



Quido Input/Output Device Integration

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¹ 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 Quido IO device, with CathexisVision's software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the device.

Requirements

- CathexisVision 2016.2 and later.
- Windows 7 - 64bit and later, Windows Server 2008 R2 and later.

Notes:

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

a. License requirements

The Cathexis Quido integration license requirements are as follows:

License Name	License Description
Quido	CQUI-2000

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

Quido Integration Features

Objects and messages for

- Input (**Note:** You need to apply an external 5V over an input to trigger it).
- Output.
- Thermometer.

Commands

- Set Output.
- Clear output.
- Pulse Output.

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 Quido Setup (Set up the Quido device)

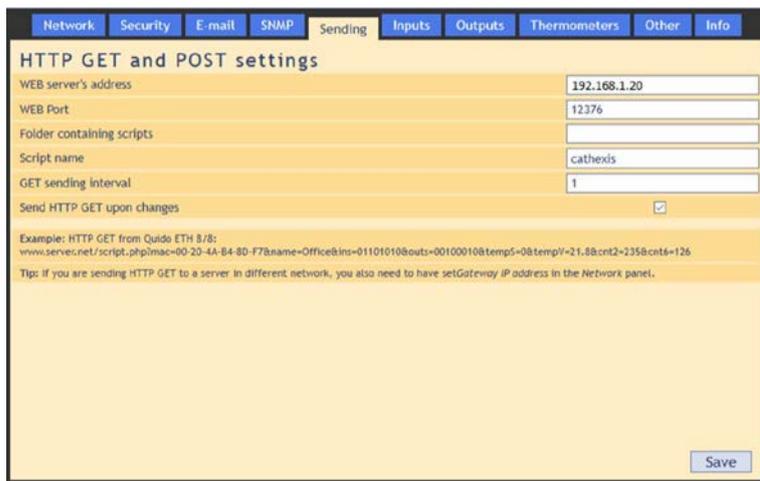
There are some steps to take, in the Quido's device setup, before you may successfully add the device to CathexisVision.

Setting up the Quido Device

1. Open a web browser and navigate to the IP address of your Quido device.
2. In the Quido setup window, click on the **Settings** option in the top right hand corner of the window:



3. Login to **Settings** as an administrator account.
4. In the **Network** tab make sure that the **Local port for TCP/UDP connection** is set to **10001**.
5. In the **Sending** tab:
 - a. Set the **WEB server's address** option to the IP address of your CathexisVision server.
 - b. Set the **WEB port** option to **12376**.
 - c. Set the **Script name** to be "cathexis" or any other name you like.
 - d. Enter "1" for the **GET sending interval**.
 - e. Enable the "**Send HTTP GET upon changes**" checkbox.

A screenshot of a web interface for configuring 'HTTP GET and POST settings'. The interface has a yellow background and a blue header with tabs: Network, Security, E-mail, SNMP, Sending (selected), Inputs, Outputs, Thermometers, Other, Info. The 'Sending' tab is active, showing fields for: WEB server's address (192.168.1.20), WEB Port (12376), Folder containing scripts (empty), Script name (cathexis), GET sending interval (1), and Send HTTP GET upon changes (checked). Below these fields is an example URL and a tip. A 'Save' button is at the bottom right.

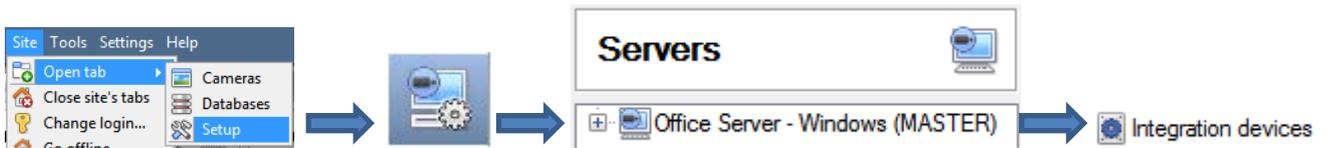
6. In the **Inputs** tab, make sure that the option to **Watch for changes** is checked.
7. In the **Outputs** tab, make sure that the option to **Watch for changes** is checked.
8. Click on the  button to apply your changes.

Note: The IO objects are only populated in CathexisVision on an input status update.

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



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

Type	ID	Name
Communication channel	__default__	Default

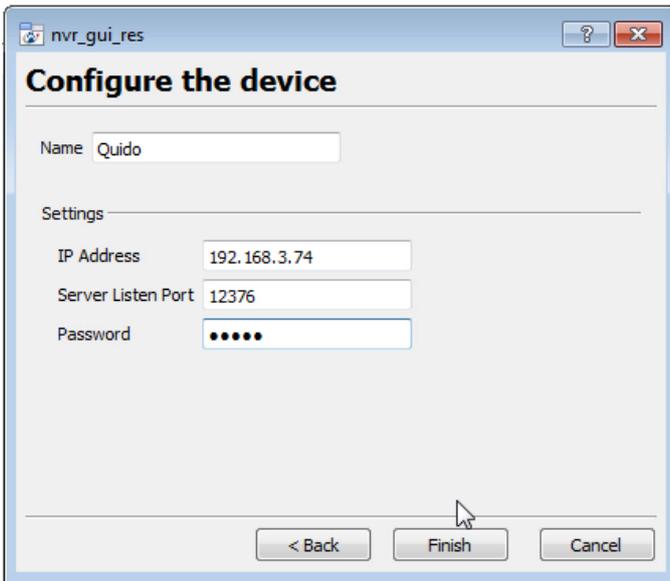
You will notice two sections in the Integration Panel:

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 **Quido I/O device** driver from the list.



Give your device a descriptive **name**.

Enter the **IP address** of your Quido unit.

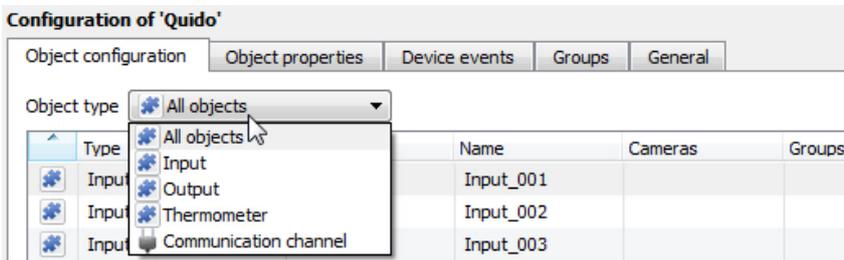
Enter in the **Server listen port** which you defined in the Quido settings, above.

Enter in the admin **Password** for the Quido device.

d. Configuration Section (Tabs)

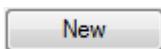
The configuration section is divided up into a number of tabs. These tabs are: **Object configuration**, **Object properties**, **Device events**, **Groups**, and **General**.

Object Configuration Tab

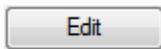


The object configuration tab is the tab where you may view all the individual objects that comprise the integration. The **Quido** device has **Input**, **Output** and **Thermometer** options.

• **Object Configuration Buttons**



You may add a new object by clicking on New.

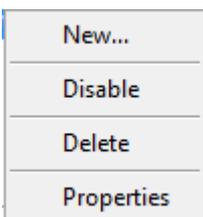


Will open up an existing object for edition.



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

• **Object Configuration Right-click Options**



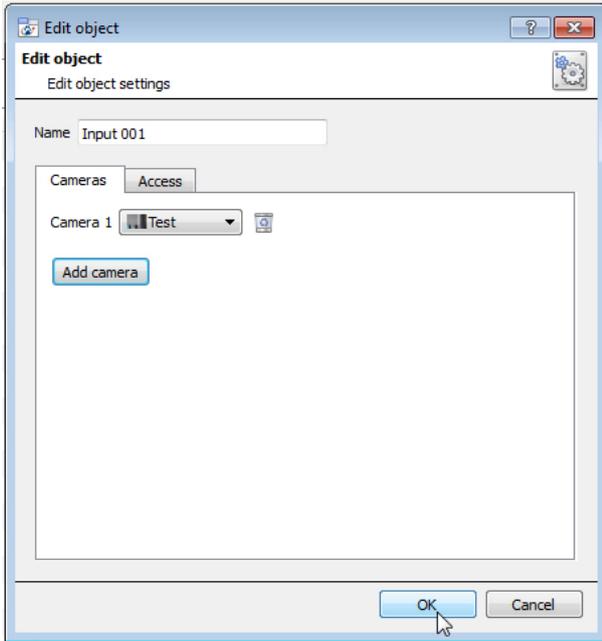
New will open up the dialogue to add a new object.

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 Quido 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

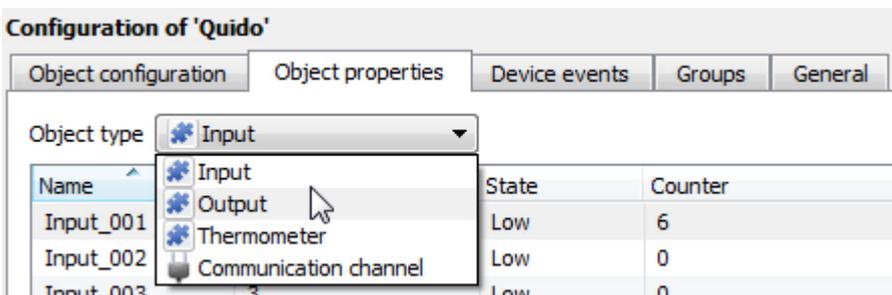


Access allows you to protect sensitive objects, by only allowing certain user levels access to them.

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



The Object properties tab allows you to view the objects, sorted by type. In the case of the **Quido** device you will have the options of viewing by **Input**, **Output** and **Thermometer**.

You may *pulse* and *set* **Outputs** via the right click menu here.

Device Events Tab

Configuration of 'Quido'

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

All events

Event type					
Input Event	2015-09-03 13:48:45.769	Input_001		Low	11
Input Event	2015-09-03 13:48:45.229	Input_001		High	10
Input Event	2015-09-03 13:48:44.299	Input_001		Low	9
Input Event	2015-09-03 13:48:43.569	Input_001		High	8
Input Event	2015-09-03 13:48:42.809	Input_001		Low	7
Input Event	2015-09-03 13:48:40.909	Input_001		High	6

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

Configuration of 'Quido'

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

Group: Door Inputs

Available objects

Name
Input_015
Input_016
Input_017
Input_018
Input_019
Input_020
Input_021
Input_022
Input_023
Input_024
Input_025
Input_026
Input_027
Input_028
Input_029
Input_030

Objects in 'Door Inputs' group

Name
Input_001
Input_002
Input_003
Input_004
Input_005
Input_006
Input_007
Input_008
Input_009
Input_010
Input_011
Input_012
Input_013
Input_014

Create a new object group

Create a new object group

Configure the new object group

Group name: Outputs

Object type: Output

OK Cancel

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.)

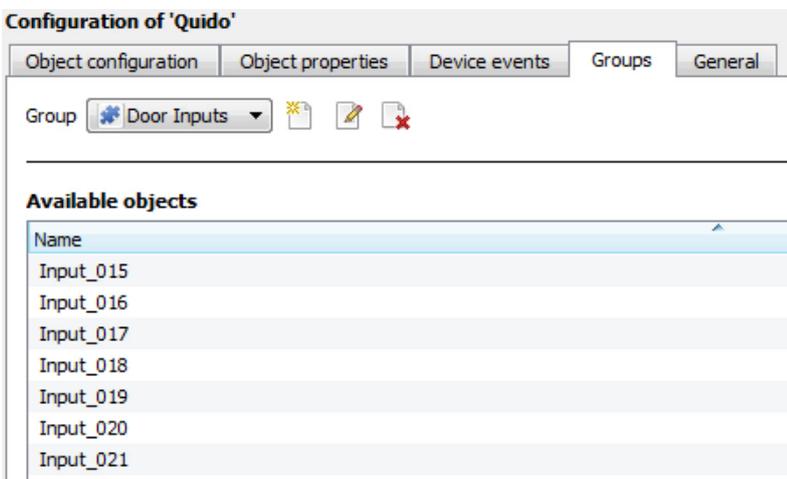
- *Create a Group*



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

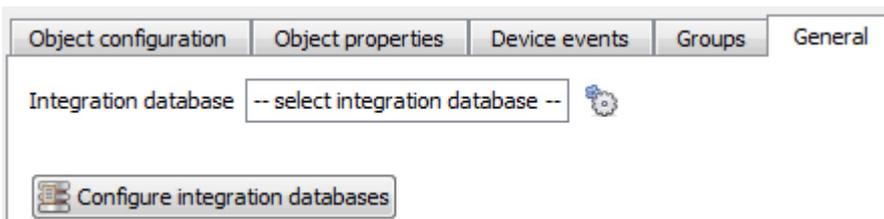
Give the group a descriptive **Group name**.

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 / .

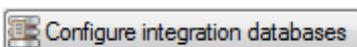
General tab



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.

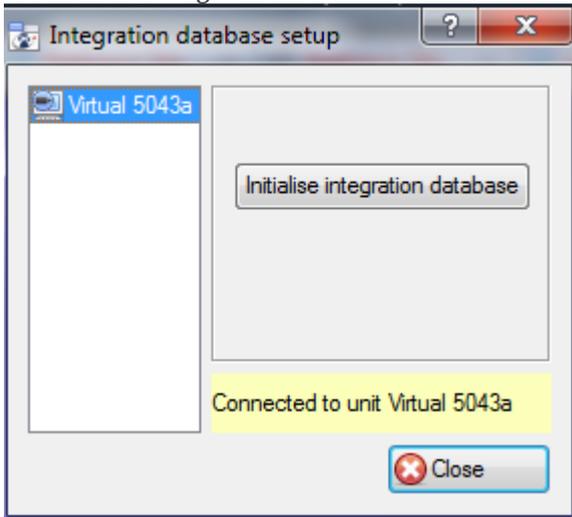
Important Note: Each integrated device needs to be attached to an Integration database. Without setting up/adding a database here your integration will not function properly within the CathexisVision system.

- *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



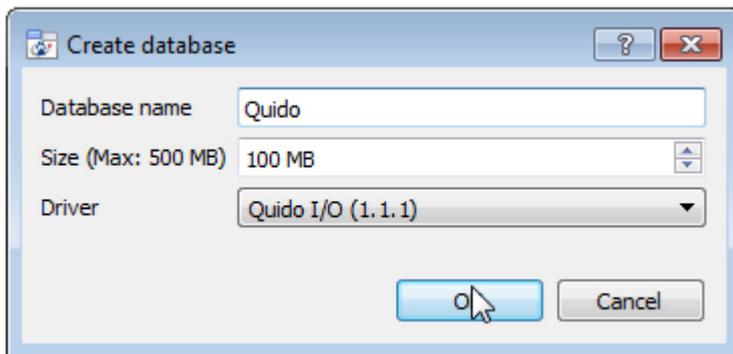
The first time you add an integration database you will have to initialise this feature on the unit. This will add a broad database, within which you will be adding all of your integrated device's databases.

Select the unit you wish to add the database to, from the list on the left, and click **Initialise integration database**. 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 **New** button, at the bottom of the Create database window.

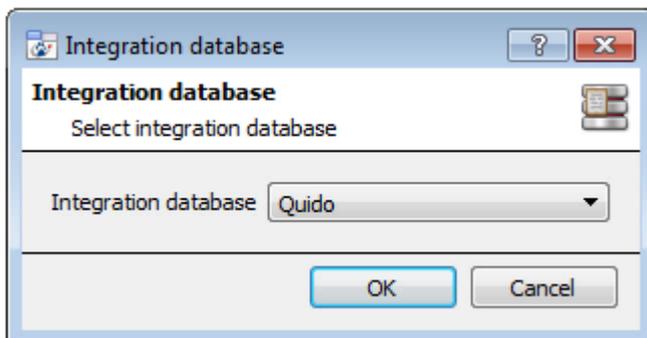


Give your Integration database a descriptive **Database Name**. e.g. Quido.

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 Quido 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

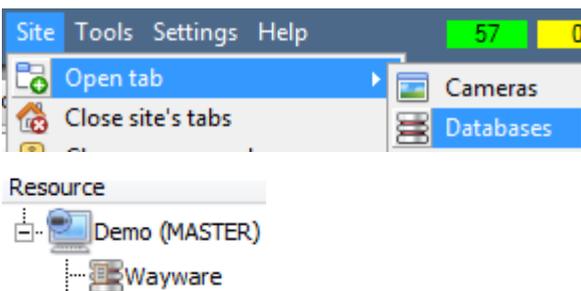
The database tab will allow you to navigate the databased entries, for each individual database. In the database tab each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording you will also be able to launch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

Time	Event Type	Object ID	Name	State	Counter	Temperature	Links
2015-09-03 14:25:42	Input	Input_001	Input 001	Low	0		
2015-09-03 14:25:43	Input	Input_001	Input 001	High	0		
2015-09-03 14:25:47	Input	Input_001	Input 001	Low	0		
2015-09-03 14:25:58	Input	Input_001	Input 001	High	0		
2015-09-03 14:26:01	Input	Input_001	Input 001	Low	0		
2015-09-03 14:26:26	Input	Input_001	Input 001	High	0		
2015-09-03 14:26:35	Input	Input_001	Input 001	Low	0		

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

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

b. Navigate to the Database

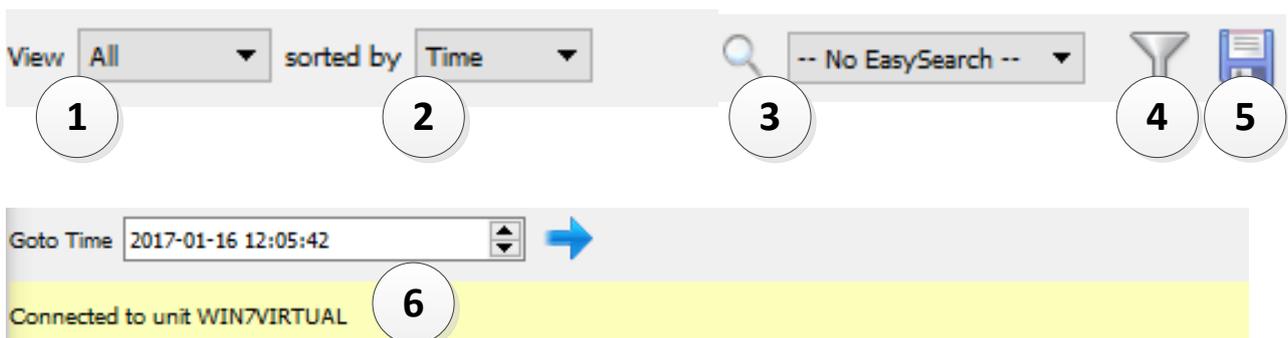


You may view the information stored in the Integration database, by following the path you see to the left.

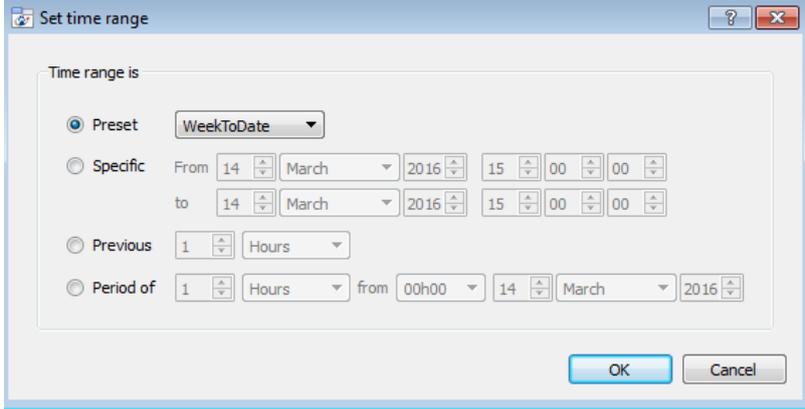
This will take you to the Database Tab.

Once in the databases tab you will have to select the relevant integration database. The databases are ordered under the NVRs that they are attached to.

c. Database Interface

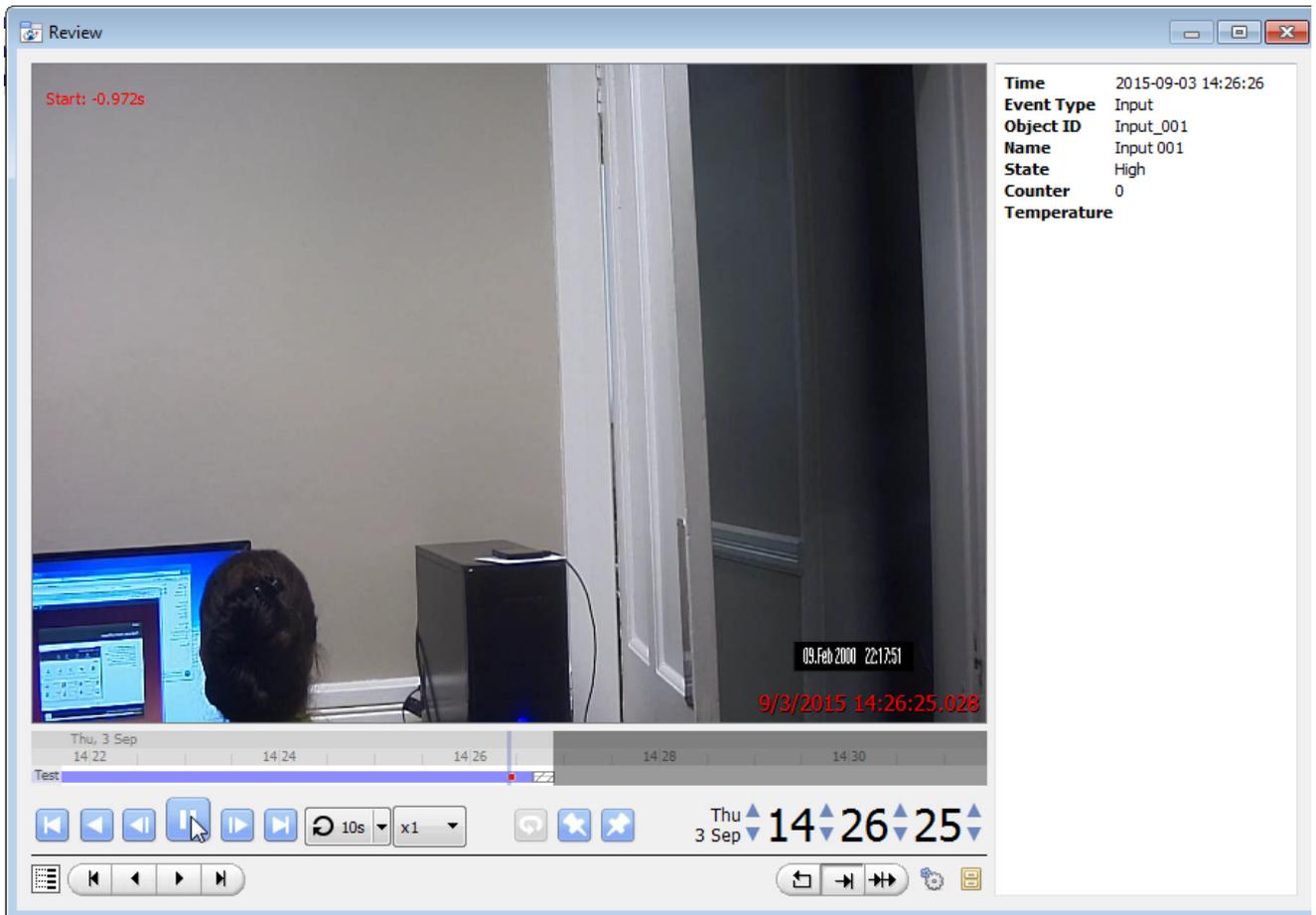


① View	The way the database is presented may be changed. Some integration databases have multiple view options. The Quido database has Input , Output , and Thermometer options.
② Sorted By	Events may be further sorted based on the following parameters: Time .
③ Easy Search	The easy search option allows for a quick search of the database within one of the following options: ID , Name , and State .

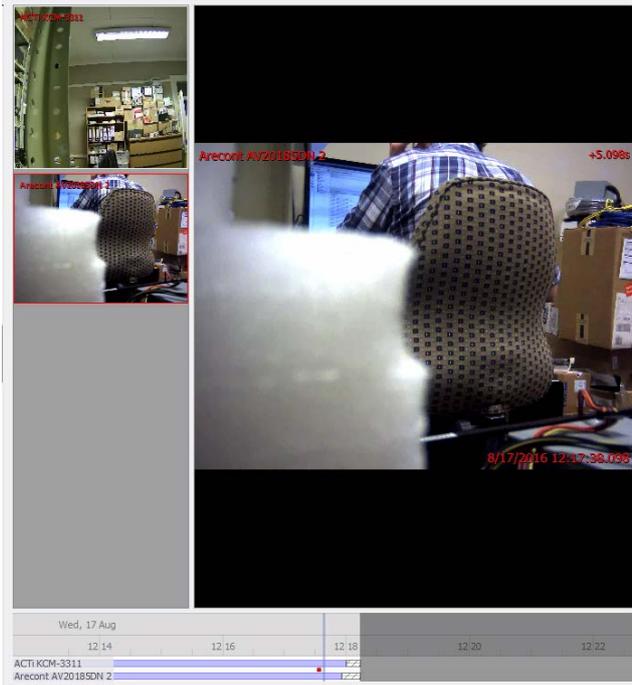
<p>④ Filter </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, the following options are available:</p> <ol style="list-style-type: none"> 1. To enable filters check this box: <input checked="" type="checkbox"/> Enable filters 2. To add a new filter click on . The filter icon  will change to  when filters are active. 3. To delete an added filter click on . <p>The options in this integration are Event, Event Type, Object Id, Name, State, Counter, Temperature.</p> <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"> 1. Multiple filters may be run simultaneously. Filters with the same parameters may be run more than once. 2. To change a filter click on the blue hyperlinked text.
<p>⑤ Export</p>	<p>Generate meta-database reports in PDF or CSV format. See below.</p>
<p>⑥ 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, and then click on the  icon.</p>

Viewing an Entry's Associated Recording

If you have attached cameras to device objects in the Integration setup and if there are available recordings for those cameras, then each Integration database entry will have a corresponding recording. To view a databased event's recording double click it. A floating replay window will appear, from which you may review and archive video content.



Reviewing Multiple Cameras



If multiple cameras were added to the recorded object during the integration setup, these are displayed on the left of the video player screen as thumbnails.

Select a camera thumbnail to review it.

Device Event Metadata

When a database entry is selected, its event information will be displayed on the right of the video player:

Time	2018-01-15 12:54:28
Event type	Fire Alarm
Message	Fire Alarm L1 A001 [1] BASEMENT STAIRCASE EXIT
Address	L1 A001 [1]
Panel	1
Room Name	BASEMENT STAIRCASE EXIT

Generate Meta-Database Reports



Click the  icon to open the Export window.

The screenshot shows the 'Export' window with the title 'Export'. The main section is titled 'Select the period to export'. There are four radio button options: 'Preset' (selected), 'Specific', 'Previous', and 'Period of'. The 'Preset' option is set to 'Quarter to date'. The 'Specific' option is set to 'From 1 January 2017 00:00:00 to 1 April 2017 00:00:00'. The 'Previous' option is set to '1 Hours'. The 'Period of' option is set to '1 Hours from 00h00 16 January 2017'. At the bottom right, there are 'Back' and 'Next' buttons.

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

Click **Next**.

The screenshot shows the 'Export' window with the title 'Export'. The main section is titled 'Configure the report'. There are two fields: 'Format' (set to 'CSV') and 'Filename' (set to 'C:/Program Files/CathexisVision Client/report.csv'). At the bottom right, there are 'Back' and 'Export' buttons.

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

See below for the two options.

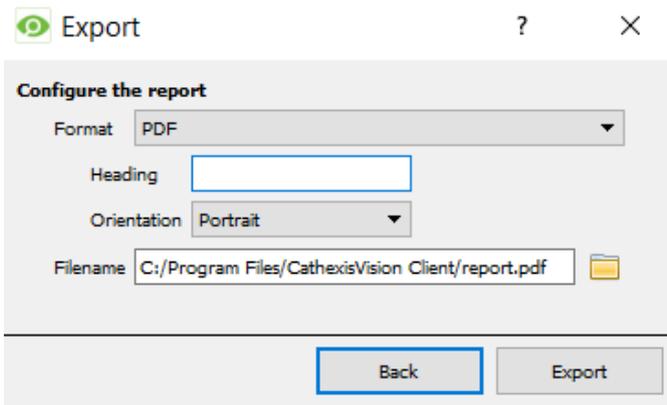
Export CSV

This is a close-up of the 'Configure the report' section from the previous screenshot. It shows the 'Format' dropdown menu set to 'CSV' and the 'Filename' text field containing 'C:/Program Files/CathexisVision Client/report.csv'. There is a folder icon button to the right of the filename field.

Select CSV **Format**.

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**), or click the  to choose a new save folder and filename.

Export PDF



The screenshot shows a dialog box titled "Export" with a close button (X) and a help button (?). The main area is titled "Configure the report" and contains the following fields:

- Format:** A dropdown menu currently set to "PDF".
- Heading:** An empty text input field.
- Orientation:** A dropdown menu currently set to "Portrait".
- Filename:** A text input field containing "C:/Program Files/CathexisVision Client/report.pdf" and a folder icon button to the right.

At the bottom of the dialog are two buttons: "Back" and "Export".

Select PDF **Format**.

Give the PDF a **Heading**.

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

Edit the **Filename** by either entering it straight into text field (replacing **report.csv**), or click the  to choose a new save folder and filename.

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 Quido specific aspects of Events. There is a comprehensive guide to CathexisVision Events in the main setup manual.

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.

Quido Demo

Edit Event

Quido Demo

General Triggers Actions Resources

Use [quido demo](#) to trigger the event

Trigger using [any input](#)

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

Description

New

Edit

Delete

No items

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

b. Creating an Event

To create an event using the Quido 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 [quido demo](#) to trigger the event
 Trigger using [any input](#)
 Start actions when [any of the following device events occur](#)

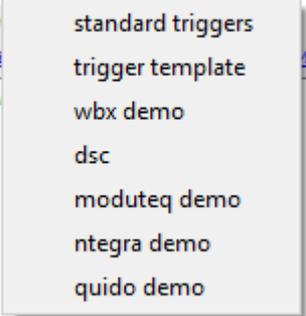
As usual, to change these settings click on the related, blue, hyperlinks.

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

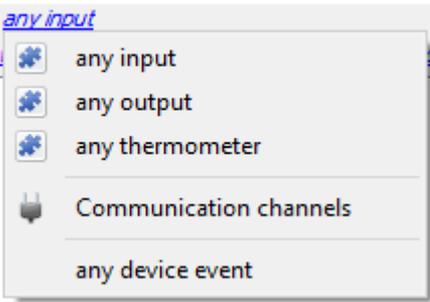
Use [wbx demo](#) to trigger the event
 Trigger using [any input](#)
 Start actions when [any of the following device events occur](#)



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 Quido device, click on the hyperlink, and select the relevant device name from the dropdown menu.

Trigger Types (Trigger Using)

Use [quido demo](#) to trigger the event
 Trigger using [any input](#)
 Start actions when [any of the following device events occur](#)



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

Any input/output/thermometer will trigger when any of the selected object type triggers.

Specific input/output/thermometer will allow you to choose specific counters to trigger an event.

Object in group... If you have set up a group it will appear here in this list.

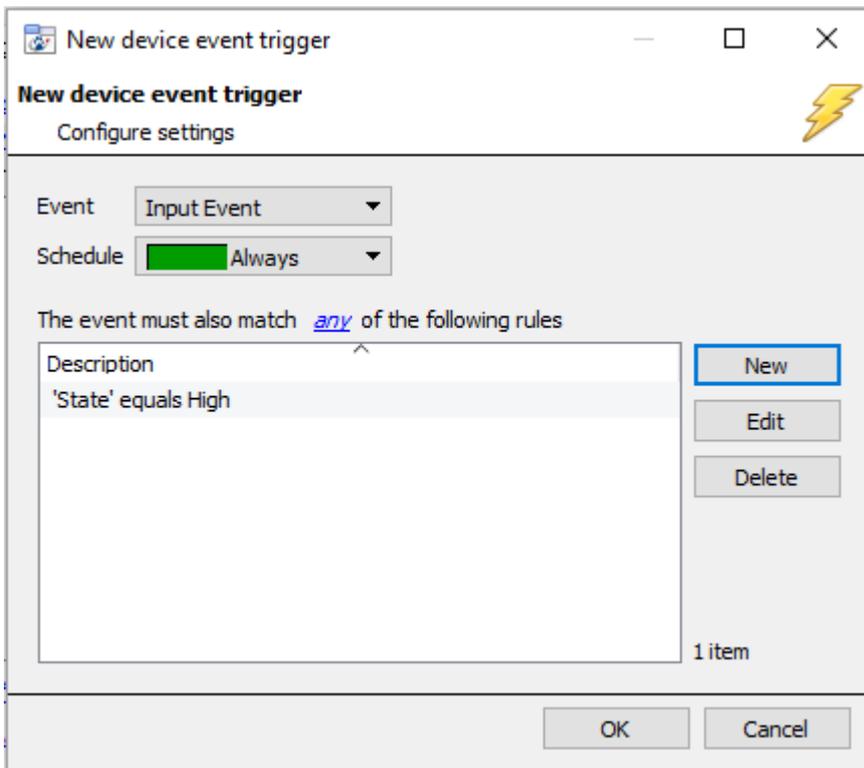
Communication channels will trigger only on the Communication channels.

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 Quido example which will send the counter information to the database, for the event: 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:

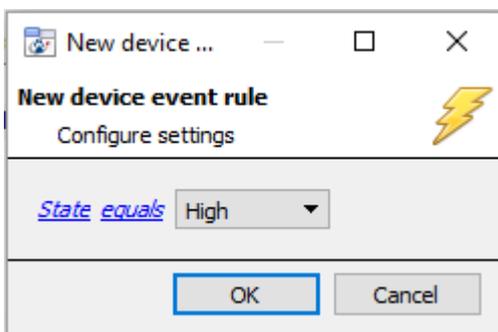


For example within the [any device event](#) option you may choose what type of device Event will be your trigger. Choose from the drop-down menu. The Quido integration offers **Input**, **Output** and **Thermometer** device events.

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 **Device Event 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.

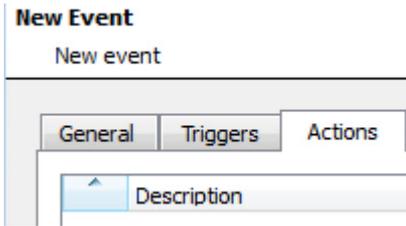


To change the constraint click on the first hyperlink, this will bring up the full list of available rules.

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.

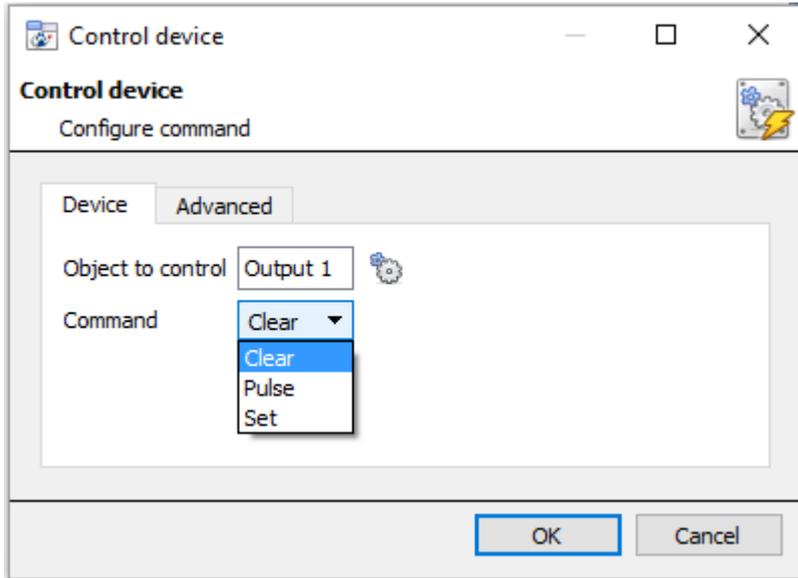
Note: When all available options are known to CathexisVision you will see a drop-down menu. When these variables are not pre-defined you will need to fill them in yourself. The information pulled through to the events is information sent to CathexisVision from the Quido device, see the Quido settings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

d. Actions

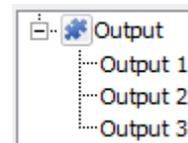


Once you have defined the triggers that are going to initiate your event, you will need to define some Actions. With many integrations there will be the option to control the integrated device, as one of the actions.

Adding an Action



Object to control will allow you to select which object to send commands to. Click on the  icon to select the object.



Select your Object from the list.

Once you have selected an object the command options for that object will populate the **Command** drop down menu.

Quido objects allow for **Clear**, **Pulse** and **Set** 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