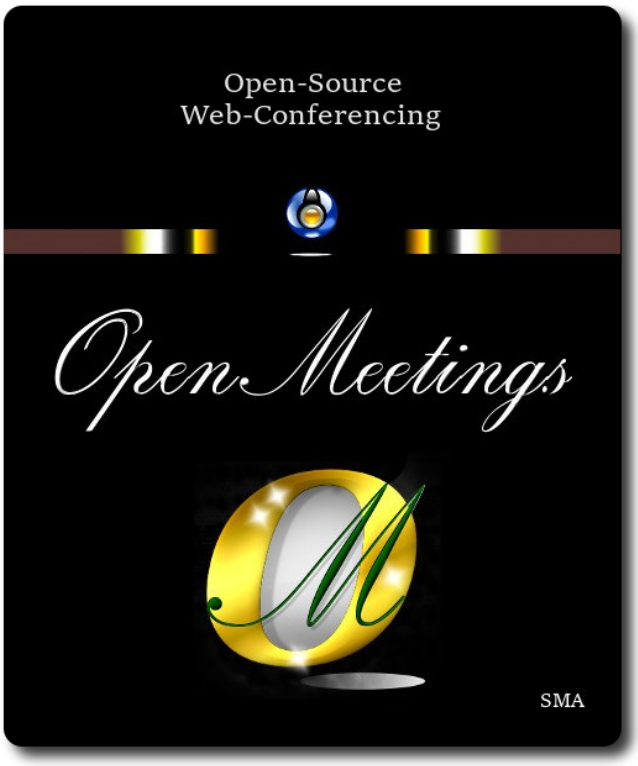


Installation of Apache OpenMeetings 7.2.0

on

Fedora 38 final

This tutorial it is bassed on a fresh installation of

Fedora-MATE_Compiz-Live-x86_64-38-1.5.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**.**

Starting...

1)

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

sudo 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.

2)

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

Update the system:

sudo dnf update -y

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

sudo reboot

3)

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

RPM Fusion repo ## Please, no install rpmfusion-non-free (ffmpeg problem).

(Only one line without space between them)

sudo su -c 'dnf install --nogpgcheck http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-38.noarch.rpm'

Update again:

sudo dnf update -y

4)

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

Java 17 is needeed to work OpenMeetings 7.2.0. Will install OpenJava 17:

sudo dnf install java-17-openjdk.x86_64 java-17-openjdk-headless.x86_64

Maybe you have installed different versions of Java. Please, select the just installed OpenJava 17:

sudo update-alternatives --config java

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

sudo java -version

5)

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

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

sudo dnf -y install libreoffice

Is needeed to convert uploaded office files to pdf.

6)

------ 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

7)

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

FFmpeg will work the video. We install it:

sudo dnf swap ffmpeg-free ffmpeg --allowerasing -y

8)

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

MariaDB is the data base server.

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 whish:

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 open720 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permision 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 that user

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

Now we leave MariaDB:

MariaDB [(none)]> quit

9)

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

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

cd /opt

...download and uncompress the 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

...and rename the obtained folder:

sudo mv apache-openmeetings-7.2.0 open720

10)

------ 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/8.0.30/mysql-connector-java-8.0.30.jar

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

11)

------ 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/tomcat34

...create the folder where we´ll put it:

sudo mkdir /etc/init.d …

...copy it to there:

sudo cp tomcat34 /etc/init.d/

...and concede execution permission:

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

If you made the installation of OpenMeetings 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

12)

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

Run MariaDB:

sudo systemctl start mariadb.service

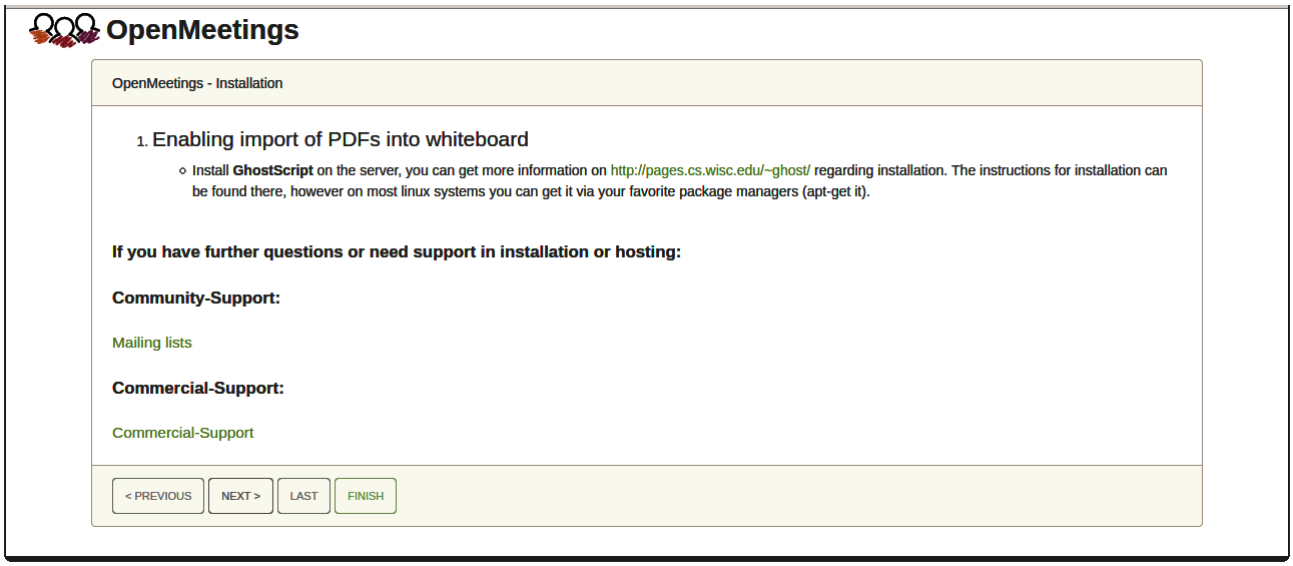
...and Tomcat-OpenMeetings:

sudo /etc/init.d/tomcat34 start

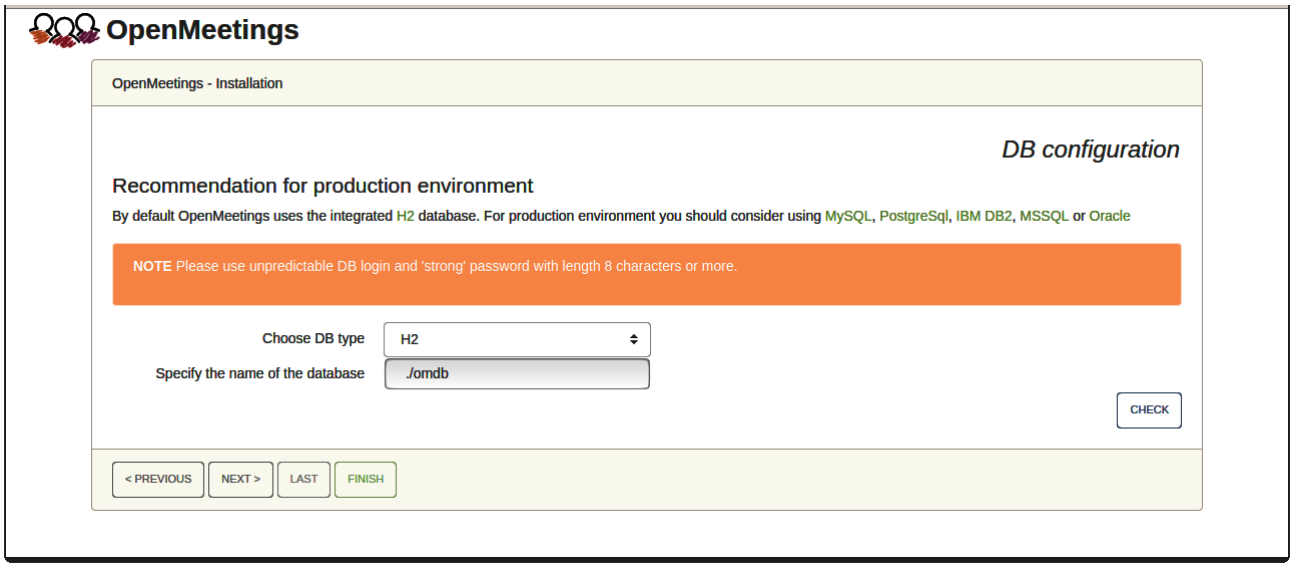
...wait about 40 seconds in order Tomcat run completly. Then, go with the browser to:

https://localhost:5443/openmeetings

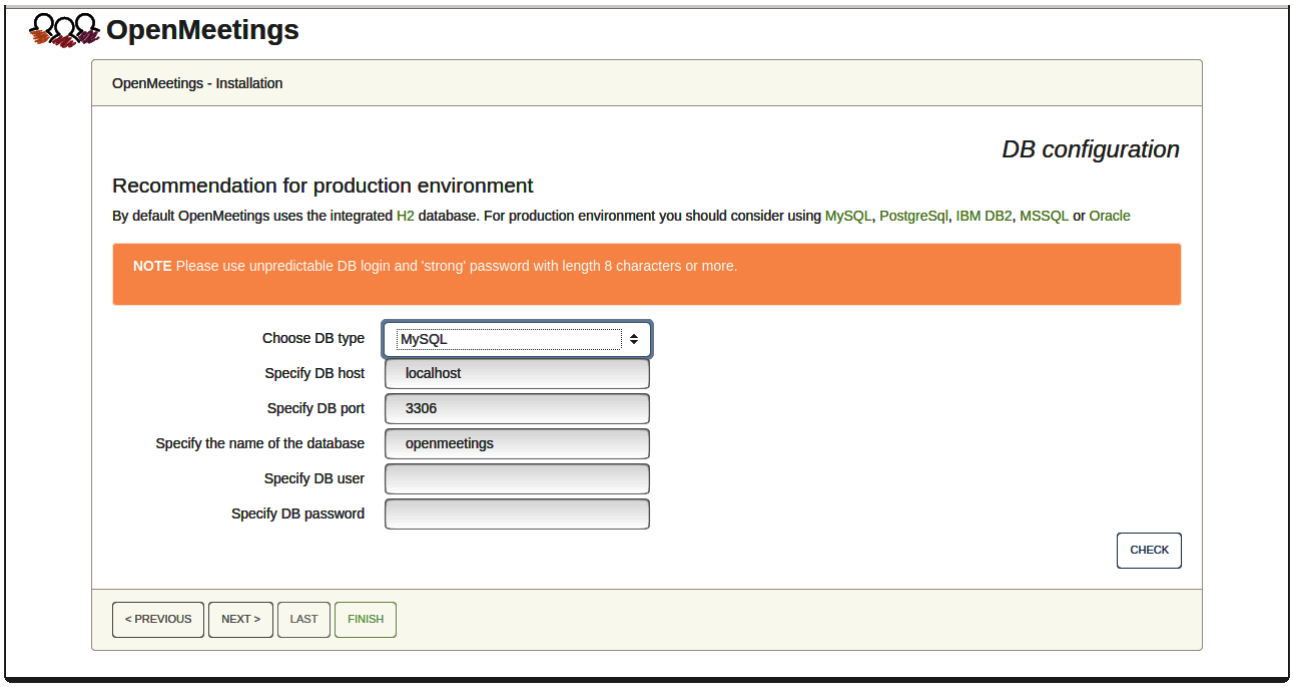
...there will show a page similar to this one:



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



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



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

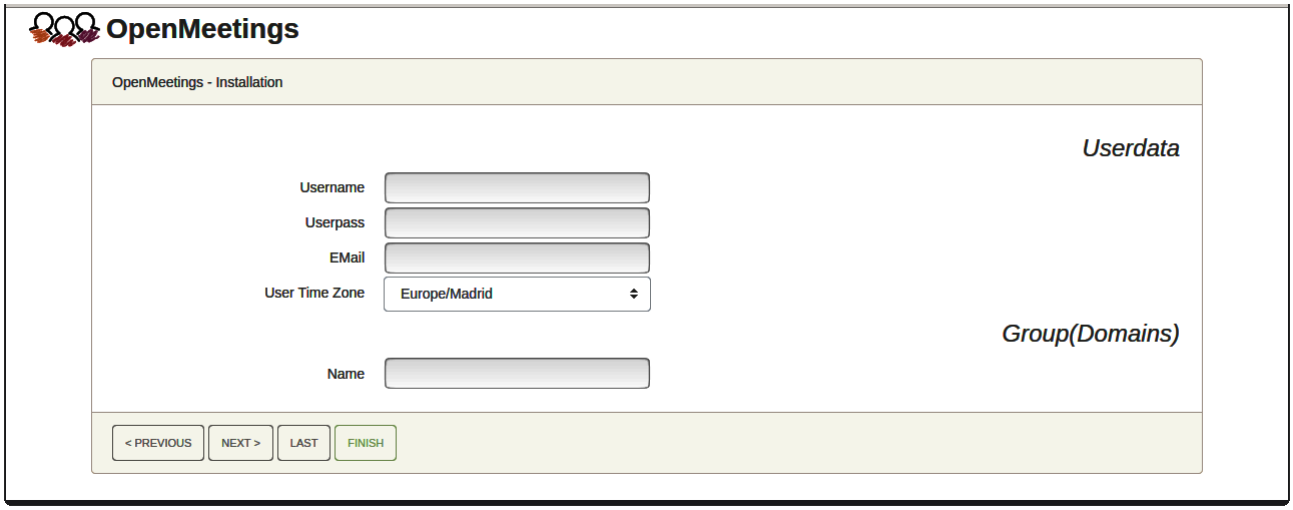
Specify the name of the database = open720

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 name will have administrator rights.

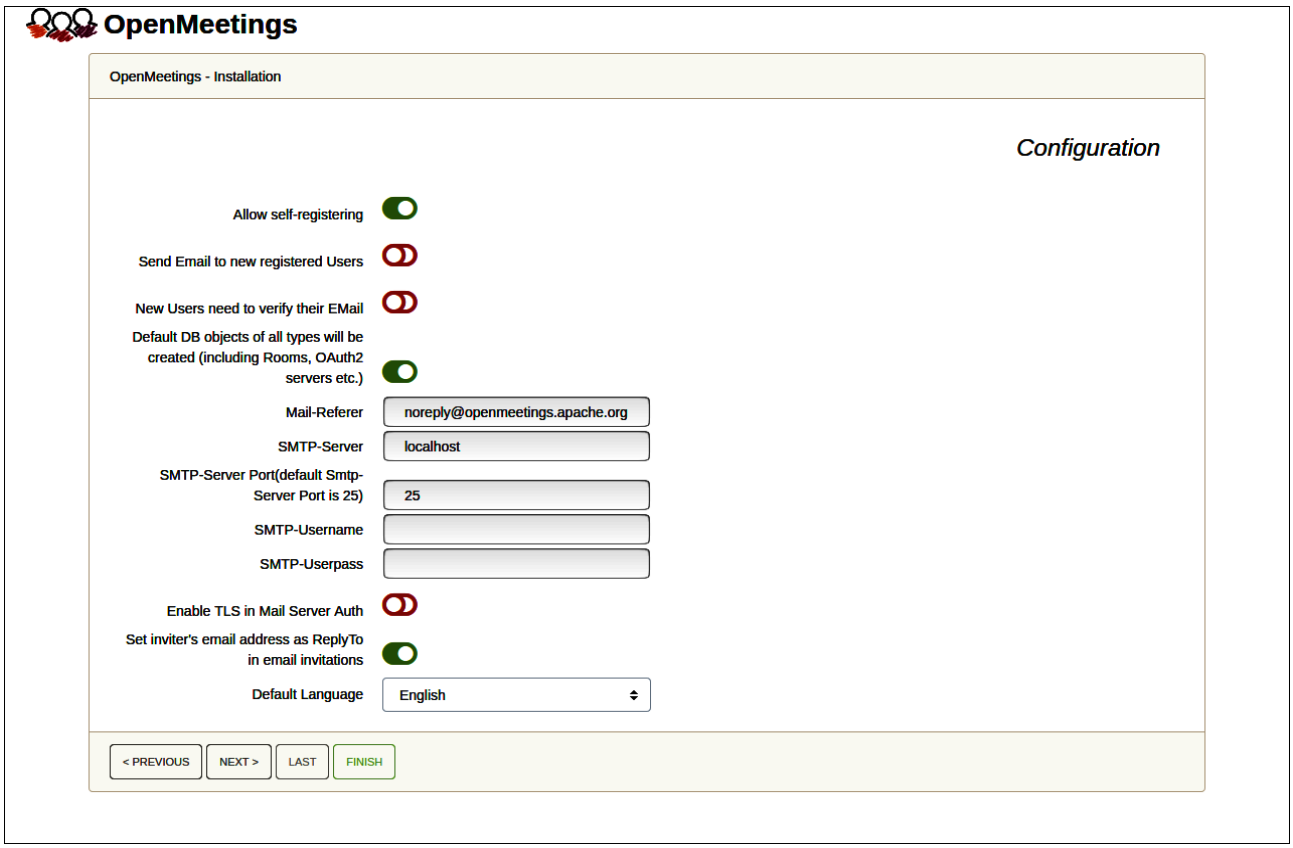
Userpass = a-password ….for the previous user

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:



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

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

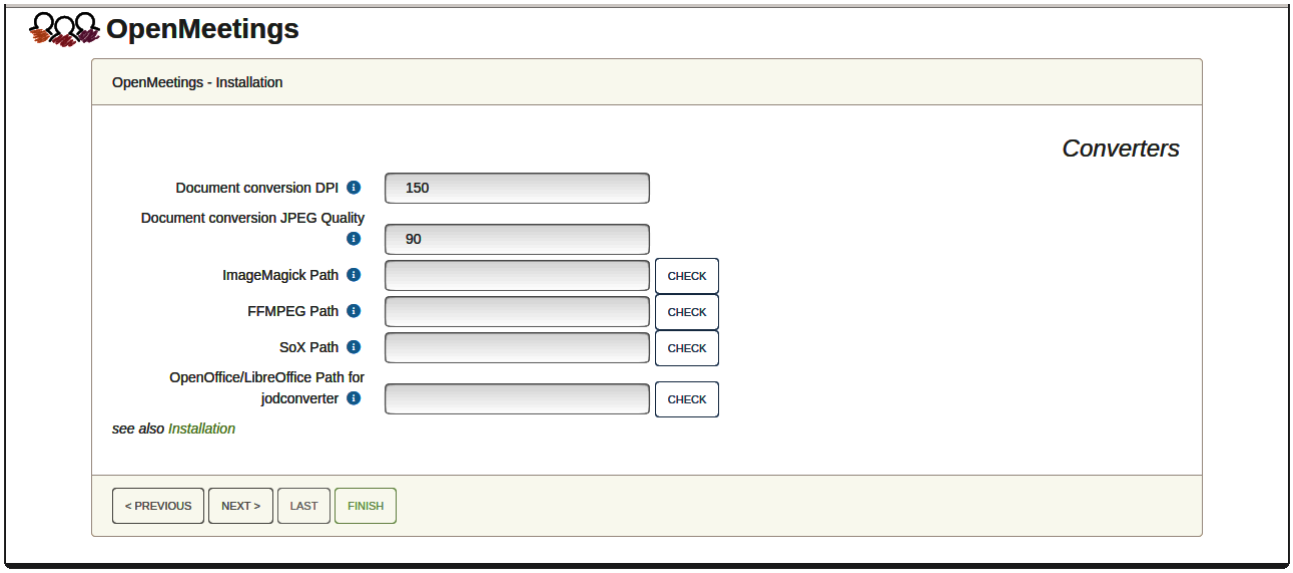
Mail-Refer	==	john@gmail.com
SMTP-Server	==	smtp.gmail.com
SMTP-Server Port (default Smtp-Server Port is 25)	==	587
SMTP-Username	==	john@gmail.com
SMTP-Userpass	==	password of john@gmail.com
Enable TLS in MailServer Auth	==	...turn green the button to activate

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:



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

ImageMagick Path == ...here empty

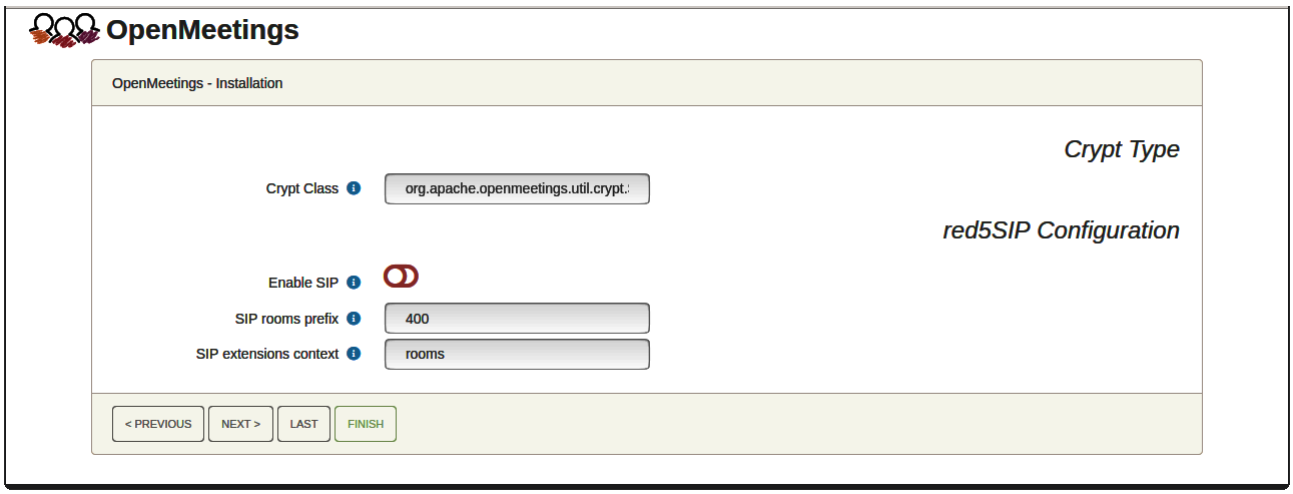
FFMPEG Path == ...here empty

SOX Path == ...here empty

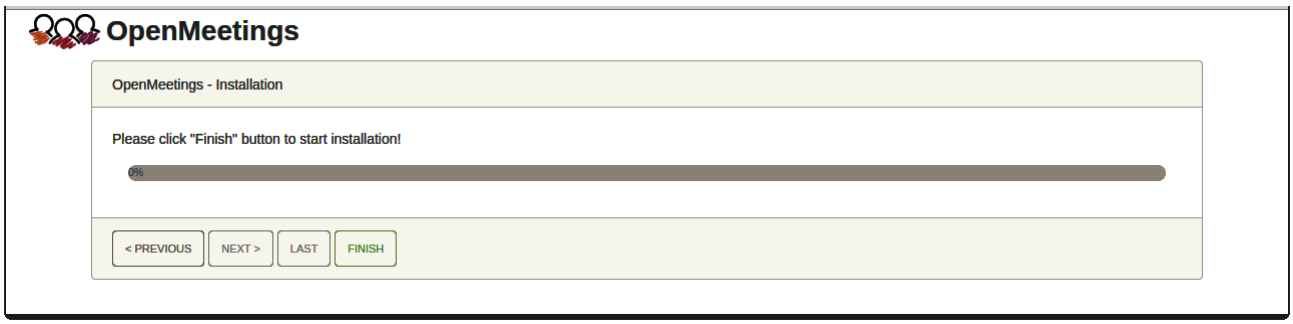
OpenOffice/LibreOffice Path for jodconverter == /usr/lib64/libreoffice

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 button "**Next >**" and move on to another page that we will leave it as is:

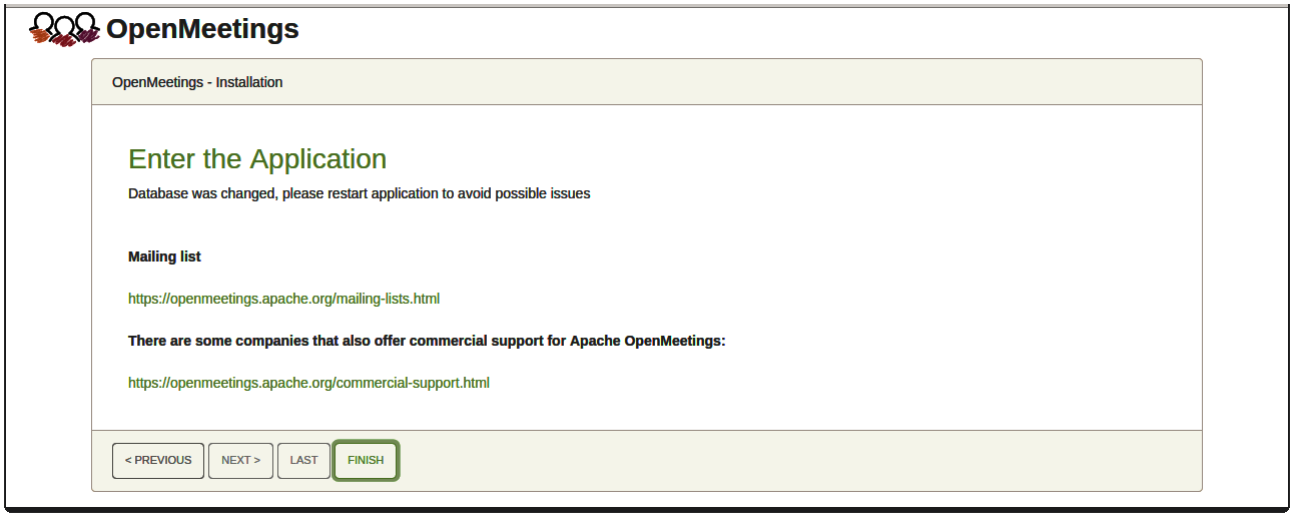


Now push the button "**Next >**" Will show this window:

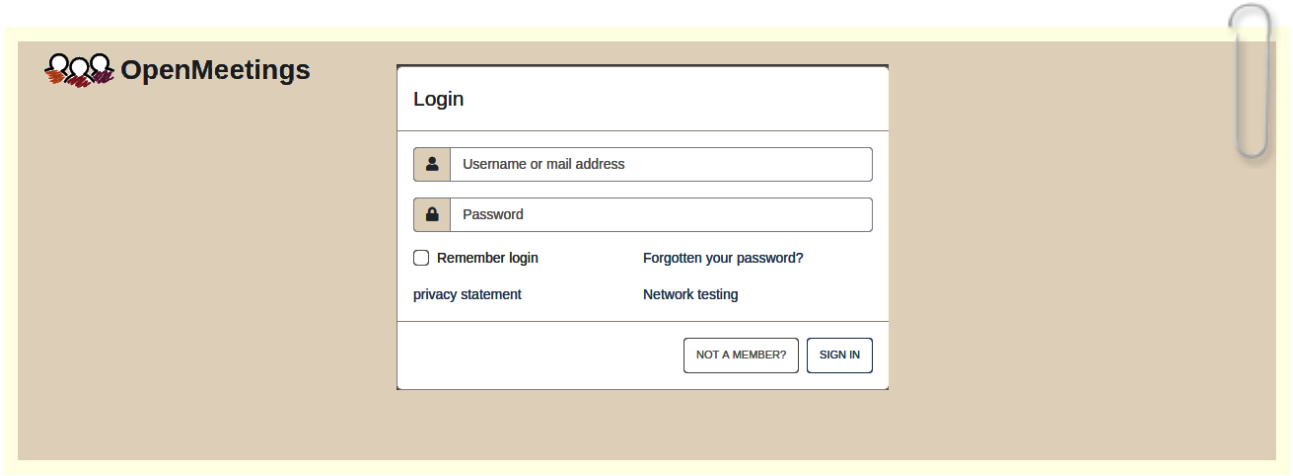


Press "**Finish"** button ...wait a seconds untill the tables are fill in the database.
When has concluded, this another page will appear. Don´t clic on **Enter the Application**.
First is need it to restart the server (be connected to Internet):

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 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



13)

------ Installation of Podman ------

Install Podman. It is the recipient where will be installed Kurento-Media-Server:

sudo dnf -y install podman

Stop Tomcat-OpenMeetings and Mariadb:

sudo /etc/init.d/tomcat34 stop

sudo systemctl stop mariadb.service

…and reboot the machine. After this, please follow in the step **14)**:

sudo reboot

14)

------ 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:

sudo systemctl start podman.service

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

sudo podman stop kms

sudo 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:

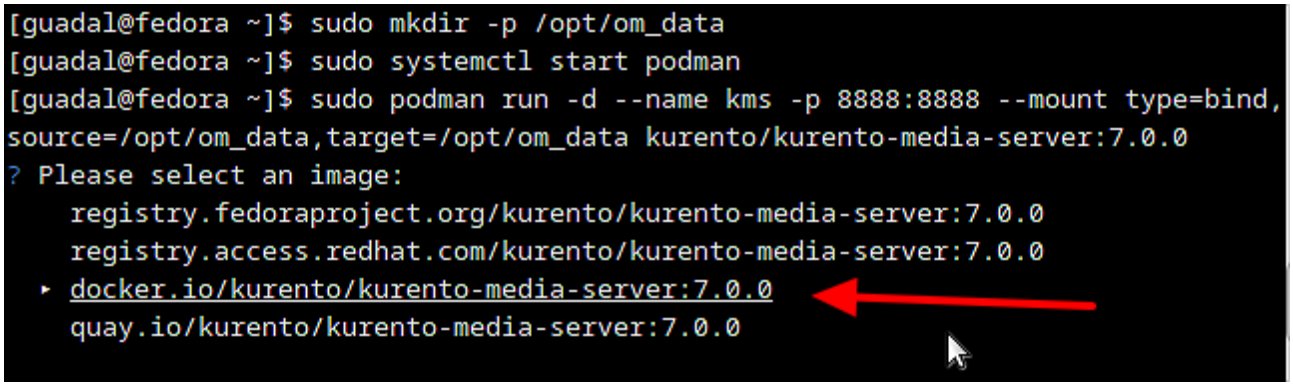
sudo mkdir -p /opt/om_data (if you choose another path please substitute it below as well)

…and install kurento: (the picture below say 7.0.0 but is 6.18.0)

(Only one line, with space between both)

sudo 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

...please select the line that say: docker.io/kurento/…. (look the capture below)



If you made the installation of /opt/om_data in another path, please edit the script called "tomcat34" downloaded at step 11:

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

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

sudo podman start kms

15)

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

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

sudo dnf 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 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/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_domaing ...change company.org to your real domain

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

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

16)

------ 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=751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXXX

...above, in:

kurento.turn.secret=751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXXX

...replace the line: 751c45cae60a2839711a94c8d6bf0089e78b2149ca602fdXXXXXXXXXXXXXX

...by the long password that we generated in step 15 and that we save in a text file.

Exit the nano editor by pressing **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 17.
But before we´ll stop any server:

sudo /etc/init.d/tomcat34 stop

sudo podman stop kms

sudo systemctl stop coturn.service

sudo systemctl stop mariadb.service

...and now reboot:

sudo reboot

17)

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

Run any server related with OpenMeetings:

MariaDB: sudo systemctl start mariadb.service

Podman: sudo systemctl start podman.service

Kurento: sudo podman start kms

Coturn: sudo systemctl start coturn.service

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

18)

------ 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:

```
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 to login:

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:

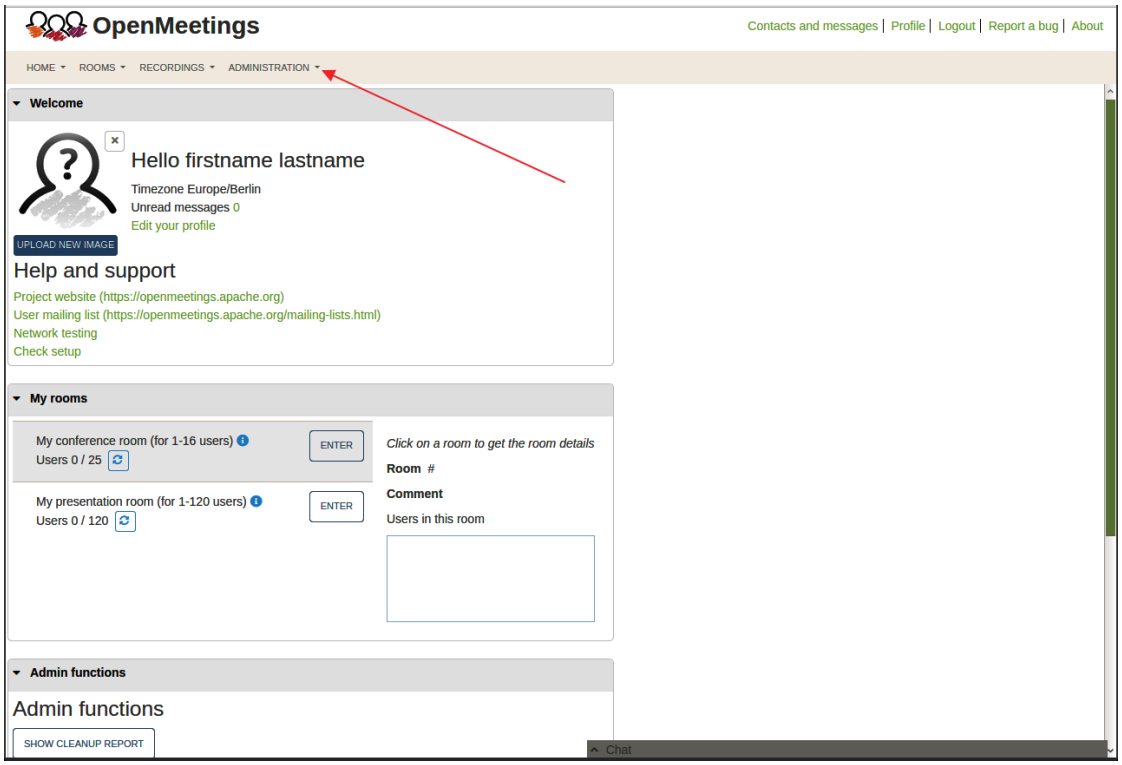
Installation SSL certificates for OpenMeetings 7.2.0 on Fedora 38

19)

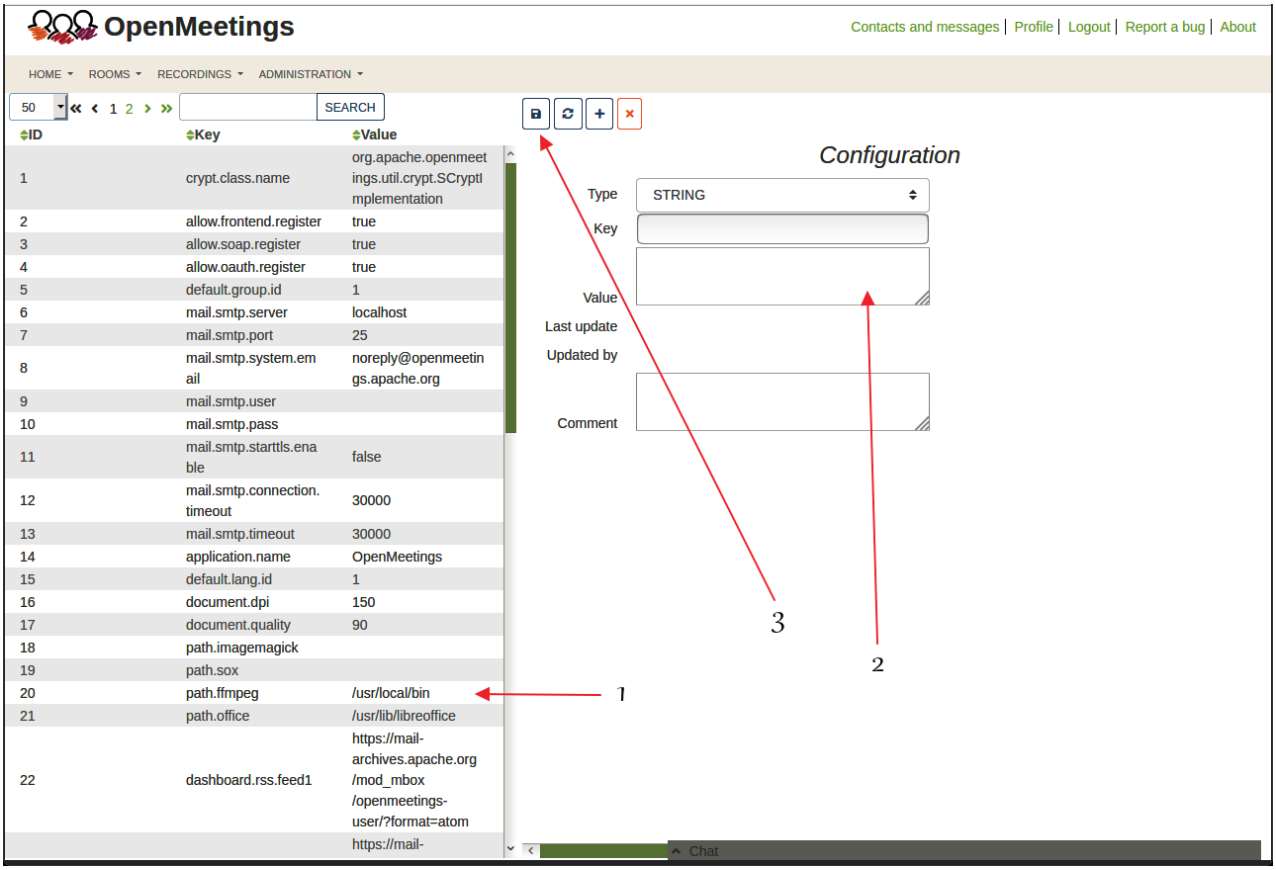
------ Configuration of OpenMeetings ------

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:



20)

------ 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 podman.service …Podman, recipient of Kurento media server

sudo podman start kms ...Kurento media server

sudo systemctl start coturn.service …Turn server (Coturn)

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

With this we conclude.

If you have some doubt or question, please expose it in 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 is at your disposal.

Can find it here:

Live iso download

Thank you.

Alvaro Bustos (PMC and Committer at Apache OpenMeetings)