



HCP VCA Search Function Operation Guide

London RD/Carl

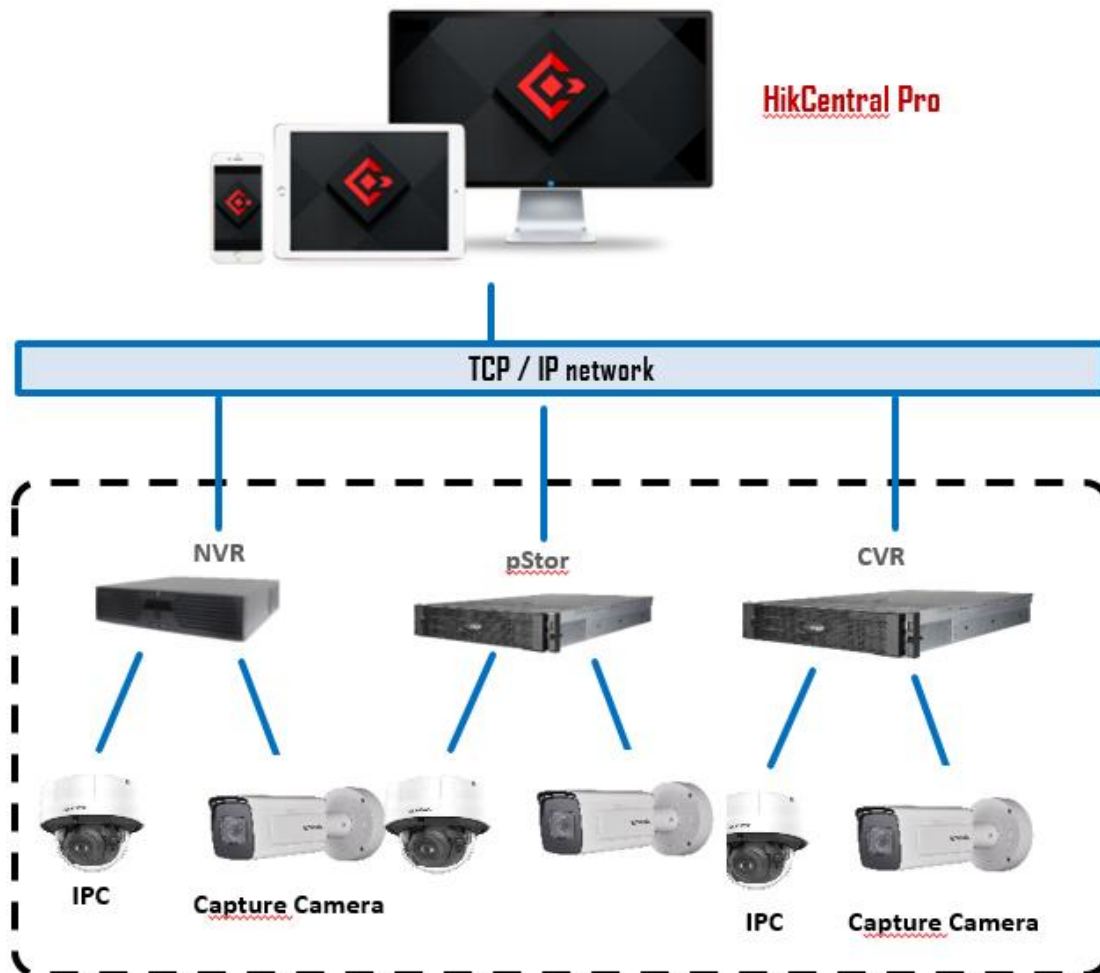
September 2023

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1 Scheme Introduction

- The camera stores the recording in CVR/NVR/DVR/pStor, retrieves and filters events on the platform, and returns corresponding event recording fragments. The topology of the solution is as follows.



[Note]: HCP currently supports three types of intelligent post retrieval for events, namely: mobile detection, cross line detection, and intrusion detection. However, the specific support for the above three events for different storage types is as follows:

NVR/DVR: All three events mentioned above are supported.

CVR: Supports motion detection and line crossing detection.

PStor/SAC: Supports mobile detection and line crossing detection.

Cloud storage: supports mobile detection and offline detection.

2 Installation Steps

[Note]: The software used in this article is the baseline version of HCP 2.4.1.

2.1 Video recording with encoding device (NVR/DVR) to achieve VCA Search function

[Note]: The device model and firmware version used for testing are as follows:

The screenshot displays the configuration interface for a HIKVISION device, specifically the 'Configuration' tab. The interface is divided into two sections, each showing the 'Basic Information' for a different device.

Device 1 (Top):

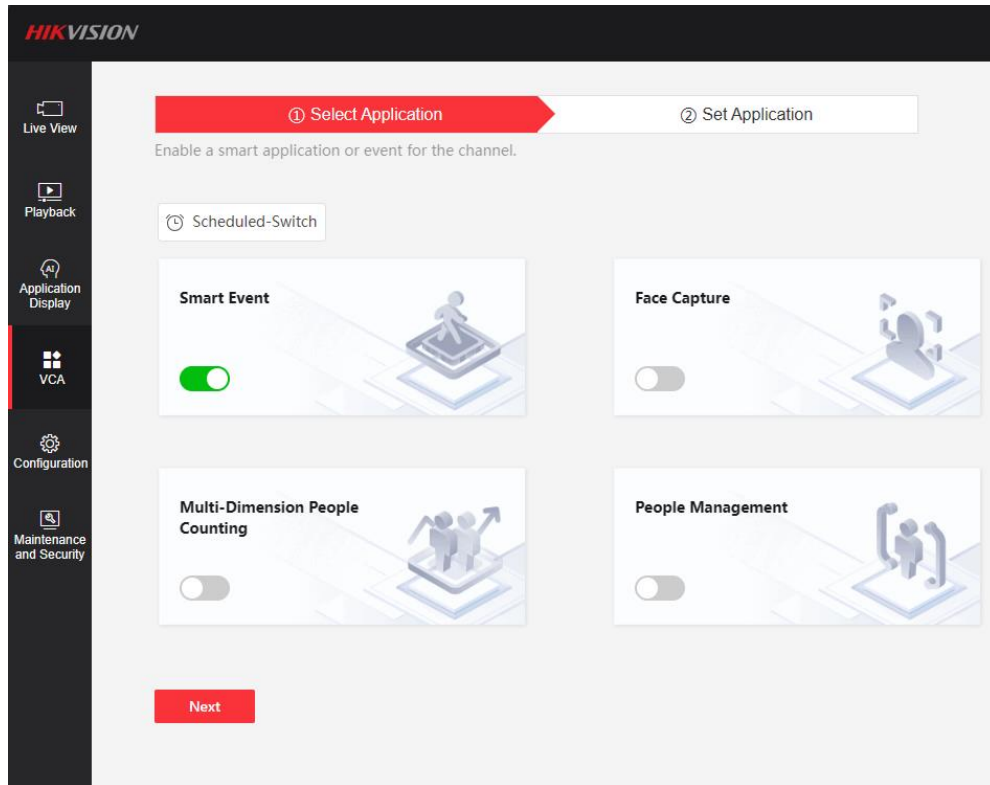
- Device Name: DeepinMind
- * Device No.: 255
- Model: IDS-7732NXI-M4 / 16P/X
- Serial No.: IDS-7732NXI-M4 / 16P/X1620230301CCRRRL348...
- Firmware Version: V4.61.225 build 230518
- Encoding Version: V5.0 build 230316
- Hardware Version: B-R-K21B1_H930-00
- FR Version: V5.0.300
- Perimeter Protection Algorithm Ve...: V2.0.0
- HMS Version: V4.5.0
- Version of Face Capture Algorithm...: V5.0.300
- ObjectsThrownDetection Version: V1.1.0
- Web Version: V4.5.0 build 230228
- Plugin Version: V3.0.8.11
- Number of Channels: 13
- Number of HDDs: 1
- Number of Alarm Input: 45
- Number of Alarm Output: 45

Device 2 (Bottom):

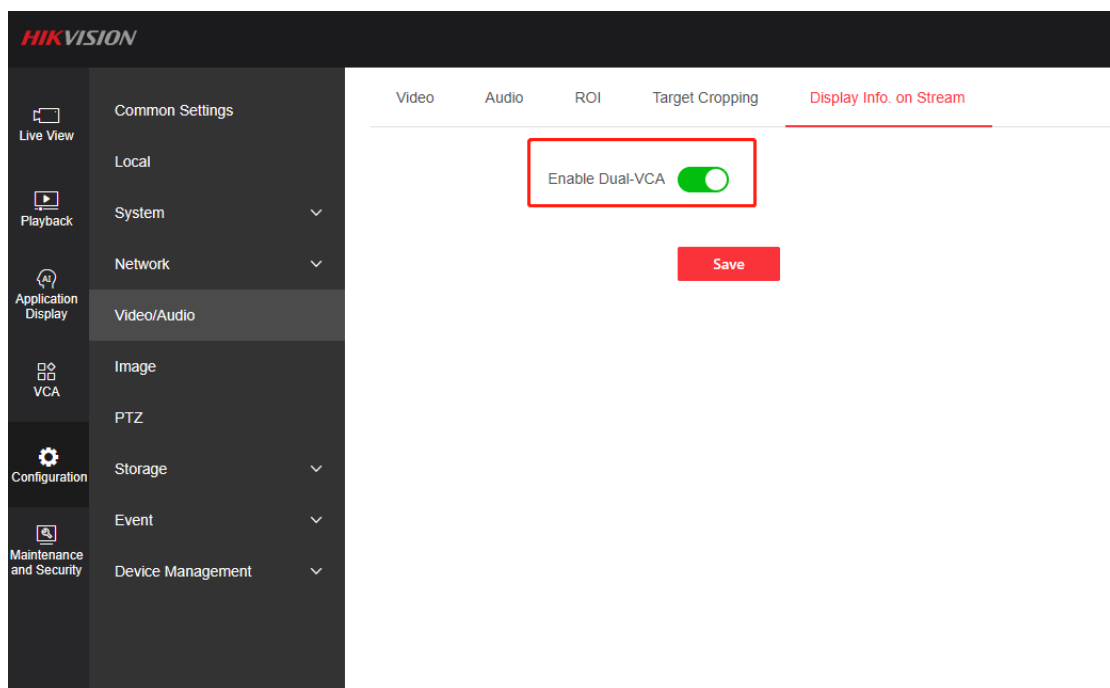
- Device Name: IP CAMERA2
- * Device No.: 88
- Device Model: IDS-2CD7547G0-XZHSY
- Device Serial No.: IDS-2CD7547G0-XZHSY20230522AAWRAB5625452
- Firmware Version: V5.8.40 build 230830 [Upgrade](#)
- Encoding Version: V7.3 build 230824
- Web Version: V5.1.0_R0101 build 230810
- Number of Channels: 1
- Number of HDDs: 1
- Number of Alarm Inputs: 1
- Number of Alarm Outputs: 1
- Firmware Version Property: B-R-H8-0

➤ Device configuration

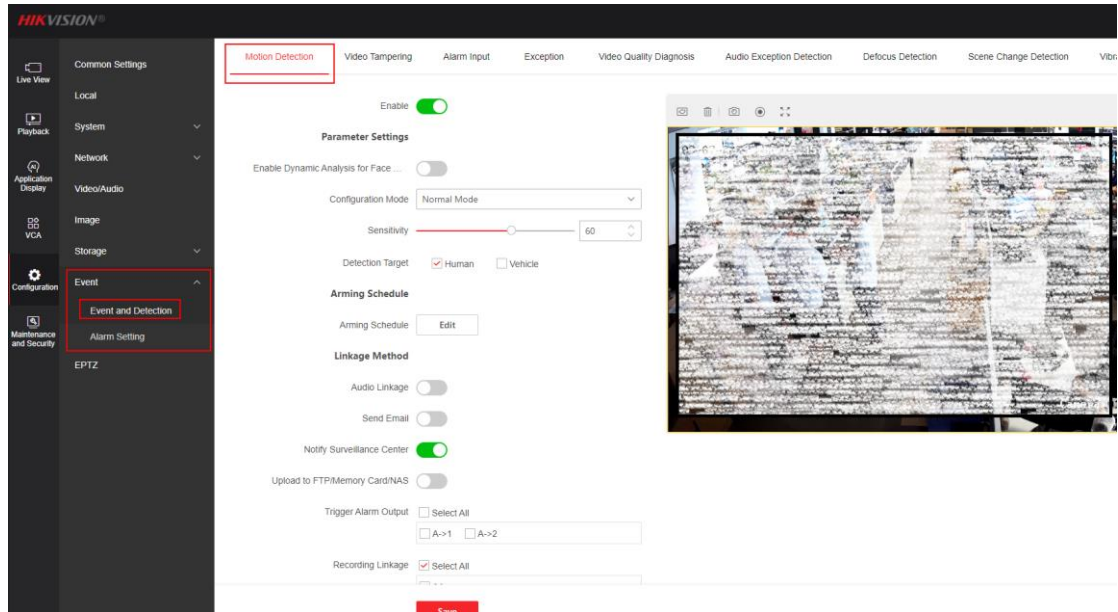
- 1) Log in to the IPC webpage and switch the camera VCA mode to intelligent event mode. (Some camera operations may vary slightly)



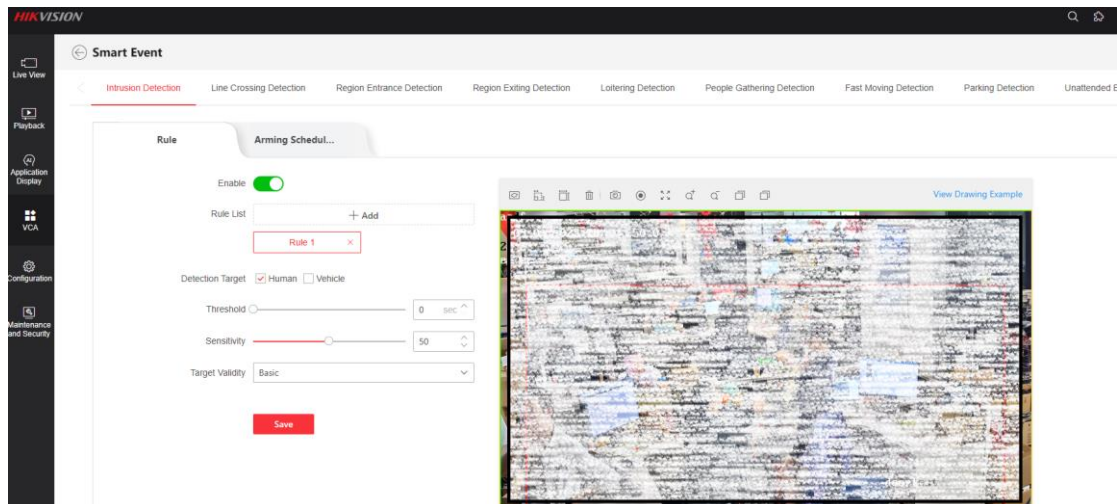
- 2) Enter the camera configuration interface and click on Video/Audio Display Info On Stream, enable the Enable Dual VCA option.

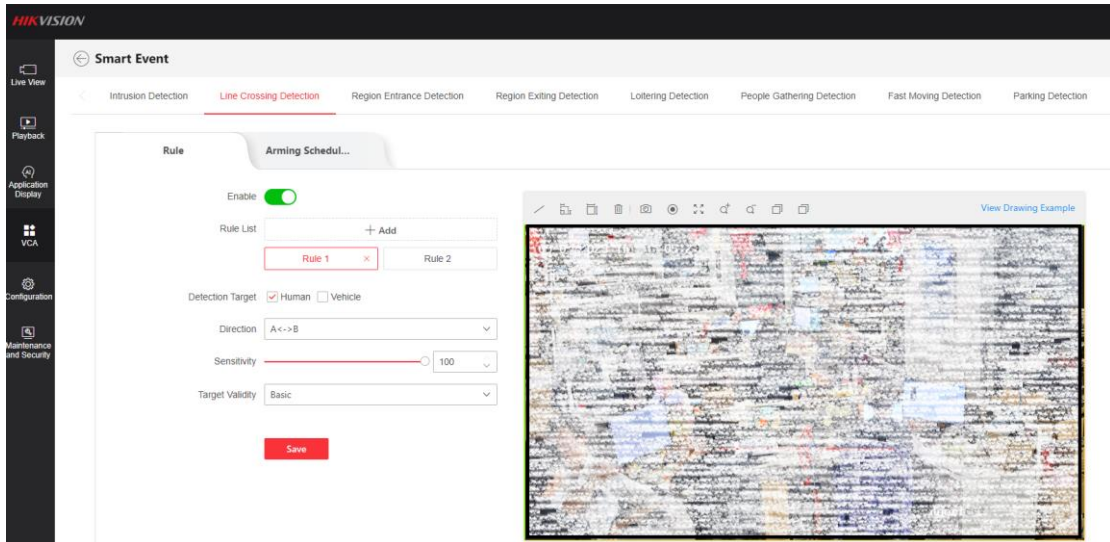


- 3) Enter the camera configuration interface, click Event Motion Detection, configure events as needed, and check to upload to the monitoring center.

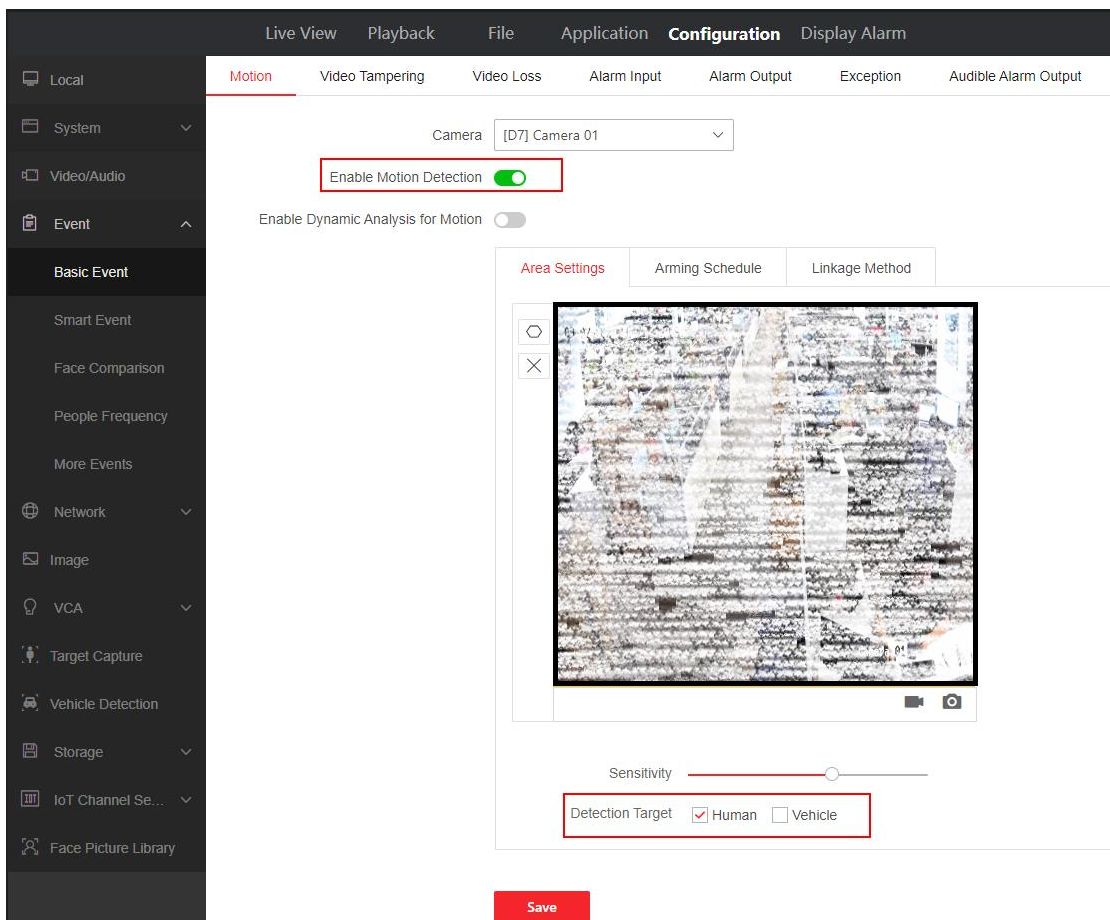


- 4) Enter the camera configuration interface, click VCA - Smart Event, enable Intrusion Detection and Line Crossing Detection, customize the detection box, and check to upload to the monitoring center.





- 5) Enter the backend device WEB interface, click Configuration Event Basic Event in sequence, and manually enable Motion; Enter Configuration Event Smart Event, enable cross line detection and area intrusion events, and check the Notify Surveillance Center for all options.



Live View Playback File Application **Configuration** Display Alarm

Camera [D7] Camera 01

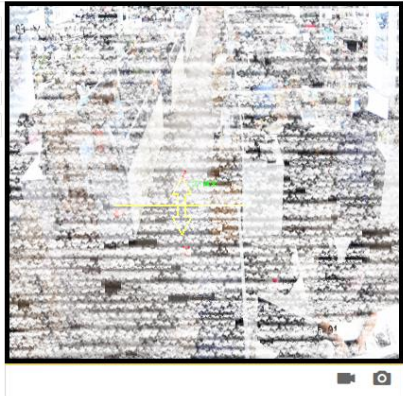
Enable AI by Device

Audio Exception Detection Defocus Detection Scene Change Detection Intrusion Detection **Line Crossing Detection**

Enable Line Crossing Detection

Area Settings Arming Schedule Linkage Method

Line 1



Detection Target Human Vehicle

Sensitivity 50

Direction A<->B

Live View Playback File Application **Configuration** Display Alarm

Camera [D7] Camera 01

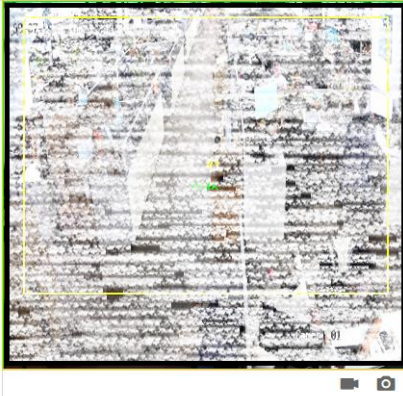
Enable AI by Device

Audio Exception Detection Defocus Detection Scene Change Detection **Intrusion Detection** Line Crossing Detection

Enable Intrusion Detection

Area Settings Arming Schedule Linkage Method

Region 1



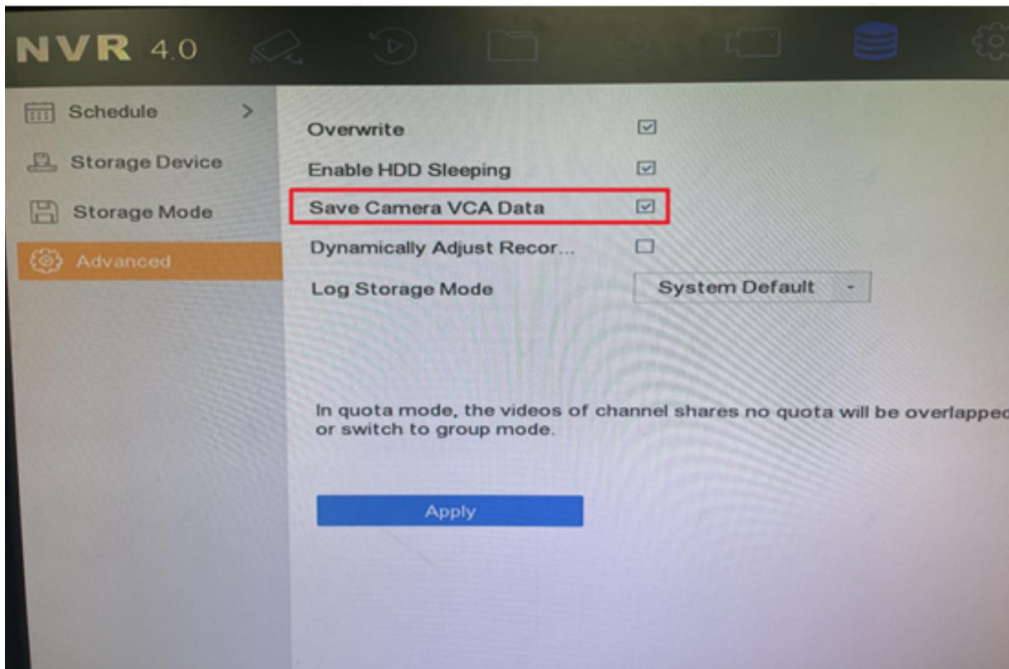
Detection Target Human Vehicle

Threshold(s) 0

Sensitivity 50

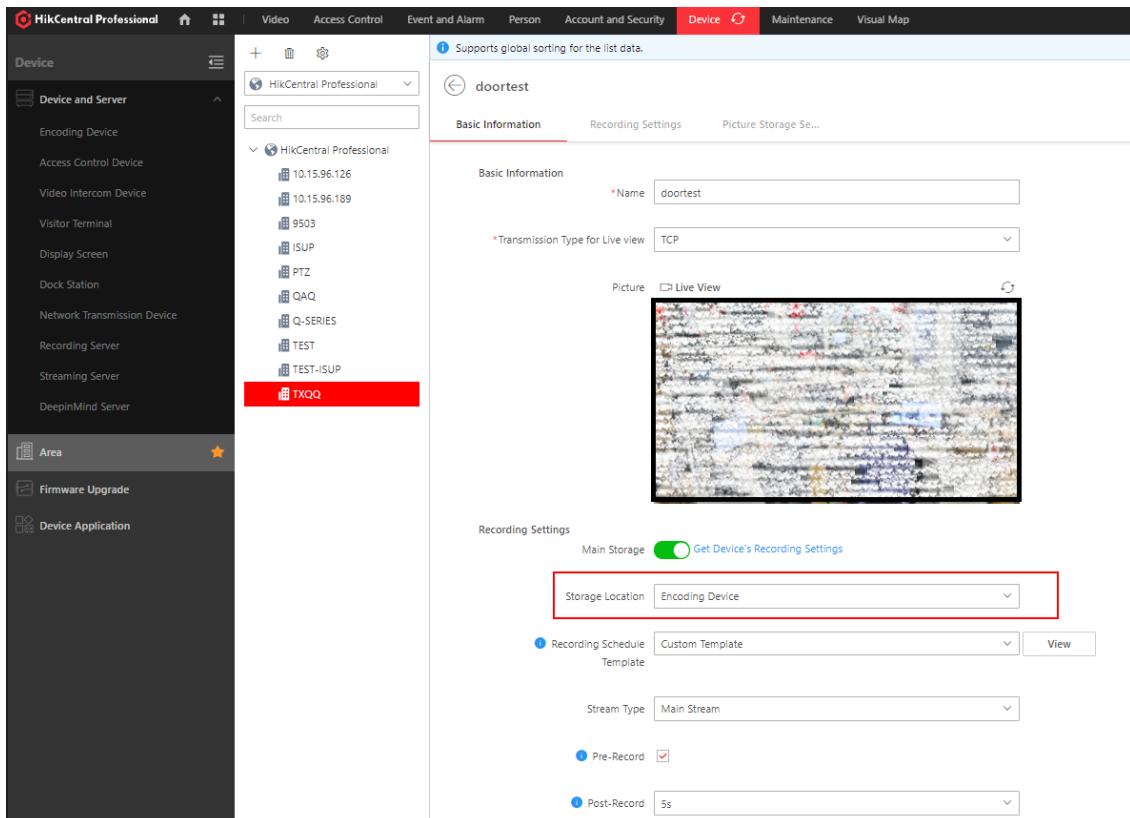
Save

- 6) The configuration item for saving camera VCA data needs to be enabled locally on the NVR.

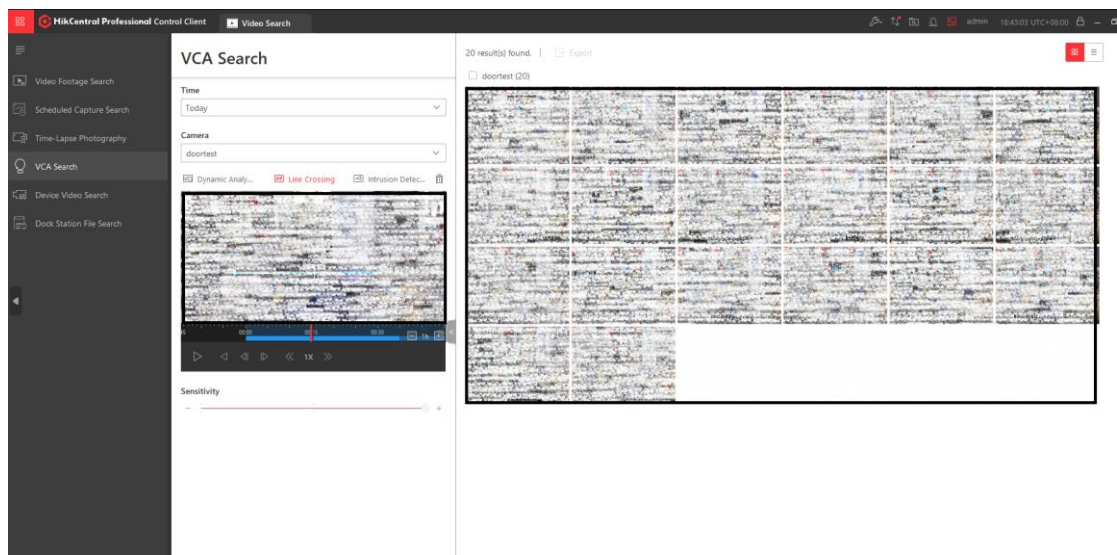
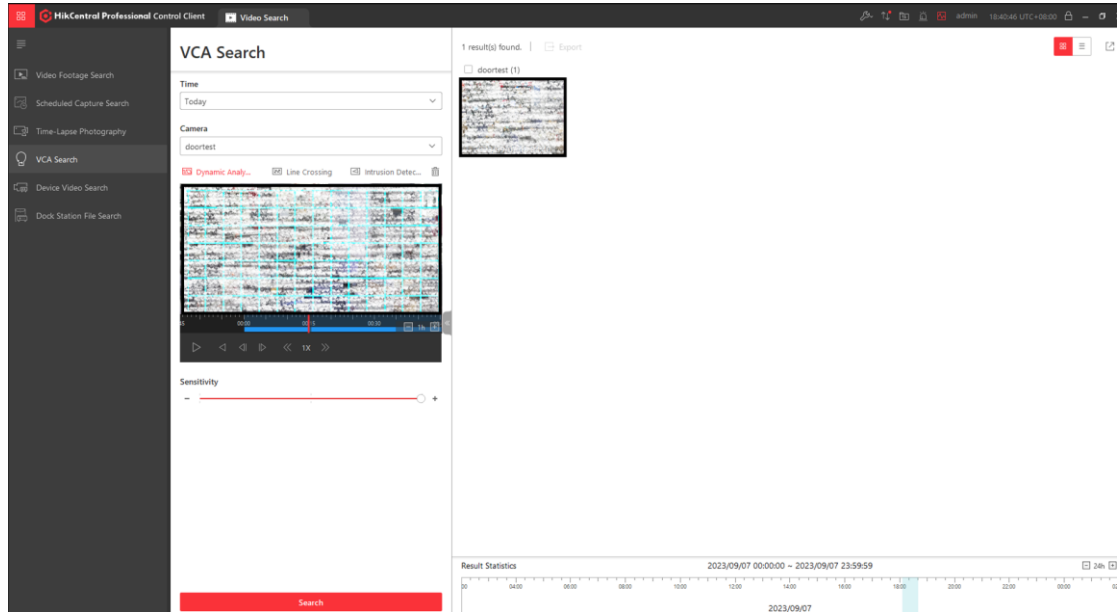


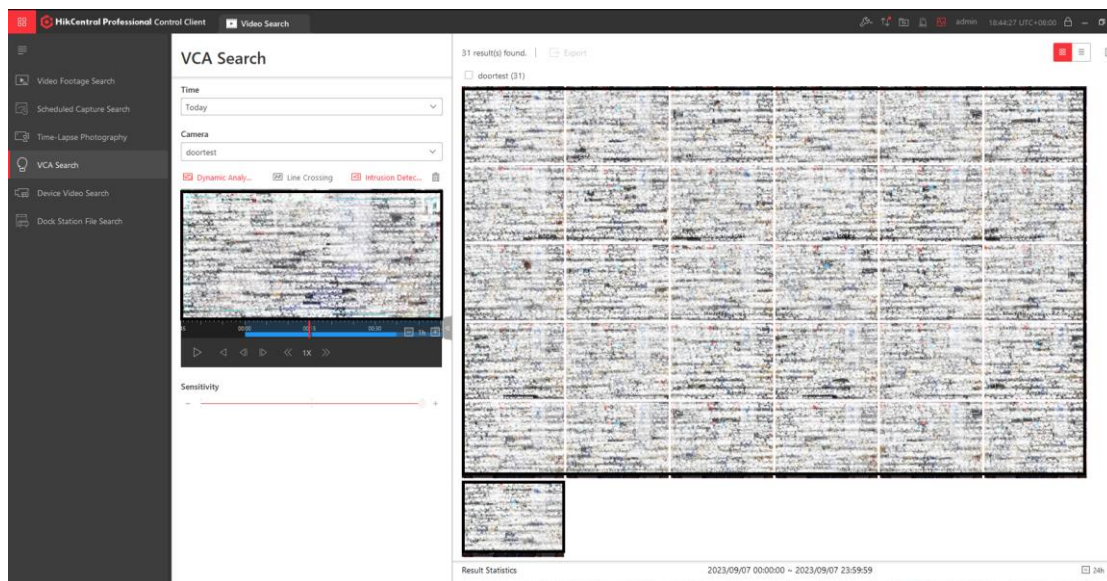
➤ **Configuration on HCP**

- 1) Open the HCP WEB interface, click on Device – Area, select the resource point, and ensure that the recording plan has been configured.



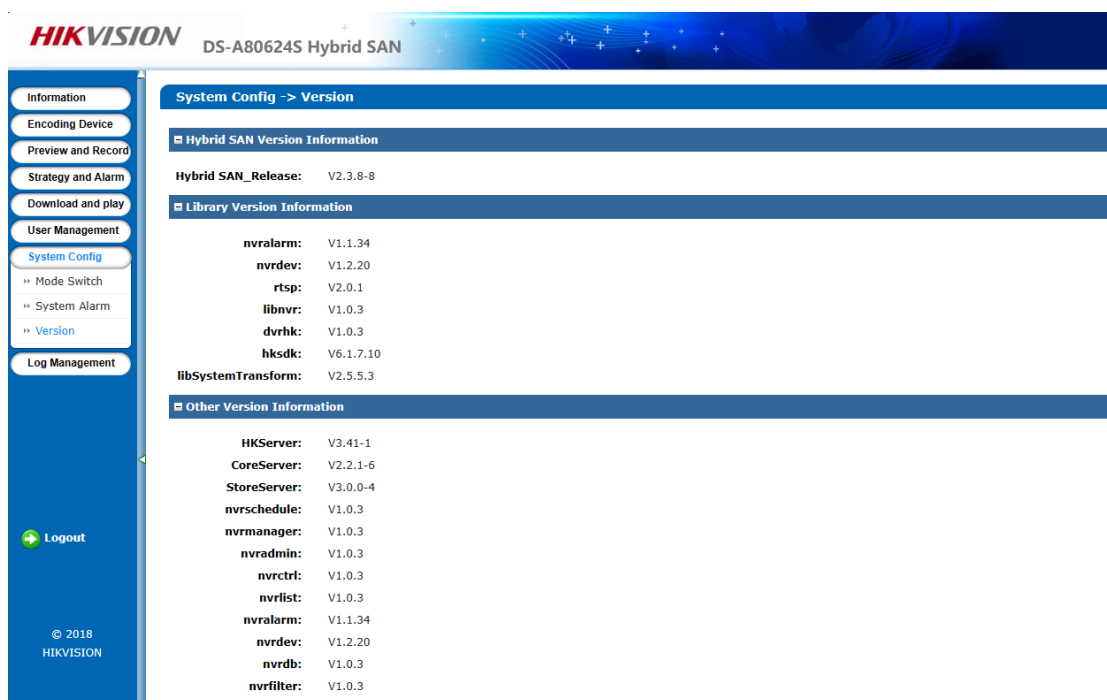
- Open the HCP client, click on Exploration Video Search VCA Search, select the filtering criteria, and draw rule boxes for mobile detection, cross line detection, and regional intrusion events. Then, search and return the VCA results of the corresponding events, as shown in the following figure.





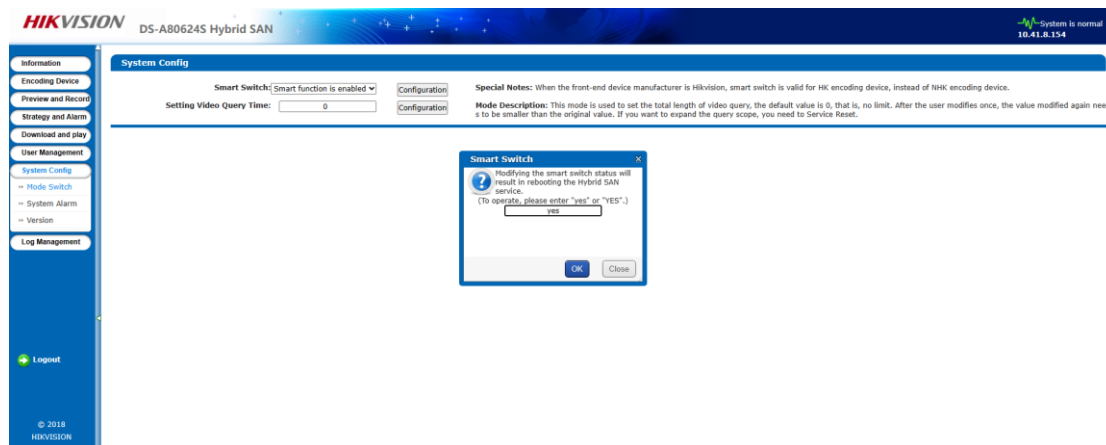
2.2 Video storage on CVR to achieve VCA Search

[Note]: The CVR model and firmware version used for testing are as follows.



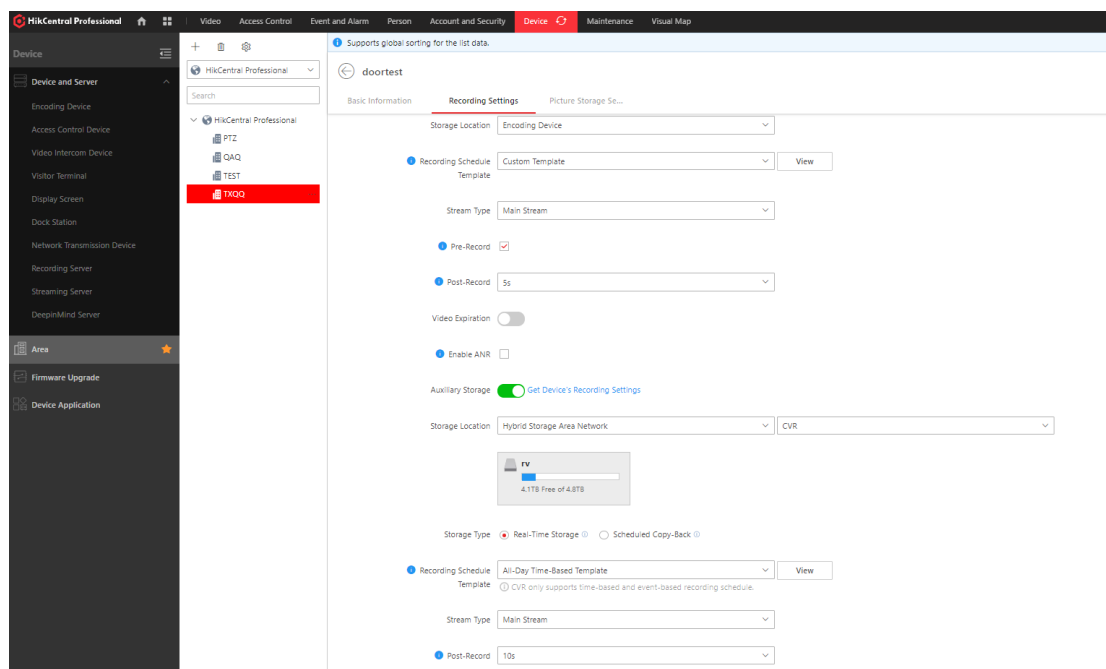
➤ Configuration on CVR

Open the CVR WEB interface, log in in to Hybrid San mode, click on System Config Mode Switch, find the Smart Switch, and enable the intelligent functions.

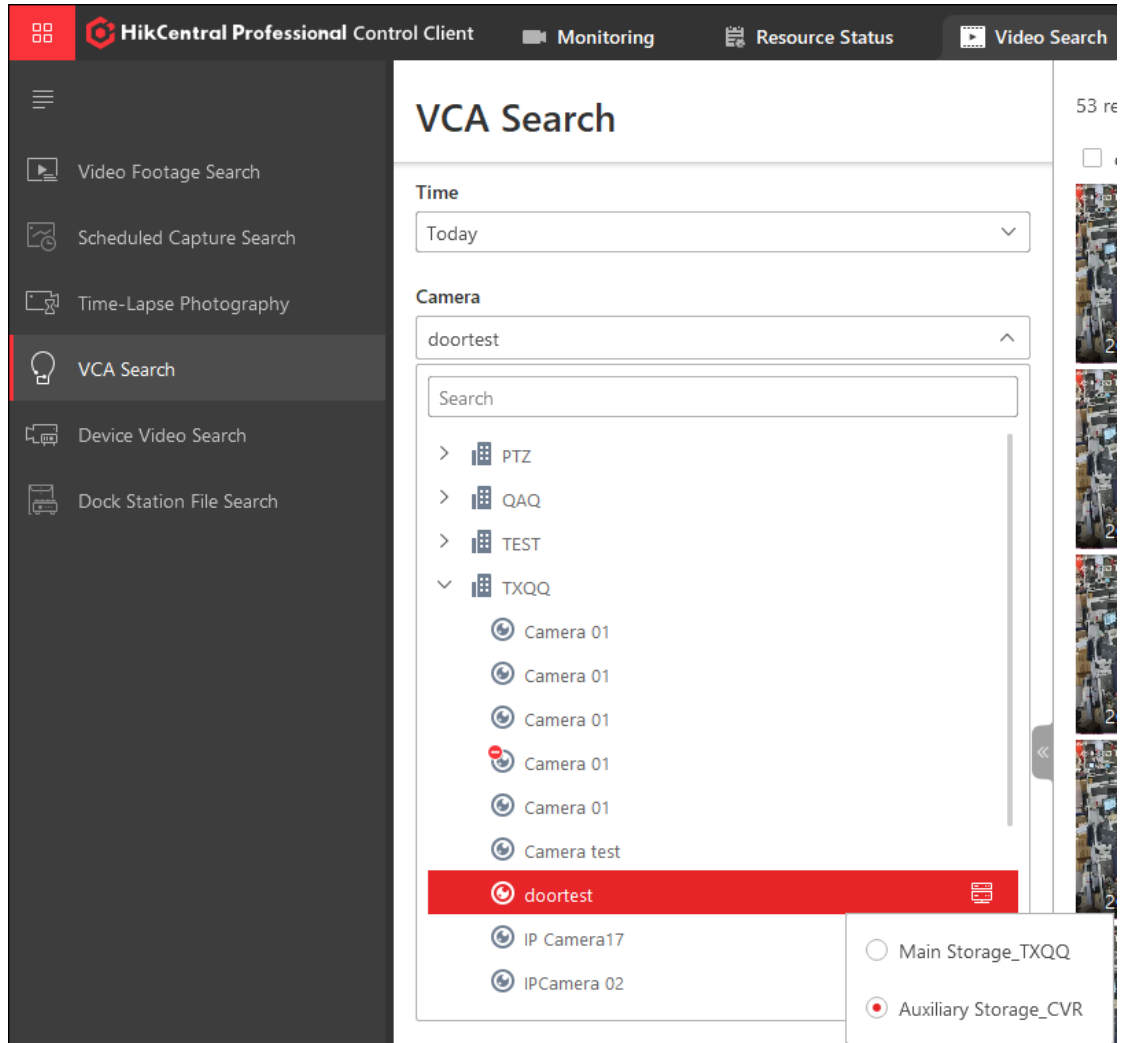


➤ Configuration on HCP

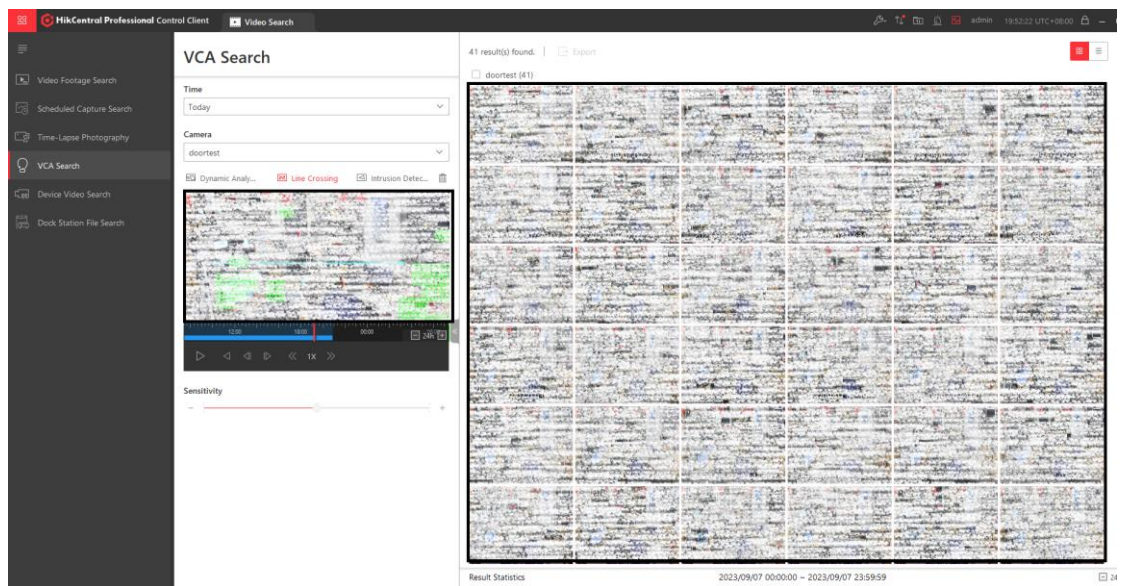
- 1) Open the HCP WEB interface, add CVR, open Device Area in sequence, select the channel, and ensure that the recording plan has been correctly configured.

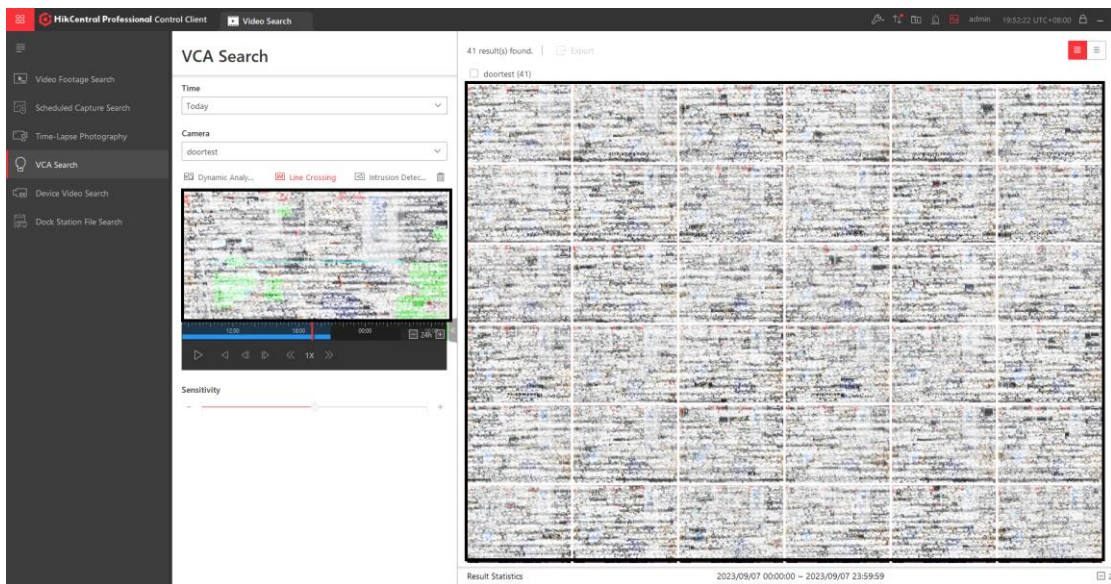


- 2) Open the HCP client and click on Exploration Video Search VCA Search. To retrieve, select the storage path CVR and click Retrieve.

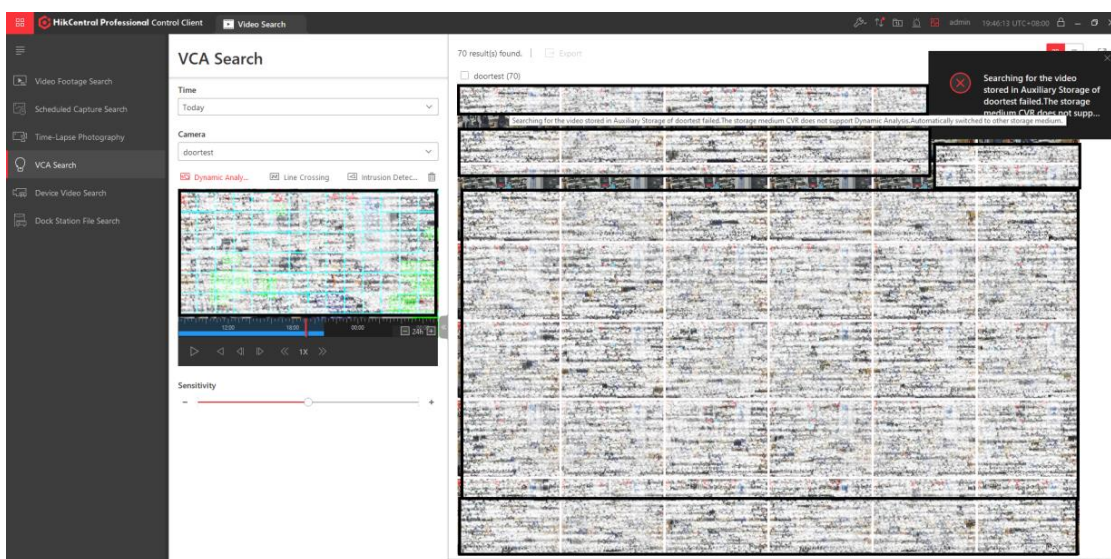


3) After drawing the detection rule box for area intrusion and line crossing detection, the following results are obtained.



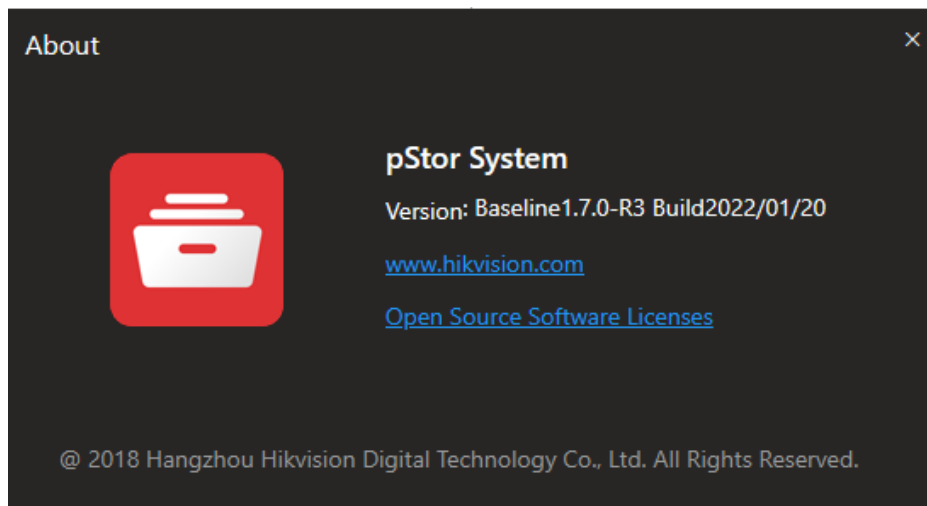


[Note]: When the storage location is CVR for motion detection retrieval, as CVR does not support intelligent post retrieval of motion detection events, if the current channel is configured with NVR, the motion detection event results in NVR will be automatically detected.



2.3 Implementing VCA Search for Video Recording Storage on pStor

[Note]: The version of pStor used for testing is as follows:



➤ **pStor configuration**

Open the installation path of the pStor program C:\SurveyanceSystem\ASW\conf\cva, and modify `<enable_ivs>0</enable_ivs>` from 0 to 1, save it, and then restart the pStor services.

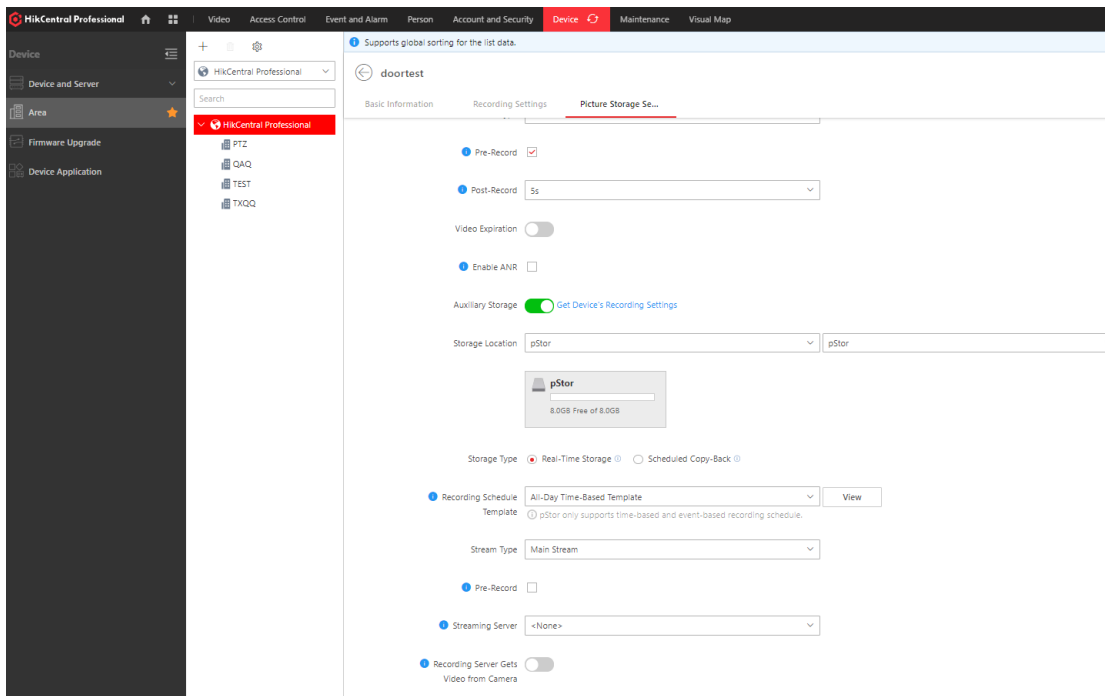
```

cva_config.xml
<?xml version="1.0"?>
<config>
  <version>2.2.1</version>
  <pool_size>4096</pool_size>
  <cvm>
    <ip>127.0.0.1</ip>
  </cvm>
  <mds>
    <ip>127.0.0.1</ip>
  </mds>
  <cpm>
    <ip>127.0.0.1</ip>
    <heartbeat_interval>3</heartbeat_interval>
    <heartbeat_fail_time>3</heartbeat_fail_time>
  </cpm>
  <record>
    <buffer_size>10</buffer_size>
    <frame_count>10000</frame_count>
    <enable_ivs>1</enable_ivs>
    <stream_type>0</stream_type>
    <anr_trigger_time>5</anr_trigger_time>
    <anr_enable>1</anr_enable>
    <stream_timeout>5</stream_timeout>
    <anr_extense_before>15</anr_extense_before>
    <anr_extense_after>15</anr_extense_after>
    <status_sync_time>300</status_sync_time>
    <write_sleep>20</write_sleep>
    <hls_enable>0</hls_enable>
    <frame_analyze_log>0</frame_analyze_log>
    <stream_retry_time>0</stream_retry_time>
    <platform_vtdu>0</platform_vtdu>
    <vtdu_relation_enable>1</vtdu_relation_enable>
    <plan_write_thread_num>32</plan_write_thread_num>
    <vtdu_direct_force>1</vtdu_direct_force>
    <gb28181_ps_enable>0</gb28181_ps_enable>
  </record>
  <status_report>
    <timeout_intervale>10</timeout_intervale>
  </status_report>
  <replenish>
    <stream_speed>16384</stream_speed>
    <data_segment_time>86400</data_segment_time>
  </replenish>
</config>

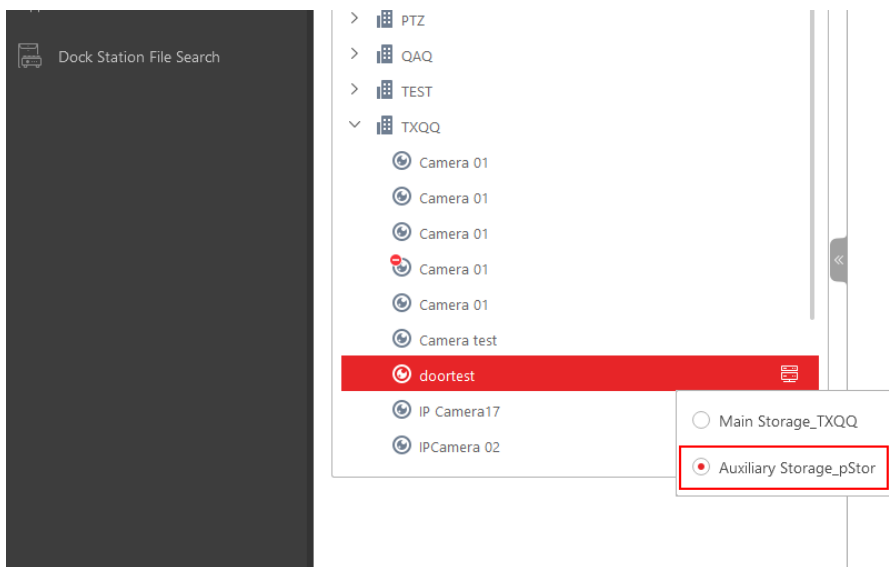
```

➤ Configuration on HCP

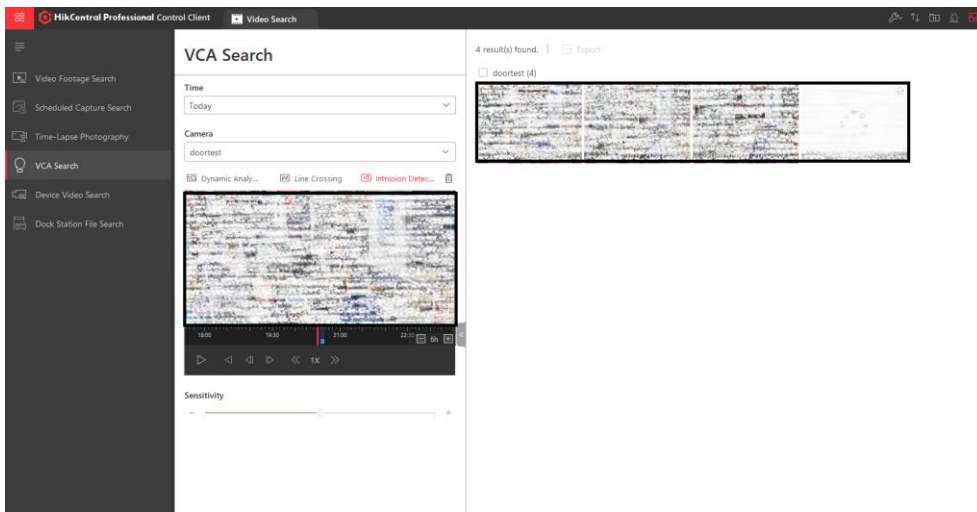
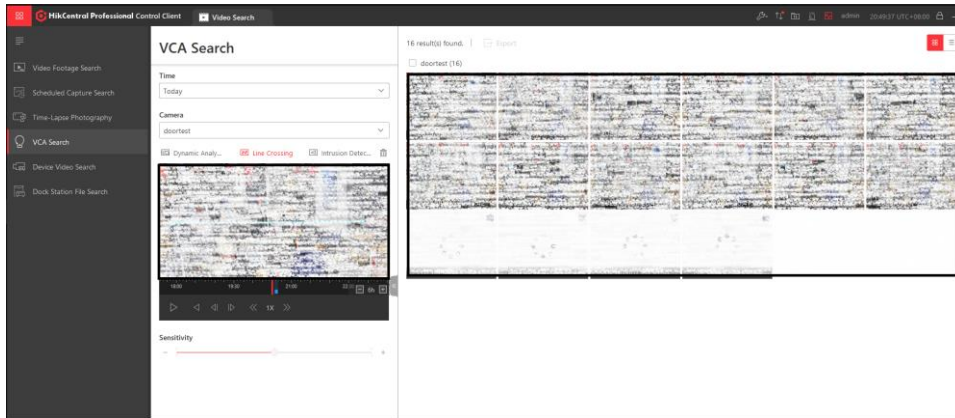
- 1) Open the HCP WEB interface, add pStor, open Device Area in sequence, select the channel, and ensure that the recording plan has been correctly configured.



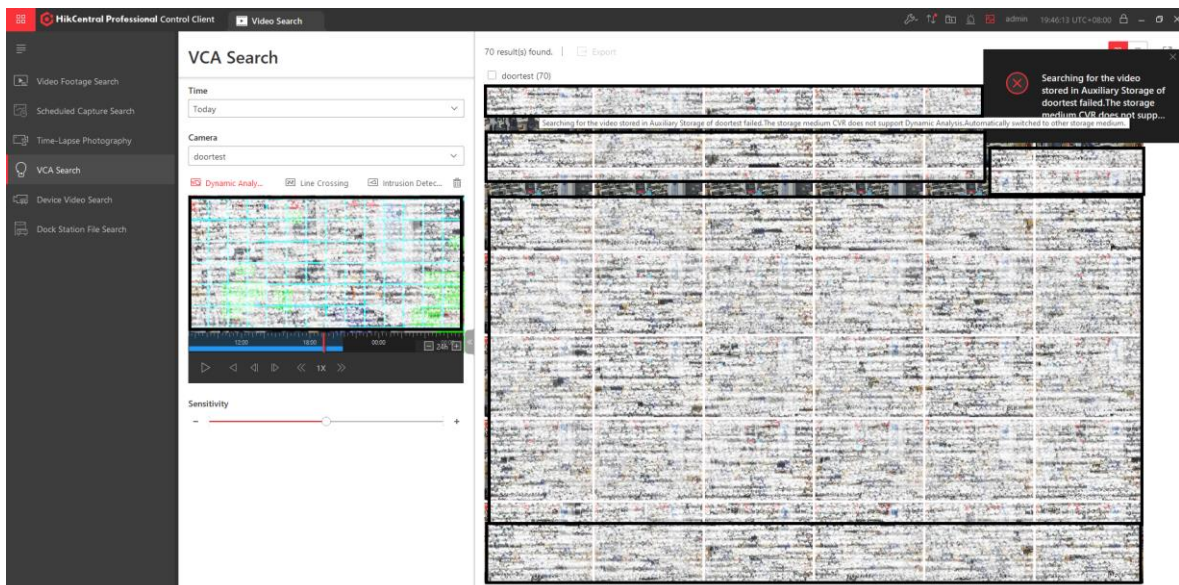
- 2) Open the HCP client and click on Investment Video Search VCA Search. To retrieve, select the storage path pStor and click Retrieve.



- 3) After drawing the detection rule box for area intrusion and line crossing detection, the following results are obtained.



[Note]: When the storage location is pStor for mobile detection retrieval, as pStor does not support intelligent post retrieval of mobile detection events, if the current channel is configured with NVR, the mobile detection event results in NVR will be automatically detected.



3 FAQ

Q: When VCA records cannot be searched on HCP, how do I troubleshoot and locate the problem?

Answer: In addition to checking configuration parameters, troubleshooting can be carried out from the following aspects.

- If the storage location of the recording is NVR, it can be retrieved on the NVR local interface. If there are no results, it is a device issue or device configuration issue. If there are results, please continue to use SDK Demo to troubleshoot.
- Using SDK Demo to perform intelligent post retrieval function.
 - 1) Adding devices on SDK Demo.
 - 2) Click Playback – By Motion, set the search time range, select the type of event to retrieve in the retrieval section, and select the response channel.
 - 3) After clicking Preview, hold down the Ctrl+left mouse button to draw the event rule box, and finally click Search to return the results.
 - 4) If the SDK demo is normal and the platform has no results, it indicates that the problem occurred in the platform test. If the SDK demo also has no results, please troubleshoot the device or configuration issue.

