

## Network Video Recorder

**Version: V4.21.005 build190509**

### Release Note

**(2019-5-9 External)**

<b>Firmware Basic Information</b>	Firmware Version:	V4.21.005 build190509
	SDK Version:	V6.0.2.30_build20190325
	Play Library:	V7.3.7.32_Build20190305
	Web component:	V4.0.1 build190505
	IVMS-4200:	V2.6.18.2 build20190326
	OpenSDK Version:	V1.5.55.1 build 181101

### Reason of Upgrade

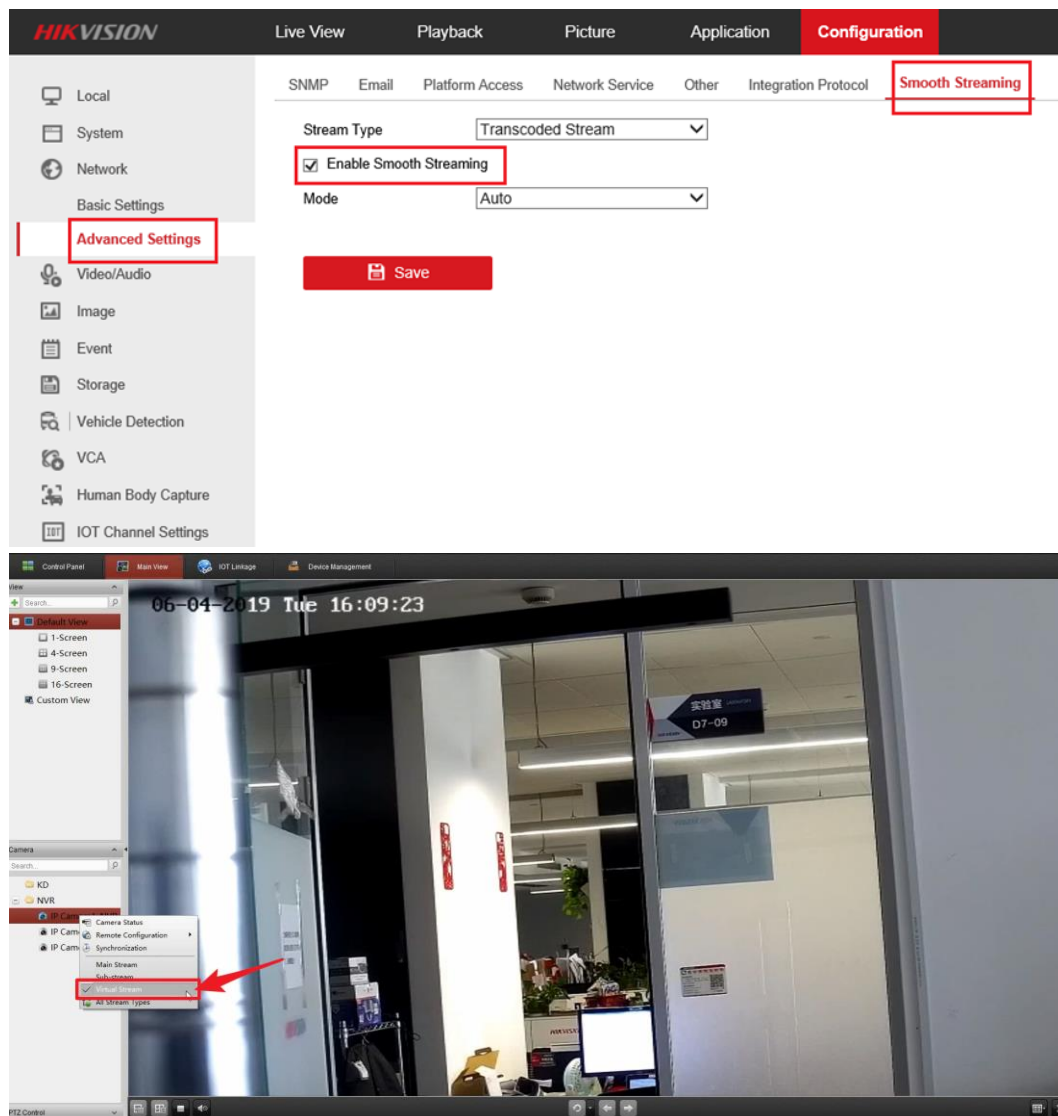
Add new features and optimize product performance.

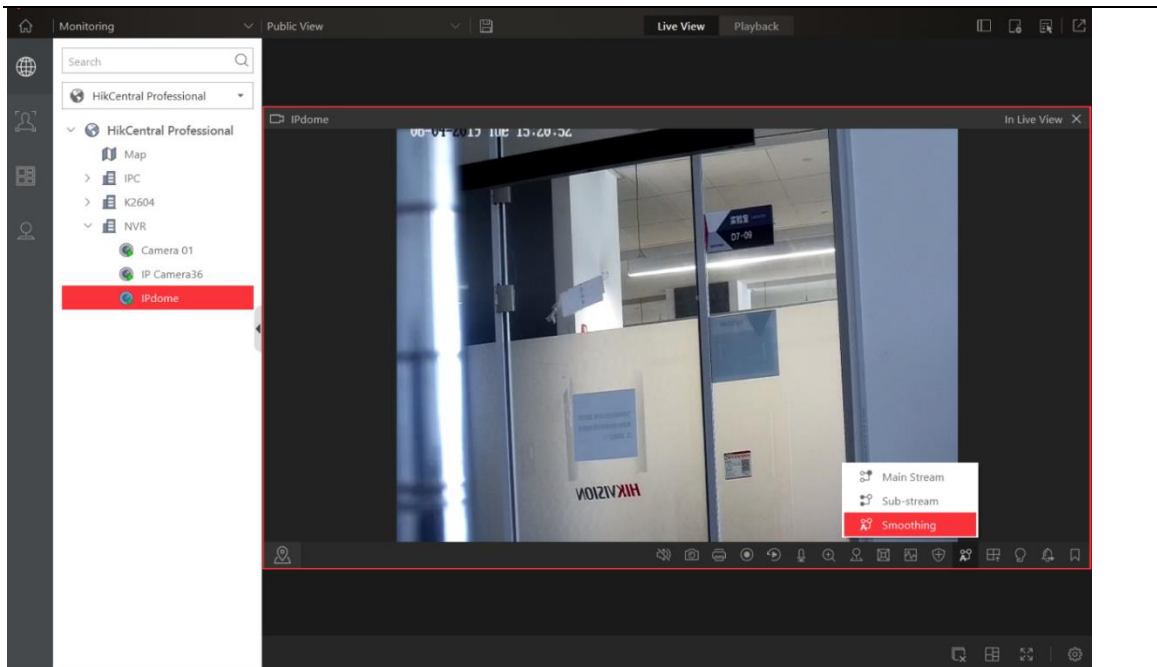
## New features

### 1. 【Smooth Streaming】

- 1) Low bandwidth preview and playback, support up to 4 channels.
- 2) This function can be configured on Web, iVMS4200 and Hik-central (above 1.3.2), and only 4200 and Hik-central support preview and playback.

*Note: Web doesn't support preview and playback.*

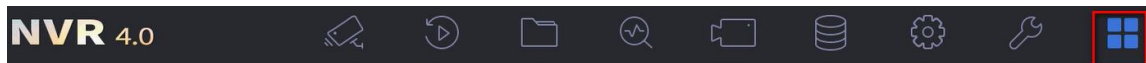




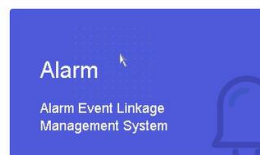
## 2. 【Access Control Devices Access】

1) Support the access of Hikvision Access Control devices and Intercom devices.

Note: Take Access Control as an example to show screenshots.

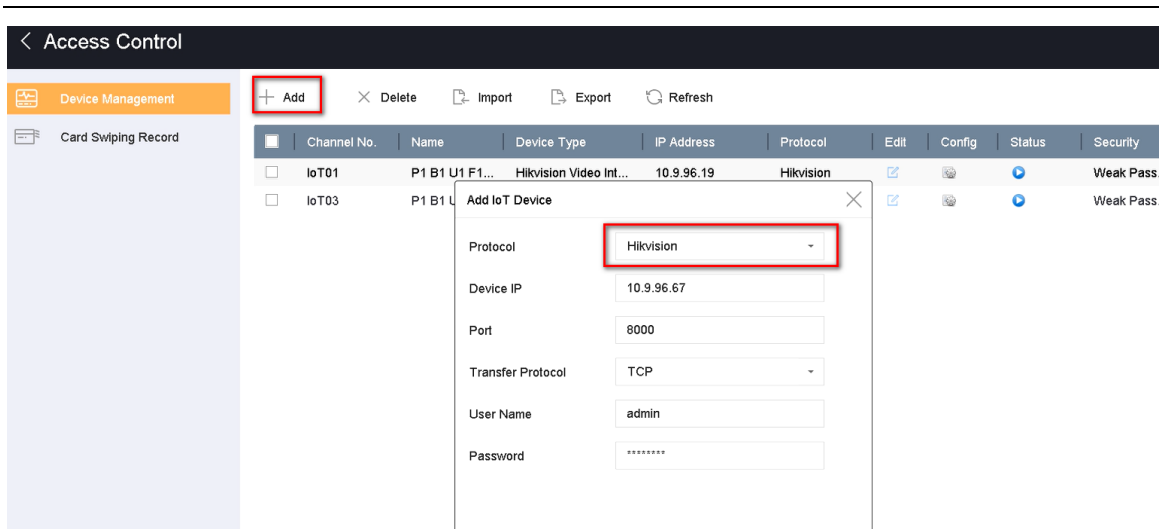


### IoT Internet of Things

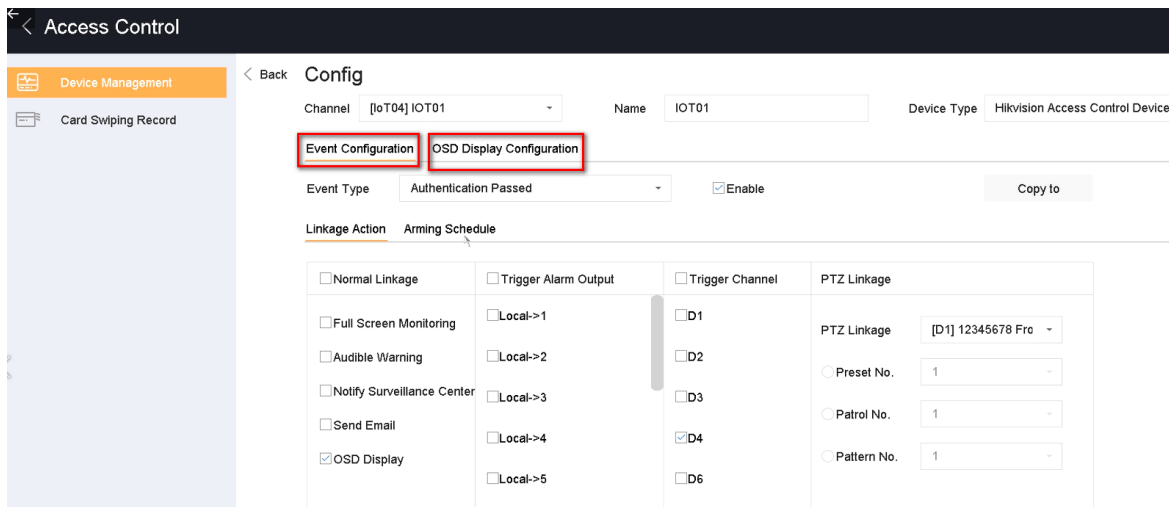


### AI Artificial Intelligence

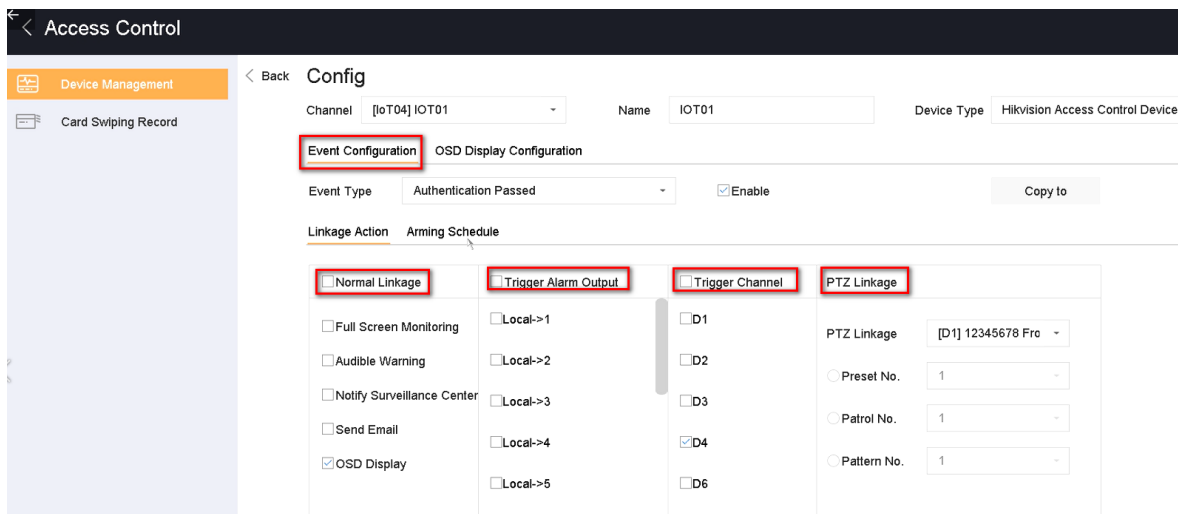




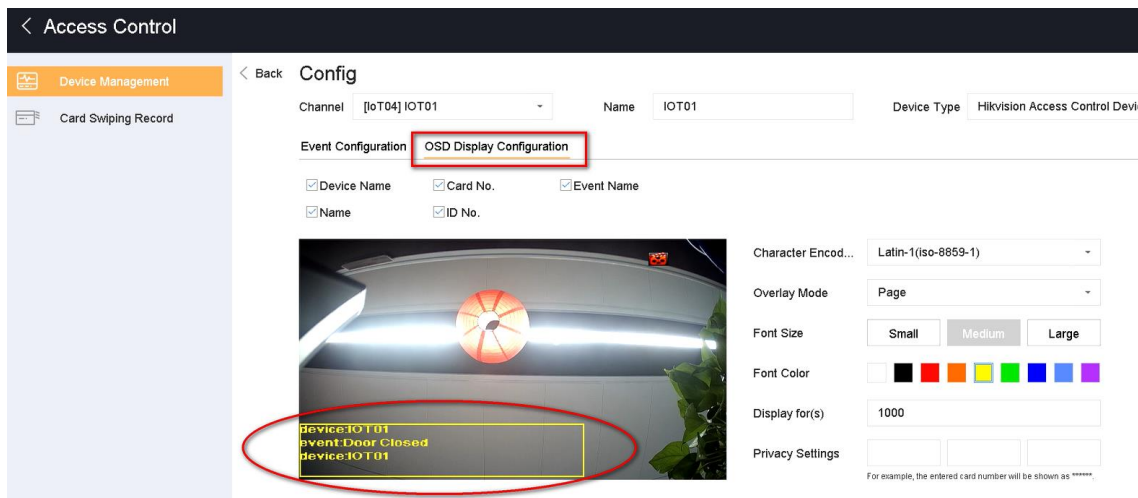
2) Support alarm rule configuration and OSD display configuration.



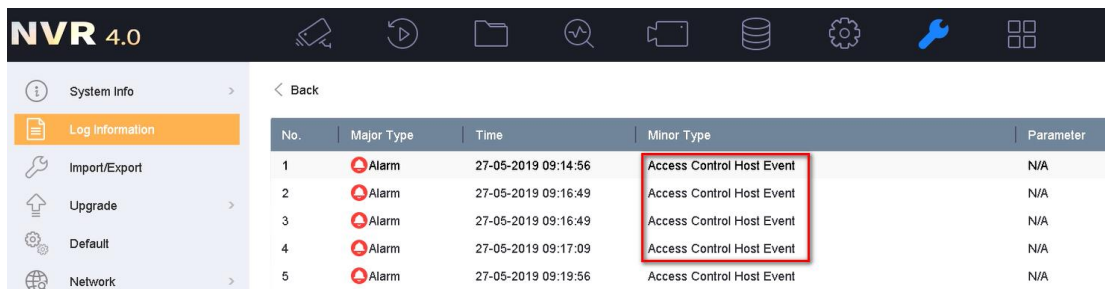
3) Support Normal Linkage, Trigger Alarm Output, Trigger Channel, PTZ Linkage.



- 4) The Access Control alarm information also can be overlapped on live view. Which IP channel will be overlapped with the OSD display depends on the trigger channel you select.



- 5) Support Access Control alarm event log.



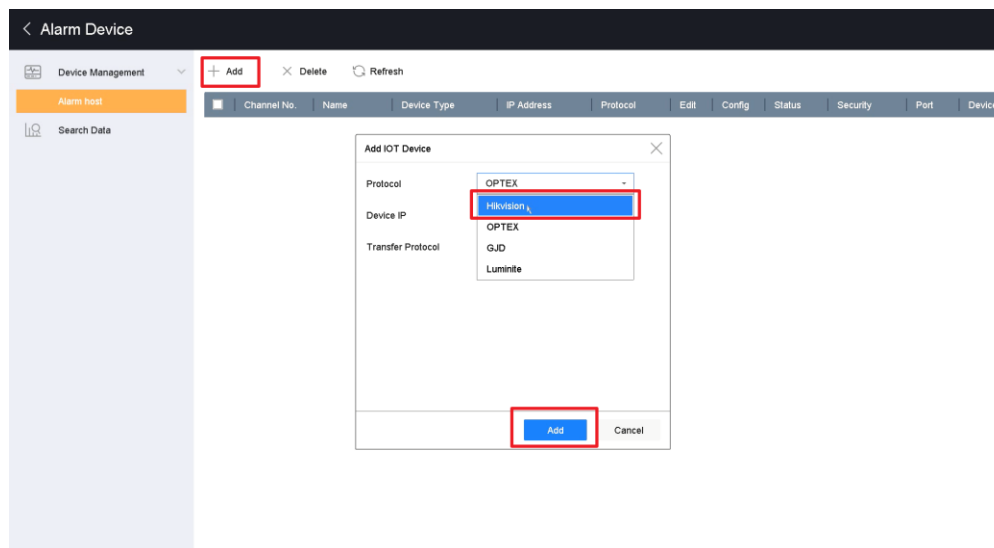
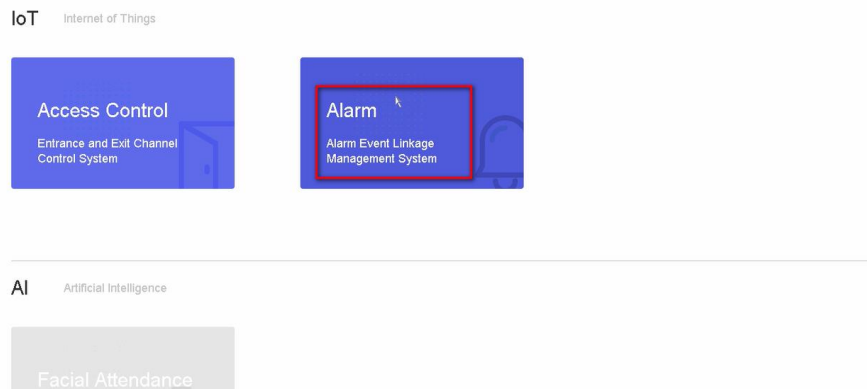
- 6) Support to upload alarm to Hik-Connect.

- 7) The timeout period for recording after the call starts is 90 seconds, or 90 seconds if there is no call end.

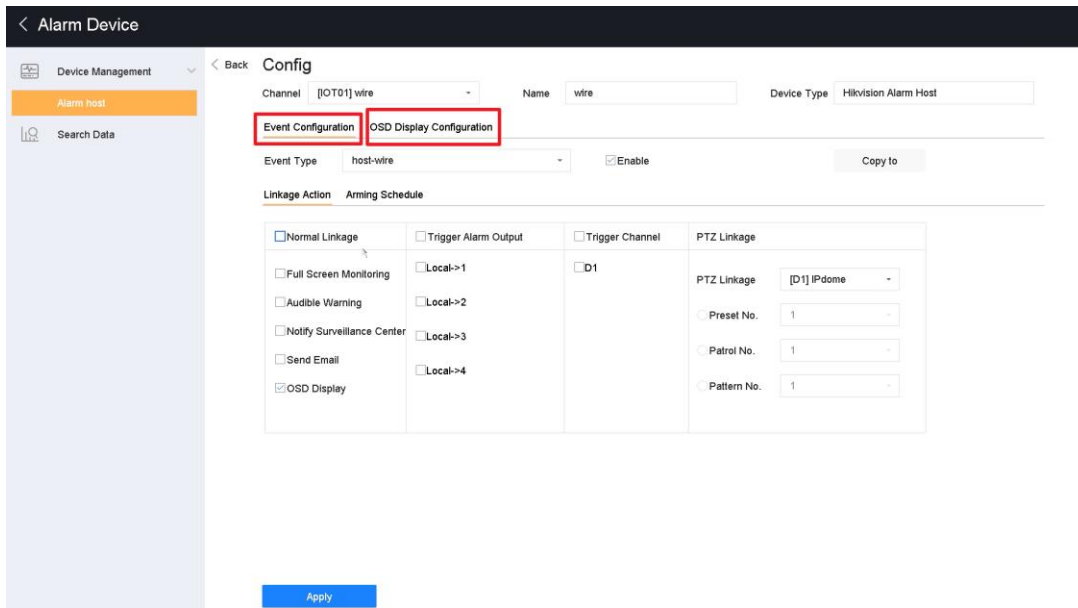
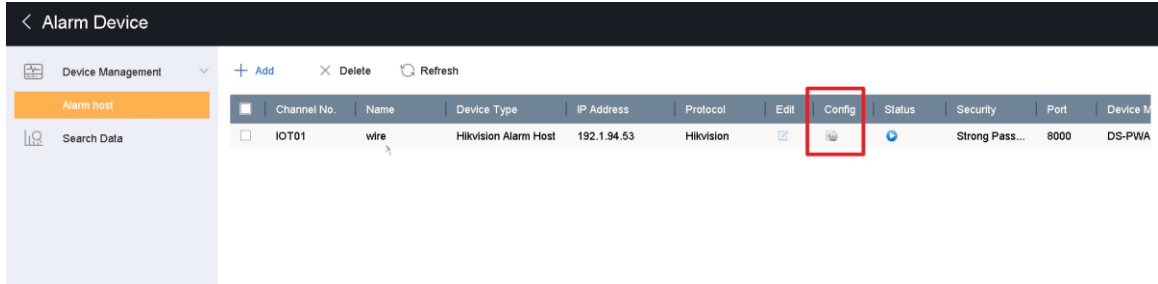
*Note: The total number of IoT access channels is up to half of the number of device channels. For model 7732NI-I4, the sum of the number of access control channels, video intercom channels and alarm (Hikvision & third party alarm) channels is up to 16.*

### 3. 【Alarm Devices Access】

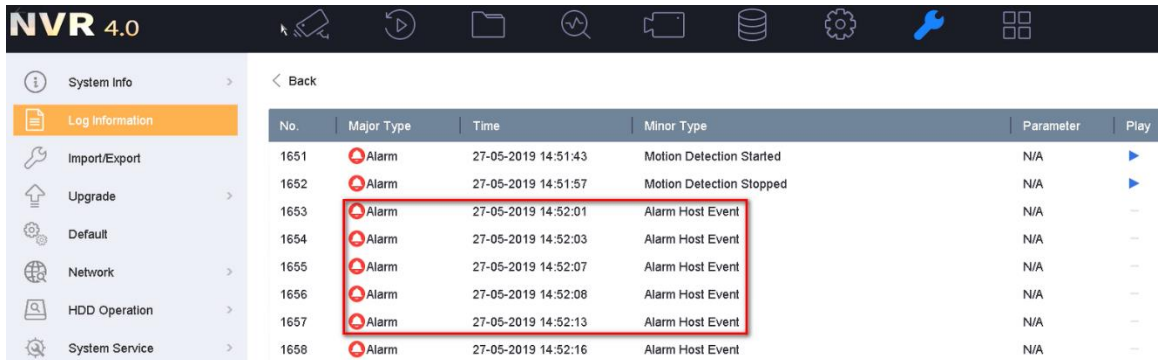
- 1) Support the access of HIKVISION alarm devices and GJD, OPTEX and Luminite alarm devices. Note: Take Hikvision Alarm Host as an example to show screenshots.



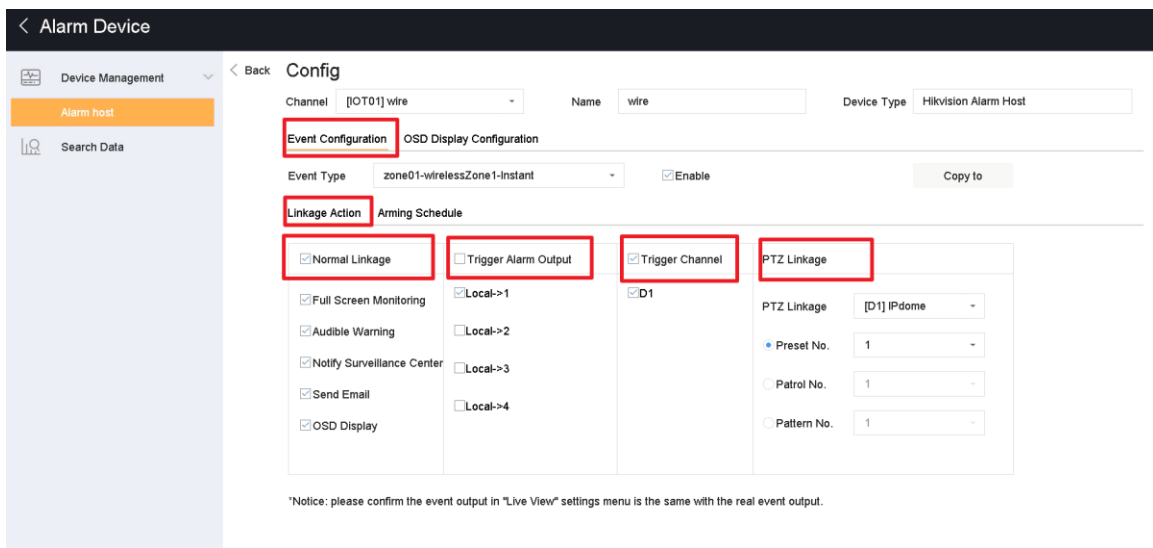
2) Support alarm rule configuration and OSD display configuration.



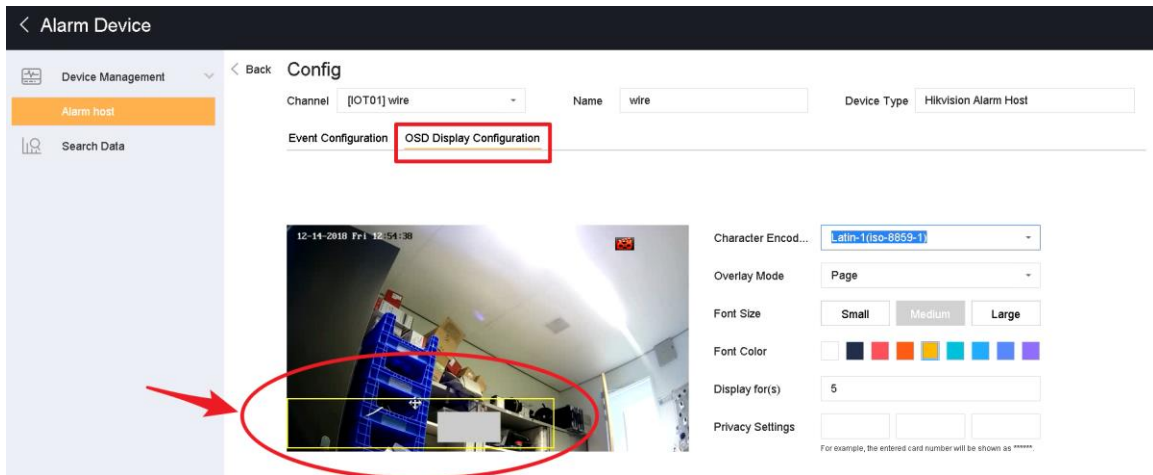
3) Support alarm event log.



4) Support Normal Linkage, Trigger Alarm Output, Trigger Channel, PTZ Linkage.

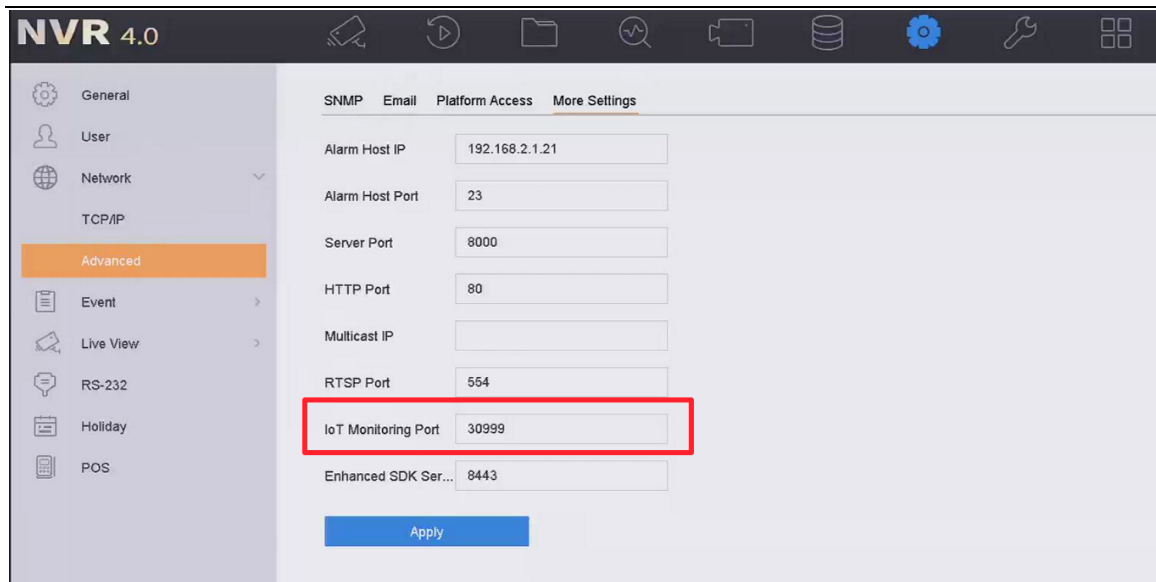


- 5) The alarm information also can be overlapped on live view. Which IP channel will be overlapped with the OSD display depends on the trigger channel you select.



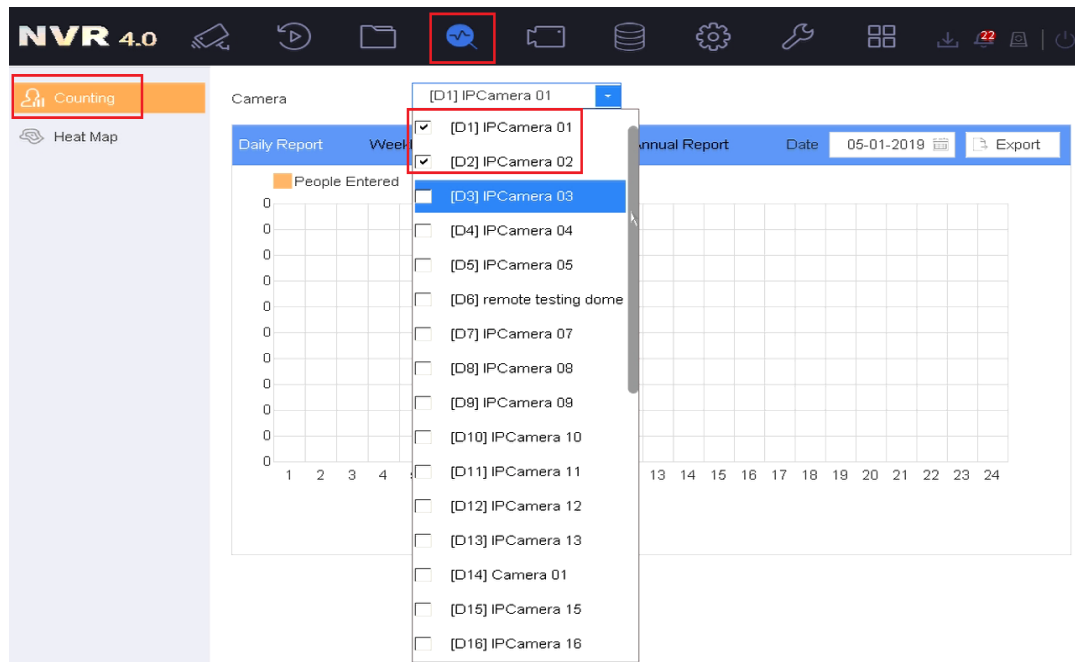
- 6) Support to upload alarm to Hik-Connect.
- 7) The default port for NVR to receive alarms is 30999, which can be modified.



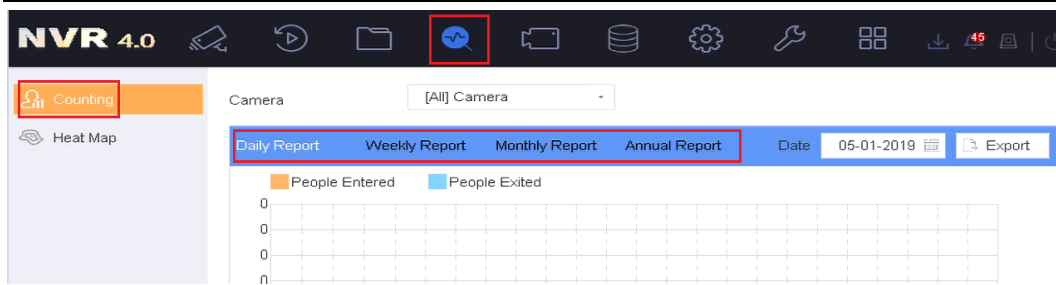


## 4. 【Counting Statistics】

1) It can support display counting statistics by selecting channels in local GUI.

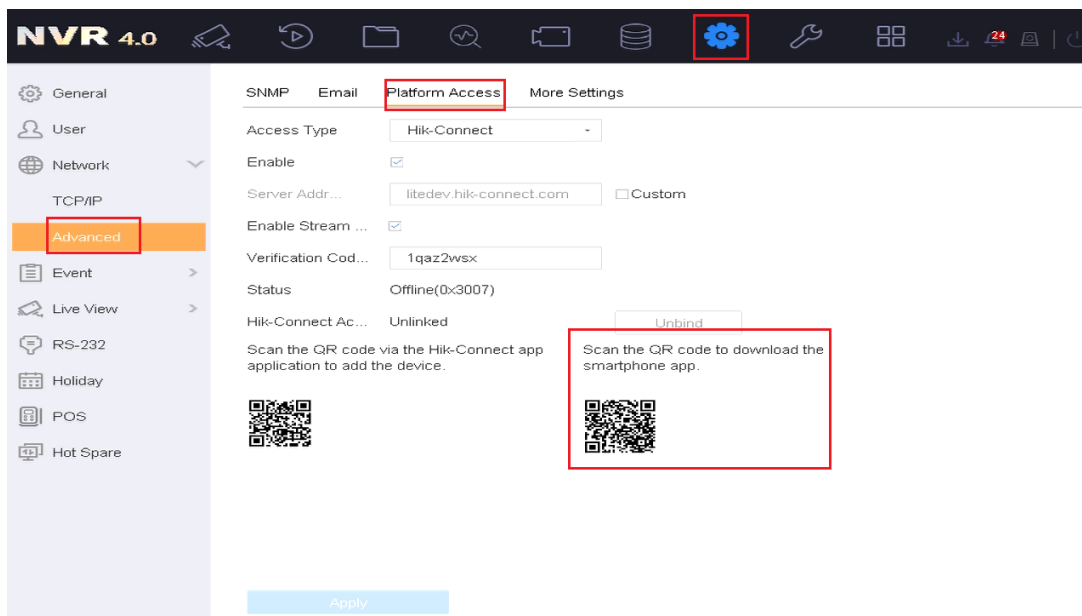


2) Support display and export reports by daily, weekly, monthly and annual.



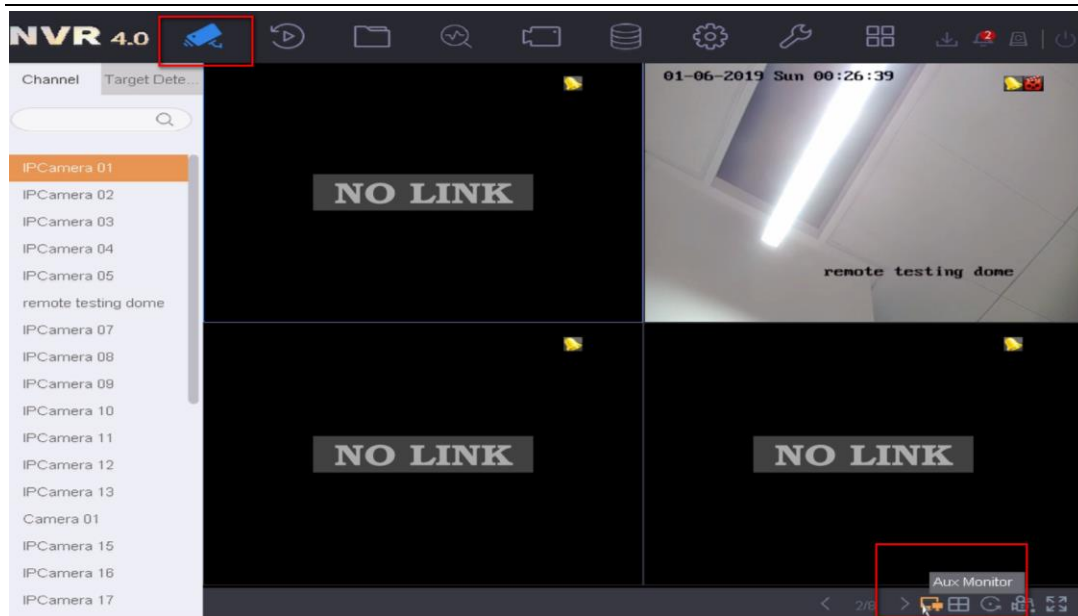
## 5. 【Hik-connect Download QR Code】

Hik-connect Download QR code is added in Platform Access interface of NVR local GUI.



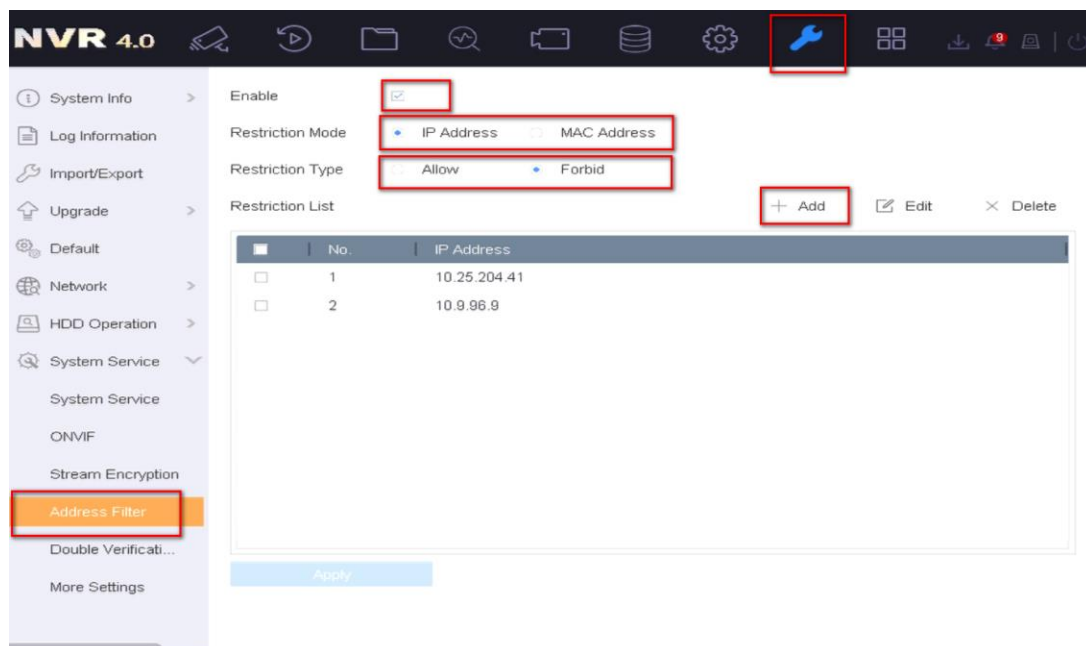
## 6. 【Main and Auxiliary Menu Switching】

- 1) Support non-homologous devices to support this function.
- 2) There is no resolution limit for the operation of primary and secondary ports, and they can be switched as long as they are supported.
- 3) Only the current port can operate PTZ after switching.



## 7. 【IP, MAC Address Black-and-white List Function】

- 1) Local GUI and web can set blacklists and whitelists of IP and MAC.
- 2) Only one (IP or MAC) black-and-white list can be enabled.

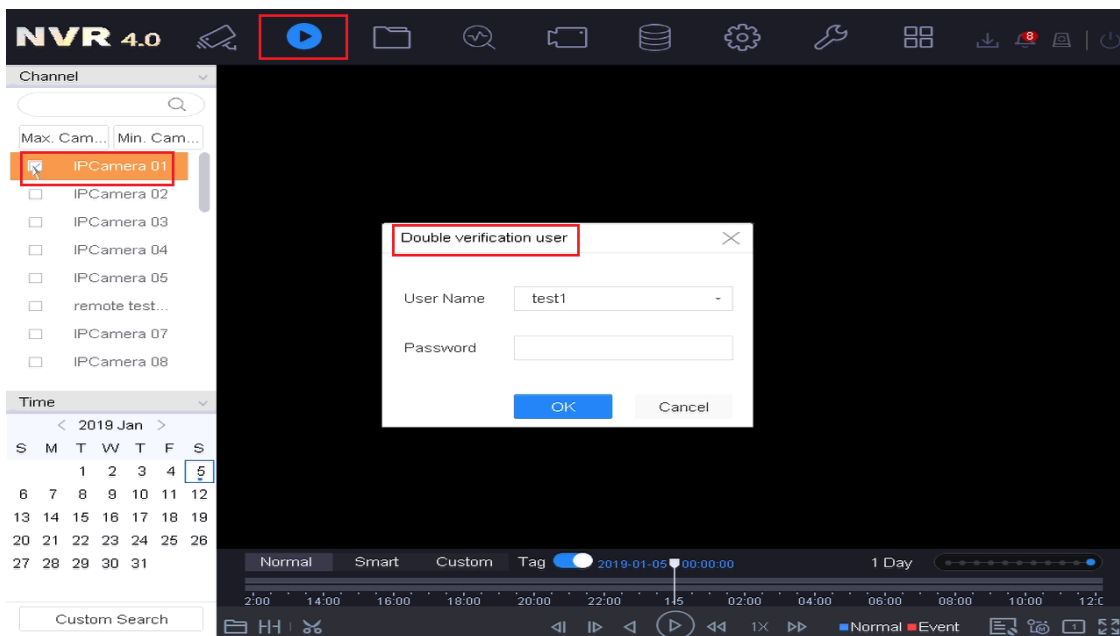


- 3) MAC and IP address black-and-white lists can support 32 addresses separately.

- 4) The actual IP and MAC are acquired in the router with IP and MAC addresses, and the IP and MAC on the router side are acquired outside the router.
- 5) The IP and MAC black-and-white list addresses set can be modified and deleted.

## 8. 【Double Verification】

- 1) If enabling Double Verification, non-admin users need secondary password authentication when local GUI playback, video export, remote video playback / download in web or IVMS4200.



- 2) Admin users don't need Double Verification and only admin user can configure the function.
- 3) Double Verification can newly add up to 8 users. Double Verification users can only be used for secondary authenticate, but **can't be used for logging in NVR.**

The screenshot shows the NVR 4.0 web interface. The top navigation bar includes icons for camera, playback, folder, search, video, storage, settings, and a blue wrench icon. The left sidebar lists various system settings, with 'System Service' and 'Double Verificati...' highlighted. The main content area shows a table with columns 'No.', 'User Name', and 'Security'. A table with 1 row is visible, containing '1', 'test1', and 'Weak Pass...'. Above the table are '+ Add', 'Modify', and 'Delete' buttons. Below the table is an 'Apply' button. A red box highlights the 'Enable Double Verification' checkbox in the top right of the settings area.

No.	User Name	Security
1	test1	Weak Pass...

*Note: After inputting double verification account, the validity period is 10s. For example, the D1 channel is authenticated and then playback. No secondary authentication is required when playback is stopped in 10s. Otherwise you have to authenticate again over 10s.*

## 9. 【EHOME 5.0 Protocol】

The device can be connected to the platform through E-home5.0 in LAN.

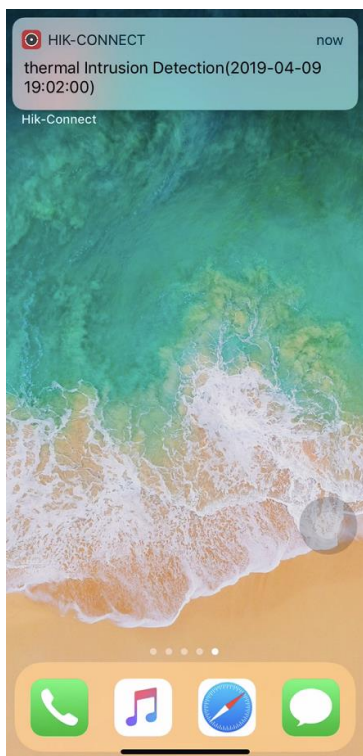
The screenshot shows the NVR 4.0 web interface for 'Platform Access' settings. The top navigation bar includes icons for camera, playback, folder, search, video, storage, settings, and a blue gear icon. The left sidebar lists various system settings, with 'Advanced' highlighted. The main content area shows the 'Platform Access' tab with a dropdown menu for 'Access Type' set to 'EHome'. Other fields include 'Enable' (checkbox), 'Server Port' (7660), 'Registration Status' (Offline), 'Device ID' (531648296), 'Version' (V5.0), and 'Encryption Password'.

## 10. 【Two-way Audio Function between NVR Channels and Hik-Connect】

- 1) It can be turned on and off on Hik-connect.
- 2) Only one channel is supported, and the channel must be in living view.
- 3) The version of Hik-Connect must be V3.7.0 or later.

## 11. 【Thermal Camera Alarm Image Upload to Hik-Connect】

- 1) After the thermal camera reports the alarm to NVR, NVR synchronizes the alarm information to Hik-Connect.
- 2) The alarm picture is the thermal channel, not the visible light channel.



## 12. 【Add POE Setting in Web】

- 1) It is supported to configure IP address of POE network card in web.

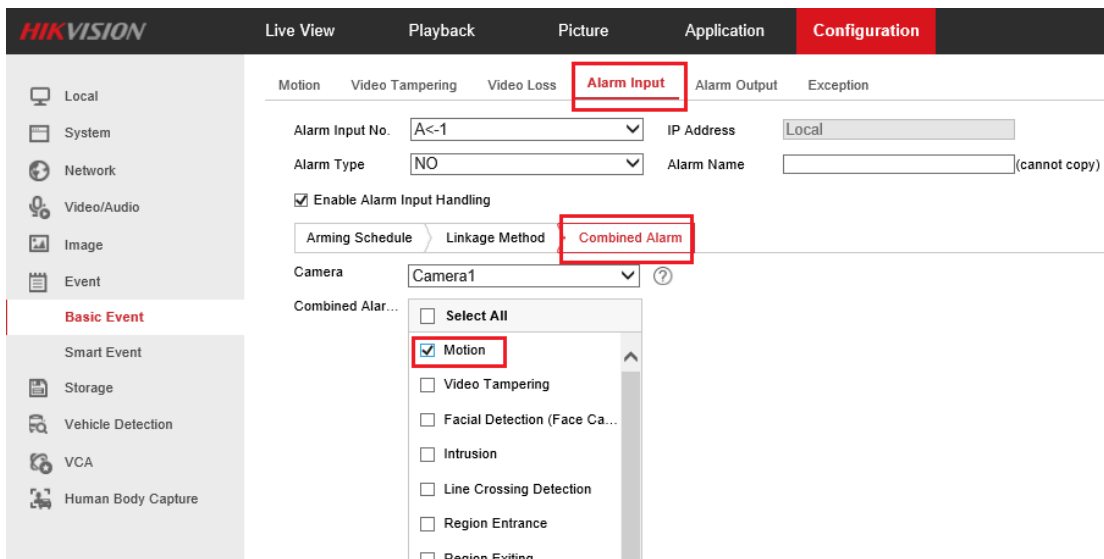
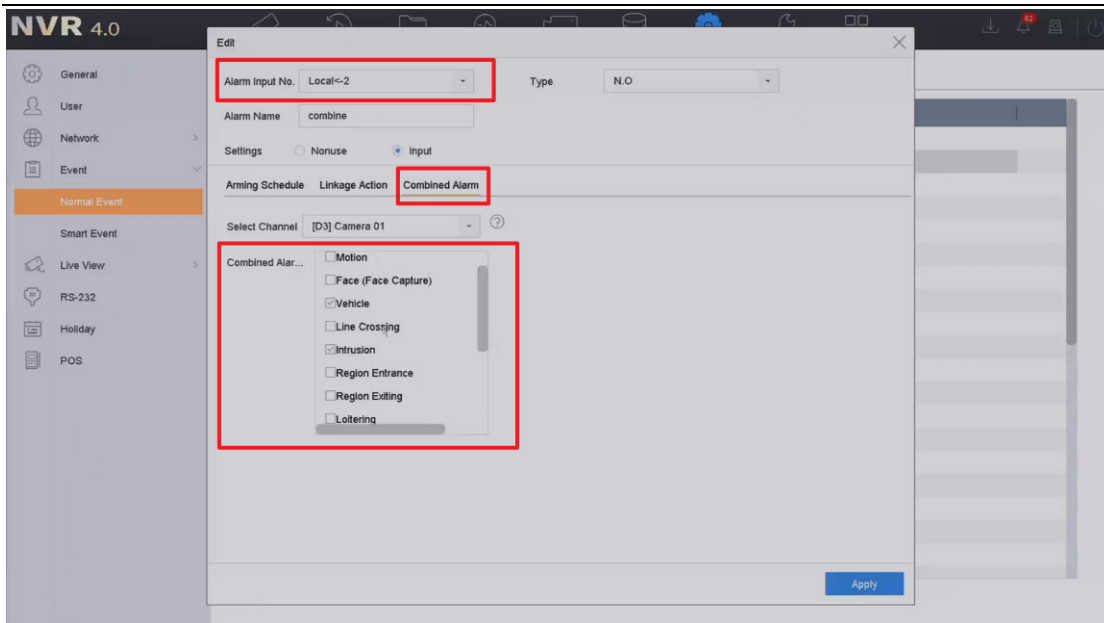
The screenshot displays the HIKVISION Configuration interface. The top navigation bar includes 'Live View', 'Playback', 'Picture', 'Application', and 'Configuration'. The left sidebar shows 'Local', 'System', and 'Network' categories. Under 'Network', 'Basic Settings' is selected. The main content area shows 'TCP/IP' settings for 'Lan1'. The settings include: NIC Type (Auto), DHCP (checked), IPv4 Address (10.9.96.28), IPv4 Subnet Mask (255.255.255.0), IPv4 Default Gateway (10.9.96.254), IPv6 Address (fe80::c62f:90ff:fea1:be4), IPv6 Default Gateway, Mac Address (c4:2f:90:a1:0b:e4), and MTU (1500). Below these are DNS Server settings: Auto DNS (checked), Preferred DNS Server (10.1.7.97), and Alternate DNS Server (10.1.7.98). At the bottom, 'PoE Network Card Settings' are shown, with a field for 'No more IOT channels ar...' containing the value '192.168.254.1' and a green checkmark.

### 13. 【Alarm In and Other Event Types Support Combination Alarm】

- 1) If Alarm In is configured with a combination alarm, the Alarm Input will not alarm separately, but only alarm for other events such as motion or smart events; If Alarm In is not set combination alarm, Alarm In should be alarmed alone.

*Note: Go to System->Event->Normal Event->Alarm input->Edit->Combined Alarm*

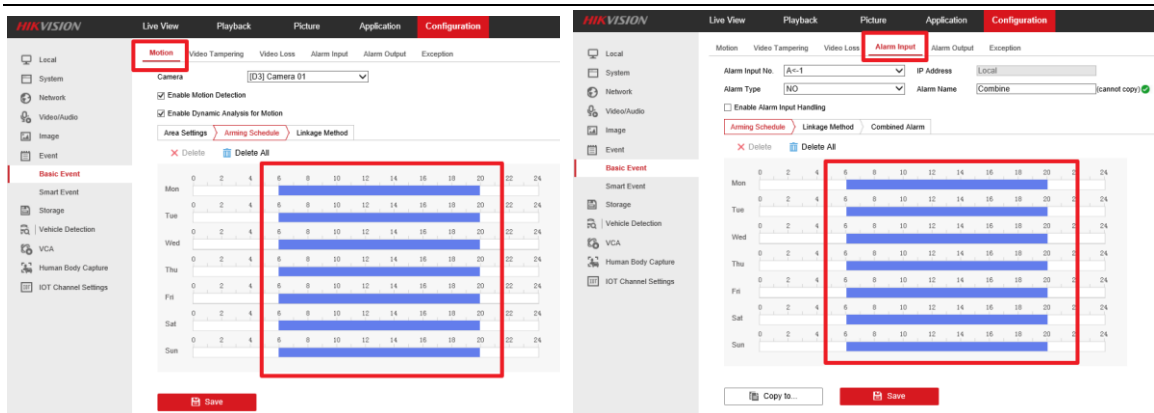
*One alarm input can only correspond to one camera channel when using Combination function.*



2) The Arming Schedule for combination alarm should be the same as other events such as motion detection or smart event.

*Note: When you select motion event as one of combined alarm events, the Arming Schedule of motion and combined alarm should be the same. (see the pics below)*





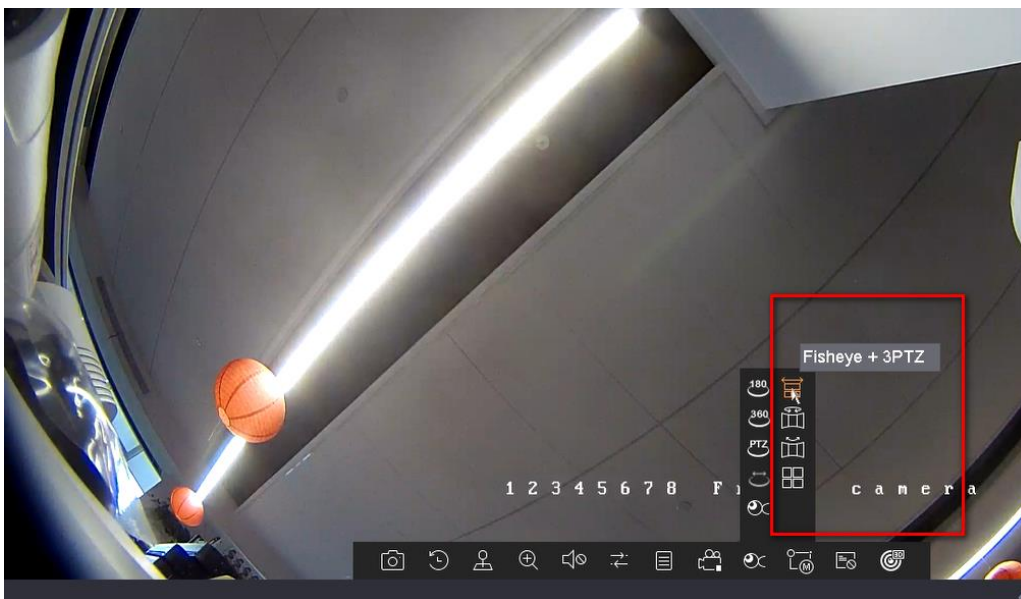
## 14. 【Add four types of smart event】

- 1) Four smart events are added: gathering, fast moving, parking detection, and loitering detection.

*Note: Only if the access cameras support these functions*

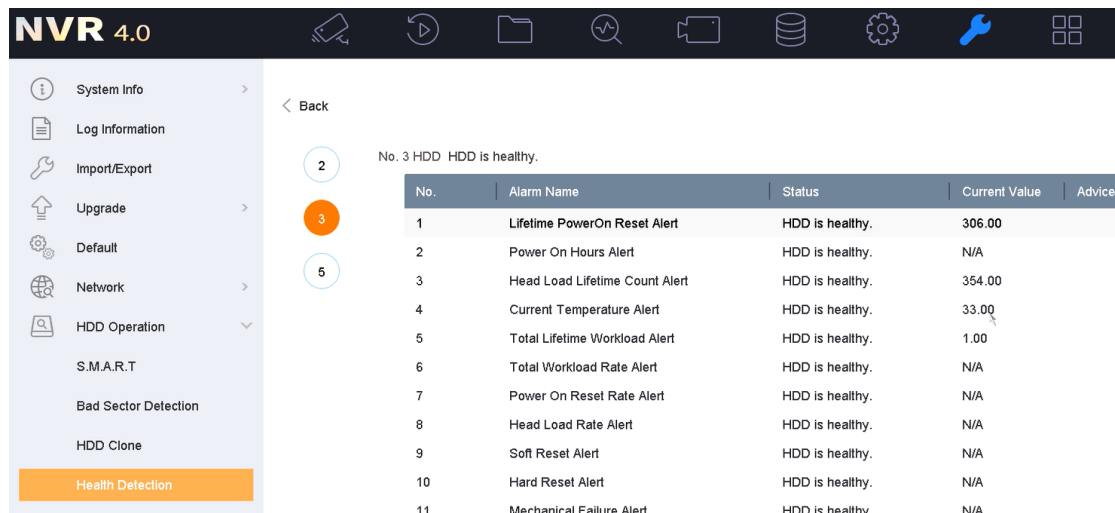
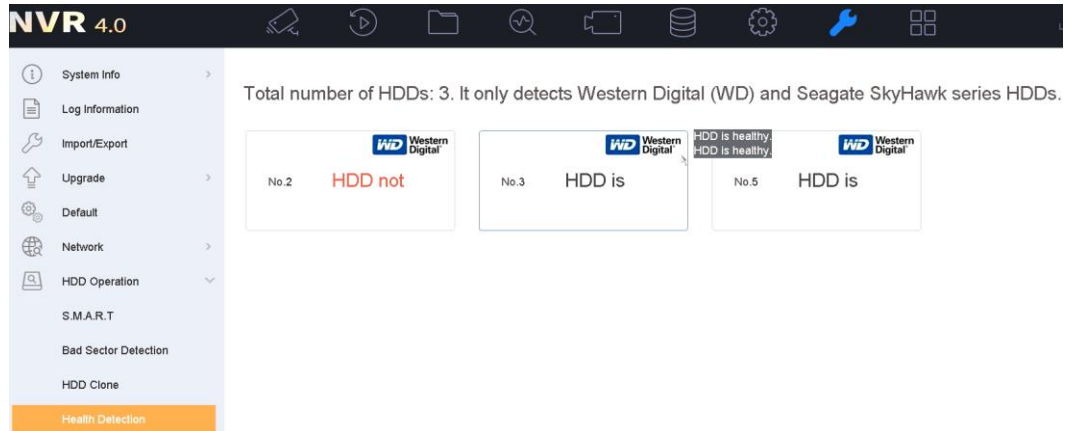
## 15. 【Fisheye Camera】

- 1) Support second generation fisheye camera access.
- 2) Four new fisheye expansion modes: Fisheye+3PTZ, Cylinder, Hemisphere, 4PTZ.



## 16. 【HDD Health Detection】

- 1) Only Western Digital HDD and Seagate Skyhawk Series HDD are supported.
- 2) The health status of various indexes of the hard disk can be visually checked.



## Modified functions

### 1. 【Optimize Keyboard Access】

- 1) For DS-1005K keyboard, after stopping patrol / starting patrol, the patrol icon will change and the tip text will change.
- 2) The target detection bar under the preview interface can be operated by keyboard.

- 3) Real-time playback can control the positioning, pause, start and exit functions of time points.

## 2. 【Optimize Thermal Camera Access】

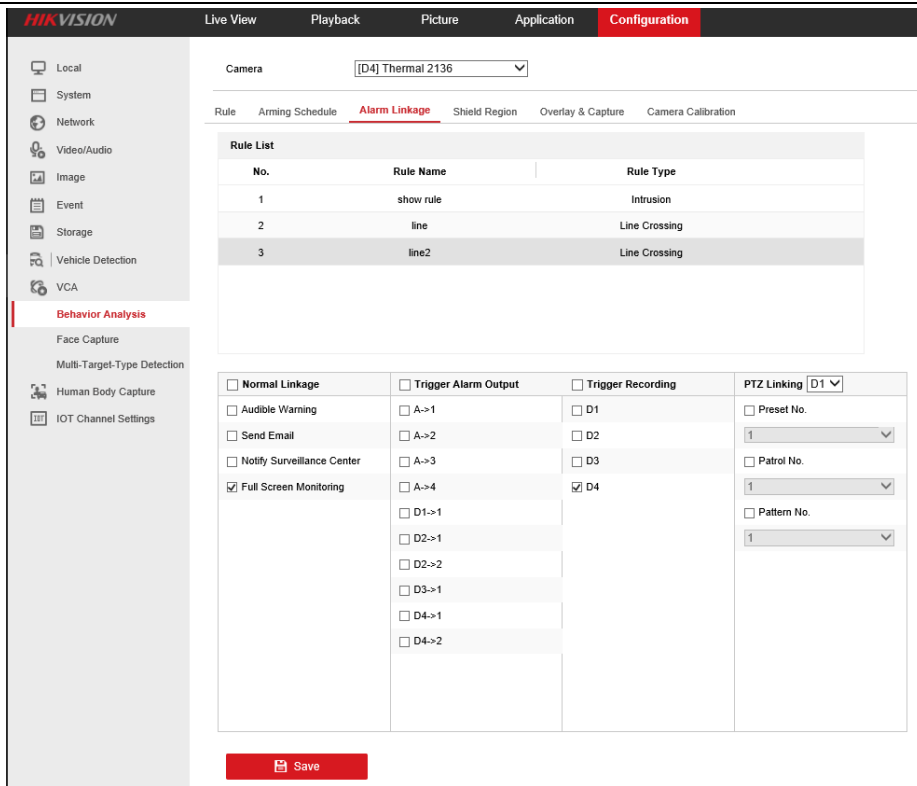
- 1) Support VCA behavior analysis configuration on NVR.

*Note: Login web of NVR, Go to Configuration -> VCA-> Behavior Analysis -> Select Thermal Channel and configure (Only support on Web of NVR)*

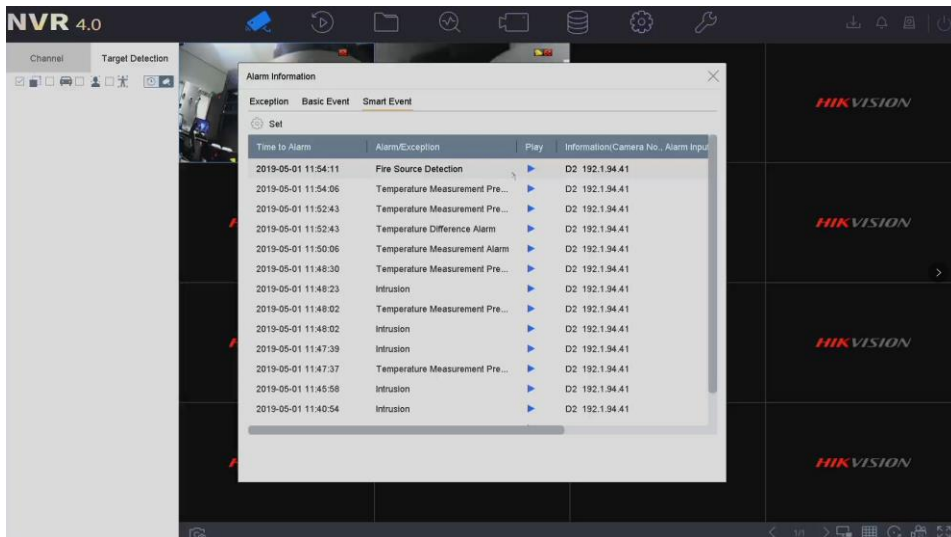
*Same type of VCA event for the same channel, the linkage after triggering the alarm can only be set to the same types. For example, if you set two line crossing events on the same channel, the linkages of them should be the same.*

*If the following low probability situation occurs, the VCA function rule configured on the web of thermal cannot be modified on the Web of NVR, please delete the rule and reconfigure it.*

The screenshot displays the Hikvision NVR web interface for configuring VCA (Video Content Analysis) on a thermal camera. The interface is divided into a sidebar and a main configuration area. The sidebar on the left contains navigation icons for Local, System, Network, Video/Audio, Image, Event, Storage, Vehicle Detection, and VCA. The VCA section is expanded, showing sub-options like Behavior Analysis, Face Capture, Multi-Target-Type Detection, Human Body Capture, and IOT Channel Settings. The main configuration area is titled 'Configuration' and shows the selected camera as '[D4] Thermal 2136'. Below this, there are tabs for 'Rule', 'Arming Schedule', 'Alarm Linkage', 'Shield Region', 'Overlay & Capture', and 'Camera Calibration'. The 'Rule' tab is active, displaying a 'Rule List' table with two rules. Rule 1 is 'show rule' with a 'Line Crossing' event type. Rule 2 is 'line' with a 'Line Crossing' event type. A dropdown menu is open for Rule 1, showing options: None, Line Crossing, Region Entrance, and Region Exiting. Below the table is a live video feed from 'Camera 01' showing a thermal image with a green bounding box labeled 'Min' and a blue bounding box labeled 'Max'. A 'Save' button is at the bottom.

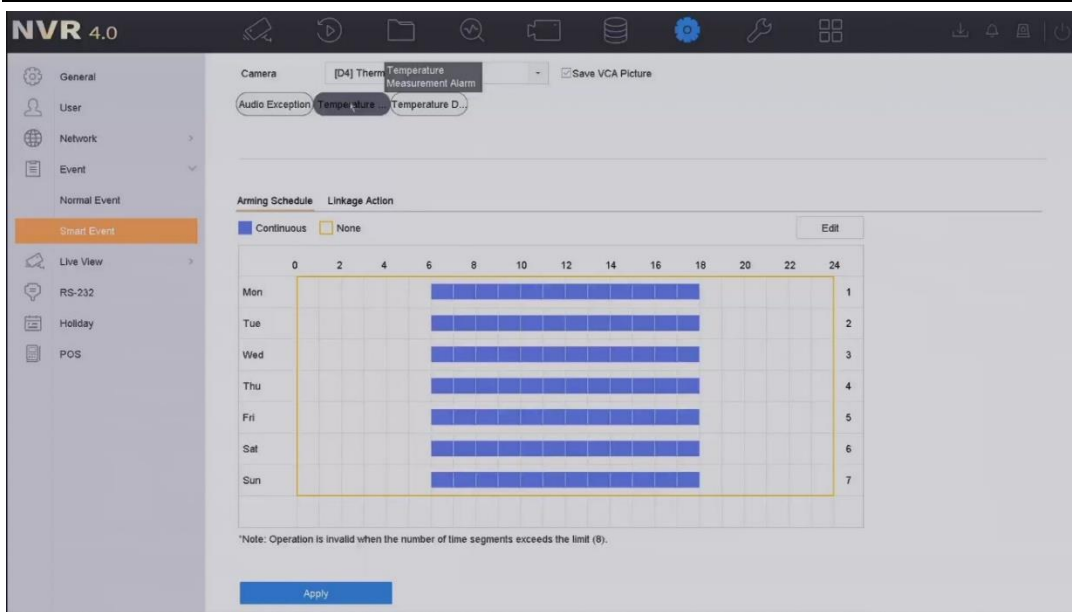


2) Support Temperature Measurement, Fire Source Detection and VCA alarm.



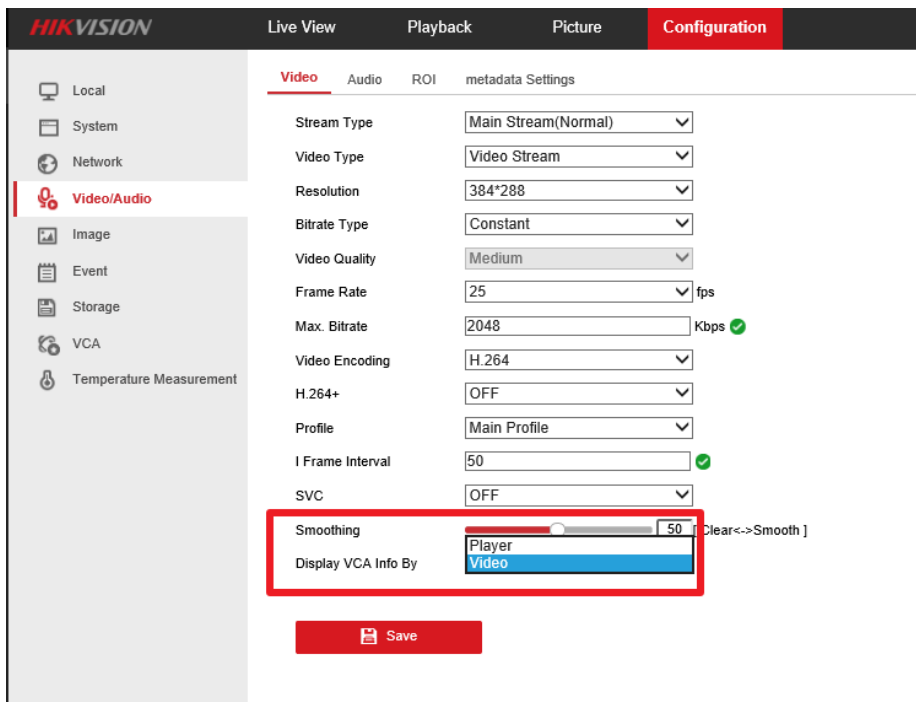
3) Support set arming schedule & linkage of real-time temperature measurement and fire source detection on NVR local.

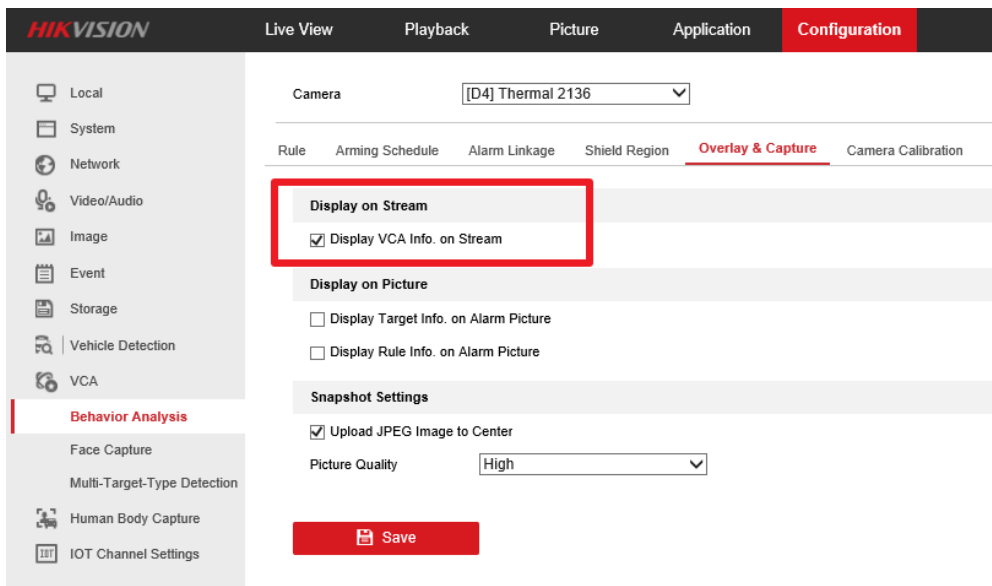
*Note: The configuration above is available after enabling the related function on web of Thermal Camera.*



#### 4) Support display rule on NVR local

*Note: This function is implemented by Thermal camera which firmware version should be above 5.5.8.*





### 3. [Virtual Host]

- 1) All models of I series including POE and non-POE NVR, can enable virtual host function, and generate connecting links.

*Note: Go to Configuration->Network->Advanced Settings->Other (see the pic below)*

- 2) After opening the virtual host, both POE and non-POE NVR can generate jump links for POE and non-POE channels.

*Note: Go to Configuration->System->Camera Management->IP Camera (see the pic)*

### 3) Support skipping the website of third-party camera.

The screenshot shows the HIKVISION Configuration interface. The 'Configuration' tab is selected, and the 'Other' sub-tab is active. The 'Advanced Settings' section is expanded, and the 'Enable Virtual Host' checkbox is checked and highlighted with a red box. Other settings include Alarm Host IP, Alarm Host Port (0), Multicast Address, and Video Download Bandwidth (262144 Kbps). A 'Save' button is visible at the bottom.

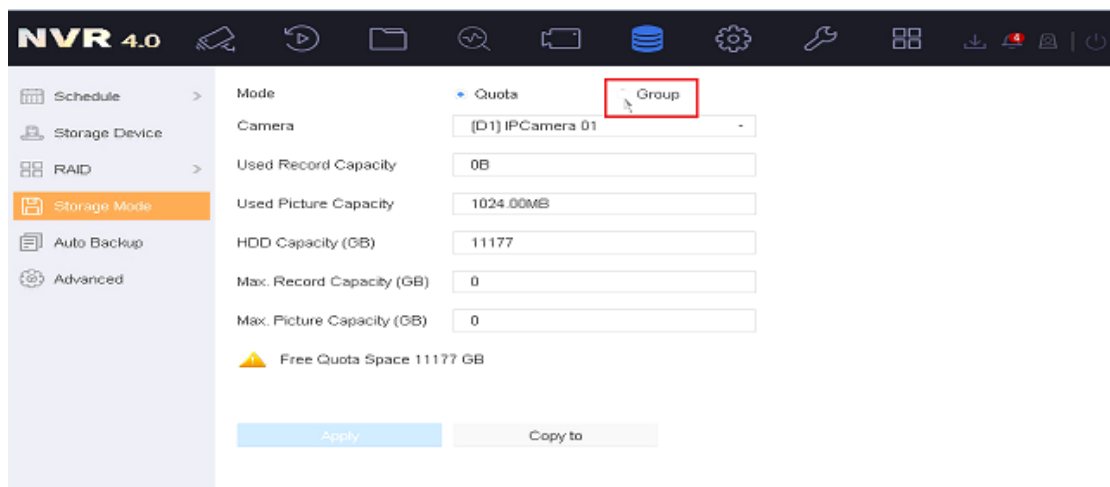
The screenshot shows the HIKVISION Configuration interface, specifically the 'IP Camera' tab. A table lists the configured IP cameras. The table has columns for Channel No., Camera Name, IP Address, Channel No., Management Port, Security, Status, Protocol, and Connect. Three cameras are listed: D1 (ANPR), D2 (IPdome), and D3 (Camera 01). All are online and use HIKVISION protocol.

Channel No.	Camera Name	IP Address	Channel No.	Management Port	Security	Status	Protocol	Connect
D1	ANPR	10.7.68.2	1	8000	Weak	Online	HIKVISION	http://10...
D2	IPdome	10.7.68.25	1	8000	Weak	Online	HIKVISION	http://10.7.68.27:80
D3	Camera 01	10.7.68.27	1	8000	Weak	Online	HIKVISION	http://10...

### 4. **【Array & Group mode are mutually exclusive】**

- 1) It can be detected when NVR is booting if Array and group mode coexist. If coexist, the local GUI will prompt "Quota mode provides higher data safety, and is recommended over array mode for HDD group". Select "Yes" and then the NVR will restart.

- 2) Array mode: It doesn't support Group mode when enabling Array. Group mode button is putting ash in local GUI, and there is no Group mode option in drop-down box in 4200.
- 3) Group mode: It doesn't support enabling Array when selecting Group mode. Enable RAID button is ash and cannot be selected, and array configuration page is hidden in 4200.



## 5. 【Optimize Search Speed of Hik-Connect Playback】

The Hik-connects receives the alarm, and the alarm video can be played back after 5-15s.

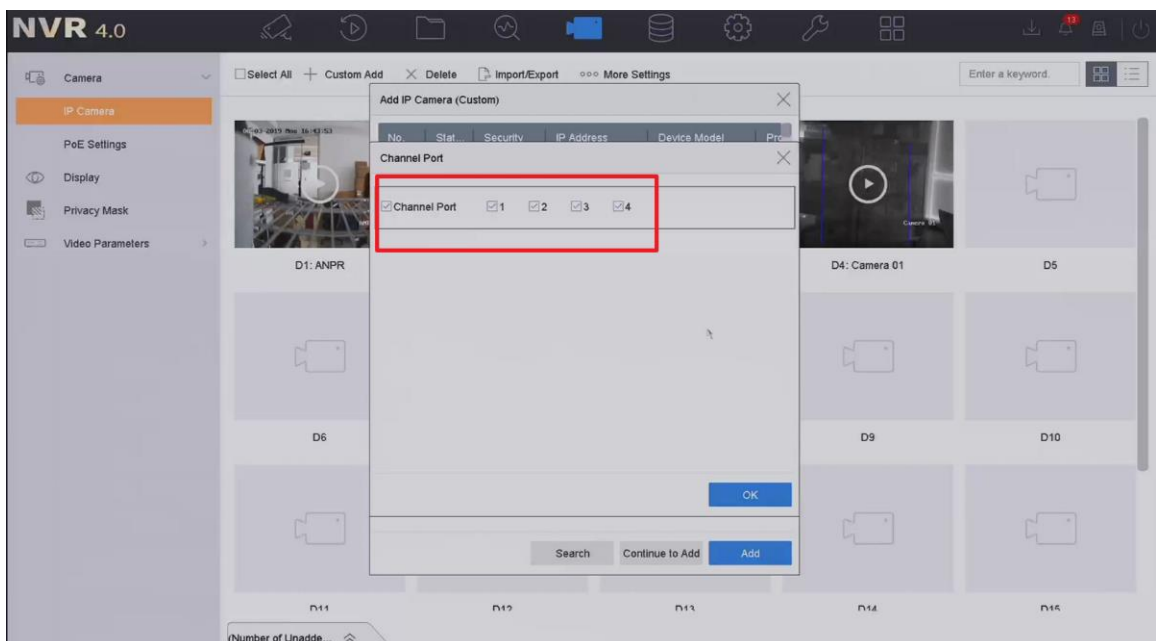
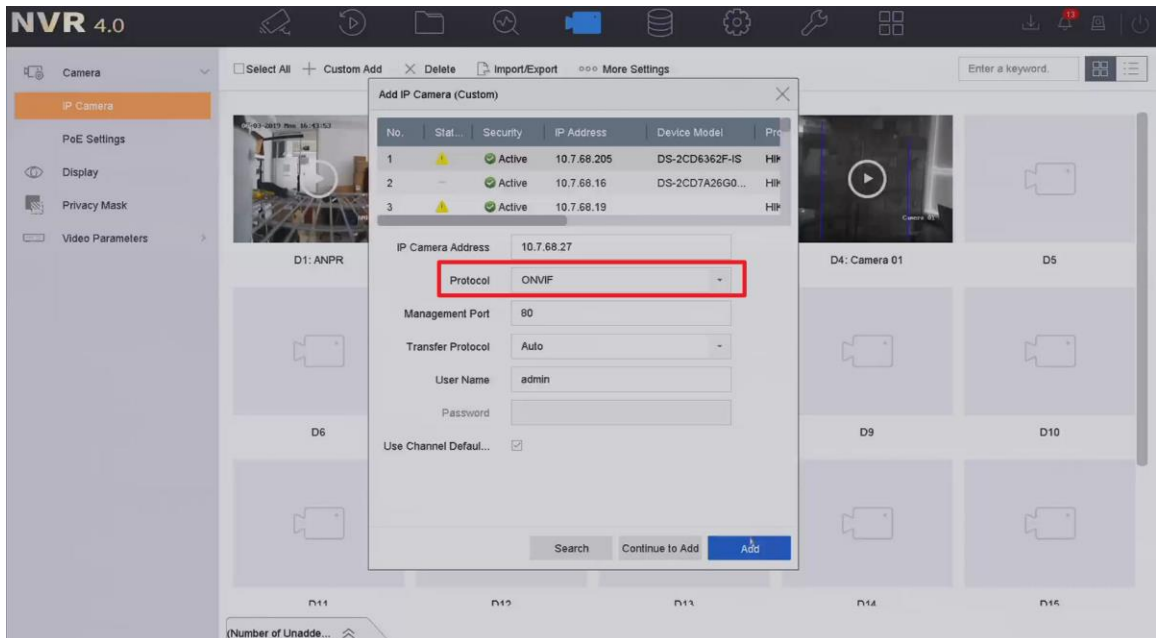
## 6. 【Vehicle Detect black/white/other list support PTZ linkage】

- 1) PTZ linkage can be set in local and remote black and white list and other lists in vehicle detection and alarm.
- 2) When the vehicle detection alarm is triggered, the local trigger corresponding PTZ linkage item.



## 7. 【Optimize Onvif Access】

- 1) Optimize the access logic of video stream to reduce the problem that camera can't be accessed or access disordered caused by parameters
- 2) Support multi-channel camera access.



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- 3) Pull-Point Notification is supported by default, and Base Notification is used if the device does not support Pull-Point Notification.

**Related product list:**

I series NVR	DS-9600NI-I16, DS-9600NI-I8 DS-7700NI-I4(/P), DS-7732NI-I4/24P DS-7700NI-I4(B)(/P), DS-7600NI-I2(/P)
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**Customer Impact and Recommended Action**

This new firmware upgrade is to improve product performance, and will take effect automatically after upgrading from previous versions. We'd like to inform you the above changes. Also, we are sorry for any possible inconvenience of use-habit changes caused by this action.

Note:

- Hikvision has all rights to alter, modify and cancel this notice.
- Hikvision doesn't give any guarantee for old models' stock.
- Hikvision is not liable for any typing or printing errors.
- For special model's change details, please contact our local technical support team.