



Release Notes

Version 8.4 | July 2014 | 3725-74600-018

Polycom[®] RealPresence[®] Collaboration Server Virtual Edition



Copyright© 2014, Polycom, Inc. All rights reserved. No part of this document may be reproduced, translated into another language or format, or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Polycom, Inc.

6001 America Center Drive
San Jose, CA 95002
USA



Polycom®, the Polycom logo and the names and marks associated with Polycom products are trademarks and/or service marks of Polycom, Inc. and are registered and/or common law marks in the United States and various other countries. All other trademarks are property of their respective owners. No portion hereof may be reproduced or transmitted in any form or by any means, for any purpose other than the recipient's personal use, without the express written permission of Polycom.



Java is a registered trademark of Oracle America, Inc., and/or its affiliates.

End User License Agreement By installing, copying, or otherwise using this product, you acknowledge that you have read, understand and agree to be bound by the terms and conditions of the End User License Agreement for this product. The EULA for this product is available on the Polycom Support page for the product.

Patent Information The accompanying product may be protected by one or more U.S. and foreign patents and/or pending patent applications held by Polycom, Inc.

Open Source Software Used in this Product This product may contain open source software. You may receive the open source software from Polycom up to three (3) years after the distribution date of the applicable product or software at a charge not greater than the cost to Polycom of shipping or distributing the software to you.

Disclaimer While Polycom uses reasonable efforts to include accurate and up-to-date information in this document, Polycom makes no warranties or representations as to its accuracy. Polycom assumes no liability or responsibility for any typographical or other errors or omissions in the content of this document.

Limitation of Liability Polycom and/or its respective suppliers make no representations about the suitability of the information contained in this document for any purpose. Information is provided "as is" without warranty of any kind and is subject to change without notice. The entire risk arising out of its use remains with the recipient. In no event shall Polycom and/or its respective suppliers be liable for any direct, consequential, incidental, special, punitive or other damages whatsoever (including without limitation, damages for loss of business profits, business interruption, or loss of business information), even if Polycom has been advised of the possibility of such damages.

Customer Feedback We are striving to improve our documentation quality and we appreciate your feedback. Email your opinions and comments to DocumentationFeedback@polycom.com.

Polycom Support Visit the [Polycom Support Center](#) for End User License Agreements, software downloads, product documents, product licenses, troubleshooting tips, service requests, and more.

Contents

Version 8.4 VE - New Features List	1
Version 8.4 VE - Changes to Existing Features	3
Interoperability Table	5
Conferencing Options	11
Resources and Feedback	13
RMX Web Client	14
Windows 7™ Security Settings	15
Internet Explorer 8 Configuration	17
Upgrade Package Contents	20
Where to Get the Latest Product Information	20
Upgrade Procedures	21
Preparing for the Upgrade	21
Upgrading the RMX Manager Application	43
Version 8.4 Detailed Description - New Features	46
Deployment Architectures	46
Backward compatibility to Lync 2010	47
Video Resource Requirements and Implications	47
Support for HD1080p Resolution	48
Limit Maximum Resolution for MS SVC Using a System flag	48
ICE Configuration	49
Federation Configuration	49
System Flags for Cropping Control	49
Sharing Content during a Conference	50
Cisco TIP Support	52
Lync 2013 Participant monitoring	52

Monitoring Participant Properties - Channel Status Tab	53
Monitoring Participant Properties - Channel Status - Advanced Tab	54
Deployment Architecture 1 - Collaboration Server Hosted	55
Look and Feel	55
Deployment Architecture 2 - MS AV MCU Cascade	56
Look and Feel for Lync clients and Group Series Endpoints	57
Look and Feel for Legacy Endpoints	58
Video Resource Requirement Selection in MS AV MCU Cascade	58
Video Forcing and Changing Layout in MS AV MCU Cascade	59
Handle Low Bit Rates Calls From the AV MCU	59
Remove Empty Cells From the Video Layout	59
New Licensing Server	61
Licensing Modes	61
Activating the Licensing Agreement	61
Active Alarms	63
Viewing Licensing Properties and Capabilities	64
Setting the Time Interval for License Validation and Updates	66
Audio-Only Indication Participant Icon	67
Choosing the Display Position of the Indication Icons	68
Choose Indication Icons to Enable for Display	68
Indication Icon Display Positions	69
Gateway Calls to Remote SIP Domain	71
Guidelines	71
Calling a SIP Endpoint in a Remote Domain	71
Limitation	71
New Video Layouts	72
Selecting the Video Layouts	72
TelePresence Display Matrix	72
Version 8.4 VE Detailed Description - Changes to Existing Features	74
Changes to User Interface and Layout Indication Icons	74
Changes to the User Interface	74
Changes to System Flags	74
Changes to Existing Indication Icons	75
New Audio Participant Indication	75
Shortening Site Name Display	76
RSS/Capture Server Dial In Recording Link	80
Changes to the User Interface	80
New System Flag for Recording Control Operations	80

Version 8.4 VE Corrections and Known Limitations	82
Corrections Between Version 8.3 and Version 8.4	82
Known Limitations	83
Troubleshooting Instructions	86
Collaboration Server Web Client Installation - Troubleshooting Instructions	86
Procedure 1: Ending all Internet Explorer Sessions	87
Procedure 2: Deleting the Temporary Internet Files, RMX Cookie and RMX Object	87
Deleting the Temporary Internet Files	88
Deleting the RMX/Collaboration Server Cookie	90
Deleting the RMX/Collaboration Server ActiveX Object	92
Procedure 3: Managing Add-ons Collisions	93
Procedure 4: Add the Collaboration Server to the Internet Explorer Trusted Sites List ..	94
Procedure 5: Browser Hosting Controls (Optional)	95

Version 8.4 VE - New Features List

The following table lists the new features in 8.4.

Version 8.4 - New Features

Category	Feature Name	Description
Microsoft - Partners	Lync 2013 SVC Connectivity to Polycom MCU	The Microsoft H.264 SVC codec replaces the H.263 codec previously used with Lync 2013 clients.
Partners - Microsoft	Lync 2013	The Collaboration Server can be configuring as a Trusted Application for Lync 2013.
Licensing	New Licensing Server	Polycom has introduced a new software licensing procedure for the <i>RMX™ 800s Virtual Edition</i> . The previous CFS procedure now no longer applies. Licensing information is now under Setup in the Main Menu, and not under Administration, as in previous versions.
Audio	Audio Participant Indication icon	The Audio Participant Indication icon displays the number of local audio-only endpoints connected to a conference.
Audio	G.719 Audio Codec	The G.719 Audio Codec is now supported.
Content	Content supported at HD1080p30 and HD1080p60	Content is supported in both Base and High Profiles at resolutions of HD1080p30 and HD1080p60.
Content	Dynamically switch from HiP to Base and vice versa while sharing content.	Collaboration Servers 2000, 4000, and Virtual Edition now support auto-selection of Base and Hi-Profile while sharing Content.
Conferencing	Mute detection for Polycom SIP endpoints	The Mute icon is displayed in the Participants pane of the RMX Web Client/RMX Manager when Polycom endpoints mute themselves.
Microsoft	Gateway calls to remote SIP domain	The RMX's Gateway functionality can be used to enhance Polycom's Microsoft Solution, enabling the connection of Legacy endpoints to connect to Lync 2010 endpoints.
Video	New video layouts	Additional video layouts have been added to the Version 8.4 release.

Version 8.4 - New Features

Category	Feature Name	Description
Conferencing	TP display decision matrix	The Room Switch Telepresence layouts normally controlled by the MLA can be managed by the MCU to speed updating the conference layouts in large conferences with many endpoints.
Conferencing	Automatic muting of noisy endpoints	The RMX can detect AVC endpoints with a noisy audio channel and automatically mute them, reducing the noise heard by other conference participants.
System Flag	Detection of H.323 endpoint disconnection	On detecting a H.323 endpoint disconnection, a new system flag, DETECT_H323_EP_DISCONNECT_TIMER allows you to specify the amount of time the MCU waits before disconnecting the endpoint.

Version 8.4 VE - Changes to Existing Features

The following table lists the changes to existing features in 8.4.

Version 8.4 - Changes to Existing Features

Category	Feature Name	Description
Conferencing	Recording and Network Quality icons	The Recording, Recording Paused, and Network Quality icons have been redesigned.
SIP	Shortening SIP Dial-In participant site names	New system flag: SIP_OMIT_DOMAIN_FROM_PARTY_NAME system flag can be used to remove Domain Names from SIP dial-in participants' Site Names. This prevents long domain names being appended to SIP participant names.
IVR	External IVR Services support via MCCF-IVR	The support of External IVR Services via the MCCF-IVR package is enabled by default in the Collaboration Server (RMX) systems, by the flag ENABLE_MCCF which is set to YES. However, in Ultra Secure Mode and in secured environments where the External IVR Services via the MCCF-IVR package is not required and unused ports should be closed, this flag should be set to NO. To change this flag value from YES to No, you must first add it to the System Configuration..
Video	Dynamically switch from HiP to Base and vice versa while sharing content up to HD1080p60	The Collaboration Server (RMX) Virtual Edition now supports auto-selection of Base and Hi-Profile while sharing Content at resolutions of up to HD1080p60.
Conferencing	Room Switch Telepresence Layout Control	In addition to all other Collaboration Server platforms, Collaboration Servers 1800, 800s, and Virtual Edition now support Room Switch Telepresence Layout Control.
Content	H.239 Content to Legacy EPs	Support for sending H.239 Content to Legacy endpoints in TIP-enabled conferences.
RMX Manager	RMX Manager multi-user capability	You can now make the RMX Manager available to all users on a computer during the initial installation. This is done by downloading the RMX Manager from the Polycom support website.

Version 8.4 - Changes to Existing Features

Category	Feature Name	Description
Recording	Dial In Recording Link	Capture Server dial in to Collaboration Server is supported.
Recording	System Flag	The ENABLE_RECORDING_OPERATION_VIA_SIPINFO System Flag allows recording control operations to be performed using either DTMF tones or a SIP INFO request.

Interoperability Table

Devices

The following table lists the devices tested with Version 8.4.

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
Gatekeepers/Proxies			
Polycom CMA	6.2.5 (Gatekeeper)	6.2.5	6.2.5
Polycom Resource Manager	8.2.0_69	8.2.0_69	8.2.0_69
Virtual Resource Manager	8.2.0_50		8.2.0_50
Polycom PathNavigator	7.0.14	7.0.14	7.0.14
Polycom SE200	8.4	8.4	
Polycom RMX Gateway	7.7	8.2	8.2
Cisco (Tandberg) Gatekeeper	N6.3	N6.3	
Cisco (Tandberg) Gateway	G3.2		
Cisco 3241 Gateway	2.1(1.49)		
Radvision ECS gatekeeper	7.7.0.0.27		
Radvision Serial Gateway	5.7.2.0.x		
Codian 4505 MCU	4.4(3.57)		
Lync 2010 server	4.0.7577.225 (CU11)	4.0.7577.225 (CU11)	4.0.7577.225 (CU11)
Lync 2013 server	5.0.8308.577 (CU4)	5.0.8308.577 (CU4)	5.0.8308.577 (CU4)
MS Exchange 2010	14.03.174.001 SP3 (UR4)	14.03.174.001 SP3 (UR4)	14.03.174.001 SP3 (UR4)
MS Exchange 2013	15.00.0775.038 (CU3)	15.00.0775.038 (CU3)	15.00.0775.038 (CU3)
Polycom DMA7000	6.1.0_Build_158329	6.1.0_Build_158329	6.1.0_Build_158329
Virtual DMA	6.1.0_Build_158329	6.1.0_Build_158329	6.1.0_Build_158329
DMA TCSPI	DMA TCSPI - 3.2.1	DMA TCSPI - 3.2.1	DMA TCSPI - 3.2.1
Polycom Capture Server	1.6.1-11341	1.6.1.0-11341	1.6.1.0-11341

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
BroadWorks	AS version Rel_20.sp1_1.606	AS version Rel_20.sp1_1.606	AS version Rel_20.sp1_1.606
ACME	SBC ACME Net-Net 3820 SCX6.4.0 MR-3 GA (Build 298)	SBC ACME Net-Net 3820 SCX6.4.0 MR-3 GA (Build 298)	SBC ACME Net-Net 3820 SCX6.4.0 MR-3 GA (Build 298)
RPAD	4.0.0	4.0.0	4.0.0
Recorders			
Polycom RSS 2000	4	4	4
Polycom RSS 4000	8.5.1	8.5.1	8.5.1
Virtual RSS	8.6.0.0-36610	8.6.0.0-36610	
MCUs, Call Managers Network Devices and Add ins			
Polycom RMX Conferencing Add in for Microsoft Outlook	1.0.x	Polycom Conferencing for Outlook (PCO) 1.4.0	Polycom Conferencing for Outlook (PCO) 1.4.0
LifeSize MCU	V1.5		
BlueJeans MCUV	1.7.0		
Radvision Scopia P10 Gateway	5.7.2.0.25	-	-
Redcom LSC Slice 2100	v4.0a (R3P9)	v4.0a (R3P9)	v4.0a (R3P9)
Avaya Aura Session Manager	6.3.0.8.5682	6.3.0.8.5682	6.3.0.8.5682
Avaya Aura CM	R016x.03.0.124.0	R016x.03.0.124.0	R016x.03.0.124.0
Cisco SBC	3.7.3	3.7.3	
Cisco CUCM	9.1.2	9.1.2	
Cisco CTMS	1.9.3	1.9.3	
Cisco TPS	3.0.2-48	3.0.2-48	
Cisco VCS	X8.1.1	X8.1.1	
Crestron Controller	4.001.1012	4.001.1012	
Crestron Polycom Build	3.1.2-2	3.1.2-2	
Polycom MLA	3.1.2.8	3.1.2.8	
Polycom TelePresence Tool	3.1.2	3.1.2	
Cisco TelePresence Server	4.0(1.57)	4.0(1.57)	
IBM Sametime Server	Sametime 9.0.0 version	Sametime 9.0.0 version	Sametime 9.0.0 version

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
OpenScape SBC	V7R1.12.1	V7R1.12.1	V7R1.12.1
Siemens OSV	V7.00.01.ALL.07_PS003 0.E06	V7.00.01.ALL.07_PS003 0.E06	V7.00.01.ALL.07_PS003 0.E06
Endpoints			
Polycom HDX Family	3.1.4-43122	3.1.4-43122	3.1.4-43118
Polycom GS Family	4.1.3_01_ft-190030	4.1.3_01_ft-190030	4.1.3_01_ft-190030
PTC Panel SW	1.10.0-48	1.10.0-48	
PTC OS	1.10.0-11	1.10.0-11	
Polycom OTX	3.1.3.2	3.1.3.2	--
Polycom RPX	3.1.3.2	3.1.3.2	--
Crestron RPX	3.1.4-1	3.1.4-1	
Polycom VSX and V-Series Family	9.0.6.2	9.0.6.2	9.0.6.2
Polycom RealPresence Desktop	3.2.0.47638	3.2.0.47638	3.2.0.47638
Polycom Viewstation Family	7.5.4 or higher	7.5.4 or higher	7.5.4 or higher
Polycom Viewstation FX/EX/4000	6.0.5 or higher	6.0.5 or higher	6.0.5 or higher
Polycom CMA Desktop	5.2.5	5.2.5	5.2.5
Polycom CMA Desktop for MAC	5.2.3	5.2.3	5.2.3
Polycom QDX6000	4.0.3	4.0.3	4.0.3
RPM IOS iPhone	3.2-47638	3.2-47638	3.2-47638
RPM IOS iPad	3.2-47638	3.2-47638	3.2-47638
RPM Android Phone	3.2-47638	3.2-47638	3.2-47638
RPM Android Tablet	3.2-47638	3.2-47638	3.2-47638
RPD (PC)	3.2-47638	3.2-47638	3.2-47638
RPD (Mac)	3.2-47638	3.2-47638	3.2-47638
Polycom m100	1.0.6	1.0.6	1.0.6
Polycom VVX1500	5.0.2	5.0.2	5.0.2
Polycom VVX500	5.0.2	5.0.2	5.0.2

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
Polycom VVX600	5.0.2	5.0.2	5.0.2
Polycom Sound Point 601 SIP	3.1.7	3.1.7	3.1.7
Polycom SoundPoint 650 SIP	4.0.4	4.0.4	4.0.4
Polycom PVX	8.0.16	8.0.16	8.0.16
Polycom iPower 9000	6.2.x	6.2.x	6.2.x
Polycom SoundStation IP4000 SIP	3.1.7	3.1.7	3.1.7
Polycom SoundStation IP7000	4.0.4	4.0.4	4.0.4
Polycom HDX Touch Controller	OS1.9.0-6/TP1.9.0-30	OS1.9.0-6/TP1.9.0-30	OS1.9.0-6/TP1.9.0-30
Polycom Group Series Touch Controller	OS4.1.3-73/TP 4.1.3.01-190025	OS4.1.3-73/TP 4.1.3.01-190025	OS4.1.3-73/TP 4.1.3.01-190025
Avaya Voice Phone	S3.171b	S3.171b	S3.171b
Avaya one-X Communicator	6.1.9.04-SP9-132	6.1.9.04-SP9-132	6.1.9.04-SP9-132
Avaya 1000 series endpoint	4.8.3(23)	4.8.3(23)	4.8.3(23)
Avaya Flare Desktop	1.1.3.14	1.1.3.14	1.1.3.14
Avaya ADVD	1_1_2_020002	1_1_2_020002	1_1_2_020002
Avaya Flare Mobile (iOS)	1.1.2	1.1.2	1.1.2
LifeSize Room and Express	4.7.22(3)	4.7.22(3)	4.7.22(3)
LifeSize ICON 600	1.3.2	1.3.2	1.3.2
LifeSize Express 220	4.12.0(30)	4.12.0(30)	4.12.0(30)
LifeSize Team 200	4.7.22(3)	4.7.22(3)	4.7.22(3)
LifeSize Team 220	4.12.0(30)	4.12.0(30)	4.12.0(30)
LifeSize Passport	4.12.0(30)	4.12.0(30)	4.12.0(30)
LifeSize SoftPhone	8.1.12	8.1.12	8.1.12
Cisco (Tandberg) EX90	7.1.1	7.1.1	----
Cisco (Tandberg) C Series	7.1.1	7.1.1	--
Cisco SX20	7.1.1	7.1.1	--
Cisco CTS3010 (Telepresence)	1.10.5.1(4)	1.10.5.1(4)	---
Cisco CTS1300 (Telepresence)	1.10.5.1(4)	1.10.5.1(4)	---

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
Cisco TX9000	6.1.2.1(5)	6.1.2.1(5)	---
TX 1310	6.1.2.1(5)	6.1.2.1(5)	
Cisco CTS500-37	1.10.5.1(4)	1.10.5.1(4)	
Cisco CTS500-32	6.1.2.1(5)	6.1.2.1(5)	
Jabber iPad	9.3.4 (21626)	9.3.4 (21626)	---
Jabber Video for Telepresence (windows)	4.6.3.17194	4.6.3.17194	---
Radvision SCOPIA XT1000 endpoint	2.5.416	2.5.416	2.5.416
Radvision Scopia XT5000	8.3.0.61	8.3.0.61	8.3.0.61
Sony PCS –1	3.42	3.42	3.42
Sony PCS –G50	2.72	2.72	2.72
Sony PCS –TL50	2.42	2.42	2.42
Sony PCS-G90	2.42	2.22	2.22
Sony PCS-XG80	2.42	2.42	2.42
Sony PCS-XG100	1.2	1.2	1.2
Tandberg 1700 MXP	F9.3.1	F9.3.1	F9.3.1
Tandberg Edge95 MXP	F9.3.1	F9.3.1	F9.3.1
Tandberg T150	L6.1	L6.1	L6.1
CSS Server	1.3.0.1009	1.3.0.1009	1.3.0.1009
Addon client	1.3.0.1009	1.3.0.1009	1.3.0.1009
Microsoft Lync 15 client	15.0.4569.1503	15.0.4569.1503	15.0.4569.1503
Microsoft Lync 14 client	4.0.7577.4419	4.0.7577.4419	4.0.7577.4419
Polycom CX7000	1.2.0	1.2.0	1.2.0
Polycom CX500 / CX600	4.0.7577.4420	4.0.7577.4420	4.0.7577.4420
Siemens ODC	V7R1.17.0	V7R1.17.0	V7R1.17.0
Siemens OpenStage Desktop Voice	V3R1 43	V3R1 43	V3R1 43
IBM-same time Connect client	sametime 9 connect client - HF1	sametime 9 connect client - HF1	sametime 9 connect client - HF1
IBM Sametime Lotus client	Sametime 9	Sametime 9	Sametime 9

Device	MCU Type		
	1500/2000/4000	1800	Virtual Editions
IBM Same time web AV client SVC	Sametime 9	Sametime 9	Sametime 9
IBM Same time web AV client AVC	Sametime 9	Sametime 9	Sametime 9

* RealPresence Collaboration Server 800s registration to the CMA Gatekeeper is supported. Bridge information (management & monitoring) and scheduling are not supported.

** RealPresence® Resource Manager can schedule calls through the DMA. Reservations are not supported. Wave 7 version of RealPresence® Resource Manager (XMA) does not support management, monitoring and scheduling of conferences on the Collaboration Server 800s that are directly managed by RealPresence® Resource Manager (XMA).

*** Lync 2013 is not supported.

Conferencing Options

The following table summarizes the conferencing capabilities and options available in the different Conferencing Modes.

Features by Conferencing Mode

Features	CP Only	Mixed CP & SVC	SVC Only
Reservations	✓	✓	✓
Operator Conferences	✓	✗	✗
Entry Queues	✓*	✓*	✓*
Dial Out	✓	✗	✗
Cascading	✓	✓**	✗
IVR	✓	✓	✓ Reduced IVR set for SVC endpoints
Permanent Conferences	✓	✓	✓
LPR	✓	✓***	✓***
Auto Redial	✓	✓	✗
Content	✓ All Content Settings, All Content Protocols	✓ Graphics Only, H.264 Cascade & SVC Optimized	✓ Graphics Only, H.264 Cascade & SVC Optimized
Presentation Mode	✓	✗	✗
Lecture Mode	✓	✗	✗
Same Layout	✓	✓	✗
Layout Selection	✓	✓ AVC endpoints only	Layout set to Auto Layout and defined on the endpoint
Skins	✓	✓ AVC endpoints only	✗
Encryption	✓	✓	✓
Recording	✓	✓ AVC recording only	✗

Features	CP Only	Mixed CP & SVC	SVC Only
Site Names	✓	✓ AVC endpoints only	Managed by the endpoint (not via MCU)
Message Overlay	✓	✗	✗

* Entry Queue & Destination Conference must have the same profile (i.e. SVC only to SVC only, Mixed CP and SVC to Mixed CP and SVC)

** Only Basic Cascading is available

*** For AVC, the LPR error resiliency is used, for SVC endpoints other error resiliency methods are used.

Resources and Feedback

To find support and to report findings, register on the beta web site and use the following resources:

Polycom Support and Resources

Polycom Support	For support please contact the Polycom Team at support@polycom.com
Polycom Test Systems	Go to http://www.polycom.com/videotest for a list of worldwide numbers that you can use to test your video conferencing system.

RMX Web Client

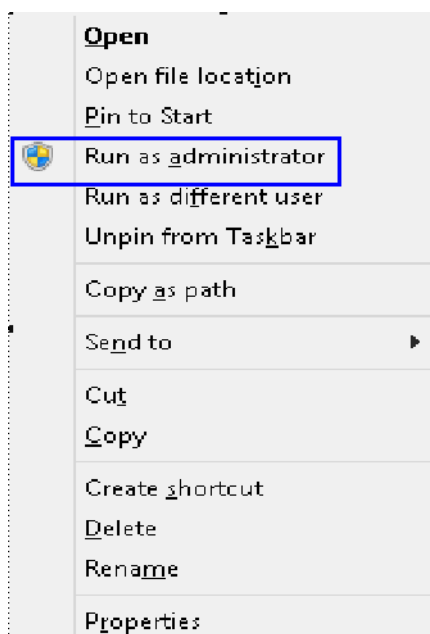
The following table lists the environments (Web Browsers and Operating Systems) with which the Collaboration Server Web Client and RMX Manager applications were tested*. It is not recommended to run RMX™ Web Client and Polycom CMAD applications simultaneously on the same workstation.

Collaboration Server (RMX) Web Client/RMX Manager Environment Interoperability Table

Web Browser	Operating System
Internet Explorer 7	Windows Vista™
	Windows 7
Internet Explorer 8	Windows 7
Internet Explorer 9	Windows 7 and Windows 8
Internet Explorer 10	Windows 8



If you have problems getting the Collaboration Server Web Client to work with Windows 8, it is recommended to run Internet Explorer as an administrator by holding the shift key and right-clicking on the IE icon, and then select Run as Administrator.

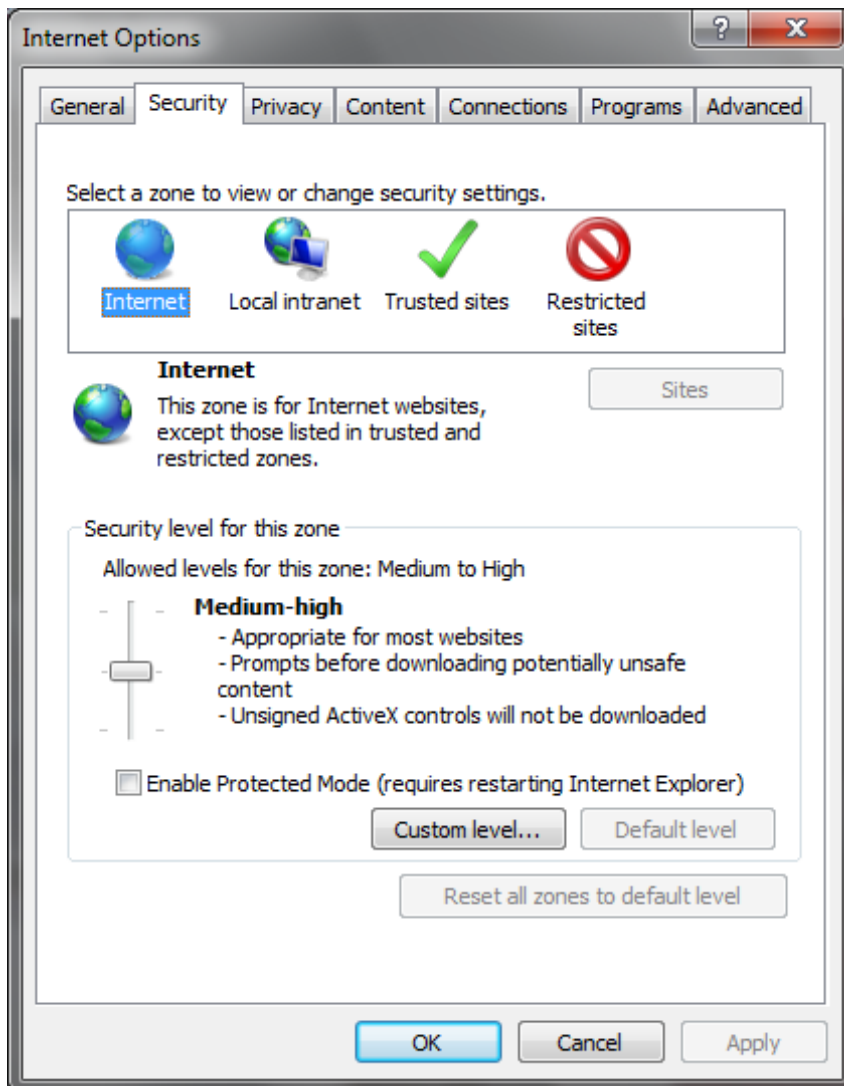


Windows 7™ Security Settings

If Windows 7 is installed on the workstation, Protected Mode must be disabled before downloading the software to the workstation.

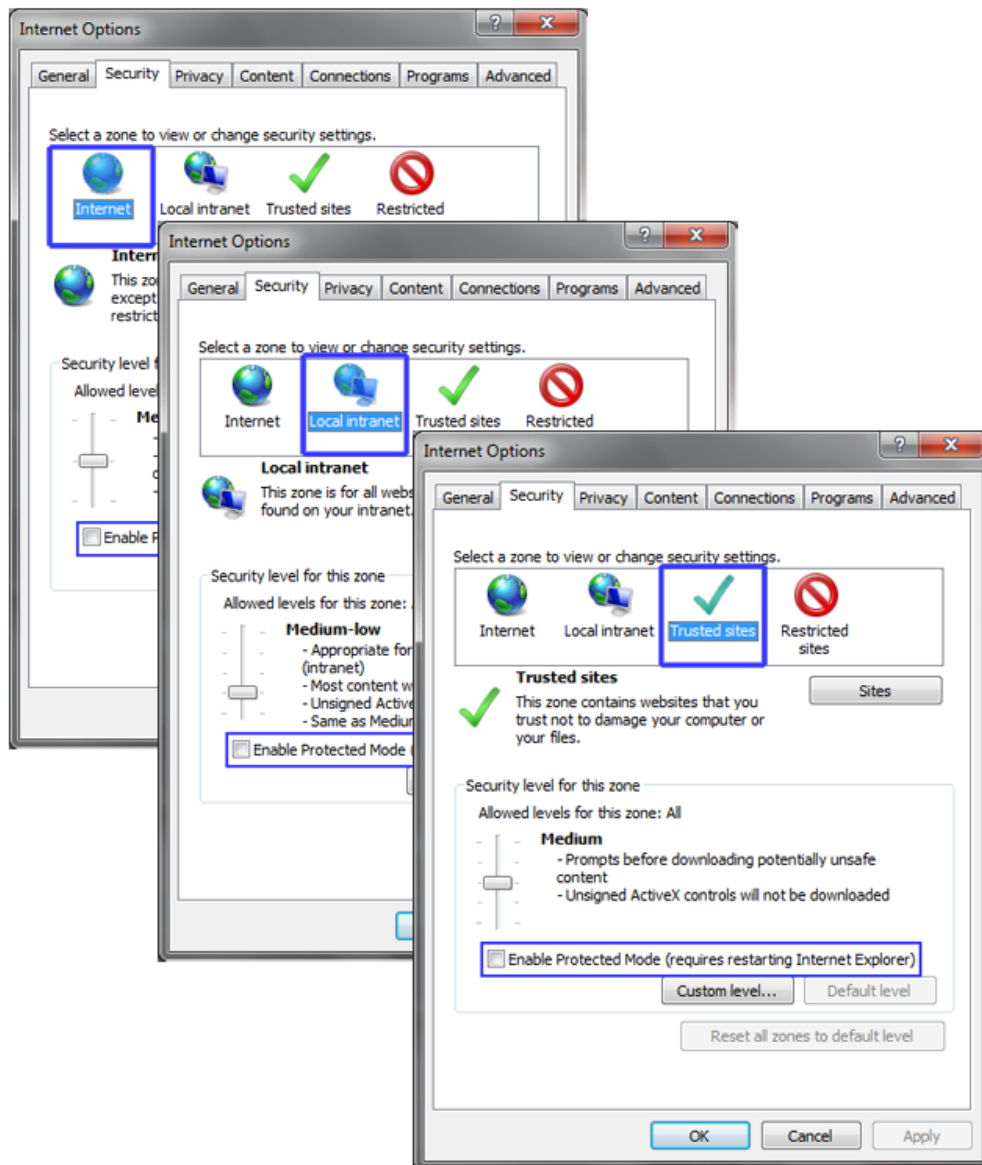
To disable Protected Mode:

- 1 In the **Internet Options** dialog box, click the **Security** tab.
The **Security** tab is displayed.



2 Clear the **Enable Protected Mode** check box for each of the following tabs:

- Internet
- Local intranet
- Trusted sites



3 After successful connection to Collaboration Server (RMX), the **Enable Protected Mode** check boxes can be selected to enable *Protected Mode* for the following tabs:

- Internet
- Local intranet

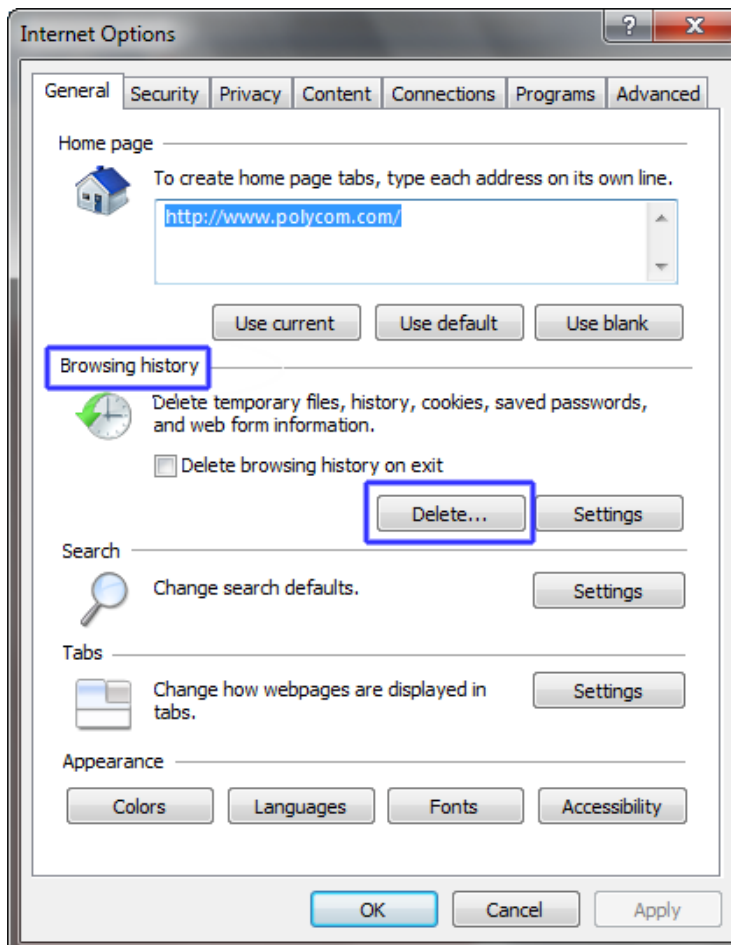
Internet Explorer 8 Configuration

When using *Internet Explorer 8* to run the *Collaboration Server (RMX) Web Client* or *RMX Manager* applications, it is important to configure the browser according to the following procedure.

To configure Internet Explorer 8:

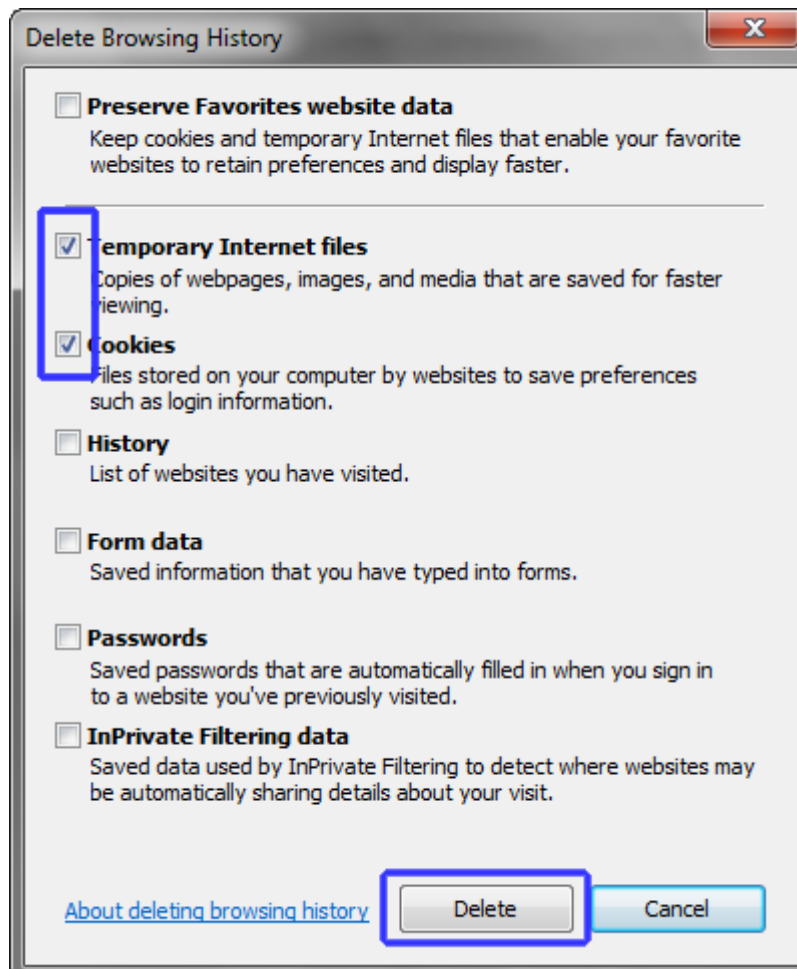
- 1 Close **all** browsers running on the workstation.
- 2 Use the Windows *Task Manager* to verify that no *iexplore.exe* processes are running on the workstation. If any processes are found, use the **End Task** button to end them.
- 3 Open Internet Explorer but do **not** connect to the MCU.
- 4 In the Internet Explorer menu bar select **Tools >> Internet Options**.

The **Internet Options** dialog box is displayed with **General** tab open.



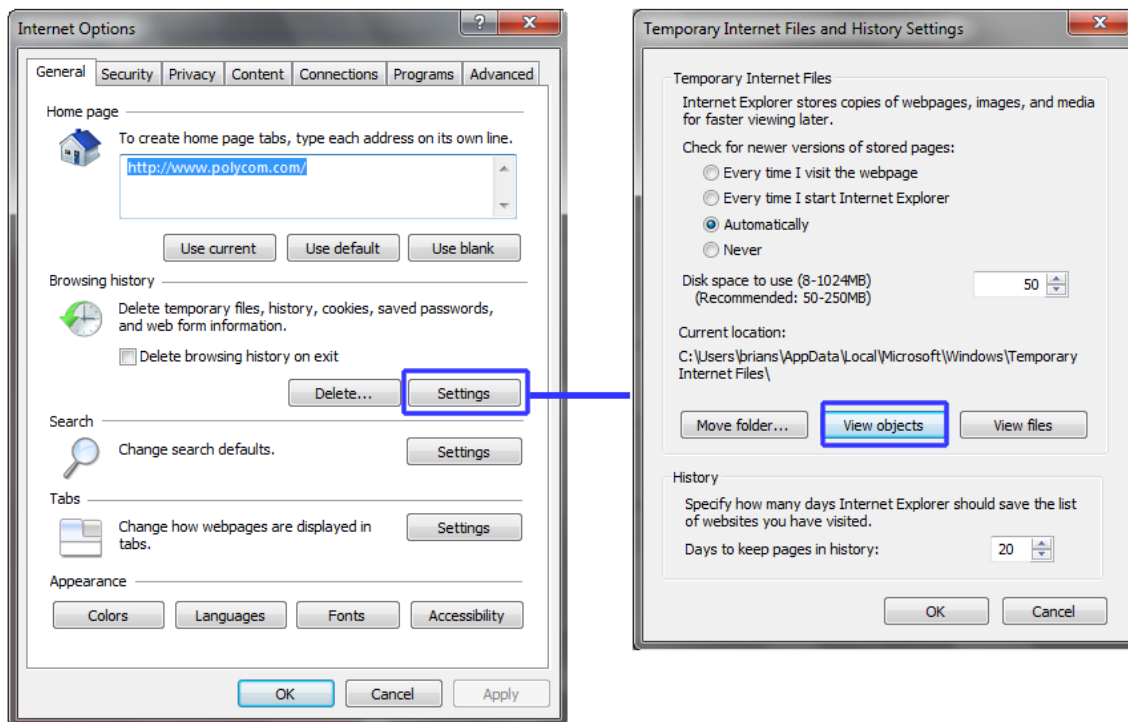
- 5 In the **Browsing history** section, click the **Delete** button.
The **Delete Browsing History** dialog box is displayed.

- 6 Select the **Temporary Internet files** and **Cookies** check boxes.
- 7 Click the **Delete** button.

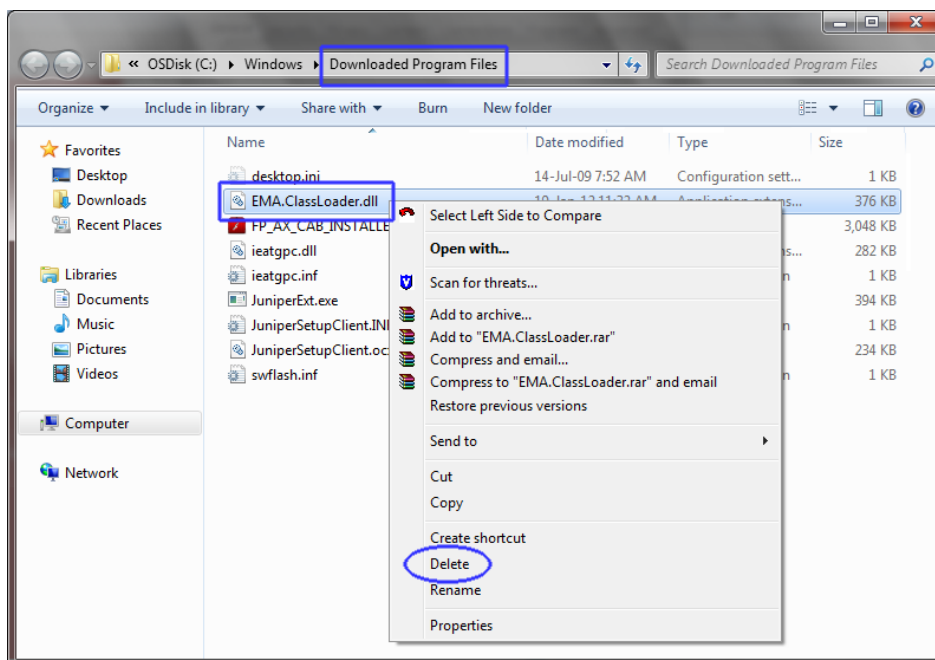


The **Delete Browsing History** dialog box closes and the files are deleted.

- 8 In the **Internet Options** dialog box, click the **Settings** button.
The **Temporary Internet Files and History Settings** dialog box is displayed.



- 9 Click the **View objects** button.
The Downloaded Program Files folder containing the installed Program Files is displayed.



- 10 Select the **EMAClassLoader.dll** file and press the **Delete** key on the workstation or right-click the **EMA.ClassLoader.dll** file and then click **Delete**.
- 11 Close the Downloaded Program Files folder and the **Temporary Internet Files and History Settings** dialog box.
- 12 In the **Internet Options** dialog box, click the **OK** button to save the changes and close the dialog box

Upgrade Package Contents

Version Version 8.4 upgrade package must be downloaded from the Polycom Resource Center and includes the following items:

- RealPresence Collaboration Server (RMX) 1500/2000/4000 documentation:
 - *RealPresence Collaboration Server (RMX) 1500/2000/4000 VVersion 8.4 Release Notes*
 - Polycom RealPresence Collaboration Server (RMX) Getting Started Guide V8.3
 - <Italic>Polycom RealPresence Collaboration Server (RMX) 1500/2000/4000 Administrator's Guide V8.3

Where to Get the Latest Product Information

To view the latest Polycom product documentation, visit the **Support** section of the Polycom website at <http://support.polycom.com>

Upgrade Procedures



- If Windows 7™ is installed on the workstation, Protected Mode must be disabled before downloading the Collaboration Server software to the workstation. For more information see “Windows 7™ Security Settings” on page 7.
- To maximize conferencing performance, especially in high bit rate call environments, a 1 Gb connection is recommended for each LAN connection.
- If the default POLYCOM user is defined in the RMX Web Client, an Active Alarm is created and the MCU status changes to MAJOR until a new Administrator user replaces the default user.

Preparing for the Upgrade

A successful upgrade requires prior preparation. These steps help ensure a smooth upgrade with minimal downtime.

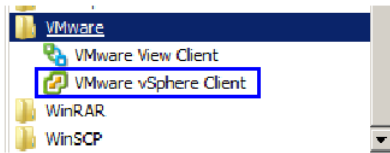
To prepare for the upgrade:

- 1 Download the Version 8.4 software from the Polycom Resource Center web site.
- 2 Obtain the Version 8.4 Product Activation Key from the Polycom Resource Center web site. For more information, see the *Polycom RealPresence Collaboration Server (RMX) Getting Started Guide*, [Obtaining the Activation Key](#).
- 3 If the RMX is used with a Polycom RealPresence Distributed Media Application (DMA), disable RealPresence Distributed Media Application functionality:
 - a Log into the RealPresence Distributed Media Application that handles call transfers for Collaboration Server (RMX).
 - b Select **Network -> MCU -> MCUs**.
 - c Select the MCU and choose either **Stop Using** or **Busy Out**.
- 4 Verify that all conferences, including permanent conferences, have been terminated.
- 5 Backup the configuration file.

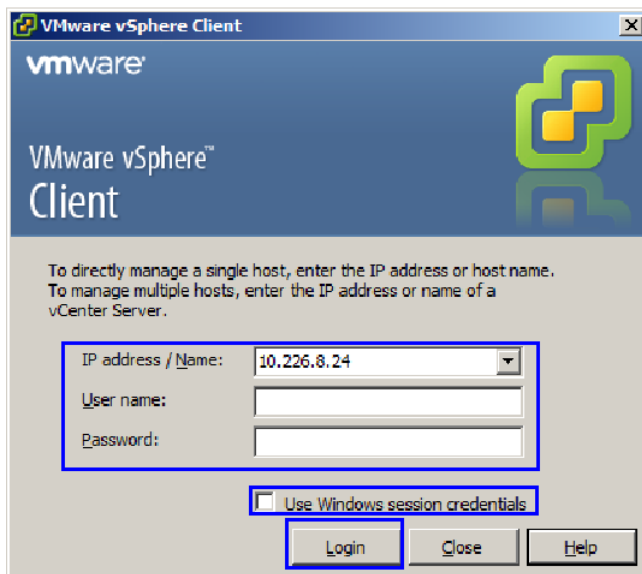
To upgrade from Version 8.3 to 8.4:

- 1 On the Windows taskbar, click the **Start > Programs**.
 - a If the VMware vSphere Client is displayed in the recently used programs list, click **VMware vSphere Client** in the list to start the application.
 or

- b Select **All Programs > VMware > VMware vSphere Client**.



The VMware vSphere Client login window is displayed.

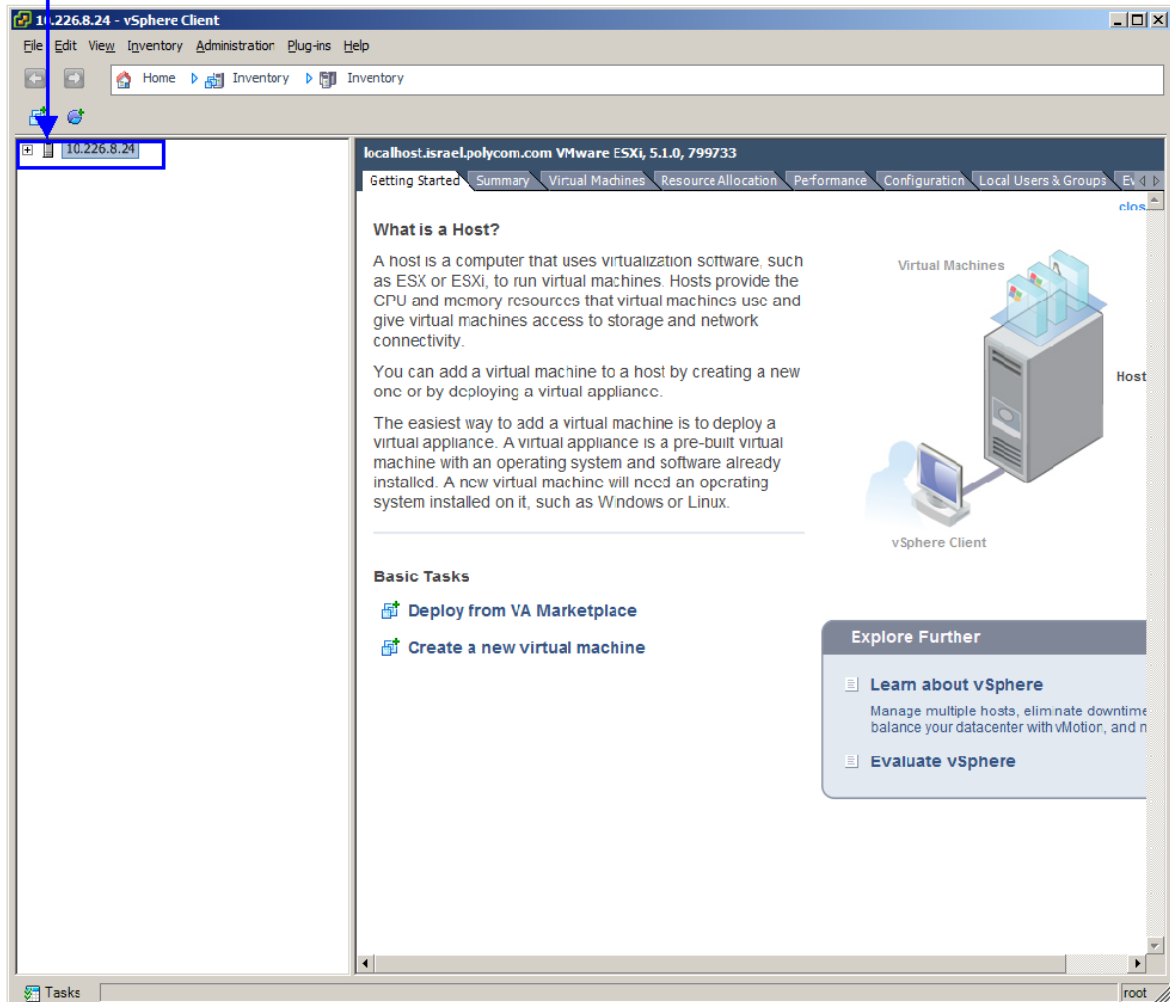


- 2 In the IP address / Name field, enter the IP Address or the name of the **vSphere** host.
- 3 Either type your **vSphere** User Name and Password or select **Use Windows sessions credentials**.

4 Click **Login**.

The VMware vSphere Client is displayed.

Inventory Panel

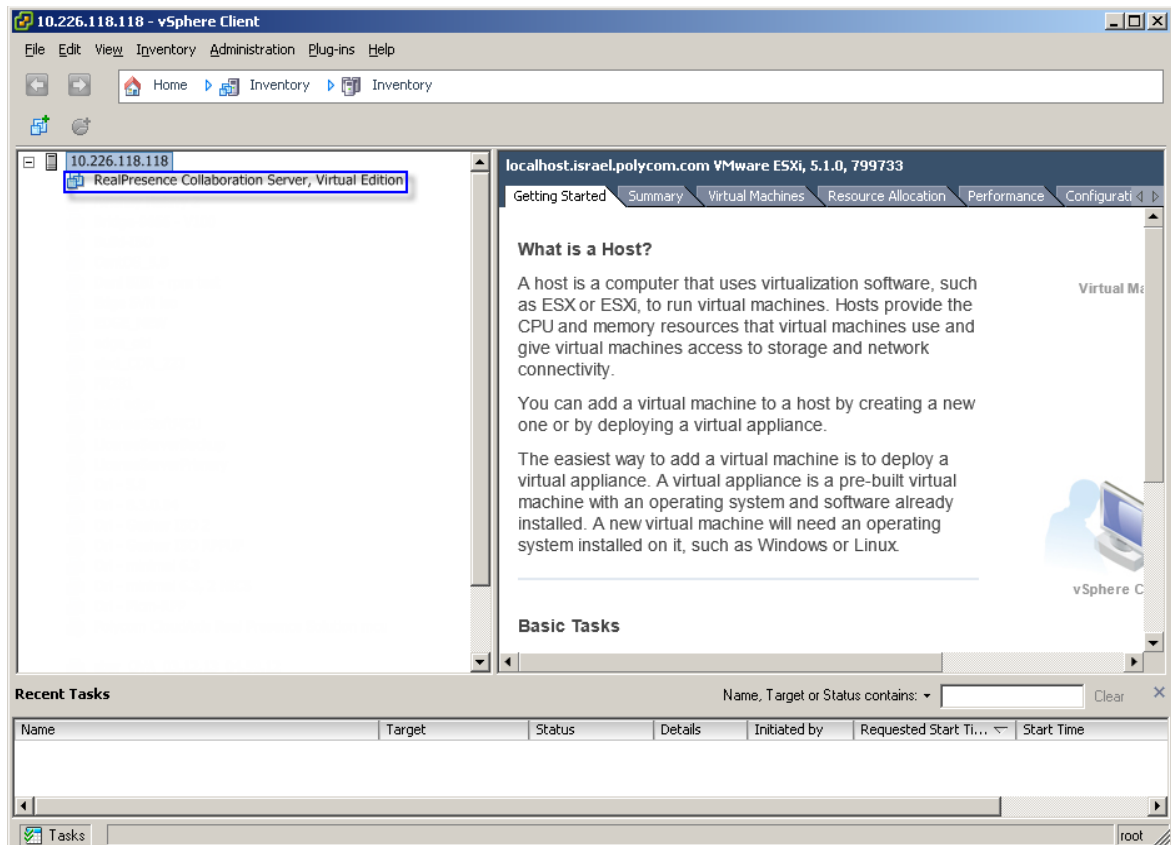


5 In the Inventory Panel, select the Datastore that houses the MCU.

The inventory of the Datastore appears.

- 6 Right-click the MCU virtual machine, then click **Power > Shut Down Guest**.

When VM turns blue, the virtual machine has shut down.



- 7 When the MCU has shut down, click the **Summary** tab.

- 8 Under Resources, right-click the datastore, and click **Browse Datastore**.

RealPresence Collaboration Server, Virtual Edition

Getting Started | **Summary** | Resource Allocation | Performance | Events | Console | Permissions

General

Guest OS: Other 2.6.x Linux (64-bit)
 VM Version: 7
 CPU: 8 vCPU
 Memory: 16384 MB
 Memory Overhead: 147.34 MB
 VMware Tools: Running (3rd-party/Independent)
 IP Addresses: 10.226.8.108 [View all](#)
 DNS Name: localhost.localdomain
 State: Powered On
 Host: [localhost.israel.polycom.com](#)
 Active Tasks:
 vSphere HA Protection: N/A

Resources

Consumed Host CPU: **1300 MHz**
 Consumed Host Memory: **8879.00 MB**
 Active Guest Memory: **6553.00 MB** [Refresh Storage Usage](#)
 Provisioned Storage: **46.10 GB**
 Not-shared Storage: **18.54 GB**
 Used Storage: **18.54 GB**

Storage	Drive Type	Capacity
datastore1		

Network

VM Network

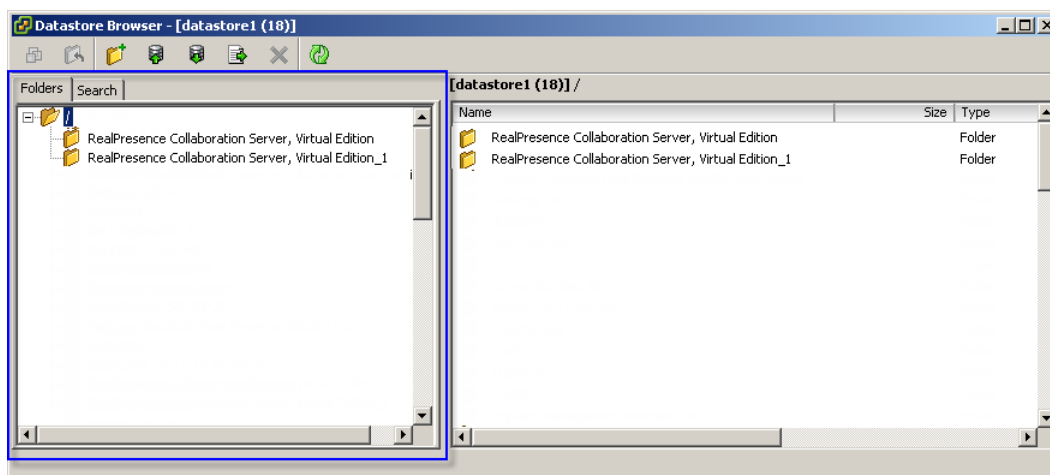
Commands

Shut Down Guest
 Suspend
 Restart Guest
 Edit Settings
 Open Console

Annotations

Notes: Edit

The Browse Datastore window appears.



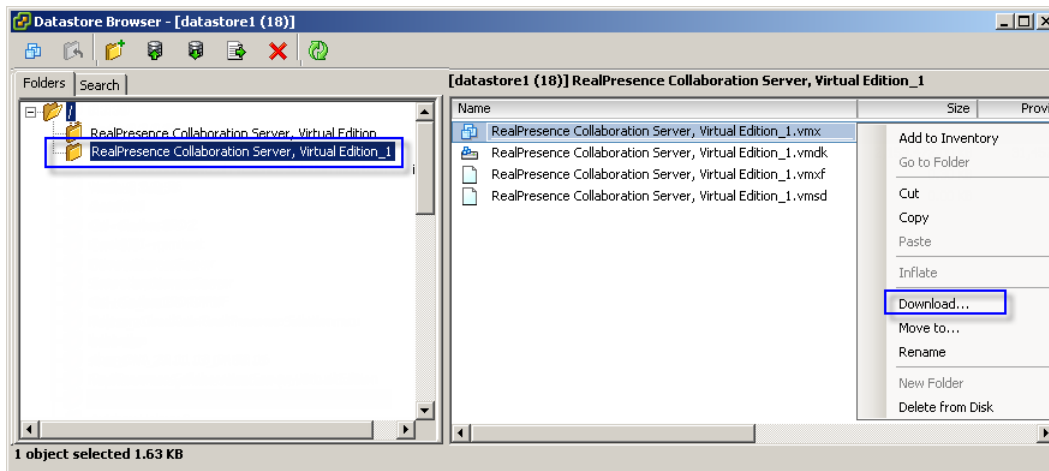
- 9 In the **Folders** tab, select the folder whose name matches that of the MCU.



If the same name has been used multiple times, there will be multiple folders with an underscore and a number appended to the name. In such a case, select the folder with the name of the MCU which ends with the highest number.

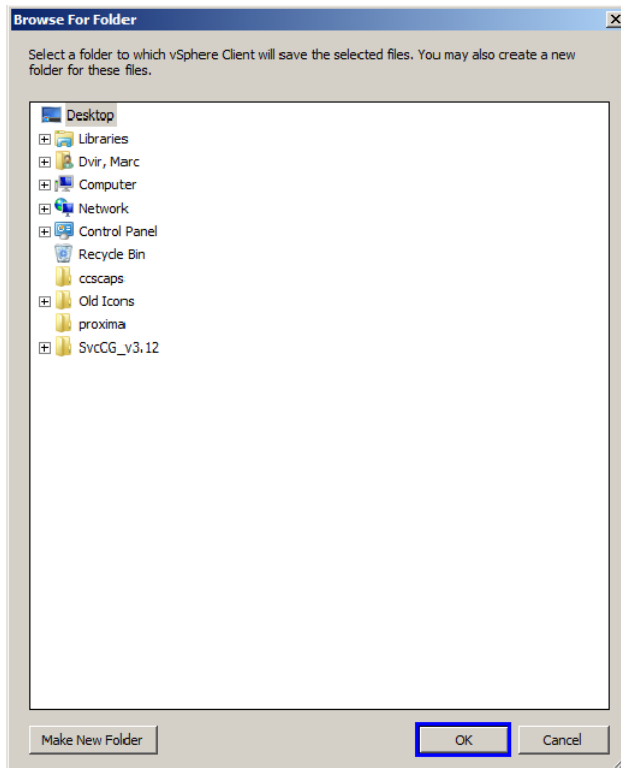
The contents of the folder are displayed.

- 10 Right-click the file ending with “.vmx” and click **Download**.



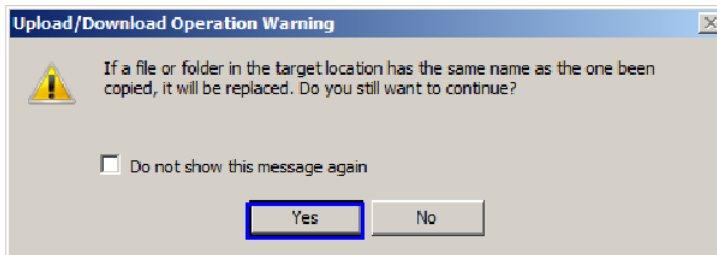
The Browse For Folder window appears.

11 Browse to a location and click **OK**.



The Upload/Download Operation Warning window may appear.

12 If the Upload/Download Operation Warning window appears, click **Yes**.



If it does not appear, proceed to step 13.

The file downloads.

13 Open the file in any plain text editor.

```

43 ethernet0.networkName = "VM Network"
44 ethernet0.addressType = "generated"
45 guestOS = "centos-64"
46 uuid.location = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
47 uuid.bios = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
48 vc.uuid = "52 b7 2d 0c 17 a8 af 14-ec 8b 97 49 bd ec 49 6a"
49 hpet0.present = "TRUE"
50 usb.vbluetooth.startConnected = "TRUE"
51 scsi0.pciSlotNumber = "16"
52 ethernet0.generatedAddress = "00:0c:29:59:3c:e9"

```

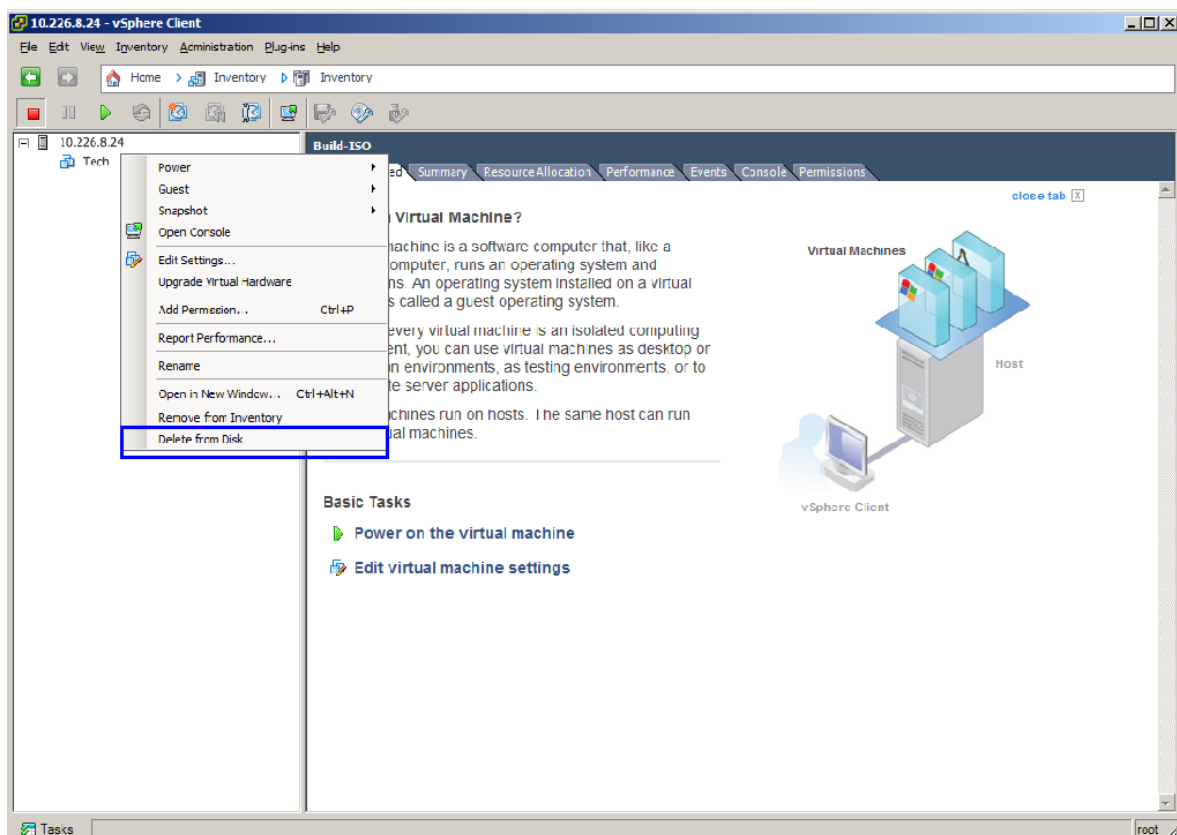
14 Locate the line that starts with uuid.bios.

15 Copy the entire line and paste it into another text file.

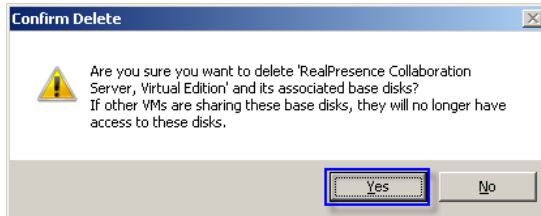
16 Save the text file.

17 In the Inventory Panel, click the Datastore that houses the MCU.

18 Right-click the MCU, and select **Delete from Disk**.

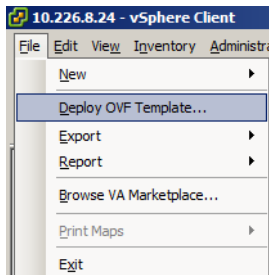


The **Confirm Delete** window appears.

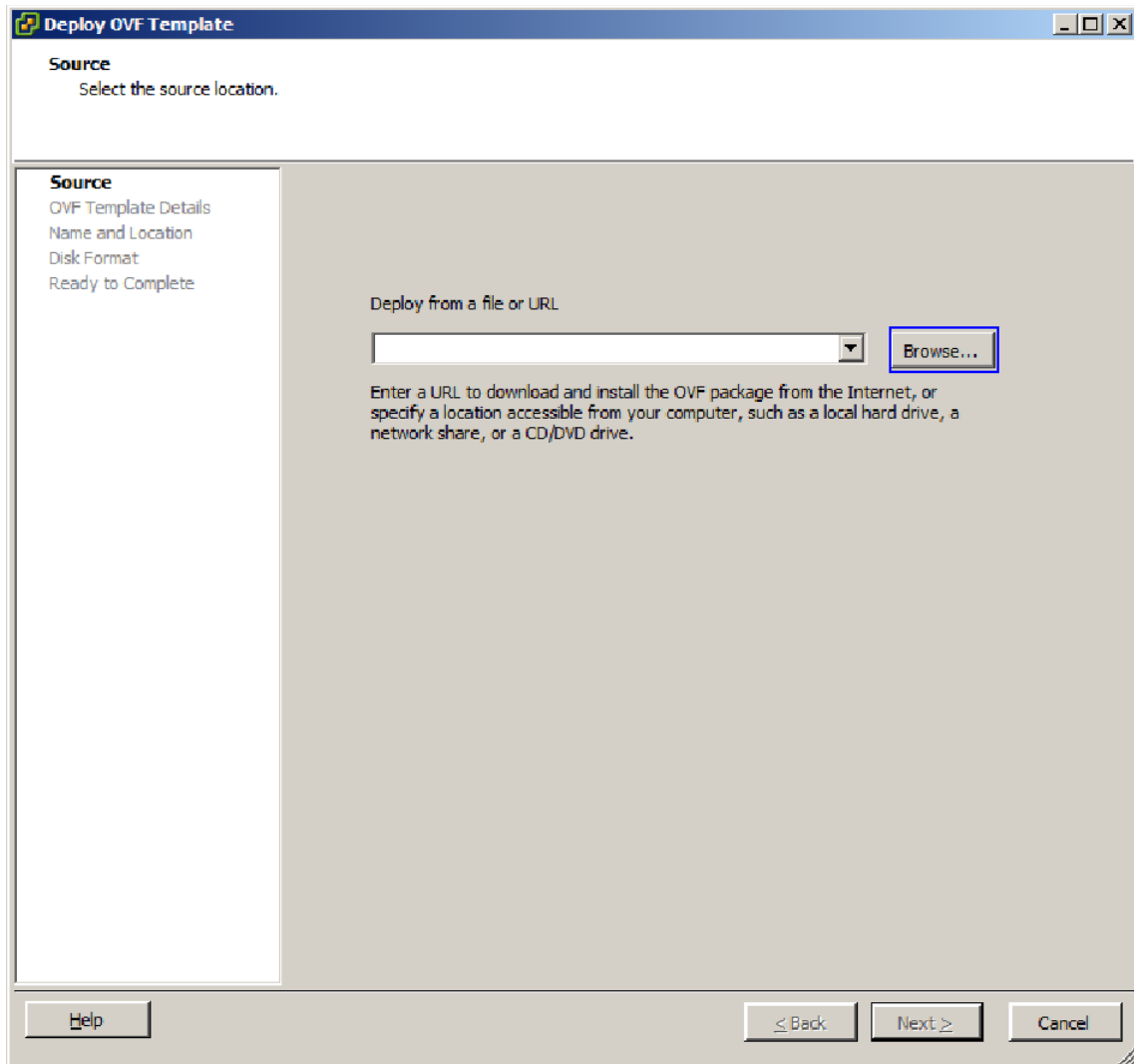


19 Click **Yes**.

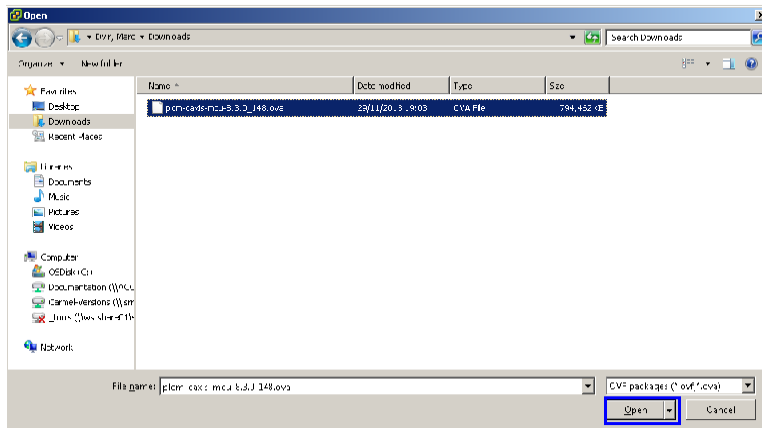
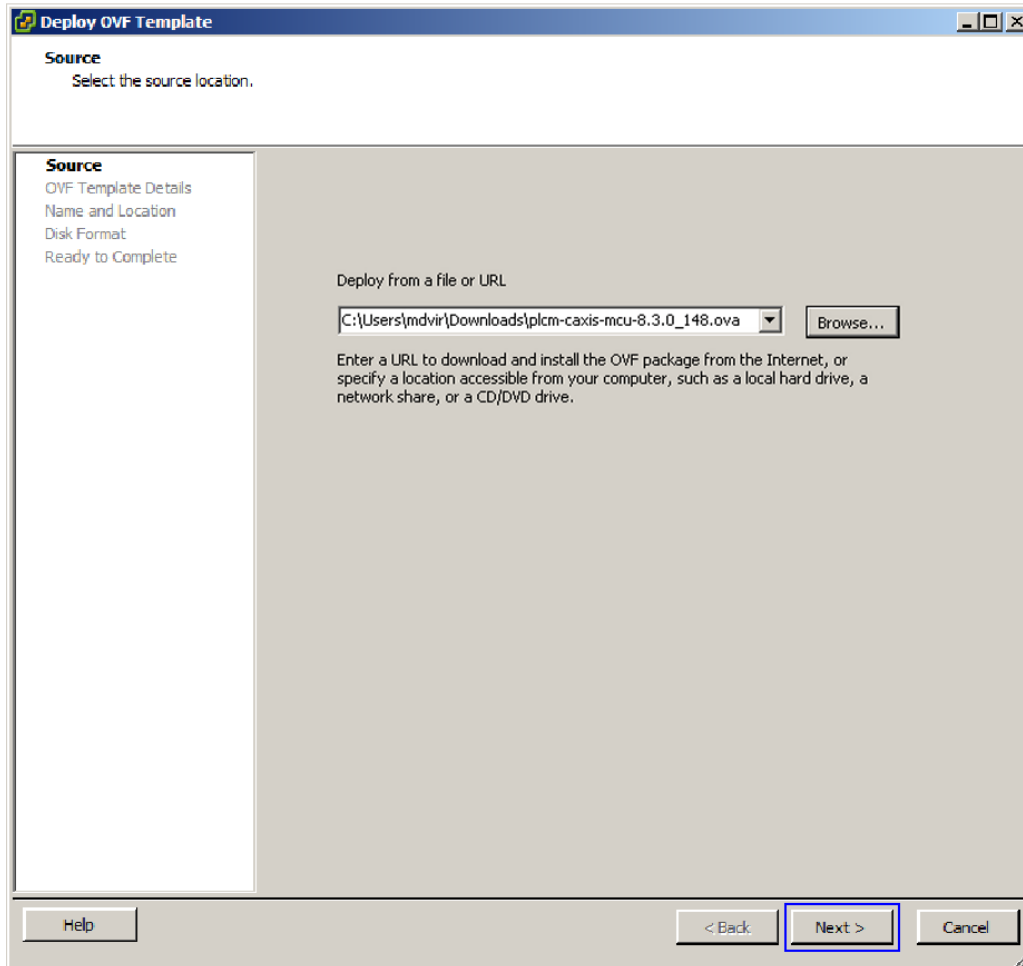
20 On the vSphere Client menu, select **File > Deploy OVF Template**.



The Deploy OVF Template wizard opens to the Source page.

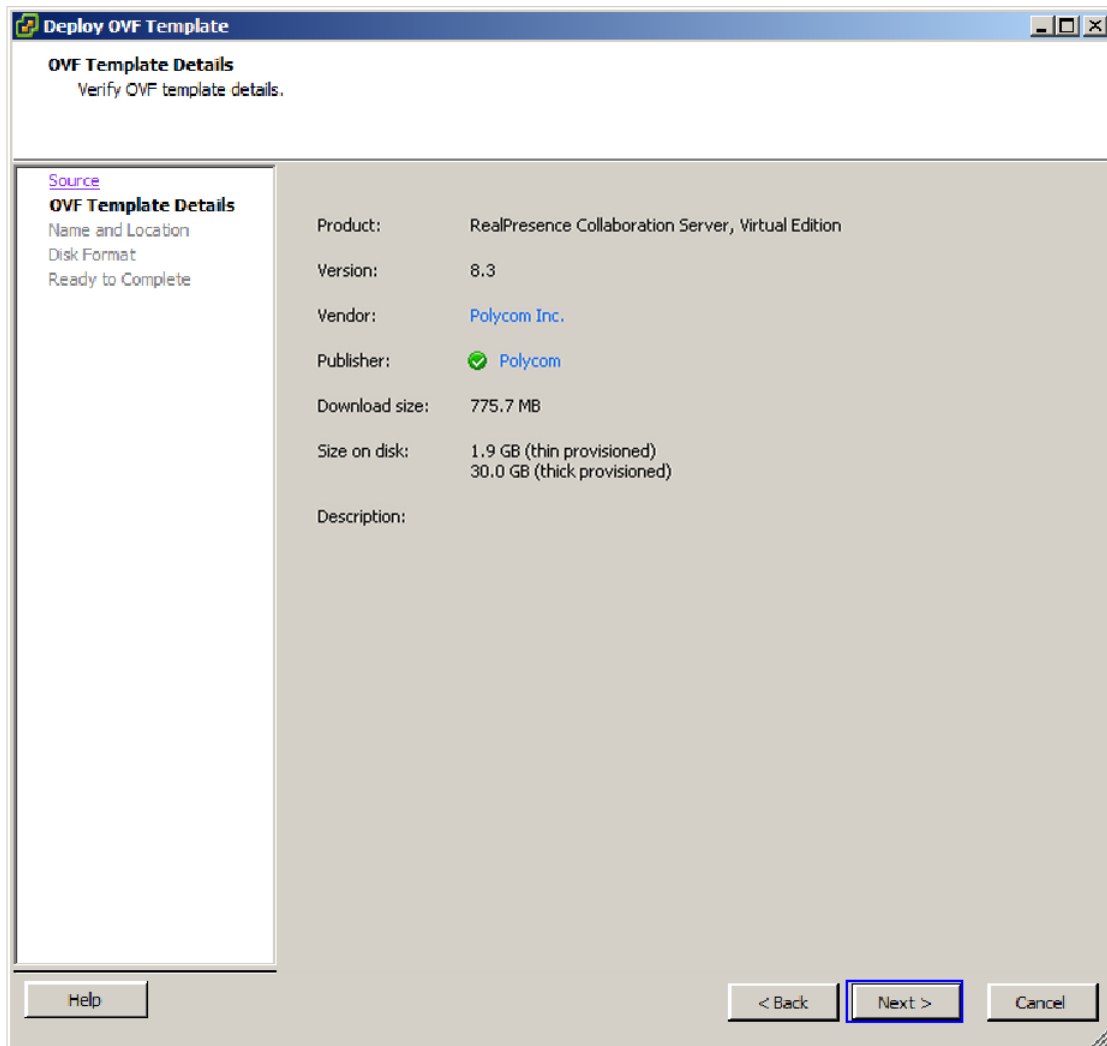
21 Click Browse.

The **Open** dialog box appears.

22 Browse to the new OVA file.**23 Either double-click on the OVA file or click on the file, then click **Open**.**

24 Click Next.

The OVF Template Details page is displayed.



25 Click Next.

The Name and Location page is displayed.

In the Name field, type the same name previously used for the MCU.

The screenshot shows a Windows-style dialog box titled "Deploy OVF Template". The main heading is "Name and Location" with the instruction "Specify a name and location for the deployed template". On the left is a navigation pane with links: "Source", "OVF Template Details", "Name and Location" (which is selected and bolded), "Disk Format", "Network Mapping", and "Ready to Complete". The main area has a "Name:" label above a text input field containing "RealPresence Collaboration Server, Virtual Edition". Below the field is a note: "The name can contain up to 80 characters and it must be unique within the inventory folder." At the bottom are four buttons: "Help", "< Back", "Next >" (which is highlighted with a blue border), and "Cancel".

26 Click Next.

The **Disk Format** page is displayed.

27 Select **Thin Provision**, then click **Next**.

The screenshot shows the 'Deploy OVF Template' wizard window. The title bar reads 'Deploy OVF Template'. The main heading is 'Disk Format' with the subtitle 'In which format do you want to store the virtual disks?'. On the left, a navigation pane lists: 'Source', 'OVF Template Details', 'Name and Location', 'Disk Format' (which is highlighted), 'Network Mapping', and 'Ready to Complete'. The main area displays 'Datastore:' as 'datastore.1' and 'Available space (GB):' as '211.6'. Three radio buttons are present: 'Thick Provision Lazy Zeroed', 'Thick Provision Eager Zeroed', and 'Thin Provision' (which is selected and highlighted with a blue box). At the bottom, there are three buttons: 'Help', '< Back', and 'Next >' (highlighted with a blue box), and a 'Cancel' button.

The Network Mapping page is displayed.

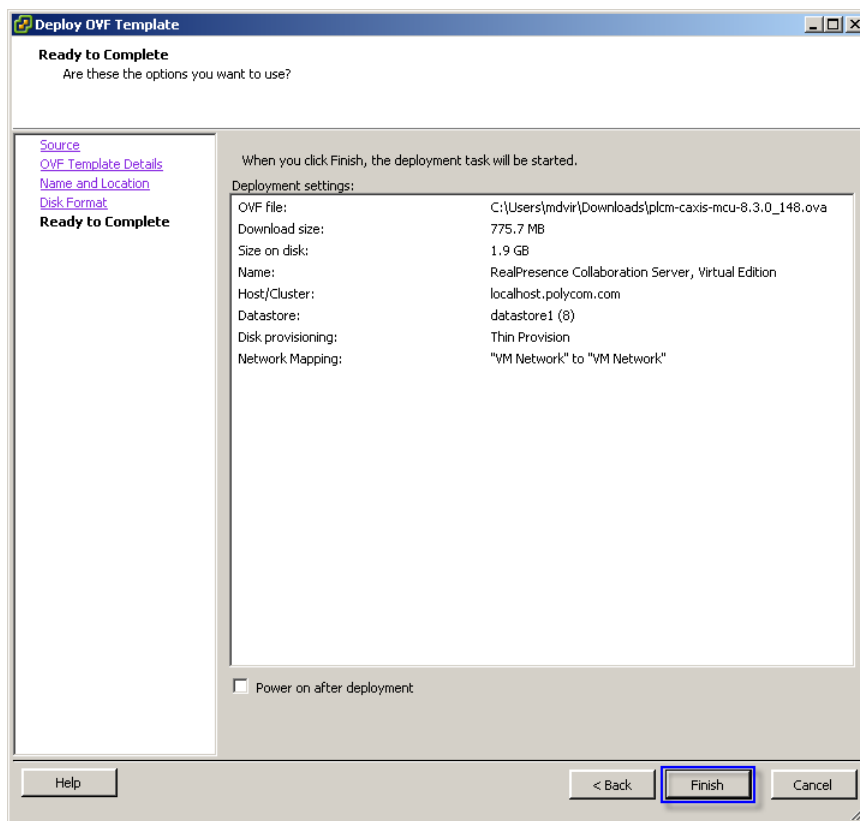
28 Select the appropriate network mappings, then click **Next**.

The screenshot shows the 'Deploy OVF Template' wizard window. The title bar reads 'Deploy OVF Template'. The main heading is 'Network Mapping' with the subtext 'What networks should the deployed template use?'. On the left is a navigation pane with links: 'Source', 'OVF Template Details', 'Name and Location', 'Disk Format', 'Network Mapping' (which is bolded), and 'Ready to Complete'. The main area contains the instruction 'Map the networks used in this OVF template to networks in your inventory'. Below this is a table with two columns: 'Source Networks' and 'Destination Networks'. The first row shows 'linux' in the source column and 'VM Network' in the destination column. Below the table is a 'Description:' label and a text box containing 'The linux network'. At the bottom of the window are three buttons: 'Help', '< Back', and 'Next >', with the 'Next >' button highlighted by a blue border. A 'Cancel' button is also present to the right of 'Next >'.

Source Networks	Destination Networks
linux	VM Network

Description:
The linux network

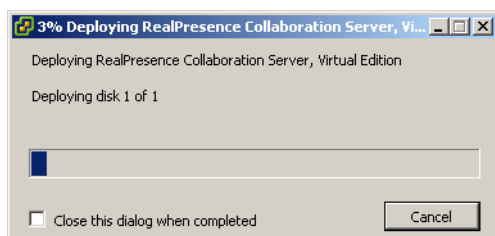
The Ready to Complete page is displayed.



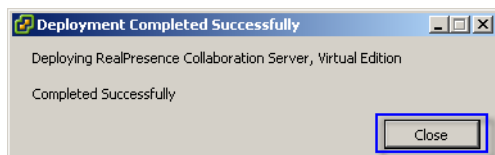
29 Verify that **Power on after deployment** is not selected.

30 Confirm that all the settings are correct, then click **Finish**.

The vSphere Client deploys the OVF file.



When the deployment is complete the following window appears:

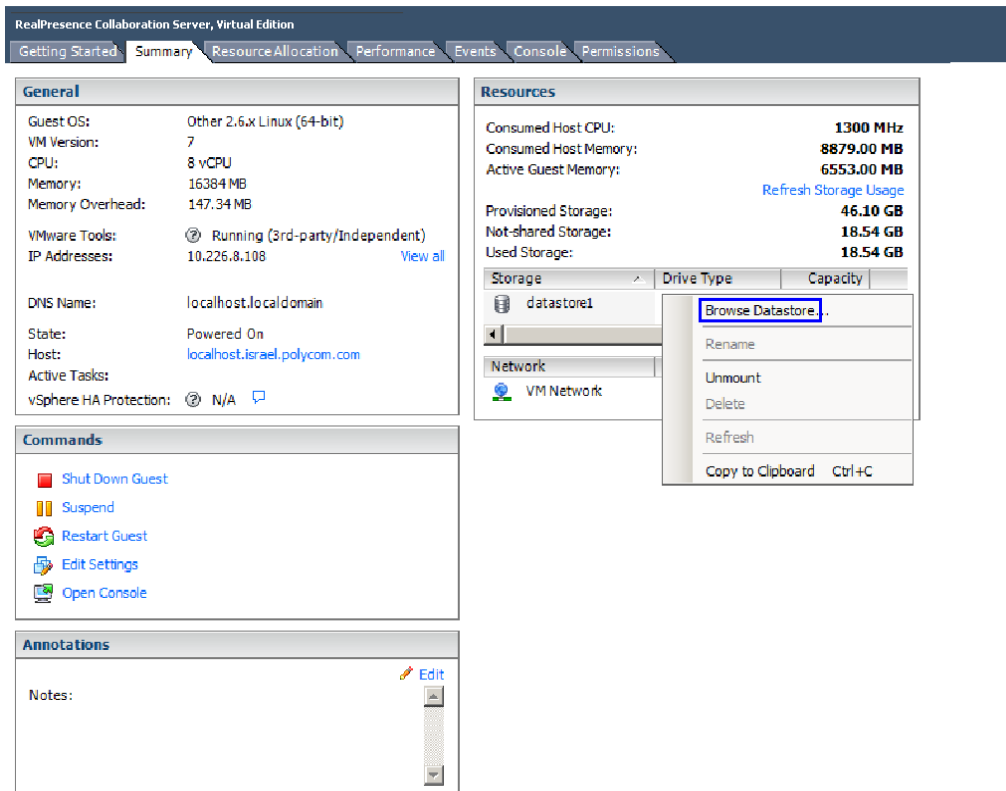


31 Click **Close**.

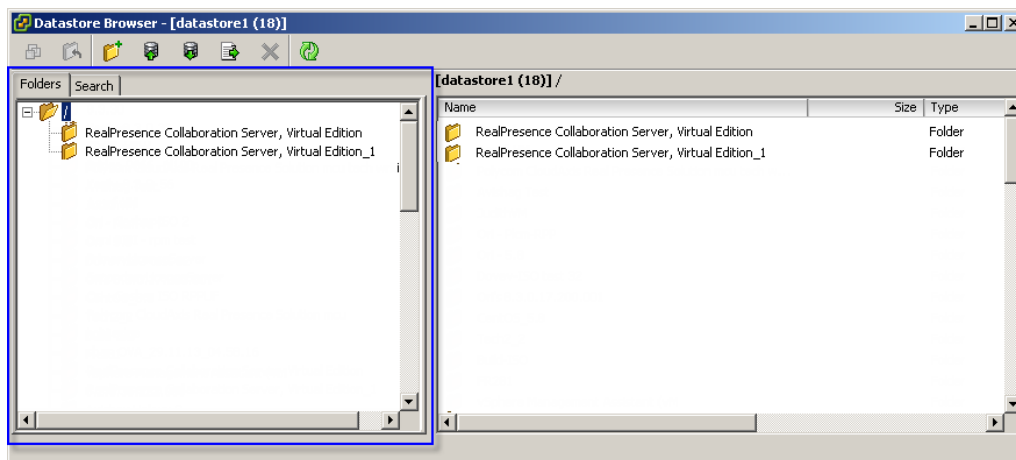
32 In the Inventory Panel, select the Datastore that used to house the MCU.

33 Click the **Summary** tab.

34 Under Resources, right-click the datastore, and click **Browse Datastore**.



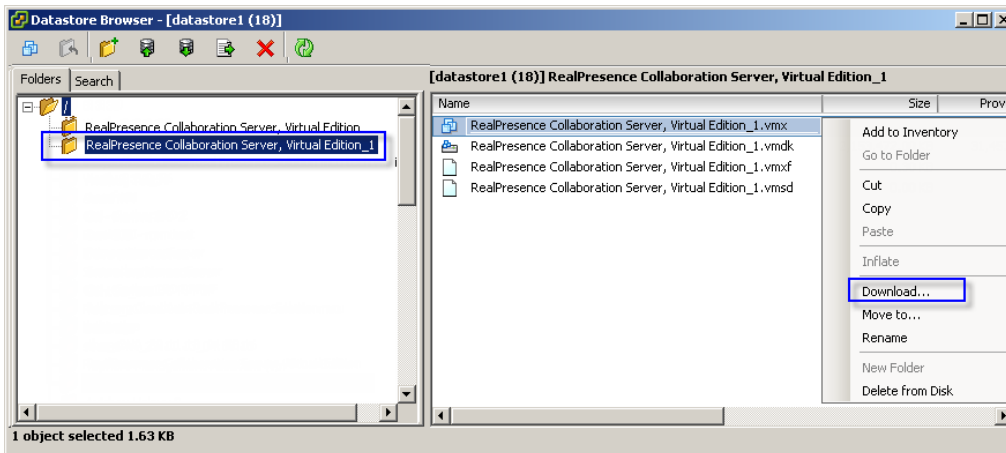
The Browse Datastore window appears.



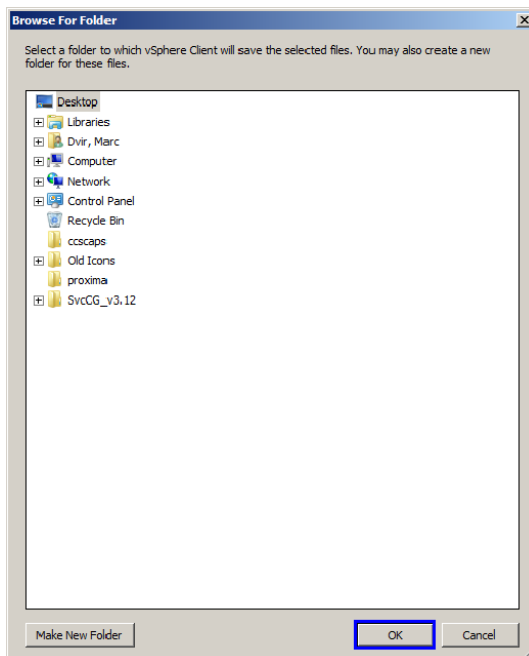
35 In the **Folders** tab, select the folder whose name matches that of the MCU. The folder name will have an underscore and a number at the end.

The contents of the folder are displayed.

36 Right-click the file ending with “.vmx” and click **Download**.

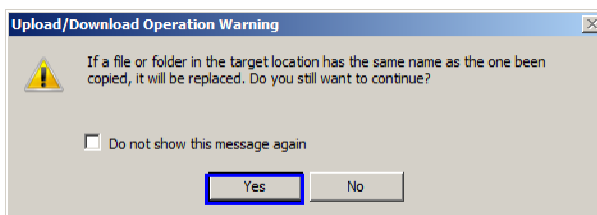


The Browse For Folder window appears.



37 Browse to a location and click **OK**.

The Upload/Download Operation Warning window may appear.



- 38 If the Upload/Download Operation Warning window appears, click **Yes**. If it does not appear, proceed to step 39.

The file downloads.

- 39 Open the file created in step 15.
40 Open the file in any plain text editor.

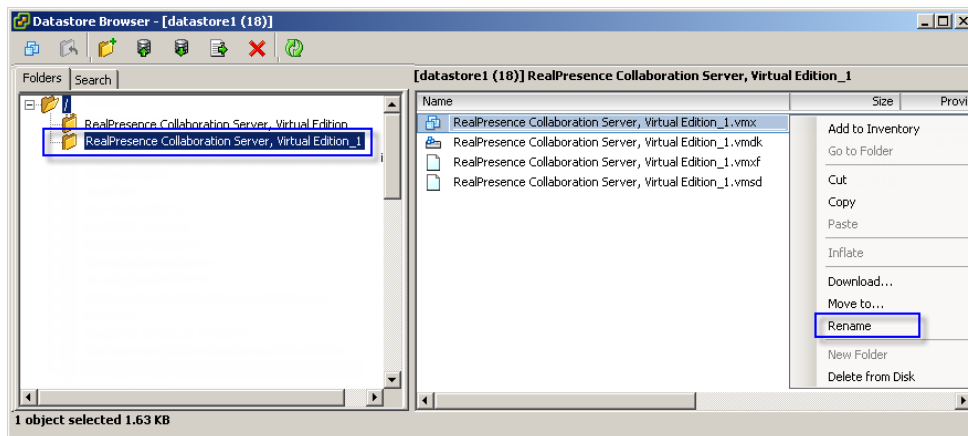
```
43 ethernet0.networkName = "VM Network"
44 ethernet0.addressType = "generated"
45 guestOS = "centos-64"
46 uuid.location = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
47 uuid.bios = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
48 vc.uuid = "52 b7 2d 0c 17 a8 af 14-ec 8b 97 49 bd ec 49 6a"
49 hpet0.present = "TRUE"
50 usb.vbluetooth.startConnected = "TRUE"
51 scsi0.pciSlotNumber = "16"
52 ethernet0.generatedAddress = "00:0c:29:59:3c:e9"
```

- 41 Locate the line that starts with, uuid.bios.
42 Replace that line with the line saved in the other text file.
43 Add the following as a separate line to the file, including the quotation marks:
uuid.action = "keep"

```
43 ethernet0.networkName = "VM Network"
44 ethernet0.addressType = "generated"
45 guestOS = "centos-64"
46 uuid.location = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
47 uuid.bios = "56 4d c9 6c 5d 6d 52 b8-71 32 cb d4 6f 59 3c e9"
48 uuid.action = "keep"
49 vc.uuid = "52 b7 2d 0c 17 a8 af 14-ec 8b 97 49 bd ec 49 6a"
```

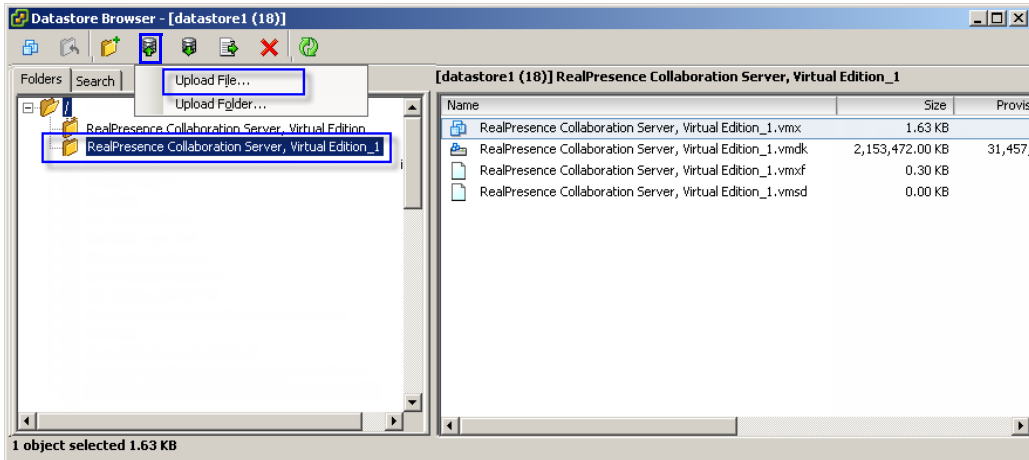
- 44 Save and close the file.
45 **Optional.** To back up the previous configuration:

- a In the Datastore Browser window, right-click the .vmx file, then select **Rename**.



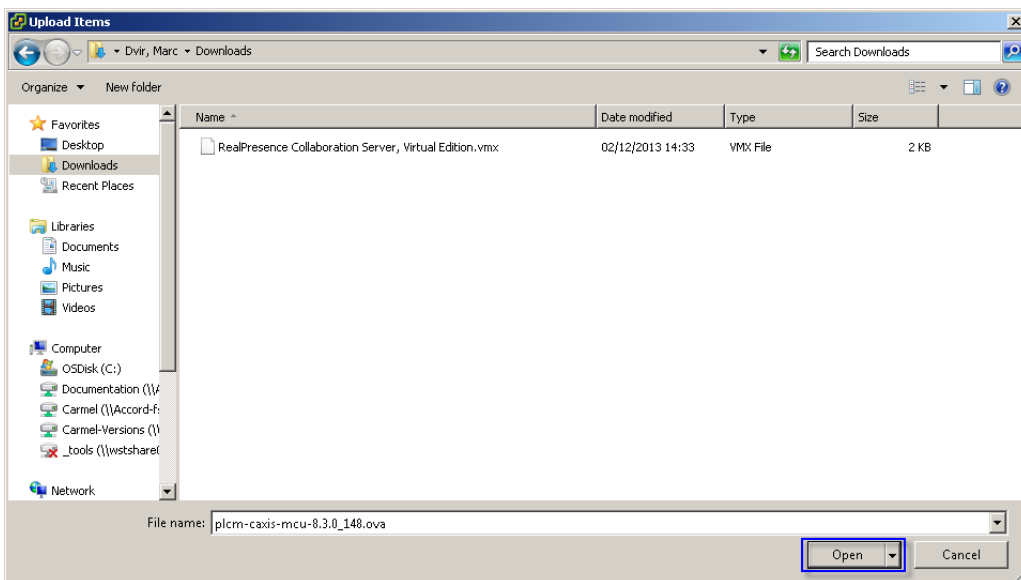
- b Change the file extension to ".bak".

46 In the tool bar of the Datastore Browser window, click the **Upload files to this datastore** button.



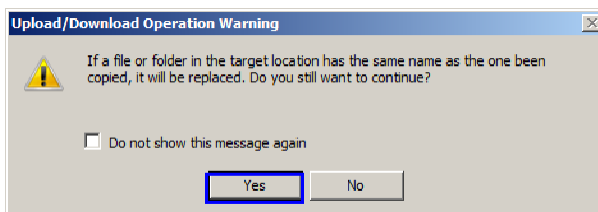
47 Click **Upload File**.

The Upload Items window appears.



48 Navigate to where you saved the “.vmx” file in step 44, select it, then click **Open**.

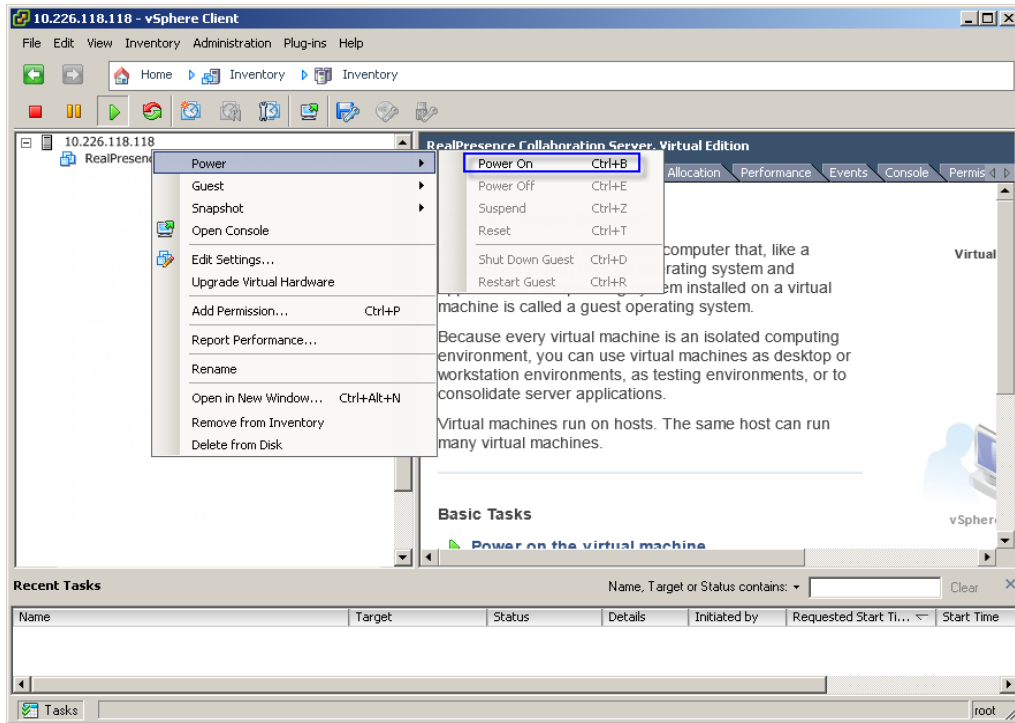
The Upload/Download Operation Warning window may appear.



49 If the Upload/Download Operation Warning window appears, click **Yes**.

The file is uploaded.

- 50 Close the Datastore Browser.
- 51 Perform additional configurations as needed. For more information, see the *Polycom RealPresence Collaboration Server (RMX) Getting Started Guide*,
- 52 In the Inventory Panel, click the Datastore that houses the MCU.
- 53 Right-click the MCU virtual machine, then click **Power > Power On**.

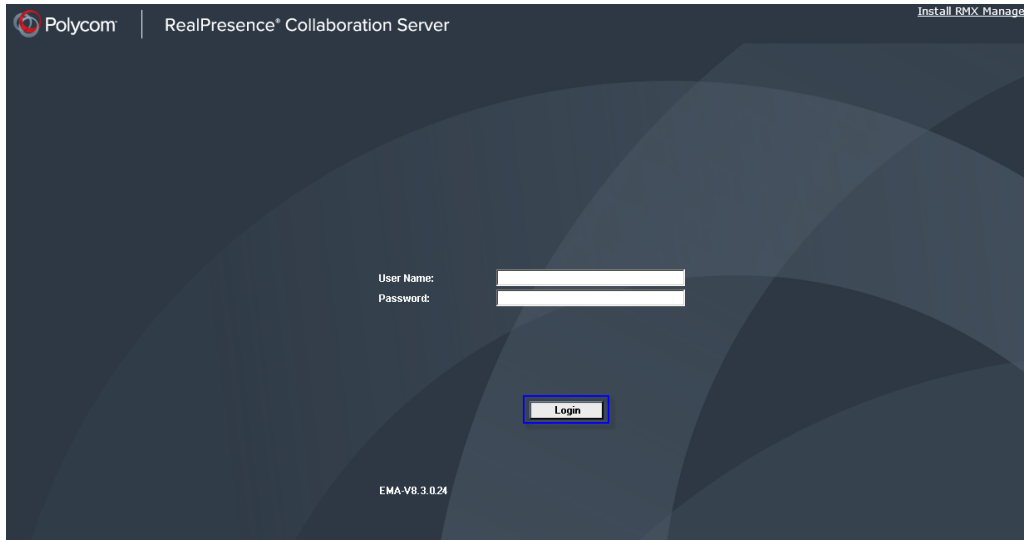


After a few minutes, the MCU turns on.

- 54 Obtain the IP address of the MCU. For more information, see the *Polycom RealPresence Collaboration Server (RMX) Getting Started Guide*.
- 55 If the IP address of the MCU is not defined, manually configure the IP settings. For more information, see the *Polycom RealPresence Collaboration Server (RMX) Getting Started Guide*, [Manual IP Configuration](#).
- 56 Start the RMX Web Client application on the workstation.
 - a In the browser's address line, enter the IP address of the MCU in the format: `http://<Control Unit IP Address>`.

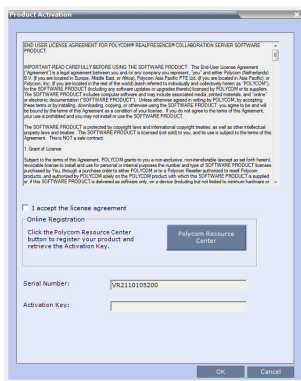
b Click Enter.

The RMX Web Client Login screen is displayed.



- 57** In the RMX Web Client Login screen, enter the default Username (**POLYCOM**) and Password (**POLYCOM**) and click **Login**.

The RMX Web Client opens and the Product Activation dialog box appears with the serial number filled in:



- 58** In the Activation Key field, enter or paste the Product Activation Key obtained earlier and click the **OK** button.
- 59** Click **OK**.
A message indicating that the Product Activation Key was loaded successfully appears.
If the Product Activation Key fails to load, please contact your vendor.
- 60** Click **OK**.



If the Product Activation dialog box does not appear, go to **Setup --> Product Activation** to display the dialog box.

61 On the RealPresence Collaboration Server (RMX) menu, click **Administration > Software Management > Restore Configuration**.

62 **Browse** to the Restore Directory Path where the backed up configuration files are stored and then click **Restore**.

The upgrade to Version 8.4 is complete.



After the upgrade is complete, all permanent conferences must be manually rescheduled.

Upgrading the RMX Manager Application

The RMX Manager application can be downloaded from one of the RMX systems installed in your site or from Polycom web site at <http://www.polycom.com/support>.



Install the latest version of the RMX Manager (version 8.1 and higher are supported).

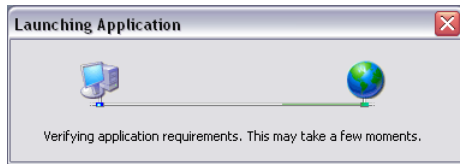
To install RMX Manager (downloading the application from the RMX):



- When upgrading the RMX Manager application, it is recommended to backup the MCU list using the **Export RMX Manager Configuration** option. For more details, see *<Italic>Polycom RealPresence Collaboration Server (RMX) 1500/2000/4000 Administrator's Guide, [Software Management](#)*.
- When upgrading the RMX Manager from a major version (for example, version 8.0) to a maintenance version of that version (for example, 8.0.1), the installation must be performed from the same MCU (IP address) from which the major version (for example, version 7.0) was installed. If you are upgrading from another MCU (different IP address), you must first uninstall the RMX Manager application using **Control Panel > Add or Remove Programs**.

- 1 Start Internet Explorer and connect to the RMX from which the current version was installed.
The Login screen is displayed.

- 2 Click the **Install RMX Manager** link on the upper right corner of the Login screen.
The installer verifies the application's requirements on the workstation.



If the following error message is displayed: "You cannot start application RMX Manager 7.8 from this location because it is already installed from a different location" you are upgrading from an MCU that is other than the one used for the installed version (different IP address).

In such a case, first uninstall the RMX Manager application using **Control Panel > Add or Remove Programs**.

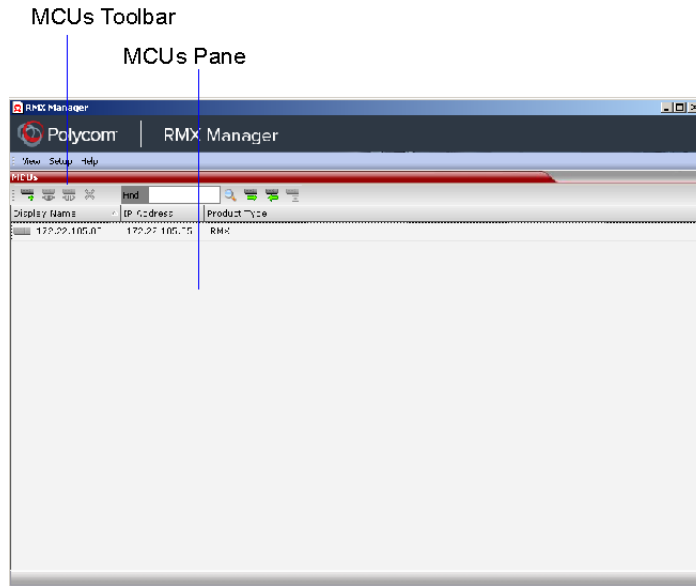


The Install dialog box is displayed.

3 Click the **Install** button.

The installation proceeds.

The installation completes, the application loads and the **MCUs** screen is displayed.



The list includes the previously defined MCUs.



If the MCUs list is empty, import the backed up list using the **Import RMX Manager Configuration** option. For more details, see the *Polycom RealPresence Collaboration Server (RMX) 1500/2000/4000 Administrator's Guide* [Import/Export RMX Manager Configuration](#).

Version 8.4 Detailed Description - New Features

Lync 2013 SVC Connectivity to Polycom MCU

The Microsoft H.264 SVC codec replaces the H.263 codec previously used with Lync 2013 clients. Although similar Polycom's standards-based H.264 and SVC implementation, it is proprietary to Microsoft, enabling video calls between Lync 2013 clients (endpoints) and Polycom endpoints to be established.

The Collaboration Server considers Lync 2010 and H.264 SVC Lync 2013 clients to be AVC endpoints. The administrator must set the Conferencing Mode in the Conference Profile to **CP (Continuous Presence)** to enable H.264 SVC Lync clients to connect to the conference.

Deployment Architectures

Two Deployment Architectures are presented as examples. Both require that a Polycom RealPresence Distributed Media Application (DMA) System 7000 be configured as part of the solution.

- [Deployment Architecture 1 - Collaboration Server Hosted \(Direct\)](#)

Lync 2013 clients connect to a conference hosted on Polycom RealPresence Collaboration Server.

- [Deployment Architecture 2 - MS AV MCU Cascade](#)

Lync 2013 clients connect to a conference on Microsoft AVMCU which is connected to a Polycom RealPresence Collaboration Server.

The following table summarizes current and legacy (non DMA) conferencing modes within the deployment architectures:

Conference Modes by Deployment Architecture

Conference Mode	Deployment Architecture 1	Deployment Architecture 2	
	Direct Dial In/Out (No AV MCU cascade) With or without DMA	AV MCU Cascade Call (Indirect Dial In)	
		With DMA	Non DMA (Backward Compatibility)
AVC Only	Supported. Dial Out out from DMA is not supported. For backward compatibility, Dial out from the RMX Web Client or RMX Manager can be used. When using backward compatibility mode for Dial out, H.264 SVC Lync 2013 clients are not be supported. If the Video Protocol field in the Participant dialog - Advanced tab is set to Auto , RTV protocol is used.	Supported. Simulcast transmitted. Multiple participants received.	Supported. One transmitted RTV stream. One received RTV stream.
Mixed Mode	Supported	Not Supported	
SVC Only	Not Supported		

Backward compatibility to Lync 2010

All Lync 2013 functionality can be disabled by adding the **BLOCK_NEW_LYNC2013_FUNCTIONALITY** System Flag and setting its value to **YES**.

The flag's default value is **NO**, and when set to yes, all Lync 2013 new functionality is disabled. All Lync 2013 clients, whether connected Directly or by MS AV MCU cascade, will connect using the RTV codec, not the MS SVC codec.

Video Resource Requirements and Implications

Lync 2013 SVC clients may not all connect to a VMR with the same stream layout. They are therefore considered H.264 AVC participants and transcoding resources are allocated to them as summarized in the following table.

Bandwidth and Resource Consumption by Video Codec

Video Codec	Resolution and Aspect Ratio	Maximum Video Payload Bit rate (Kbps)	Minimum Video Payload Bit rate (Kbps)	Resources
H.264	320x180 (16:9) Coded as 320x192 212x160 (4:3)	250	15	CIF
H.264/RTVideo	424x240 (16:9) Coded as 432x240 320x240 (4:3)	350	100	CIF
H.264	480x270 (16:9) Coded as 480x272 424x320 (4:3) Coded as 432x320	450	200	SD
H.264/RTVideo	640x360 (16:9) Coded as 640:368 640x480 (4:3)	800	300	SD
H.264	848x480 (16:9)	1500	400	SD
H.264	960x540 (16:9) Coded as 960:544	2000	500	SD
H.264/RTV	1280x720 (16:9)	2500	700	HD720p30
H.264	1920x1080 (16:9)	4000	1500	HD1080p30

Support for HD1080p Resolution

The Collaboration Server Hosted deployment supports HD1080p30 video resolution symmetrically for direct calls.

The MS AV MCU Cascade deployment supports HD1080p30 video resolution only if [Video Optimized](#) mode is selected and according to the settings of the **LYNC_AVMCU_1080p30_ENCODE_RESOLUTION** System Flag:

NO (Default) Video streams sent to and received from the MS AV MCU are HD720p30, SD, and CIF.

YES Video streams sent to the MS AV MCU are HD1080p30, SD, CIF. Video streams received from the MS AV MCU are 720p30, SD, and CIF.

Limit Maximum Resolution for MS SVC Using a System flag

The **MAX_MS_SVC_RESOLUTION** System Flag can be used to minimizing the resource usage by overriding the default resolution selection and limiting it to a lower resolution.

Range: AUTO, CIF, VGA, HD720, HD1080

Default: AUTO

The **MAX_MS_SVC_RESOLUTION** System Flag operates independently from the **MAX_RTV_RESOLUTION** System Flag allowing differing maximum resolutions to be selected for the MS SVC and RTV protocols.

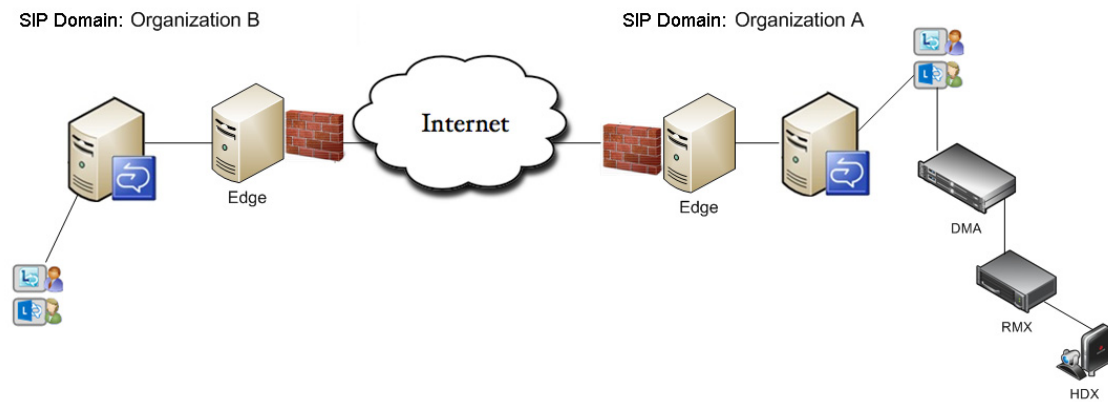
If you want to modify System Flag values, the flags must be added to the System Configuration file. For more information see: [Modifying System Flags](#) and [Controlling Resource Allocations for Lync Clients Using RTV Video Protocol](#) in the *Collaboration Server (RMX) Administrator's Guide*.

ICE Configuration

The Collaboration Server should be configured with ICE regardless of whether an EDGE Server is part of the configuration or not.

Federation Configuration

A secondary SIP domain can be added to the Lync 2013 environment. It must be configured as Federated.



For more information see: [Appendix H - Integration Into Microsoft Environments](#) in the *Collaboration Server (RMX) Administrator's Guide*.

System Flags for Cropping Control

Cropping occurs when the video source (endpoint) aspect ratio is different from the video cell aspect ratio in the Polycom Video Layout.

For all endpoints other than ITP endpoints and panoramic cells the Collaboration Server calculates the mismatch percentage between the source video aspect ratio and Polycom video layout cell aspect ratio. The mismatch percentage is used to determine whether cropping or striping will be applied to the video cell in the Polycom video layout.

For non-panoramic layouts, cropping and striping can be controlled by adding the **CROPPING_PERCENTAGE_THRESHOLD_GENERAL** System Flag and setting its value accordingly.

For panoramic layouts, cropping and striping can be controlled by adding the **CROPPING_PERCENTAGE_THRESHOLD_PANORAMIC** System Flag and setting its value accordingly.

For both System Flags:

Range: -1-100.

Default: -1

If the calculation result is less than or equal to the value of the **CROPPING_PERCENTAGE_THRESHOLD_GENERAL** System Flag, cropping will be applied.

If the calculation result is greater than the value of the CROPPING_PERCENTAGE_THRESHOLD_GENERAL System Flag, striping will be applied.

If the CROPPING_PERCENTAGE_THRESHOLD_GENERAL System Flag value is set to 0, cropping will not be applied.

If the CROPPING_PERCENTAGE_THRESHOLD_GENERAL System Flag value is set to -1 cropping will always be applied.

If the CROPPING_PERCENTAGE_THRESHOLD_GENERAL System Flag value is set to 100, always apply cropping with the exception of mobile aspect ratios. Mobile aspect ratios are those with a larger vertical aspect than horizontal for example 3:4.

Example: An iPhone Lync client sends 288x352 (3:4) aspect ratio. Cropping this resolution to 16:9 would require the cropping of 190 pixels on the vertical aspect. The mismatch calculation would yield $190/352 \sim 54$. If the applicable System Flag's value is set to ≥ 54 , striping, rather than cropping, is applied.

For more information see, [Modifying System Flags](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Sharing Content during a Conference

Using Polycom CSS (Content Sharing Suite) plug in, Lync 2013 clients are able to share content in Polycom Content sessions in both Collaboration Server Hosted calls and Cascaded MS AV MCU calls, with both Lync 2010 & 2013 clients.

Content Sharing behavior is summarized in the following tables:

Content Sharing by Lync Version and Deployment Architecture

Lync Version	Collaboration Server Hosted	Cascaded MS AV MCU
Lync 2010	Supported, as in previous versions.	Not supported
Lync 2013	Supported.	Supported

Content Sharing Behavior by Lync Connection and MCU Type

Connection Type	Content Sharing Behavior
Point to point: Lync client to Lync client.	Microsoft Content is used for the entire session.
Lync calls MS AV MCU conference with no Collaboration Server cascade participant.	Microsoft content is used until Collaboration Server will joins, from which time it will switch to Polycom content
Lync calls VMR directly	Polycom Content is used for the entire session.

Content Sharing Behavior by Lync Connection and MCU Type

Connection Type	Content Sharing Behavior
Collaboration Server joins an MS AV MCU conference before Content sharing is initiated.	Polycom Content is used until Collaboration Server leaves the conference.
Collaboration Server joins an MS AV MCU conference while Content is being shared.	When the CSS plug in of the Content speaker detects that Microsoft Content is being sent by the Lync client, it automatically stops the Microsoft Content and switches to Polycom Content and starts sending Polycom Content. Polycom Content is used until the Collaboration Server leaves the MS AV MCU conference.

CSS Behavior by Lync Content Type

Lync Content Type	CSS Behavior
Desktop Sharing	Send the desktop In cases where there is more than one monitor, the Lync client asks which monitor to use and the CSS will comply.
Program Sharing	Only the application is sent.
Power Point Sharing	Not supported. CSS should not send the Power Point to the Collaboration Server but the Lync clients will be able to send/receive the Power Point. CSS issues a notification in the Lync Content presenter device stating that the Power Point cannot be shared with non Lync devices.
Whiteboard Sharing	Not supported. CSS should not send the whiteboard to the Collaboration Server but the Lync clients will be able to send/receive the whiteboard. CSS issues a notification in the Lync Content presenter device stating that the whiteboard cannot be shared with non Lync devices.

Cisco TIP Support

Polycom's solution that allows the Collaboration Server to natively inter-operate with Cisco TelePresence Systems using Cisco TIP protocol is supported.

MLA (Multipoint Layout Application) is required for managing Cisco TelePresence layouts (whether Polycom ITP Systems are deployed or not). MLA is a Windows® application that allows conference administrators to configure and control video layouts for multipoint calls involving Polycom Immersive Telepresence (ITP) systems. For more information see the *Polycom® Multipoint Layout Application (MLA) User's Guide for Use with Polycom Telepresence Solutions*.

System behavior can be controlled by adding the **MS_AV_MCU_MONITORING** System Flag and setting its value accordingly as summarized in the following table.

System Behavior by MS_AV_MCU_MONITORING System Flag Value and MLA Mode

MS_AV_MCU_MONITORING=	MLA Mode	Collaboration Server Side	MS AV MCU Side
MAIN_AND_IN_SLAVE (Default)	Room Switch	Sees the AV MCU current speaker.	Sees the Collaboration Server hosted current speaker in a 1x1 layout.
	CP Layout	Sees all connected Lync Clients in the layout.	
NO (Not recommended)	Room Switch	Sees a Lync Client which may or may not be the current speaker.	
	CP Layout		
YES	Room Switch	Sees the MS AV MCU current speaker.	
	CP Layout (Not recommended)	Sees cascaded slave MS AV MCUs as empty cells in the layout.	

For more information see [Collaboration With Cisco's Telepresence Interoperability Protocol \(TIP\)](#) and [Collaboration with Microsoft and Cisco](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Lync 2013 Participant monitoring

Lync Clients connected to a conference using the Collaboration Server Hosted architecture will experience normal monitoring, with the addition of the MS SVC codec.

Lync Clients connected to a conference using a MS AV MCU Cascade link will be monitored as a single participant. In the Conference list the MS AV MCU is listed as *Lync AV MCU_x*, where x is an incrementing number, should multiple be multiple conferences connected using MS AV MCU Cascade links.

For more information see [Microsoft RTV Video Protocol Support in CP Conferences in the Collaboration Server \(RMX\) Administrator's Guide](#).

Monitoring Participant Properties - Channel Status Tab

Two Channel parameters for each MS AV MCU Cascade link are displayed: **Video in** and **Video out**.

For both Video in and Video out, the Bit Rate and Packet Loss parameters are displayed as aggregate values. For all other Channel parameters (Jitter, Latency, etc.) the highest values are displayed for each video stream.

user 73 Prog13std Properties

Name: [Endpoint Website](#)

Endpoint Type:

Channels Used:

Channel	Faulty	Bit Rate	Packet Loss	Fraction Loss (Pe	Jitter (P
<input checked="" type="checkbox"/> Audio in		24.0	0	0.00%(0.00%)	0(0)
<input checked="" type="checkbox"/> Audio out		24.0	11	0.00%(0.78%)	1(1)
<input checked="" type="checkbox"/> Video in		2,553.3	537	0.00%(0.00%)	0(0)
<input checked="" type="checkbox"/> Video out		337.0	14	0.00%(2.34%)	0(0)
Content in		0.0	0	0.00%(0.00%)	0(0)
Content out		0.0	0	0.00%(0.00%)	0(0)

Sync Status:

Channel	Source	Position	Protocol Sync Loss	Video Intra Sync	Video R
Video	30611 Default	<input checked="" type="checkbox"/>	0		

	Rate	Video Sync Loss	LPR activation
Tx	4024000	(1)	
Rx	4024000	(0)	

☐ Content Token

[Add to Address Book](#)

OK Cancel Apply

Monitoring Participant Properties - Channel Status - Advanced Tab

Media Info of each media stream sent by the MS AV MCU is displayed:

Stream name: The Display Name of the Lync client.

Algorithms: H.264 or RTV.

Resolution: CIF, SD, VGA, HD720 etc.

Frame Rate: 7.5, 15, 30 etc.

Annexes: Used for H.263 only

RTP Statistics are aggregated and are not detailed per stream.

The screenshot shows the 'user 73 Prog13std Properties' dialog box with the 'Advanced' tab selected. The left sidebar lists various tabs: General, Advanced, Information, Media Sources, SDP, Connection Status, Channel Status, Channel Status - Ad..., and Call Admission Control. The main area contains the following fields:

- Name:** user 73 Prog13std (with a link to Endpoint Website)
- Endpoint Type:** AVC (dropdown)
- Channel Info:** Video out (dropdown)
- RMX IP Address:** 10.226.228.68:50192 UDP
- Participant IP Address:** 10.226.228.45:2208 UDP
- ICE RMX IP Address:** 10.226.228.68:50192 UDP
- ICE Participant IP Address:** 10.226.228.45:2208 UDP
- ICE Connection Type:** Local
- Media Info:**

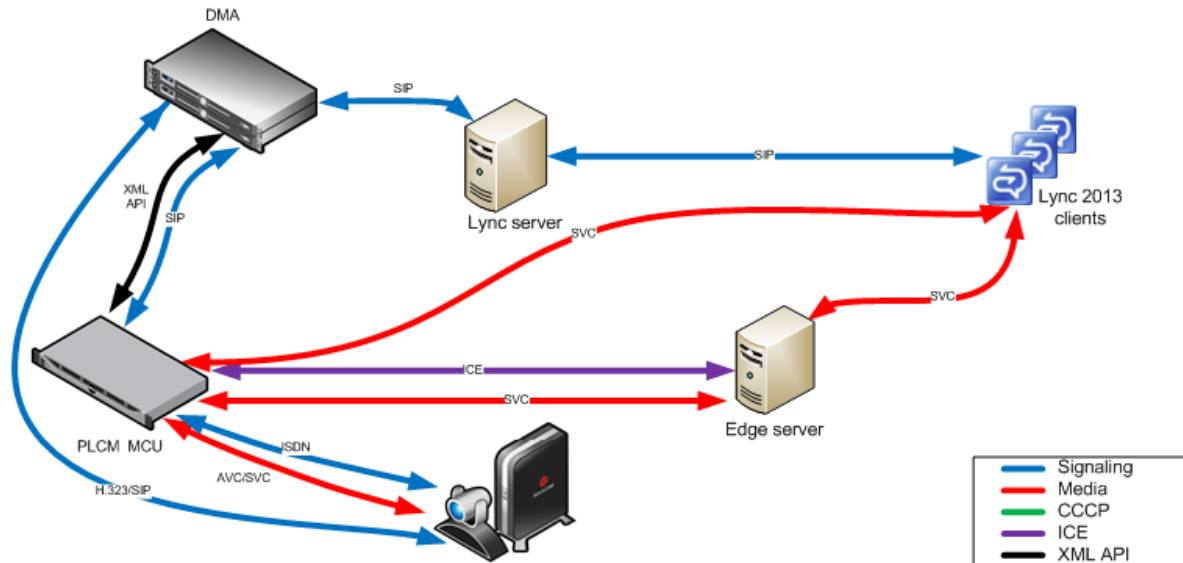
Field	Value
Algorithm	MS_SVC
Resolution	QVGA
Frame Rate	15
Annexes	

At the bottom right, there are buttons for 'Add to Address Book', 'OK', 'Cancel', and 'Apply'.

For more information see [Participant Level Monitoring](#) in the Collaboration Server (RMX) Administrator's Guide.

Deployment Architecture 1 - Collaboration Server Hosted

Lync 2013 clients connect to a conference hosted on a Polycom Collaboration Server.



- H.264 SVC Lync clients are connected using UCConfig Mode 1:
 - The SVC Codec's Temporal Scaling capability is used to send one video stream to and from the Collaboration Server for each resolution at multiple frame rates.
 - H.264 SVC uses H.264 SEI messages to send stream layout information rather than SDP messages.
 - There is one audio stream per direction.
- Lync clients place calls to a Virtual Meeting Room provisioned on the DMA, for example, 1234@dma.example.com
- The Collaboration Server can connect Lync 2013 participants to either mixed AVC/SVC or to AVC only conferences.
- Lync 2013 clients dialing to a VMR, where the type of the conference is SVC/AVC mixed and AVC CP only have their video decoded. The Collaboration Server sends encoded video to Lync 2013 participants.

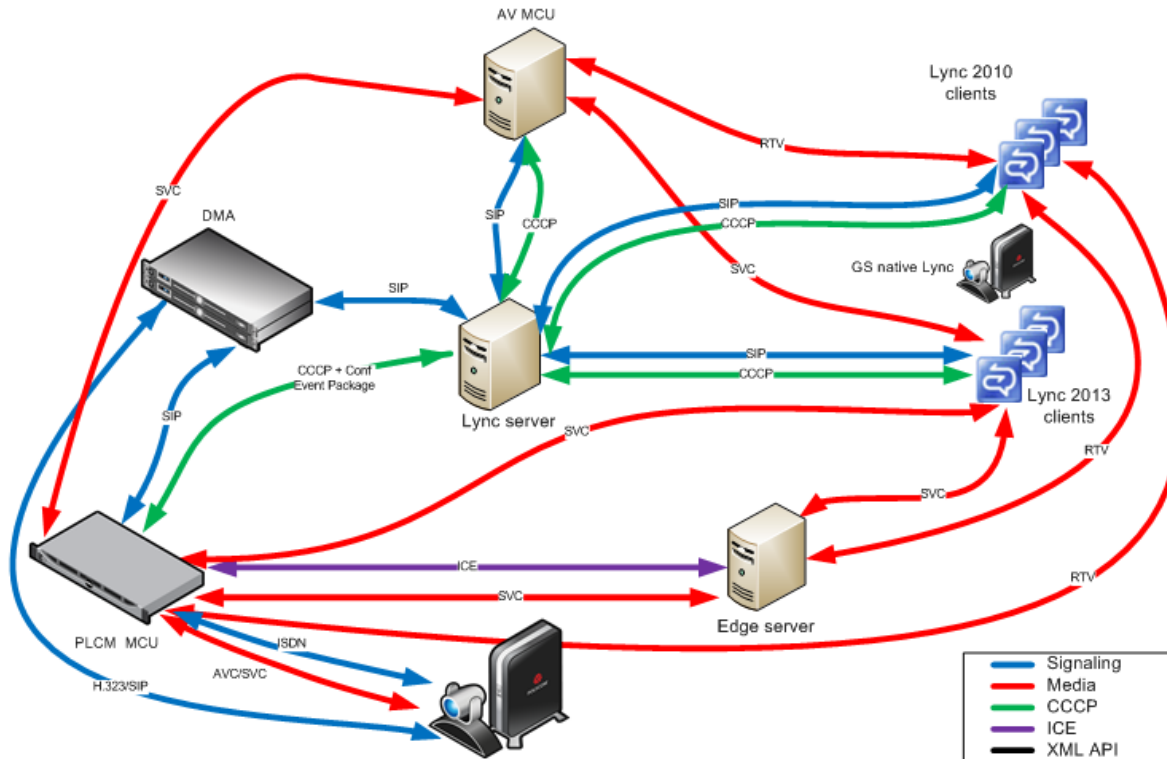
Look and Feel

All participants experience a Microsoft Point to Point conference with Polycom video layouts.

Only Classic Skin is supported. For more information about Skins, see [Defining AVC-Based Conference Profiles](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Deployment Architecture 2 - MS AV MCU Cascade

Cascaded VMR Participants (Lync 2013 clients) connect to a conference on a Microsoft AV MCU which is cascaded with a Collaboration Server.



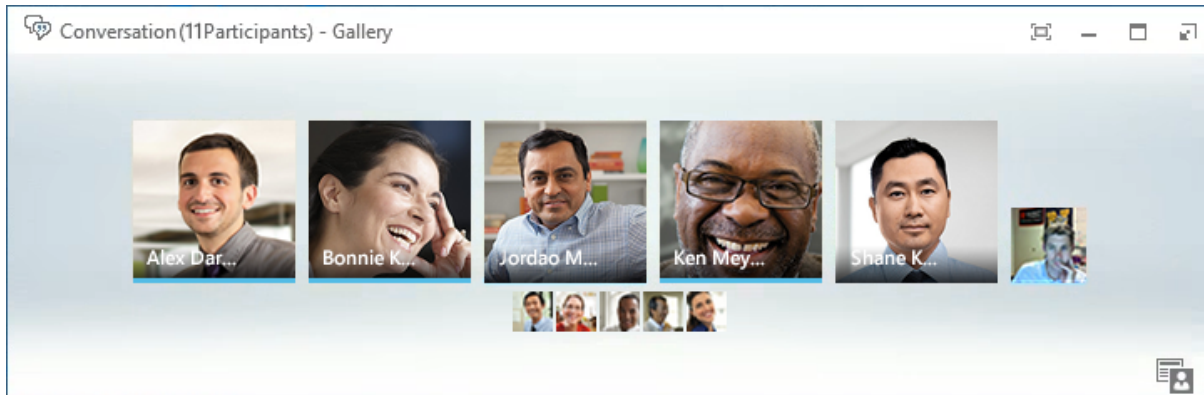
In this deployment architecture, participants connecting to the conference by way of the Collaboration Server are referred to as Cascaded VMR Participants.

- Lync clients place calls to a Virtual Meeting Room provisioned on the DMA, for example, 1234@dma.example.com
- The Cascaded VMR connects as a Lync client to the AV MCU.
 - The Collaboration Server utilizes the SVC Codec's Temporal Scaling capability to send up to three simulcast video streams to the AV MCU, each at multiple frame rates.
 - The Collaboration Server receives media from up to five different Lync clients from the AV MCU.
- Lync clients experience a Microsoft Point to Point conference with Cascaded VMR Participants appearing as Lync clients.
- Cascaded VMR Participants experience a conference with Polycom video layouts.
- Lync clients will see the active speaker from the
- Cascaded VMR while Cascaded VMR Participants will see up to 5 Lync clients in addition to other participants.

- Lync 2013 clients, connected by means of the Lync AV MCU, in point to point calls, can connect to Collaboration Server VMR participants by escalating the Lync call to a multipoint conference, including the Collaboration Server VMR meeting room and its participants.
 - The Buddy List can be used to select participants followed by, right-clicking and selecting Start a Video Call.
 - An ad-hoc (Meet Now) Lync conference can be started; a drag-and-drop operation can then be used in the Buddy List to add a Cascaded VMR to the conference.
- Cascaded VMR Participants, in point to point calls, can connect to Lync AV MCU participants by escalating the call to a multipoint Lync Conference.
 - A re-INVITE is issued to escalate the conference from point-to-point to multipoint.
- A re-INVITE can be issued from an ongoing Audio conference to escalate it, enabling connected participants to start sending video.
- Conferences hosted on a Collaboration Server can connect in cascade to only one AV MCU hosted conference.
- The Collaboration Server can host multiple conferences, each connected in cascade to a different AV MCU hosted conference. Conferences, connected in cascade to an AV MCU hosted conference cannot be connected in cascade to other Collaboration Servers.

Look and Feel for Lync clients and Group Series Endpoints

Lync clients and Group Series endpoints with native Lync capability connect to the AV MCU directly and experience a Lync look and feel conference and can see all Lync clients; up to 5 simultaneously in Gallery View.



If the active speaker is a Cascaded VMR Participant, the participant is seen by Lync Clients in a video window in the Gallery View.

By default, Cascaded VMR Participants are forced to a 1x1 layout by the default setting of the `FORCE_1X1_LAYOUT_ON_CASCADE_LINK_CONNECTION` System Flag. The flag's default setting is YES, which prevents a VMR layout being displayed within a Gallery View video window. If required, alternative Personal Layouts can be forced only after this System Flag has been added and its value set to **NO**.

For more information see, [Modifying System Flags](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Look and Feel for Legacy Endpoints

Legacy endpoints will connect to the Collaboration Server and will be able to see all Lync clients; up to 5 simultaneously in Polycom video layouts. Only Classic Skin is supported. For more information about Skins, see [Defining AVC-Based Conference Profiles](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Video Resource Requirement Selection in MS AV MCU Cascade

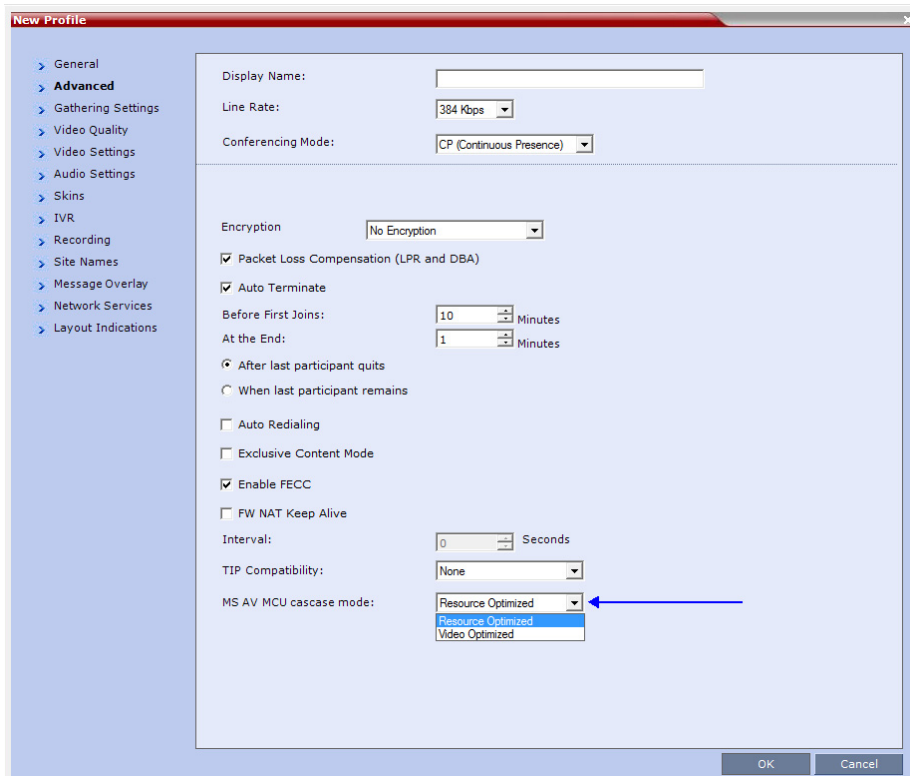
Collaboration Server resource usage in MS AV MCU Cascade can be configured in the conference Advanced tab of the Profile dialog by selecting either **Resource Optimized** or **Video Optimized**.

Resource Optimized

The Collaboration Server's Resolution Configuration menu, resolutions of up to HD540p30 (SD30) are supported, depending on the conference's profile setting.

Video Optimized

The Collaboration Server's Resolution Configuration menu, resolutions of up to HD720p30 are supported, depending on the conference's profile setting.



If the Collaboration Server has insufficient resources, endpoints will be connected at the lowest resolutions possible: CIF or SD. If the Collaboration Server has no available resources, endpoints will not be connected.

Calls that are initially connected as Audio Only will only have video resources allocated to them if they are escalated to video calls.

Video Forcing and Changing Layout in MS AV MCU Cascade

MS AV MCU Cascade behaves in the same manner as Collaboration Server to Collaboration Server Cascading.

The Conference Layout as well as the Personal Layouts of participants can be changed. Participants can be forced to appear in specific video cells of the layouts.

If Lync 2013 video streams are to be included in a Polycom Conference Layout, the Collaboration Server will remove these streams from the layout sent over the AV MCU cascade link.

If Lync 2013 video streams are to be included in a Personal Conference Layout, the Collaboration Server will not remove these streams from the layout to be sent over the AV MCU cascade link.

Handle Low Bit Rates Calls From the AV MCU

If the Collaboration Server, or a Group Series endpoint is connected to the AV MCU at a bit rate of 256kbps, the AV MCU transmits only one video stream even if it receives multiple video source requests.

At bit rates lower than 256kbps (128kbps and 192kbps) the AV MCU does not transmit video.

This limitation can be controlled using the **DISABLE_LYNC_AV_MCU_128_AND_192_KBPS** System Flag. The flag must be manually added to the System Configuration and its value modified as required:

NO (Default)—The Collaboration Server sends 128kbps or 192kbps (according to the call rate) but will receive 256kbps for each incoming video stream.

YES—The Collaboration Server will not send or receive video from the Lync AV MCU. The connection is audio only.

For more information see, [Modifying System Flags](#) in the *Collaboration Server (RMX) Administrator's Guide*.

Remove Empty Cells From the Video Layout

Empty cells in the Video Layout can occur as result of the following causes:

Case 1 — A camera connected a PC that is hosting a Lync client is switched off, the cell in which the Lync client was displayed remains in the video layout and is empty.

Case 2 — A Lync 2013 Client is connected using a CIF port at a bit rate that exceeds 192kbps.

Case 1

The empty cell can be removed from the video layout by adding the

REMOVE_EP_FROM_LAYOUT_ON_NO_VIDEO_TIMER System Flag and setting its value as required.

Range: 0 – 19 (seconds): The feature is disabled.

20 – 300 (seconds): The feature is enabled.

Default: 20

When enabled (flag value 20 - 300), the endpoint is removed when the empty cell is detected, and the cell is used for another participant if:

- No video RTP messages are received from the EP for the defined timer value in addition to one of the following timers, depending on the call type:
 - DETECT_SIP_EP_DISCONNECT_TIMER
 - DETECT_H323_EP_DISCONNECT_TIMER

- Either the **PRESERVE_PARTY_CELL_ON_FORCE_LAYOUT** System Flag =NO
or

The endpoint is not forced in the layout.



In Lync environments that do not include ICE, the empty cell will remain in the layout for direct Lync calls.

Case 2

The **RTV_MAX_BIT_RATE_FOR_FORCE_CIF_PARTICIPANT** System Flag has been added to the system with a default value of 192 (kbps). This ensures that the Lync Client sends the correct resolution and that its cell in the Video Layout is displayed correctly

New Licensing Server

Polycom has introduced a new software licensing procedure for the *RMX™ Virtual Edition*. The previous CFS licensing procedure no longer applies.



This guide assumes that you have downloaded and installed the *RealPresence Collaboration Server RCPS Virtual Edition*.

For more information, see *RealPresence Collaboration Server RCPS Virtual Edition, Getting Started Guide, First Time Installation and Configuration for the RealPresence Collaboration Server Virtual Edition*.

Licensing Modes

The new licensing procedure consists of two modes:

- **Standalone Mode**

In Standalone mode, the number of resources is determined by the capacity of your machine, including the number of ports.

- **Solution Mode (RPP)**

In RPP mode, the number of resources is determined by the license agreement.

Activating the Licensing Agreement

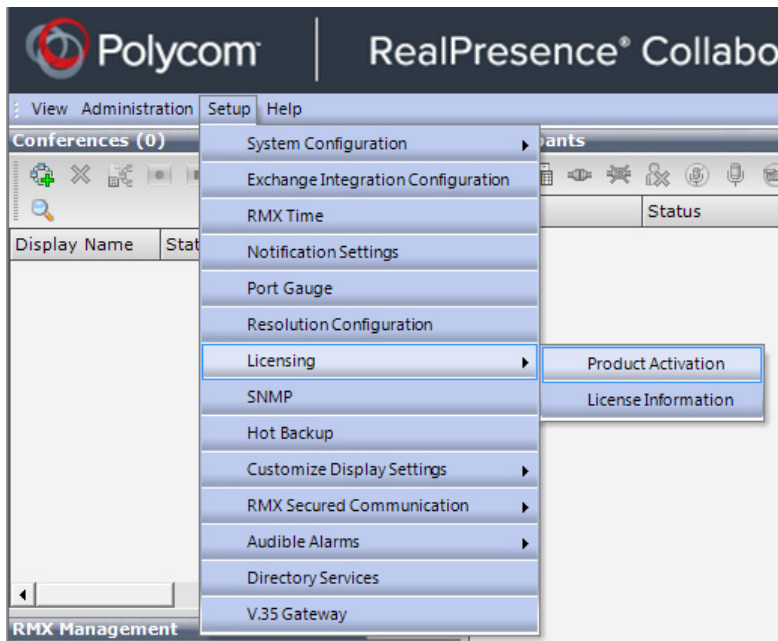


The Licensing Information tab is now under **Setup** in the Main Menu, and not under **Administration**, as in previous versions.

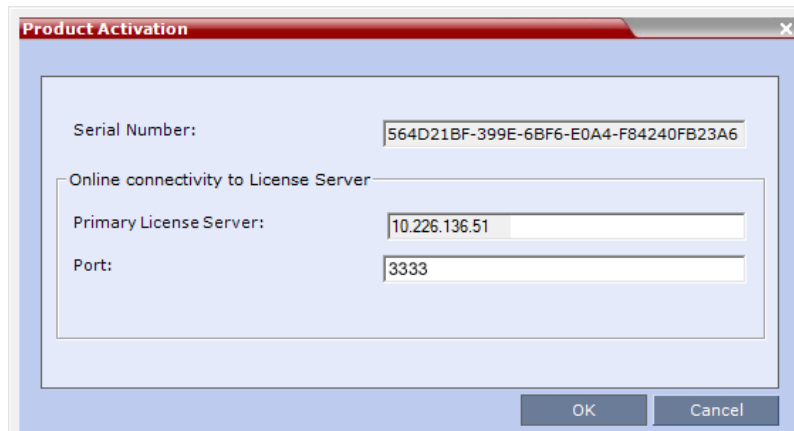
Before you begin to use the *RealPresence Collaboration Server Virtual Edition*, you need to activate the Licensing Agreement.

To activate your Licensing Agreement:

- 1 On the Collaboration Server menu, click **Setup > Licensing**.



- 2 Click **Product Activation** to display the **Product Activation** dialog.



- 3 Enter the IP address of the Primary Licensing Server. All other fields are populated by default.

Product Activation Parameters

Field/Option	Description
Serial Number	The serial number is the Universal Unique Identifier (UUID). By default, it is automatically loaded into the Serial Number field on installation.
Primary License Server	Enter the IP address of the Licensing Server *

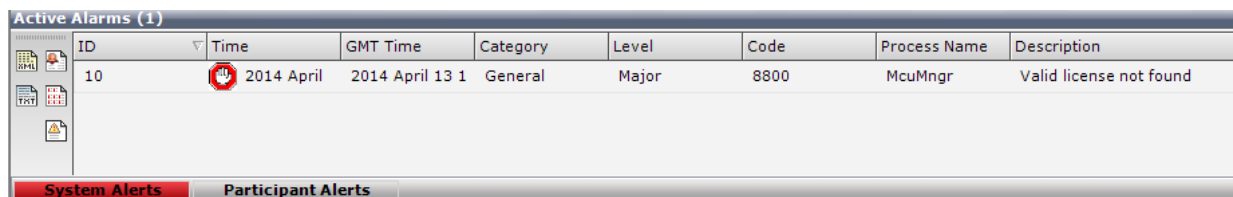
Product Activation Parameters

Field/Option	Description
Port	The number of the communication port between the MCU and the Licensing Server. The default port number is 3333 (HTTPS, secured). The number is configurable.
*The Licensing Server is the Polycom local license server. It enables you to securely acquire the licences for the products you have purchased.	

- 4 Click **OK**. An activation request is sent to the Licensing Server.

Active Alarms

In the event of any failure in the licensing procedure, an Active Alarm is displayed in the Collaboration Server System Alerts pane.



ID	Time	GMT Time	Category	Level	Code	Process Name	Description
10	2014 April	2014 April 13 1	General	Major	8800	McuMngr	Valid license not found

Active Alarms

Alarm Code	Alarm Description
Insufficient resources	In Standalone (a La Carte) mode, when the number of ports you attempt to use exceeds the number contained in the License Agreement.
License was modified	Modified license includes change in capabilities The modified license will take effect after system restart
Valid license not found *	This alarm may be triggered for the following reasons: <ul style="list-style-type: none"> No accessible license on system startup. Licensing Server is not accessible at this time. Borrow date (product expiration date) has been reached.

* If no valid license is found, the MCU attempts to contact the Licensing Server at 1 minute intervals (or according to the interval defined in the **LICENSE_VALIDATION_INTERVAL** system flag).

In the event that no valid license is found, or the license agreement has expired, the MCU responds as follows:

- All resources are blocked and new calls cannot be created (dial-in or dial-out).
- Current calls continue.
- New ongoing conferences cannot be created.
- New meeting rooms and gateway profiles can be created, but cannot be activated.



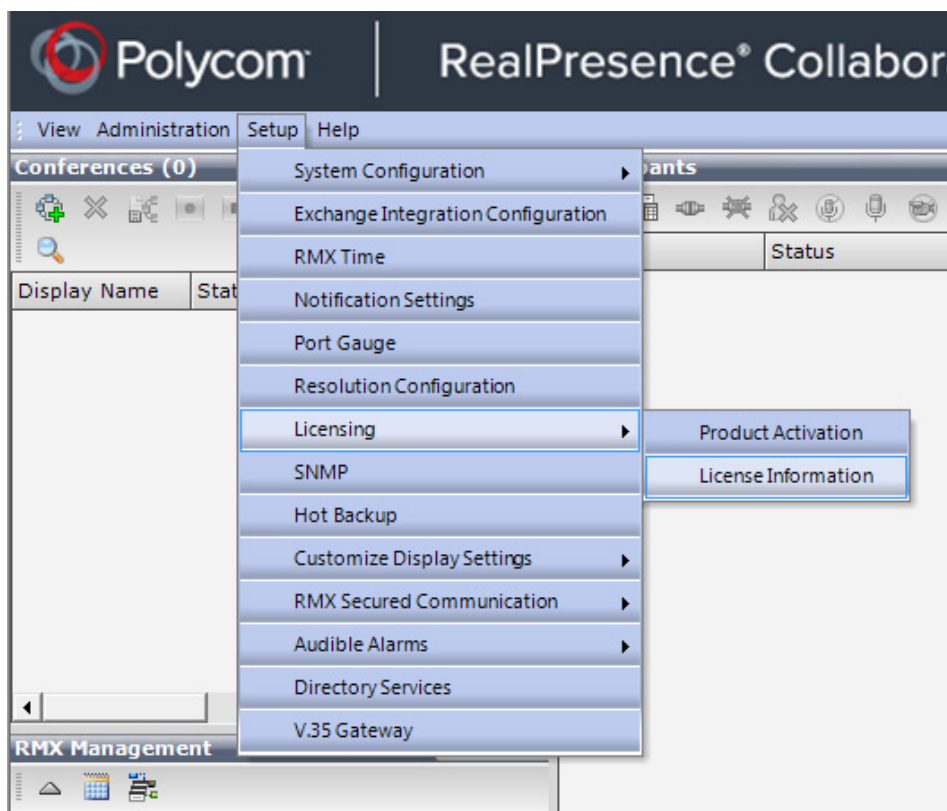
For more information, see the *Polycom® RealPresence Collaboration Server 800s/Virtual Edition Administrator's Guide*, [Appendix B - Active Alarms](#).

Viewing Licensing Properties and Capabilities

Follow the procedure below to view your current licensing properties and capabilities.

To view licensing properties and capabilities:

- 1 On the Collaboration Server menu, click **Setup > Licensing**.



- 2 Click **License Information** to display the **License Information** window.

Licensing Information

License Properties

License Server: 10.226.136.51

Borrow License Expiration Date: 14/05/2014 02:59:59

Refresh License

Licensed Capabilities

CP(HD720p30) Resources: N/A

SVC: True

Telepresence Mode: True

Encryption: True

Multiple Services: False

HD: False

AVC_CIF_PLUS: True

TIP: True

ISDN/PSTN: False

Polycom Partners

Avaya

Ibm

OK

Licensing Properties Parameters

Field	Description
License Server	The name or IP address of the Licensing Server
Borrow Licence Expiration Date	The date on which the product expires. The borrow expiration date is updated each time the MCU refreshes the license
Refresh License	Pressing this button manually refreshes the license details
License Capabilities	This section displays the capabilities you are licensed to use Capabilities refer to the particular feature or resource capacity you are entitled to use according to the license agreement

Licensing Properties Parameters

Field	Description
Polycom Partners	Lists licensed Polycom partners
* The Borrow License Expiration Date is whatever date is reached after seven days from the failure to connect to the Licensing Server. The MCU will continue to function up to the expiration date. When the expiry date is reached, an Active Alarm displays in the System Alerts pane.	

Setting the Time Interval for License Validation and Updates

The MCU automatically checks for license validity and updates. The default flag value is set to 1 minute. However, this can be modified to anything between 1-60 minutes by setting the **LICENSE_VALIDATION_INTERVAL** system flag.

For more information, see the *Polycom® RealPresence Collaboration Server 800s/Virtual Edition Administrator's Guide*, [System Configuration Flags](#).

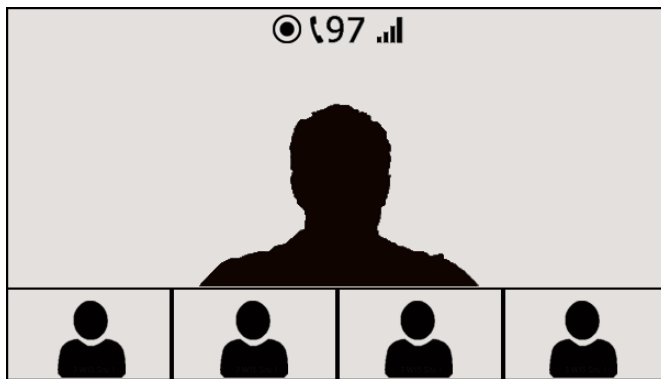
Audio-Only Indication Participant Icon

During an ongoing conference, Audio Participants Indication icon provides an indication to all participants that audio-only endpoints and secondary video devices are connected to the conference.



The Audio Participant indication icon is displayed in the conference video screen along with the number of audio-only or secondary endpoints connected. These icons are displayed as part of a group that includes a network quality indication and a recording indication displayed when recording is active. The icon group is displayed for AVC endpoints only.

The following figure shows that 97 audio participants are connected to the current conference.



The following conferencing modes are supported:

- AVC-CP (Continuous Presence)
- CP and SVC (Mixed Mode).
- Up to 99 audio participants can be indicated; when more than 99 participants are in the conference, the indicator shows 99+.
- You can set audio participant indication to display permanently or for a short period only when the number of audio participants changes. When audio participant indication is set to display permanently, it is displayed only when audio participants are connected to the conference.

Audio participant indication is not supported in the following circumstances:

- In TIP-enabled conferences
- In SVC only and AVC-VSW (Video Switched) conferencing modes
- For remote audio participants in cascading conferences; only the number of audio participants connected to the local MCU is displayed
- On SVC endpoints
- During the gathering phase of a conference
- At video resolutions lower than 4CIF

Choosing the Display Position of the Indication Icons

The display, position, and duration of the indication icons are configured in the Layout Indications tab of the conference Profile dialog, shown next.

The screenshot shows the 'New Profile' dialog box with the 'Layout Indications' tab selected. The left sidebar lists various configuration categories, with 'Layout Indications' highlighted. The main area contains the following settings:

- Display Name: [Text Field]
- Line Rate: 384 Kbps [Dropdown]
- Conferencing Mode: CP (Continuous Presence) [Dropdown]
- Position: Left Top [Dropdown]
- ☒ Recording
- ☒ Audio Participants
 - ☐ Permanent
 - ☒ On audio participants change Duration: 10 [Spinner] Seconds
- ☒ Network Quality

At the bottom right are 'OK' and 'Cancel' buttons.

Choose Indication Icons to Enable for Display

To enable indication icons, select the Recording, Audio Participants, and Network Quality check boxes in the Layout Indications tab of the conference Profile dialog.



The Recording indication icon is a duplicate of the **Display Recording Icon** field in the Recording tab of the Profile dialog. For more information, see [Recording Conferences](#) in the *Collaboration Server (RMX) Administrator's Guide*.

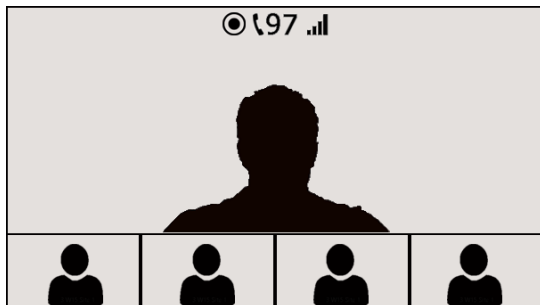
Indication Icon Display Positions

Use the Position drop-down menu to configure the display position of the indication icons group. Icons can be displayed in the following positions in the video layout:

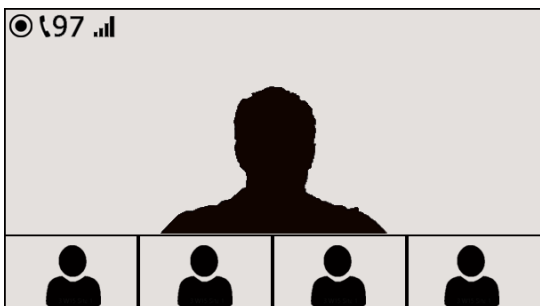
- Top-left
- Top center (default)
- Top-right
- Bottom-left
- Bottom
- Bottom-right

Following are examples of the indication icon display positions.

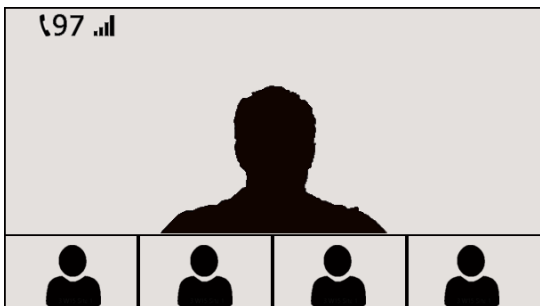
Top-center (default) with all indication icons enabled



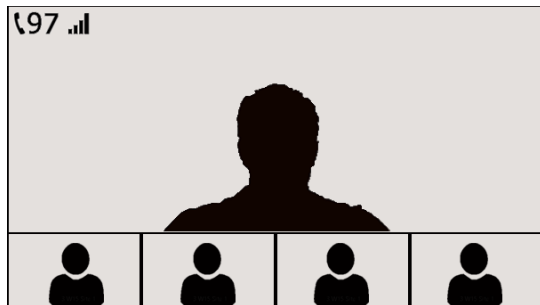
Top-left, with all indication icons enabled



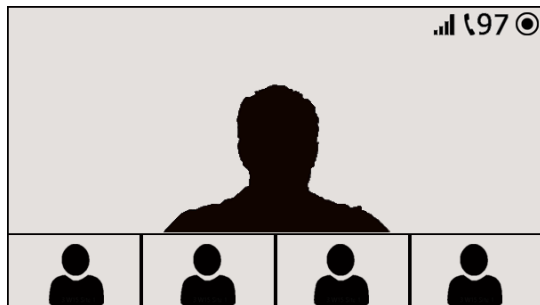
Top-left, with all indication icons enabled, recording enabled but not active



Top-left, audio participants, network quality enabled, recording not enabled



Top-right with all indication icons enabled, recording active



Gateway Calls to Remote SIP Domain

The RMX's *Gateway* functionality has been enhanced, enabling the connection of H.323 and SIP endpoints to SIP endpoints residing in a remote domain, different to that of the MCU's domain.

Guidelines

- The calling endpoint may be H.323 or SIP.
- The destination endpoint must be SIP.

Calling a SIP Endpoint in a Remote Domain

The dial string from the calling endpoint to the RMX includes the gateway dial-out number of the SIP endpoint that is located in the remote domain.

By definition, a dial-in string cannot contain two domains and it is therefore necessary that the dial string be of the following format:

```
mcu-meeting-room*dest%40dest-domain@mcu-domain
```

Where:

- The domain of the gateway call is **mcu-domain**
- The remote destination domain is **dest%40dest-domain**.
- The “%40” is replaced with an “@” when the gateway call is dialed to the remote SIP destination.



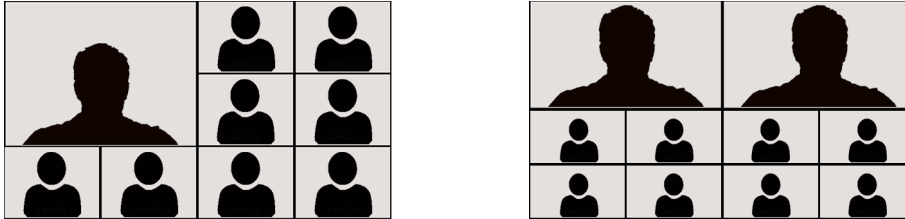
In order to support **RTV**, the **SIP Server Type** must be defined as **Microsoft**.

Limitation

- DTMF tones and Caller-id are not passed end-to-end.

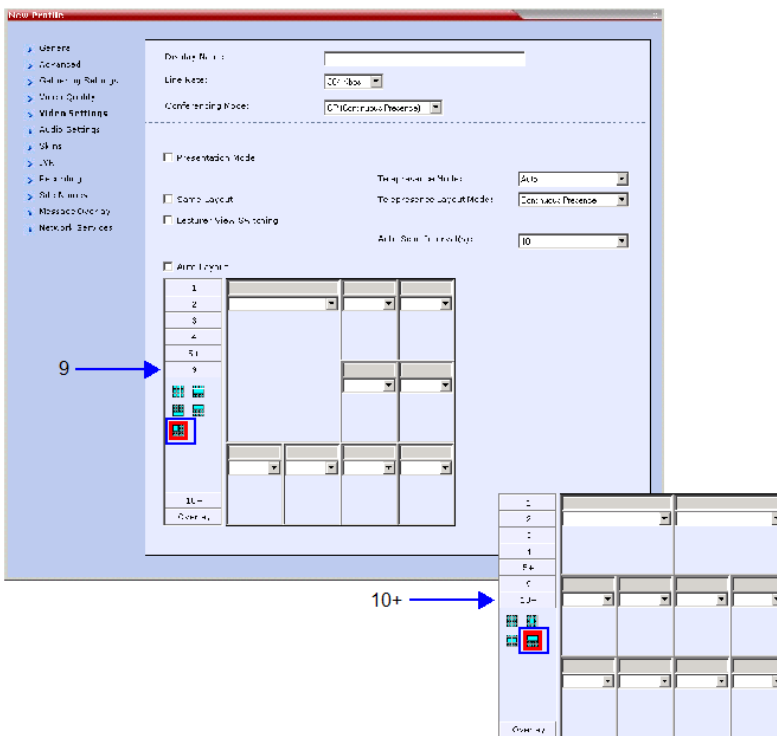
New Video Layouts

The following *Video Layouts* have been included in this version.



Selecting the Video Layouts

For conferences, the layouts can be selected by clicking the  and  icons in the **9** and **10+ Video Layout** groups of the **New Profile / Profile Properties - Video Settings** tab.














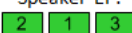


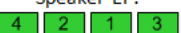








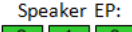

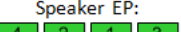












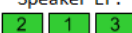


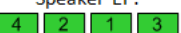



For participants, the layouts can be selected as *Personal Layouts* in the same manner as for conferences, using the *Participant Properties - Media Sources* tab.

TelePresence Display Matrix

How the speaker video is displayed on the screens of the conference participants is dependent on the relationship between the number of screens the speaker endpoint contains and the number of screens of the endpoints of the other conference participants.

The following Telepresence Display Decision Matrix table below indicates how the speaker video will be displayed on the various participant endpoints, when the MCU is managing Telepresence Room Switch conference layouts.

Number of Screens		Speaker Endpoint			
		1	2	3	4
Participant Endpoint	1	Speaker EP:  Displaying EP (mirror):  EP1	Speaker EP:  Displaying EP (mirror):  EP1	Speaker EP:  Displaying EP (mirror):  EP1	Speaker EP:  Displaying EP (mirror):  EP1
	2	Speaker EP:  Displaying EP (mirror):   EP-2 EP1	Speaker EP:  Displaying EP (mirror):  EP2 EP1	Speaker EP:  Displaying EP (mirror):   EP2 EP1	Speaker EP:  Displaying EP (mirror):  EP2 EP1
	3	Speaker EP:  Displaying EP (mirror):    EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):   EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):  EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):    EP2 EP1 EP3
	4	Speaker EP:  Displaying EP (mirror):     EP4 EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):    EP4 EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):   EP4 EP2 EP1 EP3	Speaker EP:  Displaying EP (mirror):  EP4 EP2 EP1 EP3

For example, if the speaker's endpoints has two screens and the participant's endpoint only one, the participant's display is divided into two video layout cells with each video layout cell showing the input of one of the speaker's screens (endpoint).

If the participant endpoint has two screens, and the speaker endpoint only one, the speaker's video will be displayed on one of the participant's screens, while the second screen remains black.

Version 8.4 VE Detailed Description - Changes to Existing Features

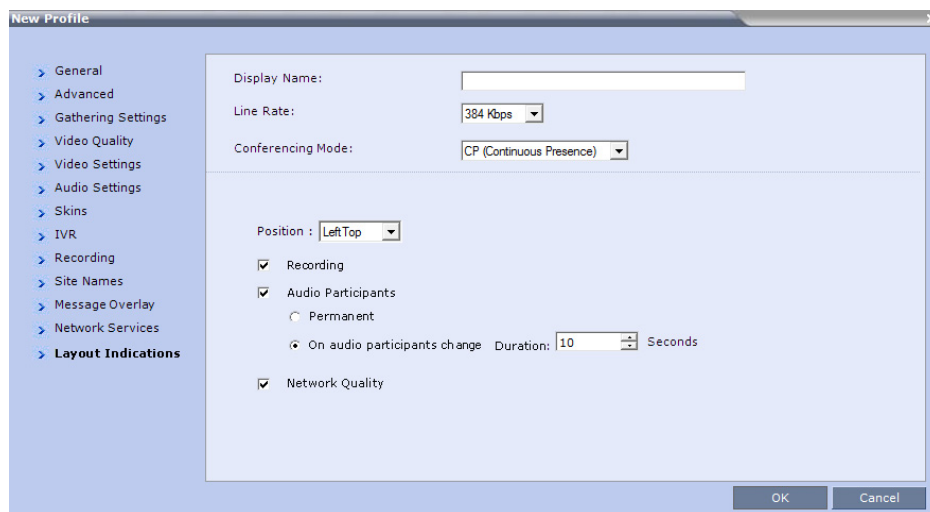
Changes to User Interface and Layout Indication Icons

For improved ease of use and real-time status indication, the user interface (RMX Web Client and RMX Manager) and layout indication icons have been modified.

Changes to the User Interface

A new tab, Layout Indications, has been added to the conference Profile dialog. The display characteristics of the indication icons are configured using this tab. The Layout Indications tab is displayed only if AVC-CP or AVC-CP and SVC (mixed mode) is selected.

For more information, see [Choosing the Display Position of the Indication Icons](#).



The Recording Indication icon is a duplicate of the Display Recording icon of the Recording tab of the Profile dialog. For more information, see [Recording Conferences](#).

Changes to System Flags









The configuration options of the Layout Indications tab have replaced the following system flags, which are no longer used:

- DISABLE_SELF_NETWORK_IND
- SELF_IND_LOCATION

Changes to Existing Indication Icons

The appearance of the following indication icons have been modified.

Modified Indication Icons

New	Old	Description
		Recording For more information, see <i>RealPresence Collaboration Server (RMX) Administrator's Guide, Recording Conferences</i> .
		Recording Paused For more information, see <i>RealPresence Collaboration Server (RMX) Administrator's Guide, Recording Conferences</i> .
		Network Quality Major For more information, see <i>RealPresence Collaboration Server (RMX) Administrator's Guide, Layout Indications (AVC Endpoints)</i> .
		Network Quality Critical For more information, see <i>RealPresence Collaboration Server (RMX) Administrator's Guide, Layout Indications (AVC Endpoints)</i> .

New Audio Participant Indication

During an ongoing conference, the Audio Participant indication icon provides an indication to all participants that are audio-only endpoints and video devices connected as secondary are connected to the conference.



The Audio Participant indication icon is displayed in the conference video layout along with the number of audio only or secondary endpoints connected, where more than 99 such participants are displayed as "99+".

Shortening Site Name Display

The **SIP_OMIT_DOMAIN_FROM_PARTY_NAME** System Flag can be used to remove Domain Names from SIP dial-in participants' Site Names. This prevents long domain names being appended to SIP participant names, as frequently happens when the Collaboration Server (RMX) is used with a DMA.

The flag must be manually added to the System Configuration and its value modified as follows:

- **YES** (Default) - The domain name is omitted from SIP dial-in participant names.
- **NO** - The domain name remains as part of SIP dial-in participant names.

For more information see [Modifying System Flags](#) in the *Collaboration Server (RMX) Administrator's Guide*.

RMX Manager Multi-User Capability

The RMX Manager can be installed to be available to all users of a shared computer during the initial installation.

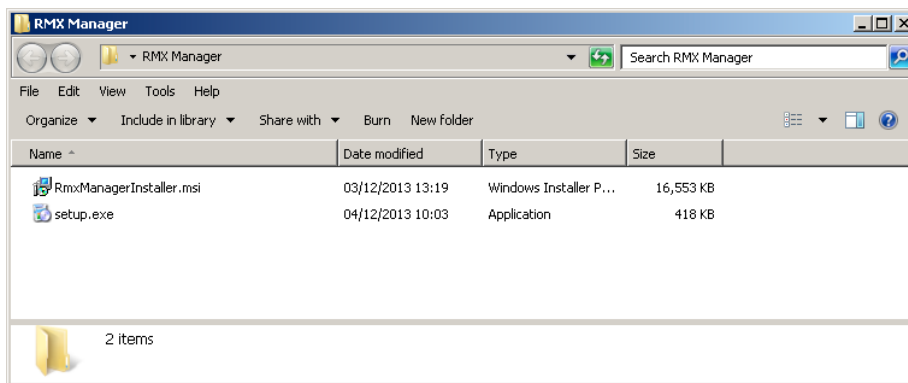
The following procedure is performed after downloading the RMX Manager from the Polycom Support website.



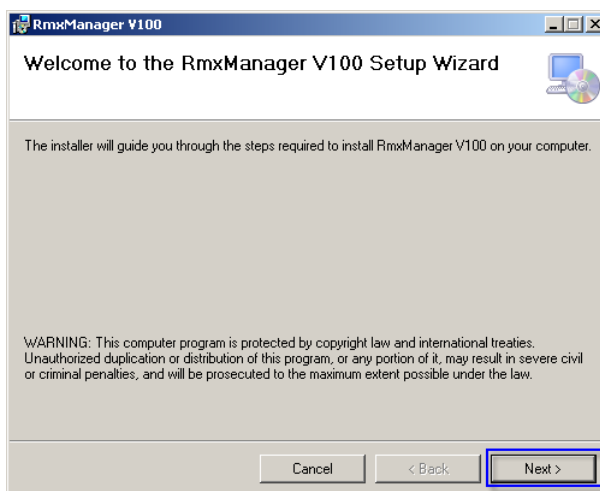
The RMX Manager can still be installed from the Collaboration Server (RMX) Web Client, but the installation will only be available to the current user.

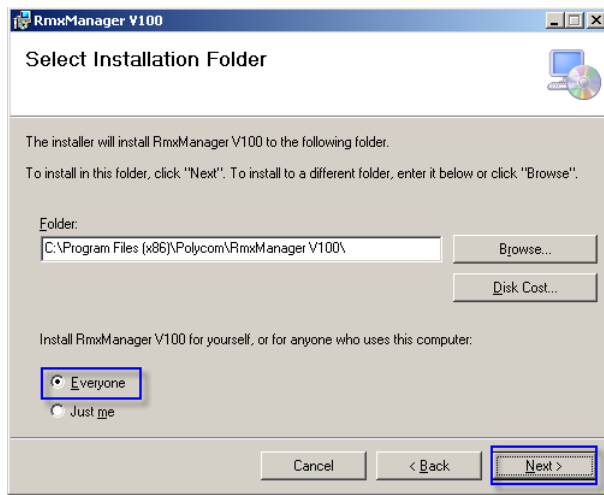
To install the RMX Manager for Multiple Users:

- 1 Download the RMX Manager installation package from the Polycom Support website.
- 2 Unzip the installation package.

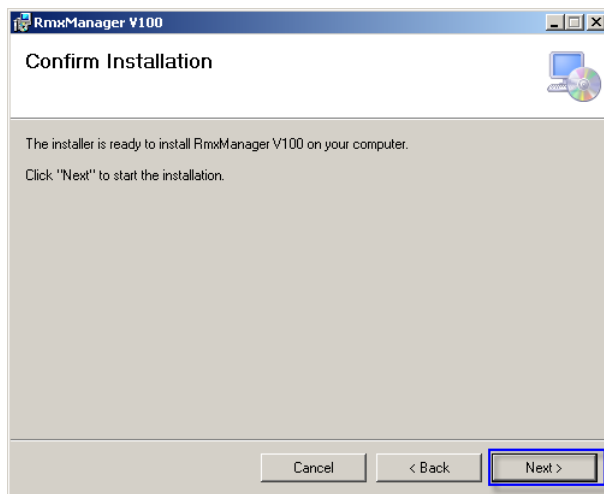


- 3 Double-click **setup.exe** to open the RMX Manager Setup Wizard.

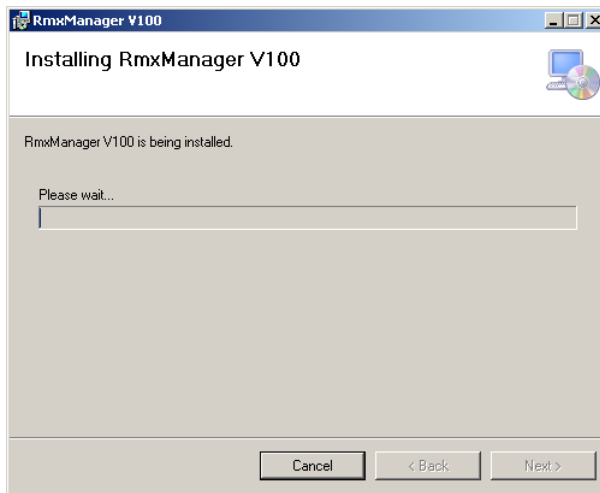


4 Click Next.

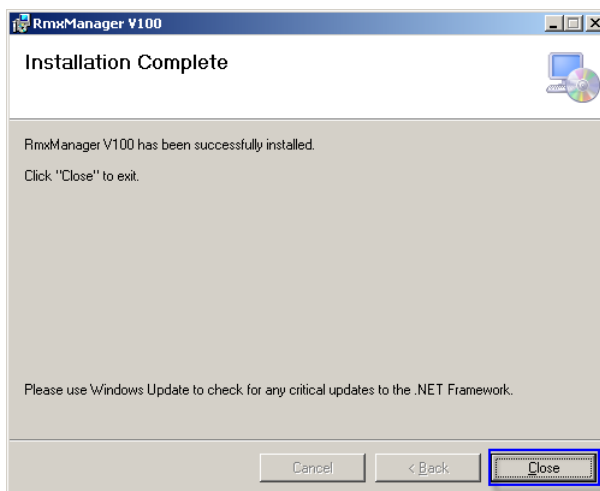
- 5 Select **Everyone**** to install the RMX Manager for all users sharing the computer.
(Select **Just me** to install the RMX Manager just for the current user.)

6 Click Next.

The installation begins.



When the installation is complete, a confirmation window is displayed.



- 7 Click **Close** to close the RMX Manager installer.

The installation is complete.

RSS/Capture Server Dial In Recording Link

Conferences running on the Collaboration Server can be recorded using Polycom RealPresence® Capture Server in the following ways:

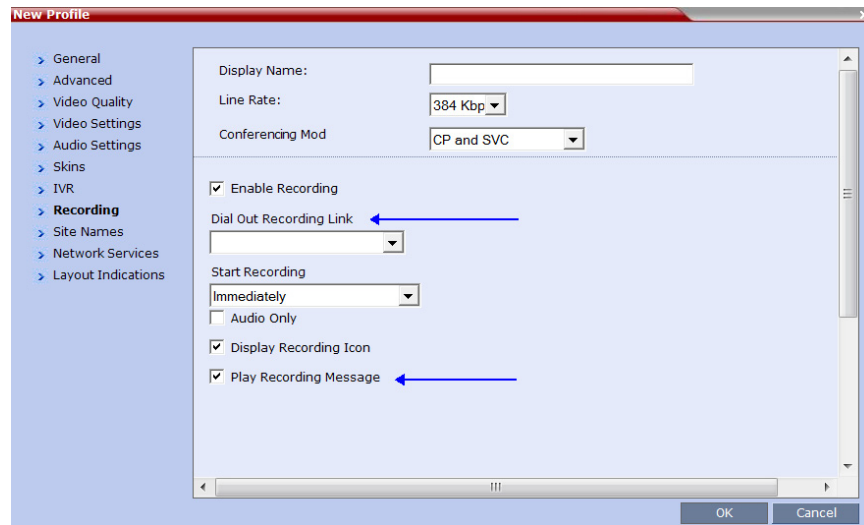
- Capture Server dials in MCU for conference recording via an SIP interface from Capture Server. From the Capture Server Admin UI, you can start a conference recording by dialing out to a Collaboration Server. After the Collaboration Server gets the request from the Capture Server, the recording will start if the recording is enabled on the Collaboration Server. During the conference recording, you can pause or stop the recording from the Capture Server Admin UI. Refer to the *Polycom RealPresence Capture Server User's Guide* on how to start a recording by dialing out to an interoperable endpoint.
- Collaboration Server dials out to Capture Server for a conference recording. Recording conferences is enabled via a dial-out Recording Link, which is a dial-out connection from the conference to the recording system.

Changes to the User Interface

In the **Recording** tab of the **New Profile** dialogue, the **Recording** field has been renamed **Dial Out Recording Link**.

A new check box, **Play Recording Message**, has been added. It is checked by default and a message is played to all participants announcing that the conference is being recorded.

Un check the **Play Recording Message** check box to prevent the announcement from being played.



New System Flag for Recording Control Operations

The user can start, stop, pause recording during a conference. In previous versions, recording control could be performed using DTMF tones. This version gives the user the option of performing recording control operations using either DTMF tones or using a SIP INFO request.

The **ENABLE_RECORDING_OPERATION_VIA_SIPINFO** System Flag can be added and its value set as required.

NO: The Collaboration Server will send Recording Control Operation commands to the Capture Server using DTMF as in all previous version.

YES: The Collaboration Server will send Recording Control Operation commands to the Capture Server using a SIP INFO request.

Version 8.4 VE Corrections and Known Limitations

Corrections Between Version 8.3 and Version 8.4

Realpresence Collaboration Server Virtual Edition V8.4 - Corrections

Issue ID	Category	Description	Found in Version
BRIDGE-8039	General	In an ICE enabled environment, when dialing out from a conference without encryption to CX500 or CX600 endpoints, the call is disconnected within a few seconds.	V8.2
BRIDGE-11410	General	In a mixed AVC-SVC 1920 kbps conference set to encrypt when possible with 15 HD AVC dial-in participants connecting using H.323 and 15 HD SVC dial-in participants connecting using SIP, after 12 hours 1 AVC participant was disconnected, the other endpoints were muted, and 1 RealPresence Desktop endpoint using H.323 connected, resulting in 100% packet loss, very poor video and audio, and a low bit rate.	V8.3
BRIDGE-11090	Video	In a mixed AVC-SVC 1920 kbps conference with a welcome message and welcome slides for both IVR and entry queue services, when the endpoints are moved from the entry queue to the main conference and a RealPresence Desktop client connects using SIP at 1920 kbps, the layout on the RealPresence Desktop client is sometimes 1:1 and sometimes 1+8.	V8.3
BRIDGE-10684	Interoperability	In a 1920 kbps encrypted conference, a RadVision XT5000 using SIP over TLS disconnected after a few seconds.	V8.3
BRIDGE-10439	Resource Capacity	In a 2 mbps AVC only conference with a Group Series endpoint connecting using H.323 at 1080p30 resolution if 22 AVC participants dial in, bringing the system over capacity, some participants disconnect while others get stuck on "waiting for dial-in" status.	V8.3, V8.3.1

Known Limitations

Realpresence Collaboration Server Virtual Edition V8.4 - Known Limitations

Issue ID	Category	Description	Detected in Version	Workaround
BRIDGE-12047	Content	On RPCS VE, some bad pixels may appear on Cisco telepresence endpoints connected to a conference running in TIP Video + Content mode,	V8.4	Use the preferred TIP mode
BRIDGE-12479	Partners - Microsoft	On RMX systems with MPMRx blades cascaded to Lync 2013 AVMCU, video freeze may occur on Lync clients connected directly to the RMX, if Lync 2010 and Lync 2013 clients are connected simultaneously to the AVMCU. Video resumes after a short period.	V8.4	If the video freezes, disconnect from the call and call back in.
BRIDGE-12663	SIP	Hot backup: SIP participants cannot reconnect after switch over between master and slave RMXs.	V8.4	
BRIDGE-13342	Interoperability	On Collaboration Server VE, Content is not seen on Cisco H.323 endpoints registered with CUCM when working in TIP Video + Content Mode.	V8.4	Use "Prefer TIP mode"
BRIDGE-13470	SIP	RMX dial-out fails when SIP device authentication is enabled in DMA.	V8.4	
BRIDGE-13499	Partners - Microsoft	Lync mobility client will not connect in a dial out scenario.	V8.4	
BRIDGE-13518	Interoperability	When using specific versions of Group Series endpoints, connecting as SVC to a Mixed Mode (SVC/AVC) conference, the Group Series endpoint will, rarely, not see the AVC endpoints.	V8.4	Upgrade the Group Series endpoints.
BRIDGE-13591	Interoperability	Sony PCS-XG80 and XG-100 endpoints do not receive content while in a Collaboration Server (RMX) 1800 or VE call.	V8.4	
BRIDGE-13620	Interoperability	When placing a call from ISDN to DMA VMR via S4GW and RMX Gateway which translates from H.323 to SIP, calls may not connect the first time.	V8.4	
BRIDGE-13622	Partners - Microsoft	Lync registered Edge endpoints have packet loss and poor video during RMX conference. Hold and resume intensifies the poor video performance.	V8.4	
BRIDGE-13634	Interoperability	In a Siemens environment, VVX fails to connect in a dial out scenario.	V8.4	

Realpresence Collaboration Server Virtual Edition V8.4 - Known Limitations

Issue ID	Category	Description	Detected in Version	Workaround
BRIDGE-10808	Interoperability	When an HDX 8000 registered to a SIP server connected to an MCU registered to a DMA 7000 attempt to connect to a mixed AVC-SVC 1920 kbps conference using a line rate of 64 kbps, instead of connecting as audio only the connection failed.	V8.3, V8.3.1	
BRIDGE-10140	Video	VSX receives no video in SIP call registered to DMA.	V8.3	
BRIDGE-7341	General	Error message displays before successfully logging into the VMCU via the console: "user/Plcm-Utils/Scripts/SetupMenu.sh: line32: : No such file or directory".	V8.2	
BRIDGE-8004	SIP	SIP endpoints may intermittently disconnect after a conference has run for more than 30 minutes.	V8.2	
BRIDGE-8033	IVR	RealPresence Mobile, RealPresence Desktop, and Group Series endpoints do not hear roll call messages when dialing into an SVC conference.	V8.2	
BRIDGE-8132	Content	Content cannot be shared when dialing-out from a CP only conference with content set to H.263 & H.264 to Tandberg Edge95 (MXP) endpoints over H.323.	V8.2	
BRIDGE-6587	IVR	In the IVR Service after rebooting an RMX800s, the "enable welcome message" check box becomes unchecked and the welcome audio message is not played.	V8.1.7	
BRIDGE-7307	Video	In a conference with 1 OTX and 2 TPX's with the OTX and 1 TPX connecting using ITP conference room switching, after applying MLA automatic layout, a black bar is displayed on the central monitor of the OTX.	V8.1	
BRIDGE-2340	IP	Failure to remove first IP address on a list of NT server addresses.	V8.0	
BRIDGE-1045	General	On the Real Presence Collaboration Server 800s, when changing the duration of conference, there is no message dialog box to prompting you to click OK.	V7.8.0	
BRIDGE-1156	RMX Manager	"Insufficient resource" alarm displays after executing "service soft_mcu restart" and then logging in via the RMX Manager.	V7.8.0	
BRIDGE-1333	Interoperability	On the Real Presence Collaboration Server 800s, after a second SIP RPD audio only endpoints joins, only one Audio Rx is shows is listed in RPD statics when there should be two.	V7.8.0	

Realpresence Collaboration Server Virtual Edition V8.4 - Known Limitations

Issue ID	Category	Description	Detected in Version	Workaround
BRIDGE-1441	General	Automatic reboot fails after modifying system flags even though system prompts reset.	V7.8.0	
BRIDGE-993	General	During a conference started from a Profile, after an SVC RPD participant dials-in, the Participants Properties - SDP tab, Remote Capabilities pane lists no information.	V7.8.0	
BRIDGE-5921	Video	Layout pictures display incorrectly when more than 15 participants join the conference.	V7.2.2	
BRIDGE-13629	Content	On a call set to TIP Video & Content mode some H.323 endpoints may not receive content.		Use "Prefer TIP mode"

Troubleshooting Instructions

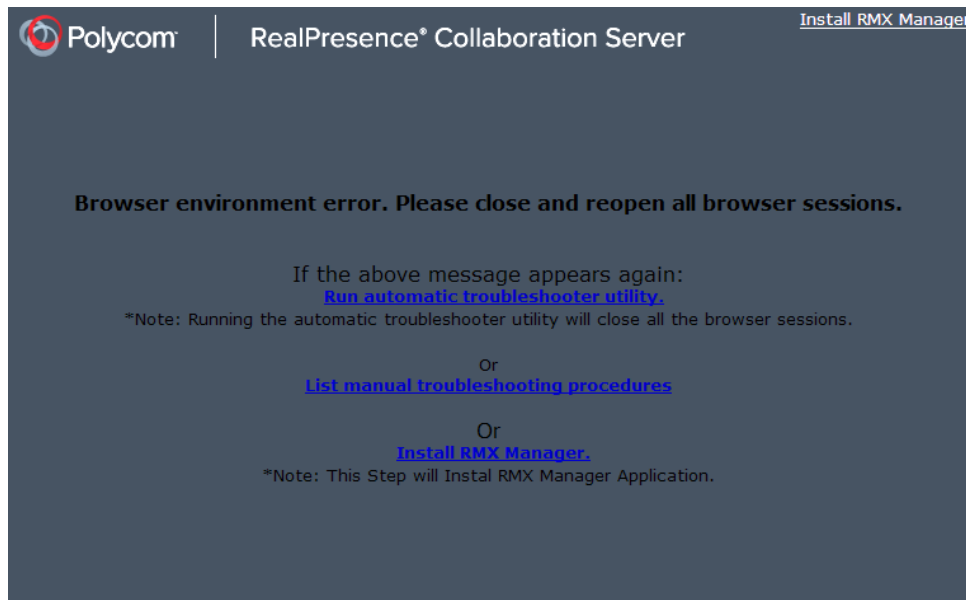
Collaboration Server Web Client Installation - Troubleshooting Instructions



Use of the **RMX Web Client** is not recommended in **Maximum Security Environments**. Management using the **RMX Manager** is the recommended method.

If a **Browser Environment Error** occurs, close all the Internet Explorer sessions and reconnect to the MCU.

If the problem persists, you can run the **Automatic Troubleshooting Utility** or perform the **Troubleshooting Procedures** manually.



The **Manual Troubleshooting Procedures** include several procedures that can be performed in order to solve the connection error. At the end of each procedure, check if you can connect to the MCU and if the problem persists, perform the next procedure.



In **Secured Mode** (<https://>), the **DNS** name specified in the RMX's Certificate must correspond with that of the **DNS Server** used by the Client that is connecting to the RMX

The following troubleshooting procedures can be performed manually:

- Procedure 1: Ending all Internet Explorer Sessions

- Procedure 2: Deleting the Temporary Internet Files, Collaboration Server Cookie and Collaboration Server Object
- Procedure 3: Managing Add-ons Collisions
- Procedure 4: Add the Collaboration Server to the Internet Explorer Trusted Sites List
- Procedure 5: Browser Hosting Controls (Optional)

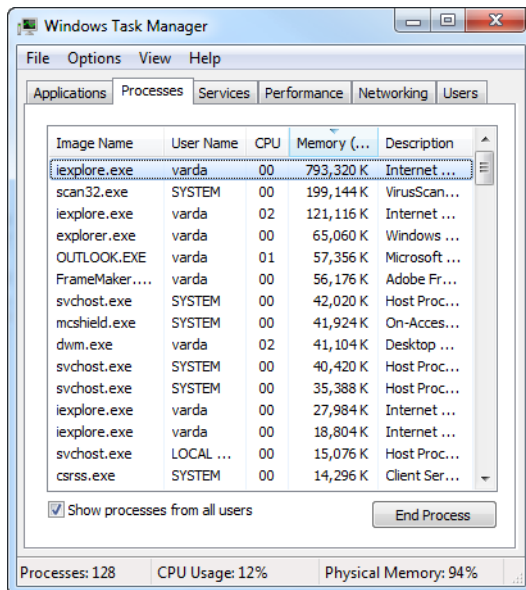
Procedure 1: Ending all Internet Explorer Sessions

In some cases, although all the Internet Explorer sessions were closed, the system did not end one or several IE processes. These processes must be ended manually.

To end all Internet Explorer sessions:

Start the Task Manager and click the Processes tab.

- 1 Select an **ieexplore** process and click the **End Process** button.



- 2 Repeat this process for all **ieexplore** processes that are currently active.
- 3 Close the **Windows Task Manager** dialog box.
- 4 Open the Internet Explorer and connect to the MCU.
- 5 If the problem persists, continue with **Procedure 2**.

Procedure 2: Deleting the Temporary Internet Files, RMX Cookie and RMX Object

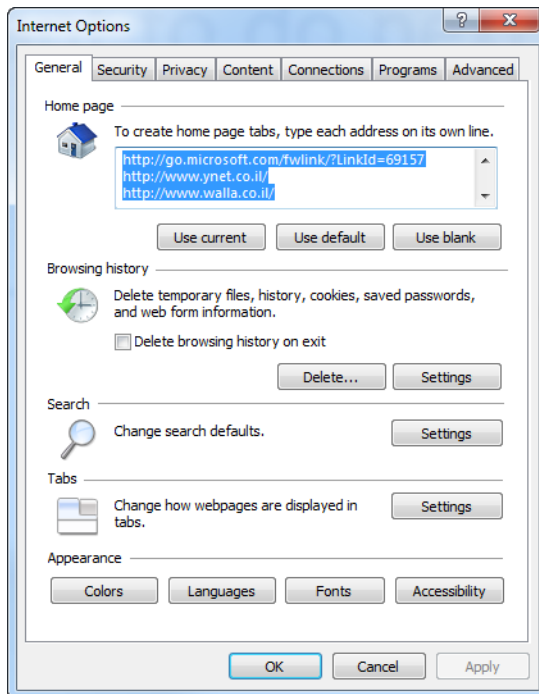
If at the end of Procedure 1 the error message is still displayed, and you cannot connect to the MCU, perform the following operations:

- Delete the Temporary Internet files
- Delete the RMX/Collaboration Server Cookie
- Delete the RMX/RMX ActiveX Object

Deleting the Temporary Internet Files

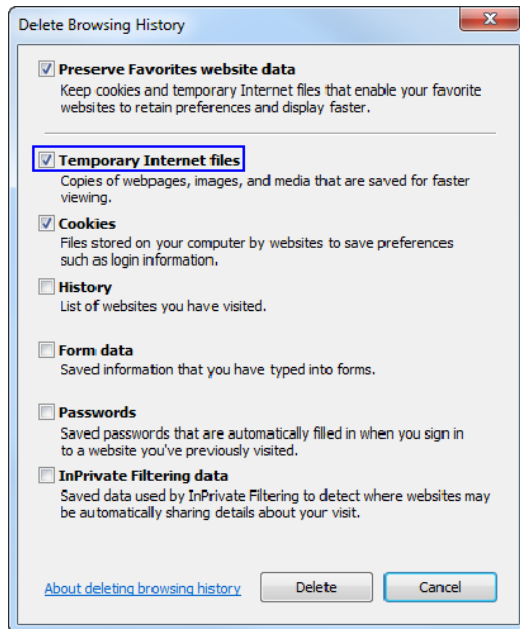
To delete the Temporary files:

- 1 In the **Internet Explorer**, click **Tools > Internet Options**.
The **Internet Options** dialog box opens.
- 2 In the **Browsing history** pane, click the **Delete** button.



The **Delete Browsing History** dialog box opens.

- 3 It is recommended to delete only the **Temporary Internet files**.
By default, the **Cookies** option is also selected. Clear it if you do not want to clear the cookies from your computer.

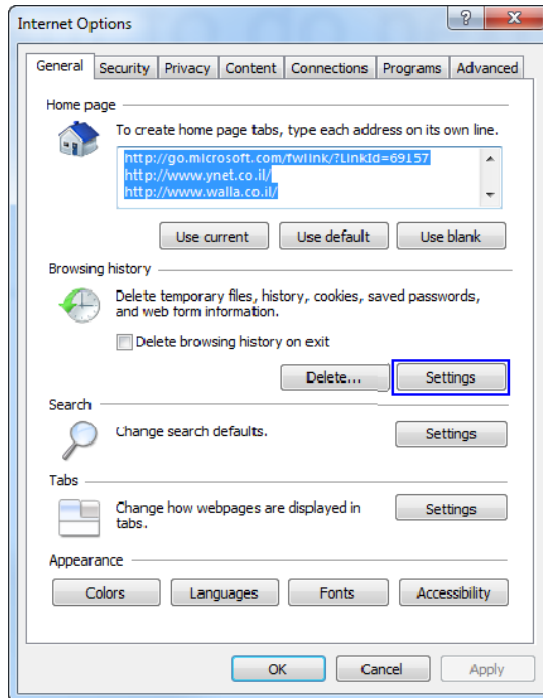


- 4 Click the **Delete** button.
- 5 When the process is complete, the system return to the **Internet Options** dialog box.

Deleting the RMX/Collaboration Server Cookie

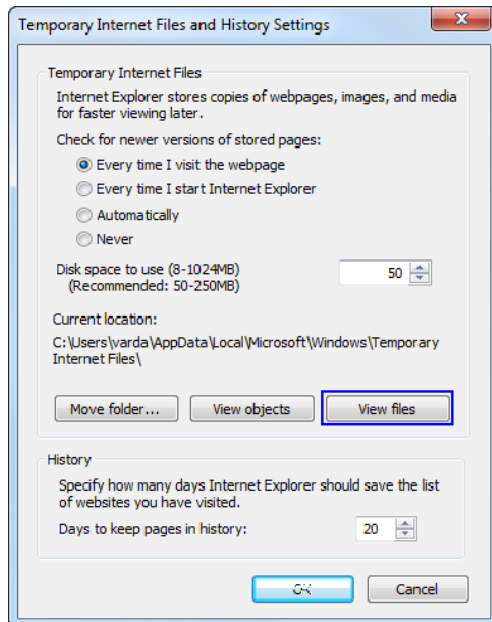
To delete the RMX Cookie:

- 1 In the **Internet Options** dialog box - **Browsing History** pane, click the **Settings** button.



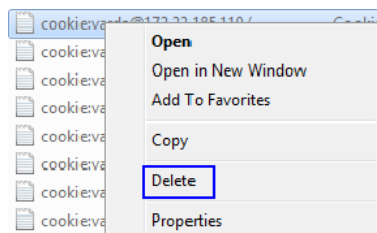
The **Temporary Internet Files and History Settings** dialog box is displayed.

- 2 Click the **View files** button.



The Windows Explorer screen opens, listing **Windows Temporary Internet Files**.

- 3 Browse to the RMX/ RMX cookie.
The cookie is listed in the format: **cookie:user name@RMX/RMX IP address**. For example: **cookie:valerie@172.22.189.110**.
- 4 Right-click the RMX cookie and click **Delete**.



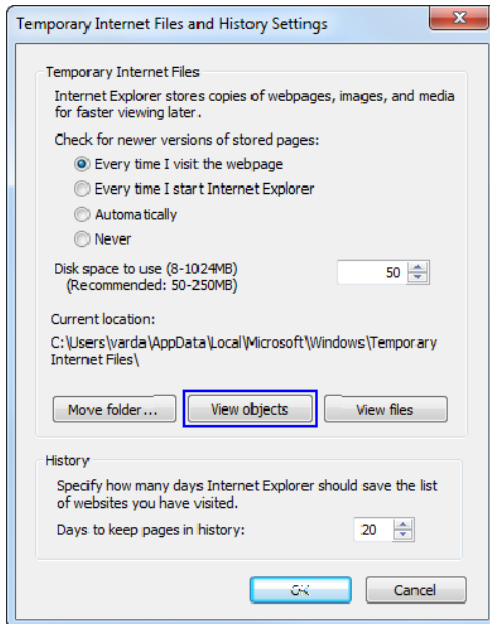
The system prompts for confirmation.

- 5 Click **Yes**.
The cookie is deleted.
- 6 Close the Windows Explorer screen.

Deleting the RMX/Collaboration Server ActiveX Object

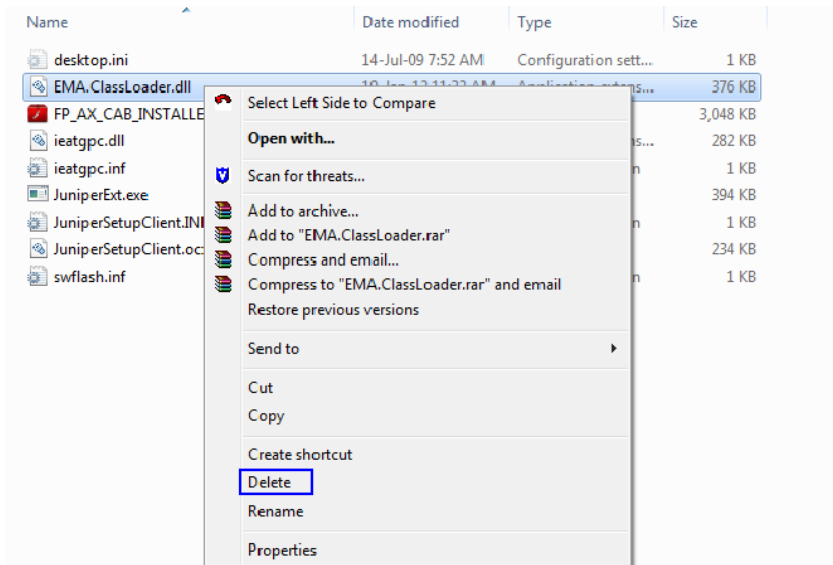
To delete the RMX/RMX ActiveX Object:

- 1 In the Temporary Internet Files and History Settings dialog box, click the **View objects** button.



The Windows Explorer screen opens, listing the Windows **Downloaded Program Files**.

- 2 Right-click the **EMA.ClassLoader.dll** and then click **Delete**.



The system prompts for confirmation.

- 3 Click **Yes**.
The RMX object is deleted.

- 4 Close the Windows Explorer screen.
- 5 In the **Temporary Internet Files and History Settings** dialog box, click **OK**.
- 6 In the **Internet Options** dialog box, click **OK** to close it.
- 7 Close the Internet Explorer session and reopen it.
- 8 Connect to the RMX.

If the problem persists, continue with Procedure 3.

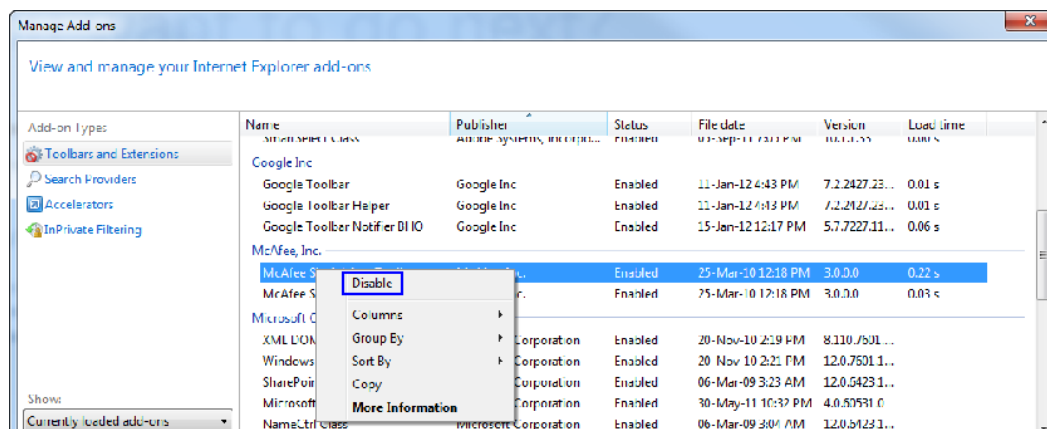
Procedure 3: Managing Add-ons Collisions

In some cases, previously installed add-ons, such as anti virus programs can create collisions between applications and prevent the installation of a new add on. Disabling these add-ons may be required in order to install the RMX Web Client.

To disable an add-on:

- 1 In the Internet Explorer, click **Tools > Manage Add-ons**.
The **Manage Add-ons - Toolbars and Extensions** dialog box opens.
- 2 Scroll to the add-on to disable (for example, the anti virus add-on), right-click it and then click **Disable**.

Alternatively, select the add-on and click the **Disable** button.



- 3 Click the **Close** button to close this dialog box.
- 4 Connect to the RMX.

If the problem persists, continue with the Procedure 4.

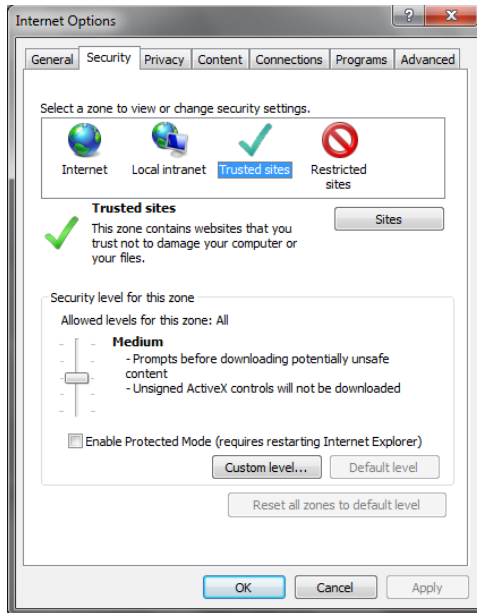
Procedure 4: Add the Collaboration Server to the Internet Explorer Trusted Sites List

In some cases, local security settings may prevent Internet Explorer from accessing the RMX.

To add the RMX to the Internet Explorer Trusted Sites list:

- 1 In the **Internet Options** dialog box, click the **Security** tab.

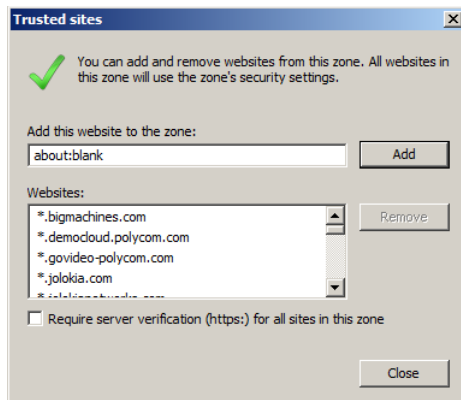
The **Security** tab is displayed.



- 2 Click the **Trusted Sites** tab.

- 3 Click the **Sites** button.

The **Trusted sites** dialog is displayed.



- 4 If the Collaboration Server (RMX) is using Secure Mode:

- a In the **Add this website to the zone:** field, enter, “**https://**” followed by the IP address or the DNS name of the Collaboration Server (RMX).
 - b Click the **Add** button.
 - c Click the **Close** button.
- 5 If the Collaboration Server (RMX) is using Standard Security Mode:
 - a In the Add this website to the zone: field, enter, “**https://**” followed by the IP address or the DNS name of the Collaboration Server (RMX).
 - b Click the **Add** button.
 - c Clear the Require server verification (https:) for all sites in this zone checkbox.
 - d Click the **Close** button.

Procedure 5: Browser Hosting Controls (Optional)

If the **Collaboration Server (RMX) Web Client** does not load and run after Procedures 1-4 have been performed, the reason may be that .NET Framework 4 or higher is running on the workstation with **Managed Browser Hosting Controls** disabled.

Managed Browser Hosting Controls is an Internet Explorer operating mode required by the **Collaboration Server (RMX) Web Client**. By default, .NET Framework 4 and higher are not enabled to support **Managed Browser Hosting Controls**.

Perform Procedure 5 to:

- Determine whether **.NET Framework 4** or higher is running on the workstation.
- Determine whether a **32-bit** or **64-bit** version of **Windows** is running on the workstation.
- Enable **Managed Browser Hosting Controls** if **.NET Framework 4** or higher is running on the workstation.

To enable Managed Browser Hosting Controls:

- 1 Determine whether **.NET Framework 4** or higher is running on the workstation.
 - a On the **Windows Desktop**, click **Start**.
 - b In the **Start Menu**, click **Control Panel**.
 - c In the **Control Panel**, click **Programs and Features**.
 - d Inspect the **Programs and Features** list for the version of **Microsoft .NET Framework Client Profile** that is installed.
- 2 Determine whether a **32-bit** or **64-bit** version of Windows is running on the workstation:
 - a On the **Windows Desktop**, click **Start**.
 - b In the **Start Menu**, click **Computer**.
 - c In the **Computer Menu**, **System properties** and inspect the value of the System type field in the System section
- 3 Enable **Managed Browser Hosting Controls** if **.NET Framework 4** or higher is running on the workstation.
 - a Open the **Registry**.
 - b Navigate to the **Subkey**:
 - ◆ **32-bit System:** HKEY_LOCAL_MACHINE\SOFTWARE\MICROSOFT\.NETFramework

◆ **64-bit System:**

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\NETFramework

- c** Add the **Dword Value: EnableIEHosting**
- d** Set value of **EnableIEHosting** to **1**.
- e** Close the **Registry**.
- f** Close and re-open **Internet Explorer**.