MILESTONE XPROTECT INTEGRATION GUIDE

Contents

1. HALO SMART SENSOR – Authentication

In order to connect HALO Smart Sensor to Milestone Xprotect, the device must be set to Basic HTTP Authentication.

Open HALO Smart Sensor in a web browser and click on the Device tab.

Scroll down to HTTP / API and click on the Authentication dropdown menu, and select Basic Only.

HTTP / API

Port	80
Authentication	Basic Only ▼

Save

Click the **Save** button to save changes and re-boot the HALO Smart Sensor.

2. HALO SMART SENSOR – Device Name

Click on the Device tab of the HALO Smart Sensor interface.

Network Configuration

Device Name

Device name	Bathroom123

Save

Enter a *UNIQUE* name in the Device Name field.   Click the *Save* button to save settings.

3. HALO SMART SENSOR – Notifications

Connect to the HALO SMART SENSOR with a web browser and click on Notifications in the top navigation bar.

Scroll down to the VMS Settings.

1) Enter **halo.%EID%** in the **Set String** and click On

2) Enter **halo.reset** in the **Reset String** and click On.

3) In the **Address** field, enter the IP Address of the **Milestone Management Server**

4) In the **Port** field, enter 1234, as this is the default port for Generic Events in Milestone XProtect.

5) Select TCP for **Protocol**.

6) Click **Save** to retain settings.

4. HALO SMART SENSOR – Actions

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

Check the **VMS Set** and **VMS Reset** checkboxes for each of the **Event Identifiers**.

Click the **Save** button to save settings.

5. MILESTONE MANAGEMENT CLIENT – Add HALO Smart Sensor to Milestone

HALO Smart Sensor can be added to Milestone XProtect as a Hardware Device. HALO can transmit a MJPEG output that appears as a "Camera" to Milestone XProtect. ***When adding a HALO Smart Sensor to Milestone XProtect, a Hardware Device License is required for each HALO Smart Sensor that is added as a "camera".***

Add HALO Smart Sensor to Milestone using Management Client

1) Open Milestone Management Client and navigate to the Servers section of the Site Navigation

2) Click on Recording Servers

3) Right click on the Recording Server that you would like to add HALO to, and select Add Hardware

4) In the Add Hardware Wizard, Select **Manual** and click **Next**.
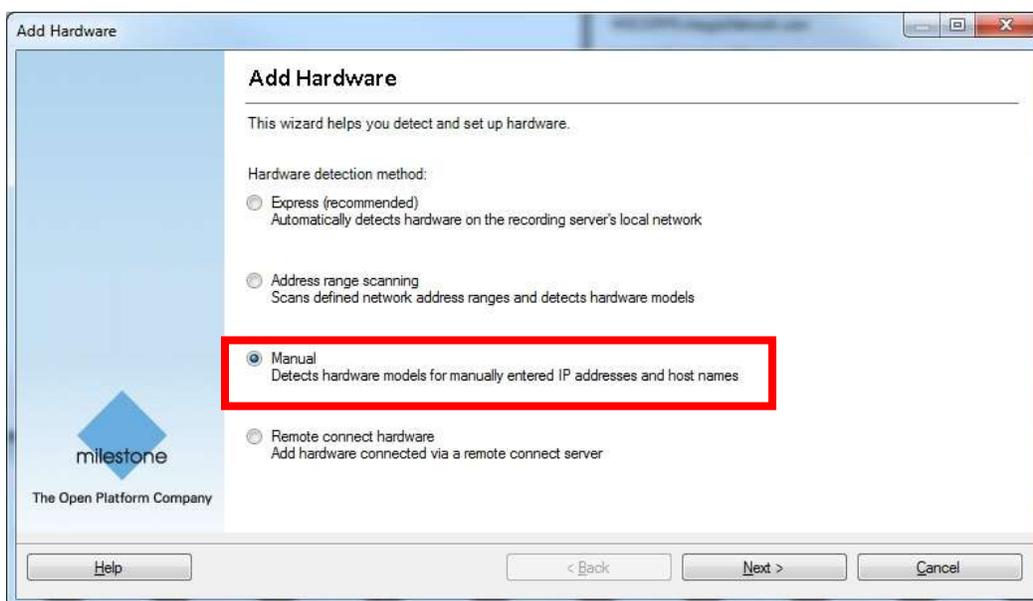
Enter the User Name and Password for HALO Smart Sensor

Select the Universal 1 Channel Driver

Enter the IP Address and Port of the HALO Smart Sensor and select Universal 1 Channel Driver from the Hardware Model dropdown menu and click next
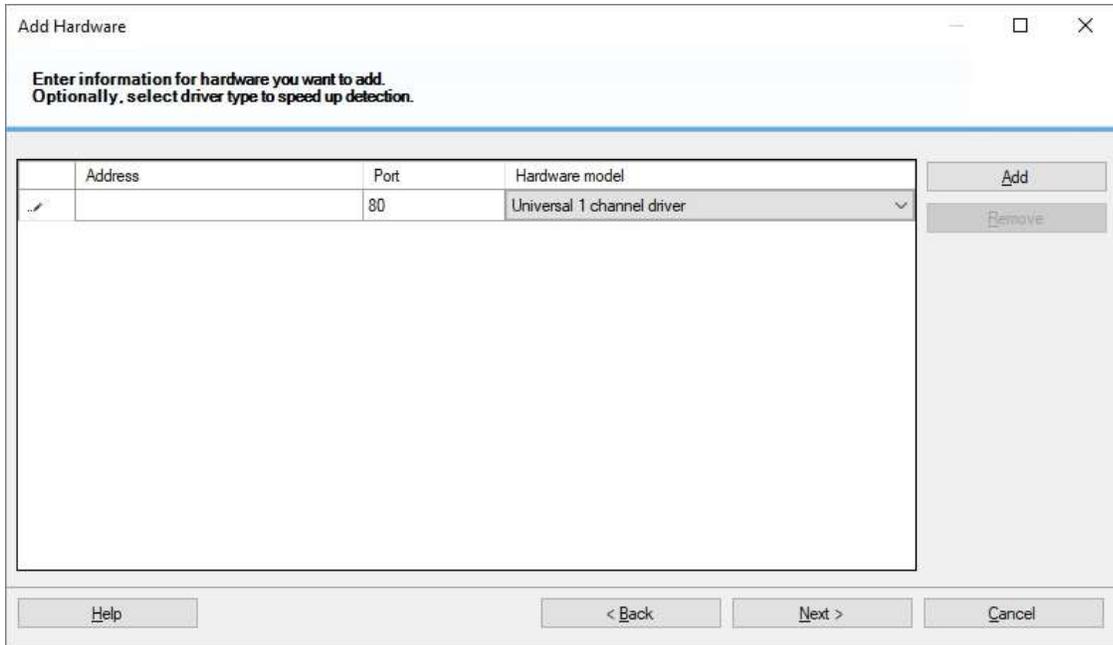
Once the Hardware Device has been successfully added, click on the HALO Smart Sensor device and click on the Settings tab.
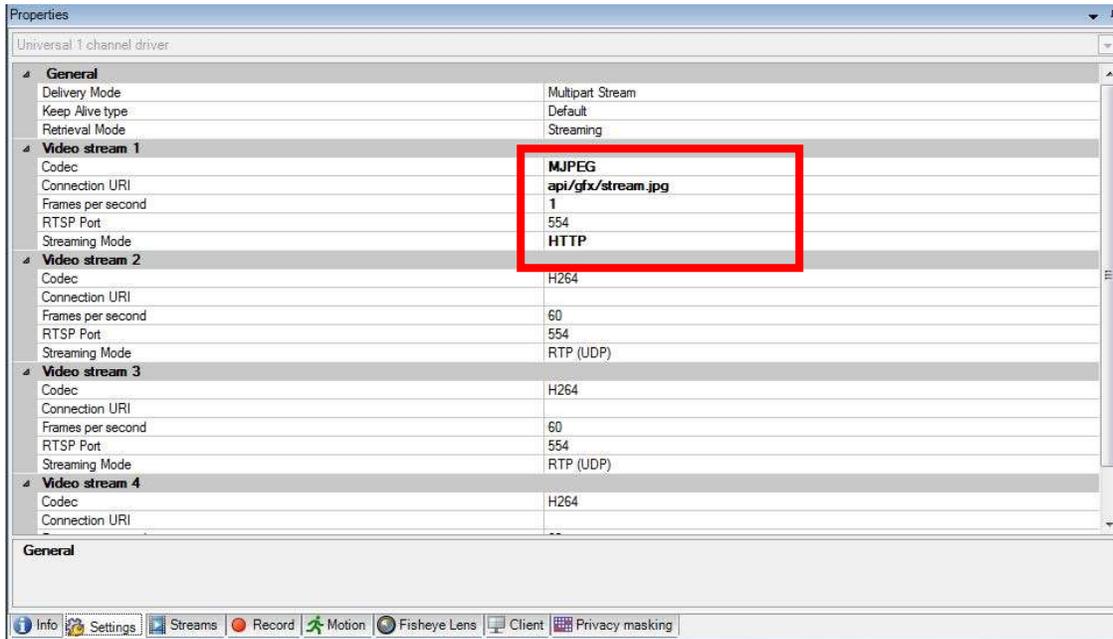
Select "MJPEG" for Codec

Enter "api/gfx/stream.jpg" in the Connection URI field

Set the Streaming Mode to HTTP

6. MILESTONE MANAGEMENT CLIENT – Enable and Configure Generic Events

Open the **Milestone Management Client**, click on **Tools** on the top toolbar and select **Options**.

Navigate to the **Generic Events** tab.

1) Check the **Enable** Checkbox

2) Select **No Echo**

3) Select **US-ASCII**

4) Add the IP Address of the Halo Smart Sensor to the "**Allowed external IP V4 Addresses**" list box. *__Enter the IP Address of EACH unique HALO Smart Sensor in this field.__*

5) Click **OK** to save settings

7. MILESTONE MANAGEMENT CLIENT – Add Generic Events

Click on **Generic Events** under **Rules and Events** in the main navigation tree.

Right click at the top of the tree and select Add New Generic Event
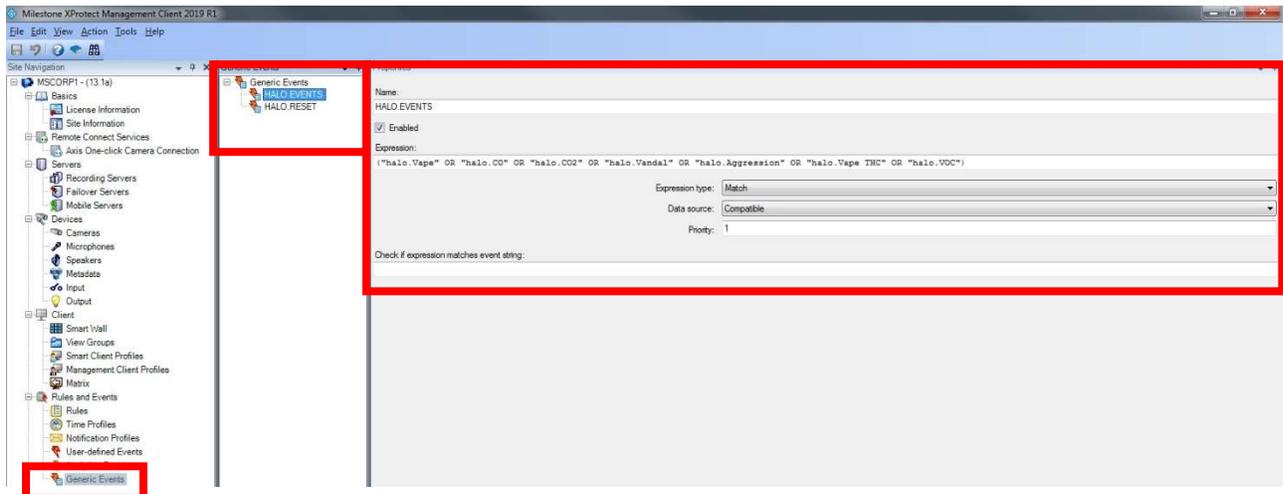
1) Add an event named "**HALO.EVENT**"
2) Check the Enabled checkbox
3) Specify

("halo.Vape" OR "halo.CO" OR "halo.CO2" OR "halo.Vandal" OR "halo.Aggression" OR "halo.Vape THC" OR "halo.VOC")

for the Expression. (See screenshot above)

Make sure to *include* the brackets and quotations in this case. It is critical that the text strings specified here identically match those specified in the HALO Smart Sensor.

4) Set Expression Type to Match
5) Set Data Source to Compatible
6) Set Priority to 1
7) Add an event named "**HALO.RESET**"
8) Specify "halo.reset" for the Expression. **Make sure to *include* the quotations in this case.**
9) Set Expression Type to Match
10) Set Data Source to Compatible
11) Set Priority to 1

8. MILESTONE MANAGEMENT CLIENT – Add User Defined Events

1) Click on **User Defined Events** under **Rules and Events** in the main navigation tree.
2) Right click at the top of the tree and select Add User Defined Event
3) **Create a *UNIQUE* User Defined Event for each HALO Smart Sensor that is connected to the network. *Make sure to use unique names for each.* It is suggested to match the User Defined Events to the HALO Smart Sensor Device Name**
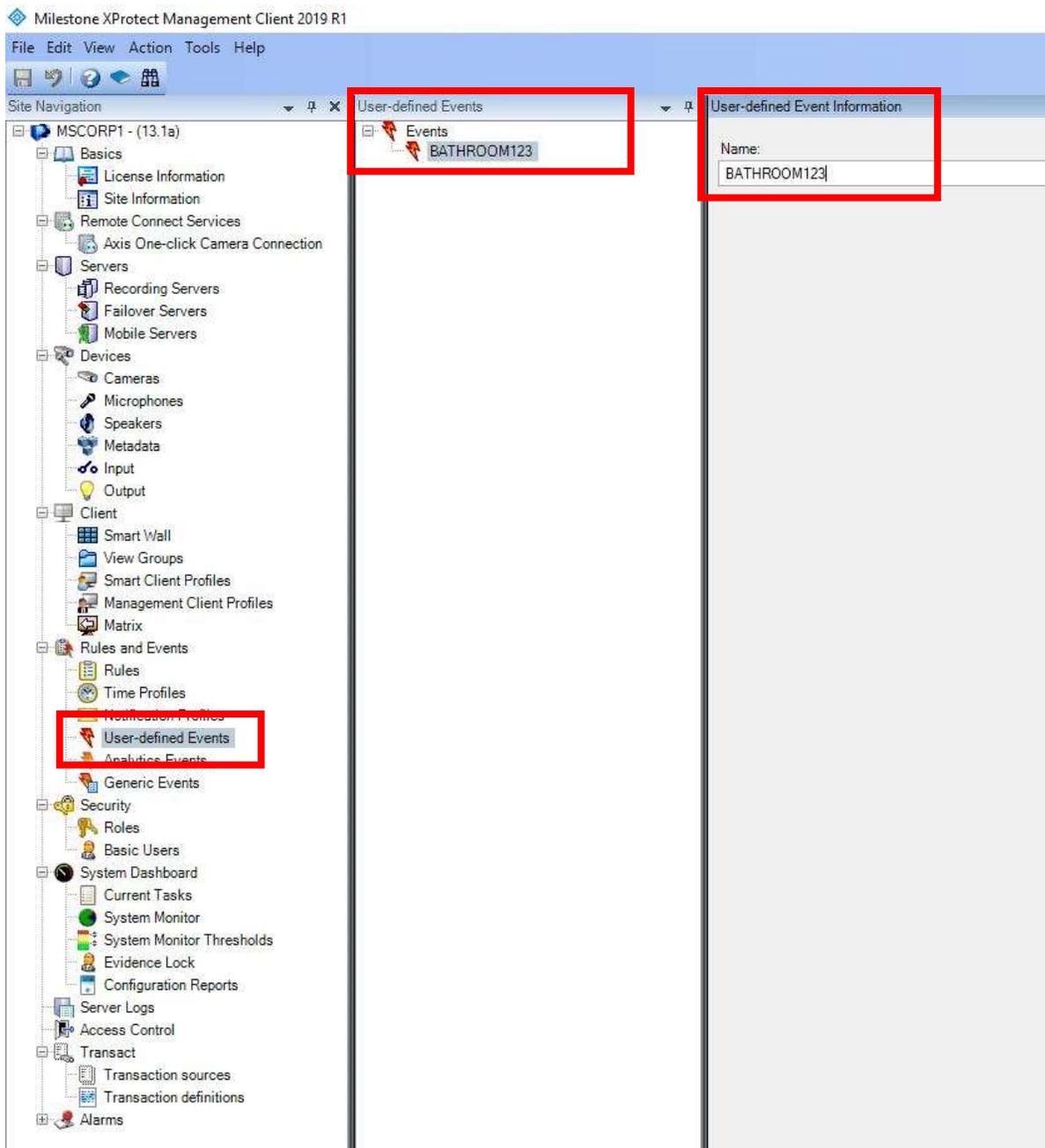
9. MILESTONE MANAGEMENT CLIENT – Add Alarm Definition

The addition of an Alarm Definition enables the events triggered by HALO Smart Sensor to be displayed in the Alarm Manager tab of the Milestone Smart Client.

1) Click on Alarm Definitions under the Alarms section of the Main Navigation Tree.
2) Right click at the top of the tree and select **Add new…**
3) Check the Enable checkbox for the Alarm.
4) Provide a unique name for the Alarm.
5) Click on the Triggering Event and select External Events from the dropdown menu.
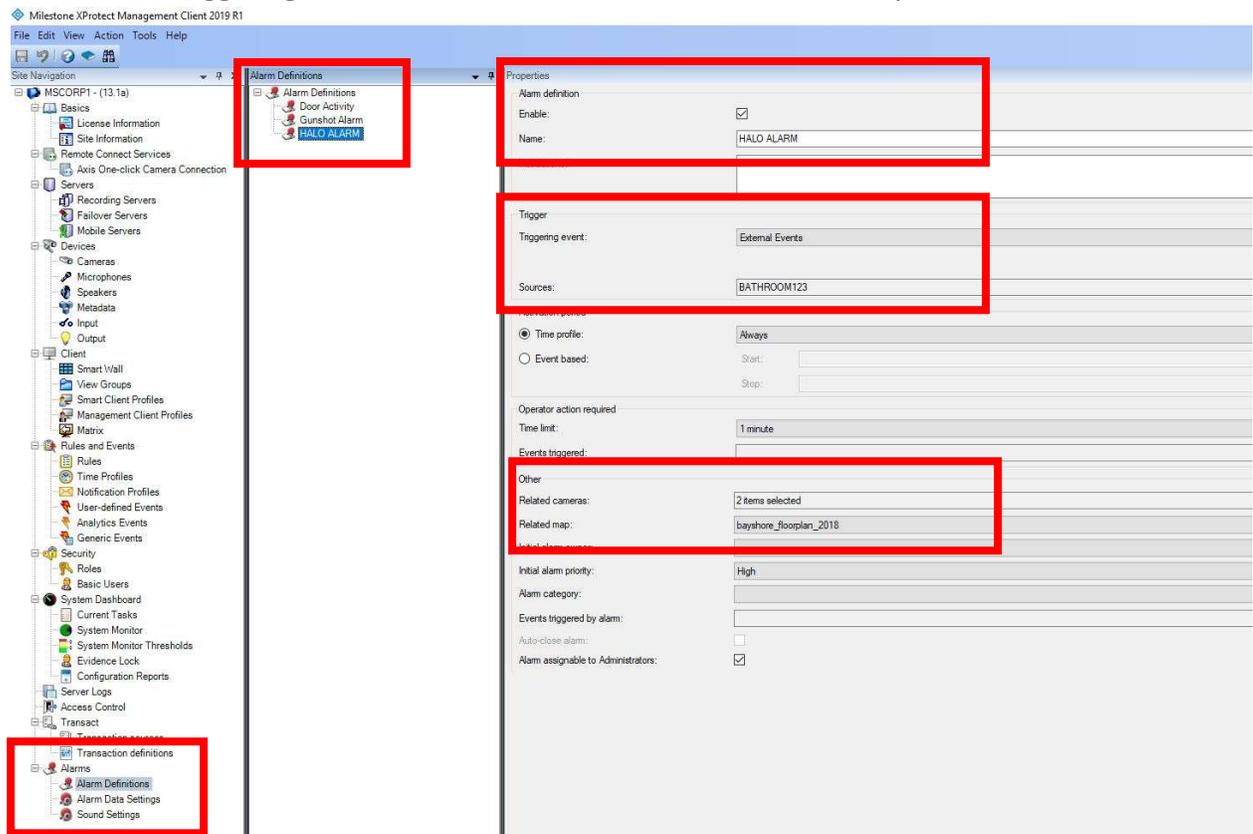
6) Click on the Select button next to Sources
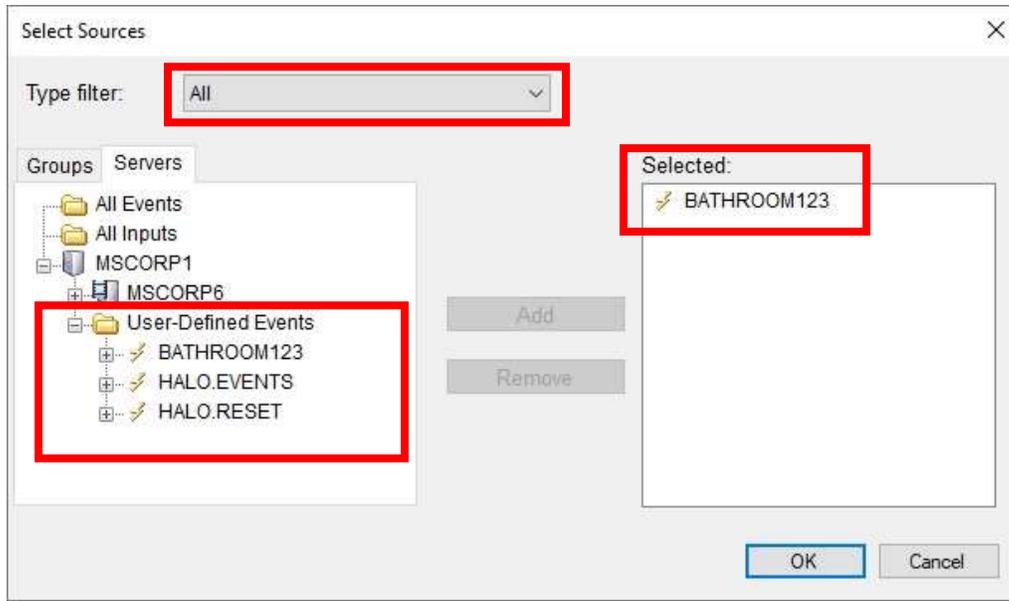
7) Switch the Type Filter to All

8) Click on the Servers tab

9) Expand the navigation tree to expose the User Defined Events

10) Select the User Defined Event that is associated to the HALO Smart Sensor that is being added.

11) Under the Other section, select Related Cameras. Typically the HALO Smart Sensor and the camera(s) in closest proximity to the HALO Smart Sensor are selected for association.

12) Specify the Related Map to display on the Alarm Manager Tab.

13) *This Alarm Definition works in conjunction with the **Flash Red Circle on Icon on Event Rule** that will be created later in this guide. The Alarms will not be triggered until both the Alarm and the associated Rule have been defined.*

10.   MILESTONE MANAGEMENT CLIENT – Matrix Configuration

You can use the Matrix functionality to associate a camera to the HALO Smart Sensor, so when Events are triggered, the associated camera is pushed to the Matrix Window in a View that includes the Halo Smart Sensor, creating a side by side visual layout.

Click on **Matrix** under **Client** in the Main Navigation Tree
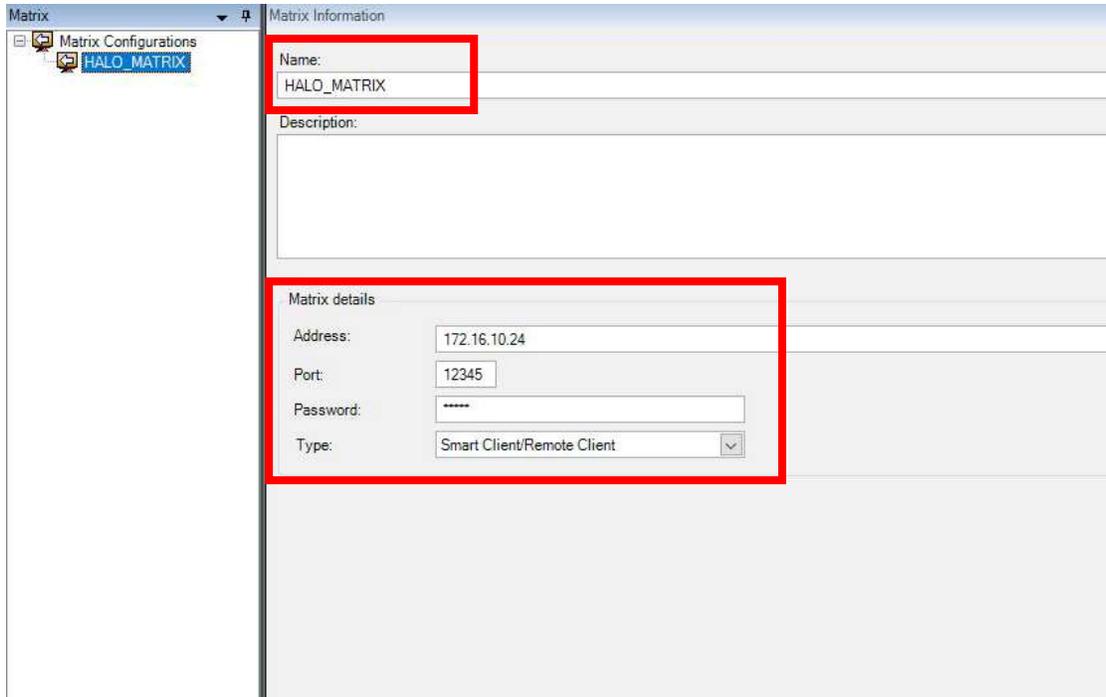
Right Click on **Matrix Configurations**, and select **Add Matrix**

Enter a **Name** for the Matrix

Enter the **IP Address** of the PC running Milestone Smart Client that will display the Matrix Window

Use the default **Port** of **12345**

Enter a **Password** that will be requested when an operator/administrator creates a view with the Matrix Window.

Select **Smart Client/Remote Client** for **Type**

11.   MILESTONE MANAGEMENT CLIENT – Matrix Rule

Now that there are **Generic Events** configured that will trigger when the HALO Smart Sensor Event thresholds are exceeded, you can use those to *trigger* **Actions** in **Rules**.

Rules can be configured to include, but will not be limited to :

- a. Set Matrix to Display
- b. Add Bookmark to recorded video
- c. Email Notification
- d. New Log Entry
- e. Show Text on Smart Wall
- f. Lock Door on integrated Access Control System

At this point, there are hundreds of variables that can be used to generate Events. Please refer to the Milestone XProtect VMS Administrator Manual for more details on the **Rules**.

Here is one example of creating a Matrix Rule to display an associated camera when HALO Events are triggered.

Click on **Rules** under **Rules and Events** in the main navigation tree.

Right click on **Rules** at the top of the navigation tree and select **Add Rule**.

Step 1, Select **Perform an Action on Event** and select a HALO Smart Sensor **Generic Event** that was defined earlier.

Step 2 will be skipped until you want to define a schedule.
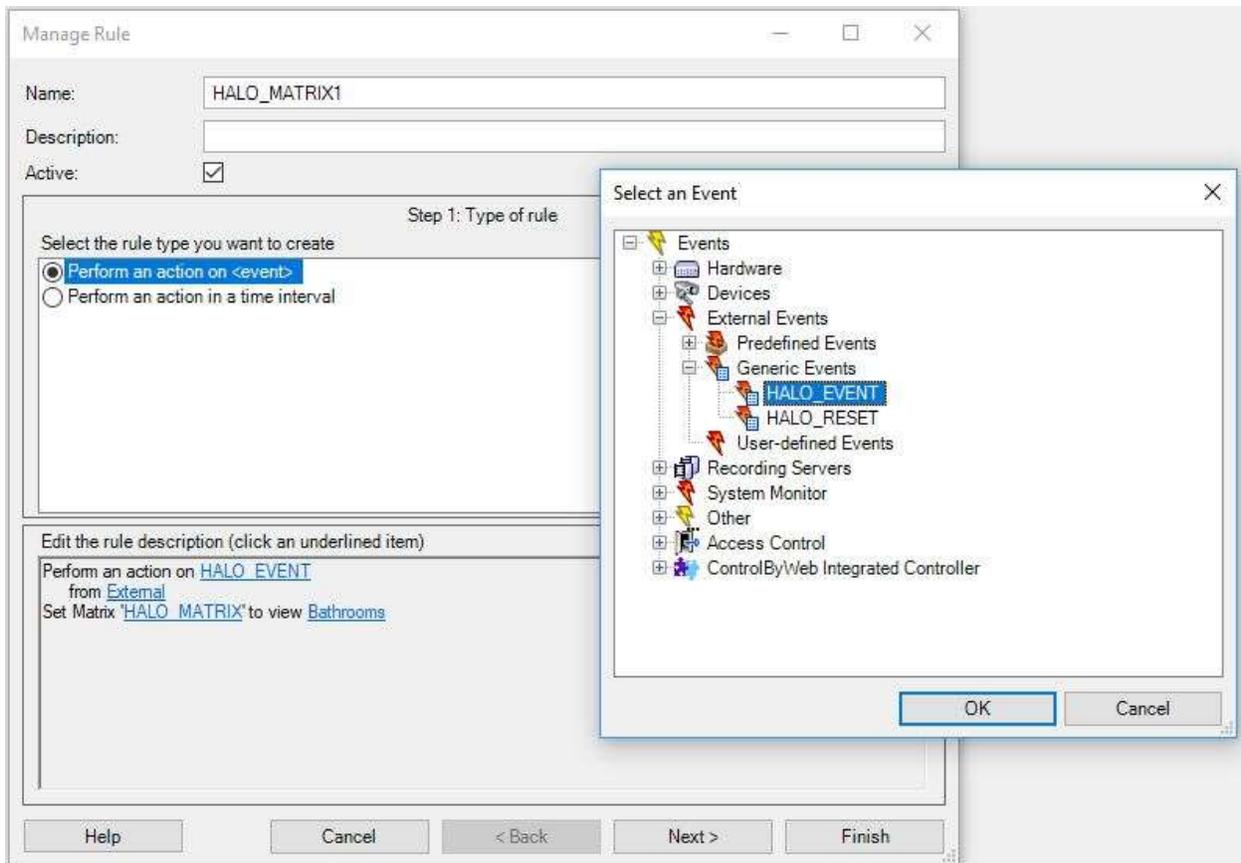
Step 3, check the Set Matrix to View checkbox and select the Matrix configuration and Device that you want to associate.
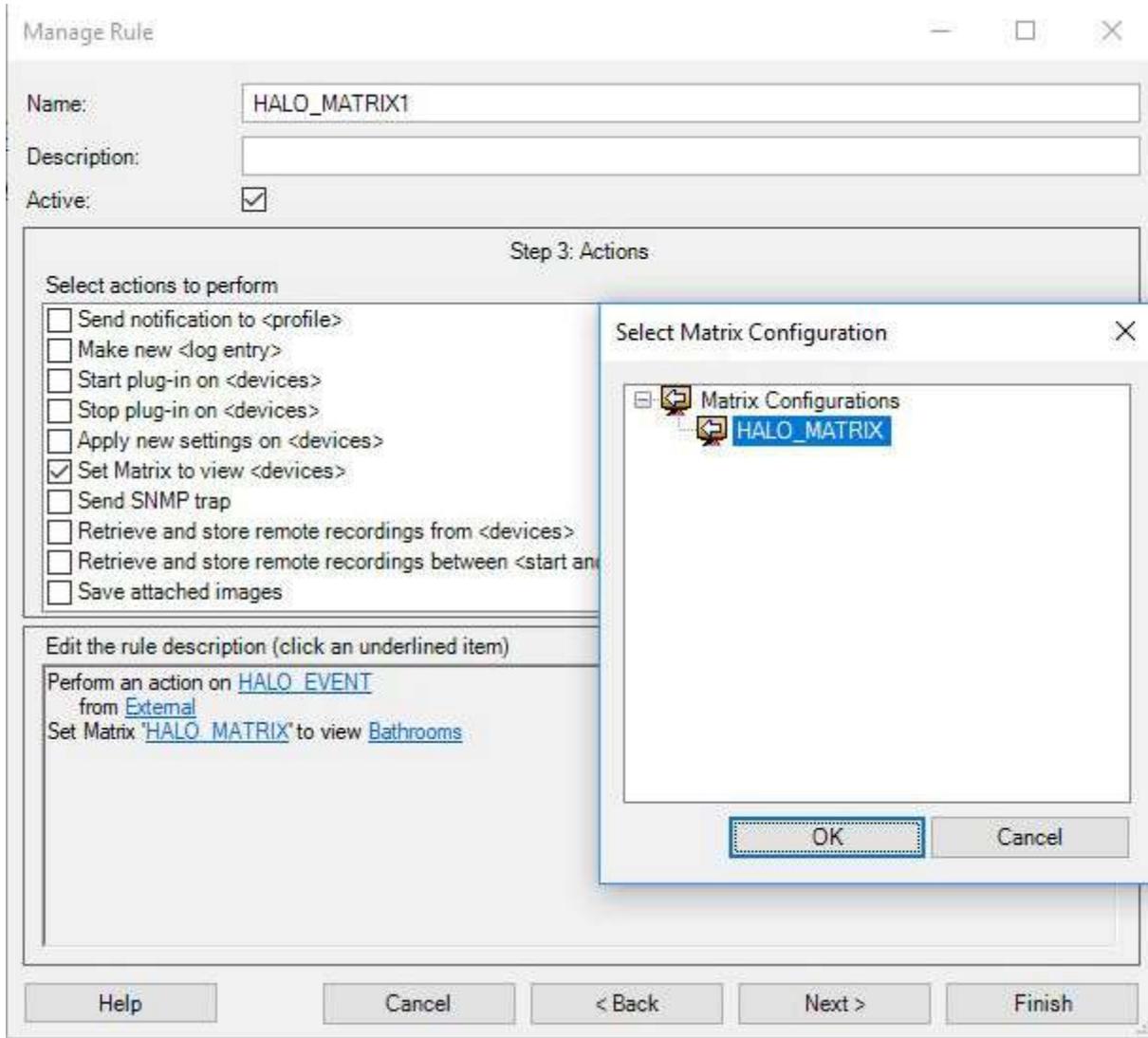
12.   MILESTONE MANAGEMENT CLIENT – HALO Record on Trigger Rule

Click on **Rules** under **Rules and Events** in the main navigation tree.

Right click on **Rules** at the top of the navigation tree and select **Add Rule**.

Step 1, Select **Perform an Action on Event** and select *HALO.EVENTS* from External Events-> Generic Events

Step 2 will be skipped unless you want to define a schedule.

Step 3 select **Start Recording on <devices>** and select the **HALO Smart Sensor. Specify -5 Seconds for the Relative Time**

Step 4 Select Perform Stop Action on <event>, and select **HALO.RESET** from External Events-> Generic Events, and select **Stop Recording Immediately**.
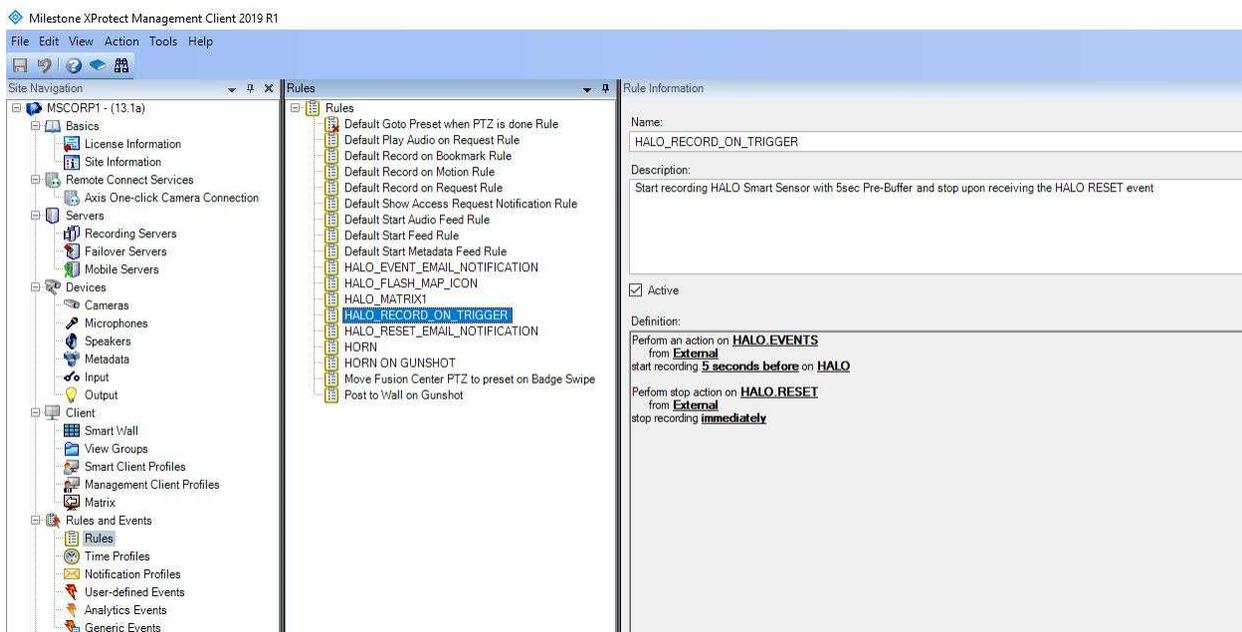
13.   MILESTONE MANAGEMENT CLIENT – Flash Red Circle on Icon on Event

Click on **Rules** under **Rules and Events** in the main navigation tree.

Right click on **Rules** at the top of the navigation tree and select **Add Rule**.

Step 1, Select **Perform an Action on Event** and select *HALO.EVENTS* from External Events-> Generic Events

Step 2 will be skipped unless you want to define a schedule.

Step 3 select **On <site> trigger <user-defined event>,** and associate the **Site** and the **User Defined Event** that is associated with the HALO Smart Sensor in question.

Step 4 Select No Actions performed on Stop
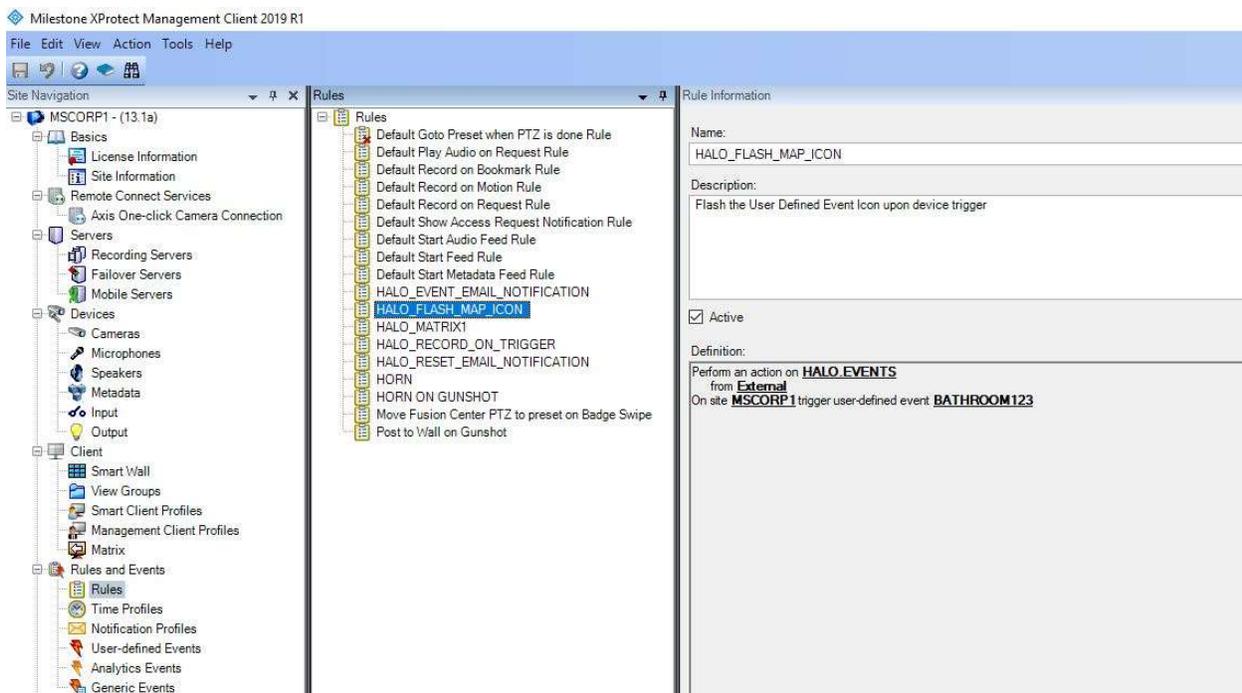
14.　　　MILESTONE SMART CLIENT – Matrix Setup

1) Open the Milestone Smart Client and click **Setup**
2) Create a new 2x1 View
3) Drag the HALO Smart Sensor into one display cell, and the Matrix component listed in System Overview
4) Scroll down to the bottom to expose the **Connection Settings** button.
5) Click the **Connection Settings Button**
6) Use **12345** for **TCP Port**
7) Enter the **Password** that was specified in the Management Client when creating the Matrix.
8) Click Setup to Save the View
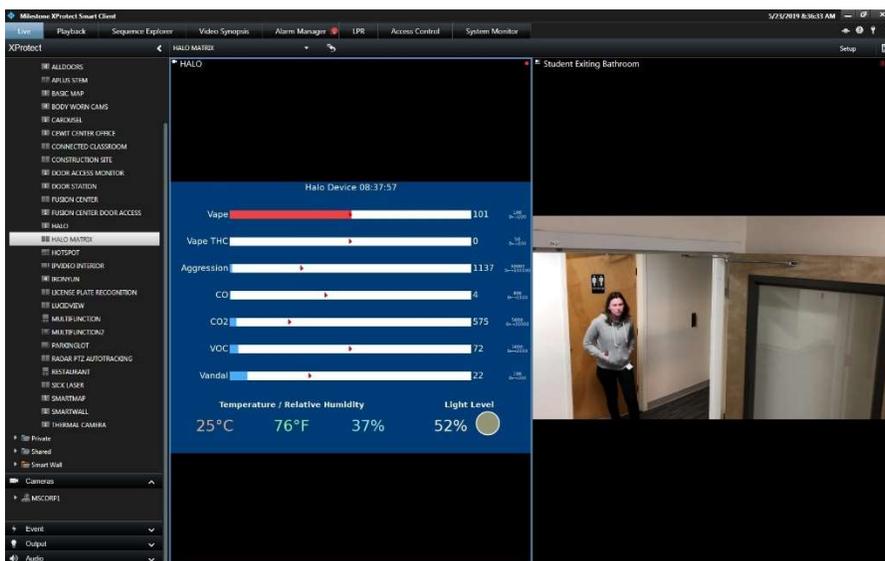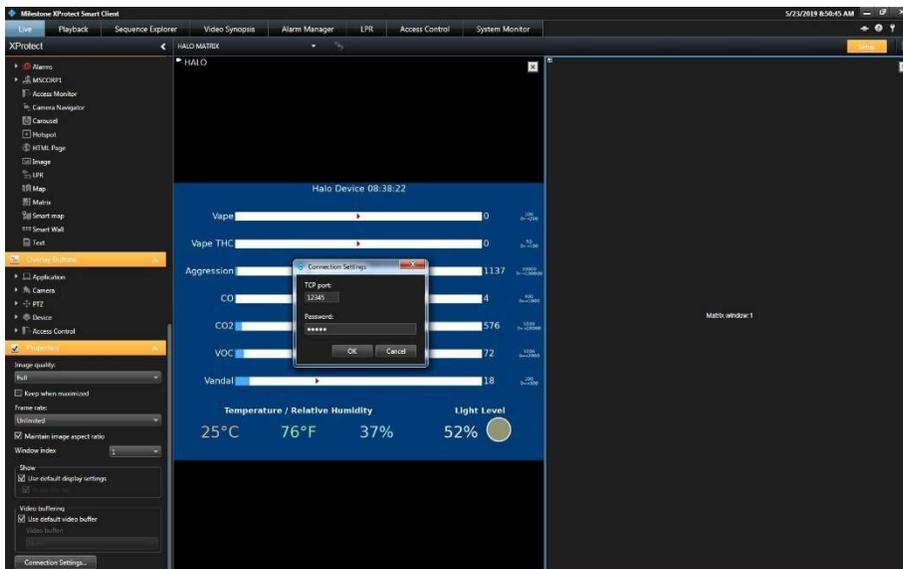
15.   MILESTONE SMART CLIENT – Alarm Manager

Once all the Events, Alarms and Rule definitions are created, there is nothing to do on the Smart Client side. When HALO Smart Sensors are triggered, the events will be displayed in the Alarm Manager tab, for the versions of Milestone that support Alarm Manager.
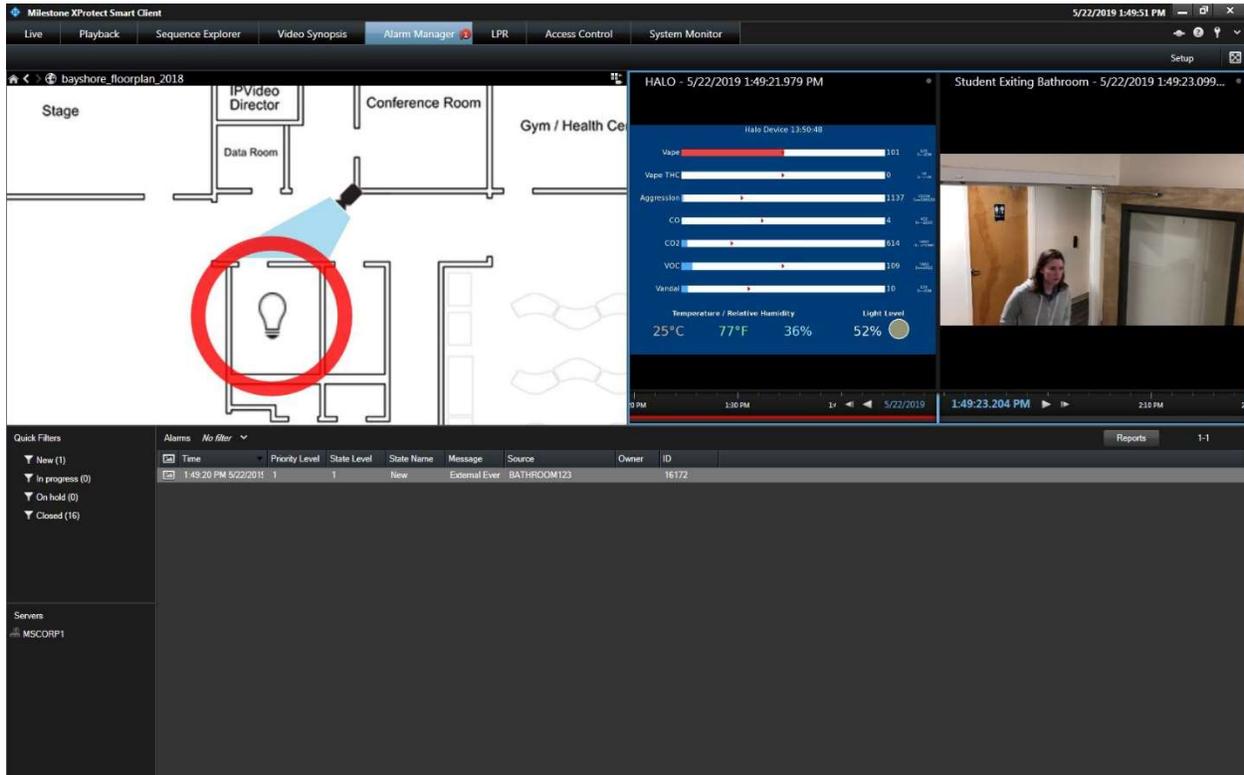
When operators click on the listed Halo Event, the Icon for the User Defined Event that is associated to the HALO Smart Sensor is displayed and begins to flash.

The recorded video from HALO Smart Sensor and any associated camera(s) is displayed, and automatically begins playback from the time of the offending trigger.

The screenshot above shows the physical location of the HALO Smart Sensor on a map, the recorded video from HALO showing the VAPE sensor surpassing the defined threshold, and the associated camera showing the student leaving the bathroom directly after the HALO Smart Sensor was triggered for VAPE.