Installation of Apache OpenMeetings 3.0.x on Centos 7

This tutorial is made based on fresh installations of

CentOS-7-x86_64-LiveGNOME-1503.iso

It is tested 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.

4-7-2015. Last update: 21-9-2015

Starting...

1)
At first place we must modify Selinux level security for the installation:

yum install -y gedit

sudo gedit /etc/selinux/config

…modify:

SELINUX=enforcing

...to

SELINUX=**permissive**

2)

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

Update operative system:

yum update -y

...and reboot for kernel changes and the new Selinux configuration take effect.:

reboot

3)

---------- ADD Repos ----------

yum install -y wget

EPEL & Remi:

wget http://epel.mirror.nucleus.be/7/x86_64/e/epel-release-7-5.noarch.rpm

wget http://rpms.famillecollet.com/enterprise/remi-release-7.rpm

sudo rpm -Uvh remi-release-7*.rpm epel-release-7*.rpm

Enable Remi:

gedit /etc/yum.repos.d/remi.repo

...and modify:

enabled=0
...to
enabled=1

ElRepo

rpm --import https://www.elrepo.org/RPM-GPG-KEY-elrepo.org

rpm -Uvh http://www.elrepo.org/elrepo-release-7.0-2.el7.elrepo.noarch.rpm

Nux

(Only one line without space)

rpm -Uvh http://li.nux.ro/download/nux/dextop/el7/x86_64/nux-dextop-release-0-5.el7.nux.noarch.rpm

RpmForge

rpm -Uvh http://pkgs.repoforge.org/rpmforge-release/rpmforge-release-0.5.3-1.el7.rf.x86_64.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

yum update -y

4)

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

Java is necessary to work OpenMeetings. Should install Open Java and the plugin icedtea-web:

sudo yum install java-1.8.0-openjdk icedtea-web

5)

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

OpenMeetings will need LibreOffice to convert to pdf the uploaded office files. Install it.

Maybe it is installed but for iso server:

yum -y install libreoffice

6)

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

Should install packages and libraries we´ll need later:

(In only one line with a space)

yum install -y libjpeg libjpeg-devel ghostscript freetype freetype-devel unzip gcc gcc-c++ ncurses ncurses-devel make zlib zlib-devel libtool bison bison-devel openssl-devel bzip2 bzip2-devel file-roller git autoconf automake pkgconfig tomcat-native nmap

7)

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

ImageMagick will work with images files. Should install it and some more libraries:

yum install -y ImageMagick giflib giflib-devel giflib-utils

Sox work the sound. Will compile it:

cd /opt

wget http://sourceforge.net/projects/sox/files/sox/14.4.2/sox-14.4.2.tar.gz

tar xzvf sox-14.4.2.tar.gz

cd /opt/sox-14.4.2

./configure

make && make install

Swftools work converting to swf (flash file) the uploaded files. Don´t use a newer version swftools file. Don´t have pdf2swf.

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 ----

Jodconverter work to convert 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 and vlc to play the recordings.

yum install -y glibc alsa-lib-devel faac faac-devel faad2 faad2-devel gsm gsm-devel imlib2 imlib2-devel lame-devel vorbis-tools theora-tools libvpx-devel vlc

This ffmpeg compilation is based on this url, but updated: (4-7-2015)

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 syncronized. Ogg right.

Also i made a script to download, compile and install ffmpeg on Centos 7. 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=3&modificationDate=1443531153065&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 gedit /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/ffpmeg-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 database server.

We install it:

```
yum install -y mariadb mariadb-server
```

...and run mariadb:

```
systemctl start mariadb.service
```

Give a password to mariadb root :

```
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 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 or stop mariadb:

```
systemctl start mariadb.service

systemctl restart mariadb.service

systemctl stop mariadb.service
```

12)

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

We´ll install OpenMeetings in /opt/red5307. All the following information will be based on this directory.

Call to our folder of installation red5307

Make the folder:

mkdir /opt/red5307

cd /opt/red5307

...and download the OpenMeetings file:

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

unzip apache-openmeetings-3.0.7.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.0.7.zip /opt

Do to nobody owner of the whole OpenMeetings installation folder:

chown -R nobody /opt/red5307

Unload and install the connector between OpenMeetings and MariaDB:

cd /opt

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

...and copy it to where must be:

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

Now we are going to configure OpenMeetings for our database in MariaDB:

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

mv persistence.xml persistence.xml-ori

mv mysql_persistence.xml persistence.xml

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

...to modify on **line 78**

, Url=jdbc:mysql://localhost:3306/openmeetings

...to

, Url=jdbc:mysql://localhost:3306/open307

...it is the name of the database that we did initially.

... to modify on **line 83**

, Username=root

...to

, Username=hola

...is the user that we did initially for the database.

...to modify on **line 84**

„ Password=" />

...to

, Password=123456" />

...it is the password that we did initially for the user "hola" in the database.

Logically if initially you chose another name and password for the database, you will to change them here.

We protect the access to the file:

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

13)

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

Build a script to start and stop red5-OpenMeetings, that we´ll call red5:

cd /opt

sudo gedit /etc/init.d/red5

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

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

export RED5_HOME=/opt/red5307

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/red5307

...to

RED5_HOME=/your-path-installation

Concede permission of execution to the script:

chmod +x /etc/init.d/red5

14)

Restart mariadb:

systemctl restart mariadb.service

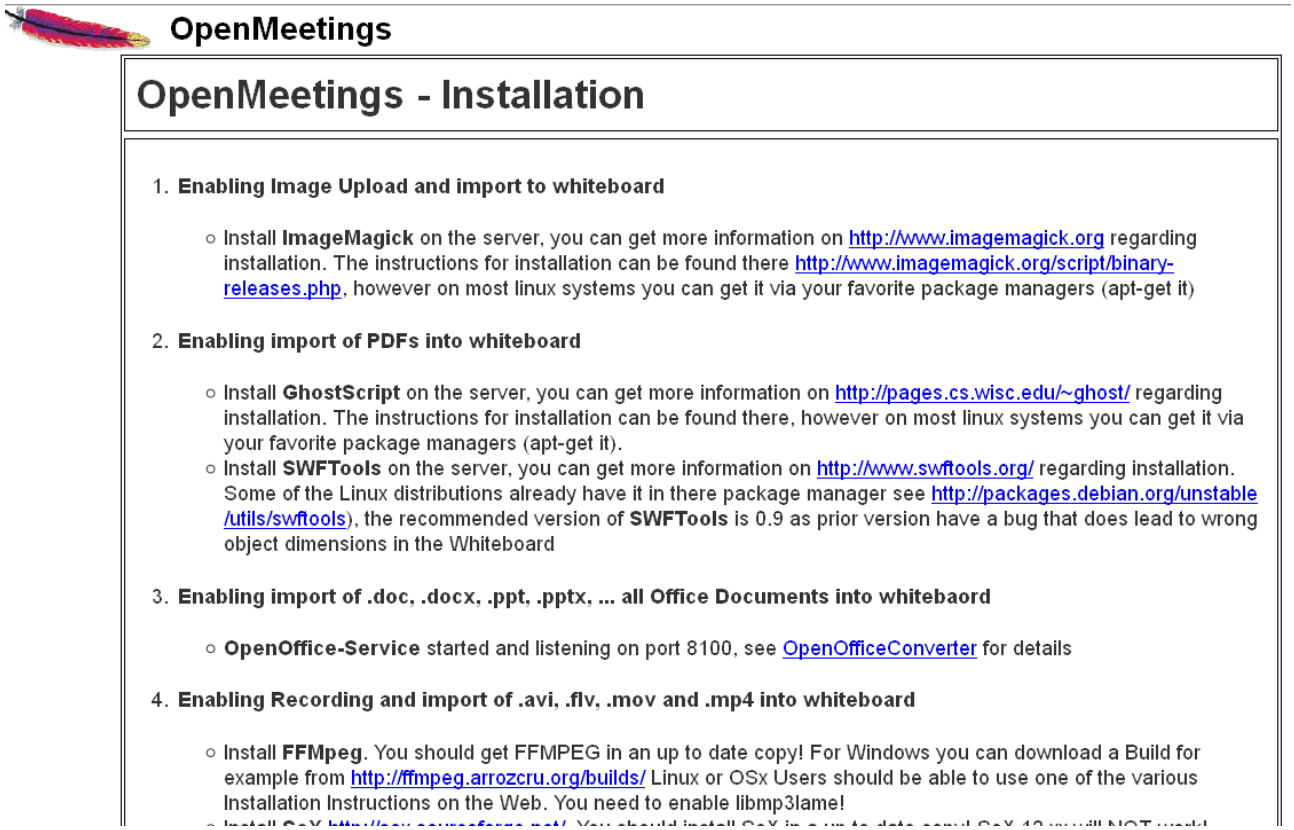
...and start red5-OpenMeetings, maybe in other window shell:

/etc/init.d/red5 start

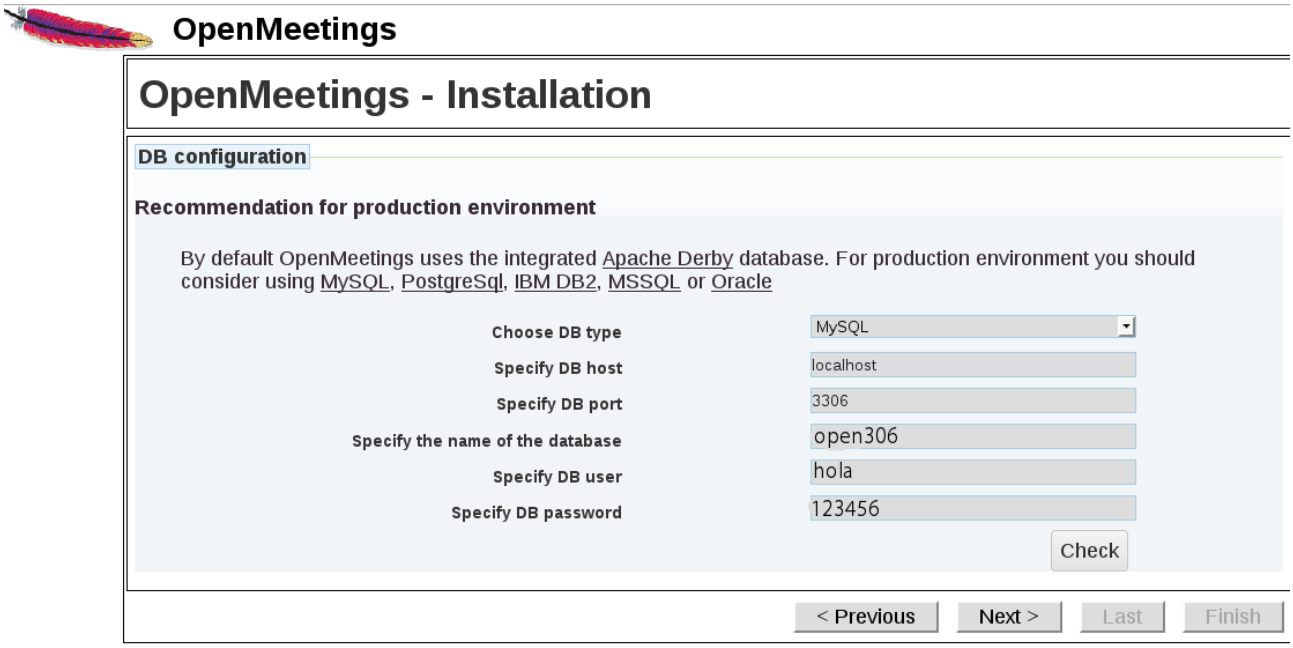
...wait 10 seconds ***at least*** in order that red5 it is runing completely, and later can go to:

http://localhost:5080/openmeetings/install

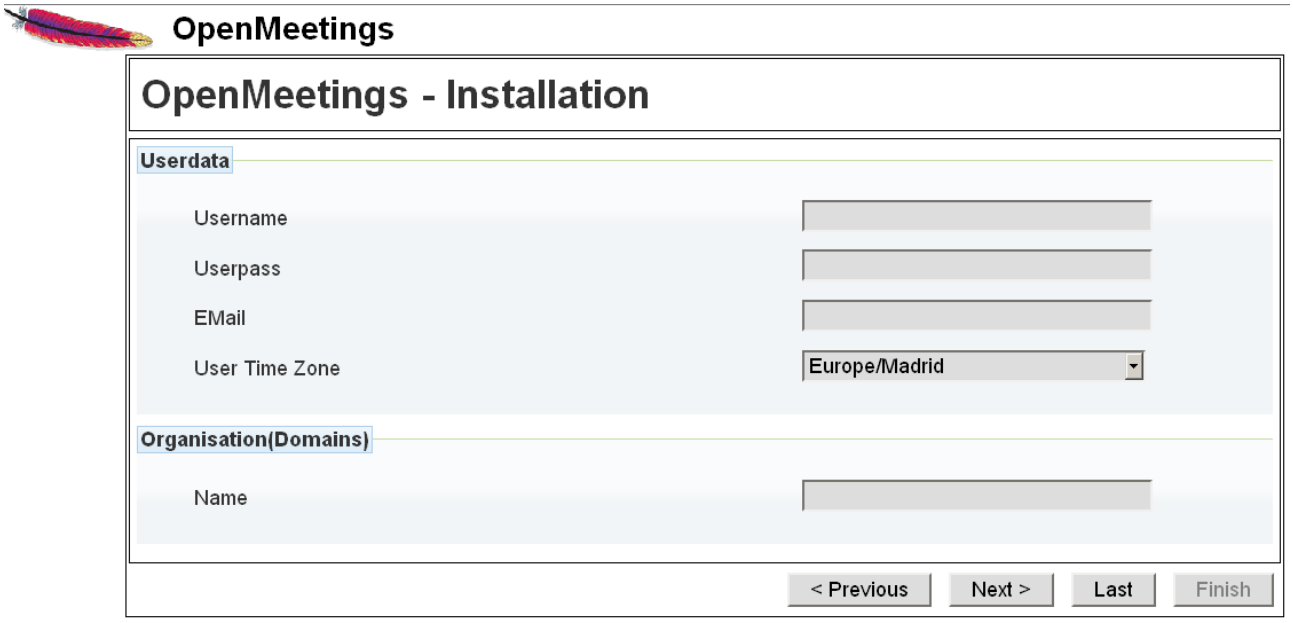
...there will appear a page similar to this one:



...clic on **Next** (bottom) and will show the database configuration we made:



...clic **Next** again:



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

Username = a-name ...this user will be administrator.

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

Email = email-adress ...of the previous user.

User Time Zone = Country where is this server

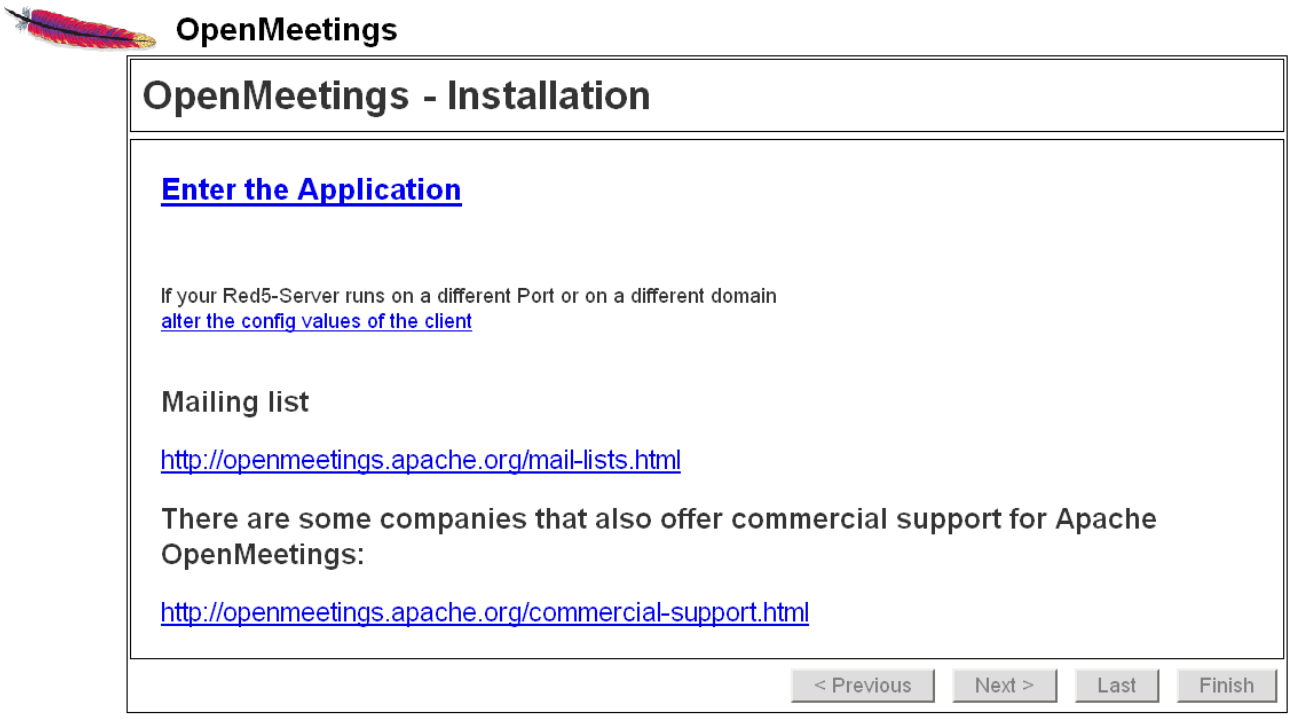
Organisation(Domains)

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

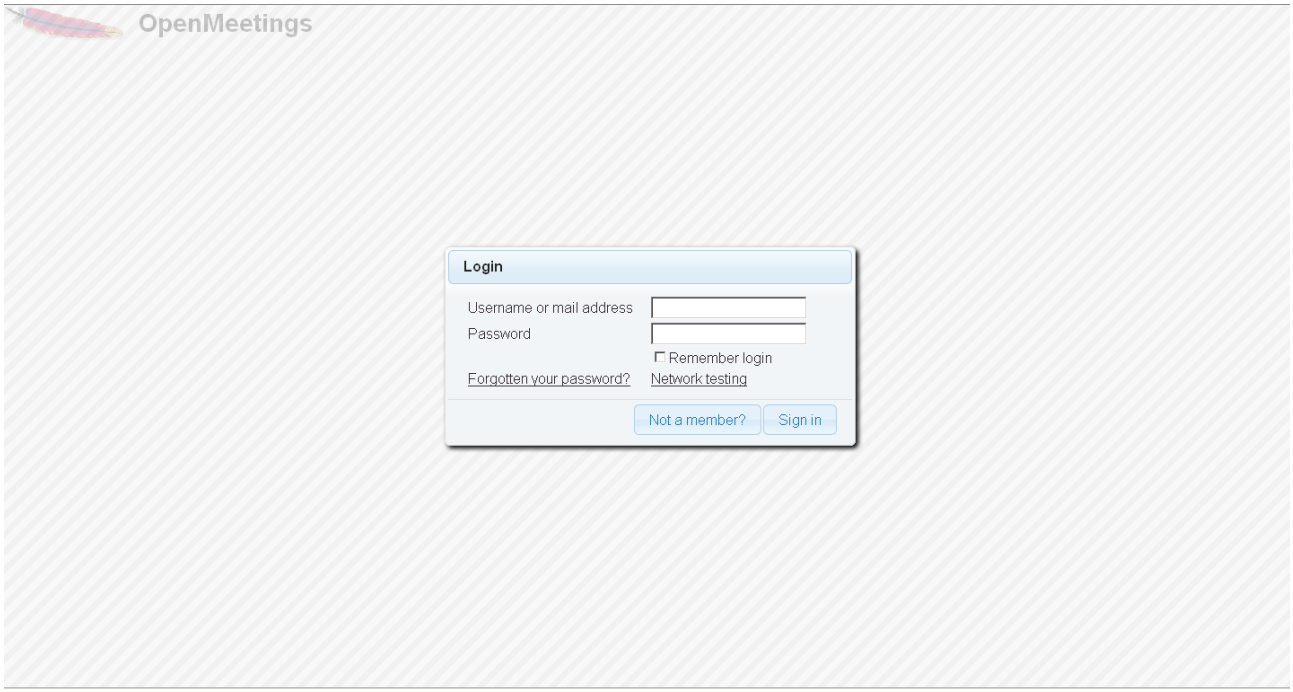
Go below completely of the page and touch the button **Last**

Clic **Finish**...wait a seconds untill the tables are fill in the database.

When has concluded, this another page will appear:



...clic on **Enter the Application**...and you should see OpenMeetings's entry:



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

...**Congratulations!**

The next time that you wants to accede to OpenMeetings will be:

http://localhost:5080/openmeetings

Remember to open in the server the three following ports:

5080 1935 8088

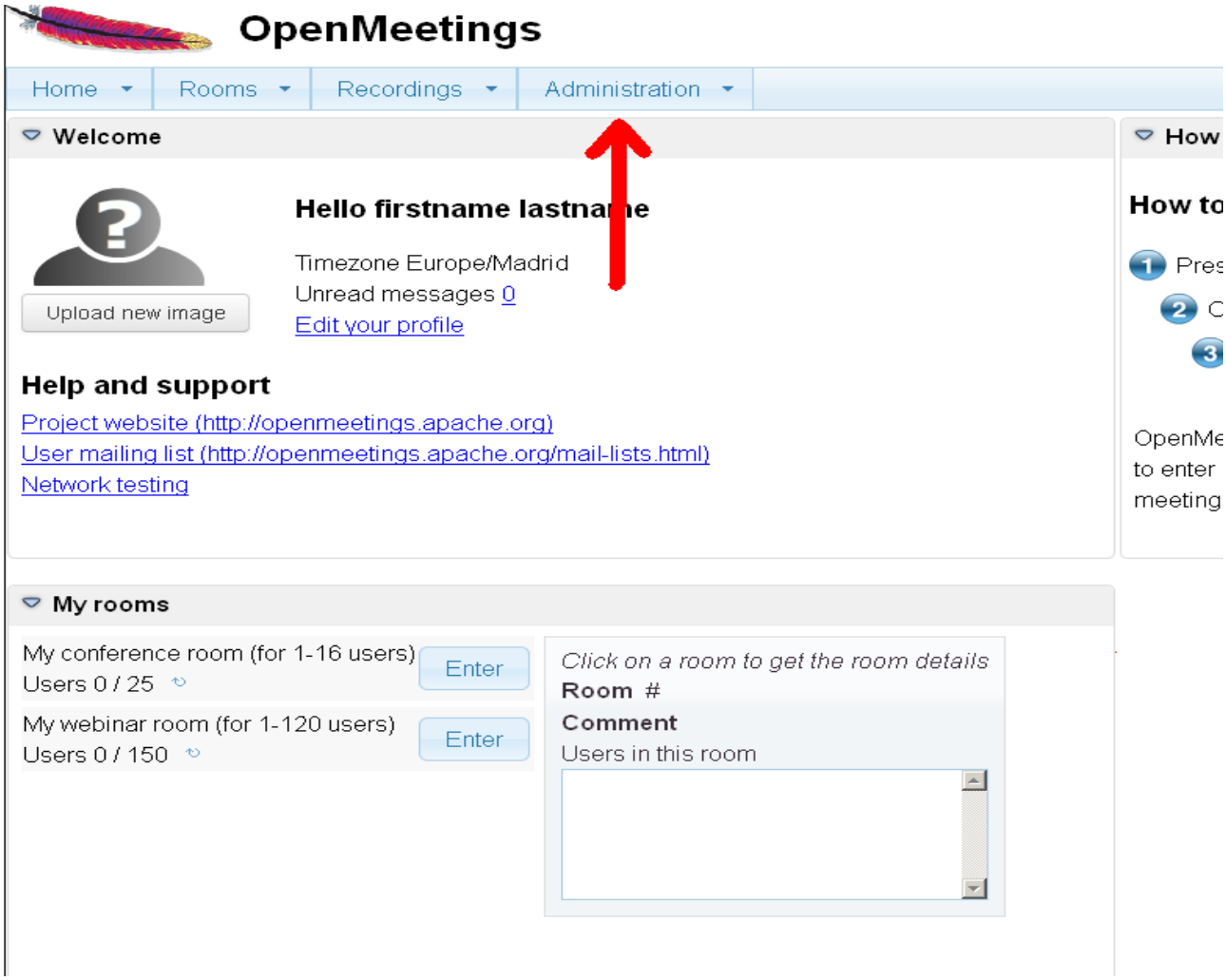
...in order that it could accede to OpenMeetings from other machines.

15)

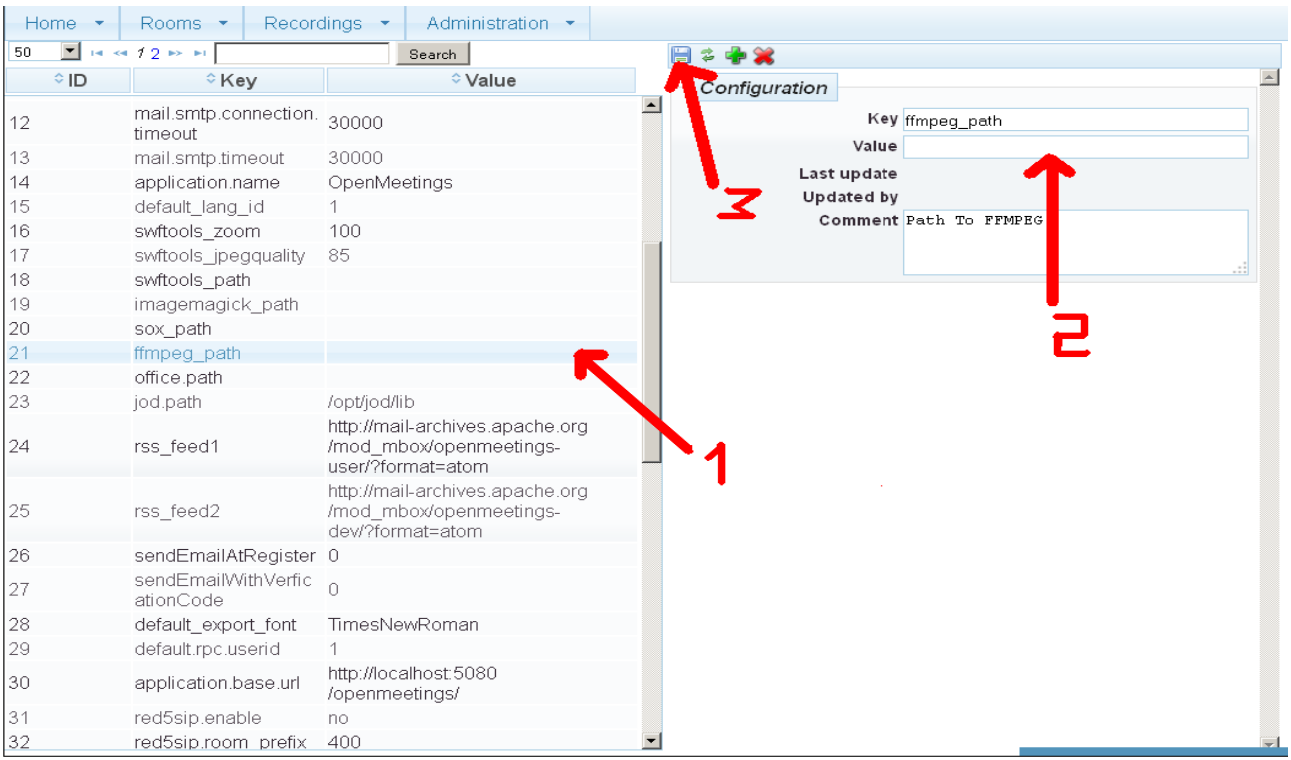
---- OpenMeetings's configuration ----

Once you acced to OpenMeetings go to:

Administration → Configuration



...introduce the parameters for the conversion of files, the audio and the video:



Clic on: **swftools_path**...and to the right in Value type: /usr/bin

Clic on: **imagemagick_path**...and to the right in Value type: /usr/bin

Clic on: **sox_path**...and to the right in Value type: /usr/local/bin

Clic on: **ffmpeg_path**...and to the right in Value type: /usr/local/bin

Clic on: **office.path**...and to the right in Value type: /usr/lib64/libreoffice

Clic on: **jod.path**...and to the right in Value type: /opt/jodconverter-core-3.0-beta-4/lib

Now there is OpenMeetings ready to work rightly.

We are going to remove files and folders that already do not serve us, if you do not want to save them.

rm -f /opt/jodconverter-core-3.0-beta-4-dist.zip

rm -f /opt/mysql-connector-java-5.1.36.jar

rm -f /opt/sox-14.4.2.tar.gz

rm -f -R /opt/sox-14.4.2

And this is all.

If you have some doubt or question, please raise it in the Apache OpenMeetings forums:

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

Thank you

Alvaro Bustos