

## **Installation procedures**

- Sensor management extension installation, on page 1
- Manual installation, on page 10
- Manual installation without USB (Local Manager access), on page 18

## Sensor management extension installation

This section explains how to install the Cisco IC3000 thanks to the sensor management extension. You will:

- 1. Retrieve the sensor management extension on cisco.com.
- 2. Install the sensor management extension on Cisco Cyber Vision.
- **3.** Connect to the Cisco IC3000 with the serial console and check its firmware version and management interface IP address.
- **4.** Create a new sensor on Cisco Cyber Vision through the Cisco device deployment and proceed to its configuration.

### **Requirements**

The hardware must have an access set to the Local Manager and to the CLI (ssh or console port).

#### **Required material and information:**

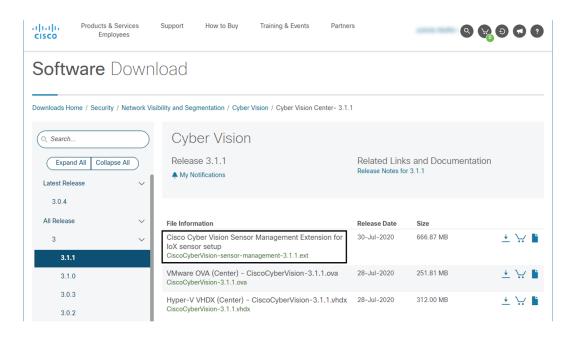
- An Admin or Product access to Cisco Cyber Vision.
- The network information of the Collection network interface (IP address, subnet mask and gateway).
- A RJ45 or mini USB console cable.
- A serial console emulator, like PuTTY.



**Note** To be able to use the Cisco Cyber Vision sensor management extension, an IP address reachable by the Center Collection interface must be set on the Collection VLAN.

### Retrieve the sensor management extension file

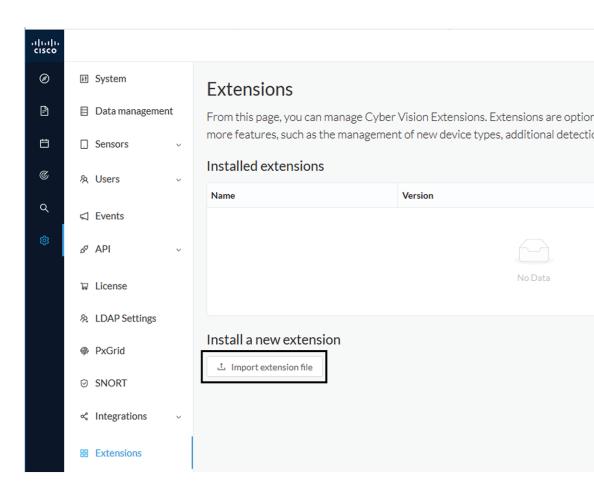
- 1. On cisco.com, navigate to Cisco Cyber Vision's Software Download page.
- **2.** Download Cisco Cyber Vision Sensor Management Extension for IoX sensor setup. Version of the extension must be the same as the version of the center.



### Install the sensor management extension

- 1. In Cisco Cyber Vision, navigate to Admin > Extensions.
- 2. Click Import extension file and select CiscoCyberVision-sensor-management-<version>.ext.

L



The file upload takes a few minutes.

### 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.

#### Installation

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

### **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.

Solution Installation Cyber Vision sensor management installed successfully !		×
Installed extensions		
Name	Version	Actions
Cyber Vision sensor management	3.2.0	
Install a new extension t Import extension file		

## **Check the Cisco IC3000 firmware version**

To ensure a proper installation of the Cisco IC3000, you must check that its firmware version is 1.2.1 or newer.

#### Procedure

Step 1 To check the version:

Step 2

• Use the following command in the Cisco IC3000 shell prompt:

ic3k>show version

**Example:** 

ic3k>show	v ve	rsion
Version:	1.2	.1
Platform	ID:	IC3000-2C2F-K9
Hardware	ID:	FCH2312Y04M
ic3k>		

The version should be 1.2.1 or newer.

### **Check the MGMT interface IP address**

Check that the IP address set on the MGMT network is the one you've configured on the Cisco Cyber Vision GUI.

To check the MGMT network interface:

#### Procedure

**Step 1** Use the following command in the Cisco IC3000 shell prompt:

ic3k>show interfaces

**Step 2** Search for the reference "svcbr\_0" which corresponds to the MGMT interface.

The IP address you've set as Host Management on Cisco Cyber Vision GUI should follow the mention "inet addr: <IP ADDRESS>".

#### Example:

```
      Dink encap:Ethernet HWaddr d0:ec:35:ca:99:a0

      inet addr:192.168.71.22

      Bcast:192.168.71.255

      Mask:255.255.255.0

      inet6 addr: fe80::d2ec:35ff:feca:99a0/64

      Scope:Link

      UP BROADCAST RUNNING MULTICAST MTU:1500

      Metric:1

      RX packets:227

      errors:0
      dropped:0

      overruns:0
      frame:0

      TX packets:16
      errors:0

      dropped:0
      overruns:0

      collisions:0
      txqueuelen:1000

      RX bytes:12676
      (12.3
      KiB)

      TX bytes:1980
      (1.9
```

Step 3

### Test connectivity between Cisco IC3000 and IOx Local Manager

To proceed with the installation, you must first test if you have access to the Cisco IC3000's Cisco IOx Local Manager. To do so:

- 1. Open Chrome.
- Access Cisco Iox Local Manager using the Cisco IC3000's MGMT IP address and the MGMT port number, which is 8443:

https://Management Address:8443

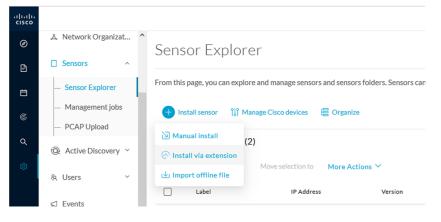
ex: https://192.168.71.22:8443

**3.** If you're able to see the following screen it means that the connectivity between the Cisco IC3000 and IOx Local Manager is on.

← → C 🔺	Non sécurisé   192.168.69.22:	3443/admin					
Applications							
cisco S cisco Cisco IC	<b>Systems</b> Dx Local Manager						
Applications	Remote Docker Workflow	Docker Layers	System Info	System Setting	System Troubleshoot	Device Config	User Config
	Add New C	Refresh					

## **Create a sensor in Cisco Cyber Vision**

1. In Cisco Cyber Vision, navigate to Admin > Sensors > Sensor Explorer and click Install sensor, then Install via extension.



- 2. Fill the requested fields so Cisco Cyber Vision can reach the equipment:
  - IP Address: admin address of the equipment
  - Port: management port (8443)
  - User: user with the admin rights of the equipment
  - Password: password of the admin user
  - Capture Mode: Optionally, select a capture mode.

Reach Cisco device	
Please fill the fields below to enable 0	Cisco Cyber Vision to reach your device.
IP address*	Port*
192.168.49.22	8443
	For example 443 or 8443
Center collection IP	
leave blank to use current co	Illection IP
Credentials	
Login*	
admin	
Password*	
•••••	
Capture mode	
Optimal (default): analyze the	most relevant flows
<ul> <li>All: analyze all the flows</li> </ul>	
O Industrial only: analyze indust	rial flows
	ng a packet filter in tcpdump-compatible syntax

**3.** Click the Connect button.

The Center will join the equipment and display the second parameter list. For this step to succeed, the equipment needs to be reachable by the Center on its eth0 connection for a Center with single interface or eth1 for a Center with dual interface.

### **Configure the sensor**

Once the Center can join the equipment, you will have to configure the Cisco Cyber Vision IOx sensor app by setting the Collection interface and, if needed, Active Discovery.

While some parameters are filled automatically, you can still change them if necessary.

- 1. Fill the following parameters for the Collection interface:
  - Collection IP address: IP address of the sensor in the sensor (must be different than the ip address of the device)
  - · Collection subnet mask: mask of the Collection IP address
  - Collection gateway: gateway of the Collection IP address (optional)

I

	Configure Cyber Vision I	Ox sensor app						
	The device requires additional parameters. Some parameters have been pre-filled. Please complete the remaining fields.							
	Cisco device: IC3000-2C2F-K9	isco device: IC3000-2C2F-K9						
	Collection IP address*	Collection prefix length*						
	192.168.49.23	24						
		Like 24, 16 or 8						
	Collection gateway							
Sele	ect the Application type (passive only	v or passive and Active Discovery).						
10								
If so	electing Passive and Active Discovery	y, the following fields will appear to set its interface:						
If so	electing Passive and Active Discovery							
If so	electing Passive and Active Discovery	y, the following fields will appear to set its interface: Install via extension						
lf so	electing Passive and Active Discover							
If so	Configure Active Discover	Install via extension						
If so	Configure Active Discove	Install via extension Cry at to enable Active Discovery on the application, select "Passive and						
If so	Configure Active Discove Please select an application type. If you war Active Discovery". You will have to add some	Install via extension Cry at to enable Active Discovery on the application, select "Passive and						
If so	Configure Active Discove Please select an application type. If you wan Active Discovery". You will have to add some	Install via extension Cry at to enable Active Discovery on the application, select "Passive and						
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	Configure Active Discove Please select an application type. If you wan Active Discovery". You will have to add some	Install via extension Cry at to enable Active Discovery on the application, select "Passive and						
If se	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface	Install via extension Cry at to enable Active Discovery on the application, select "Passive and						
If se	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface	Install via extension Cry at to enable Active Discovery on the application, select "Passive and e network interfaces parameters.						
	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface Int2  v	Install via extension Cry Int to enable Active Discovery on the application, select "Passive and e network interfaces parameters. ETH2 NETWORK						
If se	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface Int2  v	Install via extension Cry At to enable Active Discovery on the application, select "Passive and e network interfaces parameters. ETH2 NETWORK IP address*						
If se	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface Int2  v	Install via extension PCV At to enable Active Discovery on the application, select "Passive and e network interfaces parameters. ETH2 NETWORK IP address* 192.168.53.23						
If se	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface Int2  v	Install via extension  Cry  At to enable Active Discovery on the application, select "Passive and e network interfaces parameters.  ETH2 NETWORK IP address* 192.168.53.23 IP address interface used to do Active Discovery						
	Configure Active Discover Please select an application type. If you wan Active Discovery". You will have to add some <b>Passive only</b> Passive and Active Discovery Select a physical interface Int2  v	Install via extension Cry The to enable Active Discovery on the application, select "Passive and e network interfaces parameters. ETH2 NETWORK IP address* 192.168.53.23 IP address interface used to do Active Discovery Prefix length*						

Installation procedures

## Configure Active Discovery

Please select an application type. If you want to enable Active Di interfaces parameters.



Passive and Active Discovery

Select a physical interface

	^
MGMT / Collection (enables DPI on collection interface)	
Int1	
Int2	
Int3	
Int4	

- IP address of the interface dedicated to Active Discovery.
- Prefix lenght: subnet mask of the interface.

Select a physical interface

Select the port used to sen	d packets	IP address*
		192.168.53.23
		IP address interface used to do Active Discovery
		Prefix length*
		24
		Like 24, 16 or 8

**4.** Click the Deploy button.

The Center starts deploying the sensor application on the target equipment. This can take a few minutes. Once the deployment is finished, a new sensor appears in the sensors list. If Active Discovery has been enabled, the Active Discovery status will switch to Available and the Active Discovery button will be displayed in the right side panel as you click the sensor in the list.

The sensor status will turn to connected.

<ul> <li>Sensor Explorer</li> <li>Management jobs</li> </ul>	5	Folde	ers and sensors (3)	Move selection to	More Actions ❤				As of: Feb 25, 2022 1:05	PM (
<ul> <li>PCAP Upload</li> <li>Active Discovery</li> </ul>	v		Label	IP Address	Version	Location	Health status 🕕 🍷	Processing status 🕕	Active Discovery	Uptim
Users	~		•			1000	Descended 1	Descenter 1		N/A
] Events			•			-				N/A
7 API	~		□ FCH2309Y01Z	192.168.49.23	4.1.0+202202151504		Connected	Pending data	Enabled	2 min

Note

You can change the Active Discovery configuration by clicking the Active Discovery button. However, for changes to be applied, you will have to download a new provisioning package and deploy it on the hardware.

## **Manual installation**

This section explains how to install the Cisco IC3000 manually. You will generate and retrieve the provisioning package from the Cisco Cyber Vision, and manually import it into the Cisco IC3000. The last step, which is optional, consists in enabling Active Discovery.

### **Requirements**

The hardware must have an access set to the Local Manager and to the CLI (ssh or console port).

#### **Required material and information:**

- An Admin or Product access to Cisco Cyber Vision.
- The serial number of the Cisco IC3000 to be configured (located on the hardware's front view).
- The Cisco IC3000 and sensor network information.
- The Cisco Cyber Vision Sensor application to collect from cisco.com, i.e. CiscoCyberVision-IOx-IC3K-<version>.tar.
- A console cable, for the connection to the hardware's console port.

OR

• An Ethernet cable, for the connection to one of the hardware's port.

### **Configure the Cisco IC3000**

Login to Cisco Cyber Vision GUI to create and configure a new Cisco IC3000. During this step, you will have to set the Local Manager's and the Cisco IC3000 Sensor Application's network parameters to retrieve the provisioning package.

#### **Requirements:**

- An Admin or Product access to Cisco Cyber Vision.
- An IP addressing scheme for the Local Manager and the Collection Network Interfaces.



**Important** Make sure network information entered below is set accordingly to your network infrastructure and won't result in conflict. Any mistake could bring you to perform a factory reset of the Cisco IC3000 and to start the whole procedure again.

To create and configure the Cisco IC3000 in the GUI:

#### Procedure

**Step 1** Login to Cisco Cyber Vision.

**Step 2** Navigate to Admin > Sensors > Sensor Explorer.

Ø	♪ System	Sensor Explorer
Ð	目 Data Manageme 🗡	
Ħ	歳 Network Organizat	From this page, you can explore and manage sensors and sensors folders. Se for the first time, you must authorize it so the Center can receive its data.
C	Sensors ^	🕂 Install sensor 🛛 🕅 Manage Cisco devices 🛛 🗟 Organize
۵	<ul> <li>Sensor Explorer</li> </ul>	Manual install (3)
\$	<ul> <li>Management jobs</li> </ul>	🔗 Install via extension
	— PCAP Upload	Move selection to More Actions ✓

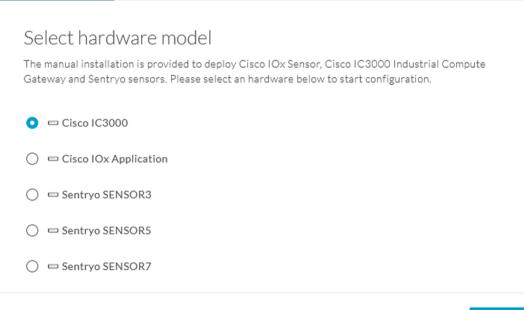
**Step 3** Click Manual install.

The manual sensor installation opens.

**Step 4** Select Cisco Cisco IC3000 as hardware model.

Next

Manual install



### 🗧 Exit

Important Two types of configuration are needed: - Cisco Cisco IC3000 configuration is to set the Local Manager Network to access the Cisco IC3000 device for configuration and troubleshooting purposes. - Sensor configuration is to set the Cisco Cyber Vision Sensor Application's to the Collection Network Interface for normal operation of Cisco Cyber Vision. Consequently, two IP addresses belonging to different subnetworks must be set accordingly to your network configuration. Pay attention to the contextual help to guide you through the configuration and keep

#### To set Cisco Cisco IC3000 Local Manager:

these information stored for a later use.

Fill the following fields to set the Local Manager's network parameters and login:

Manual install

Configu	are provisionning packa	age	
Please fill the	e fields below to add configuration to th	ne provisionning package to install.	
Cisco IC300	00 Local Manager		
Serial numbe	r <b>*</b>	Host management IP address*	
FCH2309Y0	01Z	192.168.49.22	
Host manage	ment netmask*	Host management gateway*	
255.255.25	5.0	192.168.49.254	
For e	xample 255.255.255.0 or 255.255.0.0		
Local manage	er user name*		
admin			
Step 5	Type the Cisco IC3000s' serial num	ber. It is available on the hardware's front view.	
Step 6	Type the Host Management's IP add of the Cisco IC3000 device.	ress, netmask and gateway. They must be set to acce	ss the Local Manager
Step 7		name. The login is "admin" by default. You must a and thus to avoid starting the whole procedure agai	

The user name will be asked later to log in to IOx Local Manager and in case of troubleshooting and configuration. Therefore, make sure to keep this piece of information stored.

#### To set the Sensor application:

Fill the following fields to set Cisco Cyber Vision Sensor Application's network parameters. These correspond to the Collection Network Interface within Cisco Cyber Vision's infrastructure.

I

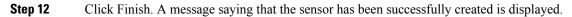
Sensor Appli		
IP address*		Netmask*
192.168.49.2	23	24
		For example 24, 16 or 8
Center collect	tion IP	Gateway
le	ave blank to use current collection IP	
Capture mode	2:	
Optimal	l (default): analyze the most releva	ant flows
All: analy	yze all the flows	
🔿 Industri	ial only: analyze industrial flows	
O Custom:	: you set your filter using a packet	filter in tcpdump-compatible syntax
		;
t		Back Create sensor
-		
Step 8	Type Cisco Cyber Vision	Cisco IC3000 Application's IP address and subnet mask.
	The Center IP and gatewa	y are optional.
	You can select the default	capture mode and change it later.
Step 9	Click Create Sensor.	

To get the provisioning package:

Step 10 Set the Local Manager's password for troubleshooting. 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. S

Step 1	1	Click the	link to	download	the	provision	ning pac	kage
--------	---	-----------	---------	----------	-----	-----------	----------	------

package
d in the root directory of USB mass storage, and plugged in or added in the right location of your IOx Application.
Confirm password"
••••••
od ()
•



L

Manual install

### Done!

The sensor has been created in Cyber Vision app and the provisionning package has been generated.

What's next?

Back to Sensor Explorer

The Cisco IC3000 status switches to Disconnected.

**Important** Do not install several provisioning package on the Cisco IC3000. The provisioning package will NOT overwrite a previously installed one with incorrect network information or a misconfigured password. In such case, a factory reset will have to be performed.

### Prepare and import the provisioning package

To deploy the provisioning package in the Cisco IC3000:

#### Procedure

Unzip and extract the downloaded provisioning package files at the root directory of a USB drive formatted as FAT32. The new file is named with the Cisco IC3000's serial number.
The new file is named with the Cisco IC3000's serial number.
Make sure the provisioning package name is strictly the Cisco IC3000 serial number. Any space or duplicate number will result in an unsuccessful installation.
Disconnect the Cisco IC3000 from the DC Current source. The USB drive must be plugged at the Cisco IC3000 boot.
Plug the USB drive on port 2 of the Cisco IC3000.
Connect the sensor to the DC Current source.
Wait a few moments. The Cisco IC3000 status changes to Enrolled on the Cisco Cyber Vision GUI.
Unplug the USB drive from port 2.
The status should quickly change to Connected.

Sensors ^	L.	<b>+</b> In	stall sensor 🛛 🕅 Man	age Cisco devices	E Organize					
<ul> <li>Sensor Explorer</li> </ul>		Folde	rs and sensors (3)							
<ul> <li>Management jobs</li> <li>PCAP Upload</li> </ul>		7 Filte	er 0 Selected	Move selection to	More Actions $\checkmark$				As of: Feb 25, 2022 1:05	рм 🖯
Q Active Discovery ∨	Ι.		Label	IP Address	Version	Location	Health status 🕠 🔻	Processing status 🕕	Active Discovery	Uptime
条 Users ~			•			1000	Descented 1	Descented 1		N/A
			•			-				N/A
s <sup>a</sup> API ∽			□ FCH2309Y01Z	192.168.49.23	4.1.0+202202151504		Connected	Pending data	Enabled	2 minutes

The provisioning package has been installed successfully on the Cisco IC3000 and traffic starts to appear in Cisco Cyber Vision.

### **Enable Active Discovery**

1. Connect to the Cisco IC3000 console and type the following command to set the Active Discovery interface.

root@sensor:~# sbs-netconf

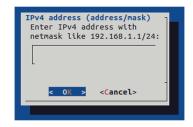
2. Choose which interface to configure between eth1, eth2, eth3 and eth4.

Network configuration
Please select an interface to configure:
bond0 56:ba:74:bb:81:7d
eth0 d0:ec:35:ca:96:2a
eth1 d0:ec:35:ca:96:2b
eth2 d0:ec:35:ca:96:2c
eth3 d0:ec:35:ca:96:2d
eth4 d0:ec:35:ca:96:2e
L .
< OK > <cancel></cancel>

3. Select Active Discovery and make sure the right interface will be used for Active Discovery.

	Configuring eth2
Please select	configuration type:
Manual	Static IP and gateway
DHCP	Automatic (DHCPv4)
Bridge	Add to SBS bridge
Active Discov	very Use eth2 for Active Discovey
L	
<	O <mark>K &gt; <cancel< mark="">&gt;</cancel<></mark>

4. Type the subnetwork IP address dedicated to Active Discovery.



5. Select OK.



6. Type the following command to reboot the sensor.

root@sensor:~# reboot

7. On the Cisco Cyber Vision Sensor Explorer page, the sensor's Active Discovery status will switch to Enabled, and the Active Discovery button will appear on the sensor's right side panel. This may take a few moments.

Sen	sor Explor	er				FCW24	445P6X5
		-	ors and sensors folders. Set ter can receive its data.	nsors can be r	emotely and securel	Label: FCW2445P6X5 Serial Number: FCW2445P6 IP address: 192.168.49.21	5X5
<b>+</b>	nstall sensor 🏻 🖁 M	anage Cisco devices	Corganize			Version: 4.1.0+2022021514 System date: Feb 24, 2022 4 Deployment: Sensor Manag	:13:06 PM
Fold	ers and sensors (	3)				Active Discovery: Enabled Capture mode: All	
∑ Fil	ter 0 Selected	Move selection to	More Actions ∽			System Health Status: Connected	
	Label	IP Address	Version	Location	Health status 🕕 🍷	Processing status: Normally Uptime: a day	processing
	•			0101	Description	🗠 Go to statistics	
	•			114815		Start Recording	
	□ FCW2445P6X5	192.168.49.21	4.1.0+202202151440		Connected	🗇 Move to	
						🔦 Capture mode	Redeploy
						⊖ Uninstall	Q Active Discovery

**Note** You can change the Active Discovery configuration by clicking the Active Discovery button. However, for changes to be applied, you will have to download a new provisioning package and deploy it on the hardware

## Manual installation without USB (Local Manager access)

This section explains how to install the Cisco IC3000 manually without USB. You will:

- 1. Create and configure a new sensor on Cisco Cyber Vision to retrieve its provisioning package.
- Install and configure the virtual sensor application on the Local Manager to deploy the provisioning package on the Cisco IC3000.
- **3.** The last step, which is optional, consists in enabling Active Discovery on the Cisco IC3000.

### Requirements

The hardware must have an access set to the Local Manager and to the CLI (ssh or console port).

#### **Required material and information:**

- An Admin or Product access to Cisco Cyber Vision.
- A Local Manager user account and password.
- The serial number of the Cisco IC3000 to be configured (located on the hardware's front view).
- An IP addressing scheme for the Local Manager and the Collection Network Interfaces.
- The Cisco Cyber Vision Sensor application to collect from cisco.com, i.e. CiscoCyberVision-IOx-IC3K-<version>.tar.

### **Configure the Cisco IC3000**

Login to Cisco Cyber Vision GUI to create and configure a new Cisco IC3000. During this step, you will have to set the Local Manager's and the Cisco IC3000 Sensor Application's network parameters to retrieve the provisioning package.

#### **Requirements:**

- An Admin or Product access to Cisco Cyber Vision.
- An IP addressing scheme for the Local Manager and the Collection Network Interfaces.



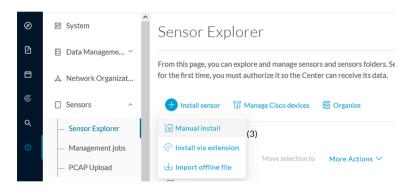
**Important** Make sure network information entered below is set accordingly to your network infrastructure and won't result in conflict. Any mistake could bring you to perform a factory reset of the Cisco IC3000 and to start the whole procedure again.

To create and configure the Cisco IC3000 in the GUI:

#### Procedure

**Step 1** Login to Cisco Cyber Vision.

#### **Step 2** Navigate to Admin > Sensors > Sensor Explorer.



Step 3 Click Manual install.

The manual sensor installation opens.

**Step 4** Select Cisco Cisco IC3000 as hardware model.

Manual install

### Select hardware model

The manual installation is provided to deploy Cisco IOx Sensor, Cisco IC3000 Industrial Compute Gateway and Sentryo sensors. Please select an hardware below to start configuration.

O □ Cisco IC3000	
🔘 📼 Cisco IOx Application	
🔘 📼 Sentryo SENSOR3	
🔘 📼 Sentryo SENSOR5	
🔘 📼 Sentryo SENSOR7	

### 🗧 Exit

Next

Important Two types of configuration are needed: - Cisco Cisco IC3000 configuration is to set the Local Manager Network to access the Cisco IC3000 device for configuration and troubleshooting purposes. - Sensor configuration is to set the Cisco Cyber Vision Sensor Application's to the Collection Network Interface for normal operation of Cisco Cyber Vision. Consequently, two IP addresses belonging to different subnetworks must be set accordingly to your network configuration. Pay attention to the contextual help to guide you through the configuration and keep these information stored for a later use.

#### To set Cisco Cisco IC3000 Local Manager:

Fill the following fields to set the Local Manager's network parameters and login:

Manual install

$\sim$		
Configure	provisionning	package
coningare	provisionning	package

Please fill the fields below to add configuration to the provisionning package to install.

Cisco IC3000 Local Manager

Serial number*	Host management IP address*
FCH2309Y01Z	192.168.49.22
Host management netmask*	Host management gateway*
255.255.255.0	192.168.49.254

For example 255.255.255.0 or 255.255.0.0

Local manager user name\*

admin

- **Step 5** Type the Cisco IC3000s' serial number. It is available on the hardware's front view.
- **Step 6** Type the Host Management's IP address, netmask and gateway. They must be set to access the Local Manager of the Cisco IC3000 device.
- **Step 7** Type the Local Manager admin user name. The login is "admin" by default. You must use the default login in case a factory reset is performed and thus to avoid starting the whole procedure again.

The user name will be asked later to log in to IOx Local Manager and in case of troubleshooting and configuration. Therefore, make sure to keep this piece of information stored.

#### To set the Sensor application:

Fill the following fields to set Cisco Cyber Vision Sensor Application's network parameters. These correspond to the Collection Network Interface within Cisco Cyber Vision's infrastructure.

Sensor Applica	ation	
IP address*		Netmask*
192.168.49.23	3	24
		For example 24, 16 or 8
Center collection	on IP	Gateway
leav	ve blank to use current collection IP	
Capture mode:		
🔿 Optimal (	default): analyze the most relevan	It flows
All: analyz	ze all the flows	
🔘 Industria	l only: analyze industrial flows	
O Custom: y	you set your filter using a packet fi	ilter in tcpdump-compatible syntax
it		Back Create sensor
Step 8	Type Cisco Cyber Vision C	Sisco IC3000 Application's IP address and subnet mask.
	The Center IP and gateway	are optional.
		capture mode and change it later.
	Tou can select the default c	apture mode and change it later.

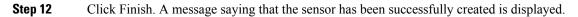
Step 9 Click Create Sensor.

To get the provisioning package:

- Step 10
   Set the Local Manager's password for troubleshooting. 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.

   Step 10
   Set the Local Manager's password for troubleshooting. 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.
- **Step 11** Click the link to download the provisionning package.

Download provisio	d be placed in the roo	- ot directory of USB mass sto	
the IC3000 / Sensor before pow	ering it up or added ir	n the right location of your l	Ox Application.
Password*	C	Confirm password*	
•••••	•	•••••	
	Good 🕕		



Manual install

### Done!

The sensor has been created in Cyber Vision app and the provisionning package has been generated.

What's next?

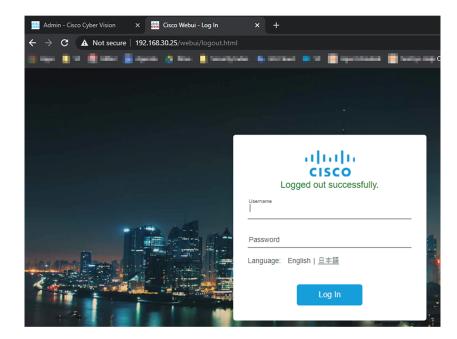


The Cisco IC3000 status switches to Disconnected.

**Important** Do not install several provisioning package on the Cisco IC3000. The provisioning package will NOT overwrite a previously installed one with incorrect network information or a misconfigured password. In such case, a factory reset will have to be performed.

### Access the Local manager

- 1. Open a browser and navigate to the IP address you configured on the interface you are connected to.
- 2. Log in using the Local Manager user account and password.



- 3. Once logged into the Local Manager, navigate to Configuration > Services > IOx.
- 4. Log in using the user account and password.

<b>i</b> For best results use a supported browser ▼	
Cisco IOx Local Manager Version: 1.10.0.1	
© 2020 Cisco Systems, Inc. Cisco, Cisco Systems and Cisco logo are registered trademarks of Cisco Systems, Inc. and/c affiliates in the U.S. and certain other countries.	its ultulu cisco

## Install the sensor virtual application

Once logged in, the following menu appears:

pplications	Docker Layers	System Info	System Setting	System Troubleshoot
		Add New	${old C}$ Refresh	

- 1. Click Add New.
- 2. Add an Application id name (e.g. CCVSensor).
- 3. Select the application archive file
  - (i.e. "CiscoCyberVision-IOx-IC3K-<version>.tar").

Deploy application	×
Application Id:	CCVSensor
Select Application Archive	Choose File CiscoCyA2.tar
	OK Cancel

The installation takes a few minutes.



When the application is installed, the following message is displayed and the sensor application appears:

1	Successfully Deployed.	ок				
cisco S Cisco IC	<b>ystems</b> xx Local Manager					
Applications	Remote Docker Workflow	Docker Layers	System Info	System Setting	System Tr	oubleshoot
sensor		DEPLO	YED			
Cisco Cyber Vision	sensor for x86-64					
TYPE docker	VERSION 4.1.0+202203111440		DFILE			
Memory *		100.0	)%		O Add New	C Refresh
CPU *		100.0	)%			
✓ Activat	e 🔷 Upgrade	💼 Delete				

## **Configure the sensor virtual application**

#### Procedure

**Step 1** Click Activate to launch the configuration of the sensor application.

sensor		DEPLOYED
Cyber Vision Sensor Image for IC	3000	
<b>TYPE</b> vm	VERSION 3.2.0+202010271337	PROFILE
Memory *		100.0%
CPU *		100.0%
✓ Activate	Upgrade	💼 Delete

To map the Sensor network interfaces:

**Step 2** Access Applications > Resources.

Name Network Config Description Action	
eth0 iox-nat0 none edit	
eth1 Not Configured none edit	
eth2 Not Configured none edit	
eth3 Not Configured none edit	
eth4 Not Configured none edit	

- **Step 3** Under Network Configuration, click Edit in the eth0 line (1).
- **Step 4** Set eth0 as iox-bridge0 (2).
- Step 5 Click OK (3).
- **Step 6** A message saying that the network interface has been changed displays. Click OK.
- **Step 7** Set the network interfaces eth1, eth2, eth3 and eth4 by repeating the previous steps and using the table below. You must click OK each time you map a new interface for changes to be taken into consideration.

Each network interface must be mapped like below:

Name	Network Configuration
eth0	iox-bridge0
eth1	int1

Name	Network Configuration
eth2	int2
eth3	int3
eth4	int4

To set eth1, eth2, eth3 and eth4 as mirrored ports:

**Step 8** Click Edit beside eth1 (1).

**Step 9** Click Interface Settings (2).

**Step 10** Tick Enabled for Mirror Mode (3).

Step 11 Click OK (4).

		Network Cor			
Interface Se	etting		×	Description	0 mbin m
	1	Pv4 Setting		Description	Action
0	Oynamic	○ Disable		none	edit
Static				none	edit
	]	Pv6 Setting		none	edit
0	<ul> <li>Dynamic</li> </ul>	○ Disable		none	edit
Static				none	edit
DHCP Client ID					4<
Cilenc 10			ice vi	a int1   Interface	Setting
		Mirror Mode			
Mirror	Enabled		_		_
Mirror					
L					
			OK Cancel	Status	

**Step 12** Repeat the above steps for eth2, eth3 and eth4. To set the peripherical configuration:

- **Step 13** Under Peripherical Configuration, click Edit (1).
- Step 14 Tick Port: 1usb1 (2).
- **Step 15** Click OK (**3**).

<ul> <li>Peripheral C</li> </ul>	onfiguration			
Device Type	Name	Label	Status	Action
USB_port	Port:1usb1	USB1	Present	edit
Device Type:	USB port		<b>v</b>	
• Port:1usb1	USB_port		•	
	USB_port		▼	
• Port:1usb1			▼	

Step 16Click Activate App on the page top right corner.To start the Sensor Application:

- **Step 17** Access the Applications tab again.
- Step 18 Click Start.

CCVSensor		ACTIVATED	CCVSensor		RUNNING
Cyber Vision Sensor	Image for IC3000		Cyber Vision Sensor I	mage for IC3000	
rype /m	VERSION 1.0	PROFILE exclusive	TYPE vm	VERSION 1.0	PROFI exclusi
Memory *		100.0%	Memory *		100.0%
CPU *		100.0%	CPU *		100.0%
► Start	Ø Deactivate	🌣 Manage	Stop	🌣 Manage	

The application moves from Activated to Running state.

Step 19

## Import the provisioning package

1. In the Local Manager, in the IOx configuration menu, click Manage.

sensor		RUNNING
Cyber Vision Sensor Image for	IC3000	
TYPE vm	VERSION 3.2.0+202010271337	PROFIL exclusiv
Memory *		100.0%
CPU *		100.0%

2. Navigate to App\_DataDir.

	cisco Systems Cisco Cisco IOx Local Manager						
Applications	Docker Layers	System Info	System Se	tting	System		
Resources	App-info A	pp-Config A	pp-DataDir ၂၈၅	Logs			

- 3. Before browsing the file, you must unzip the provisioning package.
- 4. Click Upload.

Cisco Sy Cisco Cisco IOx							
Applications	Docker Layers	System Inf	fo System	Setting	System Troub	leshoot	CCVSensor
Resources	App-info	App-Config	App-DataDir	Logs			
Current Location:	./						
Name			Туре		Size		
/							
Upload	A Home						

5. Navigate to the folder with the sensor serial name (i.e. FCH2312Y03F) > appconfigs, and select cybervision-sensor-config.zip.

Today	Today	Today
► FCH2312Y03F ► FCH2312Y03F .zip	appconfigs     ▶     device_config.cfg	cybervisionor-config.zip

6. Make sure the path contains the entire file name (with .zip).

Uploa	d Configuration	×	
Path:	cybervision-sensor-config.zip		
File to u	upload:		
Chois	ir un fichier cybervisiconfig.zi	iр	
	OK Cancel		

7. Click OK.

### **Reboot the Cisco IC3000**

- 1. Disconnect the Cisco IC3000 from the DC Current source.
- 2. Connect the Cisco IC3000 to the DC Current source.

Wait a few moments for the boot to complete.

3. After a few seconds, the sensor appears as connected in Cisco Cyber Vision.

Sensors ^	🕂 Install sensor 🕅 Manage Cisco devices 🛛 🖹 Organize		
<ul> <li>Sensor Explorer</li> <li>Management jobs</li> <li>PCAP Upload</li> </ul>	Folders and sensors (3)		As of: Feb 25, 2022 1:05 PM 🛛 🧭
<ul> <li>Q. Active Discovery ~</li> </ul>	Label IP Address Version	Location Health status 🕕 🔻 Processing status 🕠	Active Discovery Uptime
糸 Users ~	• •	INN Descelet 1 Descelet 1	N/A
		1000	N/A
sα ∀h	□ □ FCH2309Y01Z 192.168.49.23 4.1.0+202202151504	Connected Pending data	Enabled 2 minutes

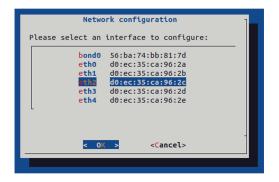
**4.** The Cisco IC3000 has been successfully installed. If the Cisco IC3000 has been connected to the Industrial Network, traffic starts to appear in Cisco Cyber Vision.

### **Enable Active Discovery**

1. Connect to the Cisco IC3000 console and type the following command to set the Active Discovery interface.

root@sensor:~# sbs-netconf

2. Choose which interface to configure between eth1, eth2, eth3 and eth4.



3. Select Active Discovery and make sure the right interface will be used for Active Discovery.

Cor	nfiguring eth2
Please select cor	nfiguration type:
Manual	Static IP and gateway
DHCP	Automatic (DHCPv4)
Bridge	Add to SBS bridge
Active Discovery	Use eth2 for Active Discovey
L	
< 0	<pre><cancel></cancel></pre>

4. Type the subnetwork IP address dedicated to Active Discovery.



5. Select OK.



6. Type the following command to reboot the sensor.

root@sensor:~# reboot

7. On the Cisco Cyber Vision Sensor Explorer page, the sensor's Active Discovery status will switch to Enabled, and the Active Discovery button will appear on the sensor's right side panel. This may take a few moments.

Sensor Explorer	
From this page, you can explore and manage sensors and sensors folders. Sensors can for the first time, you must authorize it so the Center can receive its data.	Serial Number: FCW2445P6X5 IP address: 192.168.49.21
🕂 Install sensor 🏦 Manage Cisco devices 🗧 Organize	Version: 4.1.0+202202151440 System date: Feb 24, 2022 4:13:06 PM Deployment: Sensor Management Extension
Folders and sensors (3)	Active Discovery: Enabled Capture mode: All
√ Filter 0 Selected Move selection to More Actions ✓	System Health Status: Connected
Label IP Address Version Location	n Health status () Processing status: Normally processing Uptime: a day
	Co to statistics
- • • • • • • • • • • • • • • • • • • •	Start Recording
□ □ FCW2445P6X5 192.168.49.21 4.1.0+202202151440	Connected 🗁 Move to
	Capture mode
	<ul> <li>Uninstall</li> <li>Active Discover</li> </ul>

# Note

You can change the Active Discovery configuration by clicking the Active Discovery button. However, for changes to be applied, you will have to download a new provisioning package and deploy it on the hardware.

I