



Installation Requirements

This chapter provides information about the general guidelines and minimum requirements for installing Crosswork Data Gateway on the following platforms:

- VMware.
- Cisco Cloud Services Platform (Cisco CSP).
- OpenStack Platform.

Crosswork Data Gateway Pre-installation Checklist

The pre-installation checklist helps you:

- Verify that all system requirements are met, all required ports are enabled.
- Gather the information required to complete the installation.

Before installing Crosswork Data Gateway, complete the pre-installation checklist.

1. Ensure that the host server meets the resource requirements. See [VM Requirements, on page 1](#)
2. Enable ports that are required for the Crosswork Data Gateway to operate. See [Ports Used, on page 4](#).
3. Understand if a proxy server may be required in your environment. See [Proxy Server Requirements, on page 5](#).
 - [VM Requirements, on page 1](#)
 - [Ports Used, on page 4](#)
 - [Proxy Server Requirements, on page 5](#)

VM Requirements

The table shows software requirements for the supported virtualization platforms along with the physical and network resource requirements needed to support the Crosswork Data Gateway.

The resource requirements to install Crosswork Data Gateway are the same for all the data centers, unless stated otherwise.

Table 1: Cisco Crosswork Data Gateway VM Requirements

Requirement	Description
Data Center	<p>VMware</p> <ul style="list-style-type: none"> • VMWare vCenter 7.0, ESXi 7.0 installed on the hosts • VMware vCenter Server 6.7 (Update 3g or later), ESXi 6.7 Update 1 installed on hosts <p>Cisco CSP</p> <ul style="list-style-type: none"> • Cisco CSP 2.8.0.276 or later <p>Allowed_hardware_list = ['CSP-2100', 'CSP-2100-UCSD', 'CSP-2100-X1', 'CSP-2100-X2', 'CSP-5200', 'CSP-5216', 'CSP-5228', 'CSP-5400', 'CSP-5436', 'CSP-5444', 'CSP-5456']</p> <p>OpenStack</p> <ul style="list-style-type: none"> • OpenStack OSP16
Memory	32 GB
Disk space	74 GB
vCPU	8

Requirement	Description				
Interfaces	Minimum: 1 Maximum: 3 Crosswork Data Gateway can be deployed with either one, two or three interfaces as per the combinations below:				
	<table border="1"> <thead> <tr> <th data-bbox="609 464 841 520">No. of NICs</th> <th data-bbox="841 464 1068 520">vNIC0</th> <th data-bbox="1068 464 1295 520">vNIC1</th> <th data-bbox="1295 464 1523 520">vNIC2</th> </tr> </thead> </table>	No. of NICs	vNIC0	vNIC1	vNIC2
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<ul style="list-style-type: none"> • Management traffic: for accessing the Interactive Console and troubleshooting the Crosswork Data Gateway VM. • Control/Data traffic: to receive configuration of collection jobs from the Crosswork Cloud and to forward collected data to the Crosswork Cloud. • Device access traffic: for device management and telemetry data. 					
IP Addresses	One, two or three IPv4 or IPv6 addresses based on the number of interfaces you choose to use. Note Crosswork does not support dual stack configurations. Therefore, ALL addresses for the environment must be either IPv4 or IPv6.				
NTP Servers	The IPv4 or 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. Note Confirm that the NTP IP address or host name is reachable on the network or installation will fail. The Cisco Crosswork Data Gateway host and virtual machine must be synchronized to an NTP server or the enrollment with Crosswork Cloud may not go through.				

Requirement	Description
NTPv4 Authentication	The NTPv4 authentication process that you want to use for a strong cryptographic authentication.
DNS Servers	The IPv4 or IPv6 addresses of the DNS servers you plan to use. If you want to enter multiple DNS servers, separate them with spaces. These should be the same DNS servers you use to resolve host names across your network.
DNS Search Domain	The search domain you want to use with the DNS servers (for example, cisco.com). You can only have one search domain.
Syslog Server Address	The IPv4 or IPv6 address of a syslog server accessible from the management interface. For more information on how to configure the Syslog Server, see Table 1 .
Auditd Server Address	The Hostname, IPv4, or IPv6 address of an optional Auditd server. For more information on how to configure the Auditd Server Address, see Table 1 .

Ports Used

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



Note This is only to enable the base Crosswork Data Gateway functionality. Additional ports may be enabled depending on the application that is running the Crosswork Data Gateway.

Table 2: Ports to be opened for Management Traffic

Port	Protocol	Used for...	Direction
22	TCP	SSH server	Inbound
22	TCP	SCP client Note The SCP port can be configured.	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

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

Proxy Server Requirements

Many production environments do not allow direct connectivity to public Internet sites. If your environment requires an HTTP or HTTPS proxy in order to access URLs on the public Internet, you must configure a proxy server in order for the Cisco Crosswork Data Gateway to successfully connect to the Crosswork Cloud service. Consult with your network administrator to understand if a proxy server may be required.

If a proxy server is required, the details of the proxy server on the Crosswork Data Gateway are configured in one of the following ways:

- (recommended) By entering the proxy server credentials during installation. See **Controller and Proxy Settings** in [Cisco Crosswork Data Gateway Deployment Parameters and Scenarios](#).
- From the Interactive Console of the Crosswork Data Gateway after installation. See [Configure Control Proxy](#)

