



## Installation of Apache OpenMeetings 3.1.3 on PCLinuxOS 2016

**pclinuxos64-mate-2016.07.iso**

This tutorial is made based on fresh installations of PCLinuxOS 2016 Mate.

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.3 stable, that is to say, will suppress his compilation. It is done step by step.

28-9-2016

Starting...

1)

Update and upgrade the operative system. Please go to:

`apt-get update`

`apt-get upgrade`

2)

----- Installation of libraries and packages -----

(Only one line with space between each one)

```
apt-get install -y libjpeg-progs giflib-progs freetype-devel gcc-c++ zlib1-devel libtool bison bison-  
static-devel file-roller ghostscript freetype unzip gcc ncurses make zlib1 bzip2 wget ghostscript  
ncurses zlib1 zlib1-devel x264-devel git make automake nasm pavucontrol rpm-installer freetype2  
curl
```

3)

### ----- Installation of LibreOffice and Java Sun 1.8.x -----

When we install LibreOffice also will install automatically Java sun 1.8.x. OpenMeetings 3.1.3 need java 1.8 to work.

LibreOffice will convert to pdf the uploaded office files. We install it:

`lomanager`

...if show a message like this: *Please Update your system. (more details...)....*

...then please go to:

**Synaptic --> Mark All Upgrades --> Apply --> Apply**

...and we type in shell newly:

`lomanager`

...will show a window where select your locale language for LibreOffice, and after this answer yes or ok to any question.

Will start installing Java sun 1.8.x and continue with LibreOffice. If would not install java, you can do it:

`apt-get install java-sun`

Once the installation it is finished you can change the LibreOffice language interface in:

**Tools --> Options --> Language settings --> Languages --> User interface (select your language) --> OK**

LibreOffice (installed or updated 14-8-2016) is in: `/opt/libreoffice5.2`

4)

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

Flash player it is installed in Mate already, but not in KDE minimum. So will install it and firefox also, if you like it. Adobe Flash Player even is need it for rooms in OpenMeetings:

```
apt-get install -y firefox flash-player-plugin
```

5)

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

**ImageMagick**, work with image files jpg, png, gif, etc. We install it:

```
apt-get install ImageMagick
```

**Sox**, work the sound. It is installed, but we'll uninstall it and compile a newer version than it is in the repo:

```
apt-get remove sox
```

...and download and compile the new version:

```
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**. LibreOffice convert to pdf the office files uploaded, and Swftools convert these pdf to swf, flash files, that later will show in the whiteboard. Don't install a newer version, surely will have not pdf2swf. We install it. Please, modify **your\_username** to your real user name:

```
cd /home/your_username
```

...download it:

```
wget http://apt.sw.be/redhat/el6/en/x86\_64/rpmforge/RPMS/swftools-0.9.1-1.el6.rf.x86\_64.rpm
```

Please, go to your /home/**your\_username**, and (be connected to Internet):

**Right clic on** the swftools-0.9.1-1.el6.rf.x86\_64.rpm file --> **Open with** --> **RPM-installer** → will

ask for root password → push **Enter**

Now will block this swftools version in Synaptic and then can't update installing a new version:

**Synaptic** → click on **swftools** line → **Package** (Up left) --> **Lock Version**

6)

----- **Installation of Jodconverter** -----

Jodconverter participate in the process to convert uploaded files. Install it:

`cd /opt`

(Only one line without space between both)

`wget https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/jodconverter/jodconverter-core-3.0-beta-4-dist.zip`

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

7)

----- **Remove, rename some packages** -----

We'll install lame for mp3 audio:

`apt-get install lame`

We'll remove ffmpeg that automatically was installed in Mate. In KDE minimum was not but to do it is not bad. Later we'll build our own ffmpeg.

`apt-get remove ffmpeg`

...will remove automatically vokoscreen also.

Rename x264, that we'll compile later:

`mv /usr/bin/x264 /usr/bin/x264-synaptic`

...because if we remove x264 will lose automatically too many packages.

Now will block this x264 version in Synaptic and then can't update installing a new version:

**Synaptic** → click on **x264** line → **Package** (Up left) --> **Lock Version**

8)

## ----- Compiling and installing FFmpeg -----

To compile and install ffmpeg, lame, yasm and x264, i've followed a guide with some modifications. Files updated 12-9-2106:

<https://trac.ffmpeg.org/wiki/CompilationGuide/Centos>

Install a librarie need it for the compilation:

Modify `your_username` to your real user name:

```
cd /home/your_username
```

...download it:

(Only one line without space between both)

```
wget http://download.opensuse.org/repositories/home:/ganglia:/musescore2/SLE11/x86_64/libmp3lame-devel-3.99.5-2.1.x86_64.rpm
```

Please, go to your `/home/your_username`, and (be connected to Internet):

**Right clic on the `libmp3lame-devel-3.99.5-2.1.x86_64.rpm` file --> Open with --> RPM-installer**  
→ will ask for root password → push **Enter**

The result of any recording we do in OpenMeetings, will be in avi, flv, mp4 and ogg formats. For compile ffmpeg, i build a scrip that will download, compile and install it.

Download it:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-pclinuxos.sh
```

...concede perimission of execution:

```
chmod +x ffmpeg-pclinuxos.sh
```

...and run it (be connected to Internet):

```
./ffmpeg-pclinuxos.sh
```

The compilation spend about 25 minutes. When be finish, will announce it, with this text:

**FFmpeg Compilation is finished!**

Block in Synaptic: **ffmpeg** and **yasm** ... *one by one*:

**Synaptic** → click on **ffmpeg** line → **Package** (up to left) --> **Lock Version**

...don't worry if look the packages are not installed.

***This is very important:*** When you update or upgrade the operative system, please do it from Synaptic, so will respect the locked versions, thing that will do not if update or upgrade from the shell.

FFmpeg is installed in: /usr/local/bin

9)

#### ----- Installation of MySQL and building database -----

We'll employ MySQL server, for the database.

`apt-get install -y mysql`

...run mysql:

`service mysqld start`

...we do a mysql upgrade:

`mysql_upgrade`

...and give a root mysql password replacing **new-password** for your own preference, and remember it:

`/usr/bin/mysqladmin -u root password new-password`

Now we'll build a database and an user in MySQL for OpenMeetings:

`mysql -p -u root`

...will ask for password (you just made right now) type it and make the database:

`mysql> CREATE DATABASE open313 DEFAULT CHARACTER SET 'utf8';`

(Only one line with space between both)

`mysql> GRANT ALL PRIVILEGES ON open313.* TO 'hola'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;`

...and leave MySQL:

```
mysql> quit
```

```
* open313 ..... is the data base name
* hola ..... is the user name for this data base
* 123456 ..... is the password for this user
```

You are free to change these names and password, but remember them. Later we'll need it.

Now we'll open mysql port 3306, so OpenMeetings can connect with it:

For **KDE**:

```
kwrite /etc/my.cnf
```

For **MATE**:

```
pluma /etc/my.cnf
```

...and the line number 51: **skip-networking**

...modify so, commented:

```
# skip-networking
```

...and restart mysql:

```
service mysqld restart
```

**10)**

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

We'll install the 3.1.3 stable version.

We'll make the OpenMeetings installation in /opt/red5313

Make a folder called **red5313** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5313
```

```
cd /opt/red5313
```

```
wget http://ftp.cixug.es/apache/openmeetings/3.1.3/bin/apache-openmeetings-3.1.3.zip
```

```
unzip apache-openmeetings-3.1.3.zip
```

```
mv apache-openmeetings-3.1.3.zip /opt
```

11)

----- Connector Java MySQL -----

This file is need it to connect OpenMeetings with MySQL. Download and install it:

```
cd /opt
```

(Only one line without space between both)

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.39/mysql-connector-java-5.1.39.jar
```

```
cp mysql-connector-java-5.1.39.jar /opt/red5313/webapps/openmeetings/WEB-INF/lib
```

12)

----- Configuring OpenMeetings for MySQL -----

Will introduce our data base name, user and password we made when MySQL configuration.

For MATE:

```
pluma /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

For KDE:

```
kwrite /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**Modify line 71:**

```
Url=jdbc:mysql://localhost:3306/openmeetings_3_1?.....
```

to

```
Url=jdbc:mysql://localhost:3306/open313?....
```



...**open313** is the database name we gives when install MySQL and build it.

**Modify lines 76 and 77** respectively:

```
, Username=root
, Password="" />
```

to

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

...**hola** is the user name we gives when install MySQL for **open313** database.

...**123456** is the password for **hola** user.

If you choose any other database name, user name or password, here is where to type them.  
Protect the access to this file:

(Only one line witout space between both)

```
chmod 640 /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-
INF/mysql_persistence.xml
```

13)

----- **Script to launch red5-OpenMeetings** -----

We download the scrypt will run red5-OpenMeetings:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-cf
```

...copy it to where must be:

```
cp red5-cf /etc/init.d/
```

...and concede execution permission:

```
chmod +x /etc/init.d/red5-cf
```

If you made the installation in other path, edit the scrypt and modify the line:

RED5\_HOME=/opt/red5313

...to

RED5\_HOME=/your-path-installation

14)

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

Restart MySQL (be connected to Internet):

`service mysqld restart`

...and start red5-OpenMeetings (be connected to Internet):

`/etc/init.d/red5-cf start`

...wait about 50 seconds, so red5 run completely, and later please go with the browser to:

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

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

#### OpenMeetings

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

- o 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

- o 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).
- o 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

- o **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


- o 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!
- o Install **SoX** <http://sox.sourceforge.net/>. You should install SoX in a up to date copy! SoX 12.xx will NOT work!

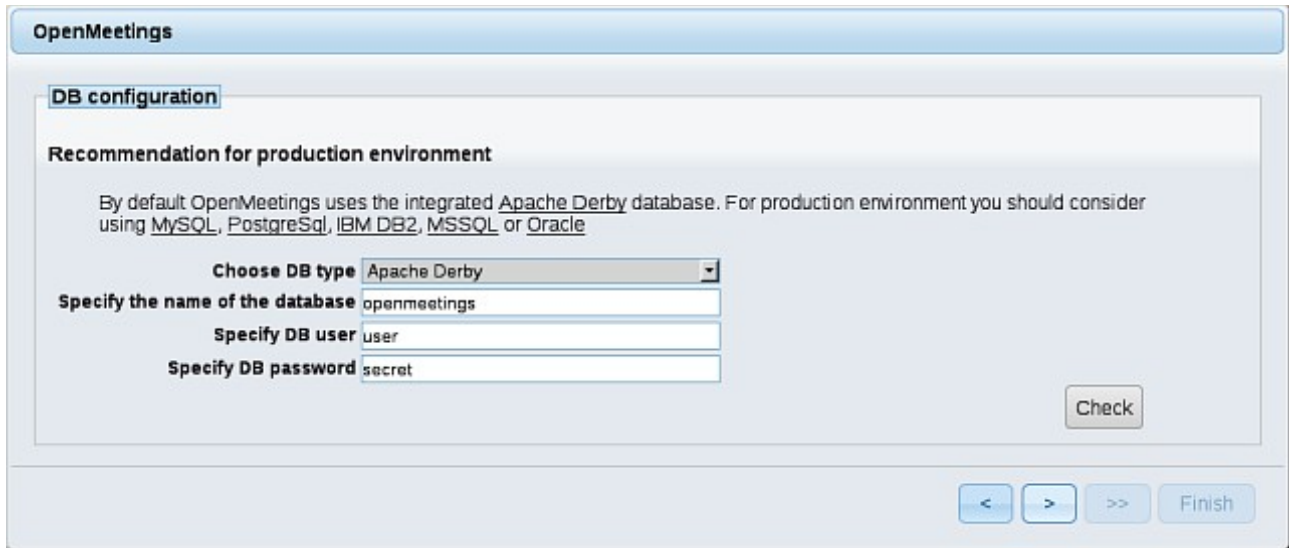
**If you have further questions or need support in installation or hosting:**

**Community-Support:**

[Mailing lists](#)

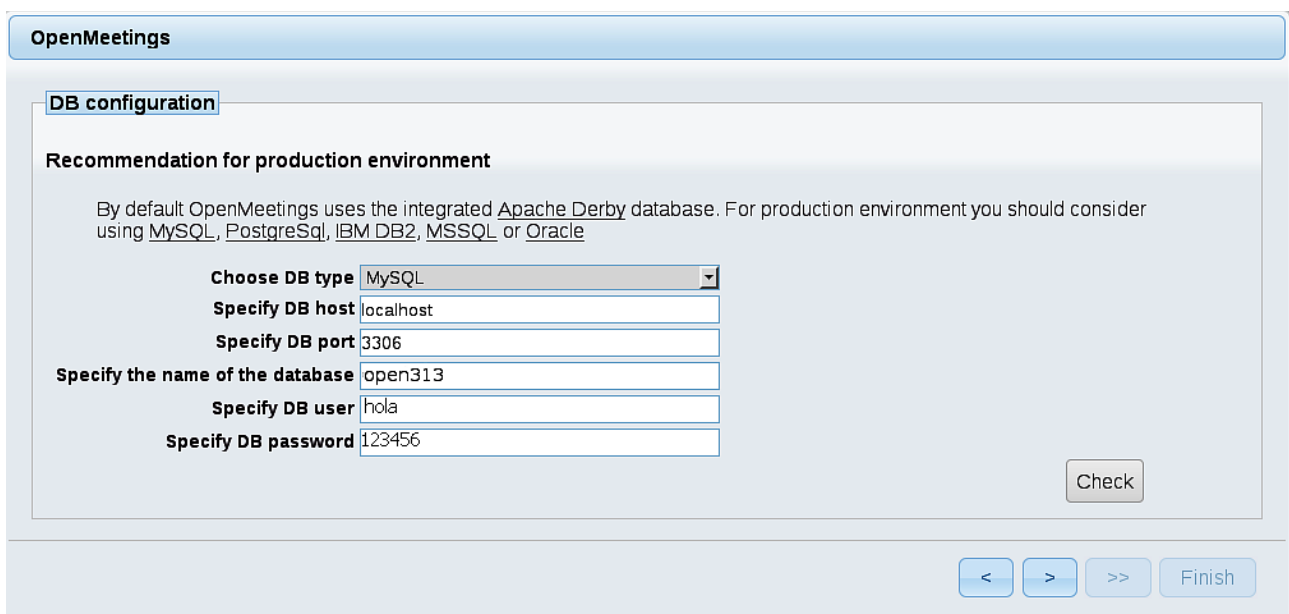
**Commercial-Support:**

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




The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' tab selected. Under the heading 'Recommendation for production environment', there is a text block stating: 'By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle'. Below this, there are four input fields: 'Choose DB type' (a dropdown menu with 'Apache Derby' selected), 'Specify the name of the database' (text box with 'openmeetings'), 'Specify DB user' (text box with 'user'), and 'Specify DB password' (text box with 'secret'). A 'Check' button is located to the right of these fields. At the bottom of the window, there are navigation buttons: '<', '>', '>>', and 'Finish'.

...so, please scroll and **Choose DB type** to MySQL:



The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' tab selected. Under the heading 'Recommendation for production environment', there is a text block stating: 'By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle'. Below this, there are five input fields: 'Choose DB type' (a dropdown menu with 'MySQL' selected), 'Specify DB host' (text box with 'localhost'), 'Specify DB port' (text box with '3306'), 'Specify the name of the database' (text box with 'open313'), and 'Specify DB user' (text box with 'hola'). The 'Specify DB password' field is present but empty. A 'Check' button is located to the right of these fields. At the bottom of the window, there are navigation buttons: '<', '>', '>>', and 'Finish'.

...will show the database configuration we made in step 13, or with your own modifications.

Please, push  button, and will go to:

Now we must introduce the followings data:

**Username** = a-name ...this user will have administrator rights

**Userpass** = a-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

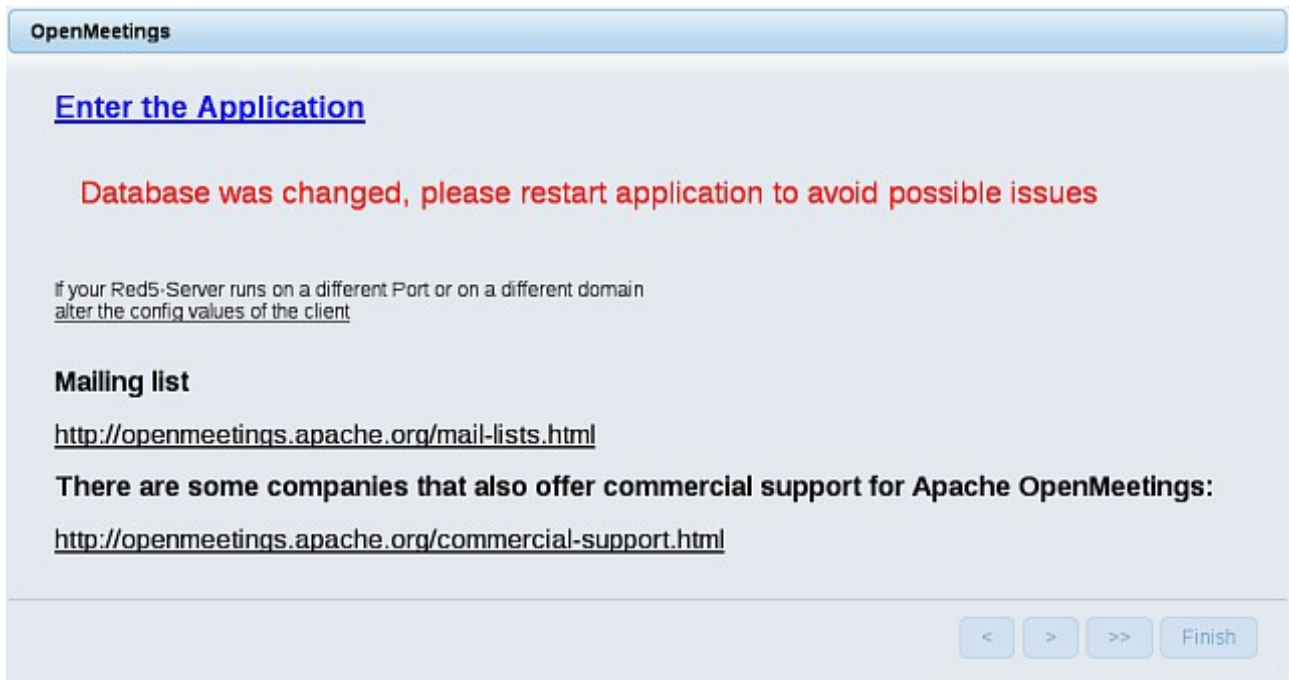
When the installation be finished, we'll configure the rest.

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

Push **Finish** button ...wait a seconds until 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 (be connected to Internet):

[/etc/init.d/red5-cf restart](#)



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 screenshot shows a login form titled "Login". It contains the following elements: a text input field for "Username or mail address", a text input field for "Password", a checkbox labeled "Remember login", a link for "Forgotten your password?", and a link for "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, push **Sign in** button, 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:

**1935 5080**

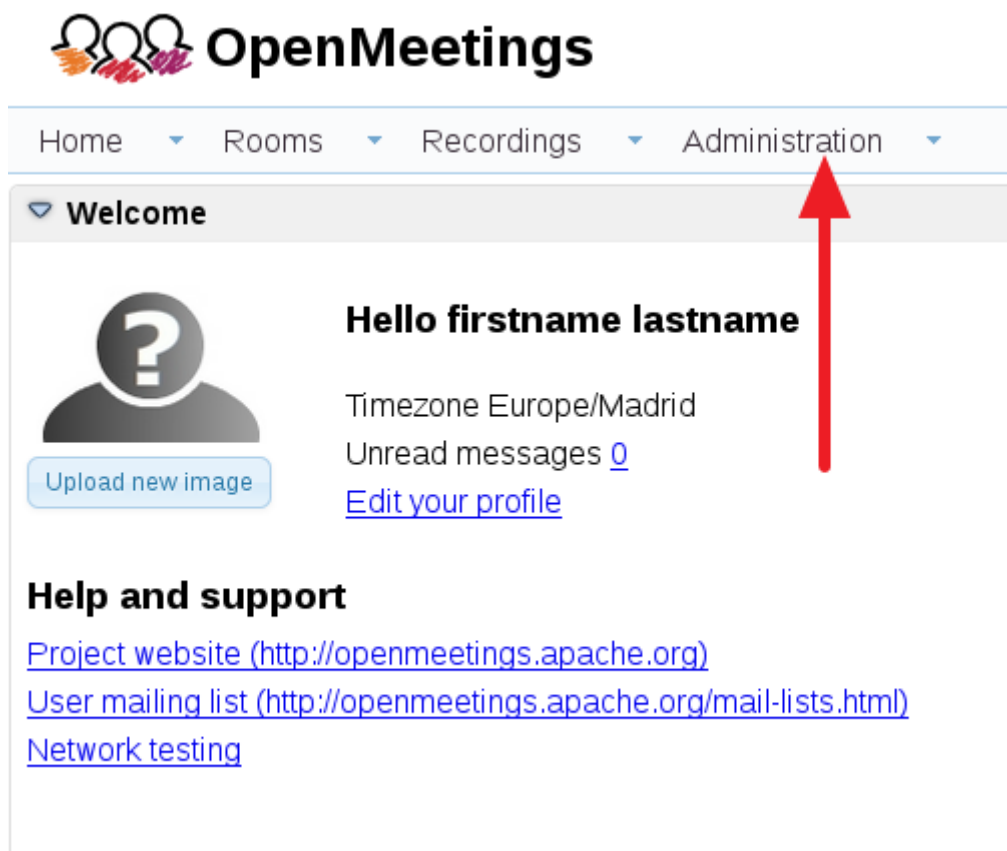
...in order that it could accede to OpenMeetings from other machines, in Lan or Internet.

15)

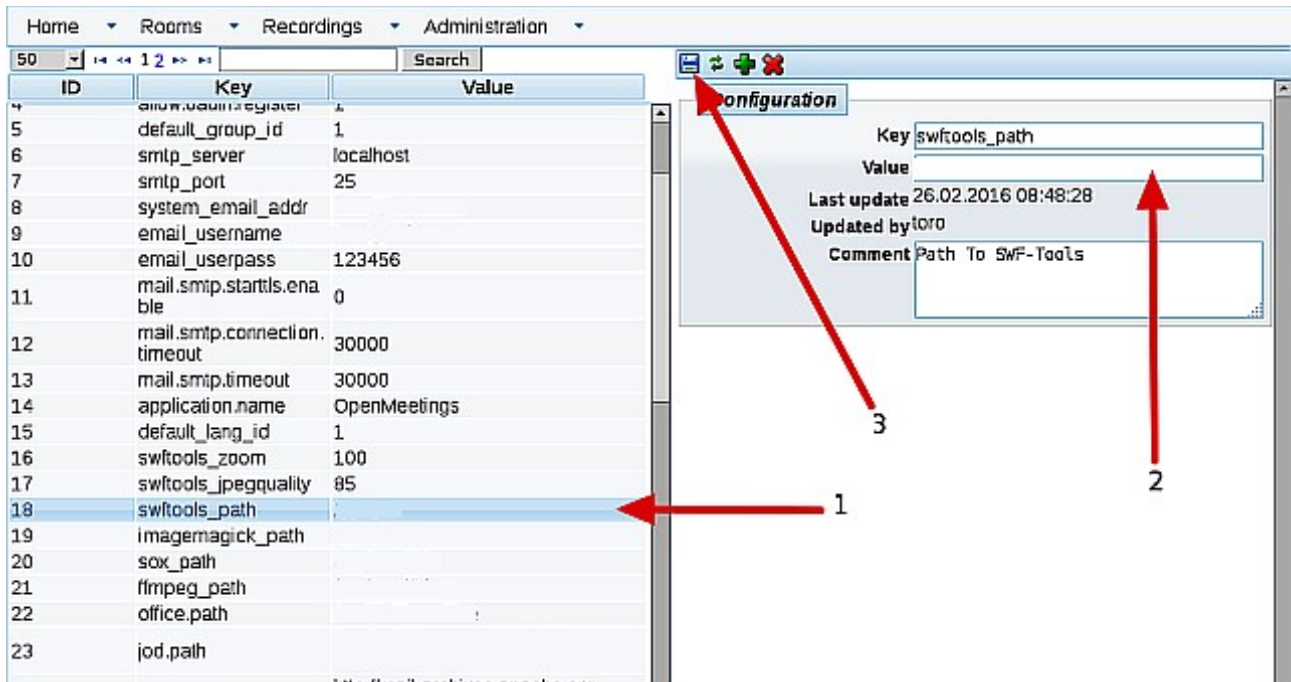
**----- Configuration of OpenMeetings -----**

Once have acceded to OpenMeetings we go to:

**Administration → Configuration**



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



Click on: **swftools\_path** ...and to up right in **Value** type: [/usr/bin](#)

Click on: **imagemagick\_path** ...and to up right in **Value** type: [/usr/bin](#)

Click on: **sox\_path** ...and to up right in **Value** type: [/usr/bin](#)

Click on: **ffmpeg\_path** ...and to up right in **Value** type: [/usr/local/bin](#)

Click on: **office.path** ...and to up right in **Value** type: [/opt/libreoffice5.0](#)

Click on: **jod.path** ...and to up right in **Value** type: [/opt/jodconverter-core-3.0-beta-4/lib](#)

Remember to save after each change (arrow number 3, up screenshot)

And this is all.

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If you have some doubt or question, please raise it in Apache OpenMeetings forums:

<http://openmeetings.apache.org/mail-lists.html>

Thank you.

Alvaro Bustos