



# Cisco Crosswork Data Gateway 3.0 Release Notes

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**First Published:** 2021-11-12

**Last Modified:** 2022-12-15

This document provides information about Cisco Crosswork Data Gateway 3.0, including features, compatibility information, known issues and limitations.

## Change History

The following table lists changes to this document since its initial release.

**Table 1: Document Change History**

Date	Change
2022-12-15	Introduced the <a href="#">Scale Support, on page 6</a> section detailing the scale information.
2021-12-21	Added an <a href="#">Important Notes, on page 7</a> section with details about the vulnerability in Apache Log4j Library Affecting Cisco Products: December 2021.
2021-11-12	Initial Release.

## Product Overview

Cisco Crosswork Data Gateway is a model-driven scalable data collection platform that enables real-time data collection from multi-protocol capable devices, thereby reducing the need for multiple collection points for multiple applications requiring data from the network.

Cisco Crosswork Data Gateway offers central visibility into services collecting data and the type of data being collected. It can also be used to feed external data destinations (such as, an external Kafka or gRPC server) in addition to Crosswork applications.

Cisco Crosswork Data Gateway is not a standalone product and is expected to be used with Crosswork on-premise or Crosswork Cloud applications. There is no separate software license needed for Cisco Crosswork Data Gateway. Use of Cisco Crosswork Data Gateway to forward data to third-party destinations is only supported when using the Crosswork Data Gateway with Crosswork on-premise applications and requires a separate license.

## Release Details

Cisco releases updated builds on the [Cisco Support & Software Download](#) site.

**Table 2: Crosswork Data Gateway Release Dates**

Version	File name	Date
3.0	cw-na-dg-3.0.0-36-release-20211105.ova	2021-11-12
3.0	cw-na-dg-3.0.0-36-release-20211105.tar.gz	2021-11-12

Cisco Crosswork Data Gateway can be installed into a data center using either the Cisco Cloud Services Platform (CSP) or VMware. The file used for deployment is unique to each of these environments. Use:

- \*.ova file - to install Crosswork Data Gateway on VMware.
- \*.qcow2 file - to deploy Crosswork Data Gateway on Cisco Cloud Services Platform (CSP).

## Compatibility Information for Crosswork Data Gateway 3.0

Cisco Crosswork Data Gateway 3.0 supports only Crosswork on-premise applications.

Cisco Crosswork Data Gateway release 3.0 has been validated in conjunction with:

- Cisco Crosswork Network Controller 3.0
- **On-premise Crosswork Applications**
  - Cisco Crosswork Change Automation 4.1
  - Cisco Crosswork Health Insights 4.1
  - Cisco Crosswork Optimization Engine 3.0
  - Cisco Crosswork Active Topology 3.0
  - Cisco Crosswork Zero Touch Provisioning 3.0
  - Cisco Crosswork Service Health 3.0 (pre-launch)

Crosswork Data Gateway provides two on-premise deployment options:

- Standard: To be used with any on-premise Crosswork applications, except Cisco Crosswork Health Insights and Cisco Crosswork Service Health.
- Extended: Required when using Crosswork Data Gateway with Cisco Crosswork Health Insights and/or Cisco Crosswork Service Health.

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

**Table 3: Cisco Crosswork Data Gateway 3.0 VM Requirements for on-premise Deployment**

Requirement	Description
Data Center	VMware <ul style="list-style-type: none"> <li>• VMware vCenter Server 7.0, ESXi 7.0 or later installed on hosts</li> <li>• VMware vCenter Server 6.7 (Update 3g or later), ESXi 6.7 Update 1 installed on hosts</li> </ul> <p><b>Note</b> Support for VMware vCenter Server 6.5 is deprecated and will be removed in the next release.</p> Cisco CSP <ul style="list-style-type: none"> <li>• Cisco CSP 2.8.0.276 or later</li> </ul> <pre>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']</pre>
Memory	<ul style="list-style-type: none"> <li>• Standard: 32 GB</li> <li>• Extended: 96 GB</li> </ul>
Disk space	<ul style="list-style-type: none"> <li>• Standard: 55 GB (Minimum)</li> <li>• Extended: 554 GB (Minimum)</li> </ul>
vCPU	<ul style="list-style-type: none"> <li>• Standard: 8</li> <li>• Extended: 16</li> </ul>

Requirement	Description				
Interfaces	Minimum: 1 Maximum: 3 Cisco Crosswork Data Gateway can be deployed with either 1, 2, or 3 interfaces as per the combinations below:				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="570 468 800 525">No. of NICs</th> <th data-bbox="800 468 1031 525">vNIC0</th> <th data-bbox="1031 468 1261 525">vNIC1</th> <th data-bbox="1261 468 1489 525">vNIC2</th> </tr> </thead> </table>	No. of NICs	vNIC0	vNIC1	vNIC2
	No. of NICs	vNIC0	vNIC1	vNIC2	
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<ul style="list-style-type: none"> <li>• Management traffic: for accessing the UIs and command line and passing configuration information between servers (for example, a Crosswork application to Crosswork Data Gateway).</li> <li>• Control/Data traffic: for data and configuration transfer between Cisco Crosswork Data Gateway and Crosswork applications and other external data destinations.</li> <li>• Device access traffic: for device management (NSO or a Crosswork application to the devices as a result of KPI configuration or playbook execution) and telemetry data being forwarded to the Cisco Crosswork Data Gateway.</li> </ul> <p>(*) - For live deployments, we recommend 3 NIC deployment, that is one interface for all the management traffic (VMs to DNS, NTP, and the network you will use to access and manage the applications), second interface for the data network (connection between Cisco Crosswork and the Cisco Crosswork Data Gateway VM) and third interface to communicate with devices in the network.</p>					
IP Addresses	1, 2, or 3 IPv4/IPv6 addresses based on the number of interfaces you choose to use. <b>Note</b> Cisco Crosswork does not support dual stack configurations. Therefore, ALL addresses for the environment must be either IPv4 or IPv6.				

Requirement	Description
NTP Servers	<p>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.</p> <p>The Cisco Crosswork Data Gateway host and virtual machine must be synchronized to an NTP server or the initial handshake may fail with "certificate not valid" errors.</p>
DNS Servers	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.
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.

### Tested Cisco OS

The following table lists the software versions with which Cisco Crosswork Data Gateway 3.0 was tested. Cisco Crosswork Data Gateway allows you to expand device coverage by means of custom packages (see Section: Manage Custom Software Packages in *Cisco Crosswork Infrastructure 4.1 and Applications Administration Guide*).

OS	Software Version	Collection Protocols	MDT Encoding
IOS-XR*	6.5.3, 6.6.2, 6.6.3, 7.0.1, 7.1.2, 7.2.1, 7.3.1, 7.3.2, 7.4.1	gNMI MDT SNMP Syslog <b>Note</b> Secure Syslog is not supported for versions 7.4.1 and 7.3.2. CLI NETCONF	gNMI Proto KVGPB/TCP
IOS-XE	16.12.3, 17.2.1, 17.3.1, 17.4.1, 17.5.1	gNMI SNMP CLI Syslog NETCONF	NA
NX-OS	9.2.1, 9.3.1, 10.x	SNMP CLI Syslog	NA

**\*For MDT configuration via NSO on IOS-XR, use NSO NED 7.33 or 7.33.1**

Crosswork Data Gateway can collect data from compatible third-party devices using SNMP or gNMI collectors. For information about deploying and validating non-Cisco collections, see [Cisco Devnet](#) or contact Cisco Professional Services.

## Scale Support

Crosswork Data Gateway (Standard deployment profile) is tested with up to 2000 devices integrated with Crosswork Network Controller running Crosswork Optimization Engine and Crosswork Active Topology. The number of Crosswork Data Gateway VMs required varies based on a combination of factors such as the number and type of collection jobs, the number of destinations data is forwarded to, and other variables. To determine if your configuration requires additional Crosswork Data Gateway VMs, see [Monitor Crosswork Data Gateway Health](#) and for information on how to add a Crosswork Data Gateway VM to the pool, see [Attach Devices to a Crosswork Data Gateway](#).

## Features and Enhancements in Crosswork Data Gateway 3.0

This section lists the features delivered in Crosswork Data Gateway 3.0:

Feature	Description
<b>View Crosswork Data Gateway profile information in Cisco Crosswork UI</b>	Crosswork Data Gateway profile type (Standard or Extended) is displayed in the <b>Data Gateway Management</b> page of the Cisco Crosswork UI.
<b>Add custom ports for SNMP Trap and Syslog collection</b>	Cisco Crosswork Data Gateway allows you to change the default ports and add custom ports for Syslog and SNMP Trap collectors.
<b>New Crosswork Data Gateway Operational State "Not Ready"</b>	Introduced a new Operational state <b>Not Ready</b> to indicate that Crosswork Data Gateway is not ready to receive collection jobs because the south bound IP address of the Crosswork Data Gateway has not been configured yet.
<b>Additional Crosswork Data Gateway options to check Crosswork Data Gateway connectivity to a destination</b>	Options to ping, traceroute and change log level of Crosswork Data Gateway components from Cisco Crosswork UI.
<b>Download collector metrics</b>	Option to download metrics for all collection jobs for a Crosswork Data Gateway VM from the Cisco Crosswork UI or the Interactive Console.
<b>Restart a Crosswork Data Gateway Service from Cisco Crosswork UI.</b>	Option to restart individual services running on the Crosswork Data Gateway VM from the Cisco Crosswork UI.
<b>NETCONF collector</b>	Introduced NETCONF based data collection which supports following types of collection: <ul style="list-style-type: none"> <li>• NETCONF over SSH with device packages.</li> <li>• Native NETCONF with device packages.</li> <li>• NETCONF event-based collection.</li> </ul>

Feature	Description
<b>SNMP Collector Enhancements</b>	<ul style="list-style-type: none"> <li>Advanced Encryption support for SNMPv3.</li> <li>Ability to pack multiple SNMP get requests in a single <b>getbulkrequest</b> via API.</li> </ul> <p>When a collection job requests for multiple scalar OIDs, Crosswork Data Gateway queries for all of them with a single request to device.</p>
<b>gNMI Collector Enhancements</b>	<ul style="list-style-type: none"> <li>Support <b>ON_CHANGE</b> subscription mode. The <b>ON_CHANGE</b> mode reports data only on change of any particular element for the specified path.</li> <li>Ability to subscribe to multiple subscription modes in a single subscription list sent to the device.</li> </ul>
<b>Support for custom gRPC requests</b>	Support to add a gNMI subscription by specifying sensor path as GRPCSensor.
<b>Filter syslog events with Filters-based SyslogSensor</b>	Option to filter syslog events with Filters-based SyslogSensor that is based on is based on RegEx, PRI or severity-facility. Combining multiple filters (maximum 3 filters) with "AND" or "OR" is supported.
<b>Enhanced Monitoring and Troubleshooting options</b>	Ability to view the state and health of the Crosswork Data Gateway VM using the <b>Diagnostics</b> menu from the Interactive Console.

## Important Notes

Log4j patch for Crosswork Data Gateway 3.0.0 is part of Crosswork Infrastructure Log4j patch version 4.1.1.

The Crosswork Infrastructure patch delivers related fixes for Crosswork Data Gateway automatically after activation. For more information, see [Cisco Crosswork Patch for Apache Log4j Vulnerability](#).

## Cisco Crosswork Data Gateway 3.0 Documentation

The following table lists the guides provided for Cisco Crosswork Data Gateway 3.0

Document Title	What is included
Cisco Crosswork Data Gateway 3.0 Release Notes	<p>This document.</p> <p>Provides an overview of the product, compatibility information, and important information that should be taken into consideration before using the product.</p>

Document Title	What is included
<a href="#">Cisco Crosswork Infrastructure 4.1 and Applications Installation Guide</a>	Shared installation guide for all the Cisco Crosswork applications and their common infrastructure. Covers: <ul style="list-style-type: none"> <li>• System requirements</li> <li>• Installation prerequisites</li> <li>• Installation instructions</li> <li>• Upgrade instructions</li> <li>• Uninstallation</li> </ul>
<a href="#">Cisco Crosswork Infrastructure 4.1 and Applications Administration Guide</a>	Shared administration guide for all the Cisco Crosswork applications and their common infrastructure. Covers: <ul style="list-style-type: none"> <li>• Overview of Cisco Crosswork Data Gateway</li> <li>• Managing Cisco Crosswork Data Gateway VMs</li> <li>• Managing Cisco Crosswork Data Gateway Pools</li> <li>• Managing External Data Destinations</li> <li>• Managing Custom Packages</li> <li>• Collection jobs</li> <li>• Configuring Cisco Crosswork Data Gateway Base VM.</li> <li>• Monitoring Cisco Crosswork Data Gateway health</li> <li>• Troubleshooting</li> </ul>
<a href="#">Open Source used in Cisco Crosswork Data Gateway 3.0</a>	Lists of licenses and notices for open source software used

### Additional Related Documentation

This section provides links to additional related documentation for Cisco Crosswork Data Gateway 3.0.

- [Cisco Crosswork Infrastructure 4.1 Release Notes](#)
- [Cisco Crosswork Network Controller 3.0](#)
- [Cisco Crosswork Change Automation 4.1](#)
- [Cisco Crosswork Health Insights 4.1](#)
- [Cisco Crosswork Optimization Engine 3.0](#)

You can access documentation for all Cisco Crosswork products at <https://www.cisco.com/c/en/us/support/cloud-systems-management/crosswork-network-automation/tsd-products-support-series-home.html>.



### Cisco Crosswork API Documentation

Advanced users can extend Cisco Crosswork product functions by using the product APIs. For more about the product APIs, see [Cisco Crosswork Network Automation API Documentation on Cisco DevNet](#).

## Open Bugs in Crosswork Data Gateway 3.0

For list of open bugs in Cisco Crosswork Data Gateway 3.0, please check this [list of open bugs](#). Each bug ID in the list links to a more detailed description and workaround.

You can use the Cisco Bug Search Tool to search for a specific bug.

1. Go to the [Cisco Bug Search Tool](#).
2. Enter your registered Cisco.com username and password, and click **Log In**.

The **Bug Search** page opens.



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**Note** If you do not have a Cisco.com username and password, you can [register here](#).

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3. To search for a specific bug, enter the bug ID in the **Search For** field.

## Open Source

A list of open source software used in Cisco Crosswork can be found in [Open Source Software Used in Crosswork Data Gateway 3.0](#).

## Accessibility Features

All product documents are accessible except for images, graphics and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact [accessibility@cisco.com](mailto:accessibility@cisco.com).

## Obtain Documentation and Submit a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [Cisco Notification Tool](#).

