



CathexisVision SPAR dStore POS Integration App-note

Contents

- 1. Introduction..... 4
 - 1.1 Requirements 4
 - 1.1.1 General Requirements..... 4
 - 1.1.2 License Requirements 4
 - 1.2 Integration Components 5
 - 1.3 Features and Abilities 5
 - 1.3.1 Device Objects 5
 - 1.3.2 Device Events..... 6
 - 1.3.3 Metadatabase..... 7
- 2. Device Addition and Configuration..... 9
 - 2.1 Cathexis SPAR dStore Specific Setup 9
 - 2.1.1 Setup of dStore dbsMonitorGateway Interface software 9
 - 2.2 Add a New Device in CathexisVision 11
 - 2.2.1 The Integration Panel 12
 - 2.2.2 Device Addition 12
- 3. Configuration Section (Tabs) 14
 - 3.1 Object Configuration Tab 14
 - 3.1.1 Object Configuration Buttons..... 14
 - 3.1.2 Right-click Options..... 14
 - 3.1.3 Edit Object 15
 - 3.1.4 Configure Overlays 16
 - 3.2 Object Properties Tab..... 17
 - 3.2.1 Till Objects 17
 - 3.2.2 Communication Channel 18
 - 3.3 Device Events Tab..... 18
 - 3.4 Object Groups Tab 19
 - 3.4.1 Create a Group 19
 - 3.4.2 Add or Remove Objects..... 20
 - 3.5 General Tab 20
 - 3.5.1 Select an Integration Database 21
 - 3.5.2 Configure a New Database 21
- 4. Camera Tab Overlay Setup 23
 - 4.1 Video Feed Options Panel 23
 - 4.1.1 Select the Overlay..... 24

5. Database	25
5.1 Navigate to the Database	25
5.2 Database Interface	26
5.3 Viewing an Entry	27
5.3.1 Transaction/Item View	28
5.3.2 Recordings	28
5.3.3 Metadata	28
6. Events	31
6.1 Event Window	31
6.2 Creating an Event.....	32
6.3 Triggers Tab	32
6.3.1 Set the Device as the Trigger	32
6.3.2 Trigger Types	32
6.3.3 While/When and Any/All.....	33
6.3.4 Define the Trigger	33
6.3.5 New Object Property Trigger	34
6.3.6 Event Example	35
6.4 Actions	35
6.4.1 New Action	35
7. Maps	37
7.1 Add the SPAR dStore POS Device as a Resource	37
7.1.1 Add the Device in the Resource Panel.....	37
7.2 Configure Map Editor	38
7.2.1 Add the Device in Map Editor.....	38
7.2.2 Add Device Objects in Map Editor	39
7.2.3 Add a Polygon	39
7.2.4 Adding and Editing Device Actions	40
7.3 Save Map	42
7.4 Load Map to CathexisVision	43
8. Conclusion	44

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

1. Introduction

This document details the integration of the **SPAR dStore POS** system with CathesisVision.

The **Sigma POS Tills** send till data, via UDP, to the **dStore MonitorGateway service**. Both the **CathesisVision SPAR dStore POS integration** and the **dStore MonitorGateway software** can be installed and configured on the same **Cathesis NVR server**. The dStore MonitorGateway software receives the Till POS transactions from each till, and then packages and sends the POS data to the CathesisVision SPAR dStore POS integration using a single port. This integration is *one way* and data will not be sent back to the dStore MonitorGateway service.

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

Note:

1. For information regarding the regular operation of a SPAR dStore POS device, please consult the relevant SPAR dStore POS manufacturer's documentation.
2. Please set the [write server] and [write port] settings in the MonitorGateway.ini to the Cathesis server and the port chosen in the driver setup.

1.1 Requirements

1.1.1 General Requirements

- Windows 10 and later, Windows Server 2012 and later
- Ubuntu 16.04 LTS and 20.04 LTS
- CathesisVision 2023.1 and later
- SPAR Sigma dStore setup:
 - Sigma version 54.021
 - dStore version 16.4

1.1.2 License Requirements

The Cathesis SPAR dStore integration license requirements are as follows:

License	Name	Description
CPDT-1001	SPAR dStore POS till	These licenses apply to the till in a point-of-sale system. The CPDT-1001 will license a single till and may be added on a till-by-till basis.
CPDT-2000	SPAR dStore POS device	This license is the "base" license to integrate with the point-of-sale system. It is applied to the server to which the point-of-sale device is connected. This licence will allow for the connection of a single integration device.
CPDT-3000	SPAR dStore POS bundle	This license includes one CPDT-2000 point-of-sale device license, and also provides support for unlimited CPDT-1001 till licenses.

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

1.2 Integration Components

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 communication channel and till of POS system are both objects. They are different types of objects.

1.3 Features and Abilities

- CathexisVision receives till slip data from a monitoring gateway which is managed by SPAR. Events are generated from this data.
- POS State (online/offline) and POS data such as voids, cash transactions, specific amounts, etc, can be used to trigger Cathexis Events.
- Till objects support camera overlays.

1.3.1 Device Objects

Object Type		Features/Abilities
General		<ul style="list-style-type: none"> • This integration has Till and Communication channel objects. • Objects may be linked to cameras to associate device events with video footage.
Till	General Object Features	<ul style="list-style-type: none"> • Relevant Till objects will populate when CathexisVision receives data from the tills. • Displays information about the associated Till. • Till events on the device can be used to trigger CathexisVision system events. • Supports camera overlays.
	Object Properties	<ul style="list-style-type: none"> • Name of Till/Till ID • Cashier ID • Cashier Name • Transaction state • License (yes/no)
Communication Channel	General Object Features	<ul style="list-style-type: none"> • Represents the UDP channel used by the integration device. • Channel will not go down when communication with SPAR dStore system is lost. <ul style="list-style-type: none"> ○ If a system event triggered on a connection state is required, use system object.

	Object Properties	<ul style="list-style-type: none"> • Till ID • Name of Till • Cameras • Object Groups
--	--------------------------	---

1.3.2 Device Events

Event Element		Features/Abilities
General		<ul style="list-style-type: none"> • Till data is sent to CathesisVision, which then generates events based on this data. • The following device event messages are received from the Till data and displayed in the CathesisVision device events tab and integration metadatabase:
Device Event Types	Change	<ul style="list-style-type: none"> • Time • Till ID • Type • Value
	End Transaction	<ul style="list-style-type: none"> • Time • Till ID • Slip • Type • Cashier number • Cashier name • Date time • Account name • Account number
	Info	<ul style="list-style-type: none"> • Time • Type • Till ID • Description • Cashier number • Cashier name
	Item	<ul style="list-style-type: none"> • Time • Till ID • Item code • Description • Quantity • Value • Total value
	Log	<ul style="list-style-type: none"> • Time • Till ID • Log no • Slip number

		<ul style="list-style-type: none"> • Cashier number • Cashier name • Type
	Rounding total	<ul style="list-style-type: none"> • Time • Till ID
	Start Transaction	<ul style="list-style-type: none"> • Time • Till ID • Cashier • Document
	Tender	<ul style="list-style-type: none"> • Time • Till ID • Type • Tender Value
	Total	<ul style="list-style-type: none"> • Time • Till ID • Number of items • Value
CathesisVision Actions Event		<ul style="list-style-type: none"> • Events generated by the Till data are reflected in CathesisVision, and can be used to create CathesisVision system events. • The device and device objects cannot be controlled as part of the system events.

1.3.3 Metadatabase

A unique metadatabase is created on the CathesisVision server for this integration. It is fully searchable, with configurable filters based on events generated from the till slip data received (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"> • Transaction • Item
Sort Options	<ul style="list-style-type: none"> • Time • Till • Cashier
Easy Search	<ul style="list-style-type: none"> • Start time • End time • Type

	<ul style="list-style-type: none"> • Till ID • Slip number • Cashier number • Cashier name • Account number • Account name • Tender type • Tender value • Tender change • Total • End type • Number of items
Filter	<ul style="list-style-type: none"> • Start Time • End Time. • Cashier. • Document Number. • Till.
Export	Database entries may be exported in CSV and PDF format.

2. Device Addition and Configuration

This section will detail the procedure for adding the Cathesis SPAR dStore device to CathesisVision.

2.1 CathesisVision SPAR dStore Specific Setup

This section covers the installation and configuration of the dStore MonitorGateway service, that communicates with the CathesisVision NVR. It also covers the Sigma POS till setup, to enable tills to send the POS till slip data to the NVR server. The MonitorGateway software that needs to be installed on the NVR server can be found at <https://cathesisvideo.com/technology-partners/integration/ht>

Note: the dStore MonitorGateway software only runs on a Windows NVR server. As such, the dStore POS is only supported on Windows NVR servers.

Note: The 3rd-party POS provider **Tradelink** allocates an IP address from the Store's POS network for the NVR server. Thereafter the Sigma POS dStore Backoffice setup will be configured by them. This setup information has been included in this app-note to be used in the CathesisVision integration setup. As such this setup can be accomplished at a store without help from the Tradelink POS supplier.

2.1.1 Setup of dStore dbMonitorGateway Interface Software

Till data is sent via UDP to the NVR server on which the CathesisVision SPAR dStore integration is configured. The **dbMonitorGateway dStore service** needs to be installed and run on this NVR server, which must be connected to the dStore POS network.

2.1.1.1 Configuration File

The Configuration file **dbMonitorGateway.ini** must be copied onto the Cathesis NVR server. The default or standard MonitorGateway.ini can be seen on the left of the table below. All values are standard and must not be changed, except for the [char_mode]. The CathesisVision SPAR dStore integration requires the [char_mode] to be changed to **ascii mode**, as shown on the right of the table (which is the renamed **dbMonitorGateway.ini** file).

Standard .ini config file	Cathesis SPAR dStore .ini config file
[GateWay]	[GateWay]
[interface]="0"	[interface]="0"
[read port]="1719"	[read port]="1719"
[write server]="127.0.0.1"	[write server]="127.0.0.1"
[write port]="5002"	[write port]="5002"
[char code]="ansi"	[char code]=" ascii "
[write port from]="7000"	[write port from]="7000"
[write path]="c:\"	[write path]="c:\"

Note: [write port]="5002" is the listening port in the CathesisVision integration dStore setup. Ensure that the UDP listening port numbers are the same for the SPAR dStore system as well as CathesisVision. The SPAR dStore system must be set up to send all data, for all tills, to the same IP and port.

Note: Ensure that the UDP port is not blocked by the firewall.

2.1.1.2 dStore Installation on NVR server

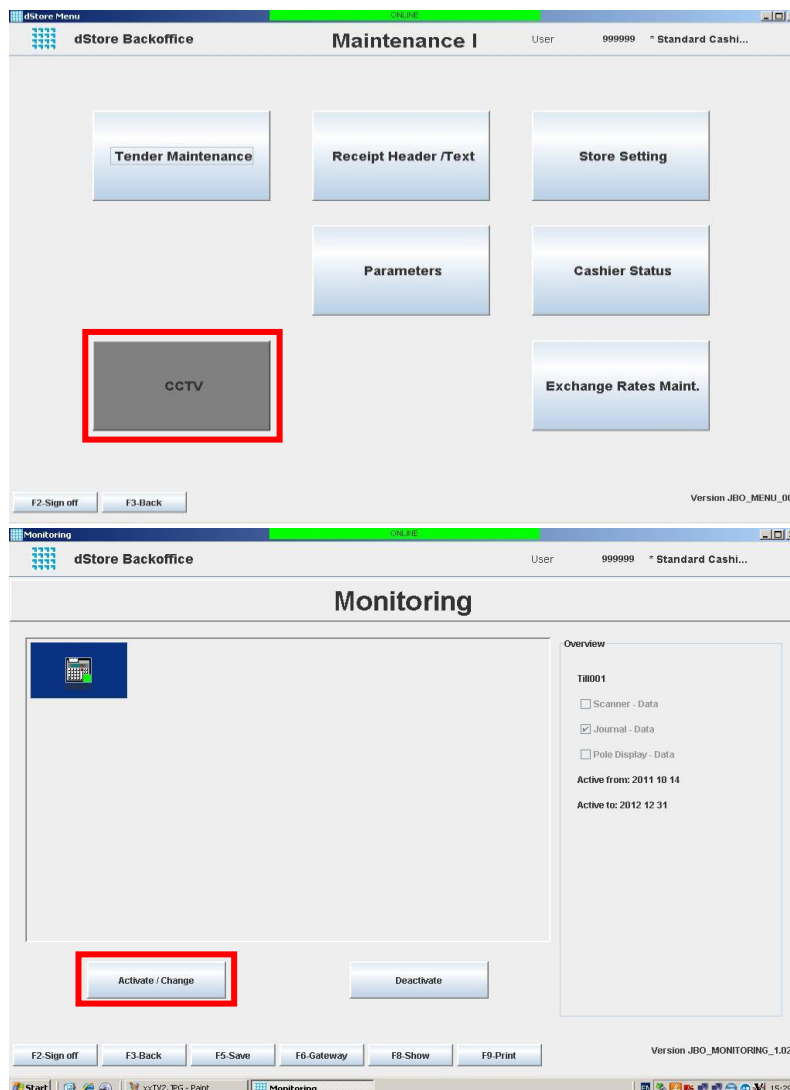
The dStore MonitorGateway service needs to be download and installed on the Cathexis NVR server where the SPAR dStore POS integration has been configured. This service receives data from all tills on the defined **UDP [read port]="1719"**, and retransmits the data to the **local NVR [write_server]="127.0.0.1"** on the configurable **UDP [write_port]** as defined in the `dbMonitorGateway.ini` file configuration in the section above (2.1.1.1) . Follow the steps below to correctly execute this installation:

1. Copy `dbMonitorGateway.exe` and `dbMonitorGateway.ini` to the `C:\` of the Cathexis NVR server.
2. Open a command window.
3. Change to `C:\` and run the command: `dbMonitorGateway.exe -install`
4. Once installed run the command: `net start dbmonitorGateway`

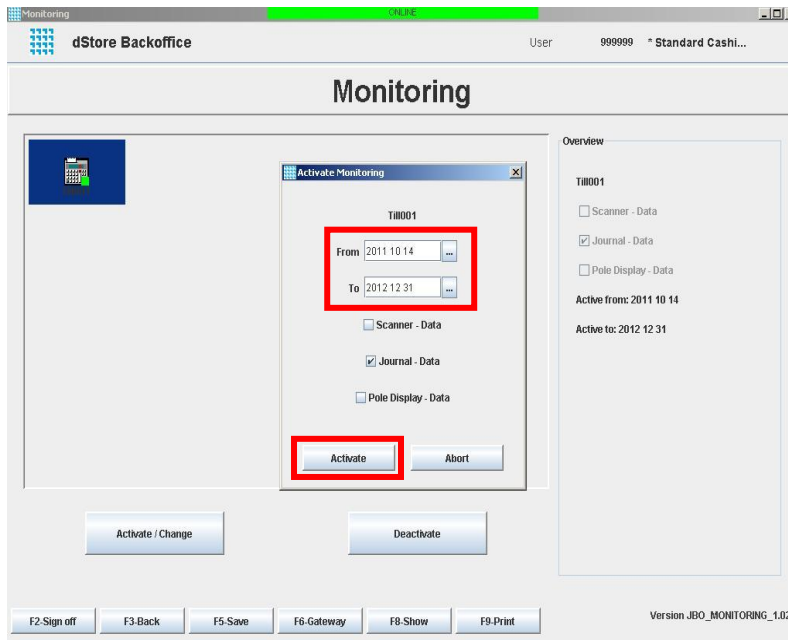
The service starts automatically on boot-up.

2.1.1.3 dStore BackOffice setup

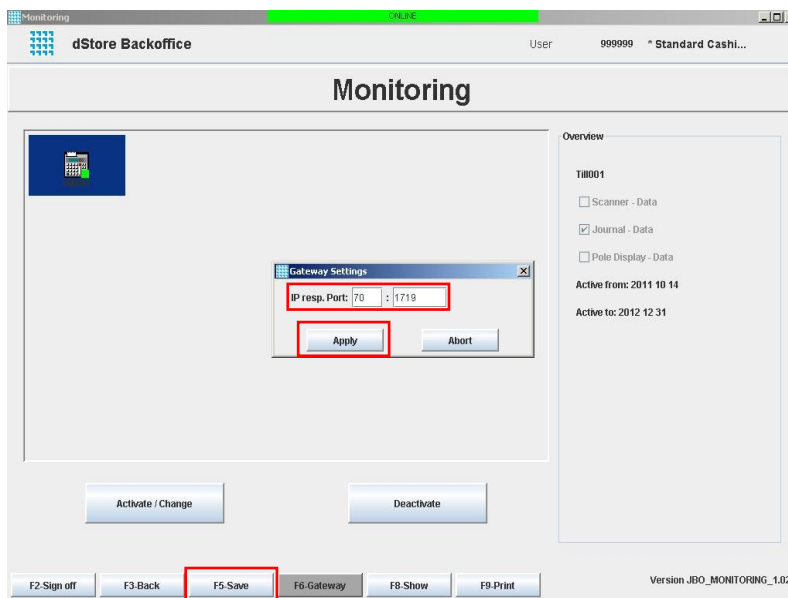
Follow the steps below to correctly execute/configure the **dStore BackOffice setup**.



1. Log in to dStore BackOffice.
2. Select **Maintenance I**.
3. Select **CCTV**.
4. Select a **till**
5. Click **Activate/Change**



6. Enter the **start and end date** and select the **Journal Data** option.



- 7. Select Gateway.
- 8. Enter the last digits of the **CCTV PC IP address (009)** and **port number (1719)**.
- 9. Apply changes.
- 10. Select **Save** and close the window.

Note: The IP Address must end with **009**. This is SPAR standard for CCTV PC, please ensure it is followed.

The tills will check if the CCTV is activated on boot up and when the cashier logs in.

Once this is done and the dStore MonitorGateway service is configured and communicating with both the Sigma POS CCTV setup and the CathesisVision SPAR dStore integration, then the next stage of configuring the integration can be started. Details on how to add the SPAR dStore integration device in CathesisVision software are provided in section 2.2 below.

2.2 Add a New Device in CathesisVision

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

2.2.1 The Integration Panel



There are two sections in the Integration Panel:

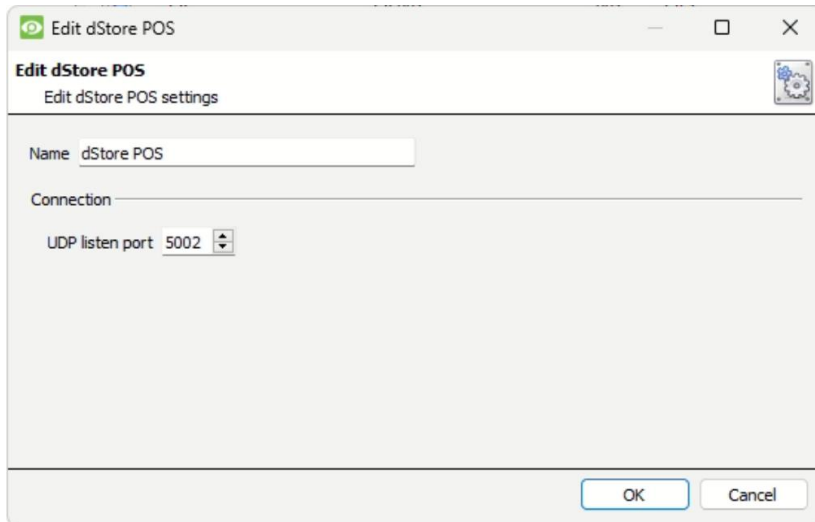
1. The **Devices** list shows the integration devices attached to the integration database.
2. The **Configuration** section enables editing/reviewing of the device selected in the **Devices** section.

2.2.2 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 **SPAR dStore** driver from the list.



3. Give the device a **descriptive name**.
4. Enter the UDP listening **port number**. This must match the UDP [write port] port defined in the dbMonitorGateway.ini setup.
5. Click **OK** when done.

3. Configuration Section (Tabs)

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

The Cathexis Device events tab will list the live POS transactions when data is received. The till objects are automatically populated when POS transactions are received from the respective tills.

3.1 Object Configuration Tab

The object configuration tab is where all the individual objects that comprise the integration may be viewed. If necessary, objects may be added manually.

SPAR dStore has two object types: **Till** and **Communication channel**.

Configuration of 'SPAR dStore POS'

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

Object type: All objects

	Type	ID	Name	Cameras	Object groups	License
	Communication channel	CommsChannel.__default__	Default			
	Till	Till.001	001	cam		

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 Right-click Options

	New will open up the dialogue to add a new object.
	Disable/Enable allows objects to be enabled/disabled manually.
	Prioritise license allows the user to give specific objects priority, when licenses are applied. (This is useful if there are fewer licenses than objects.)
	Delete will permanently remove this object from the list.
	Properties will open up the object editing window.

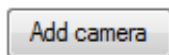
3.1.3 Edit Object

Open object **editing window** by selecting object and clicking **Edit button**, or **right-click Properties**.

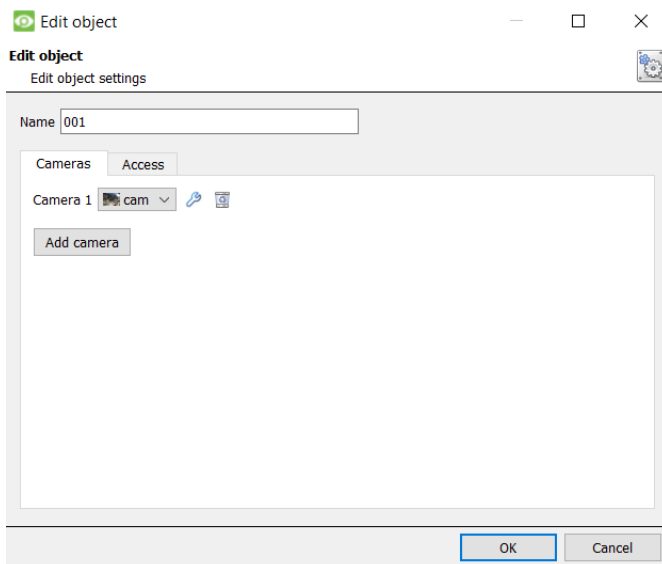
This window is where cameras are added to objects, overlays are configured, and access rights to the integration are added. These are dealt with in two tabs: **Cameras** and **Access**.

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 camera from the drop-down menu.



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

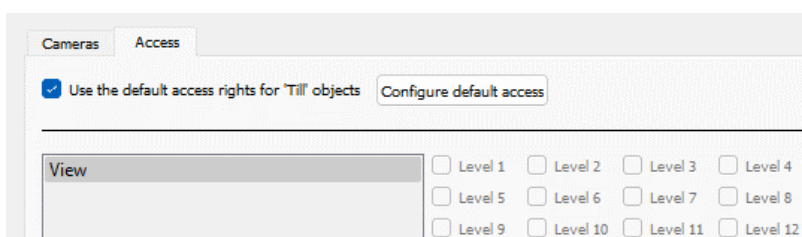


The spanner icon allows users to configure overlays. This is addressed below in 3.1.4.

Note:

1. Cameras will not be linked in the integration database.
2. Up to four cameras can be added to till objects and will be linked in the integration database.
3. 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.

3.1.2.2 Properties: Access



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

Under **View**, access levels can be set.

Note: If **Use default access rights** is checked, ensure 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. The path to follow for opening the configuration window for global or individual overlays is different, however the overlay configuration is the same. Overlays may be configured individually for **till objects**.

3.1.4.1 Configure Global Overlays

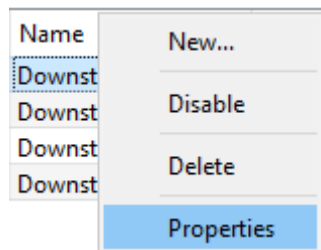
Global overlays may be configured for “Till”.

Navigate to the global overlays setup by first opening the Object configuration tab.

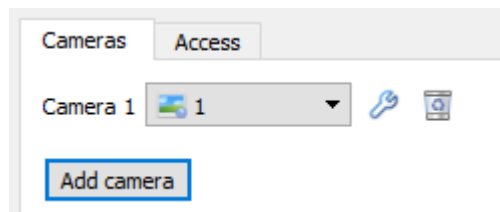


- Select the Till object from the **Object type** drop-down menu and click the Default Settings icon.

3.1.4.2 Configure Individual Overlays

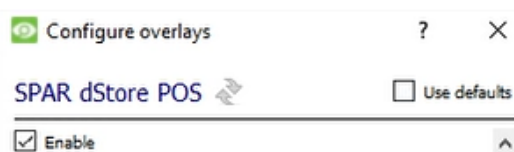


Right-click object and select **Properties** to edit the object.



- Add a camera to the object, and then click the settings icon that appears next to the camera name.

Default/Individual Options

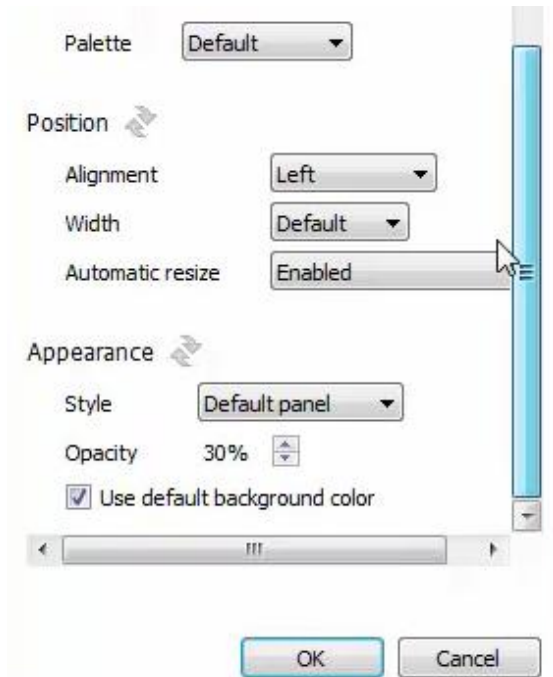


Use Defaults: This option is only available when editing individual overlays. Check this box to use the default configurations. Uncheck to edit overlays for the specific object.

Enable: This option is available in default and individual overlay configuration. In both cases, check the box to enable overlay configuration.

Click to reset values.

Overlay Configuration for Individual and Default



Select **Palette** options from the drop-down menu.

Define the **Position** of the overlay panel, including its alignment, width, and whether the overlay should automatically resize based on the size of the viewing screen/camera panel.

Define the **Appearance** of the overlay stream: Set the panel appearance to default; remove the border or remove the panel entirely (so that only the overlay text appears). Adjust the opacity as required.

To set a custom panel colour, uncheck **Use Default background colour**.

Click the colour box to bring up a colour chart.

3.2 Object Properties Tab

The Object properties tab allows the device object properties to be viewed and sorted by type.

3.2.1 Till Objects

Till objects will populate once device events are received from the relevant Tills.

Configuration of 'dStore POS'

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

Object type: Till

Name	Cashier ID	Cashier name	Transaction state	Licensed
001	7	Akhona	Active	
002	4	LONDEKA XXXXXXXXXX	Active	

3.2.2 Communication Channel

The communication channel object represents the UDP channel used by the integration device.

Configuration of 'SPAR dStore POS'

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

Object type: Communication ch

ID	Name	Cameras	Object groups
CommsChannel.__default__	Default		

Note: Due to the nature of UDP network communication, this channel will not go down when communication with the SPAR dStore system has been lost.

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.

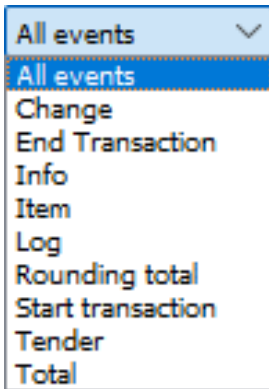
Once device events are received, the relevant Till objects will also populate (Object Configuration and Object Properties tabs).

Configuration of 'SPAR dStore POS'

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

All events

Event type							
Item	2023-03-23 10:12:49	001	60010850...	S/LIGHT LAUN BAR	1	18.99	18.99
Item	2023-03-23 10:12:50	001	60010850...	S/LIGHT LAUN BAR	1	18.99	18.99
Item	2023-03-23 10:12:51	001	60010873...	SUNLIGHT HAND D...	1	26.99	26.99
Item	2023-03-23 10:12:52	001	60010081...	SPAR MILK F/C(6)	1	69.99	69.99
Item	2023-03-23 10:12:53	001	60012310...	AUNT CAROLINE RI...	2	99.99	199.98
Total	2023-03-23 10:12:54	001	30	885.78			
Total	2023-03-23 10:12:55	001	30	877.82			
Tender	2023-03-23 10:12:55	001	Credit Card	877.82			
End Trans...	2023-03-23 10:12:55	001	25	Tax invoice	7	Akh...	30.0...
Start tran...	2023-03-23 10:12:56	001					
Item	2023-03-23 10:12:56	001	60010081...	SPAR MILK F/C(6)	1	69.99	69.99
Item	2023-03-23 10:12:57	001	60010081...	SPAR MILK F/C(6)	1	69.99	69.99
Total	2023-03-23 10:12:58	001	2	139.98			
Tender	2023-03-23 10:12:59	001	Credit Card	139.98			
End Trans...	2023-03-23 10:12:59	001	26	Tax invoice	7	Akh...	30.0...
Start tran...	2023-03-23 10:13:00	001					
Info	2023-03-23 10:13:00	Return	001	Return receipt	-	-	
Info	2023-03-23 10:13:00	Aut...	001	Authorization Cas...	21	GUGU	
Item	2023-03-23 10:13:00	001	60097107...	LAYS AMERICAN BB	1	-21.99	-21.99
Item	2023-03-23 10:13:01	001	60097107...	LAYS CAR/ONI&BAL	1	-21.99	-21.99



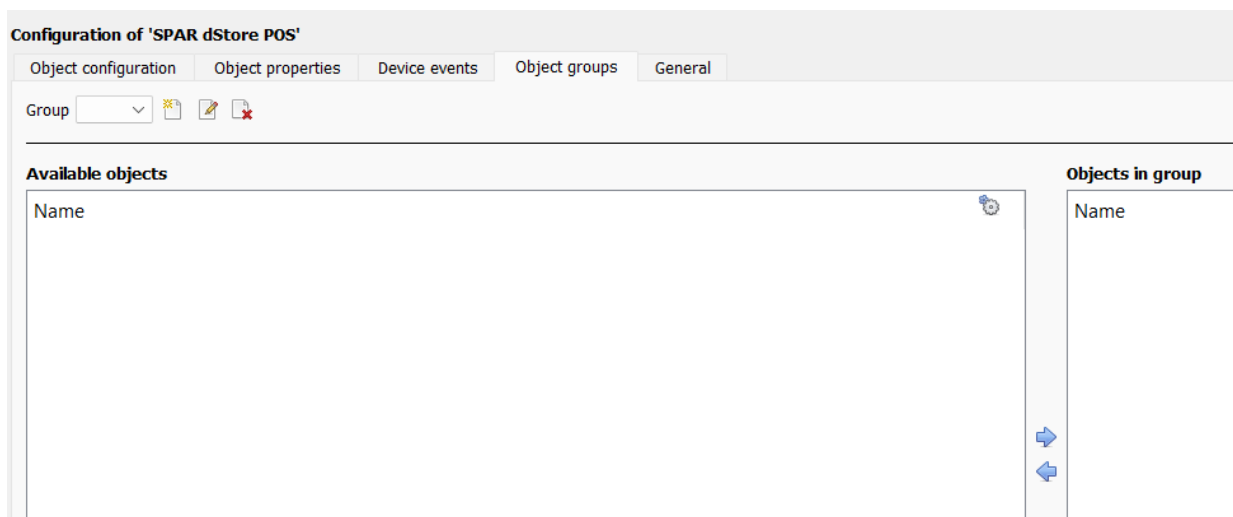
The SPAR dStore POS device has the following event types:

Change, End Transaction, Info, Item, Log, Rounding total, Start transaction, Tender and Total.

Selecting an event type will populate the relevant event fields in the tab. For details of the relevant fields see [1.4.2 Device Events](#).




3.4 Object Groups Tab

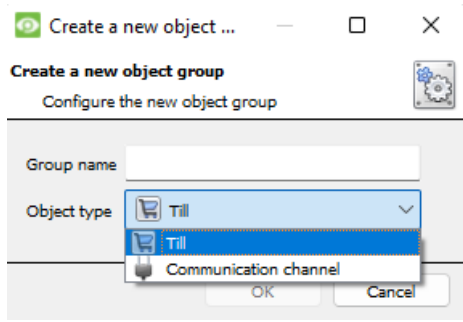
Groups of the same types of object may be created.



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

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



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

Click on the drop-down menu to select the **Object type**. Only objects of this type can be added to the group.

Note: Once a group has been created, the group’s object type may not be edited.

3.4.2 Add or Remove Objects

A list of Available Objects will then populate.



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

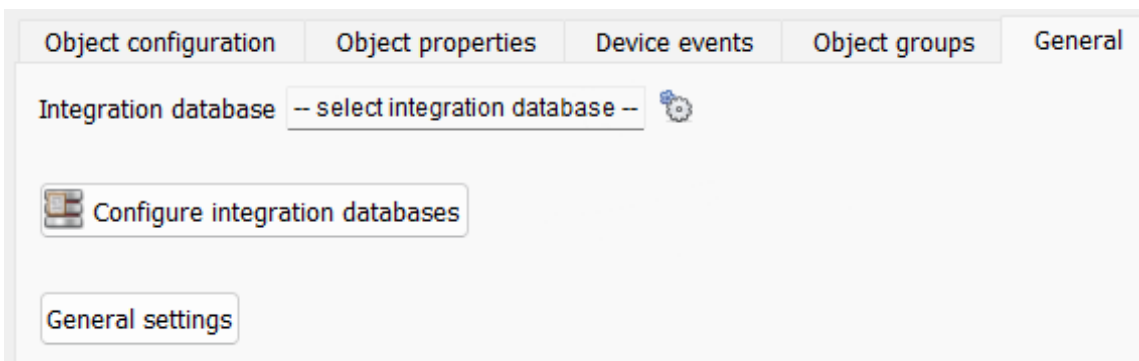
To **remove** these objects from the group, select them and click on the left arrow.

Note: Multiple objects may be selected at a time.

3.5 General Tab


The General tab deals with the integration database.

Here the user can 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, the integration will not function properly within the CathexisVision system.

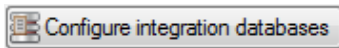
3.5.1 Select an Integration Database

 If an integration specific database has already been created, **select** it by clicking the **settings icon**.

Only databases relevant to the integration being added should appear. If a database has not been created, see below.

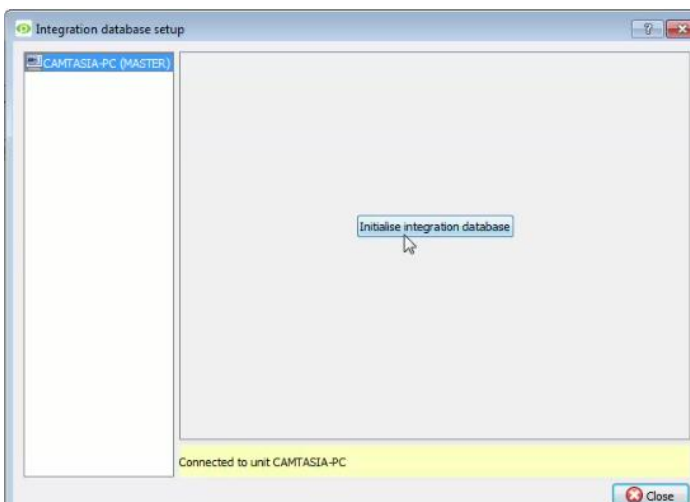
3.5.2 Configure a New Database

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**.



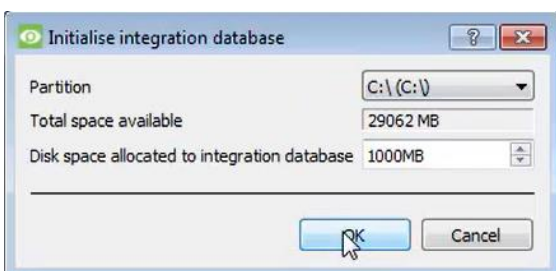
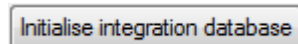
If an integration database has not yet been created, click the **Configure integration databases** button from the General tab. This opens the integration database setup.

3.5.2.1 Initialise Integration Database



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

Click **Initialise integration database**.

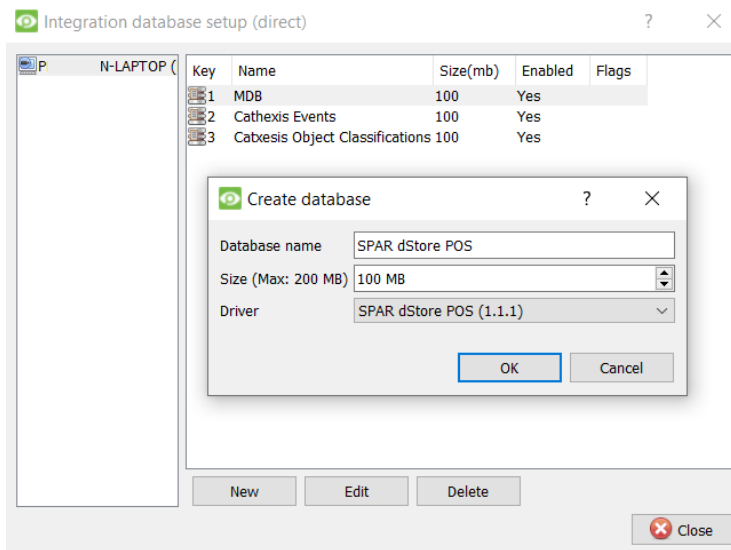


Choose the partition on which the database will be created.

Select disk space allocation.

Note: Once the size of the database has been set, the initial size cannot be increased.

3.5.2.2 Configure Integration Database



If the general integration database has already been initialised, or after initialising [\(3.5.2.1\)](#), create a new integration database for the current integration.

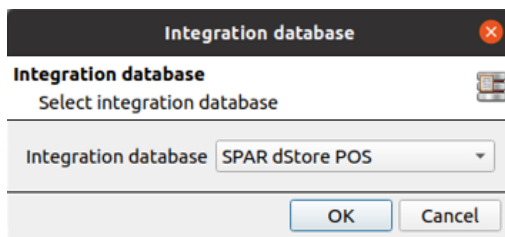
Select the unit that the database should be added to from the list on the left, and click **New** to create a new integration database.

Give the database a **name**.

Set the database **Size**.

Select the **SPAR dStore** driver from the drop-down menu.

3.5.2.3 Select the Integration Database



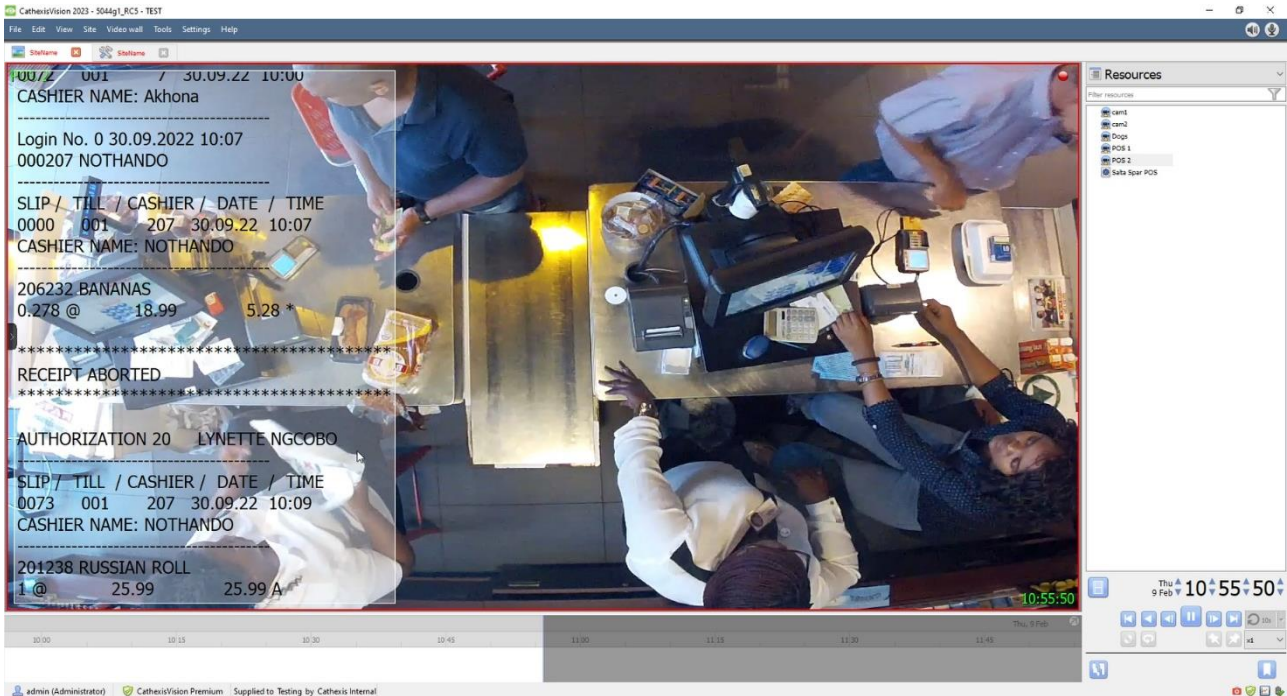
Integration database -- select integration database --

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

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

4. Camera Tab Overlay Setup

Once all the relevant settings have been configured, the SPAR dStore overlay can be pulled through over the appropriate camera feed.



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

4.1 Video Feed Options Panel

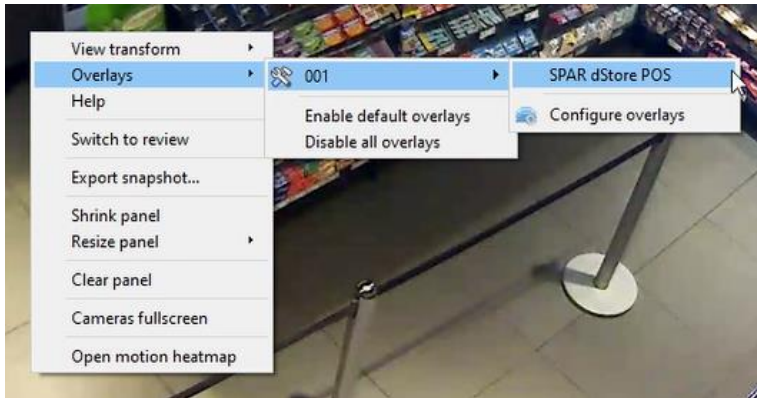


To bring up the overlay, click the arrow to the left of the screen, to pop out the Video feed options panel.

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

Right-clicking will also bring up overlay options.

4.1.1 Select the Overlay



Through the right-click option, one can select the overlay and it will appear over the video feed, as above.

Note: These overlays are an accurate and comprehensive summary of the data as sent by the SPAR dStore POS device to CathesisVision. All data received is included in the overlay except timestamps.

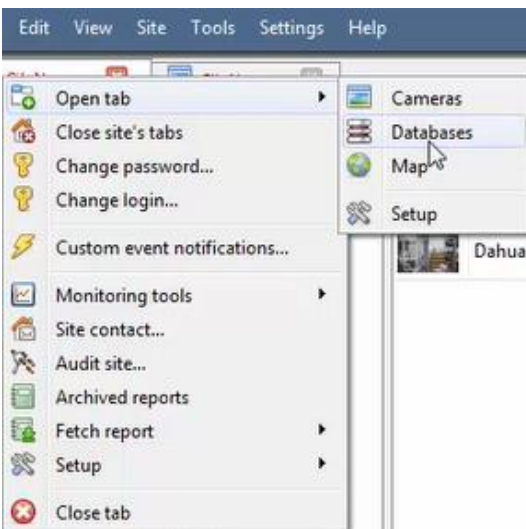
5. Database

The database tab allows database entries to be sorted, filtered, reviewed, and exported. Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathesisVision by the integrated device.

This chapter details the components of the SPAR dStore POS integration database which are [Transaction/Item view](#), [Associated video footage](#), [metadata and a representation of the till slip](#).

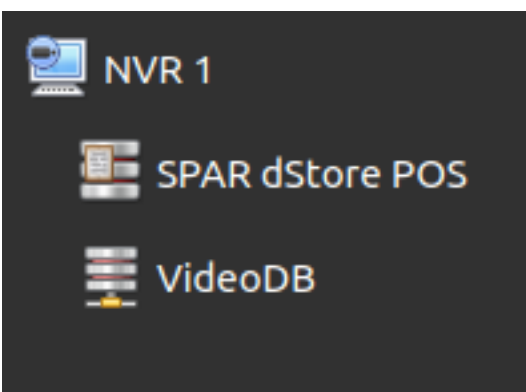
5.1 Navigate to the Database

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



To open database, follow one of two paths:

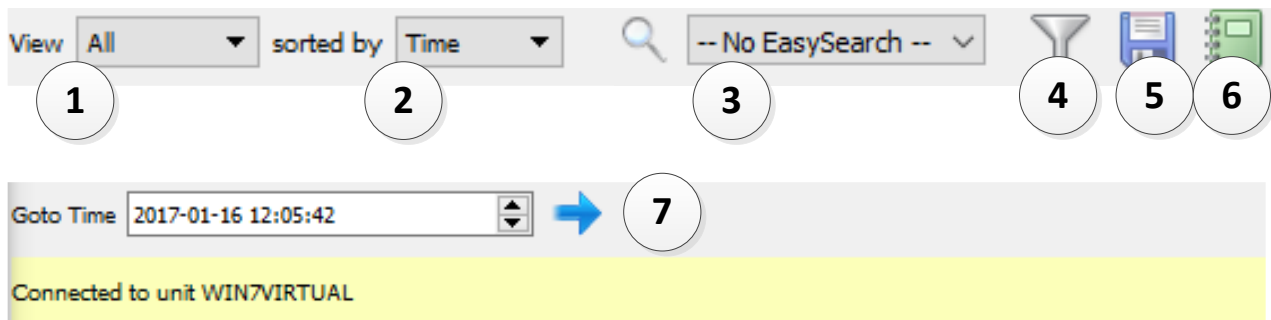
1. **Site Menu / Open Tab / Databases.**
2. **Right-click site tab / Open Tab / Databases.**


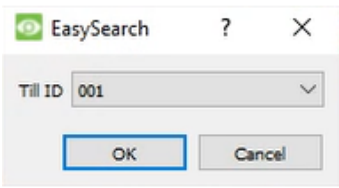







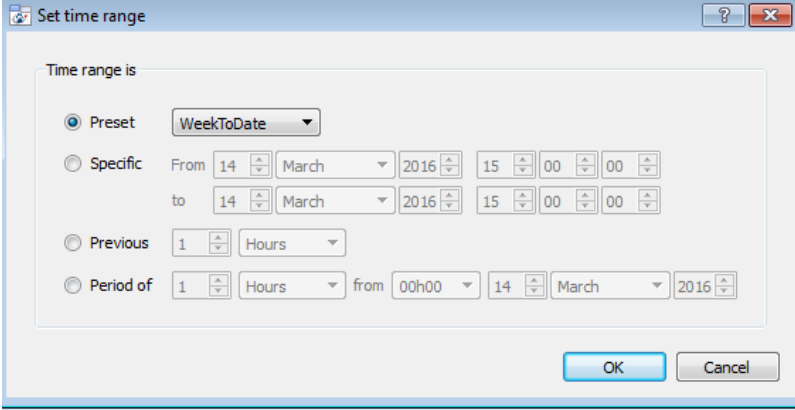

Select the SPAR dStore integration database from the database panel that opens on the left-hand side.

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

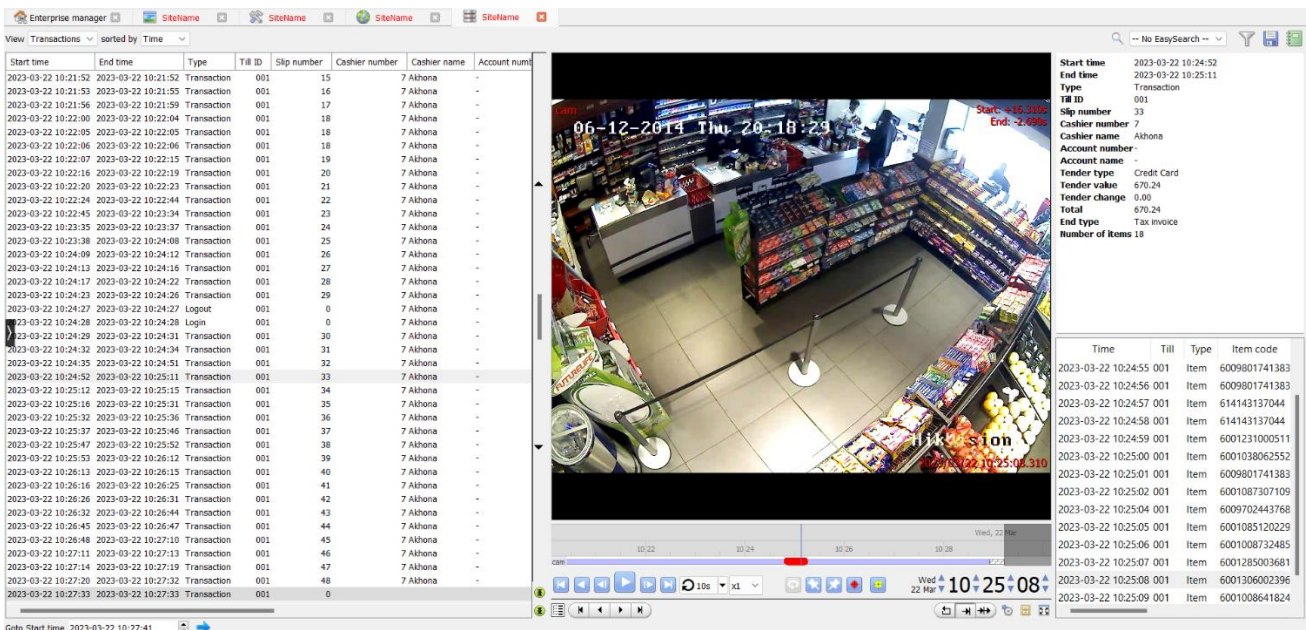
5.2 Database Interface



<p>①</p>	<p>View</p>	<p>Change the way that the database is presented. Some integration databases have multiple view options. The SPAR dStore POS integration has Transaction and Item views:</p> 
<p>②</p>	<p>Sorted by</p>	<p>The Events are sorted based on the following parameter: Time.</p>
<p>③</p>	<p>Easy Search</p>	<p>The easy search option allows one to quickly search the database using the below options:</p> 
<p>④</p>	<p>Filter </p>	<p>Filters offer a more advanced manner of sorting information in the Integration Database table.</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.
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	<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>  Then click on the arrow icon.

5.3 Viewing an Entry



The screenshot shows the 'Enterprise manager' interface. On the left, a table lists transactions with columns for Start time, End time, Type, Till ID, Slip number, Cashier number, Cashier name, and Account number. A transaction at 2023-03-22 10:24:28 is selected. The main area displays a video player showing a store interior. The video has a timestamp of 06-12-2014 Thu 20:18:23. On the right, a summary panel shows details for the selected transaction, including Start time, End time, Type, Till ID, Slip number, Cashier name, Account number, Tender type, Tender value, Tender change, Total, End type, and Number of Items. Below this is a list of items with columns for Time, Till, Type, and Item code.

5.3.1 Transaction/Item View

The Transaction/Item view is displayed on the left-hand side of the database. When Transaction view is selected the following data will populate entry columns:

Start time, End time, Type, Till ID, Slip number, Cashier number, Cashier name, Account number, Account name, Tender type, Tender value, Tender change, Total, End type, Number of items, and Links.

When Item view is selected the following data will populate entry columns:

Time, Till, Type, Item code, Description, Number of items, Item value, Total value, Links.

5.3.2 Recordings

Footage associated with a transaction is displayed in the centre of the database.



If there is any footage associated with a transaction or item, there will be a camera icon in the Links column (the right most column).

To view an associated recording, simply double click on a database entry, or click the camera icon under the Links columns. Then, click play in the video player.

Note: When the recording is played the item currently being scanned will be highlighted in the virtual till slip displayed on the bottom right of the screen.

5.3.3 Metadata

Start time	2023-03-22 10:24:52
End time	2023-03-22 10:25:11
Type	Transaction
Till ID	001
Slip number	33
Cashier number	7
Cashier name	Akhona
Account number	-
Account name	-
Tender type	Credit Card
Tender value	670.24
Tender change	0.00
Total	670.24
End type	Tax invoice
Number of items	18

Time	Till	Type	Item code
2023-03-22 10:24:55	001	Item	6009801741383
2023-03-22 10:24:56	001	Item	6009801741383
2023-03-22 10:24:57	001	Item	614143137044
2023-03-22 10:24:58	001	Item	614143137044
2023-03-22 10:24:59	001	Item	6001231000511
2023-03-22 10:25:00	001	Item	6001038062552
2023-03-22 10:25:01	001	Item	6009801741383
2023-03-22 10:25:02	001	Item	6001087307109
2023-03-22 10:25:04	001	Item	6009702443768
2023-03-22 10:25:05	001	Item	6001085120229
2023-03-22 10:25:06	001	Item	6001008732485

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

On the bottom right-hand side of the database, a virtual recreation of the slip a customer receives is displayed.

The metadata is a summary of the slip while the information in the slip shows the individual items bought.

5.3.2.1 Generate Metadatabase Reports



Click the save icon to open the Export window.

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

Click **Next**.

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

See below for the two options.

Export CSV

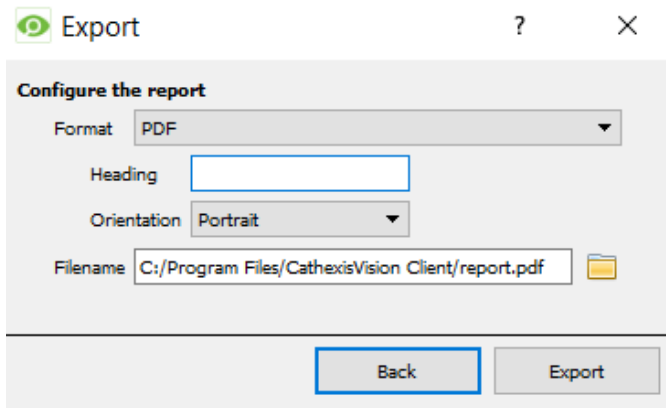
Select CSV **Format**.

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



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

Export PDF



Select PDF **Format**.

Give the PDF a **Heading**.

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

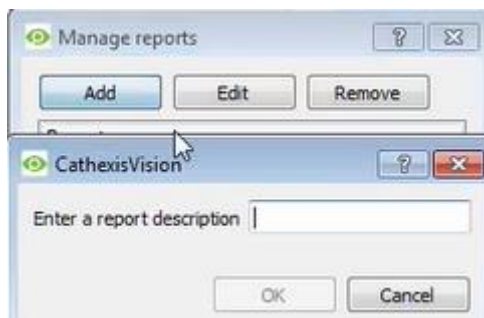
Edit the **Filename** by either entering it into text field (replacing **report.pdf**).



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

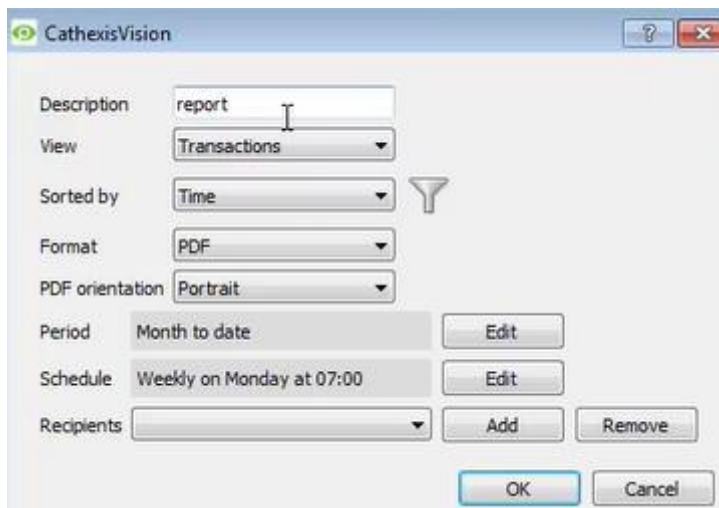
5.3.2.2 Scheduled Metadatabase Reports

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 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 report recipients by clicking **Add** and entering the relevant email address. Multiple recipients may be added. To remove a recipient, select the entry from the drop-down menu and click **Remove**.

6. Events

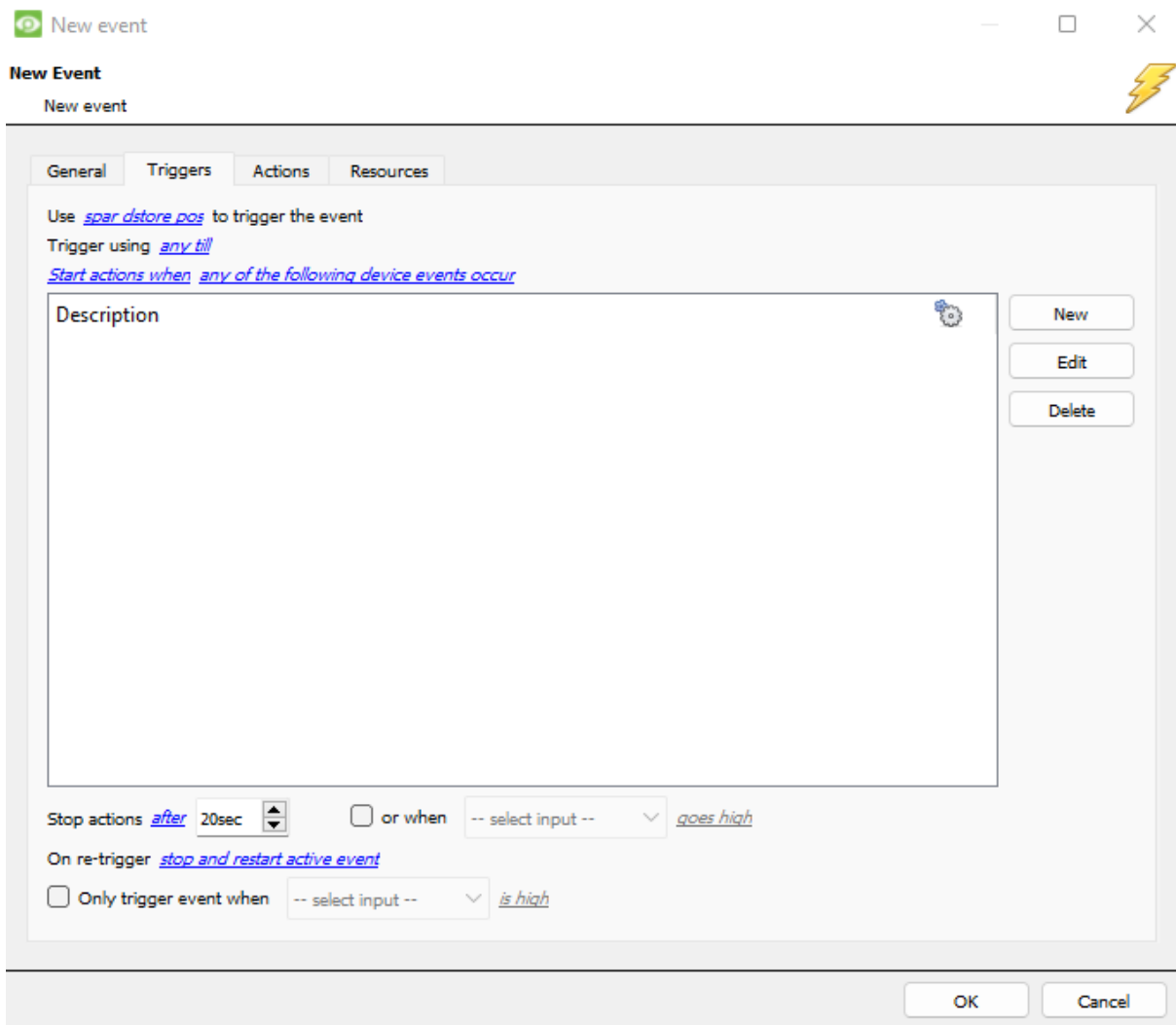
A CathesisVision event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document will detail the SPAR dStore specific aspects of events. There is a comprehensive guide to CathesisVision events in the main Setup Manual.

Most of the data that CathesisVision receives from a device is presented in the events interface.

6.1 Event Window

Events in CathesisVision are set up via the Event Window. This 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/are defined.
- In the **Actions Tab** the action/s which the event takes is/are defined.
- In the **Resources Tab**, the various site resources, which can be used as part of an event, are defined.



New event

New Event

New event

General Triggers Actions Resources

Use [spar dstore pos](#) to trigger the event

Trigger using [any till](#)

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

Description

New

Edit

Delete

Stop actions [after](#) 20sec or when -- select input -- [goes high](#)

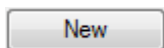
On re-trigger [stop and restart active event](#)

Only trigger event when -- select input -- [is high](#)

OK Cancel

6.2 Creating an Event

To create an event using the Cathesis SPAR dStore device, open the Events panel in Configure Servers by following this filepath: **Site menu / Open tab / Configure servers / Select server / Events**.

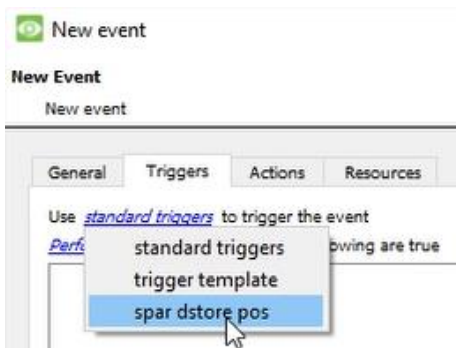


Once in Events management area, click the New icon at the bottom of the screen. This will open up the **New Event window**. Alternatively, right-click and select **New**.

6.3 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).

6.3.1 Set the Device as the Trigger



If creating a new event, the trigger type will default to: Use [standard triggers](#).

6.3.2 Trigger Types

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



Any till will trigger when any of these objects sends the selected trigger.

Specific system/till... will trigger an event from the specific object selected.

Communication channels will trigger only on the Communication channels.

Any device event will trigger on any event that occurs on the device. Within the “any device event” setup, set “device event rules”, which 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 in the **General Tab** to see a list of available descriptions.

6.3.3 While/When and Any/All

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

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.

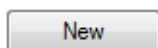


Trigger using [any till](#)
[Start actions when any of the following device events occur](#)

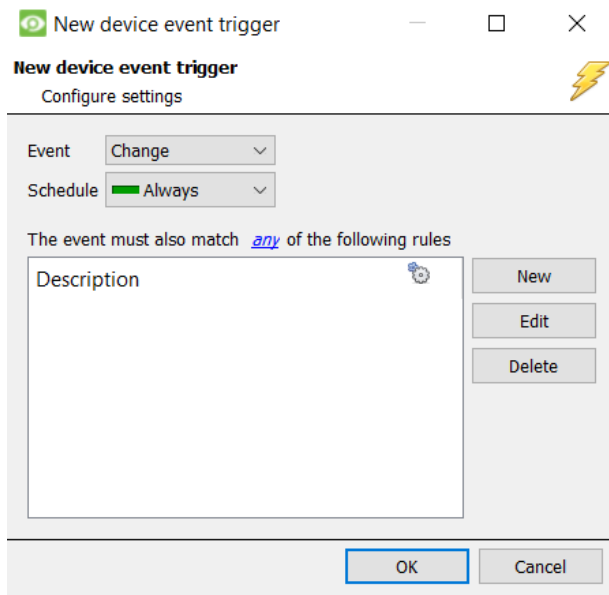
To change these settings, click on the **blue hyperlinks**.

6.3.4 Define the Trigger

After selecting a master trigger type, it is necessary to add a trigger to the event. The following example is based on a user having selected "Trigger using **Any device event**".



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



Within the “any device event” option, choose what type of device Event will be the trigger. Choose an event type from the drop-down menu.

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

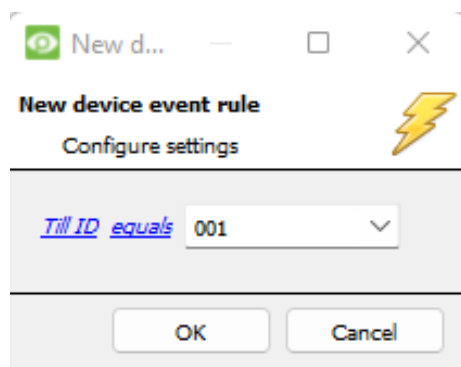
Choose whether “any”, or “all” constraints need to be fulfilled to set off a trigger.

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

6.3.4.1 New Device Event Rule

If no constraints are set, every device event will cause a trigger. Once constraints are set, only the constraints chosen will trigger the event.

Once the type of device event that will be the trigger is selected, add a new **device event rule**.



Click **new** in the **New device events trigger** window to add a new device event rule.

In the SPAR dStore POS you can choose the following constraints.

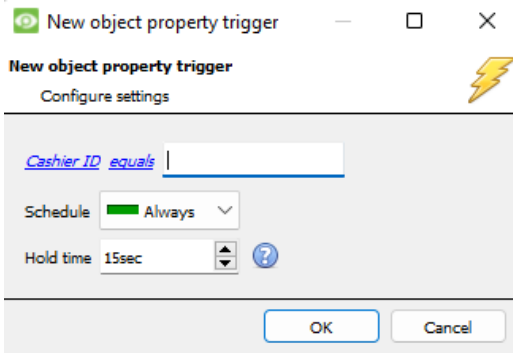
Till ID, Type, or Value

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

6.3.5 New Object Property Trigger

If the user has defined the trigger according to properties meeting criteria (in while/when and any/all), the **New object property trigger** dialogue box will open when **New** is clicked. In these instances, further constraints do not need to be set, since they are being added one at a time. This option is better if a few triggers have been selected to use.

Note: This is also true for groups, since a group may only be made up of one object type.



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 display the rules options.

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

6.3.6 Event Example

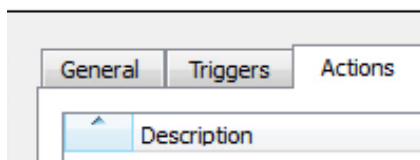
Use [spar dstore pos](#) to trigger the event
 Trigger using [any till](#)
[Start actions when any of the following device events occur](#)

In this example, an event is configured which will trigger when the state of the SPAR dStore system equals 'any till'.

6.4 Actions

New Event

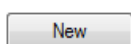
New event



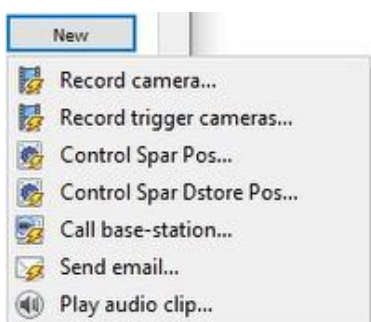
Having defined the triggers that will initiate an event, the user will need to define Actions.

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

6.4.1 New Action



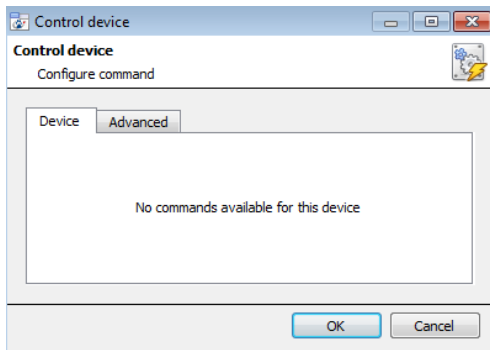
To add an action, click New in the Actions tab.



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.

Note: With many integrations there will be the option to control the integrated device, as one of the actions. This is not the case with the Cathexis SPAR dStore device. Although the option is presented in the menu, it is **not possible** to control the Cathexis SPAR dStore device as a system action.



7. Maps

It is possible to add the SPAR dStore POS device to a site map, which will allow for a number of action options when POS events are triggered. These options include the animation of triggered zones and connecting to site cameras when zones are triggered, etc.

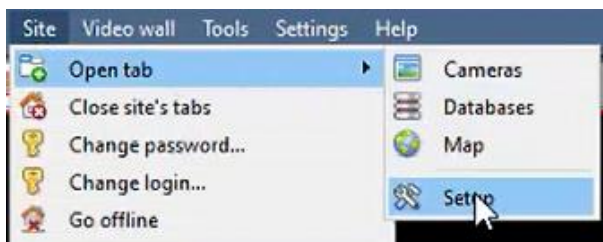
Note:

- This section will only deal with the specifics of the SPAR dStore POS device. For more information on using the CathesisVision Map Editor and Map Tab, please consult the **Map Editor Operation Manual**.
- The CathesisVision Map Editor is only available on **Windows** operating systems.

7.1 Add the SPAR dStore POS Device as a Resource

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

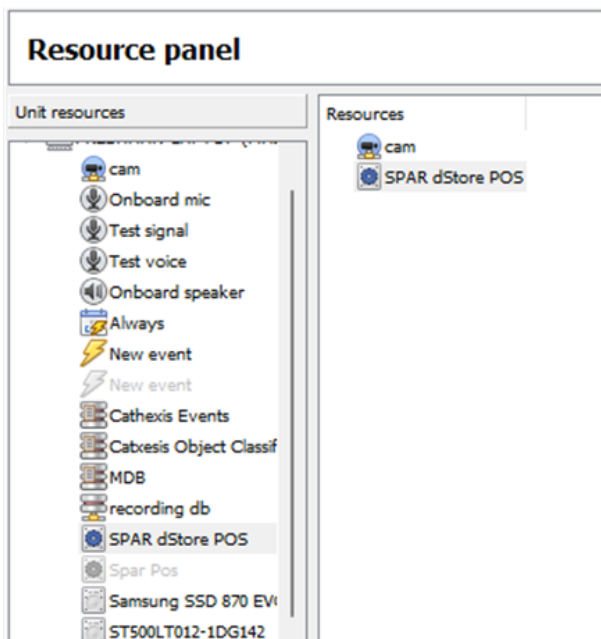
7.1.1 Add the Device in the Resource Panel



Navigate to the **Resource Panel** by following:
Site / Open Tab / Setup / Configure resource Panel



Click the **Configure Resources** icon.

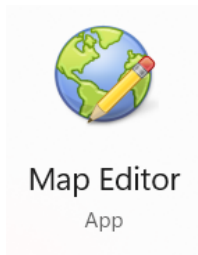


In the site's Resource panel, a list of resources will be displayed.

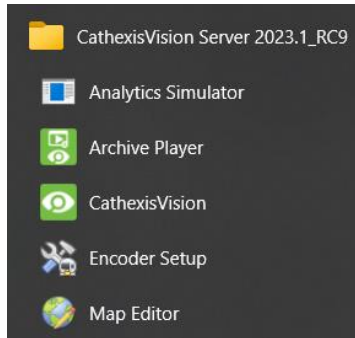
Select the **SPAR dStore POS** integration device. Drag and drop it under **Resources** on the right.

The SPAR dStore POS integration device will now be listed as a Resource in the Map Editor.

7.2 Configure Map Editor

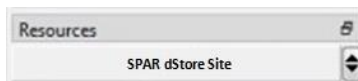


Open the **CathesisVision Map Editor** software.



Follow this filepath:

Start / All Programs or Apps / CathesisVision / Map Editor



In the **Resources** panel on the bottom right, **select** the SPAR dStore POS Site.

The SPAR dStore POS integration device will then be listed as a resource underneath.

7.2.1 Add the Device in Map Editor

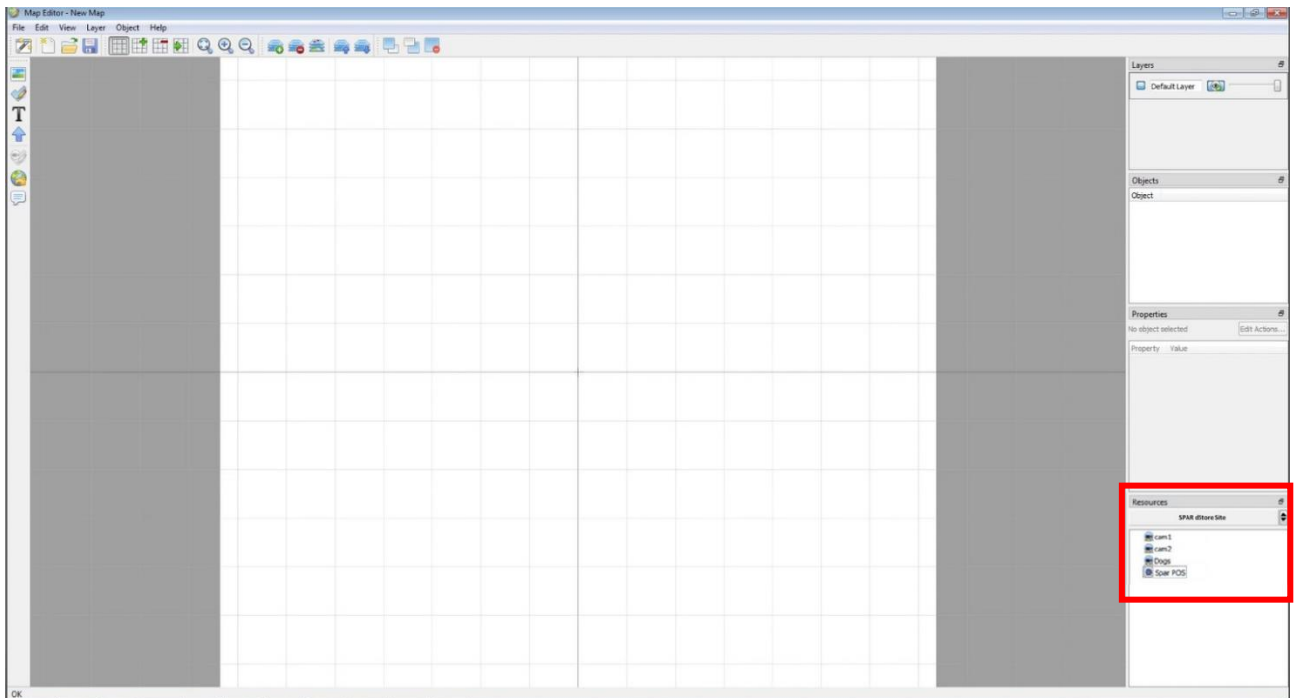
Once the SPAR dStore POS device has been added as a **Resource** in CathesisVision, it will be available to select in the **Resources** panel in the bottom-right corner of the Map Editor.



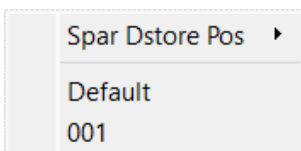
- Select the site from the dropdown menu.
- Once the site is selected, the device as well as **Site Resources** which have been enabled in CathesisVision will appear in the list.

7.2.2 Add Device Objects in Map Editor

The Map editor will appear as below, with the selected site and device appearing in the bottom right.



Drag the SPAR dStore POS device from the Site Resources list onto the map area.



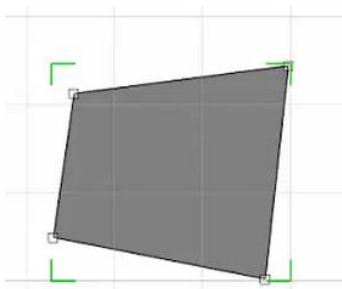
Select one of the associated objects.

Note: To add multiple objects, repeatedly drag-and-drop the SPAR dStore POS device onto the map area to bring up this option. Conversely any available individual device resources can also be dragged from the Site Resources list onto the map area.

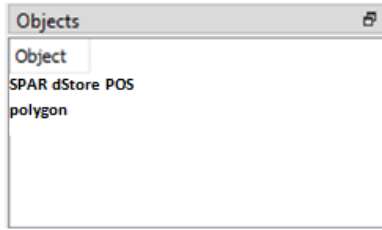
7.2.3 Add a Polygon



On the options bar on the left, click the **Add polygon** icon.



Draw a polygon on the map interface.



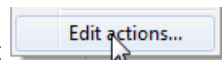
The polygon will now be listed under **Objects** on the right.

7.2.4 Adding and Editing Device Actions

To add or edit actions to the device objects:

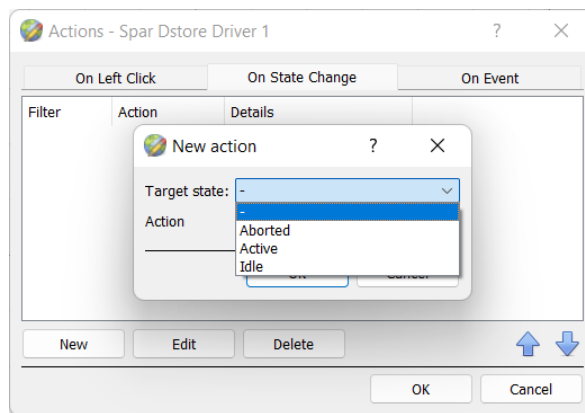


Right-click the map object and select



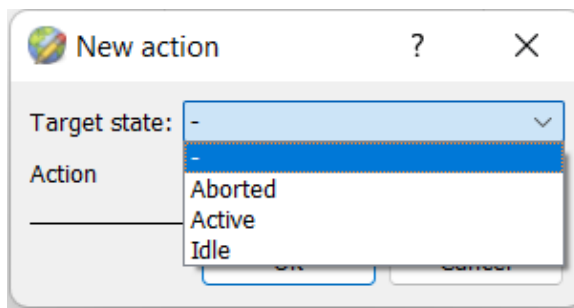
For CathesisVision integrations, Actions may be set for **Left/Right-Clicks**, **State Changes** and **Events**. The SPAR dStore POS has the ability to only set a **state change** to trigger and action.

7.2.4.1 On State Change



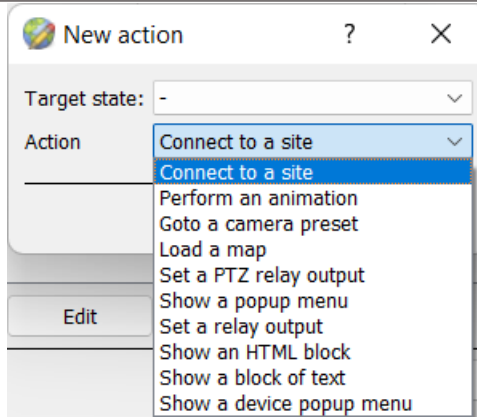
In the **On State Change** tab, select **New**.

This will bring up the **New action** window.



The three target state options are **Aborted**, **Active**, and **Idle**.

Select the **Target state** you wish to set an action for.

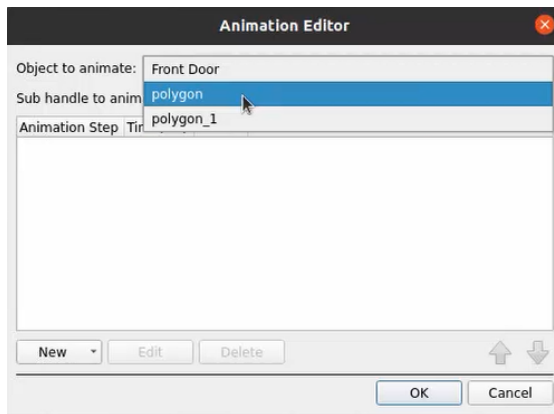


Select an **Action**. In this example, the user has selected Perform an animation.

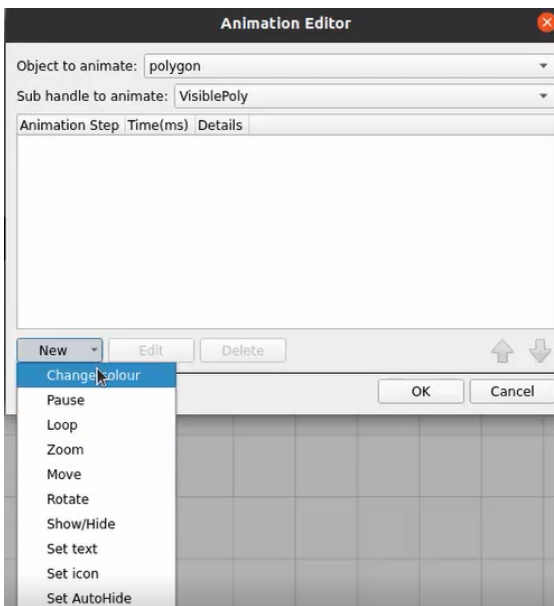


Click OK

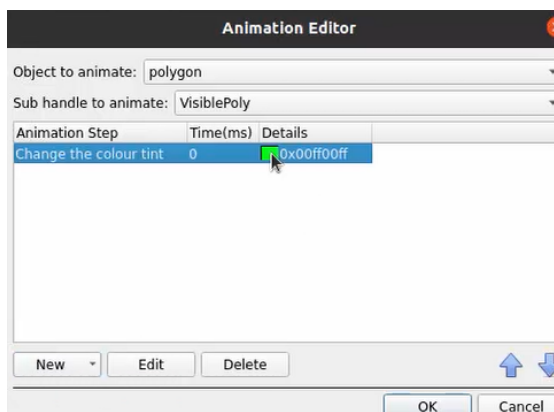
Note: Once you click OK a pop-up to configure the chosen Action will appear. Create the action as desired.



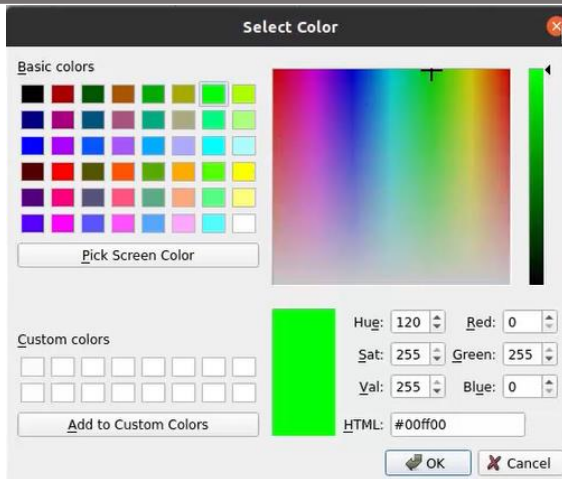
In the Animation Editor window that opens, select the polygon as the **Object to animate**.



Select **Change colour** from the drop-down list.



Double-click on the block of colour under **Details** to edit the colour. A window will appear with colour options.



Select the colour which will indicate that the Target State is **Offline**. In this example, the user has chosen to keep the colour as green.

Click **OK**.

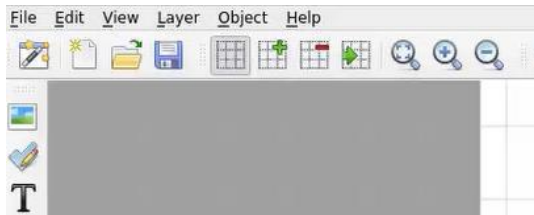
On returning to the **Animation Editor** window, click **OK**.

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

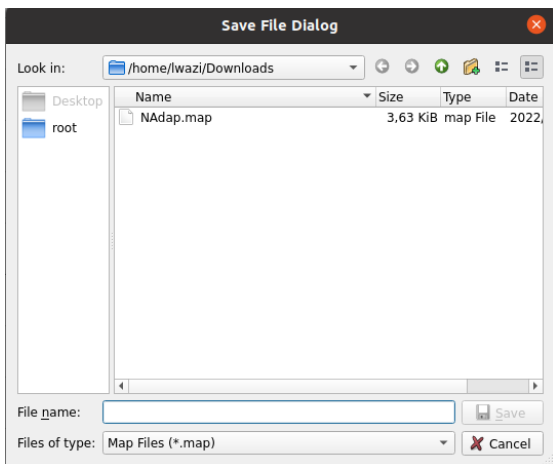
Once finished, save the map.

NB: The map must not be saved in the Work folder of the installation directory.

7.3 Save Map



In the map editor, click the **Save** icon.

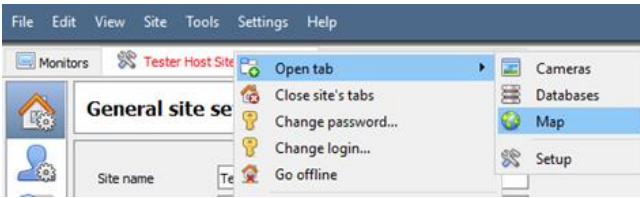


Give the map a name. Click **Save**.

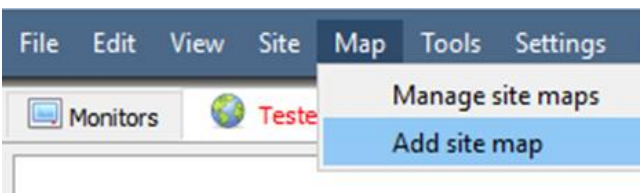
NB: The map must not be saved in the Work folder of the installation directory.

7.4 Load Map to CathesisVision

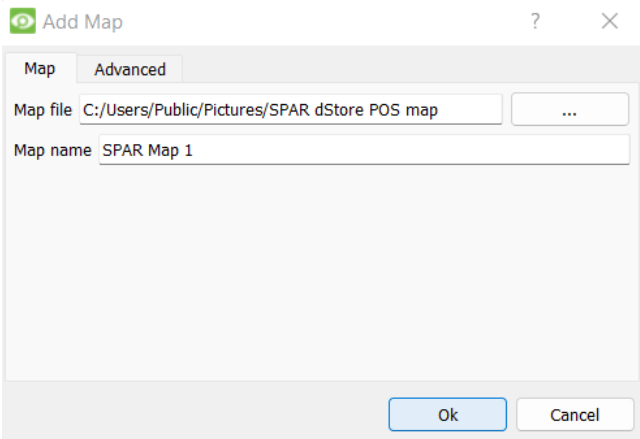
Now the completed and saved map can be uploaded to CathesisVision. Once the map is open, all objects added to the map area in the Map Editor will be visible on the map, and all actions set will be available.



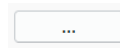
In CathesisVision, go to: **Site / Open tab / Map**



Then, in the Map tab, go to: **Map / Add site map**



The **Add Map** window will open.



Click the icon to retrieve the **Map file** from its location.

Give the map a **descriptive** name.

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.

8. 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, contact support@cathesisvideo.com

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>