



Installation of Apache OpenMeetings 3.0.x on Centos 7

This tutorial is made based on fresh installations of

CentOS-7-x86_64-LiveGNOME-1503.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.

4-7-2015

Starting...

1)

At first place we must modify Selinux level security for the installation:

```
yum install -y gedit
```

```
sudo gedit /etc/selinux/config
```

...modify:

```
SELINUX=enforcing
```

...to

```
SELINUX=permissive
```

2)

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

Update operative system:

```
yum update -y
```

...and reboot for kernel changes and the new Selinux configuration take effect.:

```
reboot
```

3)

----- ADD Repos -----

```
yum install -y wget
```

```
## EPEL & Remi: ##
```

```
wget http://epel.mirror.nucleus.be/7/x86\_64/e/epel-release-7-5.noarch.rpm
```

```
wget http://rpms.famillecollet.com/enterprise/remi-release-7.rpm
```

```
sudo rpm -Uvh remi-release-7*.rpm epel-release-7*.rpm
```

Enable Remi:

```
gedit /etc/yum.repos.d/remi.repo
```

...and modify:

```
enabled=0
```

```
...to
```

```
enabled=1
```

```
## EIRepo ##
```

```
rpm --import https://www.elrepo.org/RPM-GPG-KEY-elrepo.org
```

```
rpm -Uvh http://www.elrepo.org/elrepo-release-7.0-2.el7.elrepo.noarch.rpm
```

```
## Nux ##
```

(Only one line without space)

```
rpm -Uvh http://li.nux.ro/download/nux/dextop/el7/x86\_64/nux-dextop-release-0-1.el7.nux.noarch.rpm
```

RpmForge

`rpm -Uvh http://pkgs.repoforge.org/rpmforge-release/rpmforge-release-0.5.3-1.el7.rf.x86_64.rpm`

Adobe repo 64-bit x86_64 ## For Flash player.

`rpm -ivh http://linuxdownload.adobe.com/adobe-release/adobe-release-x86_64-1.0-1.noarch.rpm`

`rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-adobe-linux`

`yum update -y`

4)

----- Installation of Java -----

Java is necessary to work OpenMeetings. Should install Open Java and the plugin icedtea-web:

`sudo yum install java-1.7.0-openjdk icedtea-web`

5)

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

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

Maybe it is installed but....

`yum -y install libreoffice`

6)

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

Should install packages and libraries necessary:

(In only one line with a space)

`yum install -y libjpeg libjpeg-devel ghostscript freetype freetype-devel unzip gcc gcc-c++ ncurses ncurses-devel make zlib zlib-devel libtool bison bison-devel openssl-devel bzip2 bzip2-devel file-roller git autoconf automake pkgconfig tomcat-native nmap`

7)

----- Installation ImageMagick, Sox and Swftools -----

ImageMagick will work with images files. Should install it and some more libraries:

```
yum install -y ImageMagick giflib giflib-devel giflib-utils
```

Sox work the sound. Will compile it:

```
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 (flash file) the uploaded files. Don't use a newer version swftools file. Don't have pdf2swf.

```
cd /opt
```

```
wget http://www.swftools.org/swftools-2013-04-09-1007.tar.gz
```

```
tar xzvf swftools-2013-04-09-1007.tar.gz
```

```
cd /opt/swftools-2013-04-09-1007
```

```
./configure --libdir=/usr/lib --bindir=/usr/bin
```

```
make
```

```
make install
```

```
cd /opt
```

8)

---- **Installation of Adobe flash player** ----

OpenMeetings even need Adobe Flash Player for rooms.

```
yum install -y flash-plugin
```

9)

---- **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`

10)

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

FFmpeg will work with video. Will install a libraries and vlc to play the recordings.

`yum install -y glibc alsa-lib-devel faac faac-devel faad2 faad2-devel gsm gsm-devel imlib2 imlib2-devel lame-devel vorbis-tools theora-tools libvpx-devel vlc`

This ffmpeg compilation is based on this url: (4-7-2015)

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

As it is, the compilation in this url gives an error when compiling x264 (second step).

After resolve that error and finish the compilation, gives an error about ogg when recording on OpenMeetings.

Then i supress one step in the url and add some ones more. And now works properly without error, and audio-video is synchronized. Ogg right.

Also i made a script to download, compile and install ffmpeg on Centos 7. It is tested and is ok.

During the x265 compilation, will look like stop for about 8 minutes in a text that say: **41%** Don't worry, everything is goeing right. Be patience.

When is finished will appear a text: **FFMPEG Compilation and Installation Finished!!!**

The best is to download the script and to read inside the zip for running it. To download:

https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_script_compile_Centos.zip?version=1&modificationDate=1436031503196&api=v2

After the compilation is finished you can go to **step 11)**

But if you prefer copy and paste, can be errors to put in order, i leave the text script:

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

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

```
# Script ffmpeg Centos
# Alvaro Bustos. Thanks to Hunter
# 4-7-2015
# Install libraries
yum install -y autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial
nasm pkgconfig zlib-devel

# Install yasm from repos
yum install -y yasm

# 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
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
git clone git://git.opus-codec.org/opus.git
curl -O http://downloads.xiph.org/releases/ogg/libogg-1.3.2.tar.gz
curl -O http://downloads.xiph.org/releases/vorbis/libvorbis-1.3.4.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

# 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$HOME/ffmpeg_build/lib" CPPFLAGS="-I$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 and Installation Finished!"
```

...to here.

Concede permission of execution:

```
chmod +x /opt/ffmpeg-centos.sh
```

```
cd /opt
```

Now be connected to Internet, run the script and wait some long minutes while the compilation:

```
./ffmpeg-centos.sh
```

Remember the warning about 8 minutes in a false stop...

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

11)

----- Installation MariaDB database server -----

MariaDB is the database server.

We install it:

```
yum install -y mariadb mariadb-server
```

...and run mariadb:

```
systemctl start mariadb.service
```

Give a password to mariadb root :

```
mysqladmin -u root password new-password
```

Make a database for OpenMeetings:

```
mysql -u root -p
```

...will ask for the root password we does just now:

```
CREATE DATABASE open306 DEFAULT CHARACTER SET 'utf8';
```

...now do a new user with a password:

```
CREATE USER 'hola'@'localhost' IDENTIFIED BY '123456';
```

...and give privileges to this user on the open306 database:

```
GRANT ALL PRIVILEGES ON open306.* TO 'hola'@'localhost' WITH GRANT OPTION;
```

```
FLUSH PRIVILEGES;
```

```
quit
```

```
open306 ..... name of the database
hola ..... user for that database
123456 ..... password of that user
```

To start, restart or stop mariadb:

```
systemctl start mariadb.service
```

```
systemctl restart mariadb.service
```

```
systemctl stop mariadb.service
```


12)

----- 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
```

...and download the OpenMeetings file:

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

```
unzip apache-openmeetings-3.0.6.zip
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-3.0.6.zip /opt
```

Do to nobody owner of the whole OpenMeetings installation folder:

```
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
```

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

...to modify 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 modify on **line 83**

, Username=root

...to

, Username=hola

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

...to modify on **line 84**

„ Password=" />

...to

, Password=123456" />

...it is the password that we did initially for the user "hola" 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](#)

13)

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

Build a script to start and stop red5-OpenMeetings, that we'll call red5:

[cd /opt](#)

[sudo gedit /etc/init.d/red5](#)

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

```

#
#!/bin/sh -e
#
# Startup script for Red5

export RED5_HOME=/opt/red5306

start_red5="$RED5_HOME/red5.sh start"
stop_red5="$RED5_HOME/red5-shutdown.sh stop"

start() {
    echo -n "Starting Red5: "
    ${start_red5} &
    echo "done."
}
stop() {
    echo -n "Shutting down Red5: "
    ${stop_red5}
    echo "done."
}

case "$1" in
    start)
        start
        ;;
    stop)
        stop
        ;;
    restart)
        stop
        sleep 10
        start
        ;;
    *)
        echo "Usage: $0 {start|stop|restart}"
esac

exit 0

```

...to here.

If you made the installation in any other path, can modify the line:

```
RED5_HOME=/opt/red5306
```

...to

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

Concede permission of execution to the script:

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

14)

Restart mariadb:

```
systemctl restart mariadb.service
```

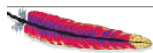
...and start red5-OpenMeetings, maybe in other window shell:

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

...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 whiteboard

- **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.arozcru.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** (bottom) 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	open306
Specify DB user	hola
Specify DB password	123456

...clic **Next** again:



OpenMeetings

OpenMeetings - Installation

Userdata

Username	<input type="text"/>
Userpass	<input type="text"/>
E-Mail	<input type="text"/>
User Time Zone	Europe/Madrid

Organisation(Domains)

Name	<input type="text"/>
------	----------------------

...here we must to introduce necessarily, to be able to continue, the following:

Username = a-name ...this user will be administrator.

Userpass = a-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 **Last**



OpenMeetings


OpenMeetings - Installation

Please click "Finish" button to start installation!

< Previous
Next >
Last
Finish

Clic **Finish**...wait a seconds untill the tables are fill in the database.

When has concluded, this another page will appear:



OpenMeetings

OpenMeetings - Installation

Enter the Application

If your Red5-Server runs on a different Port or on a different domain
[alter the config values of the client](#)

Mailing list

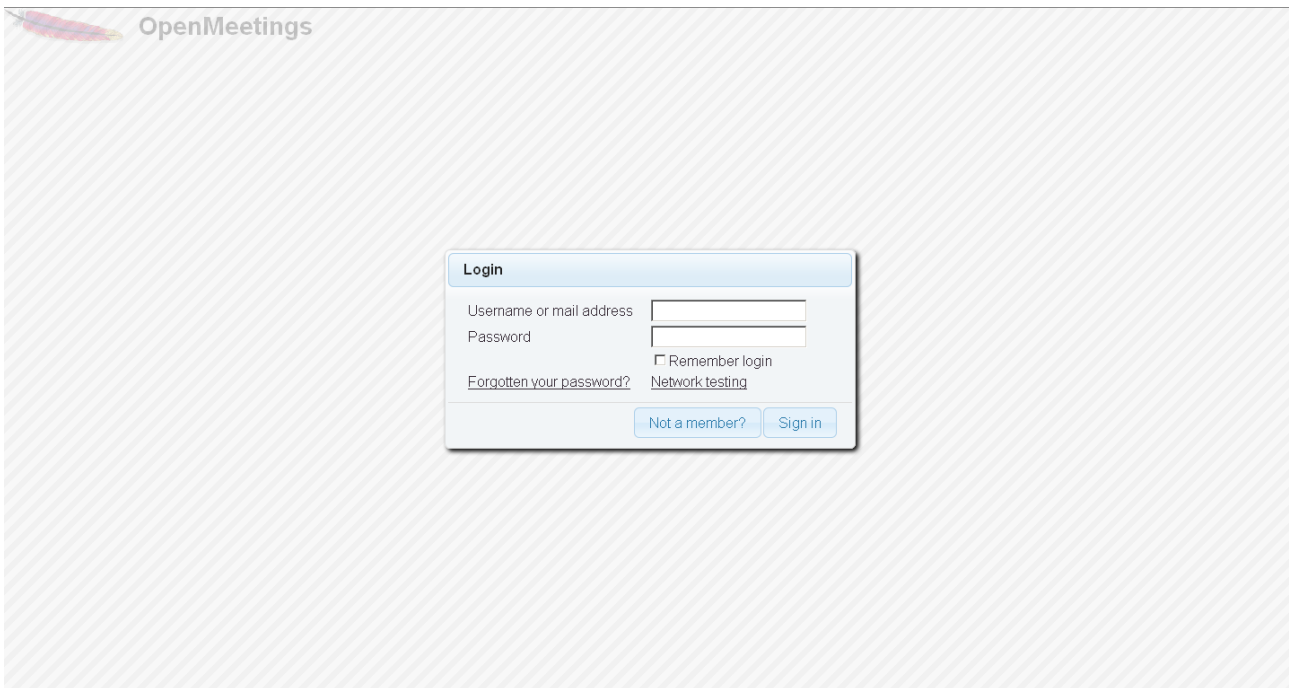
<http://openmeetings.apache.org/mail-lists.html>

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

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

< Previous
Next >
Last
Finish

...click 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 want to access 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 access OpenMeetings from other machines.

15)

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

Once you access OpenMeetings go to:

Administration → Configuration

OpenMeetings

Home | Rooms | Recordings | Administration

Welcome

Hello firstname lastname

Timezone Europe/Madrid
Unread messages 0
[Edit your profile](#)

Upload new image

Help and support

[Project website \(http://openmeetings.apache.org\)](http://openmeetings.apache.org)
[User mailing list \(http://openmeetings.apache.org/mail-lists.html\)](http://openmeetings.apache.org/mail-lists.html)
[Network testing](#)

My rooms

My conference room (for 1-16 users) Users 0 / 25

My webinar room (for 1-120 users) Users 0 / 150

Click on a room to get the room details

Room #

Comment

Users in this room

Note: A red arrow points to the 'Administration' menu item in the top navigation bar.

...introduce the parameters for the conversion of files, the audio and the video:

Home | Rooms | Recordings | Administration

ID	Key	Value
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default_lang_id	1
16	swftools_zoom	100
17	swftools_jpegquality	85
18	swftools_path	
19	imagemagick_path	
20	sox_path	
21	ffmpeg_path	
22	office.path	
23	jod.path	/opt/jod/lib
24	rss_feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
25	rss_feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
26	sendEmailAtRegister	0
27	sendEmailWithVerificationCode	0
28	default_export_font	TimesNewRoman
29	default.rpc.userid	1
30	application.base.url	http://localhost:5080/openmeetings/
31	red5sip.enable	no
32	red5sip.room_prefix	400

Configuration

Key:

Value:

Last update:

Updated by:

Comment:

Note: Red arrows point to the 'ffmpeg_path' row in the table (1), the 'Key' field in the configuration form (3), and the 'Value' field in the configuration form (2).

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: [/usr/lib64/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.

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-5.1.35.jar
```

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

```
rm -f -R /opt/sox-14.4.2
```

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