



## **Installation of Apache OpenMeetings 5.0.0-M1 on openSUSE Leap 15**

This tutorial is made based on fresh installations of

**openSUSE-Leap-15.0-DVD-x86\_64.iso**

My sincere thanks to Maxim Solodovnik for his help, without which i could not have finished this tutorial satisfactorily.  
It is done step by step.

4-5-2019

Starting...

1)

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

Update operative system:

`zypper refresh`

`zypper update`

2)

**----- Installation of OpenJava 11-----**

Java it is necessary to work OpenMeetings 5.0.0-M1. So, we install it.:

```
zypper install -y java-11-openjdk java-11-openjdk-headless update-alternatives
```

Now we'll see if is installed more than one java version. If it is, then please select our OpenJava 11:

```
update-alternatives --config java
```

...and to see the active version:

```
java -version
```

3)

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

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

Maybe it is installed, but for iso server specially:

```
zypper install -y libreoffice
```

4)

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

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

(Only one line with space between both)

```
zypper install -y gcc ghostscript unzip freetype freetype-devel ncurses ncurses-devel make libz1  
zlib-devel libtool bzip2 file-roller git autoconf automake pkg-config nmap nano
```

5)

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

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

```
zypper install -y ImageMagick giflib-devel
```

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

```
nano /etc/ImageMagick-7_Q16HDRI6/policy.xml
```

...and comment the two following lines near to bottom file:

```
<policy domain="coder" rights="none" pattern="PS" />
<policy domain="coder" rights="none" pattern="PDF" />
```

...to:

```
<!-- <policy domain="coder" rights="none" pattern="PS" /> -->
<!-- <policy domain="coder" rights="none" pattern="PDF" /> -->
```

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 ImageMagick.

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

```
zypper install -y sox
```

6)

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

FFmpeg work the video. We install Packman repository to can install somes libraries:

(Only one line with space between both)

```
zypper ar -f -n packman http://ftp.gwdg.de/pub/linux/misc/packman/suse/openSUSE_Leap_15.0/
repo_packman
```

```
zypper update
```

...when ask, accept for allways typing the letter **a** and pressing **Enter**

(Only one line witht space between both)

```
zypper install -y glibc imlib2 imlib2-devel mercurial cmake freetype2-devel libfreetype6 curl git vlc
libogg-devel libtheora-devel libvorbis-devel libvpx-devel fdk-aac-devel libmp3lame-devel
```

This ffmpeg compilation is based in this url, updated to 4-5-2019:

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

I made a script that will download, compile and install ffmpeg. Download the script:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_opensuse15.sh
```

...concede permission of execution:

```
chmod +x ffmpeg_opensuse15.sh
```

...and run it, be connected to Internet:

```
./ffmpeg_opensuse15.sh
```

Will spend about 20 minutes. When finish, will announce it with this text:

**FFmpeg Compilation is Finished!**

...then, please go to **step 7**.

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

7)

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

MariaDB is the data server.

We install it:

```
zypper install -y mariadb mariadb-tools
```

...and run mariadb:

```
systemctl start mysql.service
```

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

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

Make a database with his own user for OpenMeetings:

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

...will ask for the root-mariadb password that we have just chosen:

```
MariaDB [(none)]> CREATE DATABASE open500 DEFAULT CHARACTER SET 'utf8';
```

Now we create a user with all permission on this database. User password must be of 8 digits minimum with letter case, numbers or caracters + \* % etc:

(Only one line with space between both)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open500.* TO 'hola'@'localhost'
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

- \* open500 .....is the database name.
- \* hola .....is the user name for the database.
- \* 1a2B3c4D ..is the password of this user.

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

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

8)

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

We'll install OpenMeetings in /opt/open500. All the following information will be based on this directory.

Make the folder:

```
mkdir /opt/open500
```

```
cd /opt/open500
```

...and download the OpenMeetings file:

(Only one line without space between both)

```
wget https://dist.apache.org/repos/dist/release/openmeetings/5.0.0-M1/bin/apache-openmeetings-5.0.0-M1.zip
```

```
unzip apache-openmeetings-5.0.0-M1.zip
```

...save the unloaded file to /opt:

```
mv apache-openmeetings-5.0.0-M1.zip /opt
```

Download and install the connector file between OpenMeetings and MariaDB:

```
cd /opt
```

(Only one line without space between both)

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.15/mysql-connector-java-8.0.15.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-8.0.15.jar /opt/open500/webapps/openmeetings/WEB-INF/lib
```

9)

----- **Script to launch Tomcat-OpenMeetings** -----

We'll download the script to run Tomcat-OpenMeetings:

```
cd /opt
```

```
wget https://cwiki.apache.org/confluence/download/attachments/27838216/tomcat3
```

...copy it to where must be:

```
cp tomcat3 /etc/init.d/
```

...concede execution permission:

```
chmod +x /etc/init.d/tomcat3
```

If you made the installation in any other different path to /opt/open500, please edit the script and modify the line:

```
CATALINA_HOME =/opt/open500
```

...to

```
CATALINA_HOME =/your-path-installation
```

10)

----- **Run Tomcat-OpenMeetings** -----

Restart mariadb, (be connected to Internet):

```
systemctl restart mysql.service
```

...and run tomcat-OpenMeetings, please, in a new window terminal:

```
/etc/init.d/tomcat3 start
```

...wait about 40 seconds in order tomcat can run completely. Then, go with the browser to:

<https://localhost:5443/openmeetings>

...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

...then, 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                   | <input type="text" value="MySQL"/>        |
| Specify DB host                  | <input type="text" value="localhost"/>    |
| Specify DB port                  | <input type="text" value="3306"/>         |
| Specify the name of the database | <input type="text" value="openmeetings"/> |
| Specify DB user                  | <input type="text"/>                      |
| Specify DB password              | <input type="password"/>                  |

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

**Specify the name of the database** = open500

**Specify DB user** = hola

**Specify DB password** = 1a2B3c4D

...if you choose any other data, please type it here.

Press  button, and will go to:

OpenMeetings

Userdata

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

**Group(Domains)**

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



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 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:

**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="text"/>   |
| 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"/>                          |

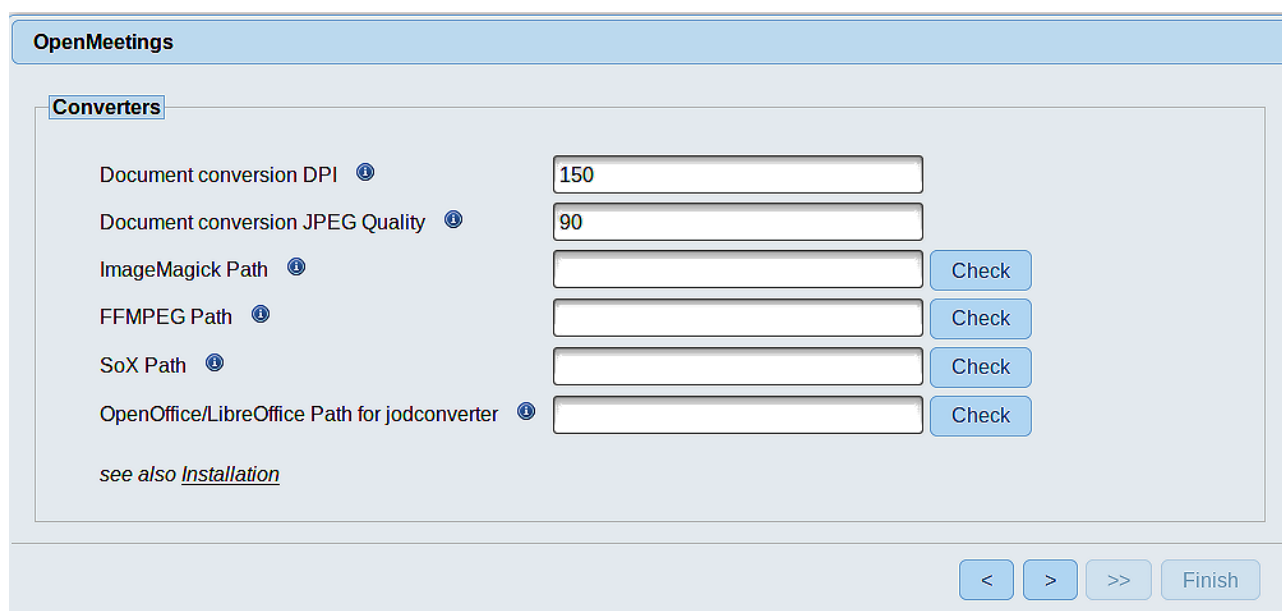
A valid example to configure the mail server with Gmail, is as follows:

(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 can modify it as you like.

Now press the button  and a new page will appear:



The screenshot shows the 'OpenMeetings' application window with the 'Converters' tab selected. The configuration options are as follows:

|  |                                  |                                      |
|--|----------------------------------|--------------------------------------|
| Document conversion DPI ⓘ                      | <input type="text" value="150"/> |                                      |
| Document conversion JPEG Quality ⓘ             | <input type="text" value="90"/>  |                                      |
| ImageMagick Path ⓘ                             | <input type="text"/>             | <input type="button" value="Check"/> |
| FFMPEG Path ⓘ                                  | <input type="text"/>             | <input type="button" value="Check"/> |
| SoX Path ⓘ                                     | <input type="text"/>             | <input type="button" value="Check"/> |
| OpenOffice/LibreOffice Path for jodconverter ⓘ | <input type="text"/>             | <input type="button" value="Check"/> |

see also [Installation](#)

Navigation buttons at the bottom: < > >> Finish

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


**ImageMagick Path** == /usr/bin

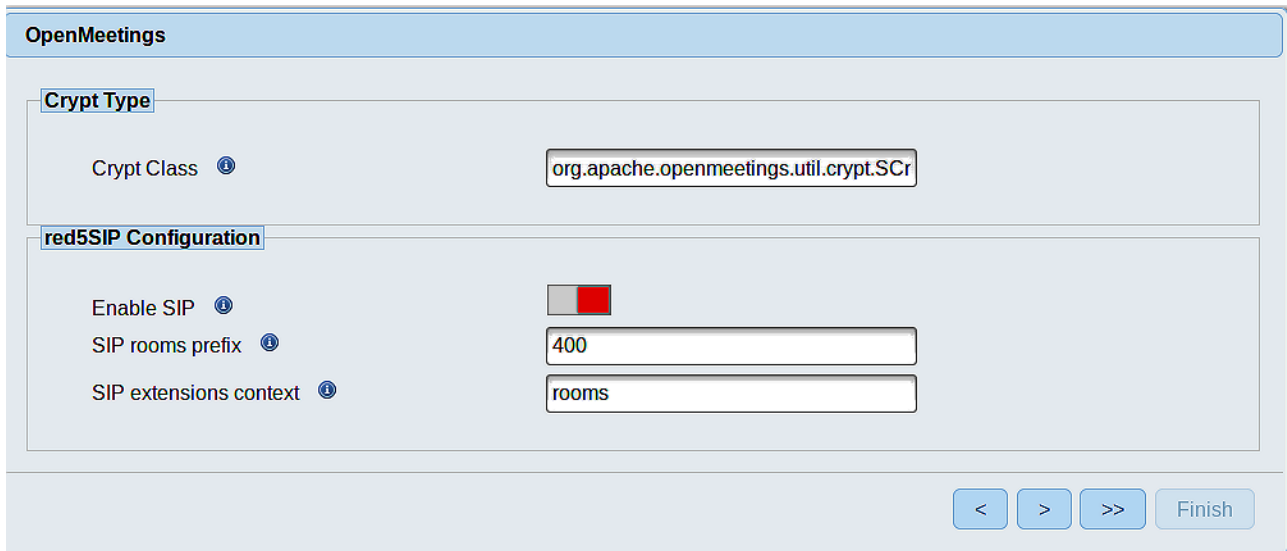
**FFMPEG Path** == /usr/local/bin

**SOX Path** == /usr/bin


**OpenOffice/LibreOffice Path for  
jodconverter** == /usr/lib64/libreoffice

As you go introducing 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 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:



Now push the button  Will show this window:



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 terminal and restart tomcat:

`/etc/init.d/tomcat3 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 you can click on Enter the Application and it will take you to the OpenMeetings entry. **But wait before entering OpenMeetings, we have to install Docker and Kurento-Media-Server,** something we will do in the next steps, so that you can have access to the camera, micro, recording and desktop sharing in the room.

**Login**

Username or mail address

Password

Remember login

[Forgotten your password?](#) [Network testing](#)

Not a member?
Sign in

11)

### ----- Installation of Docker -----

We'll install Docker as recipient for kurento-media-server.

```
zypper install -y docker
```

Add your user system to docker group and so can run docker without be root.

Replace **user** by your real system user name:

```
gpasswd -a user docker
```

...stop OpenMeetings, MariaDB and Docker:

```
/etc/init.d/tomcat3 stop
```

```
systemctl stop mysql.service
```

```
systemctl stop docker.service
```

...and reboot the machine. After this, follow in the step 12:

```
reboot
```

12)

#### ----- Installation of Kurento-Media-Server -----

After had rebooted the computer, we'll install Kurento-Media-Server need it for cam, mic-audio, recordings and share dektop.

First run docker:

```
systemctl start docker.service
```

...and install kurento-media-server:

(Only one line, with space between 1 and 2, and without space between 2 and 3)

```
docker run -d --name kms -p 8888:8888 --mount  
type=bind,source=/opt/open500/webapps/openmeetings/data,target=/opt/open500/webapps/  
openmeetings/data kurento/kurento-media-server
```

...if you does the OpenMeetings installation in a different path, then please replace the brown text.

Run kurento-media-server:

```
docker start kms
```

Run MariaDB for OpenMeetings:

```
systemctl start mysql.service
```

...and launch tomcat-OpenMeetings:

```
/etc/init.d/tomcat3 start
```

...wait around 40 seconds to tomcat run completely.

Now you can access OpenMeetings with all the functions at your disposal.

Click the link down and type the user name and his password to login:

<https://localhost:5443/openmeetings>

Can connect to this server from Internet or LAN is necessary open these ports:

**5443 8888**

The next time you like launch the servers, please do it following this order:

```
systemctl start mysql.service
```

```
systemctl start docker.service
```

```
docker start kms
```

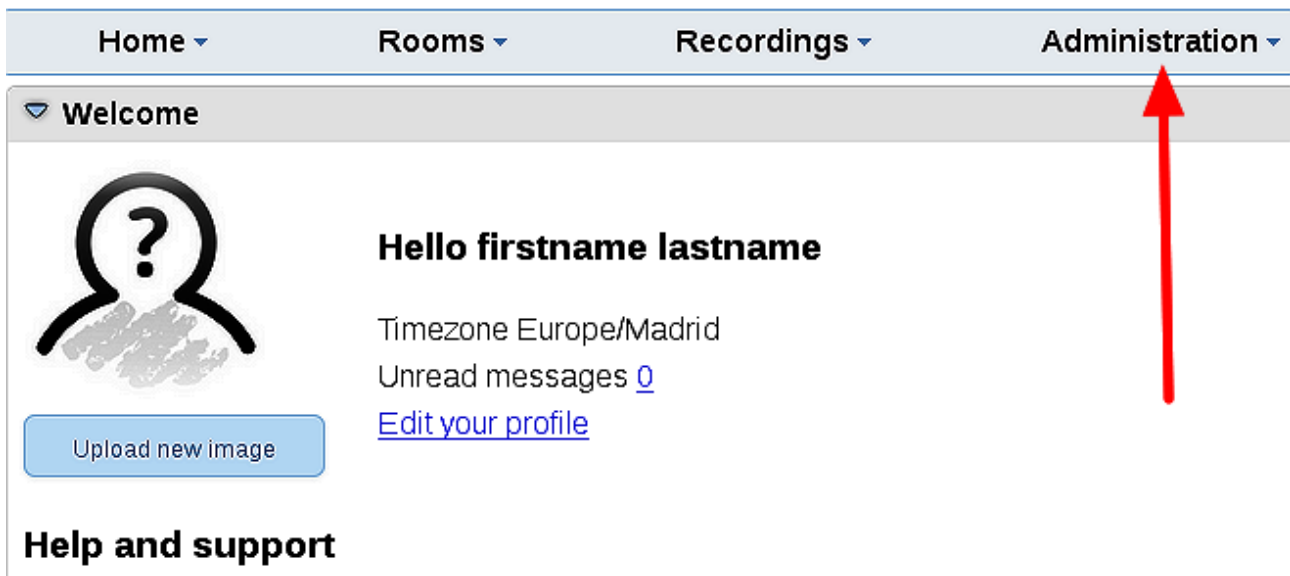
```
/etc/init.d/tomcat3 start
```

**13)**

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

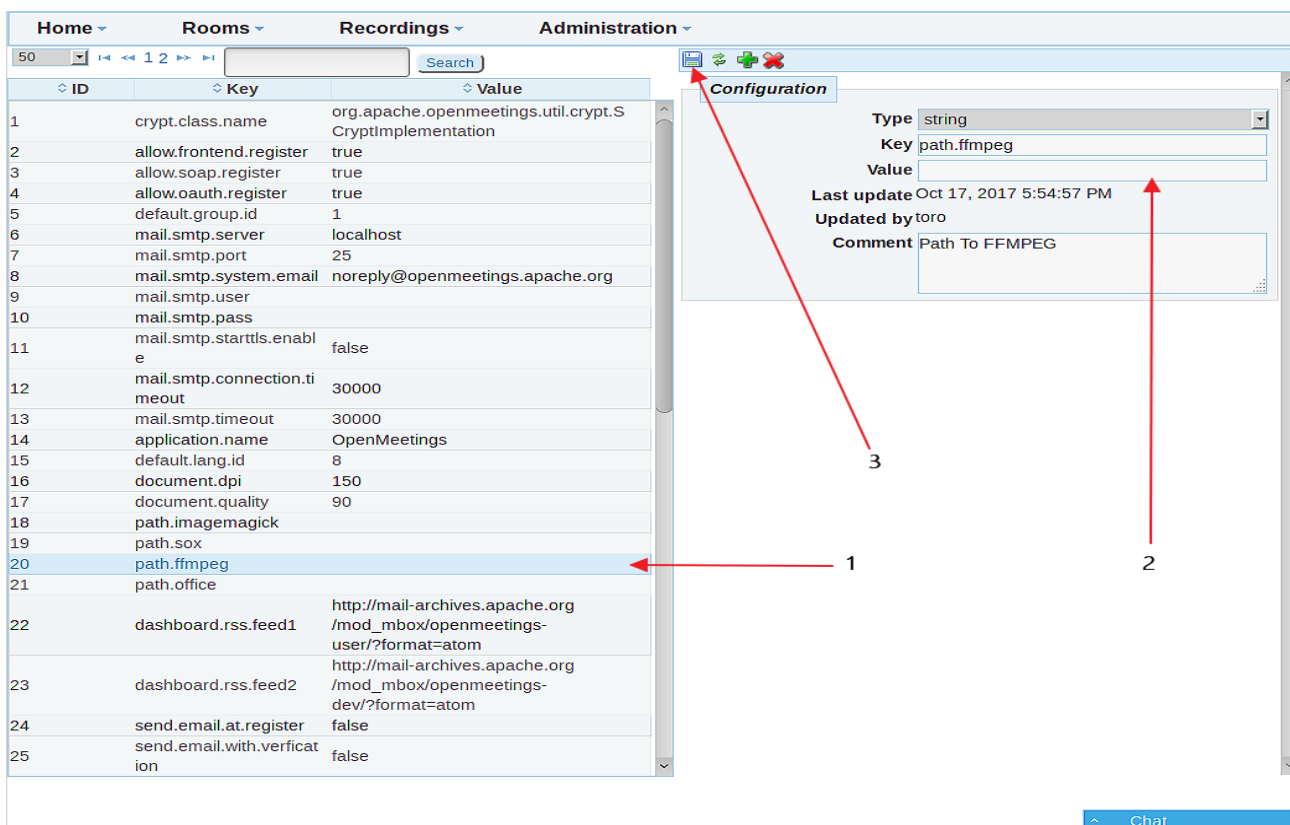
Once you accessed to OpenMeetings, if you would like to do any modification in the configuration, please go to:

## Administration → Configuration



The screenshot shows the top navigation bar with 'Home', 'Rooms', 'Recordings', and 'Administration' (highlighted with a red arrow). Below is a 'Welcome' section with a user profile icon, a greeting 'Hello firstname lastname', and details for 'Timezone Europe/Madrid' and 'Unread messages 0'. A button 'Upload new image' and a link 'Edit your profile' are also visible. A 'Help and support' section is at the bottom.

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



The screenshot shows the 'Administration' page with a table of configuration items. A red arrow labeled '1' points to the row with 'Key' 'path.ffmpeg'. Another red arrow labeled '2' points to the 'Configuration' modal window for 'path.ffmpeg'. A third red arrow labeled '3' points to the 'Configuration' modal window for 'path.ffmpeg'.

| 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' modal for 'path.ffmpeg' shows:  
Type: string  
Key: path.ffmpeg  
Value:   
Last update: Oct 17, 2017 5:54:57 PM  
Updated by: toro  
Comment: Path To FFMPEG

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

<http://openmeetings.apache.org/mailling-lists.htm>



Also you can download if you like, a wallpaper of OpenMeetings for different devices such as:

PC, Mac, Smartphone, iPhone and Tablets. Here is the link to download:

[Download](#)

Thank you.

Alvaro Bustos