

AI Camera Plug-in

User Manual

For Genetec

About This User Manual

This manual describes how to register the AI camera of **Hanwha Vision** Co., Ltd., how to install **AI Camera Plug-in**, and how to search for AI analytics event for the **Genetec Security Center** program of **Genetec**. Please read this manual carefully before using the product for proper use.

- This document explains how to use the product based on its defaults and default screens.
- The content in this document is subject to change depending on the product software updates and company policies and to partial changes without prior notification to users.

Target Audience

The content of this User Manual is intended for users of the AI camera made by **Hanwha Vision** Co., Ltd. and the **Genetec Security Center** program of **Genetec**.

- To learn how to install and set up the **Genetec Security Center** program, please visit **Genetec's** official website (<https://www.genetec.com>).

Product Usage

Users of this product may search for object (person/face/vehicle/license plate/Wisenet Road AI) detection events analyzed by the AI camera, and play video.

AI Camera Plug-in is based on the AI camera of **Hanwha Vision** Co., Ltd. and **Genetec Security Center** program of **Genetec**. Please refer to the following sites for details.

- **Hanwha Vision:** <http://www.HanwhaVision.com>
- **Genetec:** <https://www.genetec.com>

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Disclaimer

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The user is solely responsible for the consequences of using this document. Hanwha Vision Co., Ltd. may change some parts of this document without a prior notice.

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Learn about AI Camera Plug-in

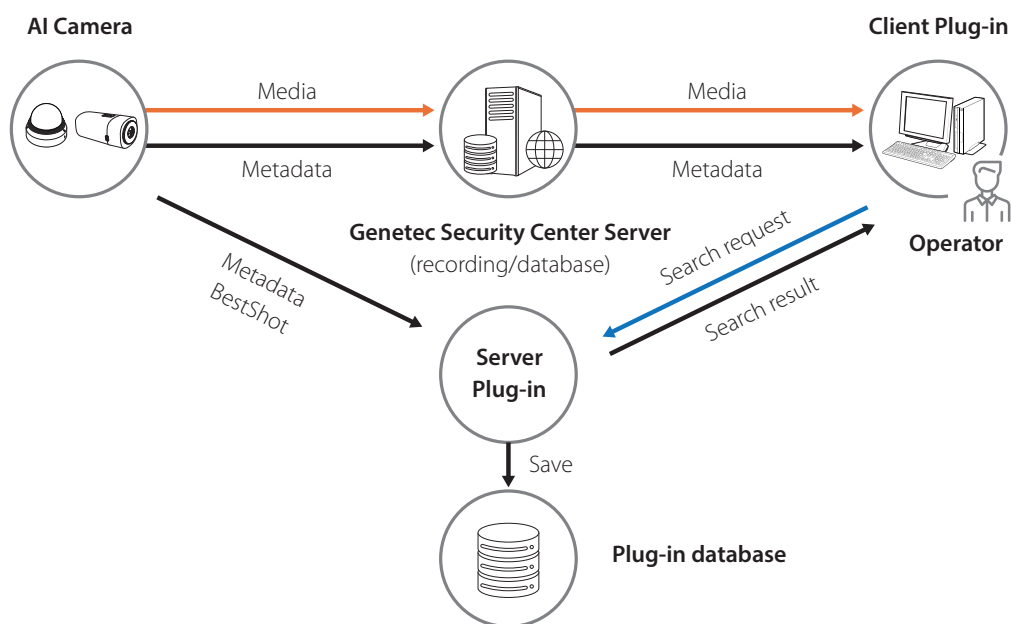
What is AI Camera Plug-in?

AI Camera Plug-in uses detailed object conditions to search for object (person/face/vehicle/license plate/Wisenet Road AI) detection events analyzed by the AI camera in the **Genetec Security Center** program and play video.

AI Camera Plug-in was developed using the Genetec Security Center SDK.

Learn about AI Camera Plug-in system configuration

AI Camera Plug-in consists of the following:



- **AI Camera**: A camera that supports AI analytics.
- **Genetec Security Center Server**: Saves and manages videos and data from the Genetec Security Center program.
- **Server Plug-in**: A plug-in that sends events analyzed by the AI camera to the Genetec Security Center server.
- **Client Plug-in**: A plug-in that adds AI event search menu in the Genetec Security Center program.
- **Operator**: A PC that runs the Genetec Security Center program.
- **Plug-in database**: Saves and manages events analyzed by the AI camera.

System requirements

The following are the system requirements for running the **AI Camera Plug-in**:

- **Genetec Security Center:** Genetec Security Center 5.10.0.0 or later

Supported cameras

The following are the Hanwha Vision AI cameras that support the **AI Camera Plug-in**:

- P series
 - PNB-A9001, PNB-A6001, PND-A9081RF, PND-A6081RF, PND-A9081RV, PND-A9081RVG, PND-A6081RV, PNM-C12083RVD, PNM-C7083RVD, PNO-A9081R, PNO-A9081RG, PNO-A6081R, PNV-A9081R, A6081R
- P series (Wisenet Road AI)
 - PNB-A9001LP, PNO-A9081RLP, PNV-A9081RLP
 - Please use the Security Center Camera Driver Pack 10.8.1 version.
- T series
 - TNB-9000, TNM-C4940TD, TNM-C4950TD, TNM-C4960TD, TNM-3620TDY, TNO-P9072EPT1-Z
- X series
 - Check the firmware version of your camera model.

Model	Firmware version
XNB-9003, XNB-8003, XND-9083RV, XND-8093RV, XND-8083RV, XNO-9083R, XNO-8083R, XNV-9083R, XNV-8083R, XNV-8093R	XND-9083RV_2.11.01_20211210_R170 or later
XNO-6123R, XNV-6123R	XNV-6123R_2.11.01_20220107_R129 or later
XNB-6003, XND-6083RV, XNO-6083R, XNV-6083R	XND-6083RV_2.11.01_20211210_R163 or later
XND-C9083RV, XND-C8083RV, XNO-C9083R, XNO-C8083R, XNV-C9083R, XNV-C8083R	XND-C9083RV_2.11.01_20211210_R251 or later
XND-C7083RV, XND-C6083RV, XNO-C7083R, XNO-C6083R, XNV-C7083R, XNV-C6083R	XND-C7083RV_2.11.01_20211210_R233 or later

Camera Setup and Registration

Setting up camera

Enable AI analytics for the AI camera to run the **AI Camera Plug-in**.

In order to use the AI analytics function, **BestShot** detection must be enabled.



Note

The setting method for object detection may differ depending on the camera model.

Setting up in the 'Analysis' menu

1. Launch the web browser.
2. Enter the IP address of the AI camera. (e.g. `http://192.168.9.107`)
3. Enter **ID** and **Password** to log in to the camera web viewer.
4. Select **Setup** and click **Analytics** on the left menu.
5. Click **Object detection** and check **Enable object detection** box.
On **BestShot** tabs, check **Enable** box for the object type you want to detect.
Click **Apply**.

The screenshot shows the WISENET web interface for configuring an AI camera. The left sidebar contains a menu with options: Basic, PTZ, Video & Audio, Network, Event, Analytics, Statistics, System, and Open platform. The 'Analytics' menu is expanded, showing sub-options: Shock detection, Motion detection, Tampering detection, Defocus detection, Object detection (highlighted with an orange box), Face mask detection, IVA, Audio detection, and Sound classification. The main content area is titled 'Object detection' and features a 'Select channel' dropdown set to 'CH 1'. Below this is a video feed of a street scene with a yellow bounding box around a person. To the right of the video feed is a 'BestShot' tab, which is active and contains a table with columns 'Type' and 'Enable'. The table lists 'Person', 'Vehicle', 'Face', and 'License plate', all with checked 'Enable' boxes. Below the table is a note: '* You can check BestShot on the Live view screen.' At the bottom of the page are 'Event action settings' (FTP, E-mail, Record, Alarm output 1) and 'Event activation time' (Always, Only scheduled time). The 'Apply' button is highlighted with an orange box.

Type	Enable
Person	☒
Vehicle	☒
Face	☒
License plate	☒



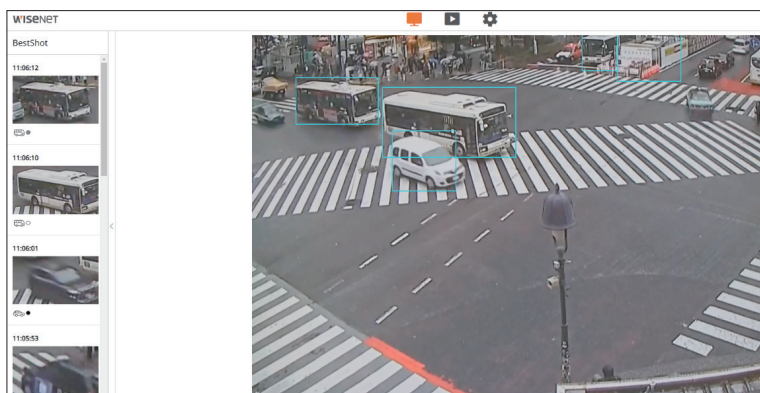
Note

In order to use AI analytics, you must check **Enable object detection** and **Enable** boxes for the **BestShot** type you want to detect.

6. Click **Basic > Date & Time**.

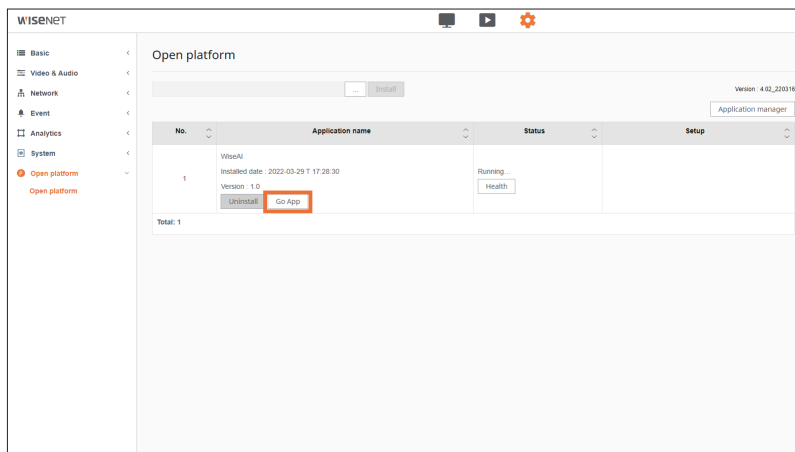
Select the **Time zone** identical with the Genetec Security Center Server and click **Apply**.
Check **Synchronize with PC viewer** and click **Apply**.

7. To see if AI-analyzed events are detected, select **Live** and check the BestShot list on the left.

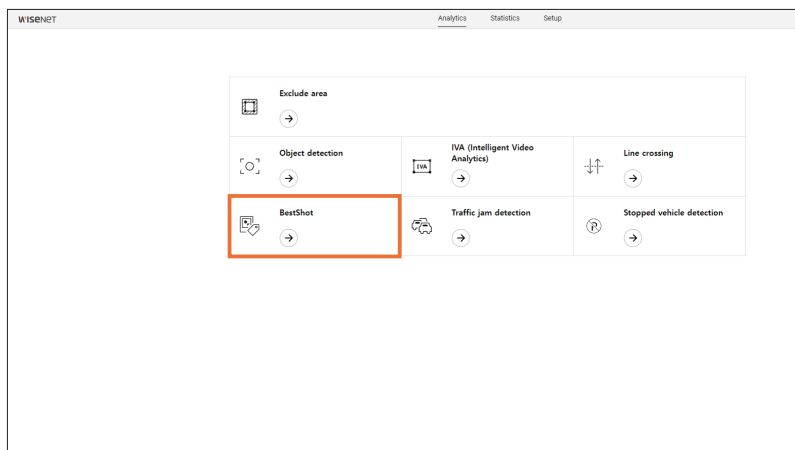


Setting up in the 'Open platform' menu

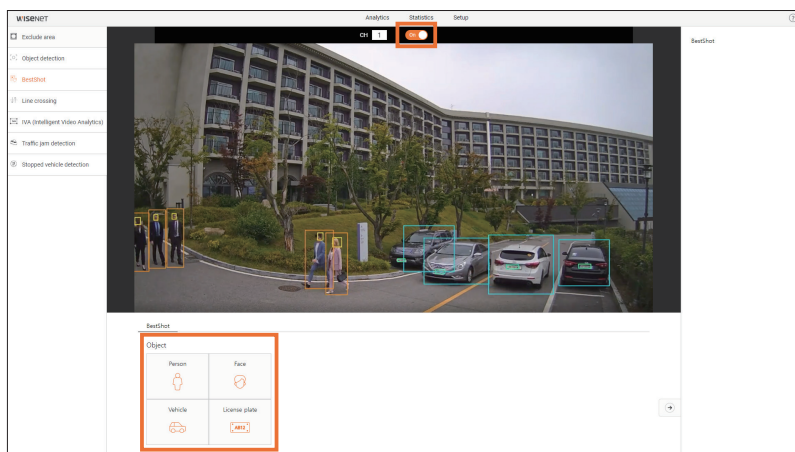
1. Launch the web browser.
2. Enter the IP address of the AI camera. (e.g. http://192.168.9.107)
3. Enter **ID** and **Password** to log in to the camera web viewer.
4. Select  **Setup** and click **Open platform** on the left menu. Click **Open Platform** and then click **Go App**.



5. Click **BestShot** on the WiseAI app screen.

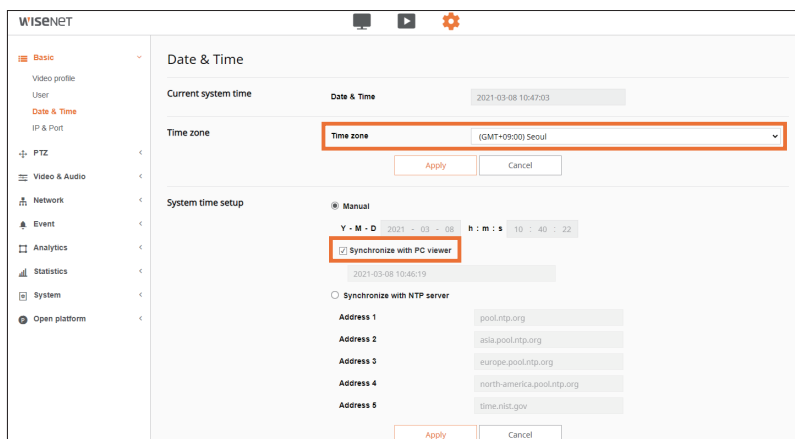


6. Select **On** by clicking the button that enables the function at the top of the screen. On the **BestShot** tab, click the object type you want to detect.

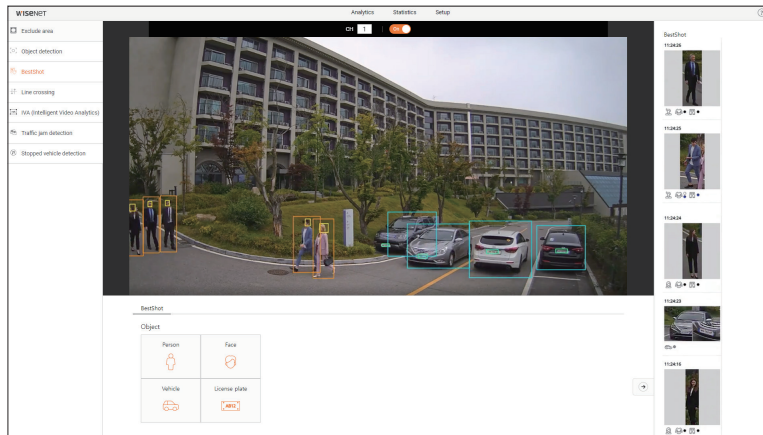


7. Click **Basic > Date & Time**.

Select the **Time zone** identical with the Genetec Security Center Server and click **Apply**.
Check **Synchronize with PC viewer** and click **Apply**.



8. Check the BestShot list on the right to see if AI-analyzed events are detected.

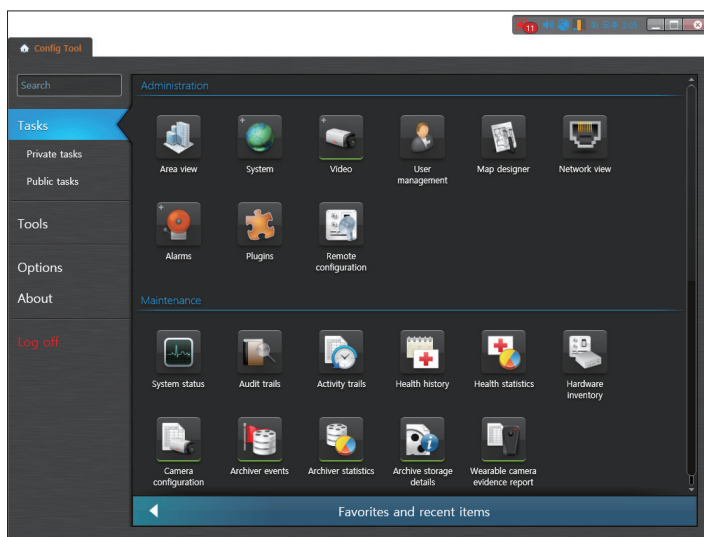


Registering Camera

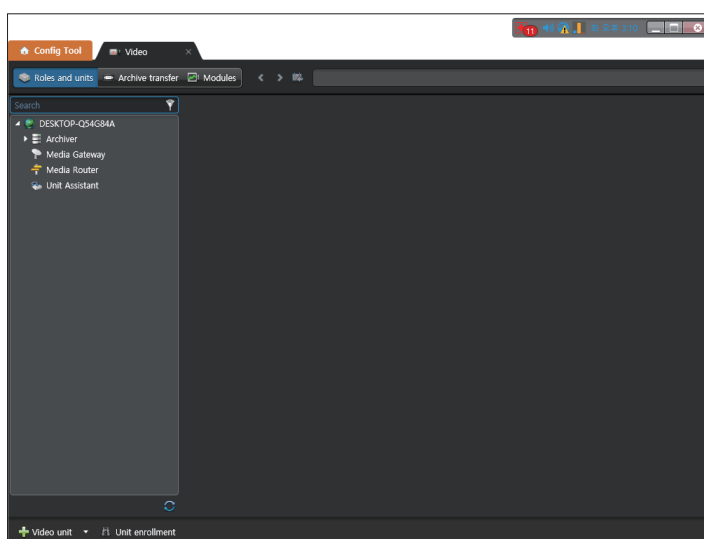
You can register your AI camera to the **Config Tool** program to use the **AI Camera Plug-in**.

Select Hanwha protocol.

1. Execute **Config Tool** program.



2. Select **Tasks > Video**.
Then, **Video** tab will be added.



3. Click **Video unit** on the bottom left.
Then, **Manual add** window appears.

Manual add

Manufacturer: Hanwha Techwin

Product type: WiseNet (P/Q/X/T/L/SPE)

IP address: 172 . 30 . 1 . 6 + Hostname IPv6

HTTP port: 80 +

Authentication: ☐ Default logon ☒ Specific

Username: admin

Password:

Use HTTPS: ☐ OFF

Location: DESKTOP-Q54G84A

Add Close Add and close

4. Select **Hanwha Techwin** for manufacturer and select **WiseNet(P/Q/X/T/L/SPE)** for product type.
Enter IP address and account information, and click the **Add** button.

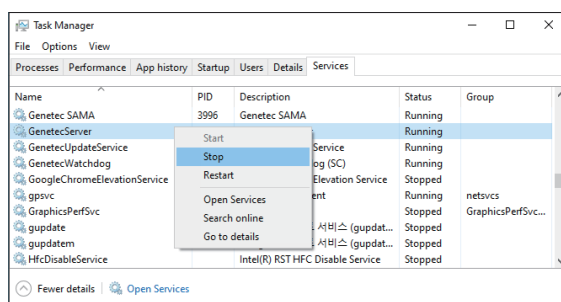
Installing AI Camera Plug-in

When using a server PC and a client PC respectively, both the server plug-in and client plug-in must be installed on the server PC. Install the client plug-in only on a client PC.

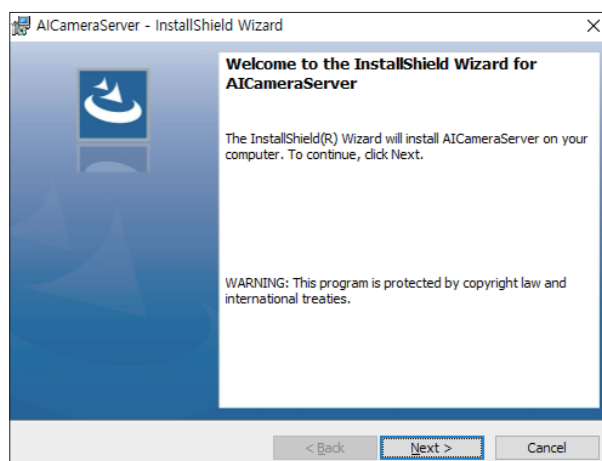
Installing Server AI Camera Plug-in

AI Camera Plug-in can be installed on the PC where the **Server Admin** program is already installed.

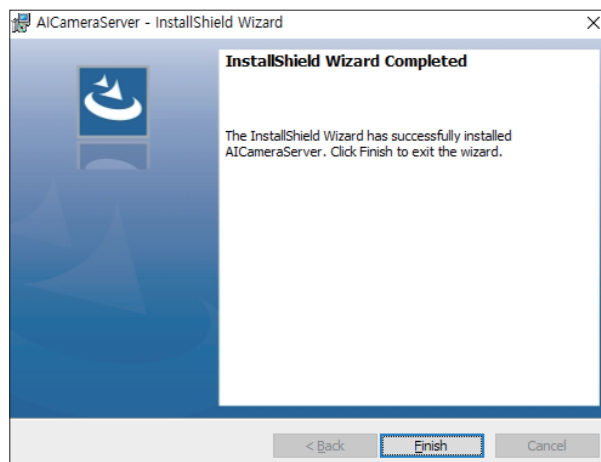
1. Stop the **Genetec Server** service.



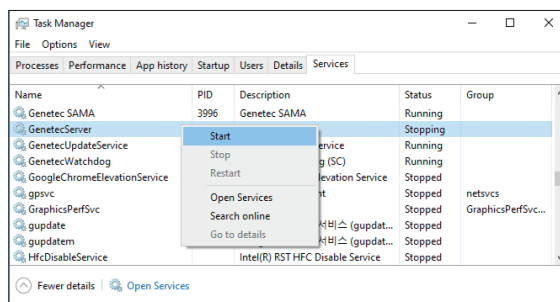
- You can stop the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.
2. Close the **Config Tool** and **Security Desk** program.
 3. Execute the Server Plug-in installation file.
When the installation wizard appears, click **Next**.



4. When installation is complete, click **Finish** to exit.

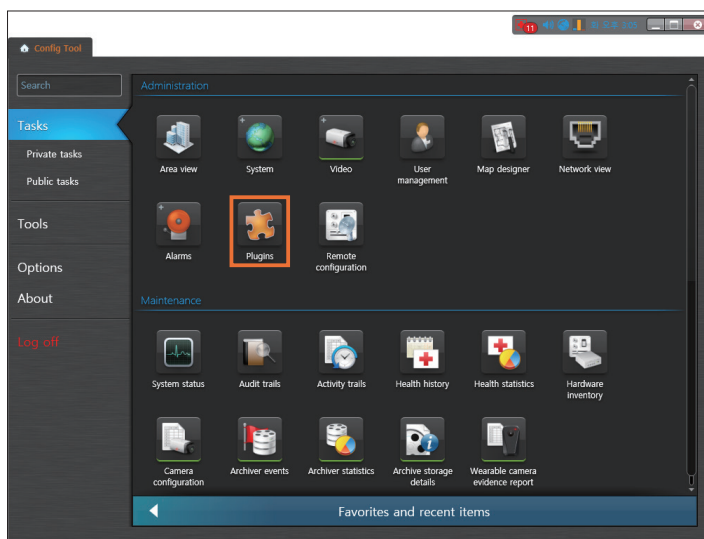


5. Restart the **Genetec Server** service.

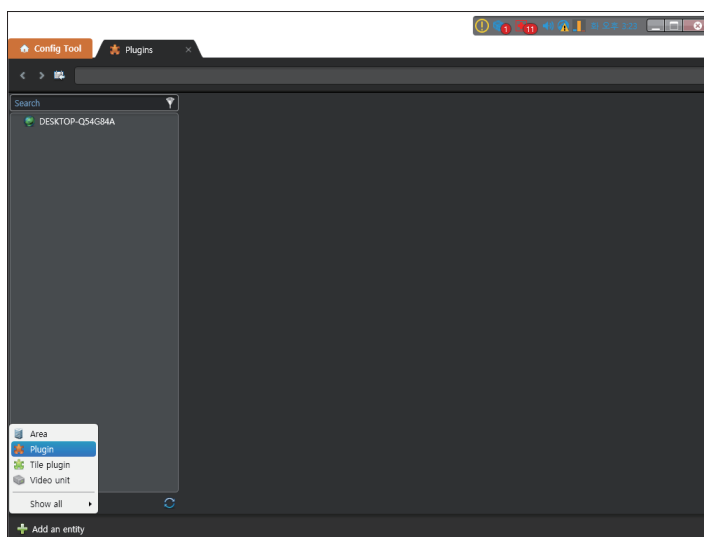


- You can start the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.

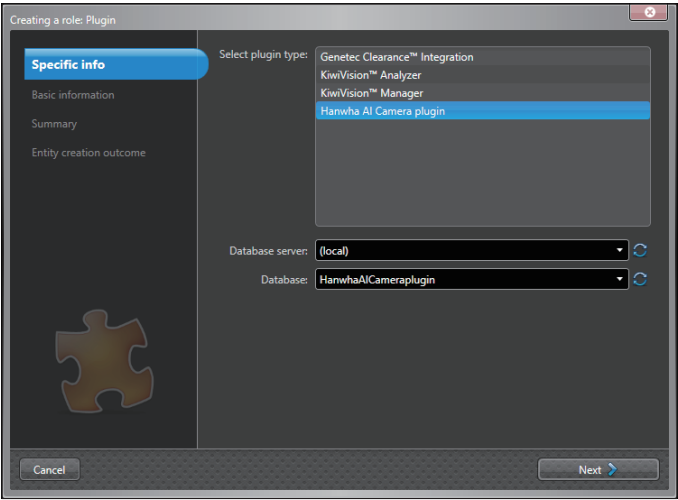
6. Execute **Config Tool** program.
7. Select **Tasks > Plugins**.
Then, **Plugins** tab will be added.



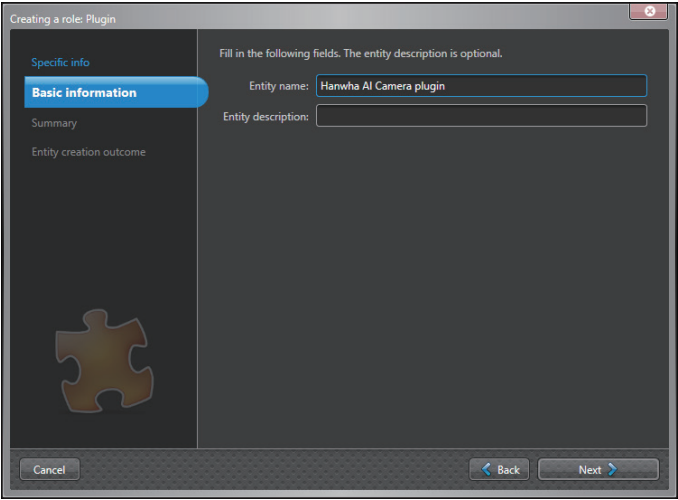
8. Click **Add an entity** on the bottom left and select **Plugin**.



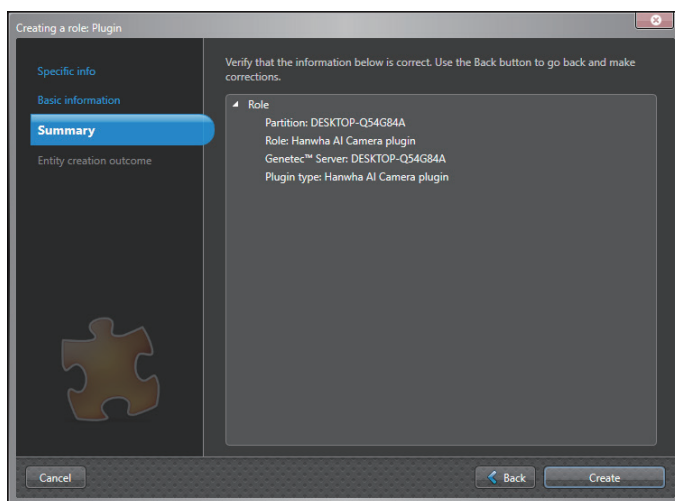
9. Select **Hanwha AI Camera plugin** and click **Next**.



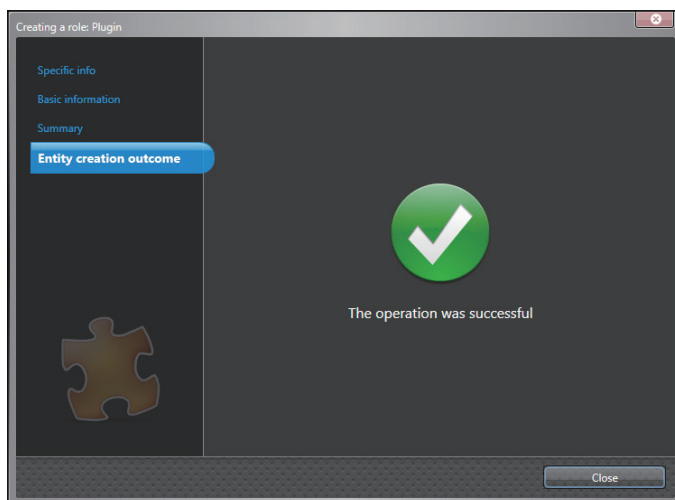
10. Set the Plugin name and description, and click **Next**.



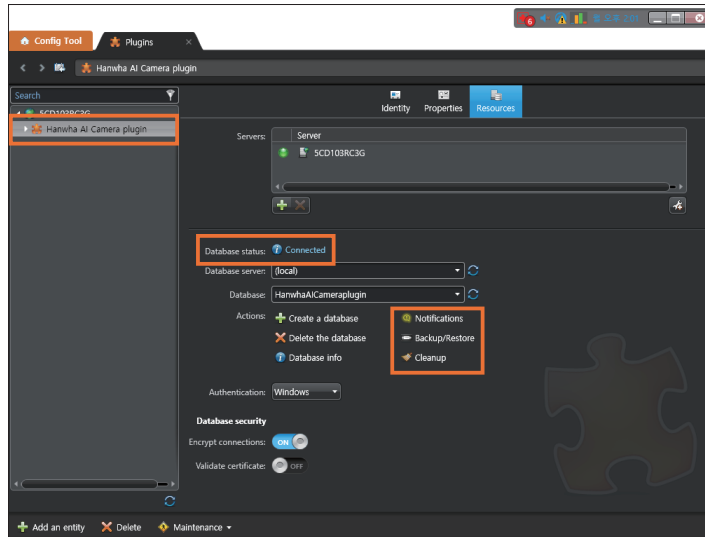
11. Check the Plugin info and click **Create**.



12. Once the Plugin is installed, click **Close**.



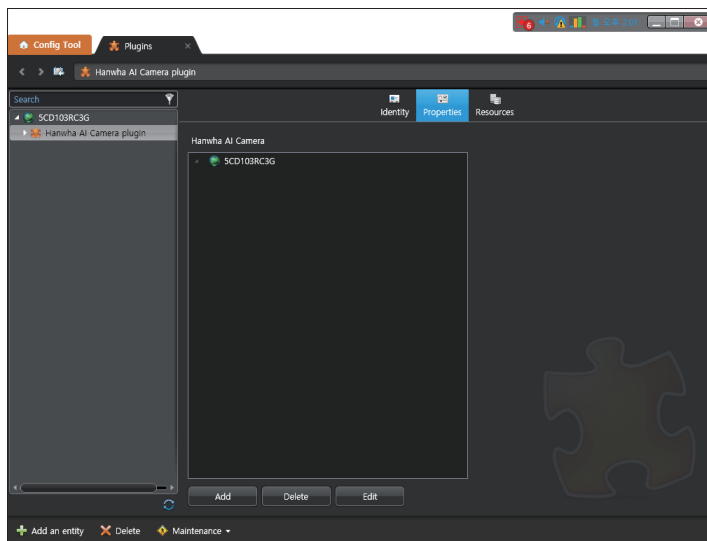
13. Select **Hanwha AI Camera plugin** from the list on the left and click **Resources**.
Check to see if **Database status** is set to **Connected**.



- Check the setting items for database management.
 - **Notification:** You can get notifications about the capacity by setting the disk's utilization or free capacity remaining.
 - **Backup/Restore:** You can select a backup folder or files to restore. You can also set an interval to automatically back up data.
 - **Cleanup:** You can set an automatic cleaning cycle for the database.
 - For more details on database management, refer to the user's guide for the Genetec Security Center program.

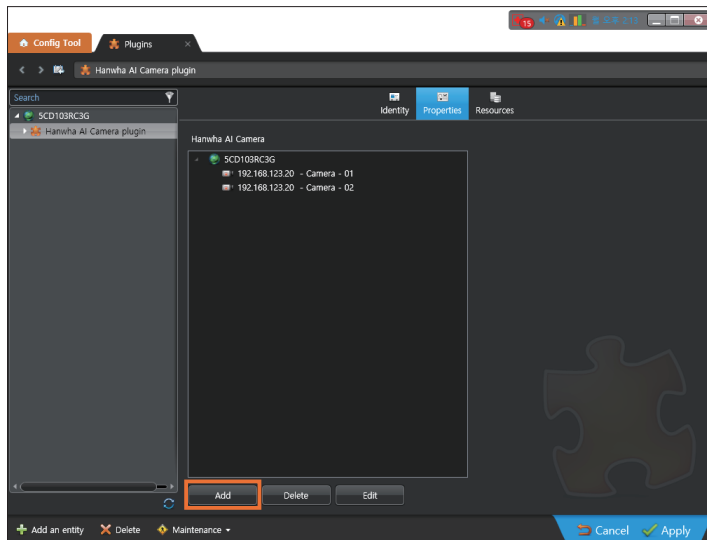
14. Click **Properties**.

A list of available cameras registered in the Genetec Security Center program is displayed.



15. Click **Add** to choose a camera to activate from the camera list.

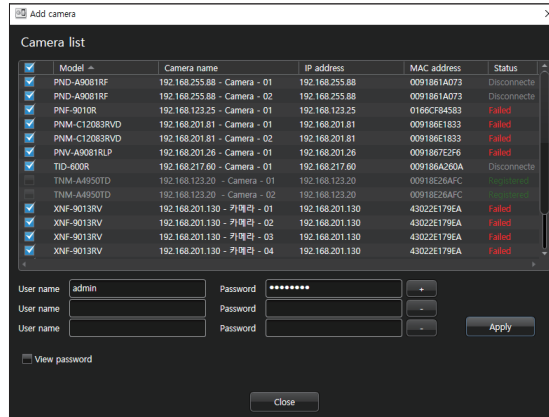
A list of Hanwha AI cameras registered in the Genetec Security Center program is displayed.



16. Select a camera you want.

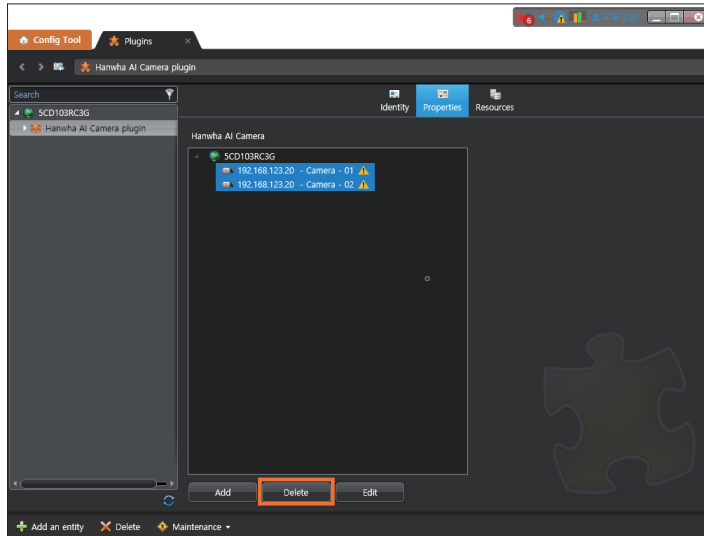
Enter the **User name** and **Password**, and click **Apply**. The connected camera is added to the bottom of the list in the preset site, and the result can be found in the **Status** column.

Click **Close** to finish adding a camera.



- You can register up to 3 sets of **User names** and **Passwords** for each camera that has a set password.

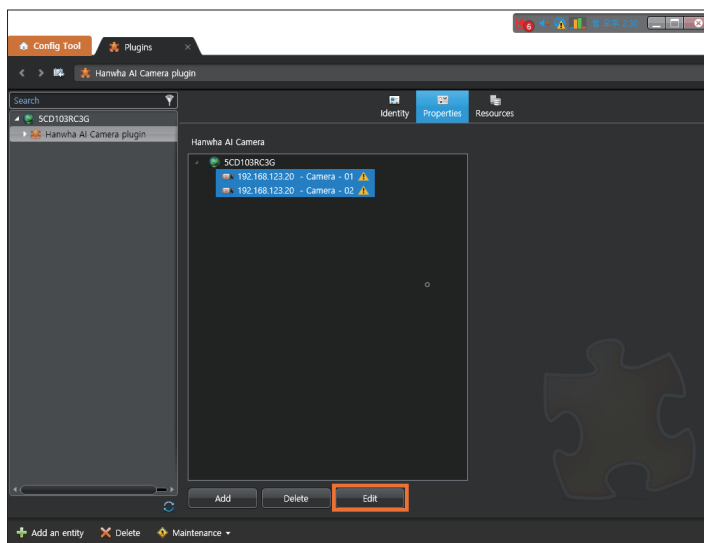
17. Select a camera that you do not use from the list, and click **Delete**.



18. The  icon on the camera or site item is displayed when the camera account has expired or when there is a problem with the camera connection status. Change the camera account information or check the camera connection status.

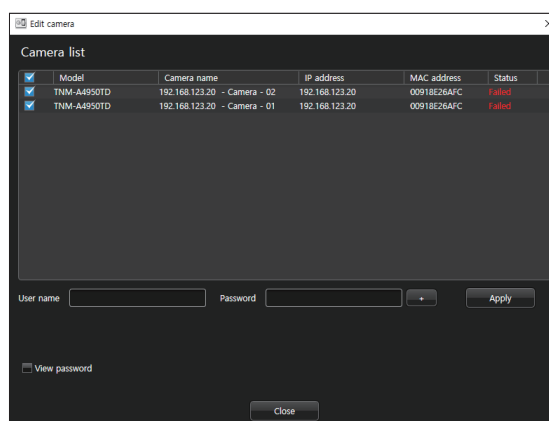
To change the account information, select a camera and click **Edit**.

- Select a site item to see the entire list of cameras at the bottom of the site.



19. Enter the camera's **User name** and **Password**, and click **Apply**. The result can be found in the **Status** column.

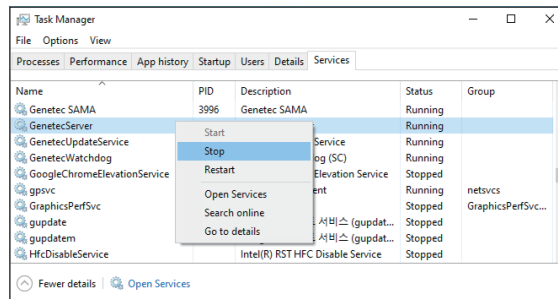
Click **Close** to complete changing the information.



20. Click **Apply** to finish installing.

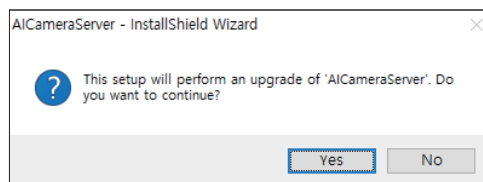
Updating Server AI Camera Plug-in

1. Stop the **Genetec Server** service.

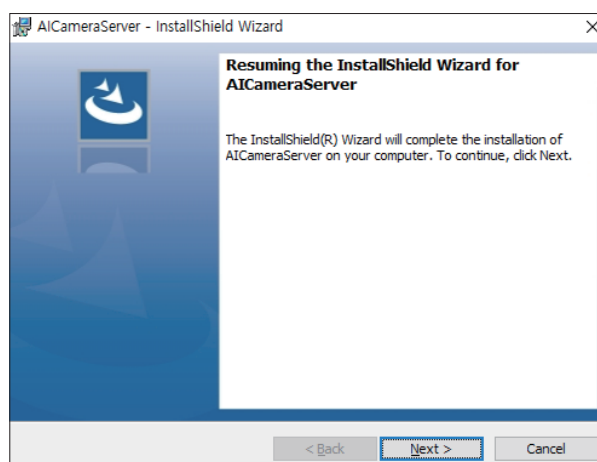


- You can stop the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.

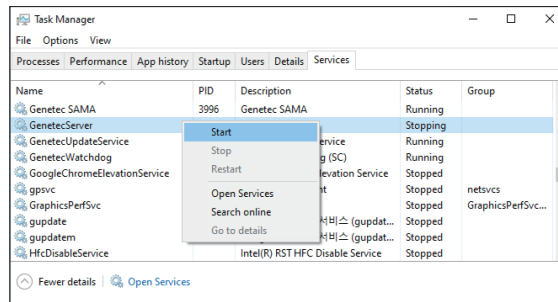
2. Close the **Config Tool** and **Security Desk** program.
3. Execute the Server Plug-in installation file.
When update start screen appears, click **Yes**.



4. To start updating, click **Next**.



5. When update is complete, click **Finish** to exit.
6. Restart the **Genetec Server** service.



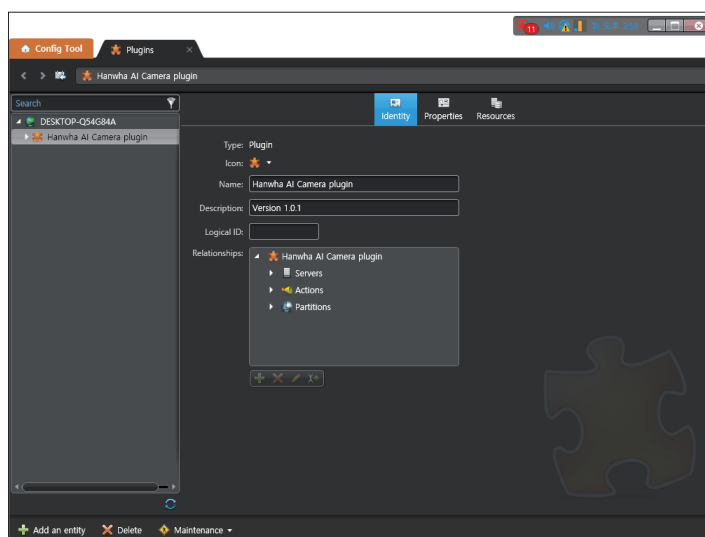
- You can start the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.

Uninstalling Server AI Camera Plug-in

1. Execute **Config Tool** program.

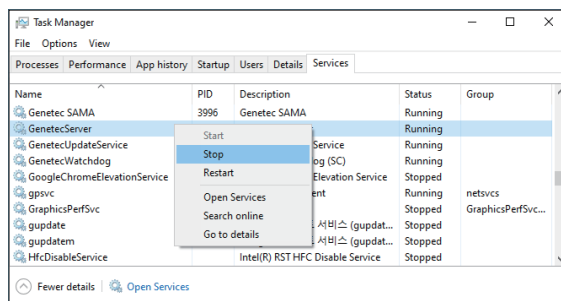


2. Select **Tasks > Plugins**.
Then, **Plugins** tab will be added.



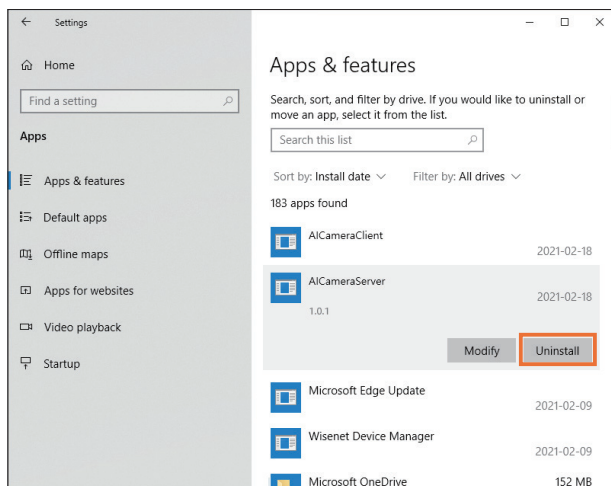
3. Select **Hanwha AI Camera plugin** from the list on the left.
Click **Delete** on the bottom left.

4. Stop the Genetec Server service.

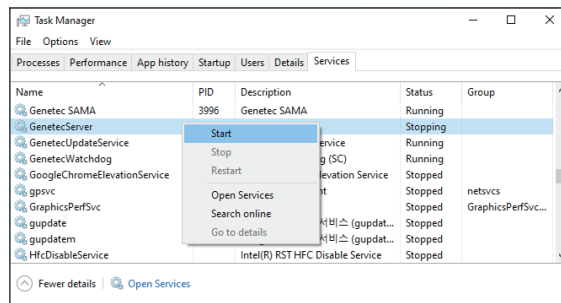


- You can stop the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.

5. Click **Start > Setup > Apps > Apps & Features > AICameraServer > Uninstall**. Then, Server Plug-in will be uninstalled.



6. Restart the Genetec Server service.

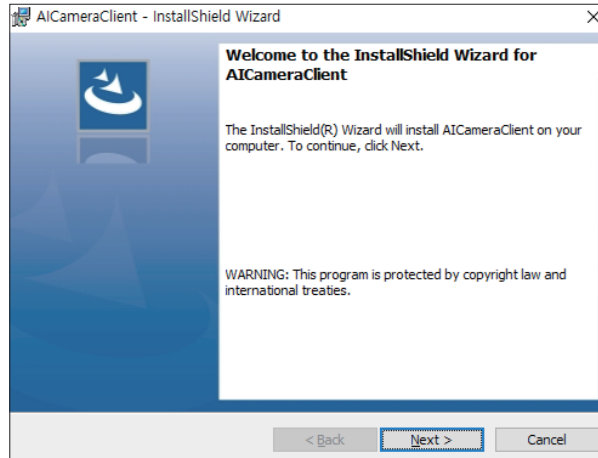


- You can start the service by selecting **Windows Task Manager > Services > GenetecServer** and then right-clicking.

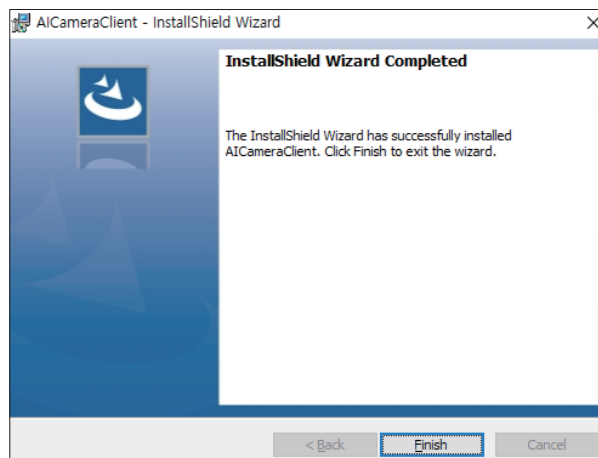
Installing Client AI Camera Plug-in

AI Camera Plug-in can be installed on the PC where the **Security Desk** program is already installed.

1. Close the **Config Tool** and **Security Desk** program.
2. Execute the Client Plug-in installation file.
When the installation wizard appears, click **Next**.

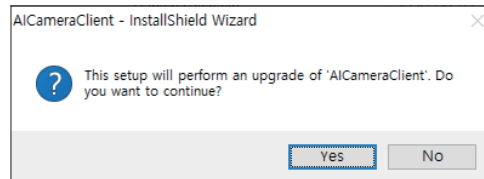


3. When installation is complete, click **Finish** to exit.

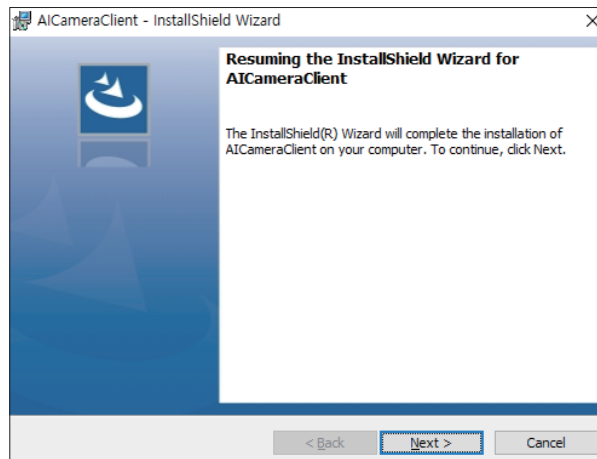


Updating Client AI Camera Plug-in

1. Close the **Config Tool** and **Security Desk** program.
2. Execute the Client Plug-in installation file.
When update start screen appears, click **Yes**.



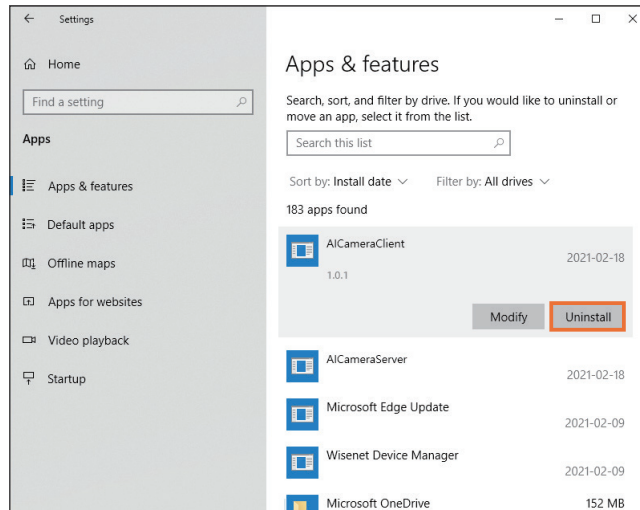
3. To start updating, click **Next**.



4. When update is complete, click **Finish** to exit.

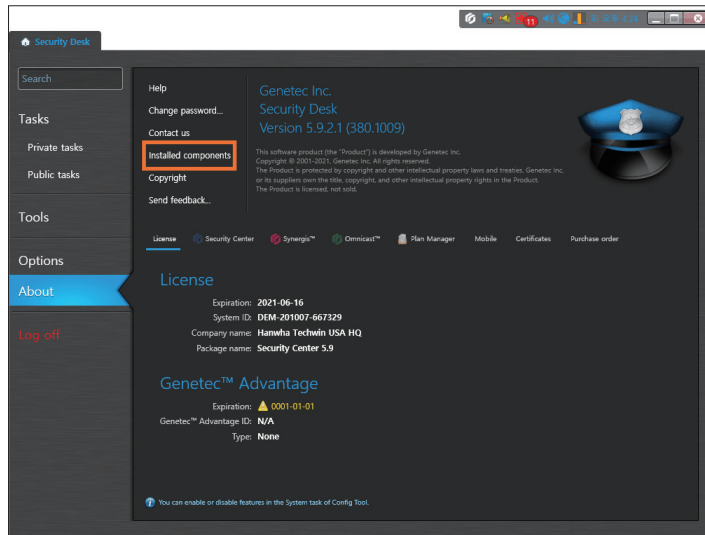
Uninstalling Client AI Camera Plug-in

1. Close the **Config Tool** and **Security Desk** program.
2. Click **Start** > **Setup** > **Apps** > **Apps & Features** > **AI CameraClient** > **Uninstall**. Then, Client Plug-in will be uninstalled.

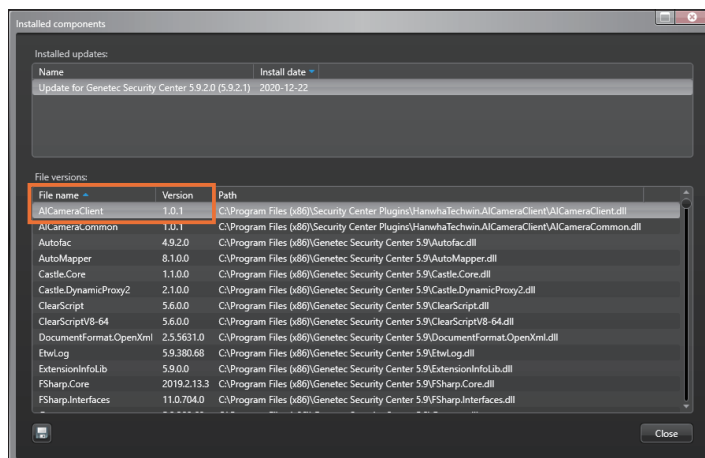


Checking Client AI Camera Plug-in Version

1. Execute Security Desk (or Config Tool) program.
2. Click **About > Installed components**.



3. Check the version information of AICameraClient.

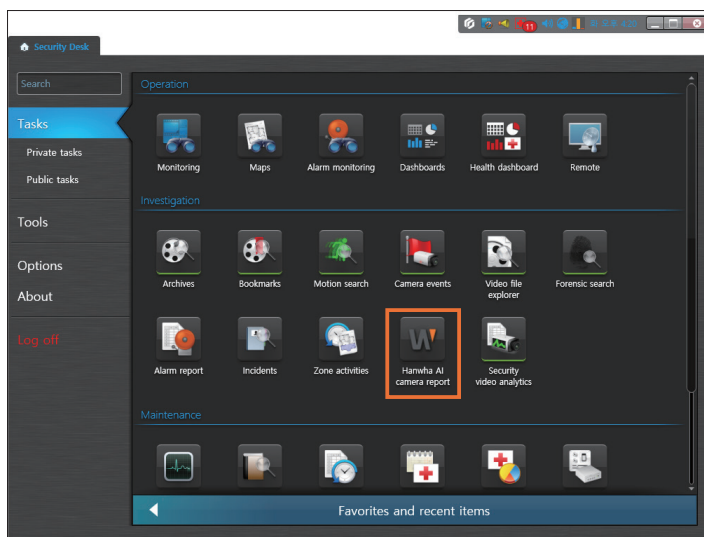


Searching for AI Analytics Events

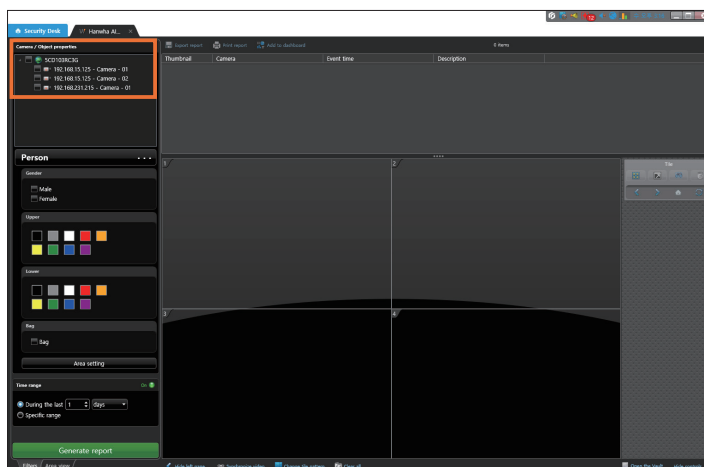
AI analytics event saves only one event per object based on the most accurate time of recognizing an object (person/face/vehicle/license plate/Wisenet Road AI) that is being continuously analyzed by the AI camera.

You can search for the saved events by setting the details of each object or camera area.

1. Execute **Security Desk** program.
2. Select **Tasks > Hanwha AI camera report**.
Then, **Hanwha AI camera report** tab will be added.

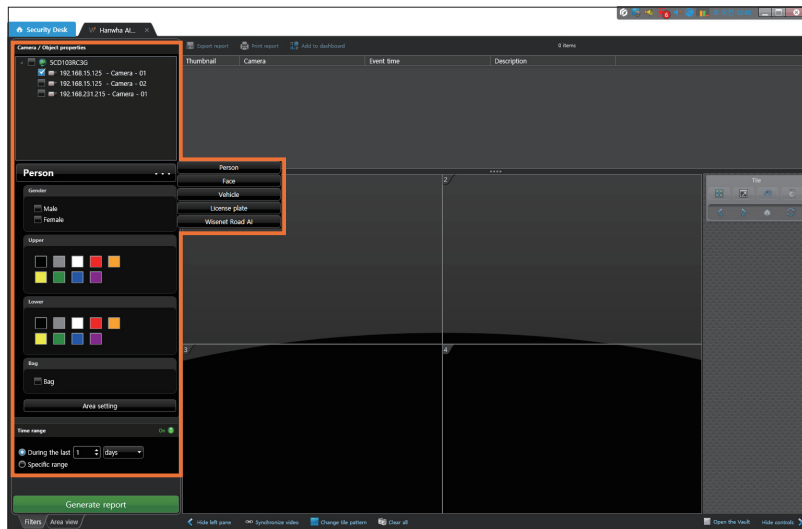


3. On the camera list, a camera added to be used in the "**Config Tool > Tasks > Plugins > Properties**" menu is displayed.

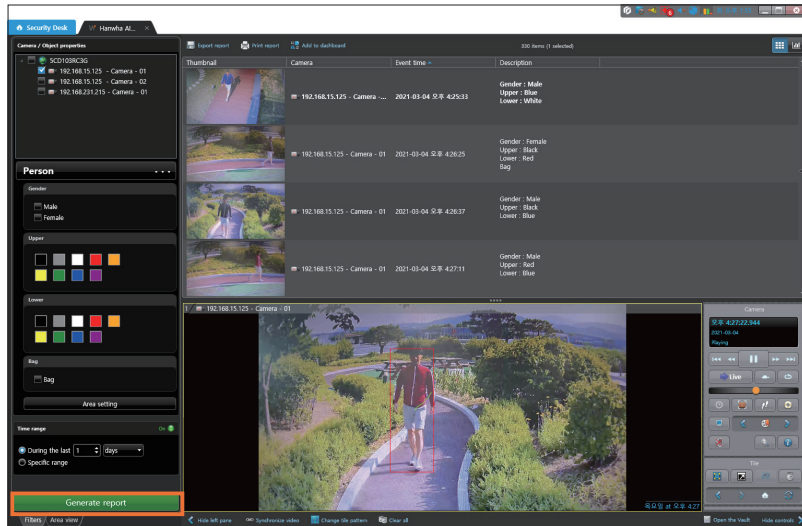


Searching for Person

1. Select the camera and time range that you want to search for.
Click the **Person** button to select **Person** for the AI object type.



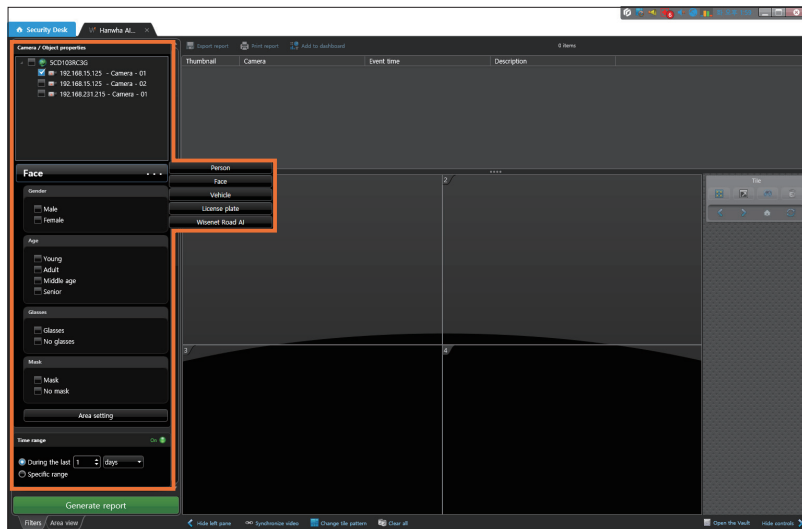
2. After setting the details, click the **Generate report** button.
Then, search results are displayed. From the list, you can select an event and play its video.



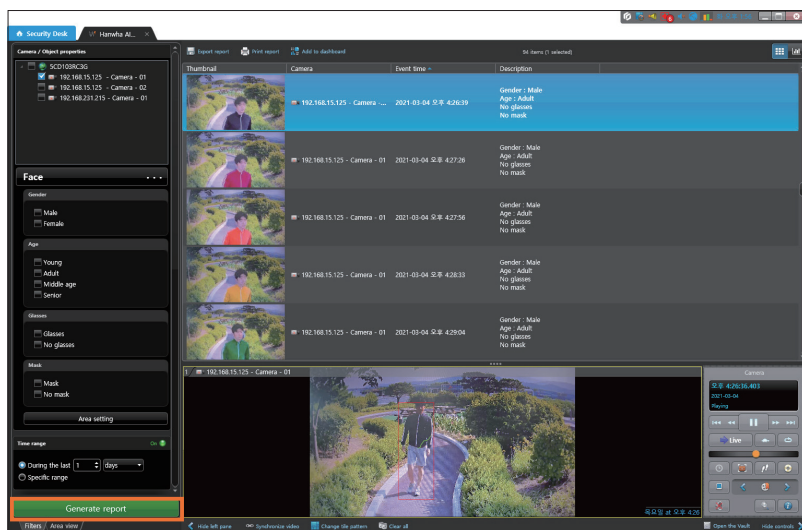
- If a user does not have permission to play a recorded video, the thumbnail video will not be displayed in the event search results and the event video cannot be played.
- If you select **Male** only from **Gender**, women and objects with unidentified gender are excluded from the search results.
If you select both **Male** and **Female**, those objects with unidentified gender are excluded from the search results.
- If you select **Male** and **Bag**, only those objects identified as male wearing a bag are included in the search results.
- For **Color**, up to two colors can be selected. Searching is valid if any one of the two colors is present.

Searching for Faces

1. Select the camera and time range that you want to search for.
Click the  button to select **Face** for the AI object type.



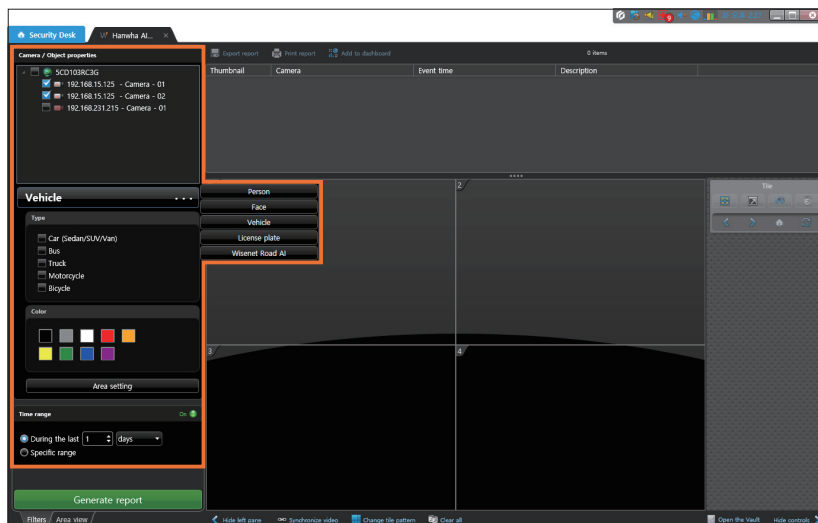
2. After setting the details, click the **Generate report** button.
Then, search results are displayed. From the list, you can select an event and play its video.



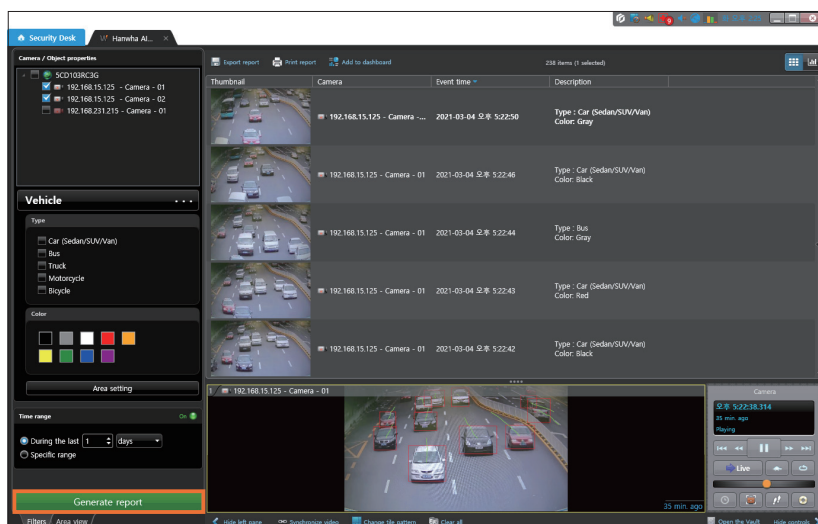
- If a user does not have permission to play a recorded video, the thumbnail video will not be displayed in the event search results and the event video cannot be played.
- If you select **Male** only from **Gender**, women and objects with unrecognized gender are excluded from the search results.
If you select both **Male** and **Female**, those objects with unrecognized gender are excluded from the search results.
- If you select **Male** and **Glasses**, those objects recognized as male wearing glasses are included in the search results.
Objects either not wearing glasses or uncertain of wearing glasses are excluded from the search results.
- If you select **Young** only from **Age**, Adult/Middle age/Senior and objects with unrecognized age are excluded from the search results.
- If you select both **Glasses** and **No glasses**, those objects uncertain of wearing glasses are excluded from the search results.
- If you select both **Mask** and **No mask**, those objects uncertain of wearing a mask are excluded from the search results.

Searching for Vehicles

1. Select the camera and time range that you want to search for.
Click the **Vehicle** button to select **Vehicle** for the AI object type.



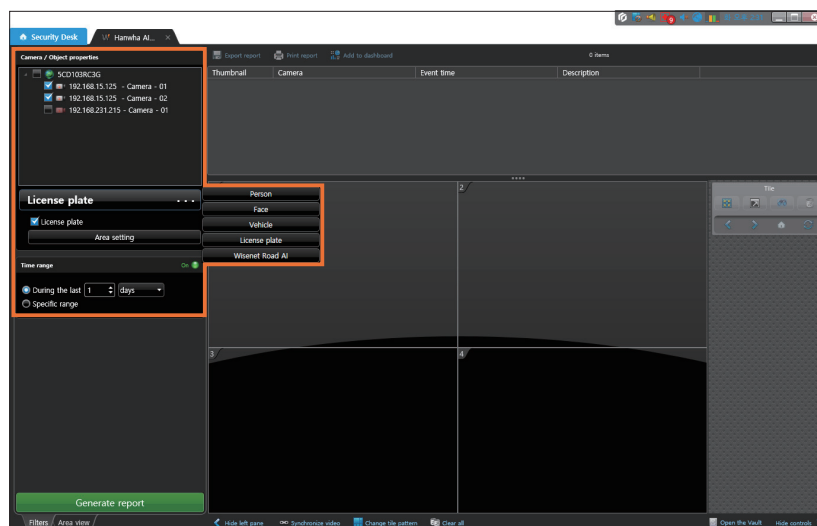
2. After setting the details, click the **Generate report** button.
Then, search results are displayed. From the list, you can select an event and play its video.



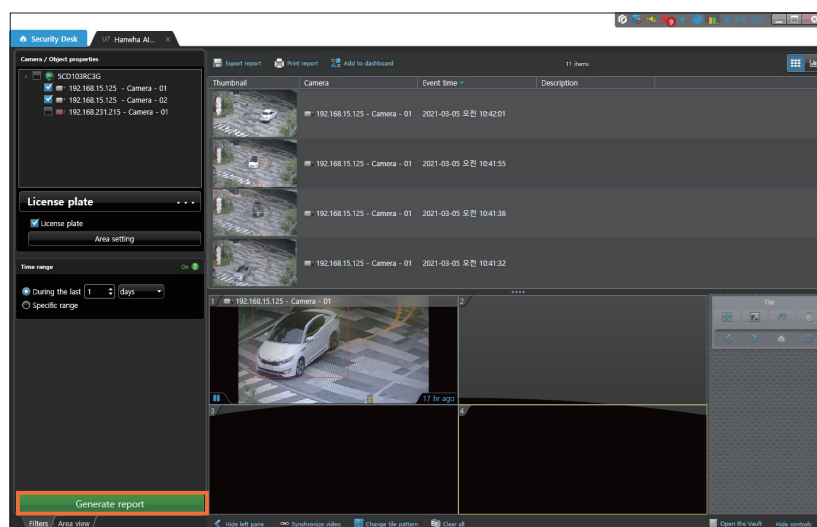
- If a user does not have permission to play a recorded video, the thumbnail video will not be displayed in the event search results and the event video cannot be played.
- If you select **Bus** only from **Type**, those objects with unchecked or unidentified types are excluded from the search results.
- For **Color**, up to two colors can be selected. Searching is valid if any one of the two colors is present.

Searching for Vehicle License Plates

1. Select the camera and time range that you want to search for.
Click the **...** button to select **License plate** for the AI object type.



2. Click the **Generate report** button.
Then, search results are displayed. From the list, you can select an event and play its video.



- If a user does not have permission to play a recorded video, the thumbnail video will not be displayed in the event search results and the event video cannot be played.
- **License plate** searches for a vehicle license plate.
If you want to search by entering a license number, see [Searching for Wisenet Road AI](#).

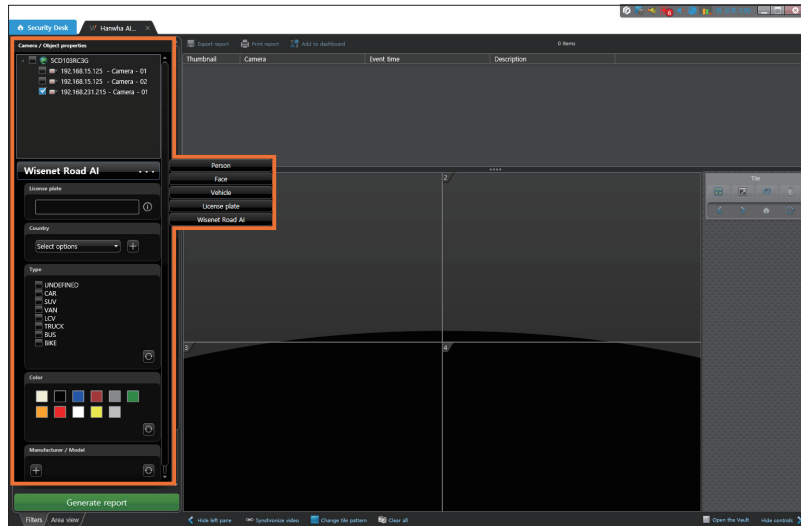
Searching for Wisenet Road AI



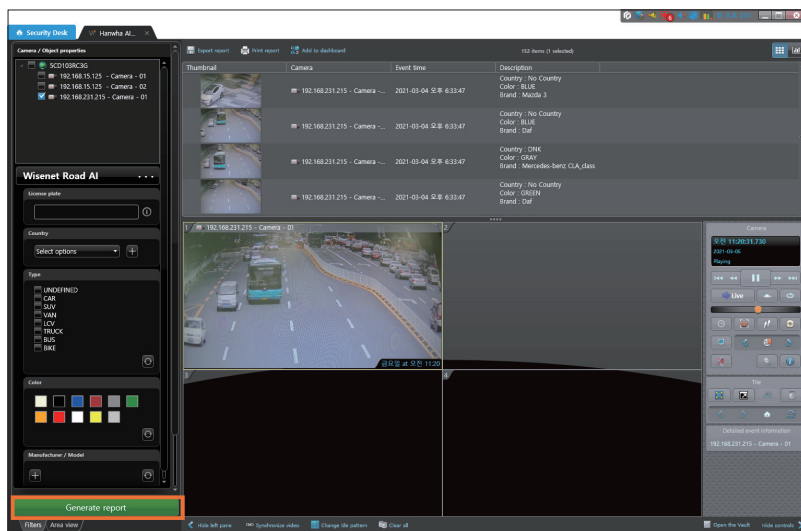
Note

Wisenet Road AI search is only available for camera models that support the feature. For products that support the **Wisenet Road AI** search function, see [Supported cameras](#).

1. Select the camera and time range that you want to search for.
Click the **...** button to select **Wisenet Road AI** for the AI object type.



2. After setting the details, click the **Generate report** button.
Then, search results are displayed. From the list, you can select an event and play its video.



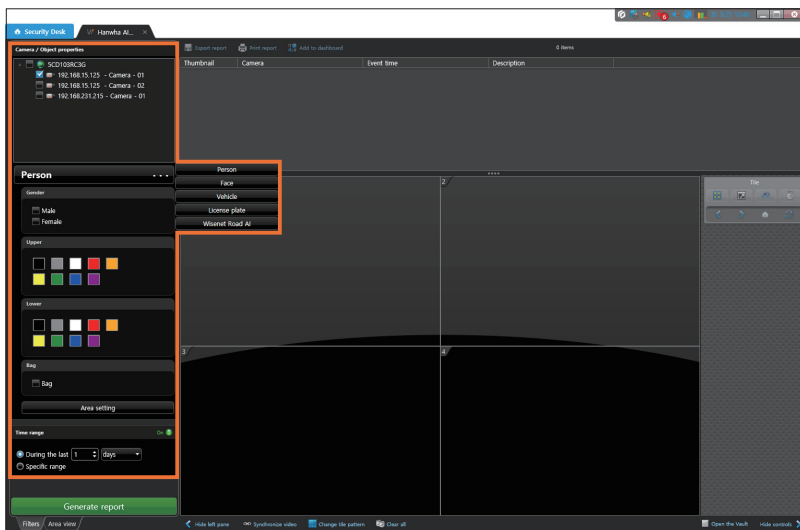
- If a user does not have permission to play a recorded video, the thumbnail video will not be displayed in the event search results and the event video cannot be played.
- Click the  button to reset the conditions selected for the vehicle **Type**, **Color**, or **Manufacturer/Model**.
- You can enter the license plate number of a vehicle that you want to search for in **License plate**. You can also enter multiple conditions for search, separated by commas. (e.g. 3690, ABC1234, 1ABC234)
- You can select multiple countries as a search condition. Click the + button on the right side of **Country** to select a country (up to 5) that you want to add as a search condition.
- For some countries, you can search by entering specific regions.
- In the search results, the following vehicle information can be found:
 - Vehicle number, Country/Specific region, Vehicle type, Brand, Manufacturer, Color

Setting Up Event Area

1. Select the camera and time range that you want to search for.

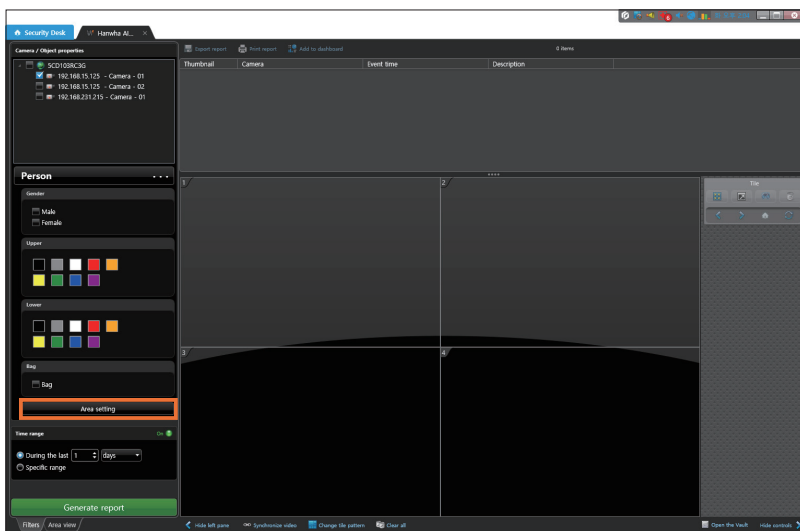
Click the **...** button to select the AI object type that you want to search for.

- **Person, face, vehicle, and license plate** can be searched by setting the area. **Wisenet Road AI** does not support area settings.

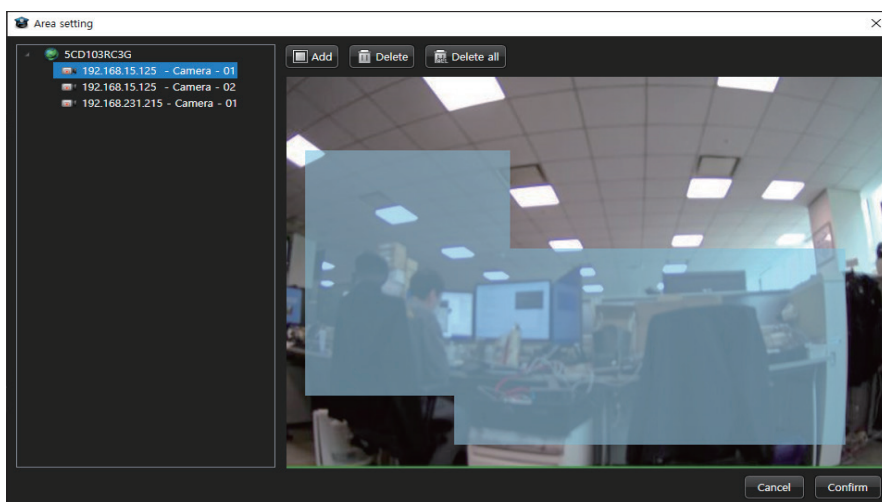


2. Set the details, and click the **Area setting**.

Then, **Area setting** window appears.



3. Select the camera for area setting, and set the area you want.
 - On the camera list, a camera added to be used in the "**Config Tool > Tasks > Plugins > Properties**" menu is displayed.



-  **Add:** You can drag the mouse to set the area you want.
-  **Delete:** You can drag the mouse to delete a previously set area.
-  **Delete all:** You can delete all areas previously set for the selected camera.

**Note**

Up to 4 camera areas can be set at the same time.

4. To finish the setup, click **Ok**.

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