



# Install Crosswork Applications

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## Install Crosswork Applications

This section explains how to install a Crosswork application from the Cisco Crosswork UI.

Every crosswork application is bundled in a particular format unique to Crosswork known as CAPP (Crosswork APplication). The application CAPP files (\*.tar.gz) are downloaded from [cisco.com](https://www.cisco.com) to a machine reachable from the Cisco Crosswork server, and added to the Crosswork UI where it can be installed. You need to have the credentials that will allow you to copy the CAPP files from that machine.

The Crosswork Network Controller applications are bundled as **Essentials** and **Advantage** packages in [cisco.com](https://www.cisco.com).

**Table 1: Crosswork Network Controller Packaging**

Package	Contents
Crosswork Network Controller Essentials	Crosswork Optimization Engine Crosswork Active Topology
Crosswork Network Controller Advantage	Crosswork Optimization Engine Crosswork Active Topology Crosswork Service Health Crosswork Health Insights Crosswork Change Automation Crosswork Zero Touch Provisioning Cisco Element Management System (EMS) Services

### Before you begin

Ensure that all requirements of your application are met. For more information, see [Integration Requirements for other Cisco Products](#).



**Important** If you intend to use the Crosswork Network Controller solution (Essential or Advantage), install Crosswork Cluster and Crosswork Data Gateway, and then install the Crosswork applications in the following sequence:

1. Crosswork Optimization Engine
2. Crosswork Active Topology
3. Crosswork Service Health (only available in Advantage bundle)
4. Cisco Element Management System (EMS) Services (only available in Advantage bundle)

Crosswork Change Automation, Crosswork Health Insights, and Crosswork Zero Touch Provisioning can be installed independently in any order and do not require any other application to be installed prior.

### Step 1 Download and validate the CAPP files:

- a) Navigate to [cisco.com](http://cisco.com) and download the application CAPP files that you require and the relevant signature file to a directory in your machine. For the purpose of these instructions, we will use the file names "**cw-na-cncadvantage-4.1.0-374-release-221027.tar.gz**" and "**cnc-4.1.0-capp-signatures.tar.gz**" respectively.
- b) Decompress the signature file

```
tar -xvf <signature file>
```

Example:

```
[test@cw-build sample]% tar -xvf cnc-4.1.0-capp-signatures.tar.gz
x README
x CW-CCO_RELEASE.cer
x cisco_x509_verify_release.py3
x cisco_x509_verify_release.py
x cw-na-ztp-4.1.0-229-release-221025.tar.gz.signature
x cw-na-common-ems-services-4.1.0-127-release-221025.tar.gz.signature
x cw-na-cat-4.1.0-225-release-221024.tar.gz.signature
x cw-na-aa-4.1.0-262-release-221026.tar.gz.signature
x cw-na-cncadvantage-4.1.0-374-release-221027.tar.gz.signature
x cw-na-cncessential-4.1.0-401-release-221026.tar.gz.signature
```

- c) Use python script to validate the signature of each file you plan to use.

**Note** Use `python --version` to find out the version of Python on your machine.

If you are using Python 2.x, use the following command to validate the file:

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

If you are using Python 3.x, use the following command to validate the file:

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

Example:

```
[test@cw-build sample]% python cisco_x509_verify_release.py3 -s
cw-na-cncadvantage-4.1.0-374-release-221027.tar.gz.signature -i
cw-na-cncadvantage-4.1.0-374-release-221027.tar.gz -e CW-CCO_RELEASE.cer
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 innerspace.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-cncadvantage-4.1.0-374-release-221027.tar.gz using
CW-CCO_RELEASE.cer
```

**Note** If you do not get a successful verification message, please contact the Cisco Customer Experience team.

- d) If you are planning to use individual CAPP files, hover over the relevant file and copy the MD5 or SHA512 checksum to your clip board.

Download the CAPP files to a server that can be reached from the Crosswork server. Run a tool of your choice to calculate the checksum, and the compare the checksum value in your downloaded file with the value you copied in the clip board.

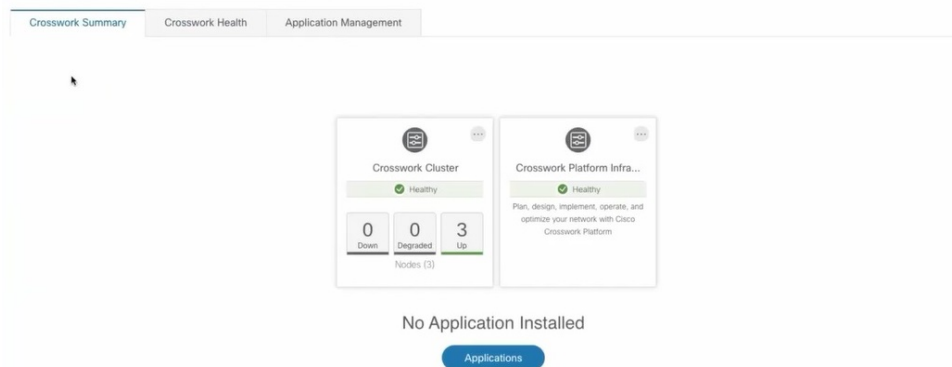
For example, on a MAC you can use the **md5** command to calculate the MD5 sum on a file:

```
md5 <.tar.gz>
```

Verify that the result value matches with the posted value on [cisco.com](https://www.cisco.com).

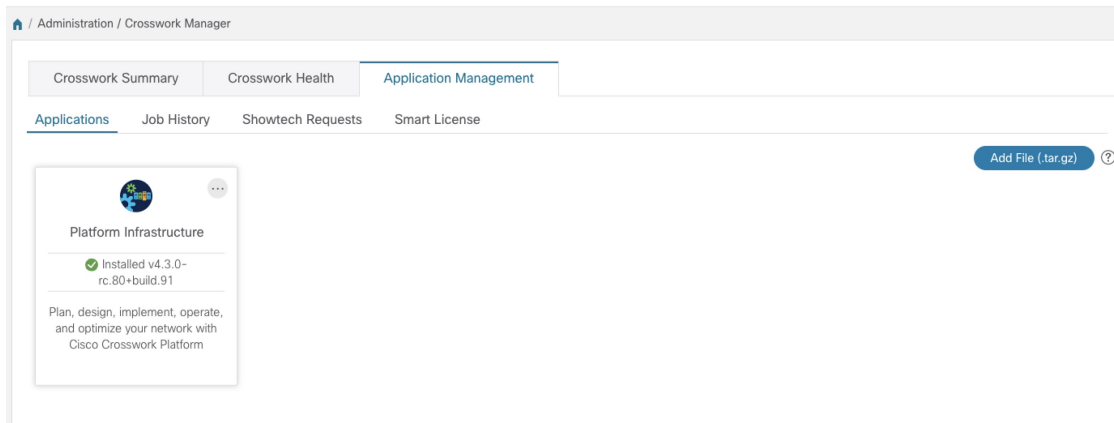
## Step 2 Add the downloaded CAPP file to Crosswork:

- a) Log into Cisco Crosswork and in the homepage, click on **Administration > Crosswork Manager**. The **Crosswork Summary** page is displayed with Crosswork Cluster and Crosswork Platform Infrastructure tiles.



You can click on the tiles to get more information.

- b) To install an application or application bundle, click on **Applications** button. Alternately, click on the **Application Management** tab.



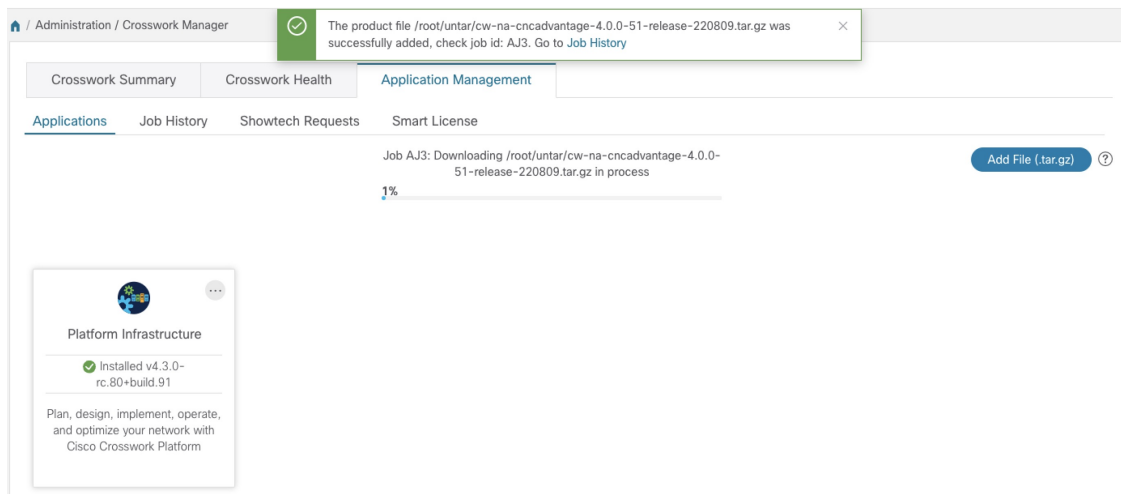
- c) In the Application Management screen, select the **Applications** tab, and click on the **Add File (.tar.gz)** option to add the CAPP file.
- d) In the Add File dialog box, enter the relevant information and click **Add**.

The dialog box is titled 'Add File (.tar.gz) via Secure Copy' and has a close button (X) in the top right. It contains the following fields:

- Server Path/Location**: A text input field with a placeholder 'Network/server\_name/directory/file name'.
- Host Name/IP Address**: A text input field.
- Port**: A text input field with the value '22'.
- Username**: A text input field.
- Password**: A text input field with a toggle icon (eye) to show/hide the password.

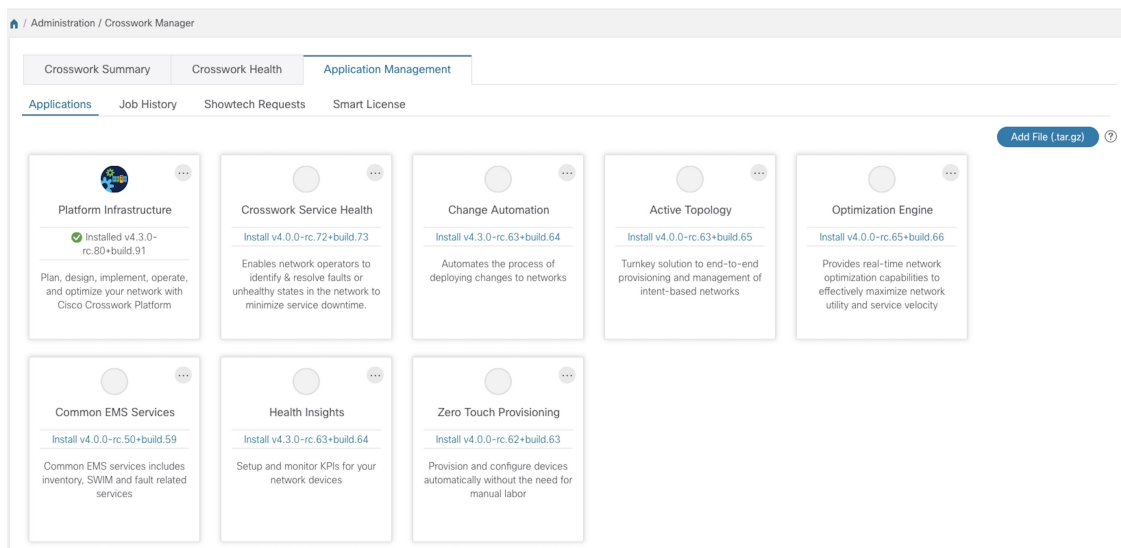
At the bottom, there is a checkbox labeled 'Automatically clean all repository files before adding new one' and two buttons: 'Add' and 'Cancel'.

The add operation progress is displayed on the **Applications** screen. You can also view the installation progress in the **Job History** tab.




**Note** When loading an application bundle (**Essentials** or **Advantage**), the loading process may stop at 50% for a while depending on the resources your host platform has available.

The newly added application file (or application files, if you added a bundle) is displayed as a tile on the **Applications** screen.



### Step 3 Install the Application CAPP file:

- Click on the **Install** prompt on the application tile. You can also click  on the tile, and select the **Install** option from the drop down list.


The application is now installed. You can observe the change in the application tile icon. Once an application is installed, all the related-resources, UI screens and menu options are dynamically loaded in the Crosswork UI.

**Note** Once an application is installed, the 90-day evaluation period will automatically start. You can register the application with your Cisco Smart Account in the the **Smart License** tab.

- b) After an application is installed, it must be activated to become functional. The first-time installation also activates a CAPP file. However, if the activation fails after a successful installation, you can manually activate the application.

To manually activate an application, click the  on the application tile, and select **Activate**.

**Step 4** Repeat step 3 for installing any remaining applications.

**Step 5** (Optional) Click  on the application tile, and select the **View Details** option to view details of the installed application.

**Step 6** Once an application (or all applications) have been installed, check the health of the environment to make sure all the applications are healthy. It can take up to an hour for all the processes that make launch and for the applications to report as healthy. If after an hour a newly installed application is not healthy after an hour, contact the Cisco Customer Experience team.

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