Installation of Apache OpenMeetings 3.1.2 on Debian 8

This tutorial is made based on fresh installations of

debian-8.3.0-amd64-CD-1.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.2 stable, that is to say will suppress his compilation. It is done step by step.

updated 12-8-2016

Starting...

1)

First update and upgrade the OS:

apt-get update

apt-get upgrade

2)

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

Red5-OM need Java. Add repository to install Oracle Java 1.8.

(Only one line with space between both)

echo "deb http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee /etc/apt/sources.list.d/webupd8team-java.list

echo "deb-src http://ppa.launchpad.net/webupd8team/java/ubuntu trusty main" | tee -a /etc/apt/sources.list.d/webupd8team-java.list

apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys EEA14886

apt-get update

To accept the license automatically when install it:

(Only one line without space between both)

echo oracle-java8-installer shared/accepted-oracle-license-v1-1 select true | sudo /usr/bin/debconf-set-selections

...now install Oracle Java:

apt-get install oracle-java8-installer

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

update-alternatives --config java

To know the active java version:

java -version

3)
------ Installation of LibreOffice ------

LibreOffice is need it to convert to pdf the uploaded files.

apt-get install libreoffice

4)
------Installation ImageMagic, Sox and Swftools ------

ImageMagic, will work the image files. Will install it and some more libraries.

apt-get install imagemagick gdebi libgif4 libgif-dev synaptic zlib1g-dev liboil0.3 unzip make

apt-get install build-essential libfreetype6-dev wget

Sox, work the audio. Will compile.

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. LibreOffice convert the uploaded office files to pdf, and Swftools convert these pdf to swf (flash file); that later will show in the whiteboard. Don´t use a newer version, surely have not pdf2swf.

For **64** bit:

cd /opt

(Only one line without space between both)

wget http://old-releases.ubuntu.com/ubuntu/pool/universe/s/swftools/swftools_0.9.0-0ubuntu1_amd64.deb

dpkg -i swftools_0.9.0-0ubuntu1_amd64.deb

echo "swftools hold" | sudo dpkg --set-selections   (To block version)

For **32** bit:

cd /opt

(Only one line without space between both)

wget http://old-releases.ubuntu.com/ubuntu/pool/universe/s/swftools/swftools_0.9.0-0ubuntu1_i386.deb

dpkg -i swftools_0.9.0-0ubuntu1_i386.deb

echo "swftools hold" | sudo dpkg --set-selections   (To block version).

5)
------ Installation of Adobe Flash Player ------

OpenMeetings even need Adobe Flash Player for rooms.
Add repository to can install it:

gedit /etc/apt/sources.list

...copy-paste these two lines and comment: # deb cdrom:[Debian GNU/Linux 8 _Jessie_ ...

deb http://ftp.us.debian.org/debian jessie contrib non-free
deb http://ftp.us.debian.org/debian jessie contrib

...save, update:

apt-get update

...and install:

apt-get install flashplugin-nonfree

6)

------ 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

7)

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

FFmpeg will work with video.

This compilation is based on:

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

Updated to 12-8-2016. Install libraries.

(Only one line with space between each one)

apt-get -y --force-yes install autoconf automake libass-dev libfreetype6-dev
libgpac-dev libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev
libxcb-shm0-dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev nasm libx264-dev cmake
mercurial libopus-dev curl git

We´ll employ a script that it will download, compile and install ffmpeg. It is tested and works
rightly.

Please, download the script.

cd /opt

(Only one line without space between both)

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

...concede permission of execution:

chmod +x ffmpeg-ubuntu-debian.sh

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

./ffmpeg-ubuntu-debian.sh

When finish the compilation, a text will appear:

<div align="center">FFmpeg Compilation is Finished!</div>

Then, please, go to **step 8).**

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

sudo gedit /opt/ffmpeg.sh

...copy and past **from here**:

```
# FFmpeg compilation for Ubuntu and Debian.
# Alvaro Bustos. Thanks to Hunter.
# Updated 12-8-2016

sudo apt-get update
sudo apt-get -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev
libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev libxcb-shm0-
dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev mercurial cmake

# Create a directory for sources.
SOURCES=$(mkdir ~/ffmpeg_sources)
cd ~/ffmpeg_sources

# Download the necessary sources.
wget ftp://ftp.gnome.org/mirror/xbmc.org/build-deps/sources/lame-3.99.5.tar.gz
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
hg clone https://bitbucket.org/multicoreware/x265
wget -O fdk-aac.tar.gz https://github.com/mstorsjo/fdk-aac/tarball/master
wget http://downloads.xiph.org/releases/opus/opus-1.1.2.tar.gz
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 yasm-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" && make && sudo make
install && make distclean; cd ..

cd x264-*/
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"
--enable-static && PATH="$HOME/bin:$PATH" make && sudo make install && make distclean;
cd ..

cd x265/build/linux
PATH="$HOME/bin:$PATH" cmake -G "Unix Makefiles"
-DCMAKE_INSTALL_PREFIX="$HOME/ffmpeg_build" -DENABLE_SHARED:bool=off
../../source && make && sudo make install && make distclean; cd ~/ffmpeg_sources

cd mstorsjo-fdk-aac*
autoreconf -fiv && ./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make &&
sudo make install && make distclean; cd ..

cd lame-*/
./configure --prefix="$HOME/ffmpeg_build" --enable-nasm --disable-shared && make && sudo
make install && make distclean; cd ..

cd opus-*/
./configure --prefix="$HOME/ffmpeg_build" --disable-shared && make && sudo make install &&
make distclean; cd ..

cd libvpx-*/
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --disable-examples
--disable-unit-tests && PATH="$HOME/bin:$PATH" make && sudo make install && make clean;
cd ..

cd ffmpeg
PATH="$HOME/bin:$PATH" PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig"
./configure --prefix="$HOME/ffmpeg_build" --pkg-config-flags="--static" --extra-cflags="-
I$HOME/ffmpeg_build/include"  --extra-ldflags="-L$HOME/ffmpeg_build/lib"
--bindir="$HOME/bin" --enable-gpl --enable-libass --enable-libfdk-aac --enable-libfreetype
--enable-libmp3lame --enable-libopus --enable-libtheora --enable-libvorbis --enable-libvpx
--enable-libx264 --enable-libx265 --enable-nonfree && PATH="$HOME/bin:$PATH" make &&
sudo make install && make distclean && hash -r; cd ..

cd ~/bin
cp ffmpeg ffprobe ffplay ffserver vsyasm x264 yasm ytasm /usr/local/bin

cd ~/ffmpeg_build/bin
cp lame x265 /usr/local/bin

echo "FFmpeg Compilation is Finished!"
```

...to here.

Concede permission of execution:

chmod +x /opt/ffmpeg.sh

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

cd /opt

./ffmpeg.sh

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

 8)

------ Installation and configuration of MariaDB data server ------

MariaDB is the data server.
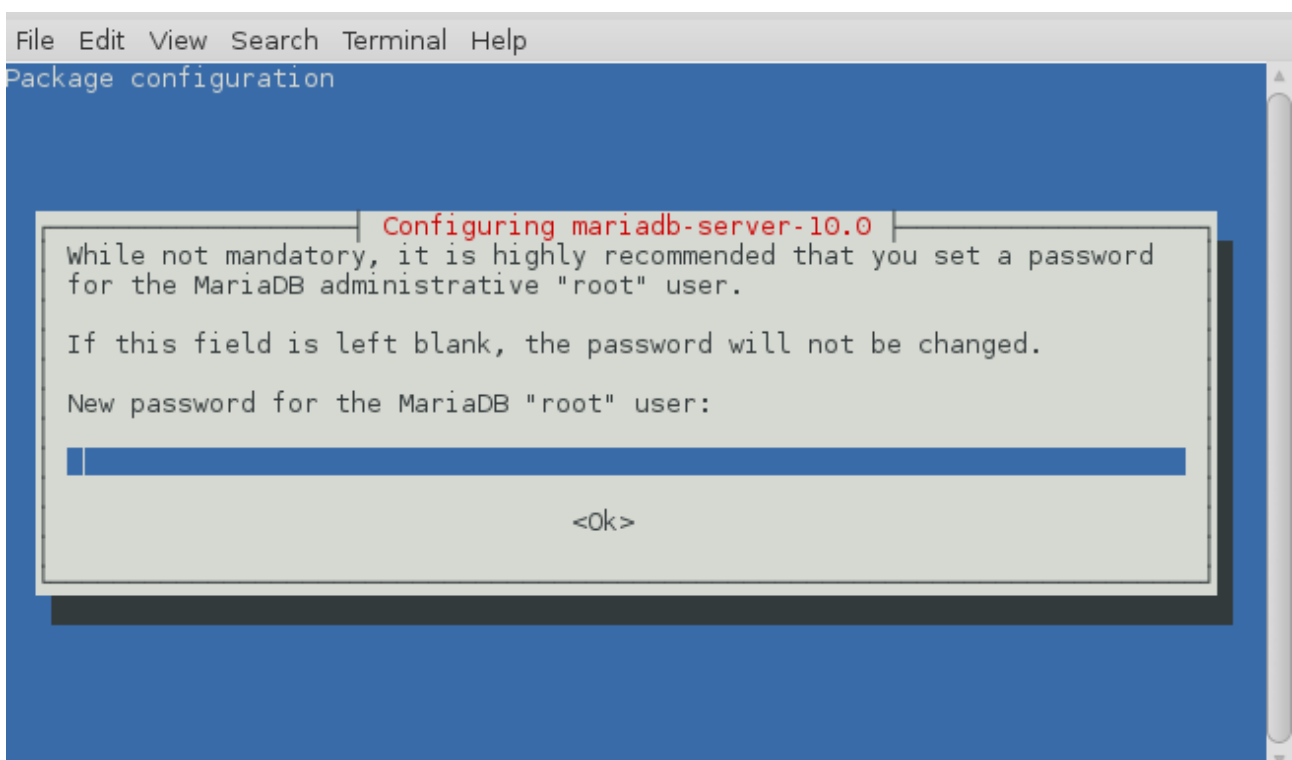
It is in Jessie repository. Install these packages:

sudo apt-get install python-software-properties
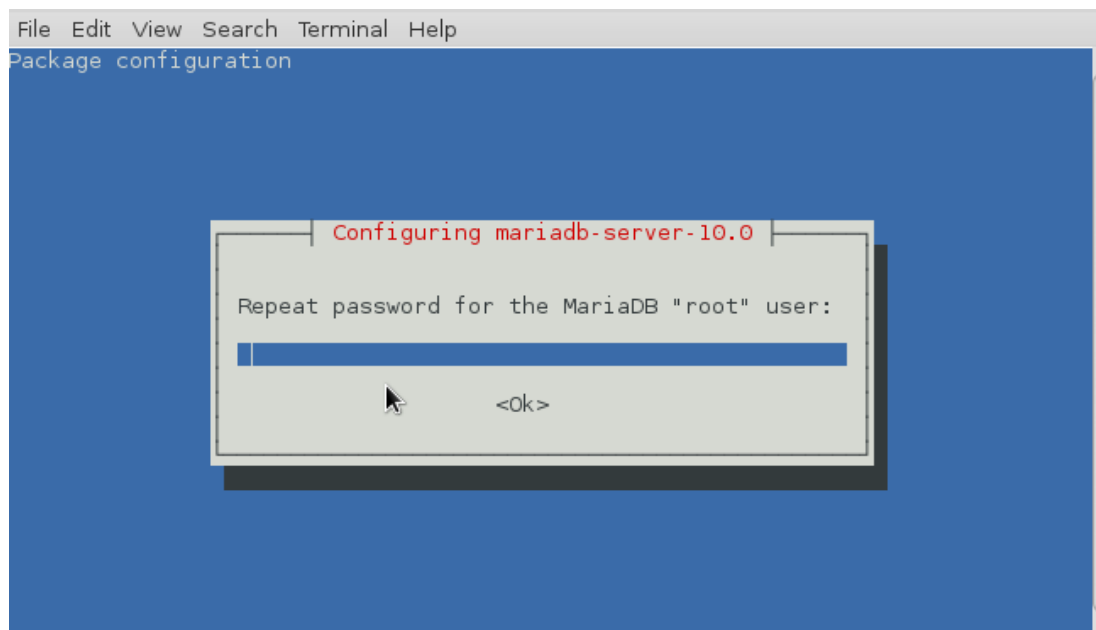
sudo apt-get install software-properties-common

...and now MariaDB:

apt-get install mariadb-server

Will open a window asking for a root MariaDB password:

Type the password you like it → **Ok** → **Enter**

...will ask repeat the password:

Run MariaDB:

/etc/init.d/mysql start

Make a database with his own user for OpenMeetings:

mysql -u root -p

...will ask for the root password that we have just choosen, type it...

MariaDB [(none)]> CREATE DATABASE open312 DEFAULT CHARACTER SET 'utf8';

With this command we has created a database called open312.
Now we create a user with all permission on this database.

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open312.* TO 'hola'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;

* open312 ......is the database name.
* hola ………is the user name for this database.
* 123456 …....is the password of this user.

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

MariaDB [(none)]> quit

9)

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

We´ll install OpenMeetings in /opt/red5312. All the following information will be based on this directory.

Call to our folder of installation red5312

Make the folder:

mkdir /opt/red5312

cd /opt/red5312

wget http://ftp.cixug.es/apache/openmeetings/3.1.2/bin/apache-openmeetings-3.1.2.zip

unzip apache-openmeetings-3.1.2.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.1.2.zip /opt

Do to **nobody** owner of the whole OpenMeetings folder installation, for security:

chown -R nobody /opt/red5312

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

(Only one line without space between both)

wget wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.39/mysql-connector-java-5.1.39.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.39.jar /opt/red5312/webapps/openmeetings/WEB-INF/lib

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

gedit /opt/red5312/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify on line 71:

, Url=jdbc:mysql://localhost:3306/openmeetings_3_1?

...to

, Url=jdbc:mysql://localhost:3306/open312

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

Modify on line 76:

, Username=root

...to

, Username=hola

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

Modify on line 77:

, Password=" />

...to

, Password=123456" />

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

If you choose another name and password for the database, you will to change it here.

We protect the access to the file:

(Only one line without space between both)

chmod 640 /opt/red5312/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

10)
------ Script to launch red5-OpenMeetings ------

Please, download the red5 run script:

cd /opt

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

...and copy it to:

cp red5-ubdeb /etc/init.d/

Concede permission of execution:

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

11)   ------ Run red5-OpenMeetings ------

Start MariaDB if still it is not:

/etc/init.d/mysql start

...and now start red5-OpenMeetings:

/etc/init.d/red5-ubdeb start

...will appear two text lines in the shell:

> start-stop-daemon: --start needs --exec or --startas
> Try 'start-stop-daemon --help' for more information.

...you do nothing. Don´t worry, everything work right.

Wait about 40 seconds minimum, 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:

OpenMeetings

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 whitebaord**

   ○ **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.arrozcru.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 **SoX** http://sox.sourceforge.net/. You should install SoX in a up to date copy! SoX 12.xx will NOT work!

If you have further questions or need support in installation or hosting:

Community-Support:

Mailing lists

Commercial-Support:

Push $>$ button (bottom), and will show the default database configuration with Derby, but we employ MySQL (MariaDB):

OpenMeetings

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	Apache Derby
Specify the name of the database	openmeetings
Specify DB user	user
Specify DB password	secret

Check

< > >> Finish

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

...and will show our data base configuration we made in step 9.

If you choose any other different data, will show equally.

Please, push   `>`   button, and will go to:

Now we introduce the followings data:

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

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

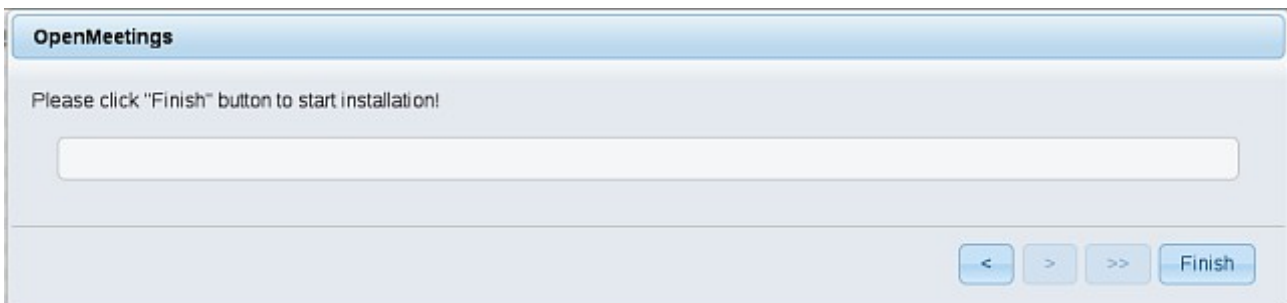Email = email-adress ...of the previous user.

User Time Zone = country where is this serve

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

When the installation be finished, we´ll 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:
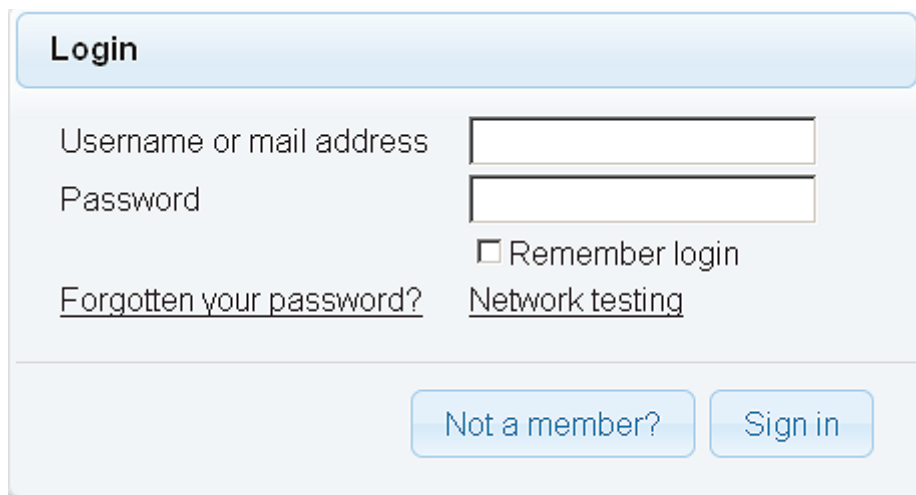
/etc/init.d/red5-ubdeb restart
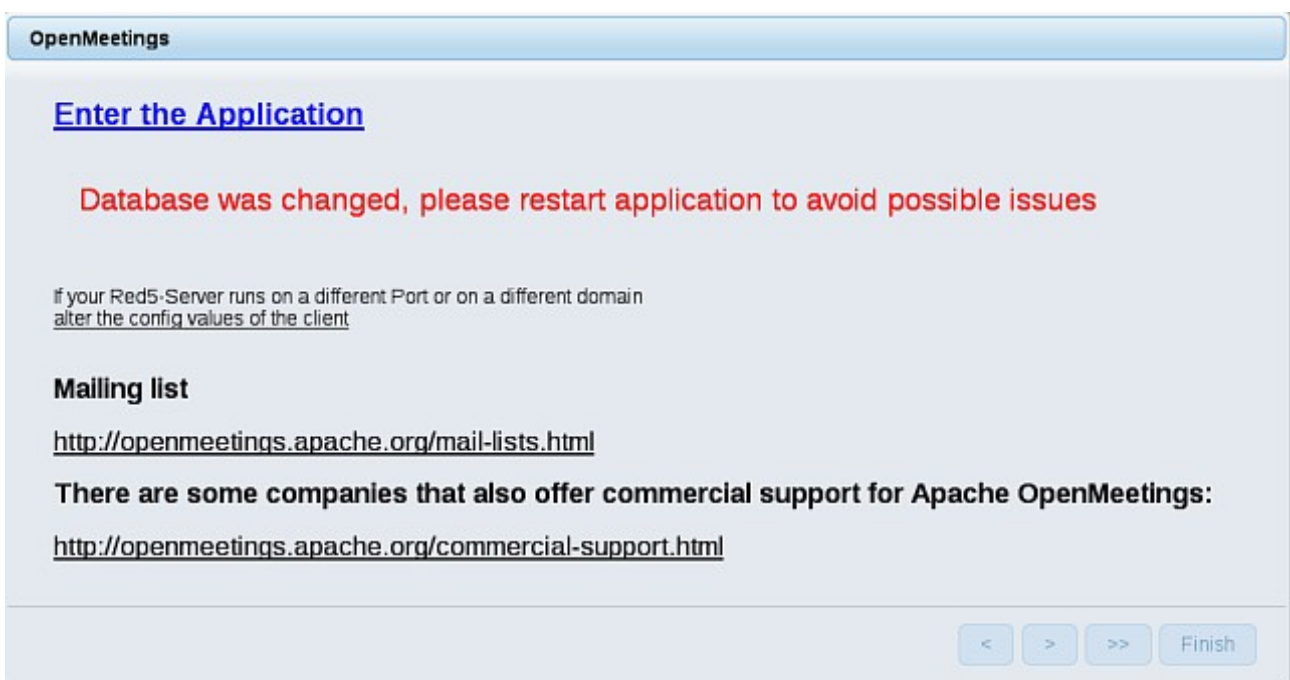
Now yes, you can clic on **Enter the Application**, or go with your browser to:

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 the **Sign in** button 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 two following ports:

1935   5080

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

12)

 ------ 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 (32 bit): /usr/lib/libreoffice
Clic on: **office.path**...and to the right in **Value** type (64 bit): /usr/lib/libreoffice

Clic on: **jod.path**...and to the 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.

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-5.1.39.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