

INTEGRITI INTEGRATION - HANWHA WISENET WAVE CCTV

MANUAL V1.9.1

INNERRANGE.COM

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OVERVIEW

The Integration enables seamless interoperability between Hanwha Wisenet Wave video management system and the Integriti security platform. This integration consolidates CCTV monitoring, access control, and intruder detection into a single unified interface, streamlining operator workflows and enhancing situational awareness across a site.

With this integration, Integriti users can view live and recorded footage, control supported PTZ cameras, trigger CCTV actions, and receive events and alarms directly from the CCTV server. Cameras and supported feature sets can be synchronised with the Integriti software and CCTV footage can be linked to Integriti events, entities, and schematics for rapid incident response.

The integration also supports License Plate Recognition (LPR) notifications from a range of camera technologies, allowing recognised plates to be processed within Integriti for functions such as automated access control. Advanced features such as camera status monitoring, categorised review logs, and the ability to trigger actions based on CCTV events ensure that Integriti operators maintain complete visibility over video activity without switching between platforms.

By combining Integriti's powerful security management capabilities with the flexibility of Hanwha Wisenet Wave, this integration delivers a cohesive and efficient CCTV experience suitable for both small installations and large enterprise environments.

For a detailed list of supported features, please refer to the CCTV Capabilities.

Term: For brevity, ***Hanwha Wisenet Wave*** is referred to as ***Hanwha Wave*** in this document.

Note: The Integration will only work with Hanwha Wisenet Wave systems. Use the Integriti Hanwha Techwin CCTV Integration for connecting to Hanwha Techwin and Hanwha Wisenet NVRs.

Refer to the Release Notes document for information about prerequisites, licensing and vendor system compatibility.

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INITIAL SETUP

Installation

Install the Plugin on the Integriti Servers running Integration Server services, and on every Integriti node used to access video streaming functionality.

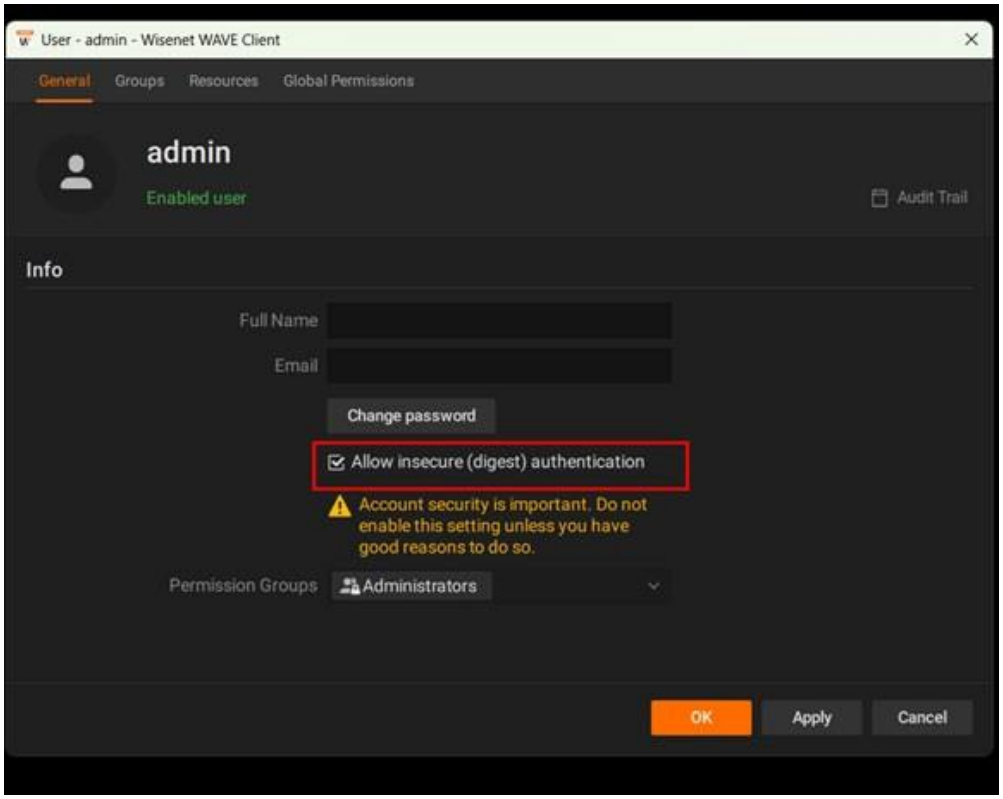
Hanwha Wave Server Configuration

A user account must be created, to be used by the integration to login to the server. The account name/password will be configured in plugin configuration UI.

Note: The technology vendor (Network Optix) recommends keeping the login name all in low case.

Hanwha Wave supports two types of user authentication: *digest* (sometimes referred to as *insecure*) and *bearer token.* Back in v4/5, the *digest* authentication was the only one available. From v6 on, the *bearer token* is the default authentication method needed by the **majority** of the APIs. However, for technological reasons, certain APIs (associated with RTSP streaming) still rely on *digest* authentication method enabled for the login.

For the integration to work, a customer must enable digest authentication for the designated account:

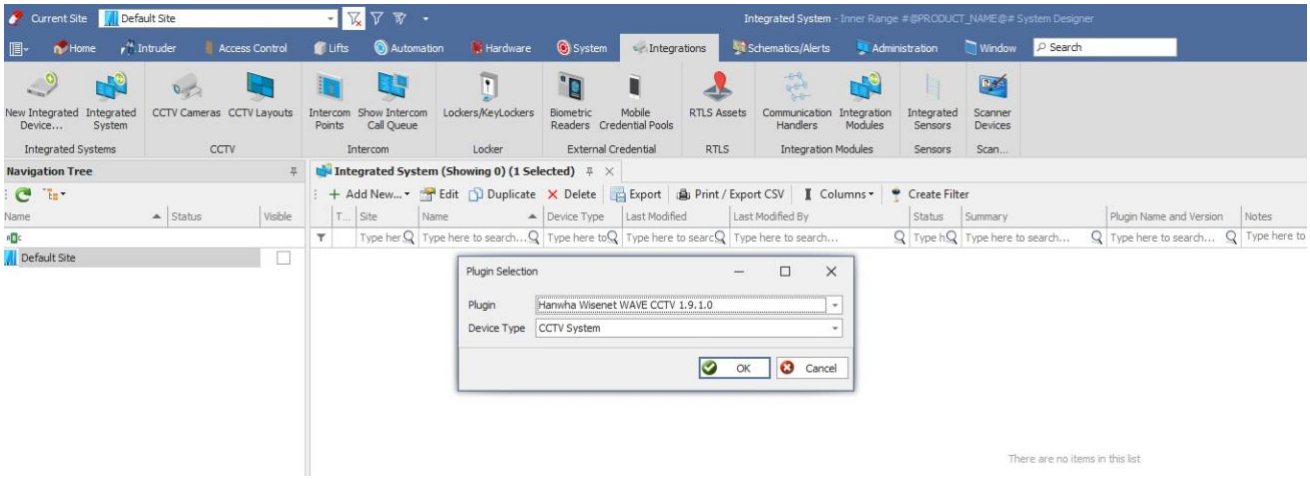


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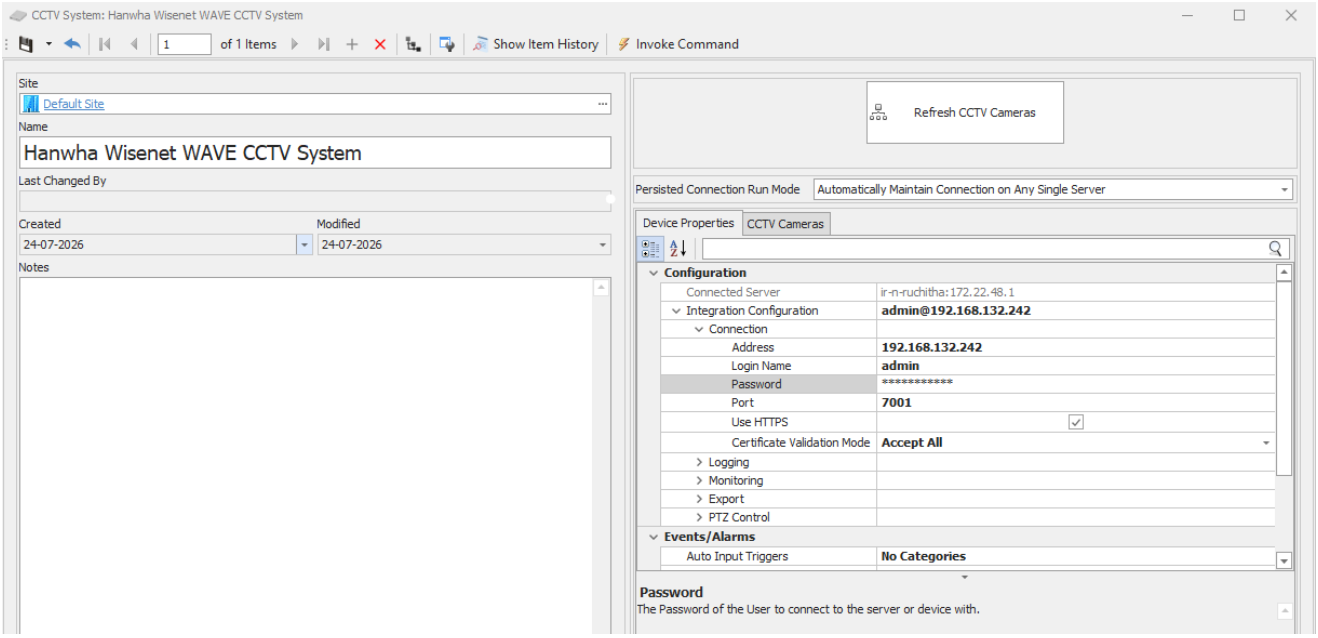
Integriti Configuration

Please refer to the 'Integriti Integrations – CCTV' manual for a detailed description on how to fully configure and use CCTV integrations in Integriti/Infiniti. *C:\Program Files\Inner Range\Integriti Pro\doc\Integrations.*

[Integrations>New Integrated Device>]



This section specifies the Hanwha Wave CCTV Integration specific configuration details.



Address – The IP Address of the server/recorder to connect to.

Login Name – The username of the user to connect to the Server with. This user should have sufficient permissions configured to allow all of the features of the plugin to be used.

Password – The Password of the user to connect to the server with.

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Port – The Port used to connect to the Server. This is 7001 by default. This port should be configured in the Integriti Integration Server and any Integriti Client Machine's firewalls to allow it to be used.

Use HTTPS: Set to true to use HTTPS rather than HTTP for connections.

Certificate Validation Mode: Select the validation mode to use when connecting with an invalid certificate.

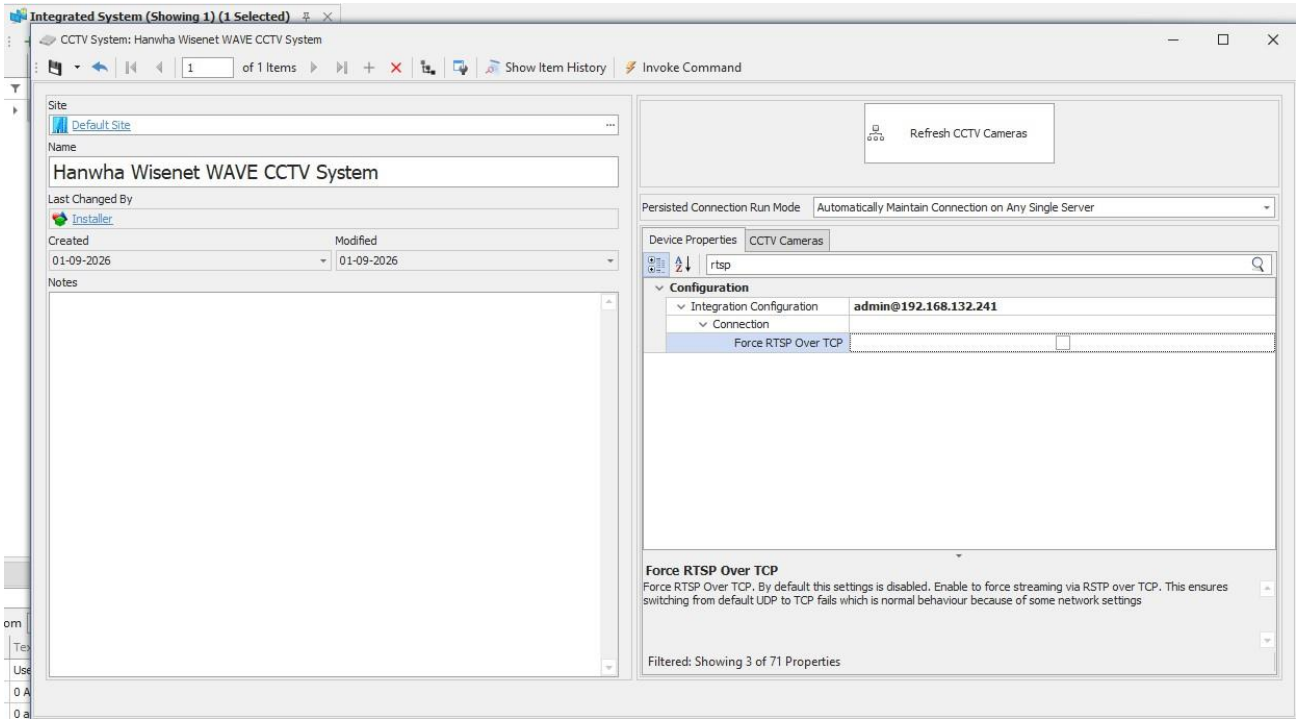
Certificate Thumbprint: Enter the thumbprint of the certificate used by the HTTPS connection.

Options:

- **Logging\Log Verbosity** – Only logs of the specified level or higher will be logged. If Warning is selected, only Warning, Error and Fatal logs will be written to the log.
- **Monitoring\Processing Interval** - How often to process events from the VMS. Specify a time interval between 1 to 60 seconds.
- **PTZ\Pan Speed** – Select the speed of pan PTZ operations, as a percentage of the maximum speed.

An ***RTSP_over_TCP*** parameter was added in v1.9.1. If ticked, the plugin will force RTSP over TCP, without trying UDP first.

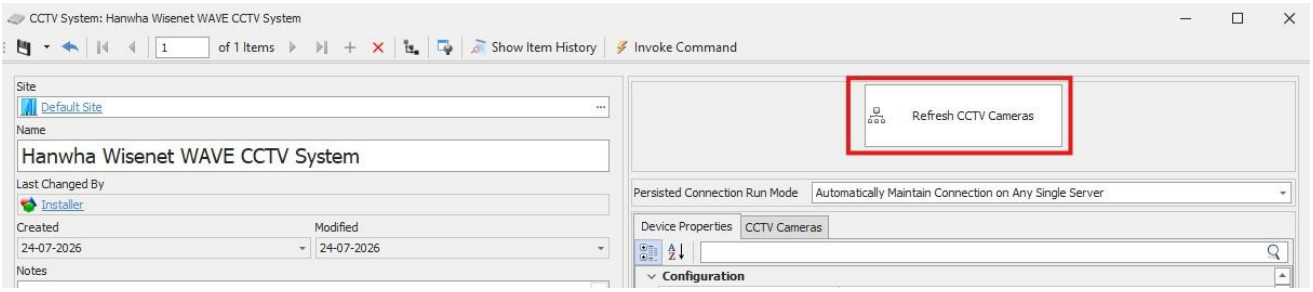
The parameter is hidden from the standard UI. To reveal, type RTSP in the search field:



Once Configured, click **SAVE**.

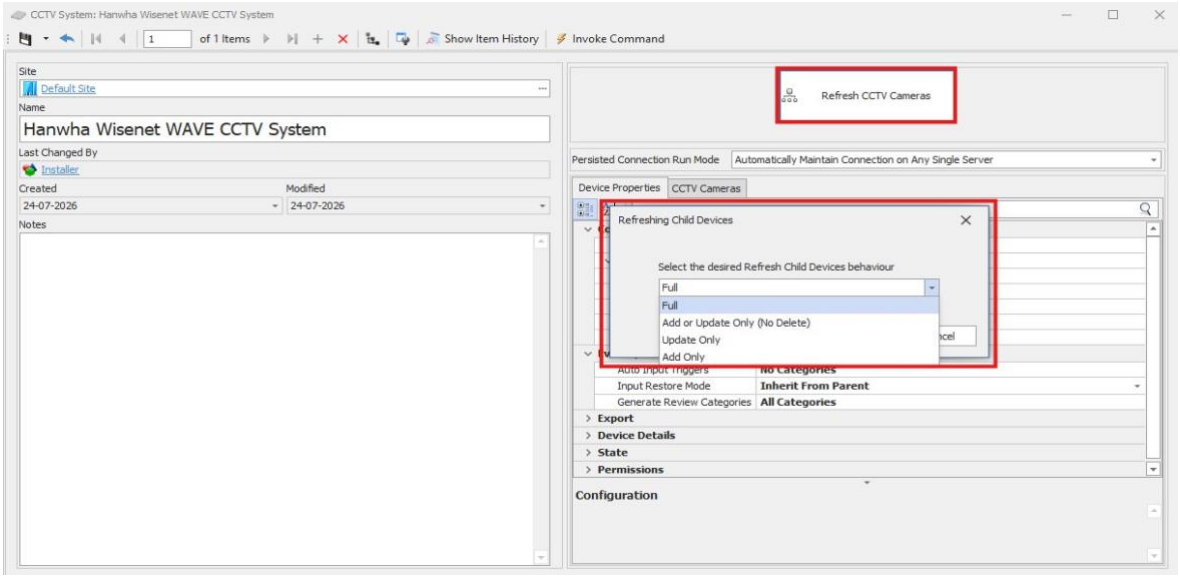
Then click **Refresh Device**.

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Refreshing Camera List

An operator can update the Cameras list available within Integriti using the “Refresh CCTV Cameras”

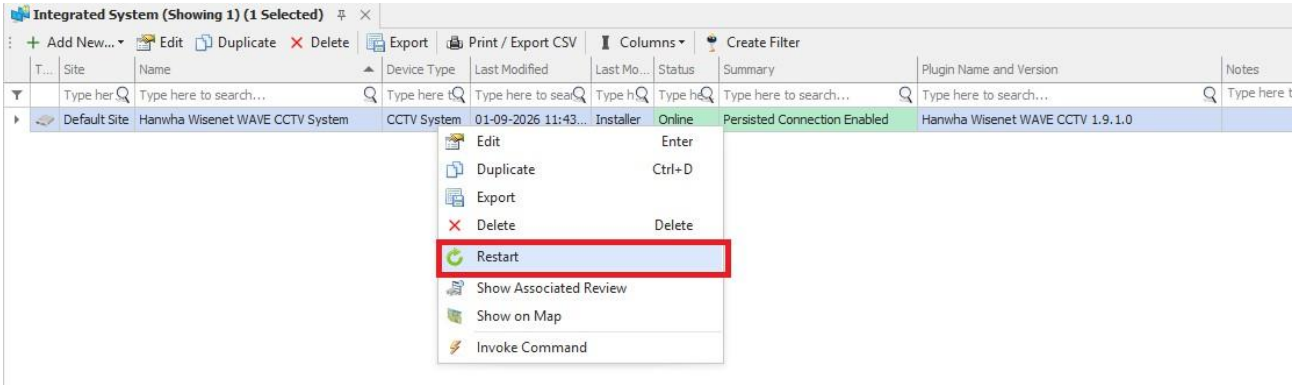


- **Full** – Full Refresh – Warning this will repopulate the Integriti camera list within Integriti. Any programmed cameras i.e. Schematics will need repopulating.
- **Add Or Update Only (No Delete)** Additional cameras added on the recorder will be populated within Integriti, however, any removed cameras on the recorder will still remain within Integriti. This method is used for newly added cameras on the recorder wanting to be added to Integriti but not remove any temporary disconnected cameras on the recorder. Names will also be updated.
- **Update Only** – Adds and Removes cameras based on what’s currently connected to the recorder. Names will also be updated.
- **Add Only** – Only adds new cameras to Integriti

Connection Restart

An operator can force a restart of the connection which will reinitiate connection between the two system. This can be used after the initial setup or where there have been changes to the configuration.

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LPR functionality

The plugin can process License Plate Recognition (LPR) notifications generated by the server. An LPR notification is triggered by an LPR-enabled camera connected to the server.

Note: *This integration only supports LPRCamera → CCTV server → Plugin → Integriti data flow. A separate Generic LPR plugin exist, to handle LPR notifications from cameras which communicate to plugin directly, without a server in between. Contact Inner Range support for more info.*

The following LPR technologies are supported by the plugin:

- Hanwha RoadWatch and RoadAI
- AXIS CammraAI and License Place Notifier applications
- LPR-enabled HikVision cameras
- MileSight cameras

Integriti configuration

For details of LPR processing by Integriti, refer to the Doc\Integrations\Integriti Integrations – LPR.pdf document.

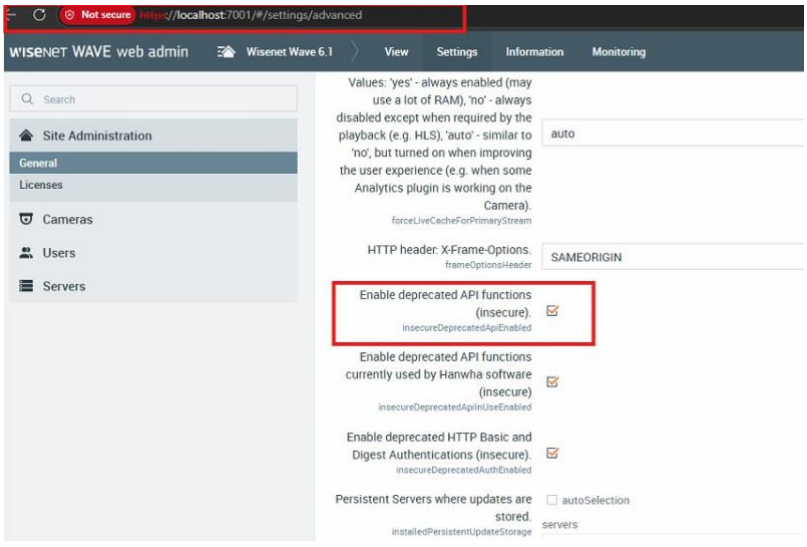
External configuration

To make LPR functionality work, certain configuration steps are required on cameras, and on the server.

For configuring LPR applications running on cameras, refer to their respective vendors documentation. This may be quite involving.

Once a camera is configured correctly and can generate LPR notifications, you need to create Camera Rules on your Hanwha Wave server. The Camera Rules configuration is specific for every LPR technology. Following paragraphs explain details.

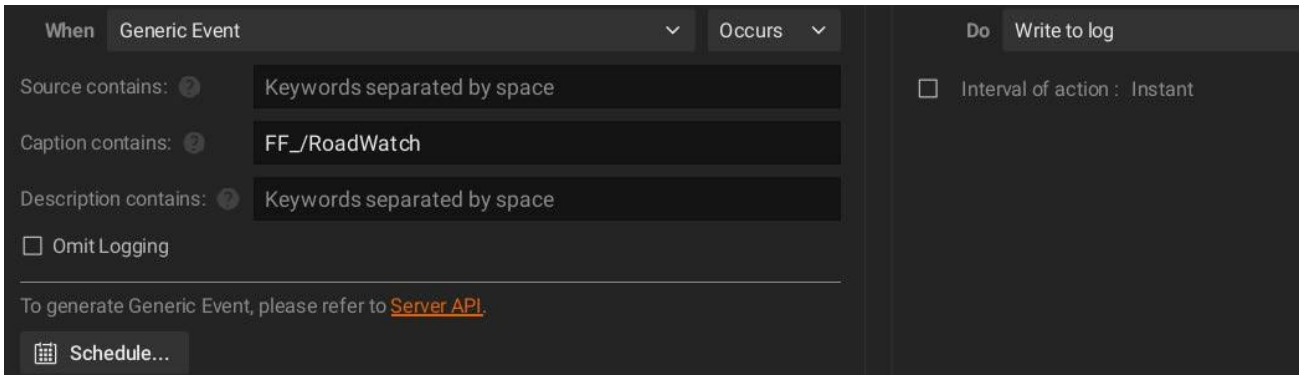
Browse into your CCTV server, go Settings/Advanced and Activate the "*Enable deprecated API functions*" feature to get LPR events.



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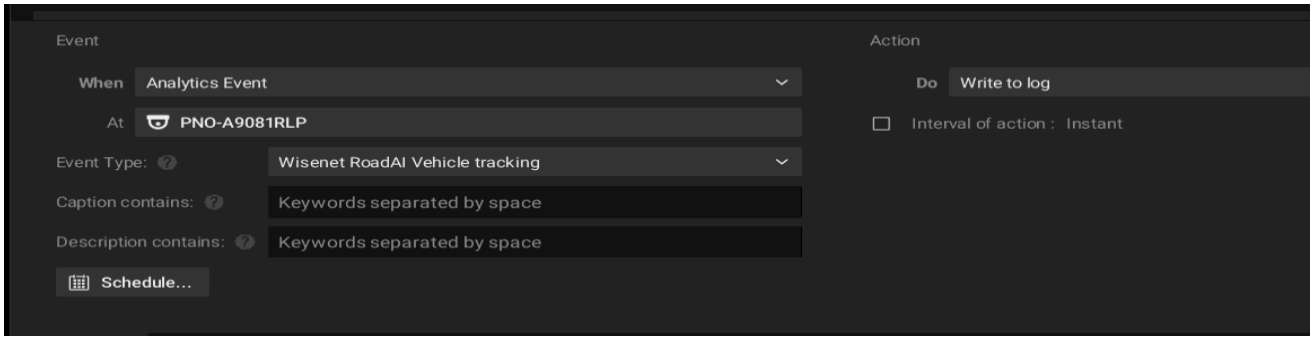
For cameras running Hanwha RoadWatch application:

Configure a Generic Event, as shown below:



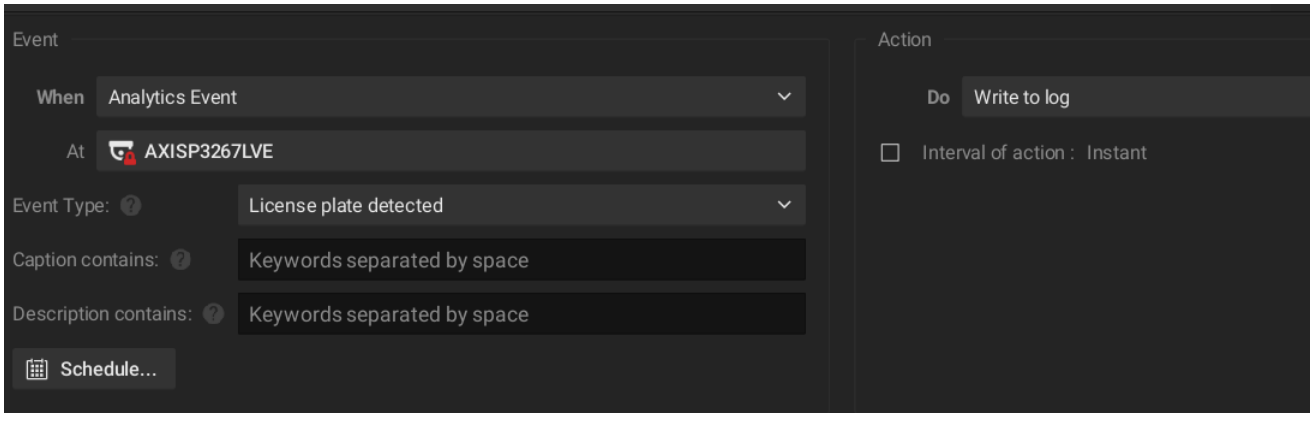
For cameras running Hanwha RoadAI application:

Configure a camera rule as shown below:



For cameras running AXIS CammraAI and License Plate Notifier applications:

Configure a camera rule as shown:



For cameras running HikVision LPR application:

Same as above – Analytic Event/LicensePlateDetected.

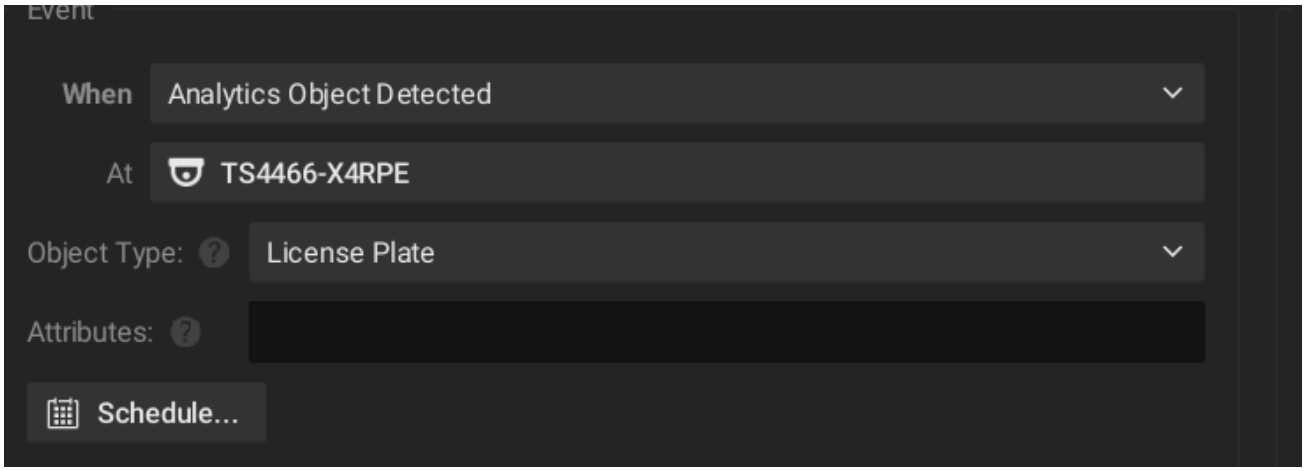
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For MileSight cameras:

Step 1: To make Wave CCTV server and the camera work together, the Milesight Analytics Plugin must be installed on your Hanwha Wave server and enabled for the camera(s).

Contact your vendor support to obtain the plugin package and for specific installation/configuration instructions.

Step 2: Configure a camera rule as shown below:



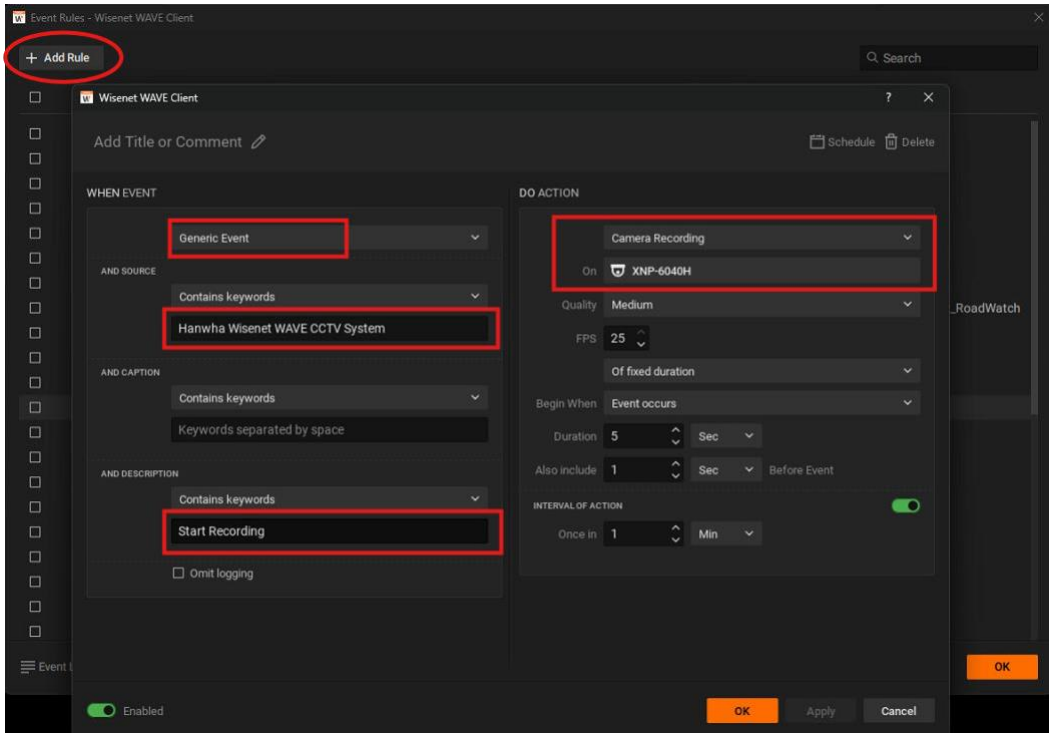
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COMMANDS

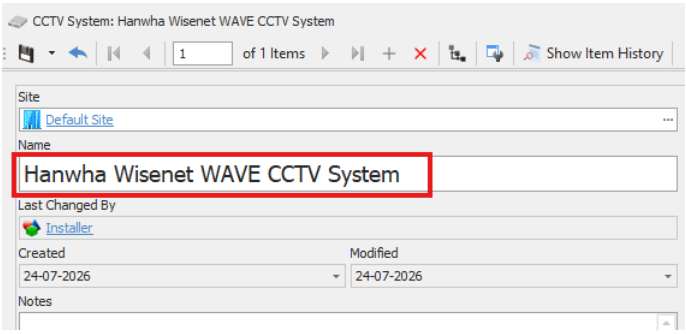
CCTV Recorder Commands

Trigger Generic Command

Generic Events can be configured in the VMS to perform an action from a variety of different action types available in response to being triggered by Integriti. The Generic Event must be preconfigured in the VMS first before it can be triggered by Integriti. The below steps outline the configuration process to trigger a “Camera Recording” action as an example. The same steps apply to triggering other action types in the VMS.



1. Open the ‘Event Rules’ editor in Wisenet WAVE Client and click ‘Add’.
2. Under the ‘Event’ options select ‘Generic Event’ from the drop-down menu next to ‘When’.
3. Set the ‘Source contains’ field to the Integrated System name.

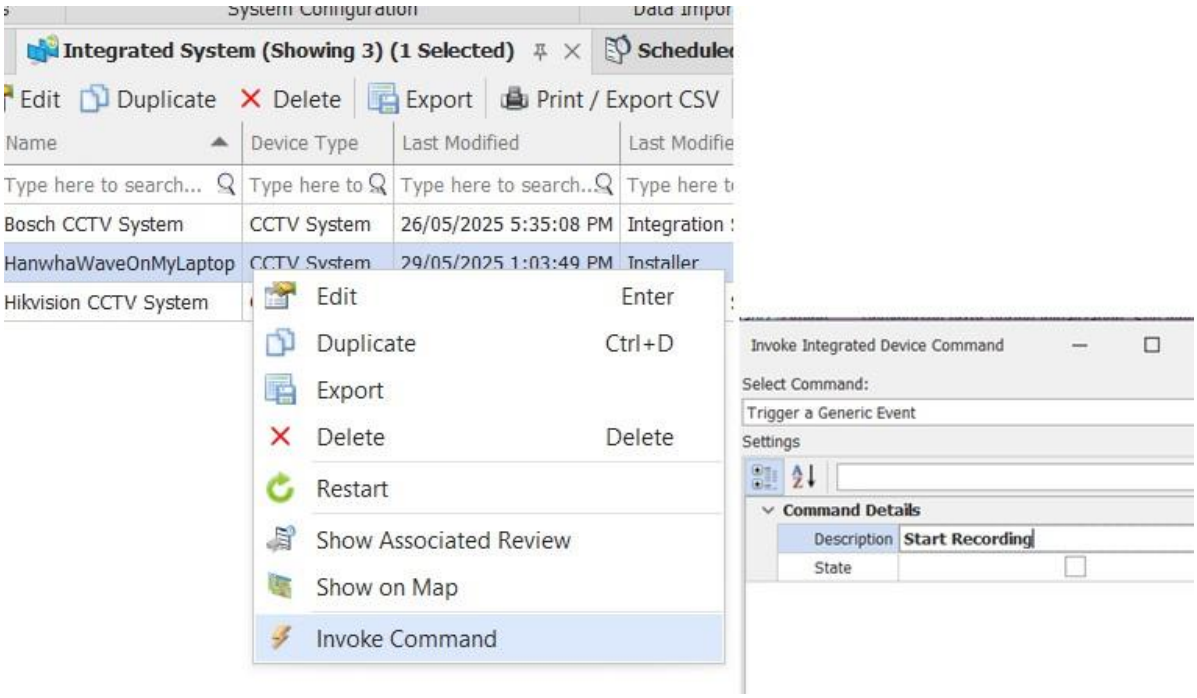


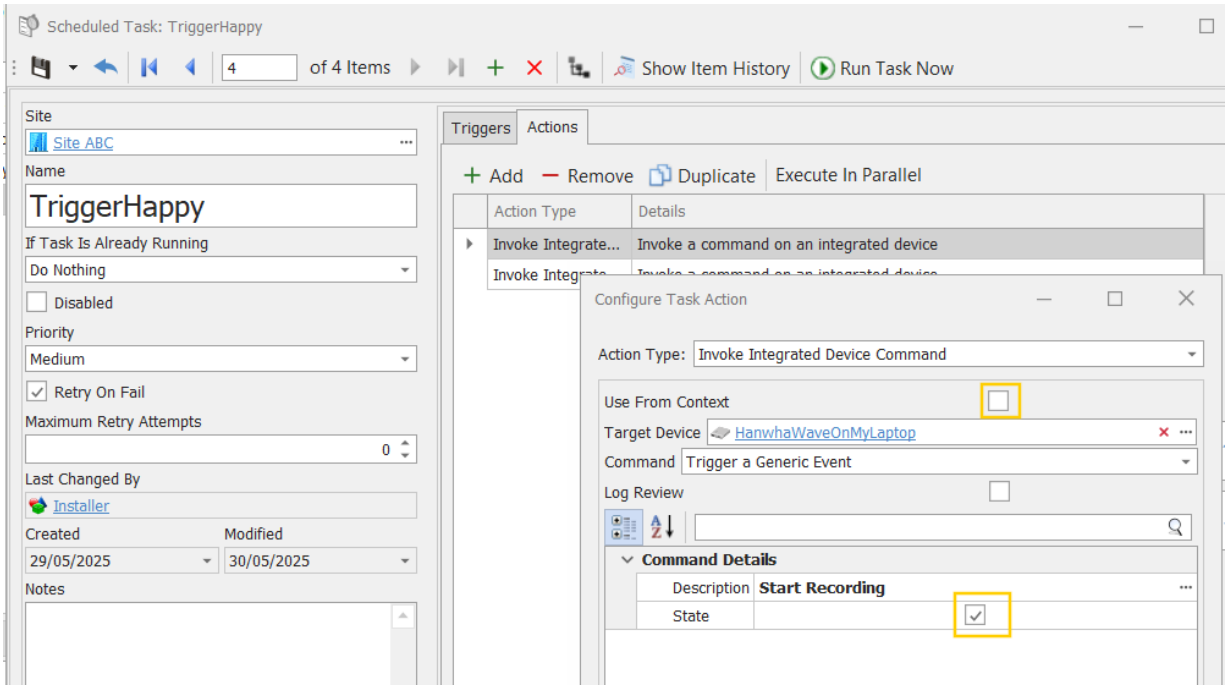
4. Set the ‘Description contains’ field to a meaningful value, such as “Start Recording”.
   Same value will be used when configuring a command trigger (Task\Command) in Integriti.
5. Under the ‘Action’ options select ‘Camera recording’ from the drop-down menu next to ‘Do’.

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6. Select a camera to start recording on and other relevant options then click ‘Ok’ to save the event rule and exit.

In Integriti, the command can be triggered from the Integrated System context menu, as well as configured as a Scheduled Task.





Set the ‘Description’ field in Integriti’s UI to the same value as configured for the corresponding Generic Event on CCTV server, in this case ‘Start Recording’.

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Leave the UseFromContext box unchecked.

Tick the State box to activate the event on CCTV server or leave it unticked to de-activate the event.

Important: once activated, the event will not be triggered again until it is de-activated. Customers should pay attention to it, as it creates a common source of confusion. We recommend configuring a Scheduled Task in such a way that it combines both Activate and DeActivate actions, with a delay in between if needed. Customers should also review their site requirements based on the "Interval of action", frequency and/or if not required. Contact Inner Range support for guidance if required.

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CCTV Camera Commands

Send camera to PTZ Preset	Sends the selected camera to a preset identified by PTZ Id. PTZ Id can either be the preset id or name.
Run PTZ Tour on camera	Runs a tour identified by PTZ Id on the selected camera. PTZ Id can either be the tour id or name.

TROUBLESHOOTING

General

Most production site issues are caused by wrong configuration.

- Ensure that communication parameters and login parameters are correct.
- Ensure that the login account has necessary permissions for requested operations.
- Set the plugin logging level to Debug, and review entries in Integriti LogViewer – it may provide useful insight into the root cause.

LPR notifications are not received/processed

Ensure that a camera's LPR application is configured as per vendor instructions. Ensure that an application itself reports LPR events.

Ensure that the Camera Rules are correctly configured as per here. The server's Events Log panel must show LPR events. If an LPR event does appear on a server, it most certainly won't be reaching the plugin.

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CCTV CAPABILITIES

Core CCTV Capabilities

Feature	Feature Description	Y/N
Stream Live CCTV Footage	Live CCTV footage can be streamed from online cameras in the CCTV system to an Integriti client.	✓
Select Custom Aspect Ratio	Select the aspect ratio to use when streaming CCTV footage on a per-camera or per-recorder basis.	✓
Stream Archived CCTV Footage	Archived CCTV footage can be streamed from online cameras in the CCTV system to an Integriti client.	✓
Control Archived CCTV Playback Speed	Playback speed of archived CCTV footage can be controlled from the Integriti client.	✓
Auto-Play CCTV Footage from Events	Live or archived CCTV footage can be configured to be automatically displayed when an event occurs in the Integriti System on a specific client workstation.	✓
Create Child Devices from Camera Configuration	Child CCTV Cameras will be created based on the Camera configuration on Refreshing Child Devices	✓
Associate Cameras with Entities	Cameras loaded from the CCTV system can be associated with Integriti Entities to allow direct control of one from the other.	✓
Show Associated CCTV From Event	Associated CCTV Footage can be directly accessed and viewed from any event occurring in Integriti that has an associated Camera (either a direct association or through the Entity that triggered the event)	✓
Control PTZ Cameras	Send PTZ commands to support cameras on the CCTV system to control the Pan, Tilt and Zoom of the camera directly from the video stream.	✓
Send Cameras to PTZ Preset	Send supported PTZ cameras on the CCTV system to preconfigured PTZ presets directly from the video stream.	✓
Digital PTZ Control	Digitally zoom the CCTV stream's image for non-PTZ cameras and archived footage.	✓
CCTV Layouts	Store a collection of Cameras with a specific viewer layout to be brought up at a later point in time	✓

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Feature	Feature Description	Y/N
CCTV Surrounding Cameras View	Show a selected camera, as well as the cameras configured to be N, NE, E, SE, S, SW, W and NW of the selected camera, quickly jumping between surrounding streams directly from the view.	✓
Trigger Actions in the CCTV System	Trigger actions or commands in the CCTV system directly from Integriti.	✓
View and Control Cameras on Schematics	Cameras can be added to Schematics Maps in Integriti and directly viewed and controlled directly from the Schematic. Each camera's state is immediately visible on the Schematic where available.	✓
Sync Time (via NTP)	Sync the time of the CCTV system and Integriti to match via an NTP.	✓
Display Connection Status to CCTV System	Display whether or not Integriti is currently connected to the CCTV system.	✓
Receive Events/Alarms from the CCTV System	Log events/alarms occurring on the CCTV system to Integriti's Review.	✓
Trigger Integriti Actions on CCTV Events/Alarms	Trigger actions to automatically occur in Integriti whenever specific events/alarms are received from the CCTV system.	✓
Generate Alerts from CCTV Events/Alarms	Automatically generate and restore Alerts tied to a specific Camera in Integriti whenever specific events/alarms are received from the CCTV system.	✓

Advanced CCTV Capabilities

Feature	Feature Description	Y/N
Automatically Load Camera Configuration	Refreshing Child Devices will automatically populate all cameras configured in the CCTV System into Integriti when run. If not supported, camera configuration will need to be manually entered into Integriti.	✓
64-bit Integration Server Support	The integration supports being run on the 64-bit integration server.	✓
Show Camera Status	The current online/offline status of configured cameras will be visible directly through Integriti.	✓

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Feature	Feature Description	Y/N
Categorised Review Records	Review generated by the integration will have a different category for different event types, allowing for easy filtering of specific CCTV events	✓
License Plate Recognition	License plates recognised by supported cameras in the CCTV system can be used to automatically allow access to configured Doors.	✓
Trigger Inputs on CCTV Event	Inputs in Integriti can be automatically triggered and restored when specified types of events are received from the CCTV system.	✓
Control Iris and Focus	Control the iris and focus of supported cameras on the CCTV system directly from the video stream	×
Control PTZ Tours	PTZ Tours can be started and stopped directly from the video stream.	✓
Display Video Frame Times	When viewing archived CCTV footage, the time of the current frame will be displayed on the viewer control.	×
Show On-Screen Display	Enable additional information (such as camera name and current playback time) to be displayed as an overlay on video streams.	×
Reverse Playback	When viewing archived CCTV footage, the footage can be played in reverse.	×
Step Forward/Backward	When viewing archived CCTV footage, the footage can be stepped through one frame at a time.	×
Export CCTV Clips	Export video clip of archived CCTV footage to the Evidence Vault or to a file directly from Integriti.	✓
Export CCTV Snapshots	Export still snapshot of archived CCTV footage to the Evidence Vault or to a file directly from Integriti.	×
Export Current Frame	Export still snapshot of the current frame in the CCTV Viewer to the Evidence Vault or to a file directly from the CCTV Viewer.	×
Stream Audio With Video	Receive audio from the microphone on a supported CCTV camera through an Integriti client workstation	×

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Feature	Feature Description	Y/N
Send Audio to CCTV Camera	Send audio from an Integriti client workstation out of the speakers on a supported CCTV camera.	×

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