



## **Installation of Apache OpenMeetings 4.0.0 on Gentoo**

This tutorial is based on a fresh installations on

**stage3-amd64-20170202.tar.bz2**

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

Please, be connected to Internet during all the process to run any server.

Starting...

1)

**----- Update Operative System -----**

Open a terminal as root:

`su`

...will ask for root password, and we update the operative system:

`emerge -uaD world`

2)

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

Java **1.8** it is necessary for OpenMeetings **4.0.0**. We'll install Oracle Java.

```
cd /usr/portage/distfiles
```

...download the java file:

(All in one line only. 1<sup>a</sup> and 2<sup>a</sup> without space between them. A space to the 3<sup>a</sup>. Together 3<sup>a</sup> and 4<sup>a</sup>)

```
wget --no-cookies --no-check-certificate --header "Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie"
http://download.oracle.com/otn-pub/java/jdk/8u152-b16/aa0333dd3019491ca4f6ddb78cdb6d0/jdk-8u152-linux-x64.tar.gz
```

...we install it:

```
emerge --verbose dev-java/oracle-jdk-bin:1.8
```

...maybe you have installed various versions of Java. We see it:

```
java-config --list-available-vm
```

...select the just installed Oracle Java:

```
java-config --set-system-vm oracle-jdk-bin-1.8
```

...and to see the active version:

```
java -version
```

3)

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

OpenMeetings will need LibreOffice to convert to pdf the uploaded office files.

We install it (will spend about 35 minutes):

```
cd /opt
```

```
emerge libreoffice-bin
```

4)

#### ----- Installation of necessary packages and libraries -----

Will install packages and libraries that we'll need later:

```
emerge zlib libtool bzip2 autoconf automake pkgconfig tomcat-native nmap freetype nano
```

5)

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

**ImageMagick**, will work with images files jpg, png, gif, etc. We install it:

```
emerge imagemagick
```

**Sox**, work the sound. Install it:

```
emerge sox
```

```
cd /opt
```

6)

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

OpenMeetings even need Adobe Flash Player for cam. We install it:

```
emerge adobe-flash
```

Prepare this plugin for Firefox. Please, change **you-user** by your real user name:

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

```
ln -s /usr/lib64/nsbrowser/plugins/libflashplayer.so /home/you-user/.mozilla/plugins
```

7)

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

FFmpeg work with video. Will install a libraries and paquets:

```
emerge glibc faac faad2 gsm imlib2 cmake curl git mercurial yasm
```

The ffmpeg compilation it is based on this url, updated file versions 5-11-2017:

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

I made a script that will download, compile and install ffmpeg. It is tested and works ok. The result of any recordings we do in OpenMeetings, will be in mp4 format.

When the compilation be finished, will appear a text announces it:

FFMPEG Compilation is Finished!

So, download the script:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-archlinux.sh
```

...concede execution permission to it:

```
chmod +x ffmpeg-archlinux.sh
```

...and run it (be connected to Internet):

```
./ffmpeg-archlinux.sh
```

The compilation will spend about 25 minutes.

When finished, please go to **step 8**).

But if you prefer, can copy and paste, though i **don't advise**.  
Leave here the commands script:

```
nano /opt/ffmpeg-arch.sh
```

...copy the green text **from here**:

```
# Script ffmpeg compile for Arch Linux and Gentoo  
# Alvaro Bustos, thanks to Hunter.  
# Updated 5-11-2017  
  
# Create a temporary directory for sources.  
SOURCES=$(mkdir ~/ffmpeg_sources)  
cd ~/ffmpeg_sources  
  
# Download the necessary sources.
```

```

# git clone --depth 1 git://git.videolan.org/x264
curl -#LO ftp://ftp.videolan.org/pub/x264/snapshots/last_stable_x264.tar.bz2
hg clone https://bitbucket.org/multicoreware/x265
git clone --depth 1 git://git.code.sf.net/p/opencore-amr/fdk-aac
curl -L -O http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
wget https://sources.voidlinux.eu/opus-1.2.1/opus-1.2.1.tar.gz
wget http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
wget http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.5.tar.gz
wget http://downloads.xiph.org/releases/theora/libtheora-1.1.1.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 x264-*/
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin" --enable-static && make &&
make install && make distclean; cd ..

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

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

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

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

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

cd libvorbis-*/
LDFLAGS="-L$HOME/ffmeg_build/lib" CPPFLAGS="-I$HOME/ffmpeg_build/include"
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-shared
&& make && make install && make distclean; cd ..

cd libtheora-*/

```

```
./configure --prefix="$HOME/ffmpeg_build" --with-ogg="$HOME/ffmpeg_build" --disable-examples --disable-shared --disable-sdltest --disable-vorbistest && make && make install; cd ..
```

```
cd libvpx
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-examples && make && make install && make clean; cd ..
```

```
cd ffmpeg-*/
```

```
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" --pkg-config-flags="--static" --enable-gpl --enable-nonfree --enable-libfdk_aac --enable-libfreetype --enable-libmp3lame --enable-libopus --enable-libvorbis --enable-libvpx --enable-libx264 --enable-libx265 --enable-libtheora && make && make install && make distclean && hash -r; cd ..
```

```
cd ~/bin
```

```
cp ffmpeg ffprobe ffserver lame x264 /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/ffmpeg-arch.sh
```

```
cd /opt
```

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

```
./ffmpeg-arch.sh
```

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

8)

#### ----- Installation of MariaDB data server -----

MariaDB is the data server. We install it:

```
emerge mariadb
```

**ATTENTION!** When MariaDB installation is finished, a lines before the last, in the shell, is a command tha we need to copy and run. Actualy is this, please check it, and if is the same run it:

`emerge --config =dev-db/mariadb-10.0.29`

...will ask for a new root mariadb password. Choose one you like it and type it twice.

Run MariaDB:

`/etc/init.d/mysql start`

...and access to MariaDB:

`mysql -u root -p`

...will ask for the password you does just now.

We make a database called open40, for OpenMeetings:

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

Now we create a user for open40 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` ..... name of the database
- \* `hola` ..... user for that database
- \* `1a2B3c4D` .....password of this user

You can change the data, but...remember it! Later we'll need it.

We exit MariaDB:

MariaDB [(none)]> `quit`

9)

#### ----- 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 that folder:

```
mkdir /opt/red540
```

```
cd /opt/red540
```

...and 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
```

Download 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/5.1.42/mysql-connector-java-5.1.42.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.42.jar /opt/red540/webapps/openmeetings/WEB-INF/lib
```

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

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

**Modify in 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.

Press on keyboard, **Ctrl+x**, **Y** and **Enter**, to save changes and exit nano editor.

Logically, if initially you choose another user name, password or database name, you will change them here.

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
```

10)

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

Download the script to run red5-OpenMeetings:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-2
```

...copy it to where must be:

```
cp red5-2 /etc/init.d/
```

...concede execution permission:

```
chmod +x /etc/init.d/red5-2
```

If you would made the installation in any other different path to /opt/red540, please edit the script and modify the line:

```
RED5_HOME=/opt/red540
```

...to

```
RED5_HOME=/your-path-installation
```

11)

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

Restart MariaDB:

```
/etc/init.d/mysql restart
```

...and run red5-OpenMeetings. Please, open a new terminal as root, and be connected to Internet, so the running will be quick:

```
/etc/init.d/red5-2 start
```

...wait until the text “**CleanupJob.cleanRoomFiles**”, it is the last in the shell. Then, go with the browser 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  (bottom), and will show the default 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**

**Specify the name of the database**

Check

< > >> Finish

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

**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

Specify DB host

Specify DB port

Specify the name of the database

Specify DB user

Specify DB password

...and will show the database configuration we made in the step 9.

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 8, and his password:

**Specify DB user** = **hola**

**Specify DB password** = **1a2B3c4D**

Please, press  button, and will go to:

**OpenMeetings**

**Userdata**

Username

Userpass

EMail

User Time Zone

**Group(Domains)**

Name

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

**Email** = email-adress ...of this 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)

<b>Mail-Refer</b>	==	<a href="#">john@gmail.com</a>
<b>SMTP-Server</b>	==	<a href="#">smtp.gmail.com</a>
<b>SMTP-Server Port (default SmtP-Server Port is 25)</b>	==	<a href="#">587</a>
<b>SMTP-Username</b>	==	<a href="#">john@gmail.com</a>
<b>SMTP-Userpass</b>	==	<a href="#">password of john@gmail.com</a>
<b>Enable TLS in Mail Server Auth</b>	==	<a href="#">...turn green the button to activate</a>

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

<b>Default Language</b>	==	<a href="#">...select your language</a>
-------------------------	----	---

...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](#)*

Here we'll introduce the respective paths for the image, video, audio and conversion of uploaded files:


**ImageMagick Path** == [/usr/bin](#)

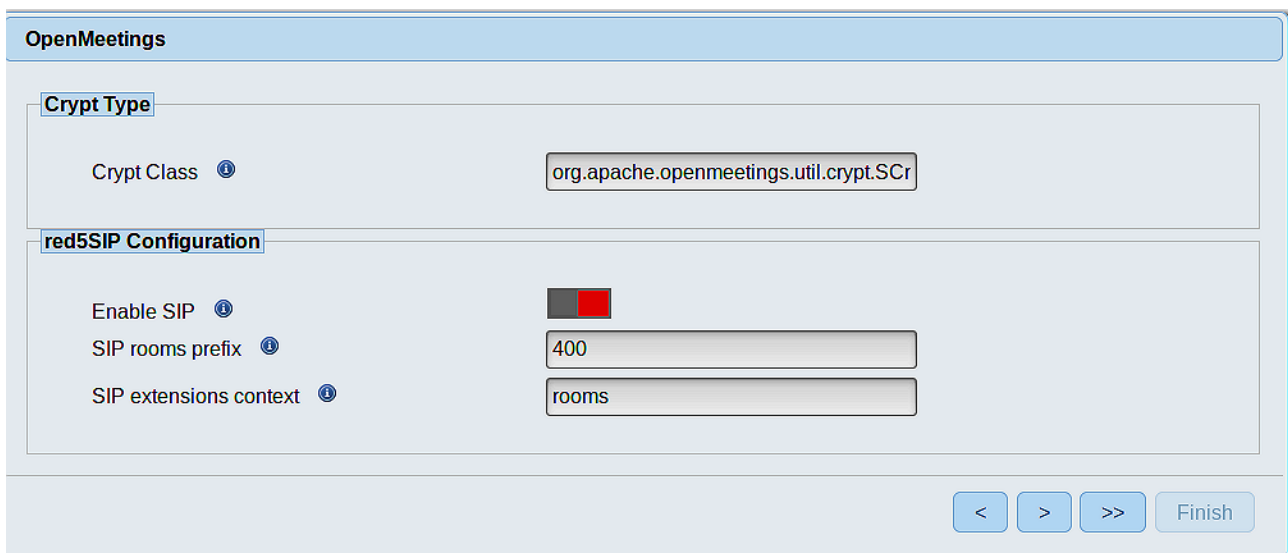
**FFMPEG Path** == [/usr/local/bin](#)

**SOX Path** == [/usr/bin](#)

**OpenOffice/LibreOffice Path for  
jodconverter** == [/usr/lib64/libreoffice](#)

As you go introducing routes, 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 ⓘ

---


**red5SIP Configuration**

Enable SIP ⓘ

SIP rooms prefix ⓘ

SIP extensions context ⓘ

< > >> Finish

Now, touch the button  Will show this window:



**OpenMeetings**

Please click "Finish" button to start installation!

< > >> Finish

Press **Finish** button...wait a seconds until the tables are fill in our database.

When is concluded, this another page will appear. **Don't** clic on [Enter the Application](#).  
First is need it to restart red5 server. Please, be connectd to Internet. Open a new terminal as root:

```
/etc/init.d/red5-2 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 chosen during the installation, push **Sign in** button, and...

...**Congratulations!**

The next time that you like to accede 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.

12)

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

Once you acced to OpenMeetings, if you would like to do any modification in the configuration, please go to:

**Administration → Configuration**

The screenshot displays the OpenMeetings web interface. At the top, there is a navigation bar with four items: 'Home', 'Rooms', 'Recordings', and 'Administration', each with a small downward arrow. The 'Administration' item is highlighted with a red arrow pointing upwards. Below the navigation bar is a 'Welcome' section with a user profile icon (a question mark inside a circle) and the text 'Hello firstname lastname'. To the right of the profile, it shows 'Timezone Europe/Madrid' and 'Unread messages 0'. Below the profile icon is a button labeled 'Upload new image'. At the bottom left, there is a section titled 'Help and support'.



...and following the order of the red arrows:

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

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