



## Installation of Apache OpenMeetings 4.0.0 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 4.0.0 stable, that is to say will suppress his compilation. It is done step by step.

5-11-2017

Starting...

1)

First update and upgrade the OS:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

2)

----- Installation of Open Java 1.8 -----

OpenMeetings **4.0.0** need Java **1.8** to work. In the normal repos of Ubuntu 14.04, is not OpenJava 1.8. So, we add a new one for can install it:

```
sudo add-apt-repository ppa:openjdk-r/ppa
```

...press **Enter** when ask,

...update:

```
sudo apt-get update
```

...and install it:

```
sudo apt-get install openjdk-8-jdk
```

If you have more than one java version installed, please choose OpenJava 1.8:

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

You can see the active java version:

```
java -version
```

Now we'll install **Icedtea-8-plugin** for Java 8, and so we can record in the rooms or share desktop. For that, we need add a new repo:

```
sudo add-apt-repository ppa:maarten-fonville/ppa
```

...press **Enter** when ask,

...update:

```
sudo apt-get update
```

...and install it:

```
sudo apt-get install icedtea-8-plugin
```

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 ImageMagick and Sox** -----

**ImageMagick**, 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
```

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 5-11-2017. 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.
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 https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.tar.gz
```

```
git clone --depth 1 https://chromium.googlesource.com/webm/libvpx.git
```

```
# git clone --depth 1 git://source.ffmpeg.org/ffmpeg
```

```
wget http://ffmpeg.org/releases/ffmpeg-3.1.1.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-*/
```

```
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 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/ffpmege.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):

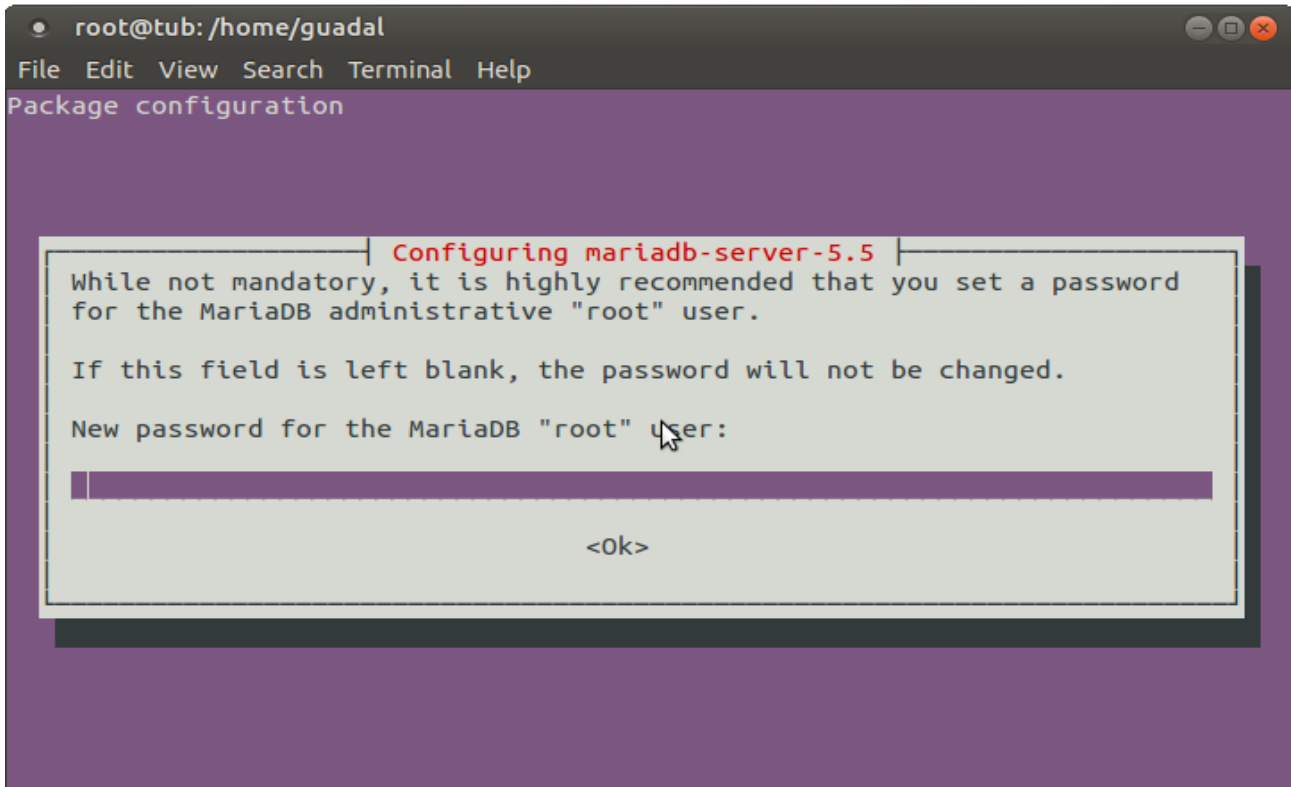
First install these paquets:

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

...and now MariaDB:

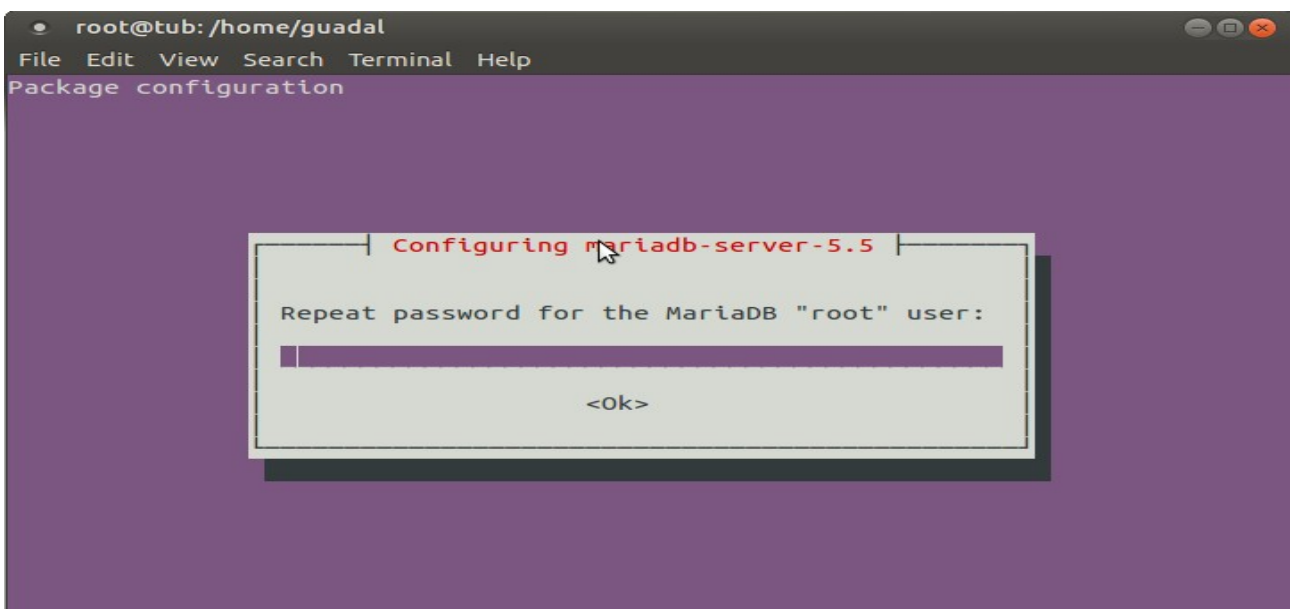
```
sudo apt-get install mariadb-server
```

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 open40 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a database called open40.

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 open40.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

- \* open40 .....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/red540. All the following information will be based on this directory.

Call to our folder of installation red540

Make the folder:

```
mkdir /opt/red540
```

```
cd /opt/red540
```

...download the OpenMeetings file:

```
wget http://apache.miloslavbrada.cz/openmeetings/4.0.0/bin/apache-openmeetings-4.0.0.zip
```

```
unzip apache-openmeetings-4.0.0.zip
```



...save the unloaded file to /opt:

```
mv apache-openmeetings-4.0.0.zip /opt
```

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

```
chown -R nobody /opt/red540
```

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/red540/webapps/openmeetings/WEB-INF/lib
```

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

```
gedit /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**Modifique la linea 72:**

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

```
...a
```

```
, Url=jdbc:mysql://localhost:3306/open40?
```

...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/red540/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).

**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	<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" value="open40"/>
Specify DB user	<input type="text"/>
Specify DB password	<input type="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**

...if you choose a differents data, type it here.

Please, press  button, and will go to:

**OpenMeetings**

**Userdata**

Username	<input type="text"/>
Userpass	<input type="password"/>
E-Mail	<input type="text"/>
User Time Zone	<input type="text" value="Europe/Madrid"/>

**Group(Domains)**

Name	<input type="text"/>
------	----------------------

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	<input checked="" type="checkbox"/>
Send Email to new registered Users	<input type="checkbox"/>
New Users need to verify their EMail	<input type="checkbox"/>
Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)	<input checked="" type="checkbox"/>
Mail-Referer	<input type="text" value="noreply@openmeetings.apache.org"/>
SMTP-Server	<input type="text" value="localhost"/>
SMTP-Server Port(default SmtP-Server Port is 25)	<input type="text" value="25"/>
SMTP-Username	<input type="text"/>
SMTP-Userpass	<input type="text"/>
Enable TLS in Mail Server Auth	<input type="checkbox"/>
Set inviter's email address as ReplyTo in email invitations	<input checked="" type="checkbox"/>
Default Language	<input type="text" value="inglés"/>

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</b>	==	ohn@gmail.com
<b>SMTP-Server</b>	==	smtp.gmail.com
<b>SMTP-Server Port (default Smtplib-Server Port is 25)</b>	==	587
<b>SMTP-Username</b>	==	john@gmail.com
<b>SMTP-Userpass</b>	==	password of john@gmail.com
<b>Enable TLS in Mail Server Auth</b>	==	...turn green the button to activate

To select the language of your server OpenMeetings, please scroll on the line:

**Default Language** == ...select your language

...the rest you can change it as you like.

Now press the button  and a new page will appear:

**OpenMeetings**

**Converters**

Document conversion DPI ⓘ	<input type="text" value="150"/>	
Document conversion JPEG Quality ⓘ	<input type="text" value="90"/>	
ImageMagick Path ⓘ	<input type="text"/>	<input type="button" value="Check"/>
FFMPEG Path ⓘ	<input type="text"/>	<input type="button" value="Check"/>
SoX Path ⓘ	<input type="text"/>	<input type="button" value="Check"/>
OpenOffice/LibreOffice Path for jodconverter ⓘ	<input type="text"/>	<input type="button" value="Check"/>

*see also [Installation](#)*

Here we'll introduce the respective paths for the image, video, audio and conversion of uploaded files:


**ImageMagick Path** == /usr/bin

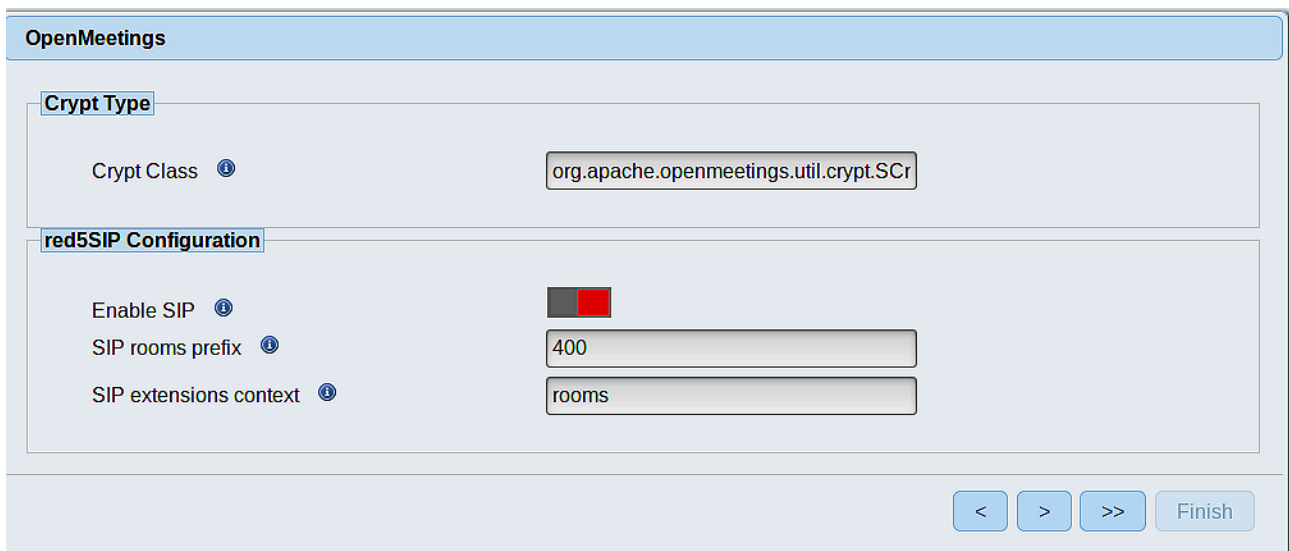
**FFMPEG Path** == /usr/local/bin

**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:



The screenshot shows the 'OpenMeetings' configuration window. It has a title bar 'OpenMeetings' and a light blue header. Below the header, there are two main sections:

- Crypt Type**: Contains a 'Crypt Class' label with a help icon and a text input field containing 'org.apache.openmeetings.util.crypt.SCr'.
- red5SIP Configuration**: Contains three items:
  - 'Enable SIP' with a help icon and a red toggle switch.
  - 'SIP rooms prefix' with a help icon and a text input field containing '400'.
  - 'SIP extensions context' with a help icon and a text input field containing 'rooms'.

At the bottom right of the window, there are four buttons: '<', '>', '>>', and 'Finish'.

Now push the button  Will show this window:



The screenshot shows the 'OpenMeetings' configuration window after clicking the next button. The title bar is 'OpenMeetings' and the header is light blue. The main content area contains the text 'Please click "Finish" button to start installation!' above a large empty text input field. At the bottom right, there are four buttons: '<', '>', '>>', and 'Finish'.

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](#)

**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:

**Login**

Username or mail address	<input style="width: 100%;" type="text"/>
Password	<input style="width: 100%;" type="password"/>
	<input type="checkbox"/> Remember login
<a href="#">Forgotten your password?</a>	<a href="#">Network testing</a>

Not a member?
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**

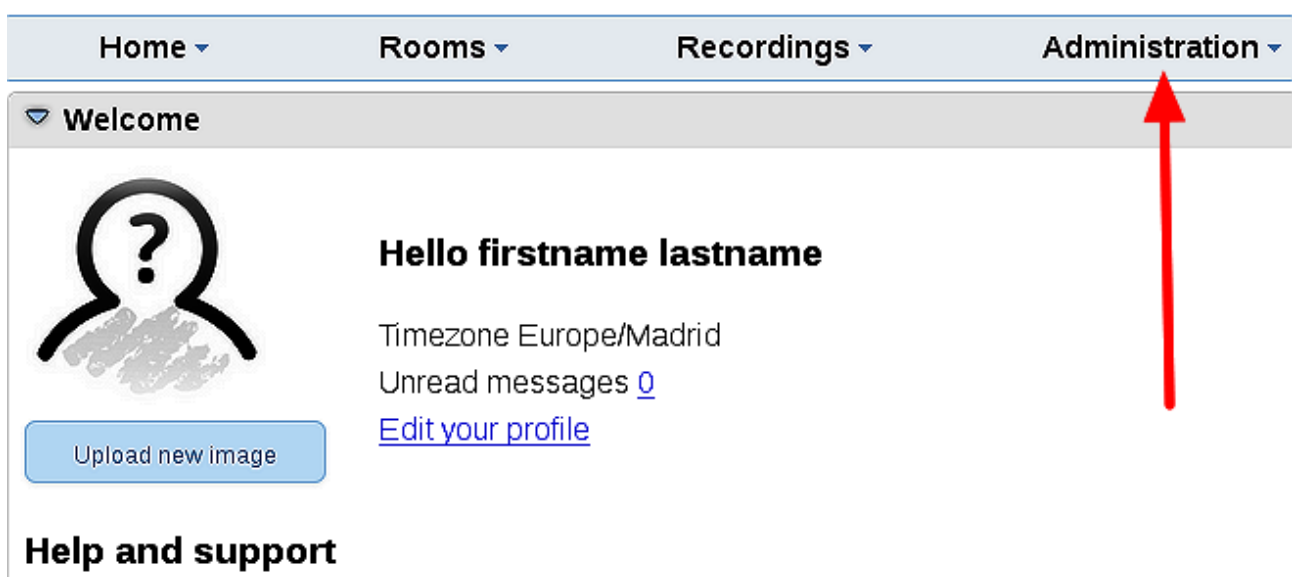
...in order that it could accede to OpenMeetings from other machines.

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**



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

The screenshot shows the Administration section of the Apache OpenMeetings interface. On the left is a table of configuration items, and on the right is a configuration form for the selected item.

ID	Key	Value
1	crypt.class.name	org.apache.openmeetings.util.crypt.SCryptImplementation
2	allow.frontend.register	true
3	allow.soap.register	true
4	allow.oauth.register	true
5	default.group.id	1
6	mail.smtp.server	localhost
7	mail.smtp.port	25
8	mail.smtp.system.email	noreply@openmeetings.apache.org
9	mail.smtp.user	
10	mail.smtp.pass	
11	mail.smtp.starttls.enable	false
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default.lang.id	8
16	document.dpi	150
17	document.quality	90
18	path.imagemagick	
19	path.sox	
20	path.ffmpeg	
21	path.office	
22	dashboard.rss.feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
23	dashboard.rss.feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
24	send.email.at.register	false
25	send.email.with.verification	false

The configuration form on the right shows the following details for the selected item:

- Type: string
- Key: path.ffmpeg
- Value: (empty field)
- Last update: Oct 17, 2017 5:54:57 PM
- Updated by: toro
- Comment: Path To FFMPEG

Red arrows indicate the sequence of actions: 1 points to the 'path.ffmpeg' row in the table, 2 points to the 'Value' field in the configuration form, and 3 points to the 'Save' button in the form.

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

