



Optex REDWALL/REDSCAN Laser Scan Detector Integration

App-note

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1. Introduction

This document details the integration of the Optex REDWALL Laser Scan Detector device with CathesisVision.

Functionally this integration entails the recording of data and triggering of standard CathesisVision Events, based on data and triggers received from the Optex REDWALL Laser Scan Detector device.

There is a General Integration section in the main *CathesisVision Setup Manual*. It contains information on creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section.**

1.1 Requirements

1.1.1 General Requirements

- CathesisVision 2017 Service Pack 2 and later.
- REDWALL version PIE-1.

Note:

1. As CathesisVision has integrated with the REDWALL module version PIE-1, any REDWALL devices using this module will also be integrated with CathesisVision.
2. For information regarding the regular operation of an Optex device, please consult the relevant manufacturer's documentation.

1.1.2 License Requirements

License Code	License	Description
CORL-2000	Optex REDWALL Laser Scan Detector device license.	This license is the "base" license to integrate with a laser scan system. It is applied to the server to which the laser scan device is connected. It will allow for the connection of a single controller.
CORL-1001	Optex REDWALL Laser Scan Detector object license.	These licenses apply to the detectors (sensors) in a laser scan system. CORL-1001 will license a single detector, and may be added on a detector-by-detector basis.
CORL-3000	Optex REDWALL Laser Scan Detector bundle license.	This license includes the CORL-2000 device license, and also provides support for unlimited CORL-1001 detector licenses.

Note: In this integration, individual devices will require a license for each device.

A NOTE ON CAMERA CHANNELS

The CathesisVision software packages have **limits on camera channels**. A multi-sensor camera is physically a single device (camera) but it **requires a camera channel for each one of the internal cameras**. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathesisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

1.2 Integration Components

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

Device	The device is CathesisVision software’s interface, which handles all the interaction between CathesisVision and the integrated hardware. When an integration is added to the CathesisVision system, a device is added. The messages received from the device are called Device Events.
Objects	Objects are the individual pieces of hardware that comprise the integration. There may be 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.

1.3 Features and Abilities

1.3.1 Device Objects

Object Type	Abilities
General	<ul style="list-style-type: none"> • This integration has Sensor objects. • Objects are automatically created as soon as communication between the CathesisVision unit and device is established. • Device objects cannot be commanded as an action of a CathesisVision system event. • Events on the device can be used to trigger CathesisVision system and map events. • Objects may be linked to cameras to associate device events with video footage.
Sensor	<ul style="list-style-type: none"> • Sensor object has multiple state options, dependent on device and event. • Indicates condition of various facets of the object. See below.
Object Properties	<ul style="list-style-type: none"> • Name. • State. • Alarm. • Latest Detection.

	<ul style="list-style-type: none"> • Multiple Locations. • Trouble. • Tamper. • Licensed.
State Indication	<p>The Sensor object supports multiple states which indicate the condition of the sensor. These are:</p> <ul style="list-style-type: none"> • Normal/Offline status (heartbeat). • Master Alarm Condition. • Disqualification Circuit Activated. • Anti-rotating Function Activated. • Anti-masking Function Activated. • Sensor Error Condition. • Dirt on Laser Window. • Tamper Circuit Activated. • Fault Circuit Activated
Object Conditions	<p>The sensor object may have various object conditions, besides the states, which are indicated in device events. These include but are not limited to:</p> <ul style="list-style-type: none"> • Alarm state. • Nature of the 'Latest Detection' message, e.g.: <ul style="list-style-type: none"> ○ Creep. ○ Far. ○ Far near. • Indication of whether detection made in multiple locations. • Tamper indication. • Note: Presence of conditions dependent on device and event type.
Command	<ul style="list-style-type: none"> • N/A.

1.3.2 Device Events

A CathesisVision Event has a trigger, which causes an action. The Optex REDWALL/REDSCAN device can be used to trigger an event. The device cannot be controlled.

Event Element	Features/Abilities
General	<ul style="list-style-type: none"> • A message is displayed when communication to the device is lost. • Status and Detection type events may be configured. • Events are populated in the device events section, and in the Meta-database.
Event Triggers	<p>REDWALL sensor objects (and groups of appropriate objects), and object conditions may be used to trigger CathesisVision events:</p> <ul style="list-style-type: none"> • Sensor Object (and groups of objects).

	<ul style="list-style-type: none"> • Notification. • Latest Detection. • Multiple locations. • Object ID.
Event Type	<ul style="list-style-type: none"> • Detection. • Status.
CathesisVision Event Actions	<p>All CathesisVision events can generate actions, such as:</p> <ul style="list-style-type: none"> • Recording cameras and trigger cameras. • Sending alarms to base-stations. • Sending emails. • Control PTZ/virtual output/virtual input. • Play audio clip. <p>The Optex REDWALL device cannot be controlled as an event action.</p>

1.3.3 Metadatabase

A unique metadatabase is created on the CathesisVision server for this integration. It is fully searchable, with configurable filters based on device event information (as above), and time stamping. The filtered event/s, and the associated video, will then be available for review in a new window from which an archive can be created and exported.

Database Element	Features/Abilities
General	<ul style="list-style-type: none"> • All device events are databased. • Database entries include the footage from cameras linked to device objects. • Multiple cameras may be linked to multiple objects. • Device event metadata is displayed where applicable. • Databased device events may be viewed in the embedded video player, which includes the usual CathesisVision video review tools.
View Options	<ul style="list-style-type: none"> • Detection events. • Status Events.
Sort Options	<ul style="list-style-type: none"> • Device event time.
Easy Search	<ul style="list-style-type: none"> • Object. • Notifications. • Latest Detection. • Multiple Locations.
Filter	<ul style="list-style-type: none"> • Time. • Event Type. • Object. • Notification. • Latest Detection. • Multiple Locations.
Export	Database entries may be exported in CSV and PDF format.

1.3.4 Maps

The CathesisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

Map Element	Features/Abilities
General	Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action.
Map Action Triggers	<ul style="list-style-type: none"> • All device objects may be set to trigger a map action if the user left-clicks on map. • Some device objects may be set to trigger a map action if a state change message is received from the device. • All device objects may be set to perform a map action if <i>any</i> event occurs on the device. • Device objects, which can be configured to trigger CathesisVision events, may also be set to perform a map action when specific CathesisVision events are triggered.
Map Actions Options	When triggered (see above), objects may perform the following map actions (where applicable): <ul style="list-style-type: none"> • Connect to a site. • Perform an animation. • Go to a camera preset. • Load a map. • Set a PTZ relay output. • Show a popup menu. • Set a relay output. • Show an HTML block. • Show a block of text. • Show a device popup menu.

USEFUL LINKS

To view **tutorial videos** on CathesisVision setup, visit <https://cathesisvideo.com/resources/videos>

Find answers to Cathesis **Frequently Asked Questions**:

<https://cathesis.crisp.help/en/?1557129162258>

2. Device Addition and Configuration

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

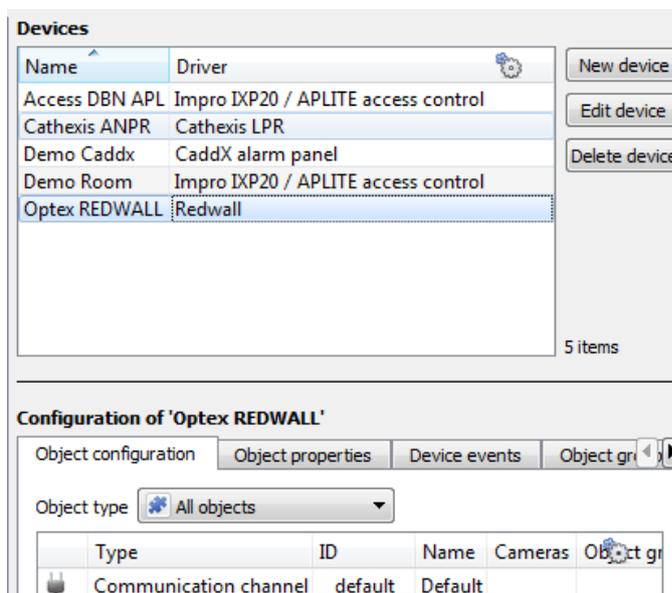
2.1 REDWALL/REDFAN Web Interface

The only thing that needs to be done here is to make sure that the port number matches the one entered when adding the integration in CathesisVision.

2.2 Devices Section (Add a New Device in CathesisVision)

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:

2.2.1 The Integrations Panel



There are two sections in the Integration Panel:

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

The **Configuration** section enables the editing/review of the device which added in the **Devices** section.

2.2.1.1 Device Addition

New device

Next

1. Once in the Integration Panel, click on New Device, in the Devices section. This will open the addition dialogue.
2. Select the Redwall driver from the list
3. Then click on Next.

Name the device.

Enter the **UDP Listen Port number**. Leave this as default unless a different port number has been configured.

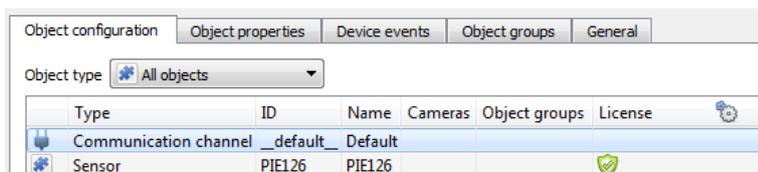
Click **Finish** when done.

2.3 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.**

Note: Device objects will be generated automatically when device events are received.

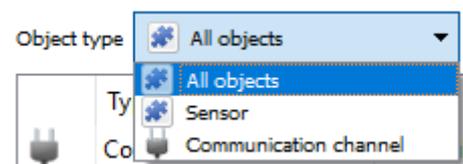
2.3.1 Object Configuration Tab



The object configuration tab is the tab in which the individual objects that comprise the integration can be viewed.

Objects will only be created when the corresponding hardware is present.

Select the Object type dropdown to view all objects that comprise the integration. Select one of the object types from the menu to view only objects of that type in the list area.



Note: See the Integration Components section, above, for more information on the object types.

2.3.1.1 Object Configuration Buttons

New

Add a new object by clicking on New.

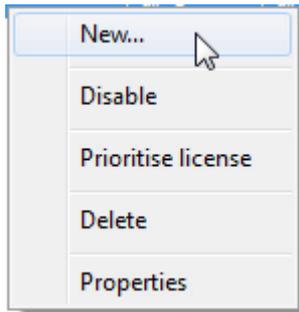
Edit

Click Edit to change an existing object.

Delete

Click Delete to remove an existing object from the CathesisVision configuration.

2.3.1.2 Object Configuration Right-click Options



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

Disable/Enable will manually enable/disable individual objects.

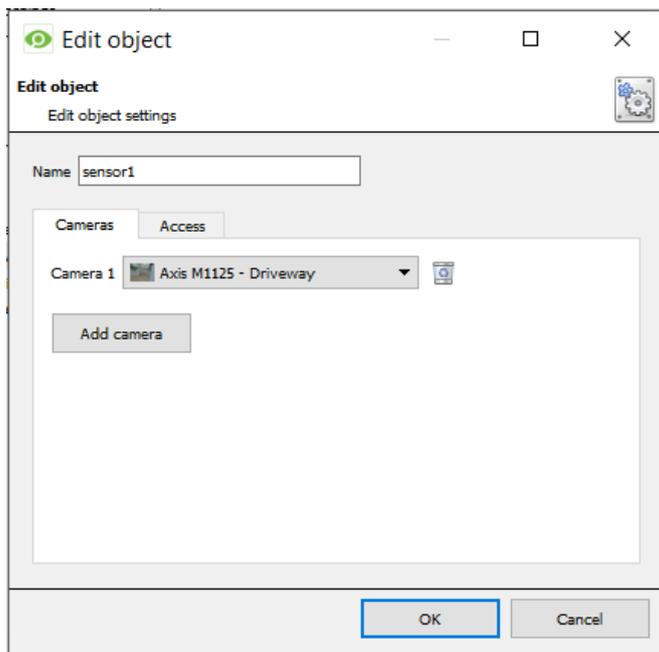
Prioritise license will give a specific till license preference, in case there are more tills than licenses.

Delete will permanently remove this object from the list.

Properties will open up the object properties. Objects may be edited from here. (Specifically, cameras will be assigned to this object, as well as user access levels assigned.)

Properties: Cameras

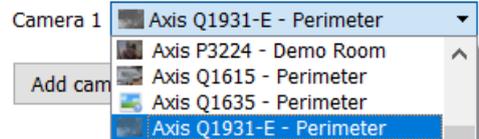
Adding a camera to an object will mean that, whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database.



Add camera

Click Add camera.

From the dropdown menu that appears, click the desired camera.



To delete a camera, click on the trash icon.

Note: If **continuous recording** is not set up, on associated cameras, this runs the risk of device objects triggering while the cameras are not recording. To only record cameras, when an object triggers, set up **Events** that trigger a recording when one of these objects is activated.

Properties: Access

Access protects sensitive objects by ensuring that only certain user access levels can access them.

Under **View**, set the access levels.

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

2.3.2 Objects Properties Tab

Name	State	Alarm	Latest Detection	Multiple Locations	Trouble	Tamper	Licensed
PIE126	Offline	✘			✘	✘	✔

The Object properties tab allows objects to be viewed by type. In the case of this device, objects can be viewed by **Sensor**.

Selecting any of these object types will populate the configuration section with the object type properties.

2.3.2.1 Sensor Object States

The sensor object supports multiple states indicating the condition of the sensor. These are:

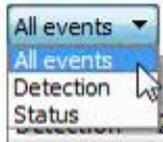
- Normal/Offline status (heartbeat).
- Master Alarm Condition.
- Disqualification Circuit Activated.
- Anti-rotating Function Activated.
- Anti-masking Function Activated.
- Sensor Error Condition.
- Dirt on Laser Window.
- Tamper Circuit Activated.
- Fault Circuit Activated.

2.3.3 Device Events Tab

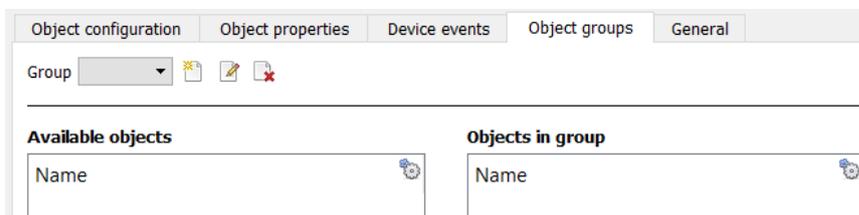
This will list all events sent from this device. It is an excellent way for installers to see that the integration is functioning, and to monitor the events happening on site.

Object configuration		Object properties		Device events		Object groups		General	
All events								Filter	
Event type									
Detection	2016-11-17 09:15:24.706	PIE126		Alarm cleared					
Status	2016-11-17 09:15:24.706	PIE126		Master alarm condition is restored	PIE126				
Detection	2016-11-17 09:15:46.423	PIE126		Alarm active		Far and Near (FN)			
Status	2016-11-17 09:15:46.423	PIE126		Master alarm condition	PIE126				
Detection	2016-11-17 09:16:23.728	PIE126		Alarm active		Creep (CR)		CR & FR or FN	
Detection	2016-11-17 09:16:48.949	PIE126		Alarm active		Far and Near (FN)			
Detection	2016-11-17 09:16:49.089	PIE126		Alarm active		Creep (CR)		CR & FR or FN	
Detection	2016-11-17 09:16:49.149	PIE126		Alarm active		Far and Near (FN)			
Detection	2016-11-17 09:16:59.569	PIE126		Alarm active		Creep (CR)			
Detection	2016-11-17 09:17:10.169	PIE126		Alarm cleared					
Status	2016-11-17 09:17:10.169	PIE126		Master alarm condition is restored	PIE126				
Status	2016-11-17 09:17:25.718	PIE126		Tamper circuit activated	PIE126				
Status	2016-11-17 09:17:52.210	PIE126		Tamper circuit status is restored	PIE126				
Status	2016-11-17 09:18:01.660	PIE126		Sensor error condition	PIE126				
Status	2016-11-17 09:18:27.060	PIE126		Sensor error condition is restored	PIE126				

Filter the device events by selecting the dropdown menu and choosing an event type:



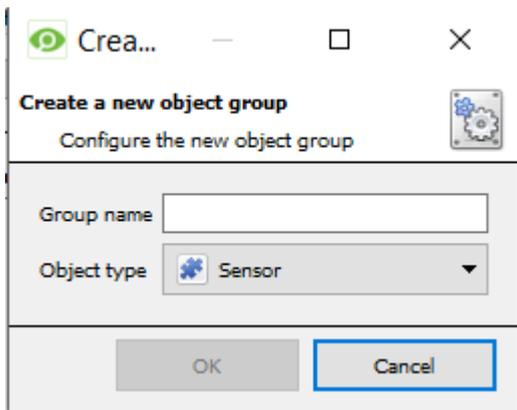
2.3.3.1 Groups Tab



Groups of the same type of object can be created.

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 are triggered.)

2.3.3.2 Create a Group



To create/edit a group click on / .

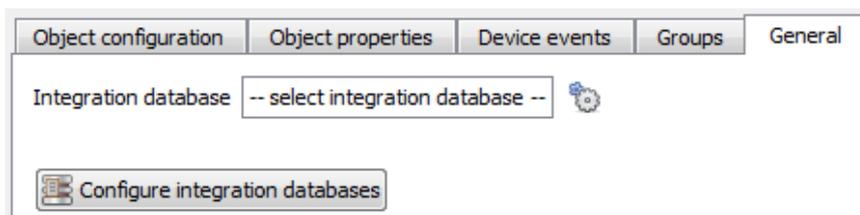
Note: Once a group has been created, the object type of the group may not be changed.

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

Click on the drop-down menu to select the **Object type** to view.

A list of Available Objects will appear. To add/remove, select the object/s (multiple may be selected), and click on / .

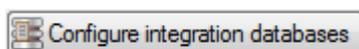
2.3.4 General Tab



Currently the General Tab deals with the **Integration database**. Here it is possible to either select an existing database, or configure a new database for the integration.

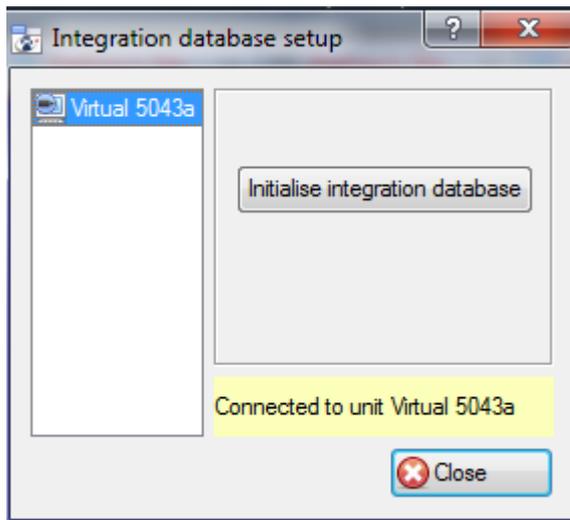
Important Note: Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here, the integration will not function properly within the CathesisVision system.

2.3.4.1 Configure a New Database



If there is no database created yet, click on this button to set up the integration database.

Initialise the Integration Database



The first time an integration database is added, this feature needs to be initiated on the unit. This will add a broad database, within which all of the integrated device's databases will be added.

Select the unit to add the database to, from the list on the left, and click

Initialise integration database

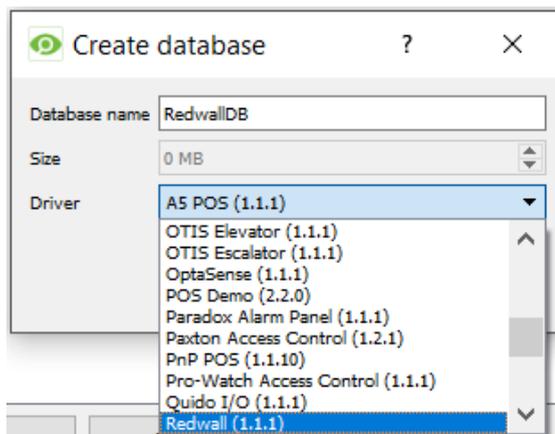
Choose which partition the database will be formed on, and select how much space it will take up.



Add a New Devices Database

After initialisation, add the database for the current integration.

New Click on the New button, at the bottom of the Create database window.



Give the Integration database a descriptive **Database Name**.

Allocate a **Size** to the new device database. The max is 500MB.

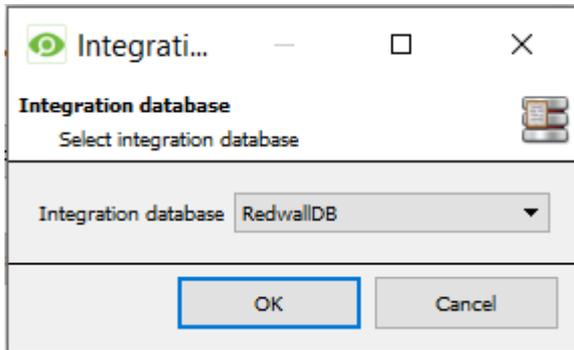
Choose the **Redwall Driver**.

Click **OK** to create the database.

Once created, close the **Integration Database Setup** window.

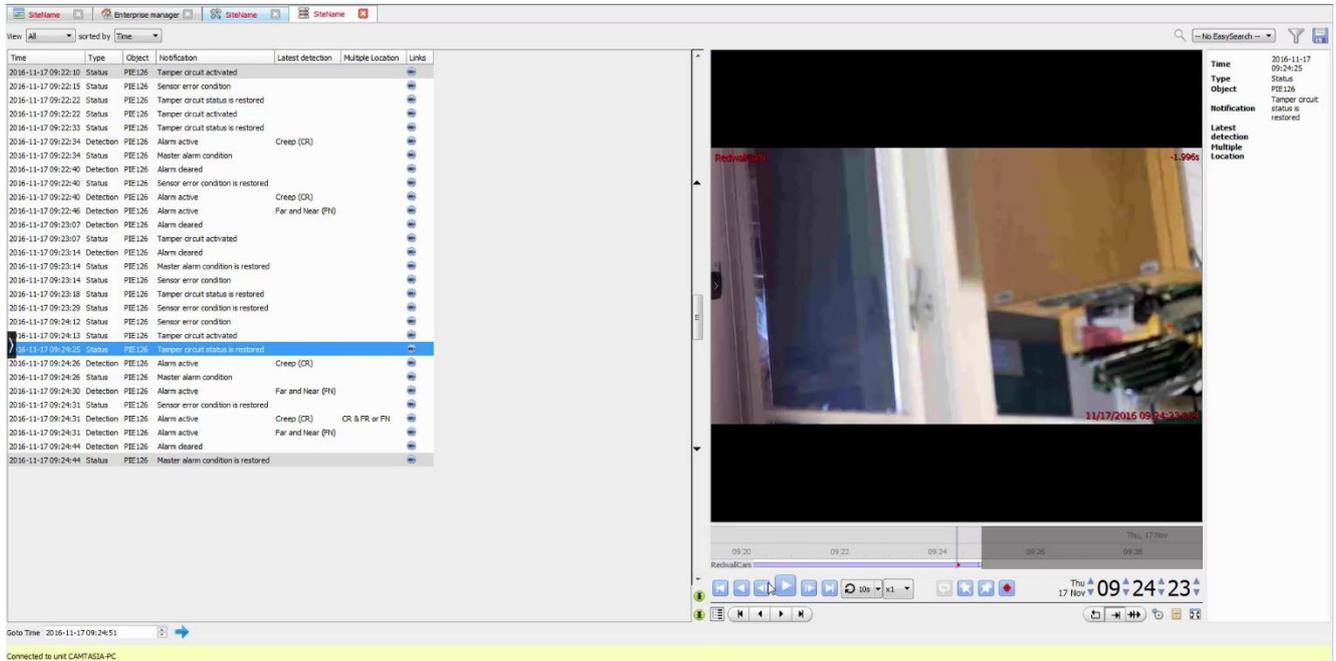
2.3.4.2 Select the Redwall Electric Fence Integration Database

- Once a database has been created the user may select it by clicking on the settings icon, and selecting it from the dropdown menu in the dialogue that appears.



3. Database

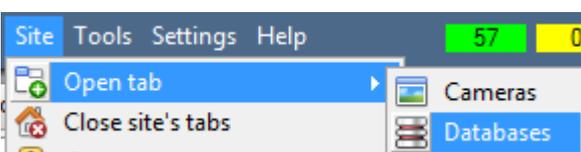
The Databases tab will allow the user to navigate the databased entries, for each individual database. In the database tab, each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording the user will also be able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



Time	Type	Object	Notification	Latest detection	Multiple Location	Links
2016-11-17 09:22:10	Status	PIE126	Tamper circuit activated			
2016-11-17 09:22:15	Status	PIE126	Sensor error condition			
2016-11-17 09:22:22	Status	PIE126	Tamper circuit status is restored			
2016-11-17 09:22:22	Status	PIE126	Tamper circuit activated			
2016-11-17 09:22:33	Status	PIE126	Tamper circuit status is restored			
2016-11-17 09:22:34	Detection	PIE126	Alarm active	Creep (CR)		
2016-11-17 09:22:34	Status	PIE126	Master alarm condition			
2016-11-17 09:22:40	Detection	PIE126	Alarm cleared			
2016-11-17 09:22:40	Status	PIE126	Sensor error condition is restored			
2016-11-17 09:22:40	Detection	PIE126	Alarm active	Creep (CR)		
2016-11-17 09:22:46	Detection	PIE126	Alarm active	Far and Near (FN)		
2016-11-17 09:23:07	Detection	PIE126	Alarm cleared			
2016-11-17 09:23:07	Status	PIE126	Tamper circuit activated			
2016-11-17 09:23:14	Detection	PIE126	Alarm cleared			
2016-11-17 09:23:14	Status	PIE126	Master alarm condition is restored			
2016-11-17 09:23:14	Status	PIE126	Sensor error condition			
2016-11-17 09:23:18	Status	PIE126	Tamper circuit status is restored			
2016-11-17 09:23:29	Status	PIE126	Sensor error condition is restored			

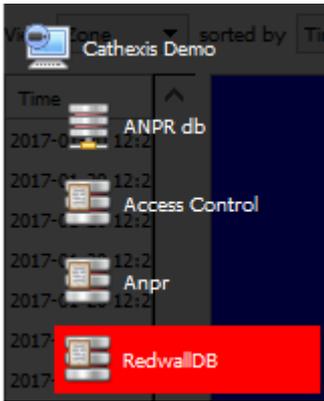
Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathesisVision by the integrated device.

3.1 Navigate to the Database



The information stored in the Integration database may be viewed by following this path.

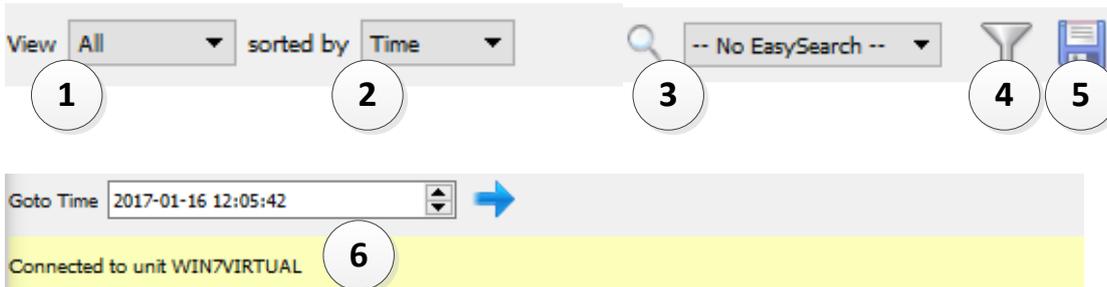
Site / Open tab / Databases



From 2016.2 onwards, when the database tab opens, the relevant integration database must be selected from the database panel that opens on the left-hand side. The databases are ordered under the NVRs that they are attached to. To open and close this list click on the arrow in the centre of the list:



3.2 Database Interface



① View	The user may change the way that the database is presented.
② Sorted By	Events can only be sorted by certain parameters.
③ Easy Search	The easy search option lets the user quickly search the database.
④ Filter 	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, the following filter options are available:</p> <ol style="list-style-type: none"> To enable filters check this box: <input checked="" type="checkbox"/> Enable filters To add a new filter click on . To delete an added filter click on . <p>It is possible to filter the same parameters more than once. To change a filter click on the blue hyperlinked text. (For example, click on Timestamp to change the filter from Timestamp, to any of the other available options.)</p> <p>The filter options in this integration are:</p> <div data-bbox="408 1800 748 2139" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Transaction</p> <ul style="list-style-type: none"> Time Type Object Notification Latest detection Multiple Location </div>

	<p>Note:</p> <ol style="list-style-type: none"> Multiple filters may be run simultaneously. The filter icon  will change to  when filters are active.
⑤ Export	Generate meta-database reports in PDF or CSV format. See below.
⑥ Go to Time	<p>This navigates to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes.</p> <p> Then click on the arrow icon.</p>

3.2.1 Generate Meta-Database Reports



Click the save icon to open the Export window.

The screenshot shows the 'Export' dialog box with the following options:

- Preset:** Quarter to date (dropdown)
- Specific:** From 1 January 2017 00:00:00 to 1 April 2017 00:00:00
- Previous:** 1 Hours
- Period of:** 1 Hours from 00h00 16 January 2017

Buttons: Back, Next

Select the **Period** to export, and enter the required details.

Click **Next**.

The screenshot shows the 'Export' dialog box with the following options:

- Format:** CSV (dropdown)
- Filename:** C:/Program Files/CathexisVision Client/report.csv

Buttons: Back, Export

Select the **Format** to export the report in; either CSV or PDF.

See below for the two options.

3.2.1.1 Export CSV

Configure the report

Format:

Filename:

Select **CSV Format**.

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**).



Or, click the folder icon to choose a new save folder and filename.

3.2.1.2 Export PDF

Configure the report

Format:

Heading:

Orientation:

Filename:

Select **PDF Format**.

Give the PDF a **Heading**.

Select either Landscape or Portrait **Orientation** of the PDF.

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**).



Or, click the folder icon to choose a new save folder and filename.

3.2.2 Viewing an Entry's Associated Recording

This integration uses the new video option where the video player is embedded in the database view. This player uses the same timeline features as the CathesisVision cameras tab.

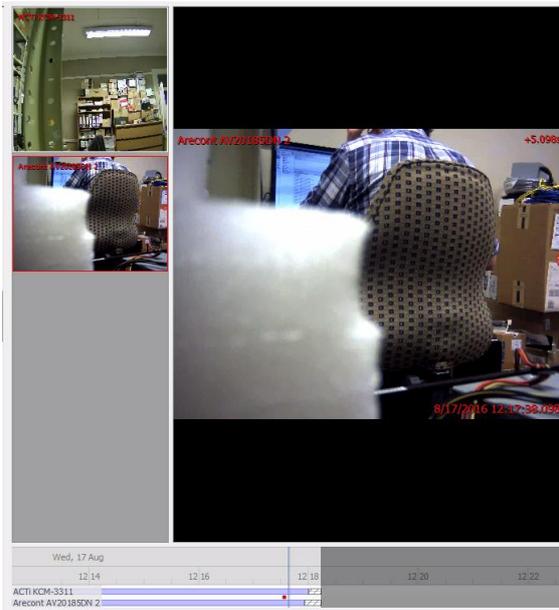


To view an associated recording, simply left-click on a database entry which has the camera icon in the **Links** column. Then click play in the video player.

Timestamp	Server IP	Name	Region	Rule	Action	Rule Type	Priority	Confidence	Triggering Object	Message	Links
2016-12-21 13:20:00	192.168.6.114	TestCamera2	Region 0	TRSPWIRE	line	VERY LOW		Human	CurrentPCIn=3,CurrentPCOut=1,CumulativePCIn=15,C		
2016-12-21 13:20:09	192.168.6.114	TestCamera2	Region 0	TRSPWIRE	line	VERY LOW		Human	CurrentPCIn=3,CurrentPCOut=6,CumulativePCIn=18,C		
2016-12-21 13:20:18	192.168.6.114	TestCamera2	Region 0	TRSPWIRE	line	VERY LOW		Human	CurrentPCIn=3,CurrentPCOut=6,CumulativePCIn=18,C		
2016-12-21 13:25:29	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:25:48	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:25:49	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:26:05	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:26:06	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:34:36	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:34:37	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:41:30	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:41:38	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:41:41	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:41:45	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:42:27	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:42:27	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:42:52	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:44:17	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			
2016-12-21 13:44:17	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human			

Timestamp	Server IP	Name	Region	Rule	Action	Rule Type	Priority	Confidence	Triggering Object	Message
2016-12-21 13:44:17	192.168.6.114	TestCamera2	Region 0	TRESPASS	area	VERY LOW		Human		

3.2.2.1 Reviewing Multiple Cameras



If multiple cameras were added to the recorded object during the integration setup, these are displayed on the left of the video player screen as thumbnails.

Select a camera thumbnail to review it.

3.2.2.2 Device Event Metadata

When an integration database entry is selected, its event information will be displayed on the right of the video player:

Time	2016-11-17 09:24:25
Type	Status
Object	PIE126
Notification	Tamper circuit status is restored
Latest detection Multiple Location	

4. Events

A CathesisVision Event has a trigger, which causes an action. Integrated devices can be set to act at triggers, or as actions. This document will detail the Optex REDWALL specific aspects of Events. There is a comprehensive guide to CathesisVision Events in the *CathesisVision Setup Manual*. For more information, please consult it.

Most of the data that CathesisVision 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.

4.1 Event Window

Events in CathesisVision are setup via the Event Window. This has 4 tabs:

1. In the **General Tab**, an event is given a name, description, schedule and priority.
2. In the **Triggers Tab**, the trigger/s for the event is defined.
3. In the **Actions Tab**, the action/s which the event takes is/are defined.
4. In the **Resources Tab**, the various site resources which can be used as part of an event are defined.

New Event 

New event

General Triggers Actions Resources

Name

Description 

Schedule Always  

Priority ⚠ Low

4.2 Creating an Event

To create an event using the Optex REDWALL/REDFAN device, enter the Events management area:



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

4.2.1 While/When and Any/All

When triggering on an object the user will have the option to trigger **while/when** a trigger is active. The user 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 [laserdetector](#) to trigger the event

Trigger using [any sensor](#)

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

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

4.2 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).

4.2.1 Set the Device as the Trigger

[laserdetector](#) to trigger the event

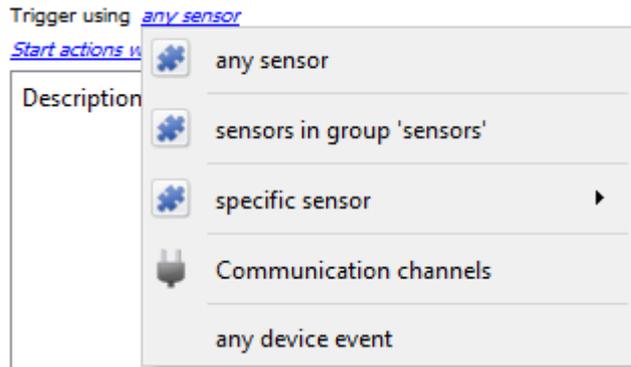
- standard triggers
- trigger template
- demo caddx
- access control ap lite
- cathexis anpr
- laserdetector

If creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device will trigger the event, click on the hyperlink after "use".

To set it as the Optex REDWALL device, click on the hyperlink, and select the relevant device name from the dropdown menu.

4.2.2 Trigger Types (Trigger Using)

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



Any ... will trigger when on an event from *any* of these objects.

Specific ... will only trigger on an event from a specific object.

Sensors in group... If an object group has been set up it will appear in this list. When any object in the group triggers, the event will be triggered.

Communication channels will trigger only on the Communication channels.

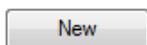
Any device event will trigger on any event that occurs on the device. Within the “any device event” setup the user may set “device event rules” which will constrain which device events will trigger the event.

Note for group triggers: For events to be databased under the name of a specific object, and not the name of the triggering group, the Description field in the **General Tab of the Event setup** needs to be modified.

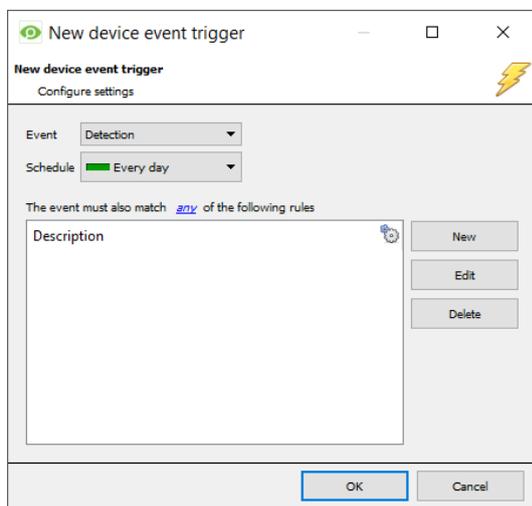
Click on the question mark to see a list of available descriptions.

4.2.3 Define the Trigger

After selecting a master trigger type, add a trigger to the event.



Click on New in the Triggers tab. This will bring up the dialogue box below, for the various trigger types:

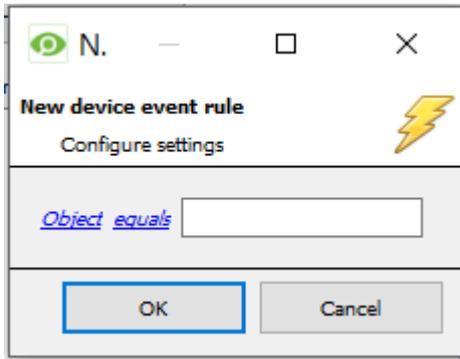


For example, within the [any device event](#) option, choose what type of device Event will be the trigger. Choose an event type from the drop-down menu.

Note: Multiple constraints (**Device Event Triggers**) may be set. If a constraint is not defined, every single device event will trigger this event.

To add/edit/delete a **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.



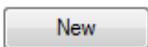
To change the constraint, click on the first hyperlink, this will bring up the full list of available rules.

To modify the way this rule will be treated click on the second hyperlink ([equals](#) in the example) to display the rules options.

Note: When all available options are known to CathexisVision a drop-down menu will be available. When these variables are not pre-defined, they will need to be filled in manually. The information pulled through to the events is information sent to CathexisVision from the Optex REDWALL/REDSKAN device, see the Optex settings for the strings needed here.

4.3 Actions

Once the triggers that are going to initiate the event have been defined, the user will need to define some Actions in the **Actions tab** of the **New Event** window.



To set an action for an event trigger, click New and select an action from the available options.

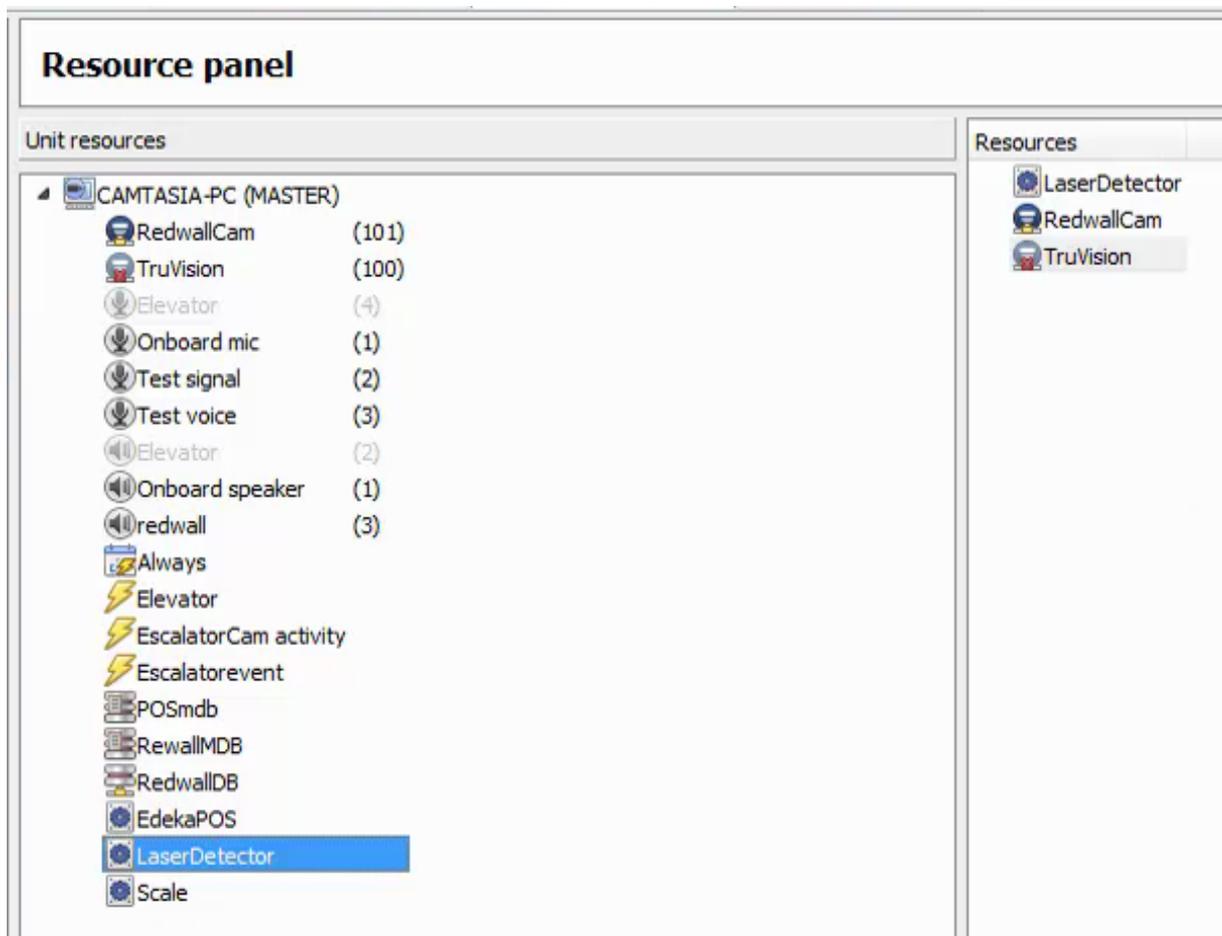
5. Map

It is possible to add the Optex REDWALL/REDFIELD device to a site map, which will allow for a number of action options when objects are triggered. These options include the animation of triggered zones and connecting to site cameras when zones are triggered, etc.

Note: This section will only deal with the specifics of the Optex REDWALL/REDFIELD device. For more information on using the CathesisVision Map Editor and Map Tab, please consult the dedicated and detailed **Map Editor Operation Manual**.

5.1 Add the Optex Device as a Resource

To configure the map, the device must be added as a resource to be added to the map.



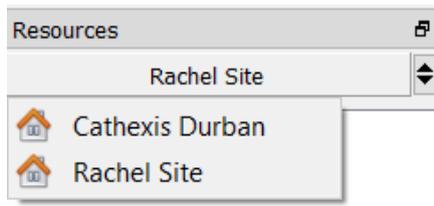
5.1.1 Add the Device in the Resource Panel

1. Navigate to the **Resource Panel** by following **Site / Open Tab / Setup / Resource Panel**.
2. Drag the device from the **Unit Resources** list into the **Resources** list, on the right.

5.2 Add the Device in Map Editor

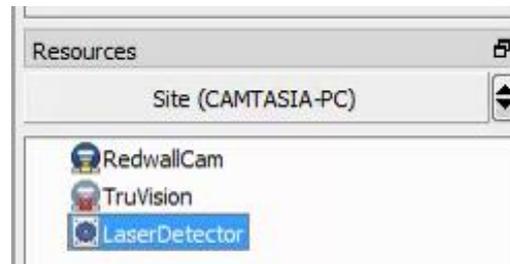
Once the device has been added as a **Resource**, it will be available to drag onto the map area from the **Site Resources** list.

5.2.1 Connect to Site

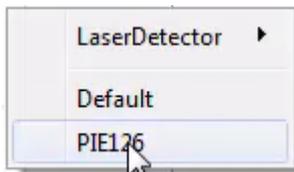


At the bottom right-hand of the Map Editor screen, click the dropdown menu to select the site to connect to.

Once connected to site, all the resources available will populate the panel below.



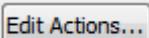
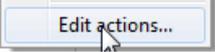
5.2.2 Adding Device Objects

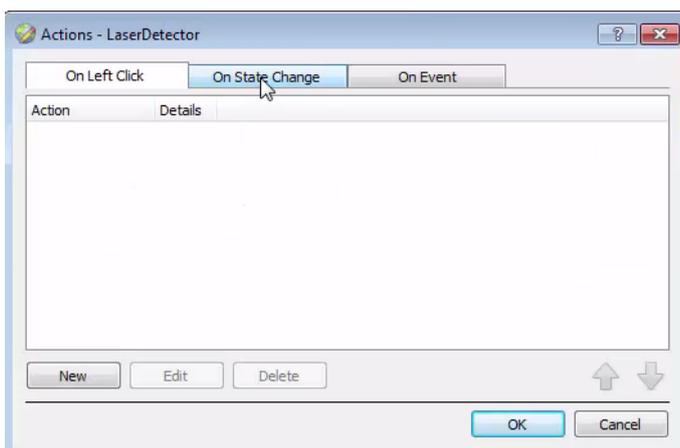


Drag the device from the Site Resources list onto the map area. All of the device objects will appear in a list. Select an object.

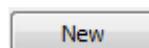
Note: To add multiple objects, repeatedly drag-and-drop the device onto the map area and select the desired objects individually.

5.3 Adding Device Actions

To add actions to the device objects, either select the object on the map and click  or right-click the map object and select .



Actions may be set for **Left/Right-Clicks**, **State Changes** and **Events**.

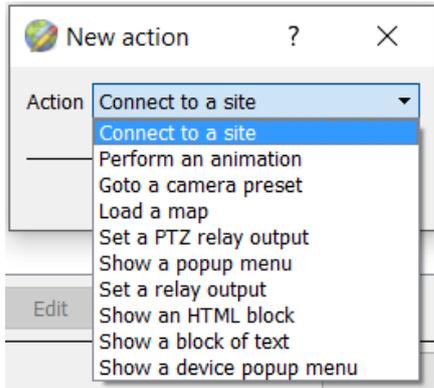


To create a new action, select New.

5.3.1 Action Options

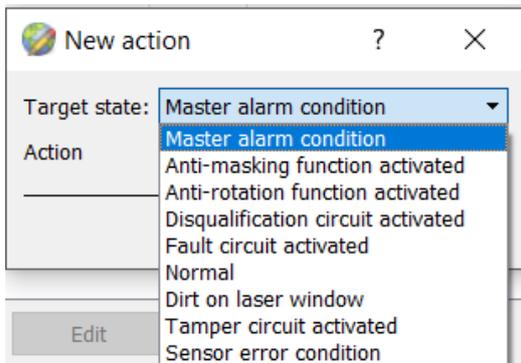
The action triggers will differ according to the object selected, as well whether the action is being set for a Click, State Change or Event. See below.

5.3.1.1 On Left-Click Tab



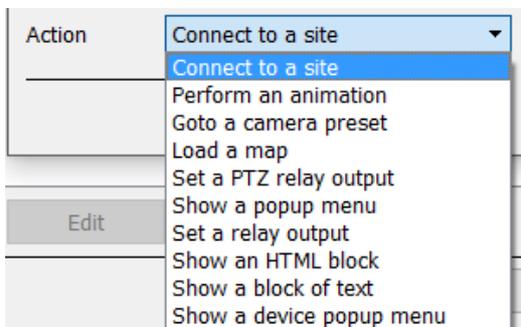
Select a map action to be triggered when this device object is left-clicked on the map.

5.3.1.2 On State Change Tab



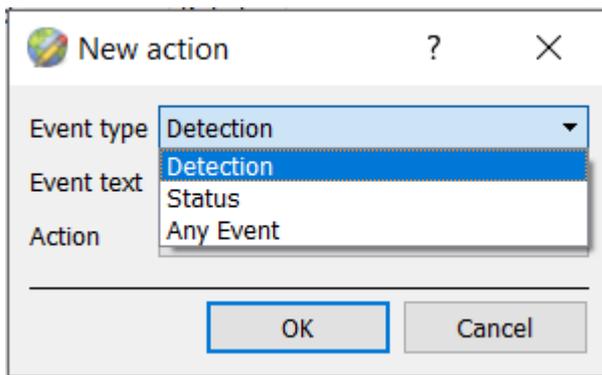
Select the target state of the device object which will trigger the map action.

Note: State Change action is available/unavailable depending on the device object.



Select the map action which will be triggered when the device object changes to the target state.

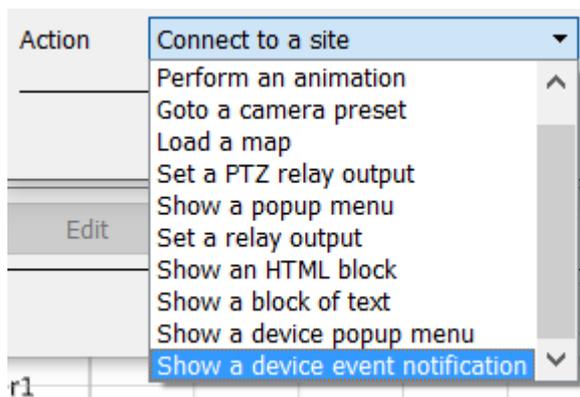
5.3.1.3 On Event Tab



Select the event type of the device object which will trigger the map action.



Enter Event text which will appear on the map when the selected event triggers this map action.



Select the map action which will be triggered by the device object event.

Note: Event actions include the extra option to **Show a device event notification**.

Note: Multiple actions may be added to the map objects.

5.3.1.3 Save Map

Once finished, save the map.

Important note: The map **must not be saved** in the **Work** folder of the CathesisVision installation directory.

5.4 Map Tab

The saved map needs to be uploaded to CathesisVision. Once the map is open, all objects added to the map area in the Map Editor will be visible on the map, and all actions set will be available.

6. Conclusion

This app-note was designed to deal specifically with this integration. For further information about the CathesisVision software please consult the ***CathesisVision Setup Manual*** (<http://cathesisvideo.com/>).

For support, please contact support@cathesisvideo.com.