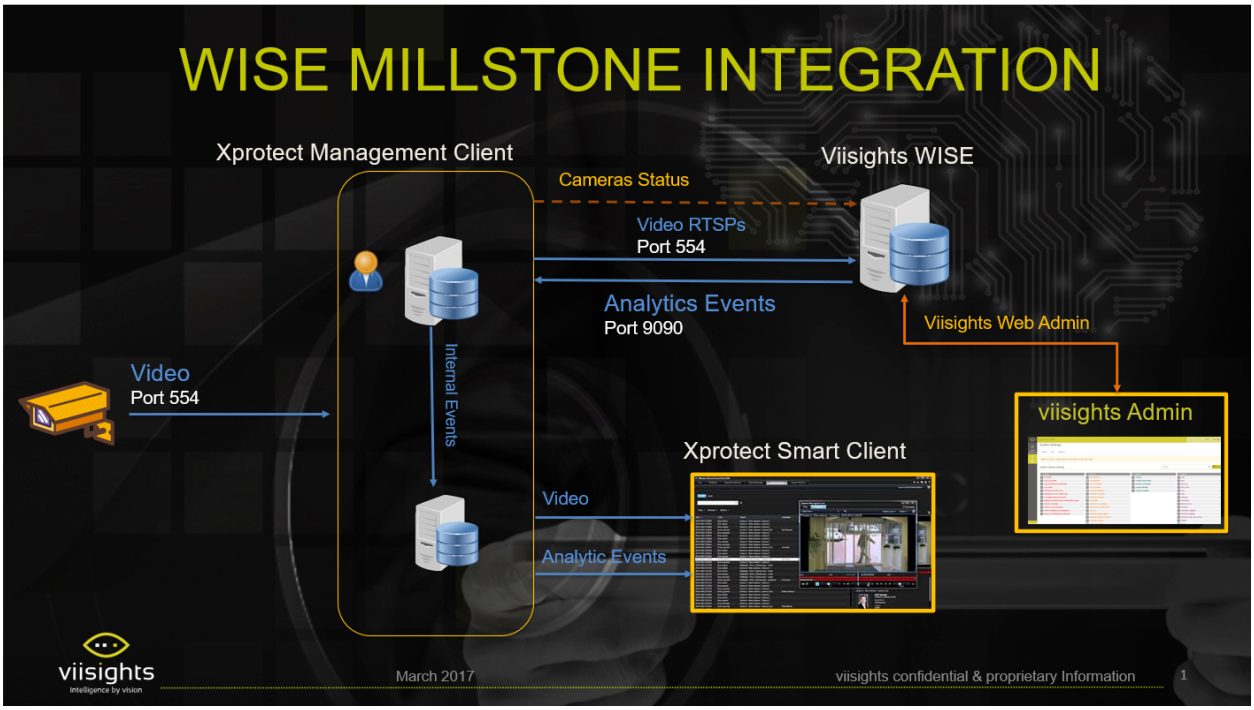
Milestone-Wise system Architecture



https://s3-us-west-2.amazonaws.com/secure.notion-static.com/8863b62e-82c6-4bf3-90a1-e06ef9773e39/viisights-Milestones_Integration_Plan.pptx

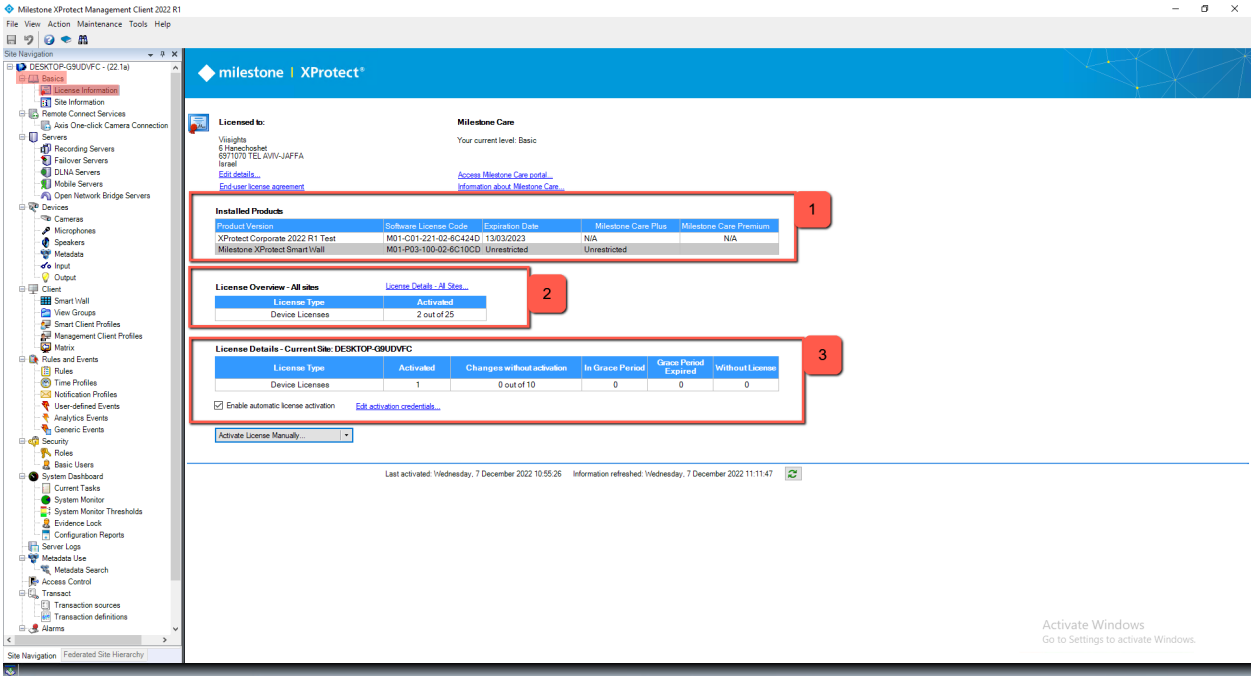
©

Enable Automatic License Activation

Before getting started, make sure that the license information is activated

1, Open Milestone XProtect Management Client

2. Browse to Basics —> License Information
3. Verify that the license information is valid, and that there are no bolded red indicators:
    a. Installation product should provide a valid expiration date
    b. License Overview - All sites, should provide the amount of active sites
    c. License Details - current site -
4. Should there be a license issue, contact your Milestone account manager


Milestone XProtect Management Client 2022 R1
File View Action Maintenance Tools Help
Site Navigation
DESKTOP-G9UDVFC - (22.1a)
Basics
License Information
Site Information
Remote Connect Services
Axis One-click Camera Connection
Servers
Recording Servers
Failover Servers
DLNA Servers
Mobile Servers
Open Network Bridge Servers
Devices
Cameras
Microphones
Speakers
Metadata
Input
Output
Client
Smart Wall
View Groups
Smart Client Profiles
Management Client Profiles
Matrix
Rules and Events
Rules
Time Profiles
Notification Profiles
User-defined Events
Analytics Events
Generic Events
Security
Roles
Basic Users
System Dashboard
Current Tasks
System Monitor
System Monitor Thresholds
Evidence Lock
Configuration Reports
Server Logs
Metadata Use
Metadata Search
Access Control
Transact
Transaction sources
Transaction definitions
Alarms
Site Navigation
Federated Site Hierarchy
milestone | XProtect®
Licensed to:
Viisights
6 Hanechoshet
6971070 TEL AVIV-JAFFA
Israel
Edit details...
End-user license agreement
Milestone Care
Your current level: Basic
Access Milestone Care portal...
Information about Milestone Care...
Installed Products
Product Version
Software License Code
Expiration Date
Milestone Care Plus
Milestone Care Premium
XProtect Corporate 2022 R1 Test
M01-C01-221-02-6C424D
13/03/2023
N/A
N/A
Milestone XProtect Smart Wall
M01-P03-100-02-6C10CD
Unrestricted
Unrestricted
1
License Overview - All sites
License Details - All Sites...
License Type
Activated
Device Licenses
2 out of 25
2
License Details - Current Site: DESKTOP-G9UDVFC
License Type
Activated
Changes without activation
In Grace Period
Grace Period Expired
Without License
Device Licenses
1
0 out of 10
0
0
0
3
Enable automatic license activation
Edit activation credentials...
Activate License Manually...
Last activated: Wednesday, 7 December 2022 10:55:26
Information refreshed: Wednesday, 7 December 2022 11:11:47
Activate Windows
Go to Settings to activate Windows.

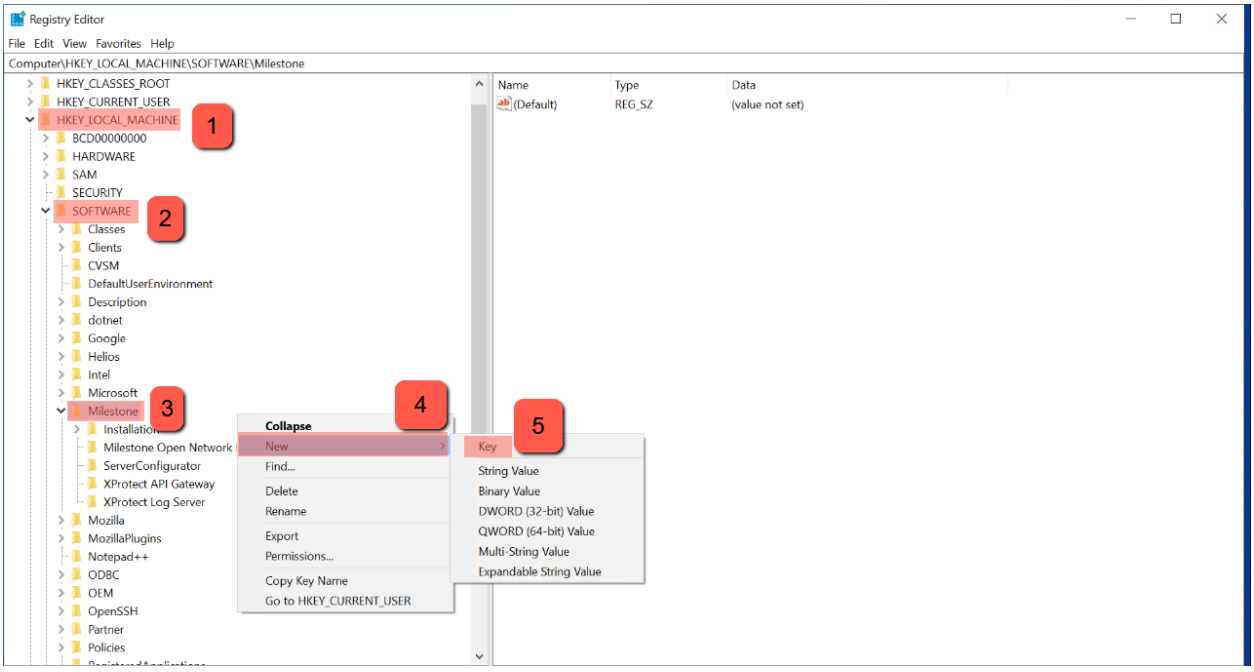
®

Windows - Key registry

In order to ensure that the outputted Milestone RTSP would be digested by the Wise engine, the user must verify if a specific registry key exists on the Windows registry framework.

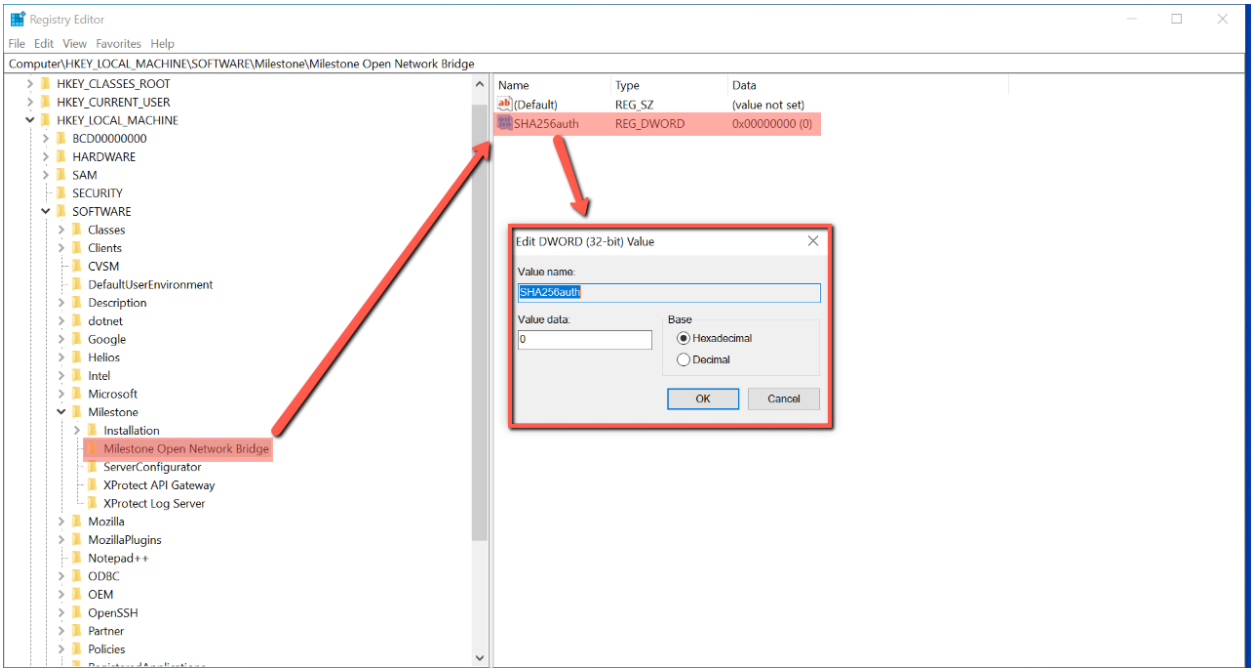
> ✅ If it does note exists, we must manually create it.

1. Open window's Registry Editor
2. Browse to Computer —> HKEY_LOCAL_MACHINE —> SOFTWARE —> Milestone
3. Right click the Milestone folder and create a new key



4. Rename the key (folder) to "Milestone Open Network Bridge"

5. Create a DWORD (32-bit) Value
6. Rename the “value name” to “SHA256auth"
7. Input 0 in the “Value data” field



8. reboot the server, so that the registry take effect

These step will ensure that the SHA256auth protocol would cancel out, effectively allowing Wise to digest the Mileston outputted RTSP.

You may verify if the MD5 authentication protocol is the only protocol running on the Milestone RTSP by testing the following ffmpeg command:

✅ ffmpeg -v trace -i <milestone_RTSP_URL>

e.g.
ffmpeg -v trace -i rtsp://192.168.1.58:554/live/7410822f-5aaa-4b6e-b604-b00378310541

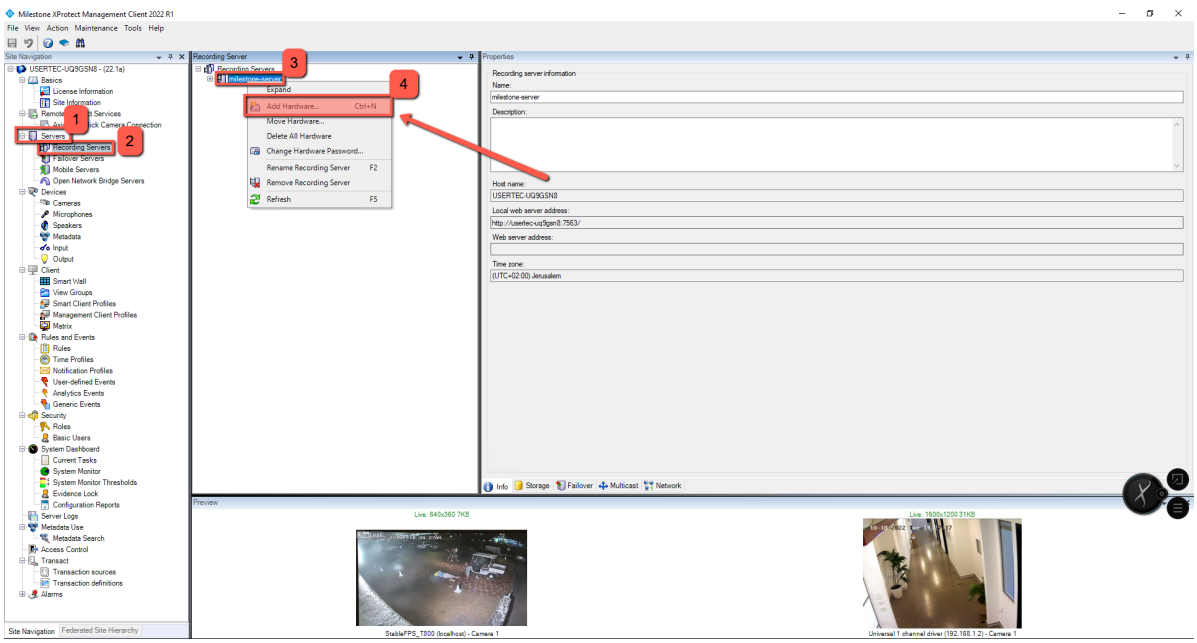
Output:

CSeq: 3
Date: Mon, Nov 21 2022 19:19:46 GMT
WWW-Authenticate: Digest realm="RtspServerLibrary", nonce="Sv4kDzaJW4zQflwuNKCYcB04cjfXZVVV", algorithm="MD5"

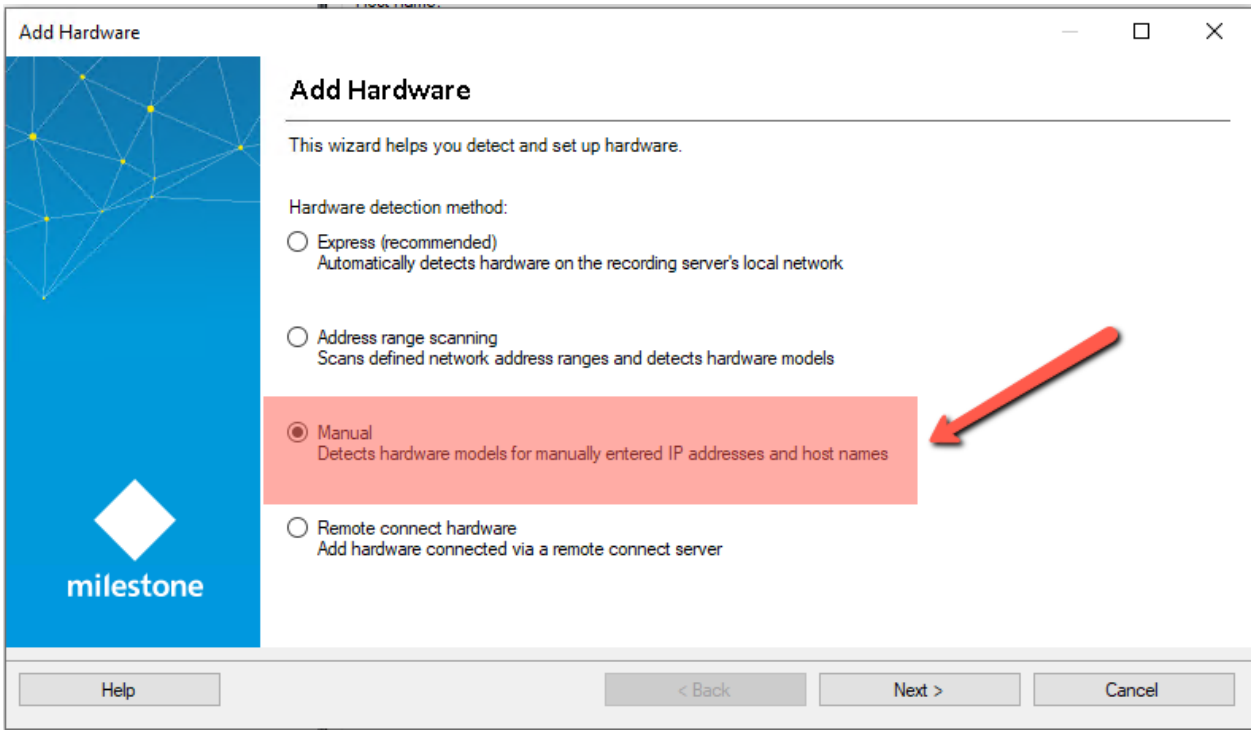
Registering Camera Using RTSP URL

Using a RTSP URL coming from a real camera

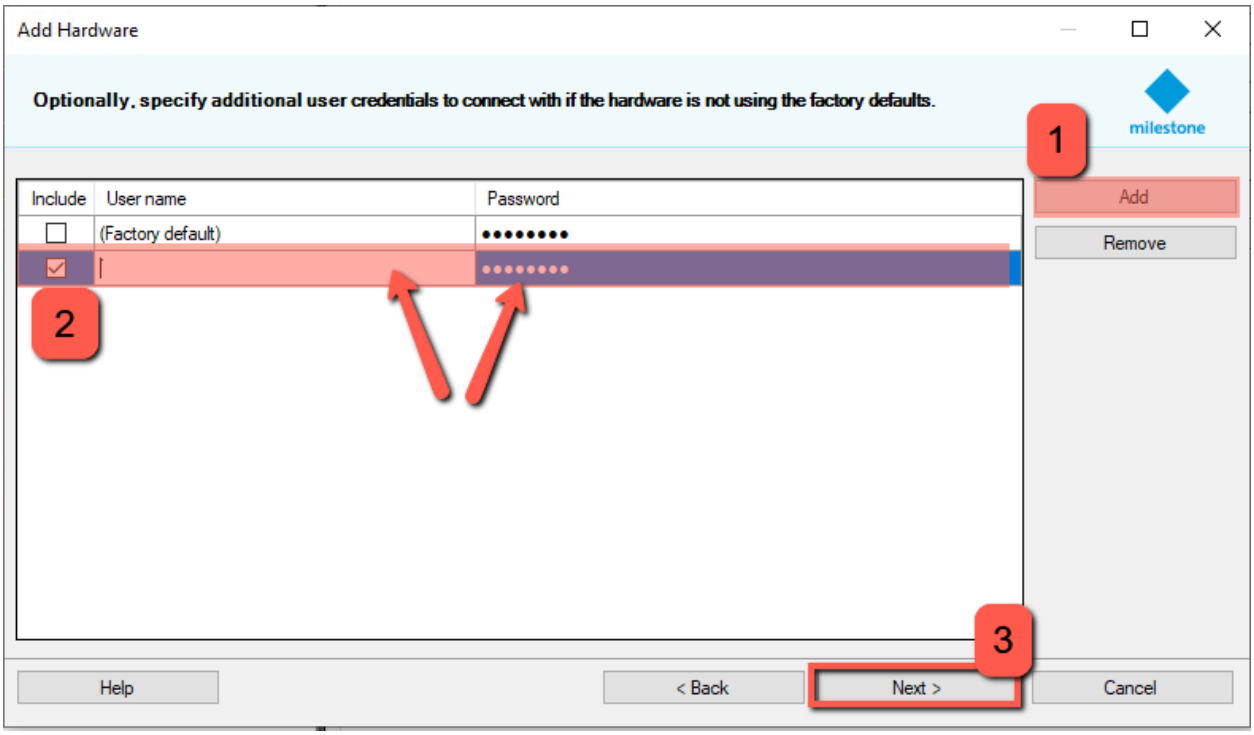
1. Open the Milestone Xprotect Management Client program
2. Browse to **Servers** —> **Recording Servers** —> Right click the current server installed
3. Select **Add Hardware**



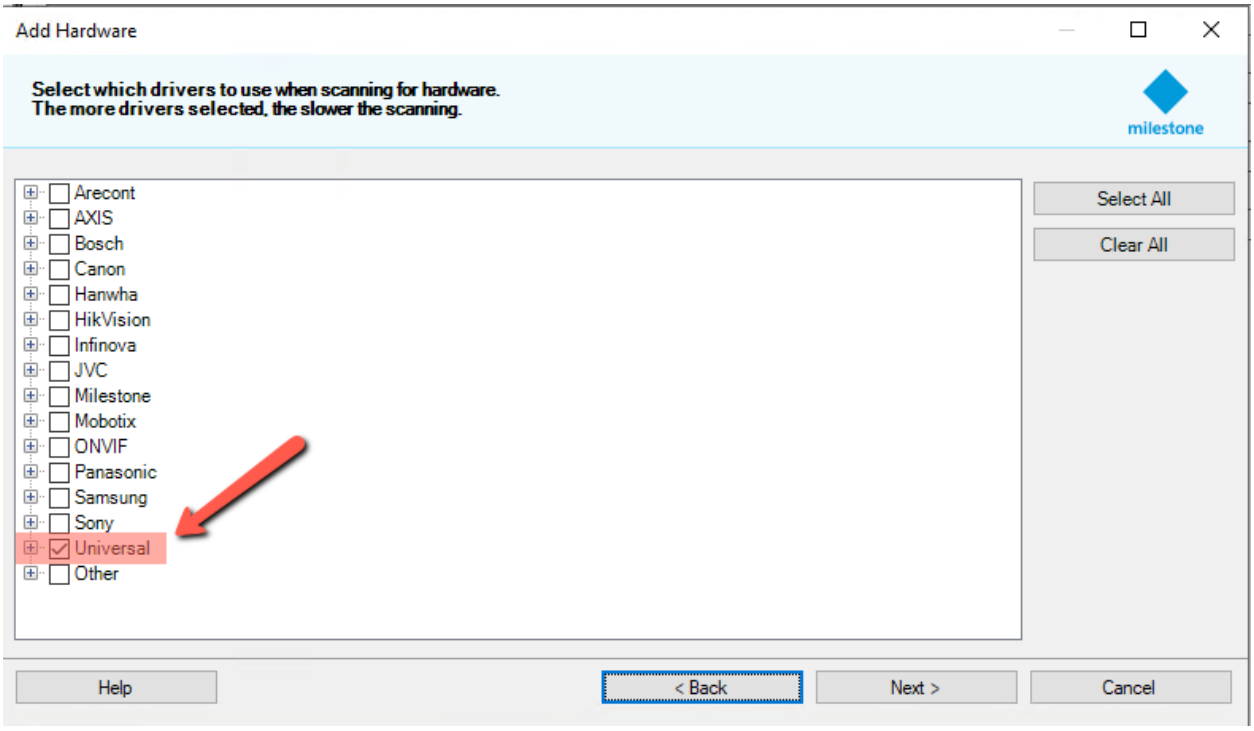
4. In the “**Add Hardware**” window, select **Manual** and click on **Next**



5. Uncheck the (Factory default) checkbox
6. In the next wizard window, click on **Add** for adding a new credential option
7. Input the **username** and **password** that that particular RTSP URL uses
8. Click **Next**

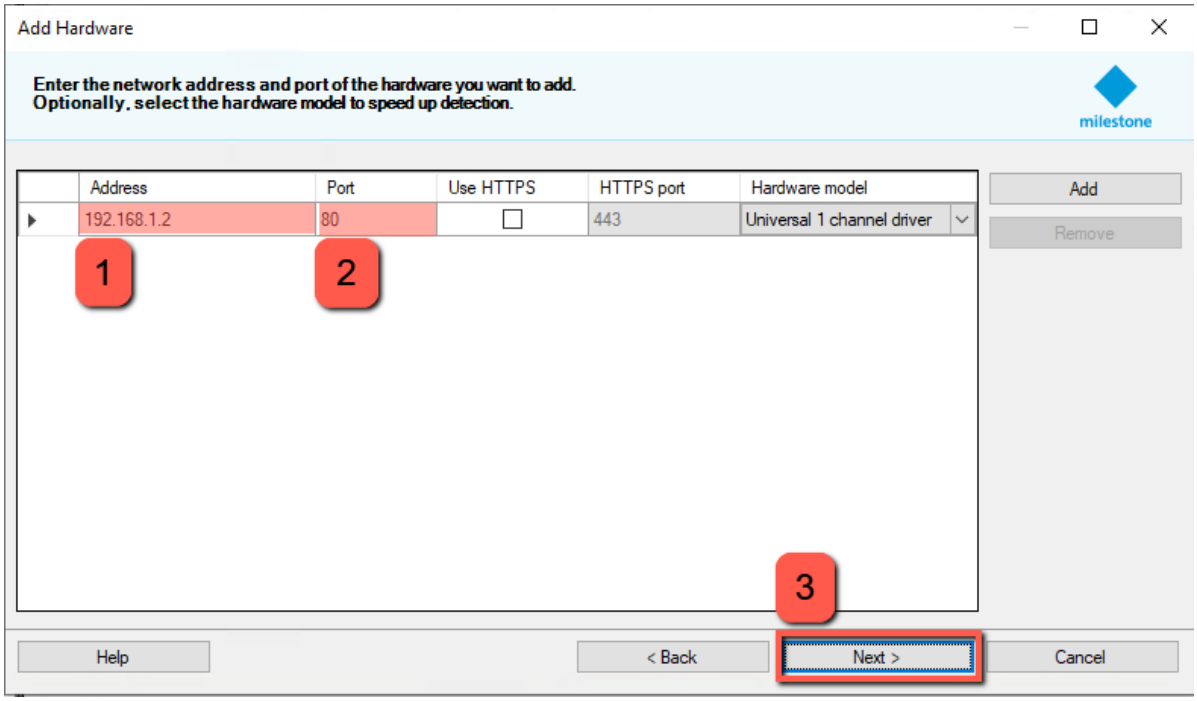


8. Select the relevant RTSP communication driver protocol - **universal**

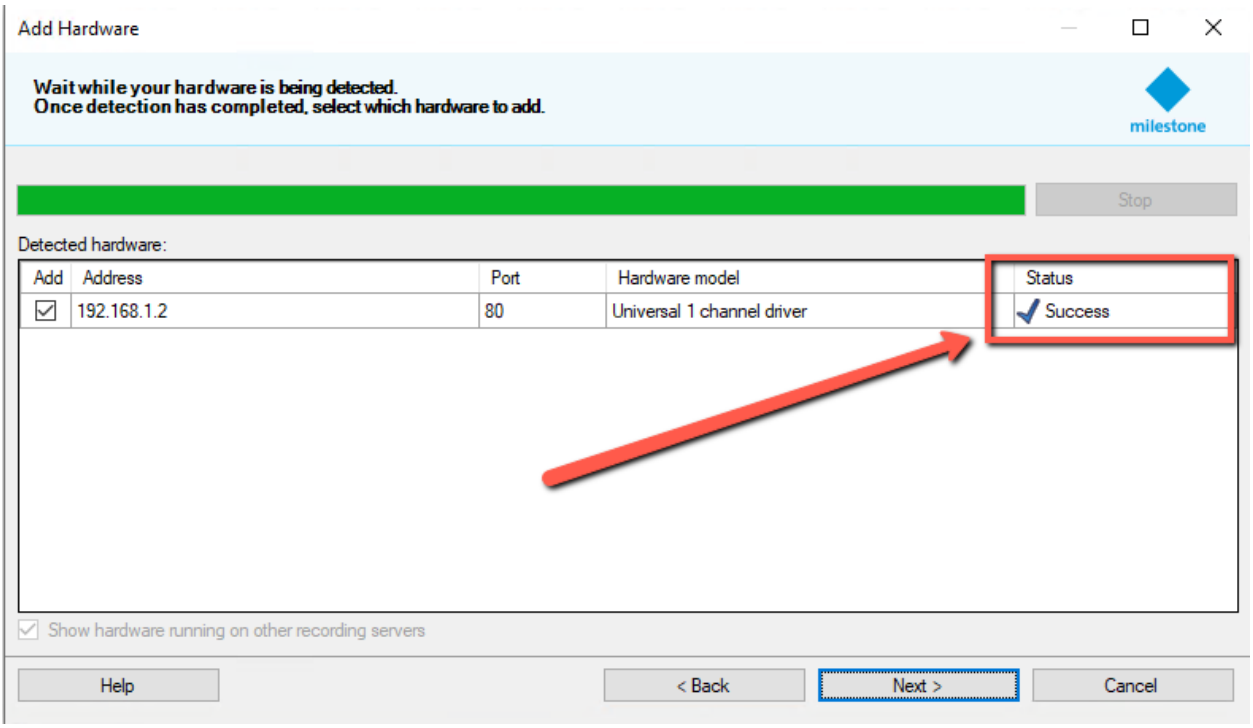


9. Input the camera's **IP address** and **communication interface port**

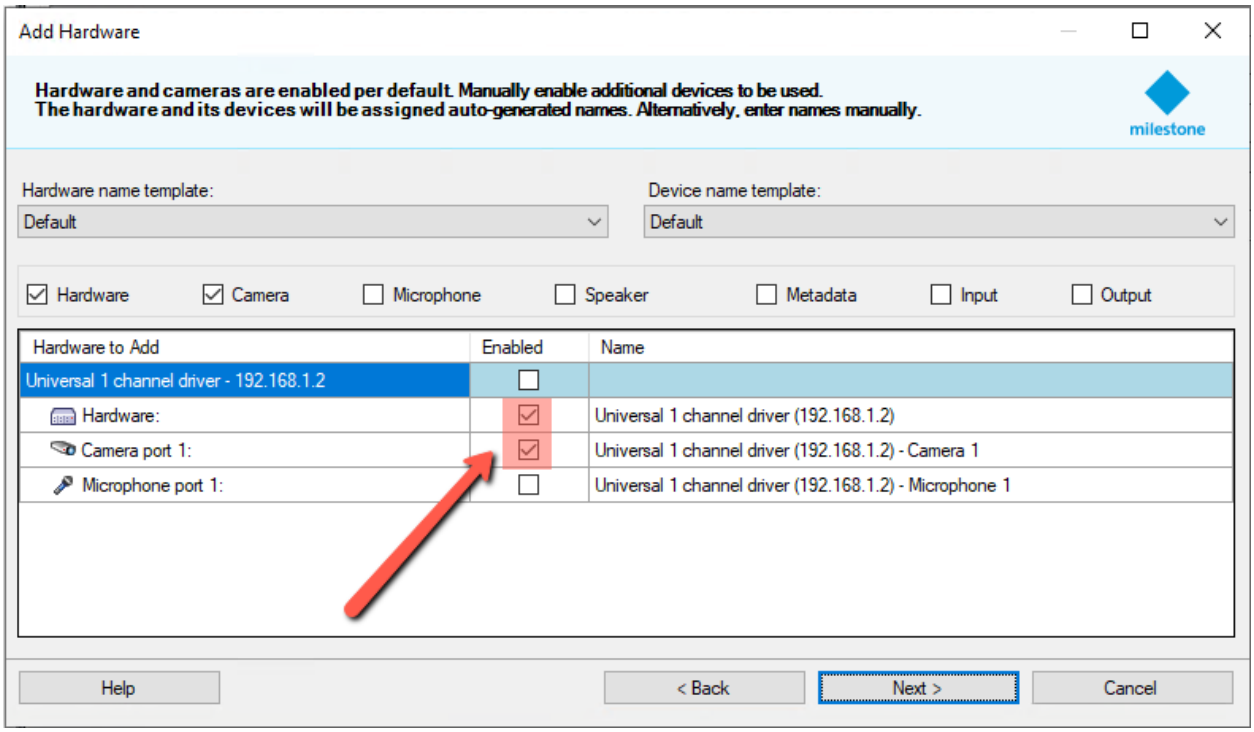
10. Click **Next**



11. Confirm that the camera was successfully added, by seeing a blue check mark under the S**tatus** indicator:



12. Enable the **Hardware** & **Camera** services
13. Click **Next**

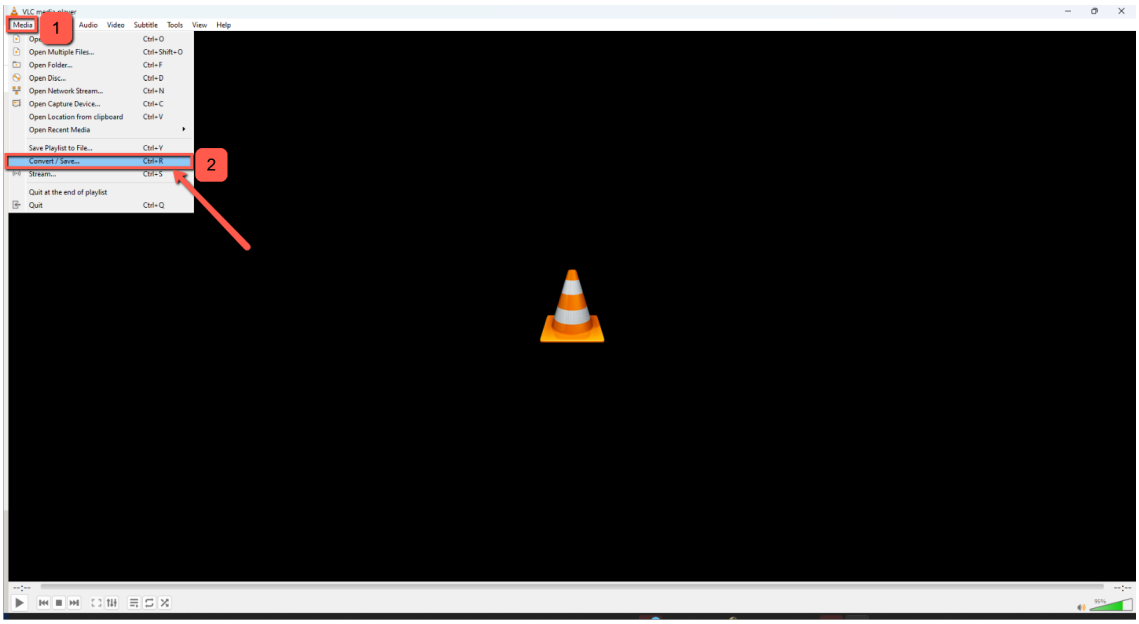


14. Create a new Hardware, right click on the Recording server's name and choose "Add Hardware"

Using a RTSP URL coming from a virtual camera

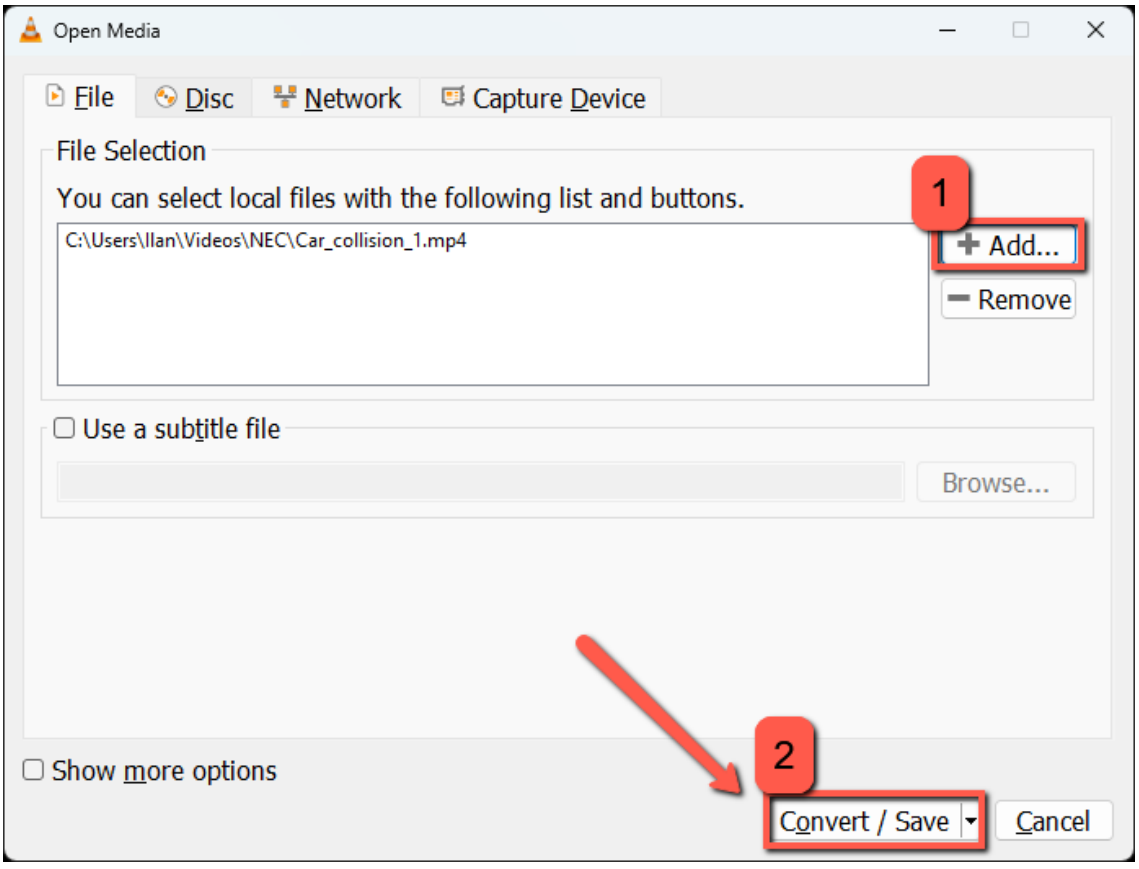
Creating a RAW file

1. Obtain a mp4 file
2. Preform a clip conversion using VLC:
    a. Open VLC
    b. Browse to "**Media" —> "convert and save"**



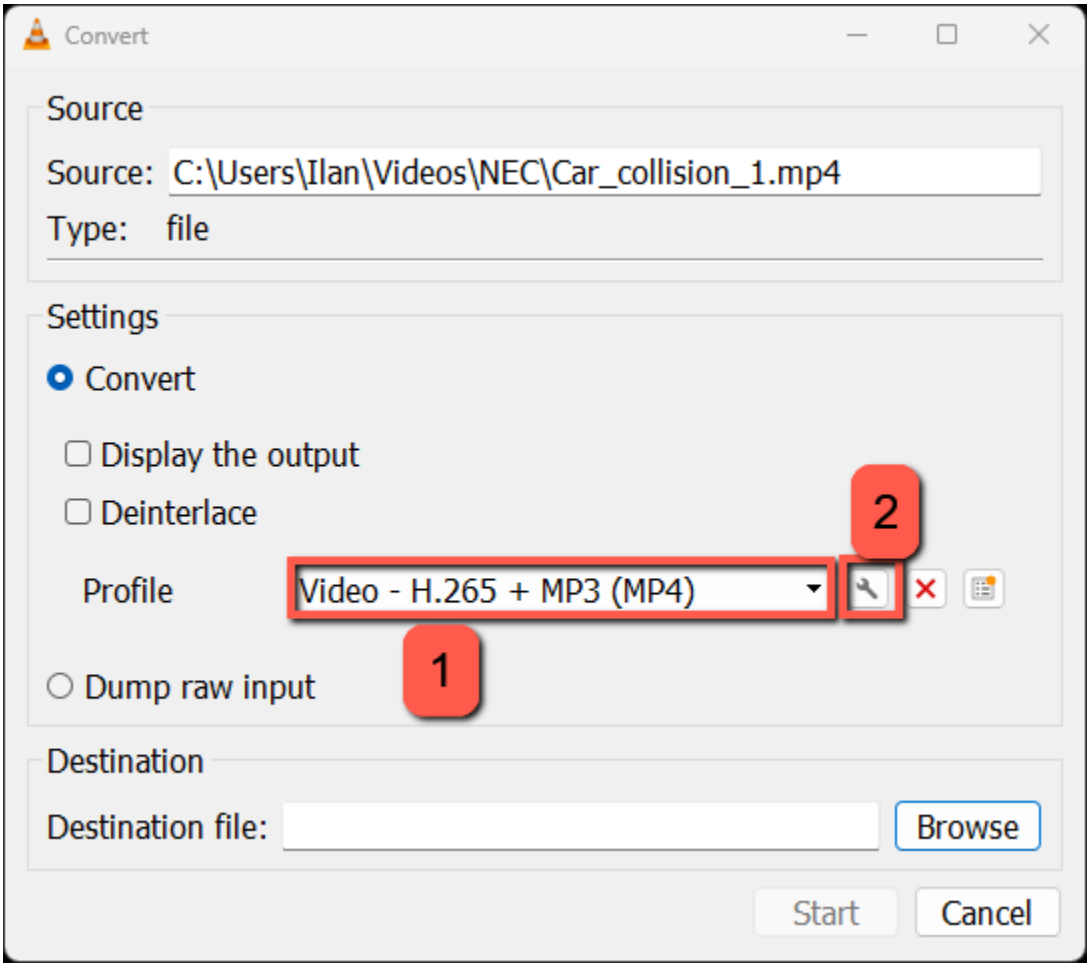
c. **Add** the relevant mp4 file

d. Click on **Convert/Save**

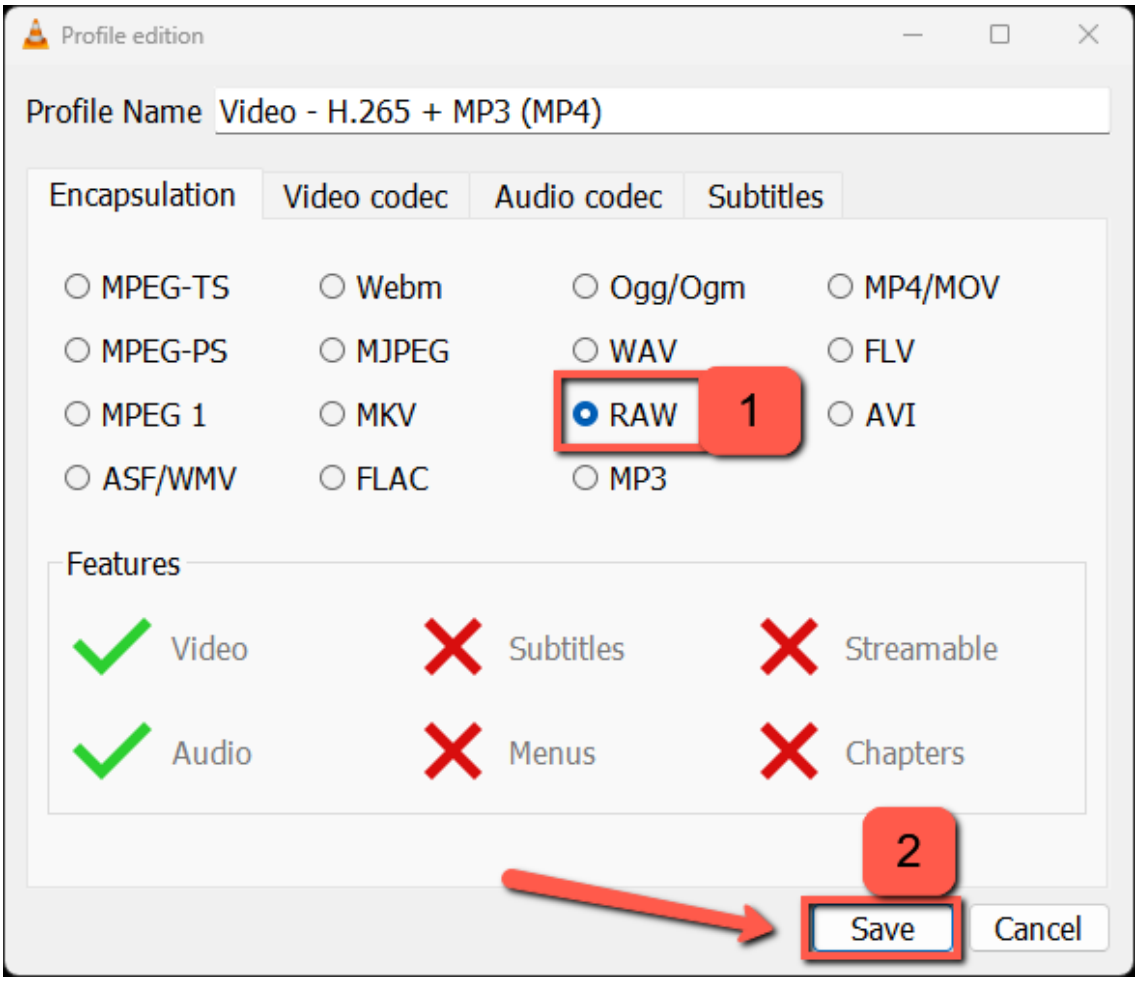


e. Select the “**Video - H.265 + MP3 (MP4) option**” option

f. Click on the **wrench** Icon



g. Change the encapsulation method to **RAW** option and **save**



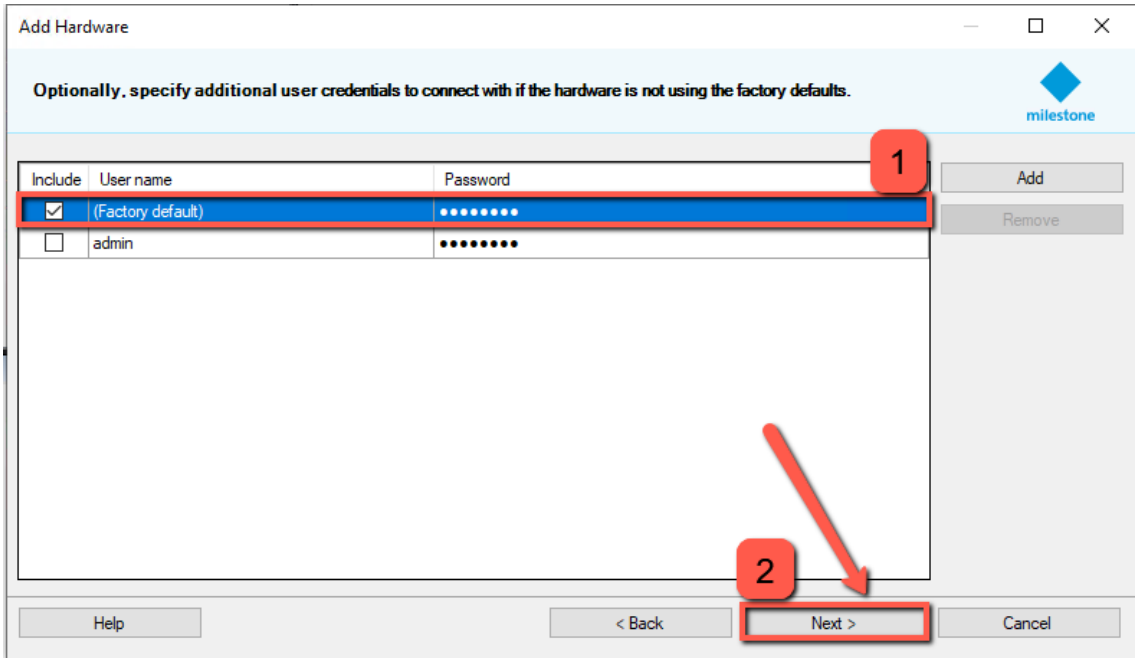
h. Click on the "**Browse**" to select a destination file, save it in the following directory:

📍 C:\Program Files (x86)\Milestone\XProtect Recording Server\Drivers\NativeDrivers\StableFPS_DATA\Video\H264

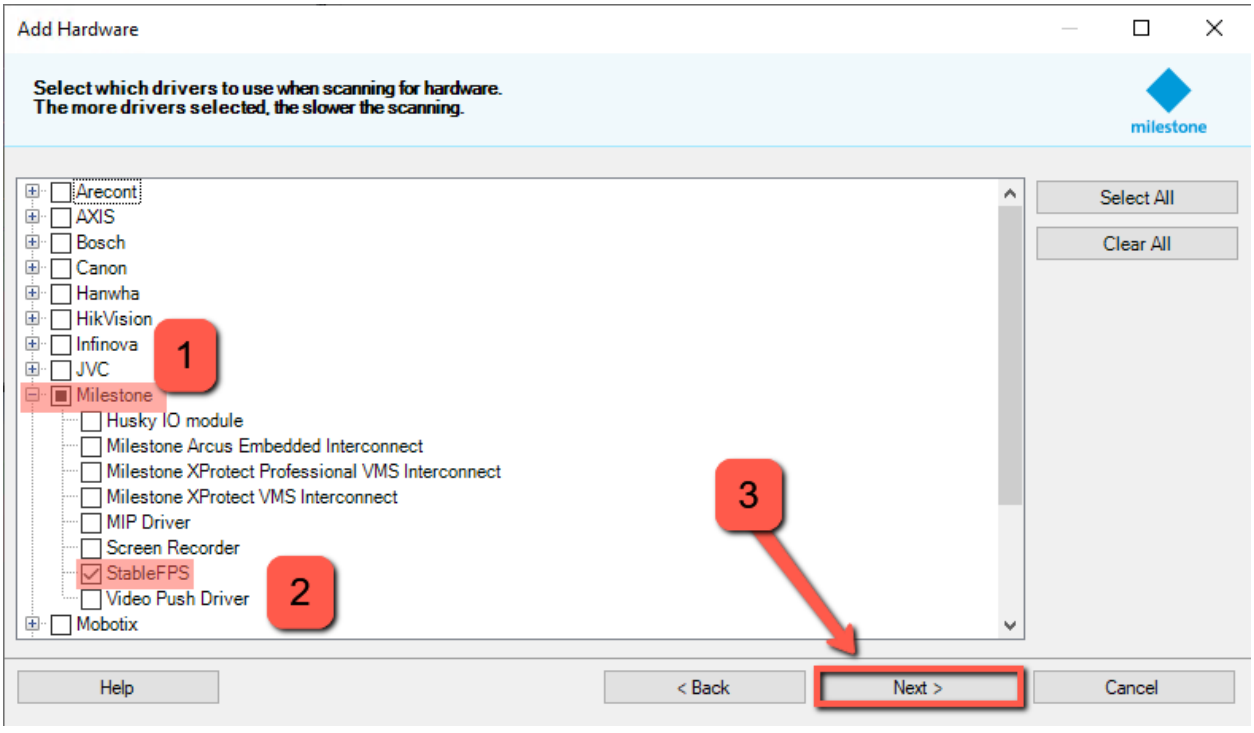
Creating a virtual RTSP using the created RAW file:

1. Browse to **Servers** —> **Recording Servers** —> Right click the current server installed
2. In the "**Add Hardware**" window, select **Manual** and click on **Next**

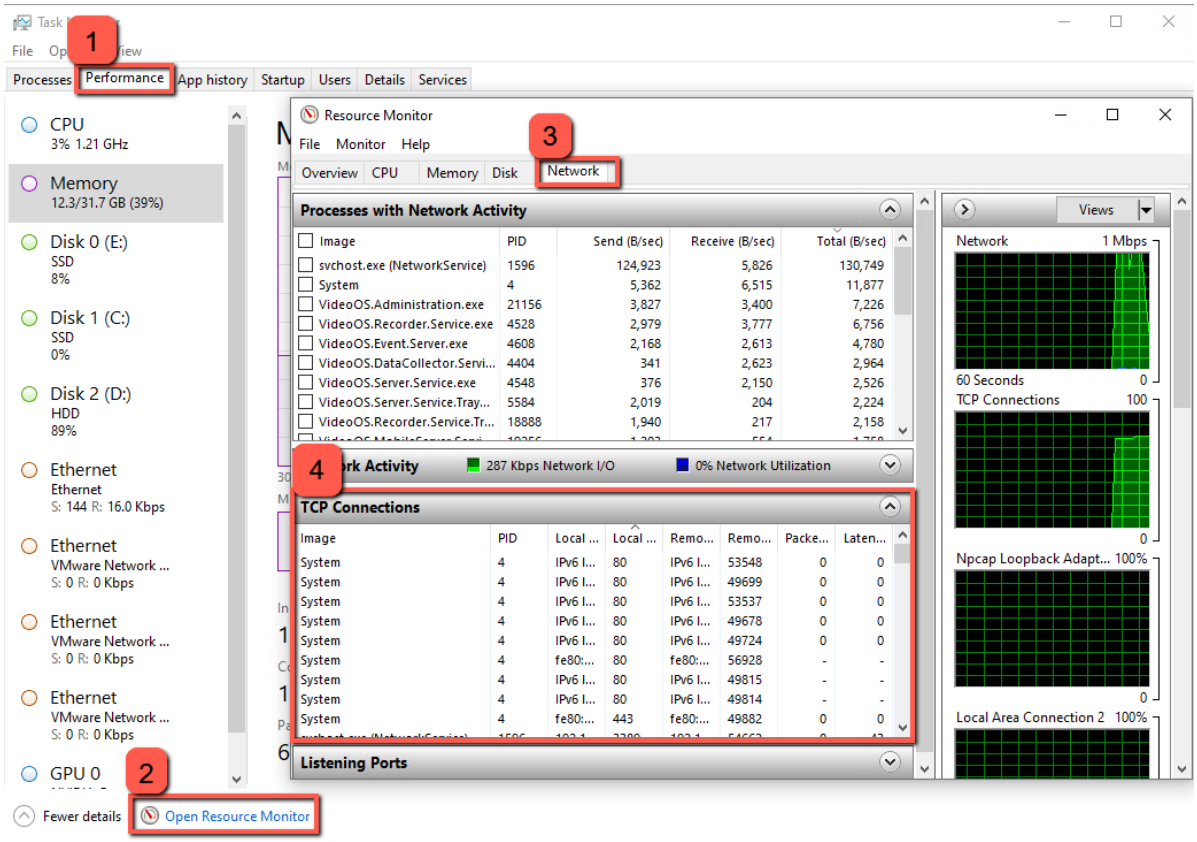
3. In the next wizard window, use the (**Default Factory**) credentials

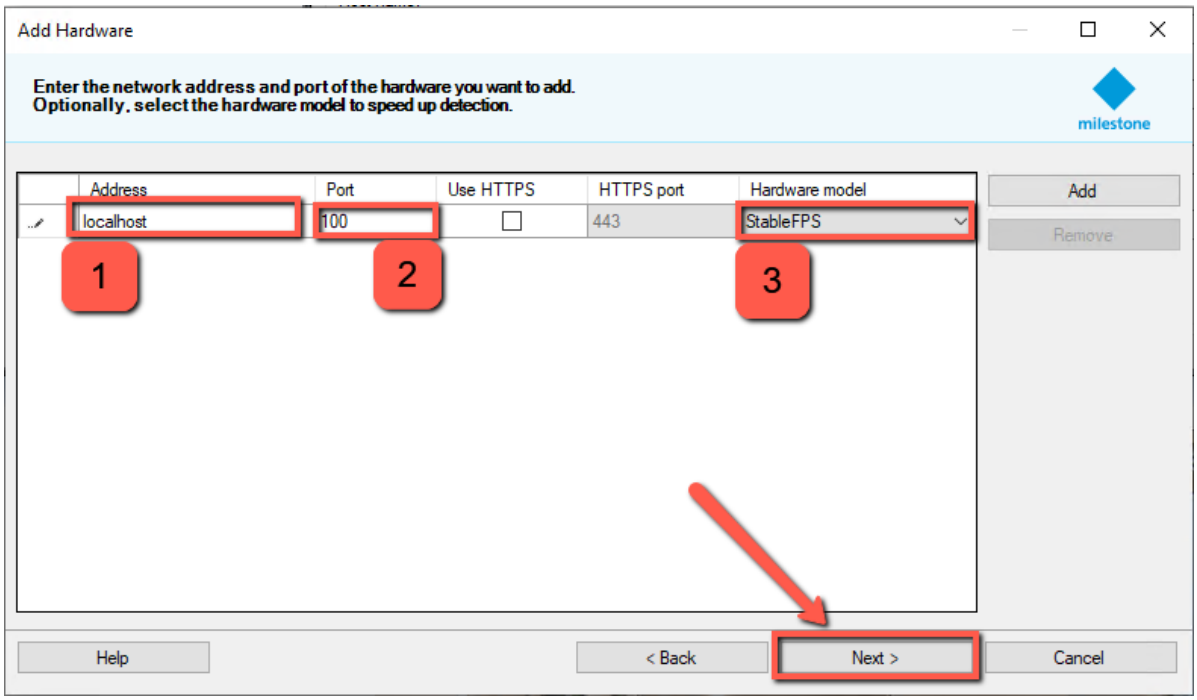


4. Select the relevant RTSP communication driver protocol (**Milestone —> Stable FPS**)

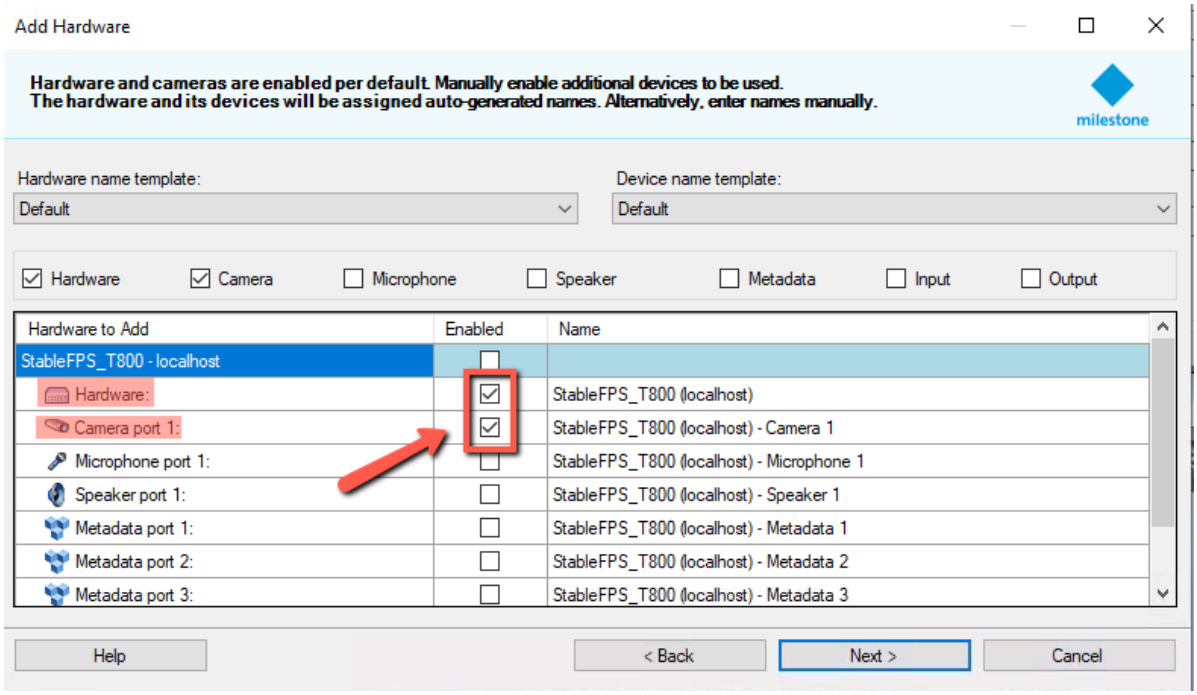


5. input the following information:
    a. Change the IP address to “**local host”**
    b. Find a free port in the machine using (**step #6)**
    c. Select “**StableFPS”** option in “**Hardware model”**
6. Input a free port, check if the port is free, open **Task Manager** —> **Open Resource Monitor —> Network tab —> TCP Connection** (if a port is not registered then it is free for utilization)
7. Click “**Next**”

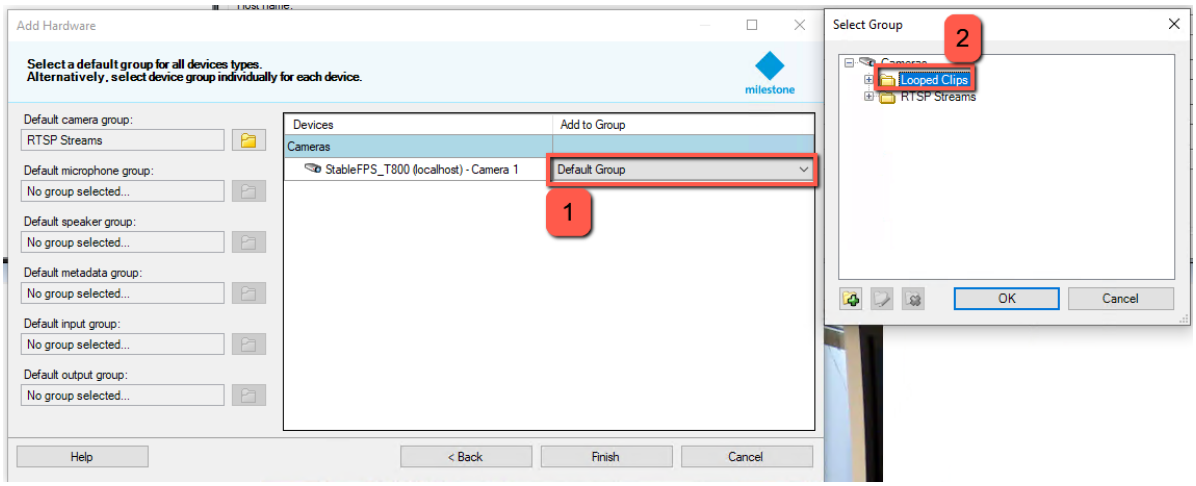




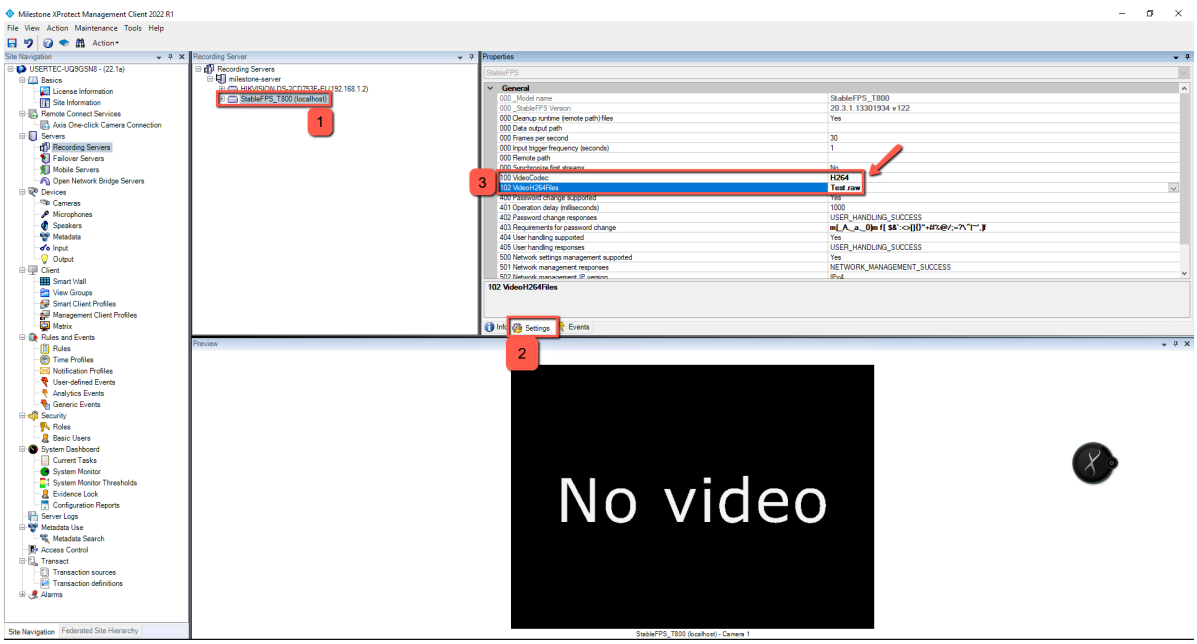
8. Click next until you get the below window, check only the HW & Camera options



9. Click Next
10. Group the new virtual camera stream under the “**Looped Clips**” folder



11. Click finish
12. Select the **new created HW**, browse to the “**Settings”** tab
    a. Choose the “**H264”** option under the **“VideoCodec”** field
    b. Select the the source **.RAW** file you wish to play from under the **VideoH264Files** field
    c. Save the changes

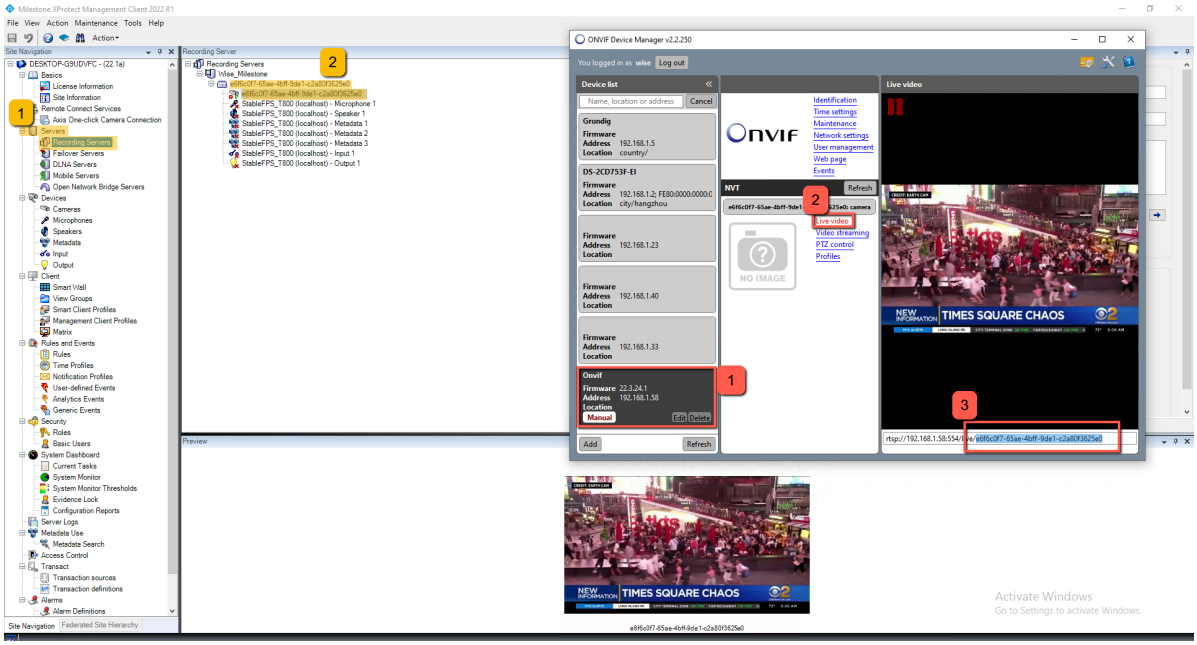


13. Rename the camera according to the guid that the Milestone VMS generated:

a. Open ONVIF Device Manager

b. copy the guid

c. Past the guid description instead of the original camera name



Obtaining the RTSP Milestone stream for the Wise application

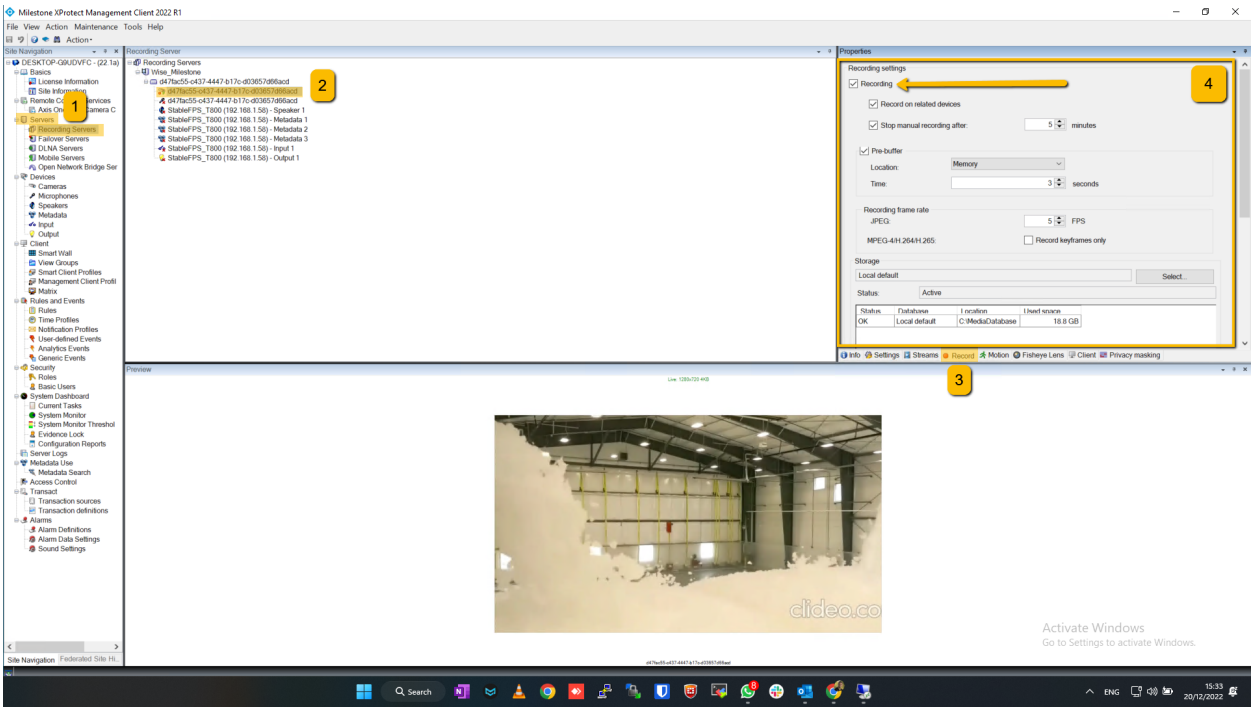
1. Verify that the Network Bridge is operational
2. Open ONVIF Device Manager

3. Login using “**Open Network Bridge”** credentials

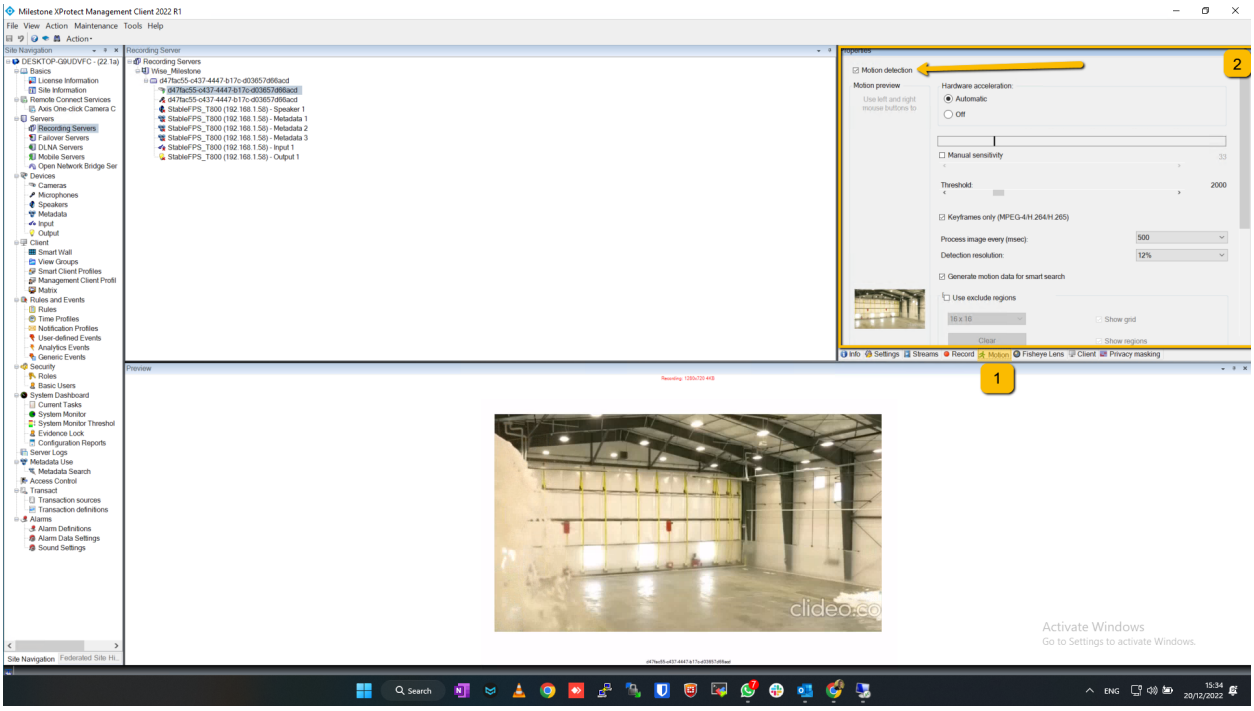
Enable Recording and Motion functions

In any RTSP setup (virtual or real camera), enable the recording and Motion functions:

1. Open Milestone Xprotect Management
2. Browse to “Servers” —> “Recording Servers” —> relevant camera
3. Enable the Recording function



4. Enable the Motion function

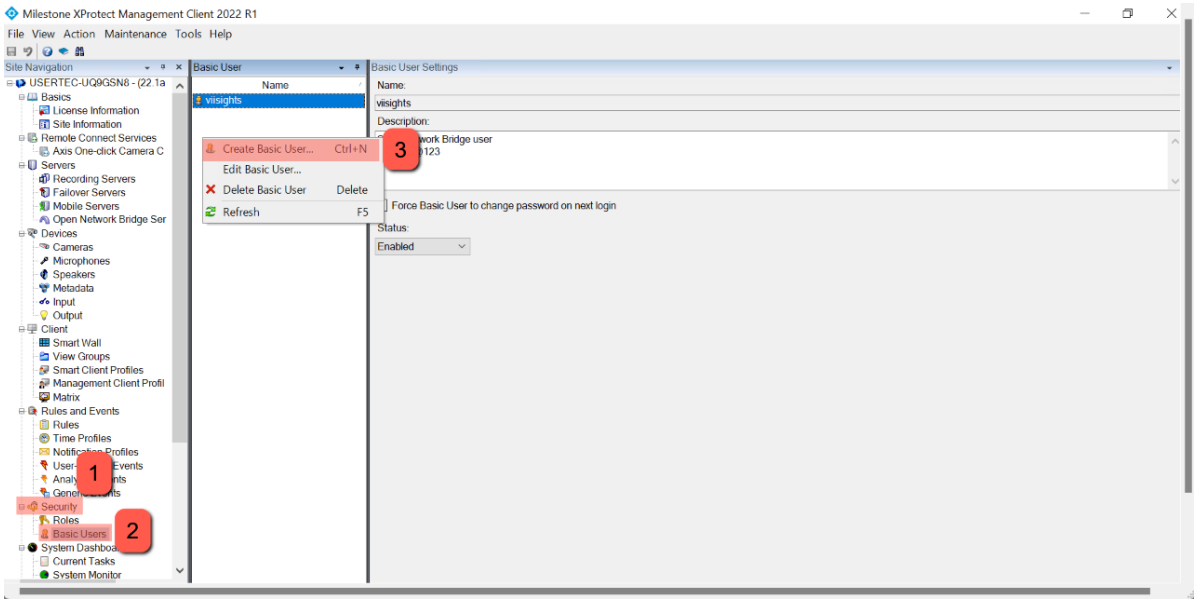


Enabling ONVIF Bridge Service

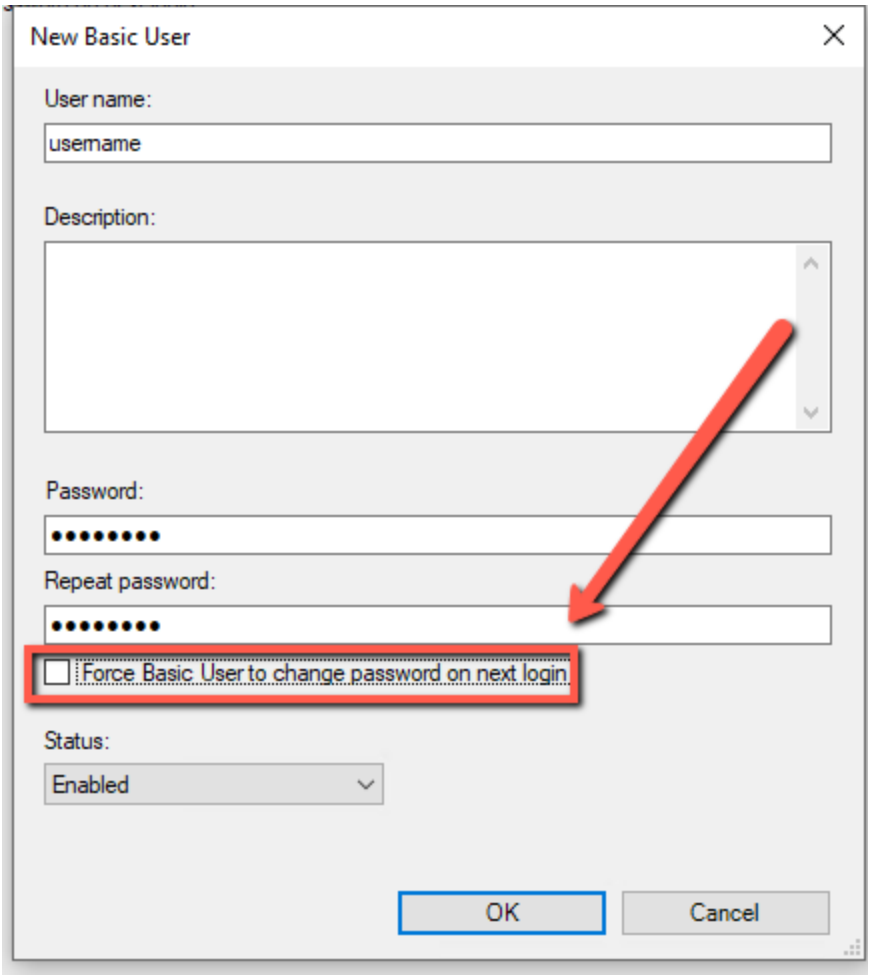
Create an ONVIF Bridge User

These credentials makes it possible for the user to utilize the ONVIF capabilities, providing an local RTSP URL for the integration usage.

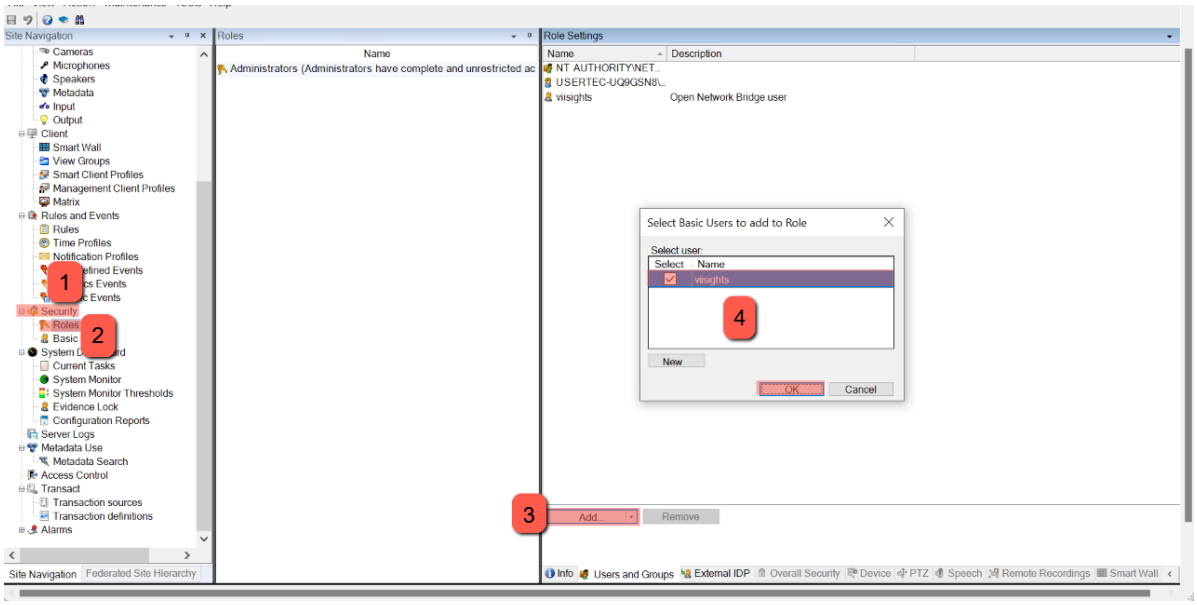
1. Open **Milestone XProtect Management Client** program
2. Browse to **Security** —> **Basic User,** add a new basic user



3. Establish the new basic user, by designating a username and password, make sure to uncheck the “Force Basic User to change password on next login”

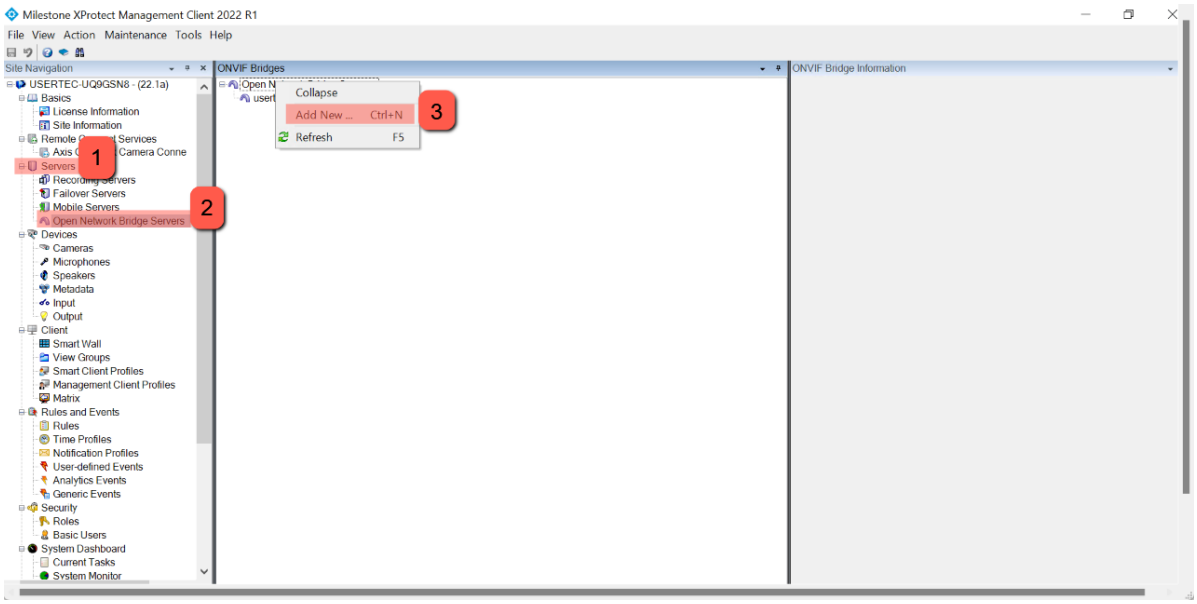


4. Browse to **Security** —> **Roles —>** click **Add,** and assign the new user with Administrator privileges

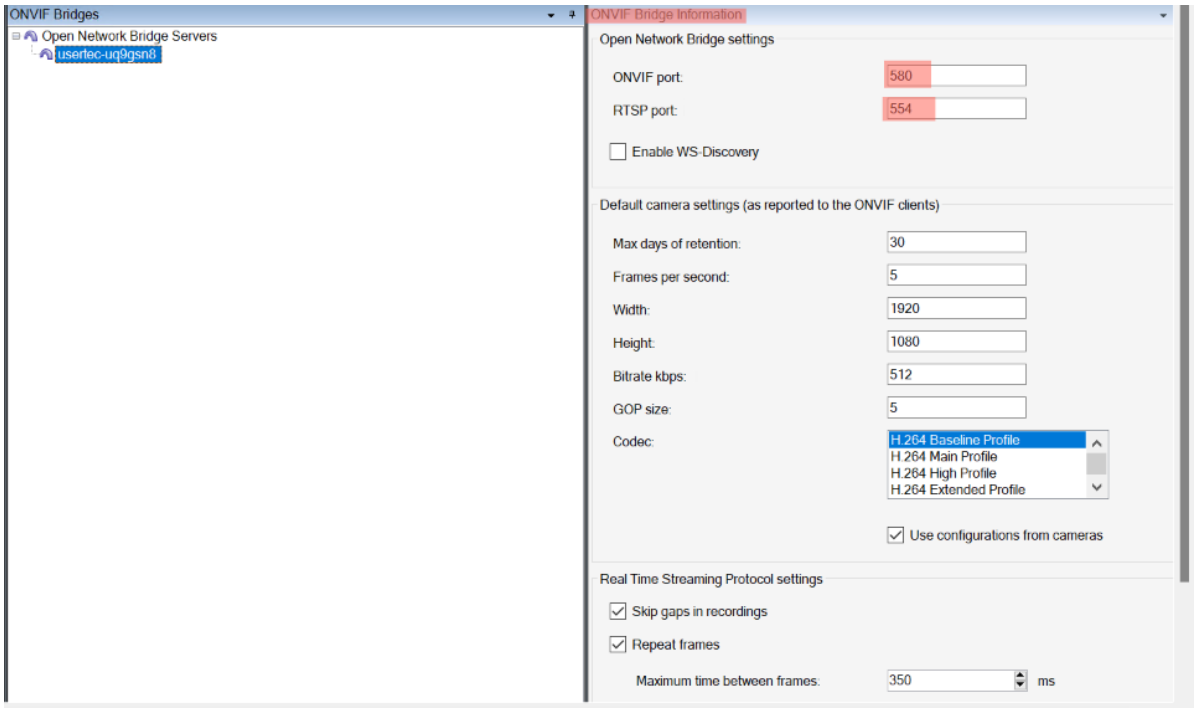


Enable Network Bridge Servers

1. Make sure that Milestone Open Network Bridge is working
2. Browse to **Server —> Open Network Bridge Servers**
3. Right click and add a **new server**

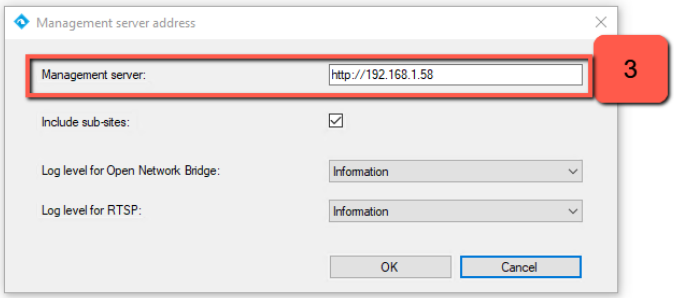


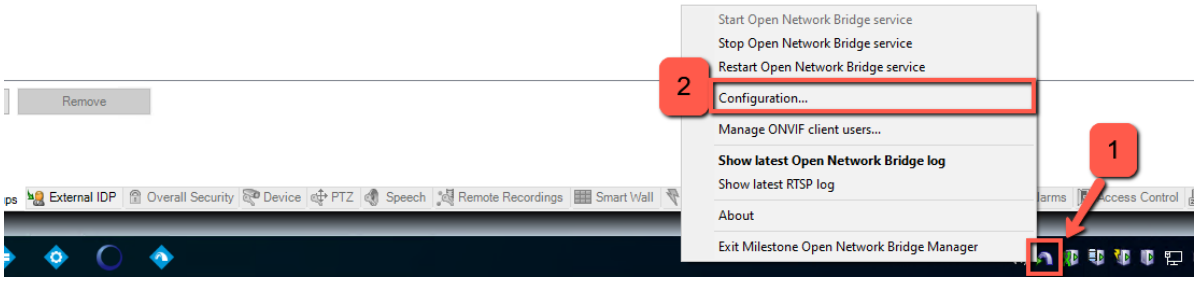
4. Confirm that the following infomration is add as in the picture below



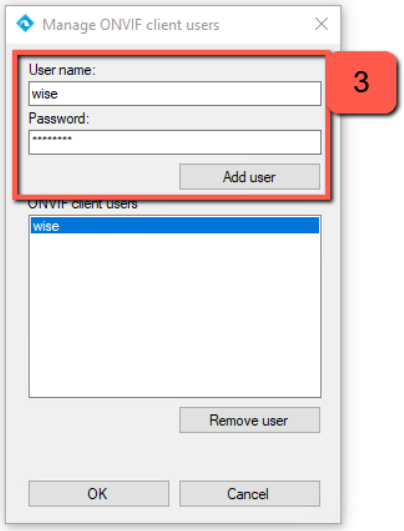
Adding Milestone User to Open Network Bridge

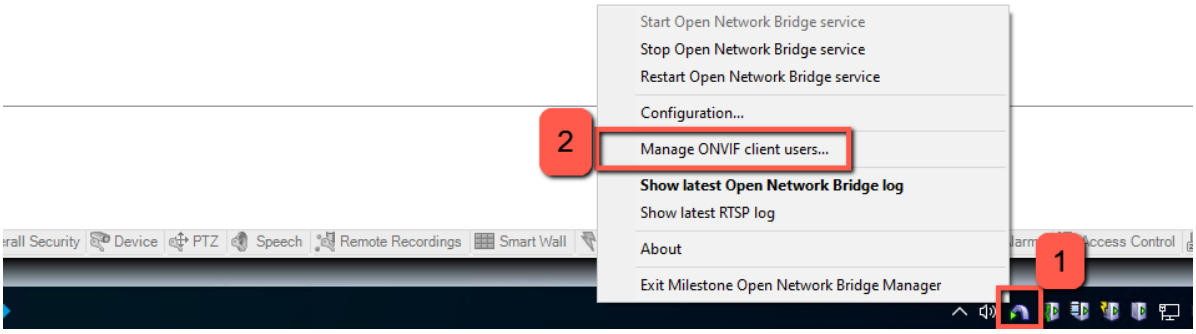
1. Open Milestone Open Network Bridge Manager
2. Right click the lower icon, and select “Configurations”, change the “Management server” to the local host server’s IP address





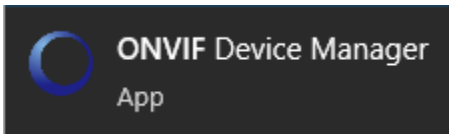
3. Right click the lower icon, and select “Manage ONVIF client users”, add credentials of the the basic user.





Testing ONVIF RTSP

1. Open ONVIF Device Manager

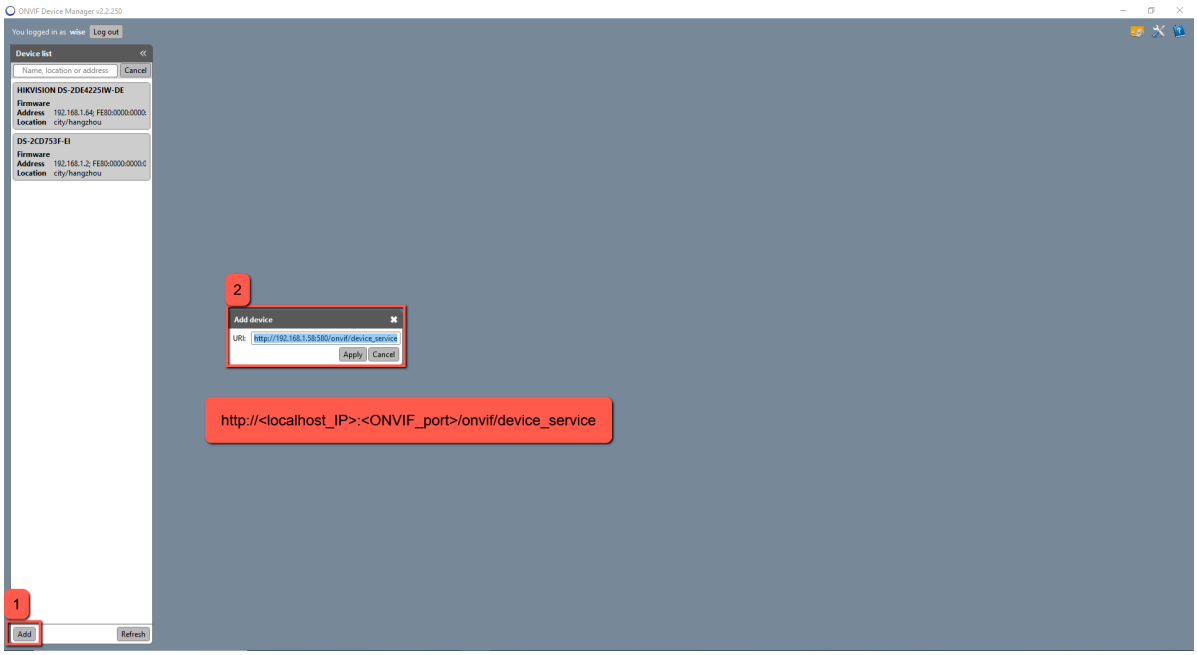


1. Login with the basic user credentials

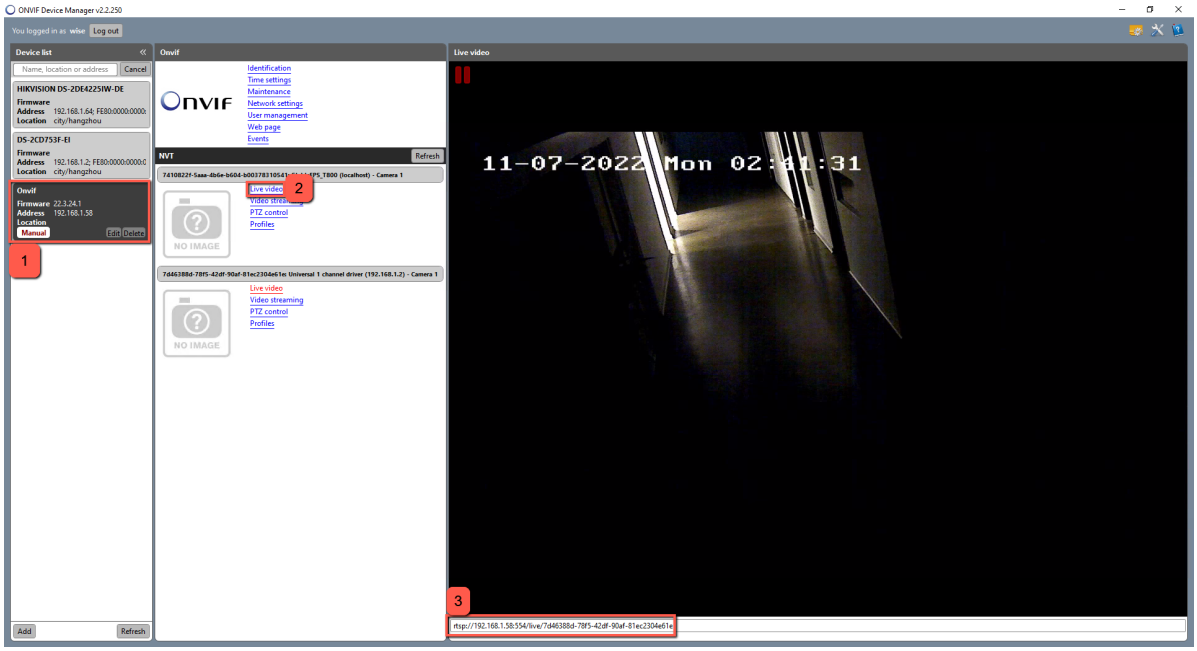
2. Click on the Add button and change the URL to the following format

✅ http://<localhost_IP>:<ONVIF_port>/onvif/device_service

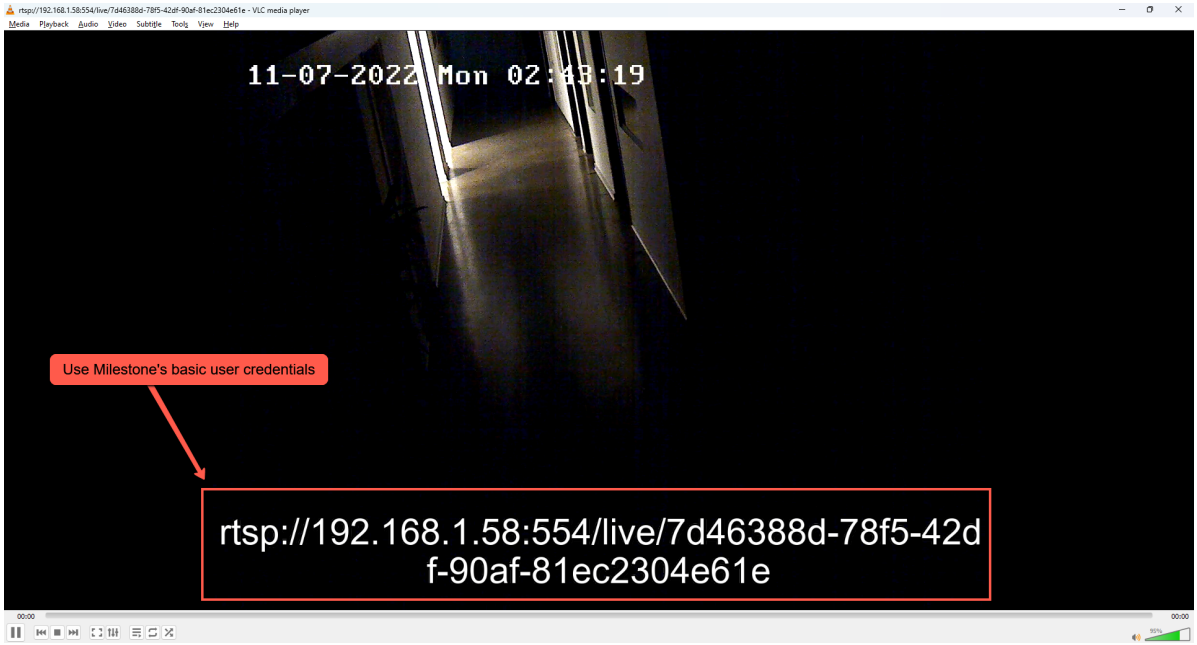
e.g. http://192.168.1.58:580/onvif/device_service



3. To verify that the Milestone RTSP URL is operational, browse to the Onvif device list —> select one of the cameras —> Live video —> copy the RTSP URL



4. Check the URL on VLC or a 3rd party program



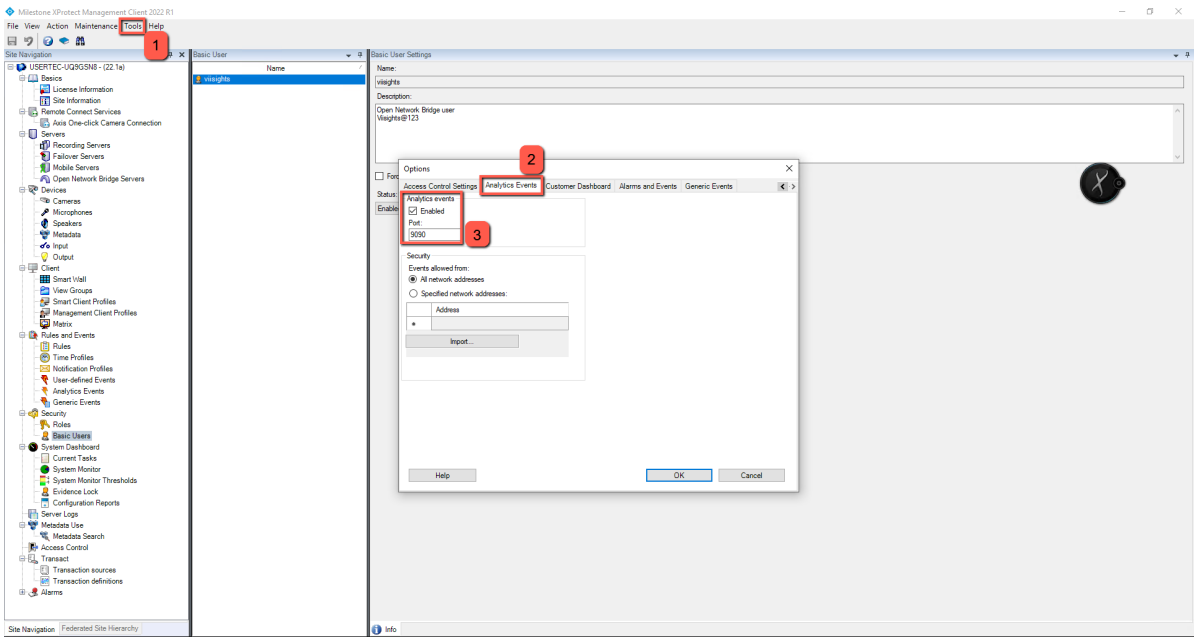
Enabling Analytics Events - Milestone

Open Firewall Windows Port:

1. Open Windows Defender Firewall with Advanced Security
2. Establish inbound and outbound rules of the following ports:
    a. RTSP port 554
    b. Analytics port 9090

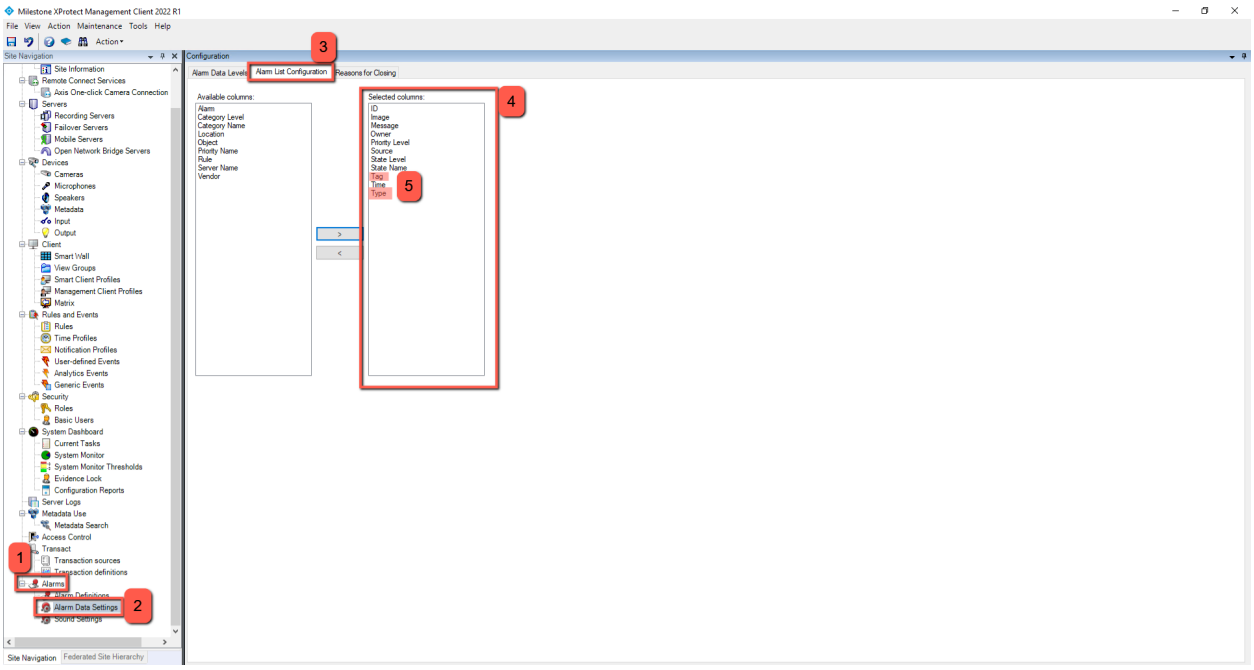
Enable the Analytic Events Service:

1. In Milestone Xprotect Management Client go to **Tools** —> **Options** —> **Analytics Events tab**
2. Enable port 9090
3. Click **OK**



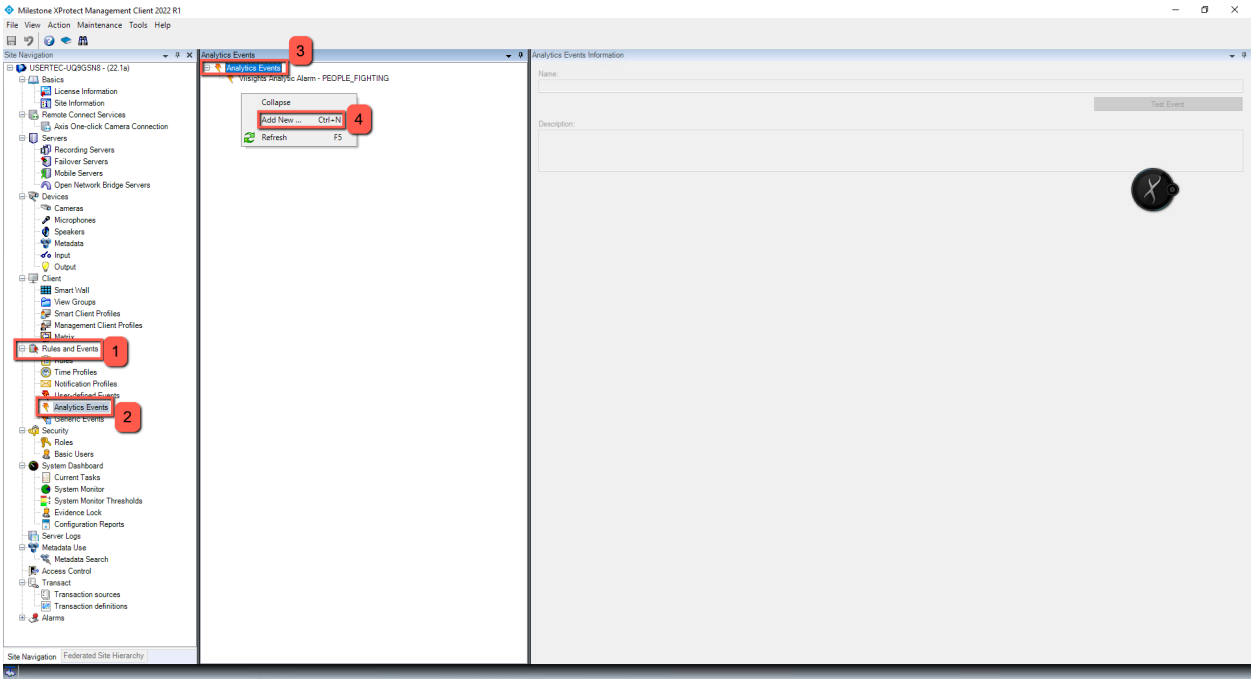
Modify the Alarm Data Settings

1. Browse to **Alarms** —> **Alarm Data Settings —> Alarm List Configuration**
2. Add “Type” & “Tag” columns to the “Selected columns”

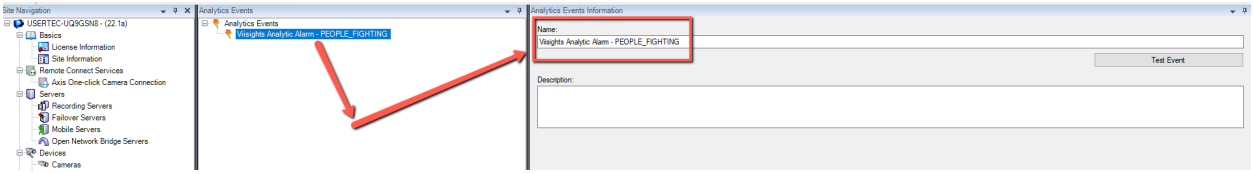


Create an Analytic Event:

1. Browse to **Rules and Events —> Analytics Events**
2. Right Click “**Analytics Event**”
3. Click on **Add New**



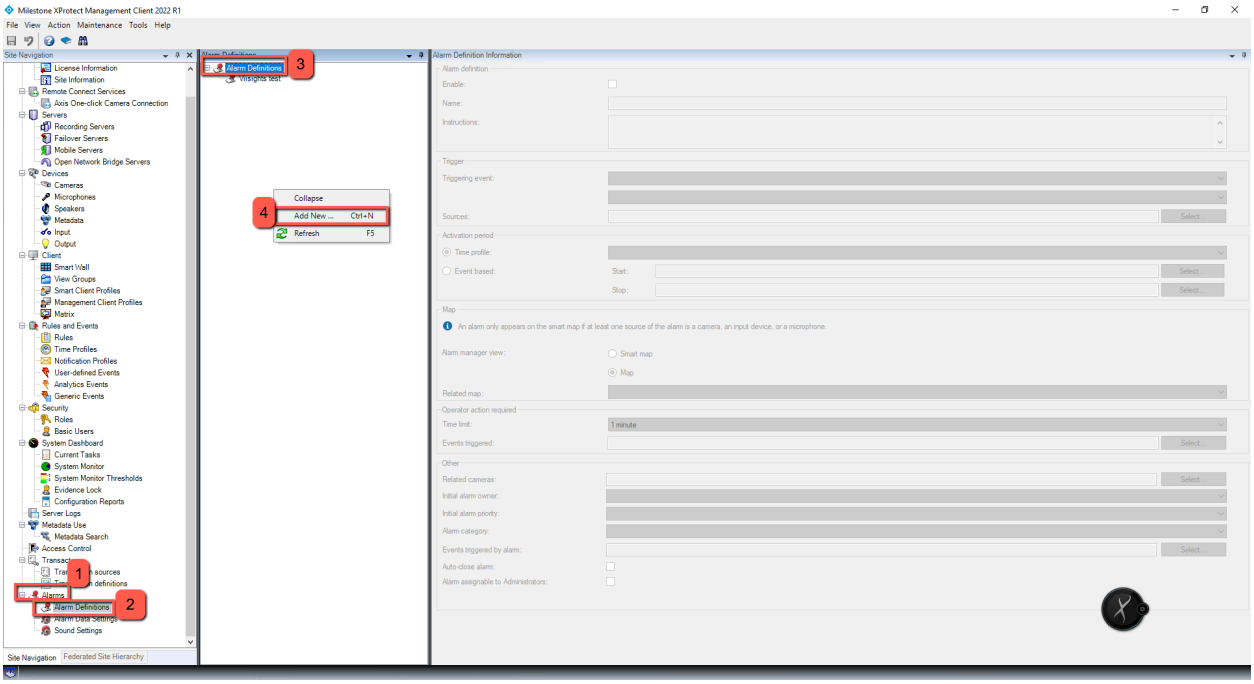
4. Input the name of the Event in the following format



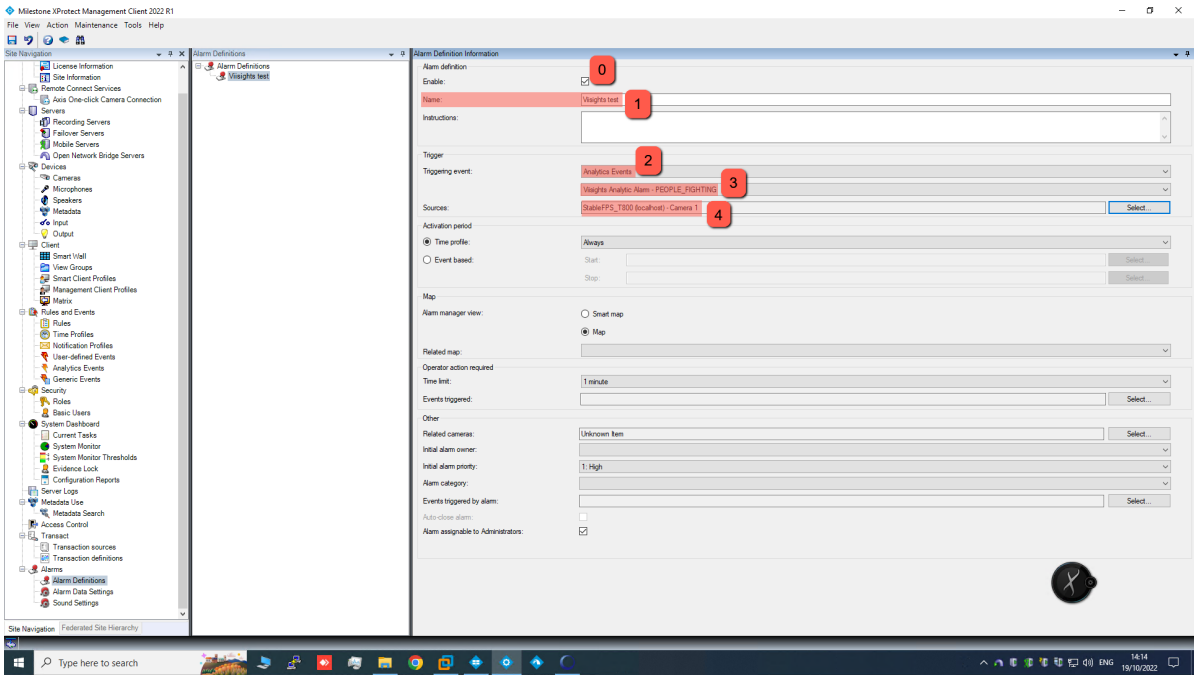
📍 Viisights Analytic Alarm - <class_in_capital_letters>
e.g. Viisights Analytic Alarm - PEOPLE_FIGHTING

Create an Alarm

1. Browse to Alarms —> Alarm Definitions
2. Right click Alarm Definitions and add a new alarm



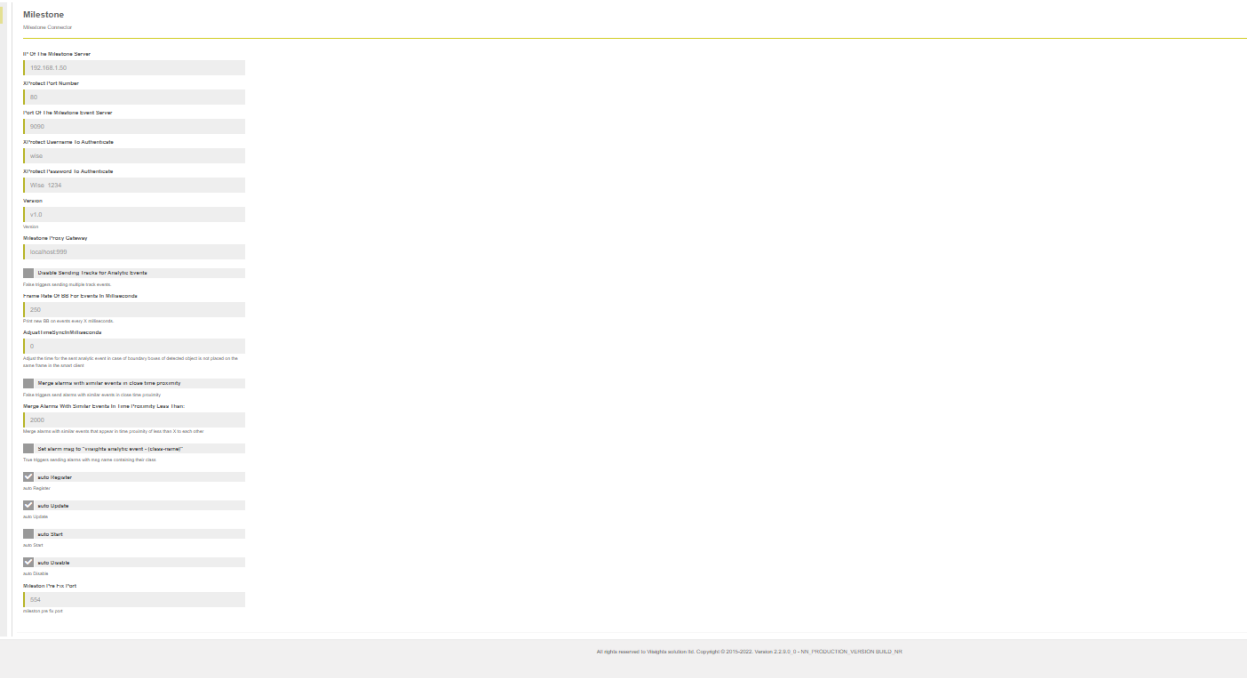
3. Fill in the following data:
    a. Check the enable checkbox alarm
    b. Name of the Alarm
    c. Select the trigger event
    d. Choose the specific Analytic event
    e. Select the camera source


Milestone XProtect Management Client 2022 R1
File View Action Maintenance Tools Help
Site Navigation
Alarm Definitions
Alarm Definition Information
Alarm definition
Enable:
Name:
Visights test
Instructions:
Trigger
Triggering event:
Analytics Events
Visights Analytic Alarm - PEOPLE_FIGHTING
Sources:
StableFPS_T800 (localhost) - Camera 1
Select...
Activation period
Time profile:
Always
Event based:
Start:
Stop:
Map
Alarm manager view:
Smart map
Map
Related map:
Operator action required
Time limit:
1 minute
Events triggered:
Other
Related cameras:
Unknown Item
Initial alarm owner:
Initial alarm priority:
1: High
Alarm category:
Events triggered by alarm:
Auto-close alarm:
Alarm assignable to Administrators:
0
1
2
3
4
Type here to search
ENG
14:14
19/10/2022

Wise Connector Configurations

Setting up the wise connector infomration:

1. Open the wise application
2. In Wise, browse to “System Settings” —> “Connectors” —> “Milestone”



3. input the below information

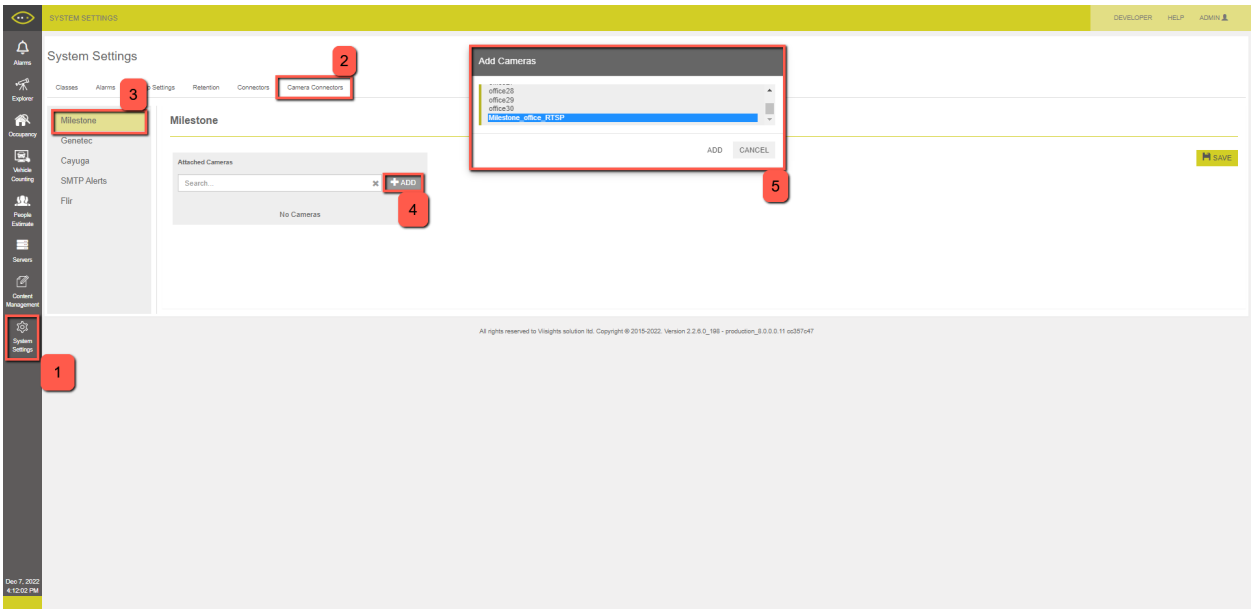
Field	**Value**	**Note**
IP Of The Milestone Server	192.168.1.50	IP of the Milestone server

Field	**Value**	**Note**
XProtect Port Number	80	IP port in charge of communication with Wise UI
Port Of The Milestone Event Server	9090	Set on the XProtect Management Client
XProtect Username To Authenticate	wise	**Currently not relevant**
XProtect Password To Authenticate	Wise_1234	**Currently not relevant**
Version	v1.0	
Disable Sending Tracks for Analytic Events		**Currently not relevant**
Frame Rate Of BB For Events In Milliseconds	250	
AdjustTimeSyncInMilliseconds	0	
Merge alarms with similar events in close time proximity		
Merge Alarms With Similar Events In Time Proximity Less Than:	2000	
Set alarm msg to “viisights analytic event - (class-name)	Mark as **checked**	

4. Click the save button to apply the changes

Setting up the wise Camera connector infomration:

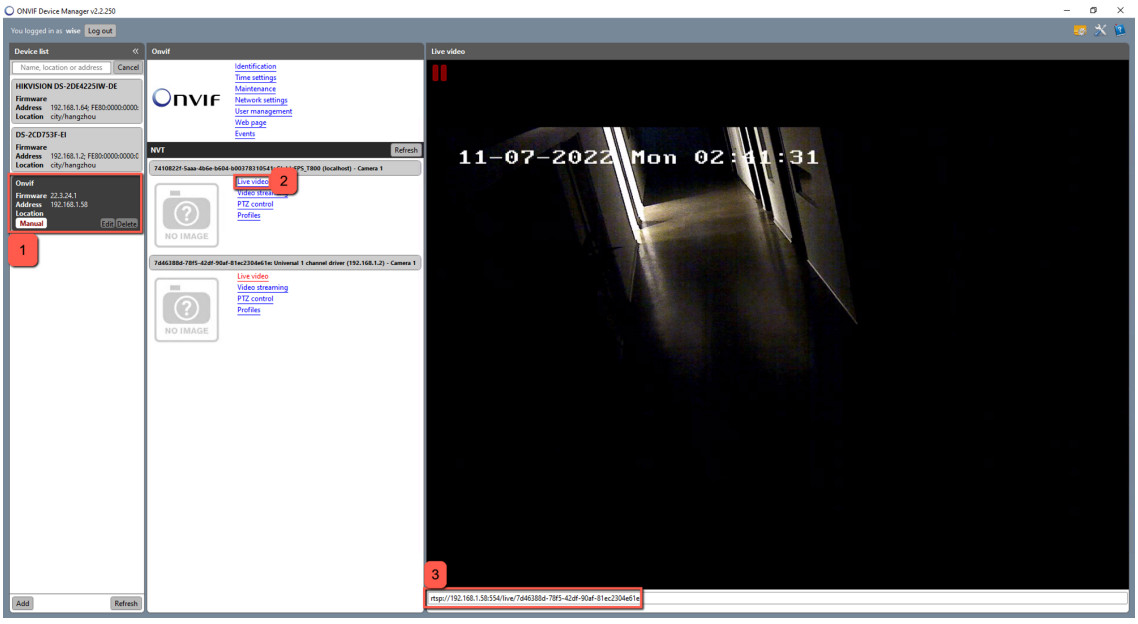
1. Browse to “System Settings” —> “Camera Connectors” —> “Milestone”
2. Click the ADD button to attach the relevant camera
3. Click the save button to apply the changes


SYSTEM SETTINGS
DEVELOPER
HELP
ADMIN
Alarms
Explorer
Occupancy
Vehicle Counting
People Estimate
Servers
Content Management
System Settings
System Settings
Classes
Alarms
Settings
Retention
Connectors
Camera Connectors
Milestone
Genetec
Cayuga
SMTP Alerts
Flir
Milestone
Attached Cameras
Search...
ADD
No Cameras
Add Cameras
office28
office29
office30
Milestone_office_RTSP
ADD
CANCEL
SAVE
1
2
3
4
5

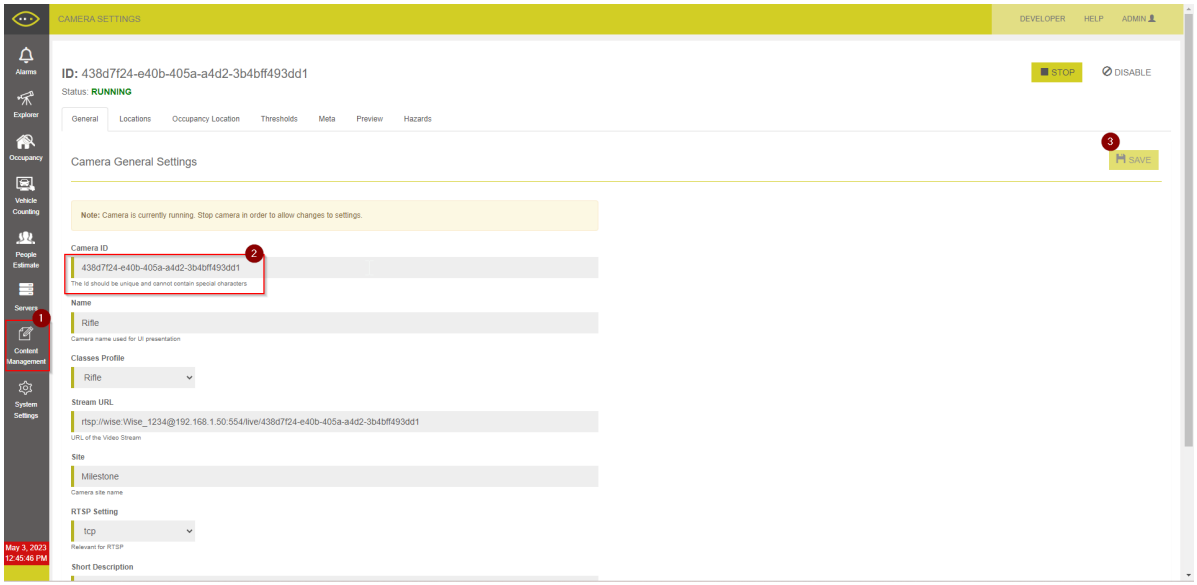
Registering Milestone Stream in Wise

In order to view the Wise alerts in the Milestone Xprotect Client, the following settings must be implemented

1. Register the Milestone RTSP in Wise’s content management
    a. On the Open ONVIF application, copy the session ID allocated by the Xprotect program
    b. Go to Milestone Server —> Open ONVIF Device Manager —> click on the relevant live video camera stream —> copy the RTSP’s session ID, highlighted in yellow below



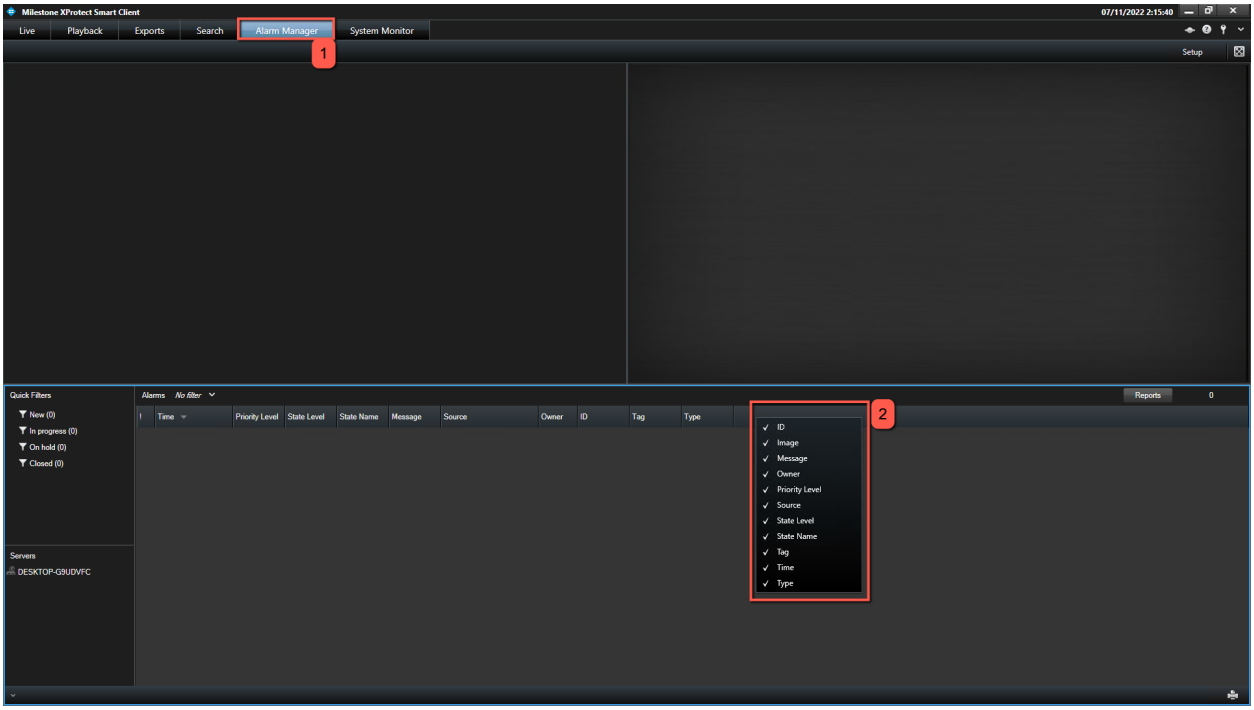
2. In Wise, rename the relevant camera's ID to RTSP's session ID, Go to Wise —> Content Managment —> Camera's settings —> rename the ID



3. In Milestone Xprotect, rename the device & camera name to the TSP's session ID, Go to Xprotect Managment server —> Servers —> recording servers —> rename both Device and Camera name to

Milestone Xprotect Smart Client

1. Open Milestone Xprotect Smart Client
2. Browse to Alarm Manager, right click the filter title
3. Add Tag & Type



Create Alarm Video on XProtect Smart Client

1. Open the XProtect Smart Client, switch to Setup mode

2. In setup mode - Create new view
3. Add viisightsOverlay plugin to view
4. Click on view, click "select camera" (bottom left side of screen) and add the appropriate camera.
5. Settings – Analytic Overlay – choose appropriate camera.