



# Maintenance

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- [Upgrade procedures, on page 1](#)
- [Certificate renewal, on page 8](#)

## Upgrade procedures

### Upgrade through the Cisco Cyber Vision sensor management extension

Before updating sensors, the Cisco Cyber Vision sensor management extension must be up-to-date.

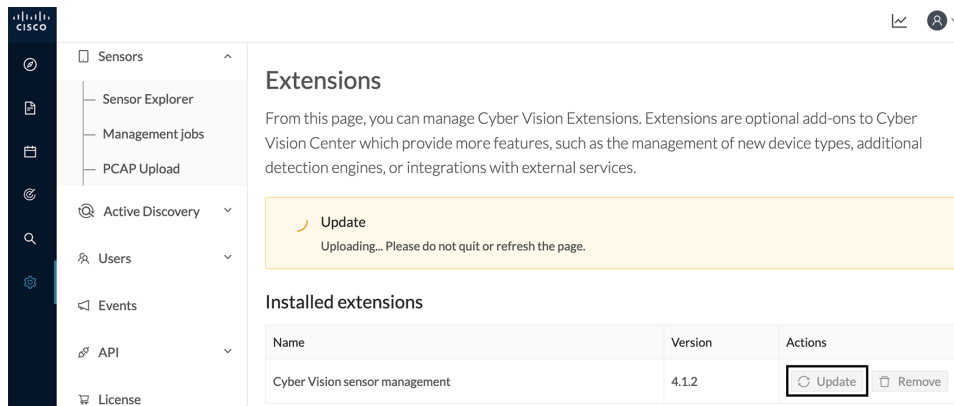
#### Update the sensor management extension

The Cisco Cyber Vision sensor management extension must be up-to-date to update IOx sensors.

##### Procedure

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- Step 1** Retrieve the sensor management extension file (i.e. CiscoCyberVision-sensor-management-<version>.ext) on cisco.com.
- Step 2** In Cisco Cyber Vision, navigate to Admin > Extensions.
- Step 3** Click **Update** to browse the new version of the extension file.



**Extensions**

From this page, you can manage Cyber Vision Extensions. Extensions are optional add-ons to Cyber Vision Center which provide more features, such as the management of new device types, additional detection engines, or integrations with external services.

**Update**  
Uploading... Please do not quit or refresh the page.

**Installed extensions**

Name	Version	Actions
Cyber Vision sensor management	4.1.2	<a href="#">Update</a> <a href="#">Remove</a>

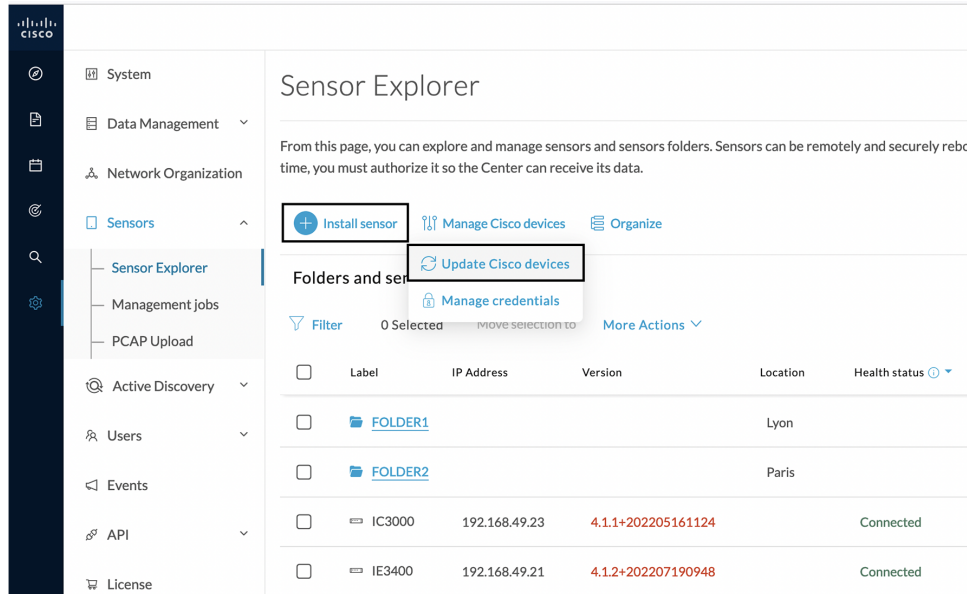
## Update the sensors

### Procedure

**Step 1** In Cisco Cyber Vision, navigate to Admin > Sensors > Sensor Explorer.

Sensors that are not up-to-date have their version displayed in red.

**Step 2** Click **Install sensor**, then **Update Cisco devices**.



**Sensor Explorer**

From this page, you can explore and manage sensors and sensors folders. Sensors can be remotely and securely rebo time, you must authorize it so the Center can receive its data.

[Install sensor](#) [Manage Cisco devices](#) [Organize](#)

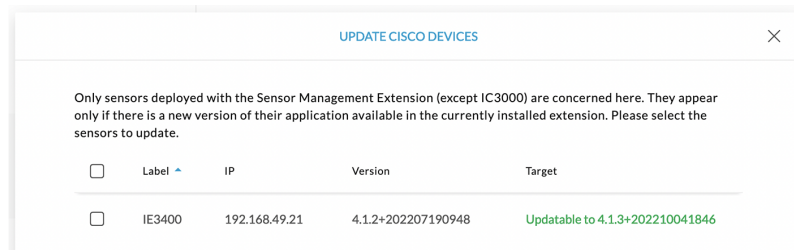
[Update Cisco devices](#) [Manage credentials](#)

**Folders and sensors**

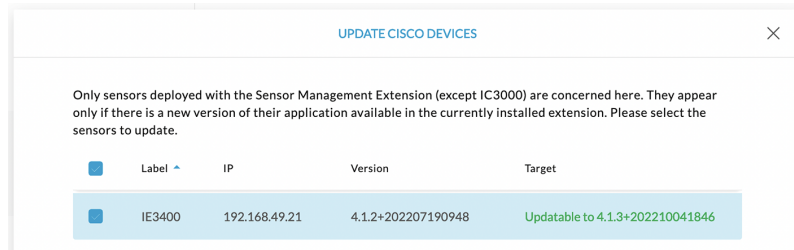
Filter 0 Selected MOVE SELECTION TO More Actions

	Label	IP Address	Version	Location	Health status
<input type="checkbox"/>	<a href="#">FOLDER1</a>			Lyon	
<input type="checkbox"/>	<a href="#">FOLDER2</a>			Paris	
<input type="checkbox"/>	IC3000	192.168.49.23	4.1.1+202205161124		Connected
<input type="checkbox"/>	IE3400	192.168.49.21	4.1.2+202207190948		Connected

The update Cisco devices window pops up listing all sensors that have been deployed with the sensor management extension.

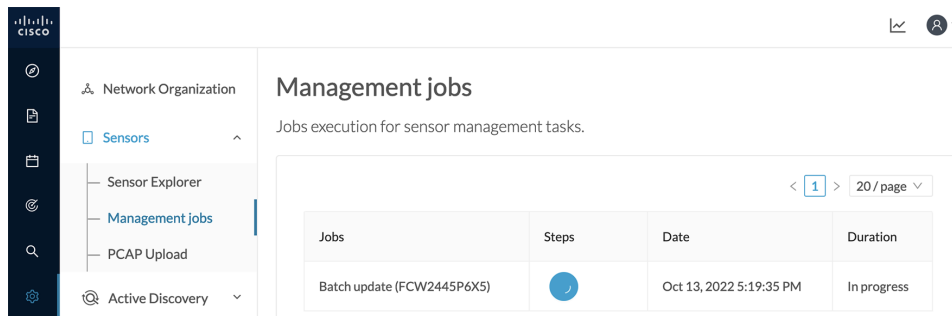


**Step 3** Select the sensors you want to update.

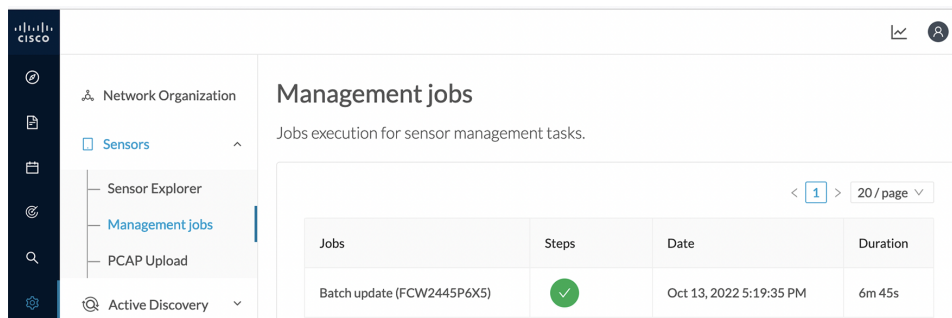


**Step 4** Click **Update**.

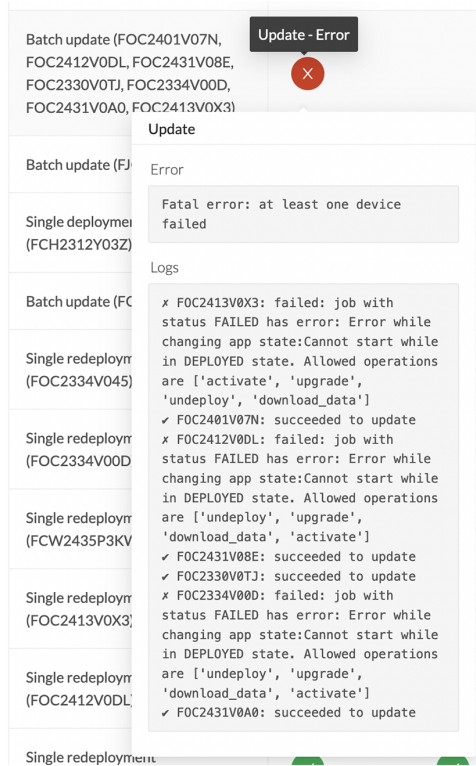
The sensors' update status appear in the Management jobs page in batches per sensor type and of maximum ten sensors per batch.



Herebelow the management jobs indicate that the batch of sensors updated successfully.



If the batch update fails, click the red update error icon to see logs.



## Upgrade through the Local Manager

The following section explains how to upgrade the sensor through the Local Manager.

In the Cisco Cyber Vision sensor administration page, the sensor is in 3.2.2. In the example below, we will upgrade the sensor to Cisco Cyber Vision version 3.2.3.

**Sensors**

From this page, you can manage sensors in online and offline modes and generate provisioning packages to deploy Cisco Cyber Vision on remote sensors. Sensors can also be remotely and securely rebooted, shut down, and erased. When a sensor connects for the first time, you must authorize it so the Center can receive its data.

Name	IP	Version	Status	Processing status	Active Discovery status	Capture Mode <sup>®</sup>	Uptime
▶ FOC2334V00H	192.168.69.20	3.2.3+202104292032	Connected	Pending data	Unavailable	All	4d 1h 57m 2s
▼ FCH2312Y047	192.168.70.20	3.2.2+202103181753	Connected	Pending data	Unavailable	All	27m 37s

S/N: FCH2312Y047  
 Name: FCH2312Y047  
 IP address: 192.168.70.20  
 Version: 3.2.2+202103181753  
 System date (UTC): Friday, April 30, 2021 9:42 AM  
 Status: Connected  
 Processing status: Pending data  
 Active discovery: Unavailable  
 Deployment: Manual  
 Uptime: 27m 37s  
 Capture mode: All  
 ● Start recording sensor  
 📊 Go to statistics

Remove Erase Get Provision... Capture Mode Enable IDS Shutdown Reboot

[+ UPDATE CISCO DEVICES](#)
[+ DEPLOY CISCO DEVICE](#)
[+ INSTALL SENSOR MANUALLY](#)
[IMPORT OFFLINE FILE](#)

1. Access the Local Manager.
2. Stop the application.

Cisco Systems  
Cisco IOx Local Manager

Applications Remote Docker Workflow Docker Layers System Info System Setting

**CyberVisionSensor** RUNNING

Cyber Vision Sensor Image for IC3000

TYPE	VERSION	PROFILE
vm	3.2.2+202103181753	exclusive

Memory \* 100.0%

CPU \* 100.0%

Stop Manage

The operation takes a few moments.

The application status switches to STOPPED.

Cisco Systems  
Cisco IOx Local Manager

Applications Remote Docker Workflow Docker Layers System

**CyberVisionSensor** STOPPED

Cyber Vision Sensor Image for IC3000

TYPE	VERSION	PROFILE
vm	3.2.2+202103181753	exclusive

Memory \* 100.0%

CPU \* 100.0%

Start Deactivate Manage

In Cisco Cyber Vision, the sensor status moves to Disconnected.

Name	IP	Version	Status	Processing status	Active Discovery status	Capture Mode <sup>®</sup>	Uptime
▶ FOC2334V00H	192.168.69.20	3.2.3+202104292032	Connected	Pending data	Unavailable	All	4d 1h 5m 12s
▼ FCH2312Y047	192.168.70.20	3.2.2+202103181753	Disconnected @ SSH	Disconnected	Unavailable	All	N/A

S/N: FCH2312Y047  
 Name: FCH2312Y047  
 IP address: 192.168.70.20  
 Version: 3.2.2+202103181753  
 System date (UTC): Friday, Apr 11 30, 2021 9:42 AM  
 Status: Disconnected  
 Processing status: Disconnected  
 Active discovery: Unavailable  
 Deployment: Manual  
 Capture mode: All  
[Go to statistics](#)

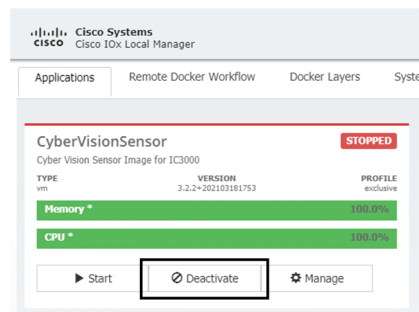
UPDATE CISCO DEVICES

+ DEPLOY CISCO DEVICE

+ INSTALL SENSOR MANUALLY

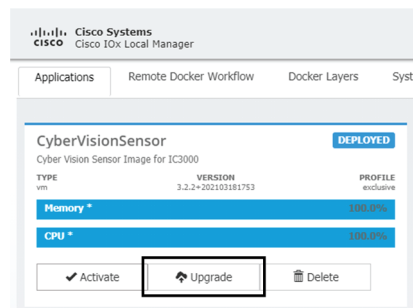
IMPORT OFFLINE FILE

- In the Local Manager, click the Deactivate button.

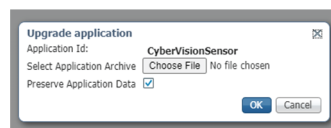


The application status moves to "DEPLOYED".

- Click Upgrade.

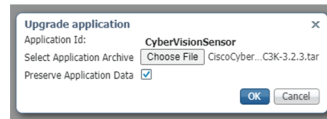


The pop up Upgrade application appears.



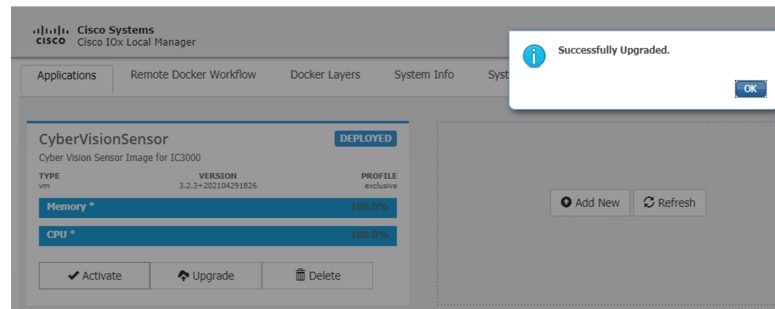
- Select the option Preserve Application Data.

6. Select the new version of the application archive file.  
e.g. Cisco-Cyber-Vision-IOx-IC3K-3.2.3.tar



The operation takes a few moments.

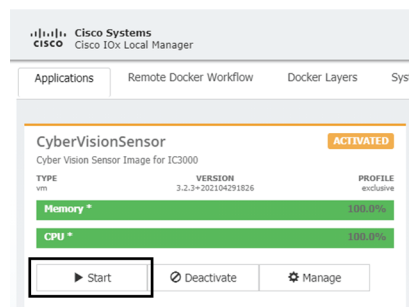
A message indicating that the sensor has been successfully upgraded is displayed.



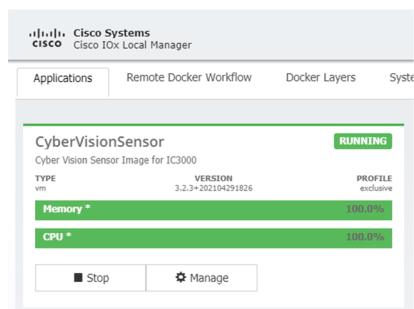
7. Check the number of the new version.
8. Click Activate.
9. Check configurations.

**It can happen that network configurations are lost during the upgrade. If they are, refer to [Configure the sensor virtual application](#) and do as explained.**

10. Click the Activate App button.  
The application status moves to ACTIVATED.
11. Click the Start button.



The application status changes to RUNNING.



In Cisco Cyber Vision, the sensor is upgraded from version 3.2.2 to 3.2.3 and its status moves to Connected.

Name	IP	Version	Status	Processing status	Active Discovery status	Capture Mode <sup>®</sup>	Uptime
▶ FOC2334V00H	192.168.69.20	3.2.3+202104292032	Connected	Pending data	Unavailable	All	4d 2h 17m 23s
▼ FCH2312Y047	192.168.70.20	3.2.3+202104291826	Connected	Pending data	Unavailable	All	1m 22s

S/N: FCH2312Y047  
 Name: FCH2312Y047 ✎  
 IP address: 192.168.70.20  
 Version: 3.2.3+202104291826  
 System date (UTC): Friday, Apr 11 30, 2021 10:02 AM  
 Status: Connected  
 Processing status: Pending data  
 Active discovery: Unavailable

Deployment: Manual  
 Uptime: 1m 22s  
 Capture mode: All  
 ● Start recording sensor  
 📊 Go to statistics

Remove
Erase
Get Provision...
Capture Mode
Enable IDS
Shutdown
Reboot

UPDATE CISCO DEVICES
DEPLOY CISCO DEVICE
INSTALL SENSOR MANUALLY
IMPORT OFFLINE FILE

## Certificate renewal

The certificates generated by Cisco Cyber Vision have a validity of two years.

Sensor certificates must be renewed manually. The procedure used differs whether the certificate is already expired or not and whether the sensor has been deployed using the sensor management extension.

- If the certificate is still valid, refer to [Sensor certificate renewal, on page 8](#).
- If the sensor was deployed with the sensor management extension, refer to [Sensor certificate renewal, on page 8](#).
- If the certificate is outdated, and was deployed manually, refer to [Sensor certificate renewal through the Local Manager, on page 12](#).

## Sensor certificate renewal

The following procedure applies to:

- Sensors deployed with the sensor management extension, whether the certificate expiration date is exceeded or not (i.e. the deployment method is indicated in the sensor's right side panel).



The screenshot shows the 'Sensor Explorer' page. At the top right, there is a red banner for 'System Issues Actions required'. Below it, the sensor 'FOC2330V0T0' is selected. A yellow warning box indicates '2 sensor certificates expired'. The main area contains a table of sensors and a detailed view of the selected sensor.

**Sensor Explorer**

From this page, you can explore and manage sensors and sensors folders. Sensors are automatically discovered and added to the Explorer. When a sensor connects for the first time, you must authorize it so that it can be managed.

⚠️ 2 sensor certificates expired

[+ Install sensor](#)
[🔧 Manage Cisco devices](#)
[📁 Organize](#)

**Folders and sensors (3)**

🔍 Filter 0 Selected Move selection to [More Actions](#) ▾

<input type="checkbox"/>	Label	IP Address	Version
<input type="checkbox"/>	FCH2309Y01Z	192.168.49.23	4.2.2+202306261711
<input type="checkbox"/>	FCW2445P6X5	192.168.49.21	4.2.2+202306261519
<input type="checkbox"/>	FOC2330V0T0	192.168.49.41	4.2.2+202306261519

**FOC2330V0T0**

Label: FOC2330V0T0 [✎](#)  
 Serial Number: FOC2330V0T0  
 IP address: 192.168.49.41  
 Version: 4.2.2+202306261519  
 System date: Jul 6, 2023 11:26:00 AM  
 Deployment: **Sensor Management Extension**  
 Active Discovery: Unavailable  
 Capture mode: All

**System Health**

Status: Connected  
 Processing status: Normally processing  
 Uptime: 18 hours

[📊 Go to statistics](#)  
[🔴 Start Recording](#)

[📁 Move to](#)

[🔧 Capture mode](#)
[🔄 Redeploy](#)

[⊖ Uninstall](#)

- In the case of sensors deployed manually, it only applies if the sensors certificate have not expired yet (i.e. the sensor certificate status is Expire Soon).

If sensors have been deployed manually and the certificate expiration date is exceeded, refer to [Sensor certificate renewal through the Local Manager, on page 12](#).

## Procedure

**Step 1** In Cisco Cyber Vision, navigate to Admin > Sensors > Sensor Explorer or click the top banner alert to access the Sensor Explorer page directly.

The screenshot shows the top banner area of the Sensor Explorer page. A red banner for 'System Issues Actions required' is visible. Below it, a white alert box with a red 'X' icon contains the text: '2 sensors certificates expired. Please renew them in: [Sensor explorer](#)'.

Another alert is displayed.

The screenshot shows the Cisco Sensor Explorer interface. On the left is a navigation sidebar with options like System, Data Management, Network Organization, Sensors, Active Discovery, Users, Events, API, License, External Authentication, and Snort. The main content area is titled "Sensor Explorer" and includes a notification banner: "2 sensor certificates expired and 1 will expire soon" with a "Manage certificates" link. Below this are buttons for "Install sensor", "Manage Cisco devices", and "Organize". A table titled "Folders and sensors (3)" lists three sensors with columns for Label, IP Address, Version, Location, Health status, and Processing status.

Label	IP Address	Version	Location	Health status	Processing status
FCH2309Y01Z	192.168.49.23	4.2.2+202306261711		Connected	Normally pro
FCW2445P6X5	192.168.49.21	4.2.2+202306261519		Connected	Normally pro
FOC2330V0T0	192.168.49.41	4.2.2+202306261519		Connected	Normally pro

**Step 2** Click **Manage certificates** in the alert or **Manage Cisco devices > Manage certificates**.

This screenshot shows the same Cisco Sensor Explorer interface as above, but with a dropdown menu open over the "Manage Cisco devices" button. The dropdown menu contains three options: "Update Cisco devices", "Manage credentials", and "Manage certificates", which is highlighted with a black box. The notification banner and table are still visible in the background.

The **Manage sensors certificates** window opens.

MANAGE SENSORS CERTIFICATES

Select a sensor to renew its certificate.  
If a sensor cannot be selected, it means that its certificate cannot be renewed automatically.

Filter

Certificate status is Expired × Certificate status is Expiring Soon ×

	Sensor Label	IP	Certificate Status	Expiration Date
<input type="radio"/>	FCH2309Y01Z	192.168.49.23	Expired	Jul 2, 2023
<input type="radio"/>	FOC2330V0T0	192.168.49.41	Expired	Jul 2, 2023
<input checked="" type="radio"/>	FCW2445P6X5	192.168.49.21	Expiring Soon	Jul 14, 2023

Cancel Renew certificate

- Step 3** Select the sensor with the status Expiring Soon.
- Step 4** Click **Renew certificate**.

MANAGE SENSORS CERTIFICATES

Select a sensor to renew its certificate.  
If a sensor cannot be selected, it means that its certificate cannot be renewed automatically.

The certificate has been successfully renewed.

Filter

Certificate status is Expired × Certificate status is Expiring Soon ×

	Sensor Label	IP	Certificate Status	Expiration Date
<input type="radio"/>	FOC2330V0T0	192.168.49.41	Expired	Jul 2, 2023
<input type="radio"/>	FCH2309Y01Z	192.168.49.23	Expired	Jul 2, 2023
<input type="radio"/>	FCW2445P6X5	192.168.49.21	Valid	Sep 3, 2025

Cancel Renew certificate

The certificate is renewed and automatically sent to the sensor. Its status switches to Valid and the new expiration date appears.

## Sensor certificate renewal through the Local Manager

In case of certificate expiration, communication with the sensor is no longer possible if it was deployed manually (i.e. without the sensor management extension). In this case, the certificate is renewed by sending it to the sensor manually. As the certificate is part of the provisioning package, the action consists in generating the provisioning package and sending it to the sensor application through the Local Manager.

The screenshot shows the Cisco Cyber Vision Sensor Explorer interface. At the top right, there is a red notification banner that says "System issues Action required". Below this, the main content area is titled "Sensor Explorer" and displays a notification: "1 sensor certificate expired". Below the notification, there are three buttons: "Install sensor", "Manage Cisco devices", and "Organize". A table titled "Folders and sensors (3)" lists three sensors with columns for Label, IP Address, and Version. The first sensor, FCH2309Y01Z, is highlighted. To the right of the table, a detailed view for the selected sensor is shown, including its Label, Serial Number, IP address, Version, System date, and Deployment method (Manual). Below this, there are several action buttons: "Go to statistics", "Start Recording", "Move to", "Download package", "Capture mode", "Enable IDS", "Reboot", "Shutdown", and "Uninstall".

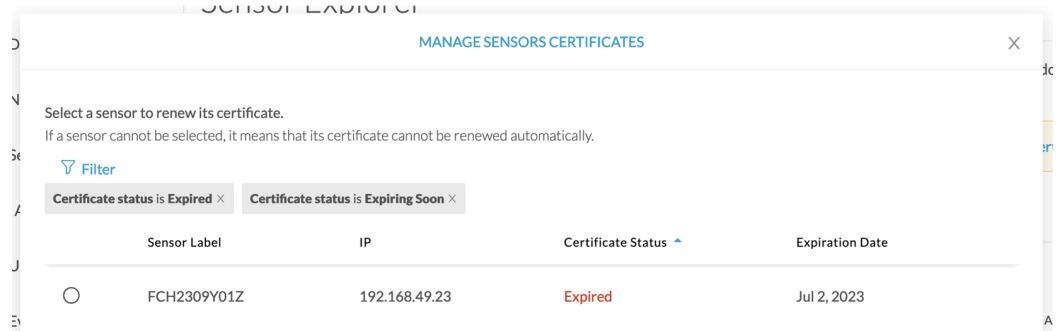
Label	IP Address	Version
FCH2309Y01Z	192.168.49.23	4.2.2+202306261711
FCW2445P6X5	192.168.49.21	4.2.2+202306261519
FOC2330V0T0	192.168.49.41	4.2.2+202306261519

### Procedure

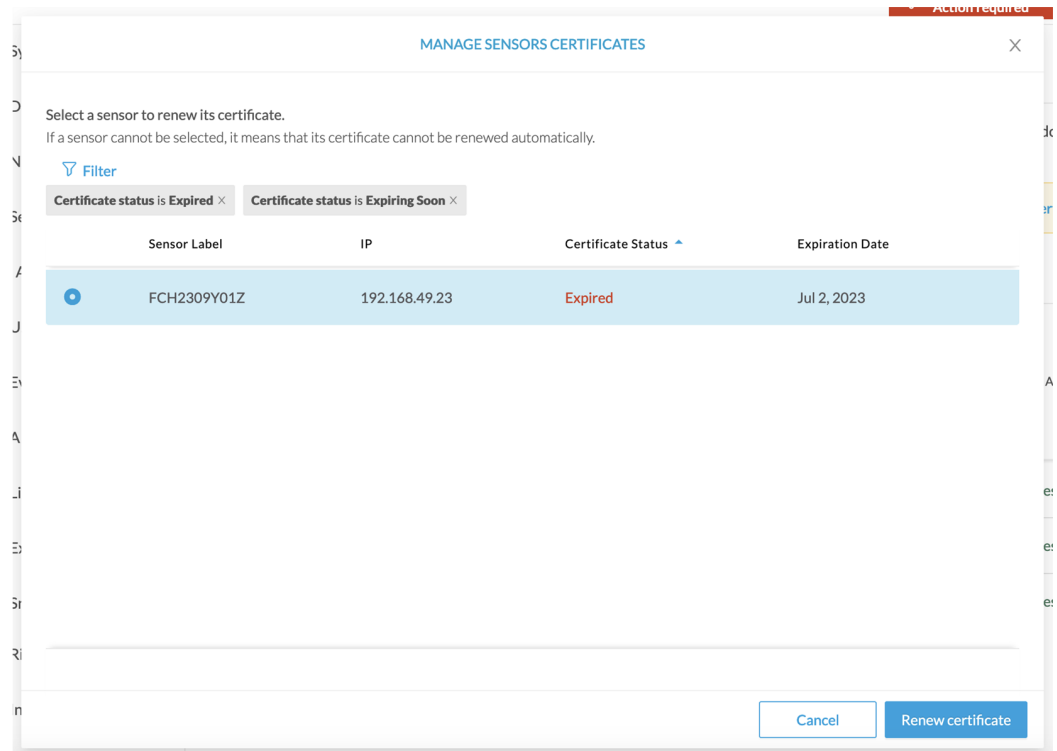
**Step 1** In Cisco Cyber Vision, navigate to Admin > Sensors > Sensor Explorer.

**Step 2** Click **Manage Certificates**.

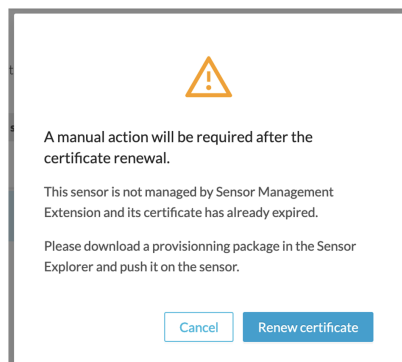
The Manage sensors certificates window appears.



**Step 3** Select the sensor and click **Renew Certificate**.

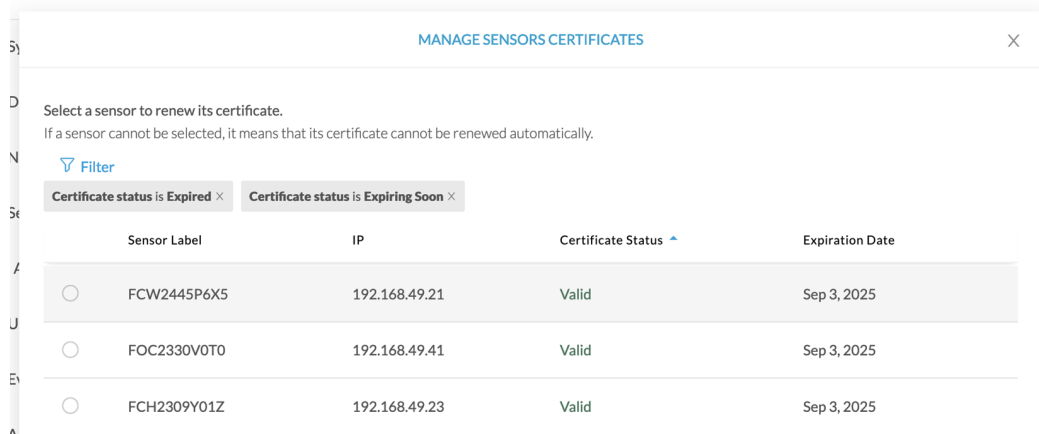


A message is displayed.



**Step 4** Click **Renew certificate** again.

The sensor certificate status appears as valid.



**Step 5** Close the Manage sensors certificates window.

The sensor's health and processing status appear as Disconnected.

## Sensor Explorer

From this page, you can explore and manage sensors and sensors folders. Sensors can be remotely and securely rebooted, shut down, and erased. When a sensor connects for the first time, you must authorize it so the Center can receive its data.

[+ Install sensor](#) [? Manage Cisco devices](#) [📁 Organize](#)

### Folders and sensors (3)

[Filter](#) 0 Selected Move selection to [More Actions](#) As of: Jul 6, 2023 11:41 AM [Refresh](#)

<input type="checkbox"/>	Label	IP Address	Version	Location	Health status	Processing status	Active Di
<input type="checkbox"/>	FCH2309Y01Z	192.168.49.23	4.2.2+202306261711		Disconnected	Disconnected	Disa
<input type="checkbox"/>	FCW2445P6X5	192.168.49.21	4.2.2+202306261519		Connected	Normally processing	Una
<input type="checkbox"/>	FOC2330V0T0	192.168.49.41	4.2.2+202306261519		Connected	Normally processing	Una

**Step 6** Click the sensor in the list.

Its right side panel opens.

**Step 7** Click the **Download package** button.

The screenshot shows the 'Sensor Explorer' interface. On the left, there's a list of sensors under 'Folders and sensors (3)'. The table below shows the details for three sensors:

Label	IP Address	Version	Location
FCH2309Y01Z	192.168.49.23	4.2.2+202306261711	Local
FCW2445P6X5	192.168.49.21	4.2.2+202306261519	Local
FOC2330V0T0	192.168.49.41	4.2.2+202306261519	Local

On the right, the detailed view for sensor 'FCH2309Y01Z' is shown. It includes the following information:

- Label: FCH2309Y01Z
- Serial Number: FCH2309Y01Z
- IP address: 192.168.49.23
- Version: 4.2.2+202306261711
- System date: Jul 6, 2023 11:36:49 AM
- Deployment: Manual
- Active Discovery: Disabled
- Capture mode: All
- System Health: Status: **Disconnected**, Processing status: **Disconnected**, Uptime: N/A

Below the details, there are several action buttons: 'Move to', 'Download package' (highlighted with a red box), 'Enable IDS', 'Reboot', 'Shutdown', and 'Uninstall'.

**Step 8** Type the Local Manager's password or set it if not already done. Make sure to keep this piece of information stored as it will be asked to access IOx Local Manager and for further troubleshooting and configuration purposes.

The 'DOWNLOAD PACKAGE' dialog box contains the following text: "The provisioning package should be placed in the root directory of USB mass storage, and plugged in the IC3000 / Sensor before powering it up or added in the right location of your IOx Application." Below this text are two password input fields labeled 'Password\*' and 'Confirm password\*'. A progress bar below the fields shows a green bar and the text 'Good'. At the bottom right, there is a 'Download package' button.

**Step 9** Click **Download package**.

**Step 10** Import the provisioning package in the Local Manager. To do so, refer to [Import the provisioning package](#).

**Step 11** In the sensor's CLI, type the following command to enroll the sensor:

```
sbs-sensor-enroll-offline -fp /data/iox/appdata/cybervision-sensor-config.zip
```

**Step 12** The sensor's health status switches to Connected and its processing status to Normally processing.



## Sensor Explorer

From this page, you can explore and manage sensors and sensors folders. Sensors can be remotely and securely rebooted, shut down, and erased. When a sensor connects for the first time, you must authorize it so the Center can receive its data.

Install sensor
 Manage Cisco devices
 Organize

### Folders and sensors (3)

Filter    0 Selected    Move selection to    [More Actions](#)
As of: Jul 6, 2023 11:56 AM

<input type="checkbox"/>	Label	IP Address	Version	Location	Health status	Processing status	Active Di:
<input type="checkbox"/>	FCH2309Y01Z	192.168.49.23	4.2.2+202306261711		Connected	Normally processing	Disal
<input type="checkbox"/>	FCW2445P6X5	192.168.49.21	4.2.2+202306261519		Connected	Normally processing	Unav
<input type="checkbox"/>	FOC2330V0T0	192.168.49.41	4.2.2+202306261519		Connected	Normally processing	Unav