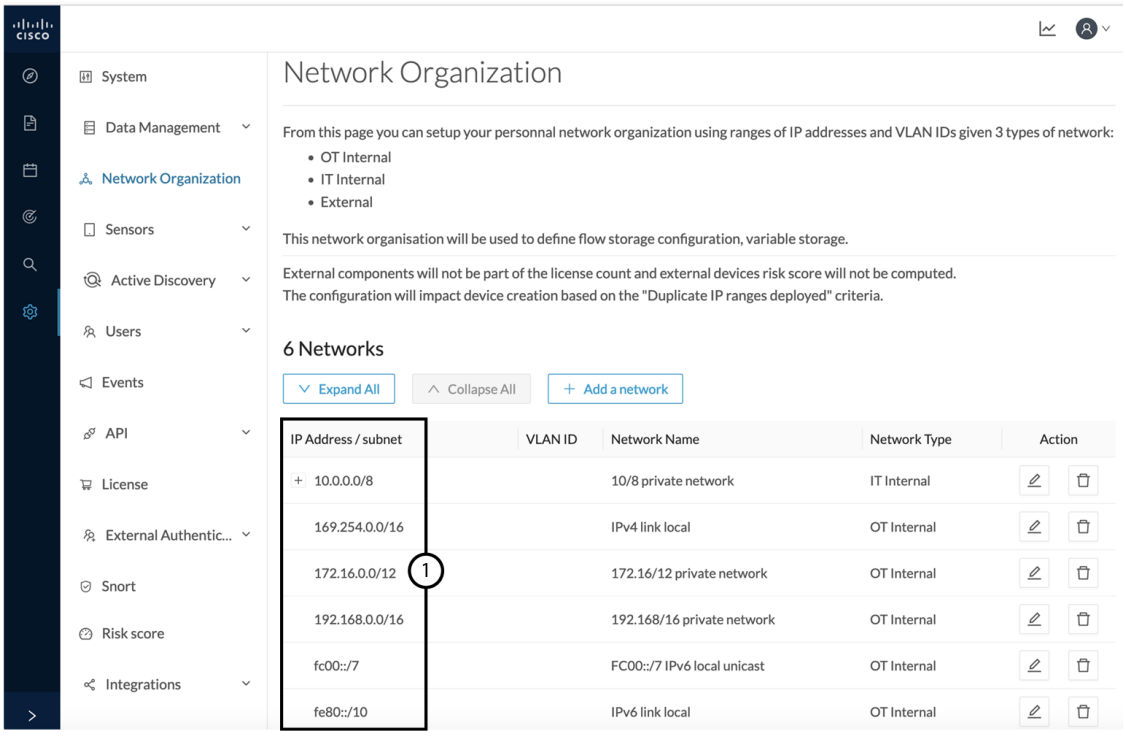
Network organization

Network organization

This page allows you to define the subnetworks inside the industrial network by setting up IP address ranges and declaring whether networks are internal or external.



In Cisco Cyber Vision all private IP addresses are classified as OT internal. They appear in the Network Organization page **(1)**.

Every other IP address is considered as external, except for:

- Broadcast IPv4: 255.255.255.255

Network organization

- IPv4 and IPv6 zero: 0.0.0.0 et 0:0:0:0:0:0:0:0
- Loopback IPv4 and IPv6: 127.0.0.1 and ::1
- Link Lock Multicast IPv4 and IPv6: 224.0.0.0/8 and ff00::/8

If you want to declare a public IP address as internal, you must add an exception by changing their network type.

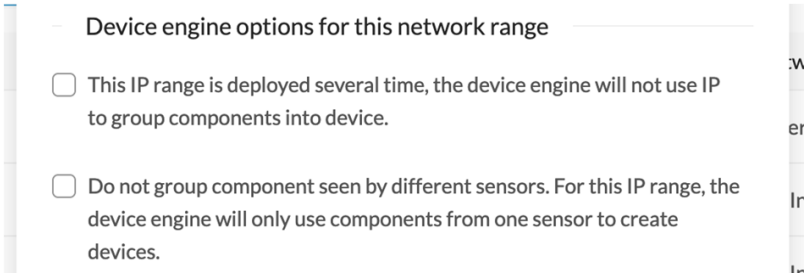
Declaring a subnetwork as OT internal is useful in case public IP addresses are used in a private network of an industrial site. Conversely, declaring a set of IP addresses as external will exclude their flows from the database, and exclude their devices from the license device count and the risk score.

Overall, defining subnetworks in Cisco Cyber Vision is useful for several reasons:

- It allows you to choose afterwards how related flows should be stored through the Ingestion configuration page. Excluding unnecessary flows will have positive impact on performances.
- It will impact devices' risk scores, since a private network is considered as safer than an external one.
- Cisco Cyber Vision's license will be more accurate, because devices from an external network will be excluded from the licensing device count.

By default, Cisco Cyber Vision groups identical IP addresses detected inside the industrial network into a single device, because in most cases these belong to several components of a device. However, it can happen that the same IP address is used by several devices. In this case, you can choose to select the first option when declaring a subnetwork to prevent duplicate IP addresses from grouping within this subnetwork.

The second option is to be used when components with the same IP address are found by different sensors. This happens when same addressing parameters are used on several subnetworks, for example in case of identical production lines. By using this option, components detected by different sensors will not be aggregated into a single device.



IP ranges can be **organized into groups** which subranges can be defined like in the example below:

IP Address / subnet	VLAN ID	Network Name	Network Type	Action
− 10.0.0.0/8		10/8 private network	IT Internal	
10.2.0.0/22		OT range	OT Internal	
10.4.0.0/22		External IP within IP range	External	

Here, the user specified that the IP range 10.2.0.0/22 is OT internal and that 10.4.0.0/22 is external.

Thus, flow storage can be specifically set in the Ingestion configuration for the IP range set here as OT internal, whereas flows and devices from the IP range set as external will be excluded from the database and the license device count and risk score.

Note It is also possible to organize subnetworks through the API.

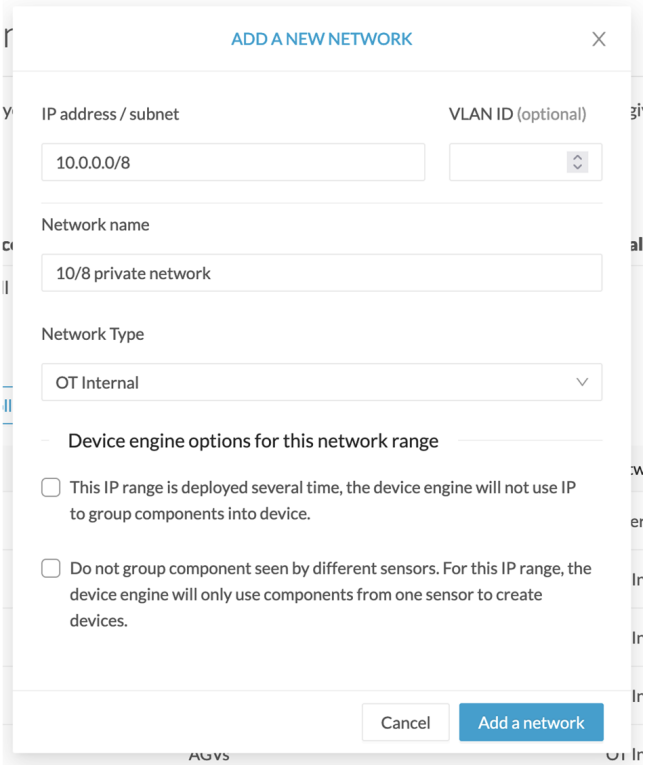
Define a subnetwork

To define a subnetwork:

Step 1 In Cisco Cyber Vision, navigate to Admin > Network organization.

Step 2 Click the **Add a network** button.

The Edit a network window pops up:



Step 3 Enter an IP address range and its subnet.

Step 4 If possible, add a VLAN ID.

This will allow you to create overlapping networks.

Step 5 Give the network a name.

Step 6 Set the network type as OT internal, IT internal or External.

Note Setting the network type can impact Cisco Cyber Vision's performances by setting flows storage, devices' risk score and the license's device count.

Step 7 If applicable, tick the first option.

Note Enable this option in case several devices share the same IP across the monitored network.

The components won't be grouped by IP.

Step 8 If applicable, tick the second option.

Note Enable this option in case same addressing parameters are used within different subnetworks. For example in case of identical production lines.

For that particular network range, the system will not aggregate components with components with same IPs detected by sensors monitoring other subnetworks. The system will aggregate the components into devices when subnetworks monitored are using the same IP ranges for several machines or production lines.

In this case, for a specific IP range, a component with an IP of that range seen by a sensor will be grouped with a component with the same IP only if components were detected by the same sensor.

Step 9 Click **Save**.