

Polycom[®] RealPresence[®] Mobile for Android[®]

Contents

What's New in Release 3.8	1
Release History	3
Security Updates	5
Hardware and Software Requirements	5
Products Tested with this Release	6
Install and Uninstall RealPresence Mobile	8
System Constraints and Limitations	8
Resolved Issues	11
Known Issues	11
Interoperability Issues	13
Enterprise Scalable Video Coding (SVC) Solution	16
Access Media Statistics	18
Prepare Your Device for Mutual Transport Layer Security	20
Get Help	22
Copyright and Trademark Information	22

What's New in Release 3.8

Polycom[®] RealPresence[®] Mobile version 3.8 includes the features and functionality of previous releases and includes the following new features.



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

Support for Receiving 1080p Content

When your call rate is set as 1024 kbps or higher, you can receive 1080p content up to 15 fps.

Disable Remember Password Feature

If your provisioning server is Polycom RealPresence Resource Manager version 10.1 or higher, you can configure it to disable the **Remember Password** option in RealPresence Mobile to provide higher login security.

Dropped Support for Polycom® Concierge

From this release on, RealPresence Mobile for Apple iPhone and Android phones drops the support for Polycom Concierge.



Polycom Concierge is now available only in RealPresence Mobile for Apple iPhone and Android phones, in versions 3.5, 3.6, and 3.7.

New Device Support

The following new devices are now supported:

- Google® Pixel
- Samsung Galaxy S8 Plus
- Samsung Galaxy Tab S3

Release History

This following table lists the release history of Polycom RealPresence Mobile application.

Release History

Release	Release Date	Features
3.8	September 2017	Support for receiving 1080p content Disable Remember Password feature Dropped support for Polycom® Concierge New device support
3.7	December 2016	Audio enhancement Video enhancements UI enhancements Support for Android device capability detection for 720p CallTo feature support Czech language support New device support New OS Support
3.5.1	April 2016	Android version 6.x support New devices support Constant Bitrate (CBR) adopted for video codecs Bug fixes and feature enhancements
3.5	January 2016	Polycom® Concierge Solution support for Android phones TLSv2 support Simplified Chinese UI support for Android phones and tablets New devices support
3.4.2	August 2015	Fixed a known Android security vulnerability.
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 Device Support Changes

Release History

Release	Release Date	Features
3.3	January 2015	<p>Support for BroadSoft Device Management as Provisioning Server User Interface Improvements Standalone mode provides more features. See System Capabilities and Constraints 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</p> <ul style="list-style-type: none"> • Drop support for iOS 6 • Add support for iOS 8 • Add support for iPad Air 2 and iPad Mini 3 • Add support for iPhone 6 and iPhone 6 Plus
3.3	January 2015	<p>Support for BroadSoft Device Management as Provisioning Server User Interface Improvements Standalone mode provides more features. See System Capabilities and Constraints for a complete list of feature capabilities. Support for high video Resolution (720p) on powerful mobile devices, such as Samsung S5, and Samsung Galaxy Tab Pro, for AVC point to point calls, AVC multi-points calls, and SVC point to point calls. Support for the SDP Size Adjustment Feature Device Support Changes</p> <ul style="list-style-type: none"> • This release adds support for the following devices: <ul style="list-style-type: none"> ▲ Samsung Galaxy Tab Pro 8.4" ▲ Samsung Galaxy S5 Phone • This release drops the support for the following Android devices: <ul style="list-style-type: none"> ▲ HTC One X phone ▲ Samsung Galaxy SII GT-I9100 Phone
3.2.1	July 2014	<p>The Roster display button is not shown in CloudAXIS 1.5 and earlier versions. Fixed an OpenSSL security vulnerability (CVE-2014-0224).</p>

Release History

Release	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
3.2	June 2014	Support for CloudAXIS HTTPs tunneling Support for roster display in a CloudAXIS meeting Support for log collector Support for Far-end Camera Control (FECC) on Android tablets in managed mode Support for sharing pictures on Android tablets in managed mode Support for the following new devices: <ul style="list-style-type: none">• Samsung Galaxy Tab 3 7" SM-T217A Tablet• Samsung Galaxy Tab 3 8" SM-T311 Tablet

Security Updates

RealPresence Mobile is now upgraded its OpenSSL to the latest version 1.0.2k for higher security.

Please refer to the [Polycom Security Center](#) for information about known and resolved security vulnerabilities.

Hardware and Software Requirements

The following hardware requirements were determined based on test scenarios. Your system's actual performance may vary based on software or hardware configurations.

Manufacturer	Model	Android Version	Network Requirements	Optional Peripheral Devices
Samsung	Galaxy Tab S 10.5	4.4 and later	Wireless Local Area Network (WLAN), 802.11 a/b/g/n 3G or 4G network	3.5 mm headset Stereo Bluetooth headset
	Galaxy Tab 4 10.1			
	Galaxy Tab Pro Tablet			
	Galaxy Tab S2 T710			
	Galaxy Tab A 8.0 T350			
	Galaxy S5 Phone			
	Galaxy S6 Phone			
	Galaxy Note 4 Phone			
	Galaxy Note 5 Phone			
	Galaxy Note Pro 12.2			
	Galaxy S7 Edge			
	Galaxy S7			
	Galaxy S8 Plus			
	Galaxy Tab S3			
Motorola	Nexus 6			
Google	Google ® Pixel			

To view your Android system version:

- » Tap **Settings** and then **About device** and then **Android 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

The Polycom RealPresence Mobile application is tested with other products. The following list is not a complete inventory of compatible equipment. It indicates the products that have been tested for compatibility with this release.



Polycom recommends that you upgrade your Polycom devices with the latest software versions, as compatibility issues may already have been addressed by software updates. See the [Current Polycom Interoperability Matrix](#) to match product and software versions.

Products Tested with this Release

Product	Tested Versions
Polycom® Distributed Media Application™ (DMA®) 7000	6.4.1, 9.0
Polycom® RealPresence® Resource Manager	10.0, 10.1
Polycom® RealPresence® Collaboration Server (RMX®) 4000/2000/1800/1500	8.7.1, 8.7.3
Polycom® RealPresence® Collaboration Server Virtual Edition	8.7.1, 8.7.3
Polycom® RealPresence® Collaboration Server (RMX®) 4000/2000 with MPMx	8.5.4
Polycom® RealPresence® Media Suite	2.7, 2.8
Polycom® RealPresence® Web Suite	2.1.2
Polycom® RealPresence® Group Series	6.0, 6.1
Polycom® HDX® Series	3.1.11
Polycom® RealPresence® Desktop	3.7, 3.8
Polycom® RealPresence® Mobile	3.7, 3.8
Polycom® VVX®	5.5.1
Polycom® RealPresence Debut™	1.2, 1.3
Polycom® RealPresence Trio™	5.4.5
Polycom® RealPresence® Access Director™	4.2.4, 4.2.5
Polycom® VBP® 7301	14.8.2
Broadsoft SIP Server	R21 SP1
Broadsoft DMS	R21 SP1

Install and Uninstall RealPresence Mobile

This section explains how to install and uninstall RealPresence Mobile.



The RealPresence Mobile user interface supports the following languages: English, Czech, Simplified Chinese, and Traditional Chinese.


To install the RealPresence Mobile application:

- 1 Go to the Google Play application, search for **Polycom** or **video conferencing** to find the RealPresence Mobile application.
- 2 Tap **Free** and then **OK** to accept permission. The application downloads and installs automatically.



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, tap **Settings** and then **Applications** and then **Manage applications**.
- 2 Tap  **Video** and then **Uninstall**.
- 3 When you are prompted to confirm, tap **OK**. Your user data is deleted when you uninstall this application.

System Constraints and Limitations

The following sections provide information on constraints and limitations when using Polycom RealPresence Mobile application.

Capabilities

The following video capabilities are supported for RealPresence Mobile.

Call Rate	Video Capability
1 Mbps	720p
512 kbps 384 kbps 256 kbps	360p
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	Video sent from camera
Up to 720p, 30 fps	Video received from far end
Up to 1080p, 15 fps	Content received from far end
Up to 720p (1280x720), 5 fps (Tablets only)	Content showing from the tablets



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	H.264 SVC H.264 AVC H.264 high profile H.263 and H.263+ (for content only) Note: 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)
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

Port	Function
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

Resolved Issues

The following table lists resolved issues in Polycom RealPresence Mobile application.

Resolved Issues

Issue Number	Description
EN-26685	RealPresence Mobile cannot sign in to the Polycom RealPresence Resource Manager successfully if the IP address of the LDAP server is invalid.
EN-17039	When you are in a call with a Cisco SX20 system, the incoming video frame rate is around 3 to 5 fps. This is much lower than that in RealPresence Mobile version 3.7.
EN-17003	During a video call, your video freezes and your phone becomes unresponsive.
EN-16500	RealPresence Mobile does not work via SIP onto PexIP. It gets stuck on the previous conference wallpaper. However, using h323 calls work well.
EN-16311	The meeting video freezes or is choppy in H.323 calls with a Cisco SX20 system.
EN-15363	In an SVC call, endpoints connecting through Polycom RealPresence Access Director cannot receive video while waiting the chairperson to join the conference.
SWEP-10322	You cannot sign in to Polycom RealPresence Resource Manager successfully if the LDAP server is down or incorrectly configured.
SWEP-10140	The RealPresence Mobile application cannot re-register to the backup Polycom RealPresence DMA cluster after the primary super cluster fails. This is because the RealPresence Mobile application doesn't parse the TTL attributes under the "CNAME" header in DNS query responses.

Known Issues

The following table lists all known issues and suggested workarounds for Polycom RealPresence Mobile application.



These release notes do not provide a complete listing of all known issues that are included in the software. Issues not expected to significantly impact customers with standard voice or video conferencing environments may not be included. In addition, the information in these release notes is provided as-is at the time of release and is subject to change without notice.

Known Issues

Issue ID	Description	Workaround
SWEP-10627	The RealPresence Mobile cannot sign in successfully through Polycom RealPresence Access Director. The error message is 'Invalid server'.	Do the following: <ol style="list-style-type: none"> 1 From Polycom RealPresence Access Director administrator portal, go to Configuration > Access Proxy > Https proxy. 2 Change the rule of the Polycom RealPresence Resource Manager to make it the highest priority.
SWEP-10213	If your device is HUAWEI Nexus 9 running on Android 7.0 OS, the display rotation doesn't work smoothly in SVC calls.	None.
SWEP-9146	If you are using Samsung Note 4 phone with low battery, the frame rate of a 720p call is around 7 fps instead of 15 fps.	None. This is not a Polycom problem.
SWEP-8960	You cannot share pictures or PDF files from the Dropbox application in SVC calls.	None. This is the designed behavior.
SWEP-8626	When you receive a PSTN call, you hear the call audio always from your device speaker.	None.

Interoperability Issues

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

Interoperability Issues Related to the Android Versions and Devices

Interoperability Issues Related to the Android Versions and Devices

Description	Solution
The RealPresence Mobile log file on Android 4.4 may only catch 16 KB size logs.	It is a limitation of the Android 4.4 OS. Upgrade your device to a later Android OS version.
SmartPairing auto detection does not work on Sony tablets.	Use manual detection.
The speaker's volume is a little low during a call on the following Samsung tablets: <ul style="list-style-type: none"> Tab3 7" T217A Tab3 8" T311 	It is a limitation of the RealPresence Mobile application. Adjust the volume to the maximum on the tablets.
RealPresence Mobile Android version 3.0 and later cannot launch on Tegra-2 devices (XOOM tablet and Galaxy Tab 10.1" GT-P7510/GT-P7500 tablet).	To enjoy the full features (RealPresence Mobile 2.3 release) of this application on your Tegra-2 tablets, download REALPRESENCE MOBILE - TEGRA 2 from Google Play .
The following two issues are due to the system limitation on tables using Acoustic Echo Cancellation (AEC): <ul style="list-style-type: none"> On the Samsung Galaxy Tab 8.9", Samsung Galaxy Tab 10.1" LTE SC-01D, and ASUS Transformer Pad TF300T tablets, you cannot adjust the speaker volume by using the hardware Volume control. If a Transformer Pad TF300T tablet is close to Polycom HDX or Group Serial 500 systems which enable Ultrasound, you can hear noise from the far end. 	This is a system limitation of the tablet. The tablet's system volume control is used for RealPresence Mobile. When a tablet uses AEC, the system volume control does not work.
The far end can hear an echo if RealPresence Mobile running on Android device is in the same conference and does not mute. <ul style="list-style-type: none"> Sony Xperia Z SGP312 Tablet Transformer Pad TF300T Tablet DROID XYBOARD Tablet Galaxy Tab 2 10" GT-P5100 Tablet 	This is a limitation of the tablet. The microphone and the speaker are placed very close. Use a headset or lower the speaker's volume.
When you run RealPresence Mobile on HTC smart phones, the loudspeaker volume is too low to be heard during a call.	This is a limitation of the tablet. Use a headset.

Description	Solution
<p>Placing SIP calls over TCP may fail on the following tablets:</p> <ul style="list-style-type: none"> Transformer Pad TF300T Tablet 4.1.1 and 4.2.1 Samsung Tab2 7" GT-P3110 Tablet 4.0.3 Samsung Tab2 10" GT-P5100 Tablet 4.0.3 Samsung Galaxy Note GT-I9220 Phone 4.0.3 SONY Xperia ZL L35h Phone 4.1.2, 4.2.2, and 4.3 SONY Xperia Z SGP312 Tablet 4.1.2 and 4.2.2 <p>Placing SIP calls over UDP (Default) and SIP over TLS on the above tablets works well.</p> <p>The root cause is TCP/IP stack on Android 4.0.3 will check SIP messages. If TCP packet size is larger than 1500 bytes, it may be dropped by the system.</p>	<p>Try one of the following:</p> <ul style="list-style-type: none"> Use SIP over UDP (Default) or SIP over TLS. Change the UDP or TCP listening port to a non-standard port on the SIP server.
<p>When using Android tablets with Acoustic Echo Cancellers, SmartPairing fails with auto-detection.</p> <ul style="list-style-type: none"> On Transformer Pad TF300T tablets, auto detection does not work. On Galaxy Tab 8.9" SHV-E140S, Galaxy Tab 10.1" LTE SC-01D, and Galaxy Tab 2 10" GT-P5100 tablets, auto detection does not work during calls. On SONY Xperia Z SGP312 tablet, auto detection does not work. 	<p>You can manually add the room systems' IP addresses to control the room systems on non-AEC tablets.</p>
<p>On the Samsung Galaxy Tab2 PT-3110 tablet and Samsung Galaxy Tab2 PT-5100, received video is delayed on long calls, or when you are sharing content.</p>	<p>This is due to the low CPU capability of the tablets. To avoid performance issues, only 1x1 layout is supported in SVC meetings. Users can see only the active speaker during SVC meetings.</p>
<p>On some Android devices with display ratio other than 16:9, you may see video distortion in a meeting.</p>	<p>None</p>
<p>On the Galaxy Tab 10.1" LTE SC-01D tablet, the user cannot control mute the speaker on the device.</p>	<p>None</p>
<p>If you create a Continuous Presence (CP) only conference call on Polycom RealPresence Collaboration Server (RMX) 4000/2000 systems 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.</p>	<ul style="list-style-type: none"> Change the RealPresence Collaboration Server (RMX) Content Settings to Graphics, and Content Protocol to H.263 & H.264 Auto Selection. Set the call rate on RealPresence Mobile to above 384 kbps.
<p>Prior to version 4.1.0, Polycom VVX 1500 always reboots when the RealPresence Mobile application sends 320 x 180 video to a Polycom VVX 1500 system.</p>	<p>This issue was fixed in VVX 1500 4.1.0, upgrade to 4.1.0 or newer version when using RealPresence Mobile with VVX 1500.</p>
<p>RealPresence Mobile supports only using English user names and passwords to sign in a Polycom CMA server and RealPresence Resource Manager or register to a gatekeeper or an SIP server.</p>	<p>Use an English user name and password.</p>

Description	Solution
In a call with a RealPresence Collaboration Server (RMX) system, a blue edge is displayed at the bottom of the video window.	This is a limitation of the RealPresence Collaboration Server (RMX) MPM+ hardware. Use MPMX media cards instead.
Some RealPresence Mobile devices may receive delayed video in RealPresence Collaboration Server (RMX) meetings when the Conference Mode setting is set to Motion .	Some RealPresence Mobile devices do not support 60 fps. Set the conference mode to Sharpness to allow these RealPresence Mobile users to participate with normal video.
When VSX® Visual Concert™ calls RealPresence Mobile, only audio is connected.	Let RealPresence Mobile call VSX Visual Concert.
RealPresence Mobile SIP call transfers by Polycom VVX systems may fail when the endpoints are not registered with a RealPresence DMA system.	Register both the Polycom VVX system and the RealPresence Mobile application with the same RealPresence DMA system.

Enterprise Scalable Video Coding (SVC) Solution

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.
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 (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 RealPresence Collaboration Server (RMX) Content Settings to Graphics, and Content Protocol to H.263 & H.264 Auto Selection. Set the call rate on RealPresence Mobile 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, 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

SVC is a scalable media relay conferencing solution based on SVC and Scalable Audio Coding (SAC)

codecs. It is an alternative to the Advanced Video Coding (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 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

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.

Value	Description
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 RealPresence 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 into your Android device, you need to generate a Certificate Request (CSR) first by using a computer that has installed the OpenSSL tool.

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**.

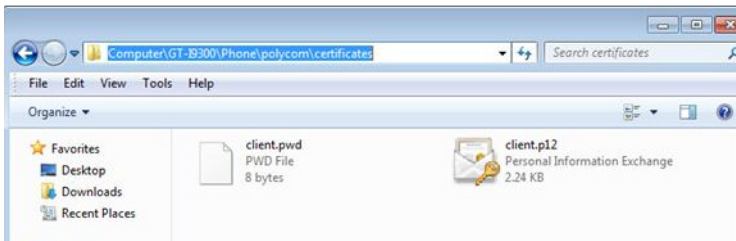
- 7 Move the generated **certnew.cer** file to your current directory.
- 8 Convert the file *ccertnew.cer* to a .p12 file by using the OpenSSL tool. For example:


```
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 Connect your Android phone or tablet to a PC using a USB cable, then copy file *client.p12* and *client.pwd* to your phone or tablet's internal storage, under the directory **/polycom/certificates**.



To import the root certificate of your CA into Android device:

- 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 then click **Download CA Certificate**.
- 3 Connect your Android phone or tablet to a PC using a USB cable.
- 4 From your Android phone or tablet, tap **Settings > Security > Install from Storage**.
- 5 Follow the screen prompt to enter, or set, the screen lock password.
- 6 Name the certificate, or accept the suggested name.
- 7 Click **OK** to install the certificate.

The certificate is now installed on your device.



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

Get Help

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

To find all Polycom partner solutions, see [Polycom Global Strategic Partner Solutions](#).

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