

# Risco Alarm Panel Integration

# Contents<sup>1</sup>

1	Introduction .....	2
a.	License requirements .....	2
b.	Integration Components.....	2
2	Device Addition and Configuration .....	4
a.	Introduction.....	4
b.	CathexisVision Specific Risco Setup (Set up the Risco device) .....	4
c.	Devices Section (Add a New Device in CathexisVision).....	4
d.	Configuration Section (Tabs) .....	6
3	Database.....	12
a.	Introduction.....	12
b.	Navigate to the Database .....	12
c.	Database Interface .....	13
4	Events.....	15
a.	Introduction.....	15
b.	Creating an Event.....	15
c.	Triggers .....	16
d.	Actions .....	18
5	Conclusion .....	19

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<sup>1</sup> 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 will detail the integration of the Risco Alarm Panel (RP432B), with CathexisVision's software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Risco device.

## Requirements

- CathexisVision 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.

## Notes:

1. If you need information regarding the regular operation of a Risco device, please consult the relevant Risco documentation.
2. When using a serial port connection CathexisVision is unable to detect the Risco device if the Controller or Communications channel has lost connection.

## a. License requirements

The Cathexis Risco integration license requirements are as follows:

License Name	License Description
CALM-2000	CathexisVision alarm license.

## b. Integration Components

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

**Device** The device is CathexisVision software's interface, which handles all the interaction between CathexisVision and the integrated hardware. When you add an integration to the CathexisVision system, you add a device. The messages received from the device are called Device Events.

**Objects** Objects are the individual pieces of hardware that comprise the integration. You may have 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

## Risco Integration Features

CathexisVision 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.

### • *Integration Objects*

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

- **System**
  - Stores overview information about the device.
  - Object states:

- Bypassed
  - Troubled
- **Partition.**
  - Object states:
    - Not Ready
    - Arm
    - Home Stay
    - Ready to Arm
- **Zone.**
  - Object states:
    - Armed
    - Alarmed
    - Bypassed
    - Troubled
    - Tampered

- *Command Types*

This integration may issue commands to the **partition** and **zone** objects, but will not issue commands to the **system** object.

- **Partition commands:**
  - Arm groups within a partition (Group A, B, C, D).
  - Partition states: **arm-away/arm-stay** and **disarm**.
- **Zone commands:**
  - Bypass/Enable.

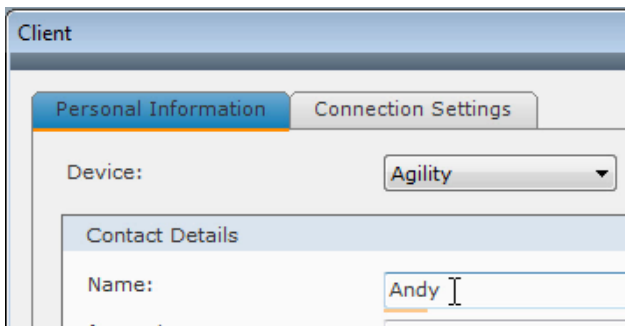
## 2 Device Addition and Configuration

### a. Introduction

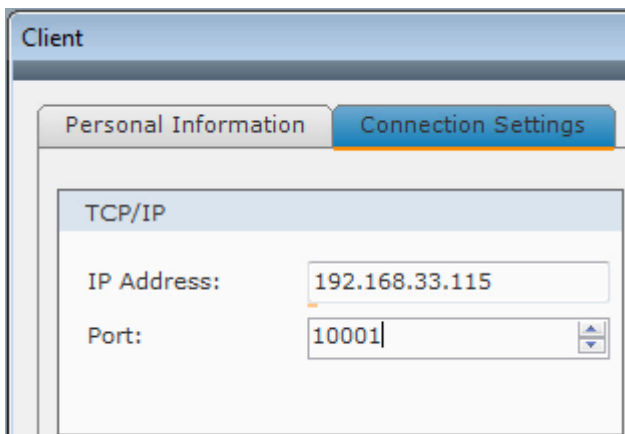
This section will detail the procedure for setting up the two systems to effectively communicate with each other.

### b. CathexisVision Specific Risco Setup (Set up the Risco device)

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



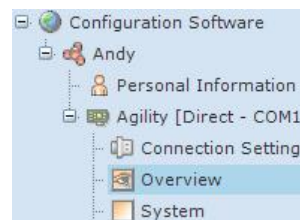
Fill in the relevant user fields.



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

**IP Address** of the Risco panel.

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



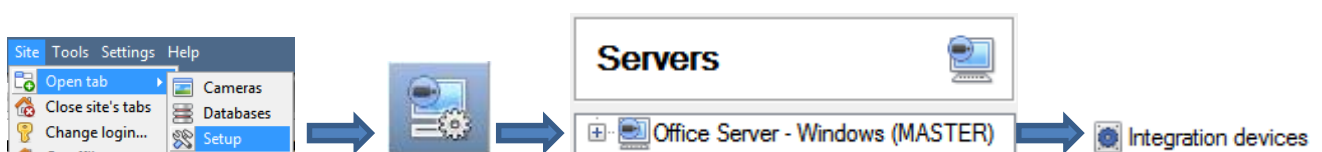
The device information should now populate in the Risco software


**Note:** The Risco configuration software needs to be closed in order to add the device to CathexisVision. So make sure to close it after you have completed the above steps.

### c. Devices Section (Add a New Device in CathexisVision)

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:

#### The Integrations Panel



**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

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**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

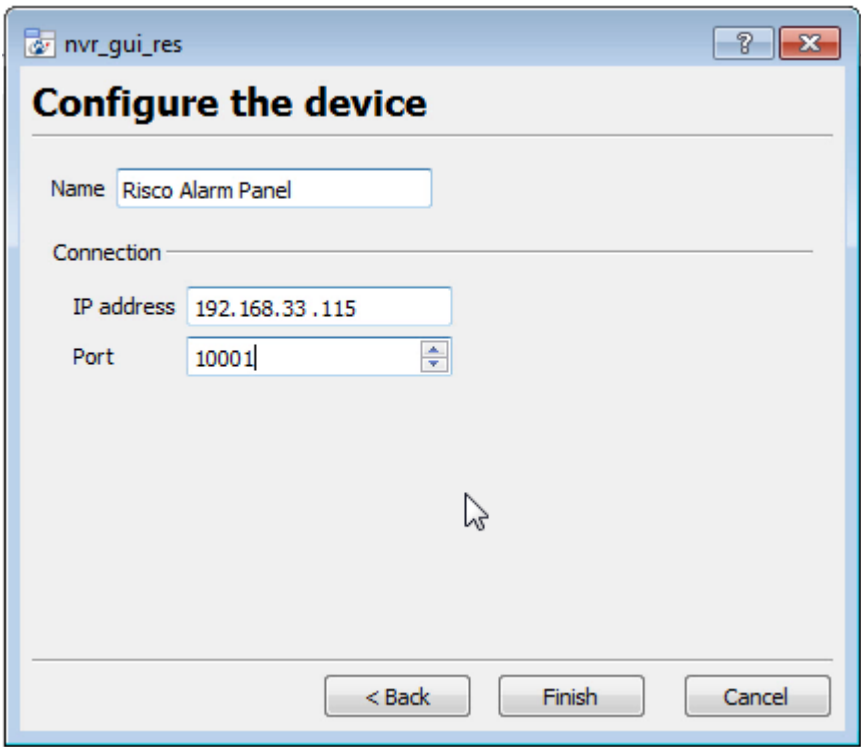
You will notice two sections in the Integration Panel:

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

The **Configuration** section enables you to edit/review, the device which you have selected in the **Devices** section.

- **Device Addition**

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



Give your device a descriptive name.

Enter in the **IP address** of the Risco panel.

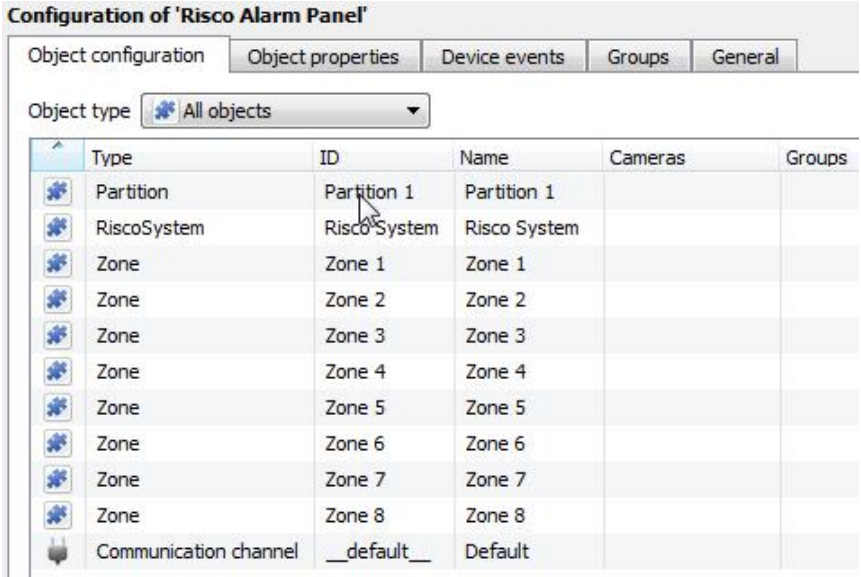
Enter in the **port number** of the Risco panel.

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

**d. Configuration Section (Tabs)**


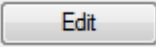
The configuration section is divided up into a number of tabs. These tabs are: **Object configuration, Object properties, Device events, Groups, and General.**

Object Configuration Tab



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

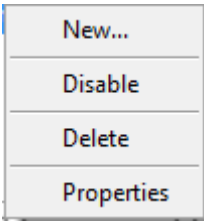
• **Object Configuration Buttons**

-  You may add a new object by clicking on New.
-  Will open up an existing object for edition.



Is used to delete an existing object from the CathexisVision configuration.

• **Object Configuration Right-click Options**



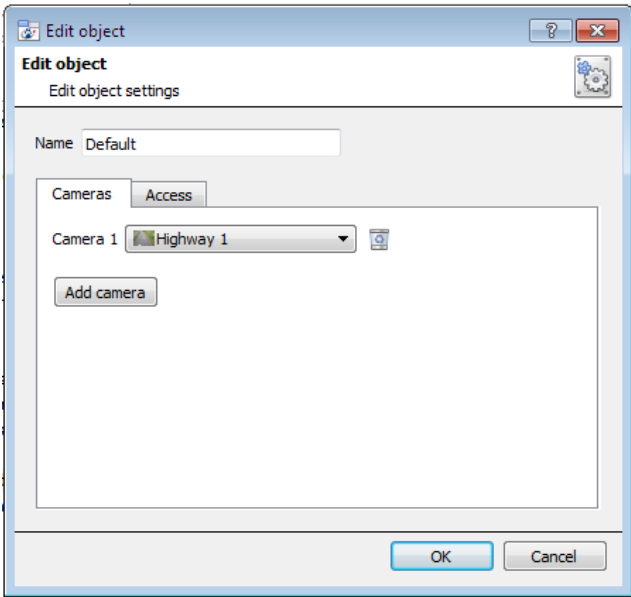
**New** will open up the dialogue to add a new object.

**Disable/Enable** allows you to manually enable/disable individual objects.

**Delete** will permanently remove this object from the list.

**Properties** will open up the object properties. You may edit the object from here. (Specifically you will be able to assign cameras to this object, as well as define user access levels for it.)

**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 on "Add Camera, and select the relevant camera from the drop-down menu.

To delete a camera click on

**Note:** While you can add multiple cameras here, only the first camera added with the object will be linked in the integration database.

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

**Properties: Access**



**Access** allows you to protect sensitive objects, by only allowing certain user levels access to them.

Under **View** you will be able to set the access levels.

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



## Objects Properties Tab

**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	✗	✗	✗	✗	✗

The Object properties tab allows you to view the objects, sorted by type. In the case of the Risco device you will have the options of viewing by **Zone**, **Partition**, and **riscosystem**.

## Partitions

Partition 1	Ready to Arm	✗
<ul style="list-style-type: none"> <li>Arm-Away</li> <li>Arm Group A</li> <li>Arm Group B</li> <li>Arm Group C</li> <li>Arm Group D</li> <li>Arm-Stay</li> <li>Disarm</li> </ul>		

Right clicking on a partition will give the user the options to **Arm-away**, **Arm Group**, **Arm-stay**, and **Disarm**.

## Zones

Name	Armed
Zone 1	✗
Zone 2	✗

Context menu: Bypass

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

## Device Events Tab

**Configuration of 'Risco Alarm Panel'**

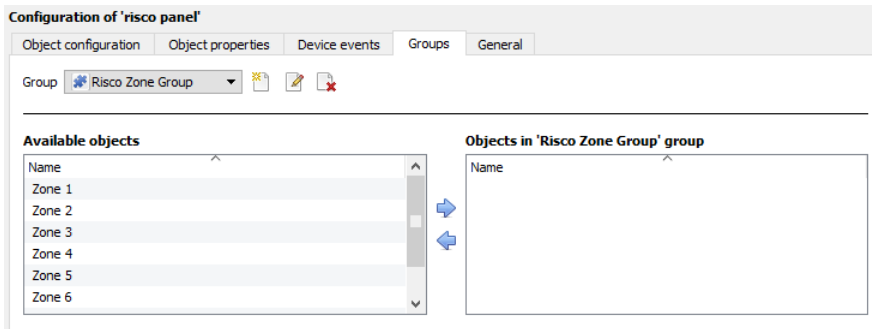
Object configuration | Object properties | Device events | Groups | General

All events

Event type	Time	Zone	Description
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

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

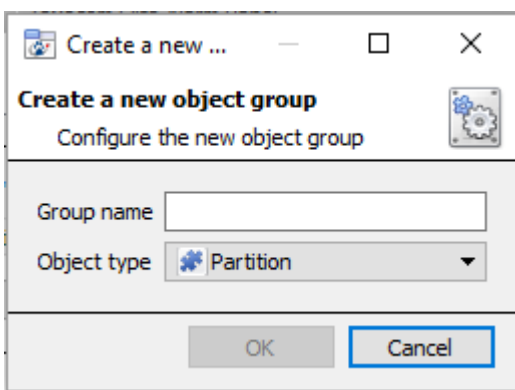
## Groups Tab





You can create groups of the same type of object.

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

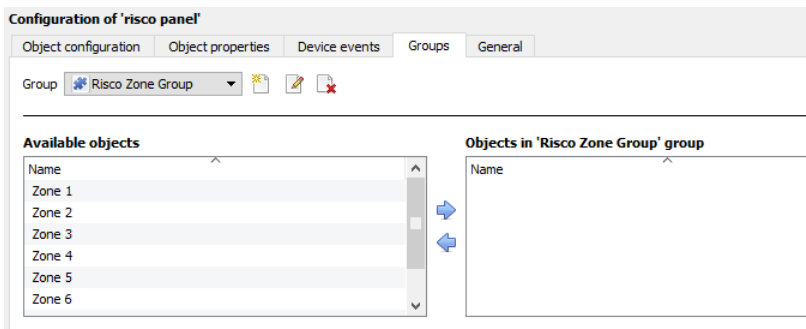
### • Create a Group





To create/edit a Risco group click on  / . (**Note:** Once a group has been created, you may not edit the object type of the group.)

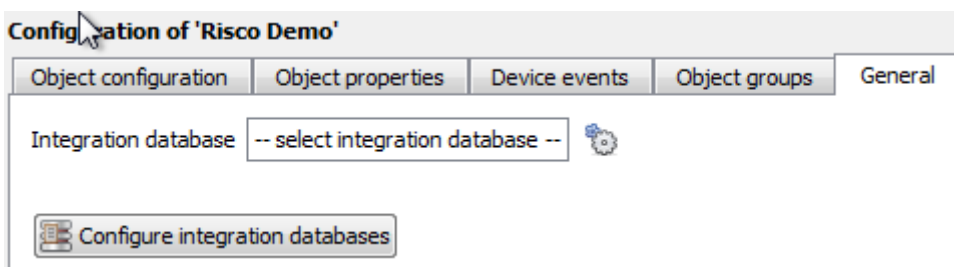
Give the group a descriptive **Group name**.

Click on the drop-down menu to select the **Object type** that you would like to group.



You will then see a list of Available Objects. To add/remove these objects to the group select them (you may select multiple at a time), and click on  / .

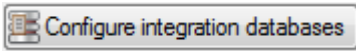
## General tab



Currently the general tab deals with the **Integration database**. Here you will be able to select an existing database, or you will be able to configure a new database for your integration.

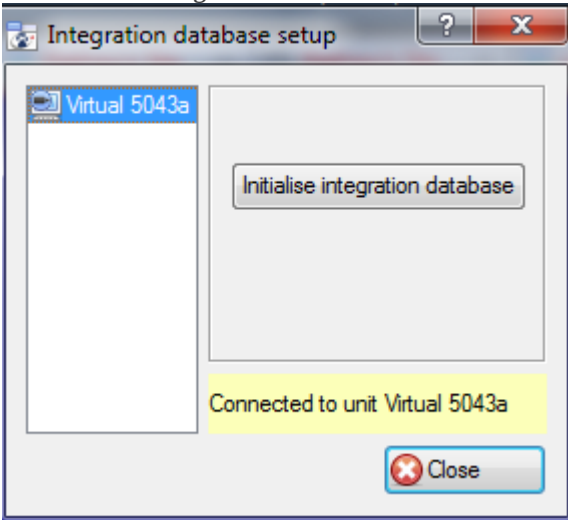
**Important Note:** Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here your integration will not function properly within the CathexisVision system.

- *Configure a new database*

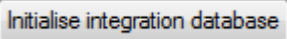


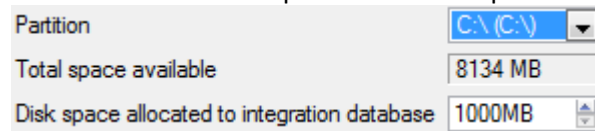
If there is no database created yet, clicking on this button will take you to the integration database setup.

*Initialise the Integration Database*

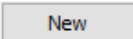


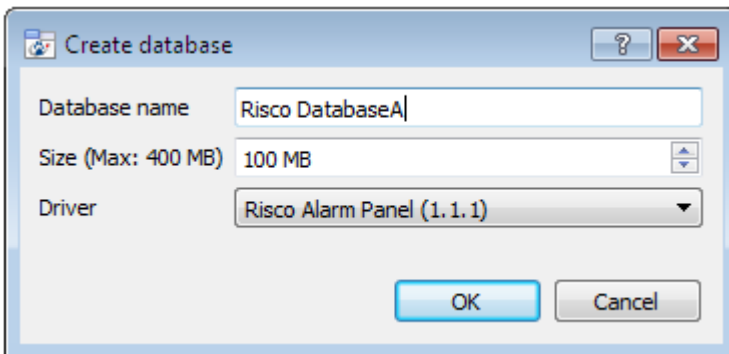
The first time you add an integration database you will have to initialise this feature on the unit. This will add a broad database, within which you will be adding all of your integrated device's databases.

Select the unit you wish to add the database to, from the list on the left, and click . You will have to choose which partition the database will be formed on, and select how much space it will take up.



*Add a New Devices Database*

After initialisation, you will be able to add the database for the integration that you are working with. Click on the  button, at the bottom of the Create database window.

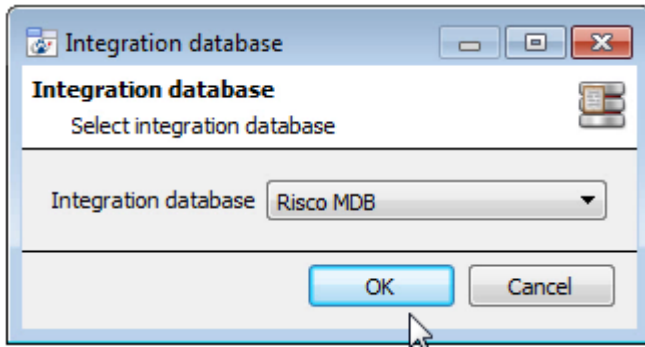



Give your Integration database a descriptive **Database Name**. e.g. Risco Integration database.


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

Choose the device **Driver** that your device will be using, And click on OK to create the database.

- *Select the Risco Integration database*



Integration database -- select integration database -- 

Once a database has been created the user may select it by clicking on the  icon, and selecting it in the dialogue that appears. Only databases which relate to the device you are adding should appear.

# 3 Database

## a. Introduction

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

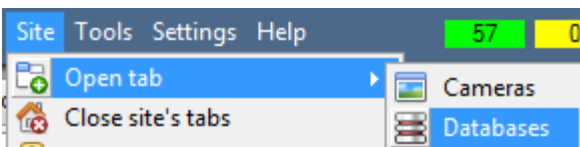
View All sorted by Time

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 (Stay) cleared	Partition 1		

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

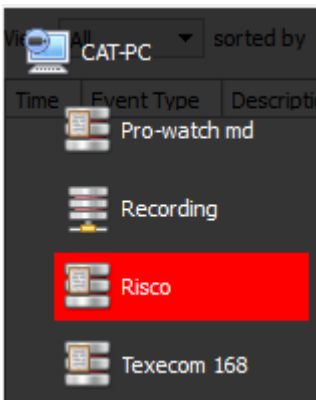
The Risco database is information rich. This is an example of some of the information that is included.

## b. Navigate to the Database



You may view the information stored in the Integration database, by following the path you see to the left.

This will take you to the Database Tab.









When the database tab opens you will have to select the relevant integration database from the database panel that opens on the left hand side. The databases are ordered under the NVRs that they are attached to.

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




### c. Database Interface

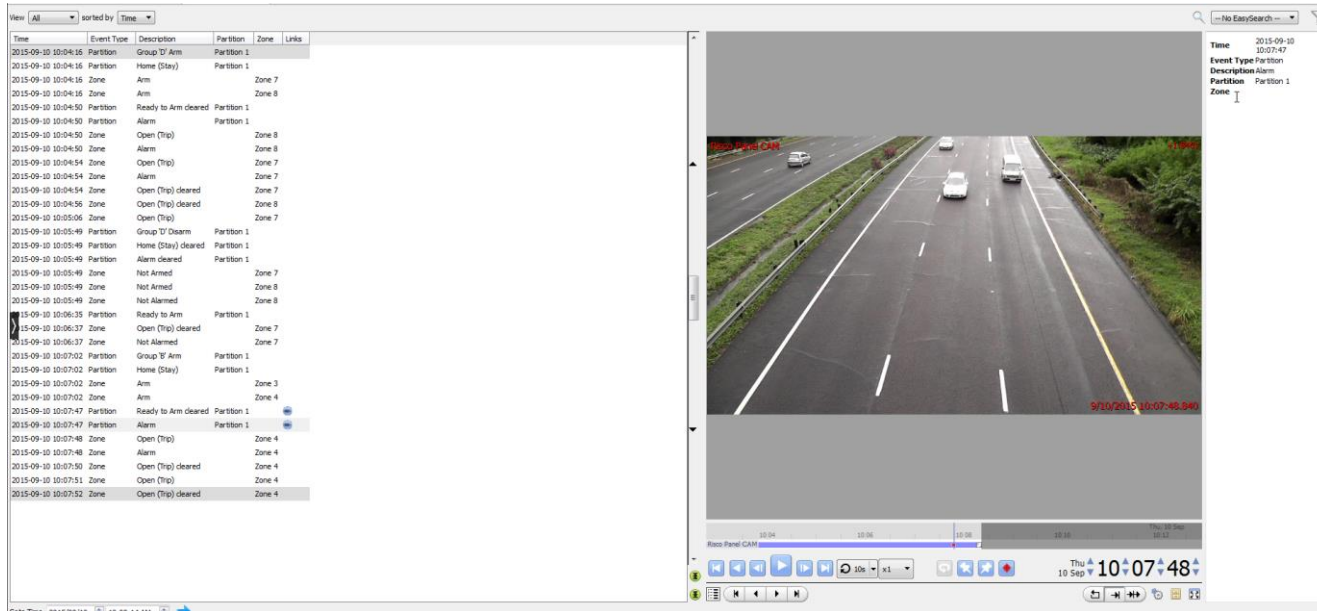


① <b>View</b>	You may change the way that your database is presented. Some integration databases have multiple view options. The Risco database has <b>All, Partition, Zone</b> and <b>Info</b> options.
② <b>Sorted By</b>	You may sort the Events based on the following parameters: <b>Time</b> .
③ <b>Easy Search</b>	The easy search option allows you to quickly search the database within one of the following options: <b>Partition, Zone</b> and <b>Description</b> .
④ <b>Filter</b> 	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once you have the filters dialogue open you will have the following options:</p> <ol style="list-style-type: none"> <li>To <b>enable</b> filters check this box: <input checked="" type="checkbox"/> Enable filters</li> <li>To <b>add</b> a new filter click on . The filter icon  will change to  when filters are active.</li> <li>To <b>delete</b> an added filter click on .</li> </ol> <p>The options in this integration are <b>Time, Event Type, Description, Partition, and Zone</b>.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>You may run multiple filters simultaneously. And you may even filter using the same parameter more than once.</li> <li>To change a filter click on the blue hyperlinked text. (For example, click on <a href="#">Timestamp</a> to change the filter from Timestamp, to any of the other available options.)</li> </ol>
⑤ <b>Go to Time</b>	This will allow you to go to a specific point in time, down to the second. To navigate to a timestamp set the time using the time and date boxes, and then click on the  icon.



## Viewing an Entry's Associated Recording

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

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



The screenshot displays a database interface with a table of events and an embedded video player. The table has columns for Time, Event Type, Description, Partition, Zone, and Links. The video player shows a road scene with a timestamp of 9/10/2015 10:07:45.948. The interface includes a search bar, a table of events, and a video player with playback controls.

Time	Event Type	Description	Partition	Zone	Links
2015-09-10 10:04:16	Partition	Group 'I' Arm	Partition 1		
2015-09-10 10:04:16	Zone	Home (Stay)		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	Zone	Alarm		Zone 8	
2015-09-10 10:04:50	Zone	Open (Trip)		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 'I' Disarm	Partition 1		
2015-09-10 10:05:49	Partition	Home (Stay) cleared	Partition 1		
2015-09-10 10:05:49	Partition	Alarm cleared	Partition 1		
2015-09-10 10:05:49	Zone	Not Armed		Zone 7	
2015-09-10 10:05:49	Zone	Not Armed		Zone 8	
2015-09-10 10:05:49	Zone	Not Armed		Zone 8	
2015-09-10 10:06:35	Partition	Ready to Arm	Partition 1		
2015-09-10 10:06:37	Zone	Open (Trip) cleared		Zone 7	
2015-09-10 10:06:37	Zone	Not Armed		Zone 7	
2015-09-10 10:07:02	Partition	Group 'E' Arm	Partition 1		
2015-09-10 10:07:02	Partition	Home (Stay)	Partition 1		
2015-09-10 10:07:02	Zone	Arm		Zone 3	
2015-09-10 10:07:02	Zone	Arm		Zone 4	
2015-09-10 10:07:47	Partition	Ready to Arm cleared	Partition 1		
2015-09-10 10:07:47	Partition	Alarm	Partition 1		
2015-09-10 10:07:48	Zone	Open (Trip)		Zone 4	
2015-09-10 10:07:48	Zone	Alarm		Zone 4	
2015-09-10 10:07:50	Zone	Open (Trip) cleared		Zone 4	
2015-09-10 10:07:51	Zone	Open (Trip)		Zone 4	
2015-09-10 10:07:52	Zone	Open (Trip) cleared		Zone 4	

## 4 Events

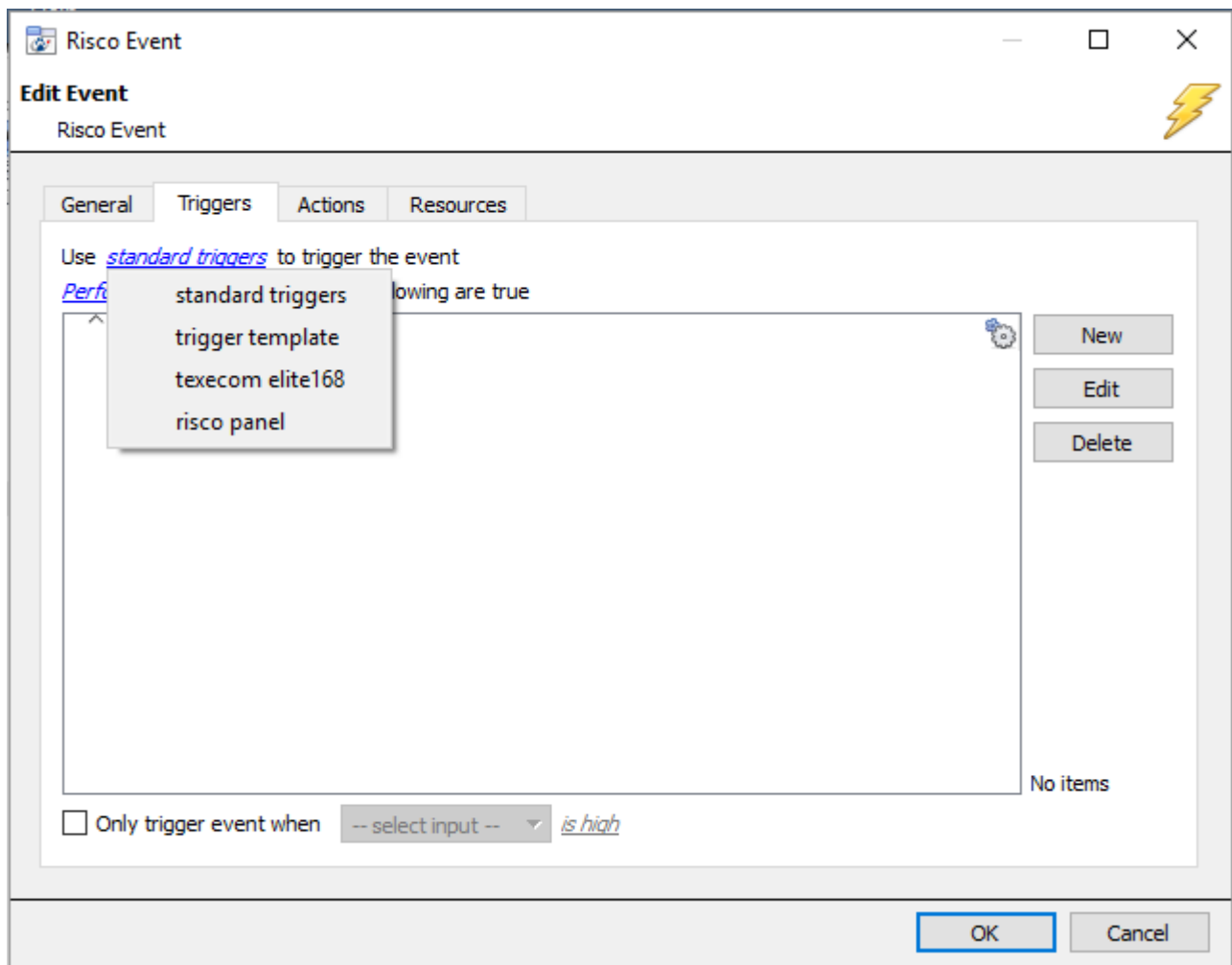
### a. Introduction

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

Most of the data that CathexisVision receives from a device is presented in the Events interface. This 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.

#### Event Window

Events in CathexisVision are setup via the Event Window. This has 4 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.




### b. Creating an Event

To create an event using the Risco device, enter the Events management area:





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

- **While/When and Any/All**

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

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

Trigger using [any partition](#)

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

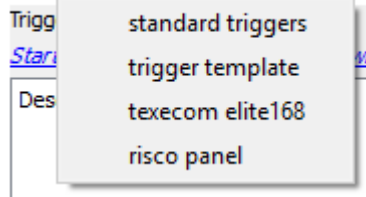
As usual, to change these settings click on the related, blue, hyperlinks.

### c. 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).

#### Set your device as the trigger

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

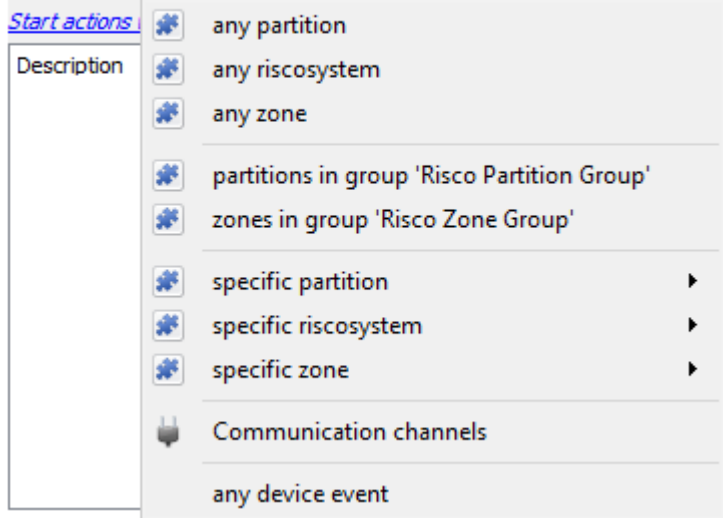


If you are creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device you want to trigger the event, click on the hyperlink after “use”. To set it as the Risco device, click on the hyperlink, and select the relevant device name from the dropdown menu.

#### Trigger Types (Trigger Using)

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

Trigger using [any partition](#)



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

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



**Object in group...** If you have set up a group 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.

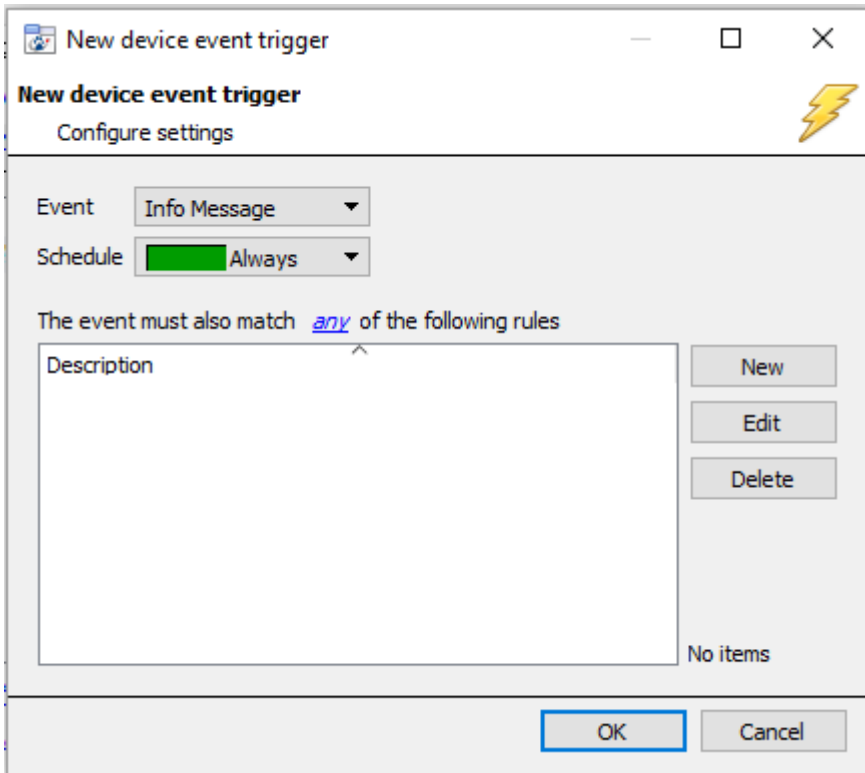
**Any device event** will trigger on any event that occurs on the device. Within the “any device event” setup you may set “device event rules” which will constrain which device events will trigger the event.

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

Click on the  to see a list of available descriptions. Here is a Risco example:  
Description  

### Define Your Trigger

After selecting a master trigger type, you will need to add a trigger to the event. Click on  in the Triggers tab. This will bring up the dialogue box you see below, for the various trigger types:

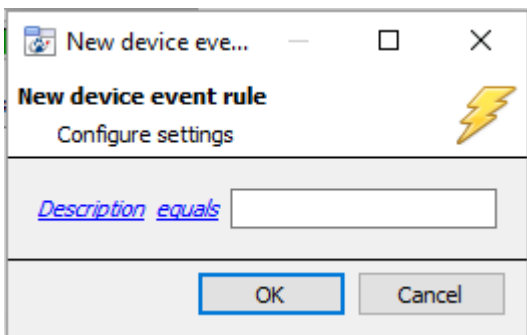


For example within the [any device event](#) option you may choose what type of device Event will be your trigger. Choose an event type from the drop down menu.

**Note:** You may set multiple constraints (**Device Event Triggers**). If you do not define a constraint, every single device event will trigger this event.

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

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

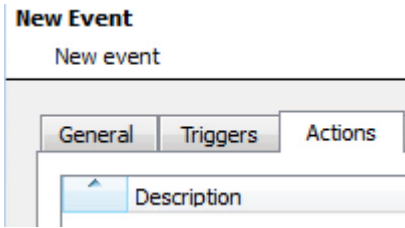


To change the constraint click on the first hyperlink, this will bring up the full list of available rules.

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

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

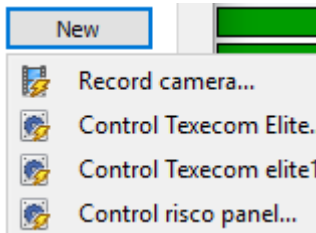
## d. Actions



Once you have defined the triggers that are going to initiate your event, you will need to define some Actions. With many integrations there will be the option to control the integrated device, as one of the actions.

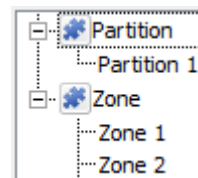
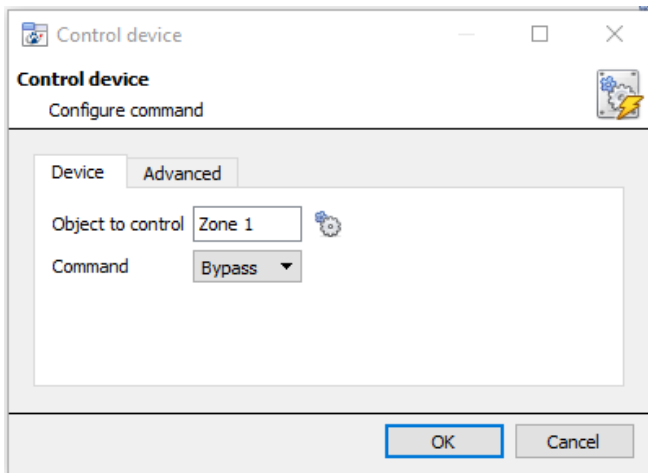
The Risco device allows for the following level of control over the **Partition** and **Zone** objects.


### New Action



To create a new Event Action click on  .

Select **Control Risco panel** if you wish to control this device with the CathexisVision event.



Clicking on the  icon will bring up a list of the Risco objects which may be controlled by this event.

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

**Partitions** allow **Arm-away**, **Arm-stay**, **Arm Group**, and **Disable** commands.

**Zones** allow **Bypass** and **Enable** commands.

## 5 Conclusion

Please remember that this appnote was designed to deal specifically with this integration. For further information about the CathexisVision software please consult the main manual (<http://cathexisvideo.com/>).

For support please contact [support@cat.co.za](mailto:support@cat.co.za)