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

Contents

About This Guide

Topics:

- [RealPresence DMA System Editions](#)
- [Audience, Purpose and Required Skills](#)
- [Get Help](#)

This guide provides the first time setup information that you need to configure a RealPresence DMA system. Once you've completed first time setup, see the *Polycom RealPresence DMA System Operations Guide* for additional configuration and customization tasks you can perform.

RealPresence DMA System Editions

The RealPresence DMA system is available in an Appliance Edition (for use with a Polycom Rack Server) and a Virtual Edition (packaged as software only).

Most of the functionality described in this document applies to both editions, and so the product references are general–that is, the RealPresence DMA system. However, when information applies to a specific edition, the reference will be specific–that is, RealPresence DMA, Virtual Edition or RealPresence DMA, Appliance Edition.

Audience, Purpose and Required Skills

This document is written for a technical audience. You must know or have the following:

- Basic computer and network system administration skills
- Virtual machine (VM) concepts
- Network configuration, including IP addressing, subnets, gateways, domains, DNS, time servers, and possibly network routing
- The deployment plan for the RealPresence DMA system being installed and the video conferencing/collaboration network of which it will be a part

This guide assumes that you are starting with a RealPresence DMA system that has never been previously configured.

If necessary, obtain the assistance of the appropriate IT or network administration personnel before proceeding.

Get Help

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

Polycom and Partner Resources

In addition to this guide, the following documents and other resources provide details about the RealPresence DMA system. To access documents, go to support.polycom.com.

- *Polycom RealPresence DMA System Release Notes*

  Provides information you need to know about the specific release of the system you are deploying.

- *Polycom RealPresence DMA System Operations Guide*

  Provides more detailed and specialized configuration, operation, and administration information you need to know when using the RealPresence DMA system.

- Online help–In the product user interface, select **Help** > **Help Contents** to access the entire help system, or click any **Help** button to see the specific help topic for that location.

- Partner product interoperability–Refer to the partner deployment guides.

- Specific certifications–Refer to: www.polycom.com/solutions/solutions-by-industry/us-federal-government/certification_accreditation.html.

The Polycom Community

The Polycom Community gives you access to the latest developer and support information. Participate in discussion forums to share ideas and solve problems with your colleagues. To register with the Polycom Community, simply create a Polycom online account. When logged in, you can access Polycom support personnel and participate in developer and support forums to find the latest information on hardware, software, and partner solutions topics.

Prepare for System Installation

Topics:

This section describes the preparations to complete before the initial installation and configuration of a RealPresence DMA system.

Complete the First-Time Setup Worksheet

Before you begin system setup, fill out the applicable fields in the **My System Values** column of the following worksheet.

Network configuration of an appliance (hardware-based) RealPresence DMA system involves options and settings not relevant in a virtual deployment, including dual-server configuration and split management and signaling networks. Although those settings are present in the **Network Settings** page of the RealPresence DMA system's web-based user interface, they must not be used in a virtual deployment. They are clearly identified in the following worksheet.

First-Time Setup Worksheet

Configuration Information	My System Values	Description
System IP type		Specify whether the system should support IPv4, IPv6, or both. If both, complete all the IP address information below. If only IPv4 or IPv6, complete only the corresponding fields below.
System server configuration		Specify whether you're installing a single-server system or a two-server system. For a single-server system, the Server 2 section below is not used.
		If you received two servers, be sure you've read and understood the cautions regarding configuration and setup and know whether you're setting up a co-located two-server cluster or two separate single-server systems.
		Virtual Edition deployments *must* be single-server systems.

Configuration Information	My System Values	Description
System split network setting		Specify whether to combine or split the system's management and signaling interfaces. If the same network will be used for both management (administrative access) and signaling, the signaling IP addresses and Shared Signaling Network Settings section below are not used. Virtual Edition systems *must* combine the system's management and signaling interfaces.
	Caution: Choose split networking *only* if you need to restrict access to the management interface and SNMP to users on an isolated non-public network separate from the enterprise network. Typically, this is the case only in high-security environments. In most network environments, users accessing the management interface are on the same enterprise network as endpoints and other devices communicating with the system, and they use the same physical and virtual IP addresses and the same network interface. To split the network configuration, you must use different gateways and subnets for management and signaling, and separate physical connections for the management and signaling networks (eth0 for management, eth2 for signaling). In a split network configuration, routing rules are necessary for proper routing of network traffic. If management and signaling traffic are combined on the same network (subnet), both use the same physical and virtual IP addresses and the same network interface. If you are not sure whether split networking is appropriate, possible, or necessary for this installation, consult the appropriate IT staff or network administrator for your organization.	
Server 1		Only the Server 1 settings are used for Virtual Edition deployments.
Management host name		Local host name of the prod_name_shortserver's combined interface. Host names may contain only letters, numbers, and internal dashes (hyphens), and may not include a domain. The reserved values appserv* and dmamgk-* may not be used for host names. The host name is combined with the domain name specified under **General System Network Settings** to form the fully qualified domain name (FQDN).
Management IPv4		Static, physical IP address(es) for the first (or only) server's management (or combined) interface.
Management IPv6		

Configuration Information	My System Values	Description
Signaling IPv4		Static, physical IP address(es) for the first (or only) server's signaling interface (if networking is split).
Signaling IPv6		Not used for Virtual Edition deployments.
Server 2		These settings are not used for Virtual Edition deployments.
Host name		Local host name of the second server's management (or combined) interface. Host names may contain only letters, numbers, and internal dashes (hyphens), and may not include a domain. The reserved values appserv* and dmamgk-* may not be used. The host name is combined with the domain name specified under **General System Network Settings** to form the fully qualified domain name (FQDN).
IPv4		Static, physical IP address(es) for the second server's management (or combined) interface.
IPv6		
Signaling IPv4		Static, physical IP address(es) for the second server's signaling interface (if networking is split).
Signaling IPv6		
Shared Management Network Settings		In the combined network configuration (required for Virtual Edition deployments), users accessing the management interface are on the same network as endpoints and other devices communicating with the prod_name_short system, and these settings are used for both management and signaling.
Virtual host name		For a two-server system or a single-server system in IPv6-only mode, the local host name of the virtual management host. Not used for a single-server system with IPv4 enabled. Host names may contain only letters, numbers, and internal dashes (hyphens), and may not include a domain. The reserved values appserv* and dmamgk-* may not be used for host names. The host name is combined with the domain name specified under **General System Network Settings** to form the fully qualified domain name (FQDN).

Configuration Information	My System Values	Description
Virtual IPv4		For a single-server system in IPv6 only mode, the IP address(es) of the virtual management host. Not used for a single-server system with IPv4 enabled.
Virtual IPv6		
Subnet mask		IPv4 network mask that defines the subnetwork of the system's management interface.
IPv6 prefix length		IPv6 CIDR (Classless Inter-Domain Routing) prefix size value (the number of leading 1 bits in the routing prefix mask) that defines the subnetwork of the system's management interface.
IPv4 gateway		IP address of the gateway server used to route network traffic outside the subnet.
Management Link		
Auto-negotiation		Yes or no. If no, indicate speed and full or half duplex. **Note:** Auto-negotiation is required if your network is 1000Base-T.
LAN Security Settings		These settings are not used for Virtual Edition deployments. **Caution:** In a network that requires 802.1x authentication for servers (this is rarely the case), incorrect settings in this section and, if applicable, lack of the proper certificate(s) can make the system unreachable. Recovering from this situation requires connecting a laptop to the system using a crossover cable in order to access it.
Enable 802.1x		Enables the system to authenticate this network interface to the LAN. Depending on the authentication method, the access credentials required may be either a user name and password (specified below) or a security certificate. If you are deploying a Virtual Edition system, do *not* select **Enable 802.1x**.
User name		The user name with which the system may authenticate this interface.
Password Confirm password		The password for the user name entered above.

Configuration Information	My System Values	Description
EAP Method		The Extensible Authentication Protocol method used to establish trust with the authentication server (this is also known as the outer authentication protocol).
Protocol		When a TLS tunnel is established with the authentication server, the protocol used within the tunnel (this is also known as the inner authentication protocol).
Shared Signaling Network Settings		These settings are not used for Virtual Edition deployments. For Appliance Edition deployments: The settings in this section are enabled only if management and signaling traffic are on separate networks. If so, they apply to the entire system (both servers in two-server configuration). For a one-server configuration, the virtual host name and IP fields are disabled. (Exception: If only IPv6 is enabled, the system must have two addresses, so a single-server system must still have a virtual host name and IP address.) The settings are the same as those in **Shared Management Network Settings**, except that under Signaling Link, the signaling network interface (eth2) can be disabled. This capability exists for debugging purposes.
General System Network Settings		
DNS search domains		One or more fully qualified domain names, separated by commas or spaces. The system domain you enter below is added automatically, so you need not enter it.

Configuration Information	My System Values	Description
DNS 1		IPaddresses of up to three domain name servers. At least one DNS server is required.
DNS 2		Your prod_name_short system must be accessible by its host name(s), not just its IP address(es), so you (or your DNS administrator) must create A and/or AAAA records for IPv4 and IPv6, respectively, as well as the corresponding PTR records, on your DNS server(s). A/AAAA records and PTR records that map each physical host name to the corresponding physical IP address and each virtual host name to the corresponding virtual IP address are mandatory, as are the corresponding PTR records that allow reverse DNS resolution of the system's physical or virtual host name(s).
DNS 3		
Domain		The domain for the system. This is combined with the host name to form the fully qualified domain name (FQDN). For instance: Host name: `dma1` Domain: `callservers.example.com` FQDN: `dma1.callservers.example.com`
Signaling DSCP		The Differentiated Services Code Point value (0 - 63) to put in the DS field of IP packet headers on outbound packets associated with signaling traffic. The DSCP value is used to classify packets for quality of service (QoS) purposes. If you're not sure what value to use, leave the default of 0.
Management DSCP		The Differentiated Services Code Point value (0 - 63) to put in the DS field of IP packet headers on outbound packets associated with management traffic. The DSCP value is used to classify packets for quality of service (QoS) purposes. If you're not sure what value to use, leave the default of 0.
Default IPv6 gateway		The IPv6 gateway's address and the interface used to access it, generally eth0, specified as: *<IPv6_address>*%eth0
Default IPv4 gateway		Not used for Virtual Edition deployments, which must combine the system's management and signaling interfaces and thus have only one IPv4 gateway specified.

Configuration Information	My System Values	Description
System Time		In Virtual Edition deployments, some of the System Time settings are automatically configured as part of the installation process.
Time zone		Time zone in which the system is located. We strongly recommend selecting the time zone of a specific geographic location (such as America/Denver), not one of the generic GMT offsets (such as GMT+7).
		If you do use a generic GMT offset (for instance, to prevent automatic daylight saving time adjustments), note that they use the Linux/Posix convention of specifying how many hours ahead of or behind local time GMT is. Thus, the generic equivalent of America/Denver (UTC-07:00) is GMT+07, not GMT-07.
NTP server #1		IP address of the primary NTP time server. Use of time servers is strongly recommended. All the devices in your video conferencing deployment should use the same time servers to avoid potential problems caused by time differences among devices.
NTP server #2		IP address of a second NTP time server (optional, but strongly recommended).
NTP server #3		IP address of a third NTP time server (optional, but strongly recommended).
Routing Configuration		Special routing rules are generally not needed in the combined network configuration, which is required in Virtual Edition deployments.
		In a split network configuration, routing rules are necessary for proper routing of network traffic.
		If you aren't sure, consult the appropriate IT staff or network administrator for your organization.
Host/network		The IP address of the destination network host or segment.
Prefix length		The CIDR (Classless Inter-Domain Routing) value that, together with the destination host/network address, defines the subnet for this route.
		For IPv4, a prefix length of 24 is equivalent to specifying a subnet mask of 255.255.255.0. A prefix length of 16 is equivalent to specifying a subnet mask of 255.255.0.0.

Configuration Information	My System Values	Description
Interface		Specify the interface for this route. In the combined network configuration required in Virtual Edition deployments, this is eth0.
Via		IP address of router for this route. Optional and only needed for non-default routers.

Prepare Client Systems

To log into the RealPresence DMA system, you need a client system running Microsoft® Windows® with the following hardware and software:

- Hardware
    - 1024x768 (SXGA) minimum display resolution; 1400x900 (WSXGA+) or greater recommended
    - USB and Ethernet ports (Appliance Edition only)
- Software
    - Browser: Microsoft Internet Explorer® version 8 or higher, or Google Chrome™
    - Adobe® Flash® version 11 or higher

    The RealPresence RealPresence DMA system's management interface requires Adobe Flash Player. For stability and security reasons, we recommend always using the latest version of Flash Player.

Prepare the USB Flash Drive (Appliance Edition Only)

You must configure the RealPresence DMA system, Appliance Edition server(s) using the USB Configuration Utility (available in the /usb-gui directory of the system recovery disc and at support.polycom.com) and the USB flash drive included in the server package.

Caution: Use the latest version of the RealPresence DMA system USB Configuration Utility

For compatibility reasons, ensure that you use the latest version of the RealPresence DMA system USB Configuration Utility.

Note that if for some reason you are not able to use the USB Configuration Utility, you can configure your system servers manually by logging into the web user interface and configuring settings.

Procedure

1. Connect the blank USB flash drive to the Windows PC on which you put the ZIP file containing the RealPresence DMA system USB Configuration Utility.
2. Unzip the RealPresence DMA system USB Configuration Utility files to the USB flash drive.

    The USB Configuration Utility files must be at the root of the flash drive, not in a folder. One of the files is autorun.inf, which enables the USB Configuration Utility to start automatically when the

USB flash drive is inserted into a PC that supports autorun. In a highly secure environment, this file may not be allowed.

3. Start the USB Configuration Utility by double-clicking *dma7000-usb-gui.exe*.

4. In the **USB Configuration Utility** window, click **Configure the System Parameters**.
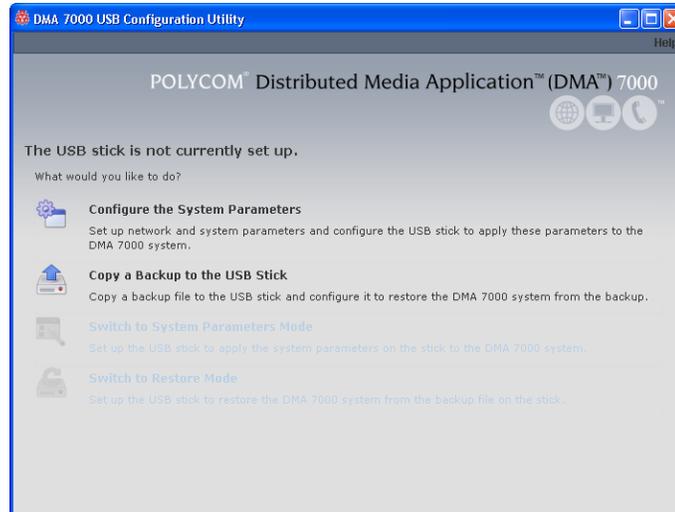
5. On the **Network** page, select the **System IP type**, **System server configuration**, and **System split network setting** that you specified on the First-Time Setup Worksheet.

   Note that the settings you choose for these items determine which of the remaining network value fields are enabled. For instance, if you specify a single-server configuration, the **Server 2** fields are disabled.

6. Enter the network values from the First-Time Setup Worksheet.

   If you need to set up a special network routing rule or rules, click **Routing Configuration**, create the rule(s), and click **OK**. In the combined network configuration, routing rules are generally not necessary. In a split network configuration, routing rules are necessary for proper routing of network traffic. If you are not sure what rule or rules you need, consult the appropriate IT staff or network administrator for your organization.

7. Click **Next**.

8. On the **System Time** page, select the correct **System time zone** for your location.

   Polycom recommends that you select the best location-specific setting, not one of the generic GMT offset settings. The location-specific settings automatically include the correct daylight saving time adjustments (if any) for that location and will be updated as locales change their time policies in the future.

9. Under **NTP servers**, enter the IP addresses (or domain names) for the time servers from the First-Time Setup Worksheet.

   Polycom recommends specifying at least one and preferably three time servers. Use NTP stratum 3 quality time servers if possible. At least one time server must be specified before creating or joining a supercluster.

10. Click **Done**.

   The utility confirms that the configuration file was created and returns you to the initial menu.

11. Verify that **The USB stick is set to apply system parameters** is displayed in the initial menu, as shown in the following figure.
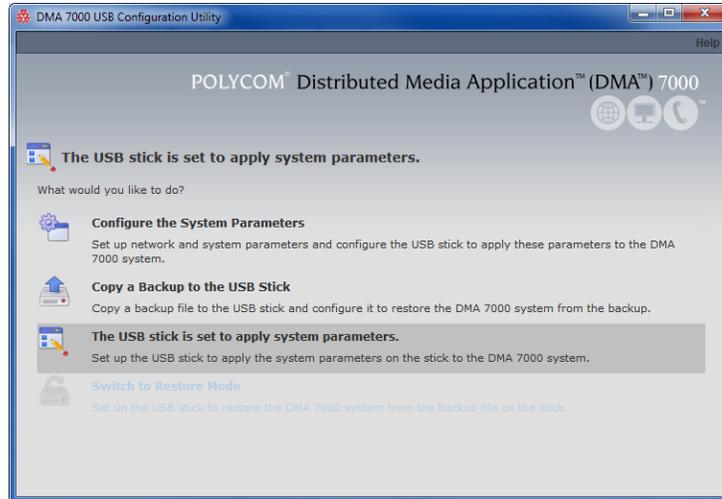
12. Close the program.
13. On your PC, eject the USB flash drive.

System Installation

Topics:

- [Virtual Edition Installation](#)
- [Appliance Edition Installation](#)

The RealPresence DMA system is available in an Appliance Edition and a Virtual Edition. Refer to the following installation instructions based on your edition.

Virtual Edition Installation

Before you install the RealPresence DMA system in your environment, review the Polycom RealPresence DMA System Release Notes and ensure that your host machine has the capacity for your planned Virtual Edition deployment. In addition, ensure that it meets the host guidelines recommended by Polycom.

Host Installation Guidelines for Virtual Editions

Before deploying your Polycom RealPresence Virtual Edition software, review the following planning guidelines for your deployment. Unless otherwise noted, use these guidelines for all Polycom Virtual Editions.

Polycom recommends that a virtual environment administrator install Virtual Edition software. After the installation of a Virtual Edition, additional configuration should be done by someone who understands video conferencing.

CPU Allocation

- Leave 2 cores unallocated, regardless of the number of cores present, how many licenses are purchased, and what other virtual machines will be present.
- For VMware, do not allocate CPU core 0. Host operating system performance may be affected if this core is assigned to the virtual machine.
- When possible, allocate cores on one CPU. This will enhance performance by reducing CPU-to-CPU communication times.
- Do not use processor oversubscription; maintain a 2:1 ratio of virtual CPU to physical CPU. For example, a system with 8 physical cores can support up to 16 virtual processors divided up into any combination among the virtual machines running on that host.
- When you are using Hyper-V, Polycom recommends disabling the Virtual Machine Queue of the Network Interface Card (NIC). For more information, see https://support.microsoft.com/en-us/kb/2902166

Note: CPU reservations can only be done after shutting down the virtual machine.

Memory Allocation

In a Microsoft Hyper-V environment, you must not overprovision memory at the hypervisor layer. Dynamic memory for virtual machines is not supported.

Disk

Hypervisors add overhead to disk operations. For best performance, ensure that the virtual machine is able to achieve the recommended IOPS listed in the following table.

	Lab Environment	Production Environment
Disk Performance	170 Random IOPS (write) 170 Random IOPS (read)	230 Random IOPS (write) 450 Random IOPS (read)
Network	1GB Shared	1GB Dedicated 10GB Shared

Capacity information such as storage space and memory varies according to virtual edition. Please see release notes for your RealPresence virtual edition software for the minimum capacity requirements for your product.

Install the Virtual Edition Software

You can install your RealPresence DMA, Virtual Edition software with your native virtual environment tools or with the Polycom RealPresence Platform Director system, depending on your deployment.

If you have deployed a Polycom RealPresence Resource Manager system, version 10.0 or higher, you must use your virtual environment tools to install your RealPresence DMA software.

If you have not deployed a RealPresence Resource Manager system or if you have not upgraded your RealPresence Resource Manager system to version 10.0 or later, you can use your virtual environment tools to install your RealPresence DMA software. You may also be able to use the RealPresence Platform Director system to install your product instance.

If your RealPresence Platform Director system was installed in a VMware vCenter environment with the required credentials, you can use the RealPresence Platform Director system to deploy Polycom software. For complete instructions on how to use the RealPresence Platform Director system, see the *Polycom RealPresence Platform Director Administrator Guide.*

You cannot use the RealPresence Platform Director system to deploy a Hyper-V Virtual Edition. For a Hyper-V Virtual Edition, you must deploy the software using Hyper-V tools and then add the instance to the RealPresence Resource Manager system, version 10.0 or higher, or RealPresence Platform Director system, based on your deployment.

Choose from the following installation methods:

- Install the RealPresence DMA System Software Using Your Virtual Environment Tools on page 15
- Install the RealPresence DMA System Software Using the RealPresence Platform Director System on page 16

Install the RealPresence DMA System Software Using Your Virtual Environment Tools

If you install the RealPresence DMA, Virtual Edition, using your virtual environment tools, you will still need to use the RealPresence Resource Manager system or RealPresence Platform Director system to manage licensing of your Polycom software.

Note: If installing a Hyper-V version, you must use the **Copy** option.

Procedure

1. Refer to the documentation for your virtual environment tools for instructions on installing a virtual instance.
2. Install an instance of the RealPresence DMA system, Virtual Edition.
3. Assign a static IP address to the instance using the console if your VM environment does not use DHCP.

Assign a Static IP Address

The RealPresence DMA system requires a static IP address for your system's instance. If your VM environment is not using DHCP, you must assign a static IP with the console before continuing to configure your system. If your VM environment has a DHCP server, it will assign an IP address to the instance. You can then assign a static IP using the console or assign the static IP from the RealPresence DMA system's web interface during initial configuration.

Note: Assign only one static IP address during initial network configuration

During installation and initial network configuration, you need to assign one static IP address to the management interface (eth0). After installation is complete, you can configure additional IP addresses for other network interfaces from the RealPresence DMA web user interface.

Procedure

1. Power on the newly-installed VM.
2. Access the console.
3. Click in the console window and press **Enter** if necessary to see the login prompt.

    A shell interface appears that enables you to configure the network.
4. Log in with user ID `polycom` and password `polycom`.
5. Choose option 2 and follow the prompts to configure the following initial network settings:

    - IP address
    - Subnet Mask
    - Default Gateway IP

    The system reboots.
6. Press **CTRL + ALT** to release the cursor from the console, then close the console window.

Install the RealPresence DMA System Software Using the RealPresence Platform Director System

If your RealPresence Platform Director system was installed in a VMware vCenter environment with the required credentials, you can use the RealPresence Platform Director system to deploy Polycom software. For complete instructions on how to use the RealPresence Platform Director system, see the *Polycom RealPresence Platform Director Administrator Guide.*

You cannot use the RealPresence Platform Director system to deploy a Hyper-V Virtual Edition. For a Hyper-V Virtual Edition, you must deploy the software using Hyper-V tools and then add the instance to the RealPresence Platform Director system.

Procedure

» Install an instance of the RealPresence DMA system, Virtual Edition, according to the instructions in the *Polycom RealPresence Platform Director Administrator Guide*.

Log in to the RealPresence DMA System, Virtual Edition

You need to log in to your RealPresence DMA system, Virtual Edition, to continue system configuration.

Procedure

1. Be sure the RealPresence DMA system is powered on and running.
2. Open a web browser and enter the URL of the system in the address bar:

   `https://<IP address>:8443/dma7000/`
3. Enter the factory default administrator credentials:

   Username: `admin`

   Password: `Polycom12#$`

Appliance Edition Installation

If you purchased the RealPresence DMA, Appliance Edition, you need to install the server. If the system software is not pre-installed on the server, you need to download the software from the Polycom support site and create a DVD to install the software on your server.

Follow the process outlined in the following topics to install the RealPresence DMA, Appliance Edition: Review the most recent *Polycom RealPresence DMA System Release Notes*

Verify Shipment Contents

Polycom Rack Server shipments include the server and other contents. You should verify the type of server and other contents of your shipment when you unpack the system.

The following table describes shipment contents based on the type of server you purchased. **Note that licensing information and other items may be shipped separately**.

Item	R620	R630	R220
1 Polycom Rack Server	X	X	X
1 system DVD	X (May be shipped separately)		
1 blank USB flash drive	X (RealPresence Resource Manager appliances do not include a blank USB flash drive)	X	X
1 USB flash drive labeled *Diagnostics* that contains server diagnostics utilities. Use these utilities only under the direction of Polycom Global Services.	X	X	X

Item	R620	R630	R220
Power cord(s)	May be shipped separately	May be shipped separately	May be shipped separately
Rail kit	Slide rails with cable management arm	Slide rails with cable management arm	Static rails
Bezel with Polycom badge	X	X	X
Polycom warranty letter	X	X	X
Product Information Guide	X	X	X

Unpack and Install the Hardware

The RealPresence DMA system, Appliance Edition, can be installed on the following servers:

- Polycom Rack Server 630 (R630)
- Polycom Rack Server 220 (R220)
- Polycom Rack Server 620 (R620)

You should verify the type of server and other contents of your shipment when you unpack the system.

Procedure

1. Examine the shipping container for damage.

   If you find damage, file a claim with the delivery carrier. Polycom is not responsible for damage sustained during shipment of this product.

2. Open and review the container packing slips.

3. Open the container and examine the contents for damage.

   If you find damage, file a claim with the delivery carrier. Keep all shipping materials in case you need them later.

4. Unpack your system and identify each item.

   A single-server RealPresence DMA system shipment includes the items listed in

5. Assemble the rails and install the server in the rack.

   To rack-mount a server, see the following instructions:

   - Polycom Rack Server 630 (R630) server:

     http://www.dell.com/support/home/us/en/04/product-support/product/poweredge-r630/manuals

   - Polycom Rack Server 620 (R620) server:

     http://www.dell.com/support/home/us/en/04/product-support/product/poweredge-r620/manuals

   - Polycom Rack Server 220 (R220) server:

6. Connect the server's power cable(s) to the server and connect a VGA cable from the server to the monitor.

7. Connect all power cables into a grounded electrical outlet or separate power source, such as an uninterrupted power supply (UPS) or power distribution unit (PDU).

8. Connect a keyboard to the server.

9. Press the power button on the server and on the monitor.

   The power indicators should light.

10. Create one access password for the system BIOS.

11. Set the correct system time in the system BIOS.

12. Install the bezel (optional).

13. *For Polycom Rack Server 630 (R630) or 620 (R620) servers only*: Connect the **GB 1** Ethernet port to the enterprise network.

    The GB 1 Ethernet port is the eth0 network interface, which must be used for this purpose.

14. *For Polycom Rack Server 220 (R220) servers only*: Connect the **Port 0** Ethernet port to the enterprise network.

    The Port 0 Ethernet port is the eth0 network interface, which must be used for this purpose. It is the port that is furthest left on the back of the server.

Port 0 Location for Polycom Rack Server 220
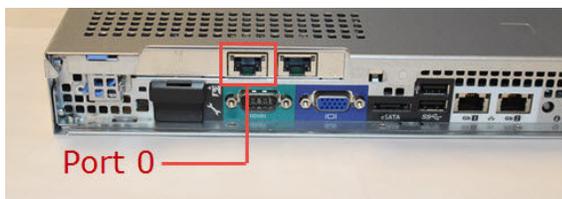
Create a DVD for the System Software

If your RealPresence DMA, Appliance Edition does not have the system software pre-installed, you need to download the software ISO image from the Polycom Support site, burn it onto a blank DVD, then use the DVD to install the software onto the RealPresence DMA server.

Procedure

1. Download the RealPresence DMA software ISO image from Polycom Support to your Windows client system.

2. Insert a blank, recordable DVD into your DVD-RW drive.

3. Using your DVD recording software, burn the ISO image onto the DVD.

4. Verify that the ISO image burned successfully to the DVD, then remove it from your client system.

Install the RealPresence DMA System Software

If the RealPresence DMA system software is not pre-installed on your server(s), you can install the system software using the RealPresence DMA DVD you created.

Before you install the system software, see Complete the First-Time Setup Worksheet on page 4 to review your general system settings.

Procedure

1. Turn on the RealPresence DMA system server and insert the DVD.
2. Restart the system server.

   The server boots from the DVD and the installation starts. Installation takes approximately 20-30 minutes, after which the DVD ejects and the server restarts twice. For Polycom Rack Server 630-based or 620-based systems, **DMA Installed** displays on the front panel LCD when installation is complete. This indicates that the system software is installed but its network and time settings are not configured.
3. Remove the DVD from the server's DVD drive.
4. If you are installing a two-server cluster, repeat these steps for the second system server.

Initial Configuration

Topics:

-
-
-
-

The sections that follow describe the RealPresence DMA system software initial log in and configuration.

Virtual Edition Initial Configuration

After installation of the Virtual Edition software, you need to configure the Virtual Edition system using the system's web-based user interface.

Procedure

1. From a PC with network access to the Virtual Edition system, point your browser to the URL for the system instance (ignore any security certificate warning that may appear) and log in with user ID *admin* and password *Polycom12#$*.

   The End User License Agreement (EULA) is presented, along with a check box to accept or decline the Agreement. In this dialog, you can also agree or disagree to send usage data to Polycom to help improve the product. See the *Polycom RealPresence DMA System Operations Guide* for more information about automatic data collection.

2. Select the check box labeled **I accept the terms of this license agreement** and click **Accept**.

   The Dashboard of the RealPresence DMA system's user interface displays. Using its menus, you can complete your system setup.

3. Go to **Admin** > **Local Cluster** > **Network Settings** and select the **System IP type** that you specified in the First-Time Setup Worksheet on page 4.

4. If you need to change the network configuration, enter the network values from the First-Time Setup Worksheet on page 4.

5. Click **Update**.

   When asked to confirm restarting the system, click **Yes**.

   The system restarts.

6. Point your browser to the system's virtual host name or IP address, and log in with user ID *admin* and password *Polycom12#$*.

7. Go to **Admin** > **Local Cluster** > **Time Settings** and do the following:

   a) Select the correct **System time zone** for your location.

      We strongly recommend selecting the best location-specific setting, not one of the generic GMT offset settings. If you select a generic GMT offset, note that they use the Linux/Posix convention of specifying how many hours ahead of or behind local time GMT is. Thus, the generic equivalent of America/Denver (UTC-07:00) is GMT+07, not GMT-07.

8. Under **NTP servers**, enter the IP addresses or domain names for the time servers from the First-Time Setup Worksheet on page 4.

We strongly recommend specifying at least one and preferably three time servers. Use NTP stratum 3 quality time servers if possible. At least one time server must be specified before creating or joining a supercluster.

9. Click **Update**.

   When asked to confirm restarting the system, click **Yes**.

   The system restarts, which takes several minutes.

10. Log back in to the system and complete your system setup.

    The tasks required to complete the system configuration are described in the online help or the *Polycom RealPresence DMA System Operations Guide*.

Appliance Edition Initial Configuration

You can configure the RealPresence DMA system, Appliance Edition server(s) using the supplied RealPresence DMA system USB flash drive. If you have not prepared the USB flash drive with the required settings, see Prepare the USB Flash Drive (Appliance Edition Only) on page 11 .

Note that if for some reason you are not able to use the USB Configuration Utility, you can configure your system servers without using it. See Initial Configuration Without Using the USB Flash Drive on page 24 for more information.

Procedure

1. If you are configuring the system software for the first time, do the following:

   a) On the first (or only) server, insert the USB flash drive into a USB port.

   b) Turn on the first (or only) server.

      Leave the second server turned off.

      After it boots, the server reads its network and system parameters from the USB flash drive and applies them.

   c) Go to step 3.

2. If you are *not* configuring the system software for the first time, do the following:

   a) Turn on the first (or only) server and insert the system DVD for the newer version.

   b) Insert the USB flash drive into one of the server's USB ports.

   c) Restart the first (or only) server.

      Leave the second server off.

      The server boots from the DVD, and the installation commences. About 15-20 minutes later, the DVD ejects and the server restarts twice. The server then reads its network and system parameters from the USB flash drive and applies them.

   d) Go to step 3.

3. If you are using a Polycom Rack Server R630 or R620, wait for the front panel LCD to display **DMA Ready**.

   It may take up to 10 minutes for the system to finish applying settings.

4. Disconnect the USB flash drive and if applicable, remove the disc.

   If you are installing a single-server system, skip to step 7.

Caution: **LCD messages**

> If you are using a Polycom Rack Server R630 or R620 and the message **DMA Installed** displays on the LCD, the system software is installed, but not configured. Make sure the USB flash drive is set to apply system parameters and inserted into a functioning USB port, and then restart the server.
>
> If a different message or no message displays, stop. Contact Polycom Global Services for assistance.

---

5. If you are installing a two-server cluster and and configuring the system software for the first time, follow these steps.

   a) If you are using Polycom Rack Server R630 or R620 systems, connect an Ethernet cable between the GB 2 ports of the two servers.

      If you are using Polycom Rack Server R220 systems, connect an Ethernet cable between the Port 1 ports of the two servers.

   b) Turn on the second server.

      Leave the first server on.

      After it boots, the second server detects the first server, gets its configuration settings from it, and joins the cluster. If you are using a Polycom Rack Server R630 or R620, when done, both servers' LCDs display **DMA Clustered**.

      Caution: **What are the LCDs displaying?**

      > If you are using a Polycom Rack Server R630 or R620 and **DMA Clustered** is not displayed on the LCD, stop. Contact Polycom Global Services for assistance.

      ---

   c) Go to step 7.

6. If you are installing a two-server cluster and replacing the system software with a newer version, follow these steps.

   Note that both servers in the cluster must be running the same version of the software, so if you install a newer version on the first server, you must install the same version on the second server.

   a) Turn on the second server and insert the system DVD for the newer version.

   b) If you are using Polycom Rack Servers R630 or R620, connect an Ethernet cable between the GB 2 ports of the two servers.

      If you are using Polycom Rack Servers R220, connect an Ethernet cable between the Port 1 ports of the two servers.

   c) Restart the second server.

      Leave the first server turned on.

      The second server boots from the DVD and the installation commences. About 15-20 minutes later, the DVD ejects and the server restarts twice. After the second restart, the second server detects the first server, gets its configuration settings from it, and joins the cluster. If you are using Polycom Rack Server R620 or R630 systems, after the servers start, **DMA Clustered** displays on both servers' LCDs.

Caution: **What are the LCDs displaying?**

If you are using a Polycom Rack Server R630 or R620 and **DMA Clustered** is not displayed on the LCD, stop. Contact Polycom Global Services for assistance.

---

7. Depending on which server you have, do one of the following:

   - For Polycom Rack Server R630 or R620 systems, connect an Ethernet cable from the GB 1 Ethernet port of the server(s) to the enterprise network to be used for management or combined traffic.

   - For Polycom Rack Server R220 systems, connect an Ethernet cable between the Port 0 Ethernet port of the server(s) to the enterprise network.

8. On a PC with network access to the RealPresence DMA system, point your browser to the system's virtual host name or IP address and log in with user ID *admin* and password *Polycom12#$*.

   The End User License Agreement (EULA) is presented, along with a check box to accept or decline the Agreement. In this dialog, you can also agree or disagree to send usage data to Polycom to help improve the product. See the *Polycom RealPresence DMA System Operations Guide* for more information about automatic data collection.

9. Select the check box labeled **I accept the terms of this license agreement** and click **Accept**.

   The Dashboard of the RealPresence DMA system's user interface displays. Using its menus, you can complete your system setup.

   The tasks required to complete the system configuration are described in the online help and the *Polycom RealPresence DMA System Operations Guide*.

Caution: **Do not unplug a Polycom Rack Server R630 or R620 system without proper shutdown**

Do not turn off a Polycom Rack Server R630 or R620 by unplugging it or otherwise removing power, especially if the system will remain turned off for some time. If a server loses power without being properly shut down, the RAID controller fails to shut down, eventually depleting its battery. If that happens, the server cannot be restarted without user input, requiring a keyboard and monitor.

Initial Configuration Without Using the USB Flash Drive

If for some reason you cannot use the USB Configuration Utility on the USB flash drive, you can use the following procedure to complete the initial setup using a laptop PC and an Ethernet cable.

The RealPresence DMA system servers are shipped with the following default network settings that you can use to connect to the system:

IP address: `192.168.200.10`

Subnet mask: `255.255.255.0`

Default gateway: `192.168.200.1`

Procedure

1. Ensure that the server is NOT connected to the enterprise network.
2. Configure the network settings on your laptop to connect it to the same network segment as the RealPresence DMA system server(s).

Example settings:

- IP address: 192.168.200.20
- Subnet mask: 255.255.255.0
- Default gateway: 192.168.200.1

3. If you are using Polycom Rack Server R630 or R620 systems, connect an Ethernet cable between your laptop and the GB 1 interface of the first (or only) server.

4. If you are using Polycom Rack Server R220 systems, connect an Ethernet cable between your laptop and the Port 0 interface of the first server.

5. If you are configuring the system software for the first time, start the first (or only) server.

The server starts, which takes several minutes. If you are using a Polycom Rack Server R630) or R620 system, after the server starts, **DMA Installed** displays on the front panel LCD. This indicates that the system software is installed but its network and time settings are not configured.

Caution: **What are the LCDs displaying?**

If you are using a Polycom Rack Server R630 or R620 and **DMA Installed** is not displayed on the LCD, stop. Contact Polycom Global Services for assistance.

6. If you are *not* configuring the system software on the server(s) for the first time, do the following:

a) Turn on the first (or only) server and insert the system DVD for the newer version.

b) Restart the first (or only) server and leave the second server turned off.

The server boots from the DVD and the installation commences. About 15-20 minutes later, the DVD ejects and the server restarts. If you are using a Polycom Rack Server R630 or R620, after the server starts, **DMA Installed** displays on the front panel LCD. This indicates that the system software is installed but its network and time settings are not configured.

Caution: **What are the LCDs displaying?**

If you are using a Polycom Rack Server R630 or R620 and **DMA Installed** does not display on the LCD, stop. Contact Polycom Global Services for assistance.

7. On the laptop, point your browser to http://192.168.200.10 (ignore any security certificate warning that may appear) and log in with user ID *admin* and password *Polycom12#$*.

The End User License Agreement (EULA) is presented, along with a check box to accept or decline the Agreement. In this dialog, you can also agree or disagree to send usage data to Polycom to help improve the product. See the *Polycom RealPresence DMA System Operations Guide* for more information about automatic data collection.

8. Select the check box labeled **I accept the terms of this license agreement** and click **Accept**.

The Dashboard of the RealPresence DMA system's user interface displays. Using its menus, you can complete your system setup.

9. Go to **Admin** > **Local Cluster** > **Network Settings** and select the **System IP type**, **System server configuration**, and **System split network setting** that you specified in Complete the First-Time Setup Worksheet on page 4.

The settings you choose for these items determine which of the remaining network value fields are enabled. For instance, if you specify a single-server configuration, the **Server 2** fields are disabled.

10. Enter the network values you specified in Complete the First-Time Setup Worksheet on page 4.

Caution: **Make certain LAN Security Settings are correct**

If the network on which you are installing the system requires 802.1x authentication for servers (this is rarely the case), incorrect settings in the LAN Security Settings section can make the system unreachable. Recovering from this situation requires that you disconnect the system from the network and connect a laptop directly to the system to access it. Make certain these settings are correct if you need to configure them.

---

11. If you need to set up a special network routing rule or rules, click **Routing Configuration**, create the rule(s), and click **OK**.

In the usual combined network configuration, routing rules are generally not necessary. In a split network configuration, routing rules are necessary for proper routing of network traffic. If you are not sure what rule or rules you need, consult the appropriate IT staff or network administrator for your organization.

12. Click **Update**.

When asked to confirm restarting the system, click **Yes**.

The system begins to restart.

13. While the server is restarting, do the following:

    a) Disconnect the Ethernet cable from the laptop.

    b) If you are using a Polycom Rack Server R630 or R620, connect the server's GB 1 Ethernet port to the enterprise network to be used for management or combined traffic.

       If you are using a Polycom Rack Server R220, connect the server's Port 0 Ethernet port to the enterprise network.

       This is the eth0 network interface, which must be used for this purpose.

    c) For a split network configuration using a Polycom Rack Server R620 or R630, connect the GB 3 Ethernet port to the network to be used for signaling traffic.

       For a split network configuration using a Polycom Rack Server R220, connect the GB 1 Ethernet port to the network to be used for signaling traffic.

       This is the eth2 network interface, which must be used for this purpose.

       The restart process takes several minutes. If you are using a Polycom Rack Server R630 or R620, after the server starts, **DMA Ready** displays on the front panel LCD.

    Caution: **What is the LCD displaying?**

    If you are using a Polycom Rack Server R630 or R620 and a different message or no message displays on the LCD, stop. Contact Polycom Global Services for assistance.

---

14. From a PC with network access to the RealPresence DMA system, point your browser to the system's virtual host name or IP address (if installing a two-server system) or physical host name or IP address (if installing a single-server system).

15. Log in with user ID *admin* and password *Polycom12#$*.

16. Go to **Admin** > **Local Cluster** > **Time Settings** and Select the correct **System time zone** for your location.

We strongly recommend selecting the best location-specific setting, not one of the generic GMT offset settings. If you really want to use a generic GMT offset, note that they use the Linux/Posix convention of specifying how many hours ahead of or behind local time GMT is. Thus, the generic equivalent of America/Denver (UTC-07:00) is GMT+07, not GMT-07.

17. Under **NTP servers**, enter the IP addresses or domain names for the time servers from the First-Time Setup Worksheet.

    We strongly recommend specifying at least one and preferably three time servers. Use NTP stratum 3 quality time servers if possible. At least one time server must be specified before creating or joining a supercluster.

18. Click **Update**.

    When asked to confirm restarting the system, click **Yes**.

    The system restarts, which takes several minutes. If you are using a Polycom Rack Server R630 or R620, after the server starts, **DMA Ready** is displayed on the front panel LCD.

19. If you are installing a single-server system, skip to step 20.

    If you are installing a two-server cluster, follow the next few steps.

    Remember that both servers in the cluster must be running the same version of the software, so if you installed a newer version on the first server, you must do so on the second server.

    a) If you replaced the system software on the first server with a newer version, turn on the second server, insert the system DVD for the newer version, and restart it.

    The server boots from the DVD, and the installation commences. About 15-20 minutes later, the DVD ejects and the server restarts. If you are using a Polycom Rack Server R630 or R620 system, after the server starts, **DMA Installed** is displayed on the front panel LCD. This indicates that the system software is installed, but its network and time settings aren't configured.

    Caution: What is the LCD displaying?

    If you are using Polycom Rack Server R630 or R620 systems and a different message or no message displays on the LCD, stop. Contact Polycom Global Services for assistance.

    ---

    b) Depending on which servers you have, do one of the following:

    - If you are using Polycom Rack Server R630 or R620 systems, connect the GB 1 Ethernet port of the second server to the enterprise network to be used for management (or combined) traffic. For a split network configuration, connect the GB 3 port to the network to be used for signaling traffic.

    - If you are using Polycom Rack Server R220 systems, connect the Port 0 Ethernet port of the second server to the enterprise network to be used for management (or combined) traffic. For a split network configuration, connect the GB 1 port to the network to be used for signaling traffic.

    c) If you are using Polycom Rack Server R630 or R620 systems, connect an Ethernet cable between the GB 2 ports of the two servers.

    If you are using Polycom Rack Server R220 systems, connect an Ethernet cable between the Port 1 ports of the two servers.

    d) Verify that the first server is running and that **DMA Ready** is displayed on its front panel LCD (for Polycom Rack Server R620 or R630 only) .

    For a Polycom Rack Server R220, wait 10 minutes for the system to finish booting.

    e) Turn on (or restart) the second server.

    After the second server boots, it detects the first server, gets its configuration settings from it, and joins the cluster. If the servers are Polycom Rack Server R630 or R620 systems, when done, **DMA Clustered** displays the LCDs of both servers.

> **Caution: What are the LCDs displaying?**
>
> If you are using Polycom Rack Server R630 or R620 systems and **DMA Clustered** does not display on the LCDs, stop. Contact Polycom Global Services for assistance.

---

20. Log back into the system from your browser and complete your system setup.

The tasks required to complete the system configuration are described in the "Polycom DMA System Initial Configuration Summary" section of the online help or the *Polycom RealPresence DMA System Operations Guide*.

> **Caution: Do not unplug a Polycom Rack Server without proper shutdown**
>
> Do not turn off a Polycom Rack Server by unplugging it or otherwise removing power, especially if the system will remain turned off for some time. If a server loses power without being properly shut down, the RAID controller fails to shut down, eventually depleting its battery. If that happens, the server cannot be restarted without user input, requiring a keyboard and monitor.

System Licenses

Once you have finished first time setup, you will need to license your RealPresence DMA system. This process depends on the type of license you have for your product.

- Polycom RealPresence Clariti™ customers who have a Polycom RealPresence Resource Manager system version 10.0 or later must use the RealPresence Resource Manager system to license their product. If you have not deployed a RealPresence Resource Manager system or if you have not upgraded your RealPresence Resource Manager system to version 10.0 or later, you must license your product using the RealPresence Platform Director system version 3.0 or later.

- If you are not a RealPresence Clariti customer, you must use a license file or activation key code to license your product.

License Your System with RealPresence Resource Manager

The RealPresence Resource Manager system must be able to communicate with your RealPresence DMA system so it can be licensed and monitored. After you install your system, you need to add your RealPresence DMA system instance to the RealPresence Resource Manager system to establish communication.

For complete instructions on how to use the RealPresence Resource Manager system, see the *RealPresence Resource Manager System Operations Guide*.

License Your System with RealPresence Platform Director

If your deployment includes a RealPresence Resource Manager system version 10.0 or later, you cannot use the RealPresence Platform Director system to license your product. If you have not deployed a RealPresence Resource Manager system version 10.0 or later, the RealPresence Platform Director system version 3.0 or later is available for download from **Documents and Downloads** at Polycom Support.

The RealPresence Platform Director system must be able to communicate with your RealPresence DMA system so it can be licensed and monitored.

- If you used the RealPresence Platform Director system to deploy your RealPresence DMA system, communication is established automatically.
- If you did not use the RealPresence Platform Director system to install your RealPresence DMA system, you need to add an instance of your system to the RealPresence Platform Director.

For complete instructions on how to use the RealPresence Platform Director system, see the *RealPresence Platform Director System Administrator Guide*.

License Your System with a License File

If you are not a RealPresence Clariti customer, you need to license your RealPresence DMA system using an activation key code or license file. See the *Polycom RealPresence DMA System Operations Guide* for instructions.

Additional Configuration

See the *Polycom RealPresence DMA System Operations Guide* for additional configuration tasks.