



Installation of Apache OpenMeetings 3.0.x on Debian 8

This tutorial is made based on fresh installations of

debian-8.0.0-amd64-CD-1.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.

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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. Jessie desktop iso have already LibreOffice installed. But if you are on server: `apt-get install libreoffice`

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 libgif-dev synaptic zlib1g-dev liboil0.3 unzip make
```

```
apt-get install build-essential libfreetype6-dev
```

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 http://old-releases.ubuntu.com/ubuntu/pool/universe/s/swftools/swftools\_0.9.0-0ubuntu1\_amd64.deb
```

```
dpkg -i swftools_0.9.0-0ubuntu1_amd64.deb
```

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

For **32** bit:

```
cd /opt
```

```
wget http://old-releases.ubuntu.com/ubuntu/pool/universe/s/swftools/swftools\_0.9.0-0ubuntu1\_i386.deb
```

```
dpkg -i swftools_0.9.0-0ubuntu1_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-paste these two lines:

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

It is in Jessie repository.

Install these packages:

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

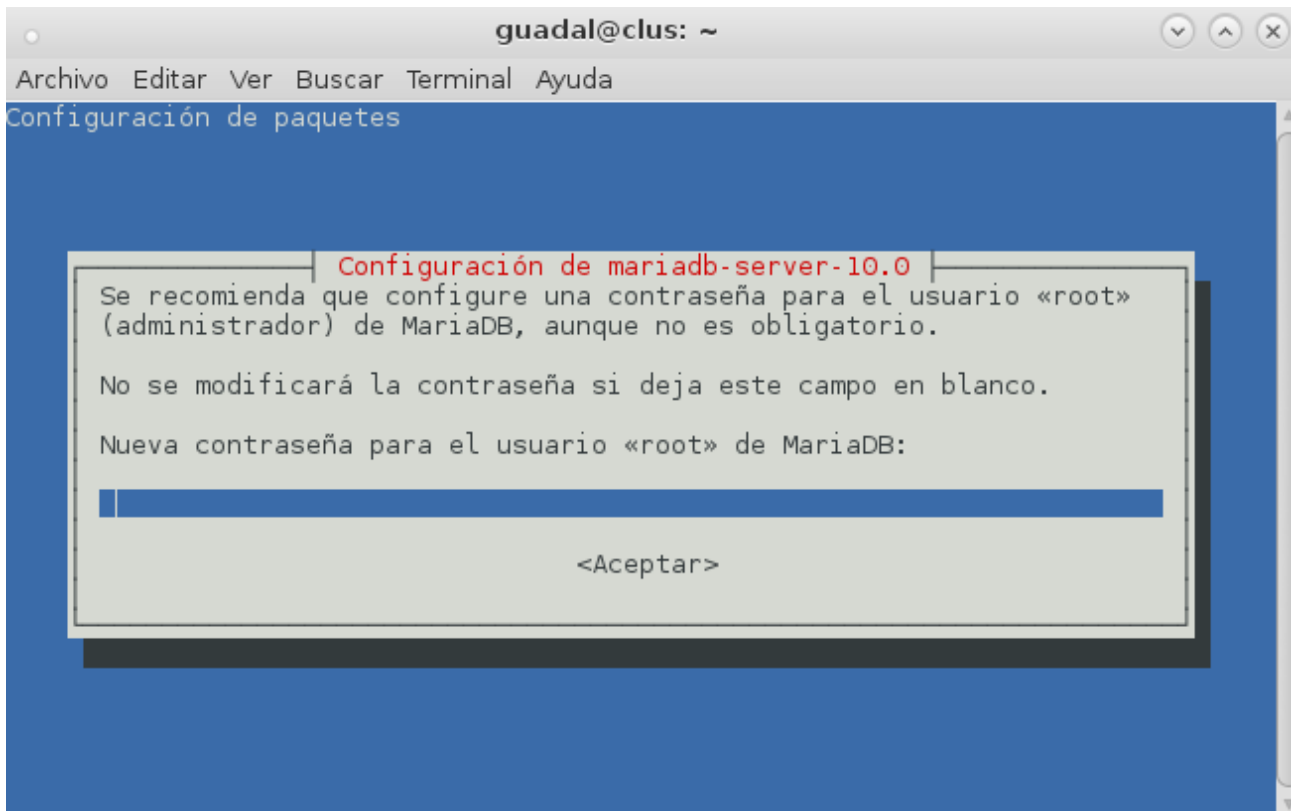
```
sudo apt-get install software-properties-common
```

...and now MariaDB:

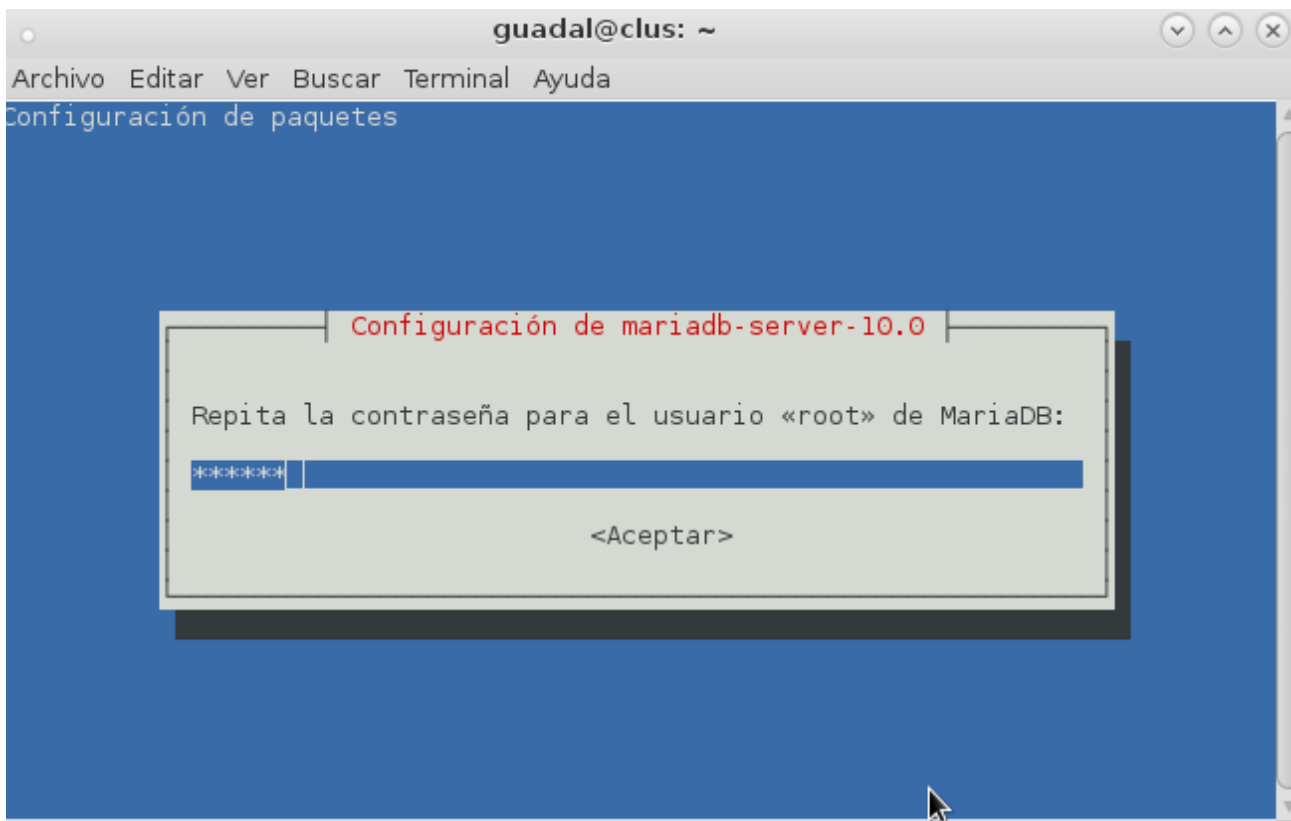
```
apt-get install mariadb-server
```

Will open a window asking for a root MariaDB password:

Type the password you like it → Accept → **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
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-3.0.6.zip /opt
```

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

```
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 81**

```
, 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 86**

```
, Username=root
```

...to

```
, Username=openmeetings
```

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

...to change on **line 87**

```
, 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=1&modificationDate=1424861692000&api=v2
```

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

Rename the file unloaded to red5:

```
mv red5?version=1 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 a seconds 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. Recommendation for production environment

By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using [MySQL](#), [Postgres](#) or for example [IBM DB2](#) or [Oracle](#)

2. 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)

3. 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

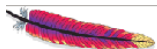
4. Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard

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

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

...clie on **Next** (bottom page)

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



OpenMeetings

OpenMeetings - Installation

DB configuration

Recommendation for production environment

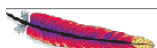
By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

Choose DB type	MySQL
Specify DB host	localhost
Specify DB port	3306
Specify the name of the database	
Specify DB user	
Specify DB password	

Check

< Previous Next > Last Finish

...clie **Next** and this another page will appear:



OpenMeetings

OpenMeetings - Installation

Userdata

Username	
Userpass	
E-Mail	
User Time Zone	Europe/Madrid

Organisation(Domains)

Name	
------	--

< Previous Next > Last Finish

...here we have 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!

< Previous
Next >
Last
Finish

...and wait a *moment* 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>

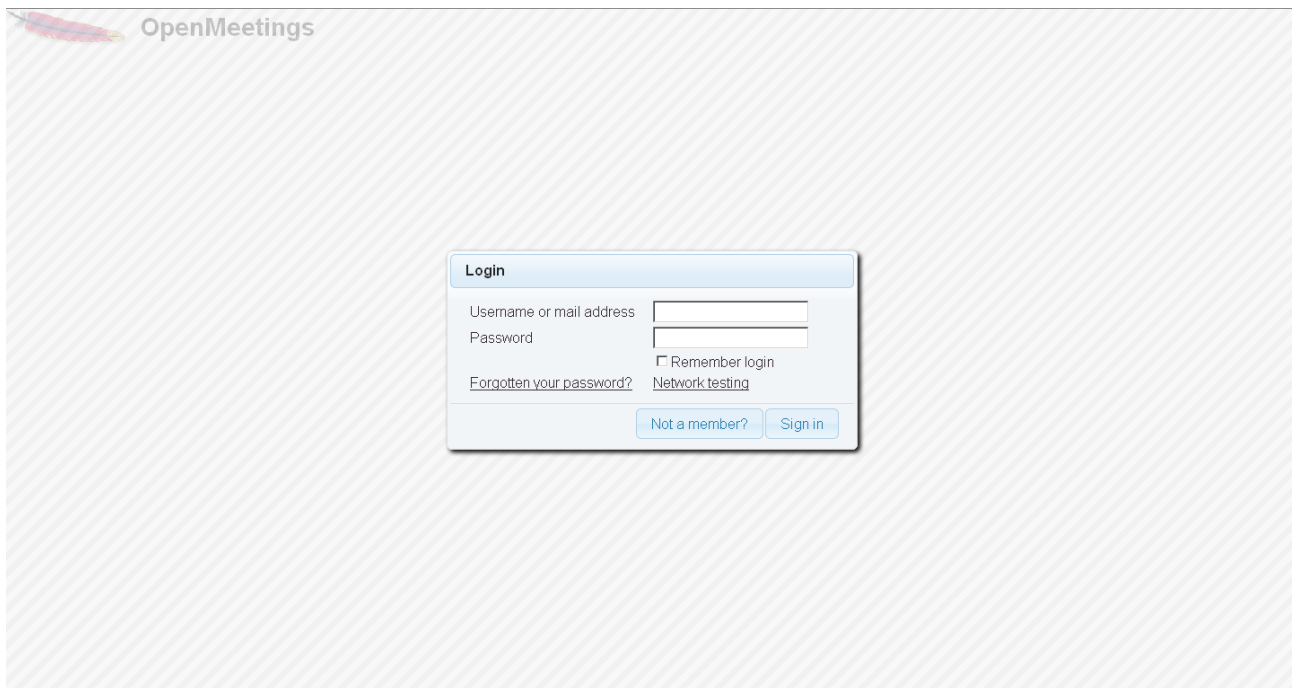
There are some companies that also offer commercial support for Apache OpenMeetings:

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

< Previous
Next >
Last
Finish

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

..and 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 that you wants 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

The image shows the OpenMeetings user interface. At the top, there is a navigation bar with tabs for Home, Rooms, Recordings, and Administration. The Administration tab is selected. Below the navigation bar, there is a 'Welcome' section with a user profile card. The profile card shows a question mark icon, the text 'Hello firstname lastname', and options to 'Upload new image', 'Edit your profile', and 'Unread messages'. A red arrow points to the 'Administration' tab. Below the profile card, there is 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 of steps: 1. Press, 2. C, 3. OpenMe to enter meeting.

...this is the page of configurations...

The image shows the OpenMeetings configuration page. At the top, there is a navigation bar with tabs for Home, Rooms, Recordings, and Administration. The Administration tab is selected. Below the navigation bar, there is a search bar and a table of configurations. The table has columns for ID, Key, and Value. The configuration for 'ffmpeg_path' (ID 21) is highlighted. A red arrow points to this row. To the right of the table, there is a configuration form for the 'ffmpeg_path' key. The form has fields for Key, Value, Last update, Updated by, and Comment. A red arrow points to the 'Value' field, and another red arrow points to the 'Comment' field. The 'Comment' field contains the text 'Path To FFmpeg'.

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

...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/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**

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