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 the Cisco Crosswork Infrastructure 4.1 and how the applications are installed. For more information, see *Cisco Crosswork Infrastructure 4.1 and Applications Installation Guide*.

Overview of Cisco Crosswork Change Automation and Health Insights

Cisco Crosswork Change Automation and Health Insights is part of the Cisco Crosswork Network Automation suite of products.

The application 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 and remediation.

Cisco Crosswork Change Automation

Cisco Crosswork Change Automation helps to codify workflows using parameterized Plays and stitches them into Playbooks for execution in single-step fashion.

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. For more details, see Cisco Crosswork Network Automation APIs.

This guide explains how to use Cisco Crosswork Change Automation and Health Insights.

For more information about the Cisco Crosswork Network Automation platform, see the Cisco Crosswork Network Automation Product page on Cisco.com.

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 Cisco Crosswork Network Controller Data Sheet.

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

- **Crosswork API**: Cisco Crosswork Change Automation and Health Insights provides 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 Automation API Documentation on Cisco DevNet.

- **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**: 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 Active Topology**: Crosswork Active Topology enables visualization of topology and services on logical and geographical maps.

- **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 4.1 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.

Licensing

Crosswork Change Automation and Health Insights 4.1 is now available as an add-on license in the purchase of Cisco Crosswork Network Controller 3.0 and is no longer separately orderable.

One Right-To-Manage (RTM) license is required for each managed physical device.

Also, licenses are required to use Crosswork Change Automation and Crosswork Health Insights. The licenses come in packs - KPI pack and Playgroup pack. One KPI pack includes a set of five KPIs. One Playgroup pack includes a set of five plays which can be combined in multiple Playbooks.

Crosswork Change Automation increments the license count for each play that is run (whether successful or not) including dry run. Creating new play without running it does not use license. Crosswork Health Insights licenses are based on the number of KPIs enabled through a KPI Profile and the license count increments for each enabled KPI.

If additional KPI packs or Playgroup packs are required, contact your Cisco account representative (sales) or the partner from whom the product was purchased.

Note For demonstrations and field trials, Crosswork Change Automation or Crosswork Health Insights can be used without license for up to 90 days. After 90 days of evaluation period, the product will be out of compliance. All the existing tasks will still continue as is but enabling new Plays or KPIs is not allowed. 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, see the Cisco Crosswork Network Automation Product Data Sheet at Cisco.com.