



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 | - |

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 DNA Spaces | In/Out | HTTPS | 443 |
| Cisco CMX | Cisco DNA Center | In/Out | SSH/HTTPS | 443 |
| Cisco CMX | Cisco Prime Infrastructure | In | HTTPS | 443 |