**Installation of Apache OpenMeetings 3.0.x on Debian 8**

This tutorial is made based on fresh installations of

**debian-8.0.0-amd64-CD-1.iso**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.0.7 stable, that is to say will suppress his compilation. It is done step by step.

Last update:  21-9-2015

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.

<span style="color:red">(In only one line with space)</span>

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:

(In only one line without space)

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

...now install Oracle Java 8:

apt-get install oracle-java8-installer

For JAVA_HOME Environment:

apt-get install oracle-java8-set-default

To know the active java version:

java -version

**3)**

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

LibreOffice is need it to convert to pdf the uploaded files. Jessie desktop iso have already LibreOffice installed. But if you are on iso server:  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

**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** 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 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

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


For **32** bit:

cd /opt

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

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



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

OpenMeetings even need Adobe Flash Player for rooms.

Add repository can install it:

gedit /etc/apt/sources.list

...and copy-paste these two lines:

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

Install libraries.
(In 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

We´ll make a script that it should download, compile and install ffmpeg.
It is updated to the last versions files 20-9-2015.
It is tested and works rightly with synchronized audio and video. Mp4 and Ogg ok.

Please, download the script. Inside the zip are the instructions to running it:

https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_script_compile_Ubuntu_Debian.zip?version=3&modificationDate=1443530338096&api=v2

...and after running the script can go to step **8).** But if prefer copy and paste (i **don´t advise**):

sudo gedit /opt/ffmpeg.sh

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

```
# Ffmpeg for Ubuntu, Debian 8 and Debian 7
# Alvaro Bustos. Thanks to Hunter.
# 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
wget http://download.videolan.org/pub/x264/snapshots/x264-snapshot-20150919-2245-
stable.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.tar.gz
wget http://storage.googleapis.com/downloads.webmproject.org/releases/webm/libvpx-1.4.0.tar.bz2
wget http://ffmpeg.org/releases/ffmpeg-2.8.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-snapshot*
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 "¡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

**8)**
#### ---- Installation and configuration of MariaDB database server ----

MariaDB is the database 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 → Accept → **Enter**
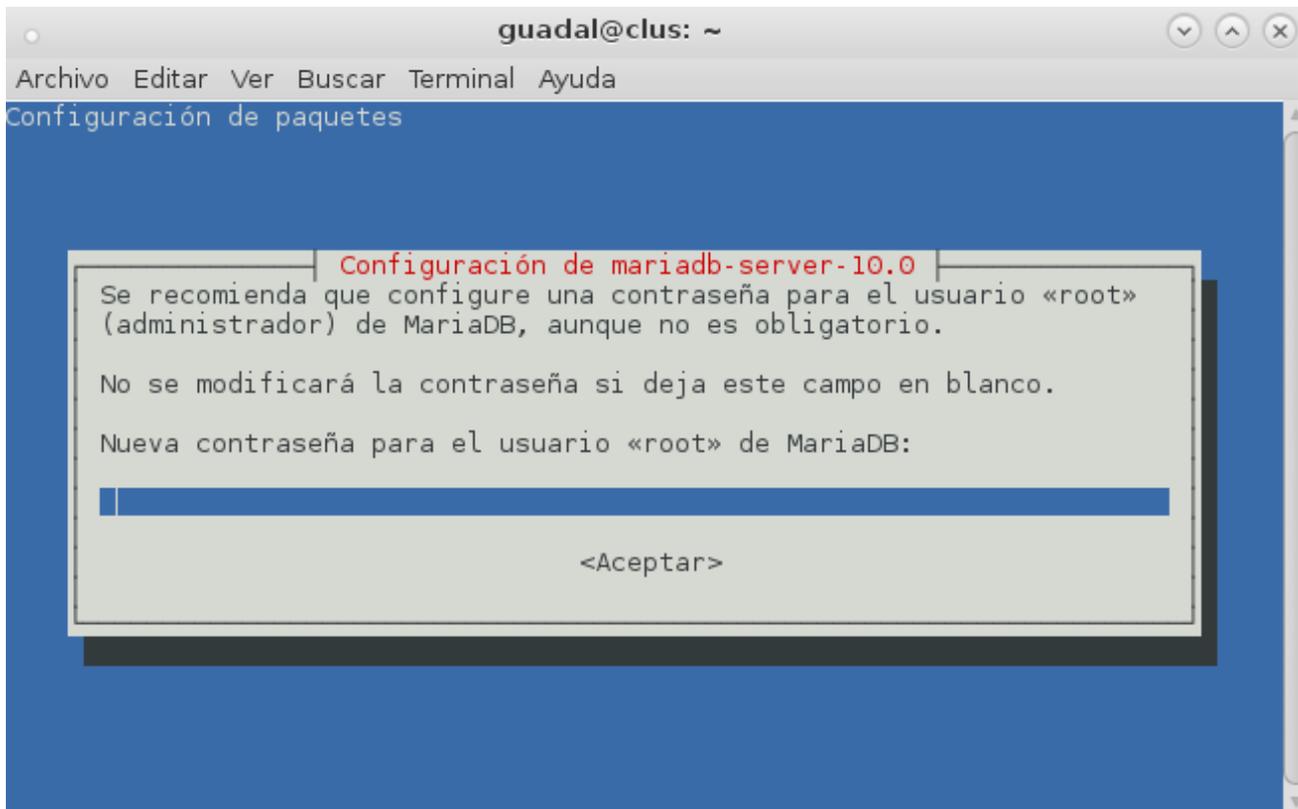


...will ask repeat the password:
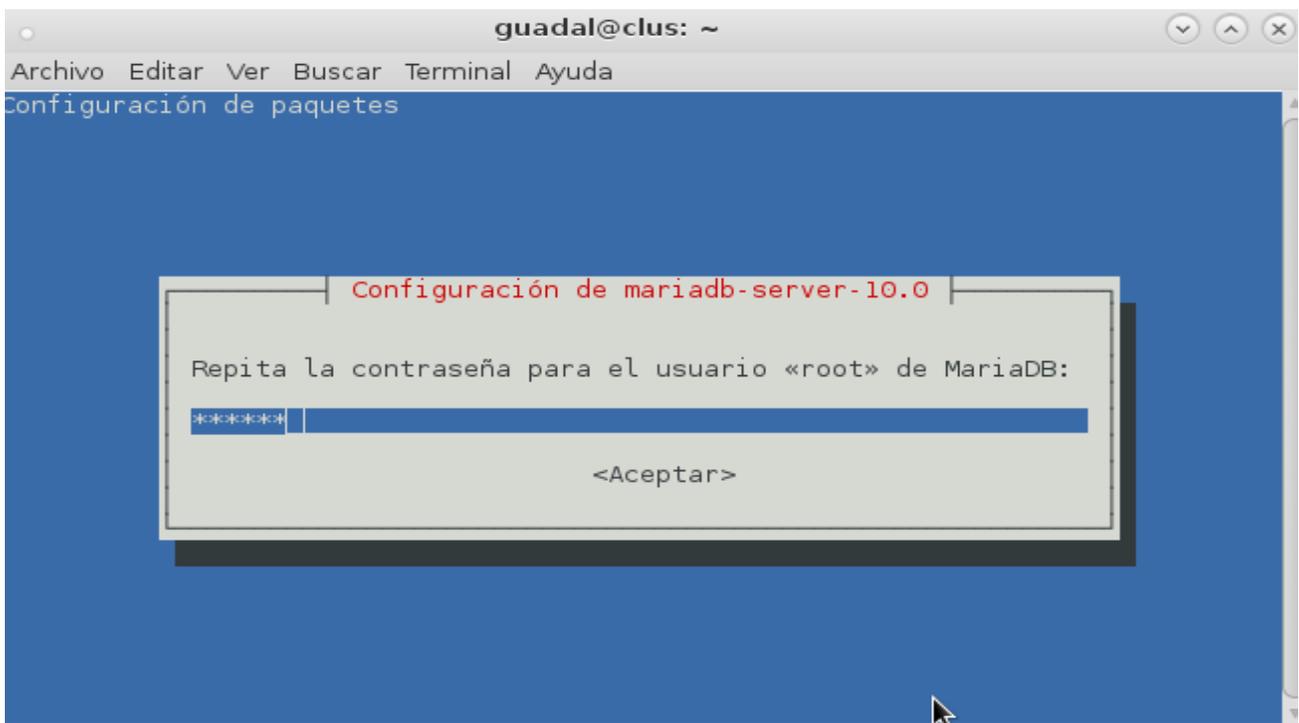
Run MariaDB:

/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 open307 DEFAULT CHARACTER SET 'utf8';

With this command we has created a called database open307 though you can choose another name to your whish.

Now we create a user with all the permission on this open307 database.

(In only one line with space)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open307.* TO 'openmeetings'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;

        * open307 ......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/red5307. All the following information will be based on this directory.

Call to our folder of installation **red5307**

Make the folder:

mkdir /opt/red5307

cd /opt/red5307

wget http://apache.rediris.es/openmeetings/3.0.7/bin/apache-openmeetings-3.0.7.zip

unzip apache-openmeetings-3.0.7.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.0.7.zip /opt

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

chown -R nobody /opt/red5307

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.36/mysql-connector-java-5.1.36.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.36.jar /opt/red5307/webapps/openmeetings/WEB-INF/lib

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

cd /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF

mv persistence.xml persistence.xml-ori

mv mysql_persistence.xml persistence.xml

gedit /opt/red5307/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

...to modify on **line  81**

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

...to

, Url=jdbc:mysql://localhost:3306/open307

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

... to modify on **line 86**

, Username=root

...to

, Username=openmeetings

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

...to modify on **line 87**

, 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/red5307/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

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

Please, download the red5 run script:

cd /opt

(In one line only without space)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5?
version=3&modificationDate=1443596054913&api=v2

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

Rename the file unloaded to red5:

mv red5?version=3 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 a seconds 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:

...clic on **Next** (bottom page)

...and this another page will appear showing the database configuration we made:



...clic **Next** and this another page will appear:



...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**



...and wait a seconds untill the tables are fill in the database.
When has concluded, this another page will appear:

...clic on **Enter the Application**

...and we should see OpenMeetings's entry:
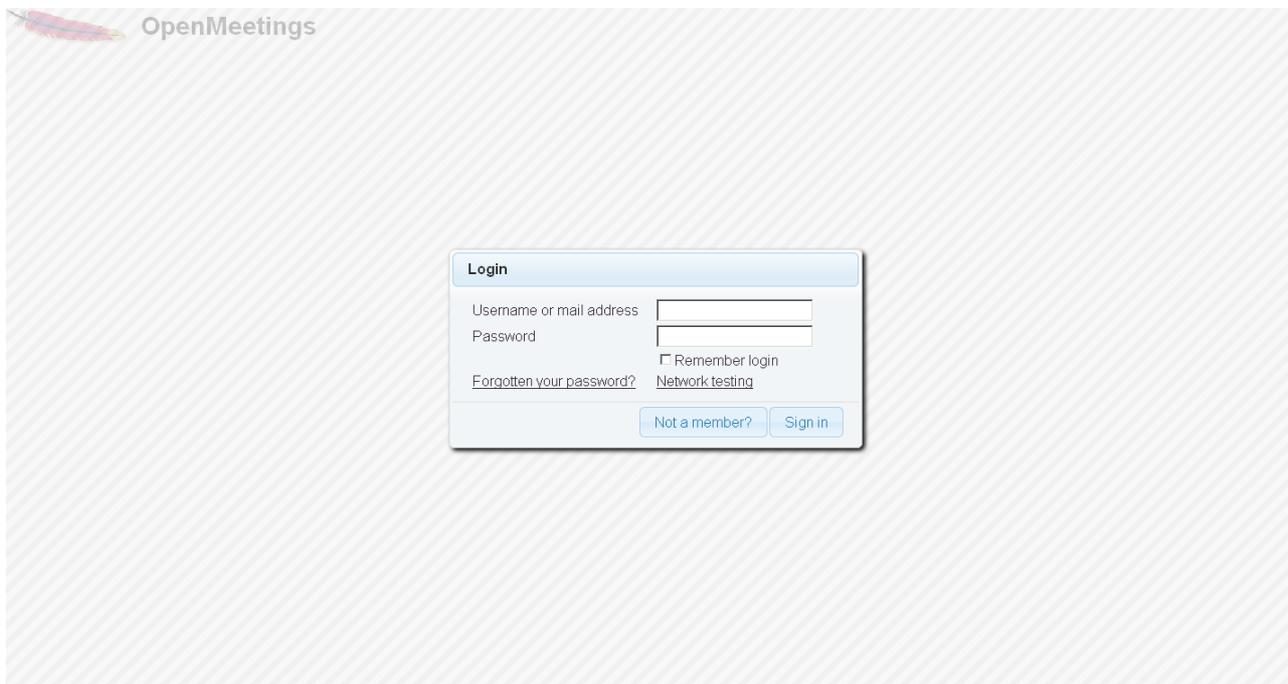
Introduce the user's name and the password that you have chosen during the installation and...

**...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.

**12)**

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

Once you acced to OpenMeetings go to:

**Administration → Configuration**

...this is the page of configurations...

...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**

Now there is OpenMeetings ready to work rightly.

**13)**

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-5.1.36.jar

rm -f /opt/sox-14.4.2.tar.gz

rm -f -R /opt/sox-14.4.2

And this is all.

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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