



DSC ITV2 PowerSeries Neo Alarm Panel Integration App-note

20 April 2022

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1. Introduction

This document will detail the integration of the DSC ITV2 PowerSeries Neo Alarm Panel with the CathesisVision software.

This driver communicates with the panel via the ethernet connection on the Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU.

Functionally, this integration will entail the triggering of standard CathesisVision Events, based on the triggers from the DSC ITV2 panel.

Note:

1. For information regarding the regular operation of a DSC ITV2 device, please consult the relevant manufacturer’s documentation.
2. There is a General Integration section in the main *CathesisVision Setup Manual*. It contains information about 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 2018 Service Pack 4 and later.
- Integration supported on Windows and Linux 32/64-bit units.
- Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU communicator module.

1.2.2 CathesisVision License Requirements

License	Name	Description
CDSC-2000	DSC Neo ITV2 Device license.	This license is the “base” license to integrate with an alarm panel. It is applied to the server to which the alarm panel is connected. It will allow for the connection of a single alarm panel.

Note: In this integration, individual alarm panels will require a license for each panel.

1.2.3 DSC Specifications

The following hardware components were used to test this integration:

PowerSeries Neo Security Control Panel HS2128

- Firmware version: V01.13.01.20.

Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU

- Firmware version: 4.17.
- Protocol version: 2.17.

Full Message LCD Hardwired Security Keypad HS2LCD

- Firmware version: V01.11.01.13.

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.

1.3 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.

1.4 Features and Abilities

- CathesisVision receives event messages from the DSC ITV2 device.
- The DSC Neo PowerSeries Alarm Panel device can be used to integrate with third-party systems.
- A DSC Neo simulator is included with the device to assist third-party developers with API implementation.
- The DSC Neo driver sends and receives UTF-8 encoded XML messages over UDP.
- CathesisVision receives event messages from the DSC Neo device.

1.4.1 Device Objects

Objects are populated automatically as soon as communication between the DSC ITV2 device and CathesisVision is established.

Object Type		Abilities
General		<ul style="list-style-type: none"> • This integration has Partition, Communicator, Zone, and Communication objects. • Objects are automatically created as soon as communication between the CathesisVision unit and device is established. • Device objects can be commanded as an action of a CathesisVision system event. • Device objects support overlays. • Objects may be linked to cameras to associate device events with video footage.
Partition	General Object Features	<ul style="list-style-type: none"> • The partition object is a group of zones. • It is used to arm/disarm the associated zones. • The panel keypad (or commands from the NVR) are used to control the device and its state changes, which affect its properties in CathesisVision. • The partition states are updated as events occur on the panel.
	Object Properties	<ul style="list-style-type: none"> • ID. • Name. • Zones. • Ready Status. • Armed. • Arm Mode. • Alarm. • Fire Alarm. • CO Alarm. • Alarm Memory. • Fire pre-alert.

		<ul style="list-style-type: none"> • Trouble. • Has bypassed zones. • Delay in progress. • Armed with no entry delay. • Programming mode. • Enabled door chime. • Audible Bell. • Audible keypad buzzer alarm.
	States	<ul style="list-style-type: none"> • Alarmed. • Armed. • Not ready to arm. • Ready to arm. • Ready to force arm. • Troubled.
	Commands	<ul style="list-style-type: none"> • Arm without entry delay. • Away Arm. • Instant Stay Arm. • Night Arm. • Quick Arm. • Stay Arm. • Stay Arm no entry delay. • User Arm.
Communicator	General Object Features	<ul style="list-style-type: none"> • Lost connections, and reconnections will take several seconds to display. • The device type is the same as the communicator panel's model number. • If the inbound or outbound encryption key is incorrect the communicator object will try to configure encryption.
	States	<ul style="list-style-type: none"> • Connection down. • Configuring encryption. • Inbound Encryption Key Mismatch. • Outbound Encryption Key Mismatch. • Connected.
	Object Properties	<ul style="list-style-type: none"> • ID. • Name. • Connection. • Device Type. • Software version. • Protocol version.
	Commands	<ul style="list-style-type: none"> • N/A. There are no commands for this object.
Zone	General Object Features	<ul style="list-style-type: none"> • The zone object cannot be controlled while the partition is armed. • Right-click the zone object and select the desired command.

		<ul style="list-style-type: none"> • The zone states are updated as events occur on the panel.
	States	<ul style="list-style-type: none"> • Alarm. • Bypassed. • Closed. • Delinquency. • Fault. • Low battery. • Open. • Tamper.
	Object Properties	<ul style="list-style-type: none"> • ID. • Name. • Open. • Alarm. • Alarm in memory. • Bypassed. • Tamper. • Fault. • Low battery. • Delinquency. • Partitions. • Lost Alarm Type.
	Commands	<ul style="list-style-type: none"> • Unbypass.
Communication Channel	General Object Features	<ul style="list-style-type: none"> • The communication channel object connects using UDP. • It will not go down when communication with the panel is lost. • The communicator object can be used to trigger events when communication with the panel is either established, lost, or when encryption errors occur.
	Object Properties	<ul style="list-style-type: none"> • ID. • Name. • Channel Status. • Details. • Creation type. • Creation time. • Idle time (min).
	States	<ul style="list-style-type: none"> • States are up or down. • Indicates connection between the device and the software
	Commands	<ul style="list-style-type: none"> • N/A. There are no commands for this object.

1.4.2 Device Events

The CathesisVision DSC ITV2 alarm panel integration generates device events, which are triggered on the device and reflected in CathesisVision.

Event Element	Features/Abilities
General	<ul style="list-style-type: none"> Events triggered on the device are sent to CathesisVision.
Device Event Types	<ul style="list-style-type: none"> ID. Time. Zone name. Zone number. Description.
CathesisVision Event Actions	<ul style="list-style-type: none"> Zone bypass. Entry Delay. Exit Delay. Partition Alarm. Quick Exit Delay. System Alarm. Trouble. Zone Alarm. Zone open/closed. Zone trouble.

1.4.3 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"> Zone events. Alarms. Arming. Entry/exit delay.

Sort Options	<ul style="list-style-type: none"> • Trouble. • Time. • Event Type. • Partition Name. • Partition Number. • Zone Name. • Zone Number. • Description. • State. • Arm Method. • User. • Audible.
Easy Search	<p style="text-align: center;">Or</p> <ul style="list-style-type: none"> • Zone number. • Description. • State. • Arm Method. • User. • Audible. • Urgency. • Restarted. • Device Type. • Device Number.
Filter	<ul style="list-style-type: none"> • Time range.
Export	Database entries may be exported in CSV and PDF format.

1.4.4 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.

<p>Map Actions Options</p>	<ul style="list-style-type: none"> • 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. <p>When triggered (see above), objects may perform the following map actions (where applicable):</p> <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. • Show a Device Event Notification.
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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>

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2. Panel and Communicator Configuration

The DSC Neo ITV2 Alarm Panel requires manual configuration, as does the TL2803G-EU communicator module used to facilitate communication between the panel and CathesisVision. Find the steps for doing so below.

2.1 DSC Neo ITV2 Panel Configuration

Take note of the following codes and details as they will be required for the CathesisVision integration.

Panel Code	Type	Description
[*8] + installer code	Enter programming state.	Press this sequence of codes to enter programming state on the panel. Installer code may differ.
[*]	Enter function.	While navigating the menu, [*] functions as [Enter].
[#]	Escape function.	While navigating the menu, [#] functions as [Escape].

2.2 Communicator Module Setup

The communicator module needs to be configured to facilitate communication between CathesisVision and the panel. The module is configured by entering the required codes on the DSC panel. Codes described below.

Note that this integration was tested using the TL2803G-EU communicator module; other models will have different codes, e.g. the TL280RE uses panel code [851][432] for the Integration Outgoing Port.

Panel Code	Panel Description	Setting on the NVR
[851][001]	Ethernet IP address.	Outgoing UDP IP address
[851][002]	Ethernet IP Subnet Mask.	Check panel subnet
[851][651]	Integration Identifier Number	Inbound encryption key
[851][652]	Integration Access Code	Outbound encryption key
[851][663]	Integration Toggle Option 2 Option 3 ON – Integration over ethernet Option 5 ON – Integration protocol	
[851][665]	Integration Polling Interval (recommend 10 seconds 0x000A).	
[851][664]	Integration Toggle Option 3 Option 1 ON – UDP polling Option 2 OFF – TCP polling Option 3 ON – Real-time notifications Option 4 ON – Notifications Follows Poll	
[851][693]	Integration Server IP	CathesisVision NVR IP Address
[851][695]	Integration Polling Port (hex format)	Incoming UDP port (decimal format)
[851][698]	Integration Outgoing Port (hex format)	Outgoing UDP port (decimal format)

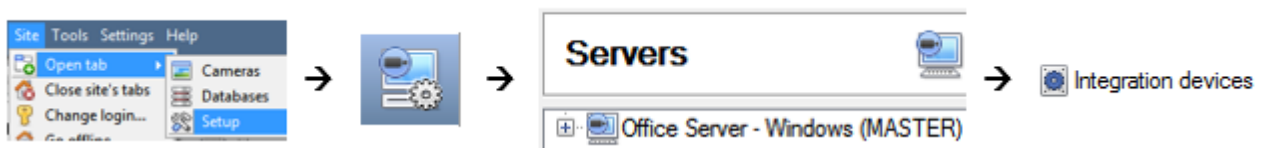
3. Device Addition and Configuration

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

3.1 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:

3.1.1 The Integration Panel



There are two sections in the Integration Panel:

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

Devices	
Name	Driver
Cathexis POS	Cathexis POS
DSC Neo ITV2	DSC ITV2 Neo alarm panel
JVA Perimeter Patrol	JVA Perimeter Patrol
Risco ProSys	Risco Alarm Panel

4 items

Illustrated left is the **Devices** list.

3.1.2 Device Addition



1. Once in the Integration Panel, click on the **New device** button, in the Devices section. This will open the addition dialogue.
2. Select **DSC ITV2 Neo alarm panel** driver from the list.

Configure the device

Name

Connection

Name	Configuration
Incoming	UDP port 0
Outgoing	UDP connection to :0

Settings

Inbound encryption key

Outbound encryption key

3. Give the device a descriptive **name**.
4. Double-click the Incoming and Outgoing channels to configure respective **port numbers**. Check these details on the panel (section 2.2).
5. Enter the Inbound and Outbound **encryption keys**. Check for these details on the panel (section 2.2).
6. Click **Finish** when done.

Once added, the device objects and information should populate automatically.

4. 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**.

4.1 Object Configuration Tab

The object configuration tab is where all the individual objects that comprise the integration may be viewed.

The DSC ITV2 device has three object types: **Communicator**, **Partition**, and **Zone**.

Configuration of 'Neo DSC ITV2'

Object configuration | Object properties | Device events | Object groups | General

Object type: All objects

	Type	ID	Name	Cameras	Object groups
	Communication channel	1	Incoming		
	Communication channel	2	Outgoing		
	Communicator	Communicator	Communicator		

4.1.1 Object Configuration Buttons

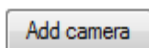
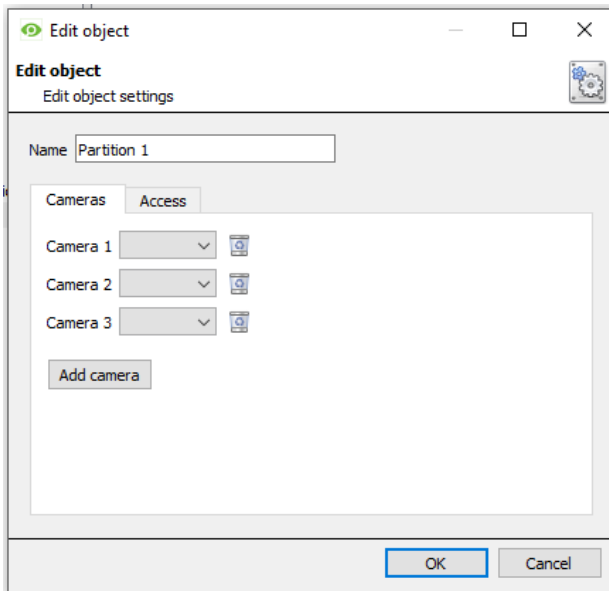
	Click New to add a new object.
	Click Edit to change an existing object.
	Click Delete to remove an existing object from the CathesisVision configuration.

4.1.2 Object Configuration Right-Click Options

	New will open up the dialogue to add a new object.
	Disable/Enable allows manually enabling/disabling individual nodes.
	Delete will permanently remove this object from the list.
	Properties will open up the object properties. The object may be edited from here. Specifically, assign cameras to this object, as well as define user access levels for it.

4.1.2.1 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.



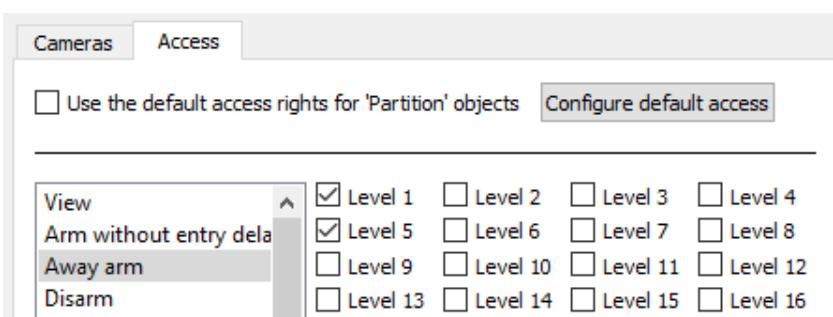
To **add** a camera, click Add camera, and select the relevant camera from the drop-down menu.



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

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.

4.1.2.2 Properties: Access



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

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

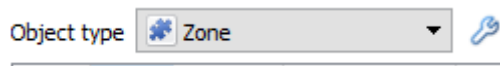
Note: If **Use default access rights** is checked, make sure that those default rights have been correctly defined. Click on **Configure default access** to do this.

4.1.3 Object Overlays

Overlays will display the following Zone properties: Zone name, Open/Closed state, other zone states and which of its associated partitions are armed. The overlay will also show Communication down when the connection to the panel has been lost.

Overlays may be configured globally for **all zones**, or they may be configured for a zone. See below for how to open the overlay configuration window for global or specific overlay configuration. Thereafter, the overlay configuration window looks the same for both options.

4.1.3.1 Configure Global Overlays

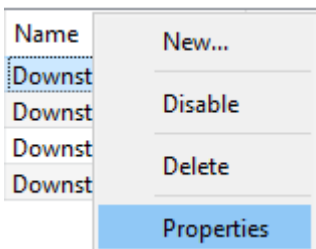


Select the zone or sector object from the Object type drop-down menu.

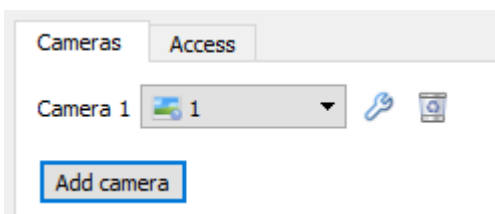
 Then click the **Default Settings icon**.

Select the Overlays tab.


4.1.3.2 Configure Overlays for a Single Object



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



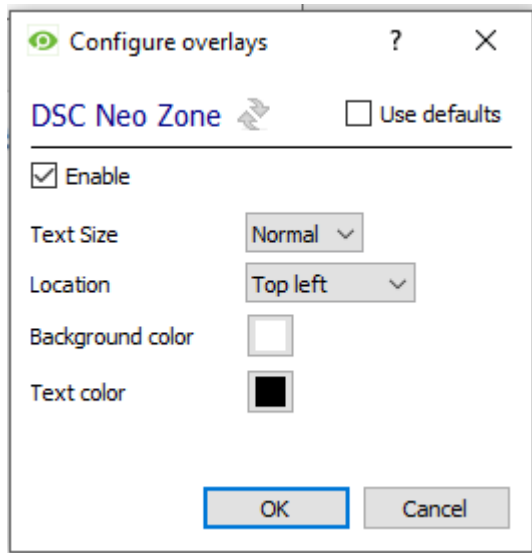
2. Add a camera to the object.

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

4. **Note:** This option only appears for zone objects.

4.1.3.3 Overlay Configuration Window

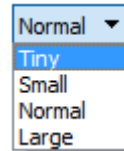
Note: This window looks the same for both global and specific object overlay configurations.



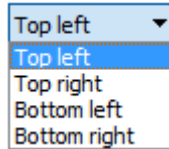
1. If configuring individual overlays, uncheck **Use Defaults** in order to allow configuring for the specific selected object.

2. **Enable** Check to **Enable** overlay configuration (on either the individual object or global configuration).

3. Select the **Text Size** of the overlay:



4. Select the **Location** of the overlay:

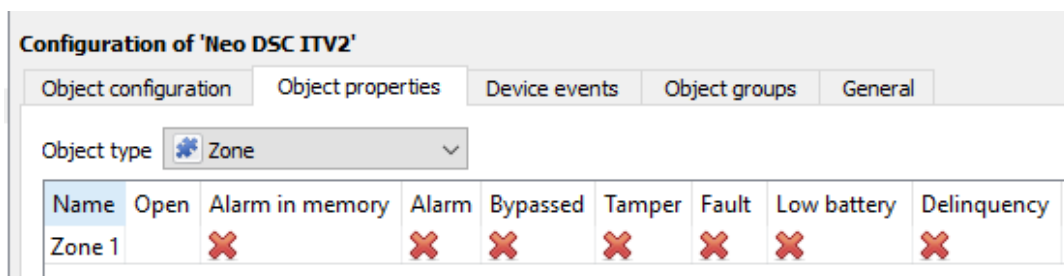


5. Choose the **Background and Text** of the overlay.

Click the colour box to bring up a colour chart.

4.2 Objects Properties Tab

The Object properties tab allows viewing objects, sorted by type. In the case of the DSC ITV2 alarm panel, one will have the options of viewing by **Communicator, Partition, Zone, and Communication Channel**.



4.2.1 General Object Properties

Note: The following general properties for this integration’s device objects:

1. Objects are populated automatically around 10 seconds after communication is established.
2. Custom object names are displayed for all overlays, device events, and in the metadatabase.

3. The panel is polled for configuration changes every 10 minutes. Changes to the panel will reflect after the next poll, however the integration device can be disabled and reenabled to manually force an update.
4. Polling the panel for state changes occurs every 10 seconds.

4.2.2 Communicator Object

The communicator object represents the connection to the panel. Note the following properties:

1. Object takes up to 35 seconds to show lost connection.
2. Takes up to 25 seconds to reconnect and display reconnection.
 - a. Partition and Zone object states are updated up to 25 seconds after communicator object reconnects.
3. If the panel is disconnected while configuring encryption, it takes up to 15 seconds for the communicator object state to reflect a dropped connection.
4. The device type is the same as the communicator panel's model number.
5. If the inbound encryption key is incorrect, the communicator object will try to configure encryption and then stop, showing an inbound encryption key mismatch. The driver will re-try the connection every 30 seconds.
6. If the outbound encryption key is incorrect the communicator object will try to configure encryption, show an outbound encryption key mismatch and then show connection down.

Note:

1. The alarm panel may need to be restarted if the encryption keys are changed in CathesisVision, or on the alarm panel. This will force communication to be re-established using the new encryption keys.
2. Please use the communicator object to trigger events when communication with the panel is either established, lost, or when encryption errors occur.

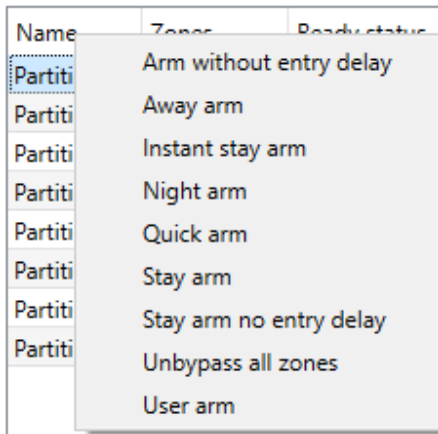
4.2.3 Partition Object Properties

The partition object is a group of zones, and is used to arm/disarm the associated zones. The panel keypad (or commands from the NVR) is used to control the device and its state changes, which affect its properties in CathesisVision.

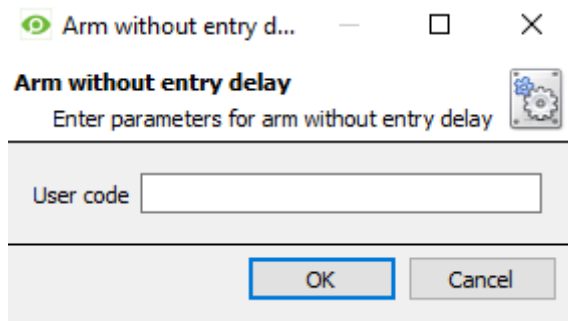
The partition states are updated as events occur on the panel.

4.2.3.1 Commands

1. Right-click the object to see the available commands.



Note: The available options depend on the state of the partition object and the Arm mode is dependent on the panel settings.



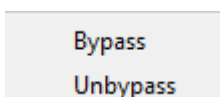
2. A user code will need to be entered to authorise certain commands.

Note:

1. When a zone is linked to more than one partition and the zone is disabled during the arming process, the panel will show that the armed partition has bypassed zones, but it may not report that the other partitions have bypassed zones.
2. States will remain the same when connection to the panel is lost but will be updated once it is restored.

4.2.4 Zone Object Properties

Note: The zone object cannot be controlled while the partition is armed. Right-click the zone object and select the desired command:



The zone states are updated as events occur on the panel.

Note:

1. All zones can be bypassed, unless it is disallowed by the panel, and can be 'unbypassed'.

- States will remain the same when connection to the panel is lost but will be updated once it is restored.

4.2.5 Communication Channel Object Properties

The communication channel objects connect using UDP and won't go down when communication with the panel is lost. Please use the communicator object to trigger events when communication with the panel is either established, lost, or when encryption errors occur.

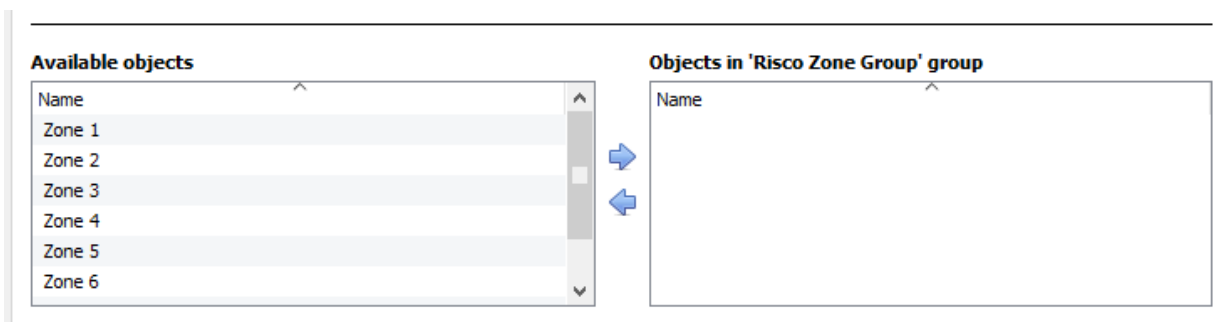
4.3 Device Events Tab

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.

Note: Events that occur on the panel while the connection is down will not come through once the connection is restored. The events are not buffered on the panel, but the panel will be polled for status updates when the connection is restored.




4.4 Object Groups Tab

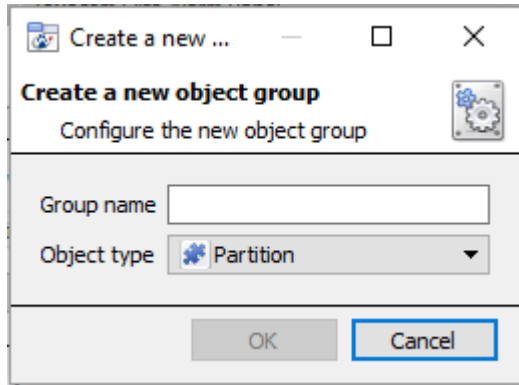
Groups of the same type of object can be created.



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

4.4.1 Create a Group

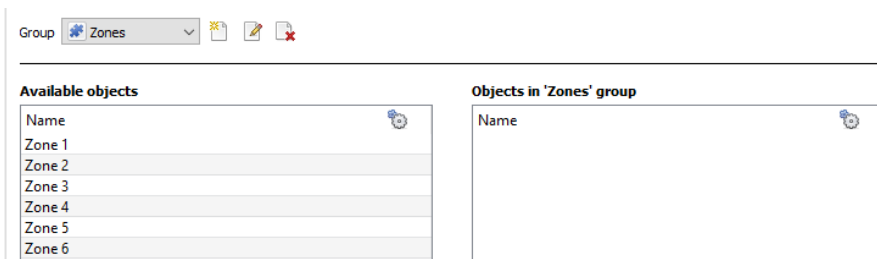
-  To **create** a DSC ITV2 group, click on this icon.
-  To **edit** a DSC ITV2 group, click on this icon.
-  To **delete** a DSC ITV2 group, click on this icon.





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

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

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



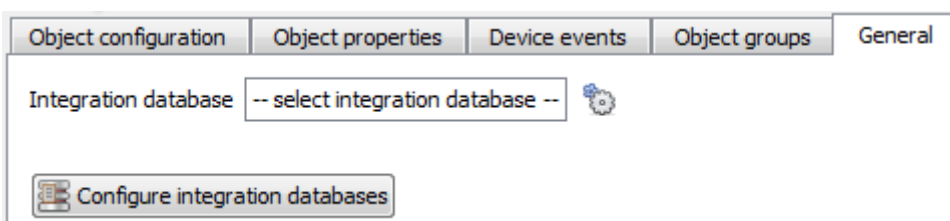
A list of Available Objects will become visible.

-  To **add** these objects to the group, select them 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.

4.5 General Tab

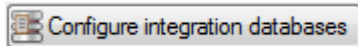
The General tab deals with the integration database. Here, select a pre-created database, or configure a new database.



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 CathesisVision system.

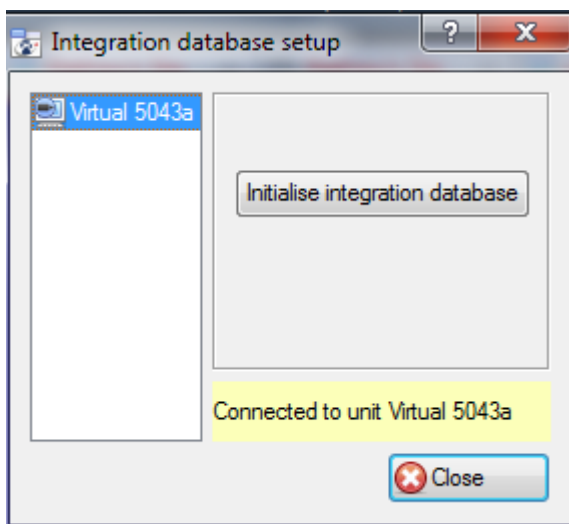
4.5.1 Configure a New Database

The first time an integration database is added, the general integration database will need to be **initialised**. Thereafter, a database for a specific integration can be **created**.



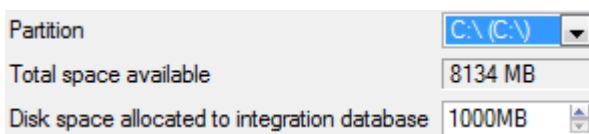
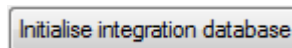
To create a new database, click the Configure integration databases button from the General tab. This opens the integration database setup.

4.5.1.1 Initialise the Integration Database



Select the unit the database will be added to from the list on the left.

Click **Initialise integration database**.

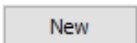


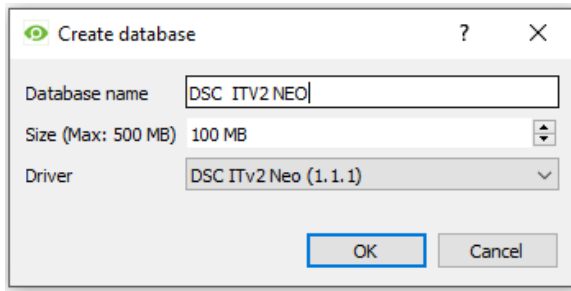
Choose the partition on which the database will be created.

Select disk space allocation.

4.5.1.2 Add a New Devices Database

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


1.  Click the New button at the bottom of the **Integration database setup** window.

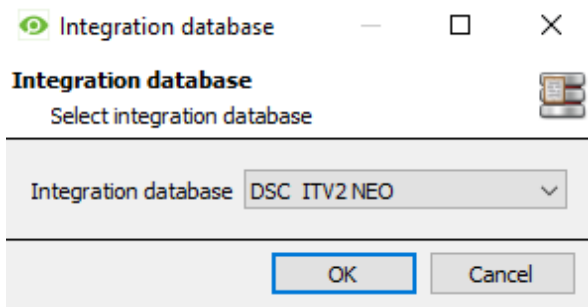


2. Give the Integration database a descriptive **Database Name**. E.g. DSC ITV2 Neo Integration database.
3. Allocate a **Size** to the new device database.
4. Choose the device **Driver** that the device will be using (for DSC Neo, **DSC ITv2 Neo 1.1.1**), and click on OK to create the database.

4.5.1.3 Select the Integration Database



From the General tab, **click** the gear icon .



In the dialogue that appears, **select** the relevant integration database.















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

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

5. 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.

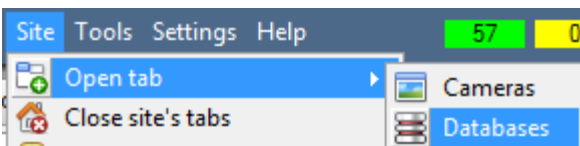
Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathesisVision by the integrated device.

Time	Event Type	Description	Partition	Zone	Output	Links
2018-12-22 17:36:44	Zone	Open (Trip)		Zone 2		
2018-12-22 22:47:04	Zone	Open (Trip) cleared		Zone 4		 
2018-12-23 00:23:44	Zone	Open (Trip)		Zone 4		 
2018-12-23 05:19:11	Zone	Open (Trip) cleared		Zone 4		 
2018-12-23 05:57:03	Zone	Open (Trip)		Zone 4		 
2018-12-23 05:57:04	Zone	Open (Trip) cleared		Zone 4		 
2018-12-23 05:57:13	Zone	Open (Trip)		Zone 4		 
2018-12-23 05:58:08	Zone	Open (Trip) cleared		Zone 4		 

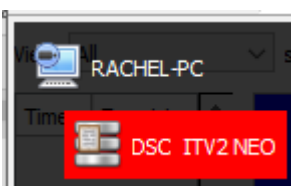
The integration database is information rich. This is a generalised example of some of the information that is included.

5.1 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**.



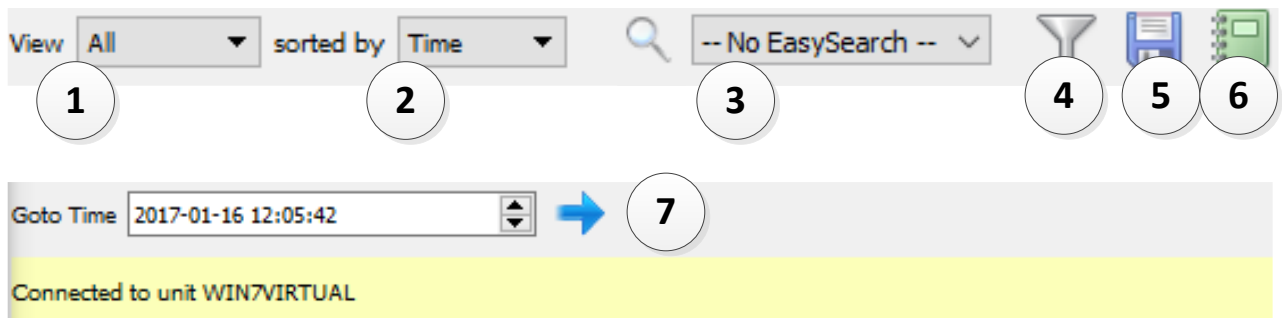
Select the **DSC ITV2 NEO** integration database from the database panel that opens on the left-hand side.

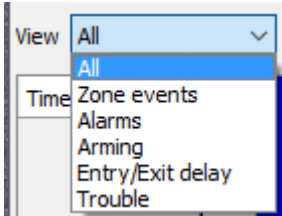
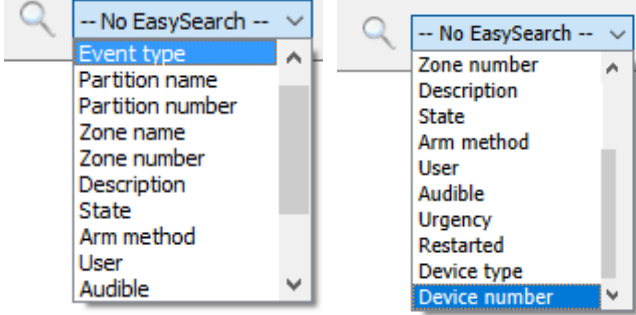





The databases are ordered under the NVRs that they are attached to.

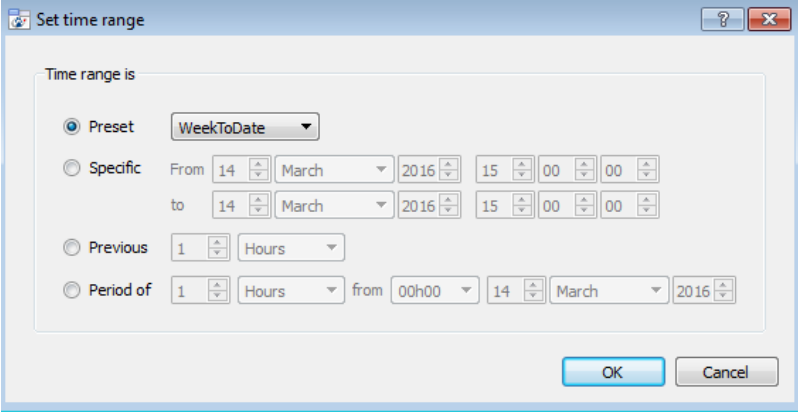



To open and close this list, click on the arrows in the centre of the list.

5.2 Database Interface



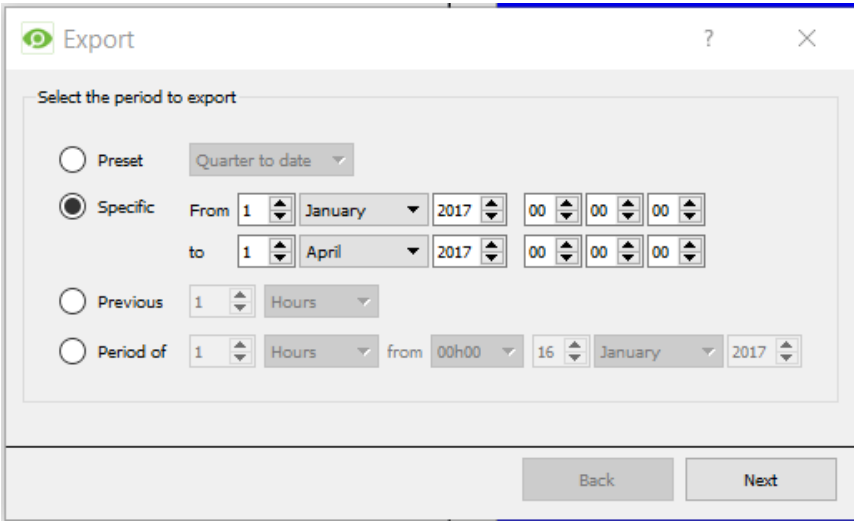
<p>① View</p>	<p>Change the way that the database is presented. Some integration databases have multiple view options. The DSC ITV2 database has the following view options:</p> 
<p>② Sorted By</p>	<p>The Events are sorted based on the following parameter: Time.</p>
<p>③ Easy Search</p>	<p>The easy search option allows one to quickly search the database using the below options:</p>  <p>Note: The search options will differ depending on the selected view.</p>
<p>④ Filter </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database Tab.</p> <p>Once the filters dialogue is open, the following 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 . The filter icon  will change to  when filters are active. To delete an added filter, click on . <p>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).</p>

	<p>This will bring up the following dialogue box, where the time range can be defined:</p>  <p>Note:</p> <ol style="list-style-type: none"> Multiple filters may be run simultaneously. Filters with the same parameters may be run more than once. To change a filter, click on the blue hyperlinked text.
<p>⑤ Export</p>	<p>Generate metadatabase reports in PDF or CSV format. See below.</p>
<p>⑥ Manage Reports</p>	<p>Generate scheduled metadatabase reports. See below.</p>
<p>⑦ Go to Time</p>	<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>

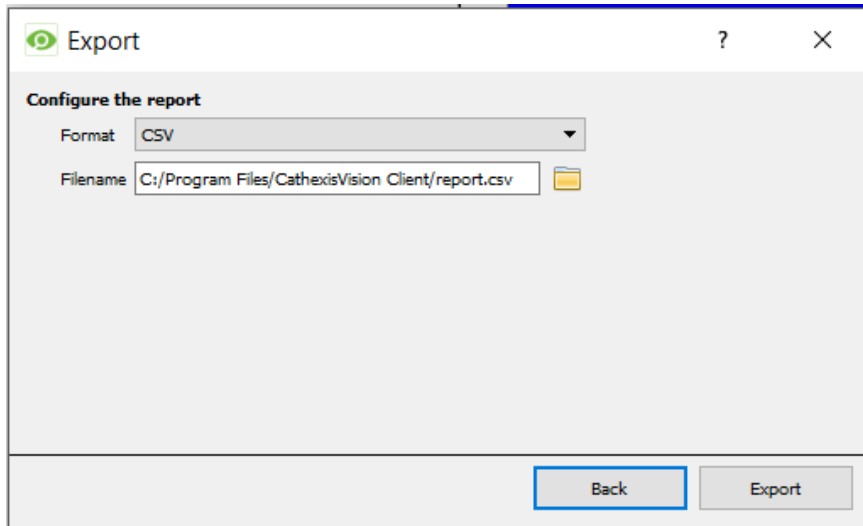
5.2.1 Generate and Export Metadatabase Reports



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

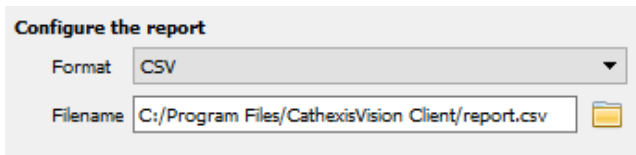


2. Select the **Period** to export, and enter the required details.
3. Click **Next**.



4. Select the **Format** to export the report in; either CSV or PDF.
5. See below for the two options.

5.2.1.1 Export CSV



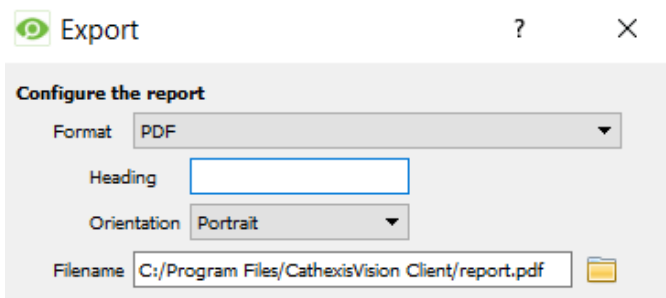
Select CSV **Format**.

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



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

5.2.1.2 Export PDF



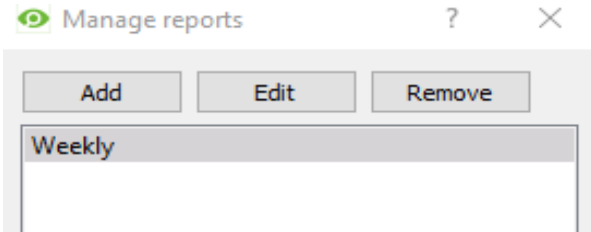
1. Select PDF **Format**.
2. Give the PDF a **Heading**.
3. Select either Landscape or Portrait **Orientation** of the PDF.
4. Edit the **Filename** by either entering it straight into text field (replacing **report.pdf**)



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

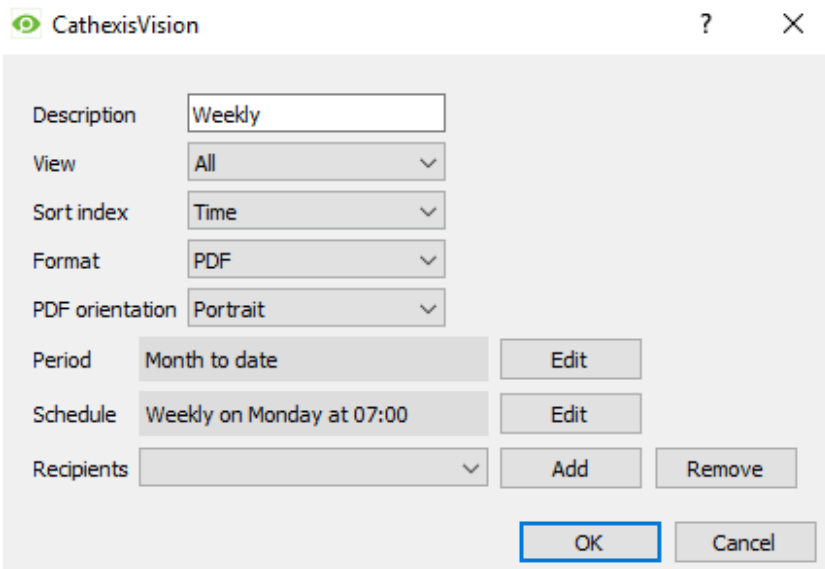
5.2.2 Scheduled Metadatabase Reports

Metadatabase reports may be auto-generated according to a user-defined schedule.



Click **Add** to add a new report. Once added, reports will populate the list.

Double-click the selected report (or select and click Edit) to configure the parameters of the scheduled report. See below.



Give the report a descriptive name.

Select the default presentation of the database entries by selecting the desired options for View and Sort Index.

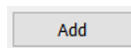
Select the format (PDF/CSV) of the report, as well as the orientation of the report (if PDF selected).

Select the period to report, and the Schedule according to which reports will be auto-generated.

Add/Remove Recipients

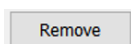
Use the icons to edit the drop-down menu.

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**.

5.2.3 Metadata

Time	2019-03-15 14:00:01
Event type	Exit delay
Description	Exit delay on
Partition name	Partition_03
Partition number	3
Zone name	
Zone number	
State	
Arm method	
User	
Delay duration	10
Audible	Audible
Urgency	Urgent
Restarted	Has not restarted
Device type	
Device number	

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

5.2.4 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 CathexisVision 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.

The screenshot displays the Cathexis database interface. On the left, a table lists various events with columns for Time, Event Type, Description, Partition, Zone, Output, and Links. The 'Links' column contains camera icons for specific entries. On the right, a video player is embedded, showing a live recording from a camera labeled 'Dahua 5421'. The video player includes a timeline at the bottom with a play button and other controls. The current time shown is 15:14:44 on Thursday, 14 Feb.

6. Cameras Tab

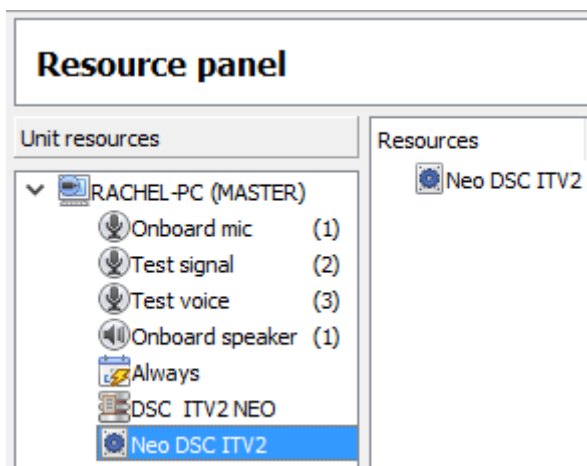
6.1 Control Device from Resources Panel

It is possible to command some of the device objects from the Resources Panel in the Cameras Tab. These commands are much the same as those in the Object Properties Tab of the Integration Devices panel of the Setup section.

To command the DSC ITV2 Neo device from within the Cameras tab, the device must be added as a resource in the Resources section of the Setup tab.

6.1.1 Add the Device as a Resource

1. Setup tab / Resources Panel

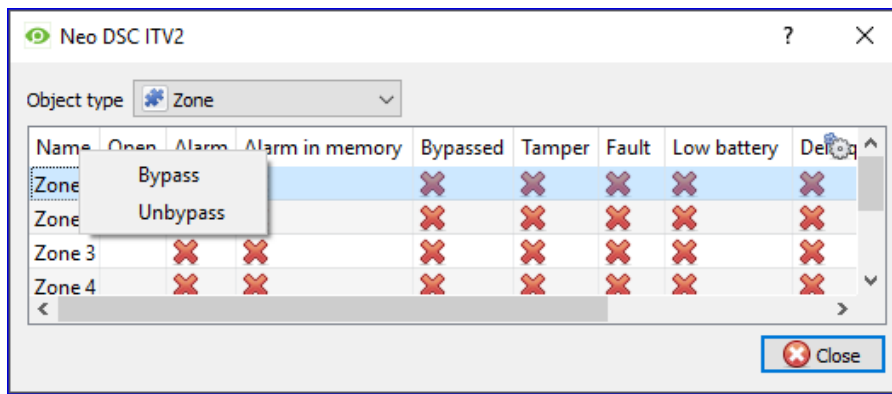


2. Navigate to the **Resource Panel** by following **Site / Open Tab / Setup / Resource Panel**.
3. Drag the Neo DSC ITV2 device from the **Unit Resources** list into the **Resources** list, on the right.
4. After doing this, the device should appear in the Resources panel in the Cameras tab:



6.1.2 Control Device

Double-click on the device in the Resources panel of the Cameras tab to bring up the window below. Here, the states of some of the device objects can be viewed and controlled.



Select the object type from the drop-down menu, then right-click the object for possible commands.

6.2 Camera Tab Overlay Setup

Once all the relevant settings have been configured, the DSC ITv2 Neo overlay can be pulled through over the relevant camera feed.

Note: Cameras must have already been added to the relevant objects.

6.2.1 Video Feed Options Panel



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

Once popped out, the Video feed options panel will present a number of options specific to the settings configured for that video feed.

6.2.2 Select the Overlay



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

Select the desired overlay and it will appear over the video feed, as above.

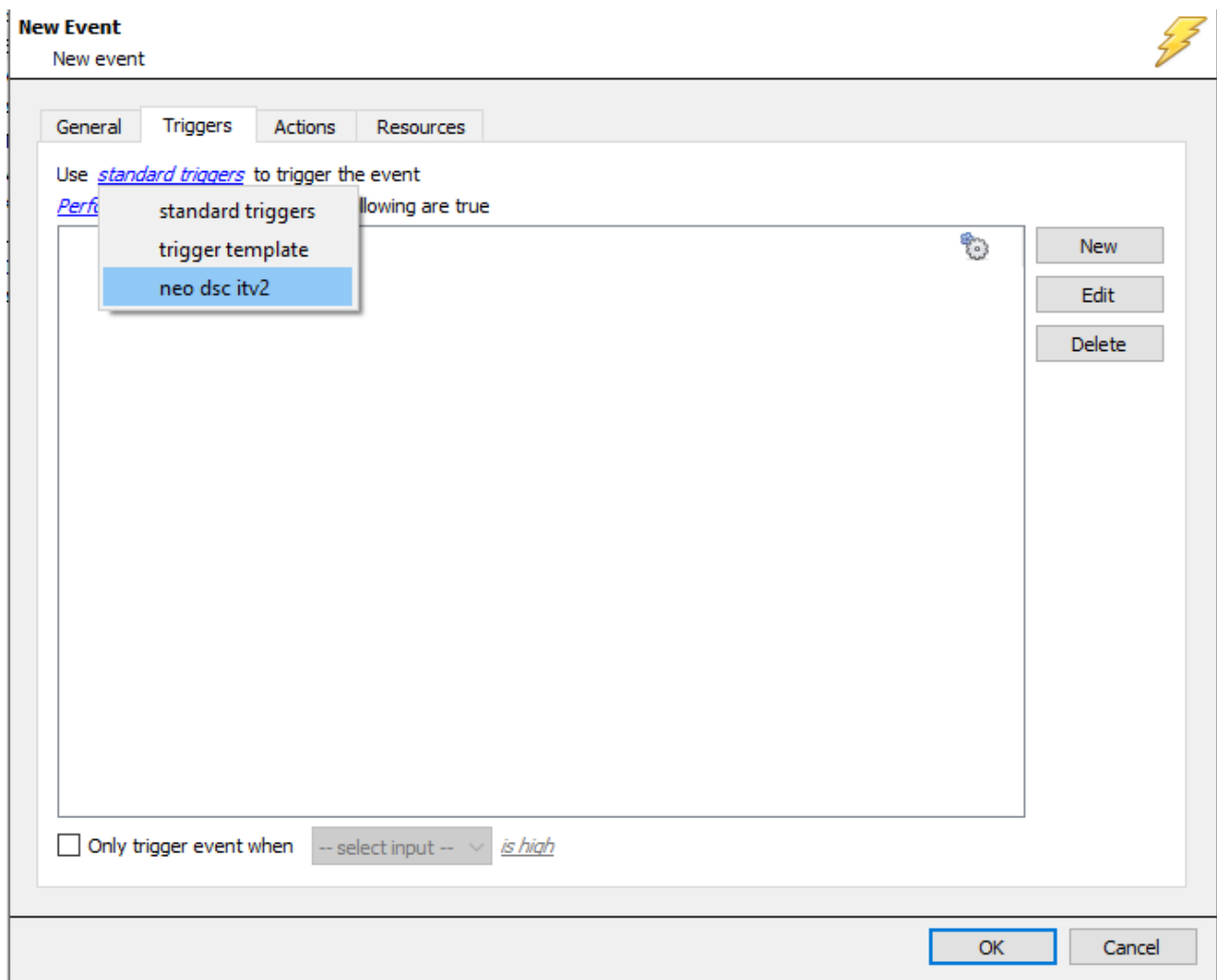
7. Events

A CathesisVision event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document will detail the DSC ITV2 specific aspects of Events. There is a comprehensive guide to CathesisVision Events in the main setup manual.

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* as an event trigger, or action.

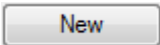
7.1 Event Window

Events in CathesisVision 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.



7.2 Creating an Event

To create an event using the DSC ITV2 device, navigate to Events by following the sequence: **Open Tab / Setup / Servers / Master Server / Events**. This is shown below.

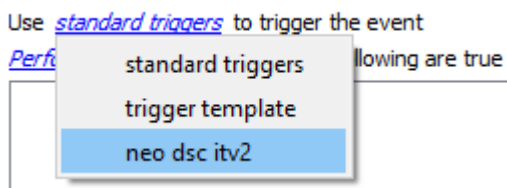


Once in Events management area, click the New icon at the bottom of the screen. This will open up the **New Event window**. Alternatively, right-click and select **New**.

7.3 Triggers Tab

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).

7.3.1 Set the Device as the Trigger



When 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 DSC ITV2 device, click on the hyperlink, and select the relevant device name from the dropdown menu.

7.3.2 While/When and Any/All

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.

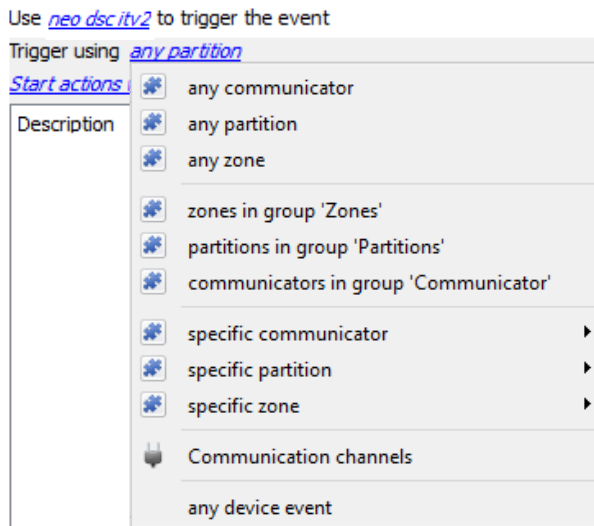
Start actions when	any of the properties meet the following criteria any of the following device events occur
Perform actions while	any of the properties meet the following criteria all of the properties meet the following criteria

Use [neo dsc itv2](#) to trigger the event
 Trigger using [any partition](#)
 Start actions when [any of the following device events occur](#)

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

7.3.2 Trigger Types (Trigger Using)

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



Any partition/communicator/zone will trigger when any of these objects sends the selected trigger.

Object in group... If a group has been set up, it will appear here in this list.

Communication channels will trigger only on the Communication channels.

Specific partition/communicator/zone will trigger on an event from the specific object selected.

Any device event will trigger on any event that occurs on the device. Within the “any device event”, “device event rules” will constrain which device events will trigger the event.

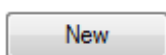
Note for group triggers: For this event to be databased under the name of a specific object, and not the name of the triggering group, modify the Description field in the **General tab** of the Event setup.

Click on the question mark icon to see a list of available descriptions. Here is a DSC ITv2 Neo example:

Description

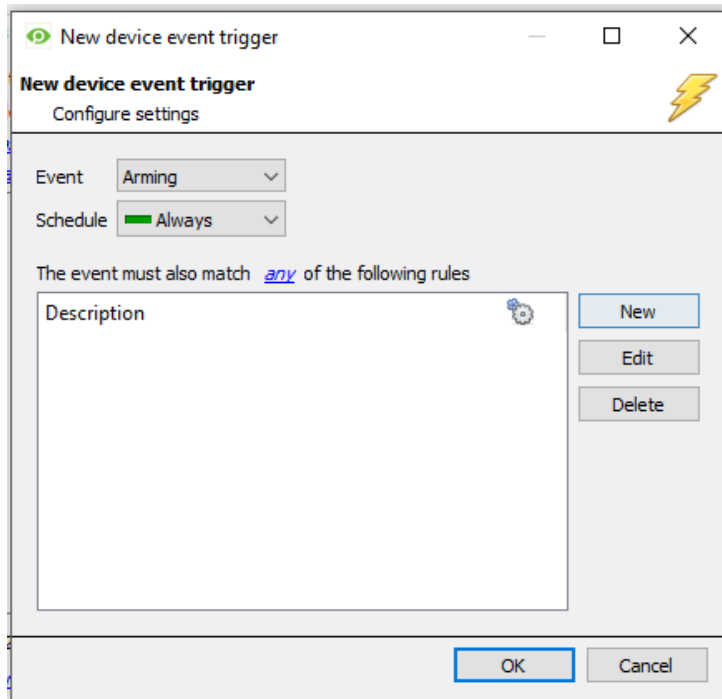
7.3.3 Define the Trigger

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



Click on **New** in the Triggers tab. Clicking on New will bring up the **New device event trigger** dialogue box.

7.3.3.1 New Device Event Trigger



Choose the type of device Event that will be the trigger. Choose from the drop-down menu.

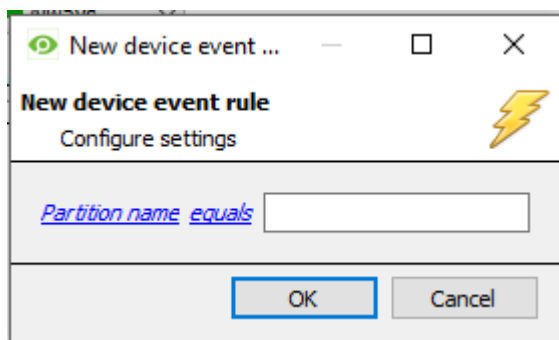
Choose a schedule.

Choose if [any](#), or [all](#) constraints need to be fulfilled to set off a trigger.

To add/edit/delete a **Device event rule** (a constraint to the device event trigger) use the **New**, **Edit**, and **Delete** buttons on the right-hand side.

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

New Device Event Rule



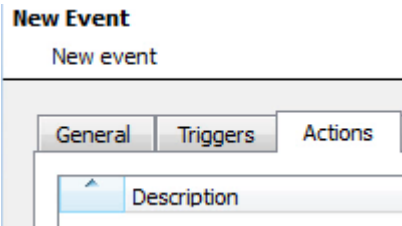
To change the constraint, click on the first hyperlink, this will bring up the full list of available rules.

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

Note: When all available options are known to CathexisVision, a drop-down menu will be visible. When these variables are not pre-defined, fill them in.

The information pulled through to the events, is information sent to CathexisVision from the DSC ITV2 Neo device, see the DSCs ITV2 Neo settings for the strings needed here.

7.4 Actions




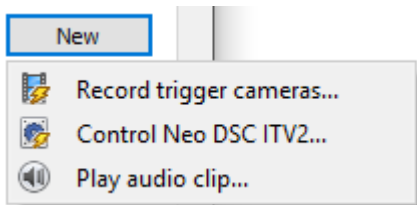
Having defined the triggers that will initiate an event, the user will need to define Actions.

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

One of the available actions for DSC ITV2 Neo device will be to *control* the **Partition** and **Zone** objects.


7.4.1 New Action

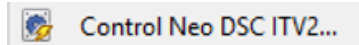
 To add an action, click New in the Actions tab.



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

Select an option.

 This icon represents an action to control. It will state "**Control ...**" and the name of the Action device e.g.



Select **Control Neo DSC ITV2** to control this device.

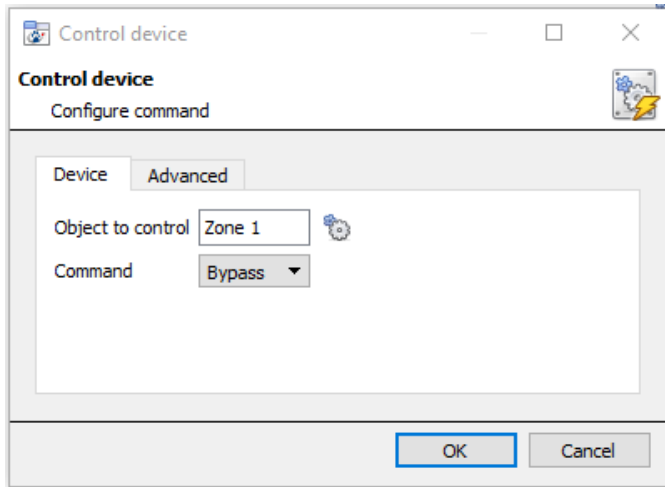
7.4.1.1 Control Device




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

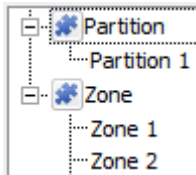
Under the **Device** tab, the user defines how the device will be controlled. Under the **Advanced** tab, the scheduling of the action is defined.

Configure Command Window



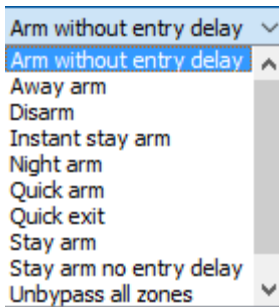
 To select an **Object**, click on the settings icon.

This provides a selection of all the Objects available on the DSC ITV2 device.



Under the object type parent group, select the individual objects to control.

Click OK.



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

Choose a command with which to control the selected object.

Click OK.

The image alongside shows possible commands for **Partitions**. **Zones** allow **Bypass** and **Unbypass** commands.

A user code will need to be entered to authorise certain **Partition** commands.

8. Maps

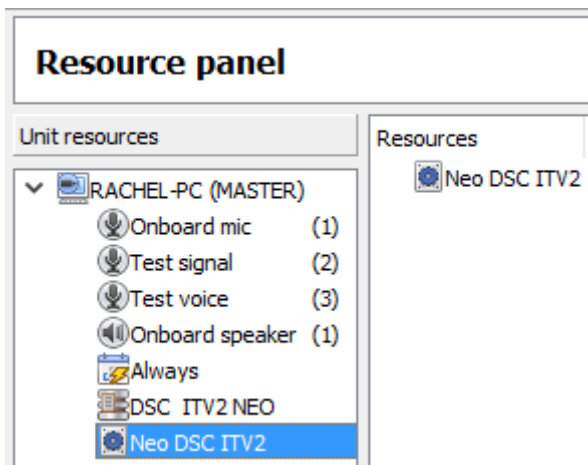
It is possible to add the DSC ITV2 Neo device to a site map, which will allow for a number of action options when objects are triggered. These options include the animation of triggered zones and connecting to site cameras when zones are triggered.

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

8.1 Add the Device as a Resource

If this has not already been done (see section 6. Cameras Tab), the device must be added as a resource to be added to the map.

Setup tab / Resources Panel



Navigate to the **Resource Panel** by following **Site / Open Tab / Setup / Resource Panel**.

Drag the DSC ITv2 Neo device from the **Unit Resources** list into the **Resources** list, on the right.

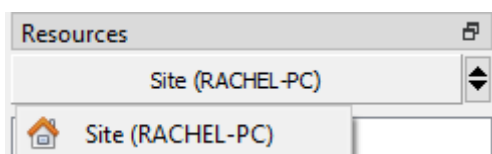
After doing this, the device should appear in the Resources panel in the Cameras tab:



8.2 Add the Device to the Map

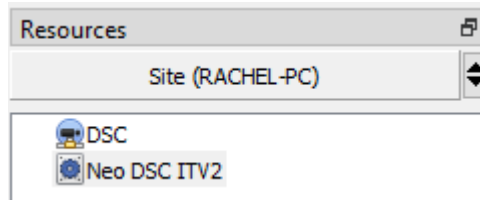
Once the DSC ITV2 Neo device has been added as a **Resource**, it will be available to drag onto the map area from the **Site Resources** list.

8.2.1 Connect to Site

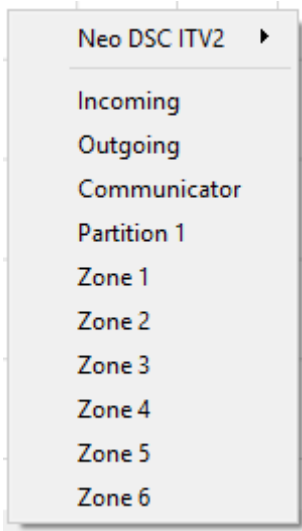


At the bottom right-hand of the Map Editor screen, click the drop-down menu to select the site to connect to.

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



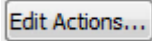

8.2.2 Adding Device Objects

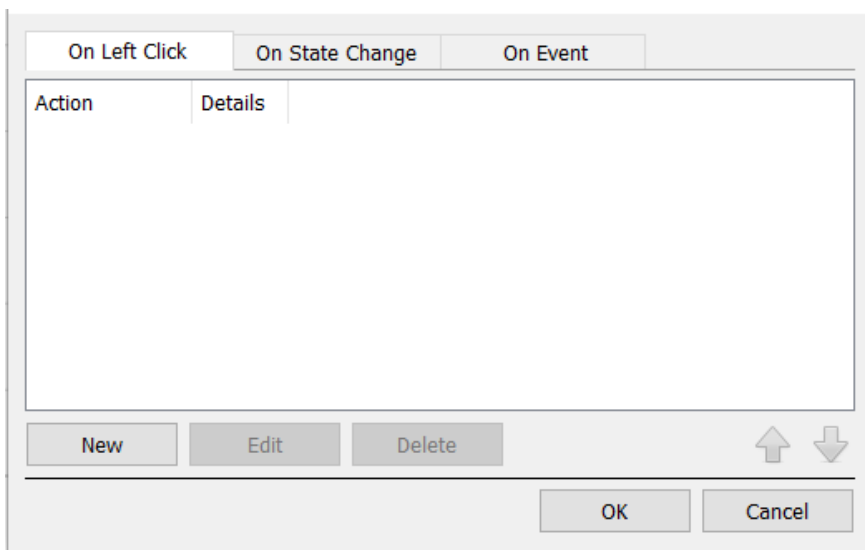


Drag the device from the Site Resources list onto the map area. All of the available device objects will appear in a list. Select an object.

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

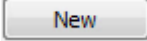
8.3 Adding Device Actions

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**. See descriptions below.

Once configured, the list of actions will populate the white space in the relevant tabs.

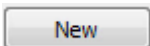
To create a new action, select .

8.3.1 Map Object Device Action Tabs

Map actions may be set to trigger on **Left-Clicks**, **State Changes**, and **Events**. The table below illustrates the triggers that may be used to generate a map action.

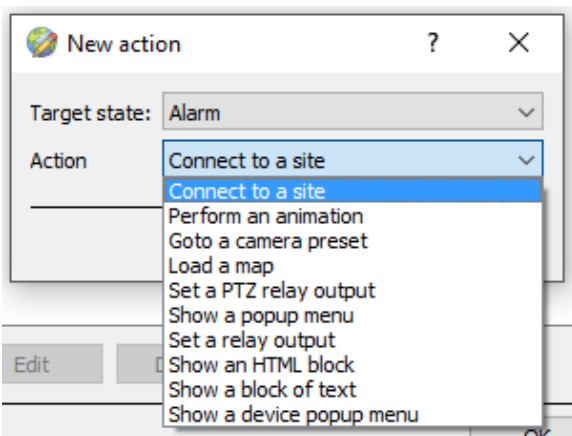
Tab	Map Action Trigger Detail
On Left Click	Left-clicking on the object in the map will trigger an associated map action. See below for actions.
On State Change	When the state of the selected object changes, the map action will occur. State change options will differ according to selected object.
On Event	When a device object event occurs, the associated map action will be triggered. Event types change depending on the selected object.

8.3.2 Action Options



Click New in the relevant tab of the action window.

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



Action options are the same for all tabs, except for the event tab, which has the added option to **Show a Device Event Notification**.

Click **OK** in the Action window once all required actions have been set for the various map objects.

Once finished, save the map.

NB: The map **must not be saved** in the default folder or Work folder of the installation directory. Instead, create a new directory when saving; E.g. C:\Maps.

8.4 Map Tab

The saved map needs to be uploaded to the CathesisVision server. 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 app-note was designed to deal specifically with this integration.

For further information about the CathesisVision software, consult the main manual (<http://cathesisvideo.com/>).

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