



## **Installation of Apache OpenMeetings 5.0.1 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.

Starting...

**1)**

First, we update and upgrade the OS:

`sudo apt update`

`sudo apt upgrade`

**2)**

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

OpenMeetings 5.0.1 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, or maybe you'll be asked to keep or replace the "policy.xml" file (modified by us), then pres "Keep" button.

**Sox**, work the sound. We install it:

```
sudo apt install sox
```

5)

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

FFmpeg will work the video. We install together to vlc for watch the videos:

```
sudo apt install ffmpeg vlc
```

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 open501 DEFAULT CHARACTER SET 'utf8';
```

(Only one line with space between both)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open501.* TO 'hola'@'localhost'  
IDENTIFIED BY '1a2B3c4D' WITH GRANT OPTION;
```

- \* open501 .....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/6.13.0 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/open501. 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/open501. All the following information will be based on this directory:

```
cd /opt
```

...download the tomcat-OpenMeetings file:

```
sudo wget https://archive.apache.org/dist/openmeetings/5.0.1/bin/apache-openmeetings-5.0.1.tar.gz
```

...uncompress it:

```
sudo tar xzvf apache-openmeetings-5.0.1.tar.gz
```

...and rename the obtained folder:

```
sudo mv apache-openmeetings-5.0.1 open501
```

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

```
sudo mkdir -p /opt/open501/webapps/openmeetings/data/streams/{1,2,3,4,5,6,7,8,9,10,11,12,13,14}
```

```
sudo mkdir -p /opt/open501/webapps/openmeetings/data/streams/hibernate
```

...restrict the access to these folders:

```
sudo chmod -R 750 /opt/open501/webapps/openmeetings/data/streams
```

...and we do to “nobody” user owner of OpenMeetings installation folder:

```
sudo chown -R nobody:nogroup /opt/open501
```

Download and install the connector between OpenMeetings and MariaDB:

```
cd /opt
```

(Only one line without space between both)

```
sudo wget https://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.20/mysql-connector-java-8.0.20.jar
```

...and copy it to where must be:

```
sudo cp /opt/mysql-connector-java-8.0.20.jar /opt/open501/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/tomcat4
```

...copy it to:

```
sudo cp tomcat4 /etc/init.d/
```

...and concede permission of execution:

```
sudo chmod +x /etc/init.d/tomcat4
```

11)

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

Start MariaDB, if still it is not:

```
sudo /etc/init.d/mysql start
```

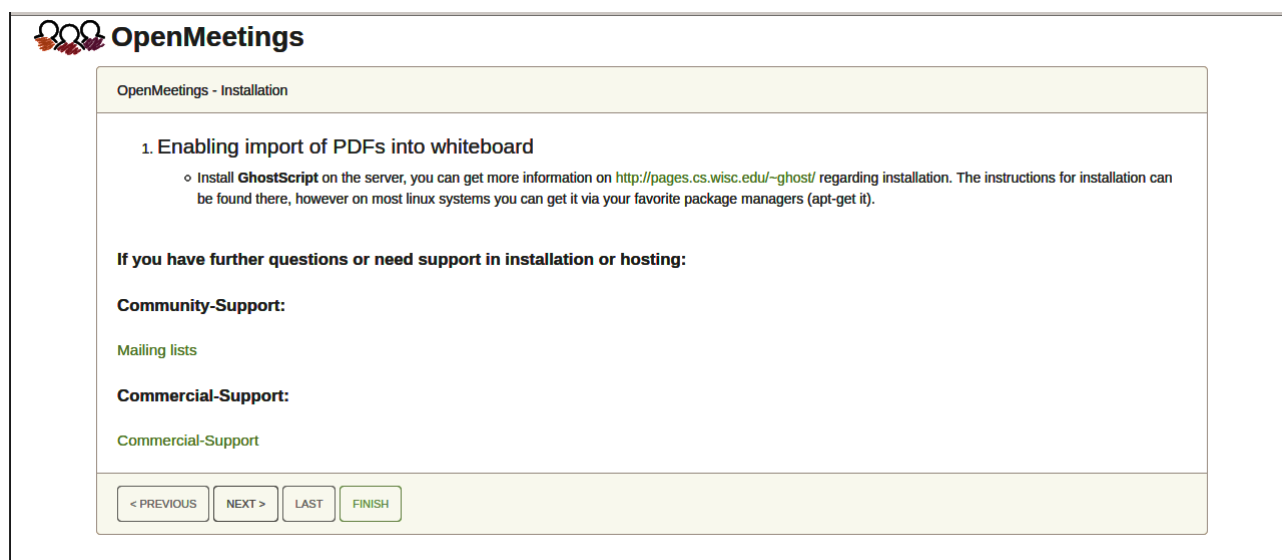
...and now start tomcat-OpenMeetings:

```
sudo /etc/init.d/tomcat4 start
```

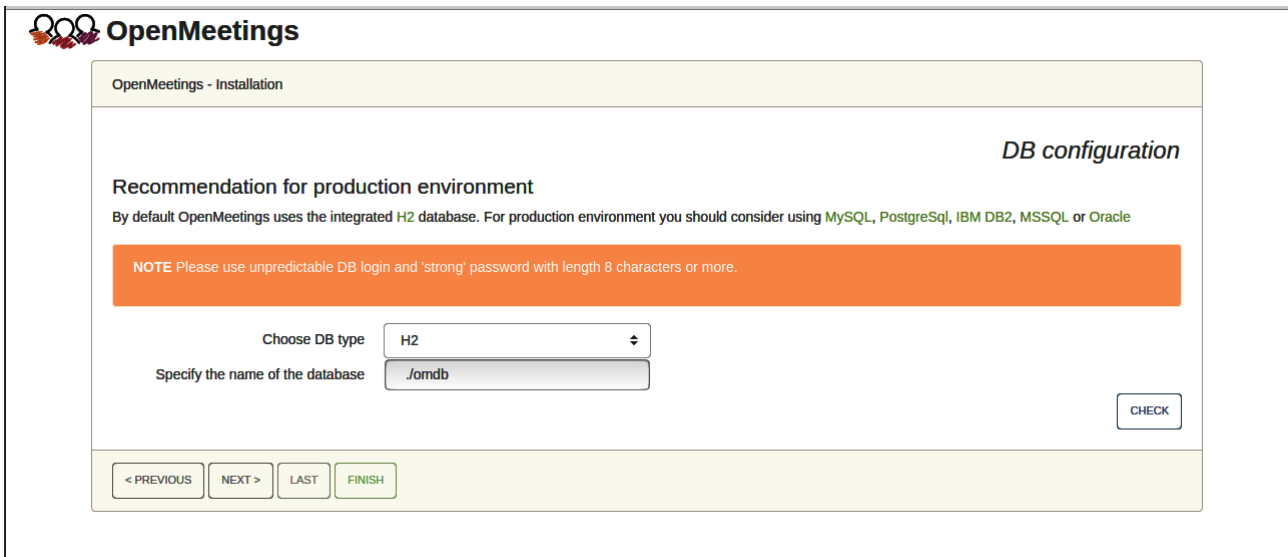
...wait 40 seconds at least, in order that tomcat runing completely. And after this, can go to:

<https://localhost:5443/openmeetings>

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



...press on “Next >” button (bottom), and will show the default database configuration with H2, but we employ MySQL (MariaDB),



**OpenMeetings**

OpenMeetings - Installation

*DB configuration*

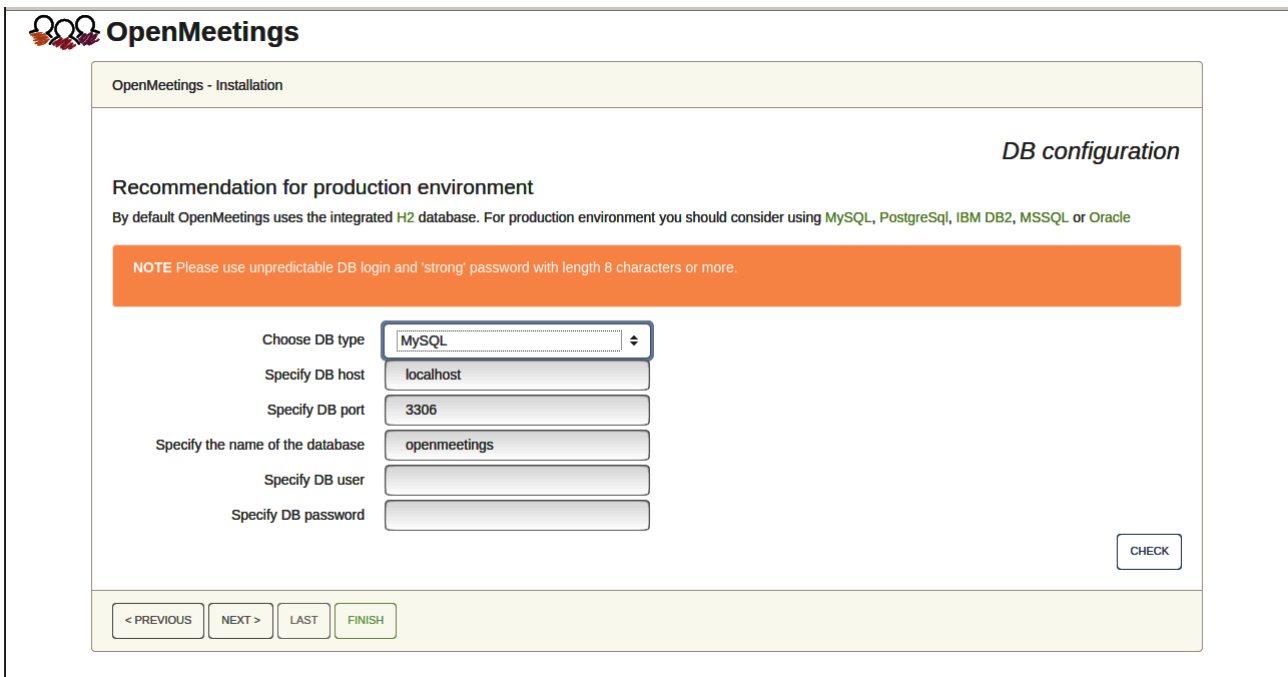
**Recommendation for production environment**  
By default OpenMeetings uses the integrated H2 database. For production environment you should consider using MySQL, PostgreSQL, IBM DB2, MSSQL or Oracle

**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type:

Specify the name of the database:

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



**OpenMeetings**

OpenMeetings - Installation

*DB configuration*

**Recommendation for production environment**  
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**NOTE** Please use unpredictable DB login and 'strong' password with length 8 characters or more.

Choose DB type:

Specify DB host:

Specify DB port:

Specify the name of the database:

Specify DB user:

Specify DB password:

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



**Specify the name of the database** = open501

**Specify DB user** = hola

**Specify DB password** = 1a2B3c4D

...if you choose any other data, please type it here. Please push “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** = 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 “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:

OpenMeetings - Installation

*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

SMTP-Server

SMTP-Server Port(default SmtP-Server Port is 25)

SMTP-Username

SMTP-Userpass

Enable TLS in Mail Server Auth

Set inviter's email address as ReplyTo in email invitations

Default Language

< PREVIOUS    NEXT >    LAST    FINISH

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

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

|                                                          |    |                                                                |
|----------------------------------------------------------|----|----------------------------------------------------------------|
| <b>Mail-Refer</b>                                        | == | <a href="mailto:john@gmail.com">john@gmail.com</a>             |
| <b>SMTP-Server</b>                                       | == | <a href="mailto:smtp@gmail.com">smtp@gmail.com</a>             |
| <b>SMTP-Server Port (default SmtP-Server Port is 25)</b> | == | 587                                                            |
| <b>SMTP-Username</b>                                     | == | <a href="mailto:john@gmail.com">john@gmail.com</a>             |
| <b>SMTP-Userpass</b>                                     | == | password of <a href="mailto:john@gmail.com">john@gmail.com</a> |
| <b>Enable TLS in Mail Server Auth</b>                    | == | ...turn green the button to activate                           |
| <b>Default Language</b>                                  | == | ...select your language                                        |

...the rest you can change it as you likes.

Now press the button “Next >” and a new page will appear:

**OpenMeetings**

OpenMeetings - Installation

*Converters*

Document conversion DPI ⓘ

Document conversion JPEG Quality ⓘ

ImageMagick Path ⓘ  CHECK

FFMPEG Path ⓘ  CHECK

SoX Path ⓘ  CHECK

OpenOffice/LibreOffice Path for jodconverter ⓘ  CHECK

*see also Installation*

< PREVIOUS    NEXT >    LAST    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/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**.

Once completed the paths, please click the button “Next >” and move on to another page that we will leave as is:

**OpenMeetings**

OpenMeetings - Installation

Crypt Class ?

Enable SIP ?

SIP rooms prefix ?

SIP extensions context ?

Crypt Type  
red5SIP Configuration

< PREVIOUS   NEXT >   LAST   FINISH

Now push the button “Next >” and will show this window:

**OpenMeetings**

OpenMeetings - Installation

Please click "Finish" button to start installation!

< PREVIOUS   NEXT >   LAST   FINISH

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/tomcat4 restart`

**OpenMeetings**

OpenMeetings - Installation

**Enter the Application**

Database was changed, please restart application to avoid possible issues

**Mailing list**

<https://openmeetings.apache.org/mailling-lists.html>

**There are some companies that also offer commercial support for Apache OpenMeetings:**

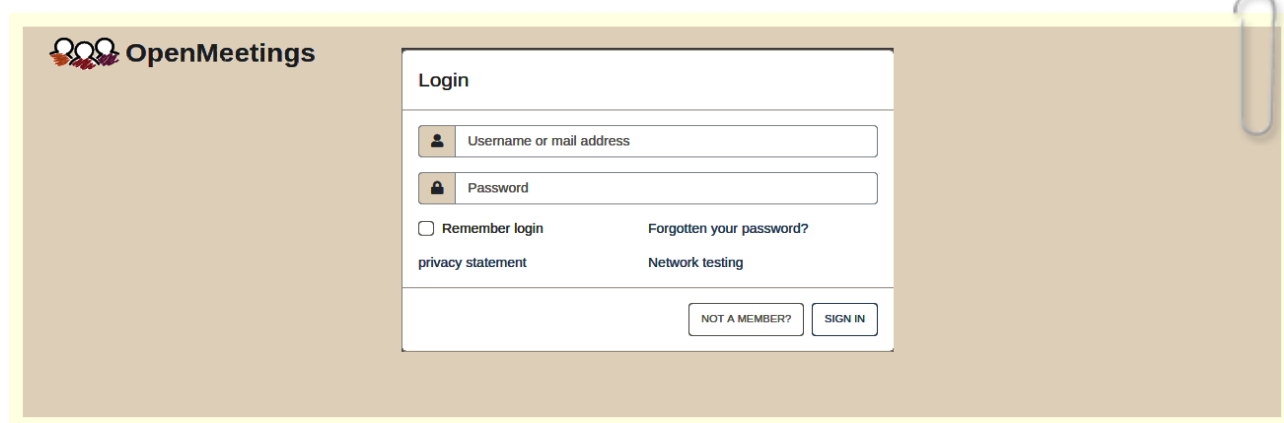
<https://openmeetings.apache.org/commercial-support.html>

< PREVIOUS   NEXT >   LAST   FINISH

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 chosen during the installation, push “**Sign in**” button, and...

**...Congratulations!**

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

**5443 8888**

# After installing OpenMeetings, you still need to install Coturn (Turn server) for which you can download the following tutorial and follow it from step 5:

[Installation SSL certificates and Coturn for OpenMeetings 5.0.1 on Ubuntu 18.04](#)

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

The screenshot shows the OpenMeetings Administration interface. At the top, there is a navigation menu with 'HOME', 'ROOMS', 'RECORDINGS', and 'ADMINISTRATION'. A red arrow points to the 'ADMINISTRATION' menu item. Below the navigation is a 'Welcome' section with a user profile card. The profile card includes a placeholder for a profile picture, the text 'Hello firstname lastname', and details for 'Timezone Europe/Berlin' and 'Unread messages 0'. There is a link to 'Edit your profile' and a button to 'UPLOAD NEW IMAGE'. Below the profile is a 'Help and support' section with links to the project website, user mailing list, network testing, and check setup. Further down is a 'My rooms' section with two room entries: 'My conference room (for 1-16 users)' and 'My presentation room (for 1-120 users)'. Each room entry has an 'ENTER' button and a 'Users' count. At the bottom is an 'Admin functions' section with a 'SHOW CLEANUP REPORT' button. A 'Chat' button is visible in the bottom right corner.

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

The screenshot shows the OpenMeetings Configuration page. At the top, there is a navigation menu with 'HOME', 'ROOMS', 'RECORDINGS', and 'ADMINISTRATION'. Below the navigation is a search bar and a table of configuration items. A red arrow points to the search bar. The table has columns for ID, Key, and Value. The configuration items are as follows:

| ID | Key                          | Value                                                                    |
|----|------------------------------|--------------------------------------------------------------------------|
| 1  | crypt.class.name             | org.apache.openmeetings.util.crypt.SCryptImplementation                  |
| 2  | allow.frontend.register      | true                                                                     |
| 3  | allow.soap.register          | true                                                                     |
| 4  | allow.oauth.register         | true                                                                     |
| 5  | default.group.id             | 1                                                                        |
| 6  | mail.smtp.server             | localhost                                                                |
| 7  | mail.smtp.port               | 25                                                                       |
| 8  | mail.smtp.system.email       | noreply@openmeetings.apache.org                                          |
| 9  | mail.smtp.user               |                                                                          |
| 10 | mail.smtp.pass               |                                                                          |
| 11 | mail.smtp.starttls.enable    | false                                                                    |
| 12 | mail.smtp.connection.timeout | 30000                                                                    |
| 13 | mail.smtp.timeout            | 30000                                                                    |
| 14 | application.name             | OpenMeetings                                                             |
| 15 | default.lang.id              | 1                                                                        |
| 16 | document.dpi                 | 150                                                                      |
| 17 | document.quality             | 90                                                                       |
| 18 | path.imagemagick             |                                                                          |
| 19 | path.sox                     |                                                                          |
| 20 | path.fmpeg                   | /usr/local/bin                                                           |
| 21 | path.office                  | /usr/lib/libreoffice                                                     |
| 22 | dashboard.rss.feed1          | https://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom |

Below the table is a configuration form with the following fields:

- Type: STRING
- Key: [input field]
- Value: [input field]
- Last update: [input field]
- Updated by: [input field]
- Comment: [input field]

Red arrows indicate the following sequence of actions:

- Arrow 1 points to the 'path.fmpeg' row in the table.
- Arrow 2 points to the 'Value' input field in the configuration form.
- Arrow 3 points to the 'Key' input field in the configuration form.

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/tomcat4 start          ....Tomcat-OpenMeetings
```

-----

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

<https://openmeetings.apache.org/mailling-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 5.0.1 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).

