



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.

14-5-2015 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. 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 libx264-dev cmake  
mercurial libopus-dev
```

We'll make a script that it should download, compile and install ffmpeg.

Today, 8-6-2015, is a bug with the last x264 and ffmpeg versions when recording on OpenMeetings. Therefore we'll use versions from the end of the past year, that works rightly, i tested it.

Better than copy and paste would be download the script:

https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_script_compile_Ubuntu_Debian.zip?version=2&modificationDate=1436189138000&api=v2

...and after running the script can go to step 8)

```
sudo gedit /opt/ffmpeg.sh
```

...copy and past **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-20141003-2245-
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.tar.gz
wget http://webm.googlecode.com/files/libvpx-v1.3.0.tar.bz2
wget http://ffmpeg.org/releases/ffmpeg-2.5.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 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

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
```

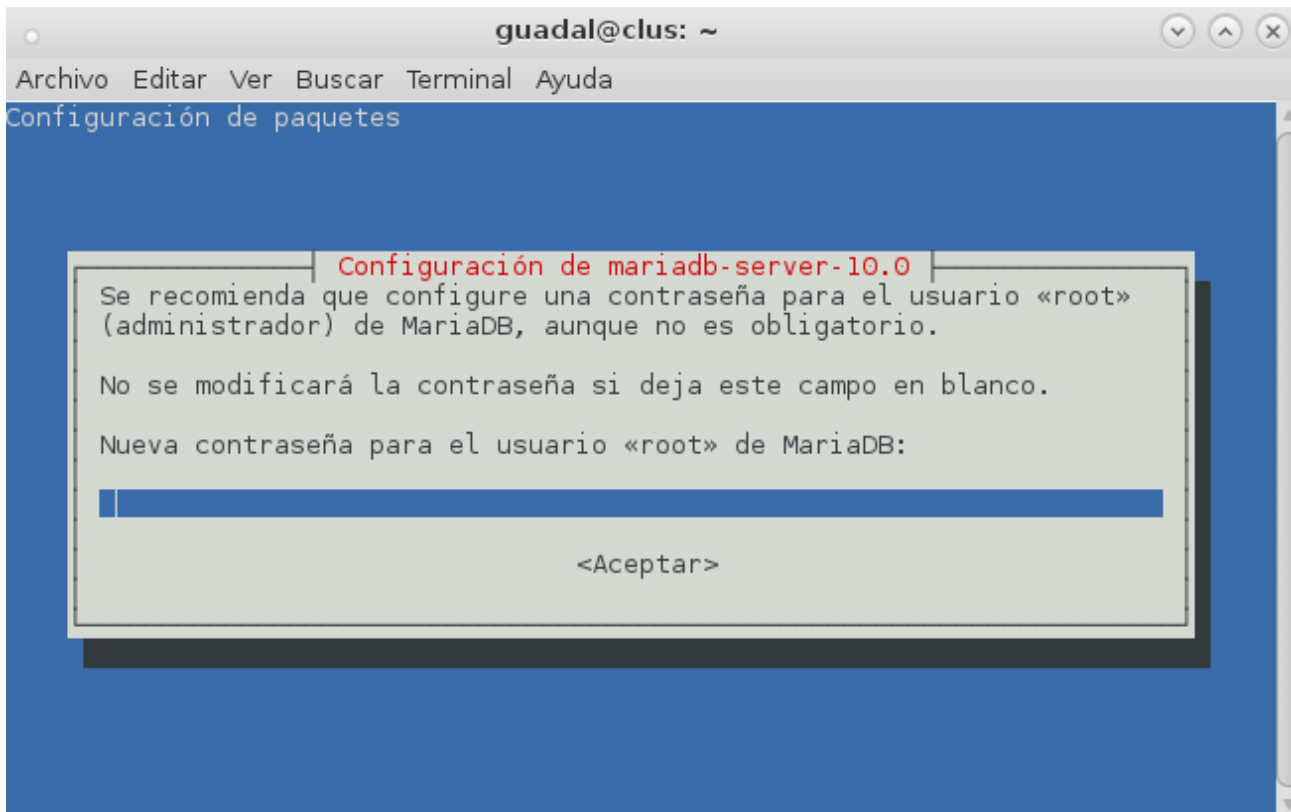
```
sudo apt-get install software-properties-common
```

...and now MariaDB:

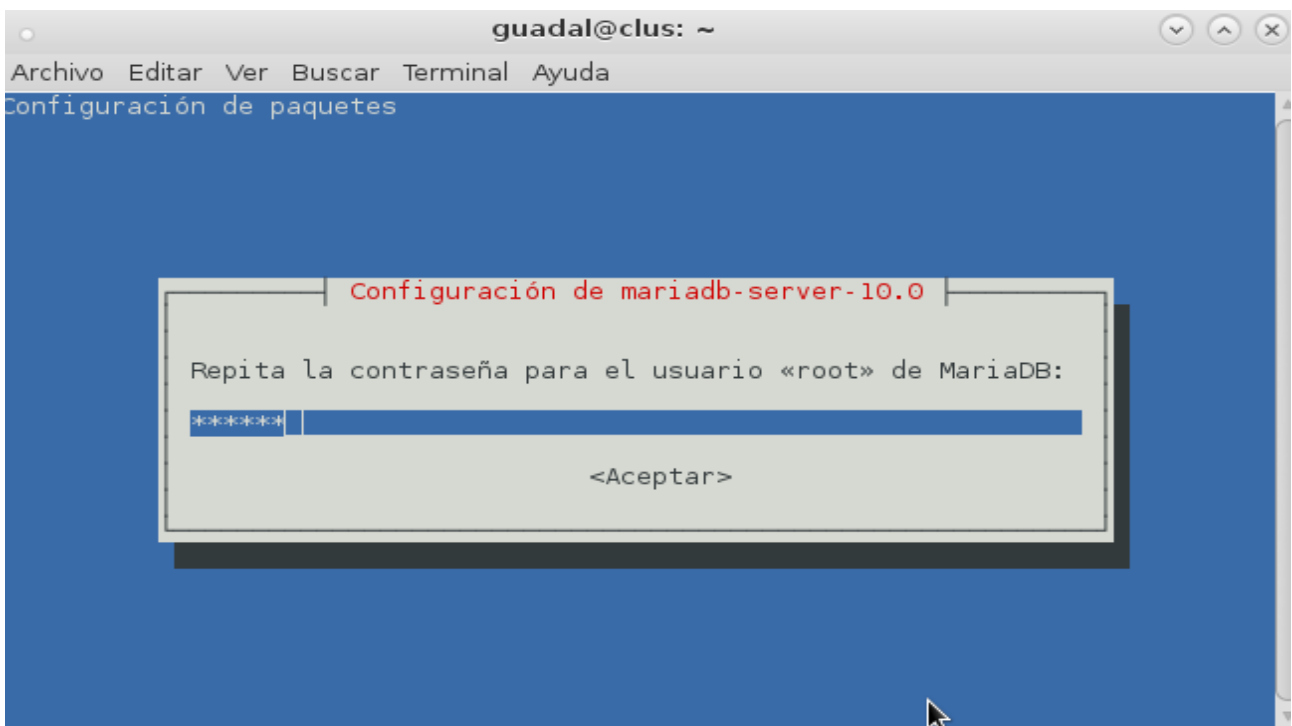
`apt-get install mariadb-server`

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;
```

* open306is the database name.

* openmeetings ...is the user name for the database.

* 123456is 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 modify 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 modify on **line 86**

```
, Username=root
```

```
...to
```

```
, Username=openmeetings
```

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

...to modify 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=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 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

...clic 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	<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="text"/>

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



OpenMeetings

OpenMeetings - Installation

Userdata

Username	<input type="text"/>
Userpass	<input type="text"/>
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 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!
<input type="text"/>
<input type="button" value=" < Previous"/> <input type="button" value=" Next >"/> <input type="button" value=" Last"/> <input type="button" value=" Finish"/>

...and wait a seconds untill the tables are fill in the database.
When has concluded, this another page will appear:

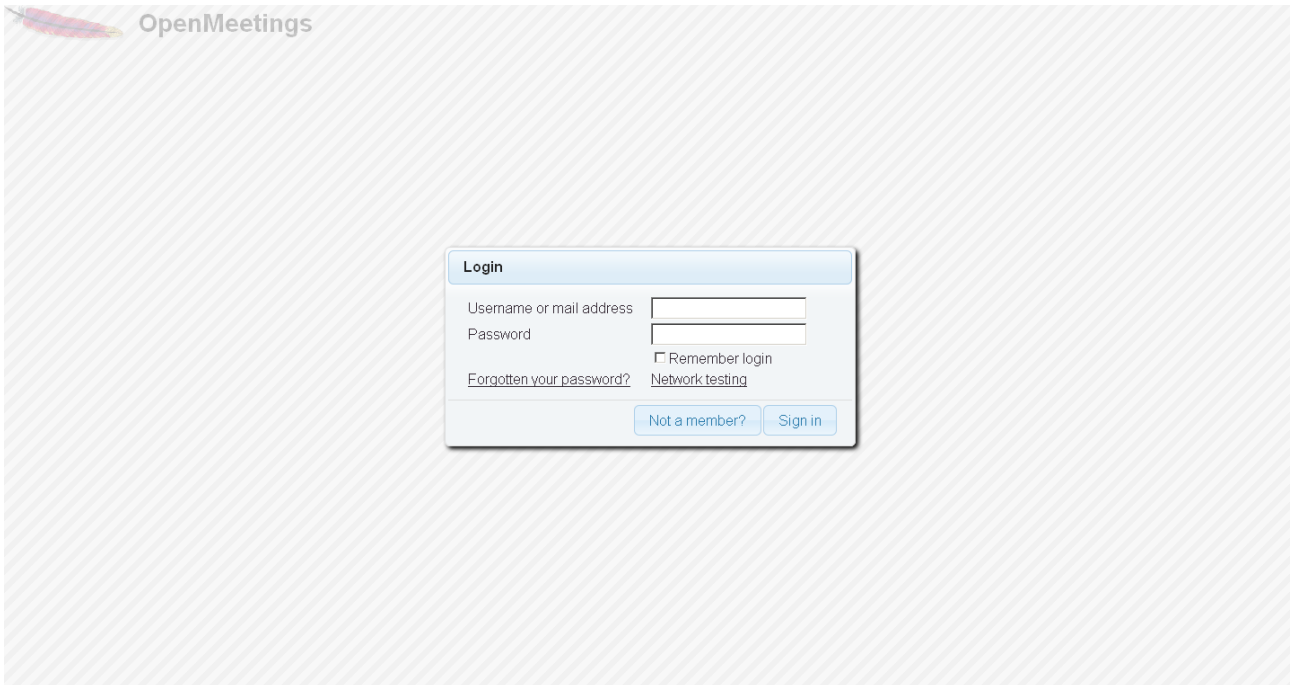


OpenMeetings

OpenMeetings - Installation
<u>Enter the Application</u>
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
<input type="button" value=" < Previous"/> <input type="button" value=" Next >"/> <input type="button" value=" Last"/> <input type="button" value=" Finish"/>

...click 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.

12)

---- 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](#)

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](#)

My rooms

My conference room (for 1-16 users) *Click on a room to get the room details*

My webinar room (for 1-120 users)

Room #

Comment

Users in this room

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

Home | Rooms | Recordings | Administration

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

Configuration

Key:

Value:

Last update:

Updated by:

Comment:

...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.

13)

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-5.1.35.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