

# Installation of Apache OpenMeetings 5.0.0-M3 on CentOS 8

This tutorial is made based on fresh installations of

CentOS-8-x86\_64-1905-dvd1.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)

We access to terminal as root::

su

....will ask for root password.

Install nano editor:
yum install -y nano
Add our user system to sudoers, so can use sudo:
nano /etc/sudoers
copy and paste replacing user by your real user system name:
user ALL=(ALL:ALL) ALL
press in the keyboard Ctrl+x, will ask to save, press Y, and press Enter to exit nano editor.
Now will change the selinux configuration, enforcing to permissive:
nano /etc/selinux/config
modify:
SELINUX=enforcing
to
SELINUX=permissive
press in the keyboard Ctrl+x, will ask to save, press Y, and press Enter to exit nano editor.
Update the system:
yum update -y
and reboot the machine to get effect the changes. After reboot please continue at step 2:
reboot
2)
ADD Repos
sudo yum install -y wget
EPEL:
sudo yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm

```
## RPMFusion ##
```

sudo yum install https://download1.rpmfusion.org/free/el/rpmfusion-free-release-8.noarch.rpm

3) ----- Installation of OpenJava -----

Java 11 is necessary for OpenMeetings 5.0.0-M3. So we install OpenJava 11:

sudo yum install -y java-11-openjdk-devel

Maybe you have installed various versions of Java. Please select the just installed OpenJava 11:

sudo update-alternatives --config java

And to see if the selected version is active:

java -version

4) ----- Installation of LibreOffice -----

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

cd /opt

(Only one line without space between both)

sudo wget ftp://mirror.7he.at/pub/tdf/libreoffice/stable/6.3.3/rpm/x86\_64/LibreOffice\_6.3.3\_Linux\_x86-64\_rpm.tar.gz

sudo tar -xvf LibreOffice 6.3.3\*

cd LibreOffice 6.3.3.2\*

sudo yum localinstall RPMS/\*.rpm

cd /opt

Installation of Ghostscript, necessary packages and libraries
Will install packages and libraries we'll need later:
(Only one line with space between each one of them)
sudo yum install -y libjpeg libjpeg-devel freetype freetype-devel unzip gcc gcc-c++ ncurses ncurses-devel make zlib zlib-devel libtool bison openssl-devel bzip2 bzip2-devel file-roller git autoconf automake pkgconfig nmap vlc
We acces to terminal as root:
su
will ask for root password.
With a script we should compile Ghostscript 9.27, free of security hole:
cd /opt
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ghostscript.sh
chmod +x ghostscript.sh
and run it:
./ghostscript.sh
when be finished will announce it: GhostScript compilation is Finished!
rm -Rf/opt/ghostscript-9.27
6)
Installation ImageMagick and Sox
ImageMagick, work the images files jpg, png, gif, etc. We install it and some libraries:
yum install -y ImageMagick giflib
Say work the sound Will compile it:

wget http://ftp.icm.edu.pl/packages/sox/14.4.2/sox-14.4.2.tar.gz
tar xzvf sox-14.4.2.tar.gz
cd /opt/sox-14.4.2
./configure
make && make install
cd /opt
7) Compilation of FFmpeg
FFmpeg work with video. Will install a paquets, libraries and vlc to play the recordings:
(Only one line with space between each one of them)
yum install -y glibc alsa-lib-devel faad2 faad2-devel gsm imlib2 imlib2-devel vorbis-tools theora-tools autoconf automake cmake freetype-devel gcc gcc-c++ git libtool make mercurial pkgconfig zlib-devel curl
This ffmpeg compilation is based on this url:
https://trac.ffmpeg.org/wiki/CompilationGuide/Centos
I made a script to compile and install ffmpeg on CentOS. It is tested and is ok. The result of any recording we do in OpenMeetings will be in mp4 format.
When is finished, will appear a text:
FFmpeg Compilation is Finished!
So, we download the script:
cd /opt
wget https://cwiki.apache.org/confluence/download/attachments/27838216/ffmpeg_centos8.sh
concede execution permission to it:

```
chmod +x ffmpeg centos8.sh
```

...and run it. The compilation will spend about 30 minutes:

./ffmpeg\_centos8.sh

All the compiled files will be installed at: /usr/local/bin

8)

## ----- Installation of MariaDB data server -----

Exit as root:

exit

MariaDB is the database server. We install it:

sudo yum install -y mariadb-server

...and run mariadb:

sudo systemctl start mariadb.service

Give a password to mariadb root. Please, modify new-password by your own:

sudo mysqladmin -u root password new-password

Make a database for OpenMeetings. User password must be of 8 digits minimum:

sudo mysql -u root -p

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

MariaDB [(none)] > CREATE DATABASE open503 DEFAULT CHARACTER SET 'utf8';

Now we create a user with all permission on this open503 database.

(Only one line with space between both)

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

```
* open503 ..... name of the database
```

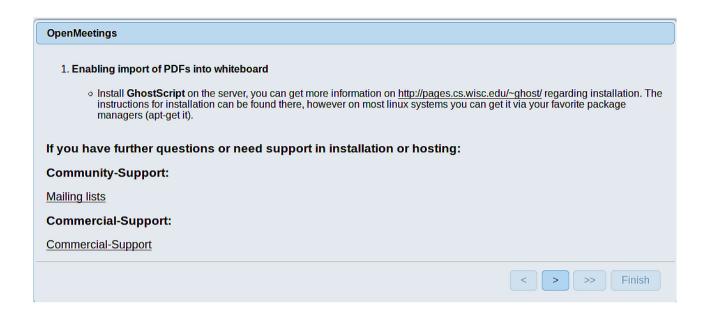
<sup>\*</sup> hola ..... user for that database

<sup>\* 1</sup>a2B3c4D ..... password of that user

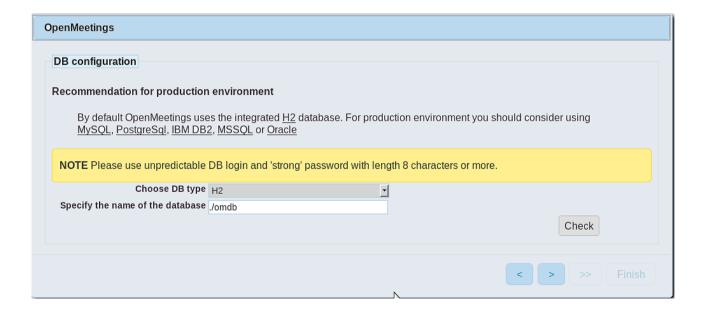
MariaDB [(none)]> quit
9) Installation of OpenMeetings
We'll install OpenMeetings in /opt/open503. All the following information will be based on this directory:
cd /opt
download the OpenMeetings file:
(Only one line without space between both)
sudo wget http://archive.apache.org/dist/openmeetings/5.0.0-M3/bin/apache-openmeetings-5.0.0-M3.tar.gz
sudo tar xzvf apache-openmeetings-5.0.0-M3.tar.gz
and rename the obtained folder:
sudo mv apache-openmeetings-5.0.0-M3 open503
Download and install the connector between OpenMeetings and MariaDB:
(Only one line without space between both)
$sudo\ wget\ http://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.16/mysql-connector-java-8.0.16.jar$
and copy it to where must be:
sudo cp /opt/mysql-connector-java-8.0.16.jar /opt/open503/webapps/openmeetings/WEB-INF/lib
10) Script to launch Tomcat-OpenMeetings
We'll download the script to run tomcat-OpenMeetings:

"you can change the data...but remember it! Later we'll need it. Now we exit MariaDB:

cd /opt
sudo wget https://cwiki.apache.org/confluence/download/attachments/27838216/tomcat3
copy it to where must be:
sudo cp tomcat3 /etc/init.d/
concede execution permission:
sudo chmod +x /etc/init.d/tomcat3
If you made the installation in any other path to /opt/open503, please edit the script and modify the line:
CATALINA_HOME==/opt/open503
to
CATALINA_HOME==/your-path-installation
11) Run Tomcat-OpenMeetings
Restart MariaDB:
sudo systemetl restart mariadb.service
sudo systemeti restart mariado.service
and run tomcat-OpenMeetings:
sudo /etc/init.d/tomcat3 start
wait a minimum of 40 seconds in order tomcat run completly. Then, go with your browser to:
https://localhost:5443/openmeetings/
there will appear a page similar to this one:



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



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

OpenMeetings
DB configuration
Recommendation for production environment
By default OpenMeetings uses the integrated <u>Apache Derby</u> database. For production environment you should consider using <u>MySQL</u> , <u>PostgreSql</u> , <u>IBM DB2</u> , <u>MSSQL</u> or <u>Oracle</u>
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 penmeetings
Specify DB user
Specify DB password
Check
< > >> Finish

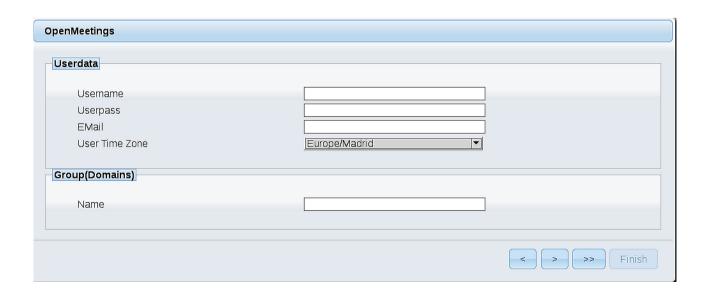
Here we must introduce the database name, user name and his password we did at the step 8:

Specify the name of the database = open503

Specify DB user = hola

Specify DB password = 1a2B3c4D

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.

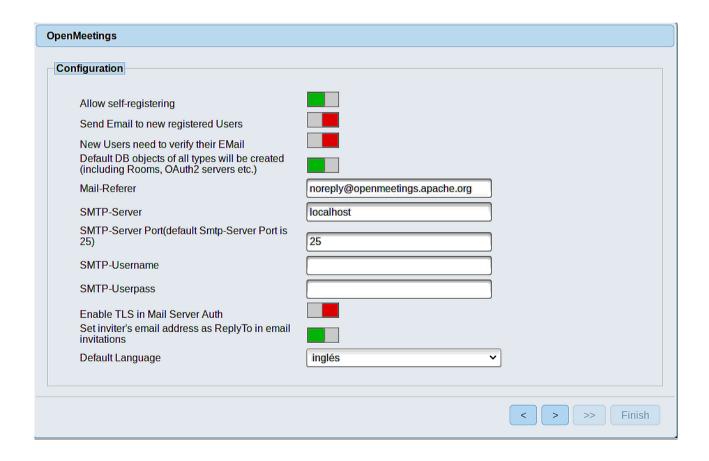
Userpass = a-password ... for the previous user.

**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 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

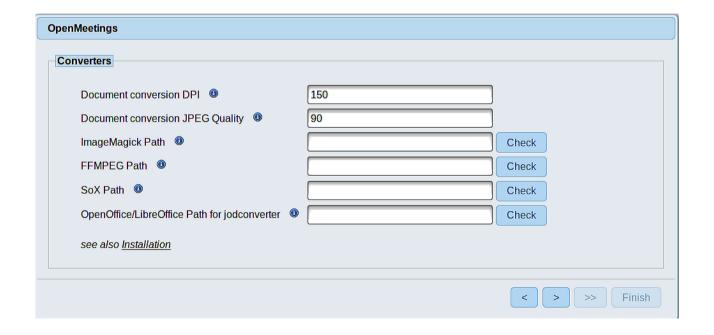
SMTP-Userpass = password of john@gmail.com

Enable TLS in Mail Server Auth = ...turn green the button to activate

**Default Language** == ...select your language

...the rest we can leave as is. If is necessary, can modify it as you like it.

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

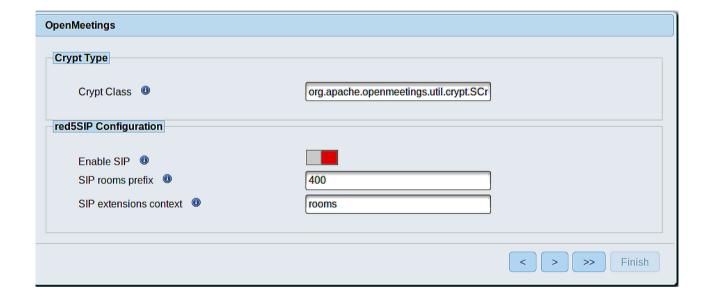
SOX Path == /usr/local/bin

OpenOffice/LibreOffice Path for

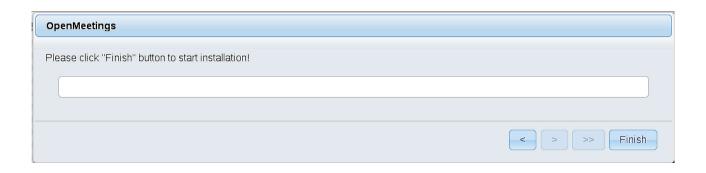
jodconverter = /opt/libreoffice6.3

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:

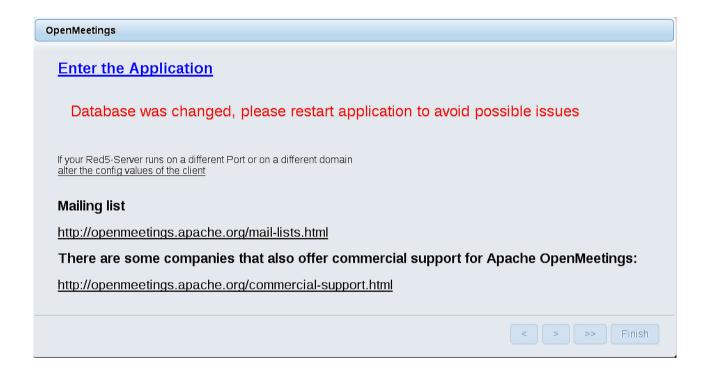


Now push the button Will show this window:



Clic **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 tomcat server. Be connected to Internet:

## 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 you can have access to the camera, micro, recording and desktop sharing in the room



12)

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

First install some neccessary libraries:

sudo yum install -y yum-utils device-mapper-persistent-data lvm2

Add the Docker repo:

sudo dnf config-manager --add-repo=https://download.docker.com/linux/centos/docker-ce.repo

...update:

sudo yum update

...install docker:

sudo dnf install --nobest docker-ce

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

sudo gpasswd -a user docker

...stop tomcat and mariadb:

sudo /etc/init.d/tomcat3 stop

sudo systemctl stop mariadb.service

...and reboot the machine. After this, follow in the step 13:

sudo reboot

13)

## ----- 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 room.

First run docker:

sudo systemctl start docker.service

...and install kurento-media-server:

(Only one line, with space between 1 and 2, and without space between 2 and 3)

sudo docker run -d --name kms -p 8888:8888 --mount type=bind,source=/opt/open503/webapps/openmeetings/data,target=/opt/open503/webapps/openmeetings/data kurento/kurento-media-server

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

sudo docker start kms

...and run also MariaDB and tomcat-OpenMeetings:

sudo systemctl start mariadb.service

sudo /etc/init.d/tomcat3 start ...wait around 40 seconds to tomcat run completly.

Now you can access OpenMeetings with all the functions at your disposal. Clic the link down and type the user name and his password to login:

https://localhost:5443/openmeetings

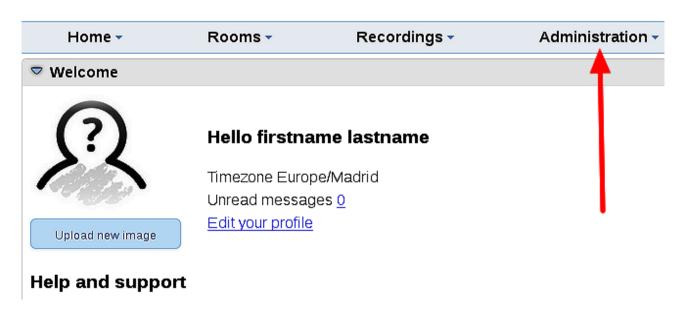
To connect to this server from Internet or LAN is necessary open these ports:

#### 5443 8888

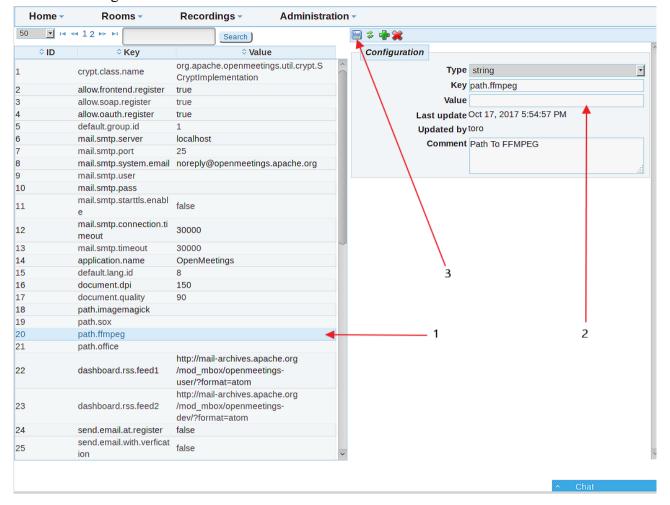
14) ----- OpenMeetings's configuration -----

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

## Administration $\rightarrow$ 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:

http://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 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).