

Polycom® RealPresence® Distributed Media Application™ (DMA®)

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What's New in the Version 10.0 Release

Version 10.0 of the Polycom® RealPresence® Distributed Media Application (DMA®) system offers the following new features and enhancements to previous functionality:

- [Core and Edge Configuration Options](#)
- [RealPresence DMA System Supported Features](#)
- [Clariti License Enforcement in the Polycom RealPresence Collaboration Server](#)
- [Other Changes](#)



Important: The RealPresence DMA system version 10.0 can be used with the Polycom® RealPresence® Web Suite version 2.1.5 or later. Previous versions are not supported.

Core and Edge Configuration Options

This version of the RealPresence DMA system supports two types of configuration: core configuration and edge configuration. A system with a core configuration is similar to previous versions of the RealPresence DMA system, but with added features and functionality in version 10.0. A system with an edge configuration incorporates the features of the Polycom® RealPresence® Access Director™ system, combined with gatekeeper, registrar, and call server functionality.

When you install one or more RealPresence DMA systems, you need to configure each system with a core configuration, an edge configuration, or a combination configuration as follows:

- A core configuration is recommended if the system(s) is deployed inside your network environment.
- An edge configuration provides additional security features and is recommended if you deploy the system in the DMZ and it communicates with one or more core-configured systems inside your enterprise network.
- A combination system is one of the following:
 - an edge-configured system that resides in the DMZ and does not communicate with any core configured system, or
 - an edge-configured system inside the enterprise that is part of a VPN tunnel and does not communicate with any core configured system.

RealPresence DMA System Supported Features

The RealPresence DMA system version 10.0 provides all features (new or existing) in an edge, core, or combination configuration. Specific systems can be configured in a variety of ways, but not all configurations are supported.

The following table lists the features and configurations that have been tested and are supported in version 10.0 of the RealPresence DMA system.

RealPresence DMA System Supported Features

Feature/ Configuration	Edge System	Core System	Combination System	New Feature in Version 10.0
Access proxy	Yes	No	Yes	Yes
Access Control Lists	Yes	Yes	Yes	Yes
Active Directory integration	Yes	Yes	Yes	
Certificates	Yes	Yes	Yes	
Clariti VMR licensing	No	Yes	Yes	Yes
Conference management (MCUs, VMRs, conference templates, conference settings)	No	Yes	Yes	
Edge services	Yes	No	Yes	Yes
Embedded DNS	No	Yes	No	
External H.323 gatekeepers	Yes	Yes	Yes	
External SIP peers	Yes	Yes	Yes	
H.323	Yes	Yes	Yes	
High Availability (HA)	Yes	Yes	Yes	Yes (active-active)
High Availability support for Polycom ContentConnect HA and geo-redundancy	No	Yes	Yes	Yes
Immersive Telepresence (ITP) layout (new)	No	Yes	Yes	Yes
IVR	No	Yes	Yes	
MCU conference thresholds	No	Yes	Yes	Yes
Media traversal (relay)	Yes	No	Yes	Yes
Microsoft Exchange	No	Yes	Yes	
NAT	Yes	No	Yes	Yes
Polycom ContentConnect (PCC) integration	No	Yes	Yes	
RealPresence® Resource Manager integration (site topology, scheduling)	No	Yes	Yes	
RealPresence Resource Manager licensing (Clariti)	Yes	Yes	Yes	
Registration sharing (from)	Yes	No	No	Yes
REST API	Yes	Yes	Yes	
Security settings	Yes	Yes	Yes	
Shared number dialing	No	Yes	Yes	
SIP	Yes	Yes	Yes	

Feature/ Configuration	Edge System	Core System	Combination System	New Feature in Version 10.0
SIP conference factories	No	Yes	Yes	
Site topology	Yes	Yes	Yes	
Skype for Business integration	No	Yes	Yes	
SNMP	Yes	Yes	Yes	
Superclustering	No	Yes	No	
Synchronize pooled conference name from the RealPresence Resource Manager system to RMX	No	Yes	Yes	Yes
TIP version 8 support	Yes	Yes	Yes	Yes Can connect to devices that use tip 8
TURN	Yes	No	Yes	Yes
VPN tunnel	Yes	No	Yes	Yes
WebRTC	No	Yes	Yes	

See the *Polycom® RealPresence® Distributed Media Application (DMA®) System Operations Guide* for further information about features or access the online help from the system's management user interface.

Unsupported Configurations

The following configurations of one or more RealPresence DMA systems are not supported. Note that the use of unsupported features and configurations will not be prevented.

- Superclustering of systems in edge configuration
- Superclustering of systems in edge standalone configuration (combination systems)
- Superclustering between systems in edge configuration and systems in core configuration
- High Availability between a system in edge configuration and a system in core configuration
- High Availability active-active systems in core configuration in a supercluster
- High Availability for a VPN tunnel

Clariti License Enforcement in the Polycom RealPresence Collaboration Server

With Polycom RealPresence Clariti™ licensing, the Polycom RealPresence Collaboration Server (version 8.8 and higher) will only work with the RealPresence DMA version 10.0 and above and it will block incoming and outgoing SIP and H.323 calls that are not routed through the RealPresence DMA system.

Other Changes

Version 10.0 of the RealPresence DMA system uses version 3.6.0 of the Polycom RealPresence Platform API. See the [RealPresence DMA System API Documentation](#) for a summary of changes between RealPresence Platform API version 3.5.0 and 3.6.0.

Security Updates

Version 10.0 of the RealPresence DMA system includes an upgrade to PostgreSQL 10.4 and the following security updates:

- Resolved Spectre and Meltdown vulnerabilities.
 - CVE-2017-5753
 - CVE-2017-5715
 - CVE-2017-5754
- Removed potentially sensitive information from system logs.
- Updated access controls and authentication requirements, further restricting access to some RealPresence DMA system URLs to prevent potential information disclosure.
- Added missing HTTPS headers to prevent potential cross-site scripting attacks.
- Revised some web user interface error messages to prevent potential information disclosure.

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

Viewing Usage Data and Settings

When you accept the End User License Agreement (EULA) for the Polycom RealPresence DMA system, you can select the **Automatically send usage data** check box. This option enables your system to send various types of usage data to a Polycom collection point (*customerusagedatacollection.polycom.com*). As this data is used to continually improve the product, Polycom recommends that you keep the setting enabled. See the *Automatically Send Usage Data* section in the *Polycom® RealPresence® DMA® System Operations Guide* for a description of the types of data your system sends.

To view or change your selection for sending usage data:

- 1 Go to **Admin > Server > Licenses** in the web user interface.
- 2 Select or clear the **Automatically send usage data** check box.
- 3 Click **Update** if you change the setting.

To view the data your RealPresence DMA system sends to Polycom:

- 1 Go to **Admin > System Log Files** in the web user interface.
- 2 Click **Roll Logs**.
The system prompts you to download the log archive.
- 3 Click **OK** and save the log archive to your local machine.

4 After the download is complete, unpack the log archive.

The *analytics.json* file in the *var/log/polycom/rpp* directory contains the data that your RealPresence DMA system sends to Polycom.



Note: If your local DNS server does not resolve *customerusedatacollection.polycom.com*, the analytics service in the RealPresence DMA system will query the Google DNS server (8.8.8.8) to resolve that DNS name.

Release History

The following table lists only the RealPresence DMA versions released for General Availability.

Software Version History

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
10.0	3.6.0	CentOS 6.10 OpenJDK 1.8.0_171 PostgreSQL 10.4	October 2018	Access proxy Access Control Lists (ACLs) Integration with multiple Polycom® ContentConnect™ systems Support for ContentConnect High Availability and geo-redundancy Clariti VMR licensing and local burst Edge services High Availability (active-active) Immersive Telepresence (ITP) layout (new) Media traversal MCU conference thresholds NAT Registration sharing from edge to core Pooled conference name synchronizing from the RealPresence Resource Manager system to RMX TURN services TIP version 8 support VPN tunnel
9.0.1	3.5.2	CentOS 6.9 OpenJDK 1.8.0_151 PostgreSQL 9.6.6	January 2018	Load balancer to support multiple Polycom ContentConnect systems Security updates Fixed bugs

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
9.0.0.3	3.5.1	CentOS 6.9 OpenJDK 1.8.0_131 PostgreSQL 9.6.3	November 2017	Maintenance release to fix issues
9.0.0.2	3.5.0	CentOS 6.9 OpenJDK 1.8.0_131 PostgreSQL 9.6.3	August 2017	New management user interface Multiple dial plans Enhanced High Availability Peer-to-Peer to MCU Escalation Two-system installation with the USB Configuration Utility Network packet capture troubleshooting utility Single log file downloads Enhanced network settings Revised security settings Licensing changes Revised superclustering Enhanced security features Fixed bugs
6.4.1.8	3.4.6	CentOS 6.7 OpenJDK 1.8.0_77 PostgreSQL 9.5.2	December 2017	Maintenance release to fix issues
6.4.1.7	3.4.5	CentOS 6.7 OpenJDK 1.8.0_77 PostgreSQL 9.5.2	September 2017	Maintenance release to fix issues
6.4.1.6	3.4.4	CentOS 6.7 OpenJDK 1.8.0_77 PostgreSQL 9.5.2	July 2017	Maintenance release to fix issues
6.4.1.5	3.4.3	CentOS 6.7 OpenJDK 1.8.0_77 PostgreSQL 9.5.2	July 2017	Maintenance release to fix issues

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
6.4.1.4	3.4.0	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	June 2017	Maintenance release to fix issues
6.4.1.1	3.4.0	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	December 2016	Maintenance release to fix issues
6.4.1	3.4.0	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	September 2016	Maintenance release to fix issues
6.4.0.1	3.4.0	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	September 2016	Maintenance release to fix issues
6.4.0	3.4.0	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	August 2016	Microsoft Skype for Business MCU Affinity Integration with the Polycom RealPresence Collaboration Server MMCU and RDP Content Translator Scheduled Conference Support for Microsoft Office 365 Panoramic Layout Support for Skype for Business Clear SNMP Traps API Additions and Changes Fixes the issues identified in the Resolved Issues section
6.3.2.4	3.1.3	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4		Maintenance release to fix issues
6.3.2.3	3.1.3	CentOS 6.7 OpenJDK 1.8.0 PostgreSQL 9.4.4	July 2016	Maintenance release to fix issues

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
6.3.2.2	3.1.3	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	May 2016	Maintenance release to fix issues
6.3.2.1	3.1.2	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	April 2016	Maintenance release to fix issues
6.3.2	3.1.2	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	March 2016	Support for RealPresence Clariti Resolved some known issues
6.3.1.2	3.1.0	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	February 2016	Maintenance release to fix issues
6.3.1.1	3.1.0	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	February 2016	Maintenance release to fix issues
6.3.1	3.1.0	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.4.4	December 2015	Maintenance release to fix issues
6.3.0.2	2.7.3	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.3	September 2015	Maintenance release to fix issues
6.3.0.1	2.7.3	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.3	August 2015	Maintenance release to fix issues
6.3.0	2.7.2	CentOS 6.6 OpenJDK 1.8.0 PostgreSQL 9.3	June 2015	Enhanced CSR Dialog, Enhanced Chairperson Functionality for Cascaded Conferences, External Lync System Integration, Lobby Support for RealConnect™ Conferences, Scheduled Backups, Signaling Diagram, SIP 302 Redirect Support, Support for Polycom Rack Server 630 (R630), VEQ support for RealConnect™ Conferences, WebRTC Conferencing

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
6.2.2.2	2.6.3	CentOS 6.6 Java 8u5 PostgreSQL 9.3	October 2015	Maintenance release to fix issues
6.2.2.1	2.6.3	CentOS 6.6 Java 8u5 PostgreSQL 9.3	September 2015	Maintenance release to fix issues
6.2.2	2.6.3	CentOS 6.6 Java 8u5 PostgreSQL 9.3	August 2015	Maintenance release to fix issues
6.2.1.2	2.6.2	CentOS 6.6 Java 8u5 PostgreSQL 9.3	June 2015	Maintenance release to fix issues
6.2.1.1	2.6.2	CentOS 6.6 Java 8u5 PostgreSQL 9.3	April 2015	Maintenance release to fix issues
6.2.1	2.6.2	CentOS 6.6 Java 8u5 PostgreSQL 9.3	March 2015	Maintenance release to fix issues. Conference room dial-out improvements
6.1.3.1	2.5.5	CentOS 6.5 Java 8u5 PostgreSQL 9.3	April 2015	Maintenance release to fix issues
6.1.3	2.6.0	CentOS 6.5 Java 8u5 PostgreSQL 9.3	March 2015	Maintenance release to fix issues
6.2	2.6.0	CentOS 6.6 Java 8u5 PostgreSQL 9.3	December 2014	1080p SVC or SVC/AVC support, SIP peer high availability, faster post-deployment setup, improved Lync 2013 integration, RealPresence Resource Manager geographic redundancy support, scripting for VMR dial-out participants, MCU site name overlay support, enhanced VEQ scripting, and enhanced API functionality

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
6.1.2	2.5.4	CentOS 6.5 Java 8u5 PostgreSQL 9.3	October 2014	Maintenance release to fix issues
6.1.1.1	2.5.3	CentOS 6.5 Java 8u5 PostgreSQL 9.3	August 2014	Maintenance release to fix issues
6.1.1	2.5.2	CentOS 6.5 Java 8u5 PostgreSQL 9.3	July 2014	Maintenance release to fix issues SIP peer high availability support
6.0.6	1.7.6	CentOS 6.4 Java 7u21 PostgreSQL 9.2.4	July 2014	Maintenance release to fix issues
6.1	2.5.2	CentOS 6.5 Java 8u5 PostgreSQL 9.3	June 2014	Lync 2013 support, enhanced upgrade framework, centralized licensing support, Management Instrumentation, enhanced H.323 and SIP statistics, enhanced High Availability functionality, H.323 firewall rate limit, enhanced conference template features, enhanced API functionality, and cascade support for SVC and mixed-mode conferences
6.0.5	1.7.6	CentOS 6.4 Java 7u21 PostgreSQL 9.2.4	May 2014	Maintenance release to fix issues
6.0.4	1.7.5	CentOS 6.4 Java 7u21 PostgreSQL 9.2.4	February 2014	Maintenance release to fix issues MPMRx and RealPresence Collaboration Server 1800 MCU support
5.2.2.6	1.2.2	CentOS 5.8 Java 7u9 PostgreSQL 9.2.1	January 2014	Maintenance release to fix issues
6.0.3	1.7.4	CentOS 6.4 Java 7u21 PostgreSQL 9.2.4	December 2013	Maintenance release to fix issues Conference template enhancements surrounding high resolution content

<i>Release</i>	<i>API Version</i>	<i>System</i>	<i>Release Date</i>	<i>Features</i>
5.2.2.5	1.2.2	CentOS 5.8 Java 7u9 PostgreSQL 9.2.1	December 2013	Maintenance release to fix issues
5.2.2.4	1.2.2	CentOS 5.8 Java 7u9 PostgreSQL 9.2.1	October 2013	Maintenance release to fix issues
6.0.2.1	1.7.2	CentOS 6.4 Java 7u9 PostgreSQL 9.2.2	August 2013	Maintenance release to fix issues
5.2.2.3	1.2.2	CentOS 5.8 Java 7u9 PostgreSQL 9.2.1	August 2013	Maintenance release to fix issues
6.0.2	1.7.1	CentOS 6.4 Java 7u9 PostgreSQL 9.2.2	July 2013	RealPresence DMA-controlled VEQs with operator support, enhanced call/conference history and CDRs, resource priority (AS-SIP) support, ANAT support, gatekeeper blacklist, management connection whitelist, simplified history retention settings, single-server shutdown, and new conference template setting.

System Capabilities and Limitations

The RealPresence DMA system is available in either an Appliance Edition or a Virtual Edition.

If your RealPresence DMA system is licensed for more than 200 concurrent calls, the server you use must have 16 GB of RAM.

- If you are using a Virtual Edition, you need to create a new virtual machine (VM) with the required 16 GB of RAM and at least 146 GB of hard disk space.
- If you are using an Appliance Edition, you must use an R620 or R630 server, or a combination of the two (see [Supported Cluster Configurations](#)). These servers come with 16 GB RAM.

Supported High Availability Cluster Configurations

The RealPresence DMA system supports two-system clusters configured for High Availability (HA) only with certain server and virtual instance combinations. The following table details the combinations of server models and Virtual Edition instances that can be configured for HA:

Supported Two-System Combinations for High Availability Configuration

	<i>Polycom Rack Server 620 (R620)</i>	<i>Polycom Rack Server 630 (R630)</i>	<i>Polycom Rack Server 220 (R220)</i>	<i>Polycom Rack Server 230 (R230)</i>	<i>RealPresence DMA Virtual Edition</i>
<i>Polycom Rack Server 620 (R620)</i>	Supported	Supported	Not Supported	Not Supported	Supported ¹
<i>Polycom Rack Server 630 (R630)</i>	Supported	Supported	Not Supported	Not Supported	Supported ¹
<i>Polycom Rack Server 220 (R220)</i>	Not Supported	Not Supported	Supported	Supported	Supported ²
<i>Polycom Rack Server 230 (R230)</i>	Not Supported	Not Supported	Supported	Supported	Supported ²
<i>RealPresence DMA Virtual Edition</i>	Supported ¹	Supported ¹	Supported ²	Supported ²	Supported

¹ The default OVA settings for the VM match the specifications of the R620 and R630 servers.

² The default OVA settings for the VM must be adjusted to match the specifications of the R220 and R230 servers.

Appliance Edition

This version of the RealPresence DMA system, Appliance Edition, can be installed on the following Polycom servers:

- Polycom Rack Server 620 (R620)
- Polycom Rack Server 630 (R630)
- Polycom Rack Server 220 (R220) – deployments with 200 or fewer licensed concurrent calls
- Polycom Rack Server 230 (R230) – deployments with 200 or fewer licensed concurrent calls



Note: If you have a RealPresence Access Director Polycom Rack Server 620 (R620), v2 or v3 (shipped from January 2013 through June 2014), you must perform a new installation of the RealPresence DMA system, version 10, on the server. The R620 servers cannot be upgraded.

Maximum Capabilities of Servers – Core Configuration

The maximum capabilities of the system differ with the server you are using. The following table lists the maximum capabilities of Polycom Rack servers with a core configuration of the RealPresence DMA system software.

Maximum Capabilities for Polycom Rack Servers 220/230 and 620/630 – Core Configuration

<i>Maximum Capability</i>	<i>Polycom Rack Server 220/230</i>	<i>Polycom Rack Server 620/630</i>
Number of sites	100	500
Number of subnets	1000	5000
Number of RealPresence DMA clusters in a supercluster	3	10
Number of clusters enabled for conference rooms	3	3
Number of MCUs enabled for conference rooms	5	64
Number of concurrent SIP<->H.323 gateway calls	200	500
Size of Active Directory supported	1,000,000 users and 1,000,000 groups (up to 10,000 groups maybe imported)	1,000,000 users and 1,000,000 groups (up to 10,000 groups maybe imported)
Number of contacts registered to a Skype for Business server per cluster	25000	25000
Number of network usage data points retained per cluster	8,000,000	8,000,000
Concurrent registrations per cluster	1600	15000
Total concurrent conference room (VMR) calls per cluster	200	1200 H.323 only 3600 SIP only
Total point-to-point concurrent calls per cluster	200	5000
Total concurrent conference room (VMR) calls for a supercluster ¹	600	3600 H.323 only 10800 SIP only ¹
Total point-to-point concurrent calls for a supercluster	600	50000

¹ To support 3600 H.323 or 10800 SIP calls, the supercluster must contain at least three clusters.

Maximum Capabilities of Servers – Edge Configuration

The following table lists the maximum capabilities of Polycom Rack servers with an edge configuration of the RealPresence DMA system software.

Maximum Capabilities for Polycom Rack Servers 220/230 and 620/630 – Edge Configuration

<i>Maximum Capability</i>	<i>Polycom Rack Server 220/230</i>	<i>Polycom Rack Server 620/630</i>
Registrations	2000	5000
Concurrent calls ¹	200	1000
HTTPS tunnel calls (RealPresence Web Suite SIP guest calls only)	200	200
Throughput (Mbps)	700	700

¹ In a VPN tunnel configuration, the maximum concurrent call capacities are reduced.

Trial Licenses

All new RealPresence DMA Appliance Edition systems include a trial license for 5 concurrent calls that can be used after you install the software on your server. When you purchase and activate your call license, any remaining trial license calls are no longer available – they are not added to your number of purchased licensed calls. For example, if you use 3 trial license calls, then activate a 50 concurrent-call license, you will have a total of 50 concurrent calls available, not 52.

If you deploy two RealPresence DMA Appliance Edition systems as an HA pair, the two systems combined include a trial license for 5 concurrent calls.

Virtual Edition

This version of the RealPresence DMA system is available in an edition packaged for VM-based deployment. The RealPresence DMA system, Virtual Edition, is supported in VMware environments and Microsoft Hyper-V environments.

Polycom supports mixed Hyper-V/VMware environments, but has not tested all configurations and combinations.

New RealPresence DMA Virtual Edition systems do not include a trial license for calls.

Host Installation Guidelines

The RealPresence DMA system OVA is configured to require 146 GB hard disk capacity, which Polycom has set for standard installations. To modify the required hard disk capacity, create a VM instance with the desired hard disk capacity and install the system using the RealPresence DMA system ISO file.

Note: The only benefit to having greater hard disk capacity is the ability to store more log files.

If you deploy two systems as a High Availability pair, one of which is a virtual instance and the other is a Polycom server, the profile of the VM should be consistent with the server's profile.

The following table describes the recommended VM host deployment settings for each instance of the RealPresence DMA system, Virtual Edition. It also shows the typical performance capacities of that deployment.

Recommended VM Host Deployment Settings

<i>Component</i>	<i>Recommended Small Deployment Settings</i>	<i>Recommended Medium-Large Deployment Settings</i>
Virtual Cores	6	12
Min. CPU Speed	2.4 GHz	2.4 GHz
Total Required GHz	14.4 GHz	28.8 GHz
Min. CPU Family	Haswell	Haswell
Memory	16 GB	16 GB
Storage	146 GB	146 GB
Random IOPS	110 total	210 total
Performance	200 concurrent calls	5000 concurrent calls <ul style="list-style-type: none"> • Up to 1200 H.323 calls, not to exceed 5000 total calls • Up to 3600 SIP calls (encrypted or unencrypted), not to exceed 5000 total calls • Up to 5000 point-to-point calls, not to exceed 5000 total calls

Because of differences in hardware and VM environments, the performance information is provided for guidance purposes only and does not represent a guarantee of any kind by Polycom.

Interoperability Limitations

The following table lists limitations of other products that may cause interoperability issues with the RealPresence DMA system.

Interoperability Limitations

<i>Product</i>	<i>Description</i>	<i>Workaround</i>
Polycom RealPresence Group Series	When a RealPresence Group Series system is registered to a RealPresence DMA system and hosts an encrypted conference, Cisco C-series endpoints that are registered to the RealPresence DMA system and dial in to the conference are unable to complete the SSL handshake with the RealPresence Group Series system's MCU.	Dial out from the RealPresence Group Series system to the Cisco endpoints.
Polycom HDX endpoints	A Polycom HDX endpoint using the RealPresence DMA system as its SIP registrar is unable to complete a point-to-point call to a Microsoft Lync or Skype for Business client.	In the RealPresence DMA system, edit the Microsoft external SIP peer on the External SIP Peers page and enable the Postliminary feature.
Polycom HDX endpoints	Polycom HDX endpoints can be used with Lync Server but do not support Skype for Business video conferencing.	
Polycom HDX endpoints, Polycom Trio	DMA does not support H.264 high profile (HP) for SIP <-> H.323 calls.	
Sony, Radvision, Avaya, and Polycom VVX endpoints	In the RealPresence DMA system, the Terminate calls based on failed responses to IRQs call server setting is enabled by default, causing some Sony, Radvision, Avaya, and Polycom VVX endpoints to be disconnected during conferences.	In the RealPresence DMA system, disable the Terminate calls based on failed responses to IRQs call server setting.
Various endpoints	The RealPresence DMA system version 6.4 or later no longer supports certificates with an RSA key size less than 1024 bits in length. Manufacturers of some endpoints have not yet enhanced their software to support more secure encryption. As a result, TLS connections made from the RealPresence DMA system to some endpoints will no longer work.	

<i>Product</i>	<i>Description</i>	<i>Workaround</i>
Cisco SX endpoints	When Cisco SX devices running CE 8.X software are registered to the RealPresence DMA system using SIP/TLS, SSL handshake failures between the Cisco SX and RealPresence DMA system during establishment of SIP/TLS connections can result in call failures.	Add a certificate to the Cisco SX device and enable the certificate for use with SIP. See the Cisco SX CE 8.X Administrator Guide on the Cisco website for additional details.
Microsoft Skype for Business and Polycom RealPresence Desktop	When Microsoft Skype for Business and Polycom RealPresence Desktop are connected in a point-to-point call, the call does not include video media. When Microsoft Skype for Business and Polycom RealPresence Desktop are connected in a VMR call, the call does include video.	As an alternative to a point-to-point call, if Skype for Business joins a VMR or RealConnect™ conference with RealPresence Desktop, the conference will include video.
Microsoft Skype for Business and Polycom RealPresence DMA Virtual Entry Queues	On RealPresence DMA systems, Virtual Entry Queues (VEQs) do not support direct dialing from Skype for Business clients into the RealPresence Platform.	
Microsoft Skype for Business and Polycom RealPresence DMA presence publishing	After editing a VMR in the RealPresence DMA system, Skype for Business (and Lync) clients experience a delay in updating presence information.	
F5 BIG-IP device	The RealPresence DMA system setting for the Diffie-Hellman public key size changes during an upgrade to version 9.0.1. The new setting differs from the F5 BIG-IP Diffie-Hellman public key size.	Choose one of the following options: <ul style="list-style-type: none"> Customers using an F5 BIG-IP device to load balance ContentConnect servers in a Polycom RealConnect environment should contact Polycom Support before upgrading to version 9.0.1. Some settings may need to be changed to ensure interoperability with version 9.0.1 of the RealPresence DMA system. Use the load balancer function in version 10.0 of the RealPresence DMA system to support load balancing across multiple ContentConnect systems.

System Requirements

The Polycom RealPresence DMA system requires the following hardware, software, and network performance capabilities.

Hardware

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

To access the management interface, you need a client system running Microsoft® Windows® with the following hardware:

- 1280x1024 (SXGA) minimum display resolution; 1680x1050 (WSXGA+) or greater recommended
- USB and Ethernet ports
- DVD-RW drive or an external DVD burner (Appliance Edition only)

Software

The client system used to access the management user interface requires a web browser that supports HTML5. Microsoft Internet Explorer® must be version 11 or later.

Network Performance

The following table describes different types of RealPresence DMA system network connections and the related network performance requirements.

Network Performance Requirements

<i>RealPresence DMA System Network Connections</i>	<i>Network Performance</i>
Between clusters of a RealPresence DMA supercluster – core configuration	<ul style="list-style-type: none"> • Bandwidth above 10 Mbps, regardless of packet loss or latency • Less than 1 percent packet loss if network latency is 300 ms or less (one-way) <p>Or</p> <ul style="list-style-type: none"> • No packet loss if network latency is below 350 ms (one-way)
Between the RealPresence DMA system and all MCUs – core and combination system configurations	<ul style="list-style-type: none"> • Less than 200 ms round-trip latency • Less than 2 percent round-trip packet loss <p>Since this network carries only signaling traffic (the RTP stream goes directly from the endpoint to the MCU), bandwidth is not an issue.</p>

<i>RealPresence DMA System Network Connections</i>	<i>Network Performance</i>
Between the RealPresence DMA system and video endpoints – core, edge, and combination system configurations	<ul style="list-style-type: none"> • Less than 200 ms round-trip latency • Less than 6 percent round-trip packet loss
Between the RealPresence DMA system and Microsoft® Active Directory® (if integrated) – core, edge, and combination system configurations	<ul style="list-style-type: none"> • Less than 200 ms round-trip latency • Less than 4 percent round-trip packet loss

Products Tested with This Release

Polycom RealPresence DMA systems are tested extensively with a wide range of products. The list in this section is not a complete inventory of compatible systems.

The following table lists the versions of products that have been tested with version 10.0 of the RealPresence DMA system. If a product does not include a version number, it has not been tested with version 10.0 of the RealPresence DMA system.



Note: Polycom recommends that you upgrade all your Polycom systems with the latest software versions. Any compatibility issues may have been addressed by software updates. Go to http://support.polycom.com/PolycomService/support/us/support/service_policies.html to see the current Interoperability Matrix.

Products Tested with this Release

<i>Product</i>	<i>Tested Versions</i>
Polycom Devices	
Border Controllers	
Polycom RealPresence Access Director	4.2.x
Call Processors / Gatekeepers / SIP Servers	
Polycom ISDN Gateway	
Polycom RealPresence DMA Hardware Edition	10.0.0
Polycom RealPresence DMA Virtual Edition	10.0.0
Polycom RealPresence WebSuite MEA	2.2.1
Polycom RealPresence WebSuite WSP	2.2.1

<i>Product</i>	<i>Tested Versions</i>
Polycom Work Flow Server (OTD)	1.6.1
Endpoints	
Polycom RealPresence Centro	6.1.8, 6.2.0
Polycom RealPresence Immersive Studio	6.1.8, 6.2.0
Polycom RealPresence Immersive Studio Flex	6.1.8
Polycom RealPresence WebSuite Client	
Polycom Touch Control for Group Series	2.1.8
Polycom RealPresence Touch	2.1.8
Polycom Touch Control for HDX	
Polycom CMA Desktop	
Polycom CMA Desktop for MAC	
Polycom CX5500	1.3.4
Polycom CX8000	
Polycom Debut	1.3.2
Polycom Group Series	6.1.8, 6.2.0
Polycom HDX	
Polycom RealPresence Desktop for Mac	3.9.0
Polycom RealPresence Desktop for Windows	3.9.0
Polycom RealPresence Mobile for Android™	3.9.0
Polycom RealPresence Mobile for Apple iOS	3.9.0
Polycom Trio 8500	5.7.1, 5.7.2
Polycom Trio 8800	5.7.1, 5.7.2
Polycom VVX 1500	
Polycom VVX UCS	5.8.0
Management Systems	

<i>Product</i>	<i>Tested Versions</i>
Polycom RealPresence Resource Manager Hardware Edition	10.4.0
Polycom RealPresence Resource Manager Virtual Edition	10.4.0
MCUs	
Polycom RealPresence Collaboration Server 1500	
Polycom RealPresence Collaboration Server 1800	8.8.0
Polycom RealPresence Collaboration Server 2000	8.8.0
Polycom RealPresence Collaboration Server 4000	8.8.0
Polycom RealPresence Collaboration Server Virtual Edition	8.8.0
Recorders / Content Servers	
Polycom Content Connect	1.6.2
Polycom Pano	1.1.1
Polycom Pano App	1.1.0
Polycom RealPresence MediaSuite Hardware Edition	
Polycom RealPresence MediaSuite Virtual Edition	2.8.2
Third-Party Devices	
Border Controllers	
Sonus SBC	
Call Processors / Gatekeepers / SIP Servers	
Avaya Aura CM	
Avaya Aura SM	
Broadsoft Server	
Cisco TelePresence Video Communication Server	8.8.1
Cisco Unified Communications Manager	12.0(1)
Cisco 3241 ISDN Gateway	
Radvision Scopia P10 ISDN Gateway	

<i>Product</i>	<i>Tested Versions</i>
Radvision ECS Gatekeeper	
Microsoft Exchange 2016	15.1(Build-1466.3)
Microsoft Lync 2013 Server	
Microsoft Lync 2015 Skype for Business (SfB) Server	6.0.9319.516
Unify OpenScape Branch	
Unify OpenScape SBC	
Unify OpenScape Voice Server	
Endpoints	
Avaya 10XX	
Avaya 1X Communicator	
Avaya ADVD	
Avaya Flare Desktop	
Avaya Flare Mobile (iOS)	
Avaya Scopia XT5000	08.03.07.0051 V8_3_7_51
Avaya Scopia XT7000	
Avaya Voice Phone	
Broadsoft BTBC_Android (Mobile)	
Broadsoft BTBC_Android (Tablet)	
Broadsoft BTBC_iOS (Mobile)	
Broadsoft BTBC_iOS (Tablet)	
Broadsoft BTBC_PC	
Cisco DX70 / DX650	SIP10.2.5 & CE9.2.4
Cisco DX80	CE9.2.4
Cisco MX300 G2	CE9.2.4
Cisco TelePresence 1300	

<i>Product</i>	<i>Tested Versions</i>
Cisco TelePresence 150 MXP	
Cisco TelePresence 1700 MXP	
Cisco TelePresence 3010	
Cisco TelePresence 500-32	6.1.13
Cisco TelePresence 500-37	
Cisco TelePresence C40	TC7.3.14
Cisco TelePresence C60	TC7.3.14
Cisco TelePresence C90	TC7.3.14
Cisco TelePresence EX60	TC7.3.14
Cisco TelePresence EX90	TC7.3.12
Cisco TelePresence IX5000	8.3.1.1
Cisco TelePresence SX10	CE9.2.4
Cisco TelePresence SX20	CE9.2.4
Cisco TelePresence SX80	CE9.3.0
Cisco TelePresence TX1310	6.1.13
Cisco TelePresence TX9000	6.1.13
Huawei TE30	
Huawei TE40	
IBM SameTime	
TCSPI Adapter	
LifeSize Express 220	LS_EX2_5.0.9(2)
LifeSize Icon 600	LS_RM3_2.9.0 (1982)
LifeSize Team 220	
Microsoft CX500/CX600	
Microsoft Lync 2010 Client	

<i>Product</i>	<i>Tested Versions</i>
Microsoft Lync 2015 Client	
Microsoft Lync Mac Client	16.17.65
Microsoft Skype for Business (SfB) 2016 Client	16.0.10228.20080
Microsoft SfB Client (Android-Phone)	6.21.0
Microsoft SfB Mobile Client (iOS-Phone)	6.21.1
Microsoft SfB Client (Android-Tablet)	6.21.0
Microsoft SfB Mobile Client (iOS-Tablet)	6.21.1
Radvision Scopia XT1000	
Sony PCS-XG100	
Sony PCS-XG80	
Unify OpenScape UC	
Unify Openscape UC Client	
Unify Openstage 60/80	
MCUs	
Cisco 5310 MCU	
Cisco TelePresence MCU 4505	
Cisco TelePresence Server	

Installation and Upgrade Notes

You can upgrade previous versions of the RealPresence DMA system software to version 10.0 (see [Supported Upgrade Paths – RealPresence DMA System](#)). You can also upgrade the RealPresence Access Director system to version 10.0 of the RealPresence DMA system (see [Supported Upgrade Paths – RealPresence Access Director System](#)). When you log into the [RealPresence DMA support portal](#), you can download the 10.0 upgrade package and any interim upgrade packages you need for both the Appliance Edition and Virtual Edition.



Note: If you have a RealPresence Access Director Polycom Rack Server 620 (R620), v2 or v3 (shipped from January 2013 through June 2014), you must perform a new installation of the RealPresence DMA system, version 10, on the server. The RealPresence Access Director R620 servers cannot be upgraded.



Caution: Customers using an F5 BIG-IP device to load balance ContentConnect servers in a Polycom RealConnect environment should contact Polycom Support before upgrading to version 10.0. Some settings may need to be changed to ensure interoperability with version 10.0 of the RealPresence DMA system.

Network Firewall/Router

When you install or upgrade the RealPresence DMA system in an edge or core configuration, you must turn off SIP and H.323 ALG, as well as any packet inspection/modification, on your network firewall and/or router. Your call scenarios will fail if the network firewall/router modifies any incoming packet to the RealPresence DMA system. To detect if your network firewall/router is modifying packets, do one of the following:

- Run a sniffer trace and observe the signaling packets (H.323 or SIP) to determine if the network firewall/router is inserting its IP address.
- In the RealPresence DMA system user interface, go to Monitoring > Endpoints and see if the IP address of the endpoint is the network firewall/router IP address.

SIP and H.323 Dynamic Ports

When you install a new RealPresence DMA edge-configured system and then run the DMA edge wizard, you can specify the **Maximum number of simultaneous calls** for your system to support. When you do so, the wizard will assign three SIP and three H.323 dynamic ports for the maximum number of calls you specified. For example, if you enter 500 as the **Maximum number of simultaneous calls**, the wizard will assign 1500 dynamic ports for SIP calls and 1500 dynamic ports for H.323 calls.

OVA Files

Installing and configuring the RealPresence DMA system, Virtual Edition, from the RealPresence Resource Manager system using an OVA file is not supported. Instead, use your virtual environment tools to deploy the RealPresence DMA system OVA file. You can use thinshell or the RealPresence DMA user interface to configure the network address, then add the instance to the RealPresence Resource Manager system for licensing.

Ethernet Interface to Network Adapter Mapping in Virtual Edition Installations

When you deploy a new RealPresence DMA Virtual Edition using an OVA template in a virtual environment, the ethernet interface (in CentOS) to network adapter mapping (in the hypervisor) can sometimes occur in a different order. For example, eth0 will be mapped to network adapter 2, eth1 will be mapped to network adapter 1. This is due to how hypervisors interact with CentOS running in the RealPresence DMA system.

The ethernet interface names in CentOS (eth0, eth1, eth2, eth3) are assigned to network adapters in the hypervisor in the alphanumeric order of the MAC addresses of the ethernet interfaces.

Assign Networks to Network Adapters

After deploying the RealPresence DMA OVA, complete the following steps before you start the virtual machine (VM).

- 1 Go to the VM's Network Settings in the hypervisor.

If the MAC addresses are in ascending alphanumeric order, the network adapters will be mapped to ethernet interfaces as follows:

<i>Network Adapter (VMware)</i>	<i>MAC Address of the Ethernet Interface</i>	<i>Ethernet Interface (CentOS)</i>
Network adapter 1	00:0c:29:db:42:89	eth0
Network adapter 2	00:0c:29:db:42:91	eth1
Network adapter 3	00:0c:29:db:42:af	eth2
Network adapter 4	00:0c:29:db:43:a5	eth3

- 2 If the MAC addresses are not in ascending alphanumeric order, you need to assign the network adapters to the appropriate network connection in the hypervisor. Use the following table as an example.

<i>Network Adapter (VMware)</i>	<i>MAC Address of the Ethernet Interface</i>	<i>Ethernet Interface (CentOS)</i>
Network adapter 1	00:0c:29:db:42:91	eth1
Network adapter 2	00:0c:29:db:42:89	eth0
Network adapter 3	00:0c:29:db:43:a5	eth3
Network adapter 4	00:0c:29:db:42:af	eth2

- 3 After assigning the network adapters to network connections, you can start the RealPresence DMA VM.

Supported Upgrade Paths – RealPresence DMA System

You can upgrade to version 10.0 of the RealPresence DMA system *only* from version 9.0.x.

If your RealPresence DMA system is running a version prior to 9.0.x, you must perform interim upgrades before you can upgrade to version 10.0. If you try to upgrade from a non-supported version, the RealPresence DMA system displays the following message:

“This upgrade version cannot be used to upgrade the current system. Please refer to the release notes for allowed upgrade paths or perform a backup, then a fresh install, followed by restoring the backup to upgrade the system to this version.”

Do not perform a fresh installation of version 10.0 and then restore a backup of a non-supported version. You must upgrade a non-supported version to one of the supported versions before upgrading to 10.0.



Note: If you have a system running version 6.4.x that has two default territories and is integrated with a RealPresence Resource Manager system, you must delete one of the territories before you upgrade to version 10.0. If you upgrade without deleting one of the default territories, the system will display an error when you attempt to change some user settings. To resolve the error, you need to remove your integration with the RealPresence Resource Manager system, then reintegrate.

Your upgrade to version 9.0.1 or 10.0 may be blocked if you are running one of the following versions of the RealPresence DMA system on a Polycom Rack Server 630 (R630). In this case, you must upload and install `DELL-HW-Utility.bin` before upgrading to 9.0.1 or 10.0.

- 6.4.1.3
- 6.4.1.4
- 6.4.1.5
- 6.4.1.6
- 6.4.1.7
- 9.0.0
- 9.0.0.1
- 9.0.0.2

The following table outlines the supported paths you can use to upgrade a previous version of the RealPresence DMA system to version 10.0, depending on which version your system is currently running. Read the release notes for each version in your upgrade path to review any upgrade notes.

Supported Upgrade Paths: RealPresence DMA System to RealPresence DMA System, Version 10

<i>Current Version</i>		<i>Intermediate Upgrade</i>		<i>Intermediate Upgrade</i>		<i>Intermediate Upgrade</i>		<i>Final Upgrade</i>	<i>New License Required?</i>
5.0.x 5.1.x 5.2.0	→	5.2.1	→	6.2.2.2	→	6.4.1.1	→	9.0.1	Yes
5.2.1 5.2.2.x 6.0.x	→	6.2.2.2			→	6.4.1.1	→	9.0.1	Yes

<i>Current Version</i>	<i>Intermediate Upgrade</i>	<i>Intermediate Upgrade</i>	<i>Intermediate Upgrade</i>	<i>Final Upgrade</i>	<i>New License Required?</i>
6.1.x 6.2.x 6.3.x		→	6.4.1.1	→	9.0.1 Yes
6.4.0.x 6.4.1 6.4.1.1 6.4.1.2				→	9.0.1 Yes
6.4.1.3 6.4.1.4 6.4.1.5 6.4.1.6 6.4.1.7		→	DELL-HW Utility (only if using Polycom R630 server)	→	9.0.1 Yes
6.4.1.8				→	9.0.1 Yes
9.0.0 9.0.0.1 9.0.0.2		→	DELL-HW Utility (only if using Polycom R630 server)	→	10.0 Yes
9.0.0.3				→	10.0 Yes
9.0.1.x				→	10.0 Yes

Supported Upgrade Paths – RealPresence Access Director System

The following table outlines the supported path you can use to upgrade the RealPresence Access Director system to version 10.0 of the RealPresence DMA system.

Supported Upgrade Paths: RealPresence Access Director System to RealPresence DMA System, Version 10

<i>Current Version</i>	<i>Intermediate Upgrade</i>	<i>Intermediate Upgrade</i>	<i>Intermediate Upgrade</i>	<i>Final Upgrade</i>	<i>New License Required?</i>
4.1.x or earlier		→	4.2.x	→	10.0 Yes

Upgrading to Version 10.0 of the RealPresence DMA System

It's recommended that you upgrade as follows:

- First, upgrade your RealPresence DMA system from version 9.0.x to version 10.0. The 10.0 system will automatically have a core configuration.
- Next, upgrade your RealPresence Access Director system from version 4.2.x to version 10.0. The 10.0 system will automatically have an edge configuration.
- Upgrade to version 10.0 of the RealPresence DMA system before upgrading to version 8.8 of the RealPresence Collaboration Server.

Note the following:

- If you are a RealPresence Clariti customer, you must license the RealPresence DMA system through the RealPresence Resource Manager. If you plan to use concurrent VMR licenses, you must use version 10.4 or later of the RealPresence Resource Manager system.
- A RealPresence Access Director system, version 4.2.x, will operate with a RealPresence DMA core-configured system (version 10.0).
- A RealPresence DMA edge-configured system (version 10.0) will not operate with any older versions of the RealPresence DMA system.
- If you configure your RealPresence DMA edge system in a combination configuration, you need to add subnets for your internal endpoints to the **Default Site**, or you can create a new site for internal endpoints. See **Site Topology** in the management user interface.
- No port numbers can overlap in version 10.0 of the RealPresence DMA system. After upgrading, alerts for overlapping ports may display based on the system you upgraded (RealPresence Access Director version 4.2.x or RealPresence DMA version 9.0.x). To clear these alerts, go to the services named in the alerts (for example, **Access Proxy Settings**) and revise the ports or port ranges as needed. You can also revise the system ephemeral ports in **Network Settings**.
- The subnet of internal endpoints and MCUs on a core system or a combination system should always be in a site other than Internet/VPN.

Upgrading Superclustered or High Availability Systems

If you have superclustered or High Availability systems to upgrade, review the following information:

- If you upgrade the RealPresence DMA system from version 6.4.x to 9.0.x, break your superclusters before upgrading. You can reestablish the superclusters before or after upgrading to version 10.0.
- If you upgrade a RealPresence DMA system HA pair from version 6.4.x to 9.0.x, keep the HA nodes connected before upgrading. Then upgrade one of the systems or the virtual IP address and the upgrade will be applied across both HA systems. You can reenab the HA pair before or after upgrading to version 10.0.
- You don't need to break superclusters or HA pairs when upgrading version 9.0.x systems to version 10.0 systems with core configurations. Superclustering in a mixed-version environment of 9.0.x and 10.0 core-configured systems is supported but, after upgrading any systems to version 10.0, inviting an additional 10.0 node to join the supercluster is not supported.

- If you install new version 9.0.x and version 10.0 RealPresence DMA systems, superclustering between the new systems running different versions is not supported.

Upgrading Systems Integrated with RealPresence Resource Manager

If your RealPresence DMA system is integrated with a RealPresence Resource Manager system, you need to revise the RealPresence DMA instance.

Complete the following steps if you have not yet upgraded the RealPresence DMA system:

- 1 In the RealPresence Resource Manager web user interface, edit the RealPresence DMA instance and uncheck the Call Server option and the Support DMA Supercluster option (if your RealPresence DMA system is part of a supercluster).
- 2 Upgrade the RealPresence DMA system.
- 3 In the RealPresence Resource Manager web user interface, edit the RealPresence DMA instance and check the Call Server option and the Support DMA Supercluster option (if your RealPresence DMA system is part of a supercluster).

Calls and conferences will not be affected by the revisions.

Complete the following steps if you have already upgraded the RealPresence DMA system:

- 1 In the RealPresence Resource Manager web user interface, edit the RealPresence DMA instance and uncheck the Call Server option and the Support DMA Supercluster option (if your RealPresence DMA system is part of a supercluster).
- 2 Edit the RealPresence DMA instance again and check the Call Server option and the Support DMA Supercluster option (if your RealPresence DMA system is part of a supercluster).

Calls and conferences will not be affected by the revisions.

Upgrade the RealPresence DMA System from Version 9.0.x to Version 10.0

You can upgrade a RealPresence DMA system to version 10.0 from the system's management user interface. A new license is required.

See "DNS Records for the Polycom RealPresence DMA System" in the *Polycom RealPresence DMA System Operations Guide* or the online help to ensure you have the correct DNS entries for a successful deployment.

To upgrade the RealPresence DMA system:

- 1 Log into the [Polycom Support Portal](#).
- 2 Go to **Documents and Software > UC Infrastructure > Management & Scheduling**.
- 3 Select **RealPresence Distributed Media Application (DMA)**.
- 4 Under the **Current Releases** tab, select the upgrade package to download.
- 5 Read and accept the End User License Agreement and the Export Restrictions.
- 6 Save the upgrade package to your local client system.
- 7 From the RealPresence DMA user interface, go to **Admin > Software Upgrade**.

8 Select Upload and Upgrade.**9 Navigate to the upgrade package you saved and select Open.**

After the upload is complete, the upgrade begins.

10 Select Upgrade status page below the status bar.

The **RPP Install Status** page displays. After the installation status reaches 100%, the system will reboot.

11 After the system reboots, log into the RealPresence DMA system with your administrator credentials.**12 Read and accept the End User License Agreement.**

The management user interface opens and displays any alerts you need to resolve to complete the upgrade.

13 See [Resolve Upgrade Alerts](#) if necessary to complete the upgrade.

Upgrade the RealPresence Access Director System to the RealPresence DMA System, Version 10.0

You can upgrade version 4.2.x of the RealPresence Access Director system to version 10.0 of the RealPresence DMA system. A new license is required.



Important: Upgrading a RealPresence Access Director system to a RealPresence DMA system is a major upgrade. Configuration changes are required after upgrading to ensure that the RealPresence DMA edge-configured system functions like your RealPresence Access Director system did.

If you have two RealPresence Access Director systems in a two-box tunnel configuration, you must disable two-box tunnel mode on both systems before you migrate them to version 10.0 of the RealPresence DMA system. After migration, you need to create a VPN tunnel between the two systems and configure the default connections required for communication between the outside edge and inside edge or combination system and between the inside edge or combination system and a core-configured system. The default connections include external SIP peers, external H.323 gatekeepers, registration sharing, dial rules, and access proxies.

The RealPresence Access Director system that resides in the DMZ remains in the DMZ after you upgrade it to a RealPresence DMA edge-configured system. However, after migration, its communication settings will point to the RealPresence DMA core-configured system. You need to revise the settings so that external SIP peers, external H.323 gatekeepers, registration sharing, dial rules, and access proxies on the outside edge system point to the inside edge or combination system. The same settings on the inside edge or combination system must point to the core system.



Note: If you use a combination system as the inside system for the VPN tunnel, you don't need to configure that system to point to a core RealPresence DMA. The combination system serves as both an edge and core system.

Additionally, to enable outbound calling through the VPN tunnel, you need to create an external SIP peer and external gatekeeper on the inside edge or combination system that point to the signaling address of the outside edge system.

When configuring the two VPN tunnel systems, follow these guidelines:

On the outside RealPresence DMA edge system

- Point external SIP peers, external H.323 gatekeepers, registration sharing, and access proxies to the inside edge or combination system.
- Assign standard ports to the HTTPS, LDAP, and XMPP proxies on the public side; assign non-standard ports on the private side.

On the inside RealPresence DMA edge or combination system

- Point external SIP peers, external H.323 gatekeepers, registration sharing, and access proxies to the core system.
- Assign non-standard ports (the same ones you assigned to the private side of the outside system) to the HTTPS, LDAP, and XMPP proxies on the public side; assign standard ports on the private side.

For complete instructions on how to set up a VPN tunnel and configure settings, see the *VPN Tunnel Settings* chapter in the *Polycom RealPresence DMA System Operations Guide*.

Before upgrading single or two-box tunnel systems, review the following information:

- If you have a RealPresence Access Director Polycom Rack Server 620 (R620), v2 or v3 (shipped from January 2013 through June 2014), you must perform a new installation of the RealPresence DMA system, version 10, on the server. The RealPresence Access Director R620 servers cannot be upgraded.
- If you upgrade a RealPresence Access Director High Availability pair, you must disable HA on both systems before upgrading.
- You need to enter the RealPresence DMA 10.0 administrator user credentials in the registration sharing settings to complete the upgrade. See [Resolve Upgrade Alerts](#).
- You must open port 8443 on your internal firewall for the registration sharing feature in the RealPresence DMA system version 10.0 to work correctly. An edge-configured system uses port 8443 on the physical interface to connect to a core-configured system for registration sharing.
- No changes to the RealPresence Access Director system's default port ranges are required when you upgrade to version 10 of the RealPresence DMA system. However, the RealPresence DMA system will display a port overlap alert for the system ephemeral port range. After upgrading, you need to change the RealPresence DMA system's ephemeral port range to prevent port conflicts. You do not need to make changes to your firewall.
- The RealPresence Access Director SSH passwords for the following user accounts will be migrated to the RealPresence DMA system during the upgrade:
 - `polycom`
 - `root`
 - `rpadd` (the `rpadd` user will be converted to the `dmaremote` user but the password will remain the same).



Note: For HA systems, to prevent having to change your firewall settings after you upgrade, it's recommended that you transition your existing physical IP addresses for media interfaces to virtual IP addresses. You can then assign new physical IP addresses to the media interfaces.

To upgrade the RealPresence Access Director system to the RealPresence DMA system:

- 1 Log into the [Polycom Support Portal](#).
- 2 Go to **Documents and Downloads > UC Infrastructure > Management & Scheduling**.
- 3 Select **RealPresence Distributed Media Application (DMA)**.
- 4 Under the **Current Releases** tab, download one of the following upgrade files:
 - If you upgrade any version from 4.2.0 through 4.2.5, download the .upg file.
 - If you upgrade from version 4.2.5.1 or higher, download either the .upg file or .bin file.
- 5 Read and accept the End User License Agreement and the Export Restrictions.
- 6 Save the upgrade package to your local client system.
- 7 From the RealPresence Access Director user interface, go to **Maintenance > Software Upgrade**.
- 8 Select **Upload and Upgrade**.
- 9 Navigate to the upgrade package you saved and select **Open**.
After the upload is complete, the upgrade starts and a status bar displays.
- 10 Select **Upgrade status page** below the status bar.
The **RPP Install Status** page displays. After the installation status reaches 100%, the system will reboot.
- 11 After the system reboots, select **Click here to connect to DMA in Edge mode when the upgrade is complete** to display the RealPresence DMA login screen.
The RealPresence DMA login screen will not display until the system has finished rebooting.
- 12 Using your administrator login credentials from the RealPresence Access Director system, log into the RealPresence DMA system management user interface.
- 13 Read and accept the End User License Agreement.
The management user interface opens and displays any alerts you need to resolve to complete the upgrade.
- 14 See [Resolve Upgrade Alerts](#) to complete the upgrade.

Verify and Revise RealPresence DMA Edge System Settings

After you upgrade a RealPresence Access Director system to a RealPresence DMA edge-configured system, you need to verify that the RealPresence Access Director system's configuration settings migrated correctly. You also need to revise some of the RealPresence DMA edge system's settings.

RealPresence Access Director system licenses will not migrate to a RealPresence DMA edge-configured system. Calls through the edge system will work if the edge system is communicating with a core system. Adding licenses for concurrent calls and concurrent VMRs in an edge-configured system is optional.

After upgrading single or two-box tunnel systems, complete the following steps on each upgraded system:

To verify and revise RealPresence DMA edge system settings:

- 1 Go to **Service Config > Call Server Settings** and enter the **Registration sharing user name** and the **Registration sharing password** to enable registration sharing. Click **Update** to save the settings.
 - For the registration sharing feature to work correctly, you need to open port 8443 on your network's internal firewall. An edge-configured system uses port 8443 on the physical interface to connect to a core-configured system for registration sharing.
- 2 Go to **Admin > Server > Network Settings** and complete the following steps:
 - a Revise the **System Ephemeral Ports** to resolve any conflicts with ports migrated from the RealPresence Access Director system.
 - b Click **Services** and verify that the services mapping is the same as it was in the RealPresence Access Director system.
 - c Under **Network Interface Settings**, select an interface and click the Edit button to verify the **NAT address** (on the **IPv4 Configuration** tab) for the interface. Repeat for each interface.
- 3 If your signaling service for private and public is on the same NIC, go to **Service Config > H.323 Settings** and select **By Topology** as the Policy Selection.
- 4 Go to **Admin > Server > Certificates** and verify that your signed certificates are installed. Reinstall if necessary.
- 5 Go to **Service Config > Access Control** and verify that the **ACL Variables**, **ACL Rules**, and **ACL Settings** are correct. If not, edit or create new variables, rules, and settings as needed.
- 6 Go to **Service Config > SIP Settings**, select a port, click the Edit button, and select **Factory Core Registration Policy** as the default registration policy. Repeat this setting for all SIP ports to enable calling from non-provisioned SIP endpoints.
- 7 Go to **Service Config > H.323 Settings** and select **Factory Core Registration Policy** as the default registration policy on both the **Private** and **Public** NICs. This setting enables calling from non-provisioned H.323 endpoints.
- 8 go to **Service Config > Dial Plan > Domain Restrictions** and add all local domains. This setting enables SIP calls to work correctly.
- 9 Go to **Service Config > Dial Plan > Dial Plans** and complete the following steps:
 - a Select **SIP Dial Plan Public** and verify that the **Resolve to external address** dial rule points to the correct external SIP peer (the core RealPresence DMA system). If you have more than one core system in a supercluster, the dial rule should point to the embedded DNS name of the territory.
 - b Select **H.323 Dial Plan Public** and verify that the **Dial to External H.323 Gatekeeper** dial rule points to the correct external H.323 gatekeeper (the core RealPresence DMA system). If you have more than one core system in a supercluster, the dial rule should point to the embedded DNS name of the territory.
- 10 Go to **Service Config > Site Topology > Sites** and verify that the **Default Site** includes subnets for all RealPresence DMA systems in the supercluster.

Resolve Upgrade Alerts

When you upgrade to version 10.0 of the RealPresence DMA system, you may need to make changes in the system to complete the upgrade. After you log into the management user interface, a list of alerts automatically displays. Most of the alerts link to the **Backup and Restore** page, which summarizes the restore status and the upgrade issues that need to be resolved.



Note: If you upgrade a RealPresence Access Director system to version 10.0 of the RealPresence DMA system, you will need to enter the administrator user credentials for the RealPresence DMA management user interface in the registration sharing settings to complete the upgrade.

To resolve upgrade alerts:

- 1 From the management user interface, do one of the following:
 - In the **Alerts** window, click an alert (most alerts link to the **Backup and Restore** page).
 - Go to **Admin > Backup and Restore**.
- 2 Review the upgrade **Restore status** and any upgrade issues that occurred.
- 3 Resolve any upgrade issues as described in the following table.

Upgrade Issues and Resolutions

<i>Restore Status</i>	<i>Issue</i>	<i>Steps to Resolve</i>
Successfully restored <xxxx.xxx>, where xxxx.xxx is the name of the backup file	NA	NA
An error occurred while restoring <xxxx.xxx>, where xxxx.xxx is the name of the backup file	NA	Contact Polycom Global Support for assistance.
Port conflict detected: service <xxxx>: Range <xxxxx,xxxxx> conflicts with SYSTEM_EPHEMERAL: Range <xxxxx,xxxxx> on <xxx>, where xxxx is the name of the service, xxxxx,xxxxx is the port range, xxx is the ethernet interface		<ol style="list-style-type: none"> 1. Go to Admin > Server > Network Settings. 2. Click System Ephemeral Ports. 3. Revise the port range as needed to prevent port overlap with the ports used for services. 4. Click OK.

<i>Restore Status</i>	<i>Issue</i>	<i>Steps to Resolve</i>
User action is required to complete the restoration of <xxxx.xxx>, where xxxx.xxx is the name of the backup file	Unable to migrate registration sharing credentials	<ol style="list-style-type: none"> 1. Go to Service Config > Call Server Settings. 2. Enter the Registration sharing user name and the Registration sharing password. 3. Click Update.
	Review the access proxy public interface	<ol style="list-style-type: none"> 1. Go to Admin > Server > Network Settings. 2. Click Services. 3. Select a different access proxy public interface if necessary. 4. Click OK.
	Unable to migrate the H.323 Gatekeeper (Next hop) address	<ol style="list-style-type: none"> 1. Convert the FQDN of the gatekeeper to an IP address. 2. Go to Service Config > Site Topology > Sites. 3. Select Default Site and click the Edit button. 4. Select Subnets, then Add a new subnet for the IP address. 5. Click OK.
	Unable to migrate the SIP registrar (Next hop) address	<ol style="list-style-type: none"> 1. Convert the FQDN of the SIP registrar to an IP address. 2. Go to Service Config > Site Topology > Sites. 3. Select Default Site and click the Edit button. 4. Select Subnets, then Add a new subnet for the IP address. 5. Click OK.

<i>Restore Status</i>	<i>Issue</i>	<i>Steps to Resolve</i>
	Unable to migrate the SIP proxy (Next hop) address	<ol style="list-style-type: none"> 1. Convert the FQDN of the SIP proxy to an IP address. 2. Go to Service Config > Site Topology > Sites. 3. Select Default Site and click the Edit button. 4. Select Subnets, then Add a new subnet for the IP address. 5. Click OK.
	Changes are needed to complete H.323 setup	<ol style="list-style-type: none"> 1. Go to Service Config > H.323 Settings. 2. Adjust the H.225 and RAS ports in one of the following ways: <ol style="list-style-type: none"> a. Make all the ports match and select Policy Selection By topology. b. Make each port unique. c. Assign signaling to different interfaces in Network Settings.

- 4 After you resolve any issues, select **Dismiss Notification** if you want to delete the restore status and alert details (optional).

Rolling Back System Software to Previous Versions

After you upgrade your RealPresence DMA system to a new version, you can roll back the upgrade to restore the previous version of software you were running. However, if a rollback is necessary, you may need to reconfigure supercluster or High Availability configuration settings for your system(s).



Caution: If you upgrade a RealPresence Access Director system to version 10.0 of the RealPresence DMA system, rolling back the upgrade is not supported.

The state of a RealPresence DMA system after you perform an upgrade and then roll back to the previous version may vary, depending on the software version from which you upgraded and whether you configured any of the settings on your upgraded system before performing a rollback.

The following table describes the states of a RealPresence DMA system before and after an upgrade and after a rollback.

RealPresence DMA System States Before and After an Upgrade and Rollback

<i>System Version and State Before Upgrade</i>		<i>System State After Upgrade and Additional Configuration</i>	<i>System Version and State After Rollback</i>	
9.0.x	Standalone single-server cluster	Part of an HA pair or supercluster	10.0	Standalone single-server cluster, core configuration
9.0.x	Part of an HA pair or supercluster	Part of an HA pair or supercluster	10.0	Part of an HA pair or supercluster, core configuration; remains part of the HA pair or supercluster
9.0.x	Standalone single-server cluster	Part of an HA pair or supercluster	9.0.x	Standalone single-server cluster
9.0.x	Part of an HA pair or supercluster	Part of an HA pair or supercluster	9.0.x	Part of an HA pair or supercluster; remains part of the HA pair or supercluster
6.4.x	Standalone single-server cluster	Part of an HA pair or supercluster	6.4.x	Standalone single-server cluster; cannot pair or supercluster with 9.0.x systems.
6.4.x	Part of an HA pair or supercluster	Part of an HA pair or supercluster	6.4.x	Standalone single-server cluster; cannot pair or supercluster with 9.0.x systems; may be able to pair or supercluster with 6.4.x systems. ¹

¹ After rolling back superclustered systems to version 6.4.x, the systems may be able to re-establish supercluster communications, but this is not guaranteed.

Resolved Issues

All issues resolved through versions 6.4.1.8 and 9.0.1.3 of the RealPresence DMA system have corresponding fixes applied to version 10.0. The following table lists the additional issues resolved in version 10.0.

Resolved Issues

<i>Category</i>	<i>Issue Number</i>	<i>Found in Version</i>	<i>Description</i>
Active Calls	EN-24742	9.0	The system clears data on the Active Calls page for pinned H.323 calls after a call has ended.
Active Directory	EN-100216	9.0.1.2	Active directory does not synchronize correctly on the same servers. Alert history shows that enterprises conference rooms differ between servers and some VMRs received a busy signal then failed when calling VMRs.
Audio Cascade	EN-98551	6.4.1.8	The RealPresence DMA system sends a 502 error (bad gateway) to an Avaya session manager when the system attempts to establish an audio cascade link.
CDR	EN-94774	6.4.1.6	Call Detail Records (CDR) file is not generated and cannot be downloaded.
CDR	EN-91894	6.4.1.8	CDR file cannot be downloaded.
Certificates	EN-91849	DMA-9.0.1.1, N/A	A certificate cannot be installed on a superclustered system and a new CSR cannot be created after re-imaging the system.
Conference Manager	EN-92264	9.0.0.3	The system does not correctly handle the Secure Conference mode in RMX, causing VMRs to become unreachable.
DNS	EN-99203	9.0.1.1	After upgrading from 9.0.1.1 to 9.0.1.2, unable to log in after attempting to supercluster systems because superclustering attempts to prevent joining a server whose local management hostname resolves to multiple DNS IP address entries.
Endpoints	EN-97347	9.0.1	After upgrading the RealPresence DMA and RealPresence Resource Manager systems, some endpoints cannot connect to scheduled conferences.
H.323	EN-94284	9.0.1.1	The system's H.323 service stops working and a reboot is required to resolve the issue.

<i>Category</i>	<i>Issue Number</i>	<i>Found in Version</i>	<i>Description</i>
High Availability	EN-86211	9.0.1.1	After upgrading a High Availability cluster to version 9.0.1.1, the IP address and hostname are swapped and the VIP cannot be reached.
License	EN-94747	9.0.1	Calls are disconnected when the system runs out of licenses before it reaches the maximum call limit.
SIP	EN-98367	6.4.1.7, 9.0.1	SIP audio phone calls made from RealPresence Debut or RealPresence Desktop disconnect after 30 seconds.
Supercluster	EN-98683	9.0.1.1	After removing a system from a supercluster, the system freezes and requires a hard reboot to recover.
Supercluster	EN-106295	9.0.1	After upgrading from 6.4.1.8 to 9.0.1.2, issue occurs with superclustering. Systems are initially stable but calls start failing after 24 hours and an alert indicates an internal system error.
System Performance	EN-102004	9.0	Downloading logs of other nodes from a node in a supercluster across a low bandwidth connection or a bad network connection causes the RealPresence DMA system to saturate the network link.
System Performance	EN-33900	RPAD 4.2.3	The RealPresence Access Director system does not enforce history record retention limits on the call_signaling_event table, causing the hard disk space to fill.
User Interface	EN-83859	9.0.1.1	In the web user interface, Integrations > MCUs, an inaccurate MCU alarm status (mcuState) displays.
User Interface	EN-82138	9.0.1.1	In the web user interface, a scheduled VMR continues to display after it has expired or been deleted.
User Interface	EN-82093	9.0.1.1	In the web user interface, after scheduling a VMR with a date, initial start time, and expiration time, if the VMR is edited, the date and time fields do not display. Issue occurs only in Internet Explorer 11.
User Interface	EN-33923	RPAD 4.1.0	In the RealPresence Access Director management user interface, the SNMPv3 username field doesn't accept special characters.
User Interface	EN-104272	9.0.1	In the web user interface, Integrations > MCUs, the RMX status is Unknown if the MCU System name is in Russian.-
User Interface	EN-104265	9.0.1	When setting up a list of MCUs before a meeting, the H.323 Room ID format MCU_IP##RoomID does not work.

<i>Category</i>	<i>Issue Number</i>	<i>Found in Version</i>	<i>Description</i>
User Interface	EN-102958	9.0.1	In the web user interface, conference room IDs (VMRs) are not listed in numerical order.

Known Issues

The following table lists known issues of the Polycom RealPresence DMA system version 10.0.



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

Known Issues

<i>Category</i>	<i>Issue ID</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Access Control Lists	EN-106515	10.0	A VMR call from a registered endpoint is denied by an Access Control List (ACL) Guest Call rule in superclusters.	
Access Control Lists	EN-23857	10.0	An operator that is incompatible with a variable type is not flagged at execution time.	
Active Calls	EN-103672	10.0	In the web user interface, Monitoring > Active Calls, the territory and site of MCUs are listed incorrectly in the Destination field.	
API	EN-70774	10.0	The <code>signaling/restore-defaults</code> API does not restore the signaling port to the Access Control List (ACL).	
Bandwidth Limitation	EN-106891	10.0	A site topology bandwidth limitation should be between network hops, not the IP address of the source endpoint.	

<i>Category</i>	<i>Issue ID</i>	<i>Release</i>	<i>Description</i>	<i>Workaround</i>
Conference Manager	EN-102766	10.0	Some H.323-to-SIP calls that weren't completed do not have an end time in call history and the system interprets that the bandwidth from these calls is still in use.	
H.323	EN-102536		Point-to-point calling between two H.323 endpoints registered to an edge-configured system does not work.	Use SIP endpoints for point-to-point calls.
MCU	EN-35489	9.0	The system starts conferences on heavily-loaded video-only MCUs instead of lightly-loaded mixed audio/video MCUs.	
Simplified Dialing	EN-109837		Simplified dialing to an ISDN gateway fails if the RealPresence DMA system is running with RPCS version 8.8.	
User Interface	EN-105309	10.0	In the web user interface, after disabling High Availability on one active-active system, the message that displays to configure the peer is confusing.	
User Interface	EN-107516	10.0	In the web user interface, the status that displays for nodes in an active-active HA pair is incorrect when one of the nodes owns both the virtual IP addresses.	
User Interface	EN-102112	10.0	In the web user interface, Service Config > Access Control > Device Authentication, duplicate users in Inbound Device Authentication and duplicate realms in Shared Outbound Authentication can be added.	
User Interface	EN-101964	10.0	In the web user interface, Reports > Call History, authentication details for calls that use shared outbound device authentication display in the Call Events tab of Call Details instead of the Call Info tab.	
User Interface	EN-101608	10.0	In the web user interface, Monitoring > Endpoints, sorting on the Active Calls column does not work.	

Category	Issue ID	Release	Description	Workaround
User Interface	EN-75557	9.0.1	In the web user interface, the system displays an unexpected exception instead of a clear error when a superclustered node is configured as an external SIP peer.	
User Interface	EN-34623	9.0	In the web user interface, Reports > Registration History, when displaying registration details for a device, the device changes if there are ongoing registration actions.	
User Interface	EN-96998	10.0	In the web user interface, the Core Configuration banner doesn't display after upgrading a node in an HA pair or supercluster	<p>To display the banner in an HA or a superclustered system, complete these steps:</p> <ul style="list-style-type: none"> • Upgrade one node to version 10.0 and wait for it to boot up. • Log into the management user interface and go to User > Login Policy Settings > Banner. • In the System description field, enter <code>Core Configuration</code>. • Click Update. • Upgrade the second node and wait for it to boot up. <p>The banner should correctly display. Subsequent upgrades on either node won't require this manual workaround.</p>
	EN-105340		The subnet of internal endpoints and MCUs on a core system or a combination system should always be in a site other than Internet/VPN.	

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