



## **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)

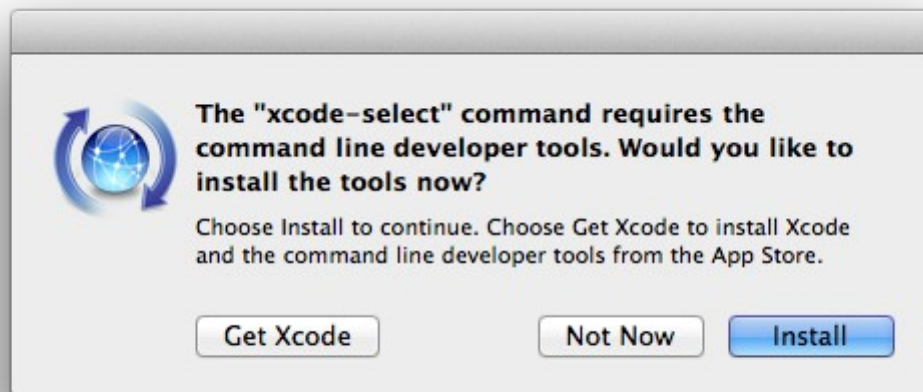
### **----- Installation of Command line developer tools -----**

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

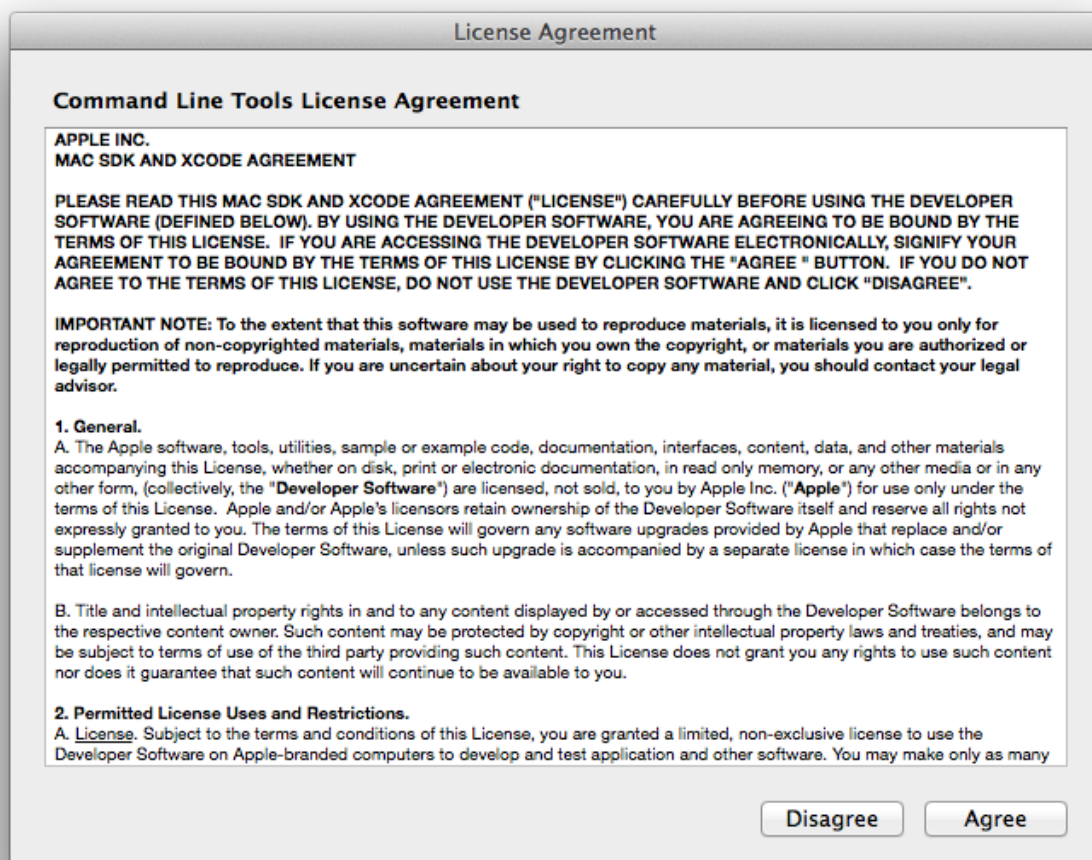
Run the shell as administrator, not as root, and install:

`xcode-select --install`

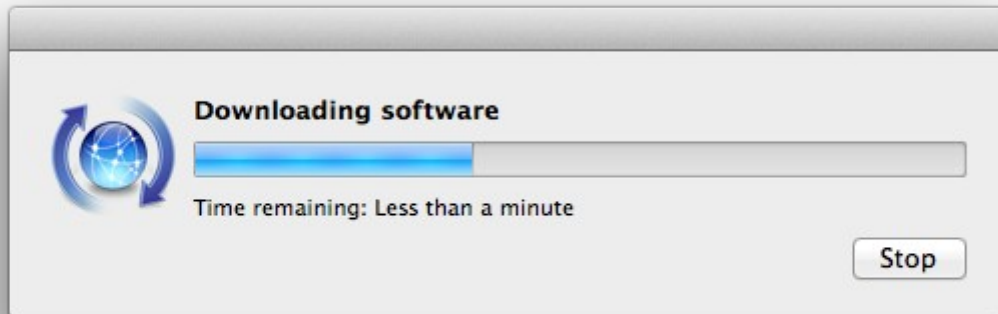
...will open a window informing:



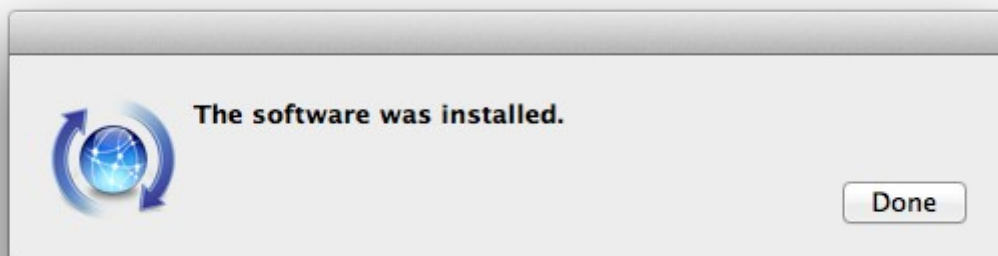
clie **Install** button only, and will open other window. clic **Agree** button



...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-8u77-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>

...clie 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 modiflicated the script and now it works rightly. Also is updated to 3-4-2016. 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=3&modificationDate=1459700531225&api=v2](https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_compile_El_Capitan_OSX.zip?version=3&modificationDate=1459700531225&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-3.0.1.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 libvpx-*/
./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-libvpx --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 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 line 77:

```
, Username=root
```

...to

```
, Username=hola
```

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

#### Modify 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!

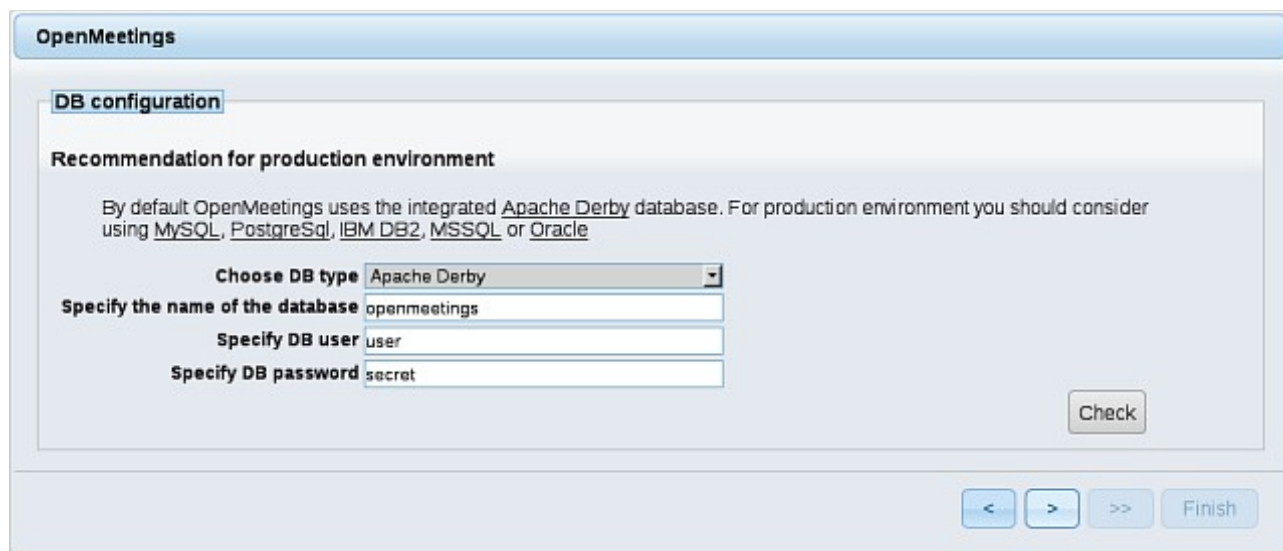
**If you have further questions or need support in installation or hosting:**

**Community-Support:**

[Mailing lists](#)

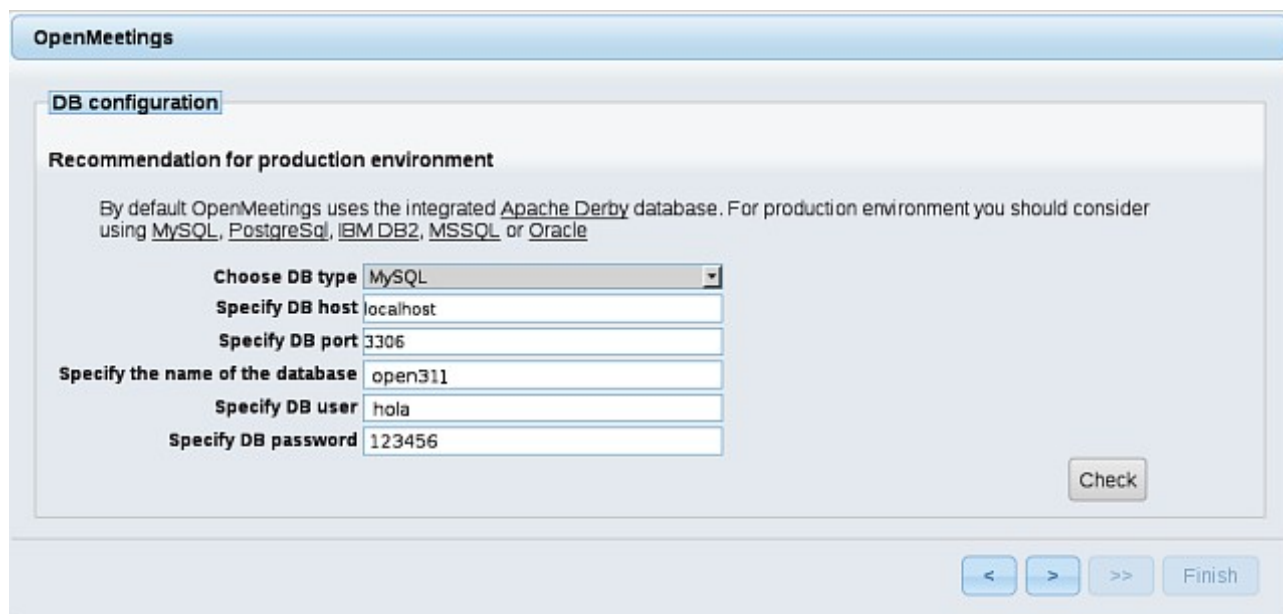
**Commercial-Support:**

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




The screenshot shows the 'OpenMeetings' window with the 'DB configuration' tab selected. It contains a 'Recommendation for production environment' section with a text block stating that the default is Apache Derby and suggesting MySQL, PostgreSQL, IBM DB2, MSSQL, or Oracle for production. Below this, there are four input fields: 'Choose DB type' (a dropdown menu set to 'Apache Derby'), 'Specify the name of the database' (text field with 'openmeetings'), 'Specify DB user' (text field with 'user'), and 'Specify DB password' (text field with 'secret'). A 'Check' button is located to the right of these fields. At the bottom right of the window, there are four navigation buttons: '<', '>', '>>', and 'Finish'.

...then, scroll and **Choose DB type** to MySQL:



The screenshot shows the 'OpenMeetings' window with the 'DB configuration' tab selected. It contains the same 'Recommendation for production environment' section. Below it, the input fields are: 'Choose DB type' (a dropdown menu set to 'MySQL'), 'Specify DB host' (text field with 'localhost'), 'Specify DB port' (text field with '3306'), 'Specify the name of the database' (text field with 'open311'), 'Specify DB user' (text field with 'hola'), and 'Specify DB password' (text field with '123456'). A 'Check' button is located to the right of these fields. At the bottom right of the window, there are four navigation buttons: '<', '>', '>>', and 'Finish'.

...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 the 'OpenMeetings' installation window. It has a title bar 'OpenMeetings' and a light blue background. There are two main sections: 'Userdata' and 'Group(Domains)'. The 'Userdata' section contains four input fields: 'Username', 'Userpass', 'EMail', and 'User Time Zone'. The 'User Time Zone' field is a dropdown menu currently showing 'Europe/Madrid'. The 'Group(Domains)' section contains a single input field labeled '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:

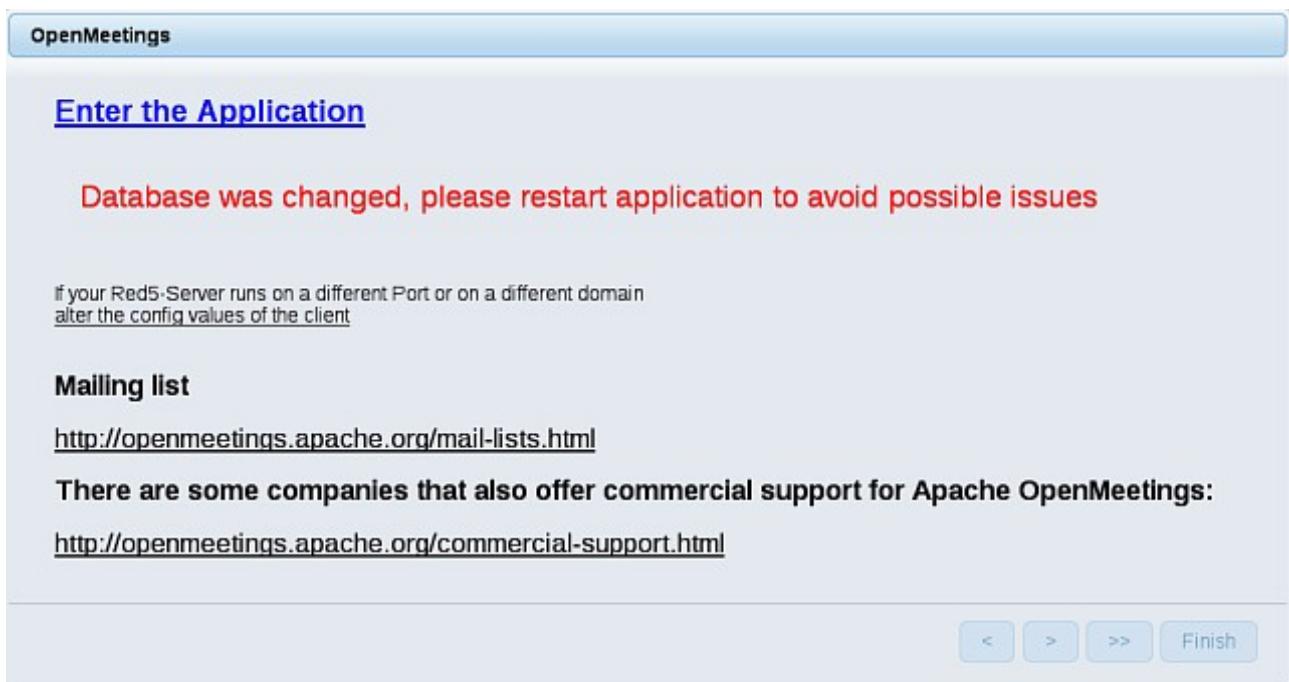
The image shows the 'OpenMeetings' installation window after clicking the double arrow button. It has a title bar 'OpenMeetings' and a light blue background. The main area contains a message: 'Please click "Finish" button to start installation!'. Below the message is a large empty rectangular box. At 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:

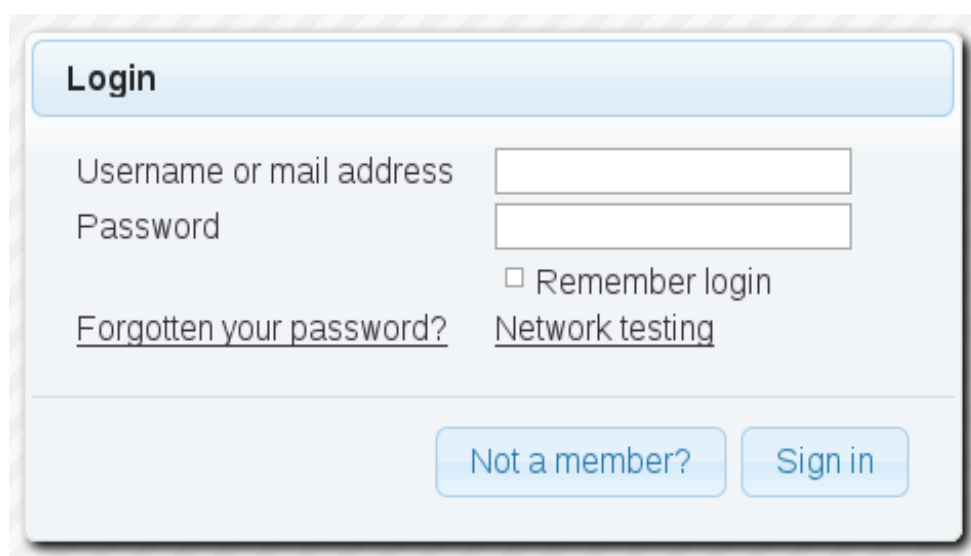




Now yes, you can clic on **Enter the Application**, or go with your browser to:

<http://localhost:5080/openmeetings>

...and will take us to the entry of OpenMeetings:



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**

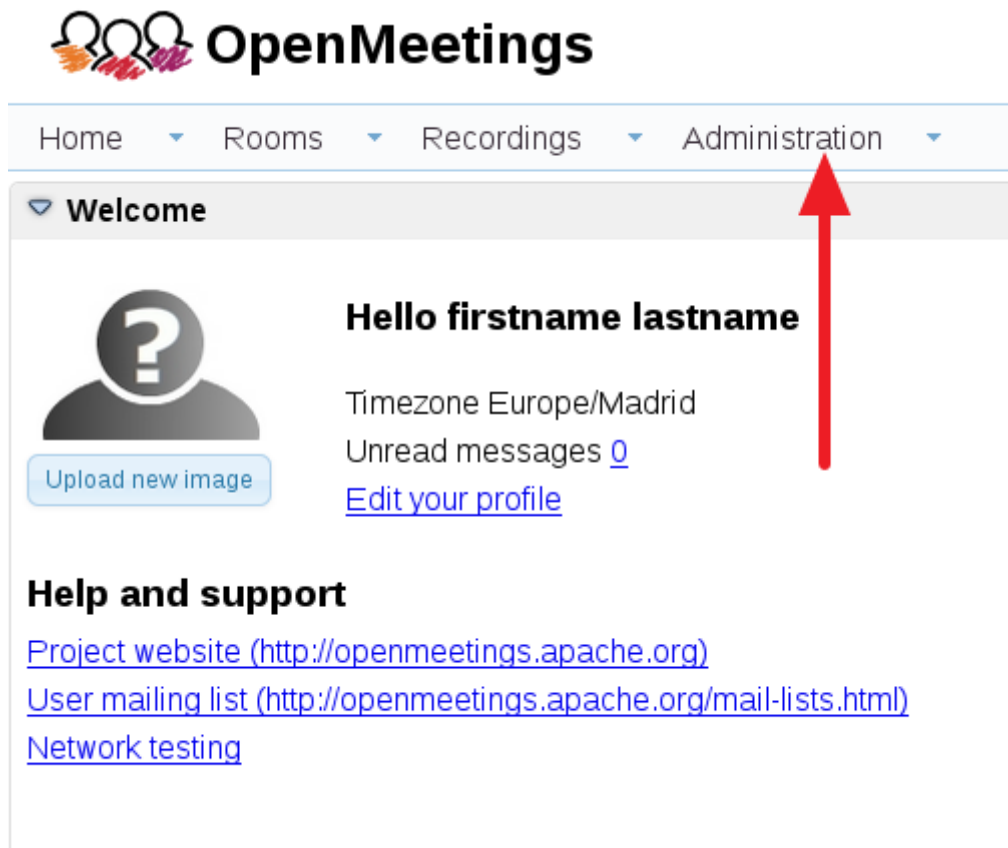
...in order that it could accede to OpenMeetings from other machines, in Lan or Internet.

16)

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

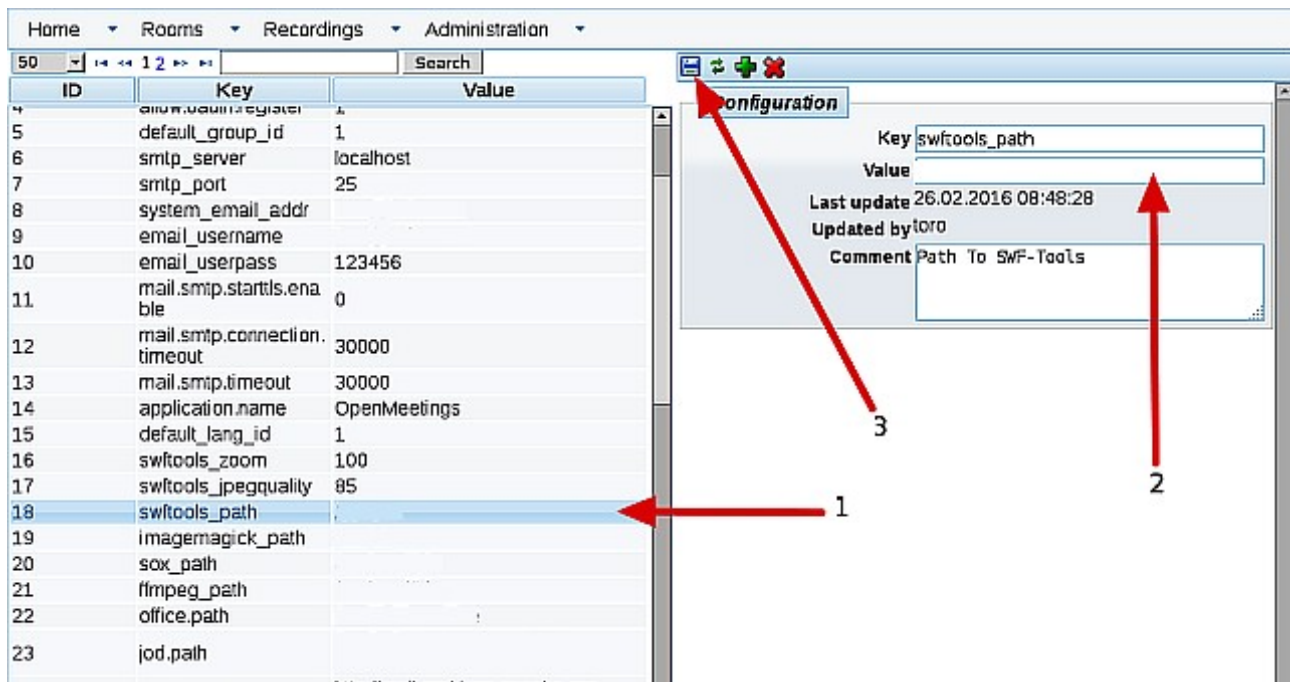
Once you accede to OpenMeetings, please go to:

**Administration → Configuration**



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

Pag 18



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.

-----

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