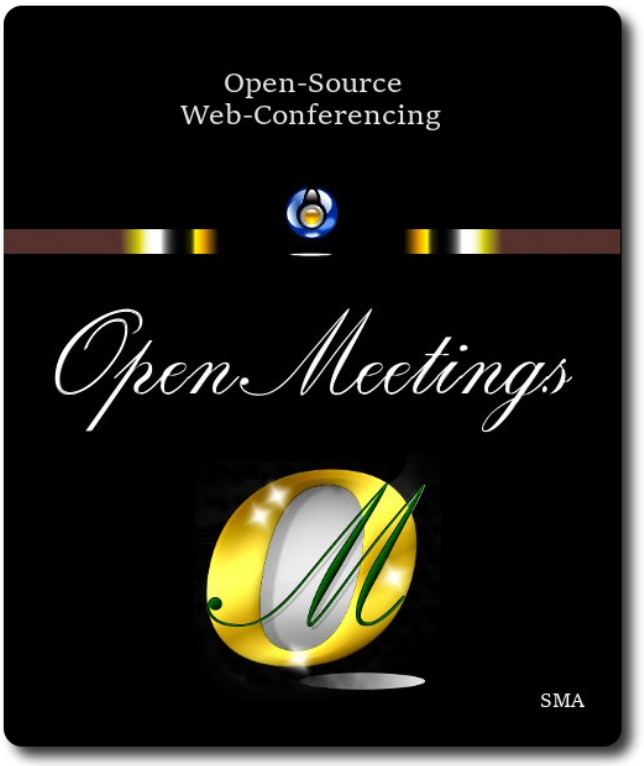



**Installation of Apache OpenMeetings 7.2.0 on openSUSE Leap 15.6**

This tutorial is made based on fresh installations of

**openSUSE-Leap-15.6-DVD-x86_64-Media.iso**

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

**1)**

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

Update operative system:

su

zypper refresh

zypper update

**2)**

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

Java 17 is necessary to work Tomcat-OpenMeetings 7.2.0. So, we install OpenJava 17:

Add OpenJava repo:

zypper addrepo https://download.opensuse.org/repositories/home:ecsos/15.6/home:ecsos.repo

...refresh, typing the letter **a** when ask, to accept for always the keys:

zypper refresh

...and install OpenJava 17:

zypper install java-17-openjdk

export JRE_HOME=/usr/lib64/jvm/java-17-openjdk-17

Now we´ll see if is installed more than one java version. If it is, then please select our OpenJava 17:

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:

zypper install -y ghostscript git nano unzip

**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

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

zypper install -y sox

**6)**

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

FFmpeg takes care of the work with the video. The build script that worked before now has stopped doing so, so we will install a ffmpeg file compiled by me in openSUSE Leap 15.4. (until i get the script to work):

cd /opt

...download it:

(Only one line without space between both)

wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_openSUSE_15.5.zip

...uncompress:

unzip ffmpeg_openSUSE_15.5.zip

...and copy ffmpeg file to /usr/local/bin:

cp ffmpeg_openSUSE_15.5/ffmpeg /usr/local/bin

chmod +x /usr/local/bin/ffmpeg ...concede execution permission.

**7)**

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

MariaDB is the database 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 open720 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permission on this 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 .....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/open720. All the following information will be based on this directory.

cd /opt

...download the OpenMeetings file:

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

...uncompress it:

tar xzvf apache-openmeetings-7.2.0.tar.gz

...and rename the obtained folder:

mv apache-openmeetings-7.2.0 open720

Download and install the connector file between OpenMeetings and MariaDB:

(Only one line without space between both)

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:

cp /opt/mysql-connector-java-8.0.30.jar  /opt/open720/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/tomcat34

...copy it to where must be:

cp tomcat34 /etc/init.d/

...concede execution permission:

chmod +x /etc/init.d/tomcat34

If you 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, (be connected to Internet):

systemctl restart mysql.service

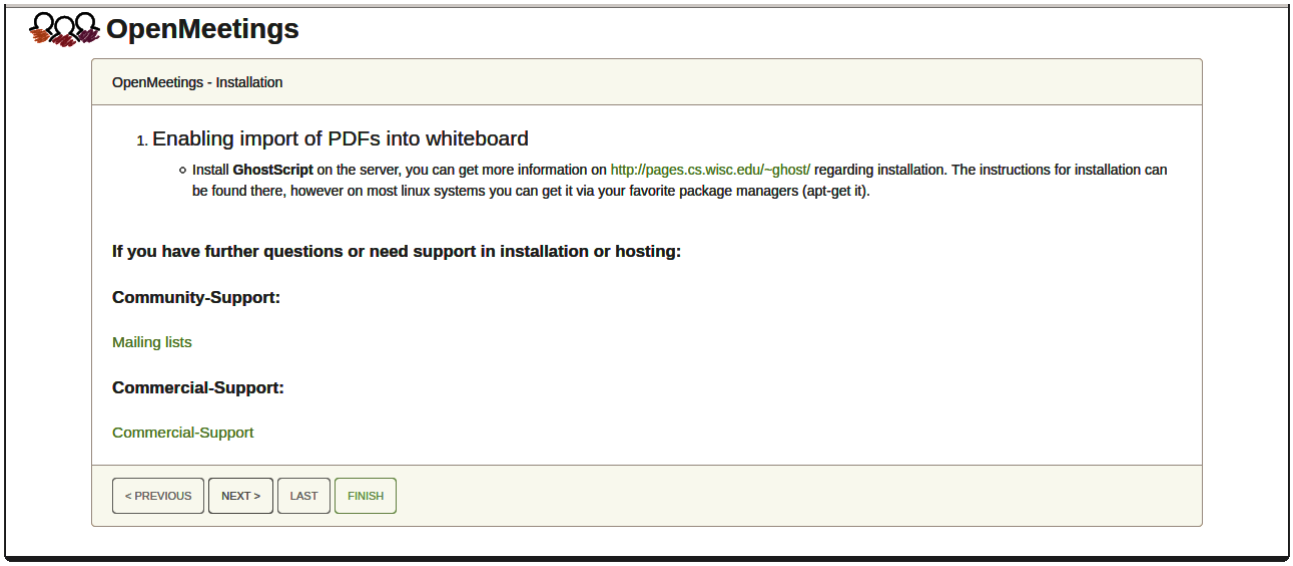
...and run tomcat-OpenMeetings, please, in a new window terminal:

/etc/init.d/tomcat34 start

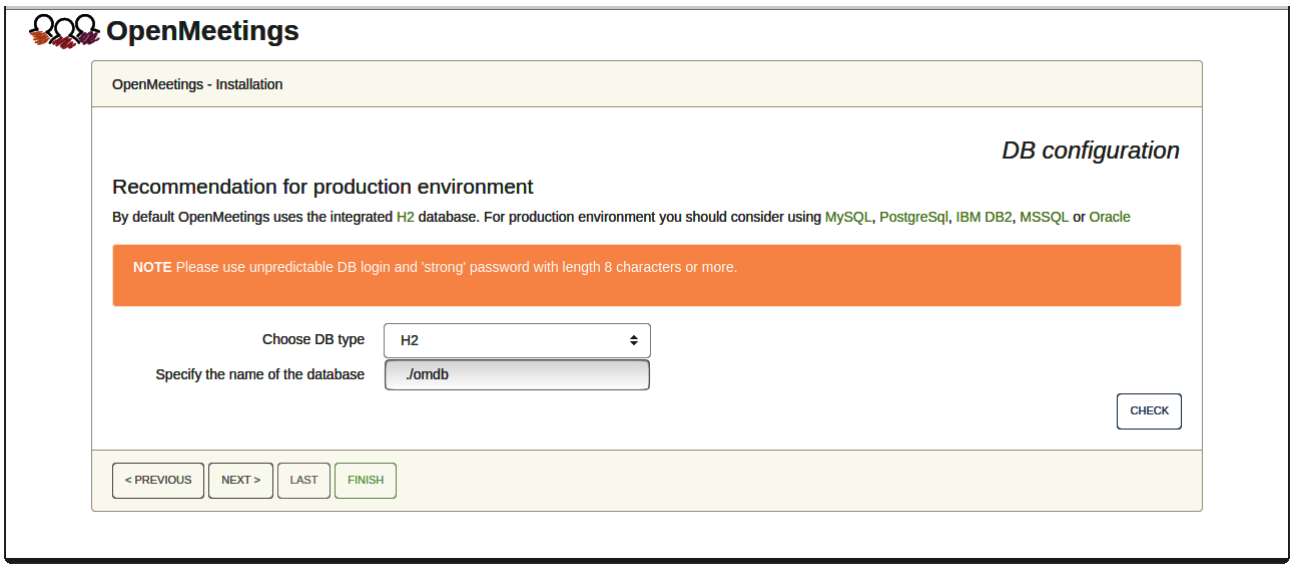
...wait about 40 seconds in order tomcat can run completly. Then, go with the browser to:

https://localhost:5443/openmeetings/

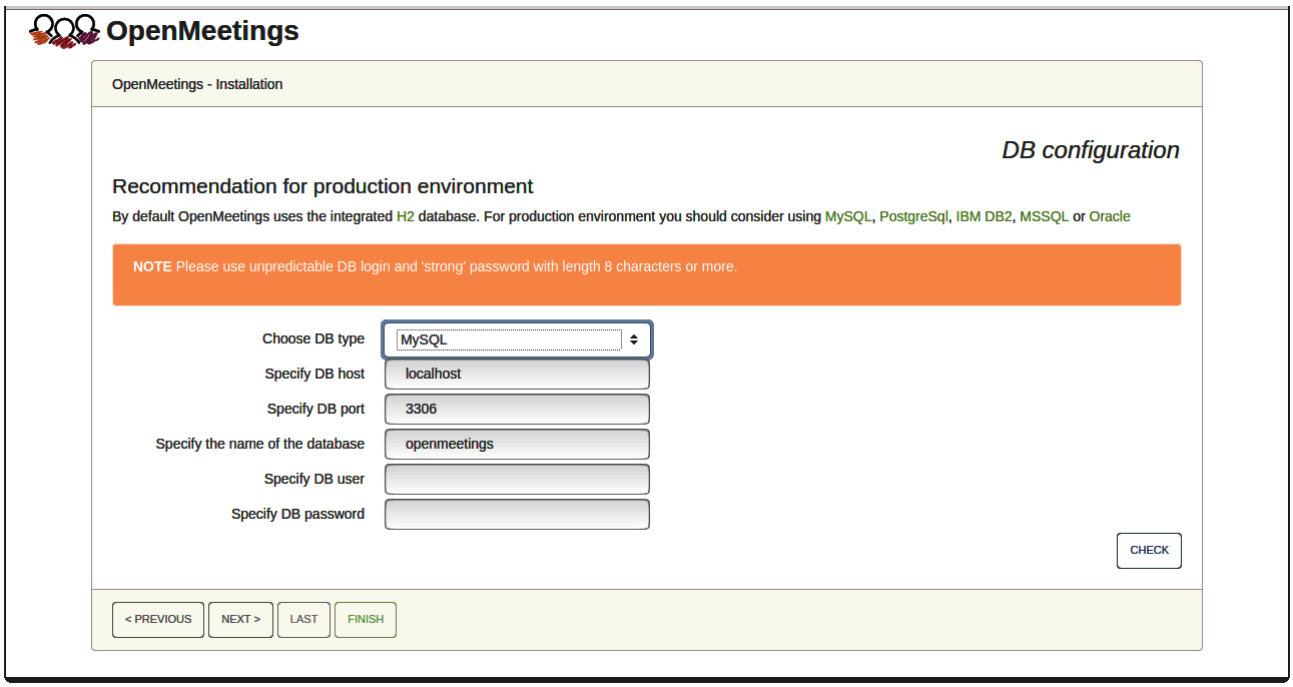
...there will appear a page similar to this one:




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




...then, 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:

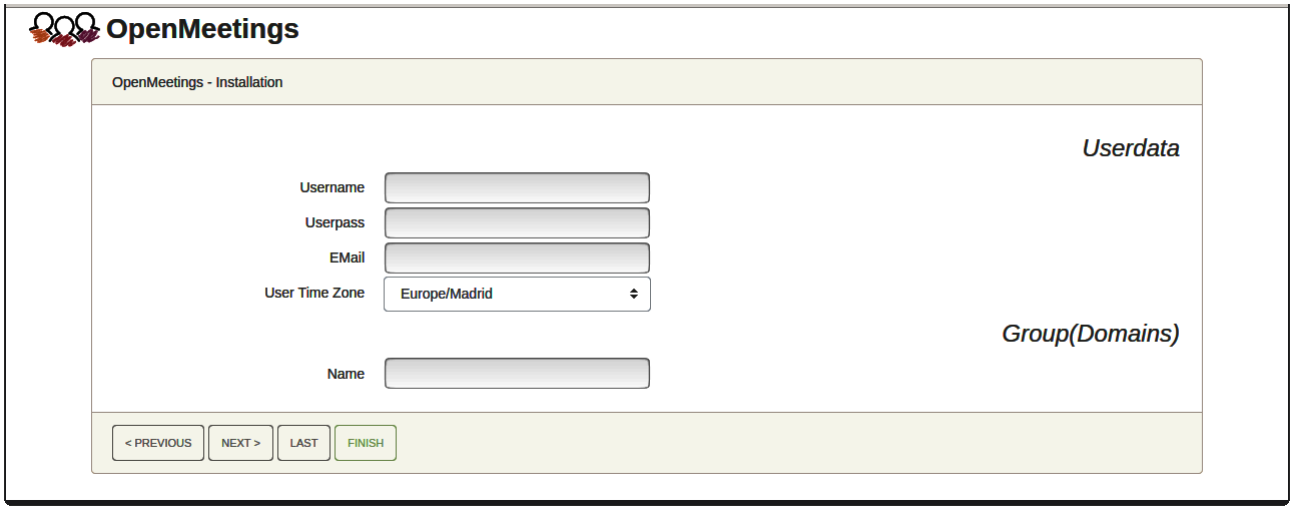
**Specify the name of the database** = open720

**Specify DB user** = hola

**Specify DB password** = 1a2B3c4D

...if you choose 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 will be administrator.

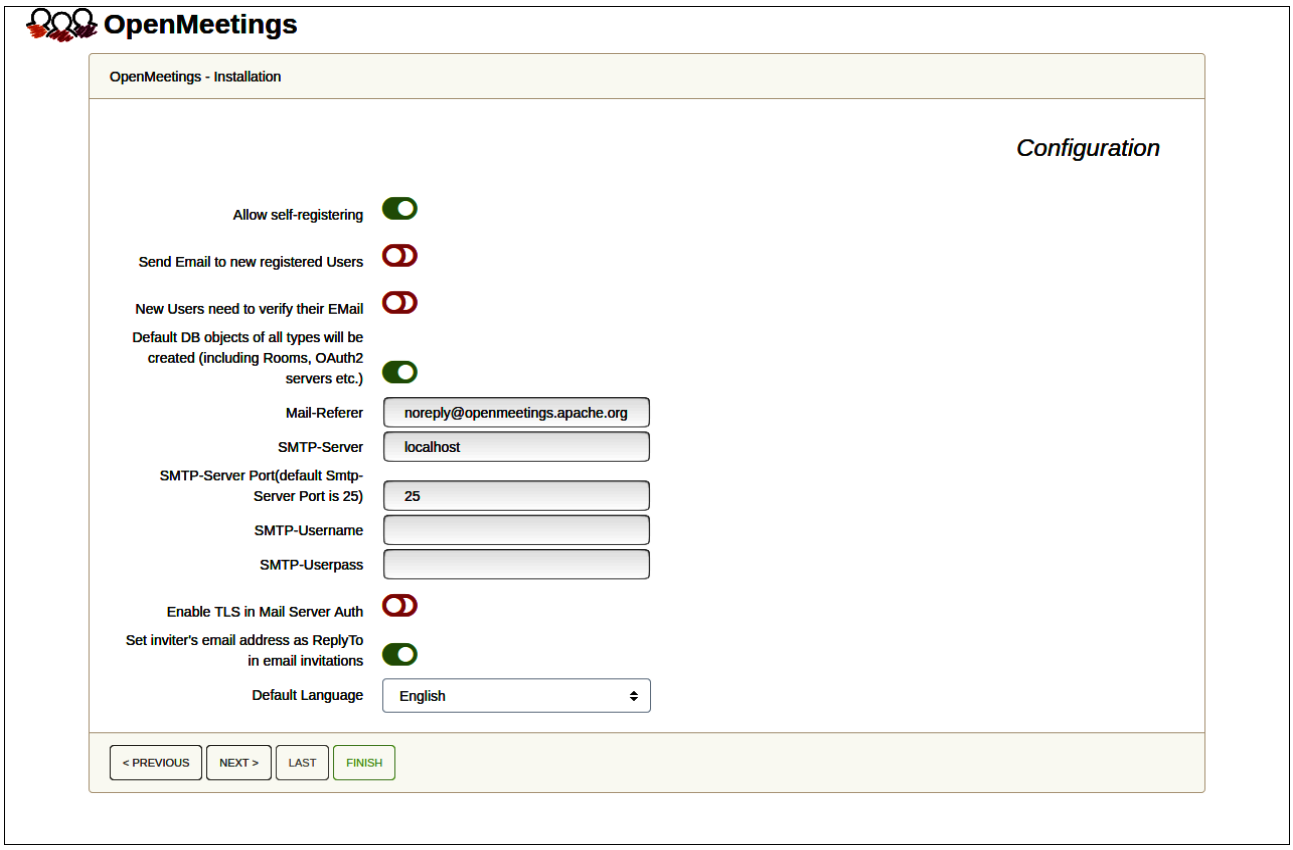
**Userpass** = a-password ...for the previous user.

**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 "**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:



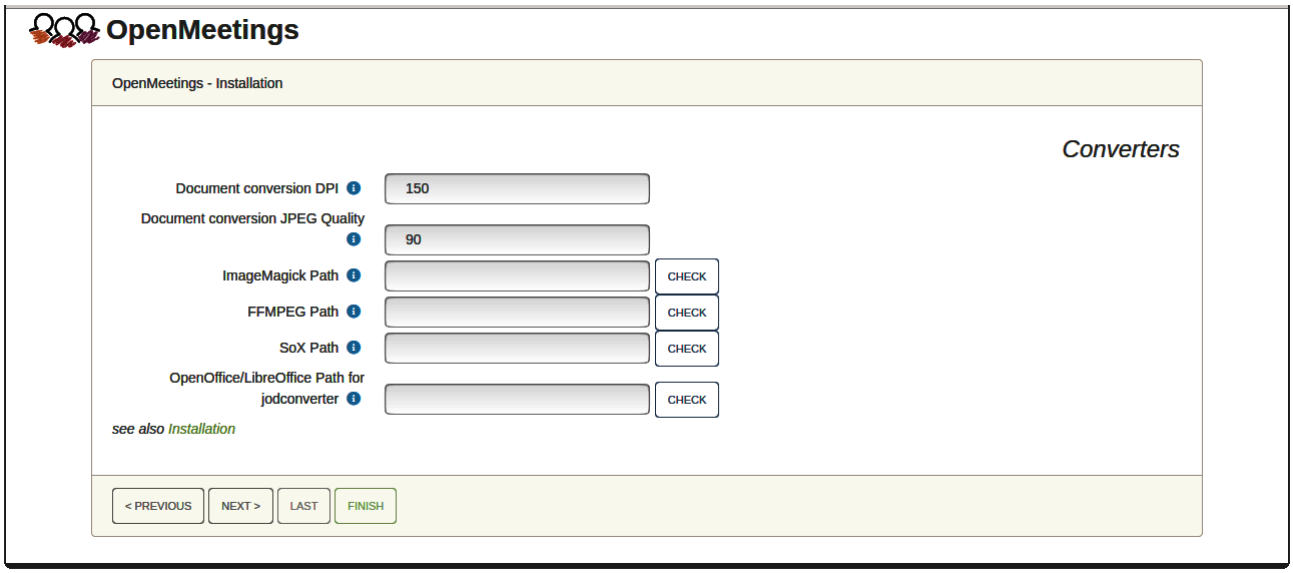

A valid example to configure the mail server with Gmail, is as follows:

(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 can modify 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:

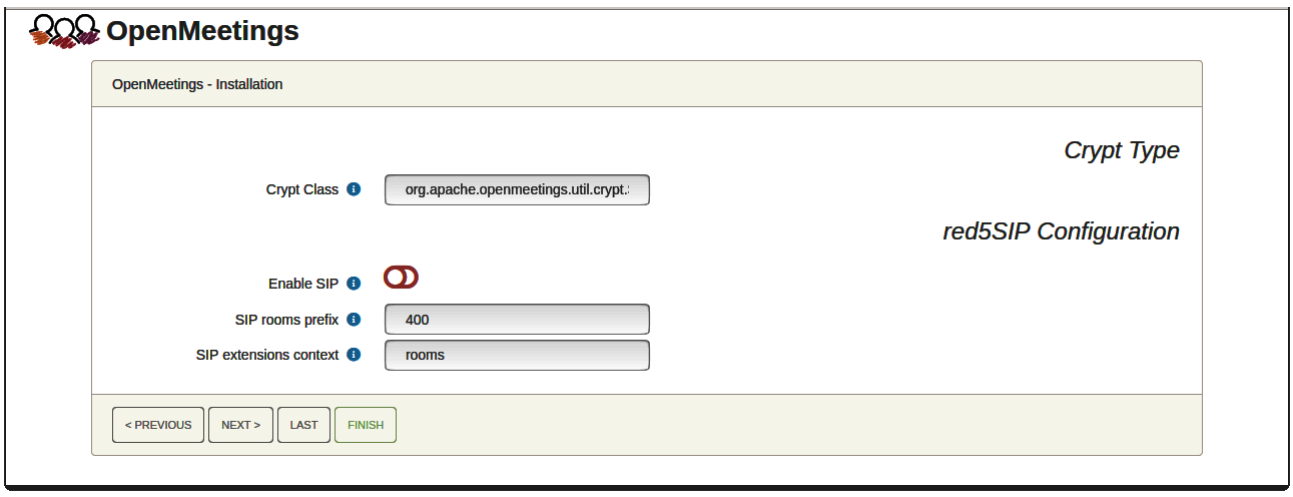
**ImageMagick Path** == ...here empty

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

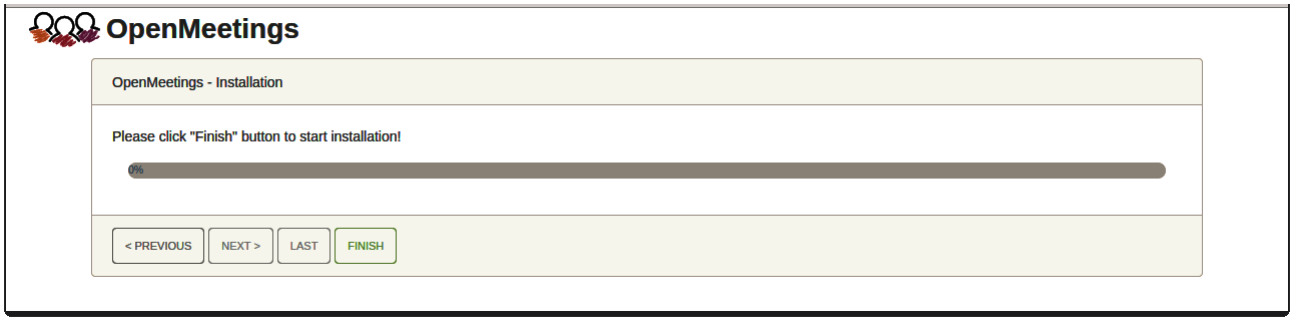
**SOX Path** == ...here empty

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

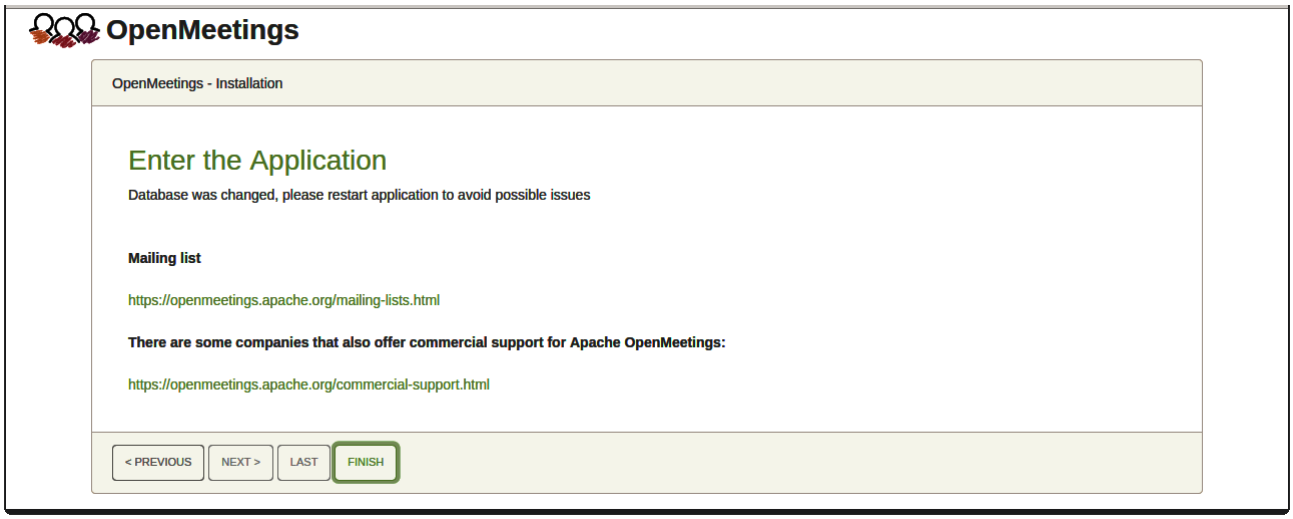


Now push the button "**Next >**" **and w**ill show this window:

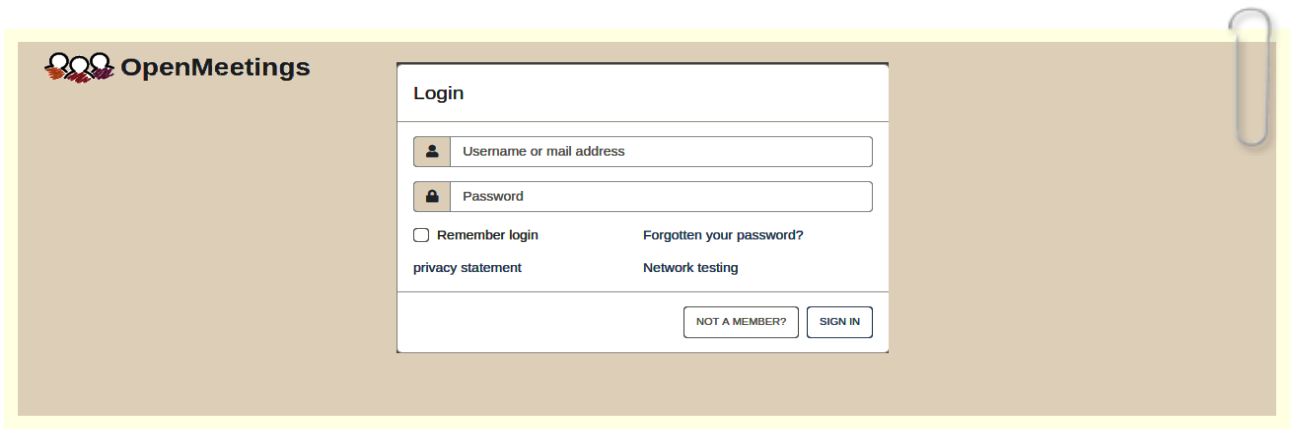



Press "**Finish"** button...wait a seconds untill the tables are fill in the database.
When has concluded, this another page will appear. Don´t clic on **Enter the Application**.
First is need it to restart the server. Please, open a new terminal and restart tomcat:

/etc/init.d/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 Podman, 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 Podman ------**

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

zypper install -y podman

...stop OpenMeetings, MariaDB and Podman:

/etc/init.d/tomcat34 stop

systemctl stop mysql.service

systemctl stop podman.service

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

reboot

**12)**

**------ Installation of Kurento-Media-Server ------**

After had rebooted the computer, we´ll install Kurento-Media-Server needed for 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 Podman:

systemctl start podman.service

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

podman stop kms

podman 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:

mkdir -p /opt/om_data

…and install kurento 6.18.0:

(Only one line, with space between both)

podman 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 ask, please select the line that say docker.io/kurento/…)

podman start kms ...kms is Kurento Media Server

**13)**

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

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

zypper install 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 created it:

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:

nano /etc/coturn/turnserver.conf

...in this file we will have to uncomment (delete #) the following lines:

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_domain ...change company.org to your real domain

stale-nonce=60 ...change 600 to 60

log-file=/var/log/coturn/turnserver.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:

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 after to continue in the next step 15.

But before we´ll stop any server:

podman stop kms

systemctl stop podman.service

systemctl stop coturn.service

/etc/init.d/tomcat34 stop

systemctl stop mysql.service

...and now reboot:

reboot

**15)**

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

Run any server related to OpenMeetings:

| | |
|---|---|
| MariaDB: | systemctl start mysql.service |
| Podman: | systemctl start podman.service |
| Kurento: | podman start kms |
| Coturn: | systemctl start coturn.service |
| Tomcat-OpenMeetings: | /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, these are the commands:

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

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

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

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

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

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

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

service iptables save

...and restart IPTables:

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/openmeeting

# 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 openSUSE Leap 15.6

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

systemctl start mysql.service

systemctl start podman.service

podman start kms

systemctl start coturn.service

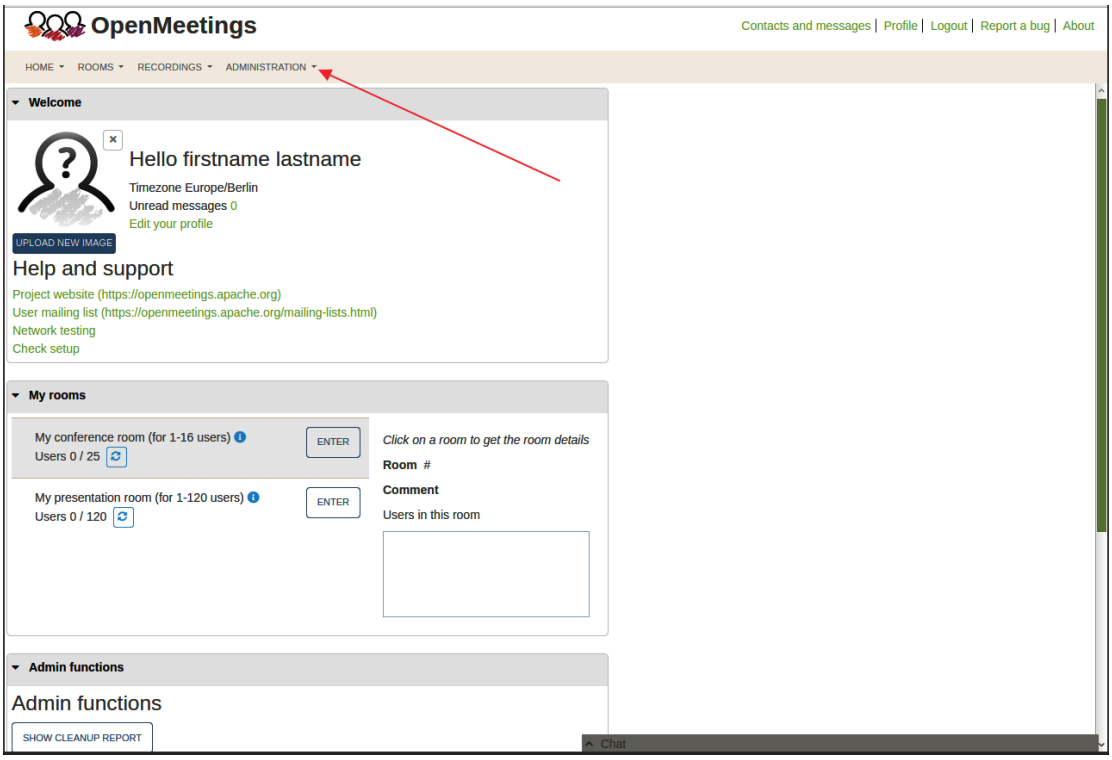
/etc/init.d/tomcat34 start

**17)**

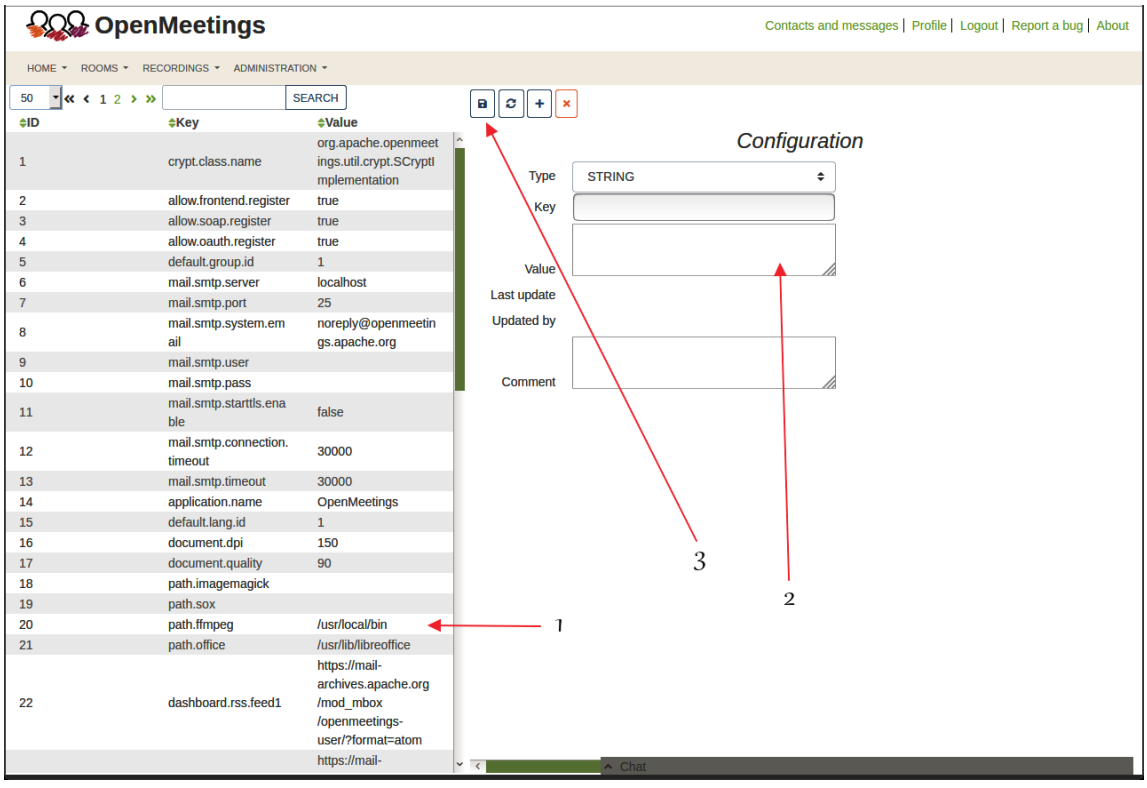
**------ OpenMeetings's configuration ------**

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:



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

https://openmeetings.apache.org/mailing-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 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, it are at your disposal.

Can find it here:

Live iso download

Thank you.

Alvaro Bustos  (PMC and Committer at Apache OpenMeetings)