

# Polycom® RealPresence® Collaboration Server 1800/2000/4000/Virtual Edition

Polycom announces the release of the Polycom RealPresence Collaboration Server 8.9 software. This document provides the latest information about this release.

## Contents

Contents	1
What's New in This Release	2
System Capabilities and Constraints	4
Resource Capacities	8
Security Updates	12
Products Tested with this Release	12
Upgrade Information for the RealPresence Collaboration Server	14
Known Issues	21
Known Limitations	22
Resolved Issues	22
Copyright and Trademark Information	27

## What's New in This Release

RealPresence Collaboration Server 8.9 includes the features and functionality of previous releases, the software fixes identified in the [Resolved Issues](#) section, and the following new features.

### ***Secure Meeting Lobby for Locked Conferences***

This release of the RealPresence Collaboration Server implements a secure meeting lobby option for callers that try to join an active locked conference.

When implemented, the RealPresence Collaboration Server does the following:

- Puts a caller who tries to join an active locked conference into the secure meeting lobby, plays the designated IVR message, and displays the designated slide.
- Sends a notification to all conference chairpersons (with AVC endpoints) that one or more callers are waiting in the lobby. The notification identifies the most recent five callers to join the lobby by user or site name and provides a total number of callers waiting in the lobby.

Callers stay in the meeting lobby until the chairperson unlocks the conference or until a designated time-duration elapses. If a chairperson unlocks the conference, all callers in the lobby become conference participants. Chairpersons can't choose which waiting callers join the meeting.

Note the following:

- Because the RealPresence Collaboration Server sends the notification to all conference chairpersons with AVC endpoints, at least one chairperson for the conference must connect with an AVC endpoint if you enable this option.
- To use this option, the conference can't be in **Prefer TIP** or **Lecture** mode.

This feature is disabled by default. Enable this feature using system flags. For more information, see the *Polycom RealPresence Collaboration Server 1800/2000/4000/Virtual Edition Administrator Guide*.

### ***Exclusive SVC Mode***

This release of the RealPresence Collaboration Server enables you to configure the MCU to host SVC Meeting Room (MR) conferences only.

In Exclusive SVC Mode, the MCU rejects AVC and mixed-mode conferences, as well as any Virtual Meeting Room (VMR) conferences made on a RealPresence DMA system. In this mode, the RealPresence Collaboration Server can accept dial-in SVC calls and make dial-out SVC calls.

Because the connection is set up directly between the MCU and the endpoint(s) in Exclusive SVC Mode, RealPresence DMA systems don't support these calls. Therefore, you must disable RealPresence Clariti licensing on the RealPresence Collaboration Server before enabling Exclusive SVC Mode.

This feature is disabled by default. Enable this feature using system flags. For more information, see the *Polycom RealPresence Collaboration Server 1800/2000/4000/Virtual Edition Administrator Guide*.

### ***Forward Audit Logs***

Starting with this release of the RealPresence Collaboration Server, you can use RMX Manager to configure the MCU to forward audit logs, which document all administrative actions, to a syslog server.

For more information, see the *Polycom RealPresence Collaboration Server 1800/2000/4000/Virtual Edition Administrator Guide*.

## ***Support for Dial-Out Participants in SVC-Only Meeting Rooms***

This release of the RealPresence Collaboration Server enables administrators and operators to add dial-out participants to SVC-only Meeting Room (MR) conferences. Previously, only dial-in participants were allowed in SVC-only MR conferences.

This new feature allows the RealPresence Collaboration Server to dial out to RealPresence Desktop and RealPresence Mobile applications.



Dial-out SVC-only calls from the RealPresence Collaboration Server are not supported with Polycom RealPresence Group Series endpoints.

The RealPresence Collaboration Server only supports dial-out SVC calls when the SIP signaling connection is set up directly between the MCU and the endpoint. These calls are not supported when the SIP signaling connection is routed through a RealPresence DMA system. Therefore, you must disable RealPresence Clariti licensing on the RealPresence Collaboration Server before setting up an SVC-only Meeting Room (MR) conference with dial-out participants.

## ***Add and Remove Participants for SVC-Only Conferences***

This release of the RealPresence Collaboration Server enables administrators and operators to add and remove participants from an active SVC-only conference. Previously, this was available only for AVC conferences.

Operators and administrators that use RMX Manager can now drag and drop both dial-in and dial-out participants from the RMX Address Book into an active SVC-only conference.

## ***Increased SVC Port Capacity***

This release of the RealPresence Collaboration Server Virtual Edition increases SVC HD capacity to 600 on systems having 30 or more AVC HD port capacity.

## ***Content Sharing Notifications in On-Premises Microsoft Skype for Business Conferences***

This release of the RealPresence Collaboration Server (RMX) supports notifications to Microsoft Skype for Business (on-premises as well as online) conference participants when there are specific restrictions related to content sharing.

When a Skype for Business user in a Microsoft Skype for Business conference shares an unsupported content type (such as Microsoft PowerPoint or Whiteboard), all conference participants connected to the RMX see an **Unsupported content is being displayed within the Skype for Business conference** notification.

When a participant connected through RMX to a Microsoft Skype for Business conference attempts to share content, but the RealPresence Collaboration Server is configured as an Attendee and not a Presenter, the participant attempting to share content sees a **Skype for Business users are unable to view the shared content without the VTC being promoted to a presenter** notification.

## Custom Logo Displayed in Conferences

Organizations can upload a custom logo image through the RMX Manager that the RealPresence Collaboration Server displays to participants during conferences. Image files must in .jpg, .jpeg, or .bmp format and must be 1 MB or smaller.

This feature was introduced in the RealPresence Collaboration Server 8.8 release. This release of the RealPresence Collaboration Server extends this feature to the Virtual Edition.

## System Capabilities and Constraints

This section provides information about the RealPresence Collaboration Server system capabilities and constraints.

### Licensing Models

The RealPresence Collaboration Server has two licensing models:

- Standalone (A-la-carte)—the number of resources is determined by the capacity of the MCU, including the number of ports.
- RealPresence Clariti (Solution)—the number of resources is determined by the license agreement.

### Supported Conferencing Options

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

Features	CP Only	Mixed CP & SVC	SVC Only
Reservations	✓	✓	✓
Operator Conferences	✓	✗	✗
Entry Queues	✓*	✓*	✓*
Dial Out	✓	✗	✓
Cascading	✓	✓**	✗

Features	CP Only	Mixed CP & SVC	SVC Only
IVR	✓	✓	✓ Reduced IVR set for SVC endpoints
Permanent Conferences	✓	✓	✓
LPR	✓	✓***	✓***
Auto Redial	✓	✓	✗
Content	✓ All Content Settings, All Content Protocols	✓ Graphics Only, H.264 Cascade & SVC Optimized	✓ Graphics Only, H.264 Cascade & SVC Optimized
Presentation Mode	✓	✗	✗
Lecture Mode	✓	✗	✗
Same Layout	✓	✓	✗
Layout Selection	✓	✓ AVC endpoints only	Layout set to Auto Layout and defined on the endpoint
Skins	✓	✓ AVC endpoints only	✗
Encryption	✓	✓	✓
Recording	✓	✓ AVC recording only	✗
Site Names	✓	✓ AVC endpoints only	Managed by the endpoint (not via MCU)
Message Overlay	✓	✗	✗
<b>Legend</b>			
* Entry Queue and Destination Conference must have the same profile (i.e. CP Only to CP only, SVC Only to SVC Only, Mixed CP & SVC to Mixed CP & SVC)			
** In a Mixed CP & SVC conference, the Cascade link is always AVC.			
*** For AVC endpoints the LPR error resiliency mechanism is used, however for SVC endpoints new error resiliency methods are used.			

## ***RealPresence Collaboration Server, Virtual Edition Host Server Platform Profile***

This section provides information on the minimal Virtual Machine host settings and configuration, required for deploying RealPresence Collaboration Server, Virtual Edition.

To maximize audio and video quality, Polycom strongly recommends a dedicated VM server per Collaboration Server.

The described configuration is not mandatory; however, failing to follow it may result in degraded video and audio performance. Due to differences between hardware and VM environments, the performance information below is provided for guidance purposes only, and does not represent a guarantee

#### Deployment Settings - Minimum / Recommended

Component	Minimum Deployment Settings	Recommended Deployment Settings
vCPU	25000 MHz Reservation	90000 MHz Reservation
Memory	16 GB Reservation	32 GB Reservation
Network Adapter (NIC)	2 x 1Gbit	2 x 1Gbit
Hard Disk (Thin/Thick Provisioning)	30 GB	30 GB
Performance	14 SD ports or 7 HD ports	60 SD ports or 30 HD ports



#### Notes:

- For Intel CPUs, when Hyperthreading is enabled, the numbers above refer to logical cores (vCores) and not physical ones.
- Depending on the environment, the virtual machine might need a Network Interface Card (NIC) from the host dedicated for the virtual machine. For more information, refer to your VMware administrator.

An example for a recommended deployment is a 32 logical-cores machine at 2.9GHz.

## CPU Reservations for Licenses Purchased

The Administrator is required to change the *number of cores per socket* so that the *total number of cores* reflects the CPU cores required for the purchased licenses.

The table below demonstrates the more common/likely machines. Other systems might require some experimentation.

#### Number of Cores Required for Licenses Purchased

Number of Licenses Purchased	CPU Configuration				
	Dual Intel E5-2690 32 cores	Dual Intel E5-2680 32 cores*	Dual Intel E5-2650 32 Cores*	Dual Intel E5-2620 24 Cores	Dual Intel X5660 24 Cores*
5 ports	5	5	7	8	8
10 ports	10	11	14	16	16
15 ports	16	17	21	24	24
20 ports	21	23	29	NA	NA
25 ports	26	29	NA	NA	NA

**Number of Cores Required for Licenses Purchased**

Number of Licenses Purchased	CPU Configuration				
	Dual Intel E5-2690 32 cores	Dual Intel E5-2680 32 cores*	Dual Intel E5-2650 32 Cores*	Dual Intel E5-2620 24 Cores	Dual Intel X5660 24 Cores*
30 ports	32	NA	NA	NA	NA
* These numbers are estimates only, and may require adjustment.					

**Notes:**

- An example for a typical deployment is a 32 logical cores at 2.9 GHz.
- These numbers are estimates only, and may require adjustment.
- These numbers assume that hyperthreading is enabled in the physical server's BIOS. If hyperthreading is disabled, the above numbers are approximately halved.
- Do not over-allocate cores.

For information on the capacity of RealPresence Collaboration Server, Virtual Edition platforms, see the Performance Benchmarks section.

## ***Conferencing Capacities for RealPresence Collaboration Server, Virtual Edition***

**Note:**

Numbers in square brackets denote the increased capacity when the RPCSVE\_ENHANCE\_CAPACITY feature is enabled.

**Conferencing Feature Capacities**

System Functions	Benchmark System Capacity
Maximum number of Video participants per conference	32 [42]
Maximum number of Video participants per SVC only conference	200
Maximum number of Voice participants per conference	360 [504]
System maximum number of VOIP participants	360 [504]
Maximum number of Audio calls per second	5
Maximum number of Video calls per second	2
Maximum number of Conferences	200
Maximum number of Meeting Rooms	1000
Maximum number of Entry Queues	40

**Conferencing Feature Capacities**

<b>System Functions</b>	<b>Benchmark System Capacity</b>
Maximum number of Profiles	80
Maximum number of Conference Templates	100
Maximum number of SIP Factories	40
Maximum number of IVR Services	40
Maximum number of Recording Links	100
Maximum number of IVR Video Slides	40
Maximum number of Log Files (1Mb max.)	4000
Maximum number of CDR Files	2000
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 Address Book entries	4000
Maximum number of Users	100
Maximum number of Reservations (internal Scheduler)	4000
Maximum number of concurrent Reservations	80
Maximum number of participants in a template	200
Maximum number of users concurrently logged into MCU	20

## Resource Capacities

The benchmarks for Conferencing and Resource Capacities are based on a Benchmark System (Reference Host) equipped with two Intel E5-2690 processors (2.90GHz), each containing 8 physical cores (16 logical cores with hyper-threading enabled) and 16 GB of RAM. This is the equivalent of 32 logical cores each running at 2.90GHz.

**Resource Capacity in Non-Mixed and Mixed Modes by Base License Ratio and Maximum Capacity**

<b>Resource Type</b>	<b>Maximum Line Rate (Mbps)</b>	<b>Mixed Mode</b>		<b>Non Mixed Mode</b>	
		<b>Base License Ratio</b>	<b>Maximum Capacity</b>	<b>Base License Ratio</b>	<b>Maximum Capacity</b>
Licenses			32		32
1080p60 (asymmetric)	6	0.33	10	0.33	10
1080p30	4	0.5	16	0.5	16



**Resource Capacity in Non-Mixed and Mixed Modes by Base License Ratio and Maximum Capacity**

Resource Type	Maximum Line Rate (Mbps)	Mixed Mode		Non Mixed Mode	
		Base License Ratio	Maximum Capacity	Base License Ratio	Maximum Capacity
720p30	2	1	32	1	32
SD30 (4CIF)	1	2	64	2	64
CIF30	1	2	64	2	64
Audio/VoIP (AVC or SAC)	0.128	7	228	12	384
SVC 720p30	1.5	5	160	20	600
SVC 1080p30	3	5	160	5	160
TIP 720p30		1	30	1	30
WebRTC VGA/SD			20		20

**\* Non-Linear License Entitlement: The license ratio degrades when the maximum resource limit is reached.**  
**Base License Ratio:** The ratio between the purchased licenses and their consumption by the various Resource Types.  
**Maximum Capacity:** The maximum capacity per Resource Type for a Benchmark System.

The following tables list RealPresence Collaboration Server, Virtual Edition capacities on different reference platforms.

**Resource Capacity in Non-Mixed by Platform and License Mode (RealPresence Clariti)**

Port Type	Dual E5-2690@2.9G hz 48 cores 64 GB	Dual E5-2690@2.9G hz 32 cores 32 GB	Dual E5-2690@2.9G hz 24cores 24 GB	Dual E5-2690@2.9G hz 32cores 16 GB	Dual E5-2690@2.9G hz 8 cores 8 GB
AVC 1080p60	14	10	8	10	2
AVC 1080p30	21	16	12	16	2
AVC 720p30	42	32	24	32	5
AVC SDp30	84	64	48	64	10
AVC CIFp30	84	64	48	64	10
Audio	504	384	288	384	60
SVC (& SAC) 720p30	600	600	480	600	100
1080p SVC	210	160	120	160	25

**Resource Capacity in Mixed Modes by Platform and License Mode (RealPresence Clariti)**

Port Type	Dual E5-2690@2.9Ghz 48 cores 64 GB	Dual E5-2690@2.9Ghz 32 cores 32 GB	Dual E5-2690@2.9Ghz 24cores 24 GB	Dual E5-2690@2.9Ghz 8 cores 8 GB
AVC 1080p60	14	10	8	2
AVC 1080p30	21	15	12	2
AVC 720p30	42	32	24	5
AVC SDp30	84	64	48	10
AVC ClFp30	84	64	48	10
Audio	300	228	172	35
SVC (& SAC) 720p30	210	160	120	25
1080p SVC	210	160	120	25

**Resource Capacity in Non-Mixed by Platform and License Mode (RealPresence Clariti) - With  
RPCSVE\_ENHANCE\_CAPACITY Flag Set to YES**

Port Type	Non Mixed Mode			
	Dual E5-2690 @ 2.9GHz 48 cores 64 GB	Dual E5-2690 @ 2.9GHz 32 cores 16 GB	Dual E5-2690 @ 2.9GHz 24cores 24 GB	Dual E5-2690 @ 2.9GHz 8 cores 8 GB
AVC 1080p60	18	14	10	2
AVC 1080p30	27	21	15	3
AVC 720p30	55	42	31	7
AVC SDp30	110	84	62	14
AVC ClFp30	110	84	62	14
Audio	598	504	372	84
SVC (& SAC) 720p30	600	600	600	140
1080 SVC (& SAC)	275	210	155	35

**Resource Capacity in Mixed Modes by RMX Hardware Platform**

	Port Type	Single MPMRx-S	Single MPMRx-D	1800-0(10)	1800-1(35)	1800-3(100)
<b>Mixed Mode</b>	AVC 1080p60	10	33	3	11	33
	AVC 1080p30	15	50	5	17	50
	AVC 720p30	30	100	10	35	100
	AVC SDp30	60	200	20	70	200
	AVC CIFp30	60	200	20	70	200
	Audio	300	300	116	300	300
	720p SVC (& SAC)	150	300	30	175	300
	1080p SVC (& SAC)	150	150	30	175	150

**Resource Capacity in Non Mixed by RMX Hardware Platform**

	Port Type	Single MPMRx-S	Single MPMRx-D	1800-0(10)	1800-1(35)	1800-3(100)
<b>Non Mixed Mode</b>	AVC 1080p60	10	33	3	11	33
	AVC 1080p30	15	50	5	17	50
	AVC 720p30	30	100	10	35	100
	AVC SDp30	60	200	20	70	200
	AVC CIFp30	60	200	20	70	200
	Audio	300	300	110	300	300
	720p SVC (& SAC)	150	300	30	175	300
	1080p SVC (& SAC)	150	300	30	175	150

The following table lists the Soft Blade (on its own reference platforms) resource capacities:.

#### Soft Blade Resource Capacity by Platform

Port Type	Dual E5-2690v3@ 2.6GHz 8 Cores	Dual E5 -2620@ 2.0GHz 16 Cores	Dual E5-2620@2.0GHz 8 Cores
RDP	21	33	16

## Security Updates

The RealPresence Collaboration Server supports upgraded versions of the following Open Source Software:

Open Source Software	RMX 1800	RMX 2000/4000	Virtual Edition
Apache	2.4.39	2.4.39	2.4.39
OpenLDAP	2.4.47	2.4.47	2.4.47
Perl	5.28.1	5.28.1	5.28.1
Busybox	1.31.0	1.31.0	N/A

## Products Tested with this Release

The RealPresence Collaboration Server is tested with a wide range of products. The following tables identify the products that have been tested for compatibility with this release; it is not a complete inventory of compatible equipment.



Polycom recommends you upgrade all Polycom systems to the most current software to ensure that an issue has not already been addressed by recent software updates before reporting issues to Polycom Support.

Go to [http://support.polycom.com/PolycomService/support/us/support/service\\_policies.html](http://support.polycom.com/PolycomService/support/us/support/service_policies.html) to find the Current Polycom Interop Matrix.

#### Polycom Gatekeepers, Gateways, SIP Servers and MCUs

Device	RMX 1800/2000/4000 RMX Virtual Edition
Polycom® RealPresence® Resource Manager	10.7.0
Polycom® RealPresence® DMA® 7000	10.0.0.5
Polycom ISDN Gateway	2.0.0
Polycom® ContentConnect™ Server	1.6.2
Polycom® RealPresence® Access Director™	4.2.5.3

**Polycom Gatekeepers, Gateways, SIP Servers and MCUs**

Device	RMX 1800/2000/4000 RMX Virtual Edition
Polycom® RealPresence® Web Suite Services and Experience Portals	2.2.2
RealPresence Media Suite	2.8.2.0

**Virtual Machines**

Device	RMX 1800/2000/4000	RMX Virtual Edition
VMware vCenter Server	6.7.0	6.7.0
Hyper-V Server (2016)	10.0	10.0

**Endpoints**

Device	RMX 1800/2000/4000 RMX Virtual Edition
Polycom® RealPresence® Group Series	6.2.2
Polycom® HDX®	3.1.14
Polycom® Trio 8800/8500	5.9.1
Polycom® RealPresence® OTX Studio	6.1.3
Polycom VVX Series (UCS)	5.8.0
Polycom® RealPresence® Debut	1.3.2
Polycom® RealPresence® Web Suite and WebRTC clients	2.2.2
Polycom® RealPresence® Desktop for Windows®	3.10.2
Polycom® RealPresence® Mobile for Android™	3.10.1
Polycom® RealPresence® Desktop for Mac®	3.10.2
Polycom® RealPresence® Mobile for Apple® iOS	3.10.1
Polycom Content App	1.3.2

Device	RMX 1800/2000/4000 RMX Virtual Edition
Cisco Unified Communications Manager	12.0
Microsoft Teams	1.2.00.34161
Microsoft Lync AVMCU 2013	5.0.8308.1091
Microsoft Skype for Business Online	6.0.9319.559

Device	RMX 1800/2000/4000 RMX Virtual Edition
Microsoft Skype for Business AVMCU 2015	6.0.9319.559
Microsoft Lync 2013 Edge Server	5.0.8308.1091
Microsoft Skype for Business 2015 Edge Server/Pool	6.0.9319.559
Microsoft Exchange 2016 server	15.01.0845.034
Microsoft Exchange Online	15.01.1531.003
Microsoft SFB server 2019	7.0.2046.123

Device	RMX 1800/2000/4000 RMX Virtual Edition
Skype for Business Desktop Client Windows (S4B 2016)	16.0.12325.20280
Skype for Business Desktop Client Windows (Lync 2013)	15.0.5159.1000
Skype for Business Desktop Client Windows (S4B 2015)	15.0.5127.1000
Skype for Business Desktop Client Mac (S4B 2016)	16.28.130
Skype for Business Mobile Client iOS (S4B 2016)	6.26.1.0001
Skype for Business Mobile Client Android (S4B 2016))	6.25.0.27
Skype for Business Desktop Web App-Client Windows	2019.0718.1001
Skype for Business Desktop Web App-Client Mac	2011.14.4.3(170308)
Cisco EX90	TC7.3.17
Cisco CTS500	6.1.12
Cisco IX5000	8.3.1.1
Cisco C40/C60/C90/EX60	TC7.3.17
Cisco MX300/SX10/SX20/SX80/	CE9.7.1
Cisco DX70/DX80	CE9.6.1
Cisco VCS	8.11

## Upgrade Information for the RealPresence Collaboration Server

The following sections provide important general information about upgrading RealPresence Collaboration Servers to this release.

## Upgrade Package Contents

The RealPresence® Collaboration Server 8.9 software upgrade package includes:

- The RealPresence Collaboration Server (RMX) 8.9 software (\*.bin)
- The RealPresence Collaboration Server, Virtual Edition 8.9 software
  - The \*.upg file is for upgrading RealPresence Collaboration Server, Virtual Edition on VMware.
  - The \*.ova file is for deploying RealPresence Collaboration Server, Virtual Edition on VMware.
  - The \*.vhd file is for deploying RealPresence Collaboration Server, Virtual Edition on Hyper-V.
- The RealPresence Collaboration Server (RMX) 1800/2000/4000/Virtual Edition 8.9 Soft Blade
  - The \*.ova file is for deploying Soft Blades on VMware.
  - Soft Blade upgrade is along with MCU upgrade via MCU upgrade software.
    - ◆ \*.bin for RMX 1800/2000/4000
    - ◆ \*.upg for Virtual Edition
- The RealPresence Collaboration Server Local Web Client (RMX Manager)
- The RealPresence Collaboration Server 8.9 Release Notes
- The RMX API Kit Version 8.9 includes:
  - RealPresence Collaboration Server API Version 8.9 Release Notes
  - RealPresence Collaboration Server XML API Overview
  - RealPresence Collaboration Server XML API Schema Reference Guide
  - XML Schemas

## Supported Upgrade Paths

You can upgrade the following versions of RealPresence Collaboration Server directly to version 8.9:

- 8.8.1.0.2
- 8.8.0.3

## Important Upgrade Notes

Please carefully review the following important upgrade notes.

- In a RealPresence Clariti environment, install or upgrade to RealPresence DMA 7000 system version 10.0 or greater before installing or upgrading to RealPresence collaboration Server version 8.9.
- When upgrading to this release, Polycom requires that you upgrade from the latest maintenance release of the version currently running on the server.
- To enable the MMCU function, Polycom recommends that you upgrade the system to version 8.9.
- This release does not support MPM, MPM+ or MPMx cards. DO NOT upgrade to this release if MPM, MPM+ or MPMx cards are installed in the RealPresence Collaboration Server (RMX); Polycom also recommends trained people to do the upgrade as mentioned in the Prepare for the Upgrade part.
- Customers currently using the new RealPresence Collaboration Server Soft Blades solution for supporting Microsoft Remote Desktop Protocol (RDP) content can choose to continue using the same solution. However, if a customer has deployed (or requires to deploy) the Polycom RealConnect

solution then it's recommended to migrate to the Polycom ContentConnect for sharing content as it's more fully featured. Customers who are currently using Polycom ContentConnect should continue to use it.

## Upgrade a RealPresence Collaboration Server 1800/2000/4000

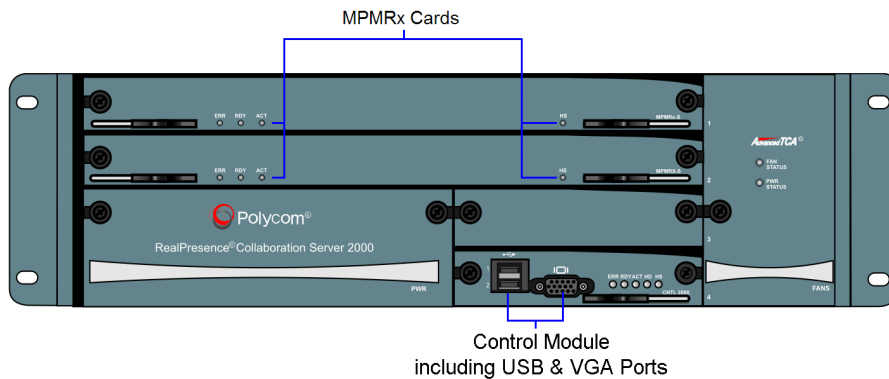
The following upgrade information relates to RealPresence Collaboration Server 1800/2000/4000 models only.

### RealPresence Collaboration Server (RMX) 2000/4000 Hardware and Software Compatibility

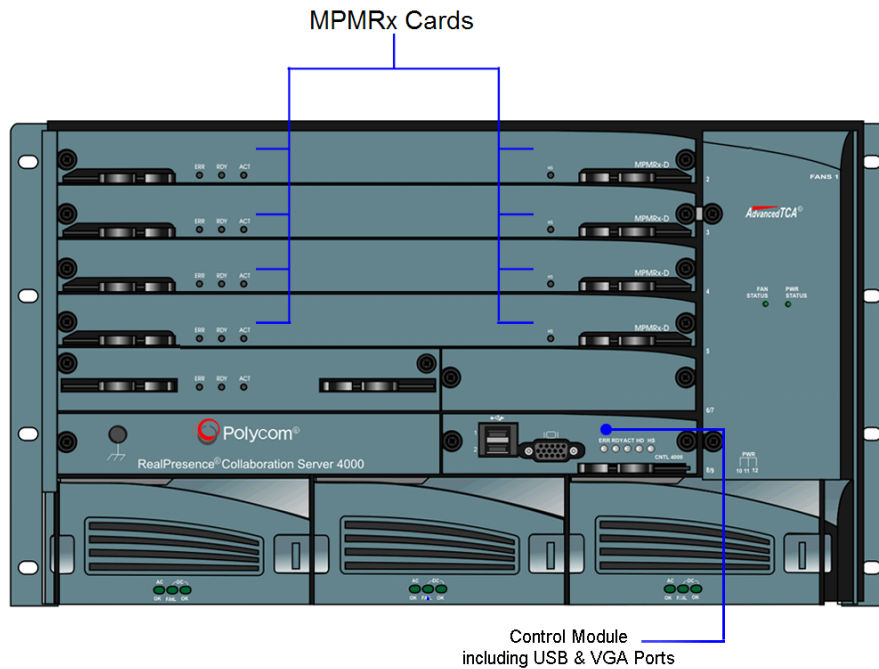
Because of hardware constraints, the RealPresence Collaboration Server (RMX) 2000/4000 is only compatible with specific software versions.

Both Control Modules BRD2534B-L0/BRD2535B-L0 include USB and VGA ports on the front panel.

#### RMX 2000 system with CNTL 2000 Module BRD2534B-L0





**RMX 4000 system with CNTL 4000 Module BRD2535B-L0**

## Prepare for the Upgrade

Prepare the RealPresence Collaboration Server 1800/2000/4000 for upgrade by verifying that the server meets the upgrade requirements identified in this procedure and securing a backup of the current configuration.

### To prepare for the upgrade:

- 1 Back up the RealPresence Collaboration Server.
  - a Select **Administration > Software Management > Backup Configuration**.
  - b In the **Backup Configuration** pane, click **Browse** to select a backup directory and click **Backup**.  
Once backup is complete, you may upgrade the RealPresence Collaboration Server.
- 2 Verify that all MCU cards are compatible with the 8.9 software. RealPresence Collaboration Server 2000/4000 with MPMx media cards are not supported by this release.  
If the MCU contains MPM, MPM+, MPMx media cards, refer the *DOC2754A RMX 2000/4000 MPMRx Migration Procedure*.

## Perform the Upgrade

The RealPresence Collaboration Server 1800/2000/4000 being upgraded cannot host conferences during the upgrade.

## To upgrade to the RealPresence Collaboration Server 1800/2000/4000 software

- 1 Download the `.bin` file from the Polycom Support Site.
- 2 If the RealPresence Collaboration Server is integrated with a RealPresence DMA system, disable the connection. To do this, on the RealPresence DMA system, edit the **Network > MCU > MCUs** connection, select the MCU, and choose either **Stop Using** or **Busy Out**.  
  
Again note that in a RealPresence Clariti environment, install or upgrade to RealPresence DMA 7000 system version 10.0 or greater before installing or upgrading to RealPresence collaboration Server version 8.9.
- 3 On the RealPresence Collaboration Server and RealPresence DMA system, verify that all conferences (including permanent/recurrent conferences) targeted to the MCU being upgrade are terminated.
- 4 At the **RMX Manager**, click **Administration > Software Management > Software Download**.
- 5 Browse to the location where you saved the `.bin` file and click **Install**.
- 6 When the files have copied successfully, click **OK**.  
  
The upgrade procedure takes approximately 20 minutes.  
  
Once you click OK, 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 then indicates that IPMC Burning is in progress. A further series of Active Alarms are displayed indicating the progress of the upgrade process.
- 7 If a system message alert is displayed, click Next/Cancel.  
  
At the end of the process, connection to the Collaboration Server is terminated.
- 8 When a **Please wait for system reboot** message alert appears, click **Next**.  
  
Connection to the RealPresence Collaboration Server is terminated and you are prompted to reopen the browser.
- 9 Close any open browser windows and wait approximately 10 minutes.
- 10 After 10 minutes, reconnect to the RealPresence Collaboration Server by entering its IP address into the browser address bar.
- 11 Enter your User Name and Password, and click **Login**.  
  
When the progress indicator shows Complete, the RealPresence Collaboration Server is ready.
- 12 If the RealPresence Collaboration Server was integrated with a RealPresence DMA system, re-establish the connection.  
  
To do this, on the RealPresence DMA system, edit the **Network > MCU > MCUs** connection, select the MCU, and choose **Start Using**.

## Upgrade a RealPresence Collaboration Server, Virtual Edition

The following sections provide important information about upgrading a RealPresence Collaboration Server, Virtual Edition.

For information on deploying RealPresence Collaboration Server, Virtual Edition, see the *Polycom RealPresence Collaboration Server 1800/2000/4000/Virtual Edition Getting Started Guide*.

## Soft Blade Requirements

Installing and upgrading Soft Blade require the following minimal virtual machine host (VMware) settings:

### Deployment Settings - Minimum

Component	Minimum Deployment Settings
Number of vCPU	4
Memory	8 GB
Hard Disk (Thin Provision)	60 GB

For more information, see the Modular MCU section.

## Prepare for the Upgrade

Prepare for the RealPresence Collaboration Server upgrade by verifying the server meets the upgrade requirements identified in this procedure and securing a backup of the current configuration.

### To prepare for the upgrade:

- » Back up the RealPresence Collaboration Server.
  - a** Select **Administration > Software Management > Backup Configuration**.
  - b** In the **Backup Configuration** pane, click **Browse** to select a backup directory and click **Backup**.  
Once backup is complete, you may upgrade the RealPresence Collaboration Server.

## Perform the Upgrade

The RealPresence Collaboration Server, Virtual Edition can remain active during an upgrade and can host conferences until you are required to reboot to complete the upgrade procedure.

### To upgrade a RealPresence Collaboration Server, Virtual Edition:

- 1 Download the `.upg` file from the Polycom Support Site.
- 2 If the RealPresence Collaboration Server is integrated with a RealPresence DMA system, disable the connection. To do this, on the RealPresence DMA system, edit the **Network > MCU > MCUs** connection, select the MCU, and choose either **Stop Using** or **Busy Out**.
- 3 On the RealPresence Collaboration Server and RealPresence DMA system, verify that all conferences (including permanent/recurrent conferences) targeted to the MCU being upgrade are terminated.
- 4 At the **RMX Manager**, click **Administration > Software Management > Software Download**.
- 5 Browse to the location where you saved the `.upg` file and click **Install**.
- 6 Download the `.upg` file from the Polycom Support Site.
- 7 When the files have copied successfully, click **OK**.

The upgrade procedure takes approximately 20 minutes. During this time the **Install Software** information box indicates that Software Loading is in progress and a series of Active Alarms display, indicating the progress of the upgrade process.

- 8 Reset the MCU.
- 9 If the RealPresence Collaboration Server was integrated with a RealPresence DMA system, re-establish the connection.  
To do this, on the RealPresence DMA system, edit the **Network > MCU > MCUs** connection, select the MCU, and choose **Start Using**.

## Verify the RealPresence Collaboration Server Configuration After the Upgrade

After upgrading the RealPresence Collaboration Server, you may need to reset some server configuration items.

### To verify the RealPresence Collaboration Server configuration after the upgrade:

- 1 Verify that the version number on the Welcome page is updated, signifying that the upgrade is complete.
- 2 Install the RMX Manager software that is part of the RealPresence Collaboration Server 8.9 release.
- 3 Reschedule any permanent conferences that were terminated before the upgrade.
- 4 Check **IVR Services** to ensure that changed or additional DTMF codes do not conflict with previously defined DTMF codes.
- 5 After an upgrade, the **Enable Gathering** check box is selected by default for pre-existing Profiles. To disable it for those profiles go to **Profile Properties > Gathering Settings**.

- **SIP Proxy Registration** is configured in the **Conference Profile > Network Services** dialog beginning with version 7.1.
- **Media Encryption** is enabled by a Conference Profile setting from version V7.6.1, replacing the **ALLOW\_NON\_ENCRYPT\_PARTY\_IN\_ENCRYPT\_CONF** System Flag. Modified the profile to meet your environment's encryption requirements.
- **Automatic Muting of Noisy AVC-based Endpoints** is not automatically enabled in existing Profiles and has to be manually enabled, if required. In new Profiles that are created after the upgrade, auto mute of noisy endpoints option is enabled by default.
- **RealPresence DMA** system in the environment requires that the value of the flag **MAX\_CONF\_PASSWORD\_REPEATED\_CHAR** System Flag value be set to 4 system for compatibility from version 7.7.

## Known Issues

The following table lists known issues and suggested workarounds for RealPresence Collaboration Server 8.9.



These release notes do not provide a complete listing of all known issues that are included in the software. Issues not expected to significantly impact customers with standard video conferencing environments may not be included. In addition, the information in these release notes is provided as-is at the time of release and is subject to change without notice.

Issue ID	Description	Workaround
EN-165297	After re-opening a Meeting Room, RMX Manager does not identify the Lecturer originally defined in the meeting room.	
EN-159799	RMX 1800- The "Conference is secured" IVR is not played when the conference is locked if the conference has only one participant.	
EN-155906	After putting a call on hold and then resuming the call, H323-registered endpoints transfer content on video channel rather than content channel.	
EN-153524	The PRESERVE_PARTY_CELL_ON_FORCE_LAYOUT >> Party Deletion (having reserved cell in Conference layout) results in empty Cell in the Video Layout even when new participant dial-in the conference	
EN-147172	When SVC endpoints are moved from an Entry Queue to a Meeting Room, they receive only a single stream.	
EN-132039	In a Poly RealConnect call with more than 25 participants, Poly Trio endpoints do not see a logo displayed.	

## Known Limitations

Description	Workaround
If a conference exceeds 180 participants and H.264 content is shared, the MCU may appear unresponsive as it renegotiates the rate for all users. The RealPresence DMA system will interpret this unresponsiveness as an MCU outage and begin a fail over sequence.	Polycom recommends Use Cascading for Size for large conferences.
When using Skype for Business 2015 client on a Microsoft Surface (x86) to join a meeting and receive content, your Skype for Business 2015 client may crash.	To fix the issue, install the <a href="#">February 7, 2017, update (KB3141501)</a> for Skype for Business 2016. For more information, see <a href="https://support.microsoft.com/en-gb/help/4010281/the-long-term-fix-for-skype-for-business-2016-crashes-when-you-receive-a-content-from-a-third-party-rdp-implementation">https://support.microsoft.com/en-gb/help/4010281/the-long-term-fix-for-skype-for-business-2016-crashes-when-you-receive-a-content-from-a-third-party-rdp-implementation</a>
When the system configuration flag LAN_REDNDANCY is set to 'YES' for RealPresence Collaboration Server 1800, and every time when the interface reaches more than 10 Mbps, an alarm is raised on the RealPresence Platform Director informing that "40% of the network capacity has reached". Even maximum speed of interface is 100 Mbps.	

## Resolved Issues

The following table lists the issues resolved in this release of the RealPresence Collaboration Server.

### Issues Resolved in Version 8.9

Key	Summary
EN-164510	RMX v8.8.1, RMX Manager does not show System Information under <b>System Information &gt; Advanced Information</b> .
EN-164391	Softblade disk space is 100% used.
EN-164029	Media card rebooted - Power Off Problem.
EN-164017	After the RMX was upgraded to recommended version, three media cards were rebooted.
EN-163764	Participants added to RMX meeting rooms do not show up after meeting room properties is closed and then re-opened.
EN-163659	RMX 1800 Conference fails. It is displayed in RMX Manager as AVMCU idle and endpoint waiting to dial.
EN-162143	Chairperson password once created in a meeting room cannot be removed. Can be edited but not deleted.
EN-161280	Media card reboot and Conf party Core Dump observed.

Key	Summary
EN-161270	While enabling the Mute Participants Except Lecturer option, muted participants cannot be unmuted by RMX administrator or operator.
EN-158847	RMX dial out to SIP participant gets disconnected and hung. Unable to reconnect the participant.
EN-158837	RMX was unavailable and stayed so until reboot.
EN-157236	RMX Manager Mute/Unmute status doesn't work properly for SIP calls.
EN-156781	Media card rebooted.
EN-156187	Adding RMX 8.8.1 as a network device instance in the RealPresence Resource Manager 10.6 and 10.7 fails and an error occurs with "instance is not reachable" error.
EN-156180	Caller unable to dial into VMR.
EN-154227	Meeting on VMR dropped endpoints unexpectedly.
EN-154129	RMX2000 hot backup failed over unexpectedly.
EN-153699	Some Skype for Business clients cannot see video from endpoints. Some Skype for Business conferences have issues with sharing content.
EN-153240	Polycom Group Series intermittently not receiving video from the RMX in an SVC conference.
EN-151510	After upgrading the RMX to 8.7.5.5, QDX connect with no audio.
EN-149910	GMT format is observed on syslog server when set transport protocol to 'UDP' or TLS
EN-149485	The "Lecturer as Chairperson" option is not saved and the conference does not act like it is in Lecture mode when the box is checked in the RMX Conference Profile.
EN-148505	Blurry content received at endpoint during ongoing conference due to presence of some noisy endpoints.
EN-147374	Calls not getting connected due to cascade link failure between two RMXs.
EN-146658	When an RMX is rebooted, the default recording link (and sometimes IVR) resets to a different default value.
EN-146329	Content sharing fails if BFCP is over TCP in a SIP call via Polycom RealPresence DMA Edge system to VMR, same is working over UDP.
EN-145224	'Conference exists' noise was observed when all participants were muted except the cascade link with the flag "ENABLE_SIRENLPR" set to YES.
EN-145080	An Avaya Equinox client got connected at low rate 64kbps only.
EN-144612	RMX crashed unexpectedly. Core dump created. RMX rebooted.
EN-144462	Enforced layout is not working with system flag PRESERVE_PARTY_CELL_ON_FORCE_LAYOUT
EN-144129	Cisco TIP calls fail when encryption type got changed from DTLS to SDDES.
EN-143888	Video quality is significantly lower for WebRTC endpoints in RMX hosted conferences..

Key	Summary
EN-143513	In RMX hosted conference, SIP participant's Personal Layout was not set in conference through API request.
EN-143267	Sites cannot connect until the RMX rebooted.
EN-142667	During a RealConnect conference, a Skype participant sees frozen video from a Group Series when there are 2 or 3 Skype participants on the AVMCU.
EN-142019	Participants experienced video bleed.
EN-141977	RMX rebooted with 5 cores produced.
EN-141659	An H323 participant is not able to control the PCM Menu when "Start PCM" permission is enabled for everyone.
EN-141469	When an audio call is escalated to a video call, the Cisco Jabber/Phone client receives only video at only 64Kbps from the RMX.
EN-141132	There are some RMX Manager preview feature limitations on Windows 10.
EN-141022	Card rebooted and then the RMX rebooted.
EN-141006	In a RealConnect call, when the Skype client mutes the RMX participant, the cascade link between RMX and the AVMCU is disconnected.
EN-140140	Cannot change ISDN switch type.
EN-140131	Intermittent RealConnect call disconnects reported. RealPresence DMA reporting RMX call failure penalty.
EN-138038	RMX 1800 - the MULTIPLE_SERVICE system flag causes a "Duplicate Ip Alarm".
EN-137599	RMX 1800 always reports video latency as 0.
EN-137213	The connection from some endpoints is not completed.
EN-136973	The ICE Manager intermittently fails to start.
EN-136306	Participants may see distorted color in a a Polycom RealPresence Collaboration Server-hosted call.
EN-136033	RMX shows gatekeeper registration time outs that clear after an RMX reboot.
EN-135263	When two Lync cents, the first one a dial-out, the second one a dial-in, are in a VMR/MR and encryption is enabled, the dial-out party doesn't receive audio.
EN-134166	In RMX hosted conference with participants joining through Siren22 Audio format, continuous logs of Reset Siren22 decoder observed.
EN-133279	An H323 CALL SETUP event is not recorded in the CDR files when the endpoint is connected through an H323 call.
EN-132448	Endpoint dropped from a RealConnect conference twice.
EN-132399	A participant is dropped from an RMX hosted conference. An mcu_internal_problem error is seen.
EN-132361	Power supply PWR_1KW alarm appearing and cleared on the RMX.



Key	Summary
EN-132269	RMX1800 PCM menu does not popup on the monitor when ## is pressed.
EN-132095	RMX1800-Cannot start any new conferences (VMR or direct). Failure status error displayed.
EN-131968	RMX Manager frequently disconnects. An Apache restart is seen in the logs.
EN-131681	Video freezes for some seconds after packet loss.
EN-130652	The MCU rebooted automatically.
EN-130636	Soft blade content cannot be shared in RealConnect calls. Transport counter is filling up.
EN-130440	Multiple participants in an RMX conference are not receive content.
EN-130434	RMX card reboot issues still occurring after upgrade to v8.7.4.6.
EN-129164	RMX 1800 experienced a core dump file in ConfParty.
EN-129125	The RMX, interpreting DTMF, acts too quickly, causing the DTMF to be sent twice.
EN-128675	RMX didn't connect to the AV_MCU, because it was missing digits from the focus URI.
EN-128287	RMX 1800 shutdown automatically.
EN-128252	GS 500 endpoints are dropped from ongoing meeting. A core dump file was generated at the time of disconnect.
EN-128080	ENABLE_CONTENT_IN_PREFER_TIP_FOR_CALL_RATES_LOWER_THAN_768K system flag does not change the minimum requirement of 512Kbps as content rate for endpoints dialing in over H.323 into TIP enabled calls.
EN-128011	RMX is sending distorted video to HDX when video is SD.
EN-127672	After upgrading RMX from v8.6 to v8.7.5, the Info Collector log cannot be downloaded to a network share folder.
EN-127153	When exporting RMX CDR in formatted mode, the data entered in fields Info2, Info3 of the Conference Properties (Information menu) is not included in CDR.
EN-126941	The audio for all participants was lost during a VMR conference. Video was not affected. Rebooting the RMX resolved the issue.
EN-124169	RMX suffered an MPMrx power off problem due to a fatal FPGA error.
EN-122848	With 3 + 1 conference layout, the video cell at the upper right, which is set as auto scan, does not cycle to display participants.
EN-122791	Full participant name is not being recorded in RMX roll call.
EN-121946	Cisco WebEx Room Kit content channel fails to connect, so content media is traversing the people video channel at a very poor rate of quality.
EN-121582	RMX reset the root password on reboot.
EN-120904	A Skype for Business call scheduled with Skype Online, accepted by endpoint, and built on the RealPresence DMA system. The endpoint connected OK but the AV MCU connection attempt failed.

Key	Summary
EN-119319	RealPresence Collaboration Server VE cannot be set to debug mode due to insufficient disk space.
EN-118928	RMX1800--A SIPTask gets stuck. No active alarm are displayed. Manually reboot required.
EN-118456	Content share period failed during a conference.
EN-118390	RMX v8.7.5 - Two new core files were created on different days and RMX automatically rebooted.
EN-117587	An RMX conference disappeared when some of the participants in this conference were being deleted.
EN-115714	Lecturer Mode: Participant switching does not stop when a participant speaks.
EN-114809	RMX did not redial after the first attempt of AV_MCU call not connect because ICE check failed.
EN-105596	Post upgrade, EMA shows Softblades port count of 0, even after Softblades are in Ready state.
EN-70537	In a master MCU conference with slave endpoint, the master endpoint shows loopback video of active speaker on cascade cell when participants of slave are waiting for chairperson to join.
EN-69991	In a RealPresence Collaboration Server, Virtual Edition conference that has Polycom® RealConnect™ Service, after a Lync participant locking and unlocking the video spotlight of the Polycom participants, the Lync participant is unable to see the videos of the Polycom participants.

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USA

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