Installation of Apache OpenMeetings 4.0.0 on Debian 9

This tutorial is made based on a fresh installations of

debian-9.1.0-amd64-DVD-1.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, we update and upgrade the OS:

sudo apt-get update

sudo apt-get upgrade

2)
                         ------ Installation of OpenJava 1.8 ------

OpenMeetings **4.0.0** need Java **1.8** to work. So, we install OpenJava 1.8:

sudo apt install openjdk-8-jdk openjdk-8-jdk-headless

...and his plugin for web:

sudo apt install icedtea-8-plugin

Now, please, select OpenJava, if you have more than one java versions installed:

sudo update-alternatives --config java

To see the active java version:

java -version

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

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

The ubuntu desktop iso have already LibreOffice installed.

We do it also for server iso:

sudo apt-get install libreoffice

4)
------ Installation ImageMagick and Sox ------

ImageMagic, will work the image files, png, jpg, gif, etc. Will install it and some more libraries and paquets:

sudo apt-get install -y imagemagick libjpeg62 zlib1g-dev unzip make build-essential wget nmap

Sox, work the sound. We´ll compile, because this version is newer than is in the repos:

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. On Debian 9 is not easy install it from repos. We´ll do almost manually:

cd /opt

mkdir flashplayer

cd flashplayer

(Only one line without space between both)

wget http://slackware.uk/people/alien/slackbuilds/flashplayer-plugin/build/flash_player_npapi_linux.27.0.0.183.x86_64.tar.gz

tar zxvf flash_player_npapi_linux.27.0.0.183.x86_64.tar.gz

...please, modify you-user, by your real user name:

mkdir /home/you-user/.mozilla/plugins

cp libflashplayer.so /home/you-user/.mozilla/plugins

6)

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

FFmpeg will work with video. This compilation is based on:

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

Updated files to5-11-2017. Install some 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 vlc

I made a script that 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

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_ubuntu1704.sh

...concede permission of execution:

chmod +x ffmpeg_ubuntu1704.sh

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

./ffmpeg_ubuntu1704.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 are the commands script:

sudo gedit /opt/ffpmeg.sh

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

FFmpeg compilation for Ubuntu 17.04 and Debian 9 only.
Alvaro Bustos. Thanks to Hunter.
Updated5-11-2017

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 libx264-dev libfdk-aac-dev libmp3lame-dev libvpx-dev

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

Download the necessary sources.
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
hg clone https://bitbucket.org/multicoreware/x265
wget -O fdk-aac.tar.gz https://github.com/mstorsjo/fdk-aac/tarball/master
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 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 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 ffserver vsyasm yasm ytasm /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.sh

Now be connected to Internet, run the script and wait about 30 minutes while the compilation:

cd /opt

./ffmpeg.sh

7)
         ------ Installation and configuration of MariaDB data server ------

MariaDB is the data server. Will install it. (Version 10.x):

sudo apt-get install mariadb-server

Run MariaDB:

/etc/init.d/mysql start

Now we give a root password to MariaDB. Please, replace new-password with your own:

mysqladmin -u root password new-password

Make a database with his own user for OpenMeetings:

mysql -u root -p

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

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

With this command we has created a database called open40.
Now we create an 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;

      * open40 ......is the database name.
      * hola ....is the user name for this database.
      * 1a2B3c4D ..is the password for this user.

You can change the data...but remember it! Later we´ll 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.

Make the folder:

mkdir /opt/red540

cd /opt/red540

...and download the red5-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, by security:

chown -R nobody /opt/red540

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

<div align="center">(Only one line without space between both)</div>

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 form OpenMeetings for our database in MariaDB:

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

Modify 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.

If initially you choose another name for the database, replace it here. And save the changes.

We protect the access to the file:

<div align="center">(Only one line without space between both)</div>

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

9)

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

Please, download 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/

...and 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. Please, be connected to Internet:

/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 this, can go to:

http://localhost:5080/openmeetings/install

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

OpenMeetings	
1. 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).	
If you have further questions or need support in installation or hosting:	
Community-Support:	
Mailing lists	
Commercial-Support:	
Commercial-Support	
	`<` `>` `>>` Finish

...press on [>] 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.	
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:

...will show the database 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 choosed a different name or password, introduce them 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:

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 you can change it as you like.

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
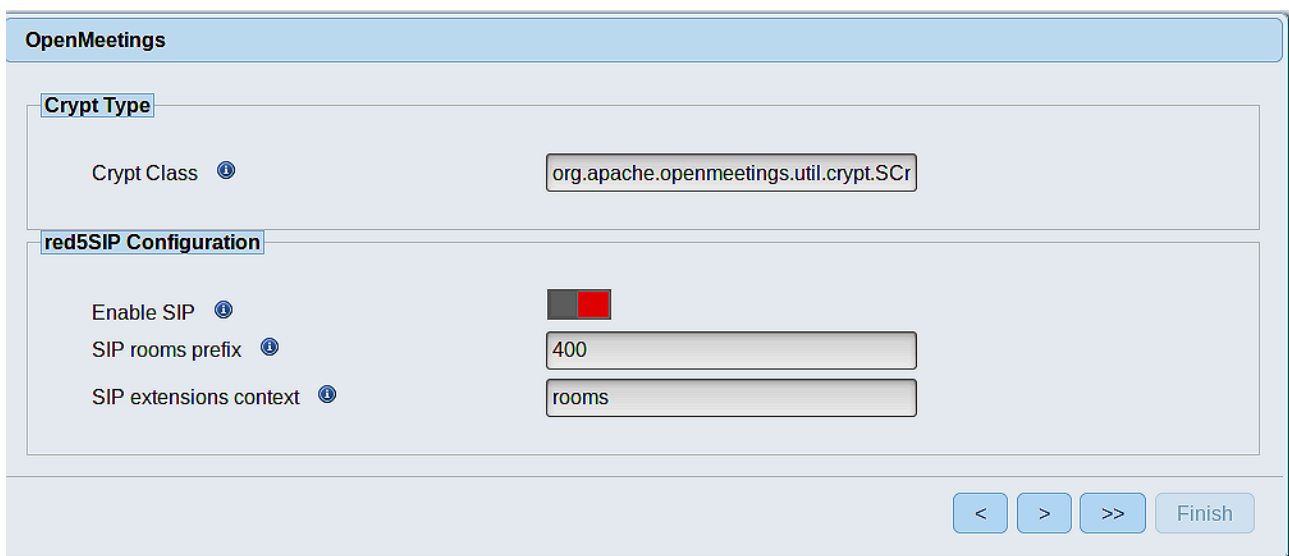
FFMPEG Path == /usr/local/bin

SOX Path == /usr/local/bin

OpenOffice/LibreOffice Path for
jodconverter == /usr/lib/libreoffice **(32bit - 64bit)**

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:

OpenMeetings

Crypt Type

Crypt Class ⓘ   org.apache.openmeetings.util.crypt.SCr

red5SIP Configuration

Enable SIP ⓘ

SIP rooms prefix ⓘ   400

SIP extensions context ⓘ   rooms

< | > | >> | Finish

Now push the button   >   and will show this window:

OpenMeetings

Please click "Finish" button to start installation!

< | > | >> | 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. Please, be connected to Internet:

/etc/init.d/red5-ubdeb2 restart

OpenMeetings

Enter the Application

   Database was changed, please restart application to avoid possible issues

If your Red5-Server runs on a different Port or on a different domain
alter the config values of the client

Mailing list

http://openmeetings.apache.org/mail-lists.html

There are some companies that also offer commercial support for Apache OpenMeetings:

http://openmeetings.apache.org/commercial-support.html

| < | > | >> | Finish |

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:

Login

Username or mail address

Password

☐ Remember login

Forgotten your password?   Network testing

Not a member?   Sign in

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 accede to OpenMeetings would be:

http://localhost:5080/openmeetings

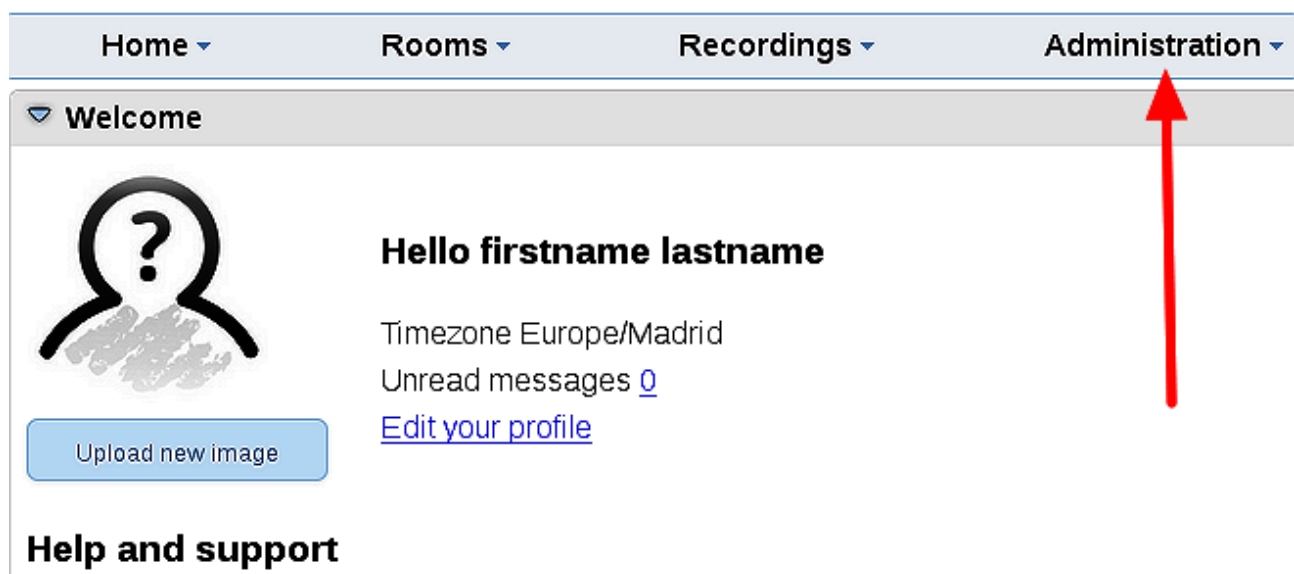Remember to open in the server the two following ports:

1935   5080

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

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:

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