



## Installation of Apache OpenMeetings 3.0.x on Debian 7

This tutorial is made based on fresh installations of

**debian-7.8.0-amd64-CD-1**

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.

25-2-2015 updated 26-4-2015 updated 25-5-2015

Starting...

1)

First update and upgrade the OS:

```
apt-get update
```

```
apt-get upgrade
```

2)

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

Red5-OM need Java. Add repository to install Oracle Java 1.8.

(In only one line with space)

```
echo "deb http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee  
/etc/apt/sources.list.d/webupd8team-java.list
```

```
echo "deb-src http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee -a  
/etc/apt/sources.list.d/webupd8team-java.list
```

```
apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys EEA14886
```

```
apt-get update
```

To accept the license automatically when install it:

(In only one line without space)

```
echo oracle-java8-installer shared/accepted-oracle-license-v1-1 select true | sudo /usr/bin/debconf-set-selections
```

...now install Oracle Java 8:

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

For JAVA\_HOME Environment:

```
apt-get install oracle-java8-set-default
```

To know the active java version:

```
java -version
```

3)

#### ---- Installation of LibreOffice ----

LibreOffice is need it to convert to pdf the uploaded files.

The Wheezy desktop iso have already LibreOffice installed.

4)

#### --- Installation ImageMagic, Sox and Swftools ---

**ImageMagic** will work the image files. Will install it and some more libraries.

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

**Sox** work the audio. 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-rennaissance/ella-rennaissance-beta/beta1/+download/swftools\_0.9.1-1\_amd64.deb
```

```
dpkg -i swftools_0.9.1-1_amd64.deb
```

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

5)

#### ---- Installation of Adobe flash player ----

OpenMeetings even need Adobe Flash Player for rooms.

Add repository can install it:

```
gedit /etc/apt/sources.list
```

...and copy these two lines:

```
deb http://ftp.us.debian.org/debian wheezy contrib non-free
deb http://ftp.us.debian.org/debian wheezy contrib
```

...save, update:

```
apt-get update
```

...and install:

```
apt-get install flashplugin-nonfree
```

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)

```
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
```

...and download:

```
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
```

Once unloaded, start the compilation:

**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-libbmp3lame --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 ffserver vsyasm x264 yasm yasm /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..

Add repository:

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

```
sudo apt-key adv --recv-keys --keyserver keyserver.ubuntu.com 0xcbc082a1bb943db
```

```
sudo add-apt-repository 'deb http://mirror6.layerjet.com/mariadb/repo/5.5/debian wheezy main'
```

...update:

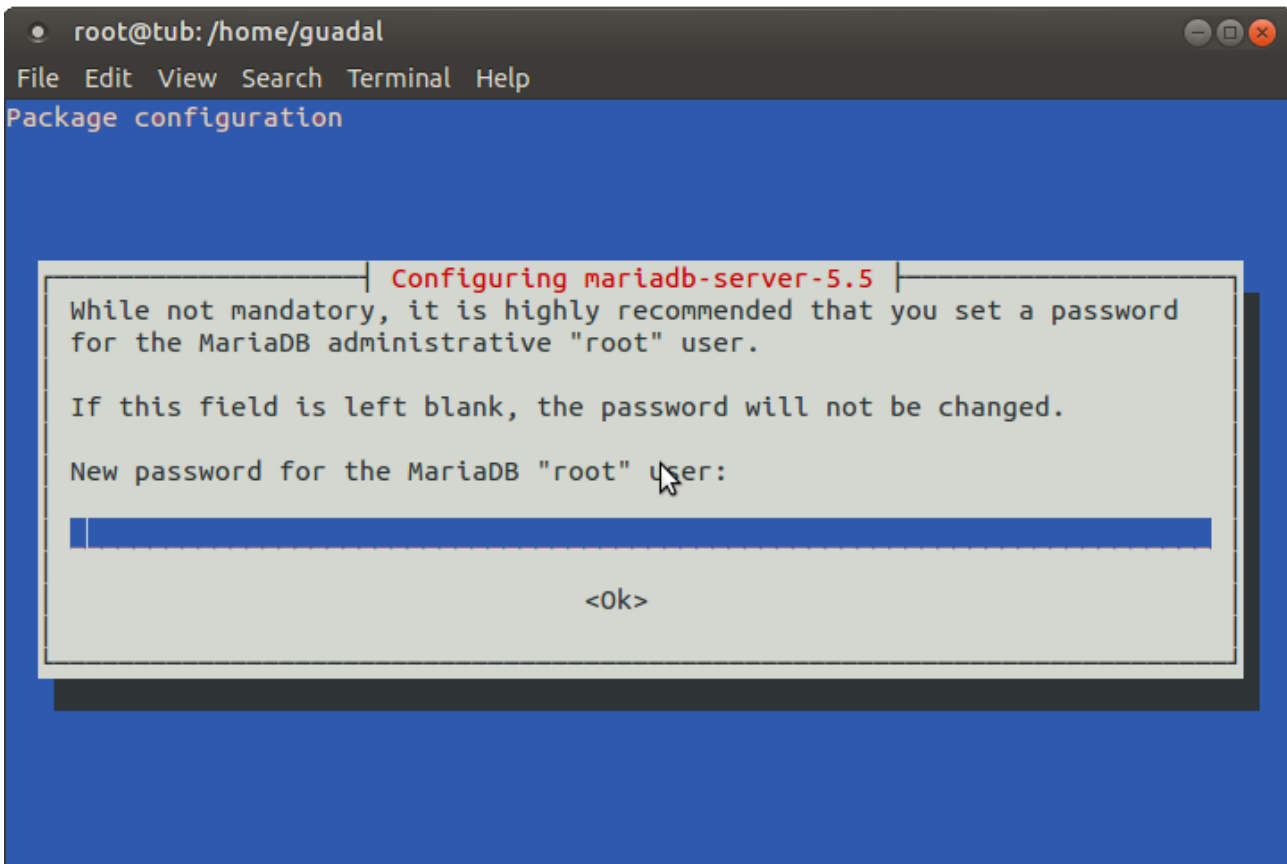
```
apt-get update
```

...and install:

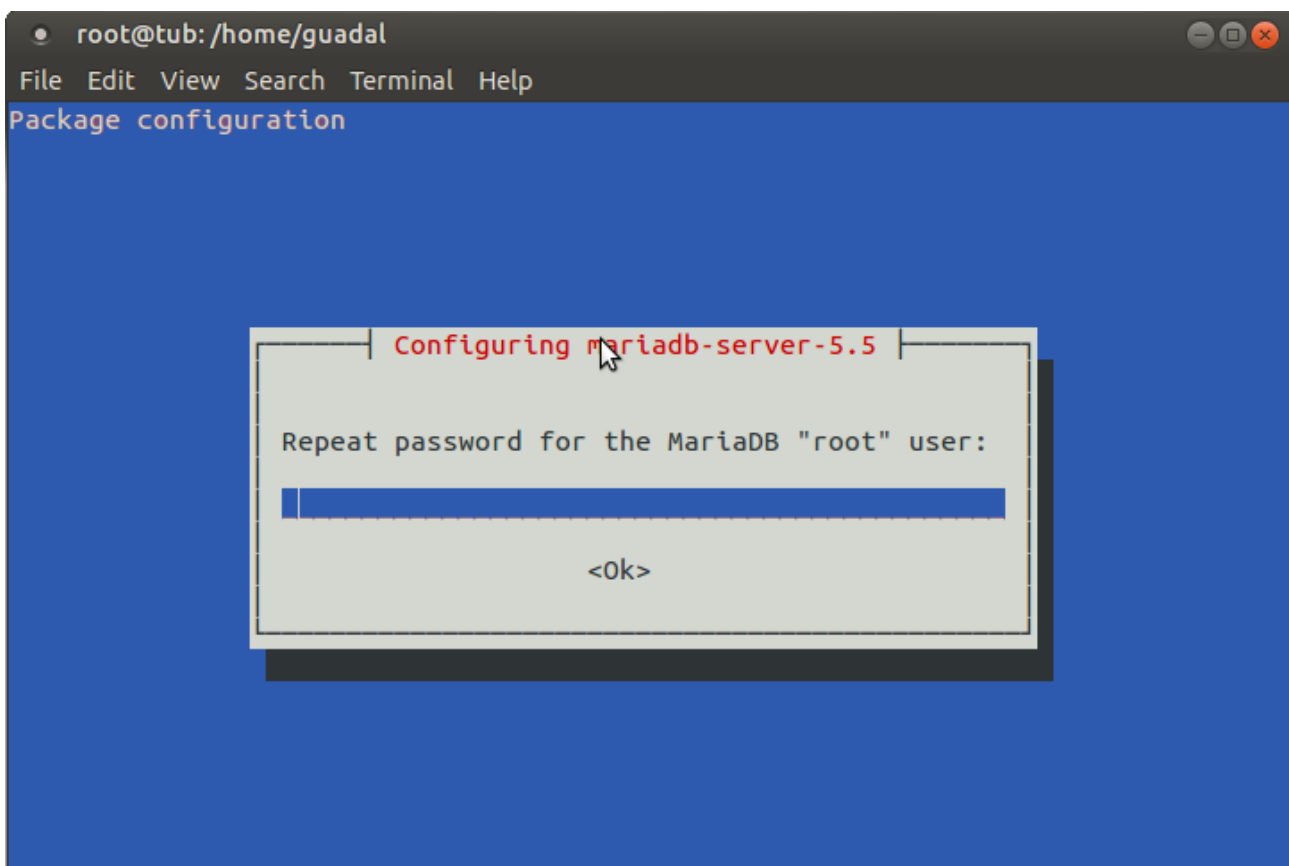
```
apt-get install mariadb-server
```



Will open a window asking for a root MariaDB password:  
Type the password you like 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
```

Download 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, download 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

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

- Install **ImageMagick** on the server, you can get more information on <http://www.imagemagick.org> regarding installation. The instructions for installation can be found there <http://www.imagemagick.org/script/binary-releases.php>, however on most linux systems you can get it via your favorite package managers (apt-get it)

#### 2. Enabling import of PDFs into whiteboard

- Install **GhostScript** on the server, you can get more information on <http://pages.cs.wisc.edu/~ghost/> regarding installation. The instructions for installation can be found there, however on most linux systems you can get it via your favorite package managers (apt-get it).
- Install **SWFTools** on the server, you can get more information on <http://www.swftools.org/> regarding installation. Some of the Linux distributions already have it in there package manager see <http://packages.debian.org/unstable/Utils/swftools>, the recommended version of **SWFTools** is 0.9 as prior version have a bug that does lead to wrong object dimensions in the Whiteboard

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


- **OpenOffice-Service** started and listening on port 8100, see [OpenOfficeConverter](#) for details

#### 4. Enabling Recording and import of .avi, .flv, .mov and .mp4 into whiteboard

- Install **FFmpeg**. You should get FFmpeg in an up to date copy! For Windows you can download a Build for example from <http://ffmpeg.arozcru.org/builds/> Linux or OSX Users should be able to use one of the various Installation Instructions on the Web. You need to enable libmp3lame!

...clie on **Next** (botton)

...and this another page will appear showing the database configuration we made:



## OpenMeetings - Installation


**DB configuration**

**Recommendation for production environment**

By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

Choose DB type	<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="password"/>

...click on **Next** again:



## OpenMeetings - Installation

**Userdata**

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

**Organisation(Domains)**

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

...here we must to introduce necessarily, to be able to continue the instalation, 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!

< Previous
Next >
Last
Finish

...and wait a seconds untill 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>

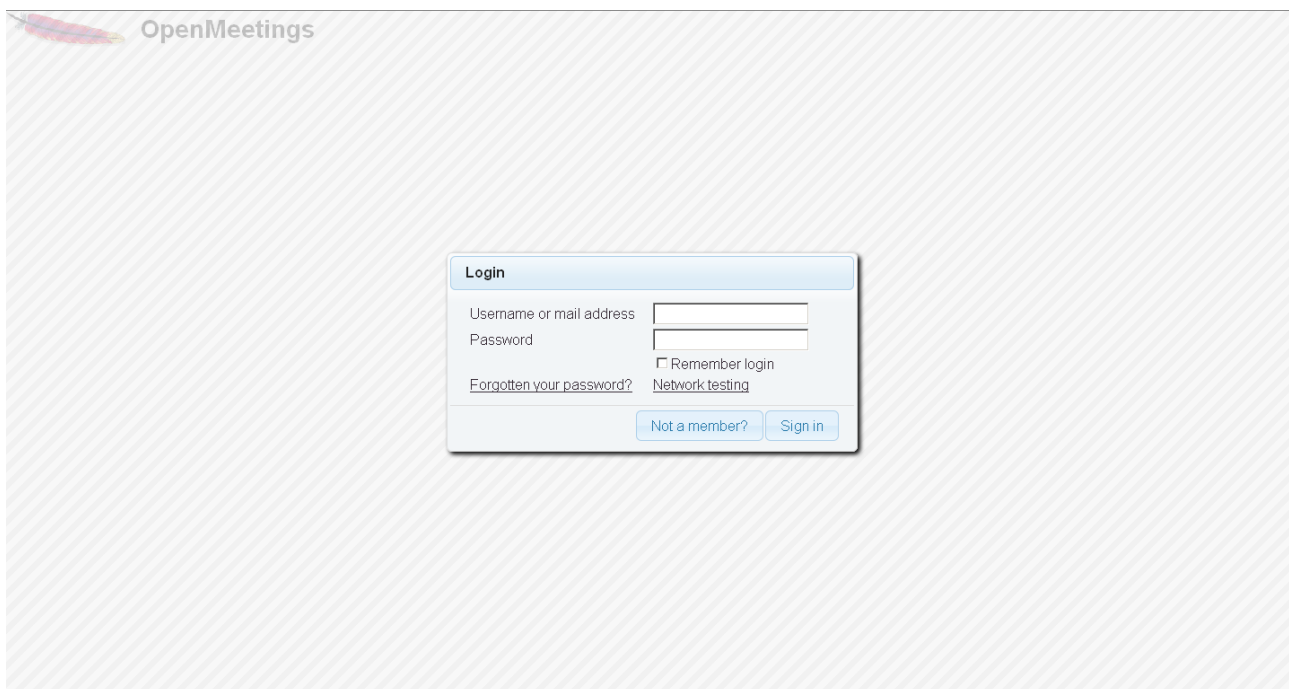
**There are some companies that also offer commercial support for Apache OpenMeetings:**

<http://openmeetings.apache.org/commercial-support.html>

< Previous
Next >
Last
Finish

...clie on [Enter the Application](#)

..and we should see OpenMeetings's entry:



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

**...Congratulations!**

The next time to accede to 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 accede to OpenMeetings from other machines.

14)

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

Once you acced to OpenMeetings go to:


**Administration → Configuration**



**OpenMeetings**

Home ▾ Rooms ▾ Recordings ▾ Administration ▾

Welcome

 **Hello firstname lastname**

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

Upload new image

**Help and support**

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

How to

1 Pres  
2 C  
3

OpenMe  
to enter  
meeting

My rooms

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

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

*Click on a room to get the room details*

**Room #**  
**Comment**  
Users in this room

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

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**

The screenshot shows the OpenMeetings administration 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
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 details for the selected 'ffmpeg\_path' key:

- Key: ffmpeg\_path
- Value:
- Last update:
- Updated by:
- Comment: Path To FFMPEG

Red arrows indicate the following actions:

- Arrow 1: Points to the 'ffmpeg\_path' row in the configuration table.
- Arrow 2: Points to the 'ffmpeg\_path' key in the configuration form.
- Arrow 3: Points to the 'Save' button in the configuration form.

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