Poly RealPresence Desktop for Mac OS X

What's New in This Release

Poly RealPresence Desktop 3.11.8 is a maintenance release that includes bug fixes only.

Release History

The following table lists the release history of RealPresence Desktop.

Release	Release Date	Features
3.11.8	March 2023	Bug fixes
3.11.6	June 2022	Bug fixes

Release	Release Date	Features
3.11.3	April 2021	Enhancements for the Poly Clariti Manager Endpoint Call Quality Statistics feature
3.11.2	December 2020	Support for configurations to mute video or audio on call entry Bug fixes
3.10.6	October 2020	Bug fixes
3.10.4	June 2020	Enhancement on network events subscription Option to disable H.264 High Profile Bug fixes
3.10.2	November 2019	Bug fixes XCode upgraded to 11.1
3.10	April 2019	Collaborates with Poly Studio and Plantronics Calisto 7200 Bug fixes
3.9.1	September 2018	RealPresence Web Suite soft client supports NoiseBlock controlled by RealPresence Web Suite RealPresence Desktop changes to 64-bit app on Mac Bug fixes
3.9	January 2018	RealPresence Web Suite soft client for non-WebRTC conferencing Install or upgrade RealPresence Desktop as a normal user

Security Updates

Please refer to the [Poly 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.

Hardware or Software	Requirement
Mac OS X	Monterey (12.3) Big Sur (11.0) Catalina (10.15) Mojave (10.14) High Sierra (10.13)
Processor	RealPresence Desktop system's capabilities vary depending on processor performance. The processor types and speeds listed below are intended as reference. RealPresence Desktop has equivalent capabilities on other processors with equivalent performance. Recommended CPU: Intel Core i5, 2.5 GHz or higher. Basic Video Transmit (up to QVGA 30 fps sending, up to 720p 15 fps receiving) • Single core • Dual logical cores, lower than 2.0 GHz • Quad logical cores, lower than 1.3 GHz Premium Video Transmit (up to VGA 30 fps sending, up to 720p 30 fps receiving) • Dual logical cores, 2.0 GHz or higher • Quad logical cores, 1.3 GHz or higher HD Transmit • Quad logical cores, 2.0 GHz or higher (up to 720p 30 fps sending, up to 1080p 30 fps receiving) • Dual logical cores, 2.5 GHz or higher (up to 720p 15 fps sending, up to 720p 30 fps receiving) • Quad logical cores, 1.6 GHz or higher (up to 720p 15 fps sending, up to 720p 30 fps receiving) • Apple M1 processor
RAM	4 GB
Video memory	Minimum: 256 MB
Hard drive space	200 MB

Hardware or Software	Requirement
Camera	Integrated or external Note: RealPresence Desktop only supports directly connecting with common cameras. RealPresence Desktop doesn't support connecting with video transcoding devices, for example, BlackMagic Web Presenter.
Python 3	Required if your Mac is running on MacOS 12.3 and you're upgrading to RealPresence Desktop 3.11.6. This is because MacOS 12.3 requires Python 3. See *Apple 12.3 Release Notes* for more information: https://developer.apple.com/documentation/macos-release-notes/macos-12_3-release-notes. If RealPresence Desktop doesn't detect Python 3 during the upgrade, osascript invokes the installation and prompts for your permission. You must allow this change. Otherwise, the upgrade fails.

Install RealPresence Desktop

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

Installation Notes

Here are some things to consider when doing a RealPresence Desktop installation:

- The RealPresence Desktop user interface supports the following languages: English, International Spanish, French, German, Simplified Chinese, Korean, Japanese, Russian, Portuguese, Kazakh, Czech, and Traditional Chinese.
- The Mac OS language setting controls the language choice for RealPresence Desktop.
- You can view the license number of the RealPresence Desktop by selecting Polycom RealPresence Desktop on the top menu and selecting the **About** option.
- It takes around 20 - 30 minutes to install or upgrade to RealPresence Desktop 3.11.6. Please be patient. This is because the installation on the new MacOS (12.3) requires additional time.

Install RealPresence Desktop in Standalone Mode

This section describes how to install RealPresence Desktop in standalone mode.

To install RealPresence Desktop:

1   Download the installation file from [Poly Support.](#)
2   Follow the Installer Wizard instructions.

To activate RealPresence Desktop license:

1 Start RealPresence Desktop application and in the **Individual Account** box select **Enter**.

2 Select **Activate** to activate the application with a license. Then do one of the following:

➢ Select **More** ▬ to select a license file.

The license file is a .txt file that contains the license number and activation key.

➢ Specify your **License Number** and **Activation Key Code** manually.

You can press the TAB key to navigate among different text fields.

You can also copy your key string, select in the first text field, and then press Ctrl + V to paste it.

3 Select **Activate**.

Install RealPresence Desktop in Managed Mode

In managed mode, an administrator can distribute the latest version of RealPresence Desktop to all managed systems. To do this, the administrator uploads the RealPresence Desktop distribution package (.tar.gz) to the Poly Clariti Manager system. This process is described in detail in the ***Distribute Polycom Applications*** topic in the *Poly Clariti Manager Administrator Guide*.

Upgrade RealPresence Desktop Through Poly Clariti Manager

This section describes how to upgrade RealPresence Desktop when an upgrade package is available on the Poly Clariti Manager.

The Poly Clariti Manager can schedule and perform limited monitoring of the RealPresence Desktop application as well as manage and provision the application. The CMA system can'tt upgrade the RealPresence Desktop application, and the Poly Clariti Manager system can upgrade the application only from version 8.0.

For more information on upgrading managed RealPresence Desktop systems, see the ***Using Dynamic Software Updates Applications*** topic in the *Poly Clariti Manager Administrator Guide*.

To upgrade RealPresence Desktop:

» Select **Help** > **Check Upgrade**.

If an upgrade is available, you will be prompted to perform the upgrade.
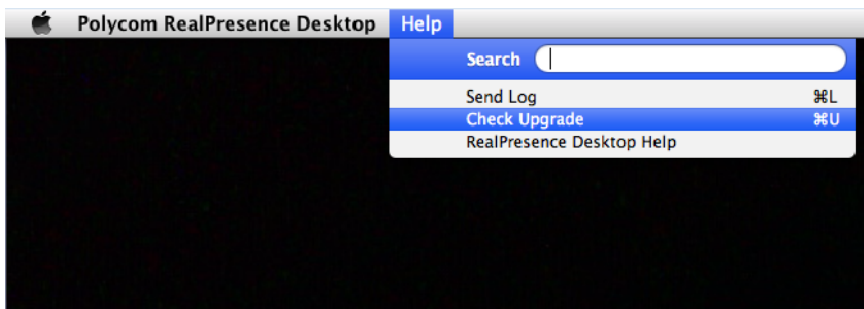
To install RealPresence Desktop using terminal:

1 Navigate to the folder where the RealPresence Desktop `.pkg` installation file resides.

2 Run this command:

```
installer –pkg RealPresenceDesktop.pkg –target CurrentUserHomeDirectory
```

Products Tested with This Release

The RealPresence Desktop 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.

> Poly recommends that you upgrade your Poly devices with the latest software versions, as compatibility issues may already have been addressed by software updates. See the Current Poly Intraoperability Matrix to match product and software versions.

Prducts Tested with This Release

Type	Product	Tested Versions
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Poly Clariti Core and Poly Clariti Edge	10.3.0.0-612971 10.2.2.3-606942
	Poly Clariti Manager	10.9.0_80, 10.11.0_156
	Poly RealPresence Collaboration Server 800s, Virtual Edition	8.10.0.4939 8.9.2.4865
	Poly Clariti Relay	1.2.1_615471
Endpoints	Poly RealPresence Desktop	Mac 12.2.1: 3.11.8
	Poly RealPresence Mobile	Android 11 : RPMv3.11.8 Android 12 : RPMv3.11.8 IOS 16 : RPMv3.11.8
	Poly Studio X30	3.14.1-374010
	RealPresence Group 500	GS63 : 6.2.2.8-670021
	Trio 8800	7.1.1.0731
	Poly Clariti App	1.2.0+612627
	Poly Clariti Core and Poly Clariti Edge	10.3.0.0-612971 10.2.2.3-606942
	Poly Clariti Manager	10.9.0_80, 10.11.0_156
	Poly RealPresence Collaboration Server 800s, Virtual Edition	8.10.0.4939 8.9.2.4865

Interoperability Issues

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

Interoperability Limitations Related to the Mac Operating System

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

System Capabilities and Constraints

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

Protocols

The following table lists the supported protocols.

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

Resolutions

The following table lists the supported resolutions.

Resolution and Frame Rate	Source
Up to 720p / 30 fps	Video sent from camera
Up to 1080p / 30 fps	Video received from far end
Up to 1080p / 5 fps	Content showing from the computer
Up to 1080p / 15 fps	Content received from far end

Algorithms

The following table lists the supported algorithms.

Algorithm Type	Description
Audio	G.711μ or G.711A SirenLPR at 24 Kbps, 32 Kbps, 48 Kbps, and 64 Kbps G.722.1 at 16 Kbps, 24 Kbps, and 32 Kbps G.722.1 Annex C at 24 Kbps, 32 Kbps, and 48 Kbps G.719 at 32 Kbps, 48 Kbps, 64 Kbps G.729 G.728 SAC Automatic gain control Acoustic echo cancellation
Video	H.261 H.263/H.263+ H.264 AVC H.264 SVC H.264 high profile Content over H.264/H.263/H.263+ Video Poly Lost Packet Recovery (LPR) QoS technology
Encryption	AES-128 media encryption TLS/SRTP supported in SIP calls

Inbound and Outbound Ports

The following tables list the supported inbound and outbound 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 Control (H.245)

Port	Function
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
5222 (TCP)	XMPP
1720 (TCP)	H.323 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

About Full Duplex Echo Cancellation

Sometimes, RealPresence Desktop may not provide full duplex echo cancellation. To enable full duplex echo cancellation, your laptop needs to satisfy the following requirements:

- The audio clocks of microphone and speaker must synchronize.
- No caustic coupling exists between the microphone and speaker.
- No nonlinear process in the handling of the microphone and speaker data.

Unfortunately, many laptop microphones and speakers don't meet the above requirements, which makes full duplex audio difficult. Additionally, USB microphones normally contain their own audio clock, making synchronization difficult.

To get the optimum audio experience, Poly recommends you to use the Poly room systems instead.

Resolved Issues

This release includes the following resolved issues.

Issue #	Description
EN-238936	RealPresence Desktop for Mac OS keeps changing your Microphone and Speaker device. It reduces the audio volume automatically to around 1/3 of the maximum volume.

Known Issues

The following table lists all known issues and suggested workarounds for RealPresence Desktop.

> These release notes don't 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.

Issue #	Description	Workaround
EN-127032	RealPresence Desktop users that use special characters such as ¬ and £ in their passwords can't sign in to a Poly Clariti Manager system.	None.
EN-144570	Sometimes the RealPresence Desktop vCard is empty during a conference and in the profile.	None.
EN-160379	RealPresence Desktop on a MAC, Export/Import doesn't restore the "SIP Domain" in the user profile.	None.
EN-162621	RealPresence Desktop on a MAC crashes after sharing content with iPhone (H323).	None.
EN-164444	Calls between RealPresence Group 500 systems running software version 6.2.2 and RealPresence Desktop 3.10 sometimes have lip sync and audio dropout issues.	None.
EN-166127	When using RealPresence Desktop on a MAC, Content sharing doesn't display "Applications" on the far-end.	None.
EN-168977	When you share content using RealPresence Desktop on a MacBook, the far ends occasionally see your desktop wallpaper instead of the content.	None.

Issue #	Description	Workaround
EN-207836	While logging in to RealPresence Desktop with AD user credentials, if you input a wrong password, RealPresence Desktop sends error message **Invalid server address**. The error message isn't accurate.	None.
EN-238934	if you place a call using the video protocol H.264, RealPresence Desktop shows **H.264SVCHigh** as the video protocol in **Call Statistics**.	None. This is a known display issue. For H.323 calls, video protocol is H.264 or H.264High, depending on your H.264 High Profile setting.

Limitations

The following table lists the limitations in this release.

Issue ID	Description	Workaround
EN-162035	Poly Clariti Manager Enterprise Sign-in from RealPresence Desktop doesn't check for a valid IP format in the **Server** field.	None.
EN-165915	Logging in to Poly Clariti Manager from RealPresence Desktop Enterprise fails when using Cyrillic or Chinese names.	None.
EN-56996	From version 3.9, RealPresence Desktop is installed in the `/Users/username/Applications` folder. You can launch the application from the **Launchpad**.	None.
EN-144583	RealPresence Web Suite and RealPresence Desktop don't share the camera image when connect to a VMR conference.	None.
EN-163950	RealPresence Desktop and RealPresence Mobile don't receive content when in a VMR or point-to-point call.	Use Poly RealPresence DMA version 10.0.0.7 or later.

Firewall and NAT Support

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

● Ability to keep Real-time Transport Protocol (RTP) NAT mapping alive during live streaming.

● Support for guest user dialing.

● Ability to support Secure Real-time Transport Protocol (SRTP) and Transport Layer Security (TLS) for the secure transmission of media.

● Ability to support Binary Floor Control Protocol (BFCP) over both TCP and UDP links (UDP preferred). Control signaling can now be forwarded using the best-effort traffic class in firewall and NAT traversal.

● Support for the following dial strings when you place calls without registering to a server.

> ➢ H.323
>> ♦ name@FQDN
>> ♦ name@IP
>> ♦ extension@FQDN
>> ♦ extension@IP
>> ♦ IP##extension
> ➢ SIP
>> ♦ <name>@FQDN
>> ♦ <extension>@<ipAddress:port>

- Ability to verify server certificates by using installed root certificates (SIP, HTTPS, and LDAP) when establishing TLS connections.
- Ability to interoperate with Acme Session Border Controller (SBC) systems and Poly RealPresence Access Director.
- Support for SIP signaling FW/NAT traversal over TCP/TLS as defined in RFC5626.
- Ability to switch to a backup SIP server when the primary server fails.

Enterprise Scalable Video Coding (SVC) Mode

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

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

The SVC mode provides the following features:

- Video sends and receives up to 720p resolution.
- Frame rates of 7.5/15/30
- Support for AVC content

- Support for SVC auto layouts for video streams of up to nine far-end participants

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

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

- Supported layouts of 1x1 and 1+1 through 1+10

  The maximum layout of 1+10 comprises nine remote participants plus one content sharing frame, and one local preview frame

- Support for SAC with at least two quality layers, for example, 48 Kbps and 10 Kbps
- Support for mixing up to three different audio streams from the MCU
- Support for combining up to nine different SVC video streams (call rate at 1920 Kbps) from the MCUs

SVC conference calls currently do not support the following:

- Far-end Camera Control (FECC)
- Recording with RealPresence Capture Server
- H.323 calls

  > 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 Collaboration Server (RMX) system will clear the frozen stream in 30 minutes.

Access Media Statistics

To access media statistics, select **Statistics** 📊 on the in-call toolbar during a call.

Value	Description
Call Type	SIP or H.323 call type.
Call Encryption	Indicates whether your call is encrypted.
Far Site Name	Name of the far site.
Far Site System	Type of video conferencing system at the far end and the software version.
Call Speed	Negotiated speed (bandwidth) for the call, which is usually the combined video and audio speeds in the call.
Video Protocol	ITU-C video algorithm and annexes used in the current call. The video protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.
Video Format	Picture size currently in use.
Audio Protocol	Audio algorithm and annexes used in the current call. The audio protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.

Value	Description
Audio Rate	Bandwidth specified for the audio portion of the call. The proportion of the audio rate to the video rate depends on the protocol used.
Video Rate	Bandwidth specified for the video portion of the call. The proportion of the video rate to the audio rate depends on the protocol used.
Video Rate Used	Actual bandwidth being used for the video portion of the call. This is a real-time measurement, which normally fluctuates.
Video frame rate	Rate your system uses to update the picture seen at the far end. The system can send up to 15 frames per second. If the camera picks up large, continuous, or frequent motions, the software takes longer to assemble the data into video frames, and the frame rate drops. Changes in lighting also reduce the frame rate.
Video Packets Loss Percentage	Total video packet loss as a percentage of the total number of video packets transmitted by your system and those transmitted by the far end.
Video Jitter	Percentage of variation in the video transmission rate.
Audio Packet Lost	Number of audio data packets lost during the call, including transmitted packets and incoming packets. Packet loss indicates congestion or other problems on the network.
Audio Packets Loss Percentage	Total audio packet loss as a percentage of the total number of audio packets transmitted by your system and those transmitted by the far end.
Audio Jitter	Percentage of variation in the audio transmission rate.
Content Protocol	Format used for the recording, compression, and distribution of the content.
Content Format	Display resolution of the content.
Content Rate	Rate your system uses in content transmission.
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.

About AES Encryption

The following are requirements for using AES encryption in calls.

AES Encryption in H.323 Calls

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

- Enable AES encryption.

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

  When working in the standalone mode, the AES encryption of the RealPresence DesktopRealPresence Desktop application works as "When available" and isn't guaranteed.

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

AES Encryption in SIP Calls

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

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

> When working in the managed mode, the AES encryption of the RealPresence Desktop application is configurable through its provisioning server.
>
> When working in the standalone mode, the AES encryption of the RealPresence Desktop application works as "When available" and isn't guaranteed.

Preparing Your Device for Mutual Transport Layer Security

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

Generate and Import Your Certificate

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

.**To generate and import your certificate:**

1 Open the Terminal window from your Mac. (**Applications > Utilities > Terminal.app**)

2 Go to the **Documents** folder and generate the private key client.key. For example:
```
localhost$ cd documents
localhost$ openssl genrsa -out client.key 1024
```

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

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

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

```
----
Country Name (2 letter code) [GB]:cn ---CSR info.
State or Province Name (full name) [Berkshire]:bj ---CSR info.
Locality Name (eg, city) [Newbury]:bj ---CSR info.
Organization Name (eg, company) [My Company Ltd]:plcm ---CSR info.
Organizational Unit Name (eg, section) []:caqa ---CSR info.
Common Name (eg, your name or your server's hostname) []:caqa ---CSR info.
Email Address []:pp@pp.com ---CSR info.
```

Enter the following "extra" attributes to be sent with your certificate request. Write down the challenge password. You will need it later in the procedure.

```
A challenge password []:1234 -----see the note below.
An optional company name []:poly
```

4   Submit the certificate request to your CA:

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

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

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

   b   Go to your CA's web interface http://<*CA's IP address*>/certsrv/, and select **Request a certificate**.

   c   Choose **Advanced certificate request**.

   d   Select **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or Submit a renewal request by using a base-64-encoded PKCS #7 file**.

   e   Paste the content of the file client.csr in the **Saved Request** text field, and select **Submit**.

   f   Choose **Base 64 encoded** and then select **Download certificate**.

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

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

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

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

7   Encrypt the challenge password you set:

   a   Go to **Convert String.**

   b   Enter the challenge password in the text field, and select **Base64 Encode!**.

   c   Copy the encoded text from the following text field, and save it as a .pwd file. For example: client.pwd.

8   Open the **Documents/Polycom** RealPresence Desktop folder, and then copy the files client.p12 and client.pwd to the folder.

To import the root certificate of your CA:

1 Go to your CA's web address http://*<CA's IP address>*/certsrv/, select **Download a CA certificate, certificate chain, or CRL**.

2 Select **Base 64**, and select **Download CA Certificate.**

3 Double-click the CA file, and select **Always Trust**. If you see the Add Certificates message, select Add before you select **Always Trust**.
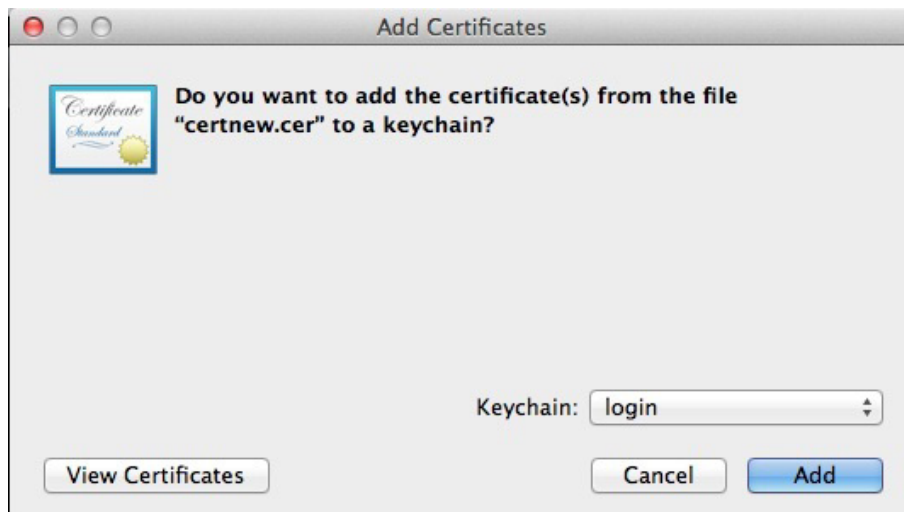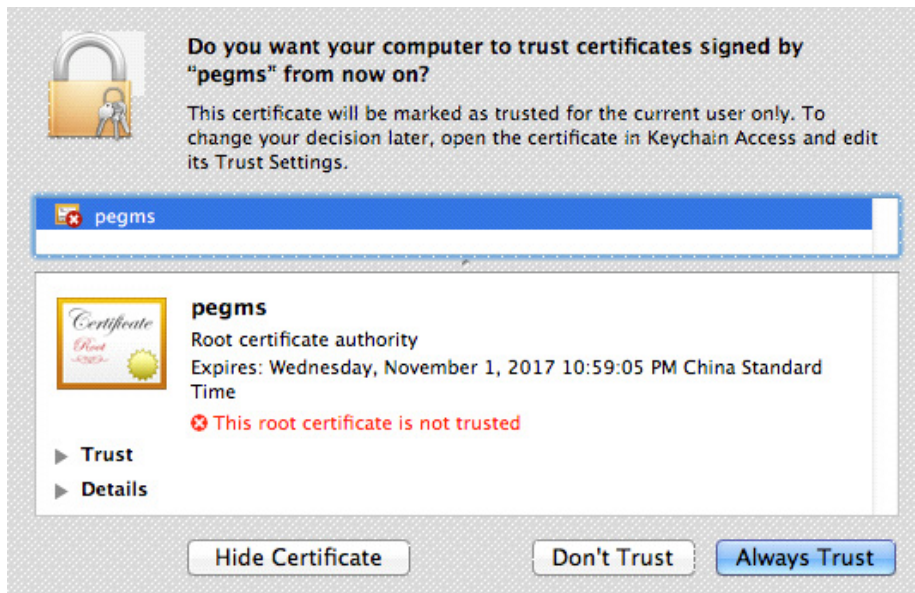
About Section 508 Accessibility Standards

For information about how RealPresence Desktop conforms to the Section 508 and Section 255 accessibility standards, see Voluntary Product Accessibility Template Reports.

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