



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

This tutorial it is bassed 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 3.0.7 stable,
that is to say should suppress his compilation.

It is done step by step.

Última actualización: 29-9-2015

Starting...

1)

At first place modify Selinux level security for the installation.

```
sudo nano /etc/selinux/config
```

...modify:

```
SELINUX=enforcing
```

...to

```
SELINUX=permissive
```

Press **Ctrl+x** and will ask to save, press **Y**

When finish the installation you can leave the level.

2)

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

Update operative system:

`dnf update -y`

...and reboot for kernel changes if it is and the new **Selinux** configuration::

`reboot`

3)

----- 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 32 bit ## For Flash Player.

`rpm -ivh http://linuxdownload.adobe.com/adobe-release/adobe-release-i386-1.0-1.noarch.rpm`

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

.### Adobe repo 64-bit ### 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`

4)

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

Should install packages and libraries necessary:

(In only one line with a 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 ghostscript ncurses zlib git make automake nasm pavucontrol alsa-plugins-pulseaudio
icedtea-web nmap tomcat-native
```

5)

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

Java it is necessary to run red5-OpenMeetings. We'll install it, if not, OpenJava 1.8.

```
dnf -y install java
```

6)

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

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 to pdf.

7)

----- Installation of ImageMagick, Sox and Swftools -----

ImageMagick work with the images files like jpg, png, etc. Will install it:

```
dnf -y install ImageMagick
```

Sox work with the audio. Will install it:

```
dnf -y install sox
```

Swftools convert to swf (flash file) the uploaded files and show them in the whiteboard. *Don't use a newer version: have not pdf2swf.* 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
```

8)

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

OpenMeetings even need Adobe Flash Player for rooms.

```
yum install -y flash-plugin
```

9)

-----Installation of 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
```

10)

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

FFmpeg will work with video. Will install a 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 zlibtheora theora-tools libvpx-devel mercurial cmake
```

This ffmpeg compilation is based on this url, but updated: (20-9-2015)

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

As it is, the compilation in this url gives an error when compiling x264 (second step).

After resolve that error and finish the compilation, gives an error about ogg when recording on OpenMeetings.

Then i supress one step in the url and add some ones more. And now works properly without error, and audio-video is synchronized. Ogg right.

Also i made a script to download, compile and install ffmpeg on Centos and Fedora. It is tested and is ok.

During the x265 compilation, will look like stop for about 8 minutes in a text that say: **41%**
Don't worry, everything is goeing right. Be patience.

When is finished will appear a text: FFMPEG Compilation and Installation Finished!

Please download the script and read inside the zip for running it. To download:

https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_script_compile_Centos.zip?version=1&modificationDate=1436031503196&api=v2

After the compilation is finished you can go to **step 11)**

But if you prefer copy and paste, i **don't advise**, leave the text script:

`sudo nano /opt/ffmpeg-centos.sh`

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

```
# Script ffmpeg Centos Fedora
# Alvaro Bustos. Thanks to Hunter
# 4-7-2015
# Install libraries
yum install -y autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial
nasm pkgconfig zlib-devel

# Install yasm from repos
yum 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
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
git clone http://git.opus-codec.org/opus.git
```

```
curl -O http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
curl -O 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

# 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$HOME/ffmeg_build/lib" CPPFLAGS="-I$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 ..
```

```
cd ffmpeg
PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig" ./configure
--prefix="$HOME/ffmpeg_build" --extra-cflags="-I$HOME/ffmpeg_build/include" --extra-
ldflags="-L$HOME/ffmpeg_build/lib" --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 and Installation Finished!"
```

...to here.

Concede permission of execution:

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

```
cd /opt
```

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

```
./ffmpeg-centos.sh
```

Remember the warning about 8 minutes in a false stop...

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

11)

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

MariaDB is the new database server fork 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 open307 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 open307 database:

```
GRANT ALL PRIVILEGES ON open307.* TO 'hola'@'localhost' WITH GRANT OPTION;
```

```
FLUSH PRIVILEGES;
```

```
quit
```

```
open307 ..... 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
```

12)

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

Make a folder called **red5307** where download the Apache OpenMeetings file and where make the installation. Will install the 3.0.7 OpenMeetings stable version:


```
mkdir /opt/red5307
```

This url that you can visit, is the Apache OpenMeetings 3.0.7 stable version:

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

```
cd /opt/red5307
```

Here leave two valids examples links to chose download:

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

...or

```
wget http://ftp.cixug.es/apache/openmeetings/3.0.7/bin/apache-openmeetings-3.0.7.zip
```

```
unzip apache-openmeetings-3.0.7.zip
```

...save the original file to /opt:

```
mv apache-openmeetings-3.0.7.zip /opt
```

13)

---- 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/5.1.36/mysql-connector-java-5.1.36.jar
```

```
cp mysql-connector-java-5.1.36.jar /opt/red5307/webapps/openmeetings/WEB-INF/lib
```

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

```
chown -R nobody /opt/red5307
```

14)

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

Will configure OpenMeetings to connect with MariaDB:

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

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

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

```
cd /opt
```

```
sudo nano /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 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 **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.

Protect the access to this file:

```
chmod 640 /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

15)

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

We'll download the script to run Red5-OpenMeetings on Fedora:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5fedora?version=1&modificationDate=1443596055393&api=v2
```

...rename the script:

```
mv red5fedora?version=1 red5fedora
```

...and move it to where must be:

```
cp red5fedora /etc/init.d/
```

...concede execution permission:

```
chmod +x /etc/init.d/red5fedora
```

If you made the installation in any other path different to /opt/red5307, please edit the script and modify the line:

```
RED5_HOME=/opt/red5307
```

...to

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

Stop Mariadb:

```
systemctl stop mariadb.service
```

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

```
reboot
```

16)

After reboot we continue. Run mariadb:

```
systemctl start mariadb.service
```

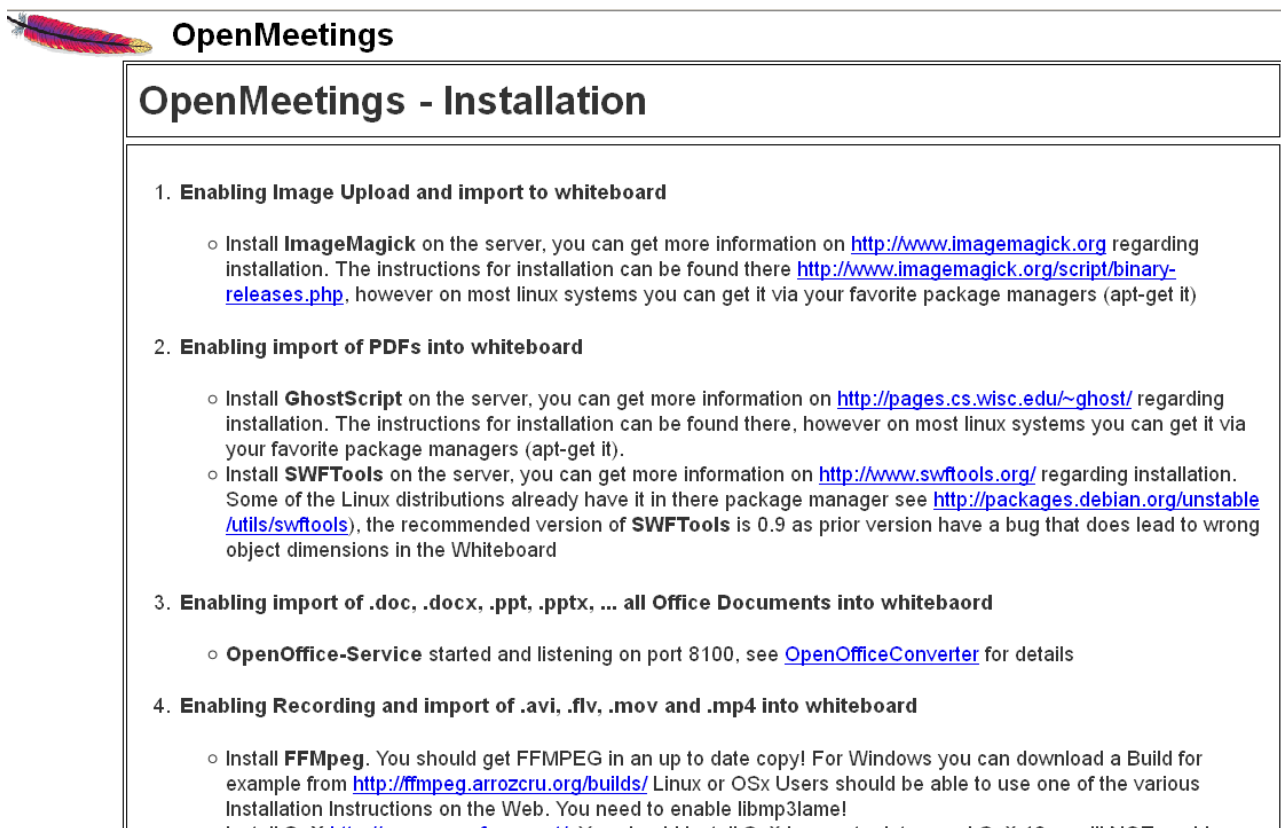
...and red5-OpenMeetings:

[/etc/init.d/red5fedora start](#)

...wait **10 seconds minimum** in order red5-OpenMeetings run, and later can 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 **CaX** <http://www.cax.com/>. You should install CaX in a up to date copy! CaX 1.2 will NOT work!

...click **Next** button in the foot page, and will show the database configuration we made in the step 14.:



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	

...clic **Next** again:



OpenMeetings

OpenMeetings - Installation

Userdata

Username	
Userpass	
E-Mail	
User Time Zone	Europe/Madrid

Organisation(Domains)

Name	
------	--

...here we must to introduce necessary, to be able to continue, the following:

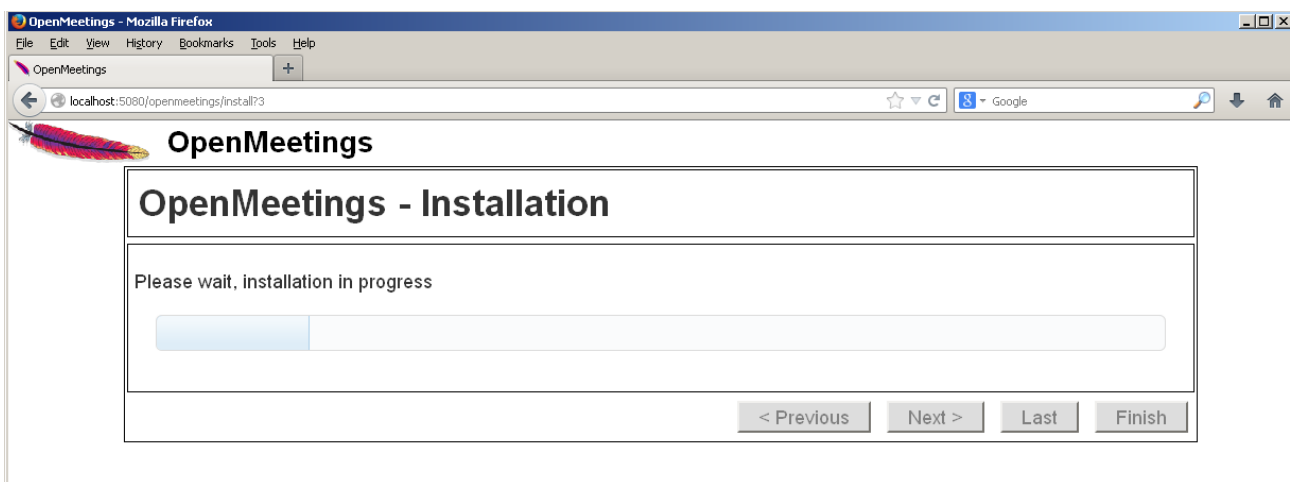
Username = **a-name** ...This user name will have administrator rights.
 Userpass = **a-password**for the previous user
 EMail = **email-address** ...of the previous user.
 User Time Zone = Select your geographyc situation
 Name = **example-openmeetings** ...group name to choose

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

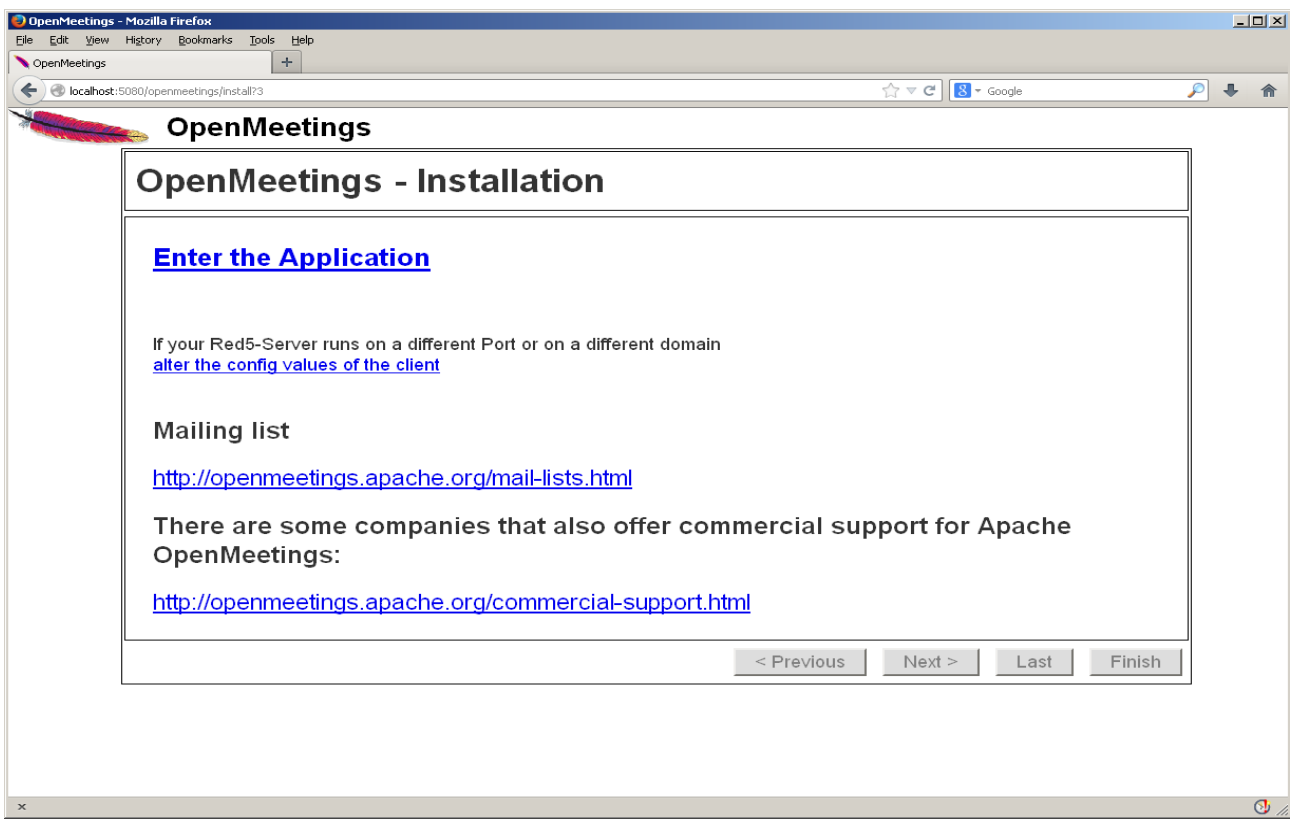
Click **Last** button and this other page will appear:



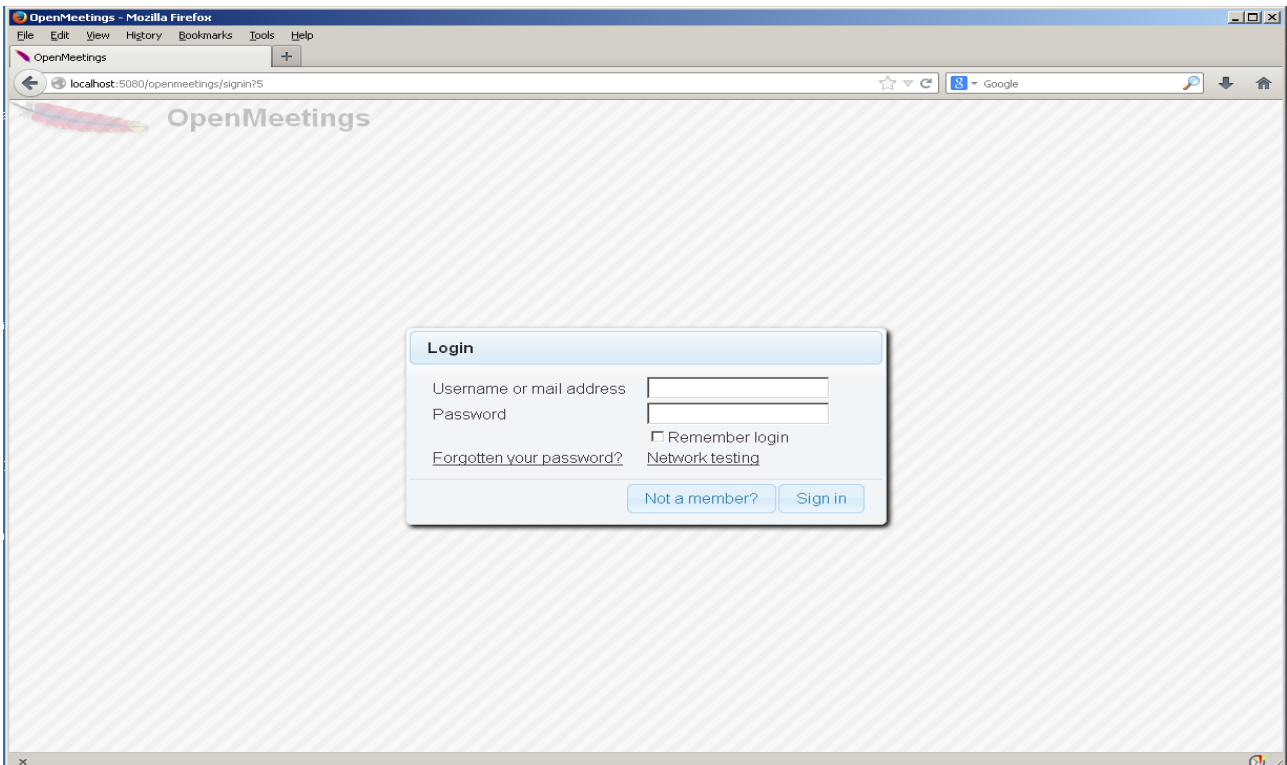
...click **Finish** and will start to fill the database tables:



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** and...

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.

17)

---- Configuration of OpenMeetings ----

Once you acceded to OpenMeetings we go to:

Administration → Configuration

The screenshot shows the OpenMeetings user dashboard in a Mozilla Firefox browser. The address bar shows 'localhost:5080/openmeetings/#user/dashboard'. The page has a navigation menu with 'Home', 'Rooms', 'Recordings', and 'Administration'. The main content area is divided into several sections: 'Welcome' with a user profile placeholder and 'Hello firstname lastname', 'How to conference' with a 4-step guide and 'START'/'Calendar' buttons, and 'My rooms' with two room options: 'My conference room (for 1-16 users)' and 'My webinar room (for 1-120 users)'. A red arrow points to the 'Administration' menu item.

The screenshot shows the OpenMeetings administration configuration page in a Mozilla Firefox browser. The address bar shows 'localhost:5080/openmeetings/#admin/config'. The page has a navigation menu with 'Home', 'Rooms', 'Recordings', and 'Administration'. The main content area features a table of configuration keys and values, and a 'Configuration' panel on the right. The table has columns for ID, Key, and Value. The 'Configuration' panel shows a form for editing a key-value pair. Red arrows and numbers 1, 2, and 3 are used as annotations: arrow 1 points to the 'ffmpeg_path' key in the table, arrow 2 points to the 'Value' field in the configuration panel, and arrow 3 points to the configuration panel's title bar.

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-user@famat.com

...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 32 bits** type: [/usr/lib/libreoffice](#)

Click on: **office.path** ...and to up right in **Value 64 bits** 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/red5fedora stop](#)

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