Installation of Apache OpenMeetings 3.1.1

on

Fedora 24 beta 1.4 – 64bit

This tutorial it is bassed on a fresh installation of

Fedora-MATE_Compiz-Live-x86_64-24_Beta-1.4.iso

It is tested with positive result.
We will use the Apache's binary version
OpenMeetings 3.1.1 stable,
that is to say should suppress his compilation.
It is done step by step**.**

6-5-2016

Starting...

1)
At first place modify Selinux level security for the installation and install nano editor:

dnf install nano

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 ----------

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:

(Only one line with a space between them)

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.

dnf 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

: (Only one line with space between both)

dnf install -y glibc alsa-lib-devel gsm gsm-devel imlib2 imlib2-devel libogg libvorbis vorbis-tools theora-tools libvpx-devel mercurial cmake

This ffmpeg compilation is based on this url, but updated: (6-5-2016)

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 Fedora 24 beta. It is tested and is ok. The files versions updated 6-5-2016.
During the x265 compilation, will look like stop for about 8 minutes in a text that say: **41%**
Some times don´t do it. Don´t worry, everything is goeing right. Be patience.

Gcc 6 on Fedora 24 beta, have a bug to compile fdk-aac. Therefore, i made a special sustitution for it.

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_build.zip?version=1&modificationDate=1463037441023&api=v2

Push **Ctrl+c** on keyboard after download.

mv ffmpeg_build.zip?version=1 ffmpeg_build.zip

unzip ffmpeg_build.zip

mkdir -p /root/ffmpeg_build

cp -R /opt/ffmpeg_build/include /root/ffmpeg_build

cp -R /opt/ffmpeg_build/lib /root/ffmpeg_build

Now, we download the script to compile ffmpeg.

cd /opt

(Only one line without space between both)

wget
https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_fedora24beta.sh?version=1&modificationDate=1463056010024&api=v2

Push Ctrl+c on keyboard after download.

mv ffmpeg_fedora24beta.sh?version=1 ffmpeg_fedora24beta.sh

...give execution permission:

chmod +x ffmpeg_fedora24beta.sh

...and run it to start compilation:

./ffmpeg_fedora24beta.sh

At the end of compilation, a text will apear: **FFMPEG Compilation Finished!**

The compilation will employ about 30 minutes.

After it 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-fedora24beta.sh

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

```
# Script ffmpeg Fedora 24 beta 1.4-special
# Alvaro Bustos. Thanks to Hunter
# Updated 6-5-2016
# Install libraries
dnf install -y autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial nasm
pkgconfig zlib-devel

# Install yasm from repos
dnf 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/opencore-amr/fdk-aac/fdk-aac-0.1.4.tar.gz
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
wget http://storage.googleapis.com/downloads.webmproject.org/releases/webm/libvpx-1.5.0.tar.bz2
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-1.5.0
./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-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-fedora24beta.sh

cd /opt

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

./ffmpeg-fedora24beta.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. Please replace **new-password** by your own whish:

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 open311 DEFAULT CHARACTER SET 'utf8';

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

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

...and give privileges to this user on the open311 database:

```
GRANT ALL PRIVILEGES ON open311.* TO 'hola'@'localhost' WITH GRANT OPTION;

FLUSH PRIVILEGES;

quit
```

open311 ..... 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 **red5311** where download the Apache OpenMeetings file and where make the installation. Will install the 3.1.1 OpenMeetings stable version:

```
mkdir /opt/red5311
```

This url that you can visit, is the Apache OpenMeetings 3.1.1 stable version:

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

```
cd /opt/red5311
```

Here leave two valids examples links to chose download:

```
wget http://apache.rediris.es/openmeetings/3.1.1/bin/apache-openmeetings-3.1.1.zip
```

...or

```
wget http://ftp.cixug.es/apache/openmeetings/3.1.1/bin/apache-openmeetings-3.1.1.zip

unzip apache-openmeetings-3.1.1.zip
```

...save the original file to /opt:

mv apache-openmeetings-3.1.1.zip /opt

13)

---- Connector Java MariaDB----

This file is need it to connect OpenMeetings with MariaDB:

cd /opt

(Only one line without space)

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.38/mysql-connector-java-5.1.38.jar

cp mysql-connector-java-5.1.38.jar /opt/red5311/webapps/openmeetings/WEB-INF/lib

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

chown -R nobody /opt/red5311

14)

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

Will configure OpenMeetings to connect with MariaDB:

(Only one line without space)

sudo nano /opt/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml persistence.xml

Modify line 72:

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

to

Url=jdbc:mysql://localhost:3306/open311?....

...open311 is the database name we gives when install MariaDB and build it.

Modify lines 77 and 78 respectively:

, Username=root
, Password=" />

...to

, Username=hola
, Password=123456" />

...hola is the user name we gives when install MariaDB for **open311** database.

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

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

Protect the access to this file:

(Only one line without space between both)

chmod 640 /opt/red5311/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

15)

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

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

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5fedora?version=3&modificationDate=1458905250412&api=v2

...rename the script:

mv red5fedora?version=3 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/red5311, please edit the script and modify the line:

RED5_HOME=/opt/red5311

...to

RED5_HOME=/your-path-installation

Stop Mariadb:

systemctl stop mariadb.service

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

reboot

16)

------ Run red5-OpenMeetings ------

After reboot, we continue. Run mariadb:

systemctl start mariadb.service

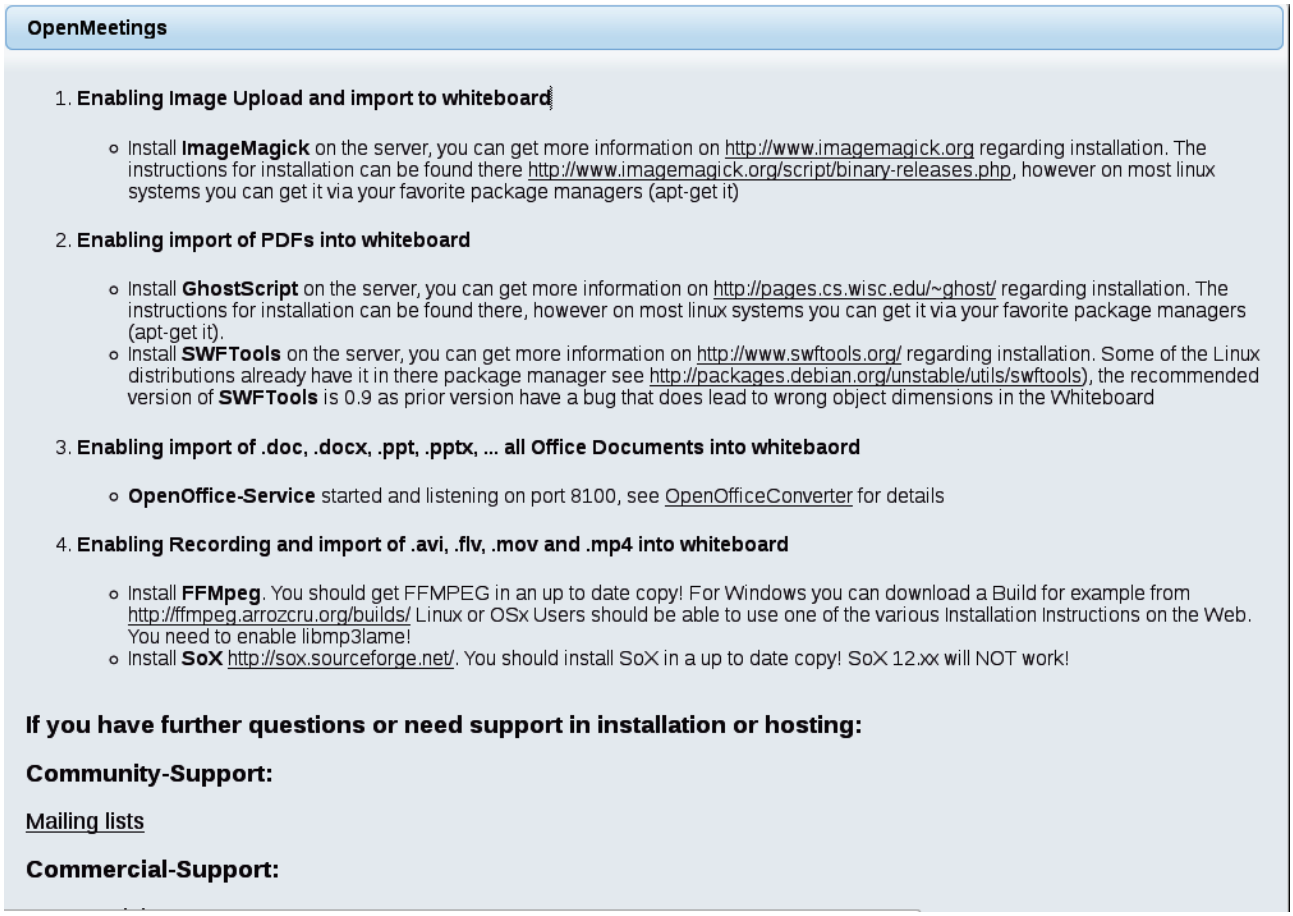
...and red5-OpenMeetings:

/etc/init.d/red5fedora start

...wait **20 seconds minimum** in order red5-OpenMeetings run, and later can go with browser to:

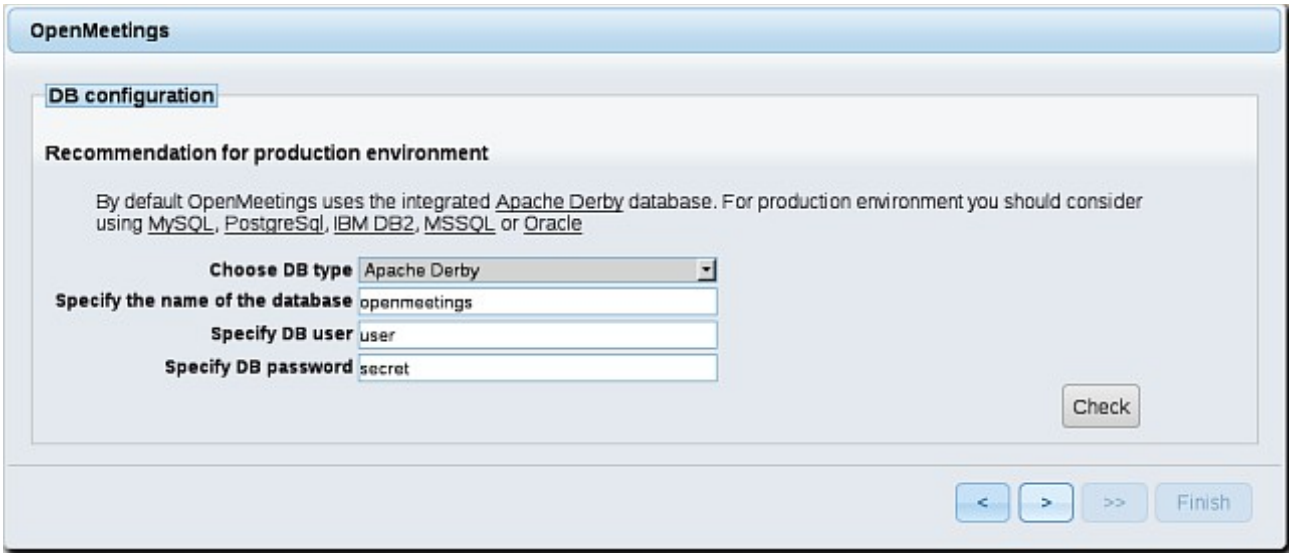
http://localhost:5080/openmeetings/install

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

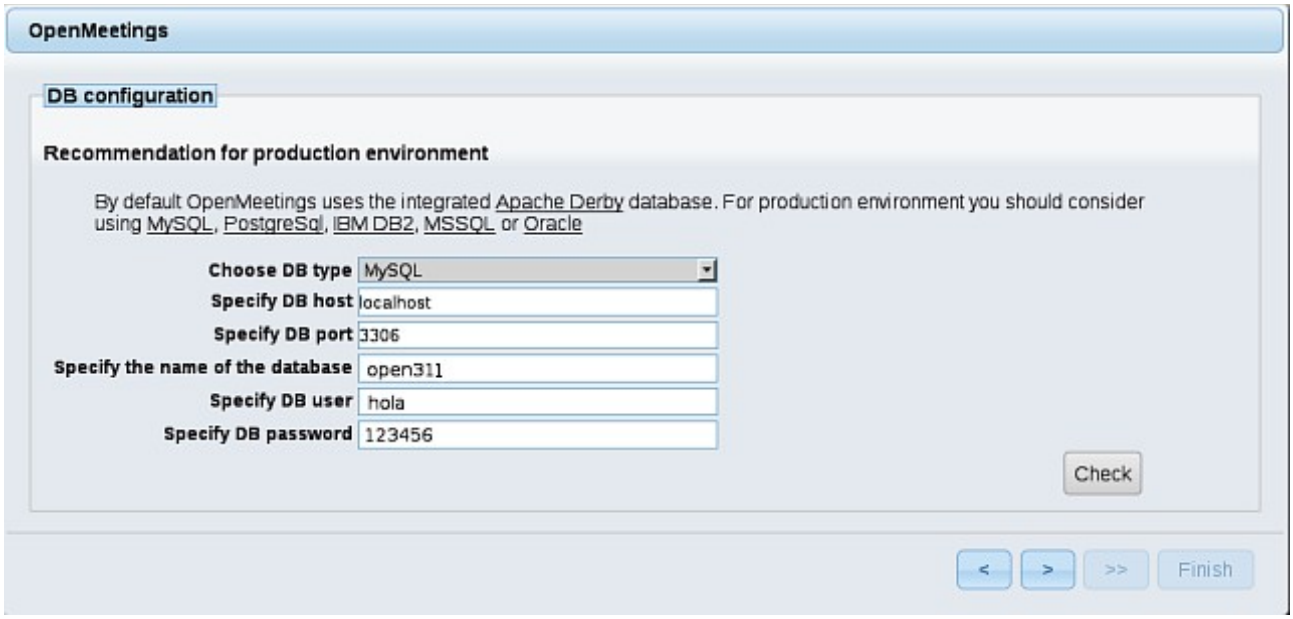


...push on > (bottom), and will show the default database configuration

with Derby, but we should use MySQL (MariaDB):

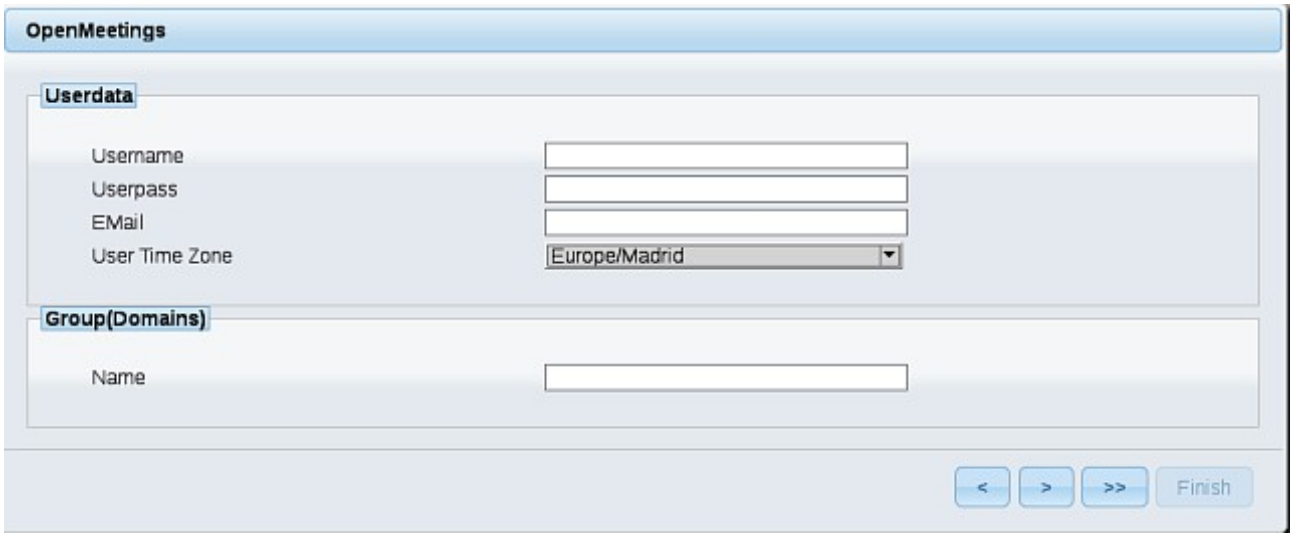


...then, scroll and **Choose DB type** to MySQL:



...will show the data base configuration we made in step 14, or with your own modifications.

Please, push > button, and will go to:



Now we must introduce the followings data:

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

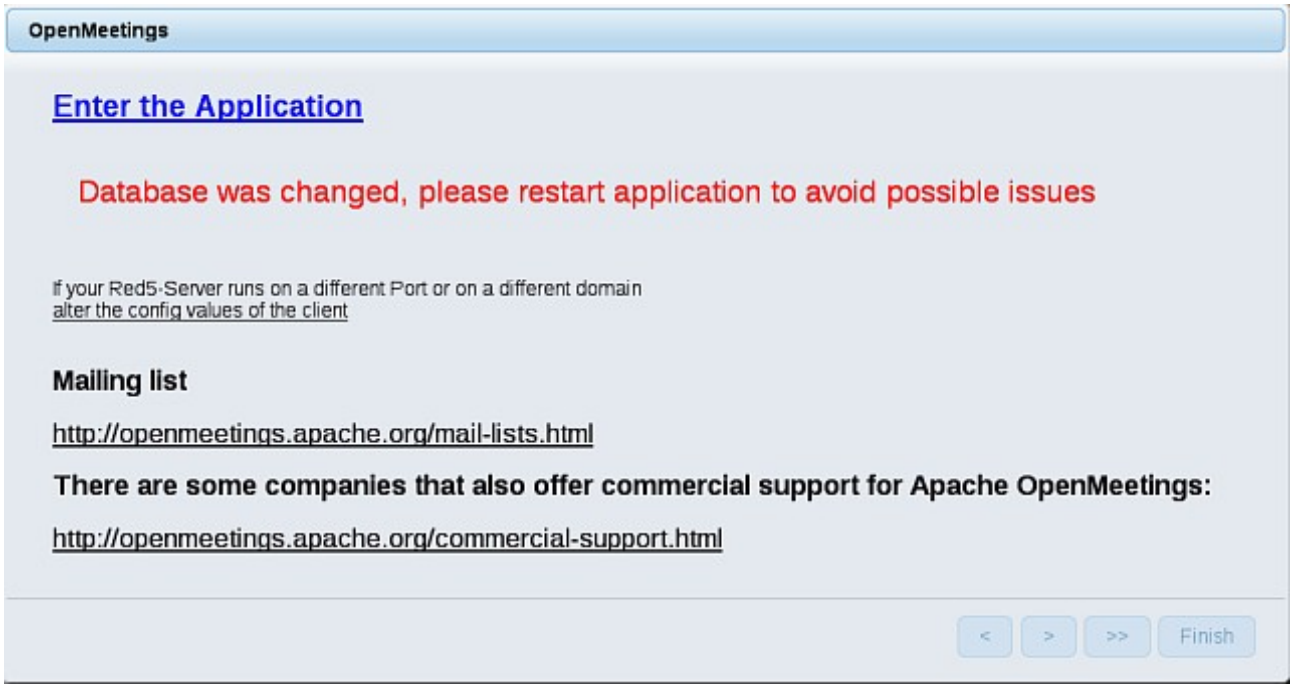
When the installation be finished, should configure the rest.

Now go to bottom page and push the button >> (double arrow). Will show this:

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

When has concluded, this another page will appear. Don´t clic on Enter the Application.
First is need it to restart the server:

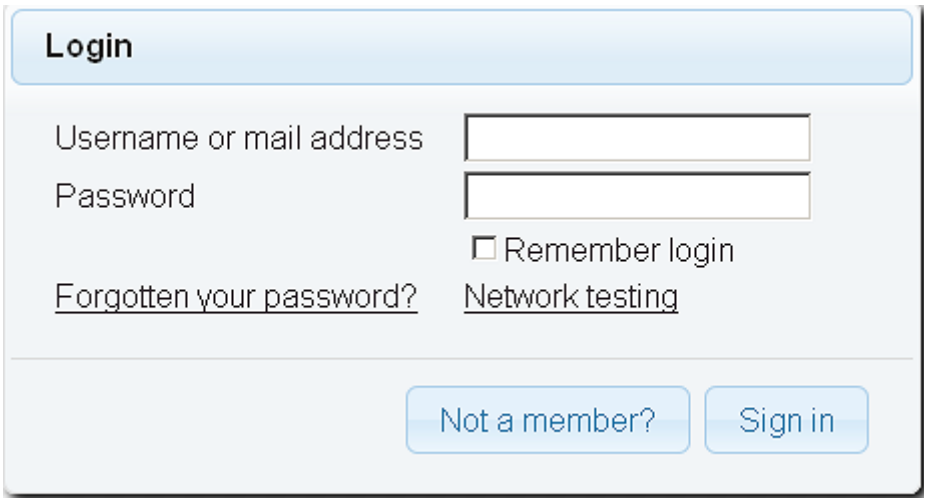
/etc/init.d/red5 restart



Now yes, you can clic on **Enter the Application**, or go with your browser to:

http://localhost:5080/openmeetings

...and will take us to the entry of OpenMeetings:



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

...**Congratulations!**

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

http://localhost:5080/openmeetings

Remember to open in the server the two following ports:

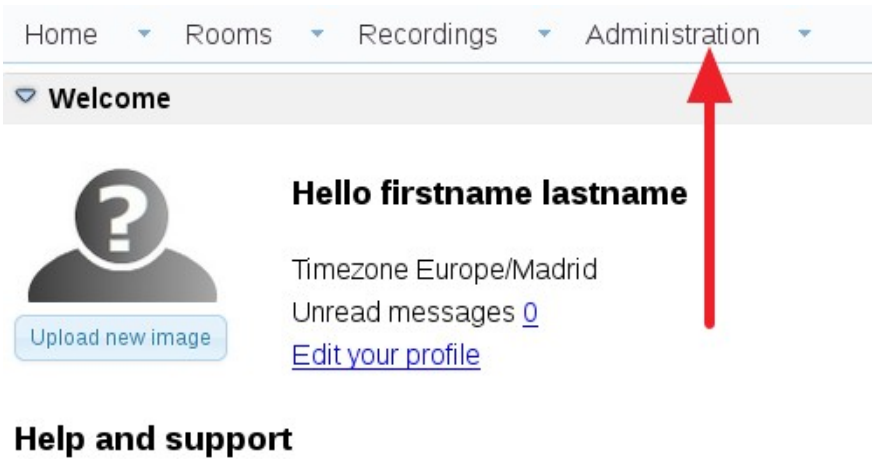
1935 5080

17)

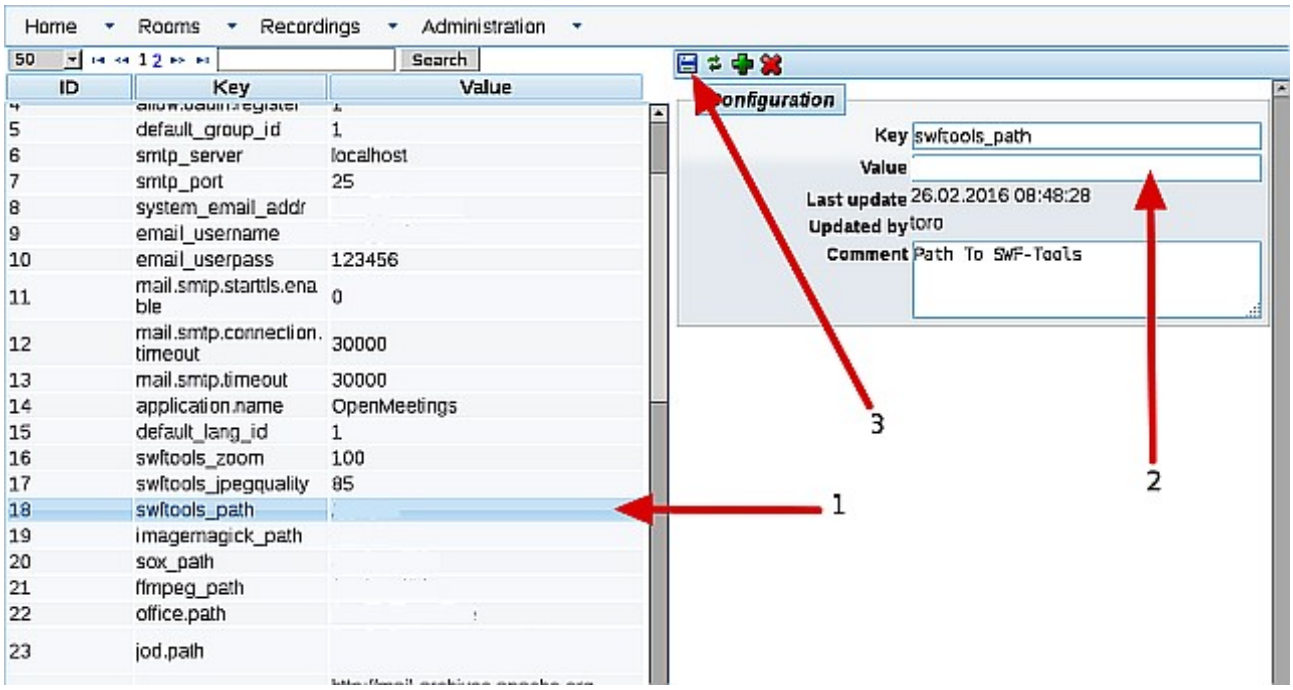
---- Configuration of OpenMeetings ----

Once you acceded to OpenMeetings, we go to:

Administration → Configuration



...introduce the parameters for the conversion of files, the audio and the 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 save after each change (arrow number **3**, in the up screenshot).

Now there is OpenMeetings ready to work rightly.

Cuando quiera detener red5-OpenMeetings: /etc/init.d/red5fedora stop

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/swftools-2013-04-09-1007.tar.gz

rm -f /opt/swftools-2013-04-09-1007

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

rm -f /opt/mysql-connector-java-5.1.38.jar

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