



Wayware Weighbridge Integration Document

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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 Mastech Wayware Weighbridge, with CathexisVision's software. Functionally this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Mastech device.

Requirements

- CathexisVision 2014 Service Pack 3 and later.
- Win 7 - 64bit and later; Win Server 2008 R2 and later.
- Minimum of 4 GB of RAM required.

Note:

1. If you need information regarding the regular operation of a Mastech device, please consult the relevant Mastech 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. When using a serial port connection CathexisVision is unable to detect the Mastech device, if the Controller or Communications channel has lost connection.
4. When using an ESP1204 the Communication channel will only show it is disconnected if the network connection to the ESP1204 is down.

a. License requirements

The Cathexis weighbridge licenses are as follows:

License Name	License Description
CWBG-2000	Weighbridge device license.
CWBG-3000	Weighbridge bundle with device license and unlimited weighbridges.

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.

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.

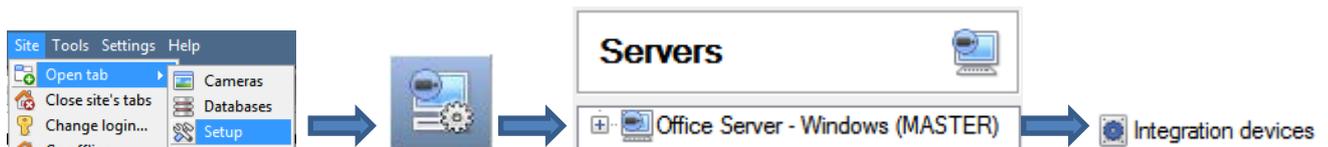
b. CathexisVision Specific Wayware Weighbridge Setup

This integration will communicate over a UDP port. Make sure that you know which UDP comms port the Wayware Weighbridge device is using, as you will need to input this, when adding the device in the Cathexis-Vision 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 server.
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 **Wayware Weigh Bridge** from the list.

Give the device a descriptive **name**.

Set the **UDP listen port**.

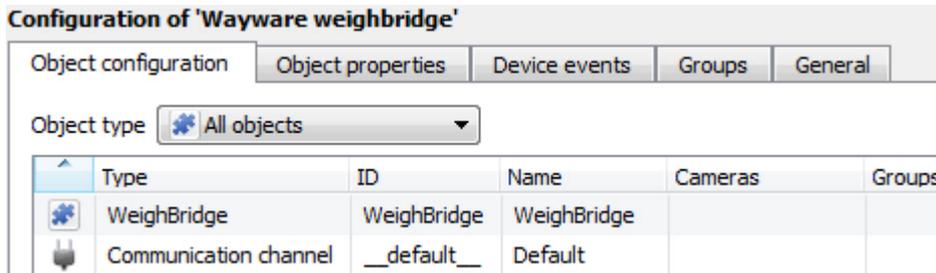
Note: This must be the same as the UDP comms port number used by the Wayware Weighbridge device software.

The weighbridge will be fully added after the first transaction from that weighbridge has come through.

d. Configuration Section (Tabs)

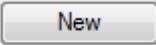
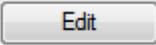
The configuration section is divided up into a number of tabs. These tabs are: **Object configuration**, **Object properties**, **Device events**, **Groups**, and **General**.

Object Configuration Tab

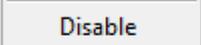
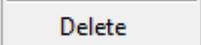


The object configuration tab is the tab where you may view all the individual objects that comprise the integration.

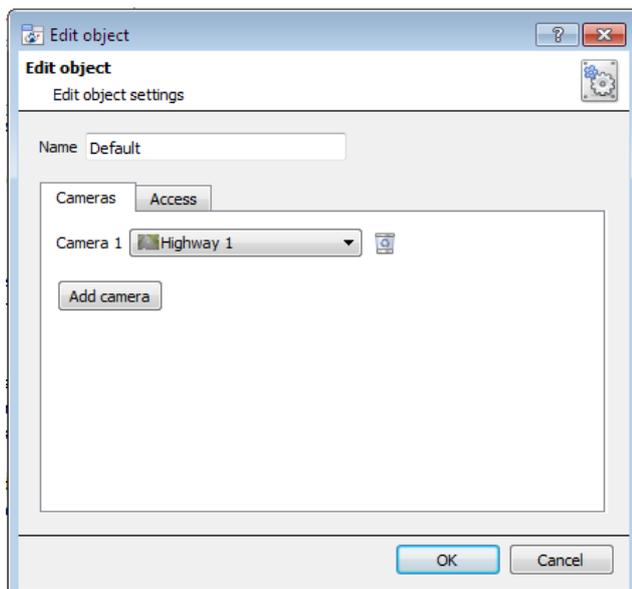
• Object Configuration Buttons

-  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

-  **New** will open up the dialogue to add a new object.
-  **Disable/Enable** allows you to manually enable/disable individual nodes.
-  **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 Wayware Weighbridge 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

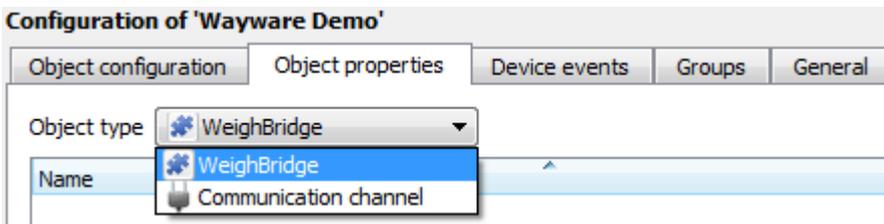


Access allows you to protect sensitive objects, by only allowing certain user levels access to them.

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 Wayware Weighbridge device you will have the options of viewing by **Weighbridge**, or **Communications channel**.

Device Events Tab

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.

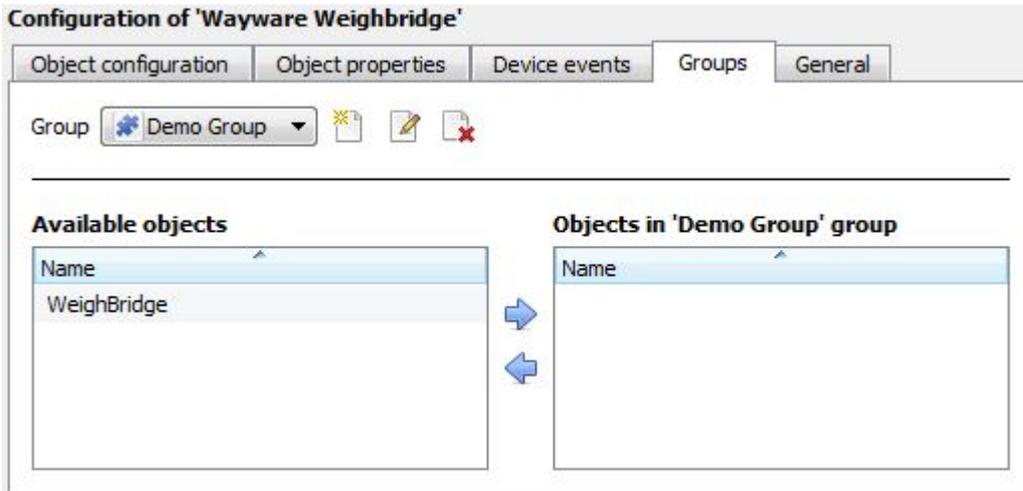
Configuration of 'Wayware weighbridge'

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

Transaction ▼

Time	Message Key	Message Type	Message Date	Event Date	Card Number
2015-05-18 11:30:58	AD98A649432A789472D675A7236B845B	Arrival	2015-05-18 12:16:22	2015-05-18 11:30:58	0003
2015-05-18 11:29:42	D46FB5A44F3856E2EA59B68F374FF50D	Departure	2015-05-18 12:16:22	2015-05-18 11:29:42	0002
2015-05-18 11:28:12	AFCE12A74FEE96435B11E7B457E50966	Arrival	2015-05-18 12:16:22	2015-05-18 11:28:12	0002
2015-05-18 11:26:35	EAADD5C44AEC93DA2CC277A8E2FD1485	Departure	2015-05-18 12:16:22	2015-05-18 11:26:35	0002
2015-05-18 11:25:00	7D98A649432A789472D675A7236B845A	Arrival	2015-05-18 12:16:22	2015-05-18 11:25:00	0002
2015-05-18 11:25:00	7D98A649432A789472D675A7236B845A	Arrival	2015-05-18 12:16:22	2015-05-18 11:25:00	0002

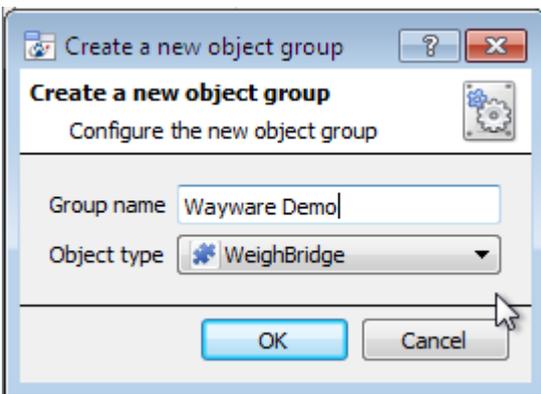
Groups Tab



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 PIRs in that group is triggered.)

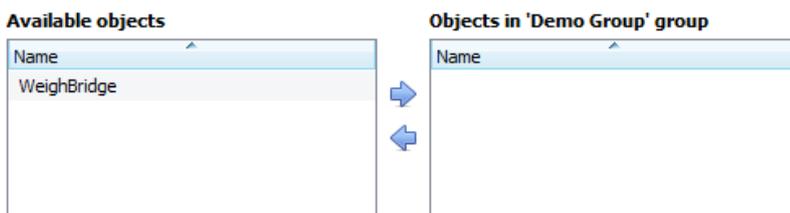
- **Create a Group**



To create/edit a Wayware Weighbridge 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 a pre-created database, or you will be able to configure a new database.

Important Note: Without setting up/adding a database here your integration will not function properly within the CathexisVision system.

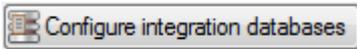
- *Select the Wayware Weighbridge Integration database*

Integration database



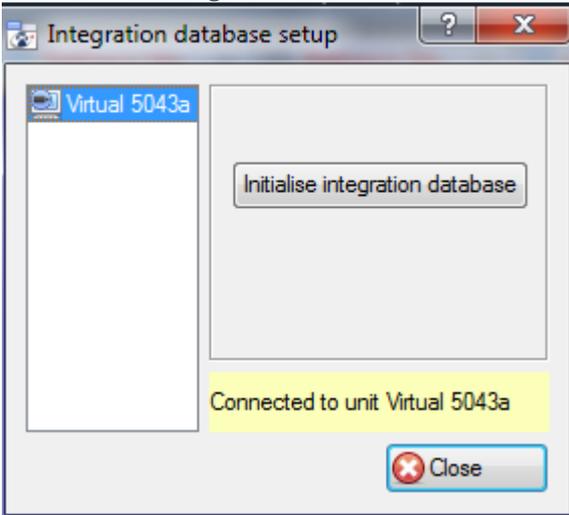
To select a database click on , and select the relevant database. Only databases which relate to the device you are adding should appear.

- *Configure a new database*

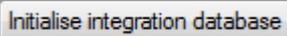


If there is no database created yet, clicking on this button will take you to the integration database setup.

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.

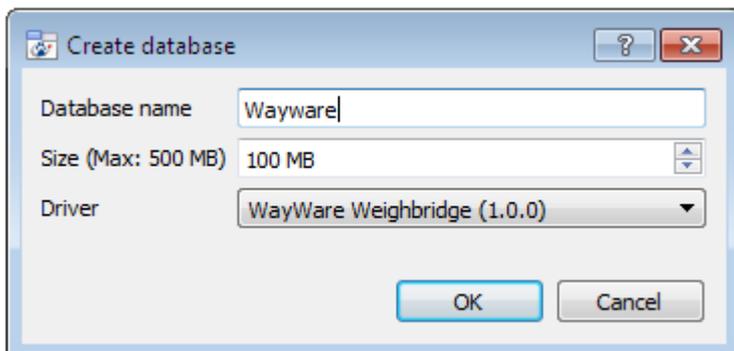
Select the unit you wish to add the database to, from the list on the left, and click . You will have to choose which partition the database will be formed on, and select how much space it will take up.

Partition	<input type="text" value="C:\(C)"/>
Total space available	8134 MB
Disk space allocated to integration database	1000MB

Add a New Devices Database

After initialisation, you will be able to add the database for the integration that you are working with.

Right click on the white space that was occupied by  before you initialised your database, and click on **New**.



Give your database a descriptive **Database Name**. e.g. Wayware.

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

Then choose the device **Driver** that your device will be using.

3 Database

a. Introduction

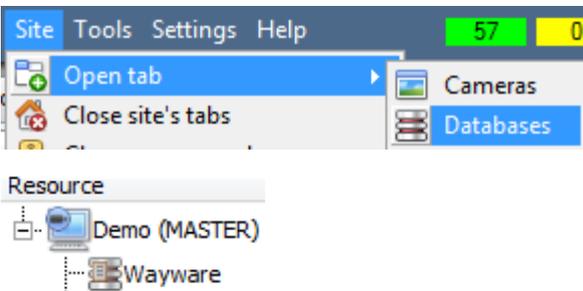
The database tab will allow you to navigate the databased entries, for each individual database. In the database tab each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording you will also be able to launch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

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

The Wayware Weighbridge database is information rich, this is an example of some of the information that is included:

Time	Name	Message Key	Message Type	Message Date	Event Date
2015-05-18 11:25:00	WeighBridge	7D98A649432A789472D675A7236B845A	Arrival	2015-05-18 12:16:22	2015-05-18 11:25:00
2015-05-18 11:25:00	WeighBridge	7D98A649432A789472D675A7236B845A	Arrival	2015-05-18 12:16:22	2015-05-18 11:25:00
2015-05-18 11:26:35	WeighBridge	EAADD5C44AEC93DA2CC277A8E2FD1485	Departure	2015-05-18 12:16:22	2015-05-18 11:26:35
2015-05-18 11:28:12	WeighBridge	AFCE12A74FEE96435B11E7B457E50966	Arrival	2015-05-18 12:16:22	2015-05-18 11:28:12
2015-05-18 11:29:42	WeighBridge	D46FB5A44F3856E2EA59B68F374FF50D	Departure	2015-05-18 12:16:22	2015-05-18 11:29:42
2015-05-18 11:30:58	WeighBridge	AD98A649432A789472D675A7236B845B	Arrival	2015-05-18 12:16:22	2015-05-18 11:30:58
2015-05-18 11:32:07	WeighBridge	AD98A649432A789472D675A7236B845B	Departure	2015-05-18 12:16:22	2015-05-18 11:32:07

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	You may change the way that your database is presented. Some integration databases have multiple view options. The Wayware Weighbridge database has the Standard option.
② Sorted By	You may sort the Events based on the following parameters: Time, Message Type, Message Date, Event Date, Quantity, SAP Mass, Total Mass, Arrival Time, Arrival Mass, Departure Time, Departure Mass, Net Mass.

<p>③ Easy Search</p>	<p>The easy search option allows you to quickly search the database within one of the following options: Time, Name, Message Key, Message Type, Message Date, Event Date, Card Number, CARDINT, Comment, Comment 1, Contractor Name, Document Number, Driver ID, Driver Name, Transporter Code, Transporter Name, Log On Names, PUP, Quantity, SAP Mass, Sequence Number, Status, Total Mass, Trailer, Transportation Number, Transportation Type, Transportation Type Name, Vehicle Registration, Arrival Time, Arrival Mass, Arrival Scale Code, Arrival User, Departure Time, Departure Mass, Departure Scale Code, Departure User, Net Mass</p>
<p>④ Filter </p>	<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"> 1. To enable filters check this box: <input checked="" type="checkbox"/> Enable filters 2. To add a new filter click on . <p>The filter icon  will change to  when filters are active.</p> <ol style="list-style-type: none"> 3. To delete an added filter click on . <p>Note:</p> <ol style="list-style-type: none"> 1. You may run multiple filters simultaneously. And you may even filter using the same parameter more than once. 2. To change a filter click on the blue hyperlinked text. (For example, click on Timestamp to change the filter from Timestamp, to any of the other available options.)
<p>⑤ Go to Time</p>	<p>This 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 if there are available recordings for those cameras, then each Integration database entry will have a corresponding recording. To view a data-based event's recording double click it. A floating replay window will appear, from which you may review and archive video content.

Time	2015-05-18 11:25:00
Name	WeighBridge
Message Key	7D98A649432A789472D675A7236B845A
Message Type	Arrival
Message Date	2015-05-18 12:16:22
Event Date	2015-05-18 11:25:00
Card Number	0002
CARDIINT	0053000002
Comment	NO COMMENT
Comment 1	PHONE MICHAEL AT EXT 349 ON ARRIVAL
Contractor Name	JOHN PETER
Document Number	Ref. 123
Driver ID	80121212324154
Driver Name	PETER JOHNSON
Transporter Code (Haulier)	1
Transporter Name (Haulier)	CARGO CARRIERS
Log On Names	9
PUP	GHI777NW
Quantity	12345
SAP Mass	0
Sequence Number	5
Status	Pending
Total Mass	0
Trailer	DEF456GP
Transportation Number	000083142
Transportation Type	SU03
Transportation Type Name	Pallet return
Vehicle Registration	ABC123GP
Arrival Time	2015-05-18 11:25:00
Arrival Mass	13320
Arrival Scale Code	KEYBOARD
Arrival User	9
Departure Time	0001-01-01 00:00:00
Departure Mass	0
Departure Scale Code	
Departure User	
Net Mass	0
Camera key	1

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 Wayware Weighbridge 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 Wayware Weighbridge 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 [wayware weighbridge](#) to trigger the event

Trigger using [any weighbridge](#)

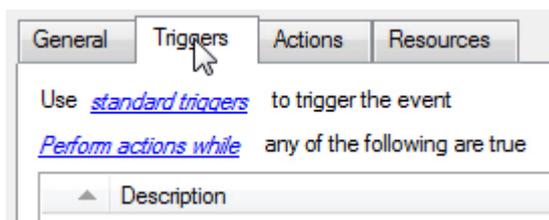
[Start actions when any of the properties meet the following criteria](#)

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

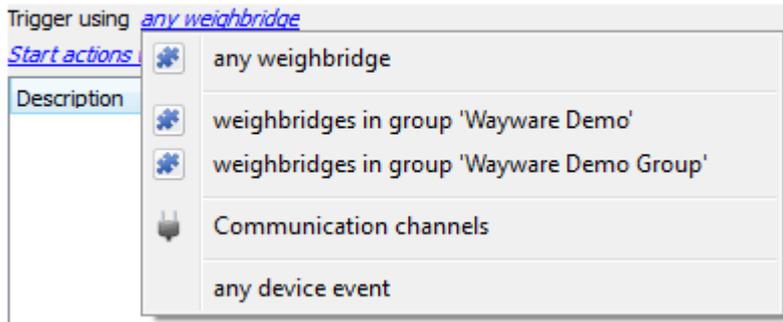


If you are creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device you want to trigger the event, click on the hyperlink after “use”. To set it as the Wayware Weighbridge device, click on the hyperlink, and select the relevant device name from the dropdown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

Trigger Types (Trigger Using)

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

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



Any weighbridge will trigger on any of the weighbridges.

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

Specific Weighbridge will trigger only on the selected weighbridge.

Communication channels will trigger only on the Communication channels.

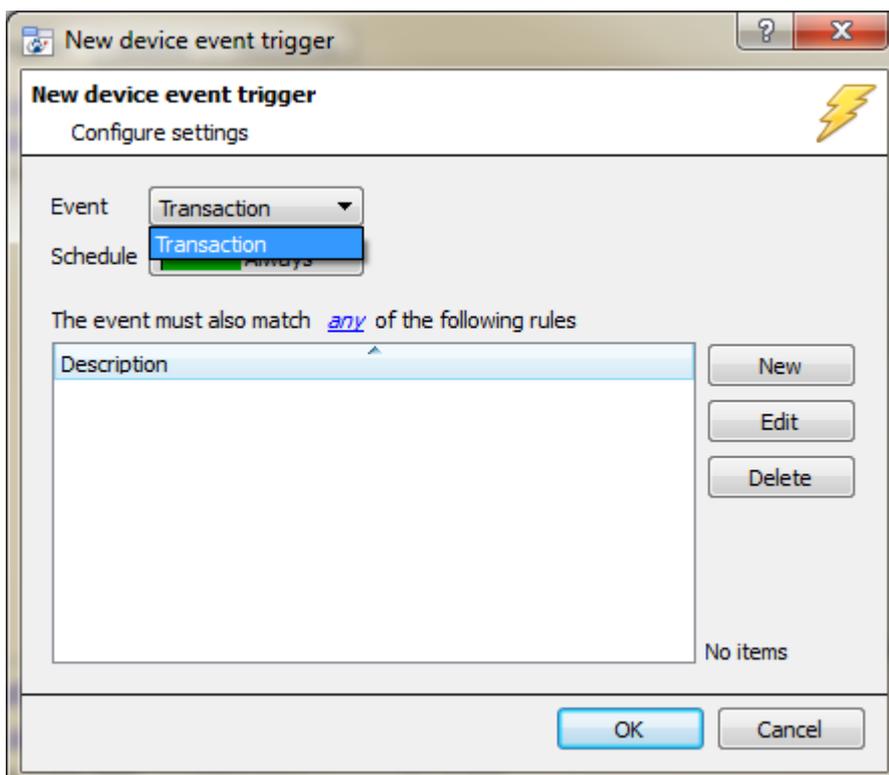
Any device event will trigger on any event that occurs on the device. Within the “any device event” setup you may set “device event rules” which will constrain which device events will trigger the event.

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 an example which will database the text “Status” along with the status of whichever Wayware Weighbridge triggered 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**

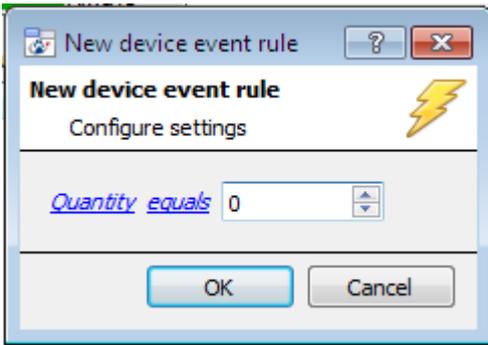


For example within the [any device event](#) option you may choose what type of device Event will be your trigger. Choose from the drop-down menu. The Wayware Weighbridge device offers **Transaction**.

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.



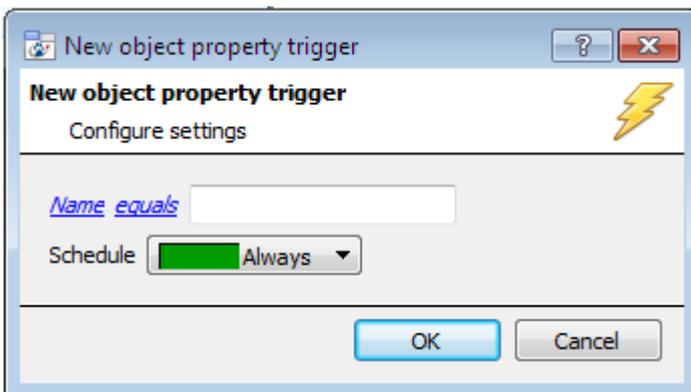
To change the constraint click on the first hyperlink, this will bring up the full list of available rules.

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 Wayware Weighbridge device, see the Wayware Weighbridge settings for the strings needed here.

- **Any Weighbridge or Group**

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, the dialogue will appear as the **New Device Event Rule** window did previously.

Note: this is true for groups as well, 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. 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 Wayware Weighbridge device. You still have all the other CathexisVision Action options, which are detailed extensively in the Main Setup Manual.

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