
Valerus-HALO Integration

XX281-60-00



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Vicon Industries Inc.

Tel: 631-952-2288) Fax: 631-951-2288

Toll Free: 800-645-9116

24-Hour Technical Support: 800-34-VICON

(800-348-4266)

UK: 44/(0) 1489-566300

www.vicon-security.com

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General

As an enterprise level video management solution, Valerus VMS can integrate with HALO sensors. These sensors can detect a range of things such as smoke, gunshot sound, vaping and more. This works as an RTSP source and sends events to the Valerus Event Listener.

Prerequisites

- HALO devices should be running a minimum firmware version 2.2 to support RTSP streaming.
- Valerus version 20.3 or higher with a PRO or ENTERPRISE license tier to support external events and a 3rd party camera license (any devices) per HALO sensor
- HALO devices set up and running with network access to the Application Server.
- Application Server firewall open for listener port.

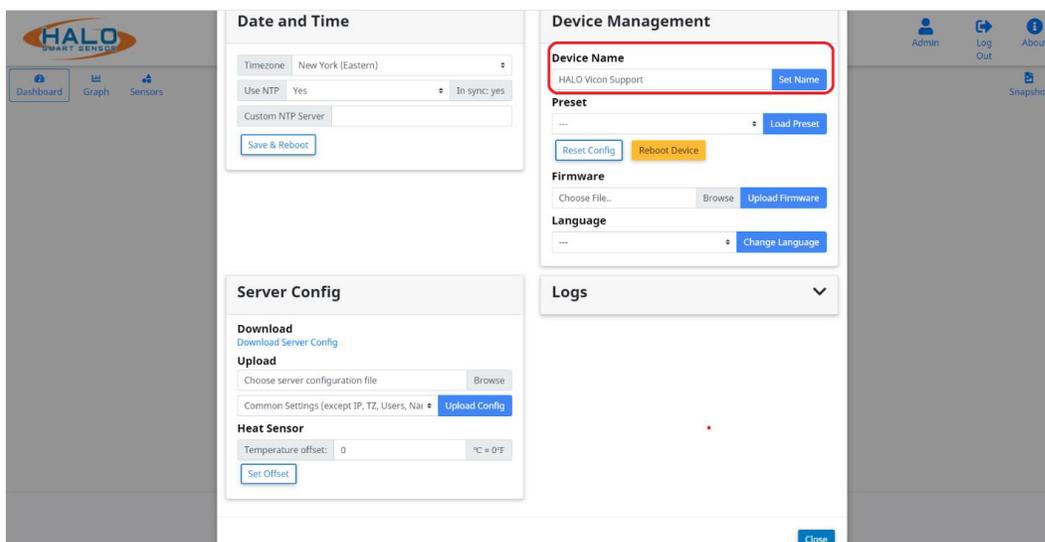
Note: At this time, if using Valerus 21.1 and trying to create alarms, it is only possible to set an alarm for all external events and not possible to specify the device. This will be updated in a future version.

Halo Device Settings

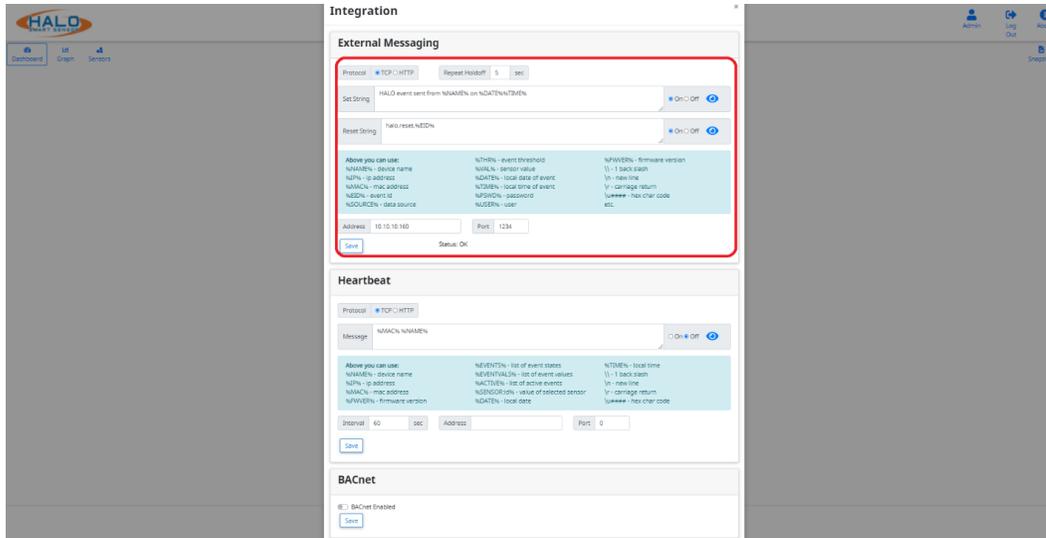
This manual will cover only the required settings to integrate with Valerus. For detailed information about the HALO sensor capabilities and settings, use the HALO sensor manuals <https://ipvideocorp.com/>.

Once the HALO sensors have been configured and are running on the network, follow the instructions below to prepare them to integrate with Valerus:

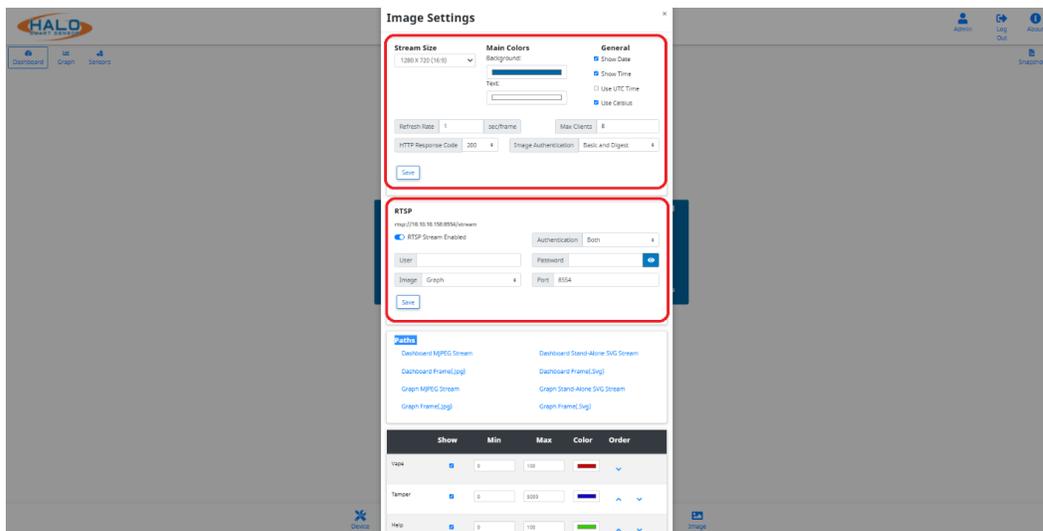
1. Set every HALO sensor with a unique name. This will be used in Valerus to identify it as well as to set rules. Select the "Device Settings" option, set it in the appropriate field and click set name.



- Set every HALO sensor's "External Messaging" to be sent on event to Valerus. Select the "Integration" option to open this menu. In the example you can see a set up to send the event text "HALO event sent from %NAME% on %DATE%%TIME%". This is fully configurable and allows you to set your messages as needed. The address and port at the bottom are the Valerus Application Server IP address and the port that will be used to listen for these events (same will be set up in the Valerus listener later in this document). Click Save when done



- Set every HALO sensor's "Image Settings." Select the "Image" option to open this menu. Make sure to set the stream settings (1280x720 is the recommended resolution) and to enable RTSP streaming. Take note of the RTSP address shown in this section (in the example rtsp://10.10.10.158:8554/stream); it will be needed to add the device to Valerus.



Valerus Settings

After all the HALO sensors have been set up and are online, they can be added to Valerus to both view and record their graph or dashboard streams and to receive event information allowing actions to be set in Valerus.

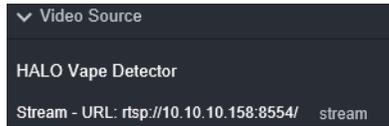
A typical installation will have all HALO sensors set in Valerus in a way that an event triggered by them will follow with a display of the sensor stream next to the camera or cameras viewing the sensors surroundings. For example, a VAPE event from a HALO sensor in the cafeteria will pop-up a display of that sensor next to the cameras covering the cafeteria, allowing to view and recognize the person vaping.

Adding the HALO Device

1. In Valerus go to "Configuration – Network Devices – Cameras and Devices" and click the "Add Device Manually" button to open the create device form:
 - a. Select the NVR that will record and stream this sensor as you would a camera.
 - b. Select Generic RTSP as the device type.
 - c. Enter the HALO sensor IP address.
 - d. Enter the HALO sensor port for RTSP.
 - e. Provide user and password details if set in the sensor.
 - f. Add the suffix needed in the stream URL (typically stream).

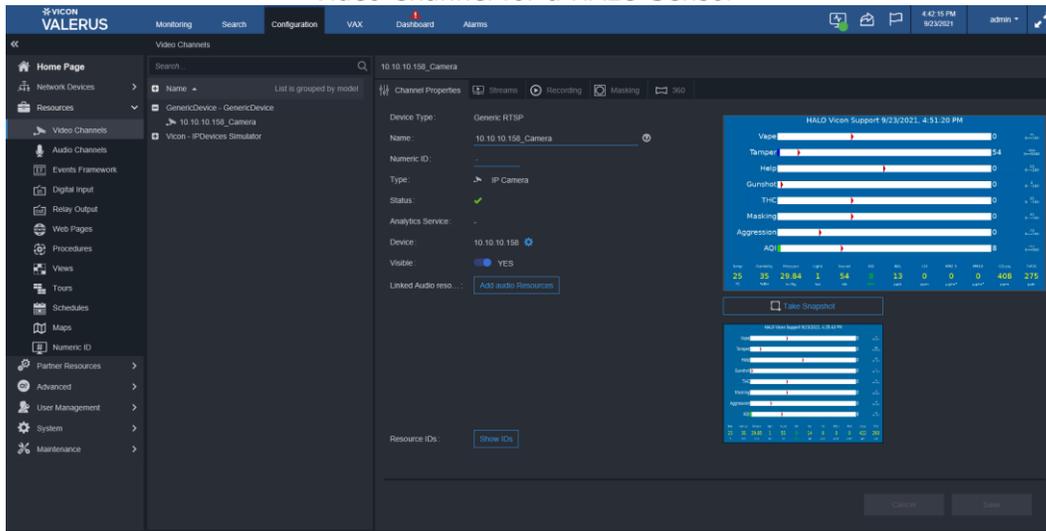
The screenshot shows the 'Create Device' configuration window. A red box highlights the 'Assigned to NVR', 'Device Type', 'IP Address', 'Port', 'User Name', and 'Password' fields. Another red box highlights the 'Stream - URL' field under 'Video Source 1', which contains the text 'rtsp://10.10.10.158:8554 / stream'. The 'Apply and close' and 'Apply' buttons are visible at the bottom of the window.

- If entered correctly, the stream URL shown will match the RTSP address shown in the HALO sensor in previous step 3. Check and correct if that is different. A typical stream URL will look like this **rtsp://10.10.10.158/stream**



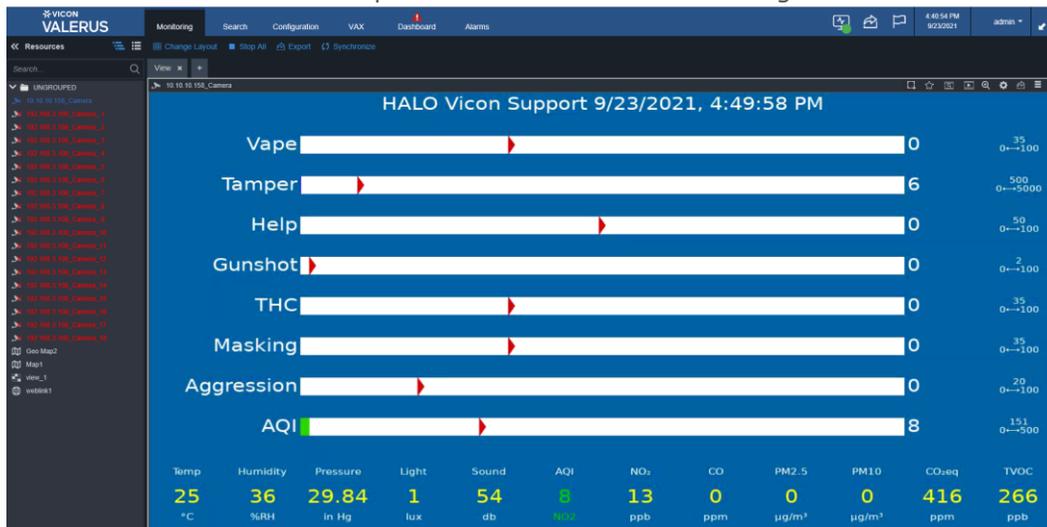
- Once added, it will show a video channel under Resources and allow setting all the parameters an RSTP device has in Valerus, including its properties and recording settings (single stream).

Video Channel for a HALO Sensor

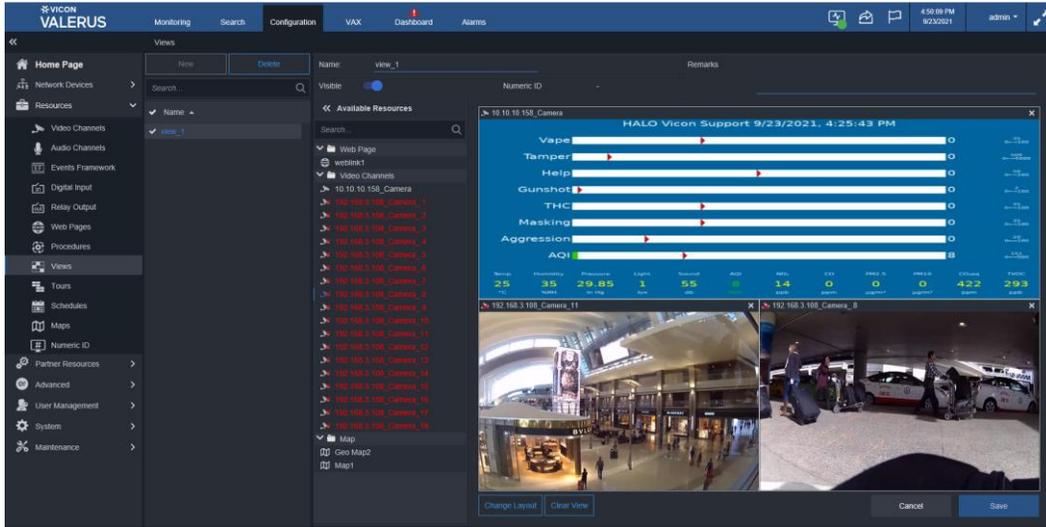


- The channel will show in the Resources list and dragging it to display will open the stream set in the specific HALO device.

Sensor Open for a Live View in Monitoring

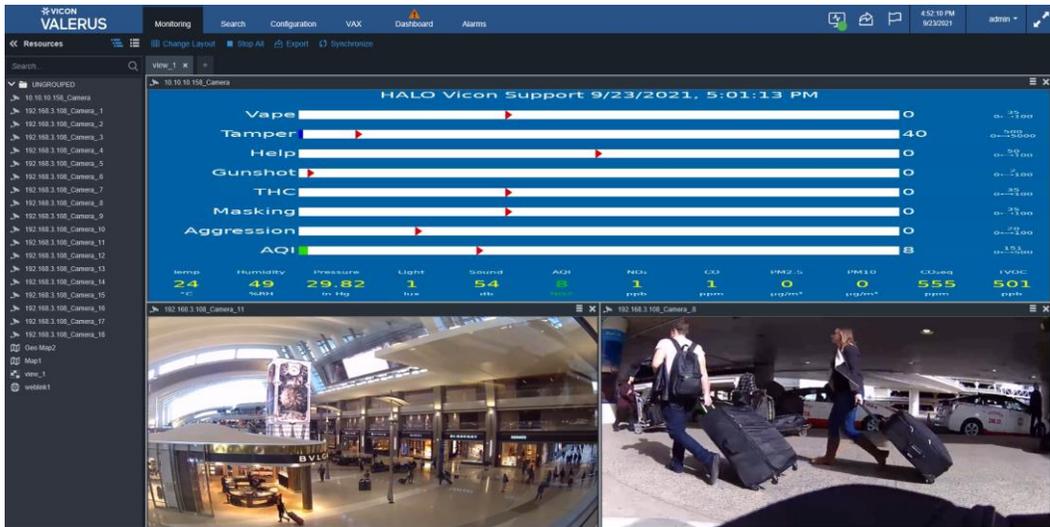


Setting a View with Cameras



- It is recommended to create views in Valerus that include the sensor and the related cameras and those can then be used to start a Live view and pop-up on event.

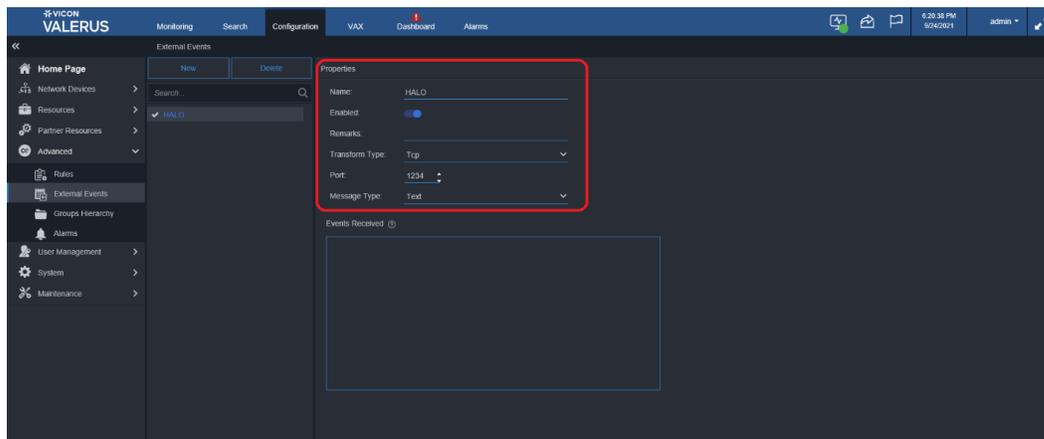
View on Monitoring Page



Creating an Event Listener for the HALO Device

In order to receive the events created by the HALO sensor and sent to Valerus. it is necessary to set up an external event listener in Valerus. Make sure the port used for the listener is the same as the one set up in the HALO sensor integration screen as previously explained.

1. In Valerus go to "Configuration – Advanced – External Events" and click the "New" button to add a new listener.
2. Fill in the required details for the listener:
 - a. Provide a name.
 - b. Enter remarks if required.
 - c. Select TCP as the transform type.
 - d. Enter the port number as set in the HALO sensors (remember the Application Server firewall needs to be set to allow data received over this port).
 - e. Select "Text" as the message type.
3. Once saved, events coming from the HALO sensors should show in the events received field below for testing purposes. You may need to refresh this screen after saving for this to work.



Note: It is assumed in this document that when multiple HALO sensors are used, all will be sending their events to the same port and captured by the same listener; however, if there is a need to have separate listeners for different sensors, that can be done as long as the port numbers used are unique for each sensor.

Testing

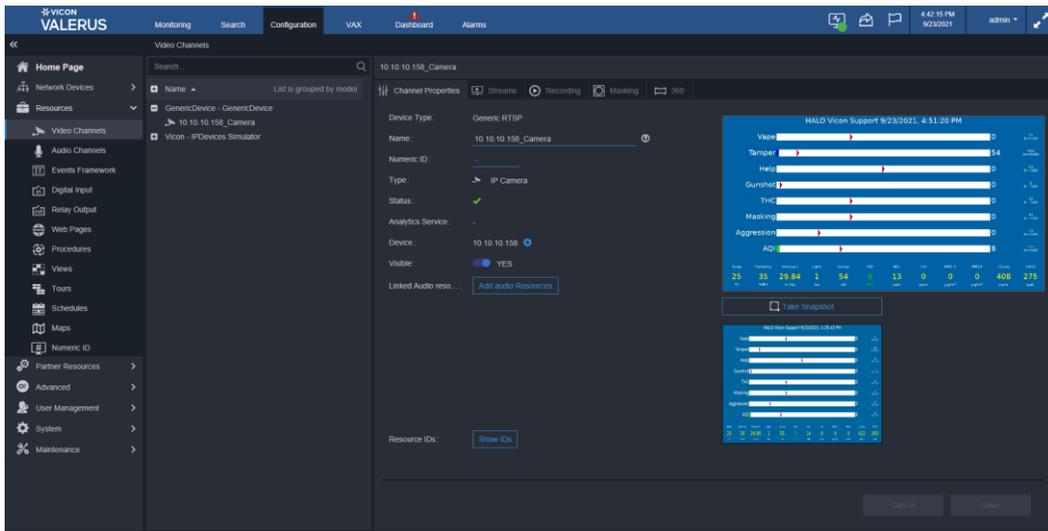
Testing the integrated solution has two steps.

Testing the Video Feed from the HALO Sensor

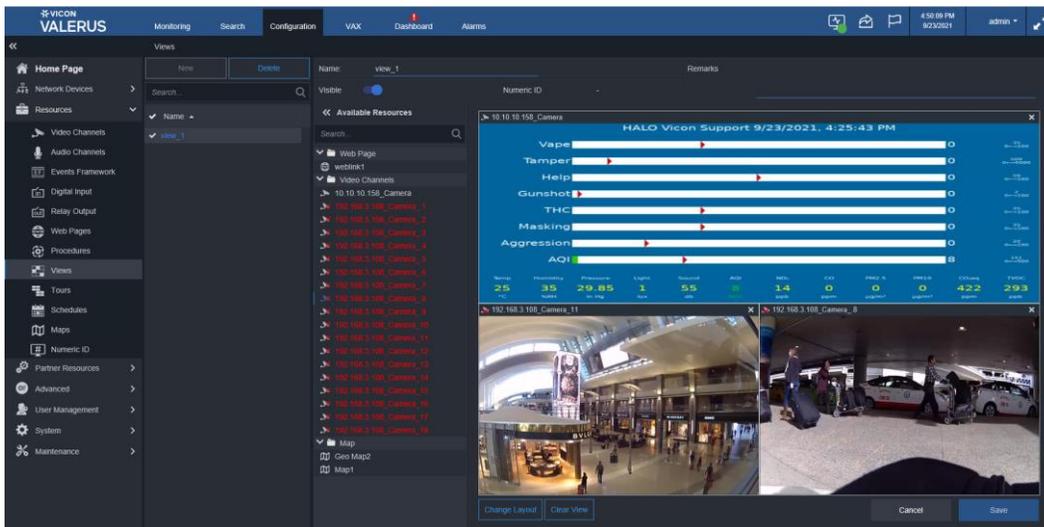
If the HALO sensor has been added properly as an RTSP camera, it should show and work in the same manner as a regular camera does. The sensor will be listed as a video channel and will be available, on the Resources list, to drag and drop for viewing. Like any video channel, it can be used in a View or placed on a Map where needed.

If the HALO sensor stream is not seen, check that the RTSP channel details match those in the sensor (including credentials if set).

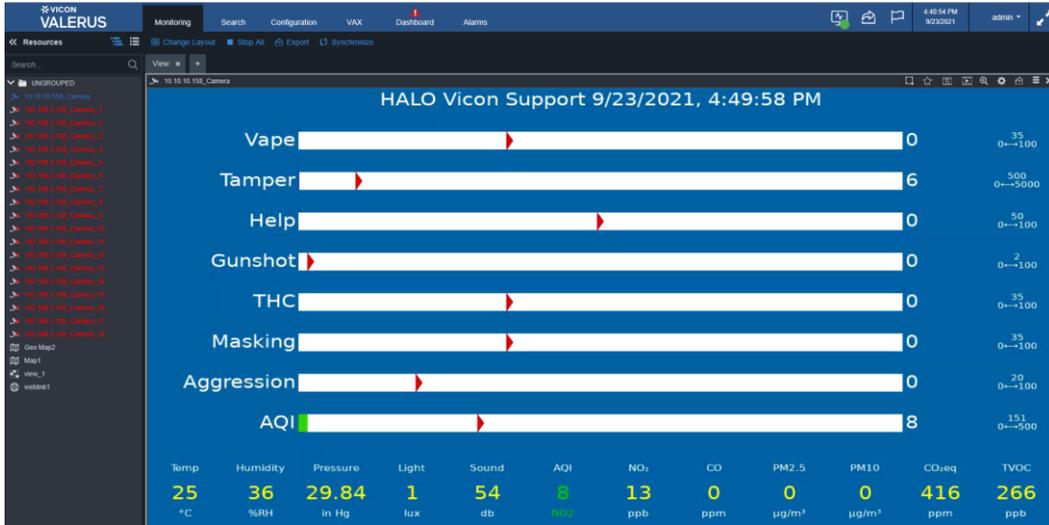
Video Channel for a HALO Sensor



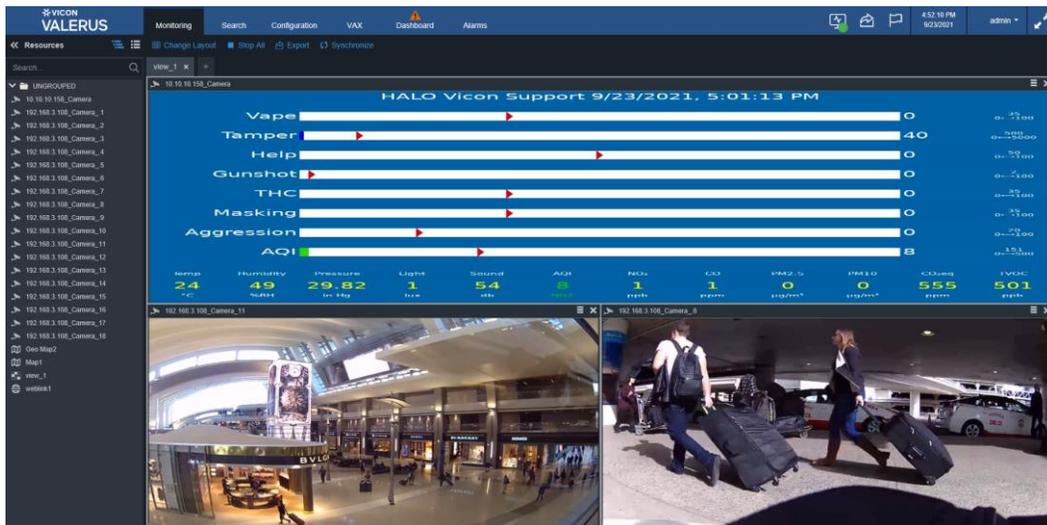
Setting a View with Cameras



Sensor Open for Live View in Monitoring



View on Monitoring Page



Testing the Events from the HALO Sensor

To test that the events sent from the HALO sensor are received in Valerus, use the test button option in the HALO sensor while looking at the external event listener page. You should be able to see the message sent in the sensor arriving in Valerus.

In the HALO sensor menu, select events to open the list of events set (see HALO manual for details). In this menu, you can see a test button for every one of the events set.

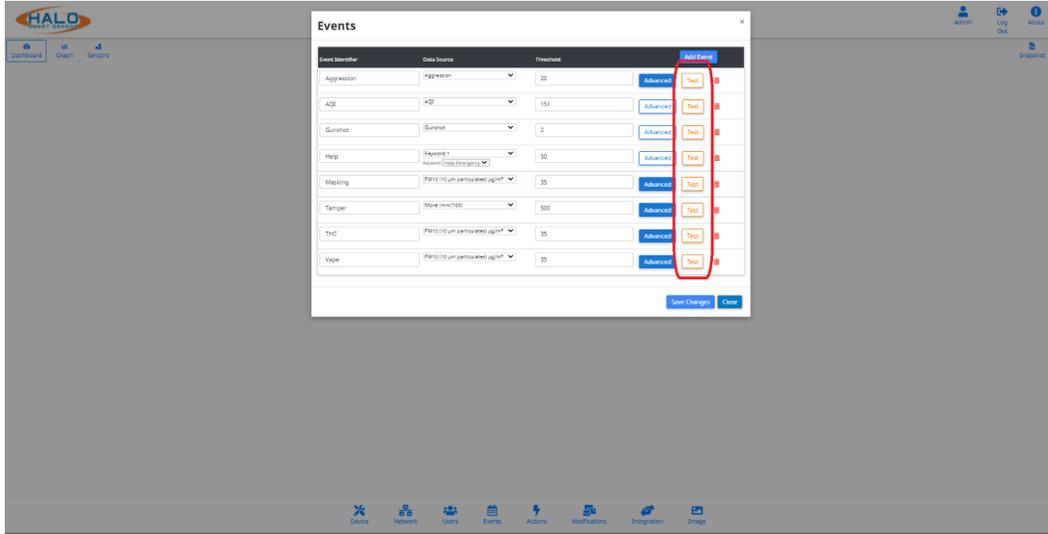
Clicking the test button will send the event as it was set prior in the Integration tab (step 2. of HALO configuration in this document).

If you open the Valerus external event listener you created for this device, you should be able to see the event sent when clicking the test button, in the console.

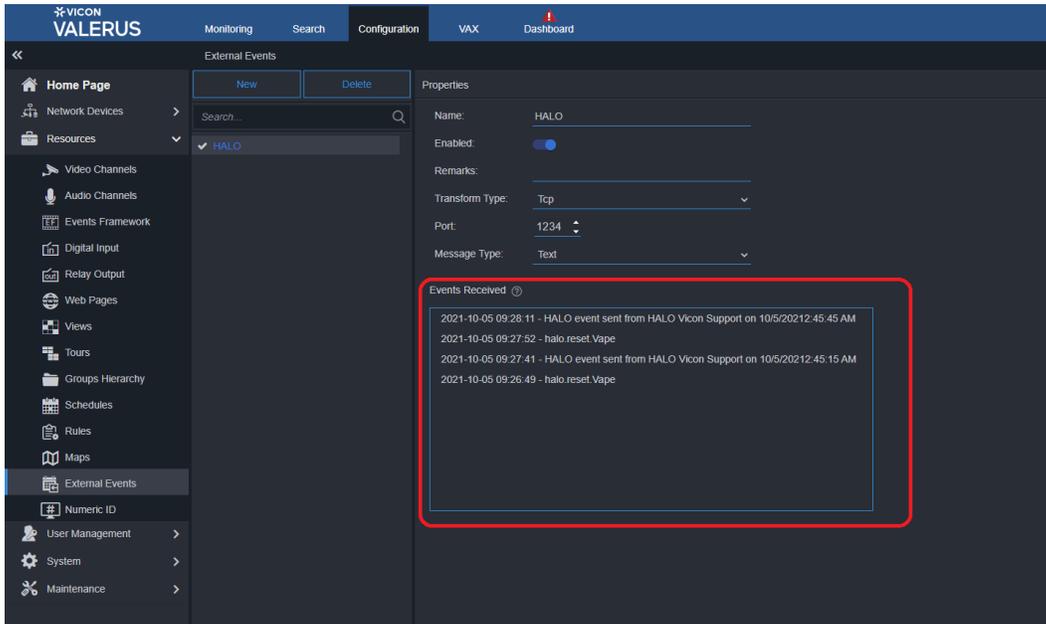
In case the event is not showing, check for the following:

- Make sure the listener port matches the port set for events on HALO (Integrations page).
- Make sure the Application Server firewall is set to allow receiving events over the set port.

HALO Events Page



Event Shown in Listener



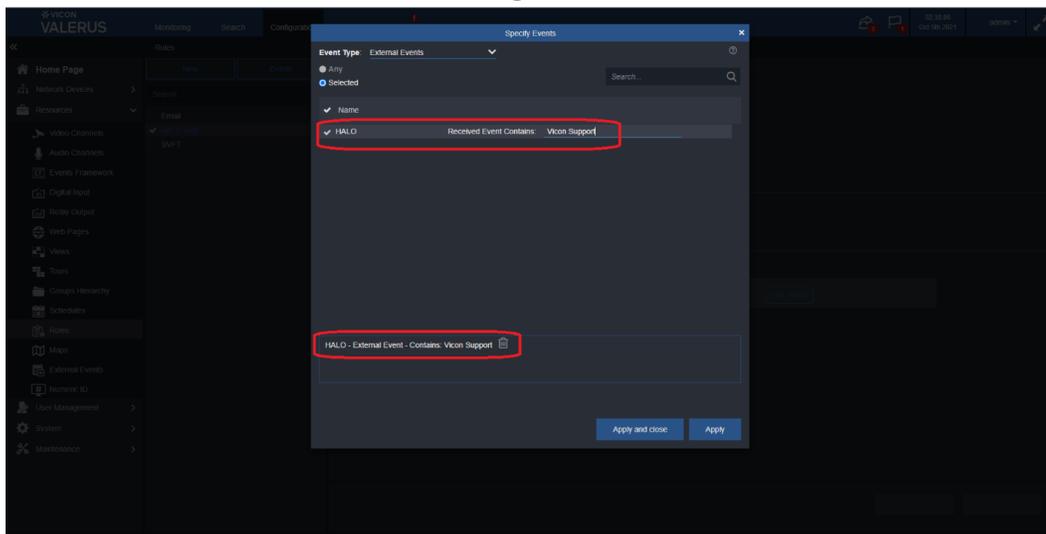
Rules and Alarms in Valerus

Once the events are set up, you can define rules in Valerus to respond to the events sent from the different HALO sensors on your network.

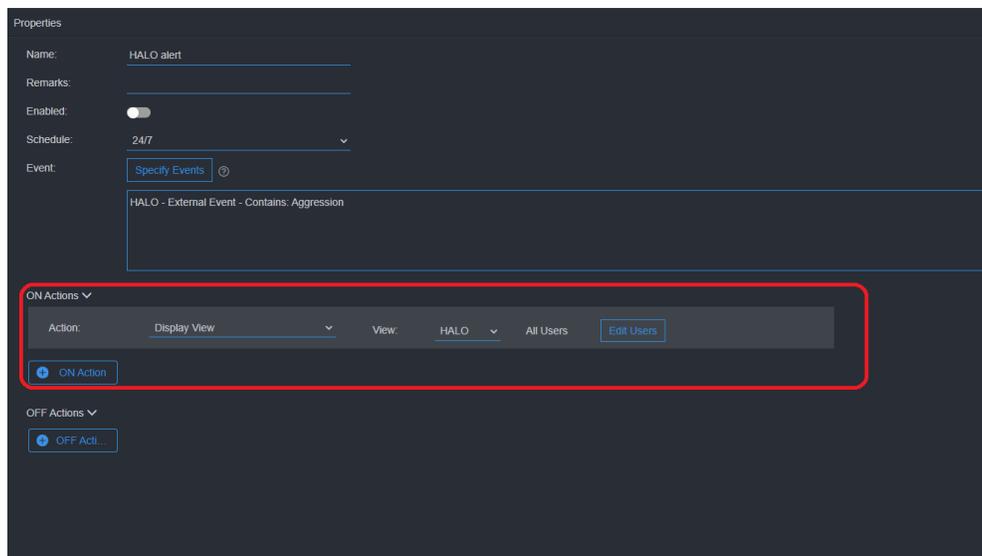
The rules will be based on the listener set up for these. Where there is one listener set to receive all events from all sensors, the rule will need to use the HALO sensor name to identify which action to take. Make sure to include the name (see example in HALO set up in this document) in the events sent.

- Open Valerus "Configuration – Resources – Rules" and create a new rule called HALO.
- Under Event Type select "External Events."
- Select the HALO listener previously created and define the expected text to trigger. In the example below it is set to trigger if the event contains "Vicon Support," which is the name of the HALO sensor that was previously set.
- Save and proceed to set the action like any other rule in Valerus. Typically, this will pop-up the view related to this HALO sensor and may include additional actions.
- If multiple HALO sensors exist (with different names), a rule will need to be created for each one with its own action.
- If multiple listeners were used, make sure the rule is set correctly for the listeners.

Setting a Rule

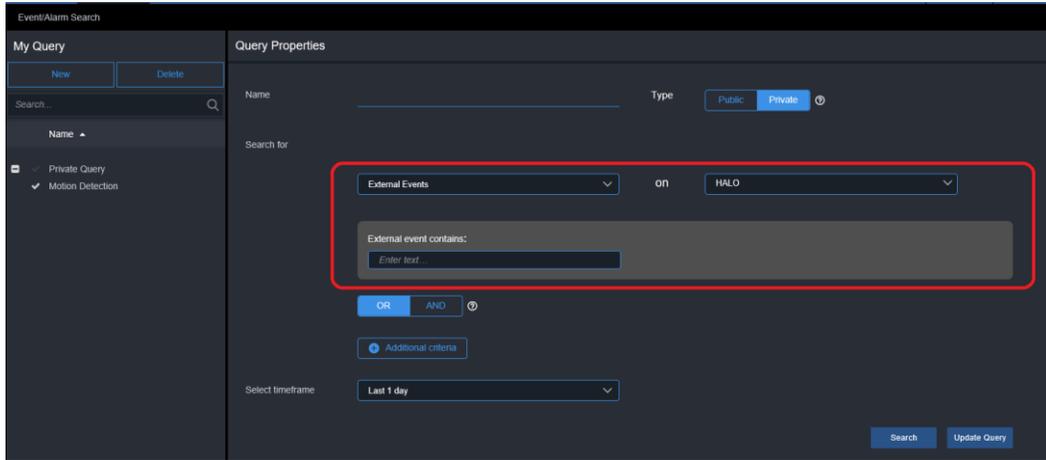


Setting an Action (Display View) for a Rule



Search Events in Valerus

Searching for the events generated by the HALO sensors is based on the external event listener and the text searched for. As shown in the example below, it will require defining the specific listener name and allows adding the text in the event (HALO sensor name for example) to narrow down the results.





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