



# Cisco Crosswork Network Controller 6.0.2 Release Notes

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This document provides information about Cisco Crosswork Network Controller 6.0.2, including patch release versions for Cisco Crosswork products and their associated defects, and the patch installation workflow.

## Patch Release Versions for Cisco Crosswork Products

The Crosswork patch files (.tar.gz) are available on the [Cisco Software Download](#) page.

Table 1: Patch Releases

Cisco Crosswork Product	New Releases with Fix	Defect ID
Platform Infrastructure	6.0.2	CSCwi97727
		CSCwi82524
		CSCwi44368
		CSCwi81455
		CSCwi26233
		CSCwi64836
		CSCwj06474
		CSCwj02265
		CSCwi75599
		CSCwi78896
		CSCwj17713
		CSCwj32666
		CSCwj30584
		CSCwj07752
		CSCwj41352
		CSCwj48720
		CSCwj57692
		CSCwj32134
		CSCwi22610
		CSCwj34547

Cisco Crosswork Product	New Releases with Fix	Defect ID
Optimization Engine	6.0.2	CSCwj28402 CSCwi77043 CSCwj06480
Service Health	6.0.2	CSCwj14638 CSCwj14643 CSCwi75593 CSCwj62161 CSCwi88619
Health Insights	6.0.2	CSCwj13073 CSCwj57692
Change Automation	6.0.2	CSCwj57692
Element Management Functions	6.0.2	CSCwi28262 CSCwi34319 CSCwi73629 CSCwj11881 CSCwj23248 CSCwi75003 CSCwj66580 CSCwj36028
Zero Touch Provisioning	6.0.2	CSCwj09052 Cscwj50796

## Patch Installation Workflow

This section explains how to install the Cisco Crosswork 6.0.2 patch files.

### Before you begin

Ensure you have:

- Crosswork Infrastructure MOP file (*signed-cw-na-infra-6.0.2-MOP-240510.tar.gz*) and Crosswork patch image files (see the table below) downloaded from [Cisco Software Download](#) to a local machine that can be accessed via SCP by Crosswork.
- Cisco Crosswork Administrator user credentials.
- Management IP address used for your Crosswork VM deployment.

- Installed Crosswork Network Controller version 6.0.0. For more information, see the instructions in [Cisco Crosswork Network Controller 6.0 Installation Guide](#).
- Installed [Cisco NSO version 6.1.9](#) on your machine. For installation instructions, please refer to the [NSO 6.1.x documentation](#).



**Important** Crosswork Network Controller 6.0.0 supports Cisco NSO version 6.1.4. If you want to install the Crosswork 6.0.2 patch, you must uninstall the existing NSO and install NSO version 6.1.9.

- Backed up your data and the NSO data.

The upgrade process is disruptive and should be performed during a maintenance window. The time required for the applications to restart is typically less than 30 minutes per application. If you encounter any error while installing the patch, contact the Cisco Customer Experience team before attempting to move forward with the next step.



**Important** Use the following sequence for the Crosswork 6.0.2 patch installation:

**Table 2: Crosswork 6.0.2 Patch Installation Sequence**

Patch Installation Sequence
1. <a href="#">Crosswork Infrastructure</a> : <i>signed-cw-na-infra-patch-6.0.2-26-release-240411.tar.gz</i>
2. <a href="#">Crosswork Optimization Engine</a> : <i>signed-cw-na-coe-patch-6.0.2-5-release-240401.tar.gz</i>
3. <a href="#">Element Management Functions</a> : <i>signed-cw-na-element-management-functions-patch-6.0.2-79-releaseems602-240410.tar.gz</i>
4. (Optional) <a href="#">Crosswork Service Health</a> : <i>signed-cw-na-aa-patch-6.0.2-19-releasesh600-240405.tar.gz</i>
5. (Optional) <a href="#">Crosswork Change Automation</a> : <i>signed-cw-na-ca-patch-6.0.2-4-release-240403.tar.gz</i>
6. (Optional) <a href="#">Crosswork Health Insights</a> : <i>signed-cw-na-hi-patch-6.0.2-10-release-240403.tar.gz</i>
7. (Optional) <a href="#">Crosswork Zero Touch Provisioning</a> : <i>signed-cw-na-ztp-patch-6.0.2-4-releaseztp600-240405.tar.gz</i>
Ensure you are running the latest version of each application you are using. Please note, that application version numbers may differ as not all applications are patched at the same time.

## Procedure

**Step 1 Extract and validate the Crosswork patch files:** After downloading the Crosswork patch files (see table above for details), extract and validate them.

To extract the signed image package, run the following command:

```
tar -xzf <signed image file>
```

The signed image package contains the patch file (.tar.gz) and relevant certificates.

To validate the extracted patch file, run the following command:

```
python3 cisco_x509_verify_release.py3 -e <.cer file> -i <.tar.gz file> -s <.tar.gz.signature file>
-v dgst -sha512
```

### Example:

After downloading the Crosswork Infrastructure signed patch image

**(signed-cw-na-infra-patch-6.0.2-26-release-240411.tar.gz)**, it is extracted and the signature is verified.

```
cd <folder where tar was download>
tar -xzvf signed-cw-na-infra-patch-6.0.2-26-release-240411.tar.gz

README
cw-na-infra-patch-6.0.2-26-release-240411.tar.gz
cw-na-infra-patch-6.0.2-26-release-240411.tar.gz.signature
CW-CCO_RELEASE.cer
cisco_x509_verify_release.py3

python3 cisco_x509_verify_release.py3 -e CW-CCO_RELEASE.cer -i
cw-na-infra-patch-6.0.2-26-release-240411.tar.gz -s
cw-na-infra-patch-6.0.2-26-release-240411.tar.gz.signature -v dgst -sha512

Retrieving CA certificate from http://www.cisco.com/security/pki/certs/crcam2.cer ...
Successfully retrieved and verified crcam2.cer.
Retrieving SubCA certificate from http://www.cisco.com/security/pki/certs/innespace.cer
...
Successfully retrieved and verified innespace.cer.
Successfully verified root, subca and end-entity certificate chain.
Successfully fetched a public key from CW-CCO_RELEASE.cer.
Successfully verified the signature of cw-na-infra-patch-6.0.2-26-release-240411.tar.gz
using CW-CCO_RELEASE.cer
```

Ensure that you extract and validate all the Crosswork patch files you need.

## Step 2

**Extract the Infrastructure MOP file:** Download the signed Crosswork Infrastructure MOP file **(signed-cw-na-infra-6.0.2-MOP-240510.tar.gz)** to your machine.

a) Extract the signed file:

```
cd <folder where tar was download>
tar -xzvf signed-cw-na-infra-6.0.2-MOP-240510.tar.gz

README
cw-na-infra-6.0.2-MOP-240510.tar.gz
cw-na-infra-6.0.2-MOP-240510.tar.gz.signature
CW-CCO_RELEASE.cer
cisco_x509_verify_release.py3
```

b) Validate the contents of the signed file:

```
python3 cisco_x509_verify_release.py3 -e CW-CCO_RELEASE.cer -i
cw-na-infra-6.0.2-MOP-240510.tar.gz -s cw-na-infra-6.0.2-MOP-240510.tar.gz.signature
-v dgst -sha512

Retrieving CA certificate from http://www.cisco.com/security/pki/certs/crcam2.cer ...
Successfully retrieved and verified crcam2.cer.
Retrieving SubCA certificate from http://www.cisco.com/security/pki/certs/innespace.cer
...
Successfully retrieved and verified innespace.cer.
Successfully verified root, subca and end-entity certificate chain.
Successfully fetched a public key from CW-CCO_RELEASE.cer.
```

```
Successfully verified the signature of cw-na-infra-6.0.2-MOP-240510.tar.gz using
CW-CCO_RELEASE.cer
```

- c) Copy the **cw-na-infra-6.0.2-MOP-240510.tar.gz** file (using **SCP**) to **/home/cw-admin/** folder on one of the Crosswork hybrid nodes.
- d) SSH into the Crosswork hybrid node where you copied the files, and change to root using **sudo su -** command.
- e) Extract the MOP file:

```
cd /home/cw-admin
tar -xvf cw-na-infra-6.0.2-MOP-240510.tar.gz

signed-cw-na-k8s-orchestrator-6.0.2-4-release-240321.tar.gz
update_orch.sh
```

### Step 3 Execute the script file (*update\_orch.sh*):

- a) Update the permissions: **chmod 755 update\_orch.sh**
- b) Run the script: **./update\_orch.sh**

When you run the script you will be asked for the password for the **cw-admin** user account.

**Note** Do not enter the password more than once even if you are prompted repeatedly to do so. The script will reuse the password that it read from the earlier input.

Wait 10 to 15 minutes for the update to complete and verify that system is healthy.

### Step 4 Add and install the patch files in the Crosswork UI:

- a) Click on **Administration > Crosswork Management**, and select the **Application Management** tab. The Crosswork Platform Infrastructure and any applications that are added are displayed here as tiles.
- b) Click on the **Add File (.tar.gz)** option to add the patch file (for example, **cw-na-infra-patch-6.0.2-26-release-240411.tar.gz**) that you extracted. The **Add File (.tar.gz) via Secure Copy** popup window is displayed.
- c) Enter the relevant information and click **Add**. Once the file is added, you can observe the existing application tile displaying an upgrade prompt. Click the upgrade prompt to install the patch file.

In the **Upgrade** pop-up screen, select the new version that you want to upgrade to, and click **Upgrade**. Click on **Job History** to see the progress of the upgrade operation.

- d) After the installation is complete, go to **Administration > Crosswork Manager** and confirm all of the applications are reporting a Healthy status.

**Note** It is expected that some processes will be reported as unhealthy or degraded as the upgrade is deployed (an updated status may take up to 30 minutes before reporting). If, after 30 minutes, the status does not change to Healthy, contact your Cisco Customer Experience representative. It is recommended to wait until the system is back to Healthy status before proceeding to install the next patch file.

**Step 5** Repeat **Step 4** to add and install the remaining Crosswork application patch files that you need.

**Step 6** **Install the Cisco NSO Function Packs:** Install or upgrade the relevant Cisco NSO Function Packs on Crosswork Network Controller.

- **Fresh Installation:** If Cisco NSO Function Packs are not already installed on Crosswork Network Controller version 6.0, please select the 6.0.2 versions of the Function Packs and install them from the

Crosswork UI. For more information, refer to [Install Cisco NSO Function Pack Bundles from Crosswork UI](#).

- **Existing Installation:** All Cisco NSO Function Packs that were already installed on Crosswork Network Controller version 6.0 must be upgraded manually. For more information, refer to the relevant upgrade instructions in the following guides:
  - [Cisco NSO Transport SDN Function Pack Bundle 6.0.2 Installation Guide](#)
  - [Cisco Crosswork Change Automation NSO Function Pack 6.0.2 Installation Guide](#)
  - [Cisco Network Services Orchestrator DLM Service Pack 6.0.2 Installation Guide](#)
  - [Cisco Crosswork NSO Telemetry Traffic Collector Function Pack 6.0.2 Installation Guide](#)

## Bugs

You can use the Cisco Bug Search Tool to search for any bugs associated with the product release.

1. Go to the [Cisco Bug Search Tool](#).
2. Enter your registered Cisco.com username and password, and click **Log In**.

The Bug Search page opens.




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**Note** If you do not have a Cisco.com username and password, you can [register here](#).

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3. From the **Product** list, select **Cloud and Systems Management > Routing and Switching Management > Cisco Crosswork Network Automation**.
4. Enter **6.0.2** in the **Release** field.
5. (Optional) You can enter additional criteria (such as bug ID, problem description, a feature, or a product name) in the **Search For** field.
6. Click **Search**. When the search results are displayed, use the filter tools to narrow the results. You can filter the bugs by status, severity, and so on.




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**Note** To export the results to a spreadsheet, click **Export Results to Excel**.

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