

# Polycom® RealPresence® Web Suite

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## What's New in Release 2.1.5

Polycom® RealPresence® Web Suite 2.1.5 is a maintenance release that supports the collaboration with the Polycom® RealPresence® DMA® system 9.0 and solves the interoperability related issues.

## Release History

The following table lists the release history of RealPresence Web Suite.

## Release History

<i>Release</i>	<i>Release Date</i>	<i>Features</i>
2.1.5	September 2017	<ul style="list-style-type: none"> <li>• Collaboration with the Polycom RealPresence DMA system 9.0.</li> <li>• Defect fixes.</li> </ul>
2.1.4	May 2017	Defect fixes.
2.1.3	March 2017	<ul style="list-style-type: none"> <li>• Defect fixes.</li> <li>• Support upgrade from version 2.1.2 to version 2.1.3.</li> </ul>
2.1.2	October 2016	<ul style="list-style-type: none"> <li>• Infrastructure setup for in-place upgrade for future RealPresence Web Suite releases.</li> <li>• Improved serviceability of Standards Connector.</li> <li>• User experience enhancement in <b>Join Meeting</b> and <b>End Meeting</b>.</li> <li>• Admin option that requires guests to join in Audio-Video mode</li> <li>• Defect fixes.</li> </ul>
2.1.0	May 2016	<ul style="list-style-type: none"> <li>• Support for Polycom Concierge.</li> <li>• Security enhancements.</li> <li>• Customer defect fixes.</li> </ul>
2.0.2	February 2016	<ul style="list-style-type: none"> <li>• Maintenance release that fixes customer escalation issues.</li> <li>• Support for Polycom RealPresence Clariti.</li> </ul>
2.0.1	September 2015	Maintenance release that enables SVC meetings with Google Chrome.
2.0.0	August 2015	First release of software to support Enhanced Content Sharing and WebRTC implementation.

## Security Updates

The RealPresence Web Suite 2.1.5 release supports TLS 1.2 guidelines.

RealPresence Web Suite 2.1.5 provides the ability for the administrator to edit the IP address and DNS name fields in Certificate Signing Requests (CSRs) to facilitate compliance with recommendations from the Certificate Authority/Browser Forum. See <https://cabforum.org/wp-content/uploads/Guidance-Deprecated-Internal-Names.pdf> for more information. Refer to the [Polycom Security Center](#) for information about known and resolved security vulnerabilities.

## Hardware Requirements

The following hardware requirements were determined based on test scenarios.

### ***End-User System Requirements***

The end-user computer system used must meet the following minimum requirements.

### End-User System Requirements for RealPresence Web Suite

<i>Component</i>	<i>Description</i>
Processor	Intel Core i5, 2.5 GHz or AMD equivalent
RAM	4 GB
Video memory	256 MB
Hard drive space	200 MB
Camera	Integrated or external
Audio devices	Standard PC97 audio devices
Monitor	Recommended: 16:9 aspect ratio, 1920 x 1080 resolution Minimum: 1024 x 768 resolution

For information on supported tablet and smartphone devices when using RealPresence Web Suite with RealPresence Mobile, see the RealPresence Mobile support page on [Polycom Support](#).

## Server Requirements

The recommended server requirements for RealPresence Web Suite are based on the type of licensing you have deployed in your system.

## RealPresence Web Suite

RealPresence Web Suite requires two virtual machine (VM) instances, one for the RealPresence Web Suite Experience Portal and one for the RealPresence Web Suite Services Portal. Each instance must meet the requirements in the following tables.

### Server Components per VM Instance for RealPresence Web Suite Experience Portal

<i>Component</i>	<i>Deployment Settings</i>
CPU	5000 MHz allocation
Cores	2 virtual cores
Memory	8 GB
Storage	100 GB
Performance	1200 concurrent sessions

### Server Components per VM Instance for RealPresence Web Suite Services Portal

<i>Component</i>	<i>Deployment Settings</i>
CPU	20,000 MHz allocation

<i>Component</i>	<i>Deployment Settings</i>
Cores	8 virtual cores
Memory	8 GB
Storage	100 GB

## RealPresence Web Suite Pro

When Enhanced Content is in use, RealPresence Web Suite Pro requires three or more VM instances, one for the RealPresence Web Suite Experience Portal, one for the RealPresence Web Suite Services Portal, and one or more for the Standards Connector servers. Each instance must meet the requirements in the following tables.

### Server Components per VM Instance for RealPresence Web Suite Pro Experience Portal with Enhanced Content Enabled

<i>Component</i>	<i>Deployment Settings</i>
CPU	20,000 MHz allocation
Cores	8 virtual cores
Memory	16 GB
Storage	100 GB
Performance	1200 concurrent sessions

### Server Components per VM Instance for RealPresence Web Suite Pro Services Portal

<i>Component</i>	<i>Deployment Settings</i>
CPU	20,000 MHz allocation
Cores	8 virtual cores
Memory	8 GB
Storage	100 GB
Performance	1000 concurrent host logins

### Server Components per VM Instance for RealPresence Web Suite Pro Standards Connector

<i>Component</i>	<i>Deployment Settings</i>
CPU	10,000 MHz allocation
Cores	4 virtual cores
Memory	8 GB

<i>Component</i>	<i>Deployment Settings</i>
Storage	100 GB
Performance	10 connector sessions

## Software Requirements

The following software requirements were determined based on test scenarios.

### ***Operating System Requirements***

The following software requirements must be met to use the RealPresence Web Suite Services and Experience Portals in Polycom RealPresence Web Suite.

#### **Operating System Requirements**

<i>System Type</i>	<i>Description</i>
Microsoft® Windows® 32-bit and 64-bit systems	Windows 10 Windows 8.1 Windows 8 Windows 7
Mac®	Mac OS X® 10.9.5 or higher
iOS	iOS for use with iPad and iPhone. (iOS is a trademark or registered trademark of Apple Inc. in the U.S. and other countries and is used under license.) Check RealPresence Mobile on <a href="#">Polycom Support</a> documentation for information on compatibility with version 3.5 or later.
Other	Android™ Check RealPresence Mobile on <a href="#">Polycom Support</a> documentation for information on compatibility with version 3.5 or later.

### ***Client Software Components***

Installing the following software component onto end user computers enables full functionality of RealPresence Web Suite.

## Required Client-Side Software Components

<i>Component</i>	<i>Description</i>
RealPresence Web Suite client plug-in	Required for web browser-based SIP audio/video services; enabled using the RealPresence Web Suite Experience Portal. Download this plug-in by accessing the RealPresence Web Suite Experience Portal using a supported device and install by following the on-screen instructions.
RealPresence Extension	Required to enable audio, video, and content sharing in Google Chrome. Install this extension by accessing the RealPresence Web Suite Experience Portal using Google Chrome and follow the on-screen instructions, which direct the user to install the extension from the Google Chrome Web Store.

## Browser Requirements

The browser requirements for RealPresence Web Suite are listed in the following table. Polycom supports only production versions of web browsers; beta or development versions are not supported for use with RealPresence Web Suite products.

### Browser Requirements

<i>Browser</i>	<i>Description</i>
Microsoft Internet Explorer®	Version 11 (only) for Windows
Mozilla Firefox®	For Windows and Macintosh
Google Chrome™	For Windows and Macintosh
Apple® Safari®	For Macintosh

## Mozilla Firefox Browser Limitations

In March 2017, Mozilla is expected to release Firefox version 52, which will disable the Netscape Plug-in Application Interface (NPAPI) in the browser entirely. At that time, the plug-in-based audio-video capabilities of this version of RealPresence Web Suite will cease to function with Firefox. RealPresence Web Suite users who open a conference session with Firefox version 52 (and higher) will receive a warning message indicating that the version is unsupported and recommended workarounds. Polycom recommends RealPresence Web Suite end-users to switch to non-Firefox browsers, and enterprise admins who require RealPresence Web Suite support for Firefox can consider deploying the [Extended Support Release \(ESR\)](#) to their end-users. A future update of RealPresence Web Suite is expected to address the Firefox compatibility issue.

In December 2015, Mozilla introduced a 64-bit edition of Firefox for Windows. This 64-bit variant is not supported in RealPresence Web Suite 2.1.5.

After installing the RealPresence Web Suite Plug-in, click **Allow and Remember** when prompted to allow RealPresence Web Suite to run the plug-in available in Firefox.

Due to issues with Firefox support for WebRTC and lack of feature parity, RealPresence Web Suite Pro is configured by default to require Firefox browsers to use the meeting plug-in, but this can be changed.

Because of the limitations in Firefox, however, we recommend selecting the **Enable the WebRTC support in Firefox** option only for testing or evaluation purposes. For more information, see the *Polycom RealPresence Web Suite Administrator Guide* on [Polycom Support](#).



Mozilla Firefox version 49 for Windows has an issue that does not allow any plug-in or .exe files to be downloaded. As a workaround, users can use other supported browsers to download or upgrade the RealPresence Web Suite plug-in and then use Firefox to join the conference.

## Microsoft Browser Limitations

Microsoft no longer supports Internet Explorer versions lower than Internet Explorer 11. As of version 2.1.5, RealPresence Web Suite supports only Internet Explorer 11.

The Microsoft Edge browser included with Windows 10 is not supported in RealPresence Web Suite 2.1.5. Internet Explorer 11 remains available on Windows 10 and is fully supported by RealPresence Web Suite.

## Other System Requirements

The requirements needed to enable the RealPresence Web Suite Services and Experience Portals in Polycom RealPresence Web Suite are listed in the following table.

### Other System Requirements

<i>Requirement</i>	<i>Description</i>
Polycom® RealPresence® Platform	Polycom RealPresence Web Suite requires RealPresence Platform components such as Polycom® RealPresence® Collaboration Server (RMX or Virtual Edition), Polycom® RealPresence® DMA®, and Polycom® RealPresence® Access Director™ to function. RealPresence Collaboration Server, Virtual Edition is required for RealPresence Web Suite Pro deployments for WebRTC mesh-to-bridge call escalations.
<b>VMware Deployments</b>	
.OVA Files	Latest RealPresence Web Suite Experience Portal .OVA file downloaded to your local machine from <a href="#">Polycom Support</a> . Latest RealPresence Web Suite Services Portal .OVA file downloaded to your local machine from <a href="#">Polycom Support</a> .
VMware	Version 6.0.
One or more ESXi hosts	Required for VMware deployment. Version 5.0 or higher, supporting 64-bit installations. Using a vSphere client, you must be able to access and administer your VMware ESXi hosts either directly or from a vCenter controlling the hosts.
VMware vSphere vCenter controller	Optional (Version 5.1 and Version 5.5).
<b>Hyper-V Deployments</b>	

<i>Requirement</i>	<i>Description</i>
.VHD Files	<p>Latest RealPresence Web Suite Experience Portal .VHD file downloaded to your local machine from <a href="#">Polycom Support</a>.</p> <p>Latest RealPresence Web Suite Services Portal .VHD file downloaded to your local machine from <a href="#">Polycom Support</a>.</p>
Microsoft Hyper-Visor Server	<p>Required for Hyper-V deployment.</p> <p>Microsoft 2012 R2 Standard Edition with Hyper-V Role enabled.</p>
Dynamic Host Configuration Protocol (DHCP)	Allows the portals to obtain their IP addresses.
LDAP Server	<p>Optional. Enables authentication for enterprise users with their network credentials. The RealPresence Web Suite Services Portal currently supports integration with only Microsoft Active Directory.</p> <p>This feature also enables administrators to import users from an enterprise LDAP server. The administrator can edit user roles or set user status as inactive for imported users.</p> <p>For information on user roles and on changing imported user accounts, see the <i>Polycom RealPresence Web Suite Administrator Guide</i>.</p>
SMTP Server	Enables the RealPresence Web Suite Services Portal to deliver email meeting invites and other notifications such as user onboarding.
Edge Proxy	<p>If providing access to external guests through a firewall, a functioning firewall/NAT traversal element such as RealPresence Access Director, Virtual Edition or Acme Packet SBC is required, as outlined in the <i>Polycom RealPresence Web Suite Administrator Guide</i>. This element requires provisioning to allow SIP guest access and optional H.323 access to your RealPresence DMA and MCUs.</p> <p>RealPresence Access Director 3.1 or higher is required to enable HTTPS tunneling functionality.</p>
HTTP Reverse Proxy	<p>If providing access to external guests through a firewall, an HTTP reverse proxy or a NAT server is required. This element must be provisioned to allow HTTPS and optional web socket access to the RealPresence Web Suite Experience Portal and HTTPS access to the RealPresence Web Suite Services Portal.</p> <p>RealPresence Access Director 3.0 or later can also be used as an HTTP Reverse Proxy for the RealPresence Web Suite Experience Portal.</p>
End User License Agreement (EULA)	Access the Polycom® Software End User License Agreement on <a href="#">Polycom Support</a> .

## Installation and Upgrade Notes

For the best experience, Polycom recommends that you install the RealPresence Platform component versions listed in the following table for RealPresence Web Suite and RealPresence Web Suite Pro.





RealPresence Web Suite Pro with WebRTC requires that the listed RealPresence Platform component versions be installed.

**RealPresence Platform Component Minimum Versions for RealPresence Web Suite and RealPresence Web Suite Pro**

<i>Product</i>	<i>RealPresence Web Suite</i>	<i>RealPresence Web Suite Pro (Enhanced Content)</i>	<i>RealPresence Web Suite Pro (WebRTC)</i>
RealPresence DMA	6.3	6.3	6.3
	6.4	6.4	6.4
RealPresence Collaboration Server	8.6.4	8.6.4	8.6.4 <sup>1</sup>
	8.7.3 (appliance or virtual edition)	8.7.3 (appliance or virtual edition)	8.7.3 <sup>2</sup> (virtual edition only)
RealPresence Access Director	4.2.4	4.2.4	4.2.4
	4.2.5	4.2.5	4.2.5

<sup>1</sup> RealPresence Collaboration Server version 8.6.4.97 or higher is required for support of Chrome version 52 and higher as a WebRTC client.

<sup>2</sup> Due to RealPresence Collaboration Server, Virtual Edition issue BRIDGE-26908, WebRTC endpoints with Chrome 58 and 59 versions get frozen video and disconnect after Mesh to Bridge escalation.



Polycom recommends that you upgrade all of your Polycom systems with the latest software versions before contacting Polycom support, as compatibility issues may have been addressed by software updates. Refer to the Current Polycom Interoperability Matrix on the [Polycom Service Policies](#) site for more information.

## Upgrade and Migrate Paths

The following table lists the upgrade and migrate paths of RealPresence Web Suite 2.1.5.

Note: Polycom recommends that you use Chrome to upgrade or migrate your system to version 2.1.5 due to issue CAXIS-13847.

**RealPresence Web Suite Upgrade and Migrate Paths**

<i>From Release</i>	<i>To Release</i>
<b>Tested Upgrade Paths</b>	
RealPresence Web Suite 2.1.4	RealPresence Web Suite 2.1.5
RealPresence Web Suite 2.1.3	RealPresence Web Suite 2.1.5
RealPresence Web Suite 2.1.2	RealPresence Web Suite 2.1.5
<b>Tested Migration Paths</b>	

<i>From Release</i>	<i>To Release</i>
RealPresence Web Suite 2.1.4	RealPresence Web Suite 2.1.5
RealPresence Web Suite 2.1.3	RealPresence Web Suite 2.1.5
RealPresence Web Suite 2.1.2	RealPresence Web Suite 2.1.5
RealPresence Web Suite 2.1.0	RealPresence Web Suite 2.1.5

## ***Upgrade from Version 2.1.4 to Version 2.1.5***

You need to upgrade Web Suite Services Portal first, then upgrade RealPresence Web Suite Experience Portal using the following procedures:

1. Download the upgrade package (.upg) from [Polycom Support](#).
2. Validate the upgrade package (for example using MD5 checksum).
3. Log into Web Suite Services Portal as Super Admin or RealPresence Web Suite Experience Portal as Admin.
4. Click **Platform Settings > Upgrade**.
5. Click **Choose File**, and select the upgrade package.
6. Validate the product version:
  - a. If you uploaded the wrong version or file, click **Choose File** to overwrite the previously uploaded upgrade package.
  - b. If you uploaded the correct version, click **Continue to Upgrade**.
7. Click **Upgrade** to initiate the upgrade process.  
The system reboots automatically once the upgrade is completed.
8. Login again as the same user.
9. Click **Platform Settings > Upgrade History** to view the upgrade history, and **Download** the upgrade logs for troubleshooting.
10. Go to **Product Info** to validate the product version.

## ***RealPresence Clariti Support***

RealPresence Web Suite is available as part of RealPresence Clariti, a Polycom collaboration infrastructure offer that features simplified concurrent user licensing and add-on options. RealPresence Clariti customers must consult with their Polycom representative to ensure they have the correct licensing information before upgrading.

If you are a RealPresence Clariti customer, you must use the RealPresence Resource Manager 10.0 or a higher version to license your product. If the RealPresence Resource Manager is not available, you can use RealPresence Platform Director 3.0 system alternatively to license your product.

## Products Tested with this Release

RealPresence Web Suite systems are tested extensively with a wide range of products. While the following list is not a complete inventory of compatible equipment, it lists the products that have been specifically tested for compatibility with this release.



Polycom recommends that you upgrade all of your Polycom systems with the latest software versions before contacting Polycom support, as compatibility issues may have been addressed by software updates. Refer to the Current Polycom Interoperability Matrix on the [Polycom Service Policies](#) site for more information.

For information on required and recommended RealPresence Platform components for RealPresence Web Suite and RealPresence Web Suite Pro, see [Installation and Upgrade Notes](#).

### Browsers Versions Tested

<i>Browser</i>	<i>Description</i>
Microsoft Internet Explorer®	Version 11.0 for Windows
Google Chrome™	Up to version 58 for Windows and Macintosh <sup>1</sup>
Apple® Safari®	Version 10.0.3 for Macintosh

<sup>1</sup> Collaboration Server version 8.6.4.97 or higher is required to support Chrome version 52 and higher as a WebRTC client.

### RealPresence Platform Product Versions Tested with Polycom Concierge

<i>Product</i>	<i>RealPresence Mobile</i>	<i>RealPresence Desktop</i>	<i>RealPresence Group Series</i>	<i>RealPresence Resource Manager</i>
Polycom® Concierge	3.6.0	3.6.0	6.0	10.0
	3.5.1	3.5.1	5.1	9.0.1

### RealPresence Platform Product Versions Tested

<i>Product</i>	<i>RealPresence Web Suite</i>	<i>RealPresence Web Suite Pro with Enhanced Content</i>	<i>RealPresence Web Suite Pro with WebRTC</i>
Polycom® RealPresence® Access Director™	4.2.5	4.2.5	4.2.5
	4.2.4	4.2.4	4.2.4
Polycom® RealPresence® Collaboration Server (RMX®) 1500/2000/4000	8.6	8.6	N/A
	8.5	8.5	
Polycom® RealPresence® Collaboration Server, Virtual Edition	8.7.3	8.7.3	8.7.3
	8.6.4	8.6.4	8.6.4

<i>Product</i>	<i>RealPresence Web Suite</i>	<i>RealPresence Web Suite Pro with Enhanced Content</i>	<i>RealPresence Web Suite Pro with WebRTC</i>
Polycom® RealPresence® DMA®	6.4.1 6.3.1 9.0	6.4.1 6.3.1 9.0	6.4.1 6.3.1 9.0
Polycom® RealPresence® Media Suite	2.8 2.7	2.8 2.7	2.8 2.7
Polycom® RealPresence® Resource Manager	10.1 10.0	10.1 10.0	10.1 10.0

#### Other Product Versions Tested

<i>Product</i>	<i>Tested Versions</i>
Polycom® RealPresence® Group Series systems	6.1.1 6.0.1
Polycom® HDX® group video systems	3.1.4 or higher
Polycom® RealPresence® Desktop	3.7 3.6
Polycom® RealPresence® Mobile	3.7 3.6
Skype for Business Server 2015 (volume license key installed)*	6.0.9319.102
Exchange 2010	14.03
Exchange 2013	8.3.389.2

## System Constraints and Limitations

The following sections provide information on capabilities supported for RealPresence Web Suite in this release and any restrictions and constraints.

### ***Supported Bandwidths and Video Formats***

The RealPresence Web Suite plug-in-based video conferencing client supports the bandwidth, video format, and resolution as outlined in the following tables. Individual system performance and camera capabilities may limit available video formats and resolutions.



The RealPresence DMA in your Polycom environment sets and regulates bandwidth available for meeting attendees using the RealPresence Web Suite Services and Experience Portals.

## Receive Capabilities

The following tables outline the formats supported for received video at different call rates.

### H.264 High-Profile Receive Capability

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
1280 x 720	512	640 x 360	384
1024 x 768 XGA	512	432 x 240	192
1024 x 576	512	424 x 240	96
960 x 720	512	352 x 288 CIF	96
800 x 600 SVGA	448	352 x 240 SIF	96
864 x 480	256	320 x 240 QVGA	96
640 x 480 VGA	192	320 x 180	96
704 x 576 CIF4	192	176 x 144 QCIF	96
704 x 480 SIF4	192	128 x 96 SQCIF	96

### H.264 Receive Capability

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
1280 x 720	832	704 x 480 SIF4	256
1024 x 768	832	432 x 240	256
1024 x 576	832	352 x 288 CIF	96
960 x 720	832	352 x 240 SIF	96
800 x 600	768	320 x 240 QVGA	96
864 x 480	384	176 x 144 QCIF	96
640 x 480 VGA	256	128 x 96 SQCIF	96
704 x 576 CIF4	256		

**H.263 Receive Capability**

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
1024 x 768	1024	352 x 288 CIF	96
800 x 600	1024	352 x 240 SIF	96
640 x 480 VGA	512	176 x 144 QCIF	96
704 x 576 CIF4	1024	128 x 96 SQCIF	96
704 x 480 SIF4	1024		

**SVC Multipoint Receive Capability**

<i>Bit Rate (Kbps)</i>	<i>Downlink</i>	<i>Bit Rate (Kbps)</i>	<i>Downlink</i>
<b>Number of Remote Participants: Up to 9</b>			
1920	360p30 x 1 + 180p30 x 6 + 180p15 x 2	512	360p7.5 x 1 + 180p7.5 x 3
1024	360p15 x 1 + 180p7.5 x 8	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p7.5 x 5	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 8</b>			
1920	360p30 x 1 + 180p30 x 7	512	360p7.5 x 1 + 180p7.5 x 3
1024	360p15 x 1 + 180p15 x 2 + 180p7.5 x 5	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p7.5 x 5	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 7</b>			
1920	360p30 x 1 + 180p30 x 6	512	360p7.5 x 1 + 180p7.5 x 3
1024	360p15 x 1 + 180p15 x 4 + 180p7.5 x 2	384	360p7.5 x 1 + 180p7.5 x 2
768	360p15 x 1 + 180p7.5 x 5	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 6</b>			
1920	360p30 x 1 + 180p30 x 5	512	360p7.5 x 1 + 180p7.5 x 3
1024	360p15 x 1 + 180p15 x 5	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p7.5 x 5	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 5</b>			
1920	360p30 x 1 + 180p30 x 4	512	360p7.5 x 1 + 180p7.5 x 3

<i>Bit Rate (Kbps)</i>	<i>Downlink</i>	<i>Bit Rate (Kbps)</i>	<i>Downlink</i>
1024	360p30 x 1 + 180p15 x 4	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p15 x 2 + 180p7.5 x 2	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 4</b>			
1920	360p30 x 1 + 180p30 x 3	512	360p7.5 x 1 + 180p7.5 x 3
1024	360p30 x1 + 180p30 x 2 + 180p15 x 1	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p15 x 3	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 3</b>			
1920	360p30 x 1 + 180p30 x 2	512	360p15 x 1 + 180p7.5 x 2
1024	360p30 x 1 + 180p30 x 2	384	360p7.5 x 1 + 180p7.5 x 1
768	360p15 x 1 + 180p15 x 2	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 2</b>			
1920	360p30 x 1 + 180p30 x 1	512	360p15 x 1 + 180p15 x 1
1024	360p30 x 1 + 180p30 x 1	384	360p7.5 x 1 + 180p7.5 x 1
768	360p30 x 1 + 180p30 x 1	256	360p7.5 x 1
<b>Number of Remote Participants: Up to 1</b>			
1920	720p30 x 1	512	360p30 x 1
1024	720p30 x 1	384	360p15 x 1
768	360p30 x 1	256	360p7.5 x 1

## Transmit Capabilities

The following tables outline the formats supported for transmitted video at different call rates.

### H.264 High-Profile Transmit Capability

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
1280x720	832	320 x 240 QVGA	96
640x480 VGA	384	176 x 144 QCIF	96
352x288 CIF	96	128 x 96 SQCIF	96

**H.264 Transmit Capability**

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
1280x720	960	320 x 240 QVGA	96
640x480 VGA	384	176 x 144 QCIF	96
352x288 CIF	96	128 x 96 SQCIF	96
352X240 SIF	96		

**H.263 Transmit Capability**

<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>	<i>Resolution</i>	<i>Required Call Rate (Kbps)</i>
704X576 CIF4	960	352 x 240 SIF	128
704X480 SIF4	960	176 x 144 QCIF	96
640x480 VGA	448	128 x 96 SQCIF	96
352x288 CIF	128		

**SVC Multipoint Transmit Capability<sup>1</sup>**

<i>Call Rate (Kbps)</i>	<i>Uplink</i>	<i>Call Rate (Kbps)</i>	<i>Uplink</i>
1920	180p30 + 360p30 + 720p30	384	180p15 + 270p15
1024	180p30 + 360p15 + 720p15	256	180p30
768	180p30 + 360p30	128	180p7.5
512	180p30 + 360p15		

<sup>1</sup> RealPresence Web Suite will not send 720p if the RealPresence DMA conference template is provisioned with a line rate of 2048 or greater.

## **Firewall Restrictions**

Polycom recommends system administrators configure RealPresence Web Suite to operate inside the enterprise firewall, protected by a web reverse proxy, such as the one included with RealPresence Access Director. Implementing a Demilitarized Zone (DMZ) with the RealPresence Web Suite components between the inner and outer firewall requires additional rules to be added to the internal firewall of the DMZ to enable the RealPresence Web Suite components to communicate with enterprise services, including the RealPresence DMA system, Active Directory, and Exchange. This configuration is not tested as part of the standard solution deployment and therefore is not supported by Polycom.

## **System Constraints**

The following sections describe the start and restart order for RealPresence Web Suite.



## Starting RealPresence Web Suite

When starting RealPresence Web Suite, make sure to start the RealPresence DMA system and RealPresence Web Suite Services Portal before starting the RealPresence Web Suite Experience Portal. If you do not start RealPresence Web Suite in this order, the API that handles feature functionality on the Experience Portal is impacted.

## Restarting RealPresence Web Suite

When restarting the RealPresence DMA system or RealPresence Web Suite Services Portal, make sure to also restart the RealPresence Web Suite Experience Portal afterwards. If you restart the RealPresence DMA system or Services Portal without restarting the Experience Portal afterwards, the API that handles feature functionality on the Portal is impacted.

## Resolved Issues

The following table lists the resolved issues for RealPresence Web Suite and other software in this release.

### Resolved RealPresence Web Suite Services Portal and Experience Portal Issues

<i>Category</i>	<i>Issue No.</i>	<i>Description</i>
Interoperability	CAXIS-13870	When using the RealPresence DMA 9.0 system VMR ID, RealPresence Web Suite plugin users fail to join a scheduled or Ad Hoc meeting.
Interoperability	CAXIS-13990	After a RealPresence Web Suite participant exits and rejoins a meeting, all the attendees see duplicated participants on the roster panel.

## Known Issues

This section lists known issues for RealPresence Web Suite and other software issues and workarounds (if available) for this and earlier releases.

### Known RealPresence Web Suite Services Portal and Experience Portal Issues

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Audio	CAXIS-10670	2.0.0	Occasionally when users with multiple speaker options test the options before selecting a speaker, the test will not sound in the selected speaker.	No workaround in this release.

Category	Issue No.	Release	Description	Workaround
Browser	CAXIS-13773	2.1.2	For Chrome version 54 and higher, when the user stops screen share using the <b>Stop Sharing</b> Chrome button, the screen at the receiver side displays as black, while the sender side appears to be still sharing the screen.	Use the <b>Stop</b> button from RealPresence Web Suite client user interface or Content Queue panel to stop screen share instead of the <b>Stop Sharing</b> Chrome button
Certificates	CAXIS-9280	1.7.0	The SAN field cannot be entered as part of the certificate signing requests initiated from the RealPresence Web Suite Experience Portal.	No workaround in this release.
Deployment	CAXIS-13636	2.1.1	If the deployment has self-signed certificate, the upload document might fail intermittently.	Open the content specific URL <code>&lt;MEA_URL&gt;/ecs</code> in a separate tab and accept the certificate.  Any document uploaded after accepting the certificate is uploaded.
Functionality	CAXIS-10046	2.0.0	For meetings that require a chairperson (the RealPresence DMA setting "Conference requires Chairperson" is enabled), attendees can still participate in roster, chat, and enhanced content sharing even before a chairperson has joined the call.	No workaround in this release.
Functionality	CAXIS-10287	2.0.0	Participants with the Promote option selected can only exercise promote/demote functions on the roster only if full roster control is enabled for participants in the RealPresence Web Suite admin console.	No workaround in this release.
Functionality	CAXIS-12837	2.1.0	When a Mac system is attached to multiple monitors configured for extended desktop and the user tries to share the PowerPoint application in slideshow presentation mode, the content is not visible on the far end.	Do one of the following: <ul style="list-style-type: none"> <li>While sharing content, configure the displays for mirroring rather than extended desktop mode.</li> <li>In the Web Suite Client <b>Screen Share</b> menu, select to share the display rather than the application window.</li> <li>Upgrade to PowerPoint 2016, which does not have this issue.</li> </ul>

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Functionality	CAXIS-13756	2.1.0	Each RealPresence Web Suite Services Portal deployed on Hyper-V has the same GUID and therefore the WSP deployed on Hyper-V after the first one cannot be licensed with direct licensing model.	No workaround in this release.
Interoperability	CAXIS-11077	2.0.0	When a user connects to a meeting using RealPresence Web Suite and another Polycom standard endpoint (RealPresence Mobile, RealPresence Desktop, RealPresence Group Series or Polycom HDX) using the same AD credentials, the RealPresence Web Suite Experience Portal disconnects when the user hangs up the other endpoint.	All Endpoints to have different dial strings.
Interoperability	CAXIS-13659	2.1.2	Unable to receive licenseServer, dmaConnects, meaConnection, and ldapConnection SNMP trap from RealPresence Web Suite	No workaround in this release.
Software Update	CAXIS-13857	2.1.2 2.1.3	After RealPresence Web Suite is upgraded from version 2.1.2 or 2.1.3 to version 2.1.4, NTP and Time Zone revert to default settings.	Reconfigure the NTP server IP address and Time Zone manually.
Software Update	CAXIS-13847	2.1.2 2.1.3	When a user upgrades the RealPresence Web Services Portal using Firefox, the upgrade succeeds but the web page is still stuck in the backing up existing data state.	Do one of the following: <ul style="list-style-type: none"> <li>• Use Chrome to upgrade.</li> <li>• Wait for a while, then close and reopen Firefox.</li> </ul>
Software Update	CAXIS-13850	2.1.2 2.1.3	At times, when a user reboots the virtual machine to finish the upgrade of the RealPresence Web Suite Services Portal or RealPresence Experience Portal, RealPresence Web Suite service fails to restart and the system reports “Unable to collect IPv4 routing table”.	Reboot the virtual machine.
User Experience	CAXIS-8858	2.0.0	When drawing a large shape on the whiteboard that overlaps or encloses a number of other small shapes, if the larger shape is selected and it appears that the smaller shapes are also selected when they are not.	No workaround in this release.

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
User Experience	CAXIS-8997	2.0.0	Application sharing does not list Windows 8 default applications to preview PDF and PowerPoint files.	Use the screen sharing feature to bring the needed application to the foreground.
User Experience	CAXIS-9292	2.0.0	If sharing multiple documents in a meeting and the first document is larger in size than the stage area due to monitor resolution, the document will not display on the stage.	Increase your monitor resolution or delete the document and put it further in the document queue.
User Experience	CAXIS-10681	2.0.0	If a user joins a meeting with a low bandwidth or slow connection and there is a screen share in progress displaying rapidly changing content (such as a video), the user may experience delay in content replay and meeting functions such as chat and roster control.	No workaround in this release.
User Experience	CAXIS-10746	2.0.0	When operating as an AVC video client, a RealPresence Web Suite user may receive far-end content both as enhanced content (displayed separately from people video, with additional controls) and as legacy content (displayed as people video along with other people video, potentially at a reduced resolution).	<p>Do one of the following:</p> <ul style="list-style-type: none"> <li>• Enable SVC in the applicable conference template settings to allow RealPresence Web Suite clients to use SVC video rather than AVC.</li> <li>• Disable <b>Send content to legacy endpoints</b> under <b>Content Video Settings</b> in the RealPresence DMA conference template. This workaround may impact the ability of legitimate legacy endpoints from being able to view content.</li> </ul> <p><b>Limitation:</b> If <b>Multiple Content Resolutions</b> is also enabled, this workaround has no effect and will not eliminate the redundant content.</p>
User Experience	CAXIS-10770	2.0.0	When user connects a USB headset while in a meeting, the user must refresh the page or refresh the browser to use it in the meeting.	No workaround in this release.
User Experience	CAXIS-11969	2.1.0	When using the RealPresence Mobile pairing application for the first time with Polycom Concierge, it may take several seconds for the application to complete the sign-in process and be ready to detect and pair with room systems.	No workaround in this release.

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
User Interface	CAXIS-9787	2.0.0	It is possible in the RealPresence Web Suite Experience Portal admin console to enable enhanced content even if the required RealPresence Web Suite Pro license has not been implemented.	No workaround in this release.
User Interface	CAXIS-13352	2.1.0	When migrating from software version 2.0.0 to 2.1.0, the Help links on the RealPresence Web Suite Services Portal user UI also get migrated from the old machine to the new deployment. The Help link points to the 2.0.0 <i>User Guide</i> instead of the 2.1.0 version.	To reset the Help links to display the 2.1.0 <i>User Guide</i> : <ol style="list-style-type: none"> <li>1. Log in to the RealPresence Web Suite Services Portal using admin credentials</li> <li>2. Go to <b>Settings &gt; Custom UI &gt; Footer / URL's.</b></li> <li>3. Click <b>Restore Default.</b></li> </ol>
Video	CAXIS-13321	2.1.0	In certain cases during an SVC call, the video may look elongated or stretched. This can happen due to the changes in network dynamics which cause the video resolution and the aspect ratio to change.	No workaround in this release.

## Limitations

This section lists the limitations for RealPresence Web Suite and other software limitations and workarounds (if available) in this and earlier releases.

### RealPresence Web Suite Services Portal and Experience Portal Limitations

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Browser	CAXIS-9755	2.0.0	The specific browser instance that is running RealPresence Web Suite cannot be shared as an app during screen share on Chrome.	Share the complete screen instead of the application.
Browser	CAXIS-10418	2.0.0	If hardware acceleration is not enabled in Chrome, you may not receive the main video in a meeting and your self-view will not display.	Configure Chrome to "Use H/W Acceleration when available" within the Chrome browser settings and restart the browser.
Browser	CAXIS-10503	2.0.0	If a user starts or joins a call in Chrome incognito mode, the Polycom Chrome extension cannot be added from the Chrome web store.	Relaunch your meeting in a window that does not have incognito mode enabled.  You can also enable the app by using developer mode to work in incognito mode.

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Browser	CAXIS-12838	2.0.0	When using Enhanced Content screen sharing in Chrome to display a presentation in PowerPoint Slide Show mode, far-end participants still see the PowerPoint application window with editing tools instead of the full-screen slide view, and the slides won't advance.	Do one of the following: <ul style="list-style-type: none"> <li>• Enter Slide Show mode in PowerPoint first and then start sharing the PowerPoint application window in Chrome.</li> <li>• Select the screen share option to share the entire screen rather than the PowerPoint application window.</li> <li>• Use a browser other than Chrome.</li> </ul>
Browser	CAXIS-11029	2.0.0, 2.0.1	RealPresence plug-in installation in macOS does not get initiated, and the uninstallation also fails. If the installation process is force quitted, the Terminal effort "AppleEvent timed out." prompts.	Do one of following: <ul style="list-style-type: none"> <li>• Loggoff and restart the machine</li> <li>• Kill plugin process manually</li> </ul> <p>Note: You are not recommended to use MacKeeper or other system cleaner.</p>
Browser	CAXIS-13712	2.1.2	When joining a meeting on Mozilla Firefox using RealPresence Web Suite, sometimes the plug-in keeps getting upgraded even though it is already upgraded to latest version.	Restart the Mozilla Firefox browser.
Certificates	CAXIS-9280	1.7.0 2.0.0	The SAN field cannot be entered as part of the certificate signing requests initiated from the RealPresence Web Suite Experience Portal.	No workaround in this release.
Connectivity	CAXIS-8348	1.7.0	If a conference is configured to require encryption and a participant can't establish encryption, the call disconnects without providing this information to the user.	No workaround in this release.
Functionality	CAXIS-7885	1.6.1	The direct access probe feature is not available when running the RealPresence Web Suite client on Mac systems. On a Mac system, the RealPresence Web Suite client always attempts to use a forwarding web proxy, if one is configured on the local system and/or browser.	No workaround in this release.

<i>Category</i>	<i>Issue No.</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Functionality	CAXIS-13228	2.1.0	In deployments where users upload PowerPoint and Word document files, the RealPresence Web Suite Experience Portal instance may reach a state where the memory utilized by the conversion library exceeds the specified limits. If this occurs, file uploads might fail intermittently.	Polycom recommends to restart the MEA services once every two weeks for these types of deployments.
Interoperability	CAXIS-8815	1.7.0	If you create a Continuous Presence-only conference call on Polycom RealPresence Collaboration Server (RMX) 4000, 2000, and 800s, version 8.1, with default content settings ( <b>Content Settings: HiResGraphics</b> and <b>Content Protocol: H.264 HD</b> ), RealPresence Web Suite cannot send or receive content if the call rate is set to 384 Kbps or below.	Set the call rate on RealPresence Web Suite to above 384 Kbps. Or, change the RealPresence Collaboration Server (RMX) <b>Content Settings</b> to <b>Graphics</b> and the <b>Content Protocol</b> to <b>H.263</b> and <b>H.264 Auto Selection</b> .
Software Update	CAXIS-13149	2.1.0	At times, the default NTP server address provisioned in the RealPresence Web Suite Services and Experience Portals does not reach the actual NTP server and causes the time sync between the MEA/WSP portals and RealPresence DMA to fail. As a result, the call attempt from the RealPresence Web Suite client fails, and the user sees a "The conference does not exist" error.	Verify that you can reach the NTP server from the RealPresence Web Suite Services and Experience Portals and RealPresence DMA. Once the reachability to the NTP server is established, update the MEA/WSP portals and RealPresence DMA with the NTP details.
User Experience	CAXIS-1529	1.3.2	The Host, the initiator of the meeting, can be dropped by a Presenter.	If a presenter switches his or her role to participant, another presenter must switch the role back to presenter before the user can rejoin the meeting.
User Experience	CAXIS-6802	1.5.0	Quality of RealPresence Web Suite Experience Portal meeting session is degraded when performing network-intensive tasks (for example, large file downloads) during a meeting.	While participating in RealPresence Web Suite Experience Portal meetings, avoid performing tasks that require a lot of network bandwidth.

## Other Limitations

Category	Description	Workaround
Functionality	Application share has been disabled in Google Chrome due to problems with sharing open applications.	Use another browser to share enhanced content.
Functionality	When trying to install the plug-in on a Mac, occasionally the system will time out and the plug-in does not install. This is a known issue with Mac systems.	You can do one of the following to install the plug-in: <ul style="list-style-type: none"> <li>• If the plug-in installer hangs and does not respond, stop the installer process and reinstall the plug-in.</li> <li>• Reboot the Mac system. This will indirectly stop the install process and bring the system back to a good install state.</li> <li>• Use a system cleaner to clean up the Mac system and reattempt the install.</li> </ul>
Video	Under some circumstances, the video bridge may truncate the top and bottom rows of windows in a displayed multipoint video conference. This can occur when the video bridge is required to send a 4:3 conference mix in a 16:9 video stream.	For more information on the behavior and configuration of the video bridge, go to the <a href="#">Collaboration and Conferencing Platforms Support</a> page on <a href="#">Polycom Support</a> .
Video	In Google Chrome for Windows, if WebGL is supported but the canvas value in chrome://gpu is <b>software only</b> , then the user will not see video.	No workaround in this release. Restarting your browser may resolve this issue.
Video	In some environments, video may be delayed or frozen on calls made from outside the enterprise network through an HTTPS tunnel.	Try the call again with a higher bandwidth connection.
Video Resolution	RealPresence Web Suite does not support the Motion setting (60fps) on RealPresence Collaboration Server (RMX). Users will see video delays if this setting is enabled.	Do not enable the Motion setting (60fps) on RealPresence Collaboration Server (RMX).
User Experience	During WebRTC conferences connecting with Chrome, some first-time participants see a blank screen instead of their video feed after clicking "Allow" to access the camera and mic. This is a known issue with the Chrome browser.	Do one of the following: <ul style="list-style-type: none"> <li>• Choose another camera from the drop down menu if one is available.</li> <li>• Restart the Chrome browser.</li> </ul>

## Get Help

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