Connector Functionality

Milestone Systems XProtect Corporate 3.7.10

Last update date: 6 Oct 2021

CONNECTOR DETAILS

MANUFACTURER	Milestone Systems
PRODUCT NAME	XProtect Corporate
PRODUCT CATEGORY	CCTV
CONNECTOR PACKAGE NAME	CNL.IPSecurityCenter.Driver.Milestone.Corporate.Version.3.7.10.3010.ipscdriver
CONNECTOR VERSION	3.7.10
SUPPORTED HARDWARE	Corporate 2020 R3
SDK/API VERSION	MIP SDK 2019R1
SUPPORTED CONTROL CENTER VERSION	5.xx
TESTED AGAINST	5.28
LICENSE TYPE	CCTV
DEVELOPER	CNLUK\bm
TESTER	JK

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1 Document Versions

Version	Date	Name	Change
1.0	6 Oct 2021	CNLUK\bm	Document Created.

2 Manufacturer Details

Name	Milestone Systems
Logo	
Website	https://www.milestonesys.com
Description	Milestone Systems a provider of open platform IP video management software

3 Control Center Versions

The connector is compatible with the following Control Center versions:

Control Center Version	Supported	Tested against
5.xx	☑	☒

4 Operating Systems

4.1 Client-Side Functionality

Operating Systems	Supported	Tested against
Windows 7 64 bit	☑	☒
Windows 7 32 bit (deprecated)	☑	☒

4.2 Server-Side Functionality

Operating Systems	Supported	Tested against

Windows Server 2008 R2	☑	☒
Windows Server 2012	☑	☒

5   Subsystem

Subsystem	Version	Supported	Tested against

5.1.1   Milestone2014 Details

Name	Milestone2014
Description	Milestone XProtect Corporate 7.0d (2014)
Reference documents	

5.1.2   Milestone2016 Details

Name	Milestone2016
Description	Milestone XProtect Corporate 10.0a(2016)
Reference documents	

5.1.3   Milestone2017 Details

Name	Milestone2017
Description	Milestone XProtect Corporate 2017R3
Reference documents	

5.1.4   Milestone2018 Details

Name	Milestone2018
Description	Milestone XProtect Corporate 2018R2
Reference documents	

5.1.5   Milestone2019 Details

Name	Milestone2019

Description	Milestone XProtect Corporate 2019R1
Reference documents	

6   SDK information

SDK/API	MIP SDK
SDK/API version	MIP SDK 2019R1
Limitations	None
SDK Installation Locations	

7   Default Ports

Port	Type	Usage
80	TCP	Mgmt Server windows user mode
443	TCP	Mgmt Server Basic user mode
7563	TCP	Recording Server
22331	TCP	Alert Server

8   Functionality

8.1   Integration Diagram
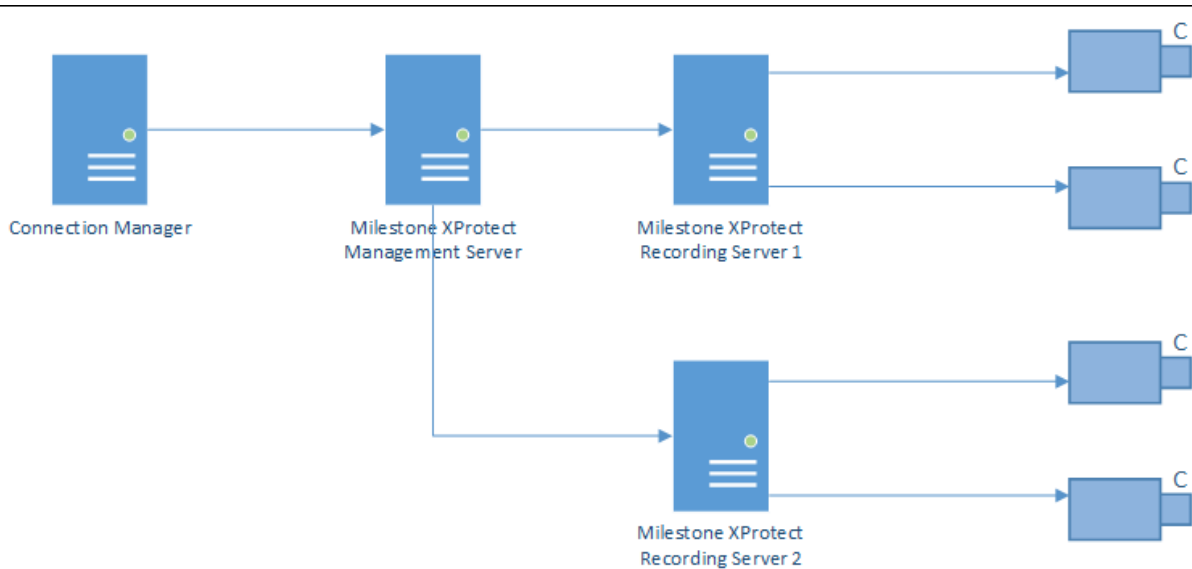
8.2   Connector Features

Feature	Value
Device Online Status	Sdk/Query Device
Authentication	Windows Credentials
Web Client Support	☑

8.3   Milestone XProtect Corporate Camera

8.3.1   Properties

Name	Type	Description	Default Value & Ranges
Vega CameraId	string	Vega CameraId	Default: None Min: None Max: None
Vega RecorderId	string	Vega RecorderId	Default: None Min: None Max: None

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Is Vega Master	bool?	Whether this is vega master camera or not.	Default: None Min: None Max: None
Presets Supported (IPresetsDevice)	Boolean	Indicates whether presets are supported by the device.	Default: True Min: None Max: None
PTZ Supported (IPtzDevice)	Boolean	Indicates whether PTZ is supported by the device.	Default: True Min: None Max: None

8.3.2   Methods

8.3.2.1   Lock Evidence

Description	Locks video from deletion on the recording server		
Returns	bool		
Operator Action	False		
Parameters			
Name	Type	Description	Default Value and Ranges
Lock Start Time	DateTime	The time from which you want the video to be locked	Default: None Min: None Max: None
Lock End Time	DateTime	The time at which you want the video lock to end	Default: None Min: None Max: None
Description	string	Description of the lock	Default: None Min: None Max: None

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Header	string	Header/Name of the lock	Default: None Min: None Max: None

8.3.2.2 Get All Evidence Locks

Description	Gets all available evidence locks that belong to a camera
Returns	List<string>
Operator Action	False

8.3.2.3 Remove (IPresetsDevice)

Description	
Returns	Void

Parameters			
Name	Type	Description	Default Value and Ranges
preset	Preset		Default: None Min: None Max: None

8.3.2.4 Update (IPresetsDevice)

Description	
Returns	Void

Parameters			
Name	Type	Description	Default Value and Ranges

preset	Preset		Default: None
			Min: None
			Max: None

8.3.2.5 Select Preset (IPresetsDevice)

Description	Moves the device to the specified preset position.		
Returns	Void		
Parameters			
Name	**Type**	**Description**	**Default Value and Ranges**
Preset Number	Int32	The number of the preset to move the device to.	Default: None Min: None Max: None

8.3.2.6 GetPresets (IPresetsDevice)

| **Description** | |
| **Returns** | PresetCollection |

8.3.3 Events

8.3.3.1 Motion Started

Description	Raised when motion is started on a camera.	
Properties		
Name	**Type**	**Description**
Parent Device Identifier	Guid	Parent of the camera that raised the event.

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8.3.3.2   Motion Ended

Description	Raised when motion is ended on a camera.	
Properties		
Name	**Type**	**Description**
Parent Device Identifier	Guid	Parent of the camera that raised the event.

8.3.3.3   Device Moved

Description	Raised when a camera is moved to a different recording server.	
Properties		
Name	**Type**	**Description**
Destination Recorder	string	Destination recorder where device has moved.

8.3.3.4   Evidence locked

Description	Raised when evidence has been successfully locked	
Properties		
Name	**Type**	**Description**
Lock Header	string	The header of the locked evidence

8.3.3.5   Custom State Changed (IRaiseCustomStates)

Description	Raised when the online state of a device changes.	
Properties		
Name	**Type**	**Description**
Interface Identifier	Guid	Gets the identifier of the interface that has changed state.
Custom State	ICustomState	The state that the device has changed to.

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Message	String	Gets the error message, if any, relating to the state change.
Is Child State Change	Boolean	Indicates whether the state change applies only to non-networked devices connected to the interface identified by the Interface Identifier property.
Device Identifier	Guid	The identifier of the device that raised the event.
Date	DateTime	The UTC date and time the event was raised.

8.3.3.6   Preset Selected (IPresetsDevice)

Description	Raised when a preset is selected using the 'Select Preset' method.	
Properties		
Name	Type	Description
Label	String	
Number	Int32	
Device Identifier	Guid	The identifier of the device that raised the event.
Date	DateTime	The UTC date and time the event was raised.

8.3.4   Interfaces

Name	Description
IRaiseCustomStates	
IPresetsDevice	
IPtzDevice	

8.3.5   Video

8.3.5.1   Video Features

Live Video	☑

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Video Playback	☑
Pan Tilt Zoom	☑
PTZ Presets	☑
Snapshot	☑
VideoExport	☑
Timebar Events	☒
De-Warp	☒
Timebar population	None

8.3.5.2   Playback Speeds

Playback Type	Supported Speeds
Normal Playback	-32,-16,-8, -4,-2, -1,0, 1, 2,4, 8,16,32
Slow-motion Playback	-0.8,-0.4,-0.2,-0.1,0,0.1,0.2,0.4,0.8

8.4   Milestone XProtect Corporate Management Server

8.4.1   Properties

Name	Type	Description	Default Value & Ranges
Authentication Mode	Authenti cationTy pe	The authentication mode to use to connect to the Milestone Device. "Basic" is for user accounts created within the Milestone configuration software. "Windows" will log on to the Milestone as the current Windows logged-in user. "Windows Credentials" will validate the credentials supplied as a Windows user.	Default: None Min: None Max: None

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Speaker Connection Timeout	int	Maximum number of seconds to wait for speaker connection. Zero uses the default value (3).	Default: 3 Min: 10 Max: 0
Microphone Connection Timeout	int	Maximum number of seconds to wait for microphone connection. Zero uses the default value (1).	Default: 1 Min: 10 Max: 0
Post Audio Seek Event Drop	int	Number of current date change events to drop before an audio seek.	Default: 12 Min: 4 Max: 24
Lock Evidence Timeout	int	The maximum amount of time that Lock Evidence has to confirm the lock in ms. It's normally quick but this is necessary for safety.	Default: 600000 Min: None Max: None
Auto Connect	bool	When set to true, IPSecurityCenter Client will automatically connect to this server on startup.	Default: true Min: None Max: None
Vega Supported	bool	Vega Supported	Default: None Min: None Max: None
Vega API Port	int	Vega API Port	Default: 90 Min: None Max: None
Vega SSL Supported	bool	Vega API Supported SSL or not	Default: false Min: None Max: None
User Name (ISecureDevice)	String	The user name for the device.	Default: None Min: None Max: None
Password (ISecureDevice)	String	The password for the device.	Default: None Min: None Max: None
Timeout (INetworkedDevice)	TimeSpan	The timeout period to use when connecting to the physical device. Specify a zero period of time (00:00:00) to never timeout.	Default: 00:01:00 Min: None Max: None

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Retry Interval (INetworkedDevice)	TimeSpan	The amount of time to wait before attempting reconnection to a device after the connection has timed out or failed. Specify a zero period of time (00:00:00) to attempt reconnection instantly after a connection failure.	Default: 00:01:00 Min: None Max: None
IP (INetworkedDevice)	String	The IP address for the device.	Default: None Min: None Max: None
Port (INetworkedDevice)	Int32	The port the device listens on.	Default: None Min: None Max: None

8.4.2   Methods

8.4.2.1   Display Camera On Smart Client

Description	Displays the camera feed on a Smart Client		
Returns	bool		
Operator Action	False		
Parameters			
Name	**Type**	**Description**	**Default Value and Ranges**
Camera	Guid	Camera device to be shown on Smart Client	Default: None Min: None Max: None
Smart Client Event	string	The user-defined event that displays a camera to a Smart Client	Default: None Min: None Max: None

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8.4.2.2 Get Custom Smart Client Events

Description	Gets the user-defined events that contain IPSC_SEND: in their name, for use in sending a video feed to smart client
Returns	List<string>
Operator Action	False

8.4.2.3 Sync Devices

Description	Update the devices to match the current configuration on Milestone server.
Returns	bool
Operator Action	False

8.4.3 Events

8.4.3.1 Configuration Changed

Description	Raised when configuration changed on a server.	
Properties		
Name	Type	Description
Item Name	string	Name of the item changed,
Server Name	string	Name of the server configuration changed,

8.4.3.2 Vega Connectivity Error

Description	Communication error with the Vega API(Only if VegaMode Enabled)	
Properties		
Name	Type	Description
Message	string	Message

8.4.4   Interfaces

Name	Description
ISecureDevice	
INetworkedDevice	

8.5   Milestone XProtect Corporate Recording Server

8.5.1   Properties

Name	Type	Description	Default Value & Ranges
Export Format	ExportType	The format of the export.	Default: None Min: None Max: None
State Transition Delay Time	int	Milliseconds to suppress camera state change to offline to prevent flip-flop state changes. Values of less than 1000 disable the delay.	Default: 1000 Min: 0 Max: 30000
Optical Zoom Speed	int	Optical zoom speed, value of 1 to 10, 1 being same speed as native software	Default: 1 Min: 1 Max: 10
Create Export Message Pump	bool	Provides the ability to run video export in a message pump.	Default: None Min: None Max: None
Is Offlne	bool	Is Offlne	Default: None Min: None Max: None
Vega Custom State Delay	int	Vega Custom State Delay in milliseconds	Default: 200 Min: None Max: None
Timeout (INetworkedDevice)	TimeSpan	The timeout period to use when connecting to the physical device. Specify a zero period of time (00:00:00) to never timeout.	Default: 00:01:00 Min: None Max: None

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Retry Interval (INetworkedDevice)	TimeSpan	The amount of time to wait before attempting reconnection to a device after the connection has timed out or failed. Specify a zero period of time (00:00:00) to attempt reconnection instantly after a connection failure.	Default: 00:01:00 Min: None Max: None
IP (INetworkedDevice)	String	The IP address for the device.	Default: None Min: None Max: None
Port (INetworkedDevice)	Int32	The port the device listens on.	Default: None Min: None Max: None
FileExtension (IVideoExport)	String		Default: None Min: None Max: None
MaximumExports (IVideoExport)	Int32		Default: None Min: None Max: None

8.5.2   Methods

8.5.2.1   Update Devices

Description	Update the properties in IPSC from those on the corresponding SDK device.This method is asynchronous and execution status of this method is notififed through DeviceUpdatingStatus event.		
Returns	void		
Operator Action	False		
Parameters			
Name	Type	Description	Default Value and Ranges
Restore Deleted Devices	bool	Whether camera deleted in IPSC to be restored during device updaate.	Default: false Min: None Max: None

8.5.2.2 SelectPreset (IPresetsServer)

Description			
Returns	Void		
Parameters			
Name	Type	Description	Default Value and Ranges
preset	Preset		Default: None Min: None Max: None
interfaceIdentifier	Guid		Default: None Min: None Max: None

8.5.3 Events

8.5.3.1 Device Updating Status

Description	Reporting update device method status.	
Properties		
Name	Type	Description
Staus	string	Current status

8.5.3.2 Completed (IVideoExport)

Description	
Properties	

Name	Type	Description
Success	Boolean	
Exception	Exception	
Task	VideoExportTask	

8.5.3.3   Progress (IVideoExport)

Description	
Properties	

Name	Type	Description
Percentage	Int32	
Task	VideoExportTask	

8.5.4   Interfaces

Name	Description
INetworkedDevice	
IVideoExport	
IPresetsServer	

8.6   Milestone XProtect Corporate Alerts Server

8.6.1   Properties

Name	Type	Description	Default Value & Ranges
Poll Interval	TimeSpan	The interval to wait between each poll of the Milestone alert service.	Default: None Min: None Max: None

Alarm Line Size	int	Maximum number of alerts to retrieve from the alert service during each poll.	Default: 10 Min: None Max: None
Alarm Filter Conditions	AlarmFilterConditionCollection	The filter conditions to use when getting alarms from the client.	Default: None Min: None Max: None
Timeout (INetworkedDevice)	TimeSpan	The timeout period to use when connecting to the physical device. Specify a zero period of time (00:00:00) to never timeout.	Default: 00:01:00 Min: None Max: None
Retry Interval (INetworkedDevice)	TimeSpan	The amount of time to wait before attempting reconnection to a device after the connection has timed out or failed. Specify a zero period of time (00:00:00) to attempt reconnection instantly after a connection failure.	Default: 00:01:00 Min: None Max: None
IP (INetworkedDevice)	String	The IP address for the device.	Default: None Min: None Max: None
Port (INetworkedDevice)	Int32	The port the device listens on.	Default: None Min: None Max: None

8.6.2   Methods

8.6.2.1   Set Alarm State

Description	Sets the state of the alarm on the Milestone server.		
Returns	bool		
Operator Action	False		
Parameters			
Name	Type	Description	Default Value and Ranges

Alarm Identifier	string	Alarm Object Identifier.	Default: None Min: None Max: None
Alarm Text	string	Text associated with the change in alarm state.	Default: None Min: None Max: None
Alarm Priority	int	The alarm priority.	Default: None Min: 0 Max: 5
Assigned To	string	The name of the user the alarm is assigned to.	Default: None Min: None Max: None
Alarm State	AlarmState	The state to set for the alarm.	Default: None Min: None Max: None

8.6.3   Events

8.6.3.1   Alarm Received

Description	Raised when an alarm is received from the Milestone alert service.	
Properties		
Name	**Type**	**Description**
Assigned To	string	Device to which this alarm is assigned to.
Camera Identifier	string	The internal Milestone XProtect camera identifier that the event is associated with, if any.
Camera Device	Guid	The Milestone camera device that is the source of the event.

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Category	int	The category of the alarm.
Category Name	string	The category name of the alarm.
Custom Tag	string	The custom tag associated with the alarm.
Local Identifier	int	A human readable alarm identifier that is unique on a server.
Description	string	The description of the alarm.
Identifier	string	The identifier of the alarm. This is the identifier that is passed in as Alarm Identifier in the Set Alarm method.
Location	string	The location where the alarm occurred.
Message	string	The alarm message.
Modified	DateTime	The UTC date and time the alarm was modified.
Name	string	The name of the alarm.
Object Value	string	Object Value.
Priority	int	The alarm priority.
Priority Name	string	The alarm priority name
Rule Type	string	The rule type for the alarm.
Source Identifier	string	The internal identifier of the Milestone XProtect object that alarm is associated with. If this is a camera, this will be the same as Camera Identifier.
Source Name	string	The name of the Milestone XProtect object the alarm is associated with.
State	int	Current alarm object status.
State Name	string	Current alarm object status.
Timestamp	DateTime	The date and time the alarm occurred on the system.
Alarm Type	string	Current alarm type.
Vendor Name	string	The name of the vendor for the system that integrates with the Milestone XProtect server.

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8.6.3.2   Communication Error

Description	Communication error between XProtectAlertServer and the Milestone SDK
Properties	

Name	Type	Description
TypeOfError	string	Type of Error
Message	string	Message

8.6.4   Interfaces

Name	Description
INetworkedDevice	

Additional Configuration Details

Device Detection

When the Management Server is brought online, it will automatically create any Recording and Alert Servers that are configured within the Milestone system. Any subsequently configured Recording and Alert Servers will be added whenever the Management Server is brought online. Bringing a Recording Server online will add all configured cameras for that server from the Milestone system.

Alerts Server does not login using basic credentials for SDK 4.5 (2013), this is known issue with the Milestone 2013 SDK. This issue is fixed in 2014 and later, alternately use Windows Credentials authentication.

Please note: When a user upgrades the driver – please ensure to restart the Connection Manager.

User Authenticaion

It should be noted that although the IP and port properties are exposed for the additionally detected devices (Recording/Alert Servers) these properties are not used and do not require the fields to be populated, instead they inherit the values set by the Management Server

Additional Details

Hardware acceleration is only supported by Milestone 2016 SDK version - R3 and above

Please note: 'Playback Issue' event on camera is not implemented on the latest version of driver.
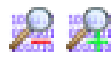
Operator Actions:

Milestone showing new audio and digital zoom buttons.

🎤 Toggle camera microphone.

🔊 Toggle camera speaker.

⬅➡⬆⬇ Move digitally zoomed image section left, right, up or down.

🔍 🔍 Digital zoom plus (+) and minus (-)

🎤 Microphone on warning icon. Shown in the bottom left of the view when camera audio is being played in live or playback mode.

🔊 Speaker on warning icon. Shown in the bottom left of the view when the camera speaker is connected to the viewer's microphone.

🔍 Digital zoom warning icon. Shown in the bottom left of the view when the current camera view is being digitally enlarged.
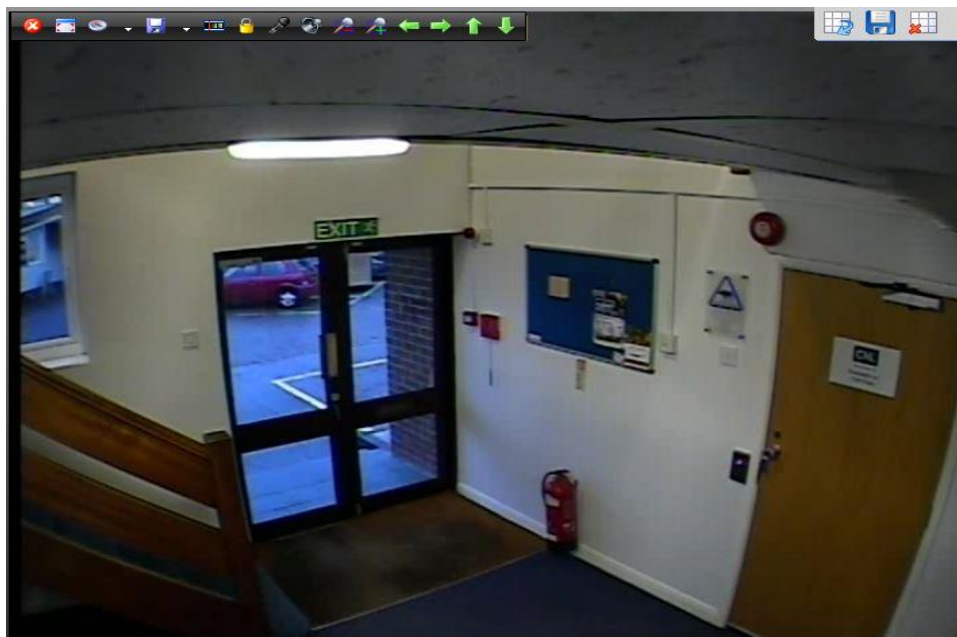
PTZ Presets

PTZ presets are supported but are identified by Name only. The preset number field is ignored when creating / updating PTZ presets.
- The VCM populates its list of presets on creation, and if presets are modified via IPSC. If additional presets are introduced into the Milestone system without using IPSC they are not propagated into the VCM display until:

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- o The Milestone Management Server device is disabled/re-enabled to read a new configuration
- o The VCM tile is closed and re-displayed.

Digital Zoom

During digital zoom, the digitally zoomed area may be moved around using the arrows. Selecting the left, right, up or down commands after the zoomed area has reached the corresponding edge of the image will cause no visual effect, but will still be considered a step by the driver. The image will not move in the opposite direction until an equivalent number of opposite steps have been selected.

Displaying video to a Smart Client

This requires extra setup on the Milestone server. Three items need to be created on the Milestone Management Client for each computer that only has a smart client.

In User-Defined events create an event with a name starting with "IPSC_SEND:" (The "IPSC_SEND:" handle is IMPORTANT), like this:
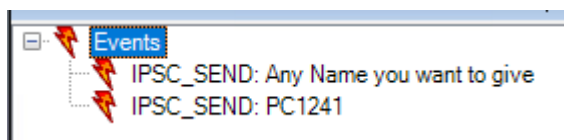
Then create a Matrix. In properties of the matrix enter the IP of the computer that has the smart client and under type select "Smart Client/Remote Client". Such as:
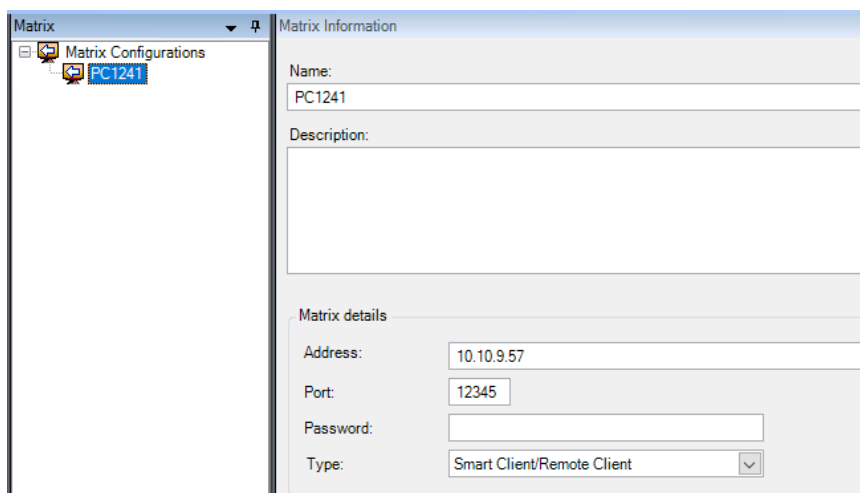
And the last item to create is a Rule, that performs an action on previously created event, the action being Set Matrix "Your Matrix" to view the devices from metadata. It should look something like this:

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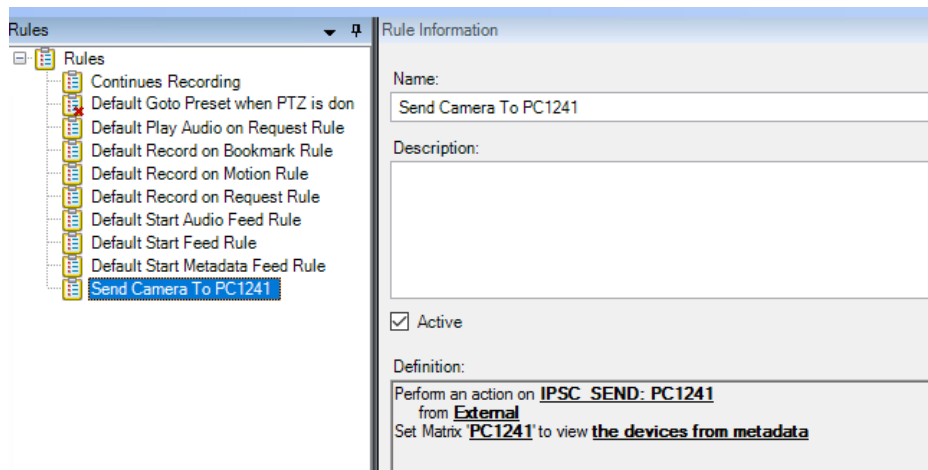
On the Smart Client which needs to receive the feed, there must also be a matrix set up. You can do this by going to Live -> Setup and dropping a matrix on a tile. Make sure the port in matrix connection details is the same as the one configured on the server.

Alert Server

Please Note: Alert server uses different services and may not sync with the management server states. Only BASIC authentication will fail together with management server, as it uses tokens that are supplied by management server.

Upon IPSC start-up, the Alert server may show failed state as it might try to connect before the Management Server is connected. It will retry after the specified retry interval and will go online.

Property "Service Relative Url" has been removed as it is no longer used.

Alert Server will have properties for connection details, this is standard for networked devices in IPSC, but they should be left blank/defaulted.

Vega Support

Vega plugin provides dual live and playback support for each camera by adding each into separate recording   server.
If Vega API is supported on site, using management server device property Vega functionality can be enabled on the driver. Vega API connectivity details can be provided through the device property. (Vega IP is same as the management server IP)

To synchronize Vega setting on server with the driver Management server SyncDevice method and Recording server UpdateDevices method can be used without reconnecting the server devices.

Connection to Vega API is happening from the Management server.

-    Connect method

If Vega API fails it will be notified through Management server online state extra information

- Sync Device method

If Vega API is failed, VegaConnectivivtyError event raised.

If Vega API successfully connected, each recording server needs to be run UpdateDevices method for cameras to get updated with Vega properties. (only required If any Vega update happened on Milestone server)

Known Issues and Limitations

General

- The Milestone configuration is only read on initial connection to the system, and when it is updated by IPSC (when modifying PTZ presets). Changes in the Milestone configuration not made by IPSC subsequent to this are not dynamically applied in IPSC and it is necessary to disable/enable the Milestone Management Server device for these to be propagated into IPSC.

Milestone 2014

- An incorrect message is displayed in the tile if the SDK is not installed on the client(but is displayed on the server) – Bug 47584
- Redisplaying a populated tile layout multiple times crashes the VCM – Bug 47634
- "Invalid token" error message displayed in tile when playback is displayed for a long time – Bug 47640
- To enable accurate audio synchronisation with video the audio stream can be closed and reopened during seek operations, this results in a drop in audio during those seeks as reconnection occurs. The size of a seek operation (in seconds) that causes audio reconnection and seek rather than just a seek is defined by the AudioSkipReconnectionTime property. The property defaults to 10 seconds if not set (0). Additional information on the audio synchronisation issues can be found in the Milestone knowledgebase article here https://force.milestonesys.com/support/articles/en_US/Troubleshootings/Audio-and-video-are-out-of-synchronization?retURL=%2Fsupport%2Fapex%2FMccKnowledgeBase&popup=false
- On some systems a number of events continue to arrive with the previous time in them. To prevent audio being out of synch with the video a number of such events are dropped before the audio connection is made, the number is configurable on the management server as PreAudioSeekEventDrop. Slower systems should set this value to 12 or more.
- A support case for the exception "InvalidComObject" has been opened with Milestone (case MSC17158). If this exception is thrown the audio for Milestone stops working, a VCM restart is required to bring it back into service.
- Disabling the recording server in IPSC sets cameras to failed state but they will still display video, however, disabling the recording server on Milestone sets cameras to failed state, and they will not display video.
- Adding a camera on the Milestone server will not automatically display in IPSC – user must re-enable the milestone management server (Milestone 2016) or run UpdateDevices on the Recording Server (Milestone 2014), and the new camera will be displayed.

Milestone 2016

- An incorrect message is displayed in the tile if the SDK is not installed on the client (but is displayed on the server) – message "Could not load file or assesmbly 'VideoOS.Platform'"

- #52849- Intermitent Issue: Management server shows incorrect behaviour,when user re-connect the connection between IPSC and native system – to prevent this restart connection manager.
- Please Note: When there are two or more managment servers (one-disabled, other-enabled), child devices always try to connect to disabled one.

Milestone 2017R3

- The Alert Server poll interval is a timespan value and can be set to any valid time range but internally to the Driver is retricted to a maximum period of 24:31:23.674, if a value beyond this is set a log entry is entered every time the driver is enabled warning that the value has been clamped.
- If the Alert server poll interval is reset the device should be disabled and reenbled to start using the new polling interval – particularly relevant if a poll period is reset to a shorter interval.
- Alerts will only be detected when a poll of the Alert Server is actioned. If the poll interval is set to a large value alerts may build up on the milestone system BEFORE they are notified into IPSC.
- Alert Server event detection requires that the user must be logged-in using Windows credentials, it does not work if the user sets up BASIC authentication.
- The Custom State Change on detection of a camera being "re-homed" – this cannot be tested because we do not have an additional license to carry out the re-home tests. (as per MikeT)

FYI steps to raise the state:

The sequence is raised when the driver detects a camera is re-homed to a new NVR.

At the point the milestone driver detects the change in location it raises a "Device Warning" event, then determines the new recording device and raises the "custom state change" indicating the name of the new recording server for the camera.

For ANY of the detection to work IPSC MUST be logged-in using Windows credentials, it does not work if the user sets up BASIC authentication.

To trigger both events move a camera from one NVR to another, you cannot trigger just one part of the sequence.

Milestone 2019R1

- The limited functionality of BASIC authentication should no longer be limited, thus BASIC users should be able to retrieve events from the Alert Server and also detect re-homing of Camera devices.
- The Milestone system now supports end-to-end encryption from Recording server to our client. The encryption can only be enabled natively, and from IPSC users perspective it is completely transparent wether the encryption is enabled or disabled.

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Milestone Limitations

- When disabling the Management Server – ensure you disable the Recording Server at the same time, as the recording server does not automatically get disabled.
- Online state on 'Milestone cameras' does not work correctly when user the disconnects a camera.

Video Export:

- Milestone will create exported files with a maximum size of 2GB, if the exported file is any larger then it will be split up into 2GB chunks, this will translate to roughly 40 minutes with avi or 80 minutes with mkv.
- For versions upto 2017R3 the Milestone SDK will generate a 1KB file even if there is no footage for exporting at the required time, for version 2017R3 no file is generated and the SDK indicates this as part of a 'failed' export report.
- During testing with 2018R2, it was observed that exporting AVI video would fail, with a FatalCodecEnumerationException written to the Video Export Task Worker Loupe log. This was determined to be caused by an SDK requirement for this export to be run from a message pump. A parameter was added to the Recording Server device which provides the ability to run video export in a message pump.

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Issue Resolution History

JIRA ID	Title	Description
DAD-609	Milestone Recording Issue	**Issue:** We have identified an issue with the Milestone driver when using playback. It always seems to default to the earliest recording regardless of whether you use it manually or via a response plan. **Resolution** The code originally looked for the start of the last available chunk of video and started there. It has been modified to find the requested location, or end of available video less a maximum of 30 seconds.
DAD-1407	Error message is seen when running a VRP setup for paused playback	**Issue:** Setup a VRP to display playback on a camera at a set time which is paused Once this is done, run the VRP Observe that there is an error message shown 'After Recordings' - The camera is paused, however, if the User presses the play button, then the camera playback will work like normal and the error message will disappear **Resolution** Investigation shows that we were not requesting a seek to the recording location in the Milestone NVR.
DAD-1419	Arrows on live/playback camera don't do much when digitally zoomed	**Issue:** Have a camera displayed on a tile Use the 'Digital Zoom Increase' button to zoom in on the image While zoomed in, attempt to use the green arrows to navigate the zoomed in picture The arrows will literally move the image once, no matter how many times you press it

Resolution:

Investigation shows that we were always resetting the step location to the center point of the zoomed image so every step after the first was requesting the same location. The code has been modified to maintain current center point.