Installation of Apache OpenMeetings 4.0.0 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 4.0.0 stable, that is to say will suppress his compilation. It is done step by step.

5-11-2017

Please, be connected to Internet in all the process tu run any server.

Starting...

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

yum install -y nano

sudo nano /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:

wget http://epel.mirror.nucleus.be/7/x86_64/e/epel-release-7-10.noarch.rpm

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

Nux

(Only one line without space between both)

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

yum update -y

4)

------ Installation of Oracle Java 1.8 ------

Java **1.8** is necessary for OpenMeetings **4.0.0**. We install Oracle Java 1.8.

cd /opt

Download the file:

(All in one line only. 1ª and 2ª without space between them. A space to the 3ª. Together 3ª and 4ª)

wget --no-cookies --no-check-certificate --header "Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" http://download.oracle.com/otn-pub/java/jdk/8u152-b16/aa0333dd3019491ca4f6ddbe78cdb6d0/jdk-8u152-linux-x64.rpm

...and install it:

rpm -ivh jdk-8u152-linux-x64.rpm

Maybe you have installed various versions of Java. We select the just installed Oracle Java:

update-alternatives --config java

And to see if the selected version is active:

java -version

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 libreoffice-headless

6)

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

Will install packages and libraries we´ll need later:

(All in only one line. A space between 1ªand 2ª. Thogether 2ª and 3ª)

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 vlc

7)

------ Installation ImageMagick and Sox ------

ImageMagick, work the images files jpg, png, gif, etc. We install it and some 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

cd /opt

8)

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

OpenMeetings even need Adobe Flash Player for cam.

yum install -y flash-plugin

9)

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

FFmpeg work with video. Will install a paquets, 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 autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial nasm pkgconfig zlib-devel curl

This ffmpeg compilation is based on this url, updated file versions 5-11-2017:

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

I made a script to compile and install ffmpeg on Centos. It is tested and is ok.
The result of any recording we do in OpenMeetings, will be in mp4 format.
During the x265 compilation, will look like stop for a minutes in a text that say: **43%,**
but not always. Don´t worry, everything is goeing right. Be patient.

When is finished, will appear a text:

FFMPEG Compilation is Finished!

So, we download the script:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-centos2.sh

...concede execution permission to it:

chmod +x ffmpeg-centos2.sh

...and run it (be connected to Internet). The compilation will spend about 30 minutes:

./ffmpeg-centos2.sh

When finish, please, go to **step 10).**

But, if you prefer copy and paste, i **don´t advise,** leave the commands script:

sudo nano /opt/ffmpeg-centos.sh

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

```
# Script ffmpeg compile for Centos 6.x and Centos 7.x
# Alvaro Bustos. Thanks to Hunter
# Updated 5-11-2017
# Install libraries
yum install -y autoconf automake bzip2 cmake freetype-devel gcc gcc-c++ git libtool make
mercurial pkgconfig zlib-devel x264-devel x265-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.
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
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
wget https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.tar.gz
wget http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
wget 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
wget http://ffmpeg.org/releases/ffmpeg-3.1.1.tar.gz

# 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 is 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 in: /usr/local/bin

10)

------ Installation MariaDB data server ------

MariaDB is the database server.

We install it:

yum install -y mariadb-server

...and run mariadb:

systemctl start mariadb.service

Give a password to mariadb root . Please, modify new-password by your own.

mysqladmin -u root password new-password

Make a database for OpenMeetings. User password must be of 8 digits minimum:

mysql -u root -p

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

MariaDB [(none)]> CREATE DATABASE open40 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permission on this open40 database.

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open40.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open40 ..... name of the database
* hola ..... user for that database
* 1a2B3c4D ..... password of that user

You can change the data...but remember it! Later we´ll need it. Now we leave MariaDB:

MariaDB [(none)]> quit

11)

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

We´ll install OpenMeetings in /opt/red540. All the following information will be based on this directory.

Call to our folder of installation red540

Make the folder:

mkdir /opt/red540

cd /opt/red540

...and download the OpenMeetings file:

wget http://apache.miloslavbrada.cz/openmeetings/4.0.0/bin/apache-openmeetings-4.0.0.zip

unzip apache-openmeetings-4.0.0.zip

...save the unloaded file to /opt:

mv apache-openmeetings-4.0.0.zip /opt

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

(Only one line without space between both)

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.42/mysql-connector-java-5.1.42.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.42.jar /opt/red540/webapps/openmeetings/WEB-INF/lib

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

nano /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify in line 72:

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

...to

, Url=jdbc:mysql://localhost:3306/open40?

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

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

Press **Ctrl+x**, will ask to save, press **Y** and to exit nano press **Enter**.

We protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red540/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

12)

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

We´ll download the script to run red5-OpenMeetings:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-2

...copy it to where must be:

cp red5-2 /etc/init.d/

...concede execution permission:

chmod +x /etc/init.d/red5-2

If you made the installation in any other different path to /opt/red540, please edit the script and modify the line:

RED5_HOME=/opt/red540

...to

RED5_HOME=/your-path-installation

13)

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

Restart MariaDB:

systemctl restart mariadb.service

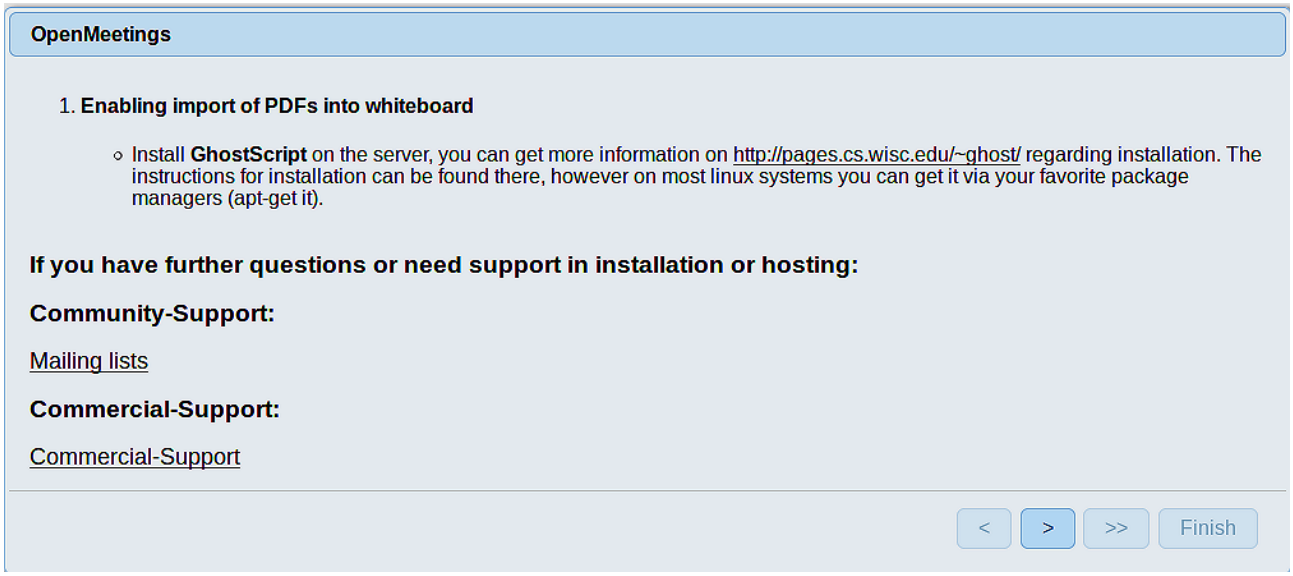
...and run red5-OpenMeetings. Please, be connected to Internet:

/etc/init.d/red5-2 start

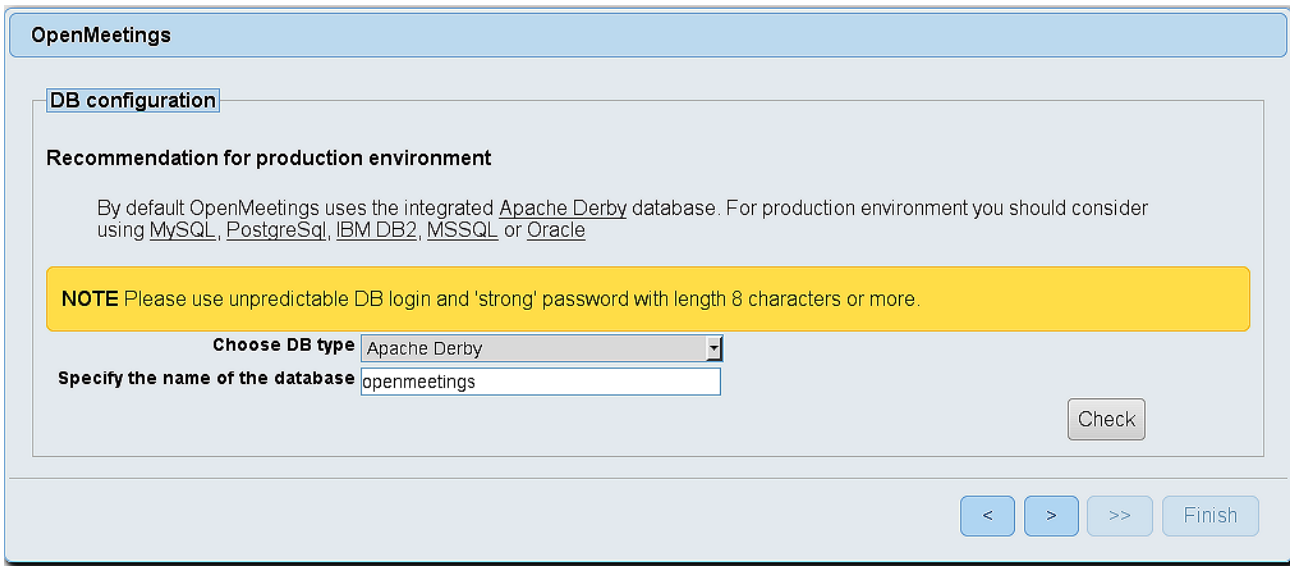
...wait untill the text "**CleanupJob.cleanRoomFiles**", it is the last in the shell. Then, go with the browser to:

http://localhost:5080/openmeetings/install

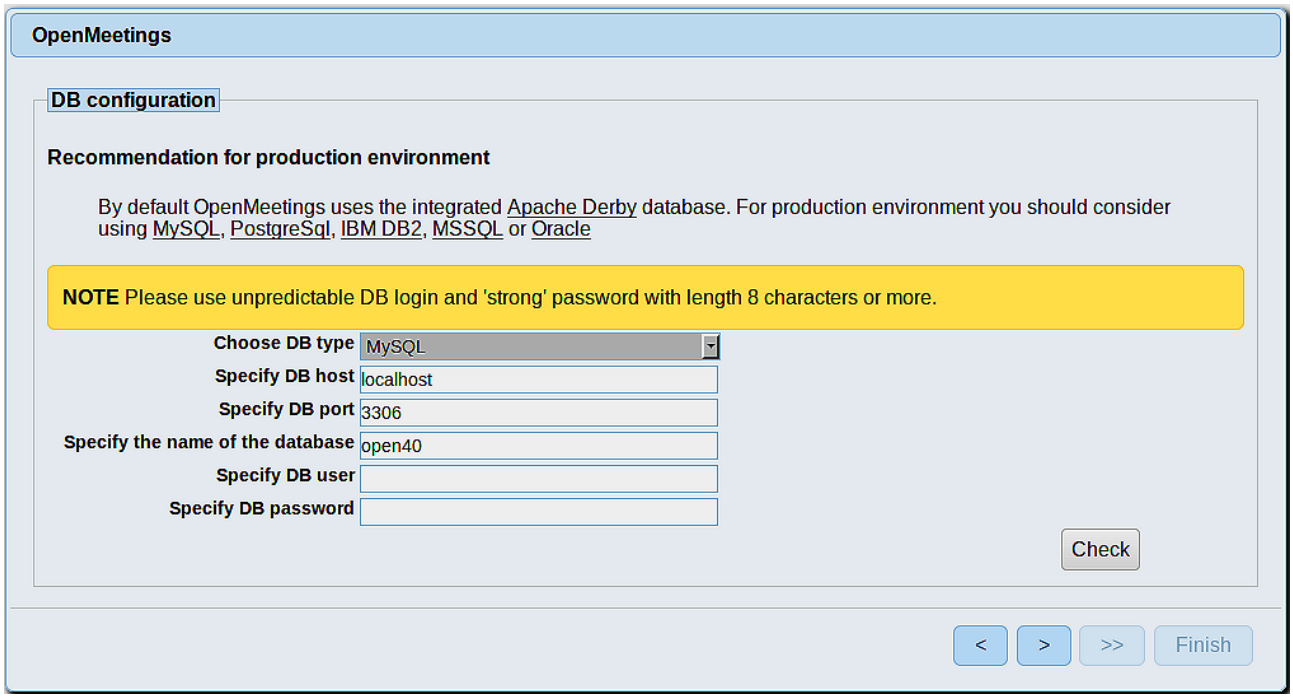
...there will appear a page similar to this one:



...push on > (bottom), and will show the default database configuration with Derby, but we employ MySQL (MariaDB):



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



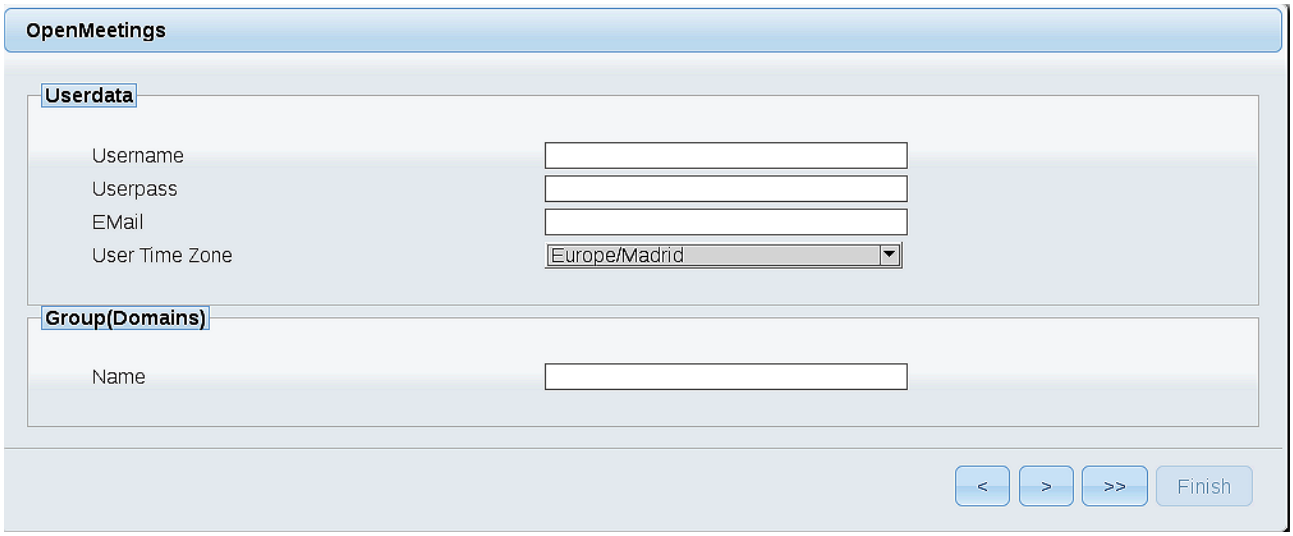
...will show the database name we made in step 11.

If you`ve choose any other different name for this, will show equally.
Now we must introduce the user name we did for our database, at the step 8, and his password:

Specify DB user = hola

Specify DB password = 1a2B3c4D

Please, press > button and will go to:



Here, we must introduce a user name for OpenMeetings, and his password. This must have 8 digits minimum, and at least 1 special symbol like: + (% # ! ...etc.

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

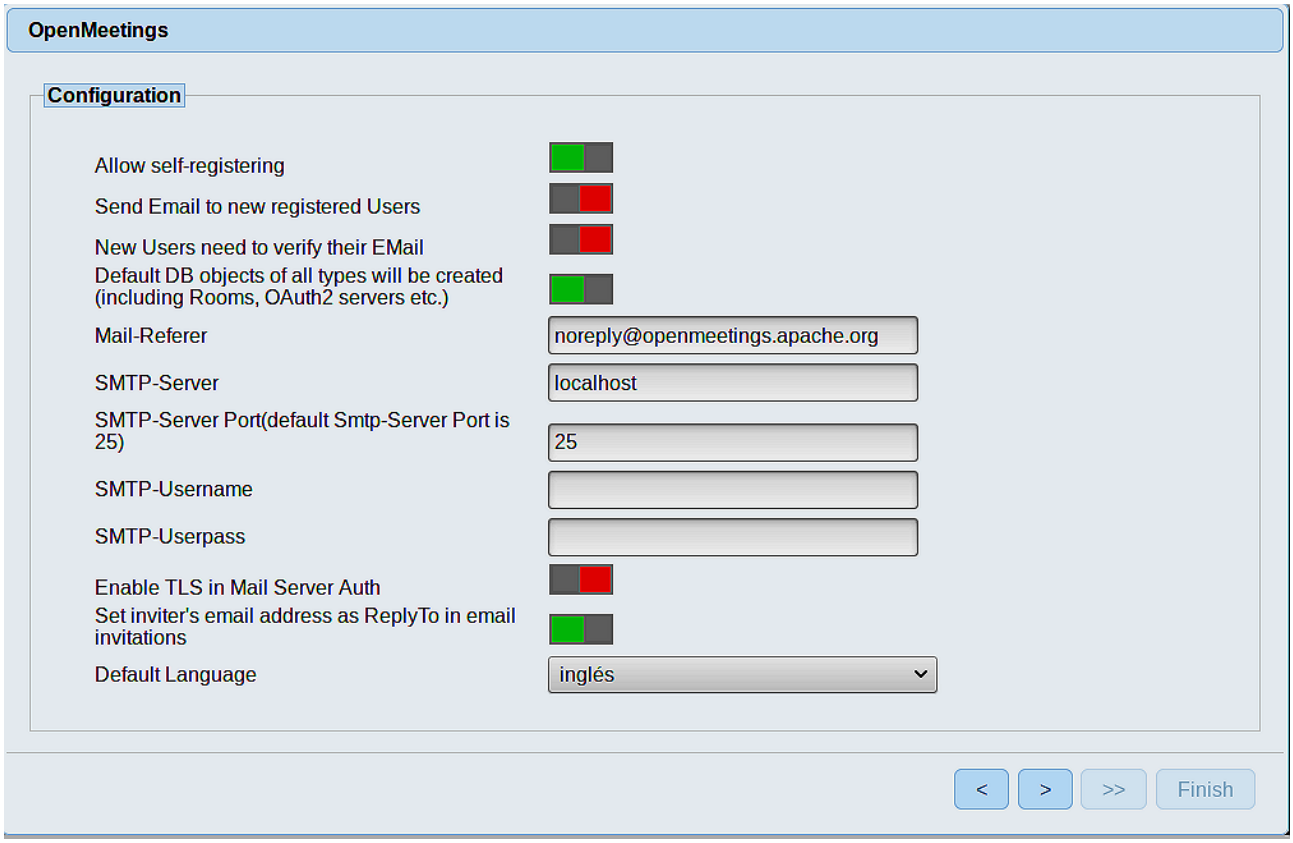
Userpass = a-password ...for the previous user.

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

User Time Zone = country where is this server

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

Press the button > and will lead us to a new page (below) where you can select the language for your OpenMeetings server, as well as other options such as the configuration of the mail server being used to send invitations or meetings from OpenMeetings:



A valid example to configure the mail server with Gmail, is as follows:
(replace **john@gmail.com** with your real Gmail account)

Mail-Refer == john@gmail.com

SMTP-Server == smtp.gmail.com

SMTP-Server Port (default Smtp-Server Port is 25) == 587

SMTP-Username == john@gmail.com

SMTP-Userpass == password of john@gmail.com

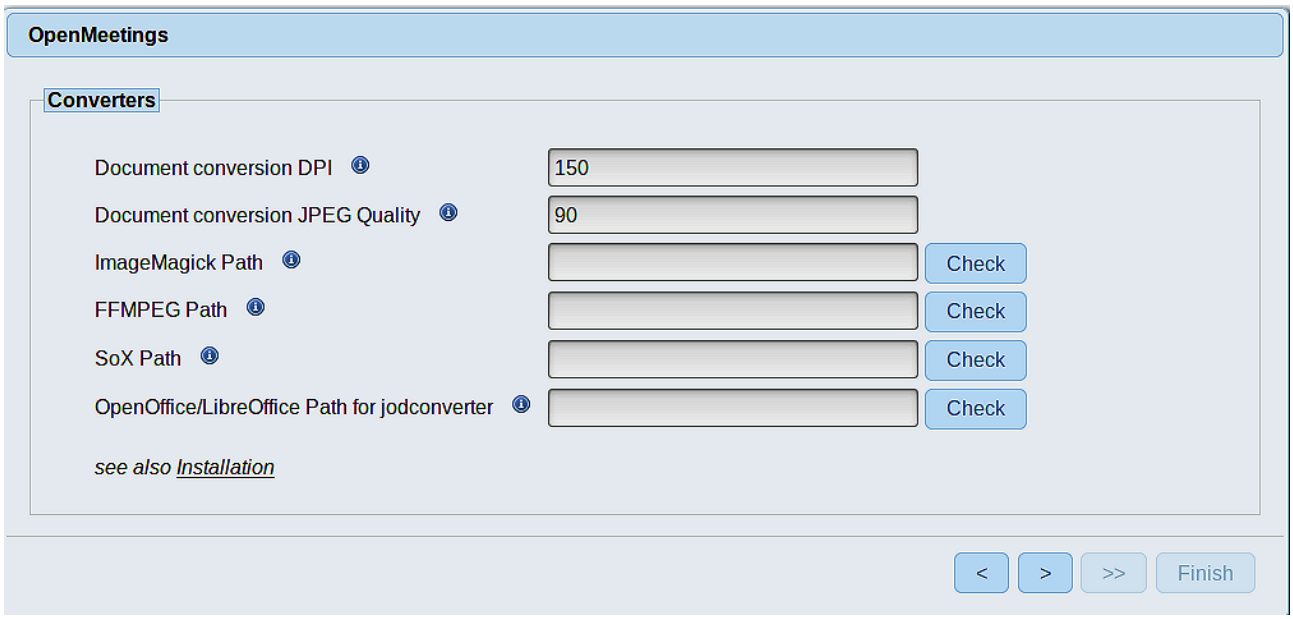
Enable TLS in Mail Server Auth == ...turn green the button to activate

To select the language of your server OpenMeetings, please scroll on the line:

Default Language == ...select your language

...the rest we can leave as is. If necessary, can modify it as you like it:

Now press the button > and a new page will appear:

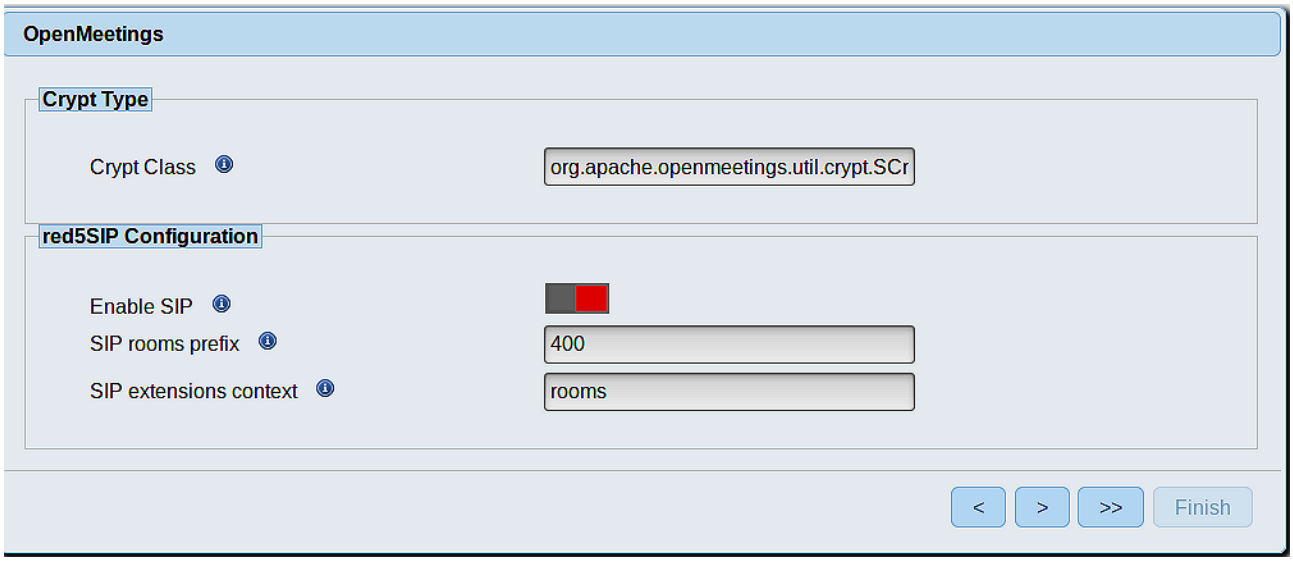


Here we´ll introduce the respective paths for the image, video, audio and conversion of uploaded files:

ImageMagick Path	==	/usr/bin
FFMPEG Path	==	/usr/local/bin
SOX Path	==	/usr/local/bin
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib64/libreoffice

As you go introducing paths, you can check if they are correct by pressing the button labeled **Check**. If it does not display any error message, that is OK.

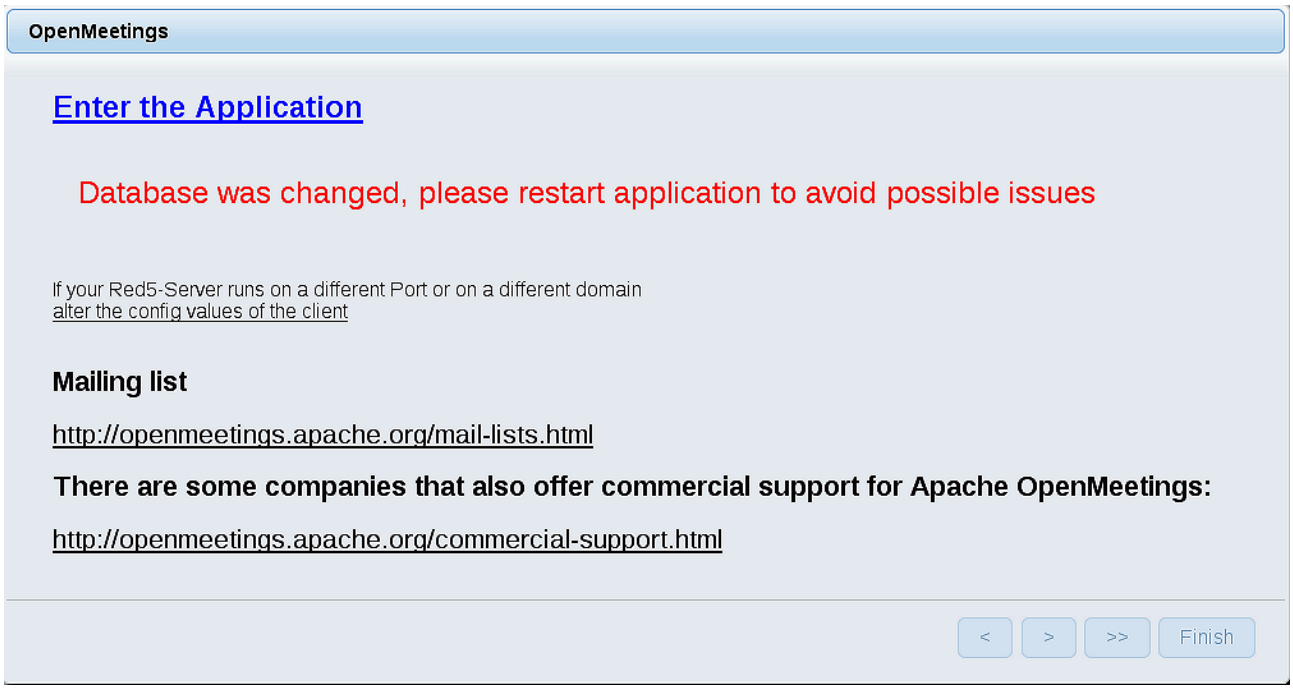
Once completed the paths, please click the > button and move on to another page that would be to activate the SIP. We will leave it as is, unless you want to activate it knowing what it does:



Now push the button > Will show this window:

Clic **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 red5 server. Be connected to Internet:

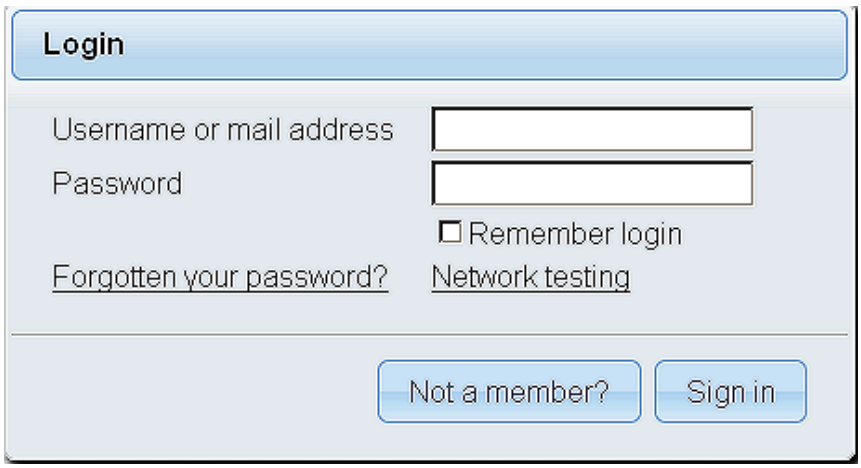
/etc/init.d/red5-2 restart



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 choosen during the installation, push **Sign in** button, and…

...**Congratulations!**

The next time that you like to accede OpenMeetings, would be:

http://localhost:5080/openmeetings

Remember to open in the server, the two following ports:

1935 5080

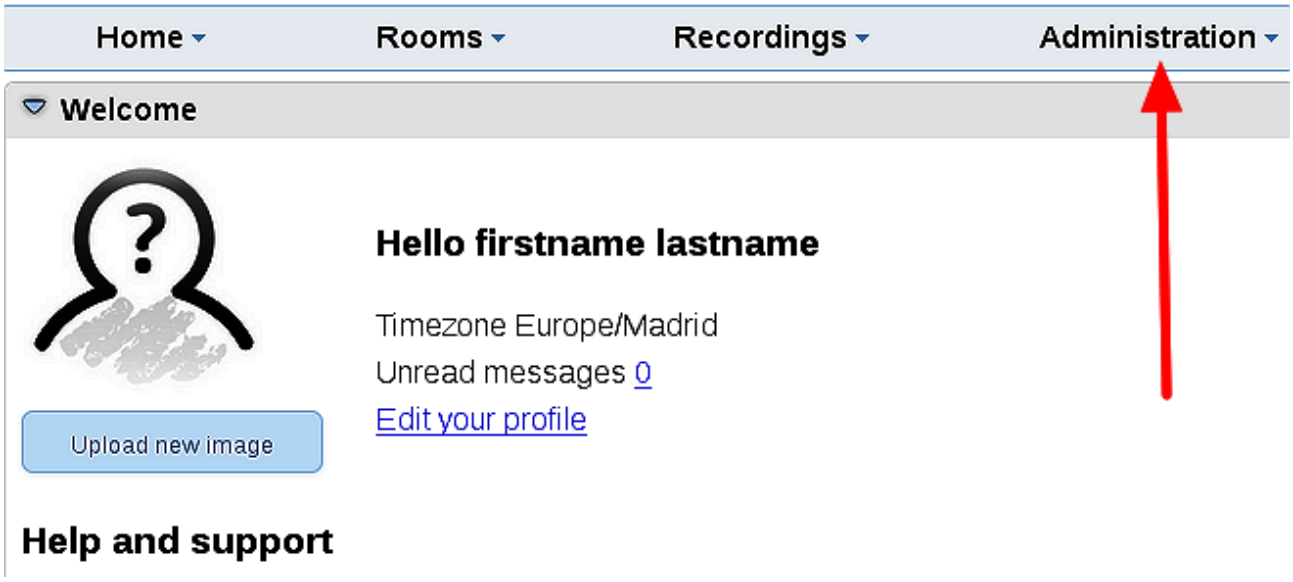
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

14)

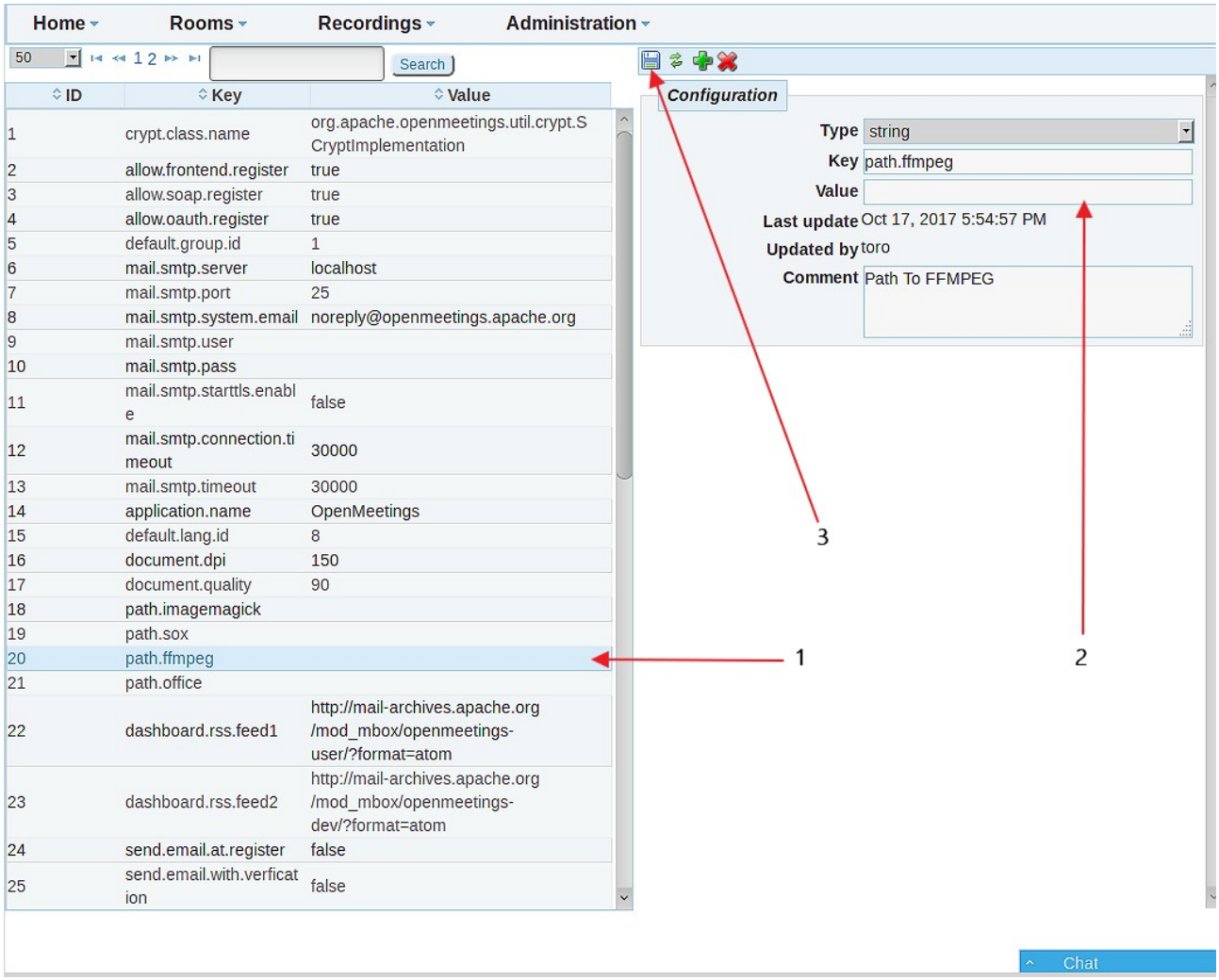
------ OpenMeetings's configuration ------

Once you acced to OpenMeetings, if you would like to do any modification in the configuration, please go to:

Administration → Configuration



...and following the order of the red arrows:



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