



## **Installation of Apache OpenMeetings 4.0.0 on openSUSE 13.2 64bit**

This tutorial is made based on fresh installations of

**openSUSE-13.2-KDE-Live-x86\_64.iso**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 4.0.0 stable, that is to say will suppress his compilation. It is done step by step.

5-11-2017

Starting...

1)

----- Update Operative System -----

Update operative system:

`zypper refresh`

`zypper update`

2)

## ----- Installation of Oracle Java 1.8 -----

Java 1.8 is need it to work OpenMeetings 4.0.0. So we install Oracle Java 1.8.

```
cd /opt
```

Download the file:

(All in one line only. 1<sup>a</sup> and 2<sup>a</sup> without space between them. A space to the 3<sup>a</sup>. Together 3<sup>a</sup> and 4<sup>a</sup>)

```
wget --no-cookies --no-check-certificate --header "Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" http://download.oracle.com/otn-pub/java/jdk/8u152-b16/aa0333dd3019491ca4f6ddbe78cdb6d0/jdk-8u152-linux-x64.rpm
```

...and install it:

```
rpm -ivh jdk-8u152-linux-x64.rpm
```

```
zypper install update-alternatives
```

We do to Oracle, the default java system:

```
update-alternatives --install /usr/bin/java java /usr/java/jdk1.8.0_152/bin/java 1551
```

```
update-alternatives --install /usr/bin/javadoc javadoc /usr/java/jdk1.8.0_152/bin/javadoc 1551
```

```
update-alternatives --install /usr/bin/jar jar /usr/java/jdk1.8.0_152/bin/jar 1551
```

```
update-alternatives --install /usr/bin/javap javap /usr/java/jdk1.8.0_152/bin/javap 1551
```

```
update-alternatives --install /usr/bin/javac javac /usr/java/jdk1.8.0_152/bin/javac 1551
```

```
update-alternatives --install /usr/bin/javah javah /usr/java/jdk1.8.0_152/bin/javah 1551
```

```
update-alternatives --install /usr/bin/jarsigner jarsigner /usr/java/jdk1.8.0_152/bin/jarsigner 1551
```

Maybe you have installed diferents versions of Java. We select the just installed Oracle Java:

```
update-alternatives --config java
```

And to see if the selected version is active:

```
java -version
```

3)

----- **Installation of LibreOffice** -----

OpenMeetings need LibreOffice to convert to pdf the uploaded office files.

Maybe it is installed, but for iso server:

```
zypper install -y libreoffice
```

4)

----- **Installation of necessary packages and libraries** -----

We install packages and libraries that need later:

(Only one line with space between both)

```
zypper install -y gcc ghostscript unzip freetype freetype-devel ncurses ncurses-devel make libz1  
zlib-devel libtool bzip2 file-roller git autoconf automake pkg-config nmap nano
```

5)

----- **Installation ImageMagick and Sox** -----

**ImageMagick**, will work with images files, jpg, png, gif, etc. We install it and some librarie:

```
zypper install -y ImageMagick giflib-devel
```

**Sox**, work the sound. Will compile it, 'cause it is newer version than the repos:

```
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
```

6)

----- **Installation of Adobe Flash Player** -----

OpenMeetings even need Adobe Flash Player for cam. Install it:

```
zypper install -y flash-player
```

7)

----- **Compilation of FFmpeg** -----

FFmpeg work video. Will install paquets and libraries.

```
zypper install -y glibc imlib2 imlib2-devel mercurial cmake
```

```
zypper install -y freetype2-devel libfreetype6 curl git
```

```
zypper install -y libogg-devel libtheora-devel libvorbis-devel libvpx-devel
```

This ffmpeg compilation is based on this url, updated file versions 5-11-2017:

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

The result of any recording we do in OpenMeetings, will be in mp4 format.  
I made a script that it will download, compile and install ffmpeg.

Download the script:

```
cd /opt
```

(Only one line without space between both)

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-opensuse132-64bit.sh
```

...concede execution permission:

```
chmod +x ffmpeg-opensuse132-64bit.sh
```

...and run it. Will spend about 25 minutes in the compilation:

```
./ffmpeg-opensuse132-64bit.sh
```

When finished, will announce it:

:

## FFMPEG Compilation is Finished!

Then, you can go to **step 8**).

But, if you prefer copy and paste, i **don't advise**, here are the commands script:

```
nano /opt/ffmpeg-opensuse.sh
```

...copy the green text **from here**:

```
# Ffmpeg compilation for openSUSE 13.2, 64bit only.
# Alvaro Bustos, thanks to Hunter.
# 5-11-2017
# Install libraries
zypper install -y autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial
nasm pkgconfig zlib-devel

# Install yasm from repos
zypper install -y yasm

# Create a temporary directory for sources.
SOURCES=$(mkdir ~/ffmpeg_sources)
cd ~/ffmpeg_sources

# Download the necessary sources.
#git clone --depth 1 git://git.videolan.org/x264
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
hg clone https://bitbucket.org/multicoreware/x265
git clone --depth 1 git://git.code.sf.net/p/opencore-amr/fdk-aac
curl -L -O http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
wget https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.tar.gz
wget http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
wget http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.5.tar.gz
wget http://downloads.xiph.org/releases/theora/libtheora-1.1.1.tar.gz
git clone --depth 1 https://chromium.googlesource.com/webm/libvpx.git
# git clone --depth 1 git://source.ffmpeg.org/ffmpeg
wget http://ffmpeg.org/releases/ffmpeg-3.1.1.tar.gz
# Unpack files
for file in `ls ~/ffmpeg_sources/*.tar.*`; do
tar -xvf $file
done

cd x264-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --enable-static && make &&
make install && make distclean; cd ..
```

```
cd x265/build/linux
cmake -G "Unix Makefiles" -DCMAKE_INSTALL_PREFIX="$HOME/ffmpeg_build"
-DENABLE_SHARED:bool=off ../../source && make && make install; cd ~/ffmpeg_sources

cd fdk-aac
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
make install && make distclean; cd ..

cd lame-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --disable-shared --enable-
nasm && make && make install && make distclean; cd ..

cd opus-*/
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
make install && make distclean; cd ..

cd libogg-*/
./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make && make install &&
make distclean; cd ..

cd libvorbis-*/
LDFLAGS="-L$HOME/ffmpeg_build/lib64" CPPFLAGS="-I$HOME/ffmpeg_build/include"
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-shared
&& make && make install && make distclean; cd ..

cd libtheora-*/
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-
examples --disable-shared --disable-sdltest --disable-vorbistest && make && make install; cd ..

cd libvpx
./configure --prefix="$HOME/ffmpeg_build" --disable-examples && make && make install &&
make clean; cd ..

cp /root/ffmpeg_build/lib/pkgconfig/x264.pc /root/ffmpeg_build/lib64/pkgconfig
cp /root/ffmpeg_build/lib/pkgconfig/x265.pc /root/ffmpeg_build/lib64/pkgconfig

cd ffmpeg-*/
PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib64/pkgconfig" ./configure
--prefix="$HOME/ffmpeg_build" --extra-cflags="-I$HOME/ffmpeg_build/include" --extra-
ldflags="-L$HOME/ffmpeg_build/lib64" --bindir="$HOME/bin" --pkg-config-flags="--static"
--enable-gpl --enable-nonfree --enable-libfdk_aac --enable-libfreetype --enable-libmp3lame
--enable-libopus --enable-libvorbis --enable-libvpx --enable-libx264 --enable-libx265 --enable-
libtheora && make && make install && make distclean && hash -r; cd ..

cd ~/bin
cp ffmpeg ffprobe ffserver lame x264 /usr/local/bin

cd ~/ffmpeg_build/bin
cp x265 /usr/local/bin

echo "FFMPEG Compilation is Finished!"
```

...to here.

Concede permission of execution:

```
chmod +x /opt/ffmpeg-opensuse.sh
```

```
cd /opt
```

Now be connected to Internet, run the script and wait some long minutes while the compilation:

```
./ffmpeg-opensuse.sh
```

All the compiled files will be installed on: **/usr/local/bin**

8)

----- **Installation of MariaDB data server** -----

MariaDB is the data server.

We install it:

```
zypper install -y mariadb mariadb-tools
```

...and run MariaDB:

```
systemctl start mysql.service
```

Give a password to MariaDB root . Please, modify **new-password** by your own:

```
mysqladmin -u root password new-password
```

Make a database for OpenMeetings:

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

...will ask for the root password you does just now:

```
MariaDB [(none)]> CREATE DATABASE open40 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a database called open40.

Now we create a user on this database. User password must be of 8 digits minimum:

(Only one line with space between both)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open40.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

- \* `open40` .....is the database name.
- \* `hola` .....is the user name for this database.
- \* `1a2B3c4D` ..is the password of this user.

You can change the data...but remember it! Later we'll need it.  
Now, we leave MariaDB:

```
MariaDB [(none)]> quit
```

9)

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

We'll install OpenMeetings in /opt/red540. All the following information will be based on this directory.

Make the folder:

```
mkdir /opt/red540
```

```
cd /opt/red540
```

...and download the OpenMeetings file:

```
wget http://apache.miloslavbrada.cz/openmeetings/4.0.0/bin/apache-openmeetings-4.0.0.zip
```

```
unzip apache-openmeetings-4.0.0.zip
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-4.0.0.zip /opt
```

Download and install the file connector between OpenMeetings and MariaDB:

```
cd /opt
```

(Only one line without space between both)

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.45/mysql-connector-java-5.1.45.jar
```



...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.45.jar /opt/red540/webapps/openmeetings/WEB-INF/lib
```

Now we are going to configure OpenMeetings for our database in MariaDB:

```
nano /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**Modify in line 72:**

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

...to

```
, Url=jdbc:mysql://localhost:3306/open40?
```

...it is the name of the database that we did initially.

Logically, if initially you choose another database name, please, type it here.

Push **Ctrl+x**, **Y** and **Enter** in the keyboard, to save and leave nano.

We protect the access to the file:

(Only one line without space between both)

```
chmod 640 /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

**10)**

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

Please, download the red5 run script:

```
cd /opt
```

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

...copy it to:

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

...concede permission of execution:

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

If you made the installation in any other different path to /opt/red540, please edit the script and modify the line:

```
RED5_HOME=/opt/red540
```

...to

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

11)

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

Restart mariadb (be connected to Internet):

```
systemctl restart mysql.service
```

...and start red5-OpenMeetings, from a new window terminal, and connected to Internet:

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

...wait till in the terminal, at the last, show this text: **CleanupJob.cleanRoomFiles**. Then, please go 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).

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


**Community-Support:**

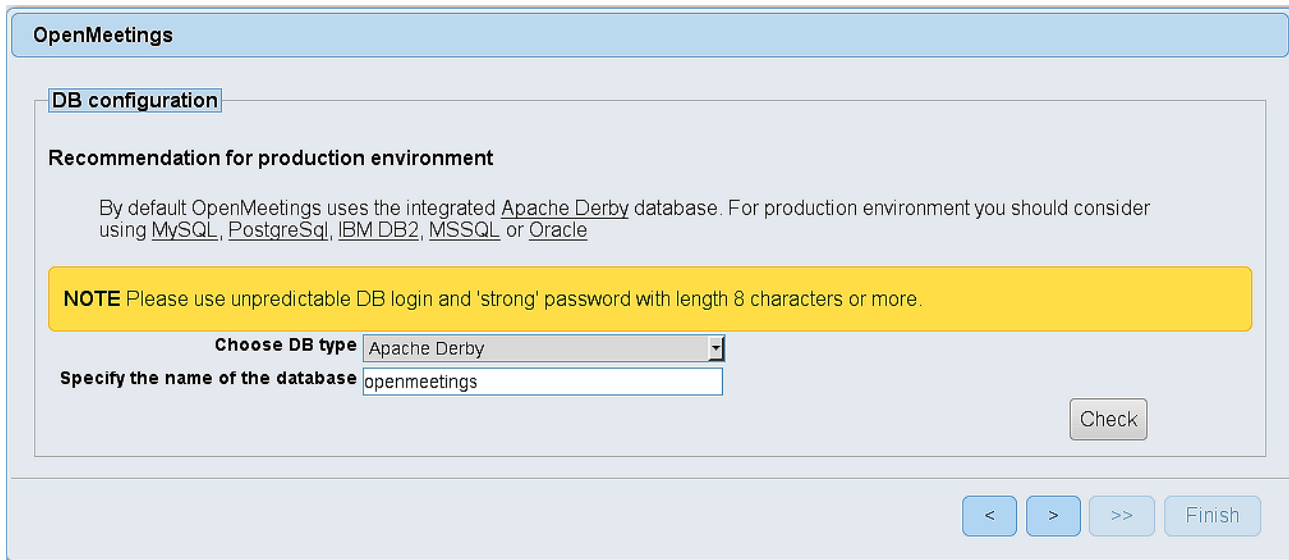
[Mailing lists](#)

**Commercial-Support:**

[Commercial-Support](#)

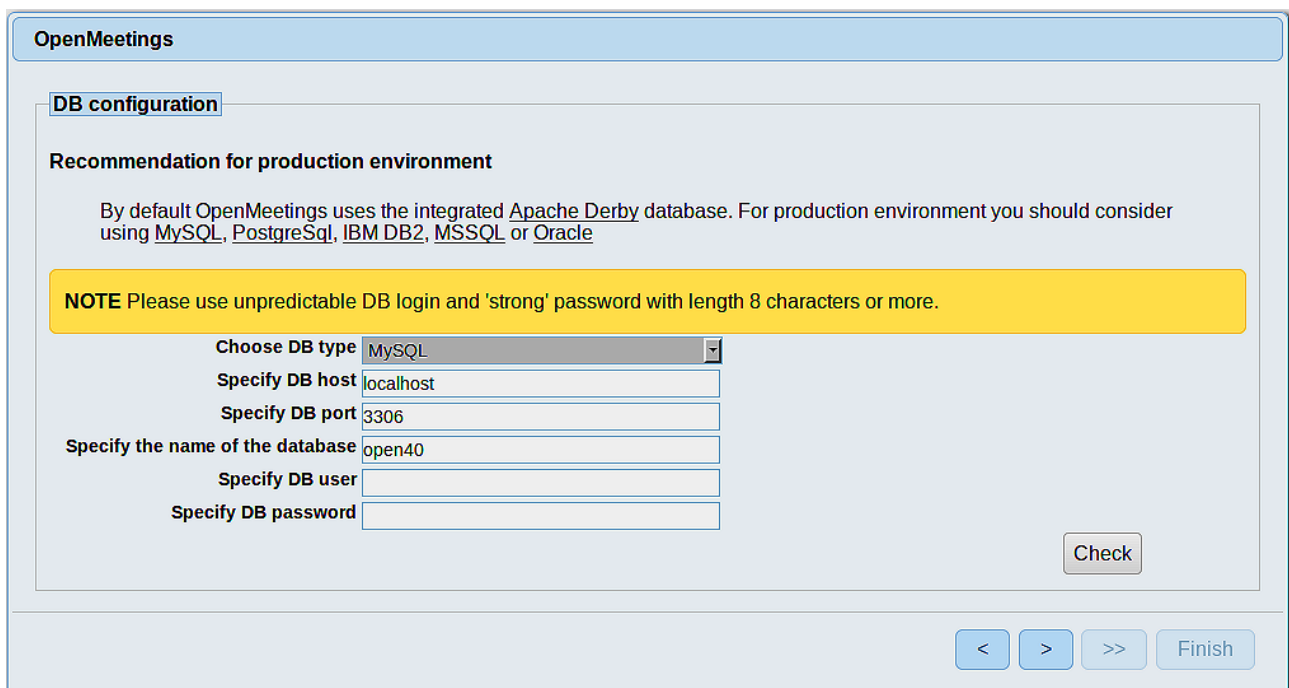
< > >> Finish

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



The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' tab selected. It includes a 'Recommendation for production environment' section with text about using MySQL, PostgreSQL, IBM DB2, MSSQL, or Oracle. A yellow 'NOTE' box advises using unpredictable DB login and a strong password. The 'Choose DB type' dropdown is set to 'Apache Derby', and the 'Specify the name of the database' text box contains 'openmeetings'. A 'Check' button is visible, and navigation buttons '<', '>', '>>', and 'Finish' are at the bottom.

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



The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' tab selected. It includes the same 'Recommendation for production environment' section and 'NOTE' box. The 'Choose DB type' dropdown is now set to 'MySQL'. The 'Specify DB host' text box contains 'localhost', 'Specify DB port' contains '3306', and 'Specify the name of the database' contains 'open40'. There are empty text boxes for 'Specify DB user' and 'Specify DB password'. A 'Check' button is visible, and navigation buttons '<', '>', '>>', and 'Finish' are at the bottom.

...and will show the database name, we made in the step 9. 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

...if you choose any other data, here is where to type it.

Please, press  button and will go to this window:

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 be administrator.

**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.

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:

OpenMeetings

Configuration

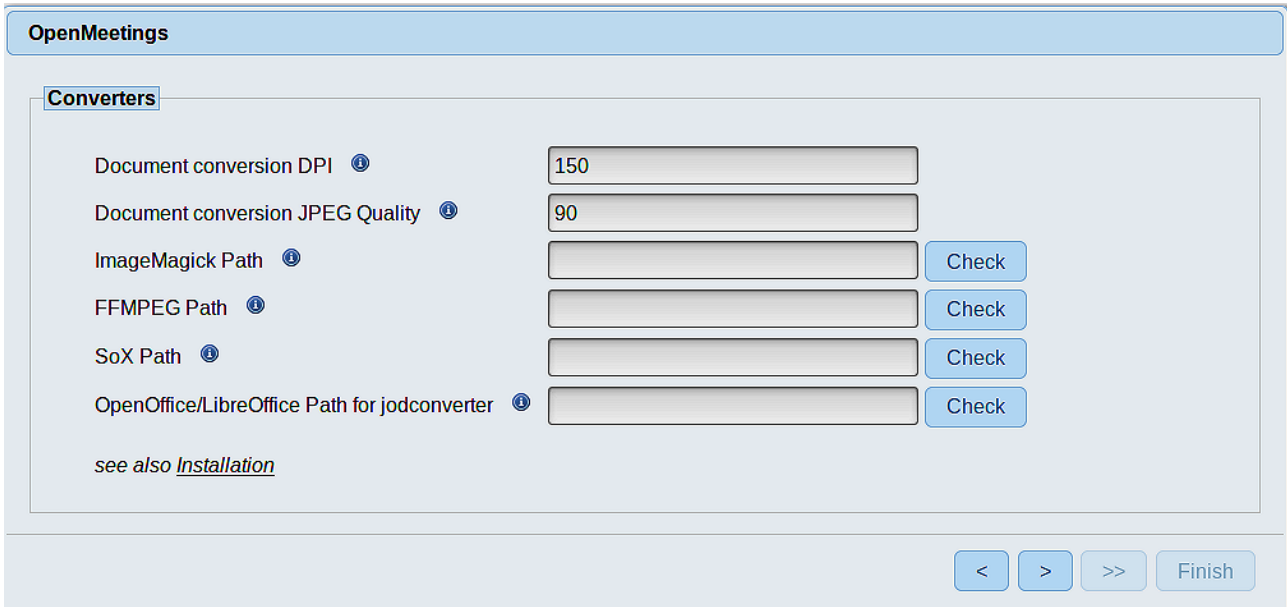
Allow self-registering	<input checked="" type="checkbox"/>
Send Email to new registered Users	<input type="checkbox"/>
New Users need to verify their EMail	<input type="checkbox"/>
Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)	<input checked="" type="checkbox"/>
Mail-Referer	<input type="text" value="noreply@openmeetings.apache.org"/>
SMTP-Server	<input type="text" value="localhost"/>
SMTP-Server Port(default SmtP-Server Port is 25)	<input type="text" value="25"/>
SMTP-Username	<input type="text"/>
SMTP-Userpass	<input type="password"/>
Enable TLS in Mail Server Auth	<input type="checkbox"/>
Set inviter's email address as ReplyTo in email invitations	<input checked="" type="checkbox"/>
Default Language	<input type="text" value="inglés"/>

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</b>	==	<a href="mailto:john@gmail.com">john@gmail.com</a>
<b>SMTP-Server</b>	==	<a href="mailto:smtp@gmail.com">smtp@gmail.com</a>
<b>SMTP-Server Port (default SmtP-Server Port is 25)</b>	==	587
<b>SMTP-Username</b>	==	<a href="mailto:john@gmail.com">john@gmail.com</a>
<b>SMTP-Userpass</b>	==	password of <a href="mailto:john@gmail.com">john@gmail.com</a>
<b>Enable TLS in Mail Server Auth</b>	==	...turn green the button to activate
<b>Default Language</b>	==	...select your language

...the rest you can change it as you like.

Now press the button  and a new page will appear:



**OpenMeetings**

**Converters**

Document conversion DPI ⓘ

Document conversion JPEG Quality ⓘ

ImageMagick Path ⓘ

FFMPEG Path ⓘ

SoX Path ⓘ

OpenOffice/LibreOffice Path for jodconverter ⓘ

see also [Installation](#)

< > >> Finish

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


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

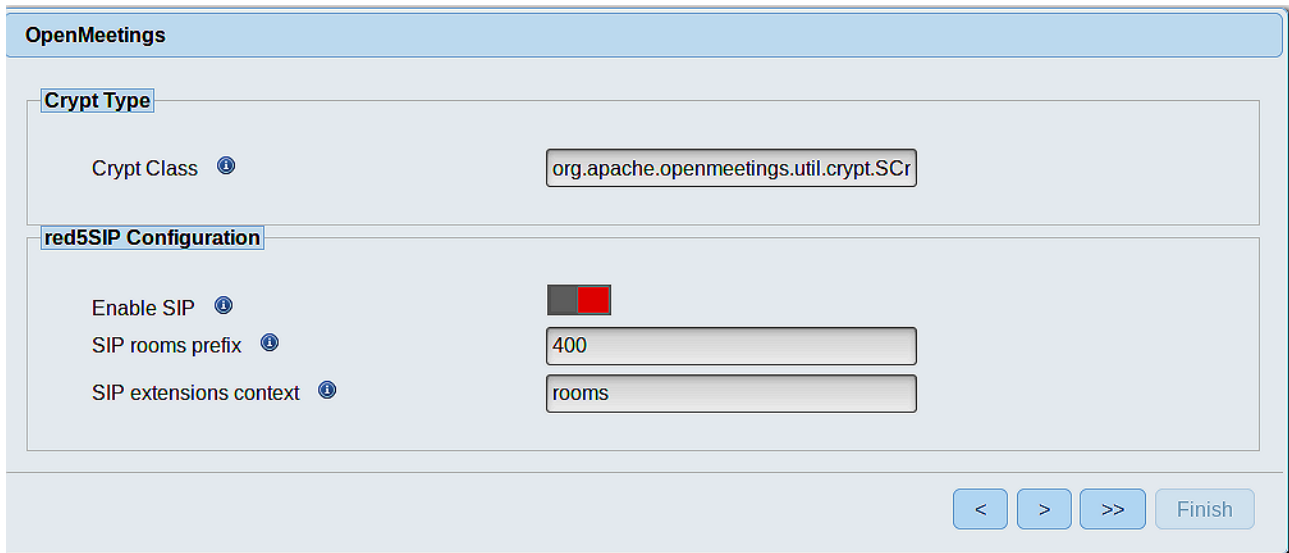
**FFMPEG Path (Path)** == [/usr/local/bin](#)

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

**OpenOffice/LibreOffice Path (Path) for jodconverter** == [/usr/lib64/libreoffice](#)

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 click 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:



The screenshot shows the 'OpenMeetings' configuration window. It has two main sections: 'Crypt Type' and 'red5SIP Configuration'. In the 'Crypt Type' section, the 'Crypt Class' is set to 'org.apache.openmeetings.util.crypt.SCr'. In the 'red5SIP Configuration' section, 'Enable SIP' is checked (indicated by a red square), 'SIP rooms prefix' is set to '400', and 'SIP extensions context' is set to 'rooms'. At the bottom right, there are navigation buttons: '<', '>', '>>', and 'Finish'.

Now push the button  Will show this window:

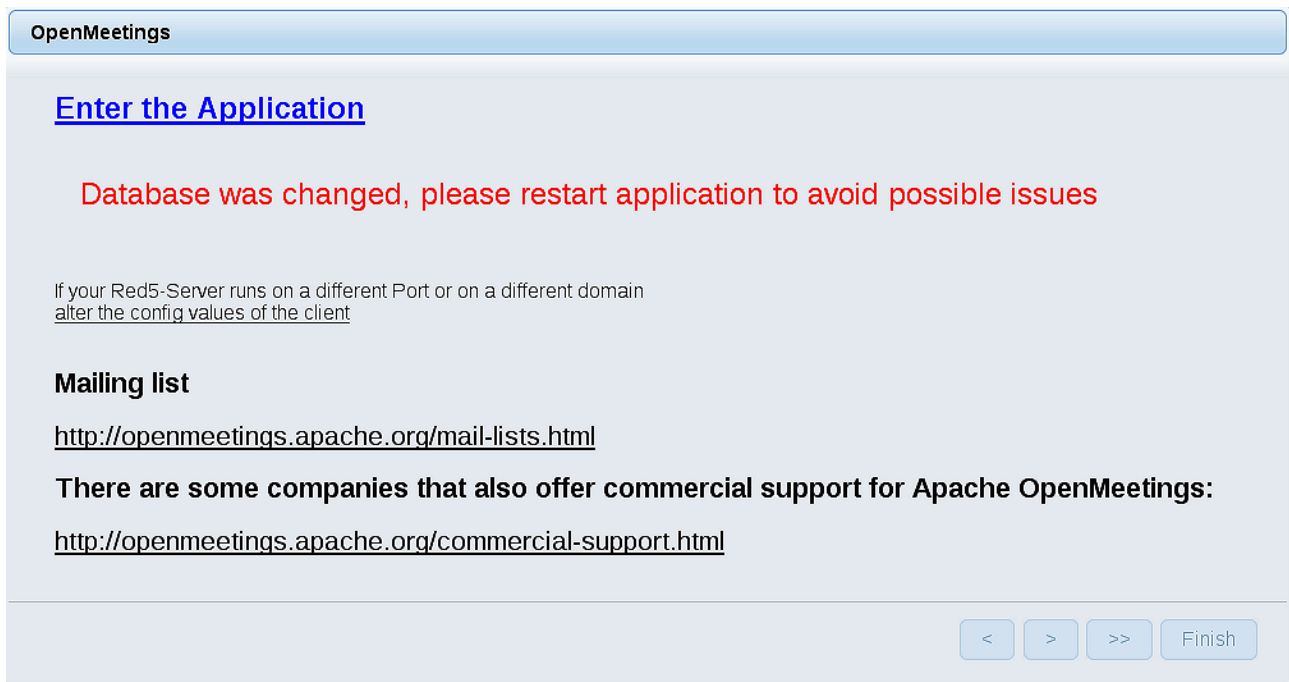


The screenshot shows the 'OpenMeetings' window after clicking the next button. The window title is 'OpenMeetings'. The main content area contains the text 'Please click "Finish" button to start installation!' and a large empty text input field. At the bottom right, there are navigation buttons: '<', '>', '>>', and 'Finish'.

Press **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 terminal and restart red5:

`/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:

Login

Username or mail address

Password

Remember login

[Forgotten your password?](#) [Network testing](#)

Not a member? 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 OpenMeetings, would be:

<http://localhost:5080/openmeetings>

Remember to open in the server, the two following ports:

**1935 5080**

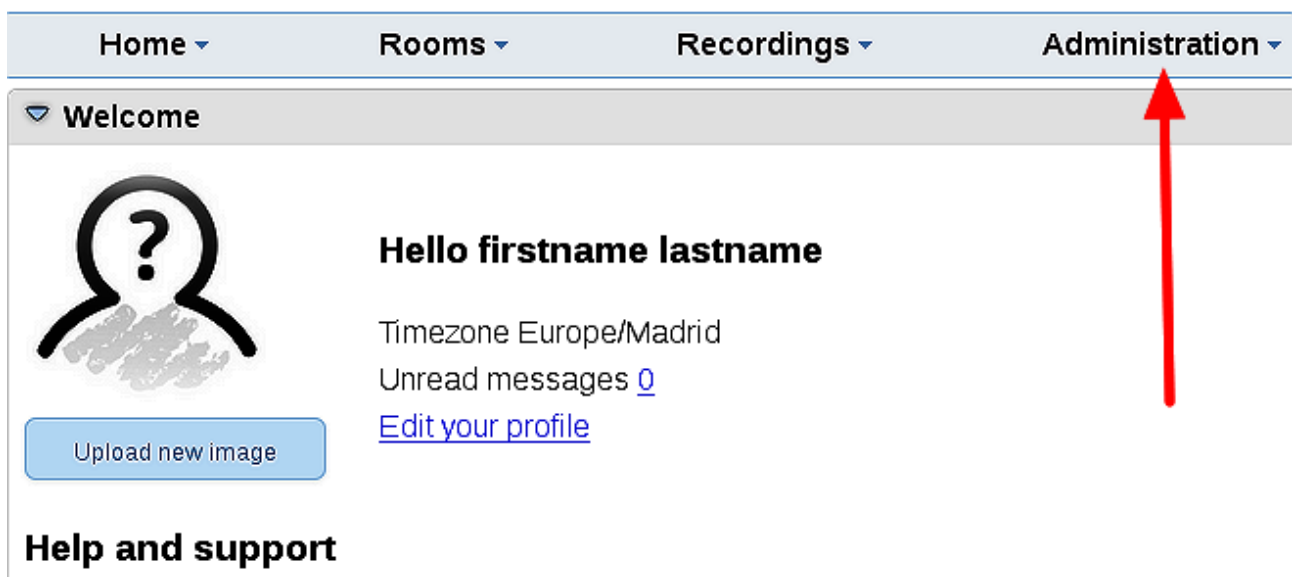
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

12)

----- **OpenMeetings's configuration** -----

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

**Administration → Configuration**



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

Home ▾ Rooms ▾ Recordings ▾ Administration ▾

50 [Search]

ID	Key	Value
1	crypt.class.name	org.apache.openmeetings.util.crypt.SCryptImplementation
2	allow.frontend.register	true
3	allow.soap.register	true
4	allow.oauth.register	true
5	default.group.id	1
6	mail.smtp.server	localhost
7	mail.smtp.port	25
8	mail.smtp.system.email	noreply@openmeetings.apache.org
9	mail.smtp.user	
10	mail.smtp.pass	
11	mail.smtp.starttls.enable	false
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default.lang.id	8
16	document.dpi	150
17	document.quality	90
18	path.imagemagick	
19	path.sox	
20	path.ffmpeg	
21	path.office	
22	dashboard.rss.feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
23	dashboard.rss.feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
24	send.email.at.register	false
25	send.email.with.verification	false

**Configuration**

Type: string

Key: path.ffmpeg

Value:

Last update: Oct 17, 2017 5:54:57 PM

Updated by: toro

Comment: Path To FFMPEG

1 2 3

Chat

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