



# Gallagher Integration App-note

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While Cathesis 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. The integration Hardware and Firmware used are current at the time of the integration development and new versions of such may not be compatible with the integration.

## 1. Introduction

This document will detail the integration of the Gallagher access control and fence management solution, with CathexisVision software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Gallagher device.

**Note:** CathexisVision only supports 1 Gallagher OPC integration per site.

In this SDK integration, CathexisVision receives event information from Gallagher for viewing in CathexisVision. For a guide on the Gallagher Command Centre's integration with CathexisVision (a REST API integration), please refer to the *CathexisVision Gallagher Command Centre Plugin Configuration Guide*. In that integration, Cathexis sends video and event information to Gallagher for viewing in the Gallagher Command Centre.

### 1.1 Requirements

- CathexisVision 2015 Service Pack 1 and later.
- Win 7– 64bit and later, Win Server 2008 R2 and later.
- CathexisVision Gallagher Wrapper.
- Gallagher OPC Core components.
- Gallagher OPC Bridge.
- Minimum of 4 GB of RAM required.

**Note:**

1. For information regarding the regular operation of a Gallagher device, please consult the relevant Gallagher documentation.
2. There is a General Integration section in the *CathexisVision Setup Manual*. It has vital information about creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section.**

#### 1.1.1 License Requirements

The Gallagher integration requires the following license: **CGAL-2000**.

**Note:** in this integration, a single license will cover multiple linked devices.

#### A NOTE ON CAMERA CHANNELS

The CathexisVision 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 CathexisVision 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.

## 1.1.2 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 object.

### 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.

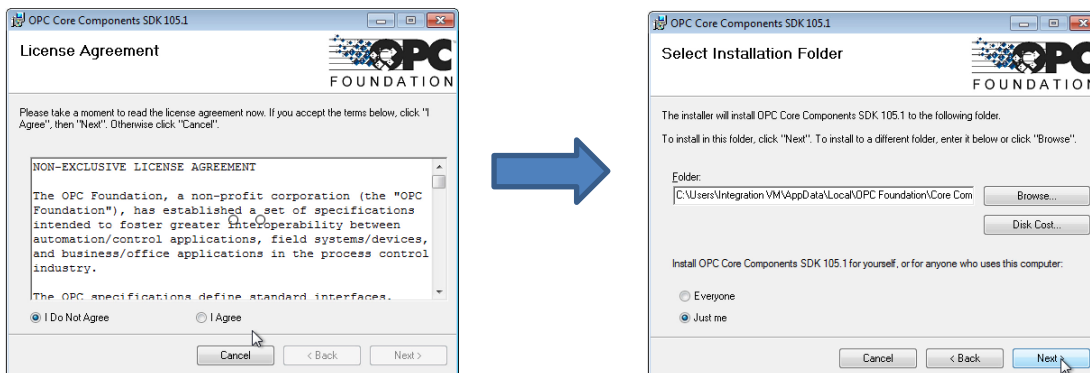
### 2.1 CathexisVision Specific Gallagher Setup

There are a number of things that have to be set up before a Gallagher device can be successfully added to CathexisVision. The following all need to be installed on the same computer:

1. Gallagher OPC Core components.
2. Gallagher OPC Bridge.
3. The Cathexis Gallagher Wrapper. This can be obtained by emailing [support@cat.co.za](mailto:support@cat.co.za).

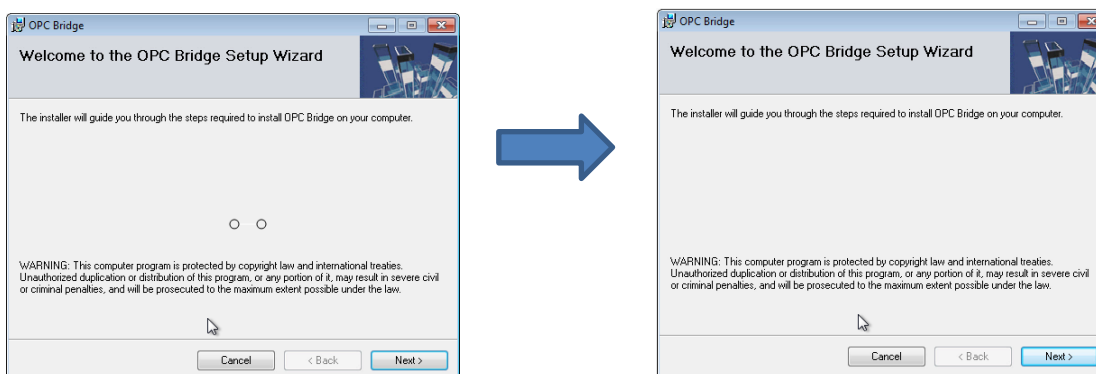
#### 2.1.1 Gallagher OPC Core Components

Simply run the OPC Core Components setup file and follow the prompts.



#### 2.1.2 Gallagher OPC Bridge

As with the Core Components, simply run the setup file, and follow the prompts.



## 2.1.3 Setup Users and Groups on the Gallagher Software



In order for the Wrapper to work, create a login for it on the Gallagher system. Open the Command centre.

### 2.1.3.1 Create an OPC Group

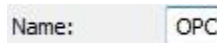
The first step is to **create an Operator Group, called OPC.**



1. Once in the Gallagher Command Centre, open up the Operator Groups dialogue. Once in the Operator Group Properties dialogue, right click on some white space and select the following:



2. Name this new group OPC.



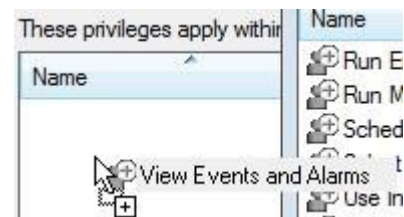
3. Click on the **Operator Privileges** tab in the Operator Group Properties.



4. After this, leave the dialogue open, and navigate to **Operator Privileges** in the main menu.

5. Scroll down to **View Events and Alarms Monitor**.

6. Left-click-and-drag this option into the still-open Operator Group privileges dialogue, as shown in the image to the right.



### 2.1.3.2 Create an OPC User

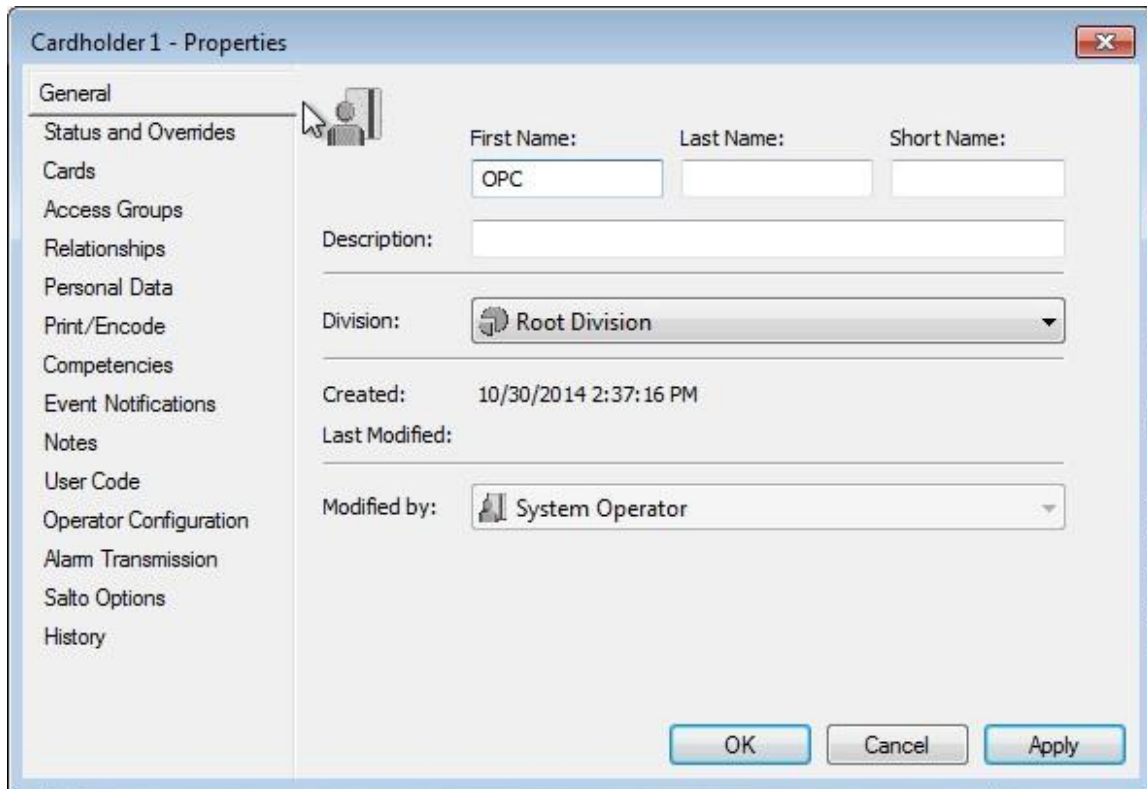
1. Once the OPC group has been created, create a user (cardholder) to add to the group.

2. This is done via **Manage / Cardholders**.

3. In the Cardholders list, right-click on some white space and click on

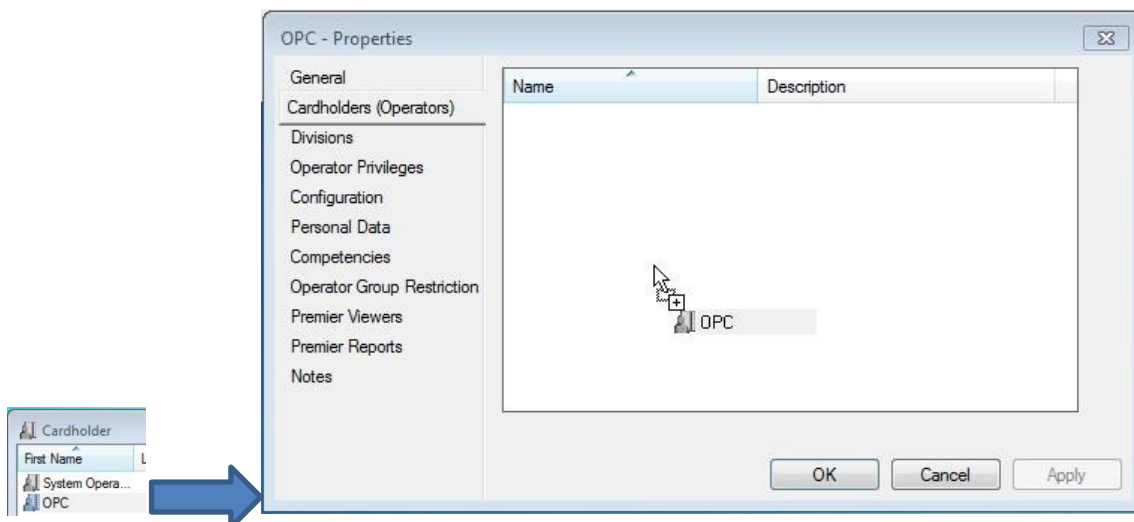


New / Cardholder. This will bring up the following dialogue. Give the cardholder only a First Name, which will make OPC.



Click to Apply. The new cardholder will now appear in the list.

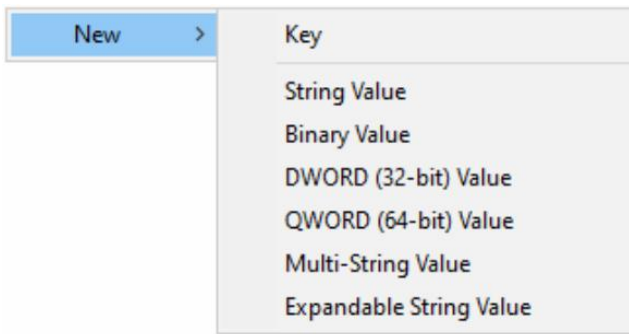
**Add the user to the OPC Group.** Left-click-and-drag this user into the Operator Group list, and click Apply:



**Set the login details of the user.**

This is done by opening regedit.exe and navigating to **Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Gallagher\Command Centre**

Then create two new string values:

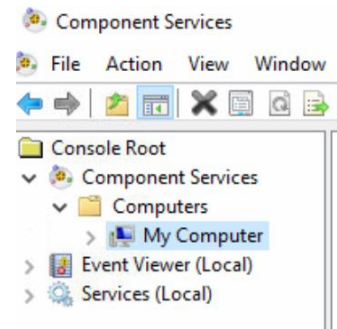


OPCPassword	REG_SZ	your_opc_password
OPCUserName	REG_SZ	your_opc_username

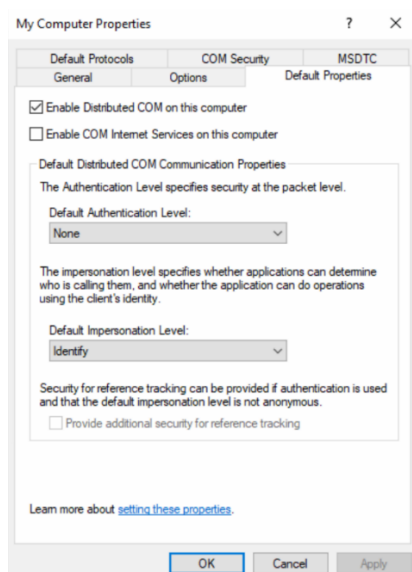
### 2.1.3.3 Configure DCOM

The following settings are needed for the Wrapper to connect to DCOM:

- Open "**dcomcnfg**" (This can be done by entering it into the start menu).
- In the new window right-click "My Computer" and select "Properties".



- Go to the "Default Properties" tab, select "**Enable Distributed COM on this computer**", set "**Default Authentication Level**" to "**None**", Set "**Default Impersonation Level**" to "**Identify**":

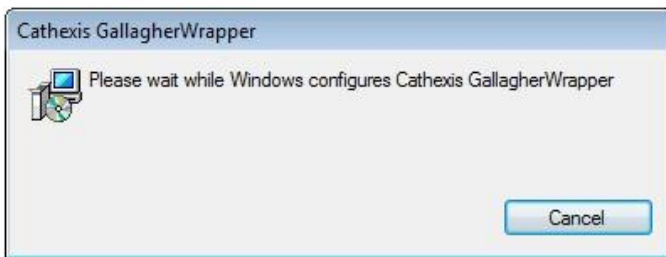




## 2.1.4 CathesisVision Gallagher Wrapper

The wrapper is the software middleman that controls the communication between the Gallagher software, and CathesisVision.

### 2.1.4.1 Installation



Run the Gallagher setup file.

The image to the left will be displayed, which will disappear once the installation is complete.

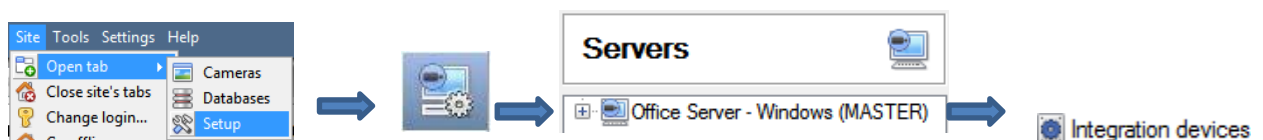


After installing the Wrapper, open it via **Start Menu / Cathesis Gallagher Wrapper**. Enter in the IP address of the CathesisVision server, and that of the Gallagher server, and set the port number to 5000. Then click on **Connect**. This will activate the Wrapper.

## 2.2 Add a New Device in CathesisVision

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

### 2.2.1 The Integrations Panel

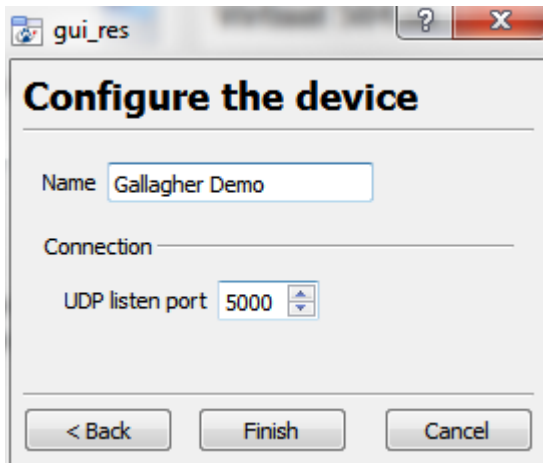


Notice two sections in the Integration Panel:

1. The **devices** list will list the integration devices that are attached to the integration database.
2. The **Configuration** section enables one to edit/review, the device selected in the **devices** section.

### 2.2.1.1 Device Addition

1. Once in the Integration Panel, in the devices section, click on **New Device**. This will open the addition window. 
2. Select **Gallagher** from the list.



3. Give the device a descriptive **name**.
4. Set the UPD listen port to 5000, as in the setup above.

## 2.3 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**.

### 2.3.1 Object Configuration Tab

The object configuration tab is the tab where one may view all the individual objects that comprise the integration.

#### 2.3.1.1 Object Configuration Buttons

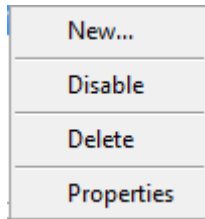


Add a new object by clicking on **New**. Will open up an existing object for edition.

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

### 2.3.1.2 Object Configuration Right-click Options

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

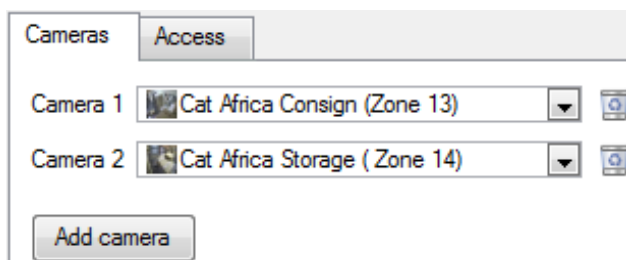


**Disable/Enable** allows one to manually enable/disable individual nodes.

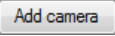
**Delete** will permanently remove this object from the list.

**Properties** will open up the object properties. Edit the object from here. (Specifically, one can assign cameras to this object, as well as define user access levels for it.)

#### Properties: Cameras



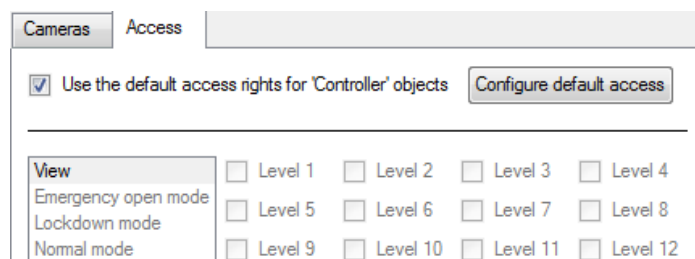
Adding a camera to an object will mean that whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database.

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

To delete a camera, click on .

**Note:** If *continuous recording* is not setup, on associated cameras, there is the risk of zones (object) triggering while the cameras are not recording. To only record cameras, when an object triggers, setup **Events** that trigger a recording, when one of these objects is activated.

#### Properties: Access



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

There will be a list of objects whose access level may be set.

**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.

## 2.3.2 Object Properties Tab

The Object properties tab allows one to view the objects, sorted by type. In the case of the Gallagher device, there are the options of viewing by **Door**, and **Fence Zone**.

## 2.3.3 Device Events Tab

**Configuration of 'Gallagher'**

Object configuration	Object properties	Device events	Groups	General	
Door Event ▾					
Time	Event Source	Description	Details	Group	Message
2014-10-30 14:43:35	Foyer Door	Door Re-secured		Door Status	Foyer Door has been resecured.
2014-10-30 14:43:34	Foyer Door	Forced Door		Forced Door	Foyer Door has been forced.

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.

## 2.3.4 Groups Tab

Object configuration	Object properties	Device events	Groups	General	IXP20 Cor
Group <input type="text"/> [Add] [Edit] [Delete]					
<b>Available objects</b>			<b>Objects in group</b>		
Name ▲			Name ▲		

Create groups of the same type of object.

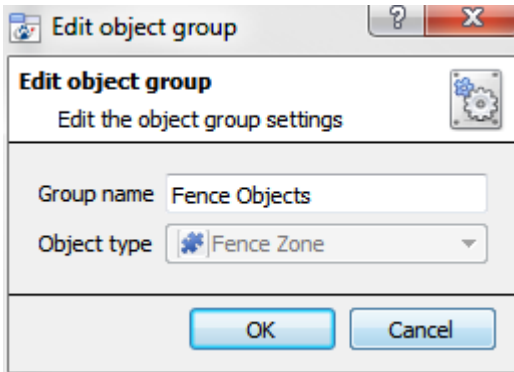
**Tip:** This is very useful when setting up Events, because events can be triggered by an object group. (E.G. a group will trigger, if any of the zones/partitions in that group is triggered.)

### 2.3.4.1 Create a Group

Click this icon to create a group.

Click this icon to edit a group.

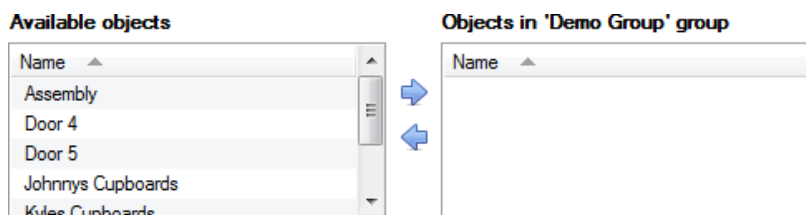
(**Note:** once a group has been created, it is not possible to edit the object type of the group.)



When creating a group, select the 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, choose which objects to use in the Group.

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

Click on the drop-down menu to select the **object type** to group.

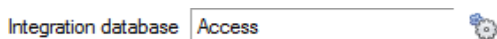


A list of available objects will appear. To add / remove these objects to or from the group, select them (one may select multiple at a time) and click on the arrow icons.

## 2.3.5 General Tab

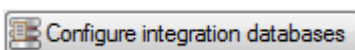
Currently the general tab deals with the integration database. Here, select a pre-created database, or configure a new database.

### 2.3.5.1 Select an Integration Database



To select a database, click on the gear icon. Select the relevant database. Only databases which relate to the device being added should appear.

### 2.3.5.2 Configure a new database



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

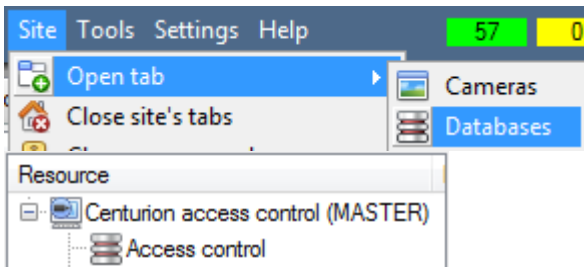
**Note:** The information on setting up an integration database may be found in the **Integration Devices General Settings** section of the CathesisVision Setup Manual.

## 3. Database

The database tab will allow one 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, it is also possible 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 CathesisVision by the integrated device.

### 3.1 Navigate to the Database



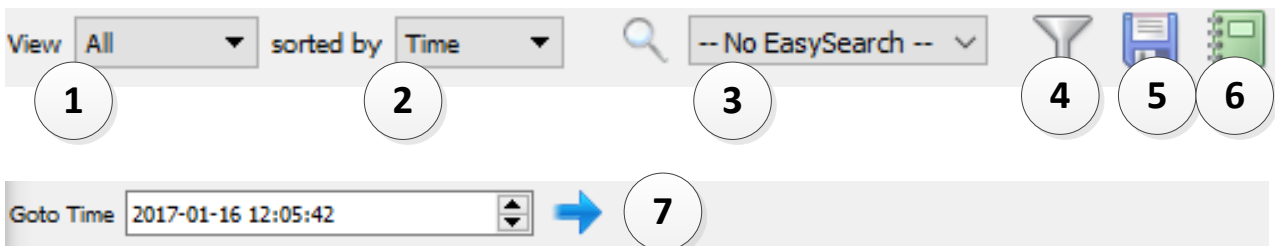
View the information stored in the Integration database, by following the path seen to the left. This will navigate to the Database Tab.

Once in the databases tab, select the relevant integration database. The databases are ordered under the NVRs that they are attached to. A Gallagher database will look like so:






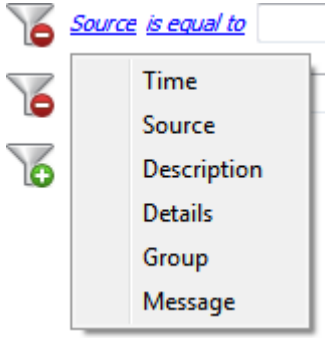
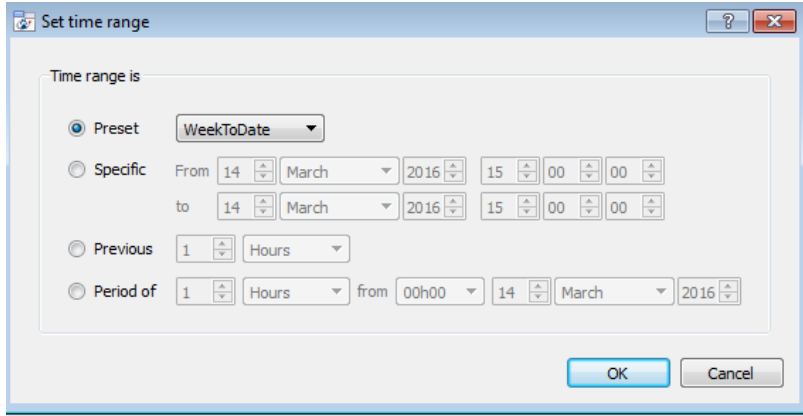
View Events sorted by Time


Time	Source	Description	Details	Group	Message	Links
2014-10-30 14:43:34	Foyer Door	Forced Door		Forced Door	Foyer Door has been forced.	
2014-10-30 14:43:35	Foyer Door	Door Re-secured		Door Status	Foyer Door has been resecured.	
2014-10-30 14:46:18	Foyer Door	Forced Door		Forced Door	Foyer Door has been forced.	
2014-10-30 14:46:22	Foyer Door	Door Re-secured		Door Status	Foyer Door has been resecured.	

### 3.2 Database Interface



① <b>View</b>	Change the way that the database is presented. Some integration databases have multiple view options. The Gallagher database only one option: <b>Access Events</b> .
② <b>Sorted By</b>	Sort the Events based on the following parameters: <b>Time, Source, and Group</b> .

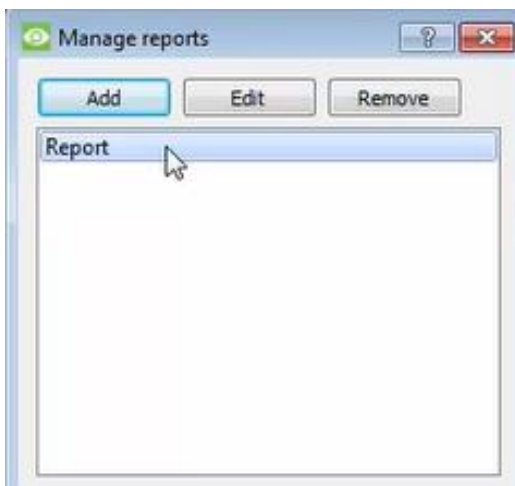
<p>③ Easy Search</p>	<p>The easy search option allows quickly searching the database within one of the following options: User</p>
<p>④ Filter </p>	<p>Filter offers a more advanced manner of sorting information in the Integration Database table.</p> <p>Once the filters dialogue is open, the following options are available:</p> <ol style="list-style-type: none"> <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 .</li> </ol> <p>The Gallagher device offers the following filter options:</p>  <p>A <b>Time range</b>, within which the search will be conducted, may also be set.</p> <p>To set a <b>Time range</b>, click on the blue hyperlinked text which specifies time (e.g. <a href="#">in the Week to date</a> ).</p> <p>This will bring up the following dialogue box, where the time range can be defined:</p>  <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>Multiple filters may be run simultaneously. Filters with the same parameters may be run more than once.</li> <li>To change a filter, click on the blue hyperlinked text.</li> </ol>

⑤ <b>Export</b>	Generate metadatabase reports in PDF or CSV format. See below.
⑥ <b>Manage Reports</b>	Generate scheduled metadatabase reports. See below.
⑦ <b>Go to Time</b>	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.

### 3.2.1 Scheduled Metadatabase Reports



Click this icon to open the scheduled report window.



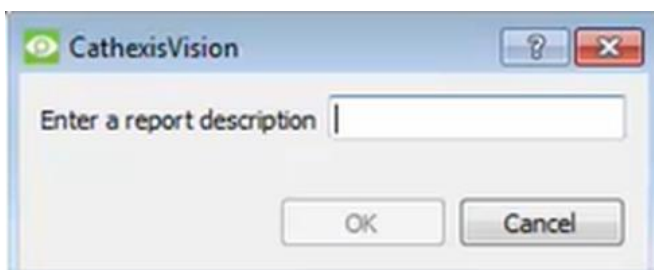
All created reports will be listed here.

First, click **Add** to create a report. Then **edit** to define the reporting schedule. See below for more detail.

To create, edit, or delete a report, select the entry and click on the corresponding button.

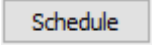
#### 3.2.1.1 New Scheduled Report

Click Add and give the report a description.

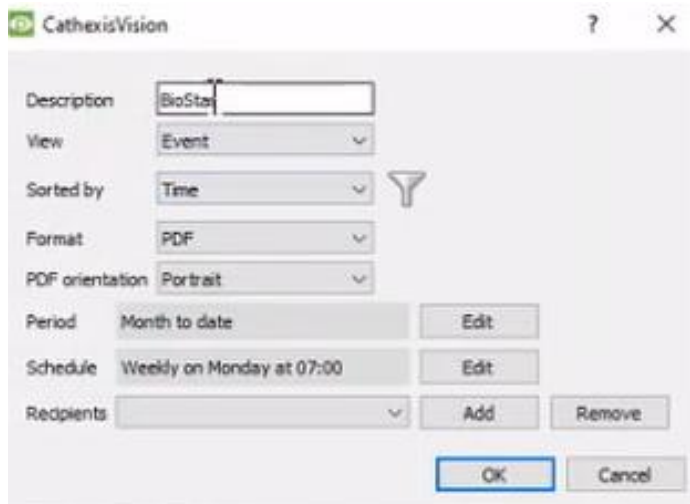


Click **OK** when done.

Once the new report is listed with the other reports, select it for editing to define the reporting schedule.

Either right-click the entry and select schedule or select the entry and click the schedule button at the bottom of the screen: .



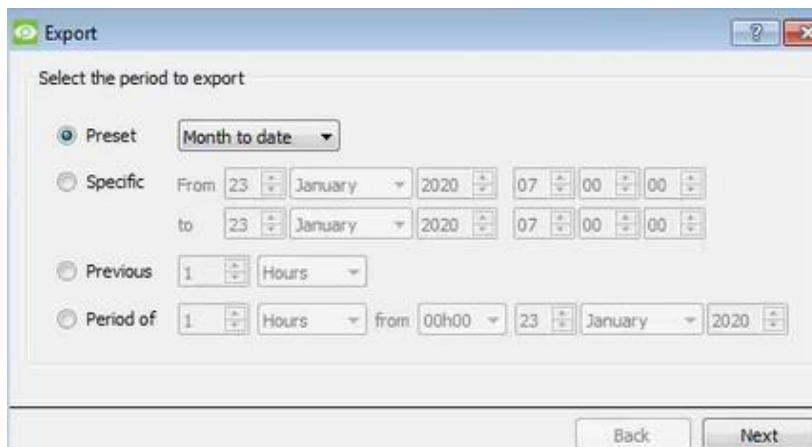


Add recipient / Remove recipient

### 3.2.2 Generate Metadatabase Reports

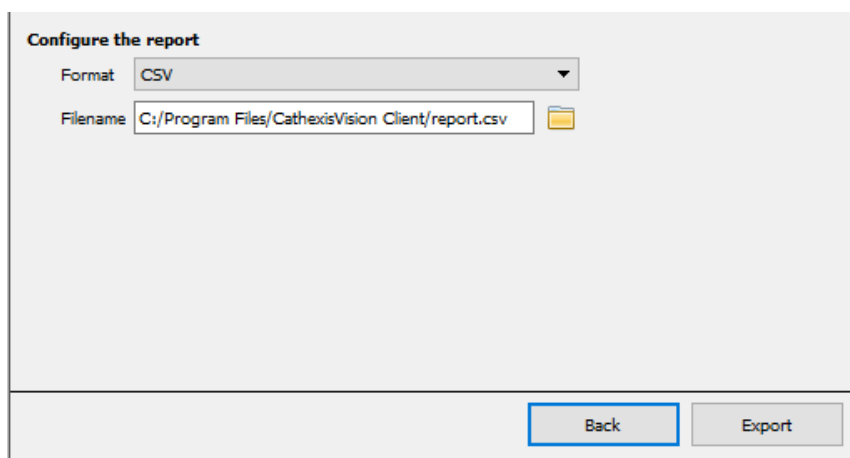


Click this icon to open the Export window.



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

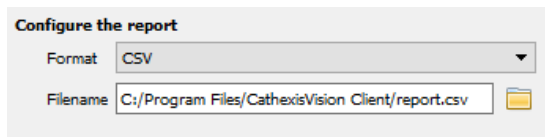
Click **Next**.




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

See below for the two options.

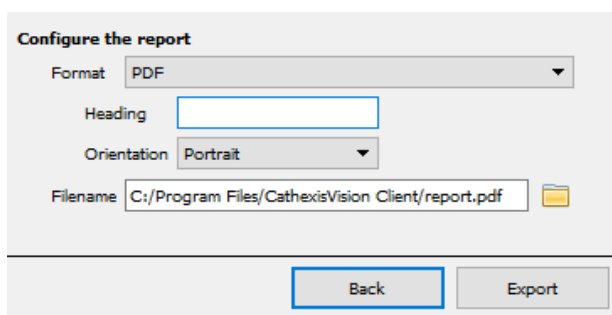
### 3.2.2.1 Export CSV



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.


### 3.2.2.2 Export PDF



Select **PDF Format**.

Give the PDF a **Heading**.

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

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

## 3.2.3 Metadata

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

## 3.2.4 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.

To view a databased event's recording, double-click it. A floating replay window will appear, from which content may be reviewed and archived.

This will give the view shown here, and will break down the image into 4 sequential frame viewers.



## 4. Events

A CathesisVision event has a trigger, which causes an action. Set integrated devices to act at triggers, or as actions. This document will detail the Gallagher 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.

**Note:** In order for the integration to discern the source of an event, objects must match a specified pattern. These patterns may be anywhere in the name as configured in the Gallagher Command Centre, e.g. at the beginning, end, or middle:

- For inputs, "Input" must be in the name.
- For doors, "Door" must be in the name.
- For fences, "Fence" must be in the name.

### 4.1 Creating an Event

To create an event using the Gallagher 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 hyperlink titled, [standard triggers](#)
3. From the menu that drops down, left-click the Gallagher device with which to trigger the event.

#### 4.1.1 While / When and Any / All

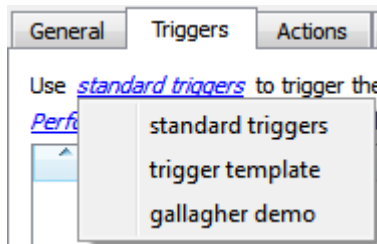
When triggering on a door, there is the option to trigger **while/when** a trigger is active. It is also possible to select multiple triggers, and define whether **all/any** of the triggers need to be active to set off an event.

Trigger using [Door 3](#) As usual, to change these settings, click on  
[Perform actions while any](#) of the properties meet the following criteria the related blue hyperlinks.

## 4.2 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).

### 4.2.1 Set the device as the trigger



When creating a new event, the trigger type will default to **Use standard triggers**.

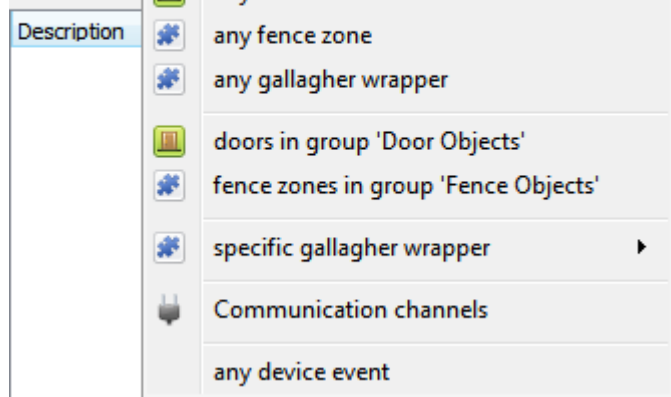
To define the device to trigger the event, click on the hyperlink after “use”. To set it as the Gallagher device, click on the hyperlink, and select the relevant device name from the dropdown menu.

### 4.2.2 Trigger Types (Trigger Using)

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

Trigger using [any door](#)

[Start actions](#)



**Any door/fence** Either choose specific doors, from any of the doors, or set the

**Group** options, will trigger based on the groups set up in the Integration addition stage.

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

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

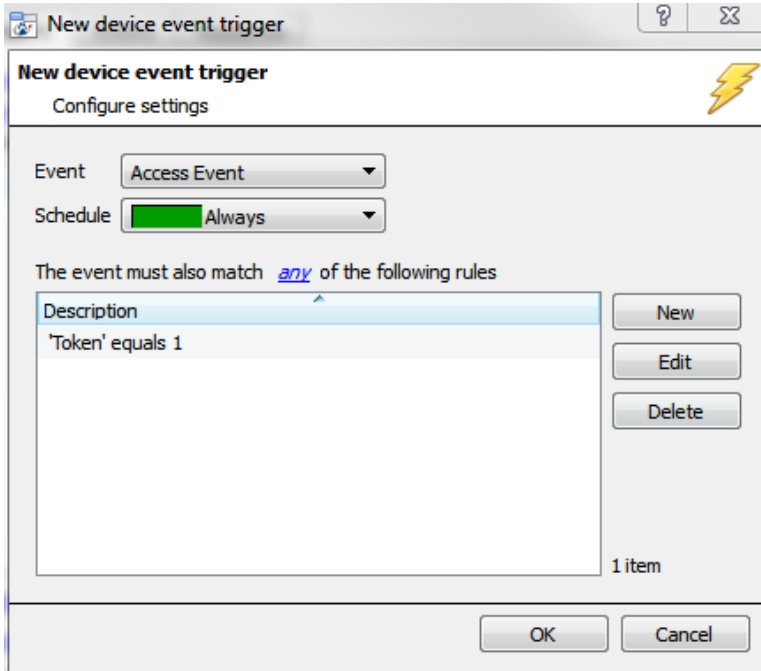
Click on the **question mark icon** to see a list of available descriptions.

Here is an example which will database the text “Door name” along with the name of the *door object* that triggered the event:

Description

After selecting a master trigger type, it is necessary to add a trigger to the event. Click on **New** in the Triggers tab. This will bring up the dialogue box below:

4.2.2.1 Any Device Event

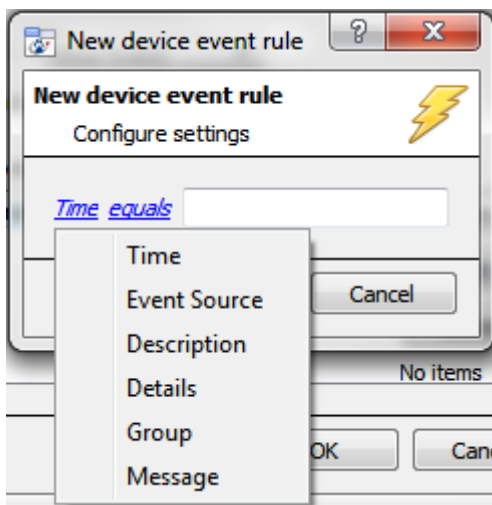


For example, within the **any device event** option, choose what type of device Event will be the trigger.

Choose from the drop-down menu. The Gallagher device offers **Door Event**, and **Fence Event**.

**Note:** it is possible to set multiple constraints. Choosing if **any**, or **all** constraints need to be fulfilled to set off a trigger. If a constraint is not defined, every 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.

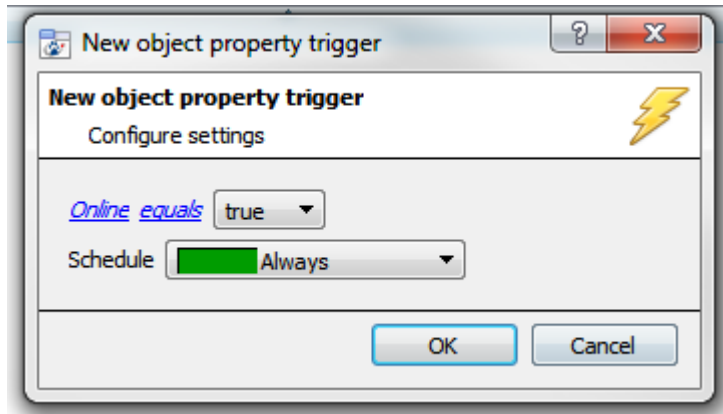
To modify the way this rule will be treated, click on the second hyperlink (**equals** in the example). This will display the rules options.

**Note:** When all available options are known to CathexisVision, 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 CathexisVision from the Gallagher device.

See either the Gallagher settings, or the **Integration devices /Device Events**, for the strings needed here.

#### 4.2.2.2 Any Door / Fence

The non-Any Device Event triggers have a slightly different setup window. In these instances, it is not necessary to set constraints, since they are being added one at a time. This option is better if there are a select few triggers to use.



Since there is only 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 also true for groups, since a group may only be made up of one object type.

### 4.3 Actions

Once the triggers that are going to initiate the event are defined, define some Actions. With many integrations there will be the option to control the integrated device, as one of the actions. Because of the nature of this integration this option is not available with the Gallagher device. The other CathesisVision Action options will be available, which are detailed in the main Setup Manual.

## 5. Conclusion

Please note that 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](mailto:support@cat.co.za)