



Installation of Apache OpenMeetings 3.0.x on

**PCLinuxOS 2014 Mate 64bit
and
PCLinuxOS 2014 Kde 64bit**

This tutorial is made based on fresh installations of PCLinuxOS 2014 Mate and Kde minimum.

It is tested in both versions with positive result. We will use the Apache's binary version OpenMeetings 3.0.4 stable, that is to say, will suppress his compilation. It is done step by step.

23-8-2014 updated 17-2-2015

Starting...

1)

Update and upgrade the operative system:

`apt-get -y update`

`apt-get -y upgrade`

2)

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

Copy line to line and then put one after other one in the shell:

```
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 ImageMagick  
ghostscript ncurses zlib1 zlib1-devel x264-devel git make automake nasm pavucontrol rpm-installer
```

3)

---- Installation of LibreOffice and Java sun 1.8.x ----

When we install LibreOffice also will install automatically Java sun 1.8.x

For **KDE only**: `apt-get install -y lomanager`

For MATE and KDE we type in shell:

`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 downloading Java sun 1.8.x and continue with LibreOffice.

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 is installed in:

`/opt/libreoffice4.3`

4)

---- Installation of 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:

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

5)

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

We'll employ MySQL as data base server.

```
apt-get install -y mysql
```

...run mysql:

```
service mysqld start
```

...we do a mysql upgrade:

```
mysql_upgrade
```

...and now give a root mysql password replacing **new-password** for your preference:

```
/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 (just we've made right now) type it and after this make:

```
CREATE DATABASE open304 DEFAULT CHARACTER SET 'utf8';
```

```
GRANT ALL PRIVILEGES ON open304.* TO 'hola'@'localhost' IDENTIFIED BY '123456'  
WITH GRANT OPTION;
```

(these last lines must be only one with a space)...and leave mysql:

```
quit
```

```
open304 ..... is the data base name
hola      ..... is the user name for this data base
123456 .... is the password for this user and data base
```

You are free to change these names, but remember them well.

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:

`# skip-networking`

...and restart mysql:

`service mysqld restart`

6)

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

Should 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.

And rename x264:

`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)

---- Installation of Sox for audio ---

Sox is required to work with audio. It is already installed on Mate and KDE.

8)

---- Installation of Swftool ----

Swftool it is needed convert to flash uploaded documents: LibreOffice to pdf and a part of swftools (pdf2swf) to flash. So we need install it:

```
cd /home/your_username
```

...change **your_username** to your really user name. And now in **only one line**:

```
wget ftp://ftp.univie.ac.at/systems/linux/dag/redhat/el6/en/x86_64/dag/RPMS/swftools-0.9.1-1.el6.rf.x86_64.rpm
```

Please go to /home/your_username and:

For MATE:

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**

For KDE:

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**

9)

---- Installation of Jodconverter ----

This is need it to help convert the uploaded files.

```
cd /opt
```

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

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

10)

---- Compiling and installing ffmpeg, lame, yasm and x264 ----

To compile and install ffmpeg, lame, yasm and x264, i've followed a guide with some little modifications:

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

Starting...

Please copy and paste as it is, do not change.

```
mkdir ~/ffmpeg_sources
```

```
cd ~/ffmpeg_sources
```

First will download all the packages we need to compile. In shell as root:

```
curl -O http://www.tortall.net/projects/yasm/releases/yasm-1.2.0.tar.gz
```

```
git clone --depth 1 git://git.videolan.org/x264
```

```
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
```

```
curl -O http://downloads.xiph.org/releases/opus/opus-1.1.tar.gz
```

```
curl -O http://downloads.xiph.org/releases/ogg/libogg-1.3.1.tar.gz
```

```
curl -O http://downloads.xiph.org/releases/theora/libtheora-1.1.1.tar.gz
```

```
curl -O http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.4.tar.gz
```

```
git clone --depth 1 https://chromium.googlesource.com/webm/libvpx.git
```

```
git clone --depth 1 git://source.ffmpeg.org/ffmpeg
```

...once all these packages-files are downloaded start the compilation.

1) ---- Yasm ----

```
cd ~/ffmpeg_sources
```

```
tar xzvf yasm-1.2.0.tar.gz  
cd yasm-1.2.0  
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"  
make  
make install  
make distclean  
export "PATH=$PATH:$HOME/bin"
```

2) ---- libx264 ----

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

3) ---- libfdk_aac ----

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

4) ---- libmp3lame ----

```
cd ~/ffmpeg_sources
```

```
tar xzvf lame-3.99.5.tar.gz
```

```
cd lame-3.99.5
```

(Copy line to line and then put one after other one with space in the shell)

```
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --disable-shared  
--enable-nasm
```

```
make
```

```
make install
```

```
make distclean
```

5) ---- libopus ----

```
cd ~/ffmpeg_sources
```

```
tar xzvf opus-1.1.tar.gz
```

```
cd opus-1.1
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

6) ---- libogg ----

```
cd ~/ffmpeg_sources
```

```
tar xzvf libogg-1.3.1.tar.gz
```

```
cd libogg-1.3.1
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```


make install

make distclean

7) ---- **libvorbis** ----

cd ~/ffmpeg_sources

tar xzvf libvorbis-1.3.4.tar.gz

cd libvorbis-1.3.4

(Copy line to line and then put one after other one with space)

./configure --prefix="\$HOME/ffmpeg_build" --with-ogg="\$HOME/ffmpeg_build"
--disable-shared

make

make install

make distclean

8) ---- **libvpx** ----

cd ~/ffmpeg_sources

cd libvpx

./configure --prefix="\$HOME/ffmpeg_build" --disable-examples

make

make install

make clean

9) ---- **libtheora** ----

cd ~/ffmpeg_sources

tar xzvf libtheora-1.1.1.tar.gz

cd libtheora-1.1.1

(Copy line to line and then put one after other one with space)

```
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build"
--disable-examples --disable-shared --disable-sdltest --disable-vorbistest
```

```
make
```

```
make install
```

```
make distclean
```

10) ---- FFmpeg ----

```
cd ~/ffmpeg_sources
```

```
cd ffmpeg
```

```
PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig"
```

```
export PKG_CONFIG_PATH
```

(Copy line to line and then put one after other one with space)

```
./configure --prefix="$HOME/ffmpeg_build" --extra-cflags="-I$HOME/ffmpeg_build/include" --extra-ldflags="-L$HOME/ffmpeg_build/lib"
--bindir="$HOME/bin" --extra-libs=-ldl --enable-gpl --enable-nonfree --enable-libfdk_aac
--enable-libmp3lame --enable-libopus --enable-libvorbis --enable-libvpx --enable-libx264
--enable-libtheora
```

```
make
```

```
make install
```

```
make distclean
```

```
hash -r
```

```
. ~/.bash_profile
```

Now we have the compiled files in: ~/bin

Should copy all them to /usr/local/bin to be enabled:

```
cd ~/bin
```

```
cp ffmpeg ffprobe ffserver lame vsyasm x264 yasm yasm /usr/local/bin
```

...and block in Synaptic: **ffmpeg**, **lame** 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.

The compilation it is finished.

11)

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

We'll install the 3.0.4 stable.

Should make the OpenMeetings installation in **/opt/red5304**

Make a folder called **red5304** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5304
```

```
cd /opt/red5304
```

This is the url official OpenMeetings download:

<http://openmeetings.apache.org/downloads.html>

We'll download from:

```
wget http://apache.rediris.es/openmeetings/3.0.4/bin/apache-openmeetings-3.0.4.zip
```

```
unzip apache-openmeetings-3.0.4.zip
```

...and remove it:

```
rm apache-openmeetings-3.0.4.zip
```

```
y
```

12)

---- Connector Java MySQL ----

This file is need it to connect OpenMeetings with MySQL:

```
cd /opt/red5304/webapps/openmeetings/WEB-INF/lib
```

(one line only)

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.32/mysql-connector-java-5.1.32.jar
```

```
cd /opt
```

and do to **nobody** owner of OpenMeetings folder installation:

```
chown -R nobody /opt/red5304
```

13)

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

```
cd /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF
```

```
mv persistence.xml persistence.xml-ori
```

```
mv mysql_persistence.xml persistence.xml
```

For MATE:

```
pluma /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

For KDE:

```
kwrite /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

...and modify **line 81**:

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

to

Url=jdbc:mysql://localhost:3306/**open304**?....

...**open304** is the database name we gives when install MySQL and build it.

Modify also **lines 86** and **87** respectively:

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

to

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

...**hola** is the user name we gives when install MySQL for **open304** database.

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

If you choose any other database name, user name or password here is where to change.

cd /opt

Protect the access to this file:

chmod 640 /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

14)

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

Build a script to start and stop red5-OpenMeetings, that we'll call **red5**

For MATE: **pluma /etc/init.d/red5**

For KDE: **kwrite /etc/init.d/red5**

...copy and past the text from here:

```
#!/bin/bash
# For RedHat and cousins:
# chkconfig: 2345 85 85
# description: Red5 flash streaming server
# processname: red5
# Created By: Sohail Riaz (sohaileo@gmail.com)
```

```

PROG=red5
RED5_HOME=/opt/red5304
DAEMON=$RED5_HOME/$PROG.sh
PIDFILE=/var/run/$PROG.pid

# Source function library
. /etc/rc.d/init.d/functions

[ -r /etc/sysconfig/red5 ] && . /etc/sysconfig/red5

RETVAL=0

case "$1" in
    start)
        echo -n "Starting $PROG: "
        cd $RED5_HOME
        $DAEMON >/dev/null 2>/dev/null &
        RETVAL=$?
        if [ $RETVAL -eq 0 ]; then
            echo $! > $PIDFILE
            touch /var/lock/subsys/$PROG
        fi
        [ $RETVAL -eq 0 ] && success "$$PROG startup" || failure "$$PROG startup"
        echo
        ;;
    stop)
        echo -n "Shutting down $PROG: "
        killproc -p $PIDFILE
        RETVAL=$?
        echo
        [ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/$PROG
        ;;
    restart)
        $0 stop
        $0 start
        ;;
    status)
        status $PROG -p $PIDFILE
        RETVAL=$?
        ;;
    *)
        echo $"Usage: $0 {start|stop|restart|status}"
        RETVAL=1
esac

exit $RETVAL

```

...to here.

If you made the installation in other path, can modify the line:

```
RED5_HOME=/opt/red5304
```

to

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

Give permission of execution to the script:

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

15)

Start mysql if not:

```
service mysqld restart
```

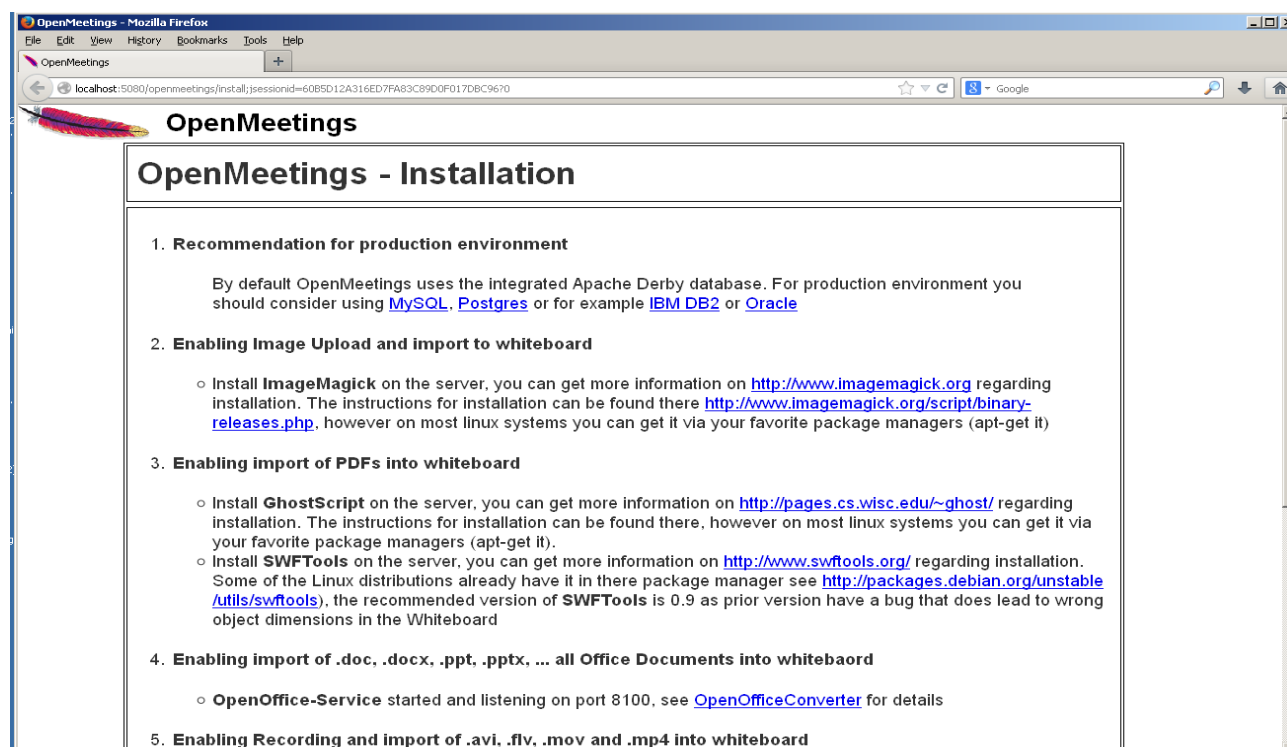
...and start red5-OpenMeetings:

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

...wait some long seconds and later go with browser to:

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

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



...click **Next** button in the foot page and this another page will appear:

OpenMeetings - Installation

- 'cfg.username' is required.
- 'cfg.password' is required.
- 'cfg.email' is required.
- 'cfg.group' is required.

Userdata

Username

Userpass

EMail

User Time Zone

Organisation(Domains)

Name

< Previous Next > Last Finish

...here we have to introduce necessarily, to be able to continue, the following:

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

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

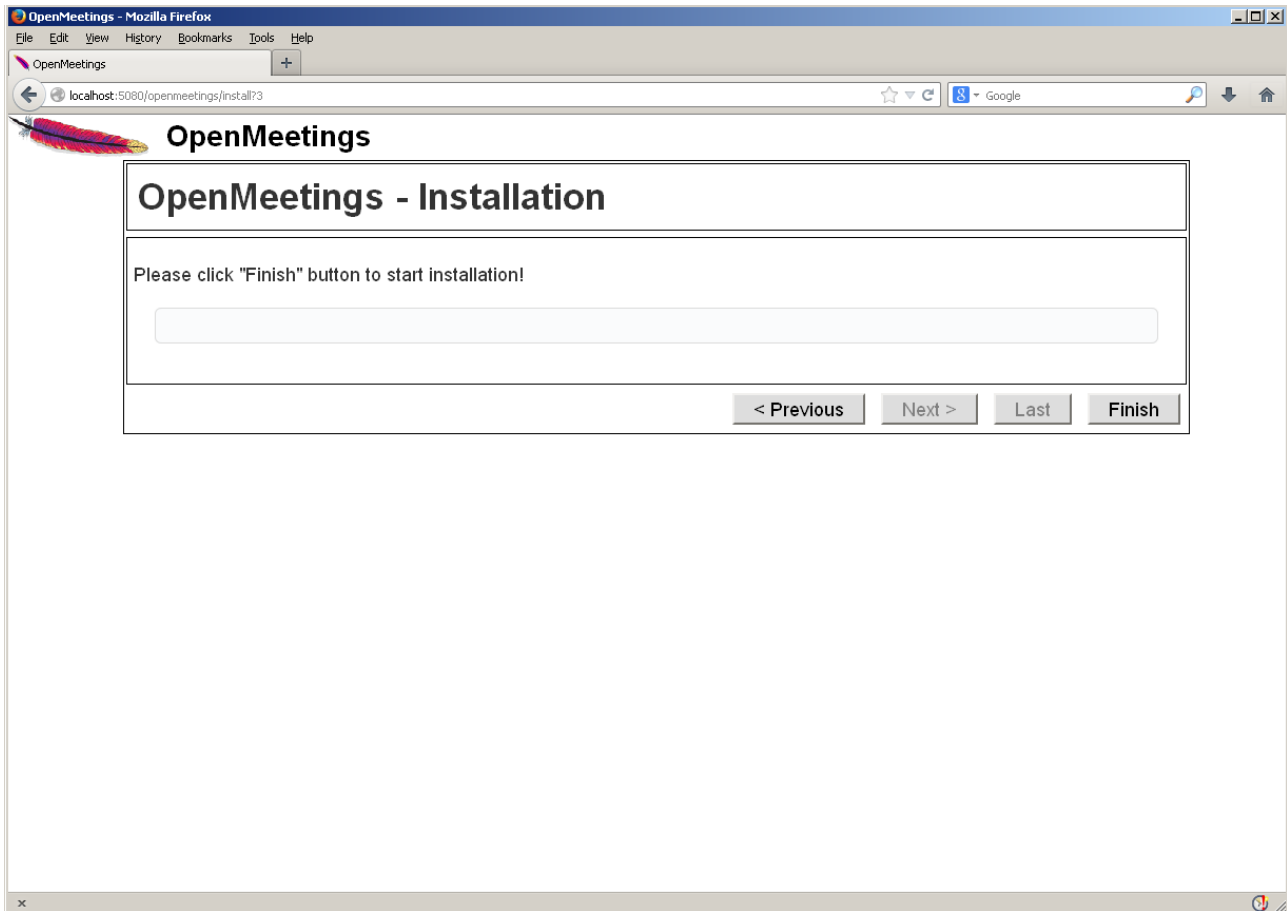
EMail = **email-adress** ...of the previous user.

User Time Zone = Select your geographyc situation

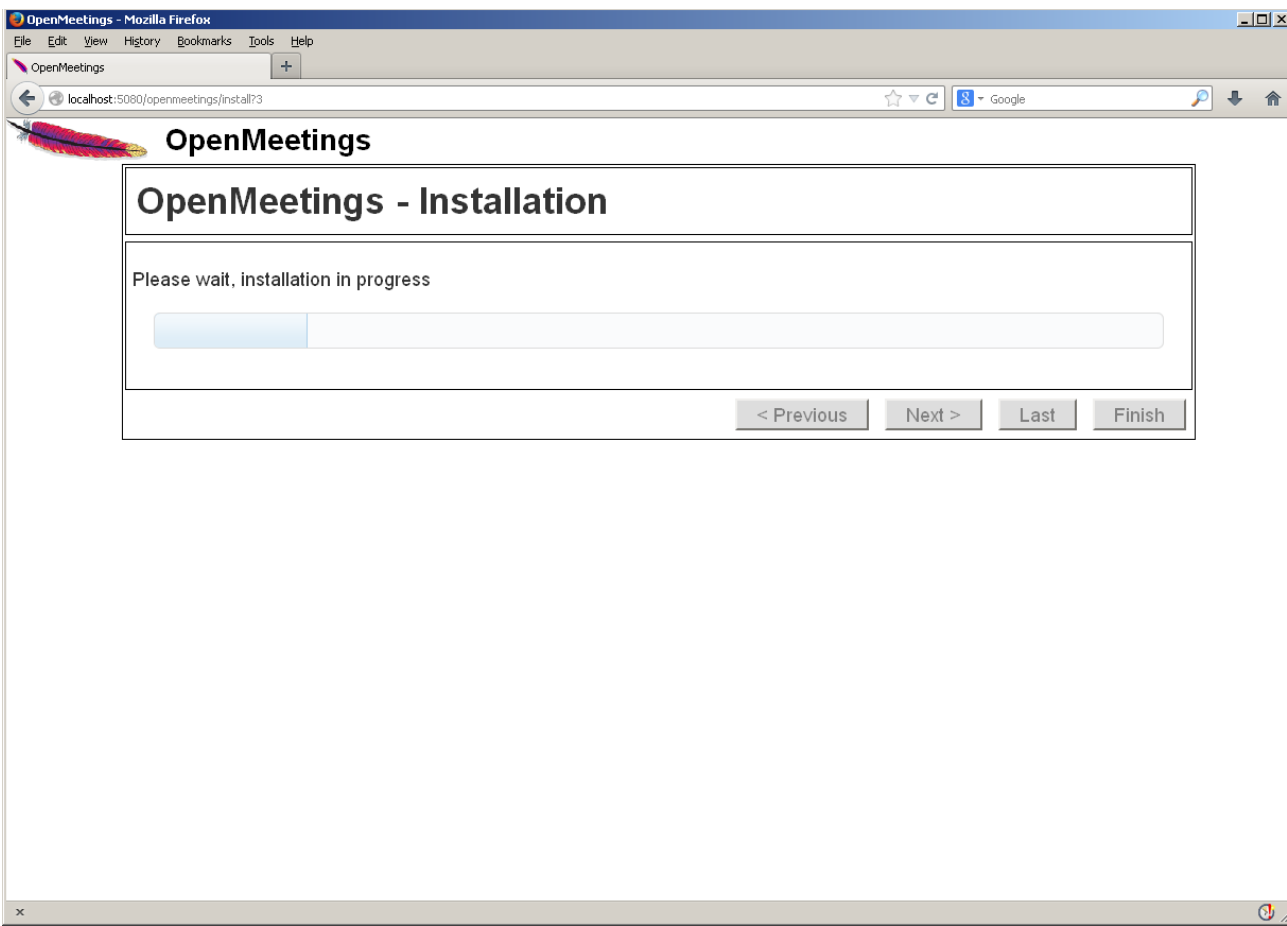
Name = **example-openmeetings** ...group name to choose

After finish the complet installation we'll configure the rest.

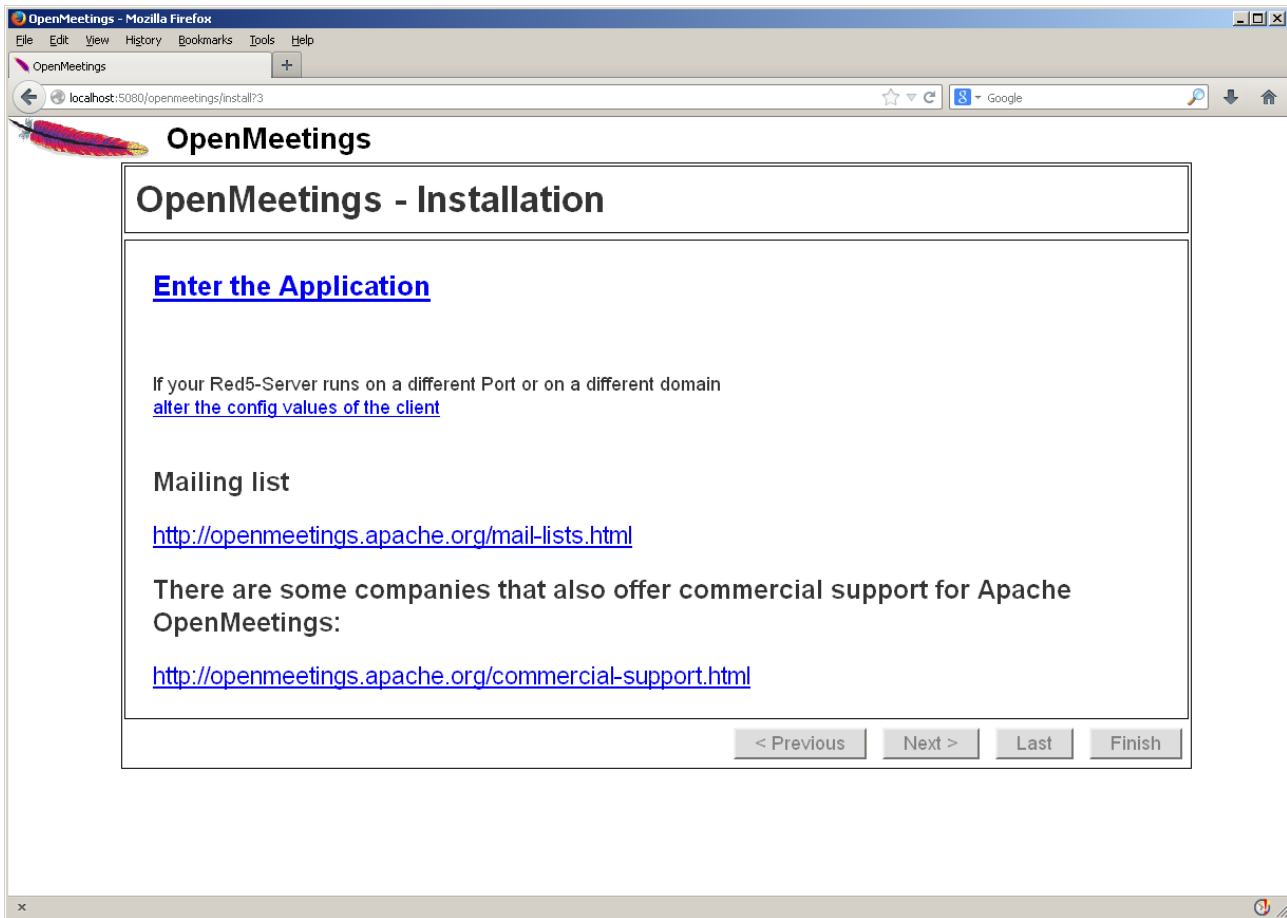
...click **Last** and this other page will appear:



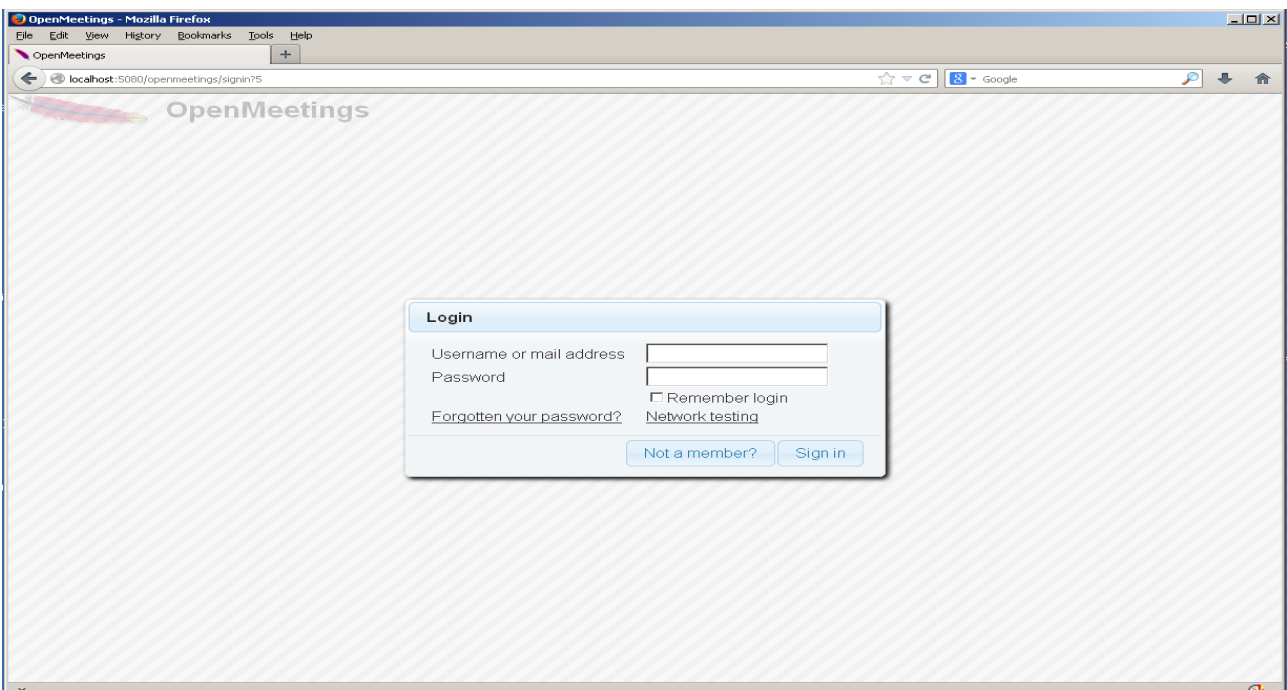
...click **Finish** and will start to build the tables for the database:



When finish should show this page:



...click on **Enter the Application** and we'll see OpenMeetings's entry:



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

...Congratulations!

The next time you want to access OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember open in the server these three ports:

1935 5080 8088

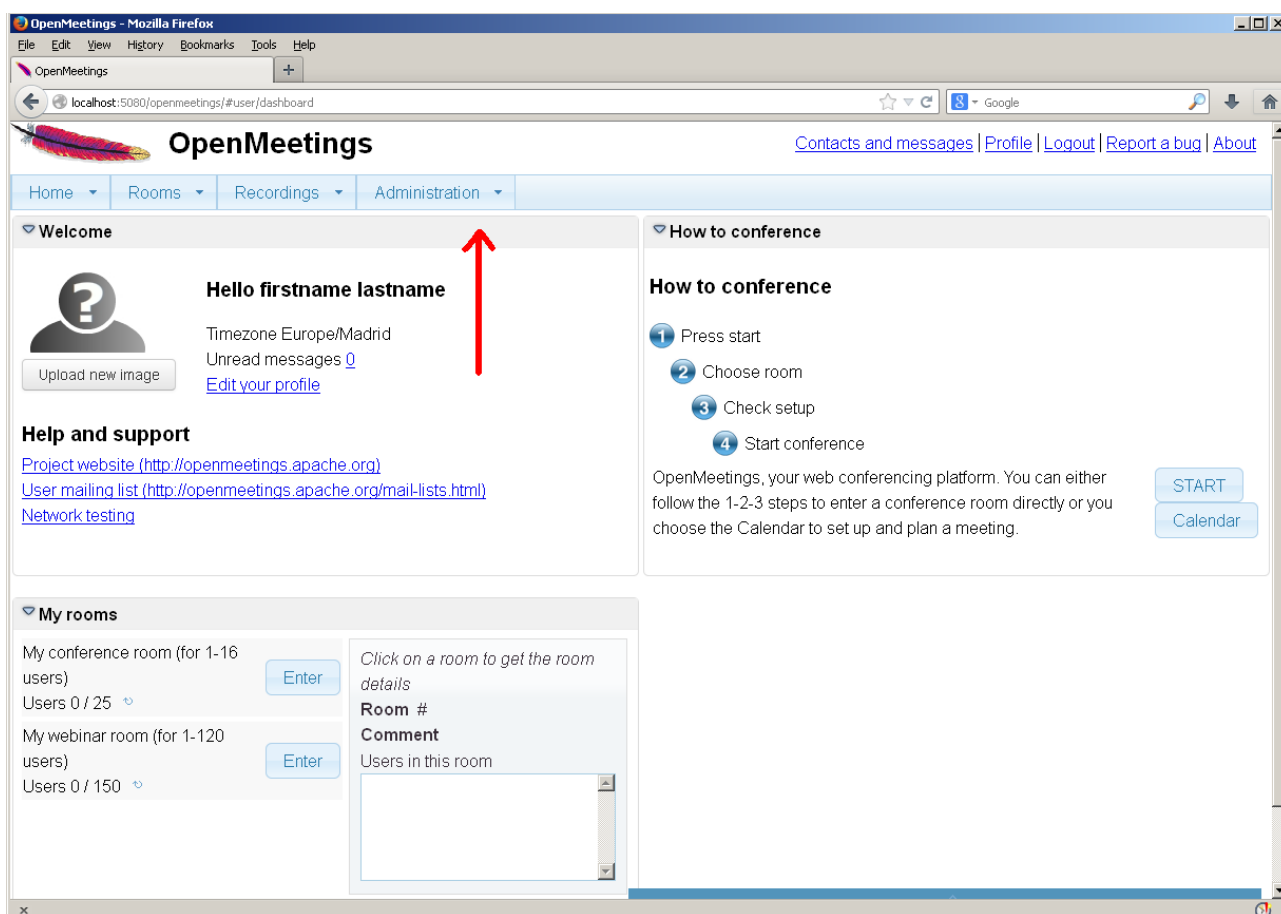
...in order can access to OpenMeetings from other machines in Lan or Internet.

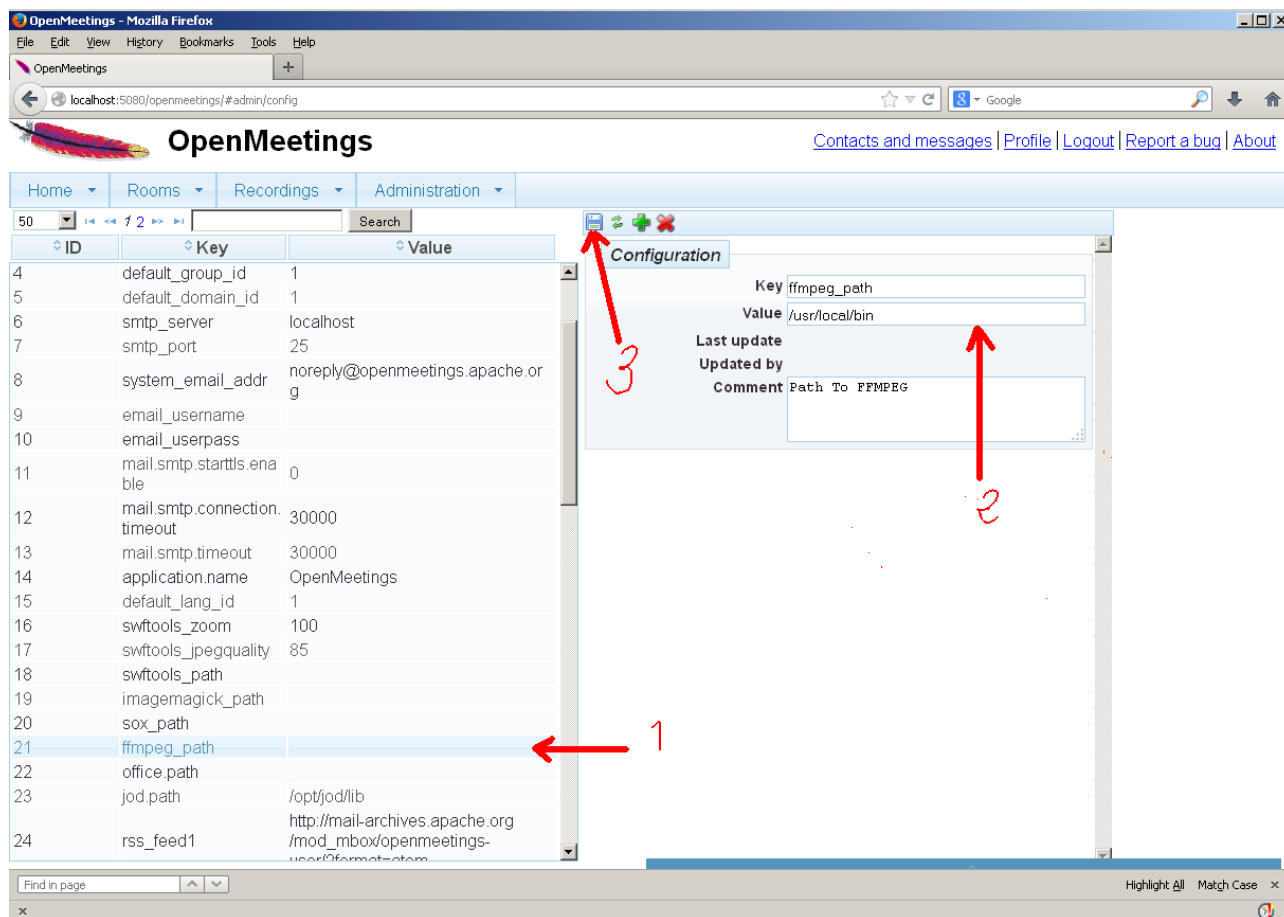
16)

---- Configuration of OpenMeetings ----

Once have accessed to OpenMeetings we go to:

Administration → Configuration





...introduce the path for files conversion, audio and 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/libreoffice4.3](#)

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

Remember to do the number 3 on picture to save each change.

To stop red5-OpenMeetings: [/etc/init.d/red5 stop](#)

And that 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