Milestone XP Plugin Install and Configuration Guide (EXTERNAL)

Overview: This guide will serve as a general purpose documentation in how to install the Milestone XP Plugin onto a computer from start to finish. This guide assumes that you already have a preconfigured Milestone and NIO setup.

Accompanying Training Videos: <u>Milestone SpotterRF XP Folder</u> Must Install: <u>C++2015</u>, <u>C++2013</u> and <u>Milestone Legacy Device Pack</u>

Step 1: Install SpotterXP Plugin.

Step 1A: Download the SpotterXP client. To do that, go to this <u>WEBSITE</u>. Execute the downloader, which should be a simple install. Click Yes/Accept to any questions. Once the install has finished, you will need to restart your computer/server. FYI, Windows may see the file as potentially dangerous. SpotterRF didn't write it, so it could be, but select Run. Anyway if it does pop up (you'll need to click "more info" first).

	×
Windows protected your PC	
Windows Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk.	
App: SpotterRFSetupV1.9.13.msi Publisher: Unknown publisher	
Run anyway Don't ru	n

Step 2: Upload your SpotterXP license to Milestone.

Step 2A: Open up XProtect Management Client and click on Licensing Information on the left pane. Reactivate your license. Once reactivated you should see that your SpotterRF plugin showing an Expiration Date in the future, like below:

Product Version	Software License Code	Expiration Date	Milestone Care Plus	Milestone Care Premium
XProtect Corporate 2018 R3 Test	M01-C01-123-02-6C42C8	10/11/2019	N/A	N/A
Milestone XProtect Smart Wall	M01-P03-100-02-6CE2A5	Unlimited	Unlimited	
SpotterRF v1.9.14.0	N/A	1/5/2019	1/5/2019	

Step 3: Create a folder within the Milestone folder in the C drive and add privileges.

Step 3A: Must create folder as follows:

Go to C:/inetpub/wwwroot

Create a folder named: SpotterRF

Right click on that folder and select Properties

Click on the Security tab and select Edit

Give every user in the list Full Control then select Appy/OK

This is where the folder location is.

📜 > Ti	nis PC > OS (C:) > ine	etpub → wwwroot		
;	Name	Permissions for SpotterRF		×
*	aspnet_client msmq	Security		
s 🖈	SpotterRF	Object name: C:\inetpub\wwwr	oot\SpotterRF	
5 🖈	iisstart	Group or user names:		
A A	iisstart 🖻	SYSTEM		
		Administrators (DESKTOP-I1U Users (DESKTOP-I1UT0LU)		
		IIS_IUSRS (DESKTOP-I1UT0		
		StrustedInstaller		
			Add	Remove
		Permissions for Users	Allow	Deny
		Full control Modify	V V	
		Read & execute	\checkmark	
		List folder contents Read	\checkmark	
		L		
		ОК	Cancel	Apply

Step 4: Now it is time to add the NIO to Milestone.

Note: Make sure before you begin there must be two accounts

on the NIO. An Admin and Viewer account.

Step 4A: From Milestone XProtect Management Client click on MIP Plug, then Spotter, then SpotterRF. Right click and select Add New. Input a name of your choice. One word, no special characters.

🖻 👬 MIP Plug-	Add SpotterRF	\times
Spotter SpotterRF	Spotter NIC ^{BestSpotter}	
	on our our our our our our our	

Step 4B: In the newly created section, click on the new item. Fill out the information for your NIO. NIO Name, IP Address, Username, and Password. The NIO Name can be anything you want. The IP Address, Username, and Password will pertain to the particular NIO. This is where you'll add the Viewer account you created earlier.

NIO Name: Test	Username	Viewer
IP Address http://192.168.25.88	Password	

Step 4C: Once all the fields have been filled out make sure to click Save, in the toolbar in the upper left.



Step 4D: Now we can test whether or not Milestone has linked to NIO and is receiving data. SpotterXP does not take a video stream, but images of NIO and then streams those to Milestone via RTSP. To view if Milestone is seeing NIO, open that SpotterRF folder you created earlier and you should see two image files in there. They should be updating about once a second.

	> This F	PC > OS (C:) > ine	tpub > wwwroot	> SpotterRF
SS	A			
ds	*	Test	Testa	
ts	*			

Note: If you don't see the images, you probably didn't install Visual C++ 2013 and 2015.You may also attempt to reboot the Milestone Server at this point. See links at the top.Step 5: Now it is time to add NIO to Milestone.

Step 5A: Click on Recording Servers, expand the top level group, then right click on the recording server below it and select Add Hardware. Should be the recording server you created when you installed Milestone.



Step 5B: Choose the Manual installation.

 Manual Detects hardware models for manually entered IP addresses and host names

Step 5C: Uncheck all but the (Factory Default) option.

	Derault)		Remove
(Factory I	Default)	•••••	
Include User Na	me	Password	Add

Step 5D: Select the driver based upon the NIO you're looking to add. The XProtect

Legacy Driver Pack is compatible, but not necessary. This driver is found under the Other category.



You can use Universal 1 Channel Driver, under the Universal category.



Don't use the NIO's IP address, we're going to use Milestones local address (using the files from the SpotterRF folder we created earlier). That address is: 127.0.0.1. You can test this first by going to: 127.0.0.1/spotterrf/SISystem.jpg in your browser.

• SISystem - the name of your NIO that you created under the MIPS section.



Step 5E: Now Milestone will attempt to reach out to the NIO to add it. If you entered

everything correctly you'll be greeted with happy green checkmark.

	Address	Ροπ	Hardware model		L
1	127.0.0.1	80	Universal 1 channel driver \vee	E	i.
				1	ł.

Step 9F: Milestone will then repeat this process, but will add the NIOthis time.

L		Address	Γοπ	Hardware model		I.
	×	127.0.0.1	80	Universal 1 channel driver ~	·	i
						I.

Step 5H: Now it is time to add it to a group. We only have one so we added it to that.

Devices	Add to Group
Cameras	
🖘 Walkway Axis - Camera 1	SI System 🗸

Step 5I: Once the NIO device has been added. Click on it and in the Settings tab add the following, and then save.

~	General					
	Delivery Mode			Non Multipart Strea	m	
	Keep Alive type			Default		
	Retrieval Mode			Snapshot		
~	Video stream 1			onoponot		
	Codec			MJPEG		
					•	
	Connection URI			SpotterRF/SISyster	m.jpg	
	Frames per second			1		
	RTSP Port			554		
	Streaming Mode			HTTP		
~	Video stream 2					
8						
8	↓ ↓ ↓ Recording Server ↓	II Dea	perties			- 4
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Server	s SE Axis		Delivery Mode Keep Alive type		Multipart Stream Default	
	B SE Samsung		Retrieval Mode		Snapshot	
S	SISystemNIO - Camera 1	•			Shupanot	
ones	SISystemNIO - Micropho	11	Codec		MJPEG	
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а	😟 🧰 SW Samsung		Frames per second RTSP Port		1 554	
			Streaming Mode		554 HTTP	
		•				
			Codec		H264	
/all			Connection URI			
roups			Frames per second		60	
	Profiles Client Profiles		RTSP Port Streaming Mode		554	
ment	client Profiles				RTP (UDP)	
ents			Codec		H264	
.vento			Connection URI			
ofiles			Frames per second		60	
tion Pr	ofiles		RTSP Port		554	
fined E			Streaming Mode Video stream 4		RTP (UDP)	
s Ever	nts	ľ	Codec		H264	
Event	ts		Connection URI		11201	
			Frames per second		60	
			RTSP Port		554	
sers		12	Streaming Mode		RTP (UDP)	
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Tasks		Π.				
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	or Thresholds					
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Step 6: We're now going to create Analytics Events within Milestone.

Note: We now have our cameras and NIO in Milestone. Now it is time to create the rules necessary to get Actions from NIO working. In this order, within Milestone, we need to create Analytics Events, Alarm Definitions, and Rules.

Step 6A: Click on Analytics Events in the left toolbar





Step 6B: Right click on Analytics Events in the second to the left pane.

Step 6C: Fill out the Name and Description field for the new Analytics Event. Then click Save, little floppy icon, in the upper left.

Properties	
Name:	
TEST	
Description:	
Description: This is a test	

Step 7: Now we're going to create an Alarm Definition, using our newly created Analytic Event.

Step 7A: Click on Alarm Definition on the left pane.

Alarms Alarm Definitions Alarm Data Settings

Step 7B: Right click on Alarm Definitions from the second to the left pane and select Add New.

-	-	-
Alarm Definition	Collapse	et .
NE Axis F	Add New	Ctrl+N
🖳 🛃 SW Axis 🛛 🗲	Refresh	F5
SW Sams	Tiddar morement	instructio

Step 7C: Fill out the follow fields. Then click Save.

- Name: Name of the Alarm Definition.
- Description: Something that will help someone understand what this is.
- Triggering Event: Analytics Event
- Sources: Camera you want to record with.
- Related Cameras: Add the NIO
- Initial Alarm Owner: Account that controls Milestone software

Properties		
Alarm definition		
Enable:		
Name:	TEST	
Instructions:	TEST	~ ~
Trigger		
Triggering event:	Analytics Events	~
	Test	~
Sources:	SW Samsung - Camera 1	Select
Activation period		
Time profile:	Aways	~
O Event based:	Start:	Select
	Stop:	Select
Operator action required		
Time limit:	1 minute	~
Events triggered:		Select
Other		
Related cameras:	SISystemServer25	Select
Related map:		~
Initial alarm owner:	Milestone (desktop j 1/88op \milestone)	~
Initial alarm priority:	Hgh	~
Alarm category:		~
Events triggered by alarm:		Select
Auto-close alarm:		

Step 8: Now we're going to create a Rule in Milestone. This process is a dynamic window that walks you through step by step. As you define you Rule you will notice new options on the lower window. The lower window acts as a step-by-step explanation of the event you're creating. Every hyperlink you see in the lower window is an option that needs to be filled out for the Rule to work correctly. The response to each hyperlink will make sense based upon the sentence the hyperlink is a part of. For example, the first hyperlink will be in the sentence (Perform an action on <u>event</u>) Click event and this is where you select our Analytics Event we created earlier. The rest will follow similarly.

Step 8A: Click on Rules in the left pane.



Step 8B: Right click on Rules in the second to the left pane, and select Add New.



Step 8C: Name your new Rule to something that will make sense later. Also select Perform an action on <event>. In the newly open window select the Analytics Event we created earlier. Next click on devices/recording server and select the camera and NIO that you want to record from. Technically all you need to select is the camera, but we also select the NIO as well so we can see a view on both.



Step 8D: Click Next. Now select the following options, Start recording on <devices>, Set recording frame rate to all frames on MPEG-4/H.264/H.265 on <devices>, and Create bookmark on <devices>. Essentially we're telling the Rule to record, boost framerate to 30FPS, and create a bookmark on the recording. In the lower window this is where you'll click on the hyperlinks and fill out the responses accordingly.



FYI: When you click on Devices select: Select devices, not Use devices from metadata.

le>			
<u>` </u>	Select Triggering Devices		×
k an underlined item alvtics Events) ra 1 recording device to all frames for MPE	Use devices from metadata Select devices		
<u>umark</u> on <u>devices</u>	ОК	Cancel	

FYI: When you create a Bookmark make sure you fill it out so that it will make sense to someone who will look at it later.

ſ	Manage Rule		x
_	Name:	New Rule 001	
tic	Description:		
	Active:		Bookmark Details X
/e xn	Set recording fra Start patrolling o Pause patrolling Move <device> t Move to default p Set device outpu Create bookman</device>	n <devices> evices> te on <devices> ime rate on <devices> ime rate to all frames for MP in <device> using <profile> w on <devices> to <preset> position with PTZ poreset on <devices> with PTZ to <state> k on <devices> isage> on <devices> with <p< th=""><th>Headline BOOKMARK Description \$DeviceName\$motion detected on \$EventName\$\$TriggerTime\$</th></p<></devices></devices></state></devices></preset></devices></profile></device></devices></devices></devices>	Headline BOOKMARK Description \$DeviceName\$motion detected on \$EventName\$\$TriggerTime\$
	Make new <log e<="" td=""><td>entry></td><td>Pre-bookmark time (seconds) 10 🚖</td></log>	entry>	Pre-bookmark time (seconds) 10 🚖
		tion (click an underlined iter Test (Analytics Events)	Post-bookmark time (seconds) 30 🚖
	from <u>SW Samsur</u> start recording <u>immed</u> and set recording f		Add system information (click links to insert variables in bookmark text) <u>Device name</u> <u>Event name</u> <u>Triggering time</u> <u>Rule name</u> <u>Recording server name</u>
			OK Cancel
	Help	Cancel	<back next=""> Finish</back>
l			

Step 8E: Click Next once all fields in the lower window have been fill out. Now we're going to tell Milestone when to stop the Rule, i.e. end the recording. Our option here is to stop after an amount of time. Usually 2 minutes is good.

	auon					
	Manage Rule				- 🗆	×
_	Name:	New Rule 001				
tic	Description:					
	Active:					
	Active.					
	Select stop criteria		ep 4: Stop criteria			
l	O Perform stop ad					
10	Perform stop ad	ction after <time></time>				
ve	No actions perf	formed on rule end				
on						
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		Select time:				
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			OK Can	el		
	Edit the rule descri	iption (click an anacrimea nemy				
		n <u>Test (Analytics Events)</u>				
	from <u>SW Samsu</u> start recording imme	ediately on SW Samsung - Camera	<u>a 1</u>			
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	Perform action time	4				
]					
	Help	Cancel	< Back	Next >	Finisł	1

Step 8F: This is what a completed Rule looks like.

manon

	Manage Rule					-		×
	Name:	New Rule 001						
ie	Description:							
	Active:							
			Step	5: Stop actions				
	Select stop action to	perform						
	Stop recording							
e	Stop feed	ve frame rate						
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	Set device output	reset on <devices> w</devices>	ith PTZ <	priority>				
	Start plug-in on <							
	Stop plug-in on <							
	Apply new settings on <devices></devices>							
	Set Matrix to view <devices></devices>							
	Edit the rule description (click an underlined item)							
	Perform an action on Test (Analytics Events)							
	from <u>SW Samsung - Camera 1</u> start recording immediately on <u>SW Samsung - Camera 1</u>							
	and set recording fra	ame rate to all frames f	for MPEG-	4/H.264/H.265 on S	W Samsung - Cam	era 1		
	and Create bookma	rk BOOKMARK on SI	SystemSer	<u>ver25</u>				
	Perform action 2 minutes after							
	stop recording immediately							
	and restore default r	recording frame rate of	keyframe	s for MPEG-4/H.264	H.265 immediately	L		
								·····›
	Help	Canc	el	< Back	Next >	L	Finisł	<u> </u>

Step 9: Now we have to disable Output Caching in Windows. This is so that Windows doesn't cache (not update) the NIO images being streamed to our SpotterRF folder we created earlier.

Step 9A: Click start and search/open Computer Management.

- Step 9B: Expand Services and Applications
- Step 9C: Click on Internet Information Services
- Step 9D: Scroll down and open Output Caching



Step 9E: Right click and select Add...

Step 9F: Select Prevent all Caching for User-Mode Caching and Kernel-Mode Caching.

Computer Management File Action View Help Action View Help Computer Management (Local View System Tools Oracle Services and Applications Device Management Conne Conn	Add Cache Rule ? X File name extension: jpg Example: .aspx or .axd User-mode caching File Cache Monitoring Using file change notifications At time intervals (hh:mm:ss): 00:00:30 @ Prevent all caching	- C ×
SQL Server Configuratic	Advanced Kernel-mode caching File Cache Monitoring Using file change notifications At time intervals (hh:mm:ss) 00:00:30 Prevent all caching OK Features View Image Content View	>

Step 9G: Click Save.

Step 10: Now we need to create an Action within NIO and add it to a zone. You know how to do that, but here is what the Action will look like.

FYI: Host is the IP of the computer that is running Milestone. Port default is 9090, but can be changed within Milestone. Event_name: is linked to the name of the Analytics Event you created in Milestone. THIS IS VERY IMPORTANT, WON'T WORK IF THIS DOESN'T MATCH. Event_souce: links to the camera you wanted to record.

✓ Script: Milestone-NEAxisMovement
✓ Settings
Deactivation Delay: 0
Script:
Trigger Milestone Analytics Event 🔹
Host: 192.168.25.198
Port: 9090
Event_name: NEAxisMovement
Event_source: 192.168.25.222
> Timed Triggers (0)
Save

Step 11: Within NIO, inside of the Milestone Action, click Test Action. You should see a green light. If you don't, Port 9090 may be blocked. Within Milestone XProtect Smart Client, you should see a new Alert. If so, it worked.

Caveats: Undocumented issues we ran into while configuring Milestone.

 If you need to delete an Analytic Event, Alarm Definition, or Rule make sure you do it in a particular order. The order is as follows, delete the Rule first, Alarm Definition second, and the Analytic Event third. This is because a Rule uses an Analytic Event and an Alarm Definition uses an Analytic Event. If you delete an Analytic Event the Rule/Alarm Definition that pointed to said Analytic Event breaks, which breaks the Analytics Server.