



Release Notes

3.3 | December 2014 | 3725-69999-008/A

Polycom[®] RealPresence[®] Desktop for Windows[®]



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Contents

What's New in Release 3.3	1
User Interface Improvements	1
Support for Calling SIP Users Directly	1
Directory Search Enhancements	2
Instant Messaging Enhancement	2
Change Some Test Features to Normal Features	2
Release History	3
Hardware and Software Requirements	6
Products Tested in This Release	7
Polycom CMA and RealPresence Resource Manager Systems	7
Installation and Upgrade Notes	9
Multi-language UI Support	9
Install RealPresence Desktop	9
Install the Software Using the .exe File	9
Install the Software Using the .msi File	9
MSI Flags	10
Upgrade RealPresence Desktop	11
Easy Upgrade from Polycom CMA® Desktop	12
System Capabilities and Constraints	14
Protocols	14
Resolutions	14
Algorithms	14
Inbound and Outbound Ports	15
Interoperability Issues	16
Known Issues	18
Resolved Issues	19
Enterprise Scalable Video Coding (SVC) Mode	21
Access Media Statistics	23
Feature Overview	25
About AES Encryption	28
AES Encryption in H.323 Calls	28
AES Encryption in SIP Calls	28

Prepare Your Device for Mutual Transport Layer Security 28

Get Help 31

The Polycom Community 31

Notices 32

 Open Source Licenses 32

 OpenSSL LICENSE 32

 Original SSLeay License 32

 ares LICENSE 33

 Expat LICENSE 33

 JpegLib NOTICE 34

 LEGAL ISSUES 34

 Libxml2 LICENSE 35

 OpenLDAP LICENSE 35

 CyrusSASL LICENSE 35

 DotNetZip LICENSE 36

 LibSRTP LICENSE 37

 Log4cxx LICENSE 37

 NAudio LICENSE 39

 SQLite LICENSE 40

What's New in Release 3.3

The Polycom RealPresence Desktop 3.3 application includes the features and functionality of previous releases and includes these new features:

- [User Interface Improvements](#)
- [Support for Calling SIP Users Directly](#)
- [Directory Search Enhancements](#)
- [Instant Messaging Enhancement](#)
- [Change Some Test Features to Normal Features](#)



Note: Get the latest product information from Polycom Support

To view the latest Polycom product documentation, visit [Polycom Support](#) web site.

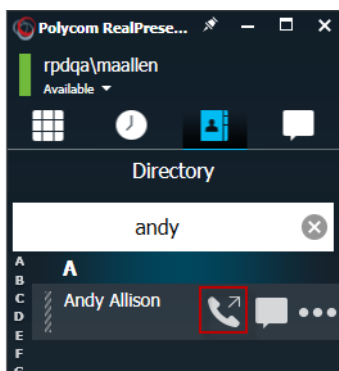
User Interface Improvements

The Polycom RealPresence Desktop 3.3 has newly designed user interfaces and icons to consolidate the user interface across all Polycom endpoint products. The RealPresence Desktop and the RealPresence Mobile user interfaces share common icons such as Recent Calls, Address Book, Mute, Place a Call, and Hang Up.

Support for Calling SIP Users Directly

When the far end is registered with SIP only and the devices of the far end have the same SIP URI, you will see the **Call User** button when browsing the contact list or contact search list, as shown next. When you click the **Call User** button, all the devices with the same SIP URI will ring. To choose a SIP device to answer, you must set each SIP device to answer manually; otherwise, the first device in the URI list that is set to auto answer will answer the call each time.


When the far end is registered with SIP only, but all the devices on the far end have different SIP URIs, you will see the **Call User** button. After you click the **Call User** button, you can select from the list of devices to place your call.



Directory Search Enhancements

This release supports the following enhancements:

- **Cancel a Search Operation or Change a Key Word**

When you search for a contact, after you enter a key word and start the operation, you can also cancel this operation by modifying the key word, re-entering a new key word, or clicking  besides the key word.

- **Support for Predictive Search**

After you enter a part of a key word for LDAP or local search, all the mapping results will be returned and listed after a very short time.

Instant Messaging Enhancement

When you chat with a person on your contacts list, RealPresence Desktop enables you use both chat and video call at the same time. Click the **Call** button to make calls directly to the person whom you are chatting.

Change Some Test Features to Normal Features

The following features have been moved from the **Test Features** tab under **Settings**.

- The **USB Headset Acoustic Bubble** feature is now on the **Audio Device** tab.
- The **Mute Reminder** feature is now on the **Audio Device** tab.
- The **SDP Size Adjustment** feature has been moved out. To enable or disable this feature, enter #001# from the Dialpad.

Release History

The following table shows the release history of the Polycom RealPresence Desktop.

Release History

Release	Release Date	Features
3.3	December 2014	User Interface Improvements Support for Calling SIP Users Directly Directory Search Enhancements Instant Messaging Enhancement Some test features have been moved from the Test Features tab under Settings . <ul style="list-style-type: none">• The USB Headset Acoustic Bubble feature is now on the Audio Device tab.• The Mute Reminder feature is now on the Audio Device tab. The SDP Size Adjustment feature has been moved out. To enable or disable this feature, enter #001# from the Dialpad.
3.2.1	July 2014	Support for DTMF with keyboard input. You can enter a DTMF password using your keyboard without showing the DTMF keypad during a call. Fixed an OpenSSL security vulnerability (CVE-2014-0224).

Release History

Release	Release Date	Features
3.2	June 2014	<p>Support for user profile import and export</p> <p>Support for Quality of Service (QoS) in managed mode</p> <p>Support for setting dialing preference</p> <p>Support for the Czech language</p> <p>Directory enhancements as follows:</p> <ul style="list-style-type: none"> • Hide the H.323 and SIP technical terms from the GUI. <ul style="list-style-type: none"> ▲ Removes the H.323 and SIP technical protocol indicator from the main window. ▲ Removes the H.323 or SIP call type from the device list displayed for contacts or directory search results • Support for display device model instead of device alias. • Add the Contacts and Organization buttons under the Contacts tab and support for the Multi-tier directory. <ul style="list-style-type: none"> ▲ Contacts Contacts are divided into two groups: <ul style="list-style-type: none"> Frequently Used Your frequently used contacts are listed here automatically. Favorites Favorites are contacts that you add to the Favorites list. You also can edit a contact or remove a contact from the Favorites list. ▲ Organization See the hierarchy of your organization. This feature is available only in managed mode and if you have permission to view the address on the server. <p>Support for the following test features:</p> <ul style="list-style-type: none"> • Automatic SDP Size Adjustment • Automatic Face Brightness Adjustment • Mute Reminder <p>Operation system and device support changes:</p> <ul style="list-style-type: none"> • Added Support for 32-bit and 64-bit Windows 8.1 standard, professional, and enterprise versions. • Support for Window XP has ended.
3.1	January 2014	<ul style="list-style-type: none"> • Support for Instant Messaging and Presence • Support for SmartPairing™ • NAT and Firewall Enhancement in standalone mode • Support for Easy Upgrade from Polycom CMA® Desktop • Support for the Kazakh language • Support for Single Sign-on • Support for USB Headset Noise Suppression (test feature). • Other Enhancement <ul style="list-style-type: none"> ▲ When you search contacts, only the people and endpoints that can be called from RealPresence Desktop are returned.

Release History

Release	Release Date	Features
3.0	July 2013	<p>Support for H.264 high-profile calls (outgoing and incoming).</p> <p>Support for answering incoming calls automatically. When enabled, this feature allows users to choose to mute the audio or video of auto-answered calls.</p> <p>Enabled users to hide or display local self-view.</p> <p>Enabled users to change call settings during the call.</p> <p>Enabled users to collect and e-mail log files.</p> <p>Added SmartPairing to enable devices to share content with Polycom HDX and RealPresence Group Series devices.</p>
2.3	March 2013	<p>Added support for some Windows 8 editions</p> <p>Note: Windows Store is not supported.</p> <p>Added Keyboard Noise Elimination for Non-speakers.</p>
2.1	December 2012	Added Interactive Voice Response (IVR) support for SVC calls.
2.0	November 2012	Initial release.

Hardware and Software Requirements

The following hardware and software requirements were determined based on test scenarios. Your system's actual performance may vary based on software or hardware configurations.

Hardware and Software Requirements

Hardware or Software	Requirement
Windows	Windows 7: 32-bit and 64-bit Windows 8 and 8.1 Standard, Pro, and Enterprise: 32-bit and 64-bit
Software	<ul style="list-style-type: none"> Microsoft .Net Framework version 4.0 Polycom CMA Management Application version 6.2.5 or later Polycom RealPresence Resource Manager version 8.1 or later
Processor	<p>RealPresence Desktop system's capabilities vary depending on processor performance. The processor types and speeds listed below are intended as reference guides. RealPresence Desktop will have equivalent capabilities on other processors with equivalent performance.</p> <p>Recommended CPU: Intel Core i5, 2.5GHz or higher.</p> <p>Audio only</p> <ul style="list-style-type: none"> Atom CPU or higher <p>Basic Video Transmit (Up to QVGA 30fps send, up to 720P 15fps receive)</p> <ul style="list-style-type: none"> single core dual cores, lower than 2.0 GHz quad cores, lower than 1.3 GHz <p>Premium Video Transmit (Up to VGA 30fps send, up to 720P 30fps receive)</p> <ul style="list-style-type: none"> dual cores, 2.0 GHz or higher quad cores, 1.3 GHz or higher <p>HD Transmit</p> <ul style="list-style-type: none"> dual cores, 2.5 GHz or higher (Up to 720p 15fps send, up to 720P 30fps receive) quad cores, 1.6 GHz or higher (Up to 720p 15fps send, up to 720P 30fps receive) quad cores, 2.0 GHz or higher (Up to 720p 30fps send, up to 720P 30fps receive)
RAM	4 GB
Video memory	Minimum: 256 MB
Hard drive space	200 MB
Camera	Integrated or external
Audio devices	Standard PC97 audio devices
Monitor	Recommended: 16:9, 1920 x 1080 Minimum: 1024x768

Products Tested in This Release

Polycom RealPresence Desktop systems are tested extensively with a wide range of products. The following list indicates the products that have been tested for compatibility with this release, but is not a complete inventory of compatible equipment.



Note: Upgrade your Polycom systems

You are encouraged to upgrade all your Polycom systems with the latest software before contacting Polycom support to ensure that the issue has not already been addressed by vendor software updates. Go to the [Polycom Support](#) to find the current Polycom Supported Products matrix.

Polycom CMA and RealPresence Resource Manager Systems

The RealPresence Desktop application can register to the Polycom CMA server and Polycom RealPresence Resource Manager server. The CMA server and RealPresence Resource Manager systems can schedule and perform limited monitoring of the RealPresence Desktop application, and also fully manage, provision, and update the application. The Polycom CMA server cannot upgrade the application, and the Polycom RealPresence Resource Manager server can upgrade the application only from version 8.0.

Products Tested in This Release

Type	Product	Version
NAT/Firewall/Border Controller	ACME Packet Net-Net 3820	Firmware SCX6.3.0 MR-5 Patch 2
	Polycom VBP® 5300-ST	11.2.19
	Polycom VBP-E	11.2.19
	Polycom RealPresence® Access Director™	4.0, 4.1
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Polycom Distributed Media Application™ (DMA®) 7000	6.1.0, 6.2.0
	Polycom Converged Management Application™ (CMA®) 4000/5000	6.2.5
	Polycom RealPresence Resource Manager	8.2, 8.3
	Polycom RMX® 4000/2000	8.4, 8.5
	Polycom RMX® 1500	8.5
	Polycom RealPresence® Collaboration Server 1800	8.4, 8.5
	Polycom RMX® 1000C	2.5.1
	Polycom RSS™ 4000	8.5.1
	Polycom RealPresence Capture Server	1.8
	Broadsoft SIP r19 Server	r19
	Polycom RealPresence CloudAXIS™ Suite	1.6, 1.6.1

Products Tested in This Release

Type	Product	Version	
Endpoints	Polycom HDX® Series	3.1.4, 3.1.5	
	Polycom RealPresence Mobile	3.2 (iOS) 3.2 (Android)	
	Polycom VVX®	5.0.1	
	Polycom CMA® Desktop	5.2.6	
	Polycom Telepresence m100	1.0.7	
	Polycom RealPresence Desktop		3.2, 3.3(Windows)
			3.2, 3.3(Mac)
Polycom RealPresence Group Series	4.1.4, 4.2		

Installation and Upgrade Notes

This section explains how to install and upgrade RealPresence Desktop. In standalone mode, you will need a license number and activation key code or license file to activate the product beyond the 30-day trial period.

Multi-language UI Support

RealPresence Desktop UI supports English, International Spanish, French, German, Simplified Chinese, Korean, Japanese, Russian, Portuguese, Kazakh, Czech, and Traditional Chinese. When you install RealPresence Desktop for the first time, you can select one of the supported languages and RealPresence Desktop is automatically installed in the selected language.

Install RealPresence Desktop

The RealPresence Desktop installation file is provided in two different formats, .exe and .msi, which are available at [Polycom Support](#).



Note: Installation prerequisite

Installation of the RealPresence Desktop application requires that you have installed Microsoft .Net Framework version 4.0.

You can view your Microsoft .Net Framework version in
C:\Windows\Microsoft.NET\Framework.

Install the Software Using the .exe File

The .exe file is intended for easy, interactive installations by end users.

To install this product by using the .exe file:

- 1 Download the .exe file from [Polycom Support](#).
- 2 Open the file.
- 3 Follow the instructions in the installation procedure.



Note: Installation GUI does not support Kazakh

RealPresence Desktop installation GUI does not support Kazakh because the Windows InstallShield does not support Kazakh.

Install the Software Using the .msi File

The .msi file is intended for use by experienced Windows administrators to support “pushed” and “silent” installations. These procedures use mechanisms such as GroupPolicy Objects. You should already be familiar with these mechanisms to use the .msi installation file.

**Note: About the .msi file**

- Centralized distribution is used by corporate system administrators for software installation or upgrade.
- When you save the .msi file to your local disk, do not rename it.
- Silent installation needs administrator level permission.

The following list shows how a desktop management or group policy object is built:

- Save the downloaded Polycom .msi installation file to a directory (for example, C:\temp) on the user's local system.
- Use the Windows Installer (.msi or .exe) to perform a command line installation of the program.
 - The following is an example of using the installer from the directory where the Polycom RealPresence Desktop .msi file resides:

```
msiexec /qn /l* RPD_install.txt /i "RPDesktop.msi"
```

- When running the installation from a directory other than the directory where the executable file resides, include the full path in the command:

```
msiexec /qn /l* RPD_install.txt /i "c:\temp\ RPDesktop.msi"
```

**Note: About the .msi file name**

The name of the .msi in your command line should be consistent with the installation package.

MSI Flags

This section describes the MSI commands for installation, upgrade, and uninstallation.

- MSI Installation Command:

```
msiexec /qn /i <setup>.msi CMASERVERADDRESS=IP_CMA /l logfile
```

You can specify the CMA server IP address using the `CMASERVERADDRESS` parameter.

- MSI Upgrade Command:

```
msiexec /qn /i <setup>.msi REINSTALLMODE=vomus REINSTALL=ALL /l logfile
```

When you upgrade the RealPresence Desktop application from an older version, you must include this line to your command: `REINSTALLMODE=vomus REINSTALL=ALL`.

You should not include this line for the first-time installation.

- MSI Uninstallation Command:

```
msiexec /qn /x <setup>.msi
```

To view the license number of RealPresence Desktop:

- 1 Click  **Polycom RealPresence Desktop** on the left of the application's title bar.
- 2 Click **About**.

Upgrade RealPresence Desktop

In managed mode, you can upgrade RealPresence Desktop to the latest version that you upload on RealPresence Resource Manager. The RealPresence Desktop distribution package (.tar.gz) is usually uploaded and managed by an administrator on RealPresence Resource Manager.



Note: Consume one more license after upgrade

RealPresence Desktop will consume one more license after upgrading from 3.0 or earlier versions to version 3.1 or later. To release the old license, remove it manually or set the license reclaim cycle to be a small value, such as 5 minutes, on the RealPresence Resource Manager system.

To upload a RealPresence Desktop distribution package:

- 1 Download the latest RealPresence Desktop distribution package from [Polycom Support](#). Download the compressed package.
- 2 Log into the RealPresence Resource Manager portal.
- 3 From the top menu, go to **ENDPOINT > Dynamic Management > Upload Software Updates**.
- 4 Select the product for which you want to upload the package—for example RealPresence Desktop (PC) or RealPresence Desktop (Mac OS).
- 5 From the left menu in the **ACTIONS** panel, click **Upload Software Update**.
- 6 In the **Upload Software Update** dialog, specify the **Software Update File** field by browsing to the RealPresence Desktop compressed package (.tar.gz).
- 7 (Optional) Enter the description.
- 8 Select the uploaded version to use.
- 9 Click **Update**.

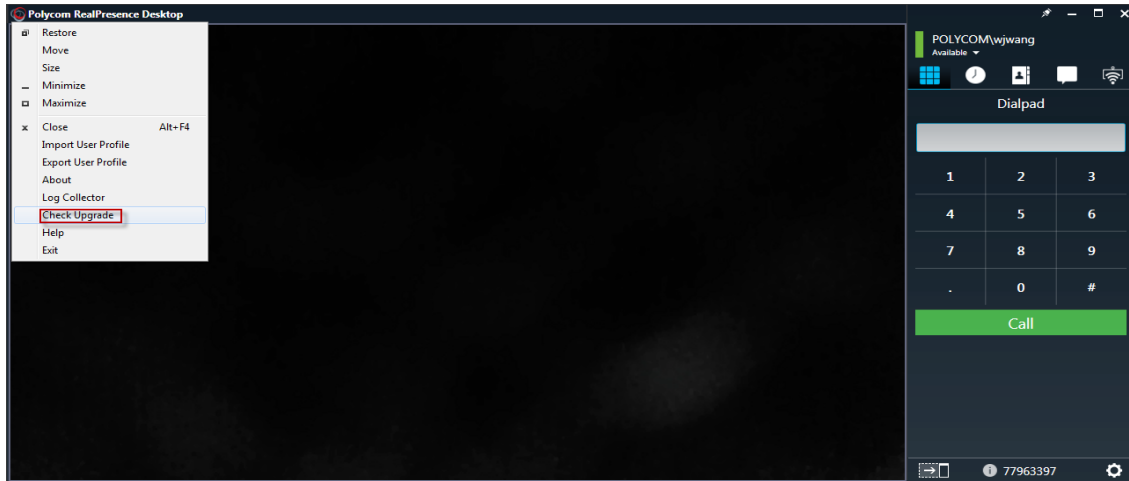
After you upload the latest distribution package to RealPresence Resource Manager, RealPresence Desktop reminds you to upgrade your RealPresence Desktop to the latest version that you uploaded when you logged into RealPresence Desktop in managed mode. You can also display the notice manually to do the upgrade.

To upgrade RealPresence Desktop:

- 1 Log in to RealPresence Desktop.
- 2 Click the RealPresence Desktop logo on the left of the application's title bar.
- 3 Choose **Check Upgrade** from the menu as shown next.
- 4 In the next dialog, click **Yes** to perform the upgrade.

The RealPresence Desktop application will be upgraded to the latest version that you uploaded to RealPresence Resource Manager.

Checking the upgrade



Easy Upgrade from Polycom CMA[®] Desktop

When you install RealPresence Desktop for the first time, RealPresence Desktop can detect the installed CMA Desktop if the version is equal or higher than 5.2.2. If RealPresence Desktop finds CMA Desktop, RealPresence Desktop displays a message to confirm the back up and to import the application and user data of CMA Desktop and also confirms the uninstall of the CMA Desktop. If you choose yes, RealPresence Desktop will back up and import the following CMA Desktop data:

- Auto-answered incoming calls
- Mute auto-answered calls
- Always check (Call to/H.323/SIP). RealPresence Desktop will import this data on Windows, but will not import this data on Mac.
- Specify sign-in server.
- Automatically start Polycom CMA Desktop at system start.
- Sign in using network login credentials. RealPresence Desktop will not import the network login credentials unless you have chosen this option.
- Maximum call rate.
- Local contacts.

RealPresence Desktop supports the easy upgrade feature only on Windows XP and Windows 7.



Note: Limitations of this feature

- When RealPresence Desktop and CMA Desktop are running on the same computer and you use the same account to sign in, the local contacts will not be synchronized between RealPresence Desktop and CMA Desktop after you add a local contact to RealPresence Desktop manually. XMPP contacts will be synchronized because XMPP contacts will be downloaded from CMA or RealPresence Resource Manager.
- After you uninstall CMA Desktop, your CMA Desktop settings will be retained. If you want to install CMA Desktop again, you can import the previous settings on Windows.
- Silent installation for enterprise IT: RealPresence Desktop will import CMA Desktop settings and user data automatically when you install RealPresence Desktop for the first time and the CMA Desktop version is higher than 5.2.2. RealPresence Desktop will not uninstall CMA Desktop. Enterprise IT can uninstall CMA Desktop using other software deployment tools.

System Capabilities and Constraints

The following protocols, resolutions, algorithms, and ports are supported for RealPresence Desktop.

Protocols

The following table lists the supported protocols.

Protocol	Description
DNS	Domain Name System
H.235	Security and Encryption
H.239	Token Management
H.281	Far End Camera Control (FECC)
H.323	Signaling
H.460	Firewall/NAT Traversal
LDAP, H.350	Directory Services
NTLMv2	Authentication
Polycom LPR™	Lost Packet Recovery
SIP	Session Initiation Protocol
XMPP	The Extensible Messaging and Presence Protocol

Resolutions

The following table lists the supported resolutions.

Resolution and Frame Rate

Resolution and Frame Rate	Source
Up to 720p / 30 fps	Video sent from camera
Up to 720p / 30 fps	Video received from far end
Up to 720p / 5 fps	Content showing from the computer
Up to 720p / 5 fps	Content received from far end

Algorithms

The following table lists the supported algorithms.

Algorithm Type	Description
Audio	<ul style="list-style-type: none"> • G.711μ or G.711A • Siren LPR • G.722.1 at 24 kbps and 32 kbps • G.722.1 Annex C at 24 kbps, 32 kbps, and 48 kbps • G.719 at 32 kbps, 48 kbps, 64 kbps, and 128 kbps • G.729 • SAC • Automatic gain control • Acoustic echo cancellation
Video	<ul style="list-style-type: none"> • H.261 • H.263/H.263+ • H.264 AVC • H.264 SVC • H.264 high profile • Content over H.264/H.263/H.263+ • Video LPR
Encryption	<p>AES-128 media encryption</p> <p>TLS/SRTP supported in SIP calls</p>

Inbound and Outbound Ports

The following tables list the supported inbound and outbound ports.

Inbound Ports

Port	Function
1720 (TCP)	H.323 Call Signaling (H.225)
1719 (UDP)	H.323 Registration, Admission, and Status (RAS)
3230 - 3250 (TCP)	H.323 Call Signaling (H.245)
3230 - 3250 (UDP)	Media (RTP/RTCP)
3238 (UDP and TCP)	BFCP
5060 (UPD and TCP)	SIP

Outbound Ports

Port	Function
443 (TCP)	Provisioning, Monitoring, Help Files, HTTPS
389 (TCP)	LDAP
5060 (UDP and TCP)	SIP

Outbound Ports

Port	Function
5061 (TCP)	SIP TLS signaling
5222 (TCP)	XMPP
1720 (TCP)	H.323 Signaling (H.225)
1719 (UDP)	H.323 Registration, Admission, and Status (RAS)
3230 - 3250 (TCP)	H.323 Signaling (H.245)
3230 - 3250 (UDP)	Media (RTP/RTCP)
3238 (UDP and TCP)	BFCP

Interoperability Issues

You may encounter the following issues when using RealPresence Desktop with other products or on specific operating systems.

Interoperability Issues

Limitation Type	Description	Solution
Limitations Related to Operating System and Third-party Software	On a 64-bit Windows 7 operating system, selecting Polycom CX5000 Panoramic Video as video device displays a blue screen.	On 64-bit windows 7, use other video device.
	On 32-bit Windows 7, when you share a Microsoft PowerPoint 2007 file and expand it to full screen, the content share control bar is covered by the RealPresence Desktop application. To display the content control bar, you need to minimize or restore the screen.	To display the content control bar, you need to minimize or restore the screen.

Interoperability Issues

Limitation Type	Description	Solution
Limitations Related to Other Polycom Products	In a motion mode conference, RealPresence Desktop receives video with a large delay because the video is 60 fps.	Set a conference with sharpness mode on MCU.
	If you create a Continuous Presence (CP) only conference call on Polycom RMX 4000/2000 system and Polycom RealPresence Collaboration Server 800s version 8.1 with default content settings (Content Settings: HiResGraphics and Content Protocol: H.264 HD), the RealPresence Desktop application cannot send or receive content if call rate is set as 384 kbps or below.	In this case, you need to do the following: <ul style="list-style-type: none"> • Change the RMX Content Settings to Graphics, and Content Protocol to H.263 & H.264 Auto Selection. • Set the call rate on RPM to above 384 kbps.
	RealPresence Desktop supports using only English user names and passwords to sign into the Polycom CMA server and RealPresence Resource Manager, or to register to a gatekeeper or an SIP server.	Use English user names and passwords.
	If you use an MPM+ media card in a call with an RMX system, a blue edge is displayed at the bottom of the video window.	Use only an MPMX media card with the RMX system.
	When RealPresence Desktop and m100 are not in the same local network, RealPresence Desktop fails to call m100.	Let m100 call RealPresence Desktop.
	When you enable mutual TLS (Transport Layer Security) from RealPresence Resource Manager, RealPresence Desktop will fail to upgrade from RealPresence Resource Manager.	Disable mutual TLS.

Known Issues

The following table lists the known issues for this release. If a workaround is available, it is noted in the table.

Category	Issue ID	Description	Workaround
SmartPairing	SWEP-6405	RealPresence Desktop stops working occasionally when sharing content under SmartPairing.	Restart RealPresence Desktop and retry.
Other	SWEP-6812	OpenSSL Memory Leak may occur. This issue impacts OpenSSL1.0.1 server implementations for both SSL or TLS and DTLS.	None.

Resolved Issues

The following table lists the resolved issues for version 3.3.

Category	Issue ID	Description
Content	SWEP-6290	You might see a mosaic screen when RealPresence Desktop joins a RMX conference which enables content transcoding, resulting in packet loss to the H.264 content stream.
SmartPairing	SWEP-6338	After connecting to a new device, RealPresence Desktop always shows the old HDX or Group Series IP address.
SVC	SWEP-6350	RealPresence Desktop may stop working after joining an SVC conference with more than 100 SVC participants.

The following table lists the resolved issues in version 3.2

Category	Issue ID	Description
Other	DSTC-1541	When you are trying to sign into RealPresence Desktop, RealPresence Desktop may incorrectly display a certificate warning for the intermediate CA issued certificate.
Video	SWEP-5592	The RealPresence Desktop received video is stretched when RealPresence Desktop is inter operating with VSX® Visual Concert™.

The following table lists the resolved issues in version 3.1

Category	Issue ID	Description
Call Control	SWEP-4495	Under Broadsoft environment, the RealPresence Desktop application can only send 180 p video to the RealPresence Group Series system. This issue has been fixed.
Contacts	SWEP-4658	The RealPresence Desktop contact list does not display enough characters to differentiate users. This issue has been fixed.
Contacts	EXT-5302	When you are trying to call some one in your recent calls list, the SIP or H.323 number is displayed instead of the user ID of this person. This issue has been fixed.
Other	SWEP-4698	RealPresence Desktop stops working when the first call comes if you configure RealPresence Desktop to start automatically when system starts. This issue has been fixed.
Other	SWEP-4905	RealPresence Desktop cannot connect to an Avaya IP phone while audio capability is negotiating with G.729 over H.323 call. This issue has been fixed.

Category	Issue ID	Description
Other	SWEP-5318	In managed mode, whenever RealPresence Desktop starts, a license page displays with the following error message: You are not authorized to perform this action. This issue has been fixed.
Video	SWEP-3859	When you join a HP 720p SIP call hosted by Polycom RMX1000 system, RealPresence Desktop application displays a blue screen. This issue has been fixed.

The following table lists the resolved issues in version 3.0.

Category	Issue ID	Description
Content	SWEP-2735	Sharing content from a third or fourth monitor may cause the RealPresence Desktop application to stop operating correctly. This issue has been fixed.
General	SWEP-3627	When using multiple <code>_cmaconfig._tcp</code> SRV records, RPD did not observe priority value assigned. This issue has been fixed.

Enterprise Scalable Video Coding (SVC) Mode

The Enterprise Scalable Video Coding (SVC) mode is an alternative to the AVC mode that has traditionally been supported. Differences between the two modes are listed in the following table.

SVC and AVC Mode

SVC Mode	AVC Mode
Each participant in the conference call is received by the client as a separate video stream.	The composite video image is determined by the bridge based on administrator configuration.
A Caller ID is indicated by text in the appropriate window, which remains on display throughout the call.	Caller ID information is displayed intermittently.
Double-clicking or tapping on a participant's video, content video, or local preview expands that video to full screen. Double-clicking or tapping again reverts the display to the composite image.	Layout may be controlled by dialing ** and then selecting a format. Double-clicking or tapping on the remote video, content video, or local preview expands that video to full screen. Double-clicking or tapping again reverts the display to the composite image.

The SVC mode provides the following features:

- Video sends and receives up to 720p resolution.
- Frame rates of 7.5/15/30.
- Support for AVC content.
- Support for SVC auto layouts for video streams of up to nine far-end participants.

Last active speakers, resolution, bandwidth, and number of participants are adjusted based on network bandwidth and processor capabilities.



Note: Incorrect screen layouts

When using SIP UDP in an SVC call and there is more than 10percent Packet Loss, the screen layout may display incorrectly. Changing to SIP TLS or TCP is recommended.

- Supported layouts of 1x1 and 1+1 through 1+10.
The maximum layout of 1+10 comprises 9 remote participants plus 1 content sharing frame, and 1 local preview frame.
- Support for SAC with at least two quality layers, for example, 48 kbps and 10 kbps.
- Support for mixing up to three different audio streams from the MCU.
- Support for combining up to nine different SVC video streams (call rate at 1920 kbps) from the MCUs.

SVC conference calls currently do not support the following:

- Far-end Camera Control (FECC)
- Recording with RealPresence Capture Server


- H.323 calls.



Note: SVC call disconnection

In a poor network connection, sometimes a participant disconnects automatically from an SVC call. This can result in a frozen video stream of the participant. The RMX system will clear the frozen stream in 30 minutes.

Access Media Statistics

To access media statistics, click the antenna icon  on the in-call toolbar during a call.

Value	Description
Call Type	SIP or H.323 call type.
Call Encryption	Indicates whether your call is encrypted.
Far Site Name	Name of the far site.
Far Site System	Type of video conferencing system at the far end and the software version.
Call Speed	Negotiated speed (bandwidth) for the call, which is usually the combined video and audio speeds in the call.
Video Protocol	ITU-C video algorithm and annexes used in the current call. The video protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.
Video Format	Picture size currently in use.
Audio Protocol	Audio algorithm and annexes used in the current call. The audio protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.
Audio Rate	Bandwidth specified for the audio portion of the call. The proportion of the audio rate to the video rate depends on the protocol used.
Video Rate	Bandwidth specified for the video portion of the call. The proportion of the video rate to the audio rate depends on the protocol used.
Video Rate Used	Actual bandwidth being used for the video portion of the call. This is a real-time measurement, which normally fluctuates.
Video Frame Rate	Rate your system uses to update the picture seen at the far end. The system can send up to 15 frames per second. If the camera picks up large, continuous, or frequent motions, the software takes longer to assemble the data into video frames, and the frame rate drops. Changes in lighting also reduce the frame rate.
Video Packets Loss Percentage	Total video packet loss as a percentage of the total number of video packets transmitted by your system and those transmitted by the far end.
Video Jitter	Percentage of variation in the video transmission rate.
Audio Packet Lost	Number of audio data packets lost during the call, including transmitted packets and incoming packets. Packet loss indicates congestion or other problems on the network.
Audio Packets Loss Percentage	Total audio packet loss as a percentage of the total number of audio packets transmitted by your system and those transmitted by the far end.
Audio Jitter	Percentage of variation in the audio transmission rate.
Content Protocol	Format used for the recording, compression, and distribution of the content.
Content Format	Display resolution of the content.
Content Rate	Rate your system uses in content transmission.

Value	Description
Content Rate Used	Actual bandwidth being used for the content transmission.
Content Frame Rate	Rate your system uses in content frame transmission.
Content Packets Lost	Number of content data packets lost during the call, including transmitted packets and incoming packets. Packet loss indicates congestion or other problems on the network.
Content Packets Loss Percentage	Total audio packet loss as a percentage of the total number of content packets transmitted by your system and those transmitted by the far end.

Feature Overview

This table compares features available in CMA Desktop, Telepresence m100, and RealPresence Desktop.

Features	CMA Desktop	Telepresence m100	RealPresence Desktop (Windows/Mac)
AVC H.323 calls (outgoing and incoming)	✓	✓	✓
AVC H.264 high profile calls (outgoing and incoming)			✓
AVC SIP calls (outgoing and incoming)	✓	✓	✓
SVC SIP calls (outgoing and incoming)			✓
SVC high profile calls			✓
H.239/BFCP Content receive	✓	✓	✓
H.239/BFCP Content send	✓	✓	✓
Automatic gain control	✓	✓	✓
Acoustic echo cancellation	✓	✓	✓
Call with audio only devices	✓	✓	✓
H.261	✓	✓	✓
H.263/H.263+	✓	✓	✓
Video LPR	✓	✓	✓
720p30 transmit	✓		✓
720p30 receive	✓	✓	✓
VGA transmit/receive	✓	✓	✓
SirenLPR	✓	✓	✓
G.719 at 32 kbps, 48 kbps, 64 kbps, 128 kbps	✓	✓	✓
G.722.1 at 24 kbps and 32 kbps	✓	✓	✓
G.722.1 Annex C at 24 kbps, 32 kbps, 48 kbps	✓	✓	✓
Siren 14 at 24 kbps, 32 kbps and 48kbps	✓	✓	
G.711 μ or G.711A	✓	✓	✓
Video mute	✓	✓	✓
Audio mute	✓	✓	✓
Volume control	✓	✓	✓

Features	CMA Desktop	Telepresence m100	RealPresence Desktop (Windows/Mac)
DTMF - (inband tones)	✓	✓	✓
DTMF - RFC 2833 (out of band events)	✓	✓	✓
Call statistics	✓	✓	✓
Camera selection (in call)	✓	✓	✓
PIP	✓	✓	✓
FECC (H323 & SIP)	✓	✓	✓
Dual monitor support	✓	✓	✓
Application level content share			✓
Region content share	✓	✓	
Windowed mode	✓	✓	✓
Full Screen mode	✓	✓	✓
Minimized running mode			✓
SVC auto layout			✓
Polycom RealPresence Resource Manager monitoring and reporting	✓		✓
Polycom RealPresence Resource Manager provisioning	✓		✓
Software update	✓		✓
Stand Alone mode		✓	✓
Call history (recent call list)	✓	✓	✓
Local contact list	✓	✓	✓
Directory service	✓ (LDAP)	✓ (LDAP, GAB)	✓ (LDAP)
XMPP Presence	✓		✓
Instant Message	✓		✓
Localization	✓		✓
Log retrieval tool	✓	✓	✓
AES encryption	✓	✓	✓
H.460 firewall traversal	✓		✓
Acme SBC Interoperability	✓		✓

Features	CMA Desktop	Telepresence m100	RealPresence Desktop (Windows/Mac)
SIP outbound (RFC 5626)			✓
Certificates for TLS connection			✓
BFCP over UDP			✓
BFCP over TCP	✓	✓	✓
Secure RTP/RTCP (SDES)			✓
Symmetric RTP	✓	✓	✓
Configurable fixed ports for RTP/RTCP	✓	✓	✓
Network adapter selection - Automatic	✓	✓	✓
Annex O	✓	✓	✓

About AES Encryption

The following are requirements for using AES encryption in calls.

AES Encryption in H.323 Calls

To use AES encryption in H.323 calls, both you and the far end must satisfy the following requirements:

- Enable AES encryption.

When working in the managed mode, the AES encryption of the RealPresence Desktop application is configurable through its provisioning server.

When working in the standalone mode, the AES encryption of the RealPresence Desktop application works as “When available” and is not guaranteed.

- Both you and your far end must support, or be compatible with, the same Key exchange and encryption method (H.235v3 w, or AES 128bit CBC).

AES Encryption in SIP Calls

To use AES encryption in SIP calls, both you and the far end must satisfy the following requirements:

- Enable AES encryption.
- Enable TLS for SIP transport.
- Support for SDES over TLS key exchange.
- Support for AES 128 bit CBC mode over SRTP.



Note: Difference between managed mode and standalone mode

- When working in the managed mode, the AES encryption of the RealPresence Desktop application is configurable through its provisioning server.
- When working in the standalone mode, the AES encryption of the RealPresence Desktop application works as “When available” and is not guaranteed.

Prepare Your Device for Mutual Transport Layer Security

You can establish secure communications using Mutual Transport Layer Security (MTLS) with provisioning servers such as Polycom DMA, CMA, or RealPresence Resource Manager systems.

To establish MTLS connections, the client and server need to hold certificates issued from the same Certificate Authority (CA) and the root certificate of this CA.

To import certificates, you need to generate a Certificate Request (CSR) first by using a computer that has installed the OpenSSL tool

To generate and import your certificate on a PC:

- 1 Make sure you have OpenSSL installed and configured.
- 2 Open the CMD console window from your PC.
- 3 Generate the private key *client.key*. For example:


```
C:\OpenSSL-Win32\bin> openssl genrsa -out client.key 1024
```

4 Generate the certificate request *client.csr*. For example:

```
C:\OpenSSL-Win32\bin> openssl req -new -key client.key -out client.csr
```

```
For som-----
```

```
Country Name (2 letter code) [GB]:cn ---CSR info.
```

```
State or Province Name (full name) [Berkshire]:bj ---CSR info.
```

```
Locality Name (eg, city) [Newbury]:bj ---CSR info.
```

```
Organization Name (eg, company) [My Company Ltd]:plcm ---CSR info.
```

```
Organizational Unit Name (eg, section) []:caqa ---CSR info.
```

```
Common Name (eg, your name or your server's hostname) []:caqa ---CSR info.
```

```
Email Address []:pp@pp.com ---CSR info.
```

Enter the following extra attributes to be sent with your certificate request. Write down the challenge password. You will need it later in the procedure.

```
A challenge password []:1234 -----see [Notel]
```

```
An optional company name []:poly
```

5 Submit the certificate request to your CA:

a View the content of the file *client.csr* using the following command: Select and copy its content (from ---BEGIN CERTIFICATE REQUEST to END CERTIFICATE REQUEST---):

```
C:\OpenSSL-Win32\bin> type client.csr
```

b Go to your CA's web interface <http://<CA's IP address>/certsrv/>, and then choose **Request a certificate**.

c Click **Advanced certificate request**.

d Click **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or Submit a renewal request by using a base-64-encoded PKCS #7 file**.

e Paste the content of the file *client.csr* to the text field in the **Saved Request** text field, and click **Submit**.

f Choose **Base 64 encoded** and click **Download certificate**.

The file is saved as *certnew.cer* by default in the **Downloads** folder.

6 Move the generated *certnew.cer* file to your current directory.

7 Convert the file *certnew.cer* to a .p12 file by using the OpenSSL tool. The export password should be the same as the challenge password you set in step 4. For example:

```
C:\OpenSSL-Win32\bin> openssl pkcs12 -export -in certnew.cer -inkey  
client.key -out client.p12 -name testp12
```

```
Enter Export Password:
```

```
Verifying - Enter Export Password:
```

8 Encrypt the challenge password you set in Step 4:

a Go to **Convert String**.

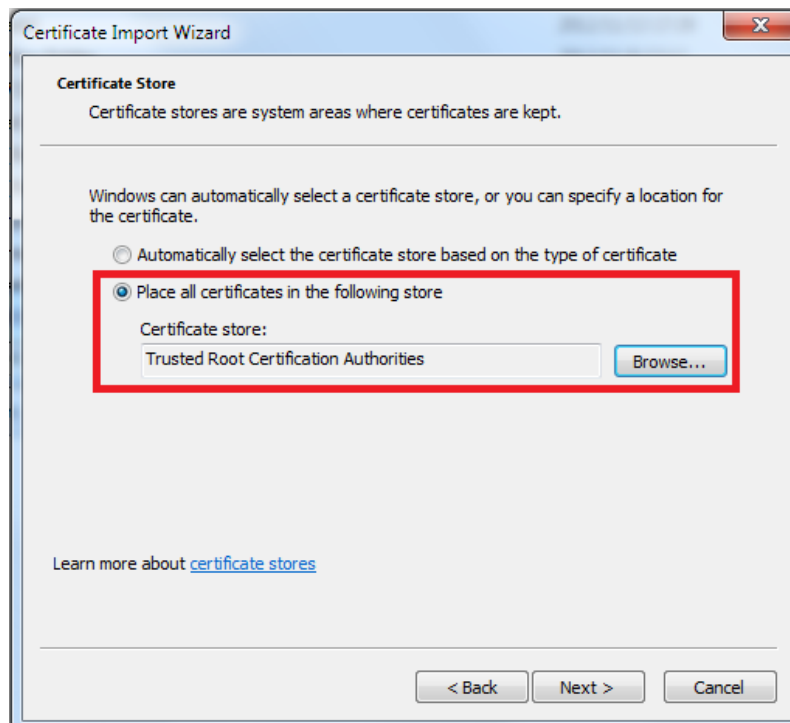
b Enter the challenge password in the text field, and click **Base64 Encode!**.

c Copy the encoded text from the following text field, and save it as a .pwd file. For example: *client.pwd*.

- 9 Open the RPD appdata folder `%appdata%\RealPresence Desktop\`, and then copy the files `client.p12` and `client.pwd` to the folder.

To import the root certificate of your CA:

- 1 Go to your CA's web address <http://<CA's IP address>/certsrv/>, click **Download a CA certificate, certificate chain, or CRL**.
- 2 Select **Base 64**, and click **Download CA Certificate**.
- 3 Right-click the CA file, and select **Install Certificate**. Follow the Certificate Import Wizard. Be sure to install it to **Trusted Root Certificate Authorities**.



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