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 3.0.7 stable,
that is to say, will suppress his compilation.
It is done step by step**.**

Last update: 21-9-2015

Starting...

1)

Update and upgrade the operative system. Please go to:

Synaptic → Reload → Mark All Upgrades → Apply → Apply

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

To install or update LibreOffice on 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 (installed or updated 20-9-2015) is in:

/opt/libreoffice5.0

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. Flash player even is need it for rooms:

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 remplacing 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 open307 DEFAULT CHARACTER SET 'utf8';

GRANT ALL PRIVILEGES ON open307.* TO 'hola'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;

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

quit

open307 …........... 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 somes 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 requerid to work with audio. It is already installed on Mate and Kde. If need install it:

apt-get -y install sox

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 somes littles modifications:

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

Starting...

Please copy and past as it is, do not any 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-1.3.0.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-1.3.2.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-1.3.5.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-1.3.0.tar.gz
```

```
cd yasm-1.3.0
```

```
./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-1.3.2.tar.gz

cd libogg-1.3.2

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

make

make install

make distclean

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

cd ~/ffmpeg_sources

tar xzvf libvorbis-1.3.5.tar.gz

cd libvorbis-1.3.5

(In only one line with a 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

(In only one line with a 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 a 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 ytasm /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 3.0.7 stable version.
Should make the OpenMeetings installation in **/opt/red5307**

Make a folder called **red5307** where download the Apache OpenMeetings file and where make the installation:.

mkdir /opt/red5307

cd /opt/red5307

This is the url official OpenMeetings download:

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

We ´ll download from:

wget http://apache.rediris.es/openmeetings/3.0.7/bin/apache-openmeetings-3.0.7.zip

unzip apache-openmeetings-3.0.7.zip

...and remove it:

rm apache-openmeetings-3.0.7.zip

y

12)

---- Connector Java MySQL ----

This file is need it to connect OpenMeetings with MySQL:

cd /opt/red5307/webapps/openmeetings/WEB-INF/lib

(one line only)

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.36/mysql-connector-java-5.1.36.jar

cd /opt

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

chown -R nobody /opt/red5307

13)

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

cd /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF

mv persistence.xml persistence.xml-ori

mv mysql_persistence.xml persistence.xml

For MATE:

pluma /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

For KDE:

kwrite /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

...and modify **line 78**:

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

to

Url=jdbc:mysql://localhost:3306/open307?....

...open307 is the database name we gives when install MySQL and build it.

Modify also **lines 83** and **84** respectively:

, Username=root
, Password=" />

to

, Username=hola
, Password=123456" />

...hola is the user name we gives when install MySQL for **open307** 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/red5307/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/red5307
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/red5307

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 somes longs seconds and later go with browser to:

http://localhost:5080/openmeetings/install

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

OpenMeetings

OpenMeetings - Installation

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 whitebaord**

   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!

...click **Next** button in bottom and will show the database configuration we made:

OpenMeetings

OpenMeetings - Installation

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.

Choose DB type	MySQL
Specify DB host	localhost
Specify DB port	3306
Specify the name of the database	
Specify DB user	
Specify DB password	

Check

< Previous   Next >   Last   Finish

...clic **Next** again:

OpenMeetings - Mozilla Firefox

File Edit View History Bookmarks Tools Help

OpenMeetings

localhost:5080/openmeetings/install?2

OpenMeetings

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	Europe/Madrid

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:
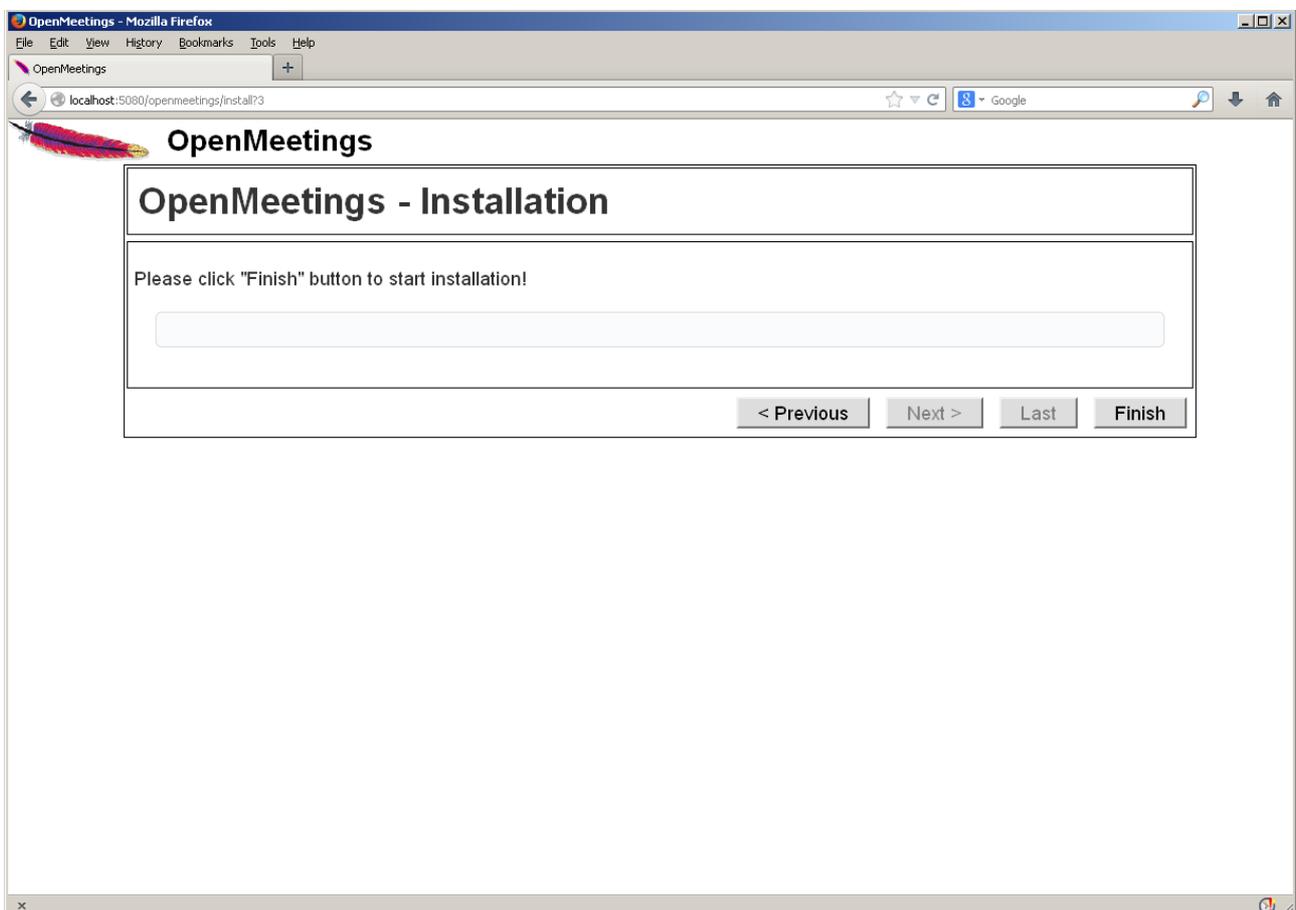
…click **Finish** and will start to fill the tables in our database:
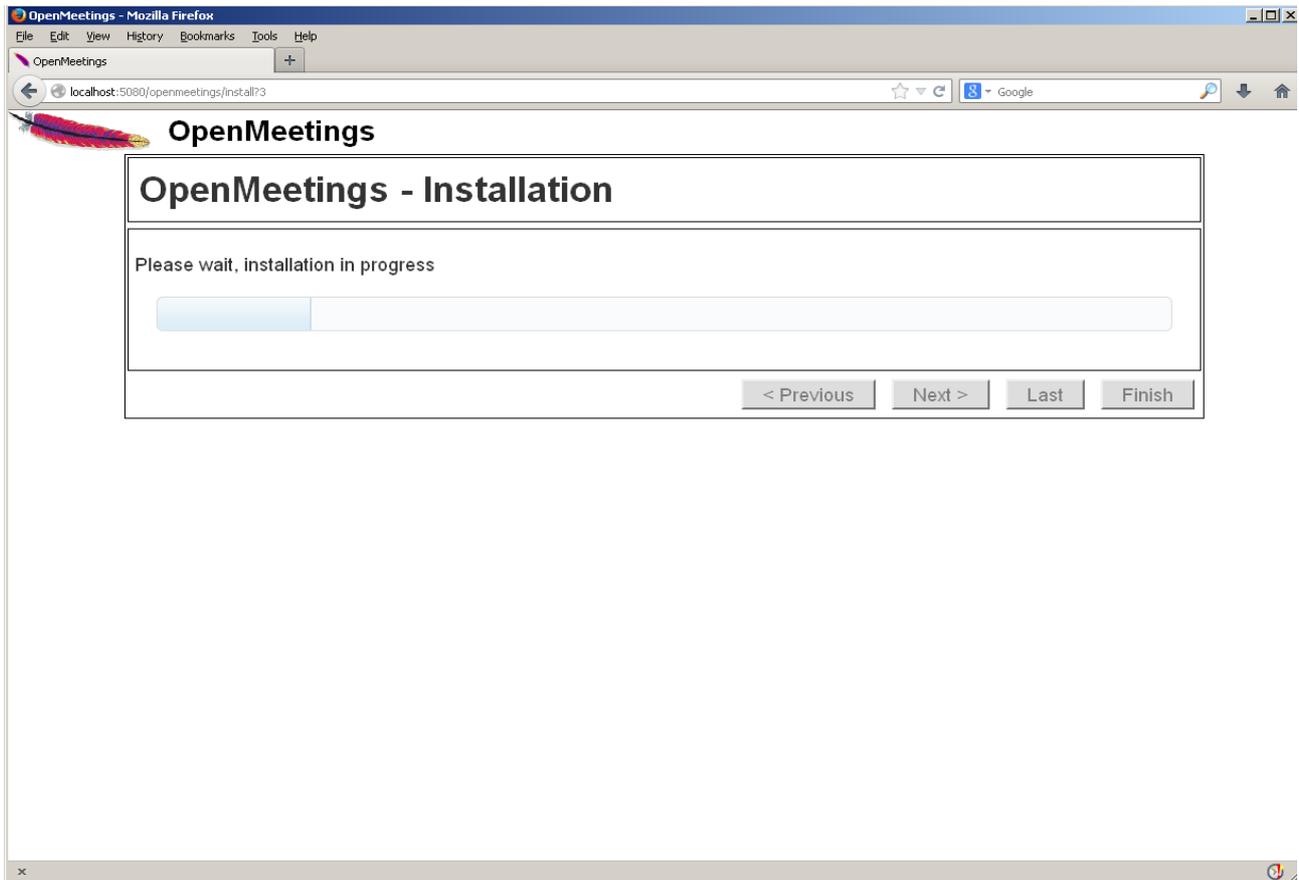
When finish should show this page:
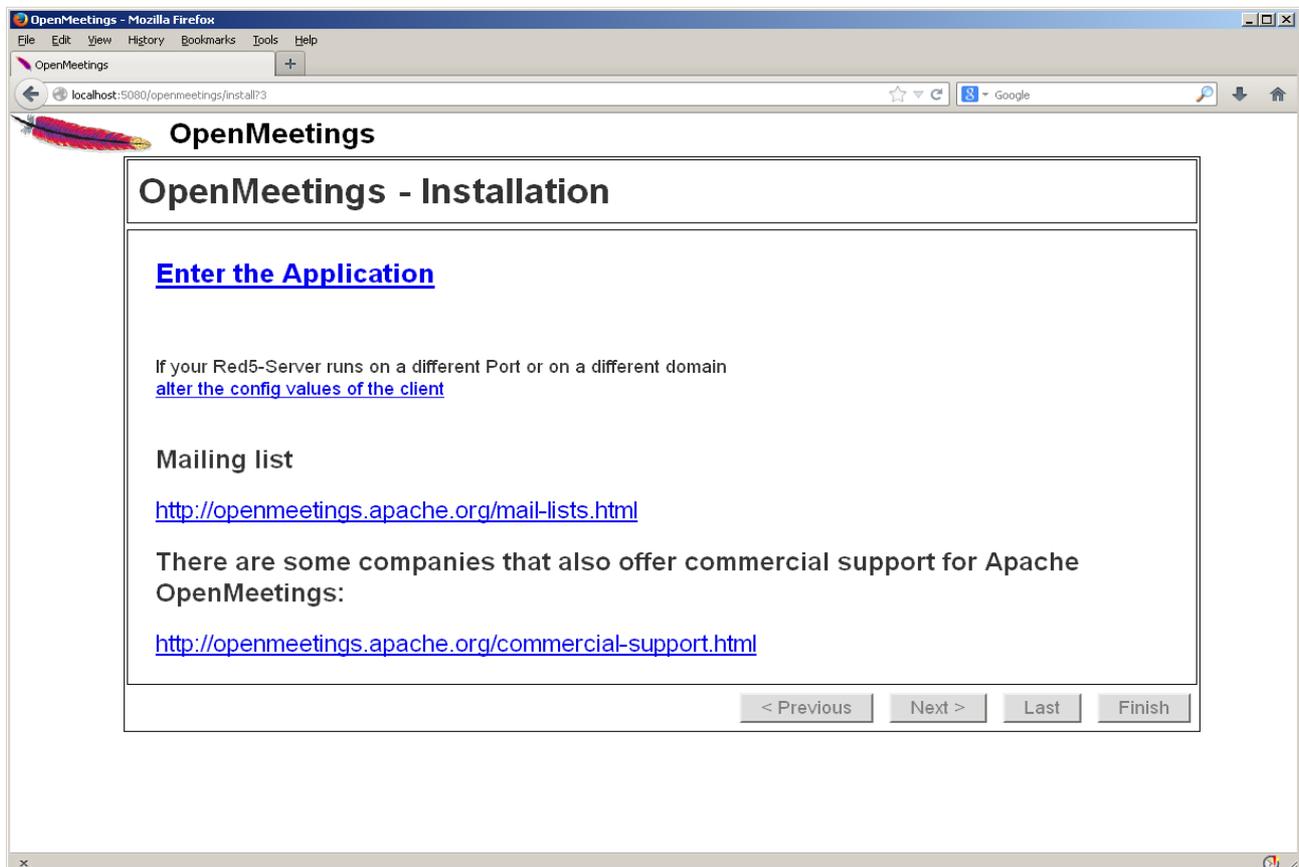
...click on **Enter the Application** and we´ll see OpenMeetings's entry:
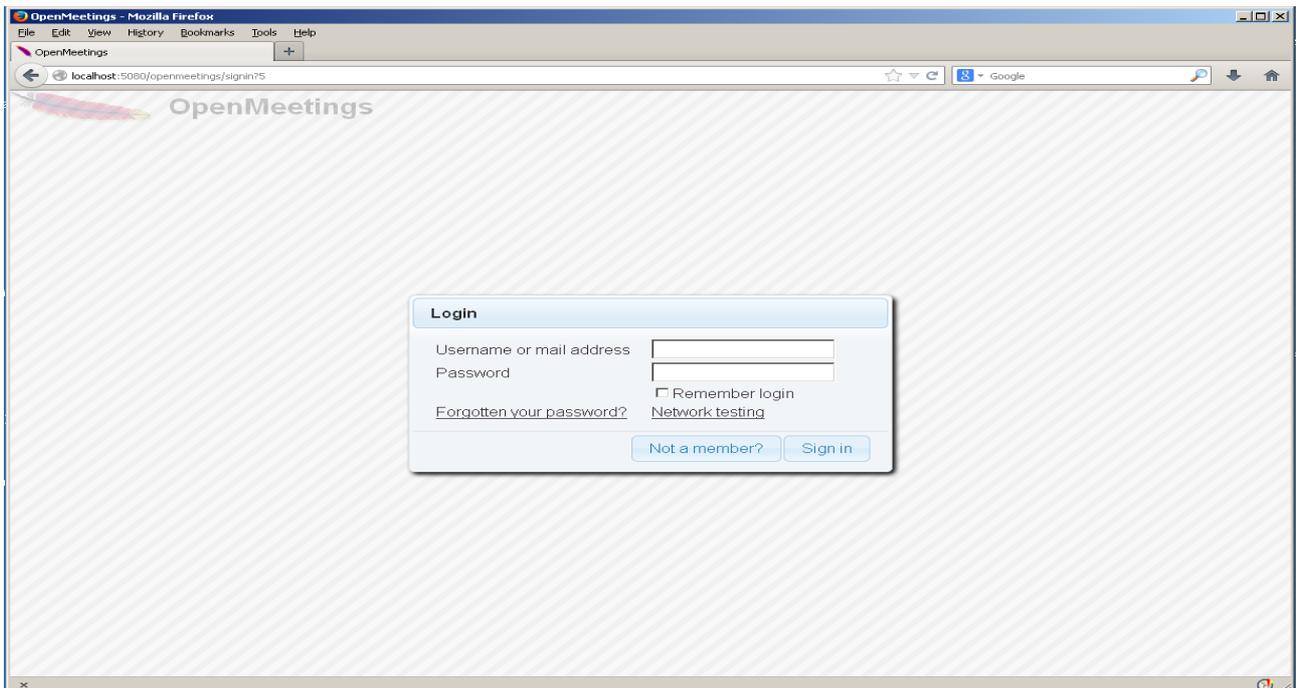
Introduce the user's name and the password that you have chosen during the installation and**...**

...Congratulations!

The next time you like accede to OpenMeetings will be:

http://localhost:5080/openmeetings

Remember open in the server these three ports:

1935   5080   8088

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

16)

---- Configuration of OpenMeetings ----

Once have acceded to OpenMeetings we go to:

Administration → Configuration
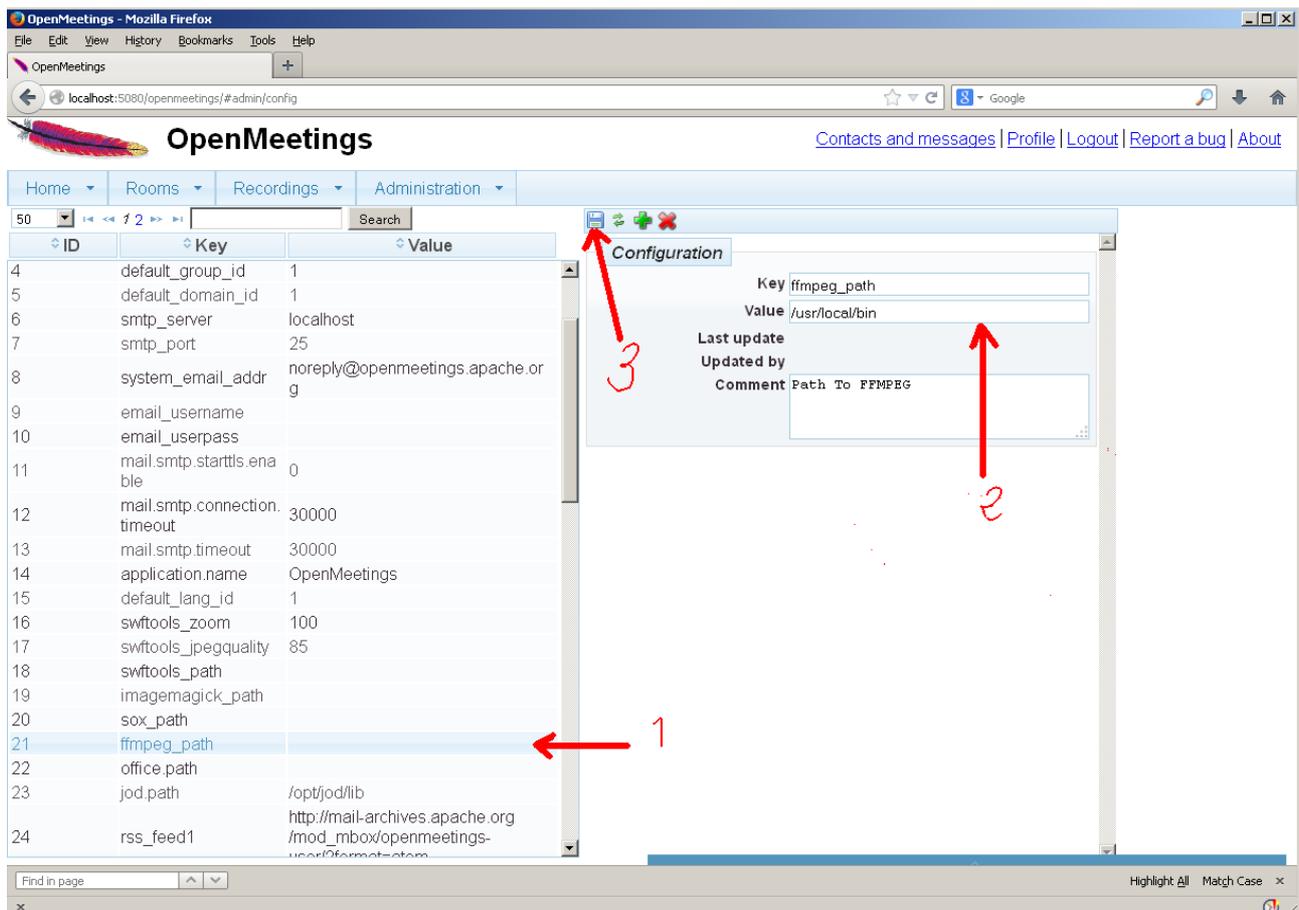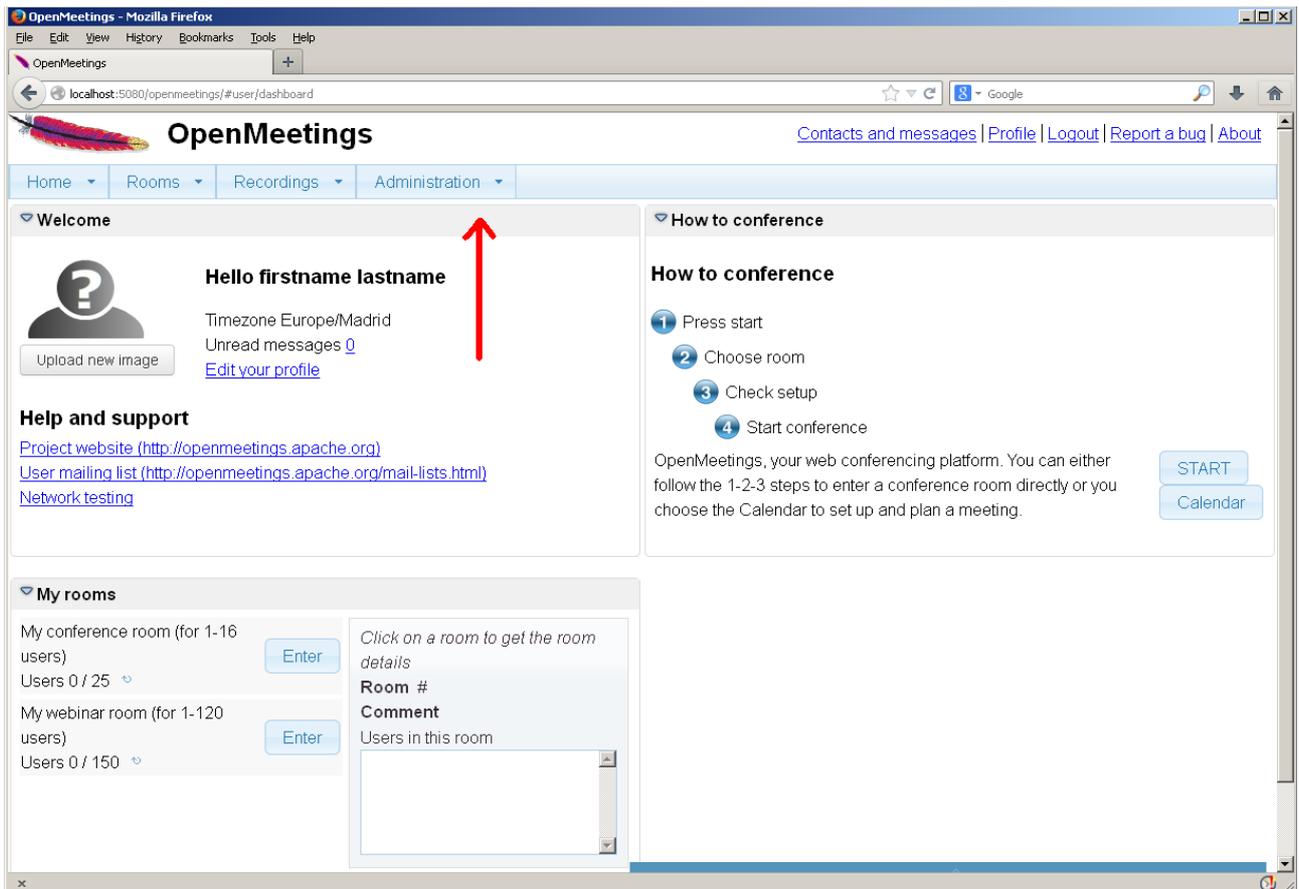
...introduce the path for files conversion, audio and video:

        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/libreoffice5.0

    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 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