

# MILESTONE XPROTECT INTEGRATION GUIDE



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#### Contents

1.	HALO SMART SENSOR – Authentication 2
2.	HALO SMART SENSOR – Device Name 2
3.	HALO SMART SENSOR – Notifications
4.	HALO SMART SENSOR – Actions
5.	MILESTONE MANAGEMENT CLIENT – Add HALO Smart Sensor to Milestone 5
6.	MILESTONE MANAGEMENT CLIENT – Enable and Configure Generic Events
7.	MILESTONE MANAGEMENT CLIENT – Add Generic Events
8.	MILESTONE MANAGEMENT CLIENT – Add User Defined Events
9.	MILESTONE MANAGEMENT CLIENT – Add Alarm Definition
10.	MILESTONE MANAGEMENT CLIENT – Matrix Configuration
11.	MILESTONE MANAGEMENT CLIENT – Matrix Rule
12.	MILESTONE MANAGEMENT CLIENT – HALO Record on Trigger Rule
13.	MILESTONE MANAGEMENT CLIENT – Flash Red Circle on Icon on Event
14.	MILESTONE SMART CLIENT – Matrix Setup 19
15.	MILESTONE SMART CLIENT – Alarm Manager

### 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.

Port	80
Authentication	Basic Only

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.



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.

VN	1S	Se	tti	n	gs

Set string	halo.%EID%	🖲 On 💿 Off	٢
Reset String	halo.reset	🖲 On 💿 Off	۲
Address	172.16.16.208		
Port	1234		
Protocol	● TCP ◎ UDP		
Save	Above, you can use: %NAME% - device name %IP% - ip address %EID% - event id %THR% - event threshold %VAL% - sensor value %DATE% - local time of event %TIME% - local time of event		

- 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
- 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.

			Set	Rese	et .
Event Identifier		Ema	Emo	JANS	VMS
	Aggression				
	CO		0		
	C02				
	Vandal				
	Vape				
	Vape THC				
	voc				

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.

Add Hardware	
	Add Hardware
	This wizard helps you detect and set up hardware.
	Hardware detection method: <ul> <li>Express (recommended)</li> </ul>
	Automatically detects hardware on the recording server's local network
	Scans defined network address ranges and detects hardware models
	<ul> <li>Manual Detects hardware models for manually entered IP addresses and host names</li> </ul>
milestone	Remote connect hardware Add hardware connected via a remote connect server
The Open Platform Company	
Help	< Back Next > Cancel

ia Haro	oware		Ц
Specif	y user name and password if	devices are not using the default ones.	
nclude	User Name	Password	<u>A</u> dd
	(Factory Default)		
$\checkmark$	admin		
$\checkmark$	root	******	
$\checkmark$	admin	******	

#### Enter the User Name and Password for HALO Smart Sensor

#### Select the Universal 1 Channel Driver

HikVision	^	Select All
		Class All
Milestone		
Mobotix		
Panasonic		
Pelco		
Samsung		
Universal		
Universal 1 channel driver		
Universal 64 channels driver		
	122	

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

Add H	Hardware				- 🗆	×
Ent Opt	er information for hardwa tionally, select driver type	re you want to add. to speed up detection.				
	Address	Port	Hardware model		<u>A</u> dd	
1		80	Universal 1 channel driver	~		
	Help		< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel	

Once the Hardware Device has been successfully added, click on the HALO Smart Sensor device and click on the Settings tab.

Toperties		•
Universal 1 channel driver		
⊿ General		
Delivery Mode	Multipart Stream	
Keep Alive type	Default	
Retrieval Mode	Streaming	
Codec	MJPEG	
Connection URI	api/gfx/stream.jpg	
Frames per second	1	
RTSP Port	554	
Streaming Mode	HTTP	
Codec	H264	E.
Connection URI		
Frames per second	60	
RTSP Port	554	
Streaming Mode	RTP (UDP)	
Codec	H264	
Connection URI		
Frames per second	60	
RTSP Port	554	
Streaming Mode	RTP (UDP)	
4 Video stream 4		
Codec	H264	
Connection URI		+
		1.00

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.

Access Control Settings Analy	tics Events Customer Dashboard Alarms and Events Generic Events
Generic events	
Select data source:	Selected data source
Compatible	Name: Compatible I Enabled Reset
International	Port: 1234 TCP and UDP 🗸 IPv4
	Separator bytes No echo
	US-ASCII V Show all
	Allowed external IPv4 addresses: Allowed external IPv5 addresses:
	10.1.6.225;172.16.10.39; 172.16.10.66
New Delete	
New Delete	

- 1) Check the **Enable** Checkbox
- 2) Select No Echo
- 3) Select US-ASCII
- Add the IP Address of the Halo Smart Sensor to the "Allowed external IP V4 Addresses" list box. <u>Enter the IP Address of EACH unique HALO Smart Sensor in this field.</u>
- 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

Ele Edit View Action Iools Help	
Site Navigation + 4 X Sector Excels + 4 reported	
🖂 🚺 MSCORP1 - (13.1a) 🛛 🐨 🝓 Generic Events	
Had Basics Name	
License Information HALO.RESET HALO.EVENTS	
Site Information	
Remote Connect Services	
Expression:	
("halo.Vape" OR "halo.CO" OR "halo.CO2" OR "halo.Vandal" OR "halo.Aggression" OR "halo.Vape THC" OR "halo.VG	DC")
Recording Servers	
Failover Servers Expression type: Match	
1 Mobile Servers Data source: Compatible	*
B Va Devices	
- To Cameras Priority: 1	
Microphones	
- C Speakers	
Wetadata	
- Jo Input	
Cutput	
P III Client	
Smart Wall	
🖆 View Groups	
💱 Smart Client Profiles	
- All Management Client Profiles	
Matrix	
Rules and Events	
Rules	
- 🛞 Time Profiles	
-29 Notification Profiles	
- 🔨 User-defined Events	
🤄 🐑 Generic Events	

- 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. <u>Make sure to use unique names for each.</u> It is suggested to match the User Defined Events to the HALO Smart Sensor Device Name

Milestone XProtect Management Client 2019 R	1			
File Edit View Action Tools Help				
□ ◎ ◎ ◆ 曲				
Site Navigation	User-defined Events	<b>–</b> 4	User-defined Event Information	
🖃 🚺 MSCORP1 - (13.1a)	Events			
🖃 🛄 Basics	BATHROOM123		Name:	
- Eicense Information			BATHROOM123	
Site Information				
🖻 🐻 Remote Connect Services				
Axis One-click Camera Connection				
🗄 🔲 Servers				
Recording Servers				
🛛 된 Failover Servers				
Mobile Servers				
🗇 ኛ Devices				
Cameras				
Microphones				
🜒 Speakers				
- 🕎 Metadata				
o Input				
🕀 🕎 Client				
Smart Wall				
🔄 View Groups				
🛛 😥 Smart Client Profiles				
Management Client Profiles				
Matrix				
E 🚯 Rules and Events				
Rules				
Time Profiles				
Nonice to the second				
V User-defined Events				
Analytics Events				
Generic Events				
Roles				
Basic Users				
System Dashboard				
Current Tasks				
System Monitor Thresholds				
System Monitor Thresholds     System Monitor Thresholds				
Configuration Reports				
Server Lone				
Control				
Transaction sources	1			
Transaction definitions	1			
1 2 Alarms	1			

## 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.

Milestone XProtect Management Client 2019 R				
File Edit View Action Tools Help				
日 🦻 🕑 🗢 曲				
Site Navigation 🚽 🗸 🕇	Alarm Definitions			
MSCORP1 - (13.1a)	🖃 🥞 Alarm Definitions	Alam definition		
🛱 🛄 Basics	Boor Activity	Easter:		
License Information	Gunshot Alarm	Enable.		
Site Information	HALO ALARM	Name:	HALO ALARM	
E Remote Connect Services				
Axis One-click Camera Connection				•
🕀 🚺 Servers	1			_
Recording Servers		Million and American American		
Failover Servers	1	Trigger		
Mobile Servers	1	Triggering event:	External Events	
Q     Devices	1		Landson and and a	
- Cameras	1			
Microphones	1	Sources	BATHROOM123	
Speakers	1	ouroe.	2011110011120	
Metadata	1	- Container period		
C Onter	1	Time profile:	Always	
Current Current	1		7 mayo	
Client Const Mall	1	<ul> <li>Event based:</li> </ul>	Start.	
Sinari Wali	1			
Smart Client Profiler	1		5000	
Management Client Profiles	1	Operator action required		
Matrix	1	Time limit:	1 minute	
Rules and Events	1		r	
- B Rules	1	Events triggered:		
- Time Profiles	1	Other		
Notification Profiles	1		120 V 120V	
- 🏘 User-defined Events	1	Related cameras:	2 items selected	
Analytics Events	1	Related map:	bayshore_floorplan_2018	
Generic Events	1	feature and an		
⊟ 🖏 Security	1			
- Koles	1	Initial alarm priority:	High	
Basic Users	1	Alam category:		
System Dashboard	1			
Current Tasks	1	Events triggered by alarm:		
System Monitor	1	Auto-close alarm		
System Monitor Thresholds	1	Alam assignable to Administratory		
Configuration Reports	1	ram dag dos to ram addres.		
Server Lone	1			
Access Control	1			
Transact	1			
Fill Transmission courses	1			
Transaction definitions	1			
🖃 🧏 Alarms	1			
- 🧶 Alarm Definitions	1			
- 🔊 Alarm Data Settings	1			
Sound Settings	1			
	1			

6) Click on the Select button next to Sources

Select Sources			×
Type filter: All	~		
Groups Servers	S	elected:	
All Events		y BATTIKOOM 123	
BATHROOM123	Add		
HALO.EVENTS ⊕ ⋠ HALO.RESET	Remove		
		ОК	Cancel

- 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) <u>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 <u>the Alarm and the associated Rule have been defined.</u></u>

#### 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.

atrix 👻	P Matrix Information		
Matrix Configurations     HALO_MATRIX	Name: HALO_MATRIX		
	Description:		
	Matrix details		1
	Address:	172 16 10 24	
	Port:	12345	
	Password:		
	Type:	Smart Client/Remote Client	
	<u> </u>		

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 <u>Milestone XProtect VMS Administrator Manual</u> 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.

iame.	HALO_MATRIX1	HALO_MATRIX1			
ctive:		Select an Event			
Select the rule of Perform and Perform and Edit the rule de Perform an action from Externa Set Matrix "HAL	Step 1: Type of rule type you want to create action on <event> action in a time interval scription (click an underlined item) on on <u>HALO_EVENT</u> <u>1</u> <u>0 MATRIX</u> to view <u>Bathrooms</u></event>	Events Hardware Devices External Events Generic Events HALO_RESET Viser-defined Events Recording Servers System Monitor Other ControlByWeb Integrated Controller			
		OK Cancel			

**Step 3**, check the Set Matrix to View checkbox and select the Matrix configuration and Device that you want to associate.

0 (2017) <b>A</b> MEL (1997) (17	-			A.C. 757 (1988)
lame:	HALO_MATRIX1			
escription:				
ctive:				
		Step 3: Actions		
Select actions	to perform			
Send notific	ation to <profile></profile>	Select Ma	atrix Configuration	
Start plug-ir	1 on <devices></devices>			
Stop plug-ir	i on <devices></devices>		Hatrix Configurations	
Set Matrix t	settings on <devices> o view <devices></devices></devices>	2		
Send SNMF	' trap	20 Part Manager		
Retrieve an Retrieve an	d store remote recordings from < d store remote recordings betwee	levices>		
Save attach	ed images	in solari din		
Edit the rule de	scription (click an underlined iter	1)		
Perform an actio	on on HALO_EVENT			
Set Matrix 'HAL	<u>al</u> O_MATRIX" to view <u>Bathrooms</u>			
		1		Consel
				Cancer
		1		

# 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.