Installation Requirements

This section provides general guidelines and minimum requirements for installing Cisco Crosswork Data Gateway.

This section contains the following topics:

Virtual Machine (VM) Requirements

You can deploy Cisco Crosswork Data Gateway as a VM on a host that meets the following minimum requirements:

Table 1: Cisco Crosswork Data Gateway VM requirements

Requirement	Description
Hypervisor	• VMware vCenter Server 6.7 Update 3g or later (ESXi 6.7 Update 1 installed on hosts) • VMware vCenter Server 6.5 Update 2d or later (ESXi 6.5 Update 2 installed on hosts)
Memory	32 GB
Disk space	70 GB
vCPU	8 vCPUs

<table>
<tr><th>Requirement</th><th>Description</th></tr>
<tr><td>Interfaces</td><td>There are three interfaces available. However, only two interfaces (i.e., vNIC0 and vNIC1) are applicable for cloud deployment.
Cisco Crosswork Data Gateway 1.1.4 can be deployed with either 1 or 2 interfaces as per the combinations below:
<table>
<tr><th>Combination #</th><th>vNIC0</th><th>vNIC1</th></tr>
<tr><td>1</td><td>• Management Traffic
• Control/Data Traffic</td><td>—</td></tr>
<tr><td>2</td><td>• Management Traffic</td><td>• Control/Data Traffic</td></tr>
</table>
• Management traffic: for accessing the UIs and command line and passing Control/Data information between servers (for example, Crosswork application to Cisco Crosswork Data Gateway or NSO).
• Control/Data traffic: for data and configuration transfer between Cisco Crosswork Data Gateway and Crosswork applications and other data destinations.</td></tr>
<tr><td>IP Addresses</td><td>1, or 2 IPv4/IPv6 addresses based on the number of interfaces you choose to use.</td></tr>
<tr><td>NTP Servers</td><td>The IPv4/IPv6 addresses or host names of the NTP servers you plan to use. If you want to enter multiple NTP servers, separate them with spaces. These should be the same NTP servers you use to synchronize devices, clients, and servers across your network. Confirm that the NTP IP address or host name is reachable on the network or installation will fail.</td></tr>
<tr><td>DNS Servers</td><td>The IPv4/IPv6 addresses of the DNS servers you plan to use. These should be the same DNS servers you use to resolve host names across your network.</td></tr>
<tr><td>DNS Search Domain</td><td>The search domain you want to use with the DNS servers (for example, cisco.com). You can only have one search domain.</td></tr>
<tr><td>Destination Networks</td><td>For live deployments, we recommend one virtual switch for the Data Network (connection between the Crosswork Cloud and the Cisco Crosswork Data Gateway VM) and second virtual switch for all the management traffic (vms to dns, ntp and the network you will use to access and manage the applications).</td></tr>
</table>

Note The VM runs Ubuntu Server 18.04.3 (ubuntu-18.04.3-server).

Ports Used

As a general policy, any ports that are not needed should be disabled.

The following table shows the minimum set of ports needed for Cisco Crosswork Data Gateway to operate correctly.

Note The SCP client port can be tuned.

Table 2: Ports to be opened for Management Traffic

Port	Protocol	Used for...	Direction
22	TCP	SSH server	Inbound
22	TCP	SCP client	Outbound
123	UDP	NTP Client	Outbound
53	UDP	DNS Client	Outbound
443	TCP	Crosswork Controller	Outbound

Table 3: Ports to be opened for Control/Data Traffic

Port	Protocol	Used for...	Direction
179	TCP	BGP	Outbound
179	TCP	BGP	Inbound
161	UDP	SNMP	Outbound
2055	UDP	Netflow	Inbound