Installation of Apache OpenMeetings 5.0.0-M3 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.

14-12-2019

Starting...

1)

First, we update and upgrade the OS:

sudo apt update

sudo apt upgrade

2)

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

OpenMeetings 5.0.0-M3 need Java 11 to work. So we install OpenJava 11:

sudo apt install openjdk-11-jdk openjdk-11-jdk-headless nano

Now, please, select OpenJava 11, 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

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:

<p align="center">FFmpeg Compilation is Finished!</p>

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

6)
<p align="center">------ **Installation and configuration of MariaDB data server** ------</p>

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 open503 DEFAULT CHARACTER SET 'utf8';

<p align="center">(Only one line with space between both)</p>

MariaDB [(none)]> GRANT ALL PRIVILEGES ON open503.* TO 'hola'@'localhost' IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;

* open503 ......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 Kurento Media Server ------

Kurento Media Server is needed for access to cam, mic-audio, recording and share dektop.
We install keys and add the repo for kurento:

 sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys 5AFA7A83

sudo nano /etc/apt/sources.list.d/kurento-dev.list

...copy-paste the following three lines:

deb [arch=amd64] http://ubuntu.openvidu.io/6.10.0 bionic kms6
deb [arch=amd64] http://mirror.yandex.ru/ubuntu/ bionic main restricted
deb [arch=amd64] http://mirror.yandex.ru/ubuntu/ bionic universe

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

Update:

sudo apt update

...install kurento:

sudo apt install --yes kurento-media-server

...and run it:

sudo /etc/init.d/kurento-media-server start

8)

------ Kurento´s Configuration ------

We should configure Kurento with "nobody" user, just the same like Tomcat and the installation
folder of OpenMeetings /opt/open503. For this we edit the configuration file:

sudo nano /etc/default/kurento-media-server

...and replace in the line number 7:

DAEMON_USER="kurento"

...to

DAEMON_USER="nobody"

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

Restart kurento:

sudo /etc/init.d/kurento-media-server restart

After install OpeNmeetings you can access to OpenMeetings and his rooms to record.

9)

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

We´ll install OpenMeetings in /opt/open503. All the following information will be based on this directory:

cd /opt

...download the tomcat-OpenMeetings file:

(Only one line without space between both)

sudo wget http://archive.apache.org/dist/openmeetings/5.0.0-M3/bin/apache-openmeetings-5.0.0-M3.tar.gz

...uncompress it:

sudo tar xzvf apache-openmeetings-5.0.0-M3.tar.gz

...and rename the obtained folder:

mv apache-openmeetings-5.0.0-M3 open503

We make some folders for the recordings we´ll make at the different OpenMeetings rooms:

sudo mkdir -p /opt/open503/webapps/openmeetings/data/streams/{1,2,3,4,5,6,7,8,9,10,11,12,13,14}

sudo mkdir -p /opt/open503/webapps/openmeetings/data/streams/hibernate

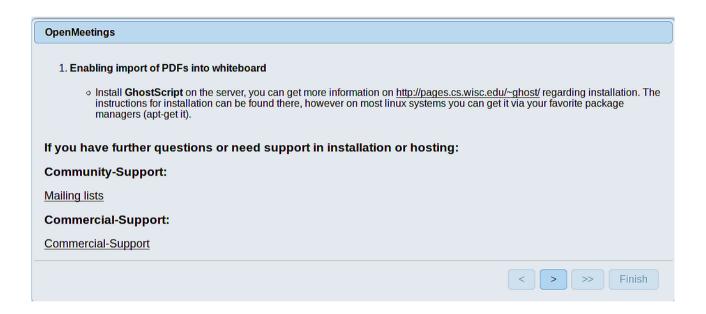...restrict the access to these folders:

sudo chmod -R 750 /opt/open503/webapps/openmeetings/data/streams

...and we do to "nobody" user ownner of OpenMeetings installation folder:

sudo chown -R nobody /opt/open503

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/8.0.17/mysql-connector-java- 8.0.17.jar

...and copy it to where must be:

sudo cp /opt/mysql-connector-java-8.0.17.jar /opt/open503/webapps/openmeetings/WEB-INF/lib

10)
------ 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

11)
------ Run Tomcat-OpenMeetings ------

Start MariaDB, if still it is not:

sudo /etc/init.d/mysql start

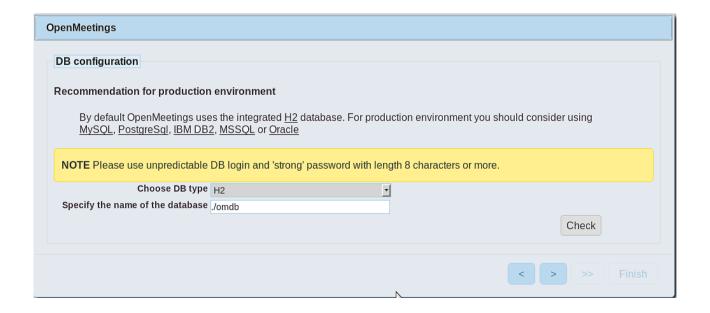...and now start tomcat-OpenMeetings:

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

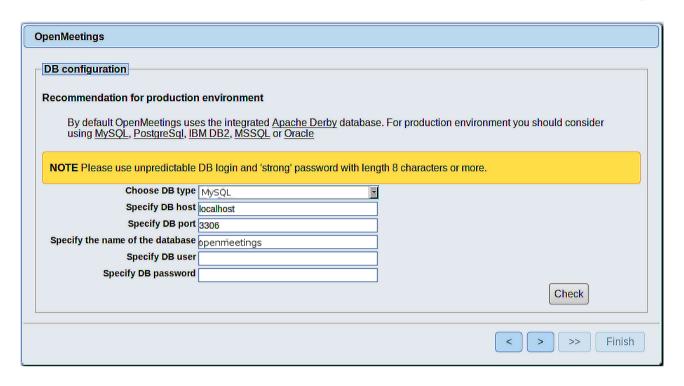...there will appear a page similar to this one:

OpenMeetings

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

| < | > | >> | Finish |

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

with H2, but we employ MySQL (MariaDB),

OpenMeetings

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   H2

Specify the name of the database   ./omdb

Check

| < | > | >> | Finish |

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

OpenMeetings

DB configuration

Recommendation for production environment

By default OpenMeetings uses the integrated Apache Derby 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 | MySQL |
Specify DB host | localhost |
Specify DB port | 3306 |
Specify the name of the database | openmeetings |
Specify DB user | |
Specify DB password | |

Check

`<` `>` `>>` Finish

Now we must introduce the database name, user name and his password, we did at the step 6:
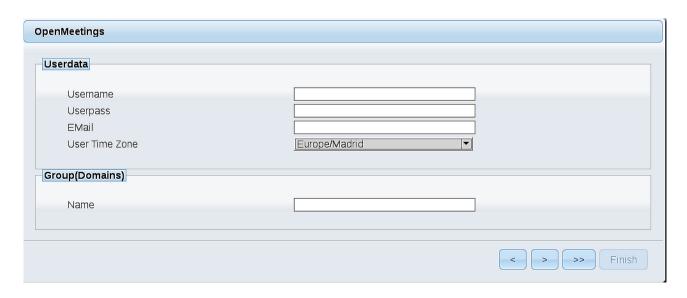
Specify the name of the database   =   open503

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:

OpenMeetings

Userdata

Username | |
Userpass | |
EMail | |
User Time Zone | Europe/Madrid |

Group(Domains)

Name | |

`<` `>` `>>` Finish

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.
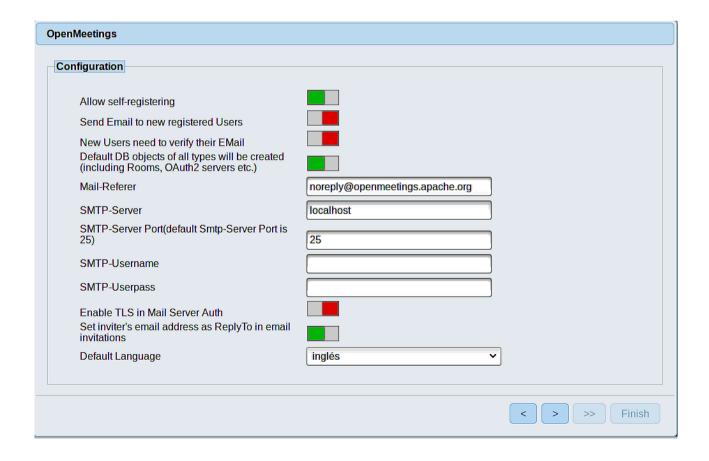>
> **Email**   = email-adress   ...of the previous user.
>
> **User Time Zone** = country where is this server.
>
> **Name**   = example-openmeetings   ...group name to choose.

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:
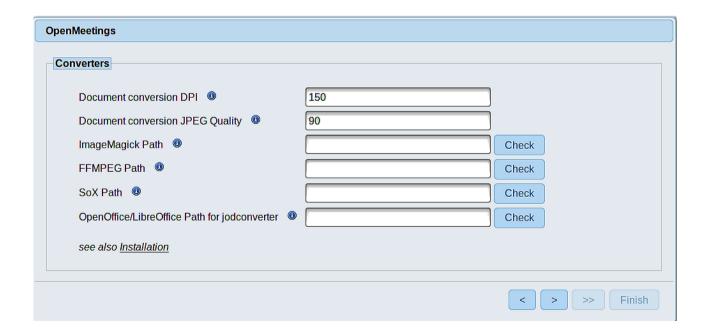

OpenMeetings

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	noreply@openmeetings.apache.org
SMTP-Server	localhost
SMTP-Server Port(default Smtp-Server Port is 25)	25
SMTP-Username	
SMTP-Userpass	
Enable TLS in Mail Server Auth	⬜🟥
Set inviter's email address as ReplyTo in email invitations	🟩⬜
Default Language	inglés ▾

`<` `>` `>>` 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 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:

OpenMeetings

Converters

Document conversion DPI ⓘ	150
Document conversion JPEG Quality ⓘ	90
ImageMagick Path ⓘ	[ ] Check
FFMPEG Path ⓘ	[ ] Check
SoX Path ⓘ	[ ] Check
OpenOffice/LibreOffice Path for jodconverter ⓘ	[ ] Check

see also *Installation*

< > >> Finish

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

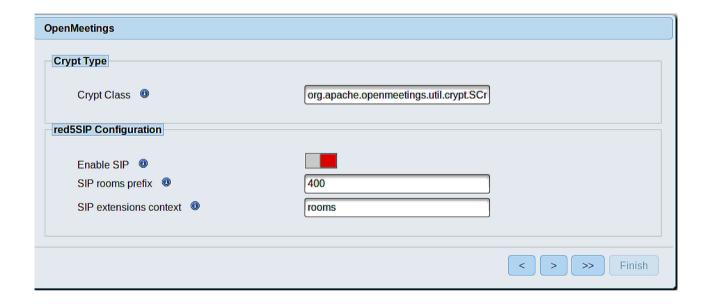|		
ImageMagick Path	==	/usr/bin
FFMPEG Path	==	/usr/local/bin
SOX Path	==	/usr/bin
OpenOffice/LibreOffice Path for jodconverter	==	/usr/lib/libreoffice **(32bit - 64bit)**

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:
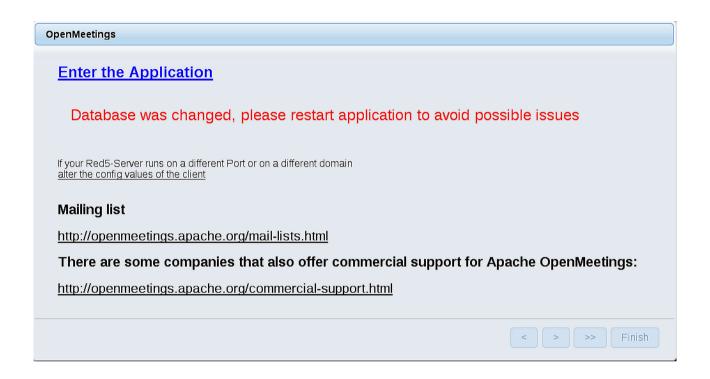
Now push the button [>] and will show this window:

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 yes, you can clic on **Enter the Application**, or go with your browser to:

https://localhost:5443/openmeetings/

...and will take us to the entry of OpenMeetings:

Introduce the user's name and the password that you have choosen during the installation, push **Sign in** button, and…

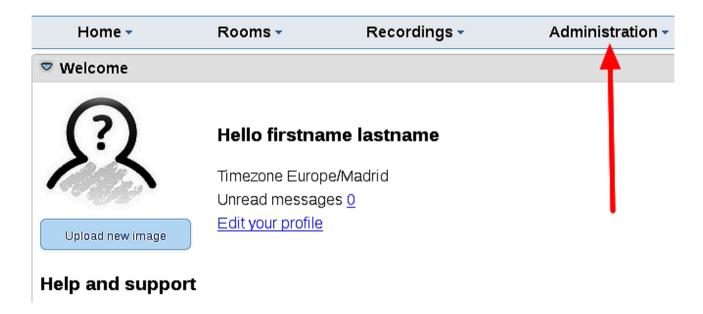<p align="center">**...Congratulations!**</p>

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

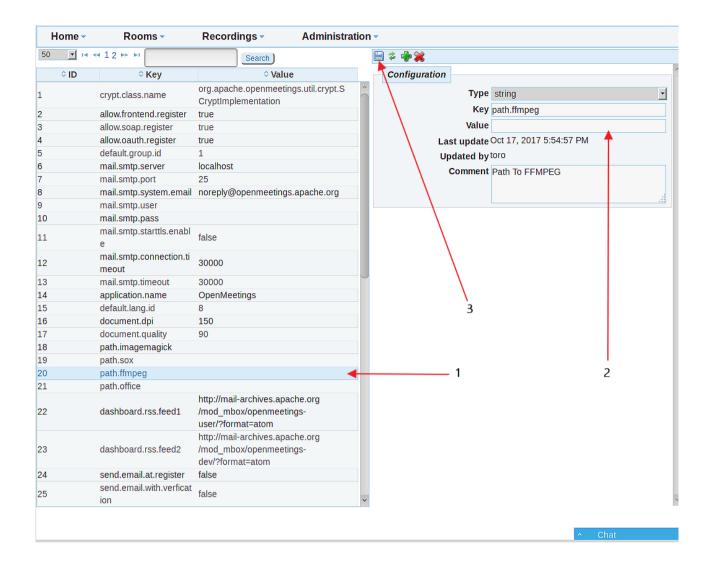<p align="center">**5443   8888**</p>

12)

<p align="center">------ **OpenMeetings's Configuration** ------</p>

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

<p align="center">**Administration → Configuration**</p>

...and following the order of the red arrows:

So to finish, the commands remember to run the servers are:

sudo /etc/init.d/mysql start   ….MariaDB data server

sudo /etc/init.d/kurento-media-server start   ….Kurento media server

sudo /etc/init.d/tomcat3 start   ….Tomcat-OpenMeetings

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 download:

[OpenMeetings Wallpaper Download](#)

A dvd live iso with OpenMeetings 5.0.0-M3 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).