



## **Installation of Apache OpenMeetings 3.3.2 on PCLinuxOS 2017**

**pclinuxos64-MATE-2017.07.iso**

This tutorial is made based on fresh installations of PCLinuxOS 2017 Mate.

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.3.2 stable, that is to say, will suppress his compilation. It is done step by step.

22-9-2017

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 3.3.2 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 22-9-2017) 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: (Only one line without space between both)

```
wget ftp://ftp.is.freebsd.org/pub/repoforge/redhat/el6/en/x86_64/dag/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)

----- **Install, 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**

7)

----- **Compiling and installing FFmpeg** -----

To compile and install ffmpeg, lame, yasm and x264, i've followed a guide with some modifications. Files updated 16-2-2107:

<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 mp4 format.  
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

8)

----- 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
```

We'll build a database and an user for OpenMeetings. User password must be of 8 digits minimum:

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

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

```
mysql> CREATE DATABASE open332 DEFAULT CHARACTER SET 'utf8';
```

(Only one line with space between both)

```
mysql> GRANT ALL PRIVILEGES ON open332.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

...and leave MySQL:

```
mysql> quit
```

- \* **open332** ..... is the data base name
- \* **hola** ..... is the user name for this data base
- \* **1a2B3c4D** ..... 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 3326, 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
```

9)

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

We'll install the 3.3.2 stable version.

We'll make the OpenMeetings installation in /opt/red5332

Make a folder called **red5332** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5332
```

```
cd /opt/red5332
```

```
wget http://apache.miloslavbrada.cz/openmeetings/3.3.2/bin/apache-openmeetings-3.3.2.zip
```

```
unzip apache-openmeetings-3.3.2.zip
```

```
mv apache-openmeetings-3.3.2.zip /opt
```

.

10)

### ----- 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/5.1.42/mysql-connector-java-5.1.42.jar
```

```
cp mysql-connector-java-5.1.42.jar /opt/red5332/webapps/openmeetings/WEB-INF/lib
```

11)

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

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

For MATE:

```
pluma /opt/red5332/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

For KDE:

```
kwrite /opt/red5332/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**Modify line 72:**

```
Url=jdbc:mysql://localhost:3326/openmeetings_3_3?.....
```

to

```
Url=jdbc:mysql://localhost:3326/open332?....
```

...open332 is the database name we gives when install MySQL and build it.

If you choose any other database name, here is where to type it. Save the changes.

Protect the access to this file:

(Only one line witout space between both)

```
chmod 640 /opt/red5332/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```



12)

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

We download the script will run red5-OpenMeetings:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-2
```

...copy it to where must be:

```
cp red5-2 /etc/init.d/
```

...and concede execution permission:

```
chmod +x /etc/init.d/red5-2
```

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

```
RED5_HOME=/opt/red5332
```

...to

```
RED5_HOME=/your-path-installation
```

13)

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

Restart MySQL (be connected to Internet):

```
service mysqld restart
```

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

```
/etc/init.d/red5-2 start
```

...wait until the text “**clearSessionTable: 0**”, it is the last in the shell. Then, go with the browser to:

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

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

**OpenMeetings**

**1. 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

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

**Community-Support:**

[Mailing lists](#)

**Commercial-Support:**

[Commercial-Support](#)

<
>
>>
Finish

...press on > (bottom), and will show the default database configuration with Derby, but we employ 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](#)

**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

**Choose DB type** Apache Derby

**Specify the name of the database** openmeetings

Check

<
>
>>
Finish

...so, please 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

**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

<b>Choose DB type</b>	<input type="text" value="MySQL"/>
<b>Specify DB host</b>	<input type="text" value="localhost"/>
<b>Specify DB port</b>	<input type="text" value="3306"/>
<b>Specify the name of the database</b>	<input type="text" value="open331"/>
<b>Specify DB user</b>	<input type="text"/>
<b>Specify DB password</b>	<input type="password"/>

...will show the database configuration we made in step 11.

If you`ve choose any other different name for this, will show equally.

Now we must introduce the user name we did for our data base, at the step 8, and his password:

**Specify DB user** = hola

**Specify DB password** = 1a2B3c4D

Please, press  button, and will go to:

OpenMeetings

Userdata

Username	<input type="text"/>
Userpass	<input type="password"/>
E-Mail	<input type="text"/>
User Time Zone	<input type="text" value="Europe/Madrid"/>

Group(Domains)

Name	<input type="text"/>
------	----------------------

Here, we must introduce a user name for OpenMeetings, and his password. This must have 8 digits minimum, and at least 1 special symbol like: +(%#!...etc.

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

**Userpass** = a-password ....for the previous user

**E-Mail** = email-address ...of the previous user.

**User Time Zone** = country where is this server

**Name** = example-openmeetings ...group name to choose

**OpenMeetings**

**Configuration**

Allow self-registering (allow_frontend_register)	Yes <input type="button" value="v"/>
Send Email to new registered Users (sendEmailAtRegister)	No <input type="button" value="v"/>
New Users need to verify their EMail (sendEmailWithVerificationCode)	No <input type="button" value="v"/>
Default Rooms of all types will be created	Yes <input type="button" value="v"/>
Mail-Referer (system_email_addr)	<input type="text" value="noreply@openmeetings.apache.org"/>
SMTP-Server (smtp_server)	<input type="text" value="localhost"/>
SMTP-Server Port(default SmtP-Server Port is 25) (smtp_port)	<input type="text" value="25"/>
SMTP-Username (email_username)	<input type="text"/>
SMTP-Userpass (email_userpass)	<input type="text"/>
Enable TLS in Mail Server Auth	No <input type="button" value="v"/>
Set inviter's email address as ReplyTo in email invitations (inviter.email.as.replyto)	Yes <input type="button" value="v"/>
Default Language	inglés <input type="button" value="v"/>
Default Font for Export [default_export_font]	TimesNewRoman <input type="button" value="v"/>

Press the button  and will lead us to a new page (below) where you can select the language for your OpenMeetings server, as well as other options such as the configuration of the mail server being used to send invitations or meetings from OpenMeetings

A valid example to configure the mail server with Gmail, is as follows:  
(replace **john@gmail.com** with your real Gmail account)

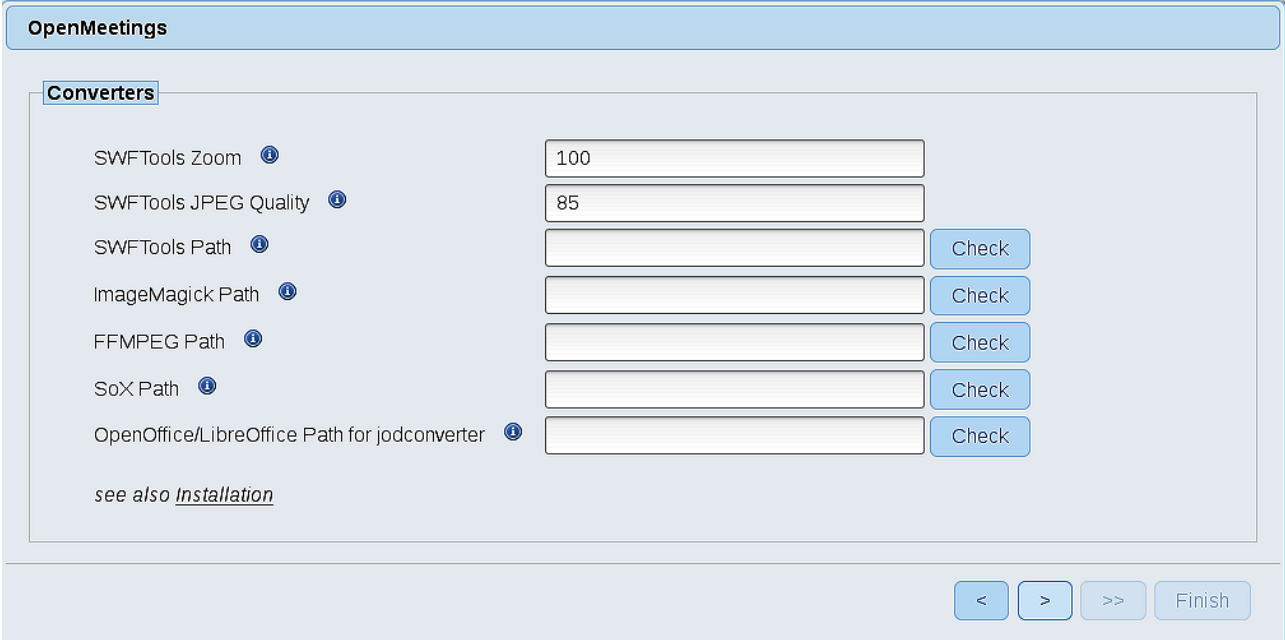
<b>Mail-Refer (system_email_addr)</b>	==	john@gmail.com
<b>SMTP-Server (smtp_server)</b>	==	smtp.gmail.com
<b>SMTP-Server Port (default SmtP-Server Port is 25) (smtp_port)</b>	==	587
<b>SMTP-Username (email_username)</b>	==	john@gmail.com
<b>SMTP-Userpass (email_userpass)</b>	==	password of john@gmail.com
<b>Enable TLS in Mail Server Auth</b>	==	Yes

To select the language of your server OpenMeetings, please scroll on the line:

**Default Language** == english

...the rest we can leave as is. If necessary, can modify it as you like it:

Now press the button  and a new page will appear:



The screenshot shows the 'OpenMeetings' configuration window with the 'Converters' tab selected. The following table represents the visible configuration options:

Field Name	Value	Action
SWFTools Zoom	100	
SWFTools JPEG Quality	85	
SWFTools Path		Check
ImageMagick Path		Check
FFMPEG Path		Check
SoX Path		Check
OpenOffice/LibreOffice Path for jodconverter		Check

At the bottom of the window, there are navigation buttons: '<', '>', '>>', and 'Finish'.

Here we'll introduce the respective paths for the image, video, audio and conversion of uploaded files:

**SWFTools Path (Path)** == [/usr/bin](#)


**ImageMagick Path (Path)** == [/usr/bin](#)

**FFMPEG Path (Path)** == [/usr/local/bin](#)

**SOX Path (Path)** == [/usr/local/bin](#)

**OpenOffice/LibreOffice Path (Path) for jodconverter** == [/opt/libreoffice5.2](#)

As you go introducing paths, you can check if they are correct by pressing the button labeled **Check**. If it does not display any error message, that is OK.

Once completed the paths, please press the button  and move on to another page that would be to activate the SIP. We will leave it as is, unless you want to activate it knowing what it does:

**OpenMeetings**

**Crypt Type**

Crypt Class

You can use this default crypt type which is equal to PHP-MD5 function or BSD-Style encryption by using: **org.apache.openmeetings.util.crypt.MD5CryptImplementation** for more information or to write your own Crypt-Style see: [Custom Crypt Mechanism](#) You can edit this value later BUT previous created Users and Sessions might be not usable anymore

**red5SIP Configuration**

Enable SIP

Enable red5SIP integration

SIP rooms prefix

Prefix for phone number of conference rooms

SIP extensions context

Context of Asterisk extensions

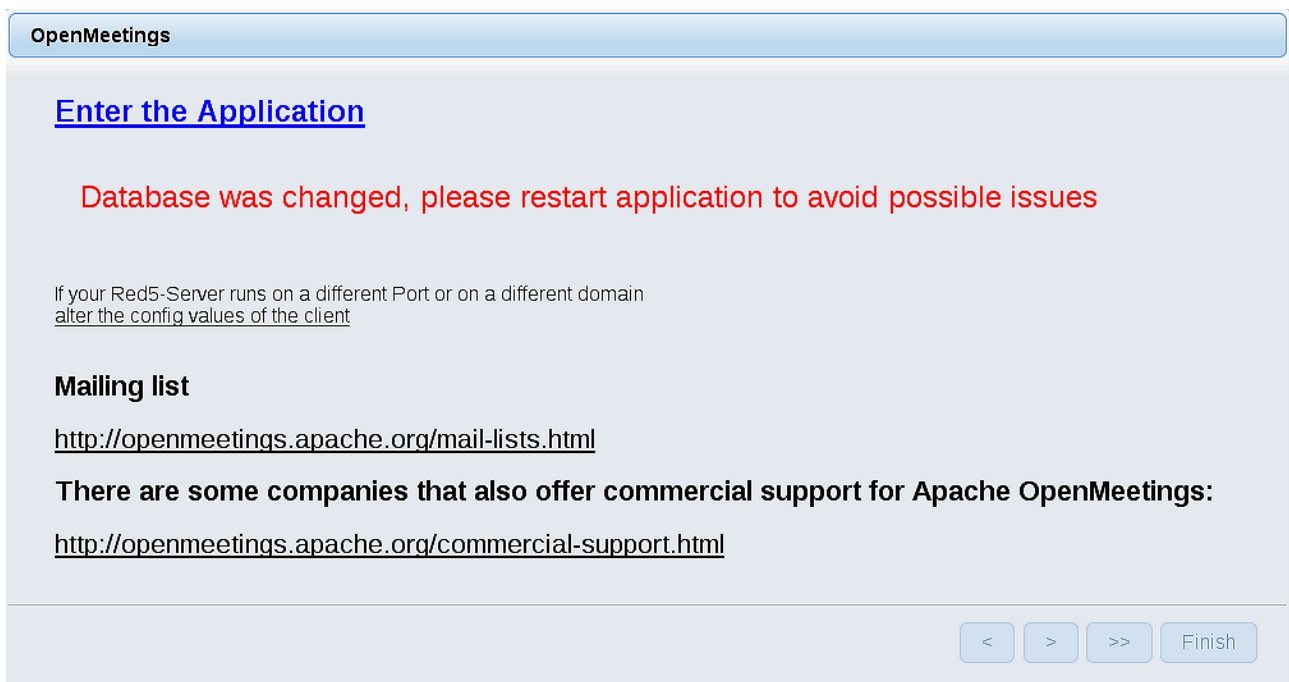
Now push the button  Will show this window:



Press **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):

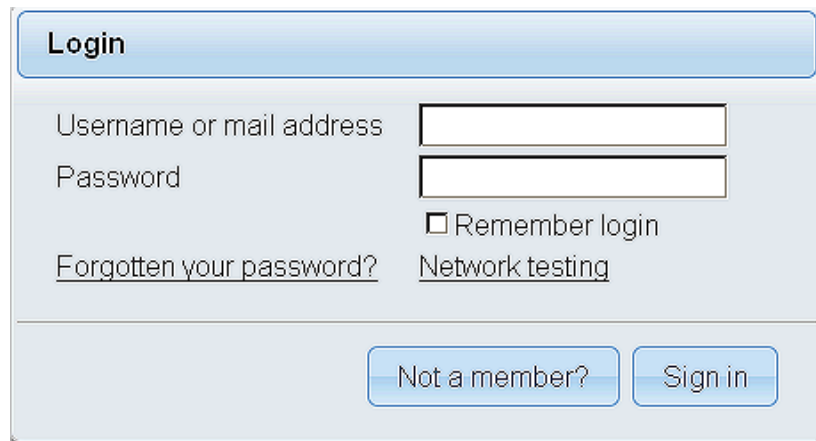
`/etc/init.d/red5-2 restart`



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 image shows a 'Login' dialog box with a light blue header. Below the header, there are two input fields: 'Username or mail address' and 'Password'. To the right of the 'Password' field is a checkbox labeled 'Remember login'. Below these fields are two links: 'Forgotten your password?' and 'Network testing'. At the bottom of the dialog box, 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.

14)

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


Once you acced to OpenMeetings, if you would like to do any modification in the configuration, please go to:

**Administration → Configuration**



Home ▾ Rooms ▾ Recordings ▾ Administration ▾

Welcome




**Hello firstname lastname**

Timezone Europe/Madrid  
Unread messages [0](#)  
[Edit your profile](#)

[Upload new image](#)

**Help and support**



...and following the order of the red arrows:

ID	Key	Value
4	allow.oauth.register	1
5	default_group_id	1
6	smtp_server	localhost
7	smtp_port	25
8	system_email_addr	noreply@openmeetings.apache.org
9	email_username	
10	email_userpass	
11	mail.smtp.starttls.enable	0
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	

**Configuration**

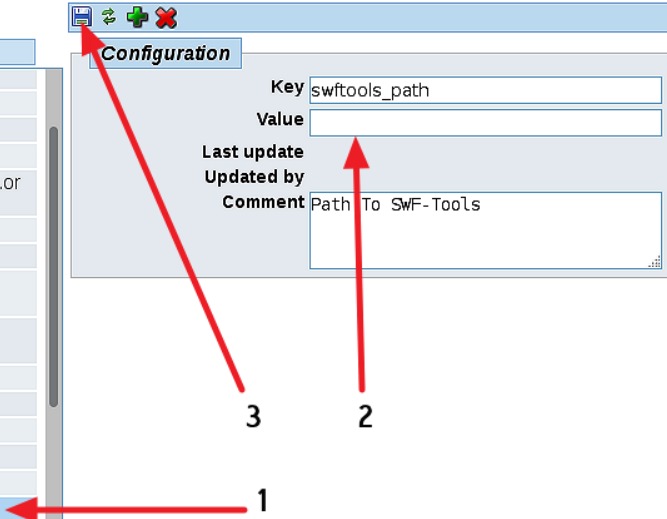
Key:

Value:

Last update:

Updated by:

Comment:



And this is all.

---

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