



Release Notes

3.3 | December 2014 | 3725-69925-004/A

# Polycom<sup>®</sup> RealPresence<sup>®</sup> Desktop for Mac<sup>®</sup> OS X



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# Contents

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

Prepare Your Device for Mutual Transport Layer Security ..... 28

Get Help ..... 31

The Polycom Community ..... 31

Notices ..... 32

    Open Source Licenses ..... 32

    OpenSSL LICENSE ..... 32

    Original SSLeay License ..... 32

    ares LICENSE ..... 33

    Expat LICENSE ..... 33

    JpegLib NOTICE ..... 34

    LEGAL ISSUES ..... 34

    Libxml2 LICENSE ..... 35

    OpenLDAP LICENSE ..... 35

    CyrusSASL LICENSE ..... 35

    DotNetZip LICENSE ..... 36

    LibSRTP LICENSE ..... 37

    Log4cxx LICENSE ..... 37

    NAudio LICENSE ..... 39

    SQLite LICENSE ..... 40

## What's New in Release 3.3

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

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



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

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

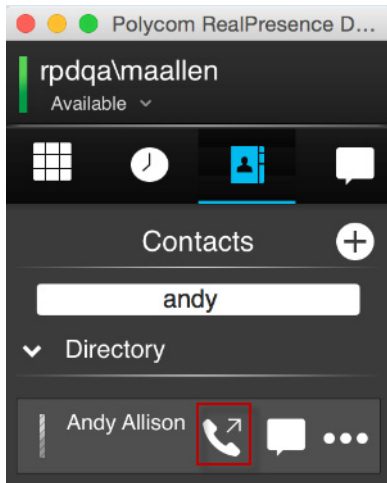
### User Interface Improvements

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

### Support for Calling SIP Users Directly


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

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



## Directory Search Enhancements

This release supports the following enhancements:

- Cancel a Search Operation or Change a Key Word  
When you search for a contact, after you enter a key word and start the operation, you can also cancel this operation by modifying the key word, re-entering a new key word, or clicking  besides the key word.
- Support for Predictive Search  
After you enter a part of a key word for LDAP or local search, all the mapping results will be returned and listed after a very short time.

## Instant Messaging Enhancement

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

## Change Some Test Features to Normal Features

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

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

## Mac OS X Support Changes

RealPresence Desktop 3.3 adds support for Yosemite 10.10 and drops support for Lion 10.7.



## Release History

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

### Release History

Release	Release Date	Features
3.3	December 2014	<p>User Interface Improvements            Support for Calling SIP Users Directly            Directory Search Enhancements            Instant Messaging Enhancement            Some test features have been moved from the <b>Test Features</b> tab under <b>Settings</b>.</p> <ul style="list-style-type: none"> <li>• The <b>USB Headset Acoustic Bubble</b> feature is now on the <b>Device</b> tab.</li> <li>• The <b>SDP Size Adjustment</b> feature has been moved out. To enable or disable this feature, enter #001# from the Dialpad.</li> </ul> <p>Mac OS X Support Changes            RealPresence Desktop 3.3 adds support for Yosemite 10.10 and drops support for Lion 10.7.</p>
3.2.2	December 2014	Fixed the password security issue ( <a href="#">VIDESC-13226</a> ).
3.2.1	July 2014	<p>Support for DTMF with keyboard input.            You can enter a DTMF password using your keyboard without showing the DTMF keypad during a call.            This feature works only when the RealPresence Desktop DTMF keypad is not shown. When you open the DTMF keypad, you can use only the keypad to enter the password.            Fixed an OpenSSL security vulnerability (CVE-2014-0224).</p>

**Release History**

Release	Release Date	Features
3.2	June 2014	<p>Support for user profile import and export</p> <p>Support for Quality of Service (QoS) in managed mode</p> <p>Support for keyboard noise suppression</p> <p>Support for setting dialing preference</p> <p>Support for the Czech language</p> <p>Directory enhancements as follows:</p> <ul style="list-style-type: none"> <li>• Hide the H.323 and SIP technical terms from the GUI. <ul style="list-style-type: none"> <li>▲ Removes the H.323 and SIP technical protocol indicator from the main window.</li> <li>▲ Removes the H.323 or SIP call type from the device list displayed for contacts or directory search results.</li> </ul> </li> <li>• Support for display device model.</li> <li>• Add the Contacts and Organization buttons under the Contacts tab and support for the Multi-tier directory. <ul style="list-style-type: none"> <li>▲ <b>Contacts</b> Contacts are divided into two groups: <ul style="list-style-type: none"> <li><b>Frequently Used</b> Your frequently used contacts are listed here automatically.</li> <li><b>Favorites</b> Favorites are contacts that you add to the Favorites list. You also can edit a contact or remove a contact from the Favorites list.</li> </ul> </li> <li>▲ <b>Organization</b> 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.</li> </ul> </li> </ul> <p>Support for the following test features:</p> <ul style="list-style-type: none"> <li>• Polycom Acoustic Bubble™</li> <li>• Automatic SDP Size Adjustment</li> <li>• Automatic Face Brightness Adjustment</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 the New Mac OS X 10.9</li> <li>• Other Enhancement <ul style="list-style-type: none"> <li>▲ When you search contacts, only the people and endpoints that can be called from RealPresence Desktop are returned. When you minimize the RealPresence Desktop during a call by clicking , you will see the In a call notice on the RealPresence Desktop icon. <div style="text-align: center;">  </div> </li> </ul> </li> </ul>
3.0	July 2013	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
Mac OS X	Mountain Lion (10.8) Mavericks (10.9) Yosemite (10.10)
Software	<ul style="list-style-type: none"> <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>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

## Products Tested in This Release

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



### Note: Upgrade your Polycom systems

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

## Polycom CMA and RealPresence Resource Manager Systems

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

### Products Tested in This Release

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

**Products Tested in This Release**

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

## Installation and Upgrade Notes

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

### Multi-language UI Support

RealPresence Desktop UI supports English, International Spanish, French, German, Simplified Chinese, Korean, Japanese, Russian, Portuguese, Kazakh, Czech, and Traditional Chinese. The language for RealPresence Desktop depends on the Mac OS language setting.

### Install RealPresence Desktop

To install this product, download *the installation file* from [Polycom Support](#), and follow the Installer Wizard instructions.

#### To view the license number of RealPresence Desktop:

- 1 Click **Polycom RealPresence Desktop** on the top menu.
- 2 Click **About RealPresence Desktop**.

### Upgrade RealPresence Desktop

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



**Note: Consume one more license after upgrade**

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

#### To upload a RealPresence Desktop distribution package:

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

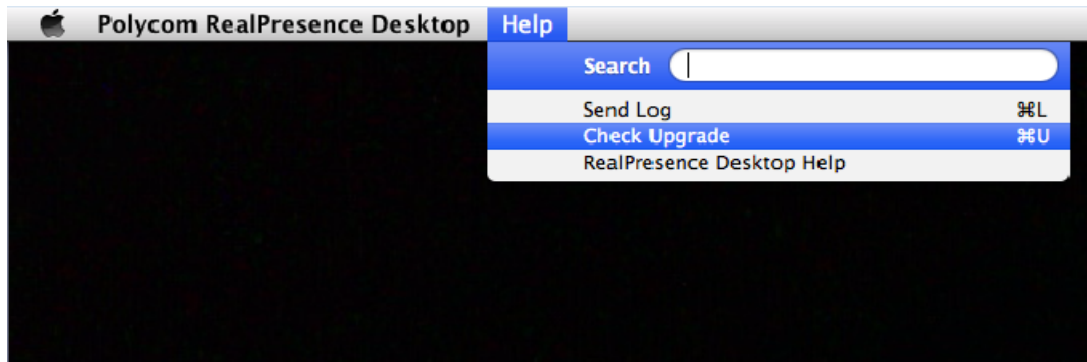
After you upload the latest distribution package to RealPresence Resource Manager, RealPresence Desktop reminds you to upgrade your RealPresence Desktop to the latest version that you uploaded when you logged into RealPresence Desktop in managed mode. You can also display the notice manually to do the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

### To upgrade RealPresence Desktop:

- 1 Log in to RealPresence Desktop.
- 2 Click **Help** on the menu of Mac as shown next.
- 3 Click **Check Upgrade**.
- 4 In the next dialog, click **Yes** to perform the upgrade.

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

### Checking the upgrade



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

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

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

RealPresence Desktop supports the easy upgrade feature only on Mac 10.8.



**Note: Limitations of this feature**

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

## System Capabilities and Constraints

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

### Protocols

The following table lists the supported protocols.

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

### Resolutions

The following table lists the supported resolutions.

#### Resolution and Frame Rate

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

### Algorithms

The following table lists the supported algorithms.

Algorithm Type	Description
Audio	<ul style="list-style-type: none"> <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 (UDP 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 Limitations**



Platform/Product Name	Description	Solution
Limitations Related to the Mac Operating System	When the CPU type is single or dual core and the Mac OS version is 10.8, RealPresence Desktop only sends half frame rate of expected per second.	Upgrade to Mac OS 10.9.2 or higher.
	On the Mac Air with CPU Intel Core 2 Duo, RealPresence Desktop has performance issues, such as long delays.	This issue is due to CPU limitation. The recommended CPU is Intel Core i5, 2.5 GHz or higher.

## Interoperability Limitations

Platform/Product Name	Description	Solution
Limitations Related to Other Polycom Products	In a motion mode conference, RealPresence Desktop receives video with a long 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 supports using only English user names and passwords to sign into the Polycom CMA server and RealPresence Resource Manager, or to register to a gatekeeper or an SIP server.	Use English user names and passwords.
	When RealPresence Desktop and m100 are not in the same local network, RealPresence Desktop fails to call m100.	Let m100 call RealPresence Desktop.
	When you enable mutual TLS (Transport Layer Security) from RealPresence Resource Manager, RealPresence Desktop will fail to upgrade from RealPresence Resource Manager.	Disable mutual TLS.

## Known Issues

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

Category	Issue ID	Description	Workaround
SmartPairing	SWEP-6516	RealPresence Desktop does not sign out when using SmartPairing after a current user logs in from another location.	Exit SmartPairing or exit RealPresence Desktop before signing in from another PC.
	SWEP-6405	RealPresence Desktop stops working occasionally when sharing content under SmartPairing.	Restart RealPresence Desktop and retry.
Other	SWEP-6812	OpenSSL Memory Leak may occur. This issue impacts OpenSSL1.0.1 server implementations for both SSL or TLS and DTLS.	None.
	SWEP-6662	When you close the video window by clicking  on the dial pad, the video is open after the following operation: <ul style="list-style-type: none"> <li>When receiving an incoming call, RealPresence Desktop goes back to the normal incoming call window.</li> <li>After ending a call, changing settings, or viewing the network and service information by clicking , the video is open.</li> </ul> After the above operations, RealPresence Desktop is supposed to keep the video closed.	None.
	SWEP-6794	RealPresence Desktop may stop working if you exit right after RealPresence Desktop starts up.	Wait for a while and then exit RealPresence Desktop.

## Resolved Issues

The following table lists the resolved issues for version 3.3.

Category	Issue ID	Description
Audio	SWEP-6365	If you pull out your earphone or USB headset during a call, other participants will hear echoes.
Content	SWEP-6290	You might see a mosaic screen when RealPresence Desktop joins a RMX conference which enables content transcoding, resulting in packet loss to the H.264 content stream.
SVC	SWEP-6350	RealPresence Desktop may stop working after joining an SVC conference with more than 100 SVC participants.

The following table lists the resolved issues in version 3.2.2

Category	Issue ID	Description
Security	VIDESC-13226	When signing in RealPresence Desktop, certain debug configuration operations might have inadvertently displayed sensitive information.

The following table lists the resolved issues in version 3.2

Category	Issue ID	Description
Other	DSTC-1541	When you are trying to sign into RealPresence Desktop, RealPresence Desktop may incorrectly display a certificate warning for the intermediate CA issued certificate.
Upgrade	SWEP-4478	The RealPresence Desktop for Mac OS X cannot be upgraded by the RealPresence Resource Manager server if it registers to the server through the Polycom RealPresence Access Director, Polycom VBP-ST, or Acme Session Border Controller.
Video	SWEP-5592	The RealPresence Desktop received video is stretched when RealPresence Desktop is inter operating with VSX <sup>®</sup> Visual Concert <sup>™</sup> .

The following table lists the resolved issues in version 3.1

Category	Issue ID	Description
Audio	SWEP-4361	When an Airplay device is detected in the network, the Mac Book speaker automatically changes from built in output to Airplay, then you cannot hear audio in a call using RealPresence Desktop.
Call Control	SWEP-4446	The RealPresence Desktop application can only send 180p video on MacBook Air. This issue has been fixed.
Call Control	SWEP-4493	The Hang up icon is unintuitive after you hang up a call. This issue has been fixed.

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.
Call Control	SWEP-4531	When H.323 name is null, the connection cannot be reached.
Contacts	SWEP-4362	The search result is incorrect when you enter a key word to find a contact. This issue has been fixed.
Contacts	SWEP-4545	RealPresence Desktop does not allow you to enter the ## characters in the IP Address field in the Contact list. This 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-4502	RealPresence Desktop always cancels Mac OS restart requests. This has been fixed.
SIP	SWEP-4517	If SIP call is not available, it should be inactive. This has been fixed.

## Firewall and NAT Support

The Polycom RealPresence Desktop provides firewall and Network Address Translator (NAT) traversal ability without the need to log in to a VPN. The following features are supported:

- Ability to keep Real-time Transport Protocol (RTP) NAT mapping alive during 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 a server.
  - H.323
    - ◆ name@FQDN
    - ◆ name@IP
    - ◆ extension@FQDN
    - ◆ extension@IP
    - ◆ IP##extension
  - SIP
    - ◆ <name>@FQDN
    - ◆ <extension>@<ipAddress:port>
- 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 and Polycom® RealPresence Access Director™.
- 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.

## Enterprise Scalable Video Coding (SVC) Mode

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

### SVC and AVC Mode

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

The SVC mode provides the following features:

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

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



#### Note: Incorrect screen layouts

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

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

SVC conference calls currently do not support the following:

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

- H.323 calls.




**Note: SVC call disconnection**

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



## Access Media Statistics

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

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

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

## Feature Overview

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

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

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

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

## About AES Encryption

The following are requirements for using AES encryption in calls.

### AES Encryption in H.323 Calls

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

- Enable AES encryption.

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

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

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

### AES Encryption in SIP Calls

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

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



**Note: Difference between managed mode and standalone mode**

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

## Prepare Your Device for Mutual Transport Layer Security

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

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

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

### .To generate and import your certificate:

- 1 Open the Terminal window from your Mac. (**Applications > Utilities > Terminal.app**)
- 2 Go to the **Documents** folder and generate the private key client.key. For example:

```
localhost$ cd documents
```

```
localhost$ openssl genrsa -out client.key 1024
```

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

```
localhost$ openssl req -new -key client.key -out client.csr
```

The requested information is incorporated into your certificate request. Enter a distinguished name (DN) and other information into the following fields (you can leave some blank).

----

```
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 the note below.

An optional company name []:poly

**4** Submit the certificate request to your CA:

- a** View the content of the file client.csr using the following command:

```
localhost > more client.csr
```

Select and copy its content from BEGIN CERTIFICATE REQUEST to END CERTIFICATE REQUEST.

- b** Go to your CA's web interface <http://<CA's IP address>/certsrv/>, and click **Request a certificate**.
- c** Choose **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 in the **Saved Request** text field, and click **Submit**.
- f** Choose **Base 64 encoded** and then click **Download certificate**.

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

**5** Move the generated *certnew.cer* file to the **Documents** folder.

**6** Convert the file ccertnew.cer to a .p12 file by using the openssl tool. Note that the export password should be the same as the challenge password you set in Step 4. For example:

```
localhost$ openssl pkcs12 -export -in certnew.cer -inkey client.key -out
client.p12 -name testp12
Enter Export Password:
Verifying - Enter Export Password:
```

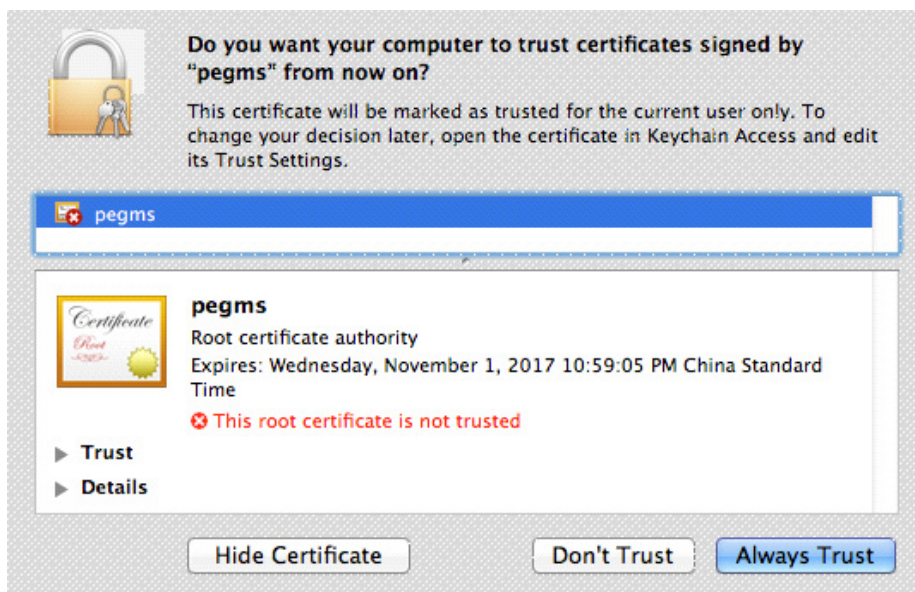
**7** Encrypt the challenge password you set:

- 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.

- 8 Open the **Documents/Polycom RealPresence Desktop** folder, 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 Double-click the CA file, and select **Always Trust**. If you see the Add Certificates message, click Add before you click **Always Trust**.





## Get Help

For more information about installing, configuring, and administering Polycom products, refer to Documents and Downloads at [Polycom Support](#).

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