Cisco Crosswork Hierarchical Controller 10.1

Release Notes

April 2025

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Cisco Crosswork Hierarchical Controller version 10.1 includes enhancements, as well as bug fixes.

Version Highlights

Cisco EPNM Adapter

The Cisco EPNM adapter was upgraded to Cisco EPNM 7.0.1.

Cisco SR-PCE Adapter

The Cisco SR-PCE adapter is now supported in Cisco Crosswork Hierarchical Controller version 10.1 and the adapter supports IOS XR 24.3.2.

Note: In Service Manager, the **Create New Tunnel > SR Policy** provisioning option should not be used and is no longer supported (although it still appears in the UI). This option will be removed from the UI in Cisco Crosswork Hierarchical Controller version 12 later this year.

Install

You can install the Crosswork Hierarchical Controller version 10.1 in the same way you install the Crosswork Hierarchical Controller version 10.0.

For installation instructions, see the Cisco Crosswork Hierarchical Controller 10.0 Installation Guide.

Upgrade

This procedure describes how to upgrade Crosswork Hierarchical Controller version 10 to Crosswork Hierarchical Controller version 10.1.

There are special considerations for:

- Upgrading a supercluster installation
- Upgrading with embedded NSO

Installation Preparation

1. Download the Crosswork Hierarchical Controller version 10.1 system pack from cisco.com.
2. Download the adapter service packs. These will be required after the upgrade, and before you re-enable the adapters. The installation command MUST use the adapter names that are in use prior to upgrading, so record the names that appear in Device Manager.
3. Check that the system status is **Running**:

   ```
   sedo system status
   ```

4. Check that the Crosswork Hierarchical Controller version is 10.0:

   ```
   sedo hco version
   ```

5. Check the NSO version:

   ```
   sedo nso version
   ```

Backing Up

Important: For a supercluster, run this procedure on the **active node only**.

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1. Make a full backup of the system:

   ```
   sedo backup create full
   ```

2. Check the backup list:

   ```
   sedo backup list
   ```

3. Download the backup file with a password:

   ```
   sedo backup download -p <password> <backup file name>
   ```

Upgrading Standalone

This procedure describes how to upgrade standalone Crosswork Hierarchical Controller.

To upgrade Crosswork Hierarchical Controller Standalone 10.0 to 10.1:

1. Disable all the adapters. For each adapter:
   a. In the applications bar in Crosswork Hierarchical Controller, select **Device Manager > Adapters**.
   b. Select the required adapter in the **Adapters** list on the left.
   c. Select the **General** tab.
   d. Deselect the **Enabled** checkbox.
   e. Click **Save**.

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2. Disable each of the adapter services:

   ```
   sedo service disable <adapter_service_name>
   ```

3. Check that the adapter services are disabled:

   ```
   sedo system status
   ```

4. Copy the system pack provided to the instance.
5. Upload the system pack:

   ```
   sudo sedo system upgrade upload <system-pack-name>
   ```

6. List the available upgrades:

   ```
   sudo sedo system upgrade list
   ```

7. Apply the upgrade:

   ```
   sudo sedo system upgrade apply
   ```

8. Wait one minute and then reboot to complete:

   ```
   sudo reboot
   ```

9. Check:

   ```
   sedo version
   ```

   ```
   sedo hco version
   ```

   ```
   sedo nso version
   ```

   ```
   sedo config list-keys
   ```

10. Download the adapter service packs.
11. Install the adapter service packs. The installation command MUST use the name that was in use prior to upgrading (if this is not the default adapter name, that is, if the **DYNAMIC_APP_GUID** param was used in the original installation to modify the name, install the new service pack with **DYNAMIC_APP_GUID=[adapter name as it was displayed in Device Manager on v10]**.
12. Wait until the adapter pods are re-created using the newly installed service pack, and then validate that the adapter pods are restarted:

    ```
    sedo system status command
    ```

13. Re-enable the adapters in Device Manager.

Upgrading Supercluster

This procedure describes how to upgrade a Crosswork Hierarchical Controller supercluster from version 10 to version 10.1.

A supercluster in a 1+1+1 scenario includes:

- active single-node cluster
- standby single-node cluster
- single witness (arbitrator) node

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Backup Active Node

Backup the active node only.

1. Make a full backup of the system:

   ```
   sedo backup create full
   ```

2. Check the backup list:

   ```
   sedo backup list
   ```

3. Download the backup file with a password:

   ```
   sedo backup download -p <password> <backup file name>
   ```

Disable Adapters on Active Node

Disable all the adapters on the active node only.

1. Disable all the adapters. For each adapter:
   a. In the applications bar in Crosswork Hierarchical Controller, select **Device Manager > Adapters**.
   b. Select the required adapter in the **Adapters** list on the left.
   c. Select the **General** tab.
   d. Deselect the **Enabled** checkbox.
   e. Click **Save**.
2. Disable each of the adapter services:

   ```
   sedo service disable <adapter_service_name>
   ```

3. Check that the adapter services are disabled:

   ```
   sedo system status
   ```

Upgrade the Nodes

Upgrade the nodes separately in the following order:

1. Active
2. Standby
3. Arbitrator

Important Note: Add the system pack file for upgrade on each instance (do not use system upgrade pull) and upgrade the instances one by one (in parallel), like standalone systems.

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1. Copy the system pack provided to the instance.
2. Upload the system pack:

   ```
   sudo sedo system upgrade upload <system-pack-name>
   ```

3. List the available upgrades:

   ```
   sudo sedo system upgrade list
   ```

4. Apply the upgrade:

   ```
   sudo sedo system upgrade apply
   ```

5. Wait one minute and then reboot to complete:

   ```
   sudo reboot
   ```

6. Check:

   ```
   sedo version

   sedo hco version

   sedo nso version

   sedo config list-keys
   ```

Upgrade Adapters on Active Node

Upgrade and enable the adapters on the active node only.

1. Download the adapter service packs.
2. Install the adapter service packs. The installation command MUST use the name that was in use prior to upgrading (if this is not the default adapter name, that is, if the **DYNAMIC_APP_GUID** param was used in the original installation to modify the name, install the new service pack with **DYNAMIC_APP_GUID=[adapter name as it was displayed in Device Manager on v10]**.
3. Wait until the adapter pods are re-created using the newly installed service pack, and then validate that the adapter pods are restarted:

   ```
   sedo system status command
   ```

4. Re-enable the adapters in Device Manager.

Issues Resolved

- CSCwo27109. Disk usage kept growing due to MinIO object versioning and was especially noticeable when multiple manual backups were created. An NxF lifecycle rule was added for MinIO buckets fixing the issue.
- CSCwn90707. Backup and restore across SA machines was broken. An update to the NxF version resolved the issue.
- CSCwn60802. The optical persistor (otn-persistor) restore state on startup failed because of incorrect validation when the service was referencing an intent. This was resolved.
- CSCwn60801. The optical persistor was passing services to the OTN-specific persistor when the underlay was non-OTN. This was resolved.

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- CSCwn60800. Optical adapters could insert R_LOGICAL links along with their paths for packet services involving MPLS-TP tunnels. This is resolved and the cross-mapper no longer alters R_LOGICAL link paths if it already has paths of a non-cross-mapper provider.
- CSCwn55872. The optical persistor sometime got stuck when recursively searching for the OTN underlay of an optical request. This was resolved.
- CSCwn94458. The bandwidth of the Circuit E-Line service created using Service Manager, could not be updated using NBI. This was resolved.
- CSCwn88678. Service Manager could not handle an "ETH_UNKNOWN" value. This was resolved.
- CSCwo11521. When modeling Cisco CNC with OSPF links, the TopologyBuilder crashed. This was resolved and the SHQL app displays all the IGP links and does not crash.
- CSCwn75934. ZR ports were not visible. This was resolved and the ZR ports data appears in the Link Manager and Service Manager for NMC and IP link creation.
- CSCwn55356. NullPointerException in Brain PCE (Java) caused by half-links. This was resolved.
- CSCwn53658. HA is disabled after multiple role change webhooks fired on standby. This was resolved.

Known Limitations

This section outlines the known limitations of the 10.1 release. For the complete list of limitations and operational considerations in the 10.0 release, refer to the Cisco Crosswork Hierarchical Controller 10.0 Release notes.

- CSCwo60268. For very low values, FECBER only displays 0 on the ZRM layer in the Summary tab.
- CSCwo67993. In Device Manager, if all check boxes are selected for the IOS-XR adapter, the device status is error.

Release Collaterals

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

This includes:

Documents
Cisco Crosswork Hierarchical Controller 10.0 Network Visualization Guide
Cisco Crosswork Hierarchical Controller 10.0 Administration Guide
Cisco Crosswork Hierarchical Controller 10.0 Assurance and Performance Guide
Cisco Crosswork Hierarchical Controller 10.0 Service Provisioning Guide
Cisco Crosswork Hierarchical Controller 10.0 Analytics Guide
Cisco Crosswork Hierarchical Controller 10.0 NBI and SHQL Reference Guide
Cisco Crosswork Hierarchical Controller 10.0 Installation Guide

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Documents
Adapter documentation is released on www.cisco.com
NxF 2.0

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Cisco Systems, Inc.
San Jose, CA

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Cisco Systems (USA) Pte. Ltd.
Singapore

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