Cisco Crosswork Change Automation and Health Insights 4.1 Release Notes

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This document provides an overview of Cisco Crosswork Change Automation and Health Insights, new functionalities, compatibility information, usage guidelines and any limitations for this release.

Product Overview

The Cisco Crosswork Infrastructure with Cisco Crosswork Change Automation and Health Insights enables service providers to quickly deploy intent-driven, closed-loop operations.

Cisco Crosswork Change Automation and Health Insights provides a ready-to-use solution supporting the following use cases:

- Monitor Key Performance Indicators (KPIs) and notify of any anomalies.

- Prepare network changes triggered by changes in KPIs and roll out these changes.

- Automate change-impact and remediation.

Functionality added in Cisco Crosswork Change Automation and Health Insights 4.1

This section lists the new functionalities delivered in Cisco Crosswork Change Automation and Health Insights 4.1.

Cisco Crosswork Change Automation

- Added granular access control on create, delete, and run Playbooks and plays.

- Added the ability to add labels to Playbooks and then assign the labels to roles. This limits the access to run Playbooks based on labels and roles assigned to those labels.

Cisco Crosswork Health Insights

- Enhanced the ability to store and visualise KPI sensor data to 72 hours.

- Added the ability to monitor CLI based KPIs for 3rd party devices.

- Enhanced the Alert Dashboard for better usability.

Compatibility Information

The following table lists hardware and software versions that have been tested and are known to be compatible with Cisco Crosswork Change Automation and Health Insights. For complete installation requirements, see the *Cisco Crosswork Infrastructure 4.1 and Applications Installation Guide*.

Hardware/Software	Supported Version
Cisco Network Services Orchestrator (Cisco NSO)	• 5.5.2.9

	Cisco Network Element Driver (NED)
	
	• Cisco IOS XR:
	
	  • CLI: 7.33.12
	
	  • NETCONF: 6.6.3, 7.3, 7.315, and 7.4.1
	
	• Cisco IOS:
	
	  • CLI: 6.74.8

	Function Packs • Cisco Crosswork NSO Telemetry Traffic Collector Function Pack 4.1.0-209 • Cisco Crosswork NSO DLM Service Pack 4.1.0 • Cisco Crosswork Change Automation NSO Function Pack 4.1.0
Software platform	• Cisco IOS XR 7.3.2, 7.41, or later • Cisco IOS XE 17.5.1 and 17.6.1 • Cisco NX-OS (N7K - 8.4(1), N9K - 7.0(3) I7(2))
Cisco WAN Automation Engine (Cisco WAE)	Version 7.21 or 7.4.0
Cisco Crosswork Data Gateway	Version 3.0
Browsers	• Google Chrome—70 or later • Mozilla Firefox—60 or later

Usage Guidelines and Important Notes

This section provides guidelines and important notes to consider when using Cisco Crosswork Change Automation and Health Insights.

Cisco Crosswork Change Automation

For information on how to use Cisco Crosswork Change Automation see the "Automate Network Changes" chapter in the *Cisco Crosswork Change Automation and Health Insights User Guide*.

- For information about using flexible Playbook development tools, see Custom Playbooks tutorial in Cisco Crosswork Change Automation Developer Guide on Cisco DevNet (https://developer.cisco.com/).

- When using dynamic tags to run a playbook on a set of devices, the playbook will be executed on groups of 20 devices at a time until the playbook has been run on all of the tagged devices.

Cisco Crosswork Health Insights

For information on how to use Cisco Crosswork Health Insights, see the "Monitor Network Health and KPIs" chapter in the *Cisco Crosswork Change Automation and Health Insights User Guide*.

- Group the KPIs within a KPI Profile for monitoring relevant device metrics. For best results, limit to 10 KPIs per KPI Profile. Maximum number of KPIs that can be supported within a KPI profile is 50.

Note The KPIs vary in the amount of data they collect. Although the system allows for up to 50 KPIs, care must be taken to ensure that you have both license and Crosswork Data Gateway capacity in place before deploying the KPIs. For more information, see the section *Enable KPI Profile on Devices* in *Cisco Crosswork Change Automation and Health Insights 4.1 User Guide*.

- For optimal performance, enable a KPI Profile in batches of no more than 100 devices.

Note When you are enabling KPI profiles on devices, ensure that sufficient capacity is available on Cisco Crosswork Data Gateway. If sufficient capacity is not available, it may cause overload and outage. For more information, see the section *Enable KPI Profile on Devices* in *Cisco Crosswork Change Automation and Health Insights 4.1 User Guide*.

- For best system performance, use the default KPI cadence.

Note KPI cadence is set based on the nature of the KPI. Any decisions about using a lower cadence (for example, as low as 10 seconds) should be reviewed with Cisco Professional Services.

Known Issues and Limitations

The following are known issues, limitations, and workarounds in Cisco Crosswork Change Automation and Health Insights.

Cisco Crosswork Change Automation

- Sometimes, under certain load conditions, the execution of a Playbook times out.

  - If it continues to fail, try changing the time out for the job.

  - If it fails because of the device being locked, try changing the device state to DOWN and UP again.

- While scheduling playbooks across a dynamic group tag, the corresponding job set screen for the job in the Job History page will not display the relevant devices, until the job is scheduled for execution.

- Running a Playbook on multiple devices at the same time with different *collection_type* parameter values may result in failure. Re-executing the failed Playbook will resolve the issue.

- Under extreme load conditions, Cisco Crosswork Change Automation may fail to clean up the collection jobs that were created. These stale collections jobs can be deleted using API.

- If you try to access Cisco Crosswork Change Automation UI after restarting the `robot-nca` pod, you may get a temporary error message (**pstream host lookup failed**) for 5 minutes.

Cisco Crosswork Health Insights

- After a KPI Profile is enabled, editing cadence and threshold parameter for any of the associated KPIs can be achieved using one of the three procedures detailed below:

  - Create a custom KPI with the required cadence and threshold parameters and associate with the existing KPI Profile.

  - Create a new KPI Profile with the relevant KPIs associated. Update the cadence & alert parameters before enabling this new KPI Profile.

  - Disable the KPI Profile & perform the modifications on relevant associated KPIs and re-enable the KPI Profile.

- For custom KPIs:

  - While creating custom KPI using API directly, user must select the full sensor path to the leaf sensors (not partial sensor path) up to a certain hierarchy (gather path).

  - All leaf sensor paths are reserved for that KPI use only.

- Any Cisco Crosswork Health Insights job stuck in the processing state that does not complete within the stipulated time out of 60 minutes will be marked as "failed". After addressing any underlying issues (for example, device connectivity, credentials or NSO sync, and so on), the same job must be reapplied.

- Filtering is case sensitive for the **Manage KPIs** and **Enable-Disable KPI Profiles** pages.

- For using Cisco Crosswork Health Insights alert forwarding functionality, you must setup one Alert provider with correct credentials.

- You can view KPI graphical data in the Cisco Crosswork UI for the last 72 hours only, go to the grafana dashboard (*https://<IPaddress:port>/robot-grafana/*) and select the desired KPI.

Related Documents

The following table lists the documents provided for the current release of Cisco Crosswork Change Automation and Health Insights. You can access all Cisco Crosswork Change Automation and Health Insights end user documentation at https://www.cisco.com/c/en/us/support/cloud-systems-management/crosswork-change-automation/model.html.

Documentation Title	What is included
Cisco Crosswork Change Automation and Health Insights 4.1 Release Notes	This document
Cisco Crosswork Infrastructure 4.1 and Applications Installation Guide	Shared installation guide for all the Cisco Crosswork applications and their common infrastructure. Covers: • System requirements • Installation prerequisites • Installation instructions • Upgrade instructions
Cisco Crosswork Infrastructure 4.1 and Applications Administration Guide	Shared administration guide for all the Cisco Crosswork applications and their common infrastructure. Covers: • Managing clusters and data gateway • Data collection • High availability • Backup and restore • Onboard and manage devices • Zero touch provisioning • Set up maps • Managing users, access, and security • Maintain system health
Cisco Crosswork Change Automation and Health Insights 4.1 User Guide	• Getting started • Automating the process of deploying changes to the network • Monitoring network health • Performing real-time key performance indicator (KPI) monitoring, alerting, and troubleshooting • Collecting and managing telemetry data in a multivendor environment

Documentation Title	What is included
Open Source used in Cisco Crosswork Change Automation and Health Insights	Lists of licenses and notices for open source software used in Cisco Crosswork Change Automation and Health Insights

Additional Related Documentation

This section provides links to documentation for products related to Cisco Crosswork Change Automation and Health Insights:

- Cisco Crosswork Data Gateway 3.0
- Cisco Network Services Orchestrator 5.5.2.9
- Cisco Crosswork NSO Telemetry Traffic Collector Function Pack 4.1.0-209 Installation Guide
- Cisco Crosswork NSO DLM Service Pack 4.1.0 Installation Guide
- Cisco Crosswork Change Automation NSO Function Pack 4.1.0 Installation Guide

You can access documentation for all Cisco Crosswork products at Cisco Crosswork Network Automation Documentation.

Cisco Crosswork API Documentation

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

Open Bugs in Cisco Crosswork

If you encounter problems while working with Cisco Crosswork, 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.

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

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 Used in Cisco Crosswork Change Automation and Health Insights*.

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 the Cisco Accessiblity Team on the Web or send email to 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.

Note   For licensing related issues, check the Smart Licensing site. For more information, see Smart Software Manager Guide. To purchase new or additional licenses, contact your Cisco account representative (sales) or the partner from whom the product was purchased.

For non-service impacting issues, open support cases through the support portal and upload all relevant logs or screenshots.

For more urgent issues, open a service request and use appropriate keywords to get your request routed to proper team.

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