

# Milestone XProtect Plugin

## Introduction

Witness supports integration with many different types of external systems through the use of plugins. These are stand-alone software libraries which are dynamically loaded by the Management Server and have the ability to pass data and events to and from the external system. This document describes the process of setting up the Milestone XProtect Plugin.

The Milestone plugin supports integration with the latest versions of Milestone XProtect. This also includes OEM versions of the same product, such as Siemens Siveillance.

The Milestone Plugin extends the capability of Witness by enabling UI recording, alarms and bookmark integration with XProtect. Witness is able to directly support the majority of PTZ cameras on the market, however it takes full advantage of the recording capabilities and alarm management within the Milestone software to provide the operator with comprehensive incident management along with tightly coupled post-incident analysis.

## Contents

- 
- [Milestone XProtect Requirements](#)
  - [Witness Requirements](#)
  - [Configuring Milestone XProtect](#)
    - [Creating a User and Role](#)
    - [Filtering Cameras](#)
    - [Configuring the Modern Browser Plugin](#)
  - [Configuring the Witness Plugin](#)
    - [Adding Additional Servers](#)
    - [Mapping Cameras](#)
  - [Milestone XProtect Smart Client](#)
  - [Milestone XProtect Web Client](#)
  - [XProtect Client Plugin](#)
    - [XProtect Client Plugin Requirements](#)
    - [Setup Procedure for the XProtect Client Plugin](#)
  - [Related Information](#)
- 

## Milestone XProtect Requirements

- Milestone XProtect 2016 Professional or higher
- Version 2016, 2016 R2 or 2019 R1
- Edition Professional / Corporate or higher
- Basic User must be set up for a Witness system user with full camera permissions
- The Modern Browser plugin (Chromium) is required to host the AdvanceGuard Web UI

 The requirements are the same for OEM editions of the software including Siemens Siveillance.

## Witness Requirements

- The Witness installation needs to be licensed to use the Milestone plugin and the required number of cameras
- The Milestone plugin needs to be installed
- At least one camera must be configured to generate bookmarks
- The Mobile Server must be installed and licenced to use the AdvanceGuard Web UI within the XProtect Smart Client

 The plugin can be selected during setup and will automatically install the files in the correct locations. If you have already installed Witness without the Milestone plugin, you can run the setup to modify your installation to include the Milestone plugin.

## Configuring Milestone XProtect

Once the software has been installed, and the software licences have been activated, the system must be configured.

**Open the Management Client after installation:** This is where you configure and maintain your system and features.

**Add hardware devices to your system:** When you open your system for the first time, the Advanced configuration wizard help assists you to add hardware devices, such as cameras, to your system and configure them with user names and passwords.

**Configure cameras:** You can specify a wide variety of settings for each camera connected to your system. Settings include video format, resolution, motion detection sensitivity, where to store and archive recordings, any pan-tilt-zoom (PTZ) preset positions, association with microphones, speakers and more.

**Configure events, input and output:** Use system events, for example based on input from sensors, to automatically trigger actions in your system. For example: starting or stopping recording on cameras, switching to a particular video frame rate, making PTZ cameras move to specific preset positions. Also use events to activate hardware output, such as lights or sirens.

**Configure alarms:** You can configure alarms to be generated for Milestone system events, but all Witness system events and live events are automatically, dynamically integrated. The Alarms feature also handles general alarms settings and alarm logging. Alarms appear in the alarm manager in XProtect Smart Client. Here, you can view and manage alarms to ease overview and to delegate and handle alarms. You can, for example, reassign alarms, change their status or comment on alarms.

See the Milestone documentation: <https://www.milestonesys.com/globalassets/techcomm/ltsb/provms/english-united-states/index.htm?toc.htm?9073.htm> for further information

### Creating a User and Role

The term **users** primarily refers to users who connect to the surveillance system through their clients. You can configure such users in two ways:

- As **basic users**, authenticated by a user name/password combination.
- As **Windows users**, authenticated based on their Windows login

You can add both types of users through the Configure User Access wizard or individually. By grouping users, you can specify rights for all users within a group in one go. If you have many users performing similar tasks, this can save you significant amounts of work. User groups are logical groups created and used for practical purposes in the Management Application only. They are not in any way connected with user groups from central directory services. If you want to use groups, make sure you add groups before you add users: you cannot add existing users to groups. Finally, the Administrators group is also listed under Users. This is a default Windows user group for administration purpose which automatically has access to the Management Application." - © 2019 Milestone Systems A/S.

It is necessary to have a minimum of one basic user with a username and password so Witness can access the Milestone Server. Once created in the Milestone Management Client, the username and password must be set in the Milestone configuration in Witness. In addition we would recommend that a user role is created on the Milestone Server specifically for the Witness user. This will allow permissions to be set for only the devices that Witness is interacting with.

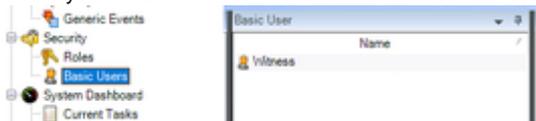
As a minimum, the Witness user role will require the following global permissions:

- Cameras Read
- Cameras Bookmarks (Full control)
- Alarms Full Control

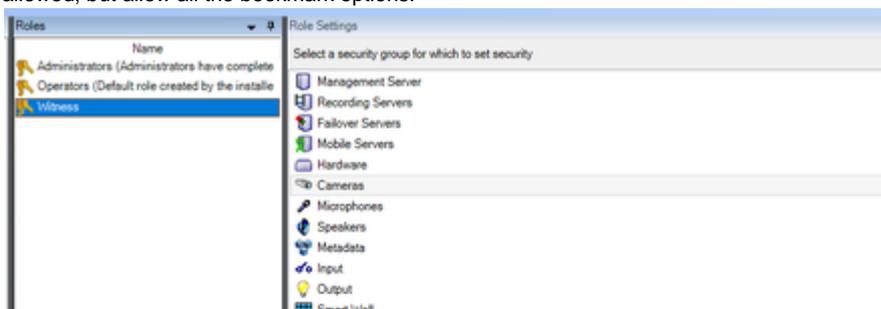
### Filtering Cameras

On Milestone systems that have a large number of cameras it may be really beneficial to filter the camera list in Witness to show only the cameras being controlled by the Witness software. This can be achieved using permissions, which involves ensuring the global read permissions for all cameras are unset and instead only add the read option to the required devices. To filter the cameras, follow these steps:

1. Ensure you have a Witness user and a dedicated Witness Role in the Milestone system.



2. Ensure that the Witness user has been allocated to the Witness group.
3. Select the Witness role and select the *Overall Security* settings. Select *Cameras* and ensure that neither Full Control or Read is allowed, but allow all the bookmark options:



Role can perform the following on the selected security group		
	Allow	Deny
Full control	<input type="checkbox"/>	<input type="checkbox"/>
Read	<input type="checkbox"/>	<input type="checkbox"/>
Edit	<input type="checkbox"/>	<input type="checkbox"/>
View live	<input type="checkbox"/>	<input type="checkbox"/>
Playback	<input type="checkbox"/>	<input type="checkbox"/>
Retrieve remote recordings	<input type="checkbox"/>	<input type="checkbox"/>
Read sequences	<input type="checkbox"/>	<input type="checkbox"/>
Smart search	<input type="checkbox"/>	<input type="checkbox"/>
Export	<input type="checkbox"/>	<input type="checkbox"/>
Create bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Read bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Edit bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Delete bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Create and extend evidence locks	<input type="checkbox"/>	<input type="checkbox"/>
Read evidence links	<input type="checkbox"/>	<input type="checkbox"/>

4. Select *Alarms* and ensure all options are enabled:

Role can perform the following on the selected security group		
	Allow	Deny
Full control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
View	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disable alarms	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Receive notifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manage security	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5. Save your changes.

6. Select the *Device* settings for the same security role and on the cameras which you want to appear in Witness, select the *Read* permission:

Role can perform the following on the selected device or device group:		
Cameras	<input checked="" type="checkbox"/>	
Read	<input checked="" type="checkbox"/>	
Live	<input type="checkbox"/>	
View live	<input type="checkbox"/>	
Recorded video	<input type="checkbox"/>	
Playback	<input type="checkbox"/>	
Within time profile	<input type="checkbox"/>	

7. By default all other cameras should not have the Read permission enabled and therefore will not appear in Witness.

8. Save the settings.

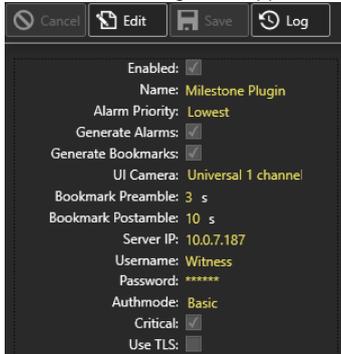
### Configuring the Modern Browser Plugin

The Modern Browser plugin available here: <https://developer.milestonesys.com/s/article/alternative-browser-plugins-for-the-XProtect-Smart-Client-howto> is a Chromium based project and provides a modern HTML 5 client. This is required to run the AdvanceGuard Web UI because the built-in Internet Explorer browser is not supported.

The plugin installer can be downloaded from here: <https://github.com/cascadia-technology/ModernBrowser/releases>. Once installed the plugin can be added to a XProtect Smart Client layout and configured with AdvanceGuard Web URL.

### Configuring the Witness Plugin

The Milestone Plugin will appear as a node under the Integration Configurations folder within the Configuration Tree.



**Enabled:** Select to enable the Milestone Plugin.

**Name:** The unique name of the plugin.

**Alarm Priority:** This sets the minimum level of alarm that the plugin will report to the Milestone system.

**Generate Alarms:** Select to enable alarms in the Milestone XProtect Smart Client.

**Generate Bookmarks:** Select to enable bookmarks to be created in the recorded video when an alarm is triggered in the Milestone XProtect Smart Client.

**UI Camera:** The name of the UI Stream in Milestone. Once the UI MJPEG stream has been configured in Milestone you will be able to select it here. This enables Witness to bookmark the UI video recording in the event of an incident.

**Bookmark Preamble (s):** The period of time before an alarm is triggered recorded in a bookmark.

**Bookmark Postamble (s):** The period of time after an alarm is triggered recorded in a bookmark.

**Server IP:** The Milestone server IP address.

**Username:** The username of the User logged into the Milestone services.

**Password:** The password of the User logged into the Milestone services.

**Authmode:** Specifies the security protocol for the User:

- Basic**
- Windows SSO** (Single Sign On)
- Windows SSL** (Secure Sockets Layer)
- Windows**

**Critical:** Select to ensure the primary server is connected on the plugin startup and remains connected.

**Use TLS:** Enable TLS for end-to-end communications security between Witness and Milestone.

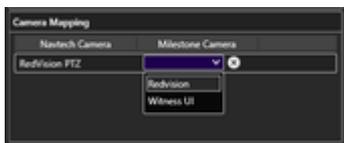
### Adding Additional Servers



On larger Milestone systems that include additional servers for either load or redundancy, or both, it may be necessary to add these servers to the configuration. The primary server should always be added in the main part of the configuration and only additional recording and events servers should be added here. To add additional servers:

1. Select *Edit* on the plugin configuration.
2. Select the + button in the Milestone Servers list.
3. Complete the relevant server details.
4. Repeat steps 2 3 as necessary.
5. Select Save when complete.

### Mapping Cameras



Once the plugin has successfully connected to the Milestone Server it will retrieve a list of configured cameras. The mapping configuration is required to map each of the cameras configured in Witness to the corresponding cameras in Milestone. This process ensures that Witness creates bookmarks for the correct camera in response to an alarm in Witness. To map the cameras:

1. Select *Edit* on the plugin configuration.
2. For each Witness camera select the appropriate Milestone camera from the drop down list.
3. Select Save when complete.

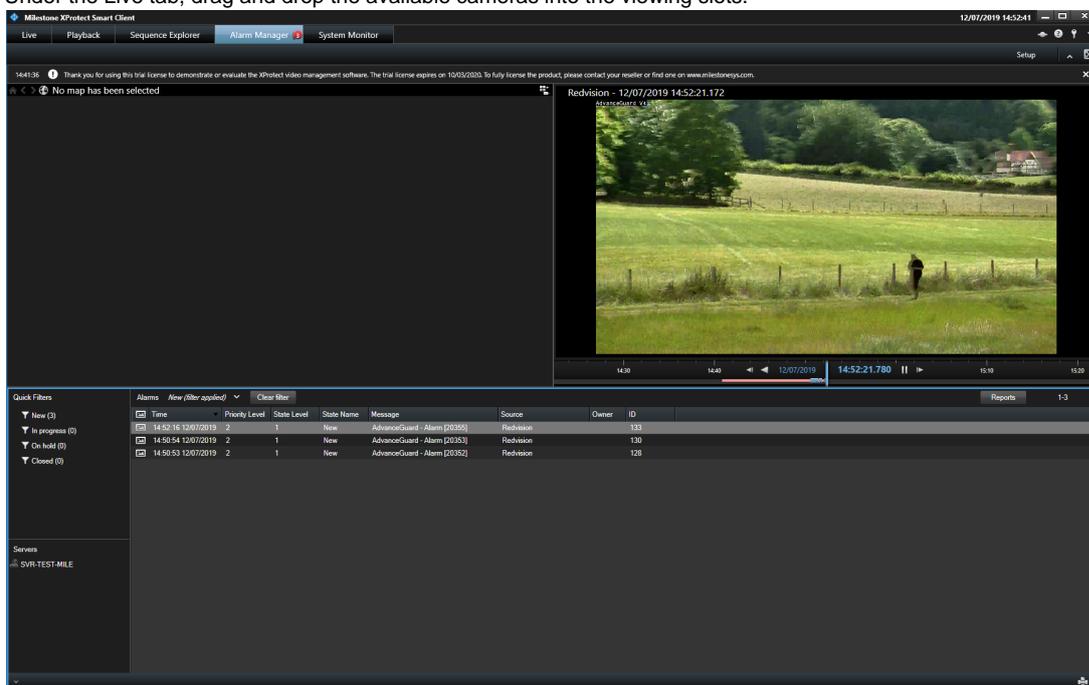
**Note** that you can assign multiple Milestone cameras to a single Witness camera. This has the advantage of using a single camera to create bookmarks in multiple video feeds on the VMS. This is required for specific camera models that support dual optics.

**Note** that the UI camera is mapped in the main configuration, not in this list. Please see the previous section *Configuring the Plugin in Witness*.

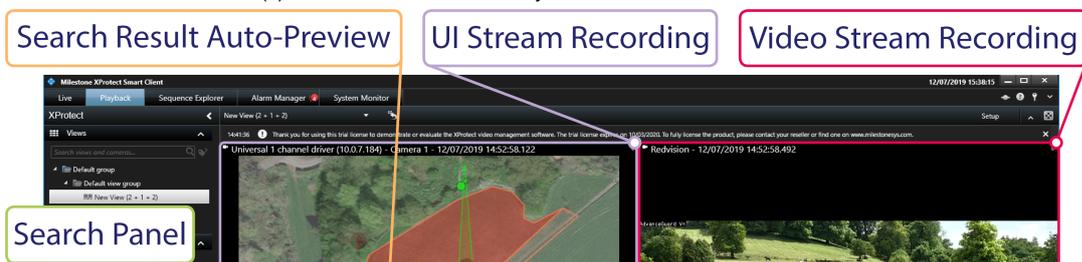
### Milestone XProtect Smart Client

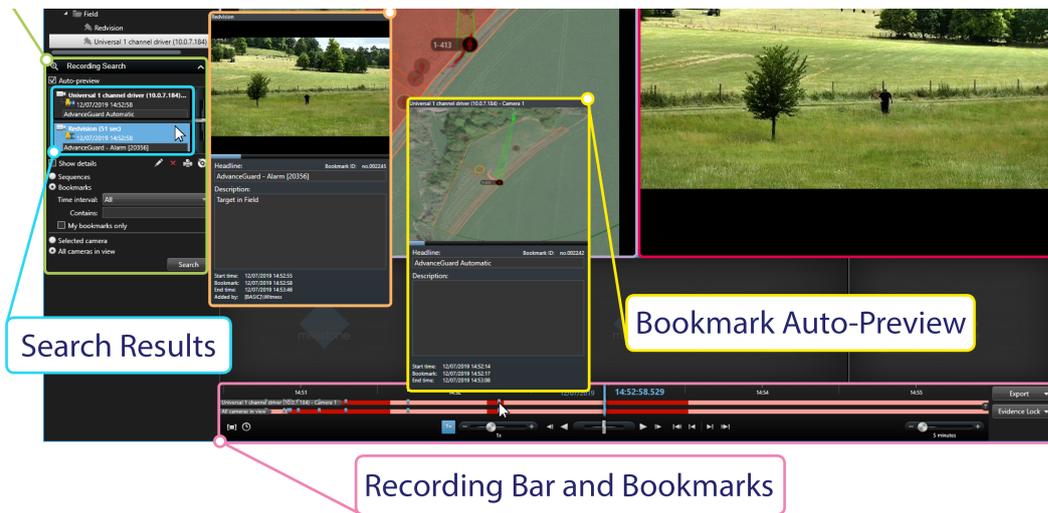
The XProtect Smart Client is the desktop UI for Milestone XProtect server. On opening the client:

1. Under the Live tab, drag and drop the available cameras into the viewing slots.

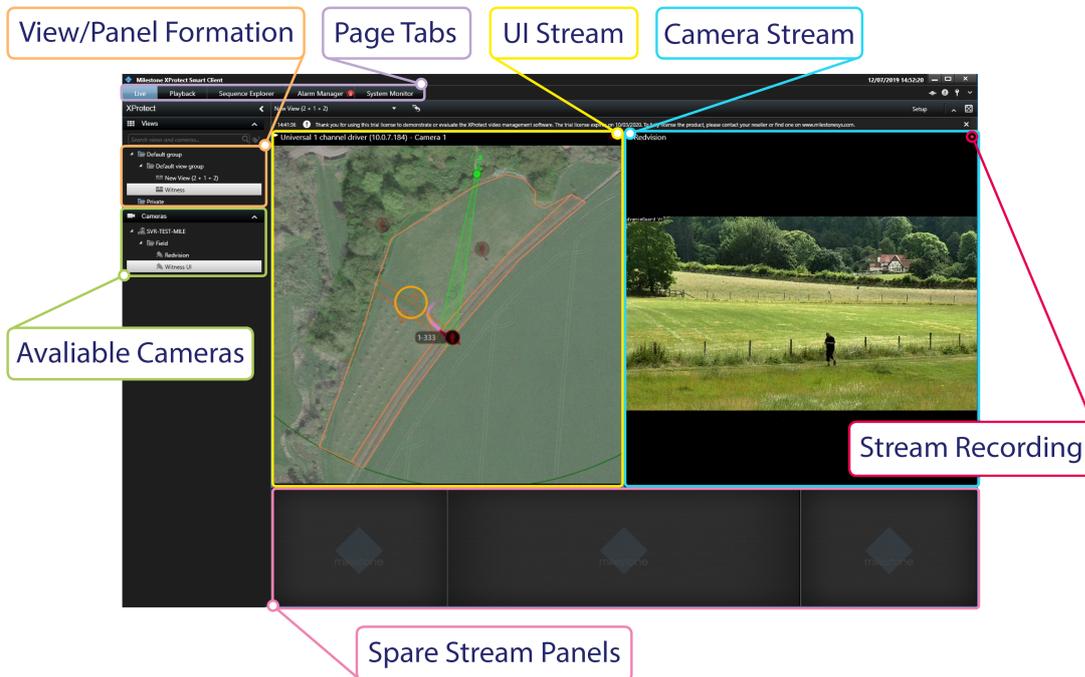


2. The UI Stream and Camera(s) will be viewed concurrently.

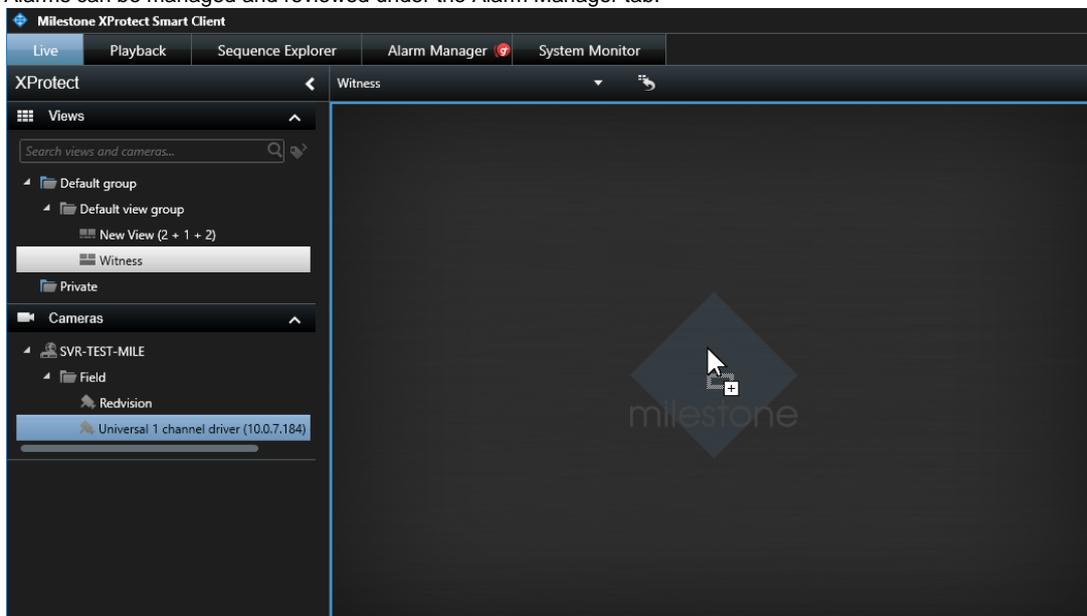




3. Use the Playback tab to review alarms, and search through all recorded video.



4. Alarms can be managed and reviewed under the Alarm Manager tab.



For the UI to be streamed, Witness **must** have a separate *PPI Panel* open, with *UI Stream* set to *Enabled*.

### Milestone XProtect Web Client

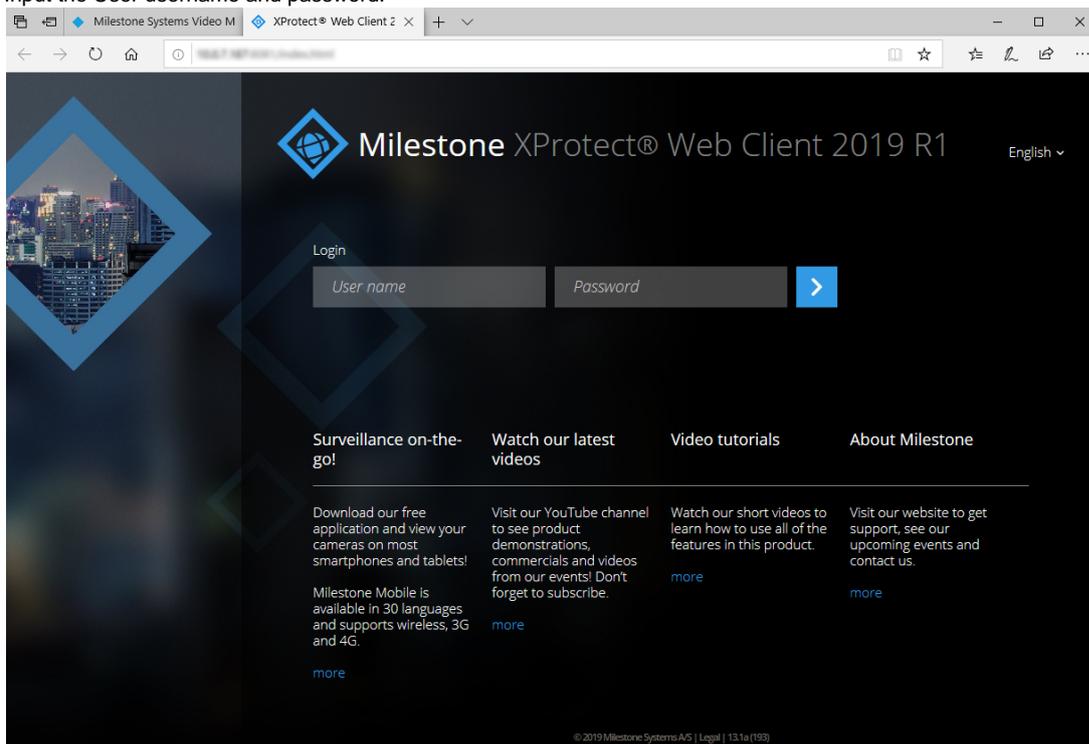
"XProtect Web Client is a web-based client application for viewing, playing back and sharing video. It provides instant access to the most commonly used surveillance functions, such as viewing live video, play back recorded video, print and export evidence. Access to features depends on individual user rights which are set up in the management client. To enable access to the XProtect Web Client, you must have a XProtect Mobile server to establish the connection between the XProtect Web Client and your system. The XProtect Web Client itself does not require any installation itself and works with most Internet browsers. Once you have set up the XProtect Mobile server, you can monitor your XProtect system anywhere from any computer or tablet with Internet access (provided you know the right external/Internet address, user name and password)." - © 2019 Milestone Systems A/S

The XProtect Web Client is the online UI for Milestone's video streaming. It is by default only accessible on the local network, but can be exposed to the public network for remote access capabilities. To open the web client:

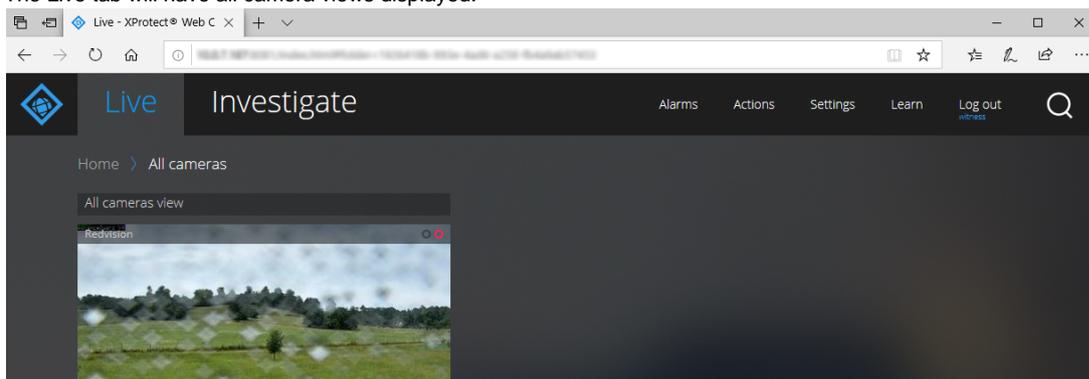
1. Open up the Network explorer, OR type the XProtect Web Client's address directly into the web browser, of any computer connected to the local network.

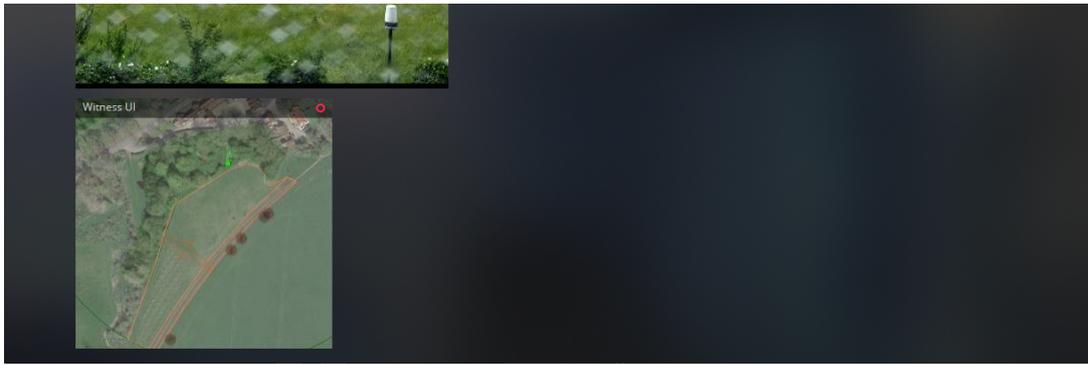


2. Input the User username and password.

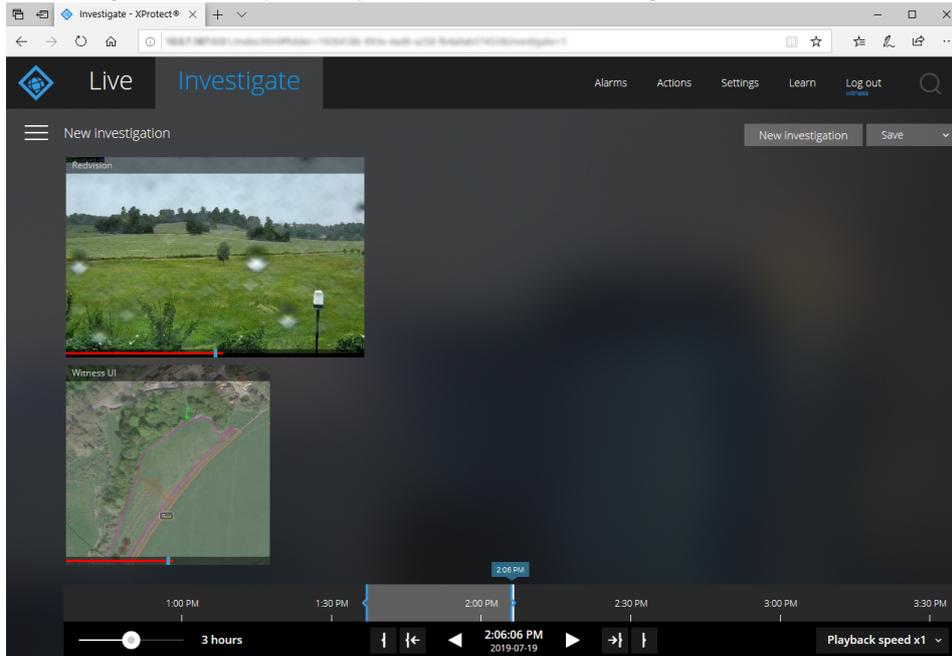


3. The Live tab will have all camera views displayed.

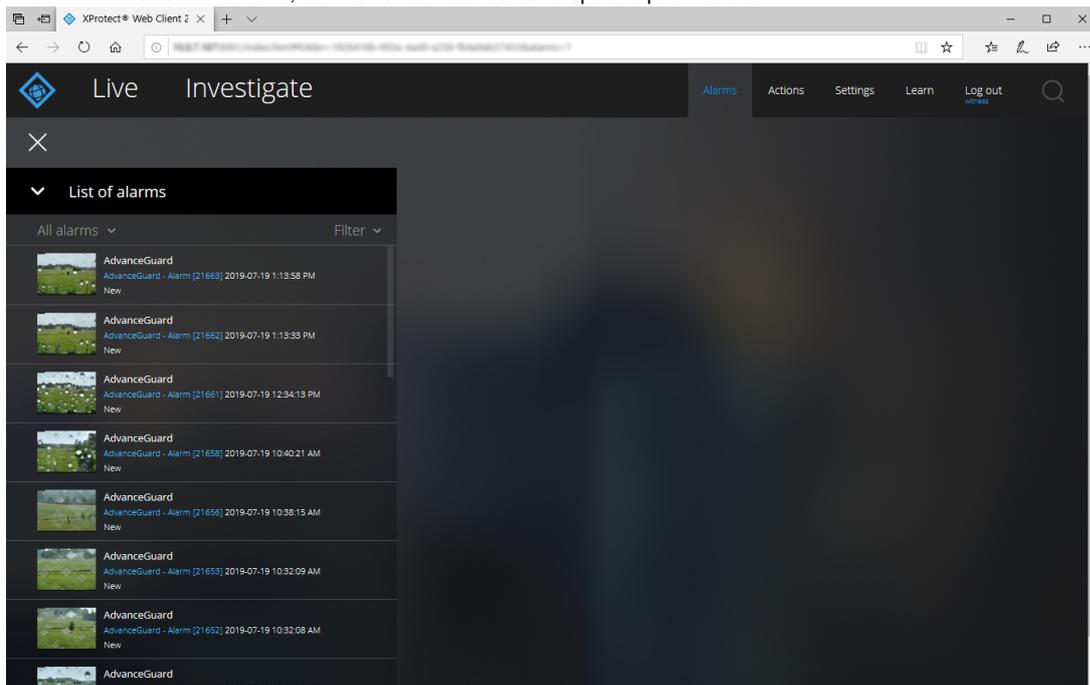




4. The Investigate tab is a simplified Playback, in order to search through the recorded video.



5. The Alarms tab lists all alarms, but the list can be filtered to specific parameters.



The XProtect Client Plugin is a separate plugin designed by Navtech, to be utilised with the Milestone product. It is used with the XProtect Client application to automate certain actions for the operator. This includes automatically displaying relevant video feeds in response to an operator selecting a target in AdvanceGuard®. In order for the XProtect plugin to work correctly then each operator must have the same username in both Milestone and AdvanceGuard®.

**i** If using Single Sign-On (SSO) for the XProtect VMS software we recommend that you do the same for AdvanceGuard®. This will ensure that the operator shares the same user name in both applications.

To use the feature, the same operator must be logged into both the Milestone UI and AdvanceGuard®. They can select (latch) tracks in the AdvanceGuard®, and these tracks will then be followed by cameras controlled by Milestone and the relevant video stream will be displayed in the Milestone client UI. Latched tracks will be highlighted in the AdvanceGuard® UI which all users can see, however, the video feeds for latched tracks will only be displayed within the Milestone UI of the user who selected them.

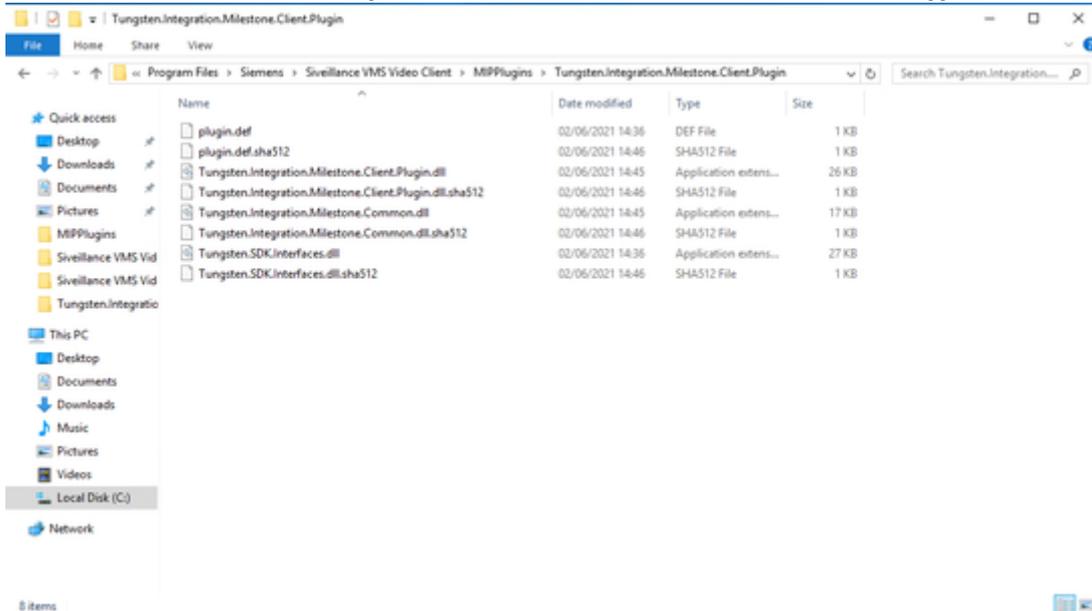
### XProtect Client Plugin Requirements

- AdvanceGuard® v4.10.0.747
- Milestone XProtect / Siveillance Server 2014 or higher
- Milestone XProtect / Siveillance Client 2016 or higher

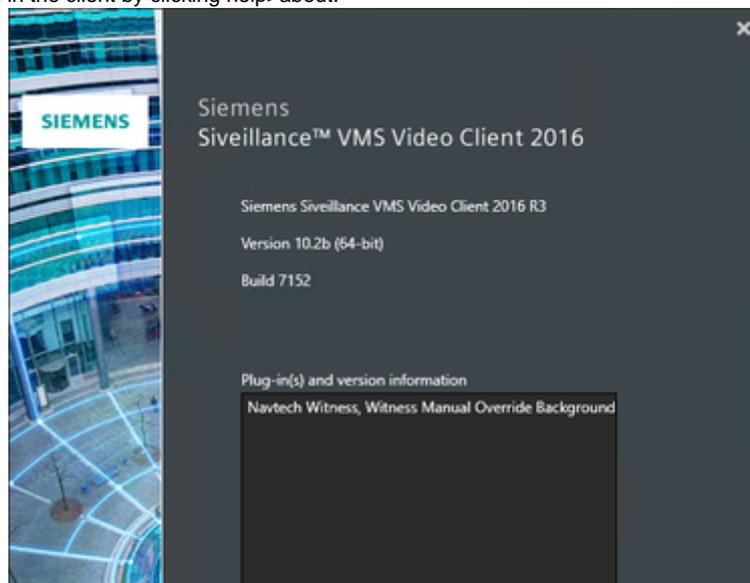
### Setup Procedure for the XProtect Client Plugin

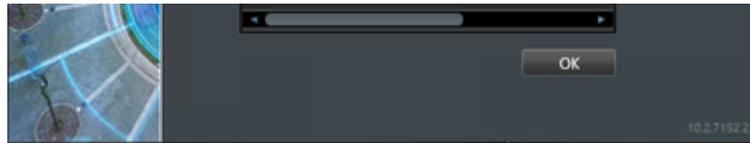
This is the Setup Procedure for the Milestone XProtect Client Plugin for AdvanceGuard®.

1. Copy the Tungsten.Integration.Milestone.Client.Plugin folder from the management server install or the UI install in the plugins folder: %ProgramFiles%\Navtech Radar\Witness\Plugins\Tungsten.Integration.Milestone.Client.Plugin onto each pc that you wish to use the Milestone Client, at this location: %ProgramFiles%\Siemens\Siveillance VMS Video Client\MIPPlugins



2. The plugin can be verified in the client by clicking help>about:





3. Then add these permissions:

