POLYCOM®

Polycom® RMX® 1500/2000/4000 Release Notes

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New Hardware - RMX 1500

A new MCU is added to RMX family.

It has the key features of the RMX 2000 and RMX 4000 with the following additions/changes:

Table 1 *RMX 1500 Additions and Changes*

	Feature Name	Description
1	New card	New cards and modified components have been added to the Hardware.
2	System Capacity	One MPMx media card is installed on the system and this is reflected in the: • Network Services • Video/Voice Port Configuration • Resource Report
3	RMX Type Indication	RMX Banner and Welcome heading display the RMX Type accordingly.
4	Hardware Monitor	New and dedicated slots. New card properties.

For detailed description of the new MCU attributes, see *"Detailed Description - RMX 1500"* on page **36**.

New Hardware - MPMx Media Card

The new *MPMx* card (*Media Processing Module*) when installed in *RMX* running version 7.0 offers:

- Increased resource capacity
- New Symmetric HD Video resolutions 720p60 & HD1080p30 fps
- Support for H.264 High Profile

Two types of *MPMx* cards are available:

- *MPMx - S* (Single)
- *MPMx - D* (Double)

The following table lists the changes in Version 7.0.x to support the new MPMx card:.

Table 2 *MPMx Card - Additions to Version 7.0.x*

	Category	Feature Name	Description
1.	General	Card Configuration Mode	A new *Card Configuration Mode - MPMx* has been added to support the new media card.
2.	General	Hardware Monitor	The status and properties of the *MPMx* card can be viewed and monitored in the *Hardware Monitor* list pane.
3.	General	Video/Voice Port Configuration	The *Resource* slider(s) in the *Video/ Voice Port Configuration* dialog box reflect the *MPMx* card capacities.
4.	General	Resource Report	The resource report reflects the *MPMx* card capacities.
5.	General	Port Gauges	The *Video/Voice Port* gauges reflect the *MPMx* card capacities.

Version 7.0.2 - New Features List

The following table lists the new features in Version 7.0.2.

Table 3 *Version 7.0.2 New Features List*

	Category	Feature Name	Card Configuration Mode	Description
1	General	Automatic Password Generation	MPM, MPM+, MPMx	The RMX can be configured to automatically generate conference and chairperson passwords when the Conference Password and Chairperson Password fields are left blank.
2	General	RMX as IVR Service Provider to DMA	MPM, MPM+, MPMx	In an environment that includes a DMA, the RMX Entry Queue can be configured to be used only as provider of IVR Services to SIP endpoints that connect to the DMA and retrieve the Conference ID entered using DTMF codes.

Version 7.0.2 - Changes to Existing Features

The following table lists changes to existing features in Version 7.0.2.

Table 4 *Version 7.0.2 changes*

	Category	Feature Name	Card Configuration Mode	Description
1	General	Resolution Sliders	MPM, MPM+, MPMx	The System Flags that were introduced in version 7.0.1 were incorporated into the Resolution Configuration dialog box designed to enable the administrator to modify the minimum bit rate thresholds of the H.264 Base Profile and High Profile for the various pre-configured resolution matrices so video quality is maintained when endpoints supporting H.264 High Profile and Base Profile connect to the same conference.

Table 4 *Version 7.0.2 changes*

	Category	Feature Name	Card Configuration Mode	Description
2	General	System Configuration Flag	MPM, MPM+, MPMx	The flag **CPU_TCP_KEEP_ALIVE_TIME_ SECONDS** was added to the system configuration. This flag indicates when to send the first KeepAlive indication to check the TCP connection. Default value: **7200** second (60 minutes) Range: 600-18000 seconds When there are NAT problems, this default may be too long and the TCP connection is lost. In such a case, the default value should be changed to 3600 seconds (30 minutes) or less.
3	General	System Configuration Flag	MPM, MPM+, MPMx	The flag **CPU_TCP_KEEP_INTERVAL_ SECONDS** was added to the system configuration. This flag indicates the interval in seconds between the KeepAlive requests. Default value: **75** second Range: 10-720 seconds.
4	General	System Configuration Flag	MPM, MPM+, MPMx	The flag **ITP_CERTIFICATION** was added to the system configuration. When set to **NO** (default), disables the telepresence features in the Conference Profile. Set the flag to **YES** to enable the telepresence features in the Conference Profile (provided that the appropriate License is installed).

Version 7.0 - New Features List

The following table lists the new features in Version 7.0.

Table 5 *New Features List*

	Category	Feature Name	Card Configuration Mode	Description
1	Video	H.264 High Profile	MPMx	The *H.264 High Profile* improves video quality and can reduce bandwidth requirements for video conferencing transmissions by up to 50%.
2	Video	New Symmetric HD Resolutions	MPMx	New Symmetric *HD* video resolutions *HD 1080p30* and *HD 720p60* have been added.
3	Video	Additional Call Rates	As per documented table	New *Call Rates* have been added.
4	Video	People+Content	MPM+	*Polycom's* proprietary *People+Content*, which is the equivalent of *H.239* is supported in addition to *H.239*.
5	Audio	G. 728	MPM+	Industry standard *G.728* audio algorithm is supported for participants connecting with legacy or low bandwidth endpoints.
6	Conference	Permanent Conference	MPM, MPM+ and MPMx	A *Permanent Conference* is an ongoing conference with no pre-determined *End Time* continuing until it is terminated by an administrator, operator or chairperson.
7	Conference	Video Preview	MPM+ and MPMx	*RMX* users can preview the video sent from the participant to the conference (*MCU*) and the video sent from the conference to the participant. It enables the *RMX* users to monitor the quality of the video sent and received by the participant and identify possible quality degradation.
8	Conference	Personal Conference Manager (PCM)	MPM+	The *Personal Conference Manager* (*PCM*) interface enables the conference chairperson to control various conference features using his/her endpoint's remote control device.
9	Conference	Message Overlay	MPM+ and MPMx	Using the *Message Overlay* option, a message can be sent to all the participants in a conference and displayed on their endpoint screens.
10	Conference	Content Broadcast Control	MPM+ and MPMx	*Content Broadcast Control* prevents the accidental interruption or termination of *H.239 Content* that is being shared in a conference by giving *Content Token* ownership to a specific endpoint via the *RMX Web Client.*

Table 5 *New Features List (Continued)*

	Category	Feature Name	Card Configuration Mode	Description
11	Conference	Copy, Cut, Paste Participant	MPM, MPM+ and MPMx	The RMX user can Copy, Cut and Paste participants between different conferences running on the RMX.When used via the RMX Manager, the user can Copy, Cut and Paste participants between conferences running on different RMXs.
12	Conference	Copy, Paste Conference	MPM, MPM+ and MPMx	The RMX user can Copy and Paste conferences on the same RMX and, when used via the RMX Manager, between different RMXs.
13	General	Resolution Configuration	MPM, MPM+ and MPMx	The *Resolution Configuration* dialog box enables *RMX* administrators to override the predefined video resolution matrix.
14	General	High Resolution Slide Enhancements	MPM, MPM+ and MPMx	*Conference* and *Entry Queue IVR Services* now support customized *High Resolution Slides* in addition to the low and high resolution slides included in the default slide set.
15	General	Multiple Recording Links	MPM, MPM+ and MPMx	The *Multiple Recording Links* feature enables *Conference Recording Links*, defined on the *RMX* to be associated with *Virtual Recording Rooms* (*VRR*), created and saved on the *Polycom® RSS™ 4000 Version 6.0 Recording And Streaming Server* (*RSS*).
16	General	Auto Redial when Endpoint Drops	MPM, MPM+ and MPMx	The *Auto Redialing* option instructs the *RMX* to automatically redial *IP* and *SIP* participants that have been abnormally disconnected from the conference.
17	General	Multi-RMX Manager Export/Import RMX Configuration	MPM, MPM+ and MPMx	The RMX Manager configuration that includes the MCU list and the multilingual selection can be saved to any workstation/PC on the network and imported to any Multi-RMX Manager installed in the network.
18	SIP	SIP LPR	MPM, MPM+ and MPMx	*Lost Packet Recovery* (*LPR*) is supported for *SIP* calls.
19	SIP	SRTP	MPM+	*Encryption* of *SIP* Media is supported using *SRTP* (*Secured Real-time Transport Protocol*) and the *AES* key exchange method.
20	SIP	ICE	MPM+	*Interactive Connectivity Establishment* (*ICE*) provides a structure/protocol to unify the various NAT Traversal techniques that are used to cross firewalls.

Version 7.0 - Changes to Existing Features

The following table lists the changes to existing features in Version 7.0.

Table 6 *Feature Changes List*

	Category	Feature Name	Description
1	Video	Limiting Maximum Resolution	The *Maximum Resolution* settings of the *Resolution Configuration* dialog box can be overridden by new fields that have been included in the *New Profile* and *New Participant* dialog boxes.
2	Video	Video Switching Resolutions	In addition to *H.264 720p30*, the following *Video Switching* resolutions have been added for *MPM+* and *MPMx* cards only: • H.264 1080p30 • H.264 720p60 • H.264 SD 30
3	Video	Auto Layout Changes	Two additional layouts are activated in Auto Layout Mode when there are: • 11 connected participants • 12 or more connected participants
4	Video	Auto Brightness	*Auto Brightness* detects and automatically adjusts the brightness of video windows that are dimmer than other video windows in the conference layout.
5	Audio	Audio Only Message	In this version, the administrator can enable an audio message that informs the participant of the lack of *Video Resources* in the *RMX* and that he/she is being connected as *Audio Only*.
6	Audio	*Audio Settings* tab in *New Profile* dialog box	A new tab *Audio Settings* has been added to the *New Profile* dialog box. It contains settings for: • Echo Suppression • Keyboard Noise Suppression • Audio Clarity
7	General	DTMF Forwarding Suppression	Forwarding of the DTMF codes from one conference to another over an ISDN cascading link can be limited to basic operations while suppressing all other operations once the connection between the cascaded conferences is established.

Table 6 *Feature Changes List (Continued)*

	Category	Feature Name	Description
8	General	Integration with Polycom CMA™ Global Address Book	The definition of the CMA IP address for the EXTERNAL_CONTENT_IP flag has changed and in version 7.0 only the IP address is entered (without http://). For more details, see RMX 1500/2000/4000 Administrator's Guide, "*Integrating the Polycom CMA™ Address Book with the RMX"* on page **5-23**.

Version 7.0.2- Interoperability Tables

Devices

The following table lists the devices with which Version 7.0.2 was tested.

Table 7 *Version 7.0.2 Device Interoperability Table*

Device	up to Version
Gatekeepers/Proxies	
Polycom CMA	5.3.0.ER15
Polycom PathNavigator	7.0.12, 7.0.14
Polycom SE200	3.00.07.ER001
Cisco gatekeeper	12.3
Radvision ECS gatekeeper	3.5.2.5
Iptel proxy	1.0.2
Microsoft OCS	R1 / R2 3.5.6907
Broadsoft proxy	r16 sp2
Recorder	
Polycom RSS 2000	4.0.0.001 360
Polycom RSS 4000	6.0.0.001 22237, v6.4 (BETA)
MCUs, Call Managers Network Devices and Add ins	
Polycom MGC 25/50/100 and MGC+50/100	8.0.2 and 9.0.3
RMX 1000	2.1, 2.1.1
Polycom DMA 7000	2.2
Avaya CM	5.2
Avaya ACM	2.1.016.4-18111, 943
Avaya IP Softphone	R6.0 SP1
Cisco Call Manager	4.1, 8.0.5
Tandberg MCU	D3.11
Tandberg MPS	J3.3
Polycom VBP 5300LF-S25	9.1.5.3
Polycom VBP-E	9.1.5.3
Polycom Conferencing Add in for Microsoft Outlook	0.9.1 build 4

Table 7 *Version 7.0.2 Device Interoperability Table (Continued)*

Device	up to Version
Endpoints	
Polycom HDX Family	2.6.1.3, 2.6.0.2, 2.7.0
Polycom Telepresence (ITP) Systems	2.6 / 2.7
Polycom VSX product line	9.0.6
Polycom Viewstation	MP512 Release 7.5.4
Polycom CMAD	5.0.0.0143, 5.0.0.0203
Polycom QDX6000	4.0, 4.0.1
Polycom VVX1500	3.3.1.0666
SoundPointIP 650	3.2.2.0481
Polycom ViaVideo PVX	8.0.4
Polycom VS 512	7.5.4
Polycom VSSP 128/384	7.5.4
Polycom VS EX	6.0.5
Polycom VS 4000	6.0.5
Polycom VS FX	6.0.5
Polycom V700 and Polycom V500	9.0.6
Polycom iPower 9000	6.2.1208
Soundstation IP3000	2.8
Aethra X3	12.1.19
Aethra X7	12.1.7
Aethra VegaStar Gold	6.0.49
Avaya IP Softphone	R6 6.01.48
Avaya 1XC	R1.020-SP2-1696
LifeSize 200	4.6, 4.7.0.19
LifeSize Room and Express	4.6.1 (5), 4.7.0 -19
VVX1500	3.1.2.0256
DST B5	2.0
DST K60	2.0.1
DST K80	4.0
Sony PCS -XG80	2.11
Sony PCS -1	3.42
Sony PCS -G50	2.72
Sony PCS -G70	2.72

Table 7 *Version 7.0.2 Device Interoperability Table (Continued)*

Device	up to Version
Sony PCS -G70	2.22
Sony PCS -TL50	2.42
Tandberg 150 MXP	L6.0.2
Tandberg 6000 MXP HD	F9.0
Tandberg 6000 MXP SD	F9.0
Tandberg 6000 B	B10.3
Tandberg 6000 E	E5.3
Tandberg Classic E-Series	E5.3 PAL
Tandberg 880 E	E5.3
Tandberg EX90	TC3.1.1.1
Tandberg C20	TC3.1.2.227244
Tandberg E20	TE_2.2.0.215697
Tandberg Codec C60	TC2.1.1.200802
Tandberg C90	TC3.1.2.227244
Tandberg Edge95 MXP	F.9.0
RadVision E.P SCOPIA XT1000	Ver 01.00.0019
RadVision SCOPIA E.P	RV-VC240-2
Microsoft OC client R2	3.5.6907.0, R2 3.5.6907.196

Polycom RMX and Avaya Interoperability

For questions and support on the Polycom - Avaya integrated solution, please contact your Avaya Authorized Service Provider.

The Polycom RMX 2000/4000 series of MCUs running software version 7.0.1.16 register to current generally available versions of Avaya Aura Session Manager R6.0 to provide multipoint video calls.

Polycom RMX 4000, RMX 2000 and RMX 1500 can call and receive calls with current generally available versions of Avaya one-X Communicator H.323 video soft clients (R5.2) on Communication Manager R5.2.1 and R6.0.

RMX Web Client

The following table lists the environments (Web Browsers and Operating Systems) with which the *RMX Web Client* was tested.

Table 8 *Version 7.0 Environment Interoperability Table*

Web Browser	Operating System
Internet Explorer 6	Windows XP™
Internet Explorer 7	Windows XP™
	Windows Vista™
	Windows 7
Internet Explorer 8	Windows 7

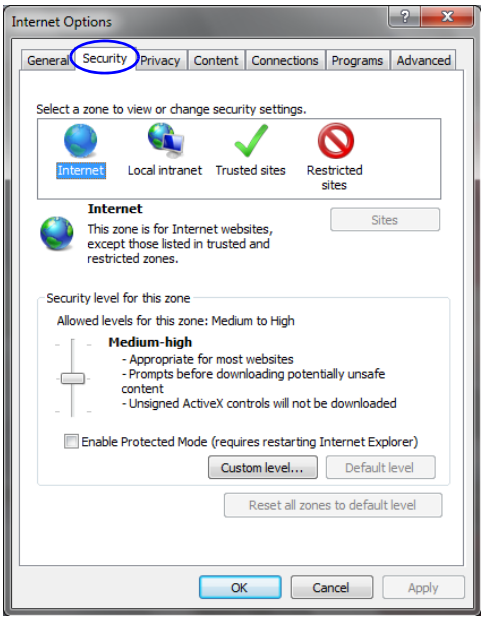
Windows 7™ Security Settings

If *Windows7* is installed on the workstation, *Protected Mode* must be disabled before downloading the Version 7.0.2 software to the workstation.

To disable Protected Mode:

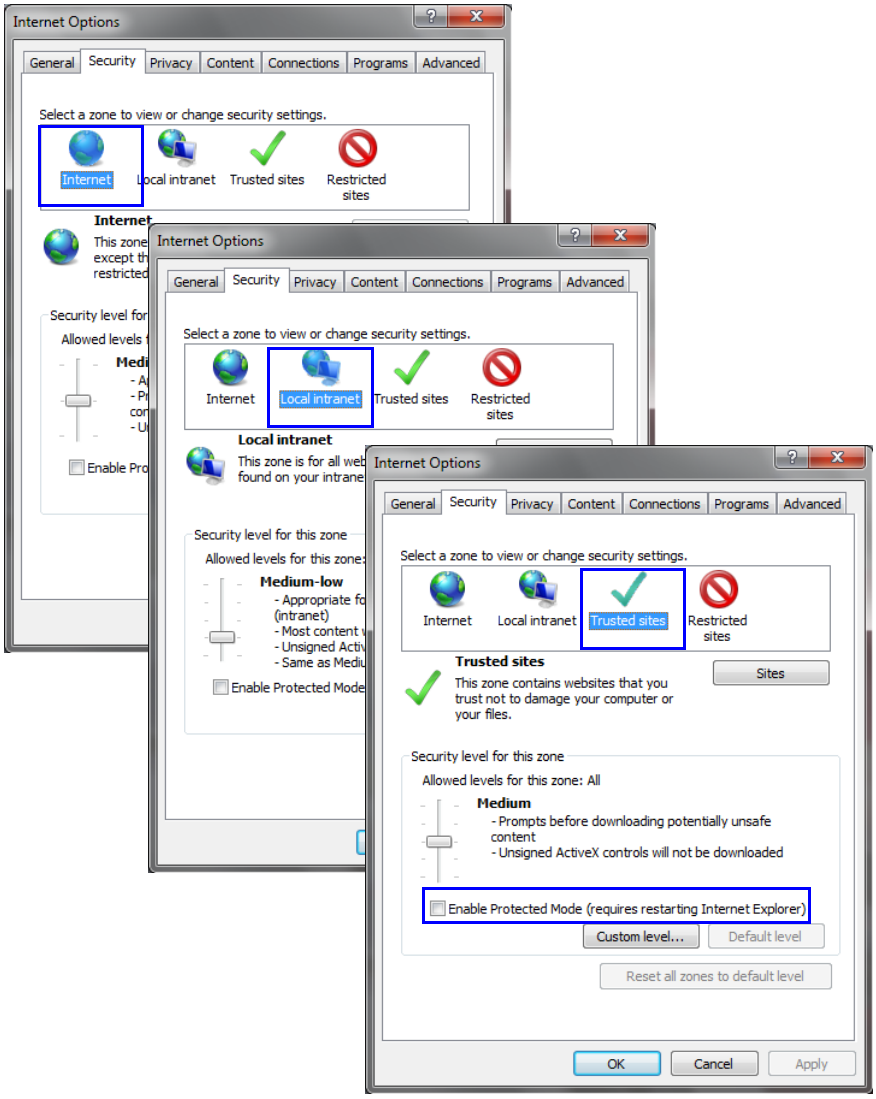
1 In the *Internet Options* dialog box, click the **Security** tab.

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 *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 *RMX Web Client* or *RMX Manager* applications, it is important to configure the browser according to the following procedure.

To configure Internet Explorer 8:

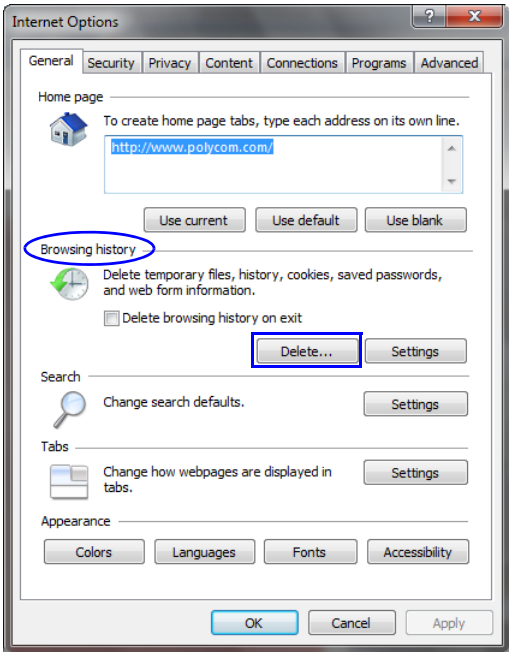
1 Close **all** browsers running on the workstation.

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 *RMX*.

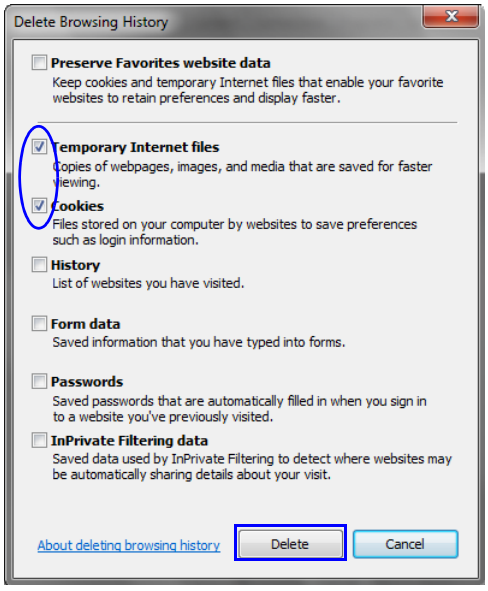
4 In the *Internet Explorer* menu bar select **Tools >> Internet Options**.

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.



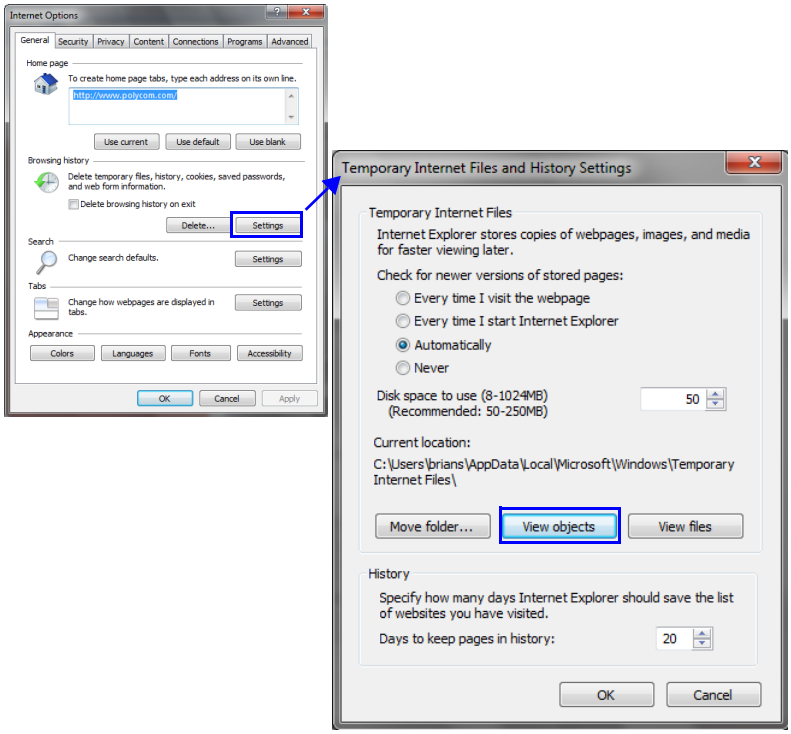
6 Select the **Temporary Internet** files and **Cookies** check boxes.

7 Click the **Delete** button.

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

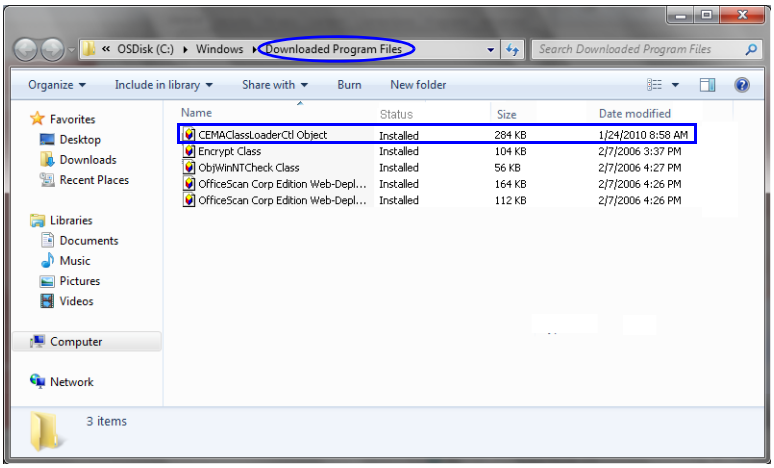
9 In the *Internet Options* dialog box, click the **Settings** button.

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



10 Click the **View objects** button.

The *Downloaded Program Files* folder containing the installed *Program Files* is displayed.



11 Select the *CEMAClassLoaderCntl Object* file

12 Press the **Delete** key on the workstation.

13 Close the *Downloaded Program Files* folder and the *Temporary Internet Files and History Settings* dialog box.

14 In the *Internet Options* dialog box, click the **OK** button to save the changes and close the dialog box.

Polycom Solution Support

Polycom Implementation and Maintenance services provide support for Polycom solution components only. Additional services for supported third-party Unified Communications (UC) environments integrated with Polycom solutions are available from Polycom Global Services and its certified Partners. These additional services will help customers successfully design, deploy, optimize and manage Polycom visual communications within their UC environments.

Professional Services for Microsoft Integration is mandatory for Polycom Conferencing for Microsoft Outlook and Microsoft Office Communications Server integrations. For additional information and details please see http://www.polycom.com/services/professional_services/index.html or contact your local Polycom representative.

Version 7.0.2- Upgrade Package Contents

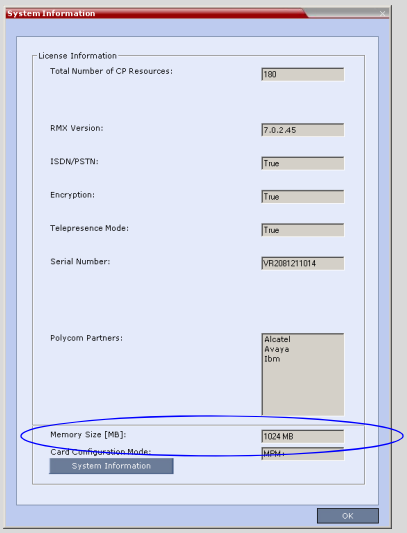
The Version 7.0.2 upgrade package must be downloaded from the *Polycom Resource Center* and includes the following items:

- lan.cfg file
- LanConfigUtility.exe
- RMX Documentation
  - RMX 1500/2000/4000 Version 7.0.2 Release Notes
  - RMX 1500/2000/4000 Getting Started Guide
  - RMX 1500/2000/4000 Administrator's Guide
  - RMX 1500/2000/4000 Hardware Guide
  - RMX 1500/2000/4000 Quick Installation Booklet
  - Installation Quick Start Guide for RMX 1500/2000/4000
  - RMX Third Party Licenses
- External DB Tools
  - RMX 1500/2000/4000 External Database API Programmer's Guide
  - Sample Scripts
- RMX XML API Kit Version 7.0
  - RMX 1500/2000/4000 XML API Version 7.0.2 Release Notes
  - RMX 1500/2000/4000 XML API Overview
  - RMX 1500/2000/4000 XML API Schema Reference Guide (version 3.0)
  - MGC to RMX XML API Conferencing Comparison
  - Polycom XML Tracer User's Guide
  - XML Schemas
  - Polycom XML Tracer application
- Translations of RMX 1500/2000/4000 Version 7.0 Documentation:
  - Getting Started Guide:
    French, German, Japanese, Russian, Simplified Chinese, Hebrew and Portuguese
  - Hardware Guide:
    French, German, Japanese, Korean, Russian, Simplified Chinese, Spanish

Version 7.0.2 - Upgrade Procedure

Version 7.0.2 requires that the Control Unit memory size be at least 1024MB.

To check the RMX Memory size, in the RMX Web Client/RMX Manager go to **Administration > System Information.**



If the control unit Memory size is 512MB, **DO NOT** perform the upgrade procedure and contact Polycom support.

To maximize conferencing performance, especially in high bit rate call environments, a 1 Gb connection is recommended for each LAN connection.

Upgrade Paths to Version 7.0.2

The upgrade options from previous versions to *Version 7.0.2* are summarized in Table 9. When upgrading from *Versions 2.x* and *3.x*, the upgrades to both the first and second intermediate versions must be performed.

Table 9 *Upgrade Paths to Version 7.0.2*

Current Version	First Intermediate Upgrade		Second Intermediate Upgrade		New Version	
	Version	Key	Version	Key	Version	Key
7.0 / 7.0.1	N/A		N/A		**7.0.2**	No
6.0.2	N/A		N/A		**7.0.2**	Yes
6.0 / 6.0.1	6.0.2	No	N/A		**7.0.2**	Yes
5.0.2	N/A		N/A		**7.0.2**	Yes
5.0 / 5.0.1	5.0.2	No	N/A		**7.0.2**	Yes
4.x	5.0.2	Yes	N/A		**7.0.2**	Yes
2.x / 3.x	4.1.1	Yes	5.0.2	Yes	**7.0.2**	Yes

Upgrading from Version 7.0 / 7.0.1 to Version 7.0.2

1 Download the *Version 7.0.2* software from the *Polycom Resource Center* web site.

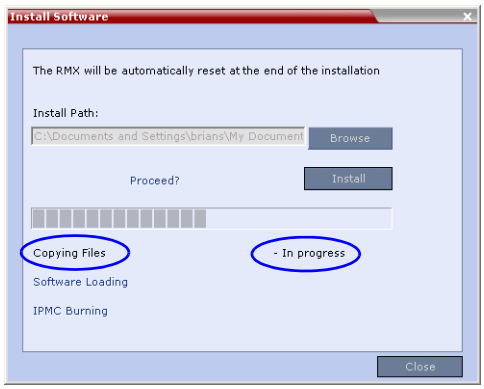
If *Windows7™* is installed on the workstation, *Protected Mode* must be disabled before downloading the *Version 7.0.2* software to the workstation.
For more information see "*Windows 7™ Security Settings*" on page **12**.

2 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, "*Software Management*" on page **18-99**.

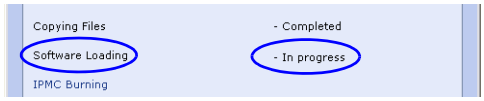
3 Install *MCU* Software *Version 7.0.2*.
On the *RMX* menu, click **Administration> Software Management > Software Download**.

4 *Browse* to the *Install Path*, selecting the **Version 7.0.2.bin** file in the folder where *Version 7.0.2* is saved and click **Install**.

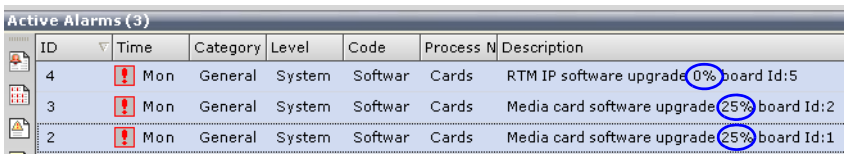
The *Install Software* information box indicates that the file *Copying files* is *In progress*.



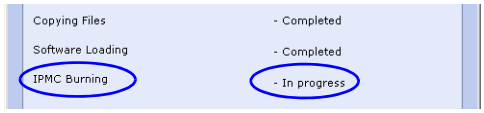
The *Install Software* information box indicates that *Software Loading* is in progress.



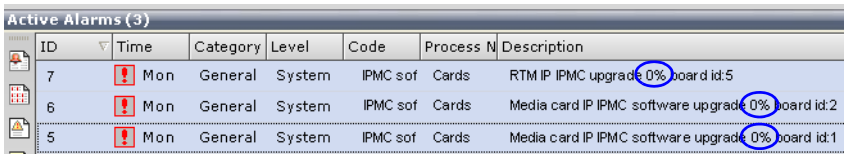
A series of *Active Alarms* are displayed indicating the progress of the upgrade process.



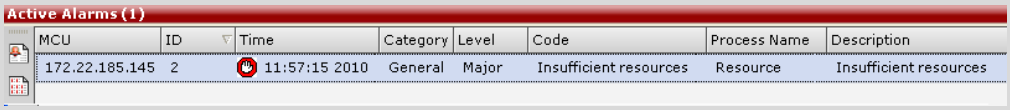
The *Install Software* information box indicates that *IPMC Burning* is in progress.



A further series of *Active Alarms* are displayed indicating the progress of the upgrade process.



Sometimes, when updating the *Version 7.0.x* license key, the system displays the following active alarm:



Ignore this Active Alarm and complete this installation procedure.

The upgrade procedure takes approximately **20** minutes.

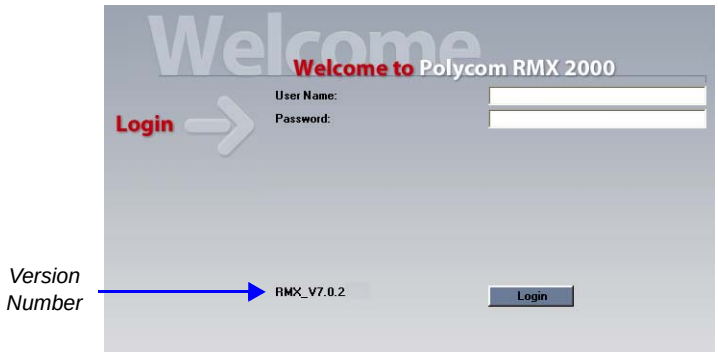
Connection to the *RMX* is terminated and you are prompted to reopen the browser.

5 Approximately 5 minutes after receiving this message, close and reopen the browser.

6 Enter the IP address of the *RMX Control Unit* in the browser's address line and press **Enter** to reconnect to *RMX*.

The browser displays a message indicating that it cannot display the requested page.

The version number in the *Welcome* screen has changed to *7.0.2*.



7 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator

showing the time remaining until the system start-up is complete.

- 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 is created and the default user is deleted.
- If the upgrade process fails, please contact Polycom support.

8 To use the new features such as *Operator Assistance* and *Gateway Sessions* the *IVR Services* must be updated. For more details, see *"Additional/Optional System Updates After Upgrading"* on page **32**.

Upgrading from Version 6.0.2 to Version 7.0.2

1 Download the *Version 7.0.2* software from the *Polycom Resource Center* web site.

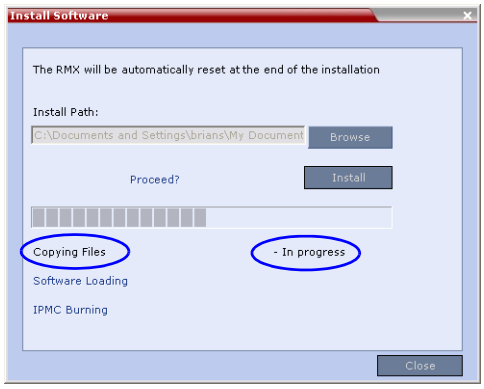
2 Obtain the *Version 7.0.2 Product Activation Key* from the *Polycom Resource Center* web site. For more information, see the *RMX Getting Stated Guide*, "*Procedure 1: First-time Power-up*" on page **2-18**.

3 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, "*Software Management*" on page **18-99**.

4 Install *MCU* Software *Version 7.0.2*.
On the *RMX* menu, click **Administration > Software Management > Software Download**.

5 *Browse* to the *Install Path*, selecting the **Version 7.0.2.x.bin** file in the folder where *Version 7.0.2* is saved and click **Install**.

The *Install Software* information box that the file *Copying files* is *In progress*.

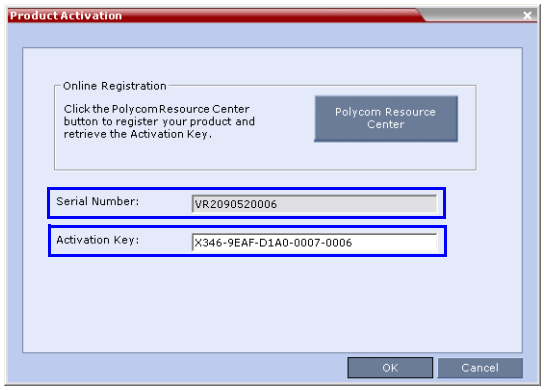


At the end of the installation process the system displays an indication that the software copying procedure is *Completed* and that a new *Activation Key* is required.

6 Click the **OK** button.

7 On the *RMX* menu, click **Setup > Product Activation**.

The *Product Activation* dialog box is displayed with the serial number field completed.

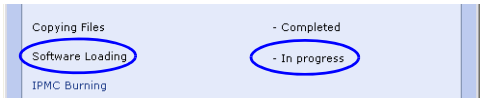


8 In the *Activation Key* field, enter or paste the *Product Activation Key* obtained earlier and click the **OK** button.

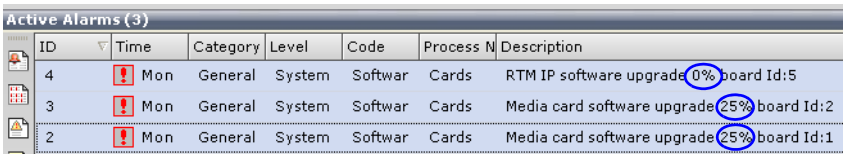
At the end of the *Product Activation* process the system displays an indication that the *Product Activation Key* was successfully installed.

9 Click the **OK** button.

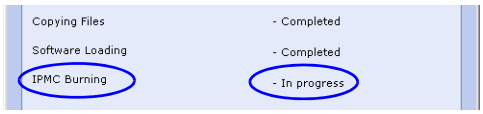
The *Install Software* information box indicates that *Software Loading* is in progress.



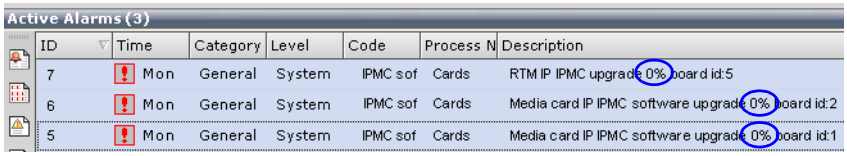
A series of *Active Alarms* are displayed indicating the progress of the upgrade process.



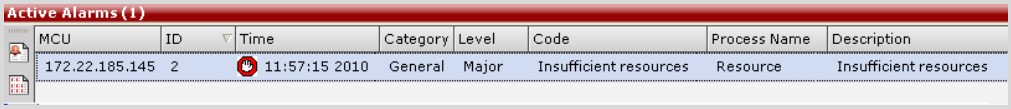
The *Install Software* information box indicates that *IPMC Burning* is in progress.



A further series of *Active Alarms* are displayed indicating the progress of the upgrade process.



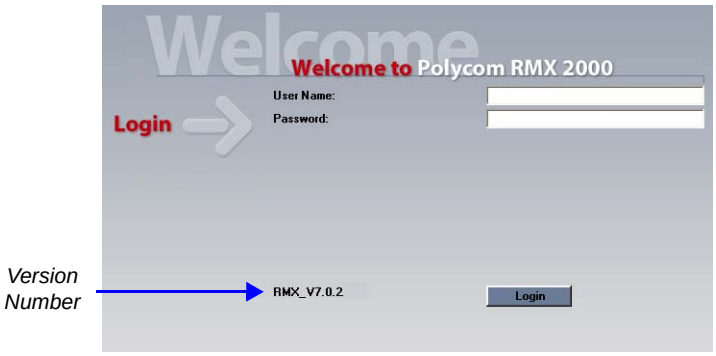
Sometimes, when updating the *Version 7.0.x* license key, the system displays the following active alarm:



Ignore this Active Alarm and complete this installation procedure.

10 After about **30** minutes, **close and reopen the browser** and connect to the *RMX*. If the browser was not closed and reopened, the following error message is displayed: "*Browser environment error. Please reopen the browser*".

The version number in the *Welcome* screen has changed to *7.0.2*.



11 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator Starting up (15:25) showing the time remaining until the system start-up is complete.

- 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 is created and the default user is deleted.
- If the upgrade process fails, please contact Polycom support.

12 To use the new features such as *Operator Assistance* and *Gateway Sessions* the *IVR Services* must be updated. For more details, see *"Additional/Optional System Updates After Upgrading"* on page **32**.

Upgrading from Versions 6.0/6.0.1 to Version 7.0.2

This upgrade requires an intermediate upgrade from *Version 6.0./6.0.1* to *Version 6.0.2*.

Intermediate Upgrade from Version 6.0/6.0.1 to Version 6.0.2

1 Download the *Version 6.0.2* software from the *Polycom Resource Center* web site.

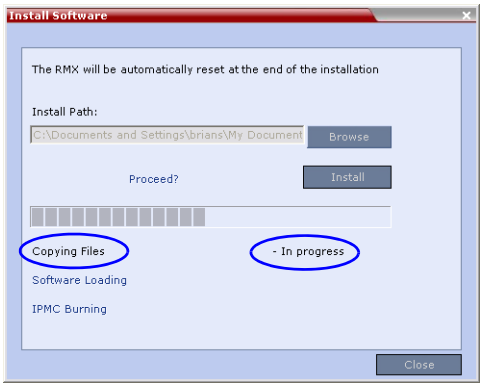
If *Windows7™* is installed on the workstation, *Protected Mode* must be disabled before downloading the *Version 6.0.2* software to the workstation.
For more information see "*Windows 7™ Security Settings*" on page **12**.

2 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide, "Software Management"* on page **18-99**.

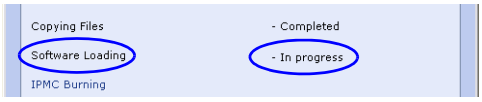
3 Install *MCU* Software *Version 6.0.2*.
On the *RMX* menu, click **Administration > Software Management > Software Download**.

4 *Browse* to the *Install Path,* selecting the **Version 6.0.2xx.bin** file in the folder where *Version 6.0.2* is saved and click **Install**.

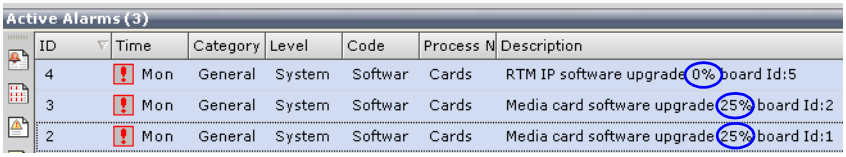
The *Install Software* information box that the file copy is *In progress*.



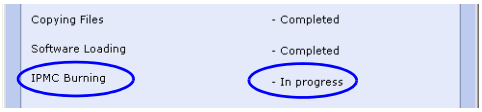
The *Install Software* information box indicates that *Software Loading* is in progress.



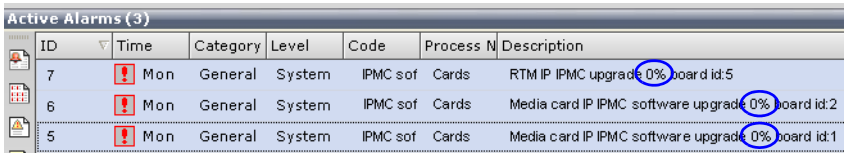
A series of *Active Alarms* are displayed indicating the progress of the upgrade process.



The *Install Software* information box indicates that *IPMC Burning* is in progress.

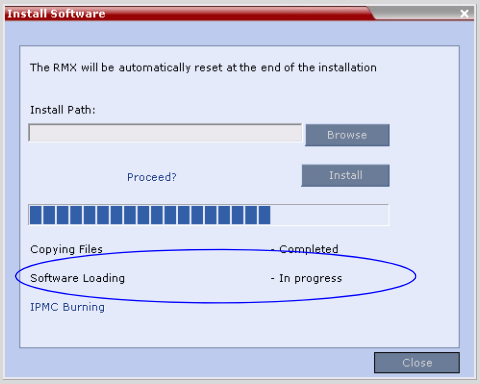


A further series of *Active Alarms* are displayed indicating the progress of the upgrade process.

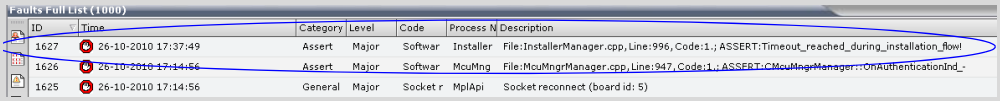


The upgrade procedure takes approximately **20** minutes.

When upgrading from version 6.0.1, if after 20 minutes the system remains in the *Loading Software* stage:



and sometimes the following Active Alarm is displayed:



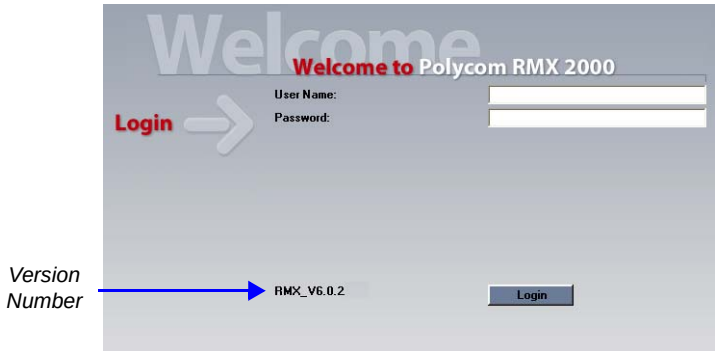
Close the Install Software window, access the **Hardware Monitor** and **Reset** the RMX. After reset, the upgrade process continues as described below.

Connection to the *RMX* is terminated and you are prompted to reopen the browser.

5 After approximately 5 minutes close and reopen the browser.

6 Enter the IP address of the *RMX Control Unit* in the browser's address line and press **Enter** to reconnect to *RMX*.

The *Login* screen is displayed. The version number has changed to *6.0.2*.



7 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator Starting up (15:25) showing the time remaining until the system start-up is complete.

Upgrade from Version 6.0.2 to Version 7.0.2

>> Continue with the upgrade from *Version 6.0.2* to *Version 7.0.2* as described starting on page 21.

Upgrading from Versions 5.0/5.0.1/5.0.2 to Version 7.0.2

For *Version 5.0* and *Version 5.0.1*, this upgrade requires an intermediate upgrade to *Version 5.0.2*.

Intermediate Upgrade from Version 5.0/5.0.1 to Version 5.0.2

1 Download the required software *Version 5.0.2* from the *Polycom Resource Center* web site.

If *Windows7™* is installed on the workstation, *Protected Mode* must be disabled before downloading the *Version 5.0.2* software to the workstation.
For more information see "*Windows 7™ Security Settings*" on page 12.

2 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, "*Software Management*" on page 18-99.

3 Install *MCU* Software *Version 5.0.2*.
On the *RMX* menu, click **Administration> Software Management > Software Download**.

4 *Browse* to the *Install Path*, selecting the **Version 5.0.2xx.bin** file in the folder where *Version 5.0.2* is saved and click **Install**.

At the end of the installation process the system displays an indication that the software was successfully downloaded and that a new activation key is required.

5 Click **Close** to close the *Install Software* dialog box.

6 When prompted whether to reset the *MCU*, click **Yes** to reset the *MCU*.

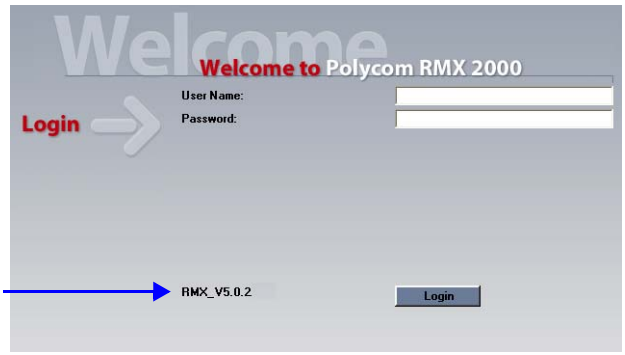
At the end of the installation process the system displays an indication that the software was successfully downloaded.

The upgrade procedure takes about **30** minutes during which time an *Active Alarm - System Upgrade* is displayed.

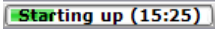
The RMX resets itself during the upgrade process and connection to the *RMX Web Client* may be lost. If the workstation is logged in to the *RMX Web Client* during the resets, the *MCU State* indicator at the bottom right corner of the *RMX Web Client* screen indicates *STARTUP*.

7 After about **30** minutes, **close and reopen the browser** and connect to the RMX. If the browser was not closed and reopened, the following error message is displayed: "Browser environment error. Please reopen the browser".

The version number in the *Welcome* screen has changed to *5.0.2*.



8 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator 

showing the time remaining until the system start-up is complete.

Upgrade from Version 5.0.2 to Version 7.0.2

1 Download the software **Version 7.0.2** software from the *Polycom Resource Center* web site.

If *Windows7™* is installed on the workstation, *Protected Mode* must be disabled before downloading the *Version 7.0.2* software to the workstation.
For more information see "*Windows 7™ Security Settings*" on page **12**.

2 Obtain the Version 7.0.2 *Product Activation Key* from the *Polycom Resource Center* web site. For more information, see the *RMX Getting Stated Guide*, "*Procedure 1: First-time Power-up*" on page **2-18**.

3 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, "*Software Management*" on page **18-99**.

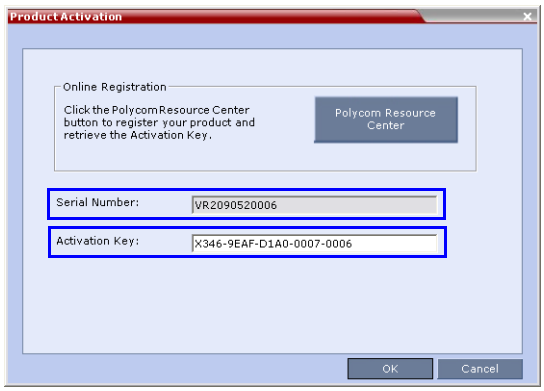
4 Install *MCU* Software Version 7.0.2.
On the *RMX* menu, click **Administration > Software Management > Software Download**.

5 *Browse* to the *Install Path*, selecting the **Version 7.0.2xx.bin** file in the folder where **Version 7.0.2**. is saved and click **Install**.

At the end of the installation process the *Install Software* dialog box indicates that the installed software is being checked. The system then displays an indication that the software was successfully downloaded and that a new activation key is required.

6 On the *RMX 2000/4000* menu, click **Setup > Product Activation**.

The *Product Activation* dialog box is displayed with the serial number field completed.



7 In the *Activation Key* field, enter or paste the *Product Activation Key* obtained earlier and click the **OK** button.

At the end of the *Product Activation* process the system displays an indication that the *Product Activation Key* was successfully installed.

8 When prompted whether to reset the *RMX*, click **Yes** to reset the *RMX*.

Sometimes when upgrading from version 5.0.2 to version 7.0.x the reset process fails. In such a case, you can try to connect to the *MCU* via the Shelf Management and reset the *MCU* from the Hardware Monitor or you can “hard” reset the *MCU* by turning the Power off and on again.

9 When prompted to wait while the *RMX* resets, click **OK**.

The upgrade procedure takes approximately 30 minutes.

Connection to the *RMX* is terminated and you are prompted to reopen the browser.

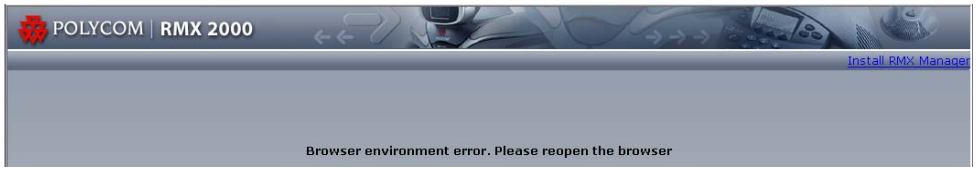
10 After approximately 30 minutes close and reopen the browser.

11 Enter the IP address of the *RMX Control Unit* in the browser’s address line and press **Enter** to reconnect to *RMX*.

The browser displays a message indicating that it cannot display the requested page.

12 Refresh the browser periodically until connection to the *RMX* is established and the *Login* screen is displayed.

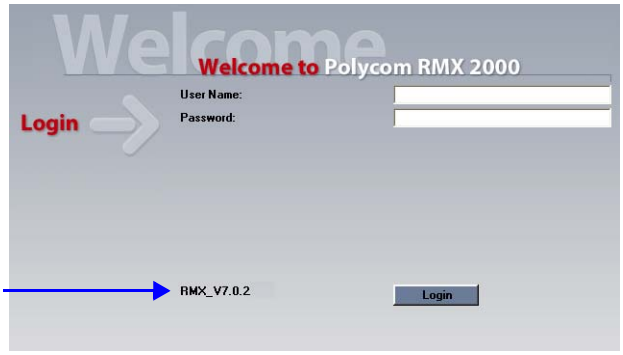
You may receive a message stating *Browser environment error. Please reopen the browser*.



13 **Optional.** Close and reopen the browser.

14 Enter the IP address of the *RMX Control Unit* in the browser’s address line and press **Enter** to reconnect to *RMX*.

The *Login* screen is displayed. The version number has changed to *7.0.2*.



15 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator Starting up (15:25) showing the time remaining until the system start-up is complete.

- 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 is created and the default user is deleted.
- If the upgrade process fails, please contact Polycom support.

To use the new features such as *Operator Assistance* and *Gateway Sessions* the *IVR Services* must be updated. For more details, see *"Additional/Optional System Updates After Upgrading"* on page **32**.

Upgrading from Version 4.x to Version 7.0.2

From *Version 4.x*, the upgrade to *Version 7.0.2* requires an intermediate upgrade to *Version 5.0.2*.

Intermediate Upgrade from Version 4.x to Version 5.0.2

1 Download the *Version 5.0.2* software from the *Polycom Resource Center* web site.

2 Obtain the *Version 5.0.2 Product Activation Key* from the *Polycom Resource Center* web site. For more information, see the *RMX Getting Stated Guide*, *"Procedure 1: First-time Power-up"* on page **2-18**.

3 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, *"Software Management"* on page **18-99**.

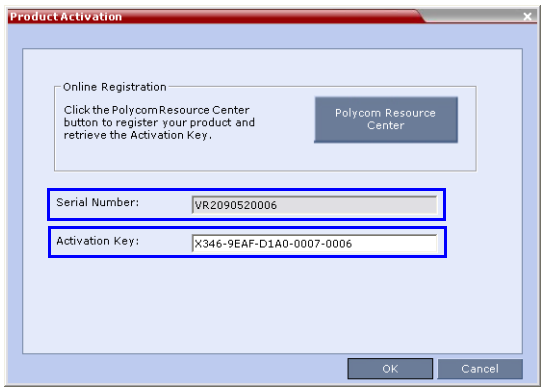
4 Install *MCU* Software *Version 5.0.2*
On the *RMX* menu, click **Administration> Software Management > Software Download**.

5 *Browse* to the *Install Path*, selecting the **Version 5.0.2xx.bin** file in the folder where the downloaded version is saved and click **Install**.

At the end of the installation process the system displays an indication that the software was successfully downloaded and that a new activation key is required.

6 On the *RMX* menu, click **Setup > Product Activation**.

The *Product Activation* dialog box is displayed with the serial number field completed.



7 In the *Activation Key* field, enter or paste the *Product Activation Key* obtained earlier and click the **OK** button.

At the end of the *Product Activation* process the system displays an indication that the *Product Activation Key* was successfully installed.

8 Click the **OK** button.

9 When prompted whether to reset the MCU, click **Yes** to reset the MCU.

At the end of the installation process the system displays an indication that the software was successfully downloaded.

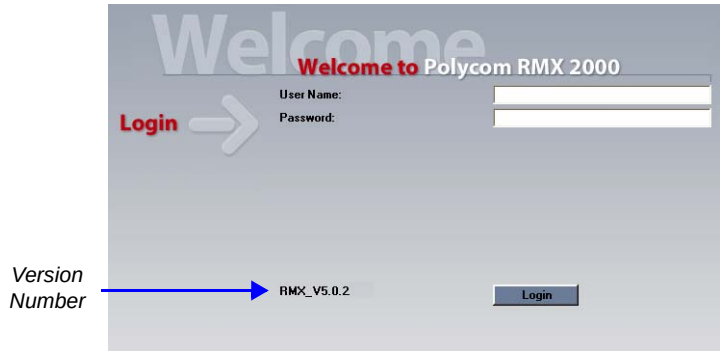
The upgrade procedure takes about **30** minutes during which time an *Active Alarm - System Upgrade* is displayed.

The RMX resets itself during the upgrade process and connection to the *RMX Web Client* may be lost. If the workstation is logged in to the *RMX Web Client* during the resets, the *MCU State* indicator at the bottom right corner of the *RMX Web Client* screen indicates *STARTUP.*

Sometimes when upgrading from version 4.x to version 5.0.x the reset process fails. In such a case, you can try to connect to the MCU via the Shelf Management and reset the MCU from the Hardware Monitor or you can “hard” reset the MCU by turning the Power off and on again.

10 After about **30** minutes, **close and reopen the browser** and connect to the RMX. If the browser was not closed and reopened, the following error message is displayed: “Browser environment error. Please reopen the browser”.

The version number in the *Welcome* screen has changed to *5.0.2*.



11 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator showing the time remaining until the system start-up is complete.

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 the POLYCOM User is renamed or a new Administrator User is created and the default User is deleted.

Upgrade from Version 5.0.2 Version 7.0.2

>> Continue with the upgrade procedure from *Version 5.0.2* to *Version 7.0.2* starting on page **26**.

To use the new features such as *Operator Assistance* and *Gateway Sessions* the IVR Services must be updated. For more details, see *"Additional/Optional System Updates After Upgrading"* on page **32**.

Upgrading from Versions 2.x/3.x to Version 7.0.2

From *Versions 2.x/3.x*, the upgrade to *Version 7.0.2* requires two intermediate upgrades:

1 Intermediate upgrade to *Version 4.1.1*.

2 Intermediate upgrade from *Version 4.1.1* to *Version 5.0.2*.

Intermediate Upgrade 1: From Version 2.x/3.x to Version 4.1.1

1 Download the *Version 4.1.1* software from the *Polycom Resource Center* web site.

2 Obtain the *Version 4.1.1 Product Activation Key* from the *Polycom Resource Center* web site. For more information, see the *RMX Getting Stated Guide*, *"Procedure 1: First-time Power-up"* on page **2-18**.

3 Backup the configuration file. For more information, see the *RMX 2000 Administrator's Guide*, *"Software Management"* on page **18-99**.

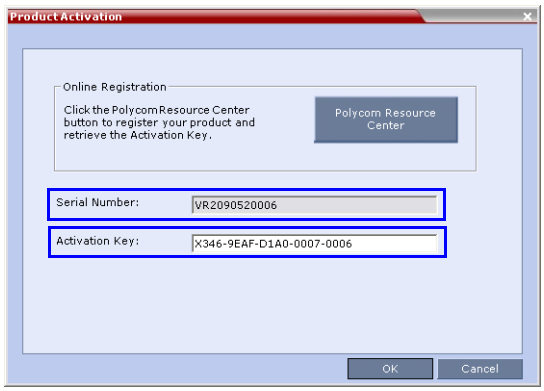
4 Install *MCU* Software *Version 4.1.1*
On the *RMX* menu, click **Administration> Software Management > Software Download**.

5 *Browse* to the *Install Path*, selecting the **Version 4.1.1xx.bin** file in the folder where *Version 4.1.1* is saved and click **Install**.

At the end of the installation process the system displays an indication that the software was successfully downloaded and that a new activation key is required.

6 On the *RMX* menu, click **Setup > Product Activation**.

The *Product Activation* dialog box is displayed with the serial number field completed.



7 In the *Activation Key* field, enter or paste the *Product Activation Key* obtained earlier and click the **OK** button.

At the end of the *Product Activation* process the system displays an indication that the *Product Activation Key* was successfully installed.

8 Click the **OK** button.

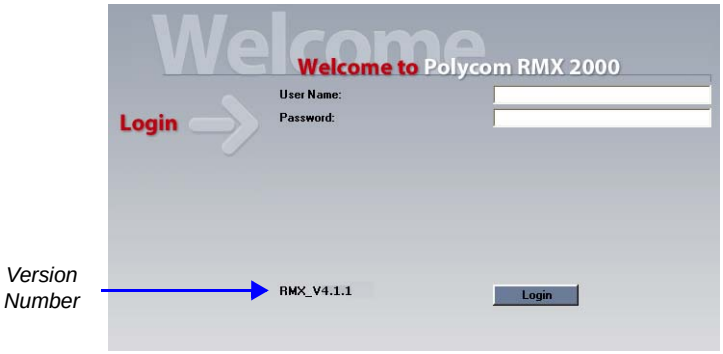
9 When prompted whether to reset the *MCU*, click **Yes** to reset the *MCU*.

The upgrade procedure may take up to 30 minutes during which time an *Active Alarm - System Upgrade* is displayed.

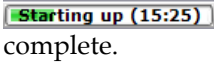
The *RMX* resets itself during the upgrade process and connection to the *RMX Web Client* may be lost. If the workstation is logged in to the *RMX Web Client* during the resets, the *MCU State* indicator at the bottom right corner of the *RMX Web Client* screen indicates *STARTUP*.

10 After 30 minutes, close and re-open the browser and connect to the *RMX*.

The version number in the *Welcome* screen has changed to *4.1.1*



11 In the *RMX Web Client – Welcome* screen, enter your *User Name* and *Password* and click **Login**.

In the *Main Screen* an *MCU State* indicator displays a progress indicator 

showing the time remaining until the system start-up is complete.

Intermediate Upgrade 2: From Version 4.1.1 to Version 5.0.2

1 Continue with *Intermediate Upgrade from Version 4.x to Version 5.0.2* starting on page 28.

2 Continue with the upgrade procedure from *Version 5.0.2* to *Version 7.0.2* starting on page 26.

Additional/Optional System Updates After Upgrading

IVR Services Update

When upgrading from version 4.0 and earlier, *Operator Assistance* and the *Gateway calls* options require that the IVR Service includes specific (new) DTMF Codes and voice messages that are not automatically added to existing IVR Services in order to avoid conflicts with existing DTMF codes. Therefore, to use these options, new Conference and Entry Queue IVR Services must be created.

In Version 6.0, recording can be controlled from the HDX remote control using the designated recording buttons. This is enabled by changing the existing definitions of the DTMF codes of the Roll Call and Recording actions in the Conference IVR Services already defined in the RMX.

In Version 7.0, PCM for ISDN participants is enabled by a DTMF code. The code must be added to the *DTMF Codes* tab to enable the PCM for ISDN participants. Default value is 1.

To modify the Conference IVR Service:

1 In the IVR Services list, double-click the service to modify or right click the service and select Properties.

2 To add the gateway voice messages and dial tones, click the **General** tab and select the appropriate *.wav files.

3 To modify the DTMF codes, click the **DTMF Codes** tab.

4 Modify the DTMF codes as follows:

Table 10 *DTMF Code Changes*

Action	Existing DTMF Code	New DTMF Code
Enable Roll Call	*32	*42
Disable Roll Call	#32	#42
Roll Call Review Names	*33	*43
Roll Call Stop Review	#33	#43
Start/Resume Recording	*73	*3
Stop Recording	*74	*2
Pause Recording	*75	*1
Request Private Assistance		*0
Request Assistance for the conference		00
PCM (for ISDN participants only)		##

5 To add the Operator Assistance Options, click the **Operator Assistance** tab and select the appropriate options and messages.

For details on modifying the IVR Services, see *RMX 2000 Administrator's Guide*, *"Defining a New Conference IVR Service"* on page **14-9**.

Gathering Settings

When upgrading from earlier versions, the *Enable Gathering* check box in the *Profile Properties - Gathering Settings* dialog box is not selected by default for existing *Profiles*.

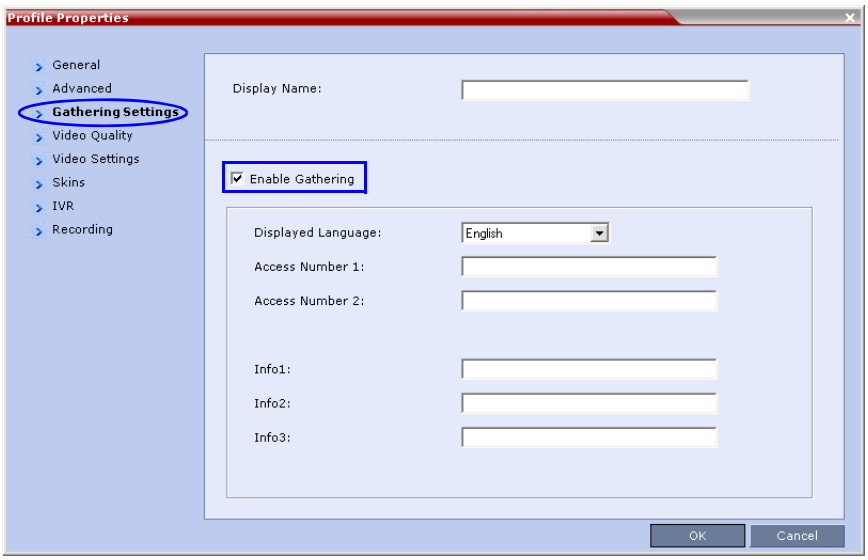
To set Enable Gathering as default:

1 In the *RMX Management* pane, click *Conference Profiles*.

2 In the *Conference Profiles* pane, double-click the **Profile** or right-click the *Profile*, and then click **Profile Properties**.

The *Profile Properties – General* dialog box opens.

3 Click **Gathering Settings**.



4 Select the **Enable Gathering** check box.

5 Click the **OK** Button.

For more information, see the RMX 1500/2000/4000 Administrator's Guide, *"Gathering Phase"* on page **2-44**.

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.

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

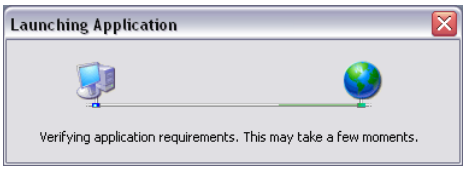
- When upgrading the RMX Manager application, it is recommended to backup the MCU list using the **Export RMX Manager Configuration** option. For more details, see *"Multi-RMX Manager - Import/Export RMX Manager Configuration"* on page **109**.
- When upgrading the RMX Manager from a major version (for example, version 7.0) to a maintenance version of that version (for example, 7.0.x), 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 unit 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.



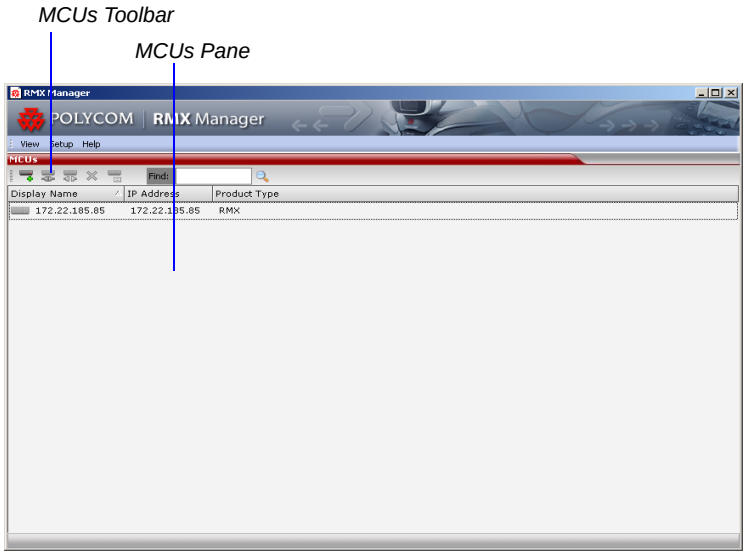
If the following error message is displayed, you are upgrading from an MCU that other than the one used for the installed version (different IP address). In such a case, first uninstall the RMX Manager application using **Control Panel > Add or Remove Programs**.

The *Install* dialog box is displayed.

3 Click the **Install** button.

The installation proceeds.

The installation completes, the application loads and the RMX *Manager - 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 *"Multi-RMX Manager - Import/Export RMX Manager Configuration"* on page **109**.

Detailed Description - RMX 1500

The Polycom® RMX® 1500 supports multiple network protocols - IP (H.323, SIP), PSTN, and ISDN - to extend the power of unified collaboration within the enterprise.

The RMX® 1500 user and administrator interface is the same as for the RMX 2000/4000.

The RMX 1500 Real-time Media Conference platform offers up to 90 video resources and 360 audio resources. For detailed description of the RMX 1500 hardware components, see the *Polycom RMX 1500 Hardware Guide*.

Card Configuration Mode

The RMX 1500 operates in the *MPMx Card Configuration Mode*.

System Capacities

Conferencing Capacities

The following table summarizes the different conferencing capacities:.

Table 1-1 *System Functions and Capacities RMX 1500*

System Functions	Capacity
Maximum number of Video participants in a conference	90
Maximum number of PSTN participants in a conference	120
Maximum number of VOIP participants in a conference	360
Maximum number of Audio calls per second	5
Maximum number of Video calls per second	2
Maximum number of Conferences	400
Maximum number of Meeting Rooms	1000
Maximum number of Entry Queues	40
Maximum number of Profiles	40
Maximum number of Conference Templates	100
Maximum number of SIP Factories	40
Maximum number of IP Services	1
Maximum number of ISDN Services	2
Maximum number of IVR Services	40
Maximum number of Recording Links	20 (default)
Maximum number of IVR Video Slides	150
Maximum number of Log Files (1Mb max.)	4000
Maximum number of CDR Files	2000

Table 1-1 *System Functions and Capacities RMX 1500*

System Functions	Capacity
Maximum number of Fault Files	1000
Number of Participant alerts	Unlimited
Maximum number of concurrent RMX Web Client connections to the MCU	20
Maximum number of Users	100
Maximum number Address Book entries	4000
Maximum number of gateway profiles	40
Maximum number of Reservations (Internal Scheduler)	2000

Resource Capacities

The following table summarizes the resource capacities according to audio, video and video resolutions in CP conferences:.

Table 1-2 *System Resource Capacities per Audio or Video and Resolution in CP Conferences*

Audio/Video and Resolution	RMX 1500 (MPMx) Resources
HD Support	CP / VSW
PSTN	120
VOIP	360
ISDN	60 (128 Kbps) - 4 E1/T1
CIF H.263	60
CIF H.264	90
SD / 4CIF H.264	60
4CIF H.263	30
720p30	30
1080p30fps/720p60	15 (Symmetric)

The following table summarizes the resource capacities according to line rates in VSW conferences as line rates are deciding factor:.

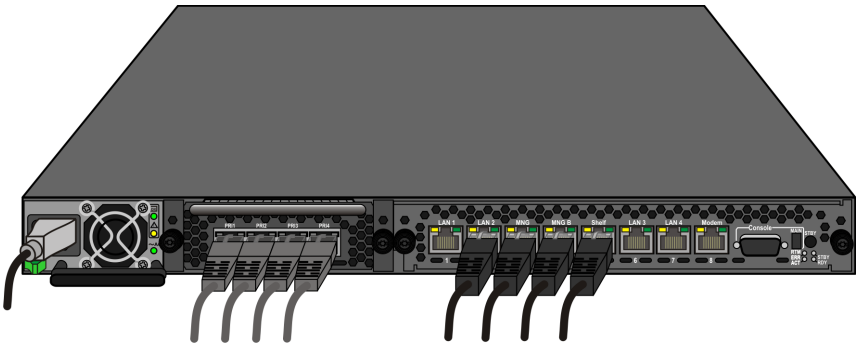
Table 1-3 *System Resource Capacities per Line Rate in VSW conferences*

Audio/Video and Resolution	RMX 1500 (MPMx) Resources
VSW 2Mb	80
VSW 4Mb	40
VSW 6Mb	20

Network Connectivity

On the RMX 1500 Media and Signaling are on the same network, but have separate IP addresses. However, Management of the RMX is separate network from Media & Signaling.

All IP addresses have separate physical LAN connector.



RMX 1500 Rear Panel View with AC Power and Communication Cables

Hardware Monitoring

In the RMX 1500, component information can be viewed in the *Hardware Monitor* section.

The properties displayed for the hardware components will vary according to the type of component viewed. These component properties

can be grouped as follows:

- MCU Properties (RMX 1500)
- Card Properties (RTM IP 1500, RTM ISDN)
- Supporting Hardware Components Properties (MPMx, Backplane, FANS, LAN)

Hardware Monitor - Slot Components

On the RMX 1500, each internal component can be viewed via the Hardware Monitor.

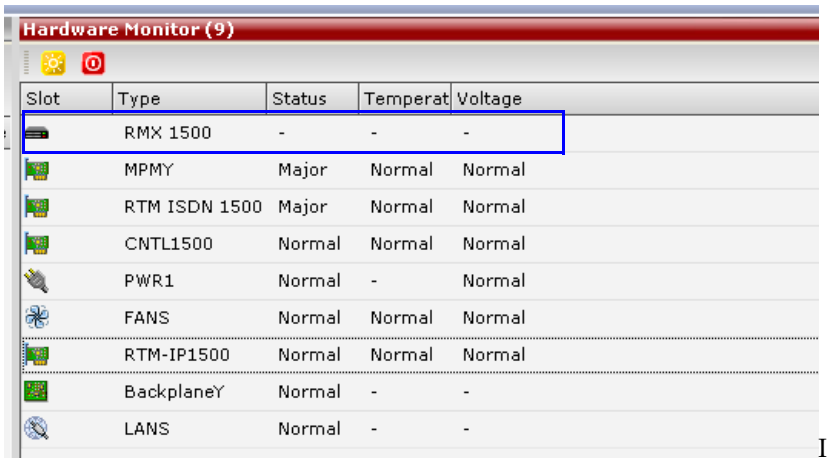
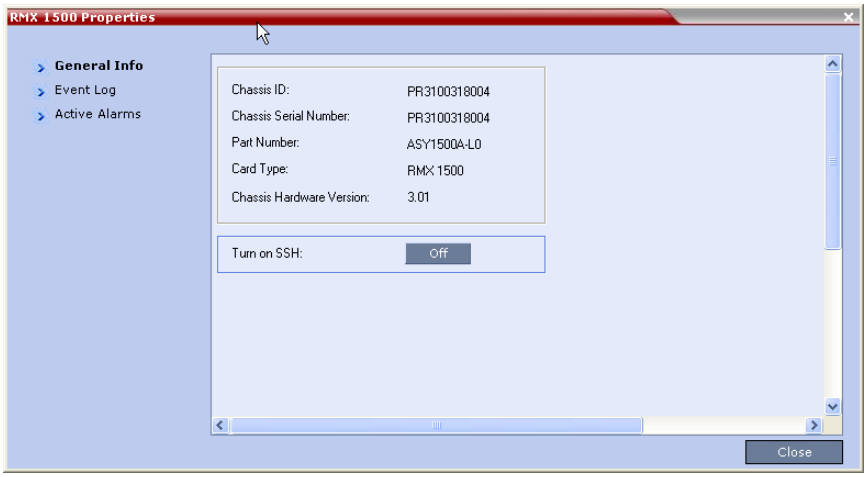


Table 2 *RMX 1500 Slot Components*

Card/Component	Requirement
MPMx Media Card	(Internal Component). Build-in MPMx card. The internal media card requires the RTM IP 1500 card.
RTM ISDN 1500	(Optional) ISDN card for 4 E1/T1 connections. This card is field replaceable.
CNTL 1500	(Internal Component). Internal Management of the system.
Power Supply	Mandatory. Supplies AC Power to the RMX. This unit is not field replaceable.
Fan (Internal Component)	(Internal Component). Provides cooling for the internal RMX components.
RTM-IP 1500	Mandatory. Contains an Ethernet Switch that manages the network of the system, routes data between the cards and components of the system and provides connectivity to external IP networks. This unit is not field replaceable.
BackplaneY	(Internal Component). Data Routing.
LANS	(Internal Component). Provide Network access.

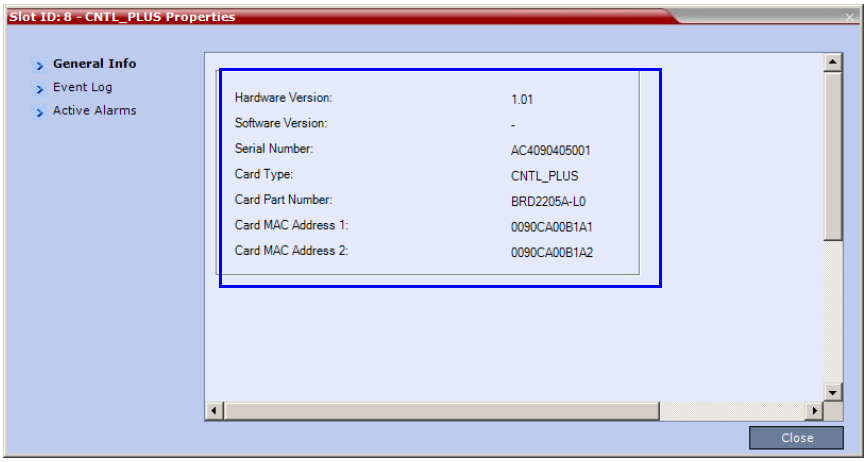
RMX 1500 Properties

The *RMX 1500 Properties - General Info* tab.



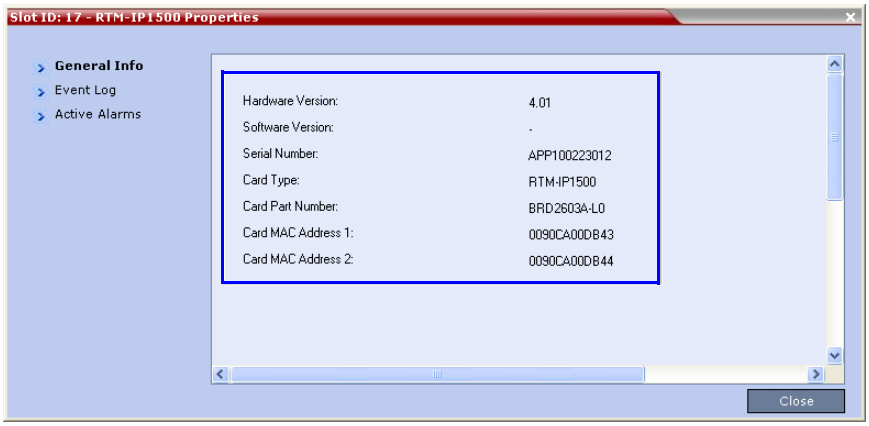
CNTL 1500 Properties

The *CTRL_PLUS Properties - General Info* tab.



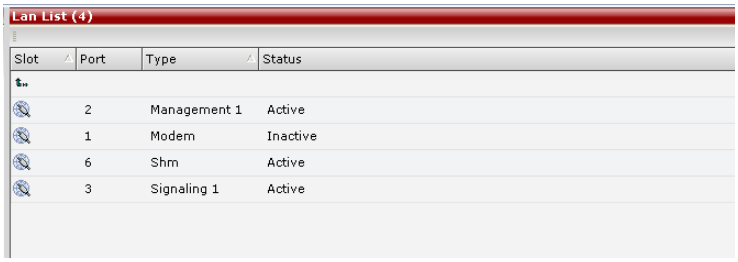
RTM IP 1500 Properties

The *RTM IP Properties - General Info* tab.



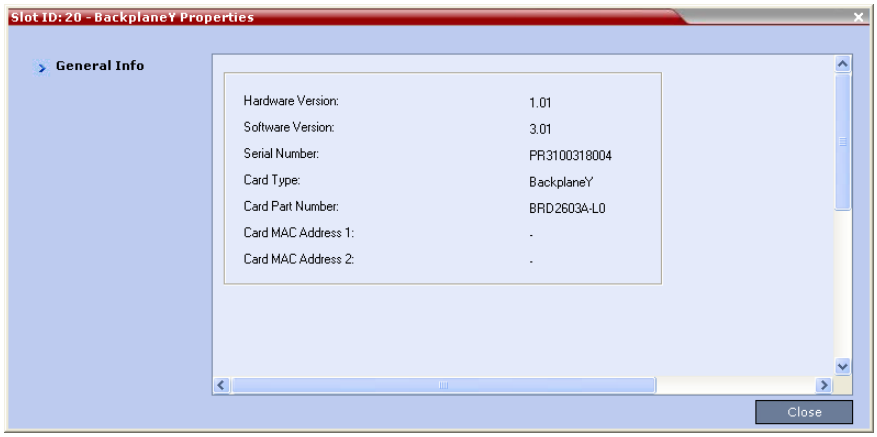
LAN Unit List Properties

The *LAN Unit List* Properties.



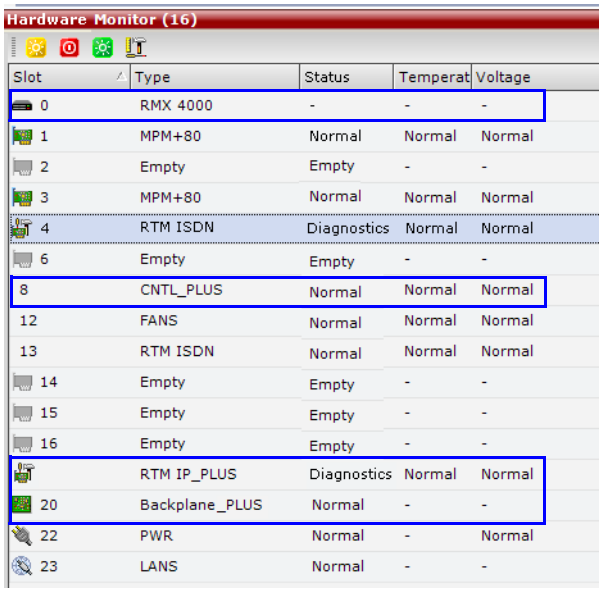
Backplane 1500 Properties

The *Backplane_PLU Properties - General* Info tab.

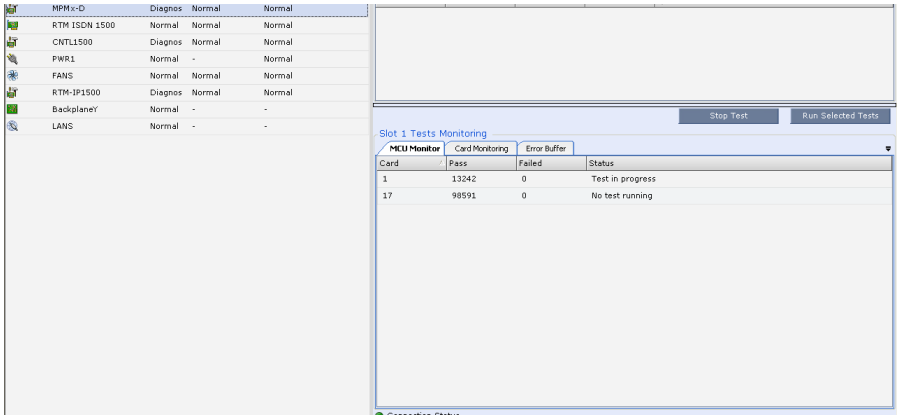


Hardware Monitor Component Diagnostics

In the *Hardware Monitor Diagnostics* pane, new components are added to the UI:



New components have been added to the *Hardware Monitor - Diagnostics Test* pane:



Video/Voice Port Configuration and Resource Report Changes

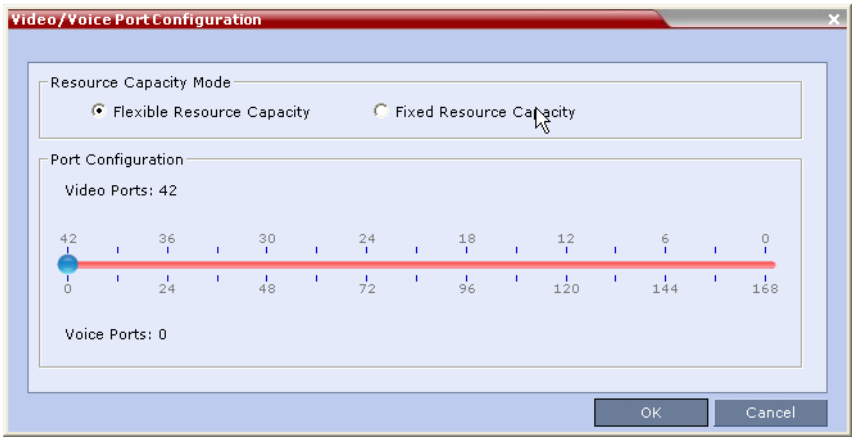
No reset is required when changing the *Video/Voice Port Configuration* on the RMX 1500.

When switching between *Flexible Resource Capacity* and *Fixed Resource Capacity* modes, no reset is required. However, the Video/Voice Configuration slider cannot be changed while there are ongoing conferences on the RMX 1500.

Flexible Resource Capacity is default resource allocation mode on the RMX 1500.

The Video and Audio resource capacities on the RMX 1500 are a maximum of:

- 90 Video Ports
- 360 Audio Ports

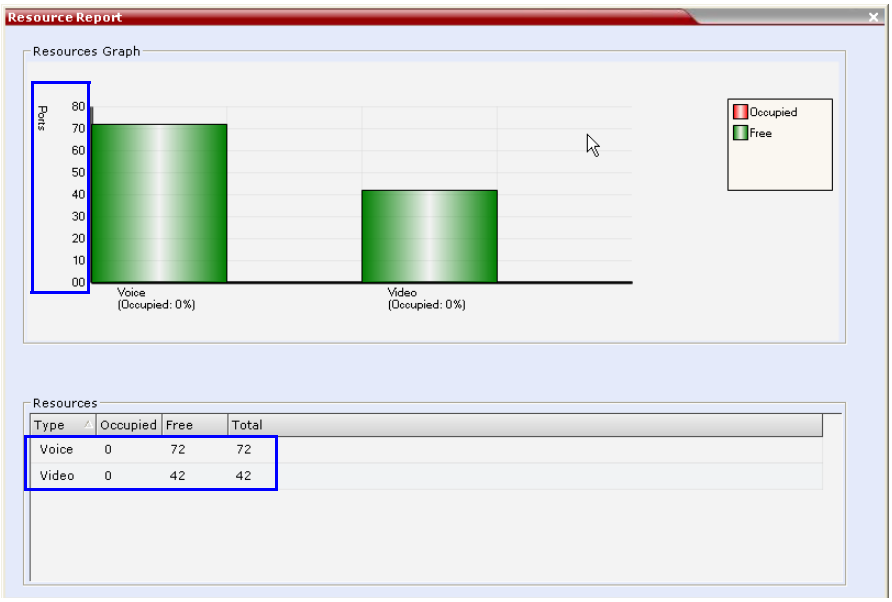


The *Resource Capacity Mode*s are identical to the RMX 2000/4000.

The slider moves in multiples of three (in *MPMx Card Configuration Mode)*, converting CIF video ports to voice ports in groups of three, with each CIF video port converting to four voice ports. The minimum number of voice ports that can be allocated is 12 (3 video ports x 4 voice ports per video port).

Resource Report

The resource capacity of RMX 1500 can be viewed in the Resource Report pane:



It reflects the MPMx card assembly type (MPMx-S and MPMx-D) and the Resource Allocation Mode (Flexible or Fixed) .

MCU Type Indication

RMX 1500 Banner

The RMX model (RMX 2000/RMX 4000/RMX 1500) is indicated in the RMX Web Client banner and in the Welcome heading.

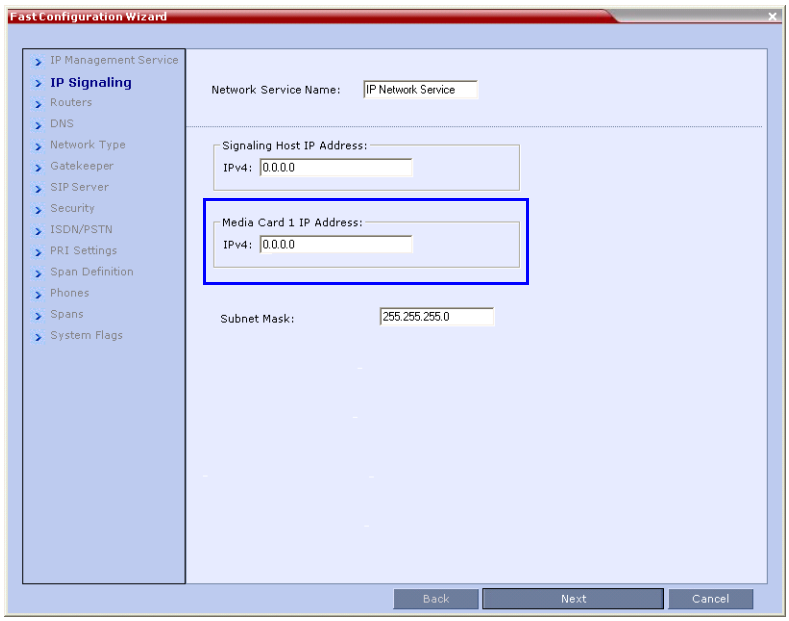
RMX Manager Application

In the *RMX Manager* application, the RMX 1500 is indicated in the MCU Type and the appropriate MCU icon is displayed when the RMX 1500 is defined .

Network Service Changes

Fast Configuration Wizard - RMX 1500

The *Fast Configuration Wizard - IP Signaling* tab is available on the RMX 1500. A single IP Address field for the MPMx media card is added to the *IP Signaling Tab*.



Detailed Description - MPMx Media Card

RMX Version 7.0.x supports the latest *MPMx (*Media Processing Module) card which increases the RMX's capacity and capabilities.

When *MPMx* cards are installed, the RMX operates in *MPMx Mode* giving the administrator enhanced control and monitoring of *Resource Capacity* and usage within the system.

MPMx cards are supported only with **D-type** chassis and software version 7.0.x.

Front Panel & LEDs

In terms of Look and Feel and LED functionality, the MPMx front panel is identical to the MPM+.

Conferencing Capacities

Table 3 lists the maximum conferencing capacities of *RMX 4000*, *RMX 2000* and *RMX 1500* when used with *MPMx* cards.

Table 3 *MPMx Capacities - RMX 4000/2000/1500*

Maximum Number of:	RMX4000	RMX2000	RMX1500
Video Participants in a Conference	*180*	*180*	*90*
Conferences	*800*	*400*	*400*
Meeting Rooms	*2000*	*1000*	*1000*
Entry Queues	*80*	*40*	*40*
Profiles	*80*	*40*	*40*
Conference Templates	*200*	*100*	*100*
SIP Factories	*80*	*40*	*40*
IP Services	*1*	*1*	*1*
ISDN Services	*2*	*2*	*2*
IVR Services	*80*	*40*	*40*
Recording Links	*20*	*20*	*20*
IVR Video Slides	*150*	*150*	*150*
Reservations (Internal Scheduler)	*4000*	*2000*	*2000*
Log Files (1Mb max.)	*8000*	*4000*	*4000*

Table 3 *MPMx Capacities - RMX 4000/2000/1500 (Continued)*

Maximum Number of:	RMX4000	RMX2000	RMX1500
CDR Files	*4000*	*2000*	*2000*
Fault Files	*1000*	*1000*	*1000*
Number of Participant alerts	*Unlimited*	*Unlimited*	*Unlimited*
HTTP (Web) clients connected to the MCU	*20*	*20*	*20*
Address Book entries	*4000*	*4000*	*4000*
Users	*100*	*100*	*100*

Resource Capacities

Resource Capacities per Card Assembly

The MPMx can be shipped in two card assemblies. Table 2 summarizes the video capacities of the two *MPMx* card assemblies per resolution in CP conferencing.

Table 4 *MPMx Resource Capacity per Card – CP Conferencing*

Resource Type	MPMx - S	MPMx - D
Voice	180	360
H.263 CIF	30	60
H.263 4CIF15	15	30
H.264 CIF	45	90
SD H.264	30	60
HD720p30	15	30
HD720p60/ HD1080p30	8	15 (Symmetrical)

Table 5 summarizes the video capacities of the two *MPMx* card assemblies per line rate in VSW conferencing.

Table 5 *MPMx Resource Capacity per Card – VSW Conferencing*

Resource Type	MPMx - S	MPMx - D
VSW 2Mbps	40	80
VSW 4Mbps	20	40
VSW 6Mbps	10	20

Resource Capacities per Card Type (MPM, MPM+ and MPMx)

Each *MPMx* card increases the resource capacities. HD720p60 and *HD1080p30* symmetric resolutions are now supported with MPMx.

Table 6 summarizes resource capacities of the various cards that can be installed in an RMX per resolution in CP conferencing (resolution being the deciding factor).

Table 6 *MPMx, MPM+ and MPM – Resource Capacity per Resolution - CP Conferencing*

Resource Type	Maximum Possible Resources Per Card		
	MPM	MPM+	MPMx
HD720p60/HD1080p30 Symmetric	Not Applicable	Not Applicable	15
HD720p60/HD1080p30 Asymmetric		10	15
HD720p30	10	20	30
SD 60	Not Applicable	20	30
SD 30 (H.264)	10	30	60
4CIF 60	Not Applicable	20	30
4CIF 30 (H.263)	10	30	30
CIF 60 (H.264)	Not Applicable	30	60
CIF 30 (H.264)	40	80	90
CIF (H.263)	40	80	60
Audio only (VoIP)	200	400	360

Table 7 summarizes resource capacities of the various cards that can be installed in an RMX per line rate in VSW conferencing (line rate being the deciding factor).

Table 7 *MPMx, MPM+ and MPM – Resource Capacity per Resolution - VSW Conferencing*

Resource Type	Maximum Possible Resources Per Card		
	MPM	MPM+	MPMx
VSW 2Mbps	40	80	80
VSW 4Mbps	20	40	40
VSW 6Mbps	-	20	20

Total Resource Capacities per System

Table 8 lists the maximum resource capacities of *RMX 4000*, *RMX 2000* and *RMX 1500* per resolution in CP Conferencing mode when used with *MPMx* cards.

Table 8 *MPMx Resource Capacities - RMX 4000/2000/1500*

Maximum Number of:	RMX4000	RMX2000	RMX1500
CIF Resources	*360*	*180*	*90*
H.264 SD Resources	*240*	*120*	*60*
H.263 4CIF Resources	*120*	*60*	*30*

Table 8 *MPMx Resource Capacities - RMX 4000/2000/1500 (Continued)*

Maximum Number of:	RMX4000	RMX2000	RMX1500
HD 720p 30fps Resources	*120*	*60*	*30*
HD 720p 60fps Resources	*60*	*30*	*15*
HD 1080p 30 fps Resources	*60*	*30*	*15*
PSTN Audio Resources	*400*	*400*	*120*
VoIP Audio Resources	*1440*	*720*	*360*

Table 9 lists the maximum resource capacities of *RMX 4000*, *RMX 2000* and *RMX 1500* per line rate in VSW conferencing (line rate being the deciding factor) when used with *MPMx* cards.

Table 9 *MPMx, MPM+ and MPM – Resource Capacity per Resolution - VSW Conferencing*

Resource Type	Maximum Possible Resources Per Card		
	RMX4000	RMX2000	RMX1500
VSW 2Mbps	320	160	80
VSW 4Mbps	160	80	40
VSW 6Mbps	80	40	20

Audio Algorithm Support

In addition to the standard audio algorithms, the MPMx card also supports Polycom's proprietary *Siren 22* and industry standard *G.719* audio algorithms for participants connecting with *Polycom* endpoints.

For more details, see the Polycom RMX 2000 XYZ Guide, *"Audio Algorithm Support"* on page 2-54.

MPMx Guidelines

MPMx, MPM+ and MPM Modes

- **MPMx Mode** is the mode in which the RMX operates to fully utilize the increased power and capacity of *MPMx* cards.

MPMx, *MPM+* and *MPM* cards that are installed in the system **cannot be used simultaneously**.
The RMX can operate in **either** *MPM* **or** *MPM+* **or** *MPMx* mode.

- ISDN support is the same as for MPM+ cards.

Operating Mode Selection During Startup / Restart

- When started with Version 7.0 installed, the RMX enters *MPMx Mode* by default when no media cards are installed.

- The RMX switches between *MPM*, *MPMx* and *MPM+ Card Configuration Modes* when *MPM/MPM+/MPMx* cards are removed or swapped while the system is running.
- The switch between *Card Configuration Modes* occurs during the **next** restart.
- Installing or swapping *MPM/MPM+/MPMx* cards while the system is off will not cause a switch in the *Card Configuration Mode* when the system is restarted – it will restart in the *Card Configuration Mode* that was active previous to powering down.

System Information Changes

The *System Information* includes *License Information*, and general system information, such as system memory size and *Media Card Configuration Mode*, which in version 7.0 includes the *MPMx Mode*.

Table 10 summarizes the *Operating Mode After Next Restart* resulting from of adding or swapping *MPM/MPM+/MPMx* cards in a running system.

***Table 10** RMX Card Configuration Mode After Next Restart*

Current Operating Mode	Media Cards Installed	Card(s) Supported	Card(s) Disabled	Operating Mode After Next Restart
MPMx	**MPM**	None	All	MPM
	MPM+	None	All	MPM+
	MPM and MPMx	MPMx Only	MPM	MPMx
	MPM+ and MPMx	MPMx Only	MPM+	MPMx
MPM+	**MPM**	None	All	MPM
	MPM+	All	None	MPM+
	MPM and MPM+	MPM+ Only	MPM	MPM+
	MPM+ and MPMx	MPM+ Only	MPMx	MPMx
MPM	**MPM**	All	None	MPM
	MPM+	MPM Only	MPM+	MPM+
	MPM and MPM+	MPM	MPM+	MPM+
	MPM and MPMx	MPM Only	MPMx	MPMx

Example 1:

Current status

- An RMX has two *MPM* cards installed.
- The *Card Configuration Mode* is **MPM**.
- Both *MPM* cards are **enabled**.

Action

1. Remove one *MPM* card.
2. Insert one *MPMx* card.

Result

- The *Card Configuration Mode* remains **MPM**.
- The remaining *MPM* card remains **enabled**.
- The inserted *MPMx* card is **disabled**.

After Reset

- The *Card Configuration Mode* is MPMx.
- The inserted *MPMx* card is **enabled**.
- The remaining *MPM* card is **disabled**.

Example 2:

Current status

- An RMX has one *MPMx* card installed.
- The *Card Configuration Mode* is **MPMx**.
- and the *MPMx* card is **enabled**.

Action

1. Remove the *MPMx* card.
2. Insert one *MPM* card.

Result

- The *Card Configuration Mode* remains **MPMx**.
- The inserted *MPM* card is **disabled**.

After Reset

- The *Card Configuration Mode* is MPM.
- The inserted *MPMx* card is **disabled**.
- The remaining *MPM* card is **enabled**.

Example 3:

Current status

An RMX has *MPM+* card installed.

The *Card Configuration Mode* is **MPM+**.

and the *MPM+* card is **enabled**.

Action

- Insert one *MPMx* card.

Result

- The *Card Configuration Mode* remains **MPM+**.
- *MPM+* card is **enabled.**
- The inserted *MPMx* card is **disabled**.

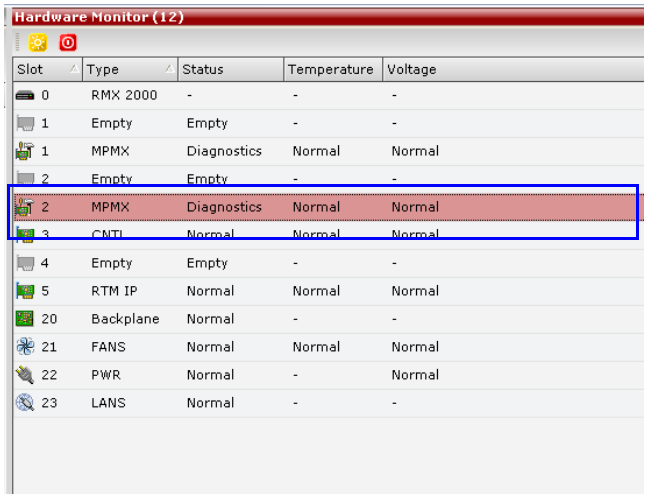
After Reset

The *Card Configuration Mode* is **MPMx**.
The inserted *MPMx* card is **enabled**.

The remaining *MPM+* card (if not removed) is **disabled**.

MPMx Hardware Monitoring

The status and properties of the MPMx Card can be viewed and monitored in the Hardware Monitor list pane. The Hardware monitor pane displays the type(s) of MPM/MPM+/MPMx card installed on the RMX 1500/2000/4000. For more information, see the *RMX 1500/2000/4000 Administrator's Guide, Chapter 13, Hardware Monitoring*.



MPMx Hardware Diagnostics

Diagnostics can be performed on the MPMx card(s) when the MCU is in *Diagnostics* mode.

To Monitor the MPMx Card:

- In the Hardware Monitor pane select the *MPMx* card and click **Diagnostics** from the drop-down menu. For more information, see the *RMX 1500/2000/4000 Administrator's Guide, "Diagnostic Mode (RMX 1500/2000/4000)"* on page **19-31**.

Video/Voice Port Configuration

The *System Card Configuration Mode* determines the resource allocation method used by the RMX to allocate resources to the connecting endpoints. As with *MPM+ Card Configuration Mode*, both **Flexible Resource Capacity™** and **Fixed Resource Capacity™** are available in *MPMx Card Configuration Mode*.

- In *MPMx Card Configuration Mode* the slider moves in multiples of three, converting CIF video ports to voice ports in groups of three, with each CIF video port converting to four voice ports. The minimum number of voice ports that can be allocated is 12 (3 video ports x 4 voice ports per video port).
- The first time the *Fixed Resource Capacity* is selected, all resources are allocated to HD720p30 by default.

- If the *Resource Capacity Mode* was previously *Fixed* or if it was *Flexible* but *Fixed* had been selected in the past, the previous resource allocations in the mode are displayed.

CIF H.263 endpoint connections require more resources than CIF H.264 - they require the same amount as SD connections. Therefore, when Fixed Mode is used for resource allocation, SD resources must be configured to ensure that H.263 endpoints can connect with video.

For more information about Video/Voice Port Configuration, see *RMX 1500/2000/4000 Administrator's Guide*, *"Video/Voice Port Configuration"* on page **18-55**.

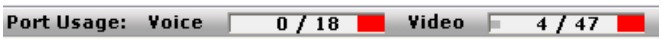
MPMx Resource Report

The *Resource Report* displays the real time resource usage according to the *Card Configuration Mode* and the selected *Resource Capacity Mode*.

For more details about Resource Report, see the *RMX 1500/2000/4000 Administrator's Guide*, *"Resource Report"* on page **18-63**.

Port Gauges

Audio (*Voice*) resources are as displayed as in previous versions while all *Video* resource types are shown as a single group of *Video* resources.



For more details, see the *RMX 1500/2000/4000 Administrator's Guide*, *"Port Usage Gauges"* on page **18-72**.

Version 7.0.2 Detailed Description - General

Automatic Password Generation

The RMX can be configured to automatically generate conference and chairperson passwords when the *Conference Password* and *Chairperson Password* fields are left blank.

Guidelines

- If the flag **HIDE_CONFERENCE_PASSWORD** is set to **YES**, the automatic generation of passwords (both conference and chairperson passwords) is disabled, regardless of the settings of the flags NUMERIC_CONF_PASS_DEFAULT_LEN and NUMERIC_CHAIR_PASS_ DEFAULT _LEN.
- The automatic generation of conference passwords is enabled/disabled by the flag **NUMERIC_CONF_PASS_DEFAULT_LEN**.
- The automatic generation of chairperson passwords is enabled/disabled by the flag **NUMERIC_CHAIR_PASS_ DEFAULT _LEN**.
- The automatically generated passwords will be numeric and random.
- The passwords are automatically assigned to ongoing conferences, Meeting Rooms and Reservations at the end of the creation process (once they are added to the RMX).
- Automatically assigned passwords can be manually changed through the *Conference/Meeting Room/Reservation Properties* dialog boxes.
- Deleting an automatically created password will not cause the system to generate a new password and the new password must be added manually or the field can be left blank.
- If a password was assigned to the conference via Microsoft Outlook using the PCO add-in, the system does not change these passwords and additional passwords will not be generated (for example, if only the conference password was assigned a chairperson password will not be assigned).
- If the flag values (i.e. the password lengths) are changed, passwords that were already assigned to conferences, Meeting Rooms and Reservations will not change and they can be activated using the existing passwords. Only new conferencing entities will be affected by the change.

Do not enable this option in an environment that includes a Polycom DMA system.

Enabling the Automatic Generation of Passwords

To enable the automatic generation of passwords, the following flags have to be defined:

Table 1-1 *Automatic Password Generation Flags*

Flag	Description
HIDE_CONFERENCE_PASSWORD	**NO (default)** - Conference and chairperson passwords are displayed when viewing the Conference/ Meeting Room/ Reservation properties. It also enables the automatic generation of passwords in general. **Yes** - Conference and Chairperson Passwords are hidden (they are replaced by asterisks). It also disables the automatic generation of passwords.
NUMERIC_CONF_PASS_MIN_LEN	Enter the minimum number of characters required for conference passwords. Possible values: **0 – 16**. **0 (default in non-secured mode)** means no minimum length. However this setting cannot be applied when the RMX is in *Enhanced Security Mode*. **9 (default in Enhanced Security Mode)** Conference password must be at least 9 characters in length.
NUMERIC_CHAIR_PASS_MIN_LEN	Enter the minimum number of characters required for chairperson passwords. Possible values: **0 – 16**. **0 (default in non-secured mode)** means no minimum length. However this setting cannot be applied when the RMX is in *Enhanced Security Mode*. **9 (default in Enhanced Security Mode)**, Chairperson password must be at least 9 characters in length.
NUMERIC_CONF_PASS_MAX_LEN	Enter the maximum number of characters permitted for conference passwords. Possible values: **0 – 16** (non-secured mode) or **9 – 16** (Enhanced Security Mode). **16 (default)** - Conference password maximum length is 16 characters.

Table 1-1 *Automatic Password Generation Flags (Continued)*

Flag	Description
NUMERIC_CHAIR_PASS_MAX_LEN	Enter the maximum number of characters permitted for chairperson passwords. Possible values: **0 – 16** (non-secured mode) or **9 – 16** (Enhanced Security Mode). **16 (default)** - chairperson password maximum length is 16 characters.
NUMERIC_CONF_PASS_DEFAULT_ LEN	This flag enables or disables the automatic generation of conference passwords. The length of the automatically generated passwords is determined by the flag value. Possible values: • **0 – 16, 6 default** (non-secured mode) • **0 and 9 – 16, 9 default** (Enhanced Security Mode). Enter **0** to disable the automatic generation of passwords. Any value other than 0 enables the automatic generation of conference passwords provided the flag *HIDE_CONFERENCE_PASSWORD is set to NO.* If the default is used, in non-secured mode the system will automatically generate conference passwords that contain 6 characters.
NUMERIC_CHAIR_PASS_ DEFAULT _LEN	This flag enables or disables the automatic generation of chairperson passwords. The length of the automatically generated passwords is determined by the flag value. Possible values: • **0 – 16, 6 default** (non-secured mode) • **0 and 9 – 16, 9 default** (Enhanced Security Mode). Enter **0** to disable the automatic generation of passwords. Any value other than 0 enables the automatic generation of chairperson passwords provided the flag *HIDE_CONFERENCE_PASSWORD is set to NO.* If the default is used, in non-secured mode the system will automatically generate chairperson passwords that contain 6 characters.

If the default password length defined by the *NUMERIC_CONF_PASS_DEFAULT_LEN* or *NUMERIC_CHAIR_PASS_ DEFAULT LEN* does not fall within the range defined by the minimum and maximum length an appropriate fault is added to the Faults list.

IVR Provider Entry Queue (Shared Number Dialing)

In an environment that includes a DMA, the RMX Entry Queue can be configured to provide the IVR Services on behalf of the DMA to SIP endpoints. It displays the Welcome Slide, plays the welcome message and retrieves the destination conference ID that is entered by the participant using DTMF codes.

To enable this feature, a special Entry Queue that is defined as *IVR Service Provider only* is created. This Entry Queue does not forward calls to conferences running on the RMX and its main functionality is to provide IVR services.

Call Flow

The SIP participant dials the DMA Virtual Entry Queue number, for example 1000@dma.polycom.com.

The DMA forwards the SIP call to the RMX, to a special Entry Queue that is configured as *IVR Service Provider Only*. The participant is prompted to enter the conference ID using DTMF codes.

Once the participant enters the conference ID, the conference ID is forwarded to the DMA, enabling the DMA to connect the SIP endpoint to the destination conference or create a new conference and connect the participant to that conference.

Guidelines

- An Entry Queue defined as IVR service provider only does not route the SIP call to a target conference and it cannot be used to rout calls on the RMX. In such a configuration, the DMA handles the calls. Therefore, normal Entry Queues must be defined separately.
- *Operator Assistance* must be disabled in the IVR Service assigned to this Entry Queue.
- Only the conference ID prompts should be configured. Other prompts are not supported in *IVR Service Provider Only* configuration.
- PSTN, ISDN, H.323 calls to this Entry Queue are rejected.
- The DMA must be configured to locate the *IVR Service Provider Only* Entry Queue on the RMX. To locate the Entry Queue the DMA requires the Entry Queue's ID number and the RMX Central Signaling IP address (xxx.xx.xxx.xx).

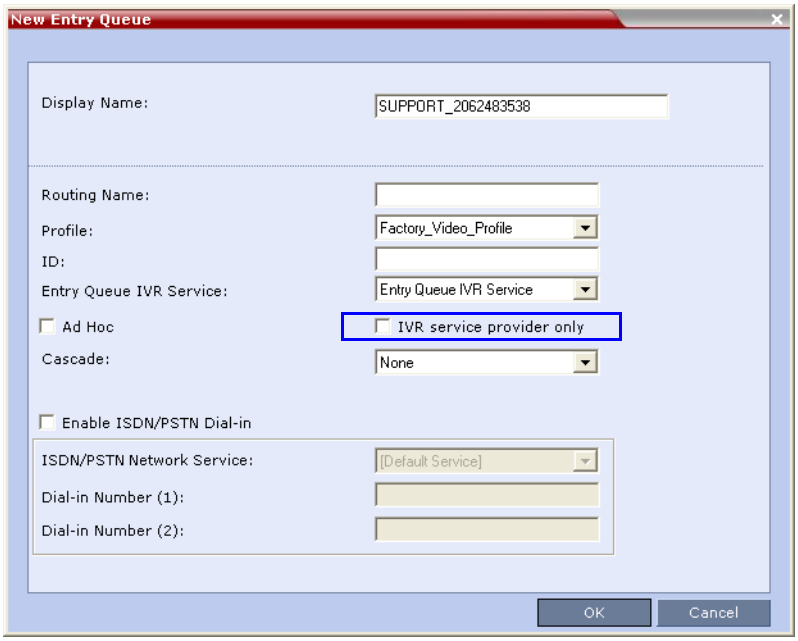
RMX Configuration

Entry Queue IVR Service

If required, create a special Entry Queue IVR Service in which the *Operator Assistance* option is disabled and only the *Conference ID* prompts are enabled.

Entry Queue

>> In the *New Entry Queue* dialog box, select **IVR Service Provider Only.**



— Enter the Entry Queue ID that will be used by the DMA to forward the SIP calls to this Entry Queue.

— Select the special Entry Queue IVR Service if one was created.

— *Ad Hoc*, *Cascade* and *Enable ISDN/PSTN Dial-in* options should not be selected with this type of Entry Queue.

Version 7.0.2 Detailed Description - Feature Changes

Resolution Configuration

+In previous versions, video resolutions for participants were determined according to a predefined video resolution decision matrix. The decision matrix matched video resolutions to connection line rates, with the aim of providing the best balance between resource usage and video quality at any given line rate.

Version 7.0

The *Resolution Configuration* dialog box enabled the *RMX* administrator to override the default video resolution decision matrix, effectively creating his/her own decision matrix. The minimum threshold line rates at which endpoints are connected at the various video resolutions could be optimized by adjusting the resolution sliders.

Version 7.0.1

Version 7.0.1 incorporated *System Flags* allowing the administrator to modify the minimum bit rate thresholds to prevent potential video quality issues when using endpoints that do not support *H.264 High Profile*.

For more information see *"Flags used in Version 7.0.1"* on page **67**.

Version 7.0.2

Version 7.0.2 incorporates these *System Flags* into a *Resolution Configuration* dialog box designed to enable the administrator to modify the minimum bit rate thresholds to prevent potential video quality issues when using endpoints that do not support *H.264 High Profile*.

Card Configuration Mode

Version 7.0.2 displays the *Resolution Configuration* dialog box according to the *Card Configuration Mode* of the *RMX: MPM*, *MPM+* or *MPMx*.

Guidelines

- *Resolution Slider* settings affect all *Continuous Presence* (*CP*) conferences running on the *RMX*. *Video Switched* conferences are not affected.
- A system restart is not needed after changing the *Resolution Slider* settings.
- *Resolution Slider* settings cannot be changed if there are ongoing conferences running on the RMX.
- The displayed sliders and the resolutions change according the *Card Configuration Mode: MPM, MPM+* or *MPMx*.

Accessing the Resolution Configuration dialog box

The *Resolution Configuration* dialog box is accessed by clicking **Setup > Resolution Configuration** in the *RMX Setup* menu.

The *Resolution Configuration* dialog box display changes according to the *Card Configuration Mode*:

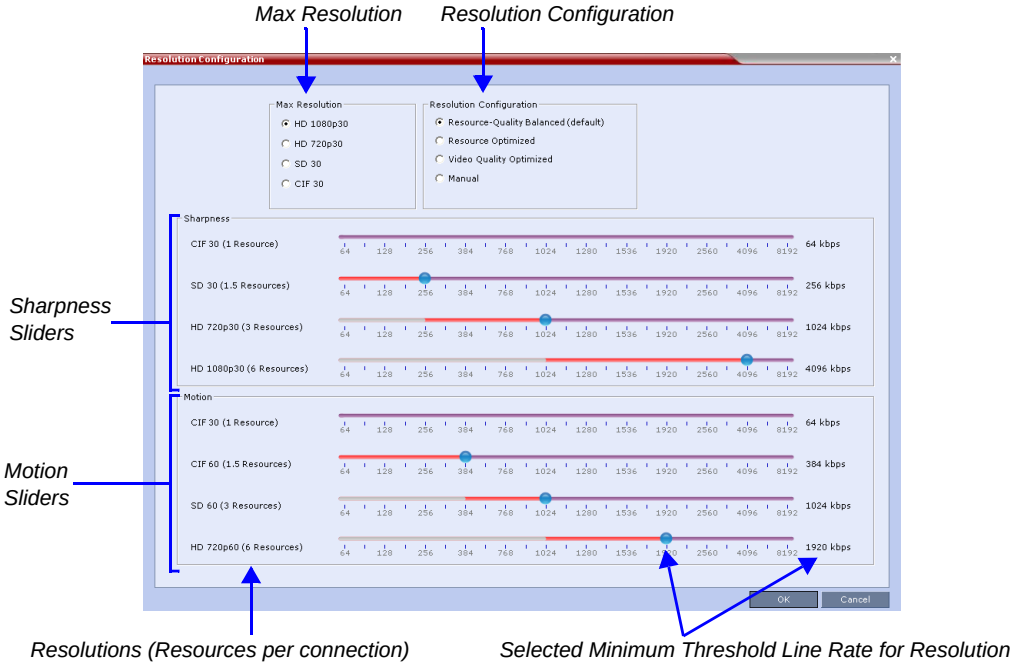
- *MPM* and *MPM+*
- *MPMx* - supports *H.264 High Profile*

Modifying the Resolution Configuration in MPM or MPM+ Card Configuration Mode

The *Resolution Configuration* dialog box shown below is displayed when the *RMX* is in *MPM* or *MPM+ Card Configuration Mode*.

The *Resolution Configuration dialog* box opens. It contains the following elements:

- *Max Resolution Pane*
- *Resolution Configuration Pane*
- *Sharpness Resolution Sliders*
- *Motion Resolution Sliders*



Max Resolution Pane

Depending on whether *MPM* or *MPM+* cards are installed, the *Maximum CP Resolution* of the *RMX* can be set to one of the following resolutions:

MPM Cards	MPM+ Cards
HD 720p30	HD 1080p30
SD 30	HD 720p30
SD 15	SD 30
CIF 30	CIF 30

Limiting Maximum Resolution

Before a selection is made in this pane, the *Maximum CP Resolution* of the system is determined by the **MAX_CP_RESOLUTION** System Flag.

The **MAX_CP_RESOLUTION** flag value is applied to the system during *First Time Power-on* and after a system upgrade. The default value is *HD1080*.

All subsequent changes to the *Maximum CP Resolution* of the system are made by selections in this pane.

Maximum Resolution

Maximum Resolution can be limited per **conference** or per **participant endpoint**.

The *Maximum Conference Resolution*, can be limited via the *Profile - Video Quality* dialog box. For more information see the *RMX 1500/2000/4000 Administrator's Guide "Defining Profiles"* on page **1-9**.

The *Maximum Resolution* can further be limited per participant endpoint via the *Participant - Properties* dialog box. For more information see the *RMX 1500/2000/4000 Administrator's Guide "Adding a Participant to the Address Book"* on page **5-4**.

Resolution Configuration Pane

The user can select from 3 pre-defined *Resolution Configurations* or select a manual *Resolution Slider* adjustment mode. The pre-defined settings can be accepted without modification or be used as the basis for manual fine tuning of resolution settings by the administrator.

The *Manual* radio button is automatically selected if any changes are made to the *Resolution Sliders*.

The *Resolution Configurations* are:

- **Resource-Quality Balanced (default)**

  A balance between the optimized video quality and optimized resource usage. This is the only available resolution configuration in version 6.0.x and earlier.

Use this option:
- When the priority is to maintain a balance between resource usage and video quality.
- When it is necessary to maintain backward compatibility with previous versions.
- When working with CMA.

  The *Balanced* settings are described in the *RMX 1500/2000/4000 Administrator's Guide, "Continuous Presence (CP) Conferencing"* on page **2-4**.

- **Resource Optimized**

  System resource usage is optimized by allowing high resolution connections only at high line rates and may result in lower video resolutions (in comparison to other resolution configurations) for some line rates.

Use this option when the priority is to save MCU resources and increase the number of participant connections.

- **Video Quality Optimized**

  Video is optimized through higher resolution connections at lower line rates increasing the resource usage at lower line rates. This may decrease the number of participant connections.

Use this option when the priority is to use higher video resolutions while decreasing the number of participant connections.

- **Manual**

  The administrator adjusts the sliders to accommodate local conferencing requirements.

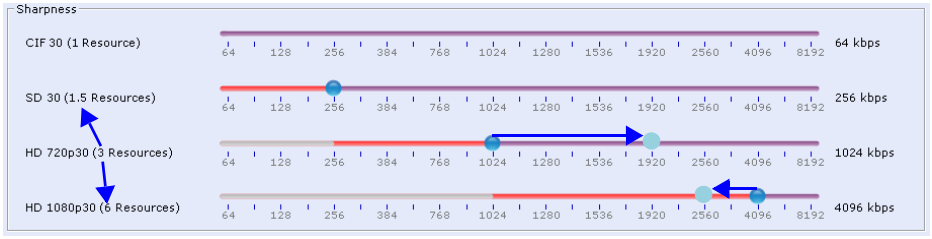
Sharpness / Motion Resolution Slider Panes

Sharpness and *Motion* are *Video Quality* settings that are selected per conference and are defined in the conference *Profile* and they determine the resolution matrix that will be applied globally to all conferences according to the selection of *Sharpness* or *Motion*. The resolution matrix for *Sharpness* or *Motion* is determined by the resolution configuration and can be viewed in the *Resolution Configuration* sliders.

System Resource usage is affected by the *Resolution Configuration* settings.

Example

As shown in following diagram:



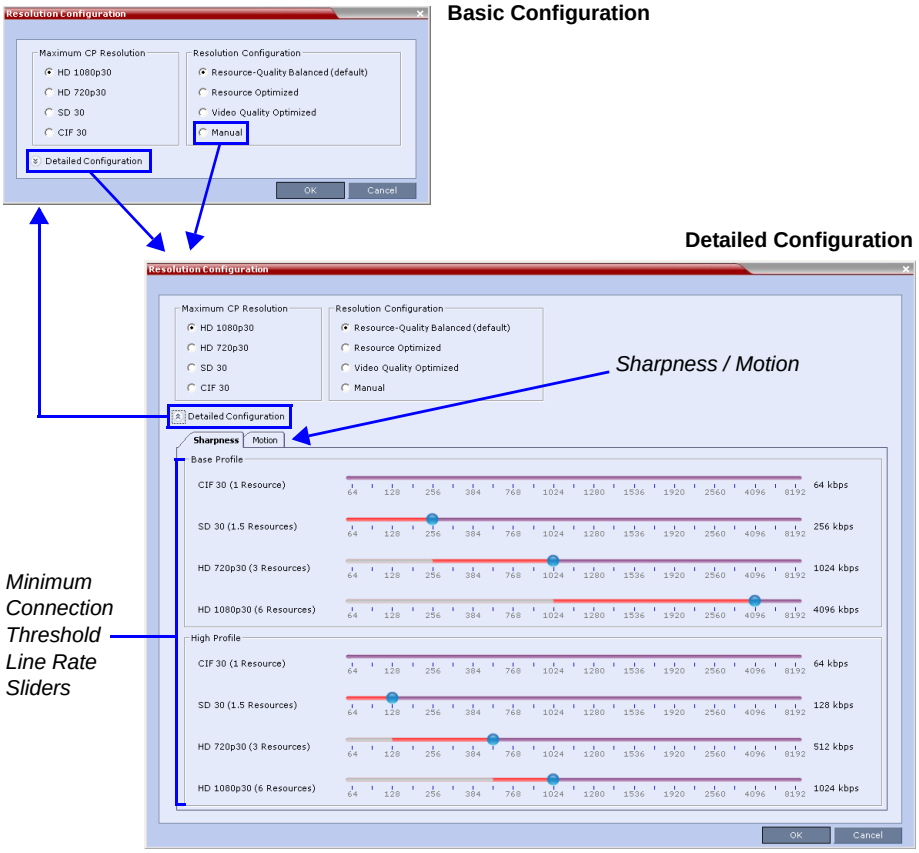
- Moving the *HD720p30* resolution slider from 1024kbps to 1920kbps increases the minimum connection threshold line rate for that resolution. Endpoints connecting at line rates between 1024kbps and 1920kbps that would have connected at *HD 720p30* resolution will instead connect at *SD 30* resolution. Each of the affected endpoints will connect at lower resolution but will use 1.5 system resources instead of 3 system resources.
- Moving the *HD1080p30* resolution slider from 4096kbps to 2560kbps decreases the minimum connection threshold line rate for that resolution. Endpoints connecting at line rates between 2560kbps and 4096kbps that would have connected at *HD 720p30* resolution will instead connect at *HD 1080p30* resolution. Each of the affected endpoints will connect at higher resolution but will use 6 system resources instead of 3 system resources.

Modifying the Resolution Configuration in MPMx Card Configuration Mode

The *Resolution Configuration - Basic Configuration* dialog box is the first dialog box displayed when the *RMX* is in *MPMx Card Configuration Mode.*

Clicking the **Detailed Configuration** button toggles the display of the *Detailed Configuration* pane, which displays sliders for modifying minimum connection threshold line rates for endpoints that support *H.264 Base Profile* or *High Profile.* The *Detailed Configuration* pane can also be opened by clicking the **Manual** radio button in the *Resolution Configuration* pane.

Sharpness and *Motion* settings are accessed by clicking the **Sharpness** and **Motion** tabs when the *Detailed Configuration* is open.



Sharpness and Motion

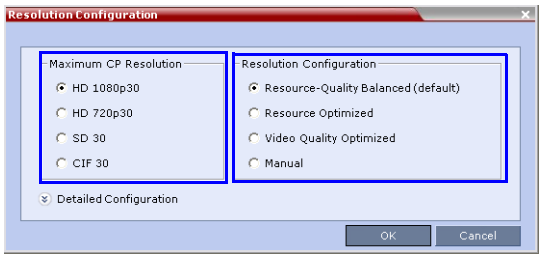
Sharpness and *Motion* are *Video Quality* settings that are selected per conference and are defined in the conference *Profile.* A conference that has *Sharpness* selected in its *Profile* uses the *Sharpness* settings of the *Resolution Configuration* and likewise a conference that has *Motion* selected in its *Profile* uses the *Motion* settings of the *Resolution Configuration* dialog box.

The *Sharpness* and *Motion* tabs in the *Resolution Configuration* dialog box allow the user to view and modify *Resolution Configuration* settings for conferences with either *Video Quality* setting.

Resolution Configuration - Basic

The *Resolution Configuration -Basic* dialog box contains the following panes:

- *Max CP Resolution Pane*
- *Resolution Configuration Pane*



Max CP Resolution Pane

When in *MPMx Card Configuration Mode* the *RMX* can be set to one of the following *Maximum CP Resolutions*:

- HD 1080p30
- HD 720p30
- SD 30
- CIF 30

Limiting Maximum Resolution

Before a selection is made in this pane, the *Maximum CP Resolution* of the system is determined by the **MAX_CP_RESOLUTION** *System Flag*.

For more information see *"Limiting Maximum Resolution"* on page **60**.

Resolution Configuration Pane

The *Resolution Configuration* pane and it's selection options in *MPMx Card Configuration Mode* behave in the same manner as for *MPM* and *MPM+ Card Configuration Modes* as described in the *"Resolution Configuration Pane"* section on page **60**.

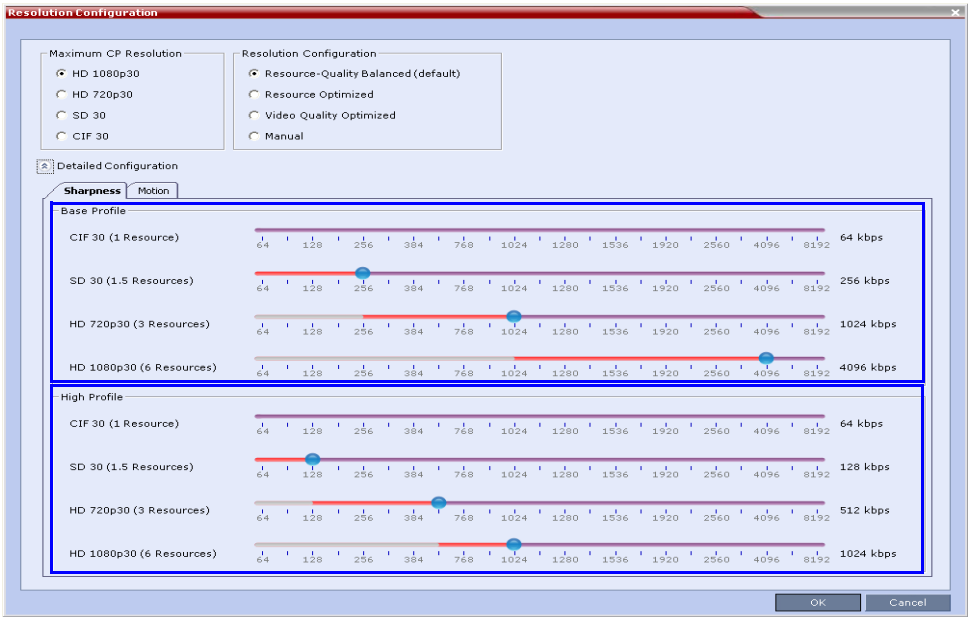
Resolution Configuration - Detailed

H.264 High Profile allows higher quality video to be transmitted at lower bit rates.

However, setting minimum bit rate thresholds that are lower than the default may affect the video quality of endpoints that do not support the *H.264 High Profile*. The *RMX* uses two decision matrices (*Base Profile*, *High Profile)* to enable endpoints to connect according to their capabilities.

The *Detailed Configuration* dialog box allows the administrator to configure minimum connection threshold bit rates for endpoints that support *H.264 High Profile* and those that do not support *H.264 High Profile* by using the following slider panes:

- *Base Profile* - Endpoints that do not support *H.264 High Profile* connect at these minimum threshold bit rates.
- *High Profile* - Endpoints that support *H.264 High Profile* connect at these minimum threshold bit rates.



Base Profile / High Profile Resolution Slider Panes

The *Base Profile* and *High Profile* sliders operate in the same manner as that described for the *Sharpness* and *Motion* sliders. For more information see the example in the *"Sharpness / Motion Resolution Slider Panes"* section on page **61**.

Default Minimum Threshold Line Rates

The following Table summarizes the *Default Minimum Threshold Line Rates* and *Video Resource* usage for each of the pre-defined optimization settings for each *Resolution*, *H.264 Profile*, *Video Quality* setting (*Sharpness* and *Motion)* for *MPM, MPM+* and *MPMx Card Configuration Modes*.

Default Minimum Threshold (kbps) by Resolution, Profile, Resources			Resource-Quality Balanced (Default)						Resource Optimized						Video Quality Optimized					
			Sharpness			Motion			Sharpness			Motion			Sharpness			Motion		
	Profile		MPM	MPM+	MPMx	MPM	MPM+	MPMx	MPM	MPM+	MPMx	MPM	MPM+	MPMx	MPM	MPM+	MPMx	MPM	MPM+	MPMx
HD1080p30	Default kbps	High			1536						4096						1024			
		Base		4096	4096					4096	4096					1728	1728			
	Resources			8	6					8	6					8	6			
HD720p60	Default kbps	High						1280						1920						832
		Base					1920	1920					1920	1920					1536	1280
	Resources						8	6					8	6					8	6
HD720p30	Default kbps	High			768						1920						512			
		Base	1024	1024	1024				1920	1920	1920				832	832	832			
	Resources		4	4	3				4	4	3				4	4	3			
SD60	Default kbps	High						768						1024						768
		Base					1024	1024					1024	1024					512	768
	Resources						4	3					4	3					4	3
SD30	Default kbps	High			256						384						256			
		Base	256	256	256				384	384	384				256	256	256			
	Resources		4	2.66	1.5				4	2.66	1.5				4	2.66	1.5			
SD15	Default kbps		256						384						256					
	Resources		2						2						2					
CIF60	Default kbps	High						256						384						256
		Base					384	384					384	384					256	256
	Resources						2.66	1.5					2.66	1.5					2.66	1.5
CIF30	Default kbps	High			64			64			64			64			64			64
		Base	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
	Resources		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

For more information see the *RMX 1500/2000/4000 Administrator's Guide:*

"*Standard Conferencing*" on page **1-3**.

"*Defining Profiles*" on page **1-9**.

"*Resolution Configuration*" on page **2-13**.

"*Resolution Configuration Pane*" on page **2-15**.

Version 7.0 Detailed Description - Video

H.264 High Profile

The *H.264 High Profile* is a new addition to the *H.264* video protocol suite. It uses the most efficient video data compression algorithms to reduce bandwidth requirements for video data streams.

Video quality is maintained at bit rates that are 20% to 30% lower than previously required. For example, a 832kbps call will have the video quality of a 1Mbps HD call while a 1Mbps HD call has higher video quality at the same (1Mbps) bit rate.

Guidelines

- *H.264 High Profile* is supported with *MPMx* cards only.
- *H.264 High Profile* is supported in *H.323, SIP* and *ISDN* networking environments.
- *H.264 High Profile* is supported in *Continuous Presence* conferences at all bit rates, video resolutions and layouts.
- *H.264 High Profile* is the first protocol declared by the *RMX*, to ensure that endpoints that support the protocol will connect using it.

H.264 High-Profile should be used when all or most endpoints support it.

Setting minimum bit rate thresholds that are lower than the default may affect the video quality of endpoints that do not support the *H.264 High Profile.*

- For monitoring purposes, the *RMX* and endpoint *H.264 High Profile* capability is listed in the *Participant Properties - H.245* and *SDP* tabs for *H.323* participants and *SIP* participants respectively.

  For more information see the *RMX 1500/2000/4000 Administrator's Guide*, "*IP Participant Properties*" on page **10-16**.
- *H.264 High Profile* is not supported:
  - In *MPM* and *MPM+* card *Configuration Modes*
  - In *Video Switched* conferences
  - For *Content Sharing*
  - As an *RSS Recording* link
  - With *Video Preview*

H.264 High Profile System Flags

ISDN

The **CFG_KEY_SUPPORT_HIGH_PROFILE_WITH_ISDN** *System Flag* enables *ISDN* support with *H.264 High Profile*.

Possible Values: YES / NO

Default: NO

This *System Flag* must be added to the *System Configuration* file before it can be modified. For more information see the *RMX 15002000/4000 Administrator's Guide*, "*Modifying System Flags*" on page **18-5**.

Flags used in Version 7.0.1

In *Version 7.0.2* the flags described below were replaced with the *High Profile* sliders in the *Resolution Configuration* dialog box.

Setting minimum bit rate thresholds that are lower than the default may affect the video quality of endpoints that do not support the *H.264 High Profile.*

Endpoints that do not support *H.264 High Profile* will connect according to the minimum bitrate thresholds defined by the following *System Flags*:

- H264_BASE_PROFILE_MIN_RATE_SD30_SHARPNESS
- H264_BASE_PROFILE_MIN_RATE_HD720P30_SHARPNESS
- H264_BASE_PROFILE_MIN_RATE_HD1080P30_SHARPNESS
- H264_BASE_PROFILE_MIN_RATE_CIF60_MOTION
- H264_BASE_PROFILE_MIN_RATE_SD60_MOTION
- H264_BASE_PROFILE_MIN_RATE_HD720P60_MOTION

These *System Flags* must be added to the *System Configuration* file before they can be modified. For more information see the *RMX 15002000/4000 Administrator's Guide*, "*Modifying System Flags*" on page **18-5**.

Example: If the *High Profile Optimized* option is selected in the *Resolution Configuration* dialog box and the *System Flag* values are set as in the following table:

System Flag	Default Value
H264_BASE_PROFILE_ MIN_RATE_SD30_SHARPNESS	256
H264_BASE_PROFILE_ MIN_RATE_HD720P30_SHARPNESS	1024
H264_BASE_PROFILE_ MIN_RATE_HD1080P30_SHARPNESS	1536
H264_BASE_PROFILE_ MIN_RATE_CIF60_MOTION	256
H264_BASE_PROFILE_ MIN_RATE_SD60_MOTION	1024
H264_BASE_PROFILE_ MIN_RATE_HD720P60_MOTION	1536

Endpoints will connect at resolutions as set out in the following table, depending on whether they support *H.264 High Profile* or not:

Video Quality Setting	Endpoint Connection Bit Rate (kbps)		Resolution
	High Profile Supported	High Profile Not Supported	
Sharpness	**128**<= bit rate <**512**	**256**<= bit rate <**1024**	SD30
	512<= bit rate <**1024**	**1024**<= bit rate <**1536**	HD720P30
	1024<= bit rate	**1536**<= bit rate	HD1080P30
Motion	**128**<= bit rate <**512**	**256**<= bit rate <**1024**	CIF60
	512<= bit rate <**832**	**1024**<= bit rate <**1536**	SD60
	832<= bit rate	**1536**<= bit rate	HD720P60

New Symmetric HD Resolutions in MPMx Mode

MPMx mode, supports the following new HD video resolutions in both *Continuous Presence* and *High Definition Video Switching* modes.

- **HD 1080p30** (symmetric) – endpoints send HD 1080p at 30 fps and receive HD 1080 at 30 fps
- **HD 720p60** (symmetric) – endpoints send HD720 at 60 fps and receive HD720 at 60 fps

These resolutions are available at line rates of 128 to 8192 Kbps depending on Flag and Resolution Slider settings. For more information, "*System Flag*" on page 70.

Depending on the line rate, the RMX sends video at the best possible resolution supported by the endpoint regardless of the resolution received from the endpoint.

Table 2 and Table 3 show the relationship between minimum line rate threshold and video quality for both *Motion* and *Sharpness* settings in both *MPM+* and *MPMx Card Configuration Modes*.

Table 2 *MPMx: Video Quality vs Minimum Line Rate Threshold*

Resolution	Line Rate (kbps)							
	Balanced (Default)		Resource Optimized		Video Quality Optimized		High Profile Optimized	
	Sharp-ness	Motion	Sharp-ness	Motion	Sharp-ness	Motion	Sharp-ness	Motion
HD1080p30	4096		4096		1560		1024	
HD720p30	1024		1920		768		512	
SD30	256		384		256		128	128
HD720p60		1920		1920		1560		832
SD60		1024		1024		768		512
WCIF60		384		384		256		

Table 3 *MPM+: Video Quality vs Minimum Line Rate Threshold*

Resolution	Line Rate (kbps)					
	Balanced (Default)		Resource Optimized		Video Quality Optimized	
	Sharp-ness	Motion	Sharp-ness	Motion	Sharp-ness	Motion
HD1080p30	4096		4096		1560	
HD720p30	1024		1920		768	
SD30	256		384		256	

Table 3 MPM+: Video Quality vs Minimum Line Rate Threshold (Continued)

Resolution	Line Rate (kbps)					
	Balanced (Default)		Resource Optimized		Video Quality Optimized	
	Sharp-ness	Motion	Sharp-ness	Motion	Sharp-ness	Motion
HD720p60		1920		1920		1560
SD60		1024		1024		768
WCIF60		384		384		256

Resource Usage

The RMX uses video ports to connect HD endpoints as follows:

- 4 video (CIF) ports are used to connect each endpoint capable of receiving *HD 720p30*.
- 8 video (CIF) ports are used to connect each endpoint capable of receiving *HD 1080p30* or *HD 720p60*.

System Flag

The **MAX_CP_RESOLUTION** flag value is applied to the system during *First Time Power-on* and after a system upgrade. The default value is *HD1080*.

All subsequent changes to the maximum *CP* resolution of the system are made by selections in the *Resolution Configuration* dialog box.

For more information see *"High Resolution Slide Enhancements"* on page **102**.

Additional Call Rates

The line rates summarized in Table 4 have been added to give administrators more control over bandwidth utilization.

Table 4 *Line Rate by Conferencing Mode / MPM Card*

Line Rate (kbps)	MPM	MPM+	MPMx
192	Continuous Presence / Video Switching		
320			
832			
1280			
1728			
2048			
2560	Video Switching	Continuous Presence / Video Switching	
3072			
3584			
6144	Not Supported		Video Switching

Guidelines

- *ISDN* endpoints are connected at the highest bonded line rate below the selected conference line rate. For example: If the conference line rate is 1024kbps, the participant is connected at 768kbps.
- Each *LAN* connection to the *RMX* has a maximum data rate capacity of 320Mbps. The maximum *LAN* capacities per *RMX* are summarized in Table 5:

Table 5 *RMX - Maximum Data Rates*

RMX Model	Number of LAN Connections	Maximum Data Rate Capacity Mbps
RMX 2000	*1*	320
RMX 2000 (with Multiple Networks)	*2*	640
RMX 4000	*4*	1280

H.239 / People+Content

The *H.239* protocol allows compliant endpoints to share content. All Conferences, Entry Queues, and Meeting Rooms launched on the *RMX* have *H.239* capability.

People+Content utilizes a different signaling protocol and is *Polycom's* proprietary equivalent of *H.239*.

Guidelines

- *H.323* is the only supported environment.
- *H.239* is supported in both *MIH Cascading* and *Star Topology* cascaded conferences.
- *People+Content* is supported in cascaded conferences but cannot be used as the protocol for a cascade link.
- Conferences can include a mix of endpoints that support *H.239* or *People+Content*.
- If an endpoint supports both *H.239* and *People+Content* protocols, *H.239* is selected as the preferred communications protocol.
- *People+Content* is enabled by default. It can be disabled for all conferences and endpoints by manually adding the flag ENABLE_EPC and changing its value to **NO** (default setting is YES).
- Endpoints that support *People+Content* may require a different signaling (for example, FX endpoints). For these endpoints, manually add the flag **CS_ENABLE_EPC** with the value **YES** (default value is NO) to the CS_MODULE_PARAMETERS tab.

Version 7.0 Detailed Description - Audio

G.728 Audio Algorithm Support

Industry standard *G.728* audio algorithm is supported for participants connecting with legacy or low bandwidth endpoints.

Guidelines

G.728 is supported:

- with *MPM+* cards only
- in mono
- in *H.323* and *ISDN* networking environments
- at bitrates from 64kbps to 4096kbps

Monitoring Participant Audio Properties

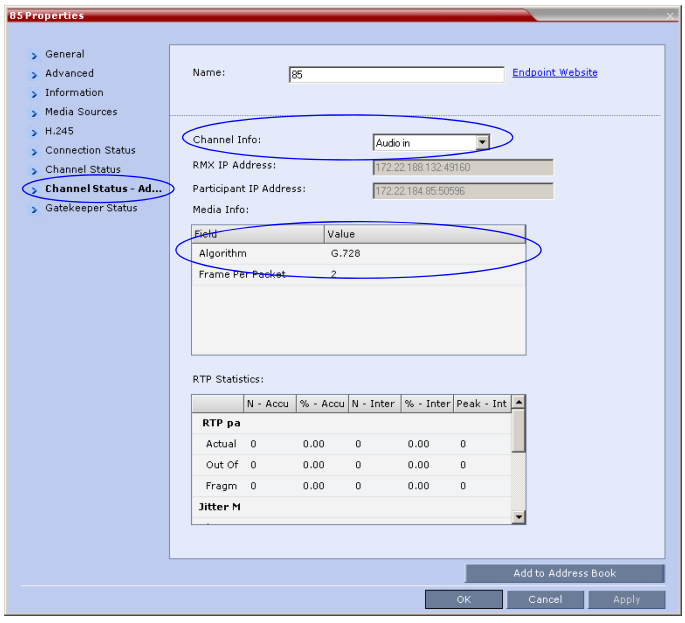
The audio algorithm used by the participant's endpoint can be verified in the Participant Properties - Channel Status dialog box.

To view the participant's properties during a conference:

1 In the *Participants* list, right click the desired participant and select **Participant Properties**.

2 Click the **Channel Status - Advanced** tab.
The *Participant Properties - Channel Status - Advanced* dialog box is displayed.

3 In the *Channel Info* field, select **Audio In** or **Audio Out** to display the audio parameters.



4 Click the **OK** button.

Version 7.0 Detailed Description - Conference

Permanent Conference

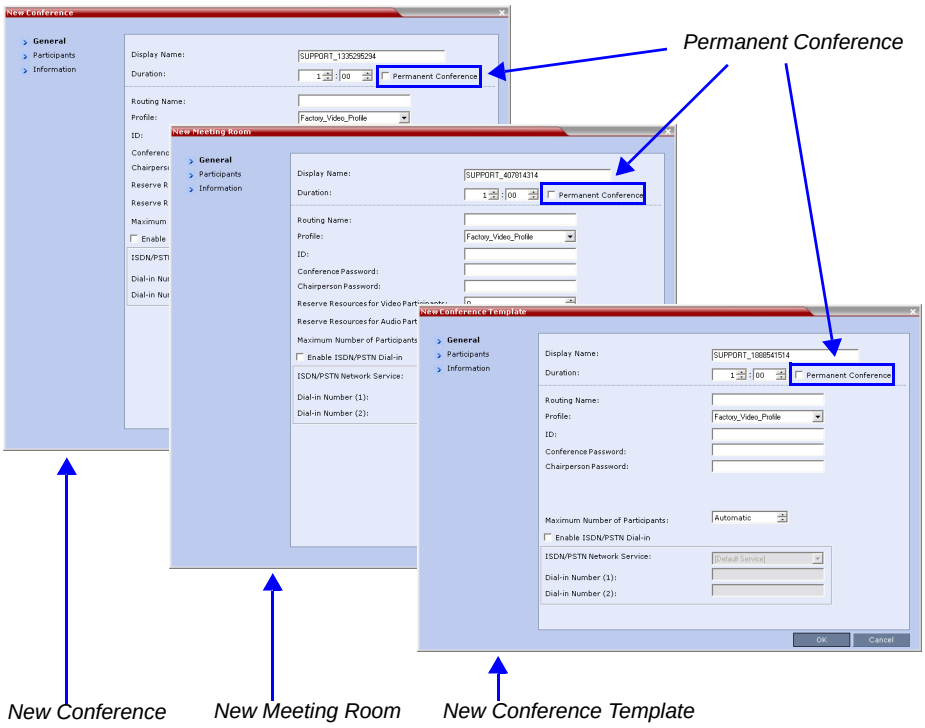
A *Permanent Conference* is an ongoing conference with no pre-determined *End Time* continuing until it is terminated by an administrator, operator or chairperson.

Guidelines

- Resources are reserved for a *Permanent Conference*, only when the conference has become ongoing.
- Resources are allocated to a *Permanent Conference* according to the *Reserve Resources for Video Participants* field. If the number of defined dial-out participants exceeds the value of this field, the *RMX* automatically replaces the number in the *Reserve Resources for Video Participants* field with the number of defined dial-out participants in the *Permanent Conference.*
- *Auto Terminate* is disabled in *Permanent Conferences*.
- If participants disconnect from the *Permanent Conference*, resources that were reserved for its video and audio participants are released.
- *Ad-hoc Entry Queues*, *Conference Reservations* and *SIP Factories* cannot be defined as *Permanent Conferences*.
- Additional participants can connect to the conference, or be added by the operator, if sufficient resources are available.
- The maximum size of the *Call Detail Record* (*CDR*) for a *Permanent Conference* is 1MB.

Enabling a Permanent Conference

The *Permanent Conference* option is selected in the *New Conference, New Meeting Room* or *New Conference Templates* dialog boxes.



Video Preview

RMX users can preview the video sent from the participant to the conference (MCU) and the video sent from the conference to the participant. It enables the RMX users to monitor the quality of the video sent and received by the participant and identify possible quality degradation.

The video preview is displayed in a separate window independent to the RMX Web Client. All Web Client functionality is enabled and conference and participant monitoring as well as all other user actions can be performed while the video preview window is open and active.

Live video is shown in the preview window as long as the window is open. The preview window closes automatically when the conference ends or when participant disconnects from the conference. It can also be closed manually by the RMX user.

Video Preview Guidelines

- Video preview is available in *Continuos Presence* and *Video Switching* conferences.
- Video preview window size and resolution are adjusted to the resolution of the PC that displays the preview.
- Video Preview of the video sent from the conference to the participant is shown according to the line rate and video parameters of the level threshold to which the participant is connected.
- Only users with Administrator authorization can request to view a video preview.
- Video preview is supported with MPM+ and MPMx cards.
- Only one preview window can be displayed for each RMX Web Client connection (workstation).
- Only one preview window can be displayed for a single conference and up to four preview windows can be displayed for each media card on different workstations (one per workstation and one per conference).
  For example, if the RMX contains two media cards, and there are 5 conferences running on the RMX, if five conferences are running on the same media card, only four conferences can be previewed from four different workstations. If four or less conferences are running on one media card and the remaining conferences are running on the other media card, all five conferences can be previewed.
- Live video that is shown in the preview window does not include the Content when it is sent by the participant.
- Video Preview is supported in cascaded conferences.
- If the video preview window is opened when the IVR slide is displayed to the participant, it will also be displayed in the video preview window.
- Video Preview us not supported with *H.264 High Profile*
- Video Preview is disabled in encrypted conferences.
- Video preview cannot be displayed when the participant's video is suspended.
- Participant's video preview and the CMAD window cannot be open and running simultaneously on the same PC as both require the same DirectDraw resource.

Workstation Requirements

To be able to display the video preview window, the following minimum requirements must be met:

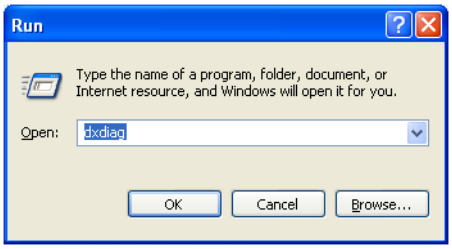
- Windows XP and later
- Internet Explorer 7
- DirectX is installed
- DirectDraw Acceleration must be enabled and no other application is using the video resource
- Hardware acceleration must be enabled

Testing your Workstation

To ensure that your workstation can display the video preview window:

1 In Windows, click **Start > Run**.
The *Run* dialog box opens.

2 In the *Open* field, type **dxdiag** and press the **Enter** key or click **OK**.

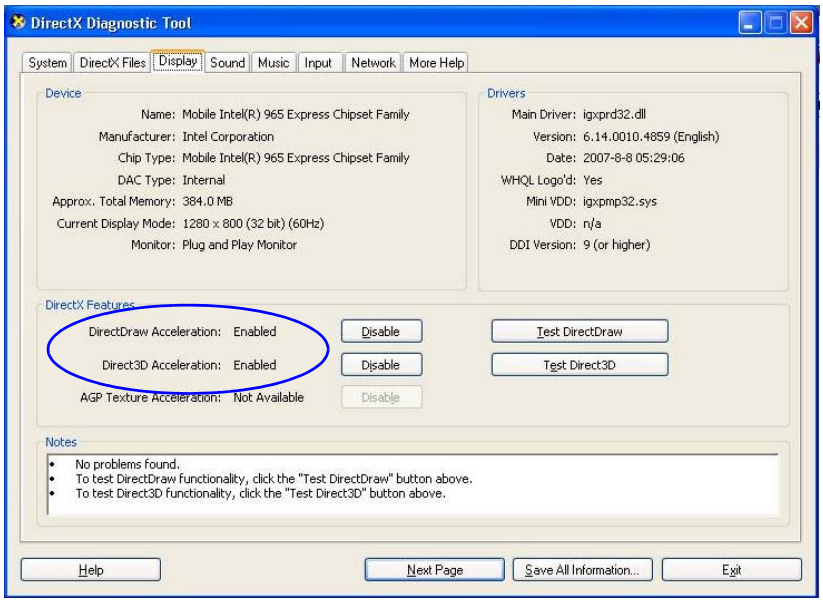


A confirmation message is displayed.

3 Click **Yes** to run the diagnostics.
The *DirectX Diagnostic Tool* dialog box opens.

4 Click the **Display** tab.

To be able to display the video preview window, the **DirectDraw Acceleration** and **Direct3D Acceleration** options must be **Enabled**.



If the video card installed in the PC does not support DirectDraw Acceleration, a black window may be viewed in the Video Preview window.

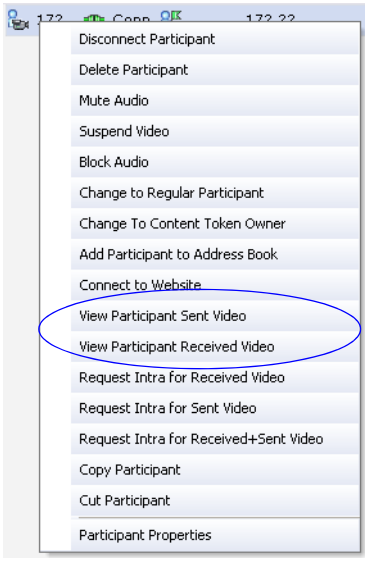
5 Click the **Exit** button.

Previewing the Participant Video

To preview the participant video:

1 List the conference participants in the *Participants* pane.

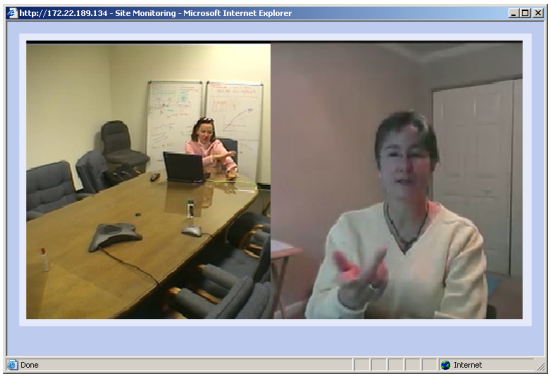
2 Right-click the participant whose video you want to preview and then click one of the following options:



— **View Participant Sent Video** - to display the video sent from the participant to the conference.

— **View Participant Received Video** - to display the video sent from the conference to the participant.

The *Video Preview* window opens.



If the video card installed in the PC does not support DirectDraw Acceleration, a black window may be viewed.

Personal Conference Manager (PCM)

The *Personal Conference Manager* (*PCM*) interface enables the conference chairperson to control various conference features using his/her endpoint's remote control device.

The following conference operations can be performed:

- Initiate **Polycom's Click&View™** application to change the local screen layout.
- Invite a participant to connect to the conference.
- View and control the audio and video of each connected endpoint.
- Camera Control - control the camera of a remote endpoint using (*FECC*).
- Control the camera of a connected endpoint.
- Video Force a specific participant to a specific window of the video layout.
- Initiate and control recording of the conference.
- Disconnect a participant.
- Terminate the conference.

Guidelines

- *PCM* is only supported with MPM+ cards.
- *PCM* is only available in *CP* conferences.
- Although the *RMX* can host up to a maximum of 800 conferences (depending on the *RMX* model) *PCM* can only be activated from 4 conferences per *MPM+* card.
  - An *RMX 2000* with 2 *MPM+80* cards installed can host a total of 8 *PCM* sessions while an *RMX 4000* with 4 *MPM+80* cards installed can host a total of 16 *PCM* sessions.
  - If 4 *PCM* sessions are active on an *MPM+* card and a chairperson of another conference, hosted on the same *MPM+* card, attempts to start an additional PCM session, a message indicating insufficient resources is displayed and *FECC* is activated.
- When *PCM* is active, *FECC* can only be performed by the chairperson using *PCM's Camera Control* menu.
- *FECC* is available to all *IP* participants in the conference with the exception of the chairperson that has an active *PCM* session.
- If enabled, *Message Overlay* is not displayed while *PCM* is active.
- Normal conference video is resumed after **4** seconds of inactivity within the *PCM* menu.
- If a chairperson with active *PCM* session is moved to another conference, the *PCM* session is automatically terminated.
- The **PCM_LANGUAGE** *System Flag* determines the language of the *PCM* interface.

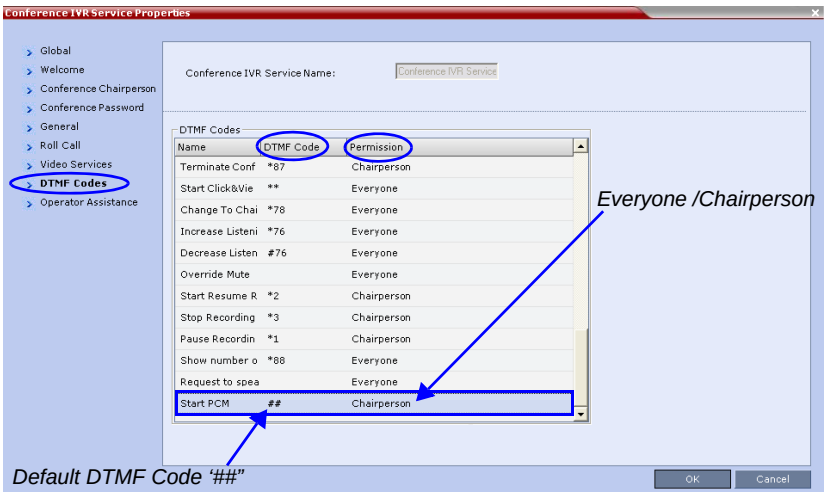
  Possible Values: ENGLISH, CHINESE_SIMPLIFIED , CHINESE_TRADITIONAL, JAPANESE, GERMAN, FRENCH, SPANISH, KOREAN, PORTUGUESE, ITALIAN, RUSSIAN, NORWEGIAN

  Default: Current *RMX Web Client* language.

  This *System Flag* must be added to the *System Configuration* file before it can be modified. For more information see the *RMX 1500/2000/4000 Administrator's Guide*, "*Modifying System Flags*" on page **18-5**.

- The *Start PCM DTMF* code for initiating *PCM* is configured in the *DTMF Codes* tab of the *New Conference IVR Service* or *Conference IVR Se vice Properties* dialog box. The default *DTMF Code* is **1** and can be modified if required.

  The default value of the *Permission* field is **Everyone**. It can be modified to **Chairperson**.



PCM Interface

Initiating PCM

For IP endpoints: *PCM* is activated by pressing the *Far* key ( ) followed by any of the *Arrow Keys* on the *Remote Control Device*.

For ISDN/PSTN endpoints: *PCM* is activated by pressing **##** on the *Remote Control Device*.

When *PCM* becomes active, the top level of the *PCM Main Menu* is displayed on the conference chairperson's endpoint:

Main Menu - Level 1

Arrow Indicator:
There are more menu options on the next page

Arrow Indicator:
There are menu options on the previous page

Main Menu - Level 2

Right Arrow:
Corresponds to the Remote Device's Right Arrow Key
Action:
Go to Sub-Menu of Selected Option (Click&View)

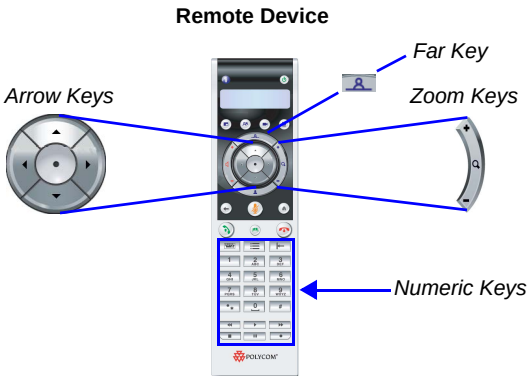
PCM Main Menu - Level 2 can only viewed and accessed by *ISDN* endpoints by using *DTMF Codes* **7** and **8**.

Remote Control Device Keys

PCM facilitates user interaction with the *RMX* using *DTMF Codes* and the *Arrow* (*FECC*) keys of the endpoint's remote control device.

Menu Navigation - Arrow and Zoom Keys

The *PCM Menu* is navigated using the *Remote Device's Arrow Zoom Keys* which are defined as follows:



They are defined as follows:

Table 6 *PCM - Menu Navigation*

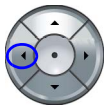
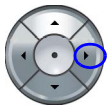
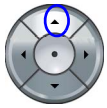
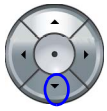
Arrow Key	Description
Left 	• Go up one menu level. • Delete the character to the left of the cursor when entering data. • Exit the PCM menu and return to normal conference video (from PCM the top level menu.) • Select the video window to the left when navigating a video layout. • Initiate PCM from a conference.
Right 	• Go down one menu level. • Confirm current selection in the PCM menu. • Select the video window to the right when navigating a video layout. • Initiate PCM from a conference.
Up 	• Cycle upward through the displayed menu options. • Select the video window above when navigating a video layout. • Initiate PCM from a conference.
Down 	• Cycle downward through the displayed menu options. • Select the video window below when navigating a video layout. • Initiate PCM from a conference.

Table 6 *PCM - Menu Navigation*

Arrow Key	Description
Zoom in (+)	• Confirm current selection in the PCM menu. • Zoom in on the remote camera when using FECC.
Zoom out (-)	• Exit PCM Menu. • Zoom out on the remote camera when using FECC.

DTMF Codes - Numeric Keys

Before using the shortcut number keys 0-9, enable the DTMF function of the endpoint according to that endpoint's configurations.

DTMF codes are entered using the *Remote Device Numerics Keys* and are defined as follows:

Table 7 *PCM - DTMF Codes*

Numeric Key	Description
0	• Number input. • Shortcut key to a numbered menu option - when conference video or the PCM menu is displayed. • Return to the conference - when in FECC mode.
1-9	• Number input. • Shortcut key to a numbered menu option - when the conference video or the PCM menu is displayed. • Initiate PCM session on ISDN/PSTN endpoint (**1** is the default for the *Start PCM* DTMF Code).
*	• Initiate DTMF mode (with Polycom endpoints) - during a conference or when the PCM menu is displayed. • Enter a period "**.**" - while entering an IP address.
#	Confirm selection and send information to the RMX.

PCM Main Menu - Level 1

Click&View

With the *Click&View* application, participants can change their *Personal Layouts* using the *Arrow Keys* or *DTMF* codes entered using the *Numeric Keys* of their endpoints.

For more a full description of *Click&View*, see the *RMX 1500/2000/4000 Getting Started Guide*, "*Personal Layout Selection with Click&View*" on page **3-81**.

Invite Participant

This function is not available to chairpersons using *PCM* with *ISDN* endpoints.

To invite a participant to connect to the conference:

1 Use the **Up/Down** arrow keys to select **Invite Participant** in the *Main Menu* and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **2** key on the *Remote Device*.

The *Invite Participant* sub menu is displayed.

2 Use the *Numeric Keys* to enter the number of the participant's endpoint.

3 Press the **#** key to initiate the call.

4 **Optional**.

a Use the **Down** arrow to select the **Auto** button to select from the following dialing methods:

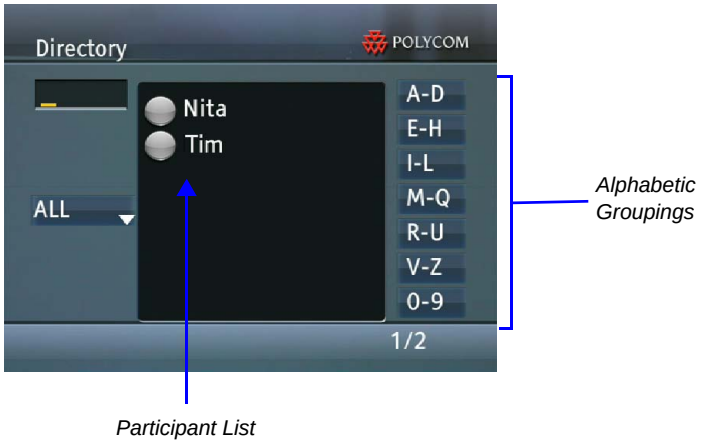
- H.323
- SIP
- VoIP
- ISDN
- PSTN

b Press the **#** key to initiate the call.

5 **Optional.**

a Use the *Arrow Keys* to select the **Directory** button to select the *Alphabetic Grouping* sub menu.

The *Local Directory* is displayed.



b Use the *Numeric Keys* to enter the number of the participant's endpoint.

c Press **#** or the **Zoom In** key to initiate the call.

or

d Use the **Up/Down** arrow keys to select a **Participant** from the displayed list or use the **Up/Down** and **Left /Right** arrow keys to display other directory listings**.**

A message, *Press # or Zoom In to select,* is displayed.

e Press **#** or the **Zoom In** key to initiate the call.

Optional. To display all participants:

— Use the **Down** arrow and the to select the **ALL** button.
— Use the **Zoom In** key to display the global directory.
— Use the **Up/Down** and **Left /Right** arrow keys to select a **Participant.**
— Press **#** or the **Zoom In** key to initiate the call.

Participants Mute/Status

This function is not available to chairpersons using *PCM* with *ISDN* endpoints.

The chairperson can view and control the audio and video status of each participant's endpoint. The chairperson can:

- View the audio and video status of participants.
- Mute, block, unmute, unblock participant audio.
- Suspend or allow participant video.
- Mute all (except chairperson and lecturer).

To view and change the Participants Mute/Status:

1 Use the **Up/Down** arrow keys to select **Participants Mute/Status** in the *Main Menu* and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **3** key on the *Remote Device*.

The *Participants Mute/Status* sub menu is displayed.

The sub menu displays the *Muted, Blocked* and *Video Suspended* status of all participants' endpoints. **ALL** can be selected to mute and unmute all participant endpoints with the exception of the conference chairperson and lecturer.

2 Use the **Up/Down/Left/Right** arrow keys to select a *Mute, Block* or *Suspend* status icon.

3 Use the **Zoom In** key to toggle the state of the audio and video channels of the participants' endpoints.

The status icons are summarized in Table 8.

Table 8 *Participants Mute/Status - Icons*

Status Icon	Description
	Audio output from this endpoint is allowed. Other conference participants can hear the audio from this endpoint.
	The endpoint is muted. Other conference participants will not hear audio from this endpoint.
	The audio input to this endpoint is allowed. This endpoint can hear the conference audio.
	The audio output to this endpoint is blocked. This endpoint cannot receive the conference audio.
	Video output from the endpoint is allowed. Other conference participants can see video from this endpoint.
	Video output from the endpoint is suspended. Other conference participants cannot see video from this endpoint.
	The endpoint is neither muted nor blocked.
	The endpoint is both muted and blocked.

Camera Control

This function is not available to chairpersons using *PCM* with *ISDN* endpoints.

The endpoint to be controlled must support *Far End Camera Control* (FECC).

Using the arrow keys of the remote control device, the chairperson can control the direction, zoom and focus of a remote endpoint's camera.

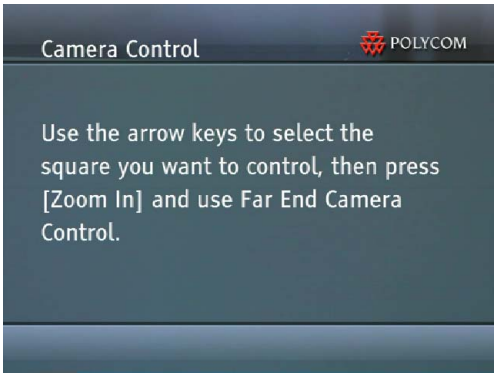
To control a far camera:

1 Use the **Up/Down** arrow keys to select **Camera Control** in the *Main Menu* and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **4** key on the *Remote Device*.

The *Camera Control* sub menu is displayed.

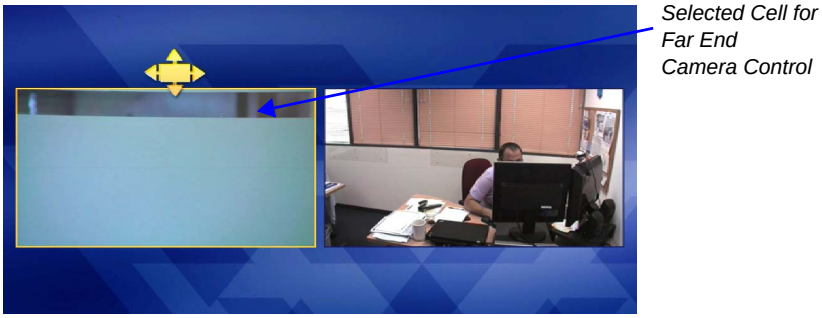


2 Use the **Up/Down/Left/Right** arrow keys to select the far camera to be controlled.

A colored frame is displayed around the selected cell in the video layout.

3 Use the **Zoom In** key to activate *FECC*.

Following a 10 second delay, the *FECC* active icon ( ) is displayed in the video image of the selected site.



4 Use the **Up/Down/Left/Right/Zoom In/Zoom Out** arrow keys to control the remote camera.

5 Press the **0** key on the remote control to exit FECC.

6 Use the **Zoom Out** key on the remote control to return to the conference video.

Video Force

This function is not available to chairpersons using *PCM* with *ISDN* endpoints.

Video Force enables the chairperson to force the video of a specific participant to a specific window of the video layout.

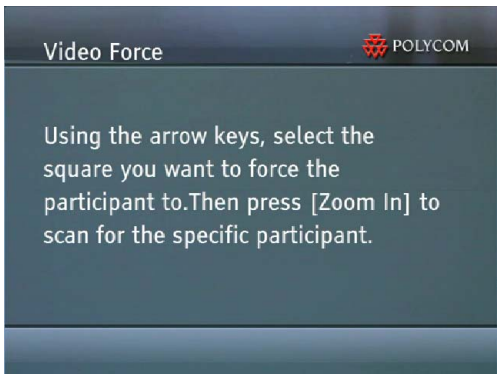
To Video Force a participant's video:

1 Use the **Up/Down** arrow keys to select **Video Force** in the *Main Menu* and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **5** key on the *Remote Device*.

The *Video Force* sub menu is displayed.



2 Use the **Up/Down/Left/Right** arrow keys to select the window of the video layout that you want the specific participant to be displayed in.

3 Press the **Zoom In** key to cycle the display of all participants in the selected video window until the participant you want to be displayed appears.

4 Press the **Right** arrow or **#** key to confirm your selection.

Recording

This function is not available to chairpersons using *PCM* with *ISDN* endpoints.

If a *Recording Link* has been set up in the *Conference Profile*, the conference chairperson can use the *PCM* interface to start, pause, resume and stop recording. If no *Recording Link* exists, this function appears grayed out and cannot be selected.

To use the recording functions:

1 Use the **Up/Down** arrow keys to select **Recording** in the *Main Menu* and then press the **Right arrow or #** key to confirm your selection.

or

Press the **6** key on the *Remote Device*.

The *Recording* sub menu is displayed.

To start recording:

>> Use the **Up/Down** arrow keys to select **Start Recording** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **1** key on the *Remote Device*.

To pause recording:

>> While recording is in progress, use the **Up/Down** arrow keys to select **Pause** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **2** key on the *Remote Device*.

To resume recording:

>> While recording is paused, use the **Up/Down** arrow keys to select **Resume** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **2** key on the *Remote Device*.

To stop recording:

>> While recording is in progress, use the **Up/Down** arrow keys to select **Stop Recording** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **3** key on the *Remote Device*.

PCM Main Menu - Level 2

Drop Participant

To disconnect a participant from the conference:

1 Use the **Up/Down** arrow keys to navigate to the second page of the *Main Menu*

2 Use the **Up/Down** arrow keys to select **Drop Participant** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **7** key on the *Remote Device*.

The *Drop Participant* sub menu is displayed.

3 Using the **Up/Down** arrow keys, select the participant to be disconnected and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the *Numeric Key* on the *Remote Device* corresponding to the participant entry.

Terminate Conference

Although this function can be accessed and viewed by chairpersons using *PCM* with *ISDN* endpoints, conference termination cannot be executed.

Although this function can be accessed and viewed by chairpersons using *PCM* with *ISDN* endpoints, conference termination cannot be executed.

To terminate a conference:

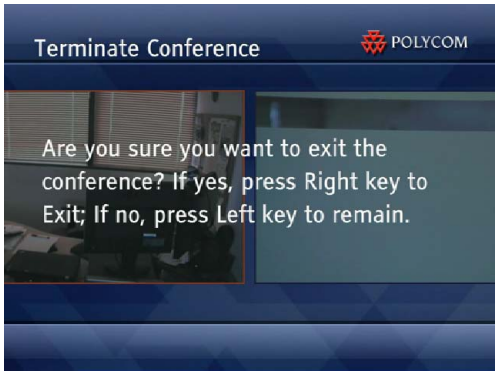
1 Use the **Up/Down** arrow keys to navigate to the second page of the *Main Menu*

2 Use the **Up/Down** arrow keys to select **Terminate Conference** and then press the **Right** arrow or **#** key to confirm your selection.

or

Press the **8** key on the *Remote Device*.

The *Terminate Conference* sub menu is displayed.



3 Press the **Right** arrow key to confirm termination of the conference.

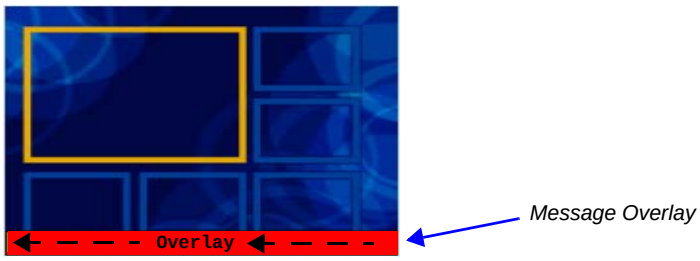
or

Press the **Left** arrow key to cancel termination of the conference.

Message Overlay

Message Overlay allows messages to be sent to all participants in an ongoing conference.

A maximum of 24 Unicode characters can be sent as a *Message Overlay*.



Guidelines

- *Message Overlay* is supported in:
  - continuous Presence (CP) conferences
  - in *Same Layout* mode
  - in encrypted conferences
- *Message Overlay* is not supported in *Lecture* mode.
- Participants that have their video suspended do not receive *Message Overlays*.
- *Message Overlays* cannot be sent via the *Content* channel.
- *Message Overlay* is not displayed when the *PCM* menu is active.
- If a *Repeating Message Overlay* is modified before it has completed all its repetitions, it is changed immediately without completing all of its repetitions. The modified *Repeating Message Overlay* is displayed starting with repetition one.
- *Message Overlay* can be enabled, modified and disabled during an ongoing conference using the *Conference Properties – Message Overlay* dialog box.

Enabling Message Overlay

Message Overlays are created and enabled in the *Conference Properties – Message Overlay* dialog box.

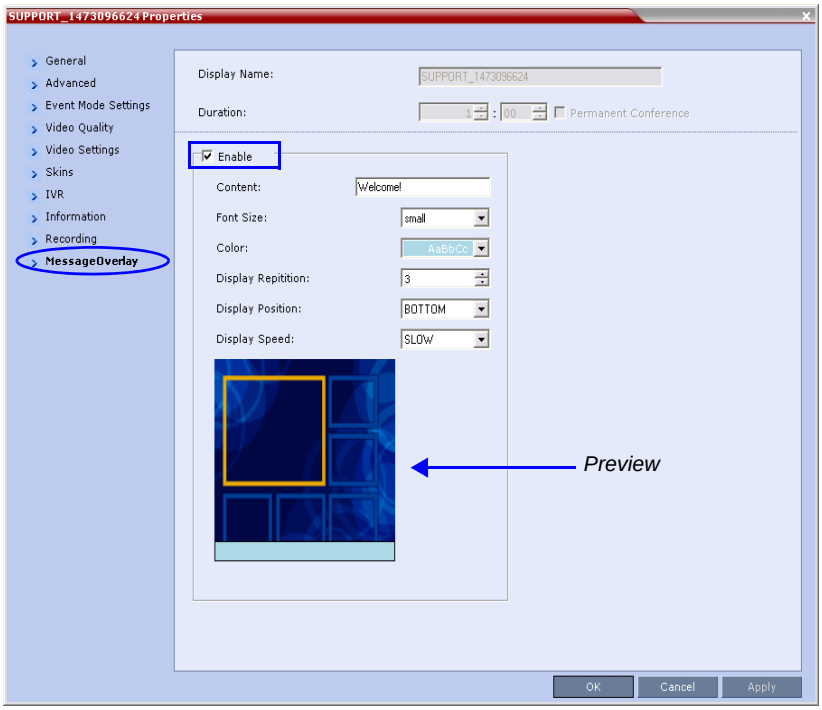
To enable Message Overlay:

1 In the *Conferences List* pane, double click the name of the conference to have *Message Overlay* enabled or right-click the conference name and then click **Conference Properties**.

The *General* tab is displayed.

2 Click the **Message Overlay** tab.

The **Message Overlay** tab is displayed.



3 Select the **Enable** check box.

4 Modify the following fields as set out in Table 12.

As the fields are modified the *Preview* changes to show the effect of the changes.
For example:

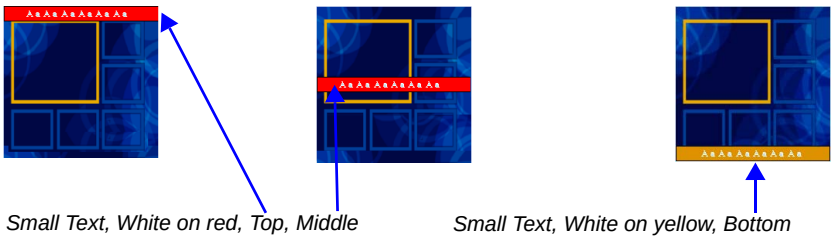
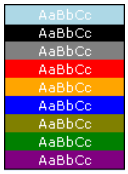


Table 9 *Conference Properties - Message Overlay*

Field	Description
Content	Enter a message of up to 24 Unicode characters.
Font Size	Select the size of the Message Overlay text from the drop-down menu options: • Small • Medium • Large **Default:** Small

Table 9 *Conference Properties - Message Overlay (Continued)*

Field	Description
Color	Select the color of the text and background of the Message Overlay from the following drop-down menu options:  **Default:** White text on pale blue background
Display Repetition	Click the arrows ( ) to increase or decrease the number of times that the Message Overlay is to be repeated. **Default:** 3
Display Position	Select the position for the display of the Message Overlay on the endpoint screen: • Top • Middle • Bottom **Default:** Bottom
Display Speed	Select whether the Message Overlay is static or repeating: • Static • Slow • Fast **Default:** Slow

5 Click the **OK** button.

Content Broadcast Control prevents the accidental interruption or termination of H.239 Content that is being shared in a conference.

Content Broadcast Control

Content Broadcast Control prevents the accidental interruption or termination of *H.239 Content* that is being shared in a conference.

Content Broadcast Control achieves this by giving *Content Token* ownership to a specific endpoint via the *RMX Web Client*. Other endpoints are not able to send content until *Content Token* ownership has been transferred to another endpoint via the *RMX Web Client*.

Guidelines

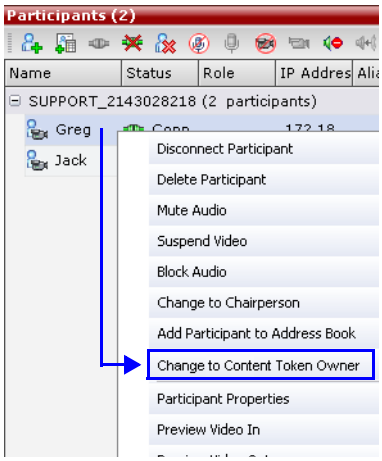
- *Content Broadcast Control* is supported in *MPM+* and *MPMx* card configuration modes.
- *Content Broadcast Control* is supported in *CP* and *Video Switching* conferences.
- *Content Broadcast Control* is supported in H.323 environments.
- Only the selected *Content Token* owner may send content and *Content Token* requests from other endpoints are rejected.
- *Content Token* ownership is valid until:
  - It is canceled by an administrator, operator or chairperson using the *RMX Web Client*.
  - The owner releases it.
  - The endpoint of the *Content Token* owner disconnects from the conference.
- An administrator, operator or chairperson can cancel *Content Token* ownership.
- In cascaded conferences, a participant functioning as the cascade link cannot be given token ownership.

Giving and Cancelling Token Ownership

Giving Token Ownership

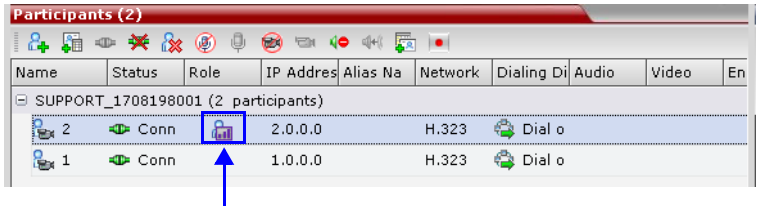
To give token ownership:

1 In the *Participants* list, right click the endpoint that is to receive *Content Token* ownership.



2 Select **Change To Content Token Owner** in the drop-down menu.

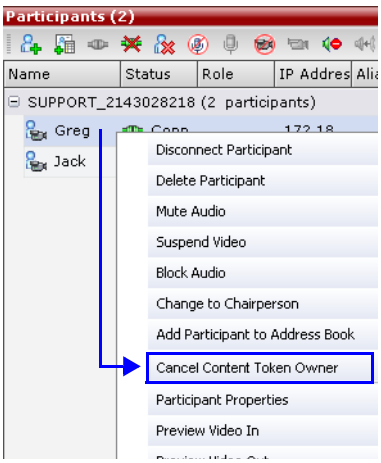
The endpoint receives ownership of the *Content Token* and an indication icon is displayed in the Role column of the participant's entry in the Participants list.



Cancelling Token Ownership

To cancel token ownership:

1 In the *Participants* list, right click the endpoint that currently has *Content Token* ownership.



2 Select **Cancel Content Token Owner** in the drop-down menu**.**

Content Token ownership is cancelled for the endpoint.

Copy Cut and Paste Participant

The *RMX* user can **Copy**, **Cut** and **Paste** participants between differ rent conferences running on the *RMX,* including his/her current conference. These functions, when used via the *RMX Manager*, with its ability to manage multiple *RMX*s, participants, allows the *RMX* user to **Copy**, **Cut** and **Paste** participants between conferences running on different *RMX*s.

Copy Participant

The **Copy** command copies all the participant's properties and makes them available for pasting. The participant remains connected to his/her current conference.

To copy a participant:

1 In the *Participants List* pane, right-click the participant you want to copy.

2 In the drop-down menu select **Copy Participant**.

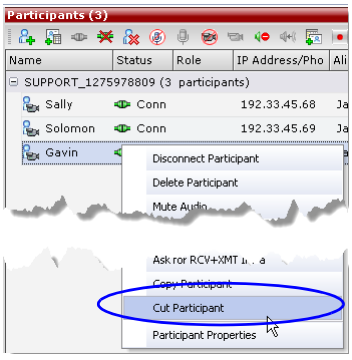
Cut Participant

The **Cut** command copies all the participant's properties and makes them available for *pasting*. The participant is deleted from his/her current conference.

To cut a participant:

1 In the *Participants List* pane, right-click the participant you want to cut.

2 In the drop-down menu select **Cut Participant**.



Paste Participant

The **Paste** command connects the *copied* or *cut* participant to the selected conference. If the participant was *copied*, he/she should be deleted from the conference he/she was *copied* from, unless it is required that the participant is connected to two (or more) conferences. (There are endpoints that permit a participant to be connected to multiple conferences).

To paste a participant:

1 In the *Conferences List* pane, click the conference you want to paste the copied/cut participant into.

2 Right-click in the *Participants List* pane of the selected conference and in the drop-down menu select **Paste Participant**.

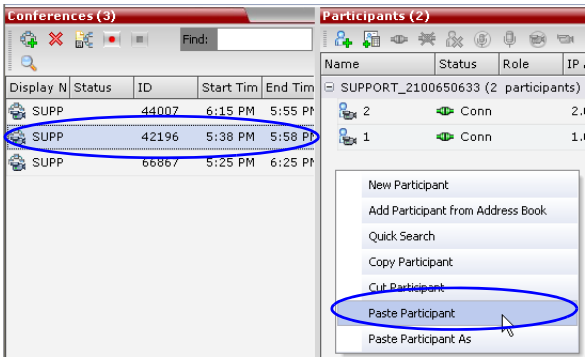
or

If you are using the *RMX Manager* and you want to paste the participant to a conference to different *RMX*:

a In the *MCUs* list pane, click the *RMX* that is hosting the conference that is to receive the participant.

b In the *Conferences* list pane, click the conference you want to paste the copied/cut participant into.

c Right-click, and in the drop-down menu select **Paste Participant**.



The participant is connected to the conference.

Paste Participant As

The **Paste Participant As** command allows the *RMX* user to create a new participant using the copied participant's properties as a template. It automatically opens the *Address Book - Participant Properties* dialog box allowing the *RMX* user to modify the participant's properties effectively creating a new participant. When the **OK** button in the *Participant Properties* dialog box is clicked the new participant is connected to the selected conference.

To paste a participant as a new participant:

1 In the *Conferences List* pane, click the conference you want to paste the copied/cut participant into.

Right-click in the *Participants List* pane of the selected conference and in the drop-down menu select **Paste Participant As**.

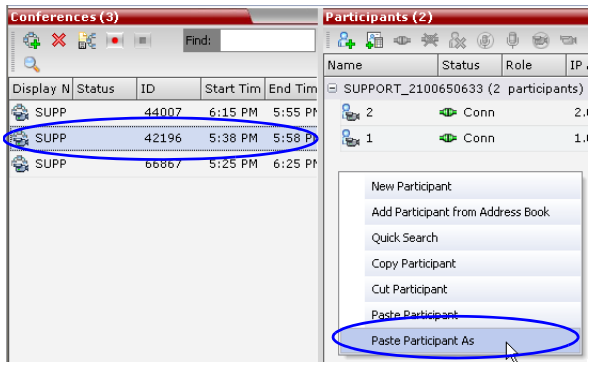
or

If you are using the *RMX Manager* and you want to paste the participant to a conference on another *RMX*:

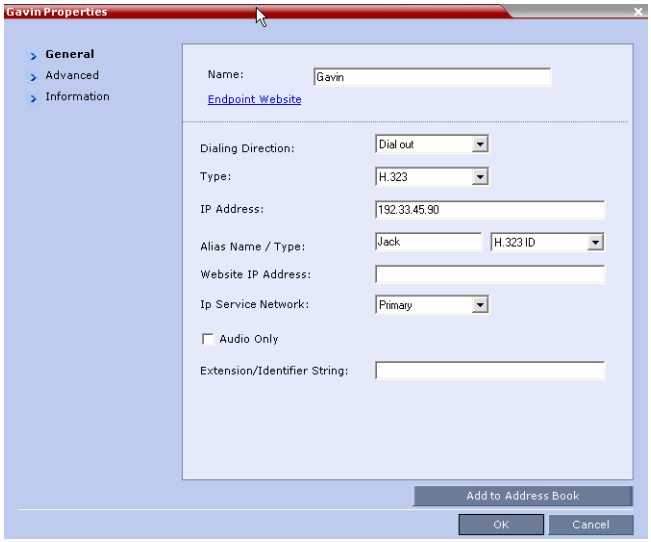
a In the *MCUs* list pane, click the *RMX* that is hosting the conference that is to receive the participant.

b In the *Conferences* list pane, click the conference you want to paste the copied/cut participant into.

c Right-click, and in the drop-down menu select **Paste Participant As**.



The *Address Book - Participant Properties* dialog box is displayed.



2 Modify the participant information as required. For more information see the *RMX 1500/2000/4000 Administrator's Guid"Modifying Participants in the Address Book"* on page **5-14**.

Optional. If not already in the *Address Book*, the copied/cut participant can be added to the *Address Book*.

Optional. The new participant can be added to the *Address Book*.

3 Click the **OK** button to connect the new participant to the selected conference.

Copy and Paste Conference

The *RMX* user can **Copy**, and **Paste** conferences. When using the *RMX Web Client*, conferences can copied and pasted on the same *RMX*, however when using the *RMX Manager*, with its ability to manage multiple *RMX*s, conferences can be copied and pasted between different *RMX*s.

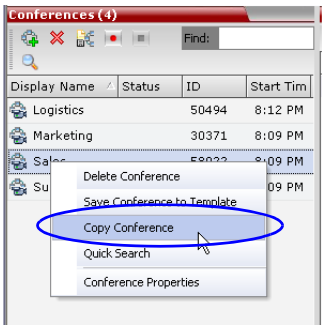
Copy Conference

The **Copy** command copies all the conference's properties including connected participants and makes these properties available for pasting, starting a new conference. The copied conference remains active until it terminates or is deleted.

To copy a conference:

1 In the *Conferences List* pane, right-click the conference you want to copy.

2 In the drop-down menu select **Copy Conference**.



Paste Conference

The **Paste Conference** command starts the new conference on the same *RMX* or on a different *RMX*.

To paste a conference:

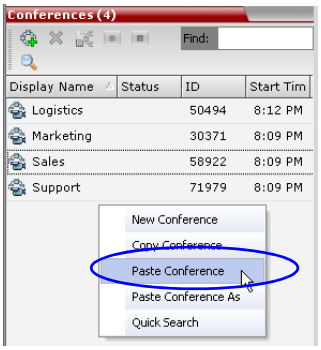
>> Right-click in the *Conferences List* pane and in the drop-down menu select **Paste Conference**.

or

If you are using the *RMX Manager* and you want to paste the conference to a different *RMX*:

a In the *MCUs* list pane, click the *RMX* that is to receive the conference.

b In the *Conferences* list pane, right-click, and in the drop-down menu select **Paste Conference.**



The conference is pasted to the *RMX*.

Paste Conference As

The **Paste Conference As** command allows the *RMX* user to create a new conference using the copied conference's properties as a template. It automatically opens the *Conference Properties* dialog box allowing the *RMX* user to modify the *General*, *Participants* and *Information* tabs to create the new conference. When the **OK** button in the *Conference Properties* dialog box *conference Properties* dialog box is clicked the new conference is started.

To paste a conference as a new conference:

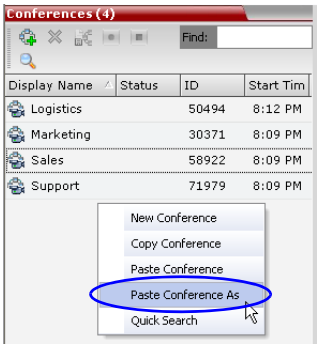
1 Right-click in the *Conferences List* pane and in the drop-down menu select **Paste Conference As**.

or

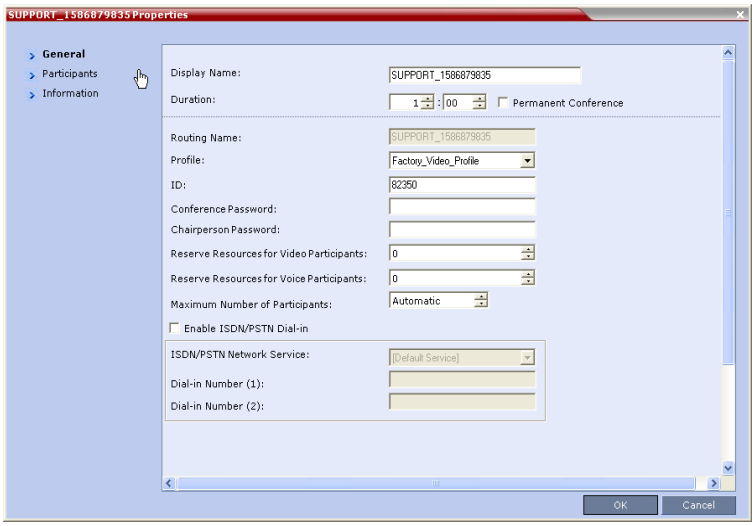
If you are using the *RMX Manager* and you want to paste the conference to a different *RMX*:

a In the *MCUs* list pane, click the *RMX* that is to receive the conference.

b In the *Conferences* list pane, right-click, and in the drop-down menu select **Paste Conference As**.



The *Conference Properties* dialog box is displayed.



2 Modify the conference information as required.

3 Click the **OK** button to paste and start the new conference.

Version 7.0 Detailed Description - General

High Resolution Slide Enhancements

Conference and *Entry Queue IVR Services* now support customized high resolution slides in addition to the low and high resolution slides included in the default slide set.

Slides can be selected and previewed via the *New Conference* and *New Entry Queue IVR Service* dialog boxes.

Guidelines

- Two customized slides can be loaded per *IVR Service*:
  - A low resolution slide, to be used with low resolution endpoints.
  - A high resolution slide, to be used with high resolution endpoints.

  Table 10 summarizes the recommended input slide formats and the resulting slides that are generated:

Table 10 *IVR Slide - Input / Output Formats*

Slide Resolution	Format	
	Input Slides	Generated Slides
High	HD1080p (16:9) or HD720p (16:9)	HD1080p HD720p
Low	4CIF (4:3) or CIF (4:3)	4SIF SIF CIF

- The source images for the high resolution slides must be in **.bmp* or **.jpg* format.
- If the uploaded slides are not of the exact *SD* or *HD* resolution, an error message is displayed and the slides are automatically cropped.
- If a slide that is selected in an *IVR Service* is deleted, a warning is displayed listing the *IVR Services* in which it is selected. If deleted, it will be replaced with a default *RMX* slide.
- The generated slides are not deleted if the system is downgraded to a lower software version.
- The first custom source file uploaded, whatever its format, is used to generate both high and low resolution custom slides. High resolution source files uploaded after the first upload will be used to generate and replace high resolution custom slides. Likewise, low resolution source files uploaded after the first upload will be used to generate and replace low resolution custom slides.
- If there are two custom source files in the folder, one high resolution, one low resolution, and a new high resolution custom source file is uploaded, new high resolution custom slides are created. The existing low resolution custom slides are not deleted.

- If there are two custom source files in the folder, one high resolution, one low resolution, and a new low resolution custom source file is uploaded, new low resolution custom slides are created. The existing high resolution custom slides are not deleted.

Managing Custom Slides

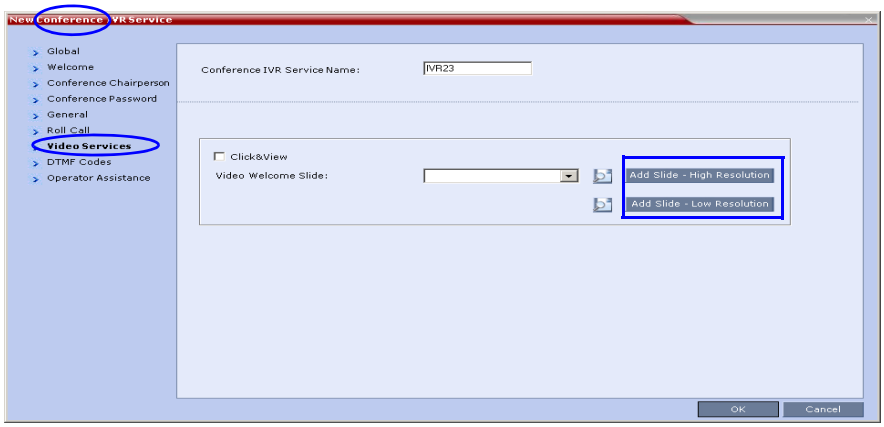
Custom Slides are managed via the *Video Services* tab of the *New Conference Queue IVR Service* and *New Entry Queue IVR Service* dialog boxes.

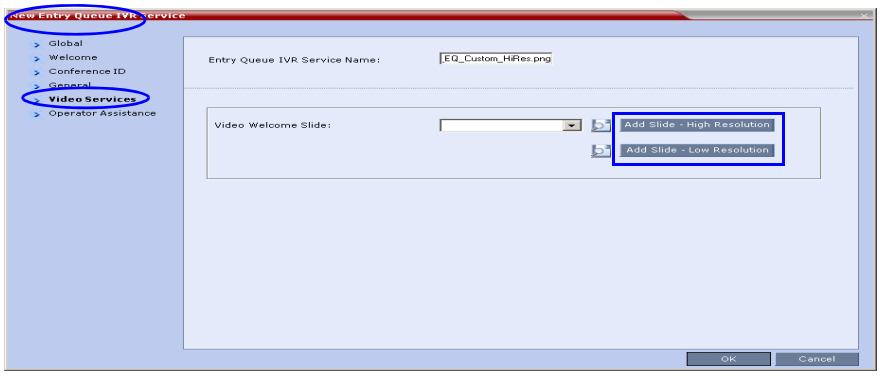
Adding, Previewing and Selecting Custom Slides

High Resolution Slides are added, previewed and selected in the same manner as *Low Resolution Slides* were in previous versions.

To upload a *Low Resolution Slide* click the **Add Slide - Low Resolution**.

To upload a *High Resolution Slide* click the **Add Slide - High Resolution**.





The *Install File* dialog box opens, enabling you to select the required slide.

Once selected, you can Preview the slide.

For more information about *Adding*, *Previewing* and *Selecting Custom Slides* see the *RMX 1500/2000/4000 Administrator's Guide*, "*Defining a New Conference IVR Service*" on page **14-9** and "*Defining a New Entry Queue IVR Service*" on page **14-27**.

Multiple Recording Links

Conference Recording Links can be associated on the *RMX* with *Virtual Recording Rooms* (*VRR*), created and saved on the *Polycom® RSS™ 4000 Version 6.0 Recording and Streaming Server* (*RSS*).

Each *Recording Link* defined on the *RMX* can be given a descriptive name and can be associated with one *VRR* saved on the *Polycom RSS 4000*.

Guidelines

- Up to 100 *Recording Links* can be listed for selection in the *Conference Profile*.
- *Multiple Recording Links* are supported in *Continuous Presence* and *Video Switched* conferences.
- A *Recording Link* that is being used by an ongoing conference cannot be deleted.
- A *Recording Link* that is assigned to a *Profile* cannot be deleted.
- While a *Profile* s being used in an ongoing conference, it cannot have a different *Recording Link* assigned to it.
- The number of *Recording Links* available for selection is determined by the value of the **MAXIMUM_RECORDING_LINKS** *System Flag* in *system.cfg*.

  Range: 20 - 100

  Default: 20

  The flag value can be modified by selecting the *System Configuration* option from the *Setup* menu. For more information, see the *RMX 1500/2000/4000 Administrator's Guide*, "*Modifying System Flags*" on page **18-5**.

Creating Multiple Recording Links

To define (multiple) New Recording Links:

On the *RSS*:

1 Modify the parameters of a recording *Template* to meet the recording requirements.

2 Assign the modified recording *Template* to a *VRR*. The recording and streaming server will assign a number to the *VRR*.

3 Repeat Step 1 and Step 2 for each *VRR* to create additional *VRR*s.

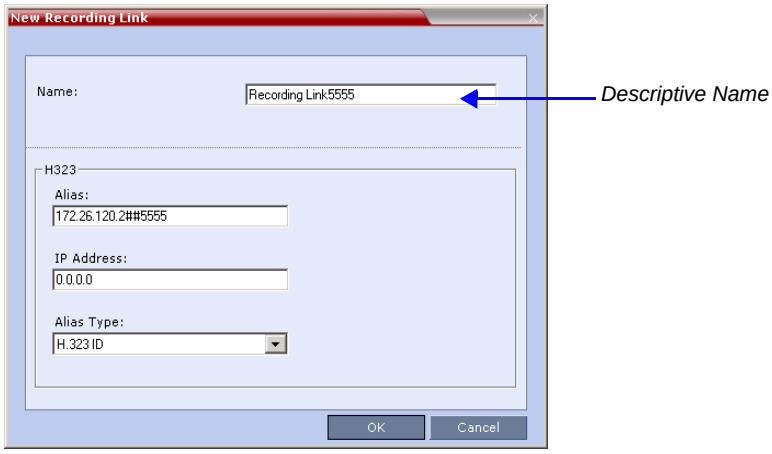
For more information see the *RSS 4000 User Guide*.

On the *RMX*:

4 In the *RMX Management* pane, click **Recording Links** ( ).

5 In the *Recording Links* list, click the **New Recording Link** ( ) button.

The *New Recording Link* dialog box is displayed.



6 Define the following parameters:

Table 11 *Recording Link Parameters*

Parameter	Description
Name	Enter a descriptive name to be assigned to the *Recording Link*. Default: *Recording Link*
IP Address	• If no gatekeeper is configured, enter the the IP Address of the RSS. Example: If the RSS IP address is 173.26.120.2 enter **`172.26.120.2.`** • If a gatekeeper is configured, you can either enter the IP address or an alias (see the alias description)..
Alias	If you are using the RSS IP address, enter the VRR number in the Alias field. For example, if the VRR number is 5555, enter **5555**. Alternatively, if the *Alias Type* is set to **H.323 ID**, enter the RSS IP address and the VRR number in the format: **<RSS_IP_Address>##<VRR number>** Example: If the RSS IP is 173.26.120.2 and the VRR number is 5555, enter **172.26.120.2##5555**
Type	Depending on the format used to enter the information in the IP address and Alias fields, select **H.323 ID** or **E.164**.

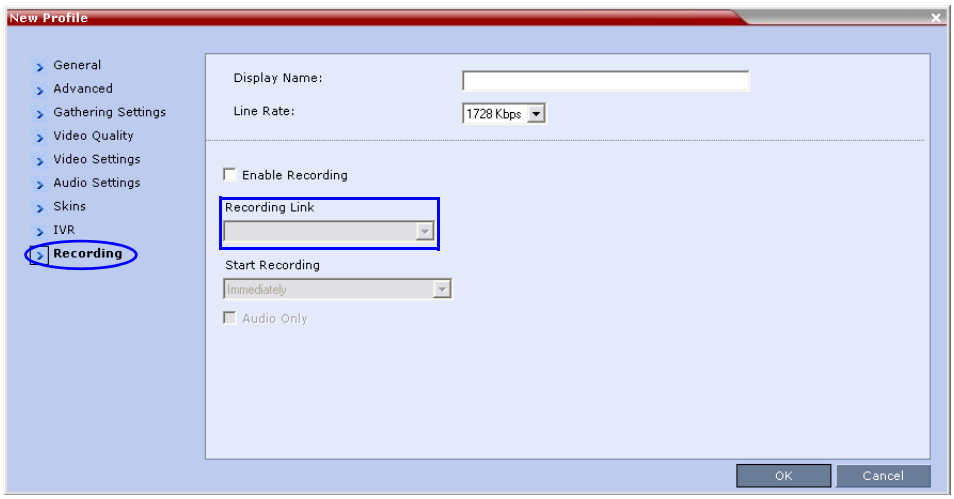
7 Click **OK**.

The *New Recording Link* is added to the list of *Recording Links*.

8 Repeat Step 4 to Step 7 for each *New Recording Link* that is to be created.

Selecting a Recording Link

In the *New Profile* and *Profile Properties* dialog boxes, the *Recording* tab has been modified to include a drop-down menu of *Recording Links* that have been defined and are available for selection.



To select a recording link:

1 In the *New Profile* or *Profile Properties* dialog box, click the **Recording** tab.

2 Select the **Enable Recording** check box.

The *Recording Links* drop-down menu is enabled.

3 Select a *Recording Link*.

4 Modify the remaining fields of the dialog box as described in the *RMX 1500/2000/4000 Administrator's Guide* "*Enabling the Recording in the Conference Profile*" on page **11-6**.

Auto Redial when Endpoint Drops

The *Auto Redialing* option instructs the *RMX* to automatically redial IP and SIP participants that have been abnormally disconnected from the conference.

Guidelines

- The *Auto Redialing* option is disabled by default.
- *Auto Redialing* can be enabled or disabled during an ongoing conference using the *Conference Properties – Advanced* dialog box.
- The *RMX* will not redial an endpoint that has been disconnected from the conference by the participant.
- The *RMX* will not redial an endpoint that has been disconnected or deleted from the conference by an operator or administrator.

Enabling Auto Redialing

Auto Redialing is enabled in the *New Profile – Advanced* or, during an ongoing conference, in the *Profile Properties – Advanced* dialog box.

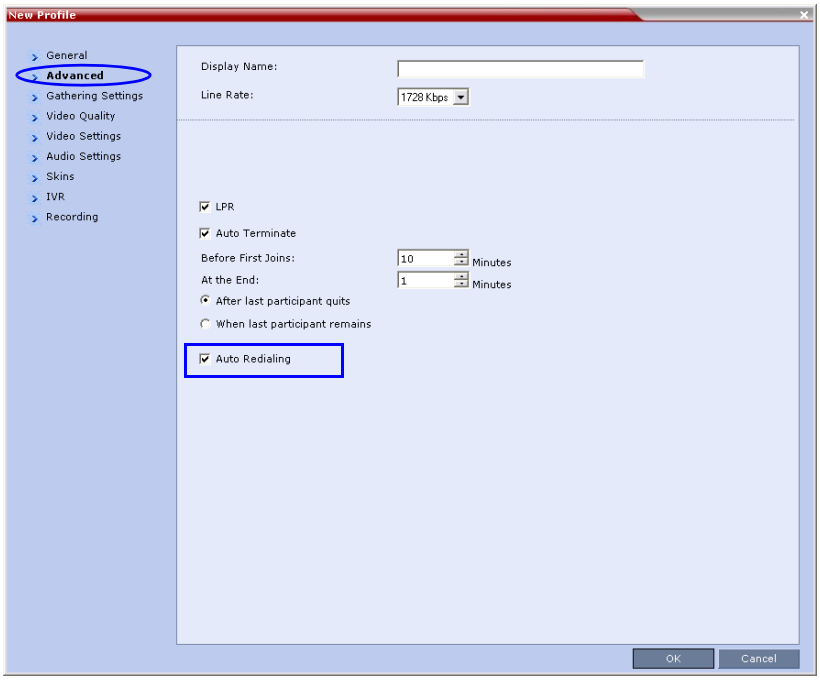
To enable Auto Redialing:.

1 Display the *Conference Profiles* list, and select either the **New Profile** button to create a new Profile or display the **Profile Properties**.

The *New Profile* or *Profile Properties* dialog box is displayed.

2 Click the **Advance** tab.

The *Advanced* tab is displayed.



3 Select the **Auto Redialing** check box.

4 Click the **OK** button.

System Flags

The **ENABLE_IP_REDIAL** *System Flag* is overridden by the *Auto Redialing* setting in the *Conference Profile*.

Auto Redialing is controlled by the two *System Flags* described in Table 12.

If a flag is not listed in the *System Flags* list it must be added to the *system.cfg* file before it can be modified.

To list, modify or add flags to the system.cfg file:

1 In the *RMX Web Client* menu, click **Setup>System Configuration**.

The *System Flags* list is displayed.

2 For each of the flags:

If the flag is listed:

a In the *System Flags* dialog box, click the **Edit Flag** button.

b Enter the *New Value* for the flag.

c Click the **OK** button.

If the flag is not listed:

a In the *System Flags* dialog box, click the **New Flag** button.

b Add the *New Flag* and *Value* as set out in Table 12.

c Click the **OK** button.

Table 12 System Flags – Auto Redialing

New Flag	Description
REDIAL_INTERVAL _IN_SECONDS	Enter the number of seconds that the RMX should wait before successive redialing attempts. Range: 0-30 (Default: 10)
NUMBER_OF _REDIAL	Enter the number redialing attempts required. Dialing may continue until the conference is terminated. Default: 3

3 Click the **OK** button.

Multi-RMX Manager - Import/Export RMX Manager Configuration

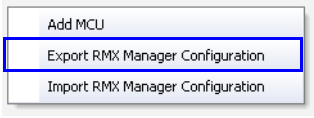
The RMX Manager configuration that includes the MCU list and the multilingual selection can be save to any workstation/PC on the network and imported to any Multi-RMX Manager installed in the network. This enables the creation of the MCUs list once and distributing it to all RMX Manager installations on the network.

In addition, when upgrading to a previous version, the MCU list is deleted, and can be imported after upgrade.

The exported file is save in XML format and can be edited in any text editor that can open XML files.

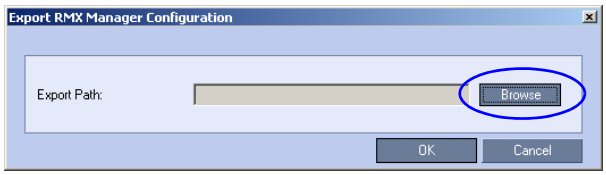
To Export the RMX Manager Configuration:

1 In the Multi-RMX Manager, click the **Export RMX Manager Configuration** button in the toolbar, or right-click anywhere in the MCUs pane and then click **Export RMX Manager Configuration**.



The *Export RMX Manager Configuration* dialog box opens.

2 Click the **Browse** button to select the location of the save file, or enter the required path in the *Export Path* box.

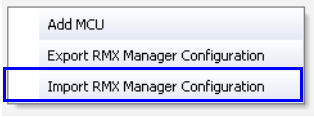


The selected file path is displayed in the *Export Path* box.

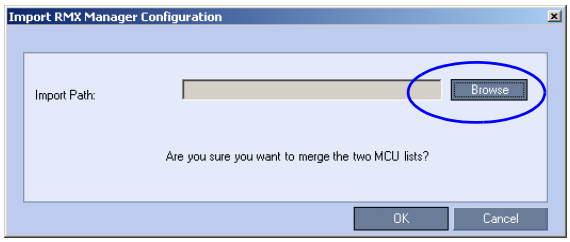
3 Click **OK** to export the RMX Manager configuration.

To Import the RMX Manager Configuration:

1 In the Multi-RMX Manager, click the **Import RMX Manager Configuration** button in the toolbar, or right-click anywhere in the MCUs pane and then click **Import RMX Manager Configuration**.

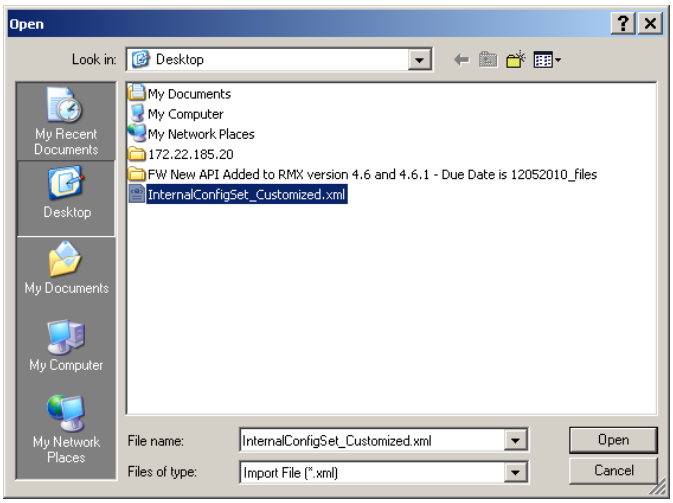


The *Import RMX Manager Configuration* dialog box opens.



2 Click the **Browse** button to select the saved file, or enter the required path in the *Export Path* box.

The *Open* dialog box is displayed.



3 Select the XML file previously save, and click the Open button.

The selected file path is displayed in the *Import Path* box.

4 Click **OK** to import the file.

Version 7.0 Detailed Description - SIP

SIP LPR

Lost Packet Recovery (*LPR*) and *Dynamic Bandwidth Allocation* (*DBA*) are supported. *LPR* and *DBA* help minimize media quality degradation that can result from packet loss in the network.

Packet Loss

Packet Loss refers to the failure of data packets, transmitted over an IP network, to arrive at their destination. *Packet Loss* is described as a percentage of the total packets transmitted.

Causes of Packet Loss

Network congestion within a LAN or WAN, faulty or incorrectly configured network equipment or faulty cabling are among the many causes of Packet Loss.

Effects of Packet Loss on Conferences

Packet Loss affects the quality of:

- **Video –** frozen images, decreased frame rate, flickering, tiling, distortion, smearing, loss of lip sync
- **Audio –** drop-outs, chirping, audio distortion
- **Content –** frozen images, blurring, distortion, slow screen refresh rate

Lost Packet Recovery

The *Lost Packet Recovery* (*LPR*) algorithm uses *Forward Error Correction* (*FEC*) to create additional packets that contain recovery information. These additional packets are used to reconstruct packets that are lost, for whatever reason, during transmission. *Dynamic Bandwidth Allocation* (*DBA*) is used to allocate the bandwidth needed to transmit the additional packets.

Lost Packet Recovery Guidelines

- *LPR* is supported in H.323 and SIP networking environments.
- In *LPR*-enabled *CP Mode* conferences:
  - Both *LPR*-enabled and non *LPR*-enabled endpoints are supported.
  - The *LPR* process is not applied to packet transmissions from non *LPR*-enabled H.323, SIP and H.320 endpoints.
- In *LPR*-enabled *Video Switched* conferences:
  - H.323 and SIP endpoints are supported.
  - Cascaded links to MGC are not supported.
  - Non H.323 participants cannot be created, added or moved to *LPR*-enabled *Video Switched* conferences.
- When connecting via an *Entry Queue:*
  - A participant using an *LPR*-enabled endpoint cannot be moved to a non *LPR*-enabled conference.

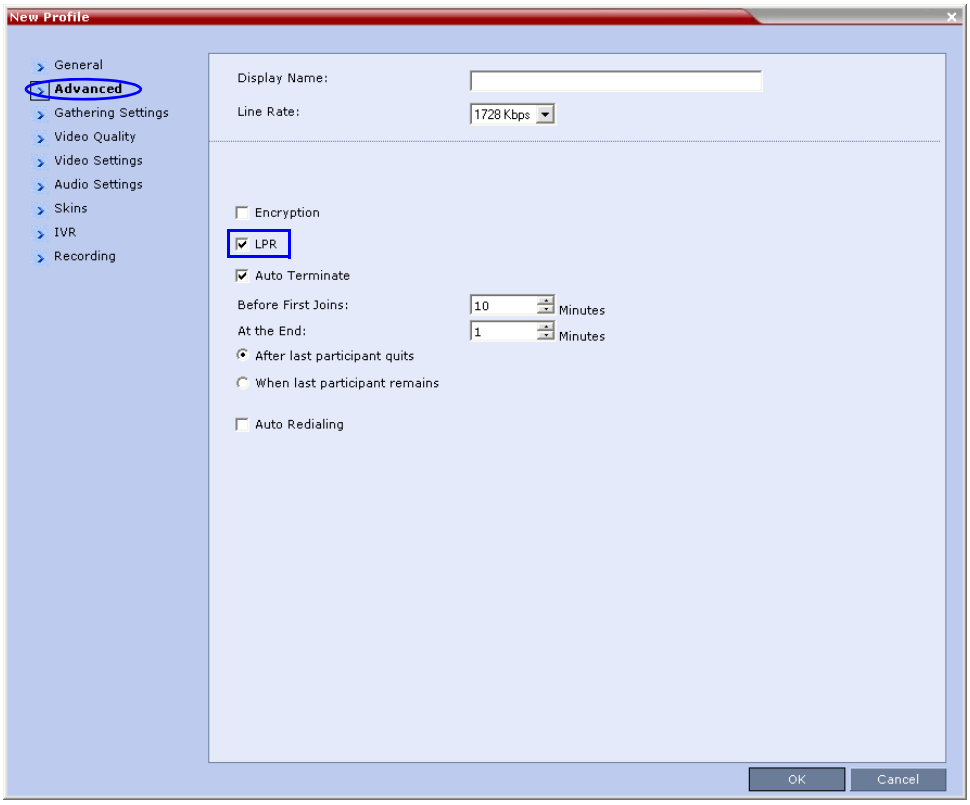
— SIP and H.320 participants cannot be moved to *LPR*-enabled *Video Switched* conferences.

- If packet loss is detected in the packet transmissions of either the video or Content streams:
  — *LPR* is applied to both the video and Content streams.
  — *DBA* allocates bandwidth from the video stream for the insertion of additional packets containing recovery information.

Enabling Lost Packet Recovery

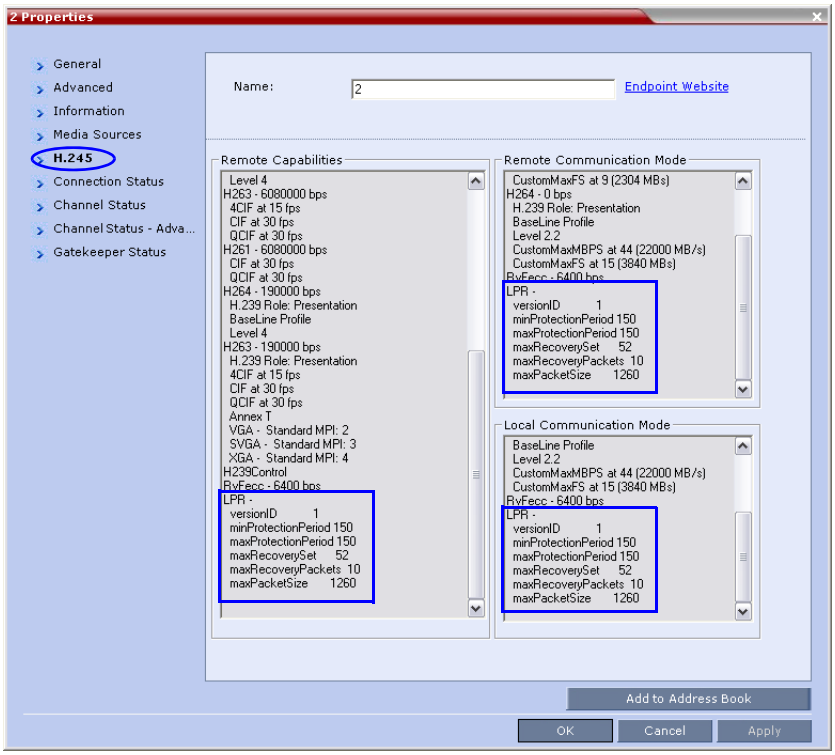
LPR is enabled or disabled in the *Conference Profile* dialog box.

- **CP Mode Conferences –** *LPR* is enabled by default in the *New Profile – Advanced* dialog box.
- **VSW Mode Conferences –** If *High Definition Video Switching* is selected, the LPR check box is automatically cleared. *LPR* can be enabled for VSW conferences but SIP participants will not be able to connect.

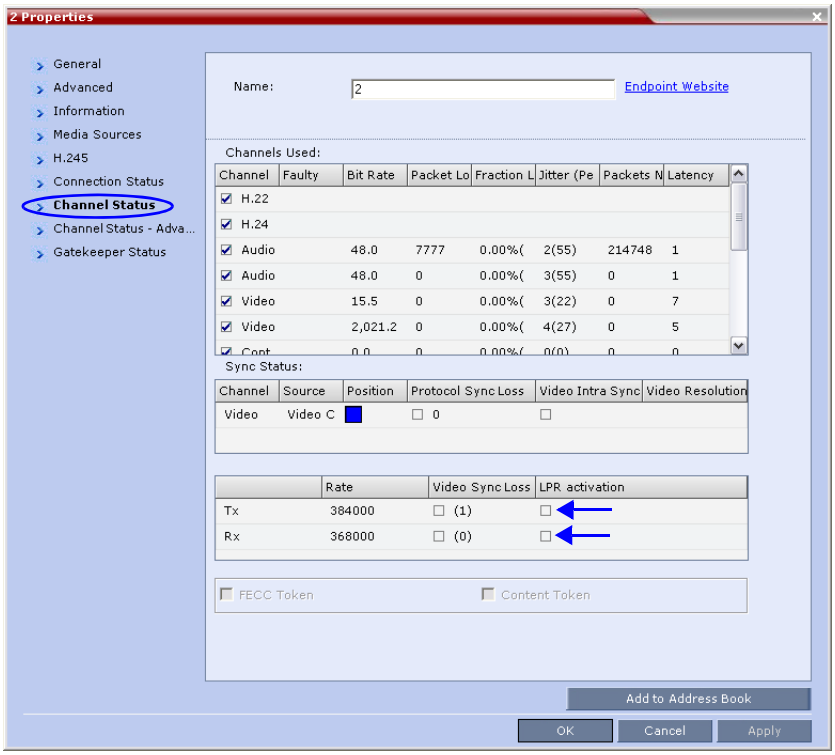


Monitoring Lost Packet Recovery

In the *Participant Properties – H.245* tab, *LPR* activity is displayed in all three panes.



In the *Participant Properties – Channel Status* tab, check box indicators show *LPR* activation in the local and remote (transmit and receive) channels.



SRTP

Encryption of SIP Media is supported using SRTP (Secured Real-time Transport Protocol) and the AES key exchange method.

SRTP Guidelines

- Encryption of SIP Media requires the encryption of SIP signaling - TLS Transport Layer must be used.
- Encryption of SIP Media is supported in CP and VSW conferences.
- All media channels are encrypted: video, audio and FECC.
- Encryption of SIP Media is available in MPM+ Card Configuration Mode (Version 7.0 and later) and MPMx Card Configuration Mode (Version 7.1 and later).
- RMX SRTP implementation complies with Microsoft SRTP implementation.
- LPR is not supported with SRTP.
- Mixing encrypted and non-encrypted endpoints in one conference is possible, based on system flag settings:
  ALLOW_NON_ENCRYPT_PARTY_IN_ENCRYPT_CONF.
  The behavior is the same as for H.323 participants, as shown in Table 13 and Table 14.

  For more information, see *RMX 2000/4000 Administrator's Guide*, "*Closed Captions*" on page **2-48**.

Conference Access:

Table 13 *Defined SIP/H.323 Participant Connection to the Conference Based on the Encryption Settings*

ALLOW_NON_ ENCRYPT_PARTY_ IN_ENCRYPT_CONF	Conference Encryption Setting	Participant Encryption Setting	Participant Connection Permitted
NO	Yes	Auto	Yes (encrypted)
NO	Yes	No	No
NO	Yes	Yes	Yes (encrypted)
NO	No	Auto	Yes (non-encrypted)
NO	No	No	Yes (non-encrypted)
NO	No	Yes	No
YES	Yes	Auto	Yes (encrypted)
YES	Yes	No	Yes (non-encrypted)
YES	Yes	Yes	Yes (encrypted)
YES	No	Auto	Yes (non-encrypted)
YES	No	No	Yes (non-encrypted)
YES	No	Yes	No

Entry Queue Access:

Table 14 *Encryption: Flag vs. Conference and Entry Queue Settings When SIP/H.323 Participant Encryption is set to Auto*

ALLOW_NON_ ENCRYPT_PARTY_ IN_ENCRYPT_CONF	Entry Queue Encryption Setting	Destination Conference Encryption Setting	Enable Participant Move from EQ to Conference
NO	Yes	No	No
NO	Yes	Yes	Yes
NO	No	No	Yes
NO	No	Yes	No
YES	Yes	No	No
YES	Yes	Yes	Yes
YES	No	No	Yes
YES	No	Yes	Yes

Enabling Encryption

In the Profile

Encryption for the conference is in the Profile and cannot be changed once the conference is running. For more details, see *RMX 2000/4000 Administrator's Guide*, *"Enabling Encryption in the Profile"* on page **2-65**.

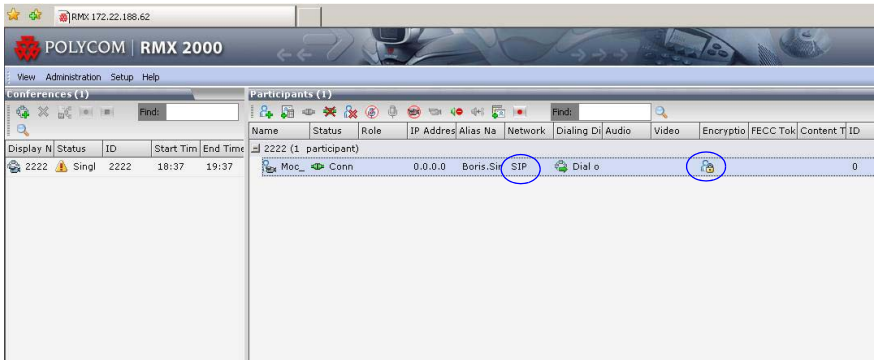
At the Participant Level

You can select the encryption mode for each of the defined participants as for H.323 participants. Encryption options are affected by the settings of the flag in the system configuration. Undefined participants are connected with the Participant *Encryption* option set to **Auto**, inheriting the conference/Entry Queue encryption setting. For more details, see *RMX 2000/4000 Administrator's Guide*, *"Enabling Encryption at the Participant Level"* on page **2-65**.

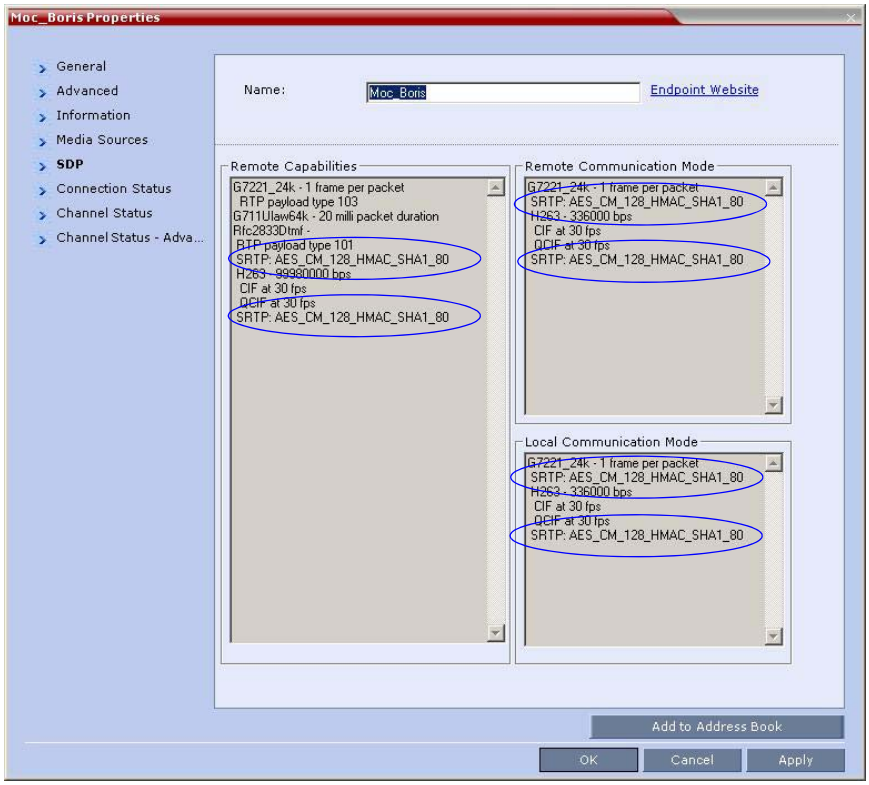
Monitoring the Encryption Status

The conference encryption status is indicated in the *Conference Properties - General* dialog box.

The participant encryption status is indicated by a check mark in the *Encryption* column in the *Participants* list pane.



The participant encryption status is also indicated in the *Participant Properties – SDP* tab, where SRTP indication is listed for each encrypted channel (for example, audio and video).



An encrypted participant who is unable to join a conference is disconnected from the conference. The disconnection cause is displayed in the *Participant Properties – Connection Status* tab, *Security Failure* indication, and the *Cause* box identifies the encryption related situation.

For more information about monitoring, see the *RMX 1500/2000/4000 Administrator's Guide* "*Conference and Participant Monitoring*" on page **10-1**.

ICE Environment Integration

Interactive Connectivity Establishment (ICE) provides a structure/protocol to unify the various NAT Traversal techniques that are used to cross firewalls.

It enables SIP based endpoints to connect while traversing a variety of firewalls that may exist between the calling endpoint (local) and the MCU or called endpoint (remote). It is the only way for remote MOC users to call into the enterprise without a VPN.

ICE Guidelines

- ICE is available in *MPM+ Card Configuration Mode* (Version 7.0 and later).
- RMX ICE implementation complies with Microsoft ICE implementation.
- ICE is available only in IPv4 environment.
- ICE can be implemented in an environment that includes a STUN server and a Relay server (for example, Microsoft AV Edge server).
- The firewall must be UDP enabled.
- The RMX must have a unique account in the Active Directory and must be registered with the OCS server.

Connecting to the RMX in ICE Environment

The dialing methods that can be used by an endpoint to connect to another endpoint depends on the ICE environment: Local, Remote or Federation.

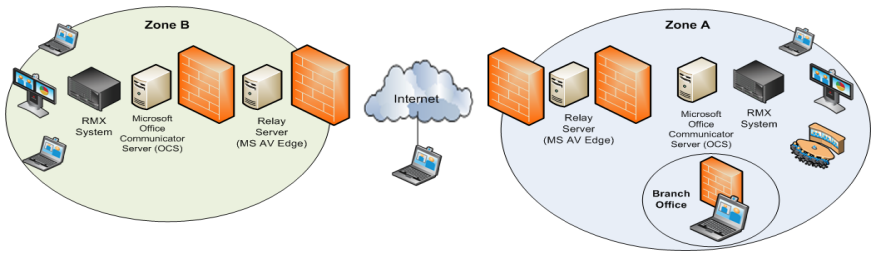


Figure 1 *ICE Environment*

Local connection - a connection between the RMX and endpoints that reside within the same organization. For example, an endpoint in Zone A calls the RMX in Zone A.

Branch Office - a connection between an endpoint that is behind a firewall and the RMX that reside in the same zone. The user in the Branch Office can also place and receive calls from other enterprises and remote users. For example, Enterprise A also contains a branch office, which in this example is a Polycom HDX user who is behind more than one firewall.

Remote - a connection between RMX that resides within the organization and an endpoint that resides outside of the organization (on a WAN). For example, and endpoint on the internet that calls the RMX in Zone A. In such a case, the call has to traverse at least one firewall.

Federation - a connection between RMX that resides within one organization and an endpoint that resides within another organization. For example, an endpoint in Zone A calls the RMX in Zone B. The calls has to traverse two or more firewalls.

Dialing Methods

The ICE protocol enables remote and federation connections using the registered user name for dialing. The endpoint connects to the RMX by entering the RMX registered user name in the following format:

[RMX registered user name]@[OCS domain name]

For example: **rmx1234567890@ilsnd.vsg.local**

The call reaches the Transit Entry Queue of the RMX and via IVR is routed to the destination conference.

This method is added to the two dialing methods available in Microsoft Office Communication environment for local connections:

- *Matched URI Routing* – in which the user enters the destination endpoint's URI
- *Numerical Dialing* – in which the RMX is configured as voice gateway and the user can enter the number of the destination endpoint in the same way as for H.323 endpoint.

The following table summarizes the dialing methods and its availability in the various configurations.

Table 1-1 *Available dialing methods per Connection Type*

	Matched URI Routing	Numerical Dialing	Registered User Name
Local	√	√	√
Branch office	√*	X	√
Remote	√*	X	√
Federation	√*	X	√

* To enable the Matched URI dialing in the federated environment to be able to connect to the RMX SIP signaling domain, you must also configure the Office Communications Server. When federating an Office Communications Server edge server with another Office Communications Server environment, you need to include the FQDN of the Office Communications Server edge server as well as the SIP signaling domain for federated environment. The SIP signaling domain is the FQDN of the Polycom DMA system or a Polycom RMX system (when your deployment does not include a DMA system).

For example, if company B wants to set up federation with company A and receive and send SIP calls that will be handled by the Polycom SIP signaling domain in company A, you need to add the FQDN of the company A Office Communications Server domain as well as the SIP signaling domain of company a to the list of Internal SIP Server domains supported by the company B Office Communications Server environment.

For more information, see the Microsoft documentation and the Visual Communications Deployment Administration Guide.

Deployment Process for the RMX Systems

To enable the remote and Federation connections the following operations must be performed:

- Create an Active Directory account for the RMX that will be used for registering and operating in the MS ICE environment
- Enable the RMX User Account for Office Communication Server
- Configure the RMX for ICE dialing

To place federated calls between Domain A and Domain B in ICE environment sub domains must be federated to the main domain or the RMX system must be installed on a main domain.

The RMX can also be set for Matched URI Routing and/or Numerical Dialing to Meeting Rooms. For more details, see *RMX Administrator's Guide, Appendix H*.

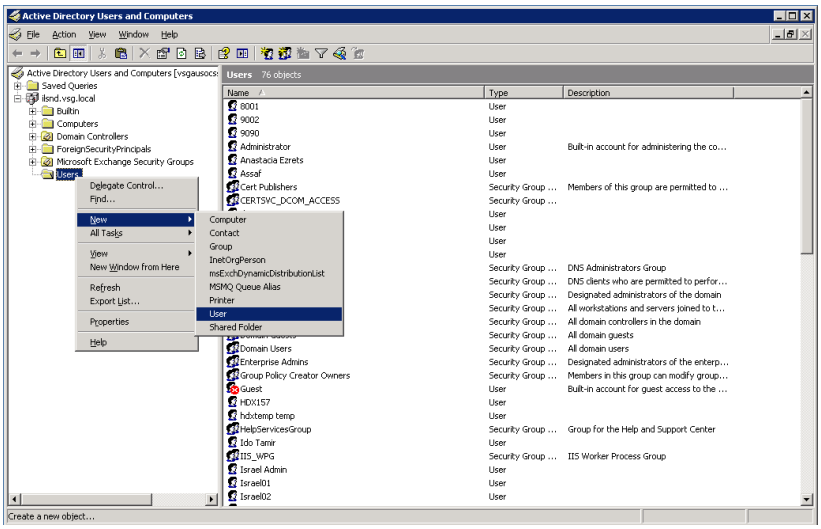
Creating an Active Directory Account for the RMX

The User account created for the RMX is used for registration in the Office Communication Server and to automatically synchronize with the STUN and relay (Edge) servers.

To add the RMX user to the Active Directory:

1 Go to **Start > Run** and enter **dsa.msc** to open the *Active Directory Users and Computers* console

2 In the console tree, select **Users > New > User**.



3 In the *New User* wizard, define the following parameters:

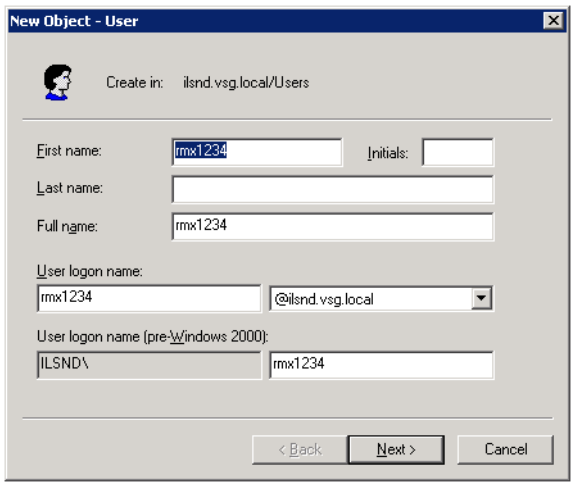
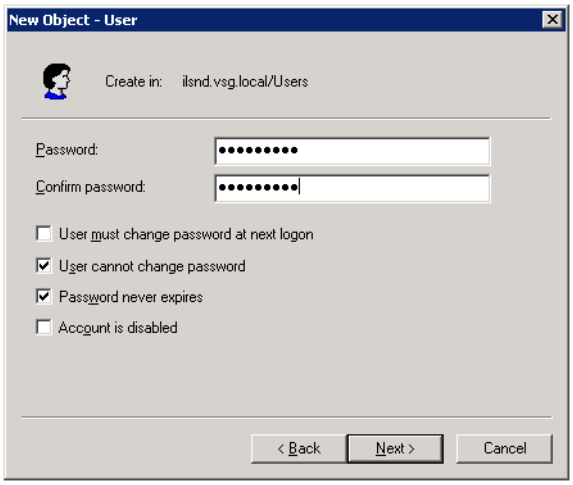


Table 2 *Active Directory - New User Parameters for the RMX*

Field	Description
First Name	Enter the name for the RMX user. This name will be used in the configuration of the ICE environment in the RMX.
Full Name	Enter the same name as entered in the *First Name* field.
User Login Name	Enter the same name as entered in the *First Name* field and select from the drop down list the domain name for this user. It is the domain name defined for the Office Communication Server.

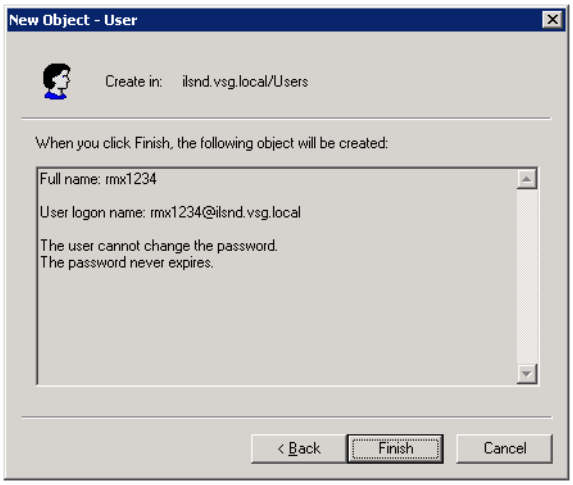
4 Click **Next**.

5 Enter the password that complies with the Active Directory conventions and confirm the password.



6 Select the options: **User cannot change password** and **Password never expires**. Clear the other options.

7 Click **Next**.
The system displays summary information.



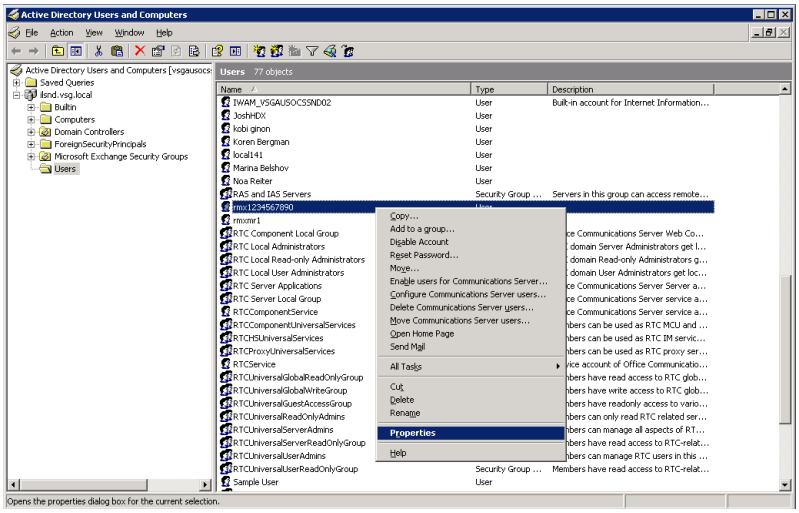
8 Click **Finish**.
The new User is added to the Active Directory *Users* list.

Enabling the RMX User Account for Office Communication Server

The new RMX user must be enabled for registration with the Office Communications Server.

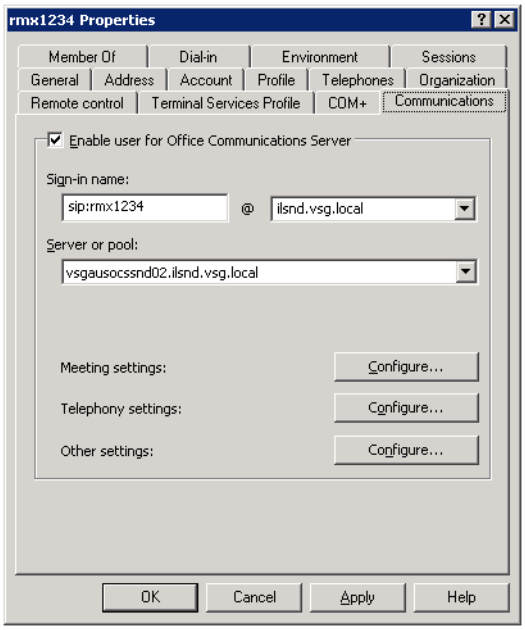
To enable the RMX User Account for Office Communication Server:

1 In the *Active Directory Users and Computers* window, right-click the RMX user and then click **Properties**.



2 In the *Properties* dialog box, click the **Communications** tab.

3 In the *Sign in name* field, enter the RMX user name in the format **SIP:rmx user name** (for example sip:rmx1234) and select the domain name (for example, ilsnd.vsg.local) as entered in the *New User* dialog box.



4 Select the *Server or Pool* from the list.

5 Click **Apply** and then **OK**.

Configuring the RMX for ICE Dialing

To enable ICE dialing, the Default IP Network Service must be configured to work with the Office Communication Server as the SIP Server and the RMX user defined in the Active Directory must also be defined in the RMX ICE environment parameters.

The procedure described here assumes that the RMX is configured to work in Microsoft environment; the MS_ENVIRONMENT flag is set to YES, the IP Network Service is set to work with Office Communications Server as the SIP Server and the TLS certificate is installed. For a detailed description of these settings, see the *RMX 1500/2000/4000 Administrator's Guide*, *Appendix H*.

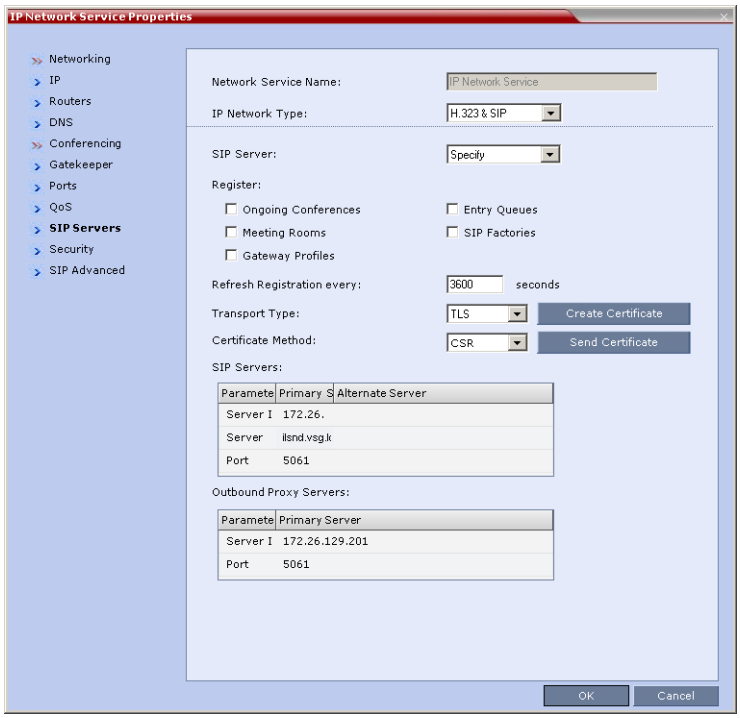
To configure the RMX for ICE Dialing:

1 In the RMX Web browser, in the *RMX Management* pane, expand the **Rarely Used** list and click **IP Network Services** ( ).

2 In the *IP Network Services* pane, double-click the **Default IP Service** (, , or) entry.

The *Default IP Service - Networking IP* dialog box opens.

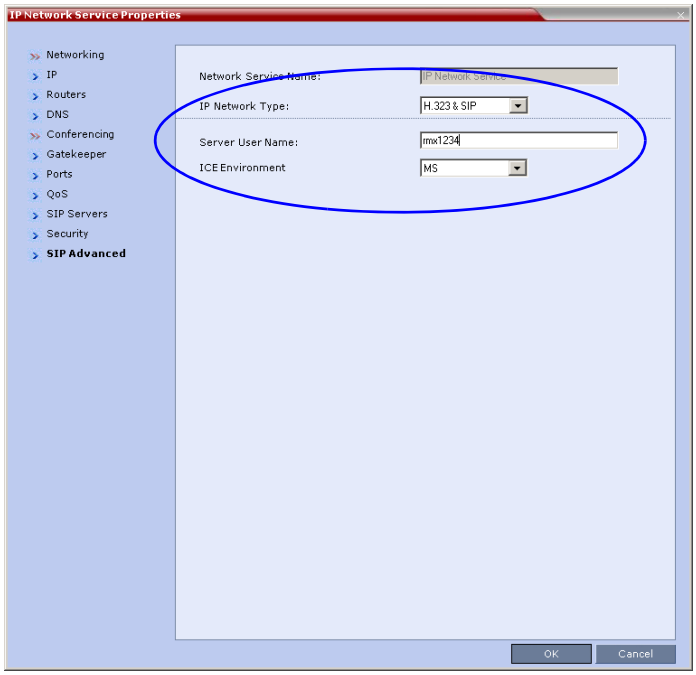
3 Click the **SIP Servers** tab.



4 Make sure that the *Registration* options (*Ongoing Conferences, Meeting Rooms, Gateway Profiles, Entry Queues* and *SIP factories*) are not selected (check boxes are cleared).

5 Make sure that the IP address of the Office Communications Server 2007 is specified and the *Server Domain Name* is the same as defined in the OCS and in the *Management Network* for the DNS.

6 Click the **SIP Advanced** tab.



7 In the *ICE Environment* field, select **MS** (for Microsoft ICE implementation) to enable the ICE integration.
This field is disabled if the RMX is **not** running in *MPM+ Card Configuration Mode*.

8 In the *Server User Name* field, enter the RMX User name as defined in the Active Directory. For example, enter **rmx1234**.
This field is disabled if the *ICE Environment* field is set to **None**.

9 **Optional** if the **Fixed Ports** options was selected previously.
Click the **Ports** tab to modify the number of UDP Ports allocated to the calls to accommodate the number of ports required for ICE dialing.

10 In the *UDP Port Range*, modify the number of UDP ports by enter the first and last port numbers in the range. When ICE environment is enabled, the number of ports defined in the range should be **2024**.

11 Click **OK**.
The RMX will register with the OCS enabling automatic retrieval of the STUN server and Relay server parameters for ICE dialing.

These parameters can be viewed in the *Signaling Monitor - ICE Servers* dialog box.

Monitoring the Connection to the STUN and Relay Servers in the ICE Environment

1 In the RMX Web browser, in the *RMX Management* pane, click **Signaling Monitor**.

2 In the *Signaling Monitor* pane, click the **IP Network Service** entry.

3 Click the **ICE Servers** tab.

The system lists the ICE servers to which it is connected and the status of the connection of each of the RMX media cards (status 1, status 2, etc) to ICE servers. (Two statuses are displayed for RMX 2000 and four statuses are displayed for RMX 4000).

It addition, the system indicates the status of the firewall detection in the RMX.

Monitoring the Participant Connection in ICE Environment

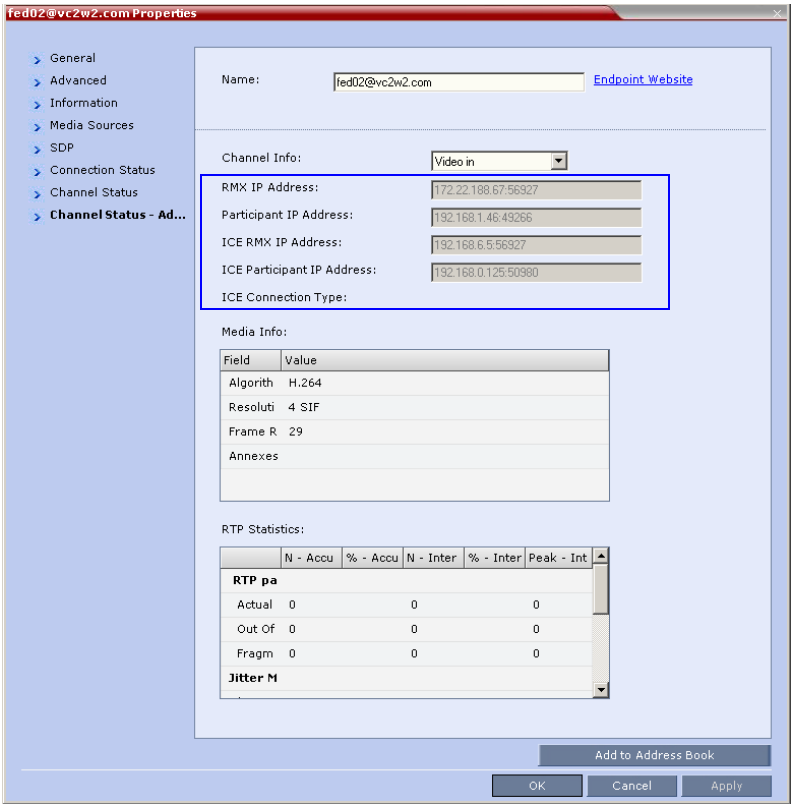
For each participant in the conference running in ICE environment, you can view the local and the external IP addresses and the type of connection between the RMX and the participant (remote).

The ICE information is displayed only for the media channels and not the signaling channel.

To view the channel properties of the participant:

1 In the participants pane, double-click the participant entry or right-click the participant entry and then click **Properties**.

2 Click the **Channel Status - Advanced** tab.



The following connection information is displayed:

Table 3 *Participant Properties - ICE Connection Parameters*

Field	Description
RMX IP Address	The local IP address and port (in the format IP address:Port) of the RMX.
Participant IP Address	The local IP address and port (in the format IP address:Port) of the endpoint.

Table 3 *Participant Properties - ICE Connection Parameters*

Field	Description
ICE RMX IP Address	The IP address and the Port number of the RMX used to pass through the media. This information changes according to the *ICE connection type:* • When *ICE connection type* is **local**, it is identical to the IP address:Port displayed in the *RMX IP Address.* • When *ICE connection type* is **relay**, the system displays the IP address and port number of the relay server used to pass the media from the RMX to the participant. • When *ICE connection type* is **firewall**, the system displays the public IP address and port of the RMX as seen outside the private network.
ICE Participant IP Address	The IP address and the Port number of the endpoint used to pass through the media. This information changes according to the *ICE connection type:* • When *ICE connection type* is **local**, it is identical to the IP address:Port displayed in the *Participant IP Address.* • When *ICE connection type* is **relay**, the system displays the IP address and port number of the relay server used to pass the media from the participant to the RMX. • When *ICE connection type* is **firewall**, the system displays the public IP address and port of the endpoint as seen outside the private network.
ICE Connection Type	Indicates the type of connection between the RMX and the participant in the ICE environment: • **Local** (or Host) - The endpoint (Remote) is on the same network as the RMX and the media connection is direct, using local addresses. • **Relay** - Media between the RMX and the participant passes through a media relay server. • **Firewall** - Media connection between the RMX and the participant is done using their external IP addresses (the IP addresses as seen outside of the local network).

— ICE Active Alarms

When ICE environment is enabled in the RMX, failure to communicate with a required component triggers the display of an Active Alarm in the System Alerts pane.

The following table lists these active alarms:

Table 4 *ICE Environment - RMX Active Alarms*

Active Alarm	Phase	Alarm Displayed When	Troubleshooting
ICE failure: Failed to register with OCS. Check the RMX Server Name.	Registration	The RMX did not receive a confirmation response from the OCS to the Registration request.	• Check that the RMX Server Name in IP Network Service - SIP Advanced is identical to the User name defined for the RMX in the OCS Active Directory. • Make sure that the RMX user is defined in the OCS Active Directory.
ICE failure: Failed to subscribe with the OCS, therefore the A/V Edge Server URI was not received.	Subscribe	The RMX did not receive a confirmation response from the OCS to the Subscription request. The Subscription is required for obtaining the A/V Edge Server URI which is followed by the notify message containing the credentials).	
ICE failure: The Notify message containing the A/V Edge Server URI was not received	Notify	The Notify message containing the A/V Edge Server URI was not received by the RMX.	
ICE failure: Received Notification does not contain URI.	Notify	The notify message that was sent from the A/V Edge Server does not contain the A/V Edge server URI.	Verify the A/V Edge server is configured in the OCS.

Table 4 *ICE Environment - RMX Active Alarms*

Active Alarm	Phase	Alarm Displayed When	Troubleshooting
ICE failure: No response from the A/V Edge Server to the RMX Service Request	Service	The RMX did not receive a confirmation response from the A/V Edge Server to the Service request.	
ICE failure: Received Service message does not contain the Credentials.	Service	The Service message response does not contain the Credentials.	
ICE failure: A/V Edge server URI cannot be resolved	Service	The RMX failed to resolve The remote address of the Edge server URI.	
ICE failure: Service credential denied. A/V Edge server credentials rejected by the OCS.	Service	This alarm indicates that the OCS does not configure with the. Generated by the ICE stack.	

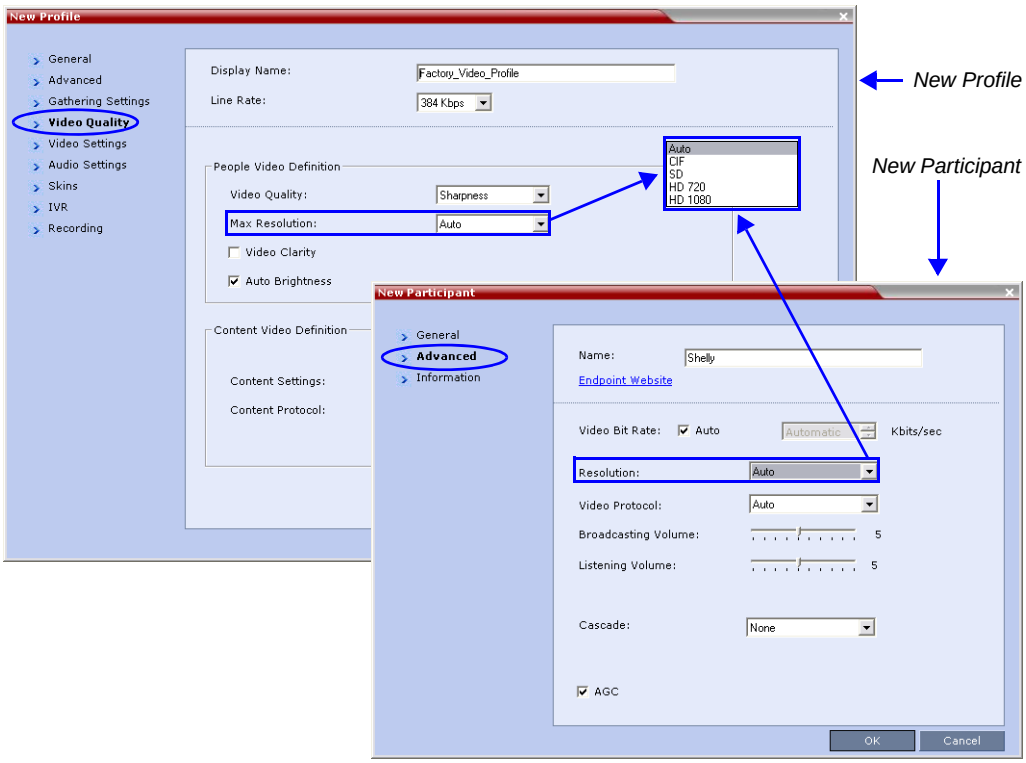
Version 7.0 Detailed Description - Feature Changes

Limiting Maximum Resolution

The *Maximum Resolution* settings of the *Resolution Configuration* dialog box can be overridden by new fields that have been included in the *New Profile* and *New Participant* dialog boxes.

The *Maximum Resolution* field in the *New Profile - Video Quality* dialog box allows *Maximum Resolution* to be limited per conference.

The *Resolution* field in the *New Participant - Advanced* dialog box allows *Maximum Resolution* to be **further limited** per participant endpoint.



The drop-down menu in both the dialog boxes allow the administrator to select from the following *Maximum Resolution* options:

- *Auto* (default) - The *Maximum Resolution* remains as selected in the Resolution Configuration dialog box.
- *CIF*
- *SD*
- *HD720*
- *HD1080*

The *Maximum Resolution* settings can be monitored in the *Profile Properties - Video Quality* and *Participant Properties - Advanced* dialog boxes.

The *Maximum Resolution* settings for conferences and participants cannot be changed during an ongoing conference.

For more information see *"Max Resolution Pane"* on page **46**.

Auto Layout Changes

In previous versions, In *Auto Layout* mode, the same video layout (1+7) was displayed when the number of participants was 8 or more.

In Version 7.0, two additional layouts are activated in Auto Layout mode when 11 and 12+ participants are connected to the conference. The following table summarizes the default layout selection according to the number of participants connected to the conference:

Table 5 *Auto Layout – Default Layouts*

Number of Video Participants	Auto Layout Default Settings
0-2	
3	
4–5	
6–7	
8-10	
11	
12+	

In layout 2+8, the two central windows display the last two speakers in the conference: the current speaker and the "previous" speaker. To minimize the changes in the layout, when a new speaker is identified the "previous" speaker is replaced by the new speaker while the current speaker remains in his/her window.

Click&View Changes

The video layout options available for 9+ participants has changed.

The following table summarizes the Video Layout options available via *Click&View*.

Table 6 *Video Layout Options*

DTMF Code	Layout Options				
1					
2					
3					
4					

Table 6 *Video Layout Options (Continued)*

DTMF Code	Layout Options				
5					
6					
8					
9					

System Configuration - Auto Layout Flags

Two new flags were added to the system configuration file, enabling the configuration of the video layout that will be automatically displayed in Auto Layout mode:

- **PREDEFINED_AUTO_LAYOUT_11**,

  default value: **CP_LAYOUT_2P8** ( )
- **PREDEFINED_AUTO_LAYOUT_12**,

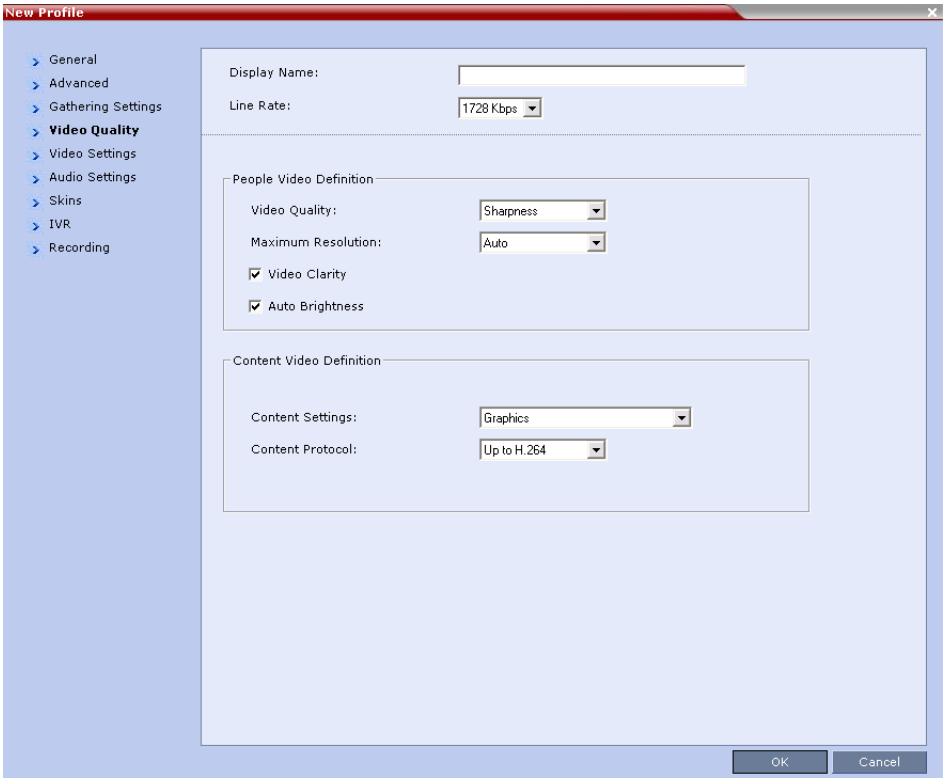
  default value: **CP_LAYOUT_1P12** ( )

For more details on Auto Layout flag configuration, see *RMX 1500/2000/4000 Administrator's Guide*, *"Auto Layout Configuration"* on page **18-37**.

Auto Brightness

A new check box, *Auto Brightness,* has been added to the *New Profile - Video Quality* dialog box.

Auto Brightness detects and automatically adjusts the brightness of video windows that are dimmer than other video windows in the conference layout.



Guidelines

- *Auto Brightness* is supported with *MPM+* and *MPMx* cards only.
- *Auto Brightness* only increases brightness and does not darken video windows.
- *Auto Brightness* is selected by default.
- *Auto Brightness* cannot be selected and deselected during an ongoing conference.

Audio Only Message

In previous versions, participants that were connected as *Secondary* (*Audio Only*)

because of lack of video resources would not receive any indication stating the reason why his/her video had not connected.

In this version, the administrator can enable an audio message that informs the participant of the lack of *Video Resources* in the *RMX* and that he/she is being connected as *Audio Only*. The message states: *All video resources are currently in use. Connecting using audio only*.

Guidelines

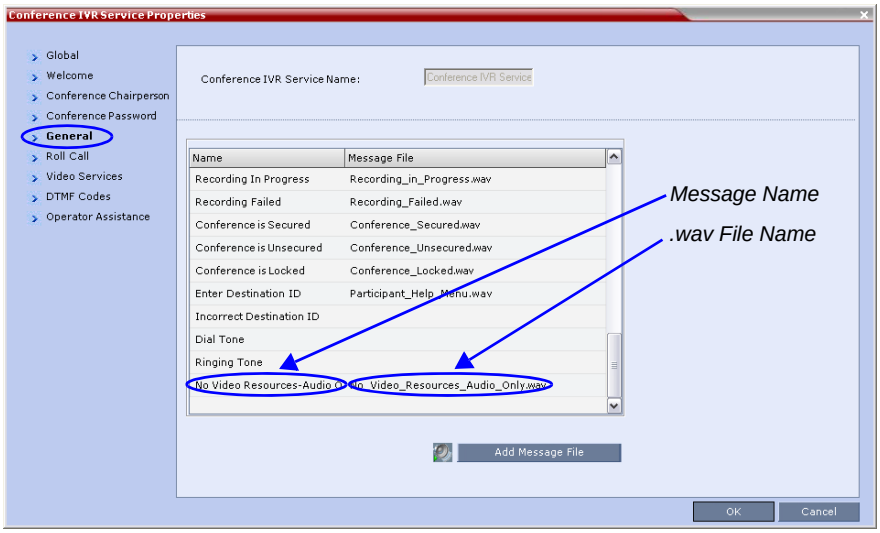
- The *IVR* message applies to video participants only. *Audio Only* participants will not receive the message.
- Only *H.323* and *SIP* participants receive the audio message.
- Downgrade to *Audio Only* is not supported for undefined *ISDN* dial in participants. These participants are disconnected if there is a lack of *Video Resources*.
- The audio message is the first message after the call is connected, preceding all other *IVR* messages.
- The message is called *No Video Resources-Audio Only* and the message file (*.wav*) is called *No video resources audio only.wav*.
- The audio message must be added to the *Conference* and *Entry Queue IVR Services* separately.
- The IVR message can be enabled/disabled by the administrator using the **ENABLE_ NO_VIDEO_RESOURCES_ AUDIO_ONLY_MESSAGE** *System Flag* in *system.cfg*.
  - Possible values: **YES** / **NO**
  - Default: **YES**

  If you wish to modify the flag value, the flag must be added to the *System Configuration* file. For more information see the *RMX 1500/2000/4000 Administrator's Guide, "Modifying System Flags"* on page **18-5**.

Enabling the Audio Only Message

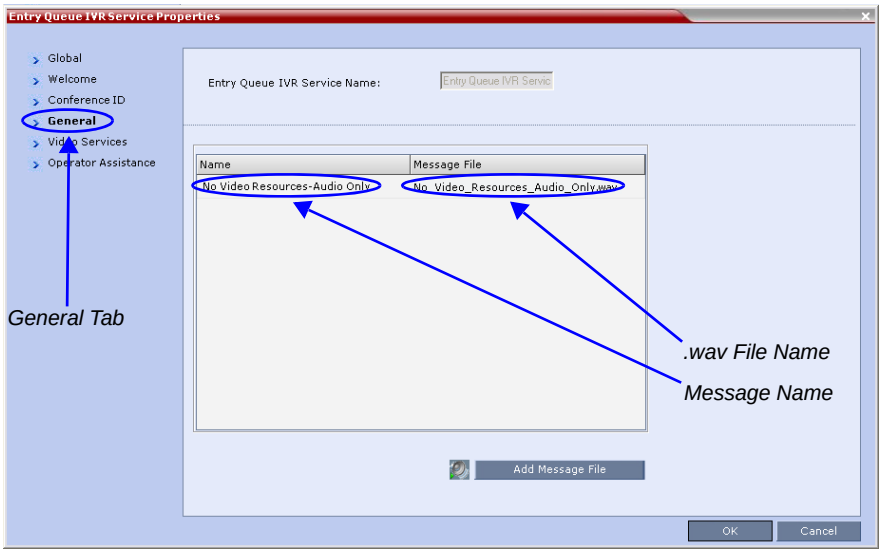
Conference IVR Service

The message file is added to the *Conference IVR Service* according to the procedure described in the *RMX 1500/2000/4000 Administrator's Guide*, "*Defining a New Conference IVR Service*" on page **14-9**.



Entry Queue IVR Service

A new dialog box tab, *General*, has been added to the *Entry Queue IVR Service* dialog box. The message name and .wav file name are added to the *Entry Queue IVR Service* in this dialog box. The message file is added to the *Entry Queue IVR Service* in the same manner as described for the *Conference IVR Service* in the *RMX 1500/2000/4000 Administrator's Guide* "*Defining a New Conference IVR Service*" on page **14-9**.



Audio Settings Tab

A new tab, *Audio Settings*, has been added to the *New Profile* dialog box. It contains settings for:

- *Echo Suppression* - moved from the *New Profile* - *Advanced* tab.
- *Keyboard Noise Suppression* - moved from the *New Profile* - *Advanced* tab.
- *Audio Clarity:*

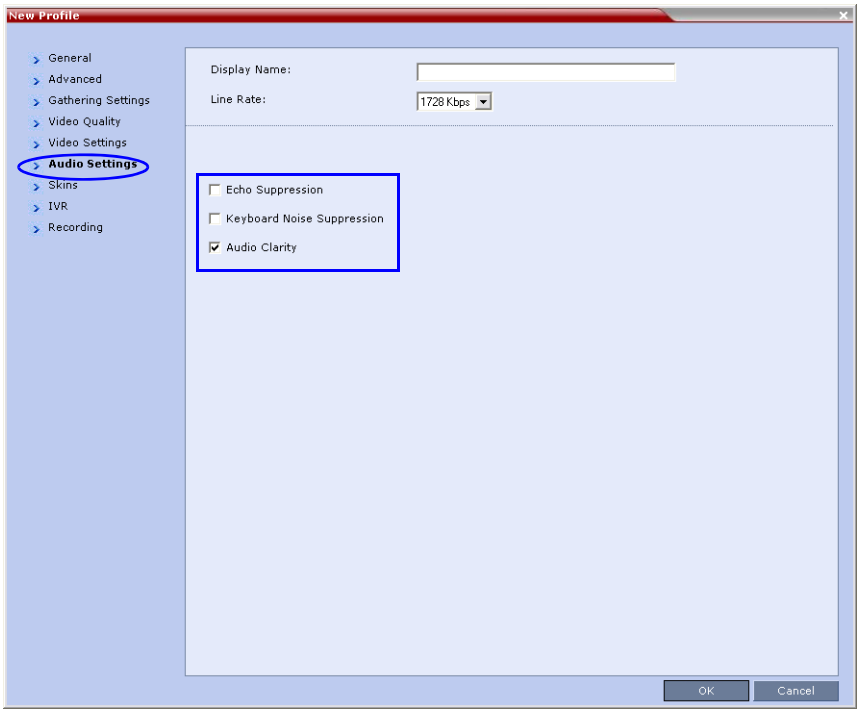
  Audio Clarity improves received audio from participants connected via low audio bandwidth connections, by stretching the fidelity of the narrowband telephone connection to improve call clarity.

  The enhancement is applied to the following low bandwidth (8kHz) audio algorithms:

  — G.729a
  — G.711

Audio Clarity Guidelines

- *Audio Clarity* is supported with MPM+ and MPMx cards only.
- *Audio Clarity* is selected by default.
- *Audio Clarity* cannot be selected and deselected during an ongoing conference.
- The check box overrides the **SET_AUDIO_CLARITY** *System Flag* in *system.cfg*. For more information see the *RMX 1500/2000/4000 Administrator's Guide*, *"Defining Profiles"* on page **1-9** and *"Modifying System Flags"* on page **18-5**.



DTMF Forwarding Suppression

Forwarding of the DTMF codes from one conference to another over an ISDN cascading link can be limited to basic operations while suppressing all other operations once the connection between the cascaded conferences is established.

Guidelines

- The forwarding of most of the DTMF codes from one conference to another is available only in cascading between two MCUs.
- When cascading between two RMXs, it is recommended that version 7.0.x is installed on both RMXs to enable the supression of DTMF code forwarding.
- It is available also when cascading between RMX and MGC.
- RMX can be used as gateway, forwarding the call to the second MCU.
- The following operations are available throughout the conference and the forwarding of their DTMF codes is not suppressed (i.e. they will apply to both conferences):
  - Terminate conference.
  - Mute all but me.
  - Unmute all but me.
  - Secure conference.
  - Unsecure conference.
- The called RMX (RMX B) automatically identifies the calling participant as an MCU and the connection is identified as a cascading link.
- The link (participant) is identified by the same cascading link icon ( ) as H.323 link.
- Content sharing is not supported across ISDN Cascading link.

Call Flow and Configuration

ISDN connection can be used to link between two MCUs and create a cascading conference.

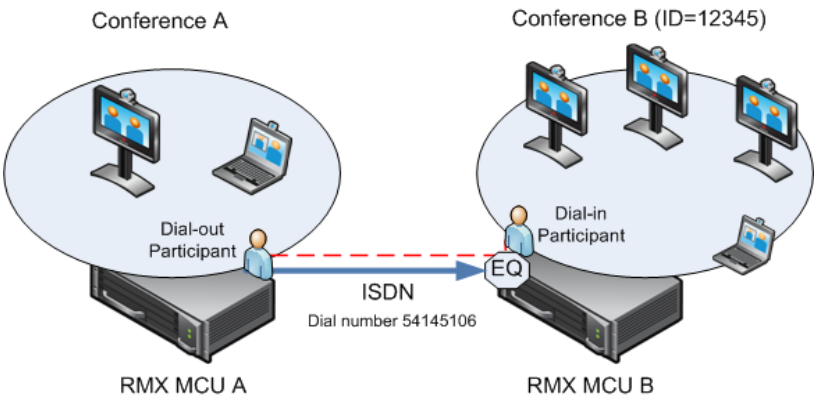
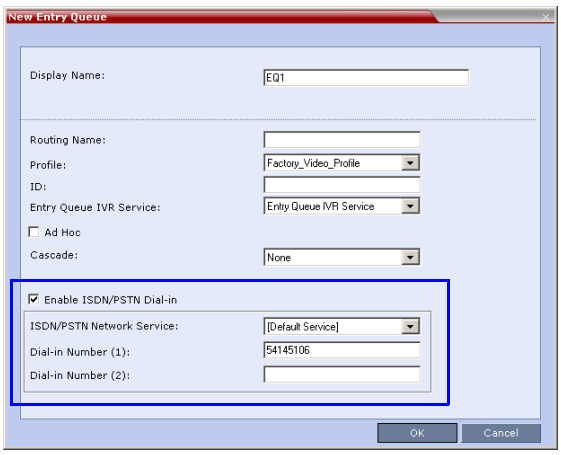
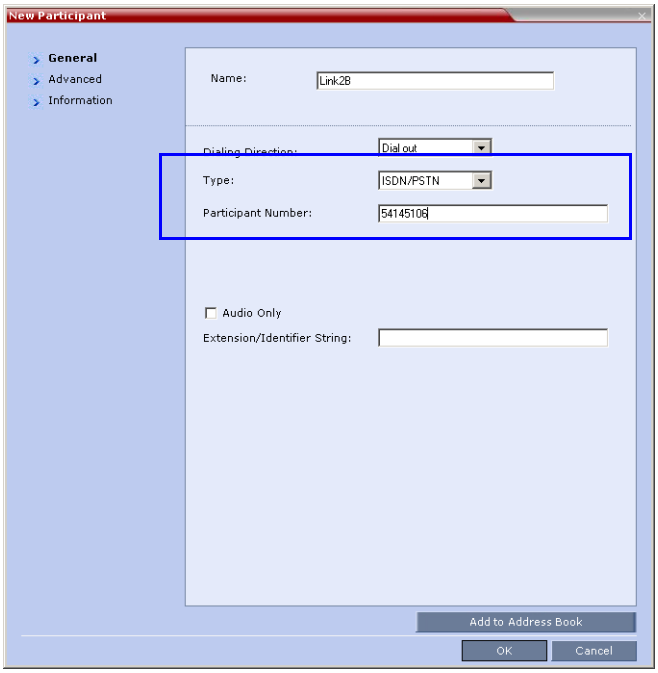


Figure 2 Cascading Between Two MCUs Using an ISDN Link

ISDN Network Service is configured in both MCUs. The Entry Queue or conference (for direct dial-in) is enabled for ISDN connection and a dial-in number is assigned (for example 54145106).



A dial out ISDN participant is defined (added) to conference A. The participants's dial out number is the dial-in number of the Entry Queue or conference running on MCU B (for example 54145106).



MCU A dials out to an Entry Queue or conference B running on MCU B using the Entry Queue number (for example 54145106) or the conference number.

When the participant, who is a dial-in participant in conference B, connects to the Entry Queue, the system plays to all the participants in Conference A the IVR message requesting the participant to enter the destination conference ID (or if connecting to a conference directly, the participant is requested to enter the conference password).

At this point the Conference A organizer or any other participant in the conference can enter the required information for the IVR session using DTMF codes. For example, the meeting organizer enters the destination conference ID - 12345.

Any DTMF input from conference A is forwarded to the Entry Queue on MCU B to complete the IVR session and enable the move of the participant to the destination conference B.

Once the DTMF codes are entered and the IVR session is completed, the participant is connected to the conference and the connection between the conferences is established. The system automatically identifies the calling participant as an MCU and the connection is identified as a cascading link and the cascading link icon is displayed for the participant. ( )

The time period (in seconds) that MCU A will forward DTMF input from conference participants to the second MCU is defined by the system flag **DTMF_FORWARD_ANY_DIGIT_TIMER_SECONDS**.

Once the timer expires, most of the DTMF codes (excluding five operations) entered in conference A will not be forwarded to conference B. This is done to prevent an operation requested by a participant individually (for example, mute my line) to be applied to all the participants in conference B.

System Flags

The **DTMF_FORWARD_ANY_DIGIT_TIMER_SECONDS** *System Flag* determines the number of seconds the system waits for DTMF input from the conference participants and forwards them to the second MCU before it will switch to forwarding suppression mode.

Flag range: **0 - 360000**

This flag is defined on MCU A (the calling MCU).

If a flag is not listed in the *System Flags* list it must be added to the *system.cfg* file before it can be modified.

To list, modify or add flags to the system.cfg file:

1 In the *RMX Web Client* menu, click **Setup>System Configuration**.

The *System Flags* list is displayed.

2 For each of the flags:

If the flag is listed:

a In the *System Flags* dialog box, click the **Edit Flag** button.

b Enter the *New Value* for the flag.

c Click the **OK** button.

If the flag is not listed:

a In the *System Flags* dialog box, click the **New Flag** button.

b Add the *New Flag* name and *Value.*

c Click the **OK** button.

3 Click the **OK** button.

Corrections and Known Limitations

Corrections Between Version 7.0.1 and Version 7.0.2

Table 7 *Corrections Between Version 7.0.1 and Version 7.0.2*

#	Category	Key	Description	Detected in Version	Workaround
1	*Content*	VNGR-16661	On an RMX 1500 running an 1024Kbps HD720p conference with Video Clarity, Auto Terminate, Sharpness, Encryption, LPR, Echo Suppression and Auto Layout enabled, when sending content some dial-out HDX9004 endpoints had bad video.	V7.0	
2	*Gateway*	VNGR-16533	Intermittent blurred video or green blocks displayed on HDX H.320 call connected via 1024kbps Gateway call via RMX 2000 with MPMx.	V7.0	
3	*Gateway*	VNGR-16603	When the endpoint that initiates a Gateway call disconnects, the Gateway session is not terminated while others are still in the conference. The Gateway session should terminate.	V7.0	
4	*General*	VNGR-15745	When you try to add the flag: "REDIAL_INTERVAL_IN_SECONDS" in the System Configuration an error code appears: 30432.	V7.0	
5	*General*	VNGR-16457	Critical fan alert is displayed in the RMX Hardware Monitor in Event Log properties box while in the Hardware Monitor pane the system status is displayed correctly as Normal.	V7.0	

Table 7 *Corrections Between Version 7.0.1 and Version 7.0.2*

#	Category	Key	Description	Detected in Version	Workaround
6	*General*	VNGR-17454	An MCU internal problem occurred: “ConfPartyMcuInternalProblem - Party:2467 Conf:744 receives Failure Status for opcode: CONFPARTY_CM_OPEN_UDP_PORT_REQ Req:799954. “	V7.0.1	
7	*Interoperability*	VNGR-16647	On an RMX 2000 in a 384Kbps H.323 CP conference with Sharpness and LPR enabled, when the RMX dials-out to an Tandberg 6000E, an empty video frame appears.	V7.0	
8	*Interoperability*	VNGR-16723	On an RMX 1500 running an mixed (H.323, SIP & ISDN) 1024Kbps conference, after connecting the ISDN endpoint and changing the layout, after a few minutes the ISDN endpoint views a black screen and the video frame rate is 0.	V7.0	
9	*Interoperability*	VNGR-16829	Blurred and highly color saturated video, followed by a black screen is displayed on HDX ISDN endpoint connected to RMX 2000 with MPMx at 1152kbps.	V7.0	
10	*Interoperability*	VNGR-16902	RMX with MPMx connected via H.320 to Tandberg 6000 B endpoint is listed with "Connected With Problem" status.	V7.0	
11	*Interoperability*	VNGR-17384	Loss of lip sync occurs on HDX8000 endpoint that dialed via DMA with higher line rate than the conference (512) to RMX2000 running V7.0.1.16 with 2*MPM+80 cards.		

Table 7 *Corrections Between Version 7.0.1 and Version 7.0.2*

#	Category	Key	Description	Detected in Version	Workaround
12	*Partners - Microsoft*	VNGR-16833	When using RMX with MPM+ with ICE enabled in a Federation dialing configuration, the Microsoft Office Communicator Client is disconnected. Call Disconnection Cause is listed as "sip hw internal MCU problem - 0".	V7.0	
13	*RMX 1500 Video*	VNGR-16766	On RMX 1500 with MPMx, strobe effect appears in video during H.323 call to HDX endpoints at 1080p at 4Mbps.	V7.0	
14	*RMX 1500 General*	VNGR-16848	On RMX 1500, Media port is listed in the Ethernet Settings dialog box but not in the LAN List pane of the Hardware Monitor.	V7.0	
15	*RMX 1500 General*	VNGR-16866	On RMX 1500 Message Overlay is blurred on SIP and H.323 endpoints.	V7.0	
16	*SIP*	VNGR-17732	In ICE environment, if QoS is enabled in the IP Network Service, the connection to the OCS is broken and the RMX cannot provision ICE and cannot see the connection to the edge server.	V7.0/7.0.1	
17	*Upgrade Process*	VNGR-16565	After upgrading to the RMX1500 to Ver 7.0.0.123 the following error message appears: "CardsComponent Type:switch, Description: Temperature problem - Major".	V7.0	
18	*Video*	VNGR-15557	On the RMX 4000 with a VSW conference set to 1080p30, when the RMX dials out to 3 HDX and 2 LifeSize endpoints, the HDX endpoints remain stuck in their splash screen.	V7.0	

Table 7 *Corrections Between Version 7.0.1 and Version 7.0.2*

#	Category	Key	Description	Detected in Version	Workaround
19	*Video*	VNGR-16382	During a video conference on the RMX2000 with an MPMx card, bitrate overflow occurs when there's a lot of motion in the video.	V7.0	
20	*Video*	VNGR-16684	On an RMX 2000 with MPM+ cards running a 1920 Kbps conference using the following settings LPR, Sharpness and Video Clarity, when connecting ISDN endpoints metallic background noises can be heard. Connect an H.323 endpoint, then ISDN endpoints view their own video.	V7.0	
21	*Video*	VNGR-16760	On an RMX1500, when connecting seven HDX8006 endpoints to a 4096 Kbps & HD 1080p conference with Video Clarity, Sharpness, Echo Suppression and Auto Layout enabled, stripes appeared in the endpoints video.	V7.0	
22	*Video*	VNGR-16789	Connecting three HDX8006, six HDX9004 and nine V500 endpoints to a 1024 Kbps, HD 1080p conference running on an RMX1500, with Video Clarity, Echo Suppression and Auto Layout enabled, poor video motion was observed.	V7.0	
23	*Video*	VNGR-17086	Video is frozen after 2-3 seconds when using CMA-D with VBP 4350 on RMX 2000 running V7.0.0.162 with MPMx.	V7.0	
24	*Video*	VNGR-17195	Colored stripes and video freeze occurs in 512 kbps calls dialed via DMA to RMX4000 running V7.0.0.162 with MPM+ cards.	V7.0	

Table 7 *Corrections Between Version 7.0.1 and Version 7.0.2*

#	Category	Key	Description	Detected in Version	Workaround
25	*Video*	VNGR-17426/ 17324/ 17319	Periodic momentary freezing of video sent from ISDN endpoint is observed on H.323 endpoint when connected to a CP conference running on RMX 2000 with MPMx at a line rate of 1920kbps and AES and LPR options enabled.	V7.0.1	
26	*Video*	VNGR-17472/ 17379	Striped video image of all other participants occurs on HDX8000 endpoint after dialing via DMA to RMX4000 running V7.0.1.16 with, 4*MPM+80 cards.	V7.0.1	

Corrections Between Version 7.0 and Version 7.0.1

Table 8 *Corrections Between Version 7.0 and Version 7.0.1*

#	Category	Key	Description	Detected in Version	Workaround
1	*Content*	VNGR-16732	When sending content, the line rate of the sender endpoint decreases and when content is stopped, the line rate increases, above the conference line rate. For example, if the conference line rate is set to 512Kbps, it decreases to 300Kbps when sending content and it increases to 700Kbps when the content is stopped.	V7.0	

Table 8 *Corrections Between Version 7.0 and Version 7.0.1*

#	Category	Key	Description	Detected in Version	Workaround
2	*Content*	VNGR-16502	In a 1920Kbps conference with H.264 content, after HDXs view and receive content, then when an VSX3000 endpoint connects the content halts and an error message appears: "0x80c7a4cCMfaTask::OnBadSpontIndFromMFA reason: 1, description: Decoder resource allocation error! Closing decoder port! "	V7.0	
3	*Content*	VNGR-17027	Black screen or frozen content displayed when endpoints dial into the conference via DMA.	V7.0	
4	*Diagnostics*	VNGR-16893	On an RMX2000 with MPM cards, when implementing the Diagnostic mode the MPM card status remains in a "startup" phase.	V7.0	
5	*Diagnostics*	VNGR-16633	On an RMX 2000/4000 when accessing the Diagnostic mode and clicking the "run all tests" option, the confirmation window only appears minimized in the Windows Toolbar at the bottom of the screen.	V7.0	
6	*General*	VNGR-16931	RMX 2000 with MPM+ displays empty video window in layout in ISDN + IP mixed conference during load test.	V7.0	
7	*General*	VNGR-16691	In ICE environment, when a local endpoint connects to the conference, the connection type in the Participant Properties should be Local instead of Host.	V7.0	
8	*Hardware*	VNGR-16898	On an RMX 4000 with MPMx_D cards in the Diagnostic mode, when running card monitoring tests on the RTM_ISDN card the tests fail.	V7.0	

Table 8 *Corrections Between Version 7.0 and Version 7.0.1*

#	Category	Key	Description	Detected in Version	Workaround
9	*Hardware*	VNGR-16882	On an RMX 1500 in the Diagnostic mode, when viewing the MCU Monitor section, the card slot numbering is incorrect.	V7.0	
10	*Hardware*	VNGR-16166	On an RMX 2000 with two MPM+ cards, after several minutes participants could not connect due to MCU Internal Problem 32112.	V7.0	
11	*Interoperability*	VNGR-16707	An RMX 2000 running an 1920Kbps CP conference with LPR, Gathering and Sharpness enabled, when the RMX dials-out to an H.323 HDX endpoint, the HDX displays blue patchy video.	V7.0	
12	*Interoperability*	VNGR-16616	CMAD negotiates G.711u instead of G.719 when connecting to a conference running at a line rate of 64Kbps, video quality is set to sharpness, and auto layout is enabled.	V7.0	
13	*Interoperability*	VNGR-16959	On RMX running H.323, 384kbps conference with MPM+ or MPMx with Send Content to Legacy Endpoints enabled. When HDX9004 sends content iPower9000 endpoint receives content while FX endpoint does not.	V7.0	
14	*Multilingual*	VNGR-16904	Incorrect Japanese translation of “Restore Last Version”.	V7.0	
15	*RMX 1500 general*	VNGR-16957	On RMX 1500 with MPMx High System CPU Usage fault occurs.	V7.0	
16	*RMX 1500 General*	VNGR-16423	On RMX 1500, changing the port speed setting from Auto to 100F is ignored with Auto remaining selected after reset.	V7.0	

Table 8 *Corrections Between Version 7.0 and Version 7.0.1*

#	Category	Key	Description	Detected in Version	Workaround
17	*RMX 4000*	VNGR-17007	No content display and several endpoints disconnected from the conference when content is sent during a conference running on RMX 4000 at a line rate of 1920Kbps and Send Content to Legacy Endpoints option enabled. Faults list indicated that the link between FSM 4000 and the media card was lost.	V7.0	
18	*Upgrade process*	VNGR-16430	On RMX 2000, MPL failure occurs after upgrading Version 7.0.	V7.0	
19	*Upgrade Process*	VNGR-16884	On an RMX2000/4000 when upgrading to version 7.0 build 139, the MPMx card on Hardware Monitor appears normal, but the MPMx card blinking LEDs indicate the card is still "startup" mode.	V7.0	
20	*Video*	VNGR-16930	When connecting 15 HDX8006 endpoints to a 1024Kbps & HD 720p conference with Video Clarity, Sharpness, Echo Suppression and Auto Layout enabled, running on an RMX1500, the endpoints had low frame rates, frozen video, packet loss and incorrect video resolutions.	V7.0	
21	*Video*	VNGR-16910	On RMX with MPMx, High-Profile endpoints (HDX 8006) display green flash in video window of layout. Attempts to send content result in "MFA error" followed by shaking video on HDX 9004 endpoints.	V7.0	

Table 8 *Corrections Between Version 7.0 and Version 7.0.1*

#	Category	Key	Description	Detected in Version	Workaround
22	*Video*	VNGR-16888	When starting a conference from the default profile with 20-30 endpoints connected on an RMX 4000 with MPMx cards, changing the conference layout causes video freezes and empty layout cells appear.	V7.0	
23	*Video*	VNGR-16811	On RMX 1500 MPMx - S, when the HDX8006 endpoint at 720p resolution using High-Profile at 512kbps connect to the conference the participant experiences welcome slide flash in video or endpoint freezes with welcome slide displayed.	V7.0	
24	*Video*	VNGR-16711	On an RMX 2000 with MPMx cards, when dialing in at 384Kbps using VSX endpoints to a Meeting Room, the video transfer rate was 800Kbps instead of 384Kbps.	V7.0	
25	*Video*	VNGR-15543	On an RMX 4000 with a CP conference with Auto Layout and Sharpness enabled, Sony PCS-1 endpoints do not transmit video in H.320 calls.	V7.0	

Corrections Between Version 6.0 and Version 7.0

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
1	*Audio*	VNGR-16038	On an RMX with two MPMx cards, when connecting two dial-out PSTN participants, there is no audio between them.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
2	*Cascading*	VNGR-15023	Content cannot be sent via cascade link. Video Disconnection Cause of the link participant is displayed as: "Content media was not established because the remote endpoint does not support the conference content protocol."	V6.0	
3	*Content*	VNGR-16734	On an RMX 1500 running an 768Kbps conference with LPR, Gathering, Sharpness, Auto Layout, Echo Suppression, Audio Clarity and Send Content to Legacy Endpoints enabled, when sending content from the Sony XG80 endpoint, HDX7600 endpoints do not view content.	V7.0	
4	*General*	VNGR-11703	Sometimes participants do not connect when the RMX is running under load. The disconnection cause is stated as "MCU internal problem 32121".	V4.5	
5	*General*	VNGR-14276	When the MCU is in start up mode, the upgrade status bar does not appear.	V6.0	
6	*General*	VNGR-15374	On an RMX with MPMx cards, when a number of endpoints with different line rates dial-out, some endpoints do not connect.	V7.0	
7	*General*	VNGR-15506	In the RMX Web Client, login as Administrator and create a new user "KANSA" with Auditor permissions. Logout and login using the new Auditor user, an error message appears.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
8	*General*	VNGR-15629	When you start a conference from an existing conference template, a popup message appears: "The conference ID already in use". Conference does not start.	V7.0	
9	*General*	VNGR-15648	In a conference started from the default "Factory_Video_Profile" and with "Send Contents to Legacy Endpoint" enabled, Legacy & ViewStation Endpoints cannot view content.	V7.0	
10	*General*	VNGR-15723	When a conference is created with the same name as another conference already running, an incorrect error message appears: "Failed to add conference: 2501".	V7.0	
11	*General*	VNGR-15726	The "Display repetition" option should be disabled when in Static Mode.	V7.0	
12	*General*	VNGR-15728	When Auto Layout is enabled in a conference, the Auto Layout function does not select the appropriate layout for number of participants present in the conference.	V7.0	
13	*General*	VNGR-15740	After updating the Exchange Integration Configuration window and clicking OK, a Message alert "31006" does not provide you with any information as to the cause of the error.	V7.0	
14	*General*	VNGR-15741	When modifying the Port Gauge usage percentage from the default value ("80%") to a lower value ("40%" or "60%"), an error message is displayed. The error message is not translated into the UI language.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
15	*General*	VNGR-15743	In the Ping Dialog box, when clicking Ping an error message appears instead of receiving an IP address.	V7.0	
16	*General*	VNGR-15744	In the Ping Dialog box, when clicking Ping an error message appears instead of receiving an IP address.	V7.0	
17	*General*	VNGR-15808	After modifying settings in the IP Network Services, the "Reset MCU" message did not appear, nor was the IP Network Service updated.	V7.0	
18	*General*	VNGR-15932	In the Web Client set to Japanese, when selecting Software download, click "Browse" you cannot view the binary download file.	V7.0	
19	*General*	VNGR-15933	When accessing the English version of the RMX Web Client, when viewing properties of the conference profile, some of the fields are in Japanese.	V7.0	
20	*General*	VNGR-15934	In the RMX Web Client, when creating a new gateway profile and clicking OK, a wrong message appears: "Conference name already exists". The message should be: "Failed to add Gateway Profile: Display name already exists".	V7.0	
21	*General*	VNGR-15949	After upgrading the RMX to version 7.0, RMX IP address is not displayed.	V7.0	
22	*General*	VNGR-15950	In the Management Network Properties - IP tab, when selecting ON [Secured Communication] and clicking OK, the popup message states RMS instead of RMX.	V7.0	
23	*General*	VNGR-15951	When Dialing in from a PSTN participant to an EQ when entering the DTMF the participant cannot connect.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
24	*General*	VNGR-15952	When viewing the properties of the Entry Queue when selecting "IVR service provider only" and clicking [OK], when re-opening the Entry Queue properties, the "IVR service provider only" is not selected.	V7.0	
25	*General*	VNGR-16075	On an RMX 2000 with a 384Kbps conference started from a Profile with three endpoints connected, when the last endpoints disconnects an assert appears: 32112.	V7.0	
26	*General*	VNGR-16266	In RMX Web Client, when viewing the Restore Factory Defaults window the "Select the Backup & Continue button to save the current configuration and restore factory defaults" field is not translated properly in Japanese.	V7.0	
27	*General*	VNGR-16293	On an RMX 4000 with the MPM+ card, a "CureDump ConfParty" file is created and saved on file.	V7.0	
28	*General*	VNGR-16348	On an RMX with the MPM card and version 7.0, when a conference is started from a Template with ViewStation 512/EX endpoints, the system restarts unexpectedly.	V7.0	
29	*General*	VNGR-16397	On the RMX 1500, in the IP Network Service > Management Network > the Lan Ports tab appears. It should be the IP tab.	V7.0	
30	*General*	VNGR-16400	When a conference is active on the RMX 1500, in the Hardware Monitor - LAN Properties there is an "Status" indication that the LAN Media is "Inactive". It should state "active".	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
31	*General*	VNGR-16421	When a HDX (A) endpoint dials the following string: "Prefix_ID of the Gateway Profile *ISDN", to the number of the second HDX using an IP to ISDN call and starts a 384Kbps conference with IVR enabled, if HDX A sends content to HDX B, the HDX views a black screen.	V7.0	Connect both HDXs directly to a regular conference that is using the same profile as the GW profile.
32	*Hardware*	VNGR-15801	After upgrading RMX4000, an error message appears: "No RTM-LAN or RTM-ISDN installed" on slots13, 14, 15". In fact no RTM-ISDN card is installed in slot 13.	V7.0	
33	*Interoperability*	VNGR-15936	When using Japanese characters in the display name of VVX1500-175/ VVX1500-176 endpoints, the endpoints display only a number.	V7.0	
34	*Interoperability*	VNGR-16398	In a 1920Kbps conference with LPR enabled, when connecting 3 HDX endpoints bad video appears.	V7.0	
35	*ISDN*	VNGR-16642	On RMX 1500 running a conference started from a conference profile, when a Viewstation MP512 ISDN endpoint connects, an error message appears: "Connected With Problem".	V7.0	
36	*ISDN*	VNGR-16855	Video freezes on ISDN endpoints in a fully loaded RMX 1500 when connecting, disconnecting and reconnecting all the endpoints.	V7.0	
37	*IVR*	VNGR-15663	An IVR slide with1080p resolution was uploaded successfully to the RMX but cannot be viewed with the preview button nor could be seen in the IVR welcome slide.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
38	*IVR-RMX 4000*	VNGR-16548	On the RMX 4000 & MPMx card, when running an 4MB CP conference, the Welcome slide does not appear.	V7.0	
39	*Partners - Microsoft*	VNGR-16804	On RMX with MPMx, Microsoft Office Communicator Client connected at 384kbps doesn't recover and disconnects after Packet Loss after dial-in MOC Client changes LAN configuration to 100 Half Duplex during ongoing conference.	V7.0	
40	*PCM*	VNGR-16913	On RMX 4000 with MPM+, PCM on certain H.323 endpoints does not respond to arrow keys.	V7.0	
41	*SIP*	VNGR-12136	No video or low quality video is seen by a SIP HDX endpoint that connects to a conference set to 384 Kbps at much higher line rate, such as 4Mb.	V4.6	
42	*SIP*	VNGR-15954	After creating a new SIP Factory and then deleting it, you cannot create another new SIP factory. A message alert appears: "fail to add SIP factory."	V7.0	
43	*Software Version*	VNGR-16803	On RMX 1500 with MPMx High System CPU Usage fault occurs.	V7.0	
44	*Software Version*	VNGR-16818	On RMX 2000 with MPM, after upgrading the RMX restarted with "no utilizable unit for audio controller" requiring hard reset (switch off and then on).	V7.0	
45	*Software Version*	VNGR-16845	When using RMX with MPMx, MplApiSocket disconnects for 10 seconds resulting in disconnection of all participants.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
46	*Software Version*	VNGR-16915	On RMX 1500, Encryption Key Server can cause the MCU to display High CPU Usage alert after restart.	V7.0	
47	*Upgrade Process*	VNGR-14844	The Faults List is empty when upgrading the RMX 2000 from V5.01 build 24 to v6.0 build 86.	V6.0	
48	*Upgrade Process*	VNGR-16828	When upgrading RMX4000 7.0.0.136 with MPM+ to Version 7.0.0.142 or 7.0.0.145, MPL Failure was indicated and the RTM-IP still shows "in upgrade" while the RMX exits the "startup" indication.	V7.0	
49	*Video*	VNGR-14673	In a 4MB Immersive Telepresence conference with Sharpness enabled, cracking and popping sounds are heard.	V6.0	
50	*Video*	VNGR-14837	Gathering slide info is cut off for dial-out VSX and CMAD MAC endpoints that receive video at a resolution of 480x352. The gathering screen displays correctly on the HDX endpoints	V6.0	
51	*Video*	VNGR-15626	During a video conference audible clicks & popping sounds are heard during when the following endpoints are connected: CMAD, VSX3000, HDX6000 and HDX7000.	V7.0	
52	*Video*	VNGR-15717	In a 1MB conference with 2 HDX endpoints one with High Profile and the other without High Profile, corrupted video is viewed in the High Profile HDX endpoint.	V7.0	

Table 9 *Corrections Between Version 6.0 and Version 7.0*

#	Category	Key	Description	Detected in Version	Workaround
53	*Video*	VNGR-15727	A 1024Kbps conference with maximum resolution forced to H720p, when connecting HDX endpoint with a resolution set to CIF, the endpoint connects with 4CIF thereby using more resources.	V7.0	
54	*Video*	VNGR-16289	On the RMX2000 running a conference based on the default Profile, when the RMX dials-out in SIP to the LifeSize endpoint, the call connects but the LifeSize endpoint does not view video.	V7.0	
55	*Video*	VNGR-16743	On an RMX 1500 running a 2048Kbps conference with LPR, Gathering, Sharpness, Send Content to Legacy Endpoints, Auto Layout, Echo Suppression and Audio Clarity enabled, when connecting all the endpoints together, after the gathering slide closes all HDX endpoints display low quality video.	V7.0	
56	*Video*	VNGR-16917	On an RMX2000 with MPMX cards, when connecting HDX8000 endpoints with 720p and 1080p resolutions using a 1+7 layout, green artifacts and stripes appear in the video.	V7.0	

Version 7.0.2 System Limitations

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
1	*Audio*	VNGR-14578	On an RMX with a license for 800 audio only participants, a disconnection cause always occurs after connecting the 767th participant.	V6.0	
2	*Audio*	VNGR-14687	When connecting 800 VOIP using 4 Entry Queues and 396 Ad Hoc conferences, when adding Dial out participants to the conferences they could connect. An MCU error message appears: MCU INTERNAL PROBLEM - 65012.	V6.0	
3	*Audio*	VNGR-15938	RMX 4000 using HDX endpoints in 2048Kpbs HD Video Switching conference using Siren22Stereo exceeds conference bit rate by sending data to endpoints at 2112kpbs.	V7.0	
4	*Audio*	VNGR-16272	RMX 4000 using HDX endpoints in 2048Kpbs HD Video Switching conference using Siren22Stereo exceeds conference bit rate by sending data to endpoints at 2112kpbs.	V7.0	
5	*Audio*	VNGR-16794	On RMX 4000 with MPM+, G.728 endpoint isn't declared 1st endpoint in conference at 96kbps.	V7.0	
6	*Audio*	VNGR-16798	Medium volume horn-like sound heard for several minutes on HDX4000 endpoint connected to RMX 4000 with MPM+ via DMA Meeting Room.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
7	*Audio*	VNGR-16919	On RMX with MPMx using H.323 with HDX endpoint, sites do receive Siren14 instead of Siren22 Stereo audio algorithm 6Mbps VSW conferences.	V7.0	
8	*Audio*	VNGR-16935	On RMX 1500, running 384kbps conference, an endpoint connected with ##FORCE_MEDIA_ASIREN14_24K or ##FORCE_MEDIA_ASIREN14_32K connects with a SIREN14_48K audio algorithm. An endpoint connected without force connects using G.711 audio algorithm.	V7.0	
9	*Audio*	VNGR-	Received audio volume of PSTN audio-only participants is approximately three times lower than that received by video participants.	V7.0	
10	*Audio*	VNGR-17070	On an RMX 4000 with MPM+ cards, when running a 512 Kbps conference with mixed HDX 8000 and VSX 3000 endpoints, audio cuts ON and OFF.	V7.0	
11	*Audio*	VNGR-17320	When dialing in from several endpoints to a Meeting Room started by the DMA, audio was lost for several seconds on the HDX9006 endpoint.	V7.0	
12	*Audio*	VNGR-17471	Loss of audio for 2-3 seconds or bursts of static noise on HDX6000 endpoint in calls dialed via DMA to RMX4000 running V7.0.1.16 with, 4*MPM+80 cards	V7.0.1	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
13	*Audio*	VNGR-17616	HDX H.323 endpoint receives G.722 audio instead of Siren22 (as the SIP endpoints) when connected to a conference running at a line rate of 384kbps on RMX4000 with MPM+ and the CS_ENABLE_EPC flag is set to YES.	V7.0.2	
14	*Calendaring*	VNGR-13686	On the RMX 4000 in a 1080p H.323 Video Switching conference with a line rate of 6Mb, the IVR welcome screen can freeze on the HDX8006 and HDX 9006 endpoints.	V6.0, V5.0.0	
15	*Calendaring*	VNGR-13810	In version 6.0, in the Conference Profiles list, the default Event Mode (COP) profile is not used, and should not be listed.	V6.0	
16	*Cascading*	VNGR-11953	When connecting to a cascaded CP conference with a 768Kpbs line rate and the video quality set to Sharpness, HDX endpoints experience bad video quality.	V5.0.0	
17	*Cascading*	VNGR-16239	Create two 384Kbps cascaded conferences with LPR enabled, when creating the dial-out Master link to the second conference is only partially connected.	V7.0	
18	*CDR*	VNGR-11746	GMT Time Offset is written to the unformatted CDR as 0.	V4.1	
19	*CDR*	VNGR-1569	When the conference termination time is changed, the CDR is not updated.	V1.0.0	
20	*CDR*	VNGR-3011	The Encryption field is missing from the CDR file.	V1.1.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
21	*CDR*	VNGR-9340	When a conference was terminated by an MCU reset, an incorrect status "Ongoing Conference" will be displayed in the CDR List pane.	V4.0.0	
22	*CMA*	VNGR-11543	When creating a conference using the CMA, the Conference Management UI displays the participants as disconnected, even though they are connected.	V4.1	
23	*Content*	VNGR-11491	In a conference with a line rate of 384Kbps, when H.323 participant connect to the conference using FECC, incorrect data is displayed in the Participant Properties - FECC and Content channels of the RMX Web Client. The information is updated correctly once the participant is fully connected.	V4.1	
24	*Content*	VNGR-16203	In a 768 Kbps Meeting Room with LPR, Echo Suppression, Auto layout and Motion enabled when the first to join the Meeting room sends content, the second participant to join views a black screen.	V7.0	
25	*Content*	VNGR-16281	Content sent from HDX (in H.264) is automatically stopped when a second participant that does not support H.264 Content (for example, CMAD that only supports H.263) joins the conference. When the content is sent again, the Content protocol is H.263+ to enable all conference participants to receive content.	V7.0	
26	*Content*	VNGR-16807	Bad audio quality experienced on PVX endpoint while it sends content when connected to RMX 1500.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
27	*Content*	VNGR-16830	In a mixed H.323 & SIP 1152Kbps conference with Video Clarity, Auto Terminate, Sharpness, Echo Suppression, Auto Layout, Gathering and Send content to Legacy endpoints enabled, HDX endpoint's content is fragmented.	V7.0	
28	*Content*	VNGR-17558	Legacy endpoint that connect to a conference in which Content is already sent, and the conference layout is set to Auto Layout the does not see the Legacy Layout and does not receive content.	V7.0.2	
29	*Content*	VNGR-17566	Chroma shift viewed on Legacy endpoints when sending content in a conference running on RMX 2000 with MPMx at a line rate of 512kbps and the Send Content to Legacy Endpoint option enabled.	V7.0.2	
30	*Content*	VNGR-17671	Content sent from a VSX7000A system. is displayed frozen on the far end VSXs when connected over H.323 to a conference with 9 H323 VSX endpoints running on RMX4000 with the MPM+ at a line rate of 768kbps and LPR, Video Clarity and Send Content To Legacy Endpoint options enabled.	V7.0.2	
31	*Content*	VNGR-17762	Sometimes Content is sent during the gathering phase and is shown through the gathering phase slide background (it is displayed as a layer underneath it) when the Sent Content to Legacy Endpoint option is enabled in a conference running at 384kbps.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
32	*Content*	VNGR-17729	Video freeze was experienced by many participants when content was sent from a PC to 160 CIF participants connected to a conference running on RMX 2000 with MPM+80 at a line rate of 384kbps and LPR and Encryption options enabled.	V7.0.2	
33	*Diagnostics*	VNGR-16142	On the RMX1500/2000 when running the "Diagnostic - RTM ISDN", test ID 717 RTM TDM FALC1 Diag, the test fails. Reason for the test failure: "RTM Timeout - RTM didn't send Test Completed".	V7.0	
34	*Diagnostics*	VNGR-16742	On an RMX2000 with MPMx_D cards when performing an Power ON Self Test (POST), the MPMx card runs the card monitoring test in an endless loop.	V7.0	
35	*Diagnostics*	VNGR-16754	On an RMX 4000 in the Diagnostic mode when pressing the menu reset button the following message appears: "connection with shelf management is lost, please log in again". You can only exit the Diagnostic mode after physically turning the RMX Off and On.	V7.0	
36	*Diagnostics*	VNGR-18257	Software verification failure is indicated when running diagnostics on RMX 1500 (MPMx card).	V7.0.2	
37	*Encryption*	VNGR-11401	In an encrypted conference, Tandberg MXP endpoints encounter audio problems.	V4.1	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
38	*Encryption*	VNGR-12202	Rarely, in an encrypted conference, H.323 encrypted dial-in and dial-out participants cannot connect and an assert appears (File:EncryptionKeyServer Manager.cpp).	V5.0.0	
39	*Encryption*	VNGR-14840	No video is seen and the Aethra VegaStar Gold endpoint remains connected with a problem when connecting over H320 to an encrypted conference at a line rate of 384Kbps.	V6.0	
40	*Encryption*	VNGR-15256	In a conference with an IVR Service with endpoints, when using DTMF (*71/#71/*88) codes to secure/unsecure the conference there is no text/ icon indication.	V7.0	
41	*FECC*	VNGR-16523	On the RMX 1500 running a mixed H.323 & SIP 384Kbps conference, when connecting an Tandberg SIP endpoint, FECC does not work.	V7.0	
42	*Gateway*	VNGR-15935	In the RMX Web Client, when creating a new gateway profile and setting the Gateway ID to "#1234" then click OK, no confirmation message appears.	V7.0	
43	*Gateway*	VNGR-16562	Gateway sessions are always running in CP mode. If Video Switching is selected in the Profile, the system will change it to CP mode, using the closest possible video settings. However, 60fps may not be supported in CP mode for the selected line rate.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
44	*Gateway*	VNGR-16604	In a Gateway call started from a video endpoint (CMAD or HDX) when other endpoints connect, the endpoint that initiates the call initially views the Gathering slide but then it disappears.	V7.0	
45	*Gateway*	VNGR-16607	When a Gateway call is started from a video endpoint (CMAD or HDX) and endpoints connect to the conference, SIP endpoints view a blurry gathering slide with artifacts.	V7.0	
46	*General*	VNGR-10922	Dial out to participants assigned to a Meeting Room will only start when the dial-in participant who has activated it has completed the connection process and the Meeting Room has become an ongoing conference.	V4.1	
47	*General*	VNGR-11324	When moving many participants simultaneously from one conference to the other (both with a line rate of 1920 Kbps), a number of HDX8000 endpoints connect secondary. When trying to disconnect and reconnect the participants connected as Secondary, an MCU Internal error 32122 is displayed.	V4.1	
48	*General*	VNGR-11383	When updating the Profile assigned to a Conference Template, changes are not applied when the conference becomes ongoing.	V4.1	
49	*General*	VNGR-11422	When the RMX is set to Flexible Allocation Mode and more than 14 endpoints are connected to a single MPM+80 card in line rates above 2Mbps, video artifacts may appear.	V4.1	Change the resource Allocation Mode to Fixed Mode.

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
50	*General*	VNGR-11701	Sometimes a system error "SOFTWARE_ASSERT_FAILURE" appears when the RMX is running under load (repetitive connecting and disconnecting participants).	V4.5	
51	*General*	VNGR-11883	After software upgrade, it is necessary to close and reopen Internet explorer.	V5.0.0	
52	*General*	VNGR-11987	When upgrading from V4.0.3 to V5.0, after inserting the activation key an invalid key message appears.	V5.0.0	Logout and login to the web browser or reopen the Internet Explorer.
53	*General*	VNGR-12033	Rarely a system error (BridgePartyVideoOut.cpp, Line:1458, Code:1701.; DEBUG-ASSERT:) is written to the log file if a change is made to the conference layout while participants are disconnecting.	V5.0.0	
54	*General*	VNGR-12100	Occasionally, after upgrading to version 5.0 (from 4.0.3, 4.1.0, 4.1.1), the soft reset fails.	V5.0.0	First try to reset from the SHM if possible. Otherwise hard reset the system.
55	*General*	VNGR-12181	Sometimes an assert may appear when terminating a conference while running 10 conferences at a line rate of 768Kbps and changing the layout for H.323 & SIP participants.	V4.6	
56	*General*	VNGR-12240	Endpoints are disconnected after extended time period (8 hrs +) when all MPM+ resources are used. Error message is displayed: "Unit not responding".	V5.0.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
57	*General*	VNGR-14062	On a fully loaded RMX 4000, endpoint may disconnects with Call Disconnection Cause stated as "MCU internal problem - 11122".	V6.0	
58	*General*	VNGR-14151	A Shelf Voltage problem is always displayed in the System Alerts pane regardless of the actual status.	V6.0	
59	*General*	VNGR-14159	Operator assistance function is blocked when the TelePresence mode is enabled.	V6.0	
60	*General*	VNGR-14624	After changing the conference profile assigned to a conference template that includes participants, some of these participant are randomly deleted from the conference template.	V7.0	
61	*General*	VNGR-14667	When defining a New Profile in the Video Settings tab and selecting a Layout, in the Conference Profiles list there is no indication of the selected layout and the layout icon is missing.	V6.0	
62	*General*	VNGR-14688	When a conference is deleted in the RMX Manager, conference participants are not deleted in the participants list.	V6.0	
63	*General*	VNGR-14767	H.323 party disconnect due to MCU Internal Problem 32212.	V6.0	
64	*General*	VNGR-15320	Saving to a Conference Template a conference in which the Message Overlay is enabled, automatically enables the message overlay option in the conference that is started from this template.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
65	*General*	VNGR-15324	o When monitoring a CP conference with 5 or more endpoints from 5 Web Client sessions on separate workstations, Video Previews can be opened from 4 workstations. Attempting to open a fifth Video Preview causes an error "Failed to Preview Video: Failure Status" instead of "The Preview cannot be displayed. The maximum number of previews per MCU has been reached."	V7.0	
66	*General*	VNGR-15366	Sometimes when Restore Factory Defaults is performed, the active alarm "CPU slot ID not identified- McuMngrCPU board id was not received from ShelfManager" is displayed.	V7.0	
67	*General*	VNGR-15523	Primary and Secondary dial in numbers entered in the Polycom Conferencing Add-in to Microsoft Outlook are always displayed on the Gathering slide (during the gathering phase) for reference, even if the participant connected using the invitation link.	V6.0	
68	*General*	VNGR-15553	On an RMX 2000 with MPMx cards, during startup a list of error appears.	V7.0	
69	*General*	VNGR-15554	Numerous missing Japanese translations in the RMX Web Client.	V7.0	
70	*General*	VNGR-15637	After creating a conference template with 6 participants, when adding and removing participants to a conference the template does not update.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
71	*General*	VNGR-15718	Incorrect disconnection cause after pulling LAN cable from RMX. The endpoints reports that the "call close normal".	V7.0	
72	*General*	VNGR-15737	In the Resolution Configuration Slider, the CIF30 slider is absent from the UI.	V7.0	
73	*General*	VNGR-15746	When downloading and installing version 7.0, the Download window lists version 6.0.	V7.0	
74	*General*	VNGR-15750	In a conference set to 512kbps with Auto Layout enabled, when starting PCM from several endpoints, - you will receive an Message Overlay: "no available PCM resources". The message overlay cannot be closed.	V7.0	
75	*General*	VNGR-15755	During an active Telepresence conference, click the Video Settings tab, the "Telepresence Mode enabled" check box appears when it should not.	V7.0	
76	*General*	VNGR-15837	In 768Kbps conference set to AES, CP, Full Layout and two HDXs Chairperson, when the SIP HDX invokes PCM Camera Control only segmented video can be seen.	V7.0	
77	*General*	VNGR-15953	When copying and pasting conferences based on a Profile, the pasted conference is added to conference templates.	V7.0	
78	*General*	VNGR-16044	After downloading and opening an auditor file of the MPMx, the MPMx name appears as MPM_PLUS.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
79	*General*	VNGR-16103	After running diagnostics on the RMX, LED functionality is not documented.	V7.0	
80	*General*	VNGR-16120	Saving to a Conference Template a conference in which the Message Overlay is enabled, automatically enables the message overlay option in the conference that is started from this template.	V7.0	
81	*General*	VNGR-16170	On an RMX 4000, endpoints using the layout 1+7, endpoints are not in the proper location.	V7.0	
82	*General*	VNGR-16230	In a Meeting Room with five participants all endpoints receive periods of frozen audio and video.	V7.0	
83	*General*	VNGR-16237	Connect to an RMX as Operator using the RMX Manager. Then connect an Administrator to same RMX the following message appears: "cannot login to MCU x.x.x.x with the user name and password entered".	V7.0	
84	*General*	VNGR-16283	In a conference with a few participants, when opening the video preview pane and previewing the next participant without closing the pane, the pane becomes minimized, and does not show video of the next participant.	V7.0	
85	*General*	VNGR-16296	The Host name is not defined in the Fast Configuration Wizard during the initial system configuration. Therefore when trying to configure either the "Control" or the "Shelf" IP address (or both), the error message "Invalid Host Name" is displayed when clicking OK.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
86	*General*	VNGR-16338	In a 4MB HD CP conference set to 720p with 3 participants, 1 endpoint disconnected due to the following message: "MCU internal problem".	V7.0	
87	*General*	VNGR-16377	On an RMX with MPM+ card, when starting a VSW conference from the Profile, you can select 6144 Kbps as the line rate.	V7.0	
88	*General*	VNGR-16427	On RMX 1500 with two conferences running and Legacy Content enabled, line artifacts are displayed in the middle of the CMAD screen after it is disconnected from the first and reconnected to the second conference.	V7.0	
89	*General*	VNGR-16466	On RMX 2000 with MPM, "MCU Internal Problem - 32112" occurs during mini-load smoke on MPM when 20 video participants are connected at 384kbps.	V7.0	
90	*General*	VNGR-16471	Extraneous MCMS version number is displayed in the detailed faults list.	V7.0	
91	*General*	VNGR-17099	Extraneous "Total Number of Event Mode Resources" field is displayed in the System Information properties box.		
92	*General*	VNGR-16529	After Restoring Factory Defaults on the RMX and defining the IP Network Service, after RMX restart the MCU Host Name parameter appears empty in the "Management Network - DNS" tab.	V7.0	
93	*General*	VNGR-16560	After log-in to the RMX 1500 Web Client, a Microsoft .NET Framework error message appears.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
94	*General*	VNGR-16581	On an RMX 2000 & MPM+ cards, running an 384Kbps CIF conference, with Auto Terminate, Encryption, LPR, Echo Suppression, Sharpness and Same Layout enabled, when sending content from an HDX to 160 other endpoints, an "Software assert failure" appeared.	V7.0	
95	*General*	VNGR-16582	On an RMX 2000 & MPM+ cards, running an 384Kbps CIF conference, with Auto Terminate, Encryption, LPR, Echo Suppression, Sharpness and Same Layout enabled, when sending content from an HDX to 160 other endpoints, an "Software assert failure" appeared.	V7.0	
96	*General*	VNGR-16600	On an RMX2000 & MPMx card running a mixed H.323 & SIP 1920Kbps conference with AES, Sharpness and Gathering enabled, when the RMX dials-out to 10 endpoints, the border layouts are "speckled" and miss their edges.	V7.0	
97	*General*	VNGR-16610	The Column width displayed in Web Client and in the RMX Manager UI need to be made broader.	V5.0.1, V5.0.0, V4.6.1, V6.0, V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
98	*General*	VNGR-16621	Run two conferences that support Content for Legacy Endpoints, connect all types of endpoints to each conference and then send content from a non Legacy endpoint to each conference. The conference layout on the Legacy endpoint is changed to the flag's CP_LAYOUT_1P4VER configuration, the default layout. Move one legacy EP to the second conference - the layout of it changes to conference layout	V7.0	
99	*General*	VNGR-16624	In the RMX Manager, when attempting to upgrade two RMX simultaneously, the Install Software window only appears for one RMX, when you should view both.	V7.0	
100	*General*	VNGR-16625	Sometimes when upgrading to version 7.0 and resetting the RMX 2000, an active alarm "CPU slot ID not identified - McuMngrCPU board id was not received from ShelfManager" is displayed.	V7.0	
101	*General*	VNGR-16745	In the RMX manager 7.0, the "new conference" icon suddenly appears in the conferences properties window.	V7.0	
102	*General*	VNGR-16751	When creating a second conference with a display name that is already used by another conferencing entity, the conference properties dialog box re-opens with a redundant check box next to the routing name field.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
103	*General*	VNGR-16793	On an RMX 2000 with MPM+, start an 4096Kbps 1x1 Layout conference from a template with Encryption, LPR, Auto Termination, Sharpness, Same Layout, Audio Clarity enabled, an "mcu internal problem: 32212" message appears in conference properties - connection status tab.	V7.0	
104	*General*	VNGR-16861	On an RMX 2000 with 2 MPM+80 and 2 RTM ISDN Cards (5 T1/PRI connecting to each RTM ISDN card), only 70 CIF dial-out endpoints can connect to the 128 Kbps conference.	V7.0	
105	*General*	VNGR-16865	MCU INTERNAL fault received on RMX 1500: "UnitId 20 (board 1) didn't return ACK for H323_RTP_UPDATE_PORT_OPEN_CHANNEL_REQ."	V7.0	
106	*General*	VNGR-16871	In 384kbps conference on RMX with MPMx, HDX endpoint's "Used Call Rate" is approximately 100kbps lower than expected.	V7.0	
107	*General*	VNGR-16890	Log Analyzer output from RMX 1500/2000 with MPMx contains numerous CRT ART errors.	V7.0	
108	*General*	VNGR-16934	When a H.323 call is released without lobby conn_id parameter, call memory is possibly not released.	V7.0	
109	*General*	VNGR-17009	On both the RMX 2000/4000 when running conference on an MPMx card with a minimum of 8 participants and viewing content, the conference terminates due an MPMx disconnection.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
110	*General*	VNGR-17436	Unit recovery of unit 14, board 1 occurred.	V7.0.1	
111	*General*	VNGR-17496	DSP recovery and asserts occur, endpoints are disconnected or lose both audio and video on RMX4000 running V7.0.1.16 with 4*MPM+80 cards.	V7.0.1	
112	*General*	VNGR-17517	"Insufficient resources" with "Power off problem" errors occur when 15 HDX 8006 and 10 HDX 9004 that are connected to a conference at a line rate of 4096kbps are muted and unmuted individually and then the conference layout is changed.	V7.0.2	
113	*General*	VNGR-17520	In MPMx Card Configuration Mode, the High Profile Sliders in the Resolution Configuration dialog box are set to the minimum and do not show the actual values for the predefined Resolution Configurations.	V7.0.2	
114	*General*	VNGR-17587	Several participants are deleted from a conference template when editing the conference template name.	V7.0.2	
115	*General*	VNGR-17714	Occasionally, RMX 4000 with MPM+ automatically resets when running conferences. The system displays the Active Alarm: NEW_VERSION_INSTALLED: A new version was installed. Reset the MCU, although a new version was not installed.	V7.0.2	
116	*General*	VNGR-17724	After Comprehensive Restore to Factory Defaults, an active alarm displayed, indicating voltage problem on MPM-f - card.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
117	*General*	VNGR-17791	DTMF Tones (Click&View) are heard by all conference participants in a conference running on RMX 2000 with MPMx.	V7.0.2	
118	*General*	VNGR-17843	HDX H323 endpoints are unable to remain connected to a CP conference running on RMX1500 at a line rate of 1920kbps with LPR, Video Clarity and Send Content to Legacy Endpoint options enabled. The disconnect status displays MCU internal problem 32212.	V7.0.2	
119	*General*	VNGR-18167	When using a conference Profile set to VSW 1080p at line rate of 6MB, the conference is started at a line rate of 4MB instead.	V7.0.2	
120	*General*	VNGR-18349	Following a Comprehensive Restore to Factory Defaults of RMX 2000, the CDR file containing 1000 CDR logs cannot be restored from the Backed up configuration.	V7.0.2	
121	*General*	VNGR-3824	The Click & View menu doesn't appear in 64 Kbps calls.	V1.1.0	Use the RMX Web Client.
122	*General*	VNGR-9729	When moving from MPM+ to MPM mode (with only MPM cards installed in the MCU), the Card Configuration Mode, indicated in the System Information dialog box, remains in MPM+ Mode.	V4.0.0	Logout and then login to the RMX Web Client.
123	*General*	VNGR-9803	When using the restore to factory defaults, after inserting the Activation key, the system requires a reset when the reset is not required.	V4.0.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
124	*H.323*	VNGR-11810	The following assert may appear when H.323 participant connects to a 2 Mb Continuous Presence conference: File:AuditorApi.cpp, Line:112, Code:1.; ASSERT:Audit_free_Data_is_too_long_20882,_max_is_20480data_size_is_:_20882	V5.0.0	
125	*Hardware*	VNGR-9571	In D-type chassis, when hot-swapping an MPM card, unit failure may occur.	V4.0.0	Reset the MCU
126	*Hardware*	VNGR-14550	On the MPM+, experience problems with DSP#1 during load testing.	V7.0	
127	*Hardware*	VNGR-16058	After upgrading RMX4000, an error message appears: "No RTM-LAN or RTM-ISDN installed" on slots 13, 14, 15". In fact no RTM-ISDN card is installed in slot 13.	V7.0	
128	*Hardware*	VNGR-16474	On RMX 1500 with MPMx-S, MCU internal problem 32112 occurs repeatedly in 2Mbps VSW or CP conference using HDX 8000 endpoint. Problem did not occur after reset.	V7.0	
129	*Hardware*	VNGR-16537	On the RMX 1500 when the RMX is in a "Diagnostic Mode" the listed slot numbers of the modules are incorrect.	V7.0	
130	*Hardware*	VNGR-16785	Run 8 512Kbps conferences and connect to each conference 2 H.323, 2 SIP, 1 ISDN, 1 PSTN & 1 VOIP endpoints, change the conference layout on each, when terminating the conferences an "MCU Internal Problem 50020" occurred on the MPMx cards.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
131	*Hardware*	VNGR-16936	On an RMX 4000 when viewing the Signaling Monitor window, the Active Alarms pane shows no link between Fabric Switch Module and MPMx card in slot 1.	V7.0	
132	*Hardware*	VNGR-16945	On the RMX2000 and RMX4000, when performing diagnostics using the Power on Self Tests (POST) you cannot access the Shelf Manager.	V7.0	
133	*Hardware*	VNGR-17001	MPMx card remains in startup mode instead of Major state after restoring the RMX to factory defaults and without configuring the IP address of the media card(s) in the Fast Configuration Wizard.	V7.0.1	
134	*Hardware*	VNGR-17157	DSP did not automatically recover after failure.	V7.0.1	
135	*Hardware*	VNGR-17194	Board recovery failure occurs after all units on board 2 stop sending data after 3 recovery attempts on RMX2000 running V7.0.0.162 with MPMx cards.	V7.0	
136	*Hardware*	VNGR-17851	Sometimes connection with RTM ISDN is lost.	V7.0.2	
137	*Hardware*	VNGR-17869	When inserting a Control Unit in Slot 4, in Hardware Monitor it is shown as inserted in slot 3	V7.0.2	
138	*Hardware*	VNGR-17881	RTM IP does not reconnect to logger port.	V7.0.2	
139	*HD*	VNGR-16780	During VSW conference at 720p60p resolution using direct connections or via DMA, endpoints display only their own video.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
140	*HD*	VNGR-3089	In HD Video Switching conferences, Tandberg endpoints may connect as Secondary when HD frame rate capabilities are less than 7.5 frames per second.	V1.1.0	Create a CP conference
141	*Interoperability*	VNGR-10849	A black screen may appear in the following instances: * On HDX8000 HD Hardware version B endpoints when the conference line rate is set in the range of 256-768 Kbps. (The Hardware version can be found on the HDX endpoint's System Information page.) * On HDX SD endpoints using the PAL mode when the conference line rate is set above 128 Kbps.	V4.1	(1) Upgrade to HDX software version 2.5.0.5 (2) Use conference line rates below 256 or above 768 Kbps. (3) Disable the IVR Welcome slide and avoid using a 1x1 Video Layout.
142	*Interoperability*	VNGR-10989	In a ISDN dial-in conference with a line rate of 384 Kbps, Tandberg MXP ISDN endpoints cannot view content.	V4.1	
143	*Interoperability*	VNGR-11341	During H.320 calls, Lip Sync issues occur when content is being sent.	V4.1	
144	*Interoperability*	VNGR-11489	In a conference running at a line rate of 384 Kbps, when HDX 8006 endpoint that sends Content is moved to another conference, Content is still viewed for a number of seconds on the HDX.	V4.1	
145	*Interoperability*	VNGR-11563	Legacy endpoints occasionally cannot switch to Content when Content switched from H,264 to H.263.	V4.1	
146	*Interoperability*	VNGR-11767	In a 6 Mb, Video Switched conference, HDX endpoints that declare 2 Mb capability may only connect at a line rate of 896 Kbps after 30 seconds.	V4.1.1	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
147	*Interoperability*	VNGR-11798	When Tandberg C20 endpoint sends Content, the far end indicates that Content is being received but received Content is black.	V5.0.0	
148	*Interoperability*	VNGR-11830	Sony XG80 endpoint cannot send Content in H.323 384 Kbps call.	V6.0	
149	*Interoperability*	VNGR-11920	In a 4 Mb RPX conference with LPR enabled, video-out bit rate decreases to 128 Kbps due to packet loss and does not increase.	V5.0.0	
150	*Interoperability*	VNGR-11963	In a conference running at a line rate of 384Kbps with AES, LPR and Video Clarity enabled, HDX ISDN participants connect with SIF resolution while HDX IP endpoints connect using a 4SIF resolution.	V5.0.0	
151	*Interoperability*	VNGR-12177	In a conference with AES, LPR and Video Clarity enabled, H.320 Tandberg MXP endpoints connect with resolution of 960x720, while identical H.323 MXP endpoints connect with resolution of 720p.	V5.0.0	
152	*Interoperability*	VNGR-12178	In a conference with AES, LPR and Video Clarity enabled, H.320 HDX8006/ HDX9004 endpoints send Content in H.263 only.	V5.0.0	
153	*Interoperability*	VNGR-12266	Tandberg MXP endpoint receives ghosted video from HDX9004 endpoint during H.323 conference.	V5.0.0	
154	*Interoperability*	VNGR-12355	DST K60 endpoint receives tiled video from HDX9004 endpoint during H.323 conference.	V5.0.0	Set the system flag SEND_WIDE_RES_TO_IP to NO to force the system to send 4CIF.

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
155	*Interoperability*	VNGR-12369	Tandberg C20 endpoint periodically displays fast updates in HD1080p conferences.	V5.0.0	
156	*Interoperability*	VNGR-12372	Tandberg 6000 E and B series, H.320 endpoints do not connect to conferences when encryption is enabled.	V5.0.0	
157	*Interoperability*	VNGR-12373	HDX endpoint connected via H.320 does not receive Content from Tandberg MXP endpoint connected via H.323.	V5.0.0	
158	*Interoperability*	VNGR-12415	In a conference running at a line rate of 1728 Kbps set to Same Layout, when PVX/VSX7000 participants connect in CIF264/263, an error message appears.	V4.6	
159	*Interoperability*	VNGR-14047	Artifacts appear on LifeSize _RM1_4.5.1(15) endpoint connected via SIP or H.323 to a 2Mbps conference with Video Quality set to "Sharpness" running on the RMX 2000 in MPM mode. The LifeSize endpoint is using 4SIF 30 resolution while Polycom endpoints are using 720*400 resolution.	V6.0	
160	*Interoperability*	VNGR-14780	RMX4000 using 4Mb, Same Layout, Sharpness, Video Clarity in profile and Entry Queue becomes inaccessible when called via an Entry Queue from H.323 LifeSize endpoint.	V6.0	
161	*Interoperability*	VNGR-15096	In a 384Kbps conference with no LPR, when connecting HDX 8000, PVX endpoints the lower segment of the welcome's slide is missing/smudged.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
162	*Interoperability*	VNGR-15129	In a conference set to a line rate of 4096kbps with Sharpness, 1+5 layout, with a number of endpoints present, when a H.323 HD720p30 Tandberg 1700MXP endpoint dial-outs, Video In & Out freeze.	V7.0	
163	*Interoperability*	VNGR-15281	Aethra VegaStar Gold endpoint, when connecting via ISDN to 384kbps conference creates CDR Event - Participant status "Connected with problem".	V7.0	
164	*Interoperability*	VNGR-15649	In a continuously running conference, after disconnected two HDX7000 and VSX7000 endpoints, the HDX4000 endpoint's video freezes.	V7.0	
165	*Interoperability*	VNGR-15789	RMX4000 using 4Mb, Same Layout, Sharpness, Video Clarity in profile and Entry Queue becomes inaccessible when called via an Entry Queue from H.323 LifeSize endpoint.	V6.0	
166	*Interoperability*	VNGR-15906	In a 384Kbps conference with no IVR and resources set to a Fixed Mode when connecting SIP/H.323 HDX & PV dial-in and dial-out endpoints, the SIP receives bad video.	V7.0	
167	*Interoperability*	VNGR-15937	In a conference with HDX8006A, HDX8006B, HDX9000, VSX7000 and ViewStation512 endpoints, the site names of the ViewStation endpoints are switched.	V7.0	
168	*Interoperability*	VNGR-15939	In a "Fixed resource Capacity" mode, Legacy endpoints can still receive content when they should not.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
169	*Interoperability*	VNGR-16192	In 2MB Conference with Sharpness enabled when connecting RPX 400, TPX 306 and RPX 200 endpoints not all endpoints can connect.	V7.0	
170	*Interoperability*	VNGR-16194	On an RMX4000 version 7.0, with four VVX 1500s and an 1 HDX 9000 endpoints connected on multiple occasions loss of video and audio for several seconds.	V7.0	
171	*Interoperability*	VNGR-16297	CMAD receives distorted video while calling to RMX.	V7.0	
172	*Interoperability*	VNGR-16322	On an RMX 2000 running a 1920 Kbps Telepresence conference, endpoints have the top part of their video screen cropped off.	V7.0	
173	*Interoperability*	VNGR-16363	On the RMX2000 with an MPMx card, when starting a new a 2MB conference, Ipower endpoints take a long time to connect.	V7.0	
174	*Interoperability*	VNGR-16378	In a SD conference (1024 resolution) with motion, auto layout enabled, when connecting HDX and dial in from Life Size endpoint, the endpoints do not connect in SD with 60 FPS as required.	V7.0	
175	*Interoperability*	VNGR-16383	On the RMX2000 with an MPMx card in a 512Kbps conference with High Profile, Gathering, IVR, Echo Suppression enabled and resources set to a Flexible Mode, when dialing-out using H.261, connection problems are encountered in VSX endpoints after about 10 seconds.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
176	*Interoperability*	VNGR-16387	On an RMX2000 with the MPM+ card, when connecting with an HDX9000 endpoint to the Entry Queue using a line rate of 384Kbps, the IVR slide blinks.	V7.0	
177	*Interoperability*	VNGR-16390	In a 768Kbps Telepresence conference when connecting to a TPX using a 1x7 layout, the HDX8000 video looks elongated in the large cell.	V7.0	
178	*Interoperability*	VNGR-16408	In a 4096Kbps conference with Auto Layout enabled, when dialing out to 3 HDX and 3 VSX endpoints, video freezing occurs.	V7.0	
179	*Interoperability*	VNGR-16506	Lip sync is noticeable on HDX 7000 rev. B that dials into a conference running at a line rate of 1Mbps.	V7.0	
180	*Interoperability*	VNGR-16519	In an 512Kbps CP conference with AES and Sharpness enabled, when Dial-in endpoints view the Gathering slide the CMAD video freezes.	V7.0	
181	*Interoperability*	VNGR-16595	On an RMX 4000 & MPM+ cards, running an 1920Kbps conference with Video Clarity, Auto Terminate, Video Quality, Sharpness, Encryption, LPR, Echo Suppression, Auto Layout, Gathering and Content for Legacy Endpoints enabled, when connecting 20 HDX, Tandberg 17000 and edge95 MXP & 3 Tandberg C series endpoints the MFA card error occurs.	V7.0	
182	*Interoperability*	VNGR-16599	On an RMX 2000 in a H.261 video conference, when a Tandberg MXP6000 connects using H.261 there is no video.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
183	*Interoperability*	VNGR-16643	A conference started from the default video conference, an H.320 Sony PCS-G50 endpoint transits the Entry Queue and when accessing the conference it connects with no video.	V7.0	
184	*Interoperability*	VNGR-16644	In a conference started from the default conference profile, when the RMX dials-out to the H.323 iPower 9000 endpoint, it views the IVR welcome screen for about 40 seconds before viewing conference video.	V7.0	
185	*Interoperability*	VNGR-16646	In a conference started from the default Profile, when the RMX dials-out to an H.320 iPower 9000 endpoint, the endpoint's video layout is shifted to the bottom right of the monitor with black borders on the left and top of the screen.	V7.0	
186	*Interoperability*	VNGR-16650	In a 384Kbps SIP conference with Auto Layout, Sharpness, Video Clarity, Gathering and Send Content to Legacy Endpoints enabled, when the RMX blast dial-out all types of endpoints, the VSX7000 and VSX8000 sites display video stills throughout the conference.	V7.0	
187	*Interoperability*	VNGR-16735	LifeSize endpoints transmits CIF instead of HD 720p resolution in a SIP1920Kbps conference call located on an MPMx card.	V7.0	
188	*Interoperability*	VNGR-16737	On an RMX 4000 with an MPM+ card, LifeSize does not transmitting or receiving video during a SIP 1920Kbps conference call.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
189	*Interoperability*	VNGR-16776	Undefined HDX endpoint cannot be added to the Address Book on RMX with Avaya Call Manager. Second attempt yields message that participant name already exists in Address Book.	V7.0	
190	*Interoperability*	VNGR-16791	In a 1024Kbps conference with Auto layout, Sharpness, AES, H.239 Content to Legacy Endpoints and LPR enabled, Lifesize endpoints encounter poor video.	V7.0	
191	*Interoperability*	VNGR-16797	In H.323 and SIP calls to RMX with MPMx, Aethra X7 endpoint displays blurred, tiled video.	V7.0	
192	*Interoperability*	VNGR-16806	On RMX 1500, a macro block is displayed in the large video window of the video layout when PVX endpoint is the speaker.	V7.0	
193	*Interoperability*	VNGR-16810	On an RMX 1500 set to the Flexible mode and running an HD720p 2Mb conference with IVR, Gathering, High Profile, and Audio Clarity enabled, 15 PVX, HDX, VSX 300, 7000 CMAD endpoints cannot change layouts when DTMF codes are used.	V7.0	
194	*Interoperability*	VNGR-16820	VSX8000 endpoint connected to RMX 1500 with MPMx in 1920kbps conference, transmits green video to all endpoints but correctly displays all connected participants' video.	V7.0	
195	*Interoperability*	VNGR-16825	Using RMX 2000 with MPMx, H.320 call to VSX8000 endpoint fails with Call Disconnection Cause listed as "No net connection - 0 ".	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
196	*Interoperability*	VNGR-16841	Connect to the network using VPN and then start a conference with LPR enabled, connect endpoints using CMAD, the video of the endpoints was very fragmented.	V7.0	
197	*Interoperability*	VNGR-16856	Artifacts displayed on ISDN endpoints connected to RMX 1500 when content is started or stopped.	V7.0	
198	*Interoperability*	VNGR-16868	On RMX 1500 audio interruptions are experienced by CMAD endpoints.	V7.0	
199	*Interoperability*	VNGR-16877	Avaya 1XC Softphone endpoints connected to conference on RMX do not receive content, while HDX endpoints do.	V7.0	
200	*Interoperability*	VNGR-16889	On RMX 1500 Video Preview - View Participant Received Video of VSX3000 endpoint is displayed as a green screen. Problem occurs at 384kbps, feature works correctly at higher call rates.	V7.0	
201	*Interoperability*	VNGR-16894	When the privacy shutter of a VVX1500 endpoint is closed, a mosaic is displayed instead of a black screen.	V7.0	
202	*Interoperability*	VNGR-16903	RMX 2000 with MPMx stops receiving calls from DMA. Subsequent calls disconnect with disconnection cause cited as Resources Deficiency.	V7.0	
203	*Interoperability*	VNGR-16921	On an RMX with version 7.0, when an Avaya 1XC Softphone dials Avaya 1XC Softphone when pressing the "Conference" button on the Avaya 1XC Softphone the Ad hoc conference on the RMX does not start.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
204	*Interoperability*	VNGR-16924	In DMA, when a SIP endpoint is connected to a certain MCU, and the user chooses to stop using it, the call is routed to a different MCU while the call rate is reduced by 64k.	V7.0	
205	*Interoperability*	VNGR-16925	Avaya 1XC Softphone intermittently partially connects to conference RMX when connecting as 2nd or subsequent participant.	V7.0	
206	*Interoperability*	VNGR-16938	Using Tandberg MXP endpoints, artifacts and choppy occur in video for 10 seconds after 1mbps H.323 or SIP connection to RMX 1500.	V7.0	
207	*Interoperability*	VNGR-16943	The Gathering slide turns green after changing layout on ViewStations when ViewStation SP Release 7.5.4.16 SP and ViewStation 512k Release 7.5.4.17 are connected to a conference running on RMX2000 with MPM+ at a Line Rate of 384Kbps, LPR, Same Layout and Auto Layout are enabled.	V7.0	
208	*Interoperability*	VNGR-16950	When RMX dials out from an encrypted conference running at 768Kbps, video quality set to Sharpness and with LPR enabled to H.323 HDX-A, the call connects OK. Then, H.323 HDX-B dials into HDX-A and the call connects OK. When HDX-B disconnects from HDX-A, the video freezes on HDX-A and RMX shows HDX-A as connected with problem.	V7.0	
209	*Interoperability*	VNGR-16955	iPower 9000 endpoint in H.323 call with RMX with MPM+ or MPMx does not transmit audio in encrypted calls.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
210	*Interoperability*	VNGR-16960	Call on RMX 2000 with MPMx using HDX endpoint connects at 128Kbps with resolution HD720p even if RMX call rate is set for 8Mb.	V7.0	
211	*Interoperability*	VNGR-17073	Loss of lip sync occurs on HDX9004 endpoint talking to an HDX9000 endpoint in 2Mbps conference with the following mix of endpoints: H323, PSTN, PVX, CMAD, HDX, dialed in via DMA with LPR on, Gathering Off, Echo suppression on.	V7.0	
212	*Interoperability*	VNGR-17221	Video from CMA-D participant was not displayed in call dialed via DMA to RMX4000 running V6.0.0.105 with 4*MPM+80 cards.	V6.0	
213	*Interoperability*	VNGR-17346	Striped video image of all other participants occurs on HDX8000 endpoint after dialing via DMA to RMX4000 running V7.0.1.16 with, 4*MPM+80 cards.	V7.0.1	
214	*Interoperability*	VNGR-17495	QDX6000 connects with a problem over H323 to a conference running on RMX 2000 with MPMx at a line rate of 192kbps or 128kbps, and LPR, Video Clarity and Send Content to Legacy Endpoints options enabled.	V7.0.2	
215	*Interoperability*	VNGR-17547	PVX H.323 endpoint cannot send content when connected to a conference running on RMX 2000 with MPMx, at a line rate of 384kbps.	V7.0.2	
216	*Interoperability*	VNGR-17559	Sony PCS-XG80 cannot connect to RMX 2000/ 1500 with MPMx over SIP.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
217	*Interoperability*	VNGR-17589	RadVision Scopia XT1000 is connected with a problem to a conference running on RMX 2000 with MPMx at a line rate of 4MB and LPR and Encryption enabled after viewing the IVR Welcome slide.	V7.0.2	
218	*Interoperability*	VNGR-17606	LifeSize systems are sometimes locking up and disconnecting when connected to a CP conference running on RMX 4000 with MPM+ at a line rate of 1920kbps, video quality set to Sharpness and LPR, Video Clarity and Send Content To Legacy Endpoint options enabled.	V7.0.2	
219	*Interoperability*	VNGR-17636	VVX is displayed in two conference video layout cells when connected over H.323 to a conference that includes two VVX endpoints when the VVX comes off hold while in the gathering screen. One cell is live video and the other cell is frozen video.	V7.0.2	
220	*Interoperability*	VNGR-17652	After resuming the call that was placed on hold, VVX 1500 display does not return to Auto Layout and remains small in the top right corner of the display. The VVX is connected via H.323 to a conference running at 128Kbps.	V7.0.2	
221	*Interoperability*	VNGR-17668	Sony PCS-XG80 receives video at a resolution of 432x240 instead of 720p when connected to a CP conference running on RMX 2000 with MPM+ at a line rate of 1920kbps with LPR, Video Clarity and Send Content to Legacy Endpoint options enabled.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
222	*Interoperability*	VNGR-17749	Flickering video is displayed for a few seconds on Lifesize Room 200 screen when connecting to a conference running on RMX 4000 at 4MB with Encryption and LPR enabled.	V7.0.2	
223	*Interoperability*	VNGR-17807	Radvison Scopia XT1000 does not transmit video when connected at a line rate of at 1920kbps to a CP conference running on RMX 2000 with MPMx and its Resource Configuration set for "Video Quality Optimized".	V7.0.2	
224	*Interoperability*	VNGR-17823	No cropping, no border and shrunken video is displayed on the VVX endpoint when connecting a VVX endpoint, HDX endpoint and a Telepresence endpoint to a conference set to telepresence mode that is running on RMX 2000 with MPMx cards.	V7.0.2	
225	*Interoperability*	VNGR-3977	Faulty connection status is indicated when the RSS 2000 recording link is the only participant in a conference and its video stream is not synchronized.	V1.1.0	The video stream is synchronized when the first participant connects to the conference.
226	*Interoperability*	VNGR-4652	HDX/VSX endpoints cannot connect directly to conferences while registered with Cisco Gatekeeper using the IP##NID string.	V1.1.0	Connect directly using the MCU IP Address via the Transit Entry Queue.
227	*Interoperability*	VNGR-6902	Sony PCS G70 (v2.61) and Sony PCS-1(v3.41) endpoints cannot connect to conferences using SIP connections.	V5.1	Force the endpoints to connect using H.323 connection.

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
228	*Interoperability*	VNGR-7597	H.323 link is connected as secondary when cascading with Tandberg MPS at 768Kbps, in both Video Switching and CP conferences.	V3.0.0	
229	*Interoperability*	VNGR-7598	H.323 link is connected as secondary when cascading with Tandberg MPS at 768Kbps, in both Video Switching and CP conferences.	V3.0.0	
230	*Interoperability*	VNGR-8605	The video of Sony G70 endpoint that is connected to a conference over ISDN at line rate of 128Kbps freezes when receiving Content from an HDX endpoint.	V3.0.0	
231	*Interoperability*	VNGR-9015	Radvision ECS Gatekeeper set to Routed Mode is not forwarding the LPR parameters as required, causing HDX calls with LPR enabled to connect with no video.	V3.0.0	
232	*Interoperability*	VNGR-9677	When switching Content sending from an HDX9004 to Aethra X7 and back, Content is not received by Aethra X7.	V4.0.0	
233	*Interoperability*	VNGR-9830	HDX endpoints may experience packet loss when the HDX endpoint's LAN Speed is configured to 100MB.	V4.0.0	Set the endpoint LAN Speed and Duplex Mode to Auto.
234	*Interoperability*	VNGR-9909	When dialing out to a Tandberg MXP ISDN endpoint, the IVR slide is not displayed, although the IVR message is played.	V4.0.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
235	*IP*	VNGR-16617	When CMAD endpoint running on Lenovo R61connects to a Meeting Room whose Line rate is 1024 Kbps, Video quality is set to Motion, Content is set to HiRes Graphics and LPR, Same Layout and Echo Suppression options are enabled, after few minutes in the conference the CMAD observes packet loss in the People Rx although QoS is enabled.	V7.0	
236	*IP*	VNGR-7734	Static Routes table in IP Network Service does not function.	V3.0.0	
237	*ISDN*	VNGR-12007	Occasionally, when ISDN participants connect to a conference with line rate 384kbs, multiple asserts appear in the log file.	V5.0.0	
238	*ISDN*	VNGR-12011	Occasionally, an ISDN participant fails to connect to the conference due to the following error - "MCU internal problem - 50020".	V5.0.0	
239	*ISDN*	VNGR-12034	In a conference running at a line rate of 384 Kbps, H.320 encrypted participant cannot connect and an assert appears.	V5.0.0	
240	*ISDN*	VNGR-15707	An RMX 4000 with a 384K H.320 conference with Motion and AES enabled, when a Tandberg 6000 MXP connects, the endpoint encounters video freezes.	V7.0	
241	*ISDN*	VNGR-16264	During a conference the ISDN line is functional but the line has no clock source.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
242	*ISDN*	VNGR-16301	After starting a VSW conference with LPR enabled, when dialing out using ISDN a message appears: "SIP cannot connect to VSW with LPR enabled"	V7.0	
243	*ISDN*	VNGR-16726	On an RMX2000 with MPMx cards running an 383 Kbps ISDN conference when connecting 10 endpoints by blast dial-out the endpoints video showed black screens.	V7.0	
244	*ISDN*	VNGR-16863	On RMX 1500, ISDN endpoint is listed with "Connected With Problem" status.	V7.0	
245	*ISDN*	VNGR-16879	In a 384Kbps H.320 conference with Video Clarity, Auto Terminate, Sharpness, Echo Suppression, Auto Layout, Gathering, and Send Content to Legacy Endpoints enabled, when the RMX dials-out to VS4000, FX, EX, VSX7000A and HDX9004 endpoints, flickering and video artifacts are seen.	V7.0	
246	*ISDN*	VNGR-16928	On RMX 1500, dial out from 256kbps conference to ISDN endpoint forced to 1920 kbps displays green screen and disconnects with "Internal MCU Problem".	V7.0	
247	*ISDN*	VNGR-16946	Video freezes on ISDN endpoints in a fully loaded RMX 2000 with MPMx when connecting, disconnecting and reconnecting all the endpoints at a line rate of 256Kbps.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
248	*ISDN*	VNGR-16974	Blurred (Predator) video is displayed on the HDX endpoint that is in self view when a movement occurs while the endpoint is connected via ISDN to a conference running at a line rate of 1472kbps, with encryption enabled.	V7.0.2	
249	*ISDN*	VNGR-17574	Internal ISDN\PSTN Audio Only calls get a loud noise (static/pop) prior to the start of the IVR message.	V7.0.2	
250	*ISDN*	VNGR-17635	The video of ISDN participants freezes during a conference running at a line rate of 256kbps on RMX 2000 with MPMx and Encryption and LPR options enabled.	V7.0.2	Set the conference to a Line rate other than 256Kbps.
251	*ISDN*	VNGR-17645	Video artifacts (video stream is superimposed on the IVR Welcome slide) when an ISDN participant connects to a conference running on RMX 2000 with MPMx at a line rate of 384kbps.	V7.0.2	
252	*ISDN*	VNGR-17689	ISDN endpoints do not connect at line rates higher than 768kbps, irrespective of profile setting, whether dial-in or dial-out.	V7.0.2	
253	*ISDN*	VNGR-17887	Sometimes, HDX9006 2.7.0-5547 and VSX7000 9.0.6 endpoints connecting over ISDN to a conference running at 384kbps do not receive video.	V7.0.2	
254	*ISDN*	VNGR-4405	When a busy signal is returned by a PSTN dial-out participant, the RMX does not redial but disconnects the participant with "party hung-up-0" status.	V2.0.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
255	*IVR*	VNGR-10054	Customized CIF slide is not displayed on the HDX screen when connecting to a 1080p High Definition Video Switching conference.	V4.0.1	
256	*IVR*	VNGR-11531	After upgrading the RMX to a software version that includes the gateway and the maximum number of IVR services reached 40 in RMX 2000 and 80 in RMX 4000, the default Gateway IVR Service is not created.	V4.1	
257	*IVR*	VNGR-12031	A conference running at a line rate of 1920Kbpsand IVR Service that includes a Welcome Slide, both the Welcome Slide and Video are partially blacked out.	V5.0.0	
258	*IVR*	VNGR-12116	When a participant is moved from one conference to another and becomes the single participant in the destination conference, the participant does not hear music.	V5.0.0	
259	*IVR*	VNGR-15101	In a Video Switched 4Mbps conference, only the last part of DTMFs *6 (mute) and #6 (unmute) messages are heard.	V7.0	
260	*IVR*	VNGR-15131	In a conference started from a Profile, when an ISDN call is forced to Audio algorithm G722_1_C_24k a buzzing noise can be heard before the IVR starts.	V7.0	
261	*IVR*	VNGR-15831	When uploading a number of high and low resolution slides to an IVR service, there is only option to choose one slide.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
262	*IVR*	VNGR-16313	On an RMX2000 with an MPMx card running a 512Kbps conference with Gathering, IVR, Echo Suppression enabled and resources set to a Flexible Mode, when dialing out using H.261 the IVR slide flashes.	V7.0	
263	*IVR*	VNGR-16460	On RMX 2000 with MPMx, H.261 endpoint that displays the default slide does not access nor displays a new slide that is added to the IVR Service.	V7.0	
264	*IVR*	VNGR-16539	In a mixed H.323 & SIP 128Kbps conference with Video Clarity, Sharpness, IVR Service and Welcome Slide settings set to "High profile optimized", when connecting HDX 8000 endpoints, the H.323 HDX endpoint does not view the IVR slide but a black screen for 15 seconds.	V7.0	
265	*IVR*	VNGR-16556	In a mixed H.323 & SIP 128Kbps conference with Gathering, Sharpness and the Welcome Slide defined as "High Profile optimized", when connecting HDX8000 endpoints, the H.323 HDX video has artifacts on the Gathering slide.	V7.0	
266	*IVR*	VNGR-17615	iPower 9000 remains in the IVR Welcome stage when connecting to a CP conference running at 384kbps with Video Quality set to Motion and Video Clarity, Encryption, LPR and Send Content to Legacy Endpoint options enabled.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
267	*IVR*	VNGR-17708	HDX8006 and HDX9006 remain in the IVR Welcome stage when connecting to a Video Switching conference running at 4MB with Video Quality set to Motion and video resolution set to 720p 60 fps.	V7.0.2	
268	*IVR*	VNGR-17833	RadVision Scopia XT1000 and Lifesize Room 200 remain in the IVR Welcome stage when connecting to a CP conference running at 4096kbps with Encryption and LPR enabled. Other endpoints connected normally.	V7.0.2	
269	*IVR*	VNGR-9834	When DTMF codes have been entered by the participants, the volume of the IVR Message may be suppressed or the message may be cut.	V4.0.0	
270	*LPR*	VNGR-10104	When an H.323 HDX endpoint sends Content, the endpoint disables the LPR.	V4.0.1	
271	*LPR*	VNGR-16997	LPR is enabled by default in the conference profile when CP mode is selected. LPR is disabled by default in the conference profile when VSW mode is selected. Changing between CP and VSW modes causes LPR to be enabled/disabled.	V7.0	
272	*Multilingual*	VNGR-14332	The stop monitoring option (in right click on MCU) in the RMX manager is not translated to Japanese. VNGBE-851	V6.0	
273	*Multilingual*	VNGR-14333	Translation of the Exchange Integration Configuration dialog box is missing.	V6.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
274	*Multilingual*	VNGR-14335	Several fields in the Conference Profile dialog box have not been translated.	V6.0	
275	*Multilingual*	VNGR-14336	Translations of some of the fields in the New Conference dialog box are missing.	V6.0	
276	*Multilingual*	VNGR-14338	Translation of the entries Copy Conference and past Conference in the Conference right-click menu is missing.	V6.0	
277	*Multilingual*	VNGR-14567	Translation of some of the fields in the Upgrade windows and dialog box are missing.	V6.0	
278	*Multilingual*	VNGR-14800	The translation of the Create Certificate button in the IP Network Service - SIP Server tab is missing.	V6.0	
279	*Multilingual*	VNGR-15812	Japanese translation is missing in some of the IVR Service dialog boxes.	V7.0	
280	*Multilingual*	VNGR-16429	On RMX with Operator Conference selected in profile, when trying to delete a running conference, the popup message is displayed in mixed English and Japanese.	V7.0	
281	*Multilingual*	VNGR-5151	The Display Name of undefined dial-in participant using HDX and VSX 7000 endpoints is displayed in English in the RMX Web Client.	V2.0.0	
282	*Multilingual*	VNGR-5310	Multilingual Settings are not reflected on the Shelf Management login page and the multilingual flags appear in the Shelf Manager window even when they have not been selected in the Multilingual Settings pane.	V2.0.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
283	*Partners - Microsoft*	VNGFE - 3246	RMX disconnects MOC ICE Call between federated sites when RMX is not installed in the same site as the OCS Pool.	V7.0	Install the RMX on a main domain or federate the sub domain.
284	*Partners - Microsoft*	VNGR-13314	When resetting the RMX after loading the certificate and registering the RMX with the OCS, two active alarms appear: "SIP registration transport error" and "No response from Registration server".	V6.0	
285	*Partners - Microsoft*	VNGR-15798	In ICE environment, a green overlay is displayed on top of one of the video layout in the Gathering slide when a dial out MOC or HDX endpoint connect to the conference.	V7.0	
286	*Partners - Microsoft*	VNGR-17631	RMX does not identify the OC/4 version (Lync Server 2010/OCS-W14), hence the wrong video settings are used (4CIF instead of CIF).	V7.0.2	
287	*Partners - Microsoft*	VNGR-17743	In an environment that includes the Microsoft Lync server and RMX 4000 MPM+80 with ICE enabled, when the RMX dials out to two Lync clients with HDX connected, the second Lync client is disconnected from the conference that is running at 384kbps, with Encryption and LPR enabled due to a SIP HW internal MCU problem.	V7.0.2	
288	*Partners - Microsoft*	VNGR-17746	In an environment that includes the Microsoft Lync server and RMX 4000 MPM+80 with ICE enabled, when the Lync client escalates to video after connecting as Audio Only to a Meeting Room that is running at 384kbps, with Encryption and LPR enabled, artifacts appears at the start of the video.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
289	*Partners - Microsoft*	VNGR-17753	In Microsoft Lync environment with ICE enabled, when the RMX 4000 with MPM+80 dials out to two Lync Clients (MOC1 with Creative Camera connected and MOC2 with CX5000 RoundTable connected), MOC1 does not receive video from MOC2.	V7.0.2	
290	*Partners - Microsoft*	VNGR-17757	In Microsoft Lync environment with ICE enabled, when a Lync client dials an Entry Queue running on RMX 4000 with MPM+80, the Lync client is not given enough time to enter the meeting room ID and is disconnect from the Entry Queue.	V7.0.2	
291	*PCM*	VNGR-15700	When PCM is initiated, site names are displayed over the PCM menu.	V7.0	
292	*PCM*	VNGR-15757	Initiating PCM when there is only one endpoint connected to a conference that is receiving music results in the music being interrupted.	V7.0	
293	*PCM*	VNGR-15822	When PCM is activated in a Gathering-enabled conference, the PCM menu is displayed on top of the gathering slide instead of the display of the Gathering Slide being terminated before the PCM menu is displayed.	V7.0	
294	*PCM*	VNGR-16849	When H.263 participant uses PCM on RMX 2000 with MPM+, additional Video Windows appear in the Video Layout and the PCM menu appears with large letters on a blurred, colored display.	V7.0	
295	*PCM*	VNGR-16968	PCM is not supported with MPMx Cards.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
296	*Recording*	VNGR-16947	In a conference running at 384Kbps and Gathering is enabled, recording is set to "Upon request" the recording is started once the gathering phase ends, resulting in the display of the Gathering slide and layout without text details and after 15 seconds the Gathering slide and layout remain and appear in the recording.	V7.0	
297	*RMX 1500 Audio*	VNGR-16857	On RMX 1500 metallic audio is heard periodically on PVX endpoint.	V7.0	
298	*RMX 1500 general*	VNGR-16809	DTMF Code *71 (Secure Conference) sent to RMX 1500 displays Gathering Slide Text instead of "Secured" indicator text.	V7.0	
299	*RMX 1500 video*	VNGR-16859	On RMX 1500 some endpoints display green flickering screen on layout change from 4x4 to 1x1.	V7.0	
300	*RMX 1500 video*	VNGR-16867	On RMX 1500 with MPMx, when the endpoint displayed in the large video window in 2+8 layout disconnects, the large video window is not re-allocated to another endpoint.	V7.0	
301	*RMX 1500 Video*	VNGR-16901	On RMX 1500 Video Preview is preceded by a green screen momentarily before Video Preview starts.	V7.0	
302	*RMX 4000*	VNGR-14386	Display information for Slot 5, FSM (Fabric Switch Module), in the RMX 4000 Hardware Monitor is incomplete.	V5.1	
303	*RMX 4000*	VNGR-16892	On an RMX4000 with MPMx_D cards in the Hardware Monitor the RTM_LAN card is not listed.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
304	*RMX 4000*	VNGR-17778	When trying to connect 180 V500/VSX to each of the two conferences running simultaneously on RMX 4000 with 4 MPMx-D cards, both conferences running at a line rate of 384, Video Quality set to Motion and Max CP resolution set to CIF, 180 participants connected to the first conference, while several participants out of the 180 could not connect to the second conference.	V7.0.2	
305	*RMX Manager*	VNGR-14175	When using the RMX Manager, a Message Alert "500" is displayed when an RMX running Version 4.6 is selected in the MCU's list.	V6.0	
306	*RMX Manager*	VNGR-16677	Progress bar missing in RMX manager during upgrade.	V7.0	
307	*RMX Manager*	VNGR-17602	Double clicking on a card in Hardware monitor of the RMX Manager application displays the Card Properties dialog instead on the Processor Properties dialog box.	V7.0.2	
308	*RMX Manager*	VNGR-18170	Video Preview cannot be activated in RMX Manager application.	V7.0.2	
309	*RMX Web Client*	VNGR-12172	In the RMX Web Client, the main window opens up as full screen and cannot be resized.	V5.0.0	
310	*RMX Web Client*	VNGR-12257	When upgrading the RMX Web Client with software changes, Internet Explorer needs to be closed and opened before the upgrade can take place.	V5.0.0	
311	*RMX Web Client*	VNGR-14778	ISDN/PSTN fields are disabled (grayed out) although Enable ISDN/ PSTN Dial-in check box is selected in RMX Management > Entry Queues > Default EQ.	V6.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
312	*RMX Web Client*	VNGR-16210	On an RMX 1500 with a conference and connected participants, when multiple web clients are opened on different PC's and Video Preview is activated, when opening another browsing session and viewing Video Preview, all the browsers close though some view a "failure status" message.	V7.0	
313	*RMX Web Client*	VNGR-2473	Sometimes when installing the RMX Web Client, Windows Explorer >Internet Options> Security Settings must be set to Medium or less.	V1.1.0	
314	*RMX Web Client*	VNGR-7557	When connecting directly to the Shelf Manager and selecting Diagnostic Mode the CNTL module does not enter the diagnostic mode and stays "Normal".	V3.0.0	Reset the MCU and then switch to Diagnostic Mode.
315	*RMX Web Client*	VNGR-9829	Occasionally, during an ongoing conference, when selecting the Hardware Monitor menu the message "No connection with Switch" appears.	V4.0.0	
316	*SIP*	VNGR-11949	The maximum number of Meeting Rooms, Entry Queues, SIP Factories and ongoing conferences that can be registered to the Proxy, is limited to 100.	V5.0.0	
317	*SIP*	VNGR-12006	With SIP defined and undefined dial-in participants you cannot change the layout type from "conference layout" to "personal layout".	V5.0.0	
318	*SIP*	VNGR-16535	SIP HDX sites (Version 2.6.1 and 2.6.0) receive video in resolution of 432x240 instead of 720p when connecting to a CP conference running on RMX 4000 at a line rate of 1920Kbps with 10+ layout selected and LPR is enabled.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
319	*SIP*	VNGR-16663	In ICE environment, when connecting endpoints from all NAT environments (corporate/branch / enterprise) to an encrypted, 720p VSW conference, running at a line rate of 2M bps with video quality set to sharpness and video clarity and auto layout enabled, endpoints fail to connect to the conference with a disconnection cause "SIP request timed out".	V7.0	To overcome the problem do one of the following: * Connect the endpoints one by one. * Run a non encrypted 2M VSW conference * Run the conference at a lower line rate (768Kbps)
320	*SIP*	VNGR-16674	In ICE environment, when connecting endpoints from all NAT environments (corporate/branch/ federated) to an encrypted CP conference running at a line rate of 2Mbps, video quality set to sharpness, and video clarity and auto layout are enabled, some of the endpoints fail to connect due to TB_MSG_OPEN_PORT MCU internal problem or SIP HW MCU internal problem.	V7.0	
321	*SIP*	VNGR-16839	On RMX with MPMx in High-Profile Motion conference at 512kbps, HDX endpoints connected via SIP only transmit H.264 HP / 4SIF at 15 frames per second.	V7.0	
322	*SIP*	VNGR-17562	The QDX6000 SIP endpoint is connected with problem to a conference running on RMX 4000 with MPM+ at a line rate of 768kbps and LPR, Video Clarity and Send Content To Legacy Endpoint options enabled.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
323	*SIP*	VNGR-17626	SIP endpoint (no High Profile) connected at a resolution of SD30 instead of SD60 when connecting to a conference running on RMX 4000 with MPMx at a line rate of 1024kbps with LPR enabled and Video Quality set to Motion.	V7.0.2	Disable the LPR option.
324	*SIP*	VNGR-17627	High Profile enabled SIP endpoint connected at a resolution of SD30 instead of SD60 when connecting to a conference running on RMX 4000 with MPMx at a line rate of 512kbps with LPR enabled and Video Quality set to Motion.	V7.0.2	Disable the LPR option.
325	*SIP*	VNGR-17628	High Profile enabled SIP endpoint connected at a resolution of SD60 instead of 720p60 when connecting to a conference running on RMX 4000 with MPMx at a line rate of 1024kbps with LPR enabled and Video Quality set to Motion.	V7.0.2	Disable the LPR option.
326	*SIP*	VNGR-17633	Incorrect display name of the RMX is displayed on SIP endpoints. RMX Display name includes additional characters and not just the URI.	V7.0.2	
327	*SIP*	VNGR-3276	SIP participants cannot connect to a conference when the conference name contains blank spaces.	V1.1.0	
328	*Software Version*	VNGR-8259	If an RMX operating in Secure Communication Mode, is downgraded to a version that does not support Secure Communication Mode (V2.0, V1.1), all connectivity to the RMX is lost.	V3.0.0	Cancel the Secure Mode before downgrading

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
329	*Software Version*	VNGR-9228	When trying to restore last version, after upgrading from version 3 to version 4, the RMX prompts for an activation key.	V4.0.0	
330	*Unified Communication Solution*	VNGR-13729	When connecting from a MOC endpoint using the link sent in the meeting invitation to an ongoing conference that was scheduled via the Polycom add-in for Microsoft Outlook on the RMX 4000 (standalone) with Gathering and Recording enabled, the conference is not started as a Meeting Room/Conference Reservation or ongoing conference with the same name already exist in the MCU.	V6.0	
331	*Upgrade Process*	VNGR-12732	After upgrading the system from version 5.0 to version 4.6, the Users list is deleted and the default POLYCOM User is created. For security reasons, it is recommended to delete this User and create your own User.	V4.6	
332	*Upgrade Process*	VNGR-14720	After software Upgrade is completed, an Active Alarm "Connection to Exchange Server failed" appears in the Alarms List on the RMX4000.	V6.0	
333	*Upgrade Process*	VNGR-15904	When upgrading RMX4000 MPM+ from version 6.0.0.105 to version 7.0.0.91, the fault "Card voltage problem" is displayed for all installed cards.	V7.0	
334	*Upgrade Process*	VNGR-15907	When upgrading RMX4000 MPM+ from version 6.0.0.105 to version 7.0.0.91, the Fabric Switch name is missing from the Hardware Monitor.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
335	*Upgrade Process*	VNGR-15909	When upgrading RMX4000 MPM+ from version 6.0.0.105 to version 7.0.0.91, the RMX Type (RMX4000) does not appear in the Hardware Monitor window.	V7.0	
336	*Upgrade Process*	VNGR-16258	Minor changes in the documentation to the upgrade process.	V7.0	
337	*Upgrade process*	VNGR-16422	RMX 2000 logs off during upgrade procedure when network is under stress.	V7.0	When the network is busy, use the RMX Manager application instead of the RMX Web Client to control the MCU.
338	*Upgrade Process*	VNGR-16462	When downgrading to software V6.0.0.105 and performing "Comprehensive restore" to Factory default, followed by upgrade to version V7.0.0.115 the upgrade procedure is stuck in "Software Loading" phase. System Reset (hard or soft) is required to resolve the problem.	V7.0	
339	*Upgrade Process*	VNGR-16752	On the RMX 2000/4000 with an ISDN card installed, after configuring the IP Fast Configuration Wizard, the system requests a reset and not to configure the ISDN Service.	V7.0	
340	*Upgrade Process*	VNGR-16817	After upgrading to version 7.0.0.135 the RMX Web Client shows that RMX is no longer in the "Startup" phase even though Faults list states: "Configuring".	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
341	*Upgrade Process*	VNGR-16886	On an RMX 1500/2000/4000 with MPMx cards, when upgrading to version 7.0 to build 139 and implementing the Diagnostic mode the MPMx card status remains in a "startup" phase.	V7.0	
342	*Upgrade Process*	VNGR-16954	On an RMX4000 after upgrading to version 7.0, build 148, the RMX "Could not complete MPM Card startup procedure".	V7.0	
343	*Upgrade Process*	VNGR-17411	Sometimes, the error message "Socket reconnected" is displayed after downgrading from V7.0.2.11 to V6.0.2.2.	V7.0.2	
344	*Upgrade Process*	VNGR-17768	When upgrading or downgrading the RMX 1500 software version and adding the activation key, the RMX Web Client disconnects from the RMX.	V7.0.2	
345	*Upgrade Process*	VNGR-18242	When upgrading RMX4000 with 4 MPM+ cards from Version 7.0.0.162 to Version 7.0.2.61 Two of the MPM+ cards remain in startup mode and do not complete the upgrade.	V7.0.2	
346	*Upgrade Process*	VNGR-18272	When downgrading an RMX 4000 with 4 MPMx cards from version 7.0.2.64 to version 7.0.1.16, the IMPC is burnt on only three out of four cards and the fourth card appears with voltage problem.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
347	*Upgrade Process*	VNGR-18276	When upgrading an RMX 2000 with one MPM card from version 7.0.1.16 to version 7.0.2.64, the MPM card appears to be in normal state in the Hardware Monitor but with no available units. The status LED on the card is green as in normal status. The upgrade procedure takes longer to complete, and until it does the audio controller units cannot be used.	V7.0.2	
348	*Upgrade Process*	VNGR-18278	No access to RMX 2000 after software upgrade from version 7.0.2.61 to version 7.0.2.64.	V7.0.2	
349	*Upgrade Process*	VNGR-9565	When downgrading from version 4.0 to version 3.0, the MPM card does revert to normal.	V4.0.0	
350	*Upgrade Process*	VNGR-9740	When upgrading from version 2.0.2 to version 4.1, and then Restoring the Factory Defaults, during system restart sometimes MPL failure is encountered.	V4.0.0	Turn the MCU off and then turn it on ("hardware" reset)."
351	*Upgrade Process, Video*	VNGR-16215	Create conference set to High Profile and connect Durango endpoints, the Durango and HDX8000 Video preview is in a green color.	V7.0	
352	*Video*	VNGR-10239	In a 4Mb conference set to Sharpness and the IVR Welcome Message enable video appears in a 4x3 format. Disable IVR Welcome message and the video appears in 6x9 format.	V4.0.1	
353	*Video*	VNGR-11351	When the video from an endpoint is blocked, inconsistent video resolution settings are implemented.	V4.1	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
354	*Video*	VNGR-11382	Legacy endpoints receive Content in 1+7 layout with black stripes on the sides (for aspect ratio fitting), selecting a different layout using Click&View (**) causes the black stripes to disappear.	V4.1	
355	*Video*	VNGR-11843	In a 2 Mb Video Switched conference with 10 or more H.323 endpoints connected, random video refreshes may occur.	V5.0.0	
356	*Video*	VNGR-11965	In a conference running at a line rate of 384 Kbps, with AES and LPR enabled, calls connect using the H.263 instead of the H.264 video protocol.	V5.0.0	
357	*Video*	VNGR-13001	Video display freezes momentarily with every speaker or layout change in a conference with HDX and SVX endpoints.	V4.6	
358	*Video*	VNGR-13152	Message overlay is limited to 32 Chinese characters OR 96 ASCII characters.	V4.6	
359	*Video*	VNGR-14124	On rare occasions in 2Mbps ISDN calls, ISDN participants connected without their endpoints sending video for a few seconds.	V6.0	
360	*Video*	VNGR-15155	In a conference with a line rate of 4096kbps, set to Sharpness, 1+5 layout, after connecting a few endpoints, when an endpoint dials out, video In & Out freeze.	V7.0	
361	*Video*	VNGR-15386	Artifacts present in the Gathering Slide in 2560kbps, CP conference with Motion selected.	V7.0	
362	*Video*	VNGR-15495	Connect to a conference with HDX 8000 & 9000 endpoints, FECC on some of the endpoints starts only after 10 seconds.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
363	*Video*	VNGR-15541	Create a conference on the RMX using the default factory video profile, connect a Sony PCS-G50 endpoint, and then try to control the XG80's camera. There is no response.	V7.0	
364	*Video*	VNGR-15709	In a 2MB CP conference with LPR, Gathering, Sharpness, Video Clarity and Auto Brightness enabled, when connecting SIP & H.323 PVX/HDX endpoints, when starting PCM and selecting 1*1 Layout, the conference video has video artifacts.	V7.0	
365	*Video*	VNGR-15722	On an RMX 4000 with MPM+ cards, when trying to view the Video Preview window, video is occasionally absent.	V7.0	
366	*Video*	VNGR-15724	On RMX with MPMx, when a skin without background is selected, the Polycom skin background is displayed. When a skin with a background is selected, the speaker notation color is incorrect.	V7.0	
367	*Video*	VNGR-15738	When monitoring a conference and right-clicking a participant, the participant's video and audio freezes.	V7.0	
368	*Video*	VNGR-15763	A conference started from a Profile set to "Motion" and Video Resolution "HD 1080" after connecting HDX endpoints, resources used are incorrect.	V7.0	
369	*Video*	VNGR-16050	When using the MPMx card to run a conference with Auto Brightness enabled, no difference can be seen in the video between a light and darkened room.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
370	*Video*	VNGR-16245	The resolution 1080p60fps is not available on the RMX 1500/2000/4000	V7.0	
371	*Video*	VNGR-16337	On an RMX 4000 in a 4096Kbps conference with Auto Terminate, Sharpness, Encryption, LPR, Echo Suppression, Auto Layout enabled, when dialing out to 40 HDX endpoints video corruption occurred.	V7.0	
372	*Video*	VNGR-16384	On an RMX 2000 with the MPMx card with a conference running, when HDX endpoints connect, sometimes in some of the video cells the Aspect ratio is incorrect when the source is 4:3 - and destination is 16:9.	V7.0	
373	*Video*	VNGR-16618	On an RMX with MPM+ cards, when configuring the resolution of Configuration Slider to HD 1080p60/ HD 720p60 - in the participant properties you should not be able to select HD1080/HD 720p as the Maximum Resolution (People Video Definition).	V7.0	
374	*Video*	VNGR-16657	In a 4MB HD1080p conference with Content, Video Clarity, Auto Termination, Encryption, LPR, Echo Suppression and Auto Layout enabled, when dialing out to six HDX8006 endpoints and changing the speaker, all endpoints had bad video.	V7.0	
375	*Video*	VNGR-16695	Using MPMx, frame rate in motion conference is less than 60fps on HDX endpoints that connect at HD resolution at 1920kbps and are not allocated on the Turbo DSP.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
376	*Video*	VNGR-16708	The displayed resolution of the gathering slide differs between H.323 participant (432x240) and H.320 participant (480x352) when both endpoints are connected to a CP conference running at a line rate of 384Kbps with video quality set to Motion and LPR is enabled. Once the Gathering phase ends, all participants connect with 2SIF resolution.	V7.0	
377	*Video*	VNGR-16722	On RMX 2000 with one MPM-H, small artifacts are displayed in the Gathering Slide when the configuration is changed to Presentation Mode during the Gathering Phase.	V7.0	
378	*Video*	VNGR-16724	On RMX 1500, video display freezes momentarily during Video Layout changes before the new Video Layout is displayed.	V7.0	
379	*Video*	VNGR-16725	Blinking video occurs during ISDN blast dial-out at 384kbps on RMX 2000 with MPMx.	V7.0	
380	*Video*	VNGR-16782	On an RMX 1500, when adding 45 VSX and V500 endpoints to a 348 Kbps CIF CP conference, with Motion, Echo Suppression and Auto Layout enabled, VSX8000 endpoints connect using incorrect resolutions and video stills are encountered.	V7.0	
381	*Video*	VNGR-16796	On RMX with MPMx, Intra request from endpoint connected via H.264 CIF stream can sometimes take almost 1 second to be answered.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
382	*Video*	VNGR-16812	When connecting 15 PVX, HDX, VSX 3000/ 7000 CMAD endpoints to a 2Mb HD720p conference with IVR, Gathering, High Profiles and Audio Clarity enabled, running on an RMX 1500, changing the conference layout from 1x1 to 4x4 (10+) results in brief video freezes.	V7.0	
383	*Video*	VNGR-16858	When connecting to 10 HDXs to a 4096Kbps conference with Encryption, LPR, Auto Termination, Sharpness, Auto Brightness, Audio Clarity and a 1x1 conference Layout enabled, running on an RMX2000 with MPM+ cards, the Welcome screen on one of the endpoints is partially fuzzy.	V7.0	
384	*Video*	VNGR-16880	When connecting HDX & VSX endpoints to a mixed ISDN & IP 4096Kbps conference with Auto Terminate, Encryption, LPR, Sharpness, Auto Layout, Same Layout and Video Clarity enabled, running on an RMX 2000 with MPM+ cards, and muting and unmuting them, HDX endpoints encounter flickering video.	V7.0	
385	*Video*	VNGR-16944	Conferences running at a line rate of 768 and 1024Kbps with Gathering enabled may display distorted font and discolored background at 432x240, 512x288, 848x480 and 720x400 resolutions.	V7.0	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
386	*Video*	VNGR-16952	During a 1472Kbps conference with LPR, AES, Gathering, Send Content to Legacy Endpoint and Auto Layout enabled, the video of VSX7000 and HDX8006 endpoints does not appear in the conference layout.	V7.0	
387	*Video*	VNGR-16958	During a 128Kbps conference with AES, Gathering, Motion, Send Content to Legacy Endpoints and Auto Layout enabled, empty layout cells, poor video and video stills occur in HDX, VSX, Lifesize endpoints.	V7.0	
388	*Video*	VNGR-17139	In a DMA 2Mb dial-in conference with LPR enabled and 20 mixed endpoints (HDX, VSX, CMAD H323, PSTN), three DSP video failures occurred and frozen video was viewed on two HDXs.	V7.0	
389	*Video*	VNGR-17148	Participant is seen blurred when connecting with QVGA resolution to a conference layout of 1+7.	V7.0.1	
390	*Video*	VNGR-17156	In a DMA dial-in Meeting Room with several endpoints, a few endpoints viewed Zebra video artifacts.	V7.0	
391	*Video*	VNGR-17208	Video in layout 1+7 from VSX3000 is not displayed in conference with endpoints that dialed via DMA to RMX4000 running V7.0.0.162 with 4*MPM+80 cards.	V7.0	
392	*Video*	VNGR-17215	In a Dial-in Meeting Room with mixed (HDX8000/ 9004) endpoints, the endpoints viewed zebra video.	V7.0.1	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
393	*Video*	VNGR-17220	documentation: Horizontal black lines are displayed across the video window on all endpoints in calls dialed via DMA to RMX4000 running V6.0.0.105 with, 4*MPM+80 cards.	V6.0	
394	*Video*	VNGR-17272	In a DMA Dial-in Meeting Room with several endpoints, HDX9004 viewed distorted video from other endpoints	V7.0.1	
395	*Video*	VNGR-17282	In a DMA Dial-in Meeting Room with several HDX8000 endpoints, video transmission stopped.	V7.0.1	
396	*Video*	VNGR-17291	In a Dial-in Meeting Room, endpoints viewed impaired video and occasionally received bad audio.	V7.0.1	
397	*Video*	VNGR-17302	Black screen with normal audio occurs on HDX8002 endpoint that dialed via DMA to RMX2000 running V7.0.1.16 with 2*MPMX cards.	V7.0.1	
398	*Video*	VNGR-17363	Endpoint connects at a higher resolution than expected according to the Resolution Slider configuration when line rate of the endpoint is forced to a lower rate than the conference rate. For example, if the conference line rate is 1024kbps and the endpoint line rate is forced to 512kbps, the endpoint resolution upon connection will be 720p instead of SD (as if it was connected at 1024Kbps).	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
399	*Video*	VNGR-17377	High Profile enabled HDX 8000 remains in the Gathering layout with frozen video inside the cells after blast dial out to several endpoints of type HDX 8000/ HDX 9004 / HDX 4000/ VSX 8000/ VSX 3000 from a CP conference at a line rate of 512kbps and LPR enabled.	V7.0.2	
400	*Video*	VNGR-17379	Green video image occurs on HDX8000 v2.6.0-4740 endpoint after dialing to RMX 2000 running V7.0.1.16 with, 2*MPM+80 cards.	V7.0.1	
401	*Video*	VNGR-17484	Periodic video freezes on H.323 endpoints when connected to a CP conference running on RMX 1500 at a line rate of 4096kbps and AES and LPR options enabled.	V7.0.2	
402	*Video*	VNGR-17514	An empty cell is displayed in the video layout when muting and then unmuting individual endpoints that are connected to the conference as follows: 10 ISDN at a line rate of 128kbps, 7 HDX 8006 at a line rate of 4096kbps, 15 HDX 9004at a line rate of 1024kbps and 15 VSX 384kbps.	V7.0.2	
403	*Video*	VNGR-17525	A black vertical line is displayed between cells where usually there is a border when OTX and RPX 400 endpoints are connected to a conference running on RMX system with MPMx at a line rate of 4MB and video Quality set to Sharpness.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
404	*Video*	VNGR-17539	Objects in video sent from VSXs are displayed stretched horizontally on HDXs screens when all are connected to a conference running on RMX 1500 over H323 and SIP.	V7.0.2	
405	*Video*	VNGR-17542	VSX8000 sees frozen video of the Gathering slide when connected over H.323 or ISDN to a conference running on RMX 1500 at a line rate of 1024kbps and LPR, encryption and Send Content to Legacy Endpoint options enabled.	V7.0.2	
406	*Video*	VNGR-17571	Rainbow bar appears when changing the conference layout from CP_LAYOUT_1X2 or from CP_LAYOUT_1X2HOR to CP_LAYOUT_1X2VER or CP_LAYOUT_2X1 in a conference running on RMX 2000 with MPMx, at a line rate of 4096kbps, Video Quality set to SHARPNESS and Video Clarity, Encryption, LPR and Echo Suppression options enabled.	V7.0.2	
407	*Video*	VNGR-17580	Site names are blinking when connecting H.261/ 263 participants to the conference.	V7.0.2	
408	*Video*	VNGR-17611	Video seen on HDX8006/ 7006 screen looks superimposed and blotchy after changing the video layout to full screen when connected via H.323 to a conference running on RMX 2000 with MPMx at a line rate of 384kbps and Encryption and LPR options enabled.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
409	*Video*	VNGR-17640	Video freeze occur when connecting the 74th HD 720p participants (out of 80) to a conference running on RMX 4000 with 4 MPM+80 cards at a line rate of 1MB, Video Quality set to Sharpness and Video Clarity, encryption and LPR options enabled.	V7.0.2	
410	*Video*	VNGR-17644	Video freeze occur when connecting 40 HD 720p participants to a conference running on RMX 2000 with 2 MPM+80 cards at a line rate of 1MB, Video Quality set to Sharpness and Video Clarity, encryption and LPR options enabled.	V7.0.2	
411	*Video*	VNGR-17646	H.261 participant video is not seen by other conference participants and the Gathering text did not appear on the H.261 participant's screen when connected to a conference running at 512kbps. The H.261 participants sees the conference video correctly.	V7.0.2	
412	*Video*	VNGR-17657	The VVX takes over a minute to resume live video on other endpoints in conference after releasing the hold when connected over H.323 to a conference running on RMX 1500 at a line rate of 128kbps.	V7.0.2	
413	*Video*	VNGR-17679	Video freeze occur when connecting 20 HD 1080p participants to a conference running on RMX 2000 with 2 MPM+80 cards at a line rate of 4MB.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
414	*Video*	VNGR-17742	Poor video quality due to low frame rate is viewed on HDX systems when connecting to a CP conference running on RMX 2000 with MPMx at a line rate of 6MB, with LPR, Video Clarity and Gathering options enabled.	V7.0.2	
415	*Video*	VNGR-17796	A thin gray line is present at the bottom of the cells when connecting TPX and RPX endpoints to a conference running on RMX 2000/4000 with MPMx cards at a line rate of 3MB or higher and video quality is set to sharpness.	V7.0.2	
416	*Video*	VNGR-17841	Lip sync occurred when an endpoint connected at 512kbps to a conference running at line rate of 2MB on RMX 2000 with 2 MPM+80 cards, and LPR enabled and active due to packet loss.	V7.0.2	
417	*Video*	VNGR-17857	Sometimes the Gathering text is not displayed when connecting SIP and H.323 endpoints to a conference running on RMX 2000 with MPMx at a line rate of 1920kbps.	V7.0.2	
418	*Video*	VNGR-17888	Full screen layout is displayed instead of 3x3 layout when the 3x3 layout is selected using Click&View from HDX9004 version 2.7.0-5547. Conference is running on RMX 2000 with either MPM+ or MPMx.	V7.0.2	
419	*Video*	VNGR-18106	Empty cells are displayed in the video layout when connecting 30 HDX 8006 endpoints at a line rate of 4MB and resolution of 1080p to a conference running on RMX 2000 with 2 MPMx-D cards.	V7.0.2	

Table 10 *Version 7.0.2 System Limitations*

#	Category	Key	Description	Detected in Version	Workaround
420	*Video*	VNGR-18279	The video display is "jumpy" when endpoints connect to a conference running on RMX with MPMx at a line rate of 512Kbps and SD resolution.	V7.0.2	