

MANUAL



SmokeCatcherBridge

for

MILESTONE

V1.00_rev00

Date : 06/01/2016

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Araani SmokeCatcherBridge

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1. INTRODUCTION

SmokeCatcherBridge is an application installed on a Milestone VMS server allowing events from SmokeCatcher devices to generate alarm notifications in the VMS.

SmokeCatcherBridge handles Alarm notifications and real time bounding box information of events.

2. SMOKECATCHER REQUIREMENTS

SmokeCatcherBridge is compatible with SmokeCatcher versions V1.06 and higher.

No SmokeCatcher configuration is needed.

SmokeCatcher has to be running before connecting or it will not be able to answer to discovery requests.

3. SMOKECATCHERBRIDGE

3.1. COMPATIBILITY

- SmokeCatcherBridge runs parallel to a Milestone VMS. Hardware specification should meet the minimum requirements for Milestone VMS. (Check Milestone Manual)
- Compatible with Milestone XProtect Enterprise and XProtect Corporate only. (Versions lower cannot handle the bounding box metadata features)
- Compatible with Windows® versions: Windows 7, Windows 8.1, Windows 10, Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016

3.2. INSTALLATION

The SmokeCatcherBridge application requires approximately 150 MB.

SmokeCatcherBridgeSetup_ *Version*.exe installs a service and a client on the VMS server.

- The service will handle all event communications between SmokeCatcher devices and Milestone.
- The client allows to configure and license the application.

Milestone services can continue to run throughout the installation and configuration of the SmokeCatcherBridge.

It is required to install and configure the SmokeCatcherBridge with administrative privileges.

- Run the installation package "SmokeCatcherBridgeSetup_ *Version*.exe".
- At the introduction screen of the installer press "Next" to continue.
- Make sure the "Milestone Integration" component is selected before clicking "Next" to continue.
- Select a destination folder for the application before clicking "Install" to continue.
- The application will install. Upon finishing, it will automatically run the service and open the SmokeCatcherBridge Client.
- Don't forget to close the Installer when the installation is complete by clicking "Close".

By default the application will install under C:\Program Files\Araani\SmokeCatcherBridge.

A start menu program item will be added named Araani in which you find the SmokeCatcherBridge Client.

3.3. LICENSING

By default the SmokeCatcherBridge will run unlicensed. With an unlicensed version you can communicate with one SmokeCatcher device only. For communication with more devices, contact Araani for a license.

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client)
- Go to the tab “About”

This “About” tab shows you information on the SmokeCatcherBridge version and the license.

The License part shows 3 items:

CID	A unique computer identification number needed to request your license
Status	Indicates whether the product is licensed or not
Max. number of cameras	-Shows the maximum number of SmokeCatcher devices able to connect to the SmokeCatcherBridge. -The number of entries created in the Milestone MIP driver open for potential SmokeCatcher device connections. Used or unused, the number of channels defined here will be created in Milestone.

Licensing takes only these steps:

- Contact Araani and send us the “CID” and the number of SmokeCatcher devices you wish to use.
- Araani will send you a “.lic” file. Use the “import” button in the “About” tab to install the “.lic” file.
- Verify if your SmokeCatcherBridge application is licensed for the requested number of devices in “Status”.

A license is tied to the computer hardware. You cannot activate SmokeCatcherBridge on another device.

3.4. CONFIGURATION

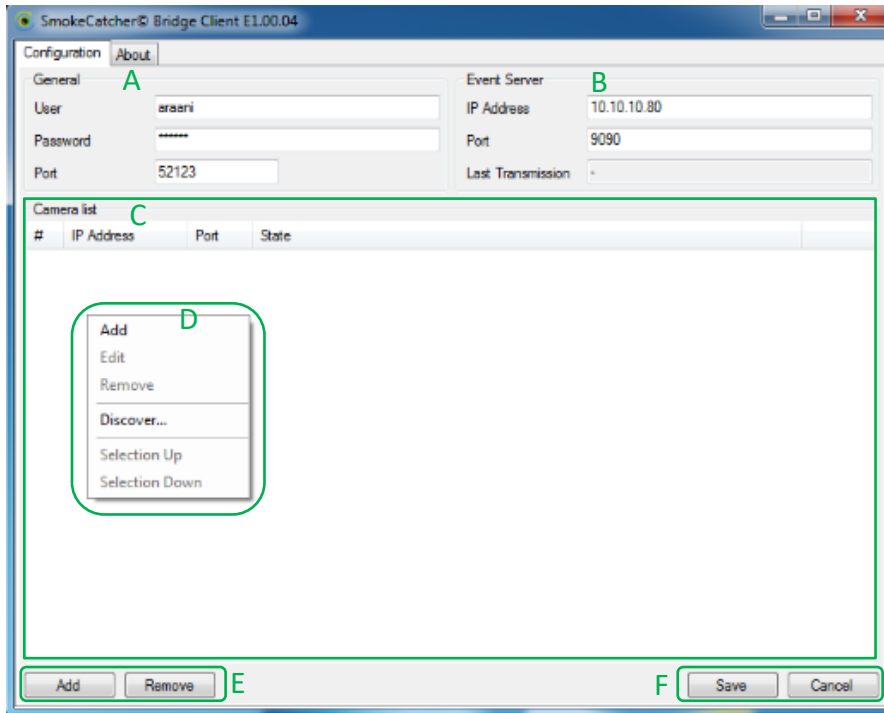
Make sure all the SmokeCatcher devices are activated and have the SmokeCatcher application running.

All SmokeCatcher devices should be connected to the same Local Area Network as the server computer.
(Note: *pinging the device from the server side indicates if communication is possible*)

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client).
- Go to the “Configuration” tab. (by default the application starts in this tab).
- Click the “Edit” button to start configuring.
- The application is no longer greyed out. You can now add devices and configure Milestone connection.

By default the “General” fields and the “Event Server” port are filled in. It’s advised to leave this default configuration.

An overview of the application configuration:



A	<p>The “General” configuration area contains connection information for communication from the SmokeCatcherBridge to the Milestone MIP driver. This communication transmits real-time bounding box metadata information. Preferable leave this information default.</p> <p>User: araani Password: araani Port: 52123</p>
B	<p>The “Event Server” area contains connection information to transmit Analytic Events to the Milestone Event service. This event service takes care of the visualization of events in the Milestone Smart Client Alarm manager.</p> <p>IP Address: Enter the IP Address of the Milestone Event Server Port: 9090 (default Analytics Events port of Milestone) Last Transmission: Last successful transmission of an event with timestamp. (Event timestamp based on local computer time)</p>
C	<p>In the “Camera list” you can add the number of SmokeCatcher devices allowed by the installed license. This list of Devices has the same order as the list of Channels in the MIP driver. (Refer to the Milestone configuration for the MIP driver configuration)</p> <p>The Camera list contains 4 elements for each SmokeCatcher device you add.</p> <p>#: Camera channel equal to the Milestone MIP driver channel IP Address: IP Address of the SmokeCatcher device Port: Port on which the SmokeCatcher device connects (default 5555) State: Current state of the SmokeCatcher device. Following states are possible:</p> <ul style="list-style-type: none"> -Connected: Normal successful operation -Closed: No connection with Milestone -Disconnected: SmokeCatcher device connection failed SmokeCatcherBridge will continuously try to reconnect
D	<ul style="list-style-type: none"> - Right click in the white area of the Camera list pane to get a menu. Here you can “Add” a SmokeCatcher device manually or “Discover” SmokeCatcher devices automatically on the Local Area Network. - Right clicking on a selected SmokeCatcher device in the Camera list enables the “Edit”, “Remove”, “Selection Up” and “Selection Down” features. <p>Edit: Change SmokeCatcher configuration for added devices in the list Remove: Remove a SmokeCatcher device from the list Selection Up: Move a SmokeCatcher device up in the list changing its channel number Selection Down: Move a SmokeCatcher device down in the list changing its channel Number</p>
E	<p>The “Add” and “Remove” buttons allow to quickly Add or Remove a SmokeCatcher device manually.</p>
F	<p>The “Save” and “Cancel” buttons are needed to save or ignore your changes.</p>

To **add** a SmokeCatcher device manually follow these steps:

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client).
- Go to the “Configuration” tab. (by default the application starts in this tab).
- Click the “Edit” button to start configuring.
- Click the “Add” button.
- A popup menu appears.
- Type the IP Address of the SmokeCatcher device you wish to add in the IP Address field.
- Leave the Port on 5555.
- Click “OK” to confirm.
- The SmokeCatcher device will be added to the list.
- A connection State will not be available until you save the configuration.

To **discover** SmokeCatcher devices automatically follow these steps:

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client).
- Go to the “Configuration” tab. (by default the application starts in this tab).
- Click the “Edit” button to start configuring.
- Right-Click in the white “Camera list” field and select “Discover”.
- A popup menu appears.
- Click the “Discover” button to start looking for SmokeCatcher devices.
- Wait for approximately 5 seconds for the SmokeCatcher devices to enter.
- Select the SmokeCatcher devices of choice.
- Click “OK” to confirm.
- The SmokeCatcher devices will be added at the bottom to the list.
- Right-click the SmokeCatcher devices and use the “Selection Up” and “Selection Down” features to move the devices to the desired order.
- A connection State will not be available until you save the configuration.

Don’t forget to save!

Editing a current SmokeCatcher device configuration in the camera list:

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client).
- Go to the “Configuration” tab. (by default the application starts in this tab).
- Click the “Edit” button to start configuring.
- Right-Click on the camera you wish to change.
- A popup menu appears.
- Click the “Edit” button.
- A popup appears in which you can change the IP Address and/or Port of the device.
- Click “OK” to confirm.
- The SmokeCatcher device is changed in the list but keeps its channel number.
- A connection State will not be available until you save the configuration.

Removing a current SmokeCatcher device configuration in the camera list:

- Open the SmokeCatcherBridge Client (Start – Programs – Araani – SmokeCatcherBridge Client).
- Go to the “Configuration” tab. (by default the application starts in this tab).
- Click the “Edit” button to start configuring.
- Select the camera you wish to remove.
- Click the “Remove” button.
- The SmokeCatcher device is removed from the list.
- A connection State will not be available until you save the configuration.
- Please note: Cancel can still ignore this change.
- When saved, the Channel number of the devices below change so the list follows up.

When the complete list of cameras has been entered, but the Milestone Configuration has not been completed the connections will remain in status **closed**. First follow the Milestone configuration steps and check the status again afterwards.

4. MILESTONE



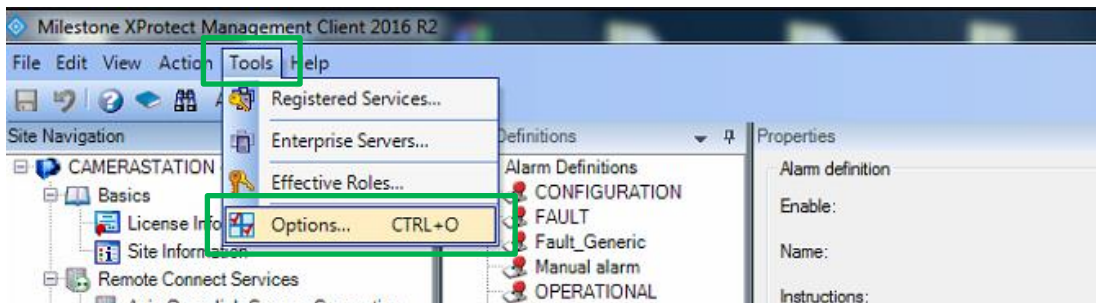
ALL VERSIONS OF MILESTONE XPROTECT SUPPORT THE ANALYTIC EVENT ALARMS, BUT THE REAL-TIME BOUNDING BOX METADATA IS ONLY SUPPORTED BY MILESTONE XPROTECT ENTERPRISE AND MILESTONE XPROTECT CORPORATE.

4.1. MILESTONE XPROTECT MANAGEMENT CLIENT SIDE

4.1.1. PORT CONFIGURATION

SmokeCatcherBridge sends analytic events on port 9090. This port needs to be configured in the Milestone Management application.

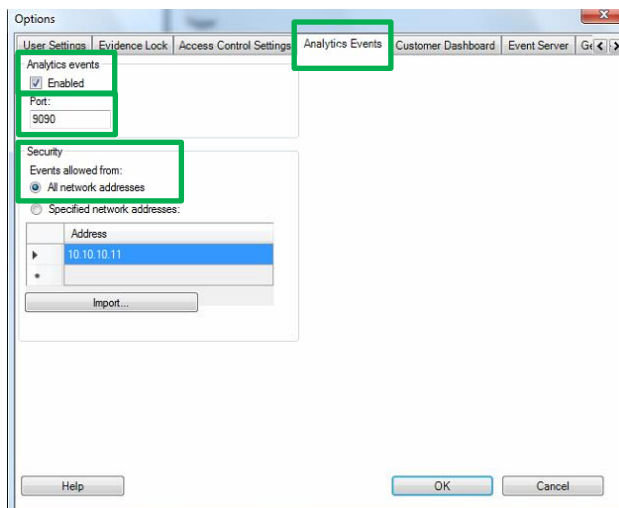
Go to “Tools – Options”



Go to the tab “Analytics events”

Make sure Analytics events is set to “Enabled” on Port “9090”.

The events should be allowed from “All network addresses”

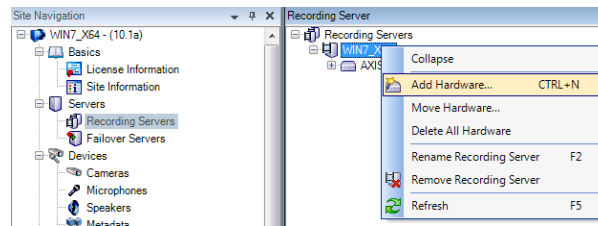


Finish by clicking “ok” so your settings are correctly saved.

4.1.2. CAMERA INSTALLATION

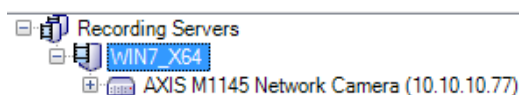
First the SmokeCatcher devices (cameras) need to be added in the Milestone Management Client. Milestone calls these devices “Recording Servers”.

- In “Servers” visit the “Recording Servers” tab.
- Under “Recording servers” click to open the server which is indicated with the server name.
- If this is an existing Milestone Server, devices will already be in the server list.
- Right-click on the recording server (indicated with the server name).
- A popup menu appears.
- Click “Add Hardware”.



- A new window appears.
- Select “Manual” and continue by clicking “Next” (An automatic scan is also possible).
- Click the “Add” button to add your camera credentials. (Ex. User name: root , Password: x)
- Click “Next” to continue.
- Select your camera brand. (Ex. Axis) and click “Next” to continue.
- Type the IP Address of the SmokeCatcher device you wish to add. (Leave Port to 80 and Hardware model to Auto-detect).
- Click “Next” to continue.
- Milestone will add the camera and mark “Success” in the status window as a confirmation.
- Click “Next” to continue.
- Once more Milestone will verify positive connection and mark “Success” again.
- Click “Next” to continue.
- Select the Camera ports you wish to use if the camera supports multiple ports. (When in doubt, select all of the ports. The first port is the port which will be used in normal circumstances).
- Click “Next” to continue.
- Click on the Folder icon where it says “Default camera group” and add you camera to a specific or just to the default group. (In a next step where the MIP driver will be installed this will have to be added to the same group.)
- Click “Finish” to finalize the camera installation.

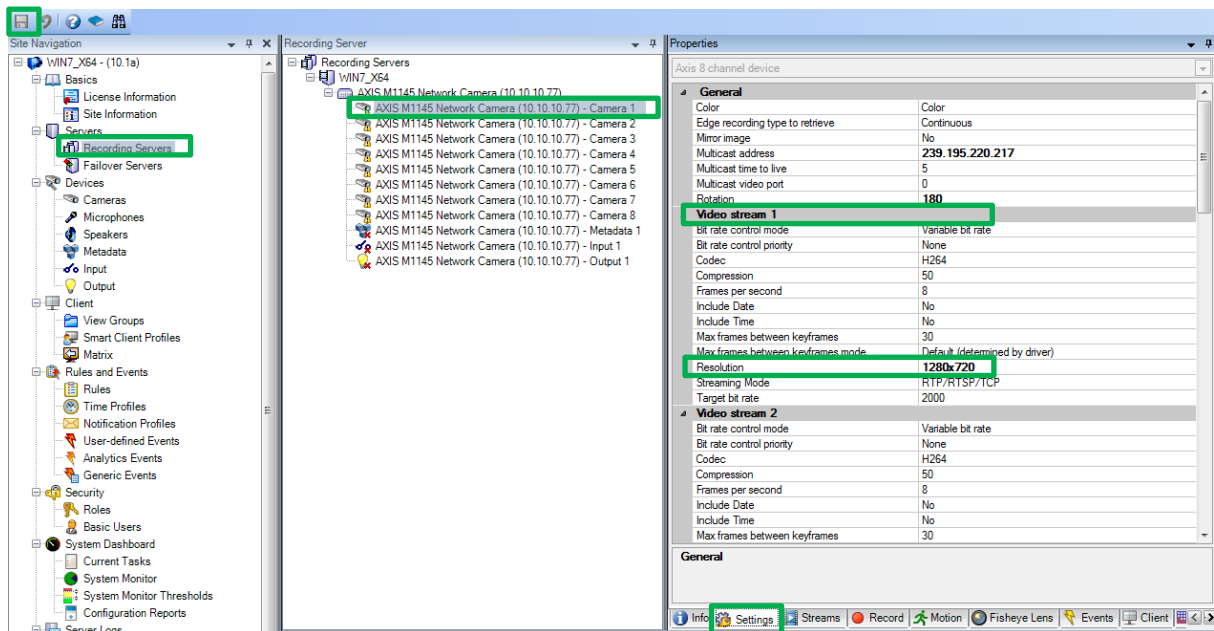
Now your SmokeCatcher device is added in Milestone and marked with the camera type and it’s IP Address in between brackets.



By default the camera image will appear in the Milestone Smart Client as a low resolution image (640x480 px)

This image is low quality and does not represent the field of view of SmokeCatcher. Here is how we change this:

- In “Recording Servers”, open the camera you wish to adjust by clicking the “+” next to it.
- Select the first camera in the list (it will be marked with a green “play” sign) (Most cameras only have one camera)
- In the field on the right of the camera list, visit the “Settings” tab.
- The second list of settings is “Video stream 1”.
- In “Video stream 1” there is a “resolution” item.
- Change the resolution to the resolution SmokeCatcher is using on the camera. (Ex. 1280x720)
- Don’t forget to press the “save disk” on the left top of the Milestone window to save.



4.1.3. MIP DRIVER INSTALLATION AND CONFIGURATION

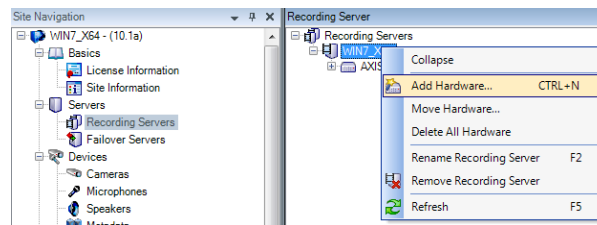
The MIP driver handles Metadata communication (Bounding box information) between Milestone and SmokeCatcherBridge.

When all the SmokeCatcher devices have been added to the camera list in “Recording Servers” a MIP driver with camera channels needs to be installed.

The amount of cameras the MIP driver supports in Milestone depends on the license of the SmokeCatcherBridge. (“Max. number of cameras” to be found in “About” in SmokeCatcherBridge)

Adding a MIP driver is similar to adding a SmokeCatcher device:

- In “Servers” visit the “Recording Servers” tab.
- Under “Recording servers” click open the server which is indicated with the server name.
- Right-click on the recording server (indicated with the server name).
- A popup menu appears.
- Click “Add Hardware”.

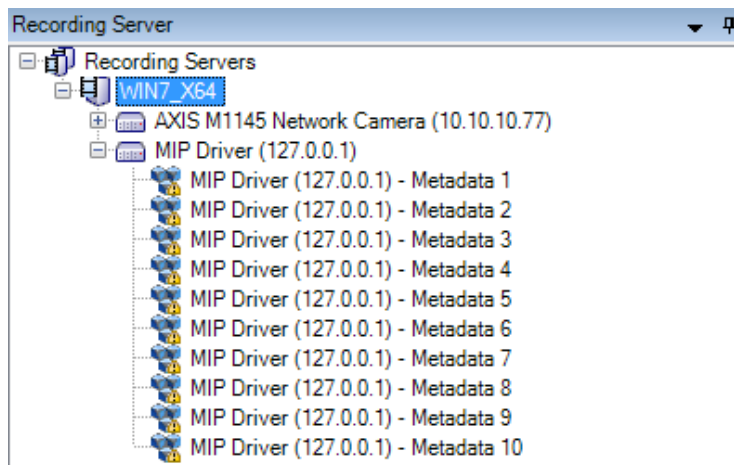


- A new window appears.
- Select “Manual” and continue by clicking “Next”.
- Click the “Add” button to add MIP driver credentials.
- Add username ‘araani’ with password ‘araani’, and make sure the user is included

Include	User Name	Password
<input type="checkbox"/>	(Factory Default)	*****
<input checked="" type="checkbox"/>	root	*****
<input checked="" type="checkbox"/>	araani	*****

- Click “Next” to continue.
- In the driver selection, go to the bottom of the list and select “Other” – “MIP Driver”.
- Click “Next” to continue.
- In the next window fill in this information:
 - o Address: 127.0.0.1
 - o Port: 52123
 - o Hardware model: MIP Driver
- Click “Next” to continue.
- Milestone will add the MIP Driver and mark “Success” in the status window as a confirmation.
- Click “Next” to continue.
- Once more Milestone will verify positive connection and mark “Success” again.
- Click “Next” to continue.
- The amount of Port available will be the amount available in your SmokeCatcherBridge license. Enable all of these Metadata ports. (In the column “Enabled” make sure are boxes are marked)
- Click “Next” to continue.
- Click on the Folder icon where it says “Default metadata group” and add you camera to the same group your cameras are in.
- Click “Finish” to finalize the camera installation.

The MIP driver is successfully installed with the amount of Metadata ports available in your SmokeCatcherBridge license.



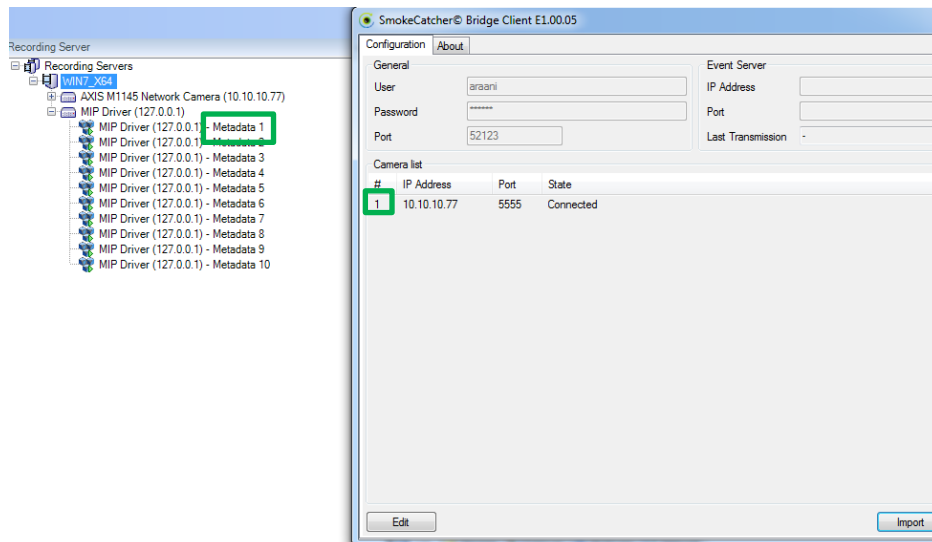
4.1.4. LINKING THE MIP DRIVER TO THE CAMERA

When all SmokeCatcher devices are added in Milestone and the MIP Driver is successfully installed, the cameras need to be linked to the correct Metadata channel of the MIP Driver.

In the SmokeCatcherBridge you have a list of devices available with an ID. This ID is the same as the Metadata port number in the MIP Driver.

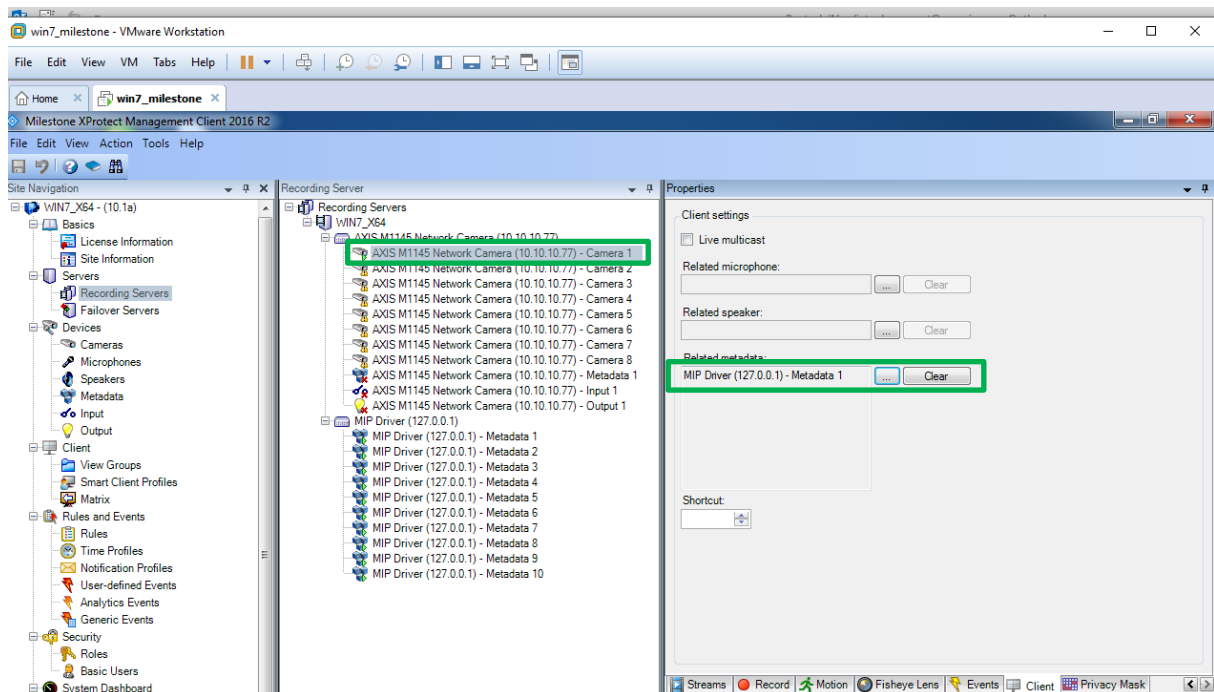
Example:

Here you see a SmokeCatcher device (10.10.10.77) added to SmokeCatcherBridge which has ID 1 (#). This camera is added in Milestone as “Axis M1145 Network Camera (10.10.10.77)”. The MIP Driver Metadata port accompanying this camera would be Metadata 1, the same number as the ID (#) in SmokeCatcherBridge.



For each SmokeCatcher device in Milestone the right Metadata port of the MIP Driver needs to be related.

- In “Recording Servers”, open the camera you wish to adjust by clicking the “+” next to it.
- Select the first camera in the list (it will be marked with a green “play” sign) (Most cameras only have one camera)
- In the field on the right of the camera list, visit the “Client” tab.
- In Client settings look for “Related metadata”. (There should be a Metadata channel filled in)
- Click the “Clear” button to clear all related metadata channels.
- Click the add button. (Button with 3 dots next to the Clear button)
- A window will open
- In the left pane, go to the group folder you added the MIP Driver in.
- Select the right Metadata port in the list. (Same port as in the SmokeCatcherBridge)
- Confirm with the “OK” button.
- The Related Metadata is now added to the camera.
- Repeat this action for each SmokeCatcher device.
- Don’t forget to press the “save disk” on the left top of the Milestone window to save.

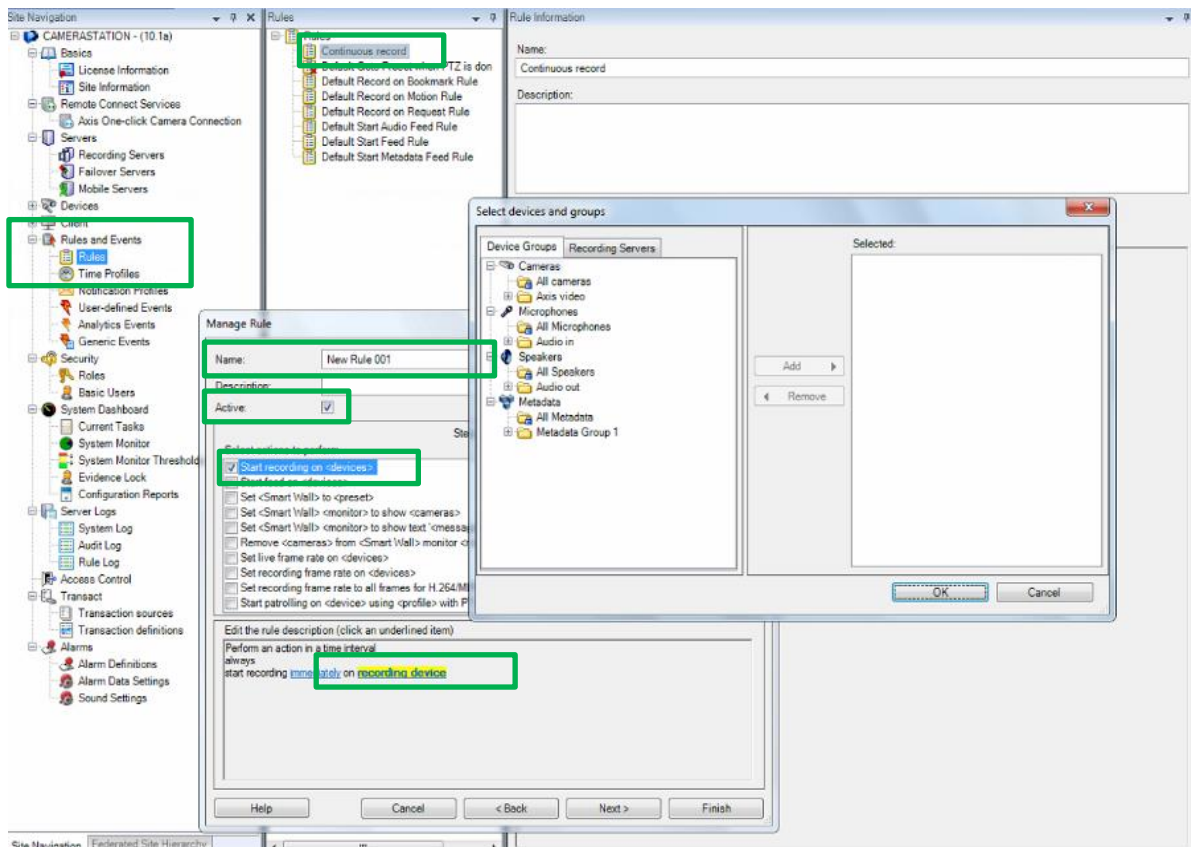


4.1.5. SET CONTINUOUS RECORDING

Milestone will automatically perform a recording for each event. Continuous recording needs to be active in the Milestone as event recording is a time stamp on the continuous recording.

To activate continuous recording:

- In 'Rules and Events' visit the 'Rules' tab.
- Add a new rule by right clicking on "Rules".
- Name the rule 'Continuous record'.
- Make sure to set the rule to "active".
- Select to set a rule for a time interval.
- Click next and select 'always'.
- Select 'Start Recording on <devices>'.
 - Click on Devices below and select the devices you wish to activate recording on.



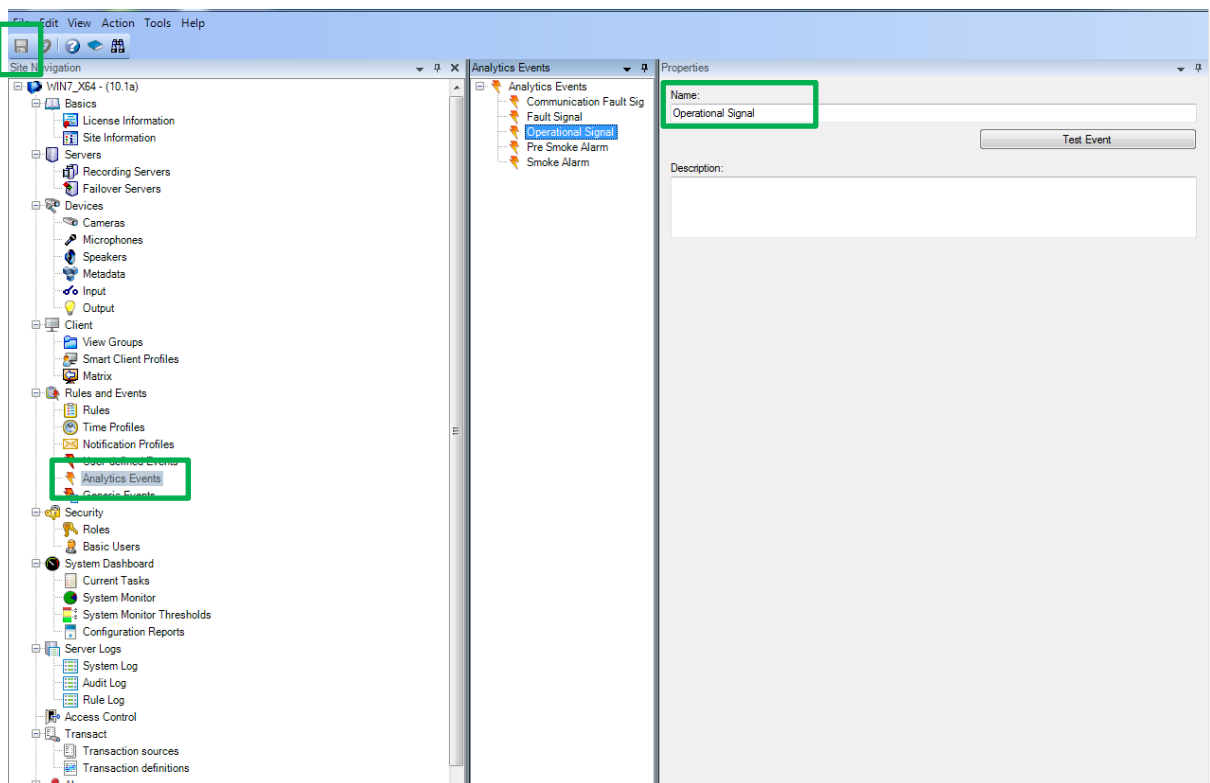
4.1.6. MILESTONE EVENT CONFIGURATION

Once your camera and the MIP driver is installed in Milestone, Analytic events need to be defined for the Smart Client Alarm manager.

- Visit the 'rules and event' tab.
- There you find 'Analytics events'.
- Right click on 'Analytics events' and select 'Add new...' to add a new event.
- In the new event provide the name, for example 'Operational'.
- This has to be written exactly as stipulated. This writing is case sensitive.
- You will have to add 5 events in total:

- Operational Signal
- Fault Signal
- Pre Smoke Alarm
- Smoke Alarm.
- Communication Fault Signal

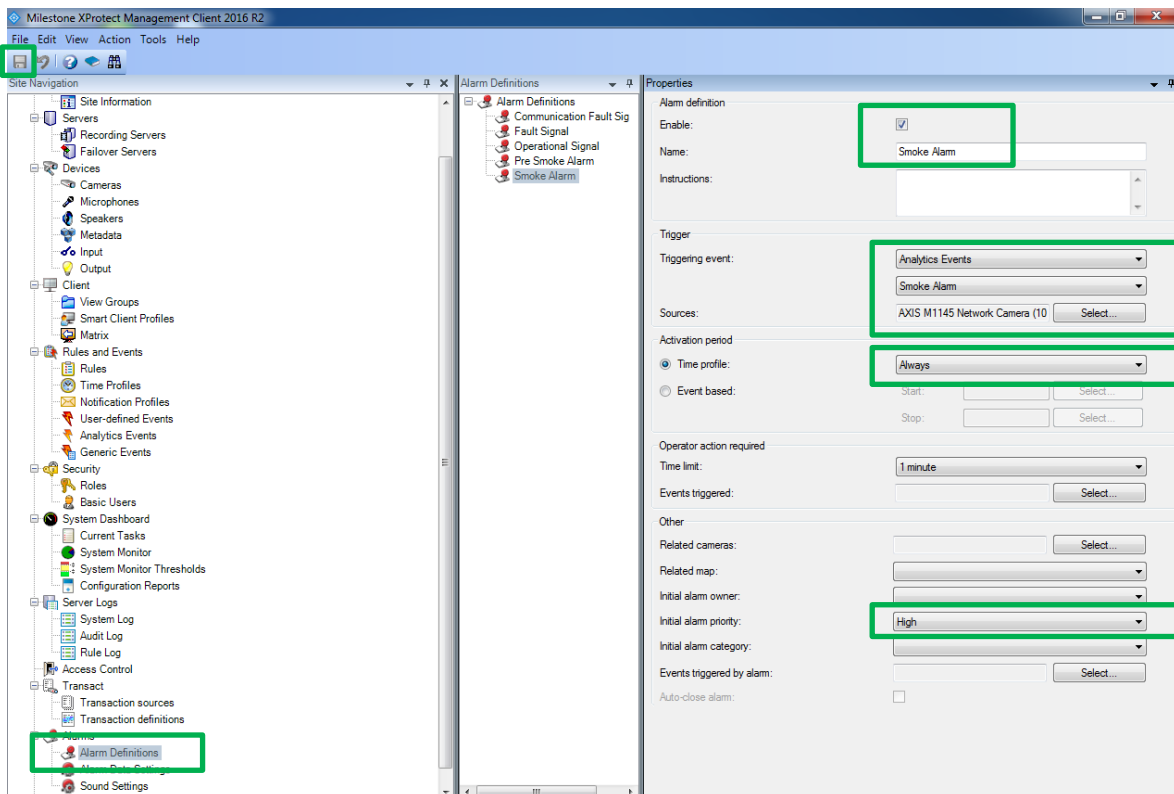
Don't forget to save after entering the name in the event.



4.1.7. MILESTONE EVENT ALARM CONFIGURATION

After creating the events, the according alarms need to be configured.

- In the Navigation pane go to menu “Alarms” and the submenu “Alarm Definitions”.
- In the “Alarm Definitions” pane, right-click on “Alarm Definitions” and select “Add New...”
- Set the Alarm definition to Enabled.
- Name the alarm. (Ex. : Smoke Alarm)
- Configure the triggering event with these settings:
 - o Analytics Events
 - o Smoke Alarm (If Alarm is “Pre Smoke Alarm”, triggering event has to be “Pre Smoke Alarm”)
 - o Click the “Select...” button to select the cameras for which this alarm is valid.
- Select when this alarm should be active (Ex. Always)
- Select the alarm priority (Ex. : Alarms could be set as High and Signals could be set as Medium)
(Alarm priority could be used for example to trigger different sound notifications)
- Don't forget to save you settings.



4.1.8. MILESTONE EVENT SOUND NOTIFICATION

Milestone can play sounds in the form of *.wav files when events (Alarms) occur to draw attention to the control screen. These sounds can be different for different kinds of priorities.

When the Alarm were defined you were able to choose the alarm priority. Now we will define sounds for each priority level (High, Medium and Low):

First we add the sound files (*.wav) we want to use:

- Open Milestone Xprotect Management Client.
- In the "Site Navigation" pane, visit the "Alarms" menu and click the "Sound Settings".
- Click the "Add" button browse your hard disk for sounds.
- Confirm with "Open".
- Repeat for each sound you wish to add.
- Don't forget to save.

Next we link the Alarm priorities to sound clips:

- Open Milestone Xprotect Management Client.
- In the "Site Navigation" pane, visit the "Alarms" menu and click the "Alarm Data Settings".
- In the Configuration pane, at the top, you find Priorities.
- Click the drop down menu in the Sound column to choose a sound for each priority.
(1 High, 2 Medium, 3 Low)
- Don't forget to save.

In **Milestone Smart Client**, sounds need to be enabled:

- Open Milestone Xprotect Smart Client.
- Click the "Options" button on the top right.



- In the left menu, go to "Alarm".
- Enable the features "Play sound notification".
- Confirm with "OK".

4.2. MILESTONE XPROTECT SMART CLIENT VIEW

After the Milestone Configuration is finished, open the SmokeCatcherBridge Client to check the connection status of the SmokeCatcher devices. These should all be connected if these 4 conditions are met:

- Make sure the SmokeCatcherBridge service is running.
- Make sure the SmokeCatcher application is running on the cameras.
- Make sure the Milestone Event server is running.
- Make sure the Milestone Recording server is running.

With all these conditions are met, the Milestone Smart Client shows all event (Alarms) in the “Alarm Manager” with date and time information. Clicking the event (Alarm) shows recording information of that time and date.

In the Milestone Smart Client “Live” tab, the live image is seen of the Cameras and SmokeCatcher devices will show bounding box information on the live image when an event (Alarm) occurs.

