Installation of Apache OpenMeetings 3.1.3 on Centos 6.8

This tutorial is made based on fresh installations of

CentOS-6.8-x86_64-LiveCD.iso

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.1.3 stable, that is to say will suppress his compilation. It is done step by step.

28-9-2016

Starting…

1)

yum install -y gedit wget

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

sudo gedit /etc/selinux/config

…modify:

SELINUX=enforcing

...to

SELINUX=**permissive**

2)

------ **Update the System** ------

Update operative system:

yum update -y

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

reboot

3)

------ **ADD Repos** ------

Add the **Epel** repository

  For Centos 6.x 32 bit

cd /opt

wget http://dl.fedoraproject.org/pub/epel/6/i386/epel-release-6-8.noarch.rpm

rpm -Uvh epel-release-6-8.noarch.rpm

  For CentOS 6.x 64 bit:

cd /opt

wget http://dl.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm

rpm -Uvh epel-release-6-8.noarch.rpm

Añadimos el repositorio **linuxtech** (32 y 64 bits)

...para la instalación de vlc, reproductor de video para las futuras grabaciones que hagamos en OpenMeetings.:

cd /opt

wget http://pkgrepo.linuxtech.net/el6/release/linuxtech.repo

cp linuxtech.repo /etc/yum.repos.d

Adobe repo **32 bit** ## For Flash Player.

rpm -ivh http://linuxdownload.adobe.com/adobe-release/adobe-release-i386-1.0-1.noarch.rpm

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

Adobe repo **64-bit** ### 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

4)

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

Java **1.8** it is necessary to work OpenMeetings **3.1.3**. The 1.7 java version is for previous OM. We install Oracle Java. Open Java gives an error in some OpenMeetings function. I has tested.

For **Centos 6.x 32 bit**:

cd /opt

Download the file:

(All in one line only. 1ª and 2ª without space between them. A space to the 3ª)

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/8u101-b13/jdk-8u101-linux-i586.rpm"

...and install it:

rpm -ivh jdk-8u101-linux-i586.rpm

For **Centos 6.x 64 bit**:

cd /opt

Download the file:

(All in one line only. 1ª and 2ª without space between them. A space to the 3ª)

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/8u101-b13/jdk-8u101-linux-x64.rpm"

...and install it:

rpm -ivh jdk-8u101-linux-x64.rpm

Now, for Centos 6.x **32** and **64** bit.

Maybe you have installed various versions of Java. We select the just installed Oracle Java:

update-alternatives --config java

And to see if the selected version is active:

java -version

5)
------ Installation of LibreOffice ------

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

We install it:

yum -y install libreoffice libreoffice-headless

6)
------ Installation of necessary packages and libraries ------

We install packages and libraries that we´ll need later:

(Only one line with space between 1ª and 2ª)

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, work the images files jpg, png, gif, etc. We install it and some libraries:

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

Sox, work the sound. Will compile and install 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. LibreOffice convert to pdf the uploaded office files, and Swftools convert these pdf to swf (flash file), that later will show in the whiteboard. Don´t use a newer version, surely have not 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 participate in the process to convert uploaded files.

cd /opt

(Only one line without space between both)

wget https://storage.googleapis.com/google-code-archive-
downloads/v2/code.google.com/jodconverter/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 cmake mercurial nasm curl git

This ffmpeg compilation is based on this url, and the file versions are updated 28-9-2016:

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

Download the script i made, to compile and install ffmpeg on Centos 6.8. It is tested and is ok.
During the x265 compilation, will look like stop for a minutes in a text that say: **41%,**
Don´t worry, everything is goeing right. Be patience.
The result of any recording we do in OpenMeetings, will be in avi, flv, mp4 and ogg formats.

Will spend about 30 minutes the complete compilation.
When is finished, a text will announce it:

FFMPEG Compilation isFinished!

So, we download the script:

cd /opt

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg-centos2.sh

...concede execution perrmission to it:

chmod +x ffmpeg-centos2.sh

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

./ffmpeg-centos2.sh

When be finished, please, go to **step 11).**

But if you prefer copy and paste, i **advise not to do it**, i leave the commands script:

sudo gedit /opt/ffmpeg-centos.sh

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

```
# Script ffmpeg compile for Centos 6.x and Centos 7.x
# Alvaro Bustos. Thanks to Hunter
# Updated 12-8-2016
# 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.
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
git clone http://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-1.3.5.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

# 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/ffpmeg-centos2.sh

cd /opt

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

./ffmpeg-centos2.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 ------

We build a file-repository to download MariaDB data server.

> **For Centos 6.x 32 bit**:

sudo gedit /etc/yum.repos.d/MariaDB.repo

...copy and paste in:

[mariadb]
name = MariaDB
baseurl = http://yum.mariadb.org/10.0/centos6-x86
gpgkey=https://yum.mariadb.org/RPM-GPG-KEY-MariaDB
gpgcheck=1

> **For Centos 6.x 64 bit**:

sudo gedit /etc/yum.repos.d/MariaDB.repo

...copy and paste in:

[mariadb]
name = MariaDB
baseurl = http://yum.mariadb.org/10.0/centos6-amd64
gpgkey=https://yum.mariadb.org/RPM-GPG-KEY-MariaDB
gpgcheck=1

We install it:

yum -y install MariaDB-server MariaDB-client

...do a backup of the configuration file; and make a newone:

mv /etc/my.cnf /etc/my.bak

cp /usr/share/mysql/my-medium.cnf /etc/my.cnf

...and run MariaDB server:

service mysql start

Give a password to mariadb root . Please, replace new-password by your own whish.

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:

MariaDB [(none)]> CREATE DATABASE open313 DEFAULT CHARACTER SET 'utf8';

With this command, we has created a database called open313, though you can choose another name to your whish.

Now we create a user with all the permission on this open313 database.

<div align="center">(Only one line with space between both)</div>

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open313.* TO 'hola'@'localhost'
IDENTIFIED BY '123456' WITH GRANT OPTION;

* open313 .... name of the database
* hola   .... user for that database
* 123456 .... password of that user

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

Leave MariaDB:

MariaDB [(none)]> quit

12)

------ Installation of OpenMeetings ------

We´ll install OpenMeetings in /opt/red5313. All the following information will be based on this directory.

Call to our folder of installation red5313.

Make the folder:

mkdir /opt/red5313

cd /opt/red5313

...and download the OpenMeetings file:

wget http://ftp.cixug.es/apache/openmeetings/3.1.3/bin/apache-openmeetings-3.1.3.zip

unzip apache-openmeetings-3.1.3.zip

...save the unloaded file to /opt:

mv apache-openmeetings-3.1.3.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/5.1.39/mysql-connector-java-5.1.39.jar

...and copy it to where must be:

cp /opt/mysql-connector-java-5.1.39.jar /opt/red5313/webapps/openmeetings/WEB-INF/lib

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

gedit /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

Modify on line 71:

, Url=jdbc:mysql://localhost:3306/openmeetings_3_1?

...to

, Url=jdbc:mysql://localhost:3306/open313?

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

Modify on line 76:

, Username=root

...to

, Username=hola

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

Modify on line 77:

,, 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:

(Only one line without space between both)

chmod 640 /opt/red5313/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml

13)
------ Script to launch red5-OpenMeetings ------

We´ll download the script to run Red5-OpenMeetings:

cd /opt

wget https://cwiki.apache.org/confluence/download/attachments/27838216/red5-3

...copy it to where must be:

cp red5-3 /etc/init.d/

...concede execution permission:

chmod +x /etc/init.d/red5-3

If you made the installation in any other different path to /opt/red5313, please edit the script and modify the line:

RED5_HOME=/opt/red5313

...to

RED5_HOME=/your-path-installation

14)
                        ------ Run red5-OpenMeetings ------

Restart mariadb:

service mysql restart

...and run red5-OpenMeetings. Please, be connected to Internet, so the run will be quick:

/etc/init.d/red5-3 start

...wait untill the text "**clearSessionTable: 0**", 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 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!
   ○ Install **SoX** http://sox.sourceforge.net/. You should install SoX in a up to date copy! SoX 12.xx will NOT work!

If you have further questions or need support in installation or hosting:

Community-Support:

Mailing lists

Commercial-Support:

...push 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

Choose DB type	Apache Derby
Specify the name of the database	openmeetings
Specify DB user	user
Specify DB password	secret

Check

[<] [>] [>>] [Finish]

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

...will show the data base configuration we made in step 12, or with your own modifications.

Please, push   >   button, and will go to:

Now we must introduce the followings data, i order can continue the installation:

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

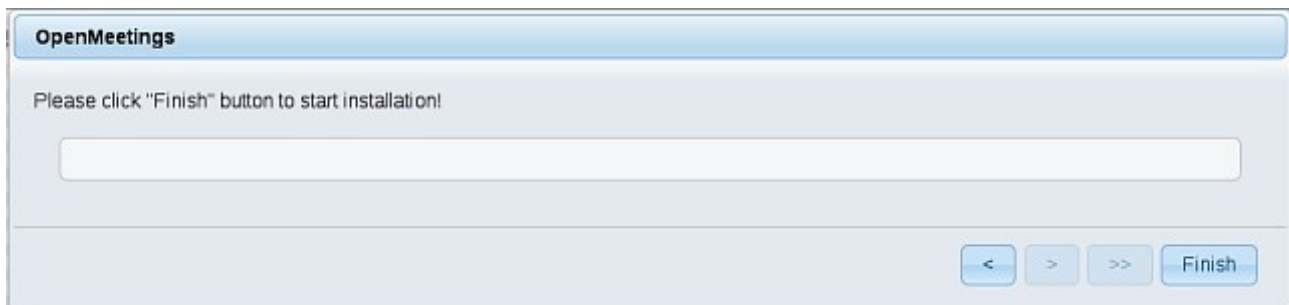**Userpass**   =   a-password ...for the previous user.

Email   =   email-adress ...of the previous user.

User Time Zone =   country where is this server

Name   =   example-openmeetings ...group name to choose.

When the installation be finished, we´ll configure the rest.

Now push the button   >>   (double arrow). Will show this:

Clic **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:
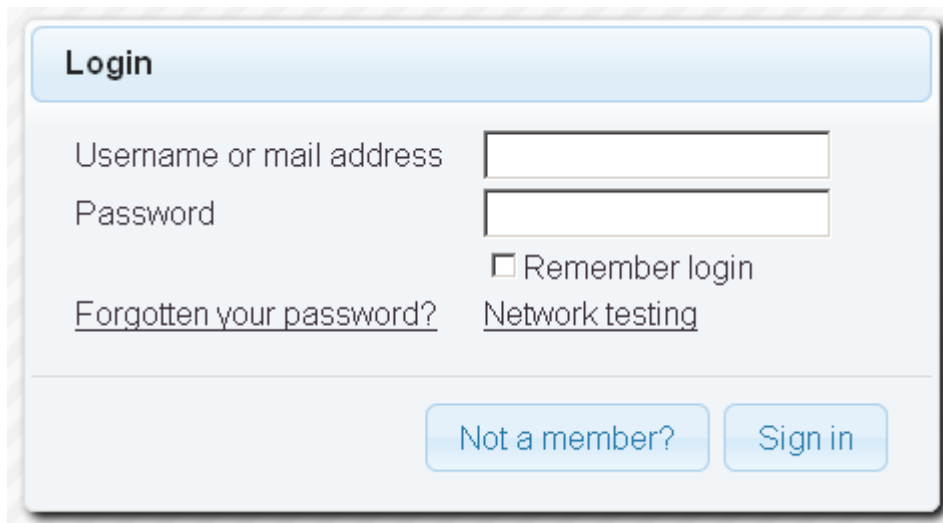
/etc/init.d/red5-3 restart
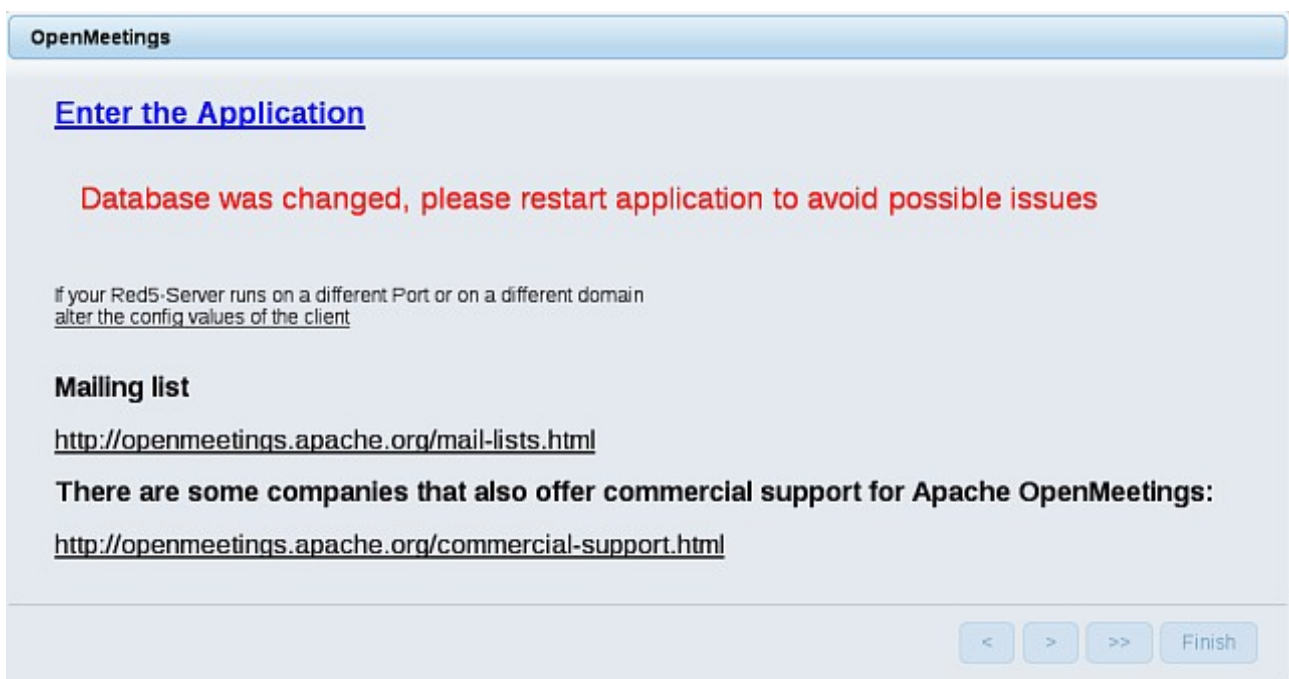
Now yes, you can clic on **Enter the Application,** or go with your browser to:

http://localhost:5080/openmeetings

...and will take us to the entry of OpenMeetings:

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, will be through:

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.

15)

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

Once you accede to OpenMeetings, please go to:

Administration → Configuration

...and 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/lib64/libreoffice

Clic on: **jod.path**...and to the right in **Value** type: /opt/jodconverter-core-3.0-beta-4/lib

Remember save after each change (arrow number **3,** in the up screenshot).

Now there is OpenMeetings ready to work rightly.

We´ll remove files and folders that already do not serve us, if you don´t like to save them:

rm -f /opt/jodconverter-core-3.0-beta-4-dist.zip

rm -f /opt/mysql-connector-java-5.1.39.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