



## **Installation of Apache OpenMeetings 3.2.0 on PCLinuxOS 2016**

**pclinuxos64-mate-2016.07.iso**

This tutorial is made based on fresh installations of PCLinuxOS 2016 Mate.

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.2.0 stable, that is to say, will suppress his compilation. It is done step by step.

16-2-2017

Starting...

**1)**

Update and upgrade the operative system. Please go to:

[apt-get update](#)

[apt-get upgrade](#)

**2)**

**----- Installation of libraries and packages -----**

(Only one line with space between each one)

```
apt-get install -y libjpeg-progs giflib-progs freetype-devel gcc-c++ zlib1-devel libtool bison bison-  
static-devel file-roller ghostscript freetype unzip gcc ncurses make zlib1 bzip2 wget ghostscript  
ncurses zlib1 zlib1-devel x264-devel git make automake nasm pavucontrol rpm-installer freetype2  
curl
```

3)

### ----- Installation of LibreOffice and Java Sun 1.8.x -----

When we install LibreOffice also will install automatically Java sun 1.8.x. OpenMeetings 3.2.0 need java 1.8 to work.

LibreOffice will convert to pdf the uploaded office files. We install it:

`lomanager`

...if show a message like this: *Please Update your system. (more details...)....*

...then please go to:

**Synaptic --> Mark All Upgrades --> Apply --> Apply**

...and we type in shell newly:

`lomanager`

...will show a window where select your locale language for LibreOffice, and after this answer yes or ok to any question.

Will start installing Java sun 1.8.x and continue with LibreOffice. If would not install java, you can do it:

`apt-get install java-sun`

Once the installation it is finished you can change the LibreOffice language interface in:

**Tools --> Options --> Language settings --> Languages --> User interface (select your language) --> OK**

LibreOffice (installed or updated 16-2-2017) is in: `/opt/libreoffice5.2`

4)

### ----- Installation of Adobe Flash Player -----

Flash player it is installed in Mate already, but not in KDE minimum. So will install it and firefox also, if you like it. Adobe Flash Player even is need it for rooms in OpenMeetings:

```
apt-get install -y firefox flash-player-plugin
```

5)

----- **Installation of ImageMagick, Sox and Swftools** -----

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

```
apt-get install ImageMagick
```

**Sox**, work the sound. It is installed, but we'll uninstall it and compile a newer version than it is in the repo:

```
apt-get remove sox
```

...and download and compile the new version:

```
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 office files uploaded, and Swftools convert these pdf to swf, flash files, that later will show in the whiteboard. Don't install a newer version, surely will have not pdf2swf. We install it. Please, modify **your\_username** to your real user name:

```
cd /home/your_username
```

...download it: (Only one line without space between both)

```
wget ftp://ftp.is.freebsd.org/pub/repoforge/redhat/el6/en/x86_64/dag/RPMS/swftools-0.9.1-1.el6.rf.x86_64.rpm
```

Please, go to your /home/**your\_username**, and (be connected to Internet):

**Right clic on** the swftools-0.9.1-1.el6.rf.x86\_64.rpm file --> **Open with** --> **RPM-installer** → will

ask for root password → push **Enter**

Now will block this swftools version in Synaptic and then can't update installing a new version:

**Synaptic** → click on **swftools** line → **Package** (Up left) --> **Lock Version**

6)

----- **Install, remove, rename some packages** -----

We'll install lame for mp3 audio:

`apt-get install lame`

We'll remove ffmpeg that automatically was installed in Mate. In KDE minimum was not but to do it is not bad. Later we'll build our own ffmpeg.

`apt-get remove ffmpeg`

...will remove automatically vokoscreen also.

Rename x264, that we'll compile later:

`mv /usr/bin/x264 /usr/bin/x264-synaptic`

...because if we remove x264 will lose automatically too many packages.

Now will block this x264 version in Synaptic and then can't update installing a new version:

**Synaptic** → click on **x264** line → **Package** (Up left) --> **Lock Version**

7)

----- **Compiling and installing FFmpeg** -----

To compile and install ffmpeg, lame, yasm and x264, i've followed a guide with some modifications. Files updated 14-2-2107:

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

Install a librarie need it for the compilation:

Modify `your_username` to your real user name:

```
cd /home/your_username
```

...download it:

(Only one line without space between both)

```
wget http://download.opensuse.org/repositories/home:/ganglia:/musescore2/SLE11/x86_64/  
libmp3lame-devel-3.99.5-2.1.x86_64.rpm
```

Please, go to your /home/your\_username, and (be connected to Internet):

**Right clic on the libmp3lame-devel-3.99.5-2.1.x86\_64.rpm file --> Open with --> RPM-installer**  
→ will ask for root password → push **Enter**

The result of any recording we do in OpenMeetings, will be in mp4 format.  
For compile ffmpeg, i build a scrip that will download, compile and install it.  
Download it:

```
cd /opt
```

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

...concede perimission of execution:

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

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

```
./ffmpeg-pclinuxos.sh
```

The compilation spend about 25 minutes. When be finish, will announce it, with this text:

**FFmpeg Compilation is Finished!**

Block in Synaptic: **ffmpeg** and **yasm** ... *one by one*:

**Synaptic** → click on **ffmpeg** line → **Package** (up to left) --> **Lock Version**

...don't worry if look the packages are not installed.

***This is very important:*** When you update or upgrade the operative system, please do it from Synaptic, so will respect the locked versions, thing that will do not if update or upgrade from the shell.

FFmpeg is installed in: /usr/local/bin

8)

----- Installation of MySQL and building database -----

We'll employ MySQL server, for the database.

```
apt-get install -y mysql
```

...run mysql:

```
service mysqld start
```

...we do a mysql upgrade:

```
mysql_upgrade
```

...and give a root mysql password replacing **new-password** for your own preference, and remember it:

```
/usr/bin/mysqladmin -u root password new-password
```

Now we'll build a database and an user in MySQL for OpenMeetings:

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

...will ask for password (you just made right now) type it and make the database:

```
mysql> CREATE DATABASE open320 DEFAULT CHARACTER SET 'utf8';
```

(Only one line with space between both)

```
mysql> GRANT ALL PRIVILEGES ON open320.* TO 'hola'@'localhost' IDENTIFIED BY '123456' WITH GRANT OPTION;
```

...and leave MySQL:

```
mysql> quit
```

- \* **open320** ..... is the data base name
- \* **hola** ..... is the user name for this data base
- \* **123456** ..... is the password for this user

You are free to change these names and password, but remember them. Later we'll need it.

Now we'll open mysql port 3306, so OpenMeetings can connect with it:

For **KDE**:

```
kwrite /etc/my.cnf
```

For **MATE**:

```
pluma /etc/my.cnf
```

...and the line number 51: **skip-networking**

...modify so, commented:

```
# skip-networking
```

...and restart mysql:

```
service mysqld restart
```

9)

### ----- Installation of Apache OpenMeetings -----

We'll install the 3.2.0 stable version.

We'll make the OpenMeetings installation in /opt/red5320

Make a folder called **red5320** where download the Apache OpenMeetings file and where make the installation:.

```
mkdir /opt/red5320
```

```
cd /opt/red5320
```

```
wget http://apache.miloslavbrada.cz/openmeetings/3.2.0/bin/apache-openmeetings-3.2.0.zip
```

```
unzip apache-openmeetings-3.2.0.zip
```

```
mv apache-openmeetings-3.2.0.zip /opt
```

.

10)

### ----- Connector Java MySQL -----

This file is need it to connect OpenMeetings with MySQL. Download and install it:

```
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
```

```
cp mysql-connector-java-5.1.39.jar /opt/red5320/webapps/openmeetings/WEB-INF/lib
```

11)

### ----- Configuring OpenMeetings for MySQL -----

Will introduce our data base name, user and password we made when MySQL configuration.

For MATE:

```
pluma /opt/red5320/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

For KDE:

```
kwrite /opt/red5320/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/open320?....
```

...open320 is the database name we gives when install MySQL and build it.

**Modify lines 77 and 78 respectively:**

```
, Username=root  
, Password=" />
```

to

```
, Username=hola  
, Password=123456" />
```



...**hola** is the user name we gives when install MySQL for **open320** database.

...**123456** is the password for **hola** user.

If you choose any other database name, user name or password, here is where to type them.  
Protect the access to this file:

(Only one line witout space between both)

```
chmod 640 /opt/red5320/webapps/openmeetings/WEB-INF/classes/META-INF/mysql_persistence.xml
```

12)

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

We download the scrypt will 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/
```

...and concede execution permission:

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

If you made the installation in other path, edit the scrypt and modify the line:

```
RED5_HOME=/opt/red5320
```

...to

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

13)

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

Restart MySQL (be connected to Internet):

`service mysqld restart`

...and start red5-OpenMeetings (be connected to Internet):

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

...wait until 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 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 **SWFTTools** 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 **SWFTTools** is 0.9 as prior version have a bug that does lead to wrong object dimensions in the Whiteboard

**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 database configuration with Derby, but we employ 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

**Choose DB type** Apache Derby

**Specify the name of the database** openmeetings

**Specify DB user** user

**Specify DB password** secret

Check

< > >> Finish

...so, please 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

**Choose DB type** MySQL

**Specify DB host** localhost

**Specify DB port** 3306

**Specify the name of the database** open.3.2.0


**Specify DB user** hola

**Specify DB password** 123456

Check

< > >> Finish

...will show the database configuration we made in step 11, or with your own modifications.

Please, press  button, and will go to:

Now we must introduce the followings data:


**Username** = a-name ...this user will have administrator rights

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

**EMail** = email-address ...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 (system\_email\_addr)** == [john@gmail.com](mailto:john@gmail.com)

**SMTP-Server (smtp\_server)** == [smtp.gmail.com](mailto:smtp.gmail.com)

**SMTP-Server Port (default Smtip-Server Port is 25)  
(smtp\_port)** == 587

**SMTP-Username (email\_username)** == [john@gmail.com](mailto:john@gmail.com)

**SMTP-Userpass (email\_userpass)** == password of john@gmail.com

**Enable TLS in Mail Server Auth** == Yes


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

**Default Language** = english

...the rest we can leave as is. If necessary, can modify it as you like it:

**OpenMeetings**

**Configuration**

Allow self-registering (allow_frontend_register)	Yes <input type="button" value="v"/>
Send Email to new registered Users (sendEmailAtRegister)	No <input type="button" value="v"/>
New Users need to verify their EMAIL (sendEmailWithVerificationCode)	No <input type="button" value="v"/>
Default Rooms of all types will be created	Yes <input type="button" value="v"/>
Mail-Referer (system_email_addr)	<input type="text" value="noreply@openmeetings.apache.org"/>
SMTP-Server (smtp_server)	<input type="text" value="localhost"/>
SMTP-Server Port(default SmtP-Server Port is 25) (smtp_port)	<input type="text" value="25"/>
SMTP-Username (email_username)	<input type="text"/>
SMTP-Userpass (email_userpass)	<input type="text"/>
Enable TLS in Mail Server Auth	No <input type="button" value="v"/>
Set inviter's email address as ReplyTo in email invitations (inviter.email.as.replyto)	Yes <input type="button" value="v"/>
Default Language	Inglés <input type="button" value="v"/> 
Default Font for Export [default_export_font]	TimesNewRoman <input type="button" value="v"/>

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:

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

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

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

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

**OpenOffice/LibreOffice Path (Path) for jodconverter** == [/opt/libreoffice5.2](#)

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 press 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

*You can use this default crypt type which is equal to PHP-MD5 function or BSD-Style encryption by using: **org.apache.openmeetings.util.crypt.MD5CryptImplementation** for more information or to write your own Crypt-Style see: [Custom Crypt Mechanism](#) You can edit this value later BUT previous created Users and Sessions might be not usable anymore*

**red5SIP Configuration**

Enable SIP

*Enable red5SIP integration*

SIP rooms prefix

*Prefix for phone number of conference rooms*

SIP extensions context

*Context of Asterisk extensions*

Now push the button  Will show this window:

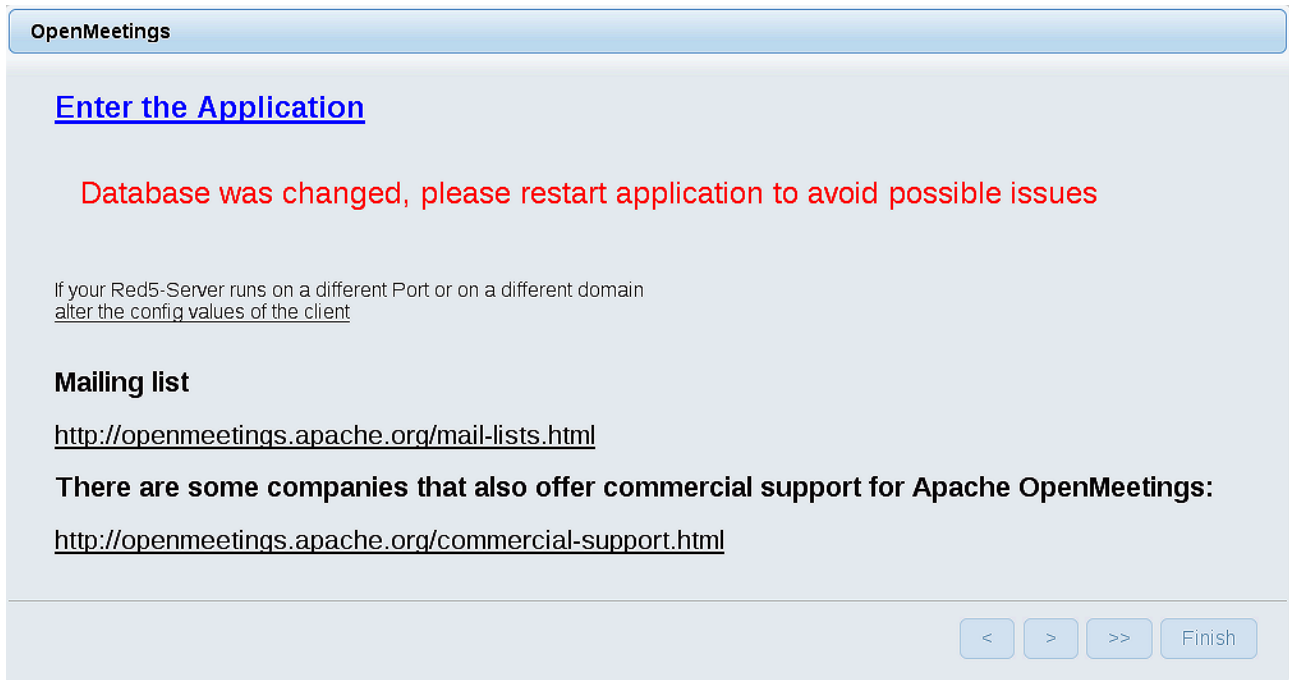
**OpenMeetings**

Please click "Finish" button to start installation!

Press **Finish** button ...wait a seconds until 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, open a new shell window, and run this command (be connected to Internet):

[/etc/init.d/red5-2 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:

The screenshot shows a login form titled "Login". It contains the following elements: a label "Username or mail address" next to a text input field; a label "Password" next to a password input field; a checkbox labeled "Remember login"; a link "[Forgotten your password?](#)"; and a link "[Network testing](#)". At the bottom, there are two buttons: "Not a member?" and "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 to OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember to open in the server the two following ports:

**1935 5080**

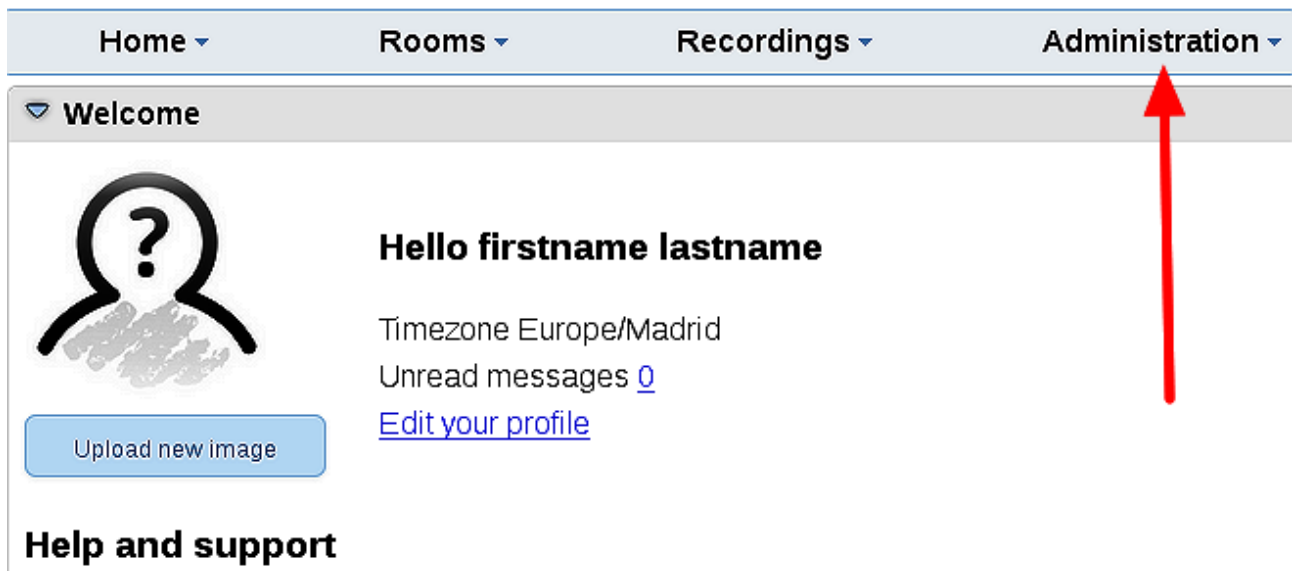
...in order that it could accede to OpenMeetings from other machines, in Lan or Internet.

14)

----- **Configuration of OpenMeetings** -----

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:

ID	Key	Value
4	allow.oauth.register	1
5	default_group_id	1
6	smtp_server	localhost
7	smtp_port	25
8	system_email_addr	noreply@openmeetings.apache.org
9	email_username	
10	email_userpass	
11	mail.smtp.starttls.enable	0
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	

**Configuration**

Key: swftools\_path

Value:

Last update:

Updated by:

Comment: Path To SWF-Tools

1 → (row 18)

2 → (Value field)

3 → (Configuration window)

And this is all.



If you have some doubt or question, please raise it in Apache OpenMeetings forums:

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

Thank you.

Alvaro Bustos

