



Risco Alarm Panel RP432B

Integration App-note

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1. Introduction

This document will detail the integration of the Risco Alarm Panel (RP432B), with CathesisVision’s software. Functionally this integration will entail the triggering of standard CathesisVision Events, based on the triggers from the Risco device.

Note: For information regarding the regular operation of Risco device, please consult the relevant manufacturer’s documentation.

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 2016 Service Pack 2 and later.
- Hardware requirements in order to have a simultaneous connection to the NVR and the Risco Cloud:
 - Risco Panel version RP432M00000E.
 - IPC (LAN module) version RP512IP0000A.

Note:

When using a serial port connection CathesisVision is unable to detect the Risco device if the Controller or Communications channel has lost connection.

1.1.2 License Requirements

The Cathesis Risco integration license requirements are as follows:

License Name	License Description	
CALM-2000	CathesisVision alarm 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.

A NOTE ON CAMERA CHANNELS

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

1.2 Integration Components

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

Device	The device is CathesisVision software’s interface, which handles all the interaction between CathesisVision and the integrated hardware. When an integration is added to the CathesisVision system, a device is added. The messages received from the device are called Device Events.
Objects	Objects are the individual pieces of hardware that comprise the integration. There may be multiple "object types" under the objects group. For example, the main controller and door nodes of an access control system are both objects. They are different types of objects.

1.3 Features and Abilities

CathesisVision connects to the Risco alarm panel via a TCP connection. An IP add-on module is necessary to give the Risco device the necessary Ethernet port.

This Risco system can have up to 8 partitions and either 32 or 50 zones, depending on the hardware.

1.3.1 Device Objects

This integration has three object types: **System**, **Partition** and **Zone**.

Object Type	Abilities
General	<ul style="list-style-type: none"> This integration has three object types: System, Partition and Zone. Objects may be linked to cameras to associate device events with video footage. System objects store overview information about the device.

		<ul style="list-style-type: none"> This integration may issue commands to the partition and zone objects, but will not issue commands to the system object.
System	Object States	<ul style="list-style-type: none"> Bypassed. Troubled.
Partition	Object States	<ul style="list-style-type: none"> Not ready. Arm. Home stay. Ready to Arm.
	Command	<ul style="list-style-type: none"> Arm groups within a partition (Group A, B, C, D). Partition states: <ul style="list-style-type: none"> ○ Arm-away ○ Arm-stay ○ Disarm.
Zone	Object States	<ul style="list-style-type: none"> Armed. Alarmed. Bypassed. Troubled. Tampered.
	Command	<ul style="list-style-type: none"> Bypass. Enable.
Output	Object states	<ul style="list-style-type: none"> Clear. Set.

USEFUL LINKS

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

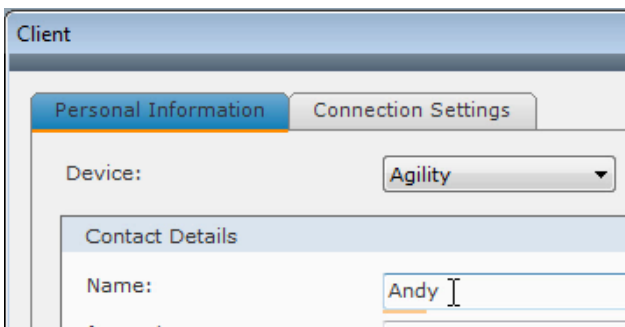
Find answers to Cathesis **Frequently Asked Questions**: <https://cathesis.crisp.help/en/?1557129162258>

2. Device Addition and Configuration

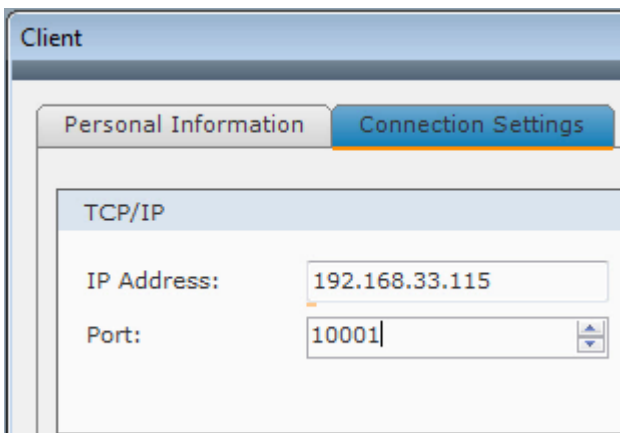
This section will detail the procedure for setting up the two systems to effectively communicate with each other.

2.1 Risco Setup

Before adding the Risco device to CathesisVision, the user will need to use the Risco configuration software to set up the Risco device to communicate with CathesisVision. This will require logging in with an administrator’s credentials, setting up a client user, and filling in the connection settings.



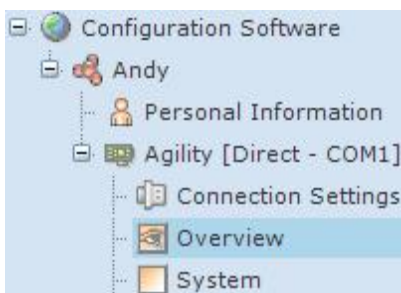
Fill in the relevant user fields.



Under the **Connection Settings** tab enter in:

IP Address of the Risco panel.

The **Port Number** (the default is 10001).



The device information should now populate in the Risco software.

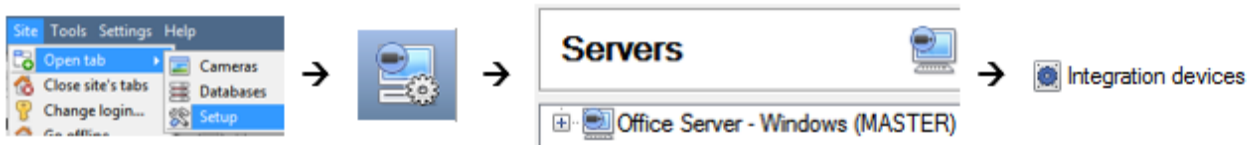
Note: The Risco configuration software needs to be closed in order to add the device to CathesisVision. Ensure that it is closed after the above steps have been completed.

2.2 Devices Section (Add a New Device in CathesisVision)

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

2.2.1 The Integrations Panel

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



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.

VirtualNVR - Integration devices

Devices

Name	Driver	
DSC	DSC IT100 alarm panel	
Moduteq Demo	Moduteq C perimeter m...	
Stinger Demo	Stinger	
WBX Demo	WBX Weighbridge	

New device
Edit device
Delete device

4 items

Configuration of 'DSC'

Object configuration Object properties Device eve

Object type All objects

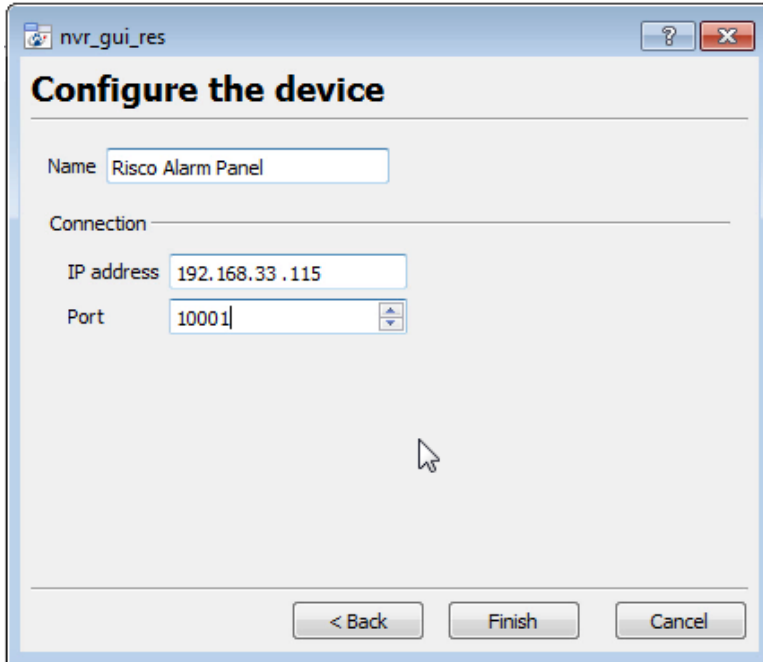
	Type	ID	Name
	Communication channel	__default__	Default

New Edit Delete 1 item

2.2.2 Device Addition

New device

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



3. Give the device a descriptive **name**.
4. Enter in the **IP address** of the Risco panel.
5. Enter in the **port number** of the Risco panel.
6. Click Finish.

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

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**.

3.1 Object Configuration Tab

The object configuration tab is the tab where all the individual objects that comprise the integration may be viewed. The Risco device has three object types **Partition**, **System** and **Zone**.


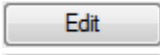

Configuration of 'Risco Alarm Panel'

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

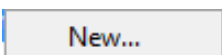
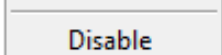
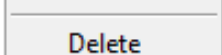
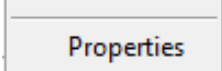
Object type: All objects

Type	ID	Name	Cameras	Groups
Partition	Partition 1	Partition 1		
RiscoSystem	RiscoSystem	Risco System		
Zone	Zone 1	Zone 1		
Zone	Zone 2	Zone 2		
Zone	Zone 3	Zone 3		
Zone	Zone 4	Zone 4		
Zone	Zone 5	Zone 5		
Zone	Zone 6	Zone 6		
Zone	Zone 7	Zone 7		
Zone	Zone 8	Zone 8		
Communication channel	__default__	Default		

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 CathesisVision configuration.

3.1.2 Object Configuration Right-Click Options

-  **New** will open up the dialogue to add a new object.
-  **Disable/Enable** allows objects to be enabled/disabled manually.
-  **Delete** will permanently remove this object from the list.
-  **Properties** will open up the object properties. The object may be edited from here. Specifically, assign cameras to this object, and define user access levels.

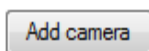
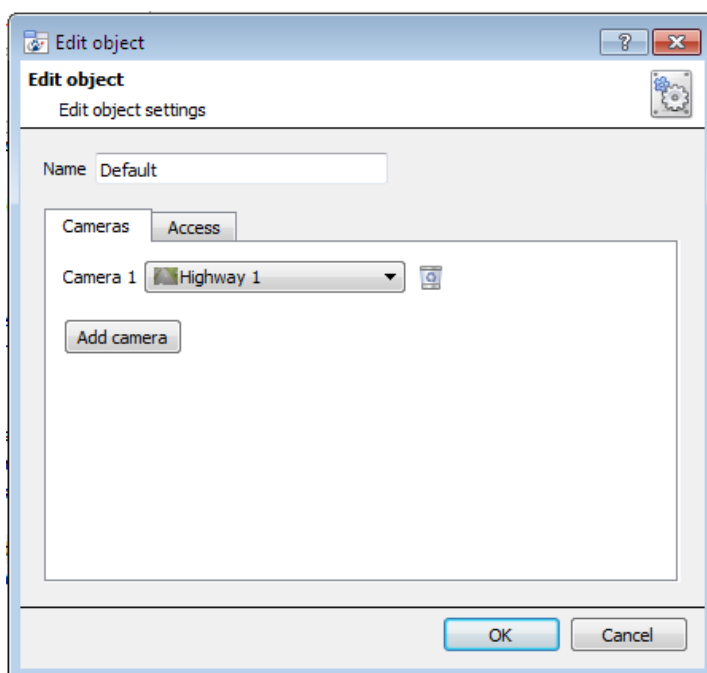
3.1.3 Edit Object

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: Cameras

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



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



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

Note:

1. While multiple cameras can be added here, only the first camera added with the object will be linked in the integration database.
2. If **continuous recording is not** set up on associated cameras, there is the risk of an object event triggering while the cameras are not recording. To record cameras only when an object triggers, set up **Events** that trigger a recording, when one of these objects is activated.

3.1.3.2 Properties: Access



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

Set the access levels under **View**.

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

3.2 Objects Properties Tab

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

In the case of the Risco device, the options are to view by **Zone**, **Partition**, and **riscosystem**.

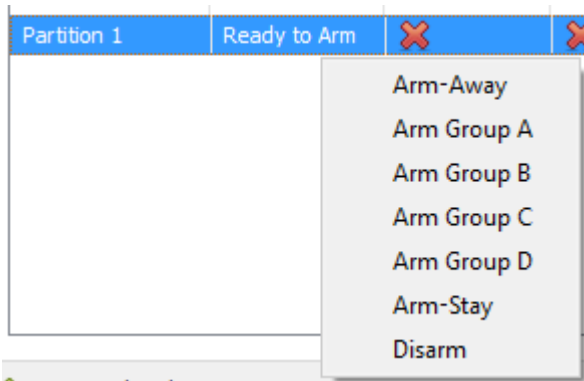
Configuration of 'Risco Alarm Panel'

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

Object type: Zone

Name	Armed	Alarm	Bypassed	Trouble	Tamper
Zone 1	✗	✗	✗	✗	✗
Zone 2	✗	✗	✗	✗	✗
Zone 3	✓	✗	✗	✗	✗
Zone 4	✓	✓	✗	✗	✗
Zone 5	✗	✗	✗	✗	✗
Zone 6	✗	✗	✗	✗	✗
Zone 7	✗	✗	✗	✗	✗
Zone 8	✗	✗	✗	✗	✗

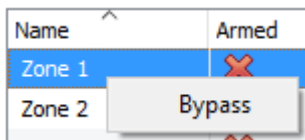
3.2.1 Partitions



Right-clicking on a partition will give the user the following options:

- **Arm-away**
- **Arm Group**
- **Arm-stay**
- and **Disarm**.

3.2.2 Zones



Right-clicking on a zone gives the user the option to **Bypass** that zone.

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.

Configuration of 'Risco Alarm Panel'

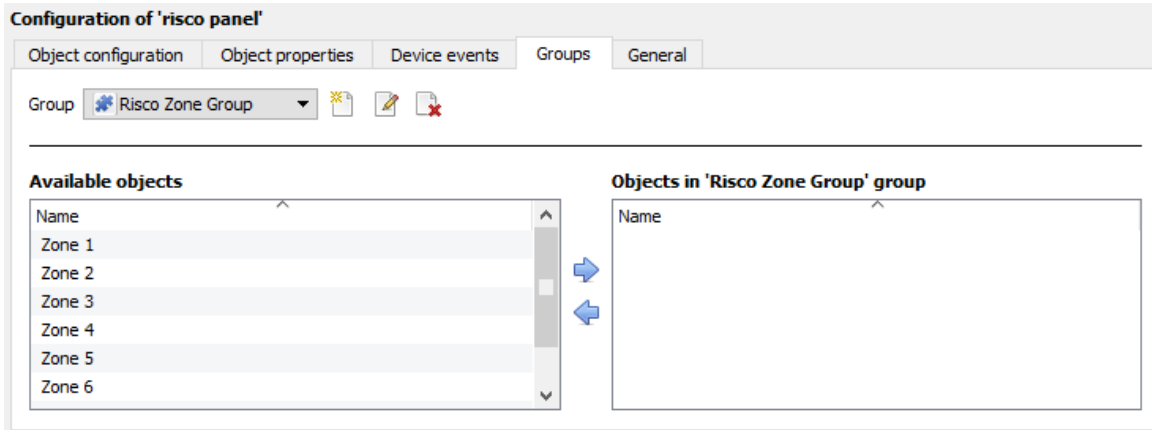
Object configuration | Object properties | **Device events** | Groups | General

All events ▼

Event type			
Zone Message	2015-09-10 09:59:45.849	Zone 8	Soak Test trouble cleared
Zone Message	2015-09-10 09:59:45.849	Zone 8	Communication trouble cleared
Zone Message	2015-09-10 09:59:45.849	Zone 8	Enable
Zone Message	2015-09-10 09:59:45.849	Zone 8	Low Battery trouble cleared
Zone Message	2015-09-10 09:59:45.849	Zone 8	Lost cleared
Zone Message	2015-09-10 09:59:45.849	Zone 8	Trouble cleared

3.4 Groups Tab

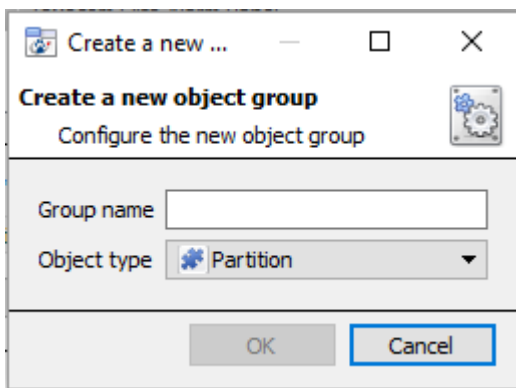
Groups of the same type of object can be created.



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

3.4.1 Create a Group

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

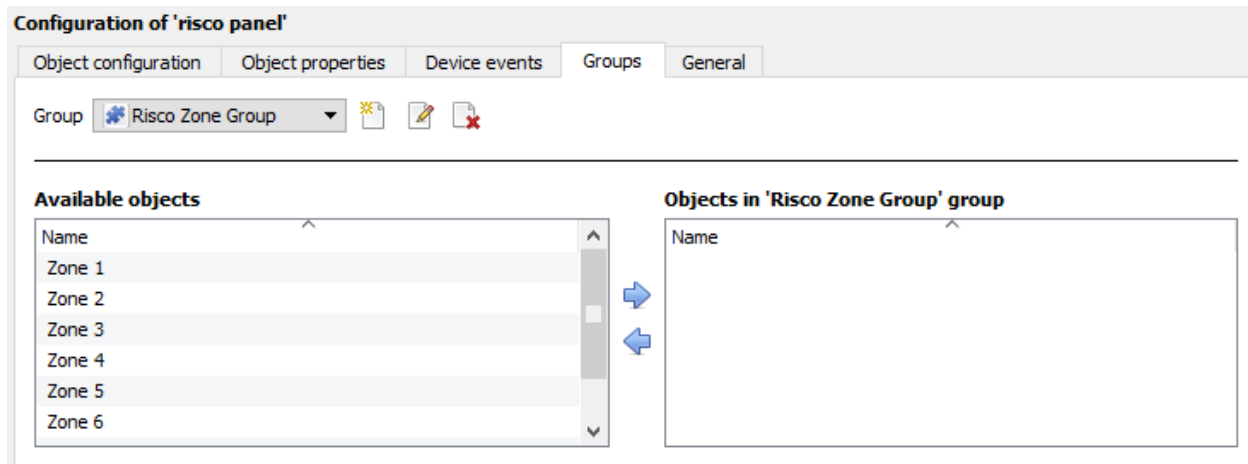



Give the group a descriptive **Group name**.


Click on the drop-down menu to select the **Object type** that to be grouped.

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

3.4.2 Add/Remove Objects



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

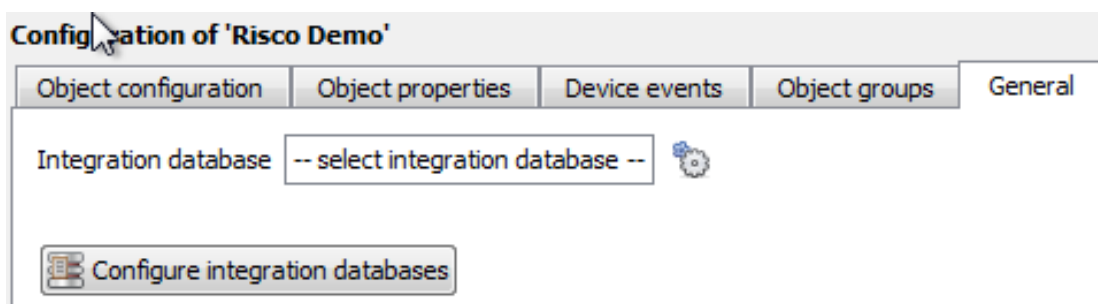
 To **remove** these objects from the group, select them and click on the left arrow.

Note: Multiple objects may be selected at a time.

3.5 General Tab


The General tab deals with the integration database.

Here, 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 CathexisVision system.

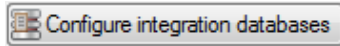
3.5.1 Select an Integration Database

 If an integration specific database has already been created, select it by clicking the settings icon next to the Integration database field, under the General tab.

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

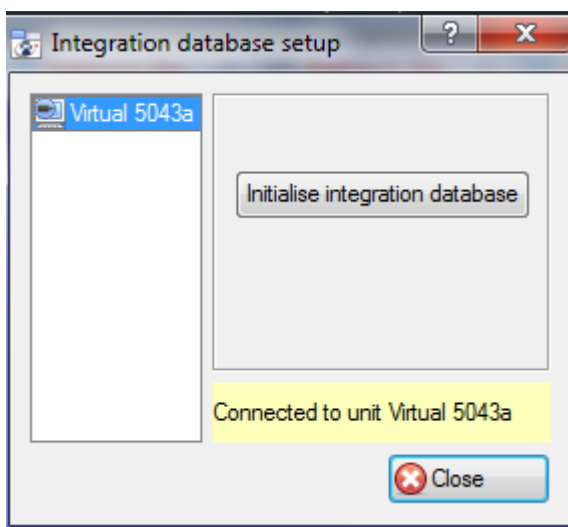
3.5.2 Configure a New Database

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**.



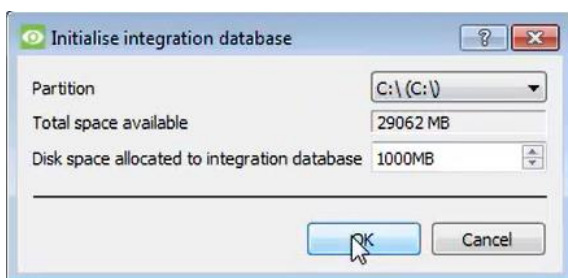
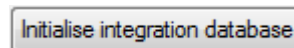
If an integration database has not yet been created, click the **Configure integration databases** button from the General tab. This opens the integration database setup.

3.5.2.1 Initialise the Integration Database



Select the unit to add the database, from the list on the left.

Click **Initialise integration database**.

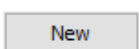


Choose the **partition** on which the database will be created.

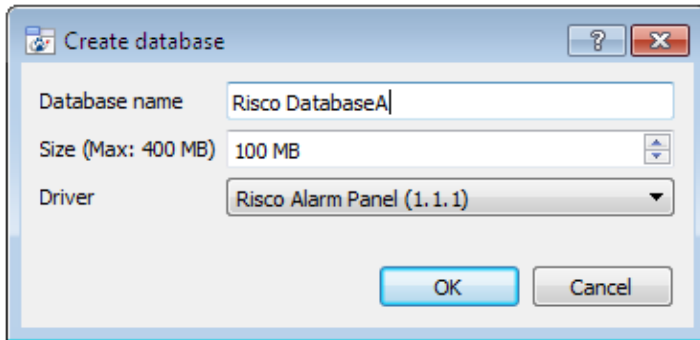
Select **disk space** allocation.

3.5.2.2 Add a New Devices Database

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



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



Give the Integration database a descriptive **Database Name**. e.g. Risco Integration database.

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


Choose the device **Driver**.

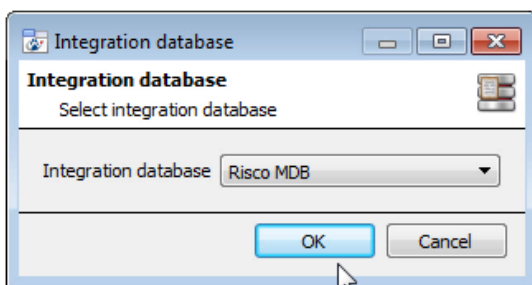
Click on OK to create the database.

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

3.5.2.3 Select the Risco 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 *CathexisVision Setup Manual*.

4. 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.

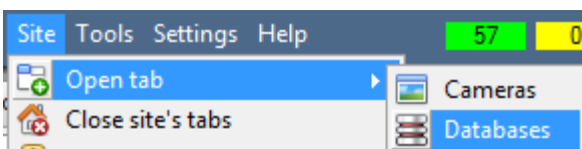
Most integrations will have a different database presentation, and unique filters, due to the different parameters sent to CathesisVision by the integrated device.

View All sorted by Time

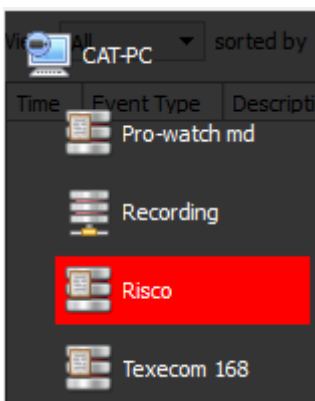
Time	Event Type	Description	Partition	Zone	Links
2015-09-10 10:04:16	Partition	Group 'D' Arm	Partition 1		
2015-09-10 10:04:16	Partition	Home (Stay)	Partition 1		
2015-09-10 10:04:16	Zone	Arm		Zone 7	
2015-09-10 10:04:16	Zone	Arm		Zone 8	
2015-09-10 10:04:50	Partition	Ready to Arm cleared	Partition 1		
2015-09-10 10:04:50	Partition	Alarm	Partition 1		
2015-09-10 10:04:50	Zone	Open (Trip)		Zone 8	
2015-09-10 10:04:50	Zone	Alarm		Zone 8	
2015-09-10 10:04:54	Zone	Open (Trip)		Zone 7	
2015-09-10 10:04:54	Zone	Alarm		Zone 7	
2015-09-10 10:04:54	Zone	Open (Trip) cleared		Zone 7	
2015-09-10 10:04:56	Zone	Open (Trip) cleared		Zone 8	
2015-09-10 10:05:06	Zone	Open (Trip)		Zone 7	
2015-09-10 10:05:49	Partition	Group 'D' Disarm	Partition 1		
2015-09-10 10:05:49	Partition	Home (Stav) cleared	Partition 1		

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

4.1 Navigate to the Database



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



Select the **Risco** 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.

To open and close this list click on the arrow in the centre of the list:



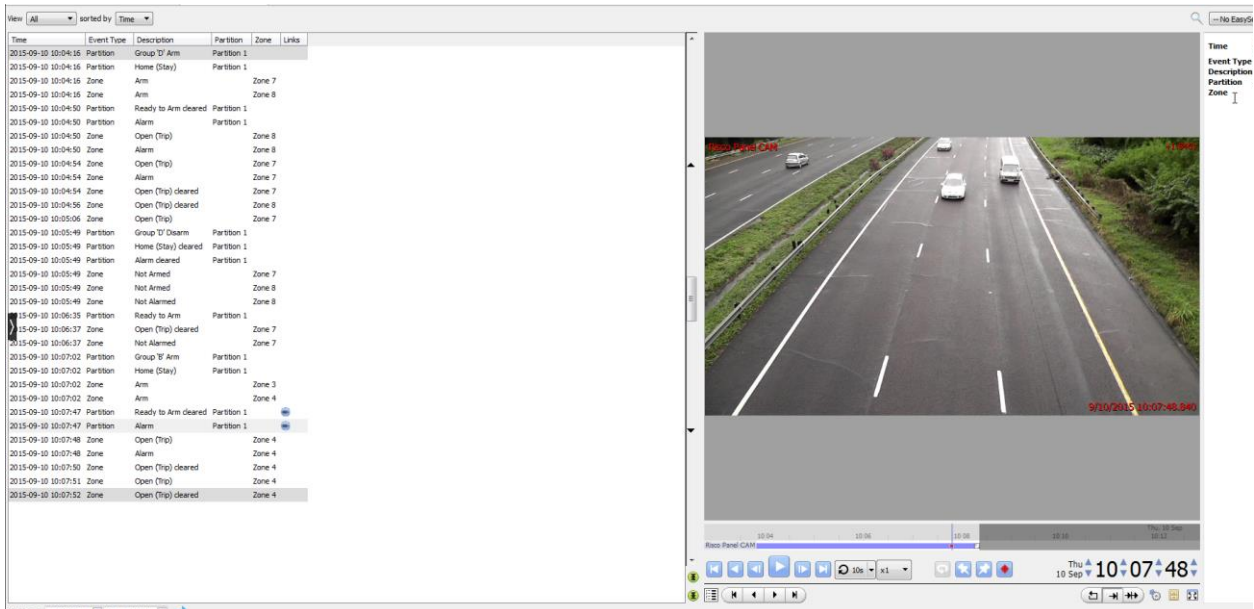
4.2 Database Interface



<p>① View</p>	<p>Change the way that the database is presented. Some integration databases have multiple view options. The Risco database has All, Partition, Zone and Info options.</p>
<p>② Sorted By</p>	<p>Sort the Events based on the following parameters: Time.</p>
<p>③ Easy Search</p>	<p>The easy search option allows quick searching of the database within one of the following options: Partition, Zone and Description.</p>
<p>④ Filter </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, the following 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>The options in this integration are Time, Event Type, Description, Partition, and Zone.</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. (For example, click on Timestamp to change the filter from Timestamp, to any of the other available options.)
<p>⑤ 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>

4.2.1 Viewing an Entry's Associated Recording

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



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

Then click **play** in the video player.

5. Events

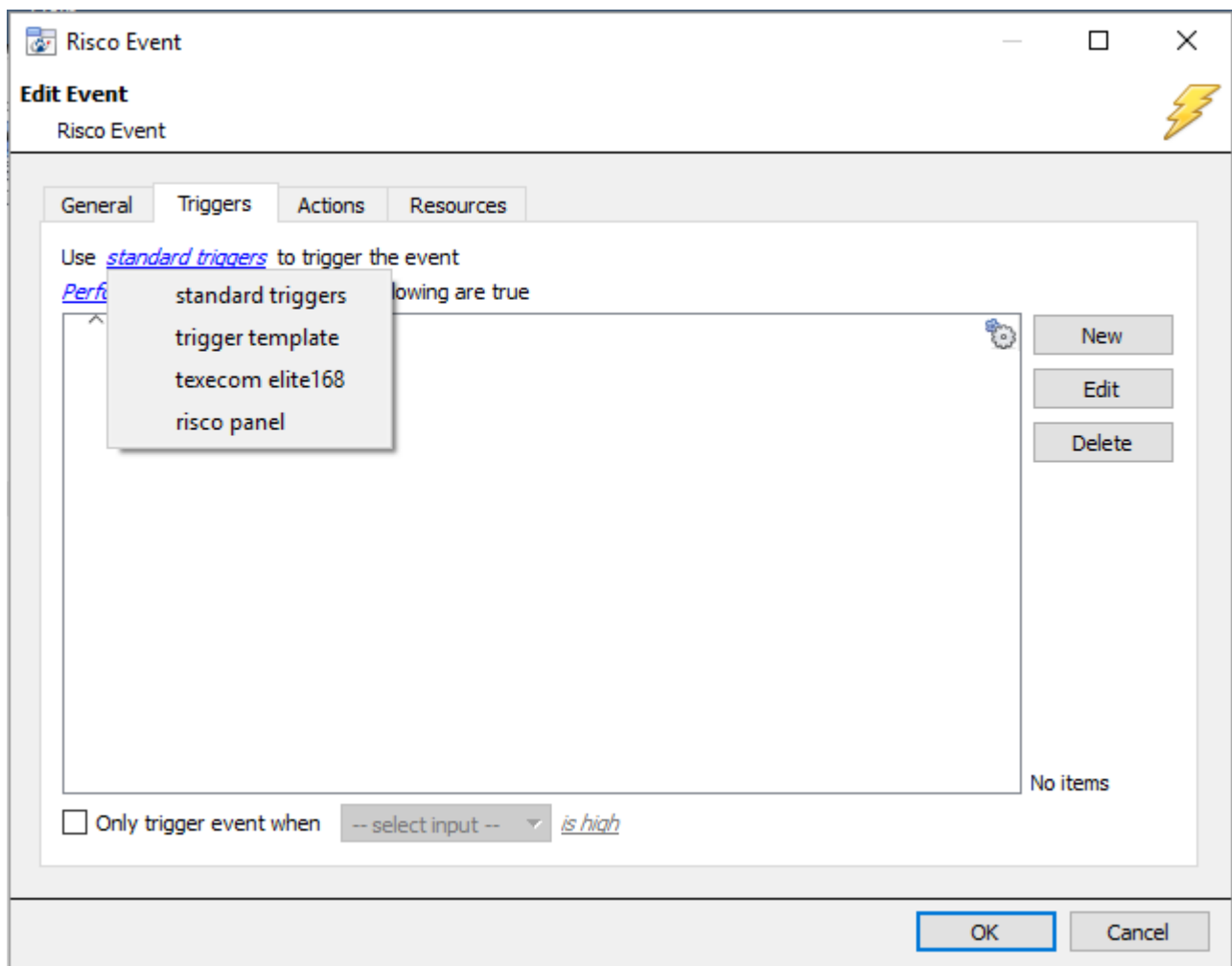
A CathesisVision Event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document will detail the Risco specific aspects of Events. There is a comprehensive guide to CathesisVision Events in the main setup manual.

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* for being used as an event trigger, or action.

5.1 Event Window

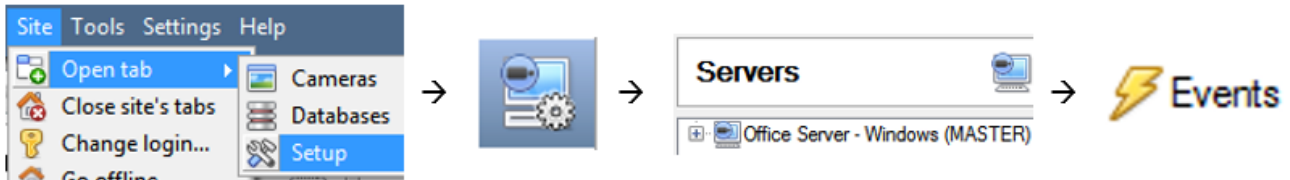
Events in CathesisVision are set up via the Event Window, which has four tabs.

- 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.



5.2 Creating an Event

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



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

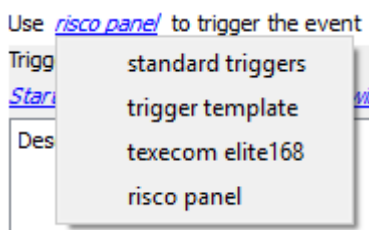


Once in Events management area, click the New icon at the bottom of the screen. This will open up the **New Event window**. Alternatively, right-click and select **New**.

5.3 Triggers

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

5.3.1 Set the Device as the Trigger



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

To define what should trigger the event, **click on the hyperlink** after the word, "Use".

To set it as the Risco device, click on the hyperlink, and **select the device name** (Risco) from the drop-down menu.

5.3.2 While/When and Any/All

When triggering on an object, there will be the option to trigger **while/when** a trigger is active. Multiple triggers may be selected. 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.

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

Use [risco panel](#) to trigger the event

Trigger using [any partition](#)

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

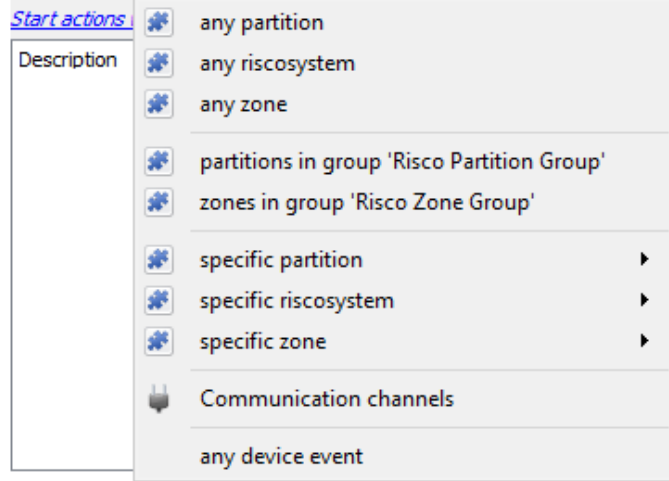
To change these settings, click on the related blue hyperlinks, as shown in the image on the left.

5.3.3 Trigger Types (Trigger Using)

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

Use [risco panel](#) to trigger the event

Trigger using [any partition](#)



Any partition/system/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/riscosystem/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” setup, it is possible to set “device event rules” which will constrain which device events will trigger the event.

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

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

Here is a Risco example: Description

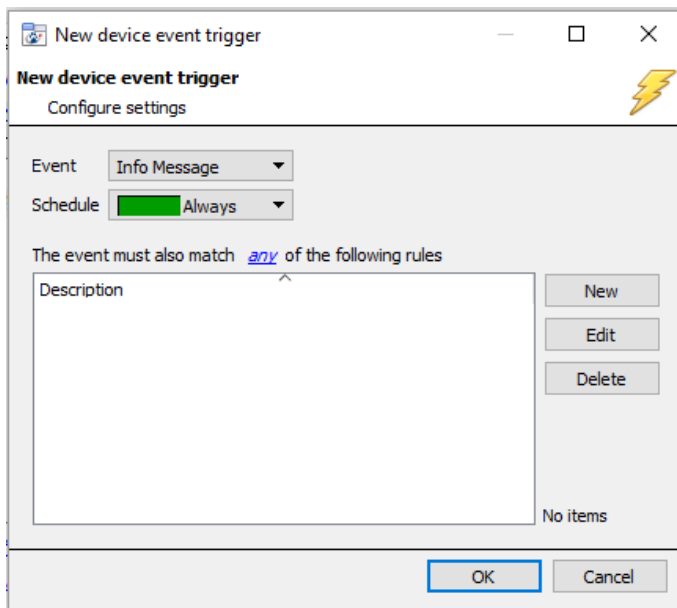
5.3.4 Define the Trigger (Any Device Event)

After selecting a master trigger type, 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.

5.3.4.1 New Device Event Trigger



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

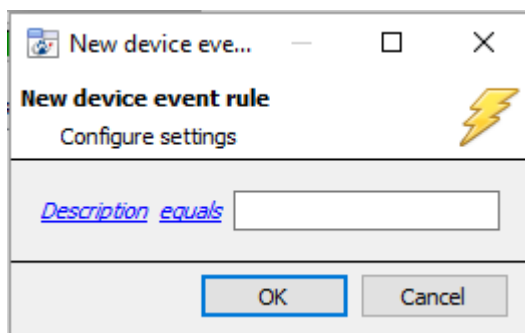
Choose a schedule.

Choose whether [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 can be set. If constraints are not defined, every device event will trigger this event.

New Device Event Rule

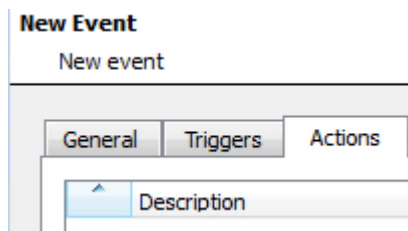


To change the constraint, click on the first hyperlink. This will bring up the full list of available rules.

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 CathesisVision, a drop-down menu will appear. When these variables are not pre-defined, fill them in. The information pulled through to the events is information sent to CathesisVision from the Risco device, see the Risco settings for the strings needed here.


5.4 Actions Tab

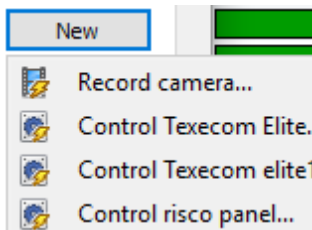


Having defined the triggers that will initiate an event, the user will need to define Actions.

One of the available actions will be to *control* a Risco device.



5.4.1 Adding an 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. 

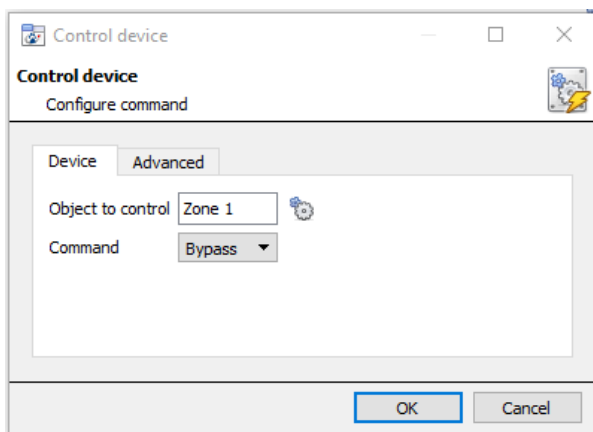
The Risco device allows control over the **Partition** and **Zone** objects.


5.4.1.1 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.

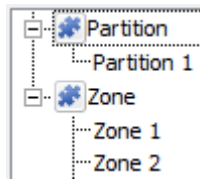
Configure Command Window



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

This shows all the Objects available on the Risco device.

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



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.

Partitions allow commands to:	<ul style="list-style-type: none"> • Arm-away • Arm-stay • Arm Group • Disable
Zones allow commands to:	<ul style="list-style-type: none"> • Bypass • Enable

7. Conclusion

This app-note was designed to deal specifically with this integration.

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

For support, please contact support@cat.co.za.