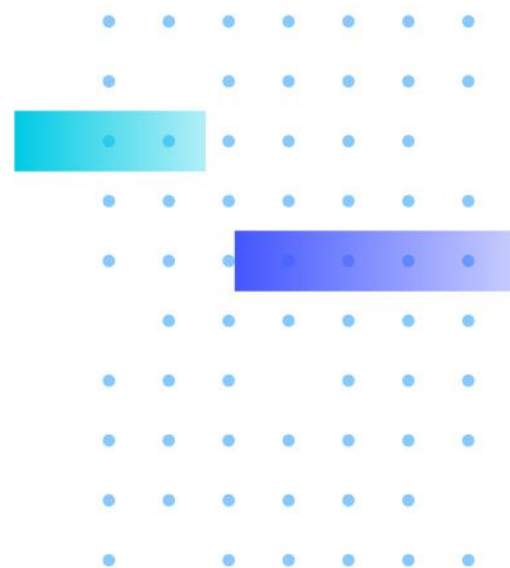


**VIVOTEK**  
**DEEP SEARCH PLUGIN**  
**USER MANUAL**

Version 3.1  
2025/3/28



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## Revision History

Version Comment	
V.0	<ul style="list-style-type: none"><li>● Initial draft</li></ul>
V1.1	<ul style="list-style-type: none"><li>● Add vehicle filter</li></ul>
V1.2	<ul style="list-style-type: none"><li>● Update images</li></ul>
V1.3	<ul style="list-style-type: none"><li>● Update prerequisites for cameras</li></ul>
V2.0	<ul style="list-style-type: none"><li>● File rename (from VIVOTEK Edge AI-Powered VCA Solution User Manual to VIVOTEK Deep Search Plugin User Manual)</li><li>● Wording correction</li><li>● Add Deep Search Plugin Section</li></ul>
V3.1	<ul style="list-style-type: none"><li>● Introduced usage instructions for the new Deep Search interface, including a <b>Re-Search</b> function.</li><li>● Update supported Genetec Security Center and Deep Learning VCA Package versions.</li></ul>

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# 1. For Genetec® Security Center Users

A proprietary plug-in is available for users who install VIVOTEK cameras with video content analysis (VCA) suite in a deployment managed by Genetec Security Center. With this plug-in, users can search video by object metadata in the Genetec Security Center. It allows users to search metadata by VCA rules such as smart motion detection, line crossing detection, loitering detection, and intrusion detection. It also allows users to draw a custom zone to focus on any critical area.

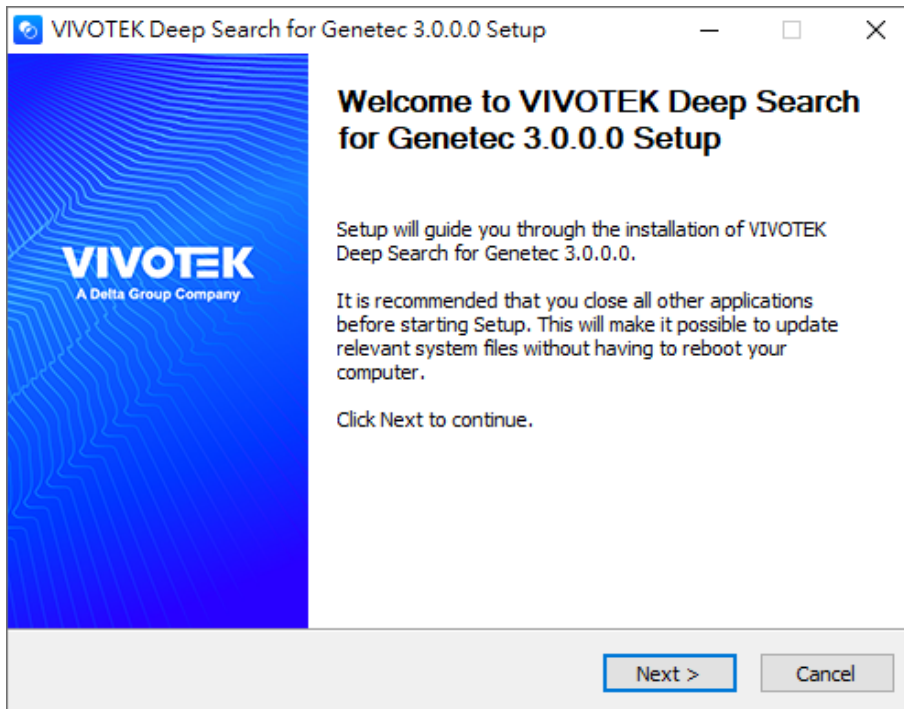
## 2. Getting Started

Complete the following procedure as the prerequisites for installing the plug-in:

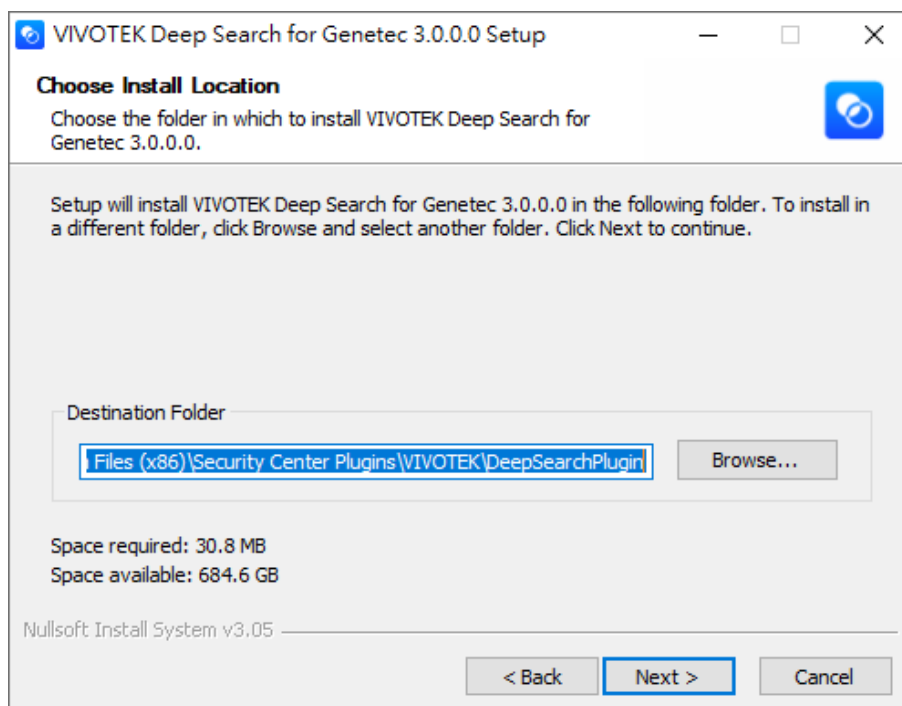
- (1) Install the Genetec Security Center 5.12.0.0 or above.
- (2) Download VIVOTEK's VCA plug-in from VIVOTEK's Camera's download page.
- (3) Execute the VIVOTEK Deep Search Plug-in installer file:
  - a. By default, a sub-folder named "**Security Center Plugins**" is available after the Genetec Security Center is installed.

The default file path should look like the following:

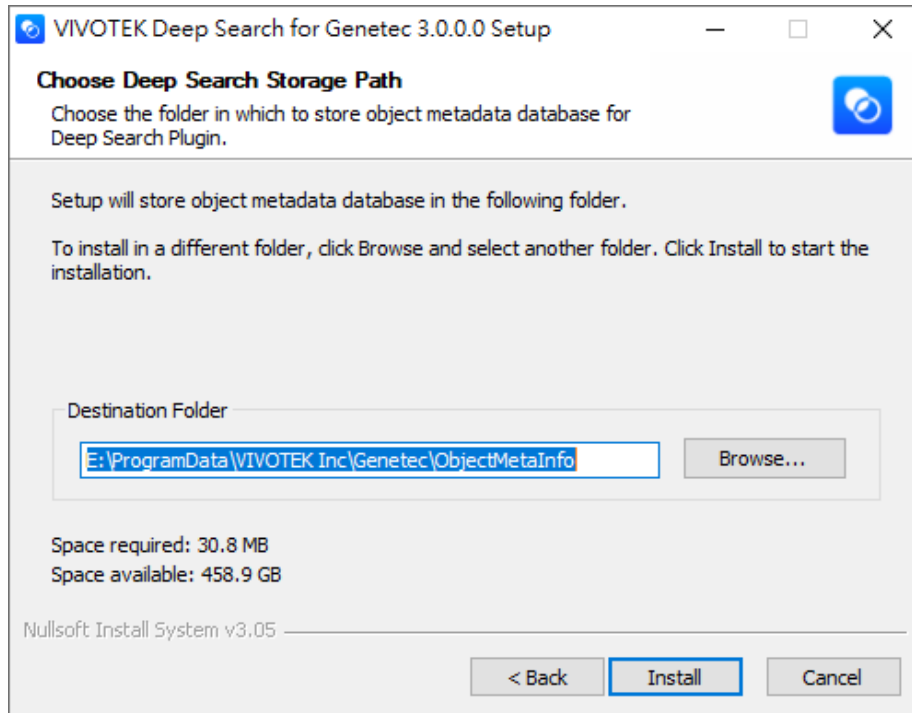
**C:\Program Files (x86)\Security Center Plugins\VIVOTEK\DeepSearchPlugin**



- b. Choose the installation location, then click Next to proceed with the installation.

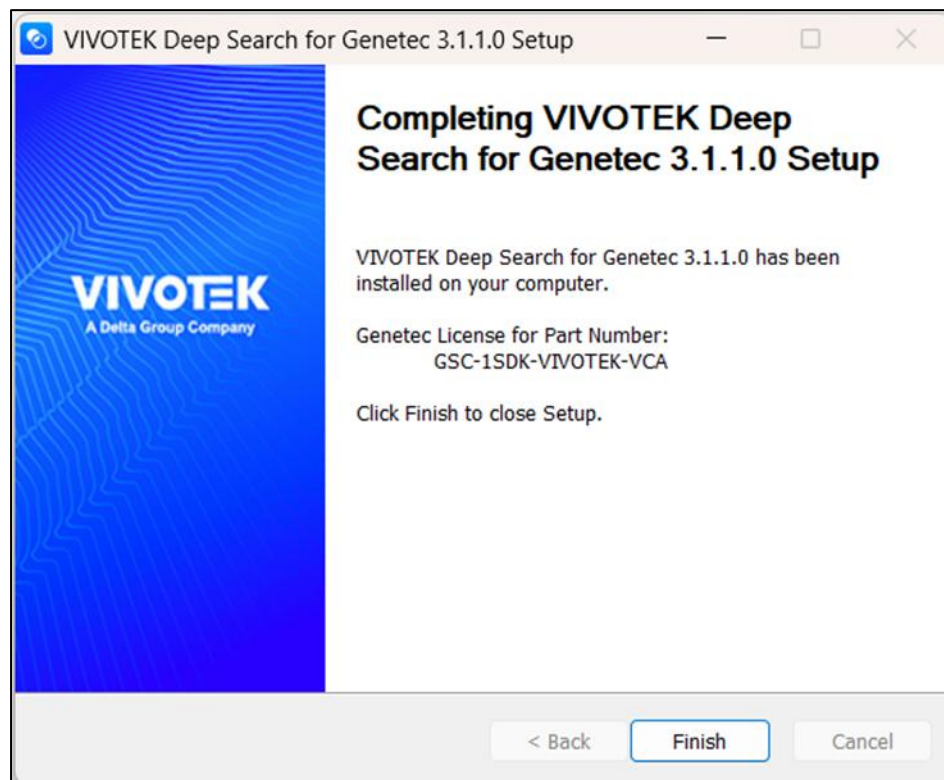


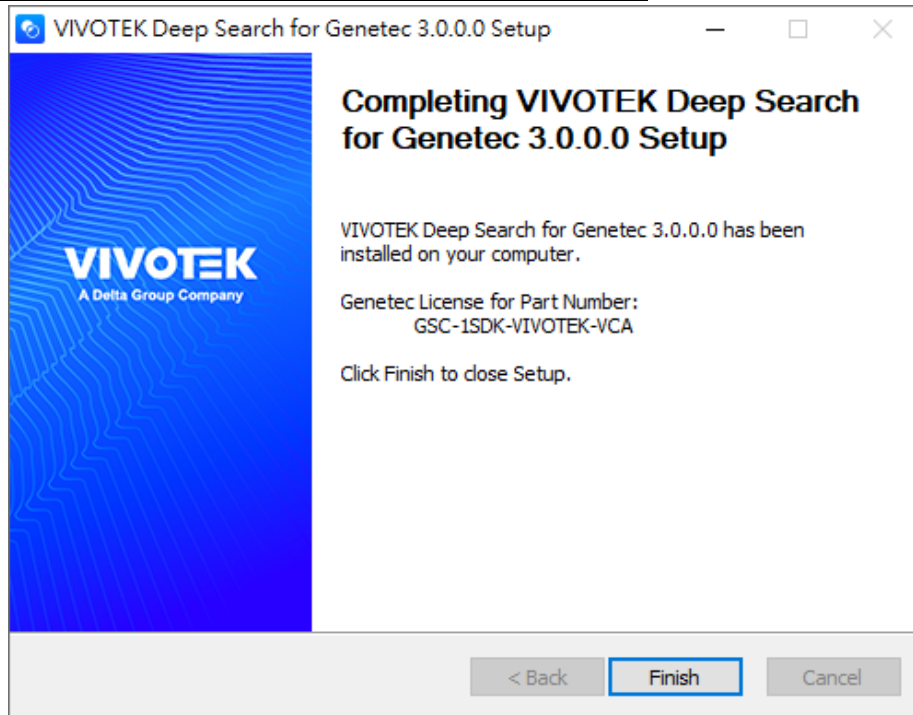
- c. Choose the storage path for deep search metadata. The default file path should be as the following: **C:\ProgramData\VIVOTEK Inc\Genetec\ObjectMetaInfo**



For storage capacity concerns, it is recommended to store Object Metadata in a separate location with a larger disk capacity, ensuring that it does not affect server operations.

- d. Click Install to proceed with the installation.  
e. Click Finish to close the setup.

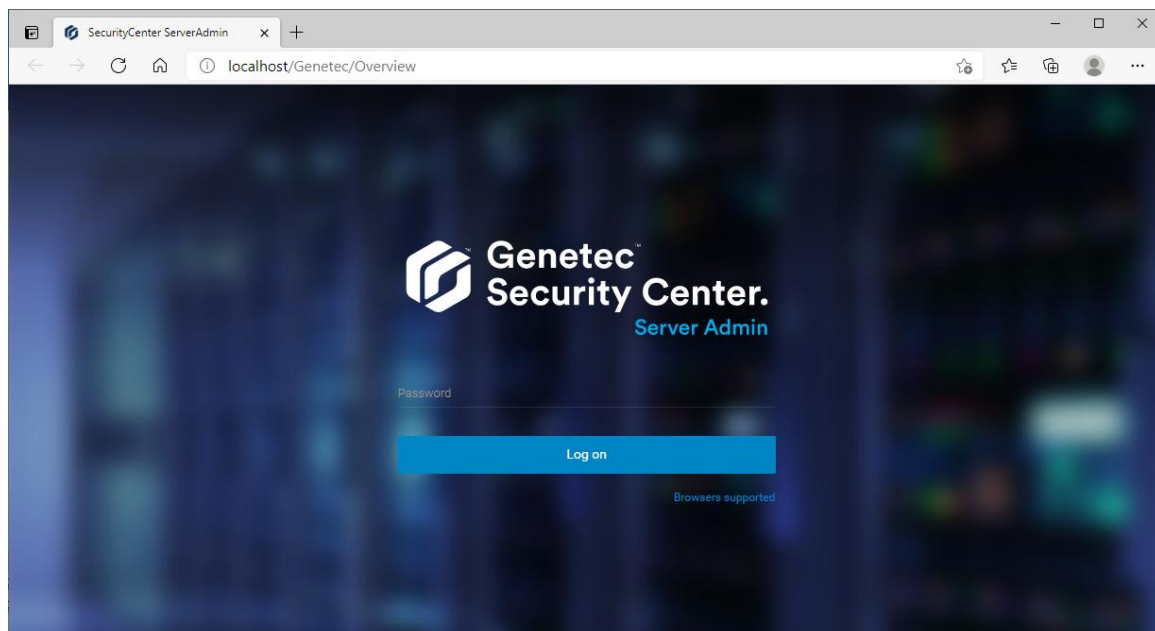




(4) Restart Genetec Security Center

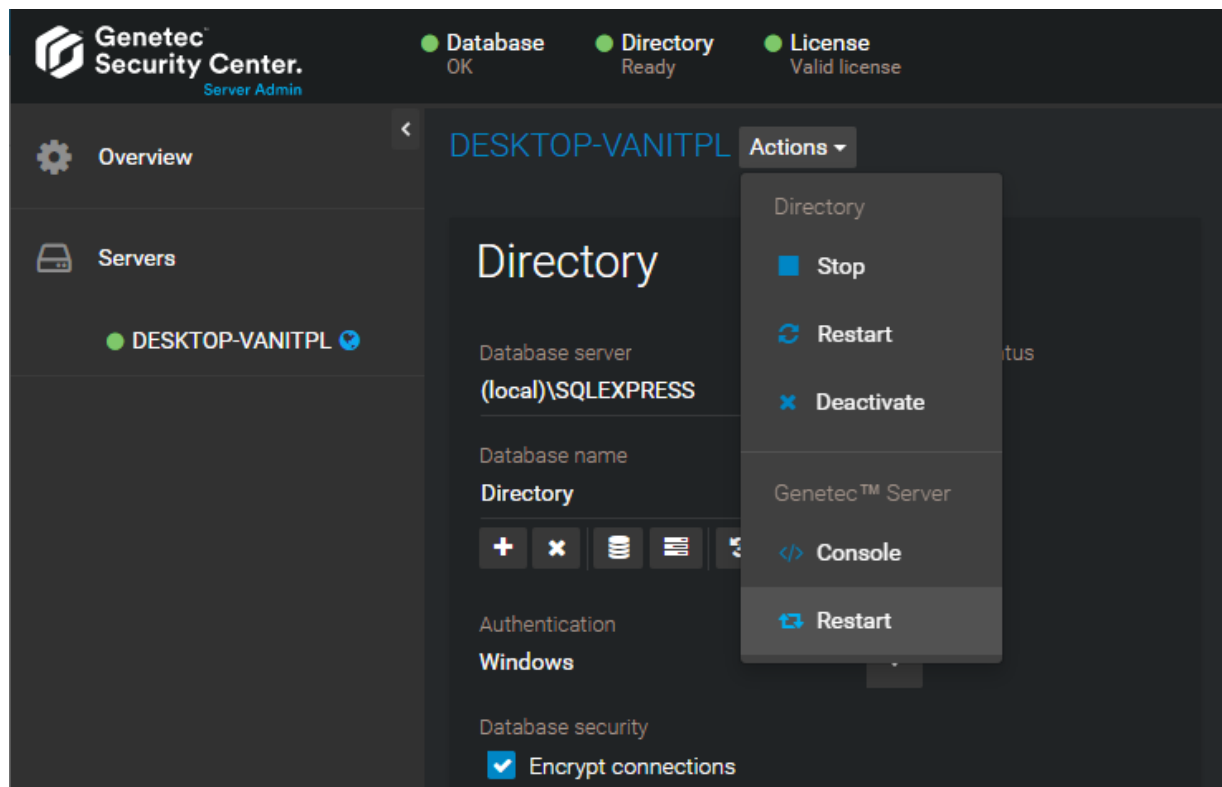
a. Open Genetec Security Center – **Server Admin**

If connecting to Server Admin from the local host, double-click **Genetec™ Server Admin** in the Genetec Security Center folder in the Windows Start menu.



Note: If your are not on the main server, type **https://computer:port/Genetec** in your web browser, where computer is the hostname or the IP address of your server and port is the web server port specified during the Security Center expansion server installation.

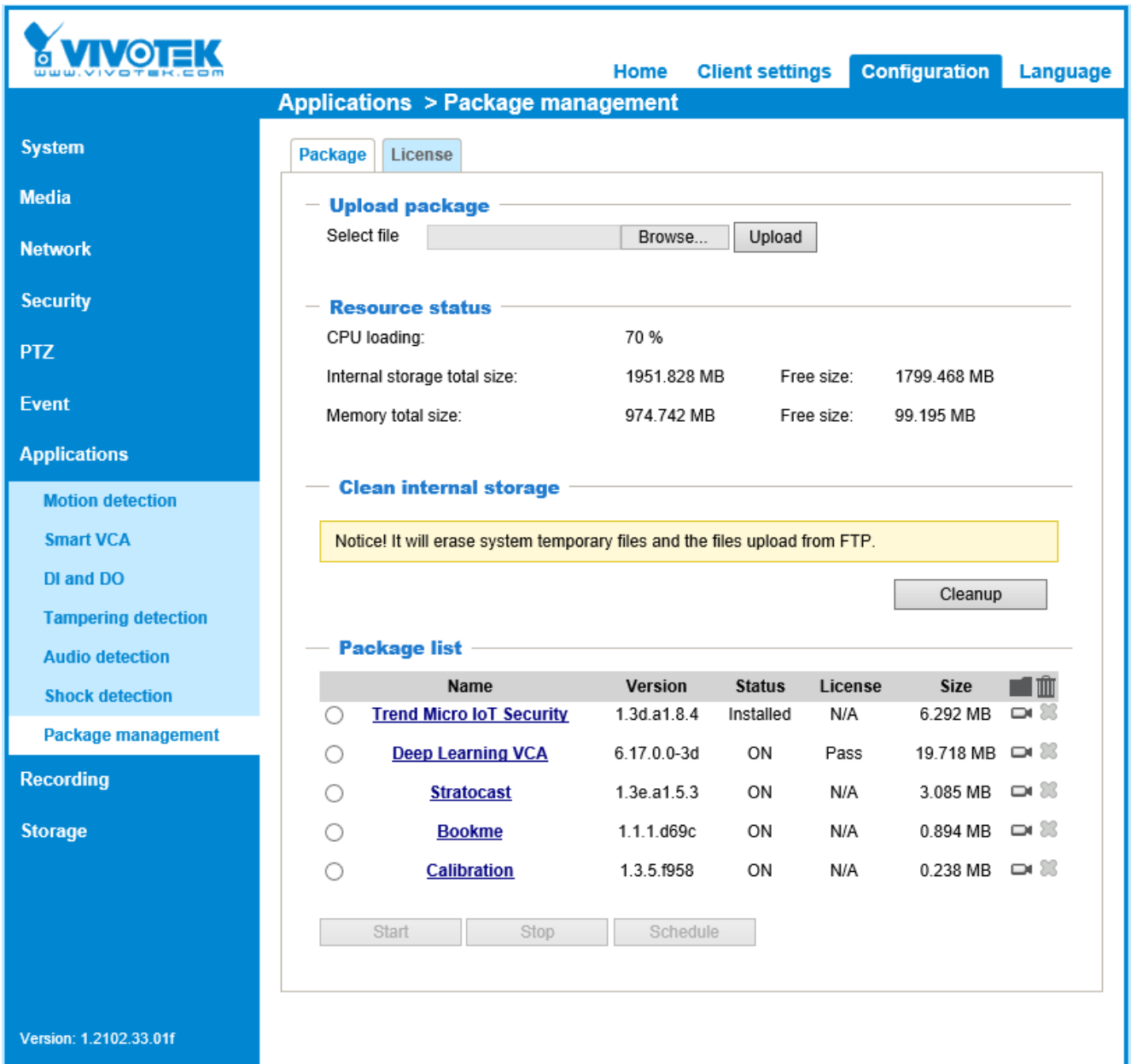
- b. Enter the server password that you set during the server installation, and click **Log on**.
- c. Select “**Server**” and click on “**Actions**” to open the menu. Click “**Restart**” to restart Genetec Server.





### 3. Prerequisites for Cameras

- (1) For the **Smart Search Plugin**, please install the Deep Learning VCA Package with version 6.17.0.0 or above.



The screenshot displays the Vivotek Security Center web interface. The top navigation bar includes links for Home, Client settings, Configuration, and Language. The left sidebar lists various system components: System, Media, Network, Security, PTZ, Event, Applications, Recording, and Storage. The 'Applications' section is expanded, showing sub-options like Motion detection, Smart VCA, DI and DO, Tampering detection, Audio detection, Shock detection, and Package management. The 'Package management' page is active, showing tabs for Package and License. The 'Upload package' section has a 'Select file' input, a 'Browse...' button, and an 'Upload' button. The 'Resource status' section displays system metrics: CPU loading (70 %), Internal storage total size (1951.828 MB) with Free size (1799.468 MB), and Memory total size (974.742 MB) with Free size (99.195 MB). The 'Clean internal storage' section includes a yellow warning box stating 'Notice! It will erase system temporary files and the files upload from FTP.' and a 'Cleanup' button. The 'Package list' section contains a table of installed and available packages.

	Name	Version	Status	License	Size		
<input type="radio"/>	<a href="#">Trend Micro IoT Security</a>	1.3d.a1.8.4	Installed	N/A	6.292 MB		
<input type="radio"/>	<a href="#">Deep Learning VCA</a>	6.17.0.0-3d	ON	Pass	19.718 MB		
<input type="radio"/>	<a href="#">Stratocast</a>	1.3e.a1.5.3	ON	N/A	3.085 MB		
<input type="radio"/>	<a href="#">Bookme</a>	1.1.1.d69c	ON	N/A	0.894 MB		
<input type="radio"/>	<a href="#">Calibration</a>	1.3.5.f958	ON	N/A	0.238 MB		

At the bottom of the package list, there are buttons for 'Start', 'Stop', and 'Schedule'.

Version: 1.2102.33.01f

- (2) For the VIVOTEK **Deep Search Plugin**, please Install the Deep Learning VCA Package with version 7.13.7.2 or above with a valid license, and Firmware version n.2nnn.3n.nnx. (n= numbers, x = letters). The attribute extraction is not supported for the models of FD/IB9x65-A, FD/IB9x87-A, FD/IB9x67-v2, FD/IB/IT9x89-v2, which firmware version is n.2nnn.3n.nnx. (n=number, x = letter).

The screenshot displays the Vivotek Security Center web interface. On the left is a sidebar menu with the following items: Applications, Motion detection, Smart VCA, DI and DO, Tampering detection, Audio detection, Shock detection, Package management, Recording, and Storage. The 'Applications' section is active, showing a 'Clean internal storage' button and a yellow warning box that reads: 'Notice! It will erase system temporary files and the files upload from FTP.' Below this is a 'Package list' table.

	Name	Version	Status	License	Size		
<input type="radio"/>	<a href="#">Trend Micro IoT Security</a>	1.3g.a1.10.0	Installed	2026-06-07	14.851 MB		
<input type="radio"/>	<a href="#">Deep Learning VCA</a>	7.13.7.2-3g	ON	Pass	101.234 MB		
<input type="radio"/>	<a href="#">Stratocast</a>	1.3e.a1.6.0	ON	N/A	3.113 MB		

- (3) Synchronize camera system time to the Genetec server or a NTP server is recommended. The time synchronization to the server can help metadata match video more closely.

[Home](#) [Configuration](#) [Language](#)

## System &gt; General settings

## System

General settings

Homepage layout

Logs

Audit Log

Parameters

Maintenance

## Media

## Network

## Security

## PTZ

## Event

## Applications

## Recording

## Storage

Version: 1.2302.37.01f

## System

Host name:

FD9387-EHTV-V3

☐ Turn off the LED indicator

## System time

Time zone:

GMT+08:00 Beijing, Chongqing, Hong Kong, Kuala Lumpur, Singapore, Taipei, Irkutsk

- ☐ Keep current date and time
- ☐ Synchronize with computer time
- ☐ Manual
- ☒ Synchronize with NTP Server

Server 1

Genetec Server IP

Server 2

time2.google.com

NTP Server Address

Server 3

time3.google.com

Server 4

0.pool.ntp.org

Server 5

1.pool.ntp.org

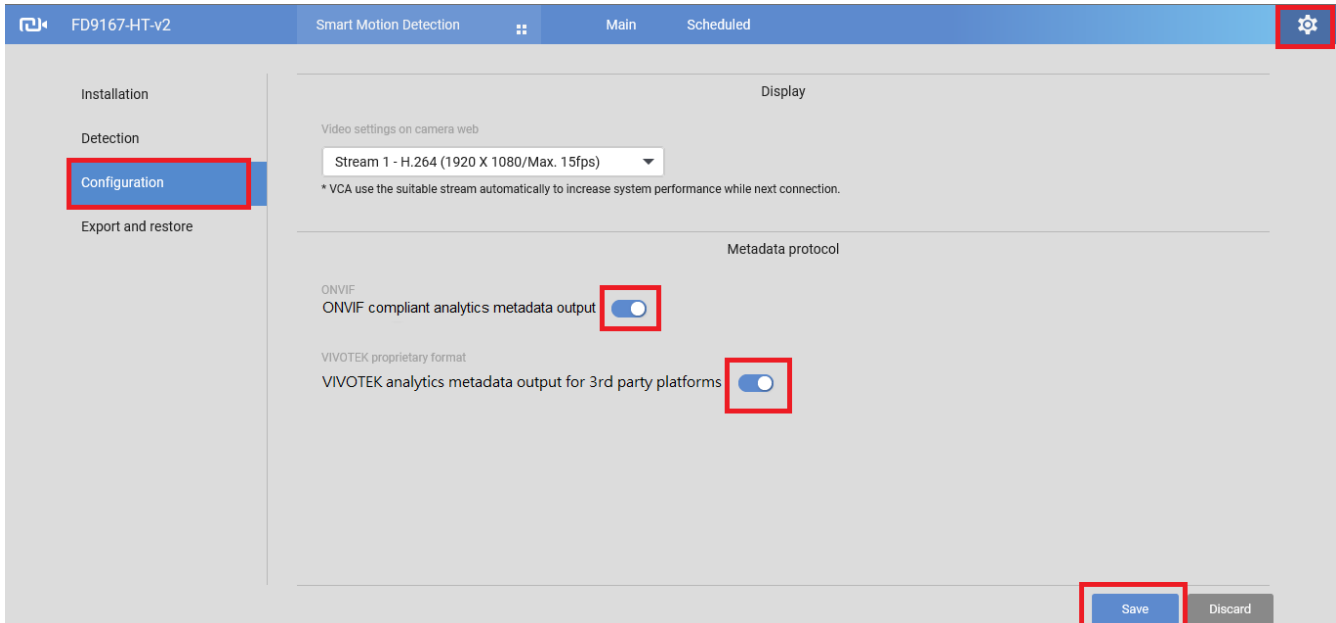
Updating interval:

Auto



Save

- (4) Enable “**ONVIF compliant Analytics metadata output**” and “**VIVOTEK analytics metadata output for 3<sup>rd</sup> party platforms**” on Settings > Configuration. The camera will send analytics metadata to Genetec server.



- The “ONVIF compliant analytics metadata output” provides the default bounding box (red frame) that can display “live & playback” views for human or vehicle objects.
  - The “VCA analytics metadata output for 3<sup>rd</sup> party platforms” delivers the human/vehicle information for the **Smart Search Plugin**. This may require higher storage capacity for “Archiver”. **For some complicated scenarios, the metadata file size may reach 300~750MB per hour per camera with this feature enabled (internal).** For the Smart Search plugin, this feature may require keeping its search function. For the Deep Search feature itself, the object metadata may require 20MB per day without this feature enabled.
- (5) For more VCA event rule settings, please follow the Smart VCA manual to setup VCA rules and events:

[http://download.vivotek.com/downloadfile/solutions/vadp/smart-vca-manual\\_en.pdf](http://download.vivotek.com/downloadfile/solutions/vadp/smart-vca-manual_en.pdf)

## 4. To Enable the Plug-in & Operation

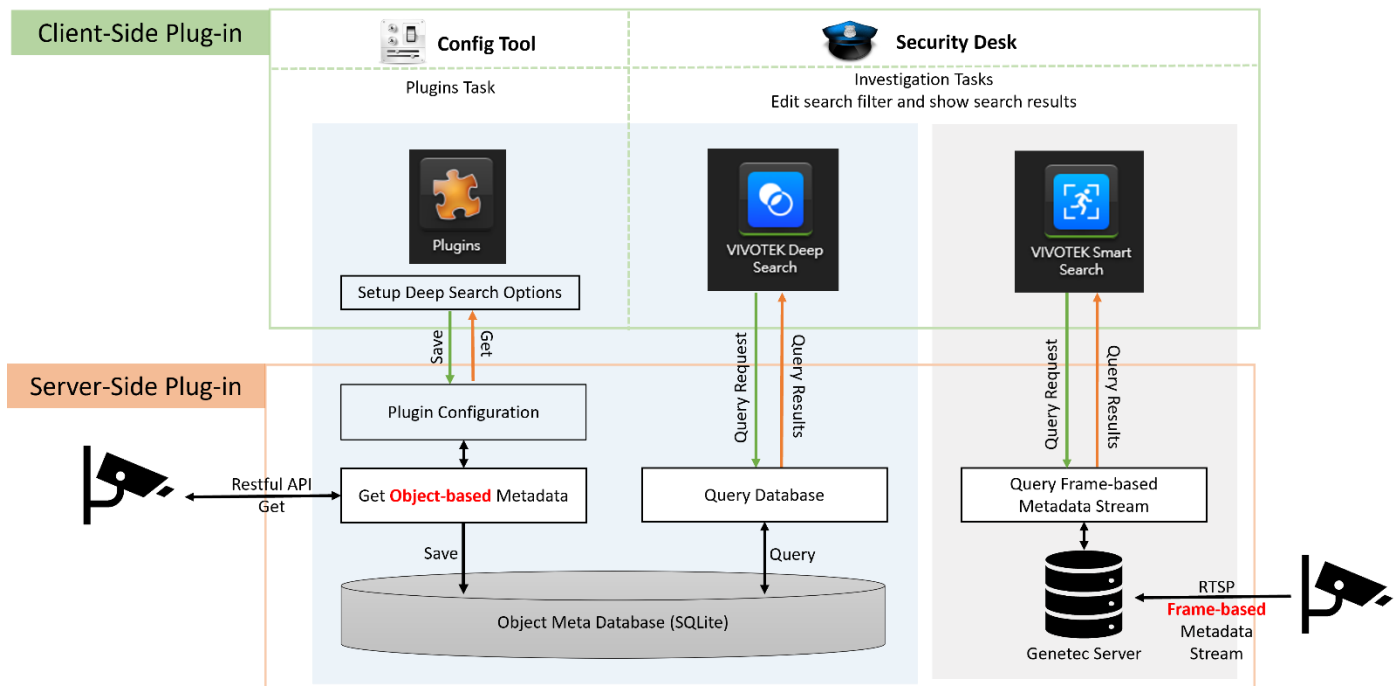
### 4.1 Architecture Overview

VIVOTEK DeepSearch Plug-in is integrated on both the server and client sides.

For Deep Search, the server-side plug-in records object-based metadata from Deep Learning VCA cameras, while the Genetec Server captures frame-based metadata streams for Smart Search. Users can leverage this plug-in to search videos using either object-based or frame-based metadata.

Users can modify the search filter within the client-side plug-in, which is integrated into the Genetec Security Desk.

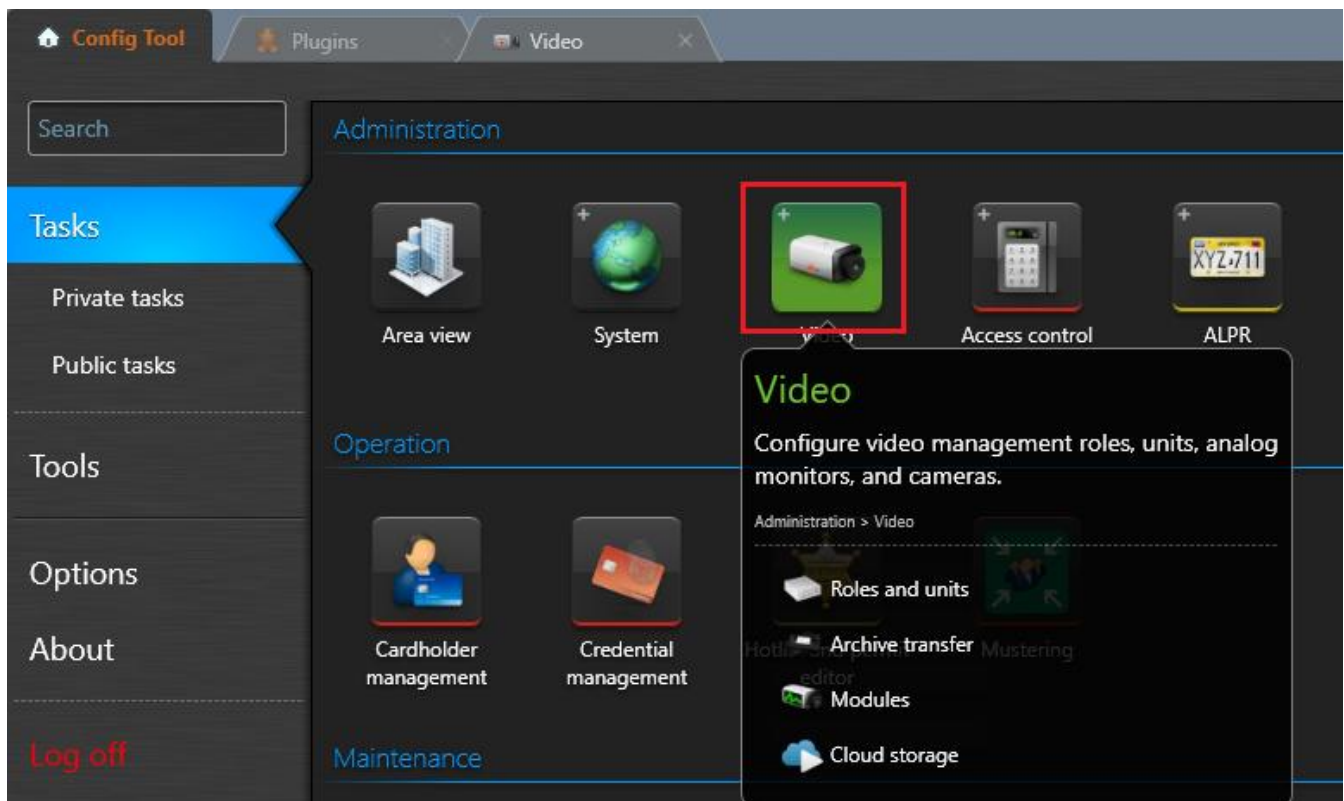
When initiating the search process, the server-side plug-in retrieves metadata from the database, checking for any data that matches the search criteria. The plug-in then sends the filtered content to the client-side plug-in for display.



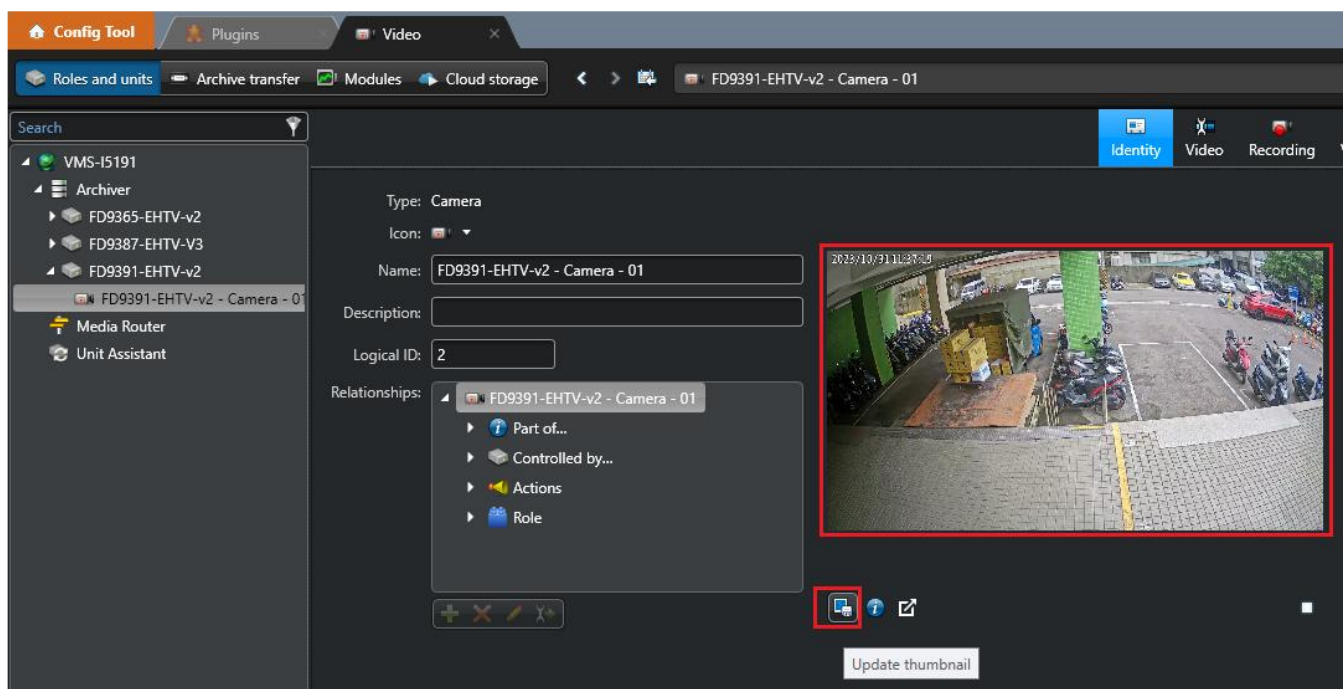
## 4.2 Enable Server-Side Plug-in

(1) Open Genetec Security Center – **Config Tool**

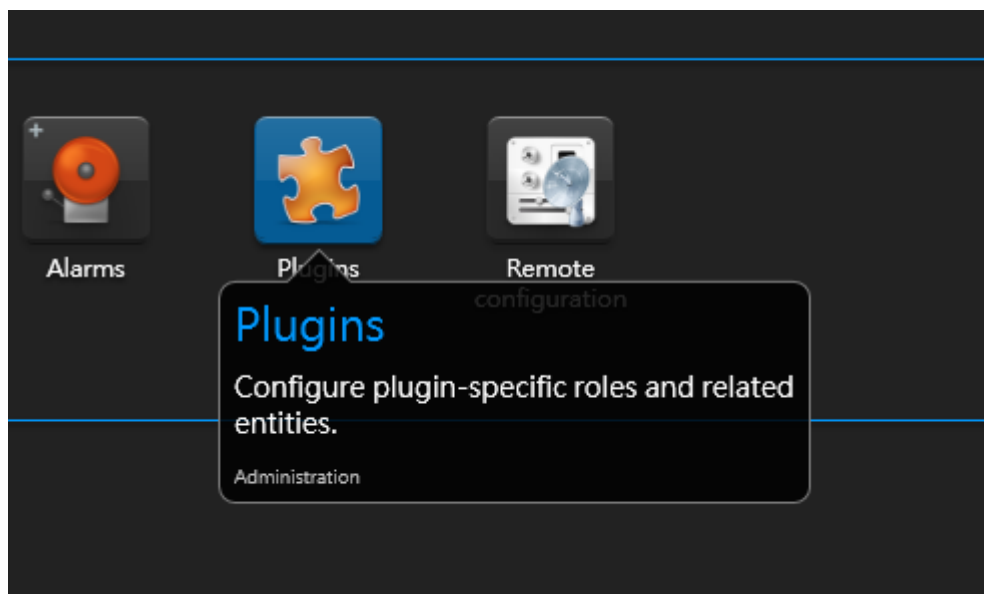
(2) Select “Video” task.



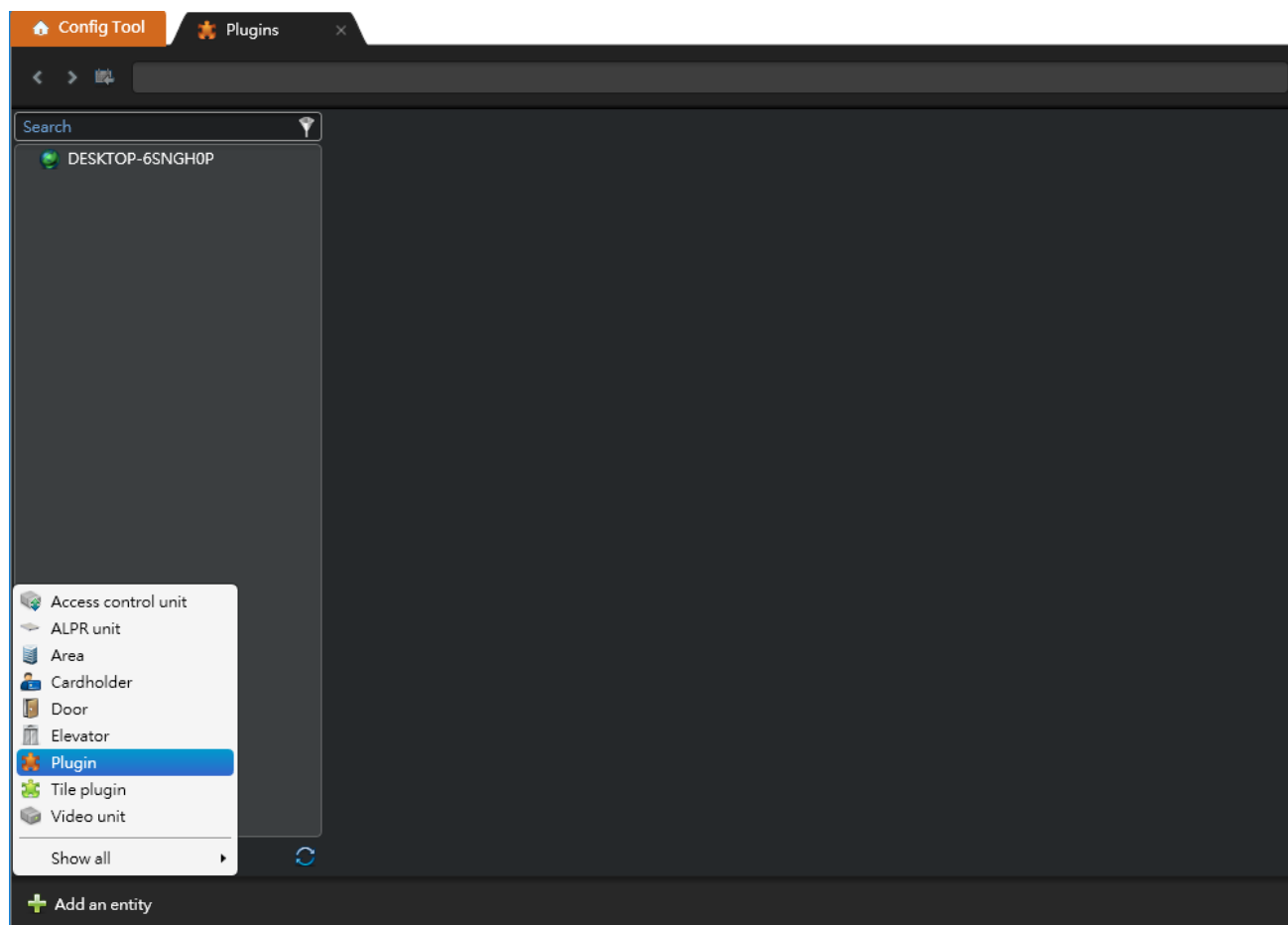
After added cameras into the Archiver, enable “**Continuous recording**” on “**Recording**” section, and enable “**Thumbnail**” and click “**Update thumbnail**” of the camera to get the “Scenes (full screen view for Deep Search Plugin)” for scene search.



(3) Select the “**Plugins**” task from the Configure Tool.



(4) Click “**Add an entity**” to add a plugin entity.



(5) Create a role: "VIVOTEK Deep Search Plugin". Select "**VIVOTEK Deep Search Plugin**" and go next steps with the default value.

Creating a role: Plugin

**Specific info**

Basic information

Summary

Entity creation outcome

Select plugin type:

- Sipelia™ Mobile
- LPR Plugin
- KiwiVision™ Manager
- KiwiVision™ Analyzer
- Certificate Signing
- VIVOTEK Deep Search Plugin**
- Genetec Clearance™

Database server: (local)\SQLEXPRESS

Database: VIVOTEKDeepSearchPlugin

Cancel

Next >

Creating a role: Plugin

Fill in the following fields. The entity description is optional.

Entity name: VIVOTEK Deep Search Plugin

Entity description: This is a VIVOTEK deep search plugin.

Cancel

Back

Next >

Creating a role: Plugin

Verify that the information below is correct. Use the Back button to go back and make corrections.

Summary

Entity creation outcome

- Role
- Partitions: VMS-01191
- Role: VIVOTEK Deep Search Plugin
- Genetec™ Server: VMS-01191
- Plugin type: VIVOTEK Deep Search Plugin

Cancel

Back

Create

Creating a role: Plugin

Entity creation outcome

The operation was successful

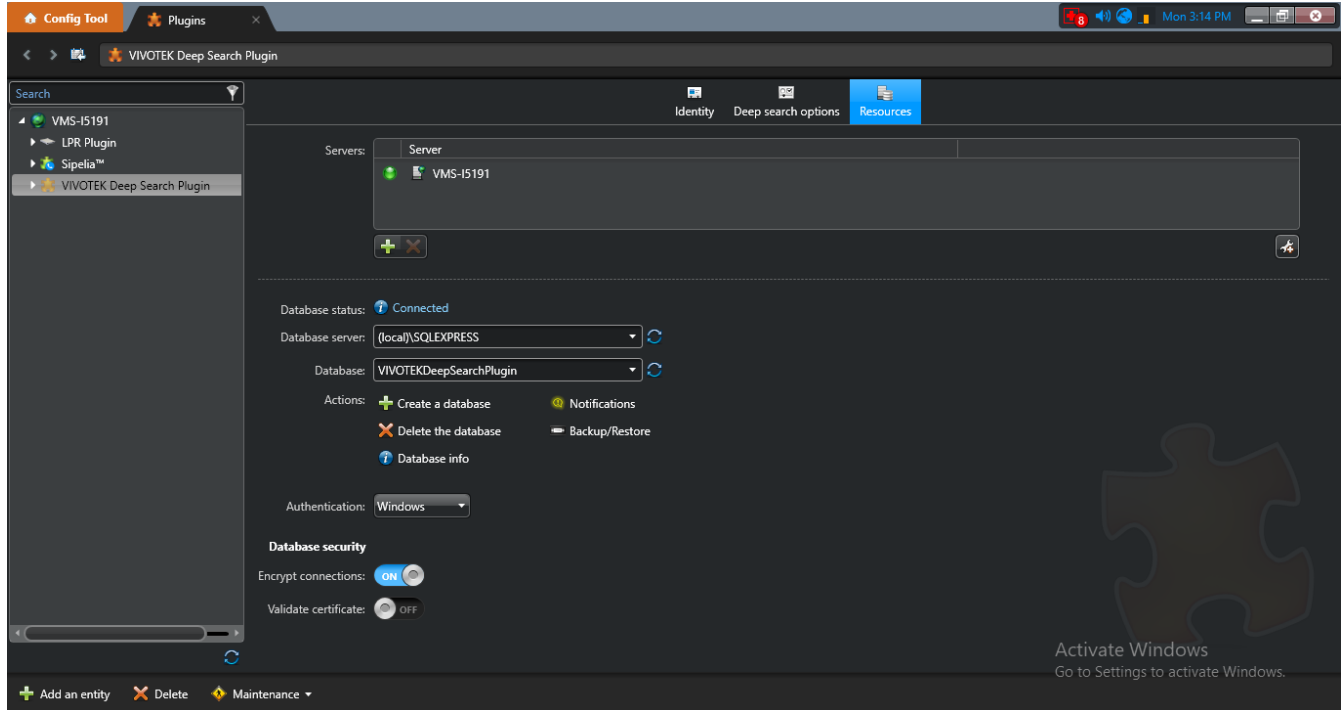
Close



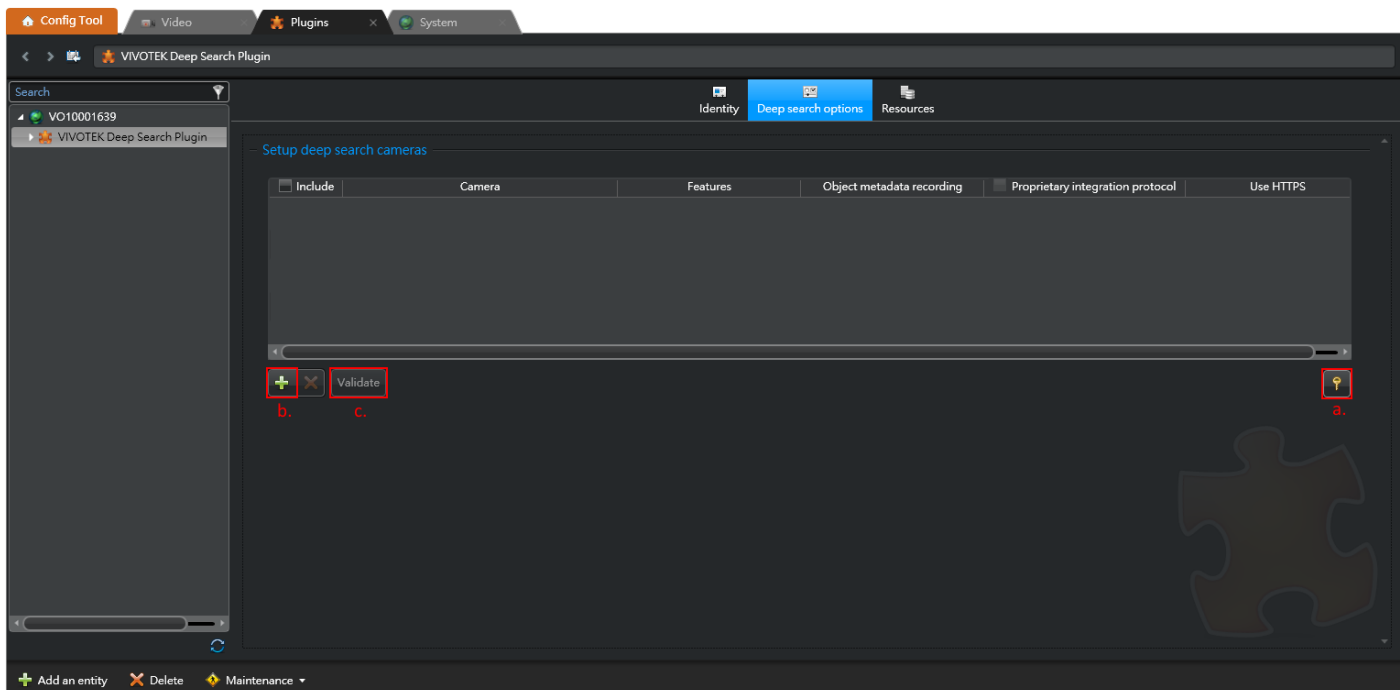
- (6) Click "**VIVOTEK Deep Search Plugin**" and check that "**Database status**" is "**Connected**" in the "**Resources**" section.

This database is only related to the Smart Search Plugin and its database on the Genetec Security Center server.

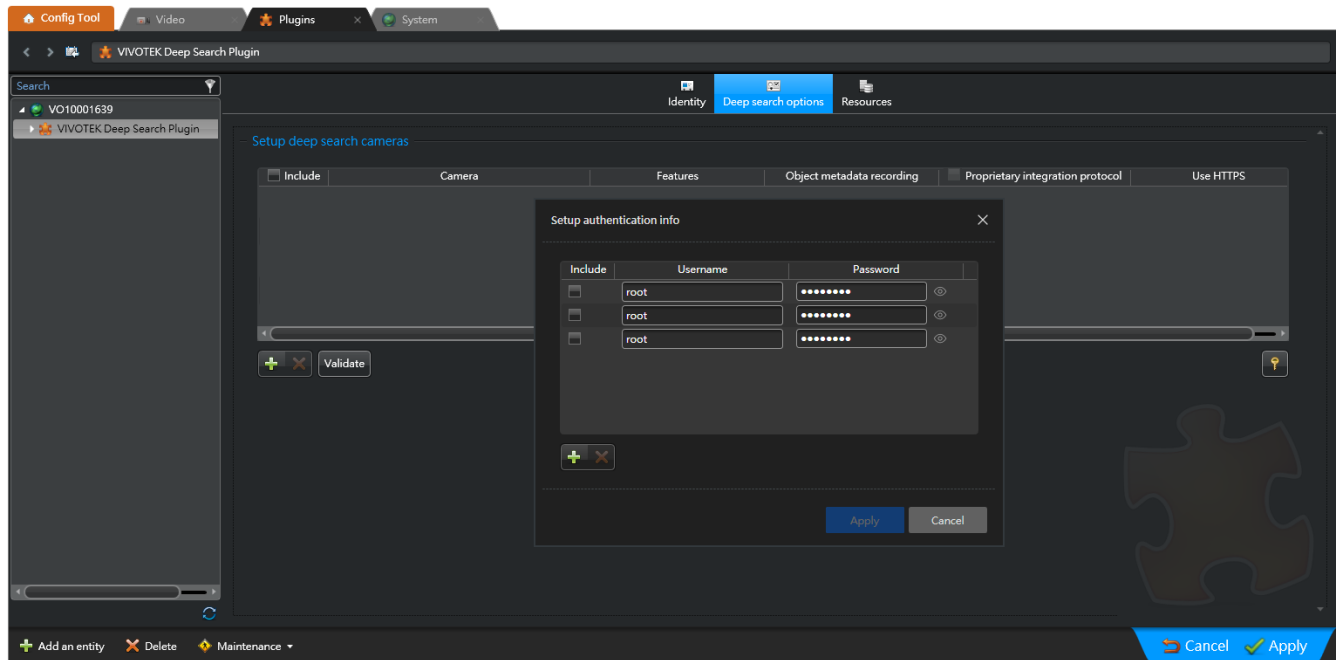
There is another database for the Deep Search Plugin, which is indicated in the above installation process.



- (7) Click "**Deep search options**", where you can manage the deep search cameras from the camera pool from the Archiver.

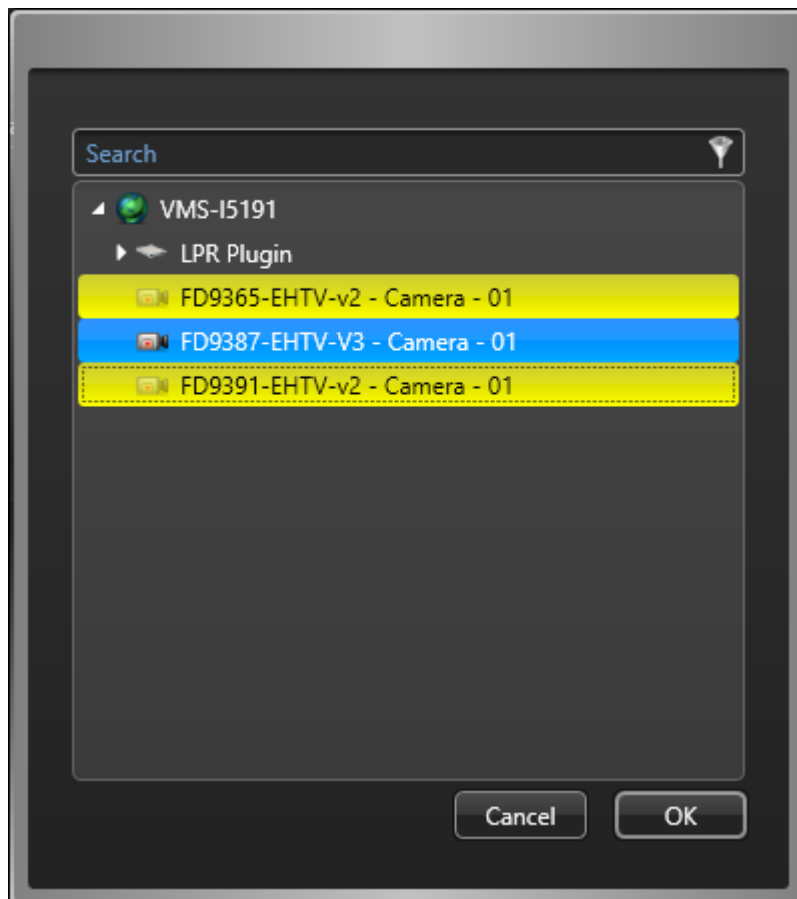


- a. Click the "Key" icon, and the "+" to add the IDs and Passwords of the cameras that are supported by the VIVOTEK attribute search, and click "Apply" to keep those settings.

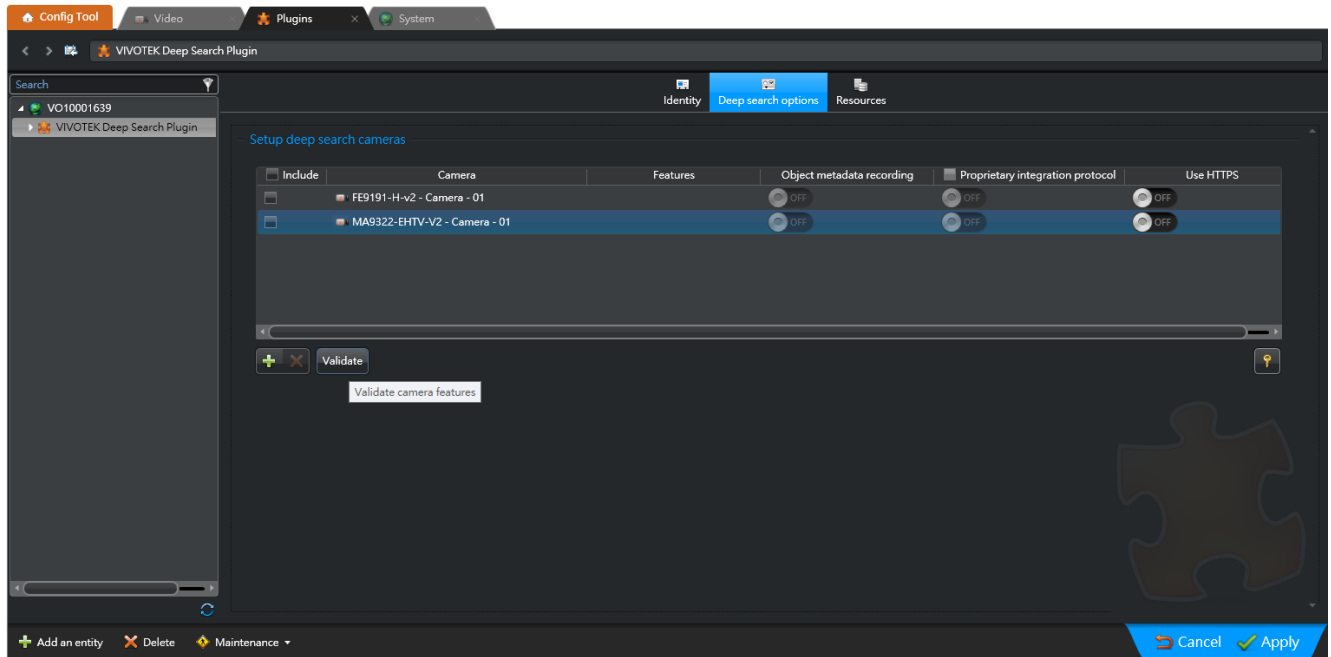


**Note**, if the “Unit password changed” is scheduled by system generated, we would recommend creating a unique ID and password on the camera side for the object metadata transmission without affected by the password changes.

- b. Click “+” to add camera into the deep search camera pool. Choose those cameras that supported by VIVOTEK attribute search with valid license, and then click “OK” to keep those selected cameras.

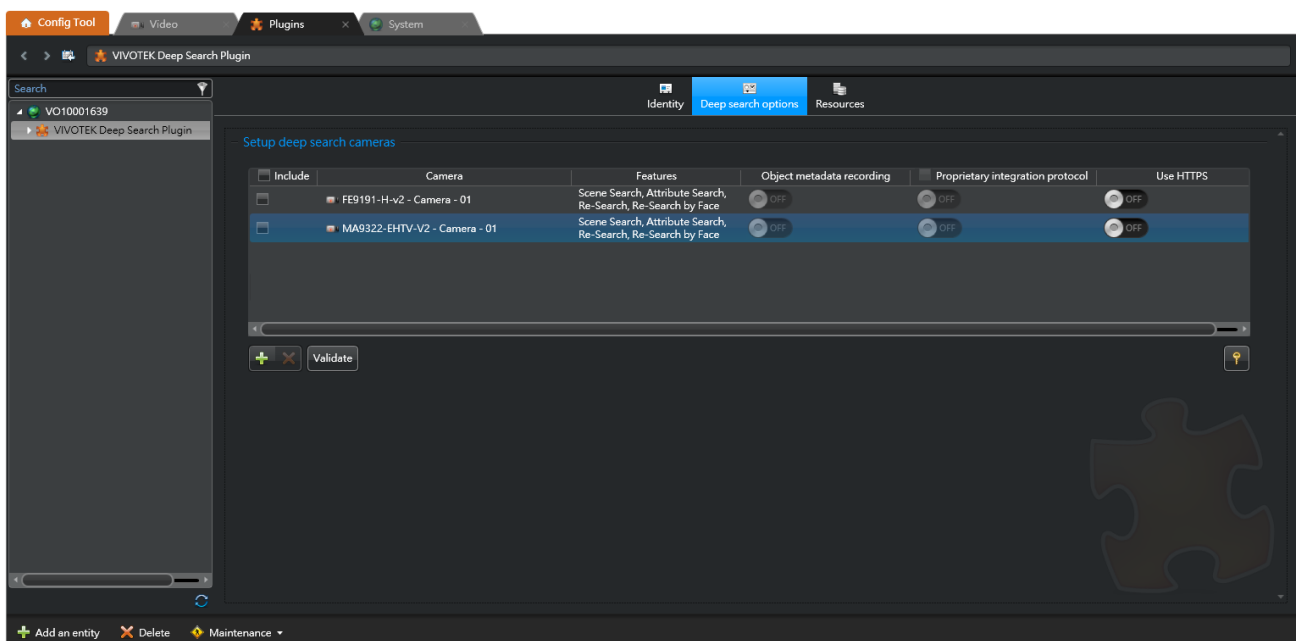


## c. Click “Validate” to verify the camera features



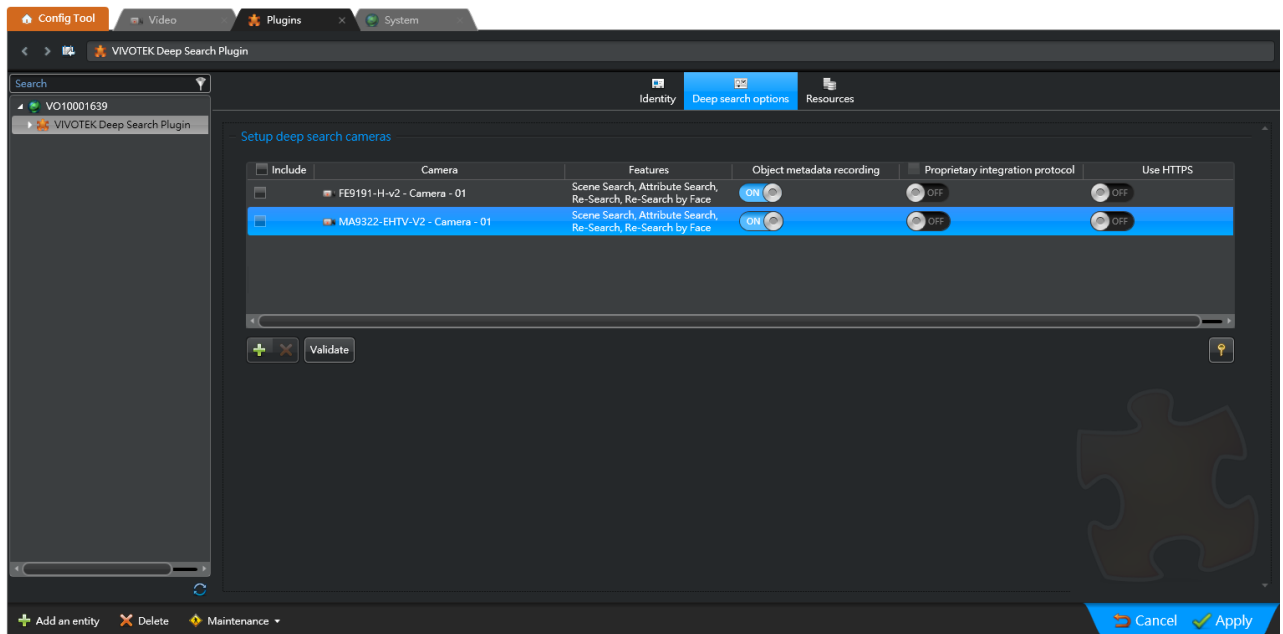
## Features:

- Invalid: Non-VIVOTEK brand cameras or cameras that cannot connect.
- Not Support: Cameras that do not support the deep search functionality.
- Scene Search: Cameras that support Scene Search.
- Attribute Search: Cameras that support Attribute Search.
- Re-Search: Cameras that support Re-Search. (requires a Re-Search-ObjMetadata license)
- Re-Search by Face: Cameras that support Re-Search by face. (requires a FaceInfo-ObjMetadata license)

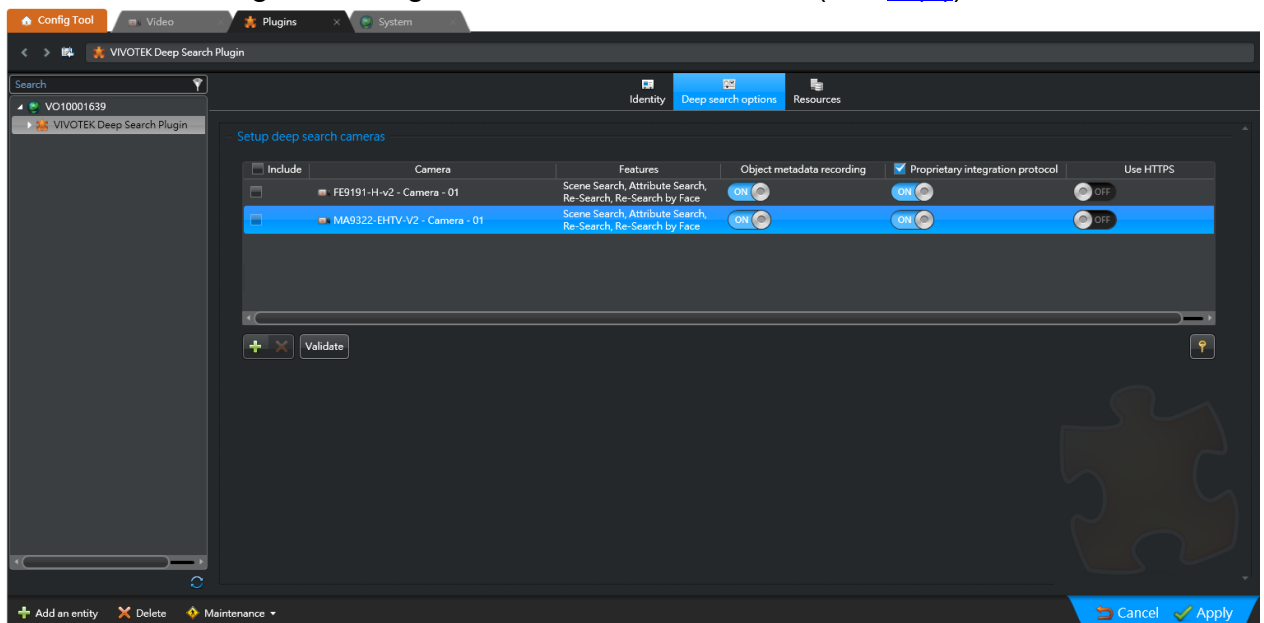


## d. Choose the camera that would like to use the Deep Search Plugin, enable the “Object metadata recording”, and then click “Apply”.

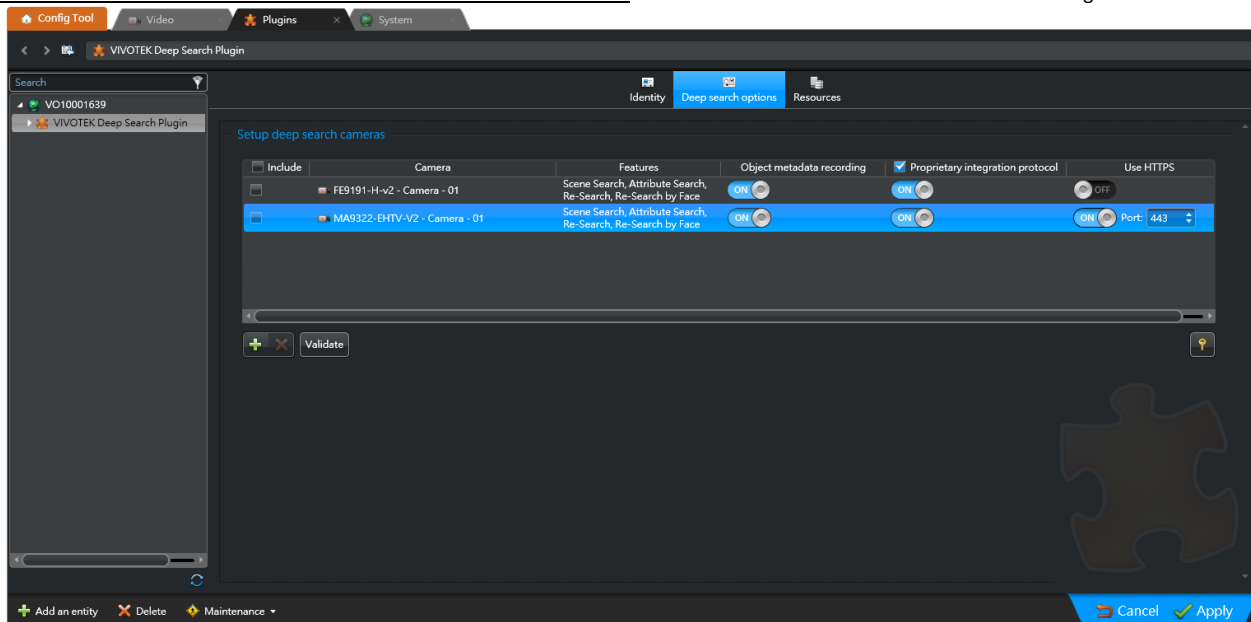
The system will request data from the camera and save it to the database.



- e. The proprietary integration protocol enables the VCA package to transmit the data required by the Smart Search plugin. The configuration is identical to that in the Camera VCA web's Settings -> Configuration -> Protocol section. (see [3.\(4\)](#))

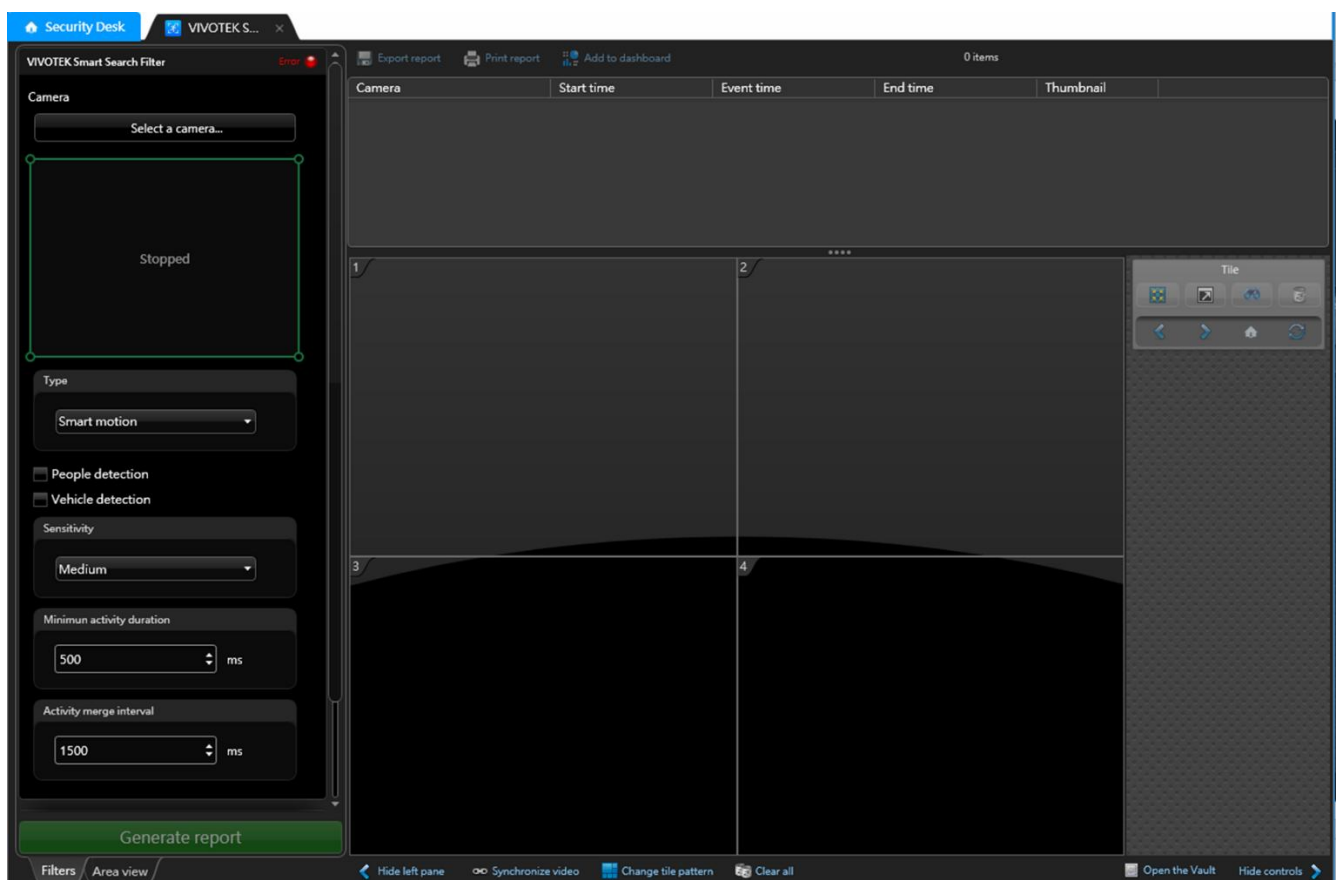
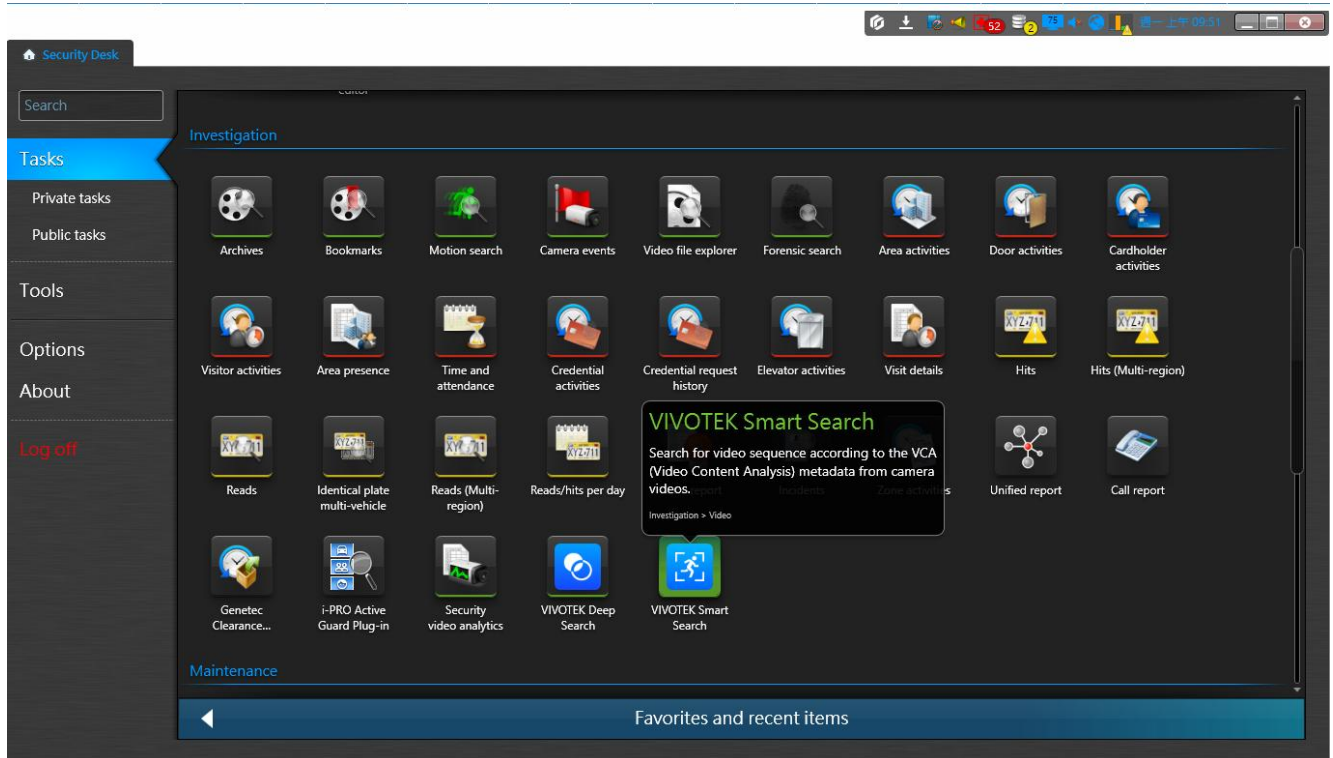


- f. If the cameras are connected to the Genetec Security Center Server by "HTTPS" protocol, please enable "Use HTTPS", indicate the Port number, and click "Apply".



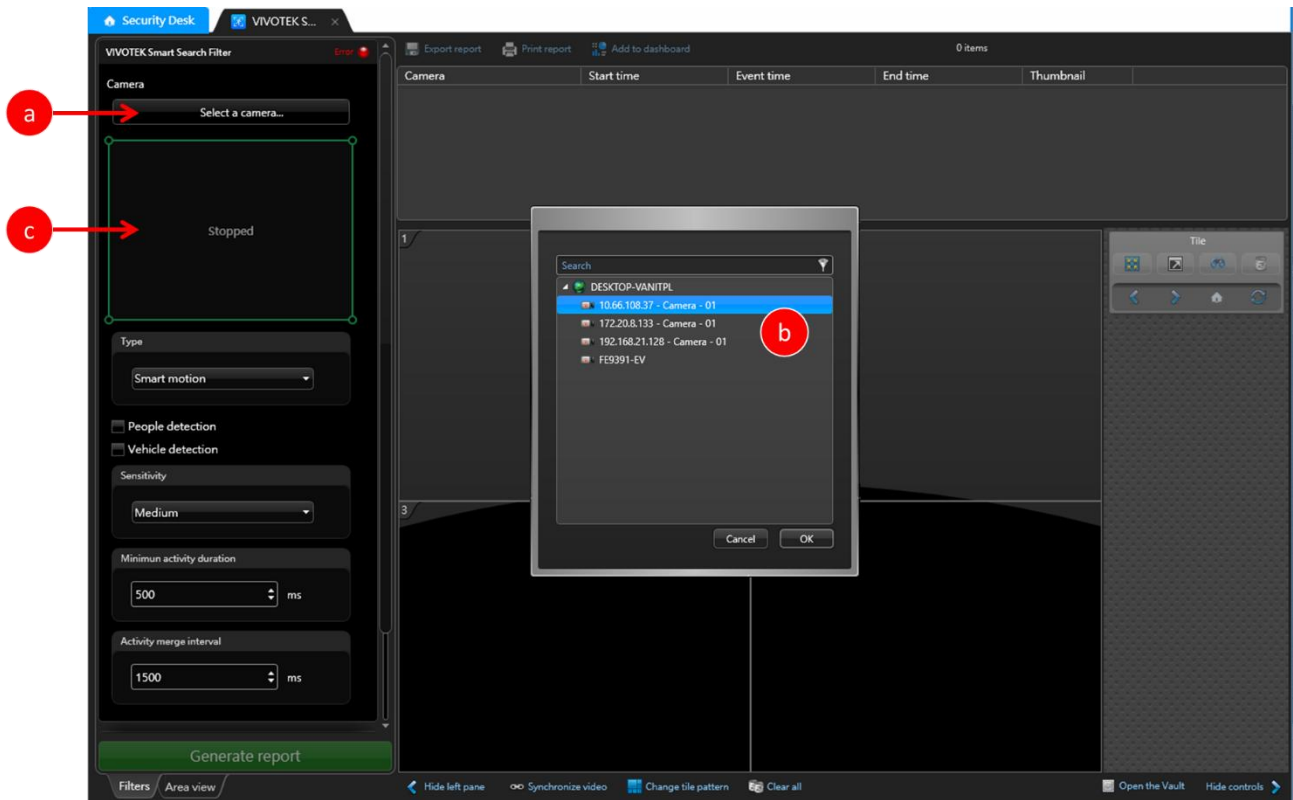
## 4.3 Search Operation with Client-Side Smart Search Plug-in

- (1) Open Genetec Security Center – **Security Desk**
- (2) Select “**VIVOTEK Smart Search**” task in “**Investigation**” group.



- (3) Select a camera to investigate.
  - a. Click "**Select a camera...**" button to open an entity selection window.

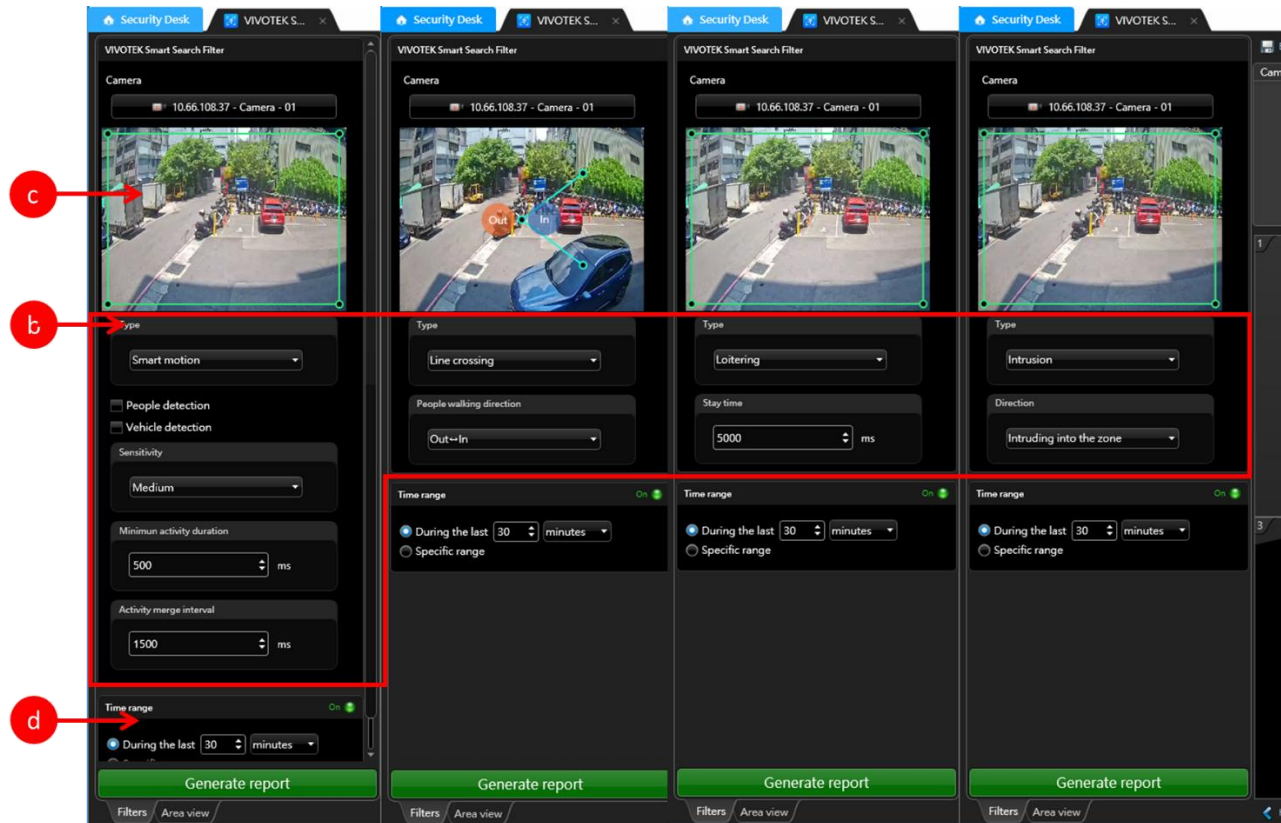
- b. Select a camera in the entity selection window and click "OK".
- c. A live video preview is displayed below "Select a camera..." button when the camera is selected.



(4) Edit the search filter.

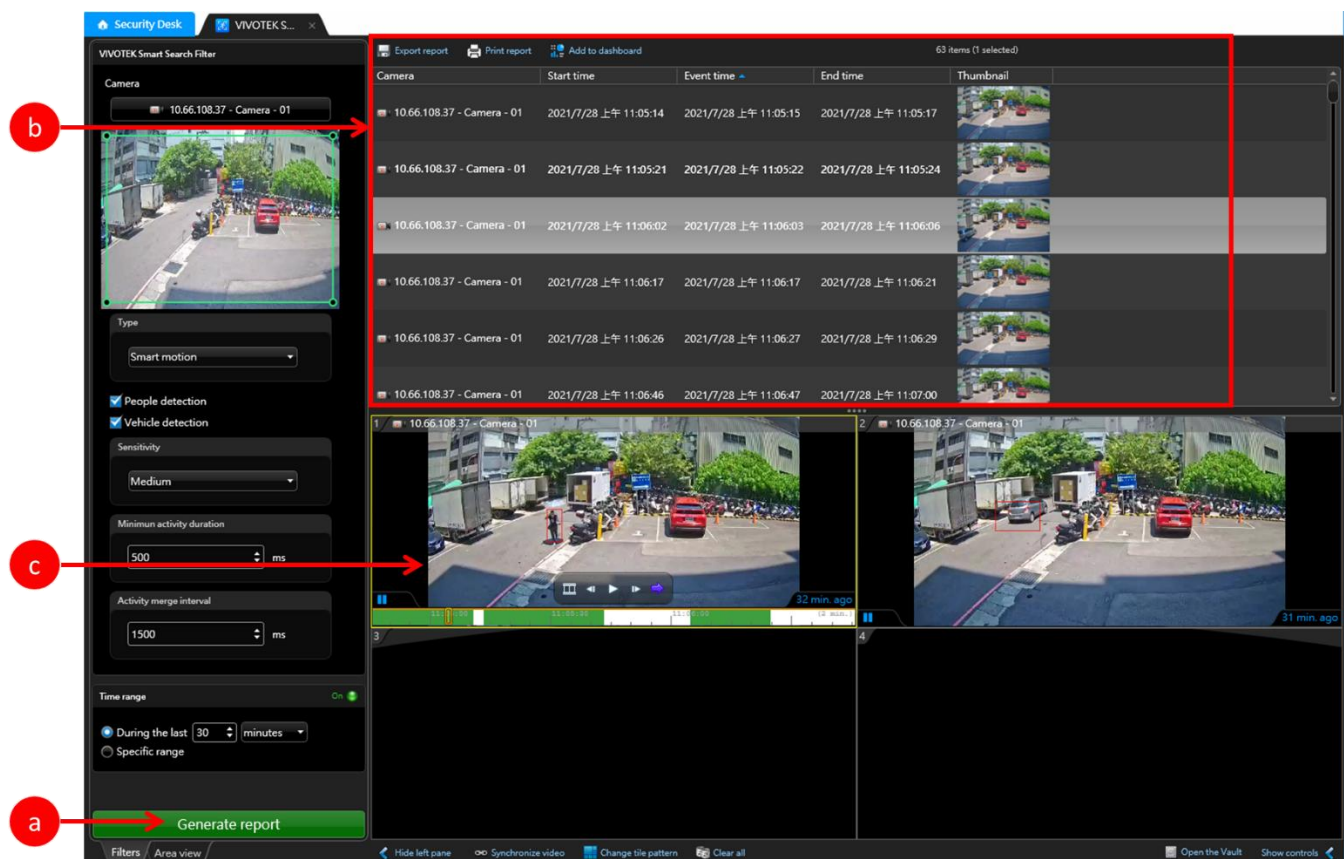
- a. There are four rule types: Smart motion, Line crossing, Loitering, and Intrusion.
- b. Select a rule in the "Type" area and configure its properties.
- c. Adjust the detection polygons or lines by mouse controlling on the preview. Users can click and drag the small circles to adjust the detection fields and right-click on the mouse to reset polygons or lines.
- d. Set the "Time range" to select a time range for the report.





(5) Click “**Generate report**” button to start search.

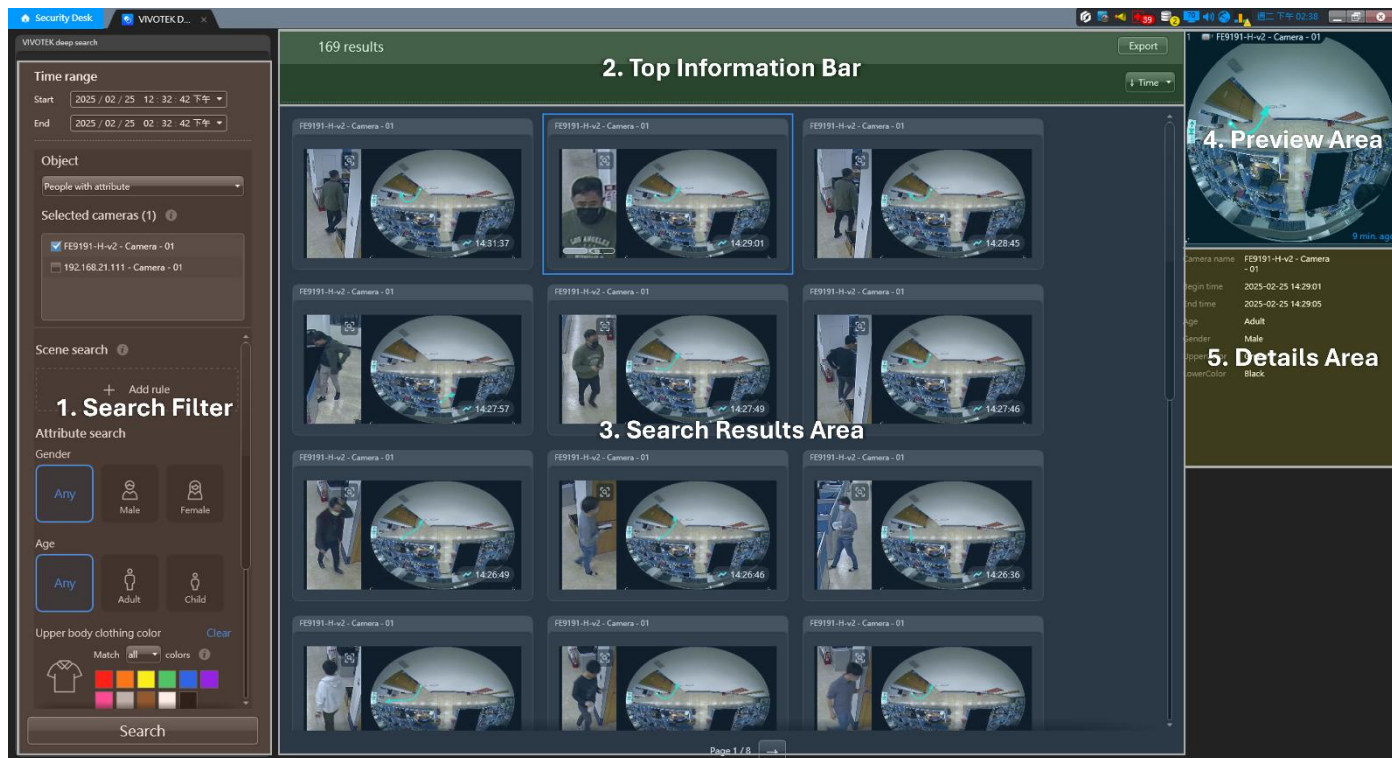
- Click “**Generate report**” button.
- The search results are listed in the report pane after a few seconds.
- When double-clicking on a row of the report, the tile in the canvas will play the associated camera video from the start time.





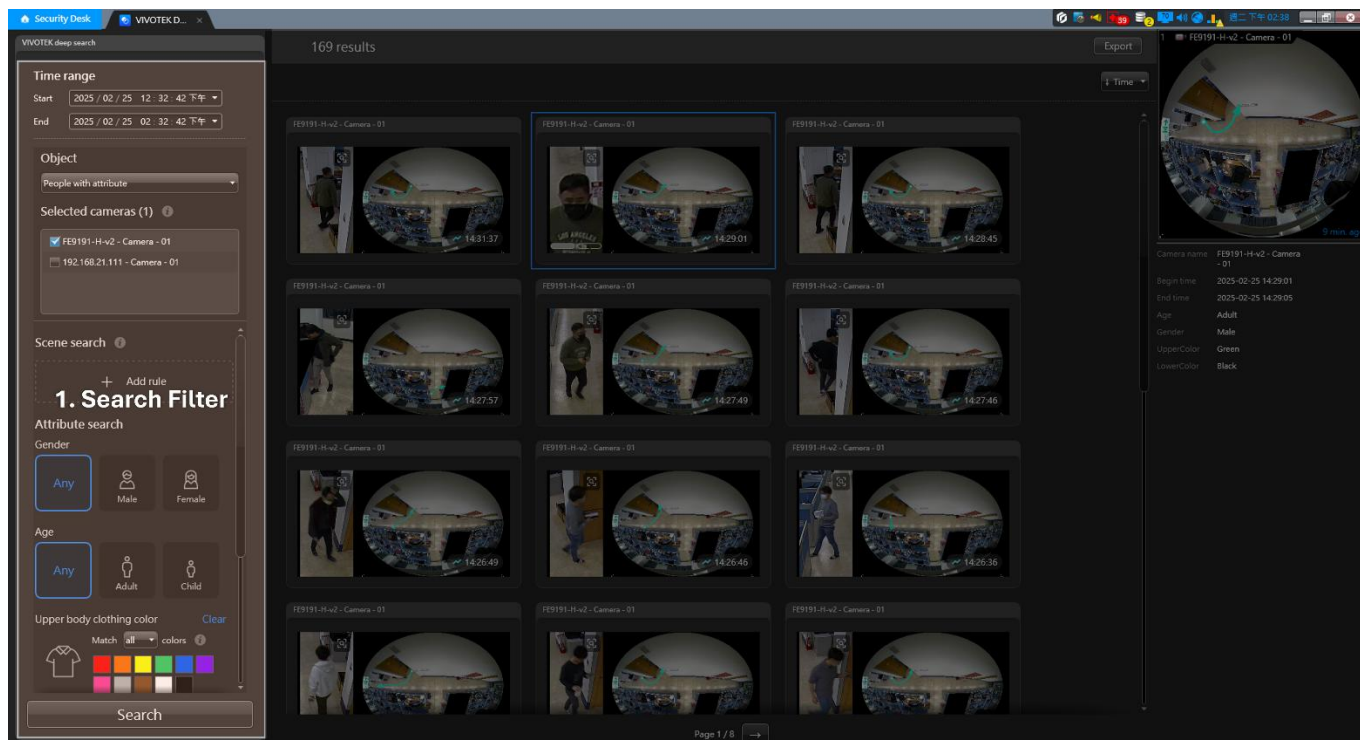
## 4.4 Deep Search Plug-in

### 4.4.1 Overview



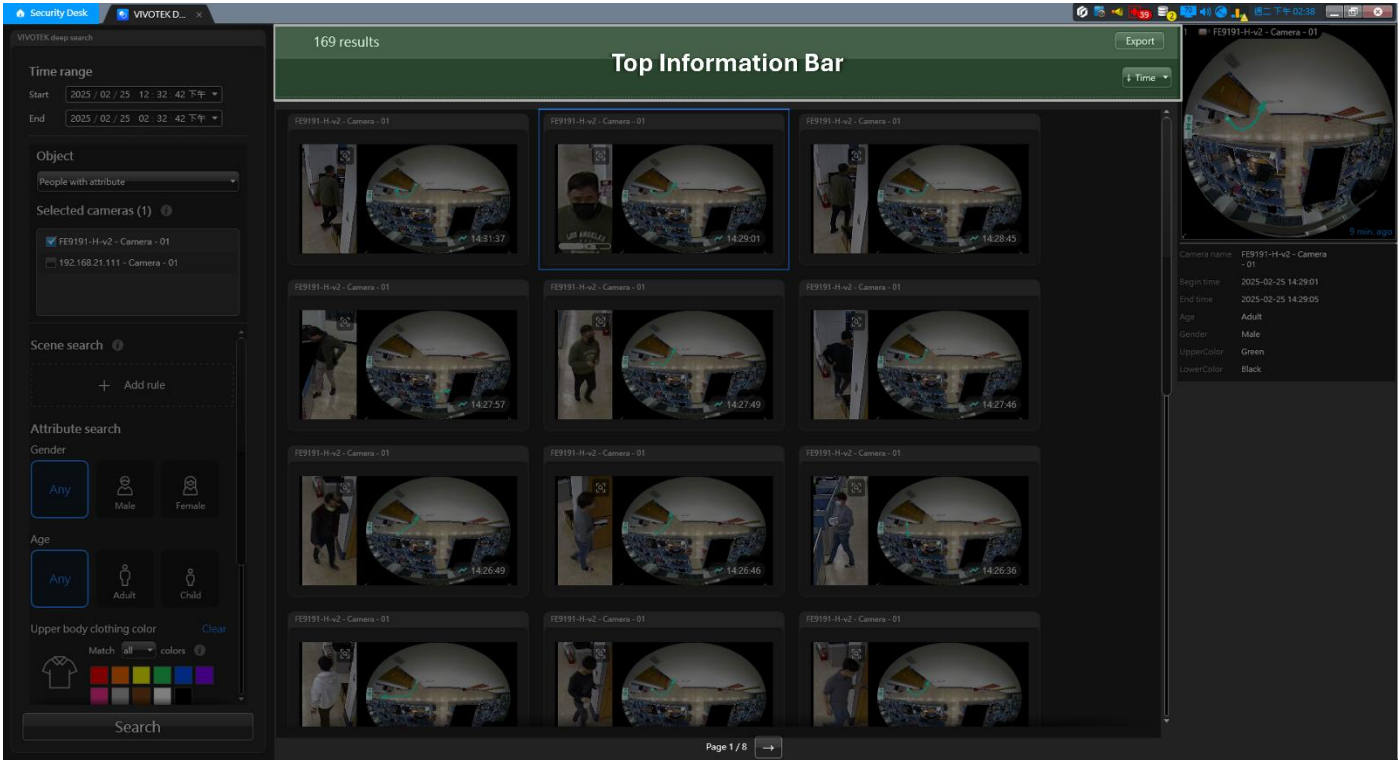
Area	Description
<b>Search Filter</b>	Configures search parameters (e.g., time range, attributes) to refine query criteria.
<b>Top Information Bar</b>	Displays the result count, a sort order selector, and data export options.
<b>Search Results Area</b>	Browses results through paginated segments.
<b>Preview Area</b>	Shows camera playback of the selected result.
<b>Details Area</b>	Displays key information of the selected result.


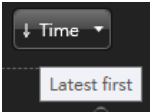
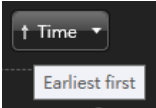
## 4.4.2 Search Filter



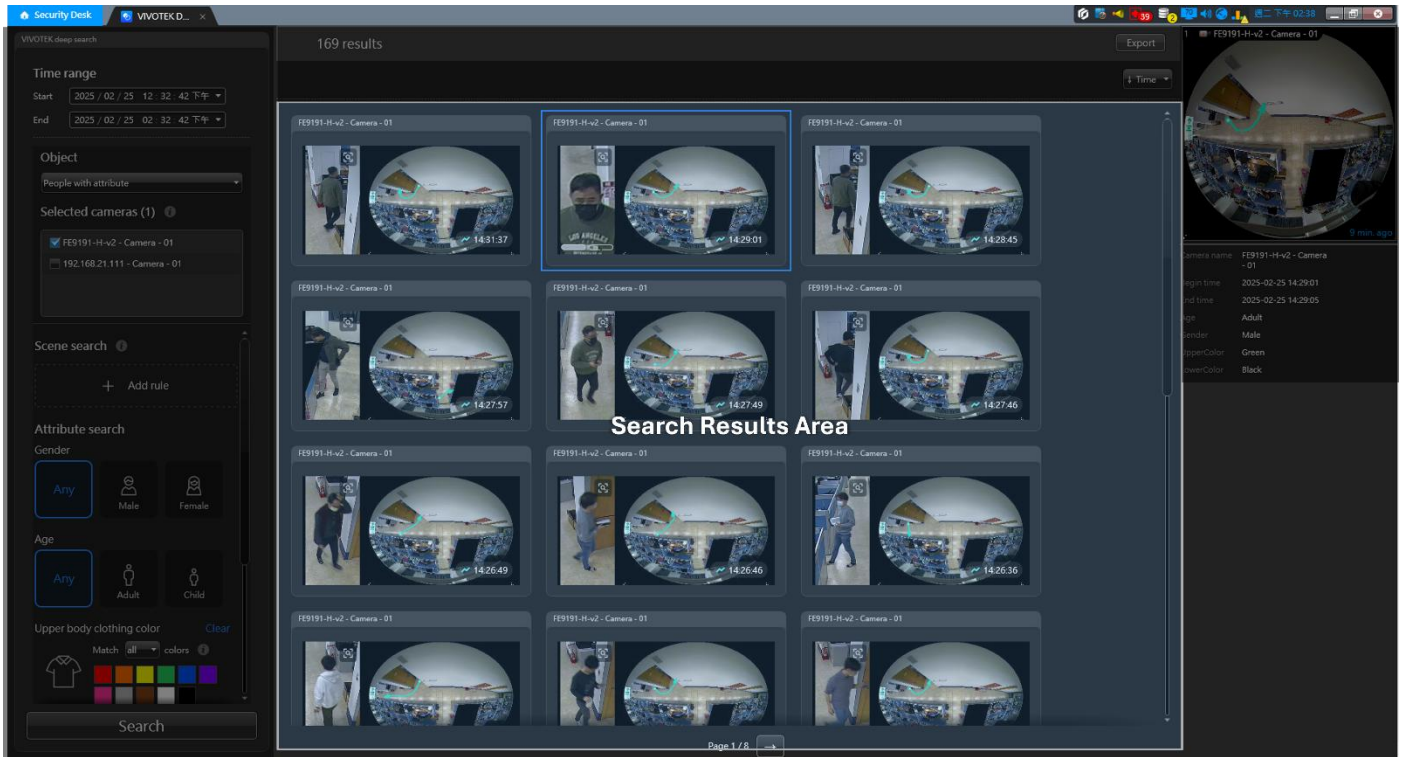
Section	Description
<b>Time range</b>	Select a period for query
<b>Object</b>	People with attribute, People, Vehicle with attribute, Vehicle.
<b>Selected cameras</b>	Only devices listed in the “Setup deep search cameras” within the “Config Tool” will be displayed in the “Select device list” list.
<b>Scene search</b>	Filter by rule is supported only on a single camera.
<b>Attribute search</b>	<p><b>People attributes:</b></p> <ul style="list-style-type: none"> <li>■ Gender: Any, Male, Female</li> <li>■ Age: Any, Adult, Child</li> <li>■ Upper body clothing color: Red, Orange, Yellow, Green, Blue, Purple, Pink, Gray, Brown, White, Black</li> <li>■ Lower body clothing color: Red, Orange, Yellow, Green, Blue, Purple, Pink, Gray, Brown, White, Black</li> <li>■ Accessories: Bag, Hat</li> <li>■ Color and Accessories with “All” / “Any” option, and limited the max. three (3) color options.</li> </ul> <p><b>Vehicle attributes:</b></p> <ul style="list-style-type: none"> <li>■ Vehicle type: Any, Car, Truck, Bus, Motorcycle, Bike</li> <li>■ Color: Red, Orange, Yellow, Green, Blue, Gray, Brown, White, Black</li> <li>■ Motorcycles and bikes do not support color attributes.</li> <li>■ Color with “All” / “Any” option, and limited the max. three (3) color options.</li> </ul>
<b>Search button</b>	Click to start search.



4.4.3 Top Information Bar



Section	Description
Result count	Search results count (max: 200). If your query returns over 200 results (200+ results), refine your search to view more relevant entries.
Export	Export search results to an HTML file.  Once export is complete, click the folder icon  (left of the export button) to access the file directory.
Sort order	By default, the first 200 results will be listed if the time is sorted from the latest to the earliest.   The first 200 results will be listed if the time is sorted from the earliest to the latest. 

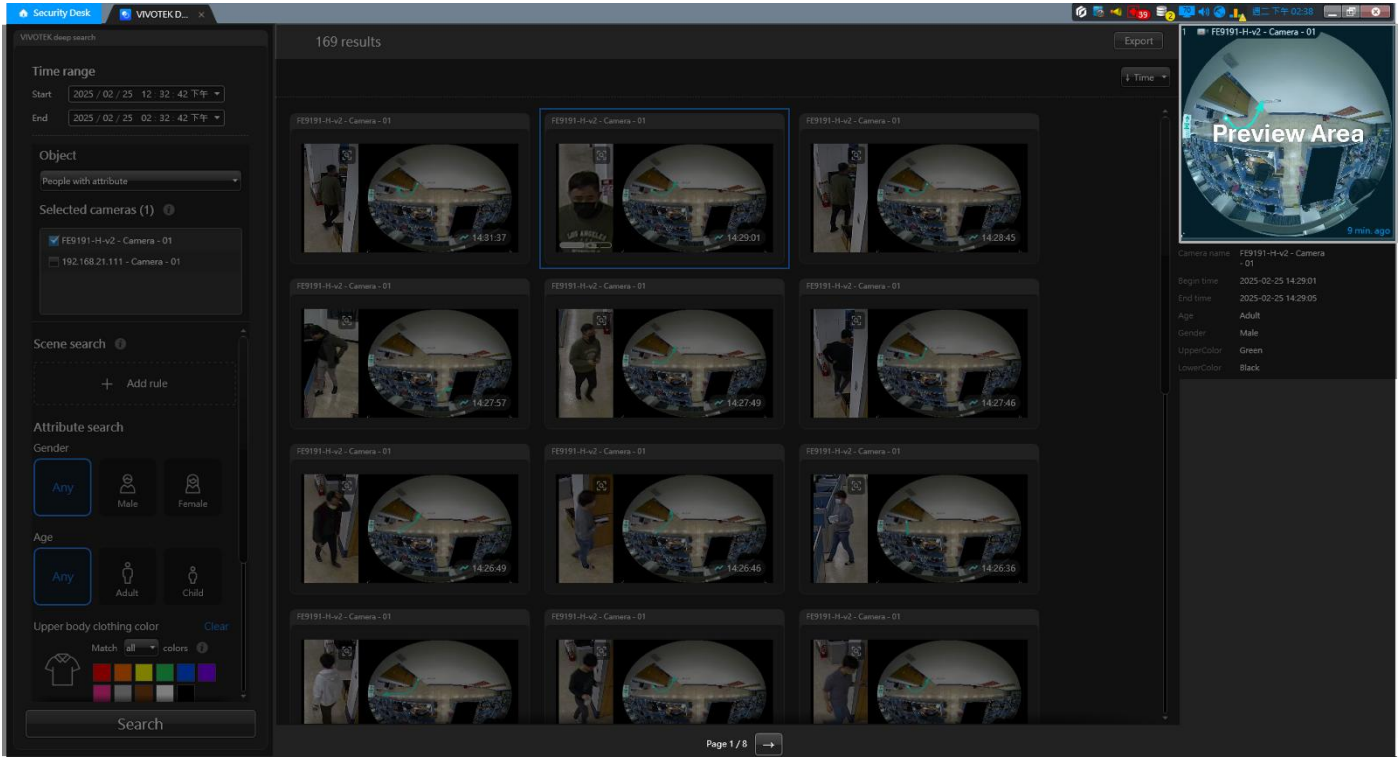
4.4.4 Search Results Area




Section	Description
<div><div>FE9191-H-v2 - Camera - 01</div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>15:03:31</div></div>	<ul style="list-style-type: none"><li>● Header Section<ul style="list-style-type: none"><li>■ Displays the camera name at the top.</li></ul></li><li>● Left Section: Object Thumbnail<ul style="list-style-type: none"><li>■ Human<ul style="list-style-type: none"><li>◆ Shows two thumbnails (Face prioritized over Body).<ul style="list-style-type: none"><li>● Face thumbnails may not exist.</li></ul></li><li>◆ A toggle slider below to switch between Face and Body views.</li><li>◆ Re-Search Feature:<ul style="list-style-type: none"><li>● A re-search icon  appears at the top-right corner of the thumbnail, If supported (see <a href="#">4.2.(7).c</a>).</li><li>● On mouse hover, a green button  is shown – click to initiate Re-Search.</li></ul></li></ul></li><li>■ Vehicle<ul style="list-style-type: none"><li>◆ Show full-view thumbnail of the vehicle.</li></ul></li></ul></li><li>● Right Section: Camera Snapshot<ul style="list-style-type: none"><li>■ Displays hourly snapshots from the camera.</li><li>■ Overlays a teal-colored object trace with arrows indicating direction and dots marking the starting point.</li></ul></li></ul> <p>Bottom-right corner shows the object's start time.</p>
<div><div>←</div><div>Page 2 / 9</div><div>→</div></div>	<p>There are buttons at the bottom for switching pages, with a maximum of 9 pages (24 results per page). Up to 200 results will be displayed.</p>

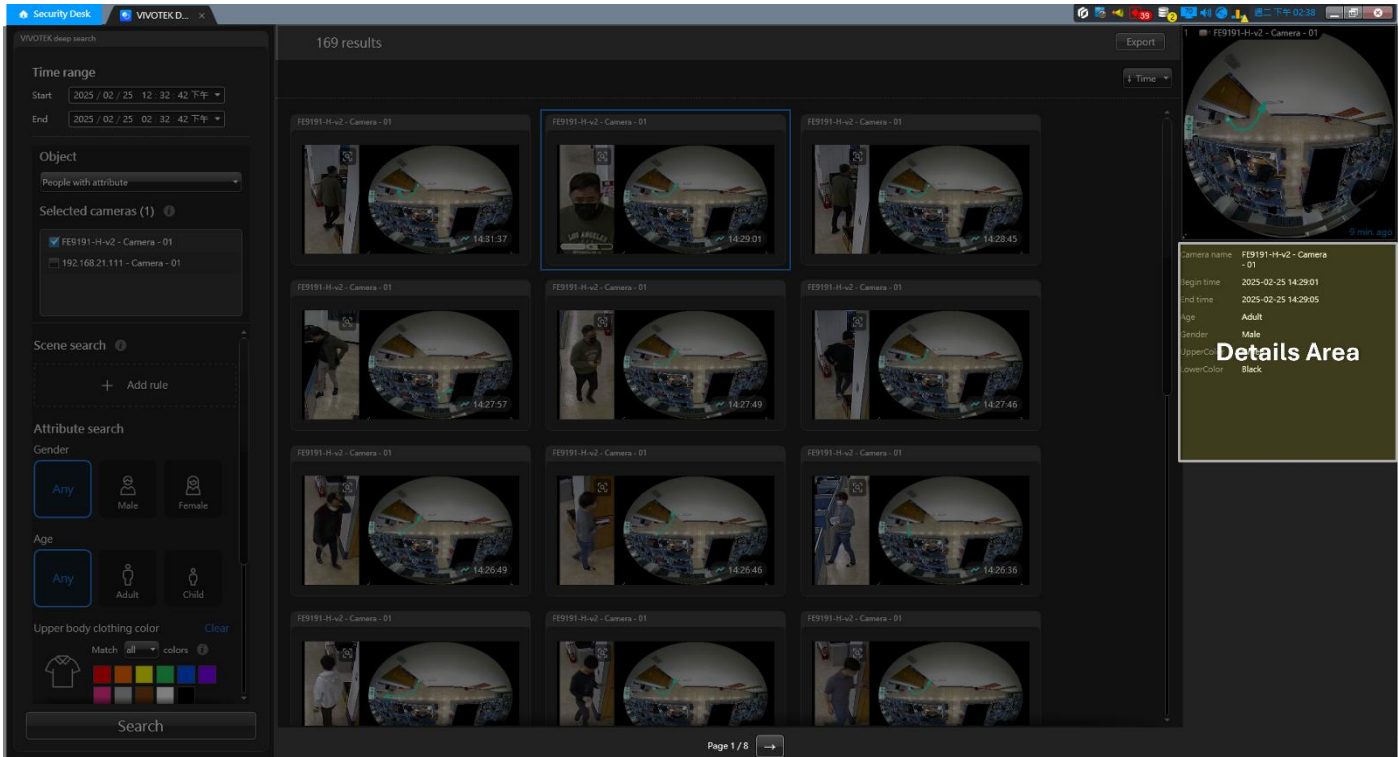


4.4.5 Preview Area



Section	Description
<div><div>1</div><div></div></div>	<div><div>●</div><div>Upon selecting a search result, the preview area displays camera playback with 5-second pre/post object video clips.<div><div>■</div>Overlays a teal-colored object trace.</div><div><div>■</div>Overlays red-colored object bounding box. (see <a href="#">3.(4)</a>)</div><div><div>■</div>Arrows indicate direction.</div><div><div>■</div>Dots mark the starting point.</div></div></div>

4.4.6 Details Area

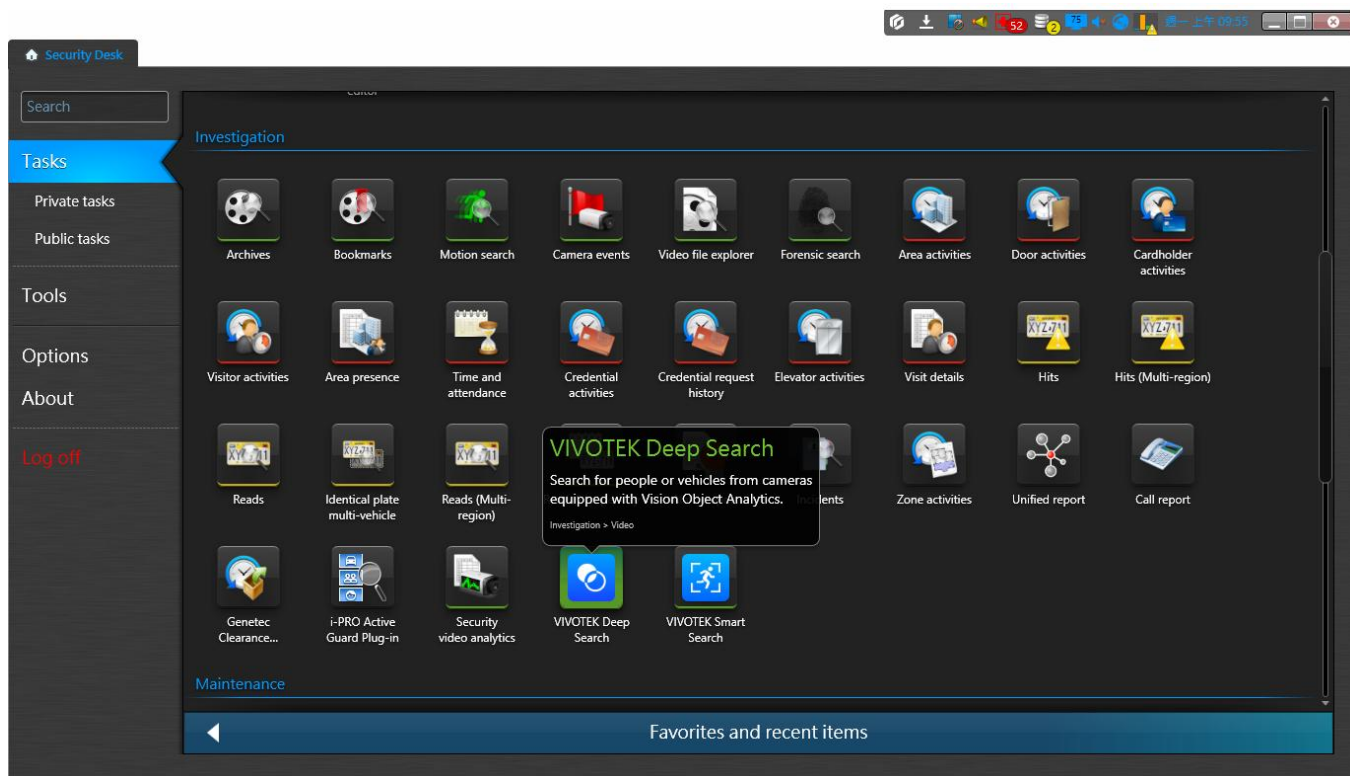


Section	Description
Detail Area	<ul style="list-style-type: none"><li>● Displays the following properties for the selected result:<ul style="list-style-type: none"><li>■ Camera name</li><li>■ Timestamp</li><li>■ Object attributes (if parameters exist; otherwise, omitted)</li></ul></li><li>● For Re-Search results:<ul style="list-style-type: none"><li>■ Face Matches: Displays Face Score (if score &gt; 50).</li><li>■ Body Matches: Displays Body Score (if score &gt; 50).</li></ul></li></ul> <p>You'll see only one score, based on the matched object type (Face or Body).</p>

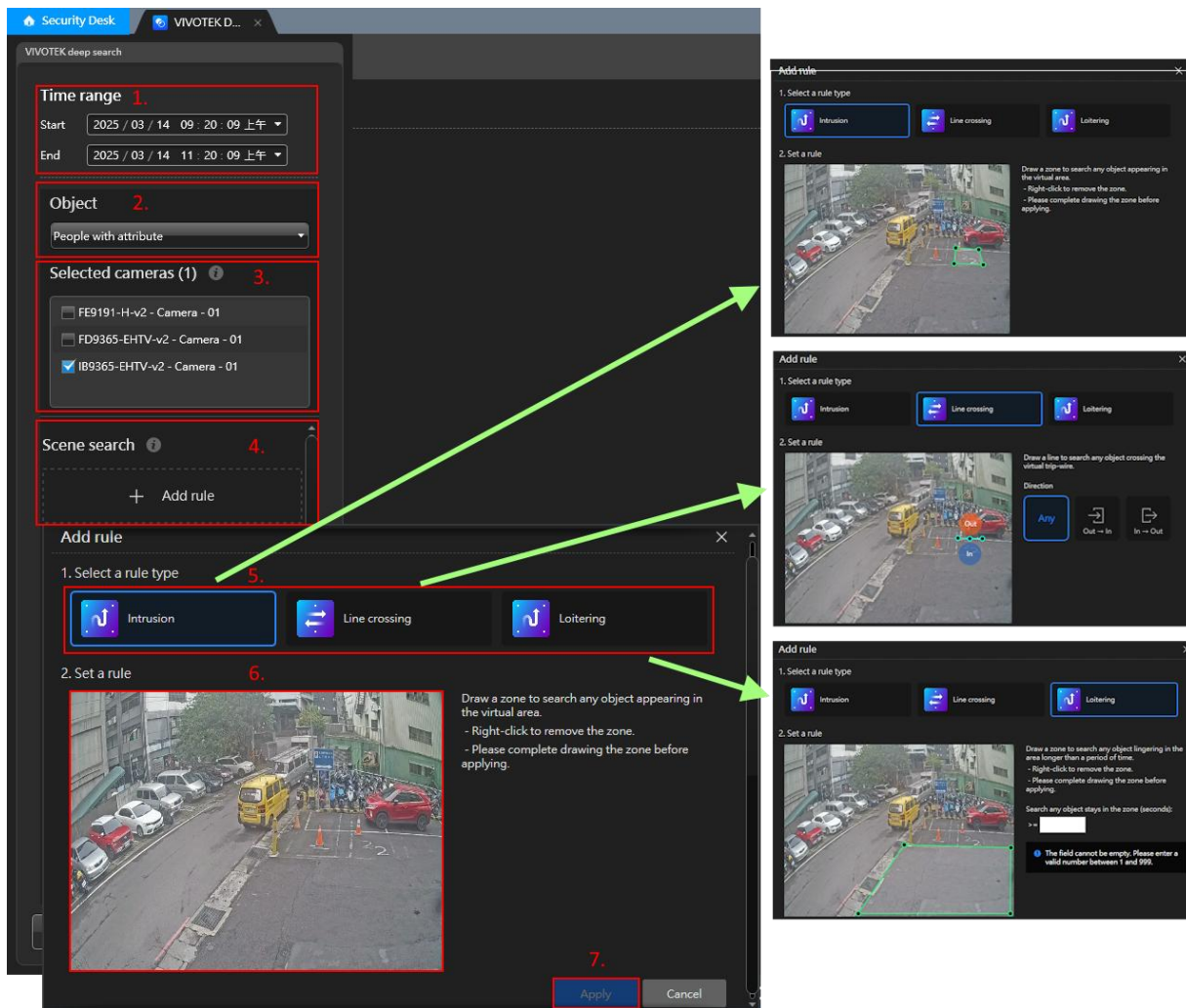
## 4.4.7 Search Operation

### 4.4.7.1 Open Deep Search Plug-in

1. Open Genetec Security Center – **Security Desk**.
2. Select “**VIVOTEK Deep Search**” task in “**Investigation**” group.



## 4.4.7.2 Search “People with attribute” and “Scene search” in a camera.



1. Configure the time range by setting its start and end times.
2. Choose “**Object**”: “**People with attribute**”.
3. Select a device.
4. Click the “**+ Add rule**” button.
5. Select a rule type: Intrusion Detection, Line Crossing Detection, and Loitering Detection.
6. Click on the camera snapshot to set up the rule points (detection area/position).  
Adjust the detection polygons or lines by mouse controlling the preview. Users can click and drag the small circles to adjust the detection fields and right-click on the mouse to reset polygons or lines.
7. Click “**Apply**”.
8. Edit people attributes: “**Gender**”, “**Age**”, “**Upper body clothing color**”, “**Lower body clothing color**”, and “**Accessories**”.



**Attribute search**

Gender

Any **Male** Female

Age

Any **Adult** Child

Upper body clothing color

Match any colors

Lower body clothing color

Match all colors

Accessories

Match all items

Bag Hat

9. Click “**Search**” to get the filtered results.

Security Desk VIVOTEK D...

VIVOTEK deep search

Time range

Start 2025 / 03 / 14 09:20 上午

End 2025 / 03 / 14 11:20 上午

Object

People with attribute

Selected cameras (1)

FE9191-H-v2 - Camera - 01

FD9365-EHTV-v2 - Camera - 01

IB9365-EHTV-v2 - Camera - 01

Age

Any Adult Child

Upper body clothing color

Match any colors

Lower body clothing color

Match all colors

Accessories

Match all items

Bag Hat

Search

13 results

Export

Time

Select a search result to preview it.

Page 1 / 1

### 4.4.7.3 Re-search

1. After the primary search, find the bestshots with additional icon for “Re-Search”.
  - a. Search Result without “Re-Search” capability.



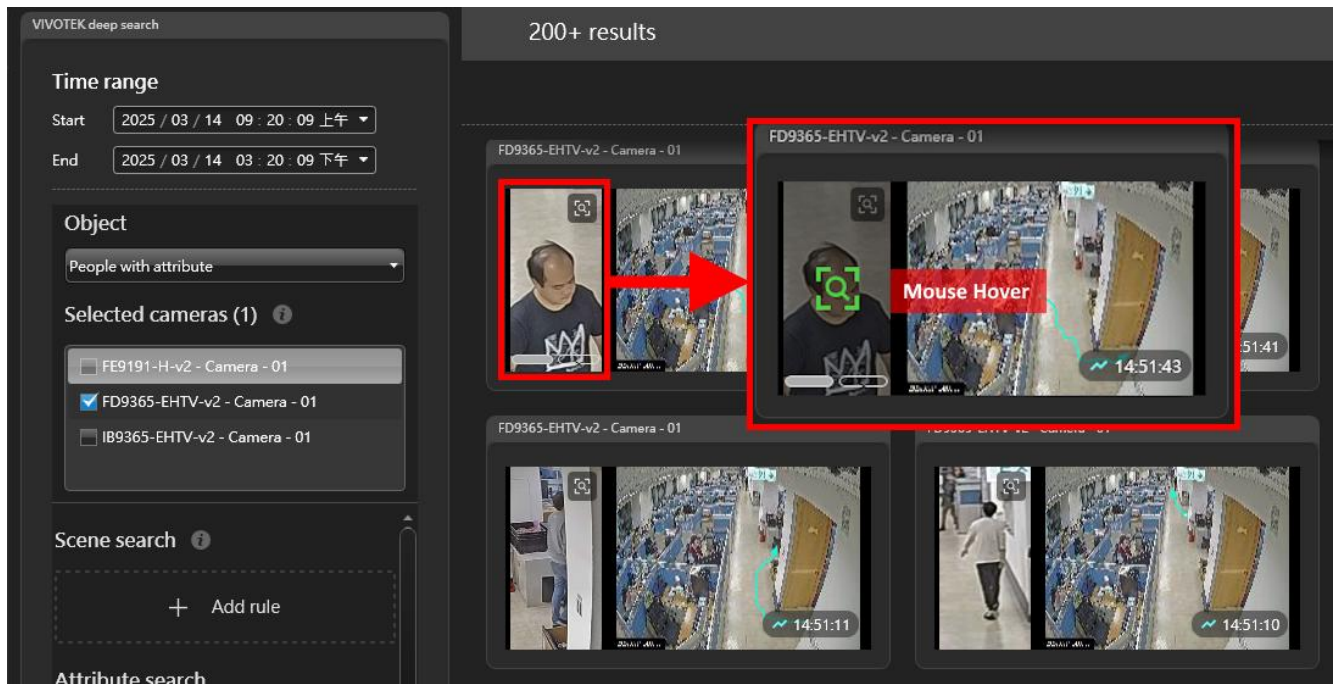
- b. Search Result with “Re-Search” capability.



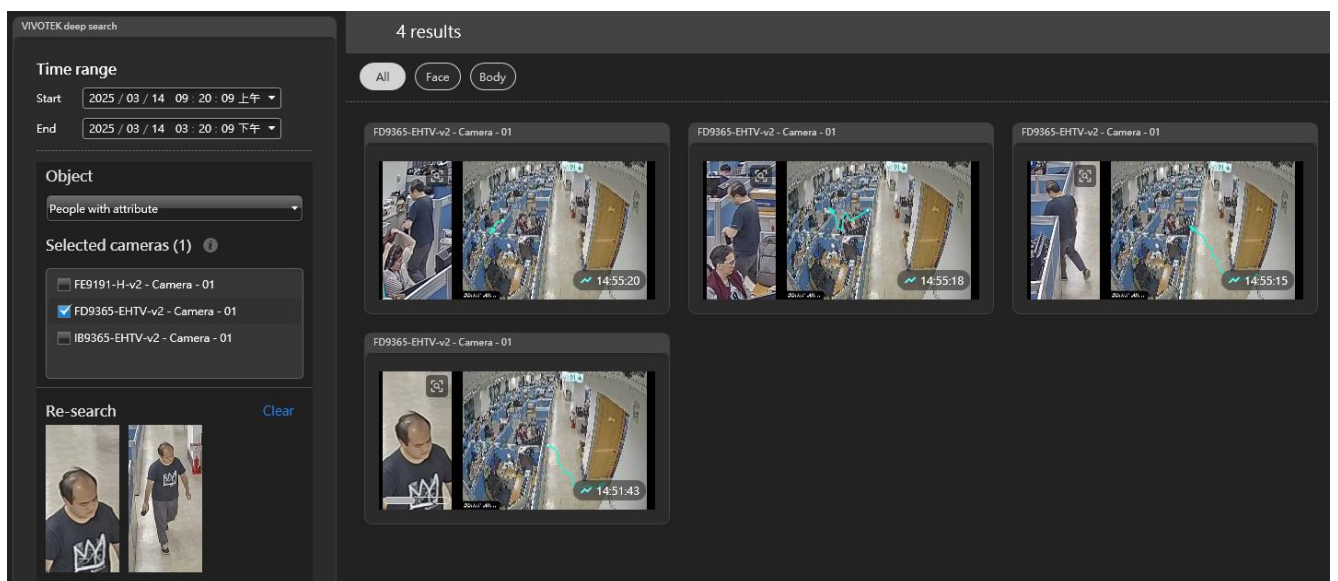
- c. Search Result with “Re-Search” and “Re-Search by Face” capability.



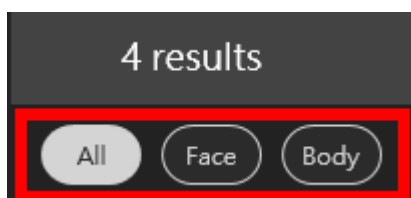
2. For the camera with the “Re-Search” results, Click the bestshot image.



3. Get the Re-Search Result with the same attributes in the database.



4. After the search is complete, you can use the “Result category” to filter the results by face or body. If the “Face” button is toggled, the search results will only display those with face scores similar to the object image.



#### 4.4.7.4 Search “Vehicle” in multiple cameras.

1. Configure the time range by setting its start and end times.
2. Choose “Object”: “Vehicle with attribute”
3. Select devices.
4. Edit vehicle attributes: “Vehicle type” and “Color”.
5. Click “Search” to get the filtered results.

