

## Overview

IPVideo’s HALO I.O.T. Smart Sensor is a multi-sensor capable of detecting vape, smoke, THC and sound abnormalities like shouting in areas a camera cannot be placed. Additional sensors give HALO the ability to monitor air quality for temperature, humidity, hazardous chemicals and more! The serial data from these events can be viewed and customized within exacqVision. This document will explain the integration process.

## Requirements

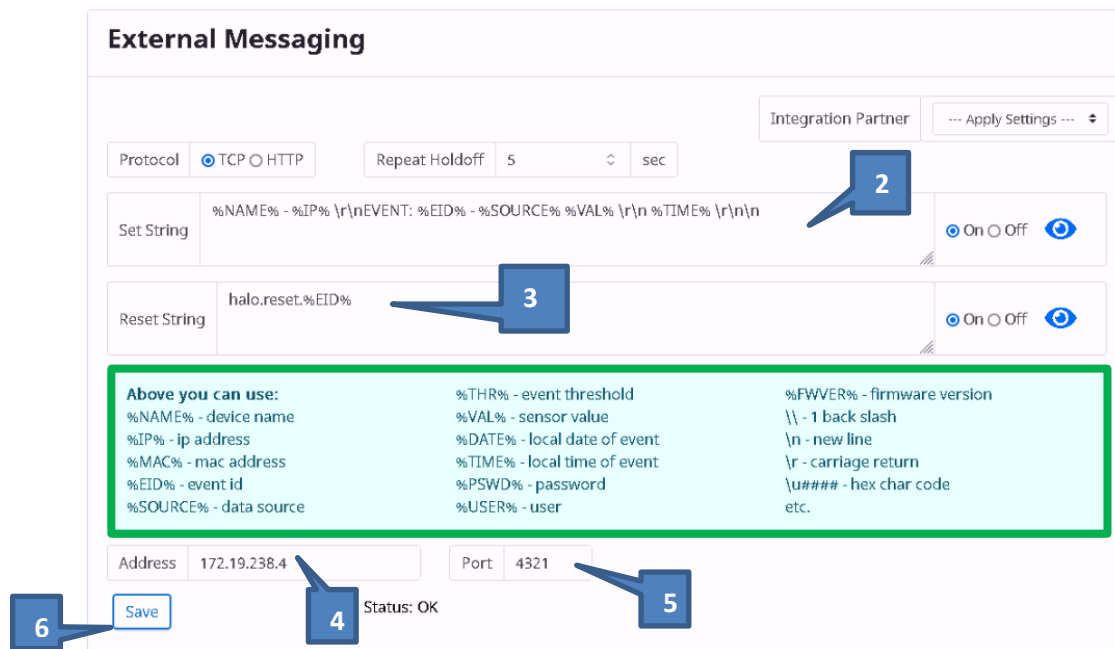
- HALO Smart Sensor unit from IPVideo Corporation
- ExacqVision server and client software - Professional or Enterprise license preferred.

Tested Versions	
exacqVision Version	Firmware
exacqVision Server 19.09	1.53
exacqVision Server 19.12	1.53, 1.66
exacqVision Server 20.03	1.53, 1.66
exacqVision Server 20.09	2.2
exacqVision Server 21.06	2.3.9
exacqVision Server 21.09	2.3.9, 2.5.1
exacqVision Server 21.12	2.5.1

## HALO Sensor Setup Process

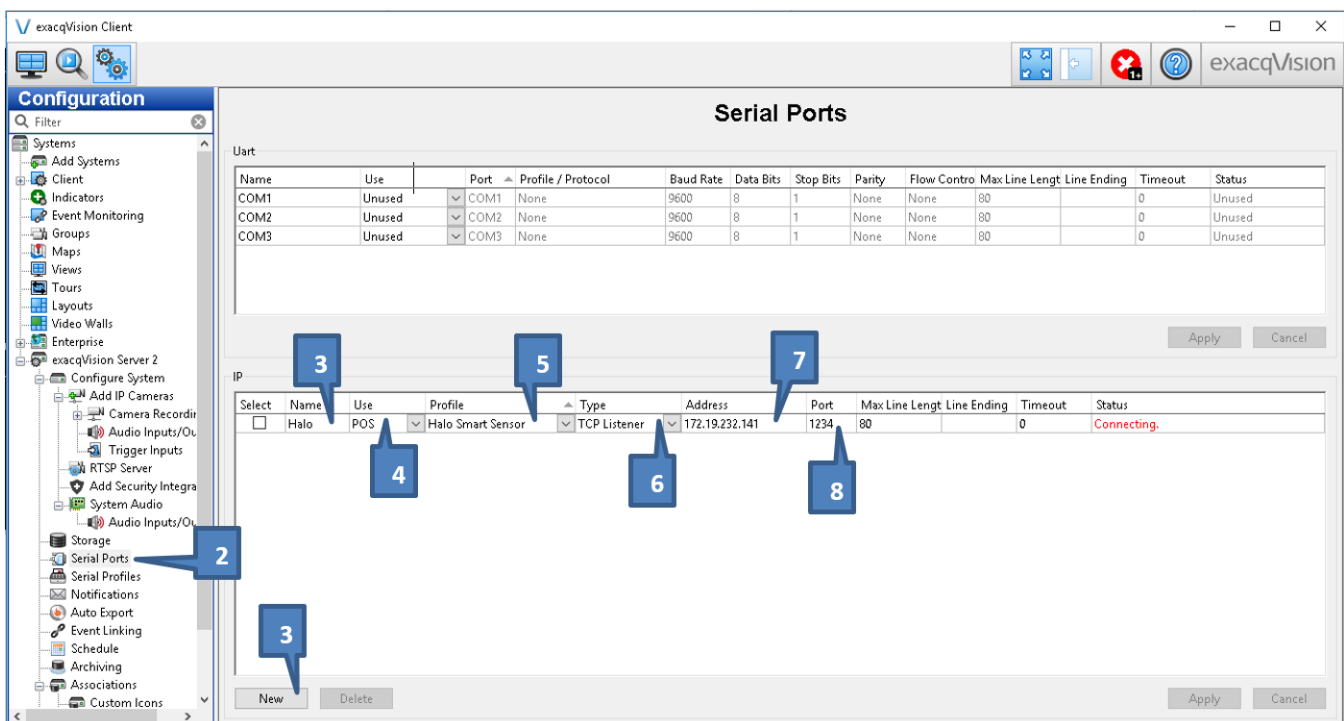
### CONFIGURE VMS SETTINGS

1. Login to the HALO SMART SENSOR web interface and click **Integrations**. In the top section (External Messaging) you will configure how event data is sent to ExacqVision.
  2. Enter at least **“%EID%”** for the Set String and Check the **On** radio button to enable (**Do not include Quotations**) More variables shown in the **green box** at the bottom of this image.
  3. Enter **“halo.reset”** for the Set String and Check the **On** radio button to enable (**Do not include Quotations**)
  4. Enter the **IP Address of the ExacqVision Server** in the IP Address field
  5. Enter a custom port number that will also be configured in exacqVision to communicate with the sensor. (example, **1234** )
- NOTE:** Only one device can be configured per port number. Additional devices should be subsequent numbers. (1235, 1236, etc...)
6. Click the **Save** button.



## exacqVision Serial Port Configuration

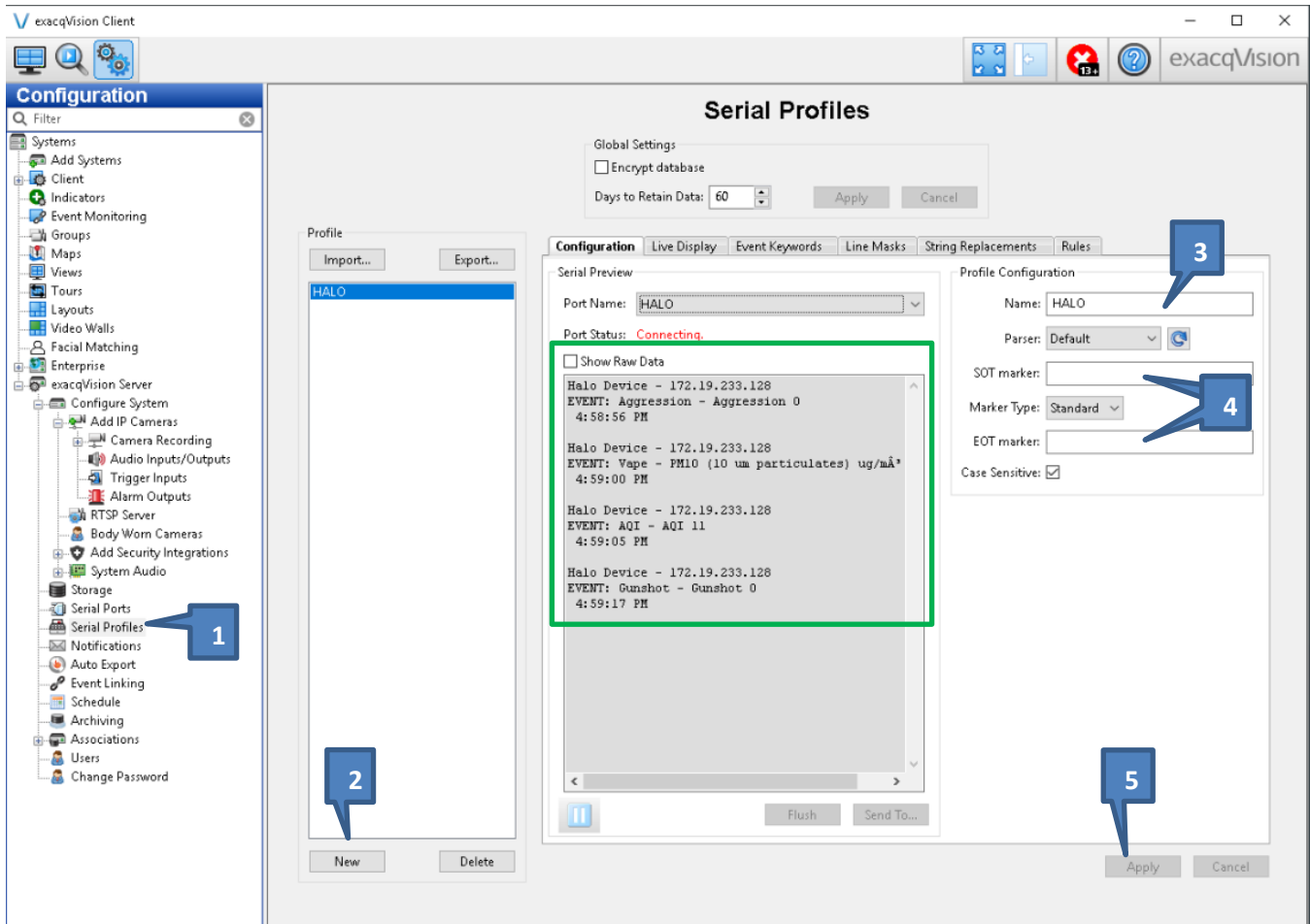
1. Log into the exacqVision Client as an Administrator and click on the Config (Setup) Icon.
2. Click on **Serial Ports** in the left navigation tree.
3. Click the **New** button in the bottom left corner, and enter a Name for the Serial Port.
4. Select **Access Ctrl** from the Use dropdown menu.
5. Select the **Profile created for HALO events** in the Profile dropdown menu.
6. Select **TCP Listener** from the type dropdown menu.
7. Enter the **IP Address of the HALO Smart Sensor** in the Address field.
8. Enter **1234** into the Port field.



**NOTE:** This integration is currently serial data only. This device is **not** connected to exacqVision the same way an IP camera would be, and therefore does **not** require an IP camera license.

## exacqVision Serial Profile Configuration

1. Click on **Serial Profiles** in the left navigation tree.
2. Click the **New** button to create a new Serial Profile.
3. On the configuration tab, specify a Profile Name.
4. **SOT** and **EOT** markers are optional here.
5. Click **Apply** to save the Profile.



In **Firmware version 2.2 and later**, you can now customize how the data strings are displayed from the Halo web interface if you prefer not to do so in the exacqVision client (shown above).

The screenshot shown on [page 1](#) shows the use of `\r` and `\n` to end the line of data in the string and start over on a new line. The output of this, as it would display in exacqVision, is shown here:

## Testing data flow

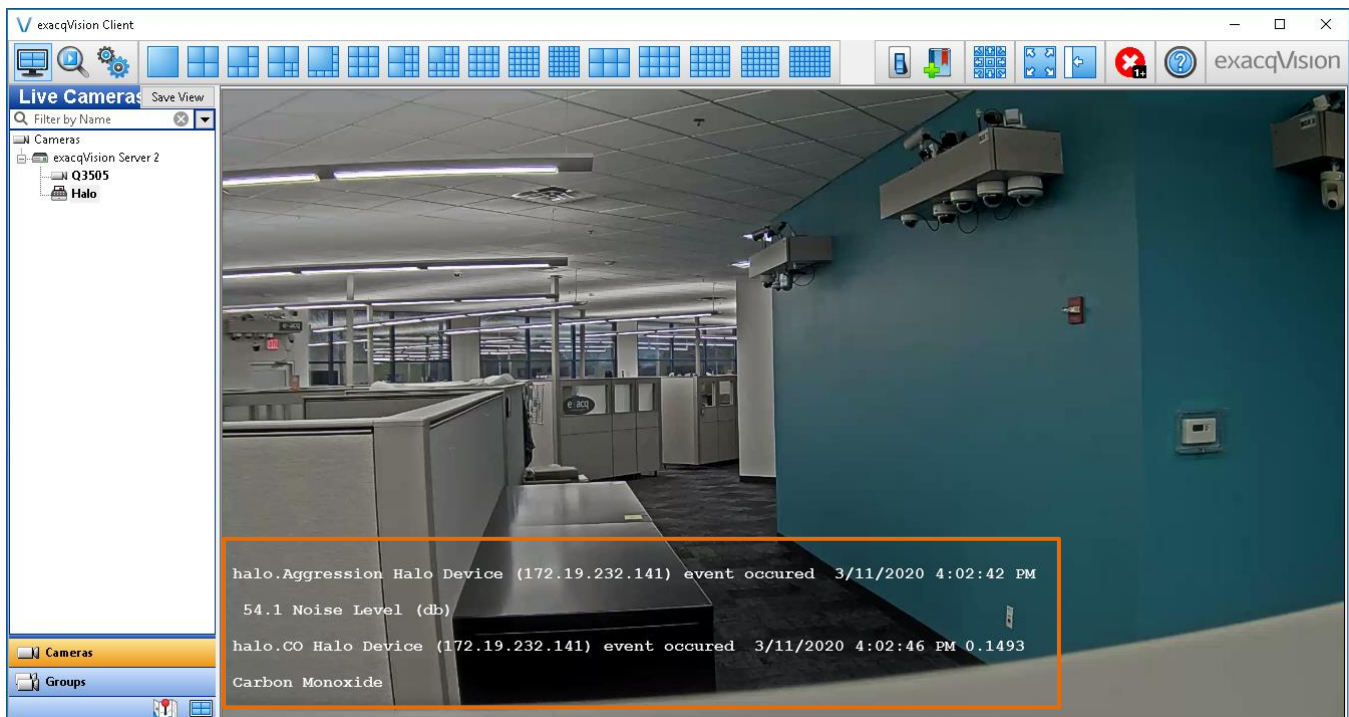
### HALO SMART SENSOR – ACTIONS

1. Click on the Actions tab of the HALO Smart Sensor interface.

Actions

Event Identifier	Email Set	Email Reset	Msg Set	Msg Reset	Relay 1	Relay 2	LED Color	LED Pattern	LED Priority	Sound	Actions
Aggression	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	Cyan	1 Sec Blink	High	---	Test
AQI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5 sec	---	Red	Steady	High	Siren-Alarm.wav	Test
Gunshot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	Blue	1 Sec Blink	High	Emergency2C2N.wav	Test
Help	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	Violet	1 Sec Blink	High	Siren-Euro.wav	Test
Masking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	---	Steady	High	---	Test
Tamper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	Yellow	1 Sec Blink	High	440_5sec.wav	Test
THC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	---	Steady	High	---	Test
Vape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---	---	---	Steady	High	---	Test

2. Make sure that the checkbox in the Msg Set (previously called VMS Set) column are checked for each of the individual Events.
3. Use the Test buttons for each of the individual Halo Events to send test commands to ExacqVision.
4. \*The transmitted events will be displayed in the ExacqVision client in the Serial Profiles or Live View. These events are also recorded and searchable when used in **Event Linking**.

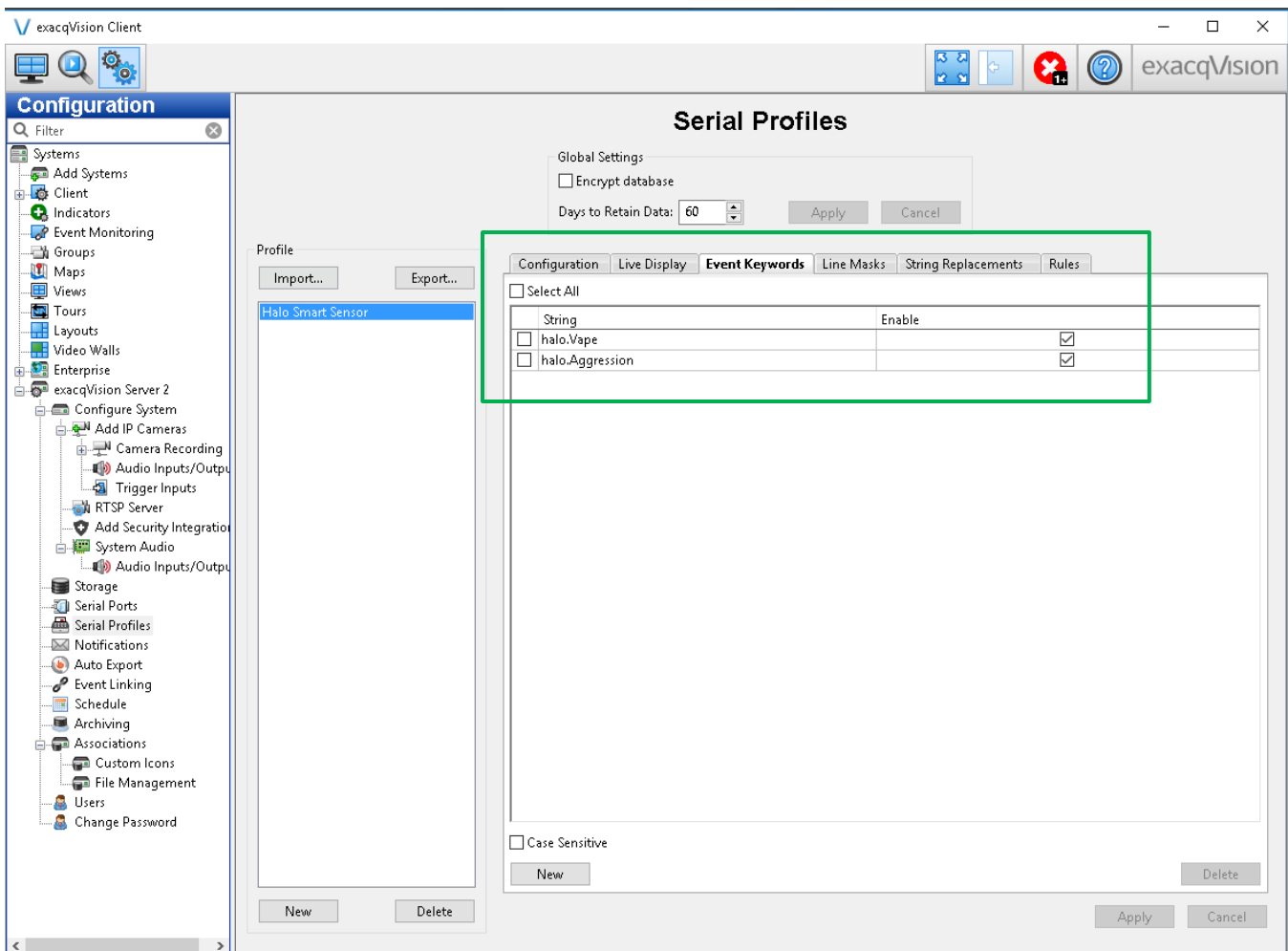


### EXACQ – SERIAL PROFILE KEYWORDS

In order to associate HALO Smart Sensor Events to ExacqVision actions, you must first create a set of Keywords. These keywords must identically match the output received from HALO, as indicated in the previous section.

**Please note that the string values are inherently case sensitive.**

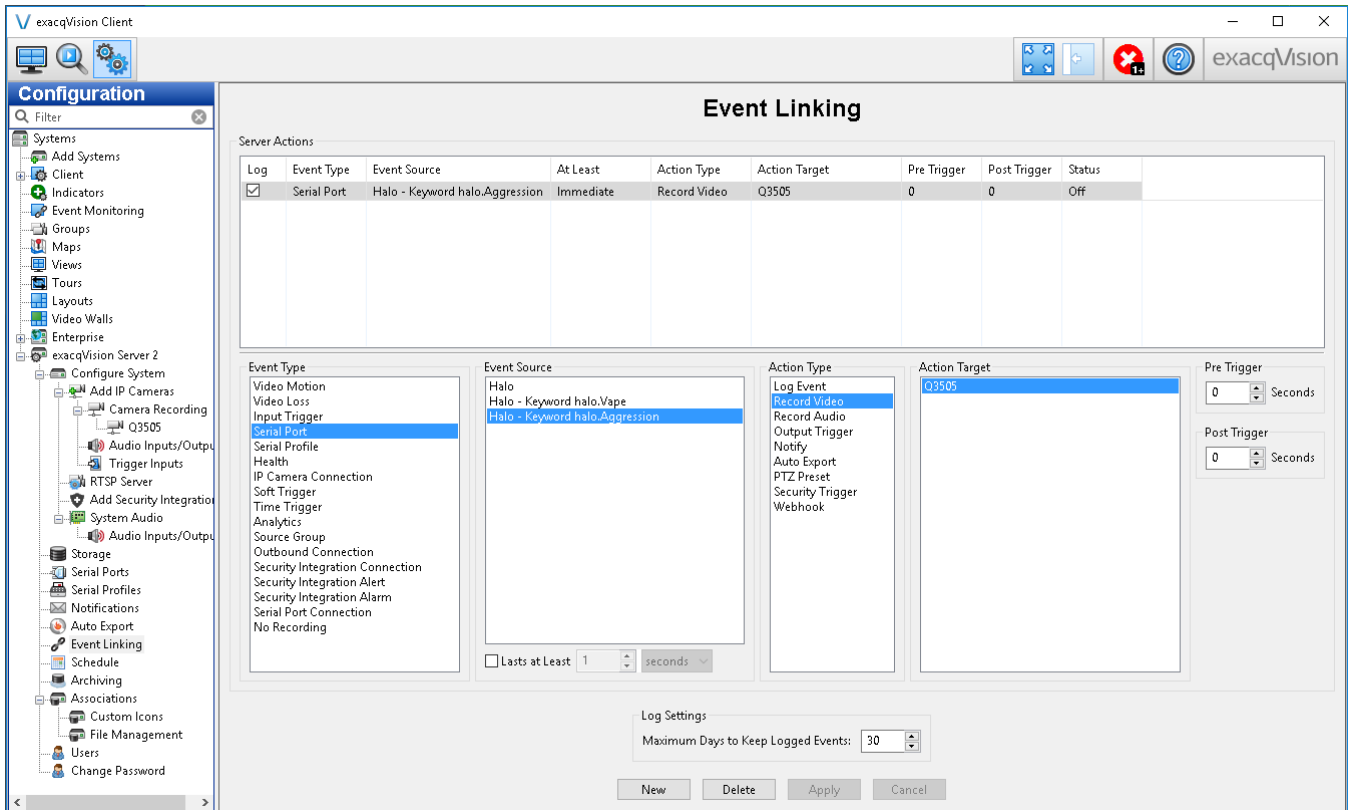
1. Click on the **Event Keywords** tab, then click the **New** button
2. Enter the event **string value** for each of the individual HALO Events that have been defined, such as %NAME%, or use any other words from the string of data received (show in the Serial Profiles Configuration tab). Event keywords can be customized to your needs.
3. Click **Apply** to save the Keywords.



## exacqVision Event Linking Configuration

Once the keywords have been added, go to **Event Linking** in the configuration tree on the left. Here you will create associations between the HALO Events and actions that ExacqVision can perform based on those events.

1. Click the **New** button to create a new Link.
2. Select **Serial Port** as the Event Type.
3. Select the **Event Source (Halo Alarm)** to associate to an action(s)
4. Specify the **Action Type, Action Target, Pre and Post Trigger**, then click **Apply** to save changes.



## Contact Info & Support

### IPVideo Corporation Technical Support

Web: <https://ipvideocorp.com/support/>

Phone: 631-647-9970

### exacqVision Technical Support

Web: <https://exacq.com/support/techsupport/>

