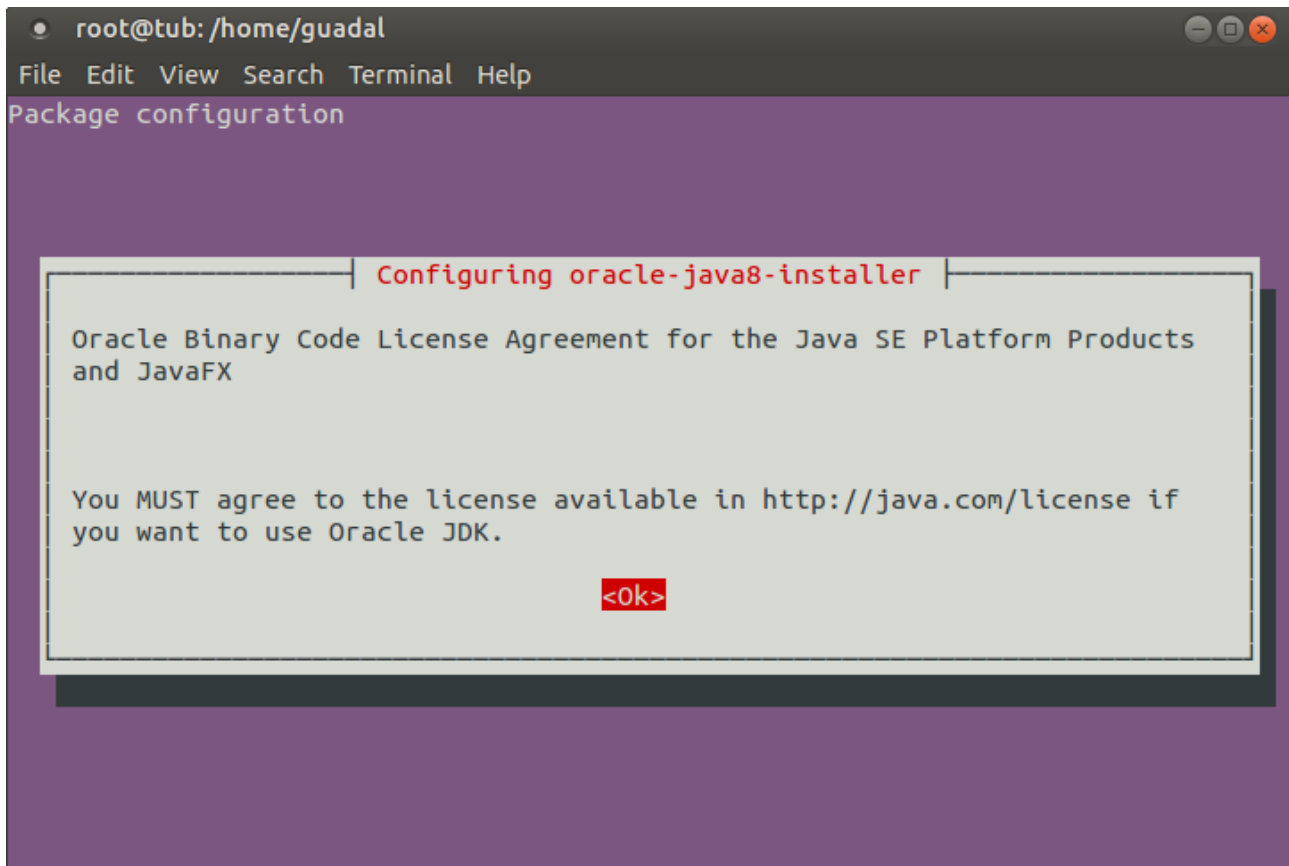
Red5-OM need Java to work. Add repository and install it:

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

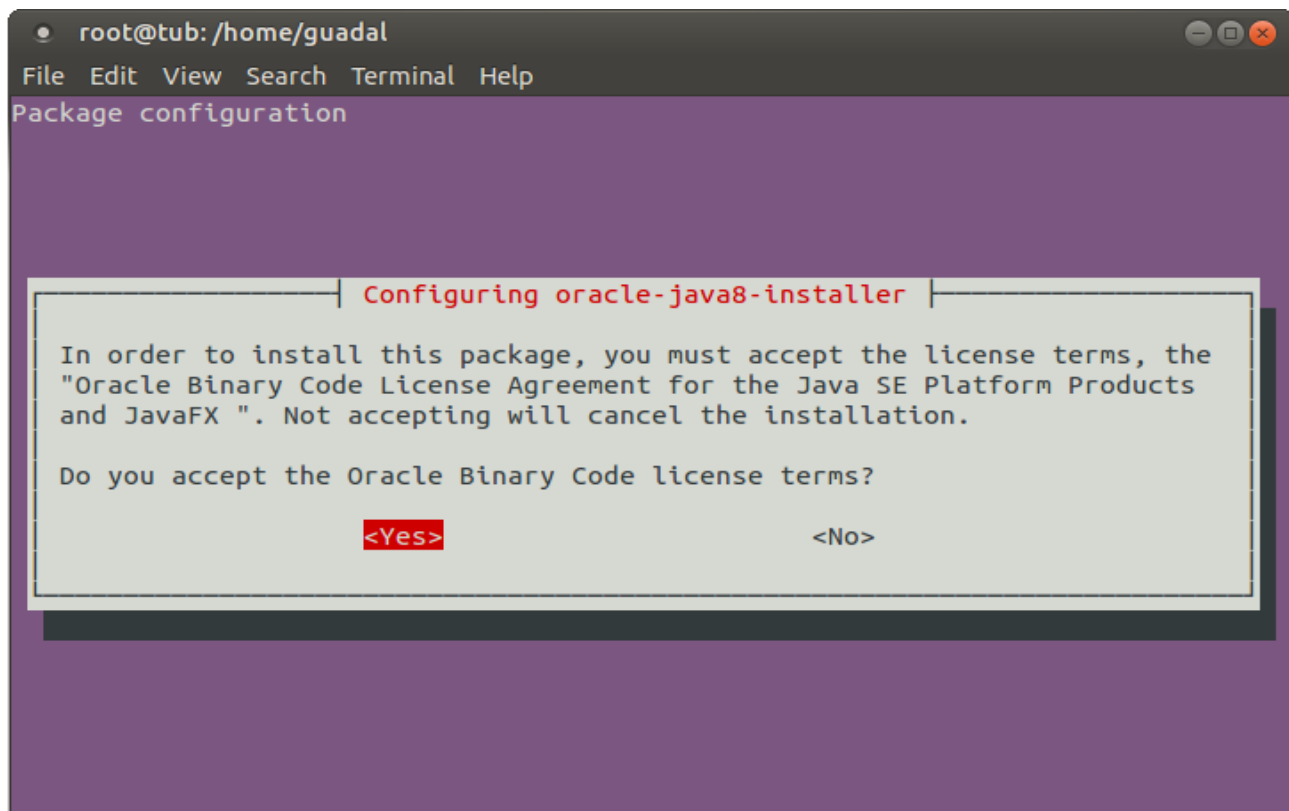
```
sudo apt-get update
```

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

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



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



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

```
sudo update-alternatives --config java
```

You can see the active java version:

```
java -version
```

To configure automaticly 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 -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 work converting to swf , flash file, 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-rennaissance/ella-rennaissance-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.

```
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 libfontconfig-dev  
libgmp-dev libidn2-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.

It is updated to the last versions files 3-4-2106.

It is tested and works rightly with synchronized audio and video. Mp4 and Ogg ok.

Please, download the script. Inside the zip are the instructions to run it:

https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_script_compile_Ubuntu_Debian.zip?version=7&modificationDate=1459700906471&api=v2

...and after running it, you can go to step 8)

But if you prefer copy and paste, i **don't** advise:

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

...copy and paste **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-20160402-2245-
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-1.1.2.tar.gz
wget http://storage.googleapis.com/downloads.webmproject.org/releases/webm/libvpx-1.5.0.tar.bz2
wget http://ffmpeg.org/releases/ffmpeg-3.0.1.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 ffserver 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

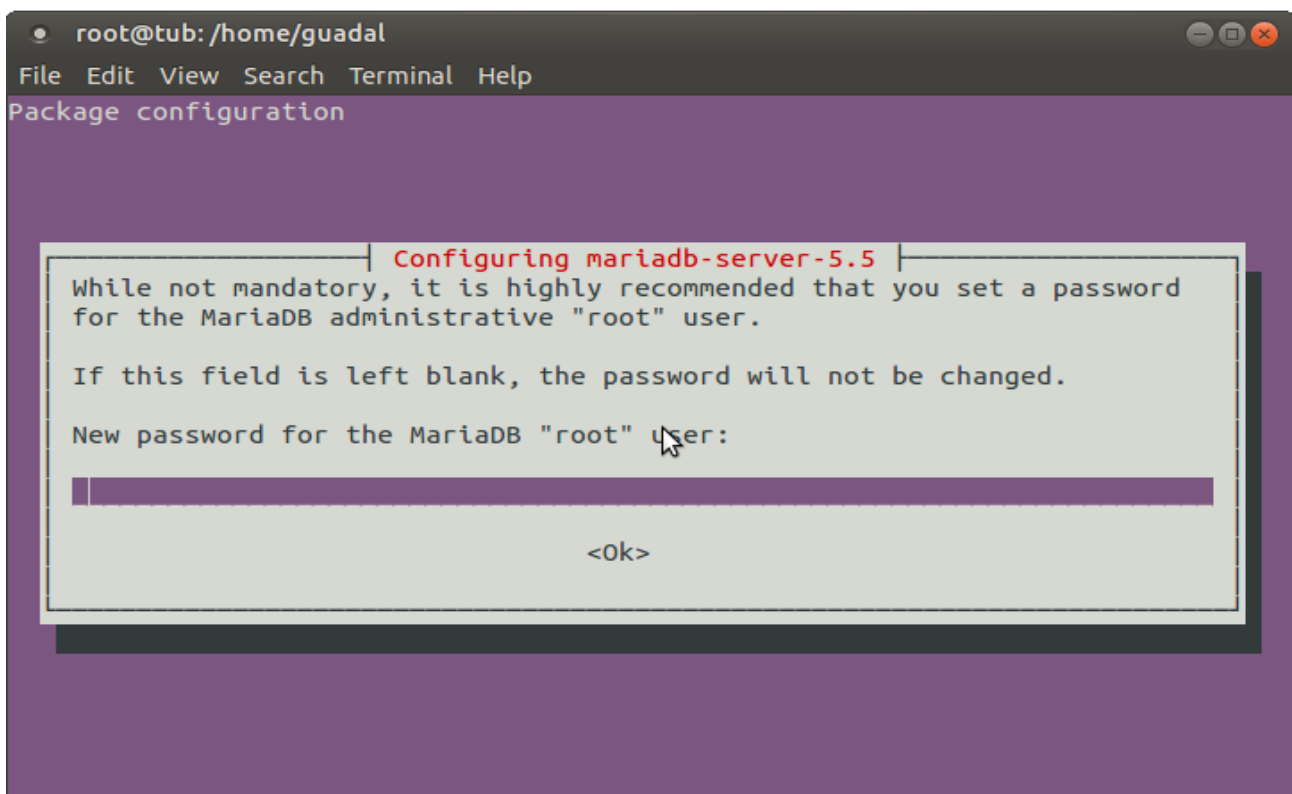
8)

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

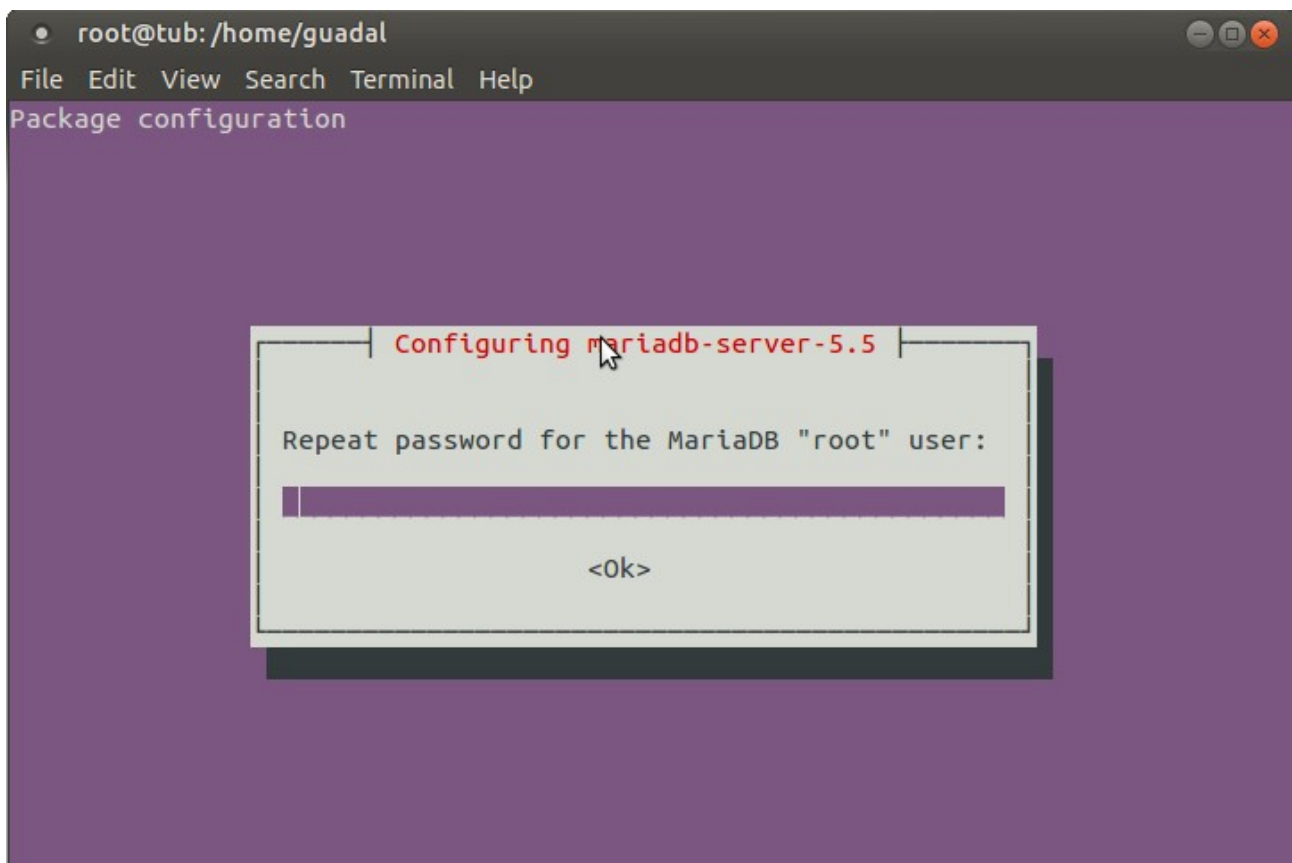
MariaDB is the database server. Will install it. (Versions 5.5 or 10.x):

```
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 open311 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a called database open311 though you can choose another name to your wish.

Now we create a user with all the permission on this open311 database.

(In only one line with space)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open311.* TO 'hola'@'localhost'  
IDENTIFIED BY '123456' WITH GRANT OPTION;
```

- * open311is the database name.
- * holais the user name for the database.
- * 123456is the password of the user called hola.

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

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

9)

---- Installation of OpenMeetings ----

We'll install OpenMeetings in /opt/red5311. All the following information will be based on this directory.

Call to our folder of installation **red5311**

Make the folder:

```
mkdir /opt/red5311
```

```
cd /opt/red5311
```

```
wget http://apache.rediris.es/openmeetings/3.1.1/bin/apache-openmeetings-3.1.1.zip
```

```
unzip apache-openmeetings-3.1.1.zip
```

...remove the unloaded file:

```
rm -f apache-openmeetings-3.1.1.zip
```

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

```
chown -R nobody /opt/red5311
```

Unload and install the connector between OpenMeetings and MariaDB:

```
cd /opt
```

(only one line)

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.38/mysql-connector-java-5.1.38.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.38.jar /opt/red5311/webapps/openmeetings/WEB-INF/lib
```

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

```
gedit /opt/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

...modify on **line 72**

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

...to

```
, Url=jdbc:mysql://localhost:3306/open311
```

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

...modify on **line 77**

```
, Username=root
```

...to

```
, Username=hola
```

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

...modify on **line 78**

```
, 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: (only one line)

```
chmod 640 /opt/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_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=4&modificationDate=1458903758300&api=v2
```

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

Rename the file unloaded to red5:

```
mv red5?version=4 red5
```

...and copy it to:

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

Concede permission of execution:

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

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 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 later can 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**
 - 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.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!
 - Install **SoX** <http://sox.sourceforge.net/>. You should install SoX in a up to date copy! SoX 12.xx will NOT work!

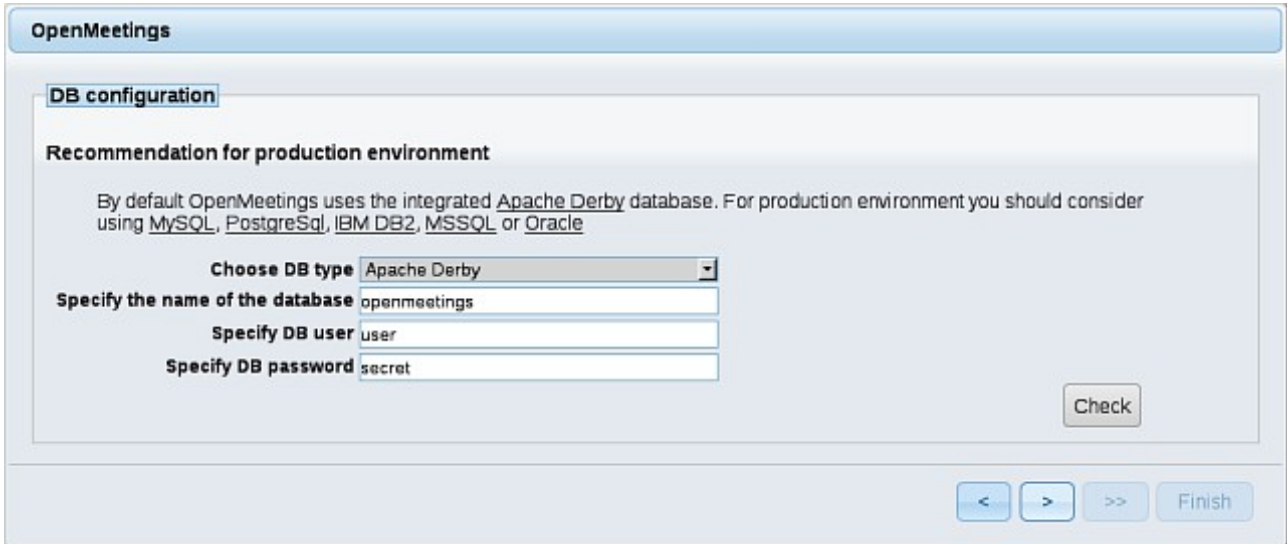
If you have further questions or need support in installation or hosting:

Community-Support:

[Mailing lists](#)

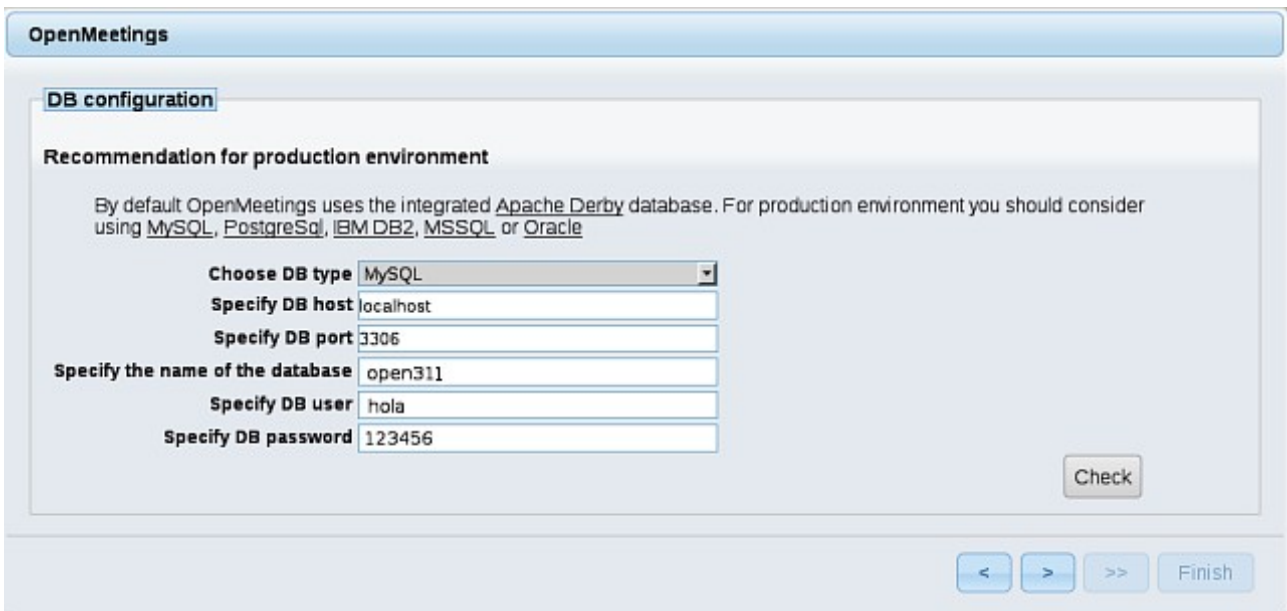
Commercial-Support:

...push on  (bottom), and will show the default database configuration with Derby, but we should use MySQL (MariaDB):




The screenshot shows the 'OpenMeetings' window with the 'DB configuration' tab selected. It contains a 'Recommendation for production environment' section with a text block stating that the default is Apache Derby and suggesting MySQL, PostgreSQL, IBM DB2, MSSQL, or Oracle for production. Below this are four input fields: 'Choose DB type' (a dropdown menu set to 'Apache Derby'), 'Specify the name of the database' (text box with 'openmeetings'), 'Specify DB user' (text box with 'user'), and 'Specify DB password' (text box with 'secret'). A 'Check' button is located to the right of these fields. At the bottom right of the window are four navigation buttons: '<', '>', '>>', and 'Finish'.

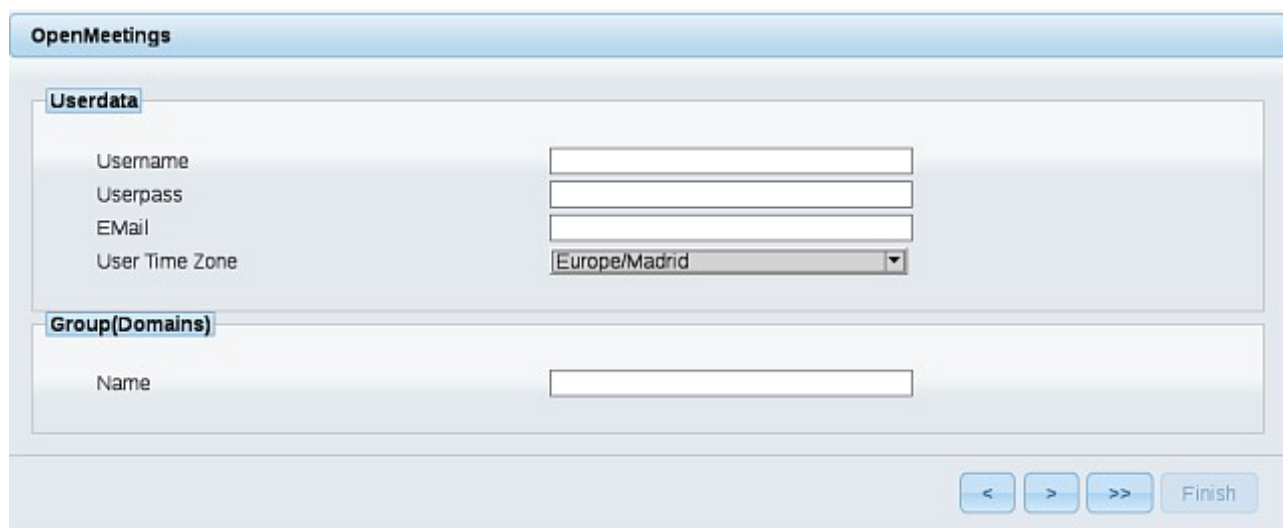
...then, scroll and **Choose DB type** to MySQL:



The screenshot shows the 'OpenMeetings' window with the 'DB configuration' tab selected. The 'Choose DB type' dropdown menu is now set to 'MySQL'. The other input fields have been updated: 'Specify DB host' (text box with 'localhost'), 'Specify DB port' (text box with '3306'), 'Specify the name of the database' (text box with 'open311'), 'Specify DB user' (text box with 'hola'), and 'Specify DB password' (text box with '123456'). The 'Check' button remains to the right. The navigation buttons at the bottom right are the same as in the previous screenshot.

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

Please, push  button, and will go to:



The image shows a window titled "OpenMeetings" with two sections. The first section, "Userdata", contains four input fields: "Username", "Userpass", "EMail", and "User Time Zone". The "User Time Zone" field is a dropdown menu currently showing "Europe/Madrid". The second section, "Group(Domains)", contains a single input field labeled "Name". At the bottom right of the window are four buttons: "<", ">", ">>", and "Finish".

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, should configure the rest.

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

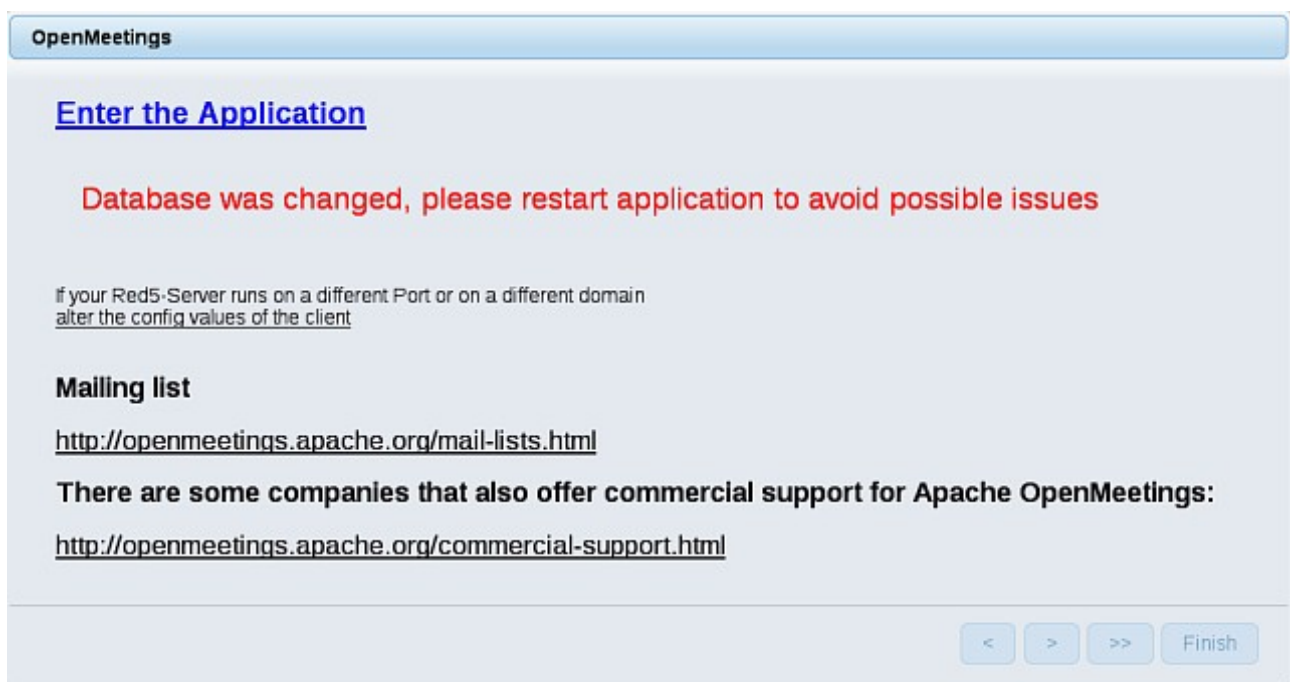


The image shows a window titled "OpenMeetings" with a message: "Please click 'Finish' button to start installation!". Below the message is a large empty rectangular box. At the bottom right of the window are four buttons: "<", ">", ">>", and "Finish".

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 restart](#)

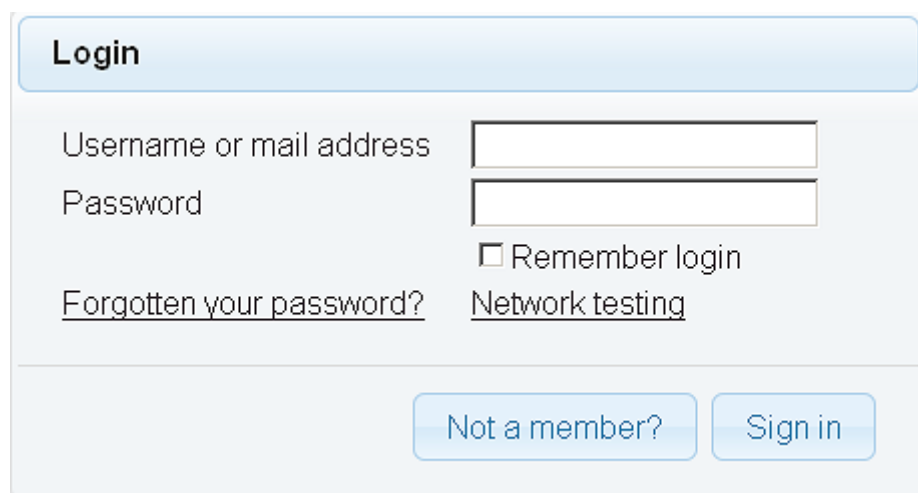


The image shows a window titled "OpenMeetings" with a light blue header. Below the header, the text "Enter the Application" is displayed in blue. A red message states: "Database was changed, please restart application to avoid possible issues". Below this, a note says: "If your Red5-Server runs on a different Port or on a different domain alter the config values of the client". A section titled "Mailing list" contains the URL <http://openmeetings.apache.org/mail-lists.html>. Another section states: "There are some companies that also offer commercial support for Apache OpenMeetings:" followed by the URL <http://openmeetings.apache.org/commercial-support.html>. At the bottom right, there are four buttons: "<", ">", ">>", and "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:



The image shows a "Login" form with a light blue header. Below the header, there are two input fields: "Username or mail address" and "Password". To the right of the "Password" field is a checkbox labeled "Remember login". Below the "Username or mail address" field is a link "Forgotten your password?". To the right of the "Remember login" checkbox is a link "Network testing". At the bottom right, there are two buttons: "Not a member?" and "Sign in".

Introduce the user's name and the password that you have chosen during the installation 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:

5080 1935

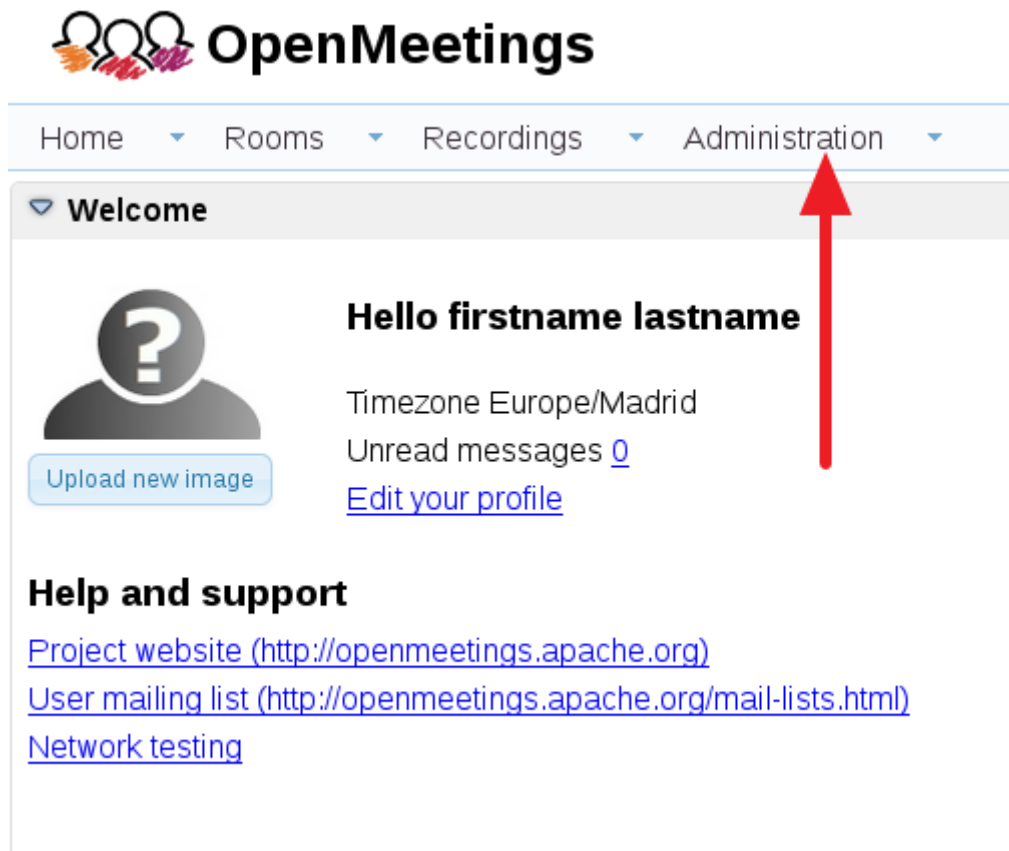
...in order that it could accede to OpenMeetings from other machines.

12)

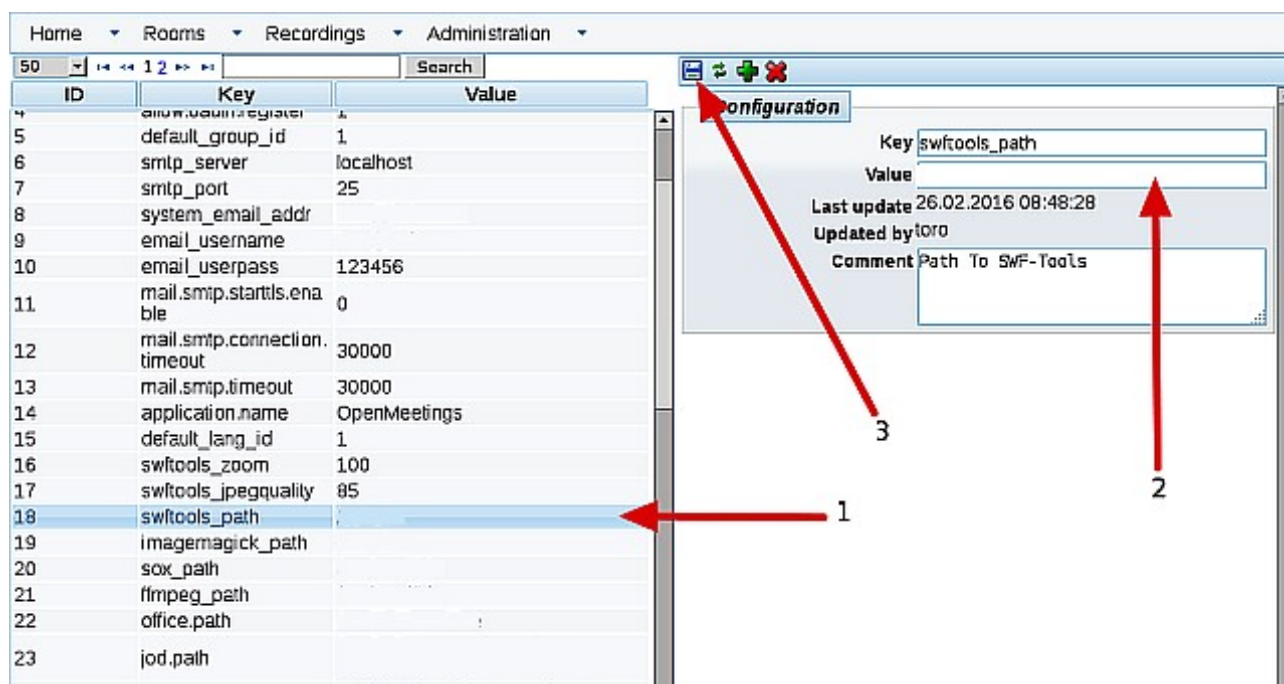
---- OpenMeetings's configuration ----

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-5.1.38.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