



Cisco Crosswork Hierarchical Controller 7.1

Release Notes

August 2023

Cisco Crosswork Hierarchical Controller version 7.1 includes completion of adapters features and alignments, as well as bug fixes.

Version Highlights

The highlights of the new functions relate to the use of the Network Services Orchestrator (NSO) engine for IP VPNs, and completion of the Nokia NSP and Ciena MCP adapters:

- NSO engine in use to provision services on the Nokia NSP controller:
 - PW/T-LDP service provisioning via NSO engine.
 - L3-VPN service provisioning via NSO engine.
- Nokia NSP IP adapter:
 - Complete inventory and topology discovery.
 - Complete L3-VPN and PW/T-LDP service discovery and visualization.
 - Added ETH statistics for ETH ports and links.
- Ciena MCP adapter:
 - Support SDH line as a new service between STM client ports (the quality of this feature may be limited as testing was not completed on a setup with Ciena MCP connected).
 - Support delegation of brownfield optical services to Crosswork Hierarchical Controller (able to delete such services from Crosswork Hierarchical Controller).

Note that full list of Crosswork Hierarchical Controller known issues and operational considerations is in v7.0 Release Notes. This document contains only the issues that were solved or detected in v7.1.

Issues Resolved

Cisco iOS-XR Adapter

- ADPT-1449. Adapter periodically stops running, this is now fixed.
- ADPT-1442. Previously, if a CLI command failed, the adapter stopped, did not run the next command, and tried to process the data collected so far. This is now fixed and in case of a failure, the adapter continues to the next commands.

Nokia NSP Adapter

Note: Issues found in Nokia NSP and fixed by Nokia are not listed here.

- CSCwf04174. Previously, an L3VPN service that was aligned in NSP appears as missing configuration and unknown ports in Crosswork Hierarchical Controller. This is now fixed.

Cisco CNC Adapter

- ADPT-1688. Crosswork Hierarchical Controller properly displays errors now when NSO is not reachable for RON link provisioning.

Discovery

- SDN-5938. IGP OSPF links very frequently failed in discovery and were not added to the model (a failure in Persister). This is now fixed.
- SDN-5918. Previously, the logs in Device manager contained user and password credentials displayed as plain text. Credentials are now encrypted.

Platform

- SDN-5403. Cross Mapping function remained disabled when machine HA state changed from STANDBY to ACTIVE. The function is now properly enabled and active after role change.

UI Applications

- App-2343. When user hides columns in UI tables, in any of the Crosswork Hierarchical Controller apps, the columns remained properly hidden after refreshing the page.

Known Issues

These issues were found in R7.1. All other issues known in R7.0 and before are listed in the Crosswork Hierarchical Controller R7.0 Release Notes.

- SDN-5968. Credentials configured in Device Manager can be deleted by the user, even when they are in use by an adapter.
- SDN-5983. The option to modify SSH key (certification) in credentials settings does not work properly.

Adapters

Crosswork Hierarchical Controller 7.1 comes with a list of network adapters that are updated to work with this version.

Note: Not all adapters are generally available (GA). Some are available for specific customers but not as GA, and hence, need BU involvement before use.

Table 1. Adapters

Vendor	Protocol/Product	Availability	Version	Content and Use cases
Ciena	MCP	GA	6.2/5.1	Full inventory and optical topology discovery, service discovery and delegation Provisioning (create and delete) OTN line, SDH line, OCH, E-Line ETH PM
Cisco	EPNM	GA	7.0/6.1	IP discovery of inventory, topology, PM counters No support of provisioning.
Cisco	iOS-XR	GA	7.2	RON use cases Coverage of inventory and L2 topology discovery
Cisco	CNC	GA	4.1/5.0	IGP topology, RSVP-TE tunnels, and SR policy discovery RON link provisioning, SR policy provisioning (create, delete)
Cisco	ONC	GA	2.1	Full inventory and optical topology discovery over NCS1010 RON link provisioning, OCH-NC provisioning

Deployment Requirements

Software Requirements

Cisco Crosswork Hierarchical Controller release 7.1 can be installed on RedHat Enterprise server 8.6/8.7 or CentOS, Oracle Linux 8.4, Bare Metal or VM.

Upgrade

Crosswork Hierarchical Controller 7.0 can be upgraded to V7.1.

Hardware Requirements

Server Node

This specification is for active and standby or standalone instances of Cisco Crosswork Hierarchical Controller.

Table 2. Server node specification - small setup (up to 2K NEs)

Hardware	Requirement
CPU	10 Cores
Memory	96 GB
Storage - for lab	400GB SSD
Storage - for production	3Tb disk. These partitions are recommended:

Hardware	Requirement
(only for storage, not including OS needs)	<ul style="list-style-type: none"> OS partitions - 500 Gb Data partition for Crosswork Hierarchical Controller - 2000 Gb For expansion - 500 Gb At least data partitions must use SSD
VMs	1

Table 3. Server node specification - mid/large setup (2K NEs and above)

Hardware	Requirement
CPU	20 Cores
Memory	192 GB
Storage - for production (only for storage, not including OS needs)	3 TB disk. These partitions are recommended: <ul style="list-style-type: none"> OS partitions - 500 GB Data partition for Crosswork Hierarchical Controller - 2000 GB For expansion - 500 GB At least data partitions must use SSD
VMs	1

Witness Node

Witness node is the third node in 'three-node-cluster' high availability solution of Cisco Crosswork Hierarchical Controller.

Table 4. Witness node spec

Hardware	Requirement
CPU	8 Cores
Memory	16 GB
Storage	256 GB SSD
VMs	1

Web Browser

Chrome version 75 or later is recommended.

Client Machine

The PC or MAC used for the web client with Google Chrome must be equipped with GPU. This is mandatory to run the 3D visualization map in Crosswork Hierarchical Controller.

Build Numbers



Release Collaterals

In this release, all Crosswork Hierarchical Controller R7.1 documents are relevant and can be used.

This includes:

Document name
Cisco Crosswork Hierarchical Controller 7.1 Network Visualization Guide
Cisco Crosswork Hierarchical Controller 7.1 Administration Guide
Cisco Crosswork Hierarchical Controller 7.1 Assurance and Performance Guide
Cisco Crosswork Hierarchical Controller 7.1 Service Provisioning Guide
Cisco Crosswork Hierarchical Controller 7.1 Analytics Guide
Cisco Crosswork Hierarchical Controller 7.1 NBI and SHQL Reference Guide
Cisco Crosswork Hierarchical Controller 7.1 Installation Guide

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