Southwest Microwave

Intrepid POE

Integration App-note

1 November 2022

Contents

1. Introduction

The document provides instructions for the integration of Southwest Microwave Intrepid POE Fence Detection System with CathexisVision. This integration includes the Micropoint™ POE Processor module, the Relay Output Module, and the Microwave Sensor, and uses POE (polling over ethernet).

Southwest Microwave's buried cable intrusion detection system is used for sites where covert perimeter protection is required. It uses a volumetric, terrain-following sensor that reliably detects and precisely locates walking, running, cutting, or crawling intruders along a facility's perimeter.

Note:

1. There is an app-note for an older Southwest Microwave Intrepid integration, using a different SDK, and both an IP connection and serial communication support. The new integration uses POE (polling-over-ethernet) and has only an IP connection, and no serial connection setup.
2. For information regarding the regular operation of the Southwest Microwave Intrepid Fence Detection System, please consult the Southwest manufacturer's documentation.
3. There is a General Integration section in the main ***CathexisVision Setup Manual***. It contains information about creating an integration database, as well as a general introduction to the Integration Panel. **Read this section.**

1.1 Requirements

1.1.1 General Requirements

- CathexisVision 2022.2
- Cathexis NVR 64-bit version
- Windows 10 or Linux (Ubuntu 18.04)

1.1.2 License Requirements

License	Name	Description
CSIP-2000	Southwest Microwave Intrepid device license	This license is the "base" license to integrate with the Southwest Microwave perimeter intrusion detection system. It is applied to the server to which the device is connected. This licence will allow for the connection of a single Intrepid integration device.
CSIP-1001	Southwest Microwave Intrepid node license	These licenses apply to the nodes in an Intrepid perimeter intrusion system. The **CCPS-1001** will license a single node, and may be added on a node-by-node basis.
CSIP-3000	Southwest Microwave Intrepid bundle	This license includes one **CSIP-2000** Intrepid perimeter intrusion device license, and also provides support for unlimited **CCPS-1001** node licenses.

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

1.1.3 Third-Party Device Information

This integration was tested on:

Third-party product name	1. Intrepid Relay Output Module 2. MicroPoint™ POE Processor Module 3. Microwave Sensor
Hardware name	1. Intrepid ROM-POE-S 2. Intrepid Micropoint PM-POE-S 3. Intrepid Model 334R-POE-S and Intrepid Model 334T-POE-S (transmitter and receiver)
Firmware as tested	Rev O (1.0.7385) Rev O (1.07693) 334 model Rev O (1.0.7385)
Third-party software name	IST-Installation Service Tool
Third party software license/s required	None

1.2 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 an integration is added to the CathexisVision 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

- CathexisVision receives event messages from the Intrepid devices.
- Intrepid device event messages can be used to trigger a CathexisVision system event.

1.3.1 Device Objects

Objects are populated automatically as soon as communication between the Southwest Microwave Intrepid POE devices and CathexisVision is established.

Object Type			Abilities
General			• This integration has Relay, Node, Cable, Cable section, Microwave sensor objects. • Objects are automatically created as soon as communication between the CathexisVision unit and device is established. • Relay, cable, and cable section objects can be commanded as an action of a CathexisVision system event. • Events on the device can be used to trigger CathexisVision system and map events. • Node, Cable, Cable section, Communication channel, Microwave sensor, and Relay objects support overlays. • Objects may be linked to cameras to associate device events with video footage.
ROM-POE-S Relay output module	**Relay**	**Object Properties**	• Name • State • ID
		Commands	• De-energize • Re-energize
PM-POE-S Micropoint II processor module	**Node**	**Object Properties**	• Mac address • Node address • Connection • Type • Tamper alarm • Service alarm • Low voltage alarm • Remote test status • Relay test status • Remote test status • Certificate expired • ID • Name • Protocol version • Hardware version • App software version • App Software build date • App software build time • Boot software version

			• Boot software build date • Boot software build time • Alarm type info • Function_code
	Cable	**Object Properties**	• Name • Alarm • Fault • Test • Enabled • Calibration Status • Alarmed cells • Disabled cells • Next section ID • State • ID
		Command	• Create cable section
	Cable section	**Object Properties**	• Name • Cable • Start cell • End cell • State • ID
		Command	• Create cable section
		Communication Channel	• Name • Channel Status • Details • Creation type • Creation time • Idle time • ID
Model xxR-POE-S & xxT-POE-S Transmitter and Receiver	Node	**Object Properties**	• Mac address • Node address • Connection • Type • Tamper alarm • Service alarm • Low voltage alarm • Remote test status • Relay test status • Remote test status • Certificate expired • ID

		• Name • Protocol version • Hardware version • App software version • App Software build date • App software build time • Boot software version • Boot software build date • Boot software build time • Alarm type info • Function_code
Microwave sensor	**Object Properties**	• Name • State • Target alarm • Path alarm • Wrong channel alarm • Jam alarm • Channel switch error
Input	**Object Properties**	• Name (Configurable. Default is ID). • State • Type
	State	• Active • Clear
	Type	• Alarm input • Auxiliary input • Clear

1.3.2 Device Events

The CathexisVision Intrepid POE integration generates Node, cable, Cable Section, Connection, Relay, Input, and Microwave Sensor Events, which are triggered on the device and reflected in CathexisVision.

<table>
<tr><th colspan="2">Event Element</th><th>Features/Abilities</th></tr>
<tr><td colspan="2">General</td><td>• Events triggered on the device are sent to CathexisVision.</td></tr>
<tr><td rowspan="7">Device Event Types</td><td>Node</td><td>• Connection and service</td></tr>
<tr><td>Cable</td><td>• Active, Clear and Alarmed cells</td></tr>
<tr><td>Cable section</td><td>• Alarm and Normal</td></tr>
<tr><td>Connection</td><td>• Online or offline</td></tr>
<tr><td>Relay</td><td>• De-energized or energized</td></tr>
<tr><td>Input</td><td><table><tr><th>Field</th><th>Value</th></tr><tr><td>Time</td><td>• Time that the event occurred</td></tr><tr><td>Object</td><td>• Name of the input object</td></tr><tr><td>Type</td><td>• Input alarm</td></tr><tr><td>Description</td><td>• Active
• Clear</td></tr></table></td></tr>
<tr><td>Microwave Sensor</td><td>• Connection: Offline and online
• Jam status: Active and clear
• Wrong channel status: Active and clear
• Intruder alarm: Active and clear
• Path alarm, channel switch error, and Normal: Active and clear</td></tr>
<tr><td colspan="2">CathexisVision Event Actions</td><td>A cable, or cable section object may be controlled via a CathexisVision event action to perform one of the following commands:
• Relay: Energize or de-energize
Events generated by the device are reflected in CathexisVision, and can be used to create CathexisVision system events.</td></tr>
</table>

1.3.3 Metadatabase

A unique metadatabase is created on the CathexisVision 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	• 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 CathexisVision video review tools.
View Options	• All • Cable • Cable section • Microwave sensor • Input • Relay • Node
Sort Options	• Time
Easy Search	• Object • Type • Description
Filter	• Time • Device event • Object • Type • Description
Export	Database entries may be exported in CSV and PDF format.

1.3.4 Maps

The CathexisVision 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	• 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 *any* event occurs on the device. • Device objects, which can be configured to trigger CathexisVision events, may also be set to perform a map action when specific CathexisVision events are triggered.
Map Actions Options	When triggered (see above), objects may perform the following map actions (where applicable): • 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 CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

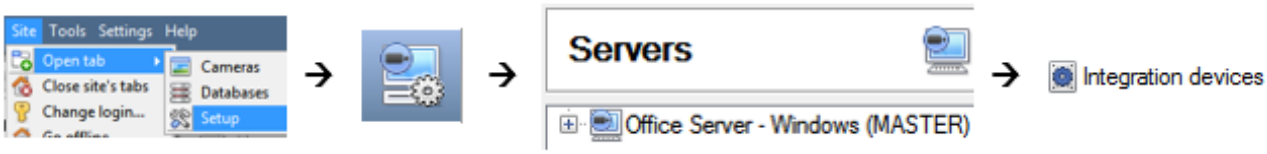
*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*

2. Device Addition

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.

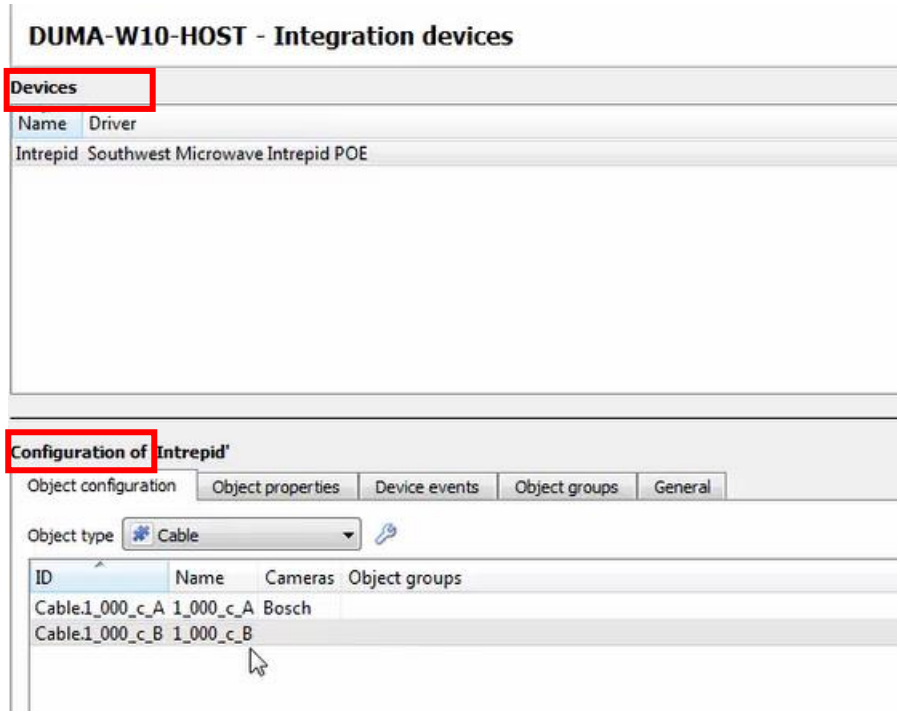
2.1 The Integration Devices Panel

To get to the Integration Panel, follow this path: S**ite / Open tab / Setup / Configuration icon / Server / Integration devices.**



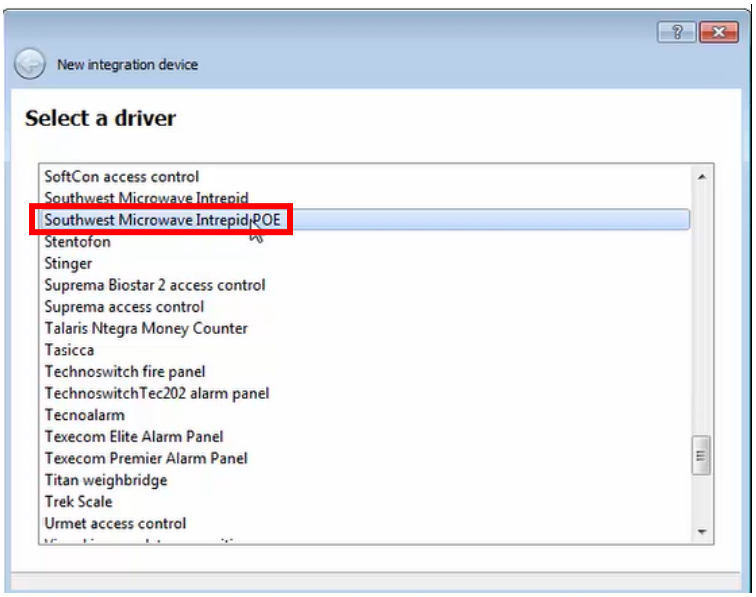
There are two sections in the Integration Panel:

- The **Devices** list shows the integration devices attached to the integration database.
- The **Configuration** section enables editing/reviewing the device selected in the **Devices** section.

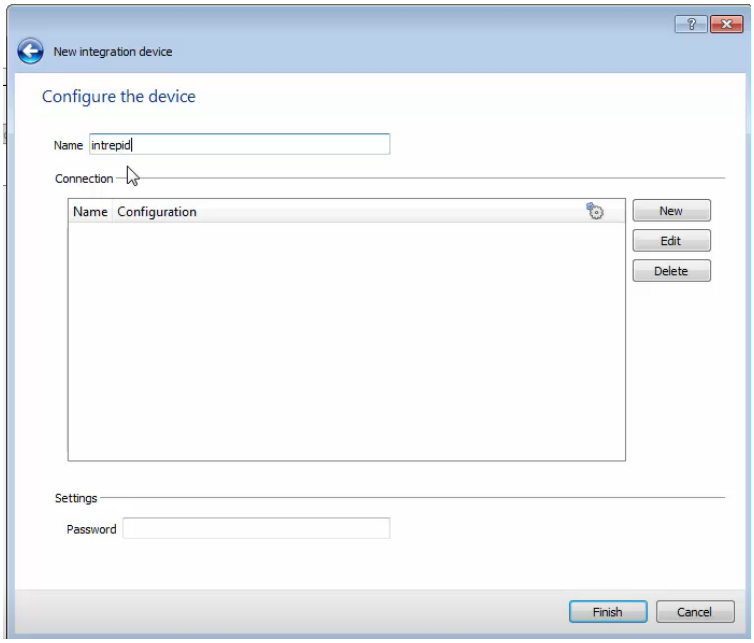


2.2 Add a New Device

1. In the Integration Panel, navigate to the **Devices section.**
2. Click on the **New device** button on the right-hand side. This will open the addition dialogue.



3. Select the **Southwest Microwave Intrepid POE** driver from the list, and click Next.

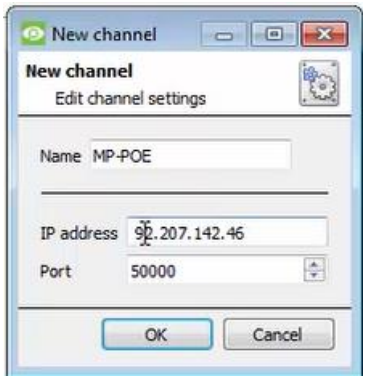


4. Give the device a descriptive **name**.
5. Add New channel (see instructions below).
6. Enter the Intrepid device **password**.
7. Click **Finish**.

2.2.1 Add a New Channel

Add the devices using the New channel dialogue.

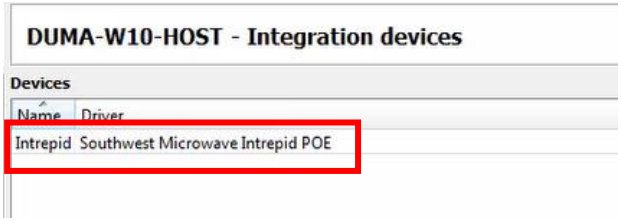
1. Click New.



2. Under Name, **enter the device name** (MP-POE, Relay, 334RX, 334TX etc.)
3. Enter the appropriate **IP address** and **Port** for the channel that is being created.
4. Click OK.

3.3 Select Device

The newly added device will show in the Devices section.



Click on the device name to select it.

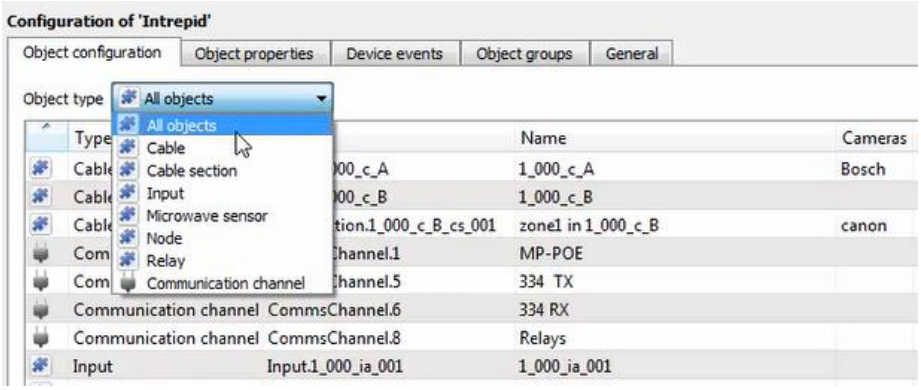
3. Configuration

The configuration section is divided into five main tabs. These tabs are: **Object configuration, Object properties, Device events, Groups,** and **General.**

3.1 Object Configuration Tab

The object configuration tab is where all the individual objects that comprise the integration may be viewed. Here, objects can be linked with cameras and overlays can be configured.

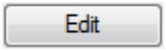
The Southwest Microwave Intrepid POE system has seven object types: **Cable**, **Cable section**, **Input**, **Microwave sensor**, **Node**, **Relay**, and **Communication channel**.



All objects are automatically populated when communication to Intrepid POE is established. It is not necessary to add new devices/readers manually.

3.1.1 Object Configuration Buttons

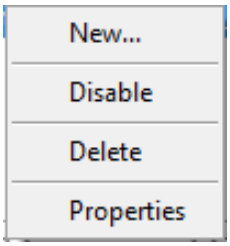
Click **New** to add a new object.



Click **Edit** to change an existing object.

Click **Delete** to remove an existing object from the CathexisVision configuration.

3.1.2 Object Configuration Right-Click Options



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

Disable/Enable allows objects to be enabled/disabled manually.

Delete will permanently remove this object from the list.

Properties will open up the object properties. The object may be edited from here: *assign cameras to this object*, and define user access levels.

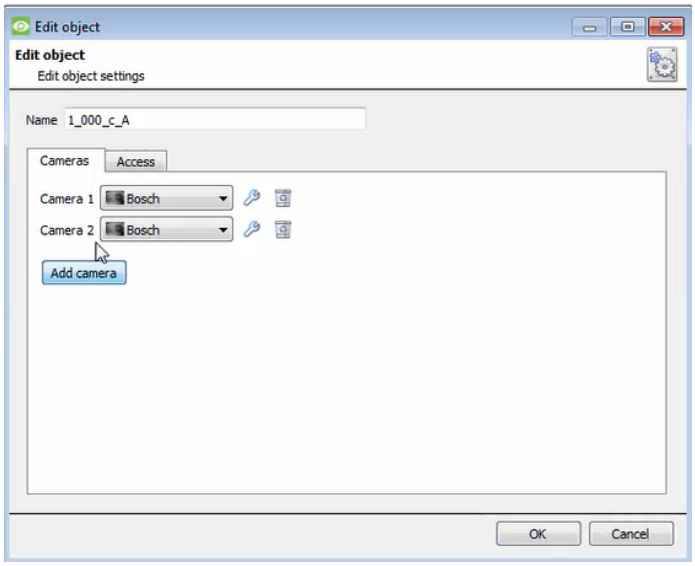
3.1.3 Edit Object

Open the object editing window by selecting an object from the list, and **right-clicking Properties**.

This window is where cameras are added to objects, overlays are configured, and access rights to the integration are added. These are dealt with in two tabs: **Cameras** and **Access**.

3.1.3.1 Properties: Camera

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 Add camera, and select the relevant model from the drop-down menu.

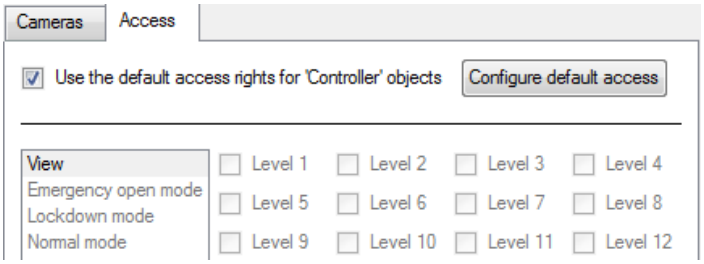
To **delete** a camera, click the trash icon.

To edit individual **overlays**, click the spanner icon. See instructions below.

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

3.1.3.2 Properties: Access

Access can be used to protect sensitive objects, by allowing only certain user levels access to them.



There will be a list of objects, for which access level may be set.

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.

3.1.4 Configure Overlays

Overlays may be configured globally for all objects, or individually for selected objects (**Device objects**).

The path to follow for opening the configuration window for global or individual overlays is different, however the overlay configuration process is the same.

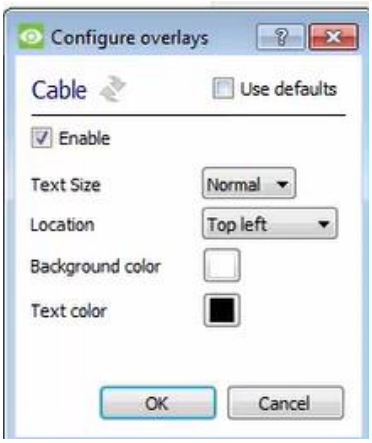
3.1.4.1 Configure Global Overlays

Global overlays may be configured for **Cable**, **Cable section**, **Input**, **Microwave sensor**, **Node**, and **Relay** objects. If global overlays are configured for cable objects, then configuration will then apply to *all* cable objects.

Navigate to the global overlays setup by first opening the **Object configuration tab**. Choose an object type.

1**. Select the spanner icon** next to the drop-down menu to configure the global overlays for the chosen object, e.g. cable.

A new window will open.



2**. Enable**: Check the box to enable overlay configuration.

3. Define the Text size by selecting from the drop-down menu.

4. Define the **Location** of the overlay by selecting from the drop-down menu.

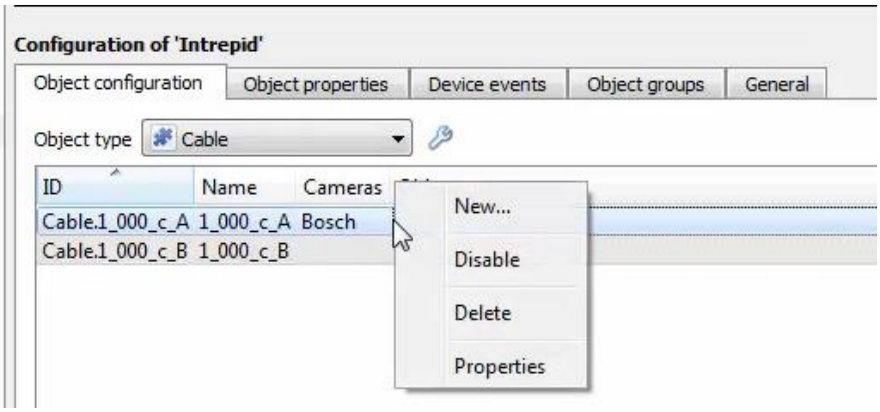
5. Define the **Background Colour** of the overlay stream.
6. Choose **Text Colour**.

Click the colour boxes to bring up a colour chart.

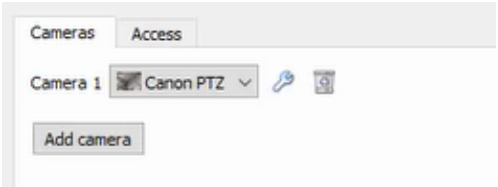
3.1.4.2 Configure Individual Overlays

For individual devices, there is a choice to use the global overlay settings (above), which apply to all objects, or to configure the settings for an individual device.

For example, the overlays for the camera on Microwave sensor might be configurated to show up with yellow text, while all other events display in red.

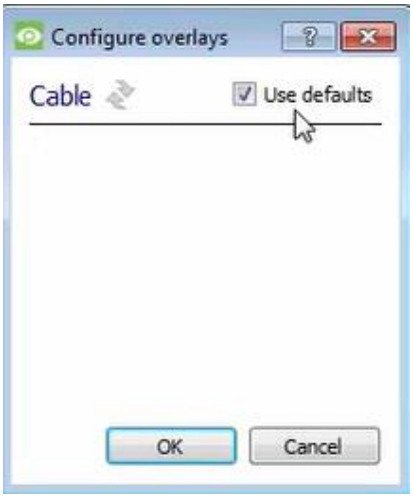


1. Right-click an object and select **Properties** to edit the object.



2**. Add a camera** to the object, or, select a camera from the drop-down menu.

3. Then **click** the **settings** icon that appears next camera name.



4. Uncheck **Use defaults** to edit individual overlays, (to override globally configured overlay settings).

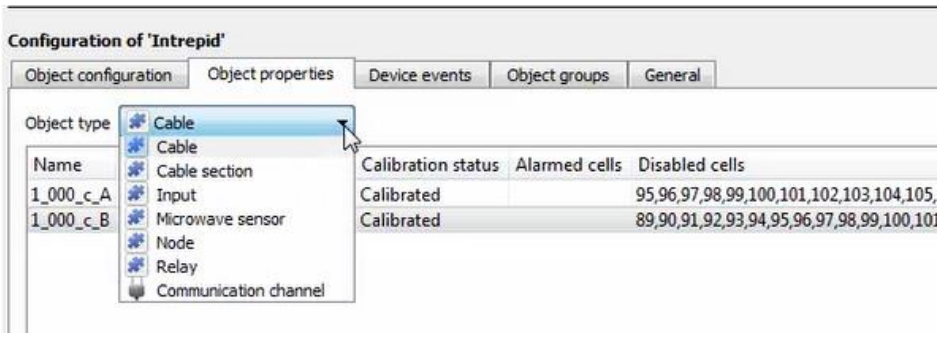
5. In the new window that opens, define the **text size**, **location**, and **colour** of the overlays.

Click  to reset values if necessary.

3.2 Objects Properties Tab

The Object properties tab allows objects to be viewed, sorted by type.

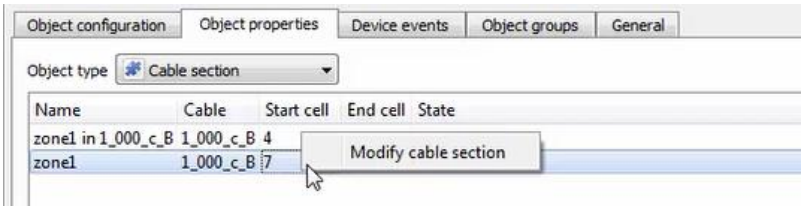
In the case of the Southwest Microwave Intrepid POE System, there is the option of viewing by **Cable, Cable section, Input, Microwave sensor, Node, Relay,** and **Communication channel.**



Commands can be configured from the Object properties tab.

3.2.1 Controlling Commands on Intrepid POE

Select the object from the drop-down menu in the **Object properties** tab. In this case, the object type is **Device**.



1**. Right-click** an item on the list.

2. Choose the command which appears.

3. If a new window open, fill in the fields.

Commands will reflect in the Device events tab. Click the Device events tab to view.

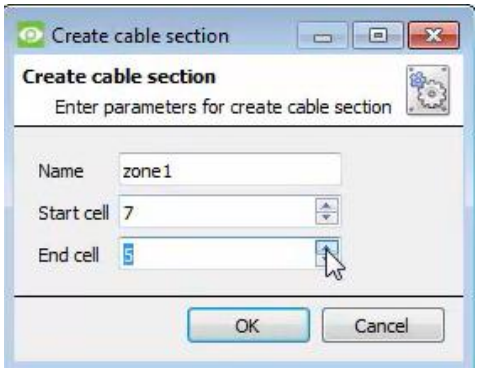
The following commands are available:

Object	Command
Cable	Create cable section
Cable section	Modify cable section
Relay	Energize or de-energise

Note: Cable commands are intended for configuration. Relay commands may be used as CathexisVision actions in response to a trigger.

3.2.1.1 Create Cable Section

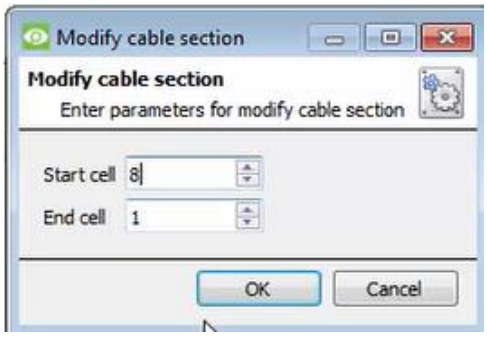
The command for Cable is to Create a cable section. If this is selected, a new window will open.



Enter the **name** of the section, and the **start and end cells**.

3.2.1.2 Modify Cable Section

The command for a Cable section object is to modify. If this is selected, a new window will open.

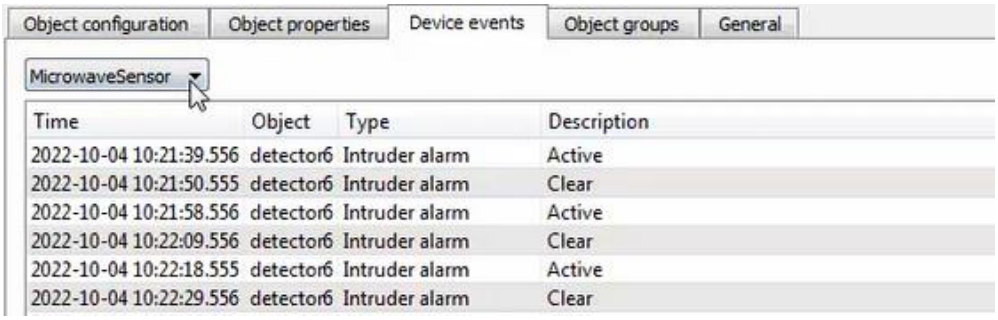


Enter new parameters for **cell start and end**.

3.3 Device Events Tab

The Device events tab lists real-time events happening on this device. Installers can ensure that the integration is functioning, and monitor the Events happening on site.

Return to CathexisVision and navigate to the Integration Panel. Open the Device events tab.

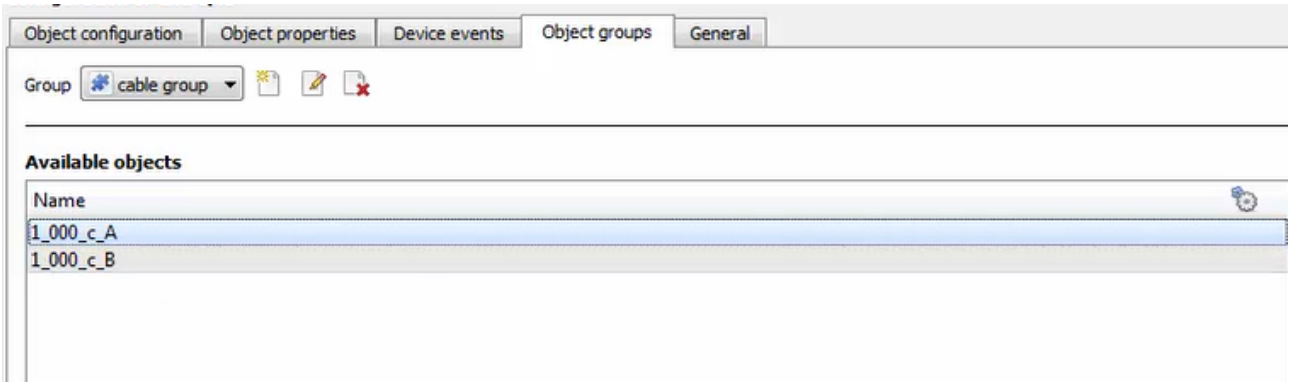


Use the drop-down menu to sort the events.

Choose between displaying: **All events**, **Cable, Cable Section, Microwave sensor, Node**, and **Relay**.

3.4 Object Groups Tab

Groups of *the same type of object* can be created.

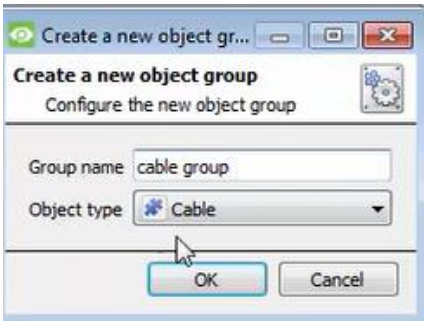


Tip: This is useful when setting up events, because events can be triggered by an object group. (E.g. a group will trigger an event if any of the doors in that group are triggered.)

3.4.1 Create a Group

1. To **create** a group, click on this icon.

   A new dialogue box will open.



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

3. Click on the drop-down menu to select the **object type** to group.

Note: Once a group has been created, the object type of the group cannot be edited.

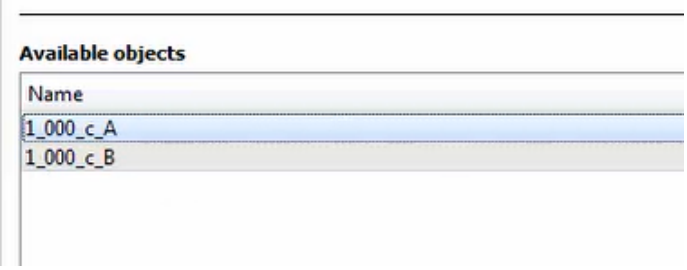
To **edit** a group, click on this icon.

To **delete** a group, click on this icon.

The next step is to add individual objects to the group.

3.4.2 Add or Remove Objects

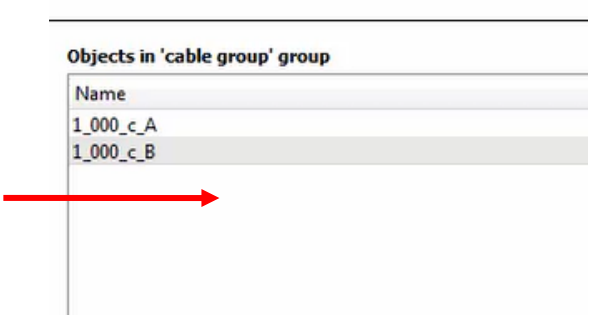
After creating a group, a list of all the available objects for that group will be displayed in the Available objects panel, on the left-hand side. Objects can then be chosen from this list, and added to the group.



To **add** these objects to the group, select them from the list, and **click on the right arrow**.

To **remove** these objects from the group, select them and **click on the left arrow**.

Note: Multiple objects may be selected at a time.



Once individual objects have been added to the group using the arrows (above), they will appear in the section on the right-hand side.

3.5 General Tab

The General tab of the Configuration section (Integration panel) deals with the integration database. Setup must be completed here, before the Databases tab can be used to search events and view associated footage.

From the General tab, the user must:

- *Select* an existing database, or
- Configure a *new* database.

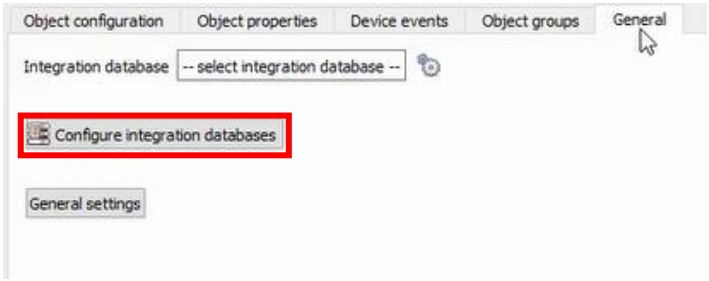
Note: Each integrated device needs to be attached to an integration database. Without setting up/adding a database here, the integration will not function properly within the CathexisVision system.

3.5.1 Configure a New Database

- The first time an integration database is added, the general integration database will need to be *initialised*.
- Once the general integration database has been initialised, then a database for a *specific integration* can be created**.**

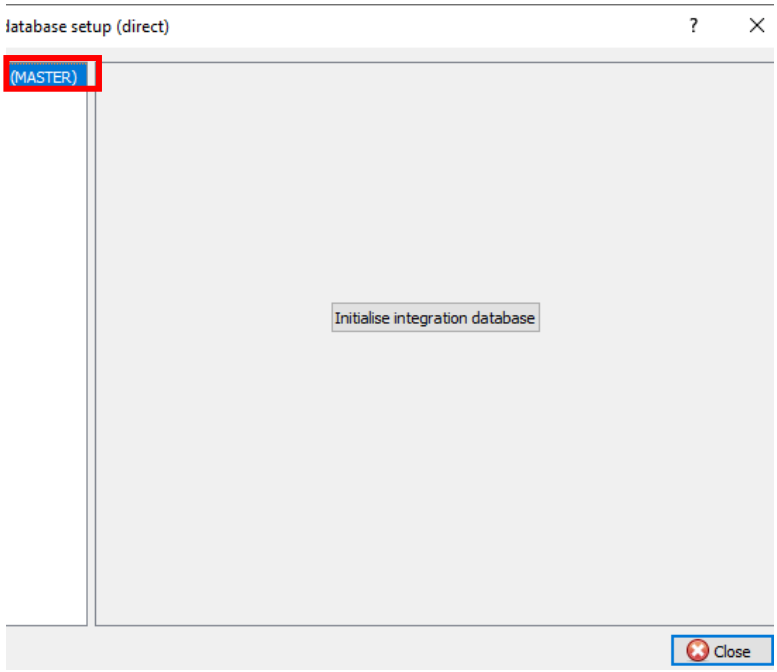
3.5.1.1 Initialise the Integration Database

If an integration database has not yet been created, follow the steps below.



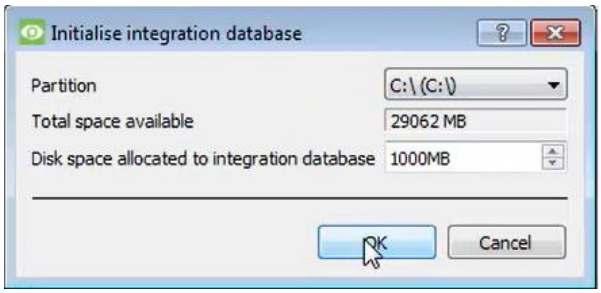
1. Click the **Configure integration databases button** from the General tab.

This opens the Integration database setup window.



2. **Select the unit** to which the database will be added, from the list on the left.

3. Then, click **Initialise integration database**.



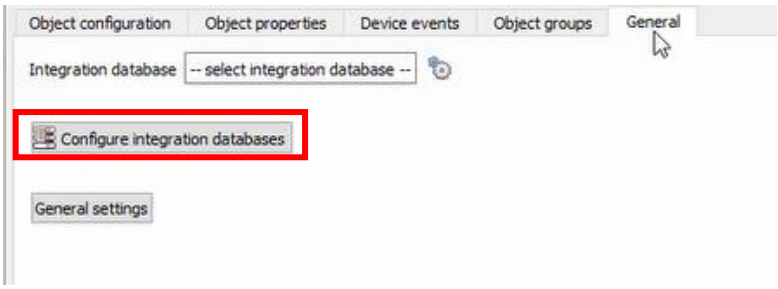
4. Choose the **partition** on which the database will be created.

5. Select **disk space** allocation.

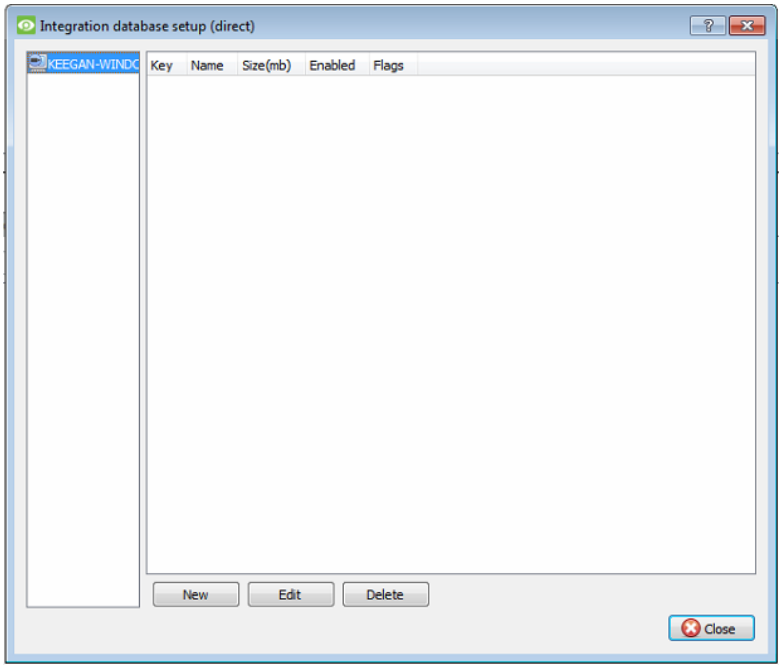
6. Click **OK**.

3.5.1.2 Add a New Devices Database

After initialisation, the database can be added to the integration.



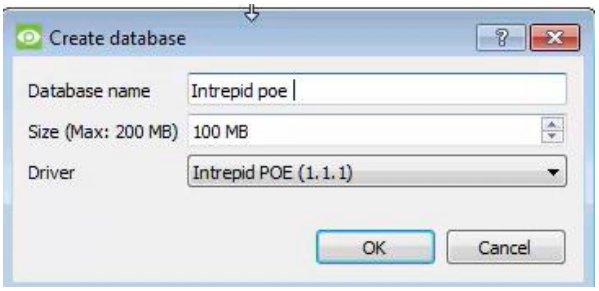
1. To add a new database, click the **Configure integration databases button** from the General tab.



This opens the integration database setup window.

2. **Click** the **New** button.

A dialogue will appear for creating the integration database.

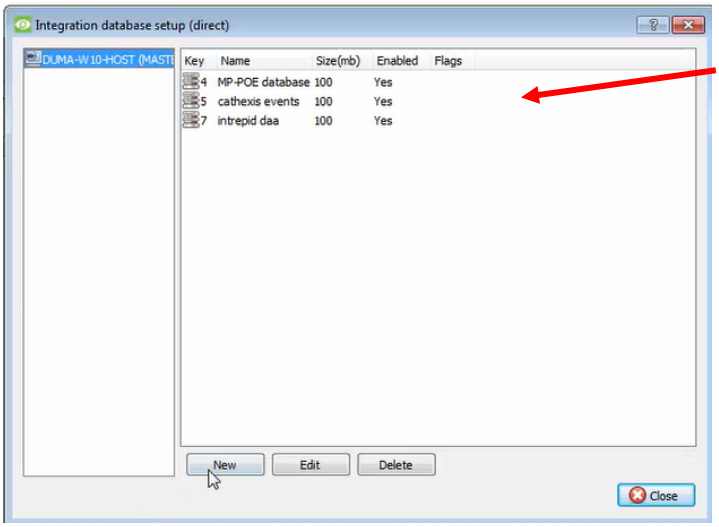


3. Give the database a descriptive **Database Name**.

4. Allocate a **Size** to the new device database.

5. Select the device **Driver, Intrepid POE,** from the drop-down list.

6. Click **OK** to create the database.

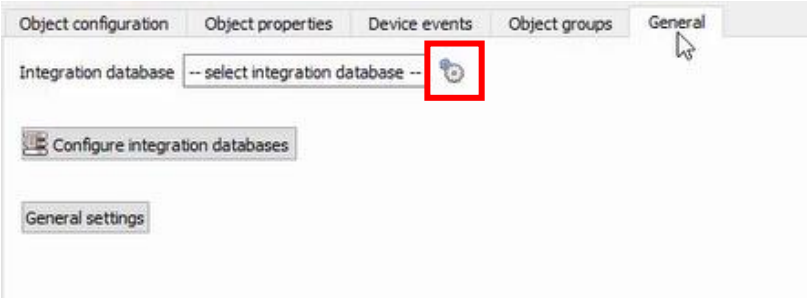


The newly created database will appear in the Integration database setup panel.

7. Click Close to return to the General tab.

3.5.2 Select the Intrepid POE Integration Database

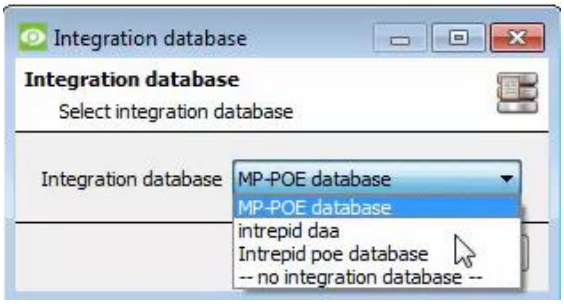
Once an Intrepid POE database has been created, it must be actively selected.



1. Return to the General tab.

2. Then, click the **settings icon.**

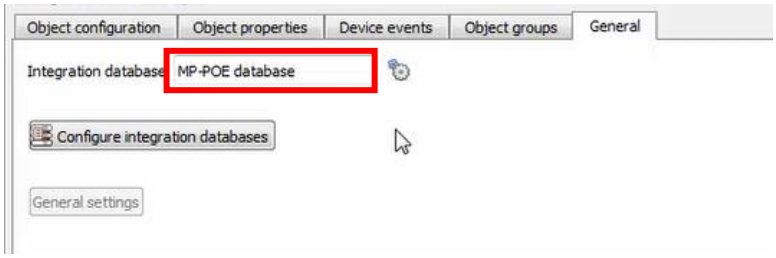
A dialogue will appear. Only databases which relate to the device being added should appear.



3**. Select** the **Intrepid POE database** from the drop-down menu.

4. Then click **OK**.

Once selected, the database will reflect in the General Tab as shown below.



Note: The information on setting up an integration database may be found in the **Integration Devices General Settings** section of the ***CathexisVision Setup Manual***.

4. CathexisVision System Events

A CathexisVision event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document describes the Intrepid 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 gives the user a full range of options. As a result, some of the options presented in the interface may be *impractical* as an event trigger, or action.

4.1 Event Window

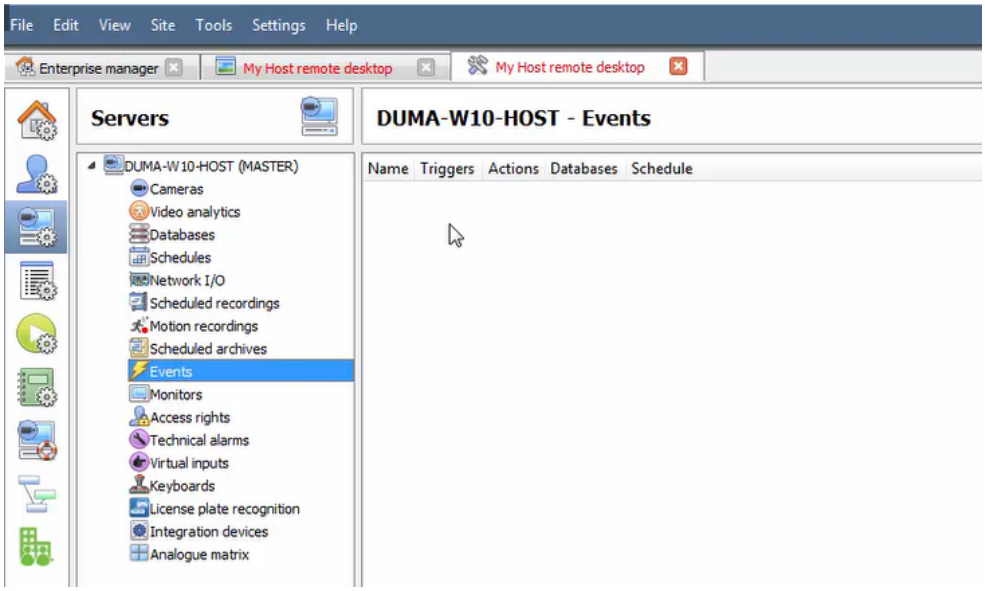
Events in CathexisVision are set up via the Event Window, which has four tabs.

- 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.

4.2 Creating an Event

To create an event using the Southwest Microwave Intrepid POE System, navigate to the Events management area by following the sequence: **Open Tab** / **Setup** / **Servers** / **Master Server** / **Events**. This is shown below.

This will allow the user to enter the Events management area:



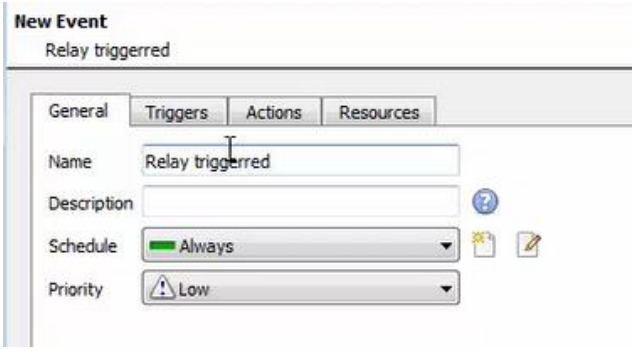
Once in Events management area, click the **New** icon at the bottom of the screen.

This will open up the **New Event window**.

The new event window has four tabs which can be used to set up the event: General, Triggers, Actions, and Resources.

4.3 General Tab

Create a new event under the General tab by filling in the fields.



1. Give the event a descriptive **Name**.
2.  Set up a **Schedule** if desired by clicking the icon.
3. Select a **Priority**.
4. A description may be entered. Or, modify the **Description** if relevant according to the instructions below.

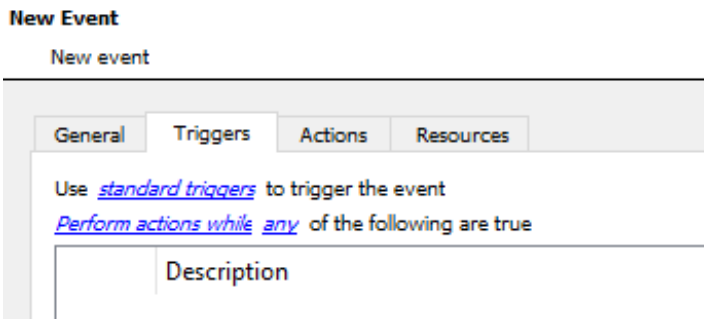
Note for group triggers: For an event to be databased under the name of a specific object, and not the name of the triggering group, modify the Description field in the **General tab** of the Event setup.

 Click on the question mark icon to see a list of available descriptions and instructions for how to enter these descriptions.

4.4 Triggers Tab

A trigger is a user-defined input, for example, the user may choose to define the trigger as a door opening on an access control system.

Once the user defines the *trigger*, it can be used to cause a subsequent *action*.

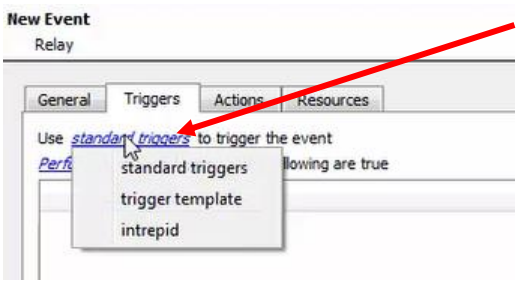


The user will need to click on the hyperlinks (depicted alongside) to set up the trigger.

The subsections below provide instructions.

5.4.1 Set the Device as the Trigger

For a new event, the trigger type will default to “standard triggers”. The user will need to change this to the Intrepid POE system.



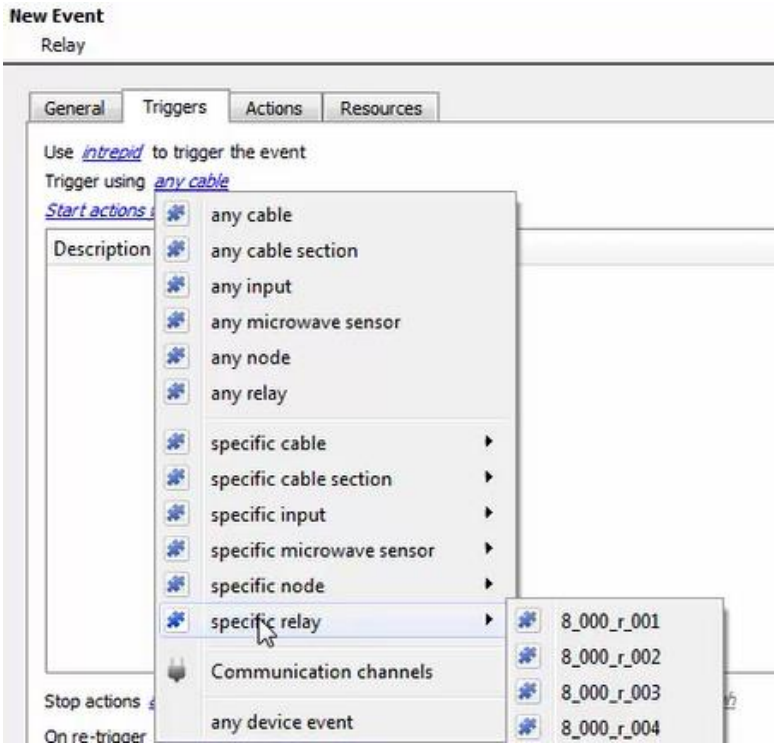
1. To change the event trigger, **click on “standard triggers”** (the hyperlink after the word “Use”).

This will open a drop-down menu with more options.

2. To set Intrepid as the trigger, **select the name** from the drop-down menu.

5.4.2 Trigger Types (Trigger Using)

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



1. **Click on** the **hyperlink** after the words “Trigger using”.

This will open a drop-down menu.

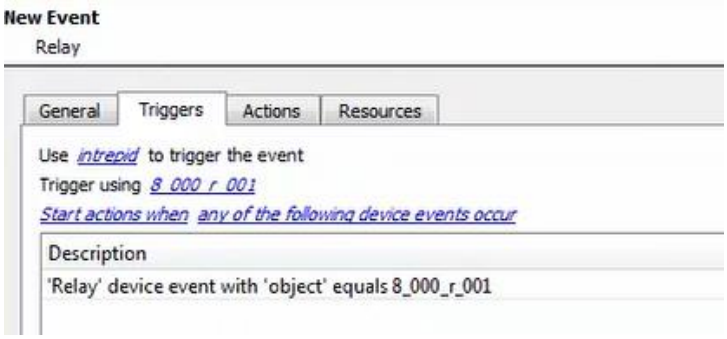
2. **Click an option** from the menu to select.

See the table below for descriptions of the options on the drop-down menu.

MENU OPTION	DESCRIPTION OF TRIGGER TYPE
Any [device]	This will trigger if anything happens on any device ie any cable, or any input etc.
Specific [device]	This will trigger on the specific object chosen for example, the relay device 8_000_r_004.
Any device event	This will trigger, initially, when any event occurs on the system/integration.

5.4.3 While/When and Any/All

The third row of hyperlinks further specifies when the event triggers. The user will choose to trigger either based on a *device event* occurring, or based on an *object property*.



To change these settings, click on the blue hyperlinks in the *third* row as shown in the image on the left.

The user can choose the option to:

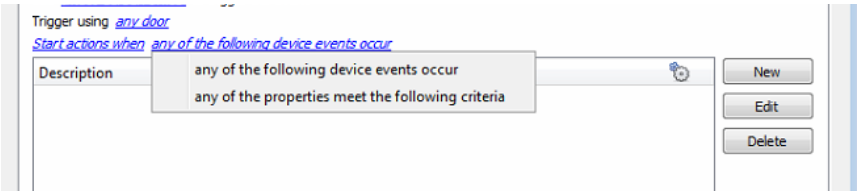
- **start actions when** any of the properties meet user-configured *criteria*, or any user-configured *device events* occur, or
- **perform actions while** any/all of the properties meet user-configured *criteria*.

Start actions when	any of the properties meet the following criteria any of the following device events occur
Perform actions while	any of the properties meet the following criteria all of the properties meet the following criteria

5.4.4 Define the Trigger ("Any Device Event" Option)

After using the hyperlinks to set up how the trigger will be defined, the user may proceed to creating a new *device* event.

One of these options is to select *any of the following device events occur*.



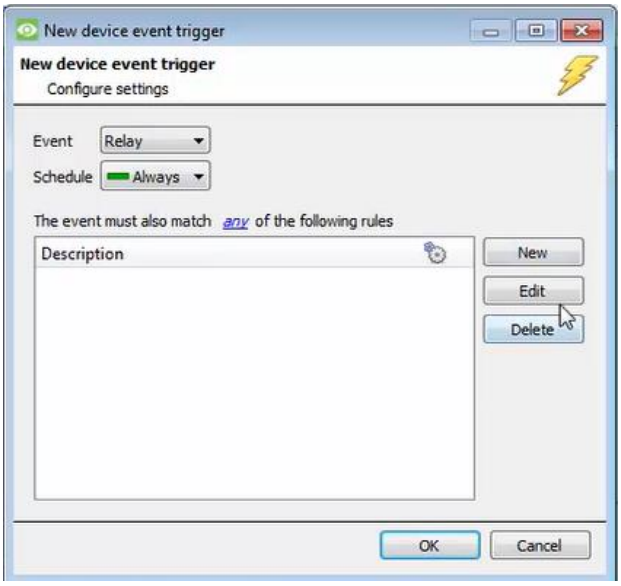
Pictured alongside is the **Triggers tab** where a user selects *any of the following device events occur*.

Click on **New** in the Triggers tab.

Clicking on New will bring up the **New device event trigger** dialogue box.

5.4.4.1 New Device Event Trigger

The user will then need to configure the new device event trigger.



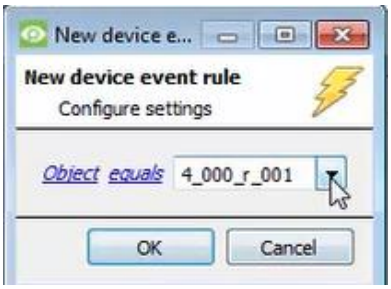
1. Select the **type of Event** where applicable.
2. Choose a **schedule**.
3. Choose whether any, or all constraints need to be fulfilled to set off a trigger.
4. Finally, use the **new/edit/delete** buttons on the right-hand side to add a device event rule (a constraint). Follow the instructions below.

5.4.4.2 New Device Event Rule

Note: From within the **New device event trigger** window (above), it is necessary to set further constraints. Multiple constraints can be set. If constraints are not defined, every device event will trigger this event.

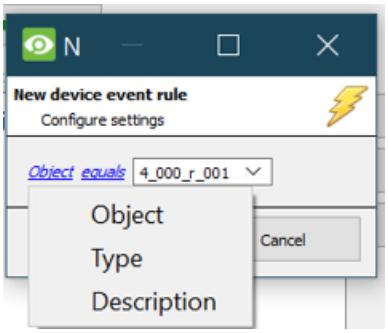
1. To configure a New device event rule, **click on New** in the New device event trigger window.

This will bring up a further window, called **New device event rule**.



2. Change the constraint by **clicking** on the **first hyperlink** (which is “Object” in this example).

This will bring up the full list of available constraints.



3. **Click an item** to select it.

4. To modify the way this constraint will be treated, **click** on the **second hyperlink** (which is "equals" in the example). This will display further options.

5. Click an option to select.

6. Follow the instructions below to define the constraint.

Defining a Constraint: Drop-Down Menu

When all available options are known to CathexisVision, a drop-down menu will appear alongside the chosen constraint.

Click an item from the drop-down menu to select.

Defining a Constraint: Written Description

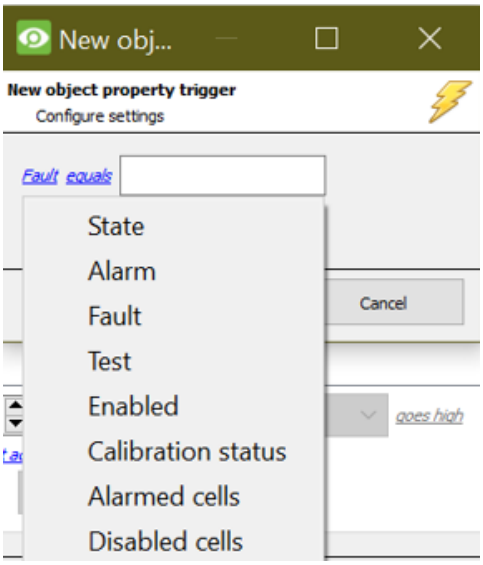
When the variables for a constraint are *not* pre-defined, fill them in manually.

5.4.5 Define the Trigger ("Properties Meeting Criteria" Option)

If the user has defined the trigger by choosing according to *properties meeting criteria*, the **New object property trigger** dialogue box will open.

- In these instances, further constraints do not need be set, since they are being added one at a time.
- This option is better if a few triggers have been selected.
- This is also true for groups, since a group may only be made up of one object type.

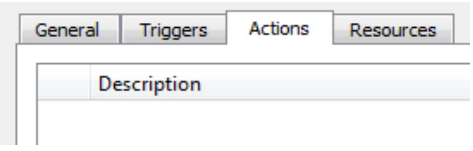
5.4.5.1 New Object Property Trigger: Configure Settings



1. **Select the event type** by clicking the first hyperlink.

2. Then, either **fill in the text field**, or, use the **drop-down menu** where relevant.

5.5 Actions Tab



Having defined the triggers that will initiate an event, the user will need to define Actions.

Select the **Actions tab** from the **New event** window.

One of the available actions will be to *control* an Intrepid device.

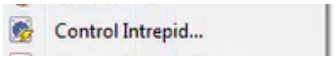
5.5.1 Adding an Action

1. To add an action, click New in the Actions tab.

A list of **available actions** will appear. The drop-down contains all the available **action types**.

2**. Select an option**, for example, Record Camera.

5.5.1.1 Actions: Control Device



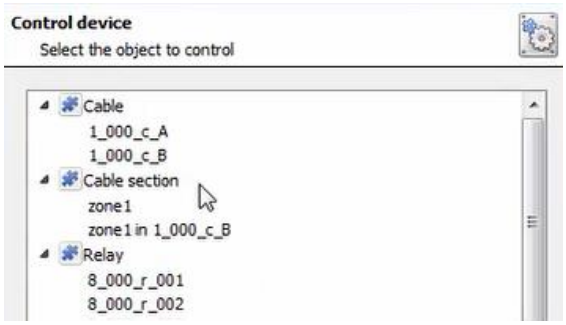
Click a Control device option to bring up the **control device** dialogue.

Under the **Device** tab, the user defines how the device will be controlled. Under the **Advanced** tab, the scheduling of the action is defined.

Configure Command Window: Device Tab

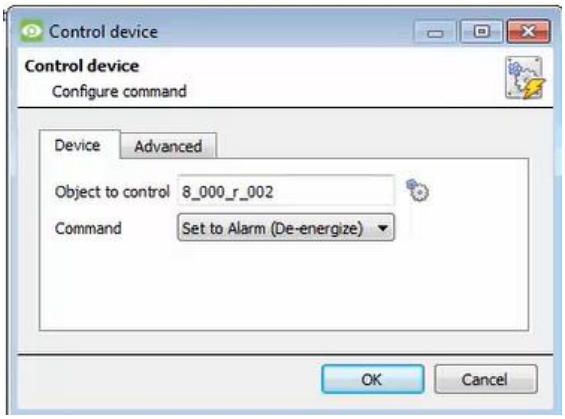
To select an **Object**, click on the **settings icon.**

This shows all the Objects available on the Intrepid POE integration.



Under the object type parent group (Device), **select the individual objects** to control.

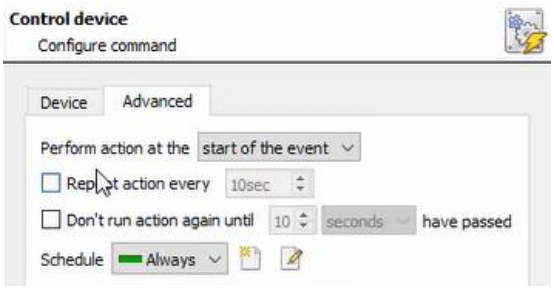
Click **OK**.



The **command** drop-down will change to represent the commands available to that Object.

Click OK.

Configure Command Window: Advanced Tab



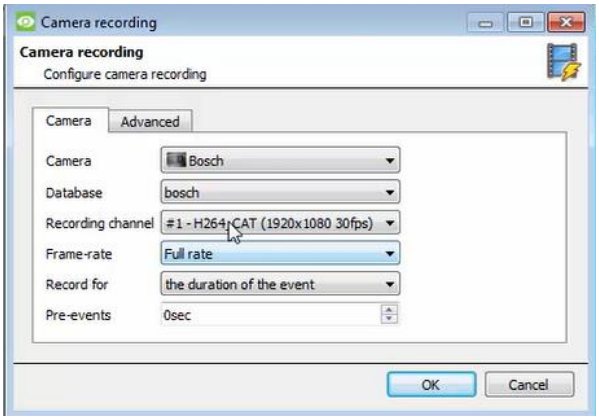
Choose to **perform action:** either **at the start** of the event, or once the event triggers have subsided.

The two checkboxes allow the user to set the action to repeat every few seconds, and/or not run for a period after it has triggered.

Schedule is a standard Cathexis schedule, which may be applied to the actions.

5.5.1.2 Actions: Record Camera

If the user has selected a new action to record camera, the following setup steps are required



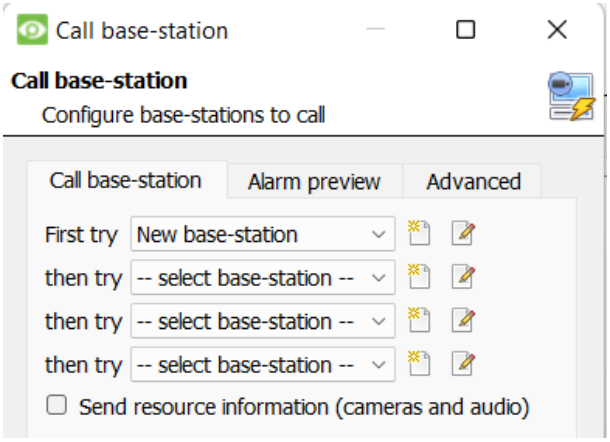
Click the drop-down menus to see more options and click to select the appropriate option.

1. Choose the **camera** appropriate for the event.
2. Choose the **database** to which the video recordings will be saved.
3. Edit **Recording channel**, **frame rate**, and **recording duration** if necessary.
4. Next to **pre-events**, increase the amount of time when recording begins before the event.
5. Click OK.

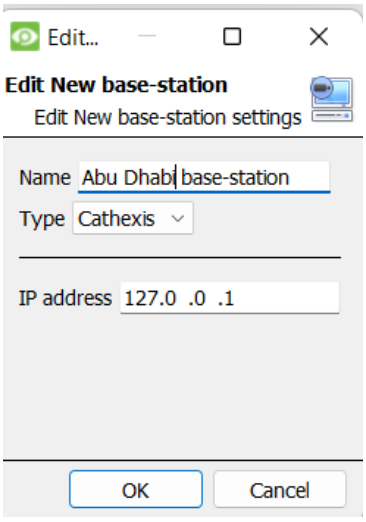
5.5.1.3 Actions: Call Base-Station

If the user has selected a new action to call base-station, the following setup steps are required. Use the tabs along the top of the window.

Call Base-Station Tab



1. Click the **edit icon** next to a base-station to configure.

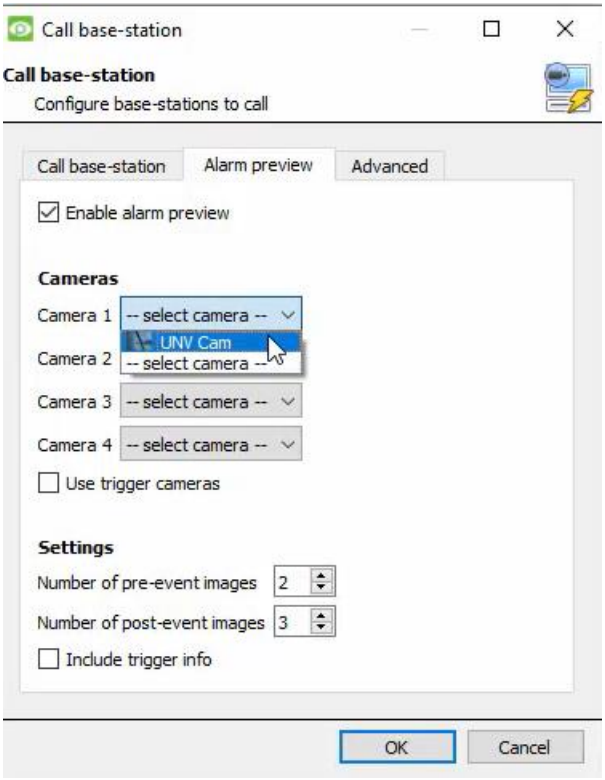


2. In the window that opens, edit or enter the **name** of the base-station and select the **type**.

3. Ensure that the **correct IP address** has been entered. This is the IP to receive the alarms on the specific unit.

4. Click OK.

Alarm Preview Tab

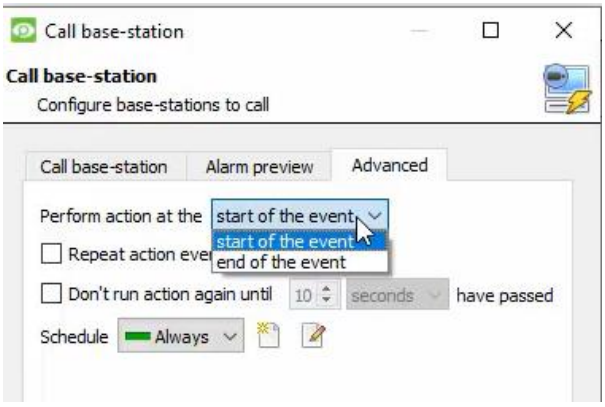


1**. Click the checkbox** to Enable alarm preview.

2. Select an appropriate camera/s.

3. Click OK.

Advanced

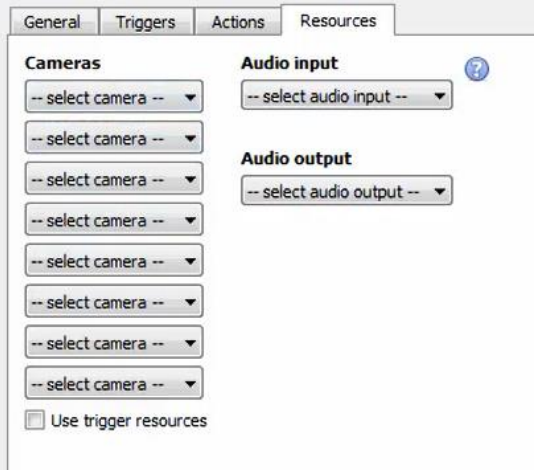


From the Advanced tab, **choose** to *perform the action* either at the start of the event, or once the event triggers have subsided.

The two checkboxes allow the user to set the action to repeat every few seconds, and/or not run for a period after it has triggered.

Schedule is a standard Cathexis schedule, which may be applied to the actions.

5.6 Resources Tab

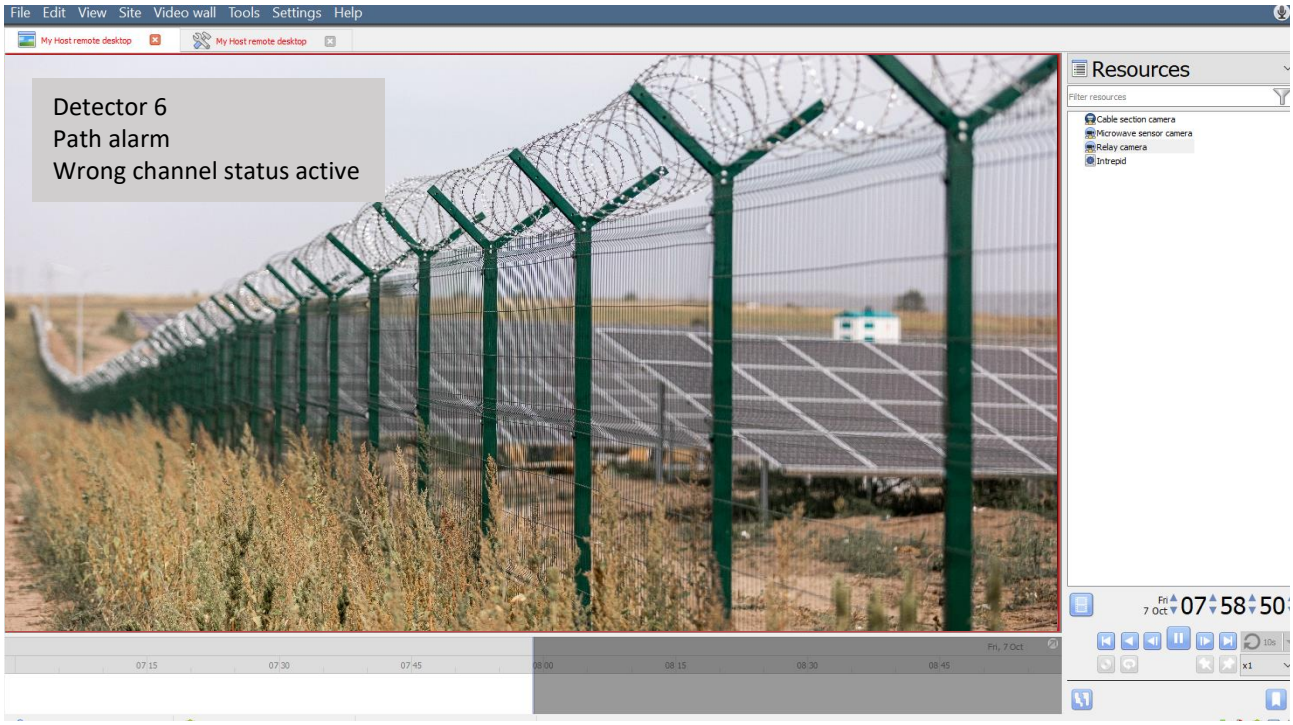


In the Resources tab, users can select the cameras, audio input, and audio output to be used.

The default is to select “Use trigger resources.”

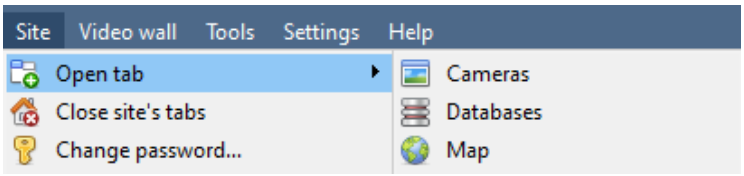
5. Camera Tab Overlay Setup

Once all the relevant settings have been configured, the fence system *overlay* can be pulled through over the appropriate camera feed.



Note: Cameras must have already been added to device objects, and overlays need to have been configured.

5.1 Navigate to the Cameras Tab



To see the camera feeds, go to the Cameras tab by following this path.

Site / Open tab / Cameras

5.2 Video Feed Options Panel

To bring up the overlay, click the arrow to the left of the screen.
This will pop out the Video feed options panel.

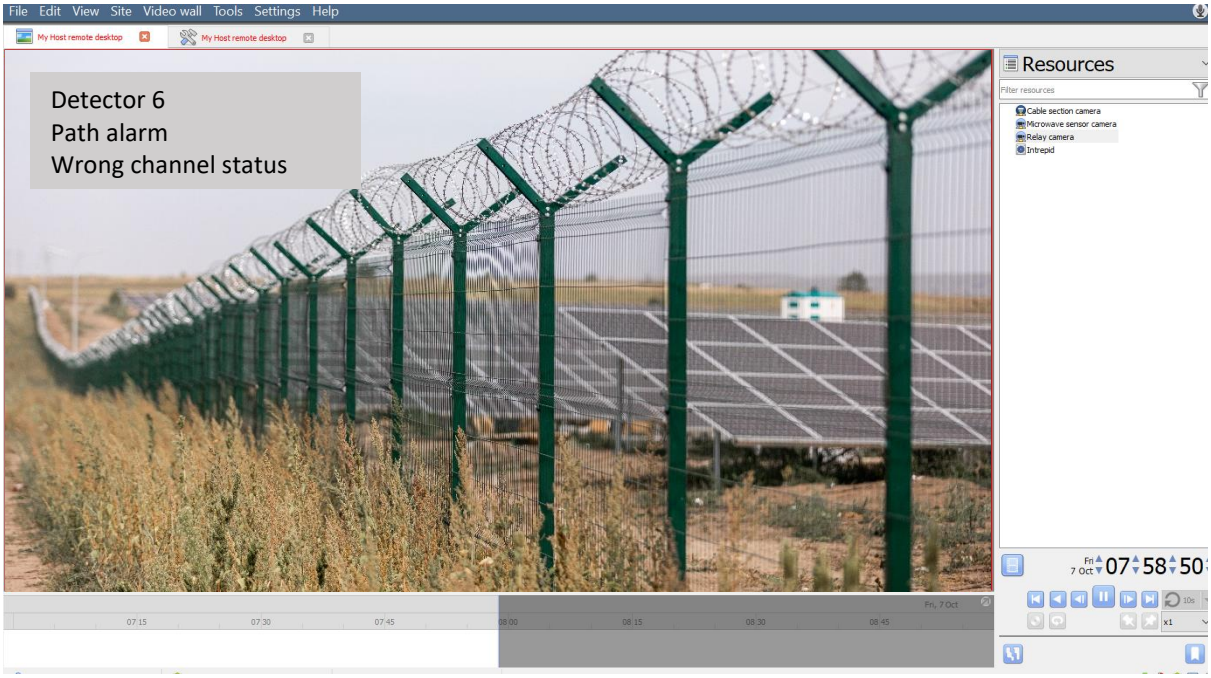
The Video feed options panel will present a number of options specific to the settings configured for that video feed.

5.2.1 Select the Overlay

Clicking this icon will bring up the overlay options for this video feed.

Select the **device** and **enable** the overlay.

The overlay will appear over the video feed, as below.



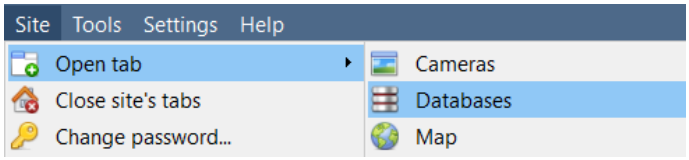
6. Database

The Databases tab allows the user to navigate to the databased entries for each individual database. In the Databases 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, this recording can be launched from within the Databases tab.

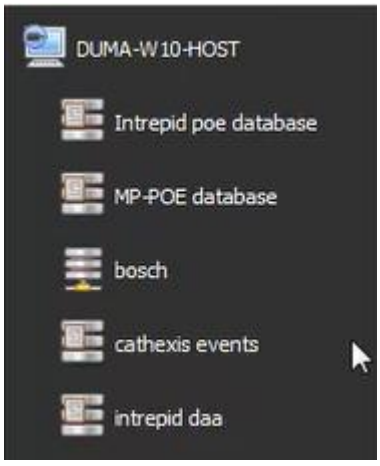
Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathexisVision by the integrated device.

6.1 Navigate to the Database

To view information stored in the Integration, first navigate to the Databases Tab.

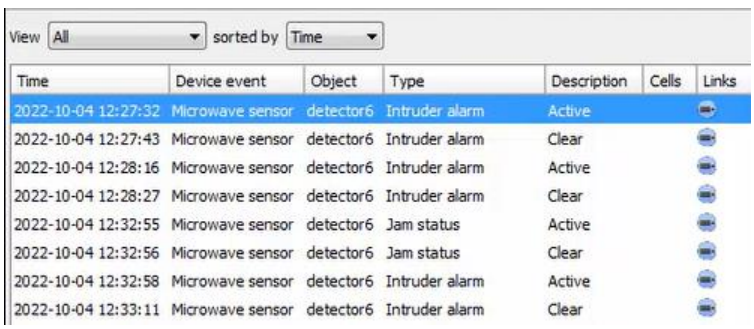


Follow the path on the left: **Site** / **Open tab** / **Databases**.



Select the **Intrepid POE** integration database from the database panel that opens on the left-hand side.

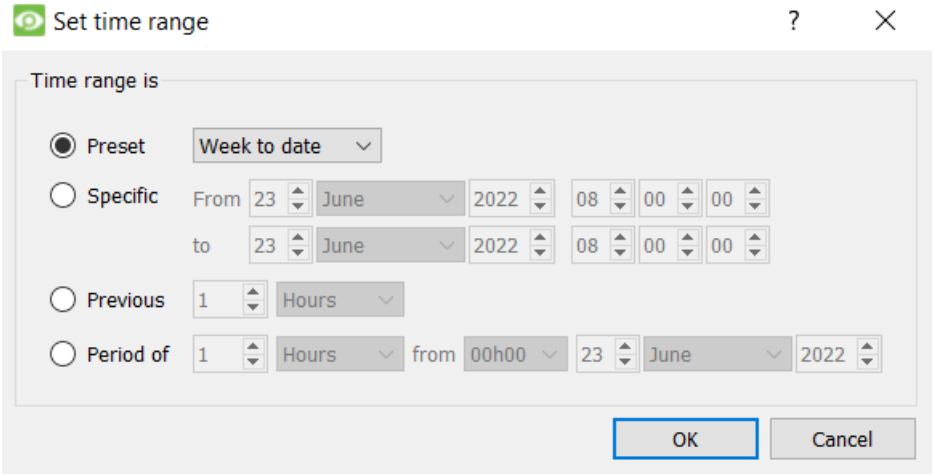
The databases are ordered under the NVRs to which they are attached.



On the left is an image of an Intrepid POE database.

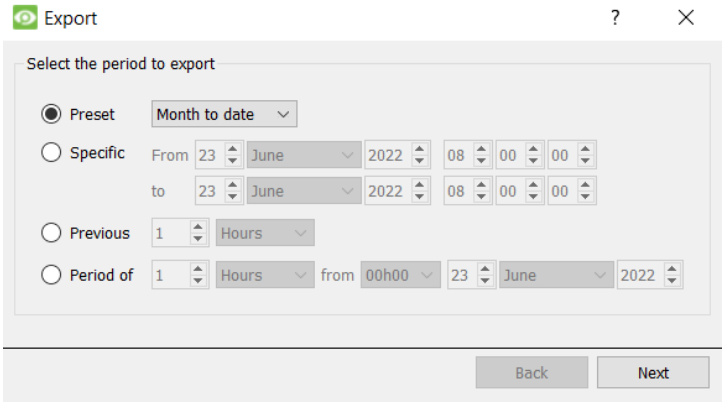
6.2 Database Interface

1 **View**	Change the way that the database is presented. Some integration databases have multiple view options. Click the field to see the available options in the drop-down menu. View All The database view presentations available for the Intrepid POE integration are: • **All** • **Cable** • **Cable section** • **Microwave sensor** • **Input** • **Relay** • **Node**
2 **Sorted By**	Sort the Events based on the following parameter: **Time.** sorted by Time
3 **Easy Search**	Easy Search options allow quick searching of the database. Click the field to see the available options in the drop-down menu. -- No EasySearch -- The following options are available: • **Type** • **Description**
4 **Filter**	Filter offers a more advanced manner of sorting information in the Integration Database table. Once the filters dialogue is open, the following options are available: 1. To **enable** filters, check this box: Enable filters 2. To **add** a new filter, click on . The filter icon will change to when filters are active. 3. To **delete** an added filter, click .

	A **Time range,** within which the search will be conducted, may also be set. To set a Time range, click on the **blue hyperlinked text** which specifies time (e.g. in the week to date). This will bring up the following dialogue box, where the time range can be defined:  **Note**: 1. Multiple filters may be run simultaneously. Filters with the same parameters may be run more than once. 2. To change a filter, click on the blue hyperlinked text.
5 **Export**	Generate metadatabase reports in PDF or CSV format. See below.
6 **Manage Reports**	Generate scheduled metadatabase reports. See below.
7 **Go to Time**	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. Then, click on the arrow icon.

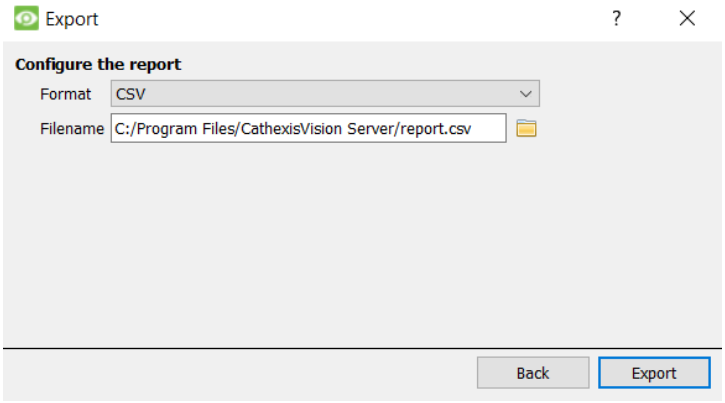
6.2.1 Generate and Export Metadatabase Reports

1. Click the save icon to open the Export window.



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

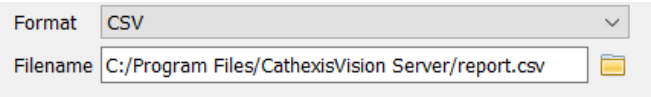
3. Click **Next**.



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

See below for the two options.

6.2.1.1 Export CSV

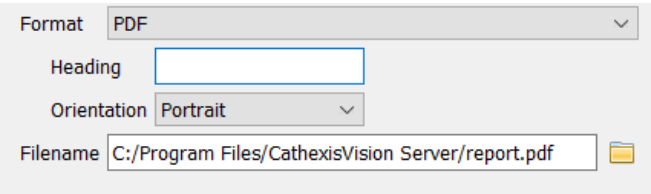


1. Select CSV **Format**.

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

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

6.2.1.2 Export PDF



1. Select PDF **Format**.

2. Give the PDF a **Heading**.

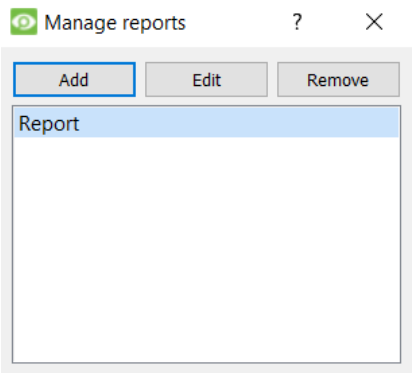
3. Select either Landscape or Portrait **Orientation** of the PDF.

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

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

6.2.2 Scheduled Metadatabase Reports

1. Click the report icon to open the scheduled report window.



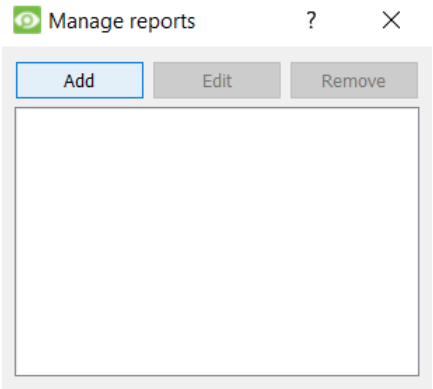
All created reports will be listed here.

2. Click **Add** to create a report.

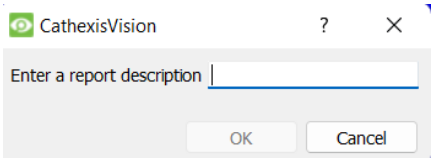
3. Then **edit** to define the reporting schedule. See below for more detail.

To edit, or delete a report, select the entry and click on the corresponding button.

6.2.2.1 New Scheduled Report

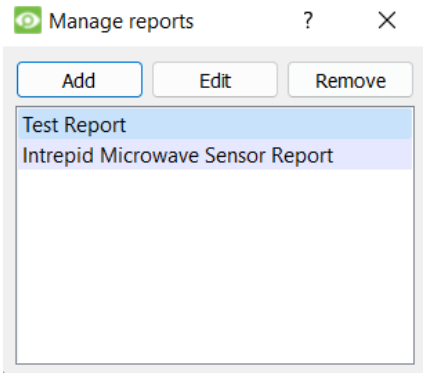


1. In the Manage reports window, click **Add**.



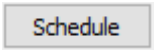
2. Give the report a description.

3. Click **OK** when done.

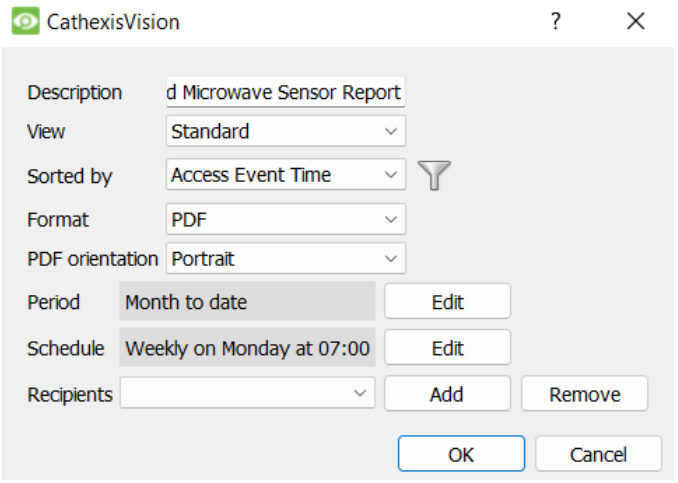


The item will appear in a list.

Once the new report is listed with the other reports, select it for editing to define the reporting schedule.



4. Either right-click the entry and select schedule or **select the entry** and **click the schedule button** at the bottom of the screen



5. Edit the **Description** if needed.

6. Edit **Viewing** options.

7. Select the **Sorted by** option.

8. Select the **Format**.

9. Select the **orientation** of the Format.

10. Select the **Period** to be reported on.

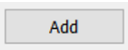
11. Define the **Schedule** for the report.

12. Select **Recipients** from the drop-down menu to whom reports will be sent.

Add/Remove Recipients

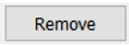
Use the icons to edit the drop-down menu.

Add recipient



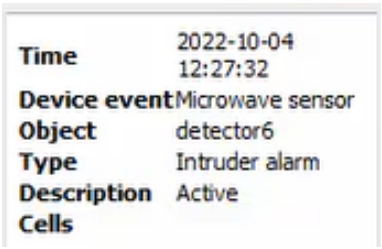
Click **Add** and enter the email address of the recipient. Multiple recipients may be added. All will receive emails.

Remove recipient



Select the recipient from the dropdown menu and click **Remove**.

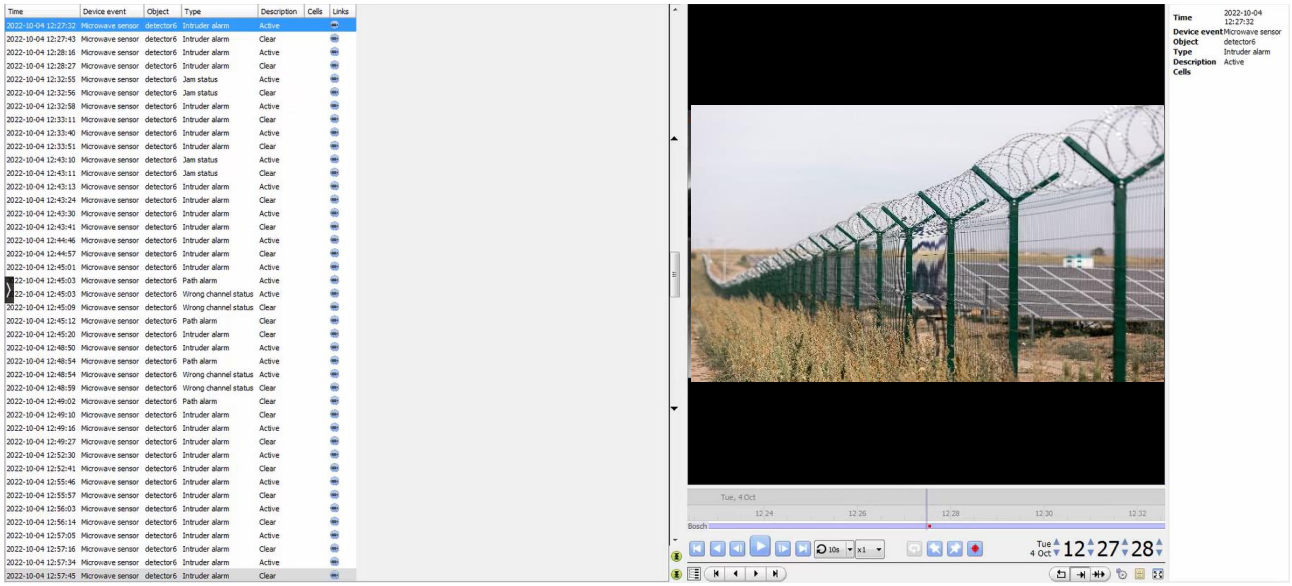
6.2.3 Metadata



On the right-hand side of the database, metadata about the event entry is displayed.

6.2.4 Viewing an Entry's Associated Recording

If cameras are attached to device objects in the integration setup, and these cameras are set up to record continuously, each integration database entry will have a corresponding recording. See the image below.



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.

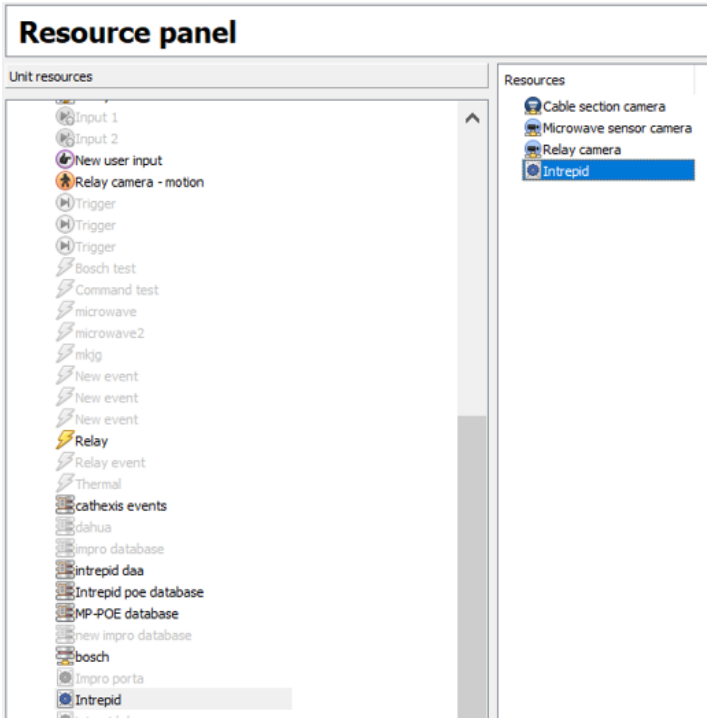
8. Maps

It is possible to add an Intrepid 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 Intrepid integration. For more information on using the CathexisVision Map Editor and Map Tab, please consult the dedicated and detailed ***Map Editor Operation Manual***.

8.1 Add Intrepid POE as a Resource

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

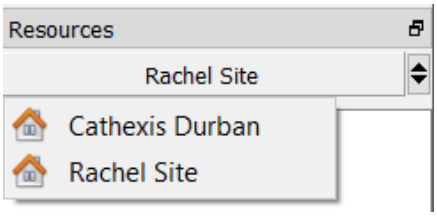


1. Navigate to the **Resource Panel** by following **Site / Open Tab / Setup / Resource Panel.**
2. Drag the Intrepied device from the **Unit Resources** list into the **Resources** list, on the right.

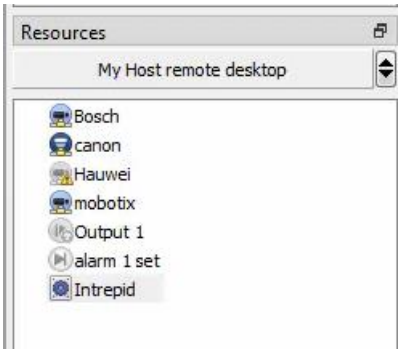
8.2 Add the Device in Map Editor

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

8.2.1 Connect to Site

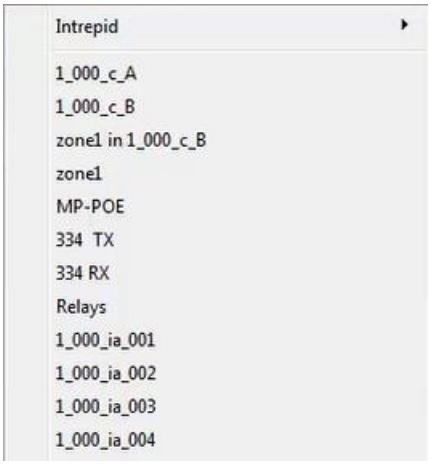


At the bottom right-hand of the Map Editor screen, click the drop-down menu to select the site to connect to.



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

8.2.2 Adding Device Objects



Drag the Intrepid device from the Site Resources list onto the **map area**.

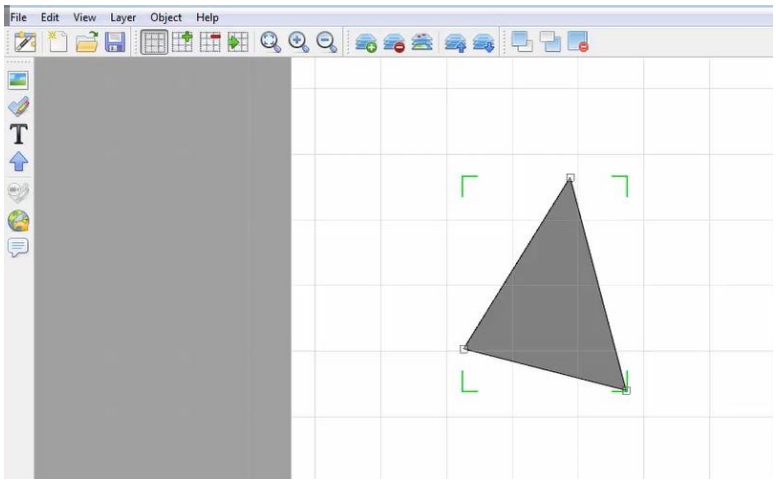
All the Intrepid device objects will appear in a list.

Select an object.

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

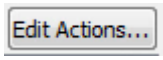
8.3 Adding a Polygon/Shape

Select the draw icon to begin creating a shape.

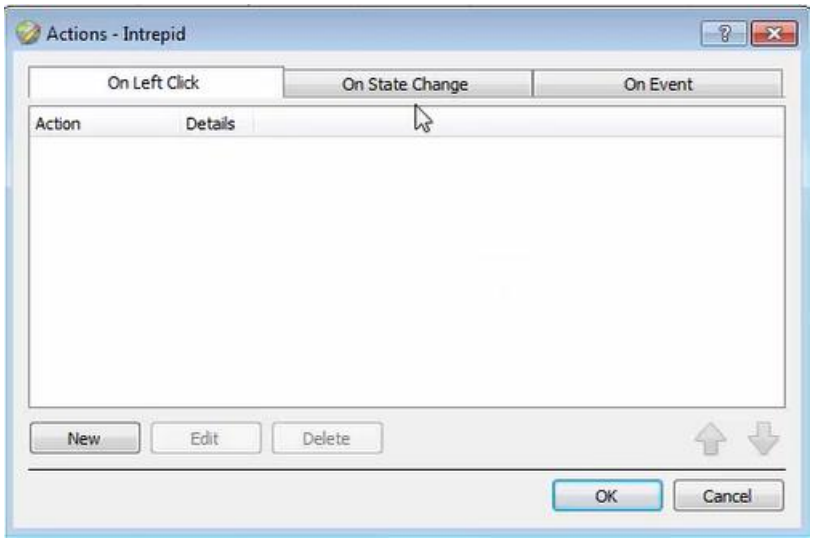


Use the mouse to draw the sides of the shape.

8.3 Adding Device Actions



To add actions to the device objects, select the object on the map and click Edit Actions.



Actions may be set for **Left-clicks, State Changes,** and **Events**.

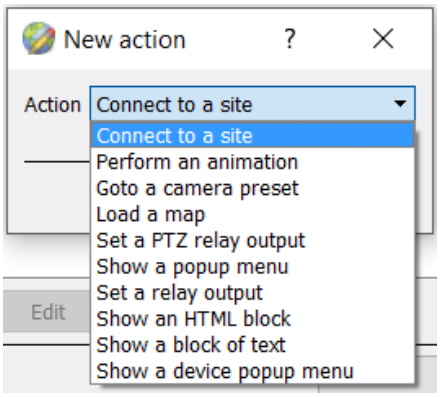
To create a new action, select 

.

8.3.1 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.

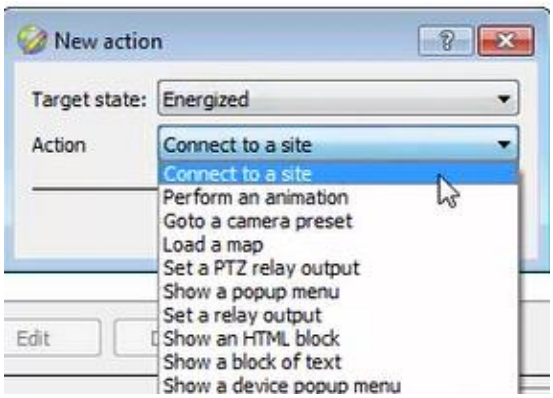
8.3.1.1 On Left-Click



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

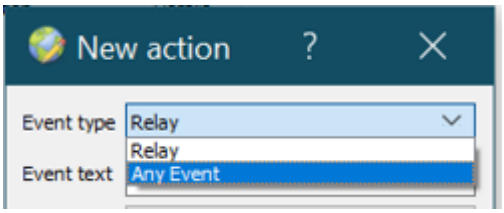
8.3.1.2 On State Change

Select the target state which is to be represented on the map.



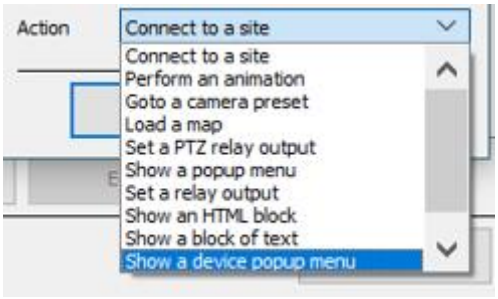
Select an action with which to represent the target state.

8.3.1.3 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.



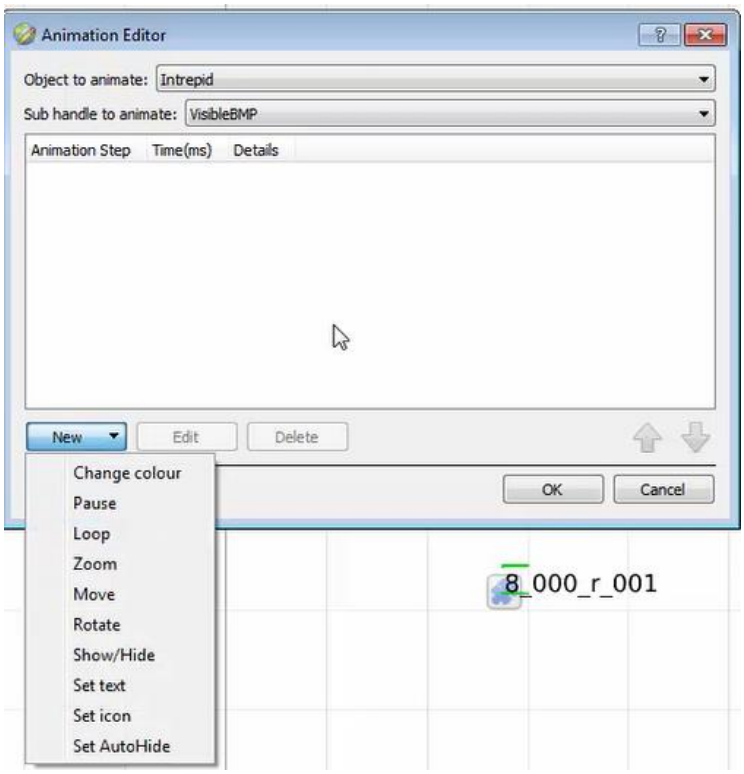
Select the map action which will be triggered by the device object event.

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

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

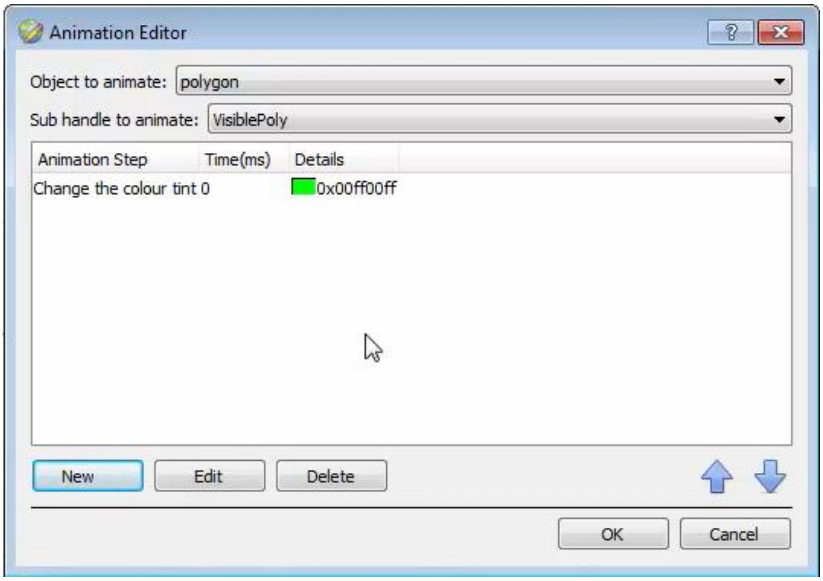
8.3.1.4 Animation Editor

If the user has chosen to represent a click, state change, or event with an animation, the animation editor will open.



Select New at the bottom of the window.

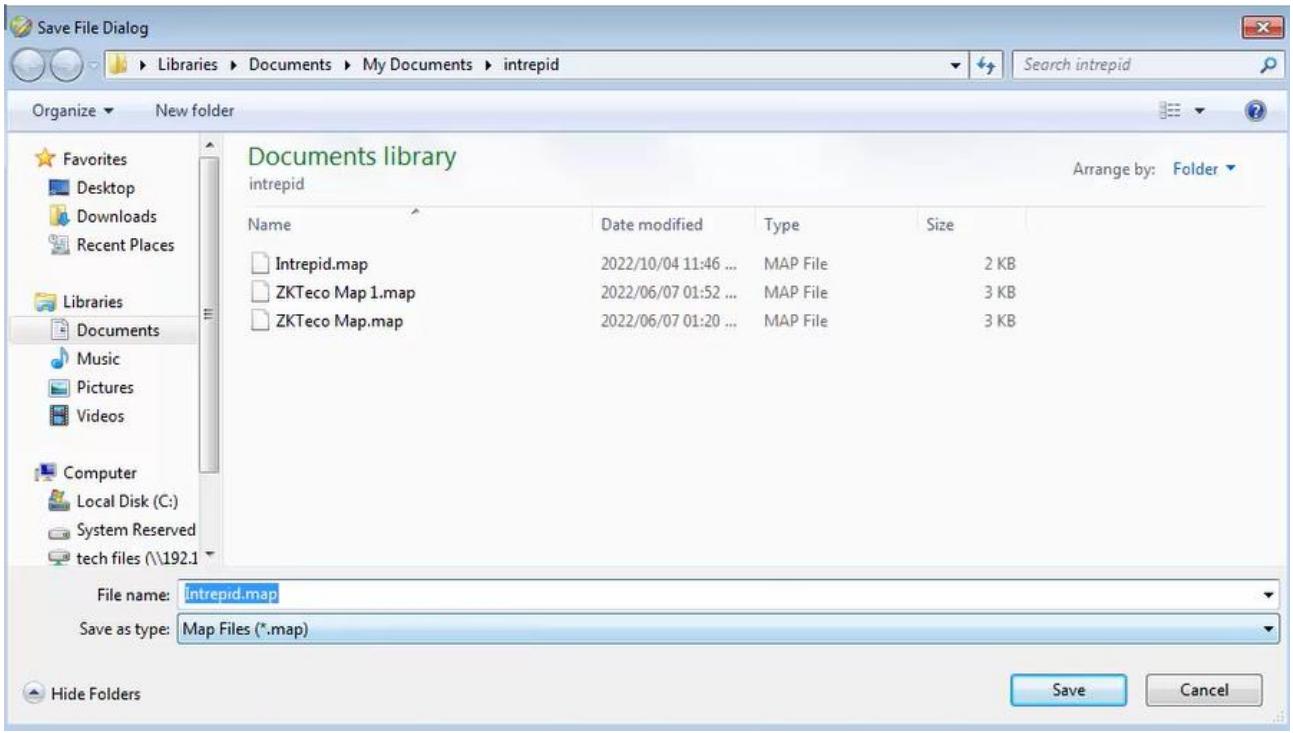
Choose a way to animate the polygon, for instance, change colour.



Select the item in the list to edit the details, for instance to choose a colour from the colour chart.

8.4 Save Map

Once finished, save the map.



Note: The map **must not be saved** in the **Work** folder of the CathexisVision installation directory.

8.5 CathexisVision Map Tab

The saved map needs to be uploaded to CathexisVision.

Navigate to the Map tap by following the filepath:
Site / Open tab / Map

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.

9. Conclusion

This document was designed to deal specifically with this integration. For further information about the CathexisVision software, consult the main manual (http://cathexisvideo.com/).

For support, email support@cat.co.za.

USEFUL LINKS

*To view **tutorial videos** on CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*