Port Usage Information for the IM and Presence Service

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IM and Presence Service Port Usage Overview

This document provides a list of the TCP and UDP ports that the IM and Presence Service uses for intracluster connections and for communications with external applications or devices. It provides 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.

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.

While virtually all protocols are bidirectional, this document gives directionality from the session originator perspective. 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 the IM and Presence Service opens several ports strictly for internal use.

Ports in this document apply specifically to the IM and Presence Service. 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 IM and Presence Service that is installed.

Configuration of firewalls, ACLs, or QoS will vary depending on topology, placement of 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.

Information Collated in Table

This table defines the information collated in each of the tables in this document.

Table 1: Definition of Table Information

Table Heading	Description
From	The client sending requests to this port
To	The client receiving requests on this port
Role	A client or server application or process
Protocol	Either a Session-layer protocol used for establishing and ending communications, or an Application-layer protocol used for request and response transactions
Transport Protocol	A Transport-layer protocol that is connection-oriented (TCP) or connectionless (UDP)
Destination / Listener	The port used for receiving requests
Source / Sender	The port used for sending requests

IM and Presence Service Port List

The following tables show the ports that the IM and Presence Service uses for intracluster and intercluster traffic.

Table 2: IM and Presence Service Ports - SIP Proxy Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
SIP Gateway --- IM and Presence	IM and Presence --- SIP Gateway	SIP	TCP/UDP	5060	Ephemeral	Default SIP Proxy UDP and TCP Listener
SIP Gateway	IM and Presence	SIP	TLS	5061	Ephemeral	TLS Server Authentication listener port
IM and Presence	IM and Presence	SIP	TLS	5062	Ephemeral	TLS Mutual Authentication listener port
IM and Presence	IM and Presence	SIP	UDP / TCP	5049	Ephemeral	Internal port. Localhost traffic only.
IM and Presence	IM and Presence	HTTP	TCP	8081	Ephemeral	Used for HTTP requests from the Config Agent to indicate a change in configuration.

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Third-party Client	IM and Presence	HTTP	TCP	8082	Ephemeral	Default IM and Presence HTTP Listener. Used for Third-Party Clients to connect
Third-party Client	IM and Presence	HTTPS	TLS / TCP	8083	Ephemeral	Default IM and Presence HTTPS Listener. Used for Third-Party Clients to connect

Table 3: IM and Presence Service Ports - Presence Engine Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	IM and Presence (Presence Engine)	SIP	UDP / TCP	5080	Ephemeral	Default SIP UDP/TCP Listener port
IM and Presence (Presence Engine)	IM and Presence (Presence Engine)	Livebus	UDP	50000	Ephemeral	Internal port. Localhost traffic only. LiveBus messaging port. The IM and Presence Service uses this port for cluster communication.

Table 4: IM and Presence Service Ports - Cisco Tomcat WebRequests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Browser	IM and Presence	HTTPS	TCP	8080	Ephemeral	Used for web access
Browser	IM and Presence	AXL / HTTPS	TLS / TCP	8443	Ephemeral	Provides database and serviceability access via SOAP
Browser	IM and Presence	HTTPS	TLS / TCP	8443	Ephemeral	Provides access to Web administration
Browser	IM and Presence	HTTPS	TLS / TCP	8443	Ephemeral	Provides access to User option pages

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Browser	IM and Presence	SOAP	TLS / TCP	8443	Ephemeral	Provides access to Cisco Unified Personal Communicator, Cisco Unified Mobility Advantage, and third-party API clients via SOAP

Table 5: IM and Presence Service Ports - External Corporate Directory Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence --- External Corporate Directory	External Corporate Directory --- IM and Presence	LDAP	TCP	389	Ephemeral	Allows the Directory protocol to integrate with the external Corporate Directory. The LDAP port depends on the Corporate Directory (389 is the default). In case of Netscape Directory, customer can configure different port to accept LDAP traffic.
IM and Presence	External Corporate Directory	LDAPS	TCP	636	Ephemeral	Allows the Directory protocol to integrate with the external Corporate Directory. LDAP port depends on the Corporate Directory (636 is the default).

Table 6: IM and Presence Service Ports - Configuration Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (Config Agent)	IM and Presence (Config Agent)	TCP	TCP	8600	Ephemeral	Config Agent heartbeat port

Table 7: IM and Presence Service Ports - Certificate Manager Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	Certificate Manager	TCP	TCP	7070	Ephemeral	Internal port - Localhost traffic only

Table 8: IM and Presence Service Ports - IDS Database Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (Database)	IM and Presence (Database)	TCP	TCP	1500	Ephemeral	Internal IDS port for Database clients. Localhost traffic only.
IM and Presence (Database)	IM and Presence (Database)	TCP	TCP	1501	Ephemeral	Internal port - this is an alternate port to bring up a second instance of IDS during upgrade. Localhost traffic only.
IM and Presence (Database)	IM and Presence (Database)	XML	TCP	1515	Ephemeral	Internal port. Localhost traffic only. DB replication port

Table 9: IM and Presence Service Ports - IPSec Manager Request

From Sender	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (IPSec)	IM and Presence (IPSec)	Proprietary	UDP/TCP	8500	8500	Internal port - cluster manager port used by the ipsec_mgr daemon for cluster replication of platform data (hosts) certs

Table 10: IM and Presence Service Ports - DRF Master Agent Server Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (DRF)	IM and Presence (DRF)	TCP	TCP	4040	Ephemeral	DRF Master Agent server port, which accepts connections from Local Agent, GUI, and CLI

Table 11: IM and Presence Service Ports - RISDC Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (RIS)	IM and Presence (RIS)	TCP	TCP	2555	Ephemeral	Real-time Information Services (RIS) database server. Connects to other RISDC services in the cluster to provide clusterwide real-time information
IM and Presence (RTMT/AMC/ SOAP)	IM and Presence (RIS)	TCP	TCP	2556	Ephemeral	Real-time Information Services (RIS) database client for Cisco RIS. Allows RIS client connection to retrieve real-time information
IM and Presence (RIS)	IM and Presence (RIS)	TCP	TCP	8889	8888	Internal port. Localhost traffic only. Used by RISDC (System Access) to link to servM via TCP for service status request and reply

Table 12: IM and Presence Service Ports - SNMP Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
SNMP Server	IM and Presence	SNMP	UDP	161, 8161	Ephemeral	Provides services for SNMP-based management applications
IM and Presence	IM and Presence	SNMP	UDP	6162	Ephemeral	Native SNMP agent that listens for requests forwarded by SNMP master agents
IM and Presence	IM and Presence	SNMP	UDP	6161	Ephemeral	SNMP Master agent that listens for traps from the native SNMP agent, and forwards to management applications
SNMP Server	IM and Presence	TCP	TCP	7999	Ephemeral	Used as a socket for the cdp agent to communicate with the cdp binary

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	IM and Presence	TCP	TCP	7161	Ephemeral	Used for communication between the SNMP Master agent and subagents
IM and Presence	SNMP Trap Monitor	SNMP	UDP	162	Ephemeral	Sends SNMP traps to management applications
IM and Presence	IM and Presence	SNMP	UDP	Configurable	61441	Internal SNMP trap receiver

Table 13: IM and Presence Service Ports - Racoon Server Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Gateway --- IM and Presence	IM and Presence --- Gateway	Ipsec	UDP	500	Ephemeral	Enables Internet Security Association and the KeyManagement Protocol

Table 14: IM and Presence Service Ports - System Service Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (RIS)	IM and Presence (RIS)	XML	TCP	8888 and 8889	Ephemeral	Internal port. Localhost traffic only. Used to listen to clients communicating with the RIS Service Manager (servM).

Table 15: IM and Presence Service Ports - DNS Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	DNS Server	DNS	UDP	53	Ephemeral	The port that DNS server listen on for IM and Presence DNS queries. To: DNS Server | From: IM and Presence

Table 16: IM and Presence Service Ports - SSH/SFTP Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	Endpoint	SSH / SFTP	TCP	22	Ephemeral	Used by many applications to get command line access to the server. Also used between nodes for certificate and other file exchanges (sftp)

Table 17: IM and Presence Service Ports - ICMP Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence --- Cisco Unified Communications Manager	Cisco Unified Communications Manager --- IM and Presence	ICMP	IP	Not Applicable	Ephemeral	Internet Control Message Protocol (ICMP). Used to communicate with the Cisco Unified Communications Manager server

Table 18: IM and Presence Service Ports - NTP Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	NTP Server	NTP	UDP	123	Ephemeral	Cisco Unified Communications Manager is the acting NTP server. Used by subscriber nodes to synchronize time with the publisher node.

Table 19: IM and Presence Service Ports - Microsoft Exchange Notify Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Microsoft Exchange	IM and Presence	HTTP (HTTPu)	) WebDAV - HTTP /UDP/IP notifications 2) EWS - HTTP/TCP /IP SOAP notifications	IM and Presence server port (default 50020)	Ephemeral	Microsoft Exchange uses this port to send notifications (using NOTIFY message) to indicate a change to a particular subscription identifier for calendar events. Used to integrate with any Exchange server in the network configuration. Both ports are created. The kind of messages that are sent depend on the type of Calendar Presence Backend gateway(s) that are configured.

Table 20: IM and Presence Service Ports - SOAP Services Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (Tomcat)	IM and Presence (SOAP)	TCP	TCP	5007	Ephemeral	SOAP monitor port

Table 21: IM and Presence Service Ports - AMC RMI Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	RTMT	TCP	TCP	1090	Ephemeral	AMC RMI Object port. Cisco AMC Service for RTMT performance monitors, data collection, logging, and alerting.
IM and Presence	RTMT	TCP	TCP	1099	Ephemeral	AMC RMI Registry port. Cisco AMC Service for RTMT performance monitors, data collection, logging, and alerting.

Table 22: IM and Presence Service Ports - XCP Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
XMPP Client	IM and Presence	TCP	TCP	5222	Ephemeral	Client access port
IM and Presence	IM and Presence	TCP	TCP	5269	Ephemeral	Server to Server connection (S2S) port
Third-party BOSH client	IM and Presence	TCP	TCP	5280	Ephemeral	HTTP listening port used by the XCP Web Connection Manager for BOSH third-party API connections
IM and Presence (XCP Services)	IM and Presence (XCP Router	TCP	TCP	7400	Ephemeral	XCP Router Master Accept Port. XCP services that connect to the router from an Open Port Configuration (for example XCP Authentication Component Service) typically connect on this port.
IM and Presence (XCP Router	IM and Presence (XCP Router	UDP	UDP	5353	Ephemeral	MDNS port. XCP routers in a cluster use this port to discover each other.
IM and Presence (XCP Router	IM and Presence (XCP Router	TCP	TCP	7336	HTTPS	MFT File transfer (On-Premises only).

Table 23: IM and Presence Service Ports - External Database Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	PostgreSQL database	TCP	TCP	5432[1]	Ephemeral	PostgreSQL database listening port
IM and Presence	Oracle database	TCP	TCP	1521	Ephemeral	Oracle database listening port
IM and Presenc	MSSQL database	TCP	TCP	1433	Ephemeral	MSSQL database listening port

[1] This is the default port, however you can configure the PostgreSQL database to listen on any port.

Table 24: IM and Presence Service Ports - High Availability Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (Server Recovery Manager)	IM and Presence (Server Recovery Manager)	TCP	TCP	20075	Ephemeral	The port that Cisco Server Recovery Manager uses to provide admin rpc requests.
IM and Presence (Server Recovery Manager)	IM and Presence (Server Recovery Manager)	UDP	UDP	21999	Ephemeral	The port that Cisco Server Recovery Manager uses to communicate with its peer.

Table 25: IM and Presence Service Ports - In Memory Database Replication Messages

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	IM and Presence	Proprietary	TCP	9003	Ephemeral	Cisco Presence Datastore dual node subcluster replication.
IM and Presence	IM and Presence	Proprietary	TCP	9004	Ephemeral	Cisco Login Datastore dual node subcluster replication.
IM and Presence	IM and Presence	Proprietary	TCP	9005	Ephemeral	Cisco SIP Registration Datastore dual node subcluster replication.

Table 26: IM and Presence Service Ports - In Memory Database SQL Messages

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	IM and Presence	Proprietary	TCP	6603	Ephemeral	Cisco Presence Datastore SQL Queries.
IM and Presence	IM and Presence	Proprietary	TCP	6604	Ephemeral	Cisco Login Datastore SQL Queries.
IM and Presence	IM and Presence	Proprietary	TCP	6605	Ephemeral	Cisco SIP Registration Datastore SQL Queries.
IM and Presence	IM and Presence	Proprietary	TCP	6606	Ephemeral	Cisco Route Datastore SQL Queries.

Table 27: IM and Presence Service Ports - In Memory Database Notification Messages

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence	IM and Presence	Proprietary	TCP	6607	Ephemeral	Cisco Presence Datastore XML-based change notification.
IM and Presence	IM and Presence	Proprietary	TCP	6608	Ephemeral	Cisco Login Datastore XML-based change notification.
IM and Presence	IM and Presence	Proprietary	TCP	6609	Ephemeral	Cisco SIP Registration Datastore XML-based change notification.
IM and Presence	IM and Presence	Proprietary	TCP	6610	Ephemeral	Cisco Route Datastore XML-based change notification.

Table 28: IM and Presence Service Ports - Force Manual Sync/X.509 Certificate Update Requests

From (Sender)	To (Listener)	Protocol	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence (Intercluster Sync Agent)	IM and Presence (Intercluster Sync Agent)	TCP	TCP	37239	Ephemeral	Cisco Intercluster Sync Agent service uses this port to establish a socket connection for handling commands.

Table 29: IM and Presence Service Ports - ICMP Requests

From (Sender)	To (Listener)	Destination Port	Purpose
Endpoint/IM and Presence	IM and Presence	7	Internet Control Mess Protocol (ICMP) This number carries echo- traffic. It does not co port as indicated in th heading.
IM and Presence	Endpoint/IM and Presence		

Table 30: Ports used for IM and Presence - Cisco Unified CM communication and IM and Presence Publisher - Subscriber communication

From (Sender)	To (Listener)	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	1500	Bi-directional	Internal ID port for Database clients. Localhost traffic only.

From (Sender)	To (Listener)	Transport Protocol	Destination / Listener	Source / Sender	Remarks
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	8443	Bi-directional	Provides access to Web administration.
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	1090	Bi-directional	AMC RMI Object port. Cisco AMC Service for RTMT performance monitors, data collection, logging, and alerting.
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	2555	Bi-directional	Bi-directional Real-time Information Services (RIS) database server. Connects to other RISDC services in the cluster to provide clusterwide real-time information.
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	8500	Bi-directional	Internal port - cluster manager port used by the ipsec_mgr daemon for cluster replication of platform data (hosts) certificates.
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	8600	Bi-directional	Config Agent heartbeat port
Cisco Unified Communications Manager	IM and Presence Publisher	UDP	123	Bi-directional	Network Time Protocol(NTP) used for time synchronization.
IM and Presence Publisher	IM and Presence Subscriber	UDP	50000	Bi-directional	Internal port. Localhost traffic only. LiveBus messaging port. TheIM and PresenceService uses this port for cluster communication.
IM and Presence Publisher	IM and Presence Subscriber	UDP	21999	Bi-directional	The port that Cisco Server Recovery Manager uses to communicate with its peer.
IM and Presence Publisher	Cisco Unified Communications Manager	TCP	4040	Bi-directional	DRF Master Agent server port that accepts connections from Local Agent, GUI, and CLI.

From (Sender)	To (Listener)	Transport Protocol	Destination / Listener	Source / Sender	Remarks
IM and Presence Publisher	Cisco Unified Communications Manager	TCP	8001	Bi-directional	Used while configuring persistent chat.
IM and Presence Publisher	Cisco Unified Communications Manager	TCP	6379	Bi-directional	Used while configuring managed file transfer (MFT).
IM and Presence Publisher	IM and Presence Subscriber	TCP	7	Bi-directional	Used while configuring external database (MSSQL).
IM and Presence Publisher	IM and Presence Subscriber	TCP	20075	Bi-directional	The port that Cisco Server Recovery Manager uses to provide admin RPC requests.
IM and Presence Publisher	IM and Presence Subscriber	TCP	8600	Bi-directional	Config Agent heartbeat port
IM and Presence Subscriber	IM and Presence Publisher	TCP	9005	Bi-directional	Cisco SIP Registration Datastore dual node presence redundancy group replication.
IM and Presence Subscriber	IM and Presence Publisher	TCP	9003	Bi-directional	Cisco Presence Datastore dual node presence redundancy group replication.
IM and Presence Subscriber	IM and Presence Publisher	TCP	20075	Bi-directional	The port that Cisco Server Recovery Manager uses to provide admin RPC requests.
IM and Presence Subscriber	IM and Presence Publisher	TCP	9004	Bi-directional	Cisco Login Datastore dual node presence redundancy group replication.
Cisco Unified Communications Manager	IM and Presence Publisher	TCP	5070	Bi-directional	Used on a call configuration
IM and Presence Publisher	IM and Presence Subscriber	TCP	44000	Bi-directional	Used on a call configuration

Table 31: On-a-call_Presence

From (Sender)	To (Listener)	Source Port	Destination Port	Protocol	Remarks
Cisco Unified Communications Manager	IM and Presence Publisher	[37240 – 61000]	5070	TCP	
IM and Presence Publisher	XMPP client (Jabber)	5222	64846	TCP	Client Access Port
IM and Presence Publisher	XMPP client (Jabber)	5222	56361	TCP	Client Access Port

Table 32: MS-SQL DB Configuration

From (Sender)	To (Listener)	Source Port	Destination Port	Protocol
IM and Presence Publisher	Database	[37240 – 61000]	7	TCP

Table 33: MS-SQL Persistent Chat Configuration

From (Sender)	To (Listener)	Source Port	Destination Port	Protocol
IM and Presence Publisher	Database	37240 – 61000	1433	TCP

Table 34: Managed File Transfer (MFT) Configuration

From (Sender)	To (Listener)	Source Port	Destination Port	Protocol
IM and Presence Publisher	External File Server	37240 – 61000	7	TCP
IM and Presence Publisher	External File Server	37240 – 61000	22	TCP
IM and Presence Publisher	External File Server	37240 – 61000	5432	TCP
IM and Presence Publisher	Database	54288 - 54292	5432	TCP

See the *Cisco Unified Serviceability Administration Guide* for information about SNMP.