

System Galaxy Video Plugin

- ♦ Milestone XProtect® Plugin & Middleware Connector (64 bit)
- ♦ ONSSI Plugin & Middleware Connector Service

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System Galaxy Setup Guide

Configuring System Galaxy to integrate with 3rd Party Video Plugins

2nd Edition

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From SG 11.7.0 (or higher)

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Scope

The next generation of Video Plugins use a Middleware Connector Service are introduced in SG software release. These include Milestone and ONSSI and others. This guide describes installing the *Video API Plugin files, Middleware Connector Service, any other related components*, as well as how to configure System Galaxy to integrate with the Milestone XProtect VMS using the video plugin solution to accomplish the following ...

- ◆ connect to the VMS and import cameras
- ◆ link cameras to readers and inputs/devices
- ◆ play live video from system-triggered alarms from camera-linked devices
- ◆ play live and recorded video inside the *Galaxy Video Viewer* using on-demand operator requests from individual cameras or camera-linked devices
- ◆ play recorded video from time-stamped system events/alarms from camera-linked devices

The manufacturer's documentation must be consulted for the installation, configuration, and operation of Milestone hardware (VMS unit and cameras). The availability of features, cameras, video controls etc. are controlled by the 3rd Party Plugins and may change without notice.

Contact authorized Tech Support if any questions arise.

Galaxy Control Systems

3 North Main Street

Walkersville MD 21793

www.galaxysys.com

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Revision History –

Date	Revisions	Descriptions
NOV 2019	SG 11.2.0 1 st Edition (R4)	<u>This guide provides setup information for Milestone VMS using the Video-API Plugin and the Middleware Connector service to connect and call-up video from within System Galaxy (SG).</u> <i>For general instructions on the operation and behavior of System Galaxy's Video Viewer, reference the general SG DVR Guide. The main DVR guide covers how to call video from various locations in System Galaxy Client (i.e. events, reports, devices, alarms, etc.).</i>
DEC 2019	SG 11.2.0 2 ND Edition (R5)	Added the step to install Ocularis Runtime component and configure the MSMQ Server Core options. Modified terminology for multi-brand support.

Chapter 1: Overview & Requirements

The System Galaxy (SG) Video API Plugin and Middleware Connector Service (64bit) are introduced in SG 11.2.0 release.

This guide covers Galaxy's integration with VMS solutions that use 64bit *Video Plugin & Middleware Connector Service* ONSSI and Milestone XProtect® VMS (64bit) and its cameras.

This guide provides instructions for the following ...

- ◆ Installing the Video Plugin files, middleware connector service, and other modules such as runtime components
- ◆ Configuring System Galaxy to connect to the 3rd Party VMS and import camera names
- ◆ Linking cameras to readers and inputs/devices (e.g. motion sensors)
- ◆ Configuring System Galaxy system and workstation options to block or trigger video playback
- ◆ Automatic call-up of live video from system-triggered events/alarms; and manual call-up of live or recorded video from operator-issued commands at cameras or camera-linked devices (from the hardware tree, graphics screen, alarm/events screen, and activity reports).

Video API Plugin Components

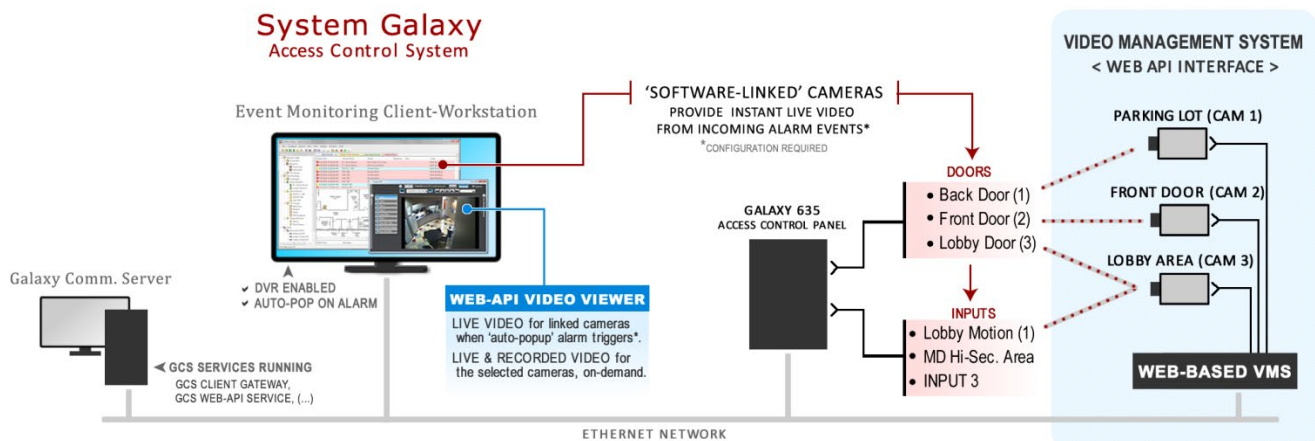
- ◆ **Video Plugin Component** (install on SG Comm Server and any workstation monitoring video)
- ◆ **Video SDK Object Installer** (ONSSI specific – install on SG Comm Server)
- ◆ **64bit MiddleWare Installer** (install on SG Comm Server for the 3rd Party Connector Service)

SUPPORTED FEATURES

SG Video Viewer supports live and recorded video and can be launched from a camera-linked device (reader or input).

1. **Video Viewer auto-launches** (Live Video) when triggered by incoming alarm events (configuration required).
2. **Video Viewer manually launches** (Live Video) when the Operator selects the **'View Video' command** in the shortcut menu from the Hardware Tree, Device Graphic screen, Alarm Event window, or an Event Report screen.
3. **Importing camera names** and positions.
4. **Linking cameras to devices (inputs and readers)** this allows the operator to pull video from an event and allows the automatic callup feature to work when incoming alarms occur.

FIGURE 1 - SYSTEM DIAGRAM: System Galaxy integrated with a Video Management System



Video Plugin Requirements

This is a consolidated list of requirements to use when planning, installing, or troubleshooting. *They are not intended as a substitute for following instructions.*

- 👁 Always consult the manufacturer's requirements and documentation.
- 👁 For a full list of OS, PC, and System requirements for System Galaxy clients, see the [**System Galaxy Specifications Guide**](#)
- 🔒 To prevent security issues, you should change the default port number set by the manufacturer.

GALAXY PRODUCT-LEVEL AVAILABILITY

SG 11.2.0 (or higher)	PROFESSIONAL	CORPORATE	ENTERPRISE	UNIT COUNT
3 rd Party DVR (64-Bit VMS Video Plugins)	✗	✓	✓	DVR LIMIT MUST BE ENTERED

NETWORK REQUIREMENTS

- Network Time Synchronization:** The Video System should be using the same NTS time-source as System Galaxy. This requirement ensures the video timestamps will match the timestamps of the corresponding SG events.
- Network Security:** At the **SG Server** or **Client Workstation(s)**, you must unblock the correct port number for the Video System. This includes unblocking ports at switches and routers and creating exceptions in Windows Firewall and your Security/Malware applications.
- Network Performance:** You must also meet requirements and best-practice for speed, bandwidth, peak demands, and security. See your VMS manufacturer's documentation.
- Network Connectivity:** You must include "https://" with the IP Address when configuring SG connections.
- Camera Permissions:** You must create a client login for System Galaxy and give it the appropriate user-rights to view video from all cameras.

GALAXY SYSTEM & WORKSTATION REQUIREMENTS

- the Brand-X VMS and cameras must already be installed and configured on the network.
- You must be signed-in to System Galaxy with a master operator login to add or edit a VMS in System Galaxy. The master operator option (checkbox) is in the SG Operator programming screen.
- In SG **System Registration** screen ...
 - product level must be **Corporate or Enterprise**
 - 3rd Party DVR Support option** must be enabled (checked)
 - Units field** must have the correct number of units (per customer purchase agreement).
- Video Plugin files:** must be manually copied from the Installation USB to the SG Server or Client and installed on every SG computer that will support video monitoring. You can copy the plugin files into the **VideoAPIplugins** folder (path below) **after** completing Part-3 of the Galaxy InstallSuite.
 - C:\\GCS\\System Galaxy\\VideoAPIPlugins**MilestoneXprotect** (the plugin files install from here)
 - C:\\GCS\\System Galaxy\\VideoAPIPlugins**OnSSI**Ocularis (the plugin files install from here)
- For ONSSI – there are prerequisite steps and an SDK Video Object Installer component. Milestone does not have this requirement or component.
- Middleware Connector Service** must be manually installed on the SG Communication Server where essential Galaxy services are running. As of SG11.2.0 the essential services must be running, or the installer will fail.
 - C:\\GCS\\System Galaxy\\VideoAPIPlugins\\MilestoneXprotect**Installers** (install on comm server only)
 - C:\\GCS\\System Galaxy\\VideoAPIPlugins\\OnSSI\\Ocularis**Installers** (install on comm server only)

Continue on next page ...

7. The **GCS Web API Service** and **all essential GCS Services** must be running on the SG communication server.

GCS API Service

GCS DataLoader Service

GCS Client Gateway Service

GCS Communication Service

GCS DBwriter Service

GCS Event Service

8. In **SG System Settings** screen ...

- **General tab:** the **DVR Enabled** option must be “checked” at each client that needs video support.
- **General tab:** the **Does Not Support Monitoring** option must be “unchecked” at each client if you want to support automatic or manual callup of video from the Alarm Event screen.
- **Alarm Options tab:** the **Automatically Call-Up Video** option must be “checked” at each client if you want to support automatic callup of video when an alarm event happens at a camera-linked device.

NOTICE: Related system programming must also be completed to support automatic callup of video from armed alarms. *See the section on Configuring Automatic Call-up for details.*

9. In **SG Client Gateway Settings** screen: the **GCS Web API Service** settings are automatically set according to installation defaults. This can be edited if you decide to use a different port than the default 8000.

10. In **Hardware > DVRs > Video API** screen, you must select the *Video Plugin for your brand* from the list box for your brand VMS solution.

- You must correctly add the VMS login username and password to the VMS
- You must include the “http://” prefix with the IP Address.
- You must give the VMS Unit a unique name in System Galaxy.
- You must click the [Test Connection] button to connect and import cameras*.
- You may need to refresh the Hardware Tree by re-opening it from the View menu to see VMS & cameras

NOTE: changing, editing, or deleting a VMS unit is done from the typical DVR Programming screen.

*** User Rights:** For 3rd Party VMS, the login credentials used in the System Galaxy Plugin Connection screen must have full user-rights to all cameras at the VMS unit, before the video-feed will work properly.

Chapter 2: Installing, Registering, and Configuring the Video Plugin Solution

This chapter describes how to install, register, and configure the Video Plugin in System Galaxy.

Use the QUICK STEPS List to guide and validate your work. *Each Quick Step has a correlating section in this chapter with the detailed instructions on how to perform these steps.*



QUICK STEPS: INSTALLING & CONFIGURING THE VIDEO-PLUGIN & MIDDLEWARE

- STEP 1.** Install the VMS unit and connect and configure all cameras. Test cameras from the VMS and fill out the camera list to track which cameras are in which location for future programming in SG.
- STEP 2.** Install the client-side files Video Plugin on the Galaxy Communication Server (this is done manually after System Galaxy Part-3 is completed).
- STEP 3.** (OnSSI only) Configure MSMQ Server Core Features (AD and HTTP support) through control panel and Install additional SDK Runtime Components on the Galaxy Communication Server.
- STEP 4.** Install the Middleware Connector Service only on the Galaxy Communication Server (this is done manually after installing plugin files).
- STEP 5.** System Registration: the **3rd Party DVR option & DVR Limit** must be set (PC restart required).
- STEP 6.** Enable Client 'DVR Support' option in SG System Settings screen (client-specific/restart to initialize).
- STEP 7.** Configure the Alarm Settings in System Settings screen (client-specific/restart to initialize).
- STEP 8.** Add the VMS connection settings & login credentials to the VMS in Video Plugin screen.
- STEP 9.** Check the Hardware Tree to confirm the unit and cameras were added (refresh HW Tree as needed)
- STEP 10.** Link cameras to the hardware (doors/inputs) in the appropriate SG programming screens. After initial system programming is completed, the SG Operator can begin using the VMS features.



SEE: the **System Galaxy Software Installation Procedure** for instructions on how to install System Galaxy software. These installation instructions are found on the HELP module or online.



SEE: your **Manufacturer's VMS Documentation** for instructions on how to install and configure the VMS and camera hardware or associated components.

STEP-1 About the VMS Install and Camera Setup

The VMS unit and any camera configuration must be completed and tested **before** you add it to System Galaxy.

1. Make sure you have a valid login at the VMS that has user-rights to access cameras and video
2. If you want logic names for the cameras, you must configure them in the VMS before importing into SG.
3. Use the chart below to list the cameras and create mapping to the locations for linking cameras to devices.
4. Test the cameras from the VMS unit to verify they work and that you have correctly installed, connected, and labeled them. Test and correct anything needed before importing them into Galaxy.



SEE: the **Manufacturer's Documentation** for instructions on how to install and configure the VMS and camera hardware.

Camera Connections Validation List (extra copy in the back – see Appendix A)

VMS NAME ▶		VMS IP/LOCATION ▶	
Camera Name	CAM #	IP/Location/Area Displayed	Device Name/Type (reader/md)
	1		<input type="checkbox"/>
	2		<input type="checkbox"/>
	3		<input type="checkbox"/>
	4		<input type="checkbox"/>
	5		<input type="checkbox"/>
	6		<input type="checkbox"/>
	7		<input type="checkbox"/>
	8		<input type="checkbox"/>
	9		<input type="checkbox"/>
	10		<input type="checkbox"/>
	11		<input type="checkbox"/>
	12		<input type="checkbox"/>
	13		<input type="checkbox"/>
	14		<input type="checkbox"/>
	15		<input type="checkbox"/>
	16		<input type="checkbox"/>

STEP-2 Installing Video Plugin files (server and workstation)

This topic describes how to find, copy, and install the Video Plugin files on the Galaxy communication server. You can also use these same instructions to install the plugin on the Galaxy client workstation.

The *Plugin* folder is created (empty) on the Galaxy computer during *Part-3 of System Galaxy Software Install*.

You must install the *Video Plugin file* on the SG Communication Server first (this step), then you can install any other prerequisite components followed by the middleware connector service.

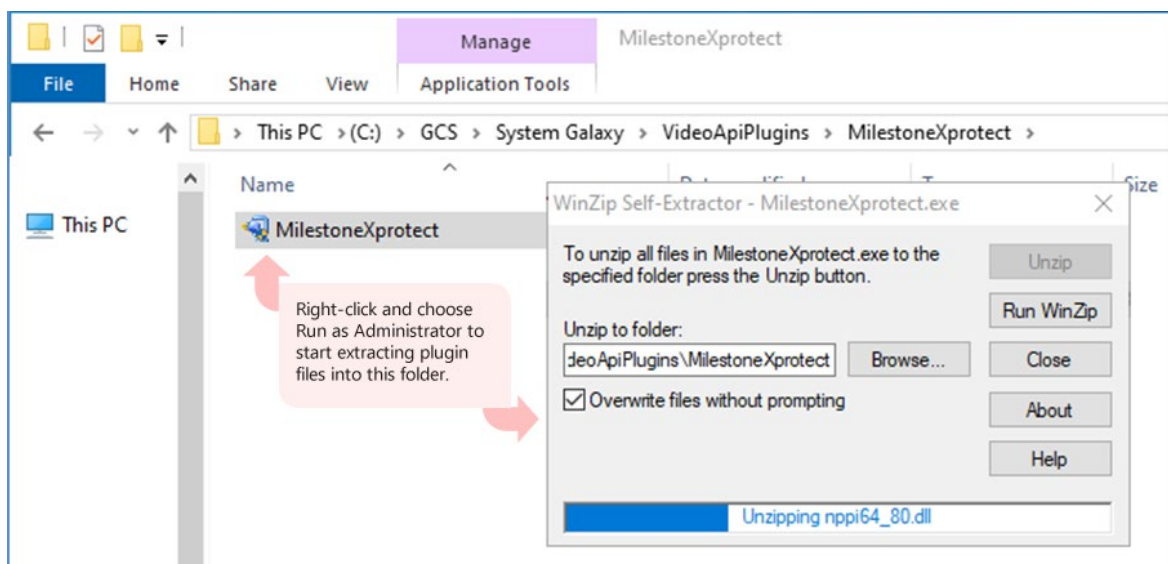
PREREQUISITES:

- You must have completed the System Galaxy software installation.
- You must have the GalSuite USB. The Video Plugin installation file is found on the GalSuite Install USB.

1. Insert the *GalSuite Install USB* and browse to the Video Plugin folder for your 3rd Party Brand.
USB:\\Auxiliary\\System Galaxy\\Video Plugins\\MilestoneXprotect
USB:\\Auxiliary\\System Galaxy\\Video Plugins\\OnSSIOcularis
2. Copy the *MilestoneXprotect.exe* file to the corresponding MilestoneXprotect folder on the Galaxy computer.
This PC ► C: \\GCS\\System Galaxy\\Video Plugins\\MilestoneXprotect
This PC ► C: \\GCS\\System Galaxy\\Video Plugins\\ OnSSIOcularis
3. Right-click on the .EXE file and choose 'Run as Administrator' from the popup menu.
4. Accept Windows UAC prompt. The Vidoe Plugin .exe file should self-extract.
RESULT ► The Video Plugin files are extracted inside the target folder on the local computer.

FIGURE 2 - Extracting the Plugin files on the System Galaxy computer (client or server)

The step pictured is the same for Milestone and OnSSI except for the folder name should match your brand being installed.



STEP-3 (OnSSI) Configure MSMQ Options and Install OnSSI Runtime (comm server)

This topic describes how to configure MSMQ Message Queue options and how to install the OnSSI Runtime components on the Galaxy communication server. This step is not performed on a client workstation.

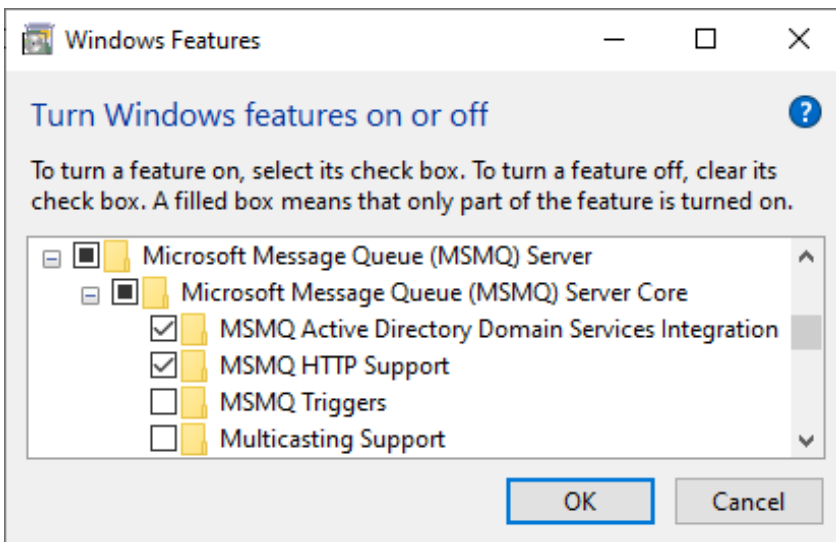
This is a requirement for OnSSI Ocularis 64bit Video Plugin. Skip this step if you are not installing OnSSI.

PREREQUISITES:

- You must have already installed the Video Plugin files on the Galaxy communication server.
- (SG 11.2.0) *essential Galaxy Services** must be running.

1. From Windows Search bar, type Control Panel and open the control panel window.
2. Select Programs option and then select the option to 'Turn On Features'.
3. Scroll down to MSMQ Server branch and expand the Server Core branch.
4. Enable (check) the 'MSSQ Active Directory integration' checkbox option.
5. Enable (check) the 'MSMQ HTTP Support' checkbox option.
6. Click OK to save these settings.
7. Click [Close] when it is finished.

FIGURE 3 – Enabling MSMQ Server Core Features on Galaxy communication server (ONSSI ONLY)



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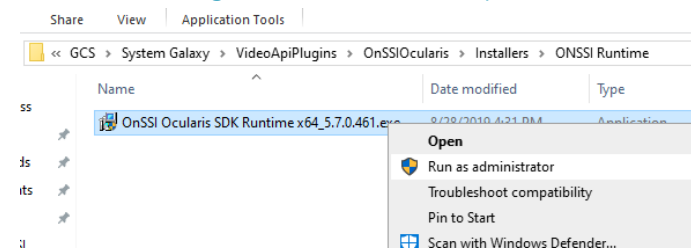
Installing OnSSI SDK Runtime Components (comm server only)

This topic describes how to install the SDK Object files on the Galaxy communication server.

This is a requirement for OnSSI Ocularis 64bit Video Plugin.

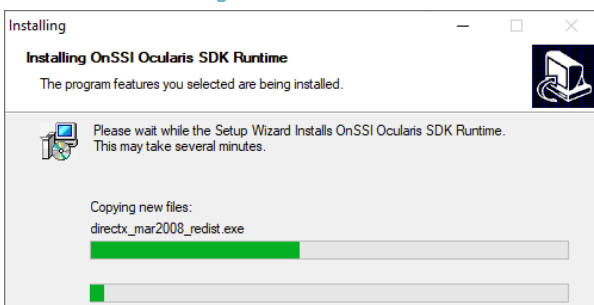
1. Browse to the OnSSI Runtime folder
2. **Right-click on the Runtime file and choose 'Run As Administrator'**

FIGURE 4 - Installing the OnSSI Runtime components on the SG Communication server



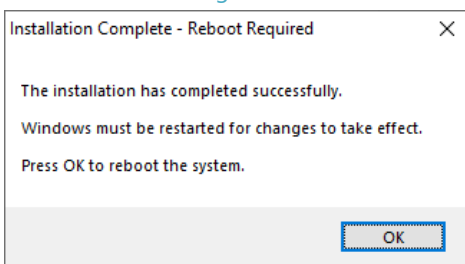
3. Click YES on the UAC confirmation dialog.
4. Click Next on the Installers Welcome window.
5. Click Next to accept the default installation path.
6. Click Next on the Ready to Install screen.
7. The progress bar will display for several minutes.

FIGURE 5 – Restarting Windows on the SG Communication server



8. **You must click OK to restart Windows.**

FIGURE 6 – Restarting Windows on the SG Communication server



STEP-4 Installing Middleware Connector Service (comm server only)

This topic describes how to find and install the Middleware Connector files on the Galaxy communication server.

The middleware connector service must be installed for all Video Plugin brands.

The Middleware installation EXE file is laid down in the **'Installers' folder** for the brand of VMS you are installing when you install the *Video Plugin files (which was done in the prior step)*.

The middleware component is only installed on the communication server where SG essential services are running.

PREREQUISITES:

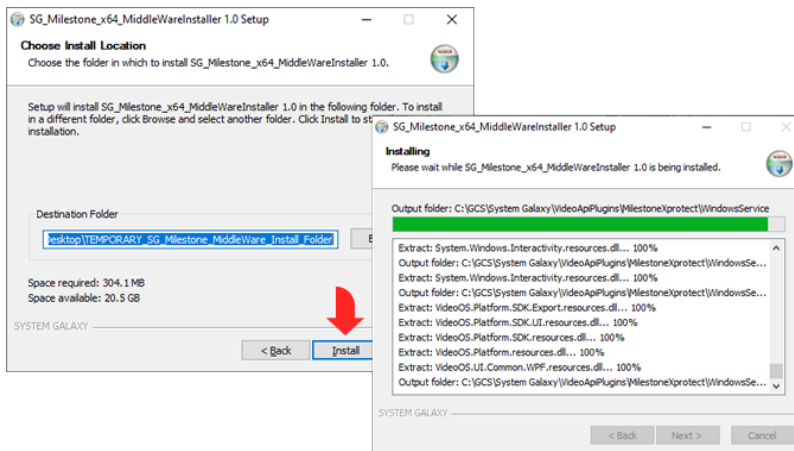
- You must have already installed the Video Plugin files on the Galaxy communication server.
- (SG 11.2.0) *essential Galaxy Services** must be running, or the Middleware Connector will not install.

* NOTICE: The essential Galaxy services include the GCS Web API Service, GCS Client Gateway service, GCS Communication Service, GCS DBWriter, GCS Event Service, and GCS DataLoader Service. Be aware that the installer may display an error message that "System Galaxy is not installed" even though it is installed. Refresh/restart GCS services or restart PC if needed.

8. Locate the *x64 MiddleWare Installer EXE file* on the Galaxy communication server.
This file was laid down by the previous step when you installed the Video Plugin files.
`C:\\GCS\\System Galaxy\\Video Plugins\\Brand Name Folder\\Installers\\SG_[brand name]_x64_MiddleWare_Installer.exe.`
9. Right-click the *Middleware Installer EXE file* and choose to 'Run as Administrator'.
10. The Installer program will open, click NEXT to start.
11. Accept default temp folder location (desktop) and click INSTALL button (see figure below).

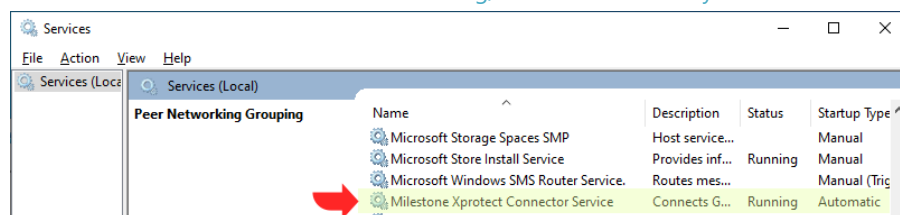
NOTE: The installer will clean up temp folders after itself.

FIGURE 7 - Installing the Middleware on Galaxy communication server



12. Open the PC Services window to confirm the *Connector Service* is running/starts automatic.

FIGURE 8 - The middleware service is running/automatic on Galaxy communication server (Milestone pictured)



STEP-5 Registering System Galaxy for 3rd Party DVR Support

This topic describes how to register VMS/DVR features in the Galaxy system-wide features. (Certified Dealer required)

The *Video Plugin support* is enabled by registering the *3rd Party DVRs* option in the System Registration screen.

- New Installs: the *3rd Party DVRs* option and DVR Limit are included in purchase agreement & registration code.
- System Upgrades: the *3rd Party DVRs* option can be added to an existing system if needed, or the *DVR Limit* can be increased with a new purchase agreement and new *registration code*. Galaxy supports having mixed brands on sites where the system already had older/different brands installed. You can replace or add to your existing system. Contact customer support for assistance.

PREREQUISITES:

- You must be an authorized certified dealer to obtain a registration code.
- You must sign-in to System Galaxy with a master operator login to perform registration

❖ Open the System Registration screen - from the SG menu **Configure ▶ Options ▶ Registration ▶ System**.

1. In *System-Wide Features*, check/enable the *3rd Party DVR* checkbox option
2. Enter the unit count in the *DVR Limit* field, per the customer purchase agreement.
3. Complete the normal registration process. The screenshot below is just for reference. You must enable or disable the options according to the purchase agreement.
4. Enter the new *Registration Code*
5. Click [Apply] button, then click [OK] button.
6. Restart System Galaxy software after registration process is complete.

FIGURE 9 – System Galaxy's System Registration screen

The screenshot shows the 'Product Registration' window with the 'System Registration' tab selected. The window contains several sections: 'System-Wide Features' with checkboxes for various features, 'Software Maintenance Settings' with dropdowns for expiration date and version, 'Limits' with input fields for maximum clients, readers, and biometric readers, 'Web Client Options' with checkboxes for ASP, photo ID, and card exchange, and 'Registration Code' with a text field and a 'Report' button. Annotations with blue arrows point to specific elements: 'Enabled the 3rd Part DVR option. Also, set the [DVR limit] to the correct number.' points to the '3rd Party DVR' checkbox and the 'DVR Limit' dropdown (set to 4). 'Enter the correct Registration Code. After you have completed all other settings.' points to the 'Registration Code' text field (containing 'T2BGFXSJ'). 'Click the APPLY button.' points to the 'Apply' button at the bottom right.



SUPPORT: Dealers may use the *GCS Online Registration* website 24/7, or contact customer service. A valid maintenance agreement is required for upgrading systems. Dealer online logon is required.

STEP-6 Enabling & Disabling Client Video Support (workstation-specific)

This topic describes how to enable or disable video support at any Galaxy computer or client workstation.

The 'DVR Enabled' option controls the *Video Viewer support* at each Galaxy computer or client-workstation. The 'Does Not Support Monitoring' option controls whether the alarm and event screens will display at the workstation. Both of these need to be configured correctly to allow monitoring and video viewing (or prevent it).

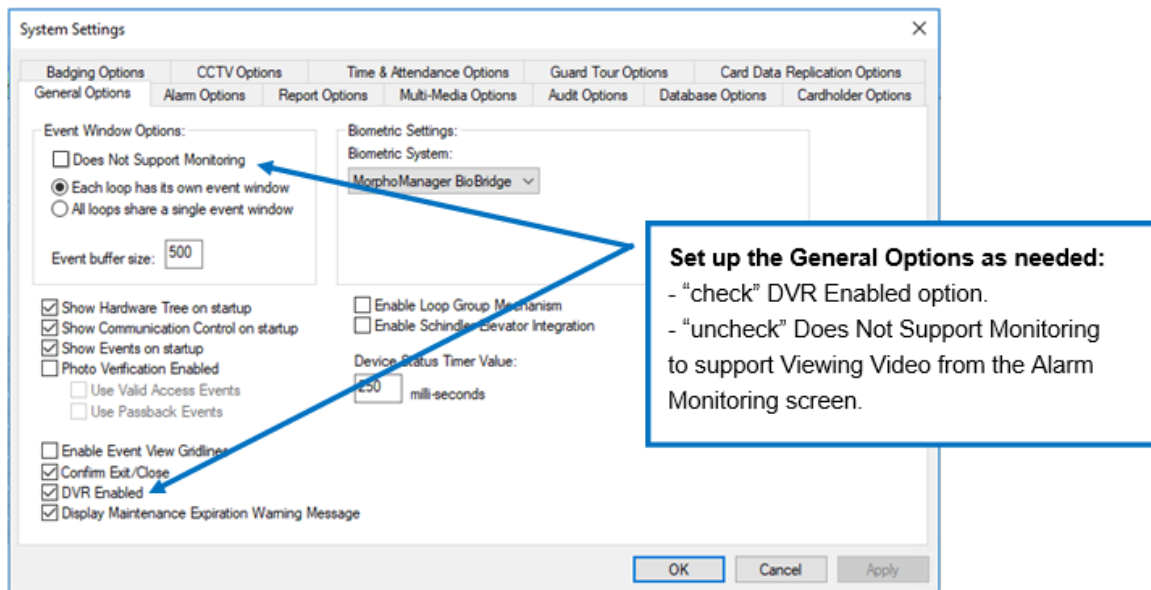
PREREQUISITES:

- You must have registered the system for DVR support.
- You must sign-in to System Galaxy with a master operator login to perform system programming.

❖ Open the System Settings screen - SG menu **Configure ▶ Options ▶ System Settings**

1. Select the 'General Options' tab.
2. Configure the 'Does Not Support Monitoring' option as appropriate ...
 - OFF (unchecked) allows Event screens to open, so operator can 'View Video' from Alarm Events screen.
 - ON (checked) will prevent the Event screens from opening.
3. Configure the 'DVR Enabled' option as appropriate ...
 - ON (checked) allows the Video Viewer to open (automatically or manually).
 - OFF (unchecked) will prevent the Video Viewer from opening only at the local workstation.
4. Click **APPLY** button to save changes –
AND -- **Proceed to the next step** to continue configuring Alarm Options (Automatic Call-up on Alarm);
OR -- If you are exiting System Settings now, **click OK and restart System Galaxy** to initialize changes.

FIGURE 10 – Galaxy's System Settings: Video option



STEP-7 Configure Automatic Video Call-up & other Alarm Options (workstation-specific)

This topic describes how to configure the workstation option to 'Automatically Call-up Video for incoming Alarms'. You must have the Event Monitoring enabled - see the prior step.

System Galaxy can automatically open the Video Viewer and play live video for an incoming alarm for a *camera-linked device (reader or input)*. The 'Automatically Call-Up Video' option controls whether SG automatically plays live video when an armed-alarm occurs. However, additional programming and conditions must be met also.

The 'Automatically Call-Up Video' option works as follows ...

- Enabled (checked) = SG will launch Video Viewer and call-up live video from *device-linked camera* for 'armed alarm' event.
- Disabled (unchecked) = SG will never auto-call-up video for armed alarms.

IMPORTANT: Five rules apply to triggering live video on an alarm event. This includes linking the device to a camera and configuring the device to be acknowledged (checkbox or schedule option) for the specific condition you want to monitor. System and device conditions must be met for an alarm to be triggered. The device must be in the 'armed' state and the device must be activated – i.e. whatever condition triggers an alarm (e.g. door-forced) must be actively occurring while the system is armed. See table below for a breakdown of the five required factors.

Table: The 5 A's ~ Rules for 'Automatic Called-up of Video' for Armed-Alarms

SYSTEM SETTING	DEVICE PROGRAMMING AND CONDITIONS				VIDEO RESULT
"Auto Call-up Option"	CAMERA LINKING	DEVICE PROPERTY	STATE	CONDITION	
Is it Assigned?	Is it Associated to device?	Is it Acknowledgeable?	Is it Armed?	Is it Active?	Is video called up?
True (checked)	True (Linked)	True (checked)	True (Armed)	True (Active/Alarm)	YES (all conditions true)
False (unchecked)	True (Linked)	True (checked)	True (Armed)	True (Active/Alarm)	NO (not assigned)
True (checked)	False (unlinked)	True (checked)	True (Armed)	True (Active/Alarm)	NO (not assoc.)
True (checked)	True (Linked)	False (unchecked)	True (Armed)	True (Active/Alarm)	NO (not ACK'd)
True (checked)	True (Linked)	True (checked)	False (Not Armed)	True (Active/Alarm)	NO (not armed)
True (checked)	True (Linked)	True (checked)	True (Armed)	False (Idle/Safe)	NO (not active)

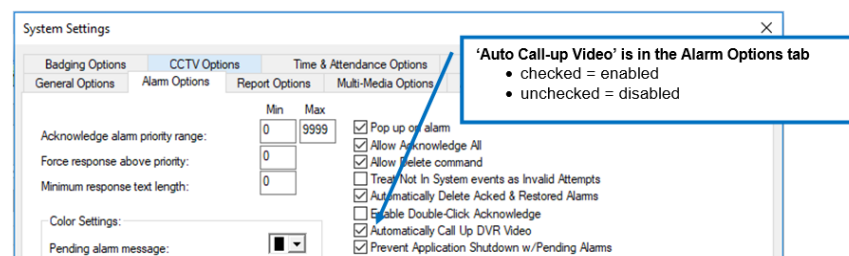
Video is automatically called-up only if these 5 conditions are All True! If any condition is false, video is not called.

IMPORTANT:

- **Alarm Priority:** Be aware that if you are using alarm priorities, that the video feed comes from the camera (device event) with the highest priority, and not necessarily from the most recent incoming event. This means that video from a different camera may supersede the one you are interested in seeing or that initially triggered the video.

- ❖ Sign-in to System Galaxy as a master operator.
- ❖ Open the System Settings screen - SG menu [Configure](#) ▶ [Options](#) ▶ [System Settings](#)
 1. Select the 'Alarm Options' tab.
 2. "Check" the 'Automatically Call-up DVR Video' option to enable it. (Unchecked means the option is disabled.)
 3. Be aware that if the Pop-up on Alarm option is checked, that the software will shift focus to the Alarm window whenever an armed alarm condition occurs. The Video Viewer will auto-start and call-up video from the offending camera/device. Note that the video feed from the offending camera will take precedence over any video you are playing if you already have the viewer open when an alarm comes in.
 4. Click the APPLY button and OK button to save your changes.
 5. Restart the System Galaxy software to initiate the changes.

FIGURE 11 – System Galaxy's System Settings: Auto Call up Video option



STEP-8 Adding the VMS to System Galaxy and Importing Cameras

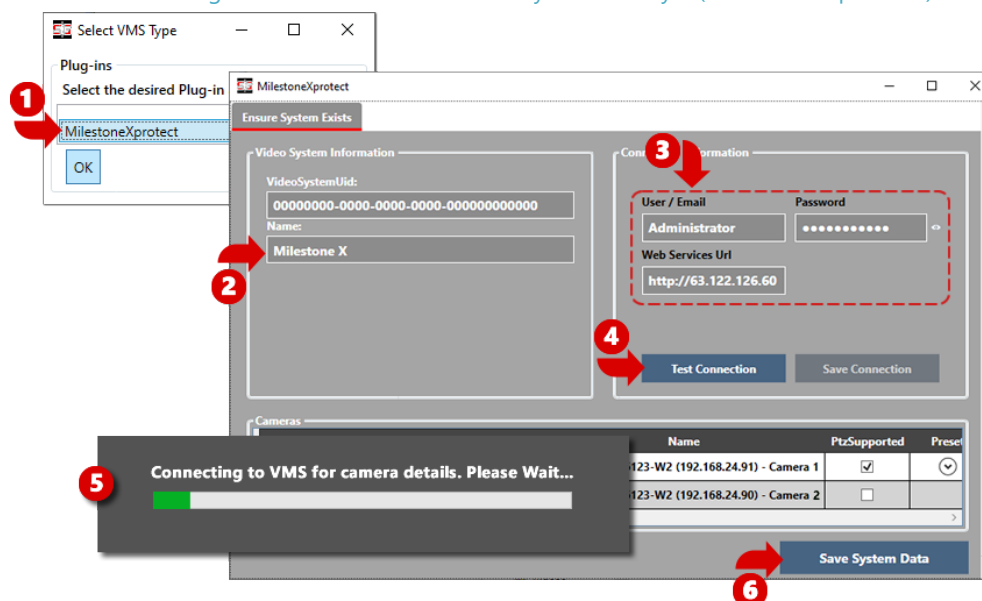
This topic describes how to add the VMS plugin to System Galaxy and configure connection settings and import cameras.

After the 3rd Party Video Plugin files are installed on the Galaxy computer, you can add the 3rd Party Plugin to the System Galaxy software. You must perform a network connection test and import the cameras. Whatever the cameras are named in the VMS Recorder is what will be imported into System Galaxy. If you need logical camera names, you must configure those in the VMS unit before you import camera names.

IMPORTANT:

- You must know the valid network settings, username, & password of the *VMS Recorder*.
 - The login credentials to the VMS must have camera rights.
 - The cameras must be installed, configured with valid network settings, and connected to the Recorder.
 - The camera names must also be preconfigured in the VMS, since the names are imported into SG.
 - You must have installed the *Video Plugin files*.
 - The VMS Connector Service must be installed running on the Galaxy communication server.
-
- ❖ Sign-in to the System Galaxy software using a *master operator* credential.
 - ❖ Open the *Video Plugin* window from the SG menu by selecting **Configuration ▶ DVRs ▶ Video Plugins**
 1. Select your brand VMS Type, such as *Milestone* or *OnSSI Ocularis* and **click OK**.
The VMS System Properties window will open.
 2. In the **Name** field, enter a logical name for the VMS Unit.
This name will display system-wide in System Galaxy – e.g. the system Hardware Tree.
 3. Enter the connection information: IP address, Username, and Password, etc
For some brands such as Milestone, you must include the "http://" prefix with the IP Address.
For other brands you may need an URL to the cloud location of your VMS.
 4. Click **Test Connection** button to test the connection and login parameters are valid.
 5. A progress bar will display as SG connects to the VMS unit and imports the cameras.
 6. Clicking the **Save System Data** button will save the Video Recorder and its list of cameras.

FIGURE 12 – Adding a VMS unit and cameras to System Galaxy – (Milestone is pictured)



EDITING CONNECTION SETTINGS FOR AN EXISTING VMS UNIT

This topic describes how to change the settings for an existing VMS unit. If you have not added the unit to the system, return to the previous topic on Adding the VMS to System Galaxy.

If you need to change the IP connection settings of an existing VMS unit after it has been added to System Galaxy, then you must do it in the traditional DVR Programming screen.

- ❖ Sign-in to the System Galaxy software using a *master operator* credential.
- ❖ Open the DVR Programming Screen - from the SG menu [Configure](#) ▶ [Hardware](#) ▶ [DVR's](#)
 1. Select the existing VMS name in the [Select DVR] droplist
 2. Click the [Edit] button in the DVR screen
 3. Make the needed changes.
 4. Click the [Apply] button to save settings.

FIGURE 13 – Editing connection settings of an existing VMS (Milestone pictured)

The screenshot shows the 'DVR Programming' screen for editing an existing VMS unit. The interface is divided into several sections:

- Select a DVR:** A dropdown menu showing 'Milestone XProtect 01'.
- Name:** A text field containing 'Milestone XProtect 01'.
- ID Number:** A text field containing '1'.
- DVR Type:** A dropdown menu showing 'Milestone XProtect'.
- Vendor Code:** A dropdown menu.
- Connection Settings:**
 - IP Address or DNS Name:** A text field containing '212.118.8.121'.
 - IP Port #:** A text field.
- Security Settings:**
 - User Name:** A text field containing 'admin'.
 - Password:** A text field.
 - Confirm Password:** A text field.
 - ☐ Show Password Characters

On the right side of the screen, there are five buttons: 'Add', 'Edit', 'Delete', 'Apply', and 'Cancel'.



Use the [delete] button to delete an existing Unit's configuration.

STEP-9 Checking the Hardware Tree for Imported Cameras

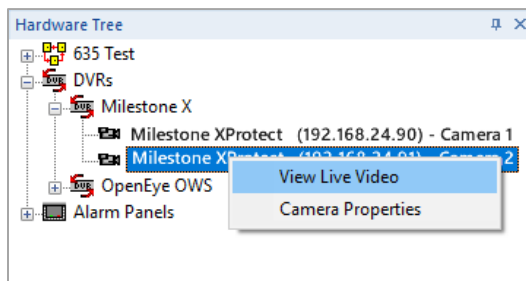
This topic describes how to verify that the VMS and cameras were imported and test the workstation settings will allow operator to view video.

The cameras should have been imported when you added the VMS in the prior steps. They will display in the Hardware Tree under the VMS branch.

PREREQUISITES

- The API and middleware services must be running
 - You must be able to connect to the VMS unit on the network and all related requirements must be met.
 - The VMS unit and all the cameras must be added/imported.
- ❖ Sign-in System Galaxy as any operator - the Hardware Tree should show the VMS you just added.
1. Click the [+] button to expand the “DVRs” branch in the Hardware Tree.
You should see all the VMS units you have added.
 2. Click the [+] button to expand a specific VMS branch.
You should see all the cameras imported in the prior step.
 3. To open the Video Viewer, right-click a camera icon and select View Live Video from the menu.
You should open each camera to verify you get video from each camera.
 4. Once you have verified that every camera is working, you can *start linking cameras to devices and finish the remaining programming at the affected readers / input.*

FIGURE 14 –System Galaxy Hardware Tree showing VMS and camera icons with shortcut menu (Milestone pictured)



STEP-9 Linking Cameras to a Door/Reader

This topic describes how to link a camera to a hardware device (reader / door).

You must link a reader to a camera to be able to manually or automatically retrieve video from the events of a reader or door. Video can be called up from events, alarms, reports, or graphic device icons. You can only link one camera to a reader. However, you can link a camera to more than one device. For example, a lobby camera could be linked to the reader/door and also to an input such as a motion detector.

IMPORTANT: Remember that Automatic Video on Alarm also requires you to place an acknowledgeable alarm schedule on the door for each condition you want to monitor for armed alarms. Be aware that the system must be in the armed state and the alarm condition must be activated to produce the alarm event and trigger automatic video callup.

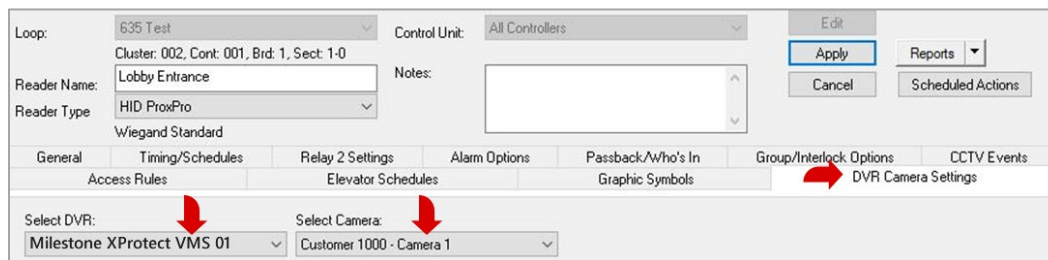
PREREQUISITES

- The VMS unit and all cameras must be correctly installed /configured (including camera names).
- You must have already added the VMS and imported its cameras into System Galaxy.
- You need to know which cameras are located by the device you are programming.
- You must sign-in to System Galaxy as a master operator.

❖ Open the Reader Properties Screen - from SG menu **Configure ▶ Hardware ▶ Doors**

1. Select the Loop and Controller that the reader belongs to.
2. Select the Reader Name click the EDIT button.
3. Select the *DVR Camera Settings* tab.
4. Select the VMS Unit name and the desired Camera name.

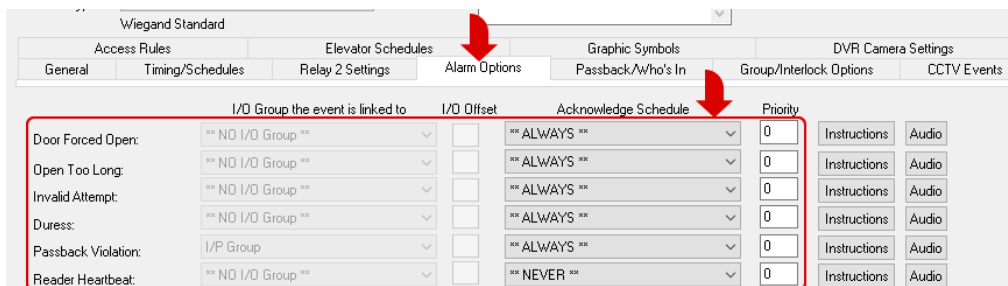
FIGURE 15 – Camera Settings for Reader/Door Properties



5. Select the *Alarm Options* tab and set an *Acknowledge* schedule for each door condition that you want to get alarms for. If you do not set a schedule for one of the conditions, it will not trigger an alarm.

NOTICE: Typically, you would set the Always schedule so that any time the system is armed the condition would create an alarm; but if you choose a custom schedule, then an alarm can only occur during the active (green) part of the schedule – provided the system is armed at that time.

FIGURE 16 – Setting Alarm Schedules in the Alarm Options of Reader/Door Properties



6. Click **APPLY** to save the settings.

STEP-10 Linking Cameras to an Input

This topic describes how to link a camera to a hardware device (input).

You must link an input to a camera to be able to manually or automatically call up video from the events of the input. Video can be called up from events, alarms, reports, or graphic device icons. You can only link one camera to an input. However, you can link a camera to more than one device. For example, a camera could be linked to the input and also to another input or a door/reader.

IMPORTANT: Remember that Automatic Video on Alarm also requires you to enable the “acknowledge” checkbox option on the input you want to monitor for armed alarms. Be aware that the system must be in the armed state and the alarm condition must be activated to produce the alarm event and trigger automatic video callup.

PREREQUISITES

- The VMS unit and all cameras must already be correctly installed /configured (including camera names).
 - You must have already added the VMS and imported its cameras into System Galaxy.
 - You need to know which cameras are located by the device you are programming.
 - You must sign-in to System Galaxy as a master operator.
- ❖ Open the Input Properties Screen - from SG menu **Configure ▶ Hardware ▶ Doors**
7. Select the Loop and Controller that the input belongs to.
 8. Select the Reader Name click the EDIT button.
 9. Select the *DVR Camera Settings* tab.
 10. Select the VMS Unit name and the desired Camera name.

FIGURE 17 –Input Properties screen: DVR Camera Settings tab

Port Type: Digital I/O Board (8 Inputs, 4 Outputs)
Clust: 002, Cont: 001, B: 5, S: 2, I: 01

Input Name: DIO Input 1 (Snibby Button)

ARM Schedule: NEVER

Mode: Normal Input ☒ Show In Tree

Operator: [Empty Field]

Link to I/O Groups Options CCTV Events Graphic Symbols **DVR Camera Settings**

Select DVR: Milestone XProtect VMS 01

Select Camera: Customer 1000 - Camera 1

11. Also, you need to check the ACKNOWLEDGE checkbox – if this is not checked then the Auto-callup on alarm will not happen when this device is active.

STEP -10 VALIDATING CAMERA MAPPING IN SG

This topic covers validating the camera device mapping in System Galaxy.

After the configuration is complete, you should test the inputs and readers to prove they are correctly mapped to the corresponding camera and that you configured to each camera / display video for the area you expect.

Follow the numbered steps to test each device. (The table below assists your verification).

- 1) Select the Event Monitoring Screen (System Galaxy is running and connected to loops)
- 2) Open the Hardware Tree and expand the objects to see all inputs and readers.
- 3) Induce an event for the device from hardware tree icon (i.e. right-click the icon and pulse / shunt).
- 4) Select the resulting event on the Event screen and right-mouse-click to pick the 'View Live Video' option from the shortcut menu. See Chapter 3 for examples of calling up video.
- 5) Verify the DVR Viewer opens/displays video for correct area.
- 6) Unshunt any input after verification is complete. (inputs only)
- 7) Repeat steps 3 through 6 for each device in the list.

Camera Connections Validation List (extra copy in the back – see Appendix A)

DVR NAME:		DVR LOCATION:		
Device Name/type	Camera #	Camera Name	Location/Area Displayed	Check
	1			<input type="checkbox"/>
	2			<input type="checkbox"/>
	3			<input type="checkbox"/>
	4			<input type="checkbox"/>
	5			<input type="checkbox"/>
	6			<input type="checkbox"/>
	7			<input type="checkbox"/>
	8			<input type="checkbox"/>
	9			<input type="checkbox"/>
	10			<input type="checkbox"/>
	11			<input type="checkbox"/>
	12			<input type="checkbox"/>
	13			<input type="checkbox"/>
	14			<input type="checkbox"/>
	15			<input type="checkbox"/>
	16			<input type="checkbox"/>

Chapter 3: Operating the Video Viewer in SG

This chapter covers operating the Video Viewer and calling up video from the hardware device icons or events.

Methods of Retrieving Video

This topic describes the methods of retrieving video.

You can call up video manually or automatically in System Galaxy.

AUTOMATIC VIDEO CALL-UP (ALARM-TRIGGERED)

This feature only applies to SG *alarm events* and depends on system settings, device programming and state and condition of the devices that are expected to trigger the alarm events. See Steps 6, 8, and 9 in chapter 2 for details.

(Automatic call-up / Live Feed) happens when an **armed alarm** occurs from an input or door that is linked to a camera (provided the workstation **auto call-up** option is ON and that device's ACK option is also enabled).

NOTICE ABOUT ALARM PRIORITIES: It is important to realize that *alarm priorities* take precedence over *event sequence*. Therefore, if you assigned *alarm priorities*, the video will be from the event with the highest priority instead of the most recent or latest alarm event.
FOR EXAMPLE: if alarm events happen at three devices in a 1-2-3 sequence, you would normally see video from the last (third) device event. But if you are assigning alarm priorities and you assign a higher priority to the first device, the video will be from the first event instead of the third. So if the first device event is a *door forced* and the third device is an input, you would see video from the door since it has a higher priority.

MANUAL VIDEO CALL-UP (OPERATOR COMMANDED)

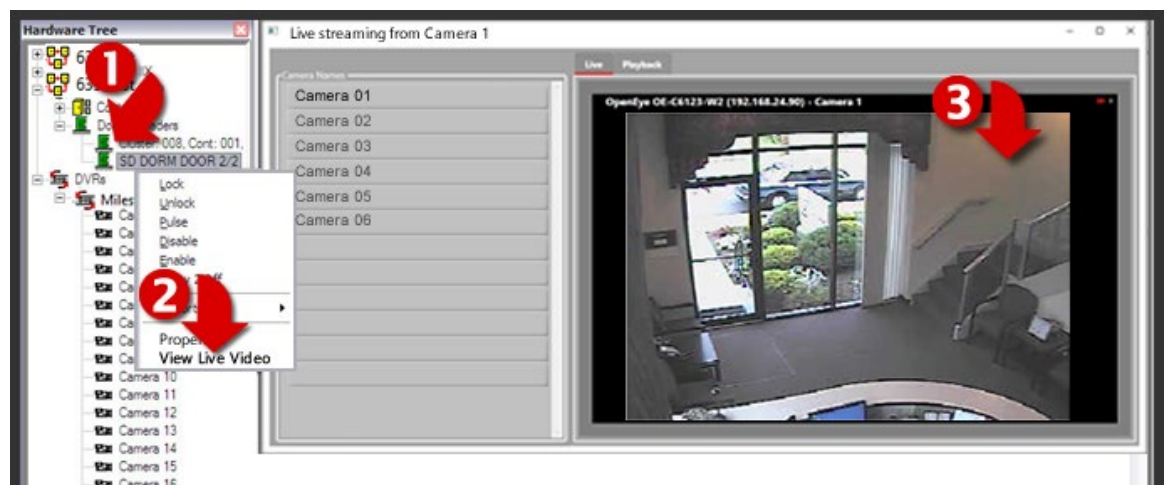
The operator can call up live video from camera icons or device icons that are linked to a camera in the Hardware Tree or a Floor Plan. Operators can call recorded video from a status or historical event logged in the event screen, device status or activity report.

- **(Live Feed)** Operator calls up video from the icon of a camera or a camera-linked device (reader/input).
- **(Recorded Video)** Operator calls video from a *device status* or *event message* that was logged in the system.
- **(Live or Recorded)** Operator starts video from the open Video Viewer by choosing camera or camera & date.

The example below shows operator calling video for a door/reader that is linked to a camera.

- 1) right-click the **door or input icon** in the Hardware Tree to see the command-menu
- 2) choose **View Live Video** option to start live feed for that camera in the Galaxy Video Viewer

FIGURE 18 – CALLING VIDEO FROM OPERATOR COMMAND



Video Viewer - User Interface

Buttons and fields are dynamically enabled or disabled based on the selected Viewing Mode.

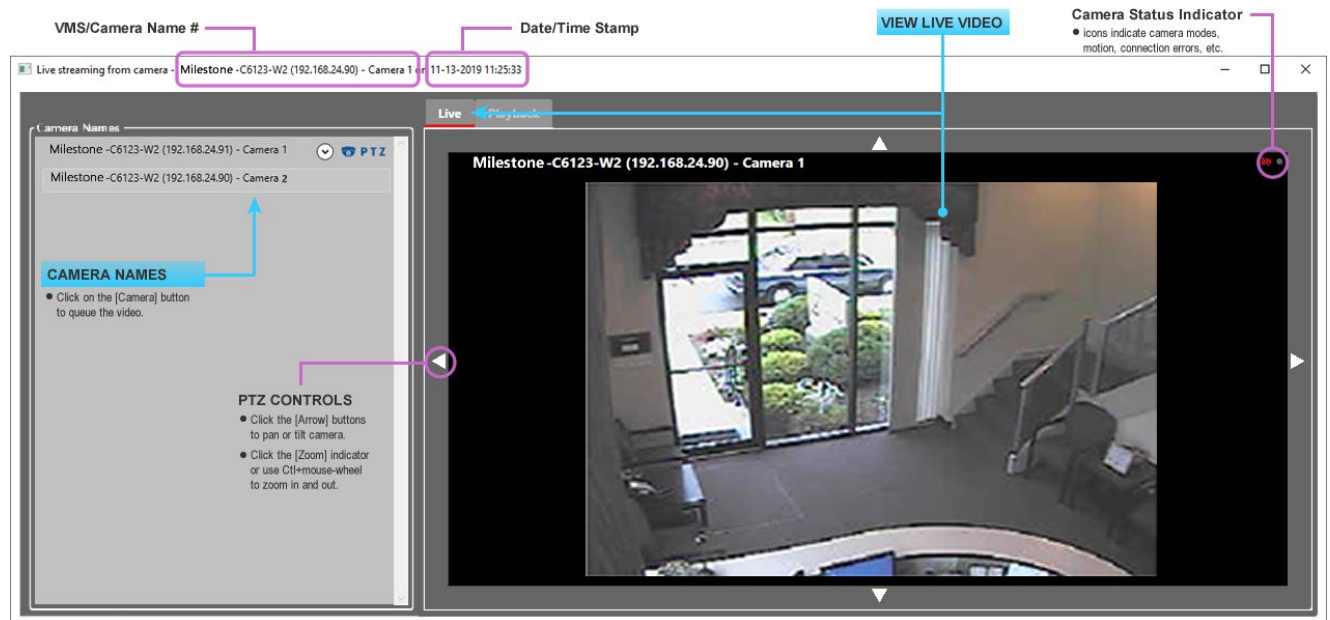
Camera controls are also dynamically enabled or disabled based on the *selected camera* as well as on how the camera is configured at the VMS unit.

- Connection settings are available in Live Mode.
- PTZ Control buttons enable in Live Mode if supported*.
- Playback Controls display in Retrieval (recorded) Mode.

DVR VIEWER SHOWN IN LIVE MODE

The figure below shows the DVR Viewer running in LIVE mode. Be aware that some options are available only if the VMS and camera are capable of supporting the option or control (i.e. Joystick, PTZ, Presets).

FIGURE 19 - GCS VIDEO VIEWER / LIVE MODE (Milestone pictured)



DVR VIEWER SHOWN IN HISTORICAL (RECORDED) MODE

The figure below shows the Video Viewer running in RECORDED MODE.

The availability of recorded or historic video is based on the memory settings and capabilities of the VMS. Refer to the VMS manufacturer's documentations for memory specifications and instructions on how often to back up your video.

FIGURE 20 - GCS VIDEO VIEWER / RECORDED MODE (HISTORICAL/PLAYBACK) (Milestone pictured)

