



# Moduteq Cxx Perimeter Monitor Integration

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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 Moduteq Cxx Perimeter Protection device with CathexisVision's software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Moduteq device.

## Notes:

1. If you need information regarding the regular operation of a Moduteq device, please consult the relevant Moduteq documentation.
2. There is a General Integration section in the main CathexisVision manual. It has vital information about creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section.**
3. No device states will be displayed if the device is not connected at startup.
4. The states will change to Unknown if the connection is lost during normal operation.

## a. License requirements

### CDEV-2000 CathexisVision Other Device License

The Moduteq device will need to be licensed, on the CathexisVision software, using the CDEV-2000 CathexisVision Other Device 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 object.

### Objects

<b>Nodes</b>	Communication devices making up the "field network" to which the sensor devices are physically connected. Nodes also relay device maintenance information.
<b>Inputs</b>	Perimeter sensors (input devices) .
<b>Outputs</b>	Relays (output devices).
<b>Groups</b>	Virtual entity representing the alarm status of a number of devices allocated to it.

### Node states

<b>Node States</b>
<b>Normal</b>
<b>Alarmed (Needs acknowledge)</b>
<b>Alarmed (Needs reason)</b>

<b>Alarmed (Needs field reset)</b>
<b>Alarmed (persistent)/Maintenance</b>
<b>Access mode</b>
<b>Unknown</b>

Command set	Description
<b>Inhibit</b>	Will not generate alarms.
<b>Re-enable</b>	Will generate alarms again.
<b>Acknowledge alarm</b>	Will acknowledge the received alarm.

### Device States

- *Input States*

<b>Input States</b>
<b>Non-existent</b>
<b>Normal</b>
<b>Alarm</b>
<b>Maintenance</b>
<b>Unknown</b>
<b>Inhibited (Normal)</b>
<b>Inhibited (Alarm)</b>
<b>Inhibited (Maintenance)</b>
<b>Inhibited (Unknown)</b>

Command set	Description
<b>Inhibit</b>	Prevents device state changes from being reflected in node and group objects.
<b>Re-enable</b>	Will generate alarms again.

- *Output States*

<b>Input States</b>
<b>Active</b>
<b>Normal</b>

Command set	Description
<b>Activate</b>	Activates the output
<b>Clear</b>	Clears the output

### Group States

<b>Group States</b>
<b>Normal</b>
<b>Alarmed (Needs acknowledge)</b>
<b>Alarmed (Needs field reset)</b>
<b>Alarmed (Needs reason)</b>
<b>Alarmed (Persistent)</b>
<b>Access Mode</b>
<b>Unknown</b>

<b>Command set</b>	<b>Description</b>
<b>Inhibit</b>	Prevents group state changes.
<b>Re-enable</b>	Will generate alarms again.
<b>Acknowledge alarm</b>	Will acknowledge the received alarm.
<b>Alarm reason</b>	Will allow the user to clear the alarm with a predefined reason.

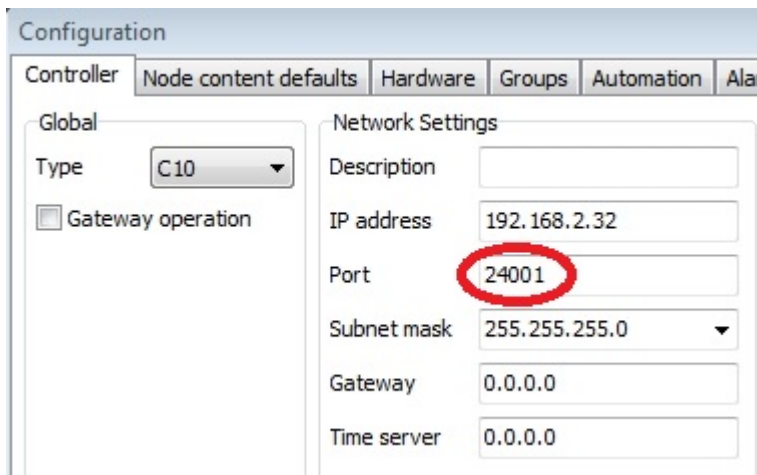
## 2 Device Addition and Configuration

### a. Introduction

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

### b. CathexisVision Specific Moduteq setup

- *Connection Options*



Configuration

Controller Node content defaults Hardware Groups Automation Alar

Global

Type C10

Gateway operation

Network Settings

Description

IP address 192.168.2.32

Port 24001

Subnet mask 255.255.255.0

Gateway 0.0.0.0

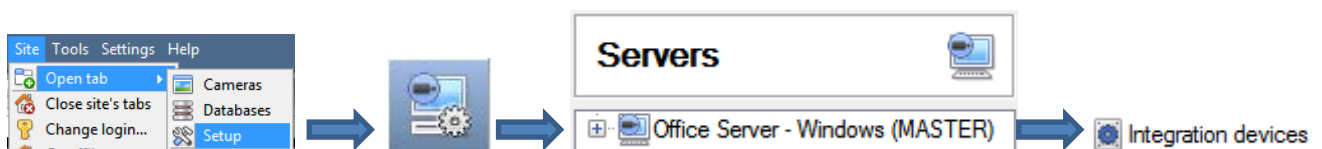
Time server 0.0.0.0

This device only connects to CathexisVision via Ethernet. The port number for the device must be set in the Moduteq C10 software.

### 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

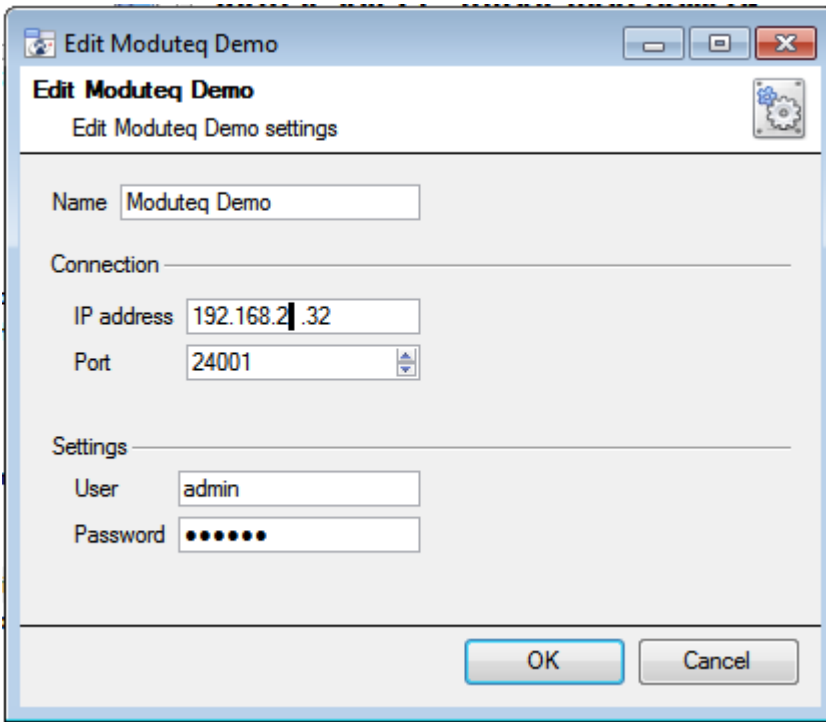


You will notice two sections in the Integration Panel:

1. The **Devices** list will list the integration devices that are attached to your integration database.
2. 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, in the **Devices** section, click on . This will open the addition window.
2. Select **Moduteq C perimeter monitoring** from the list.



Give your device a descriptive **name**.

The **IP address** is that of the Moduteq device; and the **Port number** is the port number set on that device.

The default Moduteq **user name** is: **admin**

The default Moduteq **password** is: **klm134**

## 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.

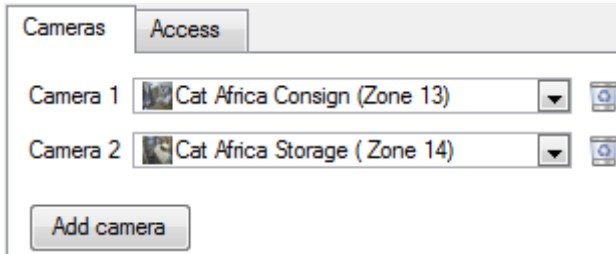
#### • **Object Configuration Buttons**

- 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**

- |   |   |
|---|---|
| <input type="button" value="New..."/>     | <b>New</b> will open up the dialogue to add a new object.   |
| <input type="button" value="Disable"/>    | <b>Disable/Enable</b> allows you to manually enable/disable individual nodes.   |
| <input type="button" value="Delete"/>     | <b>Delete</b> will permanently remove this object from the list.  |
| <input type="button" value="Properties"/> | <b>Properties</b> 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.

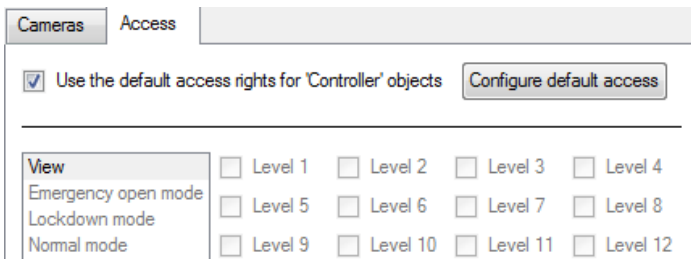
To add a camera click on , and select the relevant camera from the drop-down menu.

To delete a camera click on .

### Note:

1. If you do not have **continuous recording** setup, on associated cameras, you will run the risk of zones (object) triggering while the cameras are not recording. To only record cameras, when an object triggers, you will need to setup **Events** that trigger a recording, when one of these objects is activated.
2. Only the first linked camera will be visible in the integration database.

## Properties: Access



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

You will see a list of objects, whose access level you may set.

**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 Moduteq device you will have the options of viewing by **Group**, **Input**, **Node**, and **Output**.

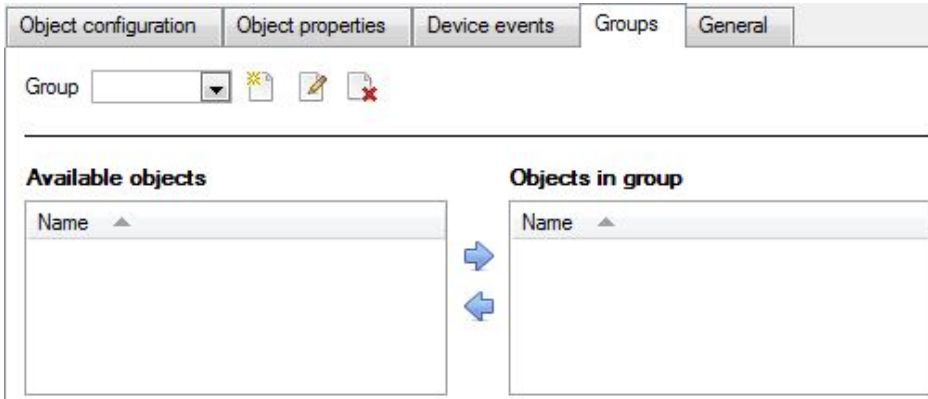
**Note:** when you right click an Object here you will be presented with the command sets for the individual Object types.

## Device Events Tab

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





## Groups Tab

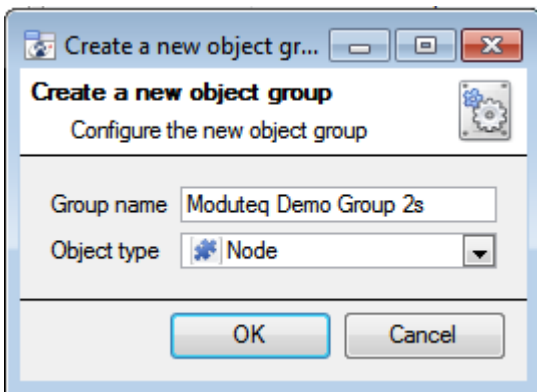


You can create groups of the same type of object.

**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 nodes/inputs in that group is triggered.)

### • Create a Group

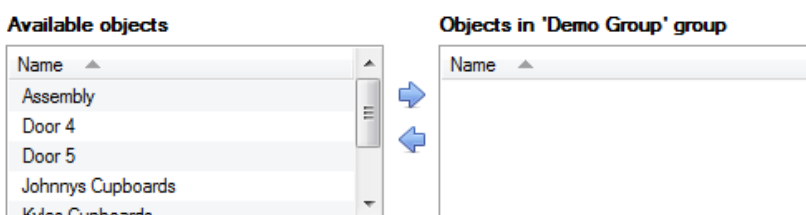
To create/edit a group click on  / . (**Note:** Once a group has been created, you may not edit the object type of the group.)





When creating a group you will select what object type to include in the group. Once the group is created the available objects panel will fill up with all available objects of that type. From this list you will choose which objects you want to use in your 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.

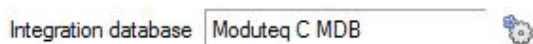



You will then see a list of Available Objects. To add/remove these objects to the group select them (you may select multiple at a time), and click on  / .

## General tab

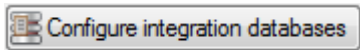
Currently the general tab deals with the integration database. Here you will be able to select a pre-created database, or you will be able to configure a new database.

### • Select an Integration database



To select a database click on , and select the relevant database. Only databases which relate to the device you are adding should appear.

- *Configure a new database*



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

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

## 3 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 Moduteq 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.

### b. Creating an Event

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



1. Once in Events management click on . This will open up the New Event window.
2. Once in this window, select the Triggers tab and click on the hyper link titled, [standard triggers](#).
  - a. From the menu that drops down, left-click the Moduteq device that you want to trigger the event with.

#### • *While/When and Any/All*

When triggering on a specific Moduteq 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 set-off an event.

Use [moduteq c10-10](#) to trigger the event

Trigger using [any node](#)

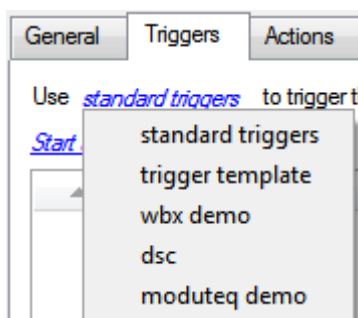
[Start actions when](#) [any of the properties meet the following criteria](#)

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).

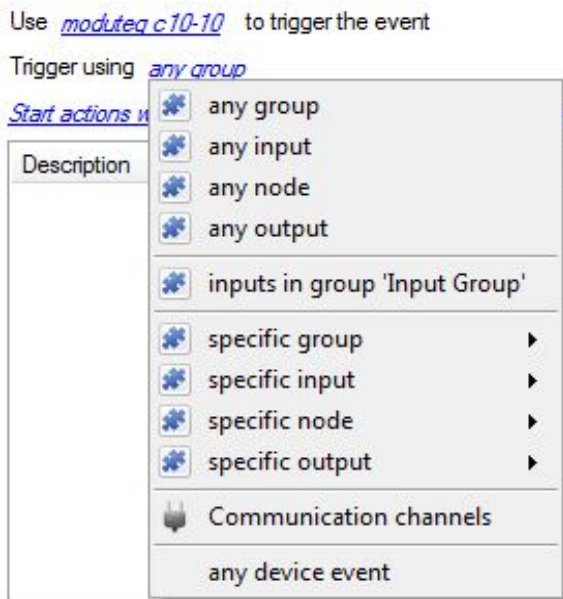
#### Set your device as the trigger



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

## Trigger Types (Trigger Using)

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



**Any group** will activate on the define triggers for all Moduteq groups (not CathexisVision groups).


**Any input/node/output** will activate on the defined triggers for all of these objects.

**Inputs in group ...** will trigger when an event occurs in any of the chosen object groups.


**Specific object** Will trigger on activity in a specific group/input/node/output.

**Communication channels** will trigger when the state of the communication channel changes.

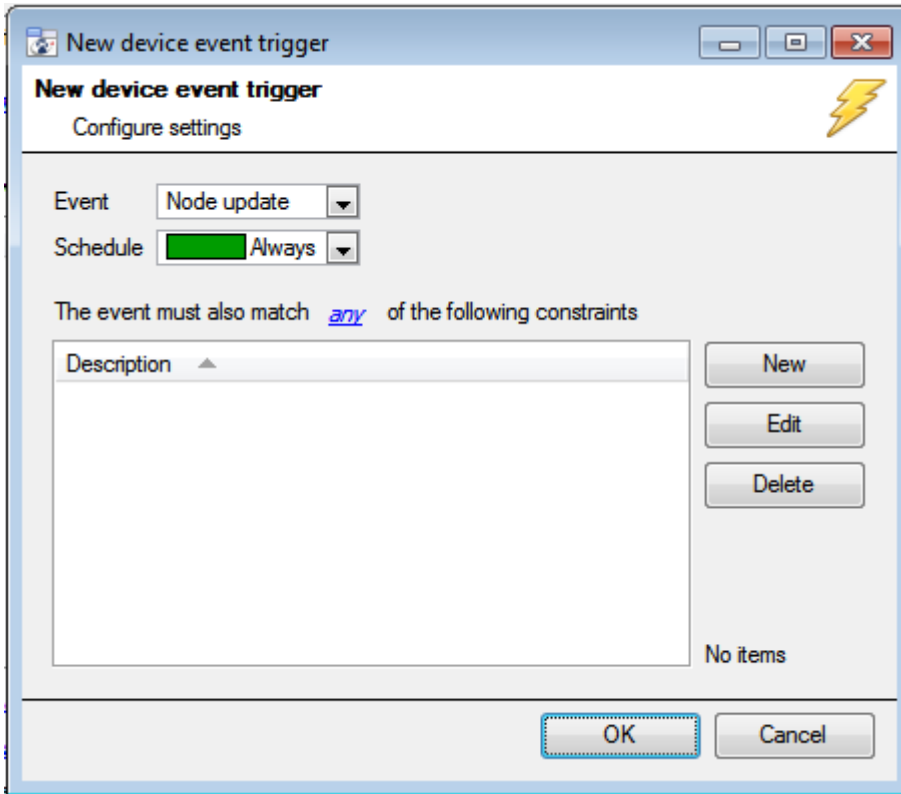
**Any device event** will trigger, initially, when any event occurs on the device. Within the "any device event" setup you may set "device event rules" which will constrain which events will trigger the event.

**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 an example which will database the object name "Input 01" when that input object of the Input Group triggers the event:

Description

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:

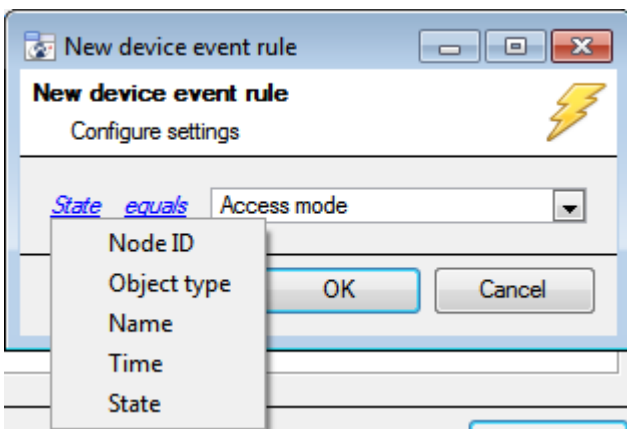
- *Any Device Event*



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 Moduteq device offers **Group update, Input Update, Node Update, Output Update, and Problem.**

**Note:** You may set multiple constraints. Choosing if [any](#), or [all](#) constraints need to be fulfilled to set off a trigger. If you do not define a constraint literally every single device event will trigger this event.

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



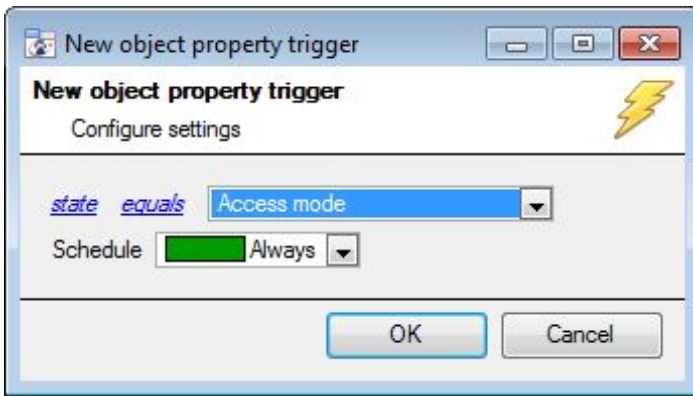
To change the constraint click on the first hyperlink, this will bring up the full list of available rules.

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 Moduteq device, or the information in the Device Events Tab, for the strings needed here.

- *Any Group/Input/Node/Output*

The non-**Any Device Event** triggers have a slightly different setup window. In these instances you do not need to set constraints, since you are essentially adding them one at a time. This option is better if you have a select few triggers that you want to use.



Since you are only using one type of object to trigger the event in this instance, the dialogue will appear as the **New Device Event Rule** window did previously.

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

## d. Actions

Once you have defined the triggers that are going to initiate your event, you will need to define some Actions. While the most common action in a CathexisVision integration is to use the integrated device's trigger to record a camera, you may also *control* a Moduteq device.

The Moduteq integration will allow for the following controls:

### Groups

- a. Acknowledge alarm
- b. Alarm reason
- c. Clear alarm state
- d. Inhibit
- e. Re-enable

### Inputs

- a. Inhibit
- b. Re-enable

### Nodes


- a. Acknowledge alarm
- b. Inhibit
- c. Re-enable

### Output

- a. Activate
- b. Clear

### • *Open Actions Tab and Select the Moduteq Device*

General Triggers **Actions** | To get started left-click on the tab titled "Actions", and click on New.

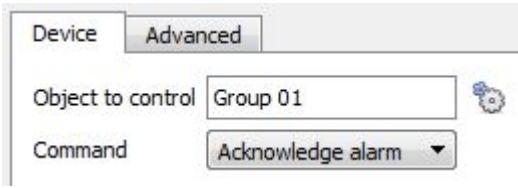
A menu will drop down containing all the available action types. The device action type is represented by this icon: .


It will say "Control ..." and the name of your Moduteq device e.g.  Control Moduteq Demo...

### Control device

This will 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.

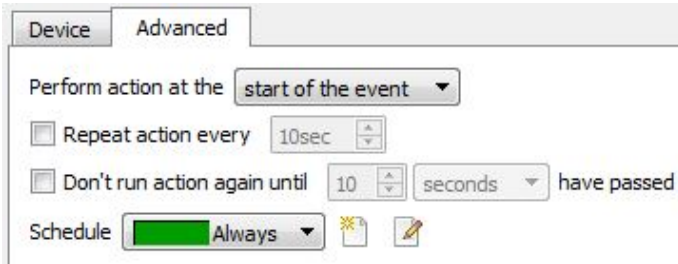
- **Device**



To select an **Object** click on the  icon. This will give you a selection of all the Objects available on the Moduteq device.

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

- **Advanced**



You may choose to **perform action at the** start of the event, or once the event triggers have subsided.

The two checkboxes allow the user to set the action to repeat every few seconds, and/or not run for a period after it has triggered.

**Schedule** is a standard Cathexis schedule, which you may apply to the actions.

**Note:** If your actions include an 'Acknowledge alarm' and an 'Alarm reason' then you must ensure that the acknowledgement is performed at the start of the event and the reason is performed at the end of the event. This will ensure that they are performed in the correct order.

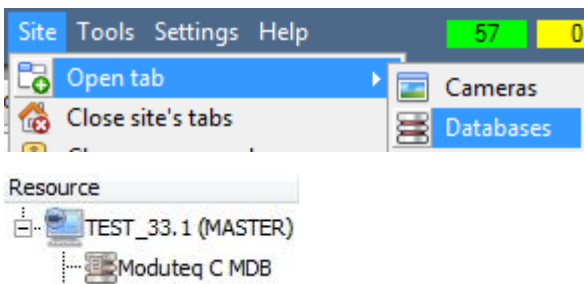
## 4 Database

### 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.

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

### b. Navigate to the Database

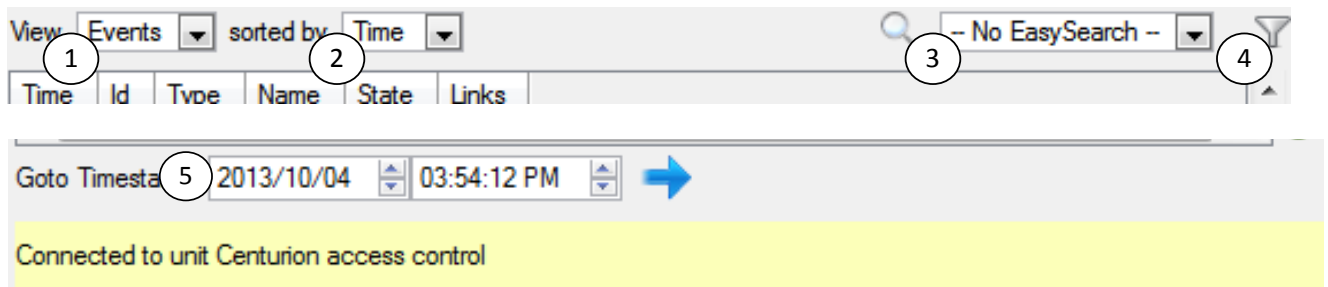




You may view the information stored in the Integration database, by following the path you see to the left.

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 <b>View</b>	You may change the way that your database is presented. Some integration databases have multiple view options.
② <b>Sorted By</b>	You may sort the Events based on the following parameters: <b>Time, ID, Type, and State.</b>
③ <b>Easy Search</b>	The easy search option allows you to quickly search the database within one of the following options: <b>Object, Type, and State.</b>
④ <b>Filter</b> 	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>You are able to filter based on the following parameters: <b>Time, ID, Type.</b></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 .</li> </ol>



	<p>The filter icon  will change to  when filters are active.</p> <p>3. To <b>delete</b> an added filter click on .</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. You may run multiple filters simultaneously. And you may even filter using the same parameter more than once.</li> <li>2. 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>
<p>⑤ Go to Time</p>	<p>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 the click on the  icon.</p>

### Viewing an Entry's Associated Recording



If you have attached cameras to device objects in the Integration setup, and have set these cameras up to record continuously, 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.



will give you the view to the left.



will break down the image into 4 sequential frame viewers.

## 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)