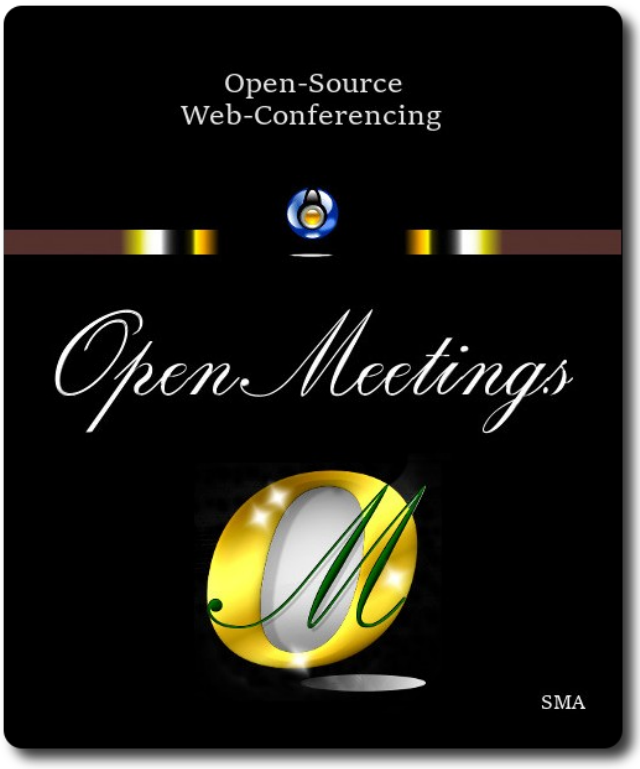


Installation of Apache OpenMeetings 7.2.0 on EndeavourOS

This tutorial is based on a fresh installations of

EndeavourOS_Endeavour-2024.06.25.iso

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

1)

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

Update the system:

sudo pacman -Syu

2)

------ Installation of Java ------

Java 17 it is necessary for OpenMeetings 7.2.0. We´ll install Open Java 17.

sudo pacman -S jdk17-openjdk

Do OpenJava 17 as default (maybe is another java versions installed):

sudo archlinux-java set java-17-openjdk

3)

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

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

We install it:

sudo pacman -S libreoffice

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

4)

------ Installation of Ghostscript ------

Ghostscript allows to present PS and PDF data on the screen. We´ll install it; nano editor and wget can downlod from terminal:

sudo pacman -S libjpeg ghostscript nano 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. Install it:

sudo pacman -S sox

6)

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

FFmpeg work with video. Will install it and vlc to play the recordings that we´ll make in OpenMeetings:

sudo pacman -S ffmpeg vlc

7)

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

MariaDB is the data base server. We install it:

sudo pacman -S mariadb

Initialize data directories:

sudo mariadb-install-db --user=mysql --basedir=/usr --datadir=/var/lib/mysql

...and run MariaDB:

sudo systemctl start mysqld

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

sudo /usr/bin/mariadb-admin -u root password new-password

Access to MariaDB:

sudo /usr/bin/mariadb -u root -p

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

Make a database called open720, for OpenMeetings:

MariaDB [(none)]> CREATE DATABASE open720 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permission on this open720 database:

(Only one line with space between both)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open720.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open720 ..... 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

8)

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

We´ll install OpenMeetings in /opt/open720. All the following information will be based on this directory:

cd /opt

...download the OpenMeetings file:

sudo wget https://archive.apache.org/dist/openmeetings/7.2.0/bin/apache-openmeetings-7.2.0.tar.gz

...uncompress it:

sudo tar xzvf apache-openmeetings-7.2.0.tar.gz

...rename the obtained folder:

sudo mv apache-openmeetings-7.2.0 open720

Download and install the connector between OpenMeetings and MariaDB:

(Only one line without space between both)

sudo wget https://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.30/mysql-connector-java-8.0.30.jar

...and copy it to where must be:

sudo cp /opt/mysql-connector-java-8.0.30.jar /opt/open720/webapps/openmeetings/WEB-INF/lib

9)

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

We make the folder /etc/init.d where put the Tomcat-OpenMeetings run script:

sudo mkdir /etc/init.d

Download the script to run tomcat-OpenMeetings:

cd /opt

sudo wget https://cwiki.apache.org/confluence/download/attachments/27838216/tomcat34

...copy it to where must be:

sudo cp tomcat34 /etc/init.d/

...concede execution permission:

sudo chmod +x /etc/init.d/tomcat34

If you would made the installation in any other different path to /opt/open720, please edit the script and modify the line:

CATALINA_HOME==/opt/open720

...to

CATALINA_HOME==/your-path-installation

10)

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

Restart MariaDB:

sudo systemctl restart mysqld

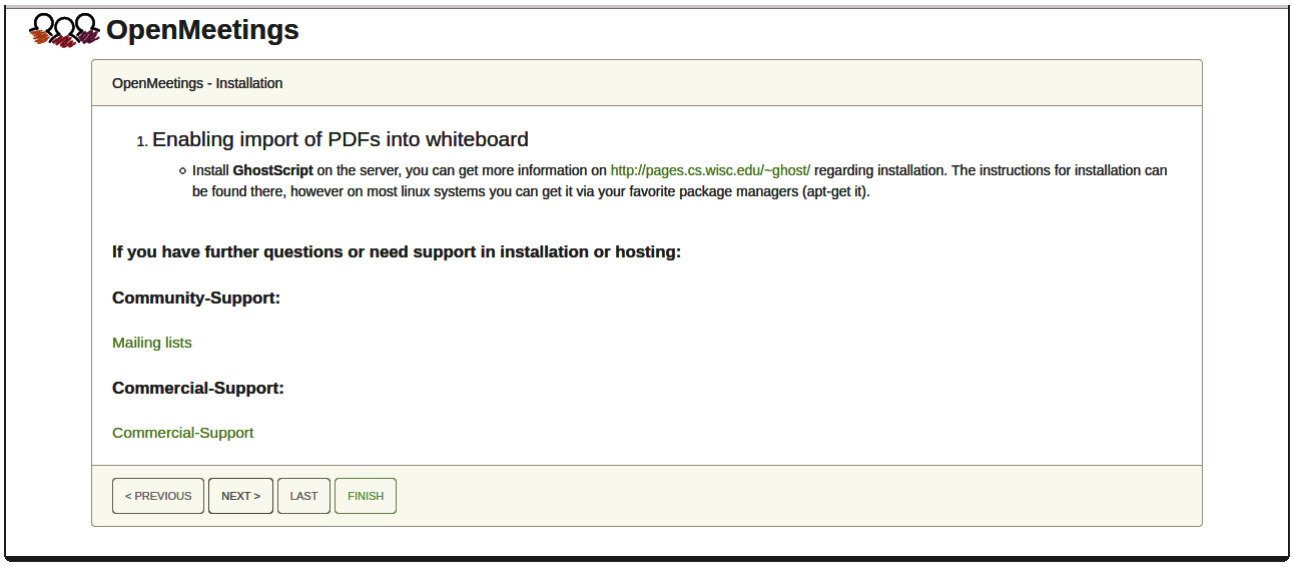
...and run tomcat-OpenMeetings:

sudo /etc/init.d/tomcat34 start

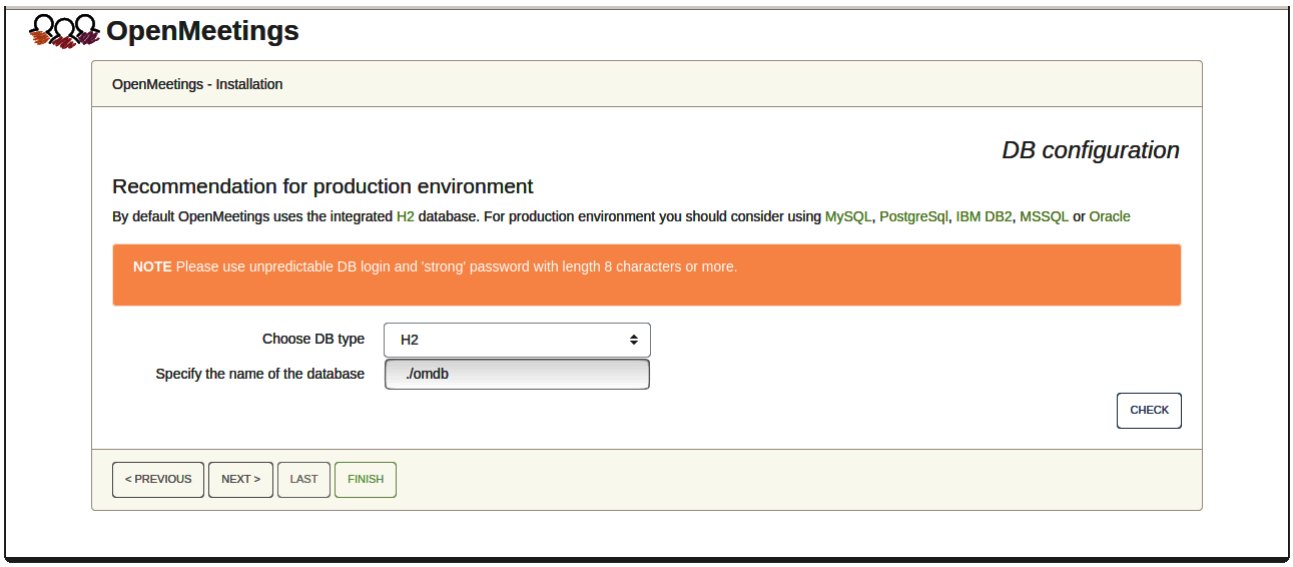
...wait around 30 seconds for running Tomcat completly. Then, go with the browser to:

https://localhost:5443/openmeetings/

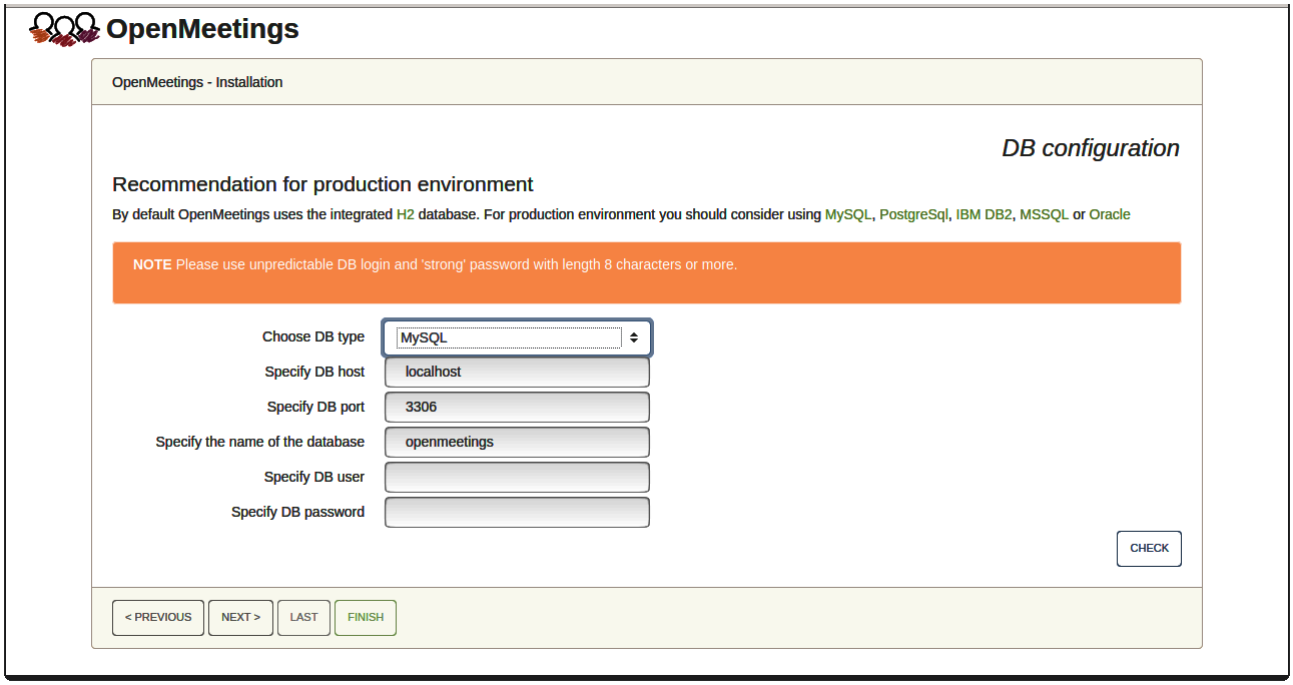
...there will appear a page similar to this one:



...push on "**Next >**" (bottom), and will show the default configuration with H2, but we employ MySQL (MariaDB):



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



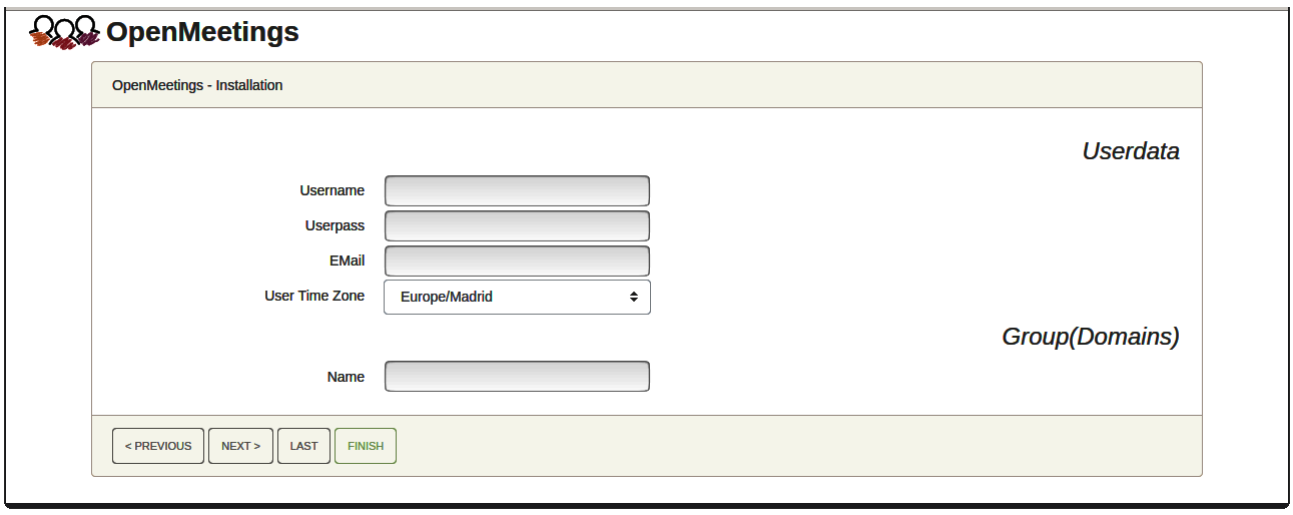
Now we must introduce the database name, user name and his password we did at the step 7:

Specify the name of the database = open720

Specify DB user = hola

Specify DB password = 1a2B3c4D

If you choose differents 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 will be administrator

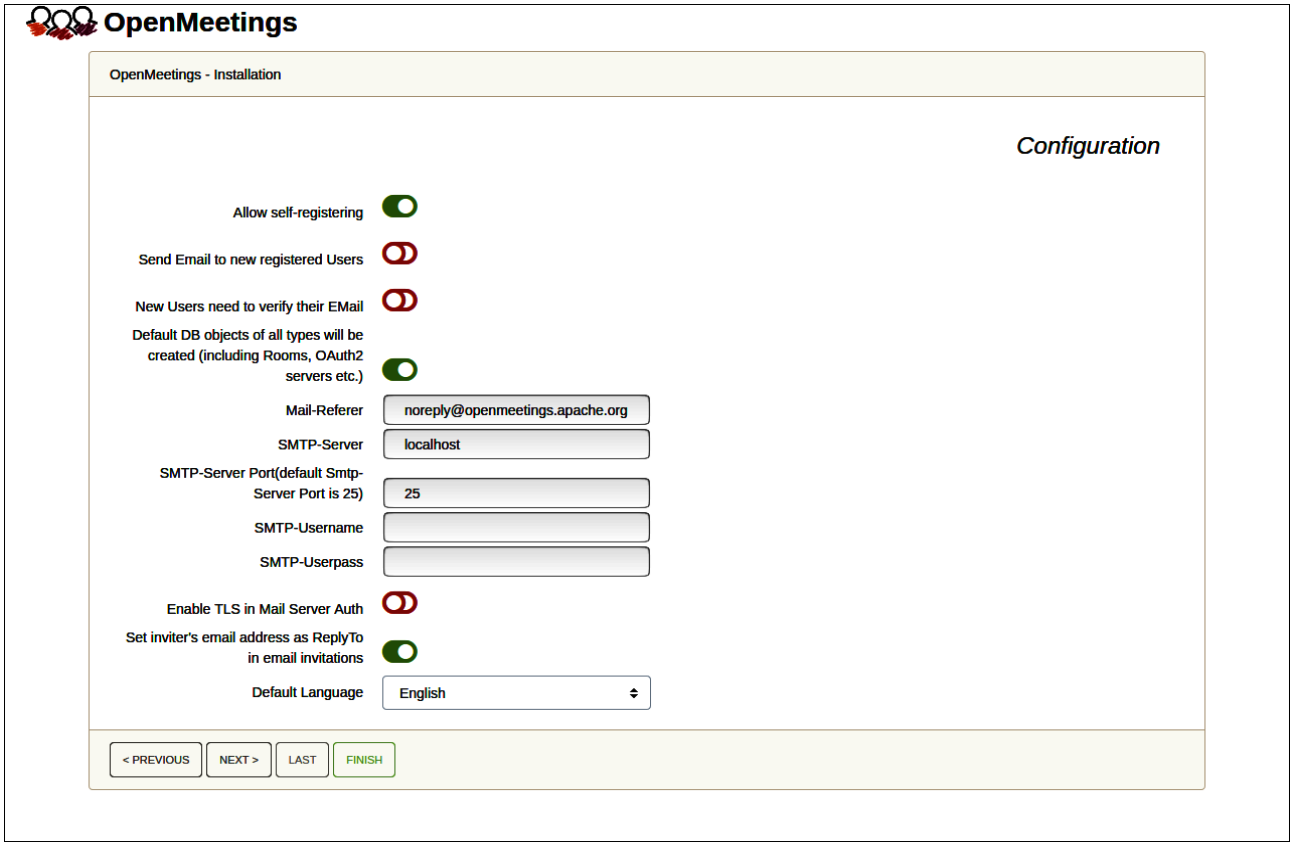
Userpass = a-password ...for the previous user.

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 "**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:

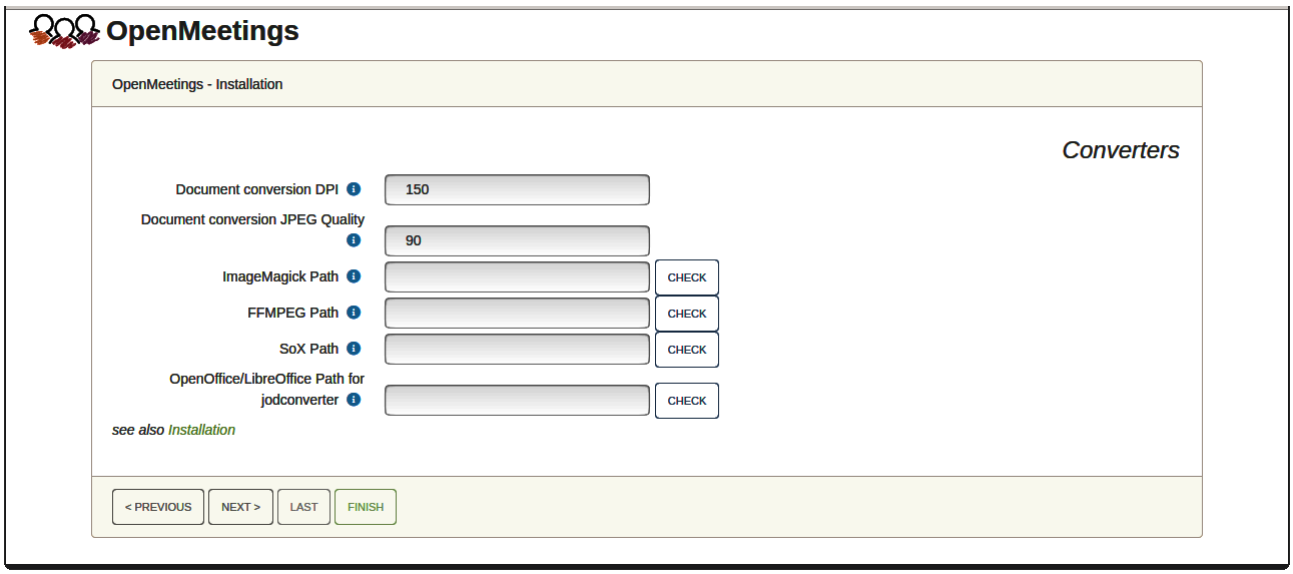


A valid example to configure the mail server with Gmail, is as follows:
(replace **john@gmail.com** with your real Gmail account)

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 Mail Server Auth	==	...turn green the button to activate
Default Language	==	...select your language

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

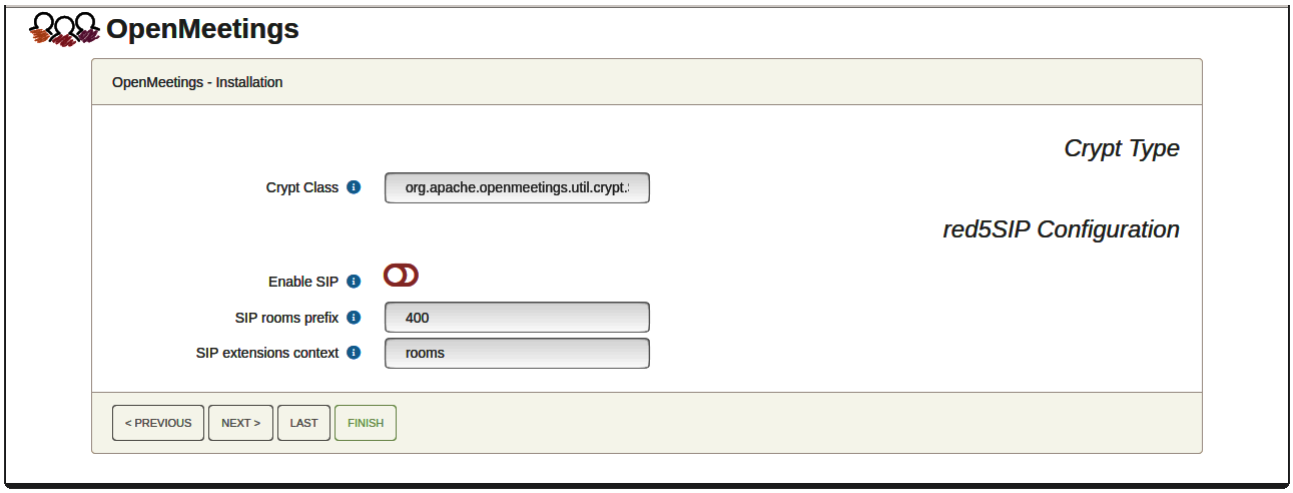
Now press the button "**Next >**" and a new page will appear:



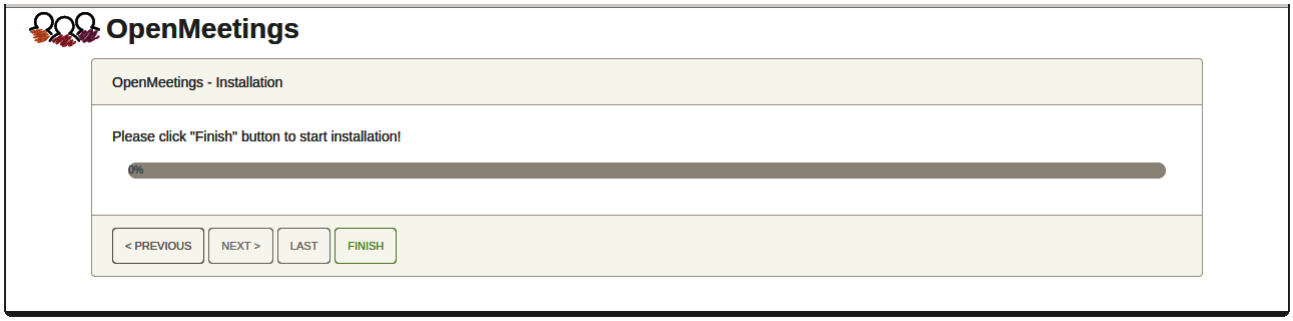
Here we´ll introduce the respective paths for the image, video, audio and conversion of uploaded files:

ImageMagick Path	==	...aquí dejar vacío
FFMPEG Path	==	...aquí dejar vacío
SOX Path	==	...aquí dejar vacío
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib/libreoffice

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



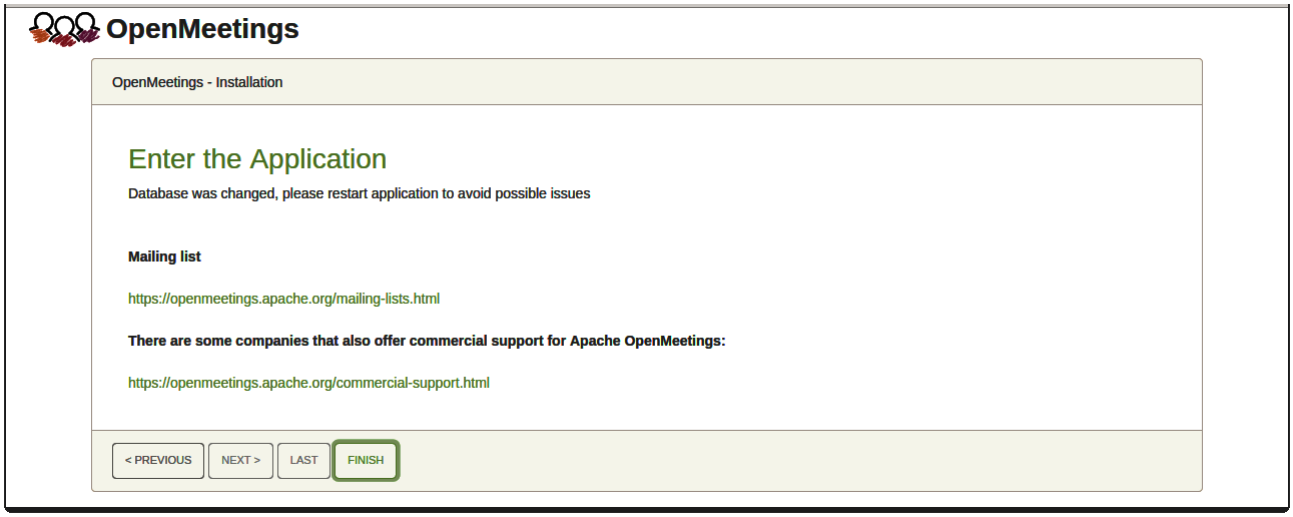
Now, touch the button "**Next >**" Will show this window:



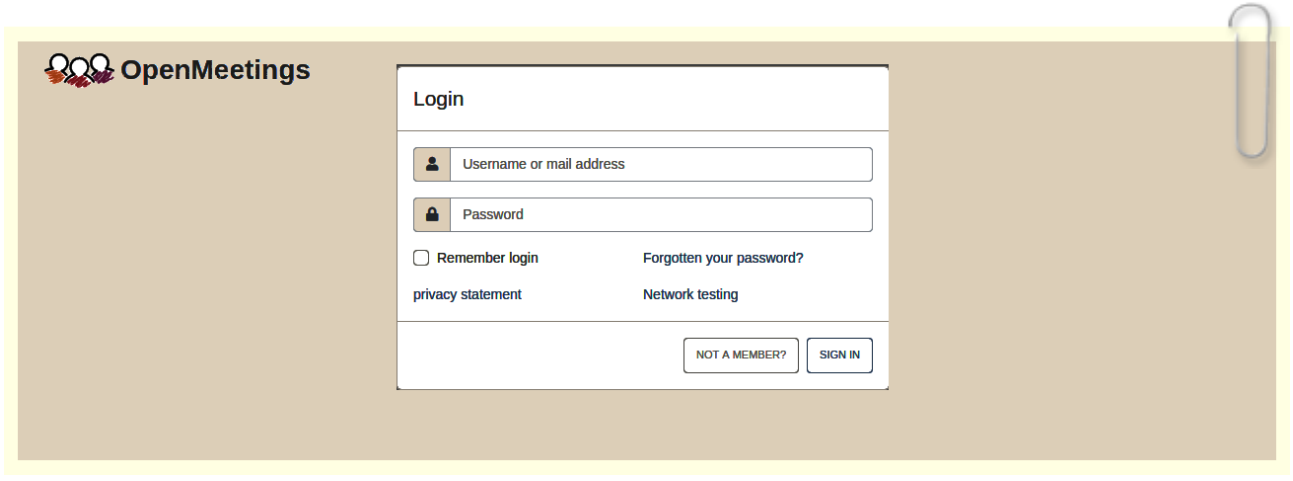
Press **Finish** button...wait a seconds untill the tables are fill in our database.

When is concluded, this another page will appear. Don´t clic on **Enter the Application**.
First is needed to restart tomcat server:

sudo /etc/init.d/tomcat34 restart



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, Kurento-Media-Server and Coturn (Turn 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.



11)

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

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

sudo pacman -S docker

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

sudo gpasswd -a user docker

su - ${USER} ...to take effect the changes

...stop OpenMeetings and MariaDB:

sudo /etc/init.d/tomcat34 stop

sudo systemctl stop mysqld

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

sudo reboot

12)

------ Instalation of Kurento-Media-Server ------

After had rebooted the computer, we´ll install Kurento-Media-Server needed for OM 7.2.0 (cam, mic-audio, recordings and share dektop in rooms). We´ll install Kurento 6.18.0 version, needeed for OpenMeetings 7.2.0 (can be Kurento 6.18+). If you have installed a before version please uninstall it like this...

First run docker:

sudo systemctl start docker.service

========= Uninstall old Kurento =========

sudo docker stop kms

sudo dockern rm kms

========= Finish uninstall old Kurento ====

…and now we´ll install Kurento-media-server. But first we´ll create the folder where will be the video recorder files we should make in rooms, as well as the uploaded files and documents:

sudo mkdir -p /opt/om_data (if you choose another path please substitute it below as well)

(Only one line, with space between both)

sudo docker run -d --name kms -p 8888:8888 --mount type=bind,source=/opt/om_data,target=/opt/om_data kurento/kurento-media-server:6.18.0

If you made the installation of /opt/om_data in another path, please edit the script called "tomcat34" downloaded at step 9:

sudo nano /etc/init.d/tomcat34

and modify the line number 7:

export JAVA_OPTS="-Djava.awt.headless=true -DDATA_DIR=/opt/om_data"

...to

export JAVA_OPTS="-Djava.awt.headless=true -DDATA_DIR=/your-path-installation/om_data"

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

Restart OpenMeetings to take effect the changes:

sudo /etc/init.d/tomcat34 restart

13)

------ Coturn installation and configuration of Turn server------

Install Coturn (Turn server make the connections between OpenMeetings clients, peer to peer):

sudo pacman -S coturn

Configuration of turn server.

First we create a password that we'll need to put it in the configuration file of the turn server and later in an OpenMeetings file. We create it:

sudo openssl rand -hex 32

...will generate something similar to this:

751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXXXXXX

…copy that long password and paste it into a text file by saving it.

Now edit the turn file configuration:

sudo nano /etc/turnserver/turnserver.conf

...in this file we will have to uncomment (delete #) the following lines (you´ll find others uncommented):

verbose

use-auth-secret

static-auth-secret=751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXX

(on the above line put the long password we just saved in a text file)

realm=your_real_domaing ...change company.org to your real domain

stale-nonce=0 ...change 600 to 0 (zero)

log-file=/var/log/turnserver/turn.log

simple-log

.
...exit the nano editor by pressing the **Ctrl+x keys**, ask if you save and press **Y** and then **Enter** to exit.

14)

------ Setting Up OpenMeetings 7.2.0 with Kurento media server------

Edit the openmeetings.properties file of OpenMeetings: (if you made OpenMeetings installation in another different path please substitute it below)

sudo nano /opt/open720/webapps/openmeetings/WEB-INF/classes/openmeetings.properties

...and in the ### Kurento ### section we modify only the following lines:

Kurento

kurento.turn.url=
kurento.turn.user=
kurento.turn.secret=

...to

kurento.turn.url=Public IP of your server:3478
kurento.turn.user=
kurento.turn.secret=751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXX

...above, in:

kurento.turn.secret=751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXX

...replace the line: 751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXX

...by the long password that we generated in step 13 and that we save in a text file.

Exit the nano editor by pressing the **Ctrl+x** keys, ask if you save and press **Y** and then **Enter** to exit.

IS IMPORTANT...we must reboot the machine, and later to continue in the next step 15.

But before we´ll stop the servers, if they are running:

sudo docker stop kms

sudo systemctl stop turnserver.service

sudo /etc/init.d/tomcat34 stop

sudo systemctl stop mysqld.service

...and now reboot:

sudo reboot

15)

------ **Run the servers after rebooted the machine** ------

Run any server related with OpenMeetings:

MariaDB: sudo systemctl start mysqld.service

Docker: sudo systemctl start docker.service

Kurento: sudo docker start kms

Coturn (Turn server): sudo systemctl start turnserver.service

Tomcat-OpenMeetings: sudo /etc/init.d/tomcat34 start

16)

------ Open ports required for servers------

We need open some ports in the router and the firewall for the servers access. These are:

3478 TCP-UDP IN

5443 TCP IN

8888 TCP IN

49152:65535 UDP IN-OUT

To open them (the firewall) with IPTables, *this is only orientative*, these are the commands:

sudo iptables -A INPUT -p tcp -m tcp --dport 3478 -j ACCEPT

sudo iptables -A INPUT -p udp -m udp --dport 3478 -j ACCEPT

sudo iptables -A INPUT -p tcp -m tcp --dport 5443 -j ACCEPT

sudo iptables -A INPUT -p tcp -m tcp --dport 8888 -j ACCEPT

sudo iptables -A INPUT -p udp --match multiport --dports 49152:65535 -j ACCEPT

sudo iptables -A OUT -p udp --match multiport --dports 49152:65535 -j ACCEPT

...after run the commands we save the changes:

sudo service iptables save

...and restart IPTables:

sudo service iptables restart

Now you can access OpenMeetings.
Clic the link down and type the user name and his password you choosed in step 10:

https://localhost:5443/openmeetings

After installing OpenMeetings, you can find a tutorial for building SSL certificates Let´s Encrypt needed for “https” url with wich will work OpenMeetings. Here is:

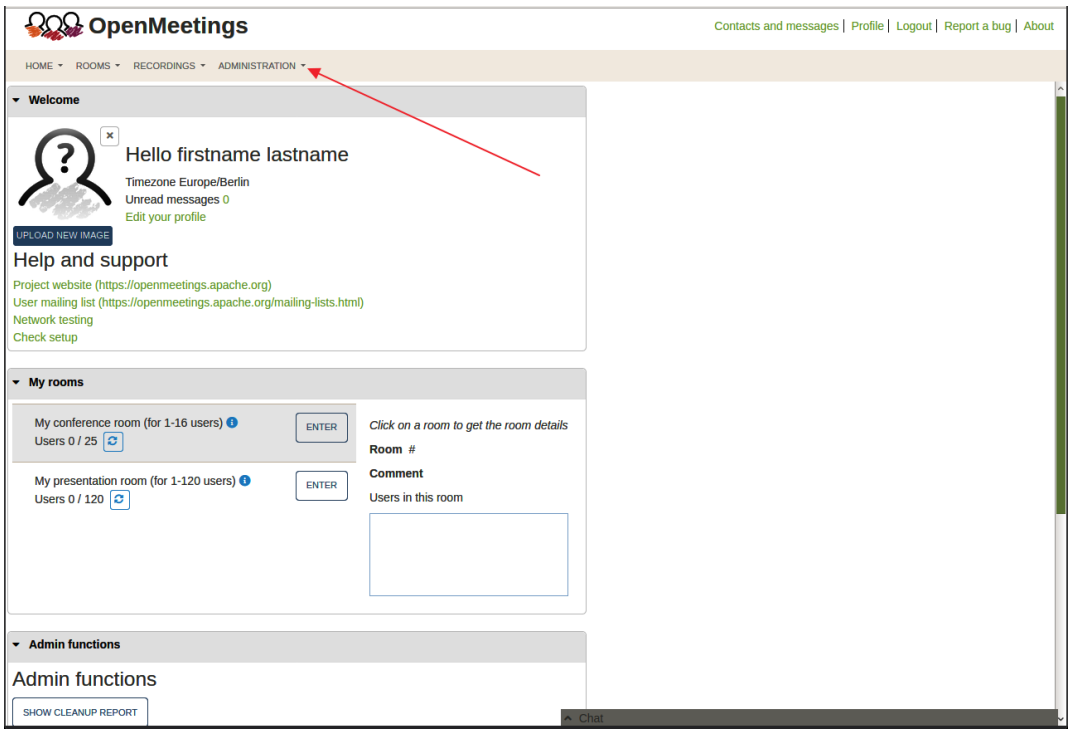
Installation SSL certificates for OpenMeetings 7.2.0 on EndeavourOS

17)

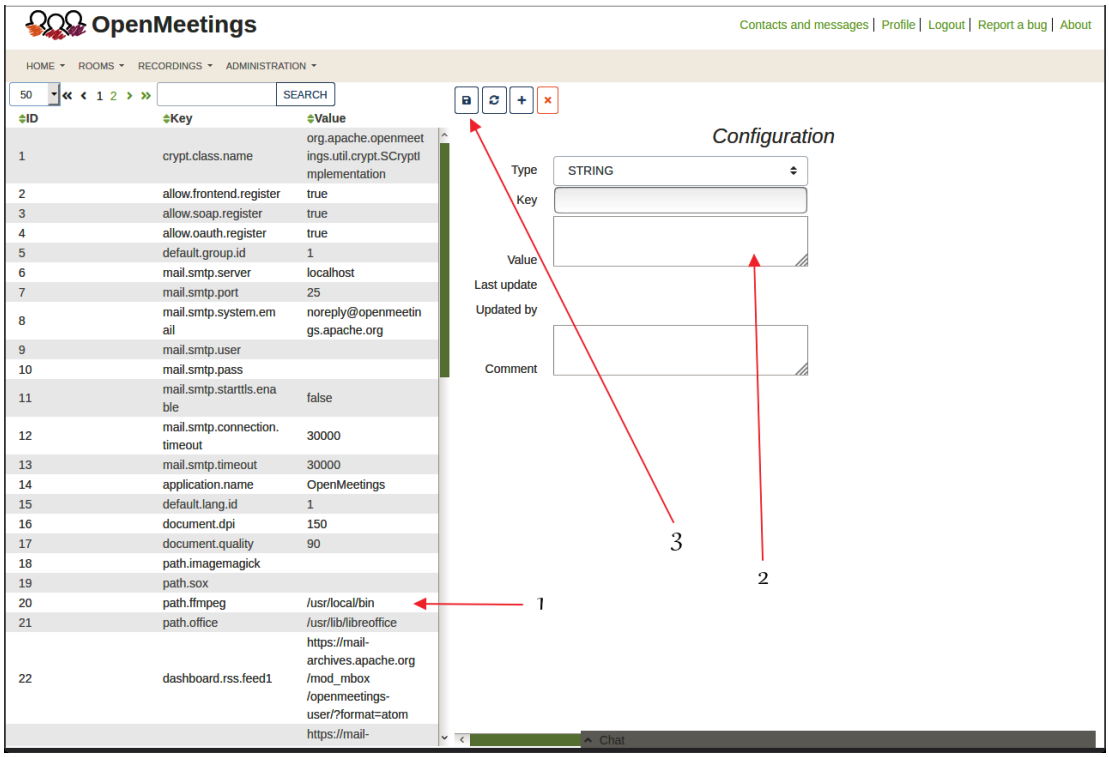
------ Configuration of OpenMeetings ------

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:



And with this we conclude.

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

https://openmeetings.apache.org/mailing-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 downoload:

OpenMeetings Wallpaper Download

A dvd live iso with OpenMeetings 7.2.0 on Ubuntu 18.04 lts and other on Ubuntu 20.04 lts are at your disposal. Can find them here:

Live iso download

Thank you.

Alvaro Bustos (PMC and Committer at Apache OpenMeetings)