



Get Started

This section contains the key workflows and an overview of Cisco Crosswork Change Automation and Health Insights dashboard:

- [Getting Started, on page 1](#)
- [Workflow 1: Configure Network View, on page 2](#)
- [Workflow 2: Monitor Key Performance Indicators, on page 2](#)
- [Workflow 3: Closed-Loop Automation, on page 3](#)
- [Workflow 4: Schedule Playbooks, on page 4](#)
- [Workflow 5: Develop Custom KPIs, on page 4](#)
- [Workflow 6: Develop Custom Playbooks, on page 5](#)

Getting Started

Workflow	For details, see...
1. Install Cisco Crosswork Change Automation and Health Insights environment and set up Cisco Crosswork Data Gateway.	See the Cisco Crosswork Network Controller 5.0 Installation Guide and the Cisco Crosswork Network Controller 5.0 Administration Guide
2. Do the basic reachability checks.	See Setup Workflow in the Cisco Crosswork Network Controller 5.0 Administration Guide
3. Configure the Change Automation settings.	Configure Change Automation Settings
4. (Optional) Setup and configure your map settings.	Workflow 1: Configure Network View, on page 2
5. Create KPI Profiles to monitor device Key Performance Indicators (KPIs) for issues and anomalies.	Workflow 2: Monitor Key Performance Indicators, on page 2
6. (Optional) Link KPIs to playbooks.	Workflow 3: Closed-Loop Automation, on page 3
7. (Optional) Schedule Playbooks to perform routine maintenance.	Workflow 4: Schedule Playbooks, on page 4

Workflow	For details, see...
8. (Optional) Expand telemetry insight with custom KPIs.	Workflow 5: Develop Custom KPIs, on page 4
9. (Optional) Remediate common failure scenarios and automate routine tasks with custom Playbooks.	Workflow 6: Develop Custom Playbooks, on page 5

Workflow 1: Configure Network View

The following workflow describes the steps to configure the map display settings in Cisco Crosswork Change Automation and Health Insights:

Step	Action
1. Group your devices logically as per your requirement.	Follow the instructions in Create and Modify Device Groups and Enable Dynamic Device Grouping .
2. Set display preferences for your topology.	Follow the instructions in Customize Map Display Settings .
3. Manage your custom topology views.	Follow the instructions in Save Topology Views for Easy Access .

Workflow 2: Monitor Key Performance Indicators

Once you have completed initial setup, use Cisco Crosswork Health Insights to begin device performance monitoring using KPI Profiles.

Step	Action
1. (Optional) Tag all of the devices whose KPIs you plan to monitor with a tag indicating the function they perform, per your plan.	See the topic Manage Tags in the Cisco Crosswork Network Controller 5.0 Administration Guide
2. Plan which Cisco-supplied KPIs you want to begin using, based on each device's function and the device performance characteristics you want to monitor.	Review the Cisco-supplied KPIs documented in List of Health Insights KPIs .
<p>Note Health Insights KPIs can be used without a 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 KPIs is not allowed.</p> <p>Check the total number of KPIs and make sure that you have enough licenses. To check, visit the Smart Licensing site. For more information, see Smart Software Manager Guide.</p>	To create a new KPI that fits your requirements, see Create a New KPI .

Step	Action
3. Based on your experience or by using the recommendation engine, group the KPIs to form KPI Profiles.	Follow the instructions in Create a New KPI Profile .
4. Enable the appropriate KPI Profiles on the devices you want to monitor.	Follow the instructions in Enable KPI Profiles on Devices

Workflow 3: Closed-Loop Automation

The following workflow describes the steps to follow when using Cisco Crosswork Health Insights to run a remediation Playbook from Cisco Crosswork Change Automation, in response to the performance challenges detected in the network by a KPI. A remediation Playbook can be:

- Linked to a KPI, alerting the operator to run the Playbook and make the remediation easier.
- Linked to a KPI and selected for automatic execution, without operator intervention.

Step	Action
1. Research the KPIs that are triggering alerts, and determine the best corrective action to take for the situation your network has experienced.	Follow the instructions in Monitor Network Health and KPIs , using the View Alerts for Network Devices to research the alerts and their possible causes.
2. Review the plays and Playbooks to determine which will best address the alerting KPI. For example: <ul style="list-style-type: none"> • Look for an existing Playbook that could resolve the issue. • Look for existing plays that could be combined to resolve the issue. Create a new Playbook with those plays. 	Review the list of Plays, Playbooks, and generic parameters in the "Playbooks" and "Plays" references in the Change Automation Developer Guide on Cisco Devnet . See Create a Custom Play Using Templates and Create a Custom Playbook Through the UI
3. Try out the selected Playbooks and see if they are applicable to your purposes. As you experiment, adjust the Playbook parameters as needed. Note Crosswork Change Automation increments the license count for each Playbook that is run (whether successful or not) including dry run. If a Playbook is run once, it can be used multiple times without increasing the license count.	See: Perform a Dry Run of a Playbook Run Playbooks In Single Stepping Mode Run Playbooks In Continuous Mode
4. If required, build a new Playbook with new or existing plays, as necessary, to meet your requirements.	See Create a Custom Play Using Templates and Create a Custom Playbook Through the UI

Step	Action
5. (Optional) For frequently triggered KPIs with a known remediation Playbook, link the Playbook to the KPI to make executing the Playbook easier for the operator.	Follow the steps for linking and triggering Playbook runs under operator control in Link KPIs to Playbooks and Run Them Manually . Use the Remediation icon shown in View Alerts for Network Devices to trigger a run of a linked Playbook from a device or KPI alert.
5. (Optional) For frequently triggered KPIs with a known remediation Playbook and no danger of runaway execution, link the Playbook to the KPI and set it to run automatically.	Follow the steps in Link KPIs to Playbooks and Run Them Automatically to trigger an automatic run of a linked Playbook upon receipt of a device or KPI alert.

Workflow 4: Schedule Playbooks

The workflow below describes the steps to follow when using Cisco Crosswork Change Automation to automate routine network upkeep, and to verify that each routine change completed correctly.



Note This workflow is applicable only if scheduling is enabled in the Change Automation settings. For more information, see [Configure Change Automation Settings](#).

Step	Action
1. Identify routine maintenance tasks (such as throughput checks, software upgrades, SMU installs, and so on) that you perform on a regular schedule and that may be suitable for automation using one or more Cisco Crosswork Change Automation Playbooks.	See About Running Playbooks and View the Playbook List
2. Configure Playbooks to perform these tasks at the desired time.	See About Running Playbooks and Schedule Playbook Runs
3. Review the Change Automation Job History to review the current status of the Playbook. If the job fails, the details will be available.	See Use the Change Automation Dashboard and View or Abort Playbook Jobs

Workflow 5: Develop Custom KPIs

The following workflow describes the steps to follow when considering whether or not to develop Cisco Crosswork Health Insights custom KPIs for your special needs, and how to proceed if you decide you do.

Step	Action
1. Review the existing KPIs to make sure the telemetry (SNMP, CLI, Cisco IOS XR, or IOS-XE) you want to monitor is not already available.	Follow the instructions in Monitor Network Health and KPIs , using the View Alerts for Network Devices to research the alerts and their possible causes.
2. Review the data available from the devices you want to monitor to see if they can supply the needed information: <ul style="list-style-type: none"> • If they can, proceed with building a custom KPI. • If they cannot, Contact Cisco. <p>The latest information on the data your devices can provide is always available at the Cisco Telemetry Data Mapper (https://tdm.cisco.com).</p>	Review the KPIs in List of Health Insights KPIs .
3. Build the custom KPI and add it to a KPI Profile.	See Create a New KPI and Create a New KPI Profile
4. Enable the new KPI Profile on a test device and confirm that the data reported matches your expectations. Be aware that KPIs that depend on data over time to establish baseline performance will need some time to "anneal" before they provide meaningful data.	See Enable KPI Profiles on Devices and View Alerts for Network Devices
5. Make sure it gets activated properly on the device (MDT only) and Crosswork Data Gateway.	See Verify the Deployment Status of Enabled KPIs
6. If the KPI Profile is meeting expectations, enable it on all devices where you consider it applicable. <p>Warning When you are enabling KPI profiles on large number of devices, ensure that sufficient capacity is available on Cisco Crosswork Data Gateway. If sufficient capacity is not available and if you enable the KPI profiles on large number of devices, it may cause overload and outage. To check Cisco Crosswork Data Gateway load, see <i>Health Insights CDG load calculator</i> at Cisco Crosswork Network Automation APIs.</p>	Follow the steps in Enable KPI Profiles on Devices .
7. Make sure the KPI Profile got deployed on the device (MDT only) and Crosswork Data Gateway (all).	See Verify the Deployment Status of Enabled KPIs

Workflow 6: Develop Custom Playbooks

The following workflow describes the steps to follow when deciding to develop a Change Automation custom Play or Playbook.

Step	Action
1. Review the existing Plays and Playbooks to see if any of them meet your needs fully or partially.	From the main menu, choose Network Automation > Play List or Playbook List .
2. If required, build a new Playbook with new or existing Plays, as necessary, to meet your requirements.	See About Custom Plays and About Customizing Playbooks .
<p>3. For a Playbook you have developed that meets your needs:</p> <ul style="list-style-type: none"> • In response to KPI alerts: If the Playbook is meeting expectations, link it to the KPI that indicates the need for the Playbook to be run, so that it is easy for operators to trigger the Playbook. • For planned maintenance or configuration changes: Schedule the Playbook to run, or run it at the planned time. Scheduling is an option only if scheduling is enabled in the Change Automation settings. For more information, see Configure Change Automation Settings 	See: Monitor Network Health and KPIs and Schedule Playbook Runs