



Installation of Apache OpenMeetings 3.0.x on Fedora 22 – 64bit

This tutorial it is based on a fresh installation of

Fedora-Live-MATE_Compiz-x86_64-22-3.iso

It is tested with positive result.
We will use the Apache's binary version
OpenMeetings 3.0.6 stable,
that is to say should suppress his compilation.

It is done step by step.

1-6-2015

Starting...

1)

At first place modify Selinux level security for the installation.

`sudo nano /etc/selinux/config`

...modify:

SELINUX=**enforcing**

...to

SELINUX=**permissive**

When finish the installation you can back to enforcing level.

2)

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

Update operative system:

`dnf update -y`

...and reboot for kernel changes if it is:

`reboot`

3)

Install wget:

`sudo dnf -y install wget`

4)

----- **ADD Repos** -----

RPM Fusion repo

(In only one line)

`su -c 'dnf install --nogpgcheck http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-22.noarch.rpm http://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-22.noarch.rpm'`

```
## Adobe repo 64-bit x86_64 ## For Flash player.
```

```
rpm -ivh http://linuxdownload.adobe.com/adobe-release/adobe-release-x86\_64-1.0-1.noarch.rpm
```

```
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-adobe-linux
```

Fast searches repos:

```
sudo dnf -y install yum-plugin-fastestmirror
```

```
dnf update -y
```

5)

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

Should install packages and libraries necessary:

(In only one line with one space)

```
dnf install -y libjpeg-turbo libjpeg-turbo-devel libjpeg-turbo-utils giflib-devel freetype-devel gcc-c++ zlib-devel libtool bison bison-devel file-roller ghostscript freetype unzip gcc ncurses make bzip2 wget ImageMagick ghostscript ncurses zlib git make automake nasm pavucontrol alsa-plugins-pulseaudio flash-plugin icedtea-web nmap tomcat-native
```

6)

----- **Installation of LibreOffice or OpenOffice** -----

LibreOffice it is installed already in the distro, but if you use a server iso then install it:

```
dnf -y install libreoffice
```

Is need it to convert uploaded files.

7)

----- **Installation of Java** -----

Java it is necessary to run red5-OpenMeetings. We'll install it, if not, OpenJava.

```
dnf -y install java
```

8)

----- Installation MariaDB database server -----

MariaDB is the new database server folk of MySQL.

We install it:

```
dnf install -y mariadb mariadb-server
```

...and starting mariadb:

```
systemctl start mariadb.service
```

Give a password to mariadb root admin:

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

Make a database for OpenMeetings:

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

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

```
CREATE DATABASE open306 DEFAULT CHARACTER SET 'utf8';
```

...now do a new user with a new password:

```
CREATE USER 'hola'@'localhost' IDENTIFIED BY '123456';
```

...and give privileges to this user on the open306 database:

```
GRANT ALL PRIVILEGES ON open306.* TO 'hola'@'localhost' WITH GRANT OPTION;
```

```
FLUSH PRIVILEGES;
```

```
quit
```

```
open306 ..... name of the database  
hola ..... user for that database  
123456 ..... password of that user
```

To start, restart and stop mariadb:

```
systemctl start mariadb.service  
systemctl restart mariadb.service  
systemctl stop mariadb.service
```

9)

----- **ImageMagick** -----

We had installed ImageMagick in the beginning.
Will work with png, jpg, gif, etc files.

10)

----- **Sox** -----

Sox work about sound. Install it:

```
dnf -y install sox
```

11)

----- **Swftools** -----

Swftools participate in convert uploaded files to swf and show them in the whiteboard.

Will compile it:

```
cd /opt
```

```
wget http://www.swftools.org/swftools-2013-04-09-1007.tar.gz
```

```
tar xzvf swftools-2013-04-09-1007.tar.gz
```

```
cd /opt/swftools-2013-04-09-1007
```

```
./configure --libdir=/usr/lib --bindir=/usr/bin
```

```
make
```

```
make install
```

```
cd /opt
```

12)

----- Compile and installation of ffmpeg, lame, yasm and x264-----

To compile and install ffmpeg, lame, yasm and x264, i made my own mixture between these two web pages:

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

<http://wiki.razuna.com/display/ecp/FFMpeg+Installation+on+CentOS+and+RedHat>

Should install some package and libraries: (In only one line)

```
dnf install -y glibc alsa-lib-devel faac faac-devel faad2 faad2-devel gsm gsm-devel imlib2 imlib2-devel libogg libvorbis vorbis-tools theora-tools libvpx-devel
```

Ffmpeg will work with the video. 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 -L -O http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
```

```
git clone --depth 1 git://git.code.sf.net/p/opencv-amr/fdk-aac
```

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

```
wget http://downloads.xvid.org/downloads/xvidcore-1.3.2.tar.gz
```

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

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

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

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

```
git clone http://git.chromium.org/webm/libvpx.git
```

```
git clone git://git.videolan.org/x264.git
```

```
git clone git://source.ffmpeg.org/ffmpeg.git
```

...once all these packages-files are downloaded start the compilation...please be connected Internet.

1) ---- libmp3lame ----

```
cd ~/ffmpeg_sources  
tar xzvf lame-3.99.5.tar.gz  
cd lame-3.99.5
```

(In only one line)

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

```
make  
make install  
make distclean
```

2) ---- libfdk_aac ----

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

3) ---- 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

4) ---- Xvid ----

cd ~/ffmpeg_sources

tar xzvf xvidcore-1.3.2.tar.gz

cd xvidcore/build/generic

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

make

make install

5) ---- 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

6) ---- Libvorbis ----

cd ~/ffmpeg_sources

tar xzvf libvorbis-1.3.4.tar.gz

cd libvorbis-1.3.4

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

make

make install

7) ---- Libtheora ----

```
cd ~/ffmpeg_sources  
tar xzvf libtheora-1.1.1.tar.gz  
cd libtheora-1.1.1
```

(In only one line)

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

```
make  
make install
```

8) ---- Yasm ----

```
dnf remove yasm  
cd ~/ffmpeg_sources  
tar xzfv yasm-1.2.0.tar.gz  
cd yasm-1.2.0  
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"  
make  
make install  
export "PATH=$PATH:$HOME/bin"
```

9) ---- Libvpx ----

```
cd ~/ffmpeg_sources  
cd libvpx  
./configure --prefix="$HOME/ffmpeg_build" --disable-examples  
make  
make install
```

10) ---- X264 ----

```
cd ~/ffmpeg_sources
```

```
cd x264
```

```
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --enable-static
```

```
make
```

```
make install
```

Config Libraries

```
export LD_LIBRARY_PATH=/usr/local/lib/
```

```
echo /usr/local/lib >> /etc/ld.so.conf.d/custom-libs.conf
```

```
ldconfig
```

11) ---- FFmpeg ----

```
cd ~/ffmpeg_sources
```

```
cd ffmpeg
```

```
git checkout release/2.2
```

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

```
export PKG_CONFIG_PATH
```

(In only one line with a space between each one)

```
./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 --enable-libxvid
```

```
make
```

```
make install
```

.....
The compilation is finished.
.....

Now we have the compiled files in: ~/bin

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

```
cd ~/bin
```

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

13)

----- Jodconverter -----

We need Jodconverter in the process to 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
```

14)

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

Make a folder called **red5306** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5306
```

This url that you can visit, is the Apache OpenMeetings 3.0.6 stable version:

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

```
cd /opt/red5306
```

Here i leave two valids examples links to choose download:

```
wget http://apache.rediris.es/openmeetings/3.0.6/bin/apache-openmeetings-3.0.6.zip
```

...or

wget <http://ftp.cixug.es/apache/openmeetings/3.0.6/bin/apache-openmeetings-3.0.6.zip>

unzip apache-openmeetings-3.0.6.zip

...save the original file to /opt:

mv apache-openmeetings-3.0.6.zip /opt

15)

---- Connector Java MariaDB----

This file is need it to connect OpenMeetings with MariaDB:

cd /opt

(In only one line)

wget <http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.35/mysql-connector-java-5.1.35.jar>

cp mysql-connector-java-5.1.35.jar /opt/red5306/webapps/openmeetings/WEB-INF/lib

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

chown -R nobody /opt/red5306

16)

----- Configuration of OpenMeetings for MariaDB -----

Will configure OpenMeetings to connect with MariaDB:

cd /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF

mv persistence.xml persistence.xml-ori

mv mysql_persistence.xml persistence.xml

cd /opt

sudo nano /opt/red5306/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/open306?....
```

...**open306** is the database name we gives when install MariaDB and build it.

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

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

...to

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

...**hola** is the user name we gives when install MariaDB for **open306** database.

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

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

Protect the access to this file:

```
chmod 640 /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

17)

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

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

```
sudo nano /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/red5306
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 any other path, can modify the line:

```
RED5_HOME=/opt/red5306
```

...to

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

Concede permission of execution to the script:

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

```
systemctl stop mariadb.service
```

...reboot machine in order the system recognize the script:

```
reboot
```

18)

After reboot we continue. Run mariadb:

```
systemctl start mariadb.service
```

...and red5-OpenMeetings:

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

...wait some *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

- 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

- 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

3. Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard

- 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

- Install **FFMpeg**. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from <http://ffmpeg.arozcru.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!

Install **FFMpeg**. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from <http://ffmpeg.arozcru.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 the foot page, 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	<input type="text" value="MySQL"/>
Specify DB host	<input type="text" value="localhost"/>
Specify DB port	<input type="text" value="3306"/>
Specify the name of the database	<input type="text"/>
Specify DB user	<input type="text"/>
Specify DB password	<input type="text"/>

...click **Next** again:



OpenMeetings

OpenMeetings - Installation

Userdata

Username	<input style="width: 70%;" type="text"/>
Userpass	<input style="width: 70%;" type="text"/>
E-Mail	<input style="width: 70%;" type="text"/>
User Time Zone	<input style="width: 70%;" type="text" value="Europe/Madrid"/>

Organisation(Domains)

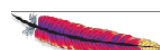
Name	<input style="width: 70%;" type="text"/>
------	--

...here we must 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-address** ...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** button and this other page will appear:

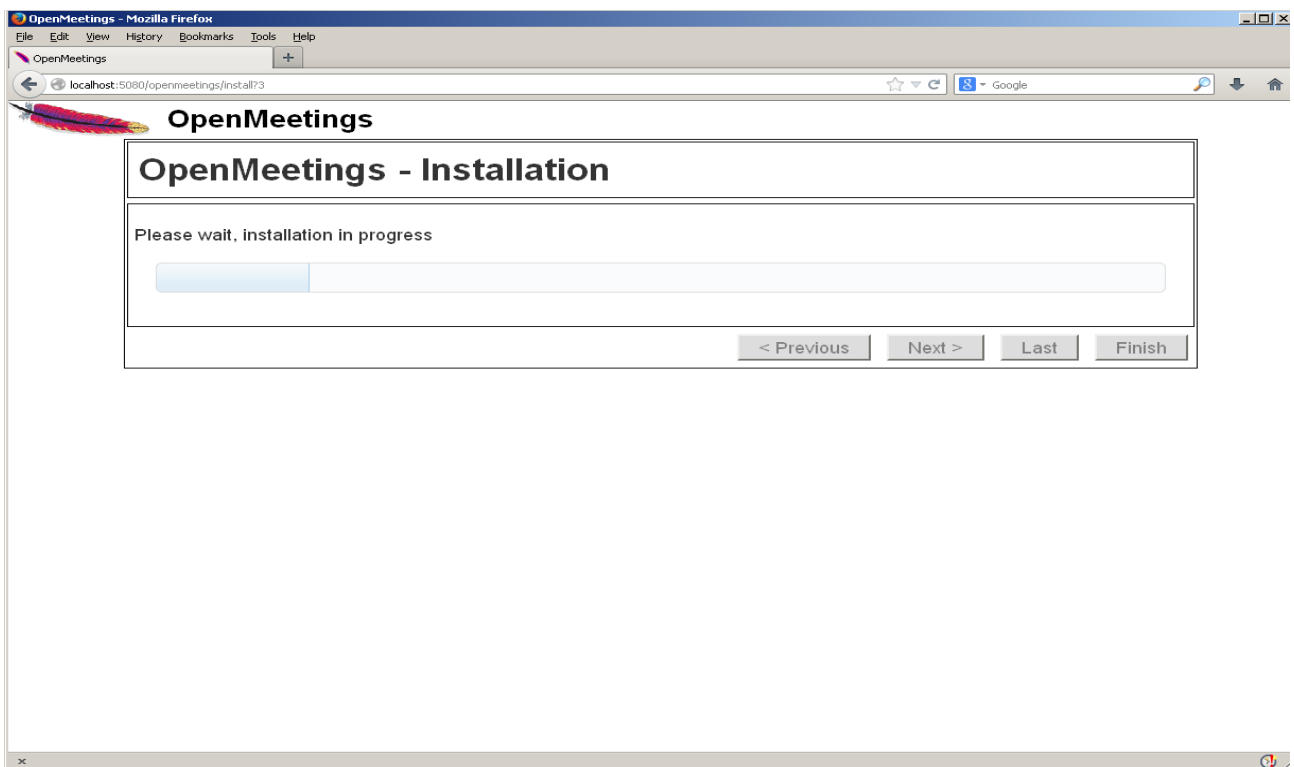


OpenMeetings

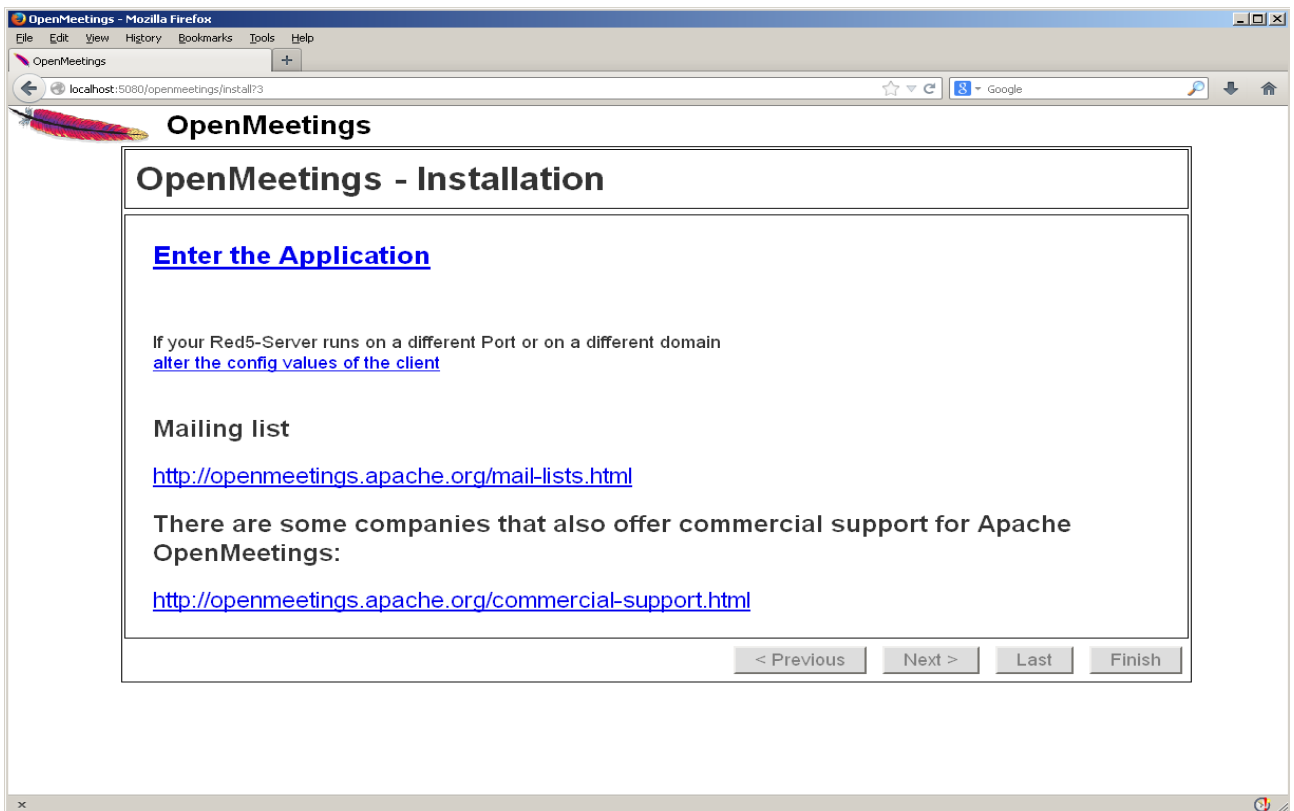
OpenMeetings - Installation

Please click "Finish" button to start installation!

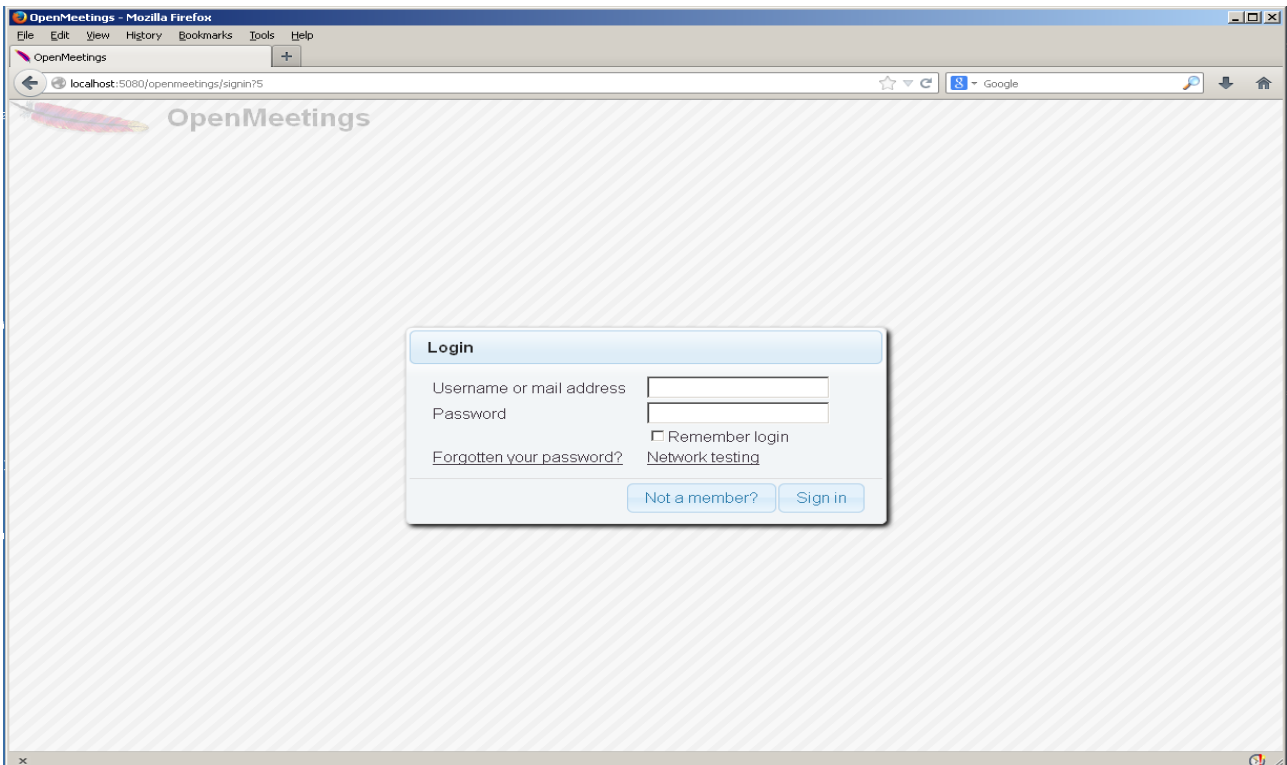
...click **Finish** and will start to fill the database tables:



When finish should show this page:



...click [Enter the Application](#) and you'll see OpenMeetings's login page...



Introduce the user's name and the password that you have chosen during the installation and clic **Sign in...**

Congratulations!

The next time to access OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember open in the server these three ports:

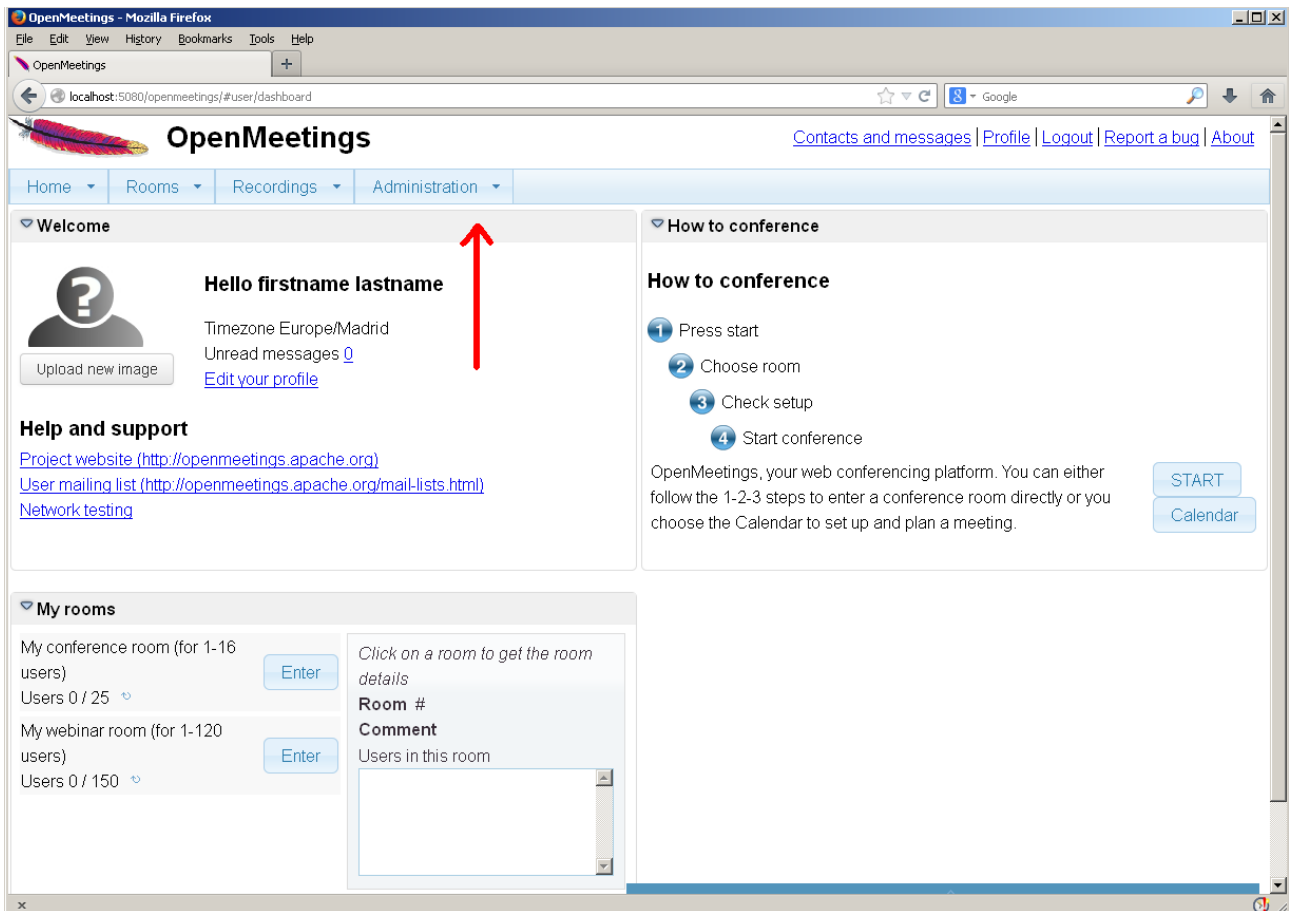
1935 5080 8088

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

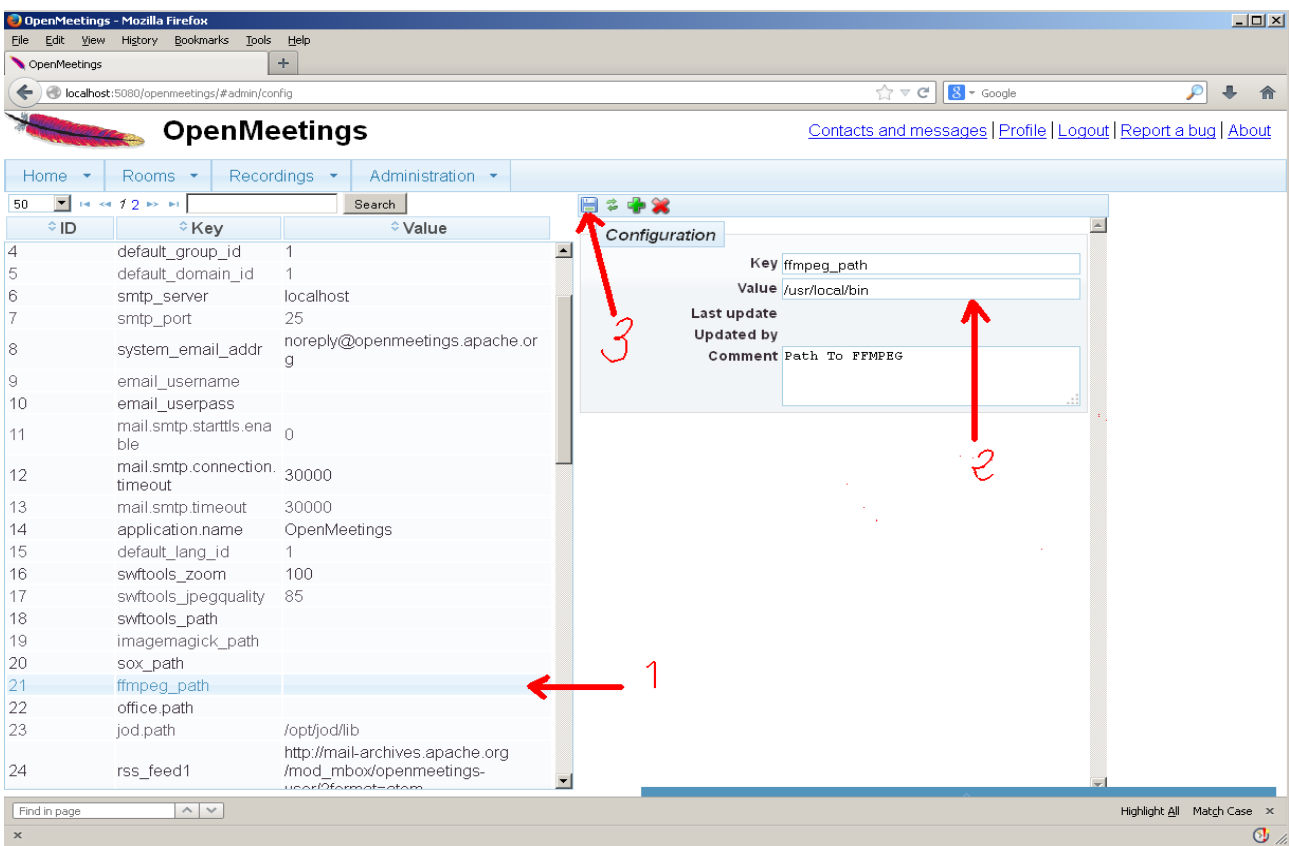
19)

---- Configuration of OpenMeetings ----

Once you 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: [/usr/lib64/libreoffice](#)

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](#)

Flash Player it was installed in the beginning. OpenMeetings even need it for rooms.

And this is all.

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

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

Thank you

Alvaro Bustos