

Smart NVR User's Manual

Version 2.0

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1. What is Smart NVR 2.0 ?

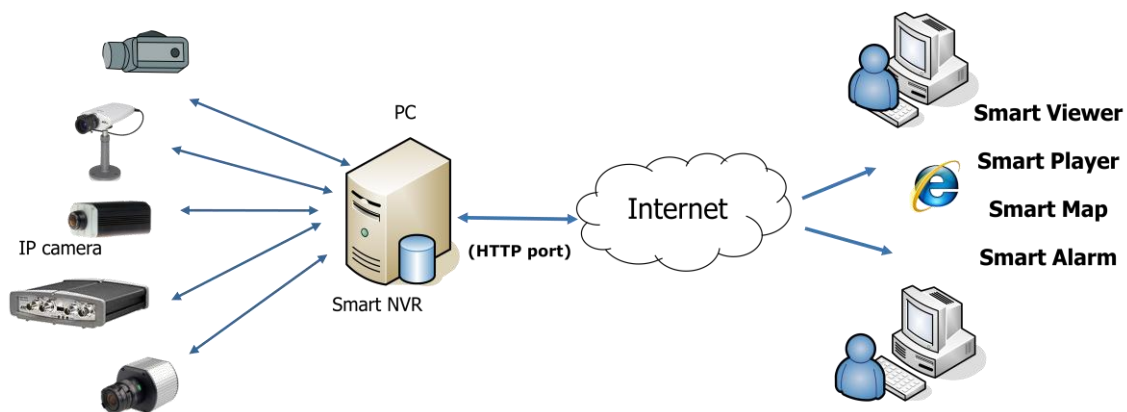
1.1 Main function of Smart NVR

This document explain how to install and setup the Smart NVR 2.0 on a computer

Smart NVR is the total video surveillance software operating on Microsoft Windows™.

Smart NVR has the following main key features.

- 1) Support Real time Video Monitoring, Recording, Playback, and Back-Up
- 2) Support the video recording and retrieval by events
- 3) Support MJPEG, MPEG4, and H.264 Video Compression
- 4) Support various IP Device manufactures (Multi-Vendor Version)
- 5) Support up to 5 Megapixel Cameras
- 6) Real time video monitoring, playback and backup are available at the Smart NVR Homepage through Web Browser. (Log-in may be required)



2. Smart NVR 2.0 Specification

Smart NVR is supplied to customers in different versions for each appropriate application. Users will need to choose the right versions for their needs.

2.1 Smart NVR 2.0 Versions

Version	No. Channel	Limit	Max Channel	Retransmission stream	Multi-Vendor IP Camera	Max Storage
Evaluation	128ch	10days,240hours	128ch	512stream	Support	160TB
Official(Multi-Vendor)	16ch	-	16ch	64stream	Support	160TB
	32ch	-	32ch	128stream	Support	160TB
	64ch	-	64ch	256stream	Support	160TB
	128ch	-	128ch	512stream	Support	160TB
Official(Single-Vendor)	16ch	-	16ch	64stream	Not Support	160TB
	32ch	-	32ch	128stream	Not Support	160TB
	64ch	-	64ch	256stream	Not Support	160TB
	128ch	-	128ch	512stream	Not Support	160TB

We recommend PC specification as the below table, using Flexwatch Smart NVR 2.0

2.2 System Requirement for PC

For best quality and performance, your computer needs to meet the minimum requirement as below.

- Microsoft Windows XP Pro, Windows 7 Pro or higher, Video Card (256MB Ram, 1024x768 or higher)

Codec	No. Channel	Resolution	Recommended CPU	Memory at PC
H.264	16ch	D1	Intel Core2Duo T5200	1.0GB
		720P	Intel Core2Duo E7550	1.5GB
		1080P	Intel Core i-5-2500S	2.0GB
	32ch	D1	Intel Core2Duo E6700	1.0GB
		720P	Intel Core i-5 750	2.0GB
		1080P	Intel Core i-7 970	4.0GB
	64ch	D1	Intel Core i-5 661	1.5GB
		720P	Intel Xeon X5660	4.0GB
		1080P	Intel Xeon X5680 Dual CPU	4.0GB
	128ch	D1	Intel Core i-5 661	1.5GB
		720P	Intel Xeon X5660	4.0GB
		1080P	Intel Xeon X5680 Dual CPU	4.0GB
MJPEG	16ch	D1	Intel Core2Duo E6700	1.0GB
		720P	Intel Core i-5 460M	1.5GB
		1080P	Intel Core i-5 -2500	3.0GB
	32ch	D1	Intel Core i-5 661	1.5GB
		720P	Intel Core i-5 -2400S	2.0GB
		1080P	Intel Xeon X5590 Dual CPU	4.0GB
	64ch	D1	Intel Core i-5 -2500	3.0GB
		720P	Intel Xeon X5550 Dual CPU	4.0GB
		1080P	Intel Xeon X5550 Dual CPU	4.0GB
	128ch	D1	Intel Core i-5 -2500	3.0GB
		720P	Intel Xeon X5550 Dual CPU	4.0GB
		1080P	Intel Xeon X5550 Dual CPU	4.0GB

Note: Above PC requirements are based on running Smart NVR program only. If other software needs to run along with Smart NVR at the same time, you may need additional performance level for your PC. It is recommended to check actual performance and disk capacity before Selecting Smart NVR. Before selecting a PC for Smart NVR.

3. Smart NVR Installation

3.1 Download Smart NVR

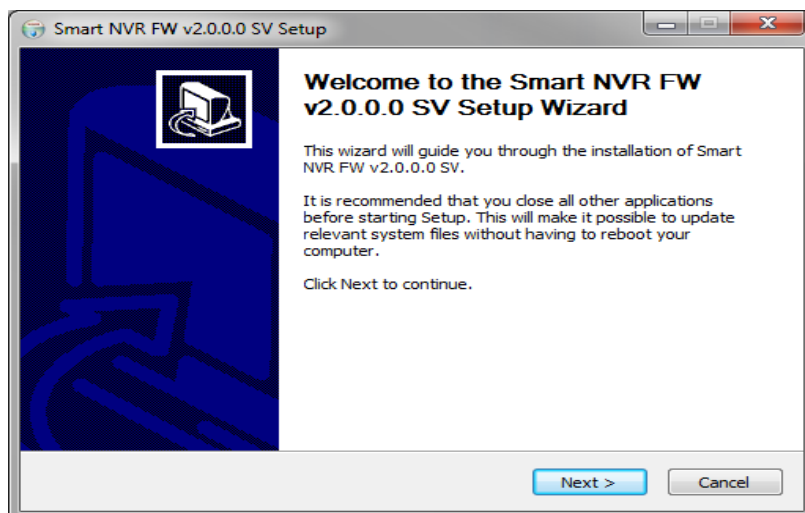
- 1) **Download** Smart NVR Software from the FlexWATCH's download website

Linked below

<http://flexwatch.com/support/download/software.asp>

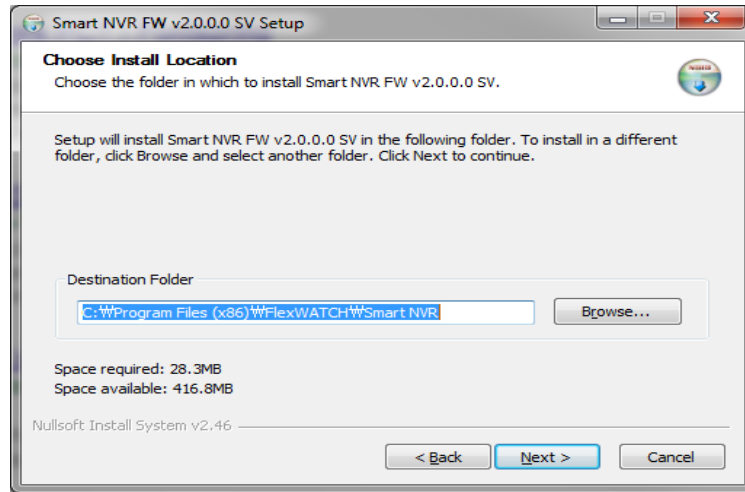
3.2 How to install the Smart NVR

- 1) Run downloaded **Smart NVR setup** file
- 2) Click **Next** to continue, Because Smart NVR program is installed for the first time, it needs to be configured before use. So it automatically executes the configuration program.



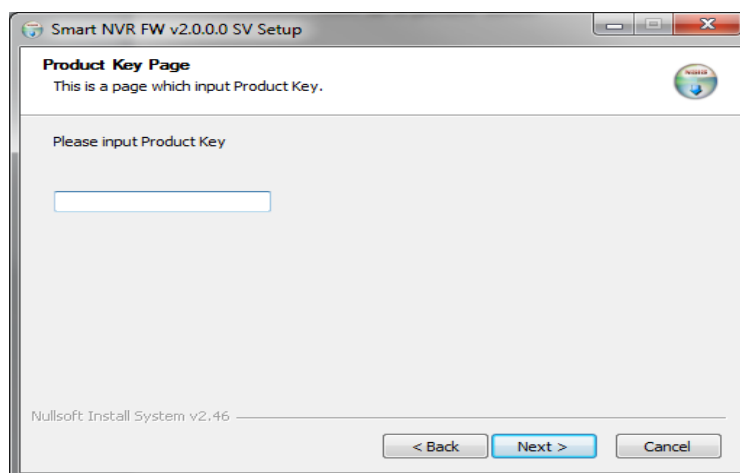
- 3) Select **install folder** and then click **Next**, Click the **Finish** button to exit from the installation process.

- 4) The default location for installation is **C:\Program Files\FlexWATCH**. It is recommended to install on this folder, but if you want to change it to other location, click **Browse** button to choose a proper path as you'd like. Now click **Install** button. You will see the progress of copying install files to the hard drive as shown below

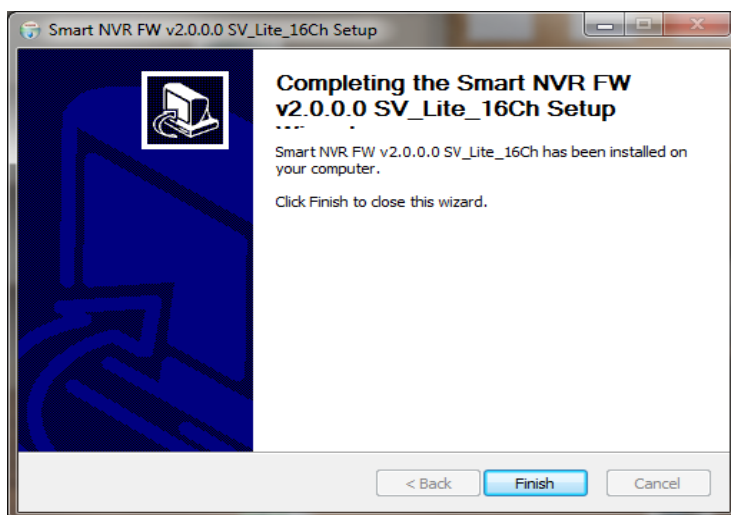


- 5) Enter a **Product Key**, click **Next** to continue

- You can generate a product key with a coupon code at www.goodskey.com
- Please contact our sales rep. if you do not have a coupon code. It will not proceed to install.



6) Click **Finish** to exit the Smart NVR installation.



Enter a proper Admin Password. The default password is **root**. Now you see **Smart NVR Configurator** window on the screen. To see on how to use Smart NVR Configuration program, go to Start Smart NVR Configuration section.

4. Components of Smart NVR 2.0

Smart NVR is consists of three programs, which are Smart NVR Service, Smart NVR Configurator, and Smart NVR Controller. When you install Smart NVR software package from a CD included in the product, all these three programs will be installed together.

1) Smart NVR Service

Smart NVR Service and runs in a **Background mode**. Smart NVR receives video, audio, alarm, even data from IP devices over the network, and then it can record the data on the hard drive or retransmit to users.

2) Smart NVR Configurator.

Smart NVR Configurator is used to set up various parameters and conditions of Smart NVR Service. Users can register, modify, and delete IP devices according to their needs.

3) Smart NVR Controller.

Smart NVR Controller program is used to start or stop Smart NVR service. The detailed usage is shown in the latter section of this manual.

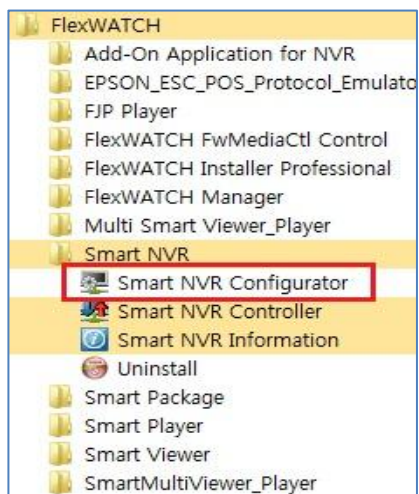
5. Smart NVR Configuration

5.1 Start Smart NVR Configurator

Smart NVR Configurator is used to set up various parameters and conditions of Smart NVR Service. Users can register, modify, and delete IP devices and users with this program. It also provides configuring tools for recording, alarm, event, and other functionalities.



- 1) Double click **Smart NVR Configurator** desktop icon ()
or Run **Smart NVR Configurator** under the Programs Menu

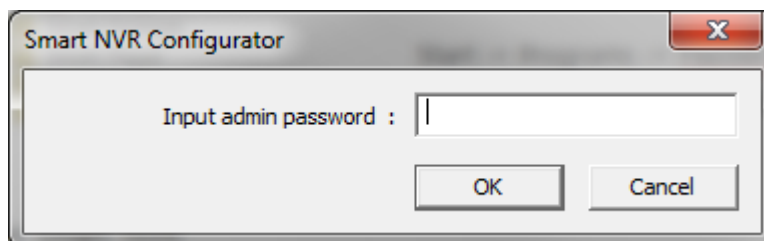


Location:

Start -> All Programs -> FlexWATCH ->

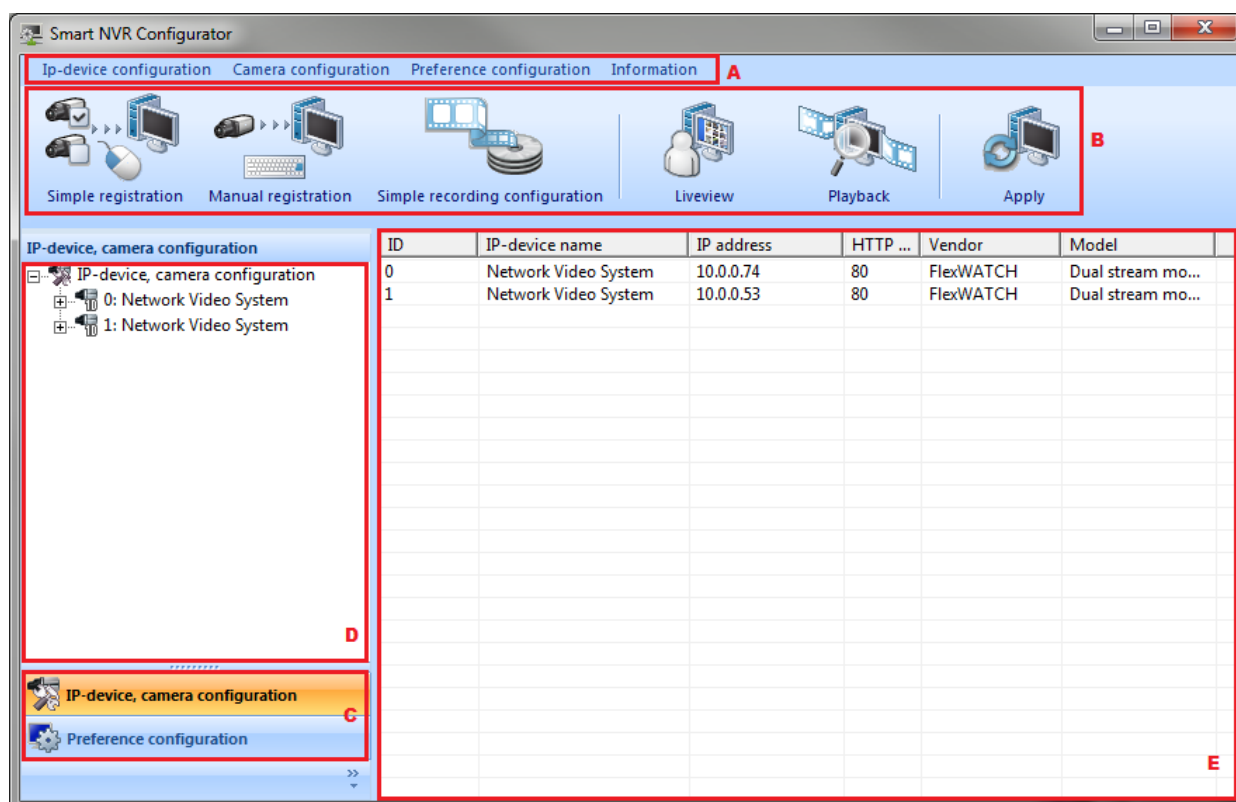
Smart NVR -> **Smart NVR Configurator**

- 2) Login with Smart NVR login password



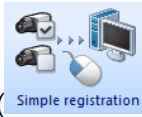
Note : Default password is "root"

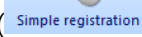
5.2 Description of Smart NVR main screen

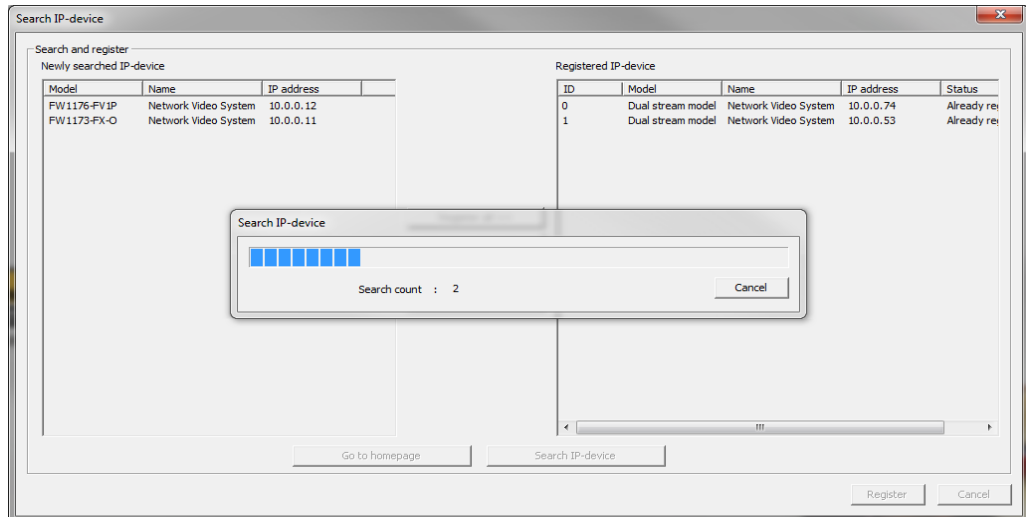


Section	Name	Description
A	Menu Bar	Main Menu
B	Tool Bar	Quick access to functions that are commonly performed within the Smart NVR.
C	Menu Toggle Switch	Switches the sub-menu
D	Sub Menu	Display the Sub-Menu
E	Detail	Display the Configuration Detail

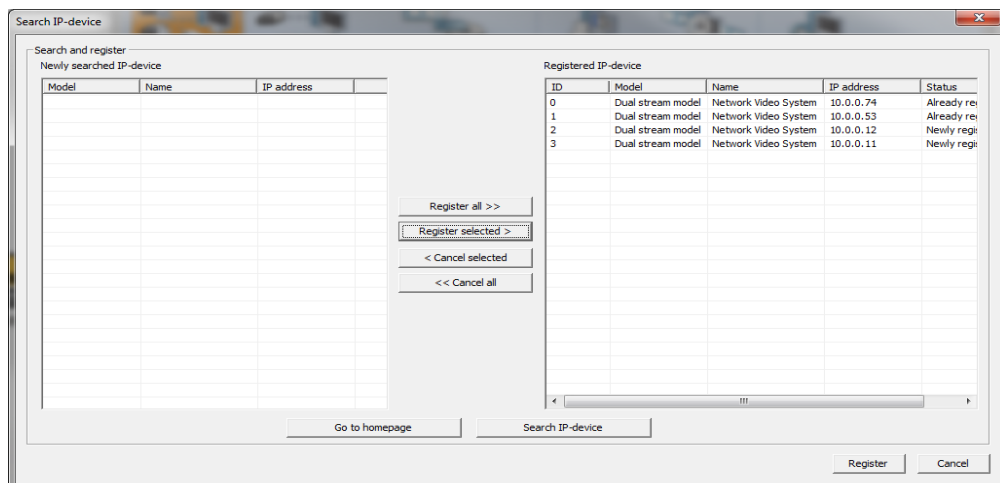
5.3 Simple Registration for IP devices.



- 1) Click Simple registration button () on the tool bar.
- 2) Wait for the device search as below



- 3) **Select** and **move** the cameras that you want to register from the left (Newly searched IP-device) to the right (Registered IP-device) section with the **Register selected** button, and then click **Register**

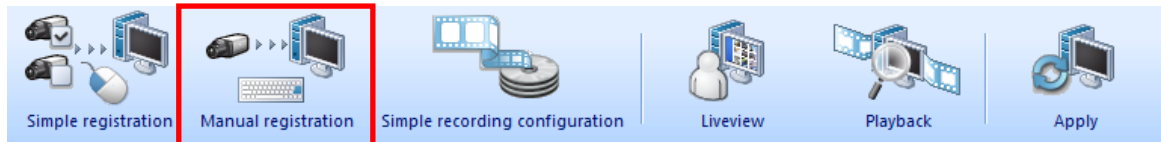


- 4) Click **Apply** button () to apply changes to the Smart NVR service.

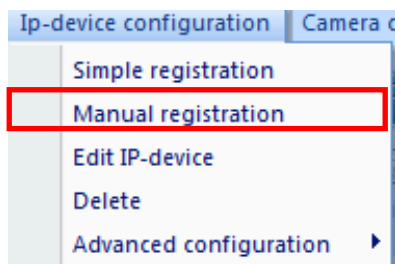
5.4 Manual Registration for IP devices.

Smart NVR 2.0 provides Simple Registration as well as Manual Registration. It is used to register manually to your own IP camera. And it is used to watch IP devices through IP-CCTV DNS, RTP/RTSP.

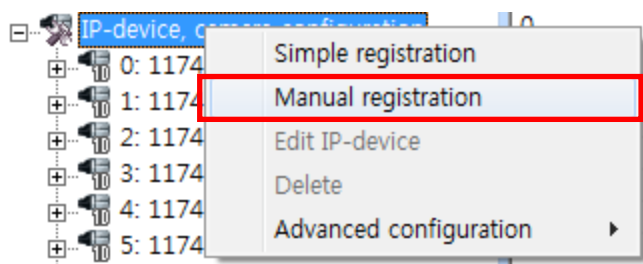
- 1) Click "Manual registration" on the tool bar.



- 2) User needs to select **Manual registration** from IP-Device Configuration on Manual registration menu as above picture.



- 3) Or directly select "manual registration", from IP-device configuration item on bottom of left side as below picture.



- 3) Show up the pop up window as shown below.

A screenshot of the 'Manual registration' pop-up window. It contains the following fields and options:

- Input IP-device info:**
 - ID: 4 (dropdown)
 - Vendor: (dropdown)
 - Model: (dropdown)
 - IP address: (text field)
 - HTTP port: 80 (text field)
 - Login ID: (text field)
 - Login password: (text field)
 - Confirm password: (text field)
 - VS module ID: 0 (dropdown)
 - Collect IP-device info: (button)
 - Name: (text field)
 - RTSP port: 544 (text field)
- Select the resolution supported by IP-device:**
 - QCIF (QQVGA): 176 x 144 ~ 160 x 112
 - CIF (QVGA): 352 x 288 ~ 320 x 240
 - Half D1 (Half VGA): 704 x 288 ~ 640 x 240
 - D1 (VGA): 704 x 576 ~ 640 x 480
 - SVGA: 800 x 600 ~ 720 x 480
 - XGA: 1024 x 768 ~ 960 x 720
 - HD720 (720P): 1280 x 720
 - SXGA: 1280 x 1024
 - UXGA: 1600 x 1200
 - 1080P: 1920 x 1080
- Check PTZ camera:**
 - Camera1: ☐
 - Camera2: ☐
 - Camera3: ☐
 - Camera4: ☐

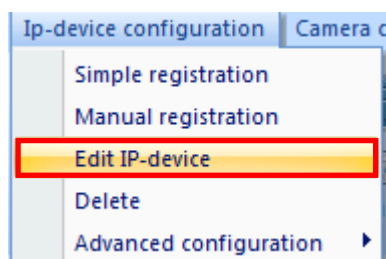
Buttons: Register, Cancel

Section	Item	Description
A	ID	Select the IP-Device ID to register
B	Vendor	Select the Vendor name of the IP-device to register.
C	Model	Select one among 1ch, dual stream, and 4ch model. Select the total number of channels the IP device has.
D	IP address	Type in IP address for using the IP-Device Type in URL address if it is connected to URL
E	HTTP port	Type in HTTP port (Default: 80)
F	Login ID	Type in ID (Default: root)
G	Login Password	Type in your password
H	Confirm Password	Type in your password to confirm.
I	VS Module ID	Generally type in "0" (FW5870, select "1")
J	Collect IP-device info	Obtain IP-device information through this button if IP-device is installed
K	Name	Type in Name for IP-device to use.
L	RTSP port	Select RTSP port number if it is connected with RTP/RTSP

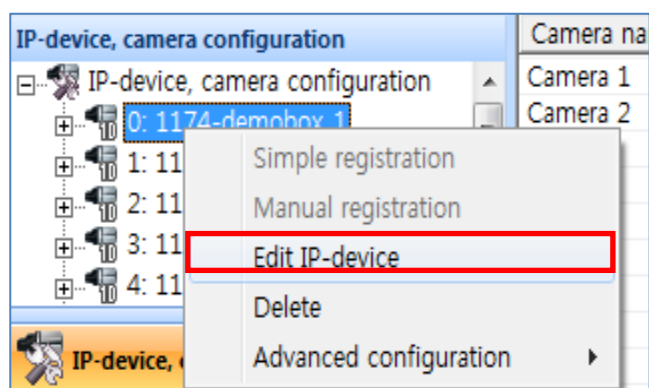
5.5 Edit IP-device in IP device configuration.

User can edit the information of IP-device that was already registered in your Smart NVR.

- 1) On Menu bar → IP device configuration → Edit IP device. You need to Select " Edit IP device"



- 2) Or directly select "Edit IP-device ", from IP-device configuration item on bottom of Left side as below picture.



- 2) Show up the window about IP device information as below picture.

Edit IP-device

Input IP-device info

ID: 0 A

Vendor: FlexWATCH

Model: Dual stream model

IP address: 10.10.211.101

HTTP port: 80

Login ID: root

Login password: ****

Confirm password: ****

VS module ID: 0

Collect IP-device info:

Name: Network Video System

RTSP port: 544

Select the resolution supported by IP-device

<input checked="" type="checkbox"/>	QCIF (QQVGA)	176 x 144 ~ 160 x 112
<input checked="" type="checkbox"/>	CIF (QVGA)	352 x 288 ~ 320 x 240
<input type="checkbox"/>	Half D1 (Half VGA)	704 x 288 ~ 640 x 240
<input checked="" type="checkbox"/>	D1 (VGA)	704 x 576 ~ 640 x 480
<input type="checkbox"/>	SVGA	800 x 600 ~ 720 x 480
<input type="checkbox"/>	XGA	1024 x 768 ~ 960 x 720
<input type="checkbox"/>	HD720 (720P)	1280 x 720
<input type="checkbox"/>	SXGA	1280 x 1024
<input type="checkbox"/>	UXGA	1600 x 1200
<input type="checkbox"/>	1080P	1920 x 1080

Check PTZ camera

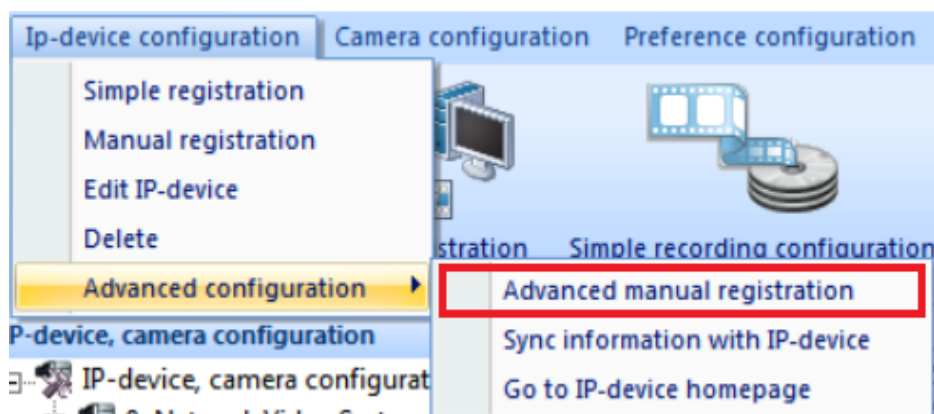
☐ Camera1 ☐ Camera2 ☐ Camera3 ☐ Camera4

- 3) Selecting method is same with " IP-device manual registration" , and you can edit all information but A (ID) . You need to select resolution supported by IP-device.

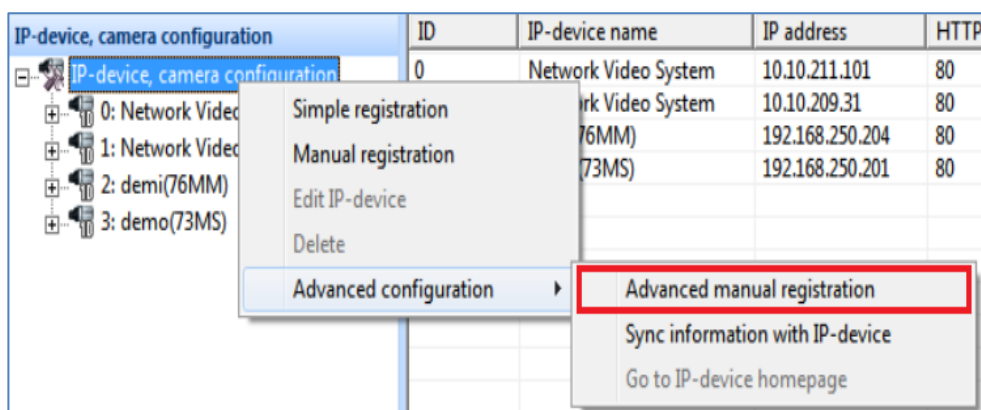
5.6 Advanced Manual registration.

These advanced function that is used to when IP camera does not installed or when many IP-devices are installed simultaneously on Smart NVR.

- 1) On Menu bar → IP-device configuration →Advanced configuration →Advanced manual registration. You need to select " Advanced manual registration" item as below picture.



- 2) Or Select directly " Edit IP-device" at the IP-device, camera configuration on the left side bottom sub part. You need to click on right button of the mouse.



- 3) Selecting method is same as " IP-device manual registration" , and you can register all information

Advanced manual registration

Input IP-device info

ID: 4 A
 Vendor: B
 Model: C
 IP address: D
 HTTP port: 80 E
 Login ID: F
 Login password: G
 Confirm password: H
 VS module ID: 0 I
 Name: J
 RTSP port: 544 K

Select the resolution supported by IP-device L

<input type="checkbox"/>	QCIF (QQVGA)	176 x 144 ~ 160 x 112
<input type="checkbox"/>	CIF (QVGA)	352 x 288 ~ 320 x 240
<input type="checkbox"/>	Half D1 (Half VGA)	704 x 288 ~ 640 x 240
<input type="checkbox"/>	D1 (VGA)	704 x 576 ~ 640 x 480
<input type="checkbox"/>	SVGA	800 x 600 ~ 720 x 480
<input type="checkbox"/>	XGA	1024 x 768 ~ 960 x 720
<input type="checkbox"/>	HD720 (720P)	1280 x 720
<input type="checkbox"/>	SXGA	1280 x 1024
<input type="checkbox"/>	UXGA	1600 x 1200
<input type="checkbox"/>	1080P	1920 x 1080

Check PTZ camera M

☐ Camera1 ☐ Camera2 ☐ Camera3 ☐ Camera4

Range registration

No range N
 IP address range: ~
 Input VS module ID range: ~ O P

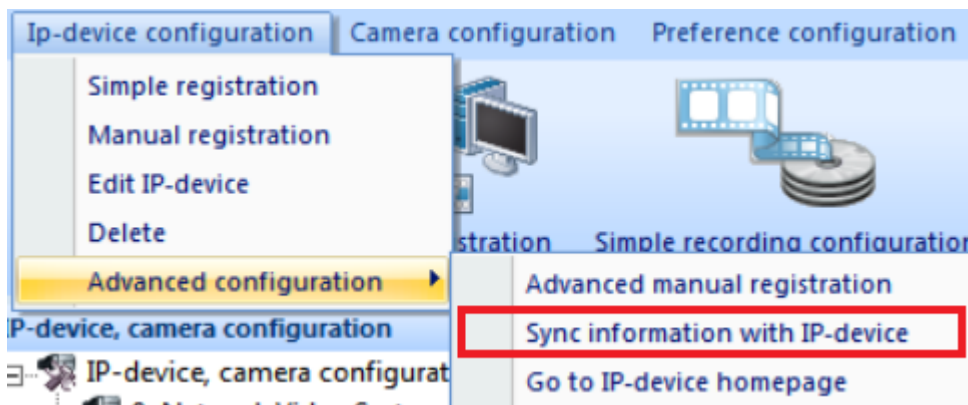
Register Cancel

Section	Item	Description
A	ID	Select the IP-Device ID to register
B	Vendor	Select the Vendor name of the IP-device to register.
C	Model	Select one among 1ch, dual stream, and 4ch model. Select the total number of channels the IP device has.
D	IP address	Type in IP address for using the IP-Device Type in URL address if it is connected with URL
E	HTTP port	Type in HTTP port (Default: 80)
F	Login ID	Type in ID (Default: root)
G	Login Password	Type in your password
H	Confirm Password	Type in your password to confirm.
I	VS Module ID	Type in Default value "0" (FW5870, select "1")
K	RTSP port	Select RTSP port number if it is connected with RTP/RTSP
L	Resolution	Select the resolution supported by IP-device
M	Check PTZ camera	You need to check it if you have a PTZ camera connected to Smart NVR
O	No Range	You need to check it if there is no range.
M	IP address range	Register IP-device within designated IP address range. When it is filled, IP address in D is ignored.
N	Input VS Module ID	Register multiple module installed IP-device in D, generally it is ranged from 0 to 1~128

5.7 Synchronization information with IP-device.

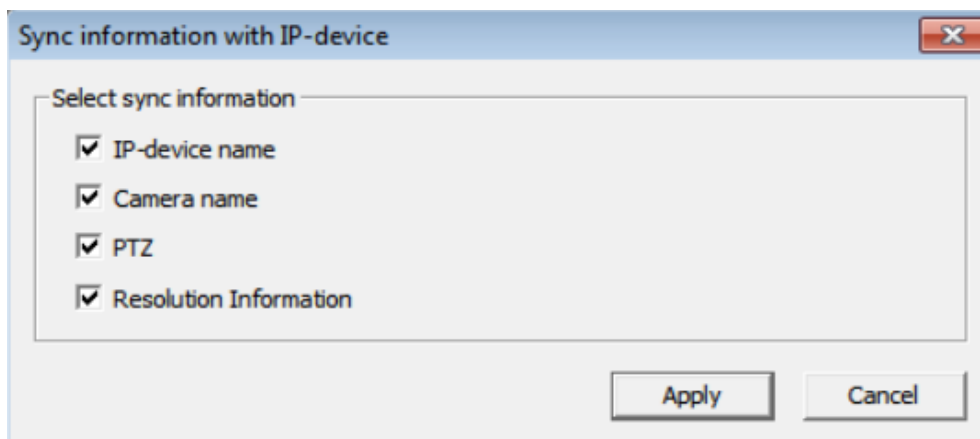
User's IP device is synchronized after obtain IP-device information and then automatically input data at **Smart NVR configurator**

Menu bar → IP device configuration → Advanced configuration → Sync information with IP-device.



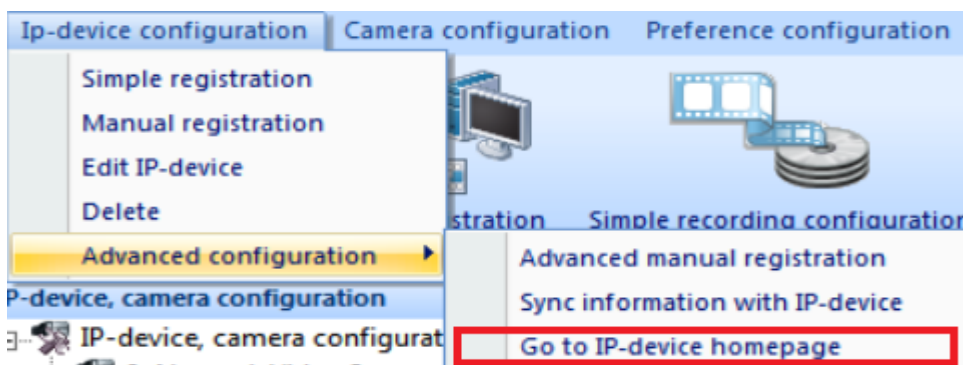
- 4) Or Select directly " Sync information with IP-Device" at the Advanced configuration from IP-device configuration menu on the left side bottom sub part. You need to click on right button of the mouse.

You need to select the item among below four items if you want to synchronize your IP device.

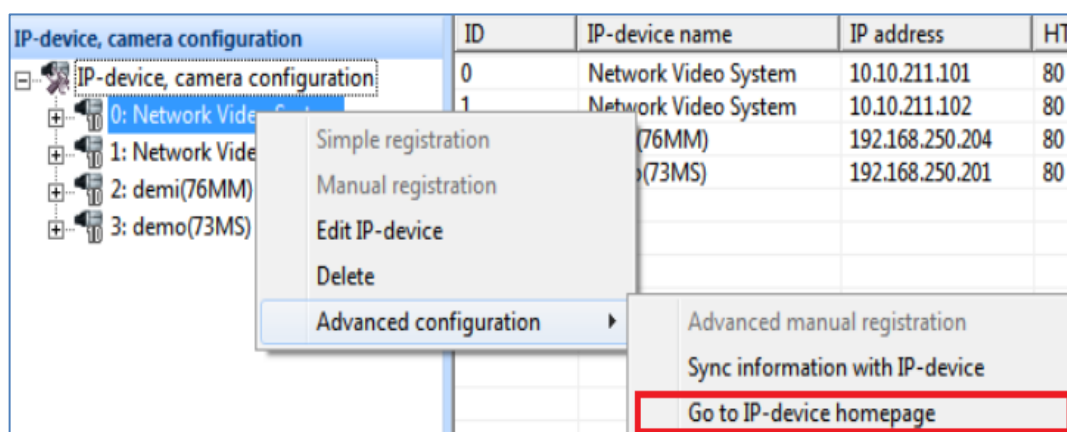


5.8 Go to IP-device Homepage.

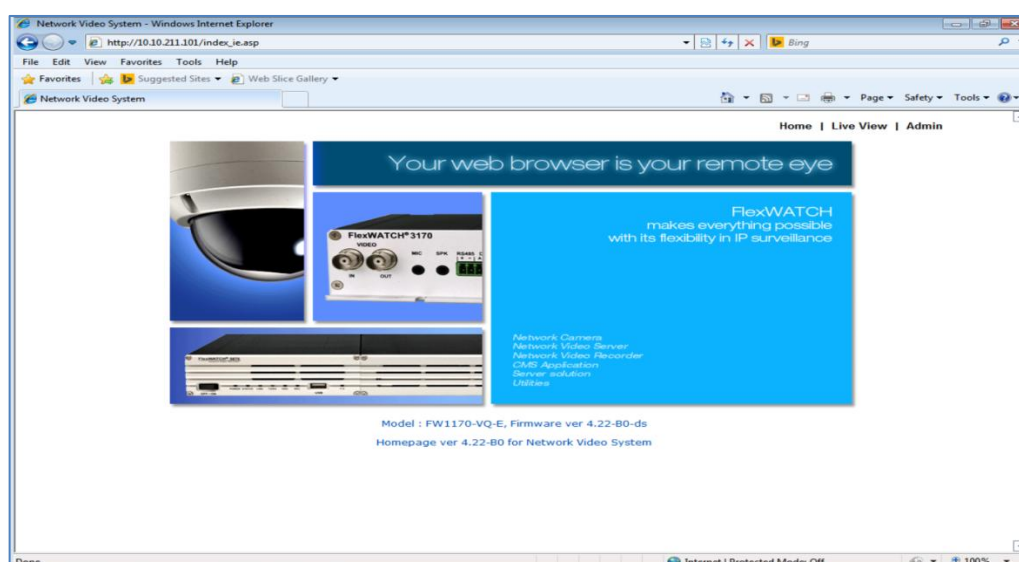
- 1) Menu bar → IP-device configuration → Advanced configuration → Go to IP-device homepage. This is a short method for access to IP-device homepage.



- 2) Or from IP-device, camera configuration, after clicking on Advanced configuration, and then select Go to IP-device homepage.



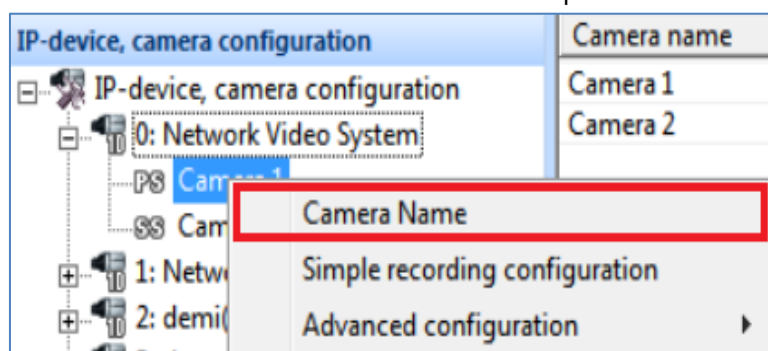
- 3) You can see web browser as below picture.



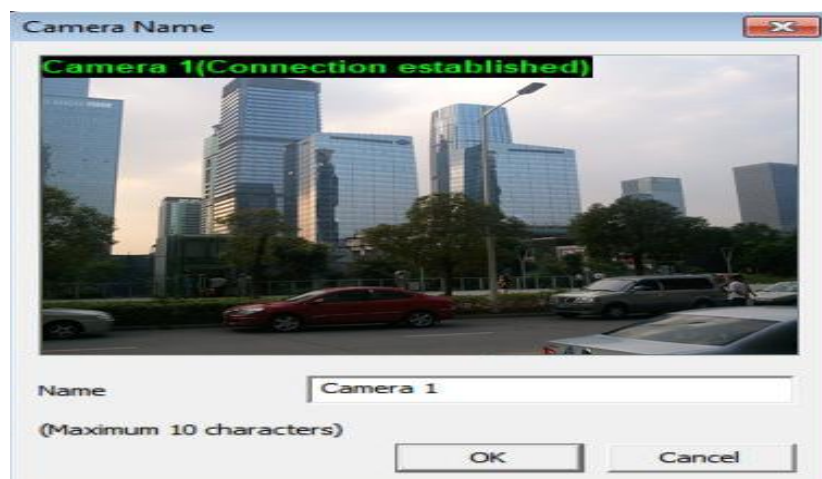
5.9 Camera configuration.

You can change camera name that was already registered.

- 1) Select "Camera name" as following order , On Menu bar → Camera configuration → Camera name,
- 2) Or after you directly select IP-camera you want, and then click on right button of mouse, you can see "Camera name" item as below picture.



- 3) You can change camera name as below if you need , and then click " OK" button to apply.

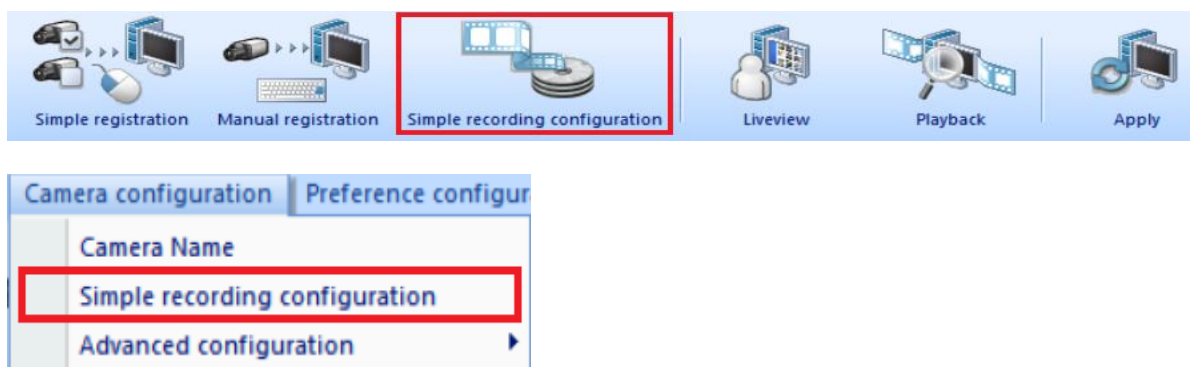


5.10 Simple recording configuration

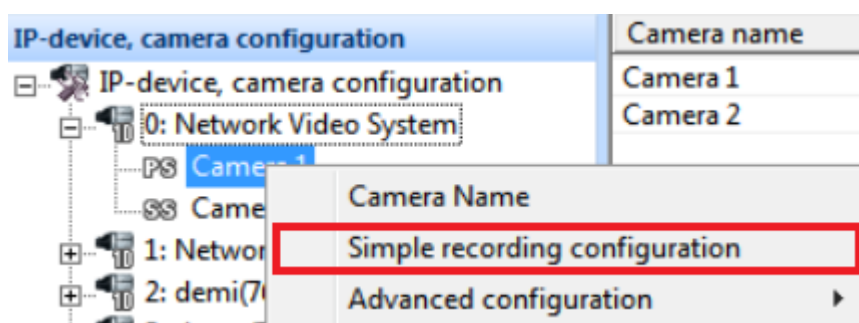
User can easily check up the status of recording condition through this menu of Smart NVR.

It is one of useful functions in using the Smart NVR 2.0

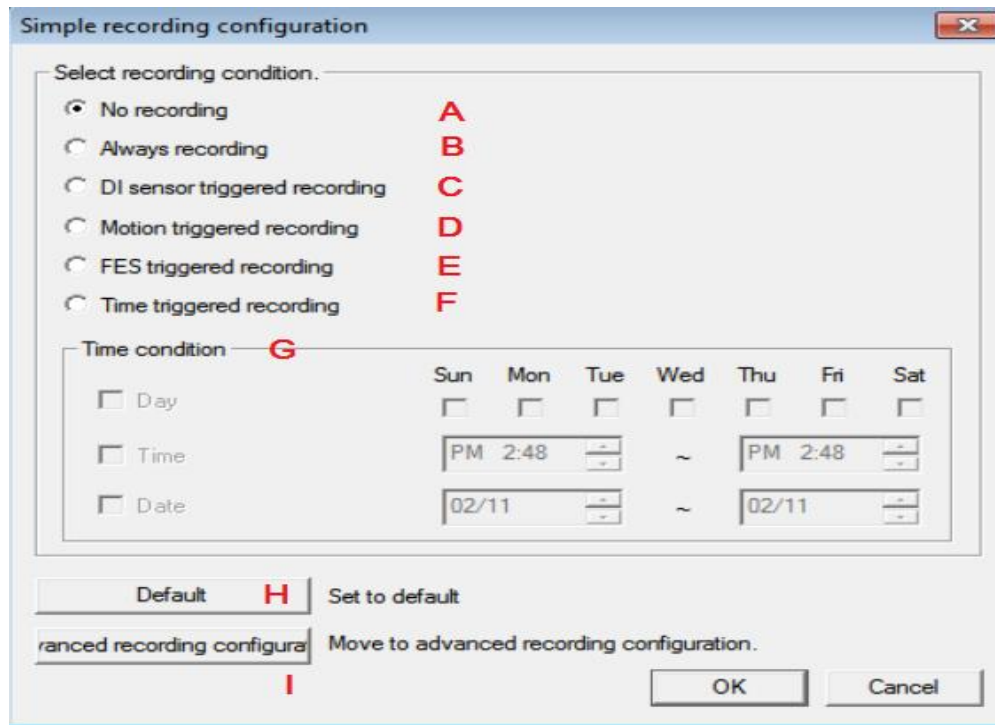
- 1) Click on "Simple recording configuration" at the main Tool bar as below picture.



- 2) Or after you directly select IP-camera you want and then click on right button of mouse, you can select " Simple recording configuration" item.



3) You can see the window as below if you click on " Simple recording configuration" item.



Name	Item	Contents
A	No recording	Not record selected camera image
B	Always recording	Always recording without conditions.
C	DI sensor triggered recording.	Record only if the signal is triggered by DI sensor of camera.
D	Motion triggered recording	Recording image only if Motion is triggered
E	FES triggered recording	Recording image only if the FES data is input.
F	Time triggered recording	Recording image if the designated time is triggered.
G	Time condition	Configure time condition you need.
H	Default	Default is set up " Motion triggered recording"
I	Advanced recording configuration	It is used for when the more complex and more various conditions you need. If you click on , see " Advanced recording configuration"

5.11 Advanced recording configuration.

This item has functions like storage, Alarm, Event, Auto preset, Touring, and Auto Do as given below. First, we explain the common menus. Second, We explain the detailed menus.

Advanced recording configuration

1.Click channel selection or camera list to configure conditions.

1 Channel model
Select camera 1 **A**

Dual stream model
Select primary channel **B** Select secondary channel **C**

Deselect
Deselect all **D**

4 Channel model
Select camera 1 **E** Select camera 2 **F** Select camera 3 **G** Select camera 4 **H**

ID	IP-device name	Camera name	Record	Condition 1	Condition 2	Condition 3	Condition 4
0	Network Video System	Camera 1	Disable	[M1]	-	-	-
0	Network Video System	Camera 2	Disable	-	-	-	-
1	Network Video System	Camera 1	Disable	[M1]	-	-	-
1	Network Video System	Camera 2	Disable	-	-	-	-
2	demi(76MM)	Camera 1	Disable	[M1]	-	-	-
2	demi(76MM)	Camera 2	Disable	-	-	-	-
3	demo(73MS)	Camera 1	Disable	[M1]	-	-	-
3	demo(73MS)	Camera 2	Disable	-	-	-	-

2.Liveview of selected camera. **J**

3.Configure recording service. **K**
Configure service

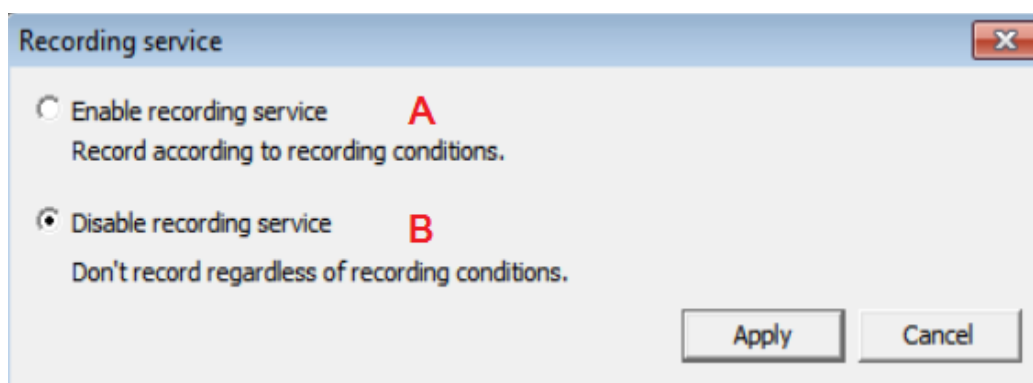
4.Configure recording condition.
Configure condition

5.Repeat above.

Apply Cancel

Name	Menu	Description.
A	Select camera 1	Select all "Camera 1" of one channel IP-devices(ex,FW3170) In I part
B	Select Primary channel	Select all "Primary channel "of Dual stream models in I part
C	Select secondary channel	Select all "Secondary channel "of Dual stream models in I part
D	Deselect all	Deselect all IP-devices in I part
E	Select camera 1	Select all " Camera 1" of four channels IP-devices(ex,FW3470) in I part
F	Select camera 2	Select all " Camera 2" of four channels IP-devices(ex,FW3470) in I part
G	Select camera 3	Select all " Camera 3" of four channels IP-devices(ex,FW3470) in I part

H	Select camera 4	Select all " Camera 4 of four channels IP-devices(ex,FW3470) in I part
I	ID	Show up all IP-device lists registered.
J	Live view of selected camera	Live view of selected camera at I part
K	Service Configuration.	<ol style="list-style-type: none"> 1. Configure service <ol style="list-style-type: none"> 1) Enable recording service Record according to conditions that user input. 2) Disable recording service Don't record without any conditions 2. Configure recording condition Select Condition mode/Schedule/ Event



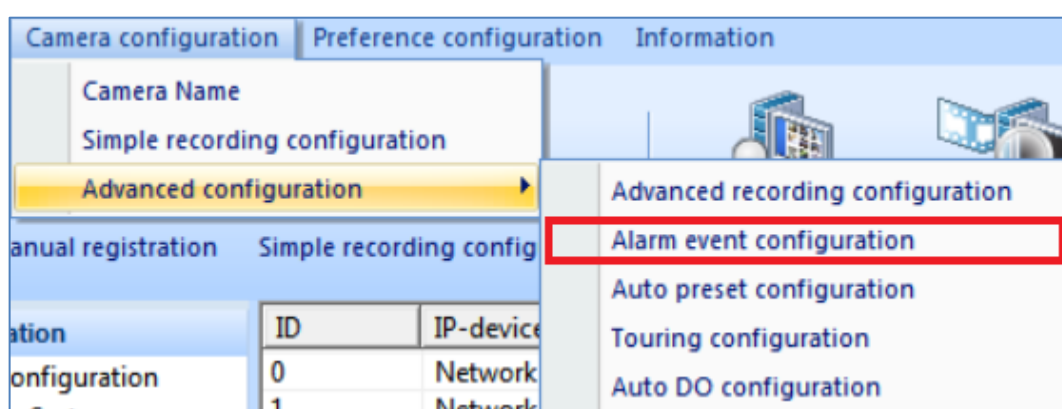
You click on "B" button when you don't need to record regardless of recording conditions. After you select Button A or B, you need to enter the button "**Apply**" to confirm recording Service.

5.12 Alarm event configuration

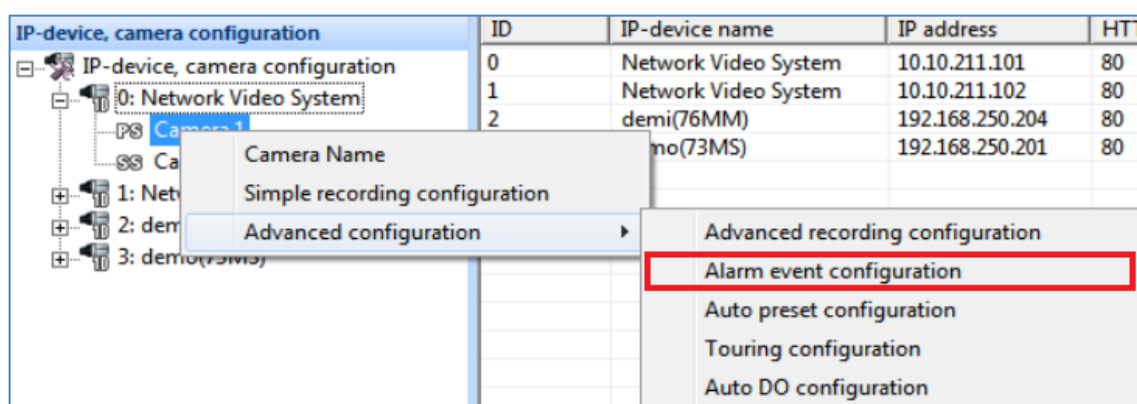
Smart NVR Service can receive the alarm event from External Space, and also you can send the alarm signal from the inside of device to external space.

- 1) Menu bar → Camera configuration → Advanced configuration → Alarm event configuration.

According to these steps, you can select "**Alarm event configuration**" item.



- 2) Or after you directly select IP-camera you want, and then enter right button of mouse, you can see "Alarm event configuration" item.



3) After selecting IP-device and then click on "A" configure service button, show up the message as below.

4)

Alarm event configuration

1. Click channel selection or camera list to configure conditions.

1 Channel model

Select camera 1

Dual stream model

Select primary channel

Select secondary channel

Deselect

Deselect all

4 Channel model

Select camera 1

Select camera 2

Select camera 3

Select camera 4

ID	IP-device name	Camera name	Alarm service	Event service
0	Network Video System	Camera 1	Enable	Enable
0	Network Video System	Camera 2	Enable	Enable
1	Network Video System	Camera 1	Enable	Enable
1	Network Video System	Camera 2	Enable	Enable
2	demi(76MM)	Camera 1	Enable	Enable
2	demi(76MM)	Camera 2	Enable	Enable
3	demo(73MS)	Camera 1	Enable	Enable
3	demo(73MS)	Camera 2	Enable	Enable

2. Liveview of selected camera.

3. Configure alarm event service.

Configure service **A**

4. Configure alarm event type.

Configure condition **B**

5. Repeat above.

Apply Cancel

Alarm event configuration

Alarm service

☒ Enable alarm service **A**
Alarm according to external alarm input.

☐ Disable alarm service **B**
No alarm regardless of external alarm input.

Event service

☒ Enable event service **C**
Output according to internal event.

☐ Disable event service **D**
No output regardless of internal event.

Apply Cancel

Name	Item	Description
A	Alarm Service	Receive an alarm from external, run the selected alarm.
B	Disable alarm service	Reject to receive an alarm from External.
C	Enable event service	Send out selected events according to internal event.
D	Disable event service	Do not send selected event regardless of internal event.

- 5) If you select B "Configure condition" on the above window message box. You can see the message as below.

Configure alarm event type

Select alarm type **A**

- ☒ Start recording
- ☒ Enable DO
- ☒ Disable DO
- ☒ Run auto preset
- ☒ Pop-up window
- ☒ Start touring
- ☒ Stop touring

Select event type **B**

- ☒ Start recording
- ☒ Stop recording
- ☒ Motion start
- ☒ Motion stop
- ☒ DI start
- ☒ DI stop
- ☒ Video normal
- ☒ Video error
- ☒ Network connected
- ☒ Network disabled
- ☒ Start touring
- ☒ Stop touring
- ☒ Enable DO
- ☒ Disable DO

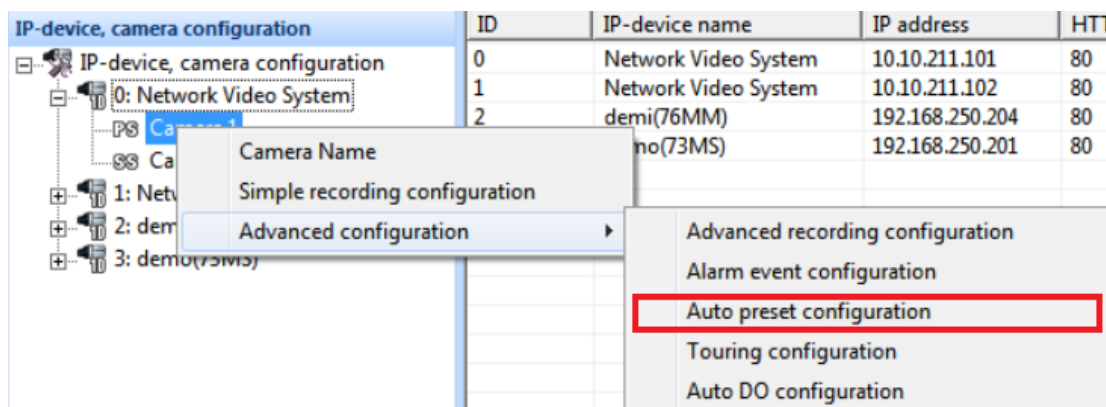
Apply Cancel

Name	Items	Description.
A	Select alarm type	Check one favorite alarm type you need.
B	Select event type	Check one favorite event type you need to send externally.

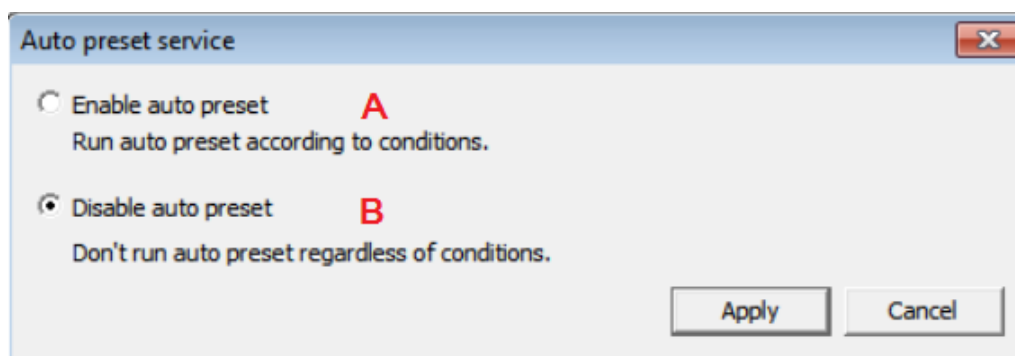
5.13 Auto preset Menu

If IP Camera (PTZ camera with preset function) meet the designated conditions, automatically moved to a preset spot where user designated.

- 1) Menu bar → Camera configuration → Advanced Configuration → Auto preset configuration.



- 2) Or after you directly select IP-camera you want, and then enter right button of mouse, you can see "Auto preset configuration " item.
- 3) You can see the window as below picture, you can select A "Configure Service" or B "Configure condition" according to your need.
- 4) After select a camera you need , if click on A, Show up following message.



Name	Item	Description
A	Enable auto preset	Run auto preset according to conditions.
B	Disable auto preset	Don't run auto preset regardless of conditions.

5) If you click on B" Configure condition" on the above pop-up message, you can see following window message.

Auto preset configuration

1. Select condition to configure. **A**

Auto preset number	Selected preset ID	Condition name
1	-	-
2	-	-
3	-	-
4	-	-

2. Select preset to run. **B**

(Liveview of selected camera in pop-up.)

3. Configure auto preset conditions. **C**

Input condition

☒ Use condition ☐ Don't use condition

Condition mode

☒ Always auto preset
☐ Schedule triggered auto preset
☐ Event triggered auto preset
☐ Schedule and event triggered auto preset

Schedule

☐ Day ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

☐ Time PM 4:00 ~ PM 4:00

☐ Date 12/31 ~ 12/31

Event

	1	2	3	4
Alarm sensor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motion detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FES			<input type="checkbox"/>	

4. Click "Apply" to apply configured condition.

D

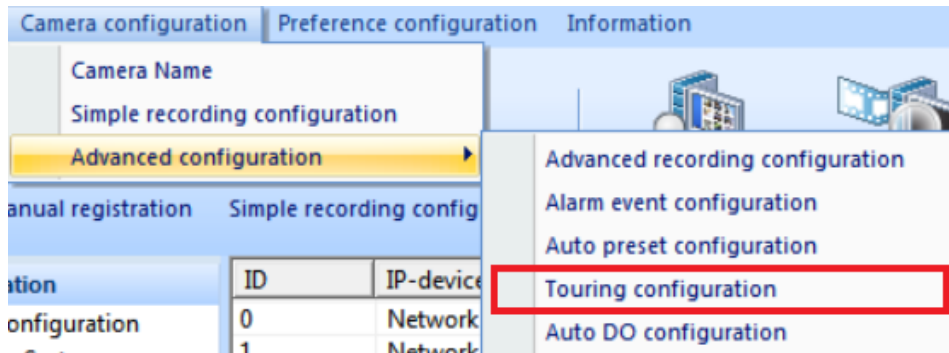
5. Repeat above.

Name	Item.	Descriptions
A	Select condition to configure	Support max 4 auto preset. One auto preset supports only one condition.
B	Select preset to run	Select preset ID to run by configured conditions. Preset ID configuration differentiates with PTZ Vendor.
C	Configure auto preset conditions	Configure auto preset conditions. Auto preset always must include event item you need to run.

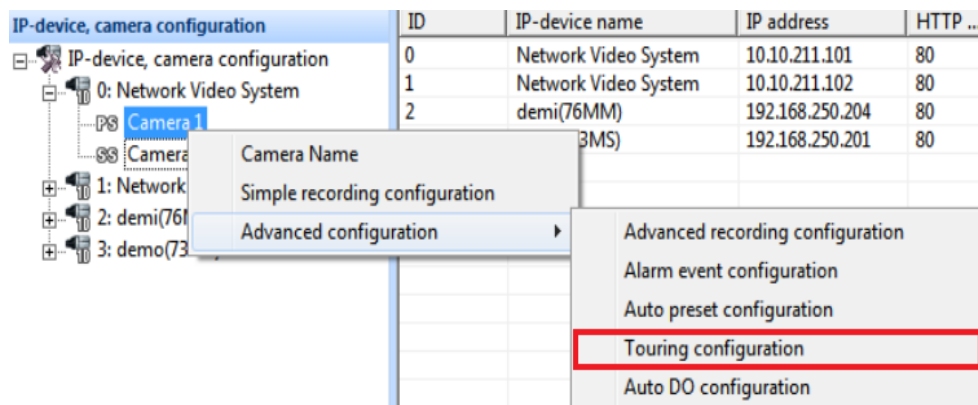
5.14 Touring configuration.

If PTZ camera is installed, this function is to move automatically according to the designated order & time.

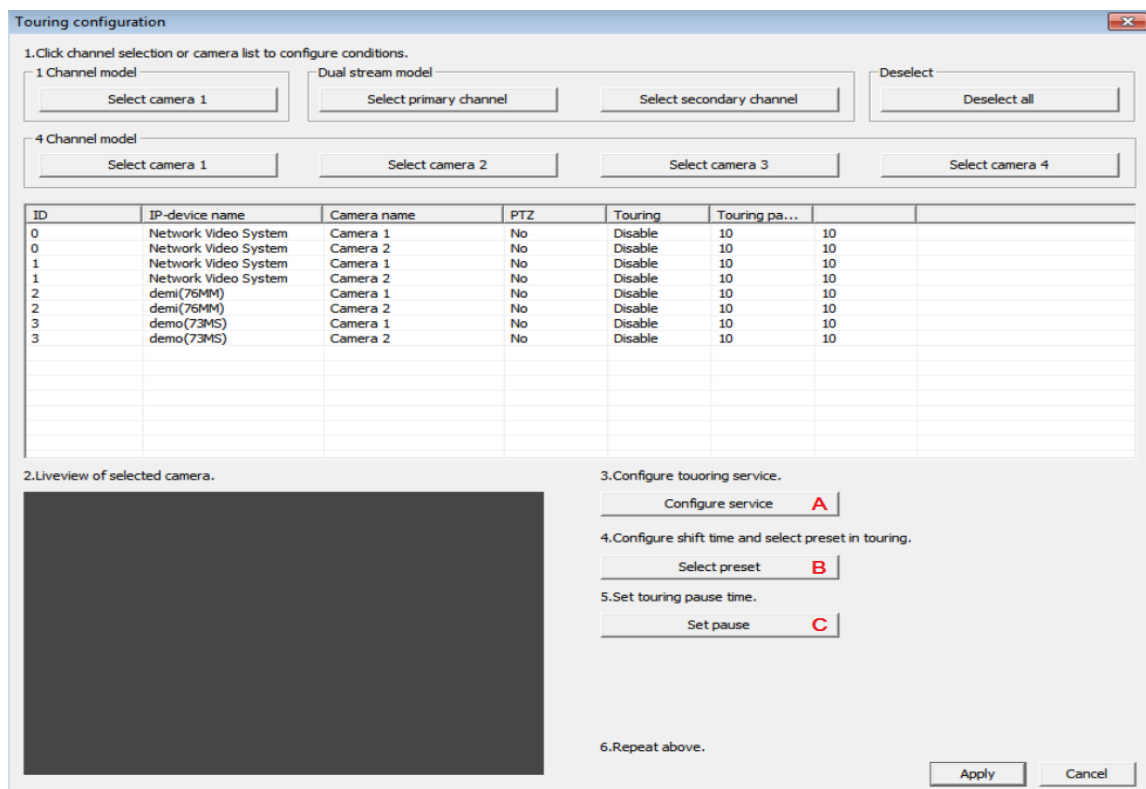
- 1) Menu bar → Camera configuration→ Advanced configuration →Touring configuration.



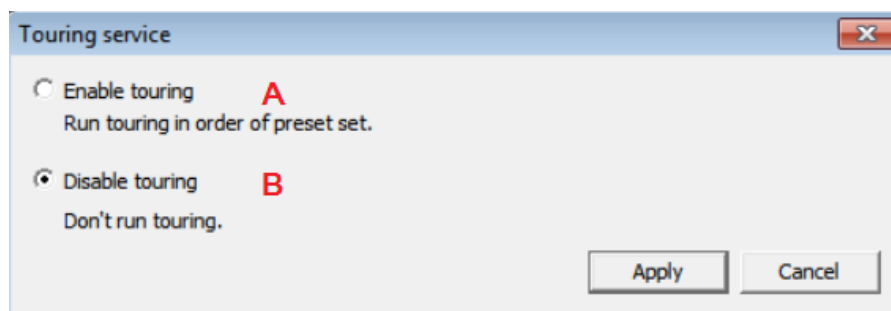
- 2) Or after you directly select IP-camera you want, and then click on right button of mouse, you can select "Touring configuration " menu.



- 3) Show up the pop- up window as below. After you select camera by mouse, can configure " configure service " and " Select preset" and " set pause" through A, B, C buttons

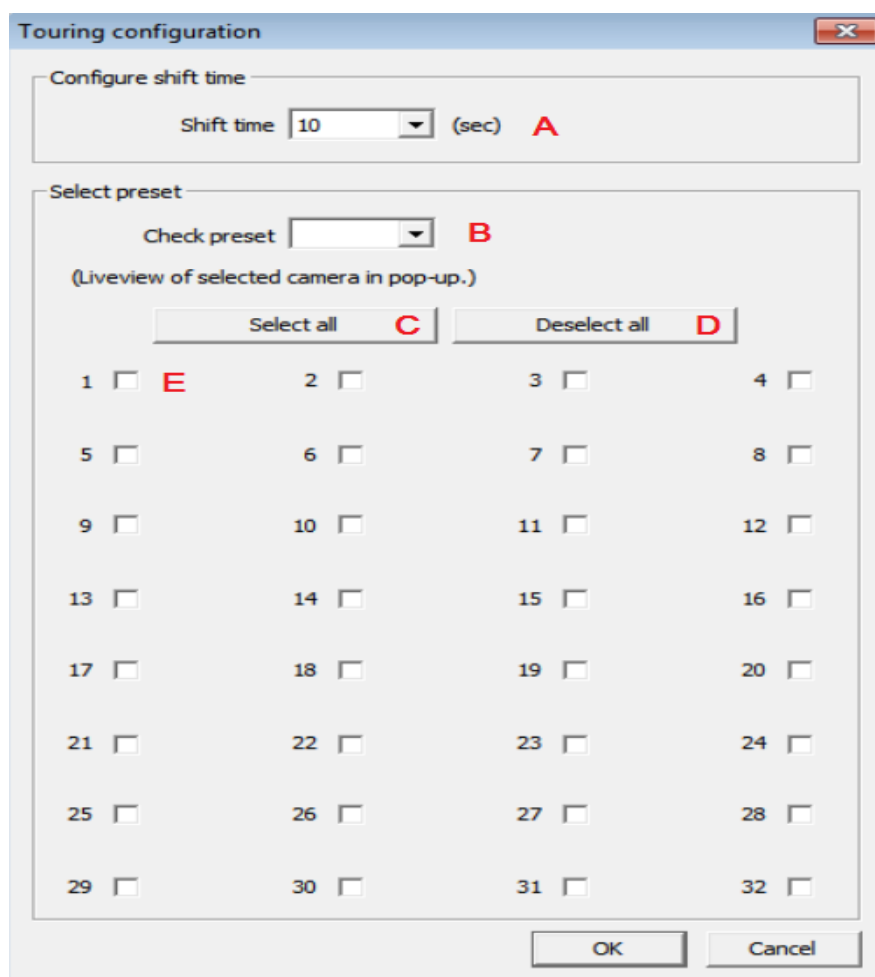


- 4) Show up the window message as the above if you select A "configure service", you can see the message like below.



Name	Item	Descriptions
A	Enable touring	Run touring in order of preset & designated time.
B	Disable touring	Do not run touring regardless of designated time & Preset ID.

- 5) Show up the pop-up window as below, click on B "Select preset" after select IP camera you need.

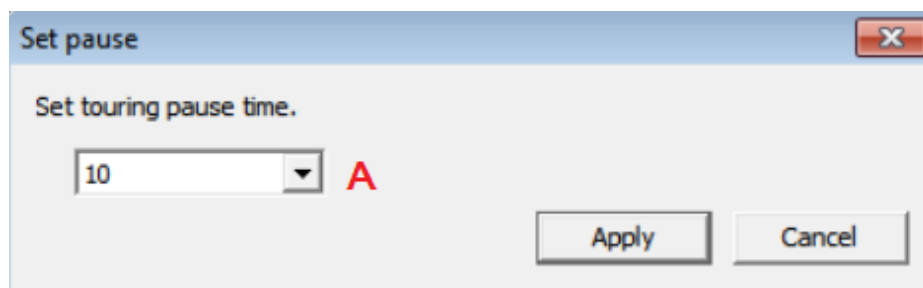


Name	Item	Description
A	Shift time	The interval time to wait for moving to next preset.
B	Check preset	If you check up preset, you can see live view of selected camera in bottom of window message.
C	Select all	Select all preset from 1 to 32
D	Deselect all	Deselect all preset from 1 to 32
E	Select preset	Individually select preset to use for touring at any spot.

6) If you select "set pause" on this message, you need to set touring pause time

If some other PTZ messages arrive in your screen when the PTZ tour runs, the touring function restarts after stopping for a few seconds in shifting time A.

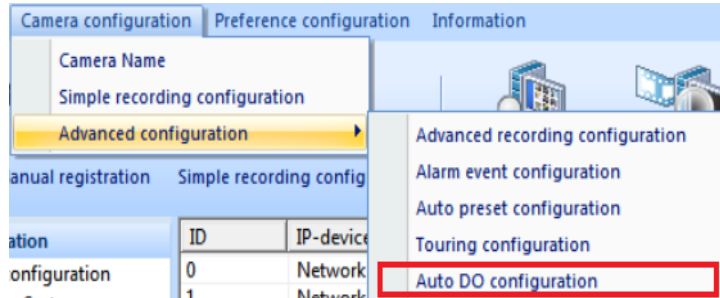
7) User need to set touring pause time at "A" and then click on Apply button.



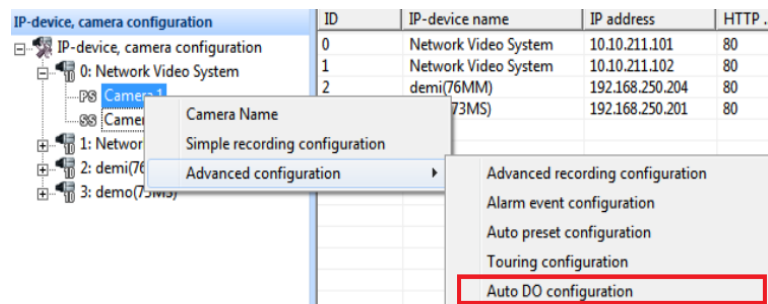
5.15 Auto DO configurations

When the alarm installed your IP camera supporting DO (Digital Output), if the selected condition is matched, it will be automatically running alarm device. It is called "**Auto DO configuration**"

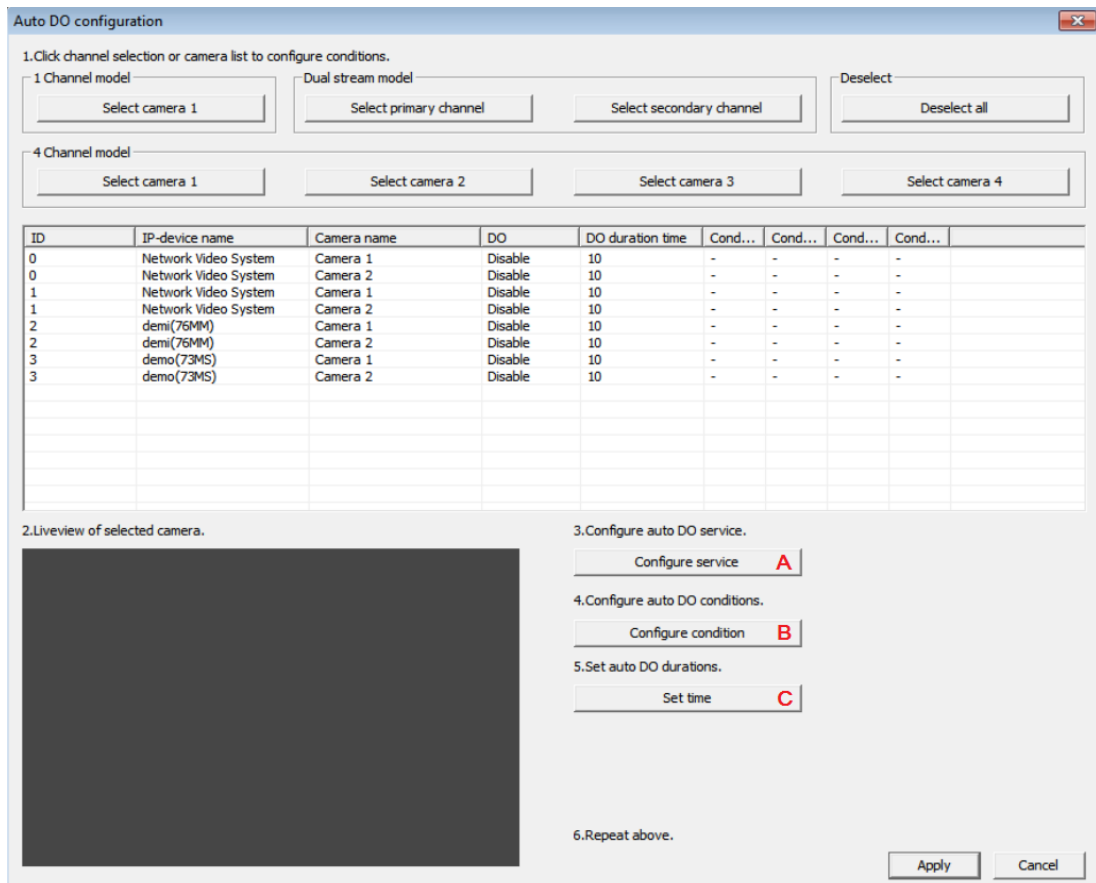
- 1) Menu bar → Camera configuration → Advanced configuration → Auto DO Configuration.



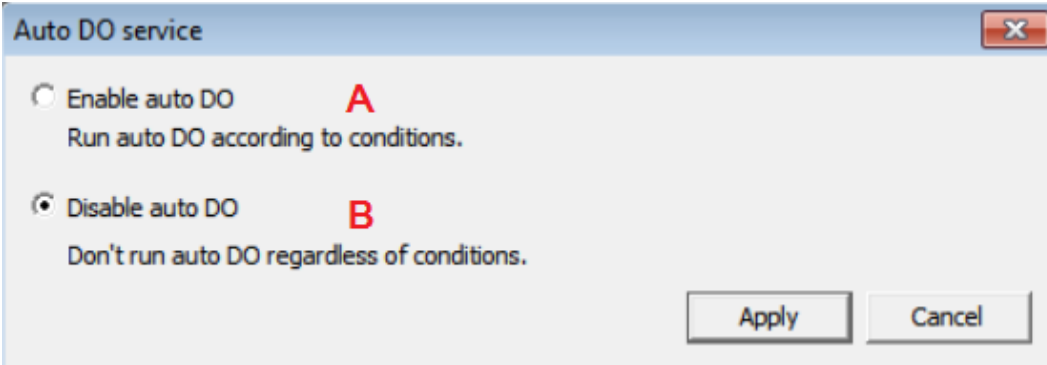
- 2) Or after you directly select IP-camera you want, and then enter right button of mouse, you can select " Auto DO Configuration " as below picture.



- 3) Show up the window as below picture. After you select camera that you need, you can select " configure service " and " configure condition" and " set time" by A, B, C buttons



- 6) Show up a pop window if you click on "A" as the above Auto DO configuration picture.
You can select if the Auto Do Service is **enable** or **disable** to run.



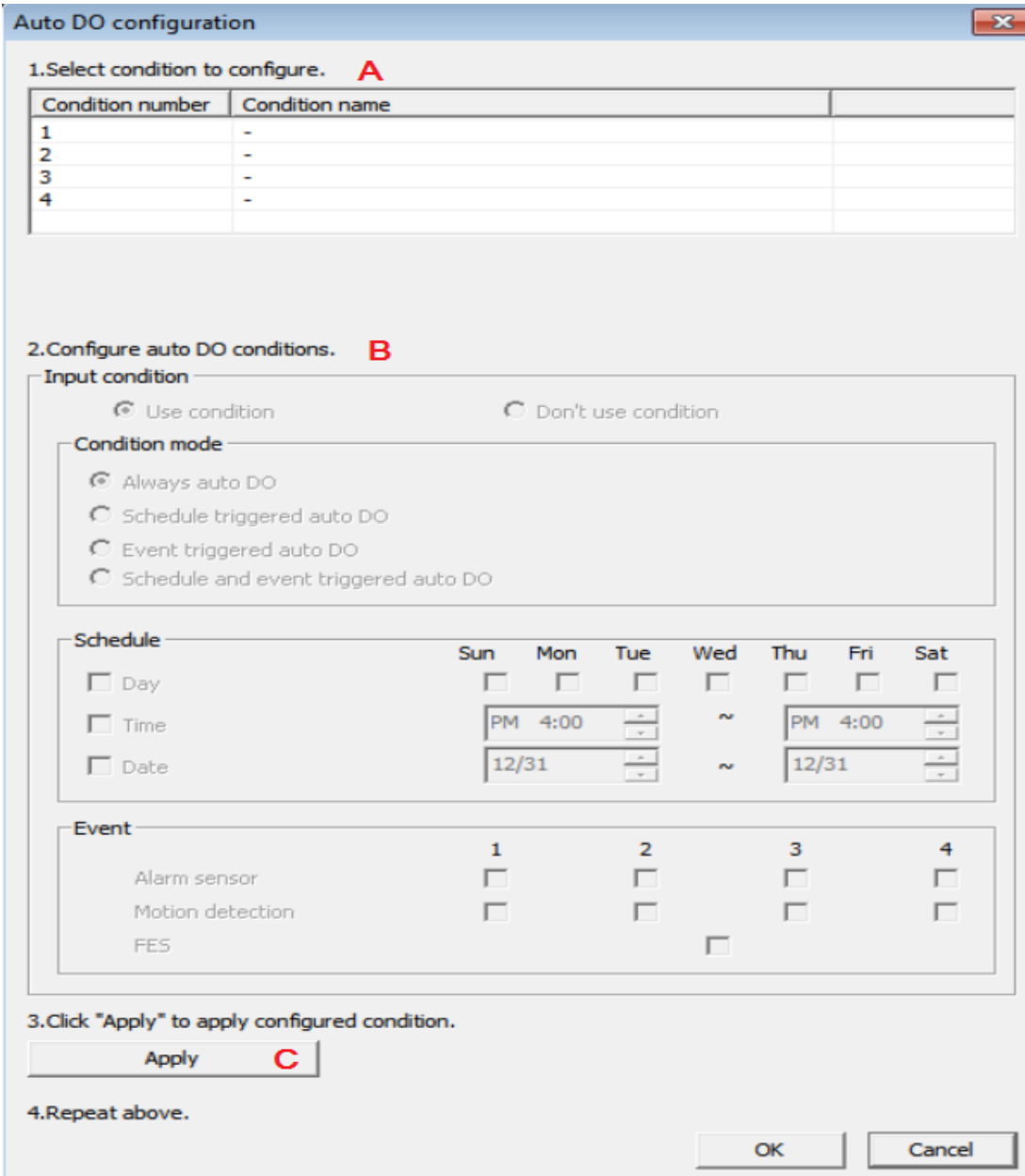
Auto DO service

☐ Enable auto DO **A**
Run auto DO according to conditions.

☒ Disable auto DO **B**
Don't run auto DO regardless of conditions.

Apply Cancel

- 7) If you click on B "configure condition" as the above **Auto DO configuration picture**, you can see the window message as below.



Auto DO configuration

1. Select condition to configure. **A**

Condition number	Condition name
1	-
2	-
3	-
4	-

2. Configure auto DO conditions. **B**

Input condition

☒ Use condition ☐ Don't use condition

Condition mode

☒ Always auto DO

☐ Schedule triggered auto DO

☐ Event triggered auto DO

☐ Schedule and event triggered auto DO

Schedule

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time	PM 4:00		~		PM 4:00		
Date	12/31		~		12/31		

Event

	1	2	3	4
Alarm sensor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motion detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FES			<input type="checkbox"/>	

3. Click "Apply" to apply configured condition.

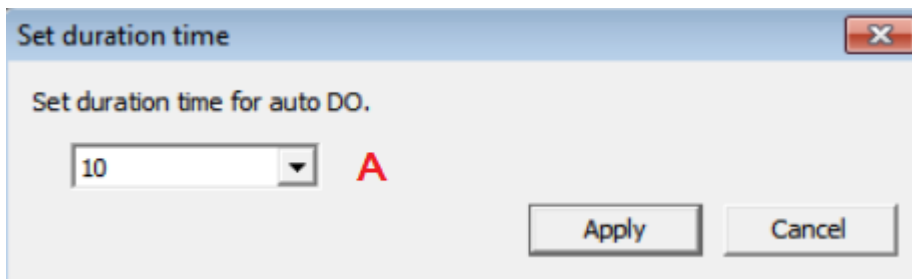
Apply **C**

4. Repeat above.

OK Cancel

Name	Item	Description.
A	Select condition to configure	It supports max 4 auto DO. Select condition to configure. It includes condition number and condition name.
B	Configure auto DO conditions	Configure auto DO conditions. It must have event conditions that user set up.

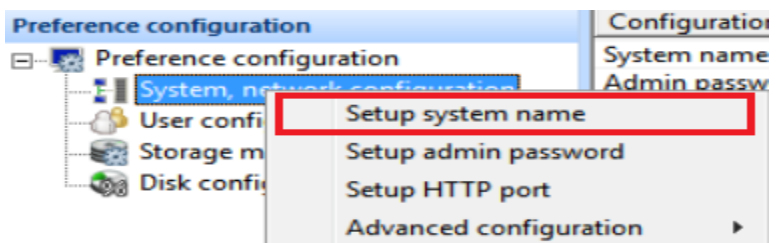
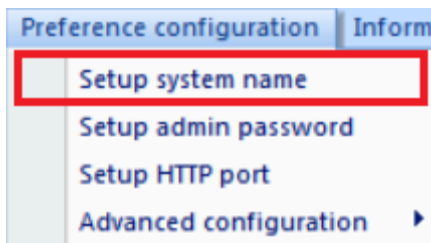
- 8) If you click on C "set time" as the above Auto DO configuration picture after selecting IP camera you need, show up a pop-up window as below. You need to set duration time for auto DO run.



6. Smart NVR Preference configuration.

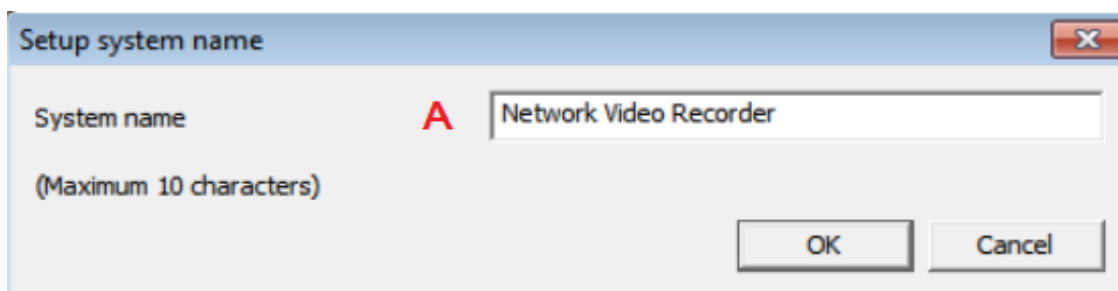
6.1 Preference configuration

- 1) Menu bar →Preference configuration →Setup system name. User can easily setup system name from this step.



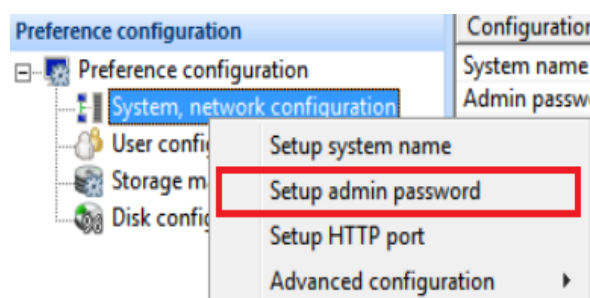
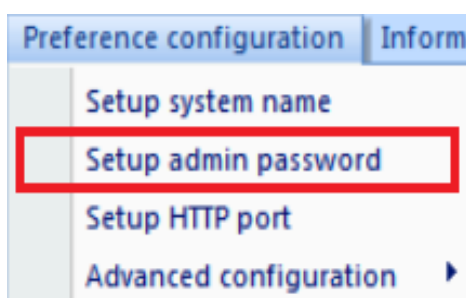
- 2) Or on the sub menu tree of preference configuration, click on the right button of mouse , you can select " Set system name" as above right picture.
- 3) And then a pop-up window will be shown up like below.

- 4) You need to type in system name in blank space like "A", it should be Maximum 10 characters and then click on OK button.



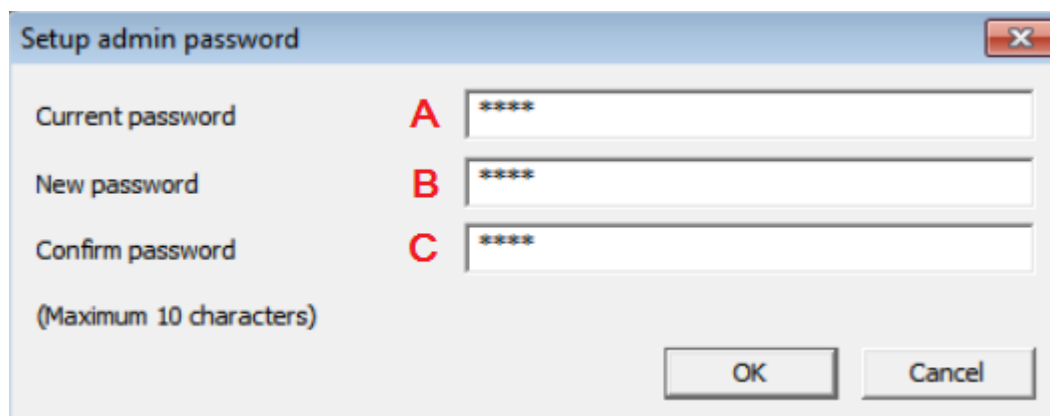
6.2 Set up admin password.

- 1) Menu bar →Preference configuration →Setup admin password.



- 2) Or at the tree of preference configuration, click on the right button of mouse, you can directly select "Setup admin password"

- 3) In next step, a pop-up window will be shown up like below.

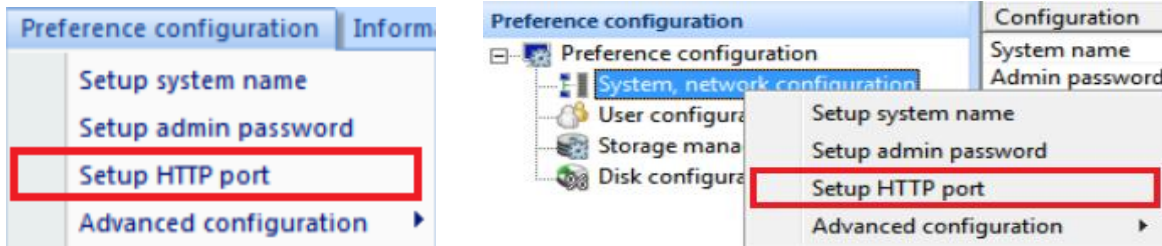


Name	Item	Description.
A	Current password	Type in current password that you are using.
B	New Password	Type in New password that you will use
C	Confirm Password	Type in New password again

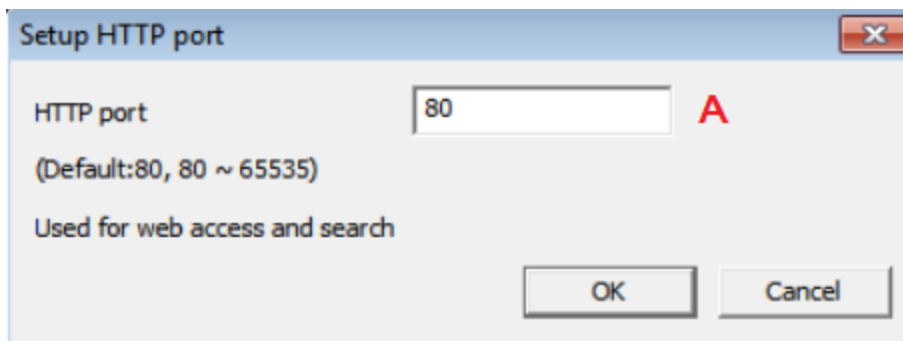
6.3 Setup HTTP port

This menu is used for connecting to Smart NVR on a web browser. You need to set up port number to run Smart NVR 2.0. To configure HTTP port to use, click **System, Network Configuration** on the tree menu.

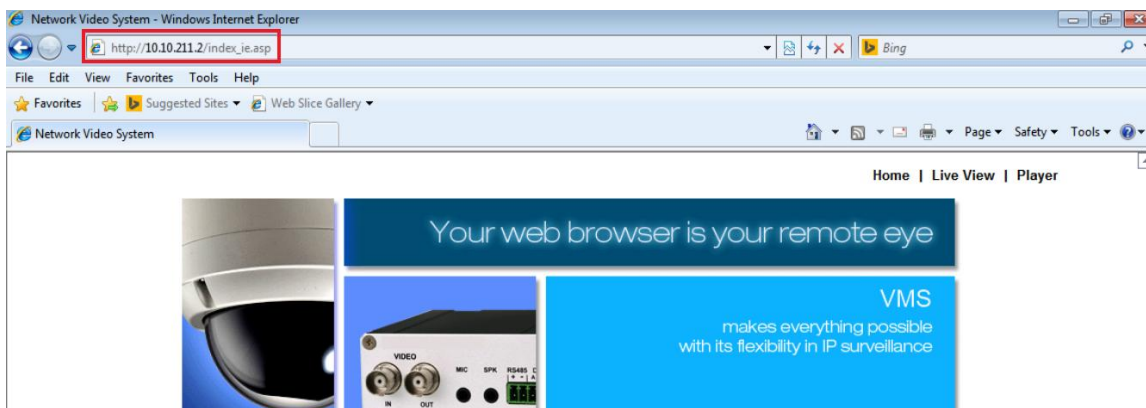
- 1) You can select "Set up HTTP port menu" as following steps, at Main tool bar → Preference configuration → Setup HTTP port



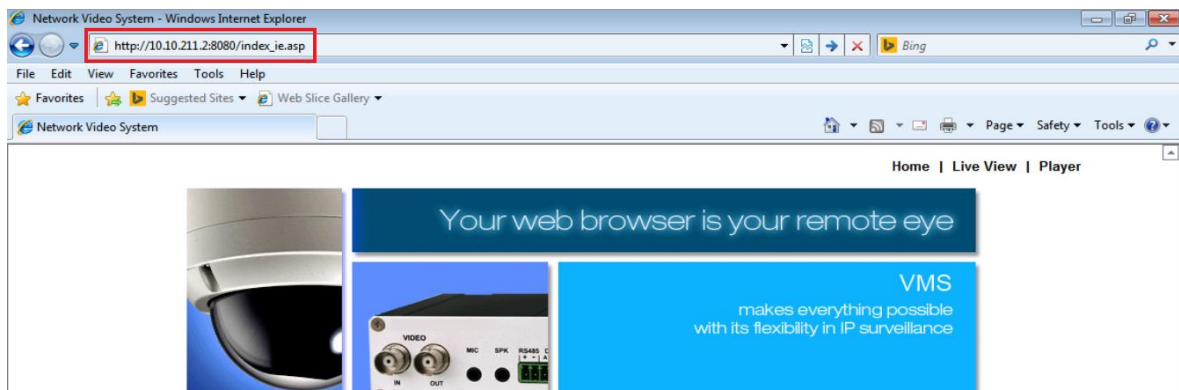
- 2) Or at the sub tree of preference configuration, click on the right button of mouse , you can select " Setup HTTP port "
- 3) The pop-up window will be shown up like below picture.



- 4) You should type in " HTTP port number " in blank Space " A ", and then click OK button
- 5) The default is 80. It is used between 80 to 65535.



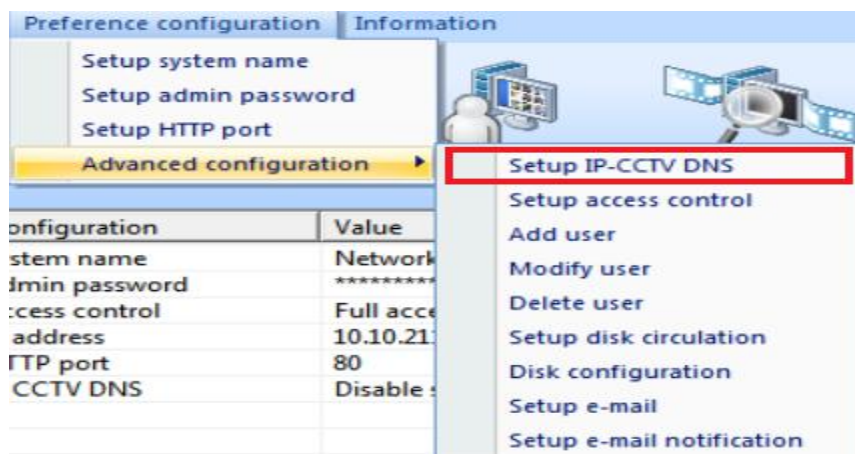
- 6) But if HTTP Port number is not 80, you should put in the other port number (ex, HTTP port 8080) as below.



6.4 Setup IP-CCTV DNS

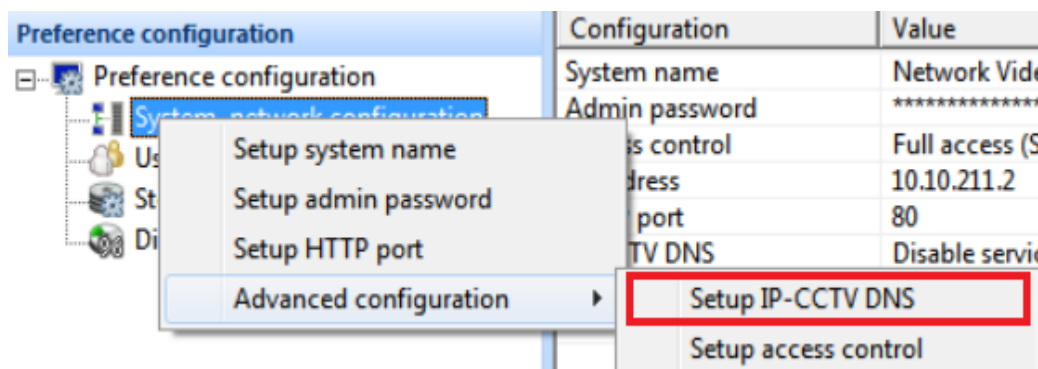
It is the menu that connects to Smart NVR from external, you can watch what something is happened as like you at home.

- 1) Main Tool bar → Preference configuration → Setup IP-CCTV DNS



- 1) Or at the tree of preference configuration, click on the right button of mouse , you can see

“Setup HTTP port” item.



2) The pop-up window will be shown up as below picture.

Setup IP-CCTV DNS

A Service : ☐ Enable ☒ Disable

B DNS server IP address : **C** Access

D MAC address :

E Product key :

F External port :

G Confirm :

Name	Item	Description
A	Service	Set to use IP CCTV DNS or not.
B	DNS Server IP address	FlexWATCH IP CCTV DNS address already entered.
C	MAC address	It is a MAC address of your PC installed Smart NVR.
D	Product key	It is a Product Key of Smart NVR that you were provided.
E	External port	When you connect to Smart NVR from external, it is usually used this menu. External port is configured when you do port forwarding from a Router.
F	Connection test	Confirm the public IP address installed Smart NVR.

1. If you succeed the test for connection, you can see this message as below.

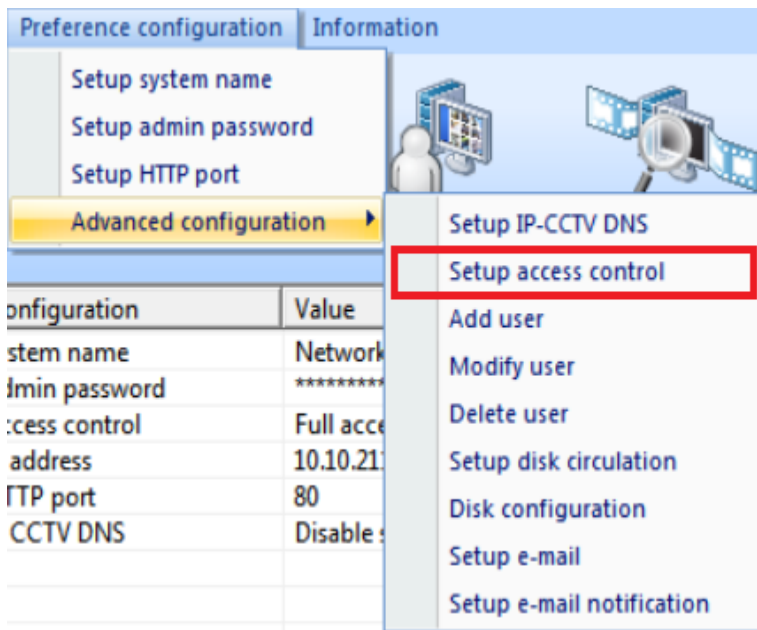
Smart NVR Configurator

Connection test success
External IP address
115.93.45.237

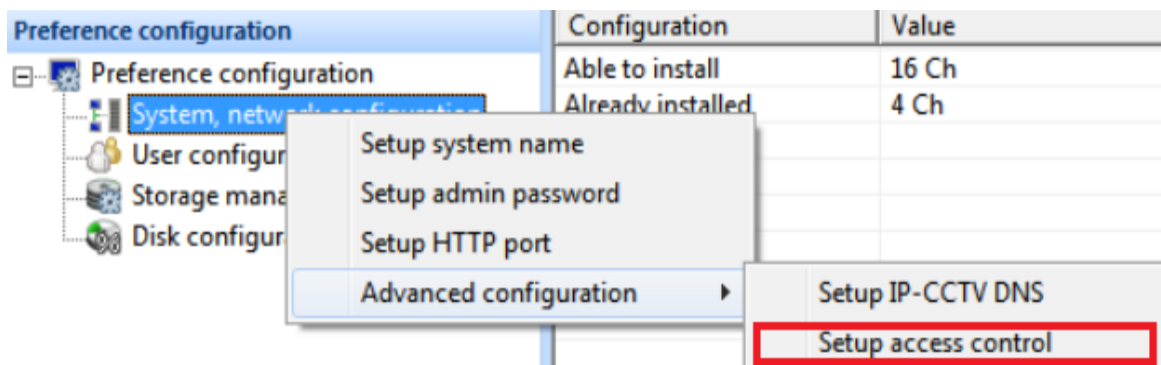
6.5 Setup access control

User can configure Authorization to access Smart NVR without any limitations.

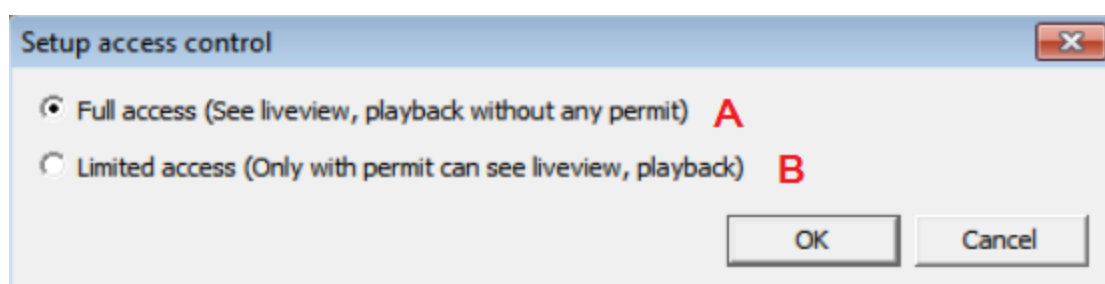
- 1) Main tool bar → preference configuration → Advanced configuration → setup access control



- 1) Or at the tree of preference configuration, click on the right button of mouse , you can see "Setup access control" item.



- 2) Show up a pop-up message as below.

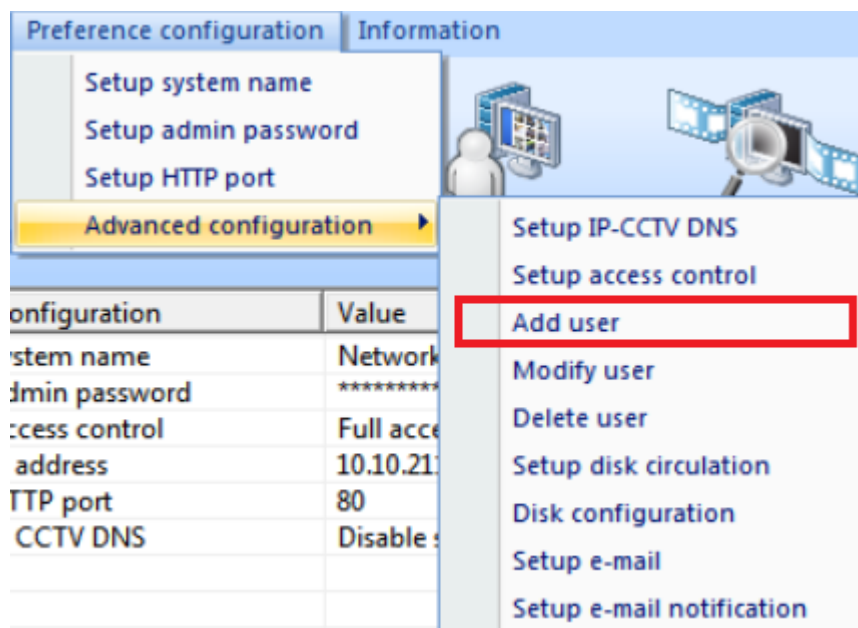


Name	Item	Description
A	Full access	Set Full Access for the user. Anyone can connect to the Smart NVR without authentication, and be allowed live view, audio, PTZ, playback. Default is Full access.
B	Limited access	Set Limited Access for the user. Only the users with proper permission to the camera can access it. It needs ID & Password.

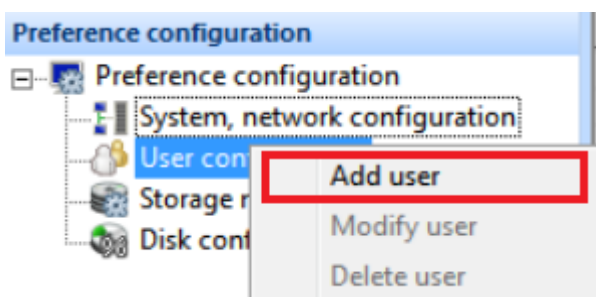
6.6 Add User

When it sets up as Limited access, you can access to Smart NVR and then see Live view, DO, PTZ, and Playback with user account.

- 1) Main tool bar → preference configuration → Advanced configuration → Add user.



- 2) Or at the tree of preference configuration, click on the right button of mouse , you can see "Add user"



3) Show up pop-up message as below picture.

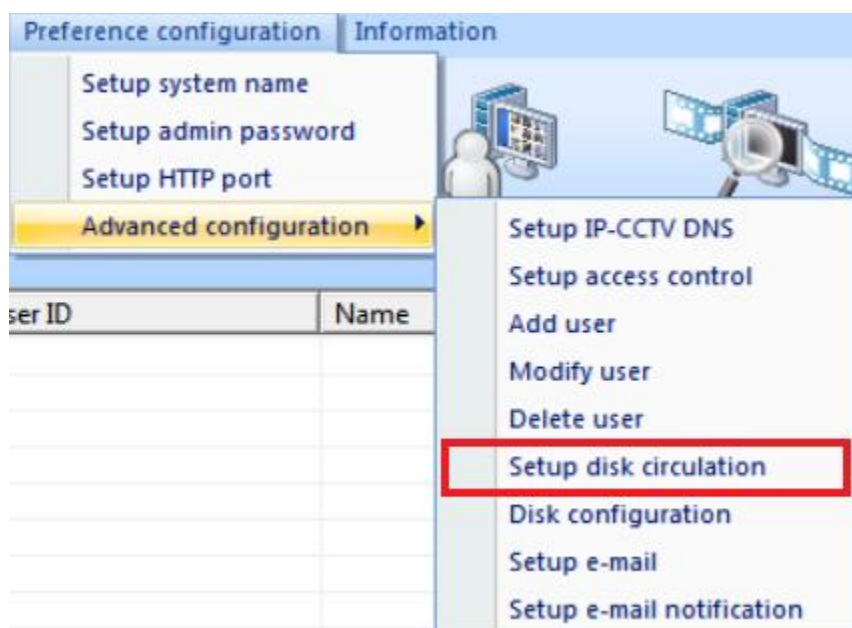
4)

Name	Item	Description.
A	User ID	Enter user ID
B	User Password	Enter user Password
C	Confirm password	Enter user Password again.
D	Name	Enter a name that is able to identify
E	All access	It has all authorization for Live view, DO, PTZ, Audio, playback of all IP-devices that are registered on Smart NVR.
F	General access	It has all authorization only for Live view that are registered on Smart NVR.
G	No access	There is no authorization to access.
H	Selective access	It has selective authorization for Live view, PTZ, Audio, playback of the designated IP-devices that are registered on Smart NVR.
I	System	It will be able to work only if selected as Limit-access. It can configure to authorize an access to Max 8 . Also it can provide separated authorization to each IP-device.

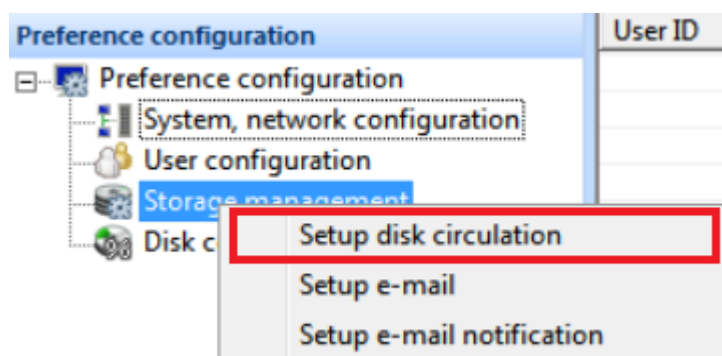
6.7 Set up disk circulation.

If you use up all disk Storage in your pc, You can use disk circulation for the other HDD Storage.

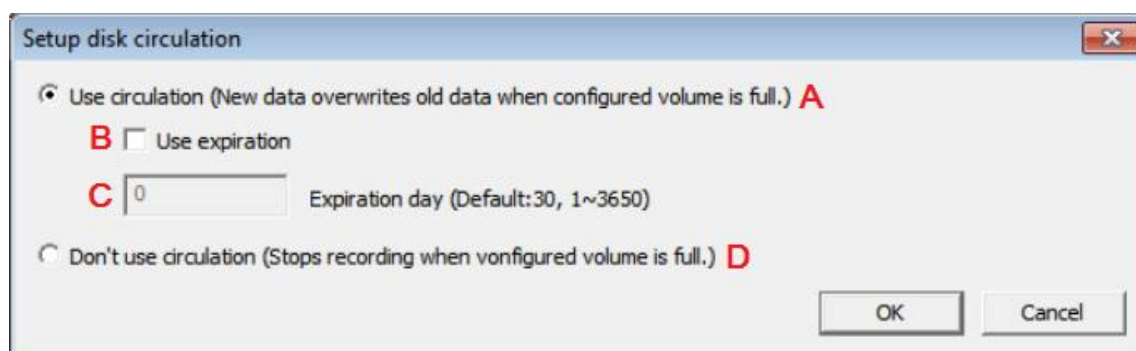
- 1) Menu bar → Preference configuration → Advanced configuration → Setup disk circulation.



- 2) Or at the tree of **Preference configuration**, click on the right button of mouse , you can see "Setup disk circulation" item.



- 3) Show up a pop-up message as below.



Record	Disk	Type	Disk size	Free size	Quota size
Recording	C:\	HDD	35 GB	17 GB	14 GB

Disk configuration

Name	Menu	Description.
A	Use circulation	New data overwrites old data when configured volume is full.
B	Use expiration	Use expiration if you need.
C	Expiration day	Expiration day if you need. (default is 30)
D	Don't use circulation	<p>Stops recording when configured volume is full.</p> <p>If you need to restart a storage function, you must to restart Smart NVR Configurator.</p>

6.8 Disk Configuration.

Record	Disk	Type	Disk size	Free size	Quota size
Recording	C:\	HDD	35 GB	17 GB	14 GB

Disk configuration

The maximum Storage capacity for PC Drive is **6.6 TB**. The Maximum total Storage capacity is **160 TB**

Setup storage ✕

Disk: C:\

A Use disk : ☒

B Maximum : GB

C Minimum : GB

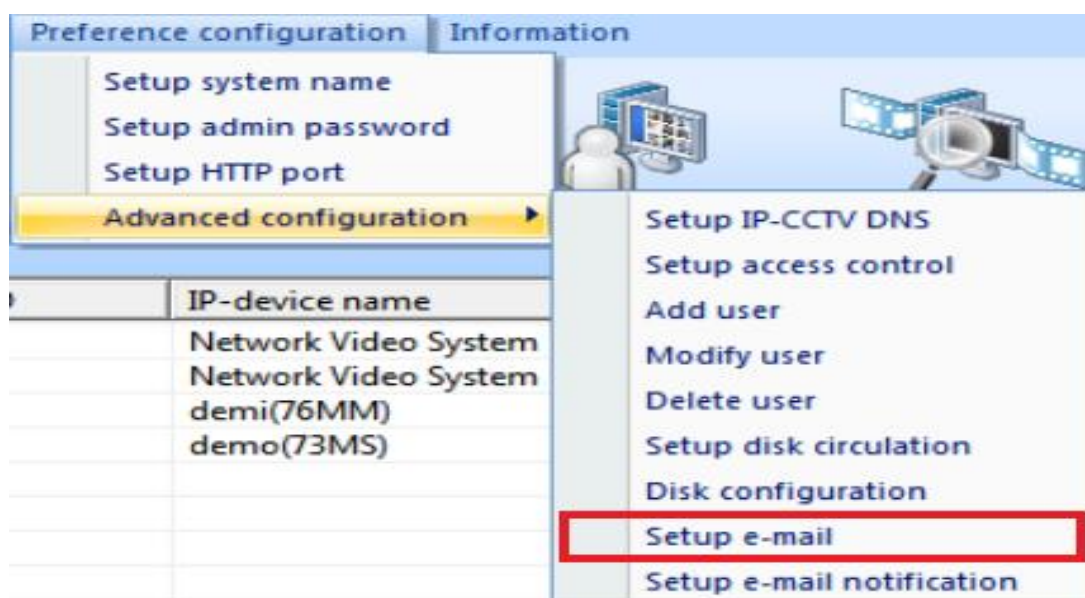
D Storage management : GB

Name	Item	Description.
A	Use disk	If you check, you can use driver for storage.
B	Maximum	It is HDD Size for maximum storage
C	Minimum	It is HDD Size for minimum storage.
D	Storage management	You can need to enter the value from min to max.

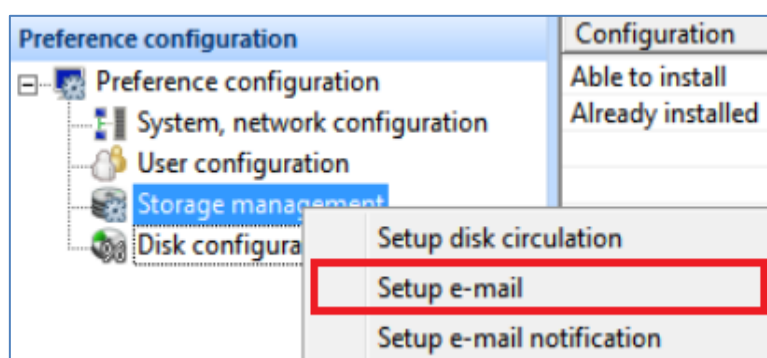
6.9 Set up e-mail

You can send some information or messages to a receiver by Smart NVR. Once an email account is registered here, you can receive email notification from Smart NVR program upon a certain event. To configure an email accounts,

- 1) Menu bar →Preference Configuration→ advanced configuration →Set up e-mail



- 2) Or at the tree of Preference configuration, click on the right button of mouse, you can see "Setup e-mail" menu as below picture.



1) Show up pop-up message as below.

Setup e-mail

A Service : ☐ Enable ☒ Disable

B SMTP server :

C Verify : ☐ Enable ☒ Disable

D E-mail ID :

E E-mail password :

F Sender :

G Receipient #1 :

H Receipient #2 :

I Receipient #3 :

J Title :

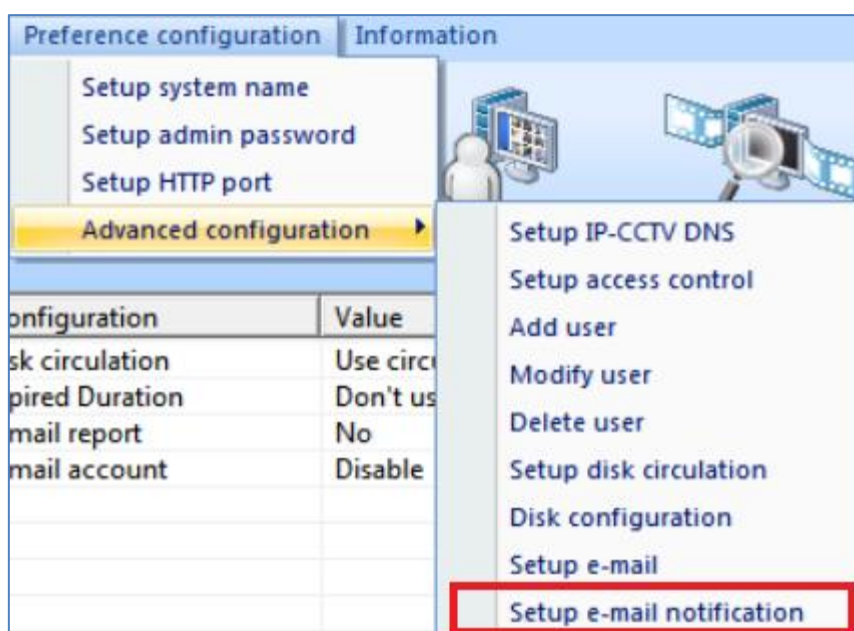
OK Cancel

Name	Menu	Description
A	Service	Decide whether to use the e-mail sending service.
B	SMTP server	Enter the address of SMTP server for sending email
C	Verify	Decide whether to use Verification.
D	E-mail ID	Enter the sender's ID for email account.
E	E-mail Password	Enter the password of the sender's email account.
G	Recipient email #1,2,3	The email addresses of three Recipients to be notified.

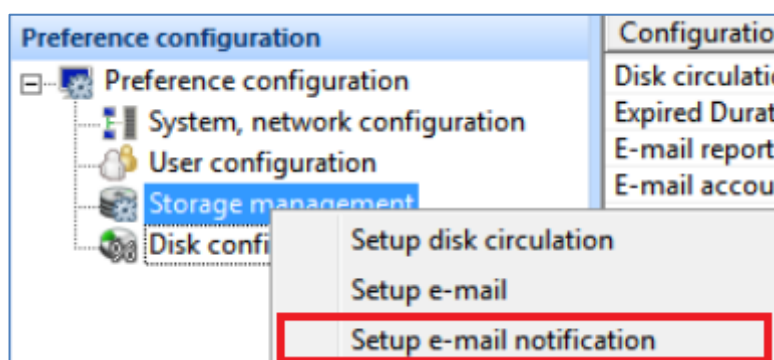
6.10 Set up e-mail notification.

It is a notification for user to run Smart NVR 2.0 for e-mailing service.

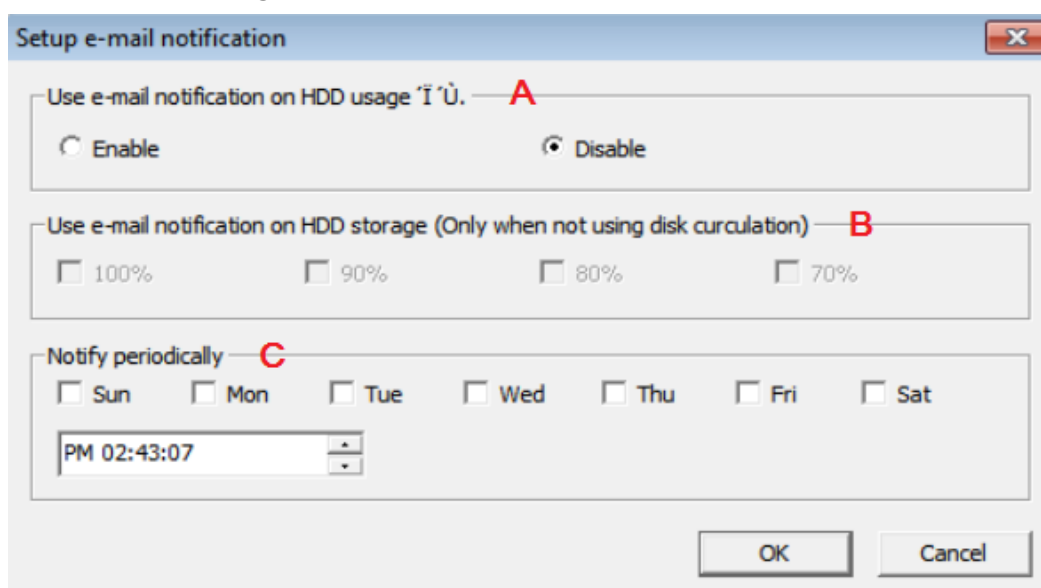
- 1) Menu bar → Preference configuration → Advanced configuration → Set up e-mail notification.



- 2) Or at the tree of Preference configuration, click on the right button of mouse , you can see "Set up e-mail notification.



- 3) Show up pop-up message as below picture.

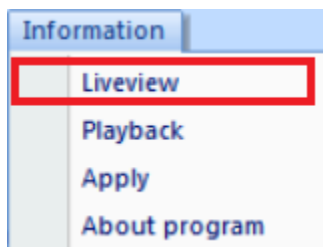


Name	Item	Description.
A	Service	Use e-mail notification on HDD
B	Storage notification	Use e-mail notification on HDD Storage only when not using disk circulation.
C	Notification HDD periodically	It sends current HDD storage value periodically as the e-mail address user set up.

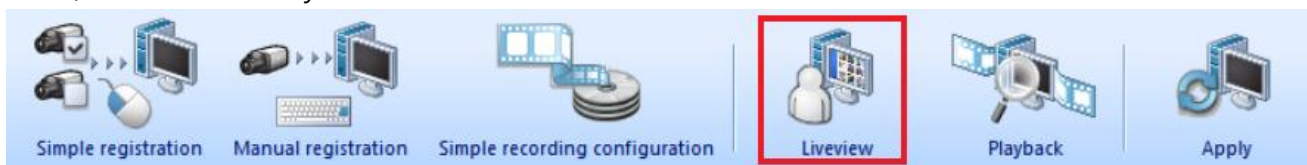
7. Information.

7.1 Live view

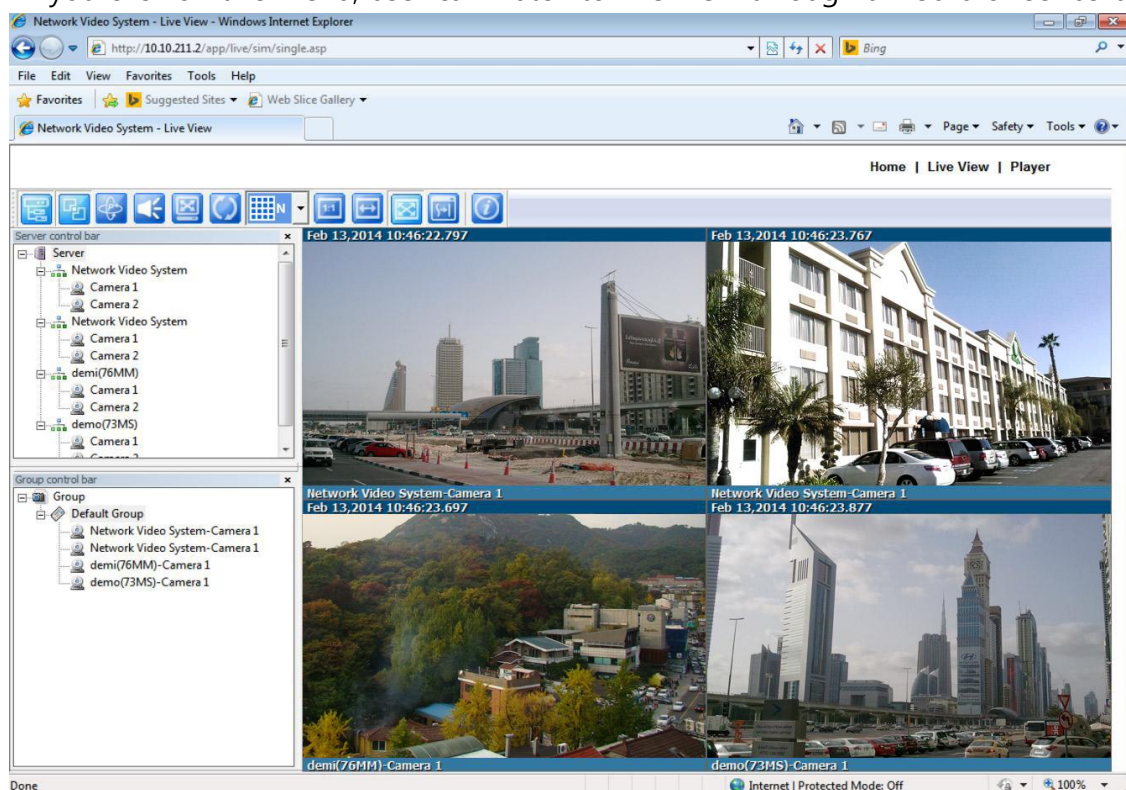
It supports live view, Playback functions to watch by Smart NVR. 2.0. You can run it as Web browsers.



- 1) Menu bar → Information → Live view
- 2) You can directly click "Live view" on the main tool bar.

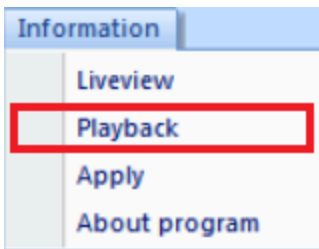


- 3) If you click on this menu, user can watch to **live view** through a web browser as below.

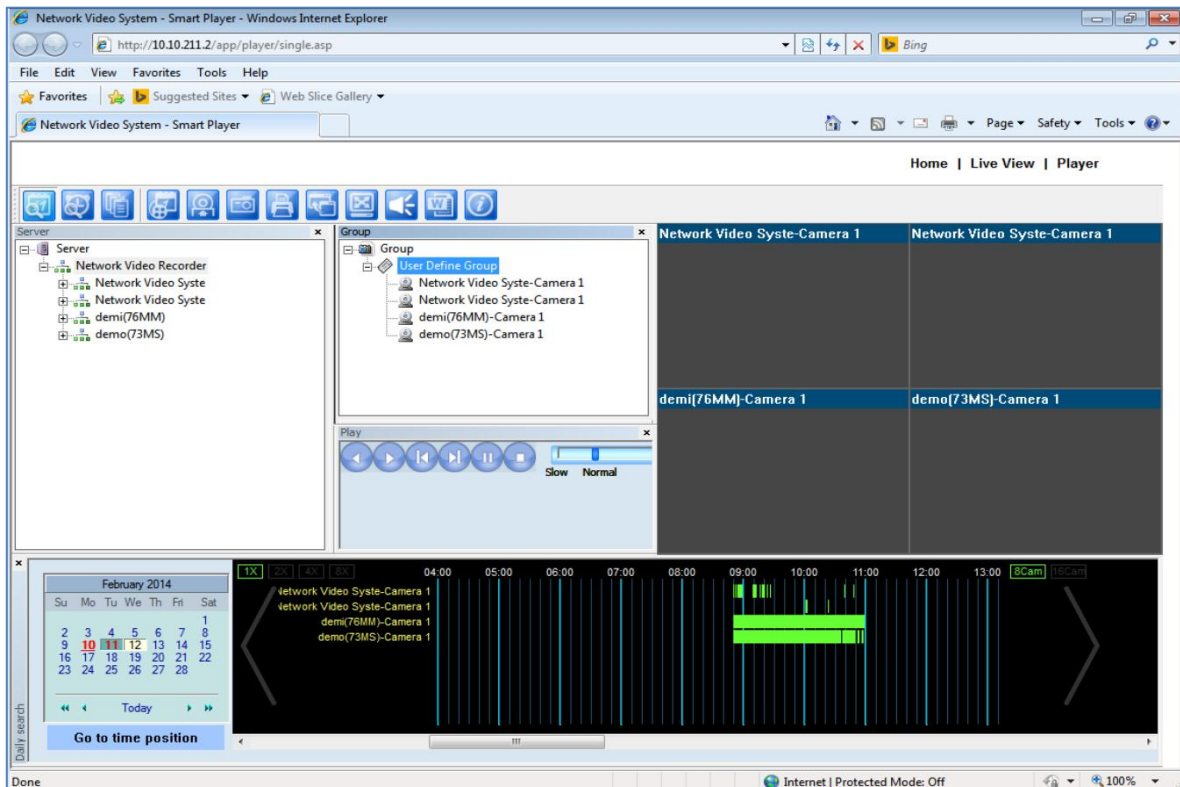


7.2 Playback

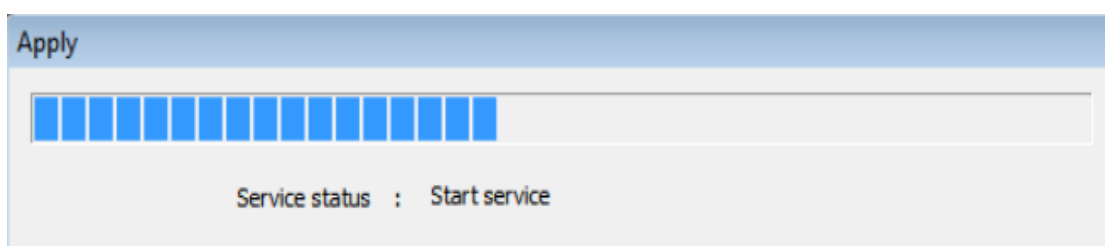
- 1) Menu bar → Information → playback
- 2) You need to click " Play back" on the main tool bar.



- 4) User can watch stored images if you click on " playback" through web browser after select " Play back "button.
- 5) You can watch a pop up message as below.



- 6) If you click "Apply" button, the service can restart and this program must be closed after configuration is completed successfully.





8 Smart NVR controller.

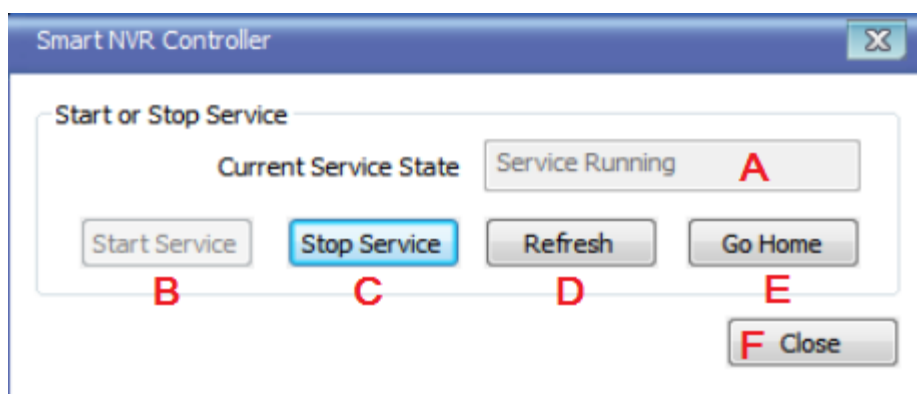
8.1 Smart NVR Controller Start & Close.

Smart NVR Controller program is used to start or stop the Smart NVR service. You can start Smart NVR 2.0 by two methods as below.

- 1) Start (IE, the left button of bottom line) → Flex watch at your PC folder → Smart NVR→Smart NVR Controller. You can select it as following order.



- 2) Or at the tree of Flexwatch , click on the right button of mouse , you can see "Smart NVR Controller "
- 3) The pop up message show up as below.



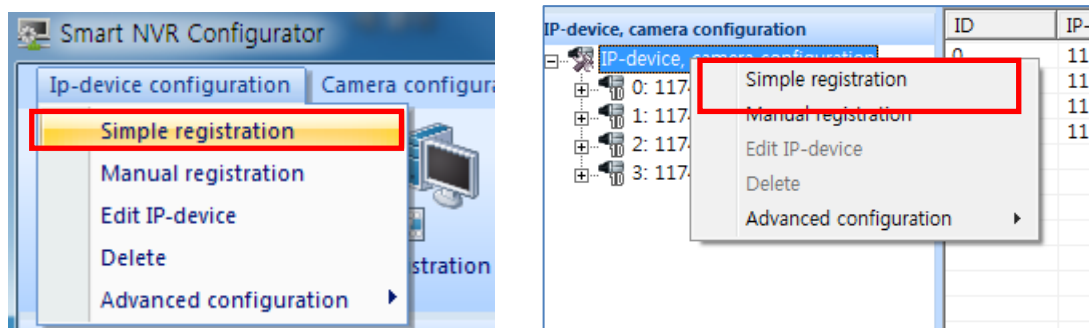
Name	Menu	Description.
A	Start Running	It shows Running or not running of at current service state.
B	Start Service	Start Smart NVR 2.0 service
C	Stop Service	Stop Smart NVR 2.0 service.
D	Refresh	Re fresh Smart NVR Controller window.
E	Go Home	You can move to Smart NVR Service as a browser.
F	Close	Close Smart NVR Controller window. It is not mean that Smart NVR controller is stopped.

9. Configuration for IP devices and Cameras

9.1 Easy Registration IP device and Cameras

User can simply detect IP devices from these menu "Simple registration"

A) At Main Menu → IP-device configuration → Simple registration.

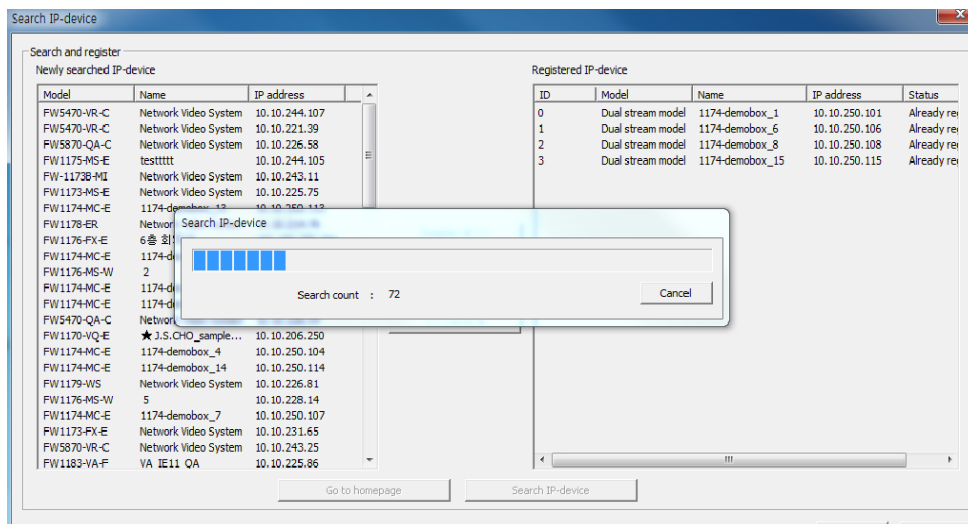


B) Or tree of IP-device, camera configuration menu on left side of bottom, click on the right button of mouse , you can select " Simple registration" item.

C) IP-Installed equipment message will be shown up as below, If you click on "cancel", it will stop to search.

9.2 Simple Save Settings

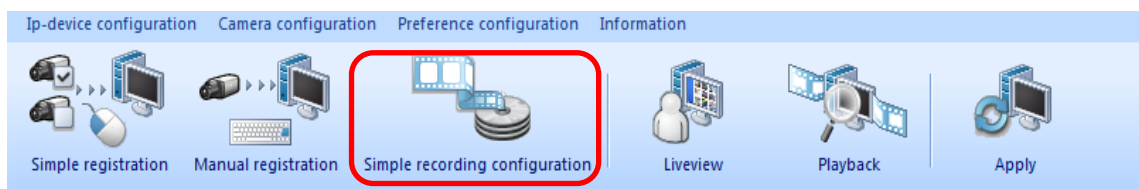
A) Easy and simple camera settings can be saved



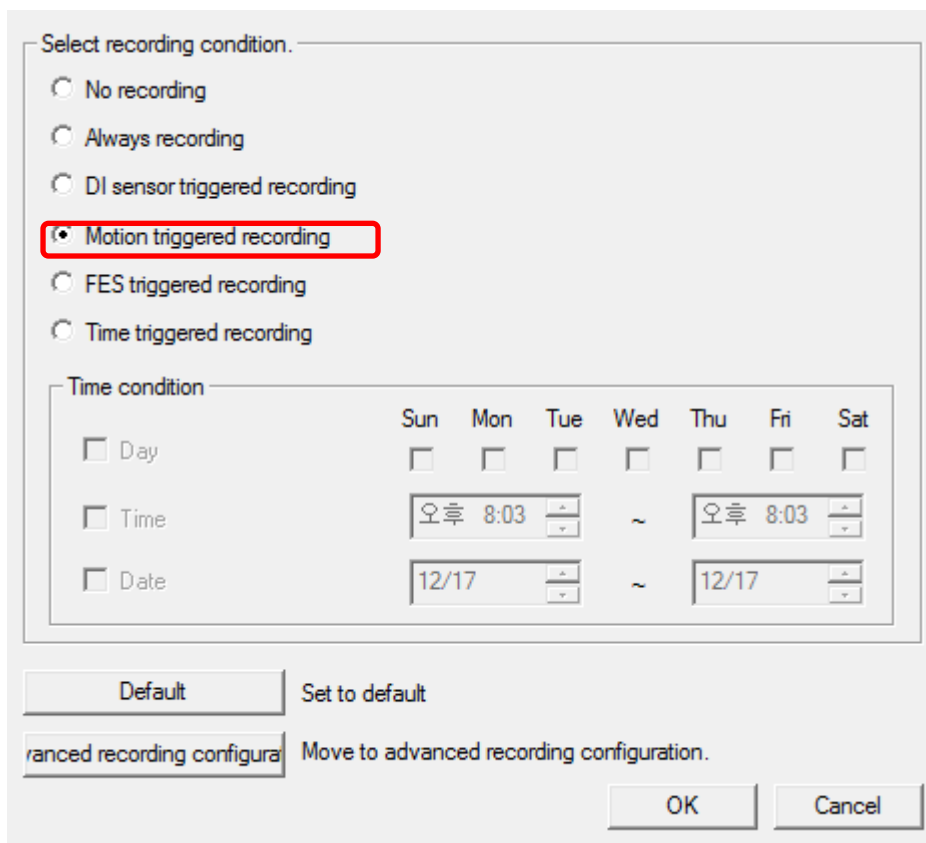
B) IP-equipment and camera management tree and select the camera from the camera list.

C) You can select " Simple recording configuration" menu as below picture..

D) Select at Main menu → IP equipment setup → Equipment easy selection.



E) Dialog box will appear as shown below to, set the desired storage condition.



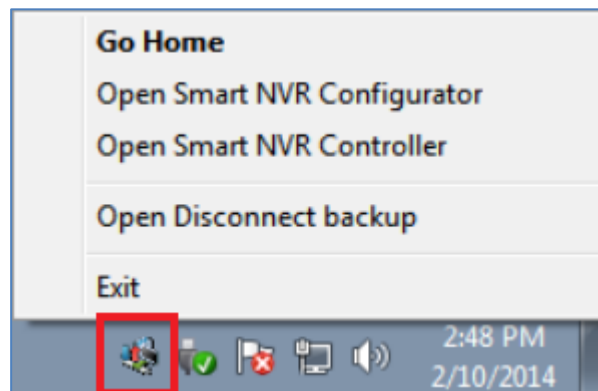
F) The initial setting is stored by the motion detection, it is set to be D

Name	Menu	Description
A	No recoding	Don't save recording
B	Always recording	Always save recording if not any options.
C	DI Sensor triggered recording.	Recording according to DI/DO Sensor
D	Motion triggered recording.	If the motion is detected, recording starts
E	FES triggered recording.	If the FES Data is input, recording starts
F	Time triggered recording.	When it is at the specified time , recording starts
G	Time Condition.	Set up the time condition if the user wants
H	Default	Set to the default

10.Uninstalling Smart NVR

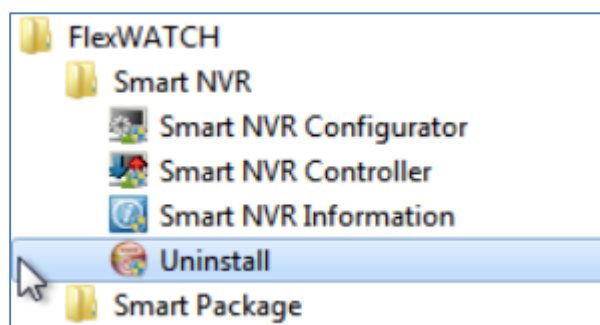
10.1 Closing Active Smart NVR

If you need to uninstall Smart NVR, first you need to make sure Smart NVR program is not running on your computer by checking the system icon. As you see on the following picture, you can easily find out if Smart NVR service running.

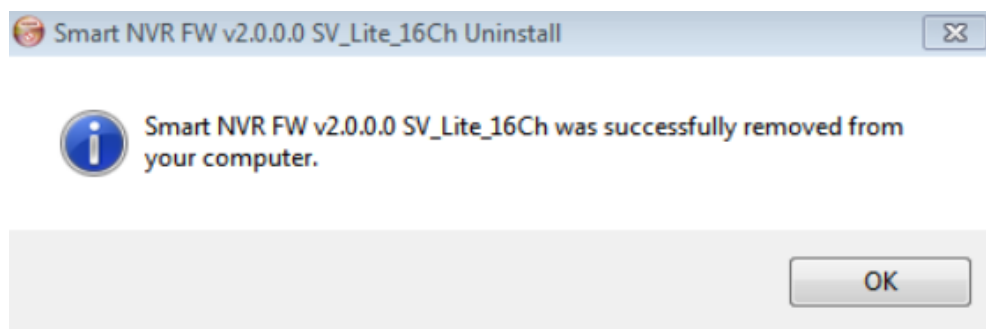


10.2 Executing Uninstaller

To start uninstalling, click **Start > All Programs > FlexWATCH > Smart NVR > Uninstall**. Smart NVR is active, place the mouse pointer on the Smart NVR icon, and click the right mouse button. You'll see the pop-up menu. Select **Close**.



Then the Smart NVR icon disappears, and you know that Smart NVR is no longer running on Your computer. Now you're ready to start uninstalling.



When the following window appears, click the **OK** button.