

NETWORK VIDEO RECORDER C/S USER MANUAL













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Network Video Recorder C/S is IP Video management software. It is widely used as a monitoring and recording system for small and midsize installation. And, because of Client/Server architecture, it can manage unlimited record server systems.

1. Feature Overview

Key features \ Package	16	36	64	Unlimited
Number of cameras per recording server	16	36	64	Unlimited
Multi server solution	Yes	Yes	Yes	Yes
Number of cameras per NVR Client Live	16	36	64	128
Number of cameras per NVR Client Playback	16	36	64	64
Alarm Manager	Yes	Yes	Yes	Yes
Map function	Yes	Yes	Yes	Yes
Watchdog	Yes	Yes	Yes	Yes

2. Minimum System Requirements

System requirements	NVR CS Server	NVR CS Client
CPU	Pentium Core2 duo 2.4	Pentium i3-3220 3.3GHz or higher
Graphic Card	128MB	128MB
Ram	2GB	2GB or higher
O/S	Windows 7	Windows 7
Network	Gigabit LAN	Gigabit LAN
HDD	Minimum 5GB Free	Minimum 1GB Free

3. Detailed Product Features

3.1. NVR CS Server

Function	Description
Recording Server	Saves transmitted video stream from IP cameras
	Intelligent recording functions (Scheduling, Event Recording)
Relay Server	Relays video streams or events from IP cameras to the Client
Two way Audio Server	Transmits client's audio data to Camera
User Management	Manages the user group and the privilege of the user group
Watchdog	Monitors Recording Servers periodically and maintains stable recording operations.

3.2. NVR Client Live

Function	Description
Real-time Monitoring	Performs real-time monitoring of Max. 128 channels by remote access to Recording servers or IP Cameras.
Unlimited Server System	Provides unlimited server system by remote management of recording servers of IP Cameras
Quick Search	Provides up to x16 playback speed of recording data by each camera of Recording Server.
P/T/Z Control	Controls Pan/Tilt/Zoom of IP Camera.
Backup	Provides AVI file of Video Backup.
Panorama Control	Creates 360 degree panorama image of PTZ Camera and Controls the position of PTZ camera.
Display	Provides various screen modes (1/4/6/9/10/13/16/25/36/49/64ch)
Dual Monitoring	Supports Dual monitoring of up to 128 channels.

3.3. NVR Client Playback

Function	Description
Remote Search	Provides up to x16 playback speed of recording data by each camera of Recording Server.
Display	Provides various screen modes (1/4/6/9/10/13/16/25/36/49/64ch)
Backup	Provides AVI file of Video Backup.
Digital Zoom	Provides digital zoom in playback mode

3.4. NVR Client E-map

Function	Description
E-map management	Provides unlimited number of E-map pages
Event Link	Supports various event notifications when event triggered.
User-friendly Interface	Provides User-friendly interface of Drag&Drop setting

3.5. NVR Client Setup

Function	Description
Remote Setup	Sets the functions of Recording Servers and IP Cameras remotely.
Log View	Displays the list of Event information of IP Cameras registered on the NVR Server.

4. Program Installation

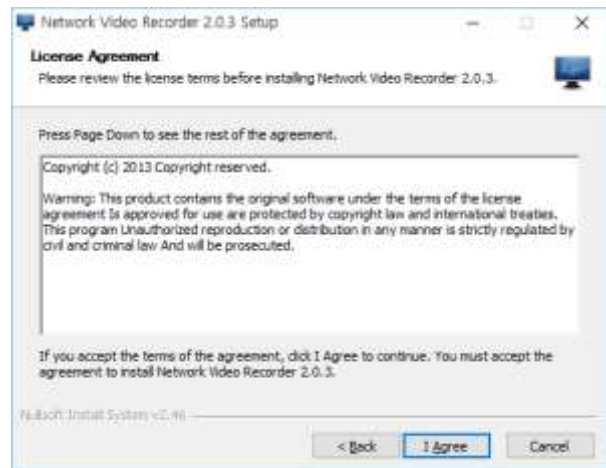
4.1. Running Installation file

- 1) Run the NVR_CS_Install_xx.exe file in the provided CD or in the folder of your PC.
- 2) Click “Next” button to continue.



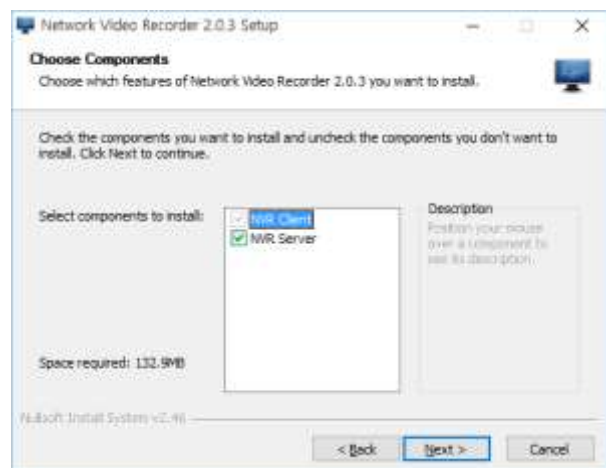
4.2. License Agreement

Read the license agreement carefully And then click “ I Agree” button.



4.3. Choose Components

Choose the components you want to install. Click “Next” to continue.

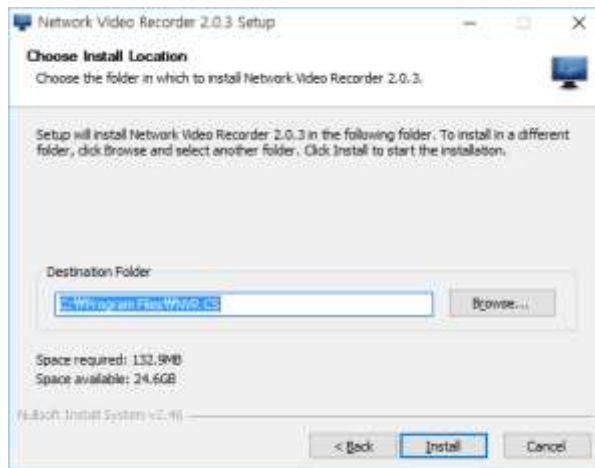


Note. To install all components as standalone type, in one computer, please click “ NVR Server”.

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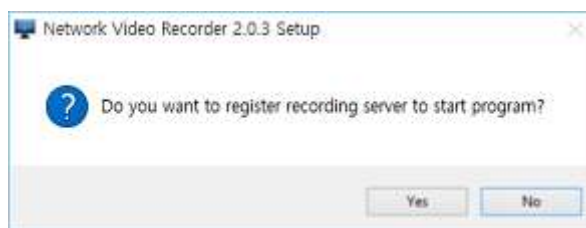
Choose Install Location

Define the destination folder and click “Install” button.
(Default folder is C:\Program Files\NVR CS)



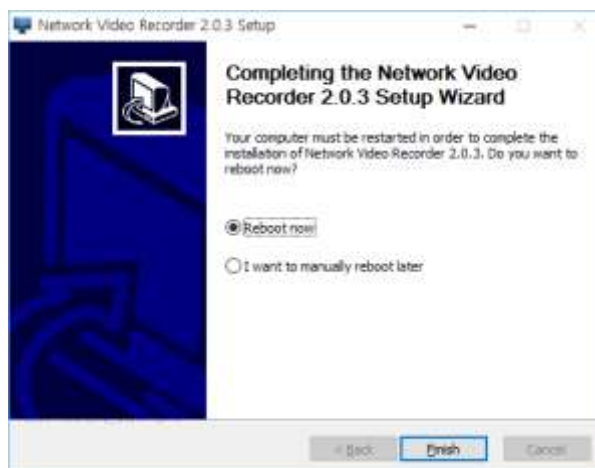
4.4. Registering NVR Server in the Windows Startup program.

If you choose the NVR Server of components, the popup window for Startup registry will appear. Then Click “Yes” Button to register it to Startup program.



4.5. Installation Completion

Upon completion, you can run NVR Recording Server by clicking “Finish” button with checked on the check box of **Reboot now**.




After installation completion, 6(six) shortcut icons will be created on Desktop as follows;



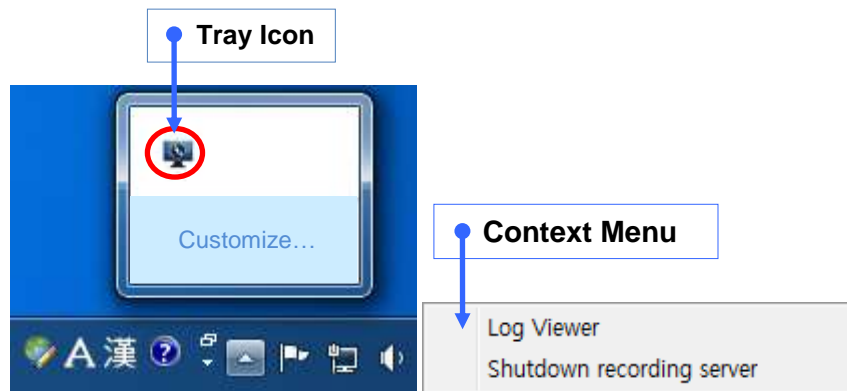
Uninstalling NVR CS,


To uninstall NVR CS, you can run uninst.exe on the below location/ way.
Start-up Menu → All Programs → NVR CS → Uninstall (uninst.exe)
In the **control panel** → open **uninstall a program** → Network Video Recorder → Uninstall

5. NVR Server/ Watchdog

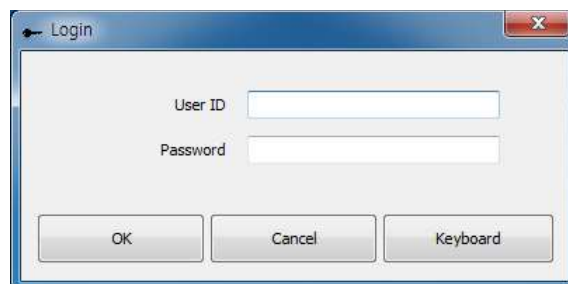
NVR Server's main roles are a Recording server and a Relay server. When the program runs, the icon [] is added to the notification area on the taskbar. It does not have its own separate UI. It runs in the background.

5.1. User Interface



(1) Select the [] icon and right click on it to open the context menu.

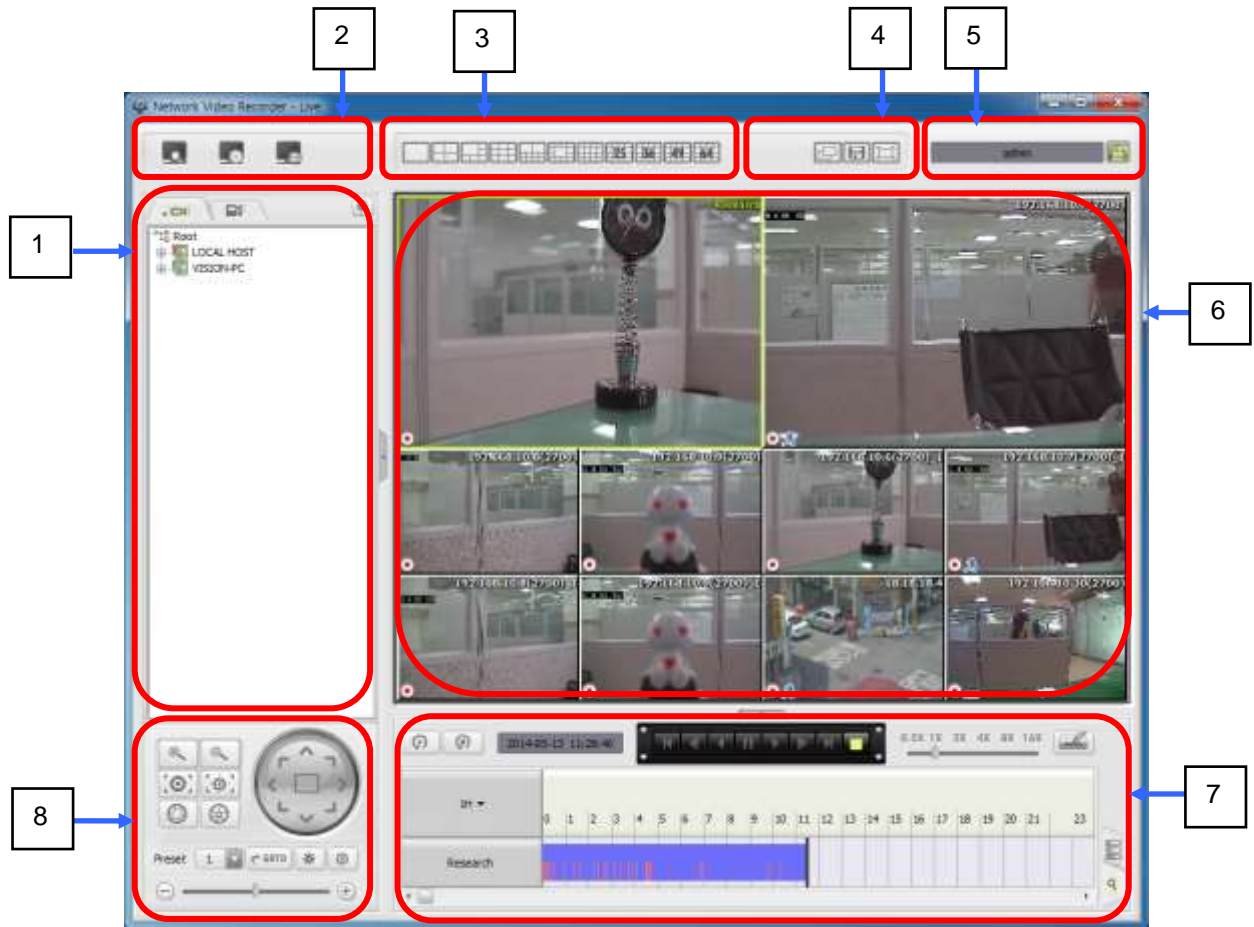
- A. Log Viewer: shows log viewer of watchdog
- B. Shutdown recording server: shuts down the NVR Server program.



(2) Enter the ID and password and click "OK".

6. NVR Client Live

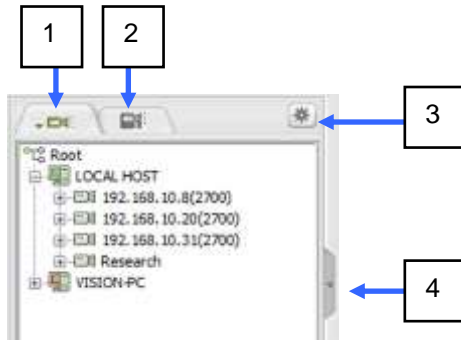
6.1. User Interface



No.	Item	Icon	Description
1	Server & Group List		Server List & Group List
2	Program Icons		NVR Playback
			NVR Setup
			NVR E-map
3	Display mode		Selects the desired screen channel
4	Function Button (Screen mode)		Dual Screen mode
			Snapshot Saving & Print
			Full Screen mode
5	Login info		Shows Login Info (Log in/out)
6	Display screen		Shows all desired
7	Timeline		Playback the recorded data
8	PTZ Control		Can control PTZ cameras remotely

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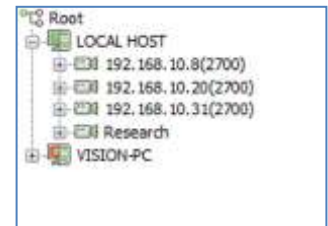
6.1.1. Status Window and Server List



No.	Icon	Item
1		Server List
2		Group List
3		Option Setup
4		Status Window

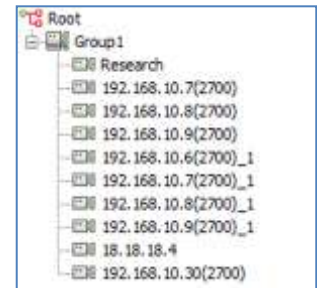
6.1.1.1. Server List

Shows registered servers and their status



6.1.1.2. Group List

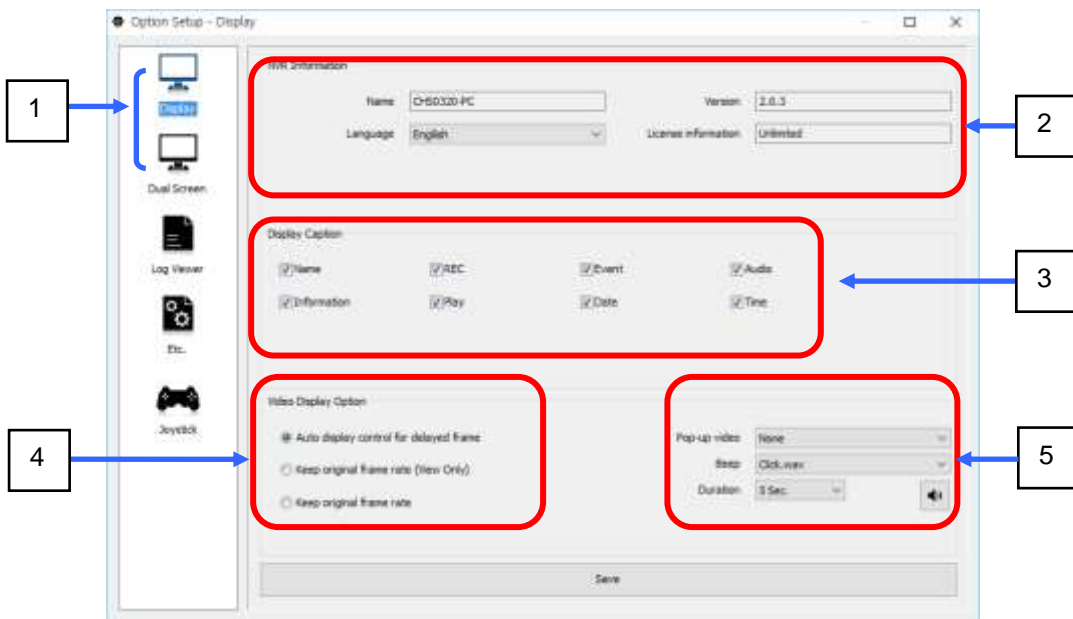
Shows Registered Groups and their status.





6.1.1.3. Option Setup

Click Option [] button. Setup Window appears.

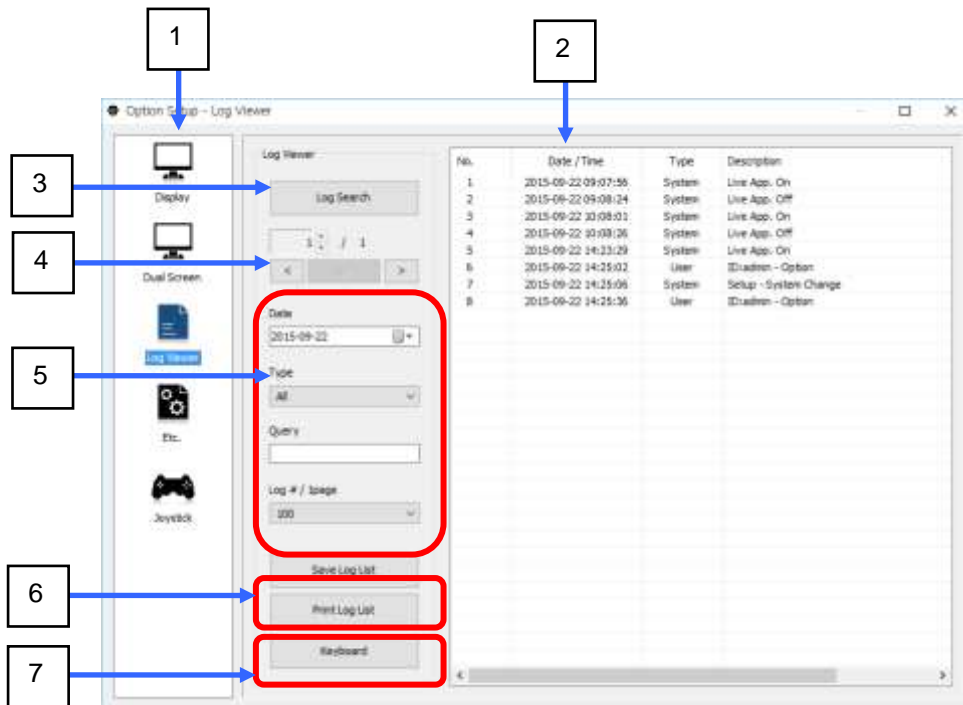
Display Setup Window




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No.	Item	Description
1	Option List	 Display
		 Dual Screen
2	Information Language	Changes Language
3	Display Caption	Sets up the captions
4	Video Display	Sets up the video display
5	Popup video	Sets up the event video popup

Log Viewer Window

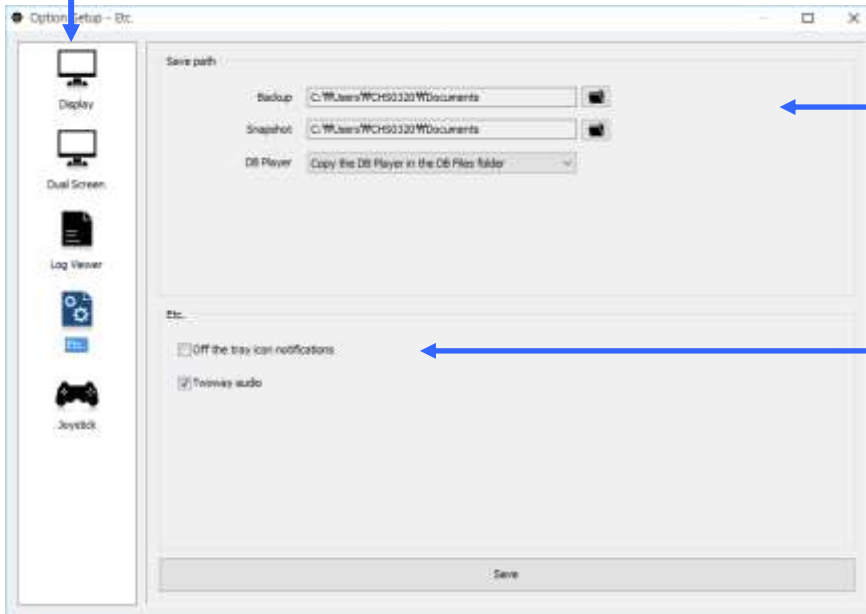


No.	Item	Icon	Description
1	Option List		Log Viewer
2	Log List		Shows the log list
3	Log Search		Searches list of
4	Page Selection		Turns to the selected page
5	Date, Type, Query		Choose Search types
6	Print Log List		Print the searched list
7	Keyboard		On-Screen Key Board

Etc. Window



Option List



Save path
(Backup & Snapshot)

Sets up the DB Player


Sets up the Tray icon
notification

Two Way Audio use

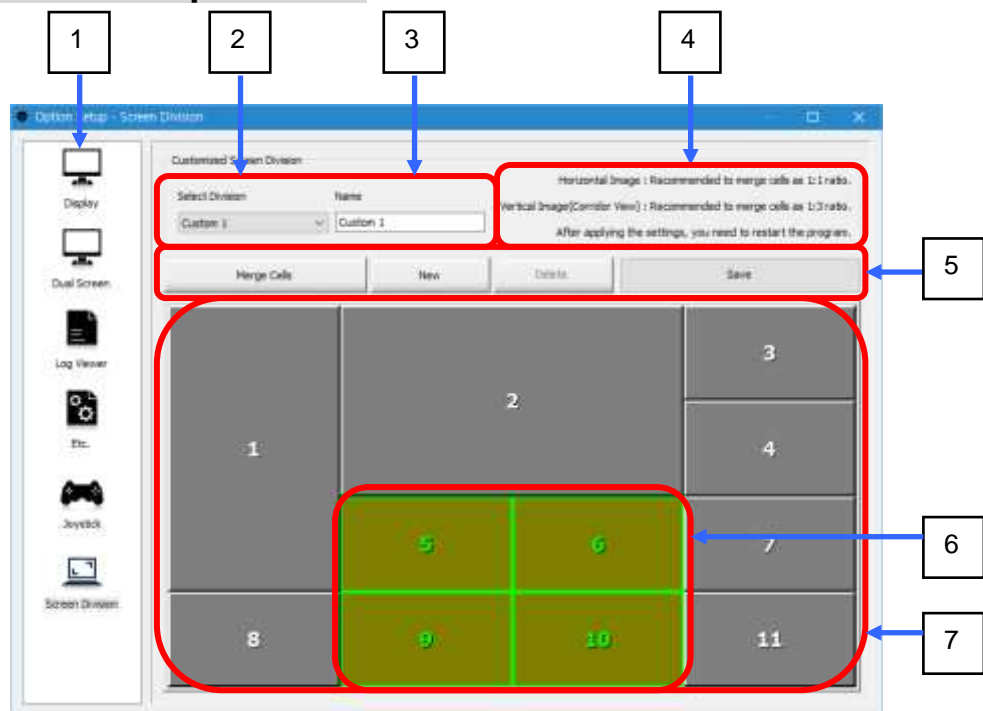
Joystick Setup Window




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No.	Item	Icon	Description
1	Option List		Joystick setup
2	Setup		Joystick use and model information
3	PTZ mode		Sets up buttons in PTZ mode
4	Live mode		Sets up buttons in Live mode
5	1 division <-> N division		Selected channel 1 and multi-division change
6	PTZ mode <-> Live mode		PTZ mode and Live mode change

Screen Division Setup Window








No.	Item	Icon	Description
1	Option List		Screen Division setup
2	Select Division		Select customized screen division
3	Name		Name of selected screen division

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4	Recommendations and description	<ol style="list-style-type: none"> 1. Horizontal Image : Recommended to merge cells as 1:1 ratio. 2. Vertical Image(Corridor View) : Recommended to merge cells as 1:3 ratio. 3. After applying the setting, you need to restart the program.
5	<ol style="list-style-type: none"> 1. Merge Cells 2. New 3. Delete 4. Save 	<ol style="list-style-type: none"> 1. Merge selected cells 2. Create NxN division 3. Delete selected screen division 4. Save selected screen division
6	Selected Cells	Select cells by using a mouse clicking
7	Cell editing screen	<ol style="list-style-type: none"> 1. Select customized screen division 2. Create NxN division by [New] button 3. Select cells by using a mouse clicking 4. Merge selected cells by [Merge Cells] button 5. Save selected screen division by [Save] button

6.1.2. Program Icons

	NVR Live :	shows real-time live video for monitoring
	NVR Playback :	you can search and play back recorded data
	NVR Setup :	you can set up / configure Network Video Sever
	NVR Event viewer :	Shows live video when events triggered
	NVR E-Map :	Displays live video and Alarms on user's defined map when events triggered.

6.1.3. Display Mode

You can set the modes: 1/4/6/9/10/11/16/25/36/49/64 channel mode



You can set the modes: 1/2/3/4 customized screen division mode



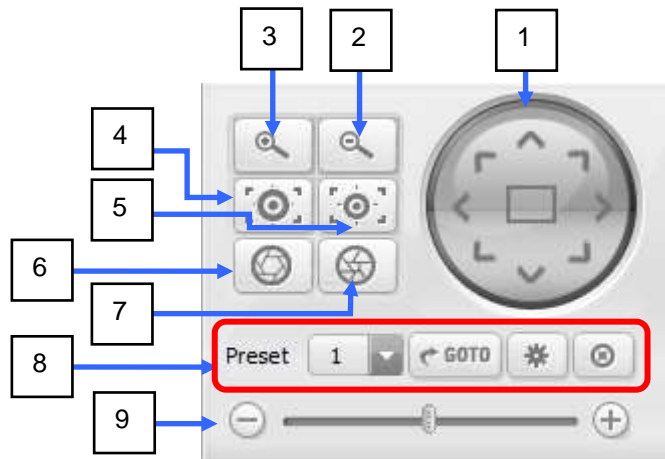
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6.1.4. Display Screen



No.	Item/ Icon	Description
1	Camera Name	Shows the name of camera
2		Recording/Playback in progress
		The status of Audio output/ Microphone
		When Motion event is detected
		Alarm In/Out
		Joystick

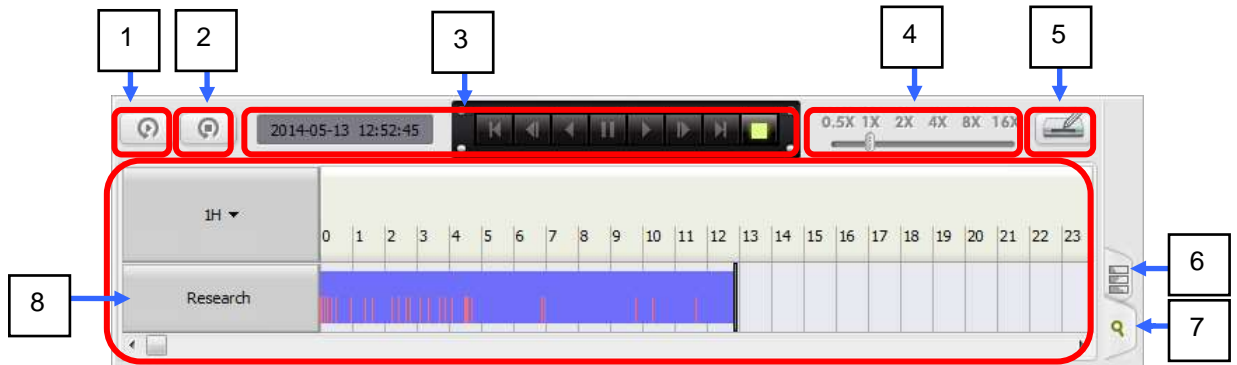
6.1.5. PTZ Control



No.	Item	Icon	Description
1	PTZ Jog		Adjusts the selected position and Controls PTZ operation/menu.
2	Zoom out		Zooms out to smaller image
3	Zoom in		Zooms in to bigger image
4	Focus in		Adjust the focus range to closer distance
5	Focus out		Adjusts the focus range to further distance
6	Iris Open		Sets to Smaller F number for more light exposure
7	Iris Close		Sets to higher F number of Iris for less light exposure
8	Preset set-up		Select Preset Number
			Go to Preset Number
			Saves a Preset
			Clears Preset
9	PTZ Speed		Controls PTZ Speed (Slow or Fast)

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6.1.6. Time Line & PTZ Panorama

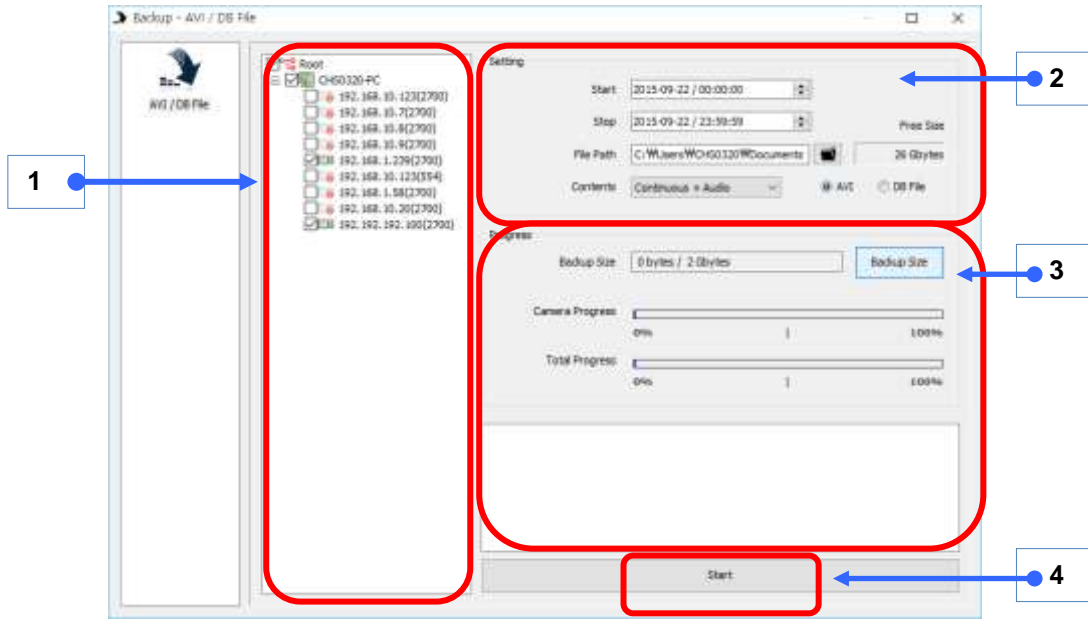


No.	Item	Icon	Description
1	Sync all		Synchronizes all on-screen playback to the time of a searching camera
2	Stop all		Stop all playback
3	Playback time & Control		Shows the playback point of time in the time line
			Pause / Stop playback
			Backward Playback/ Forward Playback
			Backward one frame / Forward one frame
4	Playback Speed		Sets the speed to 0.5x, 1x, 2x, 4x, 8x, 16x.
5	Backup		Opens Backup set-up Window (The final backup file format is “.avi” format.)
6	Panorama		Use scanned 360 Panoramic image for easy PTZ control
7	Timeline		Use the time line of Searching Data Grid
8	Research		Shows the name of camera

6.1.6.1. How to backup Search Dada

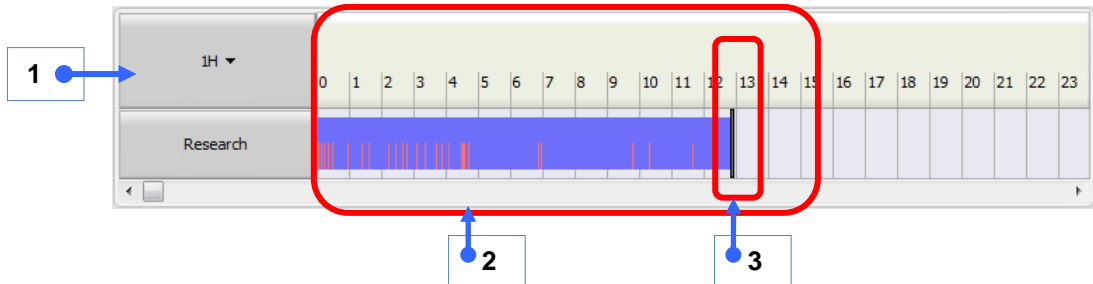
- 1) Select Cameras from the list
- 2) Specify the desired time from the Setting section.
Start/stop time & File Path.
Contents types(Continuous, Event, Audio) & AVI / DB File backup.
- 3) Click “Backup size” button for checking the backup size.
- 4) Click “Start” button.

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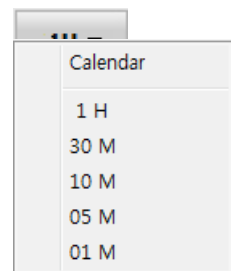
6.1.6.2. How to Search Data Grid

Displays the recorded data of the desired camera in the search grid. Drag the black line to a desired point of time to playback.







1) Search Time Scale

You can choose Calendar, timeline scale for Search Grid
 Calendar, Scale
 Calendar, Scale:
 (1 hour, 30 minutes, 10 minutes, 5 minutes, 1 minute)



2) Recording status

Color	Description
	Blank with no colored bar: No recorded data
	Continuous recording with blue bar shows the recorded data of continuous recording.
	Audio recording with Green bar shows Audio recorded data
	Event recording with Red bar shows the recorded data point when event triggered

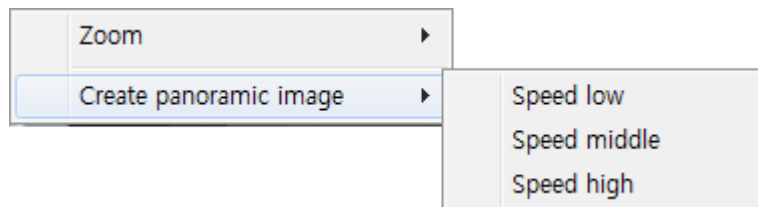
3) In the search data grid, the black vertical line is the current playback point of time

6.1.6.3. PTZ Panorama (limited to the PTZ panorama supporting PTZ cameras)


On the PTZ Panorama 360 degree image, you can click at the desired position to move a PTZ camera.




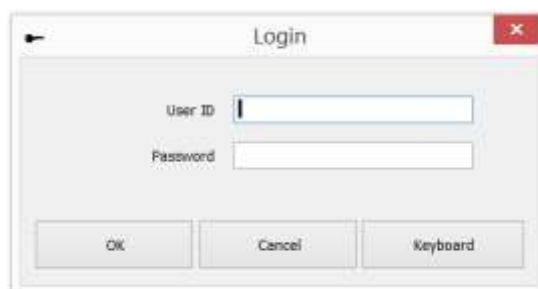
To create the PTZ panorama 360-degree image, right click on the image to open the context menu. There are three speed steps (low, middle, high) to scan 360-degree. Lower speed is higher image quality.



6.1.7. Login Information

You can click the [ Log off] button and enter the User ID and password in the login window:

After login [], the ID will be displayed

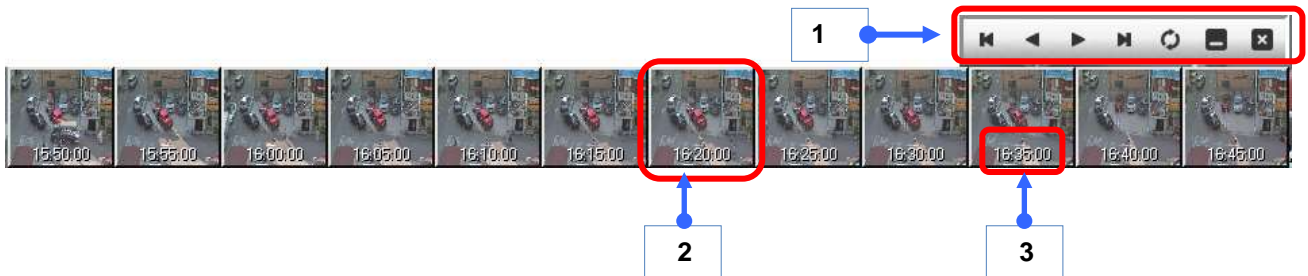


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6.1.8. Thumbnail Search

You can use the thumbnail search in the 1 division mode, and operates in sync with the timeline.

Click on the thumbnail screen to a desired point of time to playback.

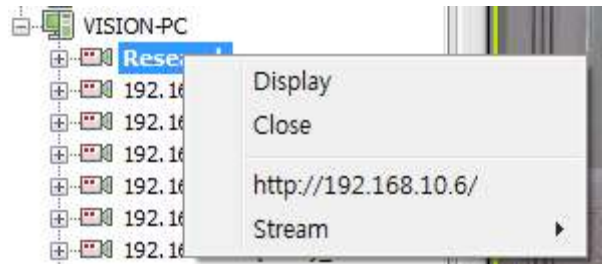


No.	Item	Icon	Description
1	Thumbnail Search Control		Step Backward / Step Forward
			Previous page / Next page
			Synchronized with Timeline
			Minimize / Maximize / Close
2	Thumbnail Screen		Click on the thumbnail screen to a desired point of time to playback.
3	Thumbnail Time		Shows the thumbnail time.

6.2. Server/Group List and Display Menu

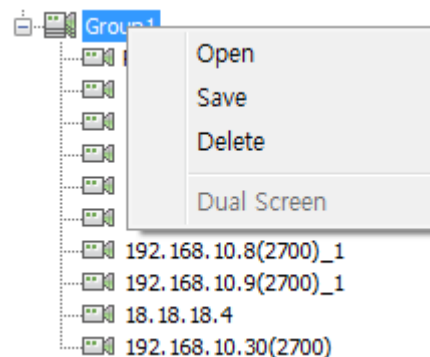
6.2.1. Server List Menu

Context	Description
Display	Display videos on the screen
Close	Close videos on the screen
http://	Open the web page of the cameras
Stream	Auto control of delayed frames Or Fixed channel setup



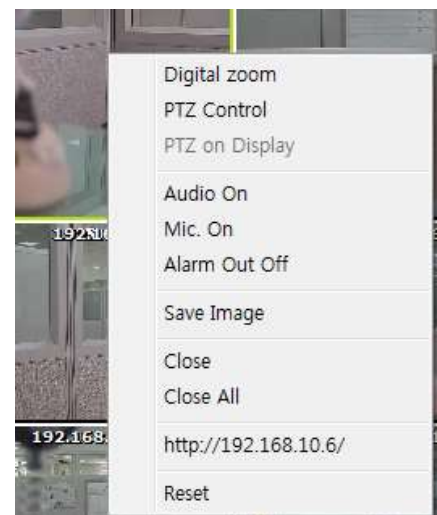
6.2.2. Group List Menu

Context	Description
Open	Display groups on the screen
Save	Saves groups on the screen
Delete	Deletes groups
Dual screen	Display groups on the dual screen

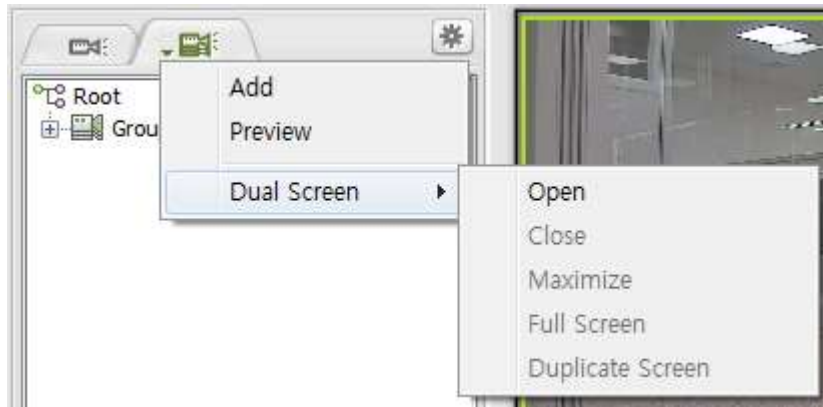


6.2.3. Display Screen Menu

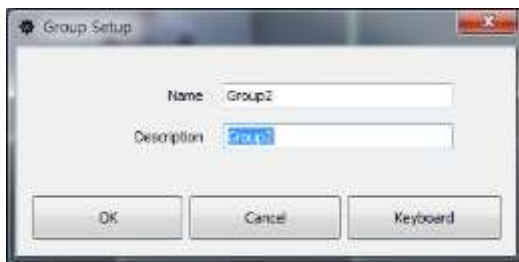
Context	Description
Digital zoom	Provides enlarging the video image by drag (returns to its original size, click on display)
PTZ Control	Controls PTZ on display (supports for only PTZ Cameras)
PTZ on Display	Moves to the "Mouse click" position (supported model only)
Audio On/Off	Turns on or off Audio
Mic. On/Off	Turns on or Off Mic.
Alarm Out On/Off	Turns on or off Alarm Out
Save Image	Saves or prints Snapshot Image
Close	Closes the display screen
Close All	Closes all the display screens
http:// ~ /	Moves to the webpage of the camera
Reset	Moves to the previous display.



6.2.4. Group Main Menu



Context	Description
Add	Adds a group
Preview	Displays groups to a preview icon
Dual Screen	Controls Dual screen options Open Close Maximize Full Screen Duplicate Screen



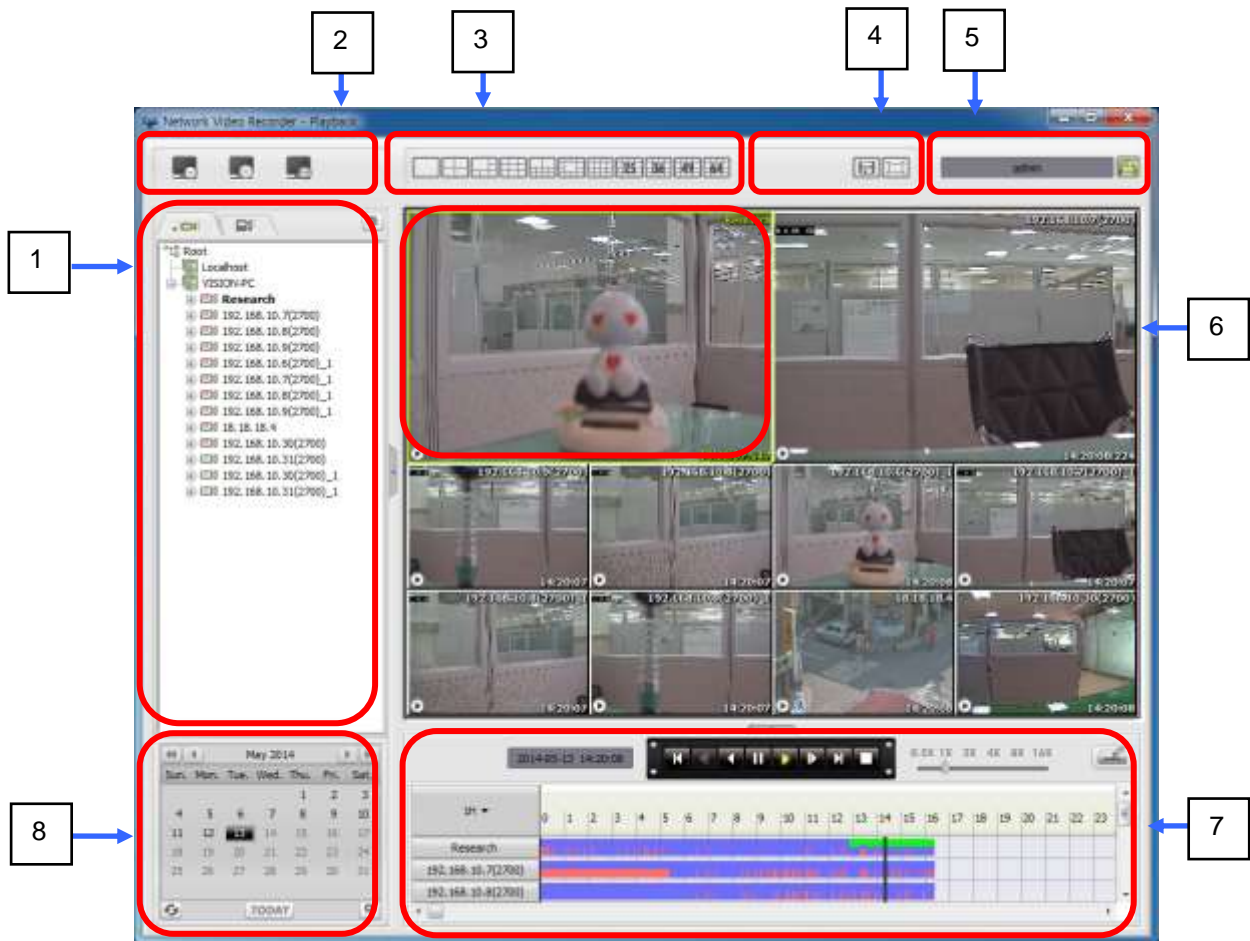
< Group Setup Window >



<Icon of group preview >

7. NVR Client Playback

7.1. User Interface



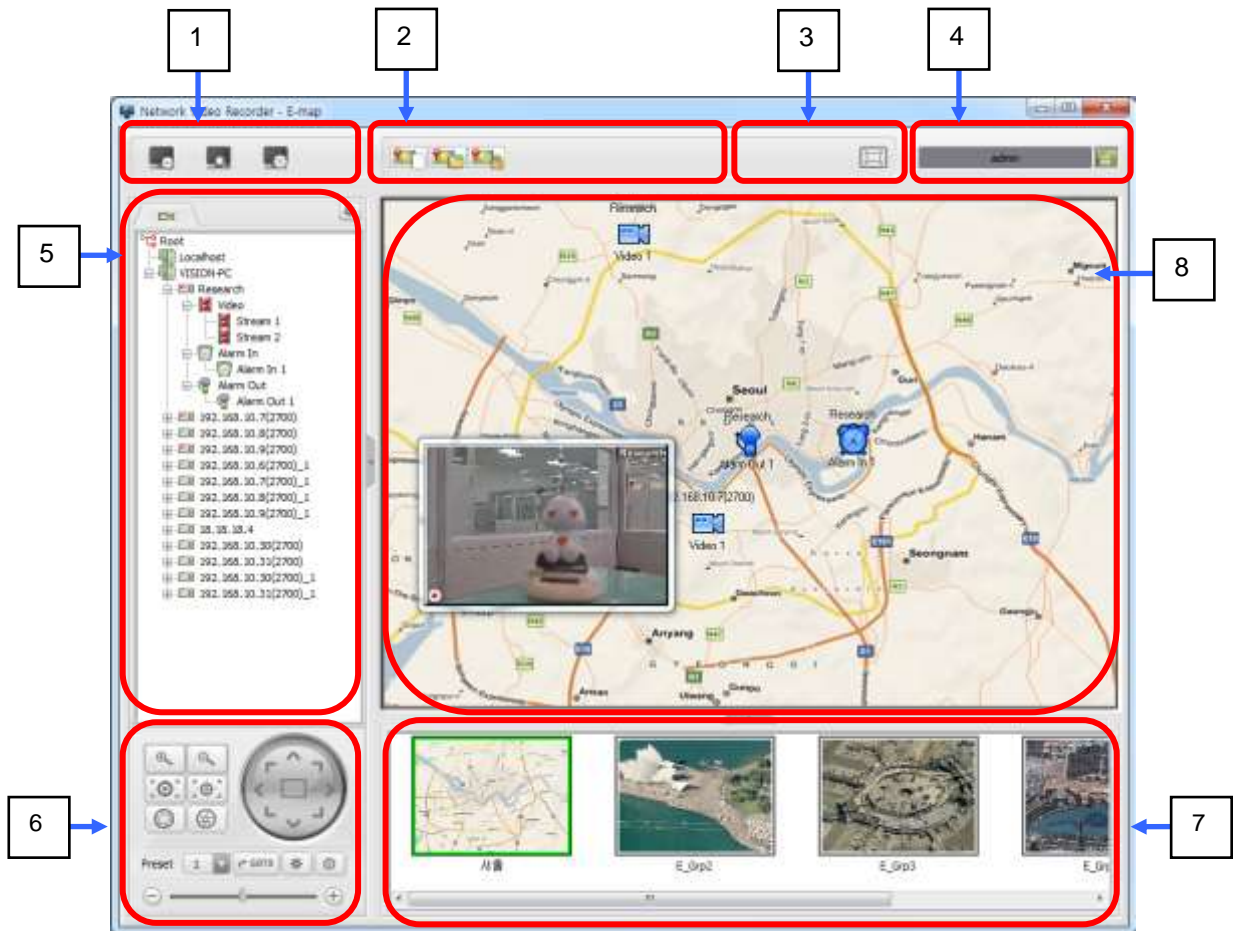
No.	Item	Icon	Description
1	Server & Group List		Server List & Group List
2	Program Icons		Select Components to switch.
3	Display modes		Selects the desired screen channel
4	Function Button (Screen modes)		Snapshot Saving & Print/ Full Screen mode
5	Login info		Shows Login Info (Log in/out)
6	Display		Shows all desired
7	Timeline		Playback the recorded data
8	Calendar		Playback the recorded data

All the features of NVR Client playback are almost the same of NVR Client Live. The differences are;

- Display/ Close screens are available only on the [] stop playback .
- On the search grid, all the timeline of display cameras are listed.
- Playback all the cameras simultaneously. (Independently in NVR Client Live)
- After screens being configured, select the date from the calendar.

8. NVR Client E-Map


8.1. User Interface




No.	Item	Icon	Description
1	Program Icons		Selects Components to switch.
2	E-map Manager		Creates new E-map Group
			Opening /Editing E-map Group
			Locks E-map Group (Monitoring mode)
			Unlocks E-map Group (Editing mode)
3	Function Button		Full Screen mode
4	Login info		Shows Login Info (Log in/out)
5	Server List		Server List & E-map Item
6	PTZ Control		Can control PTZ cameras remotely
7	E-map Group List		Shows the saved E-map group.
8	E-map Screen		E-map Screen

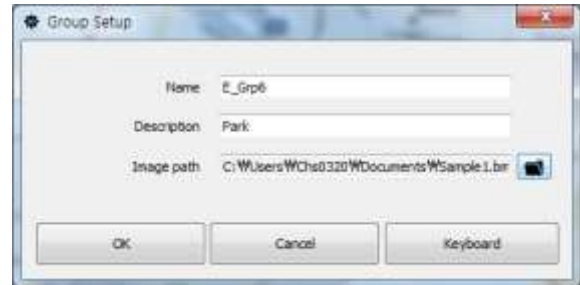
8.2. E-map Group

8.2.1. To add E-map Group



1. Click [] button to create new E-map.
2. In the Group Setup window, enter Name &

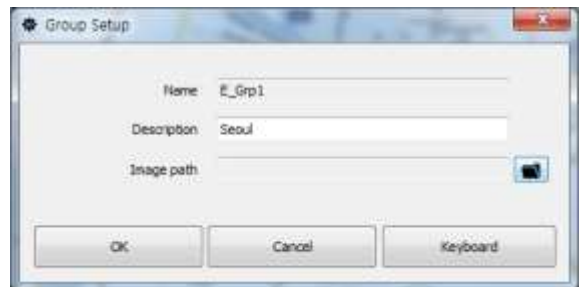
Description and define Image path by clicking [] button.

3. Click [OK] button and then the new E-map will appear on the E-map Group List







8.2.2. To edit E-map Group

1. Click [] button to edit Description or Image of E-map Group. (Enter Description or click [] button to change Image Path)
2. Click [OK] button



8.2.3. To lock or unlock E-map Group

You can click Lock [] button or Unlock [] button to switch the E-map mode.

Monitoring mode	Editing mode
	


Note. In the Editing mode, [] button and [] button are deactivated.

8.2.4. To open/ delete E-map

1. Double click to open an E-map in the E-map Group list.
2. Or, click right mouse button on it to open context menu.
3. You can open or delete the E-map.

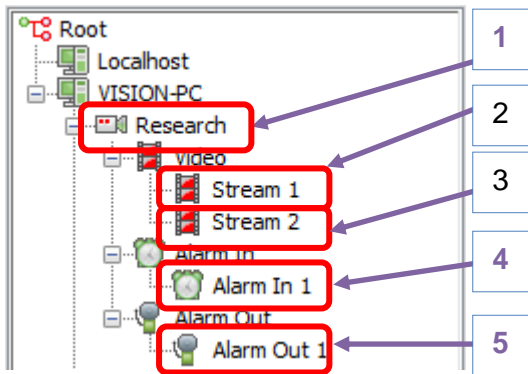







8.3. E-map Items

To add/ edit/ delete items (Camera, Stream1, Stream2, Alarm In, Alarm Out) is only available in the Editing [] mode.

8.3.1. To add items to E-map






- 1) Click an item and drag it to the E-Map.
- 2) Drop onto the desired position.



No.	Icon	Item
1		Camera
2		Stream1 (Display)
3		Stream2 (Display)
4		Alarm In 1
5		Alarm Out 2

8.3.2. To edit/delete items on the E-map

You can move an item on the E-map by drag-n-drop. And you can delete it by context menu (right mouse button)



No.	Icon	Item
1		Camera
2		Stream1 (Display)
3		Stream2 (Display)
4		Alarm In 1
5		Alarm Out 2

For Display items, Stream1, Stream2, or Pop-up display, you can move/resize a display. Click right mouse button to open context menu to Delete item or set up Event link or Dwell time setting.





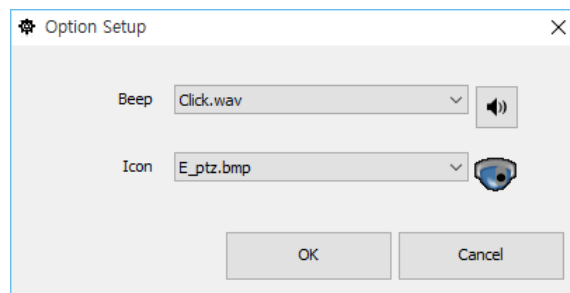
Context menu	Description
Delete item	
Event link	Motion, Alarm In, Alarm Out
Dwell time	Continuous, 5sec, 10sec, 30sec, 60sec

8.3.3. To save items to E-map

- 1) To save E-map, click [] button and it will be switched to [] button.
- 2) In a confirmation pop-up window, click [OK] button.

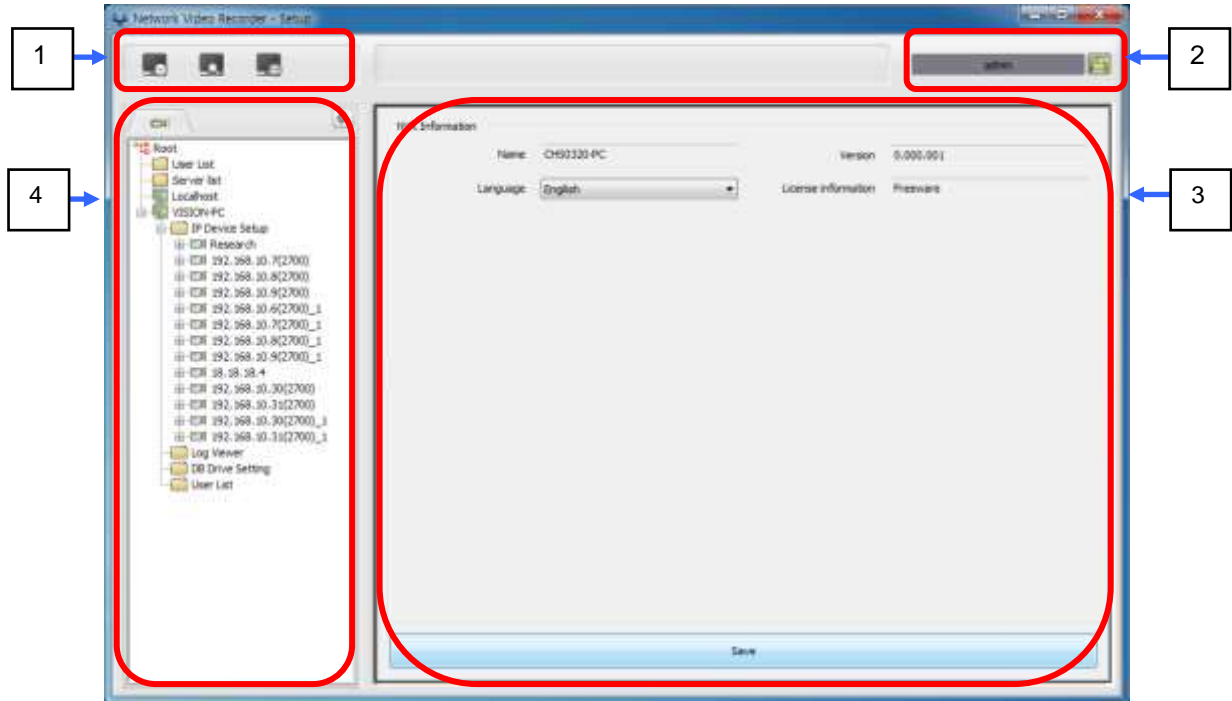
8.3.4. To set up options of items

- 1) You can set up options of items by context menu (right mouse button).
- 2) Sets up beep: click [] button and you can hear a beep.
- 3) Sets up icon: icons can be found through a [] picture shown in the right.
- 4) To save, click [OK] button.



9. NVR Client/Server Setup

9.1. User Interface



No.	Items	Icons	Description
1	Program Icons		Selects Components to switch.
2	Login info		Login buttons
3	Setup Window		Setup Window for detailed setup
4	Server List and Setup Menu		NVR information & Display Language
			Register users of NVR Server & Permission
			Registers/ Adds NVR Servers
			Shows NVR Sever System
			Adds/Edits/Deletes IP Devices
			Views Log information of NVR Server

9.2. NVR Information (Root)

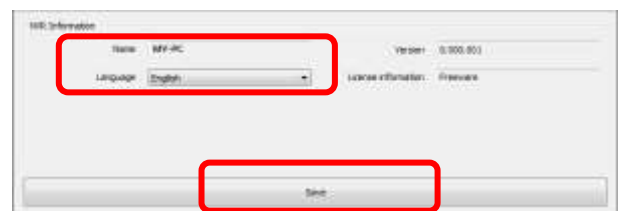
: NVR information & Language setup

1). Click [Root] and it displays NVR information & Current display language.

2) You can set the language for NVR.

Available languages: English/ Korean/ Russian/ Spanish/ Portuguese/ Japanese

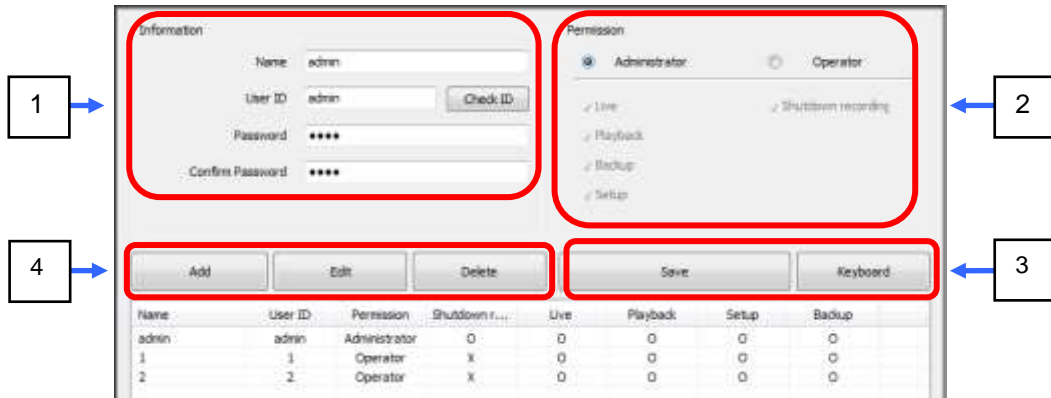
3) After the language is checked, click [Save] button to save it to the NVR Client.



NETWORK VIDEO RECORDER C/S

9.3. User List (User List)

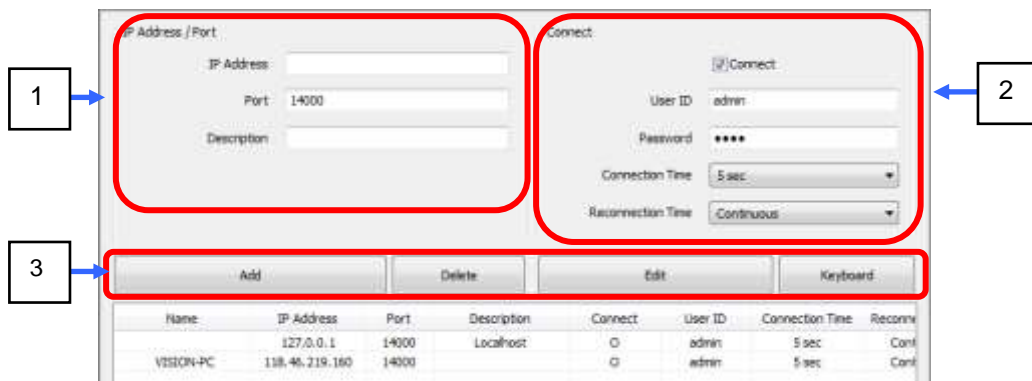
You can register users to the user list of NVR.



No.	Items	Description
1	Information	Name, User ID, Password, Confirmation Password
2	Permission (management)	Administrator: has all permissions Operator: its permission can be specified; Live/ Playback, Backup/ Setup/ Shutdown recording
3	Add/ Edit/ Delete	Adds/ Edits/ Deletes the selected users
4	Save	Saves User's list to NVR client

9.4. Server List (Server list)

It is used to register NVR Sever/Client Server (IP Address, User ID & Password)

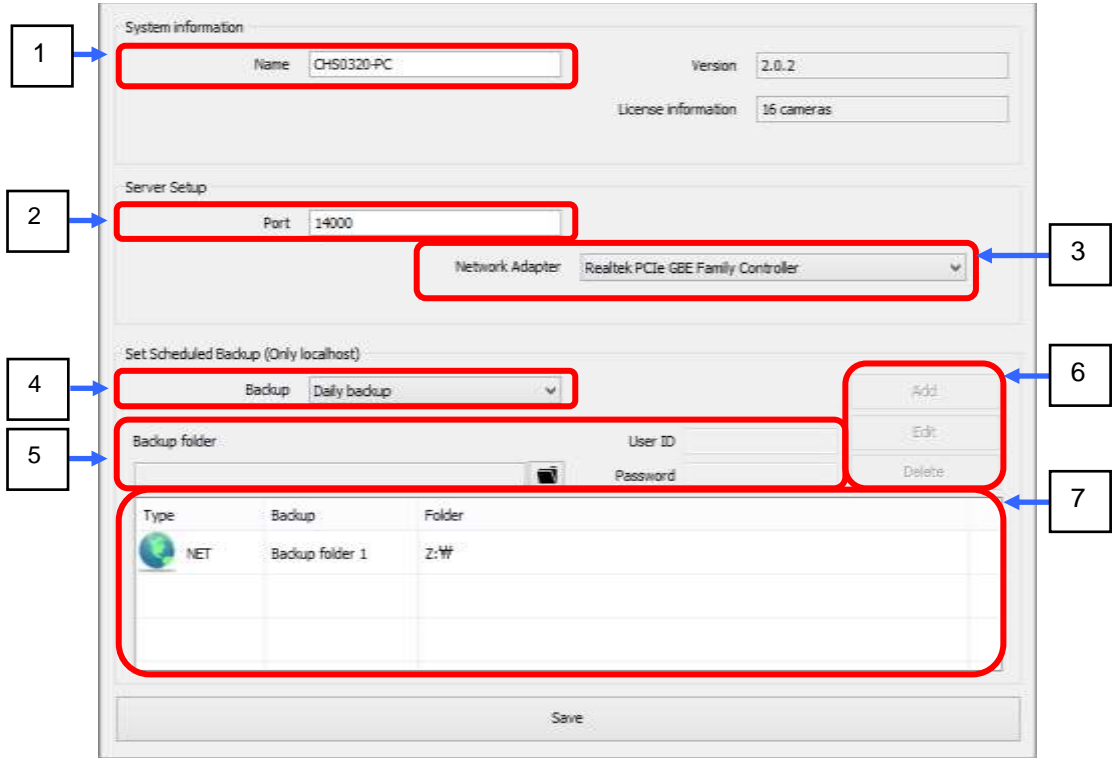


No.	Items	Description
1	IP Address/ Port	Set IP Address, Port & Description of NVR Server
2	Connection setting	Server connection information (User ID, Password, Connection Time, Reconnection Time)
3	Add Server	Adds/ Edits/ Deletes the desired sever from Server list

9.5. NVR Sever

9.5.1. System Setting (VISION-PC)

You can set up System of NVR Server.

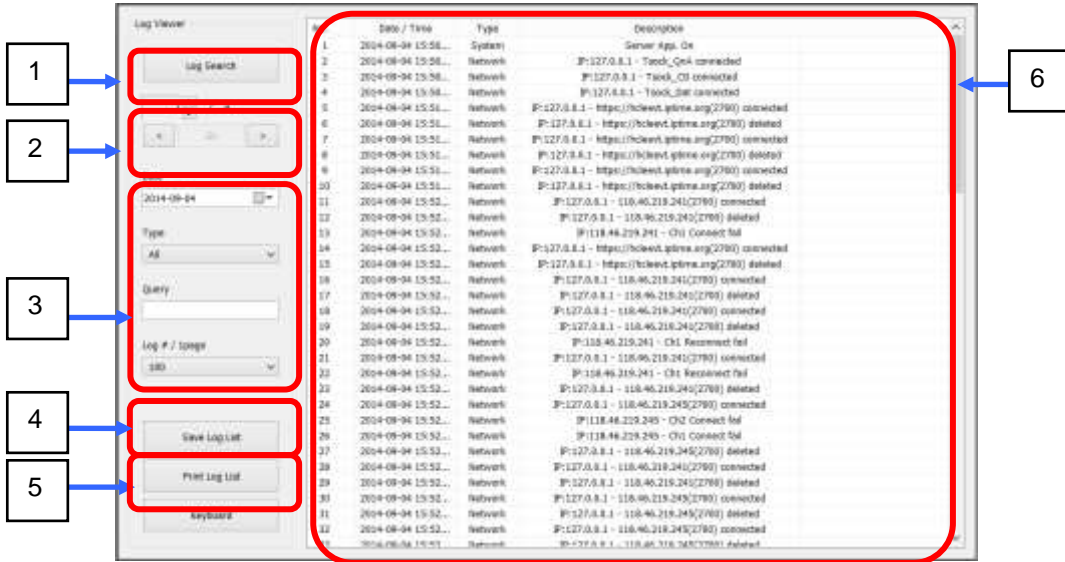


No.	Items	Description
1	System Information Name	You can set a name for NVR Server
2	Port Setup	NVR Server port setup
3	Network Server network adapter setup	Sets up when using dual network adapters.
4	Backup	Local host NVR server scheduled backup settings (Remote NVR server is not supported)
5	Backup folder	Backup folder settings If a network drive, Set User ID and Password.
6	Add, Edit, Delete	Adds/ Edits/ Deletes the selected backup folder
7	Backup folder List	Displays the backup folder list (The backup is set to "Daily Backup" and the backup folder is added, you can set scheduled backup for each camera.)

NETWORK VIDEO RECORDER C/S

9.5.2. Log Viewer(Log Viewer)

You can view all the log information (System, User, Network, Event) on the NVR Server and search them with various ways. And you can save or print the searched log list.

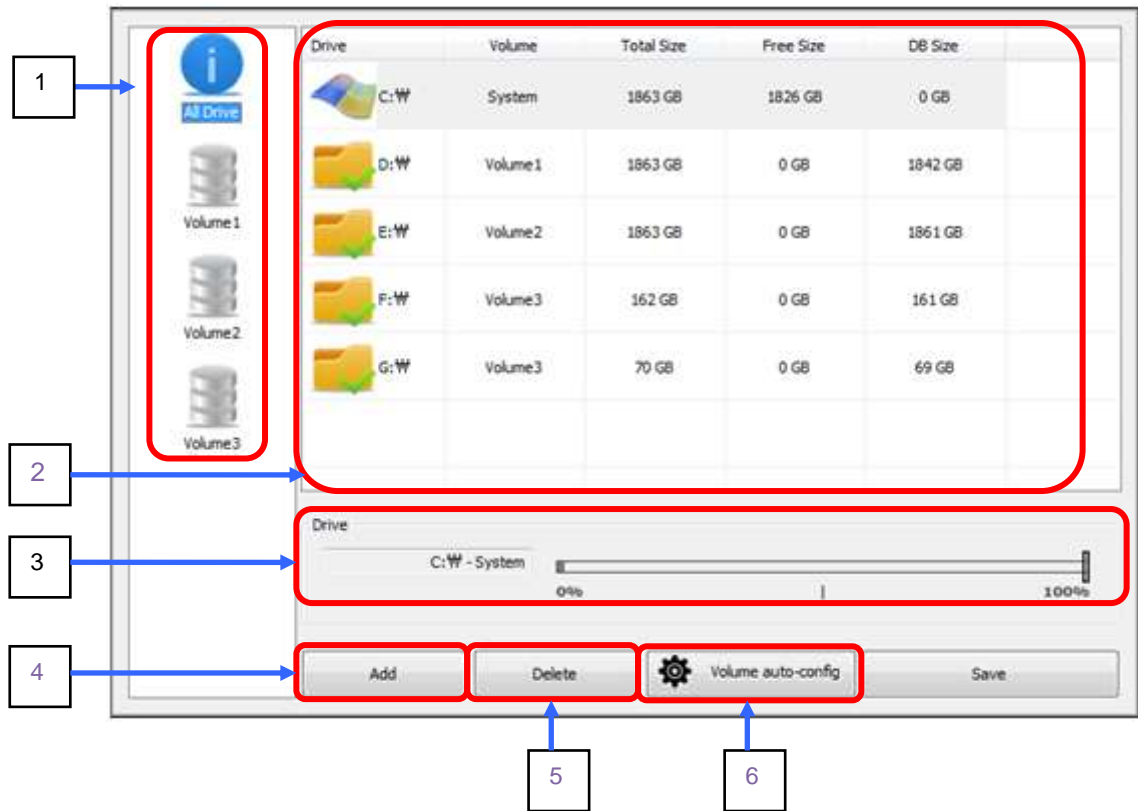


No.	Items	Description
1	Log Search	Search button
2	Page Search	Turns to the selected page
3	Select Date/ Log type/ Query	Choose Search types (Date, Log types, Query, Log # per page.
4	Save Log List	Saves log list
5	Print Log List	Print log list
6	Log List	Displays the log list

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9.5.3. DB Drive Setting (DB Drive Setting)

You can set up DB Drive of NVR Server.



No.	Items	Description
1	Volume List	Shows Volume list
2	Drive List	Show DB Drive list
3	Drive information & Size Setting	Show the Volume information of Selected Drive and sets up the size of DB drive
4	Volume Add button	Add the volume.
5	Drive Delete button	Delete the drive from volume
6	Volume auto-configuration button	Automatically configures the volumes

Volume: a unit of recording database (DB) of NVR server. It is a bunch of Drives.

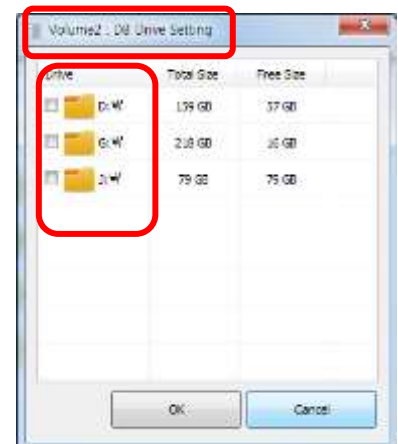
It is recommended to configure (set up) one physical Hard Drive into one Volume.

An O/S installed drive is excluded in the Volume configuration.

You can select a desired volume for recording by each camera/device individually. **It is for stable distributed recording of several cameras by volume.**

To add a volume

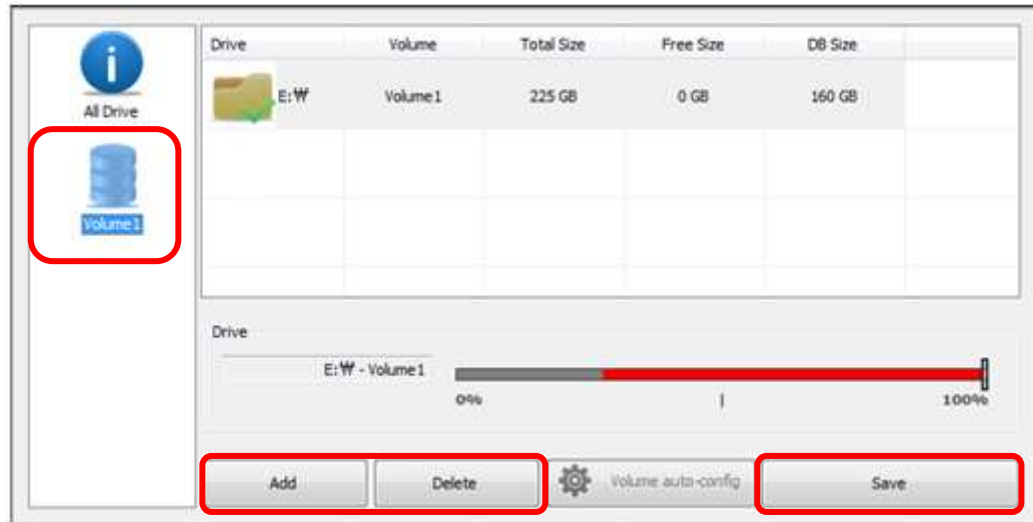
- 1) Click "Add" button.
- 2) The Volume Add window appears.
- 3) Select a desired Drive and click "OK" button.



NETWORK VIDEO RECORDER C/S

To Edit a Volume,


- 1) Select a volume of Volume list.
- 2) To add a drive, click the “Add” button and the Volume add window appears. Select a desired drive.
- 3) To delete a drive from volume, select the drive. And click “Delete” button.
- 4) When done, click “Save” button to apply to NVR server.



9.5.4. DB Recording Channel Setup (DB Recording Channel Setup)

You can set up DB Recording Channel Setup of NVR Server.

Volume	Drive	Total Size	DB Size	Description
Volume1	E	225 GByte	27 GByte ~ 110 GByte	2 cameras are allocated, 1 days and 14 hours can be recorded
Volume2	D	159 GByte	1 GByte ~ 40 GByte	1 cameras are allocated, 2 days and 16 hours can be recorded

3 Continuous + Audio  Volume auto-config Save

Name	Set Rec. Info.	Select Volume	Description
<input checked="" type="checkbox"/> 192.168.10.102(2700)	Continuous + Audio	Volume1	1 days and 14 hours can be recorded
<input checked="" type="checkbox"/> 192.168.10.6(2700)	Continuous + Audio	Volume2	2 days and 16 hours can be recorded
<input checked="" type="checkbox"/> 192.168.10.7(2700)	Continuous + Audio	Volume1	1 days and 14 hours can be recorded

No.	Items	Description
1	Volume List	Shows Volume list and information
2	Volume auto-configuration button	Automatically configures the volume of camera
3	DB Recording Channel List	List of camera recording schedule and volume settings

9.5.5. User List of NVR Server (User List)

You can register the User group of Selected NVR Server.

(the same-format window of User list of NVR Client)

Information

Name: admin

User ID: admin

Password: ****

Confirm Password: ****

Permission: Administrator Operator

Live Shutdown recording

Playback

Backup

Setup

Name	User ID	Permission	Shutdown r...	Live	Playback	Setup	Backup
admin	admin	Administrator	0	0	0	0	0
1	1	Operator	X	0	0	0	0
2	2	Operator	X	0	0	0	0

9.5.6. Stream Setup (Stream Setup)

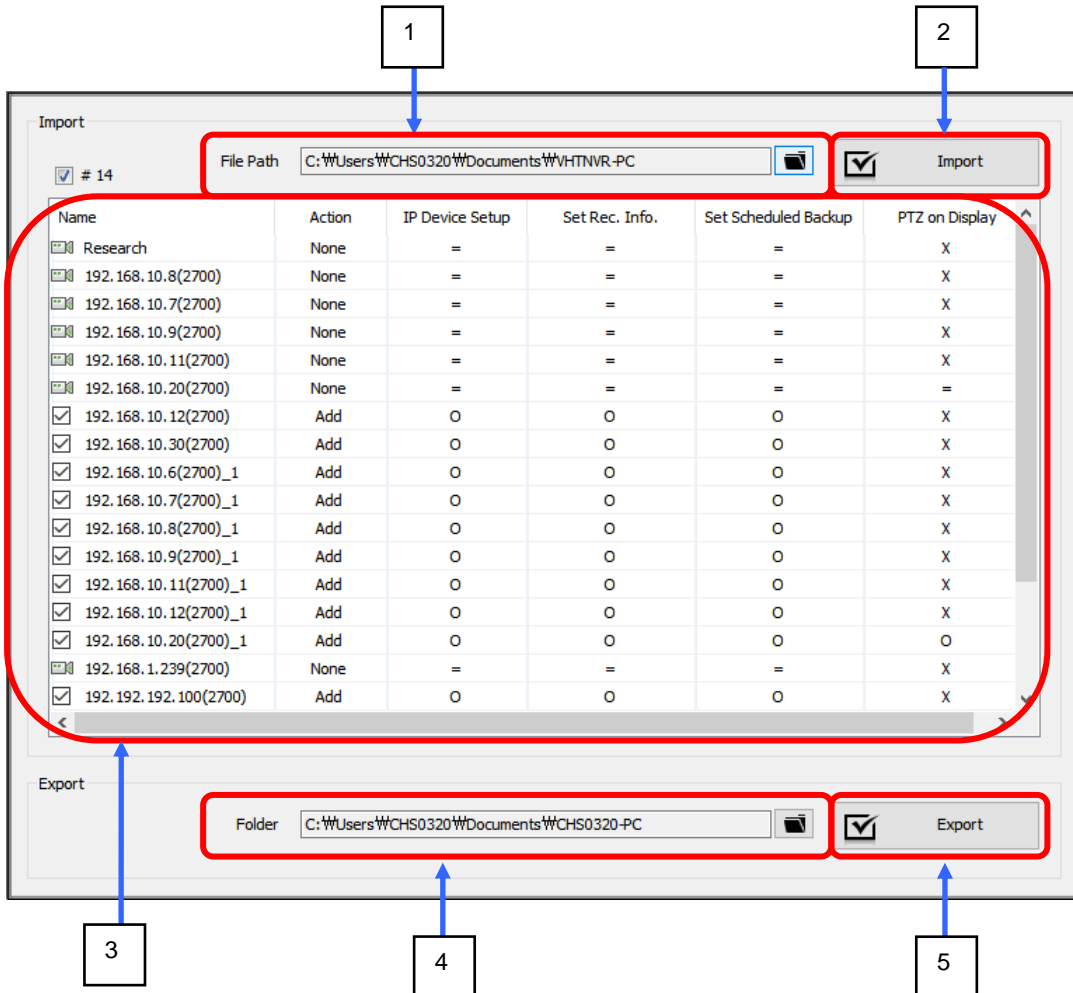
You can set up Stream Setup of NVR Server.

3

No.	Items	Description
1	First H.264 Stream	Sets up 1'st h.264 stream of selected cameras
2	Second Stream	Sets up 2'nd stream of selected cameras
3	Camera List to setup	Name : Registered camera name on the server Rate Control : CBR / VBR, H.264 only 1 - Codec : Codec of 1'st stream (H.264) 1 - Resolution : Resolution of 1'st stream 1 - fps : Frame rate of 1'st stream 1 - bps : Bitrate of 1'st stream 2 - Codec : Codec of 2'nd stream (H.264 / MJPEG) 2 - Resolution : Resolution of 2'nd stream 2 - fps : Frame rate of 2'nd stream 2 - bps : H.264 Bitrate of 2'nd stream 2 - MJPEG Quality : MJPEG Quality of 2'nd stream

9.5.7.Import / Export (Import / Export)

You can import / export Camera Settings of NVR Server.



No.	Items	Description
1	The file path for import	Select the file "porting.ini" to import -> Active the [Import] button and add cameras to import to the list
2	Import	Add cameras or update settings of selected NVR Server
3	Camera List to import	1. Action : None / Add / Update None - The camera is present on the server and the settings are the same. -> disable anything Add - Add the camera and apply the settings. Update - Update the settings of the camera. 2. IP Device Setup : If the same setting is indicated by "=". If you do not want to apply the setting, choose the "X". (Hereinafter the same) 3. Set Record Information : Except the volume setting 4. Set Scheduled Backup : Except the backup folder setting 5. PTZ on Display


NETWORK VIDEO RECORDER C/S

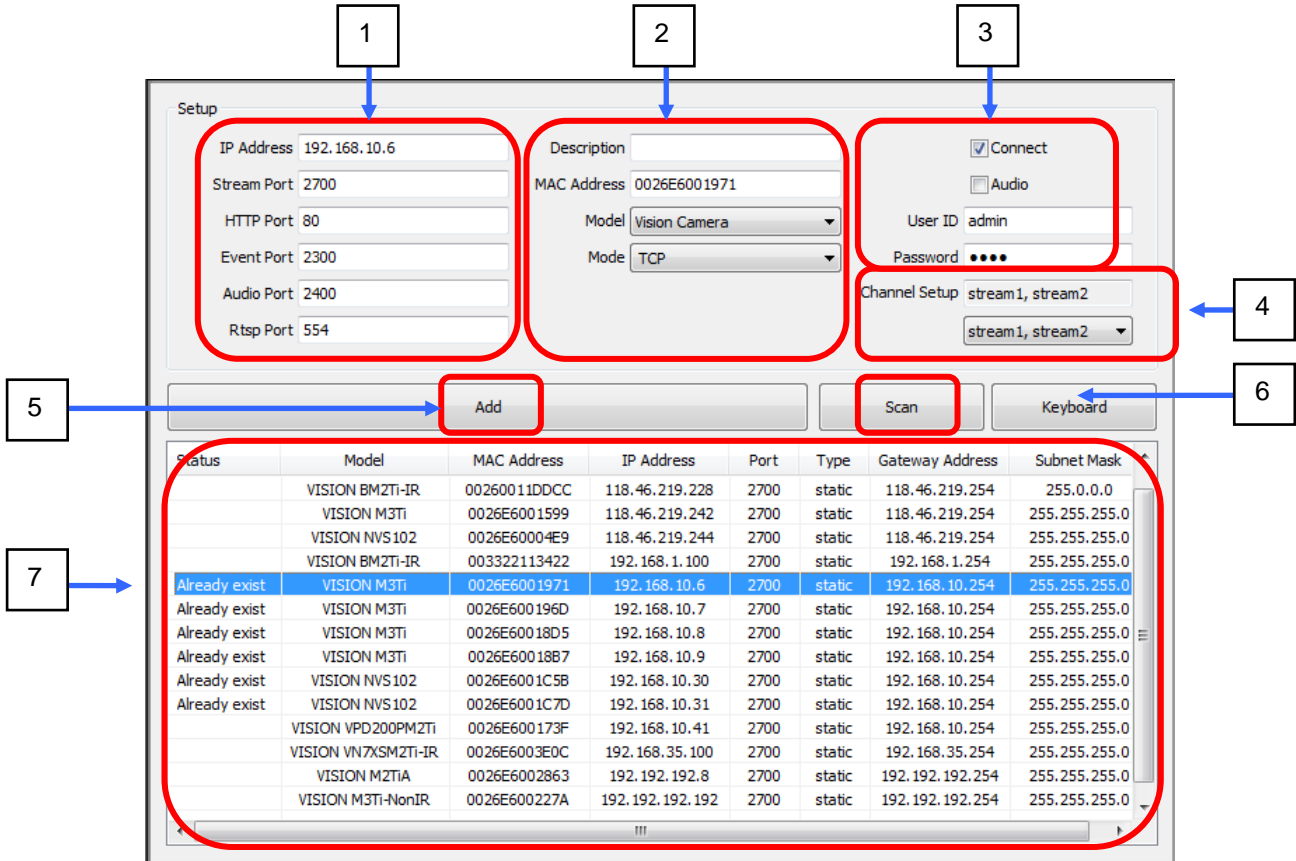
4	The folder for export	Select the folder and display the folder path to export
5	Export	Export camera settings of the selected NVR server

1. Select the [Import / Export] tab of the NVR server to export the camera settings.
2. Select the folder path to export.
3. [Export] Run.
4. Select the [Import / Export] tab of the NVR server to import the camera settings.
5. Select the file "porting.ini" of the server folder in the [Export] folder.
6. Off camera checks do not apply settings in the camera list.
7. If you do not want to apply some settings, choose the "X" in the camera list.
8. [Import] Run.

9.6. Camera

9.6.1. Adding IP Devices (Camera & Video Servers)

 **IP Device Setup** : Searching and Adding IP Devices
Click "IP Device Setup" and then Setup window will appear.




No.	Items	Description
1	IP Address & Port	Sets up IP address and Port of IP Cameras
2	Camera Description & MAC address	Edit Description & MAC address
3	Camera ID & Password	Edit Camera ID & Password
4	Camera channel Setup	Sets up Streaming types of Channels
5	Camera Add Button	Add Camera
6	Scan Button	Displays Camera list
7	Scanned Device List	Discovered device list (When you select desired device from the list, the device information is displayed on the setup)

Caution:

When you select a desired device from the discovered device list, all is set to "DEFAULT" except IP Address, Stream & HTTP Port, MAC Address and Model information.

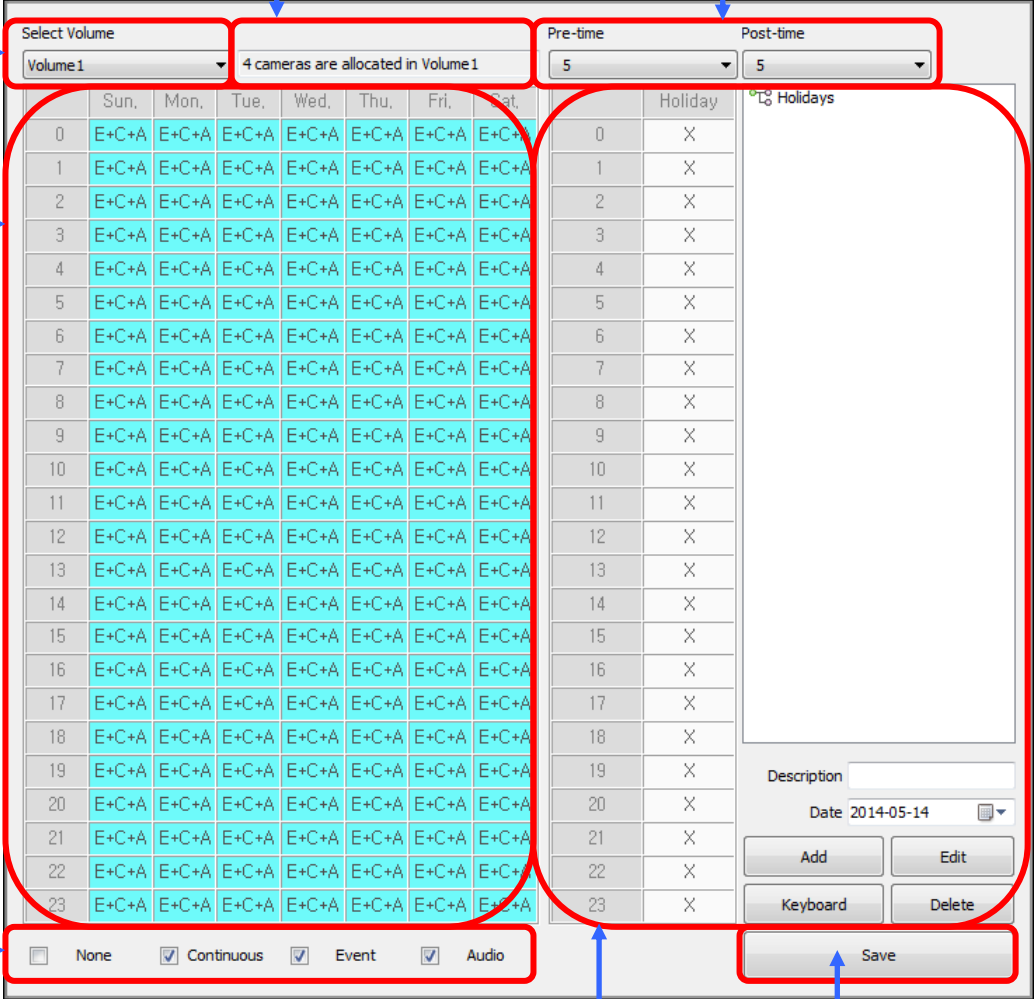
NETWORK VIDEO RECORDER C/S

9.6.2. Camera Setup

 **Research** (IP address (Port) or Description): You can edit information of a registered device
 It has the same format of IP Device Setup. But, **IP Address, Stream Port** cannot be edited. In the bottom, the connected IP device video will be displayed.

9.6.3. Set Record Information

 **Set Rec. Info.:** It is to set up DB Recording by schedule.



Volume Selection → Select Volume: Volume1 (4 cameras are allocated in Volume1)

Camera numbers in the selected volume → 4 cameras are allocated in Volume1

Pre/Post time setup → Pre-time: 5, Post-time: 5

Recording Schedule (Weekly)
 E : Event
 C : Continuous
 A : Audio
 (Mouse click or Dragging)

	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.		Holiday
0	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	0	X
1	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	1	X
2	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	2	X
3	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	3	X
4	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	4	X
5	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	5	X
6	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	6	X
7	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	7	X
8	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	8	X
9	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	9	X
10	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	10	X
11	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	11	X
12	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	12	X
13	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	13	X
14	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	14	X
15	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	15	X
16	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	16	X
17	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	17	X
18	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	18	X
19	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	19	X
20	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	20	X
21	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	21	X
22	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	22	X
23	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	E+C+A	23	X


Recording type → None Continuous Event Audio

***Holiday Recording schedule Setup** → Description: _____ Date: 2014-05-14
 Add Edit Keyboard Delete

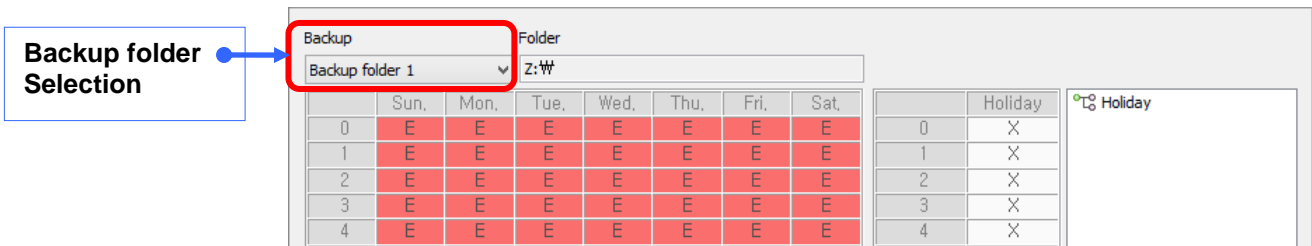
Save the schedule to NVR server → Save

* Holidays Recording schedule setup : You can add recording schedule for holidays by setting date, description

9.6.4. Set Scheduled Backup

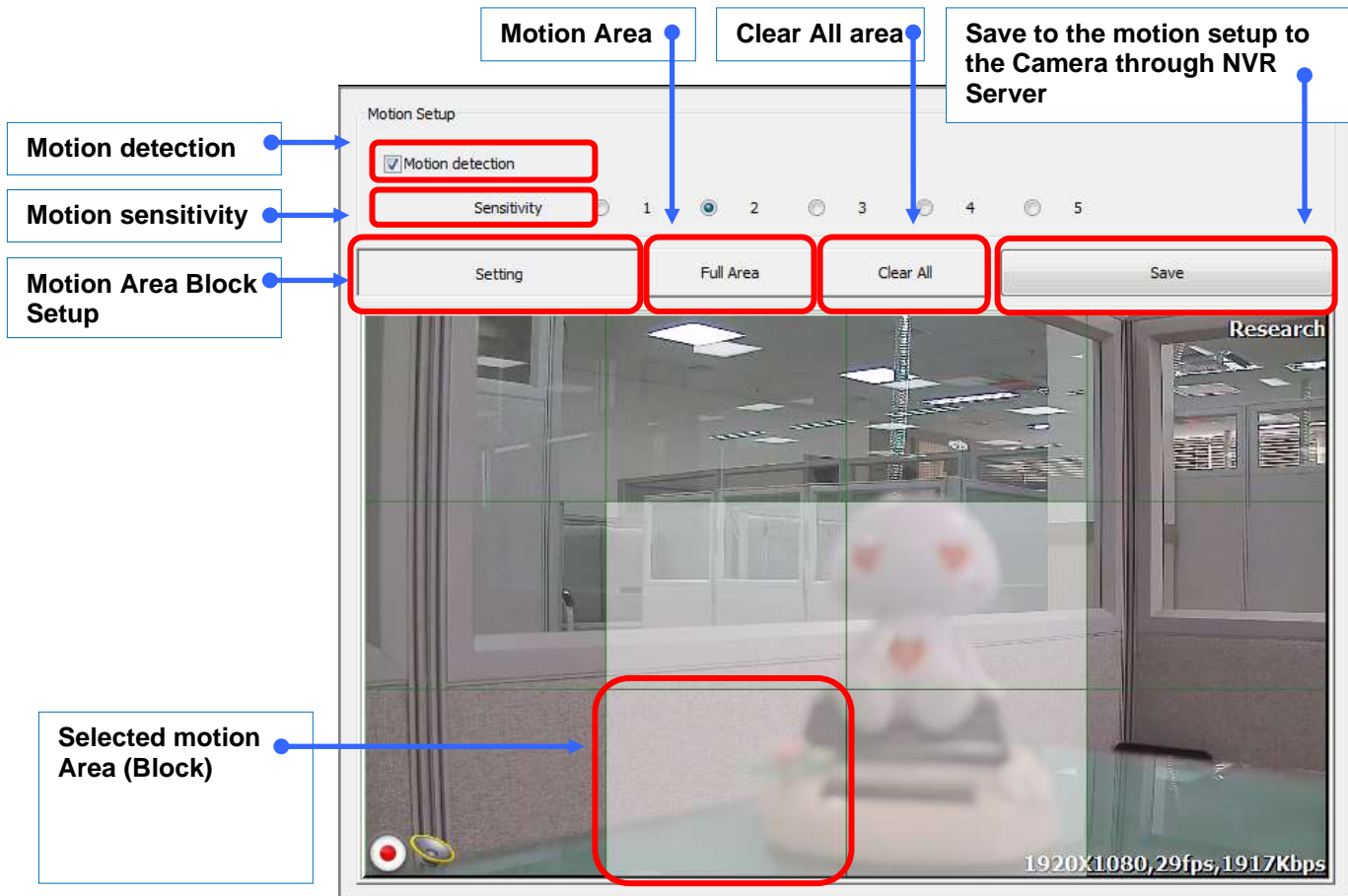
 **Set Scheduled Backup** : It is to set up scheduled backup.

You can set up scheduled backup by selecting the backup folder is added in the system settings of the NVR server setup. The remaining portion of the setup is the same as the "Set Record Information".



9.6.5. Motion Setup

 **Motion Setup** : Motion Area Setup Pane



You can select or delete Motion area by clicking the mouse and dragging.

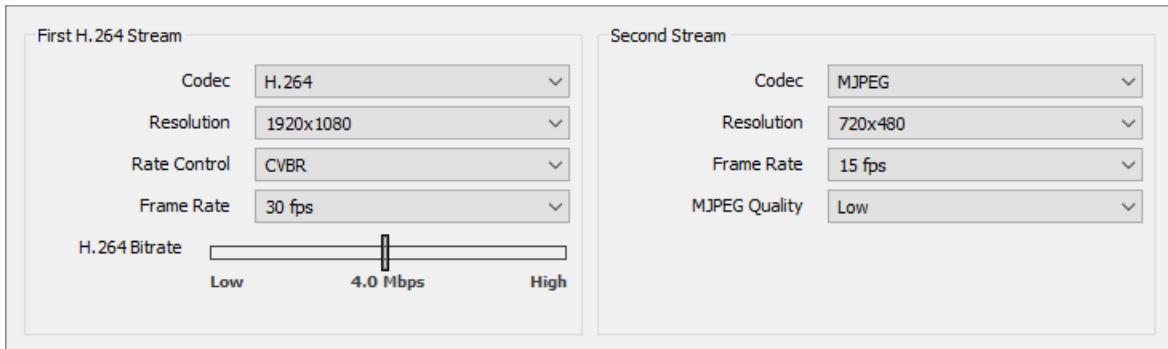
9.6.6. Stream Setup

 **Stream Setup**: Steam Setup Pane.

You can set up dual streams.


The first stream is possible only H.264 setup.

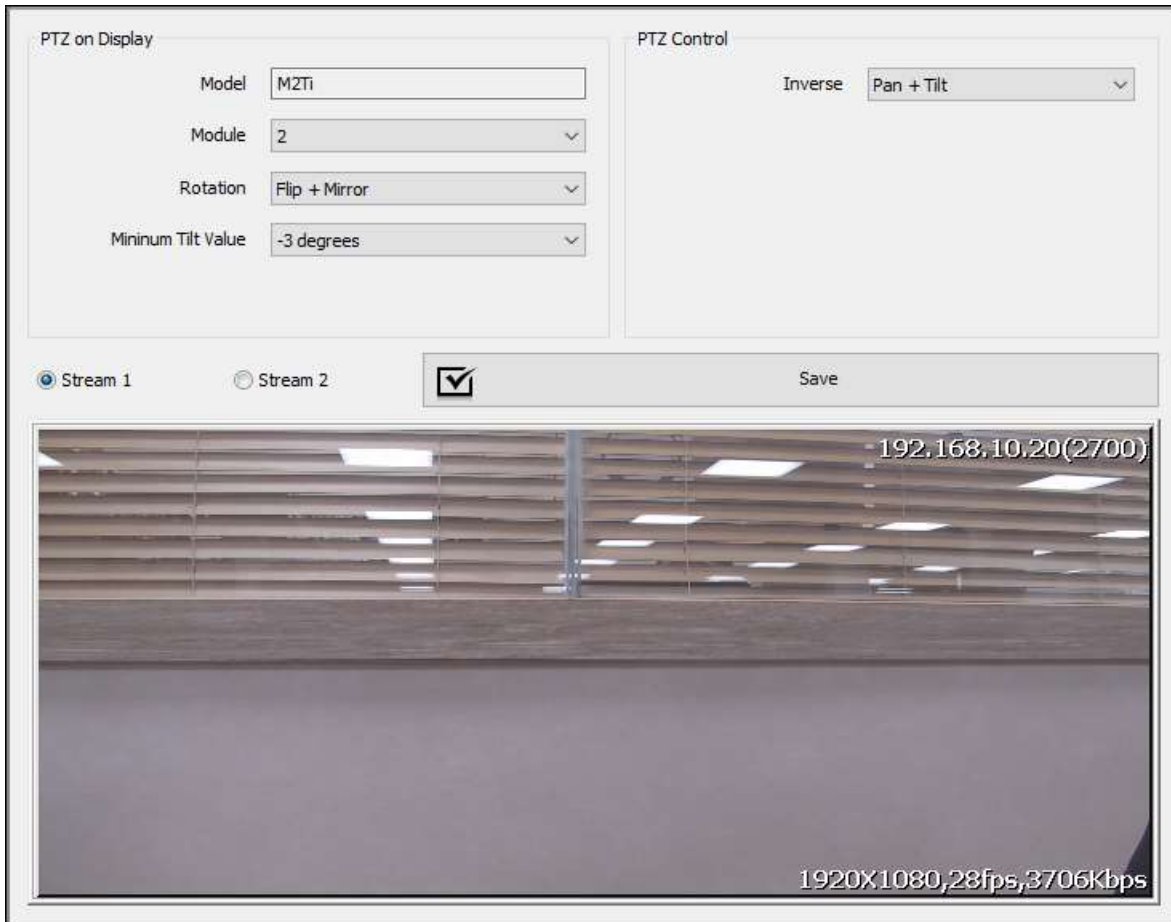
The second stream can be H.264 / MJPEG settings.



No.	Items	Description
1	Codec	Sets up Codec. (H.264 / MJPEG)
2	Resolution	Sets up Resolution.
3	Rate Control	Sets up Rate Control. (VBR / CBR, H.264 only)
4	Frame Rate	Sets up Frame Rate. (1~30 fps)
5	H.264 Bitrate	Sets up Bitrate (H.264 only)
6	MJPEG Quality	Sets up MJPEG Quality (low / normal / high, MJPEG only)

9.6.7. PTZ on Display

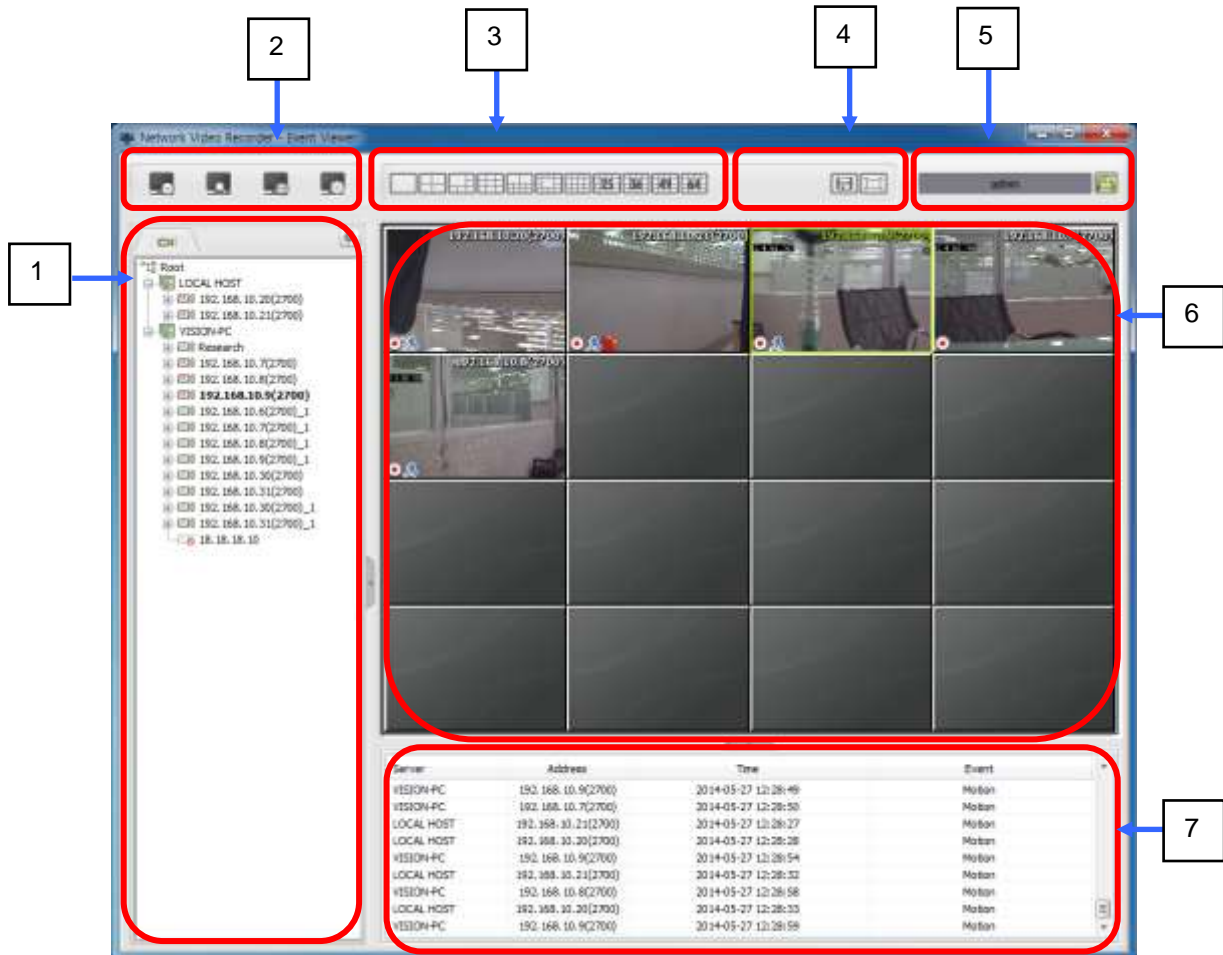
 PTZ on Display : PTZ on Display Setup Pane.



No.	Items	Description
1	Model	Model Name.
2	Module	Sets up Module Number.
3	Rotation	Sets up Rotation. (None / Flip / Mirror / Flip + Mirror) Apply to PTZ on Display and PTZ Panorama.
4	Minimum Tilt Value	Sets up Minimum Tilt Value. (0 / -3 / -38 degrees) Apply to PTZ on Display and PTZ Panorama.
5	Inverse	Sets up Inverse. (None / Pan / Tilt / Pan + Tilt) Apply to Pan and Tilt.
6	Display Screen	Verify the settings on the screen directly over the control of PTZ on Display.

10. NVR Client Event Viewer

10.1. User Interface



No.	Item	Icon	Description
1	Server List		Server List
2	Program Icons		Select Components to switch
3	Display modes		Selects the desired screen channel
4	Function Button (Screen modes)		Snapshot Saving & Print
			Full Screen mode
5	Login info		Login / Logout
6	Display		Displays Event Triggered Video
7	Event Log		Show Event logs

NETWORK VIDEO RECORDER C/S

10.2. Setup Event Viewer

A. Connect to an IP Camera (or device) and register Server Address of Event Viewer as follows;

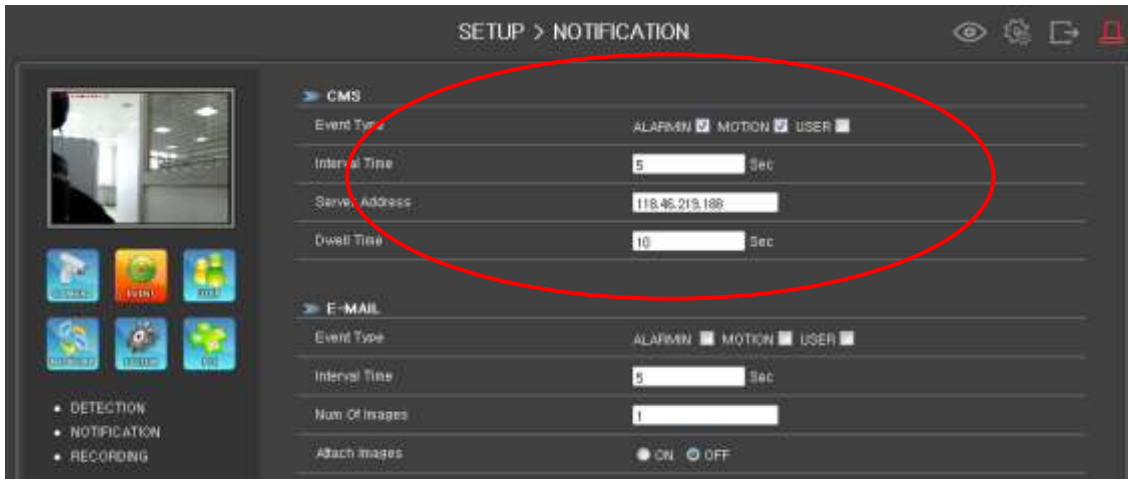
Setup → Event → Notification → Check and enter related info on CMS

Event type: Alarm, Motion, User

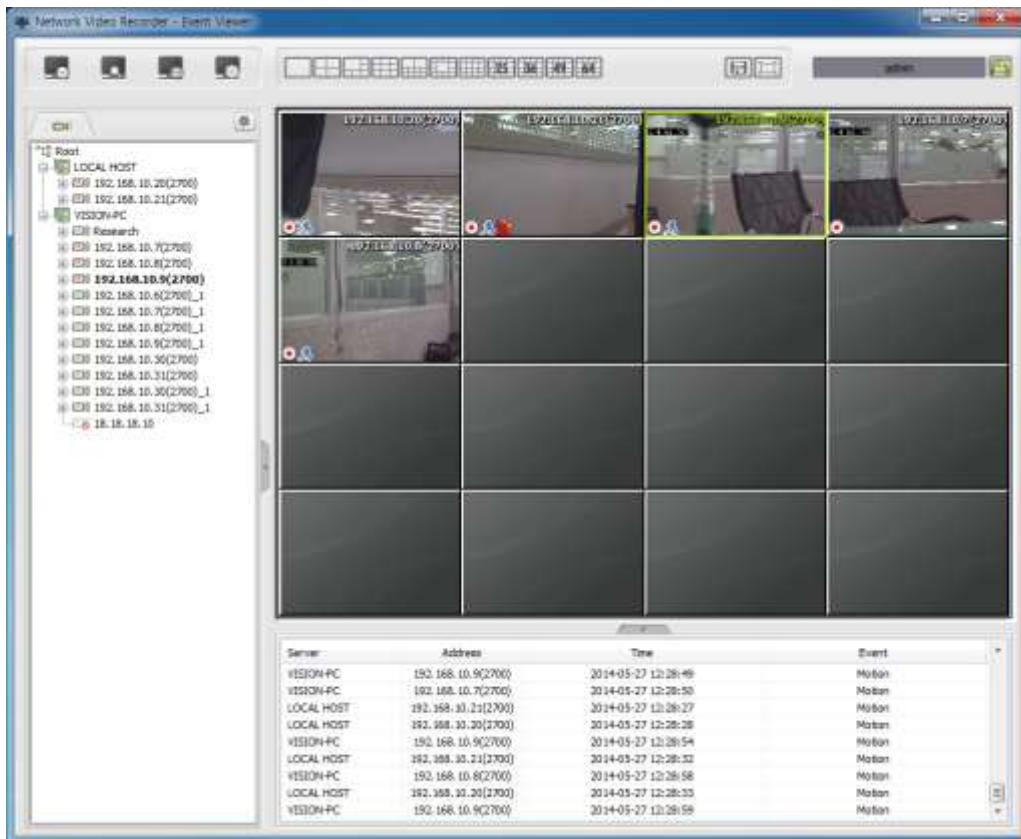
Interval time: sec

Server Address: IP address of NVR Server

Dwell time: sec

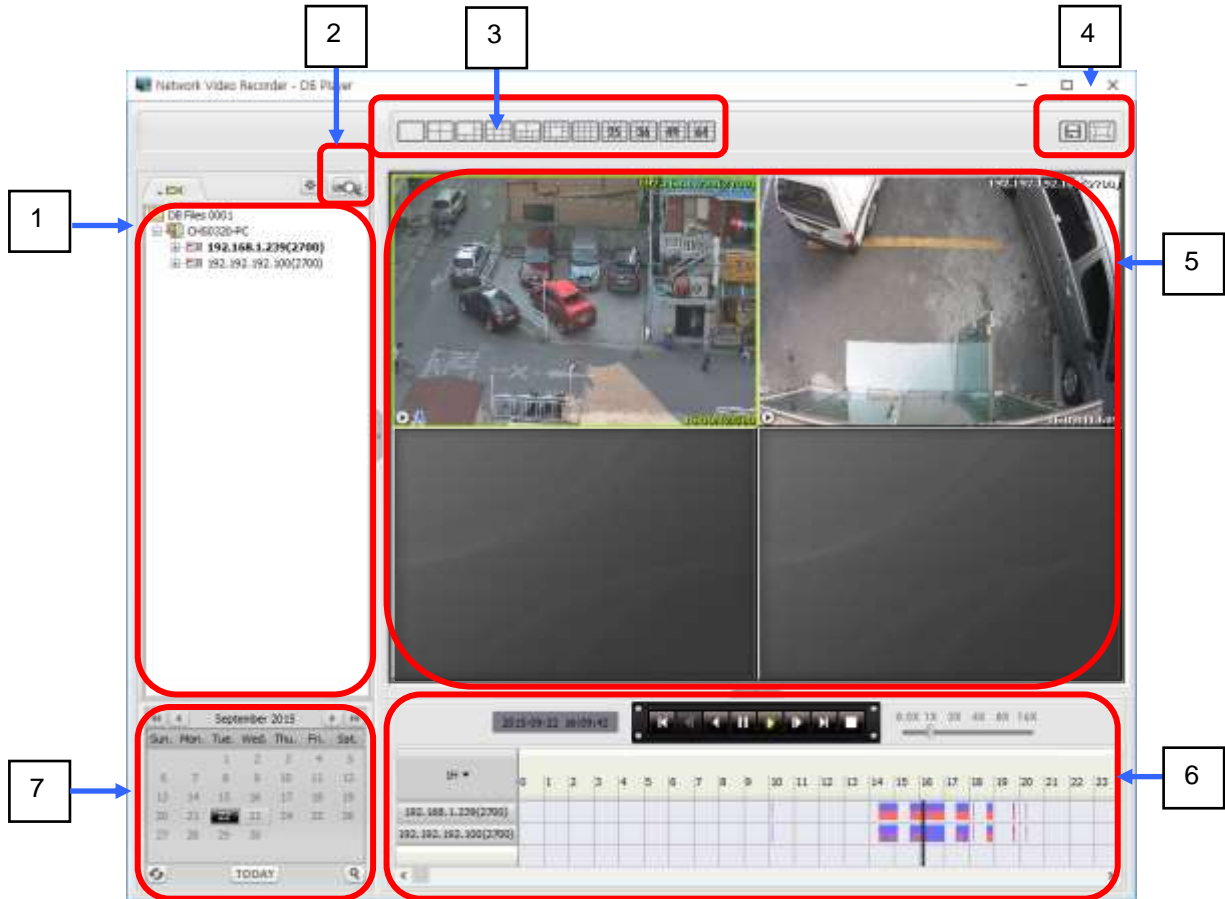


B. When event triggered, its event info added to the Event log and it will appear on the display screen during the defined “Dwell time”.



11. NVR – DB Player

11.1. User Interface



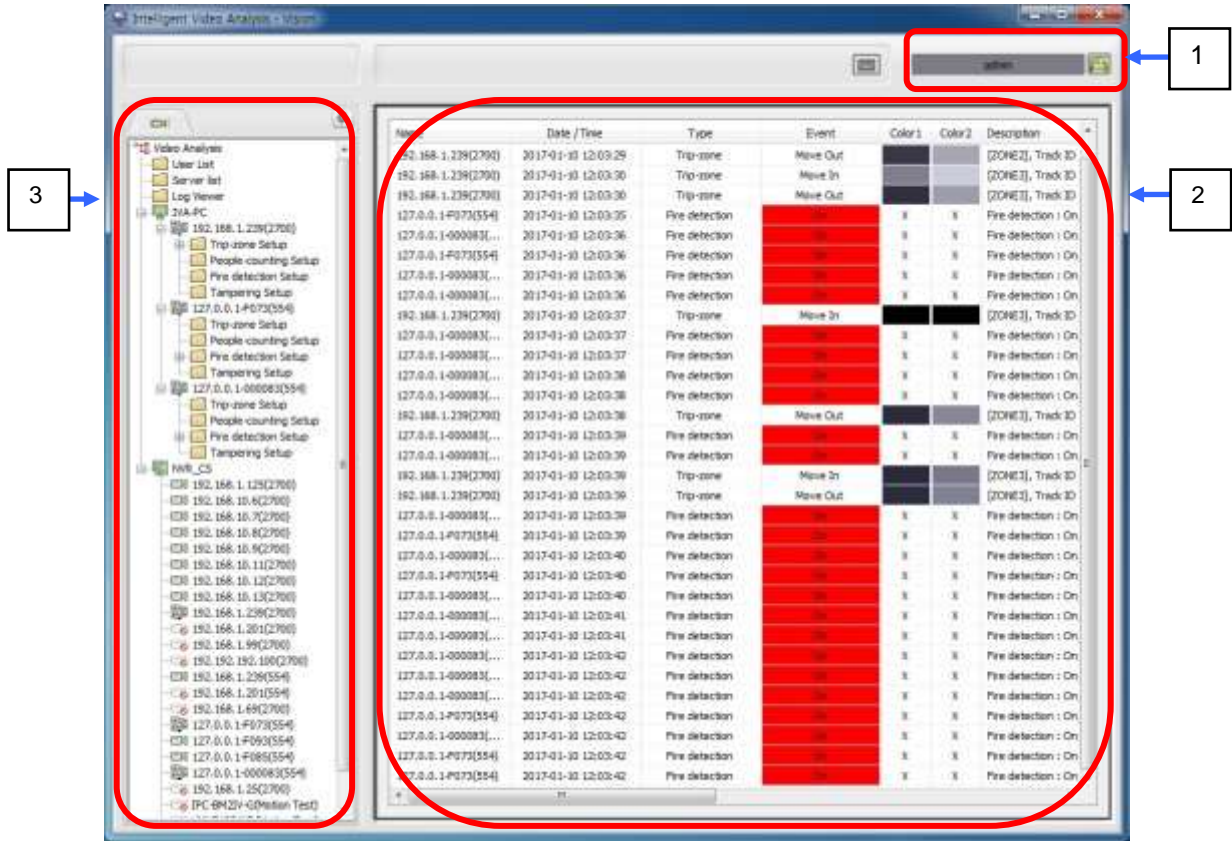
No.	Item	Icon	Description
1	Backup List		Backup List
2	Open Backup Button		Open Backup DB Files
3	Display modes		Selects the desired screen channel
4	Function Button (Screen modes)		Snapshot Saving & Print
			Full Screen mode
5	Display		Shows all desired
6	Timeline		Playback the recorded data
7	Calendar		Playback the recorded data













All the features of NVR - DB Player are almost the same of NVR Client Playback.

If you run DB_Player.exe in the backup folder [DB Files xxx] DB-Player window appears, you can use the same as NVR Client Playback. It is also possible to play at the same time another backup file using the [Open Backup] button. After screens being configured, select the date from the calendar.

12. IVA Client/Server Setup

12.1. User Interface

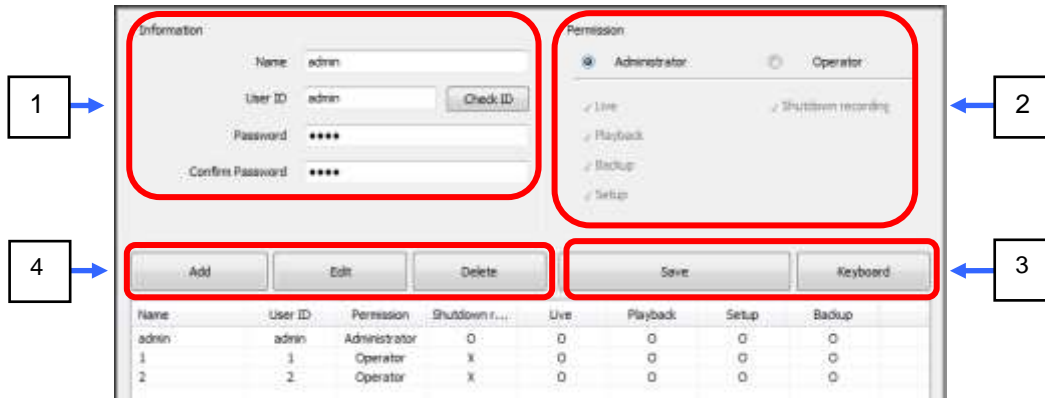


No.	Items	Icons	Description
1	Login info	 	Login buttons
2	Live event log window		
3	Server List and Setup Menu	 Video Analysis	Live event log display
		 User List	Register users of IVA CS & Permission
		 Server list	Registers/ Adds NVR Servers
		 Log Viewer	Views Log information of IVA CS
		 IVA-PC	Shows IVA CS System & Camera info.
		 NVR_CS	Shows NVR Sever System & Camera info.
		 Trip-zone Setup	Trip-zone Setup
		 People-counting Setup	People-counting Setup
		 Fire detection Setup	Fire detection Setup
 Tampering Setup	Tampering Setup		

NETWORK VIDEO RECORDER C/S

12.2. User List (User List)

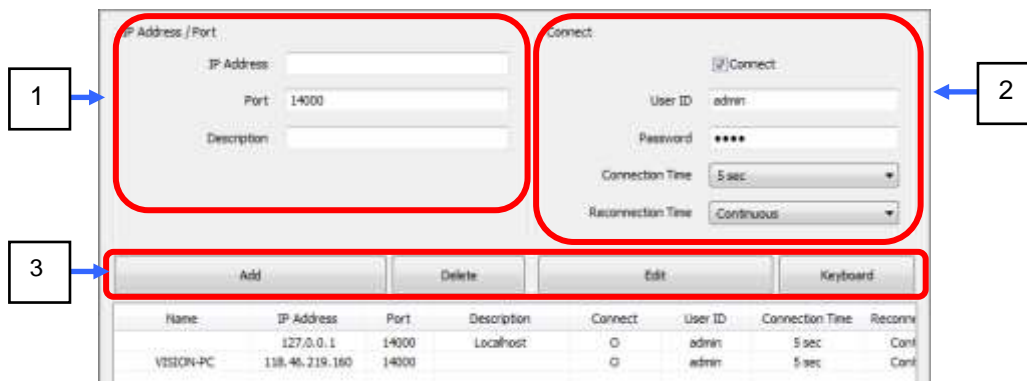
You can register users to the user list of IVA CS.



No.	Items	Description
1	Information	Name, User ID, Password, Confirmation Password
2	Permission (management)	Administrator: has all permissions Operator: its permission can be specified; Live/ Playback, Backup/ Setup/ Shutdown recording
3	Add/ Edit/ Delete	Adds/ Edits/ Deletes the selected users
4	Save	Saves User's list to NVR client

12.3. Server List (Server list)

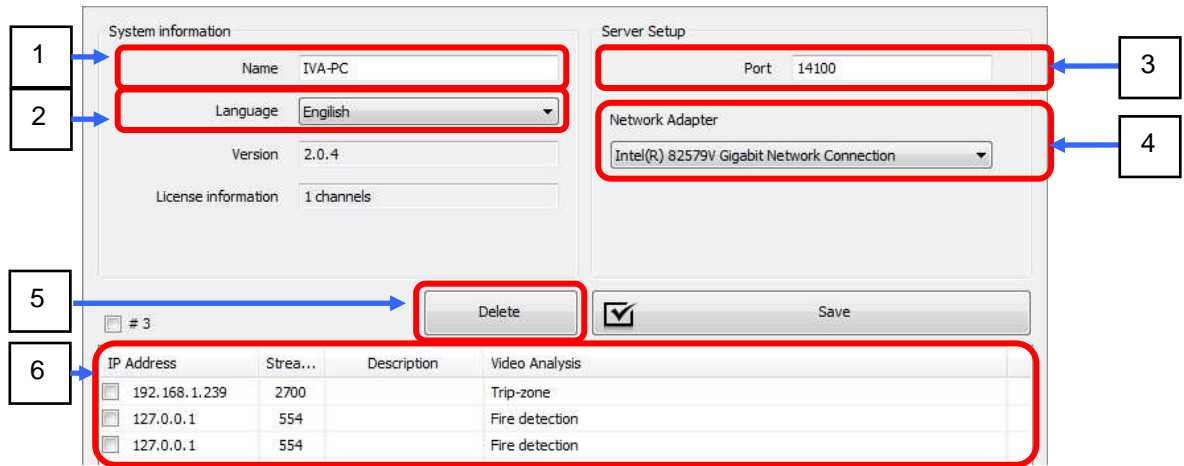
It is used to register NVR Sever (IP Address, User ID & Password)



No.	Items	Description
1	IP Address/ Port	Set IP Address, Port & Description of NVR Server
2	Connection setting	Server connection information (User ID, Password, Connection Time, Reconnection Time)
3	Add Server	Adds/ Edits/ Deletes the desired sever from Server list

12.4. IVA CS System (IVA-PC)

You can set up System of IVA CS



No.	Items	Description
1	System Information Name	You can set a name for NVR Server
2	Language Setup	You can set a language
3	Port Setup	IVA CS Server port setup
4	Network Server network adapter setup	Sets up when using dual network adapters.
5	Delete	Deletes the selected cameras.
6	Camera List	Displays the camera list of IVA CS & Video Analysis information.

12.5. IVA Camera (📹 192.168.1.239(2700))

Shows Camera & Video Analysis information

The screenshot shows the IVA Camera configuration interface. It includes a table for Video Analysis settings, a Setup section for camera information, a Delete button, and a video analysis display screen. The display screen shows a street view with three analysis zones: ZONE1 (red), ZONE2 (yellow), and ZONE3 (cyan). The interface is annotated with numbered boxes 1 through 4 pointing to these specific elements.

Video Analysis	Enable	Schedule	Control	Description
📹 Trip-zone	Enable	On		Zone1 : ZONE1, Zone2 : ZONE2, Zone3 : ZONE3
📹 People-counting	-	-		-
📹 Fire detection	-	-		-
📹 Tampering dete...	-	-		-

Setup

Stream 1 Camera IP: 192.168.1.239 Description: Port: 2700 MAC Address: 00:11:22:33:33:33 Delete

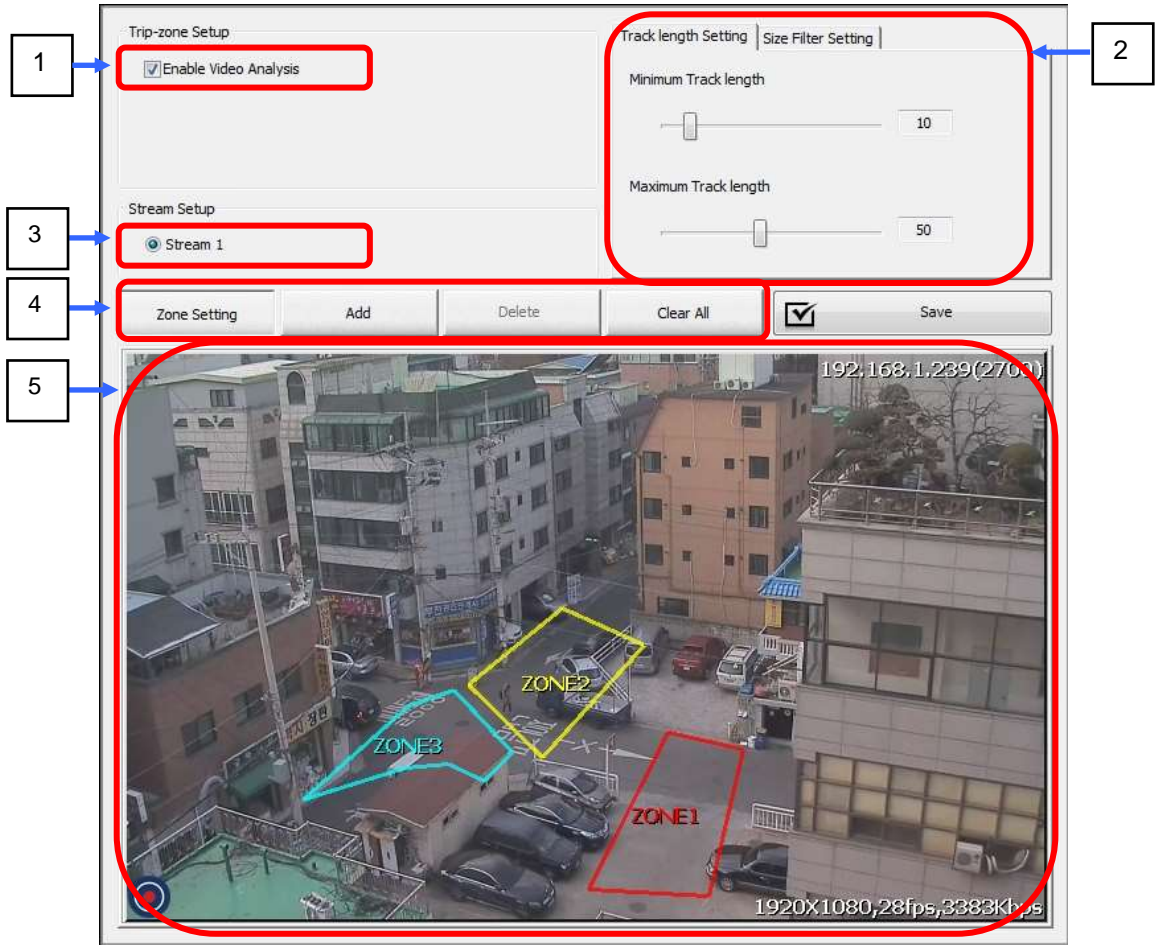
192.168.1.239(2700)

1920X1080,29fps,3787Kbps

No.	Items	Description
1	Video Analysis Info.	Video Analysis information list
2	Camera information	Camera IP, Port, Mac address & description
3	Delete	Delete Camera from IVA CS Server
4	Display screen	Shows all desired with Video Analysis

12.6. Trip-zone Setup (Trip-zone Setup)

You can set up Trip-zone Setup

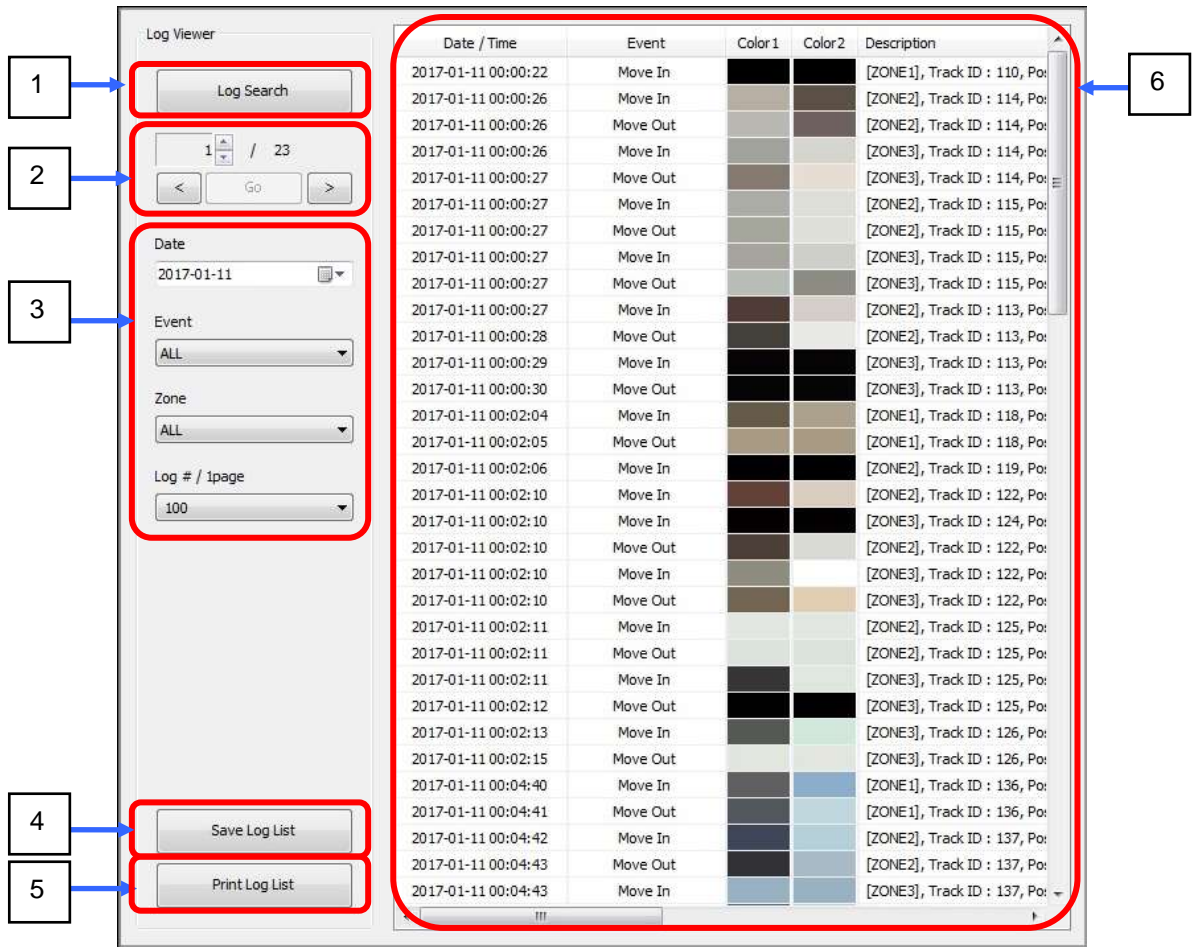


No.	Items	Description
1	Enable Video Analysis	Enable Video Analysis of Trip-zone
2	Track length & Size Filter Setting	Track length & Size Filter Setting Tab button
	Minimum/Maximum Track length	Set the minimum/maximum Track length
	Use Size Filter	Enable Size Filter
	Show Size Filter	Display Size Filter on the screen
	Minimum/Maximum Width	Set the minimum/maximum width of Size Filter
	Minimum/Maximum Height	Set the minimum/maximum height of Size Filter
3	Stream Setup	Stream settings for Video Analysis
4	Zone Setting	Enable Trip-zone setting
	Add	Popup add zone window and add zone using mouse clicks
	Delete / Clear All	Delete the selected zone and delete all of zones
5	Zone setting screen	Trip-zone setting screen using mouse clicks

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12.6.1. Log Viewer (Log Viewer)

You can view the Trip-zone events.

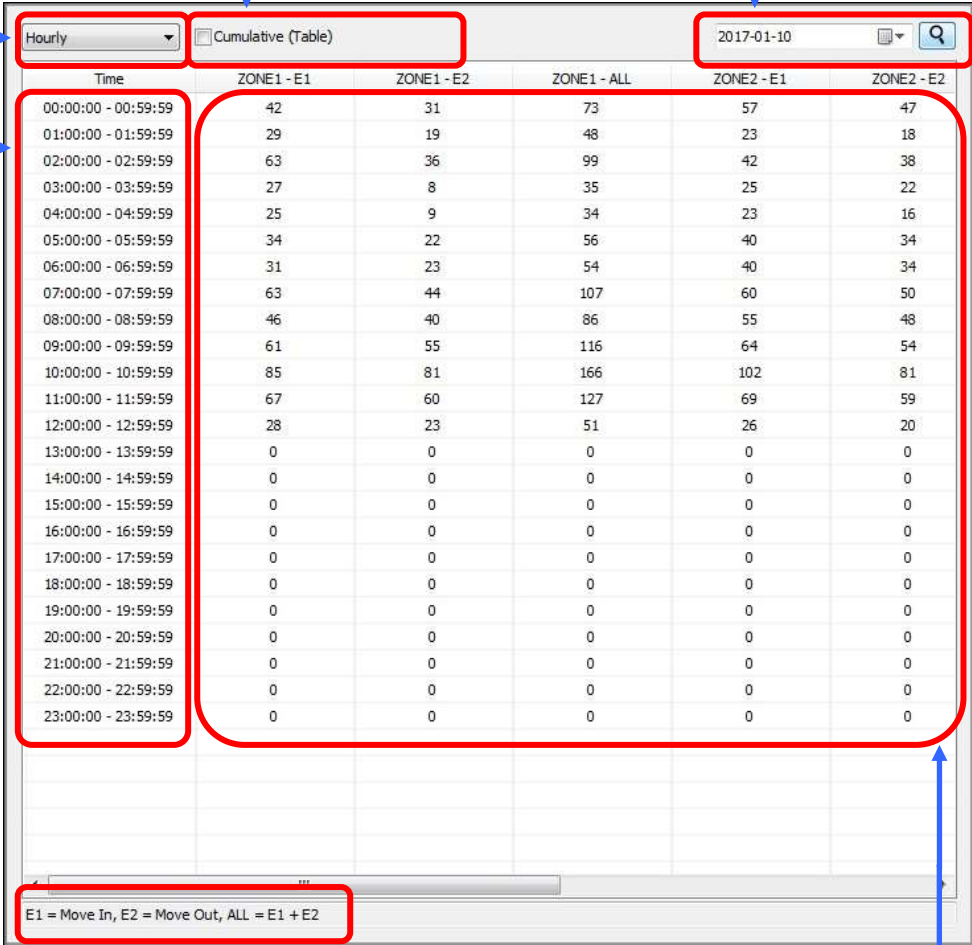


No.	Items	Description
1	Log Search	Search button
2	Page Search	Turns to the selected page
3	Select Date/ Event type/ Zone	Choose Search types
4	Save Log List	Saves log list
5	Print Log List	Print log list
6	Log List	Displays the log list

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12.6.2. Table (Table)

Trip-zone events View table by date



Cumulative table

Setting dates and Search events

Hourly / Minutely

Display time list

Time	ZONE1 - E1	ZONE1 - E2	ZONE1 - ALL	ZONE2 - E1	ZONE2 - E2
00:00:00 - 00:59:59	42	31	73	57	47
01:00:00 - 01:59:59	29	19	48	23	18
02:00:00 - 02:59:59	63	36	99	42	38
03:00:00 - 03:59:59	27	8	35	25	22
04:00:00 - 04:59:59	25	9	34	23	16
05:00:00 - 05:59:59	34	22	56	40	34
06:00:00 - 06:59:59	31	23	54	40	34
07:00:00 - 07:59:59	63	44	107	60	50
08:00:00 - 08:59:59	46	40	86	55	48
09:00:00 - 09:59:59	61	55	116	64	54
10:00:00 - 10:59:59	85	81	166	102	81
11:00:00 - 11:59:59	67	60	127	69	59
12:00:00 - 12:59:59	28	23	51	26	20
13:00:00 - 13:59:59	0	0	0	0	0
14:00:00 - 14:59:59	0	0	0	0	0
15:00:00 - 15:59:59	0	0	0	0	0
16:00:00 - 16:59:59	0	0	0	0	0
17:00:00 - 17:59:59	0	0	0	0	0
18:00:00 - 18:59:59	0	0	0	0	0
19:00:00 - 19:59:59	0	0	0	0	0
20:00:00 - 20:59:59	0	0	0	0	0
21:00:00 - 21:59:59	0	0	0	0	0
22:00:00 - 22:59:59	0	0	0	0	0
23:00:00 - 23:59:59	0	0	0	0	0

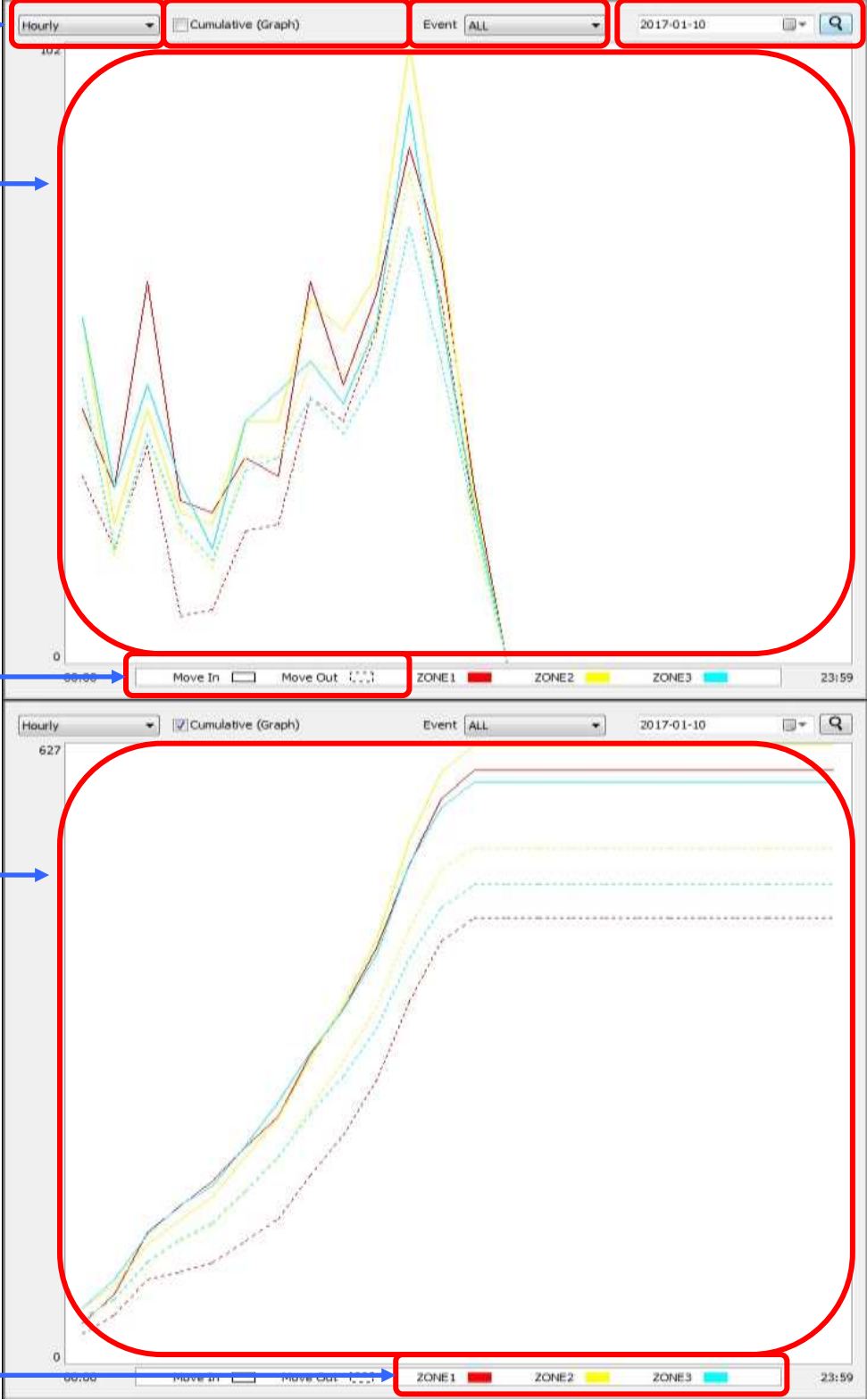
E1 = Move In, E2 = Move Out, ALL = E1 + E2

Display events by zone

**E1 = Move In events
E2 = Move Out events
ALL = E1 + E2**

12.6.3. Graph (Graph)

Trip-zone events Graph by date



Cumulative graph **Event type** **Setting dates and Search events**

Hourly / Minutely Hourly Cumulative (Graph) Event ALL 2017-01-10

Display graph

Move In => Solid line
Move Out => Dotted line

Display graph (Cumulative graph)

Show color by zone

Move In Move Out ZONE1 ■ ZONE2 ■ ZONE3 ■ 23:59

Hourly Cumulative (Graph) Event ALL 2017-01-10

627

00:00 Move In Move Out ZONE1 ■ ZONE2 ■ ZONE3 ■ 23:59

12.7. People-counting Setup (People-counting Setup)

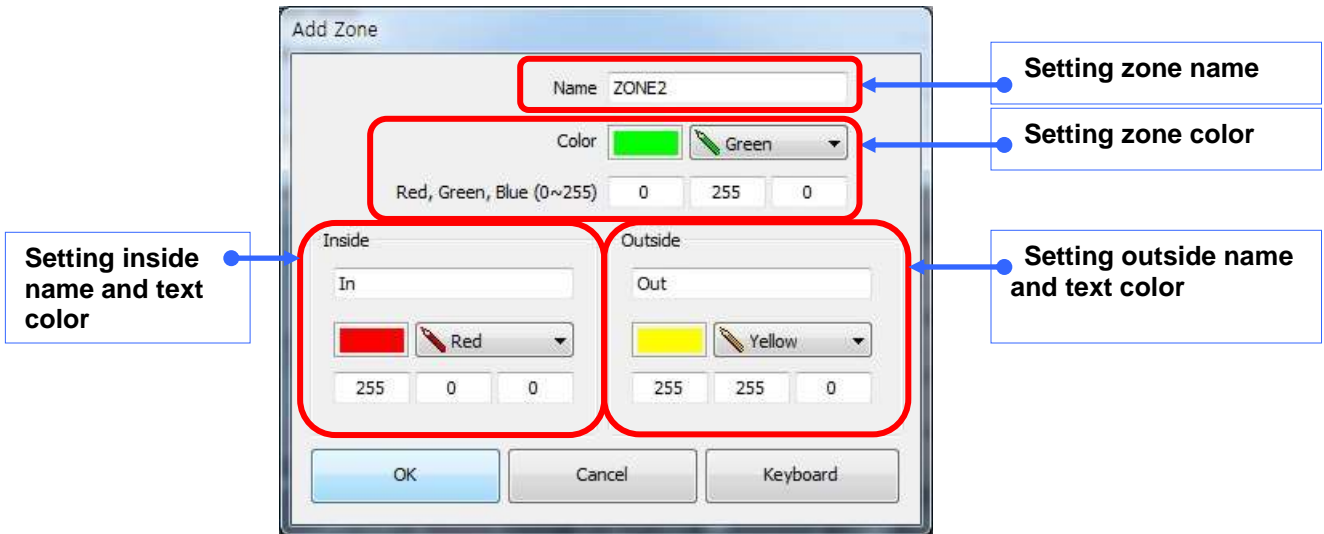
You can set up People-counting Setup



No.	Items	Description
1	Enable Video Analysis	Enable Video Analysis of People-counting
	Counting only people	Counting only people
	Reset Counting	Set the counting number initialization time
2	Track length & Size Filter Setting	Set the Track length & Size Filter
3	Stream Setup	Stream settings for Video Analysis
4	Zone Setting	Enable People-counting zone setting
	Add	Popup add zone window and add zone using mouse clicks
	Delete / Clear All	Delete the selected zone and delete all of zones
	Edit	Popup edit zone window and set the selected zone
5	Zone setting screen	People-counting zone setting screen using mouse clicks

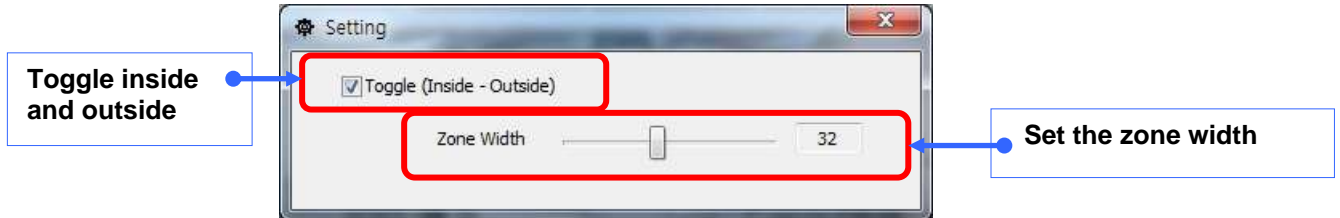
12.7.1. Popup window to add zone

Popup window to add zone for People-counting



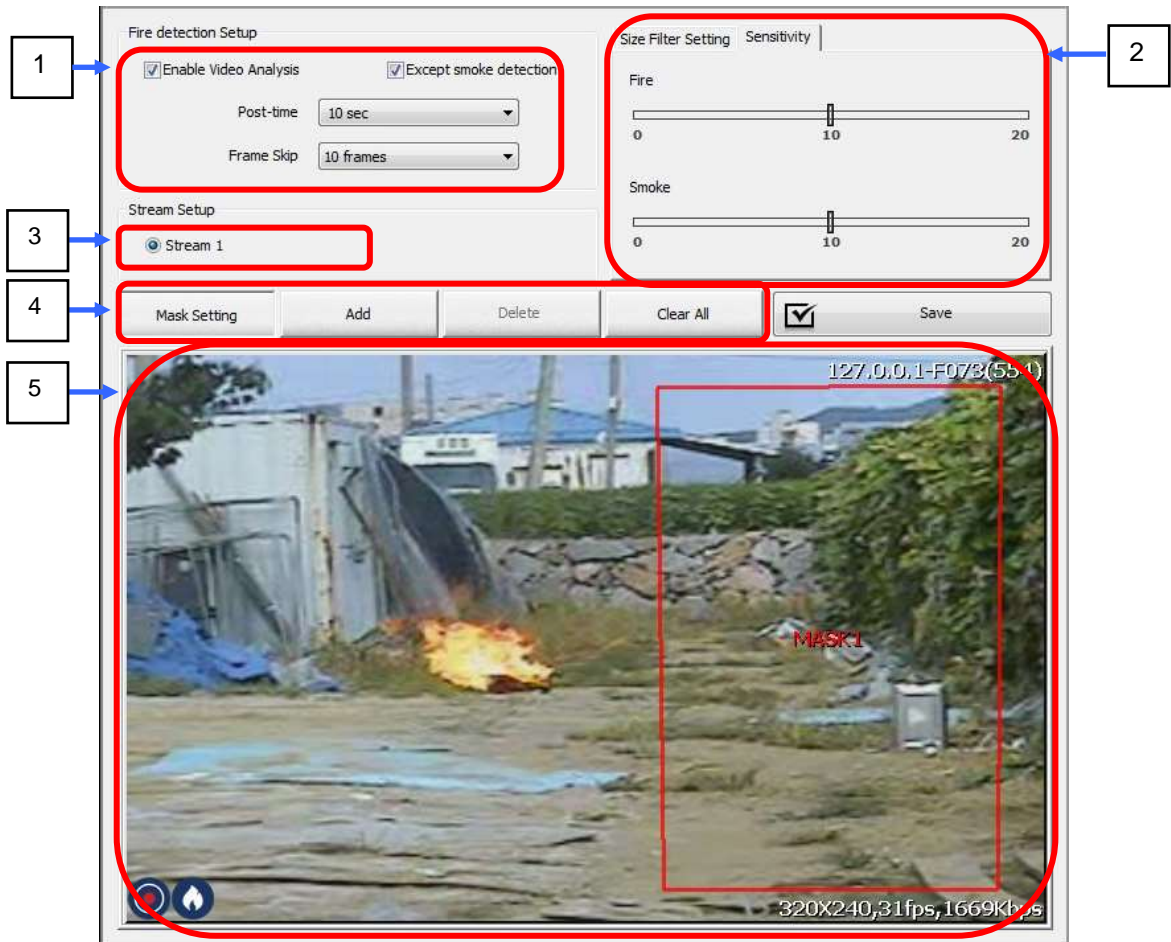
12.7.2. Popup window to edit zone

Popup window to edit selected zone for People-counting



12.8. Fire detection Setup (📁 Fire detection Setup)

You can set up Fire detection Setup



No.	Items	Description
1	Enable Video Analysis	Enable Video Analysis of Fire detection
	Except smoke detection	Except smoke detection
	Post-time	Set the Fire detection event post time
	Frame Skip	Video Analysis at the set frame intervals
2	Size Filter & Sensitivity Setting	Set the Size Filter & Sensitivity
3	Stream Setup	Stream settings for Video Analysis
4	Mask Setting (Mask area excluded from Fire detection video analysis)	Enable Fire detection mask area setting
	Add	Popup add mask area window and add mask area using mouse clicks
	Delete / Clear All	Delete the selected mask area and delete all of mask areas
5	Mask setting screen	Fire detection mask area setting screen using mouse clicks

12.9. Tampering Setup (Tampering Setup)

You can set up Tamper detection Setup



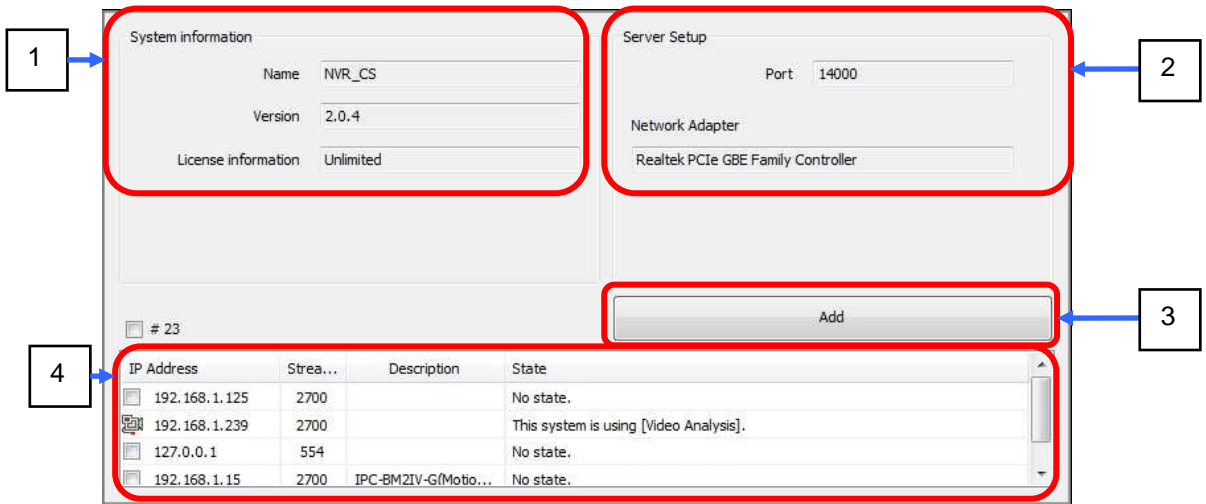
No.	Items	Description
1	Enable Video Analysis	Enable Video Analysis of Tamper detection
	Post-time	Set the Tamper detection event post time
2	Type	Set the Tamper detection type (Defocus, Occlusion, Displacement)
3	Stream Setup	Stream settings for Video Analysis

12.10. Face masking Setup (Face masking Setup)

Same as Fire detection Setup

12.11. NVR Server System (NVR_CS)

Shows NVR Server System & Camera information



The screenshot shows the NVR Server System configuration interface. It is divided into several sections:

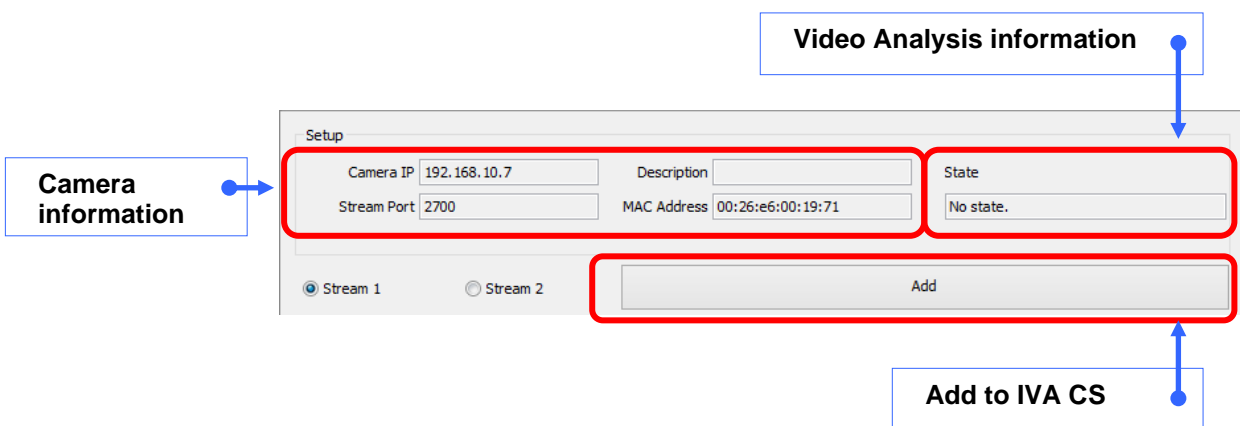
- 1**: System information section containing fields for Name (NVR_CS), Version (2.0.4), and License information (Unlimited).
- 2**: Server Setup section containing fields for Port (14000) and Network Adapter (Realtek PCIe GBE Family Controller).
- 3**: An 'Add' button located below the Server Setup section.
- 4**: A table listing cameras with columns for IP Address, Stream, Description, and State.

IP Address	Strea...	Description	State
192.168.1.125	2700		No state.
192.168.1.239	2700	This system is using [Video Analysis].	
127.0.0.1	554		No state.
192.168.1.15	2700	IPC-BM2IV-G(Motio...	No state.

No.	Items	Description
1	System information	NVR Server System information
2	Server information	NVR Server Port and network adapter information
3	Add	Adds the selected cameras to IVA CS
4	Camera List	Displays the camera list of NVR Server & Video Analysis information

12.11.1. NVR Camera (192.168.10.7(2700))

Shows Camera information



The screenshot shows the NVR Camera configuration page. It includes the following elements:

- Camera information**: A callout box pointing to the 'Setup' section, which contains fields for Camera IP (192.168.10.7), Stream Port (2700), Description, MAC Address (00:26:e6:00:19:71), and State (No state.).
- Video Analysis information**: A callout box pointing to the 'State' field in the camera setup section.
- Add to IVA CS**: A callout box pointing to the 'Add' button at the bottom of the camera setup section.