



# 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.

It is possible to select which sensors to update. The update status will be visible in the [Management jobs](#) page.

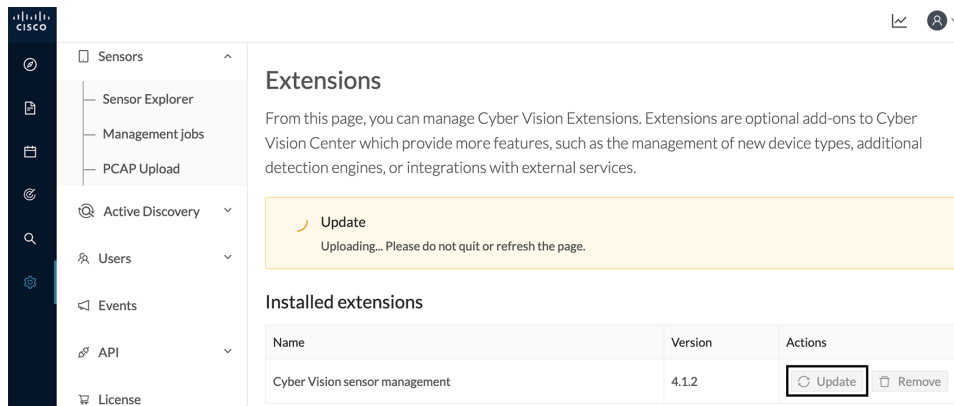
#### Update the sensor management extension

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>

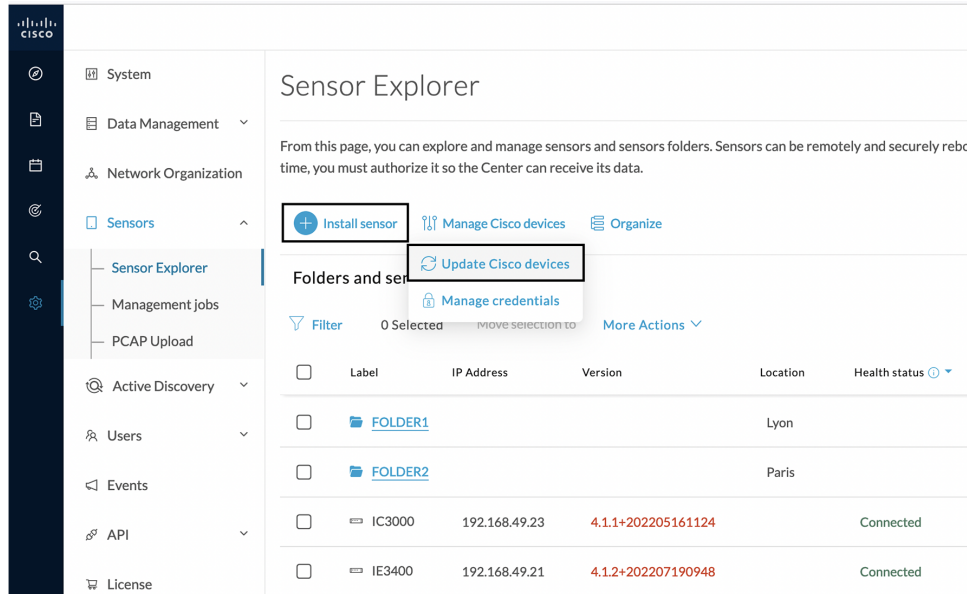
## Update the sensors

### 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.

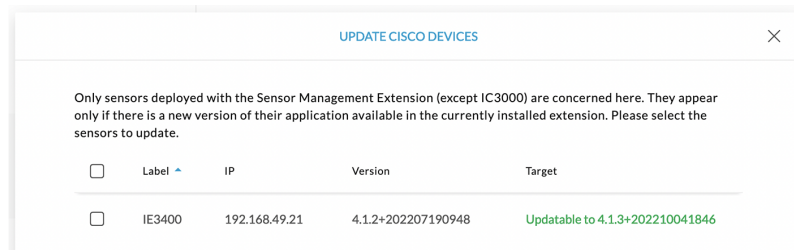
[Install sensor](#) [Manage Cisco devices](#) [Organize](#)  
[Update Cisco devices](#) [Manage credentials](#)

**Folders and sensors**

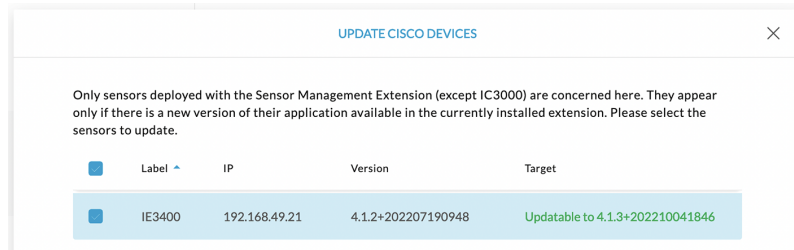
Filter 0 Selected MOVE SELECTION TO More Actions

	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.

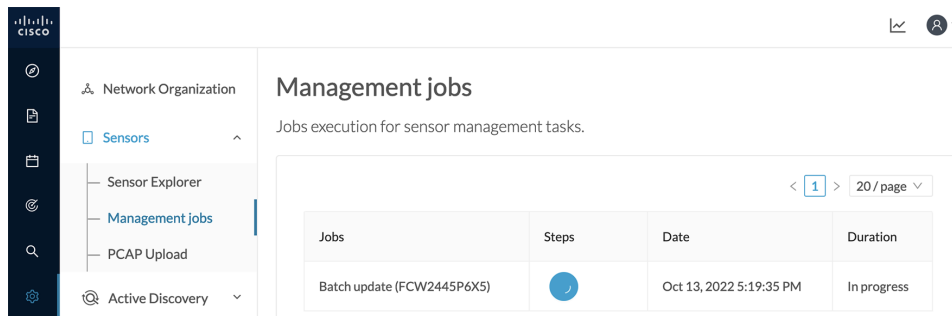


**Step 3** Select the sensors you want to update.

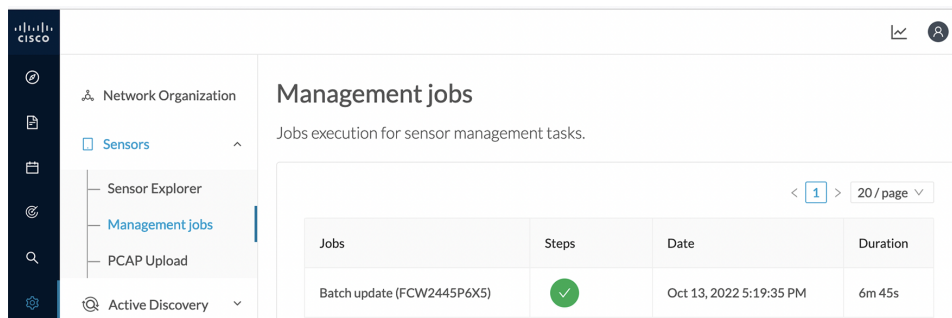


**Step 4** Click **Update**.

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.

Batch update (FOC2401V07N, FOC2412V0DL, FOC2431V08E, FOC2334V00D, FOC2431V0A0, FOC2413V0X3) **Update - Error**

**Update**

Batch update (FJ...)

Single deployment (FCH2312Y03Z)

Batch update (FC...)

Single redeployment (FOC2334V045)

Single redeployment (FOC2334V00D)

Single redeployment (FCW2435P3KV)

Single redeployment (FOC2413V0X3)

Single redeployment (FOC2412V0DL)

Single redeployment

**Error**

Fatal error: at least one device failed

**Logs**

```
x FOC2413V0X3: failed: job with status FAILED has error: Error while changing app state:Cannot start while in DEPLOYED state. Allowed operations are ['activate', 'upgrade', 'undeploy', 'download_data']
✓ FOC2401V07N: succeeded to update
x FOC2412V0DL: failed: job with status FAILED has error: Error while changing app state:Cannot start while in DEPLOYED state. Allowed operations are ['undeploy', 'upgrade', 'download_data', 'activate']
✓ FOC2431V08E: succeeded to update
✓ FOC2334V00D: succeeded to update
x FOC2334V00D: failed: job with status FAILED has error: Error while changing app state:Cannot start while in DEPLOYED state. Allowed operations are ['undeploy', 'upgrade', 'download_data', 'activate']
✓ FOC2431V0A0: succeeded to update
```

## Upgrade through the IOx Local Manager

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



**Note** In the case of Cisco Cyber Vision upgrade for an IR8340 from a release 4.1.2 or lower to a release 4.1.3, the update will fail due to the addition of the RSPAN option. The sensor application must be removed and deployed again.

In the example below, the sensor is upgraded from Cisco Cyber Vision version 3.2.2 to version 3.2.3.

Figure 1: The sensor in version 3.2.2 in the Sensors administration page of Cisco Cyber Vision

The screenshot displays the 'Sensors' administration page in Cisco Cyber Vision. The page title is 'Sensors' and includes a brief description: '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	Uptime
FOC2334V00H	192.168.69.20	3.2.2+202103181619	Connected	Pending data	Unavailable	All	4d 1h 3m 47s
FCH2312Y047	192.168.70.20	3.2.2+202103181753	Connected	Pending data	Unavailable	All	3m 27s

The expanded view for sensor FOC2334V00H shows the following details:

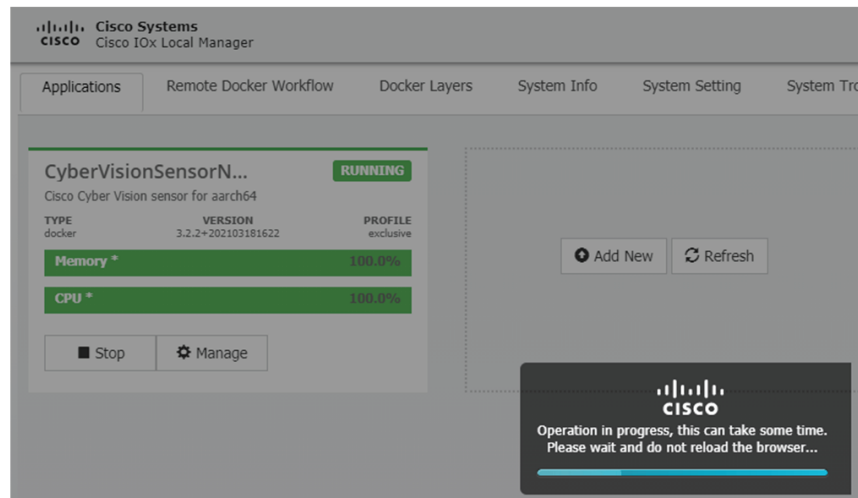
- S/N: FOC2334V00H
- Name: FOC2334V00H
- IP address: 192.168.69.20
- Version: 3.2.2+202103181619
- System date (UTC): Monday, May 31, 2021 9:17 AM
- Status: Connected
- Processing status: Pending data
- Active discovery: Unavailable
- Deployment: Manual
- Uptime: 4d 1h 32m 47s
- Capture mode: All
- Start recording sensor
- Go to statistics

At the bottom of the page, there are four buttons: UPDATE CISCO DEVICES, DEPLOY CISCO DEVICE, INSTALL SENSOR MANUALLY, and IMPORT OFFLINE FILE.

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

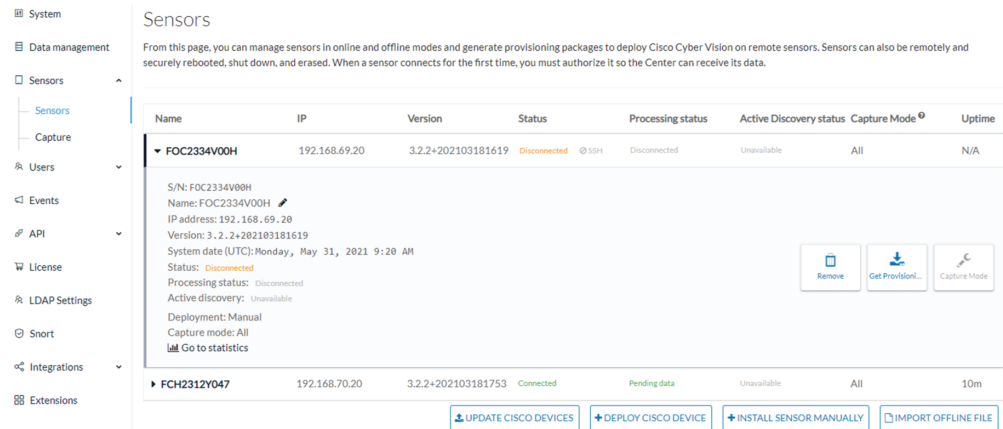
The screenshot shows the Cisco IOx Local Manager interface for a Cisco IE-3400-8T2S device. The navigation menu on the left includes Dashboard, Monitoring, Configuration, Administration, Licensing, and Troubleshooting. The main content area is titled 'Configuration > Services > IOx'. Under the 'Applications' tab, a 'CyberVisionSensorN...' application is shown with a 'RUNNING' status. The application details include TYPE: docker, VERSION: 3.2.2+202103181622, and PROFILE: exclusive. There are progress bars for Memory (100.0%) and CPU (100.0%). A 'Stop' button is highlighted with a red box, and a 'Manage' button is also visible.

The operation takes a few moments.



The application status switches to STOPPED.

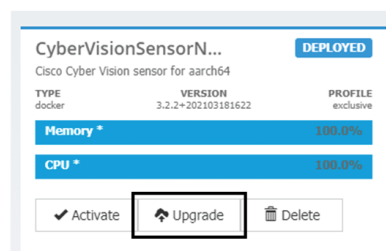
In Cisco Cyber Vision, the sensor status switches to Disconnected.



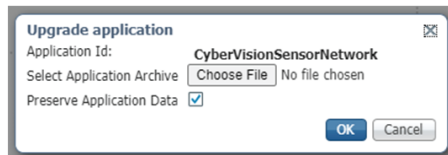
3. In the IOx Local Manager, click the **Deactivate** button.

The application status moves to DEPLOYED.

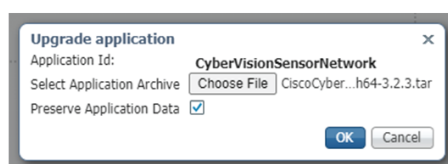
4. Click **Upgrade**.



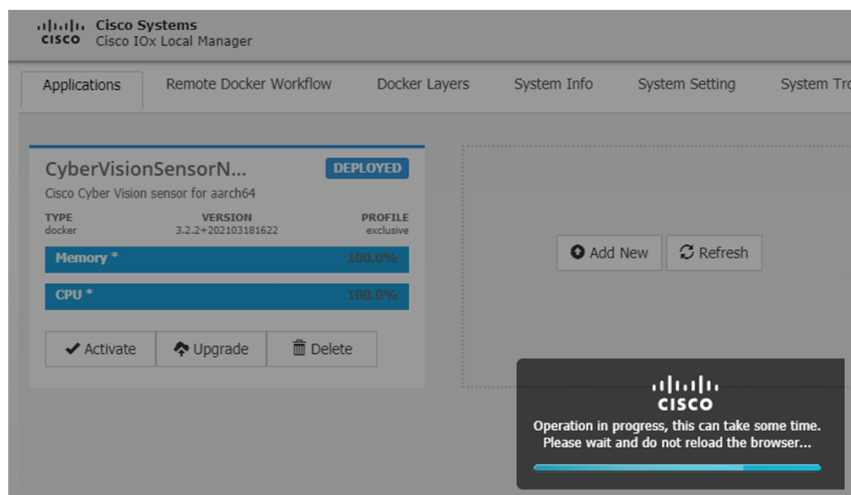
The pop up Upgrade application appears.



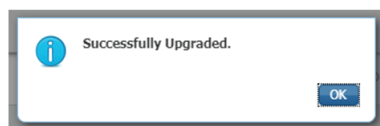
5. Select the **Preserve Application Data** option.
6. Select the new version of the application archive file.  
e.g. CiscoCyberVision-IOx-aarch64-3.2.3.tar



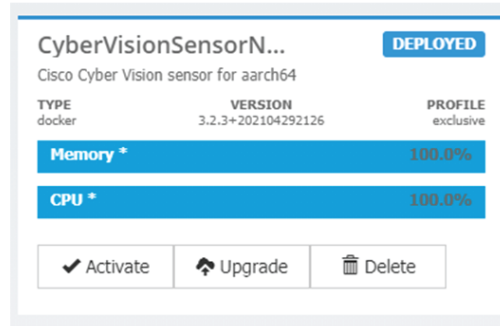
The operation takes a few moments.



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.
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	Uptime
▼ FOC2334V00H	192.168.69.20	3.2.3+202104292032	Connected	Pending data	Unavailable	All	4d 1h 4 9m
S/N: FOC2334V00H Name: FOC2334V00H IP address: 192.168.69.20 Version: 3.2.3+202104292032 System date [UTC]: Monday, May 31, 2021 9:33 AM Status: Connected Processing status: Pending data Active discovery: Unavailable Deployment: Manual Uptime: 4d 1h 49m Capture mode: All ● Start recording sensor 📊 Go to statistics							
▶ FCH2312V047	192.168.70.20	3.2.2+202103181753	Connected	Pending data	Unavailable	All	19m 34 s

[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 9](#).



- If the sensor was deployed with the sensor management extension, refer to [Sensor certificate renewal, on page 9](#).
- 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 displays the Cisco Cyber Vision Sensor Explorer interface. At the top right, there is a red notification banner for 'System issues Actions required'. The main header reads 'Sensor Explorer' and 'FOC2330V0T0'. Below the header, a yellow banner states '2 sensor certificates expired'. The interface includes navigation 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 sensor FOC2330V0T0 is highlighted. To the right, a detailed view for FOC2330V0T0 shows its label, serial number, IP address, version, and system date. A box highlights the 'Deployment: Sensor Management Extension' field. Other details include 'Active Discovery: Unavailable', 'Capture mode: All', 'System Health: Connected', 'Processing status: Normally processing', and 'Uptime: 18 hours'. Action buttons include 'Go to statistics', 'Start Recording', 'Move to', 'Capture mode', 'Redeploy', and 'Uninstall'.

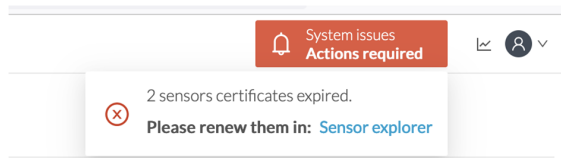
Label	IP Address	Version
FCH2309Y01Z	192.168.49.23	4.2.2+202306261711
FCW2445P6X5	192.168.49.21	4.2.2+202306261519
FOC2330V0T0	192.168.49.41	4.2.2+202306261519

- 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.



Another alert is displayed.

System issues  
Actions required

## 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.

2 sensor certificates expired and 1 will expire soon [Manage certificates](#)

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

### Folders and sensors (3)

Filter 0 Selected Move selection to [More Actions](#) As of: Jul 6, 2023 11:25 AM

<input type="checkbox"/>	Label	IP Address	Version	Location	Health status	Processing status
<input type="checkbox"/>	FCH2309Y01Z	192.168.49.23	4.2.2+202306261711		Connected	Normally pro
<input type="checkbox"/>	FCW2445P6X5	192.168.49.21	4.2.2+202306261519		Connected	Normally pro
<input type="checkbox"/>	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**.

System issues  
Actions required

## 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.

2 sensor certificates expired and 1 will expire soon [Manage certificates](#)

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

### Folders and sensors

Update Cisco devices  
Manage credentials  
Manage certificates

Filter 0 Selected [More Actions](#) As of: Jul 6, 2023 11:26 AM

<input type="checkbox"/>	Label	IP Address	Version	Location	Health status	Processing status
<input type="checkbox"/>						

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 split into two panels. The left panel, titled "Sensor Explorer", contains a notification: "1 sensor certificate expired". Below the notification are three buttons: "Install sensor", "Manage Cisco devices", and "Organize". Underneath is a section titled "Folders and sensors (3)" with a table listing three sensors. The right panel shows details for the selected sensor, FCH2309Y01Z. The "Deployment" field is highlighted with a red box and contains the value "Manual". Other details include Label, Serial Number, IP address, Version, System date, Active Discovery, Capture mode, System Health, Status, Processing status, and Uptime. At the bottom of the right panel, there are several action buttons: "Go to statistics", "Start Recording", "Move to", "Download package", "Capture mode", "Enable IDS", "Reboot", "Shutdown", and "Uninstall".

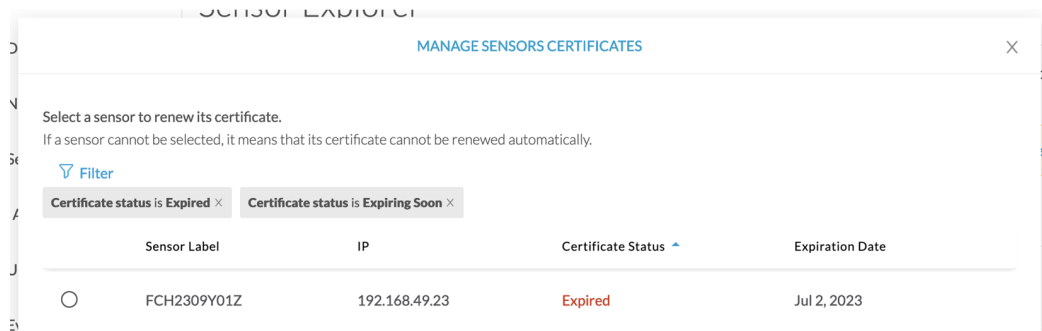
Label	IP Address	Version
FCH2309Y01Z	192.168.49.23	4.2.2+202306261711
FCW2445P6X5	192.168.49.21	4.2.2+202306261519
FOC2330V0T0	192.168.49.41	4.2.2+202306261519

### Procedure

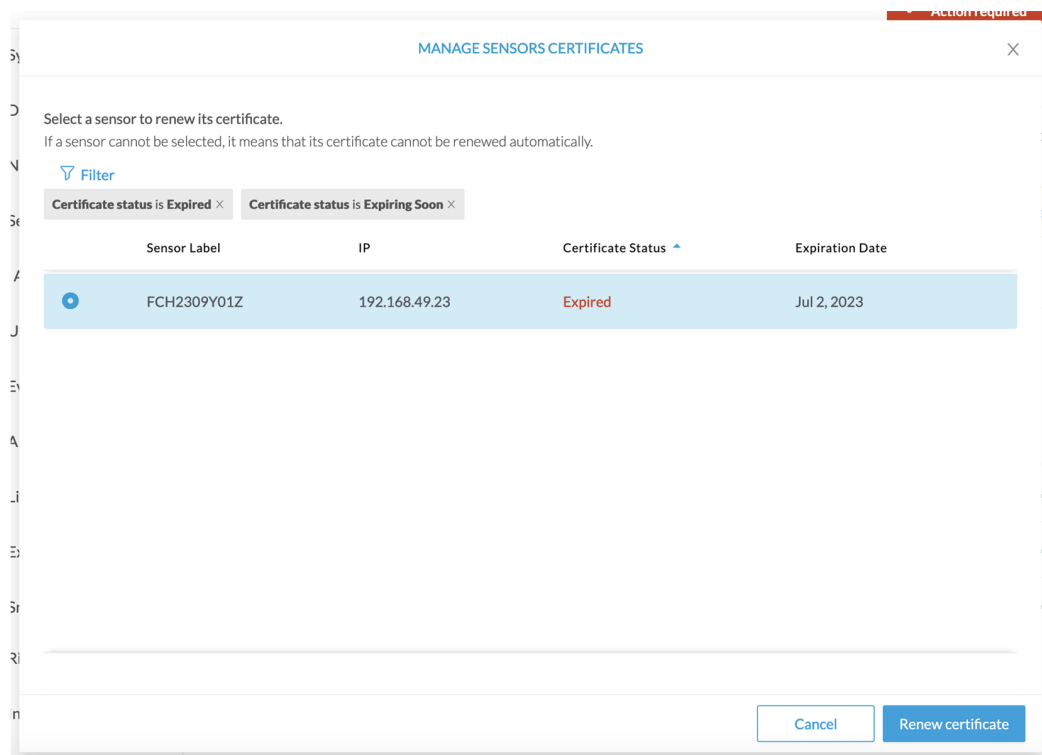
**Step 1** In Cisco Cyber Vision, navigate to Admin > Sensors > Sensor Explorer.

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

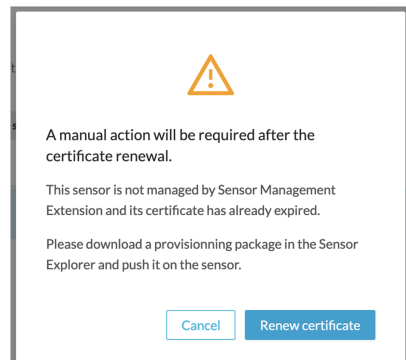
The Manage sensors certificates window appears.



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

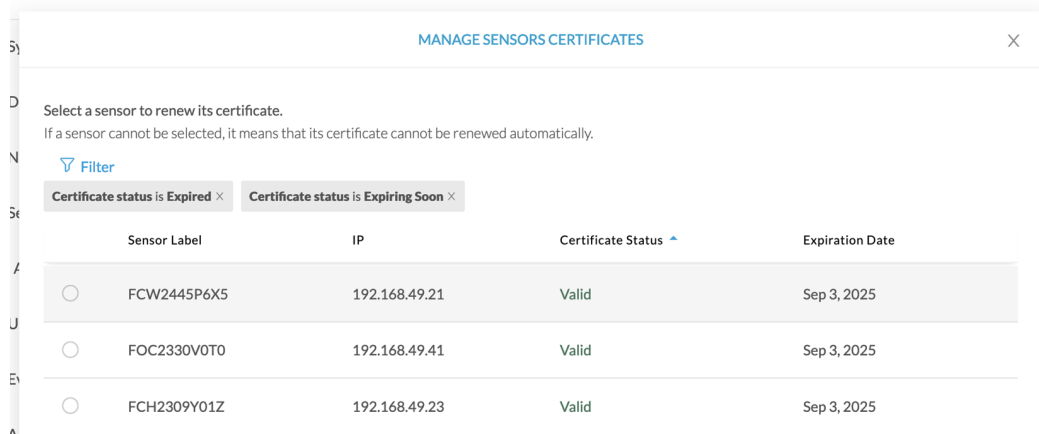


A message is displayed.



**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.





## Sensor Explorer

FCH2309Y01Z ✕


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

 Install sensor
 Manage Cisco devices
 Organize

### Folders and sensors (3)

 Filter
0 Selected
Move selection to
 More Actions

	Label	IP Address	Version	Lo
<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	

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

[Go to statistics](#)

**Step 8****Step 9**

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

**Step 10**

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