



Installation of Apache OpenMeetings 4.0.0 on Ubuntu 14.04 LTS

This tutorial is made based on fresh installations of

ubuntu-14.04.2-desktop-amd64.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

Starting...

1)

First update and upgrade the OS:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

2)

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

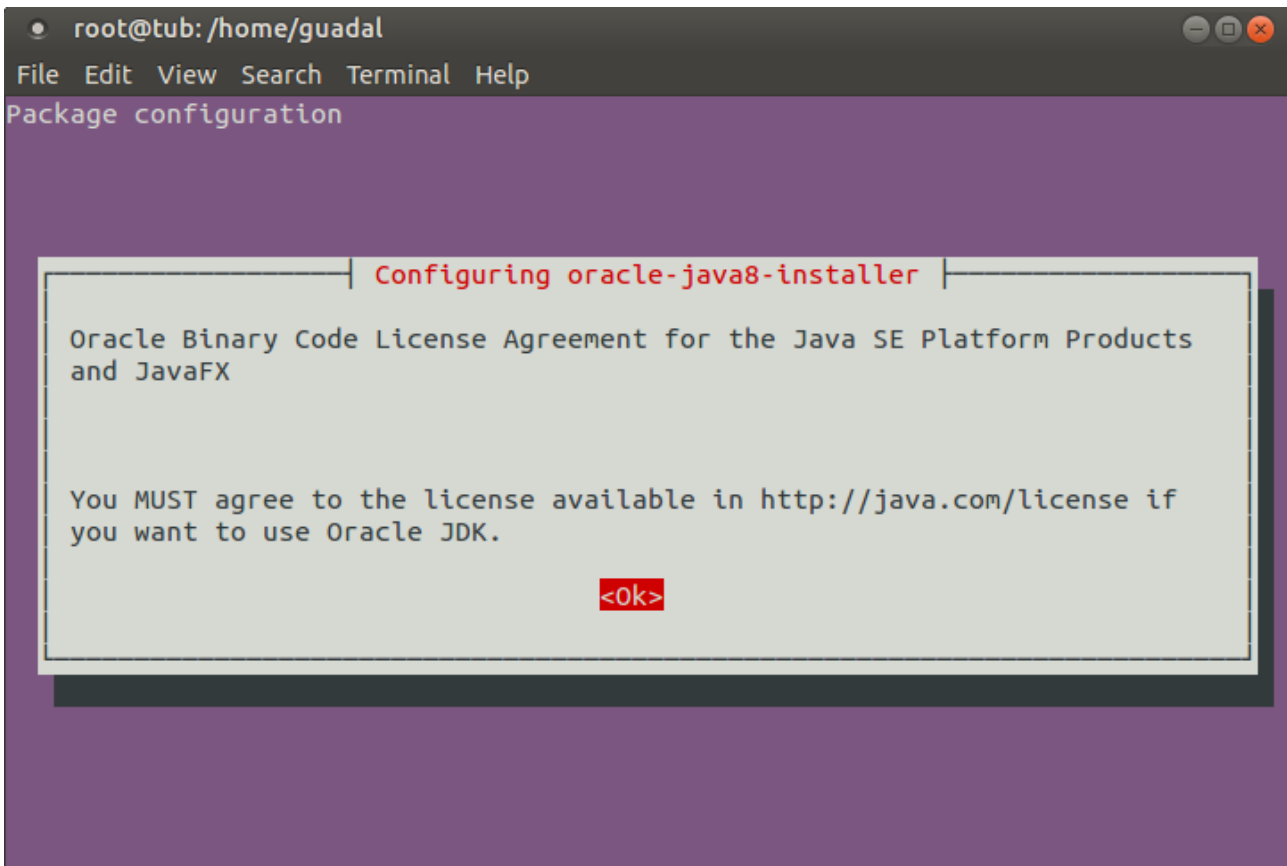
OpenMeetings **4.0.0** need Java **1.8** to work. We'll install Oracle Java, because Icedtea-plugin give error with OpenJava when try recording or share desktop :

```
sudo add-apt-repository ppa:webupd8team/java
```

```
sudo apt-get update
```

```
sudo apt-get install oracle-java8-installer
```

Will open a window. Press **Enter**.



```
root@tub: /home/guadal
File Edit View Search Terminal Help
Package configuration

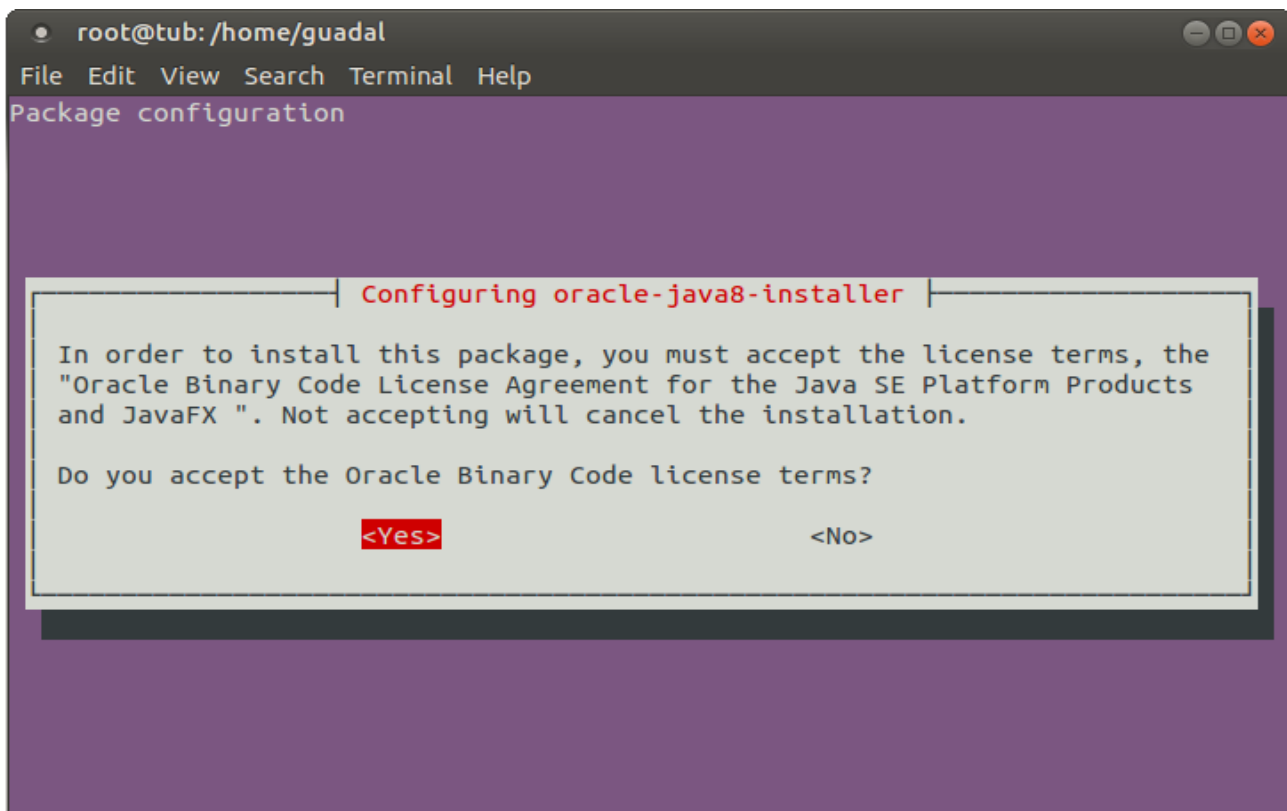
Configuring oracle-java8-installer

Oracle Binary Code License Agreement for the Java SE Platform Products
and JavaFX

You MUST agree to the license available in http://java.com/license if
you want to use Oracle JDK.

<Ok>
```

Will ask newly. Answer: **Yes** → **Enter**



```
root@tub: /home/guadal
File Edit View Search Terminal Help
Package configuration

Configuring oracle-java8-installer

In order to install this package, you must accept the license terms, the
"Oracle Binary Code License Agreement for the Java SE Platform Products
and JavaFX ". Not accepting will cancel the installation.

Do you accept the Oracle Binary Code license terms?

<Yes> <No>
```

If you have more than one java version installed, please choose Oracle Java 1.8:

```
sudo update-alternatives --config java
```

You can see the active java version:

```
java -version
```

To configure automatically the Java 8 Environment:

```
sudo apt-get install oracle-java8-set-default
```

3)

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

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

The ubuntu desktop iso have already LibreOffice installed, so don't need install it.

This is only for server ubuntu iso:

```
sudo add-apt-repository ppa:libreoffice/ppa
```

```
sudo apt-get update
```

```
sudo apt-get install libreoffice
```

Now some kind of information only:

LibreOffice installation folder is /usr/lib/libreoffice.

4)

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

ImageMagick, work the image files, jpg, png, gif, etc. Install it and some paquet and libraries.

(Only one line without space between both)

```
sudo apt-get install -y imagemagick libgif4 libjpeg62 zlib1g-dev liboil0.3 unzip make build-essential wget
```

Sox, work the sound. 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
```

5)

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

OpenMeetings even need Adobe Flash Player for cam and audio. Install it:

```
sudo apt-get install flashplugin-installer
```

6)

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

FFmpeg will work with video.

This compilation is based on:

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

Updated to 5-11-2017. Install libraries.

(Only one line with space between each one)

```
sudo apt-get -y --force-yes install autoconf automake build-essential 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 nmap vlc
```

I made a script that it will download, compile and install ffmpeg. The result of any recording we do in OpenMeetings, will be in mp4 format.

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 announce it:

FFmpeg Compilation is Finished!

Then, please, go to **step 7**).

But if you prefer copy and paste (i **don't advise**), here leave the commands script:

```
sudo gedit /opt/ffmpeg.sh
```

...copy and paste **from here**:

```
# FFmpeg compilation for Ubuntu and Debian.
```

```
# Alvaro Bustos. Thanks to Hunter.
```

```
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 https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.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 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 ffmpegserver 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 are installed on: /usr/local/bin

7)

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

MariaDB is the data server. Will install it.

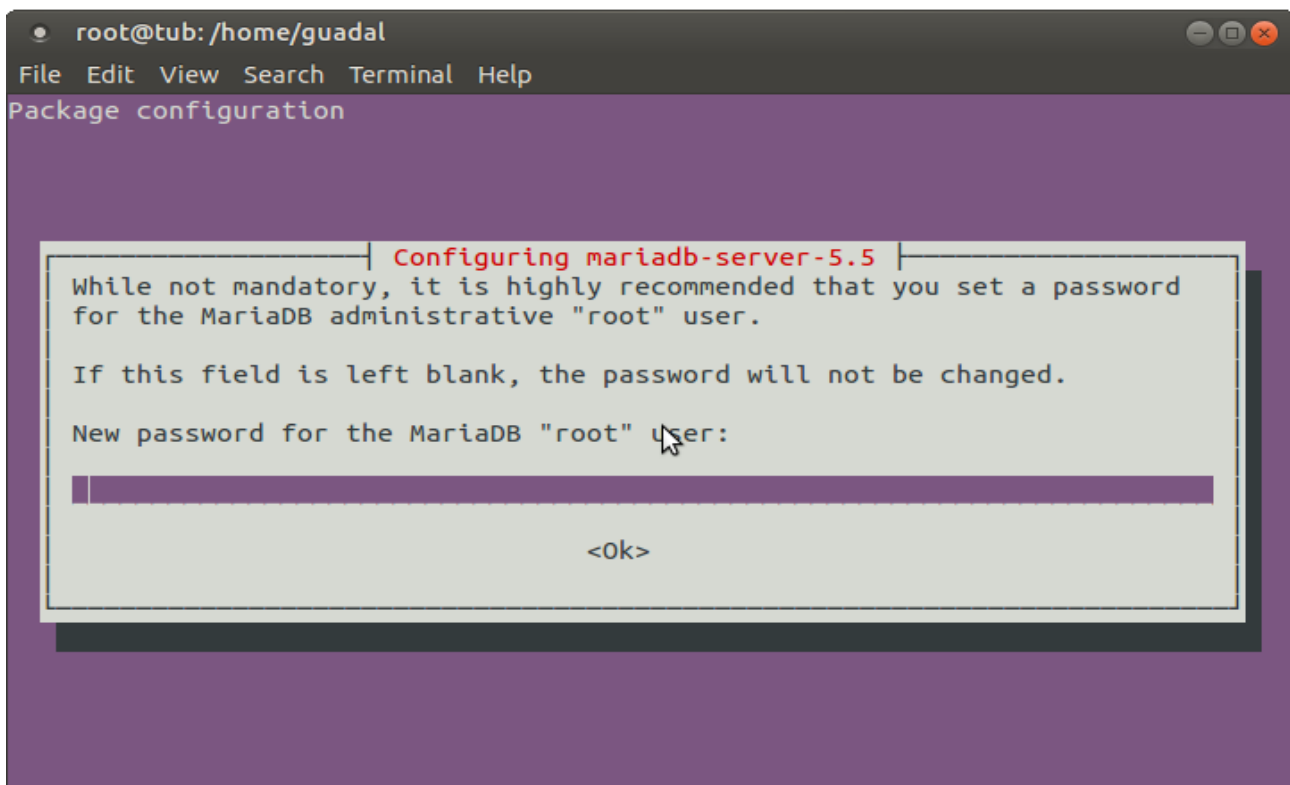
First install these paquets:

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

...and now MariaDB:

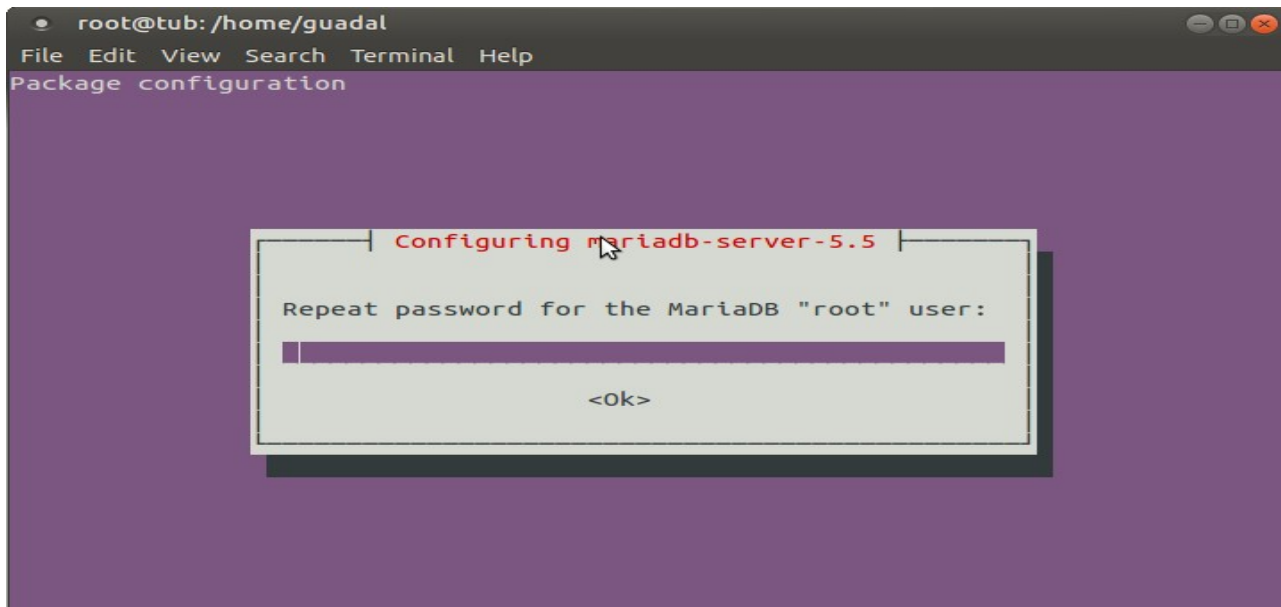
```
sudo apt-get install mariadb-server
```

Will open a window asking for a root MariaDB password.



Type one password → **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 chosen, type it...

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

With this command we has created a database called open40.

Now we create a user on this database. User password must be of 8 digits minimum:

(Only one line with space between both)

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

- * open40is the database name.
- * holais the user name for the database.
- * 1a2B3c4D ..is the password of that user

You can change the data...but remember it! Later well need it.

Now, we leave MariaDB:

```
MariaDB [(none)]> quit
```

8)

----- 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
```

...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
```

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

```
chown -R nobody /opt/red540
```

Unload 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/5.1.45/mysql-connector-java-5.1.45.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.45.jar /opt/red540/webapps/openmeetings/WEB-INF/lib
```

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

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

Modifique la linea 72:

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

...a

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

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

If initially you chose another name for the database, please type it here. Save changes.

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`

9)

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

Please, unload the red5 run script:

`cd /opt`

`wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-ubdeb2`

...and copy it to:

`cp red5-ubdeb2 /etc/init.d/`

Concede permission of execution:

`chmod +x /etc/init.d/red5-ubdeb2`

10)

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

Start MariaDB if still it is not:

`/etc/init.d/mysql start`

...and now start red5-OpenMeetings:

```
/etc/init.d/red5-ubdeb2 start
```

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

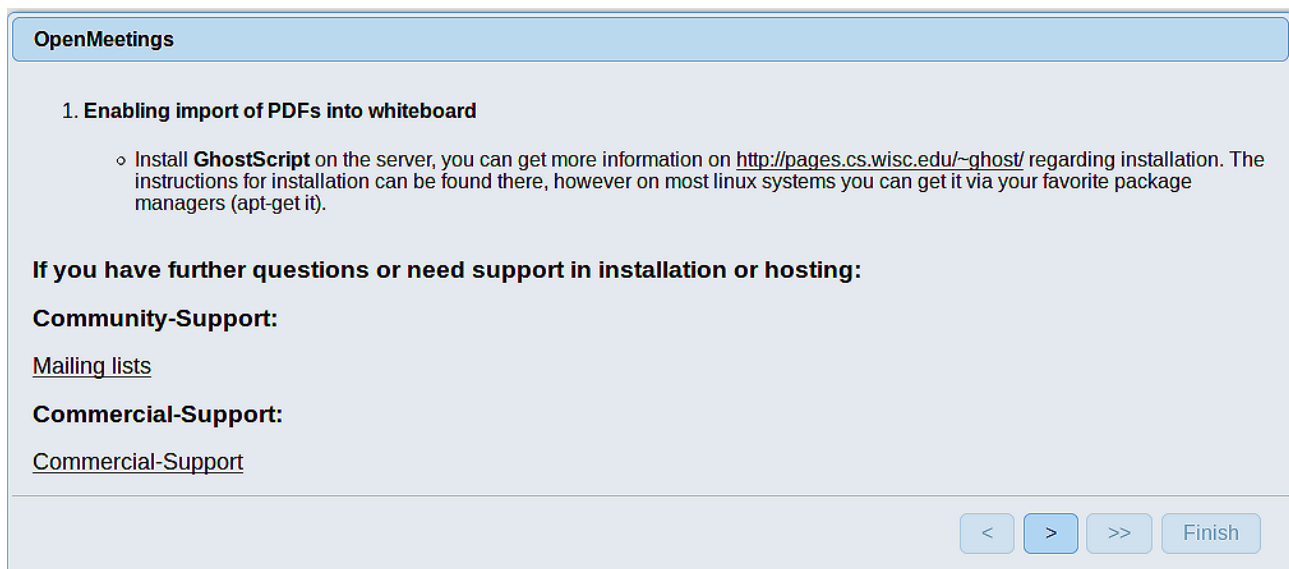
```
start-stop-daemon: --start needs --exec or --startas
Try 'start-stop-daemon --help' for more information.
```


...you do nothing. Don't worry, everything work right.

Wait 40 seconds at least, in order that red5 it is runing completely, and after can go to:

<http://localhost:5080/openmeetings/install>

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



Press  button, (bottom), and will show the default configuration with Derby, but we employ MySQL (MariaDB):

The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' section. It includes a 'Recommendation for production environment' and a yellow 'NOTE' box. The 'Choose DB type' dropdown is set to 'Apache Derby', and the 'Specify the name of the database' field contains 'openmeetings'. A 'Check' button is visible, along with navigation buttons at the bottom.

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

NOTE Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type Apache Derby

Specify the name of the database openmeetings

Check

< > >> Finish

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

The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' section. The 'Choose DB type' dropdown is now set to 'MySQL'. Additional fields for 'Specify DB host', 'Specify DB port', 'Specify the name of the database', 'Specify DB user', and 'Specify DB password' are visible. A 'Check' button is visible, along with navigation buttons at the bottom.

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

NOTE Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type MySQL

Specify DB host localhost

Specify DB port 3306

Specify the name of the database open40

Specify DB user

Specify DB password

Check

< > >> Finish

...and will show the data base configuration we made in step 8.


If you've choose any other different name for this, will show equally.

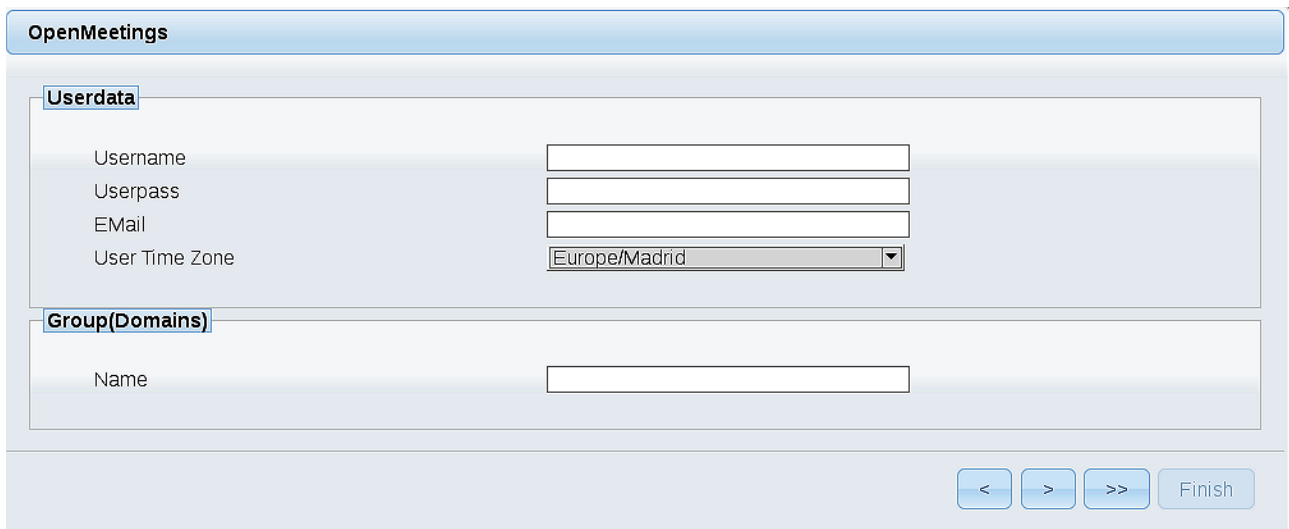
Now we must introduce the user name we did for our data base, at the step 7, and his password:

Specify DB user = hola

Specify DB password = 1a2B3c4D

...if you choose a different data, type it here.

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 = 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:

OpenMeetings

Configuration

Allow self-registering	<input checked="" type="checkbox"/>
Send Email to new registered Users	<input type="checkbox"/>
New Users need to verify their EMail	<input type="checkbox"/>
Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)	<input checked="" type="checkbox"/>
Mail-Referer	<input type="text" value="noreply@openmeetings.apache.org"/>
SMTP-Server	<input type="text" value="localhost"/>
SMTP-Server Port(default SmtP-Server Port is 25)	<input type="text" value="25"/>
SMTP-Username	<input type="text"/>
SMTP-Userpass	<input type="password"/>
Enable TLS in Mail Server Auth	<input type="checkbox"/>
Set inviter's email address as ReplyTo in email invitations	<input checked="" type="checkbox"/>
Default Language	<input type="text" value="inglés"/>

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

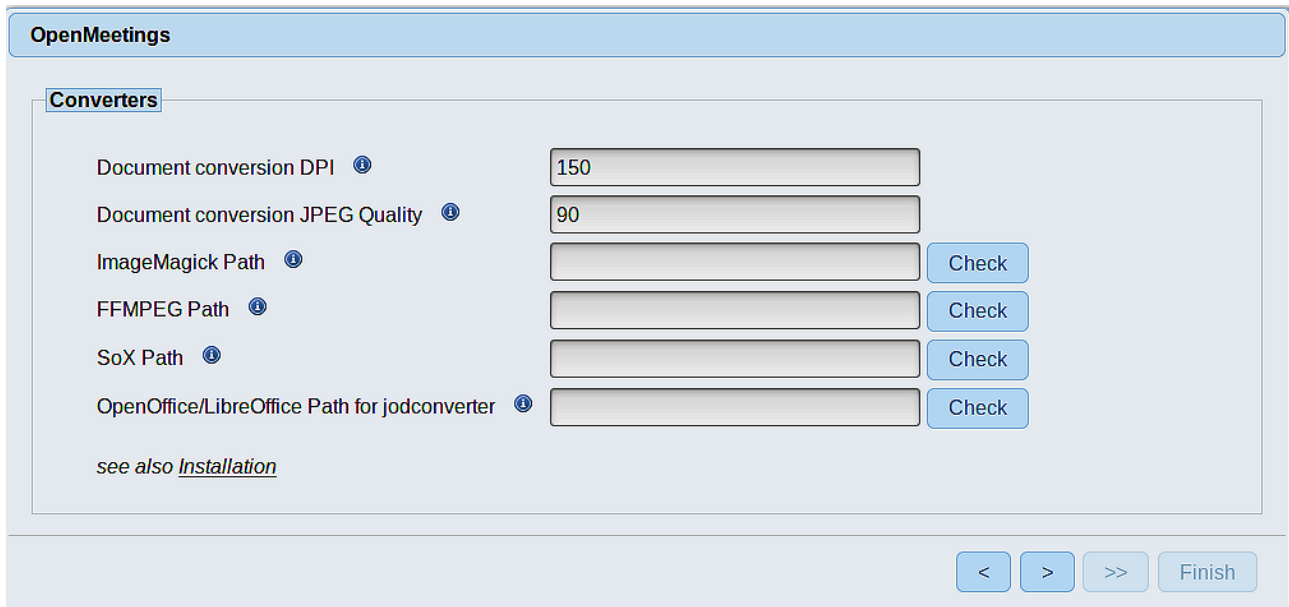
Mail-Refer	==	ohn@gmail.com
SMTP-Server	==	smtp.gmail.com
SMTP-Server Port (default SmtP-Server Port is 25)	==	587
SMTP-Username	==	john@gmail.com
SMTP-Userpass	==	password of john@gmail.com
Enable TLS in Mail Server Auth	==	...turn green the button to activate

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

Default Language	==	...select your language
-------------------------	----	---

...the rest you can change it as you like.

Now press the button  and a new page will appear:



OpenMeetings

Converters

Document conversion DPI ⓘ

Document conversion JPEG Quality ⓘ

ImageMagick Path ⓘ

FFMPEG Path ⓘ

SoX Path ⓘ

OpenOffice/LibreOffice Path for jodconverter ⓘ

see also [Installation](#)

< > >> Finish

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/lib/libreoffice (32 y 64bits)`

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:

The screenshot shows the 'OpenMeetings' configuration window. It has a title bar 'OpenMeetings' and a light blue header. Below the header, there are two main sections:

- Crypt Type**: A sub-section with a title bar. It contains a label 'Crypt Class' with an information icon, and a text input field containing the value 'org.apache.openmeetings.util.crypt.SCr'.
- red5SIP Configuration**: A sub-section with a title bar. It contains three items:
 - 'Enable SIP' with an information icon and a toggle switch that is currently turned on (red).
 - 'SIP rooms prefix' with an information icon and a text input field containing '400'.
 - 'SIP extensions context' with an information icon and a text input field containing 'rooms'.

At the bottom right of the window, there are four buttons: '<', '>', '>>', and 'Finish'.

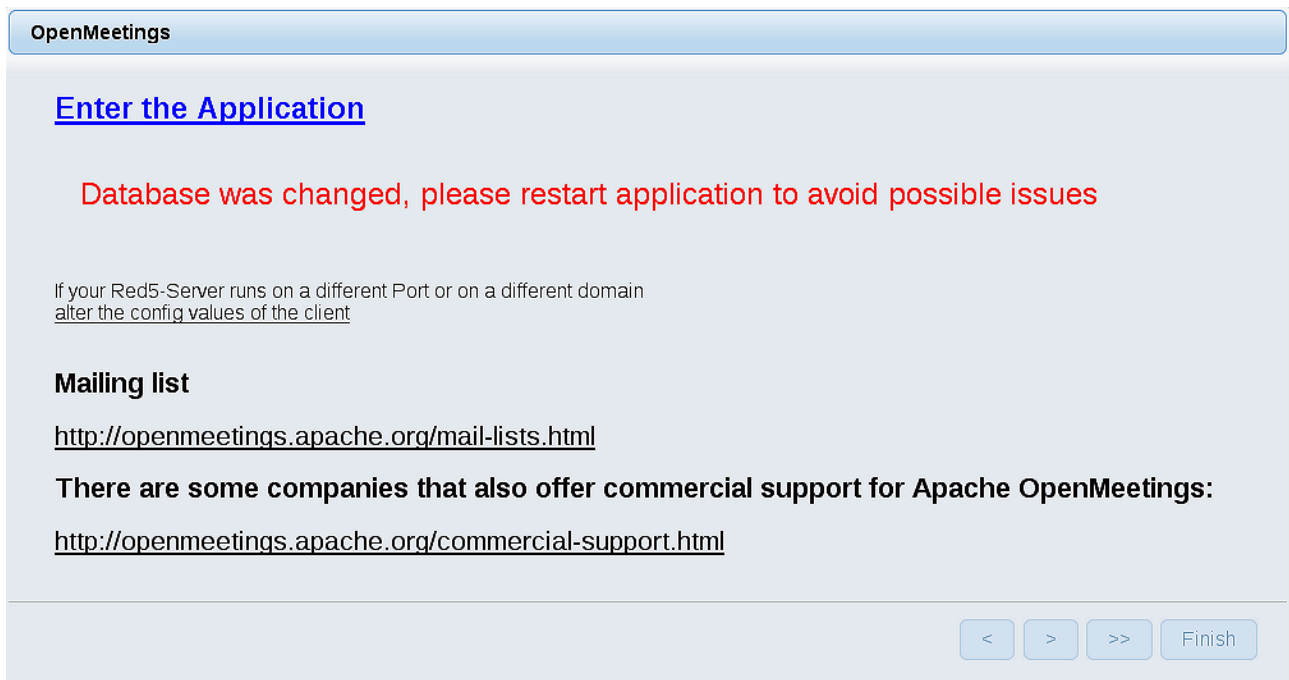
Now push the button  Will show this window:

The screenshot shows the 'OpenMeetings' window after clicking the right arrow button. The title bar is 'OpenMeetings'. The main content area contains the text 'Please click "Finish" button to start installation!' and a large empty text input field below it. At the bottom right, there are four buttons: '<', '>', '>>', and 'Finish'.

Press **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-ubdeb2 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:

The screenshot shows a login form titled "Login". It contains the following elements: a text input field for "Username or mail address", a text input field for "Password", a checkbox labeled "Remember login", a link for "Forgotten your password?", and a link for "Network testing". At the bottom, there are two buttons: "Not a member?" and "Sign in".

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 like to accede to OpenMeetings would be:

<http://localhost:5080/openmeetings>

Remember to open in the server the two following ports:

1935 5080

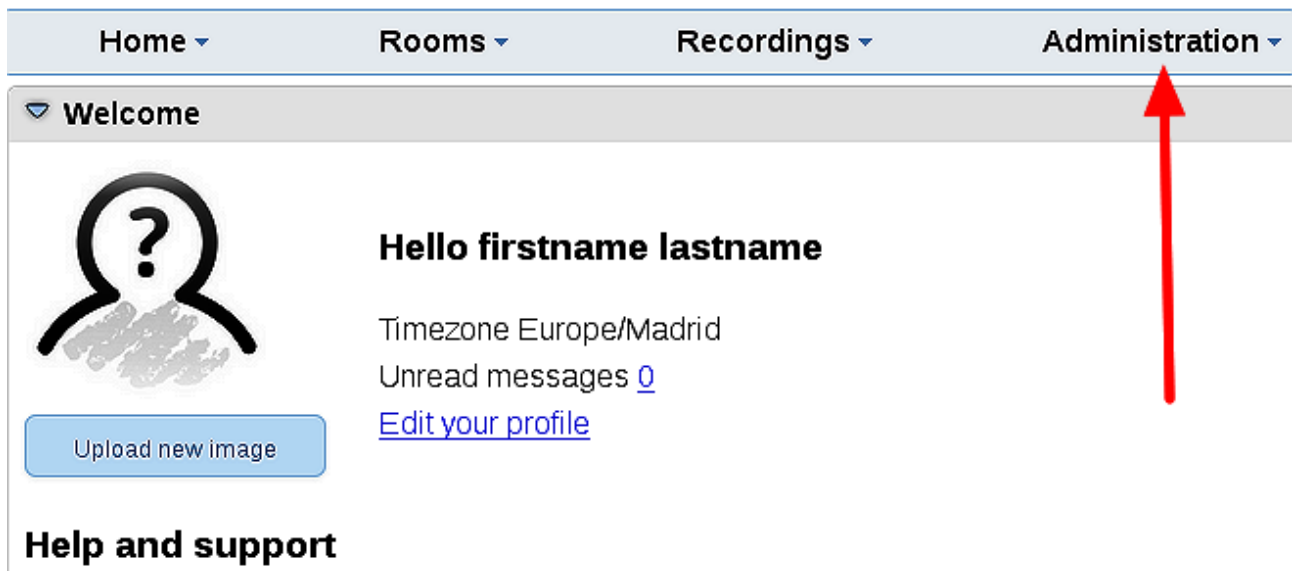
...in order that it could accede to OpenMeetings from other machines.

11)

----- **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:

Home ▾ Rooms ▾ Recordings ▾ Administration ▾

50 [Navigation icons] [Search]

ID	Key	Value
1	crypt.class.name	org.apache.openmeetings.util.crypt.SCryptImplementation
2	allow.frontend.register	true
3	allow.soap.register	true
4	allow.oauth.register	true
5	default.group.id	1
6	mail.smtp.server	localhost
7	mail.smtp.port	25
8	mail.smtp.system.email	noreply@openmeetings.apache.org
9	mail.smtp.user	
10	mail.smtp.pass	
11	mail.smtp.starttls.enable	false
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default.lang.id	8
16	document.dpi	150
17	document.quality	90
18	path.imagemagick	
19	path.sox	
20	path.ffmpeg	
21	path.office	
22	dashboard.rss.feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
23	dashboard.rss.feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
24	send.email.at.register	false
25	send.email.with.verification	false

Configuration

Type: string

Key: path.ffmpeg

Value:

Last update: Oct 17, 2017 5:54:57 PM

Updated by: toro

Comment: Path To FFMPEG

1 → 20 (path.ffmpeg) 2 → Value field 3 → Configuration panel

Chat

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