# Parts of the guide have been updated from the previous installation documentation from Alvaro Bustos – greenes. -Thanks

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 Debian (Minimal Headless System)

Step 1: - Base System



Choose 64 Bit install

Choose the language to be used for th also be the default language for the Language:	e installation process. The selected language will installed system.
C Albanian Arabic Asturian Basque Belarusian Bosnian Bulgarian Catalan Chinese (Simplif Chinese (Traditi Croatian Czech Danish Dutch English Esperanto Estonian Finnish French Galician German Greek	<ul> <li>No localization *</li> <li>Shqip</li> <li>- φ·γA</li> <li>Asturianu</li> <li>Euskara</li> <li>- Беларуская</li> <li>- Возалякі</li> <li>- Български</li> <li>- Català</li> <li>ied) - 中文(衛体)</li> <li>onal) - 中文(常像)</li> <li>- Hrvatski</li> <li>- Čeština</li> <li>- Dansk</li> <li>- Nederlands</li> <li>- Esperanto</li> <li>- Eesti</li> <li>- Suomi</li> <li>- Français</li> <li>- Galego</li> <li>- Deutsch</li> <li>- Eλληνικά</li> <li>*</li> </ul>
<go back=""></go>	

Choose English

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

Choose "United Kingdom"

[1] Select a keyboard layout	
Keuman to use:	
American English 🛨	
Belarusian	
Belgian	
Brazilian (ABNT2 layout)	
Brazilian (EUA layout)	
Buldanian	
Capadian Erench	
Canadian Multilingual	
Croatian	
Czech	
Danish	
Dutch	
DV0rdk Estonian	
Einnish	
French	
German	
Greek	
Hebrew	
Hungarian	
Itelian	
Jananese	
Kirghiz	
Latin American 🔍	
<go back=""></go>	
<pre>(Tab&gt; moves; <space> selects; <enter> activates buttons</enter></space></pre>	

Choose "British English"

	[!] Configure the ne	atwork	
lease enter the hostr	name for this system.		
pyour own home netwo lostname: ppenmeetings	ork, you can make something up	here.	
<go back=""></go>			<continue></continue>

Set the hostname, in this case its "openmeetings"

The domain name is the pa is often something that e network, you can make som	[!] Configure the network of your Internet address to the ds in .com, .net, .edu, or .org ething up, but make sure you use	he right of your host name. It . If you are setting up a home the same domain name on all
your computers. Domain name: uourdomain internal		
<go back=""></go>		<continue></continue>

Set your domain, in this case we have used "yourdomain.internal"

choose	ified user with root a root password tha maries, or a word th	access can have dis t is not easy to gue at could be easily a	tem administrative acc astrous results, so yo ss. It should not be a ssociated with you.	ount. A malicious or ou should take care t a word found in
A good change	l password will conta d at regular interva	in a mixture of lett ls.	ers, numbers and punct	uation and should be
The ro accoun become	not user should not h nt will be disabled a e root using the "sud	ave an empty passwor nd the system's init o" command.	d. If you leave this a ial user account will	empty, the root be given the power t
Note t	hat you will not be	able to see the pass	word as you type it.	
Root p	assword:			
<b>/G</b>	n Back>			<cont inue=""></cont>

Set the root password.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or use the user's real name. Your full name is a reasonable choice. Full name for the new user: 	A user account will be created for non-administrative activities.	Set up users and passwords you to use instead of the root account for
Full name for the new user: 	Please enter the real name of this default origin for emails sent by the user's real name. Your full na	user. This information will be used for instance as this user as well as any program which displays or use me is a reasonable choice.
<go back=""> <continue></continue></go>	Full name for the new user:	
	<go back=""></go>	<continue></continue>

Create new user for server (Non-priv)

[!!] Set up users and passw	ionds
contain a mixture of letters, numbe ntervals.	ers and punctuation and should be
r the new user:	
	<continue></continue>
	[!!] Set up users and passu contain a mixture of letters, numbe ntervals. r the new user:

Set password for new user

[!!] 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
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
If you choose guided partitioning for an entire disk, you will next be asked which disk
should be used.
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=""></go>

Use guided – entire disk



Select Disk to partition

[!] Partition disks
Selected for partitioning:
SCSI3 (0,0,0) (sda) - ATA VBOX HARDDISK: 17.2 GB
The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.
Partitioning scheme:
All files in one partition (recommended for new users) Separate /home partition Separate /home, /usr, /var, and /tmp partitions
<go back=""></go>
(Tab> moves; <space> selects; <enter> activates buttons</enter></space>

Choose "All files in one partition"

This is an overvie	w of your currently configured partitions and mount points. Select a
partition to modif partitions, or a d	y its settings (file system, mount point, etc.), a free space to create evice to initialize its partition table.
	Guided partitioning Configure software RAID Configure the Logical Volume Manager Configure encrypted volumes
	SCSI3 (0,0,0) (sda) – 17.2 GB ATA VBOX HARDDISK #1 primary 16.4 GB B f ext3 / #5 logical 748.7 MB f swap swap
	Undo changes to partitions Finish partitioning and write changes to disk
<go back=""></go>	

Choose "Finish partitioning and write changes to disk"

	[11	] Partition disks		
If you continue will be able to	, the changes listed make further changes	below will be writ manually.	ten to the disks. O	therwise, you
The partition ta SCSI3 (0,0,0)	ables of the followin ) (sda)	g devices are chan	ged:	
The following pa partition #1 partition #5	artitions are going t of SCSI3 (0,0,0) (sc of SCSI3 (0,0,0) (sc	o be formatted:  a) as ext3  a) as swap		
Write the change	es to disks?			
<yes></yes>				<no></no>

And finally choose "yes"

## 08/02/2013

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The goal is to find a mirror be aware that nearby countri	[1] Configure the package of the Debian archive the es, or even your own, man	ge manager   nat is close to you on the network y not be the best choice.
Debian archive mirror countr	y:	
	Mexico Moldova Netherlands New Caledonia New Zealand Nicaragua Norway Poland Portugal Romania Russian Federation Singapore Slovakia Slovenia South Africa Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United Kingdom	
<go back=""></go>		

Choose Debian archive – in this case we are using "United Kingdom"

Please select a Debia if you do not know wh	III Configure the package manager in archive mirror. You should use a mirror in your country or region hich mirror has the best Internet connection to you.
Usually, ftp. <your co<="" th=""><th>ountry code&gt;.debian.org is a good choice.</th></your>	ountry code>.debian.org is a good choice.
Debian archive mirror	
	ftp.uk.debian.org ukdebian.mirror.anlx.net mirror.positive-internet.com mirror.bytemark.co.uk cdn.debian.net debian.man.ac.uk uwuw.mirrorservice.org ftp.ticklers.org the.earth.li mirror.ox.ac.uk
<go back=""></go>	

Any archive will do closest to you; in this case we are using ftp.uk.debian.org



If you use a proxy server then add the details here, if you have full outbound access then just choose continue.

Select and install software 5% Retrieving file 5 of 21 (1min 15s remaining)	

"apt" will now update the local repository information.



Choose not to participate in the survey.

At the moment, only th	e core of the system is installed. To t	une the system to your
needs, you can choose software.	to install one or more of the following	predefined collections of
Choose software to ins	tall:	
	<ul> <li>[] Graphical desktop environmen</li> <li>[] Web server</li> <li>[] Print server</li> <li>[] DNS server</li> <li>[] File server</li> <li>[] Mail server</li> <li>[] SQL database</li> <li>[4] SSH server</li> <li>[] Laptop</li> <li>[44] Standard system utilities</li> </ul>	.t
<go back=""></go>		<cont inue=""></cont>

Choose only SSH Server and Standard System utilities.



Choose Yes to install Grub.

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

Base install has now completed, choose continue to reboot into your new system.

#### Step 2: - Setup SSH Environment

Setting kernel variablesdone.
Configuring network interfacesdone.
Starting portmap daemon
Starting NFS common utilities: statd.
Cleaning up temporary files
Setting console screen modes.
Skipping font and keymap setup (handled by console–setup).
Setting up console font and keymapdone.
INIT: Entering runlevel: 2
Using makefile–style concurrent boot in runlevel 2.
Starting NFS common utilities: statd.
Starting portmap daemonAlready running
Starting enhanced syslogd: rsyslogd.
Starting VirtualBox AdditionsVBoxService: 3.2.10_OSE r66523 started. Verbose lev
el = 0
•
Starting ACPI services
Starting deferred execution scheduler: atd.
Starting periodic command scheduler: cron.
Starting OpenBSD Secure Shell server: sshd.
Starting MTA: exim4.
Debian GNU/Linux 6.0 openmeetings ttyl
openmeetings login:

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:

You can see the IP Address in this case is 10.17.23.3 (Interface eth0)

You can now log off of the server.

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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



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



Now log in with your root credentials.

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#### Step 3: Install Dependent software

Firstly we need to add some repos to apt to get the required Java version, so first issue this command:

#### vi /etc/apt/sources.list

This will open the following file in vi: (you can use whatever file editor you are comfortable with)



Now at the top of this file add the following entries:

deb http://security.debian.org/ squeeze/updates main contrib non-free deb-src http://security.debian.org/ squeeze/updates main contrib non-free deb http://ftp.debian.org/debian/ squeeze main contrib non-free deb-src http://ftp.debian.org/debian/ squeeze main contrib non-free deb http://ftp.debian.org/debian/ squeeze-updates main contrib non-free deb-src http://ftp.debian.org/debian/ squeeze-updates main contrib non-free deb http://ftp.debian.org/debian/ squeeze-updates main contrib non-free deb http://ftp.debian.org/debian/ squeeze-updates main contrib non-free deb http://ftp.debian.org/debian squeeze main non-free deb http://ftp2.de.debian.org/debian squeeze main non-free

🛃 10.17.23.3 - PuTTY	-
4	•
<pre>deb http://security.debian.org/ squeeze/updates main contrib non-free deb http://ftp.debian.org/debian/ squeeze main contrib non-free deb-src http://ftp.debian.org/debian/ squeeze main contrib non-free deb http://ftp.debian.org/debian/ squeeze-updates main contrib non-free deb http://ftp.debian.org/debian/ squee</pre>	
deb-src http://itp.debian.org/debian/ squeeze-updates main contrib non-free	
<pre># deb cdrom:[Debian GNU/Linux 6.0.3 _Squeeze Official Multi-architecture amd6 4/i386 NETINST #1 20111008-20:04]/ squeeze main</pre>	
<pre>#deb cdrom:[Debian GNU/Linux 6.0.3 _Squeeze Official Multi-architecture amd64 /i386 NETINST #1 20111008-20:04]/ squeeze main</pre>	
deb http://ftp.uk.debian.org/debian/ squeeze main	
deb-src http://ftp.uk.debian.org/debian/ squeeze main	
den http://security.denian.org/ squeeze/undates main	
deb-src http://security.debian.org/ squeeze/updates main	
<pre># squeeze-updates, previously known as 'volatile'</pre>	
deb http://ftp.uk.debian.org/debian/ squeeze-updates main	
deb-src http://ftp.uk.debian.org/debian/ squeeze-updates main	Ш
	+

To update the repos we need to issue the following command:

#### apt-get update

Once that has completed you will be here:

🛃 10.17.23.3 - PuTTY	
Ign http://security.debian.org/ squeeze/updates/non-free Translation-en	~
Ign http://security.debian.org/ squeeze/updates/non-free Translation-en GB	
Hit http://security.debian.org squeeze/updates Release	
Hit http://ftp.debian.org squeeze/main Sources	
Hit http://ftp.debian.org squeeze/contrib Sources	
Hit http://ftp.debian.org squeeze/non-free Sources	
Hit http://ftp.debian.org squeeze/main amd64 Packages	
Hit http://ftp.debian.org squeeze/contrib amd64 Packages	
Hit http://ftp.debian.org squeeze/non-free amd64 Packages	
Hit http://ftp.debian.org squeeze-updates/main Sources/DiffIndex	
Hit http://ftp.debian.org squeeze-updates/contrib Sources	
Hit http://ftp.debian.org squeeze-updates/non-free Sources	
Hit http://security.debian.org squeeze/updates/main Sources	
Hit http://ftp.debian.org squeeze-updates/main amd64 Packages/DiffIndex	
Hit http://ftp.debian.org squeeze-updates/contrib amd64 Packages	
Hit http://ftp.debian.org squeeze-updates/non-free amd64 Packages	
Hit http://security.debian.org squeeze/updates/contrib Sources	
Hit http://security.debian.org squeeze/updates/hon-free Sources	
Hit http://security.debian.org squeeze/updates/main amd64 Packages	
Hit http://security.debian.org squeeze/updates/contrib amd64 Packages	
Hit http://security.debian.org squeeze/updates/non-free amd64 Packages	
Hit http://ftp.debian.org squeeze-updates/main amd64 Packages	=
Reading package lists Done	1
root@openmeetings:~#	-

Let's install the needed software by issuing the following commands: (Please accept the **sun-java6jre** license agreement during install)

#### apt-get install deb-multimedia-keyring

apt-get install sun-java6-jdk -y

apt-get install openoffice.org-writer openoffice.org-calc openoffice.org-impress -y apt-get install openoffice.org-draw openoffice.org-math imagemagick gs-gpl -y apt-get install libgif-dev xpdf libfreetype6 libfreetype6-dev libjpeg8 libjpeg62 libjpeg8-dev -y apt-get install g++ libjpeg-dev libdirectfb-dev libart-2.0-2 libt1-5 zip unzip bzip2 -y apt-get install subversion git-core checkinstall yasm texi2html libfaac-dev libfaad-dev -y apt-get install libmp3lame-dev libsdl1.2-dev libx11-dev libxfixes-dev -y apt-get install libogg-dev sox libvorbis0a libvorbis-dev libgsm1 libgsm1-dev -y apt-get install libxvidcore4-dev zlib1g-dev libfaad2 flvtool2 lame -y

#### Step 4: - 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

#### **Stephen Cottham**

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🚱 10.17.23.3 - PuTTY	_ 🗆 🗙
Package configuration âââââââââa Configuring mysql-server-5.1 ââââââââââ â â â â Repeat password for the MySQL "root" user: â â â â â a a a a a a a a a a a a a	
	111 <b>•</b>

Enter the password as before "ompassword" and choose ok.

Now let's crate the needed DB's for OM 2.x

Issue these commands:

#### mysql -u root -p

🗗 10.17.23.3 - PuTTY	
root0openmeetings:~# mysql -u root -p	*
	=
	-

Enter password "ompassword"

Now issue these: (Assuming username **openmeetings** 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

#### **Stephen Cottham**

#### 08/02/2013

🔗 10.17.23.3 - PuTTY	
root@openmeetings:~# mysgl -u root -p ^ ^	
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	
root@openmeetings:~#	

Successful DB creation shown above.

#### Step 5: Compile Install SWFTools (2012-10-15-1307)

Now let's create a temporary working area by issuing these commands:

mkdir -p /usr/adm cd /usr/adm

Download, compile and install swftools by issuing these commands:

wget http://www.swftools.org/swftools-2012-10-15-1307.tar.gz tar -zxvf swftools-2012-10-15-1307.tar.gz cd swftools-2012-10-15-1307 ./configure make checkinstall

N.B - You will be asked a series of questions at the beginning of the install, press return for each to continue.

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 2012-10-15-1307

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Successful swftools build.

#### Step 6: Compile and Install ffmpeg (1.1.2)

Let's go back to our temporary working area

Let's make our temporary working area

#### cd /usr/adm

Download, compile and install ffmpeg by issuing these commands:

```
wget http://ffmpeg.org/releases/ffmpeg-1.1.2.tar.gz
tar -zxvf ffmpeg-1.1.2.tar.gz
cd ffmpeg-1.1.2
./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-1.1.2

#### 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

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

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#### Step 9a: Download and compile latest OM 2.1

Again back to our working area:

#### cd /usr/adm

Then check out the latest source code using the following:

#### svn checkout https://svn.apache.org/repos/asf/openmeetings/trunk/singlewebapp/

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

cd /usr/adm/singlewebapp /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**

Now we move the compiled sourced into the correct location.

## /usr/adm/singlewebapp/dist mv red5/ /usr/lib/

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

To Download the latest builds we use the following links:

#### 2.0

https://builds.apache.org/view/M-R/view/OpenMeetings/job/OpenMeetings%202.0/

Or

2.1

https://builds.apache.org/job/openmeetings/lastSuccessfulBuild/artifact/singlewebapp/dist/

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

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

cd /usr/adm mkdir -p prebuilt/red5 cd prebuilt/red5

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

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

The precompiled deployment doesn't include the mysql connector so we need to download it:

cd /usr/adm/prebuilt/red5/webapps/openmeetings/WEB-INF/lib

wget http://ftp.up.ac.za/pub/linux/mysql/Downloads/Connector-J/mysql-connector-java-5.1.20.zip

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/prebuilt/red5/webapps/openmeetings/WEB-INF/lib

Now we need to move the compiled source into the correct location, in this system we are using /usr/lib/red5.

cd /usr/adm/prebuilt/ mv red5/ /usr/lib/

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

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/sh **### BEGIN INIT INFO** # Provides: red5 # Required-Start: \$remote\_fs \$syslog # Required-Stop: \$remote\_fs \$syslog # Default-Start: 2 3 4 5 **# Default-Stop:** 016 # Short-Description: Starts red5 server for Openmeetings. ### END INIT INFO **#** For RedHat and cousins: # chkconfig: 2345 85 85 # description: Red5 flash streaming server for OpenMeetings # processname: red5 # Created By: Sohail Riaz (sohaileo@gmail.com) **# Modified by Alvaro Bustos** PROG=red5 **RED5\_HOME=/usr/lib/red5** DAEMON=\$RED5 HOME/\$PROG.sh PIDFILE=/var/run/\$PROG.pid [ -r /etc/sysconfig/red5 ] && . /etc/sysconfig/red5 **RETVAL=0** case "\$1" in start) cd \$RED5\_HOME start-stop-daemon --start -c nobody --pidfile \$PIDFILE \ --chdir \$RED5\_HOME --background --make-pidfile \ --exec \$DAEMON >/dev/null 2>/dev/null &

```
RETVAL=$?
if [ $RETVAL -eq 0 ]; then
echo $! > $PIDFILE
fi
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 | force-reload)
```

\$0 stop

## \$0 start

;;

## status)

# Debian and Ubuntu 10 status check

ps aux | grep -f \$PIDFILE >/dev/null 2>/dev/null && RETVAL=0 || RETVAL=3

- # Ubuntu 12 status check using improved "start-stop-daemon" status query
- # (use the above command, or comment out above command and uncomment the two below commands.

```
# start-stop-daemon --status --pidfile $PIDFILE
# RETVAL=$?
[ $RETVAL -eq 0 ] && echo "$PROG is running"
[ $RETVAL -eq 1 ] && echo "$PROG is not running and the pid file exists"
[ $RETVAL -eq 3 ] && echo "$PROG is not running"
```

[\$RETVAL -eq 4] && echo "\$PROG - unable to determine status"

## ;;

```
checkports)
```

```
netstat -anp | grep soffice
netstat -anp | grep java
```

## ;;

```
*)
```

echo \$"Usage: \$0 {start|stop|restart|force-reload|status|checkports}"

```
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

#### **Stephen Cottham**

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 10.17.23.3 is just for this example.** Also make sure to clear your **browser cache.** 

http://10.17.23.3:5080/openmeetings/install

## If all went well you should now see this page:

Ktp://10.17.33_meetingu/install +		-0-	×
🕐 💌 🔂 1017233.3080/openmeetings/install 🖕	☆ッ ଫ <mark>(</mark> ┫- Google	P 🕈 🗗	# -
OpenMeetings - Installation			
Continue with STEP 1			
1. Recommendation for production environment			
By defaultOpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MySQL, Postgress or for example IBM DB2 or Oracle			
2. Easbling Image Upload and import to whiteboard			
<ul> <li>Instal ImageMagick on the server, you can primere information on <u>http://www.imagemagick.org</u> reparding installation. The instructions for installation can be found there <u>http://www.imagemagick.org/set</u> managers/apt-get#)</li> </ul>	i <u>pt binary-releases plip,</u> however cosmost limit systems	i you can get it via your fizvoeite package	•
3. Enabling impor of PDFs into whiteboard			
Install GlostScript on the server, you can get more information on <u>http://parexx.wisc.edu/.about</u> regarding installation. The instructions for installation can be found there, however on most linux systems of hand SWFTools on the server, you can get more information on <u>http://www.witco.dow/.about</u> regarding installation. Some of the Linux distributions already have it in three packager manager see <u>http://witco.dow/</u> . New a but does indoe to wore option: distribution in the Whitehouted	you can get it via your favorite package managers (apt rs.debian.org/unitable/utils/wrftoob/), the recommender	1-get it). d version of SWFTools is 0.9 as prior v	ersion
4. Enabling impor of .doc, .docx, .ppt, .pptx, all Office Documents into whitebaord			
<ul> <li>OpenOffice-Service started and Estening on port \$100, see OpenOfficeConverter for details</li> </ul>			
5. Enabling Recording and import of .axi, .ftv, .mov and .mp4 into whiteboard			
<ul> <li>Instal FFMpeg. You should per FFMPEG in anup to date copy! For Windows you can download a Build for example from <a href="http://imper.armszoru.org/builds/Linux.or">http://imper.armszoru.org/builds/Linux.or</a> OSs Users should be able to use on     </li> <li>Instal Sed <a href="http://imper.armszoru.org/builds/Linux.or">http://imper.armszoru.org/builds/Linux.or</a> OSs Users should be able to use on     </li> <li>Instal Sed <a href="http://imper.armszoru.org/builds/Linux.or">http://imper.armszoru.org/builds/Linux.or</a> OSs Users should be able to use on     </li> </ul>	se of the various Installation Instructions on the Web. Y	ou need to enable lomp.Hame!	
Continue with STEP 1			
If you have further questions or need support in installation or hosting:			
Commercial-Support:			
By phone			
++49/21/40/27/20/ By email			
service flopenmeetings.de			
Community-Support:			
User-Forums			
Lieveloper-z oruma			

## Choose the "Continue with STEP 1" link

Userdata		L2
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 invitations	Yes •	
(inviter.email.as.replyto)		

#### **Stephen Cottham**

08/02/2013

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 can take a little while but be patient.

#### **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 ma	il				
Password					
Domain	local DB [in	nternal]			\$
	Rememb	er login			
Not a member	?			Sign in	
Forgotten your pas	sword?	visit A	pache OpenMe	etings [Incuba	ating

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

Home 👻	Recordings -	Rooms 👻	Administration 💌						
6	Hello	firstname lastn	Users Manage users and rights	ŀ					
	Unread	messages <u>0</u>	<b>Connections</b> Manage connections and kick users	sers					
Upload new	v image	your prome	Usergroups Manage usergroups						
NIII Inconstant and A			Conference rooms Manage conference rooms Configuration Manage system settings Language editor Manage labels and wording LDAP Manage LDAP and ADS configurations Backup Export/Import System Backups						
Help and support         Project website (http://incubator.apache.org/op         User mailing list (http://incubator.apache.org/or         Wy rooms         My conference room (for 1-16 users)									
						\$3		Enter	
		My webinar ro				om (for 1-120 use	rs)		Clic
						**		Enter	ROU

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:

Hor	Pecordina		Poome	- 0	Iministration	-
ноп	Recordings	•	ROOMS	• A	uministration	·
0 - 50	01.01	1	14 4	50		🔚 🏶 🍃
ID	Key		nonmaatii	Value	sount MDSImple	Configuratio
2	crypt_classivame	d org.c	penneeu	igs.utils.	crypt.mb3tmple	comgutatio
3	allow frontend registe	- 1				Key
4	default group id	1				Mahar
5	default domain id	1				Value
6	smtp server	local	host			Last update
7	smtp port	25				
8	system_email_addr	nore	ply@localh	ost		Updated by
9	email_username					Comment
10	email_userpass					
11	mail.smtp.starttls.enab	0				
12	application.name	Open	Meetings			
13	default_lang_id	1				
14	wftools_zoom	72				
15	swftools_jpegquality	85				
16	swftools_path	/usr/	local/bin			
17	magemagick_path	/usr/	bin			
18	sox_path	/usr/	bin			
19	fmpeg_path					
20	office.path					
21	od.path	/usr/	lib/red5/w	ebapps/	openmeetings/j	
22	rss_reed1	null				
23	ss_reed2	null				
24	sendemailAtkegister	1				
25	default export foot	Time	cNewPerso			
20 0	default_export_ront	time	SNewkom	an		
28	redscip enable	1				
29	ed5sip.room_prefix	400				
30	ed5sip.exten context	room	IS			
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 0	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

#### 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 and create a copy for the Screen Sharing

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

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

#### **Stephen Cottham**

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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="rtmpsMinaloHandler"

<property name="handler" ref="rtmpHandler" /> <property name="codecFactory" ref="rtmpCodecFactory" /> <property name="rtmpConnManager" ref="rtmpMinaConnManager" /> <property name="keyStorePassword" value="\${rtmps.keystorepass}" /> <property name="keystoreFile" value="conf/keystore" /> "

</bean>

```
<bean id="rtmpsTransport" class="org.red5.server.net.rtmp.RTMPMinaTransport" init-
method="start" destroy-method="stop">
```

```
<property name="ioHandler" ref="rtmpsMinaloHandler" />
<property name="connectors">
<list>
<list>
<lean class="java.net.InetSocketAddress">
<le>
<lean class="java.net.InetSocketAddress">
<le>
<le>
</local class="java.net.InetSocketAddress">
<le>
<le>
</list>
<le>
</list>
</list>
</list>
</property name="ioThreads" value="${rtmps.port}" />
</property name="jmxPollInterval" value="${rtmp.io_threads}" />
</property name="itcpNoDelay" value="${rtmp.tcp_nodelay}" />
```

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

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 # Redirect http traffic to https RewriteRule ^/(.\*)\$ https://om.yourdomain.com/\$1 [L,R] </VirtualHost>

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<VirtualHost \*:443> ServerAdmin hostmaster@domain.com ServerName om.yourdomain.com

SSLEngine on SSLProxyEngine On RequestHeader set Front-End-Https "On" ProxyPreserveHost On RewriteEngine on CacheDisable \*

# Reverse proxy all requests RewriteRule ^/(.\*) http://om.yourdomain.com:5080/\$1 [P]

SSLCertificateFile /etc/ssl/certs/yourdomain.pem SSLCertificateKeyFile /etc/ssl/private/yourdomain.key

SetEnvIf User-Agent ".\*MSIE.\*" \
nokeepalive ssl-unclean-shutdown \
downgrade-1.0 force-response-1.0
</VirtualHost>

You will need SSL certs for this to work, so copy your Key and Cert to the following **locations (use WinSCP or equiv)** 

/etc/ssl/certs/ = yourdomain.pem
/etc/ssl/private/ = yourdomain.key

Now restart apache2

#### /etc/init.d/apache2 restart

You can now go to https://om.yourdomain.com/openmeetings which will encrypt ONLY the HTTPS components and re-write the address so it doesn't show the 5080 port; it still uses RTMP for flash.

And finally for HTTP redirect and re-write do the following: (assuming no SSL don't use this in conjunction with the other config – both can be incorporated but this is just for example)

vi om.yourdomain.com-http

Add the following:

ProxyRequests Off <VirtualHost \*:80> ServerAdmin hostmaster@domain.com

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ServerName om.yourdomain.com

ProxyPreserveHost On RewriteEngine on CacheDisable \*

# Reverse proxy all requests
RewriteRule ^/(.\*) http://om.yourdomain.com:5080/\$1 [P]
</VirtualHost>

Then restart Apache with

#### /etc/init.d/apache2 restart

Now you can access OM with

http://om.yourdomain.com/