

Cisco CMX Network Protocols and Port Matrix

The following table lists the ports that Cisco CMX uses for communicating with wireless clients, controllers, Cisco Prime Infrastructure, and mail servers:

Table 1: Cisco CMX Network Protocols and Port Matrix

Source Device	Destination Device	Protocol	Destination Port	Description
Cisco CMX	NMSP on WLC	TCP	16113	-
Cisco CMX	SNMP on WLC	UDP	161/162	-
Cisco CMX	NTP Server	UDP	123	-
Cisco CMX	DNS Server	-	53	-
Cisco CMX	Mail Server	TCP	25	-
Cisco CMX	Internet	-	80/443	Used to pull down images of world map and validate addresses
Web	CMX HTTPS	TCP	443	Used to manage and administer Cisco CMX
Cisco CMX CLI via SSH	CMX Management	-	22	-
Web	CMX Management	-	1984	Used to upgrade Cisco CMX
HTTPS	Clients	TCP	443	-
HTTP	Clients	TCP	80	-

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Table 2: HA Port Information

HA Ports	Description
7000, 7001, 9042	Cassandrs database
6378 through 6385	Redis
4242	High availability REST and web service. An HTTPS protocol using REST to communicate between the CMX HA
22	SSH port and used to synchronize files between servers

Table 3: Cassandra Database

Cassandra Database	Protocol
7000	TCP
7001	TCP
9042	SSL Communication

Table 4: Cisco CMX Communication With Other Cisco Devices

Component	Application	Direction	Protocol	Destination Port
Cisco CMX	Cisco Wireless Controller	Out	SSH	22
Cisco CMX	Cisco Wireless Controller	Out	SNMP	161
Cisco CMX	Cisco Wireless Controller	In/Out	NMSP	16113
Cisco CMX	Cisco Spaces	In/Out	HTTPS	443
Cisco CMX	Catalyst Center	In/Out	SSH/HTTPS	22/443
Cisco CMX	Cisco Prime Infrastructure	In	HTTPS	443

Table 5: Cisco CMX Gateway Reachability Port Requirement

Ports	Description
6378, 6379, 6380, 6381, 6382, 6383, 6385, 16378, 16379, 16380, 16381, 16382, 16383, 16385	Redis
7000, 7001, 9042	Cassandra database
5432	Postgres database

Ports	Description
4242	High Availability REST and Web Service
22	SSH port and to synchronize files between servers

Note Additionally, ensure that the Virtual Router Redundancy Protocol (VRRP) and Internet Control Message Protocol (ICMP) are allowed between the two Cisco CMX servers and the gateway is reachable to establish Cisco CMX reachability using ICMP.

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