



## **Installation of Apache OpenMeetings 3.1.x on Mac El Capitan OS X**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.1 stable, that is to say will suppress his compilation. It is done step by step.

25-3-2016

Starting....

1)

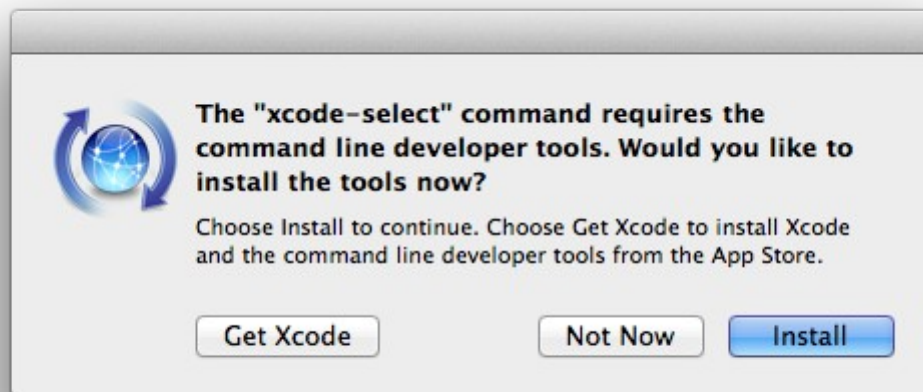
### **----- Installation of Command line developer tools -----**

Should install in first place the developer tools, that will help us to compile the sources.

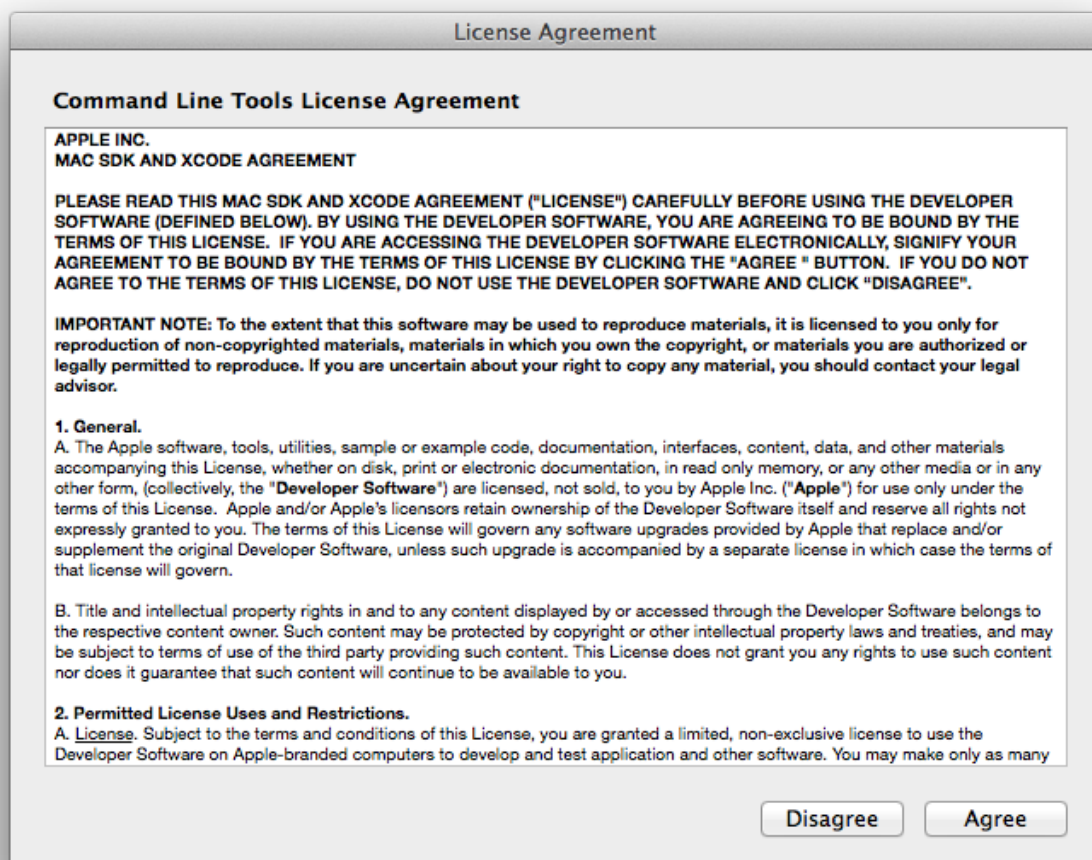
Run the shell as administrator, not as root, and install:

`xcode-select --install`

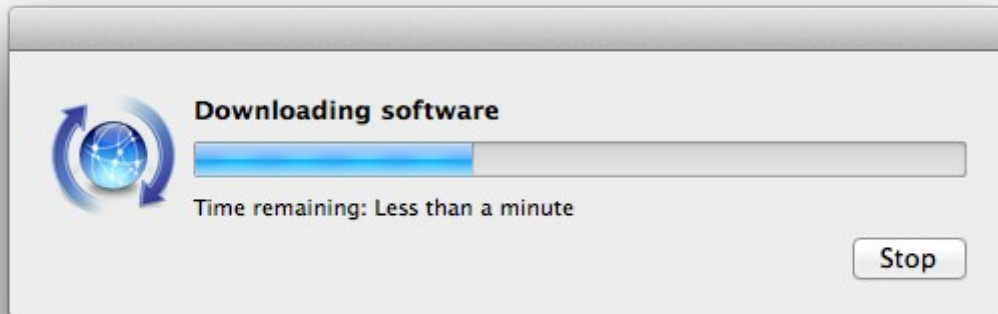
...will open a window informing:



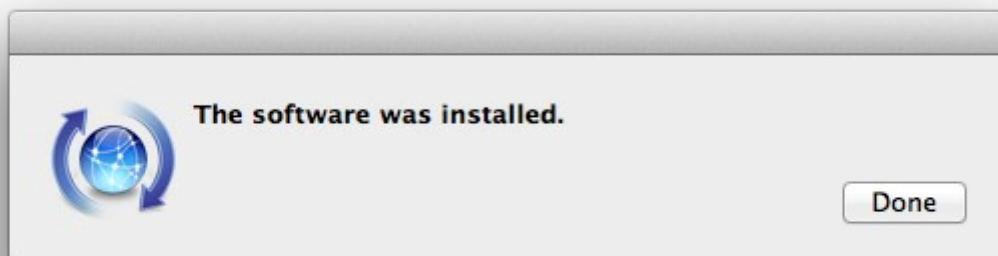
clie **Install** button only, and will open other window. clic **Agree** button



...and will download and install the software



...telling when it finished



...clic **Done**.

2)

#### ----- Installation of Homebrew -----

Homebrew install software. It is on Mac the same that apt-get on Debian and yum on Centos or Fedora, for example. Should install it:

```
ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

brew doctor

...and update:

brew update

3)

----- Installation of need it software -----

Will install wget to download files, and ghostscript:

brew install wget ghostscript nmap

4)

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

Java is need it to work with Apache OpenMeetings. Will install Oracle Java 1.8:

Please visit:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html?ssSourceSiteId=otnes>

...clic on:

**Agree and proceed**

...check:

**Accept License Agreement**

...and download the file called:

**jdk-8u74-macosx-x64.dmg**

Once unloaded the file, double clic on it and follow the installation process by default.

5)

----- Installation of OpenOffice -----

OpenOffice is need it to convert the office files uploaded to pdf.

To download please visit:

<http://www.openoffice.org/download/>

...select and download:

OS X (version >= 10-7) (DMG) language 4.1.2

Download full installation

Do double clic on the unloaded file: **Apache\_OpenOffice\_4.1.2\_MacOS\_x86-64\_install....**  
and will open this window:



...please, drag **OpenOffice** icon to right, to **Applications** folder icon.

6)

----- **Installation of ImageMagick, Sox, Swftools and Vlc** -----

**ImageMagick** work with the image files as png, jpg, gif, etc.

**Sox** work about sound.

`brew install imagemagick sox`

ImageMagick and Sox will be installed in: /usr/local/bin

**Swftools** convert images and pdf files to flash files (swf). These flash files will be showing in the whiteboard, for example. Download from here:

<https://flexpaper-desktop-publisher.googlecode.com/files/swftools-0.9.2-1-osx10.6.dmg>

...clíc on [swftools-0.9.2-1-osx10.6.dmg](#) file unloaded and install by default.

Swftools will be installed in: /opt/local/bin

**Vlc** is the player for the video files we'll recording.

`brew install Caskroom/cask/vlc`

7)

----- **FFMPEG compilation** -----

Ffmpeg work about video. We'll compile it. For it base on a script, an excellent work of Hunter at this url:

<http://hunterford.me/compiling-ffmpeg-on-mac-os-x/>

...as it is doesn't works with OpenMeetings. Then i have modificado the script and now it works rightly. Also is updated to 22-3-2016. Should install some paquets before to run it:

`brew install mercurial cmake`

The script will download, compile and install ffmpeg automatically.

Please, download it from here, the instructions to run it are inside the zip:

[https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg\\_compile\\_El\\_Capitan\\_OSX.zip?version=2&modificationDate=1458905206761&api=v2](https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_compile_El_Capitan_OSX.zip?version=2&modificationDate=1458905206761&api=v2)

...run it and after the compilation is finished you can go to **step 8)**

But if you prefer copy and paste, i **do not advise**, leave the text script.  
Please respect the spaces between the text blocks when copy. Will ask for password during installation, attention!

```
nano /Users/you-user/ffmpeg-mac.sh
```

...modify .../**you-user**/... by your real user name.

Copy **from here**:

```
# Create a temporary directory for sources.
```

```
SOURCES=$(mktemp -d /tmp/hola)
```

```
cd $SOURCES
```

```
# Download the necessary sources.
```

```
curl -#LO http://sourceforge.net/projects/opencore-amr/files/fdk-aac/fdk-aac-0.1.4.tar.gz
```

```
curl -#LO http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
```

```
curl -#LO http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
```

```
curl -#LO http://pkg-config.freedesktop.org/releases/pkg-config-0.29.tar.gz
```

```
curl -#LO http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.5.tar.gz
```

```
curl -#LO http://downloads.xiph.org/releases/theora/libtheora-1.1.1.tar.bz2
```

```
# curl -#LO http://downloads.sourceforge.net/project/opencore-amr/vo-amrwbenc/vo-amrwbenc-0.1.1.tar.gz
```

```
curl -#LO http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
```

```
curl -#LO http://storage.googleapis.com/downloads.webmproject.org/releases/webm/libvpx-1.5.0.tar.bz2
```

```
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last\_stable\_x264.tar.bz2
```

```
hg clone https://bitbucket.org/multicoreware/x265
```

```
curl -#LO http://downloads.xvid.org/downloads/xvidcore-1.3.4.tar.gz
```

```
# curl -#LG -d "p=ffmpeg.git;a=snapshot;h=HEAD;sf=tgz" -o ffmpeg.tar.gz http://git.videolan.org/
```

```
curl -#LO http://ffmpeg.org/releases/ffmpeg-3.0.tar.bz2
```

```
# Unpack files
```

```
for file in `ls ${SOURCES}/*.tar.*`; do
```

```
    tar -xzf $file
```

```
    rm $file
```

```
done
```

```
cd fdk-aac-*/
```

```
CFLAGS="-D__unix__" ./configure && make -j 4 && sudo make install; cd ..
```

```
cd lame-*/
```

```
./configure && make -j 4 && sudo make install; cd ..
```

```
cd libogg-*/
```

```
./configure && make -j 4 && sudo make install; cd ..
```

```
cd pkg-config-*/
```

```
./configure && make -j 4 && sudo make install; cd ..
```

```

cd libvorbis-*/
./configure --disable-oggtest --build=x86_64 && make -j 4 && sudo make install; cd ..

cd libtheora-*/
./configure --disable-oggtest --disable-vorbistest --disable-examples --disable-asm
make -j 4 && sudo make install; cd ..

# cd vo-amrwbenc-*/

# ./configure && make -j 4 && sudo make install; cd ..

cd yasm-*/
./configure && make -j 4 && sudo make install; cd ..

cd libvp8-*/
./configure --enable-vp8 --enable-pic && make -j 4 && sudo make install; cd ..

cd x264-*
CFLAGS="-I. -fno-common -read_only_relocs suppress" ./configure --enable-pic --enable-shared
&& make -j 4 && sudo make install; cd ..

cd x265/build/linux
cmake -G "Unix Makefiles" -DENABLE_SHARED:bool=off ../../source && make && make
install; cd /tmp/hola

cd xvidcore/build/generic
./configure --disable-assembly && make -j 4 && sudo make install; cd ../../..

# For Lion, we have to change which compiler to use (--cc=clang).
# If you're building on Snow Leopard, you can omit this flag so it defaults to gcc.
cd ffmpeg-*/
CFLAGS="-DHAVE_LRINTF" ./configure --pkg-config-flags="--static" --enable-nonfree
--enable-gpl --enable-version3 --enable-postproc --enable-swscale --enable-avfilter --enable-
libmp3lame --enable-libvorbis --enable-libtheora --enable-libfreetype --enable-libfdk-aac --enable-
libxvid --enable-libx264 --enable-libx265 --enable-libvp8 --enable-hardcoded-tables --enable-
shared --enable-threads --disable-indevs --cc=clang && make -j 4 && sudo make install

# --enable-libvo-amrwbenc

# FFMpeg creates MP4s that have the metadata at the end of the file.
# This tool moves it to the beginning.
cd tools
gcc -D_LARGEFILE_SOURCE qt-faststart.c -o qt-faststart
sudo mv qt-faststart /usr/local/bin

....to here.

```

Once copied and pasted, clic **Ctrl+X** and will ask to save, clic **Y** and after this clic **Return** (Enter) to exit. Concede execution permission:

```
chmod +x /Users/you-user/ffmpeg-mac.sh
```



...remember modify .../you-user/....by your real user name

...and execute the script to download, compile and intall ffmpeg:

```
cd /Users/you-user
```

```
./ffmpeg-mac.sh
```

...be patience and wait untill is finished. Some times will look it is stoped...don't touch anything and wait. Once finished, the installed files are in **/usr/local/bin**

8)

#### ----- Installation of Adobe Flash Player -----

Flash Player even is need it for rooms. Download and install it:

[http://fpdownload.macromedia.com/pub/flashplayer/latest/help/install\\_flash\\_player\\_osx.dmg](http://fpdownload.macromedia.com/pub/flashplayer/latest/help/install_flash_player_osx.dmg)

...clie on the [install\\_flash\\_player\\_osx.dmg](#) file and install it by default.

9)

#### ----- Installation of Jodconverter -----

Jodconverter work to convert uploaded files. (Remember modify you-user by your real user name).

```
cd /Users/you-user
```

```
wget http://jodconverter.googlecode.com/files/jodconverter-core-3.0-beta-4-dist.zip
```

```
unzip jodconverter-core-3.0-beta-4-dist.zip
```

10)

#### ----- Installation of MySQL -----

We'll use MySQL as data server. Install it:

```
brew install mysql
```

if you get this error: **Error: The `brew link` step did not complete successfully**, do this:

```
sudo chown -R $(whoami) /usr/local
```

```
brew link mysql
```

...if is not that error then don't do it.

Once finished, run MySQL:

```
mysql.server start
```

...and give a password to root of MySQL:

```
mysql -u root mysql
```

This command to give a root password to MySQL, is for 5.7.6 version and later.

...modify **your\_new\_password** by the password you like it:

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'your_new_password';
```

```
mysql> flush privileges;
```

...and out:

```
mysql> quit
```

11)

### ----- Make a data-base for OpenMeetings -----

Should make a data.base for OpenMeetings.

Run MySQL if not:

```
mysql.server start
```

...accede:

```
mysql -u root -p
```

...will ask for the password just we made it, and now we'll make our data-base:

```
mysql> CREATE DATABASE open311 DEFAULT CHARACTER SET 'utf8';
```

...also we make an user with a password for this data-base:

(One line only with a space between both)

```
mysql> GRANT ALL PRIVILEGES ON open311.* TO 'hola'@'localhost'  
IDENTIFIED BY '123456' WITH GRANT OPTION;
```

mysql> quit

- **open311** ..... is the data-base name
- **hola** ..... is the name of the user for this data-base
- **123456** ..... is the password of **hola** user.

If you like it can modify these data, but remember it! Will need it later.

12)

### ----- Installation of OpenMeetings -----

Well, we are at the installation of OpenMeetings. We'll do it in: (Remember modify **you-user**)

/Users/**you-user**/red5311

...then make the folder:

**mkdir** /Users/**you-user**/red5311

...remember always modify .../**you-user**/... by your real user name.

Download Apache-OpenMeetings file to the installation folder:

**cd** /Users/**you-user**/red5311

**wget** <http://apache.rediris.es/openmeetings/3.1.1/bin/apache-openmeetings-3.1.1.zip>

**unzip** apache-openmeetings-3.1.1.zip

...save the unloaded file moving it to your home:

**mv** apache-openmeetings-3.1.1.zip /Users/**you-user**

Download and install the connector file between OpenMeetings and MySQL:

**cd** /Users/**you-user**

**wget** <http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.38/mysql-connector-java-5.1.38.jar>

...and copy it to his place:

(In only one line with a space between both)

```
cp /Users/you-user/mysql-connector-java-5.1.38.jar
/Users/you-user/red5311/webapps/openmeetings/WEB-INF/lib
```

13)

### ----- Configuration of the data-base on OpenMeetings -----

We'll configure the file that do connect OpenMeetings with MySQL.

(In only one line without space between both)

```
nano /Users/you-user/red5311/webapps/openmeetings/WEB-INF/classes/META-
INF/mysql_persistence.xml
```

.Modify the **line 72**

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

...to

```
, Url=jdbc:mysql://localhost:3306/open311
```

...is the name of our data-base we made it.

Modify the **line 77**

```
, Username=root
```

...to

```
, Username=hola
```

...is the user name we made for our data-base.

Modify the **line 78**

```
, Password=" />
```

...to

```
, Password=123456" />
```

...is the password we made for the user called "hola".

If you have choose any other name for the user, password or data-base, here is where to type it.

clik **Ctrl+X**, will ask to save, clic **Y** and to exit clic **Retutn** (Enter.)

Now, protect the file:

(In only one line without space between both)

```
chmod 640 /Users/you-user/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

...remember modify .../**you-user**/...by your real user name.

14)

#### ----- Script to run red5-OpenMeetings -----

I supress to leave here the text script because copy and paste will give errors.  
So please download the script to run-stop red5-OpenMeetings.

```
cd /Users/you-user
```

(In only one line without a space)

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-mac?version=3&modificationDate=1458903758519&api=v2
```

...once is unloaded press **Ctrl+c**

Rename the script:

```
mv red5-mac?version=3 red5-mac
```

It is necessary to modify something inside the script. We edit it and type your real user name:

```
nano /Users/you-user/red5-mac
```

...the line:

```
export RED5_HOME=/Users/you-user/red5311
```

...press **Ctrl+x** will ask to save, press **Y** and **Return** (Enter)

```
sudo su
```

```
cp /Users/you-user/red5-mac /opt
```

...concede execution permission:

```
chmod +x /opt/red5-mac
```

exit

15)

### ----- Run red5-OpenMeetings -----

Begin with the interface of OpenMeetings.

Run MySQL, if not:

`mysql.server start`

...and run red5-OpenMeetings (maybe in other shell window):

`/opt/red5-mac start`

...wait 10 seconds until it is completely running and after this, with the browser go to:

<http://localhost:5080/openmeetings/install>

...there will appear a page similar to this one:

**OpenMeetings**


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 their package manager see <http://packages.debian.org/unstable/utils/swftools>, the recommended version of **SWFTools** is 0.9 as prior versions 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.arrozcru.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!
  - Install **SoX** <http://sox.sourceforge.net/>. You should install SoX in an up to date copy! SoX 12.xx will NOT work!

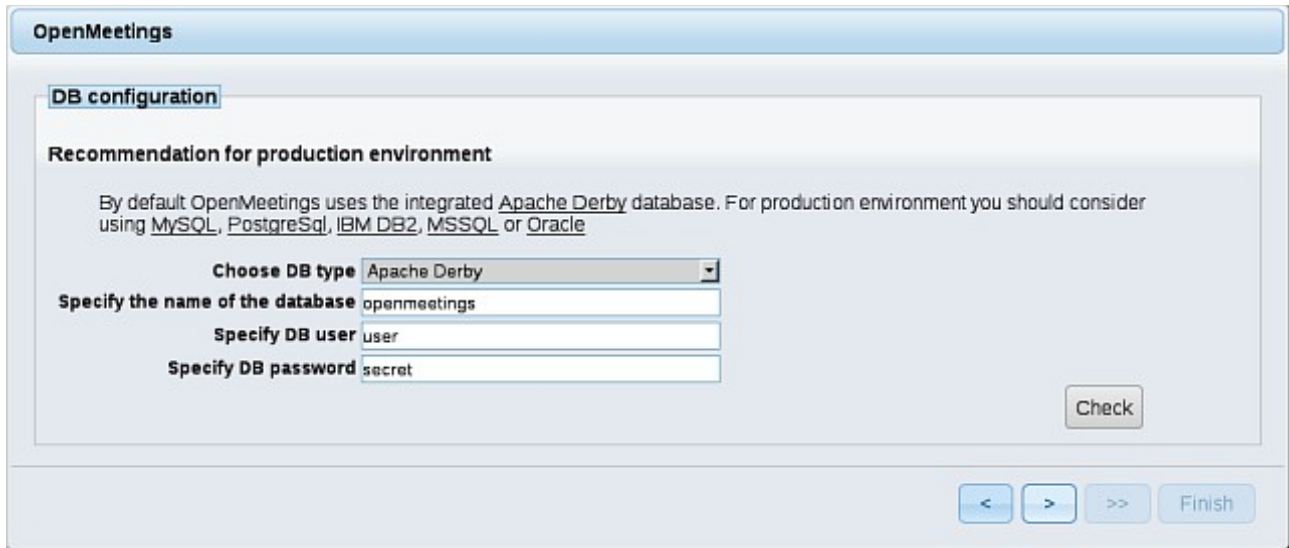
**If you have further questions or need support in installation or hosting:**

**Community-Support:**

[Mailing lists](#)

**Commercial-Support:**

...push on  (bottom), and will show the default database configuration with Derby, but we should use 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

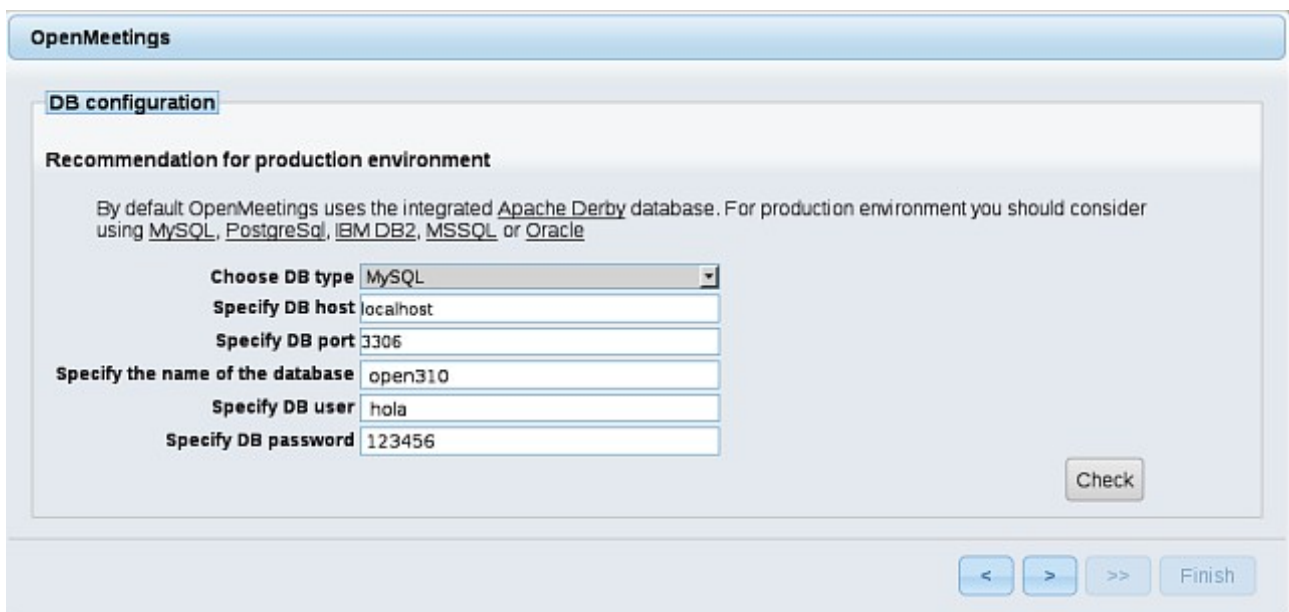
Choose DB type:

Specify the name of the database:

Specify DB user:

Specify DB password:

...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

Choose DB type:


Specify DB host:

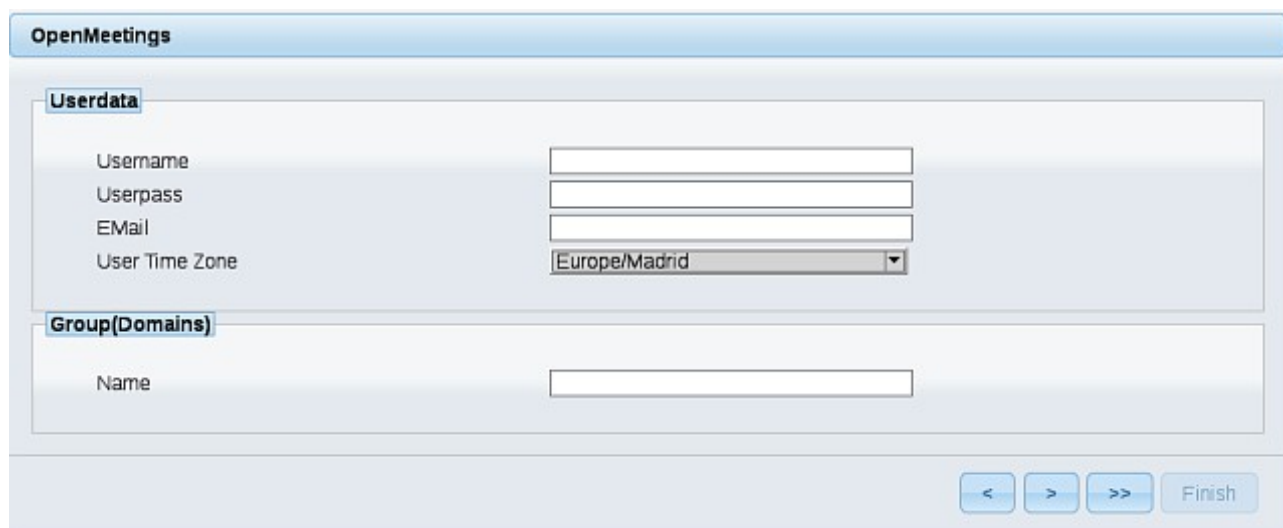
Specify DB port:

Specify the name of the database:

Specify DB user:

Specify DB password:

...will show the data base configuration we made in step 13, or with your own modifications. Please, push  button, and will go to:



The image shows a software window titled "OpenMeetings". It contains two main sections: "Userdata" and "Group(Domains)".

**Userdata section:**

- Username:
- Userpass:
- EMail:
- User Time Zone:

**Group(Domains) section:**

- Name:

At the bottom right, there are four buttons: "<", ">", ">>", and "Finish".

Now we must introduce the followings data:

**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.

When the installation be finished, should configure the rest.

Now go to bottom page and push the button  (double arrow). Will show this window:



The image shows a software window titled "OpenMeetings". It contains a message: "Please click 'Finish' button to start installation!". Below the message is a large empty rectangular box. At the bottom right, there are four buttons: "<", ">", ">>", and "Finish".

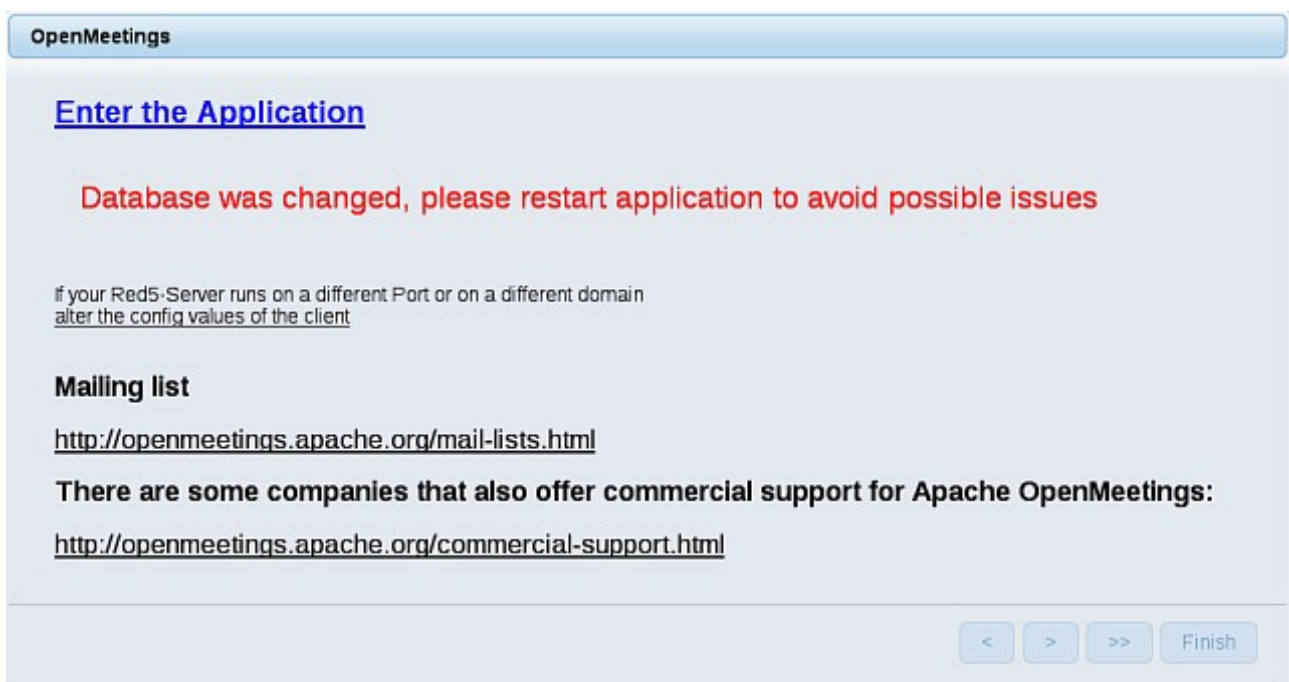
Push **Finish** button ...wait a seconds untill the tables are fill in the database.

When has concluded, this another page will appear. **Don't** clic on [Enter the Application](#).

First is need it to restart the server. Please, open a new shell window, and run this command:

`/opt/red5-mac restart`



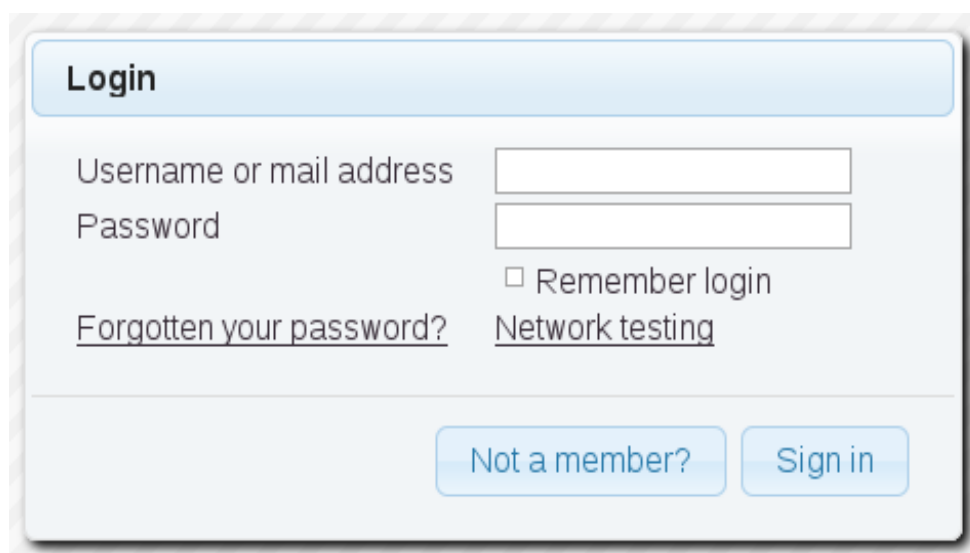


The image shows a screenshot of the OpenMeetings application window. The title bar says "OpenMeetings". The main content area has a blue header with the text "Enter the Application". Below this, a red message states: "Database was changed, please restart application to avoid possible issues". A note follows: "If your Red5-Server runs on a different Port or on a different domain alter the config values of the client". There is a section titled "Mailing list" with a link to <http://openmeetings.apache.org/mail-lists.html>. Below that, it says "There are some companies that also offer commercial support for Apache OpenMeetings:" followed by a link to <http://openmeetings.apache.org/commercial-support.html>. At the bottom right, there are four buttons: "<", ">", ">>", and "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:



The image shows a screenshot of the OpenMeetings login form. The title bar says "Login". There are two input fields: "Username or mail address" and "Password". Below the password field is a checkbox labeled "Remember login". There are two links: "Forgotten your password?" and "Network testing". At the bottom, there are two buttons: "Not a member?" and "Sign in".

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

...**Congratulations!**

The next time that you like to accede to OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember to open in the server the two following ports:

**5080    1935**

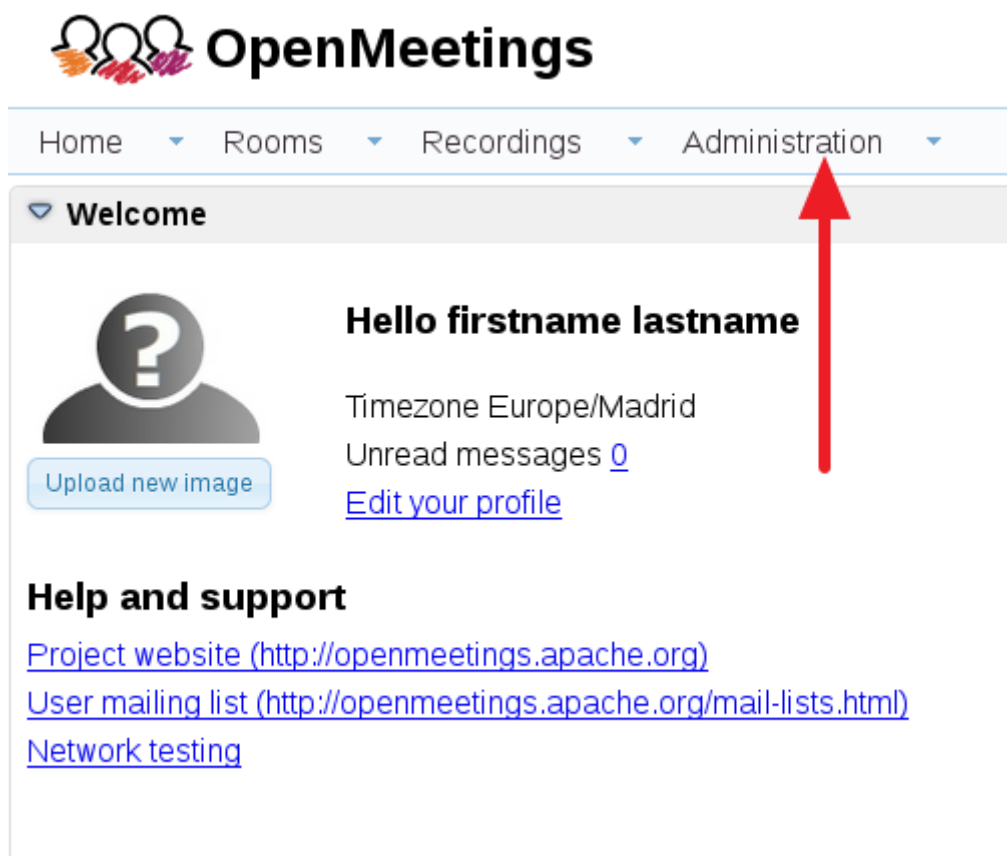
...in order that it could accede to OpenMeetings from other machines, in Lan or Internet.

16)

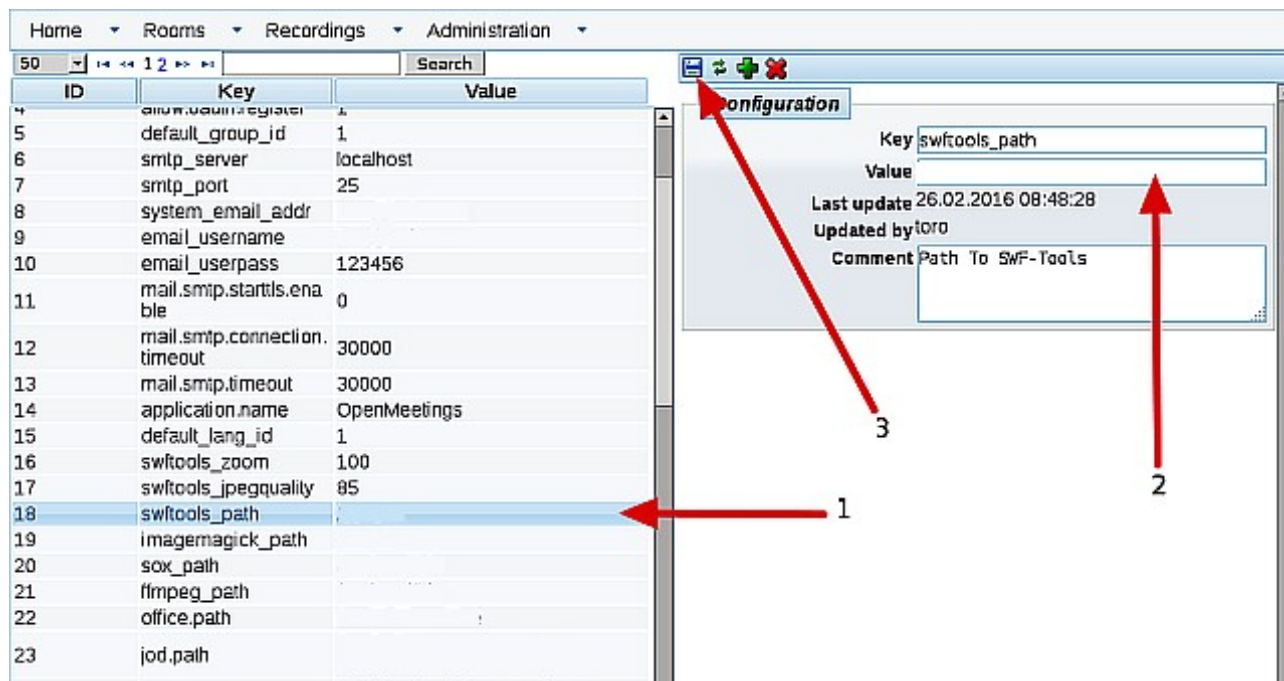
----- **Configuration of OpenMeetings** -----

Once you accede to OpenMeetings, please go to:

**Administration → Configuration**



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



Clic on: **swftools\_path**...and to right in **Value** type: **/opt/local/bin**

Clic on: **imagemagick\_path**...and to right in **Value** type: **/usr/local/bin**

Clic on: **sox\_path**...and to right in **Value** type: **/usr/local/bin**

Clic on: **ffmpeg\_path**...and to right in **Value** type: **/usr/local/bin**

Clic on: **office.path**...and to right in **Value** type : **/Applications/OpenOffice.app/Contents**

Clic on: **jod.path**...and to right in **Value** type: **/Users/you-user/jodconverter-core-3.0-beta-4/lib**  
 ....remember modify .../you-user/... by your real user name :)

Remember save after each change (arrow number 3, in the up screenshot).

Now there is OpenMeetings ready to work rightly.

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