



## **Installation of Apache OpenMeetings 4.0.6 on Manjaro Linux**

This tutorial is based on a fresh installations of

**manjaro-mate-17.1.7-stable-x86\_64.iso**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 4.0.6 stable, that is to say will suppress his compilation. It is done step by step.

15-10-2018

Please, be connected to Internet during all the process tu 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:

`pacman -Syu`

2)

**----- Installation of OpenJava 1.8 -----**

Java it is necessary for OpenMeetings **4.0.6**. We'll install Open Java 1.8.  
Continue as root:

```
pacman -S jdk8-openjdk
```

...and the plugin that later, and being in a room, we can record and share desktop:

```
pacman -S icedtea-web
```

Do OpenJava as default (maybe is another java versions) and exit as root:

```
archlinux-java set java-8-openjdk/jre
```

```
exit
```

3)

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

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

We install LibreOffice and Firefox (my Arch Linux installation have Mate desktop):

```
sudo pacman -S libreoffice
```

...press **Enter** to any question.

4)

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

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

(Only one line with space between each one)

```
sudo pacman -S libjpeg ghostscript unzip gcc ncurses make zlib libtool bison bzip2 file-roller  
autoconf automake pkgconf tomcat-native nmap curl freetype2 nano base-devel fakeroot jshon  
expac git wget
```

5)

#### ----- Installation ImageMagick and Sox -----

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

```
sudo pacman -S imagemagick
```

**Sox**, work the sound. We install it:

```
sudo pacman -S sox
```

6)

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

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

```
sudo pacman -S flashplugin
```

7)

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

FFmpeg work with video. Will install a libraries and paquets. Access as root to shell:

```
su ...will ask for root password,
```

(Only one line with space between both)

```
pacman -S glibc faac faad2 gsm imlib2 vorbis-tools autoconf automake cmake gcc git libtool make  
mercurial nasm pkgconfig yasm
```

The ffmpeg compilation it is based on this url, updated file versions 15-10-2018:

<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_archlinux2.sh
```

...concede execution permission to it:

```
chmod +x ffmpeg_archlinux2.sh
```

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

```
./ffmpeg_archlinux2.sh
```

The compilation will spend about 30 minutes.

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

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

**8)**

----- **Installation of MariaDB data server** -----

MariaDB is the data server. We install it: (continue as root in shell)

```
pacman -S mariadb
```

Initialize data directories (be connected to Internet):

```
mysql_install_db --user=mysql --basedir=/usr --datadir=/var/lib/mysql
```

...and run MariaDB:

```
systemctl start mysqld
```

Give a password to MariaDB root . Please, modify **new-password** by your own and remember it:

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

Access to MariaDB:

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

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

Make a database called open406, for OpenMeetings. User password must be of 8 digits minimum:

```
MariaDB [(none)]> CREATE DATABASE open406 DEFAULT CHARACTER SET 'utf8';
```

Now we create a user with all permission on this open406 database:

(Only one line with space between both)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open406.* TO 'hola'@'localhost'  
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

```
* open406 ..... 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 leave MariaDB:

```
MariaDB [(none)]> quit
```

9)

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

We'll install OpenMeetings in /opt/red5406. All the following information will be based on this directory.

Call to our folder of installation red5406

Make that folder:

```
mkdir /opt/red5406
```

```
cd /opt/red5406
```

...and download the OpenMeetings file:

```
wget http://archive.apache.org/dist/openmeetings/4.0.6/bin/apache-openmeetings-4.0.6.zip
```

```
unzip apache-openmeetings-4.0.6.zip
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-4.0.6.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/5.1.46/mysql-connector-java-5.1.46.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.46.jar /opt/red5406/webapps/openmeetings/WEB-INF/lib
```

10)

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

We make the folder /etc/init.d, where put the red5 run script:

```
mkdir /etc/init.d
```

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/red5406, please edit the script and modify the line:

```
RED5_HOME=/opt/red5406
```

...to

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

11)

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

Restart MariaDB:

```
systemctl restart mysqld
```

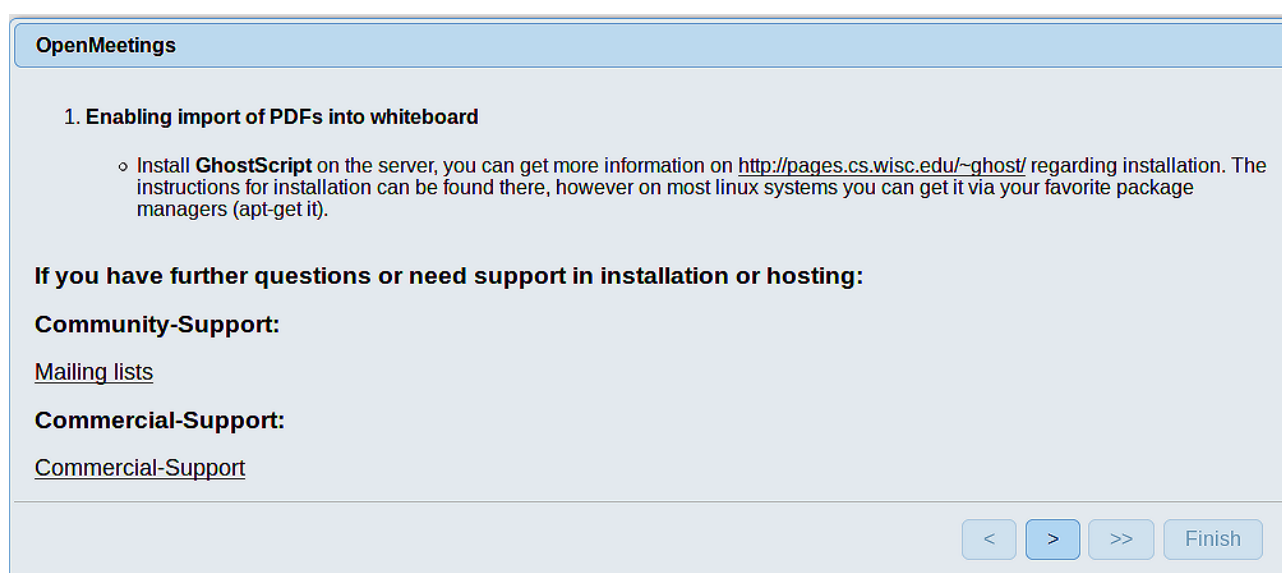
...and run red5-OpenMeetings. Please, open a new terminal as root, and be connected to Internet, so the running will be quick:

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

...wait 30 or 40 seconds for running red5-OpenMeetings completely. 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).

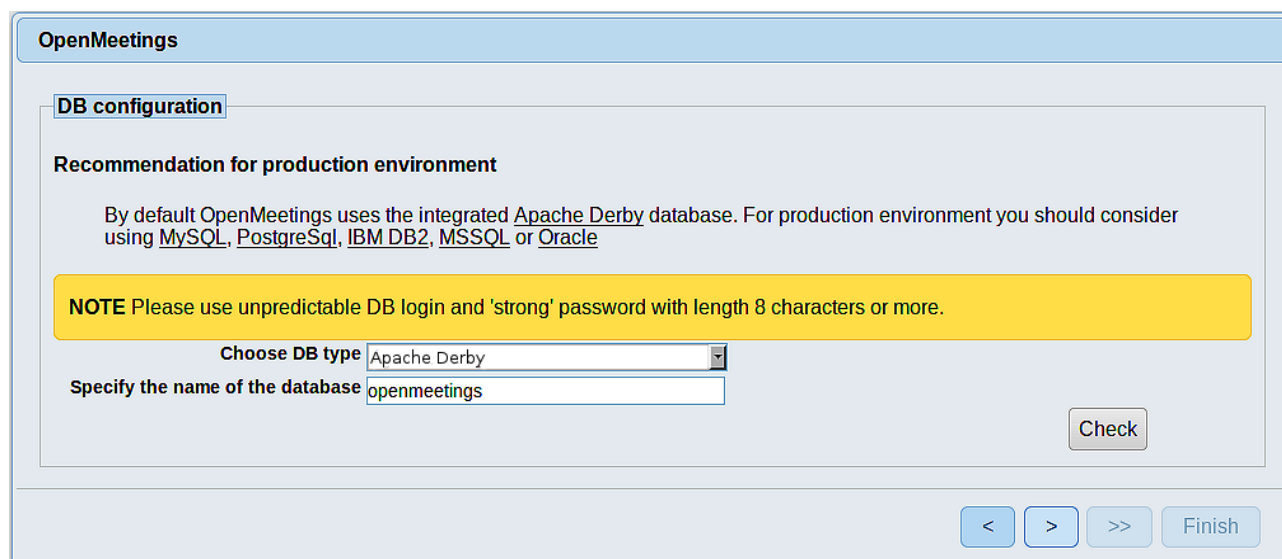
**If you have further questions or need support in installation or hosting:**

**Community-Support:**  
[Mailing lists](#)

**Commercial-Support:**  
[Commercial-Support](#)

< > >> Finish

...push 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:

The screenshot shows the 'OpenMeetings' application window with the 'DB configuration' section active. It includes a recommendation for production environments, a note about using unpredictable DB login and strong passwords, and several input fields for database configuration. The 'Choose DB type' dropdown is set to 'MySQL'. Other fields include 'Specify DB host' (localhost), 'Specify DB port' (3306), 'Specify the name of the database' (openmeetings), 'Specify DB user' (empty), and 'Specify DB password' (empty). A 'Check' button is located at the bottom right of the configuration area. At the very bottom of the window, there are navigation buttons: '<', '>', '>>', and 'Finish'.

Now we must introduce the database name, user name and his password we did at the step 8:

**Specify the name of the database** = open406

**Specify DB user** = hola

**Specify DB password** = 1a2B3c4D

Press  button, and will go to:

The screenshot shows the 'OpenMeetings' application window with the 'Userdata' section active. It contains four input fields: 'Username', 'Userpass', 'EMail', and 'User Time Zone'. The 'User Time Zone' dropdown is set to 'Europe/Madrid'. Below this is the 'Group(Domains)' section with a 'Name' input field. At the bottom of the window, there are navigation buttons: '<', '>', '>>', and 'Finish'.



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**

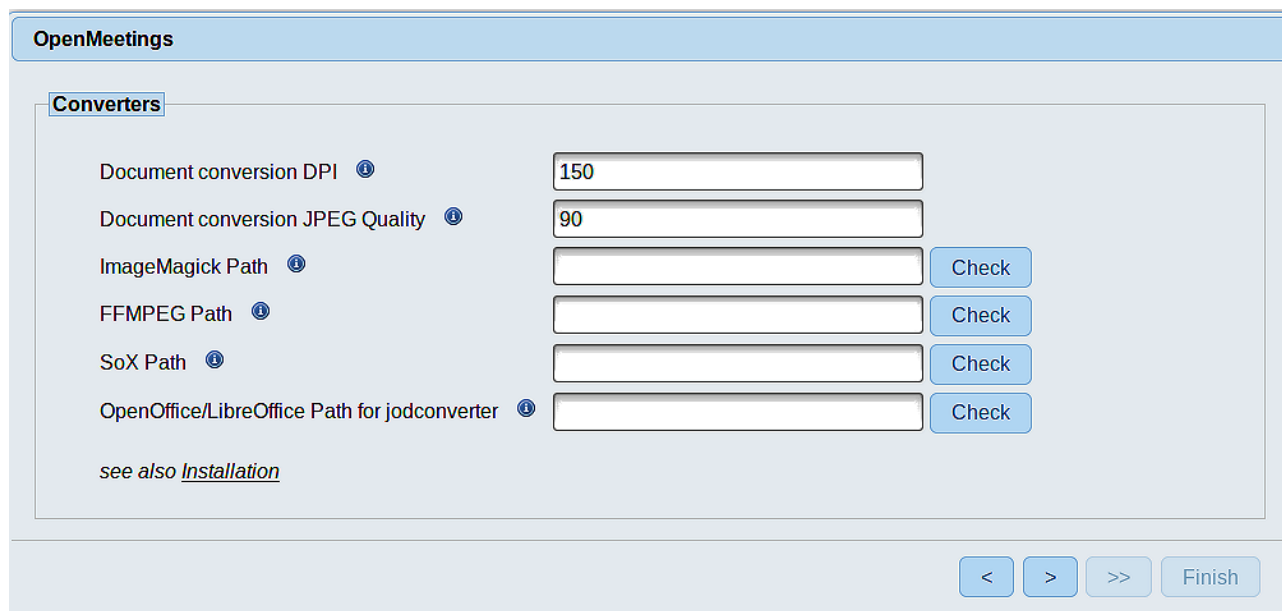
Allow self-registering	<input checked="" type="checkbox"/>
Send Email to new registered Users	<input type="checkbox"/>
New Users need to verify their EMail	<input type="checkbox"/>
Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)	<input checked="" type="checkbox"/>
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>	==	john@gmail.com
<b>SMTP-Server</b>	==	smtp.gmail.com
<b>SMTP-Server Port (default SmtP-Server Port is 25)</b>	==	587
<b>SMTP-Username</b>	==	john@gmail.com
<b>SMTP-Userpass</b>	==	password of john@gmail.com
<b>Enable TLS in Mail Server Auth</b>	==	...turn green the button to activate
<b>Default Language</b>	==	...select your language

...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 ⓘ

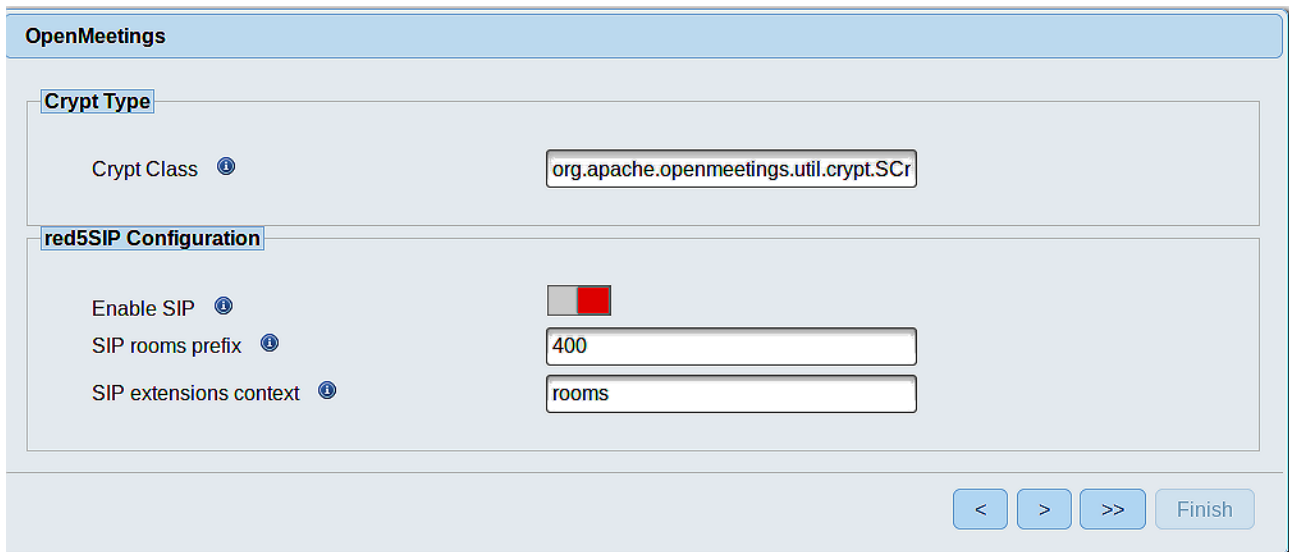
see also [Installation](#)

< > >> Finish

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

<b>ImageMagick Path</b>	==	/usr/bin
<b>FFMPEG Path</b>	==	/usr/local/bin
<b>SOX Path</b>	==	/usr/bin
<b>OpenOffice/LibreOffice Path for jodconverter</b>	==	/usr/lib/libreoffice

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:



The screenshot shows the 'OpenMeetings' configuration window. It has a title bar 'OpenMeetings' and two main sections:

- Crypt Type:** Contains a 'Crypt Class' label with a help icon and a text input field containing 'org.apache.openmeetings.util.crypt.SCr'.
- red5SIP Configuration:** Contains three items:
  - 'Enable SIP' with a checked checkbox.
  - 'SIP rooms prefix' with a text input field containing '400'.
  - 'SIP extensions context' with a text input field containing 'rooms'.

At the bottom right, there are four buttons: '<', '>', '>>', and 'Finish'.

Now, touch the button  Will show this window:

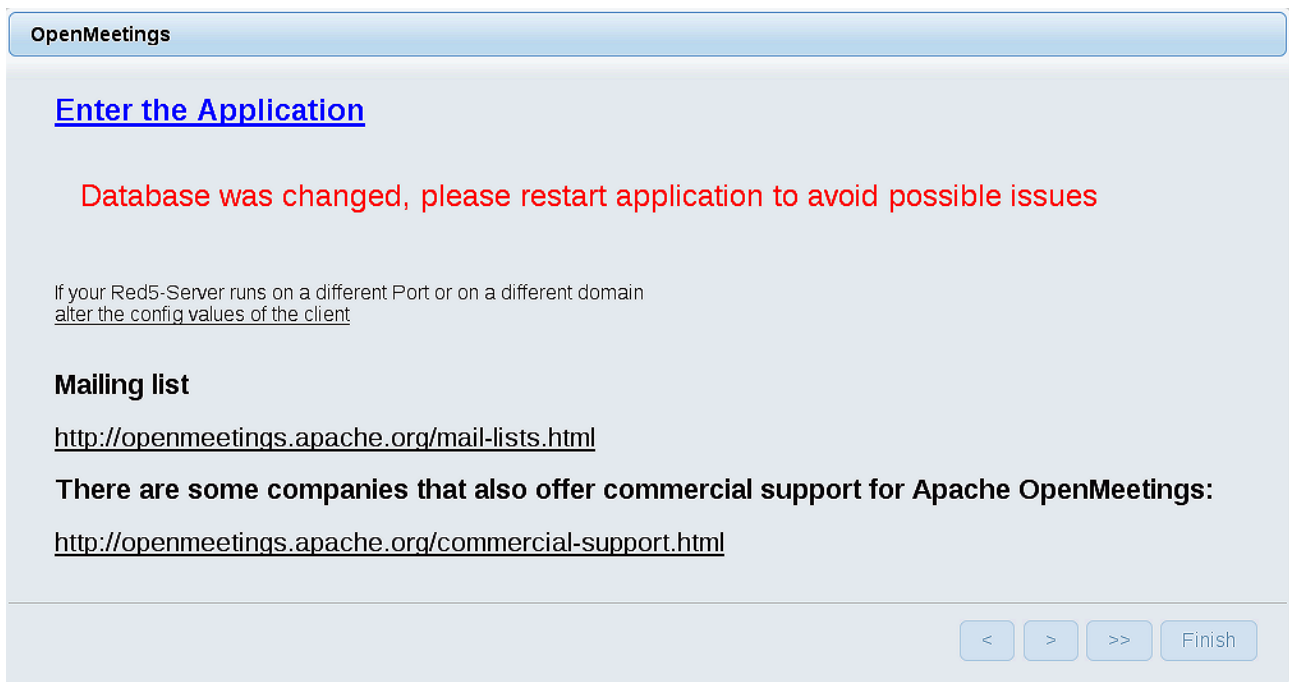


The screenshot shows the 'OpenMeetings' window after clicking the next button. The title bar is 'OpenMeetings'. The main content area contains the text 'Please click "Finish" button to start installation!' and a long, empty progress bar below it. At the bottom right, there are four buttons: '<', '>', '>>', and '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`



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 with a blue header bar. It contains the following elements: "Username or mail address" with an input field, "Password" with an input field, a checkbox labeled "Remember login", a link for "Forgotten your password?", and a link for "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 OpenMeetings, would be:

<http://localhost:5080/openmeetings>

Remember to open in the server, the two following ports:

**1935 5080**

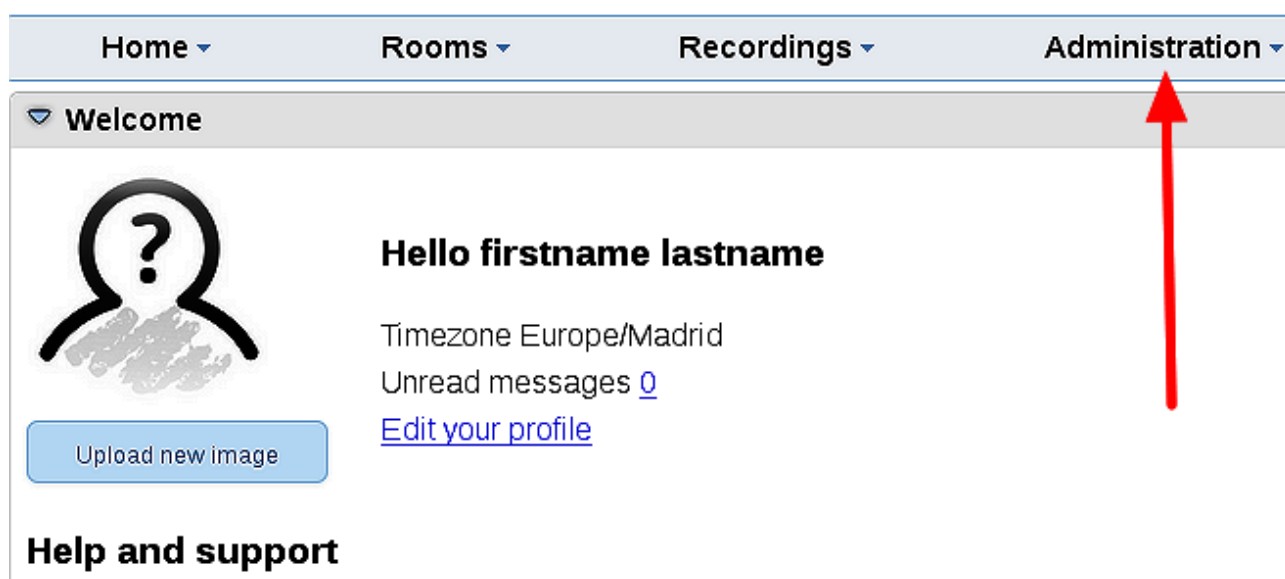
...in order that it could accede to OpenMeetings from other machines in Lan or Internet.

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**



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

The screenshot shows the OpenMeetings Administration interface. On the left is a table of configuration items, and on the right is a configuration form for a selected item. Red arrows indicate the mapping between the table and the form:

- Arrow 1: Points from the 'path.ffmpeg' row in the table to the 'Key' field in the form.
- Arrow 2: Points from the 'Value' field in the form to the 'path.ffmpeg' row in the table.
- Arrow 3: Points from the 'Type' dropdown in the form to the 'Type' column in the table.

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

The configuration form on the right shows the following details for the selected item:

- Type: string
- Key: path.ffmpeg
- Value: (empty)
- Last update: Oct 17, 2017 5:54:57 PM
- Updated by: toro
- Comment: Path To FFMPEG

12+1)

----- Special step for ImageMagick -----

We modify ImageMagick, so OpenMeetings can upload office files to whiteboard:

`nano /etc/ImageMagick-7/policy.xml`

...and comment out the follow line, near to bottom file:

```
<policy domain="coder" rights="none" pattern="{PS,PS2,PS3,EPS,PDF,XPS}" />
```

...to

```
<!-- <policy domain="coder" rights="none" pattern="{PS,PS2,PS3,EPS,PDF,XPS}" /> -->
```

Press in the keyboard **Ctrl+x**, will ask to save, press **Y**, and press **Enter** to exit nano editor. This last must be repeated every time you update system-ImageMagick.

And this is all.

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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