Cisco Crosswork Data Gateway 4.1 Release Notes

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This document provides information about Crosswork Data Gateway 4.1, including features, compatibility information, known issues and limitations.

Attention Crosswork Data Gateway 4.1 supports deployment with Crosswork on-premise applications only. To deploy Crosswork Data Gateway with Crosswork Cloud applications, you must use Crosswork Data Gateway 4.0.

Product Overview

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

Cisco Crosswork Data Gateway is not a standalone product and is expected to be used with Crosswork applications. There is no separate software license required 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.

What's New

This section lists the features delivered in Cisco Crosswork Data Gateway 4.1.

Note Starting with the Crosswork Data Gateway 4.1 release, Crosswork Data Gateway deployment is no longer supported for the Cisco CSP platform. We recommend that users with Crosswork Data Gateway deployments on Cisco CSP consider migrating the deployments to the supported data centers. For more information, see End-of-Life Announcement for the Cisco Cloud Services Platform Operating System.

Table 1: New Features in Crosswork Data Gateway 4.1

Feature	Description
DHCP Support	Support DHCP addressing when using the QCOW image for deployment.

Enhancements in the Interactive Console of the Crosswork Data Gateway's Base VM[1]	The following options were added in the console: • Add or modify a remote Auditd server • Remove the rotated log files
Deploy Crosswork Data Gateway on Amazon Elastic Cloud Compute (EC2) Platform	Support provided for deploying Cisco Crosswork Data Gateway on Amazon Elastic Cloud Compute (EC2) platform (limited release).
Configure Crosswork Data Gateway Global Parameters from the Cisco Crosswork UI or using APIs[1]	Ability to update the Data Gateway's global parameters for all Crosswork Data Gateways in the network from the Cisco Crosswork UI or using the APIs.
Enhanced Kafka Support[1]	Ability to customize configuration parameters for Kafka destination to suit the providers needs from the Cisco Crosswork UI.
Collector Memory Limit Allocation[1]	Ability to dynamically manage the memory limits of a heavily used collector or adjust the balance of memory between collectors from the Cisco Crosswork UI.
FQDN Support for Syslog Collection[1]	Ability to enable FQDN for secure syslog collection for a Crosswork Data Gateway pool.
Improved Crosswork Data Gateway Resource usage Reporting[1]	The Crosswork Data Gateway Health pane (**Administration > Data Gateway Management > Data Gateways > (click){Crosswork Data Gateway}**) displays the actual CPU Utilization and memory consumed by the Crosswork Data Gateway and generates alarms when their limits are reached.
Introduced Load Metric Reporting[1]	Ability to indicate the processing load or the load score of that specific collector. Load metric reporting generates a three level alarm in the Cisco Crosswork UI. These alarms are useful in determining if devices must be redistributed across the Crosswork Data Gateways in the pool or when additional Crosswork Data Gateways must be deployed.
SNMP Collector Enhancements[1]	Introduced support for: • Traps with SNMPv3 auth and priv. • SNMP BULK COLUMN operation.
gNMI Collector Enhancements	Optimized the gNMI collector performance for increased scale.
Serviceability Improvements[1]	Introduced additional metrics that will be captured in the cache dump or show-tech logs of the Crosswork Data Gateway to analyze or debug collector performance.
Improvements in the Data Gateway Management Page in the Cisco Crosswork UI	Numerous improvements in the Data Gateway Management pages in the Cisco Crosswork UI (**Administration > Data Gateway Management**) to improve usability.

Template-based Collection Job Support	Crosswork Data Gateway allows the Crosswork Service Health application to submit CLI and gNMI collection jobs using templates.

[1] For more information about these features, see the *Cisco Crosswork Data Gateway* section in the *Cisco Crosswork Infrastructure 4.4 and Applications Administration Guide*.

Compatibility Information

Crosswork Data Gateway 4.1 supports deployment with Crosswork on-premise applications only.

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

Note The values shown in the table are the defaults which we recommended using. Deviations from these values should not be made unless you are working with Cisco to determine the unique requirements of your deployment.

Crosswork Data Gateway 4.1 VM Requirements for Crosswork on-premise applications

Crosswork Data Gateway supports the following profiles for deployment with Crosswork on-premise applications:

- **On-Premise Standard** (default): To deploy Crosswork Data Gateway with all Crosswork on-premise applications except Crosswork Health Insights and Crosswork Service Health.
- **On-Premise Extended**: To deploy Crosswork Data Gateway when Crosswork Health Insights and Crosswork Service Health are installed.

Attention The **On-Premise Standard with Extra Resources** profile is available as a limited-availability feature and must not be used while deploying Crosswork Data Gateway in your data center. Please contact the Cisco Customer Experience team for assistance.

Table 2: Crosswork Data Gateway 4.1 VM Requirements for Crosswork on-premise applications

Requirement	Description
Data Center	**VMware** • VMware vSphere 6.7 or above. • VMware vCenter Server 7.0, ESXi 7.0 or later installed on hosts. • VMware vCenter Server 6.7 (Update 3g or later), ESXi 6.7 Update 1 installed on hosts. **Amazon EC2** • Crosswork Data Gateway deployment and operations have been validated on the current publicly available Amazon platform. For memory, vCPUs, and storage requirements for the data center, see Section: *Cisco Crosswork Installation Requirements* in the Cisco Crosswork Infrastructure 4.4 and Applications Installation Guide.

<table>
<tr><th>Requirement</th><th>Description</th></tr>
<tr><td>Interfaces</td><td>
Minimum: 1
Maximum: 3
Crosswork Data Gateway can be deployed with either 1, 2, or 3 interfaces as per the combinations below:
Note
If you use one interface on your Crosswork cluster, you must use only one interface on the Crosswork Data Gateway. If you use two interfaces on your Crosswork Cluster, then you can use two or three interfaces on the Crosswork Data Gateway as per your network requirements.
<table>
<tr><th>No. of NICs</th><th>vNIC0</th><th>vNIC1</th><th>vNIC2</th></tr>
<tr><td>1</td><td>• Management Traffic
• Control/Data Traffic
• Device Access Traffic</td><td>—</td><td>—</td></tr>
<tr><td>2</td><td>• Management Traffic</td><td>• Control/Data Traffic
• Device Access Traffic</td><td>—</td></tr>
<tr><td>3</td><td>• Management Traffic</td><td>• Control/Data Traffic</td><td>• Device Access Traffic</td></tr>
</table>
• Management traffic: for accessing the Interactive Console and passing the Control/Data information between servers (for example, a Crosswork application to Crosswork Data Gateway).
• Control/Data traffic: for data and configuration transfer between Crosswork Data Gateway and Crosswork applications and other external data destinations.
• Device access traffic: for device access and data collection.
Note
Due to security policies, traffic from subnets of a vNIC received on other vNICs is dropped. For example, in a 3 vNIC model setup, all device traffic (incoming and outgoing) must be routed through vNIC2. Crosswork Data Gateway drops device traffic received over vNIC0 and vNIC1.
</td></tr>
</table>

Requirement	Description
IP Addresses	1 or 2 IPv4 or IPv6 addresses based on the number of interfaces you choose to use. Including one additional IP address to be used as the Virtual IP (VIP) address. **Note** Crosswork does not support dual stack configurations. Therefore, ALL addresses for the environment must be either IPv4 or IPv6. In a 3- NIC deployment, you will need to provide an IP address for Management interface (vNIC0) and Control/Data interface (vNIC1) only during installation. A virtual IP address for Device Access Traffic (vNIC2) is assigned when you create a Crosswork Data Gateway pool as explained in the Section: *Create a Crosswork Data Gateway Pool* in the *Cisco Crosswork Infrastructure 4.4 and Applications Administration Guide*.
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. Verify that the NTP IP address or host name is reachable on the network or installation will fail. Also, the ESXi hosts that will run the Crosswork application and Crosswork Data Gateway VM must have NTP configured, or the initial handshake may fail with "certificate not valid" errors.
DNS Servers	The IPv4 or 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. Confirm that the DNS servers are reachable on the network before attempting installation. The installation will fail if the servers cannot be reached.
DNS Search Domain	The search domain you want to use with the DNS servers, for example, cisco.com. You can have only one search domain.
(optional) Proxy Server	URL of an optional management network proxy server if your environment. 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 Cisco Crosswork
(optional) Syslog Sever	The hostname or IPv4 or IPv6 address of an external syslog server.
(optional) Auditd Server	The hostname or IPv4 or IPv6 address of an external auditd server.

Tested Cisco OS

The following table lists the software versions with which Cisco Crosswork Data Gateway was tested.



Note Cisco Crosswork Data Gateway allows you to expand device coverage by means of custom packages (see Section: Manage Custom Device Packages in *Cisco Crosswork Infrastructure 4.4 and Applications Administration Guide)*.

Cisco Crosswork Data Gateway 4.1 for on-premise applications is compatible with all of the IOS and NX-OS versions listed in the table below.

Table 3: Cisco Crosswork Data Gateway 4.1 Support for IOS/NX-OS and Device Data Collection Protocols

OS	Version	CLI	gNMI[1]	MDT[2]	NETCONF	SNMP[1]	Syslog
IOS-XR	7.1.2	✓	✓	✓	✓	✓	✓
	7.2.1	✓	✓	✓	✓	✓	✓
	7.3.1	✓	✓	✓	✓	✓	✓
	7.3.2	✓	✓	✓	✓	✓	✓
	7.4.1	✓	✓	✓	✓	✓	✓
	7.5.2	✓	✓	✓	✓	✓	✓
	7.7.1	✓	✓	✓	✓	✓	✓
IOS-XE	16.12.3	✓	✓	✓	✓	✓	✓
	17.3.1	✓	✓	✓	✓	✓	✓
	17.4.1	✓	✓	✓	✓	✓	✓
	17.5.1	✓	✓	✓	✓	✓	✓
	17.6.1	✓	✓	✓	✓	✓	✓
	17.7.1	✓	✓	✓	✓	✓	✓
	17.8.1	✓	✓	✓	✓	✓	✓
NX-OS	9.2.1	✓	✗	✗	✗	✓	✓
	9.3.1	✓	✗	✗	✗	✓	✓
	10.1	✓	✗	✗	✗	✓	✓
	10.2	✓	✗	✗	✗	✓	✓

[1] Third Party Devices: 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.

[2] Model-Driven Telemetry: For MDT configuration via Cisco NSO on IOS-XR, use **NSO NED 7.40.1**.

Product Documentation

The following table lists the guides provided for Cisco Crosswork Data Gateway 4.1.

Document Title	What is included
Cisco Crosswork Data Gateway 4.1 Release Notes	This document. Provides an overview of the product, compatibility information, and important information that should be taken into consideration before using the product.
Cisco Crosswork Infrastructure 4.4 and Applications Installation Guide	Shared installation guide for all the Cisco Crosswork on-premise applications and their common infrastructure. Covers: • System requirements • Installation prerequisites • Installation instructions • Upgrade instructions • Uninstallation
Cisco Crosswork Infrastructure 4.4 and Applications Administration Guide	Shared administration guide for all the Cisco Crosswork on-premise applications and their common infrastructure. Covers: • Overview of Cisco Crosswork Data Gateway • Managing Cisco Crosswork Data Gateway VMs • Managing Cisco Crosswork Data Gateway Pools • Managing External Data Destinations • Managing Custom Packages • Collection jobs • Configuring Cisco Crosswork Data Gateway Base VM. • Monitoring Cisco Crosswork Data Gateway health • Troubleshooting
Open Source used in Cisco Crosswork Data Gateway 4.1	Lists of licenses and notices for open source software used
API Documentation	Advanced users can extend the Cisco Crosswork functionality using the APIs. API documentation is available on Cisco Devnet.

Related Product Documentation

You can access documentation for all Cisco Crosswork products at the Cisco Crosswork Network Automation home page on cisco.com.

Demos

If you are interested in seeing a demo of the Crosswork features and functions, please contact your Cisco account team, and they can arrange demos by leveraging our demo cloud resources.

Bugs

If you encounter problems while working with Cisco Crosswork, please check this list of bugs. 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.

Note If you do not have a Cisco.com username and password, you can register here.

3. To search for all Cisco Crosswork bugs, from the Product list select **Cloud and Systems Management** > **Routing and Switching Management** > **Cisco Crosswork Network Automation** and enter additional criteria (such as bug ID, problem description, a feature, or a product name) in the Search For field. Examples: "Data Gateway" or "CSCwc34821".
4. When the search results are displayed, use the filter tools to narrow the results. You can filter the bugs by status, severity, and so on.

Tip To export the results to a spreadsheet, click **Export Results to Excel**.

Security

Cisco takes great strides to ensure that all our products conform to the latest industry recommendations. We firmly believe that security is an end-to-end commitment and are here to help secure your entire environment. Please work with your Cisco account team to review the security profile of your network.

For details on how we validate our products, see Cisco Secure Products and Solutions and Cisco Security Advisories.

If you have questions or concerns regarding the security of any Cisco products, please open a case with the Cisco Customer Experience team and include details about the tool being used and any vulnerabilities it reports.

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.

If any product document could not be converted to the accessible formats, please contact the Cisco Customer Experience team.

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.

Support and Downloads

The Cisco Support and Downloads website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies.

Access to most tools on the Cisco Support and Downloads website requires a Cisco.com user ID and password.

For more information, see https://www.cisco.com/c/en/us/support/index.html.

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.

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