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Action Required:	None, Information Only				

## ■ General Information

Firmware Basic Information	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

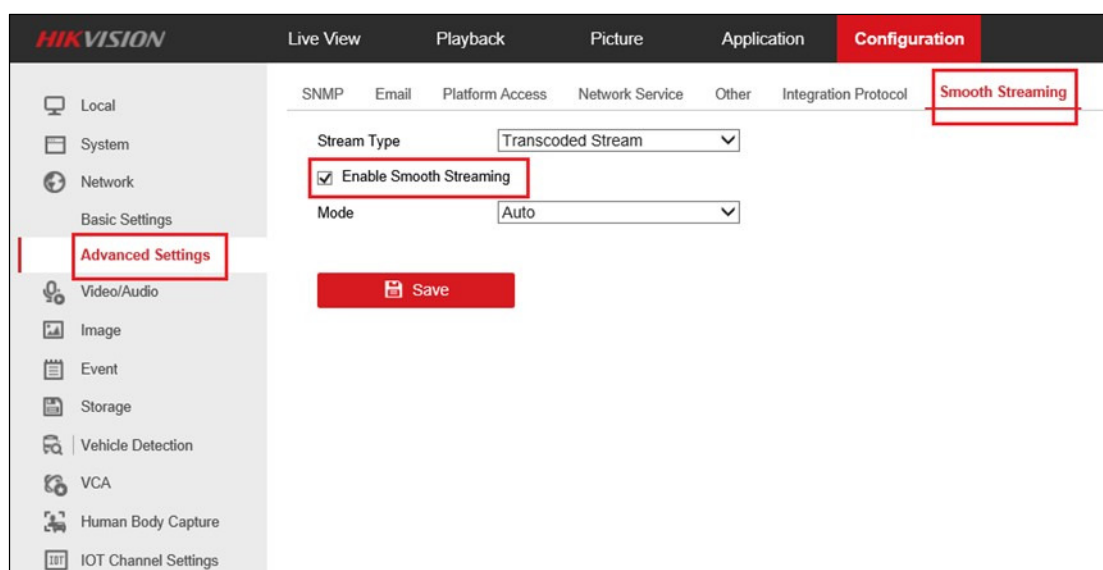
## ■ Reason for Upgrade

Added new features and optimize product performance.

## ■ New Features

### • Smooth Streaming

- Low bandwidth preview and playback, support up to 4 channels.
- Web and iVMS-4200 support configuring, and only iVMS-4200 supports preview and playback. Web doesn't support preview and playback.

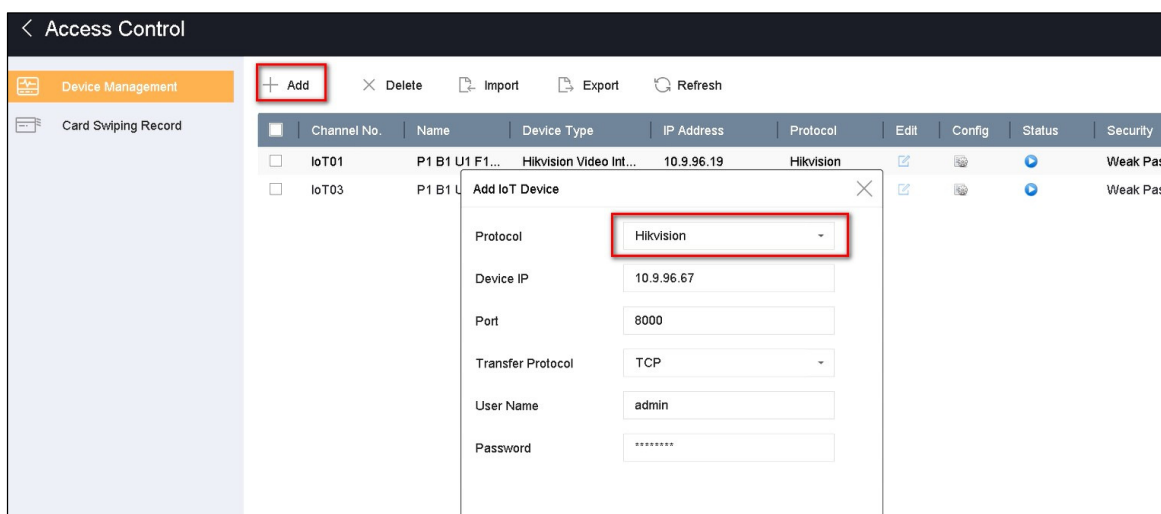
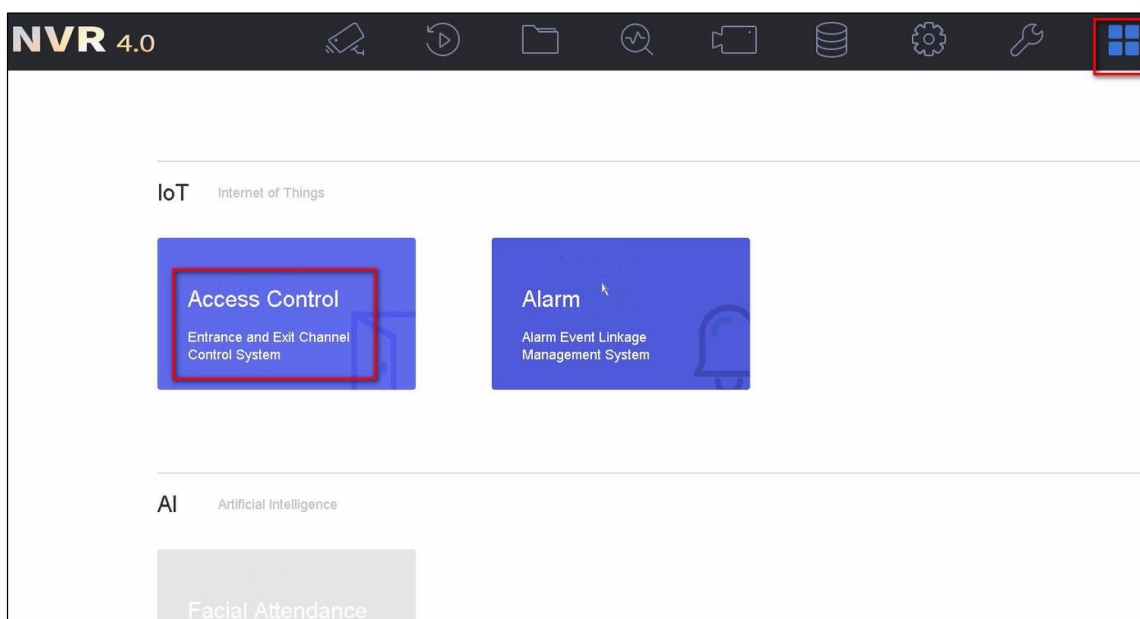


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- **Access Control Devices Access**

- Supports accessing Hikvision Access Control and Intercom devices.

**NOTE:** Access Control is used as an example for the following screenshots.



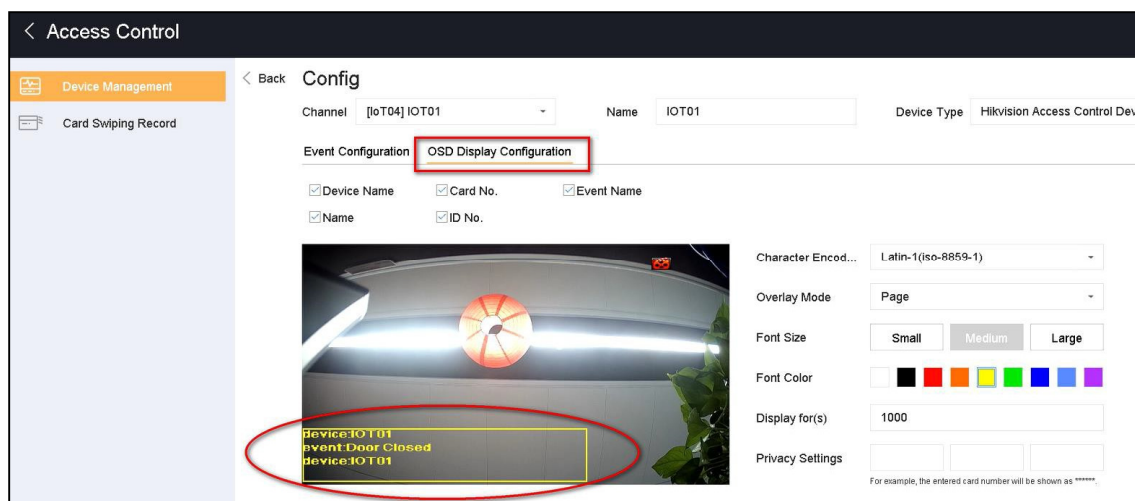
- Supports alarm rule configuration and OSD display configuration.

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- Supports Normal Linkage, Trigger Alarm Output, Trigger Channel, PTZ Linkage.

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

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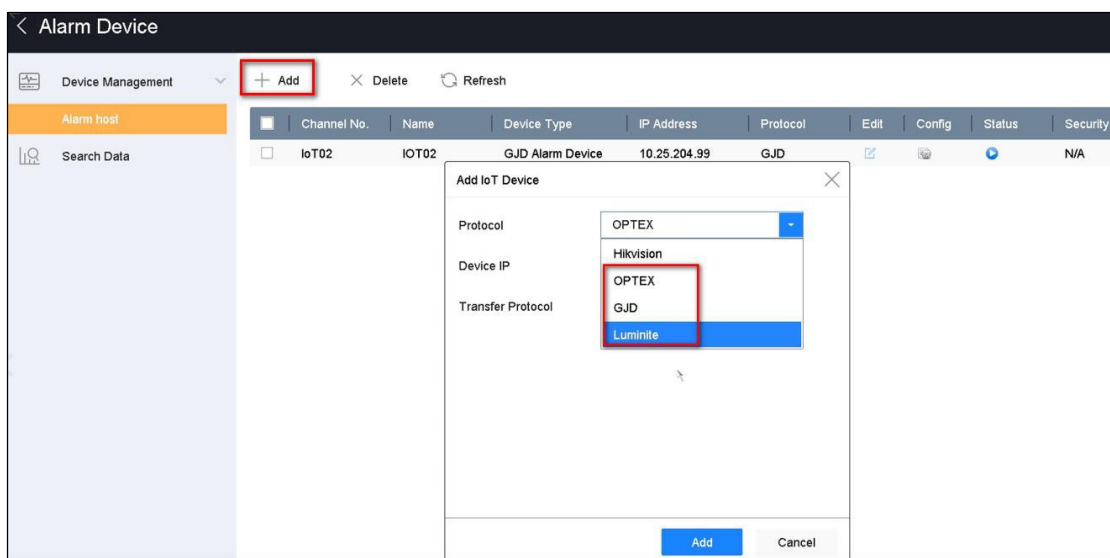
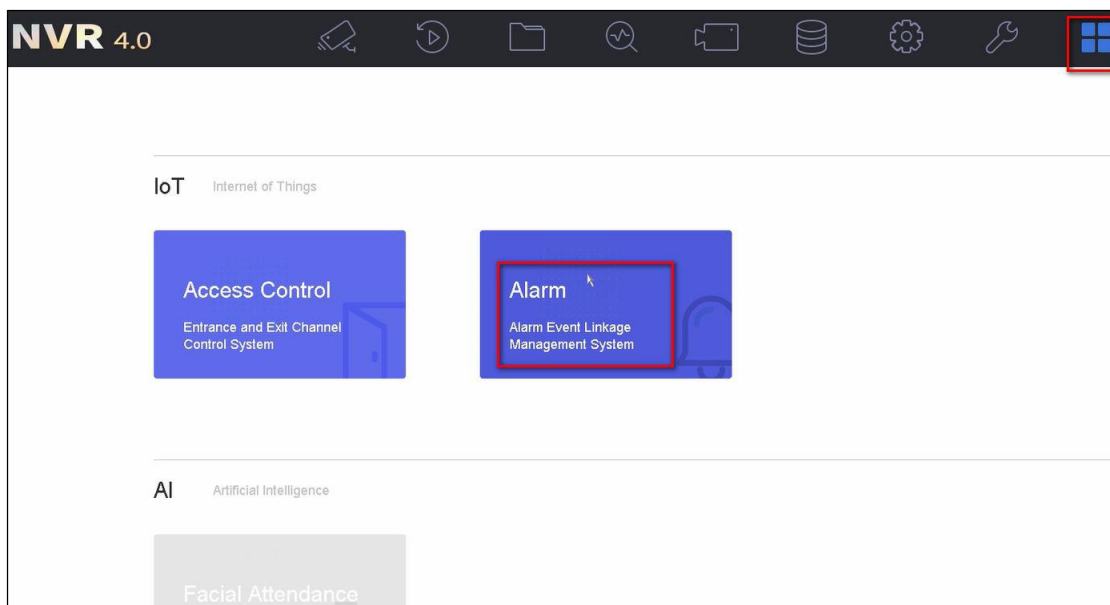
- Supports Access Control alarm event log.

No.	Major Type	Time	Minor Type	Parameter
1	Alarm	27-05-2019 09:14:56	Access Control Host Event	N/A
2	Alarm	27-05-2019 09:16:49	Access Control Host Event	N/A
3	Alarm	27-05-2019 09:16:49	Access Control Host Event	N/A
4	Alarm	27-05-2019 09:17:09	Access Control Host Event	N/A
5	Alarm	27-05-2019 09:19:56	Access Control Host Event	N/A

- Supports uploading alarm to Hik-Connect.
- The timeout period for recording after the call starts is 90 seconds, or 90 seconds if there is no call end.
- **Alarm Devices Access**
  - Supports accessing HIKVISION alarm devices and GJD, OPTEx, and Luminite alarm devices.

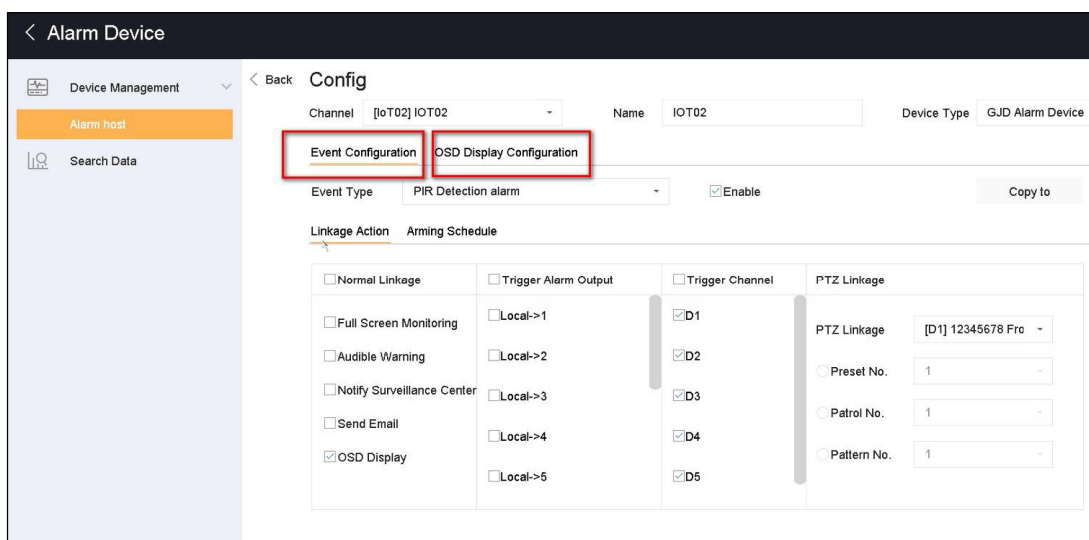
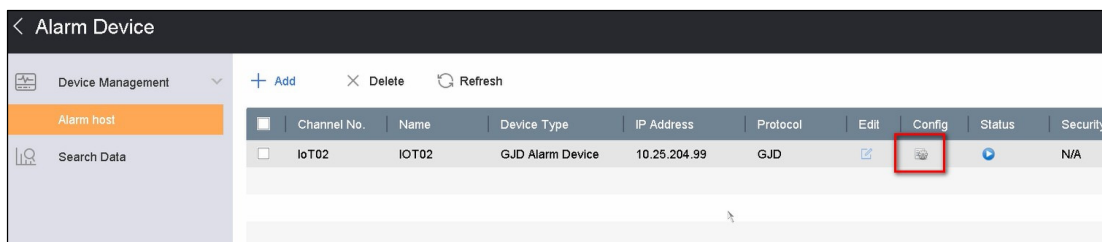
**NOTE:** GJD will be used as an example for the following screenshots.

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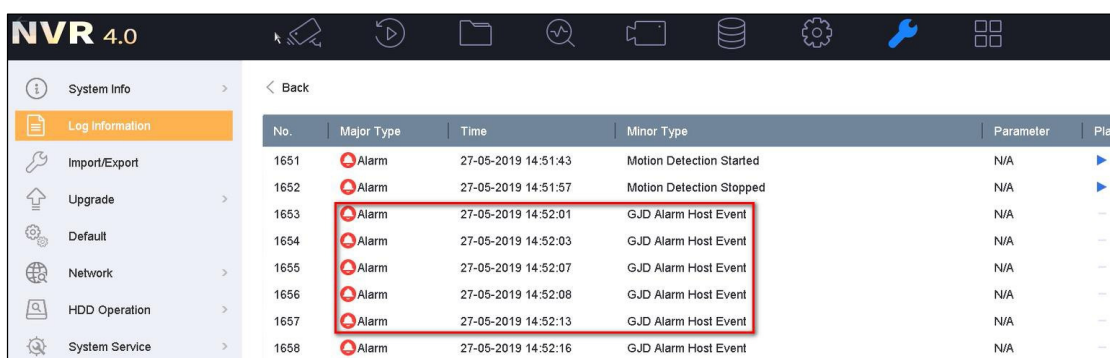


- Supports alarm rule configuration and OSD display configuration.

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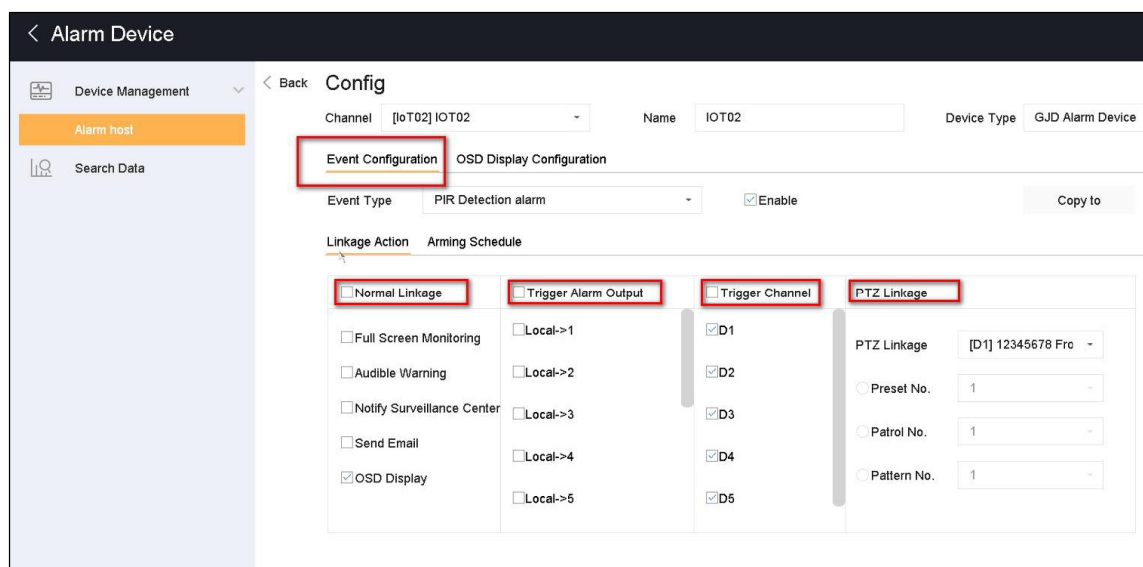


- Supports alarm event log.

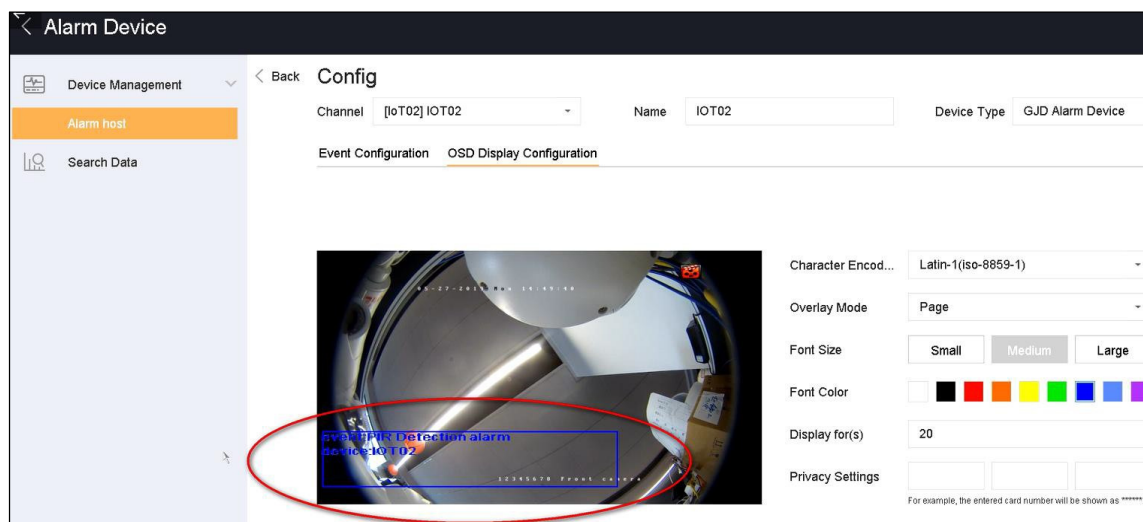


- Supports Normal Linkage, Trigger Alarm Output, Trigger Channel, PTZ Linkage.

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<b>Action Required:</b>	None, Information Only				



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

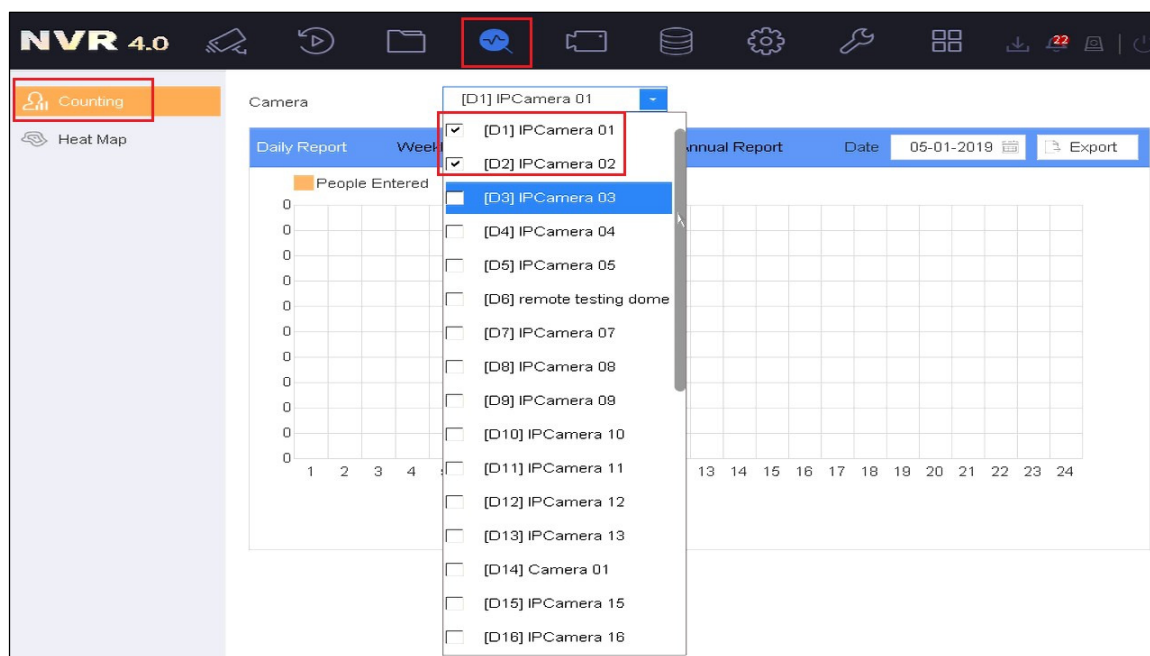


- Supports uploading alarm to Hik-Connect.
- The default port for NVR to receive alarms is 30999, which can be modified.

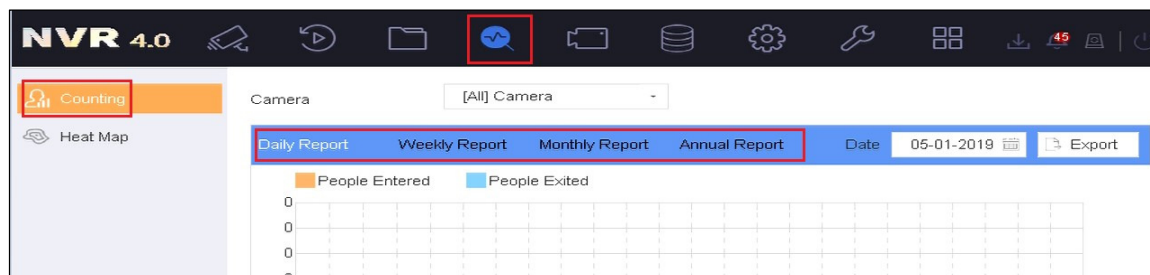
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- Counting Statistics

- Supports display counting statistics by selecting channels in the local GUI and iVMS-4200.



- Supports display and export reports daily, weekly, monthly, and annually.

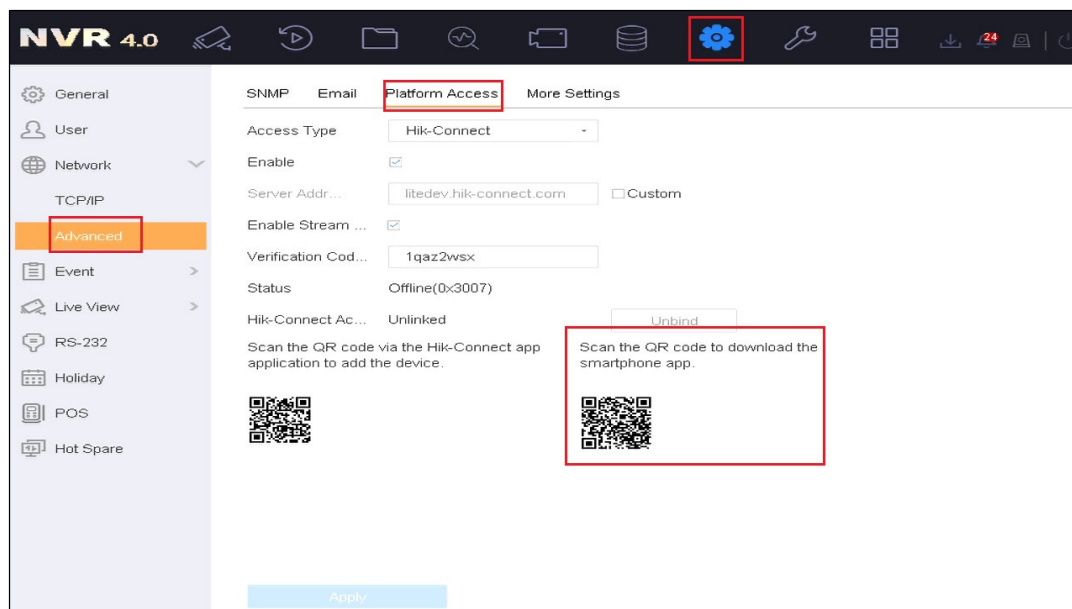


- Hik-Connect Download QR Code

- Hik-Connect download QR code is added to the NVR's local GUI Platform Access interface.



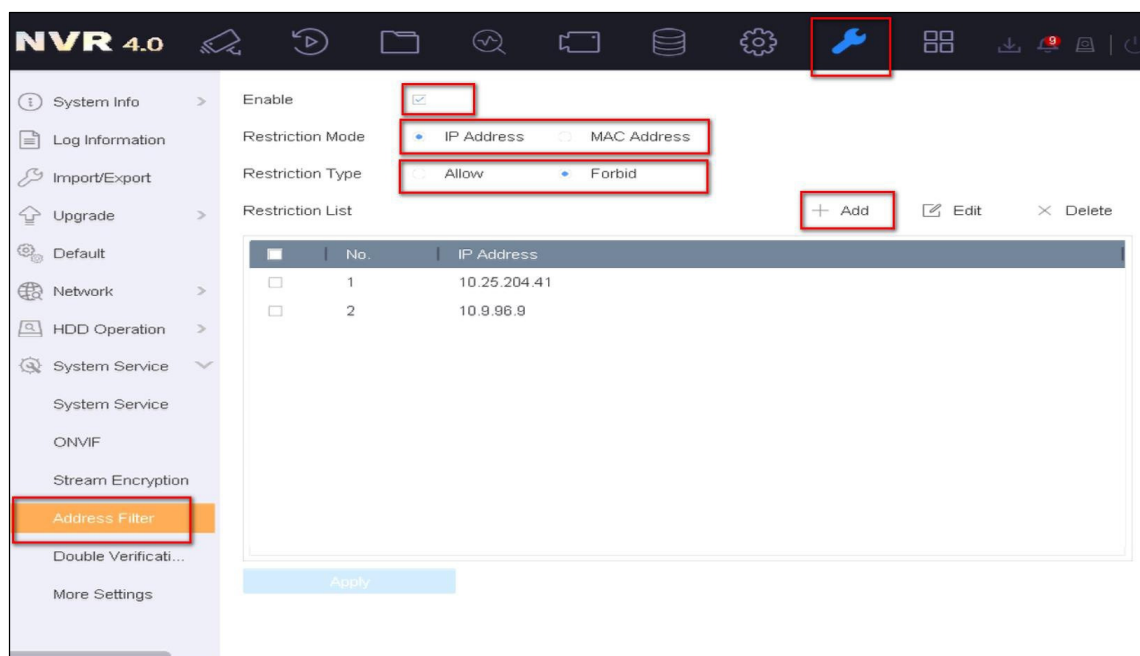
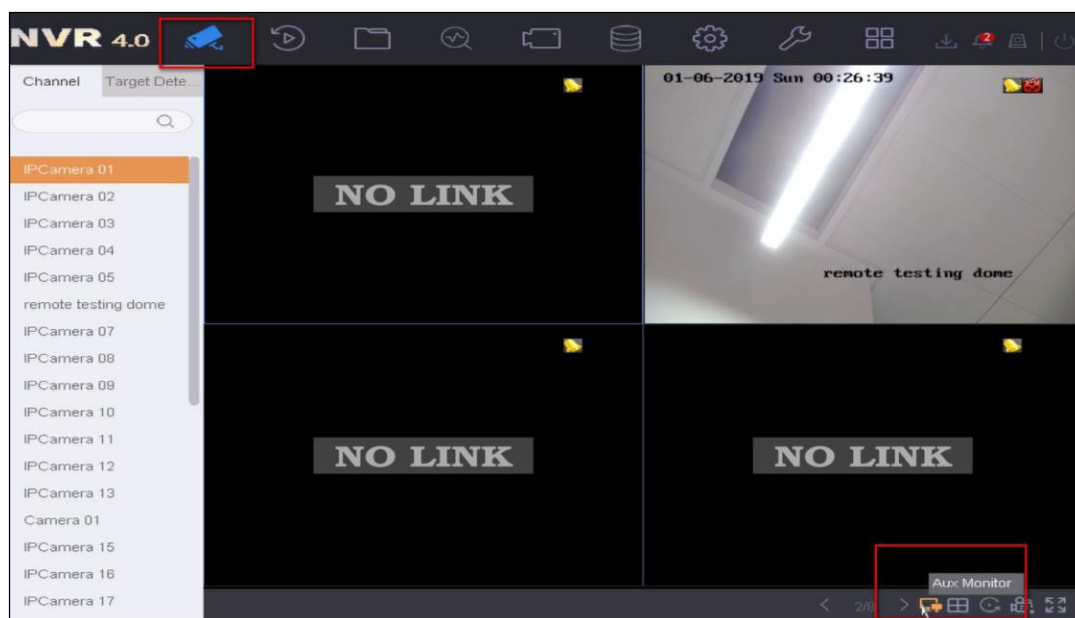
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- **Main and Auxiliary Menu Switching**

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

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- **IP, MAC Address Black-and-White List Function**
  - Local GUI and Web can set IP and MAC blacklists and whitelists.

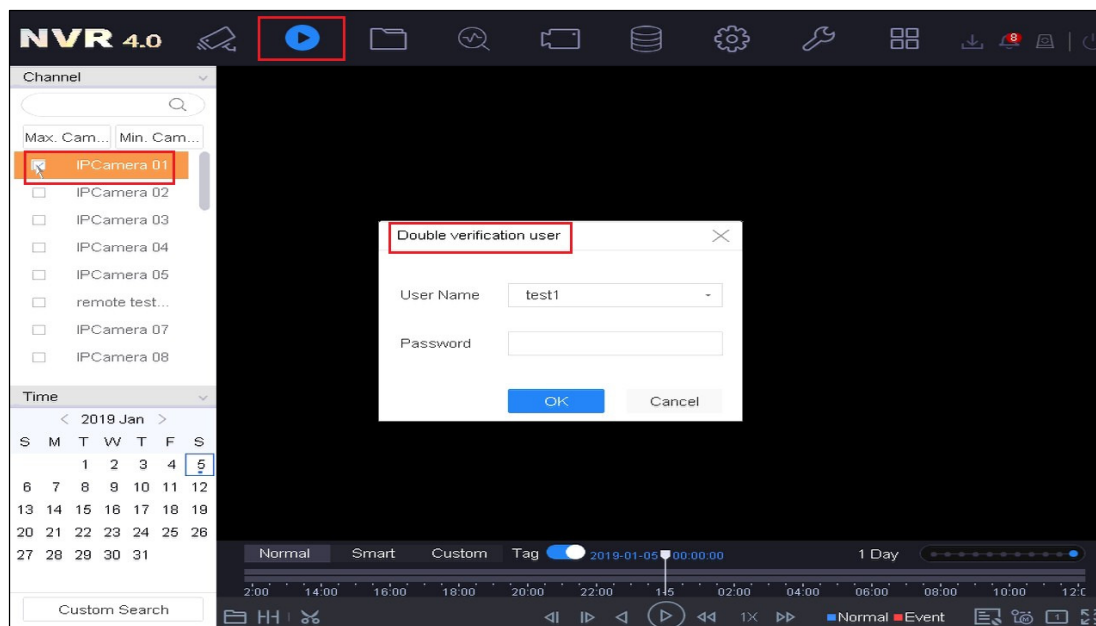
<b>Title:</b>	RN NVR v4.21.005 061919NA (EXTERNAL)	<b>Version:</b>	v5.5.0	<b>Date:</b>	061919
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- Only one (IP or MAC) black-and-white list can be enabled.
- MAC and IP address black-and-white lists can support 32 addresses separately.
- The actual IP 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.
- The IP and MAC black-and-white list addresses set can be modified and deleted.
- **Supports Korean Soft Keyboard**
  - When the local language is switched to Korean, the keyboard input supports Korean.

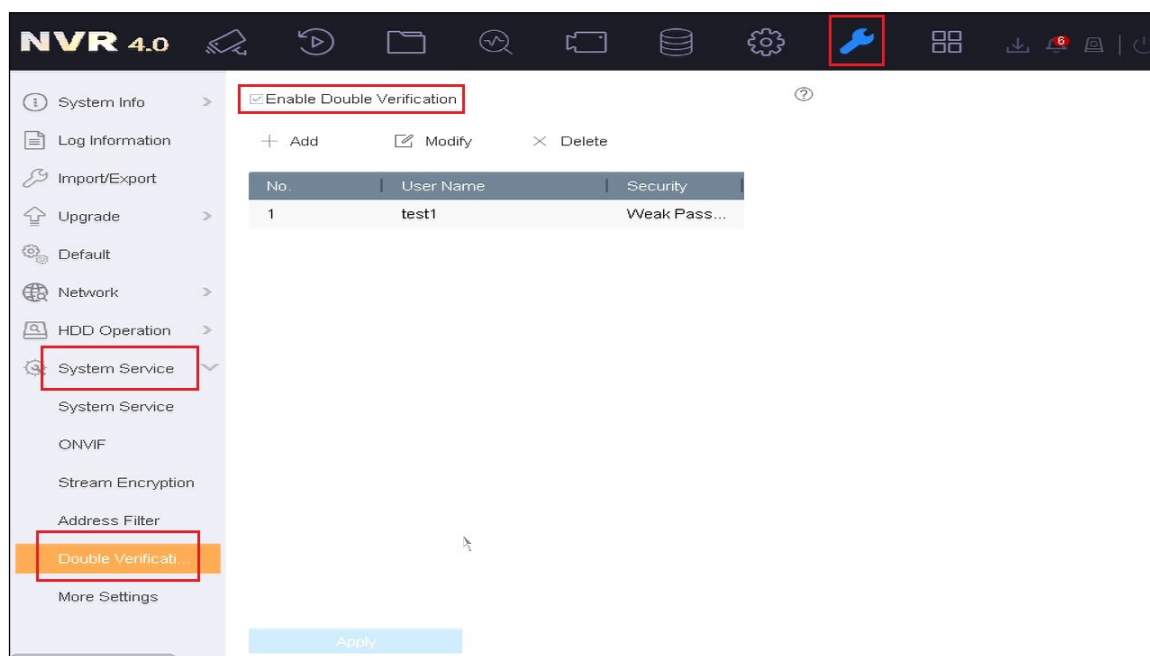


- **Double Verification**
  - If enabling Double Verification, non-admin users need secondary password authentication when performing local GUI playback, video export, or remote video playback/download in the Web or iVMS-4200.

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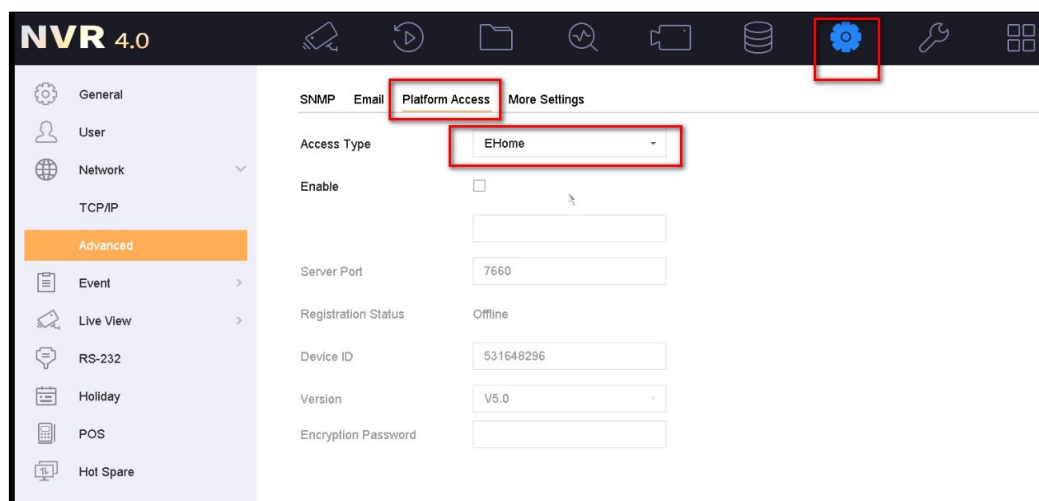
- Admin users don't need Double Verification and only the admin user can configure the function.
- Double Verification can newly add up to eight users. Double Verification users can be used only for secondary authentication, but can't be used to log into the NVR.



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- **E-HOME 5.0 Protocol**

- The device can be connected to the platform through E-home 5.0 in the LAN.



- **Two-Way Audio Function Between NVR Channels and Hik-Connect**

- It can be turned on and off in Hik-connect.
- Only one channel is supported, and the channel must be in living view.
- The Hik-Connect version must be v3.7.0 or later.

- **Thermal Camera Alarm Image Upload to Hik-Connect**

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

- **Add PoE Setting in Web**

- Supports configuring the PoE network card IP address in the Web.

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**HIKVISION** Live View Playback Picture Application **Configuration**

TCP/IP DDNS PPPoE Port NAT

**Lan1**

NIC Type Auto

☒ DHCP

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

MTU 1500

**DNS Server**

☒ Auto DNS

Preferred DNS Server 10.1.7.97

Alternate DNS Server 10.1.7.98

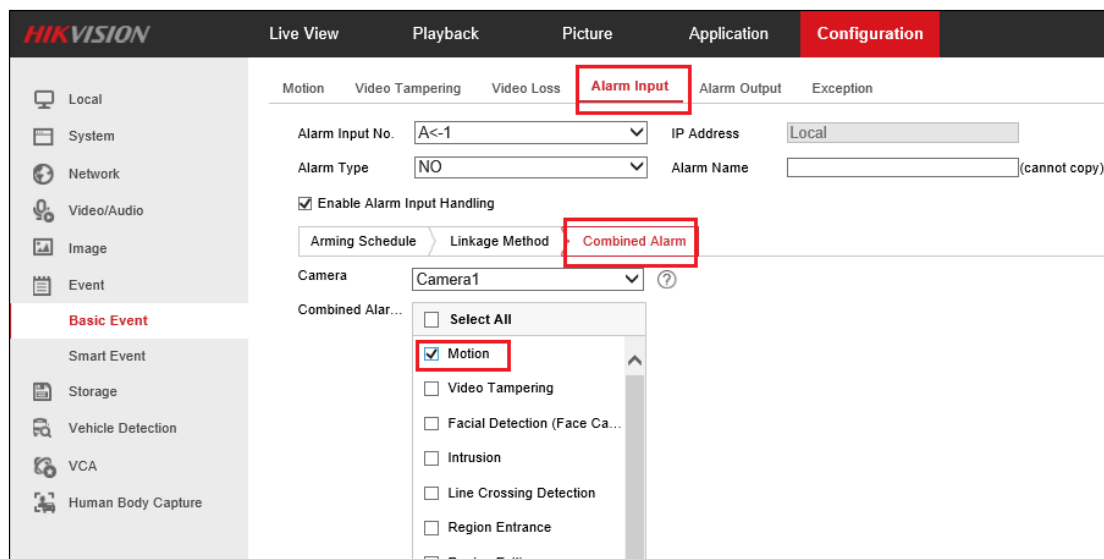
**PoE Network Card Settings**

No more IOT channels ar... 192.168.254.1

- **Alarm In and Other Event Types Support Combination Alarm**

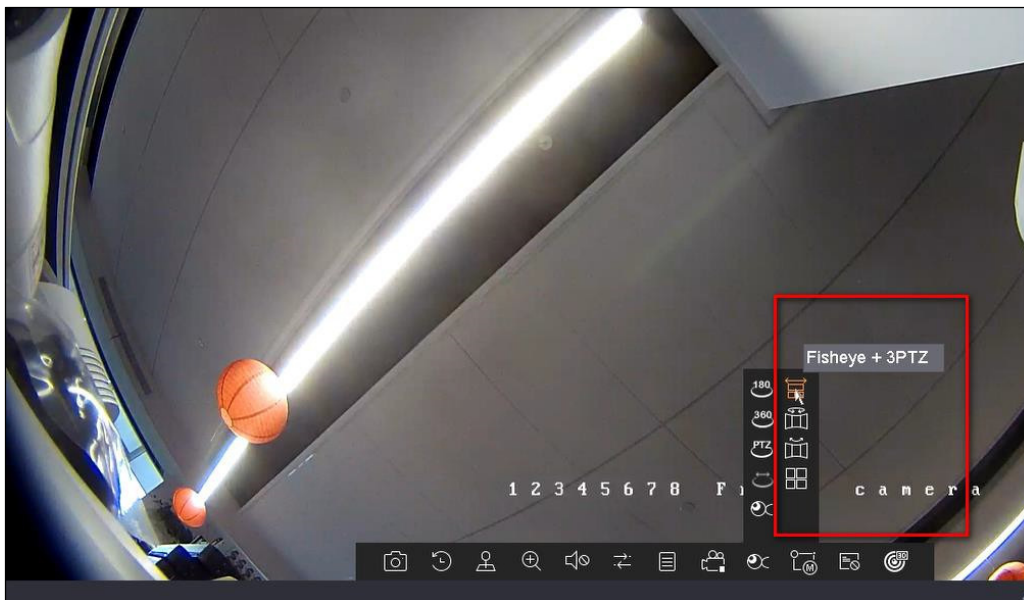
- If Alarm In is configured with a combination alarm, the Alarm Input will not alarm separately, but alarm only for other events such as motion or smart events. If Alarm In is not set with a combination alarm, Alarm In should be alarmed alone.
- The Arming Schedule for a combination alarm shall be the same as other events such as motion detection or smart event.

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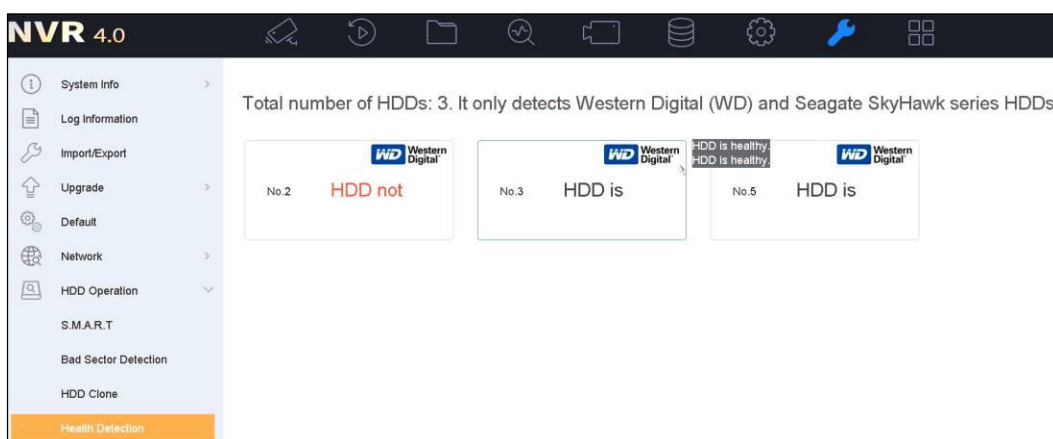
- **Indonesian**
  - Indonesian language is supported in local GUI.
- **Add Four Types of Smart Events**
  - Four smart events have been added: gathering, fast moving, parking detection, and loitering detection.
- **Fisheye Camera**
  - Supports second generation fisheye camera access.
  - Four new fisheye expansion modes have been added: Fisheye + 3PTZ, Cylinder, Hemisphere, 4PTZ.

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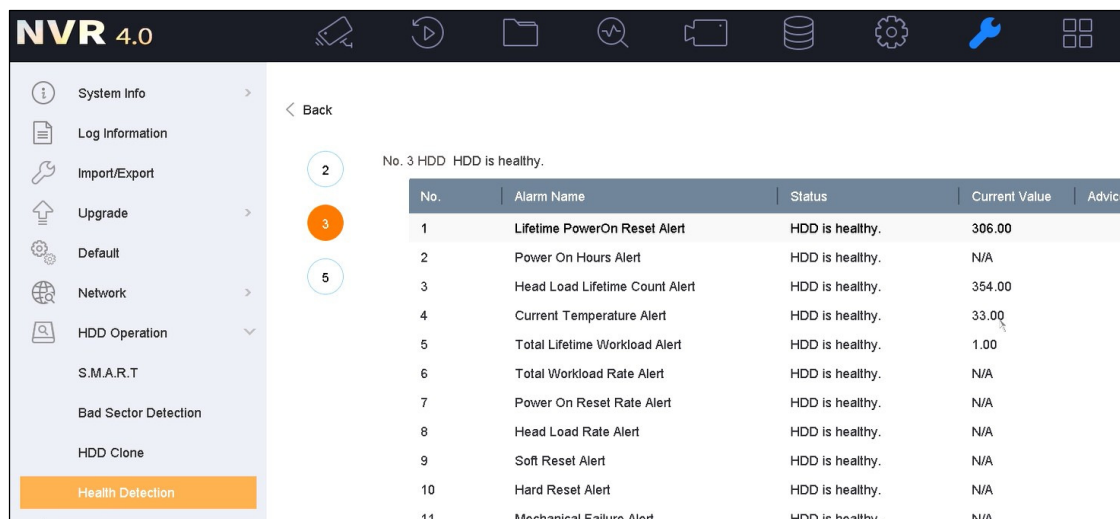
- **HDD Health Detection**

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





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## ■ Modified Functions

### • Optimize Keyboard Access

- For DS-1005K keyboard, after stopping/starting patrols, the patrol icon will change and the tip text will change.
- DS-1005K keyboard supports selecting the playback date for playback.
- The target detection bar under the preview interface can be operated by keyboard.
- Real-time playback can control the positioning, pause, start, and exit functions of time points.

### • Optimize Thermal Camera Access

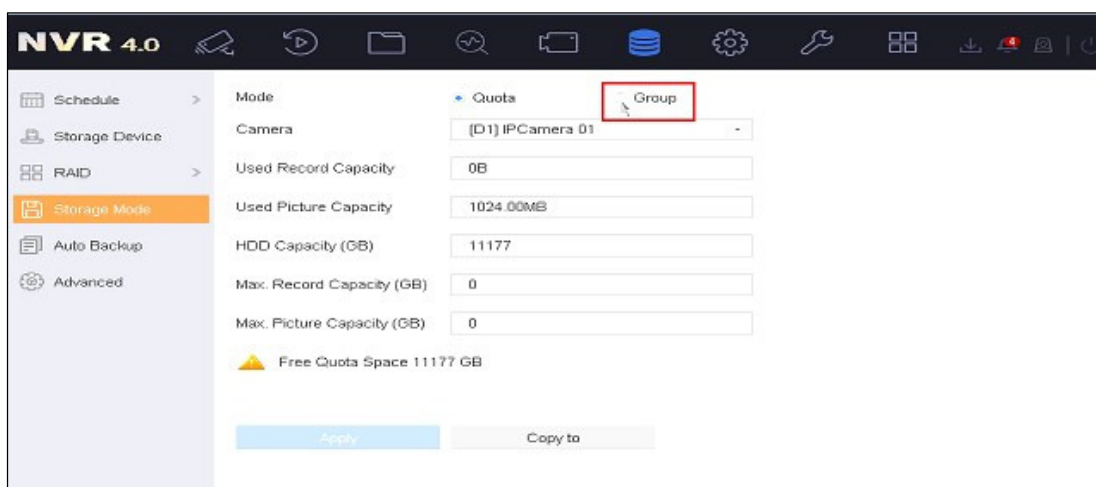
- Supports VCA behavior analysis configuration on NVR.
- Supports temperature measurement and VCA alarm.
- Supports real-time temperature measurement guide.

### • Virtual Host

- All models of I Series, including PoE and non-PoE NVRs, can enable virtual host function, and generate connecting links.
- After opening the virtual host, both PoE and non-PoE NVRs can generate jump links for PoE and non-PoE channels.

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- Supports skipping third-party camera Websites.
- **Array and Group Mode Are Mutually Exclusive**
  - When the NVR is booting, detects if array and group mode co-exist. If they co-exist, the local GUI will prompt “Quota mode provides higher data safety, and is recommended over array mode for HDD group.” Select “Yes” and the NVR will restart.
  - Array Mode: NVR doesn’t support Group Mode when Array enabled. The Group Mode button is dimmed in the local GUI, and there is no Group Mode option in the iVMS-4200 drop-down box.



- Group Mode: NVR doesn’t support enabling an array when selecting Group Mode. Enable RAID button is dimmed and cannot be selected, and array configuration page is hidden in iVMS-4200.
- **Optimized Search Speed of Hik-Connect Playback**
  - The Hik-Connect receives the alarm, and the alarm video can be played back after 5–15s.
- **Vehicle Detect Black/White/Other List Supports PTZ Linkage**
  - PTZ linkage can be set in local and remote black and white list and other lists in vehicle detection and alarm.
  - When the vehicle detection alarm is triggered, the local trigger activates the corresponding PTZ linkage item.
- **Optimized ONVIF Access**
  - Optimized the bit stream access logic.

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- Supports multi-channel camera access.
- Pull-Point Notification is supported by default, and Base Notification is used if the device does not support Pull-Point Notification.

## ■ Related Products

I Series NVRs	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 of the above changes. Also, we are sorry for any possible inconvenience of use-habit changes caused by this action.

For questions or concerns, please contact our local technical support team.

### 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.