



WIN-PAK Access Control Integration App-note

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1. Introduction

This document will detail the integration of Honeywell’s WIN-PAK Access Control software, with CathesisVision VMS software. Functionally this integration will entail the triggering of standard CathesisVision Events, based on the triggers from the WIN-PAK device.

Note: For information regarding the regular operation of a WIN-PAK device, please consult the relevant WIN-PAK manufacturer’s documentation.

There is a General Integration section in the main *CathesisVision Setup Manual*. It contains information on creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section.**

1.1 Requirements

1.1.1 Software Requirements

- CathesisVision software:
 - CathesisVision 2019.2 and later releases.
- WIN-PAK software/hardware:
 - Tested using WIN-PAK PE Release 4.7 (Build 1070.4).
 - Ensure that the WIN-PAK software is licensed to use the WIN-PAK API.
 - Tested the Honeywell NetAXS Access Control unit, model number NX4S1E.

Note:

1. If CathesisVision is 2018 Service Pack 2 and later, the new Cathesis WIN-PAK Service must be installed on the WIN-PAK server.
2. To check the WIN-PAK License contact the WIN-PAK supplier.

1.1.2 Licensing

| License Name | Description | |
|--------------|---------------------------------------|------------------------|
| CWPK-2000 | WIN-PAK access control device license | FEATURE_DEV_AC_WIN-PAK |

Note: In this integration, individual devices will require a license for each device.

A NOTE ON CAMERA CHANNELS

The CathesisVision 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 CathesisVision 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.

1.2 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 objects.

1.3 Limitations

- Only one integration device can make a TCP connection to the WIN-PAK server at any given time. Multiple simultaneous connections are not supported.
- Devices that are added, or renamed in WIN-PAK after the objects have been populated in CathesisVision may only populate after the WIN-PAK server is restarted.
- If the WIN-PAK server has a separate network connection directly to the panel and this network adapter is disabled, the WIN-PAK software will change the panel and its component states to unknown, but the state change will not be forwarded to CathesisVision. CathesisVision will only receive the new states when the network adapter is re-enabled.

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 systems to effectively communicate with each other. The WIN-PAK integration requires that the relevant WIN-PAK Communications software, and the relevant Cathexis WIN-PAK Service are running on the same computer.

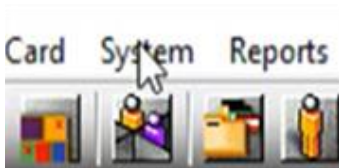
2.1 CathexisVision Specific WIN-PAK Setup

There are a number of things that need to be set up before a WIN-PAK integration device can be successfully added to CathexisVision. The following need to be installed on the same computer:

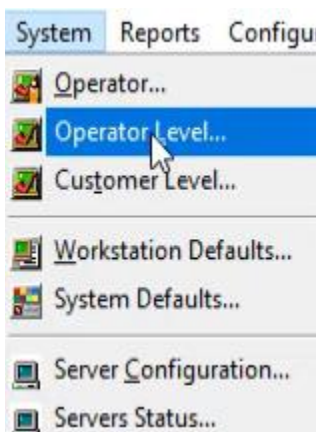
1. The relevant WIN-PAK Communications Server.
2. The relevant Cathexis WIN-PAK Service. (Download the software from cathesisvideo.com, or contact support@cat.co.za.)

Note:

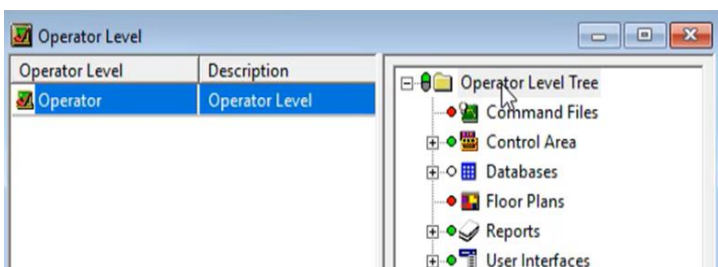
Both operator and admin credentials can be used when setting up the WIN-PAK integration in CathexisVision. If using the Operator level, ensure that the operator has maximum access rights.



1. Open the WIN-PAK User Interface and click **System**.



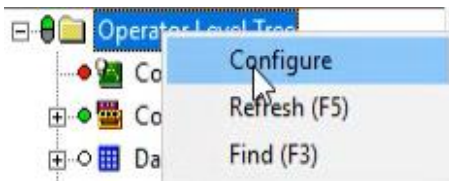
2. Click **Operator Level**.



3. Select the **Operator** and **right-click** the **Operator Level** tree.



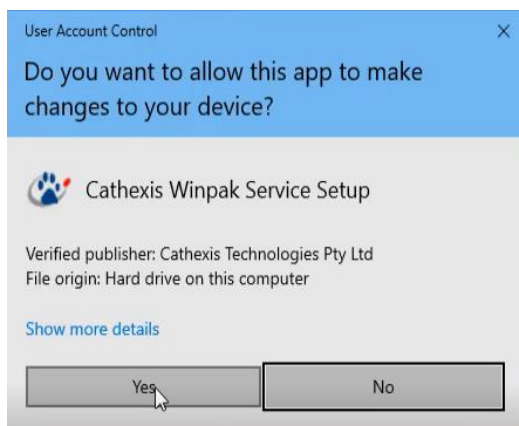
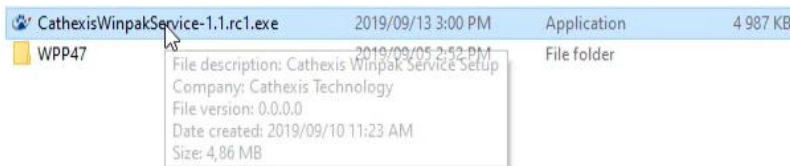
4. Select **Maximum** and click OK.



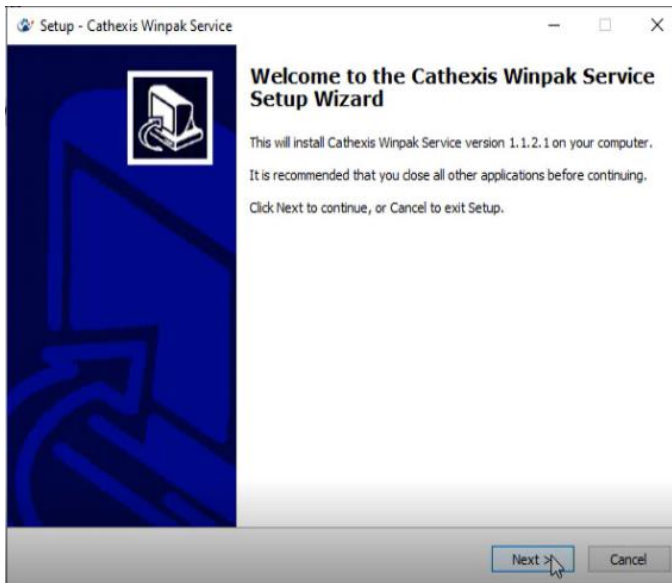
5. Right-click and select **Configure**.

2.1.1 The Cathexis WIN-PAK Service Installation

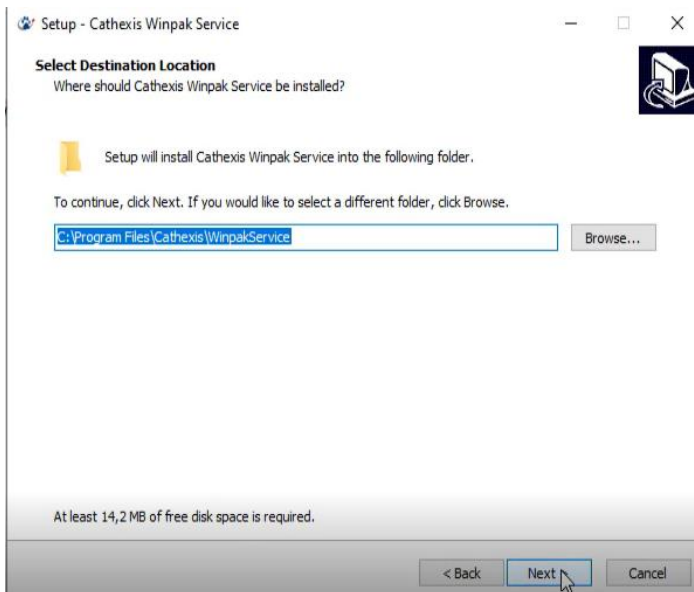
Install the Cathexis WIN-PAK Service on the same unit running the WIN-PAK Communications Server.



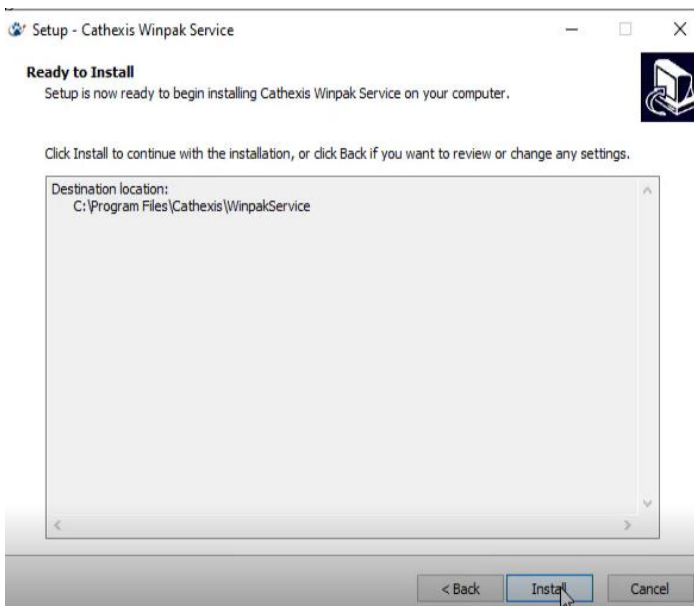
1. Allow the Service Setup to make changes.



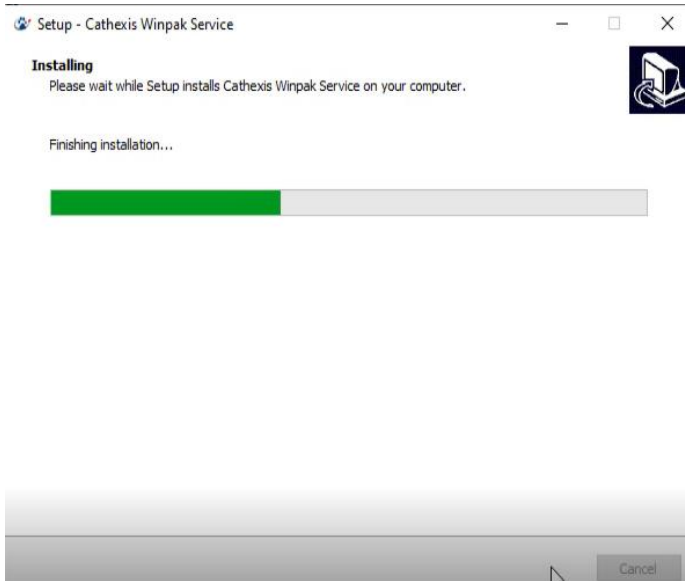
2. Start WIN-PAK Service Setup.



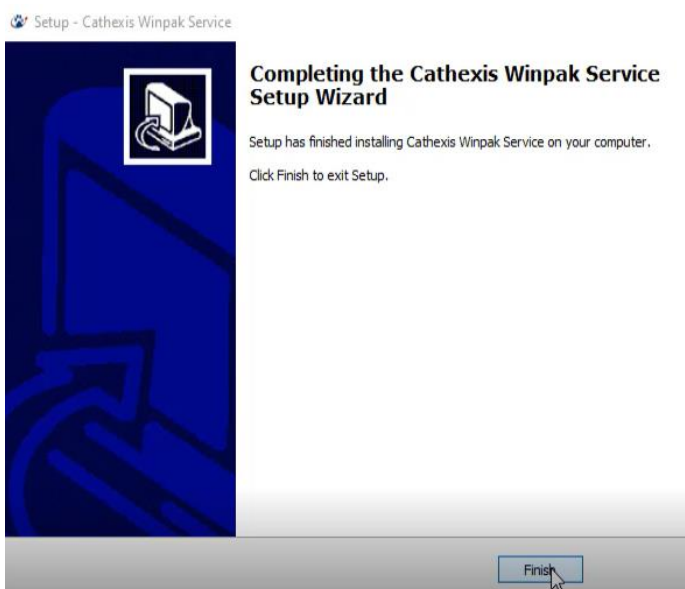
3. Select Destination location.



4. Install.



5. Wait for the Installation process.

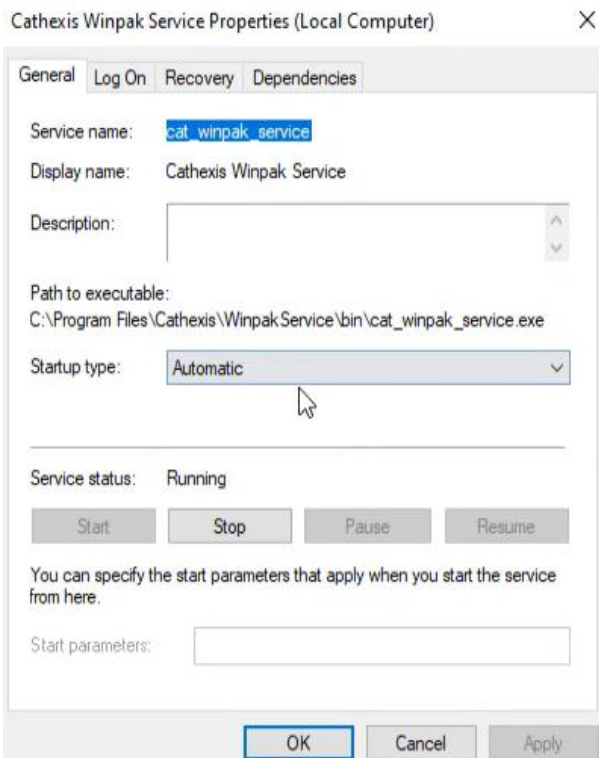


6. Click Finish.

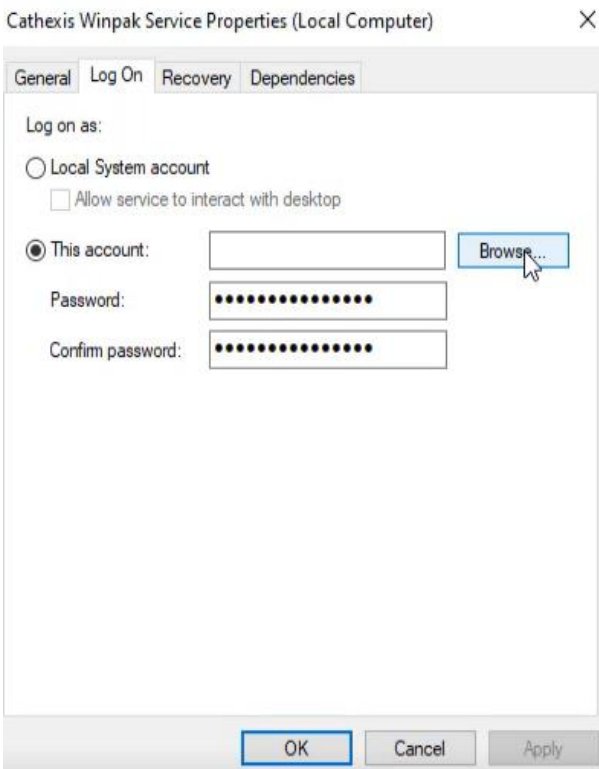
2.1.2 Cathexis WIN-PAK Service Setup

The WIN-PAK Cathexis Service will communicate with the WIN-PAK Communications Server and CathexisVision.

- The wrapper listens on port 34500 and an exception is added to the Windows Firewall during the wrapper installation.
- After installing the Cathexis WIN-PAK Service the log on credentials must be changed to use an administrative account. Restart the service to use the new credentials.
- The login credentials are retained when updating the wrapper.
- The wrapper automatically runs at Windows start-up and connects to the WIN-PAK software.
- The wrapper will automatically reconnect to the WIN-PAK software when the WIN-PAK servers are restated.



1. Click the drop-down menu in the middle of the dialogue box to set the **Startup type** to **Automatic**.



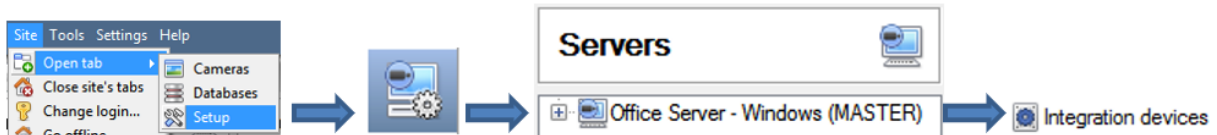
2. Login as **'This account'** and enter credentials.

Note: If the wrapper doesn't start automatically then please check your log on credentials.

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 show the integration devices that are attached to the integration database.
2. The **Configuration** section enables editing/reviewing, 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 . This will open the addition window.
2. Select **WIN-PAK access control** driver from the list.

? × Give the device a descriptive **name**.

Put in the username and password for the WIN-PAK software

Set the **IP address** to the computer that has the Cathesis WIN-PAK service running on it.

(In the demonstration on the left, this unit is also running CathesisVision, so the loopback IP address has been given.)

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

Configuration of 'Winpak'

Object configuration | Object properties | Device events | Object groups | General


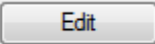

Object type: All objects

| Type | ID | Name | Cameras | Object groups |
|-----------------------|-----------|-----------------------------|---------|---------------|
| Communication channel | _default_ | Default | | |
| Device | 11 | NX4S1E | | |
| Device | 12 | NX4S1E - Door 1 Egress In 1 | | |
| Device | 13 | NX4S1E - Door 1 Status In 2 | | |
| Device | 14 | NX4S1E - Door 2 Egress In 3 | | |
| Device | 15 | NX4S1E - Door 2 Status In 4 | | |
| Device | 17 | NX4S1E - Door 1 lock Out 1 | | |
| Device | 18 | NX4S1E - Door 2 lock Out 2 | | |
| Device | 20 | NX4S1E - Reader 1 | | |

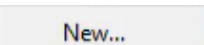
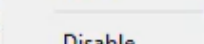
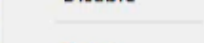
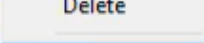
The object configuration tab is the tab where all the individual objects that comprise the integration are viewed.

With the WIN-PAK integration, all the devices should automatically be populated.

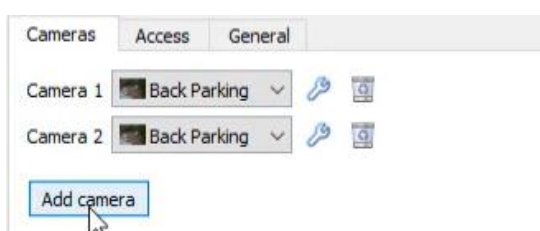
2.3.1.1 Object Configuration Buttons

-  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 CathesisVision configuration.

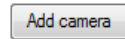
2.3.1.2 Object Configuration Right-click Options

-  **New** will open up the dialogue to add a new object.
-  **Disable/Enable** allows manually enabling/disabling individual nodes.
-  **Delete** will permanently remove this object from the list.
-  **Properties** will open up the object properties. Edit the object from here. (Specifically, 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.



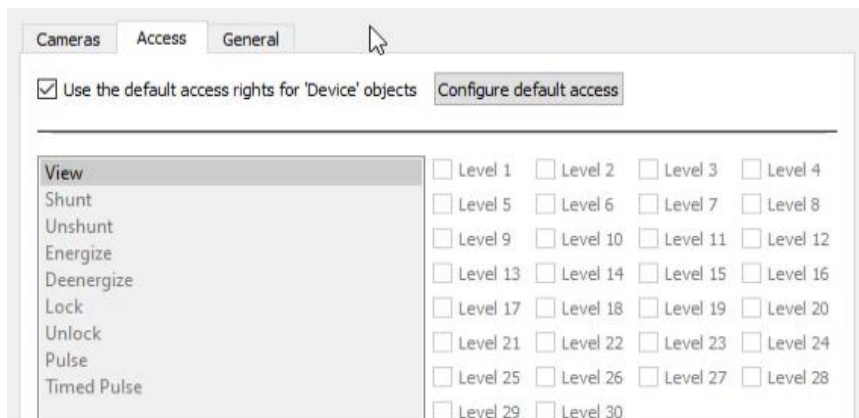
To add a camera, click on the Add camera button, and select the relevant camera from the drop-down menu.



To delete a camera, click on the trash icon.

Note: If there is no *continuous recording* setup, on associated cameras, there is the risk of objects 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

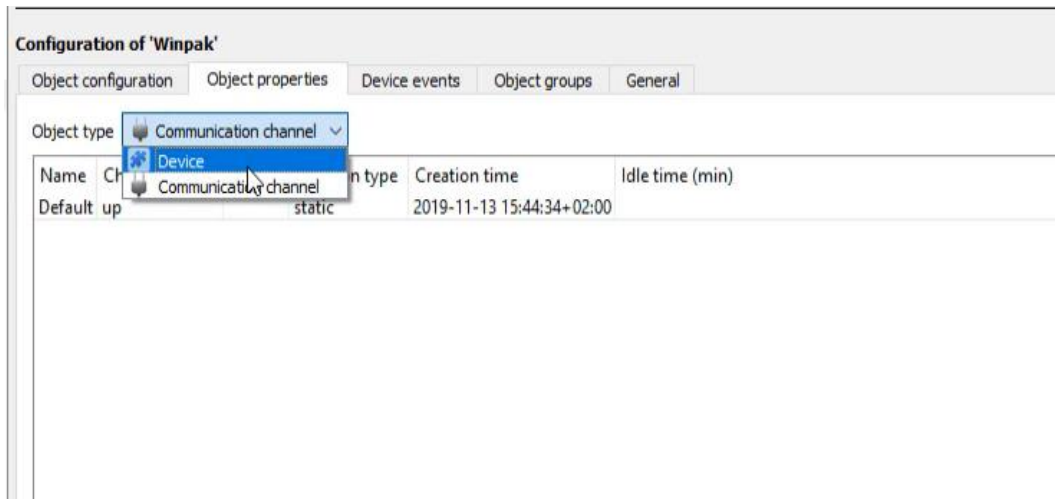


Access allows protecting sensitive objects, by only allowing certain user levels access to them. There will be a list of objects, whose access level may be set.

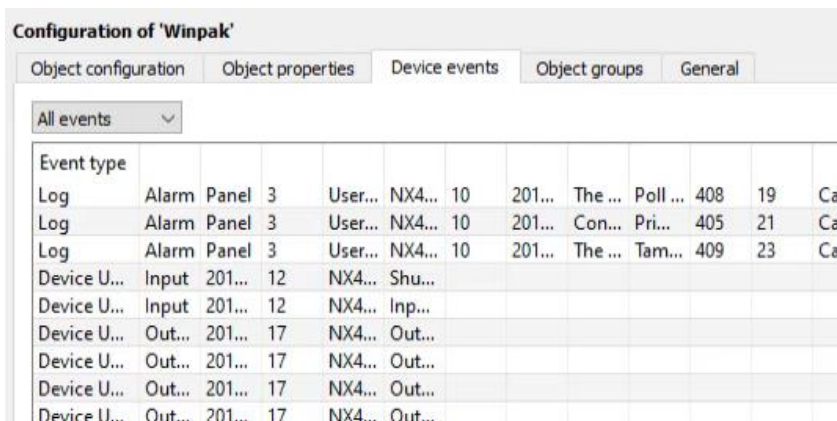
Note: If *Use default access rights* is checked, make sure that those default rights have been correctly defined. Click on **Configure default access** to do this.

2.3.2 Objects Properties Tab

The Object properties tab allows viewing objects, sorted by type. In the case of the WIN-PAK device, there is the option of viewing by **Device**, and **Communication channel**. Right-clicking on an object will give further options for each object.



2.3.3 Device Events Tab



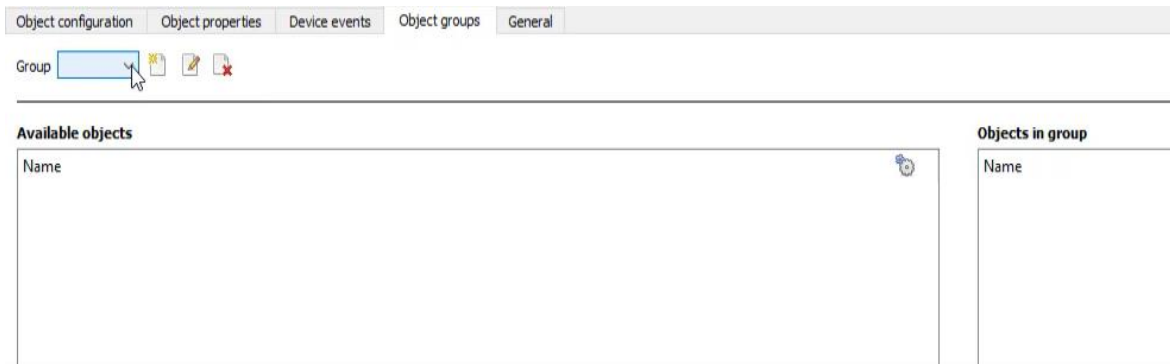
The Device Events tab, lists real time events happening on this device. It is an excellent way for installers to see that the integration is functioning, and to monitor the live events happening on site.



If there are too many events to easily sort through, or if only a specific subset of events is of interest, there is the option to sort the events by object type. The image to the left identifies the specific sorting objects available in the WIN-PAK integration.

2.3.4 Groups Tab

Groups of the same type of object can be created.

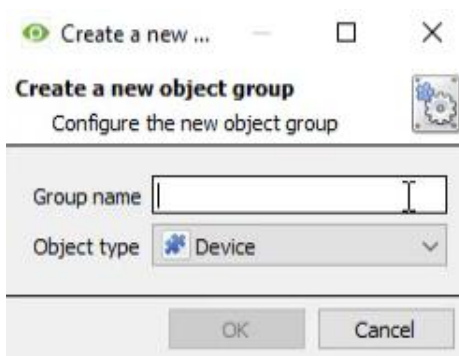


Tip: This is very useful when setting up Events, because events can be triggered by an object group. E.G., a group will trigger, if any of the objects in that group is triggered.

2.3.4.1 Create a Group

To create/edit a group click on / .

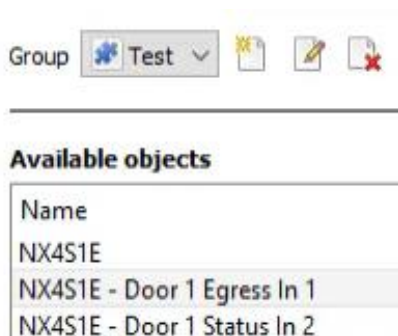
Note: Once a group has been created, the object type of the group may not be edited.



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 then be visible.

To add/remove these objects to the group select them (select multiple at a time), and click on / .

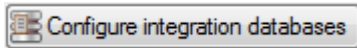
2.3.5 General Tab

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

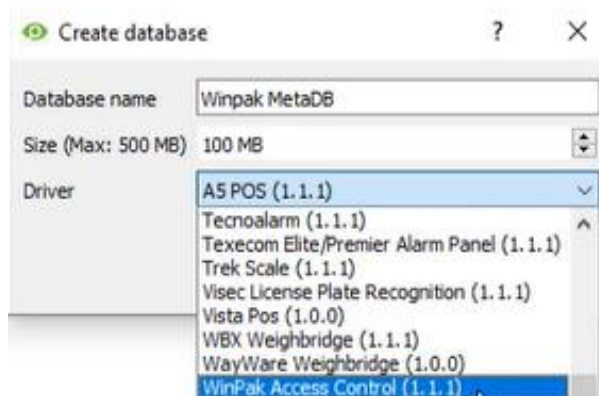
2.3.5.1 Select an Integration Database

Integration database To select a database, click on , and 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, as in the image below: Name the database, set the size and select the applicable driver.



A successfully added integration database will show up in the list like so:

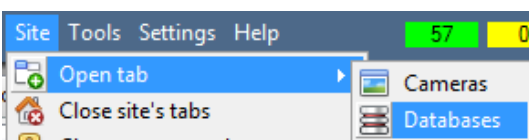
| Key | Name | Size(mb) | Enabled | Flags |
|-----|---------------|----------|---------|-------|
| 16 | Winpak MetaDB | 100 | Yes | |

3. Database

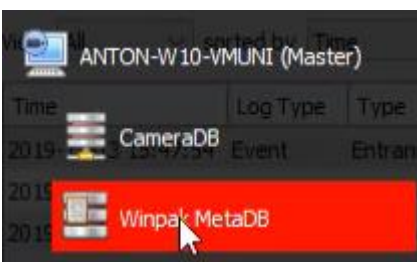
The Database Tab allows one to navigate to the databased entries, for each individual database. In the Database Tab, each database is presented as a table. It has built in filters, and the ability to navigate by timestamp. If a database entry has an associated recording, this recording can also be launched 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.

3.1 Navigate to the Database



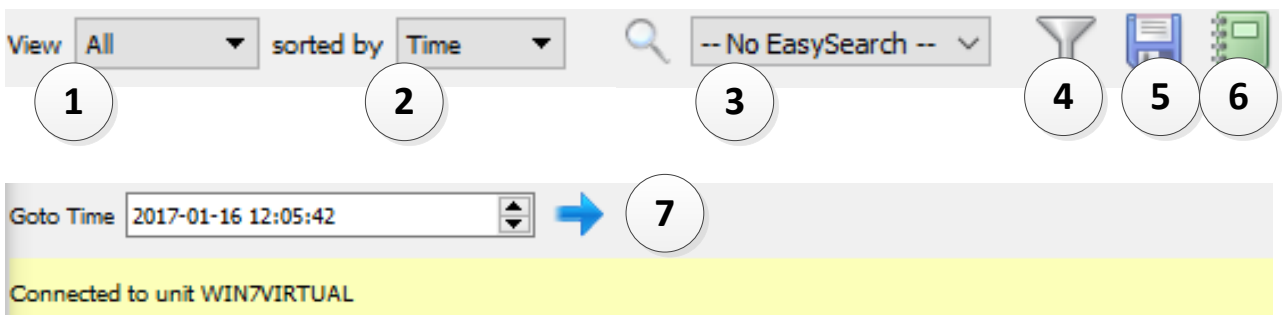
To view the information stored in the Integration database, follow the path on the left, which leads to the Database Tab.



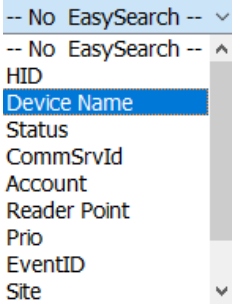






When the Database Tab opens, select the relevant integration database from the database panel that opens on the left-hand side. The databases are ordered under the NVRs that they are attached to. See below for the WIN-PAK database.

| Time | Log Type | Type | HID | Device Name | Status | CommSrvID | Account | Reader Point | Prio | Notification | Point |
|---------------------|----------|----------|-----|-------------|----------------|-----------|---------|-------------------|------|---|-------|
| 2019-11-13 15:47:54 | Event | Entrance | 20 | | Card Found | 3 | User01 | NX4S1E - Reader 1 | 79 | A valid card has been used and entry was granted. | 0 |
| 2019-11-13 15:48:02 | Alarm | Entrance | 20 | | Card Not Found | 3 | User01 | NX4S1E - Reader 1 | 30 | Card Not Found. | 1001 |
| 2019-11-13 15:48:02 | Event | Entrance | 20 | | Card Not Found | 3 | User01 | NX4S1E - Reader 1 | 30 | Card Not Found. | 1001 |

3.2 Database Interface



| | |
|----------------------|--|
| <p>① View</p> | <p>View changes the way the database is presented. Some integration databases have multiple view options.</p> |
|----------------------|--|

| | |
|--|--|
| <p>② Sorted By</p> | <p>For the WIN-PAK integration, Events may only be sorted by Time.</p> |
| <p>③ Easy Search</p> | <p>The easy search option quickly searches the database within one of the following options: HID, Device Name, Status, CommSrvId, Account, Reader Point, Prio, EventID, Site, Card number, and Full name.</p>  |
| <p>④ Filter </p> | <p>Filter offers a more advanced manner of sorting information in the Integration Database table. The following filters are available with WIN-PAK: Time, Log Type, Type, HID, Device Name, Status, CommSrvID, Account, Reader Point, Prio, Notification, EventID, Point, Site, Card Number, and Full Name.</p> <p>Once the filters dialogue is open, these are the options:</p> <ol style="list-style-type: none"> To enable filters check this box: <input checked="" type="checkbox"/> Enable filters To add a new filter click on . The filter icon  will change to  when filters are active. To delete an added filter click on . <p>The options in this integration are:</p> <p>Note:</p> <ol style="list-style-type: none"> Multiple filters may be run simultaneously. The same parameter may be used more than once. 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 Export</p> | <p>Generate metadatabase reports in PDF or CSV format.</p> |
| <p>⑥ Manage Reports</p> | <p>Generate scheduled metadatabase reports.</p> |
| <p>⑦ 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> |

3.2.1 Viewing an Entry's Associated Recording

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

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

The screenshot displays the Cathexis video player interface. On the left, there are four camera thumbnails labeled 'Vehicles', 'Back Parking', 'Front Parking', and 'Office'. The main window shows a large 'Office' camera feed with a timestamp '13/11/2019 15:47:59.992'. Below the video is a timeline for 'Wed, 13 Nov' with markers at 15:44, 15:46, 15:48, 15:50, and 15:52. A legend below the timeline shows recording status for 'Vehicles', 'Back Parking', 'Front Parking', and 'Office'. The bottom control bar includes playback buttons (play, stop, pause, previous, next), a 10s rewind button, a speed control set to 'x1', and a digital clock showing 'Wed 13 Nov 15:48:00'. On the right side, a metadata panel displays the following information:

| | |
|--------------------|------------------------|
| Time | 2019-11-13 15:48:02 |
| Log Type | Alarm |
| Type | Entrance |
| Device Name | |
| Status | Card Not Found |

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 WIN-PAK 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.

4.1 Creating and Event

To create an event using the WIN-PAK 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](#).
 - a. From the menu that drops down, left-click the WIN-PAK device that will 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. Multiple triggers can also be selected, and the user can define whether **all/any** of the triggers need to be active to set-off an event.

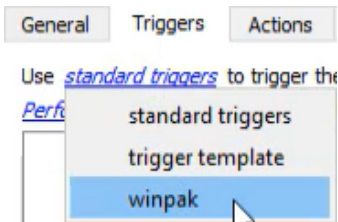
Trigger using [Door 3](#)
[Perform actions while any](#) of the properties meet the following criteria

To change these settings click on 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).

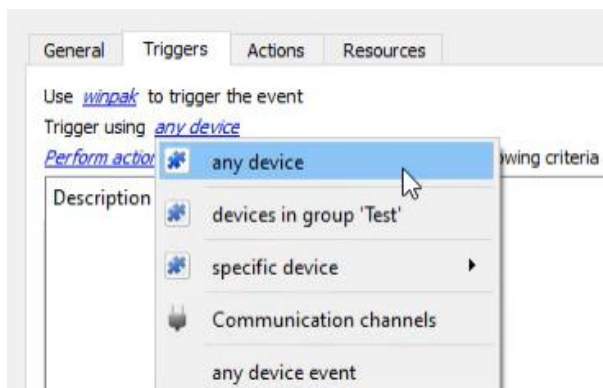
4.2.1 Set the Device as the Trigger



If creating a new event, the trigger type will default to: Use [standard triggers](#). To define which device should trigger the event, click on the hyperlink after “use”. To set it as the WIN-PAK device, click on the hyperlink, and select the relevant device name from the drop-down menu.

4.2.2 Trigger Types (Trigger Using)

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



Any device. Will trigger on any object from the selected integration device.

Devices in group ‘...’. Will trigger on a specific group chosen by the user.

Specific device will trigger based on the object selected from the selected integration device.

Communication channels

This channel will always be up and must not be used to trigger events.

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.

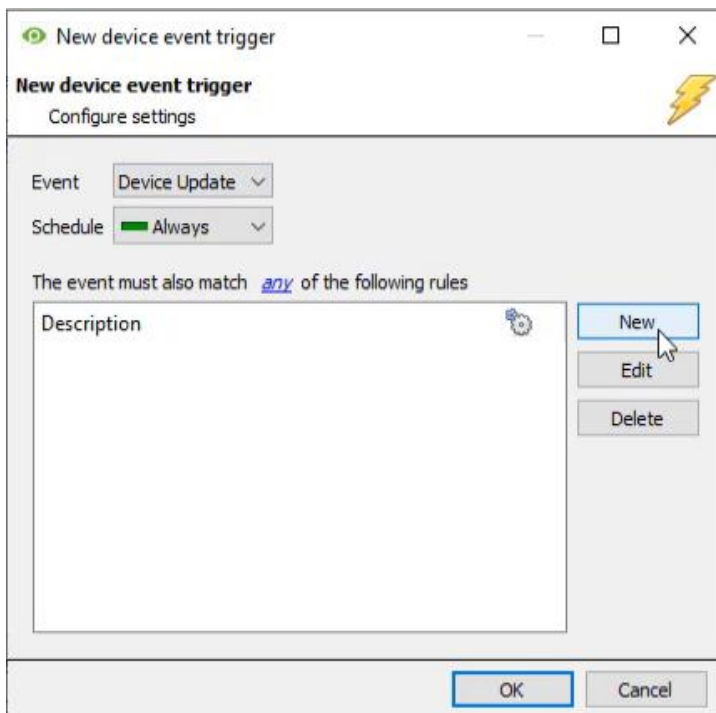
Note for group triggers: For this event to be databased under the name of a specific object, and not the name of the triggering group, modify the Description field in the **General tab** of the Event setup. Click on the to see a list of available descriptions. Here is an example of a databased text, along with the name of the object that triggered the event:

Description

'State' equals Output Deenergized (held active for 15 seconds)

After selecting a master trigger type, add a trigger to the event. Click on 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 the type of device Event that will be a trigger. Choose from the drop-down menu. The WIN-PAK device offers **Device Update** and **Log**.

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

Note: Multiple constraints may be set. Select if [any](#), or [all](#) constraints need to be fulfilled to set off a trigger. If a constraint is not defined then every single device event will trigger this event.



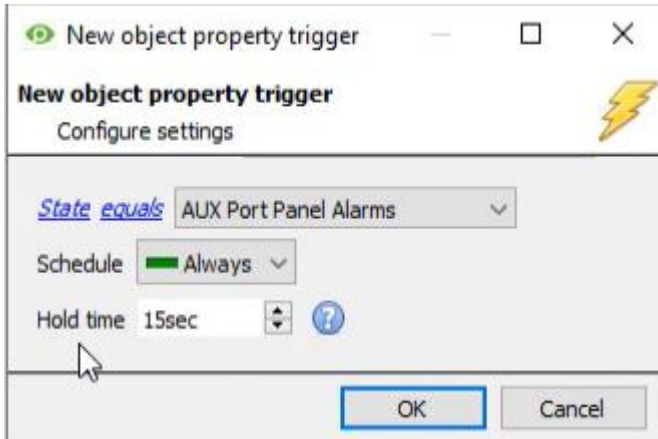
To change the constraint, click on the first hyperlink, this will bring up the full list of available rules.

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

Note: When all available options are known to CathesisVision, there will be a drop-down menu. When these variables are not pre-defined, fill them in. The information pulled through to the events is information sent to CathesisVision from the WIN-PAK device. See either the WIN-PAK settings, or the **Integration devices / Device Events**, for the strings needed here.

4.2.2.2 Any Device Event

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 essentially being added one at a time. This option is better if there are a select few triggers in use.



Since 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.

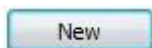
Note: CathesisVision has 3 custom states related to the wrapper and its function. These are not shown in the Device events and are not recorded in the integration database, but can be used as Event and Map action triggers:

1. TCP Connection Down (When the connection to the Cathesis WIN-PAK Service is lost).
2. Restart Pending (When the Cathesis WIN-PAK Service has detected that the WIN-PAK services are busy restarting).
3. Login Pending (When the WIN-PAK services have started and the Cathesis WIN-PAK Service waits for WIN-PAK to be ready to accept connections).

4.3 Actions

Once the triggers that are going to initiate an event are defined, define some Actions. The WIN-PAK integration allows for control of the WIN-PAK device via the CathesisVision interface.

4.3.1 Add a WIN-PAK Control Action



Navigate to the **Actions** tab in the Event, click on **New**.



Select the WIN-PAK device from the drop-down menu.

Control device

Configure command



Once the WIN-PAK device dialogue is open, click on the settings icon to retrieve a list of WIN-PAK objects that are open to the CathesisVision system for control.

Select the object to control, and click on **OK**.

After an object has been selected in the **Command** drop-down menu, it will be populated with the available commands.

In this instance, pass any of the commands, to the left, to the WIN-PAK Reader that was chosen in the previous step.

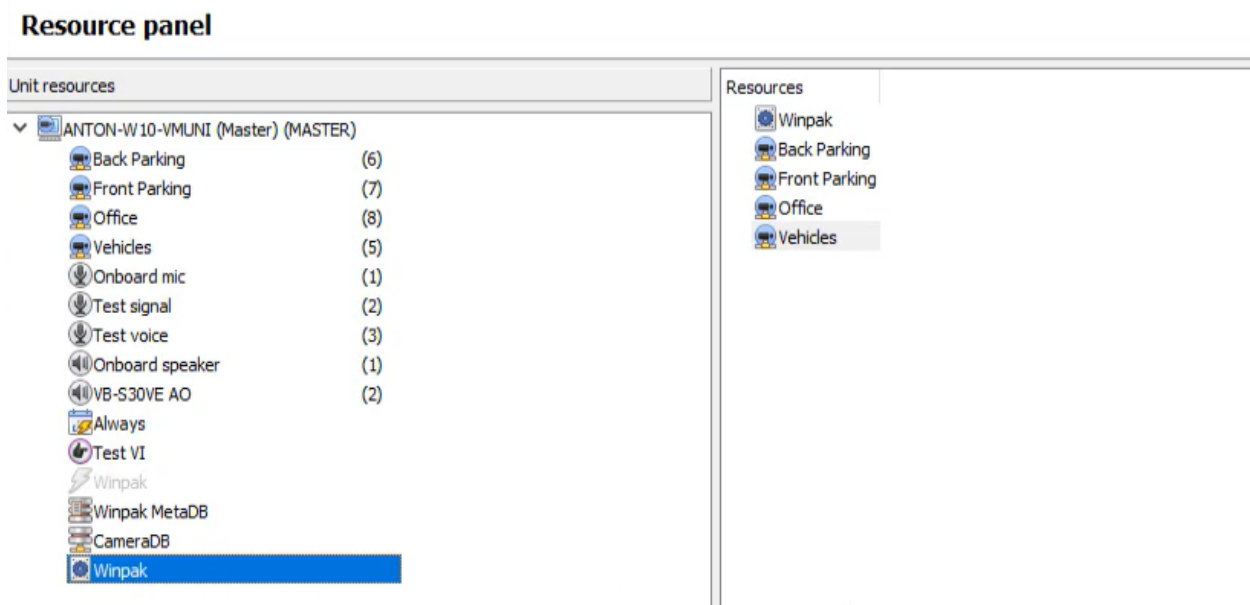
5. Map

It is possible to add the WIN-PAK device to a site map, which will allow for a number of action options when objects are triggered. These options include the animation of triggered zones and connecting to site cameras when zones are triggered, etc.

Note: This section will only deal with the specifics of the WIN-PAK device. For more information on using the CathesisVision Map Editor and Map Tab, please consult the dedicated and detailed **Map Editor Operation Manual**.

5.1 Add the WIN-PAK Device as a Resource

To configure the map, the WIN-PAK device must be added as a resource to be added to the map.



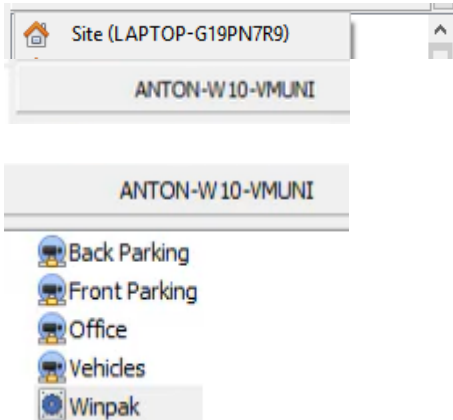
5.1.1 Add the Device in the Resource Panel

1. Navigate to the **Resource Panel** by following **Site** → **Open Tab** → **Setup** → **Resource Panel**.
2. Drag the WIN-PAK device from the **Unit Resources** list into the **Resources** list, on the right.

5.2 Add the Device in Map Editor

Once the WIN-PAK device has been added as a **Resource**, it will be available to drag onto the map area from the **Site Resources** list.

5.2.1 Connect to Site

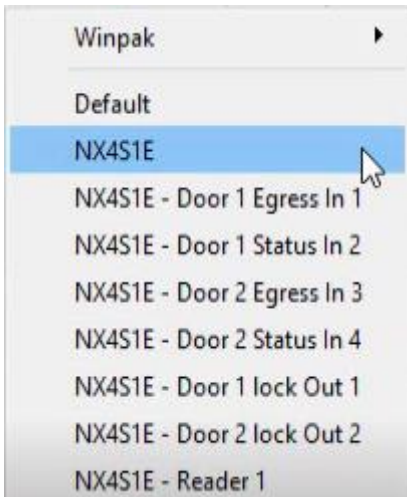


At the bottom right-hand of the Map Editor screen, click the dropdown menu.

Select the site to connect to.

Once connected to site, all the resources available will populate the panel below.

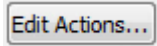
5.2.1.1 Adding Device Objects

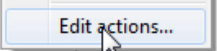


Drag the WIN-PAK device from the Site Resources list onto the map area. All of the WIN-PAK device objects will appear in a list. Select an object.

Note: To add multiple objects, repeatedly drag-and-drop the WIN-PAK device onto the map area and select the desired objects individually.

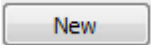
5.2.1.2 Adding Device Actions

To add actions to the device objects, select the object on the map and click .

Or, right-click the map object and select .

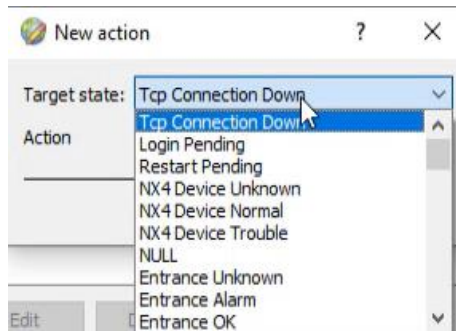
5.2.1.3 Action Options

Actions may be set for **Left/Right-Clicks**, **State Changes** and **Events**.

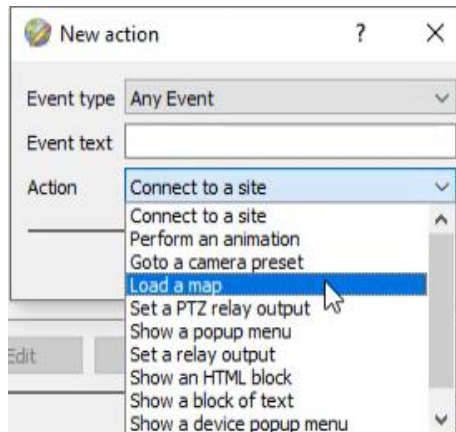
 To create a new action, select New.

The action triggers will differ according to the object selected. Consider the following example for an action based on a WIN-PAK event:

State change options:



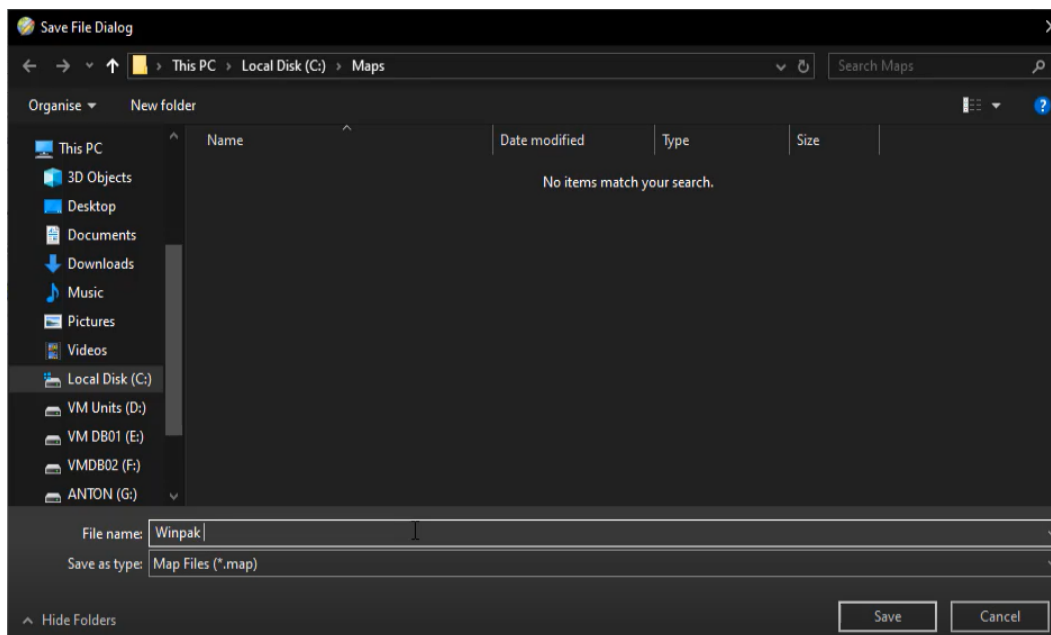
Action options:



Note: Multiple actions may be added to the map objects.

5.2.1.4 Save Map

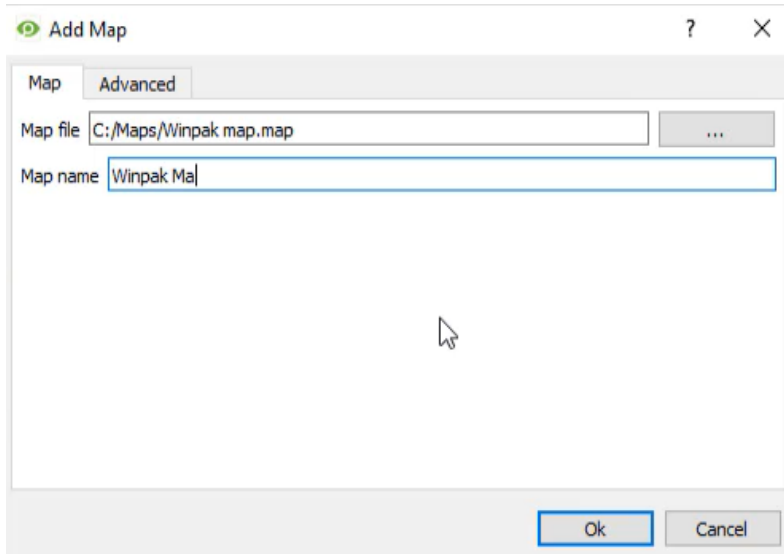
Once finished, save the map.



Important Note: The map must not be saved in the **Work** folder of the CathexisVision installation directory.

5.3 Map Tab

The saved map needs to be uploaded to CathesisVision. Once the map is open, all objects added to the map area in the Map Editor will be visible on the map, and all actions set will be available.



6. Conclusion

Remember that this Appnote was designed to deal specifically with this integration. For further information about the CathesisVision software, consult the main manual (<http://cathesisvideo.com/>). For support, email support@cat.co.za.