Overview

This section contains the following topics:

Audience

This guide describes the steps required to begin using Change Automation and Health Insights after installation. It is intended for experienced network administrators who want to use these components in their network. Before proceeding, ensure that you are familiar with the following topics:

- Networking technologies and protocols, such as IS-IS, BGP, and other relevant protocols.
- Network monitoring and troubleshooting
- Platform Infrastructure and Crosswork Network Controller components: For additional details on installation and setup, see the Cisco Crosswork Network Controller Installation Guide.

Overview of Change Automation and Health Insights

Health Insights and Change Automation are optional components that can be installed with the Crosswork Network Controller (available in Crosswork Essentials, Crosswork Advantage, or Crosswork Premier). These components are included in the Add-on package available on Cisco.com.

Note The package is available only for existing users of Crosswork Network Controller Add-on components.

The components 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.

Change Automation

Change Automation helps to codify workflows using parameterized plays and stitches them into playbooks for execution. It offers a collection of plays and playbooks designed to help you easily implement changes to the network for various situations. You also have the option to create your own playbooks to simplify the network operations or to implement network configurations in response to changing circumstances identified through Health Insights KPIs.

Health Insights

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 supports building 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 Crosswork Network Controller components 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

Change Automation and Health Insights support a wide range of use cases. These capabilities can be further extended by integrating with other Cisco and non-Cisco products. Sample configurations for integration with various tools are available on Cisco DevNet. For customers requiring additional customization, Cisco CX Services offers specialized engagements to tailor the solution to specific operational needs.

The following products can be integrated to extend the functionality of Change Automation and Health Insights:

- **Cisco Crosswork Planning**: Crosswork Planning provides traffic and topology analysis to Change Automation and Health Insights. It gives a cross-sectional view of traffic, topology, and equipment state. For more information, see Cisco Crosswork Planning.
- **Cisco Network Services Orchestrator (NSO)**: Cisco Network Services Orchestrator acts 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 Network Services Orchestrator (NSO).

- **Optimization Engine**: 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 Health Insights. For more information, see Cisco Crosswork Optimization Engine Data Sheet.
- **Cisco Element Management Functions (EMF)**: A library of functions that provides detailed device inventory, software image management, device alarm, device key metrics, configuration related functions and ZTP.
- **Non-Cisco products**: 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 Crosswork Network Controller Administration Guide and the Crosswork Network Controller API Documentation on Cisco DevNet. If you require assistance with these integration efforts, contact your account team.