Installation of Apache OpenMeetings 3.0.x on Ubuntu 14.04 LTS

This tutorial is made based on fresh installations of

ubuntu-14.04.1-desktop-amd64.iso

It is tested with positive result. We will use the Apache's
binary version OpenMeetings 3.0.6 stable, that is to say
will suppress his compilation. It is done step by step.

23-2-2015 updated 25-5-2015

Starting...

1)

First update and upgrade the OS:

sudo apt-get update

sudo apt-get upgrade

2)

---- Installation of Oracle Java 1.8 ----
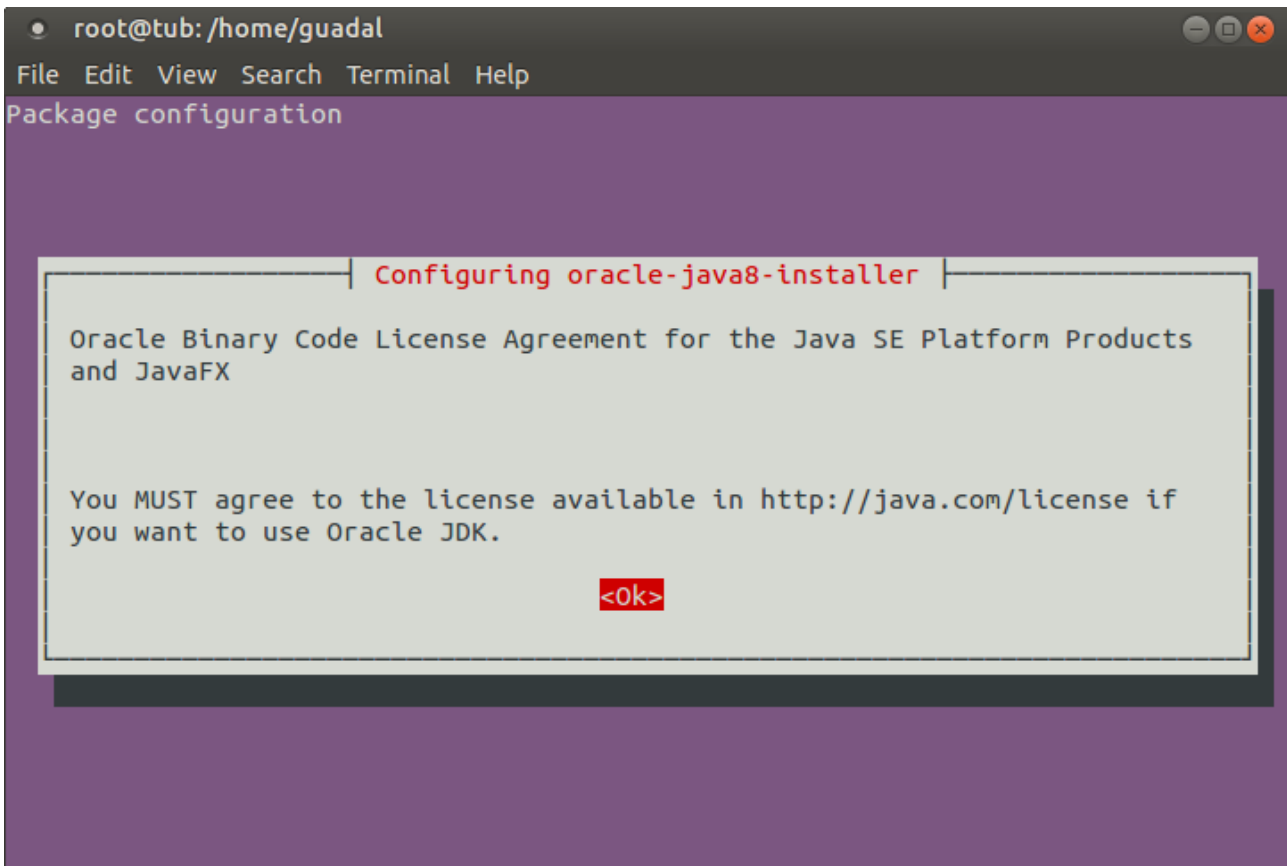
Red5-OM need Java to work. Add repository and install it:

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>


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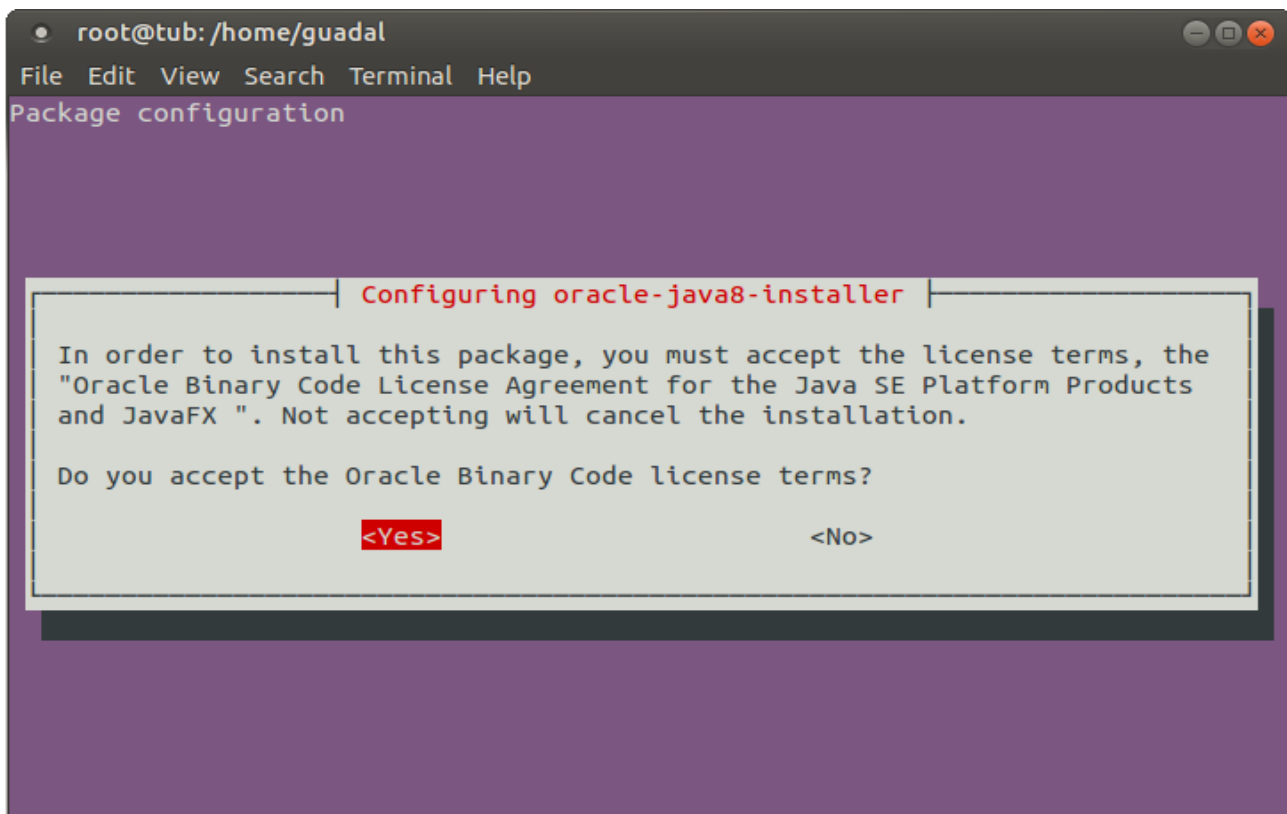
Will ask newly. Answer: **Yes → Enter**

```
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, please chose Oracle Java 1.8:

sudo update-alternatives --config java

You can see the active java version:

java -version

To configure automaticaly 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 ImageMagic, Sox and Swftools ---

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

sudo apt-get install imagemagick gdebi libgif4 libjpeg62 synaptic zlib1g-dev liboil0.3 unzip make

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

Swftools work converting to swf the uploaded files.

Don´t use a newer version swftools file. Don´t have pdf2swf.

For **64** bit:

cd /opt

wget https://launchpad.net/ella-renaissance/ella-renaissance-beta/beta1/+download/swftools_0.9.1-1_amd64.deb

dpkg -i swftools_0.9.1-1_amd64.deb

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

For **32** bit:

cd /opt

wget http://www.tataranovich.com/debian/pool/squeeze/main/s/swftools/swftools_0.9.1-1_i386.deb

dpkg -i swftools_0.9.1-1_i386.deb

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

5)
           ---- Installation of Adobe flash player ----

OpenMeetings even need Adobe Flash Player for rooms.

sudo apt-get install flashplugin-installer

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

Install libraries.

(In 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

Make a folder where download the neccesary files to compile.

mkdir ~/ffmpeg_sources

cd ~/ffmpeg_sources

wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz

wget http://download.videolan.org/pub/x264/snapshots/last_x264.tar.bz2

wget -O fdk-aac.zip https://github.com/mstorsjo/fdk-aac/zipball/master

wget http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz

wget http://downloads.xiph.org/releases/opus/opus-1.1.tar.gz

wget http://webm.googlecode.com/files/libvpx-v1.3.0.tar.bz2

wget http://ffmpeg.org/releases/ffmpeg-snapshot.tar.bz2

Start to compile.

1)   --- **Yasm** ---

cd ~/ffmpeg_sources

tar xzvf yasm-1.3.0.tar.gz

cd yasm-1.3.0

./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"

make

make install

make distclean

2)   --- **libx264** ---

cd ~/ffmpeg_sources

tar xjvf last_x264.tar.bz2

cd x264-snapshot*

(In only one line with space)

PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build"
--bindir="$HOME/bin" --enable-static

PATH="$HOME/bin:$PATH" make

make install

make distclean

3)   --- **libfdk-aac** ---

cd ~/ffmpeg_sources

unzip fdk-aac.zip

cd mstorsjo-fdk-aac*

autoreconf -fiv

./configure --prefix="$HOME/ffmpeg_build" --disable-shared

make

make install

make distclean

4) --- l**ibmp3lame** ---

cd ~/ffmpeg_sources

tar xzvf lame-3.99.5.tar.gz

cd lame-3.99.5

./configure --prefix="$HOME/ffmpeg_build" --enable-nasm --disable-shared

make

make install

make distclean

5) --- **libopus** ---

cd ~/ffmpeg_sources

tar xzvf opus-1.1.tar.gz

cd opus-1.1

./configure --prefix="$HOME/ffmpeg_build" --disable-shared

make

make install

make distclean

6) --- **libvpx** ---

cd ~/ffmpeg_sources

tar xjvf libvpx-v1.3.0.tar.bz2

cd libvpx-v1.3.0

PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --disable-examples

PATH="$HOME/bin:$PATH" make

make install

make clean

7) --- **ffmpeg** ---

cd ~/ffmpeg_sources

tar xjvf ffmpeg-snapshot.tar.bz2

cd ffmpeg

(In only one line with space between each one)

PATH="$HOME/bin:$PATH" 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" --enable-gpl --enable-libass
--enable-libfdk-aac --enable-libfreetype --enable-libmp3lame --enable-libopus --enable-libtheora
--enable-libvorbis --enable-libvpx --enable-libx264 --enable-nonfree

PATH="$HOME/bin:$PATH" make

make install

make distclean

hash -r

The compilation is finished.

Now we have the compiled files in: ~/bin

and: ~/ffmpeg_build/bin

Should copy all them to /usr/local/bin to be enabled:

cd ~/bin

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

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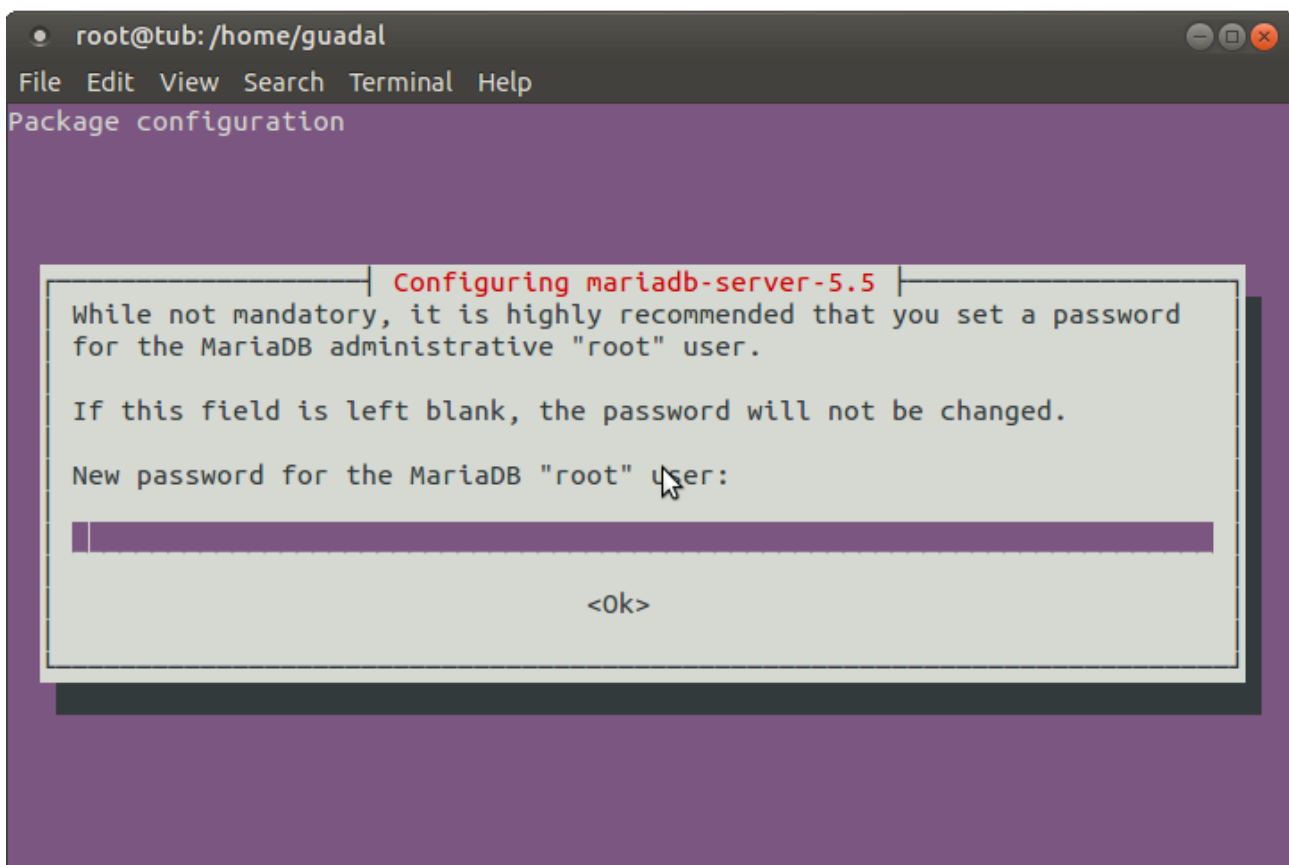
cp lame /usr/local/bin

8)
                    ---- Installation and configuration of MariaDB database server ----
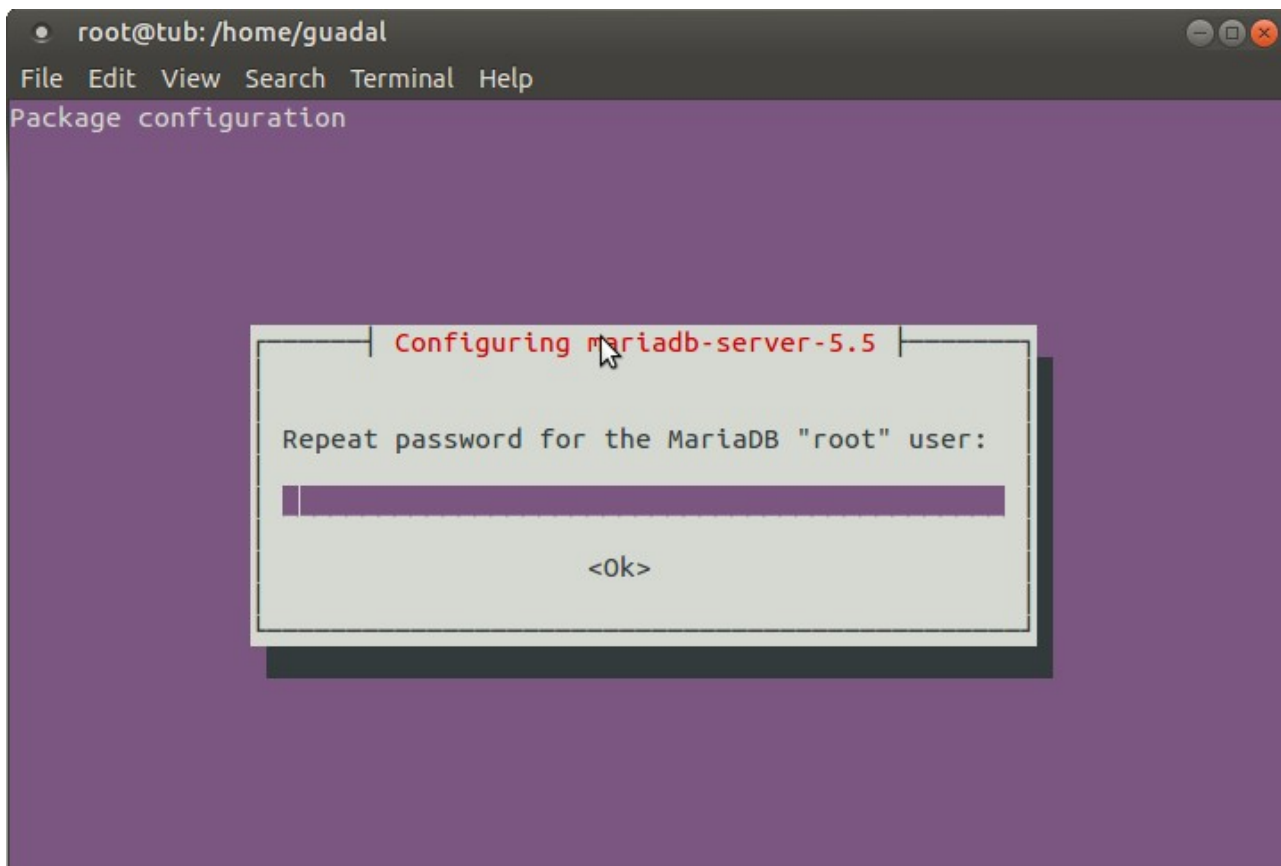
MariaDB is the database server. Will install it.

sudo apt-get install mariadb-server

Will open a window asking for a root MariaDB password. Type 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 chosen, type it...

MariaDB [(none)]> CREATE DATABASE open306 DEFAULT CHARACTER SET 'utf8';

With this command we has created a called database open306 though you can choose another name to your whish.

Now we create a user with all the permission on this open306 database.

(In only one line with space)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open306.* TO 'openmeetings'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;

* open306 ......is the database name.
* openmeetings ...is the user name for the database.
* 123456 ….........is the password of the user called openmeetings.

You can change the data...but remember it!

MariaDB [(none)]> quit

9)

---- Installation of OpenMeetings ----

We´ll install OpenMeetings in /opt/red5306. All the following information will be based on this directory.

Call to our folder of installation **red5306**

Make the folder:

mkdir /opt/red5306

cd /opt/red5306

wget http://apache.rediris.es/openmeetings/3.0.6/bin/apache-openmeetings-3.0.6.zip

unzip apache-openmeetings-3.0.6.zip

...remove the unloaded file:

rm -f apache-openmeetings-3.0.6.zip

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

chown -R nobody /opt/red5306

Unload and install the connector between OpenMeetings and MariaDB:

cd /opt

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.35/mysql-connector-java-5.1.35.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.35.jar /opt/red5306/webapps/openmeetings/WEB-INF/lib

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

cd /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF

mv persistence.xml persistence.xml-ori

mv mysql_persistence.xml persistence.xml

gedit /opt/red5306/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

...to change on **line 78**

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

...to

, Url=jdbc:mysql://localhost:3306/open306

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

... to change on **line 83**

, Username=root

...to

, Username=openmeetings

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

...to change on **line 84**

, Password=" />

...to

, Password=123456" />

...it is the password that we did initially for the user "openmeetings" 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/red5306/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

10)

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

Please, unload the red5 run script:

cd /opt

(In one line only without space)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5?version=2&modificationDate=1432719272000&api=v2

...when the download is finished press Ctrl+c keyboard.

Rename the file unloaded to red5:

mv red5?version=1 red5

...and copy it to:

cp red5 /etc/init.d/

Give permission of execution:

chmod +x /etc/init.d/red5

11)

Start MariaDB if still it is not:

/etc/init.d/mysql start

...and now start red5-OpenMeetings:

/etc/init.d/red5 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 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:

OpenMeetings

OpenMeetings - Installation

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!

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

OpenMeetings

OpenMeetings - Installation

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	MySQL
Specify DB host	localhost
Specify DB port	3306
Specify the name of the database	
Specify DB user	
Specify DB password	

Check

< Previous   Next >   Last   Finish

...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 = **password** ...for the previous user.
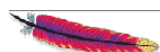
   Email   = **email-adress** ...of the previous user.

   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 **Finish**

...wait a seconds till 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.

14)

---- 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/local/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**

Now there is OpenMeetings ready to work rightly.

15)

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-5.1.34.jar

rm -f /opt/sox-14.4.1.tar.gz

rm -f -R /opt/sox-14.4.1

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