

# Polycom® RealPresence® Desktop for Windows®

## 3.1 Release Notes

Polycom is pleased to announce an update release of the RealPresence Desktop for Windows application.

RealPresence Desktop is a standards-based application that enables you to meet and collaborate face-to-face with anyone from anywhere—improving teamwork, collaborative decision-making, and productivity with colleagues, customers, and business partners.

RealPresence Desktop offers features and user experiences similar to the Polycom RealPresence Mobile application. It is easily installed and configured, supports both standalone and managed modes, and enables sharing of the desktop and content. In standalone mode, the application requires a license to operate beyond the 30-day trial period.

These release notes describe important information to assist you in installing and using the RealPresence Desktop application.

## Software Version History

The following table shows the version history of the RealPresence Desktop application.

**Table: Software Versions**

Version	Release Date	Features
3.1	January 2014	RealPresence Desktop 3.1 supports the following new features: <ul style="list-style-type: none"><li>• Support for Instant Messaging and Presence</li><li>• Support for SmartPairing</li><li>• NAT and Firewall Enhancement in standalone mode</li><li>• Support for Easy Upgrade from Polycom CMA® Desktop</li><li>• Support for the Kazakh language</li><li>• Support for Single Sign-on</li><li>• Support for USB Headset Noise Suppression (test feature).</li></ul>
3.0	July 2013	Support for H.264 high-profile calls (outgoing and incoming). Support for answering incoming calls automatically. When enabled, this feature allows users to choose to mute the audio or video of auto-answered calls. Enabled users to hide or display local self-view. Allowed users to change call settings during the call. Allowed users to collect and email log files. Added SmartPairing to enable devices to share content with Polycom HDX and RealPresence Group Series devices.

**Table: Software Versions**

Version	Release Date	Features
2.3	March 2013	Added support for some Windows 8 editions <b>Note:</b> Windows Store is not supported. Added Keyboard Noise Elimination for Non-speakers.
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.

**Table: Hardware and Software Requirements**

Hardware or Software	Requirement
Windows	Windows XP: 32-bit with Service Pack 3 or later Windows 7: 32-bit and 64-bit Windows 8 Standard, Pro, and Enterprise: 32-bit and 64-bit
Software	<ul style="list-style-type: none"> <li>Microsoft .Net Framework Version 4.0</li> <li>Polycom CMA Management Application Version 6.2.5 or later</li> <li>Polycom RealPresence Resource Manager Version 8.0 or later</li> </ul>
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>Audio only</p> <ul style="list-style-type: none"> <li>Atom CPU or higher</li> </ul> <p>Basic Video Transmit (Up to QVGA 30fps send, up to 720P 15fps receive)</p> <ul style="list-style-type: none"> <li>single core</li> <li>dual cores, lower than 2.0 GHz</li> <li>quad cores, lower than 1.3 GHz</li> </ul> <p>Premium Video Transmit (Up to VGA 30fps send, up to 720P 30fps receive)</p> <ul style="list-style-type: none"> <li>dual cores, 2.0 GHz or higher</li> <li>quad cores, 1.3 GHz or higher</li> </ul> <p>HD Transmit</p> <ul style="list-style-type: none"> <li>dual cores, 2.5 GHz or higher (Up to 720p 15fps send, up to 720P 30fps receive)</li> <li>quad cores, 1.6 GHz or higher (Up to 720p 15fps send, up to 720P 30fps receive)</li> <li>quad cores, 2.0 GHz or higher (Up to 720p 30fps send, up to 720P 30fps receive)</li> </ul>
RAM	4 GB
Video memory	Minimum: 256 MB

**Table: Hardware and Software Requirements**

Hardware or Software	Requirement
Hard drive space	200 MB
Camera	Integrated or external
Audio devices	Standard PC97 audio devices
Monitor	Recommended: 16:9, 1920 x 1080 Minimum: 1024x768

## Multi-language UI Support

RealPresence Desktop UI supports English, International Spanish, French, German, Simplified Chinese, Korean, Japanese, Russian, Portuguese, Kazakh and Traditional Chinese. When you install RealPresence Desktop using one of the supported languages, RealPresence Desktop is automatically installed in the corresponding language.

## Install RealPresence Desktop

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



### 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 Site](#).
- 2 Open the file.
- 3 Follow the instructions in the installation procedure.

### 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.



#### 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.

The following bulleted lists show how to build a desktop management or group policy object.

- Writes the .msi installation file to a directory (for example, C:\temp) on the user's local system.
- Uses 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"
```



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 /l logfile
```

- 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 your RealPresence Desktop:

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

## Upgrade

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

### To upload a RealPresence Desktop distribution package:

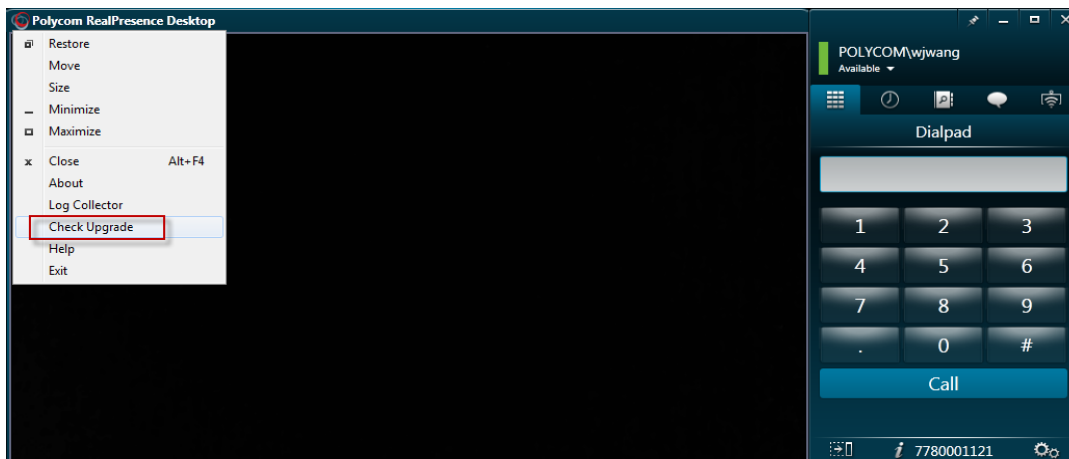
- 1 Download the latest RealPresence Desktop distribution package from [Polycom Support Site](#). You need to download the compressed package.
- 2 Log into the RealPresence Resource Manager portal.
- 3 From the top menu, click **ENDPOINT > Dynamic Management > Upload Software Updates**.
- 4 Select the product that you want to upload the package, for example RealPresence Desktop (PC) or RealPresence Desktop (Mac OS).
- 5 Click **Upload Software Update** in the **ACTIONS** panel from the left menu.
- 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 will prompt a notice to remind you to upgrade your RealPresence Desktop to the latest version that you uploaded when you log into RealPresence Desktop in managed mode. You can also display the notice manually to do the upgrade.

### To upgrade RealPresence Desktop:

- 1 Log into RealPresence Desktop.
  - 2 Click the RealPresence Desktop logo on the left of the application's title bar.
  - 3 Click **Check Upgrade** from the menu as shown in [Figure: Checking the upgrade](#) on page 5.
  - 4 Click **Yes** to do the upgrade on the popped up dialog.
- The RealPresence Desktop application will be upgraded to the latest version that you uploaded to RealPresence Resource Manager.

Figure: Checking the upgrade



## New Features in Version 3.1

RealPresence Desktop 3.1 supports the following new features. See the RealPresence Desktop online help available on [Polycom Support Site](#).

### Support for Easy Upgrade from Polycom CMA<sup>®</sup> Desktop

When you install RealPresence Desktop for the first time, RealPresence Desktop can detect the installed CMA Desktop which version is equal or higher than 5.2.2 on your computer. If RealPresence Desktop finds CMA Desktop, RealPresence Desktop will ask if you want to backup and import the application and user data of CMA Desktop and if you want to uninstall the CMA Desktop. If you choose yes, RealPresence Desktop will backup 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 when system start.
- Sign in using network login credentials. RealPresence Desktop will not import the network login credentials, but import your option of using or not using credentials.
- Maximum call rate
- Local contacts

RealPresence Desktop supports this feature only on Windows XP and Windows 7.



#### Limitations on 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.

### Support for Instant Messaging and Presence

This features is only supported in the managed mode. After you log in to the RealPresence Desktop and register to CMA successfully, you can view your name and set your presence status. You can also chat with anyone on your contacts list. RealPresence Desktop enables you use both chat and video at the same time.



#### Limitations on this Feature

- RealPresence Desktop, CMA Desktop, HDX, RealPresence Group Series exchange presence information only when they are provisioned by the same server.
- The instant messaging and presence feature works properly on RealPresence Resource Manager 8.0 or higher and CMA 6.2.5 or higher.
- If you sign in from different RealPresence Desktop, for example you first sign in on RealPresence Desktop Windows and later sign in on RealPresence Desktop Mac, RealPresence Desktop will always post your latest presence status. You are forced to sign out from the previous RealPresence Desktop. If you sign in CMA Desktop and RealPresence Desktop from different computers, you will not be forced to sign out.

## Support for SmartPairing

You can pair your PC with a Polycom HDX or RealPresence Group Series system and use RealPresence Desktop as its remote control. Then you can use the paired Polycom HDX or RealPresence Group Series system, for example, to place a call, to adjust the call volume, or to end the call, using the RealPresence Desktop application.

## NAT and Firewall Enhancement

NATs and firewalls provide security for your network by limiting outside access to your internal network. This release adds support for NAT in the standalone mode.

## Support for Single Sign-on

RealPresence Desktop now includes a single sign-on (SSO) feature. To use SSO, on the sign-in page, check the **Sign in using network login credentials** check box. If you check this check box, RealPresence Desktop will use your Window login credentials to sign in.

## Support for USB Headset Noise Suppression

RealPresence Desktop can mask your background noise during a call. To use this feature, check the Enable USB Headset Noise Suppression check box in **Settings > Test Features**. Then input the password, which is 456.




This feature only works when you are using a USB headset. If you are using a headset that does not use a USB interface, you may experience undesired muting of the microphone. In this case you should disable this feature.

Polycom recommends you try this feature and send us your feedback via Polycom Community.

## Other Enhancements

This release also offers the following enhancements:

- When you minimize the RealPresence Desktop during a call by clicking , you will see the following notice:

The call is still running in the background. Click RealPresence Desktop icon in the system tray to retrieve the call window.

- When you search contacts, only the people and endpoints that can be called from RealPresence Desktop are returned.

## Features in Previous Versions

This section describes the new features in the previous releases.

### Version 3.0

RealPresence Desktop for Windows 3.0 supports the following new features:

- Support for H.264 high-profile calls (outgoing and incoming).
- Support for answering incoming calls automatically. When you enable this feature, you can choose to mute the audio or video of auto-answered calls.
- Enables you to hide or display local self-view.
- Allows you to change call settings during the call.
- Allows you to collect and email log files.
- Support for SmartPairing to enable devices to share content with Polycom HDX and RealPresence Group Series devices.

### SmartPairing

You can pair your device with a Polycom HDX or RealPresence Group Series system and share your monitor or application with the system.

### Version 2.1

Version 2.1 added Interactive Voice Response (IVR) support for SVC calls.

With the IVR service, you can hear audio prompts when you dial in to a conference.

### Version 2.0

#### Firewall/NAT Support

This version provides firewall and Network Address Translator (NAT) traversal ability with the following features:

- Ability to keep Real-time Transport Protocol (RTP) NAT mapping alive during a live streaming.
- Support for guest user dialing.
- Ability to support Secure Real-time Transport Protocol (SRTP) and Transport Layer Security (TLS) for the secure transmission of media.
- Ability to support Binary Floor Control Protocol (BFCP) over both TCP and UDP links (UDP preferred). Control signaling can now be forwarded using the best-effort traffic class in firewall and NAT traversal.
- Support for the following dial strings when you place calls without registering to server.



H.323	SIP
<ul style="list-style-type: none"> <li>• name@domain</li> <li>• name@IP</li> <li>• extension@domain</li> <li>• extension@IP</li> <li>• IP##extension</li> </ul>	<ul style="list-style-type: none"> <li>• &lt;name&gt;@&lt;domain&gt;</li> <li>• &lt;name&gt;@&lt;ipAddress:port&gt;</li> <li>• &lt;extension&gt;@&lt;domain&gt;</li> <li>• &lt;extension&gt;@&lt;ipAddress:port&gt;</li> </ul>

- Ability to verify server certificates by using installed root certificates (SIP, HTTPS, and LDAP) when establishing TLS connections.
- Ability to interoperate with Acme Session Border Controller (SBC) systems.
- Support for SIP signaling FW/NAT traversal over TCP/TLS as defined in RFC5626.
- Ability to switch to a backup SIP server when the primary server fails.

## Working with Content

Your RealPresence Desktop application enables you to view content sent by others in the call, and share your desktop or running applications with participants at the far end. The shared video and content you receive are displayed in separate windows.

## Far-End Camera Control Support

In a point-to-point call, if the far-end system is configured to allow control, you can pan, tilt, and zoom the far-end Pan Tilt Zoom (PTZ) camera.

# 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.

**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.
- 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 do not support the following:

- FECC
- RealPresence Capture Server
- Only SIP calls are supported.
- A maximum of nine far-end video streams and one content video is supported.
- Use SIP TCP for SVC conferences.

## Access to Media Statistics

To access media statistics, click the antenna icon  on the in-call tool bar 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.

Value	Description
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.
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.

## Interoperability

This section explains the Interoperability of RealPresence Desktop and other applications.

### 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 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 Polycom RealPresence Resource Manager server can only upgrade the application from version 8.0.

## Products Tested in This Release

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



### Upgrade Polycom System

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 website](#) to find the current Polycom Supported Products matrix.

**Table: Interoperability**

Type	Product	Version
NAT/Firewall/Border Controller	ACME Packet Net-Net 3820	Firmware SCX6.3.0 MR-5 Patch 2
	Polycom VBP® 5300-ST	11.2.16
	Polycom RealPresence® Access Director™	3.0, 3.1
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Polycom Distributed Media Application™ (DMA®) 7000	6.0.2, 6.0.3
	Polycom Converged Management Application™ (CMA®) 4000/5000	6.2.5
	Polycom RealPresence® Resource Manager	8.0, 8.1
	Polycom RMX® 4000/2000	8.2, 8.3
	Polycom RealPresence Collaboration Server 800s	8.3
	Polycom RealPresence Collaboration Server 1800	8.1.8, 8.3
	Polycom RMX 1000C	2.4.2, 2.5.1
	Polycom RSS™ 4000	8.6
	Polycom RealPresence Capture Server	1.0
	Broadsoft SIP r17 Server	SP2
	DeltaPath	2.9.3
	MPX Rx	8.3

**Table: Interoperability**

Type	Product	Version	
Endpoints	Polycom HDX® Series	3.1.1, 3.1.2	
	Polycom RealPresence® Mobile	3.0, 3.1 (iOS) 3.0, 3.1(Android)	
	Polycom VVX®	4.1.4, 5.0	
	Polycom CMA® Desktop	5.2.5	
	Polycom Telepresence M100	1.0.6	
	Polycom RealPresence Desktop		3.0, 3.1(Windows)
			3.0, 3.1(Mac)
Polycom RealPresence Group Series	4.1.1, 4.1.3		

## Supported Capabilities, Protocols, Algorithms, and Ports

### Protocols

The following table lists the protocols supported in this version of the RealPresence Desktop application.

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 resolutions supported in this version of the RealPresence Desktop application.

Call Speed	Video Format	Resolution
64 kbps - 255 kbps	180p	320x180
256 kbps - 1023 kbps	360p	640x360
1024 kbps - 1920 kbps	720p (HD)	1280x720

## Algorithms

The following table lists the algorithms supported in this version of the RealPresence Desktop application.

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

## Inbound and Outbound Ports

The following tables list the inbound and outbound ports supported in this version of the RealPresence Desktop application.

**Table: Inbound ports**

Port	Function
1720 (TCP)	H.323 Signaling
1719 (UDP)	Registration, Admission, and Status (RAS)

**Table: Inbound ports**

Port	Function
3230 - 3329 (TCP)	Call Signaling
3230 - 3237 (UDP)	Media (RTP/RTCP)
5060	SIP
3238 (UDP and TCP)	BFCP

**Table: Outbound ports**

Port	Function
443 (TCP)	Provisioning, Monitoring, Help Files, HTTPS
389 (TCP)	LDAP
5060	SIP
5061 (TCP)	SIP TLS signaling
1720 (TCP)	H.323 Signaling
1719 (UDP)	Registration, Admission, and Status (RAS)
3230 - 3329 (TCP)	Call Signaling
3230 - 3237 (UDP)	Media (RTP/RTCP)
3238 (UDP and TCP)	BFCP

## Feature Overview

This table compares features available in CMA Desktop, m100, and RealPresence Desktop 3.1.

Features	CMA Desktop	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	✓	✓	✓

Features	CMA Desktop	m100	RealPresence Desktop (Windows/Mac)
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 $\mu$ or G.711A	✓	✓	✓
Video mute	✓	✓	✓
Audio mute	✓	✓	✓
Volume control	✓	✓	✓
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	✓	✓	



Features	CMA Desktop	m100	RealPresence Desktop (Windows/Mac)
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	✓		✓
SIP outbound (RFC 5626)			✓
Certificates for TLS connection			✓
BFCP over UDP			✓
BFCP over TCP	✓	✓	✓
Secure RTP/RTCP (SDS)			✓
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 your 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 your 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.
- Enable TLS for SIP transport.
- Support for SDES over TLS key exchange.
- Support for AES 12 bit CBC mode over SRTP.

## Preparing 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 well 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

```
A challenge password []:1234 -----see [Notel]
An optional company name []:poly
```



Write down the challenge password. You will need it later in the procedure.

**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/>, 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 under **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 *ccertnew.cer* to a .p12 file by using the openssl tool. 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:



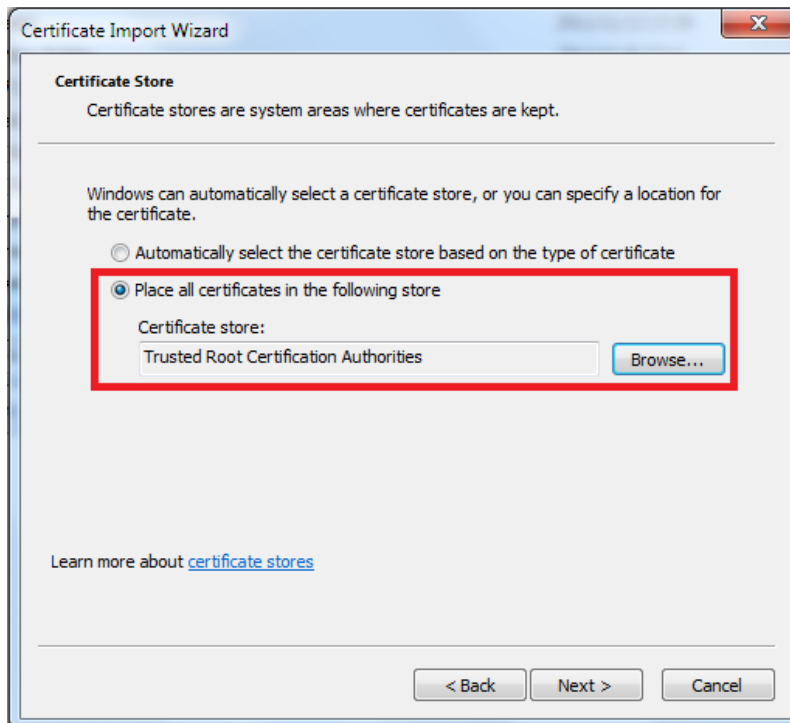
The export password should be the same as the challenge password you set in step 4.

**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**.



## Corrected Issues in Version 3.1

The table below lists the corrected issues in this release.

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.
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.

## Corrected 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 _cmaconfig._tcp SRV records, RPD did not observe priority value assigned. This issue has been fixed.

## Corrected Issues in Version 2.1

Category	Issue ID	Description
Audio/Video	SWEP-2757	Media is not shown or heard in the HDX system when the RealPresence Desktop application calls H.323 B2B through a SIP trunk to the H.323 HDX system in the other enterprise.
LDAP	SWEP-2740	When you have not taken an LDAP action for a prolonged period, accessing LDAP can result in the message “Not connected to LDAP server.”
User Interface	SWEP-2741	On some systems, the RealPresence Desktop application cannot see Internet Explorer 8 when a user shares Monitor 1 with another RealPresence Desktop user.

## 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
Audio	SWEP-3461	Audio quality can be improved by removing Conexant smart audio processing.	Remove smart audio processing as follows: <ol style="list-style-type: none"> <li>1 Go to <b>Control Panel &gt; Add/Remove Programs</b>.</li> <li>2 Uninstall <b>Conexant Smart Audio</b>.</li> <li>3 Reboot the computer.</li> </ol>
Call Control	SWEP-4953	(Standalone mode) When you set the media port in the range of 1- 1024, no video and audio is available in a SIP call.	Use other media port.
Call Control	SWEP-5454	If you sign in different RealPresence Desktop using the same user account, the RealPresence Desktop that you sign in afterwards will fail with H.323 registration due to duplicated alias.	Wait for 30 seconds, RealPresence Desktop will register H.323 automatically and successfully.
Camera	SWEP-2630	When the specified camera is in use by another application, the RealPresence Desktop application is unable to automatically select an idle camera if one is available.	None.
Camera	SWEP-2782	On a 64-bit Windows 7 operating system, selecting <b>Polycom CX5000 Panoramic Video</b> as video device displays a blue screen.	None.
Contacts	SWEP-5627	After you enter a key word and start to search contacts, you cannot cancel this operation.	Use a more specific key word to search contacts.

Category	Issue ID	Description	Workaround
Contacts	SWEP-5643	The IP Address and H.323 Extension fields are independent fields.	When you want to use IP address and a H.323 extension together, you can enter the whole address in the IP Address field, for example, <i>74.118.238.100##1000</i> .
Contacts	SWEP-2631	You cannot modify the following contact information: <ul style="list-style-type: none"> <li>Last Name</li> <li>First Name</li> <li>Device Name</li> <li>Device Type</li> </ul>	None.
Content	SWEP-4496	If you create a Continuous Presence (CP) only conference call on Polycom® RMX® 4000/2000 system and RMX/Polycom® RealPresence® Collaboration Server 800s version 8.1 with default content settings ( <b>Content Settings: HiResGraphics</b> and <b>Content Protocol: H.264 HD</b> ), the RealPresence Desktop application cannot send or receive content if call rate is set as 384 kbps or below.	<ul style="list-style-type: none"> <li>Change the RMX <b>Content Settings to Graphics</b>, and <b>Content Protocol to H.263 &amp; H.264 Auto Selection</b>.</li> <li>Set the call rate on RPM to above 384 kbps.</li> </ul>
Content	SWEP-4424	When you share a PPT file and extend it to full screen, the content share control bar is covered by the RealPresence Desktop application.	Minimize or restore the screen to make the content share control bar viewable.
Content	SWEP-3427	When you select to send application content, the content will be paused if it is overlapped with another application.	Close the other application, or make the content not overlapped.
Content	SWEP-4932	(SIP Call only) When the call rate of M100 is lower than the call rate of RealPresence Desktop and when M100 calls RealPresence Desktop, RealPresence Desktop cannot send content to M100.	Use higher call rate for M100 than RealPresence Desktop.
General	SWEP-2742	The Qihoo 360 SafeGuard antivirus program reports a false virus alert for the RealPresence Desktop application.	None.
General	SWEP-3215	The RealPresence Desktop application cannot run while either the Polycom CMA® Desktop or Polycom Telepresence m100 application is running.	Close the CMA Desktop or Telepresence m100 application.
Localization	SWEP-5277	RealPresence Desktop installation GUI does not support Kazakh since Windows install shield does not support Kazakh.	None.

Category	Issue ID	Description	Workaround
Localization	SWEP-4090	You can only use English user names to sign into Polycom CMA server and Polycom RealPresence Resource Manager, or register to GK and SIP servers.	None.
Other	SWEP-5677	On a single PC, RealPresence Desktop does not allow different users to log in at the same time. RealPresence Desktop only allows one user to log in and use it.	Exit RealPresence Desktop before another user logs in.
Other	DSTC-1541	When you are trying to sign in RealPresence Desktop, RealPresence Desktop may incorrectly display a certificate warning for the intermediate CA issued certificate.	When you see the warning message, click <b>OK</b> to trust the certificate.
SIP	SWEP-4441	If the dialed SIP URI contains spaces, the SIP call cannot be connected.	Remove the spaces.
SmartPairing	SWEP-4472	Smartpairing auto-detection might fail because some microphones, especially the internal ones have extra signal processing, which interferes with HDX or RealPresence Group Series ultrasound signal. The interference is more likely to exist on Windows XP system.	1. If available, disable the extra signal processing on the microphone. 2. Enter the HDX or RealPresence Group Series system's IP address manually.
SmartPairing	SWEP-4082	When there are several HDX or RealPresence Group Series systems nearby which are all configured to support ultrasound-based auto detection, your RealPresence Desktop application may fail to detect them all, or return the incorrect IP addresses.	Enter the device address manually.
SVC	SWEP-2736	In a poor network connection, sometimes a participant disconnects automatically from an SVC call. This can result in a participant showing up in two video streams—one frozen and one active. The RMX system will clear the frozen stream in 30 minutes.	None.
SVC	SWEP-2372	When there is 10% or more packet loss and UDP is used for an SVC call, the screen layout is wrong.	None.
Upgrade	SWEP-5331	RealPresence Desktop will consume one more license after upgrading to 3.1.	Set the license reclaim cycle to be a small value, for example, 5 minutes on RealPresence Resource Manager.
Upgrade	SWEP-5352	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.



Category	Issue ID	Description	Workaround
User Interface	SWEP-4234	There are some display issues when resolution and DPI are not under the following categories: <ul style="list-style-type: none"> <li>1024 x 768 and above</li> <li>100 dpi and 125 dpi</li> </ul>	None.
User Interface	SWEP-2739	Turning on the screen capture function of some desktop dictionary applications can cause the RealPresence Desktop interface to hang.	None.
User Interaction	SWEP-2784	The keyboard Page Up, Page Down, and arrow keys do not work with the Recent Calls, Call Details, and Contacts tab pages.	None.
Video	SWEP-2781	If you start the RealPresence Desktop application within 10 seconds after it has ended, the interface does not display correctly because the TCP socket was not released.	None.
Video	SWEP-3425	In a call with an RMX system that uses an MPM+ media card, a blue edge is displayed at the bottom of the video window.	Use an MPMX media card with the RMX system.
Video	SWEP-4396	The Video freezes and flashes for a few seconds for some SVC conference calls	None.
Video	SWEP-4548	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.
Video	SWEP-5592	The RealPresence Desktop received video is stretched when RealPresence Desktop is inter operating with VSX® Visual Concert™.	None.
XMPP	SWEP-5663	When the XMPP service stops working and the same user signs in more than one RealPresence Desktop, the later RealPresence Desktop will fail to register H.323 with duplicate alias error.	Use different user IDs to sign in different RealPresence Desktop.

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