Suprema BioStar2 Access Control Integration App-note

Contents

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. The integration hardware and firmware used are current at the time of the integration development and newer versions of such may not be compatible with the integration.

1. Introduction

This document will detail the integration of the Suprema BioStar2 Access Control Device with CathexisVision software. Functionally, this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the Suprema BioStar2 Access Control panel.

1.1 Requirements

- CathexisVision 2020.2 and later.
- Win 10: 64-bit and later, Win Server 2008 R2 and later.
- Minimum 4GB of RAM required.
- Suprema BioStar2 Version 2.9

Note:

1. For information regarding the regular operation of a Suprema BioStar device, please consult the relevant Suprema BioStar documentation.
2. There is a General Integration section in the main CathexisVision manual. It contains information on creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section**.

1.1.1 CathexisVision GUI control of BioStar objects

- Lock/unlock door
- Release door
- Open door
- Clear alarm
- Clear APB

1.1.2 License requirements

The Suprema Biostar license requirements are the following:

CSPB-1001	**Suprema BioStar reader license**
CSPB-2000	Suprema BioStar device license
CSPB-3000	Suprema BioStar bundle license

Note: The minimum required license from Suprema for BioStar is **Standard**, as the local API Server is used to access the device.

Licenses Link: https://support.supremainc.com/en/support/solutions/articles/24000017584--biostar-2-server-license-specification

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

1.2 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 an integration is added to the CathexisVision 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 CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*


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.

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 Suprema BioStar Specific Setup

1. Install the BioStar software and API server on the same machine or separate machines. Register to the BioStar 2 API Server.
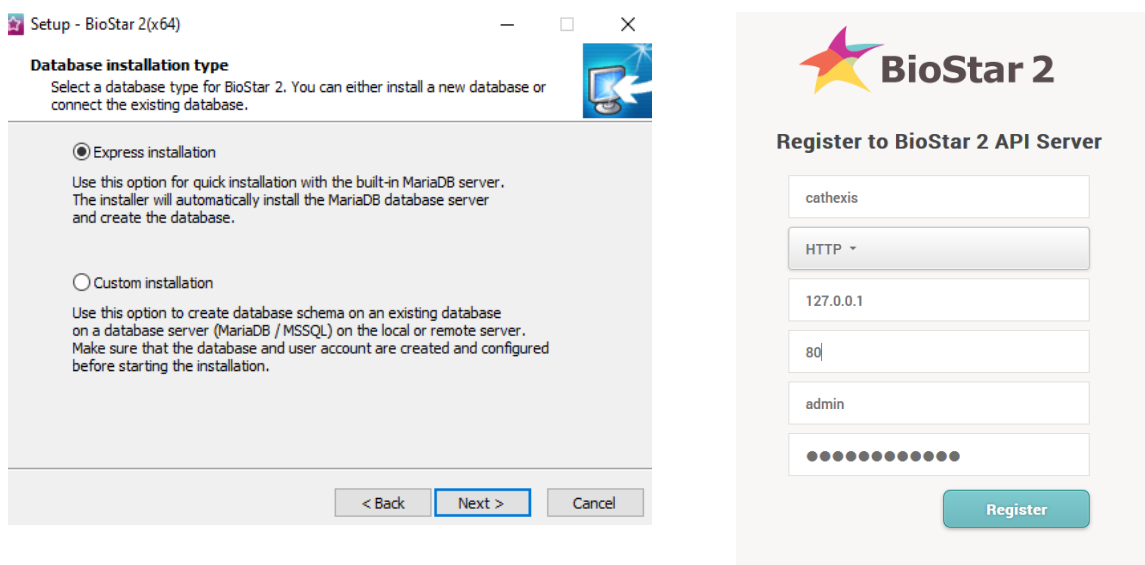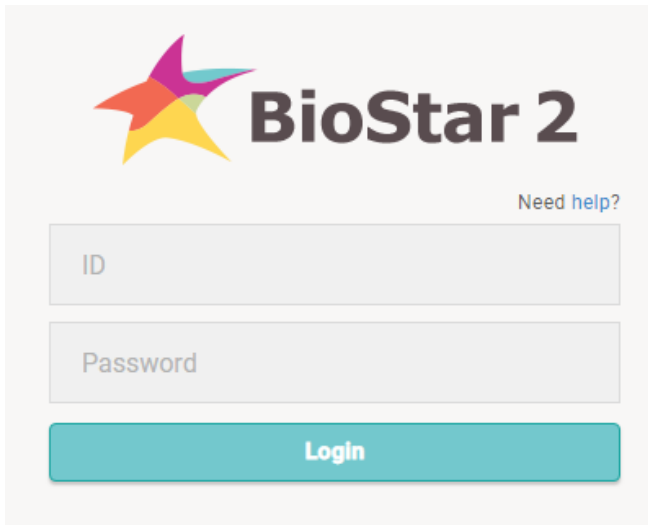

2. To install both the BioStar API server and CathexisVision on the same machine, change the http port for the API server or for Cathexis. This is if a mobile connection is used.
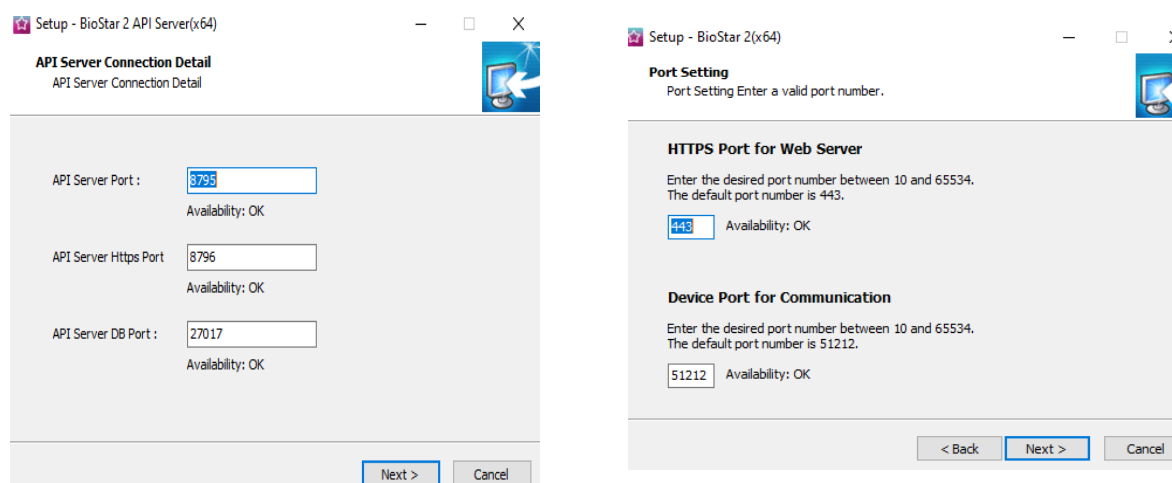
3. Log in to the API server using the IP address.
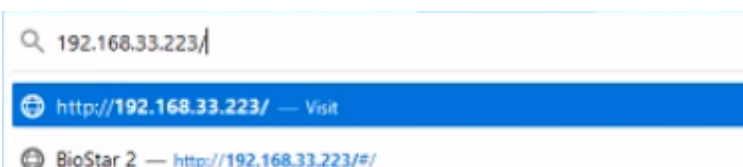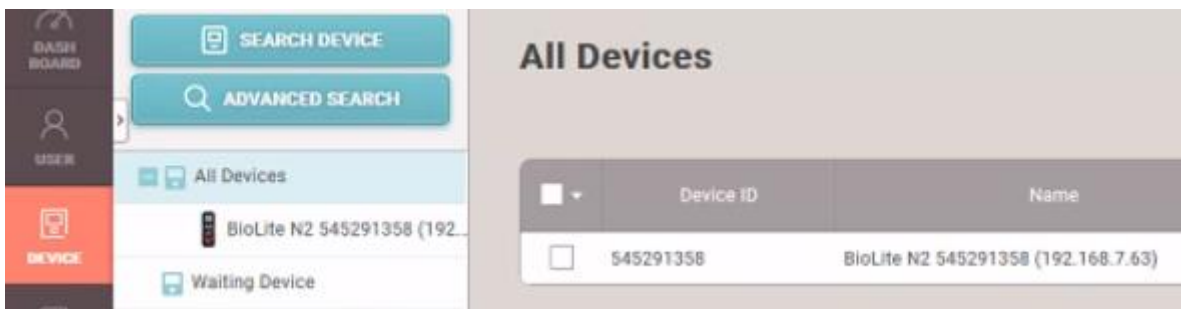
4. Use the login details created when the BioStar software was installed. Log in to the Biostar web interface.

5. Add device via the device tab, run a search and select the BioStar2 device.
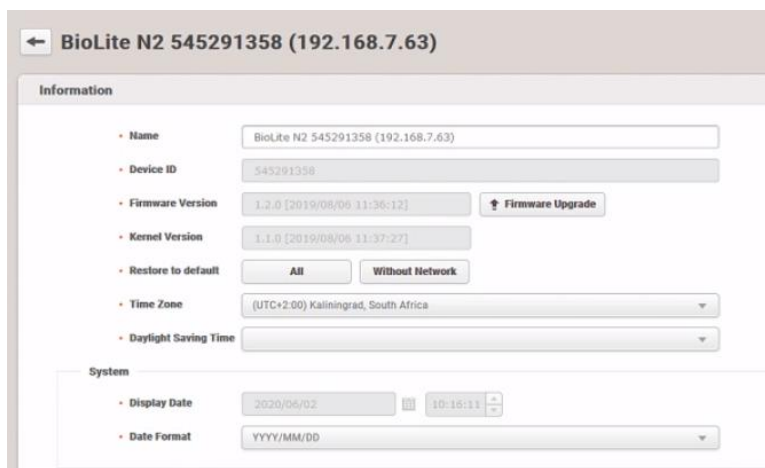
6. Adjust settings as desired.

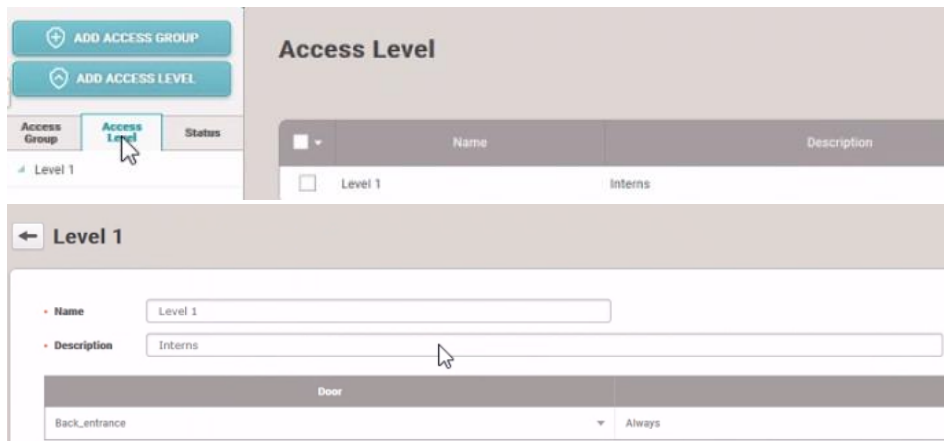- Enable full access to grant every user access to every door, or disable it to grant certain door access to a certain group of users.

- Set access control level. Add Access level:
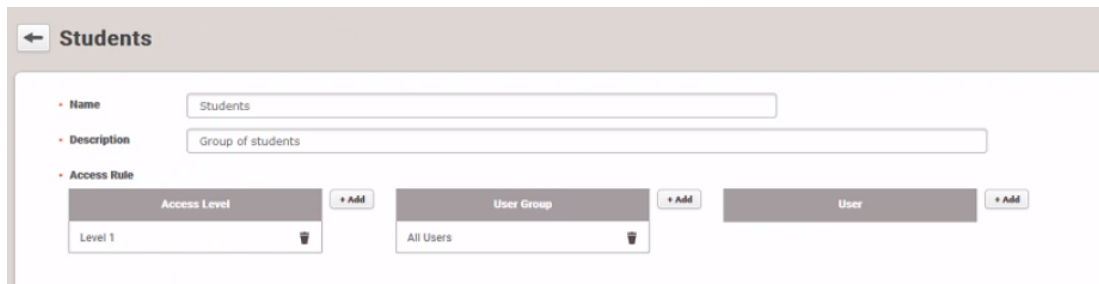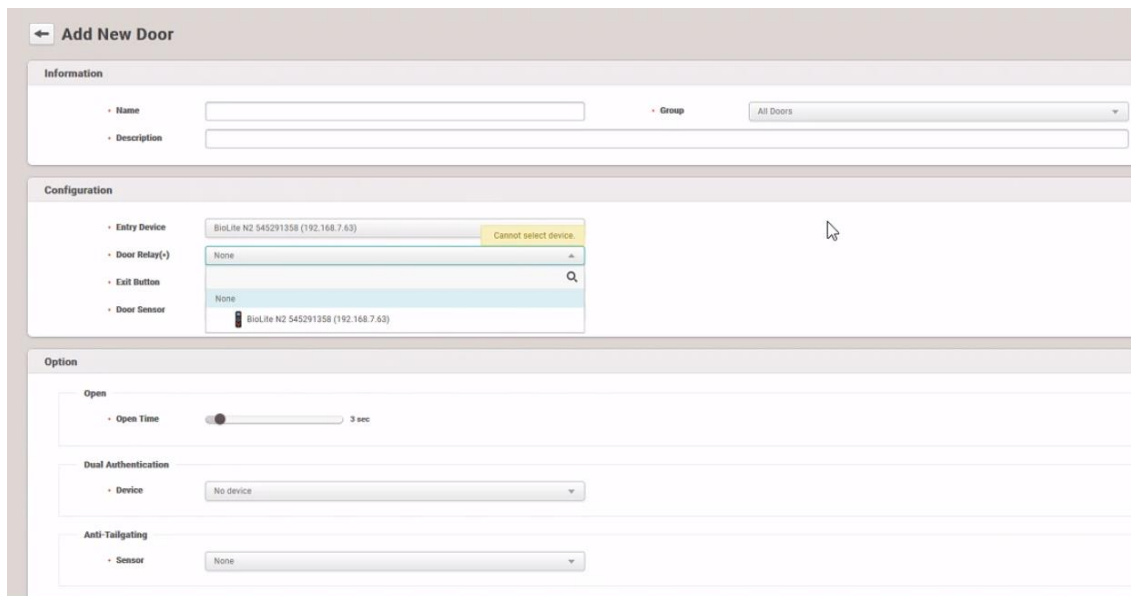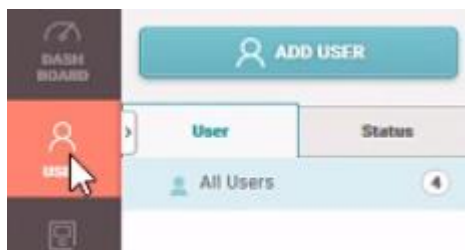

- Create access group:

Note: It is only necessary to set access control levels if full access is disabled.

- Select All Users or add them one by one:

2.2 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:
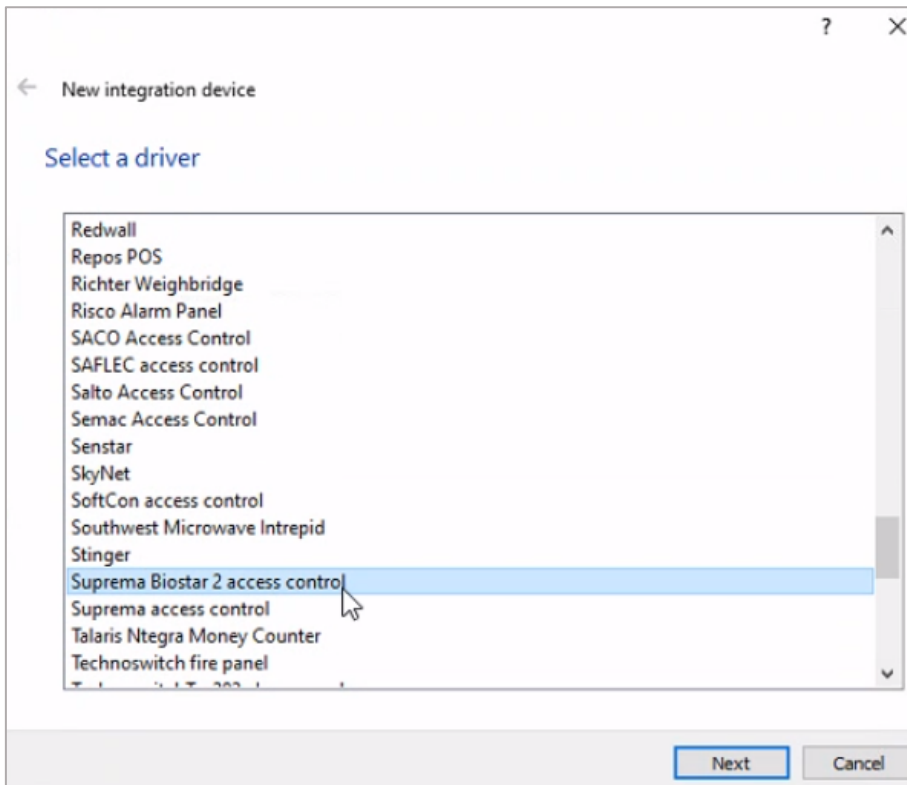
2.2.1 The Integration Devices Panel

There are two sections in the Integration Panel:

1. The **devices** list will list the integration devices 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 New device. This will open the addition window.

2. Select **Suprema BioStar 2 access control** from the list.

Give the device a descriptive **name**.

API login details are created when the BioStar software is installed. The port number is set at 8795 if it was not changed during the BioStar installation.

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.**
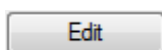
2.3.1 Object Configuration Tab

The object configuration tab is the tab where all the individual objects that comprise the integration may be viewed.
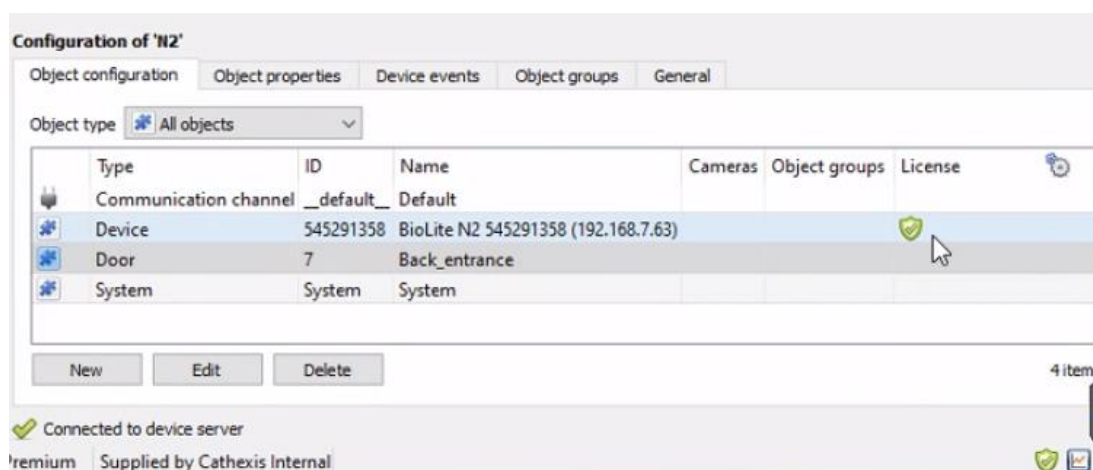
2.3.1.1 Object Configuration Buttons

 Add a new object by clicking on New.

 Here, 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 manually enabling/disabling individual nodes.
Delete will permanently remove this object from the list.
Properties will open up the object properties. The object may be edited from here. Specifically, assign cameras to this object, as well as define user access levels for it.

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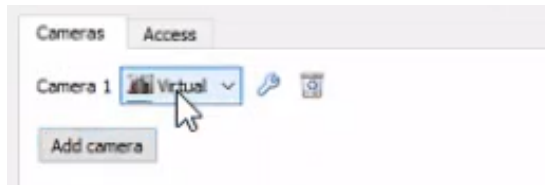
Adding a camera to an object will mean that, whenever there is an event on that object, the recording from that camera will be related to the time and date of the object event, in the Integration database.

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

To delete a camera, click 🗑 .

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

Properties: Access
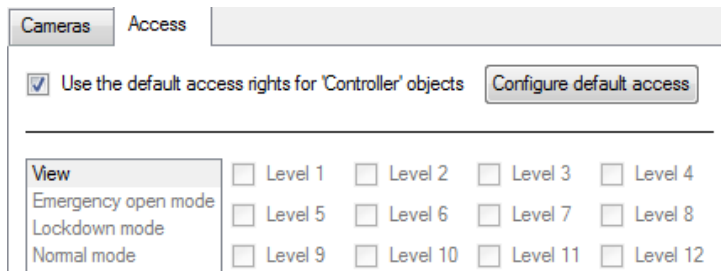
Access allows protecting sensitive objects, by only allowing certain user levels access to them.

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.
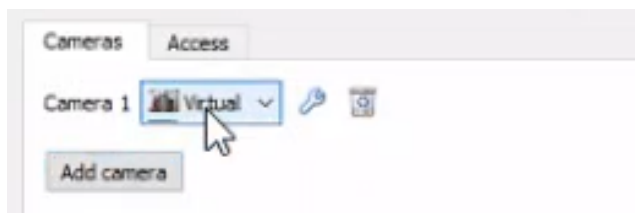
2.3.1.3 Configure Overlays

Overlays are supported for **Door and Device** objects. Overlays may be configured individually for selected objects.

Configure Individual Overlays
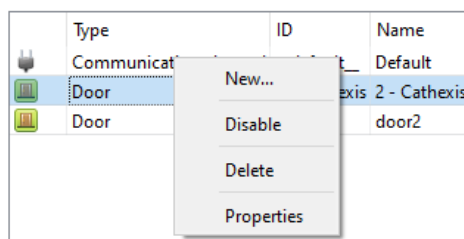
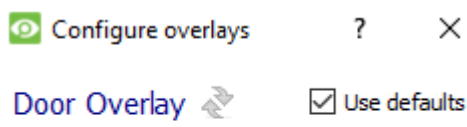Right-click object and select **Properties** to edit the object.

Add a camera to the object.

Then click the settings icon that appears next to the camera name.

Note: This option only appears for Door objects.

Individual Options

Use Defaults: This option is only available when editing individual overlays. Check this box to use the global configurations. Uncheck to edit overlays for the specific object.

Enable: This option is available in global and individual overlay configuration. In both cases, check the box to enable overlay configuration.

Click   to reset values.

Overlay Configuration for Individual
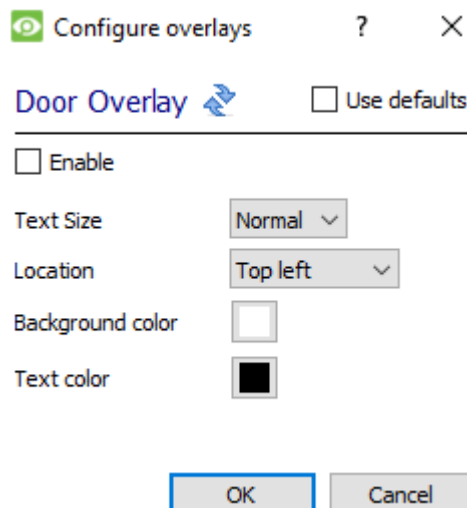
Select **Text Size** options from the drop-down menu.

Define the **Location** of the overlay panel.

Define the **Background Colour** of the overlay stream: Set the panel appearance to default; remove the border or remove the panel entirely (so that only the overlay text appears). Adjust the opacity as required.

Choose **Text Colour**.

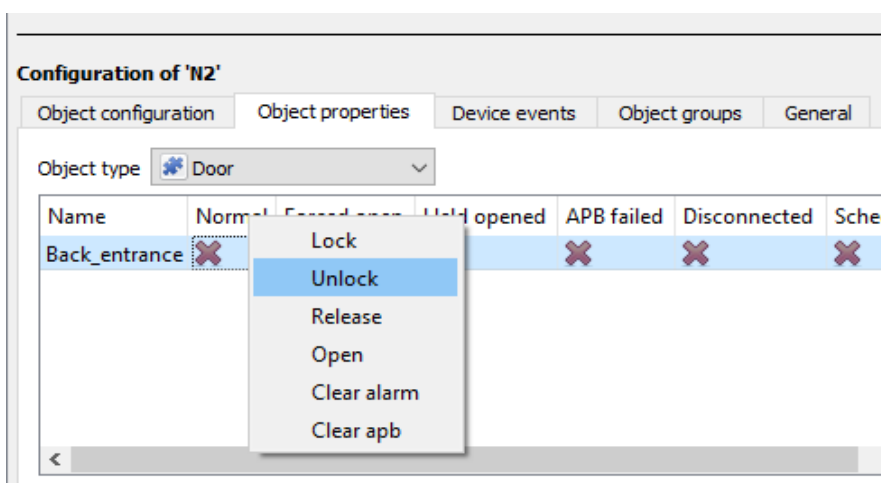To set a custom panel colour, uncheck **Use Default background colour.**

Click the   box to bring up a colour chart.

2.3.2 Object Properties Tab

The Object properties tab allows viewing objects, sorted by type. In the case of the Suprema BioStar device, there is the option of viewing by **Door, System, and Communication channel.**
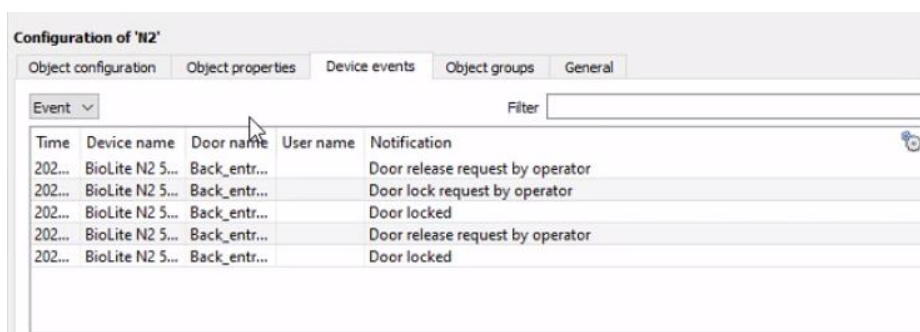

2.3.2.1 Object Control Menu

Control of the individual object can be selected by right-clicking the mouse over the object for which control is required.

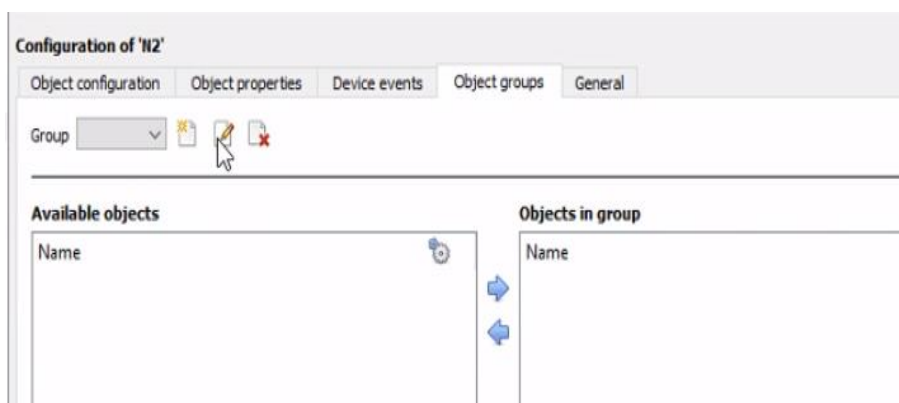This will show a menu of the commands applicable for the select object.

Select the command to apply it.

2.3.3 Device Events Tab

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

2.3.4 Object Groups Tab

Configuration of 'N2'

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

Group [▼] 📄 📝 🗙

Available objects

Name

Objects in group

Name

Groups of the same type of object can be created.

Tip: This is useful when setting up events, because events can be triggered by an object group.

(For example, a group will trigger, if any of the zones/partitions in that group is triggered.)

2.3.4.1 Create a Group

📄 To create a group, click on this icon.
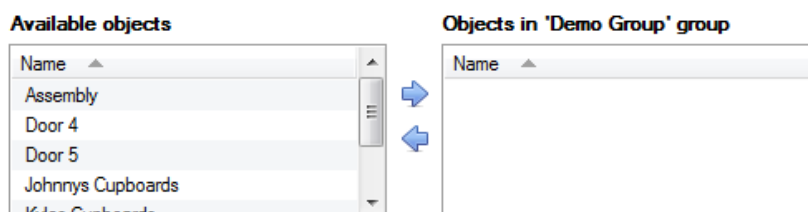
📝 To edit a group, click on this icon.

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

Create a new ...

Create a new object group
Configure the new object group

Group name [   ]

Object type [🔌 Device ▼]

OK | Cancel

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.

Available objects

Name ▲
Assembly
Door 4
Door 5
Johnnys Cupboards
Kyles Cupboards

Objects in 'Demo Group' group

Name ▲

There will then be a list of Available Objects.

Multiple objects may be selected at a time.

➡ To add these objects to the group, select them and click on this arrow.

⬅ To remove these objects from the group, select them and click on this arrow.

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.
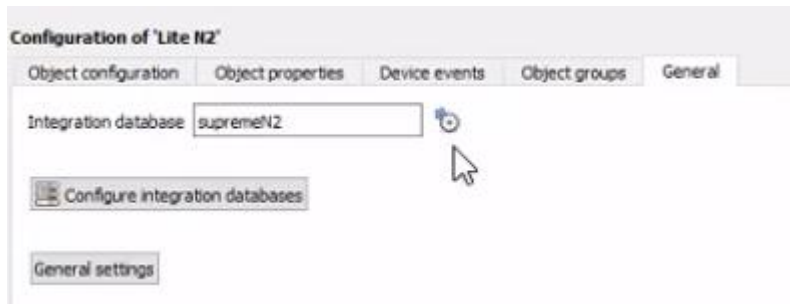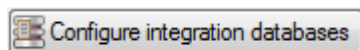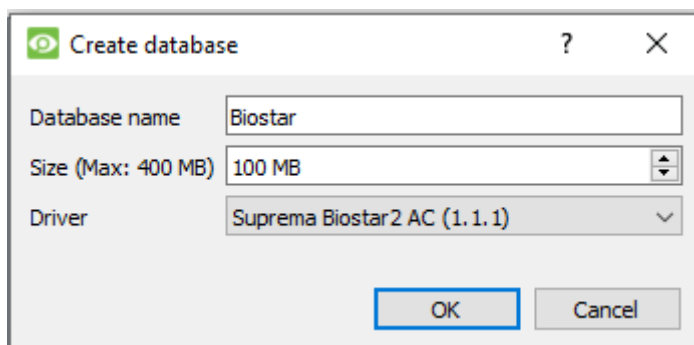

2.3.5.1 Select an integration database
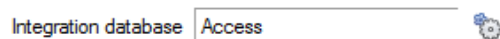
To select a database, click [icon], and select the relevant database. Only databases which relate to the device being added should appear.

### 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.

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

3. Camera Tab Overlay Setup

Once all the relevant settings have been configured, the access control overlay can be pulled through over the appropriate camera feed.
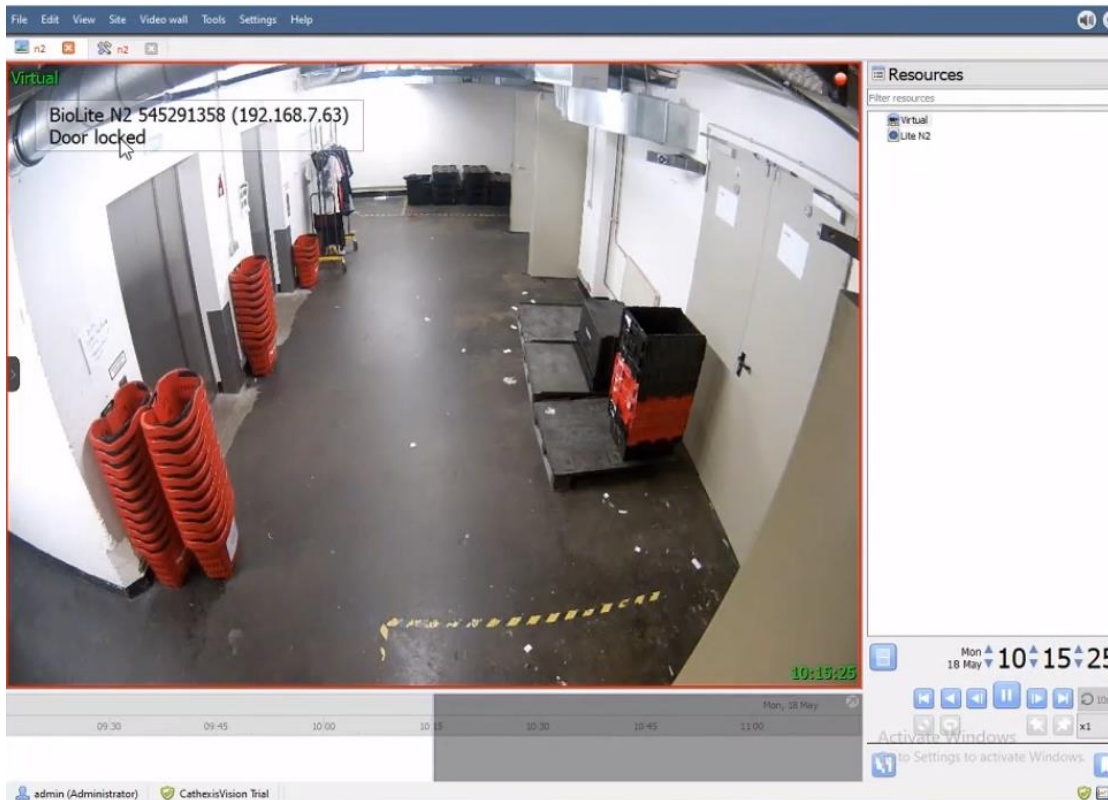

Note: Cameras must have already been added to Door objects, and overlays must have already been configured.

3.1 Video Feed Options Panel

To bring up the overlay and pop out the Video Feed Options panel, click the arrow to the left of the screen. The Video Feed Options panel will present a number of options specific to the settings configured for that video feed.

3.1.1 Select the Overlay
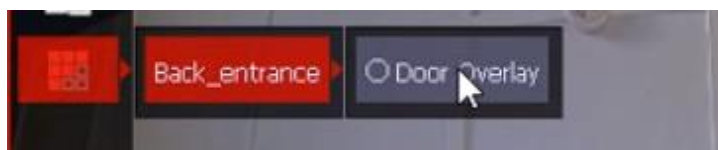
Clicking this icon will bring up the overlay options for this video feed.

Select the overlay and it will appear over the video feed, as above.

4. Database

The database tab allows navigating 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 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.
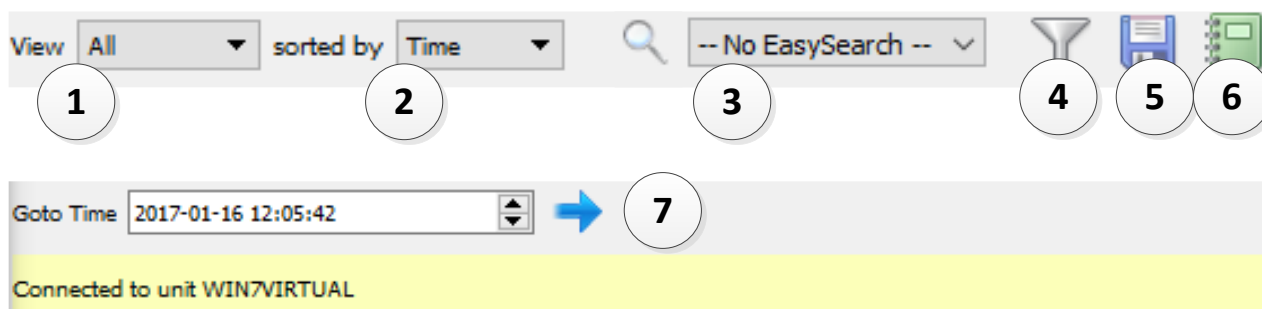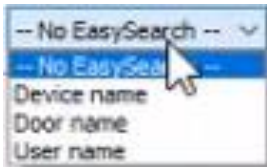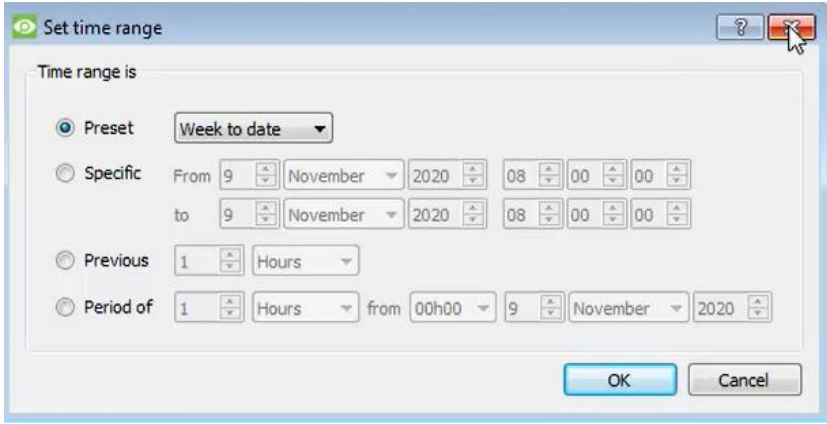
4.1 Navigate to the Database
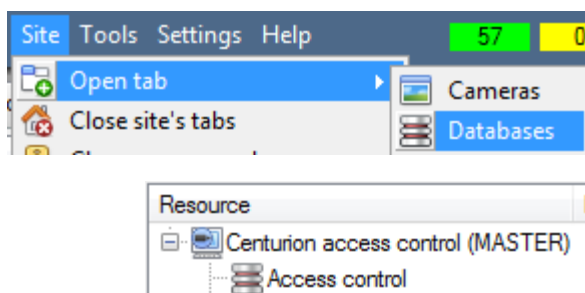
View information stored in the Integration database, by following the path seen to the left. This will navigate to the Database Tab.

Once in the databases tab, select the relevant integration database. The databases are ordered under the NVRs that they are attached to. Below, is an image of a Suprema BioStar Access Control database:

4.2 Database Interface

① **View**	Users may change the way that the database is presented. The Suprema BioStar database has only one option: **Event**.	
② **Sorted By**	Events can be sorted based on the parameter of **Time**.	
③ **Easy Search**		The EasySearch option allows users to quickly search the database within one of these options.
④ **Filter** ▽	Filter offers an advanced manner of sorting information in the Integration Database table. The following options are available within the Filters dialogue:	

Filter offers an advanced manner of sorting information in the Integration Database table.

The following options are available within the Filters dialogue:

1. To **enable** filters check this box: ☑ Enable filters
2. To **add** a new filter click on 🔽.
   The filter icon ▽ will change to 🔽 when filters are active.
3. To **delete** an added filter click on 🔽.

A **Time range,** within which the search will be conducted, may also be set.

To set a **Time range**, click on the blue hyperlinked text which specifies time (for example, *in the Week to date*).

This will bring up the following dialogue box, where the time range can be defined:

Note:

	Multiple filters may be run simultaneously, and the same parameter be used to filter more than once.
	Time To change a filter click on the blue hyperlinked text. (For example, click on *Time* to change the filter from Time to any of the other available options.)
⑤ **Export**	Generate metadatabase reports in PDF or CSV format. See below.
⑥ **Manage Reports**	Generate scheduled metadatabase reports. See below.
⑦ **Go to Time**	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.

4.2.1 Scheduled Metadatabase Reports

Click this icon to open the scheduled report window.
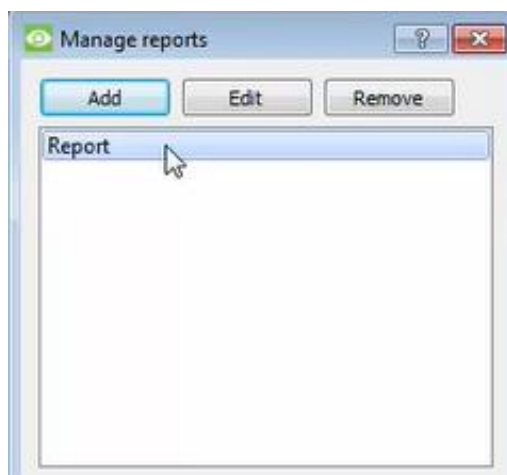
All created reports will be listed here.

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.
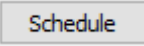
4.2.1.1 New Scheduled Report
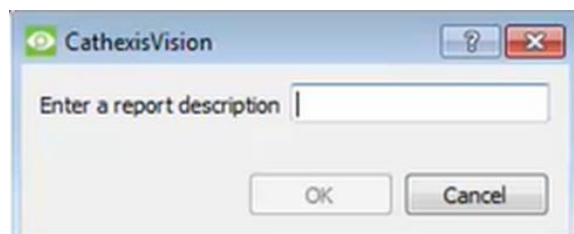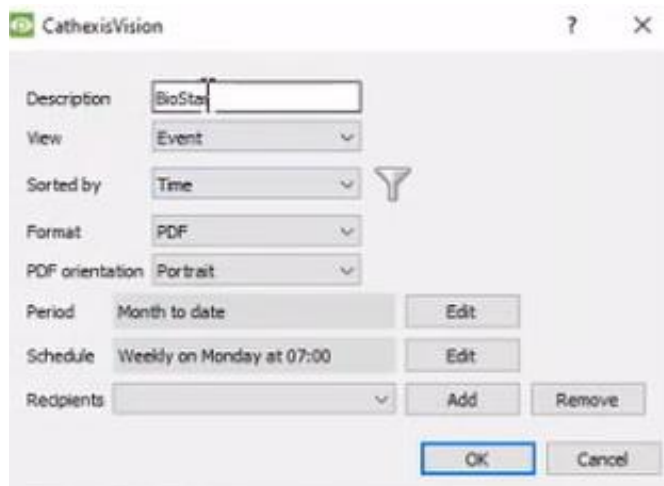
Click **Add** and give the report a description.

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: [Schedule] .

Edit the **description** if needed.

Edit **Viewing** options.

Select the **Sorted by** option.

Select the **Format**.

Select the **orientation** of the Format.

Select the **period** to be reported on.

Define the **Schedule** for the report.

Add/remove recipients to whom reports will be sent.
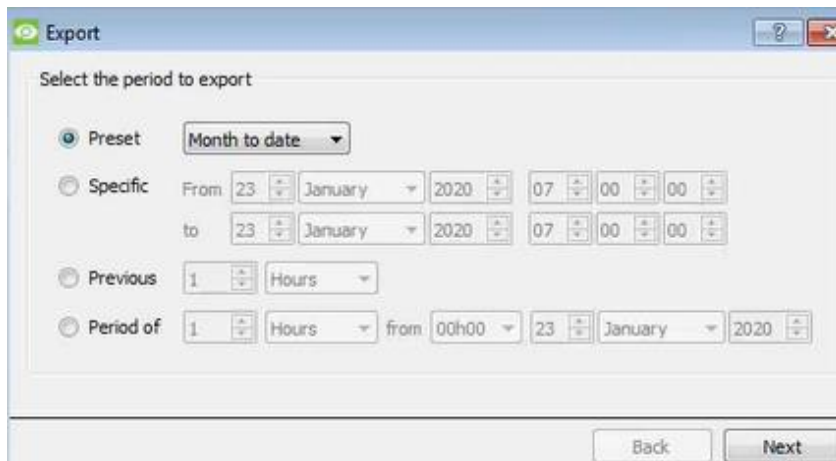
Add recipient: Click **Add** and enter the email address of the recipient. Multiple recipients may be added. All will receive emails.

Remove recipient: Select the recipient from the dropdown menu and click **Remove**.

4.2.2 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.

4.2.2.1 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.

4.2.2.2 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.

4.2.3 Metadata

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

4.2.4 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 video content may be archived and reviewed.

will present the view to the left.

will break down the image into 4 sequential frame viewers.

5. Events

A CathexisVision event has a trigger, which causes an action. Set integrated devices to act as triggers, or as actions. This document will detail the Suprema BioStar 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* as an event trigger, or action.

5.1 Creating an Event

To create an event using the Suprema BioStar device, enter the Events management area:
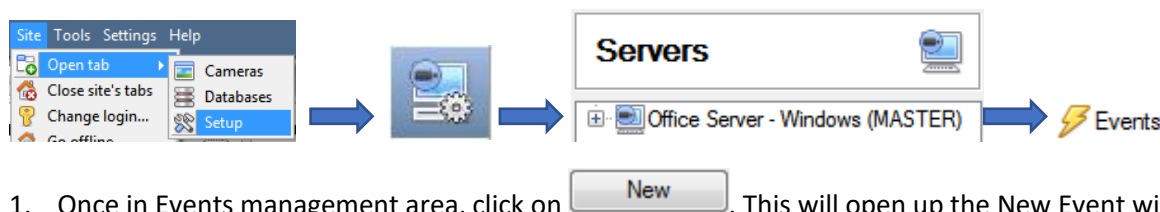
1. Once in Events management area, click on New . This will open up the New Event window.
2. Once in this window, select the Triggers tab and click on the hyperlink titled, *standard triggers* .
    a. From the drop-down menu, left-click the Suprema BioStar device with which to trigger the event.

5.1.1 While/When and Any/All

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

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

5.2 Triggers

A trigger is the user defined input that notifies the event to start. The trigger causes the subsequent action (which the user will also define).

5.2.1 Set the device as the trigger
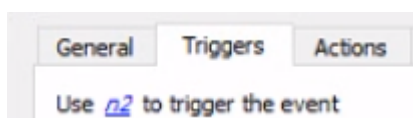
When creating a new event, the trigger type will default to: Use *standard triggers* . To define which device should trigger the event, click on the hyperlink after "use". To set it as the Suprema BioStar device, click on the hyperlink, and select the relevant device name from the dropdown menu.

5.2.2 Trigger Types (Trigger Using)

It is useful to think of this as a **master trigger type**.
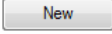
Any door will trigger if anything happens on any of the doors.
Specific door...will trigger on the specific door chosen.

Any device event will trigger, initially, when any event occurs on the device. Within the "any device event" setup, "device event rules" may be set, which will constrain the events that prompt triggers.

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 ⑦ 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:

After selecting a master trigger type, add a trigger to the event. Click on [New] in the Triggers tab. This will bring up the dialogue box below:
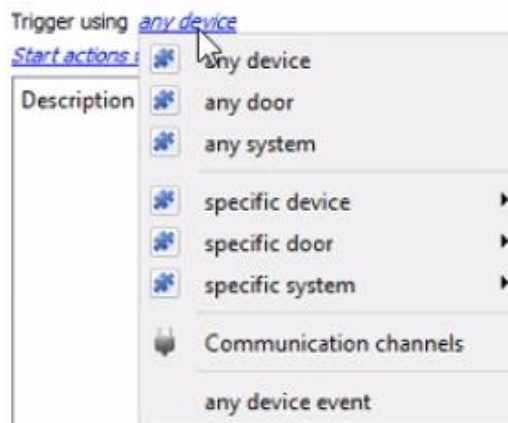
5.2.2.1 Any Device Event
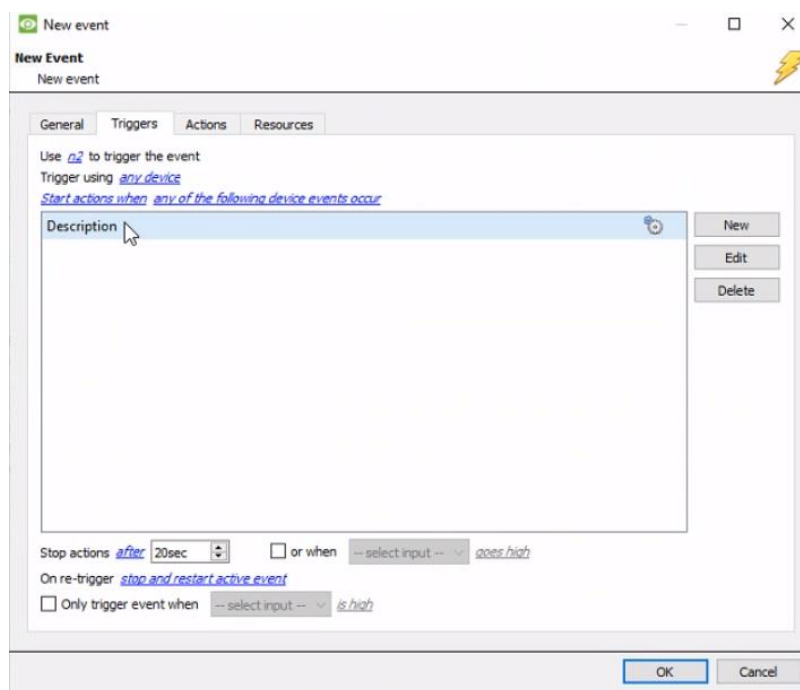
For example, within the *any device event* option, choose the type of device Event that will be the trigger. Choose from the drop-down menu.

Note: Set multiple constraints, and choose if *any* , or *all* constraints need to be fulfilled to set off a trigger. If a constraint is not defined, every single device event will send off a trigger.

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 Suprema device. See the Suprema BioStar settings for the strings needed here.

5.2.2.2 Any Door/Group

Triggers that are not of the **Any Device Event** type, have a slightly different setup window. In these instances, constraints need not be set, since they are being added one at a time. This option is better if a few triggers have been selected to use.
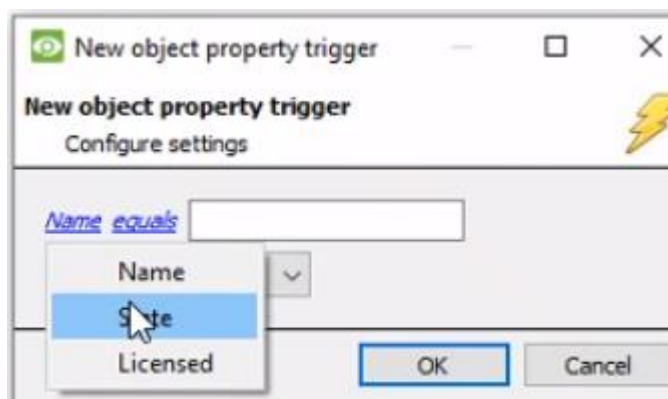
Since only one type of object is being used to trigger the event in this instance, the dialogue will appear as the **New Device Event Rule** window did previously.

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

5.3 Actions

Once the triggers that are going to initiate the event are defined, define some Actions. One of the available actions will be to *control* a Suprema BioStar2 device. **Schedule** is a standard Cathexis schedule, which may be applied to the actions.

5.3.1 Open Actions Tab and Select the Suprema BioStar2 Device

To get started, left-click on the tab titled "Actions". Click [New].

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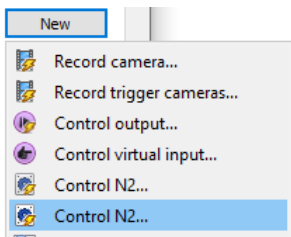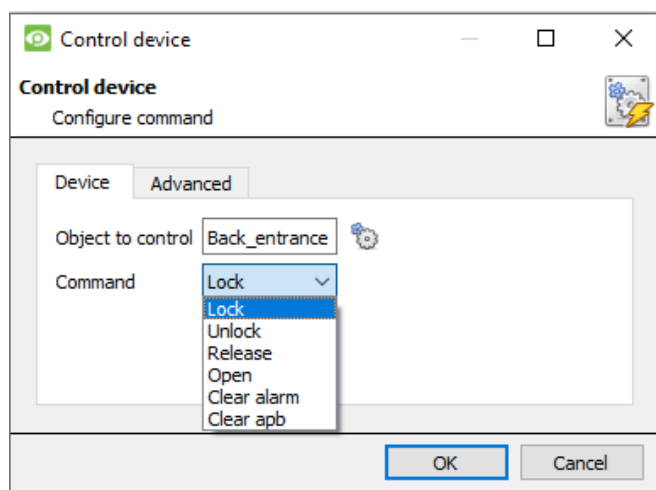

For example, it will state "Control…" and the name of the action device.

5.3.2 Control device

This will bring up the **control device** dialogue. Under the **device** tab, the user defines how the device will be controlled; under the **advanced** tab, the scheduling of the action is defined.

5.3.2.1 Device

To select an **Object**, click on the ⚙ icon. This provides a selection of all the Objects available on the Suprema Biostar device.

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

Note: Only take a global action here, and global actions may only apply to **controllers**. For example, **communication channels** or **door nodes** may not be controlled as part of an event action. If selecting one of these objects, there will be no options in the *Command* menu.

5.3.2.2 Advanced
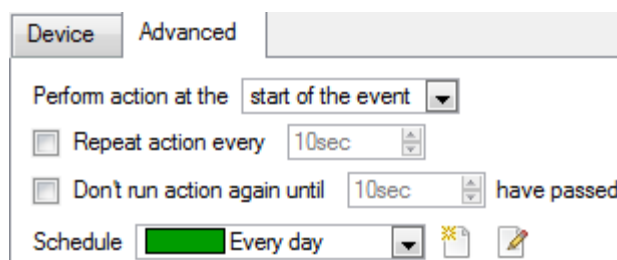
Choose to **perform action at the** start of the event, or once the event triggers have subsided.

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

6. Map

It is possible to add the Suprema Biostar Access Control 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 Suprema Biostar device. For more information on using the CathexisVision Map Editor and Map Tab, please consult the dedicated and detailed Map Editor Operation Manual.

6.1 Add the Device as a Resource

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

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

6.2 Add the Device in Map Editor

Once the Suprema Biostar device has been added as a **Resource**, it will be available to drag onto the map area from the **Site Resources** list in the Map Editor software.
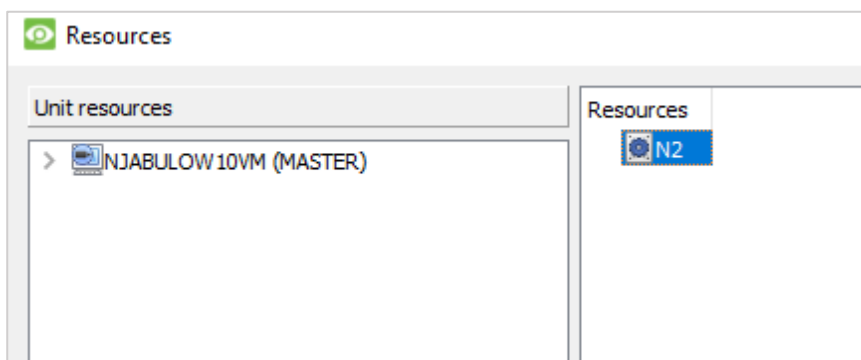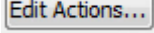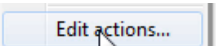

6.2.1 Adding Device Objects

Drag the device from the Site Resources list onto the map area.
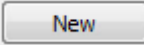
Select one of the associated objects.

Note: To add multiple objects, repeatedly drag-and-drop the device resource from the Site Resources list onto the map area to bring up this option.

6.2.2 Adding Device Actions

To add actions to the device objects, either select the object on the map and click **Edit Actions...** or right-click the map object and select **Edit actions...** .
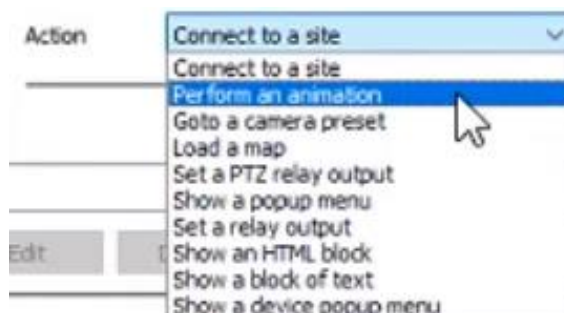

Actions may be set for **Left-Clicks, On State Change** and **Events**.

Click **New** in the relevant tab of the action window.

Once set, the list of actions will be displayed here.

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

Action options:

Action options are the same for all tabs, except for the Device Events Tab, which has the added option to Show a Device Event Notification.

Click **OK** in the Action window once all required actions have been set for the various map objects.

Once finished, save the map.

Note: The map **must not be saved** in the default folder or Work folder of the installation directory. Instead, create a new directory when saving.

6.3 Map Tab

Upload the saved map to CathexisVision. 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.

7. Conclusion

This app-note was designed to deal specifically with this integration. For further information about the CathexisVision software, consult the main manual (cathexisvideo.com/).

For technical support, email support@cathexisvideo.com