



Release Notes

3.2 | June 2014 | 3725-69999-007/A

# Polycom<sup>®</sup> RealPresence<sup>®</sup> Desktop for Windows<sup>®</sup>



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# Contents

Release History .....	1
Hardware and Software Requirements .....	3
Multi-language UI Support .....	4
Interoperability .....	5
Polycom CMA and RealPresence Resource Manager Systems .....	5
Products Tested in This Release .....	5
Installation and Upgrade Notes .....	7
Install RealPresence Desktop .....	7
Install the Software Using the .exe File .....	7
Install the software Using the .msi File .....	7
Upgrade RealPresence Desktop .....	8
What's New in Release 3.2 .....	10
Support for User Profile Import and Export .....	10
Support for QoS in Managed Mode .....	10
Support for Setting Dialing Preference .....	11
Support for the Czech Language .....	11
Directory Enhancements .....	11
Support for New Test Features .....	11
Operation System and Device Support .....	12
New Features in Previous Releases .....	12
Release 3.1 .....	12
Release 3.0 .....	14
SmartPairing .....	14
System Capabilities and Constraints .....	15
Protocols .....	15
Resolutions .....	15
Algorithms .....	15
Inbound and Outbound Ports .....	16
Interoperability Issues .....	17
Known Issues .....	19
Resolved Issues .....	20
Enterprise Scalable Video Coding (SVC) Mode .....	22

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Access Media Statistics .....	23
Feature Overview .....	24
About AES Encryption .....	27
AES Encryption in H.323 Calls .....	27
AES Encryption in SIP Calls .....	27
Prepare Your Device for Mutual Transport Layer Security .....	27
Get Help .....	30
The Polycom Community .....	30
Notices .....	31
Open Source Licenses .....	31
OpenSSL LICENSE .....	31
Original SSLeay License .....	31
ares LICENSE .....	32
Expat LICENSE .....	32
JpegLib NOTICE .....	33
Libxml2 LICENSE .....	34
OpenLDAP LICENSE .....	34
CyrusSASL LICENSE .....	34
DotNetZip LICENSE .....	35
LibSRTP LICENSE .....	36
Log4cxx LICENSE .....	36
NAudio LICENSE .....	38
SQLite LICENSE .....	39

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

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

## Release History

The following table shows the release history of RealPresence Desktop.

### Release History

Release	Release Date	Features
3.2	June 2014	<ul style="list-style-type: none"> <li>Support for user profile import and export</li> <li>Support for Quality of Service (QoS) in managed mode</li> <li>Support for setting dialing preference</li> <li>Support for the Czech language</li> <li>Directory enhancements as follows:                             <ul style="list-style-type: none"> <li>• Hide the H.323 and SIP technical terms from the GUI.</li> <li>• Support for display device model instead of device alias.</li> <li>• Add the Contacts and Organization buttons under the Contacts tab and support for the Multi-tier directory.</li> </ul> </li> <li>Support for the following test features:                             <ul style="list-style-type: none"> <li>• Automatic SDP Size Adjustment</li> <li>• Automatic Face Brightness Adjustment</li> <li>• Mute Reminder</li> </ul> </li> <li>Operation system and device support changes:                             <ul style="list-style-type: none"> <li>• Added Support for 32-bit and 64-bit Windows 8.1 standard, professional, and enterprise versions.</li> <li>• Support for Window XP has ended.</li> </ul> </li> </ul>
3.1	January 2014	<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>

**Release History**

Release	Release Date	Features
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.
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.

### 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"> <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 8.1 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>Recommended CPU: Intel Core i5, 2.5GHz or higher.</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
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, Czech, and Traditional Chinese. When you install RealPresence Desktop for the first time, you can select one of the supported languages, RealPresence Desktop is automatically installed in the selected language.



## 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 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 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.



**Note: 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](#) to find the current Polycom Supported Products matrix.

#### Products Tested in This Release

Type	Product	Tested Versions
NAT/Firewall/Border Controller	ACME Packet Net-Net 3820	Firmware SCX6.3.0 MR-5 Patch 2
	Polycom VBP® 5300-ST	11.2.17
	Polycom VBP-E	11.2.17
	Polycom RealPresence® Access Director™	4.0, 3.1

**Products Tested in This Release**

Type	Product	Tested Versions
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Polycom Distributed Media Application™ (DMA®) 7000	6.1.0, 6.0.4
	Polycom Converged Management Application™ (CMA®) 4000/5000	6.2.5
	Polycom RealPresence Resource Manager	8.2, 8.1
	Polycom RMX® 4000/2000	8.4, 8.3
	Polycom RealPresence® Collaboration Server 1800	8.4, 8.3
	Polycom RMX® 1000C	2.5.1
	Polycom RSS™ 4000	8.5.1
	Polycom RealPresence Capture Server	1.6
	Broadsoft SIP r19 Server	r19
Endpoints	Polycom HDX® Series	3.1.3, 3.1.2
	Polycom RealPresence Mobile	3.2, 3.1(iOS) 3.2, 3.1(Android)
	Polycom VVX®	5.0.1
	Polycom CMA® Desktop	5.2.5
	Polycom Telepresence M100	1.0.6
	Polycom RealPresence Desktop	3.2, 3.1(Windows)
		3.2, 3.1(Mac)
Polycom RealPresence Group Series	4.1.3, 4.1.1	

## 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.

### 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 since Windows install shield 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:

- Saves the downloaded Polycom .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"
```



**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 licenses after upgrading from 3.0 or earlier versions to version 3.1 or later versions. To release the old licenses, you need to remove the old license 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](#). You need to 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**.

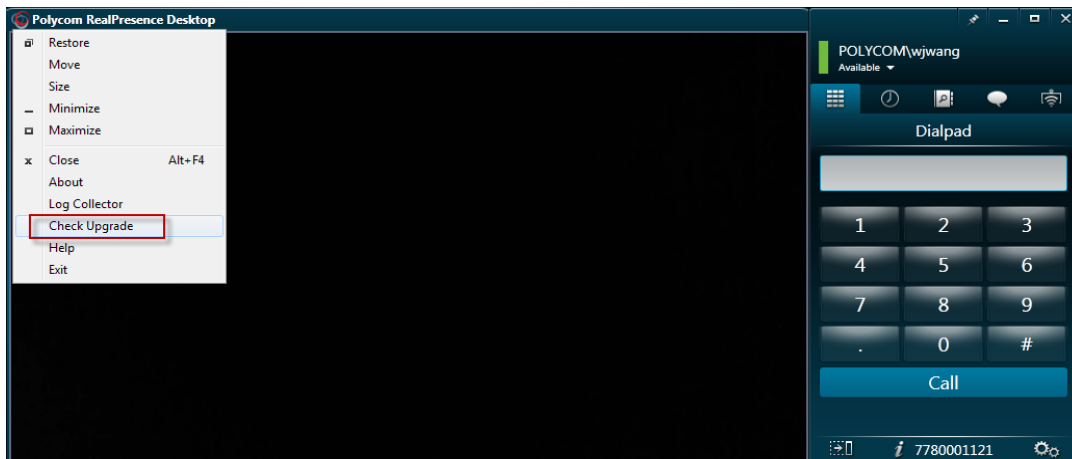
After you upload the latest distribution package to RealPresence Resource Manager, RealPresence Desktop reminds you to upgrade your RealPresence Desktop to the latest version that you uploaded when you logged into RealPresence Desktop in managed mode. You can also display the notice manually to do the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



## What's New in Release 3.2

The RealPresence Desktop 3.2 application includes the features and functionality of previous releases and includes the following new features:

- [Support for User Profile Import and Export](#)
- [Support for QoS in Managed Mode](#)
- [Support for Setting Dialing Preference](#)
- [Directory Enhancements](#)
- [Support for New Test Features](#)
- [Operation System and Device Support](#)



**Note: Get latest product information from Polycom Support**

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

### Support for User Profile Import and Export

With this feature, you can import user data of Polycom CMA Desktop, Telepresence m100, or another RealPresence Desktop system. You also can export the user data to another RealPresence Desktop system. This feature is available in both managed mode and standalone modes.



**Note: User data import and export**

- The user data configured on CMA Desktop and Telepresence m100 that also works on RealPresence Desktop can be imported, for example, auto-answered incoming calls, specified sign-in server, SIP registration settings.
- Some CMA Desktop and Telepresence m100 user data cannot be imported to RealPresence Desktop. For example, group in local contact, auto sign in, chat state, presence auto accept invitation, configured on CMA Desktop, cannot be imported.
- For RealPresence Desktop, LDAP contacts saved in the local contacts and local contacts can be imported and exported. Test features are also exported and imported.
- Dialing preferences cannot be imported and exported.

### Support for QoS in Managed Mode

RealPresence Desktop has the potential to improve the video and audio user experience. This feature supports the capability to mark the transmitted media traffic with the appropriate QoS value. This feature is available in managed mode only.



**Windows System Level QoS setting**

The QoS system level value has a higher priority than the QoS setting in RealPresence Desktop. For example, if you set the QoS value using Windows Group Policy for RealPresence Desktop, RealPresence Desktop will use this value and ignore the QoS settings in RealPresence Desktop.

## Support for Setting Dialing Preference

You can select the preferred protocol used for making calls by going to **Settings > General > Dialing Preference**. When SIP is preferred, RealPresence Desktop will make SIP calls first. If the far end cannot be reached by SIP, RealPresence Desktop will change to H.323. By default, SIP Preferred is selected.

## Support for the Czech Language

RealPresence Desktop UI supports Czech from this release. When you install RealPresence Desktop for the first time, you can select the Czech language. RealPresence Desktop is automatically installed in Czech.

## Directory Enhancements

RealPresence Desktop 3.2 implements the following directory enhancements.

- RealPresence Desktop 3.2 hides the H.323 and SIP technical terms from the GUI, which include the following changes:
  - 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.
- Under the Contacts tab, two new buttons were added:
  - **Contacts** Contacts are divided into two groups:
    - ◆ **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.
- RealPresence Desktop 3.2 lists the device model on the detail page of a contact or directory search result rather than display the device alias. When you click a contact or an entry of a directory search result, the devices belonging to this contact are displayed. For example, when the contact that you choose uses RealPresence Desktop for Windows for Mac, RealPresence Desktop will be returned and displayed as the device of this contact.

## Support for New Test Features

RealPresence Desktop 3.2 supports several new test features. Polycom recommends you try these features and send feedback via [Polycom Support](#).

- **Automatic SDP Size Adjustment** Adjusts Session Description Protocol (SDP) size automatically to avoid call failure caused by SDP size limitation for some users.



**Note: Content sharing, FECC, and SVC cannot be used**

When you enable Automatic SDP Size Adjustment, content sharing, FECC, and SVC cannot be used.

- **Automatic Face Brightness Adjustment** Detects your face to adjust the video brightness automatically.

- **Mute Reminder** When you speak with the RealPresence Desktop microphone muted (with the microphone icon on the GUI muted), a text reminder will remind you turn on your microphone. This feature works only when you use the in-call toolbar to mute. The feature does not work when you use your PC's microphone controls to mute.
  - **Face Detection Assistance** Reminds you only when RealPresence Desktop detects your face in the local video.

### To configure these features:

- 1 Go to **Settings > Test Features**.
- 2 Enter the password: **456**.
- 3 Select the features that you want to enable.

## Operation System and Device Support

RealPresence Desktop 3.2 includes the following changes to operation system and device support:

- Added Support for 32-bit and 64-bit Windows 8.1 Standard, Professional, and Enterprise editions.
- This release not longer supports Window XP.

## New Features in Previous Releases

This section describes the new features in the previous releases.

### Release 3.1

#### Support for Easy Upgrade from Polycom CMA® 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 back up 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 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 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 feature is supported only in 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.



**Note: 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, select the **Sign in using network login credentials** check box. If you select this check box, RealPresence Desktop will use your Windows login credentials to sign in.

## Support for USB Headset Noise Suppression

RealPresence Desktop can mask background noise during a call.

### To use this feature:

- 1 Go to **Settings > Test Features**.
- 2 Select the **Enable USB Headset Noise Suppression** check box.
- 3 Input the password: **456**.




**Note: Headset limitation**

This feature works only 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 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.

## Release 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.
- Enables you to change call settings during the call.
- Enables you to collect and e-mail 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.

## 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"> <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	<p>AES-128 media encryption          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 <b>Polycom CX5000 Panoramic Video</b> as video device displays a blue screen.	On 64-bit windows 7, use other video device.
	On 32-bit Windows 7, when you share an Microsoft PowerPoint 2007 file and extend 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"> <li>• Change the RMX <b>Content Settings</b> to <b>Graphics</b>, and <b>Content Protocol</b> to <b>H.263 &amp; H.264 Auto Selection</b>.</li> <li>• Set the call rate on RPM to above 384 kbps.</li> </ul>
	RealPresence Desktop only supports using English user name and password to sign in Polycom CMA server and RealPresence Resource Manager, or register to a gatekeeper or an SIP server.	Use English user name and password.
	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.	Do not use an MPM+ media card and use an MPMX media card with the RMX system.
	When RealPresence Desktop and m100 are not in the same local network.	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
Content	SWEP-6290	You might see mosaic screen when RealPresence Desktop joins a RMX conference which enables content transcoding, and there is packet loss to the H.264 content stream.	Disable content transcoding on RMX.
SmartPairing	SWEP-6338	After connecting to a new device, RealPresence Desktop always shows the old HDX or Group Series IP address.	None. It is a displaying error. The new device is connected to RealPresence Desktop.
SVC	SWEP-6350	RealPresence Desktop may stop working after joining an SVC conference with more than 100 SVC participants.	None.

## Resolved Issues

The following table lists the corrected Issues in Version 3.2

Category	Issue ID	Description
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.
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 corrected 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.
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 corrected Issues in Version 3.0.



## Release Notes

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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.

## 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 appear 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.

Value	Description
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.

## Feature Overview

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

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	✓	✓	✓
Automatic gain control	✓	✓	✓
Acoustic echo cancellation	✓	✓	✓
Call with audio only devices	✓	✓	✓
H.261	✓	✓	✓
H.263/H.263+	✓	✓	✓
Video LPR	✓	✓	✓
720p30 transmit	✓		✓

Features	CMA Desktop	m100	RealPresence Desktop (Windows/Mac)
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	✓	✓	
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	✓		✓

Features	CMA Desktop	m100	RealPresence Desktop (Windows/Mac)
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 (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 12 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 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. 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!**.

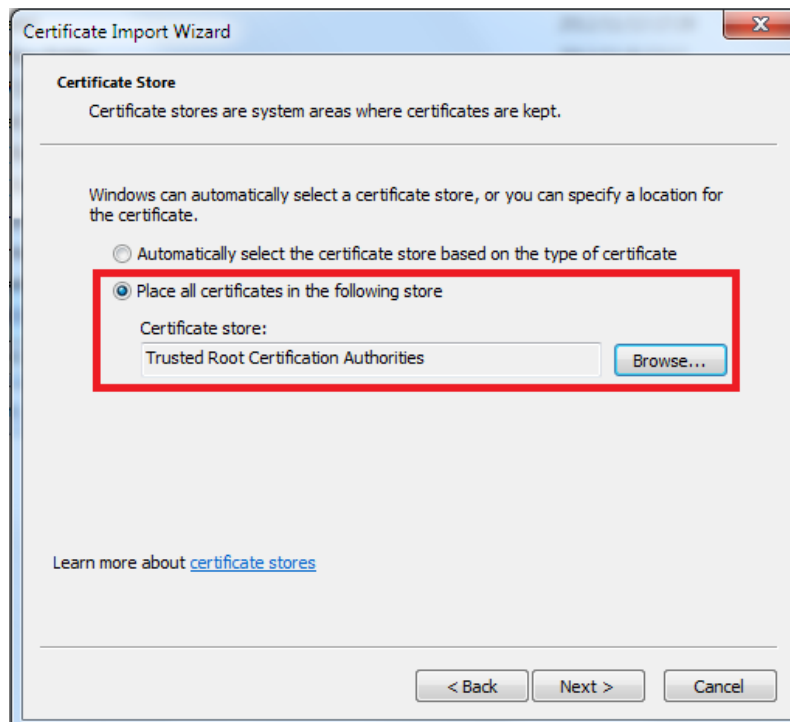
- c** Copy the encoded text from the following text field, and save it as a *.pwd* file. For example: *client.pwd*.

**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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