



# Cisco Unified Communications Manager TCP and UDP Port Usage

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This chapter provides a list of the TCP and UDP ports that Cisco Unified Communications Manager uses for intracenter connections and for communication with external applications or devices. You will also find important information for the configuration of firewalls, Access Control Lists (ACLs), and quality of service (QoS) on a network when an IP Communications solution is implemented.

- [Cisco Unified Communications Manager TCP and UDP Port Usage Overview, on page 1](#)
- [Port Descriptions, on page 3](#)
- [Port References, on page 16](#)

## Cisco Unified Communications Manager TCP and UDP Port Usage Overview

Cisco Unified Communications Manager TCP and UDP ports are organized into the following categories:

- Intracenter Ports Between Cisco Unified Communications Manager Servers
- Common Service Ports
- Ports Between Cisco Unified Communications Manager and LDAP Directory
- Web Requests From CCMAdmin or CCMUser to Cisco Unified Communications Manager
- Web Requests From Cisco Unified Communications Manager to Phone
- Signaling, Media, and Other Communication Between Phones and Cisco Unified Communications Manager
- Signaling, Media, and Other Communication Between Gateways and Cisco Unified Communications Manager
- Communication Between Applications and Cisco Unified Communications Manager
- Communication Between CTL Client and Firewalls
- Special Ports on HP Servers

See “Port Descriptions” for port details in each of the above categories.



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**Note** Cisco has not verified all possible configuration scenarios for these ports. If you are having configuration problems using this list, contact Cisco technical support for assistance.

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Port references apply specifically to Cisco Unified Communications Manager. Some ports change from one release to another, and future releases may introduce new ports. Therefore, make sure that you are using the correct version of this document for the version of Cisco Unified Communications Manager that is installed.

While virtually all protocols are bidirectional, directionality from the session originator perspective is presumed. In some cases, the administrator can manually change the default port numbers, though Cisco does not recommend this as a best practice. Be aware that Cisco Unified Communications Manager opens several ports strictly for internal use.

Installing Cisco Unified Communications Manager software automatically installs the following network services for serviceability and activates them by default. Refer to “Intracuster Ports Between Cisco Unified Communications Manager Servers” for details:

- Cisco Log Partition Monitoring (To monitor and purge the common partition. This uses no custom common port.)
- Cisco Trace Collection Service (TCTS port usage)
- Cisco RIS Data Collector (RIS server port usage)
- Cisco AMC Service (AMC port usage)

Configuration of firewalls, ACLs, or QoS will vary depending on topology, placement of telephony devices and services relative to the placement of network security devices, and which applications and telephony extensions are in use. Also, bear in mind that ACLs vary in format with different devices and versions.



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**Note** You can also configure Multicast Music on Hold (MOH) ports in Cisco Unified Communications Manager. Port values for multicast MOH are not provided because the administrator specifies the actual port values.

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**Note** The ephemeral port range for the system is 32768 to 61000. For more information, see <http://www.cisco.com/c/en/us/support/security/asa-5500-series-next-generation-firewalls/tsd-products-support-series-home.html>.

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**Note** Make sure that you configure your firewall so that connections to port 22 are open, and are not throttled. During the installation of IM and Presence subscriber nodes, multiple connections to the Cisco Unified Communications Manager publisher node are opened in quick succession. Throttling these connections could lead to a failed installation.

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# Port Descriptions

## Intracuster Ports Between Cisco Unified Communications Manager Servers

*Table 1: Intracuster Ports Between Cisco Unified Communications Manager Servers*

| From (Sender)                        | To (Listener)                        | Destination Port | Purpose   |
|--------------------------------------|--------------------------------------|------------------|---|
| Endpoint                             | Unified Communications Manager       | 514 / UDP        | System logging service  |
| Unified Communications Manager       | Unified Communications Manager       | 443 / TCP        | This port is used for communication between the Unified Communications Manager subscriber and publisher. It is used for the COP file installation on the subscriber node. |
| Unified Communications Manager       | RTMT                                 | 1090, 1099 / TCP | Cisco AMC Service for performance monitoring, collection, logging   |
| Unified Communications Manager (DB)  | Unified Communications Manager (DB)  | 1500, 1501 / TCP | Database connection (TCP is the second connection)  |
| Unified Communications Manager (DB)  | Unified Communications Manager (DB)  | 1510 / TCP       | CAR IDS DB. CAR listens on waiting requests from the  |
| Unified Communications Manager (DB)  | Unified Communications Manager (DB)  | 1511 / TCP       | CAR IDS DB. An used to bring up a instance of CAR upgrade.  |
| Unified Communications Manager (DB)  | Unified Communications Manager (DB)  | 1515 / TCP       | Database replication nodes during installation  |
| Cisco Extended Functions (QRT)       | Unified Communications Manager (DB)  | 2552 / TCP       | Allows subscriber Cisco Unified Communications Manager database notification  |
| Unified Communications Manager       | Unified Communications Manager       | 2551 / TCP       | Intracuster communication between Cisco Extended Services for Active determination  |
| Unified Communications Manager (RIS) | Unified Communications Manager (RIS) | 2555 / TCP       | Real-time Information (RIS) database service  |

## Intracuster Ports Between Cisco Unified Communications Manager Servers

| From (Sender)                                  | To (Listener)                         | Destination Port       | Purpose   |
|--|---------------------------------------|------------------------|---|
| Unified Communications Manager (RTMT/AMC/SOAP) | Unified Communications Manager (RIS)  | 2556 / TCP             | Real-time Information (RIS) database client RIS   |
| Unified Communications Manager (DRS)           | Unified Communications Manager (DRS)  | 4040 / TCP             | DRS Primary Agent   |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (SOAP) | 5001/TCP               | This port is used by S monitor for Real Time Monitoring Service.                                |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (SOAP) | 5002/TCP               | This port is used by S monitor for Performance Monitor Service.                                 |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (SOAP) | 5003/TCP               | This port is used by S monitor for Control C Service.   |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (SOAP) | 5004/TCP               | This port is used by S monitor for Log Coll Service.  |
| Standard CCM Admin Users / Admin               | Unified Communications Manager        | 5005 / TCP             | This port is used by S CDROnDemand2 ser   |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (SOAP) | 5007 / TCP             | SOAP monitor  |
| Unified Communications Manager (RTMT)          | Unified Communications Manager (TCTS) | Ephemeral / TCP        | Cisco Trace Collection Service (TCTS) -- the service for RTMT Tra Log Central (TLC)             |
| Unified Communications Manager (Tomcat)        | Unified Communications Manager (TCTS) | 7000, 7001, 7002 / TCP | This port is used for communication between Trace Collection Tool and Cisco Trace Coll servlet. |
| Unified Communications Manager (DB)            | Unified Communications Manager (CDLM) | 8001 / TCP             | Client database chang notification  |
| Unified Communications Manager (SDL)           | Unified Communications Manager (SDL)  | 8002 / TCP             | Intracuster communi service   |
| Unified Communications Manager (SDL)           | Unified Communications Manager (SDL)  | 8003 / TCP             | Intracuster communi service (to CTI)  |

| From (Sender)                            | To (Listener)                             | Destination Port   | Purpose   |
|--|---|--------------------|---|
| Unified Communications Manager           | CMI Manager                               | 8004 / TCP         | Intracuster communication between Cisco Unified Communications Manager and CMI Manager    |
| Unified Communications Manager (Tomcat)  | Unified Communications Manager (Tomcat)   | 8005 / TCP         | Internal listening for Tomcat shutdown  |
| Unified Communications Manager (Tomcat)  | Unified Communications Manager (Tomcat)   | 8080 / TCP         | Communication between Tomcat used for diagnostic  |
| Gateway                                  | Unified Communications Manager            | 8090               | HTTP Port for communication between CuCM and Gateway (Cayuga interface) Recording feature |
| Unified Communications Manager           | Gateway                                   |                    |   |
| Unified Communications Manager (IPSec)   | Unified Communications Manager (IPSec)    | 8500 / TCP and UDP | Intracuster replication of system data by IPsec Manager                                   |
| Unified Communications Manager (RIS)     | Unified Communications Manager (RIS)      | 8888 - 8889 / TCP  | RIS Service Manager request and reply   |
| Location Bandwidth Manager (LBM)         | Location Bandwidth Manager (LBM)          | 9004 / TCP         | Intracuster communication between LBMs  |
| Unified Communications Manager Publisher | Unified Communications Manager Subscriber | 22 / TCP           | Cisco SFTP service. Open this port when adding new subscriber.                            |
| Unified Communications Manager           | Unified Communications Manager            | 8443 / TCP         | Allows access to CMI - Feature and Network between nodes.                                 |

## Common Service Ports

Table 2: Common Service Ports

| From (Sender)                  | To (Listener)                  | Destination Port | Purpose   |
|--------------------------------|--------------------------------|------------------|---|
| Endpoint                       | Unified Communications Manager | 7                | Internet Control Message Protocol (ICMP) This protocol number carries echo-related traffic. It does not constitute a port as indicated in the column heading. |
| Unified Communications Manager | Endpoint                       |                  |   |

| From (Sender)  | To (Listener)                                | Destination Port               | Purpose   |
|--|--|--------------------------------|---|
| Unified Communications Manager (DRS, Call Detail Record) | SFTP server                                  | 22 / TCP                       | Send the backup data to SFTP server. (DRS Local Agent)<br><br>Send the Call Detail Record data to SFTP server.  |
| Endpoint   | Unified Communications Manager (DHCP Server) | 67 / UDP                       | Cisco Unified Communications Manager acting as a DHCP server<br><br><b>Note</b> Cisco does not recommend running DHCP server on Cisco Unified Communications Manager.   |
| Unified Communications Manager                           | DHCP Server                                  | 68 / UDP                       | Cisco Unified Communications Manager acting as a DHCP client<br><br><b>Note</b> Cisco does not recommend running DHCP client on Cisco Unified Communications Manager. Configure Cisco Unified Communications Manager with static IP addresses instead.) |
| Endpoint or Gateway                                      | Unified Communications Manager               | 69, 6969, then Ephemeral / UDP | TFTP service to phones and gateways   |
| Endpoint or Gateway                                      | Unified Communications Manager               | 6970 / TCP                     | TFTP between primary and proxy servers.<br><br>HTTP service from the TFTP server to phones and gateways.  |
| Unified Communications Manager                           | NTP Server                                   | 123 / UDP                      | Network Time Protocol (NTP)   |
| SNMP Server  | Unified Communications Manager               | 161 / UDP                      | SNMP service response (requests from management applications)   |

| From (Sender)                                    | To (Listener)                       | Destination Port | Purpose  |
|--|-------------------------------------|------------------|--|
| CUCM Server SNMP<br>Primary Agent application    | SNMP trap destination               | 162 / UDP        | SNMP traps   |
| SNMP Server                                      | Unified Communications<br>Manager   | 199 / TCP        | built-in SNMP agent listening<br>port for SMUX support   |
| Unified Communications<br>Manager                | DHCP Server                         | 546 / UDP        | DHCPv6. DHCP port for IPv6.  |
| Unified Communications<br>Manager Serviceability | Location Bandwidth<br>Manager (LBM) | 5546 / TCP       | Enhanced Location CAC<br>Serviceability  |
| Unified Communications<br>Manager                | Location Bandwidth<br>Manager (LBM) | 5547 / TCP       | Call Admission requests and<br>bandwidth deductions  |
| Unified Communications<br>Manager                | Unified Communications<br>Manager   | 6161 / UDP       | Used for communication<br>between Primary Agent and<br>Native Agent to process Native<br>agent MIB requests                    |
| Unified Communications<br>Manager                | Unified Communications<br>Manager   | 6162 / UDP       | Used for communication<br>between Primary Agent and<br>Native Agent to forward<br>notifications generated from<br>Native Agent |
| Centralized TFTP                                 | Alternate TFTP                      | 6970 / TCP       | Centralized TFTP File Locator<br>Service   |
| Unified Communications<br>Manager                | Unified Communications<br>Manager   | 7161 / TCP       | Used for communication<br>between SNMP Primary Agent<br>and subagents  |
| SNMP Server                                      | Unified Communications<br>Manager   | 7999 / TCP       | Cisco Discovery Protocol (CDP)<br>agent communicates with CDP<br>executable  |
| Endpoint   | Unified Communications<br>Manager   | 443, 8443 / TCP  | Used for Cisco User Data<br>Services (UDS) requests  |
| Unified Communications<br>Manager                | Unified Communications<br>Manager   | 9050 / TCP       | Service CRS requests through<br>the TAPS residing on Cisco<br>Unified Communications<br>Manager                                |

| From (Sender)                  | To (Listener)                  | Destination Port | Purpose   |
|--------------------------------|--------------------------------|------------------|---|
| Unified Communications Manager | Unified Communications Manager | 61441 / UDP      | Cisco Unified Communications Manager applications send out alarms to this port through UDP. Cisco Unified Communications Manager MIB agent listens on this port and generates SNMP traps per Cisco Unified Communications Manager MIB definition. |
| Unified Communications Manager | Unified Communications Manager | 5060, 5061 / TCP | Provide trunk-based SIP services  |
| Unified Communications Manager | Unified Communications Manager | 7501             | Used by Intercluster Lookup Service (ILS) for certificate based authentication.   |
| Unified Communications Manager | Unified Communications Manager | 7502             | Used by ILS for password-based authentication.  |
| Unified Communications Manager | Unified Communications Manager | 9966             | Used by Cisco push notification service to communicate between the nodes in the cluster when firewall is enabled.   |
| --                             | --                             | 8000-48200       | ASR and ISR G3 platforms default port range.  |
|                                |                                | 16384-32766      | ISR G2 platform default port range.   |

## Ports Between Cisco Unified Communications Manager and LDAP Directory

Table 3: Ports Between Cisco Unified Communications Manager and LDAP Directory

| From (Sender)                  | To (Listener)                  | Destination Port           | Purpose   |
|--------------------------------|--------------------------------|----------------------------|---|
| Unified Communications Manager | External Directory             | 389, 636, 3268, 3269 / TCP | Lightweight Directory Access Protocol (LDAP) query to external directory (Active Directory, Netscape Directory) |
| External Directory             | Unified Communications Manager | Ephemeral                  |   |



## Web Requests From CCMAAdmin or CCMUser to Cisco Unified Communications Manager

*Table 4: Web Requests From CCMAAdmin or CCMUser to Cisco Unified Communications Manager*

| From (Sender) | To (Listener)                  | Destination Port | Purpose                                      |
|---------------|--------------------------------|------------------|--|
| Browser       | Unified Communications Manager | 80, 8080 / TCP   | Hypertext Transfer Protocol (HTTP)           |
| Browser       | Unified Communications Manager | 443, 8443 / TCP  | Hypertext Transfer Protocol over SSL (HTTPS) |

## Web Requests From Cisco Unified Communications Manager to Phone

*Table 5: Web Requests From Cisco Unified Communications Manager to Phone*

| From (Sender)   | To (Listener) | Destination Port | Purpose                            |
|---|---------------|------------------|------------------------------------|
| Unified Communications Manager <ul style="list-style-type: none"> <li>• QRT</li> <li>• RTMT</li> <li>• Find and List Phones page</li> <li>• Phone Configuration page</li> </ul> | Phone         | 80 / TCP         | Hypertext Transfer Protocol (HTTP) |

## Signaling, Media, and Other Communication Between Phones and Cisco Unified Communications Manager

Table 6: Signaling, Media, and Other Communication Between Phones and Cisco Unified Communications Manager

| From (Sender)                  | To (Listener)                         | Destination Port         | Purpose   |
|--------------------------------|---------------------------------------|--------------------------|---|
| Phone                          | DNS server                            | 53/ TCP                  | <p>Session Initiation Protocol (SIP) phones resolve the Fully Qualified Domain Name (FQDN) using a Domain Name System (DNS)</p> <p><b>Note</b> By default, some wireless access points block TCP 53 port, which prevents wireless SIP phones from registering when CUCM is configured using FQDN.</p> |
| Phone                          | Unified Communications Manager (TFTP) | 69, then Ephemeral / UDP | Trivial File Transfer Protocol (TFTP) used to download firmware and configuration files   |
| Phone                          | Unified Communications Manager        | 2000 / TCP               | Skinny Client Control Protocol (SCCP)   |
| Phone                          | Unified Communications Manager        | 2443 / TCP               | Secure Skinny Client Control Protocol (SCCPS)   |
| Phone                          | Unified Communications Manager        | 2445 / TCP               | Provide trust verification service to endpoints.  |
| Phone                          | Unified Communications Manager (CAPF) | 3804 / TCP               | Certificate Authority Proxy Function (CAPF) listening port for issuing Locally Significant Certificates (LSCs) to IP phones   |
| Phone                          | Unified Communications Manager        | 5060 / TCP and UDP       | Session Initiation Protocol (SIP) phone   |
| Unified Communications Manager | Phone                                 |                          |   |

| From (Sender)                  | To (Listener)                         | Destination Port      | Purpose  |
|--------------------------------|---------------------------------------|-----------------------|--|
| Phone                          | Unified Communications Manager        | 5061 TCP              | Secure Session Initiation Protocol (SIPS) phone  |
| Unified Communications Manager | Phone                                 |                       |  |
| Phone                          | Unified Communications Manager (TFTP) | 6970 TCP              | HTTP-based download of firmware and configuration files  |
| Phone                          | Unified Communications Manager (TFTP) | 6971, 6972 / TCP      | HTTPS interface to TFTP. Phones use this port to download a secure configuration file from TFTP.   |
| Phone                          | Unified Communications Manager        | 8080 / TCP            | Phone URLs for XML applications, authentication, directories, services, and so on. You can configure these ports on a per-service basis. |
| Phone                          | Unified Communications Manager        | 9443 / TCP            | Phone use this port for authenticated contact search.  |
| Phone                          | Unified Communications Manager        | 9444                  |  |
| iPhone/iPad (Webex App)        | Unified Communications Manager        | 9560/Secure WebSocket | Webex App uses this port number for the LPNS feature.  |
| IP VMS                         | Phone                                 | 16384 - 32767 / UDP   | Real-Time Protocol (RTP), Secure Real-Time Protocol (SRTP)   |
| Phone                          | IP VMS                                |                       |  |
|                                |                                       |                       | <b>Note</b> Cisco Unified Communications Manager only uses 24576-32767 although other devices use the full range.                        |

## Signaling, Media, and Other Communication Between Gateways and Cisco Unified Communications Manager

*Table 7: Signaling, Media, and Other Communication Between Gateways and Cisco Unified Communications Manager*

| From (Sender)  | To (Listener)                         | Destination Port         | Purpose   |
|--|---------------------------------------|--------------------------|---|
| Gateway  | Unified Communications Manager        | 47, 50, 51               | Generic Routing Encapsulation (GRE), Encapsulating Security Payload (ESP), Authentication Header (AH). These ports carry encrypted traffic. They do not carry port as indicated in the heading. |
| Unified Communications Manager   | Gateway                               |                          |   |
| Gateway  | Unified Communications Manager        | 500 / UDP                | Internet Key Exchange for IP Security protocol establishment  |
| Unified Communications Manager   | Gateway                               |                          |   |
| Gateway  | Unified Communications Manager (TFTP) | 69, then Ephemeral / UDP | Trivial File Transfer Protocol (TFTP)   |
| Unified Communications Manager with Cisco Intercompany Media Engine (CIME) trunk | CIME ASA                              | 1024-65535 / TCP         | Port mapping service in the CIME off-path deployment model.   |
| Gatekeeper   | Unified Communications Manager        | 1719 / UDP               | Gatekeeper (H.225) F  |
| Gateway  | Unified Communications Manager        | 1720 / TCP               | H.225 signaling service for H.323 gateways and H.323 Trunk (ICT)  |
| Unified Communications Manager   | Gateway                               |                          |   |
| Gateway  | Unified Communications Manager        | Ephemeral / TCP          | H.225 signaling service for gatekeeper-controlled   |
| Unified Communications Manager   | Gateway                               |                          |   |

| From (Sender)                  | To (Listener)                  | Destination Port   | Purpose   |
|--------------------------------|--------------------------------|--------------------|---|
| Gateway                        | Unified Communications Manager | Ephemeral / TCP    | H.245 signaling session establishing voice data   |
| Unified Communications Manager | Gateway                        |                    | <p><b>Note</b> The H.245 signaling session is used by the system to establish the type of gateway.</p> <p>For IP gateways, the H.245 signaling session range is 11000-11001.</p>                      |
| Gateway                        | Unified Communications Manager | 2000 / TCP         | Skinny Client Control Protocol (SCCP)   |
| Gateway                        | Unified Communications Manager | 2001 / TCP         | Upgrade port for 6.x deployments with Cisco Unified Communications Manager  |
| Gateway                        | Unified Communications Manager | 2002 / TCP         | Upgrade port for 6.x deployments with Cisco Unified Communications Manager  |
| Gateway                        | Unified Communications Manager | 2427 / UDP         | Media Gateway Control Protocol (MGCP) control   |
| Gateway                        | Unified Communications Manager | 2428 / TCP         | Media Gateway Control Protocol (MGCP)   |
| --                             | --                             | 4000 - 4005 / TCP  | These ports are used for Real-Time Transport Protocol (RTP) and Real-Time Control Protocol (RTCP) for audio, video and data channel when Cisco Unified Communications Manager does not have ports for |
| Gateway                        | Unified Communications Manager | 5060 / TCP and UDP | Session Initiation Protocol (SIP) gateway and Inter-Office Telephony (IOT)  |
| Unified Communications Manager | Gateway                        |                    |   |

| From (Sender)                  | To (Listener)                  | Destination Port    | Purpose   |
|--------------------------------|--------------------------------|---------------------|---|
| Gateway                        | Unified Communications Manager | 5061 / TCP          | Secure Session Initiation Protocol (SIPS) gateway<br>Intercluster Trunk (IC)  |
| Unified Communications Manager | Gateway                        |                     |   |
| Gateway                        | Unified Communications Manager | 16384 - 32767 / UDP | Real-Time Protocol (RTP)<br>Secure Real-Time Protocol (SRTP)<br><br><b>Note</b> Cisco Unified Communications Manager 24576-32767, although devices use full range |
| Unified Communications Manager | Gateway                        |                     |   |

## Communication Between Applications and Cisco Unified Communications Manager

Table 8: Communication Between Applications and Cisco Unified Communications Manager

| From (Sender)                                    | To (Listener)                               | Destination Port | Purpose   |
|--|---|------------------|---|
| CTL Client                                       | Unified Communications Manager CTL Provider | 2444 / TCP       | Certificate Trust List provider listening server Cisco Unified Communications Manager |
| Cisco Unified Communications App                 | Unified Communications Manager              | 2748 / TCP       | CTI application server  |
| Cisco Unified Communications App                 | Unified Communications Manager              | 2749 / TCP       | TLS connection between applications (JTAPI/CTIManager)                                |
| Cisco Unified Communications App                 | Unified Communications Manager              | 2789 / TCP       | JTAPI application server  |
| Unified Communications Manager Assistant Console | Unified Communications Manager              | 2912 / TCP       | Cisco Unified Communications Manager Assistant Console (formerly IPMA)                |
| Unified Communications Manager Attendant Console | Unified Communications Manager              | 1103 -1129 / TCP | Cisco Unified Communications Manager Attendant Console (AC) JAVA RMI Registry server  |

| From (Sender)                                    | To (Listener)                                | Destination Port   | Purpose   |
|--|--|--|---|
| Unified Communications Manager Attendant Console | Unified Communications Manager               | 1101 / TCP   | RMI server sends messages to client ports.  |
| Unified Communications Manager Attendant Console | Unified Communications Manager               | 1102 / TCP   | Attendant Console server bind port -- sends RMI messages to client ports.   |
| Unified Communications Manager Attendant Console | Unified Communications Manager               | 3223 / UDP   | Cisco Unified Communications Manager Attendant Console (AC) server line server receives ping and message from, and states to, the attendant console server.                               |
| Unified Communications Manager Attendant Console | Unified Communications Manager               | 3224 / UDP   | Cisco Unified Communications Manager Attendant Console (AC) clients register with AC server for line state information.   |
| Unified Communications Manager Attendant Console | Unified Communications Manager               | 4321 / UDP   | Cisco Unified Communications Manager Attendant Console (AC) clients register with server for call control.  |
| Unified Communications Manager with SAF/CCD      | IOS Router running SAF image                 | 5050 / TCP   | Multi-Service IOS running EIGRP/SAF   |
| Unified Communications Manager                   | Cisco Intercompany Media Engine (IME) Server | 5620 / TCP<br><br>Cisco recommends a value of 5620 for this port, but you can change the value by executing the add ime vapserver or set ime vapserver port CLI command on the Cisco IME server. | VAP protocol used to communicate to the Intercompany Media Engine server.   |
| Cisco Unified Communications Manager App         | Unified Communications Manager               | 8443 / TCP   | AXL / SOAP API programmatic real-time writes to the Cisco Unified Communications Manager database that third-party applications such as billing or telephony management applications use. |

## Communication Between CTL Client and Firewalls

*Table 9: Communication Between CTL Client and Firewalls*

| From (Sender) | To (Listener)    | Destination Port | Purpose   |
|---------------|------------------|------------------|---|
| CTL Client    | TLS Proxy Server | 2444 / TCP       | Certificate Trust List provider listening ser<br>ASA firewall |

## Communication Between Cisco Smart Licensing Service and Cisco Smart Software Manager

Cisco Smart Licensing Service in Unified Communications Manager sets up direct communication with Cisco Smart Software Manager through Call Home.

*Table 10: Communication Between Cisco Smart Licensing Service and Cisco Smart Software Manager*

| From (Sender)  | To (Listener)                       | Destination Port | Purpose  |
|--|-------------------------------------|------------------|--|
| Unified Communications Manager (Cisco Smart Licensing Service) | Cisco Smart Software Manager (CSSM) | 443 / HTTPS      | Smart Licensing Service sends the license usage to CSSM to check whether Unified CM is a complaint or not. |

## Special Ports on HP Servers

*Table 11: Special Ports on HP Servers*

| From (Sender) | To (Listener)           | Destination Port          | Purpose                            |
|---------------|-------------------------|---------------------------|------------------------------------|
| Endpoint      | HP SIM                  | 2301 / TCP                | HTTP port to HP ag                 |
| Endpoint      | HP SIM                  | 2381 / TCP                | HTTPS port to HP ag                |
| Endpoint      | Compaq Management Agent | 25375, 25376, 25393 / UDP | COMPAQ Managem<br>extension (cmaX) |
| Endpoint      | HP SIM                  | 50000 - 50004 / TCP       | HTTPS port to HP SI                |

## Port References

### Firewall Application Inspection Guides

ASA Series reference information



<http://www.cisco.com/c/en/us/support/security/asa-5500-series-next-generation-firewalls/tsd-products-support-series-home.html>

PIX Application Inspection Configuration Guides

<http://www.cisco.com/c/en/us/support/security/pix-firewall-software/products-installation-and-configuration-guides-list.html>

FWSM 3.1 Application Inspection Configuration Guide

[http://www-author.cisco.com/c/en/us/td/docs/security/fwsm/fwsm31/configuration/guide/fwsm\\_cfg/inspct\\_f.html](http://www-author.cisco.com/c/en/us/td/docs/security/fwsm/fwsm31/configuration/guide/fwsm_cfg/inspct_f.html)

## IETF TCP/UDP Port Assignment List

Internet Assigned Numbers Authority (IANA) IETF assigned Port List

<http://www.iana.org/assignments/port-numbers>

## IP Telephony Configuration and Port Utilization Guides

Cisco CRS 4.0 (IP IVR and IPCC Express) Port Utilization Guide

[http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html)

Port Utilization Guide for Cisco ICM/IPCC Enterprise and Hosted Editions

[http://www.cisco.com/en/US/products/sw/custcosw/ps1001/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1001/products_installation_and_configuration_guides_list.html)

Cisco Unified Communications Manager Express Security Guide to Best Practices

[http://www.cisco.com/en/US/netsol/ns340/ns394/ns165/ns391/networking\\_solutions\\_design\\_guidance09186a00801f8e30.html](http://www.cisco.com/en/US/netsol/ns340/ns394/ns165/ns391/networking_solutions_design_guidance09186a00801f8e30.html)

Cisco Unity Express Security Guide to Best Practices

[http://www.cisco.com/en/US/netsol/ns340/ns394/ns165/ns391/networking\\_solutions\\_design\\_guidance09186a00801f8e31.html#wp41149](http://www.cisco.com/en/US/netsol/ns340/ns394/ns165/ns391/networking_solutions_design_guidance09186a00801f8e31.html#wp41149)

## VMware Port Assignment List

TCP and UDP Ports for vCenter Server, ESX hosts, and Other Network Components Management Access

