



## Installation of Apache OpenMeetings 3.3.1 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 3.3.1 stable, that is to say will suppress his compilation. It is done step by step.

8-9-2017

Starting...

1)

First update and upgrade the OS:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

2)

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

OpenMeetings **3.3.1** 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**.



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

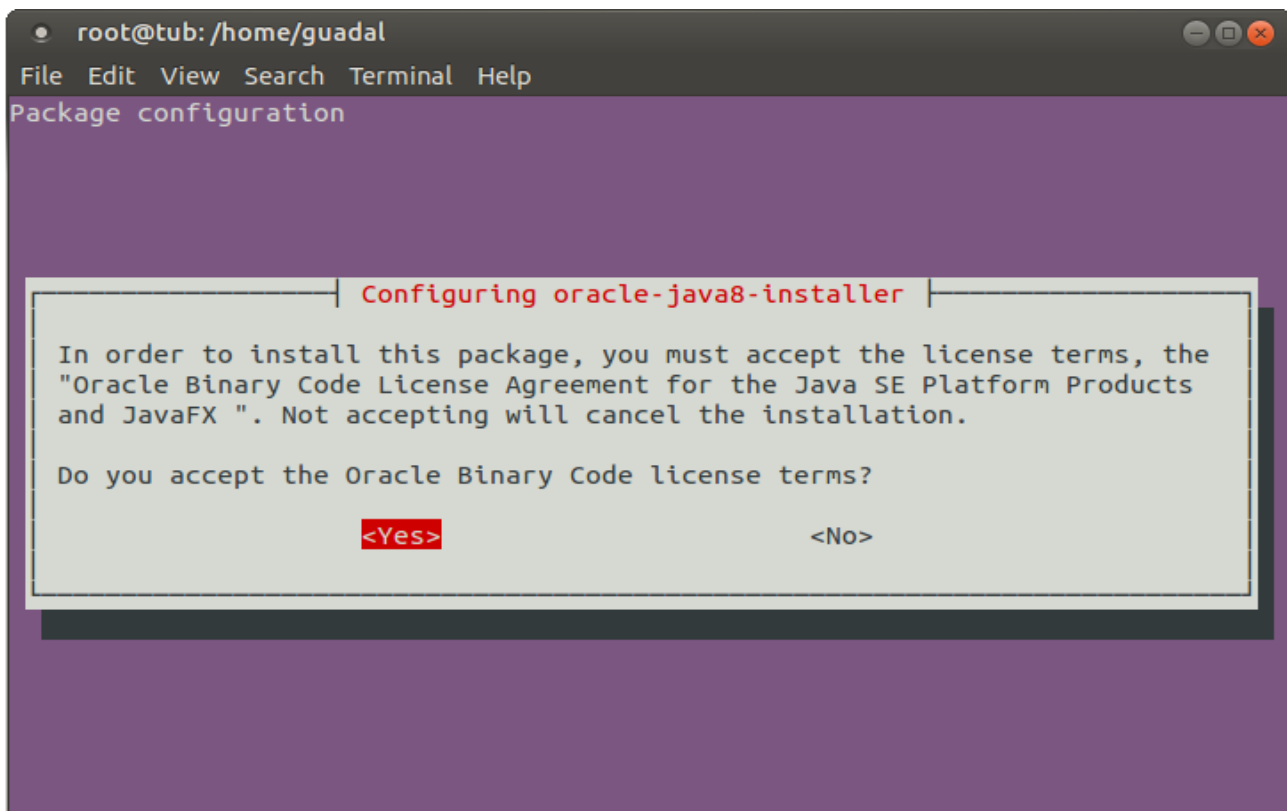
Configuring oracle-java8-installer

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 installed, please choose Oracle Java 1.8:

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

You can see the active java version:

```
java -version
```

To configure automatically 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 8-9-2017. 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 8-9-2017

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-1.1.5.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 ffmpegserver vsyasm x264 yasm yasm /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/ffmpeg.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)

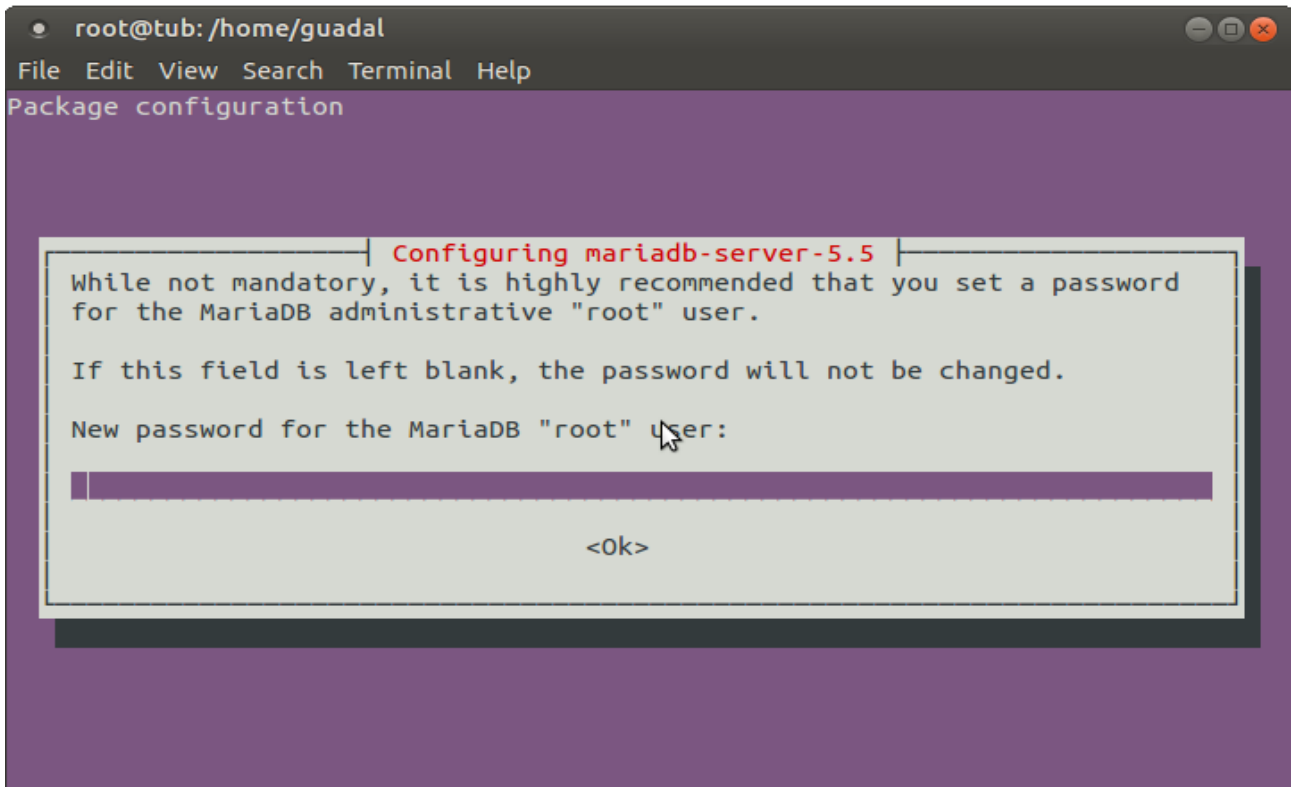
**----- Installation and configuration of MariaDB data server -----**

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

```
sudo apt-get install python-software-properties software-properties-common
```

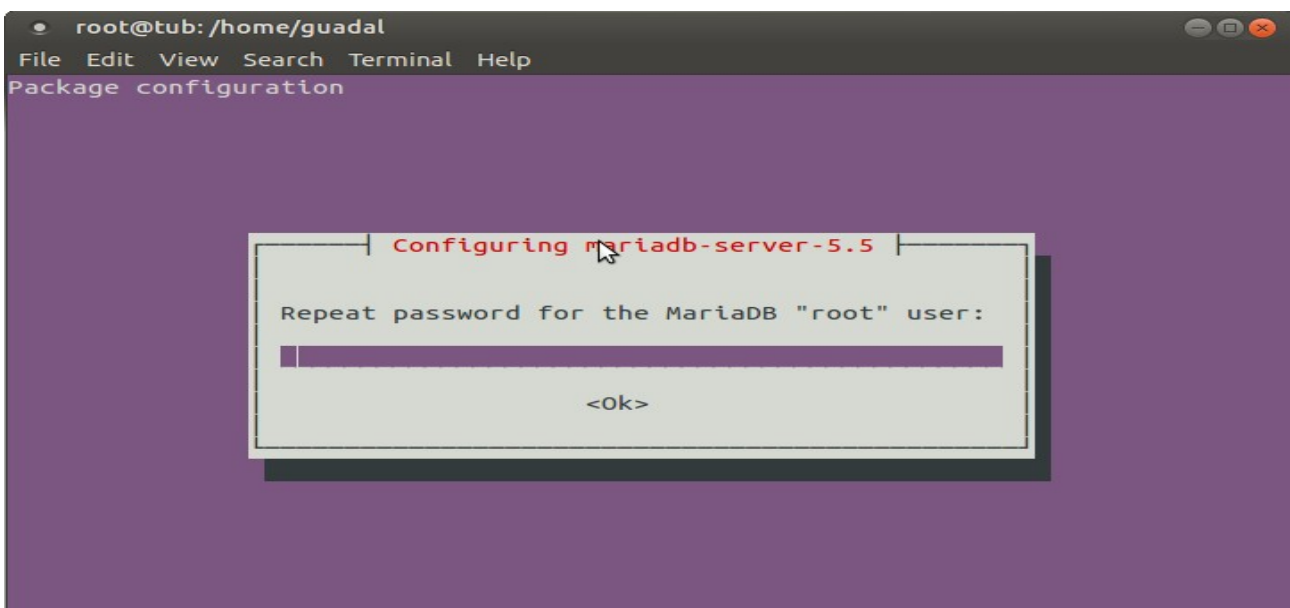
```
sudo apt-get install mariadb-server
```

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 open331 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a database called open331.

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 open331.* TO 'hola'@'localhost'
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

- \* open331 .....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/red5331. All the following information will be based on this directory.

Call to our folder of installation red5331

Make the folder:

```
mkdir /opt/red5331
```

```
cd /opt/red5331
```

```
wget http://apache.miloslavbrada.cz/openmeetings/3.3.1/bin/apache-openmeetings-3.3.1.zip
```

```
unzip apache-openmeetings-3.3.1.zip
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-3.3.1.zip /opt
```

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

```
chown -R nobody /opt/red5331
```

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/red5331/webapps/openmeetings/WEB-INF/lib
```

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

```
gedit /opt/red5331/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**Modifique la linea 72:**

```
, Url=jdbc:mysql://localhost:3316/openmeetings_3_3?
```

...a

```
, Url=jdbc:mysql://localhost:3316/open331?
```

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

If initially you chose another name for the database, please type it here. Save changes.

We protect the access to the file:

(Only one line without space between both)

```
chmod 640 /opt/red5331/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

<
>
>>
Finish

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**

**Specify the name of the database**

Check

<
>
>>
Finish

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

**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

Specify DB host

Specify DB port

Specify the name of the database

Specify DB user

Specify DB password

...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

**OpenMeetings**

**Userdata**

Username

Userpass

E-Mail

User Time Zone

**Group(Domains)**

Name

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:

**OpenMeetings**

**Configuration**

|  |  |
|--|--|
| Allow self-registering (allow_frontend_register)                                       | Yes <input type="button" value="v"/>                         |
| Send Email to new registered Users (sendEmailAtRegister)                               | No <input type="button" value="v"/>                          |
| New Users need to verify their EMAIL (sendEmailWithVerificationCode)                   | No <input type="button" value="v"/>                          |
| Default Rooms of all types will be created   | Yes <input type="button" value="v"/>                         |
| Mail-Referer (system_email_addr)   | <input type="text" value="noreply@openmeetings.apache.org"/> |
| SMTP-Server (smtp_server)  | <input type="text" value="localhost"/>                       |
| SMTP-Server Port(default SmtP-Server Port is 25) (smtp_port)                           | <input type="text" value="25"/>                              |
| SMTP-Username (email_username)   | <input type="text"/>   |
| SMTP-Userpass (email_userpass)   | <input type="text"/>   |
| Enable TLS in Mail Server Auth   | No <input type="button" value="v"/>                          |
| Set inviter's email address as ReplyTo in email invitations (inviter.email.as.replyto) | Yes <input type="button" value="v"/>                         |
| Default Language   | inglés <input type="button" value="v"/>                      |
| Default Font for Export [default_export_font]  | TimesNewRoman <input type="button" value="v"/>               |

A valid example to configure the mail server with Gmail, is as follows:  
(replace **john@gmail.com** with your real Gmail account)

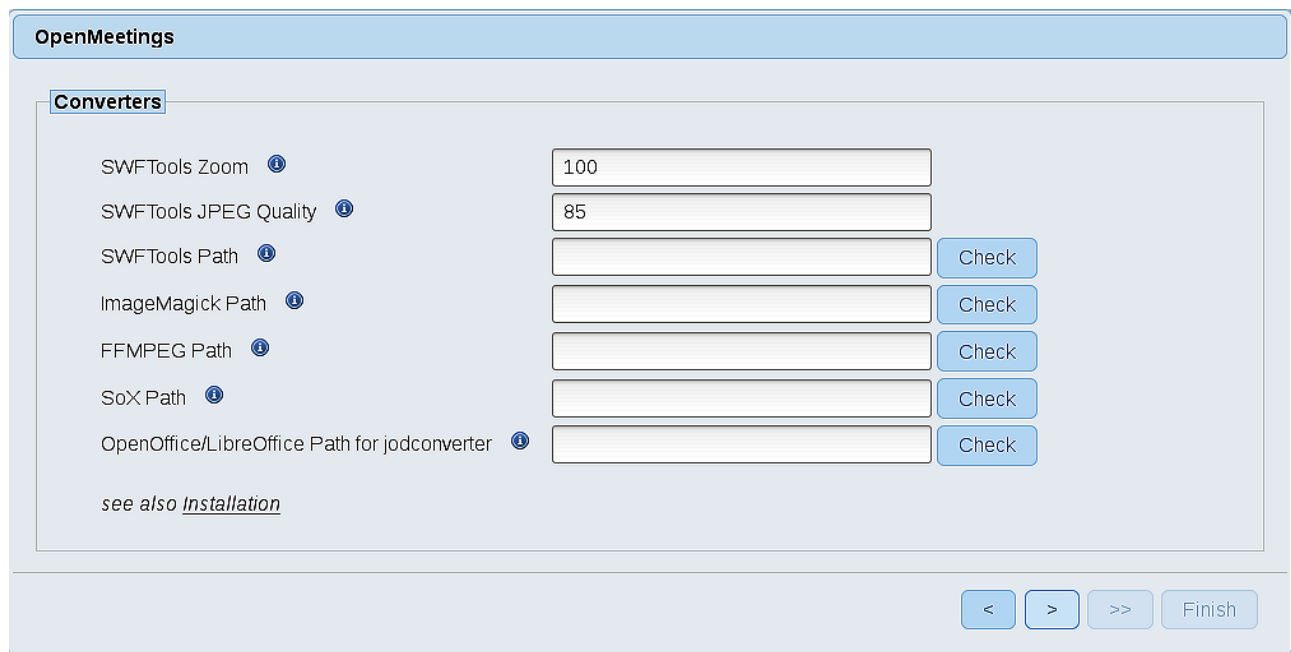
|  |    |                            |
|--|----|----------------------------|
| <b>Mail-Refer (system_email_addr)</b>                                | == | john@gmail.com             |
| <b>SMTP-Server (smtp_server)</b>                                     | == | smtp.gmail.com             |
| <b>SMTP-Server Port (default SmtP-Server Port is 25) (smtp_port)</b> | == | 587                        |
| <b>SMTP-Username (email_username)</b>                                | == | john@gmail.com             |
| <b>SMTP-Userpass (email_userpass)</b>                                | == | password of john@gmail.com |
| <b>Enable TLS in Mail Server Auth</b>                                | == | 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 ⓘ

SWFTools JPEG Quality ⓘ

SWFTools Path ⓘ

ImageMagick Path ⓘ

FFMPEG Path ⓘ

SoX Path ⓘ

OpenOffice/LibreOffice Path for jodconverter ⓘ

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

You can use this default crypt type which is equal to PHP-MD5 function or BSD-Style encryption by using: **org.apache.openmeetings.util.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

Enable red5SIP integration

SIP rooms prefix

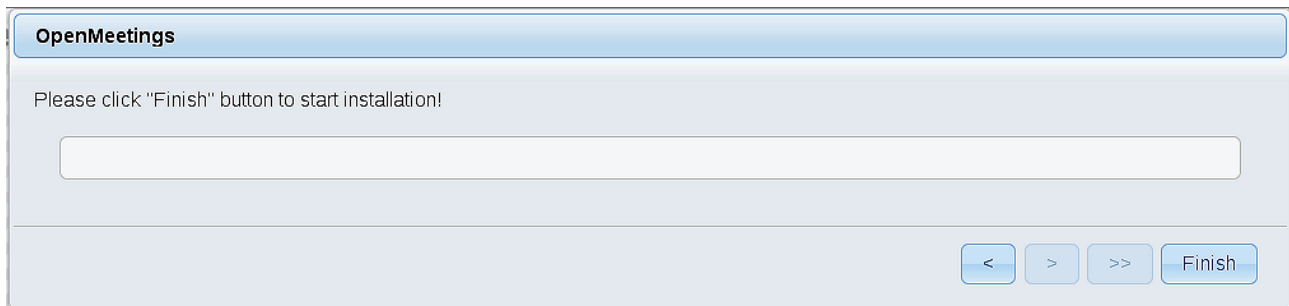
Prefix for phone number of conference rooms

SIP extensions context

Context of Asterisk extensions

Now push the button  Will show this window:

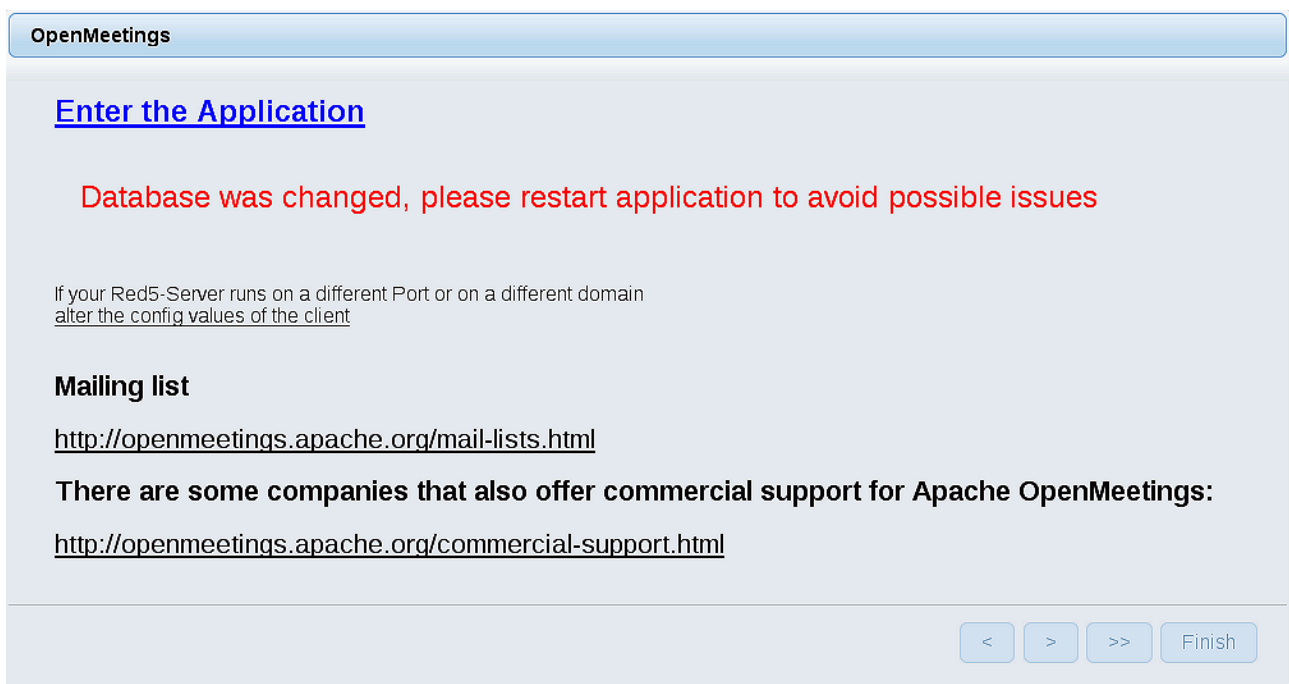




Press **Finish** button ...wait a seconds untill the tables are fill in the database.

When has concluded, this another page will appear. **Don't** clic on [Enter the Application](#).  
First is need it to restart the server:

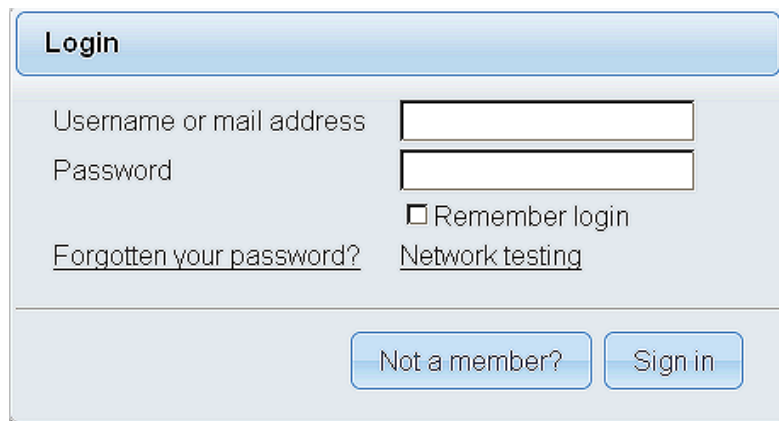
[/etc/init.d/red5-ubdeb2 restart](#)



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:



The image shows a login form titled "Login". It contains the following elements:

- A header bar with the text "Login".
- A label "Username or mail address" followed by a text input field.
- A label "Password" followed by a text input field.
- A checkbox labeled "Remember login".
- A link labeled "Forgotten your password?".
- A link labeled "Network testing".
- Two buttons at the bottom: "Not a member?" and "Sign in".

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**

Home ▾ Rooms ▾ Recordings ▾ Administration ▾

Welcome




**Hello firstname lastname**

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

Upload new image

**Help and support**



...and following the order of the red arrows:

| ID | Key                          | Value                           |
|----|------------------------------|---------------------------------|
| 4  | allow.oauth.register         | 1                               |
| 5  | default_group_id             | 1                               |
| 6  | smtp_server                  | localhost                       |
| 7  | smtp_port                    | 25                              |
| 8  | system_email_addr            | noreply@openmeetings.apache.org |
| 9  | email_username               |                                 |
| 10 | email_userpass               |                                 |
| 11 | mail.smtp.starttls.enable    | 0                               |
| 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                  |                                 |

**Configuration**

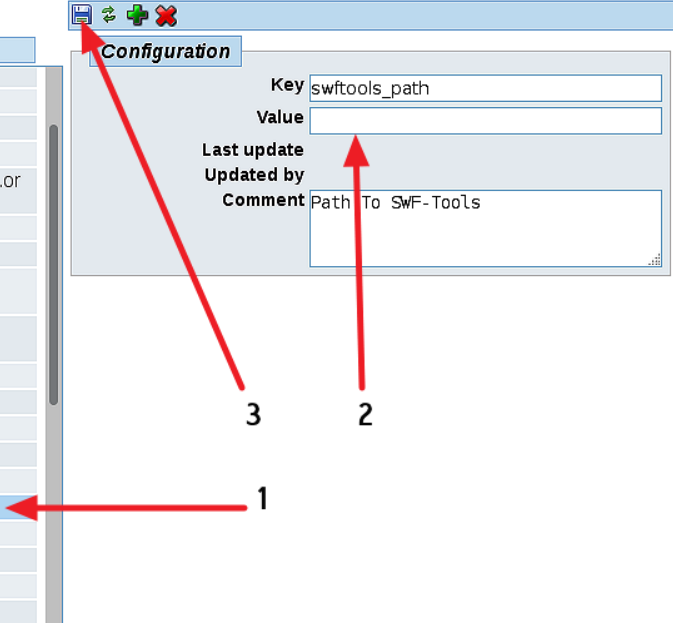
Key swftools\_path

Value

Last update

Updated by

Comment Path To SWF-Tools



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.

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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