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

The guide is aimed at Ubuntu 12.10 users, it has been written step by step with screenshots to aid in the successful build of OM from a fresh install.

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.

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Installing Ubuntu (Minimal Headless System)

Step 1: - Base System

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

Choose "Install Ubuntu Server"



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Choose English

Language:		
	C Albanian Arabic Asturian Basque Belarusian Bosnian Bulgarian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch	- No localization ↑ - Shqip - G-J-A - Asturianu - Euskara - Беларуская - Беларуская - Български - Саtalà - 中文(简体) - 中文(常體) - Hrvatski - Čeština - Dansk - Nederlands
	English Esperanto Estonian Finnish French Galician German Greek	 English Esperanto Eesti Suomi Français Galego Deutsch Ελληνικά +

Choose "United Kingdom"

	[!!] Select your location
	uill be used to set your time zone and also for example to help .e. Normally this should be the country where you live.
This is a shortlist of your location is not li	locations based on the language you selected. Choose "other" if isted.
Country, territory or a	irea:
	Antigua and Barbuda Australia Botswana Canada Hong Kong India Ireland New Zealand Nigeria Philippines Singapore South Africa United Kingdom United States Zambia Zimbabwe other
<go back=""></go>	

Choose yes to automatically detect keyboard.



Enter a hostname.

lease enter the hostna	[!] Configure the network	
now what your hostname	le word that identifies your system to e should be, consult your network admin rk, you can make something up here.	the network. If you don't istrator. If you are setting
<go back=""></go>		<continue></continue>

Enter Username.

ween account will	[!!] Set up users and p	
non-administrative a	be created for you to use instea activities.	ad of the root account for
efault origin for e		mation will be used for instance as as any program which displays or uses e choice.
ull name for the ne	w user:	
<go back=""></go>		<continue></continue>

Enter a password for the new user.

	[!!] Set up u	sers and passwo	ords	
Please enter the sa	ame user password a	gain to verify	you have type	d it correctly
Re-enter password t	o verify:			
<go back=""></go>				<continue></continue>
				10 britani

Choose "no" to encrypt the Home Directory.

] Set up users	and passwords		
You may configure your home d remain private even if your c	irectory for enc omputer is stole	ryption, such that a	any files stored th	iere
The system will seamlessly mo automatically unmount when yo	unt your encrypt u log out of all	ed home directory ea active sessions.	ach time you login	and
Encrypt your home directory?				
<go back=""></go>			<yes> (No)</yes>	

Choose yes to accept the detected time-zone.

Based on your present	[!] Configure	ne is Euro	pe/Londor	n.
If this is not correc				
Is this time zone corr <go back=""></go>	rect?			No>
(GU BACK)			/es> <t< td=""><td>NU></td></t<>	NU>

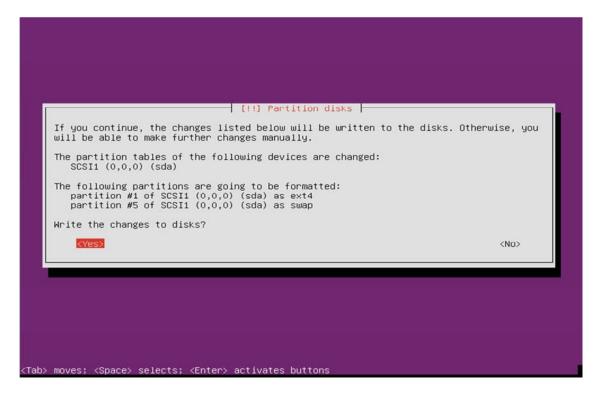
Select "Guided – Use entire disk"

[!!] 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.
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>
ab> moves; <space> selects; <enter> activates buttons</enter></space>

Accept the Disk selection to partition.

_	[!!] Partition disks
N C	Note that all data on the disk you select will be erased, but not before you have confirmed that you really want to make the changes.
0	Select disk to partition:
	SCSI1 (0,0,0) (sda) – 8.6 GB ATA VBOX HARDDISK <go back=""></go>

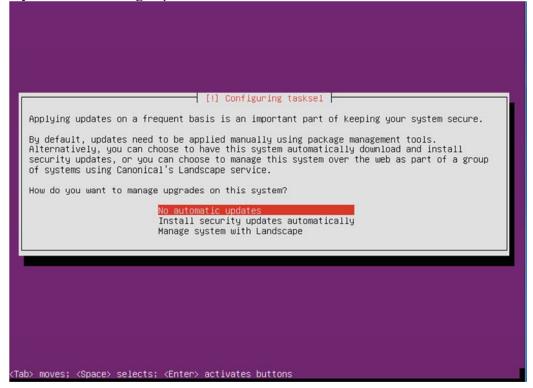
Choose "yes" to accept the changes to disk.



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.

ere. Otherwise, The proxy informa	se a HTTP proxy to access the outside world, enter the proxy leave this blank. ation should be given in the standard form of :pass]@]host[:port]/".	information
HTTP proxy inform Go Back>	mation (blank for none): <	Continue>

Select how you want to manage updates.



[!] Software selection At the moment, only the core of the system is installed. needs, you can choose to install one or more of the foll software. Choose software to install: (*) OpenSSH server [] DNS server [] LAMP server [] Mail server [] PostgreSQL database [] Print server [] Samba file server [] Tomcat Java server [] Virtual Machine host [] Manual package select	To tune the system to your owing predefined collections of
--	---

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

Choose yes to install and configure the Grub Boot loader.



Press continue to reboot your system.

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

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:

	Grbg-uk-openmeetings:~\$ ifconfig	
eth0	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)	
	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)	
madmin	@rbg-uk-openmeetings:~\$	

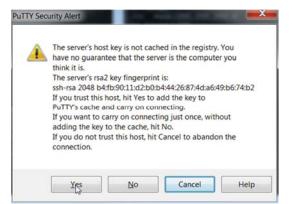
You can see the IP Address in this case is 10.17.23.11 (Interface eth0) You can now log off of the server.

Category:		
- Session	Basic options for your PuTTY se	ssion
Logging Terminal Keyboard Bel Features Window Appearance Behaviour Translation Selection Colours	Specify the destination you want to connect to	0
	Host Name (or IP address)	Port
	Le la	22
	Connection type: Raw Ielnet Rlogin OSSI	H © Serial
	Load, save or delete a stored session Saved Sessions	
- Connection	Default Settings	Load
- Proxy - Telnet		Sa <u>v</u> e
- Rlogin		Delete
└─ Serial	Close window on exit. Always Never Only on cl	lean exit

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.



And finally this screen:

@ 10.17.23.11 - PuTTY	N	- 0 ×
login as:	S	*
		-

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

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 let's create our work area

mkdir -p /usr/adm

We need to first install Libre Office:

apt-get install libreoffice -y

Libre Office installs OpenJDK so we need to install Oracle Java 6 JDK and update the alternatives – 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 it and correct the default java.

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

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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.

The last stage of this step is to install the required dependencies for the OM install.

```
apt-get install imagemagick sox -y
apt-get install libgif-dev xpdf libfreetype6 libfreetype6-dev libjpeg62 libjpeg8 -y
apt-get install libjpeg8-dev libjpeg-dev libdirectfb-dev -y
apt-get install libart-2.0-2 libt1-5 zip unzip bzip2 subversion git-core checkinstall -y
apt-get install yasm texi2html libfaac-dev libfaad-dev libmp3lame-dev libsd11.2-dev libx11-dev -y
apt-get install libxfixes-dev libxvidcore-dev zlib1g-dev libogg-dev sox libvorbis0a libvorbis-dev -y
apt-get install libgsm1 libgsm1-dev libfaad2 flvtool2 lame make g++ -y
```

Step 4: Compile and Install SWFTools 2012-10-15-1307

```
cd /usr/adm
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
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 2012-10-15-1307

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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 --enablelibfaac --enable-gpl --enable-nonfree make checkinstall

N.B - You may 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

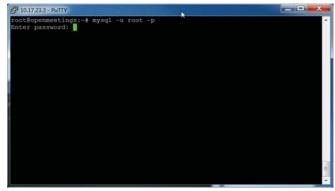
ot@rbg-uk-openmeetings -	
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	
While not mandatory, it is highly recommended that you set a pass	
for the MySQL administrative "root" user.	a
If this field is left blank, the password will not be changed.	a
	- 5
New password for the MySQL "root" user:	a
	a a
Koko	a
Por-	CONTRACTOR OF A
***************************************	aaaaaaaa

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

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Now let's create the needed DB's for OM 2.x, issue the following commands:

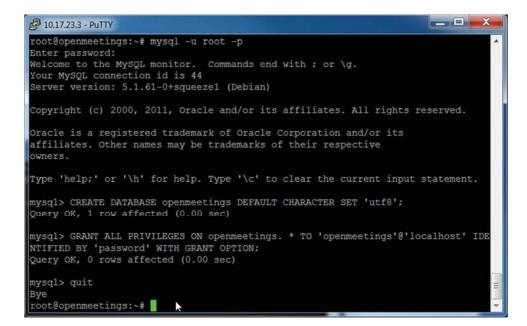
mysql -u root -p



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



Successful DB creation shown above.

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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 9: 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/incubator/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

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

Download the latest build from the following links:

2.0

https://builds.apache.org/view/M-R/view/OpenMeetings/job/OpenMeetings%202.0/lastSuccessfulBuild/artifact/2.0/dist/

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)

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/red5 cd singlewebapp/dist/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

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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://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/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/singlewebapp/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.
END INIT INFO

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```
# 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

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:

Firefox Mttp://10.1723meetings/install +	- ☆ ∀ C 👹 - Goople	
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, Postners or for e	xample IBM DB2 or Oracle	
2 Enabling Image Upload and import to whiteboard		
 Instal ImageMagick on the server, you can get more information on http://www.imagemagick.org reparding installation. The instructions for installation on managers (spt-get it) 	an be found there <u>http://www.imagemanick.org/script.binary-releases.php</u> , however on most linux systems y	you can get it via your favorite package
3. Enabling import of PDFs into whiteboard		
 Instal GherstScript on the server, you can get more information on <u>http://www.vefeed.org/</u>reparding installation. The instructions for installation Instal SWTFools on the server, you can get more information on <u>http://www.vefeed.org/</u>reparding installation. Some of the Linux disributions already? have a but does load to serve does and does but does and to serve do		
4. Enabling import of .doc, .docx, .ppt,ptx, all Office Documents into whitebaoed		
 OpeaOffice-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		
 Install FFMpeg. You should get FFMPEG in an up to date copy! For Windows you can download a Build for example from <u>http://fmpeg.areaceur.org/b</u> Install SoX <u>http://cox.sourefform.ed/</u>. You should install SoX in a up to date copy! SoX 12 xx will NOT work! 	able: Linux or OSx Users should be able to use one of the various Installation Instructions on the Web. You	u need to enable libmp3lame?
Continue with STEP 1		
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:		
User-Forums		
Developer-Forums		

Choose the "Continue with STEP 1" link

OpenMeetings - Instal	lation	
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Userdata		bg	
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		

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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.



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 [in	nternal]	\$
	Rememb	er login	
Not a mem	ber?		Sign in
Forgotten your	password?	visit Apache (OpenMeetings [Incubating]

Enter these details to sign in.

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

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Step 11: Add relevant paths to the configuration

Once logged in go to **Administration > Configuration**

Home 👻	Recordi	ings 👻	Rooms 👻	Administration 👻	
6			i rstname lastn mezone <u>Etc/GM</u>	Users Manage users and rights	•
		Unread	messages <u>0</u>	Connections Manage connections and kick users	
Upload ne	w image	Calt y	our profile	Usergroups Manage usergroups	
				Conference rooms Manage conference rooms	
Opposite and south	site (http://	to a second second	r.apache.org/op	Configuration	
<u>User mailin</u>	g list (http:/	//incubato	or.apache.org/or	Language editor Manage labels and wording	
iji My roo	oms			LDAP Manage LDAP and ADS configurations	
My conference	e room (fo	r 1-16 us	ers)	Backup Export/Import System Backups)
My webinar n	oom (for 1-	120 user	c)	Enter	Cli
iy neomar i		120 0001	-/	Enter	Ro

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:

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Ho	me 👻 Recordings	+ Rooms + Administration	*
0 - 5	0 of 67	M 4 50 2 D M	
ID	Кеу	Value	
1	crypt_ClassName	org.openmeetings.utils.crypt.MD5Imple	Configuration
2	screen_viewer	4	
3	allow_frontend_register	1	Key
4	default_group_id	1	Value
5	default_domain_id	1	Value
6	smtp_server	localhost	Last update
7	smtp_port	25	
8	system_email_addr	noreply@localhost	Updated by
9	email_username		Comment
10	email_userpass		Continent
11	mail.smtp.starttls.enabl	0	
12	application.name	OpenMeetings	
13	default_lang_id	1	
14	swftools_zoom	72	
15	swftools_jpegquality	85	
16	swftools_pegquality	/usr/local/bin	
17	imagemagick_path	/usr/bin	
18	sox_path	/usr/bin	
19	ffmpeg path	70517011	
20	office.path		
21	jod.path	/usr/lib/red5/webapps/openmeetings/ju	
22	rss_feed1	null	
23	rss_feed2	null	
24	sendEmailAtRegister	1	
24	sendEmailWithVerficatic		
25	default export font	TimesNewRoman	
20	default_export_ront default.rpc.userid	1	
28	red5sip.enable	no	
29	red5sip.room_prefix	400	
30	red5sip.exten_context	rooms	
31	sip.enable	no	
31	sip.realm		
33	sip.port		
34	sip.proxyname		
35	sip.tunnel		
	sip.codebase		
36 37	sip.forcetunnel	true	
	and the second se	la la construction de la constru	
38	sip.openxg.enable	no	
39	openxg.wrapper.url		
40	openxg.client.id		
41	openxg.client.secret		
42	openxg.client.domain		

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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"

```
<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="rtmpsMinaIoHandler" />
<property name="connectors">
<list>
<bean class="java.net.InetSocketAddress">
<br/>
<
```

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

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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