



Release Notes

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# Polycom<sup>®</sup> RealPresence<sup>®</sup> Mobile for Apple<sup>®</sup> iOS



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## What's New in Release 3.5.1

Polycom announces the 3.5.1 release of the Polycom® RealPresence® Mobile software. This release includes bug fixes, and feature enhancements.

### Constant Bitrate (CBR) Adopted for Video Codecs

From version 3.5.1, the RealPresence Mobile application changes its video encoding from Variable Bitrate (VBR) to CBR. This provides better video quality.

### About Polycom® Concierge Solution Support

Starting in version 3.5, the RealPresence Mobile application adds support to Polycom® Concierge Solution for iPhones.

However, please note that Polycom Concierge requires Polycom® RealPresence® Web Suite 2.1 with a RealPresence Web Suite Pro license. Do not enable any Polycom Concierge features unless your video conferencing environment includes RealPresence Web Suite Pro. RealPresence Web Suite 2.1 is targeted for release and available for purchase in the Q2 of 2016, but subject to change. Polycom reserves the right to modify future product plans at any time. Products and/or related specifications are not guaranteed and will be delivered on a when and if available basis.

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## Release History

The following table shows the release history of the Polycom RealPresence Mobile application.

Version	Release Date	Features
3.5.1	April 2016	Constant Bitrate (CBR) adopted for video codecs Bug fixes and feature enhancements
3.5	January 2016	Polycom® Concierge Solution support for Apple iPhones TLSv2 support SmartPairing support for Polycom® RealPresence Debut™ products New devices support
3.4.1	July 2015	Support for Cloud Services
3.4	June 2015	Profile Photo and Virtual Business Card Feature Mid-string Search of Favorites Support for Polycom® NoiseBlock™ In-call Toolbar User Interface Enhancement Support for 64-bit iOS Platform
3.3	January 2015	Support for BroadSoft Device Management as Provisioning Server User Interface Improvements Standalone mode provides more features. See <a href="#">System Capabilities and Constraints</a> for a complete list of feature capabilities. Support for high video resolution (720p) on powerful mobile devices such as iPad Air and iPad Mini 2, for AVC point to point calls, AVC multi-points calls, and SVC point to point calls. Support for the SDP Size Adjustment Feature Devices Support Changes <ul style="list-style-type: none"><li>• Drop support for iOS 6</li><li>• Add support for iOS 8</li><li>• Add support for iPad Air 2 and iPad Mini 3</li><li>• Add support for iPhone 6 and iPhone 6 Plus</li></ul>
3.2.1	July 2014	The <b>Roster</b> display button is not shown in CloudAXIS 1.5 and earlier versions. Fixed an OpenSSL security vulnerability (CVE-2014-0224). Fixed two issues. See <a href="#">Resolved Issues</a> for details.
3.2	June 2014	Support for CloudAXIS HTTPs tunneling Support for roster display in a CloudAXIS meeting Support for log collector Support for Czech Support for iPad Air and iPad Mini with Retina display

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## 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.

Items	Description
Apple	<b>iPad</b> iPad 4, iPad Air, iPad Air 2, iPad Mini 2, iPad Mini 3, iPad Mini 4 <b>iPhone</b> iPhone 5C, iPhone 5s, iPhone 6, iPhone 6s, iPhone 6s Plus, iPhone 6, iPhone 6 Plus
iOS Requirements	iOS 8.0 or later
System Requirements	Syncing with iTunes® on a Mac or PC requires: <ul style="list-style-type: none"><li>• iTunes: 10.2 or later</li><li>• Mac: OSx 10.9 or later</li><li>• PC: Windows XP SP3 or later</li></ul>
Network Requirements	Wireless Local Area Network (WLAN), 802.11 a/b/g/n recommended 3G or 4G network
Optional Peripheral Devices	3.5 mm headset Stereo Bluetooth headset

### To view your iOS system version:

- » From your device, tap **Settings > General > About > Version**.

## Polycom® CMA® System and Polycom® RealPresence® Resource Manager System

The RealPresence Mobile application can register to the Polycom® CMA® Server and Polycom® RealPresence® Resource Manager server. Some management features have limitations relative to other Polycom endpoints. For example, software updates of RealPresence Mobile are not supported and the QOS monitoring is limited.

## Products Tested with this Release

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

Type	Product	Version
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Polycom® Distributed Media Application™ (DMA®) 7000	6.2, 6.3
	Polycom® RealPresence® Resource Manager	8.4, 9.0
	Polycom® RealPresence® Collaboration Server (RMX®) 4000/2000	8.5, 8.6
	Polycom® RealPresence® Collaboration Server (RMX®) 1500	8.6
	Polycom® RealPresence® Collaboration Server (RMX®) 1800	8.5, 8.6
	Polycom® RealPresence® Collaboration Server (RMX®) 1000C	2.5.1
	Polycom® RealPresence® Media Suite	2.1, 2.5
	Broadsoft SIP Server	r21
	Polycom® RealPresence® Web Suite	2.0, 2.1
NAT/Firewall/Border Controller	ACME Packet Net-Net 3820	Firmware SCX6.3.0 MR-5 Patch 2
	Polycom® VBP® 5300-ST	11.2.23
	Polycom® VBP-E	11.2.23
	Polycom® RealPresence® Access Director™	4.1, 4.2
Endpoints	Polycom® HDX® Series	3.1.7, 3.1.9
	Polycom® RealPresence® Mobile	3.5, 3.5.1 (iOS) 3.5, 3.5.1 (Android)
	Polycom® VVX®	5.3.0
	Polycom® RealPresence® Desktop	3.5, 3.5.1 (Windows)
		3.5, 3.5.1 (Mac)
Polycom® RealPresence® Group Series	5.0, 5.1	
Other	Polycom® People+Content IP	1.3 (PC only)
	Broadsoft environment	r21



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.



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# Install and Uninstall RealPresence Mobile

This section explains how to install and uninstall RealPresence Mobile.



## To install the RealPresence Mobile application:

- 1 Go to the Apple Store, search for **Polycom** or **video conferencing** to find the RealPresence Mobile application.
- 2 Tap **Free** and then **INSTALL APP**.



RealPresence Mobile will consume one more license after upgrading from 3.0 or earlier version to version 3.1 or later versions. To release the old license, you must remove the old license manually or set the license reclaim cycle to be a small value (for example five minutes) on RealPresence Resource Manager.

## To uninstall the RealPresence Mobile application:

- 1 Go to the device's application list.
- 2 Tap and hold  **Video** until it begins to jiggle.
- 3 Tap  and then tap **Delete**. Your user data is deleted when you uninstall this application.

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## System Capabilities and Constraints

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

### Capabilities

Call Rate	Video Capability
1 Mbps	720p
512 kbps 384 kbps 256 kbps	480x270
128 kbps	240x135
64 kbps	Audio only

### Protocols

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

Protocol	Description
DNS	Domain Name System
H.235	Security and Encryption
H.239	Token Management
H.323	Signaling
H.460	Firewall/NAT Traversal
LDAP, H.350	Directory Services
NTLMv2	Authentication
Polycom® Lost Packet Recovery™ (LPR™)	Lost Packet Recovery
SIP	Session Initiation Protocol

### Resolutions

The following table lists the resolutions supported in this version of the RealPresence Mobile application.

Resolution and Frame Rate	Source
Up to 720p, 15 fps	People video sent from camera
Up to 720p, 30 fps	People video received from far end

Resolution and Frame Rate	Source
Up to 720p (1280x720), 5 fps	Content received from far end
Up to XGA (1024x768) / 5fps	Content showing from the tablet



Actual transmitted video resolution is determined by several factors, such as camera capability, computer performance, network conditions, the far-end system's capabilities, and whether content is being received.

HD/720p 30 fps is the maximum video receiving capability. The actual resolution is based on the negotiation with the far end.

## Algorithms

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

Algorithm Type	Description
Audio	G.722.1 Annex C G.711u G.711a Siren LPR Acoustic Echo Cancellation (AEC) Automatic Gain Control (AGC) Scalable Audio Coding (SAC)
Video	Polycom Lost Packet Recovery™ (LPR™) H.264 SVC H.264 AVC H.264 high profile H.263 and H.263+ (for content only) <b>Note:</b> H.261 is not supported.
Encryption	AES-128 media encryption TLS for SIP calls

## Inbound and Outbound Ports

The following table lists the inbound and outbound ports supported in this version of the RealPresence Mobile application.

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 Control (H.245)
3230 - 3250 (UDP)	Media (RTP/RTCP)

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Port	Function
3238 (UDP and TCP)	BFCP
5060 (UPD and TCP)	SIP

Port	Function
443 (TCP)	Provisioning, Monitoring, Help Files, HTTPS
389 (TCP)	LDAP
5060 (UDP and TCP)	SIP
5061 (TCP)	SIP TLS signaling
1720 (TCP)	H.323 Signaling (H.225)
1719 (UDP)	H.323 Registration, Admission, and Status (RAS)
3230 - 3250 (TCP)	H.323 Control (H.245)
3230 - 3250 (UDP)	Media (RTP/RTCP)
3238 (UDP and TCP)	BFCP

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## Known Issues

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

Issue ID	Description	Workaround
SWEP-8747	Polycom RealPresence Mobile application V3.5 or later cannot register with a VBP server that is using a Diffie-Hellman (DH) key smaller than 768 bit.	Increase your VBP server DH key to 768 bit or above.
SWEP-8716	When you place an H.323 point-to-point call from the RealPresence Mobile application, the video protocol shown in the call statistics shows H264SVCHigh.	This is the designed behavior. To improve user experience in bad network environments, people and content video are both encoded as SVC/SVC high instead of H264/H264 high for H.323 point-to-point calls.
SWEP-7978	If you adjust the speaker volume of your RealPresence Mobile application to 80% or lower, the volume is barely audible.	Use earphones or move to a quieter place.
SWEP-7684	After you initiate a meeting as the only participant using an Apple iPhone, if you then hold your iPhone vertically, the RealPresence Mobile application video displays upside down.	None.

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## Resolved Issues

None.

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## Interoperability Issues

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

### Interoperability Issues

Limitation Type	Description	Solution
Limitations Related to Operation System or Devices	On some iPads with poor CPU performance, when RealPresence Mobile sends PDF content, the video may freeze on far ends every three seconds.	None
	Audio may stop in the first few seconds when plugging in an earphone in a call on iPhone 6.	None This is a device issue.

## Interoperability Issues

Limitation Type	Description	Solution
Limitations Related to Other Polycom Products	If you create a Continuous Presence (CP) only conference call on Polycom RealPresence Collaboration Server (RMX) 4000/2000 system and 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 Mobile 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 RealPresence Collaboration Server (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 RealPresence Mobile to above 384 kbps.</li> </ul>
	Polycom VSX® Visual Concert™ cannot display 1024x576 content sent by RealPresence Mobile, whether or not they call each other directly.	Double-click the content to show the content in full screen, then RealPresence Mobile will send 1024x768 content, and the Polycom VSX Visual Concert can display correctly.
	RealPresence Mobile may consume more than one license on RealPresence Resource Manager if you install and uninstall RealPresence Mobile several times.	Configure the reclaim period on RealPresence Resource Manager to a small value (for example five minutes).
	RealPresence Mobile supports only using English user names and password to sign in Polycom CMA server and RealPresence Resource Manager, or to register to a gatekeeper or an SIP server.	Use English user name and password.
	In a motion mode conference, RealPresence Mobile receives video with a long delay because the video is 60 fps.	Set a conference with sharpness mode on MCU.
	RealPresence Mobile in internet may fail to call Telepresence m100 in intranet.	Let Telepresence m100 call RealPresence Mobile.
	You may hear a short audio glitch on RealPresence Mobile when dialing in an SIP AVC encrypted conference created on the RealPresence Collaboration Server (RMX) 4000 with NGB.	None



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## Enterprise Scalable Video Coding (SVC) Solution

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

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, 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. Pinch controls enable you to zoom in and out on a participant's video or content video.	Layout may typically be controlled by dialing ** and then selecting a format.

The SVC solution provides the following features:

- For video send and receive, support up to 720p on high performance devices under 1 Mbps call rate.
- For video send, support 7.5/15 fps
- For video receive, support 7.5/15/30 fps
- Support auto layouts of 1x1, 1+1 through 1+5  
The maximum layout of 1+5 comprises four remote participants plus one content-sharing frame, and one local preview frame
- Support for AVC content
- Support for Scalable Audio Coding (SAC) with at least two quality layers
- Ability to mix up to three different audio streams from the MCU
- Ability to combine up to four different SVC video streams (call rate at 512kbps and above) from the MCUs
- Support for SVC dial-out from RealPresence DMA

Using SVC conference calls has following limitations:

- Does not support recording
- Does not support Far-end Camera Control (FECC)
- In a SIP call, when networks using UDP experience 10 percent packet loss, the screen layout on received devices can be incorrect
- Does not support H.323 call
- 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 RealPresence RMX system will clear the frozen stream in 30 minutes
- Do not use 128 kbps if you share content in a SVC call, otherwise people's video will freeze while sending or receiving content

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## Access Media Statistics

To access media statistics, click . The following table shows the meaning of each value.

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 fps. 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.

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<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.

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# 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 RealPresence DMA 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 into your iPad, you need to generate a Certificate Request (CSR) first by using a computer that has installed the OpenSSL tool. This is an iOS limitation.

The following example uses Mac as the example.

## To generate and import your certificate:

- 1 Open the Terminal from your Mac computer.
- 2 Generate the private key *client.key*. For example:  

```
Mike-MacBook-Pro:~ root# openssl genrsa -out client.key 1024
```
- 3 Generate the certificate request *client.csr*. For example:  

```
Mike-MacBook-Pro:~ root# openssl req -new -key client.key -out client.csr
```
- 4 You are about to be asked to enter information that will be incorporated into your certificate request. Enter the Distinguished Name (DN) information that will be incorporated into your certificate request. You can leave some of the fields blank.  
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.  
E-mail Address []:pp@pp.com ---CSR info.
- 5 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
- 6 Submit the certificate request to your CA:
  - a View the content of the file *client.csr* using the following command, then select and copy its content (from ---BEGIN CERTIFICATE REQUEST to END CERTIFICATE REQUEST---):  

```
Mike-MacBook-Pro:~ root# cat client.csr
```
  - b Go to your CA's web interface <http://<CA's IP address>/certsrv/>, and click **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 **Saved Request** text field, and click **Submit**.
- f Click **Base 64 encoded** and click **Download certificate**.

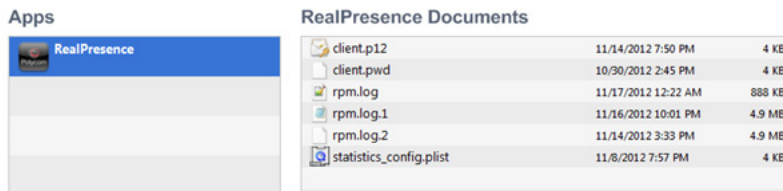
The file is saved as *certnew.cer* by default in the folder **Downloads**.

- 7 Move the generated **certnew.cer** file to your current directory.
- 8 Convert the file *ccertnew.cer* to a .p12 file by using the OpenSSL tool. For example:  
Mike-MacBook-Pro:~ root#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 3.

- 9 Encrypt the challenge password you set in Step 3:
  - a Go to [Convert Strings](#).
  - 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*.
- 10 Add both *client.p12* and *client.pwd* to your iPad using iTunes.



### To import the root certificate of your CA into your iPad:

- 1 Go to your CA's web address <http://<MCA's IP address>/certsrv/>, click **Download a CA certificate, certificate chain, or CRL**.
  - 2 Select **Base 64**, and click **Download CA Certificate**.
  - 3 Send the certificate to your iPad as an email attachment.
  - 4 On your iPad, open the attached certificate from your email, and then click **Install**.
  - 5 When prompted to install the profile, tap **Install Now**, and then tap **Done**.
- The certificate is now installed on your iPad. You can find it from your iPad **Settings > General > Profile > Configuration Profiles**.



To establish MTLS connection with servers such as Polycom RealPresence DMA or RealPresence Resource Manager systems, these systems should also hold the CA root certificate and the system's certificates.