This Guide is intended to help users install and configure Open Meetings 2.X

This guide is a variant of the Debian 64 Installation guide aimed at Ubuntu 12.04 users.

This guide has been written step by step with screenshots to aid in the successful build of OM.

SSL and Reverse proxy steps have been added but are optional.

N.B – When copying and pasting commands please check that symbols and character returns are correctly copied across.

Installing Ubuntu (Minimal Headless System)

Step 1: - Base System

| | Lar | guage | |
|------------------------|-------------------|-----------------------|--------------|
| Amharic | Gaeilge | Malayalam | Thai |
| Arabic | Galego | Marathi | Tagalog |
| Asturianu | Gujarati | Nepali | Türkçe |
| Беларуская | עברית | Nederlands | Uyghur |
| Български | Hindi | Norsk bokmål | Українська |
| Bengali | Hrvatski | Norsk nynorsk | Tiếng Việt |
| Bosanski | Magyar | Punjabi(Gurmukhi) | 中文(简体) |
| Català | Bahasa Indonesia | Polski | 中文(繁體) |
| Čeština | Íslenska | Português do Brasil | |
| Dansk | Italiano | Português | |
| Deutsch | 日本語 | Română | |
| Dzongkha | ქართული | Русский | |
| Ελληνικά | қазақ | Sámegillii | |
| English | Khmer | ສິ∘ກ⊚ | |
| Esperanto | ಕನ್ನಡ | Slovenčina | |
| Español | 한국어 | Slovenščina | |
| Eesti | Kurdî | Shqip | |
| Euskara | Lao | Српски | |
| ىسراف | Lietuviškai | Svenska | |
| Suomi | Latviski | Tamil | |
| Français | Македонски | తెలుగు | |
| F1 Help F2 Language F3 | 8 Keymap F4 Modes | F5 Accessibility F6 O | ther Options |

Choose "Install Ubuntu Server"



Stephen Cottham Choose English

| | | | ect a language callation process. The selected language will lled system. - No localization + - Shqip - جربی - Asturianu - Euskara | |
|---|---|--|---|--|
| | | Belarusian Bosnian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch English | - Беларуская - Bosanski ■ - Български - Català - 中文(简体) | |
| | | Esperanto Estonian Finnish French Galician German Greek | - Esperanto - Eesti - Suomi - Français - Galego - Deutsch - Ελληνικά + | |
| <ta< th=""><th><go back=""> b> moves; <space> se</space></go></th><th>lects; <enter≻ activates<="" th=""><th>s buttons</th><th></th></enter≻></th></ta<> | <go back=""> b> moves; <space> se</space></go> | lects; <enter≻ activates<="" th=""><th>s buttons</th><th></th></enter≻> | s buttons | |

Choose "United Kingdom"

| The selected location will be used to set your time zone and also for example to help |
|---|
| select the system locale. Normally this should be the country where you live. |
| This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed. |
| Country, territory or area: |
| Antigua and Barbuda Australia Botswana Canada Hong Kong India Ireland New Zealand Nigeria Philippines Singapore South Africa United States Zambia Zimbabwe other |
| <go back=""></go> |
| |

Choose yes to automatically detect keyboard.



Enter a hostname.

| [!] Configure the network | |
|---|-----------------------|
| Please enter the hostname for this system. | |
| The hostname is a single word that identifies your system to the know what your hostname should be, consult your network administr up your own home network, you can make something up here. Hostname: | |
| rbg-uk-openmeetings | |
| <go back=""></go> | <continue></continue> |
| | |
| | |
| | |

Stephen Cottham Enter Username.

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| | Set up users and pass | words | |
|--|-----------------------|--------------------------------------|---------|
| A user account will be created fo non-administrative activities. | | | |
| Please enter the real name of th default origin for emails sent by the user's real name. Your full r | this user as well as | any program which displ | |
| Full name for the new user: | | | |
| <go back=""></go> | | <co< td=""><td>ntinue></td></co<> | ntinue> |
| | | | |
| | | | |
| | | | |

Enter a password for the new user.

Choose no to encrypt the Home Directory.

| 6 | [!] Set up users and passwords | |
|-------------|---|----------------------------|
| | You may configure your home directory for encryption, such that any files remain private even if your computer is stolen. | stored there |
| | The system will seamlessly mount your encrypted home directory each time y automatically unmount when you log out of all active sessions. | ou login and |
| | Encrypt your home directory? | |
| | <go back=""> <yes< td=""><td>> <<mark><no></no></mark></td></yes<></go> | > < <mark><no></no></mark> |
| Ľ | | |
| | | |
| | | |
| | | |
| | | |
| <tab></tab> | > moves; <space> selects; <enter> activates buttons</enter></space> | |

Choose yes to accept the detected time-zone.

| | [!] Configure the | clock | | |
|--|-------------------|----------------|--|--------|
| Based on your present p | | | | |
| If this is not correct, Is this time zone corre | | TUIL IIST OF T | The Zones Ins | steau. |
| <go back=""></go> | | | <yes> <no< td=""><td>>></td></no<></yes> | >> |
| | | | | |

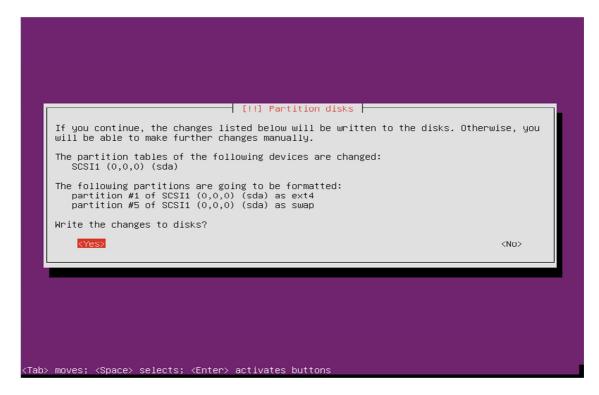
Accept the Disk selection to partition.

| | [!!] Partition disks |
|---------|--|
| Note | e that all data on the disk you select will be erased, but not before you have firmed that you really want to make the changes. |
| Sele | ect disk to partition: <mark>SCSII (0,0,0) (sda) – 8.6 GB ATA VBOX HARDDISK</mark> |
| | <go back=""></go> |
| | |
| | |
| | |
| n> move | es; <space> selects; <enter> activates buttons</enter></space> |

Select "Guided – Use entire disk"

| [!!] Partition disks The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results. If you choose guided partitioning for an entire disk, you will next be asked which disk should be used. |
|--|
| The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results. If you choose guided partitioning for an entire disk, you will next be asked which disk |
| The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results. If you choose guided partitioning for an entire disk, you will next be asked which disk |
| schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results. If you choose guided partitioning for an entire disk, you will next be asked which disk |
| |
| |
| Partitioning method: |
| <mark>Guided – use entire disk</mark> Guided – use entire disk and set up LVM Guided – use entire disk and set up encrypted LVM Manual |
| <go back≻<="" td=""></go> |
| |
| |
| |
| ab> moves; <space> selects; <enter> activates buttons</enter></space> |

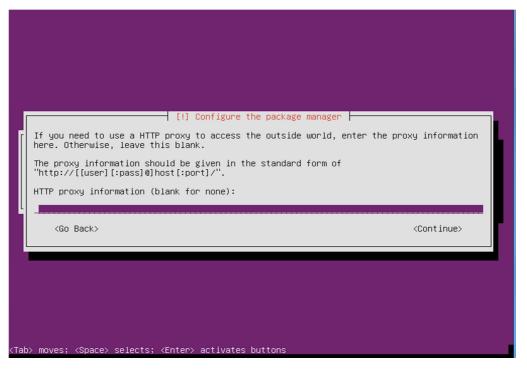
Choose "yes" to accept the changes to disk.



Select to install Security updates

| [!] Configuring tasksel |
|---|
| Applying updates on a frequent basis is an important part of keeping your system secure. |
| By default, updates need to be applied manually using package management tools. Alternatively, you can choose to have this system automatically download and install security updates, or you can choose to manage this system over the web as part of a group of systems using Canonical's Landscape service. |
| How do you want to manage upgrades on this system? |
| <mark>No automatic updates</mark> Install security updates automatically Manage system with Landscape |
| |
| |
| |
| |
| |
| (Tab> moves; <space> selects; <enter> activates buttons</enter></space> |

If you use a proxy server please enter that here, in most cases this is not needed and you can simply press enter to continue.



Select OpenSSH and leave the rest blank, then click on Continue.

| [!] Software selection |
|--|
| At the moment, only the core of the system is installed. To tune the system to your needs, you can choose to install one or more of the following predefined collections of software. |
| Choose software to install: |
| <pre>[*] OpenSSH server [] DNS server [] LAMP server [] Mail server [] PostgreSQL database [] Print server [] Samba file server [] Tomcat Java server [] Virtual Machine host [] Manual package selection</pre> |
| < <u>Continue</u> > |
| |
| |
| |
| <tab> moves; <space> selects; <enter> activates buttons</enter></space></tab> |

Stephen Cottham Choose yes to install and configure the Grub Boot loader.

| <pre>[1] Install the GRUB boot loader on a hard disk It seems that this new installation is the only operating system on this computer. If so, it should be safe to install the GRUB boot loader to the master boot record of your first hard drive. Warning: If the installer failed to detect another operating system that is present on your computer, modifying the master boot record will make that operating system temporarily unbootable, though GRUB can be manually configured later to boot it. Install the GRUB boot loader to the master boot record? </pre> |
|---|
|---|

Press continue to reboot your system.

| [!!] Finish the installation Installation complete hstallation is complete, so it is time to boot into your new system. Make sure to remove he installation media (CD-ROM, floppies), so that you boot into the new system rather han restarting the installation. |
|--|
| <go back=""> <continue></continue></go> |
| |
| |

Step 2: - Setup SSH Environment

You should now be at the following screen, the next steps are easier done from a remote desktop using an SSH client such as putty. – But first we need to know our IP address, in most cases this was issued by your DHCP server (unless you specified manual network setup during install) To find your IP address, first logon to your physical machine using root, then issue the following command:

ifconfig

This will show the following screen:

| 🛃 omadm | in@rbg-uk-openmeetings: ~ |
|------------------|---|
| omadmin(eth0 | <pre>@rbg-uk-openmeetings:~\$ ifconfig Link encap:Ethernet HWaddr 08:00:27:5a:2e:3a inet addr:10.17.23.11 Bcast:10.17.23.255 Mask:255.255.255.0 inet6 addr: fe80::a00:27ff:fe5a:2e3a/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:7796 errors:0 dropped:0 overruns:0 frame:0 TX packets:582 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:808009 (808.0 KB) TX bytes:70880 (70.8 KB)</pre> |
| 10 | Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:16436 Metric:1 RX packets:0 errors:0 dropped:0 overruns:0 frame:0 TX packets:0 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:0 (0.0 B) TX bytes:0 (0.0 B) |
| omadmin(| §rbg-uk-openmeetings:~\$ ▼ |

You can see the IP Address in this case is 10.17.23.11 (Interface eth0) You can now log off of the server.

From your desktop machine open your SSH client, in this case we will be using the putty client to connect to our new Server.

Enter the details and choose open

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| Session | Basic options for your PuTT | Ysession |
|--|---|---------------|
| Logging Logging Terminal Reyboard Bell Features Window | Specify the destination you want to conn Host Name (or IP address) | |
| Appearance Behaviour Translation Selection Olours Onnection Data Proxy Telnet Riogin SSH Serial | Raw Ielnet Riogin | SSH Serial |
| - Sellar | Close window on exit Close window on exit | on clean exit |

The first log on you will receive this message; you can choose yes here and accept the key.

| PuTTY Security Alert | | |
|---|--|--|
| The server's host key is not cached in the registry. You have no guarantee that the server is the computer you think it is. The server's rsa2 key fingerprint is: ssh-rsa 2048 b4:fb:90:11:d2:b0:b4:44:26:87:4d:a6:49:b6:74:b2 If you trust this host, hit Yes to add the key to PuTTY's cache and carry on connecting. If you want to carry on connecting just once, without adding the key to the cache, hit No. If you do not trust this host, hit Cancel to abandon the connection. | | |
| Yes No Cancel Help | | |

And finally this screen:

| 20.17.23.11 - PuTTY | |
|---------------------|---|
| login as: | * |
| | |
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| | ~ |
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When using Ubuntu the root account has no password and by default is disabled, so first log on with the user that was created during the installation process (In this case omadmin), this account by default is part of the Admin group and therefore is also part of the sudoers group already, from here we can re-enable the root account.

To do this follow these steps

sudo passwd

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Enter the omadmin password first

[sudo] password for omadmin: xxxxxx

Then enter the new root password twice

Enter new UNIX password: Retype new UNIX password: passwd: password updated successfully

We can now enter the following to change user to root

su -

Enter the password you set above and we are now ready to proceed.

Step 3: Install Dependent software

First update the repos:

apt-get update

Now lets create our work area

mkdir -p /usr/adm

To install Java 6 JDK first we need to grab the relevant binary from oracle.

cd /usr/adm

wget --no-cookies --header ''Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F'' \ http://download.oracle.com/otn-pub/java/jdk/6u32-b05/jdk-6u32-linux-x64.bin

Now issue the following to install.

cd /usr/adm chmod +x jdk-6u32-linux-x64.bin ./jdk-6u32-linux-x64.bin mkdir -p /usr/lib/jvm mv jdk1.6.0_32 /usr/lib/jvm/

update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/jdk1.6.0_32/bin/javac 1 update-alternatives --install /usr/bin/java java /usr/lib/jvm/jdk1.6.0_32/bin/java 1 update-alternatives --install /usr/bin/javaws javaws /usr/lib/jvm/jdk1.6.0_32/bin/javaws 1

update-alternatives --config javac update-alternatives --config java update-alternatives --config javaws

Check java by issuing the following

java -version

java version "1.6.0_32"

Java(TM) SE Runtime Environment (build 1.6.0_32-b05) Java HotSpot(TM) 64-Bit Server VM (build 20.7-b02, mixed mode)

ls -la /etc/alternatives/java*

and confirm the symbolic links point to the correct location.

Now let's install some more dependencies:

apt-get install openoffice.org-writer openoffice.org-calc openoffice.org-impress \ openoffice.org-draw openoffice.org-math imagemagick sox -y

apt-get install libgif-dev xpdf libfreetype6 libfreetype6-dev libjpeg62 libjpeg8 \ libjpeg8-dev libjpeg-dev libdirectfb-dev -y

apt-get install libart-2.0-2 libt1-5 zip unzip bzip2 subversion git-core checkinstall \ yasm texi2html libfaac-dev libfaad-dev libmp3lame-dev libsdl1.2-dev libx11-dev \ libxfixes-dev libxvidcore-dev zlib1g-dev libogg-dev sox libvorbis0a libvorbis-dev \ libgsm1 libgsm1-dev libfaad2 flvtool2 lame -y

Step 4: Compile and Install SWFTools 2012-04-08-0857

cd /usr/adm wget http://www.swftools.org/swftools-2012-04-08-0857.tar.gz tar -zxvf swftools-2012-04-08-0857.tar.gz cd swftools-2012-04-08-0857 ./configure make make install

Once that has completed you can now test it by issuing the following:

pdf2swf --version

Which should give you the following output:

pdf2swf - part of swftools 2012-04-08-0857

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Step 5: Compile and Install ffmpeg 0.11.1

Let's go back to our temporary working area

cd /usr/adm

Download, compile and install ffmpeg by issuing these commands:

wget http://ffmpeg.org/releases/ffmpeg-0.11.1.tar.gz tar -zxvf ffmpeg-0.11.1.tar.gz cd ffmpeg-0.11.1 ./configure --enable-libmp3lame --enable-libxvid --enable-libvorbis \ --enable-libgsm --enable-libfaac --enable-gpl --enable-nonfree make checkinstall

N.B - You will be asked a series of question towards the end of the install, press return for each to continue.

Once that has completed you can now test it by issuing the following:

ffmpeg -version

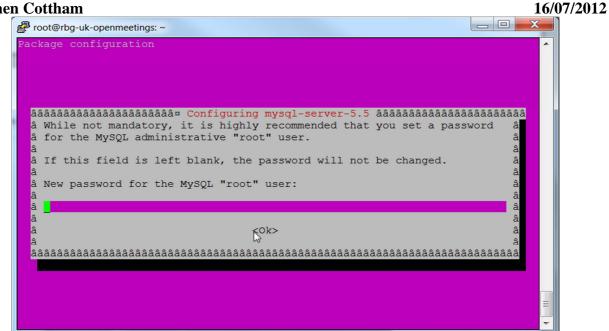
Which should give you the following output:

ffmpeg version 0.11.1

Step 6: - Create mysql DB for OM

Now we need to install MYSQL, issue this command (In this case username and password are openmeetings : ompassword)

apt-get install mysql-server -y



Enter the password as before "ompassword" and choose ok. Now let's create the needed DB's for OM 2.x

Issue these commands:

| mysql -u root -p | | |
|------------------|---------------------------------------|--|
| | 🚱 10.17.23.3 - PuTTY | |
| | root@openmeetings:~# mysql -u root -p | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Enter password "ompassword"

Now issue these: (Assuming username **openmeeting** and password = **password**)

CREATE DATABASE openmeetings DEFAULT CHARACTER SET 'utf8'; GRANT ALL PRIVILEGES ON openmeetings.* TO 'openmeetings'@'localhost' **IDENTIFIED BY 'password' WITH GRANT OPTION;** quit

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Stephen Cottham 🛃 10.17.23.3 - PuTTY root@openmeetings:~# mysql -u root -p Enter password: Welcome to the MySQL monitor. Commands end with ; or $\g.$ Your MySQL connection id is 44 Server version: 5.1.61-0+squeeze1 (Debian) Copyright (c) 2000, 2011, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> CREATE DATABASE openmeetings DEFAULT CHARACTER SET 'utf8'; Query OK, 1 row affected (0.00 sec) mysql> GRANT ALL PRIVILEGES ON openmeetings. * TO 'openmeetings'@'localhost' IDE NTIFIED BY 'password' WITH GRANT OPTION; Query OK, 0 rows affected (0.00 sec) mysql> quit Bve root@openmeetings:~#

Successful DB creation shown above.

Step 7: Install JOD Converter

Let's go back to our temporary working area

cd /usr/adm

Download, extract JOD by issuing these commands: (We will move the JOD location after the installation of OM 2.x)

wget http://jodconverter.googlecode.com/files/jodconverter-core-3.0-beta-4-dist.zip unzip jodconverter-core-3.0-beta-4-dist.zip

Step 8: Install ANT 1.8.4 for compiling latest OM 2.x

Let's go back to our temporary working area

cd /usr/adm

Download, extract ANT by issuing these commands:

wget http://mirror.catn.com/pub/apache//ant/binaries/apache-ant-1.8.4-bin.tar.gz tar -zxvf apache-ant-1.8.4-bin.tar.gz

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Once that has completed you can test it by issuing the following commands:

cd /usr/adm/apache-ant-1.8.4/bin ./ant -version

This should output the following:

Apache Ant(TM) version 1.8.4 compiled on May 22 2012

Step 9: Download and compile latest OM 2.x

Again back to our working area:

cd /usr/adm

Then check out the latest source code using the following:

svn checkout http://svn.apache.org/repos/asf/incubator/openmeetings/branches/2.0/

Once that has completed we can then build the source by issuing the following:

cd /usr/adm/2.0 /usr/adm/apache-ant-1.8.4/bin/ant clean.all /usr/adm/apache-ant-1.8.4/bin/ant -Ddb=mysql

This will take a little while depending on your system, once it has finished you should be left the following message:

BUILD SUCCESSFUL

Step 9a: Install pre-built OM 2.x (Alternative to Step 9)

Download the latest build from the following link:

https://builds.apache.org/job/openmeetings/

The file will be something like the following "apache-openmeetings-incubating-2.xxxxx.tar.gz: (Where xxx is the date and build version)

We can do this using wget, so first we need to go back to our build area like so:

cd /usr/adm mkdir -p singlewebapp/dist cd singlewebapp/dist

Then grab the file and extract it:

wget https://builds.apache.org/job/openmeetings/lastSuccessfulBuild/artifact/singlewebapp/\dist/apache-openmeetings-incubating-2.xxxxx.tar.gz

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tar -zxvf apache-openmeetings-incubating-2.xxxxx.tar.gz

Now download the mysql connector from here:

http://www.mysql.com/downloads/connector/j/

cd /usr/adm/singlewebapp/dist/red5/webapps/openmeetings/WEB_INF/lib

wget http://www.mysql.com/get/Downloads/Connector-J/mysql-connector-java-5.1.20.zip/from/http://mirrors.ukfast.co.uk/sites/ftp.mysql.com/

unzip mysql-connector-java-5.1.20.zip

cd mysql-connector-java-5.1.20

mv mysql-connector-java-5.1.20-bin.jar /usr/adm/singlewebapp/dist/red5/webapps/openmeetings/WEB_INF/lib

Step 10: Install compiled\Pre-Built OM 2.x

Now we need to move the compiled source into the correct location, in this system we are using /usr/lib/red5, so issue the following commands to move the root folder over:

cd /usr/adm/2.0/dist mv red5/ /usr/lib/

Let's move the JOD into place now cp -R /usr/adm/jodconverter-core-3.0-beta-4 /usr/lib/red5/webapps/openmeetings

And set some permissions and ownerships

chown -R nobody /usr/lib/red5 chmod +x /usr/lib/red5/red5.sh chmod +x /usr/lib/red5/red5-debug.sh

Set the start-up script for OM 2.x by issuing the following:

vi /etc/init.d/red5

and adding the following:

#!/bin/bash
For RedHat and cousins:
chkconfig: 2345 85 85
description: Red5 flash streaming server
processname: red5
Created By: Sohail Riaz (sohaileo@gmail.com)
Modified by Alvaro Bustos

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```
PROG=red5
RED5 HOME=/usr/lib/red5
DAEMON=$RED5_HOME/$PROG.sh
PIDFILE=/var/run/$PROG.pid
# Source function library
#./etc/rc.d/init.d/functions
[ -r /etc/sysconfig/red5 ] && . /etc/sysconfig/red5
RETVAL=0
case "$1" in
start)
cd $RED5_HOME
    start-stop-daemon --start -c nobody --pidfile $PIDFILE
$DAEMON >/dev/null 2>/dev/null &
RETVAL=$?
if [ $RETVAL -eq 0 ]; then
echo $! > $PIDFILE
# touch /var/lock/subsys/$PROG
fi
# [ $RETVAL -eq 0 ] && success $''$PROG startup'' || failure $''$PROG startup''
echo
;;
stop)
    start-stop-daemon --stop --quiet --pidfile $PIDFILE \
        --name java
    rm -f $PIDFILE
echo
[ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/$PROG
;;
restart)
$0 stop
$0 start
;;
status)
status $PROG -p $PIDFILE
RETVAL=$?
;;
*)
echo $"Usage: $0 {start|stop|restart|status}"
RETVAL=1
esac
exit $RETVAL
```

Save the file and then set the permissions like below:

```
chmod +x /etc/init.d/red5
update-rc.d red5 defaults
```

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Now we need to move the persistence files so we can connect to mysql, so issue the following:

Make backup copy

mv /usr/lib/red5/webapps/openmeetings/WEB-INF/classes/META-INF/ persistence.xml /usr/lib/red5/webapps/openmeetings/WEB-INF/ classes/META-INF/persistence.xml-ori

Rename mysql template to persistence.xml

mv /usr/lib/red5/webapps/openmeetings/WEB-INF/classes/META-INF/\ mysql_persistence.xml /usr/lib/red5/webapps/openmeetings/WEB-INF/\ classes/META-INF/persistence.xml

Edit the persistence file and add out mysql details, in this case we used "**openmeetings**" and "**password**" – so issue the following:

vi /usr/lib/red5/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml

Then change the following

- , Username=openmeetings
- , Password=password''/>

At this stage we are ready to start up OM 2.x for the first time.

/etc/init.d/red5 start

Now open the browser and go to the following link. N.B remember to change the IP address to your OM2.x server, the one below 10.17.23.11 is just for this example.

http://10.17.23.11:5080/openmeetings/install

If all went well you should now see this page:

| hen Cottham | | 16/07/2 |
|---|---|--|
| Image: Weight of the strength of the st | ☆ ▽ C ↓ Google | ₽ ♠ ◘ # |
| penMeetings - Installation | | |
| ntinue with STEP 1 | | |
| 1. Recommendation for production environment | | |
| By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MvSQL, Postgres or for example IB | M DB2 or Oracle | |
| 2. Enabling Image Upload and import to whiteboard | | |
| Install ImageMagick on the server, you can get more information on http://www.imagemagick.org regarding installation. The instructions for installation can be four managers (apt-get it) | I there http://www.imagemagick.org/script/binary-releases.php, however on most linux system | s you can get it via your favorite package |
| 3. Enabling import of PDFs into whiteboard | | |
| Instal GivenStript on the server, you can get more information on <u>large/paper or wise, ender-gloor</u> regarding installation. The instructions for installation can be four on latad SWTFools on the server, you can get more information on <u>linge/www.swfbook.org</u> regarding installation. Some of the Linux distributions already have it in the have a long that does load to verse object dimensions in the Whitebood | | |
| 4. Enabling import of .doc, .docx, .ppt, .pptx, all Office Documents into whitebaord | | |
| OpenOffice-Service started and listening on port \$100, see <u>OpenOfficeConverter</u> for details | | |
| 5. Enabling Recording and import of .avi, .fly, .mov and .mp4 into whiteboard | | |
| Instal FFMpeg. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from https://fmpeg.arrozeru.org/buildy/Linu Install SoX https://fmpeg.arrozeru.org/buildy/Linu Install SoX https://fmpeg.arrozeru.org/buildy/Linu Install SoX https://fmpeg.arrozeru.org/buildy/Linu | x or OSx Users should be able to use one of the various Installation Instructions on the Web. | fou need to enable libmp3lame! |
| ontinue with STEP 1 | | |
| you have further questions or need support in installation or hosting: | | |
| ommercial-Support: | | |
| phone 49 721 467 27327 | | |
| email vice@openmeetings.de | | |
| ommunity-Support: | | |
| er-Forums veloer-Forums | | |

Choose the "Continue with STEP 1" link

OpenMeetings - Installation

| | | 6 |
|--|--|---|
| Userdata | | |
| Username | | |
| Userpass | | |
| EMail | | |
| User Time Zone | New Zealand (Etc/GMT+12 (New Zealand)) | |
| Organisation(Domains) | | |
| Name | | |
| Configuration | | |
| Allow self-registering (allow_frontend_register) | Yes | |
| Send Email to new registered Users | Yes 💌 | |
| (sendEmailAtRegister) | | |
| New Users need to verify their EMail | Yes | |
| (sendEmailWithVerficationCode) | | |
| Default Rooms of all types will be created | Yes 💌 | |
| Mail-Referer (system_email_addr) | noreply@localhost | |
| SMTP-Server (smtp_server) | localhost | |
| SMTP-Server Port(default Smtp-Server Port is 25) | 25 | |
| (smtp_port) | | |
| SMTP-Username (email_userpass) | | |
| SMTP-Userpass (email_userpass) | | |
| Enable TLS in Mail Server Auth | No | |
| Set inviter's email address as ReplyTo in email invitation | ns Yes 💌 | |
| (inviter.email.as.replyto) | | |
| Default Language | english | |

The only section we need to fill out at this stage is the following:

Username: **omadmin** Userpass: **ompassword** Email: **something@something.com** TimeZone: **United Kingdom** Domain Name: **somedomain**

Now click on INSTALL at the bottom of the page, this will then create all the needed tables etc.. - it

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can take a little while but be patient.

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OpenMeetings - Installation Complete!

Enter the Application

If your Red5-Server runs on a different Port or on a different domain alter the config values of the client

Mailing list

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

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

http://incubator.apache.org/openmeetings/commercial-support.html

Once that has completed you can now enter the application by clicking on the "**Enter the Application**" link

You should see the following logon screen:

| Login | |
|---------------------|--|
| Username or mail | |
| Password | |
| Domain | local DB [internal] |
| | Remember login |
| | |
| | |
| | |
| Not a member? | Sign in |
| Forgotten your pass | word? visit Apache OpenMeetings [Incubating] |

Enter these details to sign in.

Username: **omadmin** Userpass: **ompassword**

Step 11: Add relevant paths to the configuration

Once logged in go to Administration > Configuration

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Apache OpenMeetings [Incubating] Recordings Rooms Home Administration 👻 Users H Hello firstname lastn Manage users and rights town Timezone Etc/GM Connections Unread messages 0 Manage connections and kick users ...Edit your profile Usergroups Upload new image Manage usergroups **Conference rooms** Manage conference rooms Help and support Configuration Project website (http://incubator.apache.org/op Manage system settings User mailing list (http://incubator.apache.org/or Language editor Manage labels and wording LDAP 🐝 My rooms Manage LDAP and ADS configurations Backup My conference room (for 1-16 users) Export/Import System Backups 2 Enter Clic My webinar room (for 1-120 users) Roo 2 Enter Corr

You will see on the left hand pane a list of keys and values, the ones we are interested in are

| SWFTools Path | /usr/local/bin |
|------------------|---|
| ImageMagick Path | /usr/bin/ |
| FFMPEG Path | /usr/local/bin |
| SoX Path | /usr/bin/ |
| JOD Path | /usr/lib/red5/webapps/openmeetings/jodconverter-core-3.0-beta-4/lib |

Click on the left hand pane option and then enter the value as above, click on the save button to apply the changes; once you have done each key you should see the following:

Rooms 👻 Home 👻 Recordings 👻 Administration 0 - 50 of 67 1 50 ≎ ▶ № 😑 💠 🛸 渊 ID Key Value crypt_ClassName org.openmeetings.utils.crypt.MD5Imple Configuration 1 2 screen_viewer 4 Кеу allow_frontend_register 1 3 4 default_group_id 1 Value 1 5 default_domain_id localhost 25 6 smtp_server Last update 7 smtp_port Updated by 8 system_email_addr noreply@localhost 9 email_username Comment 10 email_userpass 11 mail.smtp.starttls.enabl 0 12 application.name OpenMeetings default_lang_id 13 1 14 swftools_zoom 72 15 swftools_jpegquality 85 swftools_path /usr/local/bin imagemagick_path /usr/bin 16 17 /usr/bin 18 sox_path 19 ffmpeg path 19 Impose 20 office.path 21 jod.path /usr/lib/red5/webapps/openmeetings/ji 22 rss_feed1 null 24 sendEmailAtRegister 1 25 sendEmailWithVerficatic 1 26 default_export_font TimesNewRoman 27 default.rpc.userid 1 28 red5sip.enable no red5sip.room_prefix 400 29 red5sip.exten_context rooms 30 31 sip.enable no 32 sip.realm 33 sip.port 34 sip.proxyname 35 sip.tunnel 36 sip.codebase 37 sip.forcetunnel true 38 sip.openxg.enable no 39 openxg.wrapper.url 40 openxg.client.id 41 openxg.client.secret 42 openxg.client.domain

Apache OpenMeetings [Incubating]

JOD will find open office in this case so we do not need to set the path.

Step 12: Securing OpenMeetings using encryption (Optional)

12.1 - Generating CSR:

We can do this in a few ways, the first way I will show here is simply by generating a CSR and inserting these into OpenMeetings.

Create a new keystore and key, use the same password for both: (Taken from OM Website http://incubator.apache.org/openmeetings/RTMPSAndHTTPS.html)

keytool -keysize 2048 -genkey -alias red5 -keyalg RSA -keystore red5/conf/keystore Enter keystore password: Re-enter new password: What is your first and last name? [Unknown]: <your hostname, e.g demo.openmeetings.de> What is the name of your organizational unit? [Unknown]: Dev What is the name of your organization? [Unknown]: OpenMeetings What is the name of your City or Locality? [Unknown]: Henderson What is the name of your State or Province? [Unknown]: Nevada What is the two-letter country code for this unit? [Unknown]: US Is CN=demo.openmeetings.de, OU=Dev, O=OpenMeetings, L=Henderson, ST=Nevada, C=US correct? [no]: yes Enter key password for <red5>

Generate a CSR:

keytool -certreq -keyalg RSA -alias red5 -file red5.csr -keystore red5/conf/keystore

Submit CSR to your CA of choice and receive a signed certificate Import your chosen CA's root certificate into the keystore (may need to download it from their site make sure to get the root CA and not the intermediate one)

keytool -import -alias root -keystore red5/conf/keystore -trustcacerts -file root.crt

(note: you may receive a warning that the certificate already exists in the system wide keystore - import anyway)

Import the intermediate certificate(s) you normally receive with the certificate:

keytool -import -alias intermed -keystore red5/conf/ keystore -trustcacerts -file intermediate.crt

Import the certificate you received:

keytool -import -alias red5 -keystore red5/conf/keystore -trustcacerts -file demo.openmeetings.de.crt

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12.2 – Using Existing certs such as wild card certificates instead of generating a new CSR.

First let's go back to our work area:

cd /usr/adm/ mkdir certs cd certs/

Using WinSCP or equivalent copy your wild card key and cert files: yourdomain.key.pem and yourdomain.cert.pem - (These should be in PEM format)

Now issue the following to convert the files to DER format

openssl pkcs8 -topk8 -nocrypt -in apache.key.pem -inform PEM -out key.der -outform DER openssl x509 -in apache.cert.pem -inform PEM -out cert.der -outform DER

Now we need a couple of files to help us import the DER files into the keystore, so issue the following:

wget http://www.agentbob.info/agentbob/80/version/default/part/AttachmentData/data/ImportKey.java wget http://www.agentbob.info/agentbob/81/version/default/part/AttachmentData/data/ImportKey.class

Then use these commands to import:

java ImportKey key.der cert.der

Finally move the keystore to the correct location

mv /root/keystore.ImportKey /usr/lib/red5/conf/keystore

N.B = Alias:importkey Password:importkey (When using the java import key files, you can change the password afterwards)

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Now that we have either a new Cert of the wild card cert inside our Keystore we need to make some changes to OM 2.x to use these certificates and thus encrypt communications using HTTPS and RTMPS.

To use RTMPS do the following: First make some changes to the red5-core.xml file by issuing the following:

```
cd /usr/lib/red5/conf
vi red5-core.xml
```

now uncomment <!-- RTMPS --> section by removing the <!-- and the --> leaving this:

```
<bean id="rtmpsMinaIoHandler"
    class="org.red5.server.net.rtmps.RTMPSMinaIoHandler">
    <property name="handler" ref="rtmpHandler" />
    <property name="codecFactory" ref="rtmpCodecFactory" />
    <property name="rtmpConnManager" ref="rtmpMinaConnManager" />
    <property name="kevStorePassword" value="${rtmps.kevstorepass}" />
    <property name="keystoreFile" value="conf/keystore" />
  </bean>
  <bean id="rtmpsTransport" class="org.red5.server.net.rtmp.RTMPMinaTransport" init-</pre>
method="start" destroy-method="stop">
    <property name="ioHandler" ref="rtmpsMinaIoHandler" />
    <property name="connectors">
      <list>
        <br/><br/>bean class="java.net.InetSocketAddress">
          <constructor-arg index="0" type="java.lang.String" value="${rtmps.host}" />
          <constructor-arg index="1" type="int" value="${rtmps.port}" />
        </bean>
      </list>
    </property>
        <property name="ioThreads" value="${rtmp.io_threads}" />
    <property name="jmxPollInterval" value="1000" />
    <property name="tcpNoDelay" value="${rtmp.tcp_nodelay}" />
  </bean>
```

Save this file and then do the following:

cd /usr/lib/red5/conf vi red5.properties

```
set rtmps.port=5443
rtmps.keystorepass=password (password = password you set on your new keystore)
```

Now edit config.xml by doing the following:

```
cd /usr/lib/red5/webapps/openmeetings/
vi config.xml
```

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Set these following values:

<rtmpsslport>**5443**</rtmpsslport> <useSSL>**yes**</useSSL> <proxyType>**best**</proxyType>

To use HTTPS do the following:

First make a backup of the original jee-container file by doing the following:

cd /usr/lib/red5/conf mv jee-container.xml jee-container.xml.orig

Then rename the SSL jee template

mv jee-container-ssl.xml jee-container.xml

Now edit the config.xml

cd /usr/lib/red5/webapps/openmeetings/ vi config.xml

set

```
<protocol>https</protocol>
<red5httpport>443</red5httpport>
```

Lastly edit red5.properties by doing the following:

cd /usr/lib/red5/conf vi red5.properties

set

https.port=443 http.port=443

Now restart OM using the following:

/etc/init.d/red5 restart

We can now connect using the following link:

https://yourdomain/openmeetings

Step 13: Installing Reverse Proxy using Apache Web Server (Optional)

Another way to secure the OpenMeetings service is to use Apache as a reverse proxy, to do this we need to do the following:

First install Apache2 and enabling relevant modules by running the following commands:

apt-get install apache2 a2enmod proxy a2enmod proxy_http a2enmod ssl a2enmod headers a2enmod rewrite a2enmod cache /etc/init.d/apache2 restart

We can now redirect port 80 (less secure) or port 443 (secure) to port 5080, to do this we need to create a virtual host, to do this do the following:

cd /etc/apache2/sites-enabled/

Now for SSL redirect (using a Cert on Apache instead of keystore) do the following

vi om.yourdomain.com-ssl

and add the following

<IfModule mod_ssl.c> #NameVirtualHost *:443 ProxyRequests Off <VirtualHost *:80> ServerAdmin hostmaster@domain.com ServerName om.yourdomain.com

ProxyPreserveHost On RewriteEngine on