MAKE THE
WORLD SEE

Milestone Systems

Milestone OnGuard OpenVideo

Manual

milestone

Contents

Copyright, trademarks, and disclaimer **5**

Introduction **6**

Purpose 6

Feature list 6

Document revision history 8

Document information 10

Software version compatibility 10

License requirements for XProtect and OnGuard 11

Limitations **12**

OnGuard and Oracle database compatibility 12

Milestone XProtect Recording Server data encryption 12

Installation **13**

Prerequisites 13

Prepare for installation 13

Install .NET 4.7.2 runtime 13

Install Milestone MIPSDK x86 redistributable 14

Installation scenarios explained 15

Installing Milestone-OnGuard add-on 18

Installing the OnGuard Video Web Package and Milestone Open Network Bridge 20

Configuration **22**

Adding a Management Server 22

Adding a recorder 23

Adding an XProtect system in OnGuard 8.0 and below 24

Adding cameras 26

View video in System Administration 28

Upgrading from previous versions of the integration (explained) 28

Updating user credentials after upgrade 29

Updating camera and recorder IDs after integration upgrade 30

Configure camera tours 31

OnGuard Event Matrix explained 33

Installing OnGuard Event Matrix ... 33
Adding OnGuard Event Matrix plugin to Smart Client ... 34
Smart Client settings for the OnGuard Event Matrix plugin ... 36
Configuring XProtect VMS for the OnGuard Event Matrix ... 39
Sending OnGuard Event Matrix events into XProtect ... 40
Configuring event triggered video in OnGuard (explained) ... 41
Configuring alarm video links ... 41
Configuring device camera links ... 42
Filtering XProtect events in OnGuard explained ... 44
Using the Events Filtering Tool ... 45
Operation ... 47
View live and PTZ video ... 47
Operate PTZ presets ... 47
Play recorded video ... 48
Play audio from camera devices ... 50
Export video ... 52
Operate camera tours ... 53
View alarm triggered video ... 55
Logging ... 56
Working with log files ... 56
Change log levels ... 56
OnGuard Web Client ... 58
OnGuard Video Web Package and Milestone Open Network Bridge (explained) ... 58
Installing the OnGuard Video Web Package ... 59
Installing the Milestone Open Network Bridge ... 60
Installing the Milestone Open Network Bridge Plugins ... 61
Configuring the Milestone Open Network Bridge ... 62
Adding OnGuard Video Web Package to OnGuard ... 64
Linking OnGuard Video Web Package to XProtect in OnGuard ... 65
Troubleshooting ... 67
Supported installation scenarios ... 67
Communications alarms from <Unknown> devices. ... 68

OnGuard Event Matrix events not received on XProtect 2020 R2 68
Upgrading OnGuard breaks the integration (version 2.3 or earlier) 68
Adding cameras resets existing camera settings 69
MIP SDK upgrade error 2803 70
Ports required for Milestone video 70
Cannot discover cameras 71
Live or playback video does not work 71
Offline camera status 71
Launching video results in error message 71

Copyright, trademarks, and disclaimer

Trademarks

XProtect is a registered trademark of Milestone Systems A/S.

Microsoft and Windows are registered trademarks of Microsoft Corporation. App Store is a service mark of Apple Inc. Android is a trademark of Google Inc.

All other trademarks mentioned in this document are trademarks of their respective owners.

Disclaimer

This text is intended for general information purposes only, and due care has been taken in its preparation.

Any risk arising from the use of this information rests with the recipient, and nothing herein should be construed as constituting any kind of warranty.

Milestone Systems A/S reserves the right to make adjustments without prior notification.

All names of people and organizations used in the examples in this text are fictitious. Any resemblance to any actual organization or person, living or dead, is purely coincidental and unintended.

This product may make use of third-party software for which specific terms and conditions may apply. When that is the case, you can find more information in the file 3rd_party_software_terms_and_conditions.txt located in your Milestone system installation folder.

Introduction

Purpose

This document describes the requirements, limitations, compatibility, and functionality of the Milestone OnGuard Open Video integration, and outlines the configuration process required to integrate the Milestone XProtect VMS with an OnGuard access control system.

The purpose of the integration is to enable users to view live and recorded Milestone video from inside the OnGuard user interface. The integration lets users view OnGuard data and Milestone video from a single integrated console instead of requiring two consoles, one to view OnGuard information and another to view Milestone video.

This integration provides access to basic features of the XProtect VMS from inside OnGuard. To access the complete and extended features of the Milestone XProtect VMS, use the stand-alone XProtect Smart Client .

Feature list

Video feature	“X” indicates supported	Notes
Live Video	X	
Text Overlay	Not Supported	
Pre-recorded Video Playback	X	
Status	X	
Export To AVI	Not Supported	Export to .MKV is supported.
Time Synchronization	X	
Record Start (On Demand)	Not Supported	
Frame Rate Adjustment	Not Supported	Needs to be set up in Milestone
Record Stop (On Demand)	Not Supported	Needs to be set up in Milestone

PTZ	X	
Video Alarms	X	See alarms table below.
Video Tour	X	OnGuard implements tours
Video View Up To 16 Cameras	X	
Presets & Patterns	X	Presets only
View Live & Recorded Video from multiple cameras	X	
PTZ Presets & Presets based on event, alarm input	X	
Replay Up To 4 Cameras for same Time Interval	X	
Toggle Video Window Size from 1x to 4x	X	
Display Up To 4 Live Video Windows based on Event	X	
Original Recorded Video Cannot be Altered	X	
Playback and Recorded Video in one window	X	
Bi-directional Actions - Event Matrix	X	Added in v2.5
Camera Import into OnGuard	X	Added in v1.4
Preset Import into OnGuard	X	Added in v1.4
XProtect Recording Server data encryption	X	Added in v2.0
OnGuard web apps	X	Added in v2.2
Filter which events and alarms are received in OnGuard from XProtect.	X	Added in v2.5
Audio in both live and playback on supported devices.	X	Added in v2.6

Default alarms:

OnGuard alarm	Milestone Event Source

L_VIDEO_MOTION_DETECTED	MotionStarted
L_VIDEO_MOTION_DETECTED_RESTORED	MotionStopped
L_VIDEO_DISK_FULL	DatabaseDiskFullEvent
L_VIDEO_RECORDING_STOPPED	RecordingStopped
L_VIDEO_CAMERA_TAMPER	TamperingStart
L_VIDEO_CAMERA_TAMPER_RESTORE	TamperingEnd
L_VIDEO_FAILOVER_STARTED	FailoverStarted
L_VIDEO_FAILOVER_RESTORED	FailoverStopped
L_VIDEO_OVERFLOW_STARTED	FeedOverflowBegin
L_VIDEO_OVERFLOW_RESTORED	FeedOverflowStopped
L_VIDEO_STORAGE_UNAVAILABLE	ArchiveDiskUnavailable OR DatabaseDiskUnavailable
L_VIDEO_SOURCE_SIGNAL_LOST	VideoLoss
L_VIDEO_ON_CAMERA_TRIP_WIRE	Tripwire

For a full explanation of alarms and how to enable or disable specific alarms, please refer to Filtering XProtect events in OnGuard explained on page 44

Document revision history

Revision Date	Author	Summary of changes	Changes marked
2011-10-17	SR	Initial version for OnGuard 6.3	1.0
2012-05-09	SR	Support for OG v6.4 and XPCO 5.0	1.1
2013-04-02	SR	Support for OG v6.5, v6.6	1.2

2013-05-27	SR	Support for XPCO 6.0, Expert	1.3
2014-12-03	JFM	Support for XPCO 2014, OnGuard 6.6, 7.0 Added support for Camera Import feature Added support for PTZ Preset import	1.4
2016-12-07	JFM	Support for XPCO 2016, OnGuard 7.1, 7.2, 7.3	1.5
2018-01-18	SRB	Support for: • XProtect Corporate 2017 R1/R2/R3 • XProtect Professional+ 2017 • XProtect Expert 2017 • XProtect Express+ 2017 Support for OnGuard 7.4	1.6
2018-11-30	MAE	Added support for: • XProtect 2018 R1/R2/R3 Support for OnGuard 7.5	1.7
2019-08-28	SRB	Removed MilestoneCfgGen command-line tool references. Added Version Compatibility section. Removed references to OnGuard versions prior to 7.1. New document template.	1.8
2019-09-24	SRB	Added support for Milestone XProtect Recording Server Encryption (2019 R1 and up) Replaced Milestone 3.5 SDK with MIPSDK 2019R1	2.0
2020-02-06	SRB	Updated Version Compatibility section	2.0
2020-03-30	SRB	Added Failover support	2.1
2020-10-13	SRB	Added support for OnGuard 8.0 Added support for OnGuard web apps. New Installer	2.2

2021-06-04	MJT	Added several issues to Troubleshooting section. Expanded Adding a recorder on page 23 sub-topic. Updated Supported Versions, Prerequisites, and Camera Tours.	2.3
2022-05-09	MJT	OnGuard Event Matrix feature added XProtect Events Filtering Tool added Replaced 2021 R1 MIP SDK with 2022 R1 MIP SDK Added support for OnGuard 8.1	2.5
2023-02-24	MJT	OnGuard Event Matrix event list added Integration log improvements Audio support added	2.6
2023-06-23	MJT	Added support for OnGuard 8.2 Added support for Event Matrix Plugin on XProtect 2023 R1 and R2	2.7

Document information

Project Name	Milestone XProtect OnGuard Open Video Integration User Manual
Document Version	2.7

Software version compatibility

Integration with OnGuard Access Control system is supported with all XProtect VMS products that support MIP integrations. To find a list of supported versions of the following software components, read the compatibility document available here: OnGuard OpenVideo download site

- OnGuard access control software
- XProtect video management software
- OnGuard OpenVideo plug-in

Please verify your version of OnGuard is compatible. Milestone recommends using the latest versions of both OnGuard and XProtect.

License requirements for XProtect and OnGuard

One license file is required to be associated to each unique Milestone XProtect Software License Code (SLC) used with the integrated XProtect VMS. Contact Milestone sales for more information.

XProtect integration license details:

Milestone License Name	Milestone Part Number	MSRP	Notes
OAAP Plugin License	XPCOOAAP	$1500.00*	One license per XProtect SLC

OnGuard integration license details:

OnGuard License Name	OnGuard Part Number	MSRP	Notes
Enable Video Channel	MIL-ONG-VIDINT	No Charge**	

**This is the published MSRP as of July 2021. This amount is subject to change.*

***The cost is waived only when LenelS2 is distributor for XProtect licenses.*

Limitations

OnGuard and Oracle database compatibility

The Milestone XProtect OpenVideo integration with OnGuard isn't compatible with an OnGuard system that uses an Oracle database. The compatible and supported database technology for use with this integration is Microsoft SQL Server.

Using an Oracle database with OnGuard is an option that LenelS2 supports. The Milestone XProtect OpenVideo integration doesn't support OnGuard systems that use Oracle databases.

Milestone XProtect Recording Server data encryption

The integration supports the Recording Server data encryption feature introduced with XProtect 2019 R1.

For live and playback to work with the Recording Server data encryption feature make sure to install the appropriate certificate and make sure that it's trusted on the client machines. See the Milestone XProtect user manuals for more details.

- XProtect VMS Products - Certificate Guide
- XProtect VMS Products - Hardening Guide

Installation

Prerequisites

Before you begin the integration make sure to configure OnGuard server and OnGuard clients and check that they are working.

Also make sure that the Milestone XProtect Management Server, Milestone XProtect Recording Server, and cameras are installed, configured, and working. See the user manuals and documentation for OnGuard and Milestone XProtect for a comprehensive description of the installation, configuration, and features of the respective systems.

Prepare for installation

All software components listed in the overview steps below are available at the Milestone download site.

Visit this site to download the most updated versions of the required components. The .ZIP files are listed by the version of the OnGuard system used in the integration. The integration solution requires the following steps:

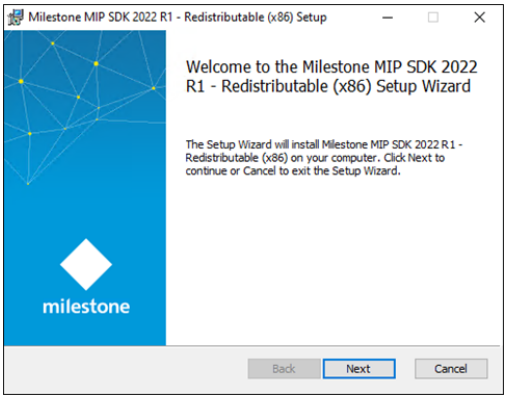
1. Install Microsoft .NET 4.7.2 installed on OnGuard server machines and OnGuard client machines used to view XProtect video.
2. Install the Milestone MIPSDK 2022R1 redistributable on XProtect Smart Client workstations that host the OnGuard Event Matrix plug-in, OnGuard server machines, and OnGuard client machines used to view XProtect video.
3. Install the integration components, the OnGuard **Accessory Add-on for Milestone**, on OnGuard server machines and OnGuard client machines used to view XProtect video.
4. Enable Analytics Events within XProtect and open port 9090 between OnGuard LS Communication Server and XProtect Event Server.
5. Add Milestone XProtect Management Server to OnGuard System Administration application in **Auxiliary Services**.
6. Setup and configure **Video Recorder** and **Cameras** in OnGuard.
7. Add and configure any features required for your use case.

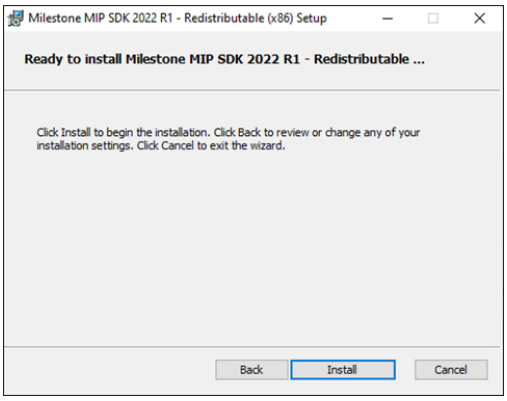
Install .NET 4.7.2 runtime

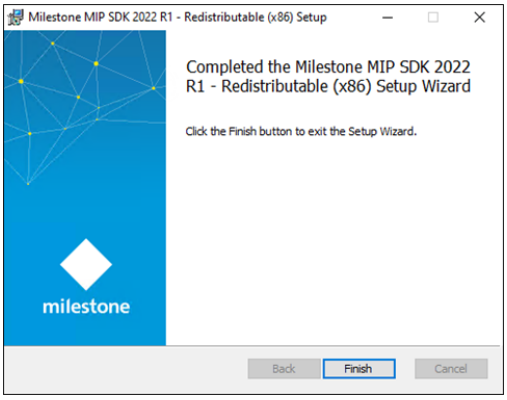
- Download the .NET Framework 4.7.2. Install this file on every OnGuard machine (LS Communication Server and video clients).

Install Milestone MIPSDK x86 redistributable

1. You must install the Milestone MIPSDK x86 redistributable on all client and server machines that need integration software plug-ins or services installed.
2. Click MIPSDK_Redist_Installer_x86_2022R1.msi to start the installation.
3. Click **Next** as needed to complete the installation.







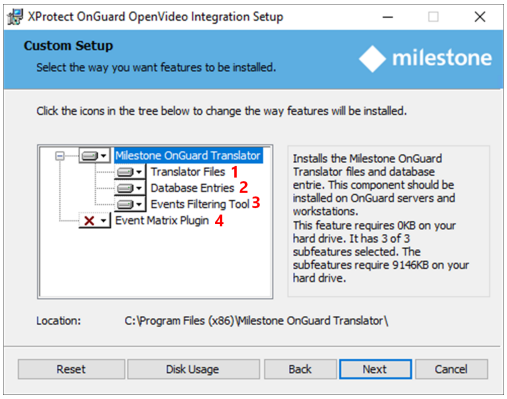
4. Click **Finish** to complete installation.

Installation scenarios explained

The OnGuard OpenVideo integration with Milestone XProtect is flexible and scalable for different installation scenarios. This topic explains where and why to install the integration components.

> Milestone and LenelS2 have created a technical deployment guide which documents design recommendations, performance thresholds, and architectural guidance within one short document. The OnGuard OpenVideo integration is covered in this deployment guide. Download and read the guide from this link:
>
> https://download.milestonesys.com/lenels2/

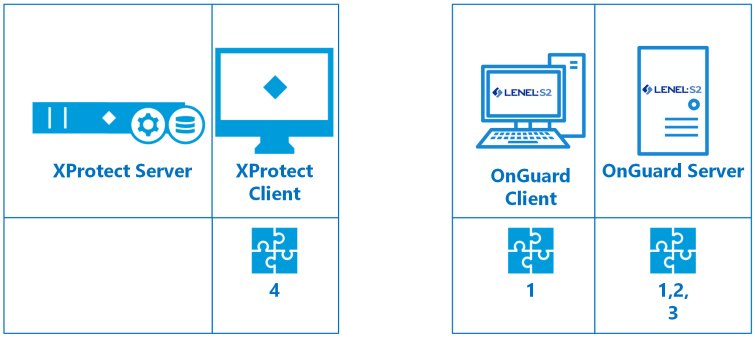
This is an illustration of the installation program with each of the four components listed from 1 to 4.



1. Translator Files - OnGuard client workstations and OnGuard Servers
2. Database Entries - OnGuard Database Servers
3. Events Filtering Tool - OnGuard LS Communication Servers
4. Event Matrix Plugin - XProtect client workstations

The least complex installation scenario is with a single XProtect server, a single XProtect client workstation, a single OnGuard server and a single OnGuard client workstation. In this scenario each server has all the server components, such as the Milestone XProtect Management Server, Event Server and Recording Server, or the OnGuard Database Server, and the LS Communication Server.

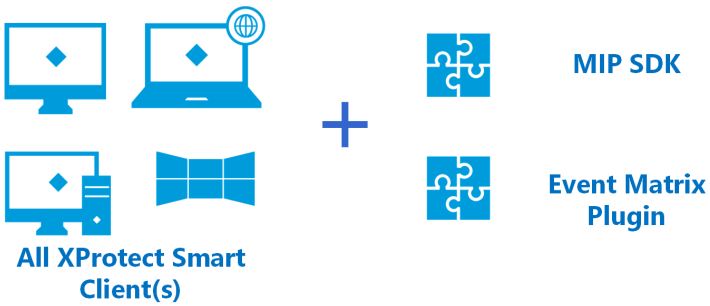
OnGuard & XProtect in Single Systems



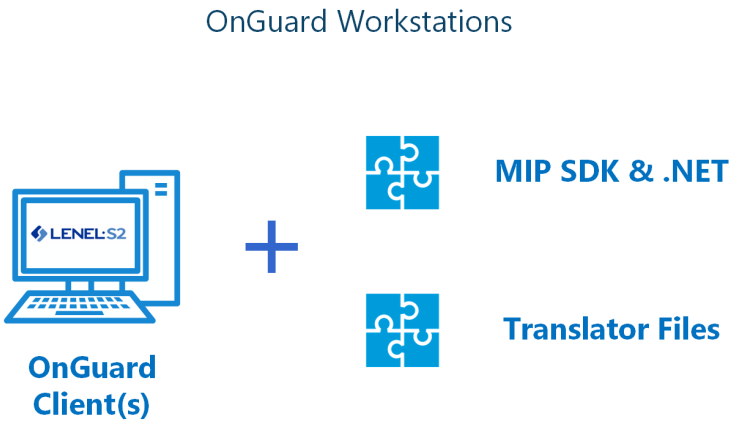
As OnGuard and XProtect systems scale in size, the integration components also need to scale. If your system has distributed XProtect Smart Clients, OnGuard workstations, LS Communication Server, or OnGuard servers, it's a best practice to verify which of the components to install.

XProtect Smart Client workstations require the Event Matrix Plugin and the MIP SDK if you want to receive events sent directly from OnGuard workstations.

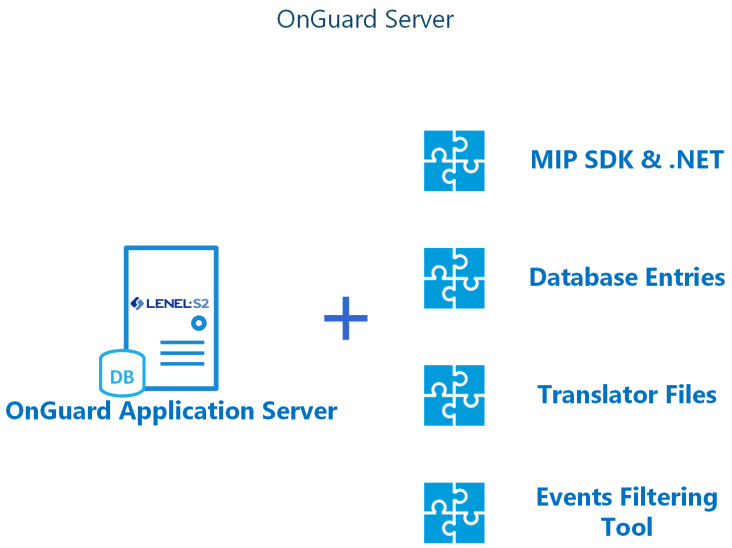
XProtect Workstations



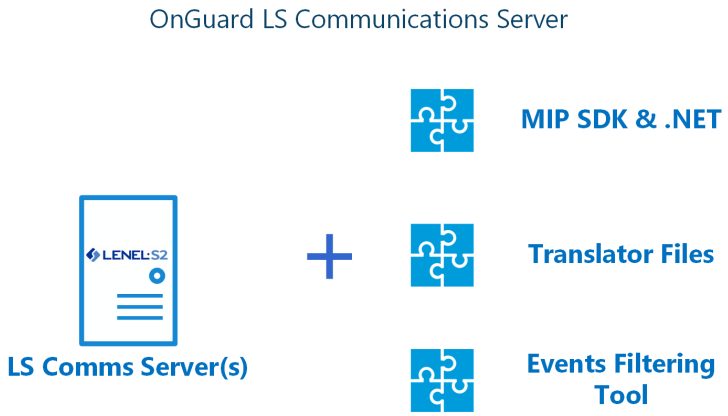
OnGuard workstations require the MIP SDK, .NET prerequisites, and the Translator Files if they need to view video from XProtect.



OnGuard application servers (master or regional) need to have the prerequisites installed, and all three integration components, assuming use of the Events Filtering feature.



Any extra OnGuard servers running an LS Communication Server to support more connections with XProtect, also need the prerequisite components, the Translator Files, and the optional Events Filtering Tool.

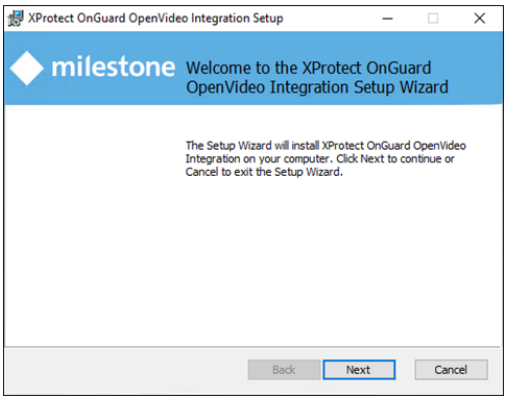


All supported integration scenarios are listed here: Supported installation scenarios on page 67.

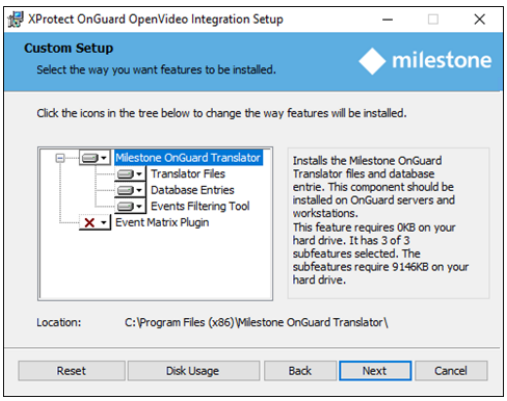
Installing Milestone-OnGuard add-on

The add-on must be installed on OnGuard servers and every OnGuard workstation where XProtect video will be viewed. This installation program checks for other installed programs on the operating system, and should present the installation options which are relevant for the location where it's being run. Most of the time it's safe to continue with the default selections presented by the installation program.

1. To start the installation, run the installation program as an administrator. The installation wizard starts checking the installed programs to find the required integration components for installation. Click **Next** to continue the wizard.



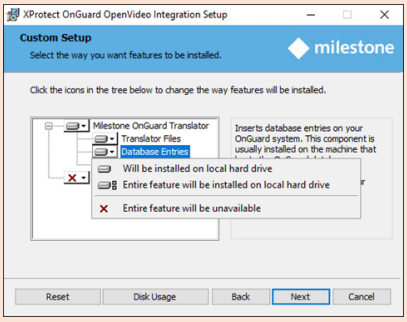
2. On the **Custom Setup** page the installation program presents the relevant options for the system where it's being run. This step lets you to specify if the wizard should take the following actions:
   - Copy files to the Milestone OnGuard Translator installation folder (**Translator Files**)
   - Add or change an entry in the OnGuard SQL database (**Database Entries**).
   - Install the **Events Filtering Tool** on the OnGuard server that has the LS Communication Server.
   - The **Event Matrix Plugin** should be unavailable when installing the integration on an OnGuard system. The **Event Matrix Plugin** should be installed on XProtect Smart Client workstations.



3. If you are installing the integration on an OnGuard server that contains an LS Communication Server and is used as an OnGuard workstation click **Next** to install the needed components by default.

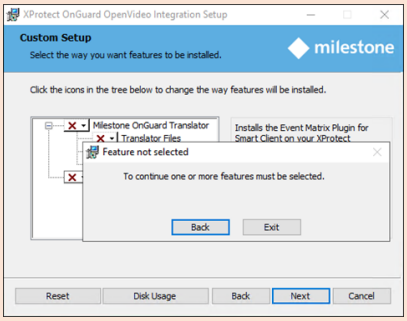
On an OnGuard server always select the **Translator Files**, unless you're running the wizard to change or repair a SQL connection parameter.

If the wizard is run on an OnGuard server, select the **Database Entries**. If you want to filter the events received by OnGuard from the attached XProtect system, and are running the installation program on a server that has an LS Communication Server select the **Events Filtering Tool**. On an OnGuard workstation, you shouldn't select the **Database Entries** or the **Events Filtering Tool**. If you expand the **Database Entries** option, the following window appears.

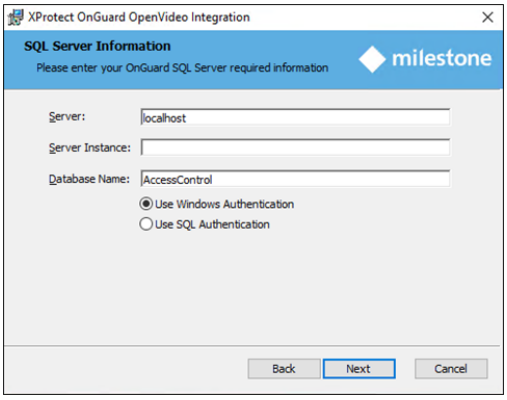


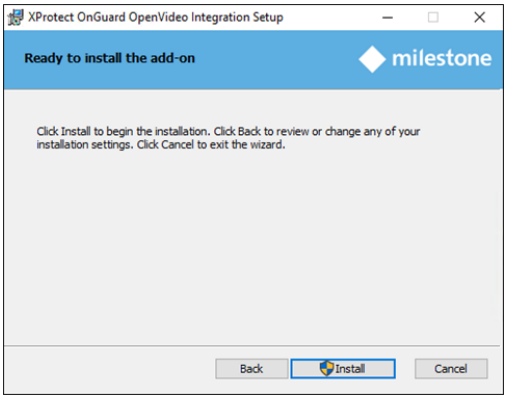
Select the **Entire feature will be unavailable** option with the red **X** for both the **Database Entries** and **Events Filtering Tool**, when installing the add-on on an OnGuard workstation.

At least one of the options must be selected or the installation program won't proceed.

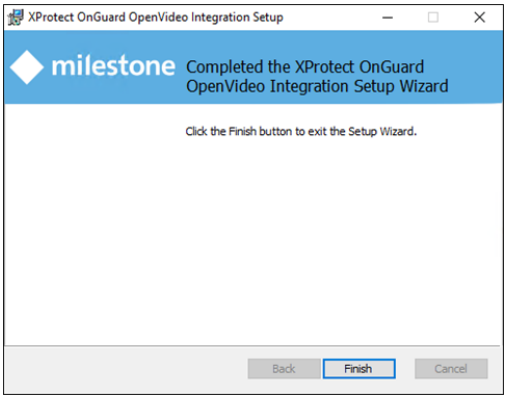


4. On a server, when you have selected the default options and you need to configure the **Database Entries**, add the necessary information to connect to the OnGuard database. If you have installed the SQL Server on the same machine where you are installing the add-on, you don't need to make any changes to the default selection.





5. When you click **Install**, the installation of the add-on begins and proceeds until completion.



Installing the OnGuard Video Web Package and Milestone Open Network Bridge

Installation of the Milestone Open Network Bridge and the OnGuard Video Web Package is required if you plan to use the OnGuard Web Client running OnGuard v8.0 and up. Ideally, you should install the OnGuard Video Web Package with Milestone ONVIF Bridge on a separate, independent server (not on the OnGuard machine, Milestone XProtect Management Server, or Milestone XProtect Recording Server).

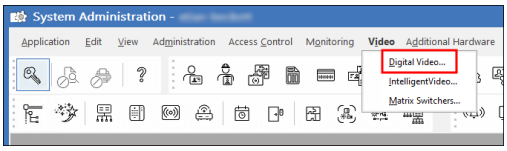
For full details please refer to the OnGuard Video Web Package and Milestone Open Network Bridge (explained) on page 58 section of this document.

Configuration

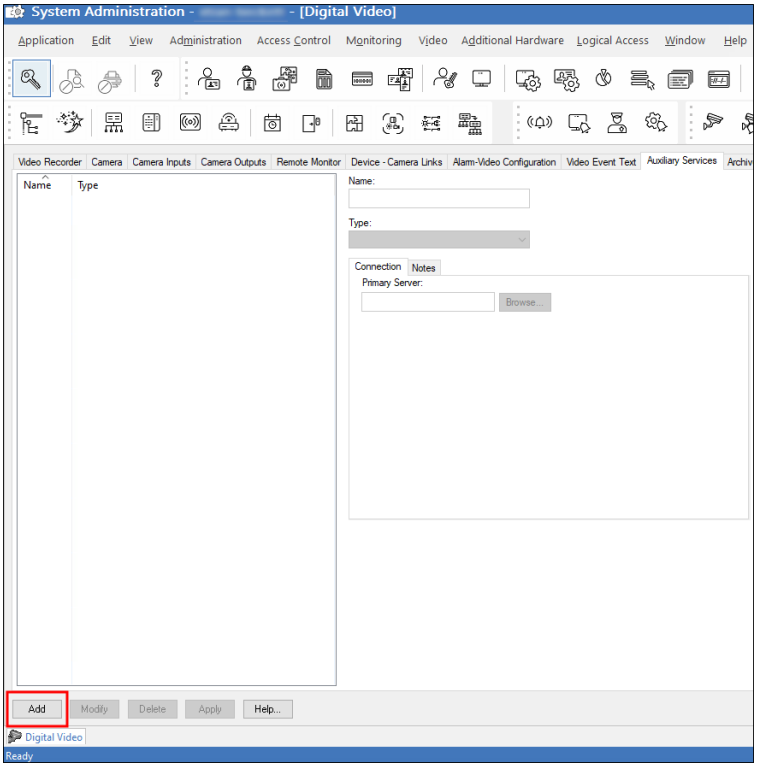
Adding a Management Server

> This process applies to OnGuard versions 8.1 and up.

1. Open the **Video** menu and choose the **Digital Video...** option from the System Administration application.



2. In the **Auxiliary Services** tab click the **Add** button to start configuring the Milestone XProtect Management Server connection.



3. Choose any name for the server, open the **Type** list and choose **XProtect Management Server**.
4. Enter the DNS name for the Milestone XProtect Management Server, and a username and password for the administrative level XProtect user facilitating the authentication through the OnGuard integration, and click **OK** to save the configuration.

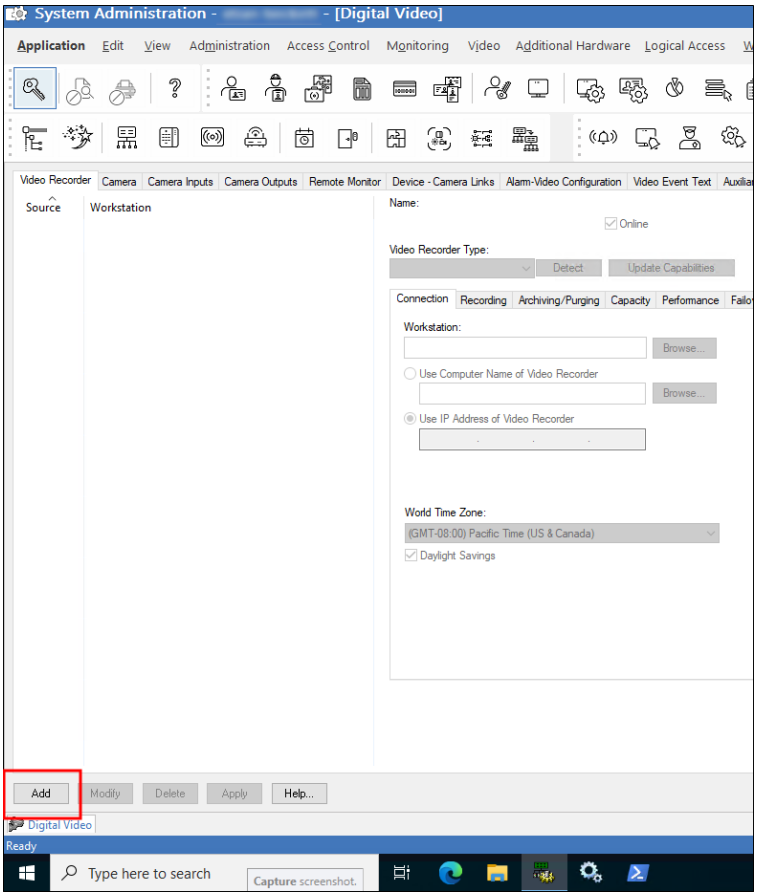
If you are using the **OnGuard Web Video Package** there are extra fields in the **Auxiliary Services** menu. These aren't required for connection. Also, you don't need to enter a port number for the connection to work the port for authentication is 80 or 443 by default. Lastly, if you add more Milestone XProtect Management Servers to OnGuard, when you add a second server after adding the first, you need to clear the connection settings retained from the first entry.

Adding a recorder

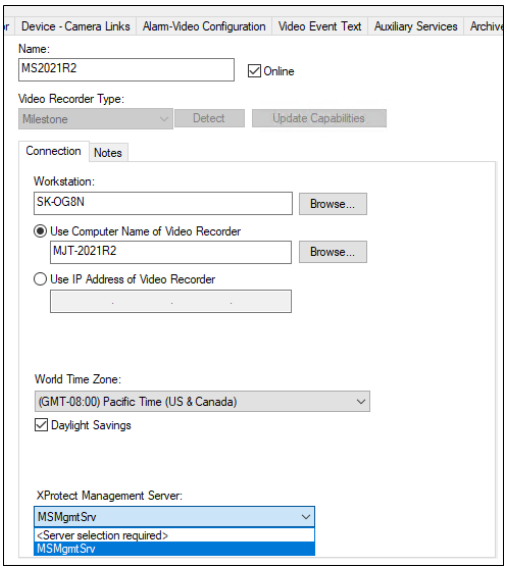
This process applies to OnGuard versions 8.1 and up.

1. Open the System Administration in OnGuard and log in, then select the **Video** menu and click on the **Digital Video ...** menu item.

2. Go to the **Video Recorder** tab, then click the **Add** button on the left-hand bottom side of the window to add a new video recorder device.



3. Specify the various fields as described below:
    - **Name**: Enter a unique name for this video recorder entry
    - **Video Recorder Type**: Select Milestone from the list
    - **Workstation**: Enter the workstation name where OnGuard LS Communication Server is installed
    - **Use Computer Name/Use IP Address of Video Recorder**: Choose either option, and enter the IP or host name of the XProtect Recording Server.
    - **XProtect Management Server**: Open the list and choose the management serverattached to OnGuard in the Adding a Management Server on page 22 topic.

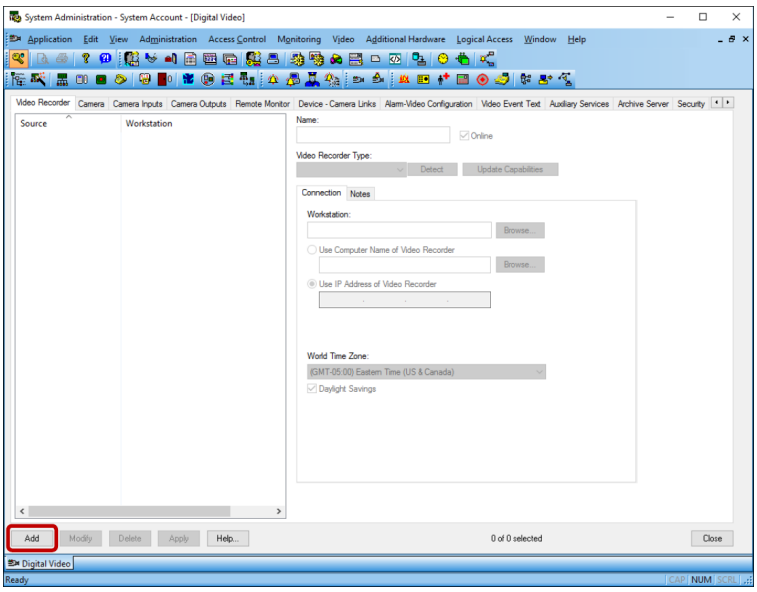


4. Click **OK** to save the **Video Recorder** configuration.
5. Click **OK** on the warning about a full download to the panel.
6. Select the monitor zone and click **OK** to complete adding the recorder.

Adding an XProtect system in OnGuard 8.0 and below

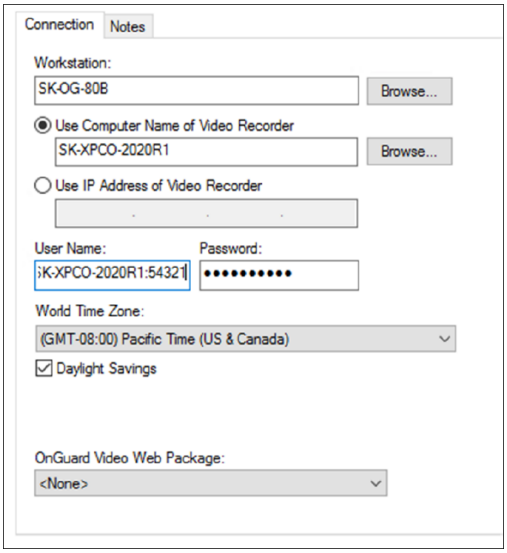
1. Open the System Administration in OnGuard and log in, then select the **Video** menu and click on the **Digital Video ...** menu item.

2. Go to the **Video Recorder** tab, then click the **Add** button on the left-hand bottom side of the window to add a new video recorder device.



3. Specify the various fields as described below:

   - **Name**: Enter a unique name for this video recorder entry
   - **Video Recorder Type**: Select Milestone from the list
   - **Workstation**: Enter the workstation name where OnGuard LS Communication Server is installed
   - **Use Computer Name/Use IP Address of Video Recorder**:Choose either option, and enter the IP or host name of the XProtect Recording Server.
   - **User Name:** Enter the domain separated by a backslash from the XProtect user name, the Management Client hostname or IP address separated from the user name by an "@" and a port number for the IIS server following a colon, if needed.
   - **Password:** Enter the associated XProtect password.

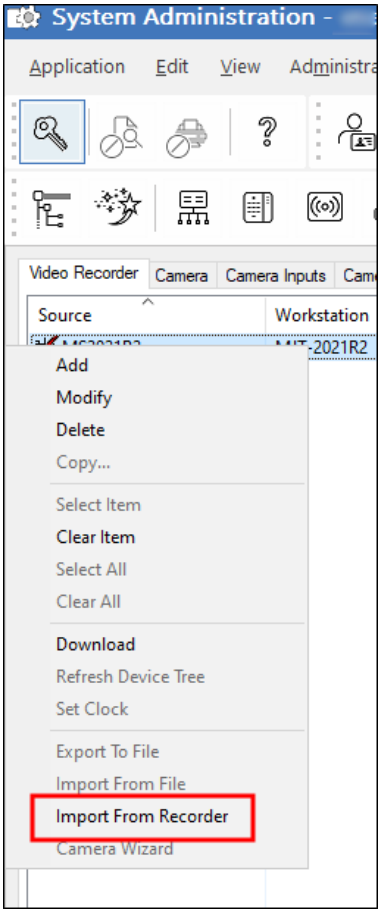


The **User Name** field must be populated with the domain, user name, hostname of the Milestone XProtect Management Server, and IIS server port because of current limitations in the integration. It is required to insert the domain information before the backslash, and the server hostname after the @ symbol. In between the backslash and the @ symbol is the user name. If the IIS server uses one of the default ports (80 or 443) it is not required to include the port number. However, when the IIS server is using a custom port number it will be required. For example: domain.us\administrator@pchostname:88

4. Click **OK** to save the **Video Recorder** configuration.

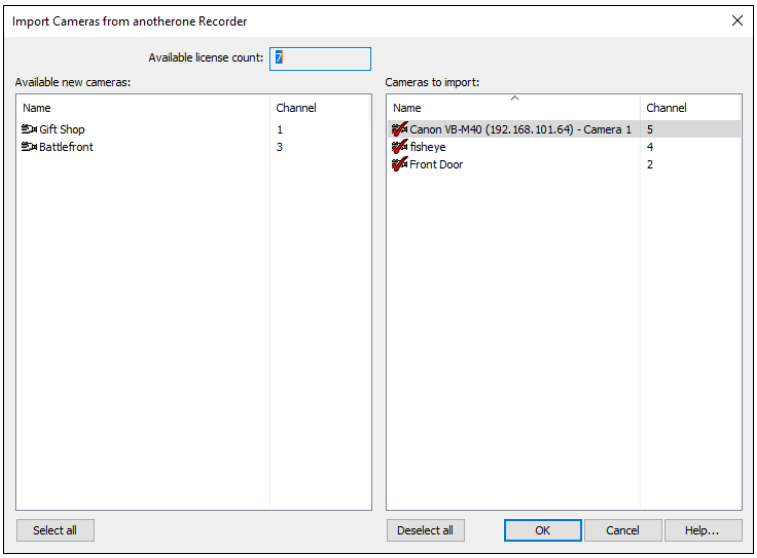
Adding cameras

1. Select the **Video Recorder** tab in the **Digital Video** section of the **Video** menu in the OnGuard System Administration application.
2. To automatically import cameras from Milestone into OnGuard, right-click the video recorder entry and select **Import from Recorder**.

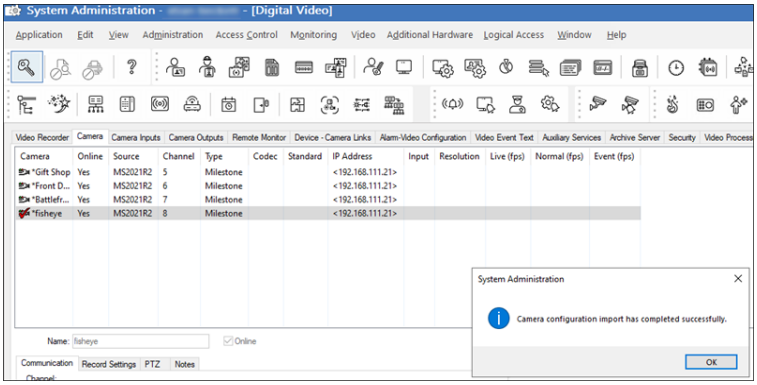


3. The import from recorder window displays a list of cameras available on the specified recorder. You can then select the cameras that you want to import into OnGuard by clicking on them in the left pane. This moves them to the right pane.

4. When you have selected all the required cameras for import, click **OK**.

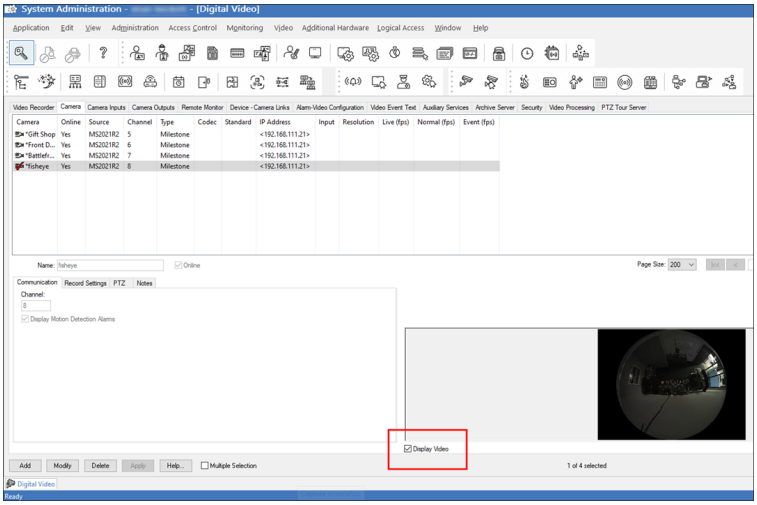


5. The selected cameras appear in the camera view.



View video in System Administration

- To view live video from the newly configured cameras in the System Administration tool, select the required camera from the list of cameras in the **Camera** tab and select the **Display Video** checkbox.



Upgrading from previous versions of the integration (explained)

> If you are upgrading from an earlier version of the integration than version 2.0, you must first upgrade to 2.0 and make sure everything works before attempting to upgrade to any newer version. It's supported to upgrade from version 1.0 to version 2.0, and version 2.0 to version 2.X. You cannot upgrade from, for example, version 1.0 to version 2.X or higher.

In versions of the integration earlier than version 1.8, the Management Server hostname, credentials, and the list of cameras in the XProtect VMS system were stored in an XML configuration file on your disk using the MilestoneCfgGen.exe command-line tool (now retired).

When you upgrade the integration to version 1.8 or higher, this tool and the XML configuration file are no longer needed, and all the connection parameters must be provided directly in the OnGuard user interface (see Adding a Management Server on page 22 section).

The add-on works after upgrading from earlier versions. There is a backward compatibility provision in the code that still reads the XML configuration file when the required information isn't in OnGuard. Milestone recommends that you carry out the two steps below to remove the dependency on the XML file.

Upgrading from 2.0 to a newer version also requires you to carry out the second step: Force the OnGuard user interface to update camera and recorder IDs in the OnGuard database.

It's important to complete this step if the XProtect recorder is part of a failover group. To prevent disruptions of the integration during failover (video and events), the recorder ID must persist in the OnGuard database.

Updating user credentials after upgrade

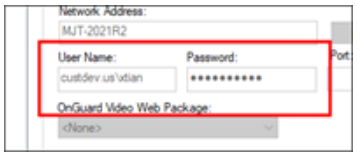
The user account credentials and server address location is configured in different locations within the OnGuard integration based on the version of OnGuard that's installed. If you are running versions 8.0 or older these credentials are stored in the **Video Recorder** tab. If you are running OnGuard 8.1 or newer, the required information to update after an integration upgrade is in the **Auxiliary Services** tab.

Add missing connection information in the OnGuard user interface:

1. Select each configured Recording Server in the Video Recorder tab of System Administration. (for OnGuard versions 8.0 or older) Or, select each configured Management Server in the Auxiliary Services tab of System Administration. (for OnGuard versions 8.1 and newer)
2. Click **Modify** and type in the user name and password fields. (For versions of OnGuard 8.0 and older, use the XProtect username and the Management Server hostname or IP separated by an '@' character in the

username field).

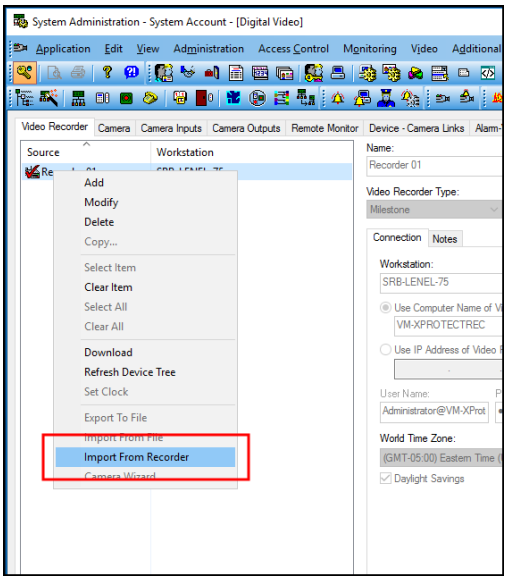
3. Click **OK**.

8.0 and older	8.1 and newer
Username: johndoe@hostname	Username: johndoe
Password: 123abc	Password: 123abc
	

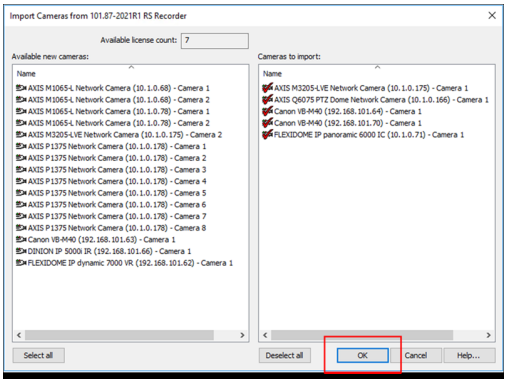
Updating camera and recorder IDs after integration upgrade

Force the OnGuard user interface to update camera and recorder IDs in the OnGuard database:

1. For each configured recording server in System Administration, right-click and select **Import From Recorder**.



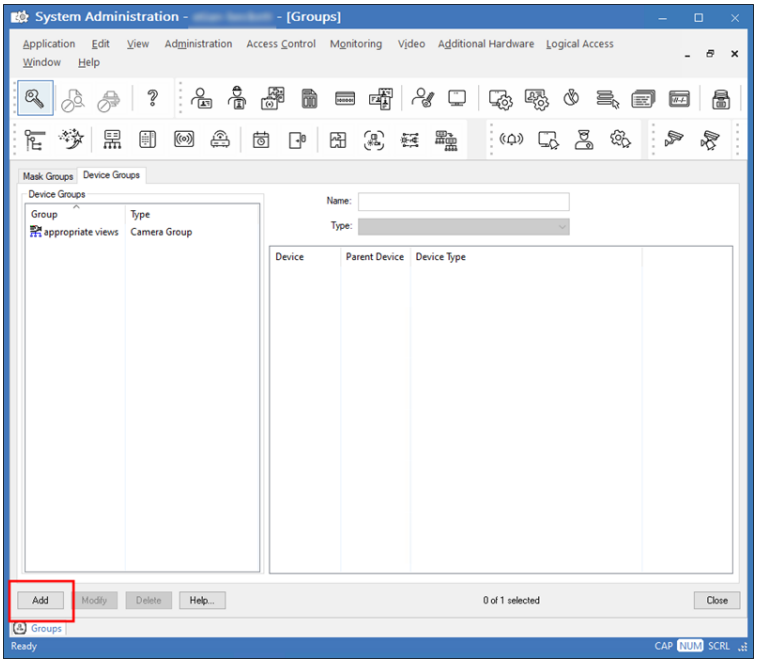
2. Click **OK** to force OnGuard to refresh its internal camera and recorder mapping.



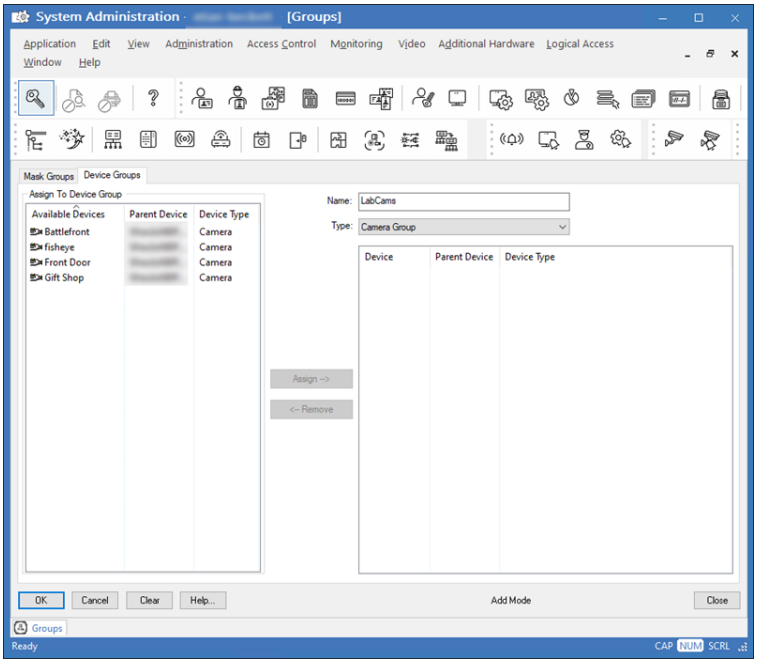
Configure camera tours

Configure Camera Tours in the System Administration application and view Camera Tours in the Alarm Monitoring application.

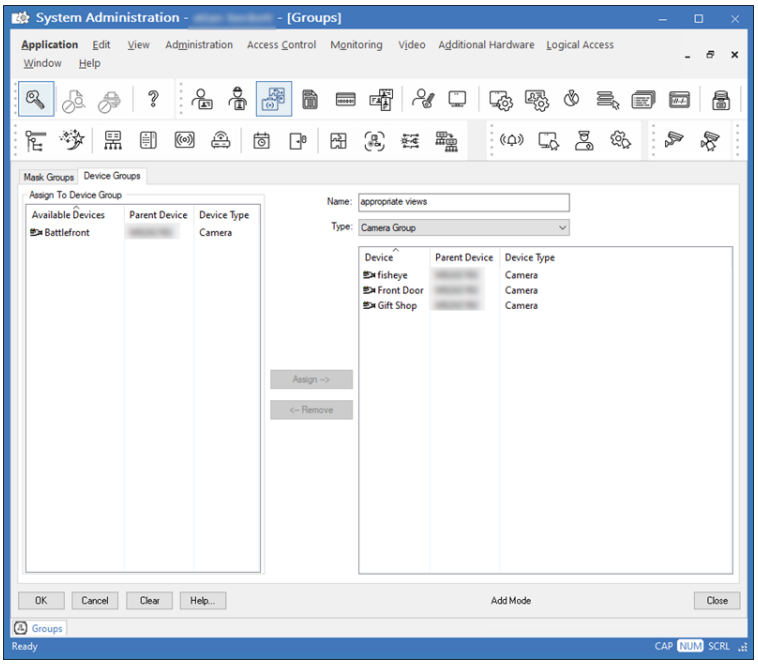
1. Open the OnGuard System Administration application. Open the **Access Control** menu and select **Groups**.
2. Select the **Device Groups** tab and click the **Add** button at the bottom left.



3. Enter a name for the group. Select **Camera Group** from the **Type** list. Cameras available for the group appear in the **Available Devices** list on the left side of the tab.



4. Click the icon of any camera to add it to the tour. The **Assign** button activates. Click on **Assign** to add the camera to the tour.



5. Repeat the process to add all required cameras to the group. Click **OK** to save the settings.

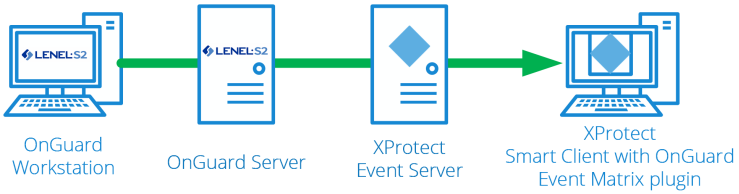
OnGuard Event Matrix explained

Event Matrix lets operators of the OnGuard workstation share live and recorded video to XProtect Smart Client workstations. The integration adds events into the XProtect system that the OnGuard users can trigger, these events drive video to Smart Client views populated with the OnGuard Event Matrix plugin and directly to floating windows. These events - once received by the XProtect system - can be used with the XProtect rules system to trigger more actions, such as creating bookmarks, or log entries.

> The OnGuard Event Matrix works with camera permissions within XProtect. Smart Client users see events and video from cameras they have permission to view. An operator within OnGuard may be able to send events to the Smart Client, but the XProtect camera permissions prevent both the event notification and video streaming.

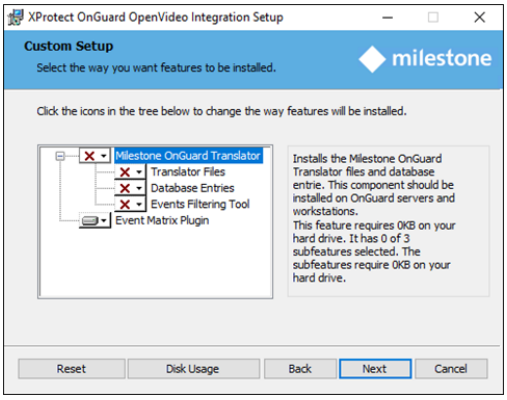
Basic requirements for the Event Matrix are as follows:

- OnGuard OpenVideo integration components installed on OnGuard workstations and servers
- Inbound port 9090 opened on all XProtect (Event Server).
- Install the OnGuard Event Matrix plugin on the Smart Client workstations.
- Add the OnGuard Event Matrix plugin to views in the Smart Client application.



Installing OnGuard Event Matrix

1. Download the .ZIP file that has the installer program from the OpenVideo download site and make sure to choose the file that matches your version of OnGuard.
2. Extract the .ZIP file and right-click the XProtectOnGuard.msi to start the installation program.
3. On the **Custom Setup** step of the wizard, select the **Event Matrix Plugin**, and click **Next**.

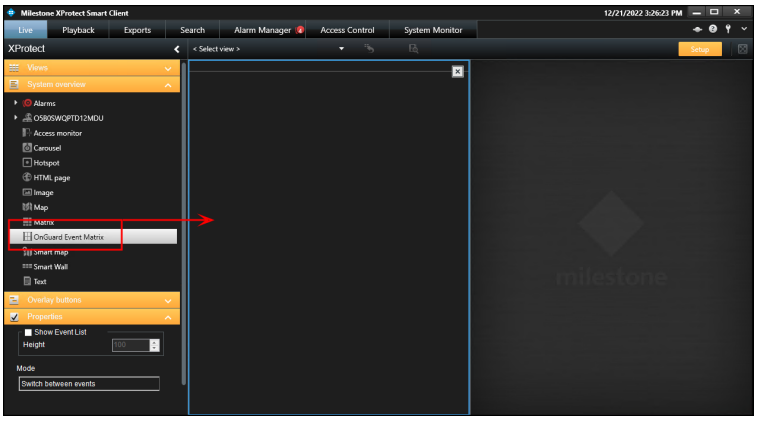


4. Finish the installation wizard.

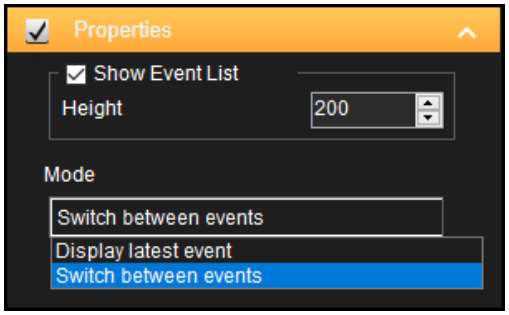
> Install the plugin on all Smart Client workstations in the system that need to receive events from OnGuard. The MIPSDKx86 redistributable components are required to support the Event Matrix Plugin installation.

Adding OnGuard Event Matrix plugin to Smart Client

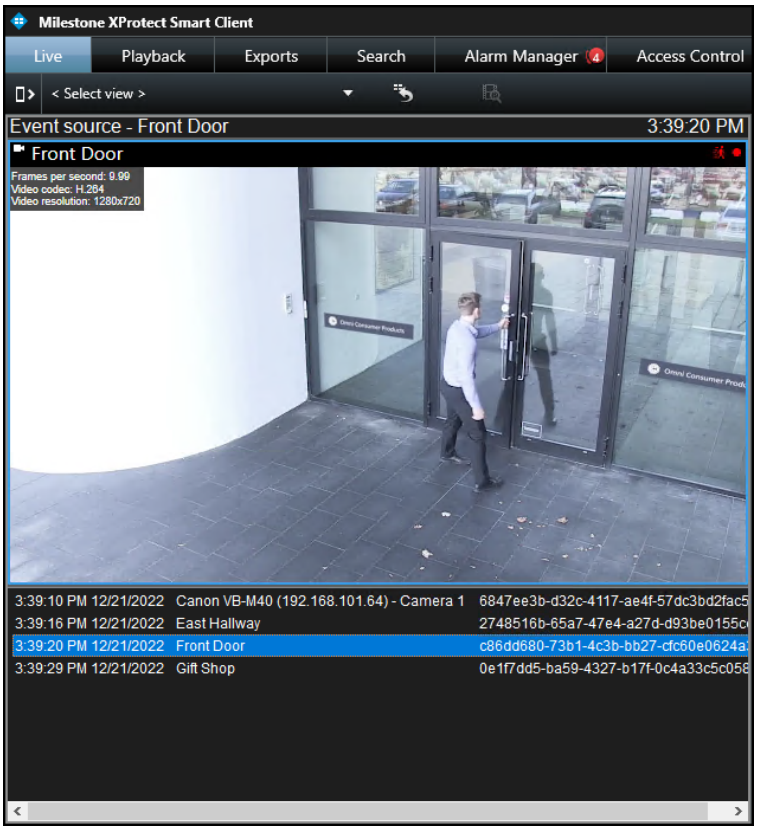
1. Go to the Smart Client application and enter **Setup** mode.
2. Open the **System overview** menu on the left side of the application.
3. Drag the **OnGuard Event Matrix** view item into an available pane. It may be required to first create a new view.



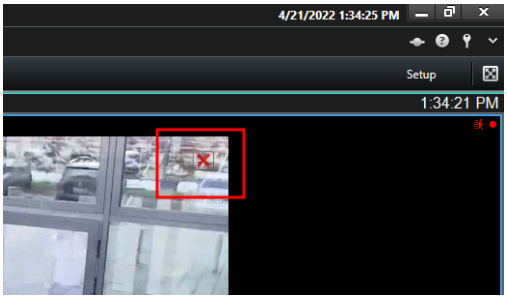
4. Expand the properties menu for the OnGuard Event Matrix view item after it has been placed in a view.
5. Select the **Show Event List** option to display a list of active events at the bottom of the OnGuard Event Matrix view item. Adjust the **Height** of the list in pixels. Choose the **Mode** of event display to automatically **Switch between events** or **Display latest event** video.



6. After the view item is active, it displays live or recorded video from the events sent from the OnGuard system. If you add more view items to the same Smart Client view, each empty view pane populates with events in sequence, before the video from the events start to overlap.
7. Click events in the event list to display video from the chosen event.



8. If you need to clear out the video from the view items, mouse over the video and click the red "X" in the top right of the video to clear the view.



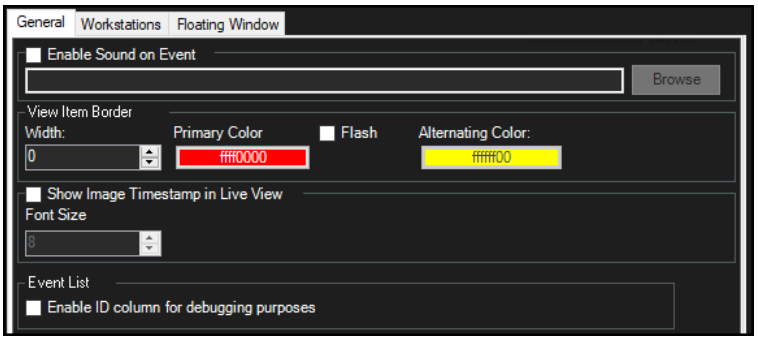
> After the plugin view item is added to the Smart Client it's recommended to adjust the settings within the OnGuard Event Matrix tab of the Smart Client settings menu. This lets XProtect users to choose which OnGuard workstations they can receive events from, and how the Smart Client responds to those events. Learn about these settings here: Smart Client settings for the OnGuard Event Matrix plugin on page 36

Smart Client settings for the OnGuard Event Matrix plugin

The available settings that control the behavior of the OnGuard Event Matrix plugin are in the **Settings** menu of the Smart Client. Any behavior changed in this menu only impacts the behavior of the current user's Smart Client application.

- Open the **Settings** menu in the Smart Client and go to the **OnGuard Event Matrix** menu.
- There are three tabs that contain different settings, the **General** tab, the **Workstations** tab, and the **Floating Window** tab. Adjust the settings as required.

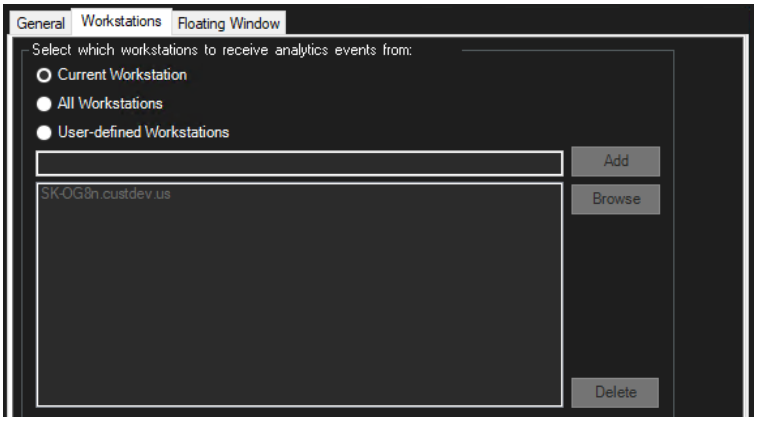
General tab:



Setting	Description
Enable Sound on Event	Controls if the Smart Client workstation makes an audible notification when it receives and event from OnGuard. Not enabled by default.

View Item Border	The OnGuard Event Matrix plugin view item border is always enabled. This section has several options to modify the appearance and behavior of the border.
Width	Pixel width of the border.
Primary Color	Color of the border, if the flash option isn't enabled.
Flash	Optional setting used to alternate border color. Used to draw the operator's attention to the OnGuard Event Matrix.
Alternating Color	Alternating color used to create the flash effect.
Show Image Timestamp in Live View	Controls if the OnGuard Event Matrix view item displays a date and time associated with the event in OnGuard.
Font Size	Size of the font used to display the date and time.
Event List	Enable ID column for debugging purposes. This adds an event ID number to each event displayed in the Smart Client event list.

Workstations:



Setting	Description
Current Workstation	This checkbox is selected by default. This results in events only being sent to the Smart Client from the OnGuard workstation installed locally.
All Workstations	The Smart Client can receive events from all OnGuard workstations.
User-Defined Workstations	The **Add** and **Browse** buttons become active when the **User-Defined Workstations** checkbox is selected. The single empty field next to the **Add** button is used to enter the fully qualified domain name (FQDN) of any OnGuard workstation that you want the Smart Client to receive events from. The **Browse** button can be used to open a network selection dialog used to browse to the workstations you would like to receive events from. The FQDN of all workstations authorized to send events to the current user's Smart Client appear in the large field. Any OnGuard workstation that isn't listed in this field is unable to send events via the OnGuard Event Matrix feature to this user. Select a workstation and click the **Delete** button to remove it from the list.

Floating Window:

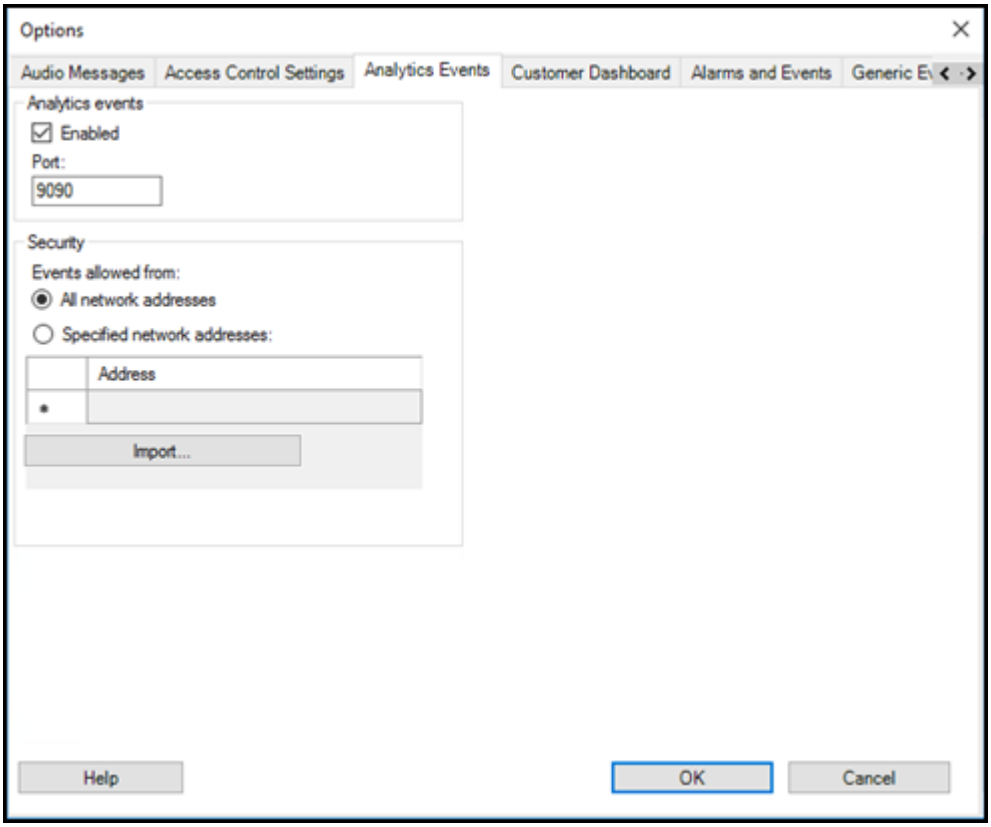
Setting	Description
When no active EventMatrix is displayed	This tab lets you to choose what the Smart Client should do in response to receiving an event if a view with the OnGuard Event Matrix isn't actively selected.
Do nothing	Select this option to have the Smart Client take no action.
Open floating window	Select this option to have the Smart Client launch a floating window.
X Position	Horizontal location of the top left corner of the Smart Client floating window. The top left corner of the preferred screen is 0'0'.
Y Position	Vertical location of the top left corner of the Smart Client floating window.

Width	Width in pixels of the floating window.
Height	Height in pixels of the floating window.
Preferred Screen	Display screen the Smart Client uses to launch the floating window.

Configuring XProtect VMS for the OnGuard Event Matrix

There is one primary requirement for supporting OnGuard Event Matrix on the Milestone XProtect Management Server or Event Server. Analytics events must be enabled, and port 9090 must be open on the firewall for inbound communications.

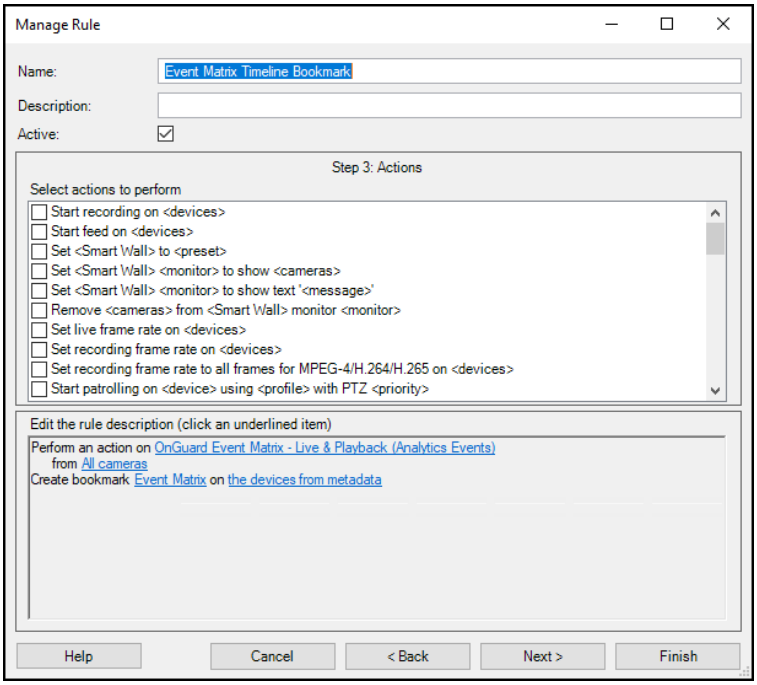
1. Open the **Options** menu of the XProtect Management Client and go to the **Analytics Events** tab.



2. Select the **Enabled** option, verify that port 9090 is chosen for **Analytics Events**.

All network addresses should be the default option for **Security** of **Analytics Events** in XProtect. It is possible to define the exact address of the OnGuard LS Communication Server(s) if your scenario requires additional security controls

After the integration is setup, the OnGuard Event Matrix events, sent into XProtect from OnGuard, can be used to trigger rules. An example is shown in the image below.

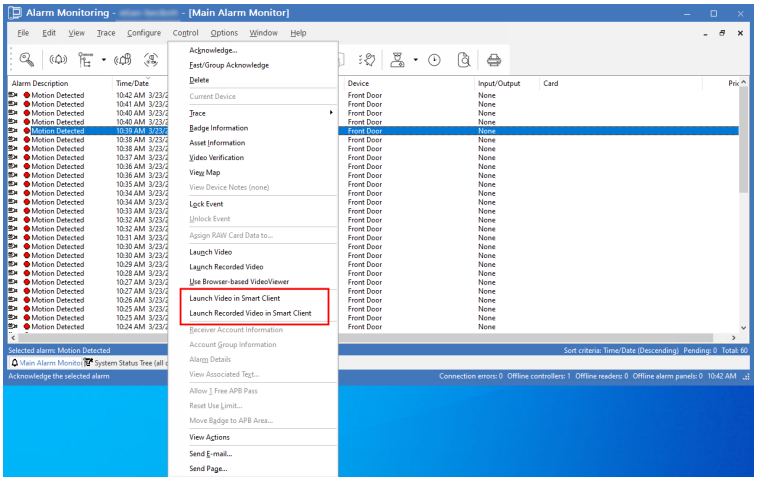


This rule creates bookmarks in the camera timeline each time the OnGuard operator sends live or recorded video events with the OnGuard Event Matrix feature. These bookmarks appear on the timeline even if the Smart Client isn't active and able to display video.

Sending OnGuard Event Matrix events into XProtect

From the OnGuard Alarm Monitoring application operators of the OnGuard workstation can send live or recorded video segments into XProtect.

1. Open the Alarm Monitoring application.
2. Right-click any alarm with associated video.
3. Choose to **Launch Video in Smart Client** or **Launch Recorded Video in Smart Client**.



Configuring event triggered video in OnGuard (explained)

The OpenVideo integration lets users configure the link between alarms and video in the System Administration application and view video when alarms occur in the Alarm Monitoring application. You can configure OnGuard to display live and or playback video of one or more cameras when alarms trigger. The following example shows how to configure OnGuard to automatically display video when motion is detected.

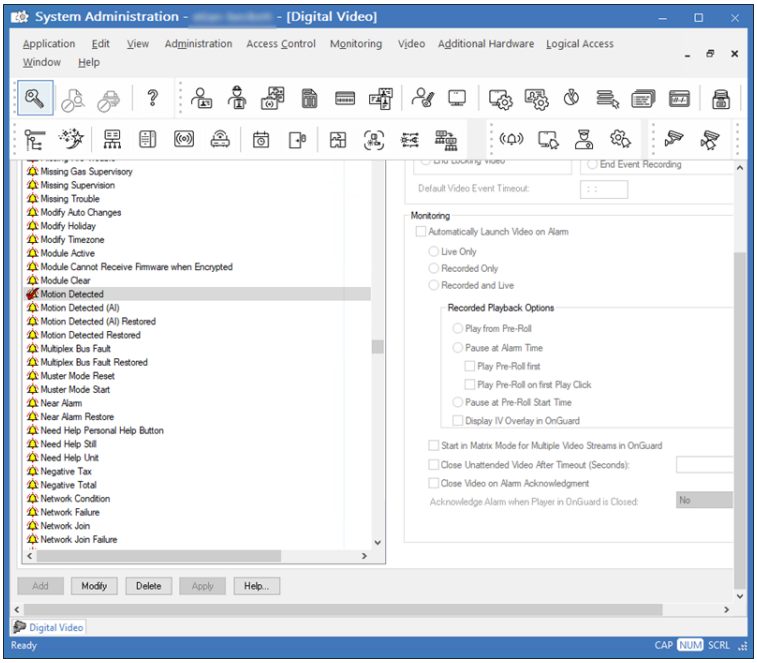
To view video triggered by events there are two changes to apply in the OnGuard system.

1. You need to choose the alarms used to trigger video, and setup alarm video links.
2. It's required to link video devices from XProtect, such as cameras and encoder channels, to access control devices from OnGuard, such as access control panels.

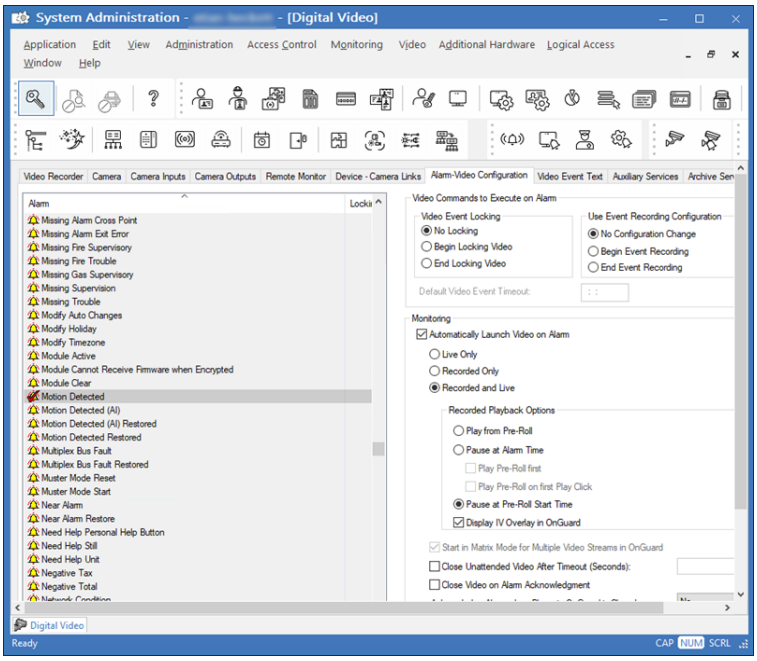
These links let live and recorded video play in the Alarm Monitoring application in OnGuard, and video from XProtect devices is automatically associated with alarms from access control devices.

Configuring alarm video links

1. Open the OnGuard System Administration application. Open the **Video** menu and select **Digital Video**. Go to the **Alarm-Video Configuration** tab of the client.



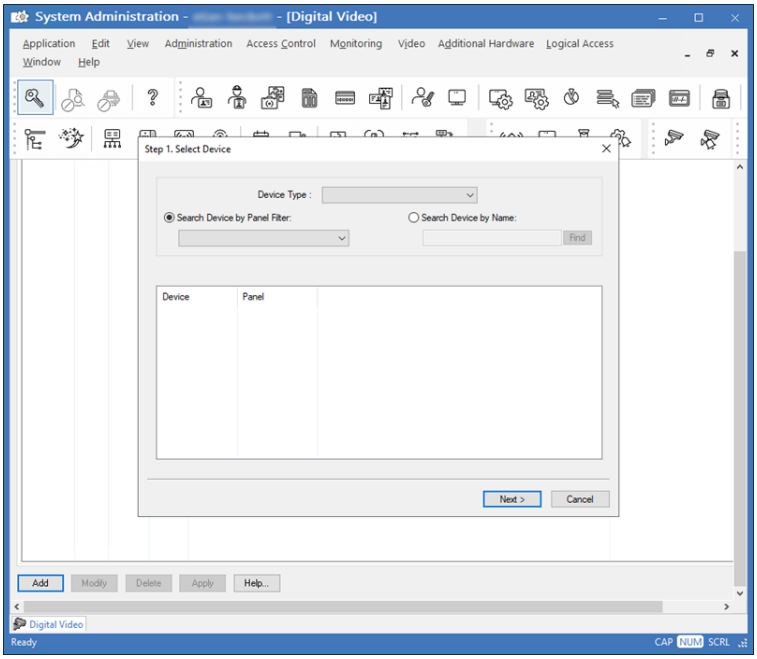
2. Select the required alarm from the alarm list. In this case, select **Motion Detected**. Click **Modify** to modify the existing response to the alarm.



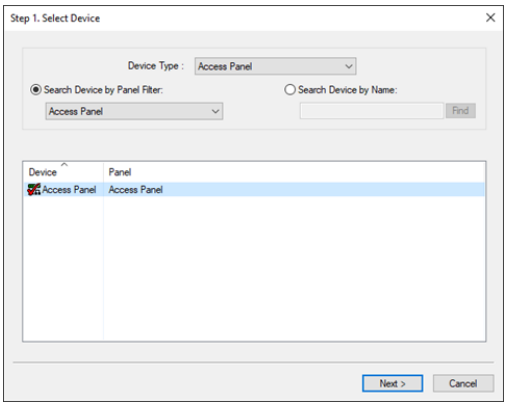
3. Select the **Automatically Launch Video Player on Alarm** checkbox, then select **Live Only** or **Recorded and Live** options. Click **OK** to save the configuration.

Configuring device camera links

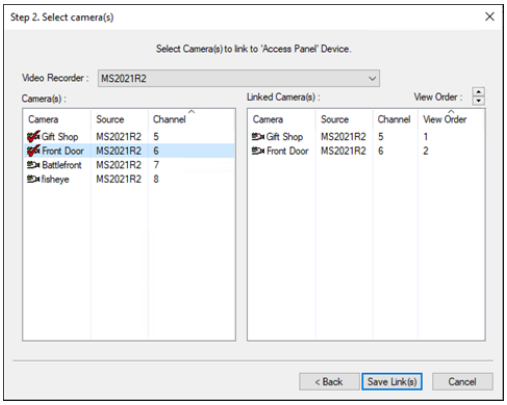
1. Open the OnGuard System Administration application. Open the **Video** menu and select **Digital Video**. Go to the **Device - Camera Links** tab.
2. Click **Add** to start the process of linking a camera to a device.



3. Open the **Device Type** list and select **Access Panel**, then select the access panel device from the **Search Device by Panel Filter** list, and click on the **Access Panel** generating the alarm to link to the camera. Verify the red check mark icon appears. Click **Next** to select the camera to be linked.



4. Select the Recording Server from the **Video Recorder** list, then select the required camera.



5. Click **Save Links** to save the configuration.

Filtering XProtect events in OnGuard explained

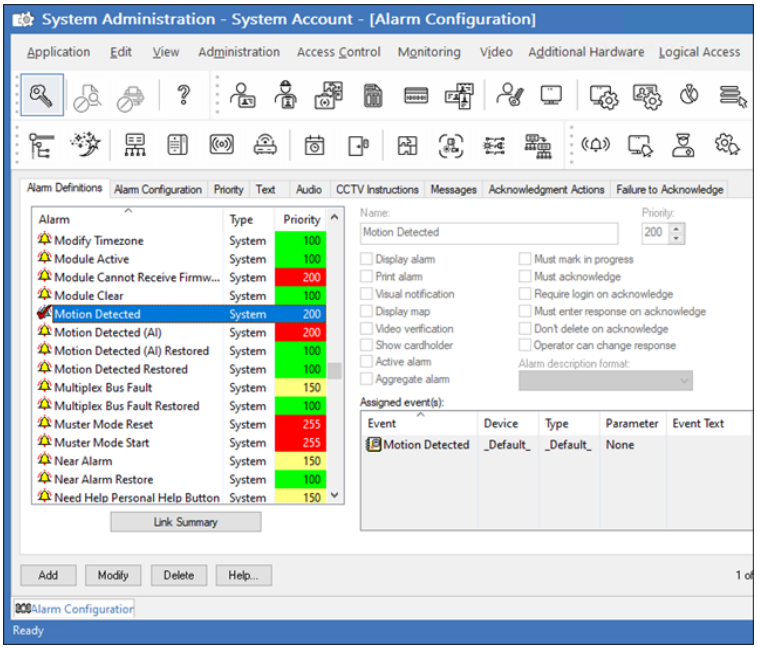
The Events Filtering Tool for the XProtect OnGuard integration is available with OnGuard 8.1.

XProtect creates many possible events which are sent into OnGuard to trigger responses from the OnGuard system. The Events Filtering Tool feature was built into the OpenVideo integration to choose which events from XProtect are sent into OnGuard. The Events Filtering Tool application runs on the OnGuard server and creates a list of events which are received by OnGuard.

If you choose not to use the Events Filtering Tool, or some of your OnGuard LS Communications Servers don't have the tool installed, those servers receive the default set of events from XProtect. The default list of these events is found at the end of the Feature list on page 6

All Milestone XProtect Recording Server generated motion detection events are received by OnGuard. These server based motion detection events can't be filtered out using the Events Filtering Tool. To stop these events from being received and displayed in OnGuard, take the following steps:

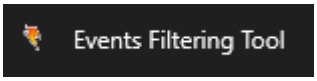
1. Open the System Administration application.
2. Select the **Alarm Definition** tab in the **Alarms** section of the **Monitoring** menu.
3. Scroll through the list of alarms to find **Motion Detected** and **Motion Detected Restored**.
4. Click the **Modify** button and remove the check boxes from the **Display alarm**, **Print alarm**, and **Must acknowledge** check boxes.
5. Click **Ok** to save the configuration.



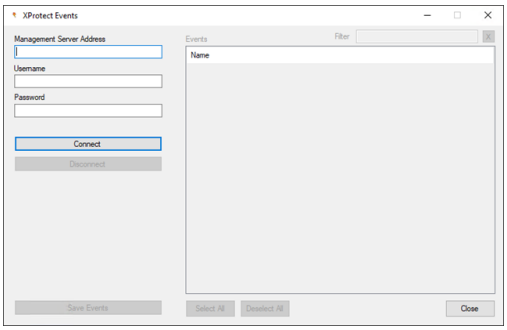
If this process is performed on both alarms, OnGuard stops displaying motion alarms from connected XProtect devices.

Using the Events Filtering Tool

1. Open the Windows start menu on the OnGuard server where the LS Communications Server is installed and where the tool is installed, and select the **Events Filtering Tool**.

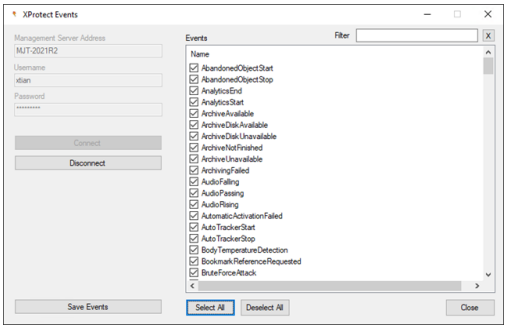


2. Enter the address of the Milestone XProtect Management Server in the **Management Server Address** field. You can use the IP address or the DNS address for the server. Enter an administrative level user's credentials in the **Username** and **Password** fields. Click the **Connect** button and the list of available events appears in the **Events** pane.



You can connect to many Milestone XProtect Management Servers and configure unique event lists from each system. Using the **Events Filtering Tool** you need to configure each list for each system separately. Each system's list is stored together on the same OnGuard server, but they don't conflict. For example, you can receive motion started events from all connected XProtect systems, or you can choose to receive motion started events from just one system.

3. By default all events are selected. Choose the events you want to receive. Events with a check mark next to them are received by OnGuard. Click **Save Events** to finish filtering the events.



Third party integrations and intelligent cameras often add events into XProtect. These events are added to the list of events received by OnGuard. If you want to receive events from third party integrations or cameras which have been configured within XProtect, you can wait for an hour, as the list of events is automatically synchronized each hour by the integration. To get an instant update - re-importing the camera list for any XProtect video recorder triggers an update to the event list.

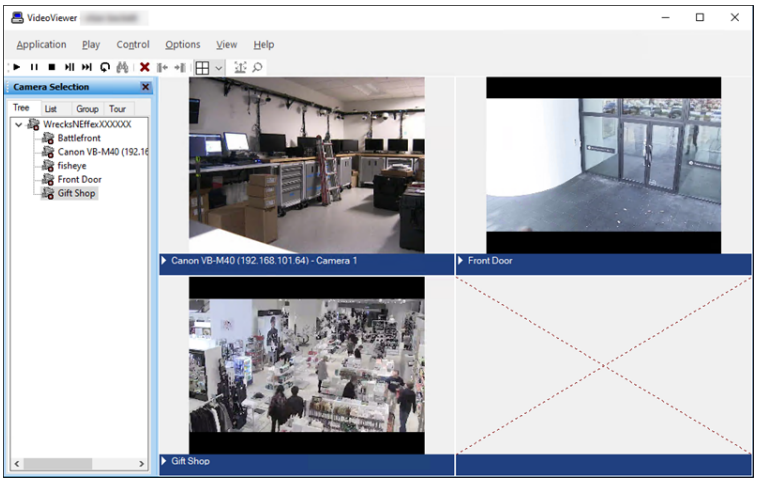
Operation

View live and PTZ video

1. Open the VideoViewer application in OnGuard to view live video from Milestone cameras.
2. Select a suitable tile configuration for displaying video.
3. Drag the required cameras from the tree control on the left to any tile on the right to view live video.

> PTZ controls appear as an overlay on the video display. If a set of cross hairs appear when placing mouse pointer over the image from a PTZ camera, Point and Click PTZ control is supported for the camera.

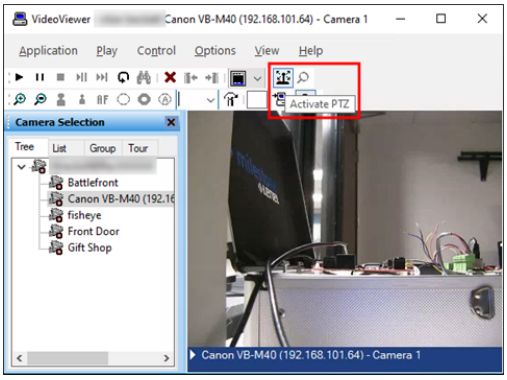
4. Click on the screen to pan, tilt, and zoom the video.

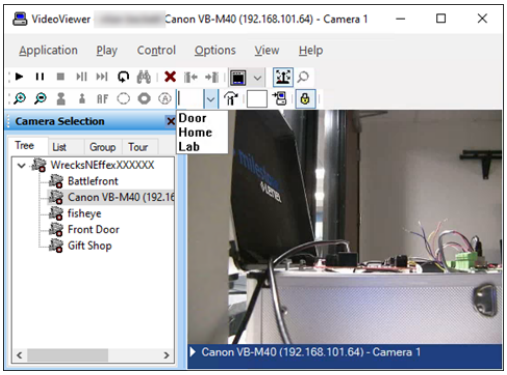


> Some cameras may display cross hairs surrounded by a square. For these types of cameras, you can control the zoom by holding down SHIFT key on the keyboard while moving the mouse up or down. You can also select zoom by holding down the left mouse button, drawing a square around an area in the image and releasing the left mouse button. Finally, you can use the mouse to zoom by scrolling.
>
> You can also view integrated Milestone video from selected cameras from the Alarm Monitoring application by selecting the required camera and clicking **Launch Video** in the menu.

Operate PTZ presets

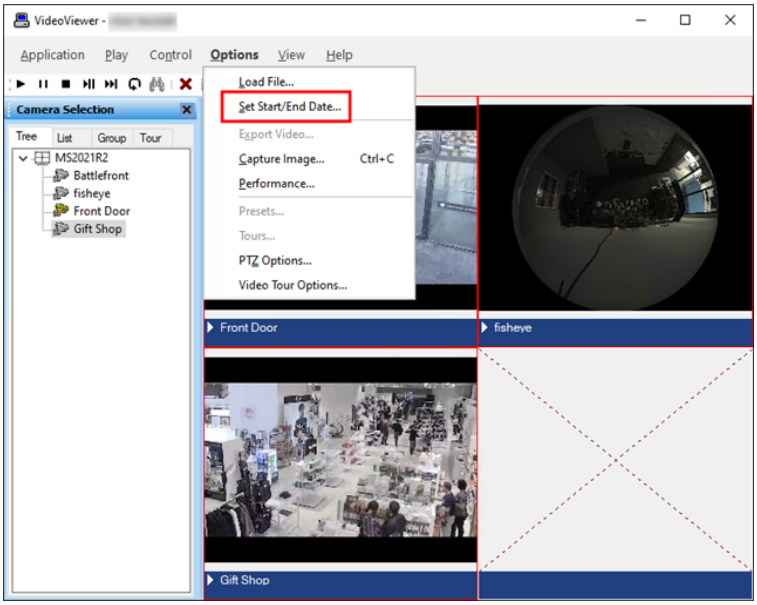
To use presets defined in XProtect, open live video in a single tile (**Single View**) and activate PTZ control. The list of presets appears in a dropdown, as shown in the screenshots below.





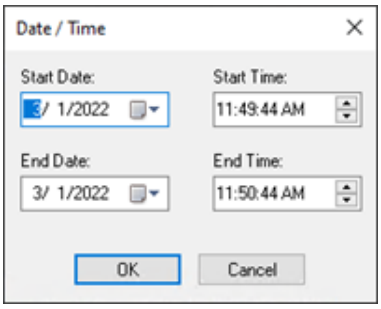
Play recorded video

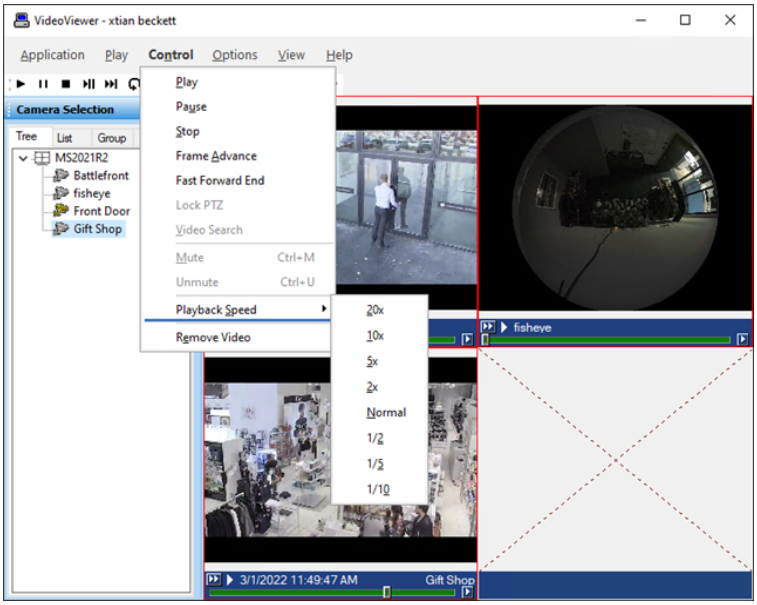
1. Go to the VideoViewer application in OnGuard to view recorded video from Milestone cameras.
2. Select a suitable tile configuration for displaying video.
3. Drag the required cameras from the tree list on the left to any tile on the right. The tiles stream live video from those cameras.
4. To playback recorded video from all cameras in the display tiles, click the **Options** menu and select **Set Start/End Date ...**
5. To playback recorded video from a single camera, right-click the camera name at the bottom of the tile and select **Set Start/End Date ...**



Video from selected cameras can be viewed from the Alarm Monitoring application by selecting the required camera and clicking **Launch Recorded Video** in the shortcut menu.

6. Set the start and end date and time of the recorded video to play back. Click **OK** to start playback.



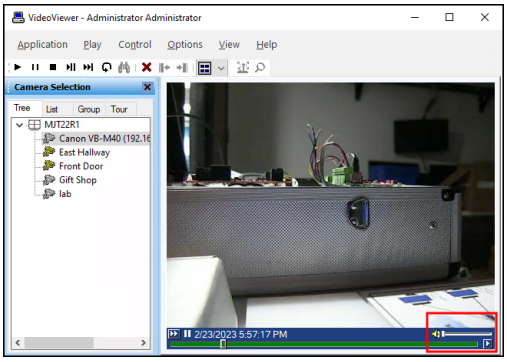


- Click **Play** control to stream video for the selected timespan
- Click **Pause** control to pause streaming video. Click **Play** to continue
- Click **Stop** control to stop streaming and go back to beginning of selected timespan
- Click **Frame Advance** control to advance one frame and pause. Click **Play** to continue
- Click anywhere in the video slider control to go to video at that point. Click **Play** to continue
- Set playback speed for individual camera by clicking on the appropriate position of the playback speed slider control
- Change date/time of start and end of playback in the date/time control. Click **Play** to start streaming video for the new timespan
- Adjust playback speed for all cameras in the view by selecting **Playback Speed** menu item from **Control** menu

Play audio from camera devices

AAC audio codecs are not compatible with this integration. The OnGuard video applications are 32bit applications. AAC codecs are not compatible with 32bit environments. G.711 and other uncompressed formats are compatible.

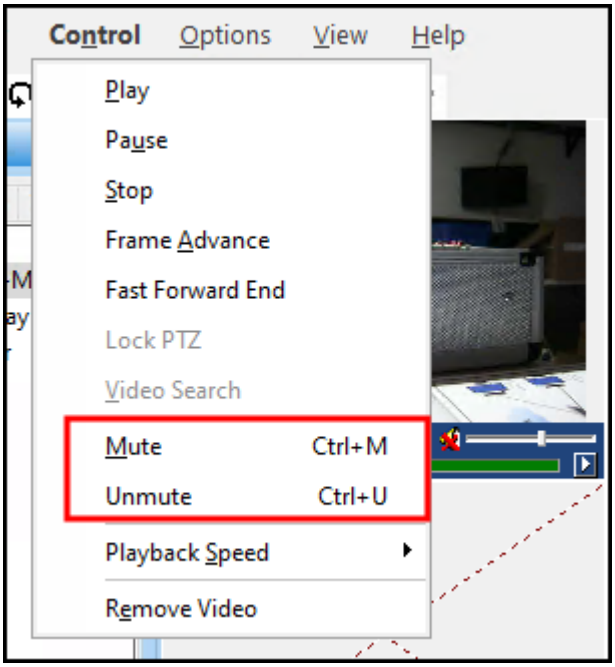
1. Open the VideoViewer application in OnGuard.
2. Camera devices that support audio contain a volume control on the live or recorded video view pane.



All cameras and view layouts start with audio unmuted at maximum volume. After configuring a camera's audio volume setting, OnGuard retains the setting the next time that device is started.

3. The audio control contains a volume slider, and the speaker icon can be clicked to mute.

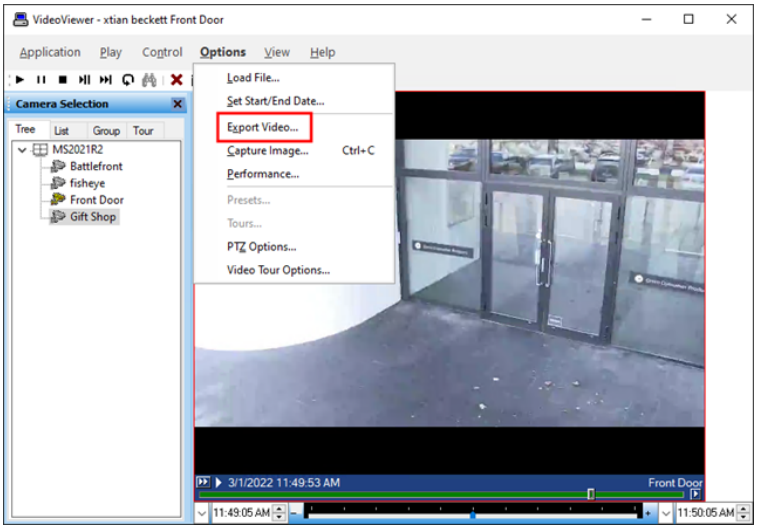
4. Open the **Control Menu** to use the **Mute** or **Unmute** options.



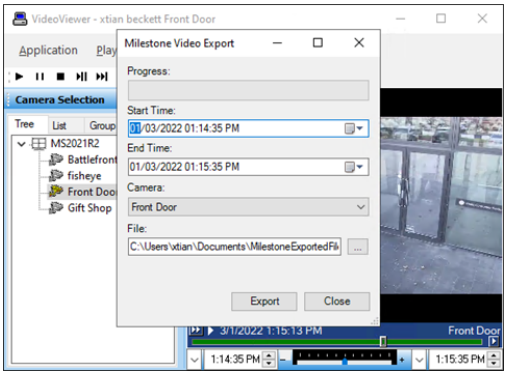
Displayed cameras which are selected, with a gray colored banner at the bottom of the video view pane, will not be impacted by the **Mute** or **Unmute** controls. All cameras with a blue banner are muted or unmuted.

Export video

1. Go to the VideoViewer application in OnGuard.
2. Drag the required camera into an open tile on the right hand side of the client.
3. Right-click the camera name at the bottom of the video and select **Recorded** to set the video display to playback mode.
4. Or, open the **Play** menu in the VideoViewer application and select **Recorded** to set display to playback mode.
5. Click the tile selection icon and select **Single View**.
6. Click the **Options** menu and select **Export Video ...** to start the export window.



7. Select the required values for **Start Time**, **End Time**, **Camera**, and **File** to configure the export.



8. Select **Export** to export the recorded video clip.

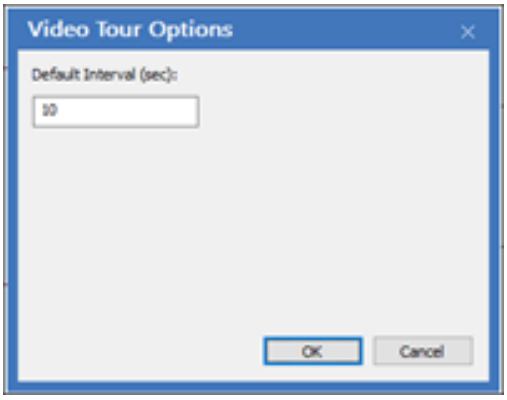
> The file format this integration supports for exported video is the .MKV file format. You need to use a third-party video application to play exported .MKV video files. Such as, the free VLC media player found at the videolan.org website.

Operate camera tours

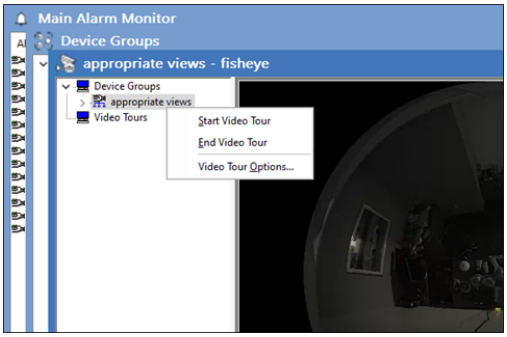
1. Go to the OnGuard Alarm Monitoring application.
2. Click on the **View** menu and select **Device Groups**.
3. Open the **Device Groups** directory
4. Right-click the camera group, and select **Live Video** from the shortcut menu to open the **Live Video** tab or window.

5. Open the **Device Groups** directory in the **Live Video** tab or window.
6. Right-click the camera group, and select **Video Tour Options…**

7. Set the **Default Interval (sec)** or dwell time between streams for each camera in the group.
8. Press **OK** to save settings.



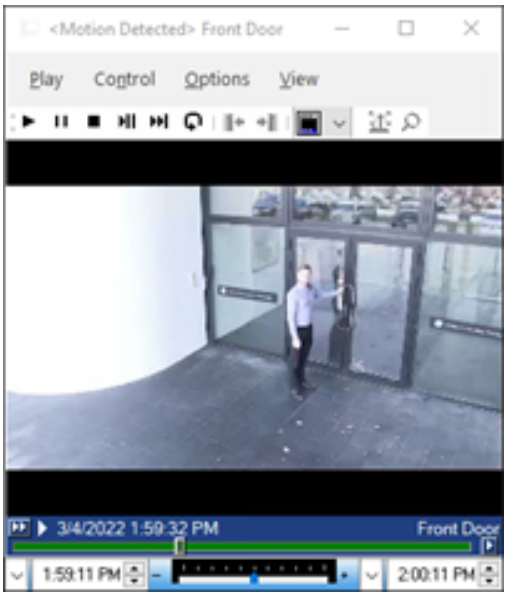
9. Right-click the camera group and select **Start Video Tour**. Live video from each camera in the group plays for the dwell time, before switching to the next camera.



10. Select **End Video Tour** from the shortcut menu to stop the tour.

View alarm triggered video

Launch the OnGuard Alarm Monitoring application. When motion is detected, a VideoViewer window opens displaying either live video or live and recorded video, from the camera which detected motion.



Logging

Working with log files

By default, both the OnGuard workstation and the OnGuard server have logging enabled at information mode (Info).

You can increase the level of information to the level of Debug for diagnostics purposes, but note that this change causes:

- More information logging
- More use of disk space
- May slow operations on servers

For this reason, you shouldn't set the log level to debug at all times. You should use this level for diagnostics purposes and switch back to **Info** when diagnosis is complete.

OnGuard workstation

1. On each machine that runs the OnGuard workstation that uses the integration, go to **C:\ProgramData\MilestoneTrans**.
2. The contents of that whole folder can be relevant for troubleshooting. Contact Milestone technical support for more information.

OnGuard server

1. On each machine that runs the OnGuard LS Communication Server goto **C:\ProgramData\MilestoneTrans**.
2. The contents of that whole folder can be relevant for troubleshooting. Contact Milestone technical support for more information.
3. On clustered OnGuard servers, make sure to capture the logs on all the machines that are part of the cluster.

Change log levels

Sometimes for diagnostics purposes, you need to get more information about the running state of the integration. You can increase the information details for logs by changing the logging level. You can set the log level at several different levels that increases the amount of information logged.

These levels are:

- Off
- Fatal
- Error

- Warn
- Info
- Debug
- Trace

Off writes no information to the file and Trace writes the most information. The logging level is Info by default. The logs delete after 10 days, so they don't take up too much disk space. In the following, you can find the steps to change the log levels in the different modules of the integration:

OnGuard workstation

1. On each machine that runs the OnGuard workstation, go to **C:\ProgramData\MilestoneTrans**.
2. Find a file named **MilestoneTrans-NLog.xml**, then open it in a text editor, for example Notepad or Notepad++.
3. The second-to-last line in the file should show: **<logger name="*" minlevel="Info" writeTo="mainlog" />**.
4. Change the **Info** to **Debug** on that line, then save the file.
5. Depending on the operating system, you may have to save the file to the desktop, and copy it back to that folder. The reason for having to do this is that Windows permissions don't let you save a file directly in the folder.

OnGuard server

1. On each OnGuard machine running the OnGuard LS Communication Server, go to **C:\ProgramData\MilestoneTrans**.
2. Find a file named **MilestoneTrans-NLog.xml**, then open it with a text editor, for example Notepad or Notepad++.
3. The second to last line in the file should read like this: **<logger name="*" minlevel="Info" writeTo="mainlog" />**.
4. Change the **Info** to **Debug** on that line, then save the file.
5. Depending on the operating system, you may have to save the file to the desktop, and copy it back to that folder. The reason for having to do this is that because Windows permissions don't let you save a file directly in the folder.

OnGuard Web Client

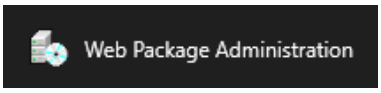
OnGuard Video Web Package and Milestone Open Network Bridge (explained)

Using the OnGuard Web Client running OnGuard v8.0 and up requires installation of the Milestone Open Network Bridge and the OnGuard Video Web Package. Install the OnGuard Video Web Package with Milestone ONVIF Bridge on a separate, independent server - not on the OnGuard machine, Milestone XProtect Management Server, or Milestone XProtect Recording Server.

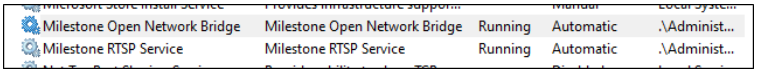
The OnGuard Video Web Package (OVWP) is a software product that acts as a gateway that provides a link between a video web application and a recorder or video system. In this case, it provides a link to an XProtect system. The OVWP relies on the Milestone Integration Platform (MIP) SDK for all command-and-control operations initiated by the OnGuard web applications. The OVWP also relies on RTP/RTSP for retrieving media streams.

The OnGuard Video Web Package installs three services, collectively known as the LenelS2 Video Web Services (LVWS):

The Web Package Administration application allows configuration of the settings of the OnGuard Video Web Package. Find this application in the Start Menu.



The Milestone Open Network Bridge consists of two services, that run on the gateway server:



There is also a plugin for the XProtect Management Client.

Download the software components required for the OnGuard Web Client integration with XProtect. Login to the partner portals for both Milestone and LenelS2. Find the right software package and start the download.

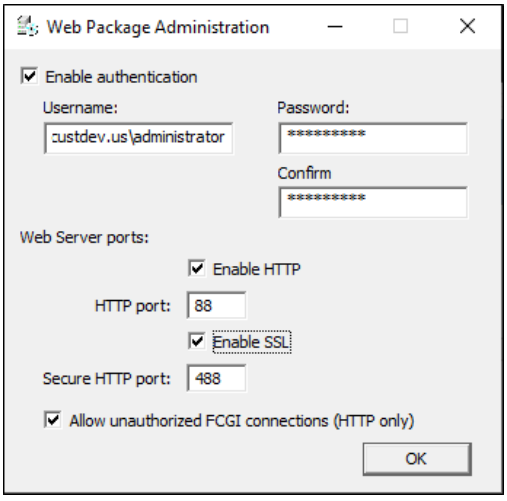
The Milestone Open Network Bridge can be found at this page. The download is only available once logged into MyMilestone. Login, then use the download selector to choose the version that matches the installed XProtect VMS.

The OnGuard Video Web Package components can be found at this page. The components required are contained in the SupplementalDisc28.iso package, which LenelS2 partners can access when logged in.

Installing the OnGuard Video Web Package

1. Download the OnGuard Video Web Package and unzip it on the gateway server. Open the folder and double-click the setup application to launch the installation wizard.
2. If the server needs to install pre-requisites, the wizard starts there. Agree to install the prerequisites and click **Install**. After the prerequisites finish installing, the installation wizard for the OnGuard Video Web Package continues. Click **Next** to start the installer.
3. Accept the license agreement and click **Next**. The **Custom Setup** step for the installer lists the components to install. Choose the default options and click **Next**. If the destination folders don't need to be changed, click **Next** to continue.
4. The OnGuard Video Web Package is now ready to install. Click **Next** and wait for the program to complete.
5. The **Web Package Application** pops up. Enter the settings required to establish connection and click **OK**.

Choose to **Enable authentication**, and change the default ports (80 and 443) if they are already in use by the system. The user account for authentication must be a user that can authenticate with OnGuard and XProtect.

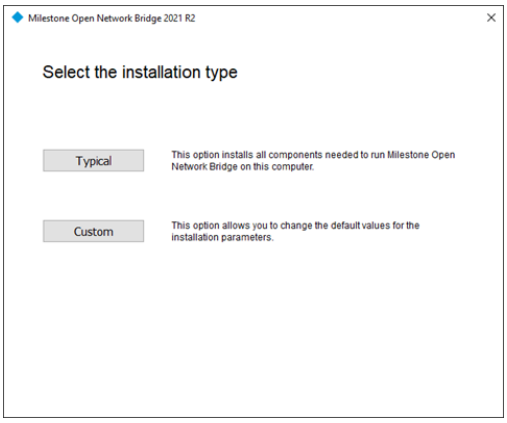


6. A pop up notification opens after saving the **Web Package Application** settings, because the system requires a restart before settings go into effect. Choose either option, and click **OK**.
7. The installation of the OnGuard Video Web Package is complete.

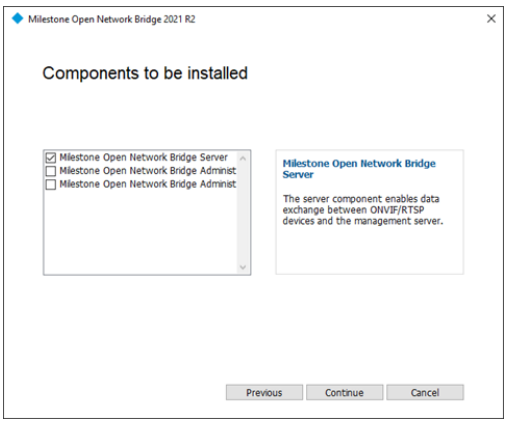
To change the configuration of the Web Package Application, find the application in the Windows Start menu and choose to run the application as an administrator.

Installing the Milestone Open Network Bridge

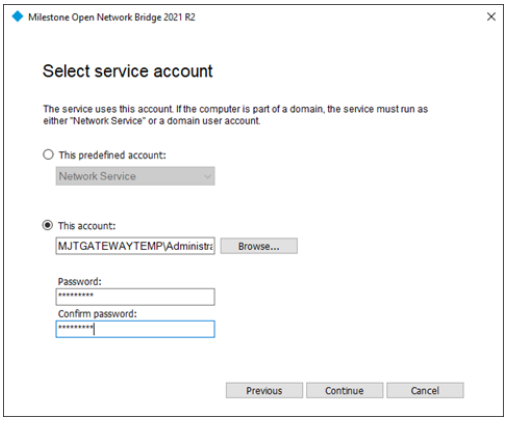
1. On the gateway server download the Milestone Open Network Bridge which matches your version of the XProtect VMS. You can find all information about the bridge application at this page. You will need a MyMilestone account to download the application. Double-click the installation package after the download. Choose your language and click **Continue**. Then accept the license agreement and click **Continue**.
2. Choose the **Custom** installation option.



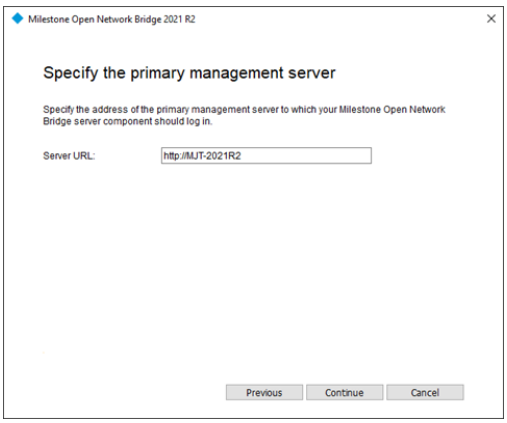
3. Select to install the server components for the Milestone Open Network Bridge and click **Continue**.



4. Choose to run the services as a user that can authenticate to the XProtect Management Client and click **Continue**.



5. Enter the address of the Management Server and click **Continue**.

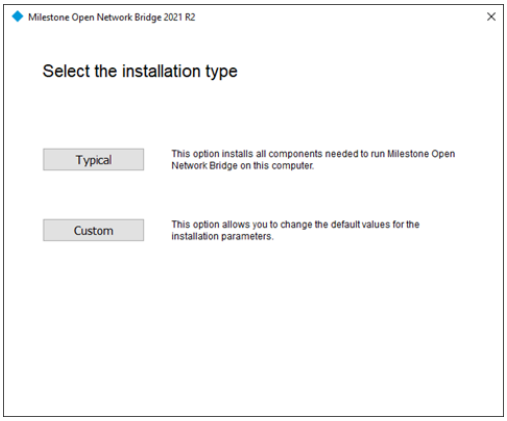


6. Choose to install at the default folder location and click **Install**. The installation completes.

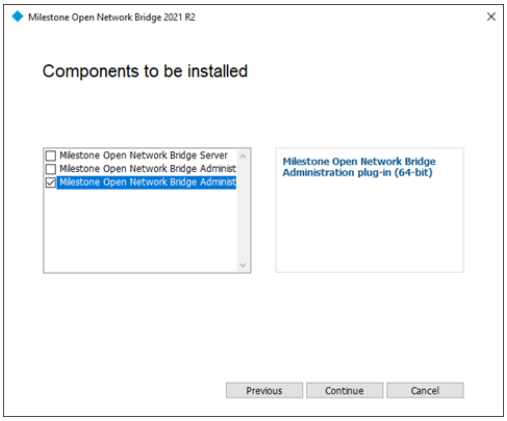
> The Milestone Open Network Bridge must use the same credentials as those used by OnGuard to connect to the XProtect Management Server.

Installing the Milestone Open Network Bridge Plugins

1. On the gateway server download the Milestone Open Network Bridge which matches your version of the XProtect VMS. You can find all versions of the bridge application at the XProtect download page for Milestone Open Network Bridge. Double-click the installation package after the download. Choose your language and click **Continue**. Then accept the license agreement and click **Continue**.
2. Choose the **Custom** installation option and click **Continue**.



3. Choose to install the correct Milestone Open Network Bridge Administration plugin for your application environment. Usually, this is the x64 version of the plugin. Click **Continue**.

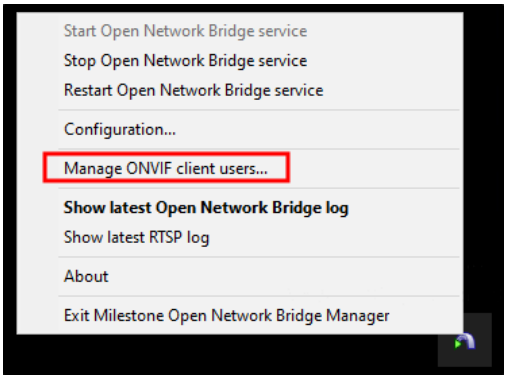


4. The installation completes.

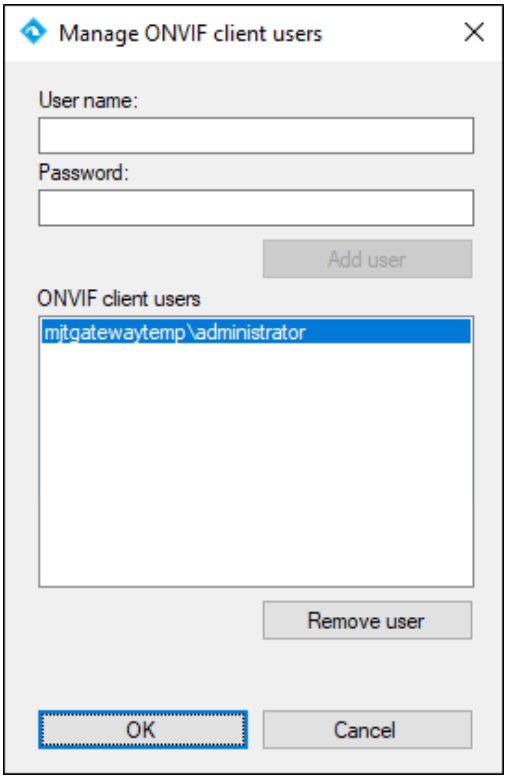
Configuring the Milestone Open Network Bridge

To fully setup the Milestone Open Network Bridge you need access to both the gateway server with the OnGuard Web Video Package, and the XProtect Management Client with the Milestone Open Network Bridge Administration plugin.

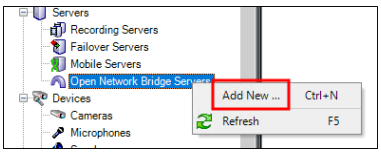
1. Go to the gateway server and right-click the Milestone Open Network Bridge service tray icon and select **Manage ONVIF client users...** from the shortcut menu.



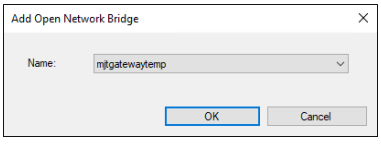
2. Enter the same user account used to run the Milestone Open Network Bridge services. Click **Add user** to move the user account credentials to the list of **ONVIF client users**. Click **OK**, and click **OK** on the pop-up that warns of a required restart to the Milestone Open Network Bridge services.



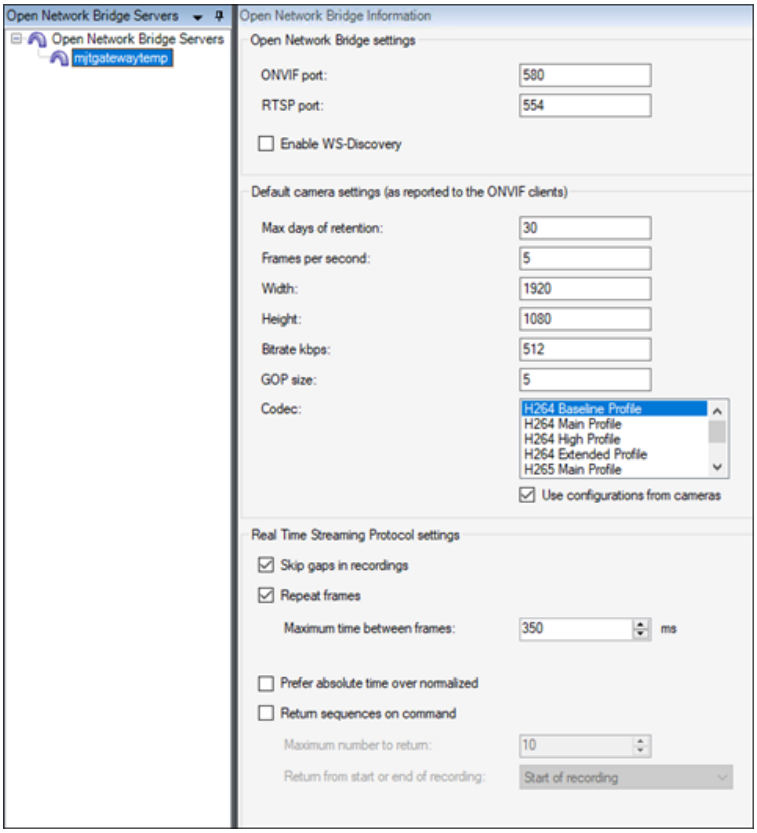
3. Go to the XProtect Management Client and select the **Open Network Bridge Servers** icon in the **Site Navigation** pane which is in the **Servers** category. Right-click the icon and select **Add New...** from the shortcut menu.



4. The name of the gateway server appears in the list of available servers in the pop up menu, select the gateway server, click **OK**.



5. This menu within the Management Client controls the video parameters of the streaming video between the XProtect system and the OnGuard Video Web Package.

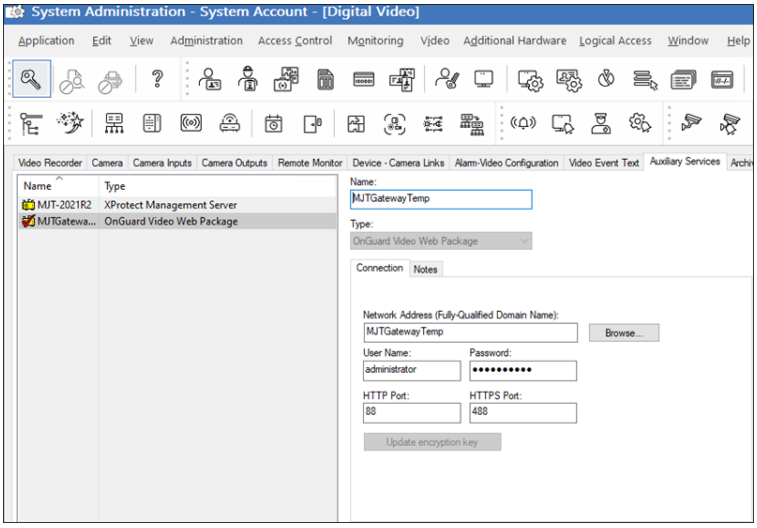


If changes are made to the user account linked to the ONVIF client user, the Milestone Open Network Bridge services on the gateway server needs a restart.

Adding OnGuard Video Web Package to OnGuard

OnGuard needs to know where the gateway server is, and how to link it to the XProtect Management Server and Recording Servers added to the integration. This process details how to add the OnGuard Video Web Package gateway server into the OnGuard system configuration.

1. Open the OnGuard System Administration client. Within the **Digital Video** section of the **Video** menu, select the **Auxiliary Servers** tab.
2. Click the **Add** button on the bottom left and enter the required parameters to connect to the gateway server.



- **Name** - choose an appropriate name for the gateway server.
- **Type** - choose OnGuard Video Web Package from the list.
- **Network Address (FQDN)** - enter the fully qualified domain name of the gateway server in this field.
- **User Name** - add the username of the same user that runs the Milestone Open Network Bridge services in this field.
- **Password** - enter the password of the same user that runs the Milestone Open Network Bridge services here.
- **HTTP & HTTPS Ports** - enter the same port numbers used when you installed the OnGuard Video Web Package.

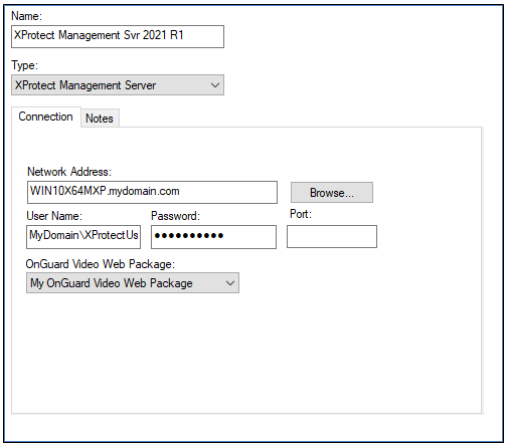
3. Click **OK** to save the configuration.

> The **Network Address** field must have a fully qualified domain name. If an IP address is used, video streaming doesn't work.

Linking OnGuard Video Web Package to XProtect in OnGuard

After the installation and configuration of the OnGuard Video Web Package and the Milestone Open Network Bridge together on a gateway server, and once the OnGuard Video Web Package is added to OnGuard as an Auxiliary Server, it's required to link the Milestone XProtect Management Server to the OnGuard Video Web Package server.

1. From the **Video** menu select the **Digital Video** option to display the **Auxiliary Services** tab.
2. Select the Milestone XProtect Management Server which was added, and verify that the OnGuard Video Web Package option, which is available at the bottom of the **Connection** tab, is configured.


Name:
XProtect Management Svr 2021 R1
Type:
XProtect Management Server
Connection
Notes
Network Address:
WIN10X64MXP.mydomain.com
Browse...
User Name:
Password:
Port:
MyDomain\XProtectUs
OnGuard Video Web Package:
My OnGuard Video Web Package

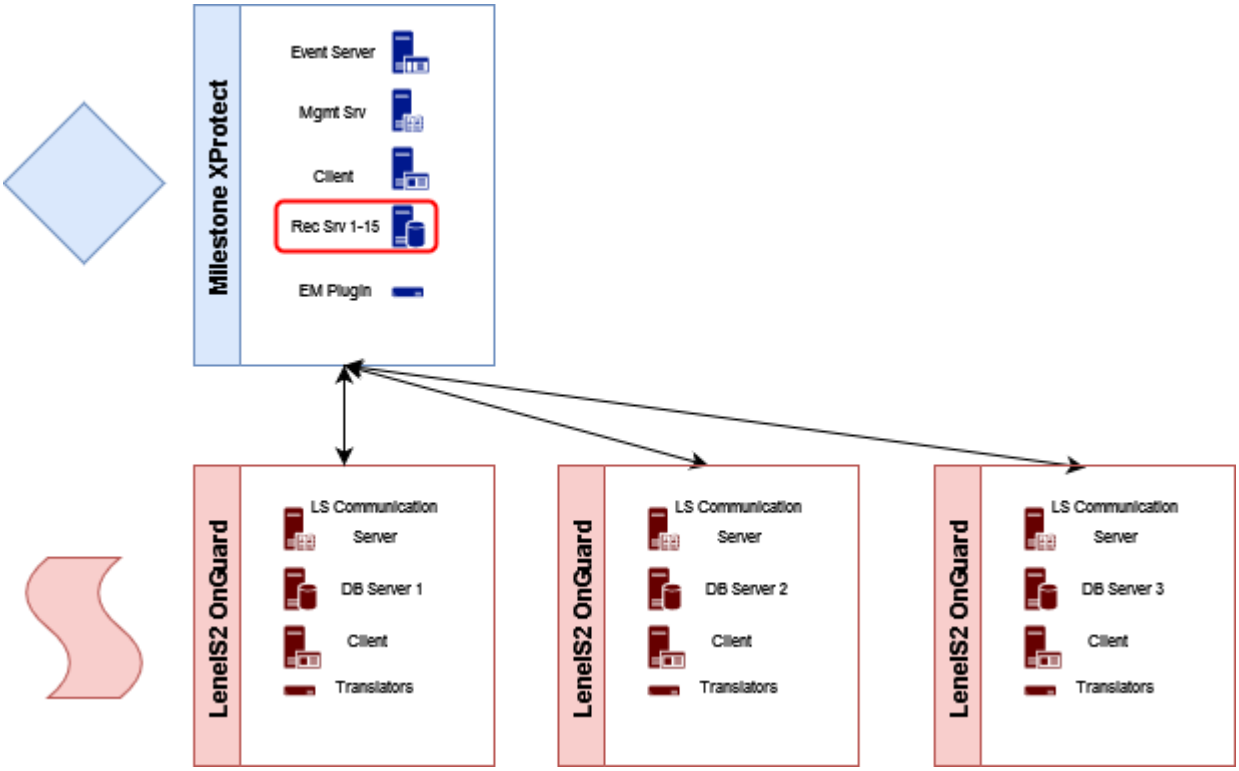
Troubleshooting

Supported installation scenarios

This document cannot list all possible installation scenarios for integrated OnGuard and XProtect systems. Below are all individual scenarios Milestone and LenelS2 have been asked to confirm as supported.

> Milestone and LenelS2 have created a technical deployment guide which documents design recommendations, performance thresholds, and architectural guidance within one short document. The OnGuard OpenVideo integration is covered in this deployment guide. Download and read the guide from this link:
>
> https://download.milestonesys.com/lenels2/

Integrations with a single XProtect system connected to multiple OnGuard systems are also supported, however this scenario is not listed in the document linked above.



In a scenario where a single XProtect systems connects with multiple OnGuard systems there will be additional performance demands on the Recording Servers in the XProtect system. Each separate OnGuard system will place additional demands on all Recording Servers. When designing a system using this scenario this is an important

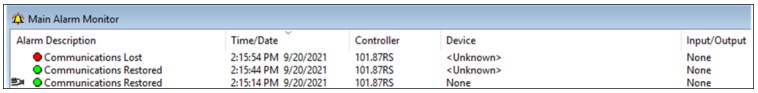
performance impact to understand. There is no logical limit to the number of OnGuard systems that can be connected to a single XProtect system using the OpenVideo integration. However, this performance impact will limit the number of systems which can functionally be connected.

Communications alarms from <Unknown> devices.

Every time the Recording Server restarts, the integration displays a communications lost alarm in OnGuard, and a communications restored alarm.

Both alarms: **Communications Lost** and **Communications Restored** are received from each individual device. This means that all cameras attached to the Recording Server send these alarms. This is expected behavior.

Cameras attached to the Recording Server in XProtect, which aren't used in the OnGuard integration, also send alarms. These alarms appear in OnGuard as **<Unknown>** devices attached to the restarted Recording Server.



There is no method to stop these alarms from the **<Unknown>** devices, without bringing all XProtect devices into OnGuard.

OnGuard Event Matrix events not received on XProtect 2020 R2

In systems running the 2.5 and above versions of the OnGuard OpenVideo integration there is a known issue which causes the OnGuard Event Matrix events to stop displaying in the XProtect Smart Client. This issue appears on XProtect 2020 R2 versions. This issue happens after attempting to send events to the XProtect Smart Client from the Alarm Monitoring application in OnGuard as detailed in Sending OnGuard Event Matrix events into XProtect on page 40

The way to fix this issue is to install the most recent cumulative hotfix for both the XProtect Event Server and the XProtect Smart Client. These fixes enable the event filters used by the Smart Client plugin to listen for events from the Event Server. The cumulative hotfixes for all XProtect versions are available through the Knowledge base, and it's always recommended to have the most recent hotfixes installed.

The most recent version of the 2020 R2 cumulative hotfixes are always available at this link: XProtect 2020 R2 cumulative patch installers

Upgrading OnGuard breaks the integration (version 2.3 or earlier)

Upgrading the OnGuard system with a service pack release can remove the required XProtect components for the integration. No video is available from configured devices and no integrated functionality is available until this is fixed.

The files deleted are located here:

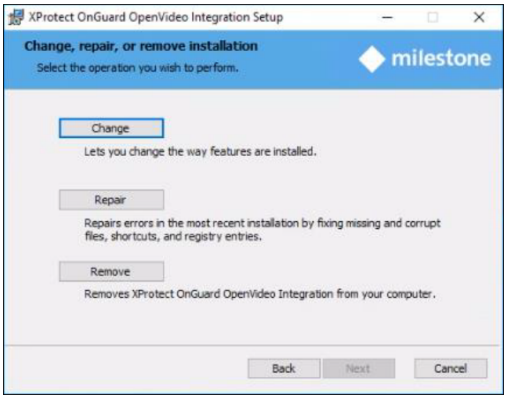
C:\Program Files (x86)\OnGuard\

> In version 2.4 and newer of the integration, the location of the installed files is changed and this issue shouldn't exist.
>
> The new location is: C:\Program Files (x86)\Milestone OnGuard Translator\

There are three files which are deleted:

- MilestoneTrans.dll
- MilestoneTrans.Managed.dll
- MilestoneTrans.Managed.dll.config

There are many files in this folder. Search for the files to confirm if they exist. If they don't exist, you can fix this by downloading the plugin installation wizard and performing the **Change** operation.



Download the files here. Make sure to download the file that corresponds to the major release of the OnGuard system that was upgraded.

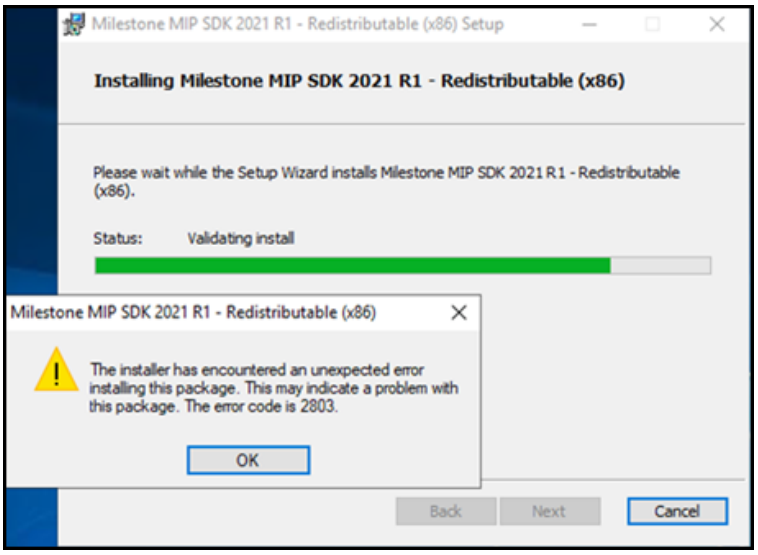
Complete the wizard using the **Change** option without changing any of the default options. You can run the wizard on an OnGuard server or workstation. After the re-installation is complete, reboot the OnGuard workstation or restart the LS Communications Server service on an OnGuard server. This should return the integration to full functionality.

Adding cameras resets existing camera settings

On XProtect systems connected to OnGuard, when a new video device is added to the integration it resets each of the integrated camera's settings stored in the OnGuard system. This impacts all existing versions of the OpenVideo integration, and all existing versions of OnGuard and XProtect. The only device setting that remains, is the device name. There is no workaround or fix for this issue. Milestone and LenelS2 are both working to fix this issue, and is addressed in an upcoming release from LenelS2. Until that time, the fix is to reconfigure each device after adding a new device.

MIP SDK upgrade error 2803

When upgrading the integration from an older version to a newer version, one of the components required to upgrade is the Milestone MIP SDK. During the upgrade process, the MIP SDK installation wizard can create an error if services or applications are still running which are using the MIP SDK files being upgraded.



Continue the upgrade process, and restart all services and applications afterward so they can use the newest versions of the required MIP SDK files. Please refer to the Milestone Knowledgebase troubleshooting article for more information.

Ports required for Milestone video

Connecting to Milestone XProtect Recording Servers, connecting to cameras, viewing video, and receiving status updates from a Milestone XProtect system, requires ports opened. There is a list of all the ports required to authenticate with, view video from, and receive status or event updates from a XProtect VMS here.

This link has a complete list of the ports required to communicate with XProtect. Here is a shorter list of ports known to impact communication for this integration:

Port	Protocol	Direction / Service(s)	Usage
80	HTTP	In & Out-bound / Management Server & Clients	Authentication
443	HTTPS	In & Out-bound / Management Server & Clients	Authentication
7563	TCP	In-bound / Clients	Video, Audio & PTZ

22331	TCP	In-bound / Clients	Alarms & Events
9090	TCP	In-bound on XProtect Event Server (not open by default)	Alarms & Events

Cannot discover cameras

After connecting to the XProtect VMS, the OnGuard system can't connect to any cameras that XProtect is managing. Follow these steps to troubleshoot the issue:

- Make sure the OnGuard LS Communication Server service is running
- Make sure the user credentials used to connect, and the Management Server hostname address provided are valid
- Check the credentials and hostname work using the XProtect Smart Client
- Log out of OnGuard System Administration application and log back in

Live or playback video does not work

It's possible for live and recorded video to stop displaying in the OnGuard system. If this happens follow these steps to troubleshoot the issue:

- Make sure the required version of the MIP SDK (2022 R1) is installed
- If the problem is with video only (black tiles) and Recording Server data encryption is enabled in XProtect, verify that the appropriate certificate is installed and trusted on every OnGuard client machine where video is displayed (see Limitations section for more details)

Offline camera status

Individual camera status in OnGuard may appear offline with a red cross-mark. Although video appears in the OnGuard system. If this happens, check if the OnGuard LS Communication Server service is running.

Launching video results in error message

The **Error communicating with Video Recorder** message appears in OnGuard Alarm Monitoring when clicking **Launch Video** on selected Milestone camera. However, video can be viewed in VideoViewer and System Administration apps.

Close the Alarm Monitoring application and stop the OnGuard LS Communication Server service. Navigate to the following file:

- C://ProgramFiles(x86)/OnGuard/LnlSkyPointBaseServerTranslatoru.dll

Rename the file to:

- LnlSkyPointBaseServerTranslatoru_bak.dll

Restart the OnGuard LS Communication Server service and the Alarm Monitoring application. Verify the XProtect servers and OnGuard servers are online and connected to network.

helpfeedback@milestone.dk

About Milestone

Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone Systems enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone Systems is a stand-alone company in the Canon Group. For more information, visit https://www.milestonesys.com/.