



# Senstar Fence Management Integration Document

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<sup>1</sup> While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit, nor implied. Specifications are subject to change without notice.

# 1 Introduction

This document will detail the integration of the Senstar Fence Monitoring system, with CathexisVision's software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Senstar device.

## Requirements

- CathexisVision 2015 Service Pack 3 and later.
- Windows 7 - 64bit and later, Windows Server 2008 R2 and later.

### **Notes:**

1. If you need information regarding the regular operation of a Senstar device, please consult the relevant Senstar documentation.
2. When using a serial port connection CathexisVision is unable to detect the Senstar device if the Controller or Communications channel has lost connection.

## **a. License requirements**

The Cathexis Senstar integration license requirements are as follows:

License Name	License Description
CSEN-2000	Senstar (one license per device.)

## **b. Integration Components**

All CathexisVision integrations have two component levels: **Device** and **Object**.

**Device** The device is CathexisVision software's interface, which handles all the interaction between CathexisVision and the integrated hardware. When you add an integration to the CathexisVision system, you add a device. The messages received from the device are called Device Events.

**Objects** Objects are the individual pieces of hardware that comprise the integration. You may have multiple "object types" under the objects group. For example, the main controller and door nodes, of an access control system, are both objects. They are different types of objects

## Senstar Integration Features

The integration has three object types:

1. **Device**.
2. **Input** (may be shunted (isolated), and enabled).
3. **Output** (Outputs may be set/cleared).

### • **Failover**

The Senstar system has a built-in failover feature. When one Senstar server goes down the next one becomes active. You can use this feature in CathexisVision by adding multiple connection addresses to the same integration device. **Note:** that the CathexisVision will ignore all communications while more than one communication channel is active. Make sure that the driver connects to the second server when one goes down.

## 2 Device Addition and Configuration

### a. Introduction

This section will detail the procedure for setting up the two systems to effectively communicate with each other.

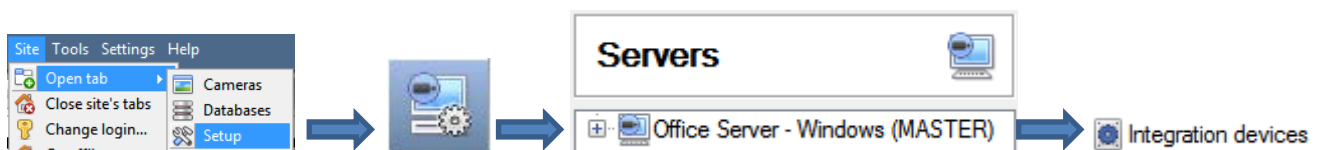
### b. CathexisVision Specific Senstar Setup (Set up the Senstar device)

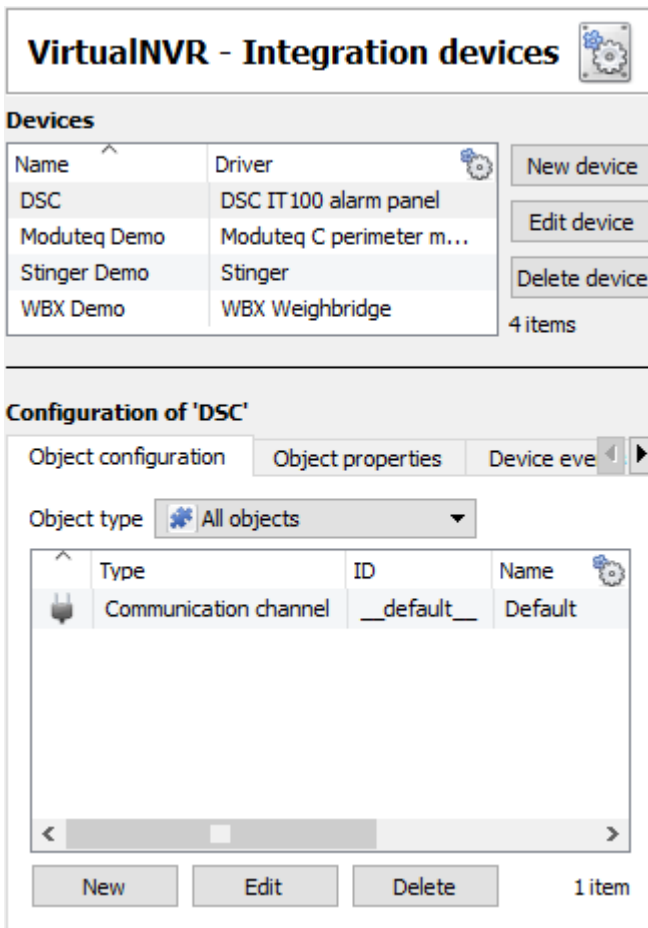
On the Senstar Configuration Network Management Server, under **SMS 1**, set the IP address of the CathexisVision unit you will be adding the Senstar device to. Keep track of the port, and the IP address of the Senstar unit, as you will need that information to add the device to the CathexisVision server later.

### c. Devices Section (Add a New Device in CathexisVision)

Integrations are added on a server-by-server basis. They are managed in the Integration Devices panel, under the Setup Tab of the servers to which they are added. To get to the Integration Panel follow this path:

#### The Integrations Panel





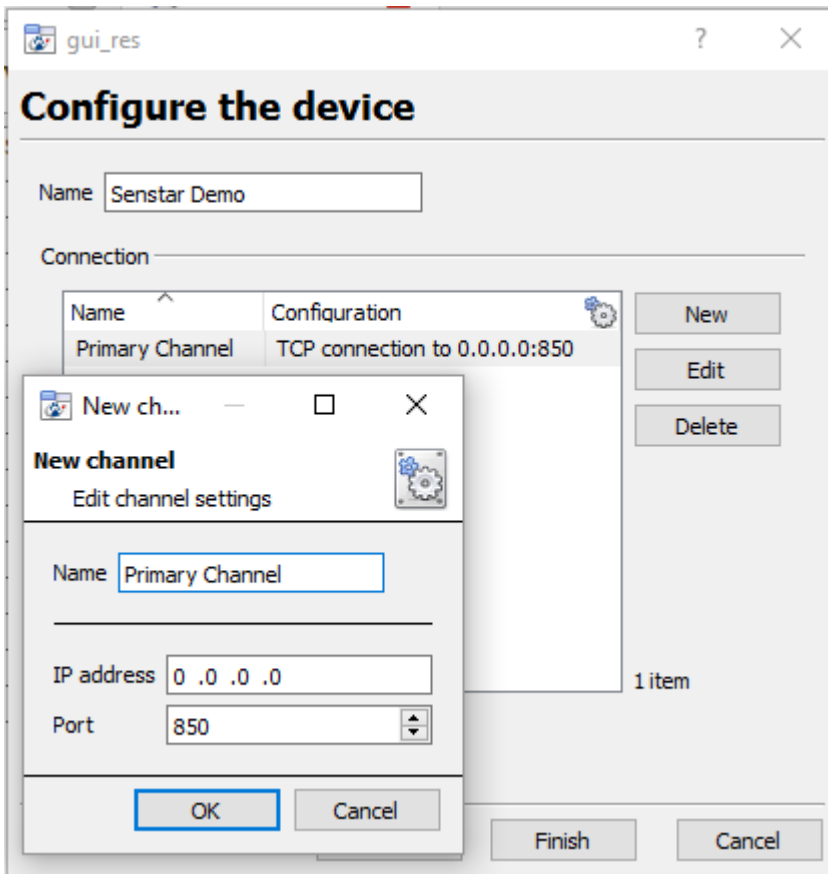
You will notice two sections in the Integration Panel:

The **Devices** list will list the integration devices that are attached to your server.

The **Configuration** section enables you to edit/review, the device which you have selected in the **Devices** section.

- **Device Addition**

1. Once in the Integration Panel, click on **New device**, in the Devices section. This will open the addition dialogue.
2. Select **Senstar** driver from the list.



Give your device a descriptive **name**.

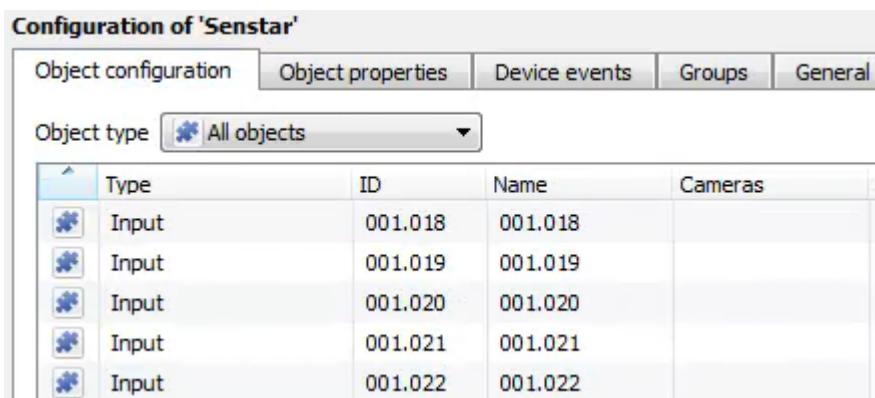
Add/edit a **connection**. The **IP address**, and **port number** entered here must point to the Senstar server which you set up to send information to this CathexisVision unit.

To use the **Senstar failover server** (if one is available) add a second connection here for the failover server.

#### d. Configuration Section (Tabs)

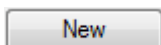
The configuration section is divided up into a number of tabs. These tabs are: **Object configuration**, **Object properties**, **Device events**, **Groups**, and **General**.

##### Object Configuration Tab

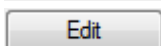


The object configuration tab is the tab where you may view all the individual objects that comprise the integration. The Senstar device has three object types **Device**, **Input**, and **Output**.

##### • **Object Configuration Buttons**



You may add a new object by clicking on New.

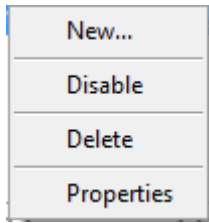


Will open up an existing object for edition.



Is used to delete an existing object from the CathexisVision configuration.

- **Object Configuration Right-click Options**



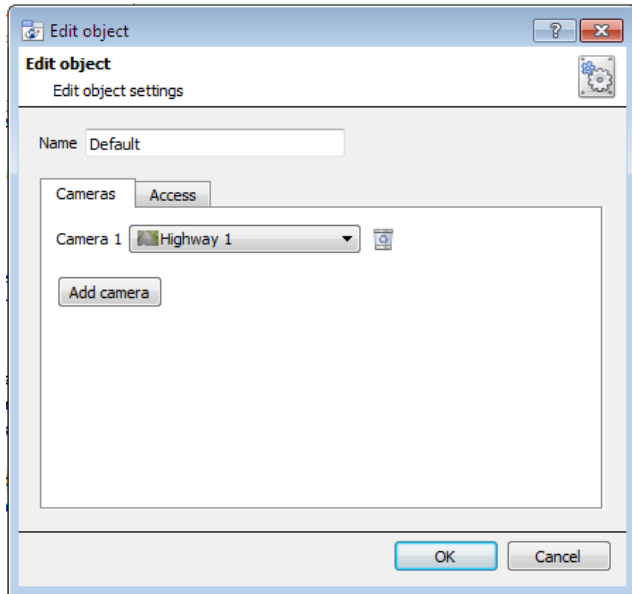
**New** will open up the dialogue to add a new object.

**Disable/Enable** allows you to manually enable/disable individual objects.

**Delete** will permanently remove this object from the list.

**Properties** will open up the object properties. You may edit the object from here. (Specifically you will be able to assign cameras to this object, as well as define user access levels for it.)

**Properties: Cameras**



Adding a camera to an object will mean that, whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database.

To add a camera click on “Add Camera, and select the relevant camera from the drop-down menu.

To delete a camera click on .

**Note:** While you can add multiple cameras here, only the first camera added with the object will be linked in the integration database.

**Note:** If you do not have *continuous recording* set up, on associated cameras, you will run the risk of Senstar objects triggering while the cameras are not recording. To only record cameras, when an object triggers, you will need to set up **Events** that trigger a recording, when one of these objects is activated.

**Properties: Access**



**Access** allows you to protect sensitive objects, by only allowing certain user levels access to them.

Under **View** you will be able to set the access levels.

**Note:** If you have *Use default access rights* checked, you must make sure that those default rights have been correctly defined. Click on **Configure default access** to do this.

## Objects Properties Tab

**Configuration of 'Senstar'**

Object configuration | Object properties | Device events | Groups | General

Object type: Device

Name	Device Type	Connected	Inputs	Outputs
001	FlexZone-60	✓	62	4

The Object properties tab allows you to view the objects, sorted by type. In the case of the Senstar device you will have the options of viewing by **Device, Input and Output.**

### • Right-click Options

Object type: Device

Name	Device Type	Connected	Inputs	Outputs
001	OmniTrax	✓		
002		✓		
003		✓		

Right-click context menu options:

- Shunt Input Alarm
- Shunt Input Tamper
- Toggle Output

If you select the **Device** object type you may:

1. **Shunt (Isolate) Input Alarm.**
2. **Shunt (Isolate) Input Tamper.**
3. **Toggle Output.**

Object type: Input

Name	Alarm	Tamper
001.001	✗	✗
001.002	✗	✗
001.003	✗	✗
001.004	✗	✗

Right-click context menu options:

- Shunt Alarm
- Shunt Tamper

If you select the **Input** object type you may:

1. **Shunt Alarm.**
2. **Shunt Tamper.**

## Device Events Tab

**Configuration of 'Senstar'**

Object configuration | Object properties | Device events | Groups | General

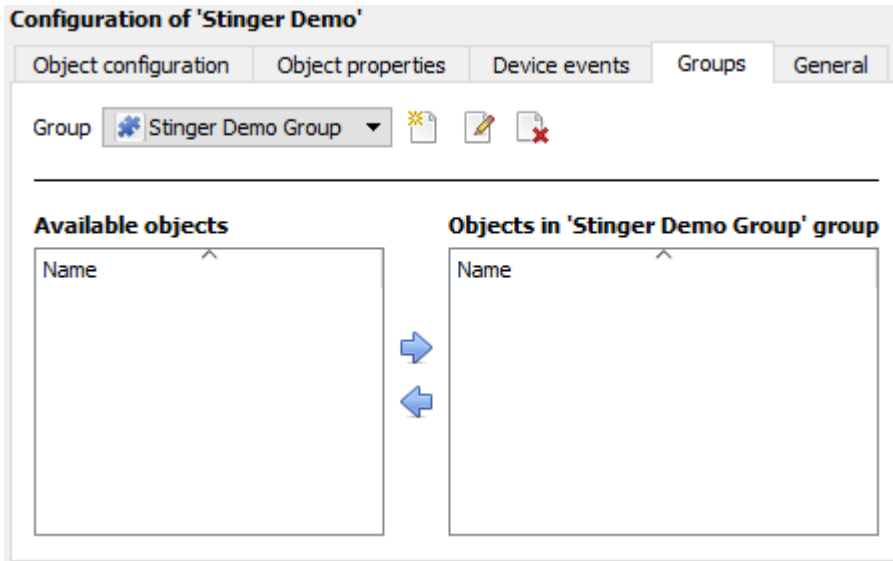
All events

Event Type	Timestamp	Device ID	Description
Device Event	2015-07-13 14:26:40.161	001	Diagnostic error number 6 cleared
Input Event	2015-07-13 14:26:39.761	001	Diagnostic error number 7 cleared
Output Event	2015-07-13 14:26:39.141	001	Diagnostic error number 7
Device Event	2015-07-13 14:26:39.711	001	Diagnostic error number 6

This will list all events sent from this device. It is an excellent way for installers to see that the integration is functioning, and to monitor the events happening on site.



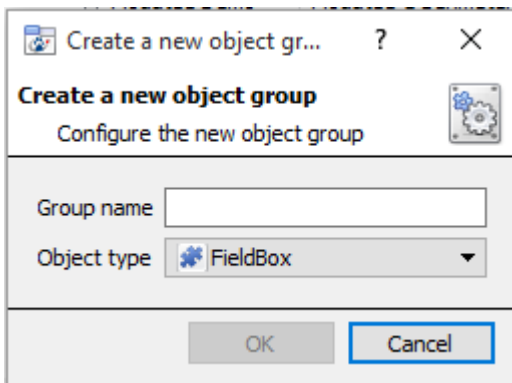
## Groups Tab



You can create groups of the same type of object.

**Tip:** This is very useful when setting up Events, because events can be triggered by an object group. (E.G. a group will trigger, if any of the devices in that group is triggered.)

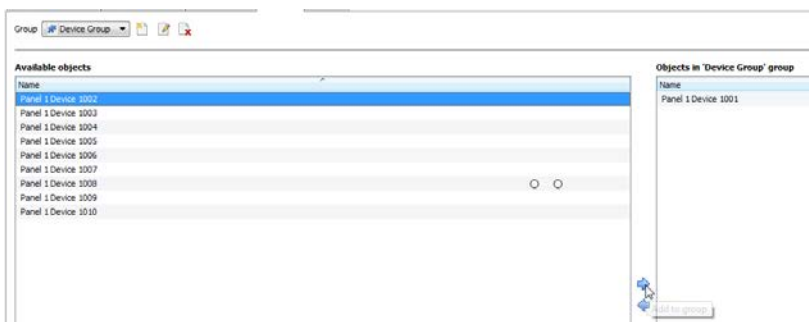
- **Create a Group**



To create/edit a Senstar group click on / . (**Note:** Once a group has been created, you may not edit the object type of the group.)

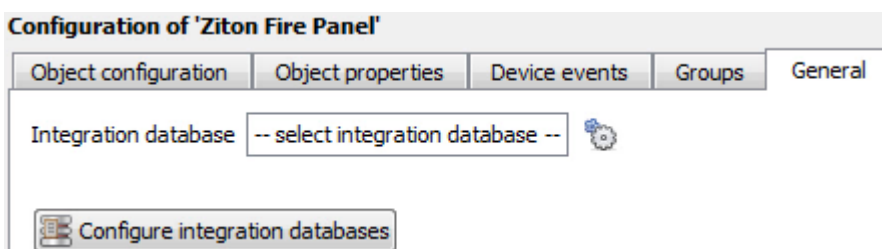
Give the group a descriptive **Group name**.

Click on the drop-down menu to select the **Object type** that you would like to group.



You will then see a list of Available Objects. To add/remove these objects to the group select them (you may select multiple at a time), and click on / .

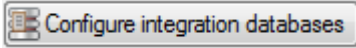
## General tab



Currently the general tab deals with the **Integration database**. Here you will be able to select an existing database, or you will be able to configure a new database for your integration.

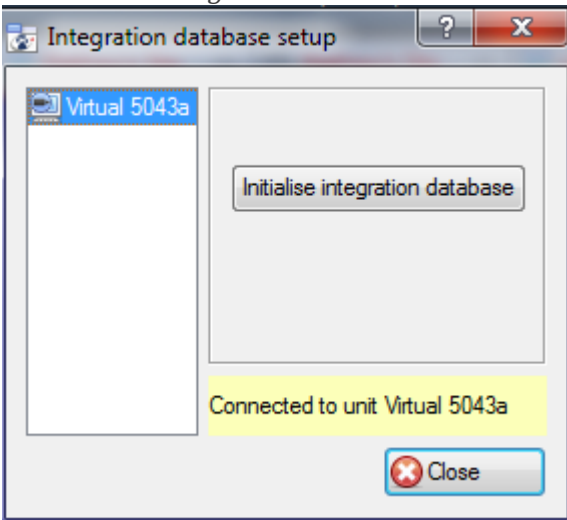
**Important Note:** Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here your integration will not function properly within the CathexisVision system.

- *Configure a new database*

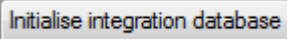


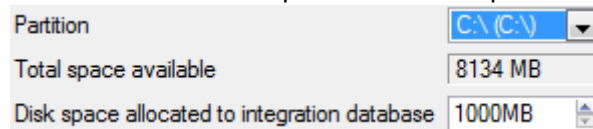
If there is no database created yet, clicking on this button will take you to the integration database setup.

*Initialise the Integration Database*




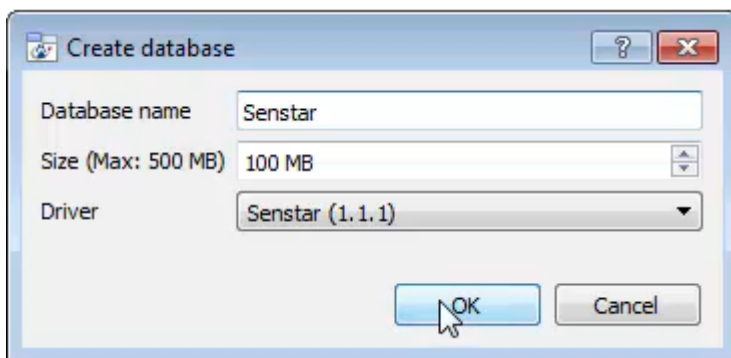
The first time you add an integration database you will have to initialise this feature on the unit. This will add a broad database, within which you will be adding all of your integrated device's databases.

Select the unit you wish to add the database to, from the list on the left, and click . You will have to choose which partition the database will be formed on, and select how much space it will take up.



*Add a New Devices Database*

After initialisation, you will be able to add the database for the integration that you are working with. Click on the  button, at the bottom of the Create database window.

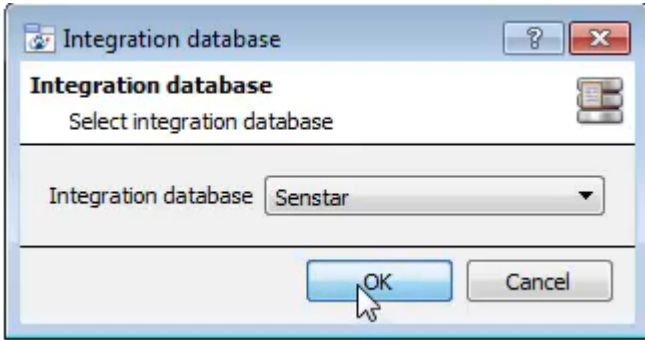


Give your Integration database a descriptive **Database Name**. e.g. Senstar.


Allocate a **Size** to your new device database.

Choose the device **Driver** that your device will be using, And click on OK to create the database.

- *Select the Senstar Integration database*



Integration database -- select integration database -- 

Once a database has been created the user may select it by clicking on the  icon, and selecting it in the dialogue that appears. Only databases which relate to the device you are adding should appear.

# 3 Database

## a. Introduction

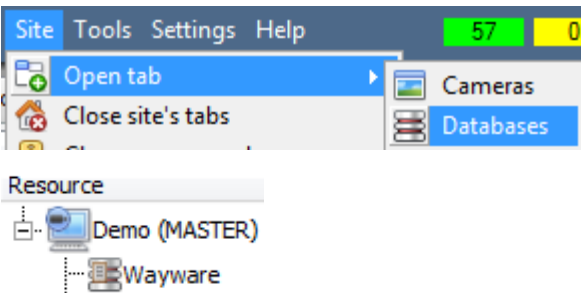
The database tab will allow you to navigate the databased entries, for each individual database. In the database tab each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording you will also be able to launch this recording, from within the database tab.

Time	Event Type	Description	Device	Input	Output	Distace	Links
2015-07-13 15:06:06	Device	Diagnostic error number 3 cleared	001				
2015-07-13 15:06:15	Input	Distance from device	001	001.004		A100	
2015-07-13 15:06:15	Input	Alarm	001	001.004			
2015-07-13 15:06:16	Input	Alarm cleared	001	001.004			
2015-07-13 15:06:17	Input	Distance from device	001	001.005		B90	
2015-07-13 15:06:17	Input	Alarm	001	001.005			
2015-07-13 15:06:17	Input	Alarm cleared	001	001.005			
2015-07-13 15:11:57	Input	Alarm	001	001.001			🔗
2015-07-13 15:11:57	Input	Tamper	001	001.001			🔗
2015-07-13 15:11:57	Input	Alarm cleared	001	001.001			🔗
2015-07-13 15:11:58	Input	Tamper cleared	001	001.001			🔗
2015-07-13 15:11:58	Input	Alarm	001	001.001			🔗
2015-07-13 15:12:21	Input	Alarm cleared	001	001.001			🔗
2015-07-13 15:22:14	Input	Alarm	001	001.001			🔗
2015-07-13 15:22:14	Input	Tamper	001	001.001			🔗
2015-07-13 15:22:14	Input	Alarm cleared	001	001.001			🔗
2015-07-13 15:22:16	Input	Tamper cleared	001	001.001			🔗
2015-07-13 15:22:16	Input	Alarm	001	001.001			🔗

Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathexisVision by the integrated device.

The Senstar database is information rich. This is an example of some of the information that is included:

## b. Navigate to the Database









You may view the information stored in the Integration database, by following the path you see to the left.

This will take you to the Database Tab.

Once in the databases tab you will have to select the relevant integration database. The databases are ordered under the NVRs that they are attached to.

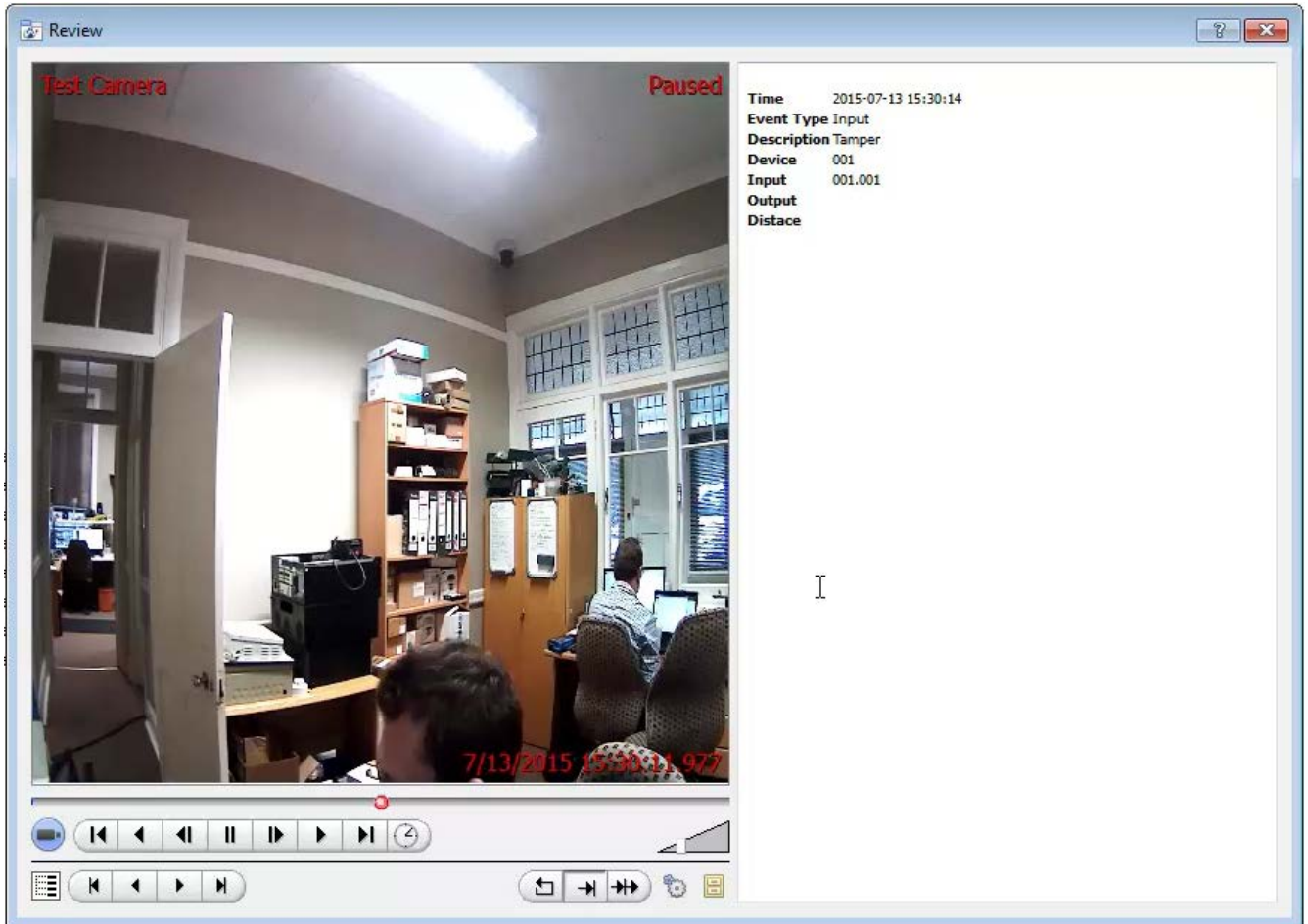
## c. Database Interface



① <b>View</b>	You may change the way that your database is presented. Some integration databases have multiple view options. The Senstar database has <b>All, Device, and Input</b> options.
② <b>Sorted By</b>	You may sort the Events based on the following parameters: <b>Time</b> .
③ <b>Easy Search</b>	The easy search option allows you to quickly search the database within one of the following options: <b>Device, Input, Output and Description</b> .
④ <b>Filter</b> 	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once you have the filters dialogue open you will have the following options:</p> <ol style="list-style-type: none"> <li>1. To <b>enable</b> filters check this box: <input checked="" type="checkbox"/> Enable filters</li> <li>2. To <b>add</b> a new filter click on . The filter icon  will change to  when filters are active.</li> <li>3. To <b>delete</b> an added filter click on .</li> </ol> <p>The options in this integration are <b>Time, Event Type, Description, Device, Input, Output, and Distance</b>.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. You may run multiple filters simultaneously. And you may even filter using the same parameter more than once.</li> <li>2. To change a filter click on the blue hyperlinked text. (For example, click on <a href="#">Timestamp</a> to change the filter from Timestamp, to any of the other available options.)</li> </ol>
⑤ <b>Go to Time</b>	This will allow you to go to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes, and then click on the  icon.

## Viewing an Entry's Associated Recording

If you have attached cameras to device objects in the Integration setup and if there are available recordings for those cameras, then each Integration database entry will have a corresponding recording. To view a databased event's recording double click it. A floating replay window will appear, from which you may review and archive video content.



## 4 Events

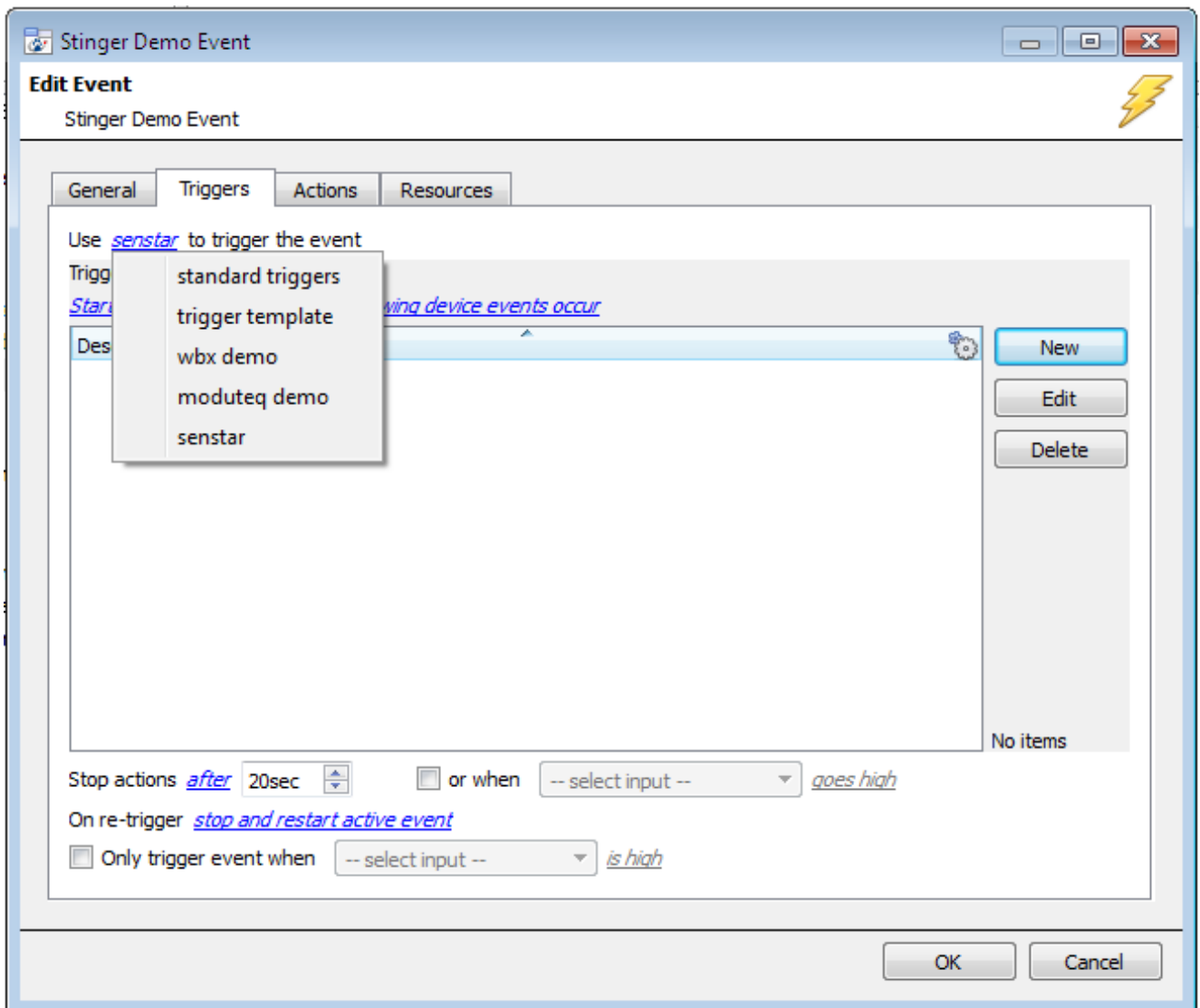
### a. Introduction

A CathexisVision Event has a trigger, which causes an action. You may set integrated devices to act at triggers, or as actions. This document will detail the Senstar specific aspects of Events. There is a comprehensive guide to CathexisVision Events in the main setup manual.

Most of the data that CathexisVision receives from a device is presented in the Events interface. This is done in order to give the user a full range of options. As a result some of the options presented in the interface may be *impractical* for being used as an event trigger, or action.

#### Event Window


Events in CathexisVision are setup via the Event Window. This has 4 tabs. In the **General Tab** an event is given a name, description, schedule and priority. In the **Triggers Tab** the trigger/s for the event is defined. In the **Actions Tab** the action/s which the event takes is defined. In the **Resources Tab** the various site resources which can be used as part of an event are defined.



## b. Creating an Event

To create an event using the Senstar device, enter the Events management area:



Once in Events management click on . This will open up the New Event window.

- **While/When and Any/All**

When triggering on an object you will have the option to trigger **while/when** a trigger is active. You will also be able to select multiple triggers, and define whether **all/any** of the triggers need to be active to start an event.

Use [senstar](#) to trigger the event

Trigger using [any device](#)

[Start actions when any of the following device events occur](#)

As usual, to change these settings click on the related, blue, hyperlinks.

## c. Triggers

A trigger is the user defined input that tells the event to start. The trigger causes the subsequent action (which the user will also define).

### Set your device as the trigger

Use [senstar](#) to trigger the event

Trigger using [any device](#)

[Start actions when any of the following device events occur](#)

Description

- standard triggers
- trigger template
- wbx demo
- moduteq demo
- senstar

If you are creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device you want to trigger the event, click on the hyperlink after “use”. To set it as the Senstar device, click on the hyperlink, and select the relevant device name from the dropdown menu.





### Trigger Types (Trigger Using)

Use [senstar](#) to trigger the event

Trigger using [any device](#)

[Start actions when any of the following device events occur](#)

Description

-  any device
-  any input
-  any output
-  Communication channels
- any device event

It is useful to think of this as a **master trigger type**.



**Any device/input/output** will trigger when any of these objects sends the selected trigger.

**Object in group...** If you have set up a group it will appear here in this list.

**Communication channels** will trigger only on the Communication channels.

**Any device event** will trigger on any event that occurs on the device. Within the “any device event” setup you may set “device event rules” which will constrain which device events will trigger the event.

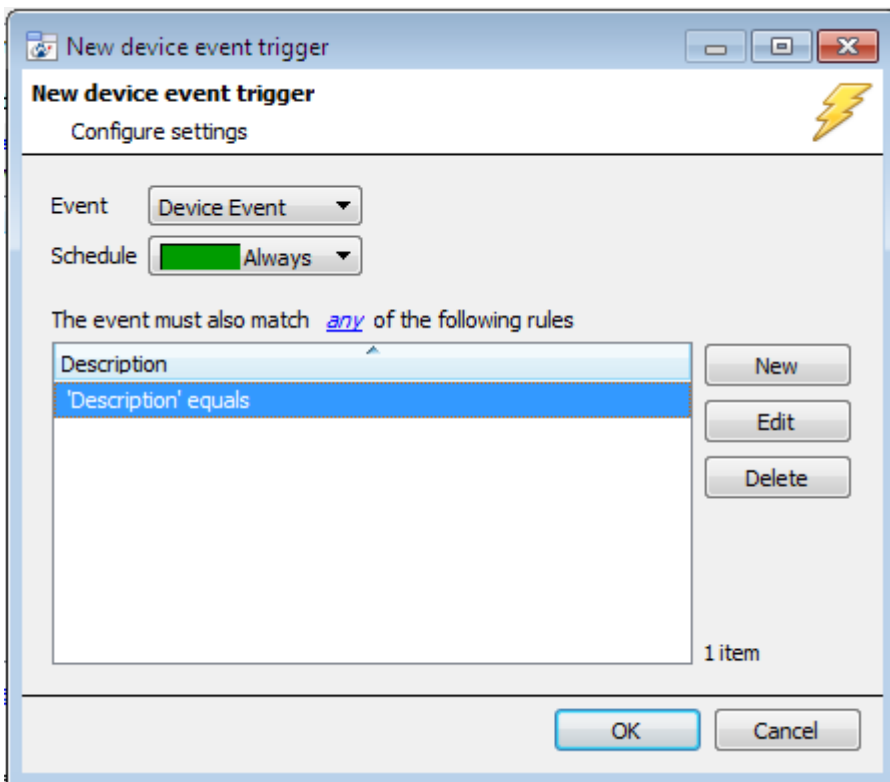


**Note for group triggers:** If you want this event to be databased under the name of a specific object, and not the name of the triggering group, you will need to modify the Description field in the **General tab** of the Event setup. Click on the  to see a list of available descriptions. Here is a Senstar example which will send the triggering fence's name to the database, for the event: Description  

### Define Your Trigger

After selecting a master trigger type, you will need to add a trigger to the event. Click on  in the Triggers tab. This will bring up the dialogue box you see below, for the various trigger types:

- **Any Device Event**

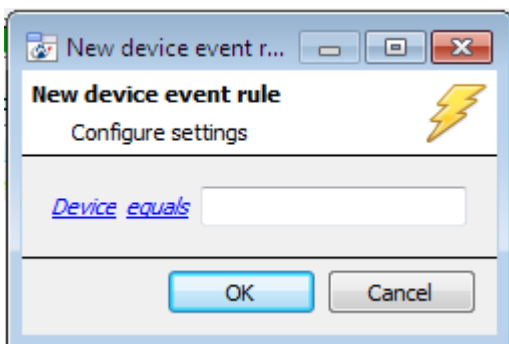


For example within the any device event option you may choose what type of device Event will be your trigger. Choose from the drop-down menu. The Senstar integration offers **Device**, **Inptus**, and **Output** device events.

**Note:** You may set multiple constraints (**Device Event Triggers**). If you do not define a constraint, every single device event will trigger this event.

To add/edit/delete a **Device Event Trigger** (a constraint) use the **New**, **Edit**, and **Delete** buttons on the right hand side.

Choose if any, or all constraints need to be fulfilled to set off a trigger.

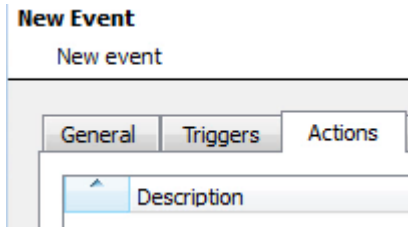


To change the constraint click on the first hyperlink, this will bring up the full list of available rules.

To modify the way this rule will be treated click on the second hyperlink (equals in the example) this will show you the rules options.

**Note:** When all available options are known to CathexisVision you will see a drop-down menu. When these variables are not pre-defined you will need to fill them in yourself. The information pulled through to the events is information sent to CathexisVision from the Senstar device, see the Senstar settings for the strings needed here.

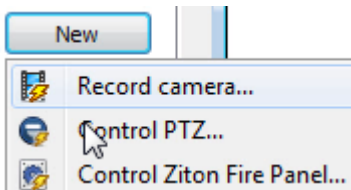
## d. Actions



Once you have defined the triggers that are going to initiate your event, you will need to define some Actions. With many integrations there will be the option to control the integrated device, as one of the actions.

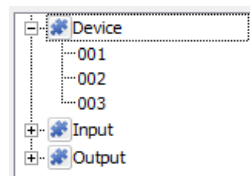
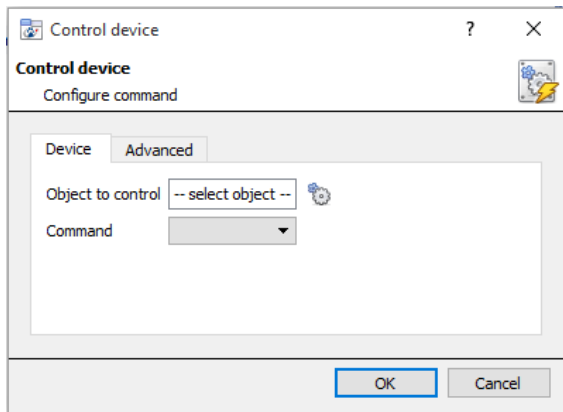
The Senstar device allows for the following level of control over the **Device**, **Output** and **Input** objects.


### New Action



To create a new Event Action click on  .

Select **Control Senstar** if you wish to control this device with the CathexisVision event.



Clicking on the  icon will bring up a list of the Senstar objects which may be controlled by this event.

The **Command** options are all the options which CathexisVision can control on the selected object.

- *Device Actions*

### Shunting Options

The screenshot shows a window titled "Control device" with a subtitle "Configure command". It has two tabs: "Device" and "Advanced". The "Advanced" tab is selected. The "Object to control" field contains "001". The "Command" dropdown menu is set to "Shunt Input Alarm". Under the "Parameters" section, the "Input Number" spinner is set to "0" and the "Shunt Alarm" dropdown is set to "Enable Alarm". At the bottom, there are "OK" and "Cancel" buttons.

There are three commands which CathexisVision may send to the **Device** object: **Shunt Input Alarm**, **Shunt Input Tamper**, and **Toggle Output**.

Once you have set the command you must define the **Input Number**, and define the **Shunt Action**.

The **Input/Output number** is the number of the input on the **Device**. (The same inputs represented in the object list, above.)

**Shunt Alarm/Tamper** will define how you want to shunt the alarm.

### Toggle

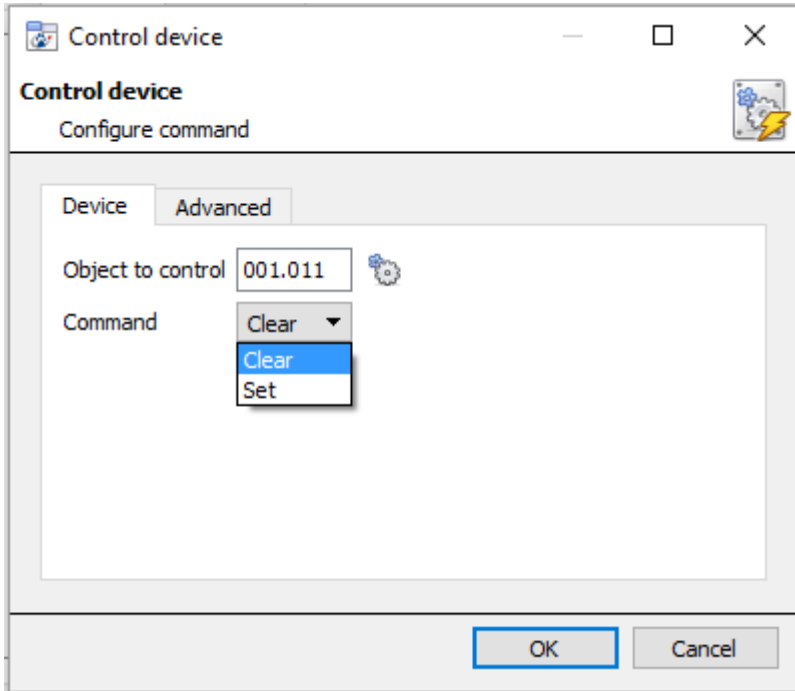
The screenshot shows a window titled "Control device" with a subtitle "Configure command". It has two tabs: "Device" and "Advanced". The "Advanced" tab is selected. The "Object to control" field contains "001". The "Command" dropdown menu is set to "Toggle Output". Under the "Parameters" section, the "Output Number" spinner is set to "0" and the "New State" dropdown is set to "Clear Output". At the bottom, there are "OK" and "Cancel" buttons.

Select **Toggle Output** as your **Command**.

The **Output Number** will correspond to the output on the Senstar device which you wish to control.

**New State** options are Clear and Set.

- **Input Actions**



After selecting your **Input** decide whether your action will be to **Clear** or **Set** it.

## 5 Conclusion

Please remember that this appnote was designed to deal specifically with this integration. For further information about the CathexisVision software please consult the main manual (<http://cathexisvideo.com/>).

For support please contact [support@cat.co.za](mailto:support@cat.co.za)