



Release Notes

3.2 | June 2014 | 3725-82878-015/A

Polycom[®] RealPresence[®] Mobile, for Apple[®] iOS



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

RealPresence Mobile 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 Mobile offers features and user experiences similar to the Polycom RealPresence Desktop application. It is easily installed and configured, supports both basic and professional modes.

This document provides the latest information about the RealPresence Mobile application, release 3.2, for Apple iOS-powered smart phones and tablet devices.

Release History

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

Release History

Version	Release Date	Features
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
3.1	January 2014	Support for whiteboard and annotation on iPad Support for sharing content via SmartPairing (iPad only)
3.0.1	October 2013	3.0.1 adds support for iOS 7, iPhone 5S, and iPhone 5C.
3.0	July 2013	Support for H.264 high-profile calls (outgoing and incoming). Support for auto-answer incoming calls. When enabled, this feature allows users to choose to mute the audio or video of auto-answered calls. Note: Auto-answer only works when the RealPresence Mobile application is running in the foreground. Support for auto VPN. iPad: Improved content sharing functionality. Enabled users to hide or display local self-view.
2.3	March 2013	Support for the Polycom RealPresence CloudAXIS™ solution.
2.2	February 2013	Added support for iPad Mini and iPhone5.
2.1	December 2012	iPad and iPhone: Support for Interactive Voice Response (IVR) service in SVC calls. iPad: Added automatic Polycom SmartPairing™ (iOS 5.0 and later) to enable the iPad to control and swipe calls to Polycom HDX and Group Series devices.

Release History

Version	Release Date	Features
2.0	November 2012	Support for H.460 firewall traversal in basic mode. Access to media statistics. iPad: Added SmartPairing in manual mode (iOS 5.0 and later) to enable the iPad to control Polycom HDX and Group Series devices. Support for the Enterprise SVC Solution, a scalable media relay conferencing solution based on SVC and SAC codecs. Added Portuguese support for the user interface.
1.3.2	September 2012	iPad and iPhone 4S: Added support for iOS 6.0.
1.3.1	August 2012	Fixed several known issues.
1.3	June 2012	iPad: Added support for firewall/NAT, FECC, and ability to run on new iPad. iPhone 4S: Localized user interface.
1.2	March 2012	iPhone 4S: Added support for basic mode.
1.1	February 2012	iPhone 4S: Initial release. iPad 2: Added content sharing. Improved user interface experience.
1.0.4	January 2012	iPad 2: Fixed some memory leak issues.
1.0.3	December 2011	iPad 2: Enabled users to disable H.323 calls. User interface enhancements. Added multi-language support for the user interface. Added H.263+ content receiving.
1.0.2	October 2011	iPad 2: Fixed some known issues. Added user interface enhancements. Added automatic Polycom CMA® server detection. Features such as AES, H.460 firewall traversal, and content receiving are available only when users are registered to a provisioning server.
1.0.1	October 2011	iPad 2: 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

Apple	<ul style="list-style-type: none"> • iPad iPad Air, iPad with Retina display, iPad 2, iPad mini with Retina display, and iPad mini. • iPhone iPhone 5s, iPhone 5c, iPhone 5, and iPhone 4s.
iOS Requirements	iOS 6.0 or later
System Requirements	Syncing with iTunes® on a Mac or PC requires: <ul style="list-style-type: none"> • iTunes: 10.2 or later • Mac: OSx 10.2 or later • PC: Windows XP SP3 or later
Network Requirements	<ul style="list-style-type: none"> • Wireless Local Area Network (WLAN), 802.11 a/b/g/n recommended • 3G or 4G network
Optional Peripheral Devices	<ul style="list-style-type: none"> • 3.5 mm headset • Stereo Bluetooth headset

To view your iOS system version:

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

Interoperability

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

Polycom CMA® System and 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 in 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.



Note: Upgrade Polycom Products

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

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	11.2.17
	Polycom VBP-E	11.2.17
	Polycom RealPresence® Access Director™	4.0, 3.1
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	

Install and Uninstall RealPresence Mobile

This section explains how to install and uninstall RealPresence Mobile.

To install RealPresence Mobile:



- 1 From the Apple App Store application, search for **polycom** or **video conferencing** to find the RealPresence Mobile application.
- 2 Touch **Free**, and touch **INSTALL APP**.



Note: Consume one more license after upgrade

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 licenses, you need to 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 From your device's application list, touch and hold  **Video** until it begins to jiggle.
- 2 Touch .
- 3 Touch **Delete**. Your user data is deleted when you uninstall this application.


Feature Overview

The following table lists the available features. Features marked with an asterisk (*) are enabled by a provisioning server.

RealPresence Mobile Features

Category	Features	iPad Basic Mode	iPad Professional Mode	iPhone Basic Mode	iPhone Professional Mode
Call functions and capability	Enterprise SVC solution	✓	✓	✓	✓
	IVR service in SVC calls	✓	✓	✓	✓
	Placing H.323 calls	✓	✓	✓	✓
	Enabling and disabling H.323 calling	✓	✓ *	✓	✓ *
	Specifying H.323 gatekeepers	✓	✓ *	✓	✓ *
	Specifying internal or external gatekeepers	✓		✓	
	Receiving H.264 content during H.323 calls		✓		✓
	Receiving H.263 and H.263 + content during H.323 calls		✓		✓
	Whiteboard and annotation		✓		
	Placing SIP calls	✓	✓	✓	✓
	Enabling and disabling SIP calls	✓	✓ *	✓	✓ *
	Registering to SIP servers	✓	✓ *	✓	✓ *
	Specifying SIP proxy servers	✓	✓ *	✓	✓ *
	Placing SIP calls over UDP	✓	✓ *	✓	✓ *
	Placing SIP calls over TCP	✓	✓ *	✓	✓ *
	Receiving H.264 content during SIP calls		✓		✓
	Receiving H.263 and H.263 + content during SIP calls		✓		✓
	H.264 content sending up to XGA		✓		
	H.263 and H.263+ content sending up to XGA		✓		
	Selectable call rates between 64 kbps - 512 kbps	✓	✓	✓	✓

RealPresence Mobile Features

Call functions and capability	H.264 encode at up to 480 x 270 (video)	✓	✓	✓	✓
	H.264 decode at up to 480 x 352 (video)	✓	✓	✓	✓
	H.264 decode at up to 720 p (content)	✓	✓	✓	✓
	H.264 high profile calls (outgoing and incoming)	✓	✓	✓	✓
	H.263 and H.263+ decode at up to XGA (content)	✓	✓	✓	✓
	Automatic gain control	✓	✓	✓	✓
	Acoustic echo cancellation	✓	✓	✓	✓
	Automatic noise control	✓	✓	✓	✓
	Polycom Siren Lost Packet Recovery	✓	✓	✓	✓
	WLAN and 3G network support	✓	✓	✓	✓
	User interface Localization	✓	✓	✓	✓
Call control	Muting your audio during a call	✓	✓	✓	✓
	Disabling your video during a call	✓	✓	✓	✓
	DTMF during a call	✓	✓	✓	✓
	Viewing call statistics by touching 	✓	✓	✓	✓
	Switching between the front and rear cameras	✓	✓	✓	✓
	Adjusting volume during a call	✓	✓	✓	✓
	Indicating network quality during a call	✓	✓	✓	✓
	Far-end Camera Control (FECC)		✓		
SmartPairing	SmartPairing for iPad (iOS 6.0 and later)	✓	✓		
	Call transferring to an HDX or RealPresence Group system	✓	✓		
	Content Sharing	✓	✓		

RealPresence Mobile Features

Firewall traversal security	H.460 firewall traversal	✓	✓	✓	✓
	Encrypting H.323 calls		✓		✓
	SIP digest authentication	✓	✓ *	✓	✓ *
	Certificate verification		✓		✓
	BFCP over UDP		✓		✓
	RTP keep-alive	✓	✓	✓	✓
	TLS/SRTP support		✓		✓
	SIP dial string	✓	✓	✓	✓
	SBC Interoperability	✓	✓	✓	✓
	SIP outbound proxy	✓	✓	✓	✓
	SIP fail-over	✓	✓	✓	✓
Professional features	Provisioning service		✓		✓
	Local address book		✓		✓
	LDAP service		✓		✓


What's New in Release 3.2

RealPresence Mobile 3.2 includes the features and functionality of previous releases and includes the following new features:

- [Support for RealPresence CloudAXIS HTTPS Tunneling and Roster Display in a CloudAXIS Meeting](#)
- [Support for Log Collector](#)
- [Support for Czech](#)
- [Add Support for New Devices](#)

Support for RealPresence CloudAXIS HTTPS Tunneling and Roster Display in a CloudAXIS Meeting

This release adds support for Polycom RealPresence CloudAXIS HTTPS tunneling, which allows you to join a CloudAXIS meeting with limited Internet access through HTTPS tunneling mechanism. If you are invited to a CloudAXIS meeting, you will receive a meeting invitation e-mail. You can attend the CloudAXIS meeting through the URI in the e-mail.

In the meeting, you can view the participant list by touching  on the in-call tool bar. This feature is only supported on CloudAXIS 1.6 or higher versions.

Support for Log Collector

You can send RealPresence Mobile logs by clicking **Send the log report** under **Settings > Other Settings > Diagnostics**.

Support for Czech

RealPresence Mobile UI supports Czech from this release.

Add Support for New Devices

RealPresence Mobile 3.2 adds support for iPad Air and iPad mini with Retina display.


New Features in Previous Releases

This section describes the new features in the previous releases.

Release 3.1

Release 3.1 supports the following new features. See the RealPresence Mobile online help on [Polycom Support Site](#) for details about the new features.

- Support for Whiteboard and Blackboard on iPad

This feature enables you to draw on iPad screen with your finger or a touch pen. After you touch the  **Share Content** button in a call, you will be able to mark your shared content with the whiteboard tools. The shared content can be a shared PDF file, Word file, Excel file, PowerPoint presentation, shared photo, or shared web page. You also can use a blank whiteboard or blackboard and draw on the board.

When RealPresence Mobile is not in a call, you can send the whiteboard or blackboard content to a paired Polycom HDX or RealPresence Group Series system.

- Support for Sharing Content via SmartPairing (iPad Only)

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

- Support for New Operating Systems and Devices

3.1 adds support for iPad Air and iPad Mini2.

Release 3.0

- Support for H.264 high profile calls (outgoing and incoming).
- Support for auto-answer of incoming calls. 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.
- iPad: enhanced content sharing functionality:
 - picture share (jpg, jpeg, png, and bmp) from local photos gallery
 - web page share
 - retrieve file from Dropbox to share
 - supported office documents types include Word, Excel, and Powerpoint.
- Support for auto VPN functionality. If proper VPN configuration is added on iOS system, the RealPresence Mobile application will trigger VPN connection automatically before the normal sign-in process.



Note: Set up the VPN

Contact your IT administrator to set up the VPN client to include the host name of the CMA server or RealPresence Resource Manager server based on the company's policy or IT deployment.

System Capabilities and Constraints

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

Capabilities

Capabilities

Call Rate	Video Capability
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.

Protocols

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 LPR™	Lost Packet Recovery
SIP	Session Initiation Protocol



Note: H.239 and BFCP Support

H.239 and BFCP are supported only when you are registered to a provisioning server.

Resolutions

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

Resolutions and Frame Rate

Resolution and Frame Rate	Source
Up to 480x270, 15 fps	People video sent from camera
Up to 480x352, 30 fps	People video received from far end
Up to 720 p, 7.5 fps	Content received from far end
Up to XGA, 3 fps	Content showing from the tablet



Note: Video Capability

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 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.

Algorithms

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)
Encryption	AES-128 media encryption TLS for SIP calls



Note: Availability of AES and TLS Encryption

AES encryption is available only when you are registered to a provisioning server.

TLS encryption is available only when you are registered to a provisioning server.

Inbound and Outbound Ports

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

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
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 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 Mobile with other products or on specific operating systems.

Interoperability Issues

Limitation Type	Description	Solution
Limitations Related to Operation System	On some iPads with poor CPU performance, when RealPresence Mobile send PDF content, the video may freeze on far ends every three seconds.	None.
Limitations Related to Other Polycom Products	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 Mobile application cannot send or receive content if call rate is set as 384 kbps or below.	<ul style="list-style-type: none"> Change the RMX Content Settings to Graphics, and Content Protocol to H.263 & H.264 Auto Selection. Set the call rate on RPM to above 384 kbps.
	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, 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 re-claim period on RealPresence Resource Manager to a small value, for example five minutes.
	RealPresence Mobile 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.
	In a motion mode conference, RealPresence Mobile receives video with a large 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.

Known Issues

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

Known Issues

Category	Issue ID	Description	Workaround
Content	SWEP-6290	You might see mosaic screen when RealPresence Mobile joins a RMX conference which enables content transcoding, and there is packet loss to the H.264 content stream.	Disable content transcoding on RMX.
SVC	SWEP-6350	RealPresence Mobile may stop working after joining an SVC conference with more than 100 SVC participants.	None.

Resolved Issues

The following table lists the resolved Issues in Version 3.2

3.2 Resolved Issues

Category	Issue ID	Description
Content	SWEP-4932	(SIP Call only) When the call rate of Telepresence m100 is lower than the call rate of RealPresence Mobile and when M100 calls RealPresence Mobile, RealPresence Mobile cannot send content to M100.
Other	DSTC-1541	When you are trying to sign in RealPresence Mobile, RealPresence Mobile may incorrectly display a certificate warning for the intermediate CA issued certificate.
Video	SWEP-5592	The RealPresence Mobile received video is stretched when RealPresence Mobile is inter-operating with VSX Visual Concert.
Video	SWEP-5614	If RealPresence Mobile is the only SIP SVC endpoint in a AVC and SVC mixed conference, after RealPresence Mobile sends content, the RealPresence Mobile transmitted video will freeze.

The following table lists the resolved Issues in Version 3.1.

Resolved Issues in Version 3.1

Category	Issue ID	Description
General	SWEP-5271	When you add a new contact, you cannot input the character <i>or</i> in any text box. This issue has been fixed.
Call Control	SWEP-4495	Under Broadsoft environment, the RealPresence Mobile application can only send 135 p video to the RealPresence Group Series system. This issue has been fixed.
Video	SWEP-4399	When sending PDF content, transmitted video frame rate of RealPresence Mobile application is downgraded to about 5 fps. This issue has been fixed.

The following table lists the resolved Issues in Version 3.0.

3.0 Resolved Issues

Category	Issue ID	Description
General	SWEP-3941	You need to uninstall the RealPresence Mobile application and install again for logs to update automatically. This issue has been fixed.

Enterprise Scalable Video Coding 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.

Differences between SVC and AVC

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, support 270p (480x270) and 135p (240x135)
- For video receive, support up to 360p with no bandwidth limitation; average is 270p or 180p (480x270)
- 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 4 remote participants plus 1 content-sharing frame, and 1 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) from the MCUs.
- Support for SVC dial-out from DMA.

Using SVC conference calls has following limitations:

- Does not support recording.
- 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 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 video will freeze while sending or receiving content.

Access Media Statistics

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

Media Statistics

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.

Media Statistics

Value	Description
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.

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 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
```

You are about to be asked to enter information that will be incorporated into your certificate request. What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some 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.

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

4 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 text filed under **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**.

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

6 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.

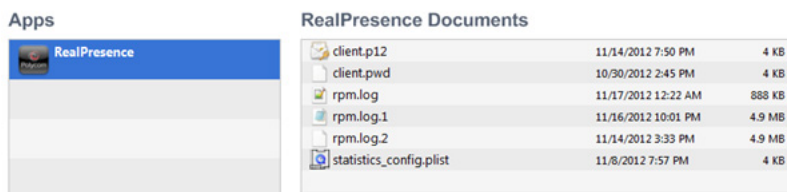
7 Encrypt the challenge password you set in Step 3:

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*.

8 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 e-mail attachment.
- 4 On your iPad, open the attached certificate from your e-mail, and click **Install**.
- 5 When prompted to install the profile, tap **Install Now**, and tap **Done**.

The certificate is now installed on your iPad. You can find it from your iPad **Settings > General > Profile > Configuration Profiles**.



Note: Hold CA root certificate and system's certificates on servers

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