



Installation of Apache OpenMeetings 3.0.x on Fedora 21 – 64bit

This tutorial it is based on a fresh installation of

Fedora-Live-Workstation-x86_64-21-5.iso

It is tested with positive result.
We will use the Apache's binary version:

OpenMeetings 3.0.3 stable

that is to say should suppress his compilation.

It is done step by step.

11-12-2014

Starting...

1)
At first place modify Selinux level security for the installation.

`sudo gedit /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:

`yum update -y`

...and reboot for kernel changes:

`reboot`

3)

Install gedit and wget:

`sudo yum -y install gedit wget`

4)

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

RPM Fusion repo

(In only one line)

`su -c 'yum localinstall --nogpgcheck http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-21.noarch.rpm http://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-21.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 yum -y install yum-plugin-fastestmirror
```

```
sudo yum -y install yum-presto
```

```
yum update -y
```

5)

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

Should install packages and libraries necessary:

(In only one line)

```
yum 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)

----- **LibreOffice or OpenOffice** -----

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

```
yum -y install libreoffice
```

Is need it to convert uploaded files.

7)

----- **Oracle Java 1.8** -----

Oracle Java 1.8 it is necessary to OpenMeetings works.

icedtea-web, that is a java plugin browser, can help for room recordings and share desktop from Conference Room in OpenMeetings.

Well, should install Oracle Java 1.8.

Please visit:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

...click on:

Agree and proceed

...click on:

Accept License Agreement

...and download the file called:

jdk-8u25-linux-x64.rpm

Place where the file was downloaded, for example:

```
cd /home/you_user
```

...and install it:

```
rpm -Uvh jdk-8u25-linux-x64.rpm
```

```
update-alternatives --install /usr/bin/java java /usr/java/jdk1.8.0_25/jre/bin/java 20000
```

```
update-alternatives --install /usr/bin/jar jar /usr/java/jdk1.8.0_25/bin/jar 20000
```

```
update-alternatives --install /usr/bin/javac javac /usr/jdk1.8.0_25/bin/javac 20000
```

```
update-alternatives --install /usr/bin/javaws javaws /usr/jdk1.8.0_25/jre/bin/javaws 20000
```

...now you must choose between OpenJava and Oracle Java to work with. Type the number **2** after run this command:

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

...so we select Java and not Open Java.

The next commands will give only one option each. Then is not what to choose:

```
update-alternatives --config javaws
```

```
update-alternatives --config javac
```

8)

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

MariaDB is the new database server folk of MySQL.

We install it:

```
yum 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 open303 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 open303 database:

```
GRANT ALL PRIVILEGES ON open303.* TO 'hola'@'localhost' WITH GRANT OPTION;
```

```
FLUSH PRIVILEGES;
```

```
quit
```

```
open303 ..... 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

10)

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

Sox is already installed in the distro.
Will work sound about.

11)

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

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

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/eep/FFMpeg+Installation+on+CentOS+and+RedHat>

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

```
yum 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 ----

```
yum 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)

```
./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 yasm /usr/local/bin
```

13)

----- Jodconverter -----

We need Jodconverter 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 **red5303** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5303
```

This url that you can visit, is the Apache OpenMeetings 3.0.3 stable version:

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

```
cd /opt/red5303
```

Here i leave two valids examples links to choose download:

```
wget http://apache.rediris.es/openmeetings/3.0.3/bin/apache-openmeetings-3.0.3.zip
```

...or

```
wget http://ftp.cixug.es/apache/openmeetings/3.0.3/bin/apache-openmeetings-3.0.3.zip
```

```
unzip apache-openmeetings-3.0.3.zip
```

...save the original file to /opt:

```
mv apache-openmeetings-3.0.3.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/5.1.34/mysql-connector-java-5.1.34.jar
```

```
cp mysql-connector-java-5.1.34.jar /opt/red5303/webapps/openmeetings/WEB-INF/lib
```

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

```
chown -R nobody /opt/red5303
```

16)

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

Will configure OpenMeetings to connect with MariaDB:

```
cd /opt/red5303/webapps/openmeetings/WEB-INF/classes/META-INF
```

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

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

```
cd /opt
```

```
sudo gedit /opt/red5303/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/open303?....
```

...**open303** is the database name we gives when install MariaDB and build it.

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

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

...to

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

...**hola** is the user name we gives when install MariaDB for **open303** 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/red5303/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 gedit /etc/init.d/red5
```

...copy and past the text from here:

```

#
#!/bin/sh -e
#
# Startup script for Red5

export RED5_HOME=/opt/red5303

start_red5="$RED5_HOME/red5.sh start"
stop_red5="$RED5_HOME/red5-shutdown.sh stop"

start() {
    echo -n "Starting Red5: "
    ${start_red5} &
    echo "done."
}
stop() {
    echo -n "Shutting down Red5: "
    ${stop_red5}
    echo "done."
}
case "$1" in
    start)
        start
        ;;
    stop)
        stop
        ;;
    restart)
        stop
        sleep 10
        start
        ;;
    *)
        echo "Usage: $0 {start|stop|restart}"
esac

exit 0

```

...to here.

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

```
RED5_HOME=/opt/red5303
```

...to

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

Concede permission of execution to the script:

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

18)

Restart mariadb:

```
systemctl restart mariadb.service
```

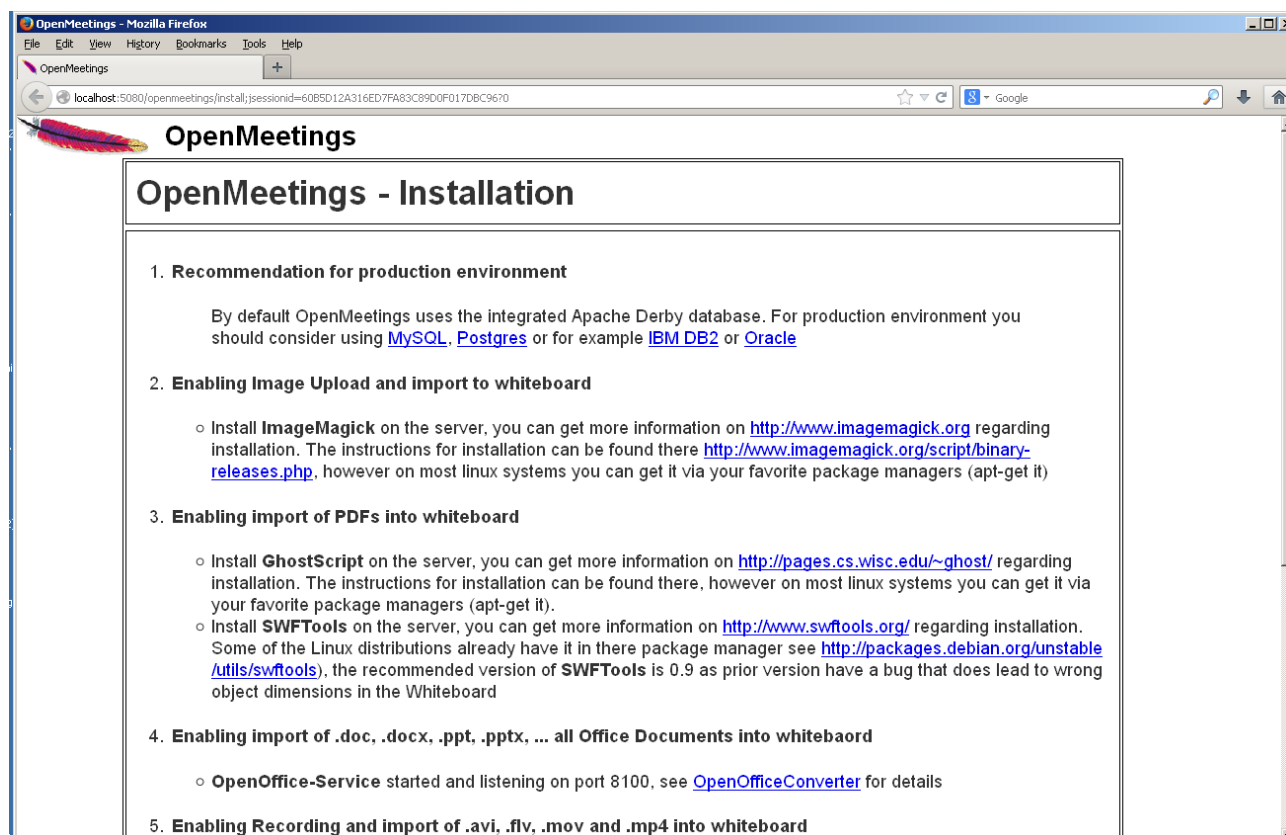
...and start red5-OpenMeetings:

```
/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:



OpenMeetings - Installation

- 1. Recommendation for production environment**

By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using [MySQL](#), [Postgres](#) or for example [IBM DB2](#) or [Oracle](#)
- 2. 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)
- 3. 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
- 4. Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard**
 - OpenOffice-Service** started and listening on port 8100, see [OpenOfficeConverter](#) for details
- 5. Enabling Recording and import of .avi, .flv, .mov and .mp4 into whiteboard**

...click **Next** button in the foot page and this other 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.

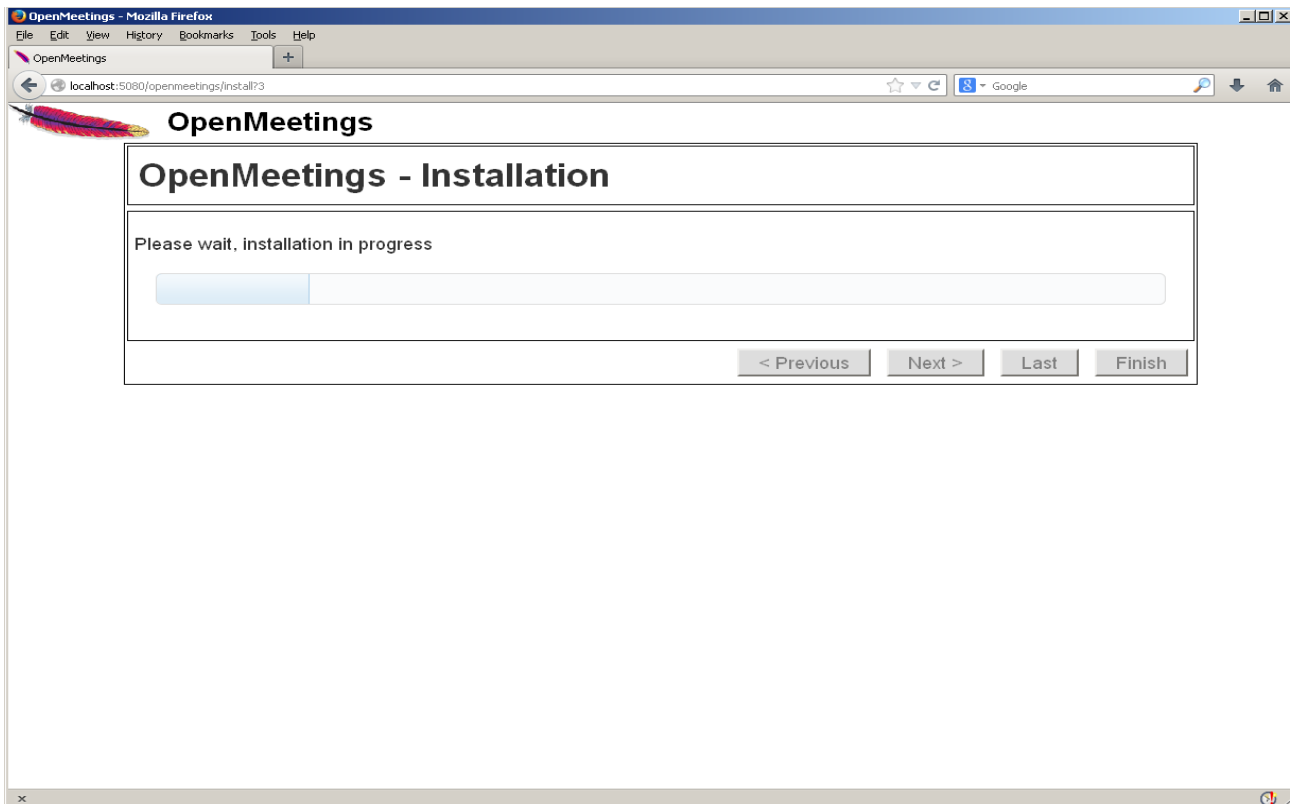
...click **Last** button and this other page will appear:

OpenMeetings - Installation

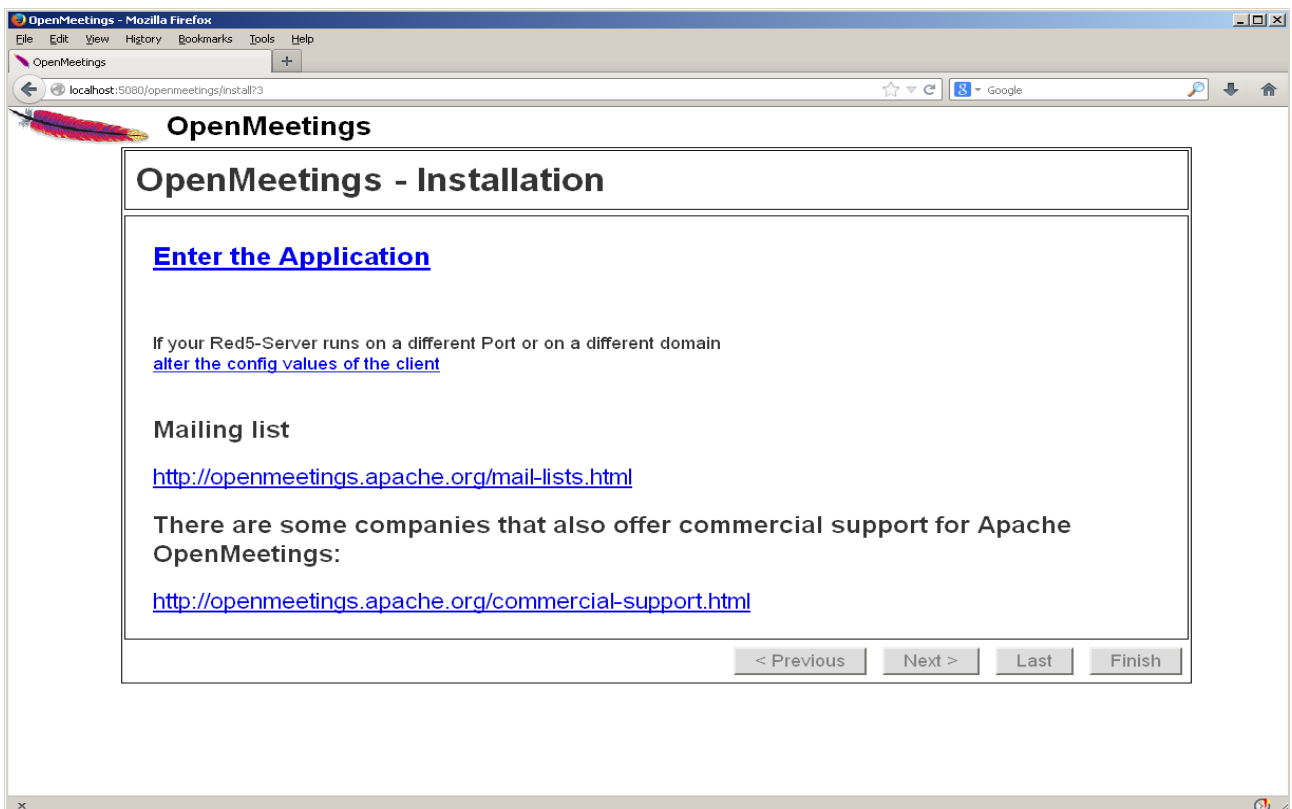
Please click "Finish" button to start installation!

< Previous Next > Last Finish

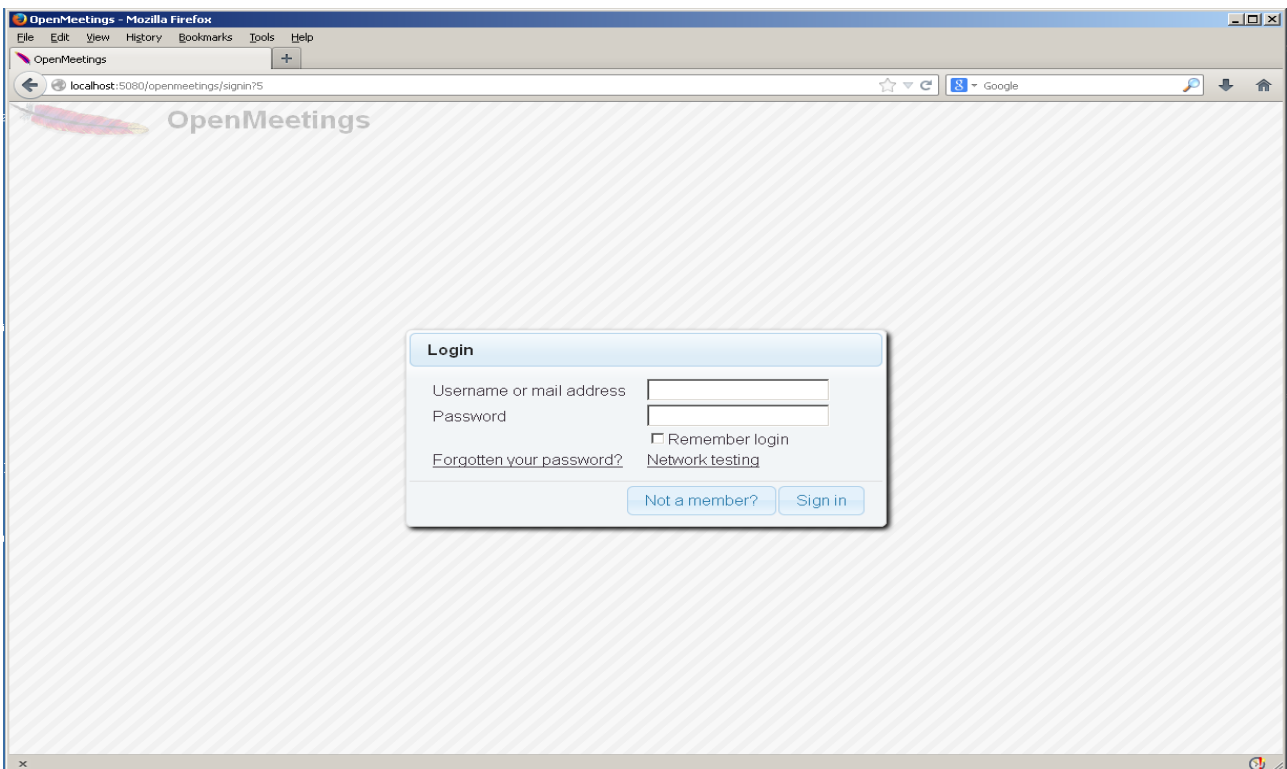
...click **Finish** and will start to fill the database tables:



When finish should show this page:



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



...Congratulations!

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

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.

16)

---- Configuration of OpenMeetings ----

Once you acceded to OpenMeetings we go to: **Administration** → **Configuration**

OpenMeetings

Home | Rooms | Recordings | Administration

Welcome

Hello firstname lastname

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

Help and support

[Project website \(http://openmeetings.apache.org\)](http://openmeetings.apache.org)
[User mailing list \(http://openmeetings.apache.org/mail-lists.html\)](http://openmeetings.apache.org/mail-lists.html)
[Network testing](#)

How to conference

- 1 Press start
- 2 Choose room
- 3 Check setup
- 4 Start conference

OpenMeetings, your web conferencing platform. You can either follow the 1-2-3 steps to enter a conference room directly or you choose the Calendar to set up and plan a meeting.

[START](#)
[Calendar](#)

My rooms

My conference room (for 1-16 users)
Users 0 / 25 [Enter](#)

My webinar room (for 1-120 users)
Users 0 / 150 [Enter](#)

Click on a room to get the room details

Room #
Comment
Users in this room

OpenMeetings

Home | Rooms | Recordings | Administration

ID	Key	Value
4	default_group_id	1
5	default_domain_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	
23	jod.path	/opt/jod/lib
24	rss_feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-users@famestatem

Configuration

Key:

Value:

Last update:

Updated by:

Comment:

...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