System Galaxy Addendum

OnSSI Ocularis 64bit Video Plugin Solution

System Galaxy

Install & Configure Plugin

Import & Assign Cameras

Operate Video Viewer
(Live / Recorded)

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Therefore, no claims are made as to the accuracy or completeness of this document.

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Scope

This guide covers known requirements and instructions to configure System Galaxy to integrate with 3rd Party Video Plug-ins.

Manufacturer's Specific Requirements and Compatibility

Always consult the manufacturer's documentation for requirements and capabilities related to the product (i.e. OS, install/set up, speed, bandwidths, supported camera models and features, codecs, etc.). The availability of features, cameras, video controls etc. are controlled by the 3rd Party Plug-ins and may change without notice. Contact authorized Tech Support if questions arise.

History

SG 11.7.0 (3rd Edition) – Merge all VPIs into one guide.
SG 11.8.3 (5th Edition) – Pub all guides seperately by brand from Flare.

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Introduction to ONSSI 64-bit Video Plugin

These instructions apply to the ONSSI 64-bit Video Plugin that integrates with System Galaxy.

FEATURED TOPICS

Perform these topics in sequential order - i.e., *setup*, *install*, and *configure* for your brand video system.

- Setup & Requirements Checklist
- Install Video Plugin
- Configure Cameras
- View Video

> ⚠ You must meet **Requirements** and **Setup Checklist** before installing Video Plugin files.

System Overview

The diagram below depicts the System Galaxy integration with a *Video Management System* using the Web API Interface and Video Plugins which are installed on the System Galaxy workstation.
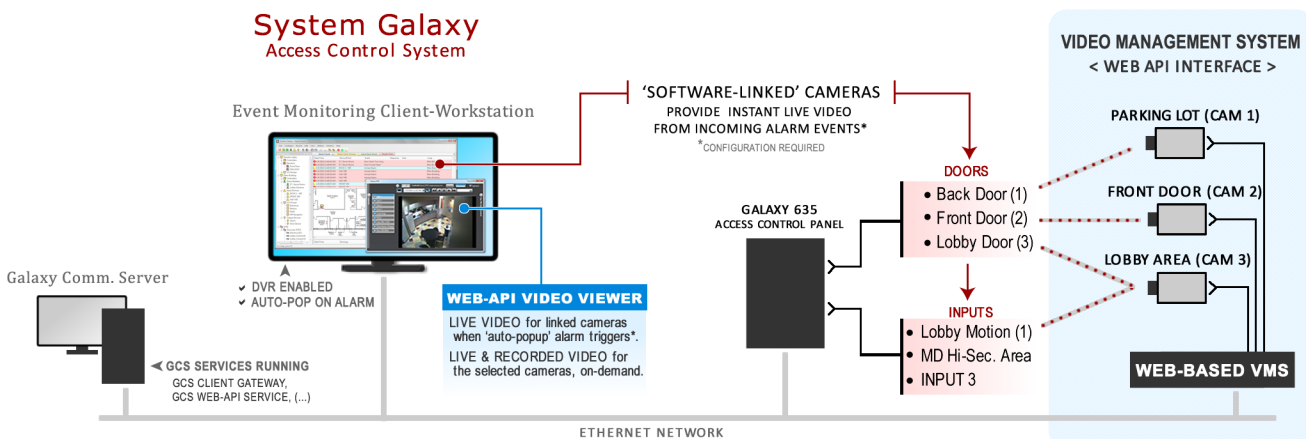
System Settings

After the DVR Support is enabled in the *System Registration*, certain options must be configured in the *System Settings* to allow video viewing at each workstation - or control how system alarms affect video playback. See Requirements & Setup for details.

DVR Enabled

The **DVR Enabled** option controls whether the *Galaxy Video Viewer* can be opened and play video. This is a workstation-specific option, so you can disable this at clients where you don't need video monitoring.

Auto Pop On Alarm

The **Auto-Pop or Callup Video on Alarm** controls whether the *Video Viewer* will automatically open and play live video when an *alarm* is detected from a door or input that is linked to a camera.

> Note: the *Alarm Priority* and *time of alarm* can affect which camera feed is displaying when multiple alarms are triggered. Generally the newest alarm takes precedence unless an alarm priority overrides it. Test your incoming video vigorously to be sure you understand how your alarm options affect video.

Installing Plugins

You should complete all the system programming and camera programming including camera names at the Video Management Unit before you install the Video Plugins. This includes configuring the SG Login account at the VMS and give it permissions to all cameras. Once this is done you can proceed to the Installing Video Plugin topic for your brand of VMS. The *GCS Web API Service* must be running /online before you install the Plugin file.

Linking Cameras

Cameras are linked to doors, elevators, or inputs (such as motion detectors) from within the System Galaxy software programming screens.

Viewing Video

After cameras are linked in the System Galaxy programming, the SG Operator to **call live video** from any linked door/input/elevator that is visible in the *Hardware Tree* or *Graphics Screen* by using the *Operator Command Menu*. SG Operators can also call video from *System Alarm Screen* or *Activity Events Report* .

> SIDE NOTE: System Galaxy still supports the traditional DVR interface which does not use Web API Plugins. The dealer would simply install the DVR/NVR using the traditional method in the DVR Programming screen as described in the traditional **Galaxy DVR/NVR Integration Guide**. New systems are recommended to use the new Web API Video solution.

Part 1: Requirements & Setup

This topic covers the **Requirements** and **Setup** that must be done before you install any Video API Plugin.

FEATURED TOPICS

- Video Plugin Requirements
- SG Setup Checklist *(required for all VPI brands)*

Video Plugin Requirements

1. System Galaxy (SG) must be correctly installed and working before you install the Video Plug-In files.

   - To obtain the **Galaxy Installation media** with the Auxiliary folder intact see the Download Software page where you can either download the ISO files or order a USB Thumbdrive from Customer Service.

     > ⚠️ If *GCS Services* are running on a Server OS, you must install and operate Video Plugin files on a client workstation with Windows 10 to support monitoring and video viewing.

     > 📖 See the Galaxy Installation Worksheet for quick steps to install System Galaxy.

     > 👁 See the SG Install Checklist in this guide for steps to register and enable Video Viewing.

2. Your **Video Management System** (VMS/NVR unit) must be fully installed and working properly.

   - You need administrative rights on the VMS Unit to create a *user login* for the SG clients.
   - In some brands of VMS, the user login may need to have permissions to all the cameras.

SG Setup Checklist (required)

This checklist validates the SG programming options are set correctly that relate to video support.

1. ___ Verify **System Registration** is correct: **Configure > Options > Registration > System**
   - Product level must be "Corporate" or "Enterprise" (per the purchase agreement).
   - **'3rd Party DVRs' option** must be enabled (checked) if your VMS is not an OEM Video Plugin.
   - **'Units' field** must have the correct number of maximum units (per purchase agreement).

2. ___ Verify Client Web APIis enabled at each workstation that needs video support:
   Configure > Options > Client Gateway …
   - **'Use Web Services' checkbox option** must be "checked".
   - **'Web Service URL'** must include the correct port number - 8000 (default) or 8443 (SSL Cert).

   See the Galaxy IT Network Checklist for ports that must be available/unblocked.

3. ___ Verify you can connect to the Web API Swagger page from the SG communication server and from each client workstation, using: http://X.X.X.X:8000/swagger or https://X.X.X.X:8443/swagger.

4. ___ Verify the following System Settings are correct at each/every client workstation that needs video support:
   Configure > Options > System Settings …
   - **General tab: 'DVR Enabled' option** must be "checked" to support the Video Viewer.
   - **General tab: 'Does Not Support Monitoring' option** must be "unchecked" to support ability to manually launch the Video Viewing from an alarm event (in Alarm Event screen).
   - **Alarm Options tab: 'Automatically Call-Up Video' option** must be "checked" if you want the Video Viewer to automatically launch when an *alarm event* happens at door or input. (Note: that if multiple camera feeds are activated, the Viewer will display the video feed from the last event, or from the highest priority event if other alarm priority programming options are configured. Testing your set-up is highly recommended.)

5. ___ Verify that *SG Alarm screen* pops open when an alarm condition occurs at an armed device, and that the screen is displaying the alarm events for the hardware that you will be linking cameras to.

   See the Hardware Programming sections in SG User Guide for configuring readers and inputs for alarm events such as Door Forced Open or Armed Alarm.

6. ___ Restart System Galaxy if you changed any of the settings. This will ensure System Galaxy is initialized.

> 👁 NEXT: See **PART-2 Installing Plugins** for information about installing the Video Plugin Files.

Installing OnSSI Ocularis Plugin

This topic covers installing a Video API Plugin for OnSSI Ocularis 64bit (VMS). Instructions include installing MSMQ, the OnSSI Runtime SDK, and the Middleware Service on Galaxy server. Also included are the steps to add the VMS login credentials to System Galaxy, connect to the VMS, and import the camera names.

FEATURED TOPICS

- Install OnSSI Ocularis Plugin (Server)
- Turn On MS Message Queue (Server)
- Install OnSSI Run-time SDK (Server)
- Install OnSSI Middleware (Server)
- Install Video Plugin (Client)
- Connect to VMS & Import Cameras
- Test VMS and Cameras

OnSSI Ocularis Video Plugin 64bit (Server)

This step describes installing the **Video Plugin file** on the computer that hosts the Galaxy GCS Services.

PREREQUISITES

- Verify GCS Web API Service is running:

    Test URL > http://localhost:8000/swagger   or   https://X.X.X.X:8334/swagger (SSL)

- The *OnSSIOcularis.exe* plugin install file is under the Auxiliary folder on the Galaxy Install media (USB/ISO).

   Path > USB:\\Auxiliary\System Galaxy\Video Plugins\OnSSIOcularis

1. Copy the **OnSSIOcularis.exe** file into the *OnSSIOcularis Folder* on the Galaxy Services Computer.

   NOTE: you must create the OnSSIOcularis folder if it does not exist.

   Your PC > C: \\GCS\System Galaxy\Video Plugins\OnSSIOcularis

2. Right-click on the **OnSSIOcularis.exe** file and choose '*Run as Administrator*' from the menu.

   The Plugin should self extract.

   Extracting Video Plugin file
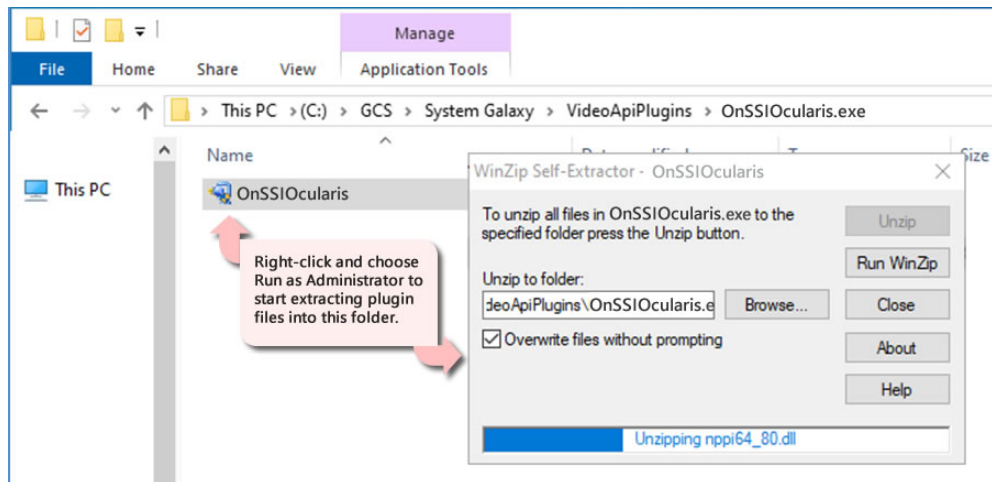
Enable Microsoft Message Queue (Server)

This step covers turning on the **MS Message Queue** option on the computer that hosts the GCS Services.

PREREQUISITES

- The *MS Message Queue* must be installed on the same computer that is hosting the GCS Services.

- The *Message Queue* feature must be turned on *before* you install the SDK.

- You must restart the computer after turning on the MS Message Queue .

STEPS

1. Open **Windows Control Panel** from the Windows Search Bar.

2. Select (click) the **Programs** option to open the *Programs* window.

3. Select (click) the **Program and Features** option to open the *Programs and Features* window.

4. Select (click) the **Turn on Windows Features** option, in the left side pane of the window.

Turn On Windows Features (MSMQ)
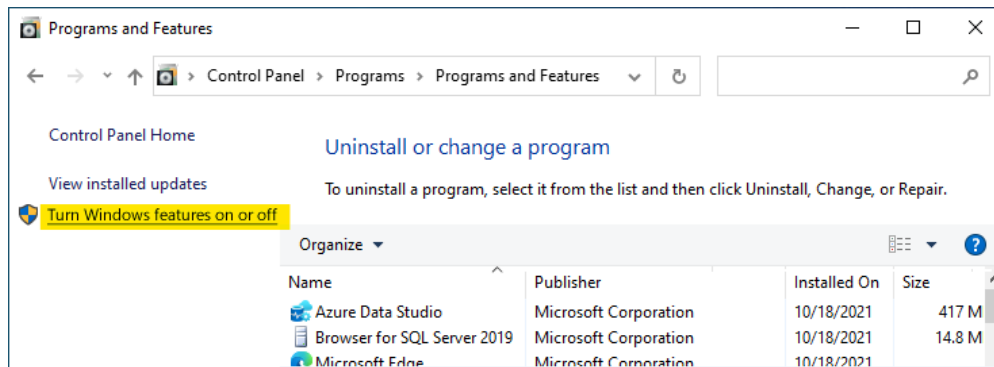
5. Expand the **Microsoft Message Queue (MSMQ) Server** option. Then expand the **Microsoft Message Queue (MSMQ) Server Core** option.

- Check (enable) the **MSMQ Active Directory Domain Services Integration**
- Check (enable) the **MSMQ HTTP Support**

Configuring MSMQ Options
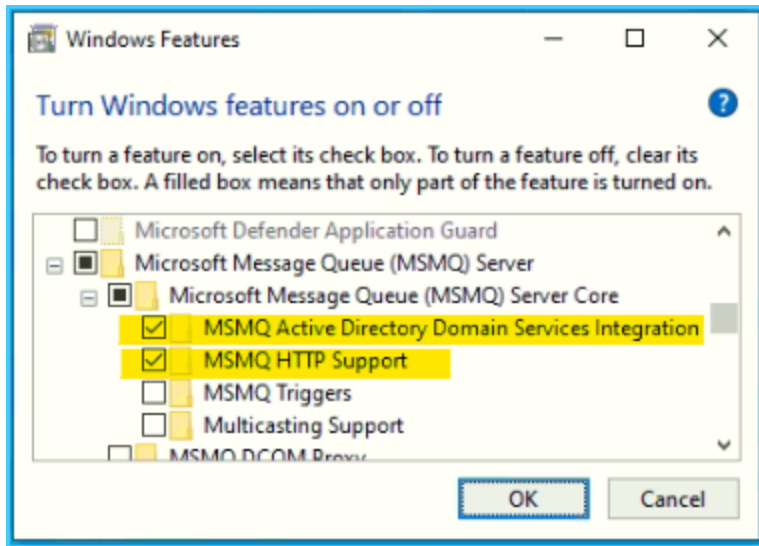
6. Click **OK** to save MSMQ changes. Then close all the Control Panel windows.

7. Restart the **Computer** to initialize these settings.

Install OnSSI Runtime SDK (Server)

This step covers installing the **OnSSI Runtime SDK** on the computer that hosts the GCS Services.

PREREQUISITES

- The *MS Message Queue* must already be properly configured (see prior section).

- The *OnSSI Runtime 64bit SDK* must be installed on the same computer hosting the GCS Services.

- Galaxy's *GCS Web API Service* must be running or the SDK will not install.

- You must restart the computer after installing the SDK.

STEPS

1. Browse to the **OnSSI x64 SDK Installer (.EXE file)** on the computer running GCS services.

   C:\\GCS\System Galaxy\Video Plugins\OnSSIOcularis\Installers\ONSSI Runtime\OnSSI Ocularis SDK Runtime x64*.exe

2. Right-click the **OnSSI SDK Installer file** and choose to *'Run as Administrator'*.

   Launch the OnSSI Runtime SDK (64bit)
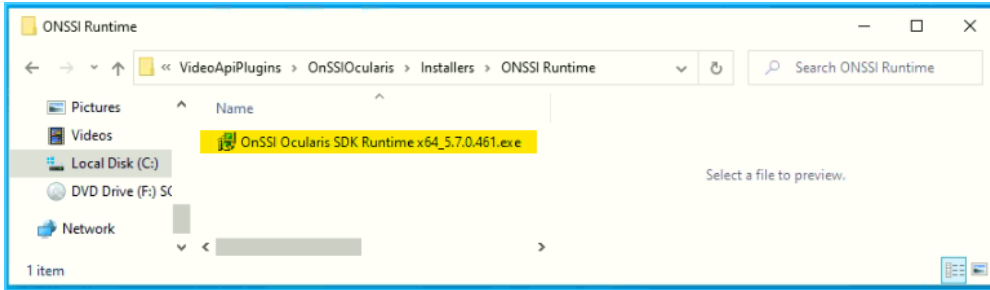
3. The **Installer Program** will open, click **NEXT** to begin.

4. During the installation process, the **Installer Program** will prompt the user to download and install the .NET Framework, if needed.

   > The **Installer Program** will automatically upgrade/update and install several run-time components, including Visual C, DirectX, and .NET Framework.

   Download supporting framework for Ocularis SDK
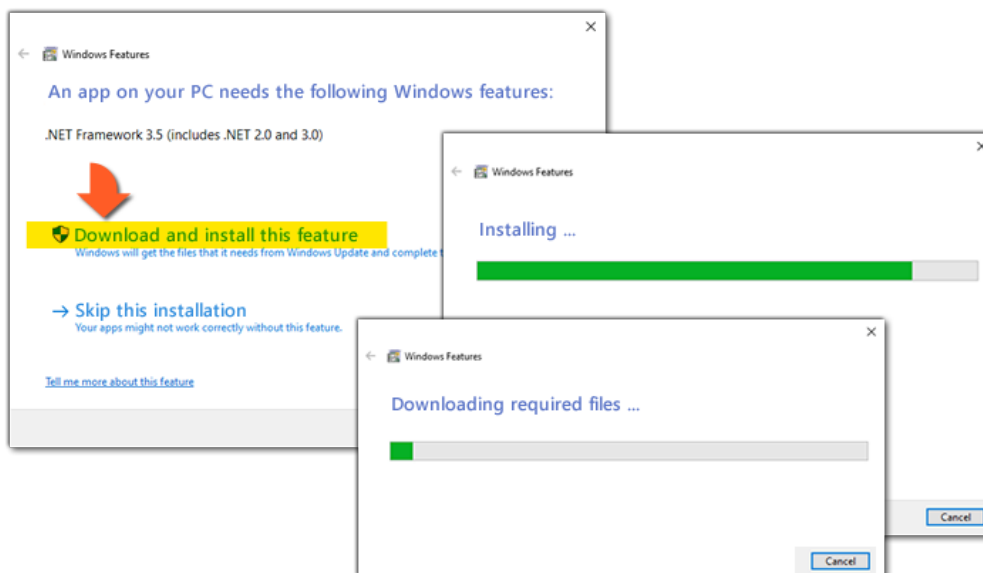
5. Click **Finish** to close the Installer Program after everything is installed.

6. Restart the **Computer** to initialize these settings.

Install Middleware Connector Service

This step covers installing the **OnSSI Middleware Connector Service** on the computer that hosts the GCS Services.

PREREQUISITES

- The *SG Ocularis X64 Middleware* will be installed on the same computer that is hosting the GCS Services.

- Galaxy's *GCS Web API Service* must be running, or the Ocularis Middleware .EXE will not install.

- You must restart the computer to initialize the services.

STEPS

1. Browse to the SG OnSSI x64 Middleware Installer (.EXE file) on the computer running GCS services.

   C:\\GCS\System Galaxy\Video Plugins\OnSSIOcularis\Installers\SG_Ocularis_X64_MiddleWare_Installer.exe

2. Right-click the **OnSSI Middleware Installer file** and choose to *'Run as Administrator'*.

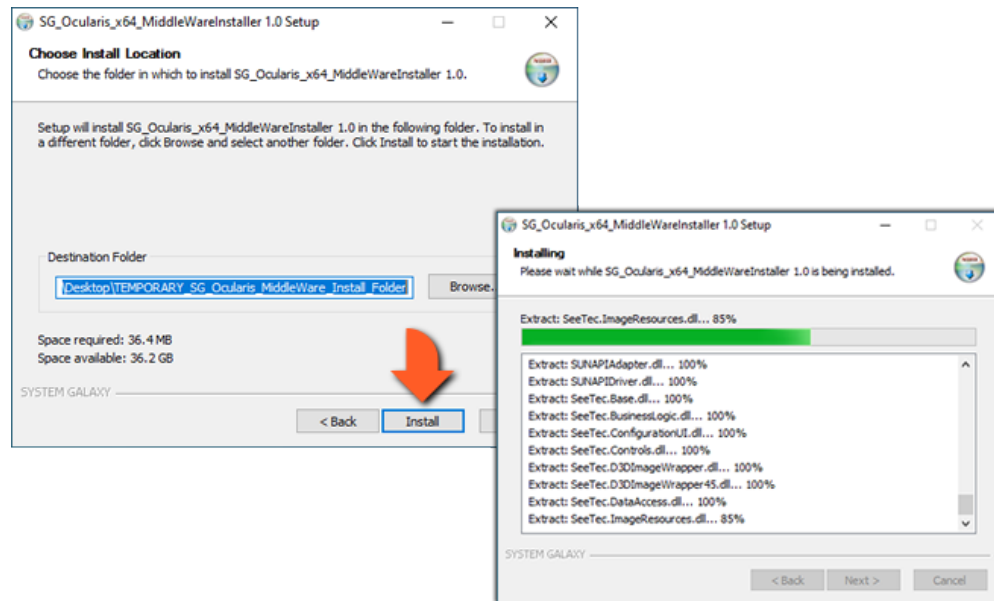   Launch the OnSSI Runtime SDK (64bit)
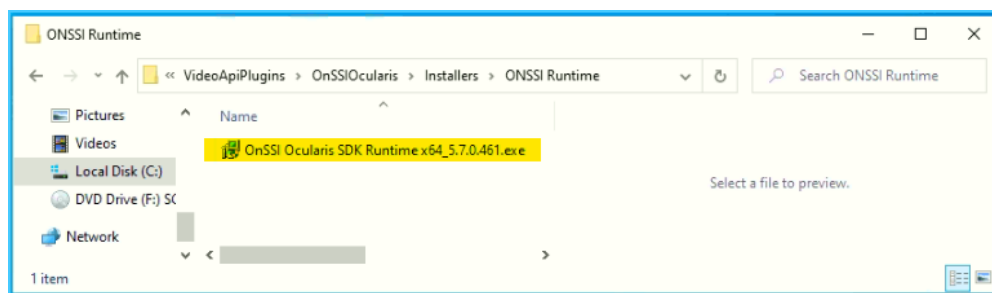
3. The **Installer Program** will open, click **NEXT** to begin.

4. You can accept the default temp folder location (desktop).

NOTE: The installer will remove the temp folder after it finishes installing.

5. Click **Install** button (see figure below).

Installing OnSSI Ocularis Middleware (64bit)

6. Click **FINISH** when the installer is done.

7. Restart the **Computer** to initialize the services starting up.

8. Open the *PC Services window*, verify the status of the '*OnSSI Connector Service*' is "Running" and is configured to "Automatic" start-up.

Ocularis service status is Running/Automatic
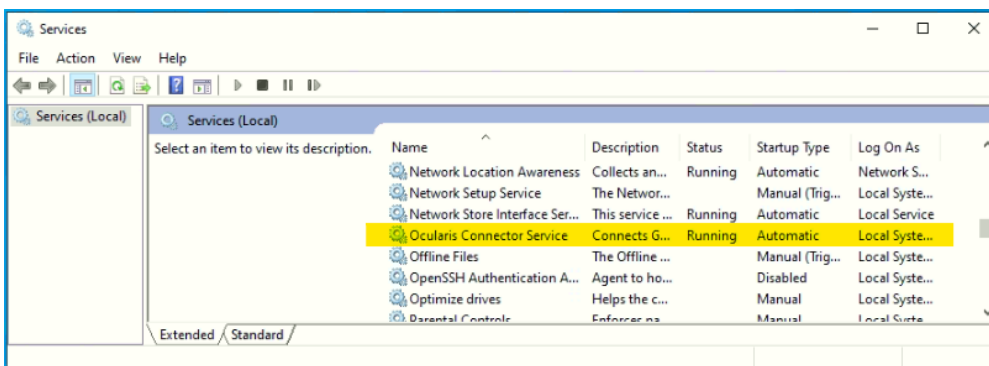
Install Video Plugin (Client)

This step covers installing the **Video Plugin File** on a Galaxy client workstation.

You can skip this step if you do not need Video at a client workstation.

PREREQUISITES

* The GCS Web API Service must be running.

* The GCS Services Computer must be online.

* The options that are related to Video Viewing and Monitoring must be enabled at this client. Refer to the Setup Checklist Item-4 in for details.

STEPS

1. Copy the **OnSSIOcularis.exe** file into the *OnSSIOcularis Folder* on the Galaxy Services Computer.
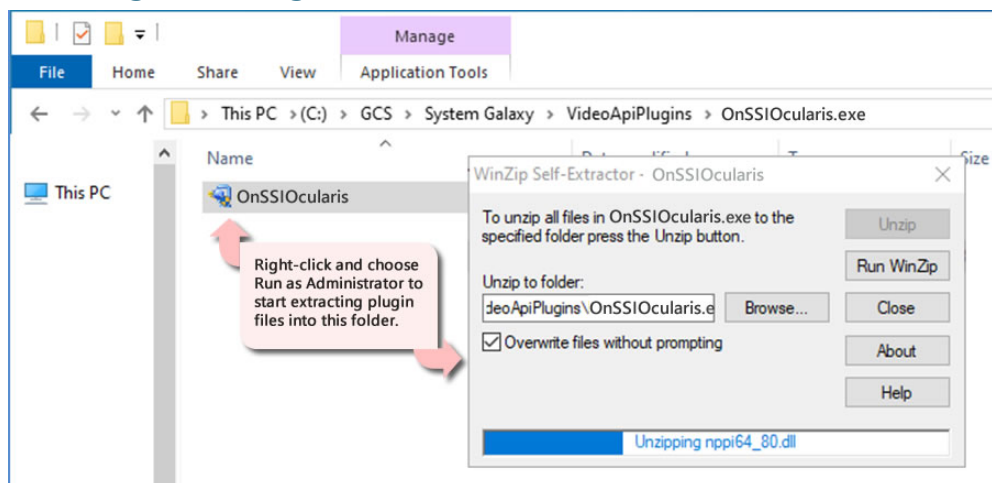
   NOTE: you must create the OnSSIOcularis folder if it does not exist.

   Your PC > C: \\GCS\System Galaxy\Video Plugins\OnSSIOcularis

2. Right-click on the **OnSSIOcularis.exe** file and choose '***Run as Administrator***' from the menu.

   The Plugin should self extract.

   Extracting Video Plugin file

Connect to VMS & Import Cameras

This step describes adding the client login and connecting to the VMS Unit and importing the camera names.

PREREQUISITES

- The VMS Unit must already be installed, configured and online.

- The *VMS Client Login* for Galaxy must already be created at the VMS Unit and must have the correct permissions to view all cameras.

- All *camera names* must be configured at the **VMS unit** before you add the VMS to System Galaxy.

- The *GCS Web API Service* and the *OnSSIOcularis Connector Service* must be running.

- You must know the IP Address of the VMS Unit (or web address if hosted over the internet)

- You must know the VMS's client login credentials (Username/Password).

> **IMPORTANT:** *Camera names* **cannot be changed in System Galaxy**. Camera names must be configured at the **VMS Unit** before they are imported into System Galaxy when the **VPI Programming** is done (this step). The imported names will display in screens and reports throughout System Galaxy, including the *SG Hardware Tree*, *Reader Programming Screen*, *Input Programming Screen*, and the *GCS VPI Video Viewer*. **TIP:** Create camera names that are useful - *like what area it shows* - e.g., lobby mezzanine, east parking lot, employee entrance, elevator lobby cam1.

STEPS

❖ Open the Plugin Screen - Configure > Hardware > DVR's > Video Plugins

   1. In the Plugins window, select "OnSSIOcularis" and click [OK] button and the *VMS Programming Screen* will open.
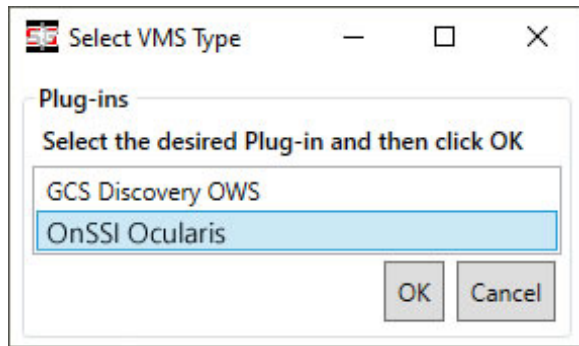
2. Enter a unique and meaningful Name (i.e. "OnSSIOcularis 01").

    FYI: This name is displayed throughout System Galaxy screens and reports - such as Hardware Tree, DVR Properties, Camera Programming, or Reader & Input screens, etc.

3. Enter *Client Login Credentials* (User or Domain & Password). Login rights must allow viewing/controlling cameras.

4. Enter the Web Services URL of the VMS unit (port number is not needed).

5. Click the [TEST] and [SAVE CONNECTION] buttons, which will test the connect and import the camera names.

6. Click [SAVE SYSTEM DATA] button, to save VMS connection settings and camera names into the SG database.

    IMPORTANT: You must *restart System Galaxy software* after saving data to initialize the VPI system configuration.

VMS Programming & Camera Import - DEFAULT PORT = NONE

The fields available may vary for your brand of Video Plugin.

Test the VMS & Cameras

This step tests that the VMS Unit and cameras were added correctly and that you can play video from a chosen cameras.

PREREQUISITE

- You must have completed the previous section by saving your System Data and restarting System Galaxy.

STEPS

Launch System Galaxy and sign-in if you have not already done so. The *Hardware Tree* should be open.

TIP: You can refresh the Hardware Tree from the View menu.

1. Click the **DVRs icon** (+ 📹) to see the list of VMS Units.

   RESULT > you should see the VMS Name that you created in the previous step.

2. Click on your **VMS Name** (+ 📹) to see the list of cameras imported.

   NOTE: If you did not create custom camera names in the VMS Unit before you imported, then you will see the default camera names from the VMS – such as Camera 1, Camera 2, (…), a serial number, or whatever the default naming scheme of your VMS unit.

   ⚠️ Do not change cameras in Galaxy after the import is done. Camera names in Galaxy must exactly match the camera names in the VMS Unit. You must create custom or specified camera names in the DVR/VMS Unit before you do the camera import step.

   VMS Unit & Cameras listed in the SG Hardware Tree
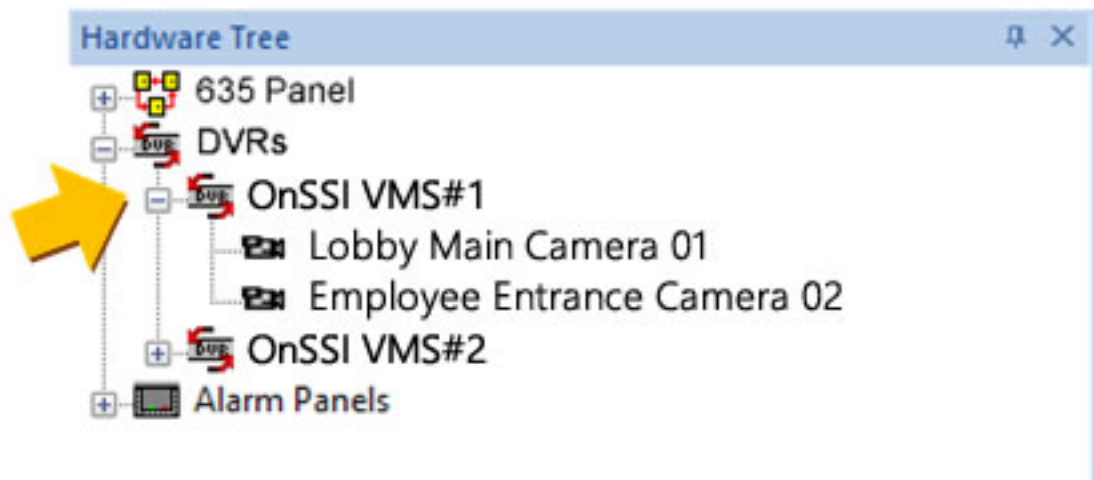
3. Right-click a **Camera icon** 📹 and select 'View Live Video' from the menu.

   RESULT > the Video Viewer plays live video from the chosen camera. (Test every camera)

4. When you have tested all your cameras, you can link the cameras to the SG hardware (readers & inputs).

   👁 See **Part-3 Configure Cameras** to link cameras to readers or inputs.

See the *Hardware Programming* sections in SG User Guide for assigning cameras to readers and inputs as well as configuring them to respond to alarm conditions such as "Door Forced Open" or "Armed Alarm".

Part 3: Linking Cameras

This topic describes how to link a camera to Doors or Inputs in the System Galaxy programming screens.

Features in this Topic

- Linking Camera to Reader
- Linking Camera to Input

Link Camera to a Reader

This section describes how to link a camera to a Door/Reader.

PREREQUISITES

- The GCS Web API Service must be running.
- The VMS Unit and Cameras must already be installed /imported into System Galaxy (including camera names).
- Video Viewing: *DVR Enabled* checkbox must be "checked" (System Settings > General).
- Video Viewing: *Does Not Support Monitoring* checkbox must be "unchecked" (System Settings > General).
- Auto-Call Video: *Auto-Callup Video on Alarm* checkbox must be "checked" (System Settings > Alarm Options).

❖ **Open Reader screen - Configure > Hardware > Doors**

1. Click the **EDIT** button and select the 'DVR Camera Settings' tab.
2. Select the **VMS Unit** name (droplist).
3. Select the desired **Camera name** (droplist).

> NOTICE: If you want to *automatically call-up video* on door alarm events, you must configure the Door/Reader hardware to respond to alarms by setting hardware to be acknowledged by the operator.

> See *Reader Programming* in the Hardware Programming Chapter of the SG User Guide for information about configuring the system to generate alarm events for alarm conditions such as "Door Forced Open" or "Door Open Too Long", etc.

5. Click **APPLY** to save the settings when finished.

Camera Settings (Reader/Door Property screen)

Linking a Camera to an Input

This section describes how to link a camera to an Input device such as a motion detector.

PREREQUISITES

- The GCS Web API Service must be running.
- The VMS Unit and Cameras must already be installed /imported into System Galaxy (including camera names).
- Video Viewing: *DVR Enabled* checkbox must be "checked" (System Settings > General).
- Video Viewing: *Does Not Support Monitoring* checkbox must be "unchecked" (System Settings > General).
- Auto-Call Video: *Auto-Callup Video on Alarm* checkbox must be "checked" (System Settings > Alarm Options).

❖ **Open Input screen** - Configure > Hardware > Inputs

1. Click the **EDIT** button and select the 'DVR Camera Settings' tab.
2. Select the **VMS Unit name** (droplist).
3. Select the desired **Camera name** (droplist).

> NOTICE: If you want to *automatically call-up video* on door alarm events, you must configure the Door/Reader hardware to respond to alarms by setting hardware to be acknowledged by the operator.

> 📘 See *Input Programming* in the Hardware Programming Chapter of the SG User Guide for information about configuring the system to generate alarm events for armed inputs.

5. Click **APPLY** to save the settings when you are finished.

Camera Settings (Input Property screen)

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

Input Name: DIO Input 1 (Snibby Button)
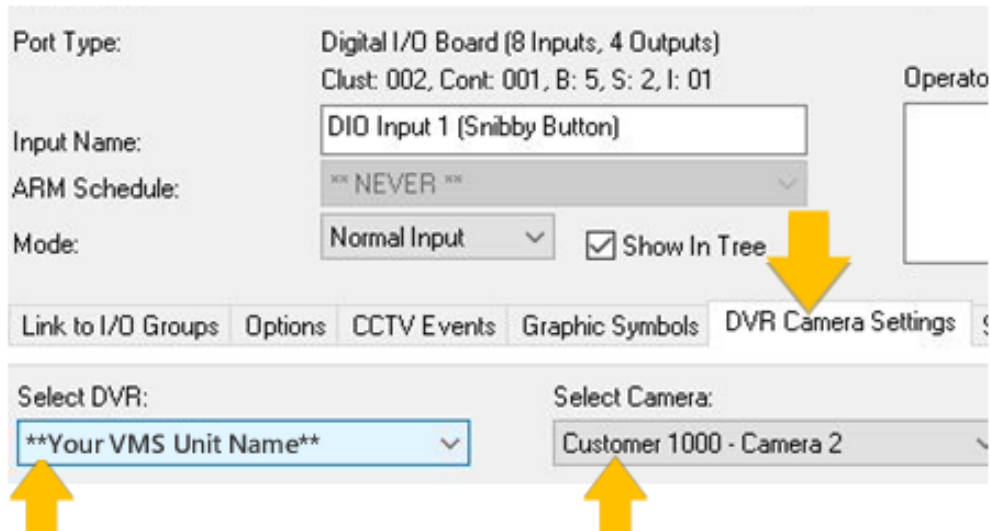
ARM Schedule: ** NEVER **

Mode: Normal Input   ☑ Show In Tree

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

Select DVR: Select Camera:

Your VMS Unit Name   Customer 1000 - Camera 2

Part 4: View Video

This topic covers the general operation of the Video Viewer in live and recorded modes.

Features in this Topic

- About Playback Controls

- Operate Viewer in Live Mode

- Operate Viewer In Recorded Mode

Playback Controls

The availability of _playback controls_ and _viewing modes_ may vary based on the type of camera connected or the permissions configured at the VMS Unit.

- If a camera does not support a particular feature (e.g. ptz), then it will not be available in the Video Viewer.

- The client login account at the VMS Unit must have the proper permissions to operate cameras and see video.

- See the Manufacturer's Documentation for instructions on programming the VMS Unit.

Operate Viewer in Live Mode

LIVE MODE = Select Live tab

1. **Live Video Frame** displays when operator chooses View Video from an alarm event or hardware icon.

2. **Double-click a camera** to start playing live video from the camera; (a checkmark appears beside camera).

3. **Grid View checkbox** - toggles the video frame between *normal view* and *grid view*.
   - **CHECKED** = Changes the *video frame* to a 2x2 grid and enables viewing of multiple cameras (up to 4 cameras at once). Double-clicking a camera starts its video in the next frame.
   - **UNCHECK** = Returns *video frame* to single camera view. Streams live video of selected camera.

4. **PTZ Controls** - drive the PTZ camera in a desired direction (pan/tilt = ◂ ▸ ▴ ▾) (zoom = +/-)

5. **Continuous Operation** checkbox – toggles the PTZ Mode between *continuous sweep* and *incremental steps*.
   - **CHECKED = Continuous Sweep**. PTZ Camera will sweep in the direction you drive it. (click ◂ ▸ ▴ ▾)Camera pans to the end of its range with one click.
   - **UNCHECK = Incremental Steps**. PTZ Camera moves small steps in the direction you drive it. (click ◂ ▸ ▴ ▾) Camera pans step-by-step with each click.

Video Viewer – Live Mode
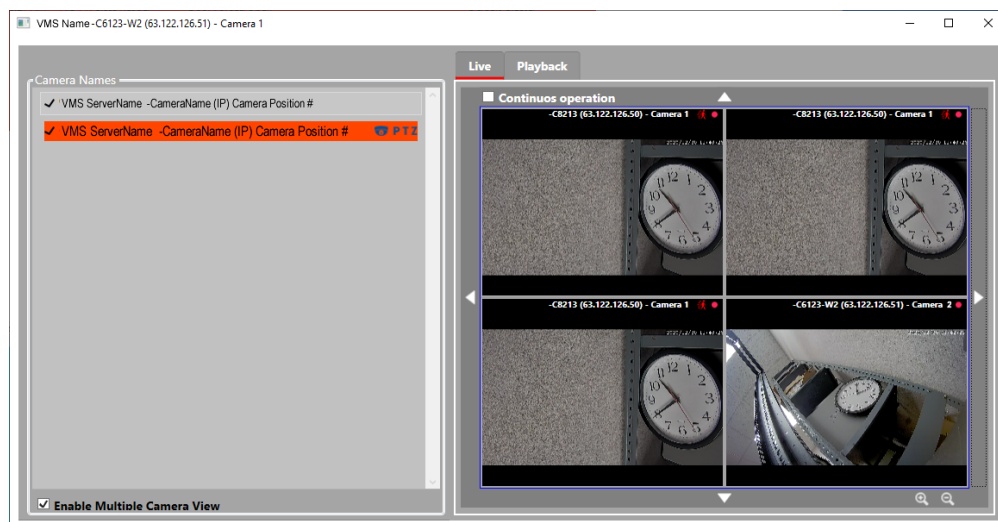
Operate Viewer in Recorded Mode

RECORDED MODE = Select Playback tab

1. **Playback Video Frame** displays when operator chooses View Video from a historical event in DVR View screen. The DVR View screen opens from the Activity History Report window if 'DVR View' is checked when you generate report.

2. **Double-click a camera** to choose it (a checkmark should appear beside the camera). You need to enter a date/time to start playing video from that point.

3. **Date/Time field** Choose a date and time to start the video. This will be the start time of the video you play back.

4. **Playback Controls** – lets operator control direction and speed of the video.
   - **Play** = starts playing video at the indicated speed.
   - **Pause** = stops/freezes video playback
   - **Skip Forward/Reverse** = skips forward/reverse in the direction you choose and plays video from that point.
   - **Speed** = sets the playback speed at 1, 2, 3, to 4 times normal rate of playback. "1" is the normal playback speed.

5. **Playback Timer** – show/hide playback clock. This clock starts from date/time selected (helpful if VMS or camera clock times are not synced or not displayed (configurable at the VMS unit).
   - **CHECKED** = shows the playback clock timer.
   - **UNCHECKED** = hides the playback clock timer.

Video Viewer – Recorded Mode