



Installation of Apache OpenMeetings 5.0.0-M4

on

Fedora 31 final

This tutorial it is based on a fresh installation of

Fedora-MATE_Compiz-Live-x86_64-31-1.9.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.

1)

At first place, modify Selinux level security, for the installation, and install nano editor:

`su`

`dnf install nano`

`sudo nano /etc/selinux/config`

...modify:

`SELINUX=enforcing`

...to

`SELINUX=permissive`

Press **Ctrl+x** and will ask to save, press **Y**, and **Enter**, to save and leave nano's editor.

Add our user system to sudoers, so can use sudo:

```
nano /etc/sudoers
```

...copy and paste replacing **user** by your real user system name:

```
user ALL=(ALL:ALL) ALL
```

...press in the keyboard **Ctrl+x**, will ask to save, press **Y**, and press **Enter** to exit nano editor.

```
exit ...exit as root.
```

2)

----- Update the system -----

Update the system:

```
sudo dnf update -y
```

...and reboot the machine to get effect the changes. After reboot continue at step 3:

```
sudo reboot
```

3)

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

```
## RPM Fusion repo ##
```

(Only one line without space between them)

```
sudo su -c 'dnf install --nogpgcheck http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-31.noarch.rpm http://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-31.noarch.rpm'
```

Update again:

```
sudo dnf update -y
```

4)

----- Installation of packets and libraries -----

We install necessary packets and libraries:

(Only one line with a space between each one)

```
sudo dnf install -y libjpeg-turbo libjpeg-turbo-devel libjpeg-turbo-utils giflib-devel freetype-devel gcc-c++ zlib-devel libtool bison bison-devel file-roller ghostscript freetype unzip gcc ncurses make bzip2 wget ghostscript ncurses zlib git make automake nasm pavucontrol alsa-plugins-pulseaudio nmap tomcat-native 'dnf-command(versionlock)' h264enc
```

5)

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

Java 11 is needed to work OpenMeetings 5.0.0-M4. Will install OpenJava 11.

-- **Only for Fedora 32 bit** --

```
sudo dnf install java-11-openjdk.i686 java-11-openjdk-headless.i686
```

-- **Only for Fedora 64 bit** --

```
sudo dnf install java-11-openjdk.x86_64 java-11-openjdk-headless.x86_64
```

Maybe you have installed different versions of Java. Please, select the just installed OpenJava 11:

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

...and to see if the selected version is active:

```
sudo java -version
```

6)

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

LibreOffice is installed already in the desktop-distro, but especially for server iso:

```
sudo dnf -y install libreoffice
```

Is needed to convert uploaded office files to pdf.

7)

----- **Installation of ImageMagick and Sox** -----

ImageMagick, work with the images files jpg, png, gif, etc. Install it:

```
sudo dnf -y install ImageMagick
```

Sox, work with the audio. Install it:

```
sudo dnf -y install sox
```

8)

----- Installation of FFmpeg -----

FFmpeg will work the video. Will install a paquets and libraries:

(Only one line with space between each one of them)

```
sudo dnf install -y ffmpeg glibc alsa-lib-devel gsm gsm-devel imlib2 imlib2-devel libogg libvorbis  
vorbis-tools theora-tools libvpx-devel mercurial cmake curl git gstreamer1-libav  
gstreamer1-plugins-ugly
```

9)

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

MariaDB is the data server fork of MySQL.

We install it:

```
sudo dnf install -y mariadb mariadb-server
```

...and run MariaDB (be connected to Internet, to run it quickly):

```
sudo systemctl start mariadb.service
```

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

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

Make a database for OpenMeetings:

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

...will ask for the root password you choose just now:

```
MariaDB [(none)]> CREATE DATABASE open504 DEFAULT CHARACTER SET 'utf8';
```

Now we create a user with all permission on this open504 database. User password must be of 8 digits minimum:

(Only one line with space between both)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open504.* TO 'hola'@'localhost'
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

```
* open504 ..... name of the database
* hola ..... user for that database
* 1a2B3c4D ..... password of that user
```

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

Now we leave MariaDB:

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

10)

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

We'll install OpenMeetings in /opt/open504. All the following information will be based on this directory:

```
cd /opt
```

...download and uncompress the file:

(Only one line without space between both)

```
sudo wget http://archive.apache.org/dist/openmeetings/5.0.0-M4/bin/apache-openmeetings-5.0.0-M4.tar.gz
```

```
sudo tar xzvf apache-openmeetings-5.0.0-M4.tar.gz
```

...and rename the obtained folder:

```
sudo mv apache-openmeetings-5.0.0-M4 open504
```

11)

----- Installation connector OpenMeetings with MariaDB -----

This file-driver is need it to connect OpenMeetings with MariaDB. Download and install it:

```
cd /opt
```

(Only one line without space between both)

```
sudo wget https://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.19/mysql-connector-java-8.0.19.jar
```

```
sudo cp mysql-connector-java-8.0.19.jar /opt/open504/webapps/openmeetings/WEB-INF/lib
```

12)

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

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

```
cd /opt
```

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

...copy it to where must be:

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

...and concede execution permission:

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

If you made the installation in any other different path to /opt/open504, please edit the script and modify the line:

```
CATALINA_HOME=/opt/open504
```

...to

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

13)

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

Run MariaDB:

```
sudo systemctl start mariadb.service
```

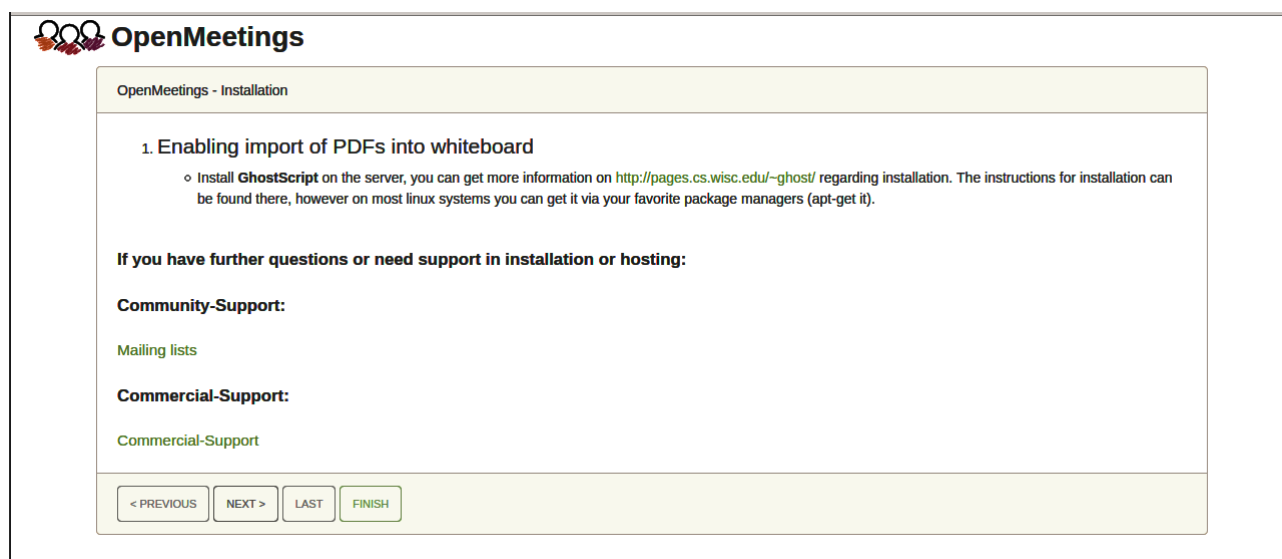
...and Tomcat-OpenMeetings:

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

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

<https://localhost:5443/openmeetings>

...there will show a page similar to this one:



OpenMeetings

OpenMeetings - Installation

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:

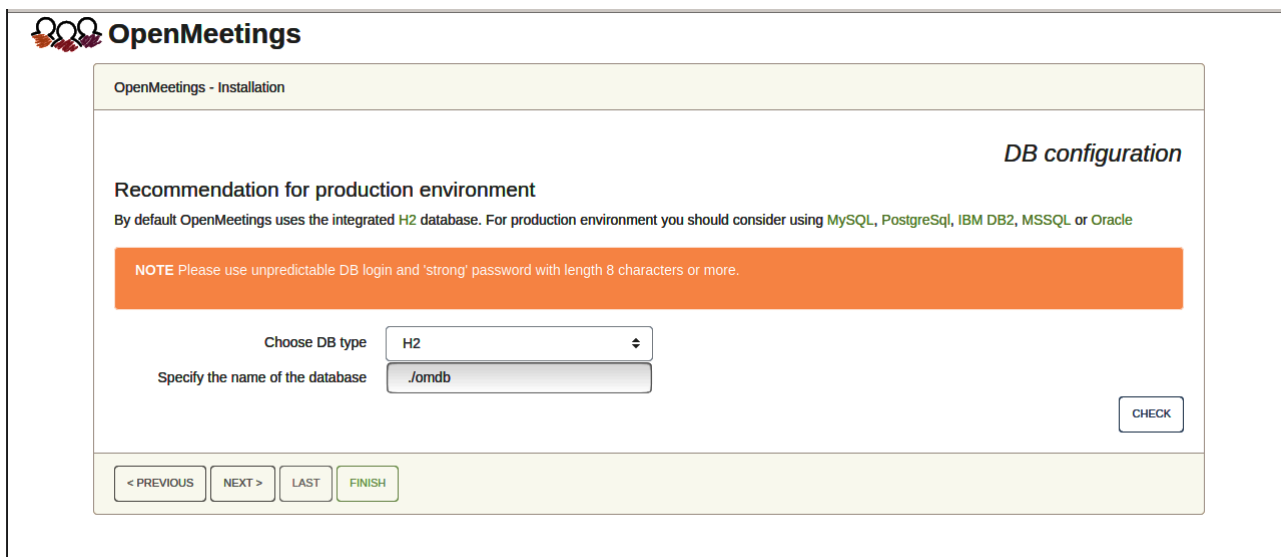
[Mailing lists](#)

Commercial-Support:

[Commercial-Support](#)

< PREVIOUS NEXT > LAST FINISH

...press on “Next >” (bottom), and will show the default database configuration with H2, but we employ MySQL (MariaDB):



OpenMeetings

OpenMeetings - Installation

DB configuration

Recommendation for production environment
By default OpenMeetings uses the integrated H2 database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

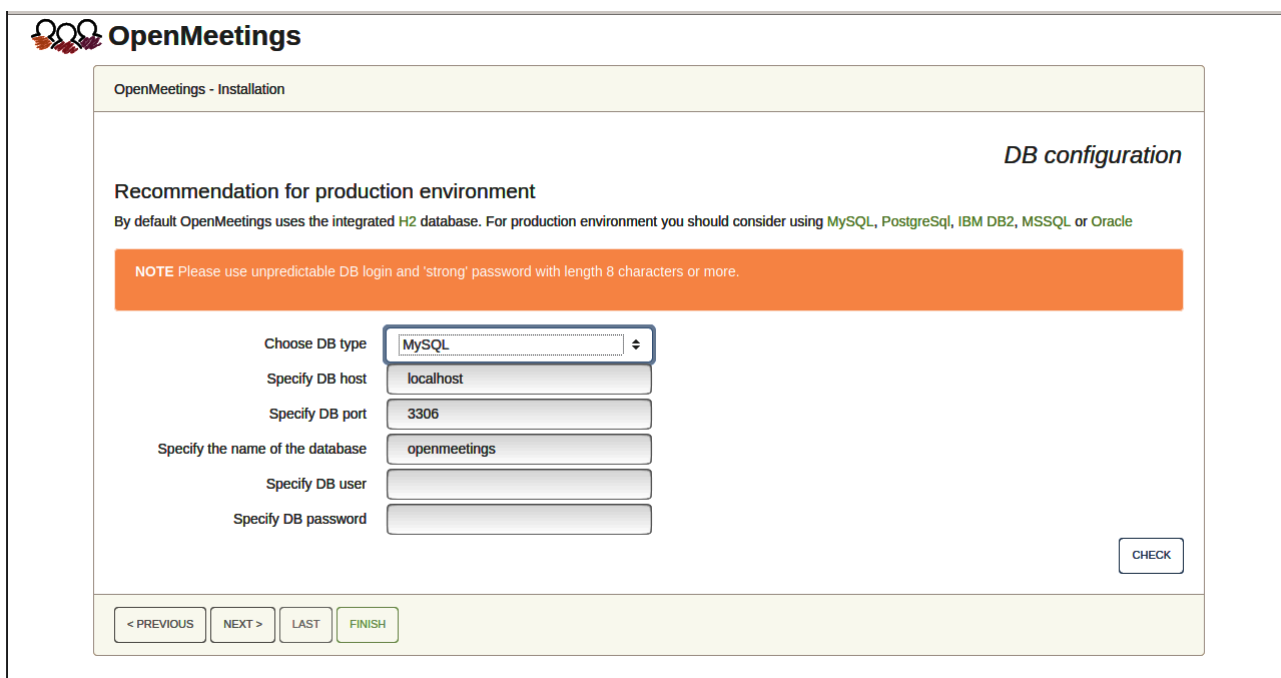
NOTE Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type:

Specify the name of the database:

< PREVIOUS NEXT > LAST FINISH

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



OpenMeetings

OpenMeetings - Installation

DB configuration

Recommendation for production environment
By default OpenMeetings uses the integrated H2 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 DB host:

Specify DB port:

Specify the name of the database:

Specify DB user:

Specify DB password:

< PREVIOUS NEXT > LAST FINISH

Now we must introduce the database name, the user name and his password we did at the step 9:

Specify the name of the database = open504

Specify DB user = hola

Specify DB password = 1a2B3c4D

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

Press “Next >” button, and will go to:

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 name will have administrator rights.

Userpass = a-passwordfor the previous user

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

User Time Zone = country where is this server

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

Press the button “Next >” 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

OpenMeetings - Installation

Configuration

Allow self-registering

Send Email to new registered Users

New Users need to verify their EMAIL

Default DB objects of all types will be created (including Rooms, OAuth2 servers etc.)

Mail-Referer

SMTP-Server

SMTP-Server Port(default SmtP-Server Port is 25)

SMTP-Username

SMTP-Userpass

Enable TLS in Mail Server Auth

Set inviter's email address as ReplyTo in email invitations

Default Language

< PREVIOUS NEXT > LAST FINISH

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

(replace **john@gmail.com** with your real Gmail account)

Mail-Refer == john@gmail.com

SMTP-Server == smtp.gmail.com

SMTP-Server Port (default SmtP-Server Port is 25) == [587](#)

SMTP-Username == john@gmail.com

SMTP-Userpass == [password of john@gmail.com](#)

Enable TLS in MailServer Auth == [...turn green the button to activate](#)

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

Default Language == [...select your language](#)

...the rest you can change it as you like.

Now press the button “Next >” and a new page will appear:

OpenMeetings

OpenMeetings - Installation

Converters

Document conversion DPI ⓘ

Document conversion JPEG Quality ⓘ

ImageMagick Path ⓘ CHECK

FFMPEG Path ⓘ CHECK

SoX Path ⓘ CHECK

OpenOffice/LibreOffice Path for jodconverter ⓘ CHECK

see also Installation

< PREVIOUS NEXT > LAST FINISH

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

ImageMagick Path == `/usr/bin`

FFMPEG Path == `/usr/bin`

SOX Path == `/usr/bin`

OpenOffice/LibreOffice Path for jodconverter == `/usr/lib/libreoffice` **(32bits)**
 == `/usr/lib64/libreoffice` **(64bits)**

As you go introducing paths, you can check if they are correct by pressing the button labeled **Check**.

Once completed the paths, please click the button “**Next >**” and move on to another page that we will leave it as is:

OpenMeetings

OpenMeetings - Installation

Crypt Class ?

Enable SIP ?

SIP rooms prefix ?

SIP extensions context ?

Crypt Type
red5SIP Configuration

< PREVIOUS NEXT > LAST FINISH

Now push the button “**Next >**” Will show this window:

OpenMeetings

OpenMeetings - Installation

Please click "Finish" button to start installation!

0%

< PREVIOUS NEXT > LAST FINISH

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 (be connected to Internet):

`sudo /etc/init.d/tomcat3 restart`

OpenMeetings

OpenMeetings - Installation

Enter the Application

Database was changed, please restart application to avoid possible issues

Mailing list

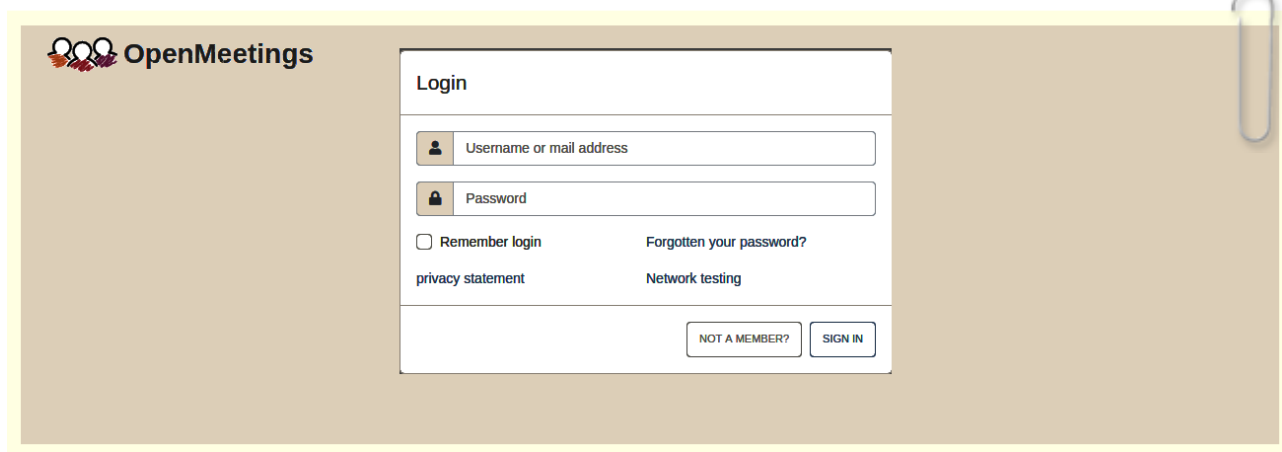
<https://openmeetings.apache.org/mailling-lists.html>

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

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

< PREVIOUS NEXT > LAST 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



14)

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

Docker will be the recipient of Kurento media server. First we install some necessary libraries:

```
sudo dnf -y install dnf-plugins-core
```

...add docker repo:

```
sudo dnf config-manager --add-repo https://download.docker.com/linux/fedora/docker-ce.repo
```

...update:

```
sudo dnf update
```

...install docker:

```
sudo dnf install docker-ce
```

Now we'll change the kernel boot options:

```
sudo grubby --update-kernel=ALL --args="systemd.unified_cgroup_hierarchy=0"
```

...update the grub:

```
sudo grub2-mkconfig
```

Add your user system name to docker group and so can run docker without be root.
Replace **user** by your real system user name:

```
sudo gpasswd -a user docker
```

...stop Tomcat-OpenMeetings and Mariadb:

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

```
sudo systemctl stop mariadb.service
```

...and reboot the machine. After this, follow in the step **15)**:

```
sudo reboot
```

15)

----- 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 in room.

First run docker:

```
sudo 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)

```
sudo docker run -d --name kms -p 8888:8888 --mount  
type=bind,source=/opt/open504/webapps/openmeetings/data,target=/opt/open504/webapps/  
openmeetings/data kurento/kurento-media-server
```

Run kurento-media-server, wich name its kms:

```
sudo docker start kms
```

...and run also MariaDB and tomcat-OpenMeetings:

```
sudo systemctl start mariadb.service
```

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

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

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

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

<https://localhost:5443/openmeetings>

To connect to this server from Internet or LAN is necessary open the following ports:

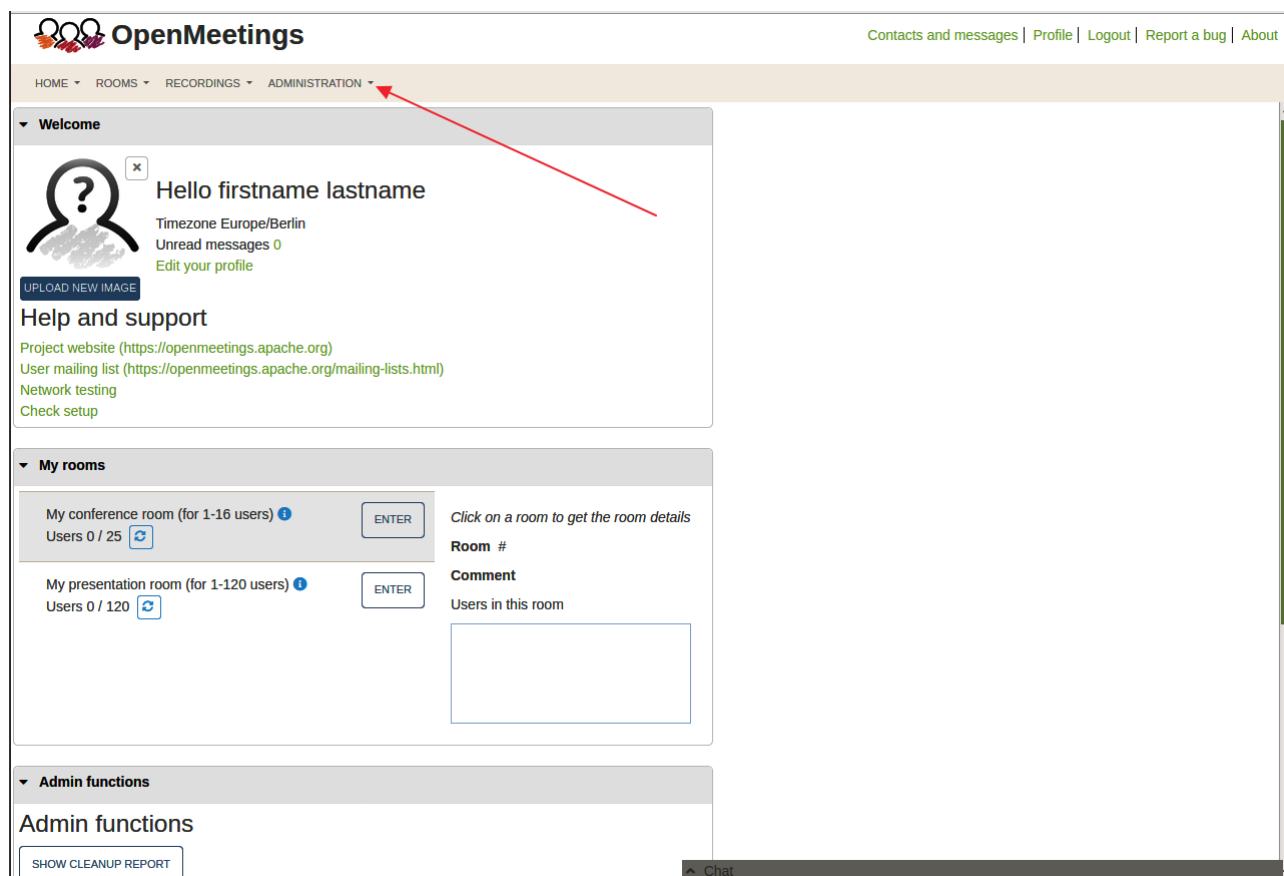
5443 8888

16)

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

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

Administration → Configuration



The screenshot displays the OpenMeetings web application interface. At the top, the logo and name 'OpenMeetings' are visible on the left, and navigation links 'Contacts and messages | Profile | Logout | Report a bug | About' are on the right. Below the header is a navigation bar with dropdown menus for 'HOME', 'ROOMS', 'RECORDINGS', and 'ADMINISTRATION'. A red arrow points to the 'ADMINISTRATION' dropdown menu. The main content area is divided into several sections: 'Welcome' with a user profile card (name: 'Hello firstname lastname', timezone: 'Europe/Berlin', unread messages: '0'), 'Help and support' with links to the project website, mailing list, network testing, and check setup; 'My rooms' with two room cards: 'My conference room (for 1-16 users)' and 'My presentation room (for 1-120 users)'; and 'Admin functions' with a 'SHOW CLEANUP REPORT' button. A 'Chat' window is visible at the bottom right.

...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. Red arrows indicate the order of operations:

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	1
16	document.dpi	150
17	document.quality	90
18	path.imagemagick	
19	path.sox	
20	path.fmpeg	/usr/local/bin
21	path.office	/usr/lib/libreoffice
22	dashboard.rss.feed1	https://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom

The 'Configuration' form on the right has fields for: Type (STRING), Key, Value, Last update, Updated by, and Comment. Red arrows point from the table to these fields: arrow 1 points to the 'Key' field, arrow 2 points to the 'Value' field, and arrow 3 points to the 'Type' dropdown.

17)

----- Order to run the servers -----

Once finished the installation of OpenMeetings, the next time you run the servers, please do it in this order:

`sudo systemctl start mariadb.service`

..MariaDB data server

`sudo systemctl start docker.service`

...Docker, recipiente de Kurento media server

`sudo docker start kms`

...Kurento media server

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

...Tomcat-OpenMeetings

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

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



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:

[OpenMeetings Wallpaper Download](#)

A dvd live iso with OpenMeetings 5.0.0-M4 on Ubuntu 18.04 lts it is at your disposal.

Can find it here:

[Live iso download](#)

Thank you.

Alvaro Bustos (PMC and Committer at Apache OpenMeetings).