Overview

This section contains the following topics:

Audience

This guide is for experienced network administrators who want to use Cisco Crosswork Change Automation and Health Insights in their network. This guide assumes that you are familiar with the following topics:

- Networking technologies and protocols (IS-IS, BGP, and so on)
- Network monitoring and troubleshooting
- Familiarity with Cisco Crosswork Infrastructure and how Crosswork applications are installed. For more information, see the Cisco Crosswork Network Controller Installation Guide.

Overview of Change Automation and Health Insights

Crosswork Change Automation and Crosswork Health Insights are parts of the Cisco Crosswork Network Controller solution.

The applications provide 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 and remediation.

Cisco Crosswork Change Automation

Cisco Crosswork Change Automation helps to codify workflows using parameterized Plays and stitches them into Playbooks for execution.

Cisco Crosswork Health Insights

Cisco Crosswork Health Insights offers real-time, telemetry-based Key Performance Indicator (KPI) monitoring and intelligent alerting. The alerts are based on predefined templates or user-defined logic. These alerts can be tied to the Playbooks to implement closed-loop automation workflows.

Health Insights configures KPIs based on telemetry using MDT, SNMP, or GNMI. The collected data is evaluated in one of the following four possible ways (using UI based tools):

- No alert
- Standard deviation
- Two-level threshold
- Rate change

Other configurations are also possible using the Cisco Crosswork APIs. For more details, see Cisco Crosswork Network Automation APIs.

Cisco Crosswork API

All the Cisco Crosswork Network Controller applications provide a robust set of APIs that allow it to be integrated with other tools you use to manage and configure your network. For more details on the product APIs, see the Cisco Crosswork Network Controller API Documentation on Cisco DevNet.

Integration with other Cisco and non-Cisco products

Crosswork Change Automation and Health Insights is integrated as part of Cisco Crosswork Network Controller. For more details on Crosswork Network Controller, see the Cisco Crosswork Network Controller Product page on Cisco.com.

Below are the other Cisco products with which Crosswork Change Automation and Health Insights can be integrated:

- **Cisco WAN Automation Engine (Cisco WAE)**: Provides traffic and topology analysis to Crosswork Change Automation and Health Insights. The foundation software is Cisco WAE Planning, which provides a cross-sectional view of traffic, topology, and equipment state. For more information, see Cisco WAN Automation Engine (WAE).
- **Cisco Network Services Orchestrator (Cisco NSO)**: Crosswork Change Automation and Health Insights uses Cisco Network Services Orchestrator as the default provider to configure the devices according to their expected functions, including configuring any required model-driven telemetry (MDT) sensor paths for data collection. Cisco Network Services Orchestrator is vital in supplying device management and configuration-maintenance services. For more information, see Cisco Network Services Orchestrator (NSO).
- **Cisco Crosswork Data Gateway**: Cisco Crosswork Data Gateway is a secure, common collection platform for gathering network data from multi-vendor devices. It is an on-premise application deployed close to network devices. Crosswork Data Gateway supports multiple data collection protocols including MDT, SNMP, CLI, standards-based gNMI (dial-in), and syslog. Any type of data can be collected by Crosswork Data Gateway as long as it can be delivered over one of the supported protocols. In this way, it can provide support for a growing set of use cases and customizations. For more information, see Cisco Crosswork Data Gateway Data Sheet.

- **Cisco Crosswork Optimization Engine**: Crosswork Optimization Engine provides real-time network optimization. Some Plays enable integration with Crosswork Optimization Engine so that the optimization decision is based on the KPIs being tracked in Crosswork Health Insights. For more information, see Cisco Crosswork Optimization Engine Data Sheet.
- **Cisco Crosswork Zero Touch Provisioning**: Crosswork Zero Touch Provisioning is an optional package that can be installed on the Cisco Crosswork Infrastructure to allow the users to bring up the devices quickly and easily using a Cisco-certified software image and a day-zero software configuration of the customer's choice. Once provisioned in this way, the new device is onboarded to the Crosswork device inventory. For more information, see Cisco Crosswork Zero Touch Provisioning Data Sheet.
- **Non-Cisco Products**: Crosswork Change Automation and Health Insights supports the loading of models for non-Cisco equipment which will enable the creation of KPIs and in some cases, the execution of plays. For more information on how to do these advanced integrations, see the Cisco Crosswork Network Controller Administration Guide and the Cisco Crosswork Network Controller API Documentation on Cisco DevNet. If you require assistance with these integration efforts, contact your account team.

Licensing

Crosswork Change Automation and Health Insights is available as an add-on license to the purchase of Cisco Crosswork Network Controller. It can no longer be ordered separately.

One Right-To-Manage (RTM) license is required for each managed network device. Also, one Right-To-Use (RTU) license is required for deployment of an instance.

Crosswork Change Automation increments the RTM license counts for each device under management. The device count is used only in determining the number of RTM licenses required, and is not tied to the number of devices where a KPI is enabled.

For demonstrations and field trials, Crosswork Change Automation and Crosswork Health Insights can be used without license for up to 90 days. After this 90-day evaluation period, the product will be out of compliance. For more information, see the Manage Licenses section in the Cisco Crosswork Network Controller Administration Guide. To find out the total and used number of licenses, check the Smart Licensing site. For more information, see Smart Software Manager Guide.

For more information about licensing, contact your Cisco Account team.