Installation of Apache OpenMeetings 5.0.0 M1 on Ubuntu 18.04 LTS

The present tutorial is made based on a minimal fresh installations of

bionic-desktop-amd64.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.

25-3-2019

Starting...

1)

First, we update and upgrade the OS:

sudo apt update

sudo apt upgrade

2)

------ Installation of OpenJava 1.8 ------

OpenMeetings **5.0.0** need Java **1.8** to work. So, we install OpenJava 1.8:

sudo apt install openjdk-8-jdk openjdk-8-jdk-headless nano

Now, please, select OpenJava 1.8, if you have more than one java versions installed:

sudo update-alternatives --config java

To see the active java version:

java -version

3)

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

LibreOffice is need it to convert to pdf the uploaded office files.

The ubuntu desktop iso have already LibreOffice installed.

But we install it specially for server iso:

sudo add-apt-repository ppa:libreoffice/ppa

sudo apt update

sudo apt install libreoffice

4)

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

ImageMagick, will work the image files, png, jpg, gif, etc. Will install it and some more libraries and paquets:

sudo apt install -y imagemagick libjpeg62 zlib1g-dev

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

sudo nano /etc/ImageMagick-6/policy.xml

...and comment the two follow 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 the ImageMagick.

Sox, work the sound. We install it:

sudo apt install sox

5)

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

FFmpeg will work the video. This compilation is based on:

https://trac.ffmpeg.org/wiki/CompilationGuide/Ubuntu

Updated files to 25-3-2019. Install some paquets and libraries:

(Only one line with space between each one)

sudo apt -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev libgpac-dev libsdl1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev libxcb-shm0-dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev nasm libx264-dev cmake mercurial libopus-dev curl git vlc unzip make build-essential wget nmap

I made a script that will download, compile and install ffmpeg.
The result of any recording we do in OpenMeetings will be in mp4 format.
Please, download the script:

cd /opt

(Only one line without space between both)

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

...concede permission of execution:

sudo chmod +x ffmpeg_UbunDebi.sh

...and run it (be connected to Internet). The compilation will spend about 20-30 minutes:

sudo ./ffmpeg_UbunDebi.sh

When finish the compilation, a text will announce it:

FFmpeg Compilation is Finished!

...then, please, go to next step.

6)

------ Installation and configuration of MariaDB data server ------

MariaDB is the data server. Will install it:

sudo apt install mariadb-server

Run MariaDB:

sudo /etc/init.d/mysql start

Now we give a root password to MariaDB. Please, replace new-password with your own:

sudo mysqladmin -u root password new-password

Make a database with his own user for OpenMeetings:

sudo mysql -u root -p

...will ask for the root password that you have just choosen, type it...

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

(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 this database.
* 1a2B3c4D ..is the password for this user.

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

Now, we leave MariaDB:

MariaDB [(none)]> quit

7)

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

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

Make the folder:

sudo mkdir /opt/open500

cd /opt/open500

...and download the tomcat-OpenMeetings file:

(Only one line without space between both)

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

sudo unzip apache-openmeetings-5.0.0-M1.zip

...save the unloaded file to /opt:

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

Do to **nobody** owner of the whole OpenMeetings folder installation, by security:

sudo chown -R nobody:nogroup /opt/open500

Download and install the connector between OpenMeetings and MariaDB:

cd /opt

(Only one line without space between both)

sudo 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:

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

8)

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

Please, download the tomcat run script:

cd /opt

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

...copy it to:

sudo cp tomcat3 /etc/init.d/

...and concede permission of execution:

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

9)

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

Start MariaDB, if still it is not:

sudo /etc/init.d/mysql start

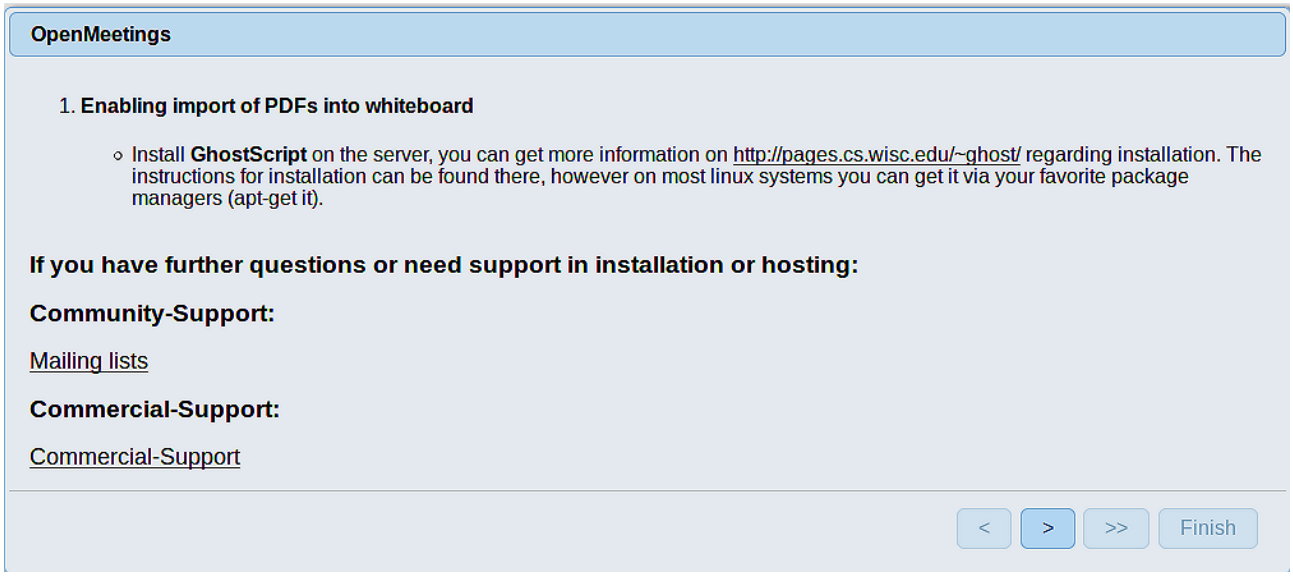
...and now start tomcat-OpenMeetings:

sudo /etc/init.d/tomcat3 start

...wait 40 seconds at least, in order that tomcat runing completely. And after this, can go to:

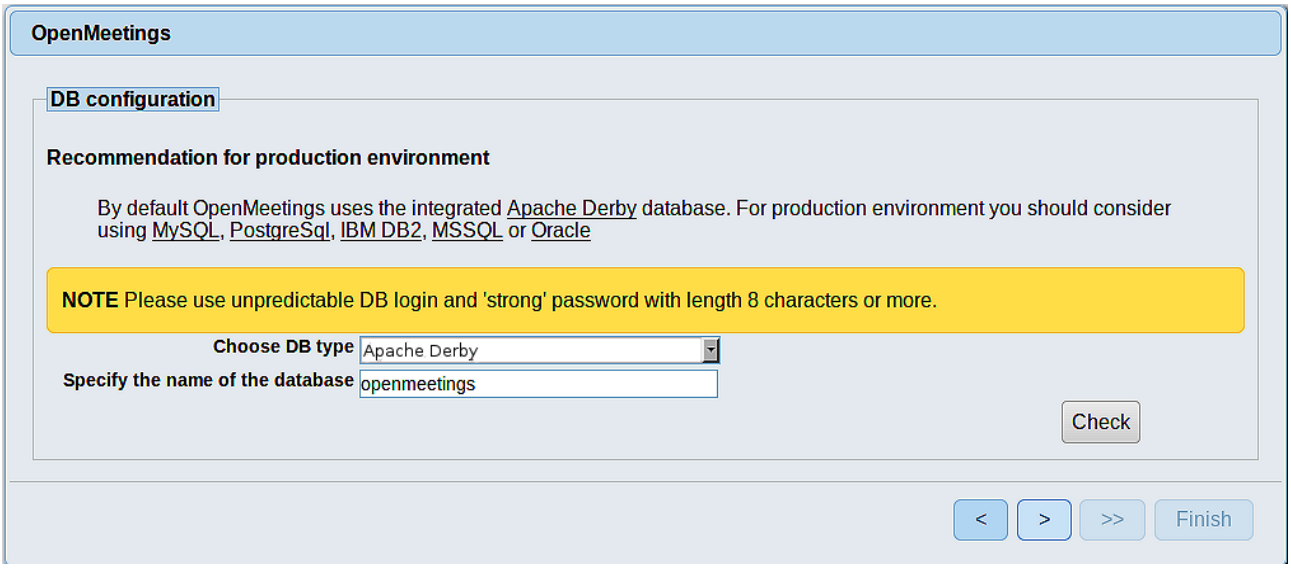
https://localhost:5443/openmeetings

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

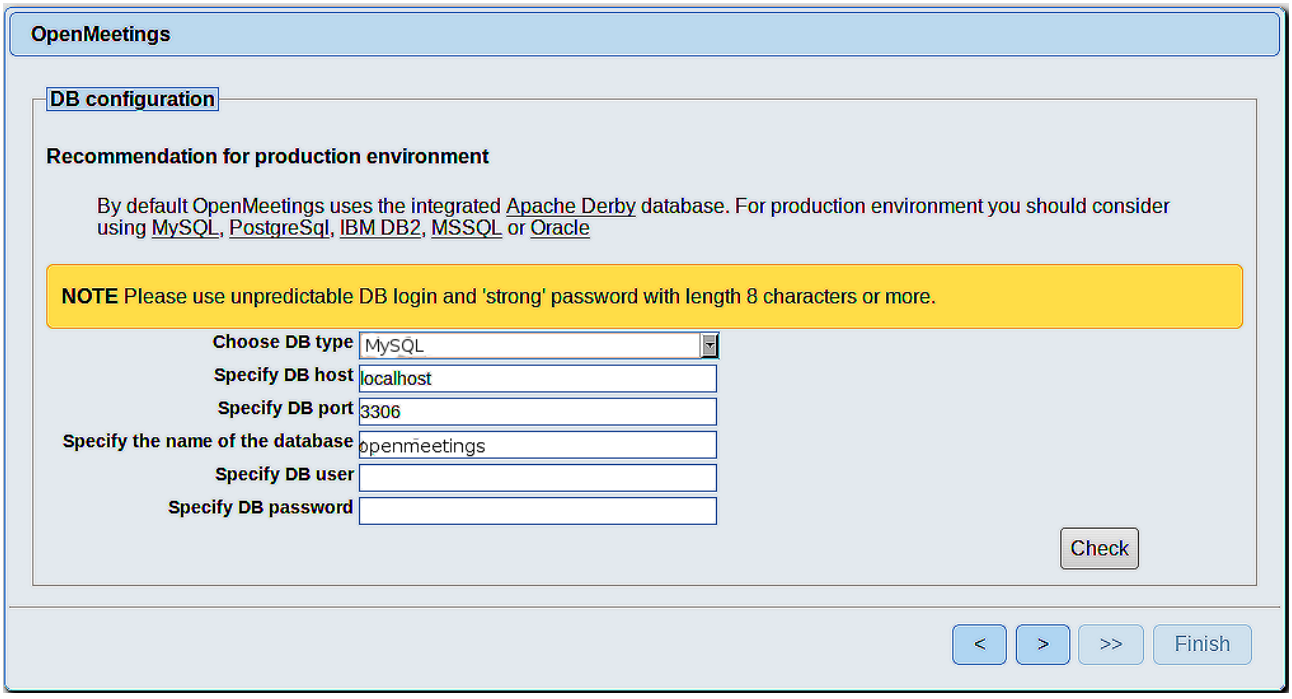


...press on > button (bottom), and will show the default database configuration

with Derby, 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 6:

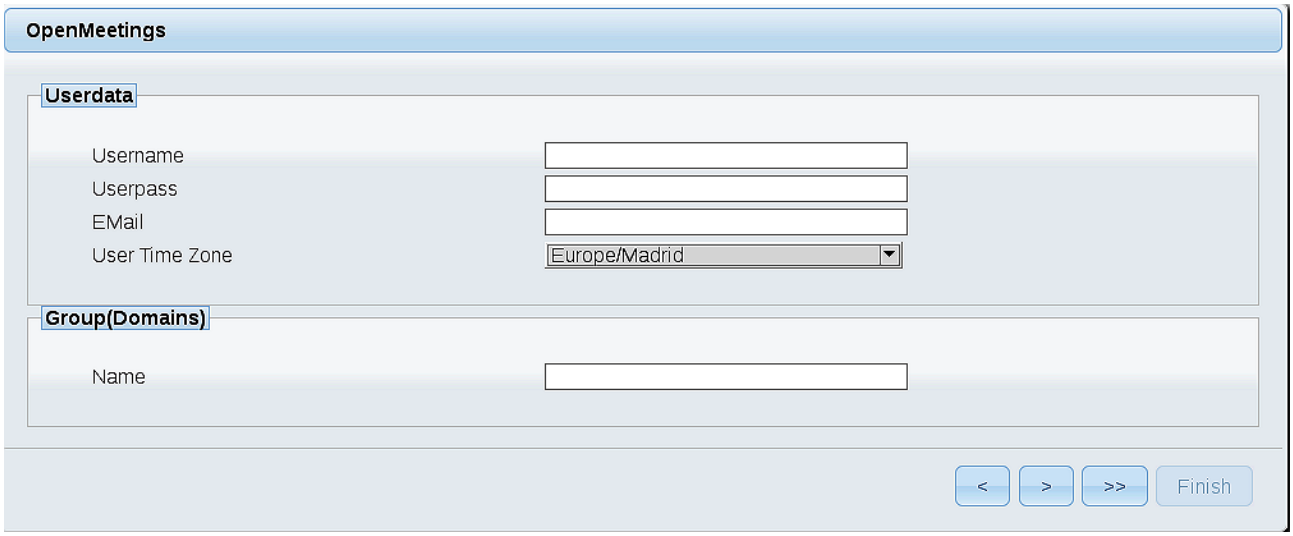
Specify the name of the database = open500

Specify DB user = hola

Specify DB password = 1a2B3c4D

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

Please, press > 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 = password ...for the previous user.

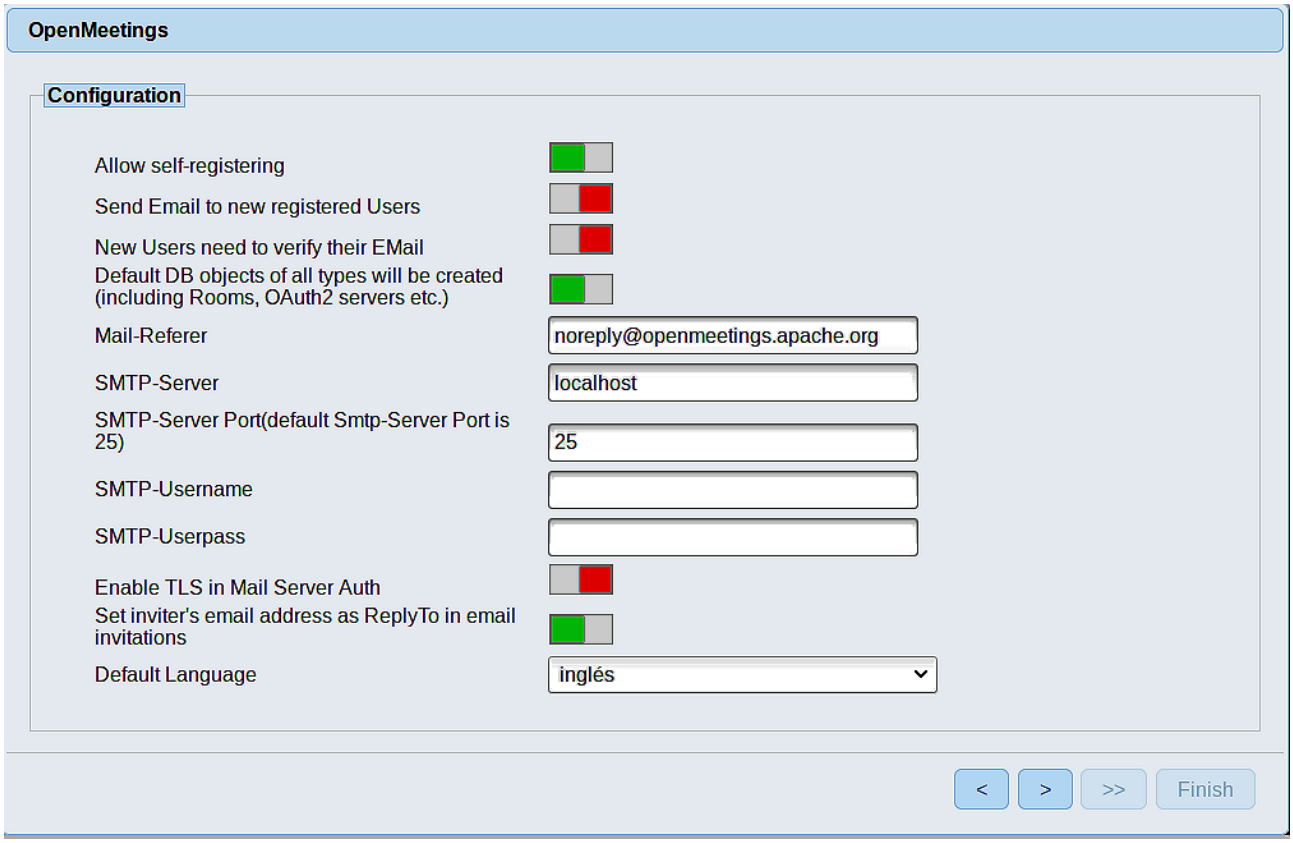
Email = email-adress ...of the previous user.

User Time Zone = country where is this server.

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

Write down your username and password on a piece of paper, then it will be used to access OpenMeetings later.

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:

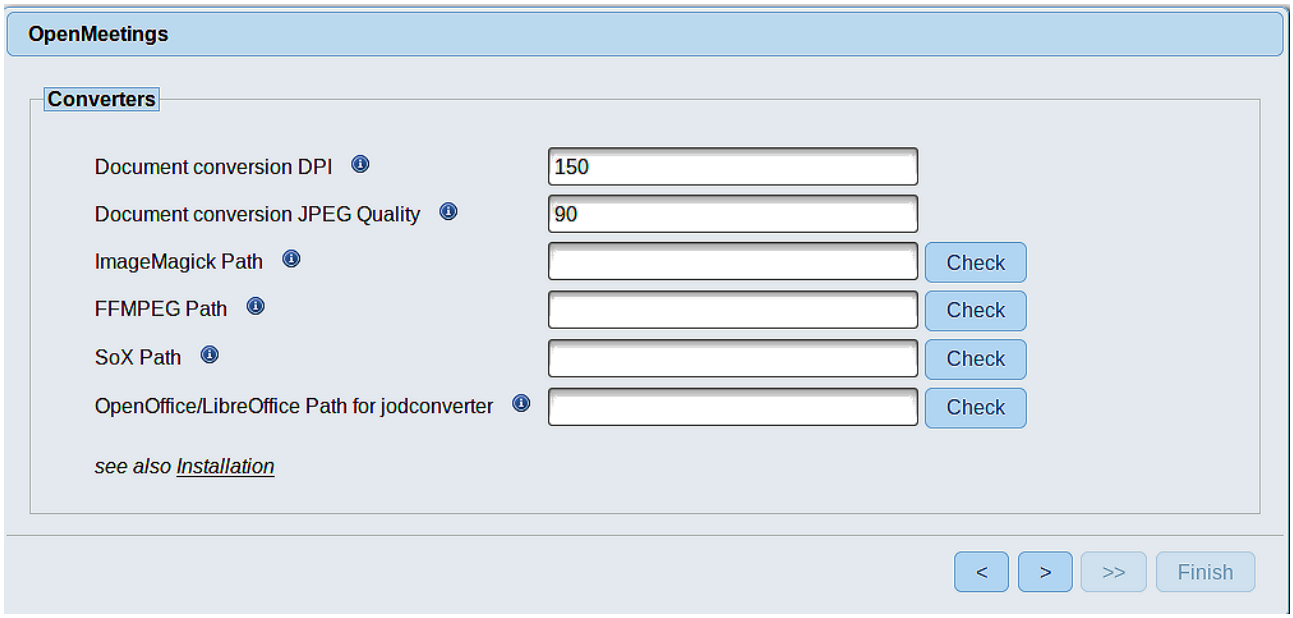


A valid example to configure the mail server with Gmail, is as follows:
(replace **john@gmail.com** with your real Gmail account)

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 > 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 == /usr/bin

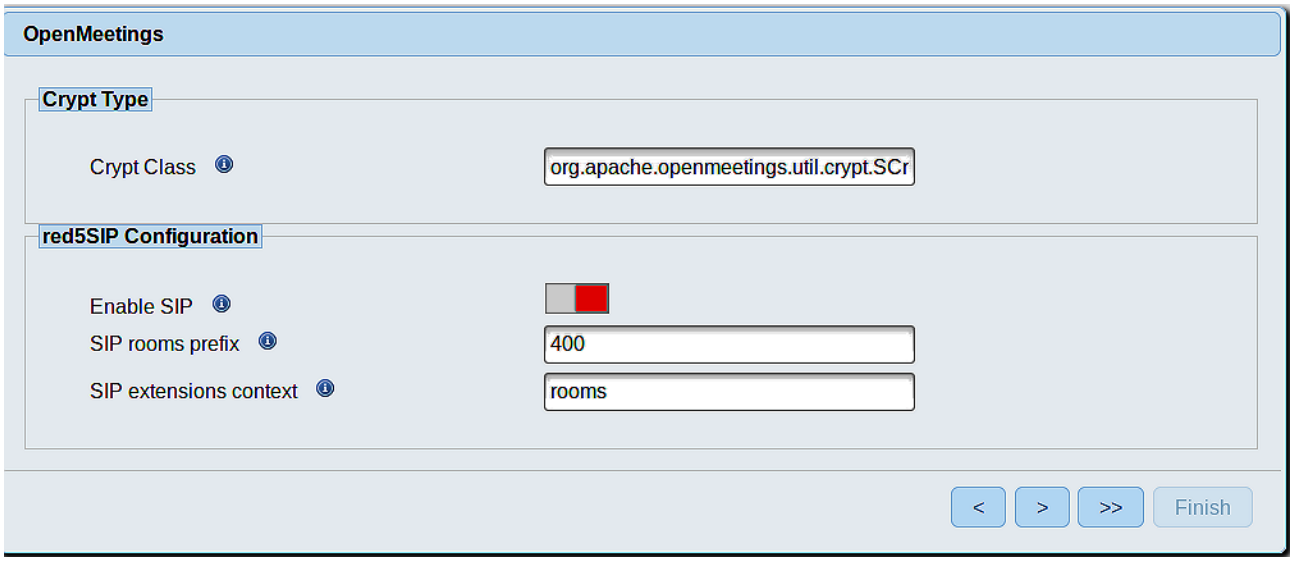
FFMPEG Path == /usr/local/bin

SOX Path == /usr/bin

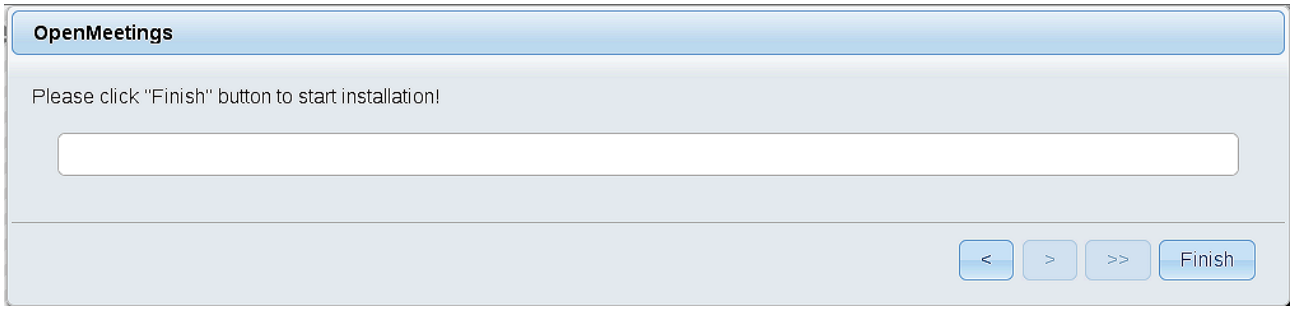
OpenOffice/LibreOffice Path for jodconverter == /usr/lib/libreoffice **(32bit - 64bit)**

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 > and will show this window:

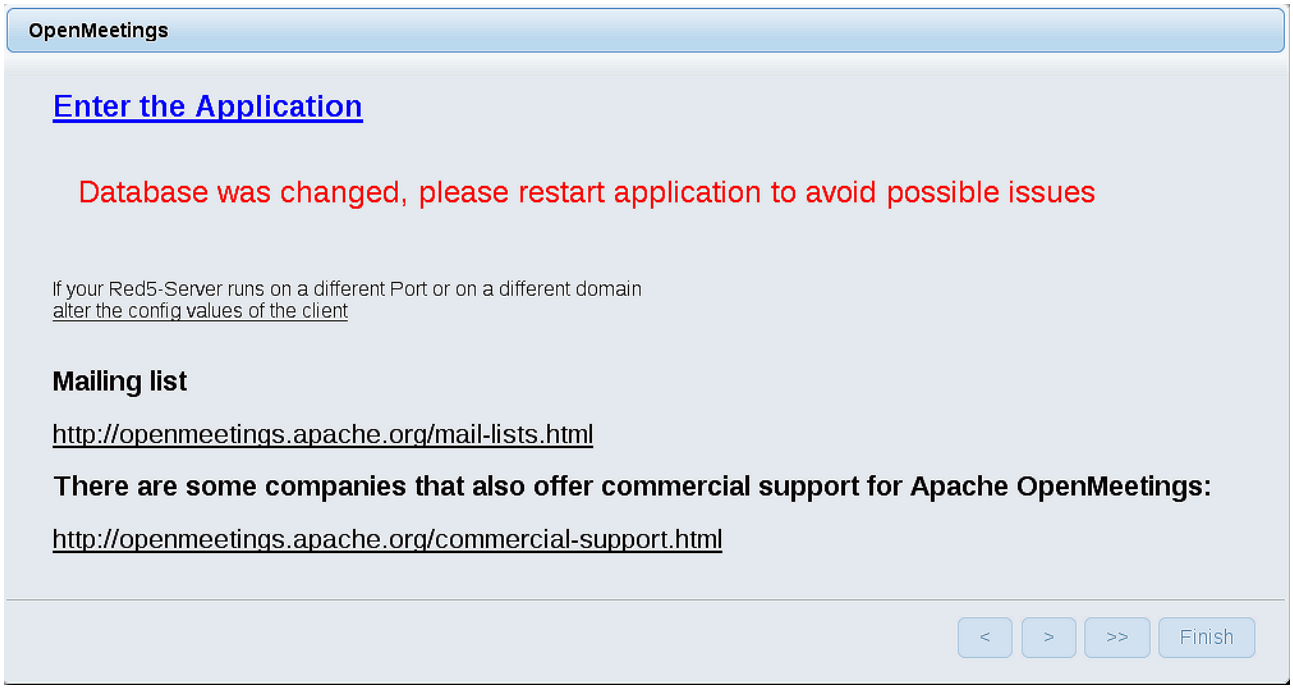


Press **Finish** button ...wait a seconds untill the tables are fill in the database.

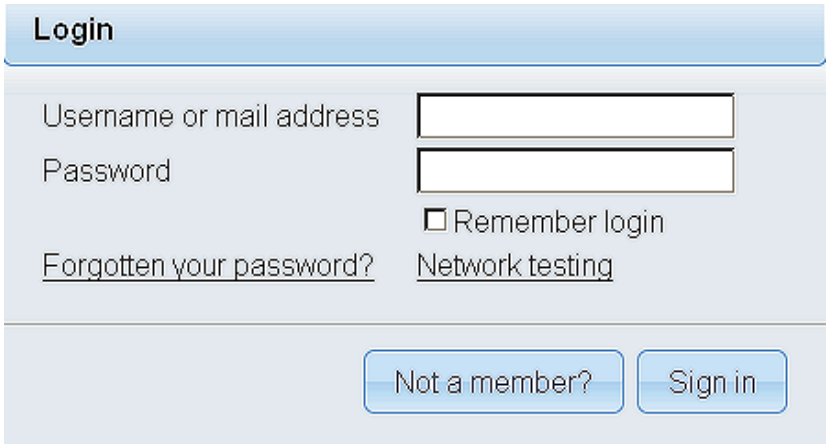
When has concluded, this another page will appear. Don´t clic on **Enter the Application**.

First is needed restart the server:

sudo /etc/init.d/tomcat3 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 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.



10)

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

We´ll install Docker as recipient for kurento-media-server.
First install some needed dependencies:

sudo apt install apt-transport-https ca-certificates curl software-properties-common

Import claves:

sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

...should verify looking that the last 8 digits they are same to:

0EBF CD88

...for this, run the command:

sudo apt-key fingerprint 0EBFCD88

...that will return something like this:

pub 4096R/0EBFCD88 2017-02-22

Key fingerprint = 9DC8 5822 9FC7 DD38 854A E2D8 8D81 803C 0EBF CD88

uid Docker Release (CE deb) <docker@docker.com>

sub 4096R/F273FCD8 2017-02-22

Now add the repository:

sudo nano /etc/apt/sources.list

...paste at the end of file:

deb [arch=amd64] https://download.docker.com/linux/ubuntu bionic stable

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

Update system:

sudo apt update

...and install Docker:

sudo apt install docker-ce

...and run it:

sudo systemctl start docker

We can prove if the installation it is correct. For that run the command:

sudo docker run hello-world

...will tell us that the installation it is right, if is so.

To finish we have to add our system user to docker group:

sudo usermod -aG docker $USER

(When you want to update the Docker version, just launch the following command:
sudo apt install docker-ce)

11)

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

Kurento Media Server is needed for can access to cam, mic-audio, recording and share dektop.

Run docker, if is not:

sudo systemctl start docker

...and install kurento-media-server:

(Only one line, a space between 1 and 2, and without space between 2 an3)

sudo 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:xenial-latest

... if you had done the installation of OpenMeetings in a different path, please replace it the brown color text :

/opt/open500/webapps/openmeetings/data

...which corresponds to yours.

To see the name and numbering ID of our kurento:

sudo docker ps -a

... write down the ID (number) and the name, we will need them. The name is kms.

Once the entire installation is finished, we will stop all the servers, reboot the computer and we´ll return here:

sudo /etc/init.d/tomcat3 stop ...stop tomcat-OpenMeetings

sudo docker stop kms ...stop kurento

sudo systemctl stop docker.service ...stop docker

sudo systemctl stop mysqld ...stop MariaDB

sudo reboot ...reboot the machine

Once the computer has rebooted, we launch the servers following this order:

sudo systemctl start mysqld

sudo systemctl start docker.service

sudo docker start kms

sudo /etc/init.d/tomcat3 start

Now you can access OpenMeetings with all the functions at your disposal.
Click on the link below and enter the username and password you entered in the paper

https://localhost:5443/openmeetings

or

http://localhost:5080/openmeetings

To be able to connect from the Internet or LAN with this server, remember to open the ports following:

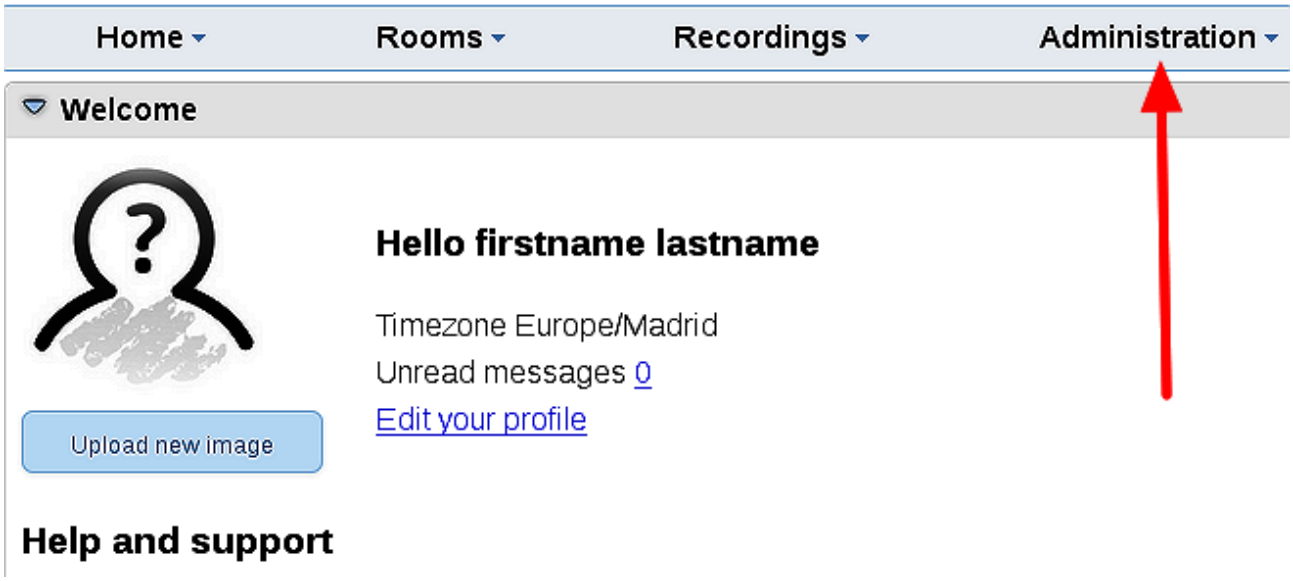
https = **5443** **8888** ----- http = **5080** **8888**

12)

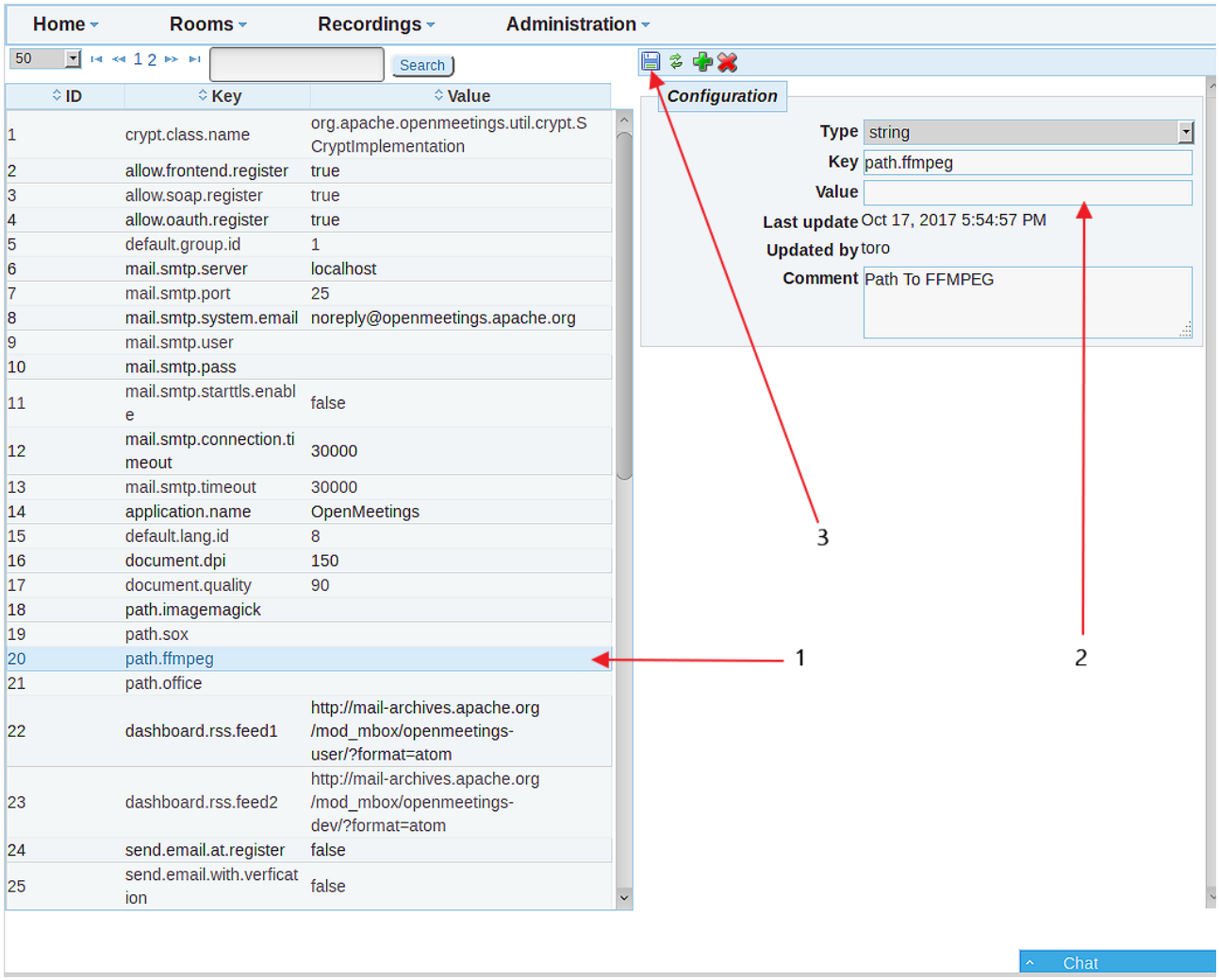
------ OpenMeetings's Configuration ------

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:



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

http://openmeetings.apache.org/mail-lists.html

Also you can download if you like, a wallpaper of OpenMeetings for different devices as: PC, Mac, Smartphone, iPhone and Tablets. Here is the link to downoload:

Download

Thank you.

Alvaro Bustos