What’s New in Release 3.9.1

Polycom® RealPresence® Mobile 3.9.1 includes the features and functionality of previous releases, defect fixes, and support for new devices.
## Release History

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

<table>
<thead>
<tr>
<th>Release</th>
<th>Release Date</th>
<th>Features</th>
</tr>
</thead>
</table>
| 3.9.1   | September 2018 | Supports new devices  
Defect fixes |
| 3.9     | January 2018 | Dropped support for automatic detection of Polycom® SmartPairing™  
New device and OS support |
| 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

<table>
<thead>
<tr>
<th>Release</th>
<th>Release Date</th>
<th>Features</th>
</tr>
</thead>
</table>
| 3.3     | January 2015 | 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  
• This release adds support for the following devices:  
  ▶ Samsung Galaxy Tab Pro 8.4”  
  ▶ Samsung Galaxy S5 Phone  
• This release drops the support for the following Android devices:  
  ▶ HTC One X phone  
  ▶ Samsung Galaxy SII GT-I9100 Phone |
| 3.2.1   | July 2014    | The Roster display button is not shown in CloudAXIS 1.5 and earlier versions.  
Fixed an OpenSSL security vulnerability (CVE-2014-0224). |
| 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:  
• Samsung Galaxy Tab 3 7” SM-T217A Tablet  
• Samsung Galaxy Tab 3 8” SM-T311 Tablet |

Security Updates

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.
To view your Android system version:

» Tap **Settings** and then **About device** and then **Android Version**.

Polycom doesn't guarantee you can use Android 9.0 mobile phones to join a meeting as the version is not fully tested. For example, you may experience big audio jitters using Google Pixel in this 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.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Android Version</th>
<th>Network Requirements</th>
<th>Optional Peripheral Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung</td>
<td>Galaxy Tab S</td>
<td>4.4</td>
<td>Wireless Local Area Network (WLAN), 802.11 a/b/g/n 3G or 4G network</td>
<td>3.5 mm headset Stereo Bluetooth headset</td>
</tr>
<tr>
<td></td>
<td>Galaxy Tab Pro 8.4</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Tab S2 T710</td>
<td>6.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Tab A 8.0 T350</td>
<td>7.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Tab S3 9.7</td>
<td>8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Note Pro 12.2</td>
<td>8.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S5 Phone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S6/Edge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Note 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S7/Edge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S8 Plus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy Note 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Galaxy S9 Plus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Google</td>
<td>Google ® Pixel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 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

<table>
<thead>
<tr>
<th>Product</th>
<th>Tested Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polycom® Distributed Media Application™ (DMA®) 7000</td>
<td>9.0.1.2</td>
</tr>
<tr>
<td>Polycom® RealPresence® Resource Manager</td>
<td>10.3, 10.4</td>
</tr>
<tr>
<td>Polycom® RealPresence® Collaboration Server (RMX®) 4000/2000/1800/1500</td>
<td>8.7.4, 8.7.5</td>
</tr>
<tr>
<td>Polycom® RealPresence® Collaboration Server, Virtual Edition</td>
<td>8.7.4, 8.7.5</td>
</tr>
<tr>
<td>Polycom® RealPresence® Collaboration Server (RMX®) 4000/2000 with MPMx</td>
<td>8.5.13</td>
</tr>
<tr>
<td>Polycom® RealPresence® Media Suite</td>
<td>2.8.2</td>
</tr>
<tr>
<td>Polycom® RealPresence® Web Suite</td>
<td>2.2, 2.2.2</td>
</tr>
<tr>
<td>Polycom® RealPresence® Group Series</td>
<td>6.1.7</td>
</tr>
<tr>
<td>Polycom® HDX® Series</td>
<td>3.1.12</td>
</tr>
<tr>
<td>Polycom® RealPresence® Desktop</td>
<td>3.9, 3.9.1</td>
</tr>
<tr>
<td>Polycom® RealPresence® Mobile</td>
<td>3.9, 3.9.1</td>
</tr>
<tr>
<td>Polycom® VVX®</td>
<td>5.4.5</td>
</tr>
<tr>
<td>Polycom® RealPresence Debut™</td>
<td>1.3.2</td>
</tr>
<tr>
<td>Polycom® VoxBox™</td>
<td>Firmware release 1.0.01</td>
</tr>
<tr>
<td>Polycom® Trio™</td>
<td>5.5.4, 5.7.1</td>
</tr>
<tr>
<td>Polycom® RealPresence® Access Director™</td>
<td>4.2.5.2</td>
</tr>
<tr>
<td>Polycom® VBP® 7301</td>
<td>14.8.6</td>
</tr>
<tr>
<td>Broadsoft SIP Server</td>
<td>R21 SP1</td>
</tr>
<tr>
<td>Broadsoft DMS</td>
<td>R21 SP1</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Call Rate</th>
<th>Video Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mbps</td>
<td>720p</td>
</tr>
<tr>
<td>512 kbps</td>
<td>360p</td>
</tr>
<tr>
<td>384 kbps</td>
<td></td>
</tr>
<tr>
<td>256 kbps</td>
<td></td>
</tr>
<tr>
<td>64 kbps</td>
<td>Audio only</td>
</tr>
</tbody>
</table>
Protocols

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

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

Resolutions

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

<table>
<thead>
<tr>
<th>Resolution and Frame Rate</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 720p, 15 fps</td>
<td>Video sent from camera</td>
</tr>
<tr>
<td>Up to 720p, 30 fps</td>
<td>Video received from far end</td>
</tr>
<tr>
<td>Up to 1080p, 15 fps</td>
<td>Content received from far end</td>
</tr>
<tr>
<td>Up to 720p (1280x720), 5 fps (Tablets only)</td>
<td>Content showing from the tablets</td>
</tr>
</tbody>
</table>

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.

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

**Inbound and Outbound Ports**

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

<table>
<thead>
<tr>
<th>Port</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1720 (TCP)</td>
<td>H.323 Call Signaling (H.225)</td>
</tr>
<tr>
<td>1719 (UDP)</td>
<td>H.323 Registration, Admission, and Status (RAS)</td>
</tr>
<tr>
<td>3230 - 3250 (TCP)</td>
<td>H.323 Call Control (H.245)</td>
</tr>
<tr>
<td>3230 - 3250 (UDP)</td>
<td>Media (RTP/RTCP)</td>
</tr>
<tr>
<td>3238 (UDP and TCP)</td>
<td>BFCP</td>
</tr>
<tr>
<td>5060 (UDP and TCP)</td>
<td>SIP</td>
</tr>
<tr>
<td>443 (TCP)</td>
<td>Provisioning, Monitoring, Help Files, HTTPS</td>
</tr>
<tr>
<td>389 (TCP)</td>
<td>LDAP</td>
</tr>
<tr>
<td>5060 (UDP and TCP)</td>
<td>SIP</td>
</tr>
<tr>
<td>5061 (TCP)</td>
<td>SIP TLS signaling</td>
</tr>
</tbody>
</table>
### Resolved Issues

The following table lists all resolved issues in this release.

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN-84608</td>
<td>You may see gray video and content in a meeting if you connect RealPresence Mobile 3.9 to Cisco Spark Room Kit.</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN-104215</td>
<td>Audio delays on Samsung Galaxy S8 Plus with Android 8.0.</td>
<td>None.</td>
</tr>
</tbody>
</table>
| SWEP-10627 | The RealPresence Mobile cannot sign in successfully through Polycom RealPresence Access Director. The error message is ‘Invalid server’. | Do the following:  
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. |
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWEP-10213</td>
<td>If your device is HUAWEI Nexus 9 running on Android 7.0 OS, the display rotation doesn't work smoothly in SVC calls.</td>
<td>None.</td>
</tr>
<tr>
<td>SWEP-9146</td>
<td>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.</td>
<td>None. This is not a Polycom problem.</td>
</tr>
<tr>
<td>SWEP-8626</td>
<td>When you receive a PSTN call, you hear the call audio always from your device speaker.</td>
<td>None.</td>
</tr>
</tbody>
</table>
## 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

<table>
<thead>
<tr>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>As the RealPresence Mobile user, you cannot mute the speaker volume of some Android phones and tablets including Samsung Galaxy Note8 (SM-N950F), SHV-E140S, Galaxy S6 G9200, Galaxy Tab 10.1 LTE SC-01D, Galaxy Tab 2 (GT-P5100), Google Pixel, ASUS Transformer Pad (TF300T).</td>
<td>None.</td>
</tr>
<tr>
<td>The RealPresence Mobile log file on Android 4.4 may only catch 16 KB size logs.</td>
<td>It is a limitation of the Android 4.4 OS. Upgrade your device to a later Android OS version.</td>
</tr>
<tr>
<td>The speaker’s volume is a little low during a call on the following Samsung tablets:</td>
<td>It is a limitation of the RealPresence Mobile application. Adjust the volume to the maximum on the tablets.</td>
</tr>
<tr>
<td>• Tab3 7” T217A</td>
<td></td>
</tr>
<tr>
<td>• Tab3 8” T311</td>
<td></td>
</tr>
<tr>
<td>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).</td>
<td>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.</td>
</tr>
<tr>
<td>The following two issues are due to the system limitation on tablets using Acoustic Echo Cancellation (AEC):</td>
<td>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.</td>
</tr>
<tr>
<td>• 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.</td>
<td></td>
</tr>
<tr>
<td>• 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.</td>
<td></td>
</tr>
<tr>
<td>The far end can hear an echo if RealPresence Mobile running on Android device is in the same conference and does not mute.</td>
<td>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.</td>
</tr>
<tr>
<td>• Sony Xperia Z SGP312 Tablet</td>
<td></td>
</tr>
<tr>
<td>• Transformer Pad TF300T Tablet</td>
<td></td>
</tr>
<tr>
<td>• DROID XYBOARD Tablet</td>
<td></td>
</tr>
<tr>
<td>• Galaxy Tab 2 10” GT-P5100 Tablet</td>
<td></td>
</tr>
<tr>
<td>When you run RealPresence Mobile on HTC smart phones, the loudspeaker volume is too low to be heard during a call.</td>
<td>This is a limitation of the tablet. Use a headset.</td>
</tr>
</tbody>
</table>
Enterprise Scalable Video Coding (SVC) Solution

<table>
<thead>
<tr>
<th>Limitation Type</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
</table>
| Limitations     | 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. | • 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.                                                                  |
| Related to Other Polycom Products | 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.
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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Type</td>
<td>SIP or H.323 call type.</td>
</tr>
<tr>
<td>Call Encryption</td>
<td>Indicates whether your call is encrypted.</td>
</tr>
<tr>
<td>Far Site Name</td>
<td>Name of the far site.</td>
</tr>
<tr>
<td>Far Site System</td>
<td>Type of video conferencing system at the far end and the software version.</td>
</tr>
<tr>
<td>Call Speed</td>
<td>Negotiated speed (bandwidth) for the call, which is usually the combined video and audio speeds in the call.</td>
</tr>
<tr>
<td>Video Protocol</td>
<td>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.</td>
</tr>
<tr>
<td>Video Format</td>
<td>Picture size currently in use.</td>
</tr>
<tr>
<td>Audio Protocol</td>
<td>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.</td>
</tr>
<tr>
<td>Audio Rate</td>
<td>Bandwidth specified for the audio portion of the call. The proportion of the audio rate to the video rate depends on the protocol used.</td>
</tr>
<tr>
<td>Video Rate</td>
<td>Bandwidth specified for the video portion of the call. The proportion of the video rate to the audio rate depends on the protocol used.</td>
</tr>
<tr>
<td>Video Rate Used</td>
<td>Actual bandwidth being used for the video portion of the call. This is a real-time measurement, which normally fluctuates.</td>
</tr>
<tr>
<td>Video Frame Rate</td>
<td>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.</td>
</tr>
<tr>
<td>Video Packets Loss Percentage</td>
<td>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.</td>
</tr>
<tr>
<td>Video Jitter</td>
<td>Percentage of variation in the video transmission rate.</td>
</tr>
<tr>
<td>Audio Packet Lost</td>
<td>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.</td>
</tr>
<tr>
<td>Audio Packets Loss Percentage</td>
<td>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.</td>
</tr>
<tr>
<td>Audio Jitter</td>
<td>Percentage of variation in the audio transmission rate.</td>
</tr>
<tr>
<td>Content Protocol</td>
<td>Format used for the recording, compression, and distribution of the content.</td>
</tr>
<tr>
<td>Content Format</td>
<td>Display resolution of the content.</td>
</tr>
<tr>
<td>Content Rate</td>
<td>Rate your system uses in content transmission.</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Content Rate Used</td>
<td>Actual bandwidth being used for the content transmission.</td>
</tr>
<tr>
<td>Content Frame Rate</td>
<td>Rate your system uses in content frame transmission.</td>
</tr>
<tr>
<td>Content Packets Lost</td>
<td>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.</td>
</tr>
<tr>
<td>Content Packets Loss Percentage</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 some-----
   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 [Note1]
   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.
**Release Notes**

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- Paste the content of the file `client.csr` to the Saved Request text field, and click Submit.
- 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 `certnew.cer` to a .p12 file by using the OpenSSL tool. For example:
   
   ```
   
   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.

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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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