# 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.

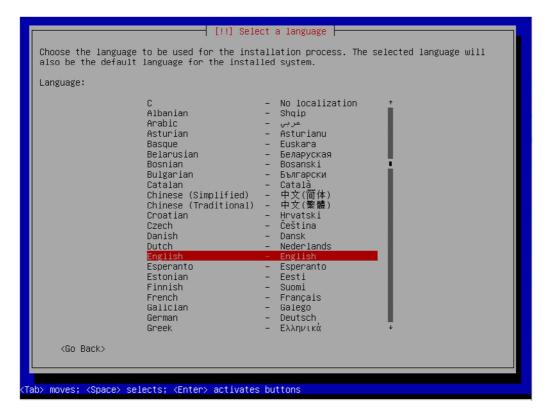
17/07/2012

# Installing Debian (Minimal Headless System)

Step 1: - Base System



Choose 64 Bit install



Choose English

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	[!!] Select your location
	d to set your time zone and also for example to help y this should be the country where you live.
This is a shortlist of locations by your location is not listed.	based on the language you selected. Choose "other" if
Country, territory or area:	
	Antigua and Barbuda Australia Botswana Canada Hong Kong India Ireland New Zealand Nigeria Philippines Singapore South Africa United States Zimbabwe other
<go back=""></go>	
o> moves; ≺Space> selects; ≺Enter>	activates buttons

Choose "United Kingdom"

Choose "British English"

	[!] Configure the netwo	rk
Please enter the ho	ostname for this system.	
know what your host	single word that identifies your syst name should be, consult your network etwork, you can make something up her	administrator. If you are setting
<go back=""></go>		<continue></continue>

Set the hostname, in this case its "openmeetings"

is often something that ends i	[!] Configure the network f your Internet address to the right of your host name. It in .com, .net, .edu, or .org. If you are setting up a home ng up, but make sure you use the same domain name on all
<mark>yourdomain</mark> . <mark>internal</mark>	<continue></continue>
b> moves; ≺Space> selects; <ente< td=""><td></td></ente<>	

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

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	[!!] Set up users and password	s
unqualified user with root choose a root password that	for 'root', the system administr access can have disastrous resul is not easy to guess. It should t could be easily associated wit	ts, so you should take care to ∣not be a word found in
A good password will contai changed at regular interval	n a mixture of letters, numbers s.	and punctuation and should be
The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.		
Note that you will not be a	ble to see the password as you t	ype it.
Root password:		
<go back=""></go>		<continue></continue>

Set the root password.

[!!] Set up users and pass	words
A user account will be created for you to use instead o non-administrative activities.	of the root account for
Please enter the real name of this user. This informati default origin for emails sent by this user as well as the user's real name. Your full name is a reasonable ch	any program which displays or uses
Full name for the new user:	
<go back=""></go>	<continue></continue>

Create new user for server (Non-priv)

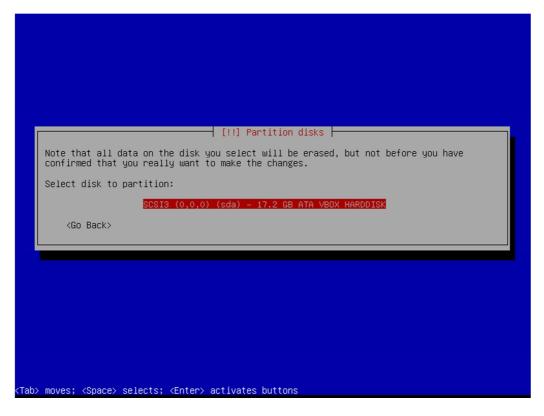
17/07/2012

A good password will contai changed at regular interval	│ [!!] Set up users and passwords n a mixture of letters, numbers a s.	
Choose a password for the n	ew user:	
<go back=""></go>		<continue></continue>
b> moves; <space> selects; <e< td=""><td></td><td></td></e<></space>		

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 should be used.
Partitioning method:
Guided – use entire disk
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"

ite

Choose "Finish partitioning and write changes to disk"

	[!!] Partition dis	ks
	, the changes listed below will be w make further changes manually.	ritten to the disks. Otherwise, you
The partition t SCSI3 (0,0,0	ables of the following devices are c ) (sda)	hanged:
partition #1	artitions are going to be formatted: of SCSI3 (0,0,0) (sda) as ext3 of SCSI3 (0,0,0) (sda) as swap	
Write the chang	es to disks?	
< Yes>		<no></no>

And finally choose "yes"

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[!] Configure the package manager	
The goal is to find a mirror of the Debian archive that is close to you on the network be aware that nearby countries, or even your own, may not be the best choice.	
Debian archive mirror country:	
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 Vnited Kingdom	
<go back=""></go>	
)> moves; <space> selects; <enter> activates buttons</enter></space>	

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

[!] Configure the package manager Please select a Debian archive mirror. You should use a mirror in your country or region if you do not know which mirror has the best Internet connection to you.	
Usually, ftp. <your code="" country="">.debian.org is a good choice. Debian archive mirror:</your>	
ftp.uk.debian.org         ukdebian.mirror.anlx.net         mirror.positive-internet.com         mirrors.melbourne.co.uk         mirror.bytemark.co.uk         cdn.debian.net         debian.man.ac.uk         www.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.

	[!] Software selection	
	e core of the system is installed. To tu o install one or more of the following	
Choose software to inst	all:	
	<ul> <li>[] Graphical desktop environment</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>[*] SSH server</li> <li>[] Laptop</li> <li>[*] Standard system utilities</li> </ul>	
<go back=""></go>		<continue></continue>

Choose only SSH Server and Standard System utilities.

[!] 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?
<go back=""> (Yes) <no></no></go>
ab> moves; <space> selects; <enter> activates buttons</enter></space>

Choose Yes to install Grub.

[!!] Finish the installation Installation complete Installation is complete, so it is time to boot into your new system. Make sure to r the installation media (CD-ROM, floppies), so that you boot into the new system rath than restarting the installation. <go back=""></go>	ier
<tab> moves; <space> selects; <enter> activates buttons</enter></space></tab>	

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 tty1
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:

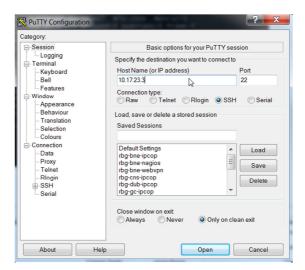
root@openmeetings:~# ifconfig
eth0 Link encap:Ethernet HWaddr 08:00:27:22:1d:a1
inet addr:10.17.23.3 Bcast:10.17.23.255 Mask:255.255.255.0
inet6 addr: fe80::a00:27ff:fe22:1da1/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:433 errors:0 dropped:0 overruns:0 frame:0
TX packets:30 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000 BY butco:41580 (40 6 KiR) TY butco:3756 (3 6 KiR)
RX bytes:41590 (40.6 KiB)  TX bytes:2756 (2.6 KiB)
lo 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:8 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:560 (560.0 B)   TX bytes:560 (560.0 B)
root@openmeetings:~# _

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

You can now log off of the server.

17/07/2012

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.

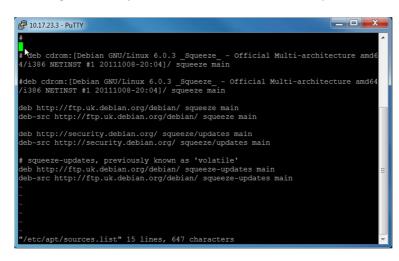
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#### Step 3: Install Dependent software

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-updates 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://ftp2.de.debian.org/debian squeeze main non-free deb http://www.debian-multimedia.org squeeze main

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

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17/07/2012

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_GB Hit http://security.debian.org squeeze/updates Release Hit http://ftp.debian.org squeeze/updates Release Hit http://ftp.debian.org squeeze/updates Release Hit http://ftp.debian.org squeeze/contrib Sources Hit http://ftp.debian.org squeeze/non-free Sources Hit http://ftp.debian.org squeeze/non-free Sources 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/main Sources Hit http://ftp.debian.org squeeze-updates/main amd64 Packages Hit http://ftp.debian.org squeeze-updates/contrib Sources Hit http://ftp.debian.org squeeze-updates/contrib amd64 Packages Hit http://ftp.debian.org squeeze-updates/contrib Sources Hit http://ftp.debian.org squeeze-updates/contrib Sources Hit http://security.debian.org squeeze/updates/contrib Sources Hit http://security.debian.org squeeze/updates/contrib Sources Hit http://security.debian.org squeeze/updates/contrib Sources Hit http://security.debian.org squeeze/updates/non-free Aud64 Packages Hit http://security.debian.org squeeze/updates/non-free Aud64 Packages Hit http://security.debian.org squeeze/updates/non-free Aud64 Packages
Hit http://ftp.debian.org squeeze.updates/non-rece amdo4 Fackages Hit http://ftp.debian.org squeeze-updates/main amd64 Fackages Reading package lists Done 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 sun-java6-jdk

apt-get install openoffice.org-writer openoffice.org-calc openoffice.org-impress \ openoffice.org-draw openoffice.org-math imagemagick gs-gpl -y apt-get install libgif-dev xpdf libfreetype6 libfreetype6-dev libjpeg8 libjpeg62 libjpeg8-dev apt-get install g++ libjpeg-dev libdirectfb-dev libart-2.0-2 libt1-5 zip unzip bzip2 apt-get install subversion git-core checkinstall yasm texi2html libfaac-dev libfaad-dev apt-get install libmp3lame-dev libsd11.2-dev libx11-dev libxfixes-dev libxvidcore4-dev zlib1g-dev apt-get install libogg-dev sox libvorbis0a libvorbis-dev libgsm1 libgsm1-dev libfaad2 flvtool2 lame

#### 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

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17/07/2012

🚱 10.17.23.3 - PuTTY	. 🗆 🗙
Package configuration âââââââââ <sup>#</sup> Configuring mysql-server-5.1 ââââââââââ â â â Repeat password for the MySQL "root" user: â â â â â a a â a a a a a a a a a a a a a	

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

Putry 10.17.23.3 - Putry	
root@openmeetings:~# mysql -u root -p	·
Enter password.	
	-
	÷

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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#### 17/07/2012

🛃 10.17.23.3 - PuTTY
<pre>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)</pre>
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 Bye root@openmeetings:~#

Successful DB creation shown above.

#### Step 5: Compile Install SWFTools (2012-04-08-0857)

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-2012-04-08-0857.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:

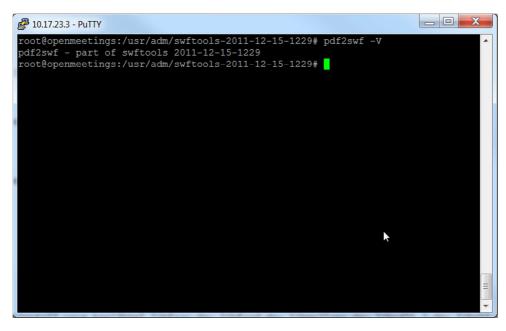
#### pdf2swf --version

Which should give you the following output:

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

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Successful swftools build.

# Step 6: Compile and Install ffmpeg (0.11.1)

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-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 0.11.1

#### 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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17/07/2012

#### 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)

So using wget we first go back to our build area like so:

cd /usr/adm mkdir -p 2.0/dist cd 2.0/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 tar -zxvf apache-openmeetings-incubating-2.xxxxx.tar.gz

17/07/2012

Now download the mysql connector from here:

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

cd /usr/adm/2.0/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/2.0/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/sh
### BEGIN INIT INFO
# Provides: red5
# Required-Start: \$remote\_fs \$syslog
# Required-Stop: \$remote\_fs \$syslog
# Default-Start: 2 3 4 5
# Default-Stop: 0 1 6
# Short-Description: Starts red5 server for Openmeetings.

```
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```

17/07/2012

```
### END INIT INFO
# 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
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)
# echo -n $"Starting $PROG: "
       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 $! > $PIDFILE
               # touch /var/lock/subsys/$PROG
       fi
       # [ $RETVAL -eq 0 ] && success $"$PROG startup" || failure $"$PROG startup"
       echo
;;
stop)
# no longer required as JOD does runs office when it needs to
                                                                pkill soffice.bin
    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
```

# no longer required as JOD does runs office when it needs to netstat -anp | grep soffice | grep 8100 &>/dev/nul && echo \$"OpenOffice server is running" || echo \$"OpenOffice server is not running"

#ps aux | grep -f \$PIDFILE &> /dev/nul && echo \$"\$PROG is running" || echo \$"\$PROG is not running"

```
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|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

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

#### **Stephen Cottham**

17/07/2012

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:

Firefox * // http://10.17.23meetings/install +		
🔄 🔶 😵 🛞 10.17.23.3.5080/openmeetings/install 🖕	v C ] Soogle	۹ 🗈 🕫 ۰
OpenMeetings - Installation		:
Continue with STEP 1		;
1. Recommendation for production environment		
By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using MrSQL, Postgres or for example IBM DB2 or Oracle		1
2. Enabling Image Upload and import to whiteboard		
<ul> <li>Instal ImageMagick on the server, you can get more information on <u>http://www.imagemagick.org</u> reparcing installation. The instructions for installation can be found there <u>http://www.imagemagick.org/icrigt.bina</u> managers (apt-get it)</li> </ul>	ry-releases.php, however on most linux systems you can get	it via your favorite package
3. Enabling import of PDFs into whiteboard		
• Install GloorStript on the server, you can get more information on <u>intra-journer consists columination</u> , The instructions for installation can be found there, however on most linus systems you can be linusd. SWF Dools on the server, you can get more information on <u>intra-journer systems columination</u> , Some of the Linux distributions already have it in there packaget manager see <u>linus-journer debin</u> have a long that does lead to verse dojet distribution in the Whitehouted		WFTools is 0.9 as prior version
4. Enabling import of .doc, .docx, .ppt, .pptx, all Office Documents into whitebaord		
<ul> <li>OpenOffice-Service started and listening on port \$100, see OpenOfficeConverter for details</li> </ul>		
5. Enabling Recording and import of .avi, .ftv, .mov and .mp4 into whiteboard		
<ul> <li>Instal FFMpeg. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from <a href="http://fmpeg.amozeru.org/builds/Linux">http://fmpeg.amozeru.org/builds/Linux</a> or OSx Users should be able to use one of th         <ul> <li>Instal SoX <a href="http://instaurorefore.net/">http://instaurorefore.net/</a>. You should install SoX in a up to date copy! Sox 12.xx will NOT work!</li> </ul> </li> </ul>	e various Installation Instructions on the Web. You need to en	nable libmp3lame!
Continue with STEP 1		
Marine barre Anathan ann an daon ann an le faraidh dhan an bardan		
If you have further questions or need support in installation or hosting:		
Commercial-Support:		
By phone ++49 721 467 27327		
By email service@openmeetings.de		
Community-Support:		ļ.
User-Forums Developer-Forums		
AND YORK YORK YORK YORK YORK YORK YORK YORK		

Choose the "Continue with STEP 1" link

17/07/2012

<b>OpenMeetings</b> - Installation		
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 invitations	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 can take a little while but be patient.

17/07/2012

# **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

Apache Ope	enMeetings []	[ncubating]			
Home 👻 Record	dings 👻 Rooms 👻	Administration 👻			
6	Hello firstname lasti town Timezone Etc/GN	Manage users and rights			
	Unread messages <u>0</u> Edit your profile	<b>Connections</b> Manage connections and kick users			
Upload new image	car your prome	Usergroups Manage usergroups			
		Conference rooms			
Help and support Project website (http://incubator.apache.org/op		Manage system settings			
<u>User mailing list (http</u>	://incubator.apache.org/o	Language editor Manage labels and wording			
🐝 My rooms		LDAP Manage LDAP and ADS configurations			
My conference room (for 1-16 users)		Backup Export/Import System Backups			
	÷	Enter	Clic		
My webinar room (for 1	I-120 users)		Roo		
:	4	Enter			
			Con		

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

/usr/local/bin
/usr/bin
/usr/local/bin
/usr/bin
/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:

	Jach	e Openn	CC	ing	. [ .	ncu	Dat				
Ног	me 👻	Recordings	-	Room	s 👻	Adm	ninistr	ation	<b>•</b>		
0 - 5	0 of 67			M	1 50		¢		📄 🐥 💈	2	
ID		Key			Va	alue					
1	crypt_C	lassName	org.c	penmee	tings.	utils.cry	pt.MD5	Imple	Configuratio	n	
2	screen	viewer	4								
3	allow_fr	rontend_register	1						Key		
4	default	_group_id	1						Value		
5	default	_domain_id	1								
5	smtp_s	erver	local	host					Last update		
7	smtp_p	ort	25						Undered by:		
3	system	_email_addr	nore	ply@loca	lhost				Updated by		
9	email_u	isername							Comment		
10	email_u	iserpass									
11	mail.sm	tp.starttls.enabl	0								
12	applicat	ion.name	Oper	Meeting	s						
13	default_	lang_id	1								
14	swftools	s_zoom	72								
15	swftools	_jpegquality	85								
16	swftools	s_path	/usr/	local/bin							
17	imagem	nagick_path	/usr/	bin							
18	sox_pat	th	/usr/	'bin							
19	ffmpeg_	_path									
20	office.p	ath									
21	jod.path	n	/usr/	lib/red5/	weba	pps/ope	enmeet	ings/j			
22	rss_fee	d1	null								
23	rss_fee	d2	null								
24	sendEm	ailAtRegister	1								
25	sendEm	ailWithVerficatio	1								
26	default_	_export_font	Time	sNewRor	man						
27	default.	rpc.userid	1								
28	red5sip	.enable	no								
29	red5sip	.room_prefix	400								
30	red5sip	.exten_context	room	IS							
31	sip.ena	ble	no								
32	sip.real	m									
33	sip.port										
34	sip.prox										
35	sip.tunn										
36	sip.code										
37	sip.forc		true								
38		nxg.enable	no								
39		.wrapper.url									
40		.client.id									
41		.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

# 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)

# **Stephen Cottham**

17/07/2012

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" initmethod="start" destroy-method="stop">

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

17/07/2012

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

17/07/2012

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

<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 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/