

STANDARD



User's Manual



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# Chapter 1 — Introduction

This document describes installation and operation of iNEX Standard software, which is designed to be used with network cameras, network video transmitters and digital video recorders (DVRs).

## 1.1 Features

iNEX Standard is a software that controls monitoring and recording of live video and playback of recorded video.

- Remote monitoring of live images
- Remote monitoring of live images in multiple Client systems through a streaming service (the number of channels that can be streamed equals the number of channels that can be recorded unless streaming WIBU-Keys have been added)
- Stable streaming by using the load balancing function in installation with more than one streaming server
- Video analytics of live images through a video analytics service
- Up to 64 simultaneous connections to the iNEX system
- Software upgrades and multiple systems setup remotely (supported only for devices which provide the functions)
- Display of system log information (supported only for devices which use the iNEX protocol)
- Map monitoring of live images
- Centralized system operation and management and event handling
- Decompression algorithm for H.264, H.265, MPEG-4 and M-JPEG
- Enhanced security using the SSL function
- Two-way audio communication and audio broadcasting
- Enhanced security by setting up different authorities for each user group
- Controllable with a network keyboard
- Text-in and alarm function via TCP networking
- Intuitive GUI
- The following are supported only for network cameras and network video transmitters:
  - Recording of video and playback of the recorded video
  - Multiple recording servers for advanced recording performance
  - Instant Recording/Panic Recording of monitored images
  - Audio recording
  - Stable recording using proprietary video database file system
- The following are supported only for DVRs:
  - Playback of video recorded in DVRs
  - Remote control of panic recording
- Number of services and devices that can be registered and channels that recording, streaming, video analytics and video wall are available for:
  - Service Registration: One monitoring service, one to four streaming services, 32 video analytics services, 64 recording services, 64 recording redundant services, 64 backup services, 8 video wall services, the same number of failover services as administration, monitoring, recording and video wall services. The number of streaming services that can be registered differs depending on the type and number of WIBU-Keys purchased. Backup, video wall, recording redundant, and failover services are sold separately.

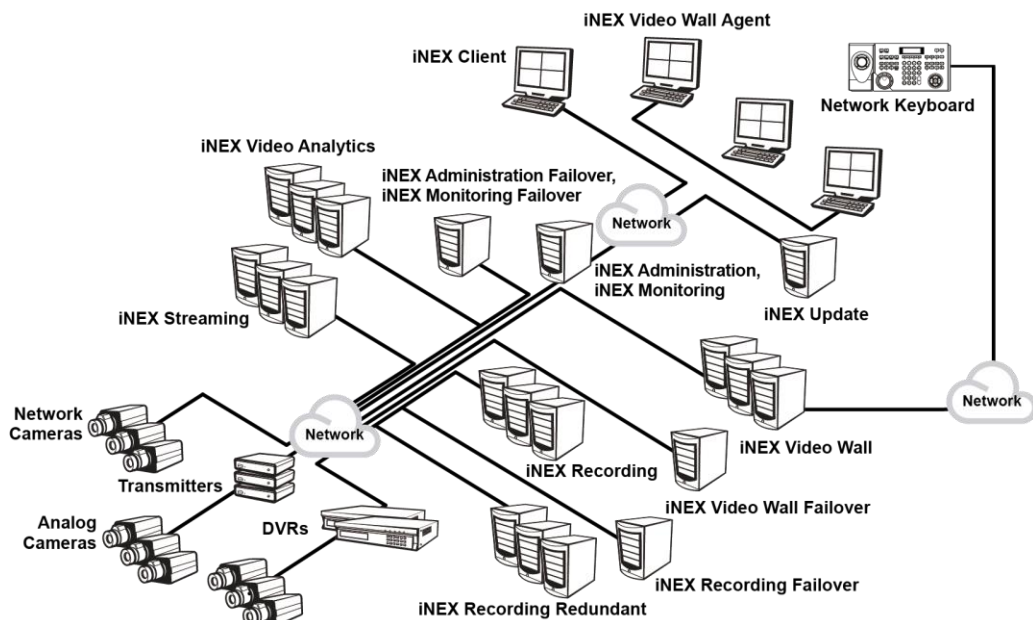
- Device Registration: Maximum of 1,024 devices including devices which do not use the iNEX protocol (The devices which do not use the iNEX protocol can be registered as the maximum number between available recording channels and available streaming channels. For example, if your iNEX software supports four-channel recording and eight-channel streaming, up to eight devices that do not use the iNEX protocol can be registered.)
- Recording (not supported for DVRs): Maximum of four to 256 channels depending on the type and number of the WIBU-Keys (up to 256 channels per recording server with up to 64 recording servers)
- Streaming: The number of channels that can be streamed equals the number of channels that can be recorded unless streaming WIBU-Keys have been added (maximum of 512 to 2,048 channels depending on the type and number of the WIBU-Keys when WIBU-Keys have been added).
- Video Analytics: Up to 8 channels per video analytics service are available.

#### **NOTES:**

- Ask your dealer or distributor about the number of channels that can be recorded or streamed using your iNEX software. If the device is a four-channel network video transmitter which uses the iNEX protocol, all four cameras are counted even if some of the four cameras are disabled, and four channels per network video transmitter are deducted from the number of channels available for recording, streaming and video analytics.
- Several types of WIBU-Keys are available and support different numbers of channels for streaming, recording or backup. You can increase the number of channels by buying additional WIBU-Keys.
- The iNEX Backup software is supported to allow you to build better surveillance systems. The iNEX Recording Redundant and iNEX Failover software are supported to enhance system stability. Ask your dealer or distributor about purchasing the software and details about it.
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org>).
- The software included in this product contains some Open Sources. You may obtain the complete corresponding source code depending on whether or not the source is publicly available under a license policy. Go to Client Menu - About page for more information. This product includes software developed by the University of California, Berkeley and its contributors, and software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>). Also, this product includes cryptographic software written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)), and software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).
- The information in this manual is believed to be accurate as of the date of publication even though explanations of some functions may not be included. We are not responsible for any problems resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

## 1.2 System Diagram

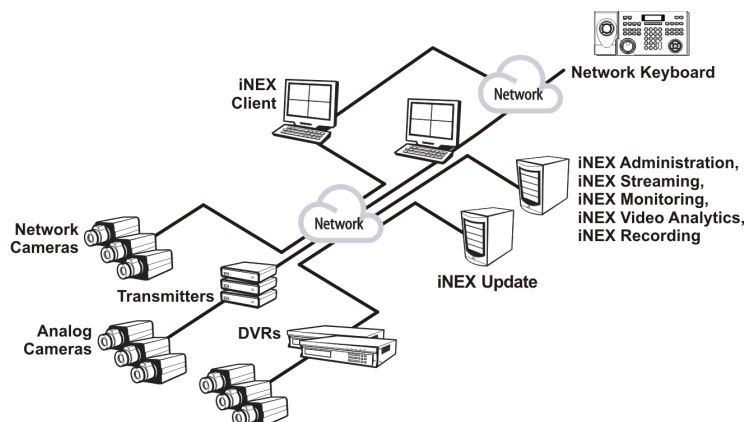
### Multi-Server



#### NOTES:

- The administration service and monitoring service can run on separate PCs.
- The update service can run on a client PC or a PC with other iNEX service programs installed.

### Single-Server



#### NOTES:

- When 256 or more devices are registered, it might take several minutes or longer to change the settings of the Setup program.
- It is suggested that you run the recording, streaming and video analytics services on separate PCs.
- The update service can run on a client PC or a PC with other iNEX service programs installed.



## Chapter 2 — Installation

### 2.1 Product Information

#### Package Contents

- Installation CD
- User's Manual
- License Key (WIBU Key or Product Serial Number)

#### NOTES:

- In case that WIBU Key (USB Dongle) is used for License Key, up to eight WIBU-Keys can be recognized by one administration server.
- If a WIBU-Key is disconnected from an administration server, the iNEX program will not operate properly.
- Stop running all services before connecting or disconnecting a WIBU-Key.

#### System Requirements

##### Server System

- Operating System: Microsoft® Windows® XP 32-bit/Vista (Home Standard, Business, Ultimate, Enterprise), Microsoft® Windows® 7 (Home Premium, Professional, Ultimate), Microsoft® Windows® 8 (Pro, Enterprise), Microsoft® Windows® 8.1 (Pro, Enterprise), Microsoft® Windows® 10 (Home, Pro), Microsoft® Windows® Server 2003/2008/2012/2016
- CPU: Intel Core i5-3570 3.30GHz/Intel Xeon E3 or faster (4cores or more)
- RAM: 2GB or more
- VGA: AMD Radeon™ HD 2400 or NVIDIA GeForce FX5500 (AMD recommended) (1280x1024, 32bpp or higher)
- Hard Disk Drive: 2 GB or more free space for each service (for example, 4 GB or more free space when installing administration and monitoring services)
- LAN: Gigabit Ethernet or faster

##### Client System

#### Recommended Requirements

- Operating System: Microsoft® Windows® 7 64-bit (Home Premium, Professional, Ultimate) (Microsoft® Windows® 8 (Pro, Enterprise), Microsoft® Windows® 8.1 (Pro, Enterprise) compatible), Microsoft® Windows® 10 (Home, Pro)
- CPU: Intel Core i5-3570 3.30GHz or faster
- RAM: 4GB or more
- VGA: AMD Radeon™ HD 7700 or NVIDIA GeForce GTX650 (AMD recommended) (1280x1024, 32bpp or higher)
- Hard Disk Drive: 6GB or more free space
- LAN: Gigabit Ethernet or faster

#### Minimum Requirements

- Operating System: Microsoft® Windows® XP Home SP 3
- CPU: Intel Core 2 Duo E7200 2.53GHz or faster

- RAM: 2GB or more
- VGA: AMD Radeon™ HD 2400 or NVIDIA GeForce FX5500 (AMD recommended) (1024x768, 24bpp or higher)
- Hard Disk Drive: 1GB or more free space
- LAN: 10/100 Mbps Ethernet or faster

**NOTE:** The client system that is installed in a 32-bit operating system could have a problem that the video is not displayed, because of a memory shortage. Ask your dealer or distributor about details about it.

**NOTE:** Using 6 monitors on Videowall Agent with products under VGA 1GB may result in problems due to memory shortage. Ask your dealer or distributor for details about it.

### FishEye Client-Side Dewarping Recommended Requirements

- Operating System: Microsoft® Windows® 7 64-bit (Home Premium, Professional, Ultimate)
- CPU: Intel Core™ i7-3770 3.40 GHz or faster
- RAM: 8GB or more
- VGA: AMD Radeon™ HD 7700 or NVIDIA GeForce GTX650 or higher (1280x1024, 32bpp), multi monitor
- Hard Disk Drive: 6 GB or more free space
- LAN: Gigabit Ethernet or faster

#### NOTES:

- In this document, the “server or server system” refers to a PC on which a iNEX service is running. The “client system” refers to a PC running the Client program.
- The iNEX service is installed and operates in 32-bit or 64-bit compatibility mode.
- It is recommended to add a new unformatted hard disk drive to ensure stable recording. If you are setting up a hard disk drive which contains data, however, you are to delete partition(s) and the file system in advance after formatting. Refer to the PC/server's user manual or consult with the PC/server manufacturer for details about how to format or delete the partition(s) and file system.

## 2.2 Installation

#### NOTES:

- It is recommended to install the recording, streaming and video analytics services on separate PCs for better performance of video recording, monitoring and playback.
- Disable your PC's Windows power saving function: *Start menu* → *Power Options* → set both *Turn off the display* and *Put the computer to sleep to Never* (*Power Options* → *Power Schemes* tab → set both *Turn off monitor* and *Turn off hard disks to Never* when using the Microsoft® Windows® XP operating system).

**CAUTION:** If an older version of iNEX software is installed on your computer, a screen appears asking you to upgrade the software. In this case, you are required to upgrade the software according to the instructions in the screen.



## Server System

### Administration Server

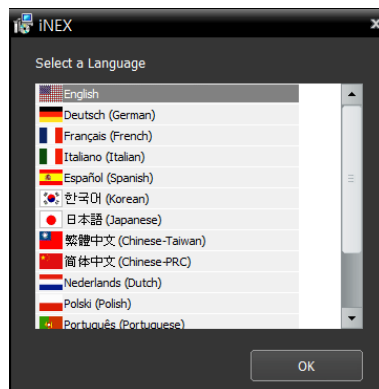
1. Insert the software CD in the administration server.
2. Run the setup.exe file in the Setup folder of the software CD.

**NOTE:** The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

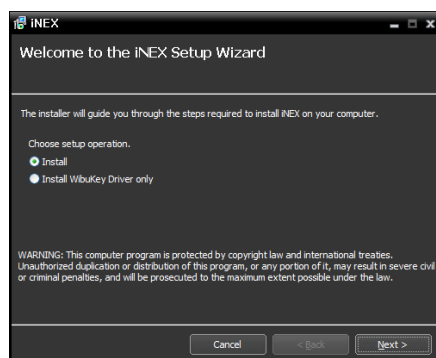
3. Select the language in which to run the program and then click OK.

#### NOTES:

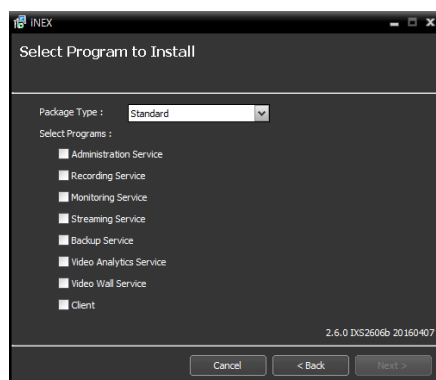
- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX* → *Utility* folder of the *Start* menu before running the *iNEX* program.



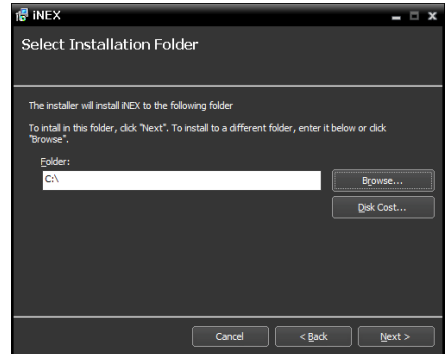
4. When the following screen appears, select Install and click Next.



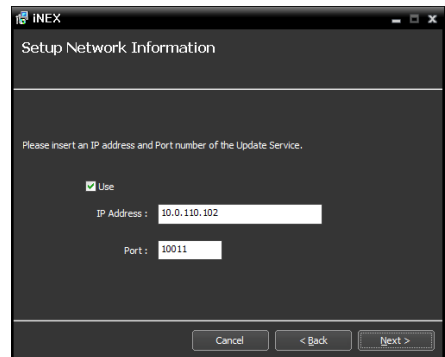
5. Select the services to install and click Next.



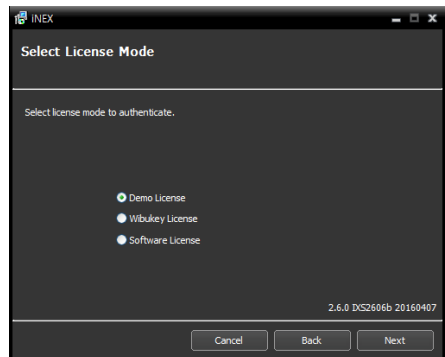
6. Designate the folder path to install the services. Clicking the **Disk Cost...** button shows the available and required disk space for each hard disk drive for the installation. Then click **Next**.



7. If you use the update service, it is required to enter the IP address and port number of the update server when installing the administration service. You can change the settings in the Service Manager program after completing installation. Refer to 2.3 Automatic Upgrade, Update Service Setup (p.18) for details.

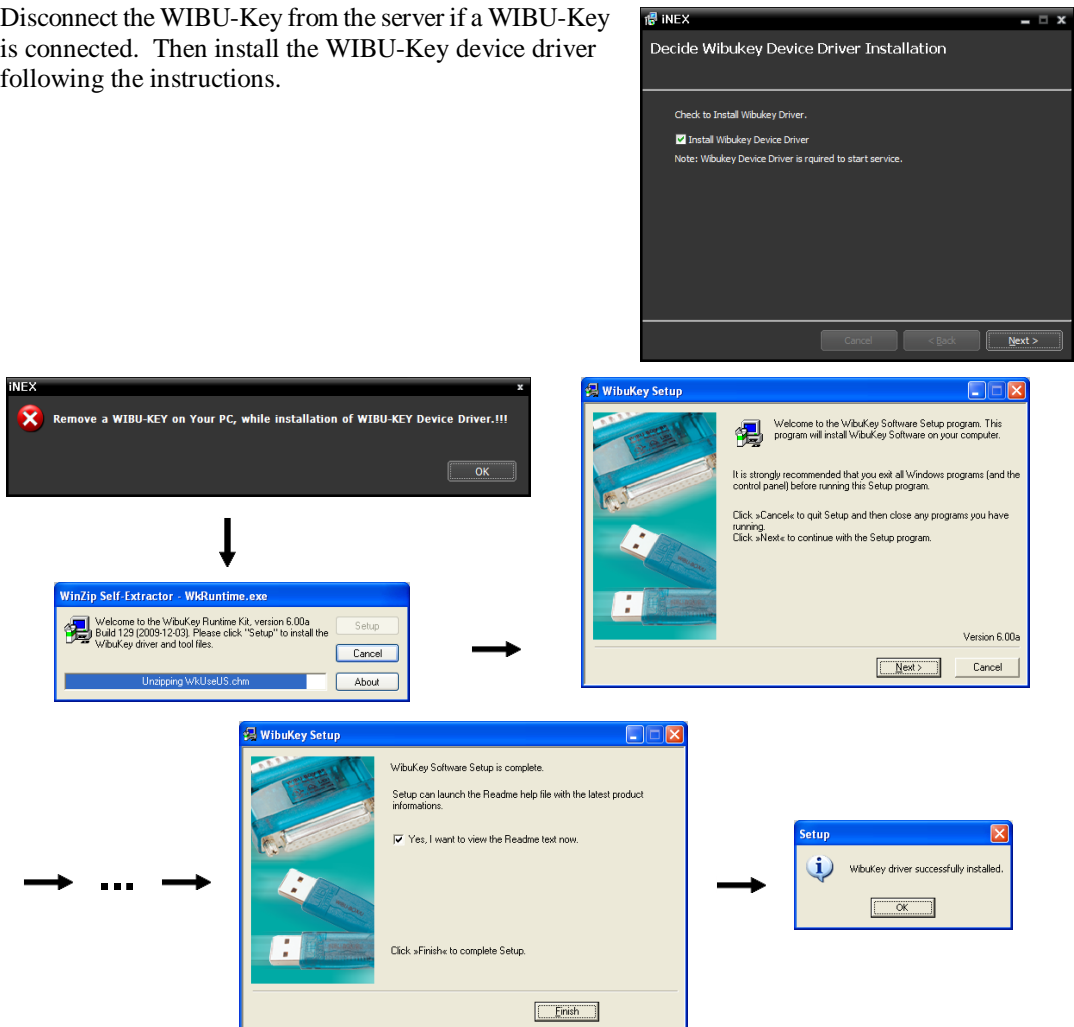


8. Select a license mode and click **Next**. You can change the settings in the Service Manager program after completing installation. Refer to 2.3 Automatic Upgrade, Update Service Setup (p.18) for details.



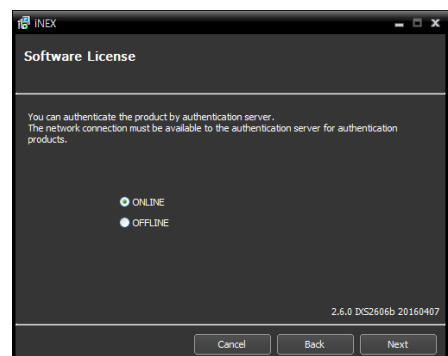
9. Select **Demo License** and click **Next** to use the demo license authentication. Demo license authentication requires no further license related process.

10. Disconnect the WIBU-Key from the server if a WIBU-Key is connected. Then install the WIBU-Key device driver following the instructions.

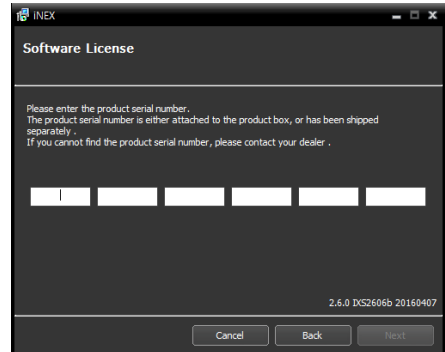


11. In order to use a software license authentication, select **Software License Authentication** mode and click **Next**. If the network connection to the authentication server is not available, select **OFFLINE**.

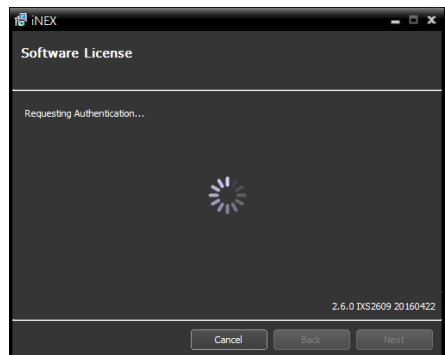
**NOTE:** The software license authentication is supported for the VMWare EXSi products only. Ask your dealer for details.



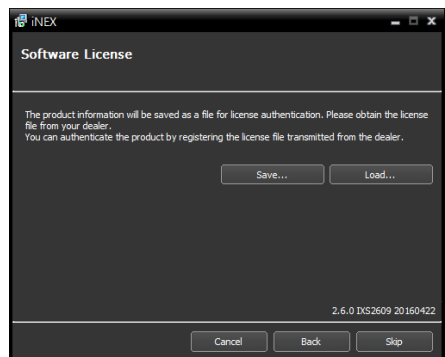
12. Enter the product serial number and click **Next**. The serial number is either attached to the product box or enclosed in the product box. If you cannot find the product serial number, please contact your dealer.



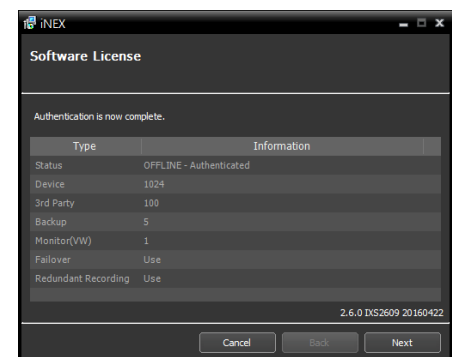
13. Online authentication requests authentication file from the remote authentication server through a network connection. If the network connection is not available due to network failure, select **Skip** and go on to the next step. You can authenticate with a license tool after completing installation.



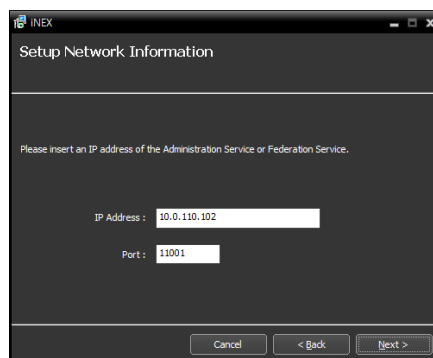
14. The offline authentication is available by registering the license file transmitted from the dealer in the exchange with the product information file.



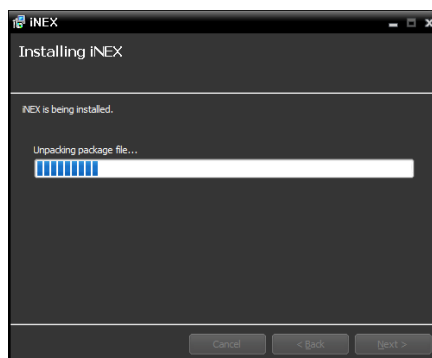
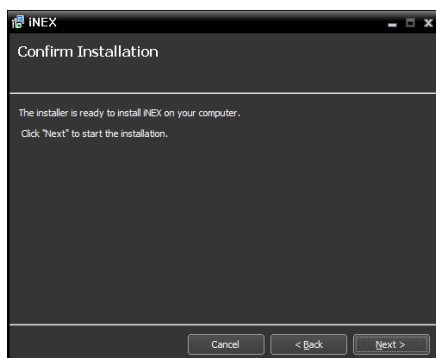
15. Current license information is displayed after the authentication is completed.



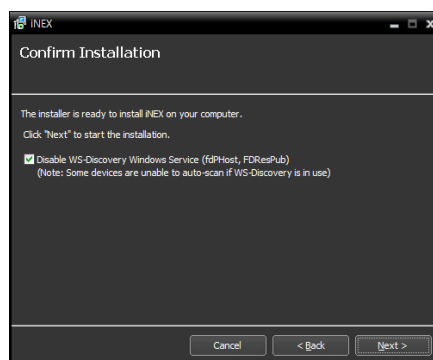
16. If the service is installed on separate PCs, it is required to enter the IP address and port number of the administration server when installing the monitoring service. You can change the settings in the Service Manager program after completing installation if necessary. When the installation is complete, the monitoring service is connected to the administration service via the network if both services are operating.



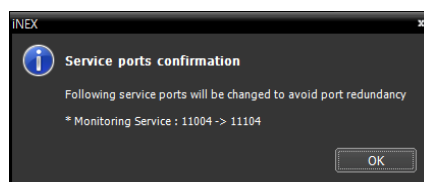
17. When the following screens appear, click Next.



**NOTE:** The following screen appears when using Microsoft® Windows® Vista or later operating systems. It is recommended that you check the *Disable WS-Discovery Windows Service (fdPHost, FDResPub)* box. If you do not check the box, the iNEX program cannot auto-scan devices using ONVIF™ Conformance protocol when scanning devices for device registration.



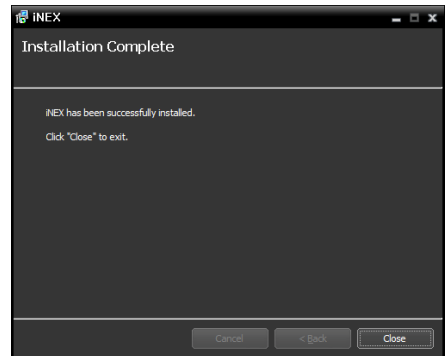
**NOTE:** The following screen appears when the port number of the service being installed is already in use, and the screen displays the port number that will be changed. The changed port number will be applied when the service starts operating after installation.



**NOTE:** .NET Framework and the Visual C++ Runtime Libraries are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

18. When the following screen appears, click the **Close** button to complete the installation.

**NOTE:** After successfully installing WIBU-Key device driver, select whether to restart the PC.



19. Connect WIBU-Keys to the administration server.

## **Recording Server / Streaming Server / Video Analytics Server**

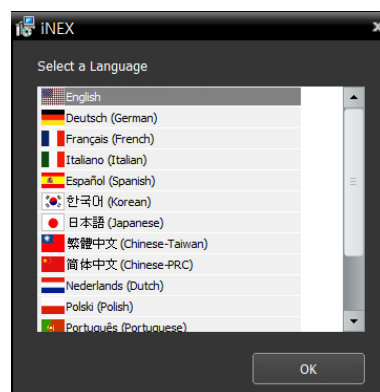
1. Insert the software CD in the server.
2. Run the **setup.exe** file in the **Setup** folder of the software CD.

**NOTE:** The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

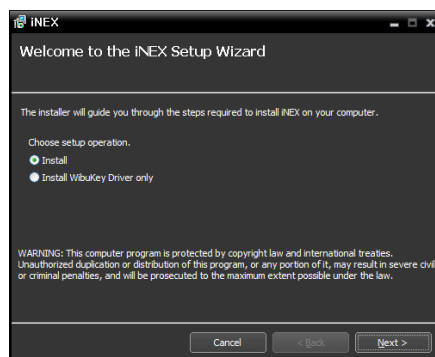
3. Select the language in which to run the program and then click **OK**.

### **NOTES:**

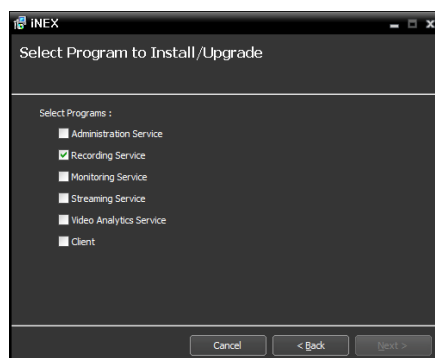
- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX* → *Utility* folder of the *Start* menu before running the *iNEX* program.



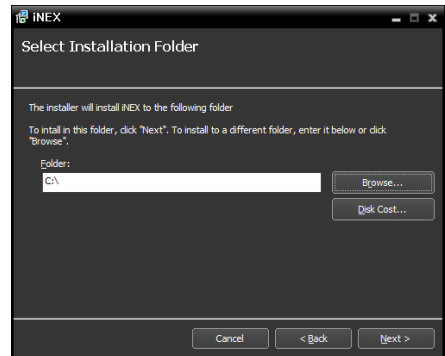
4. When the following screen appears, select **Install** and click **Next**.



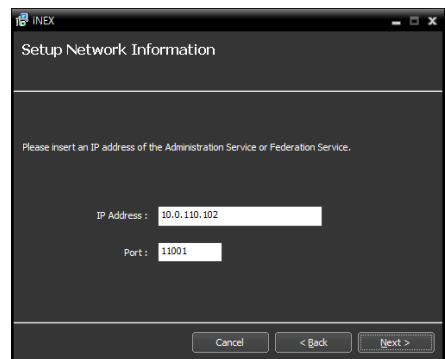
5. Select a service to install and click **Next**.



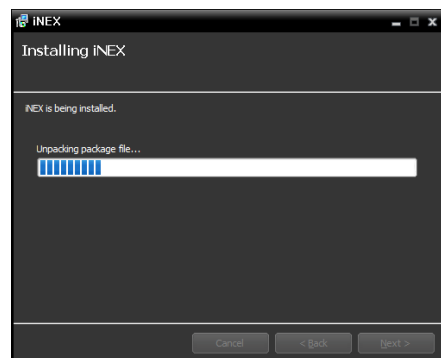
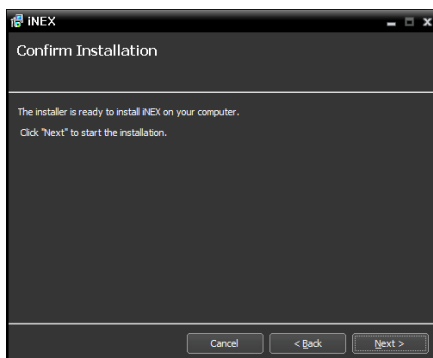
6. Designate the folder path to install the service. Clicking the **Disk Cost...** button shows the available and required disk space for each hard disk drive for the installation. Then click **Next**.



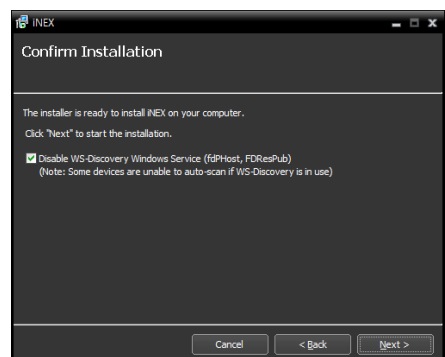
7. Enter the IP address and port number of the administration server and click **Next**. You can change the settings in the Service Manager program after completing installation. When the installation is complete, the installed service is connected to the administration service via the network if the services are operating.



8. When the following screens appear, click **Next**.

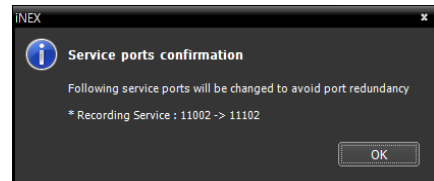


**NOTE:** The following screen appears when using Microsoft® Windows® Vista or later operating systems. It is recommended that you check the *Disable WS-Discovery Windows Service (fdPHost, FDResPub)* box. If you do not check the box, the iNEX program cannot auto-scan devices using ONVIF™ Conformance protocol when scanning devices for device registration.






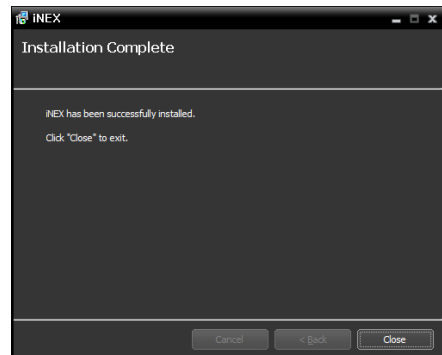
**NOTE:** The following screen appears when the port number of the service being installed is already in use, and the screen displays the port number that will be changed. The changed port number will be applied when the service starts operating after installation.



**NOTE:** .NET Framework and the Visual C++ Runtime Libraries are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

- When the following screen appears, click the Close button to complete the installation.

**NOTE:** After successfully installing the service, the service, Service Manager program (the  icon is displayed in the notification area of the task bar) and Setup program run automatically.



- Connect WIBU-Keys to the administration server.

## Client System

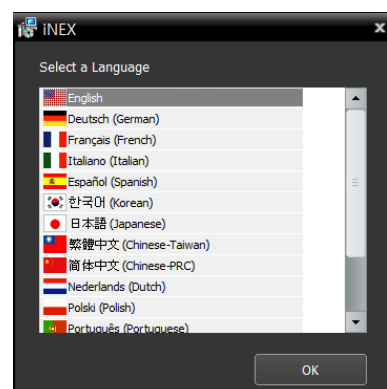
- Insert the software CD in the Client PC.
- Run the setup.exe file in the Setup folder of the software CD.

**NOTE:** The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

- Select the language in which to run the program and then click OK.

### NOTES:

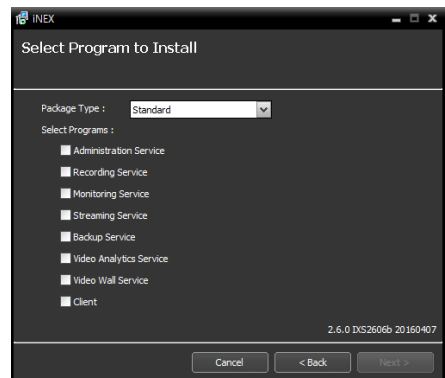
- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX* → *Utility* folder of the *Start* menu before running the *iNEX* program.



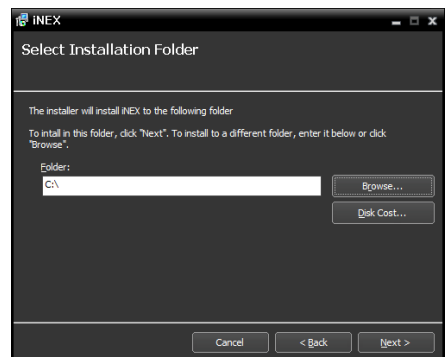
4. When the following screen appears, select **Install** and click **Next**.



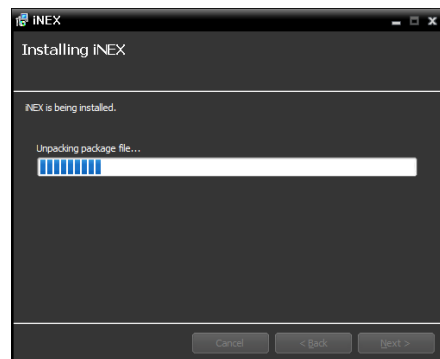
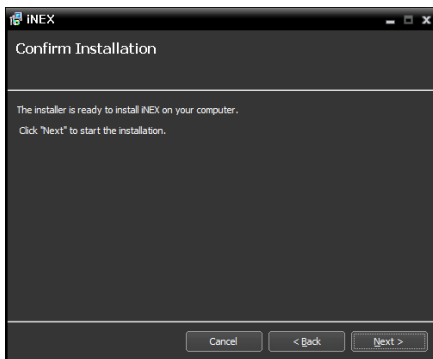
5. Select **Client** and click **Next**.



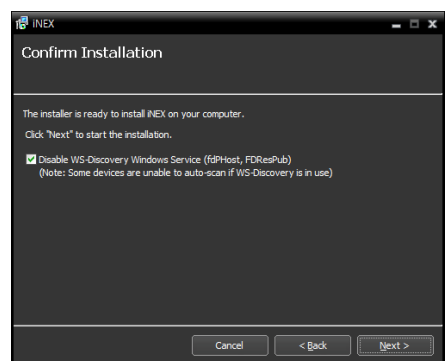
6. Designate the folder path to install the Client program. Clicking the **Disk Cost...** button shows the available and required disk space for each hard disk drive for the installation. Then click **Next**.



7. When the following screens appear, click Next.

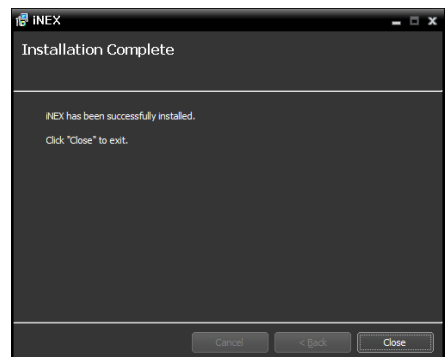


**NOTE:** The following screen appears when using Microsoft® Windows® Vista or later operating systems. It is recommended that you check the *Disable WS-Discovery Windows Service (fdPHost, FDResPub)* box. If you do not check the box, the iNEX program cannot auto-scan devices using ONVIF™ Conformance protocol when scanning devices for device registration.



**NOTE:** .NET Framework and the Visual C++ Runtime Libraries are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

8. When the following screen appears, click the Close button to complete the installation.

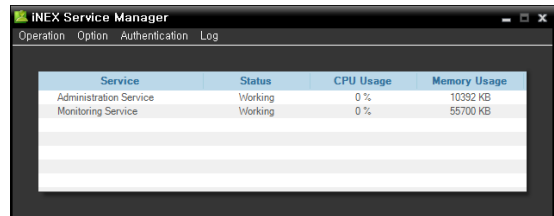


## 2.3 Automatic Upgrade

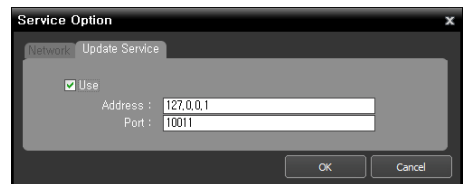
You can upgrade all services automatically by running the update service and designating the installation file of the software version to upgrade.

### Update Service Setup

1. Run the Service Manager program in the administration server.



2. Select Administration Service and click Option menu. Then select Update Package and select Update Service tab. Check the Use box and enter the IP address and port number of the update server.



## Update Service Installation

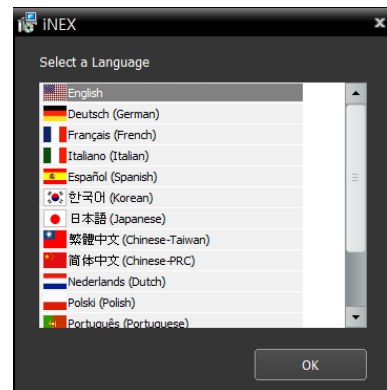
1. Insert the software CD in the update server.
2. Run the `setup.exe` file in the `Update` folder of the software CD.

**NOTE:** The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

3. Select the language in which to run the program and then click **OK**.

**NOTES:**

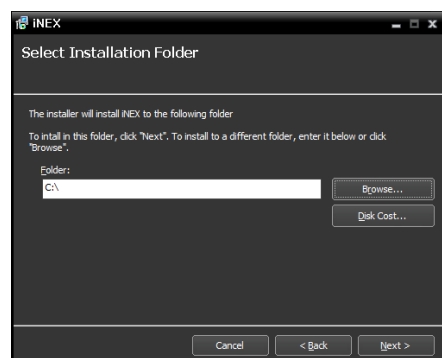
- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX* → *Utility* folder of the *Start* menu before running the *iNEX* program.



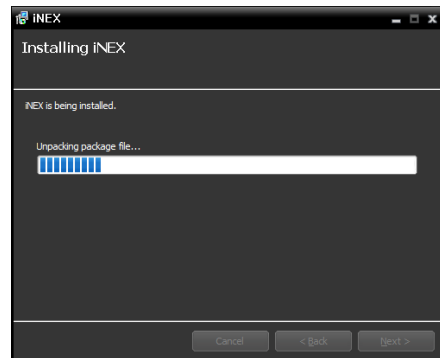
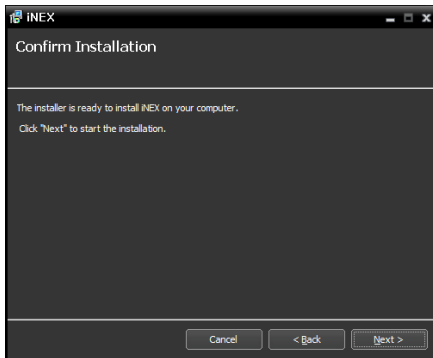
4. When the following screen appears, select **Install** and click **Next**.



5. Designate the folder path to install the service. Clicking the **Disk Cost...** button shows the available and required disk space for each hard disk drive for the installation. Then click **Next**.

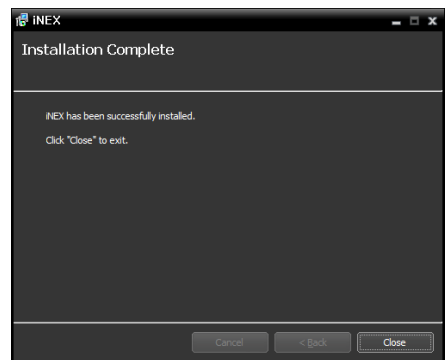


6. When the following screens appear, click **Next**.



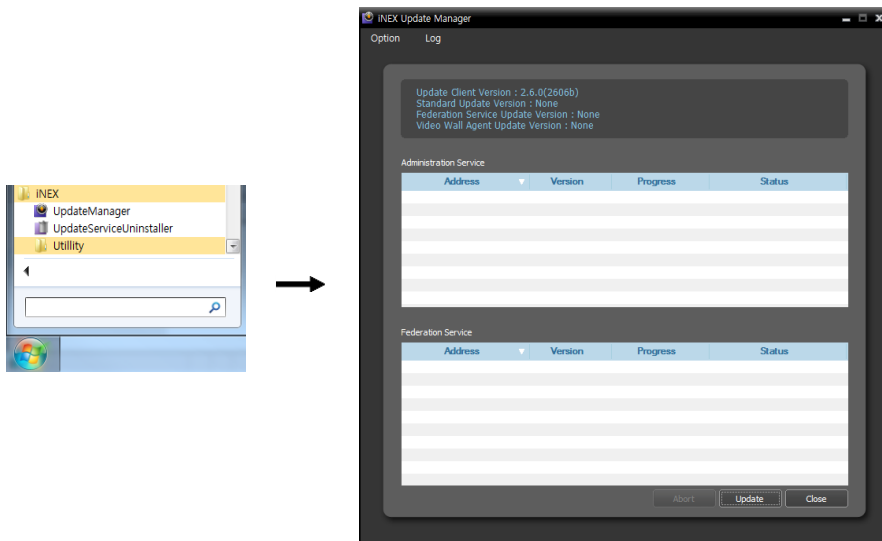
**NOTE:** *.NET Framework* and the *Visual C++ Runtime Libraries* are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

- When the following screen appears, click the Close button to complete the installation.



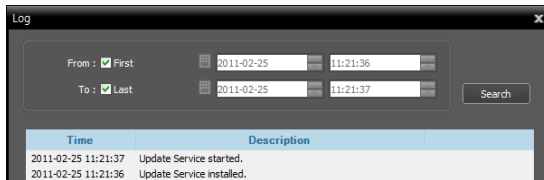
## Upgrade

- Go to the Start Menu in the update server → Click iNEX → Run the Update Manager program.



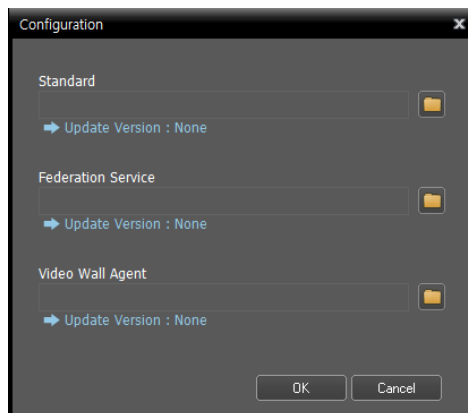
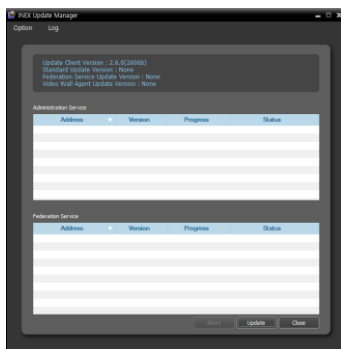
- Option: Designates the upgrade file or sets up the port number of the update server.
  - Update Package: Designates the folder path of the upgrade installation file.

- Port Setup: Sets the port number of the update server.
- Log: Selecting Show Log allows you to check and search the system log.



Setting up the time range of the log and clicking the Search button displays the log information. Selecting First displays from the oldest log entries regardless of date. Selecting Last displays to the newest log entries regardless of date.

2. Click the Option menu and select Update Package.



Click the  button and designate the folder path of the upgrade installation file. Click the OK button.

3. Click the Update button at the bottom of the Update Manager screen. For a Client system with no iNEX service program installed, clicking the Update button upgrades the Client program. For server systems, each service connects to the update service periodically and automatically upgrades if necessary.

## 2.4 Uninstall

1. Stop running the services and Client program first.

**NOTE:** The iNEX software might not be uninstalled correctly if you uninstall it while the services or Client program is running.

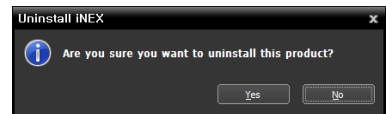
**CAUTION:** The iNEX software should be uninstalled following the procedures below. If you delete the installation folder manually, the iNEX software cannot be uninstalled or reinstalled.

2. Go to the Start Menu, and click iNEX. Click Uninstall iNEX.

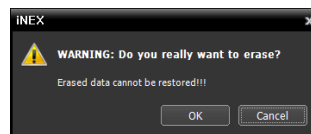
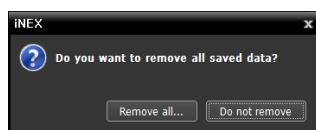
**NOTE:** You can uninstall the software by using the software CD. Insert the software CD in the server or Client PC and run the *setup.exe* file. Select *Remove* and click *Next*.



3. Click **Yes** when the following screen appears.



4. Click the **Remove All** or **Do not remove** button when the following screen appears. Clicking the **Remove All** button deletes all saved data including recorded video and previous settings in the system. Clicking the **Do not remove** button uninstalls the software without deleting any saved data in the system and keeps all saved data in the system.



**NOTE:** The deleted data cannot be restored once the data is deleted.

5. Click the **OK** button to complete the uninstall process.



## Chapter 3 — Getting Started

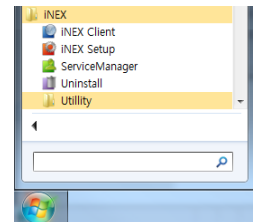
The iNEX software consists of Service Manager, Setup and Client programs, and services should be running on the iNEX servers for the iNEX program to operate. Refer to [Chapter 4 — System Overview \(p. 35\)](#) for details about Service Manager, Setup and Client programs.

**NOTE:** In this document, the “server or server system” refers to a PC on which the iNEX service is running, the “client system” refers to a PC on which the Client program is running and the “network video device” refers to a network video transmitter or network camera.

### 3.1 Running Services

**NOTE:** A “service” in the iNEX program is a process that runs in the background and performs a specified operation.

When the services are installed, the services run automatically. You can also start or stop running the services manually. Go to the **Start Menu** → Click **iNEX** → Run the **Service Manager** program.



Administration Server

iNEX Service Manager			
Operation Option Log			
Service	Status	CPU Usage	Memory Usage
Administration Service	Working	0 %	10392 KB
Monitoring Service	Working	0 %	55700 KB

Recording / Streaming / Video Analytics Server

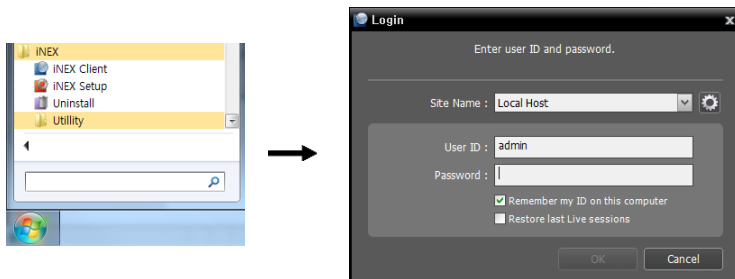
iNEX Service Manager			
Operation Option Log			
Service	Status	CPU Usage	Memory Usage
Recording Service	Working	0 %	71148 KB


Check the status of services. If any of the services are not listed as **Working** under **Status**, start the services manually. Refer to [4.2 Service Manager \(p. 39\)](#) for details about the Service Manager program.

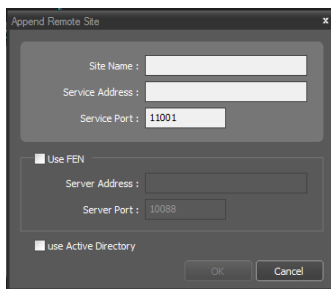
## 3.2 Log In

You are required to log in to the administration service as follows when running the Setup and Client programs.

Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** or **iNEX Client** program and enter login information.



- **Site Name:** Select the administration service to connect to from the list. Select **Local Host** as the default setting if the administration service is running in the current system. You can add other administration services to the list or modify information about the administration service in the list by clicking the  button at the right.



- **Site Name, Service Address, Service Port:** Designate the name of the administration service and enter the IP address and port number of the administration server (default: 11001).

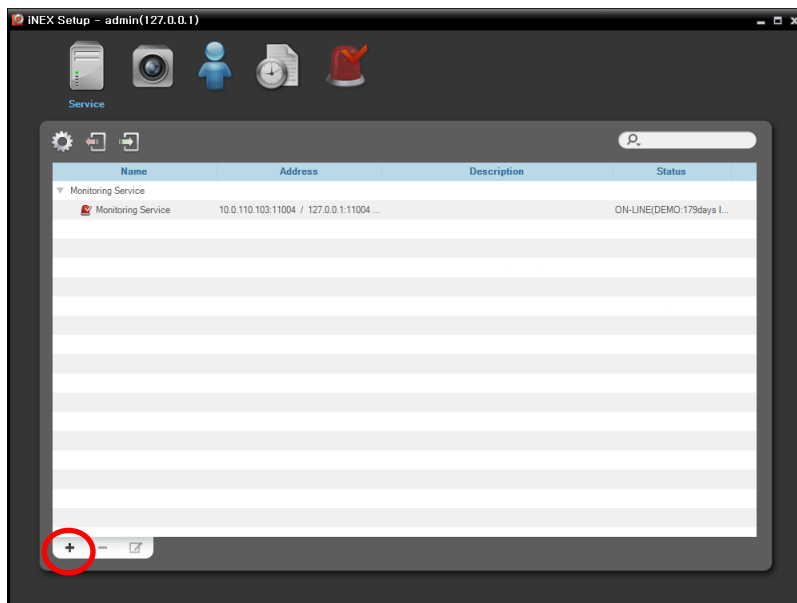
- **User ID, Password:** Enter your user ID and password. The default user ID is **admin** and default password is **12345678**. You can change the user ID and password in the User menu. Refer to **Chapter 14 — User Management** (p. 171) for details.
- **Remember my ID on this computer:** Check the box if you want to save your ID for logging on.
- **Restore last Live sessions:** Check the box if you want to restore the previous live monitoring sessions in the current Live panels of the Client program (supported only for the Client program).

### 3.3 Registering Services

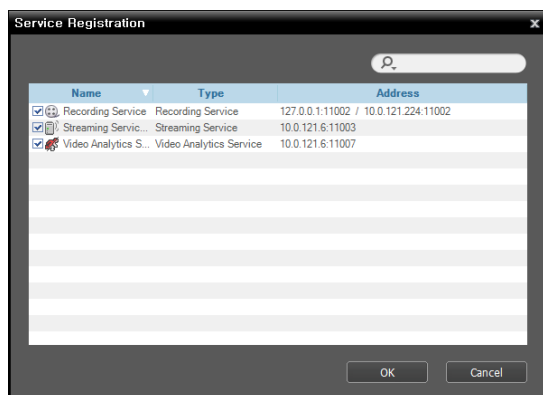
You must register recording, monitoring, streaming and video analytics services on the administration service to start the iNEX program. Services that are installed on the administration server are registered on the administration service automatically.

Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.

Select the **Service** menu, and then register recording, monitoring, streaming and video analytics services following the procedures below.



1. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.

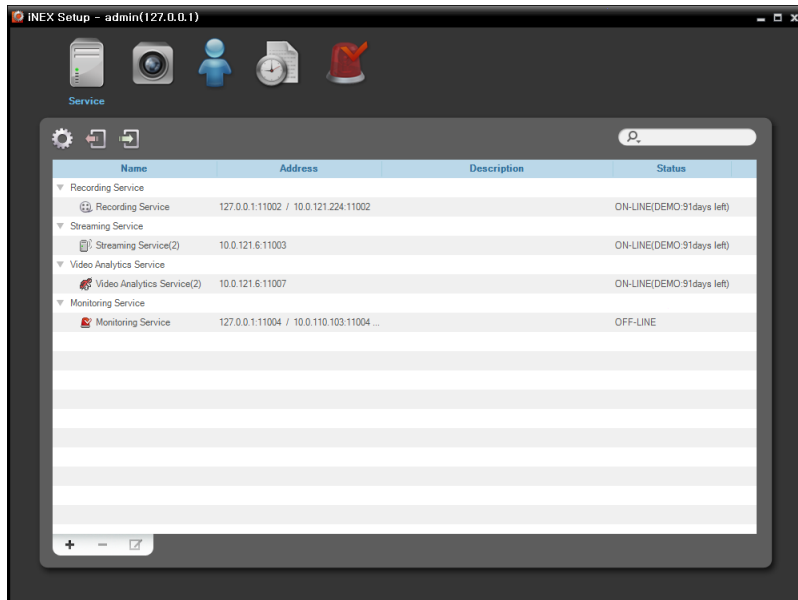


- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

#### NOTES:

- Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.
- You cannot register more than one monitoring service on one administration service.

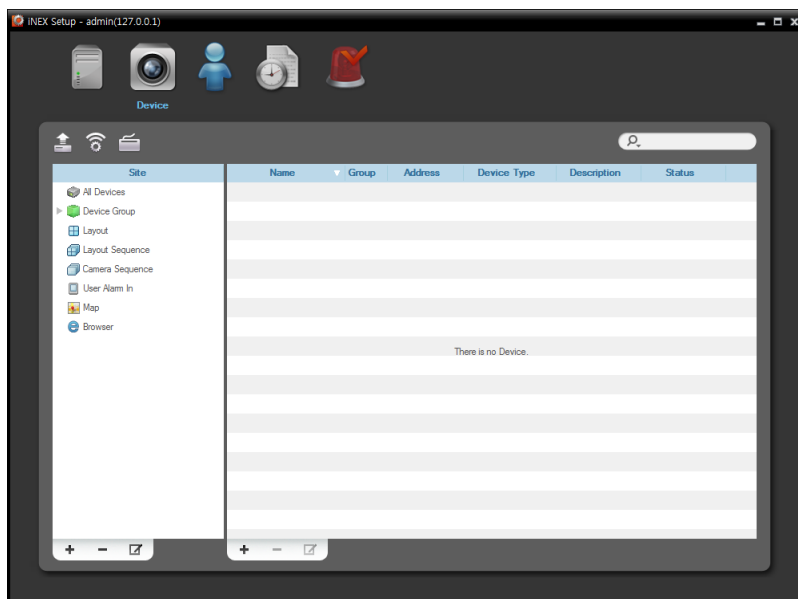
2. Select recording, monitoring, streaming and video analytics services to register on the iNEX system, and the selected services are displayed in the service list.



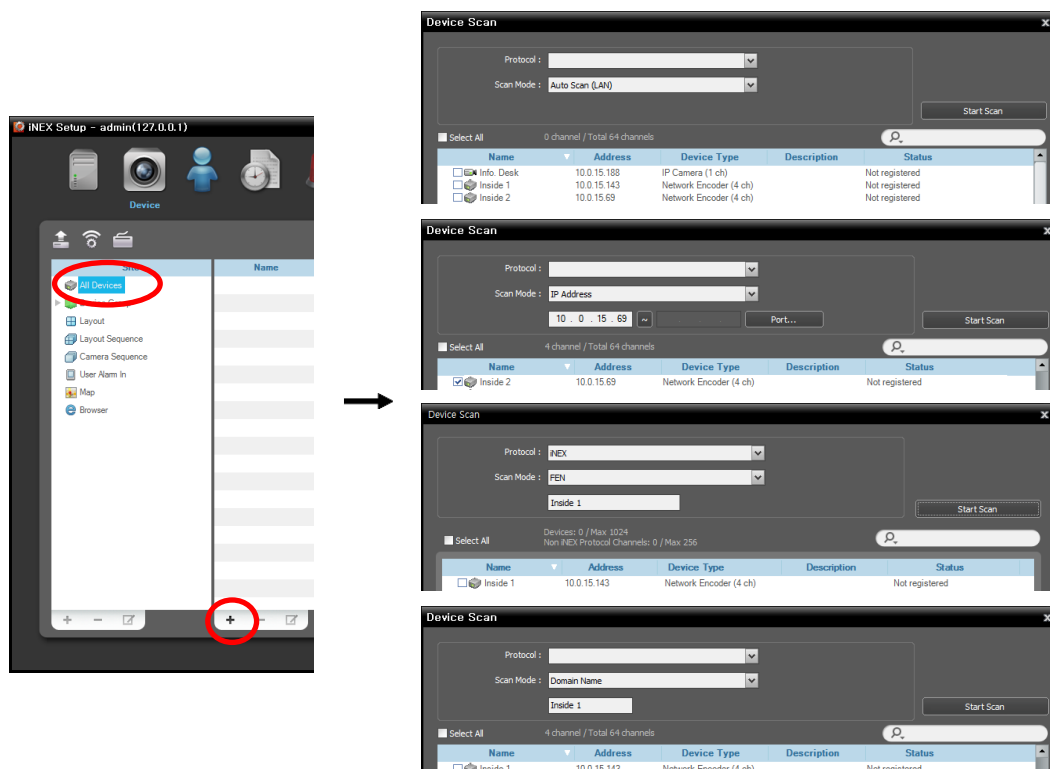
### 3.4 Registering Devices

You must register devices on the administration service and add the devices to a device group in order to perform any operation.



Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



1. Select the Device menu.
2. Click All Devices in the Site panel, and then the **+** button at the bottom of the Site List panel. The Device Scan window appears.



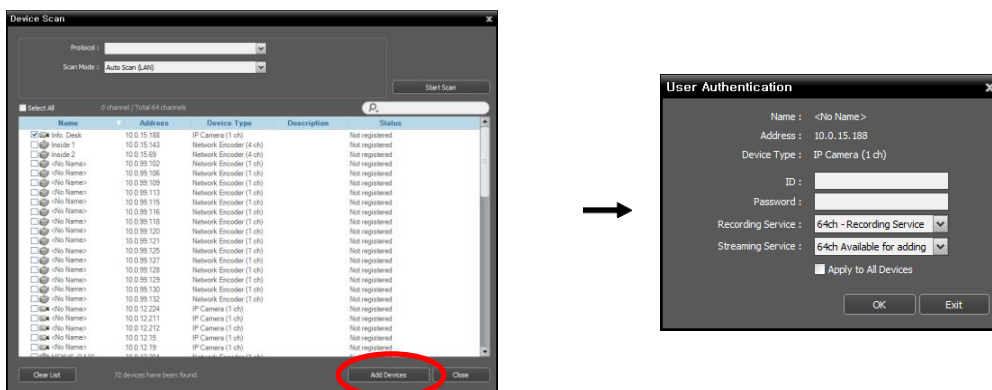
- **Protocol:** Select the protocol or manufacturer of the device to scan. Event related functions may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Some other functions may not be supported depending on the settings of the device. Ask your dealer or distributor for details.
- **Scan Mode:** Select the scan mode. Clicking the **Start Scan** button displays the results in the list. If the IP address range of the device is different from that of the administration server, the iNEX program considers the IP address invalid. In this case, you must change the device's IP address to register the device.
  - **Auto Scan (LAN):** Lists devices in a LAN environment (not supported for some models of DVRs). If the device uses the ONVIF™ Conformance protocol, this function is supported only when you have checked the **Disable WS-Discovery Windows Service (fdPHost, FDResPub)** box during the software installation in Microsoft® Windows® Vista or later operating systems. Also, if the device uses the ONVIF™ Conformance protocol, it is recommended that the device not be networked via DHCP (Dynamic Host Configuration Protocol). If the device is networked via DHCP, connection to the device may not be made properly depending on changes in the external network environment.
  - **IP Address:** Allows you to enter the IP address of a device. You can search more than one device at a time by entering a range of IP addresses. It is recommended that the device not be networked via DHCP (Dynamic Host Configuration Protocol). If the device is networked via DHCP, connection to the device may not be made properly depending on changes in the external network environment.

- **FEN:** Allows you to enter the device FEN name registered on the FEN server if the device uses the FEN function. Ensure the FEN server information on which the device is registered is correct (Service menu →  (System Setup) button). If the FEN server information is not correct, the device will not be found.
- **Domain Name:** Allows you to enter the device's domain name registered on a DNS server if the device uses the Domain Name Service.
- **Device Information File:** Allows you to import an .xml file which has device connection information and lists the devices. Ask your dealer or distributor for details about the .xml file.
- **URI:** Allows you to enter URI (Uniform Resource Identifier). (supported only for the RTSP/RTP protocol)
-  : Select the devices to register by checking the box beside each device name in the list. Selecting the **Select All** box selects all devices in the list.

#### NOTES:

- Depending on the model, the device may not be supported even though the iNEX program supports the device's protocol. Ask your dealer or distributor about supported models.
- If the device uses the ONVIF™ Conformance protocol, you can select either the manufacturer (or iNEX protocol) or the ONVIF™ Conformance protocol. However, it is possible that one or both of them are not supported depending on the device model. Ask your dealer or distributor for details. Refer to the device's user manual about enabling the ONVIF™ Conformance protocol in the device, as procedures may differ for each model.
- If a device uses the iNEX protocol and is set up in DirectIP™ mode, then you cannot add the device. In this case, clicking the device allows you to change its mode and reboot the device. After rescanning, you can add the device.
- If the device uses the Protocol-H protocol and is registered in the *Auto Scan (LAN)* mode, *Auto Scan (LAN)* mode changes to *IP Address* mode automatically after the registration.
- If a device is higher than 2304x1296 and the iNEX service is installed in 32-bit mode, then you cannot add the device. In this case, iNEX system should be installed in 64-bit mode.

#### 3. Click the Add Devices button at the bottom.



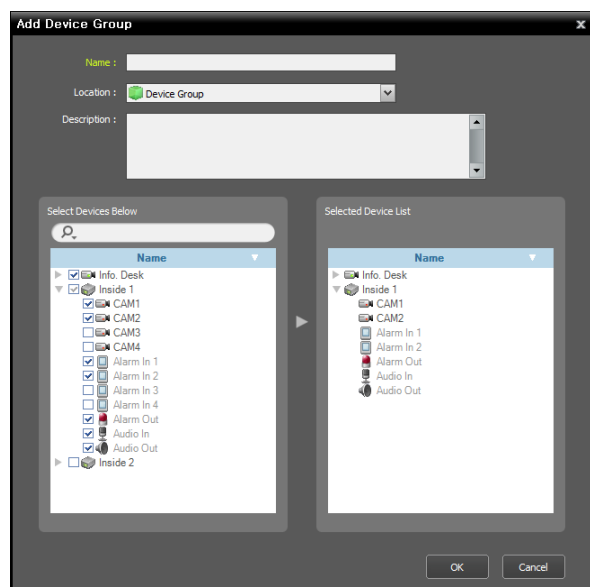
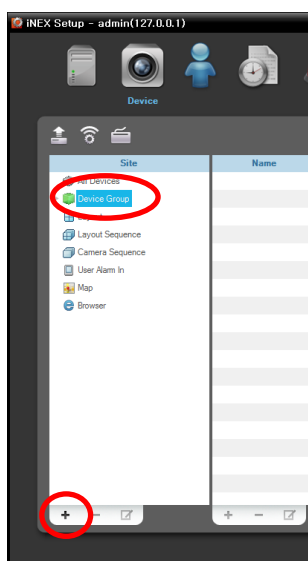
- **Name, Address, Device Type:** Displays the name, IP address and type of the selected device. The name will be updated automatically depending on the settings of the device.
- **ID, Password:** Enter the user ID and password which you set in the device in order to connect to that device remotely. The connection to the device is allowed only to the users under the Administrator group of the device, and recording is allowed only to the admin user under the Administrator group of the device.

- **Recording Service:** Select a recording server from the list to record video from the selected device (supported only for the network video devices). The device is registered on the recording server and the recording server performs recording according to a recording schedule. It is recommended that you do not change the recording server once any recording has been made. If you change the recording server after some recording has been done, you cannot search or play back the video recorded on the original recording server. The number in the recording server list indicates the maximum number of cameras that can be registered, and the name indicates the name of a recording service, which was set during the Service menu setup. The maximum number of cameras that can be registered differs depending on the type and number of the WIBU-Keys connected to the administration server. When selecting the Do not record option, the iNEX program treats the device during the Schedule setup as though it was not registered and does not perform any of the scheduled activities associated with the device. You can check the list of devices registered on the recording server on a Device Setup tab while setting up the recording server in the Service menu. Refer to **Chapter 15 — Storage Management** (p. 177) for details.
- **Streaming Service:** Select whether or not to use the streaming service for monitoring video from the device. If you use the streaming service, the iNEX program transmits video from the device to the client system through the streaming server, and it allows multiple users to monitor video simultaneously. The number of channels that can be streamed equals the number of channels that can be recorded unless streaming WIBU-Keys have been added. When you register more than one streaming service by buying additional WIBU-Keys, the iNEX program chooses any one of the streaming services depending on the system load of the streaming server. Refer to **Chapter 11 — Streaming** (p. 133) for details.
- **Apply to All Devices:** Select to apply the same user ID and password to all selected devices if you selected more than one device and the selected devices have the same user ID and password.

#### NOTES:

- The number and type of registered devices can be different depending on the type of licenses.
- If the device is a DVR, it might be necessary to enter the DVR port numbers depending on the specifications and version of the DVR.
- When registering a four-channel network video transmitter which uses the iNEX protocol, all four cameras are automatically registered even if some of the four cameras are disabled.

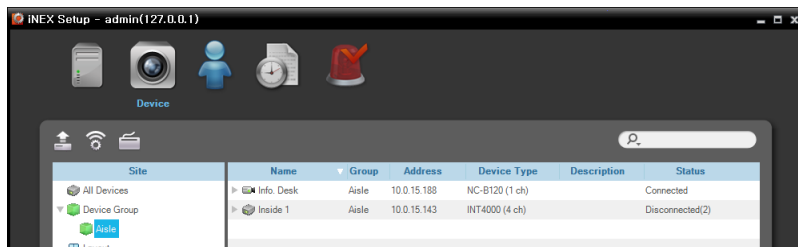
4. Click Device Group in the Site panel, and then the **+** button at the bottom of the Site panel. The Add Device Group window appears.



- **Name:** Enter the device group name.
- **Location:** Select an upper group to which the device group will belong.
- **Select Devices Below, Selected Device List:** Check the box beside cameras in the left panel, and the selected cameras are added to the right panel.

Clicking the OK button completes the device group registration.

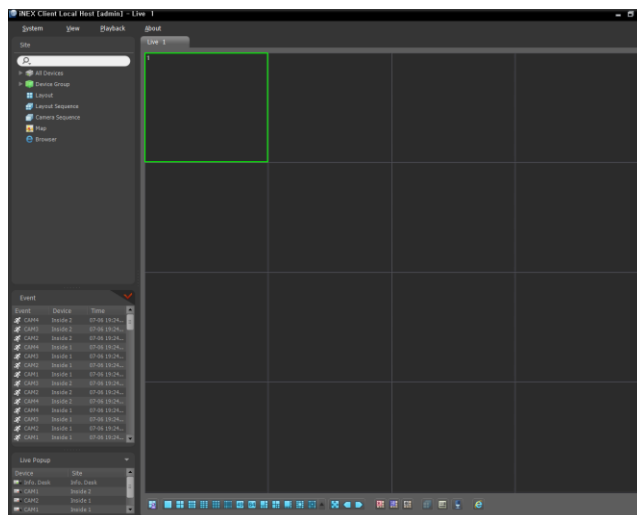
5. Check that the device was added to the device group correctly. Click **Device Group** in the **Site** panel and then the arrow button (➡) beside **Device Group**. Clicking the registered group displays the list of devices added to the device group and connection status in the **Site List** panel. If the connection was not made properly, the network disconnection log is displayed (only for devices registered on the recording service). Refer to **Appendix – Network Disconnection Log** (p. 263) for details about the network disconnection log.



Selecting the registered device group, and then the ☒ button at the bottom of the **Site List** panel displays the **Edit Device Group** window and allows you to edit the selected device group. Refer to **Chapter 13 – Device Management** (p. 143) for details.

## 3.5 Live Video Monitoring

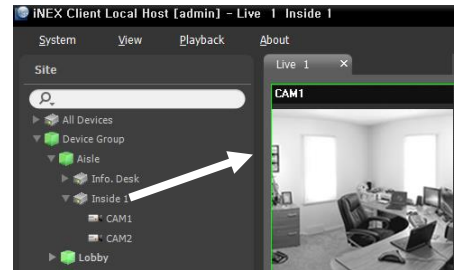
Go to the Start Menu → Click **iNEX** → Run the **iNEX Client** program and enter login information.



1. Check that the devices were added to a device group in the **Site** list.



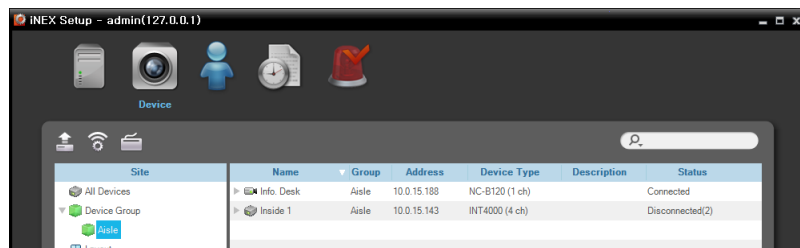
- Click the Live tab on the tab panel → Select a site to connect to from the **Site** list, and drag and drop it on the Live screen. Live video from the selected site is displayed on the screen. Refer to Chapter 5 — Live Video Monitoring (p. 69) for details.



## 3.6 Recording

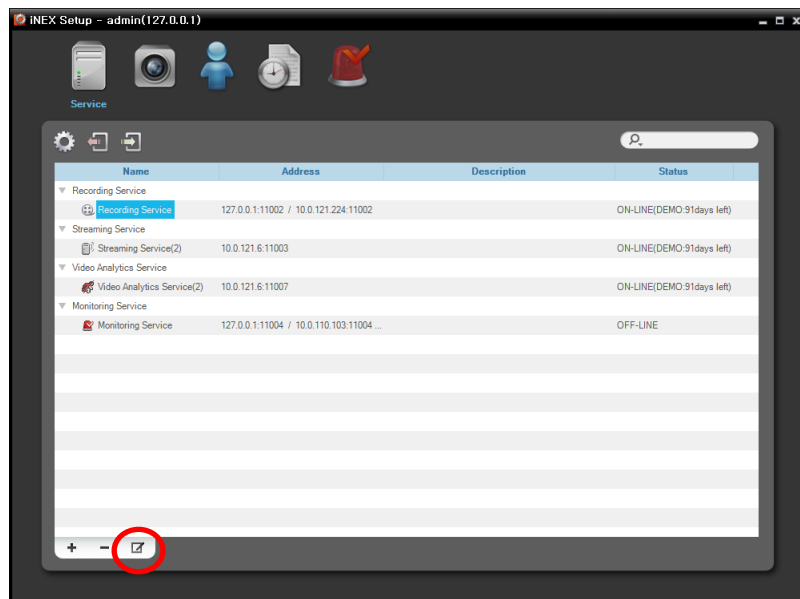
You have to allocate storage and set up recording schedule. Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.


Check that the devices were added to a device group in the **Device** menu.

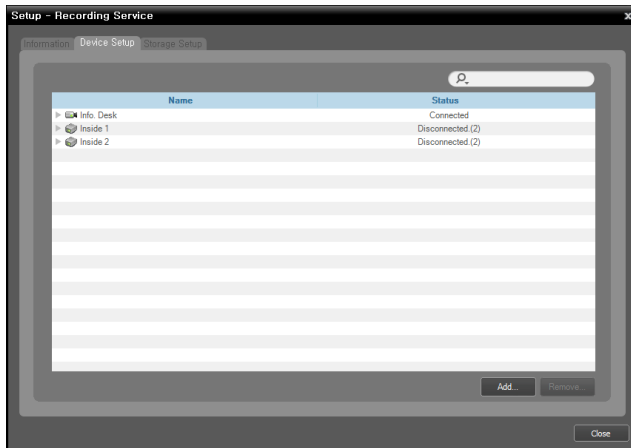


## Allocating Cameras and Storage

Select the **Service** menu. Then select a recording server and allocate storage to hard disk drives in the selected server following the procedures below. Refer to 6.1 Setting up Recording Storage (p. 91) for details.




1. Select a recording service and click the  button at the bottom. The Setup – Recording Service window appears. Select the Device Setup tab.

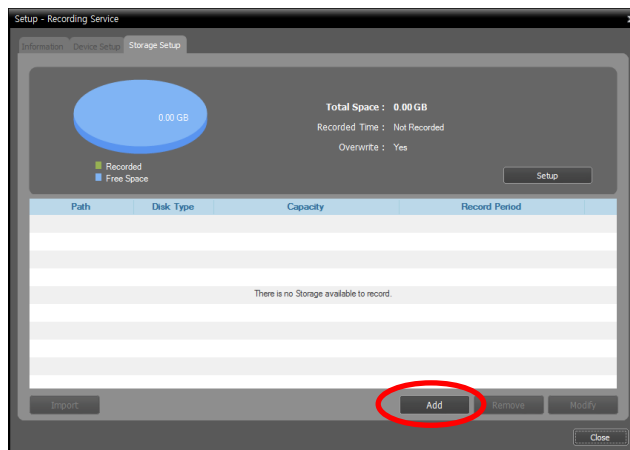


The list of cameras registered on the current recording service is displayed. Clicking the Add button at the bottom allows you to register additional cameras on the current recording service.

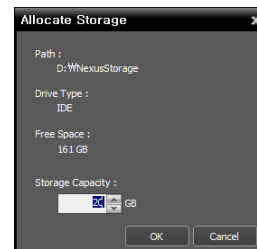
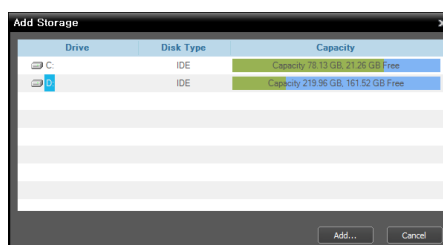
#### NOTES:

- The number of devices that can be recorded in a recording server differs depending on the type and number of the WIBU-Keys connected to the administration server.
- If you remove a device for which some recording has been done and register the device again, the iNEX system considers the device as a new device. In this case, you can search or play back video recorded before the device was removed as follows: go to the *Play* panel → click the  (Additional Menu) button → select *Removed Devices*.
- Recording is not supported for DVRs.

2. Select the Storage Setup tab and click the Add button at the bottom.

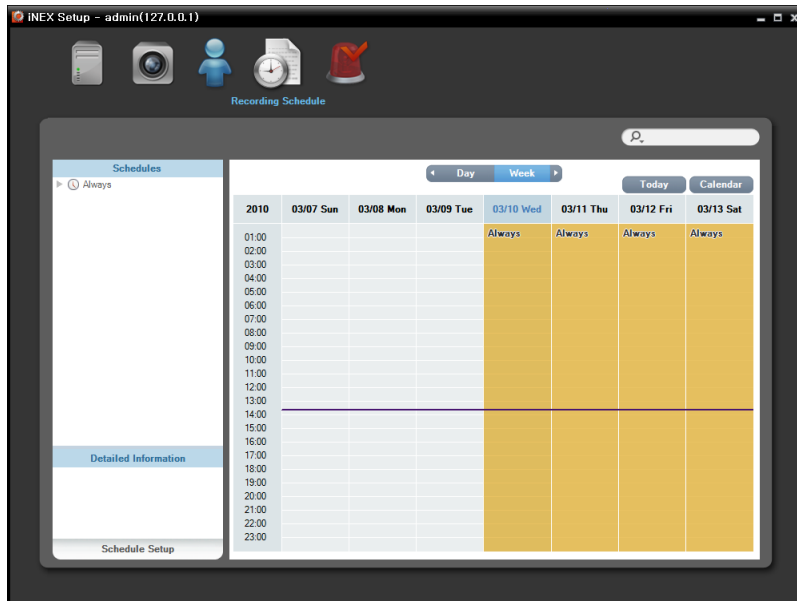


3. Select a hard disk drive from the list and click the Add button at the bottom. Allocate storage when the Add Storage window appears.

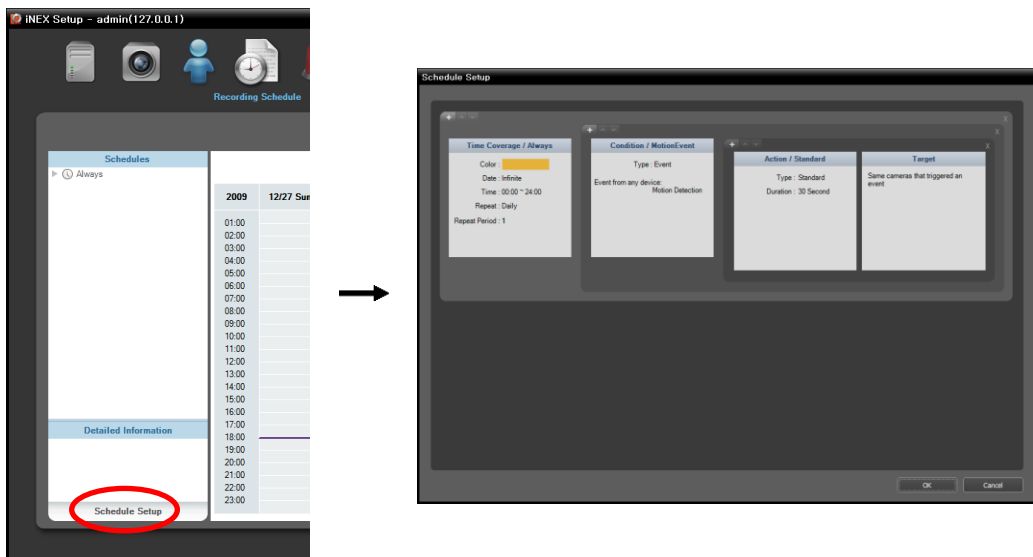


## Setting up Recording Schedule

Select the Recording Schedule menu and set up the recording schedule following the procedures below. Refer to 6.2 Setting up Scheduled Recording (p. 95) for details.



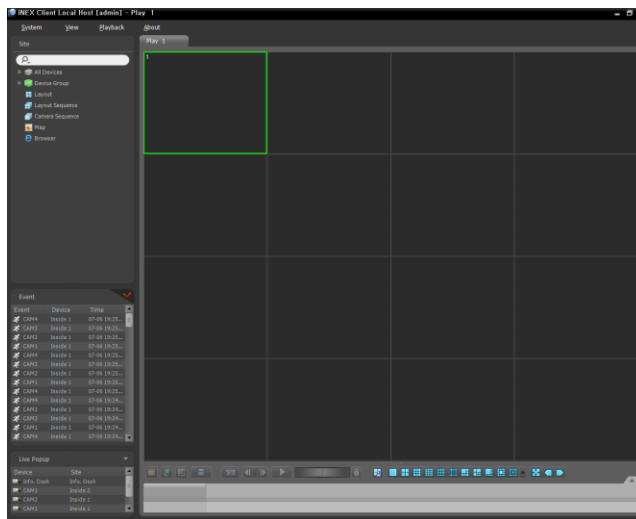
1. Click the Schedule Setup button at the bottom. The Schedule Setup window appears, and schedule windows are displayed with the current settings for each Preset.



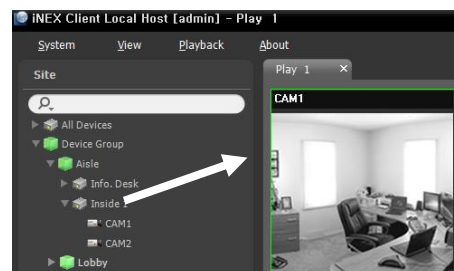
2. Double click anywhere in the empty space of each schedule window, and the Preset setup window appears.
3. Select a desired Preset from the Preset list, or click the **+** button to add a new Preset. Selecting a Preset from the list and clicking the **-** or **✓** button deletes the selected Preset or allows you to edit the selected Preset settings. Clicking the OK button applies the settings.

## 3.7 Playing Recorded Video

Go to the Start Menu → Click iNEX → Run the iNEX Client program and enter login information.



1. Check that the devices were added to a device group in the **Site** list.
2. Click the Play or DVR Search tab on the tab panel → Select a site to connect to from the **Site** list and drag and drop it on the Play or DVR Search screen. Recorded video from the selected site is displayed on the screen. Refer to Chapter 7 — Recorded Video Playback & Exportation (p. 109) for details.



## Chapter 4 — System Overview

The iNEX software consists of the following programs:

- **Service Manager:** Controls the operation of services or displays system log. Refer to 4.2 **Service Manager** (p. 39) for details.
- **Setup:** Allows you to add service, devices and users, or set up recording schedules, event management schedules and storage. Refer to 4.3 **Setup** (p. 44) for details.
- **Client:** Allows you to monitor video from registered cameras, play back recorded video from storage, export recorded video and check the system log and devices' status. Refer to 4.4 **Client** (p. 53) for details.

**NOTE:** The following programs are provided apart from the iNEX program running (Go to the *Start Menu* → Click *iNEX* and then *Utility*).

- **ProblemReporter, SecretKey:** You will use them following the directions of your dealer or distributor when your dealer or distributor requests.
- **LanguageSelector:** Use it to change the iNEX program's language.
- **License Tool:** Use it for the software license authentication.

### 4.1 License

The iNEX software supports demo, WIBU Key and software license.

The demo license lasts for 70 days in maximum, and the software or WIBU Key license authentication before the expiration date is necessary to use continuously.

#### WIBU Key License

When running with the WIBU Key license, the number of devices and services that can be registered differ according to the number and type of WIBU Keys connected to the administration server. Some of the services require WIBU Keys connected to the system with the other installed service instead of the administration service. Ask your dealer or distributor for details about it.

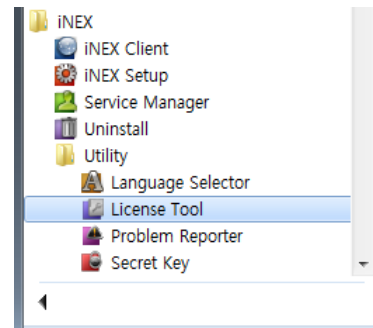
- The number of services that can be registered is as follows:
  - One monitoring service, one to four streaming services, 32 video analytics services, 64 recording services, 64 recording redundant services, 64 backup services, 8 video wall services, the same number of failover services as administration, monitoring, recording and video wall services. The number of streaming and failover services that can be registered is the same as the number of streaming service of WIBU-Key. Backup, video wall, recording redundant, and failover services are sold separately.

#### Software License

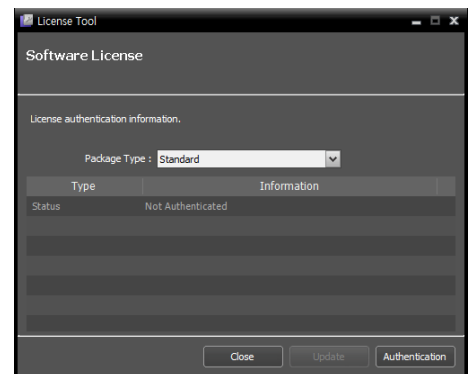
The software license authentication is supported for the VMWare EXSi products only. Ask your dealer or distributor for details about it.

## **Software License Authentication**

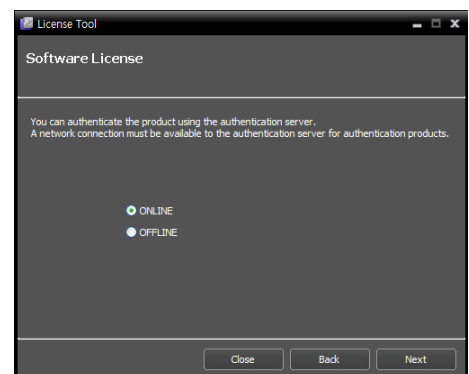
1. Go to the Start Menu → Click iNEX → Run the License Tool program.



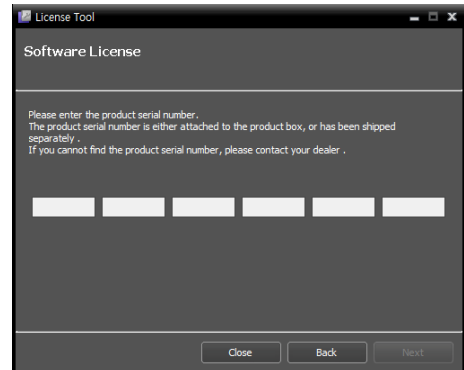
2. License Tool displays the installed iNEX software package. Select a package to get the software license authentication and click Authentication.
- Package Type: Displays the installed iNEX software package.



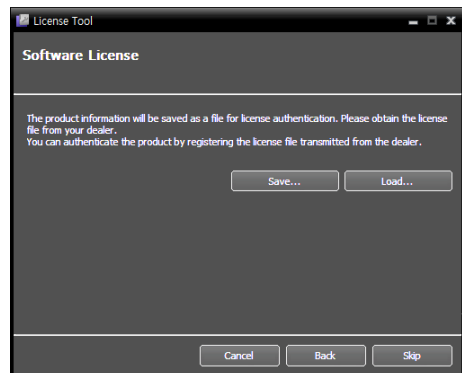
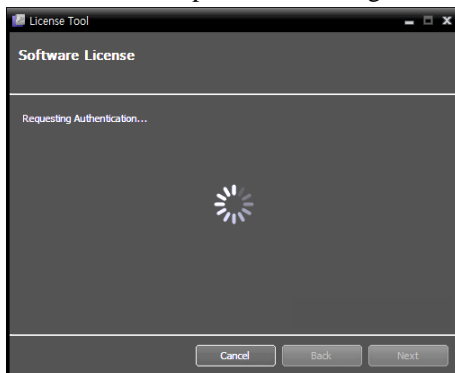
3. Select a software license authentication mode and click Next.



4. Enter the product serial number and click Next. The serial number is either attached to the product box or enclosed in the product box. If you cannot find the product serial number, please contact your dealer.

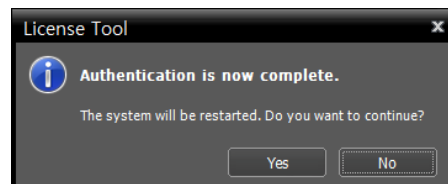
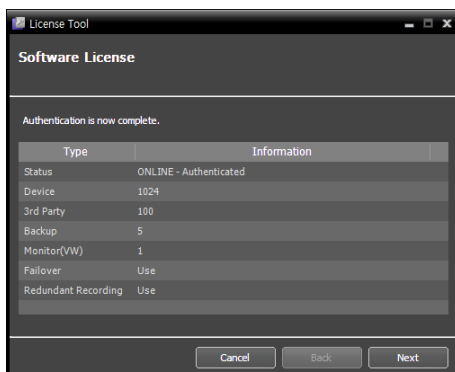


5. Authenticate the product according to the selected authentication mode.



- Online authentication requests authentication file from the remote authentication server through a network connection.
- Offline authentication is available by registering the license file transmitted from the dealer in the exchange for the product information file.

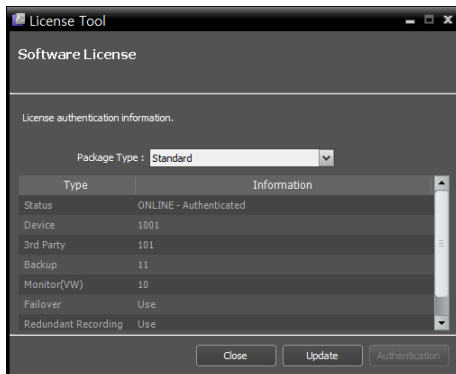
6. Current license information is displayed after the authentication is completed.



**NOTE:** Restart to apply the license, after the product authentication is completed.

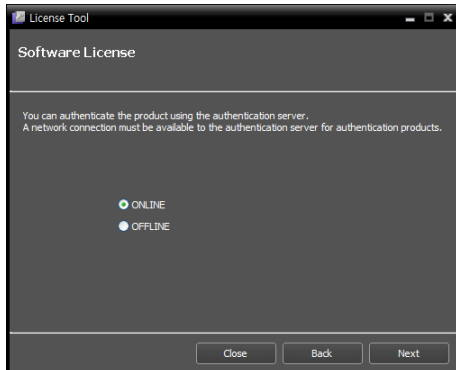
## Software License Update

1. Run the License Tool program to display the installed iNEX software package. Select a package to update the software license and click Update.



- **Package Type:** Displays the installed iNEX software package.

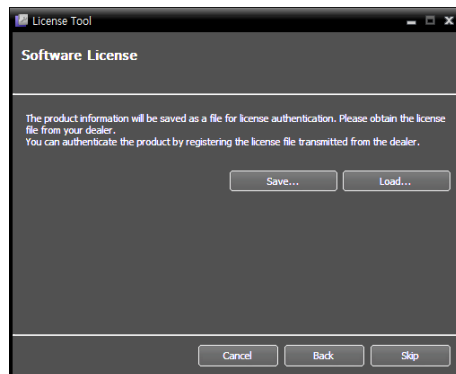
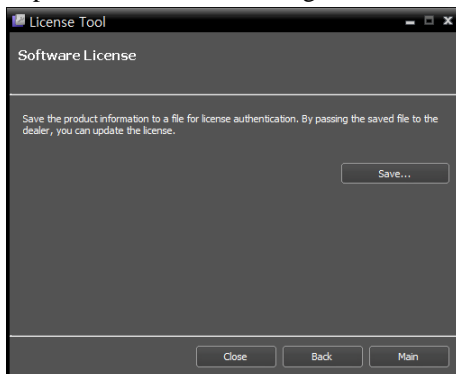
2. Select a software license authentication mode and click Next.



- **Online:** Online authentication requests license authentication from the remote authentication server through a network connection.
- **Offline:** Offline authentication is available by registering the license file transmitted from the dealer. Ask your dealer or distributor for details about it.

**NOTE:** If the authentication mode is changed, it is required to get the product authentication again through the changed mode.

3. Update the license according to the selected authentication mode.

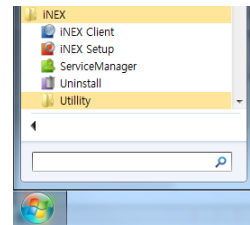


- Online authentication requests authentication file from the remote authentication server through a network connection.
  - Offline authentication updates the license by registering the license file transmitted from the dealer in the exchange for the product information file.
4. Current license information is displayed after the authentication is completed.

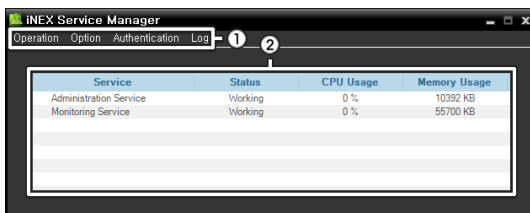


## 4.2 Service Manager

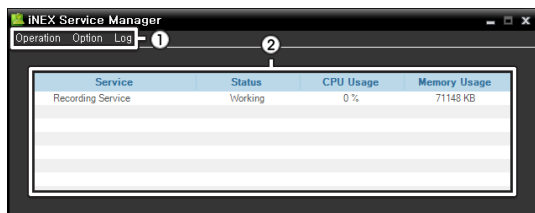
Services should be running on the system to operate the iNEX program. Go to the Start Menu → Click iNEX → Run the Service Manager program.



Administration Server



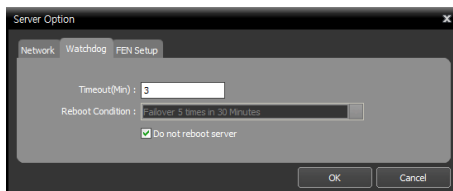
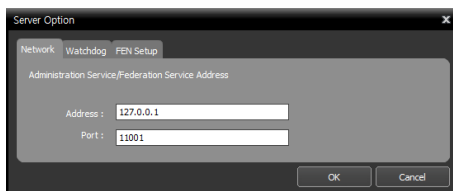
Recording / Streaming / Video Analytics Server



- ① Menu: Allows you to control the operation of the services or display the system log.
- ② Status Display: Displays the status of services.

### Menu

- **Operation:** Starts or stops all services. When the services are stopped, you cannot run the services and Client program, and the system does not record. If you have changed any settings of the Service Manager program, stop and restart all services to apply the changes.
- **Option**
  - **Server Option:** Sets up the information for connection to the administration service from the current server. Also, you can change the watchdog and FEN setting.



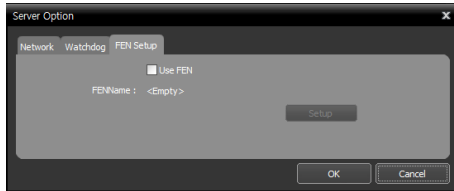
#### Network Tab

- **IP, Port:** Enter the IP address and port number of the administration server.

**CAUTION: If the IP address or port number of the administration server is wrong, the iNEX program will not work.**

#### Watchdog Tab

- **Timeout (Min.):** Set up the waiting time to restart services when services fail to operate. The service checks the system status. When the services fail to operate during the designated waiting time, the system restarts services automatically.
- **Reboot Condition:** Set up the reboot condition when services fail to operate. Checking the Do Not Reboot Server option allows the system to restart services without rebooting.



### FEN Tab

- **FENName:** Register a FEN name. The “External IP address” setting is not available when iFENName is registered.

**NOTE:** “Watchdog” in the iNEX program is a function that periodically checks the operation of the current server and restarts services automatically when services fail to operate during the predefined time.

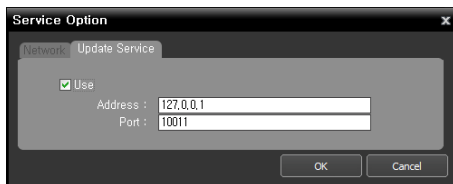
- **Service Option:** Selecting a service from the service list and **Service Option** allows you to set up the information for connection to the selected service.

### Administration Service



### Network Tab

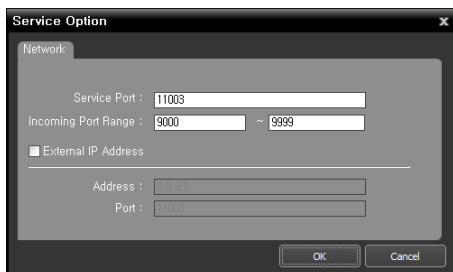
- **Service Port:** Enter the port number for connection to the service.



### Update Service Tab

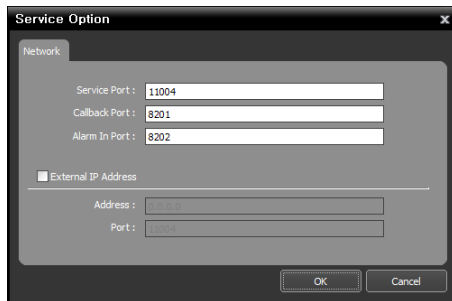
- **Use:** Check the box if you want to use the update service and enter the IP address and port number of the update server. The administration service connects to the update service periodically to check if an upgrade is available and automatically upgrades if necessary.

### Recording Service / Streaming Service / Video Analytics Service



- **Service Port:** Enter the port number for connection to the service.
- **Incoming Port Range:** Enter the port range if a device which transmits images using the RTP protocol is registered. Port range settings must be changed if the network firewall or local network allows only specific UDP/RTP port numbers. The port numbers should not conflict with the RTP port numbers of Client system or port numbers of other streaming programs. If an RTP port number conflicts with others, iNEX program recording/ streaming/video analytics function may not be available.
- **External IP Address:** Enter the external IP address and port number for connection to the service from an external network.

## Monitoring Service



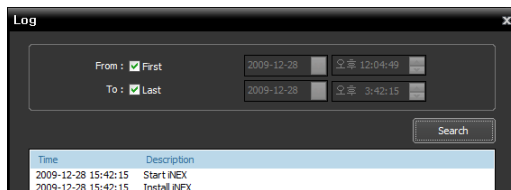
The **Service Option** dialog box is used to configure network settings for the monitoring service. It features a **Network** tab with the following fields:

- Service Port:** 11004
- Callback Port:** 8201
- Alarm In Port:** 8202
- External IP Address:** (checked)
  - Address:** 192.168.1.1
  - Port:** 11004

Buttons for **OK** and **Cancel** are at the bottom right.

- **Service Port:** Set up the port number for connection to the service.
- **Callback Port:** Set up the port number to receive a callback message from the device. The port number you enter should match the port number set on the device for remote callback.
- **Alarm In Port:** Set up the port number to receive text strings for user alarm-in event detection. Refer to **Chapter 13 — Device Management, User Alarm-In Event Setup** (p. 144) for details about the user alarm-in event.
- **External IP Address:** Set up the external IP address and port number for connection to the selected service from an external network.

- **Log:** Selecting **Show Log** allows you to check and search the system log.



The **Log** dialog box allows users to filter and search system logs. It includes the following elements:

- From:** ☒ First
- To:** ☒ Last
- Date Range:** 2009-12-28 (Start) to 2009-12-28 (End)
- Time Range:** 12:04:49 (Start) to 3:42:15 (End)
- Search** button
- Log Entries Table:**



Time	Description
2009-12-28 15:42:15	Start iNEX
2009-12-28 15:42:15	Install iNEX

Setting up the time range of the log and clicking the **Search** button displays the log information. Selecting **First** displays from the oldest log entries regardless of date. Selecting **Last** displays to the newest log entries regardless of date.

## Status Display

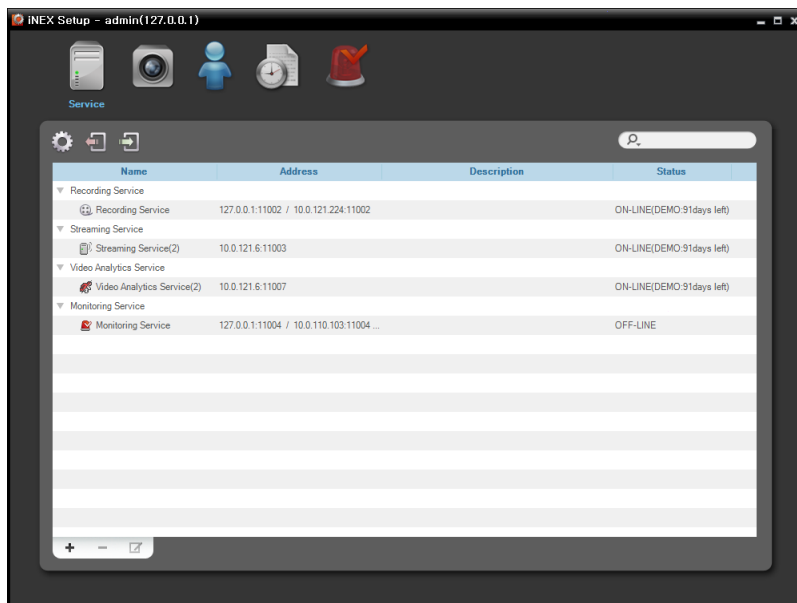
- **Service:** Displays the list of services supported by the current server.
  - **Administration Service:** Manages information of services, devices, users and schedules for operating the iNEX program. When the administration service is not working, the iNEX program does not work.
  - **Recording Service:** Records video transmitted from the network video device. When the recording service is not working, the iNEX program does work but the system will not record and playback of previously recorded video will not be available.
  - **Monitoring Service:** Notifies live events and callback events detected at the device registered in the administration service to the Client system. Only one monitoring service can be registered on an administration service.
  - **Streaming Service:** Streams images from devices to multiple client systems simultaneously.
  - **Video Analytics Service:** Enables video analytics function.
- **Status:** Displays the working status of each service.
  - **Starting:** Indicates the service started running.
  - **Opening DB:** Indicates the iNEX system is opening the database files.
  - **Initializing:** Indicates the service is being initialized.
  - **Working:** Indicates the service is working properly. You can operate the services and Client program, and the system performs recording based on the recording schedule.
  - **Stopping:** Indicates the service is being stopped.
  - **Stopped:** Indicates the service was stopped by a user. You cannot operate the services and Client program, and the system does not record.
  - **Failed:** Indicates the service failed to run because of an unknown problem. The system restarts the services or reboots the system based on the Watchdog settings. Refer to **Menu** (p. 39) for details about Watchdog settings.
- **CPU Usage:** Displays the CPU usage of each service.
- **Memory Usage:** Displays the memory usage of each service.

## Service Database Backup/Restore


 (Service Database Backup) button allows you to save the setting values related to services as an .iexp file.  (Service Database Restore) button allows you to apply the saved setting values to the current iNEX system.

**NOTE:** This function is supported only when all services registered on the administration service are currently connected to the administration service via network connections.

Run the iNEX Setup program.

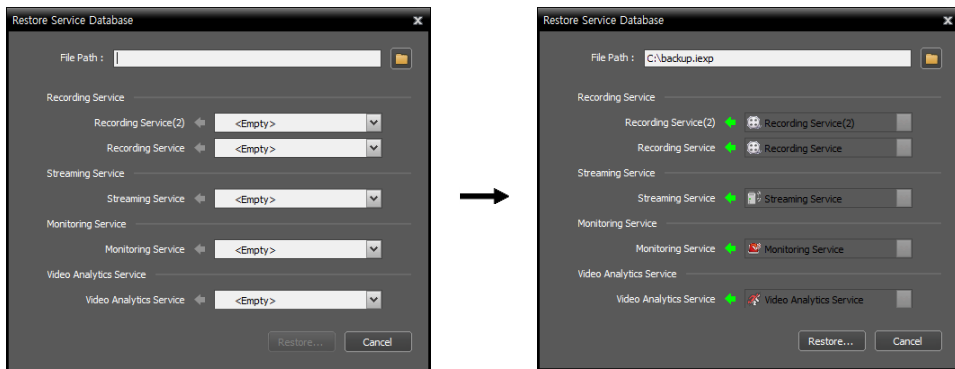







## Service Database Backup

Click the  (Service Database Backup) button → Enter the name of the setup file to save the current setting values → When saving is complete, the list of Services is displayed.




## Service Database Restore

Click the  (Service Database Restore) button.



Click the  button at the top right corner and select a setup file to apply → Services that are connected to the current administration service are displayed to the left of the  icon. Services that are saved in the setup file are displayed to the right of the  icon. Select the service to apply from the drop-down menu to the right of the  icon. If there is only one service for a service type to the left of the  icon or the services in the setup file are the services that were backed up from the current administration service, the services in the setup file will be applied automatically → Click the Import button at the bottom → The iNEX Setup program restarts after applying is complete.

**NOTE:** This is not supported in the following cases:

- When the software version of the services to the right of the  icon is later than that of the services to the left of the  icon.
- When the type or number of the services to the left and right of the  icon differs.

## 4.3 Setup

Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information. Refer to 3.2 Log In (p. 24) for details about the login.



- **Service:** Allows you to register and manage services and storage. Refer to **Service** (p. 45) for details.
- **Device:** Allows you to register and manage sites. Refer to **Device** (p. 49) for details.
- **User:** Allows you to register and manage users or user groups. Refer to **User** (p. 50) for details.
- **Recording Schedule:** Allows you to set up recording schedules. Refer to **Recording Schedule** (p. 51) for details.

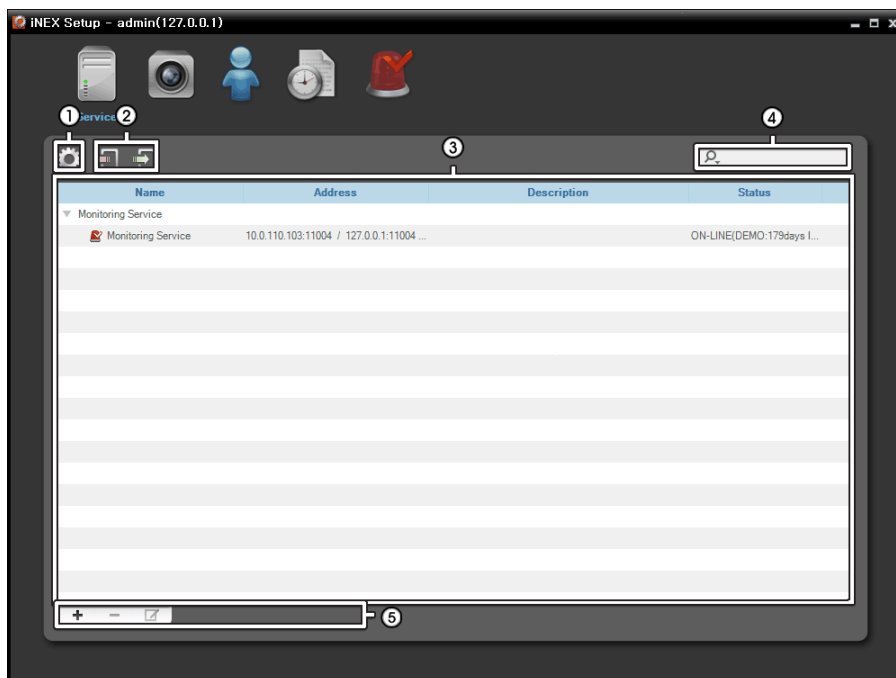
- **Event Management:** Allows you to set up event management schedules. Refer to Event Management (p. 52) for details.


**NOTE:** An alert message is displayed at the bottom of the iNEX Setup screen in the following cases:

- No monitoring service is registered.
- No storage is allocated to a recording service.
- Storage for recording is full.





## Service

The Service menu allows you to register and manage services and storage.

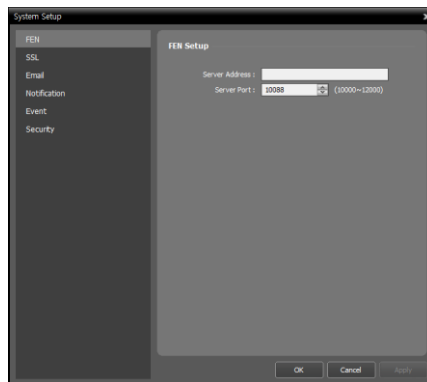


①  (System Setup): Sets up iNEX system information.

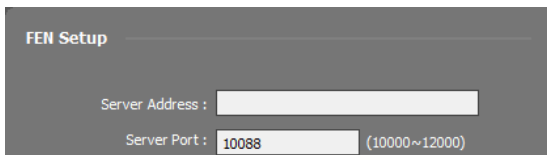
- **FEN:** Allows you to enter information of the FEN server on which a device is registered if there is a device that uses FEN function. If this setting is not correct, registration of the device and connection to the device will not be made.
- **SSL:** Allows you to enhance the security of data transferred between services of the iNEX program by using the SSL (Secure Sockets Layer) protocol. Using the SSL function might cause congestion in the iNEX system depending on the security level. Log in to the iNEX program again after you change the setting. When the setting is changed, all services that are currently connected to the administration service reconnect, and the iNEX Setup and iNEX Client programs are logged out.
- **Email:** Allows you to enter the SMTP server information. The iNEX system can send an email to preset Client users when an event is detected or to specific recipients when any services are disconnected from the administration service. Refer to 16.1 Setting up Event Management Schedule (p. 185) for details.

- ②  (Service Database Backup),  (Service Database Restore): Allows you to save the setting values related to services as an .iexp file. It also allows you to apply the saved setting values to the current iNEX system. Refer to 4.2 Service Manager, Service Database Backup/Restore (p. 43) for details.
- ③ **Service List**: Displays list of services supported in the iNEX program. Clicking the arrow button (▶) beside each service displays the list and information about services registered in the iNEX program.
  - **Address**: Displays the IP address and port number.
  - **Status**: Displays the connection status.
- ④  (Incremental Search): Allows you to search for a service registered in the administration service. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- ⑤ **+** (Add), **-** (Remove),  (Edit): Allow you to add, remove and edit a service and storage. Refer to Chapter 15 — Storage Management (p.177) for details about adding storage for a recording.

## System Setup

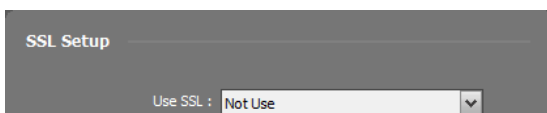


### FEN



This allows you to enter information of the FEN server on which a device is registered if there is a device that uses FEN function. If this setting is not correct, registration of the device and connection to the device will not be made.

### SSL



This allows you to enhance the security of data transferred between services of the iNEX program by using the SSL (Secure Sockets Layer) protocol. Using the SSL function might cause congestion in the iNEX system depending on the security level. Log in to the iNEX program again after you change the setting. When the setting is changed, all services that are currently connected to the administration service reconnect, and the iNEX Setup and iNEX Client programs are logged out.



## Email

**Email**

SMTP Server :

Port :

☐ Use SSL/TLS

☐ Use Authentication

ID :

Password :

Sender :

Email Test

This allows you to enter the SMTP server information. The iNEX system can send an email to preset Client users when an event is detected or to specific recipients when any services are disconnected from the administration service. Refer to **16.1 Setting up Event Management Schedule** (p. 185) for details.

## Notification

**Notification**

Recipient :  +

☐ Notification service connection

☐ Notification of Disk Almost Full

☐ Notification of Disk Bad

☐ Notification of Record Storage Error

Disk Almost Full : (Backup Service)

99 %

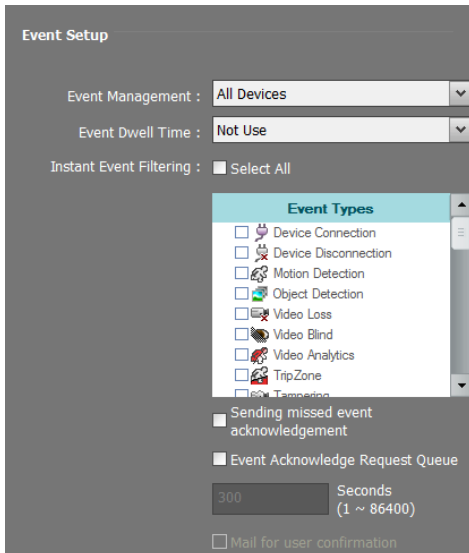
Disk Bad :

50 %

The iNEX system can send email notifications about the status of the storage hard disk or service disconnections.

- **Recipient:** Clicking the **+** button at the bottom allows you to enter email addresses of the recipients.
- ☒ **Notification of service disconnection:** Sends an email to the recipients when any services are disconnected from the administration service.
- ☒ **Notification of Disk Almost Full:** Sends an email to the recipients when the system detects that the defined percentage of the hard disk storage space is being used.
- ☒ **Notification of Disk Bad:** Sends an email to the recipients when the system detects the defined percentage of physical bad sectors on the hard disk.
- ☒ **Notification of Record Storage Error:** Sends an email to the recipients when the system detects errors (internal loss) in the record storage.

## Event

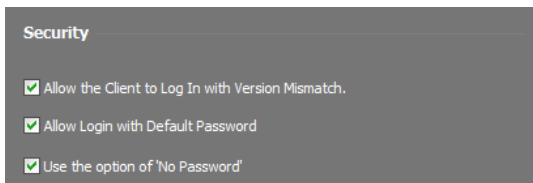


Set up the Event Management schedule option.

- **Event Management**
  - **Monitoring Devices:** Notices of events detected at the currently monitoring cameras in the Live or Map panel.
  - **All Devices:** Notices of events detected at cameras registered on the administration service.
- **Event Dwell Time:** The administration service does not notify you of the same type of events detected for the same camera within the specified period of time after the first event occurs.
- **Instant Event Filtering:** The administration service does not notify Client of the selected event even if the event is detected, except for Event Recording and Event Management schedule.

- ☒ **Sending missed event acknowledgement:** Saves event acknowledgement if a recipient user has not logged on, and notifies the missed acknowledgement when the user logs on.
- ☒ **Event Acknowledge Request Queue:** If a recipient user does not check the received event for the preset period of time, the event is forwarded to the monitoring group's user. Refer to [Chapter 14 — User Management, Advanced Setup](#) (p. 173) for details about the monitoring group. Refer to [Chapter 16 — User Management](#) (p. 195) for details about the event forwarding.
- ☒ **Mail for user confirmation:** Sends a confirmation mail to the user when event acknowledgment is forwarded.

## Security

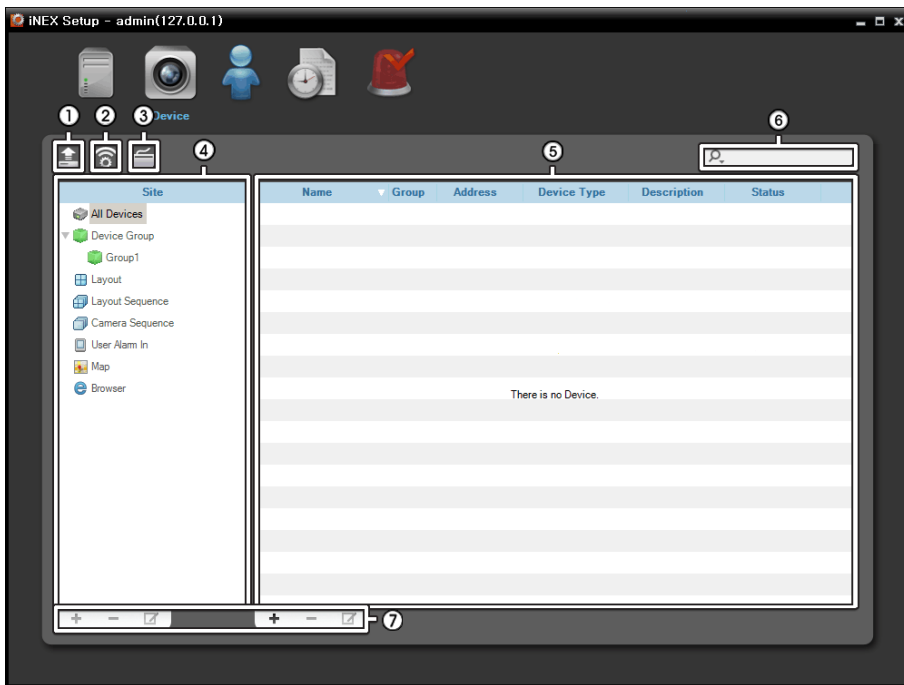


Set up the security option.

- ☒ **Allow the Client to Log In with Version Mismatch.:** Sets the login allowance when the Client version is unmatched with the administration service.
- ☒ **Allow Login with Default Password:** Sets the login allowance with default password used when you create account.
- ☒ **Use the option of 'No Password':** Enables or disables No Password option in the password change screen when logging into Client if the password is expired or Allow Login with Default Password is unchecked.

## Device

The Device menu allows you to register and manage sites.



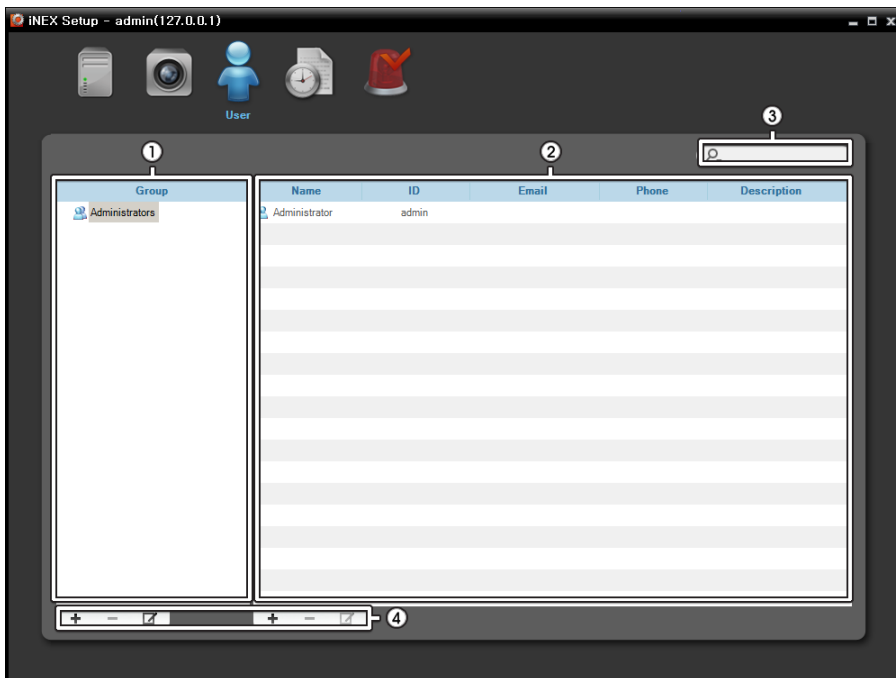
- ① (Multiple Firmware Upgrade): Allows you to upgrade software for several devices at the same time. Refer to 13.2 Managing Devices, Multiple Upgrading Device's Software (p. 159) for details.
- ② (Multiple Remote Setup): Allows you to change settings of several devices at the same time using a setup file. Refer to 13.2 Managing Devices, Changing Device's Setting Remotely (p. 158) for details.
- ③ (Network Keyboard Setup): Allows you to add, remove and edit a network keyboard. You can control the Client program with a network keyboard. Refer to Chapter 23 — Controlling With a Network Keyboard (p. 247) for details.
- ④ Site Panel: Displays site group lists supported by the iNEX program.
- ⑤ Site List Panel: Displays the list and information about sites registered in each group. If the connection was not working properly, the network disconnection log is displayed (only for devices registered on the recording service). Refer to Appendix – Network Disconnection Log (p. 263) for details about the network disconnection log. Clicking the arrow button beside each device name displays the status of video in, alarm in/out and audio in/out supported by the device (Record: During scheduled recording, Panic: During instant recording, Idle: Ready to record).
- ⑥ (Incremental Search): Allows you to search for a device or site registered in each group. Selecting a group in the Site panel and entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found within the selected group. As you enter more text, the results narrow.

- ⑦ **+** (Add), **-** (Remove), **✎** (Edit): Allow you to add, remove and edit a device or a site. You can also delete sites from the group or to edit registration information by using the menu that is displayed when selecting a site and clicking the right mouse button. If you select a device, you can connect to it and change its settings or upgrade its software remotely. If you delete a device from **All Devices** and register the device again, the iNEX system considers the device as a new device (network video devices only). Refer to **Chapter 13 — Device Management** (p. 143) for details about registering a device or device group, or **Chapter 5 — Live Video Monitoring** (p. 69) for details about registering a layout or sequence.

**NOTE:** In this document, a “site” refers to a device group, layout or sequence registered on the administration service.

## User

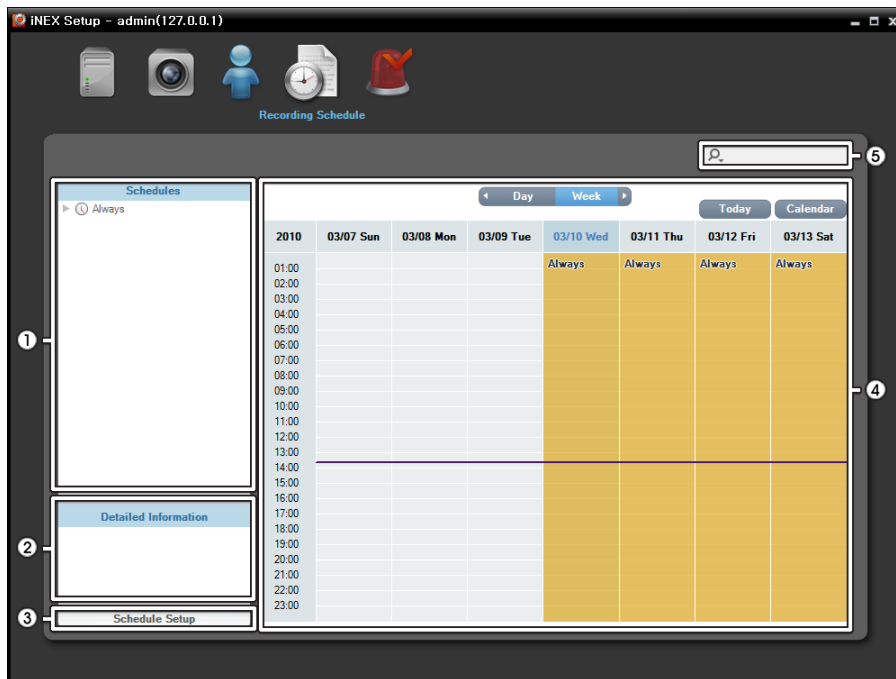
The User menu allows you to register and manage users or user groups.



- ① **Group Panel:** Displays a user group list. The **Administrators** group has authority to perform all functions, and the authority settings cannot be edited.
- ② **User List Panel:** Displays the list and information about users registered in each group.
- ③ **[Search Icon]** (Incremental Search): Allows you to search for a user registered in each group. Selecting a group in the **Group Panel** and entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found within the selected group. As you enter more text, the results narrow.
- ④ **+** (Add), **-** (Remove), **✎** (Edit): Allow you to add, remove and edit a user group or user.

## Recording Schedule

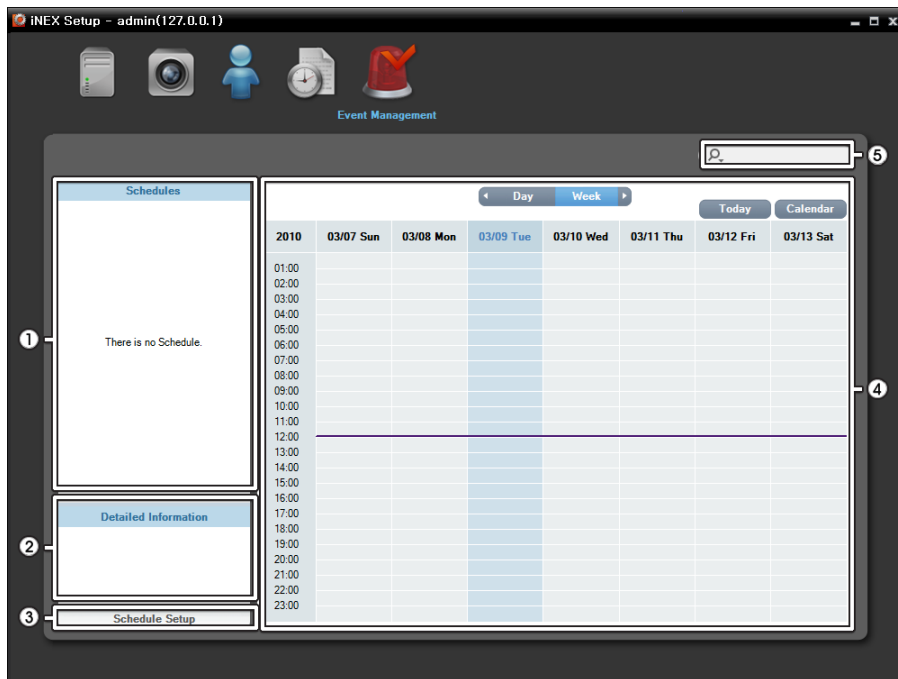
The Recording Schedule menu allows you to set up the schedule for recording.



- ① **Schedule Panel:** Displays a registered schedule list. The iNEX program performs recording based on the schedule.
- ② **Detailed Information Panel:** Displays setting values of the selected recording schedule.
- ③ **Schedule Setup:** Allows you to create and manage recording schedules for scheduled recording or configure the settings for instant recording. Refer to 6.2 Setting up Scheduled Recording (p. 95) for details.
- ④ **Schedule Table:** Displays the current recording schedule by day or week. Clicking the **Today** button displays the today's recording table. Clicking the **Calendar** button displays a calendar.
- ⑤ **Search Bar (Incremental Search):** Allows you to search for a registered schedule. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found within the registered schedule. As you enter more text, the results narrow.

## Event Management

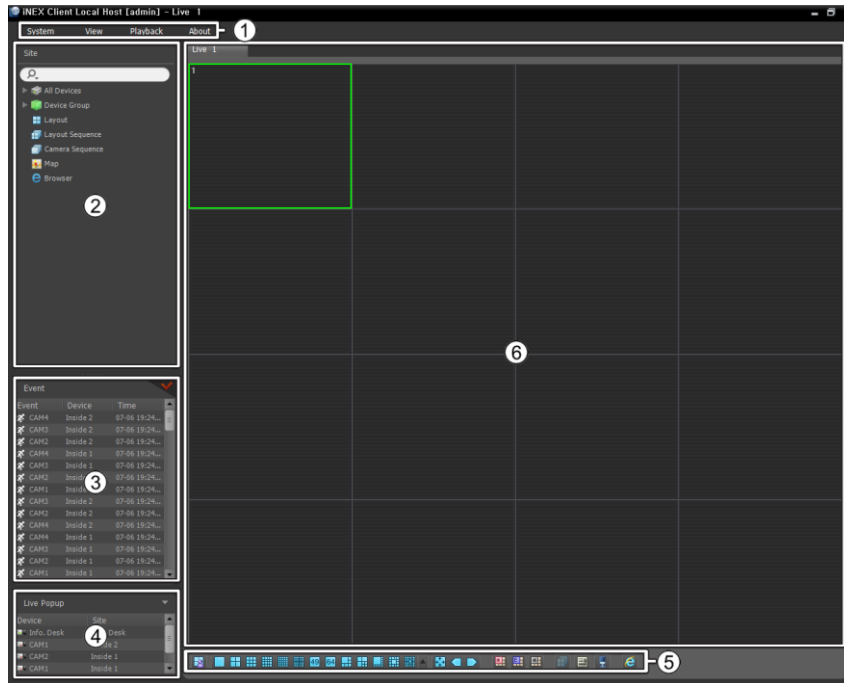
The Event Management menu allows you to set up event management schedules.



- ① **Schedule Panel:** Displays a registered schedule list. The iNEX program manages events based on the schedule.
- ② **Detailed Information Panel:** Displays setting values of the selected event management schedule.
- ③ **Schedule Setup:** Allows you to register event management schedules. Refer to 16.1 Setting up Event Management Schedule (p. 185) for details.
- ④ **Schedule Table:** Displays the current event management schedule by day or week. Clicking the **Today** button displays the today's event management table. Clicking the **Calendar** button displays a calendar.
- ⑤ **Search Bar (Incremental Search):** Allows you to search for a registered schedule. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found within the registered schedule. As you enter more text, the results narrow.

## 4.4 Client

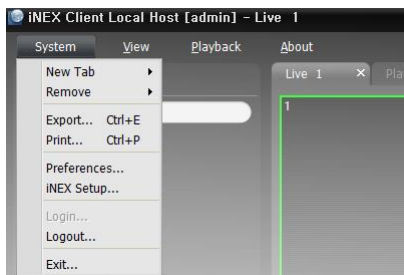
Go to the Start Menu → Click iNEX → Run the iNEX Client program and enter login information. Refer to 3.2 Log In (p. 24) for details about the login.



- ① **Menu:** Allows you to control the Client program. Refer to Menu (p. 54) for details.
- ② **Site List:** Allows you to connect to the registered site by using the mouse drag and drop. Refer to Site List (p. 55) for details.
- ③ **Instant Event List:** Displays live and callback events from registered devices. Refer to Chapter 8 — Event Handling (p. 123) for details. Clicking the ♥ button displays the Event Manager panel. Refer to 16.1 Setting up Event Management Schedule (p. 185) for details. Event related functions may not be supported depending on the protocol that the device uses and the device model. Ask your dealer or distributor for details.
- ④ **Live Popup List:** Displays the list of live popup screens currently displayed on the monitor. Refer to 16.2 Managing Events, Live Popup (p. 194) for details about the live popup screen.
- ⑤ **Panel Toolbar/Timetable:** Displays the toolbar or timetable depending on the panel. Refer to Chapter 5 — Live Video Monitoring (p. 69) or Chapter 7— Recorded Video Playback & Exportation (p. 109) for details.
- ⑥ **Panel:** Allows you to select which panel to use. Refer to Panel (p. 56) for details.

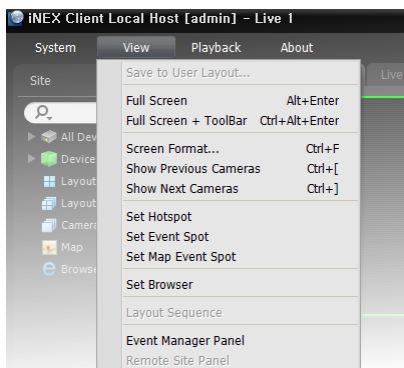
## Menu

### System



- **New Tab:** Adds panels. A maximum of 12 panels are supported for Live, Play, Backup Search, DVR Search and Map panels altogether (no more than 2 of Map panels and no more than 4 of each for the other panels – maximum 8 panels, 2 for each panel, in a 32-bit system). One of each is supported for Event, Event History, Report, Health and Status panels.
- **Remove:** Removes selected devices or cameras or all cameras from Live or Play screen.
- **Export, Print:** Exports or prints images or lists displayed on the panel on the selected tab (not supported for all panels).
- **Preference:** Displays the Preference window allowing you to change the basic settings of the Client program. Refer to Menu – Preference Settings (p. 57) for details.
- **iNEX Setup:** Runs the Setup program.
- **Login, Logout, Exit:** Logs in, logs out or exits the Client program.

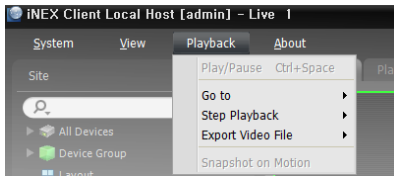
### View



- **Save to User Layout:** Saves the current screen format.
- **Full Screen:** Displays the selected Live or Play panel in full-screen format.
- **Full Screen + Toolbar:** Displays the selected Live or Play panel in full-screen format with a panel toolbar.
- **Screen Format:** Allows you to change the screen format.
- **Show Previous Cameras, Show Next Cameras:** Moves to the previous or next camera group.
- **Set Hotspot:** Sets up a selected camera screen as a hotspot screen. Refer to 5.1 Monitoring Video, Hotspot Setup (p. 70) for details.
- **Set Event Spot:** Sets up a selected camera screen as an event spot screen. Refer to 5.1 Monitoring Video, Event Spot Setup (p. 71) for details.
- **Set Map Event Spot:** Sets up a selected camera screen as a map event spot screen. Refer to 5.1 Monitoring Video, Map Event Spot Setup (p. 71) for details.
- **Browser:** Sets up the selected screen as a browser screen. Refer to Chapter 5 — Live Video Monitoring, Browser Screen Setup (p. 71) for details.
- **Layout Sequence:** Starts or stops the layout sequence. Refer to 5.1 Monitoring Video, Layout Sequence Monitoring (p. 74) for details.
- **Event Manager Panel:** Displays an event manager panel. Refer to Chapter 16 — Event Management (p. 185) for details.
- **Remote Site Panel:** Displays or hides a site list in the floating panel or full screen. Not every panel supports this function.

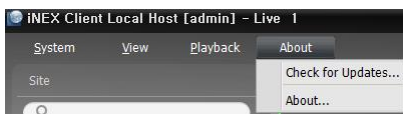


## Playback



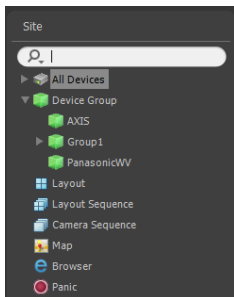
- **Play/Pause:** Plays or pauses playback of recorded video.
- **Go To:** Selects a specific point of video to be played. Refer to 7.1 Playing back Recorded Video, Panel Toolbar (p. 110) for details.
- **Step Playback:** Moves the video forward or backward in the frame or time unit.
- **Export Video File:** Exports recorded video as a self-player file (.exe) or an AVI file (.avi).
- **Snapshot on Motion:** Displays snapshot of images recorded during the event-based recording (event and pre-event) in the Play panel. Refer to 7.1 Playing back Recorded Video, Snapshot on Motion Event (p. 114) for details.

## About



- **Check for Updates:** Displays available software upgrades.
- **About:** Displays the software version and copyright information.

## Site List

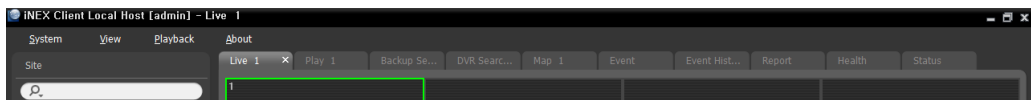


Displays the list of registered sites.

- **Incremental Search:** Allows you to search for a registered device or site. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- **All Devices:** Displays the list of devices registered on the administration service. Clicking a device in the list, and dragging and dropping it in the desired location on the screen allows you to monitor video from the cameras connected to the device or to play back recorded video from the cameras. This is supported only for the users in the Administrator group.
- **Device Group:** Displays the list of registered device groups. Clicking a device in the list, and dragging and dropping it in the desired location on the screen allows you to monitor video from the cameras connected to the device or to play back recorded video from the cameras. Refer to 5.1 Monitoring Video (p. 69) or 7.1 Playing back Recorded Video (p. 109) for details.
- **Layout:** Displays the list of registered layouts. Clicking a layout in the list, and dragging and dropping it on the screen starts layout monitoring or playback. Refer to 5.1 Monitoring Video (p. 69) or 7.1 Playing back Recorded Video (p. 109) for details.
- **Layout Sequence:** Displays the list of registered layout sequences. Clicking a layout sequence in the list, and dragging and dropping it on the screen starts layout sequence monitoring. Refer to 5.1 Monitoring Video, Layout Sequence Monitoring (p. 74) for details.
- **Camera Sequence:** Displays the list of registered camera sequences. Clicking a camera sequence in the list, and dragging and dropping it in the desired location on the screen starts camera sequence monitoring. Refer to 5.1 Monitoring Video, Camera Sequence Monitoring (p. 76) for details.
- **Map:** Displays the list of registered maps. Clicking a map in the list, and dragging and dropping it in the desired location on the screen starts map monitoring. Refer to 5.2 Map Monitoring (p. 77) for details.
- **Browser:** Displays the list of registered browsers. Clicking a browser in the list, and dragging and dropping it in the desired location on the screen launches the web browser. Refer to 5.3 Launching Browser (p. 79) for details.

- **Panic:** Displays the list of devices if there is any device for which panic recording has been done (supported only when **Panic Recording on Local Client PC** is selected). Refer to 6.4 Setting up Panic Recording (p.106) for details.

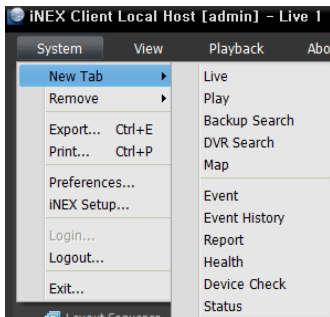
## Panel




- **Live:** Displays live images. Refer to 5.1 Monitoring Video (p. 69) for details.
- **Play:** Allows you to play back video recorded in a recording server (supported only for the network video devices). Refer to Chapter 7 — Recorded Video Playback & Exportation (p. 109) for details.
- **Backup Search:** Allows you to play backed-up video from a backup server. Refer to the iNEX Backup user's manual for details. This is supported only when Backup Services are registered in the iNEX program. Ask your dealer or distributor about purchasing the iNEX Backup software.
- **DVR Search:** Allows you to play back video recorded in DVRs, Client system, or SD (SDHC) memory cards inserted to network cameras using the iNEX protocol. Refer to Chapter 7 — Recorded Video Playback & Exportation (p. 109) for details.
- **Map:** Displays maps. Refer to 5.2 Map Monitoring (p. 77) for details.
- **Event:** Displays the list of events recorded during Event recording. Double clicking an event in the event list, or selecting an event in the event list and then clicking the right mouse button allows you to play back event-recorded video and event-associated video in the play screen. Refer to Chapter 7 — Recorded Video Playback & Exportation (p. 109) for details.
- **Event History:** Displays log entries of events displayed on the Event Manager panel. Refer to Chapter 16 — Event Management (p. 185) for details.
- **Report:** Displays log entries of the iNEX program. Refer to Chapter 10 — Log Search (p. 131) for details.
- **Health:** Displays the results of self-diagnostics for the devices registered on recording services. Refer to 9.1 Health Monitoring (p. 127) for details.
- **Device Check:** Displays the results of self-diagnostics for the devices registered on the administration service (supported only for devices which use the iNEX protocol). Refer to 9.2 Device Check (p. 128) for details.
- **Status:** Displays the status of a desired device in real-time (supported only for devices which use the iNEX protocol). Refer to 9.3 Status Monitoring (p. 129) for details.

**NOTE:** You can change the panel name by clicking the right mouse button on each panel tab.

## Adding/Deleting Panel



Go to the System menu → Click **New Tab** → Select a panel to add.

Clicking the  button beside each tab deletes the panel.

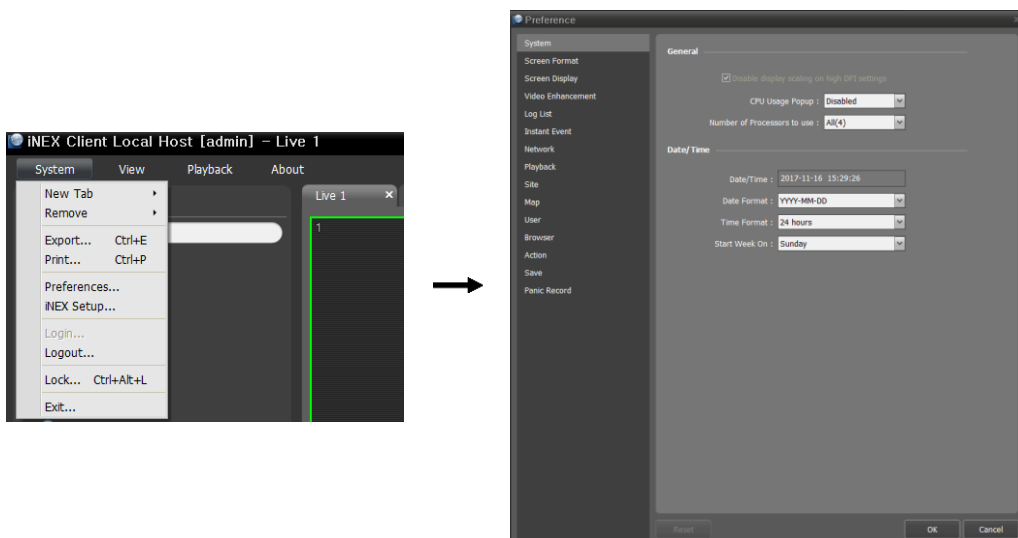
## Floating/Docking Panel

Clicking a panel tab causes it to fly out and dragging it floats the panel on the screen. Clicking the tab of a floating panel, and dragging and dropping it to its original position docks the panel. You can change the order of panel tabs by dragging and dropping with the mouse.

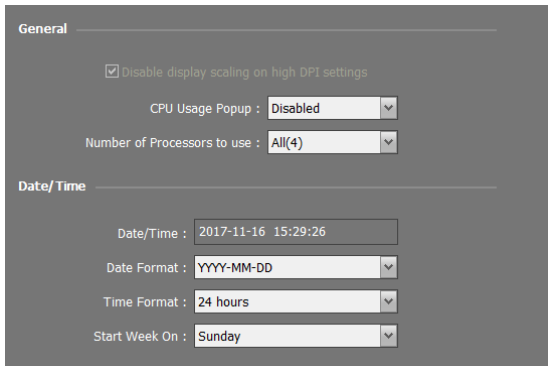
- Maximizing a floating panel: Clicking the window maximize/restore button in the upper-right corner of the floating panel maximizes or restores the window. Only one of each panel type can be maximized.
- Displaying/hiding a site list in the floating panel: Clicking the right mouse button in the camera screen of the panel and selecting the **Remote Site Panel** from the screen menu displays or hides a site list in the floating panel. This is supported for not every panel.

## **Menu – Preference Settings**

You can set the basic settings of the Client program to meet your preferences. Go to the System Menu → Click **Preference**, and the **Preference** window appears.



## System



**General**

☒ Disable display scaling on high DPI settings

CPU Usage Popup : Disabled

Number of Processors to use : All(4)

**Date/Time**

Date/Time : 2017-11-16 15:29:26

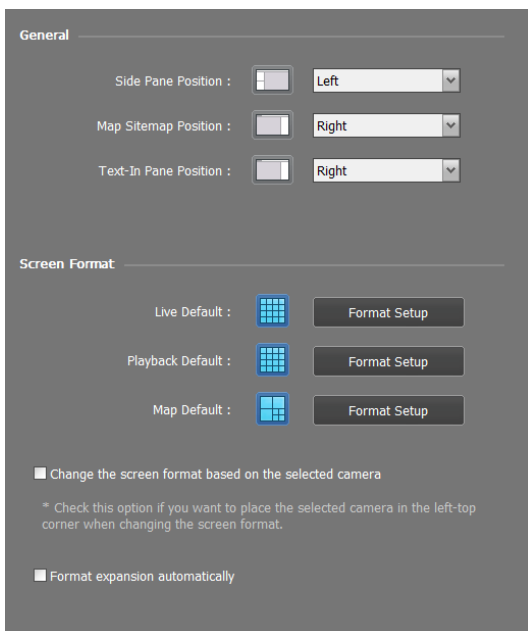
Date Format : YYYY-MM-DD

Time Format : 24 hours

Start Week On : Sunday

- **Disable display scaling on high DPI settings:** Uncheck to change the size of the client program according to the DPI scale.
- **CPU Usage Popup:** An alert message will pop up when the CPU usage of the Client system exceeds the assigned percentage.
- **Number of Processors to use:** Set up the number of processors to use during the iNEX program running. It allows you to limit the CPU usage for the iNEX program running.
- **Date/Time:** Displays the current date and time.
- **Date Format, Time Format:** Set up the system date/time format.
- **Start Week On:** Set up the day of the week to start.

## Screen Format




**General**


Side Pane Position : Left


Map Sitemap Position : Right

Text-In Pane Position : Right

**Screen Format**

Live Default :  Format Setup

Playback Default :  Format Setup

Map Default :  Format Setup

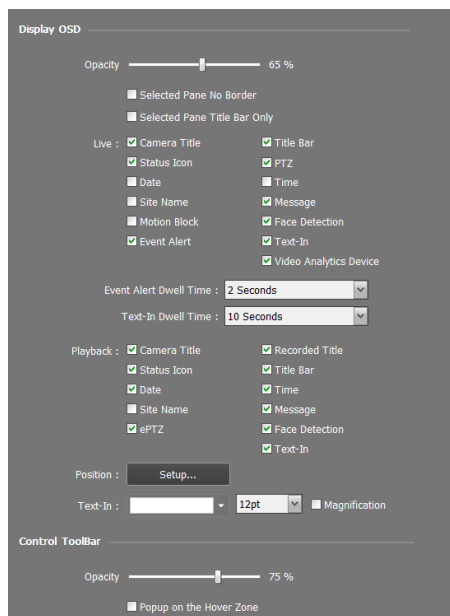
☐ Change the screen format based on the selected camera

\* Check this option if you want to place the selected camera in the left-top corner when changing the screen format.

☐ Format expansion automatically

- **Side Pane Position, Map Sitemap Position, Text-In Pane Position:** Set up the position of side panels, the position of the root map list in the Map panel, and the position of the text-in panels.
- **Live Default, Playback Default, Map Default:** The default screen formats for the Live, Play and Map screens are displayed. Clicking the **Format Setup** button allows you to change the default screen format.
- ☒ **Change the screen format based on the selected camera:** Displays video from a camera selected from the current screen format in the first camera screen of the new screen format when you change screen formats.
- ☒ **Format expansion automatically:** The screen format changes automatically corresponding the number of connected camera when the number of connected camera increases.

## Screen Display



- Display OSD: Sets up the OSD display setting and information to be displayed on a camera screen.
    - Opacity: The slide bar allows you to adjust the opacity of OSD (On Screen Display).
    - ☒ Selected Pane No Border: Does not display a border on a currently selected camera screen during monitoring or playback.
    - ☒ Selected Pane Title Bar Only: Displays the title bar on a currently selected camera screen during monitoring or playback.
    - Live, Playback: Sets up OSD information to be displayed.
      - ☒ Camera Title: Displays the camera name set in the iNEX program.
      - ☒ Title Bar: Separates the title display area from an image display area at the top.
      - ☒ Recorded Title: Displays the camera name which was set up during recording.
- 
- ☒ Status Icon: Displays status OSD.
 

(Red): Scheduled recording	(Orange): Panic recording	(Blue): Instant recording
PTZ mode	Camera sequence mode	
Zoom mode	Two-way audio communication mode	Image effect mode
Color control mode (Play image only)	Freeze mode (Live image only)	
  - ☒ PTZ: Displays direction control buttons which is displayed on the camera screen when controlling a PTZ camera.
  - ☒ Date, ☒ Time: Displays the date and time of the administration server.
  - ☒ Event Alert, Event Alert Dwell Time: Highlights the camera title bar in red when an event occurs in the device. The alert will release after the event dwell time (sec.) from the time an event is detected or when you select the camera screen if you set up the Event Alert Dwell Time setting to Manual Off.
  - ☒ Motion Block: Displays the area where motion is detected with red blocks when a motion detection event occurs in the device (supported only for network video transmitters which use the iNEX protocol).
  - ☒ ePTZ: Displays the guide GUI (Graphic User Interface) when you control PTZ in the fisheye camera.
  - ☒ Site Name: Displays the device name. This will be displayed only when the device name is different from the camera title.
  - ☒ Face Detection: Displays the area where face is detected with blocks when a face detection event occurs in the device.
  - ☒ Text-In: Displays the text-in information on the screen when a text-in event occurs in the device or iNEX system (1x1 screen format only). This feature is supported only for devices which use the iNEX protocol.
  - ☒ Message: Displays a screen message. Refer to Network (p.63) for details about the screen message.
  - ☒ Video Analysis Device: Displays the video analysis information as default.
- Position: Allows you to change the position of the OSD, OSD text size and OSD margin.

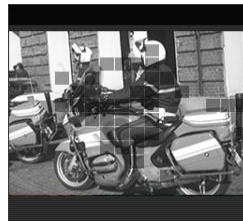
- **Control Toolbar:** Adjusts the opacity of the control toolbar on the camera screen.
  - ☒ **Popup on the Hover Zone:** Toggles on/off the toolbar by a mouse cursor position in the hover zone.



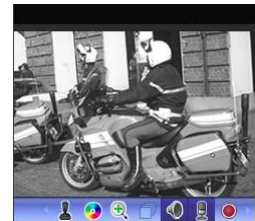
Camera Title,  
Status Icon, Date/Time



Event Alert

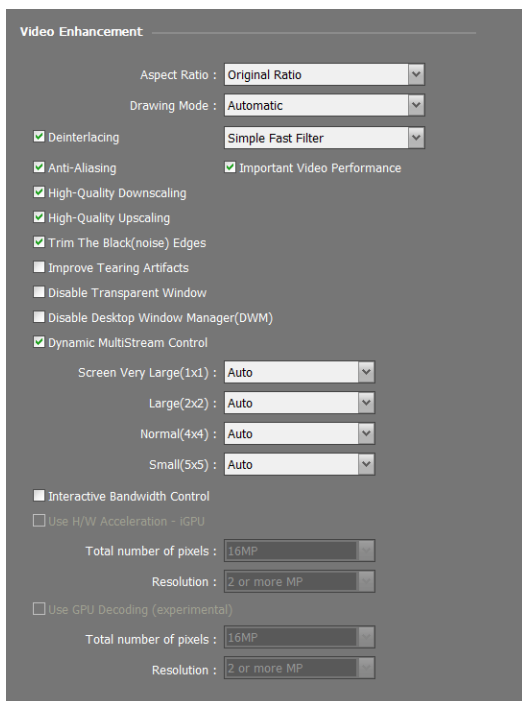


Motion Block



Control Toolbar

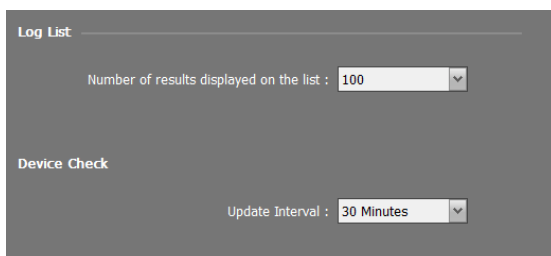
## Video Enhancement



- **Aspect Ratio:** Select the proper image aspect ratio.
  - **Original Ratio:** Fits images within the screen size while maintaining their original ratio.
  - **Fit to Screen:** Fits images to the screen size regardless of the aspect ratio.
  - **Fit to Screen (Smart):** Fits images according to the extra spaces, to the “Fit to Screen” or “Actual Size”.
  - **Fit to Screen (Aspect Ratio):** Fits images to the screen size keeping the aspect ratio. This might cause top and bottom or left and right side of images to be cropped depending on the screen size. This aspect ratio is not supported and **Original Ratio** is applied for camera screens that the following functions are activated: Image Zoom, Hotspot, Event Spot, Draw Motion Block, Draw Video Analytics.
  - **Actual Size (x1):** Displays images in their original size.
- **Drawing Mode:** Select the drawing mode standard to display video on the screen. The color quality or display performance of video might be affected depending on the drawing mode standard selected.
- ☒ **Deinterlacing:** Enhances image display quality of interlaced video on the screen by eliminating horizontal scan lines or noise in areas with motion. Select the desired deinterlace filter.
- ☒ **Anti-Aliasing:** Enhances image display quality of video on the screen by eliminating stair-stepping (aliasing) effects in the enlarged image.
- ☒ **Important Video Performance:** Gives priority to display speed over the display quality on the screen when displaying video.
- ☒ **High-Quality Downscaling:** Keeps the display quality on the screen when downscaling video.
- ☒ **Trim The Black (noise) Edges:** Trims the black line (noise) displayed at the edge of the image.

- ☒ **Improve Tearing Artifacts:** Improves tearing artifact caused when the monitor's scanning line retracing speed is slow (1x1 screen format only). This might increase the CPU load.
- ☒ **Disable Transparent Window:** Disables using a transparent window style and opacifies windows including the control toolbar to correct the problem of transparent areas of the window flickering. The change will be applied the next time the program is run.
- ☒ **Disable Desktop Window Manager (DWM):** Disables Desktop Window Manager (DWM) that runs Windows Aero. Disabling DWM is recommended if video often freezes when multiple monitors are used.
- ☒ **Dynamic Multistream Control:** Allows you to use a different stream depending on the screen format (supported only for devices in which more than one stream is used). Selecting Auto allows the iNEX program automatically to choose the proper stream based on the screen format.
- ☒ **Interactive Bandwidth Control:** Controls the network bandwidth by automatically adjusting the resolution and the frame rate of the device depending on a screen format (1x1 screen format: the maximum resolution and frame rate supported by the device, Multi-screen format: the resolution and frame rate decreased to an appropriate level for each screen format). This function enhances the network bandwidth efficiency and decreases a drop in performance of the Client system which might be caused by the network congestion. For this function to work, the device must be also set up to use the function. This function works only for monitoring video.
- ☒ **Use H/W Acceleration – iGPU/NVIDIA:** Enables hardware acceleration in the iNEX program. It may enhance processing of HD (high-definition) video. This option is available only when hardware acceleration is enabled in your PC. H/W Acceleration – NVIDIA is activated when the NVIDIA graphic card is mounted.

## Log List



- **Number of results displayed on the list:** Set up the number of log entries to be displayed at once (in the case of Device Log, maximum 100 logs at once regardless of the setting).
- **Device Check: Update Interval** allows you to set up the status update interval in the Device Check panel. Refer to 9.2 Device Check (p.128) for details about the device check function.

## Instant Event

**Instant Event**

☒ Use Event Panel

Time Range : 1 Hour

\* The Instant Event list shows recent events within the selected time range.  
(The Instant Event List will retain 100 items or less.)

Column : ☒ Event ☒ Device ☒ Time

Callback Port : 8201 (1024~65535)

Live Text-In Time Range : 1 Hour

**Event Sound**

☒ Motion Detection : \\INEX\\Client\\EventSound.wav ...

☒ Object Detection : \\INEX\\Client\\EventSound.wav ...

☒ Video Loss : \\INEX\\Client\\EventSound.wav ...

☒ Video Blind : \\INEX\\Client\\EventSound.wav ...

☒ Auto disable when Two-way Audio is on.

**Event Spot**

Event monitoring dwell : 20 Sec

Minimum monitoring dwell : 2 Seconds

- ☒ **Use Event Panel:** Displays the Instant Event List panel. Unchecking the box hides the panel.
- **Time Range:** Set up the length of time for an event notification to be displayed in the Instant Event List after notification of the event detection (If the event list has 100 or fewer items, the event list will remain on the Instant Event List even if the length of time has expired).
- **Column:** Select the information to be displayed in Instant Event List.
- **Callback Port:** Set up the port number to receive a callback message from the device. This setting will be used only when the monitoring service does not run. The iNEX system uses the callback port of the monitoring service, which is set in the Service Manager program when the monitoring service runs. The port number you enter should match the port number set on the device for remote callback.

- **Event Sound:** Set up to sound by playing back an audio file when an event is notified in the Instant Event list. Select a desired event and set up an audio file (.wav) by clicking the ... button. Clicking the ▶ button allows you to test the sound by playing back the selected audio file.
  - ☒ **Auto disable when Two-way Audio is on:** Set up to automatically turn off the event sound when using the two-way audio.
- **Event Spot:** Video from the event-detected camera is displayed on the event spot screen when an event is notified in the Instant Event list.
  - **Event monitoring dwell:** Set up the duration for video to be displayed on the event spot screen.
  - **Minimum monitoring dwell:** Set up the event monitoring dwell time for the current event when other events are detected while event-detected video is displayed. Video from other events is displayed after the preset time expires.



## Network

**General**

Buffering for HD Live :

\* Use buffering to smoothly play live Mega-pixel images. Depending on your network environment, buffering delays may occur, and real-time video cannot be guaranteed. Dual-core CPU or higher systems can use buffering.

Live image no frames detect interval :

Disconnection Message :

**RTP**

RTP Incoming Port Range :

~

Don't display broken frames :

☐ Live ☐ Playback

Buffering Frame Count :

**Network Keyboard**

☐ Use Network Keyboard

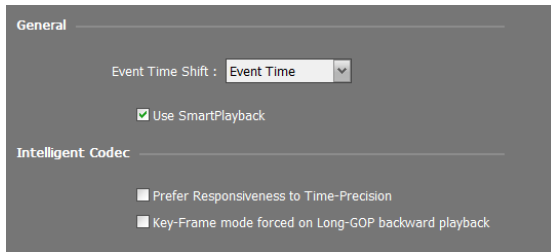
Control Port

☒ Use large mouse cursor

- ☒ **Buffering for HD Live:** Displays images on the screen more smoothly by using short term/long term buffering when monitoring HD video images (supported only for devices which use the iNEX protocol). Buffering may be delayed or real-time monitoring may decrease depending on the network environment.
- **Live image no frames detect interval:** Set up the interval to check video frame transfer from a device to the iNEX system. A message will be displayed on the camera screen when no video frame is transferred during the period.
- **Disconnection Message:** Allows you to change the text of the screen message displayed when a device is disconnected or the screen message displaying the camera status when you connect to the device. Click the **Setup** button, check the box beside each message and change the text.

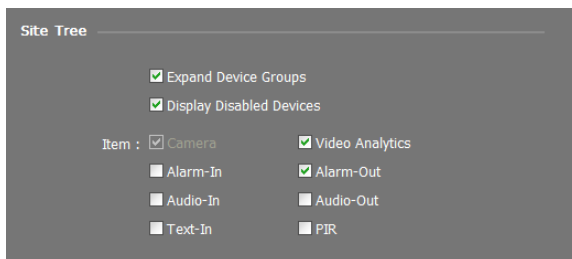
- **Don't display broken frames:** It is possible that frames will be broken or lost when using the RTP protocol depending on the network environment. Select whether or not to display the broken frames in Live or Play panels.
- **Buffering Frame Count:** Set up the number of buffering frames to use for the RTP protocol. The higher the number is, the less the video stutter. The lower the number is, the higher the real-time monitoring.
- ☒ **Use Network Keyboard:** Allows you to control the Client program by using a network keyboard. Set up the port number that the Client program will use when it is controlled by a network keyboard. Selecting **Use large mouse cursor** enlarges the mouse cursor size.

## Playback



- **Event Time Shift:** Set up to search the frame before the specific time based on the event-related frame time.
- ☒ **Use SmartPlayback:** Set up to repeatedly playback the recorded images on the recording server and failover server, on the same Play tab.
- ☒ **Prefer Responsiveness to Time-Precision:** Displays the closest time frame possible while reducing the loss of responsiveness, preferred than time-precision, when performing the GoTo function on a Long-GOP image.
- ☒ **Key-Frame mode forced on Long-GOP backward playback:** Set up to play the key-frame only on Long-GOP backward playback.

## Site



- ☒ **Expand Device Groups:** Displays the devices in the device group of the Site list when monitoring video or playing recorded video.
- ☒ **Display Disabled Devices:** Displays or hides the disabled devices from the Site list.
- **Item:** Displays or hides the list of input/output devices supported by the device in the Site list when monitoring video or playing recorded video.

## Map

**Map Setup**

☒ Use Live Popup Panel  
☒ Use Event Sound Multiple Play

\* The following default setting applies to the runtime map. After running the map, the setting can be changed by using the hover toolbar or context menu.

☐ Activate Auto Focusing

**Focusing Event :** ☒ Motion Detection ☒ Object Detection  
☐ Video Loss ☐ Video Blind  
☐ Video Analytics ☐ Face Detection  
☒ TripZone ☐ Tampering  
☒ Auto Tracking ☒ Audio Detection  
☒ Alarm-In ☒ Network Alarm-In  
☐ PIR Detection ☒ Alarm-Out  
☐ Path Sequence

Focusing Duration : 5 Seconds  
Focus Minimum Dwell : 3 Seconds  
Zoom Finder : Auto

**Map Event Spot**

Event monitoring dwell : 20 Sec  
Minimum monitoring dwell : 2 Seconds

**Instant Viewer**

Duration : 10 Seconds

- ☒ **Use Live Popup Panel:** Displays the Live Popup List panel. Unchecking the box hides the panel.
- ☒ **Use Event Sound Multiple Play:** Simultaneously plays each camera's sound file when events occur at multiple camera sites at the same time. Uncheck the box to play the first event's sound file.
- ☒ **Activate Auto Focusing:** Enlarges the area where the event-detected device is placed when an event is detected.
  - **Focusing Event:** Select a desired event for auto focusing.
  - **Focusing Duration:** Set up the duration for auto focusing to last.
  - **Focusing Minimum Dwell:** Set up the duration for auto focus to last for the first detected event when events are detected in more than one device consecutively. Auto focusing moves to the later detected event after the preset time expires.
- **Zoom Finder:** Displays or hides the PIP screen. The rectangle in the PIP screen indicates the enlarged area. When set to Auto, the PIP screen is displayed only while a canvas is enlarged.

- **Map Event Spot:** Video from the event-detected camera is displayed on the map event spot screen when an event is detected.
  - **Event monitoring dwell:** Set up the duration for video to be displayed on the map event spot screen.
  - **Minimum monitoring dwell:** Set up the event monitoring dwell time for the current event when other events are detected while event-detected video is displayed. Video from other events is displayed after the preset time expires.
- **Instant Viewer:** Set up the duration for the instant view to be displayed. Instant Viewer is displayed when clicking a camera on a map.

## User

**General**

☐ Auto run iNEX Client at Windows startup  
☒ Load user specific layout

**Auto Connect**

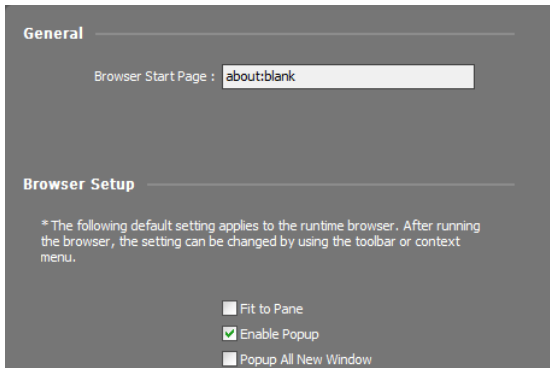
☐ Auto login at startup  
☐ Restore last Live sessions at auto login  
☒ Auto Lock 1 hour

\* If there is no keyboard or mouse activity, you will be automatically locked out after a specified time.

- **Auto run iNEX Client at Windows startup:** The Client program automatically runs when logging onto Windows.
- **Load user specific layout:** Select the user layout when running the iNEX program.
- **Auto login at startup:** The Client program automatically logs in with the login information from the previous connection when it starts. Checking the **Restore last Live sessions** at auto login box restores the previous live monitoring sessions in the current Live panels.

- **Auto:** The Client program automatically logs out or the Client system is locked out depending on the setting when there are no mouse or keyboard inputs for the specified time.

## Browser



**General**

Browser Start Page :

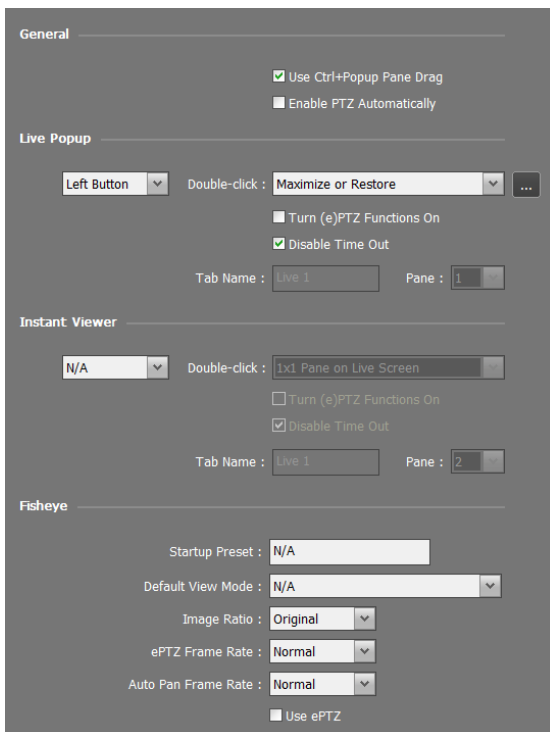
**Browser Setup**

\* The following default setting applies to the runtime browser. After running the browser, the setting can be changed by using the toolbar or context menu.

☐ Fit to Pane  
☒ Enable Popup  
☐ Popup All New Window

- **URL Start Page:** Enter the URL (Uniform Resource Locator) address of the default web browser on a browser screen.
- ☒ **Fit to Pane:** Displays the web page by fitting it to the browser screen size.
- **Enable Popup:** Enables Displays the web page by fitting it to the browser screen size.
- **Popup All New Window:** Displays the popup screen of the web page on a separate screen.

## Action



**General**

☒ Use Ctrl+Popup Pane Drag  
☐ Enable PTZ Automatically

**Live Popup**

Left Button :  Double-click :  ...

☐ Turn (e)PTZ Functions On  
☒ Disable Time Out

Tab Name :  Pane :

**Instant Viewer**

Double-click :

☐ Turn (e)PTZ Functions On  
☒ Disable Time Out

Tab Name :  Pane :

**Fisheye**

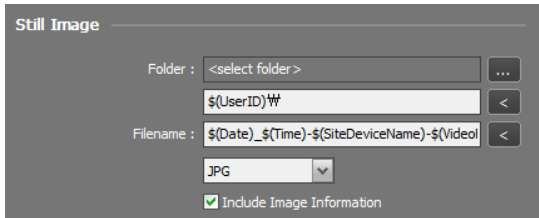
Startup Preset :   
Default View Mode :   
Image Ratio :   
ePTZ Frame Rate :   
Auto Pan Frame Rate :   
☐ Use ePTZ

- **General:** Set the general action on the live popup.
  - ☒ **Use Ctrl+Popup Pane Drag:** Press Ctrl button and drag the live popup to a pane on the Live tab to display the image on the pane.
  - ☒ **Enable PTZ Automatically:** Set PTZ control function automatically.
- **Live Popup:** Double-click on the pane to practice the following functions.
  - Maximize or Restore
  - 1x1 Pane on Live Screen
  - Maximize on Application Monitor
- **Instant Viewer:** Double-click on the predefined button, the middle or the right button, of the mouse to perform the following functions.
  - 1x1 Pane on Live Screen
  - ☒ **Turn (e)PTZ Functions On:** Set PTZ control function on default.
  - ☒ **Disable Time Out:** Disables the popup dwell time out after Action.

- **Fisheye:** Set up the default Action when accessing a fisheye camera.
  - **Startup Preset:** Set up the preset name to be used when accessing a fisheye camera. If each camera's format is saved under the same preset name, it is easier to change the format.
  - **Default View Mode:** Set the default view mode.
  - **Image Ratio:** Set the image ratio.
  - **ePTZ Frame Rate:** Set the ePTZ frame rate. High (Over average of 60 Fps), Normal (Over average of 30 Fps), Low (Average of 15 Fps), Very Low (Average of 5 Fps) – a PC with a low specification is appropriate.
  - **Auto Pan Frame Rate:** Set the auto pan frame rate. High (Over average of 60 Fps), Normal (Over average of 30 Fps), Low (Average of 15 Fps), Very Low (Average of 5 Fps) – a PC with a low specification is appropriate.

- ☒ Use ePTZ: Uses ePTZ when accessing a fisheye camera.

## Save



The 'Still Image' dialog box contains the following fields and options:

- Folder:** A dropdown menu with '<select folder>' and a browse button (...).
- Filename:** A text field with the template '\$(UserID)??' and a '<' button.
- File Format:** A dropdown menu with 'JPG' selected and a '<' button.
- Include Image Information:** A checked checkbox.

- **Folder:** Select a folder to save the still image.
- **Filename:** Set a name of the folder for saving the still image. Supported extensions include JPG, PNG, TIF, BMP and PDF.
  - ☒ **Include Image Information:** Include image information in the saved still image file.

## Panic Recording

**NOTE:** Panic record is available only when video is currently displayed on the Live tab. For example, if you change the screen format during panic record and monitoring video is hidden on the Live tab, panic record will stop for the hidden video.



The 'Panic Recording' configuration window includes the following elements:

- Storage Status:** A blue oval representing 4.00GB of free space. Text indicates 'Total Space : 4.00GB (100% left)' and 'Overwrite : Yes'.
- Legend:** Green square for 'Recorded', blue square for 'Free Space'.
- Clear All Recorded Data:** A button with a warning message: '\* All recorded data in this panic record storage will be deleted! Please be careful before checking this button.'.
- Reconstruct Abnormally Recorded Timetable:** A button with a message: '\* You can reconstruct timetables with abnormal recording which might occur because of slow network connections or hard disk errors. It may take from a few hours to several days depending on the size of your storage.'.
- Overwrite recorded data when the disk is full:** A checked checkbox.
- Panic Recording on Local Client PC:** A checked checkbox.
- Storage Path:** A text field with 'C:\?' and a browse button (...).
- Capacity:** A dropdown menu set to '4' GB.

- **Total Space:** Displays the total and remaining capacity of storage allocated for panic record.
- **Overwrite:** Displays whether overwrite mode is enabled or disabled. When overwrite mode is enabled, the iNEX system records over the oldest video data once all available storage space has been used. When overwrite mode is disabled, the iNEX system stops recording once all available storage space has been used.
- **Clear All Recorded Data:** Deletes all recorded data in the iNEX system.
- **Reconstruct Abnormally Recorded Timetable:** When any error occurs during recording, the recorded data and the timetable information of the recorded data might not match and the timetable in the iNEX program might display incorrect information. In this situation, clicking the button reconstructs the timetable to display recorded data correctly on the timetable in the iNEX program.
- ☒ **Overwrite recorded data when the disk is full:** Records over the oldest video data once all available storage space has been used.
- ☒ **Panic Recording on Local Client PC:** Enables panic recording in the Client system.
  - **Storage Path:** Allows you to set up the storage folder path for panic recording.
  - **Capacity:** Sets up the storage capacity to be allocated to the hard disk drive (Min. 4GB to max. 64GB).



## Chapter 5 — Live Video Monitoring

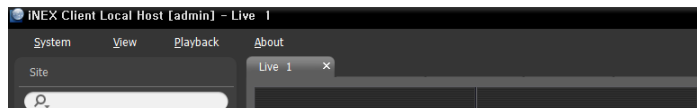
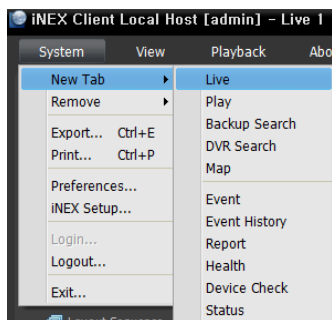
You can monitor live video of each group. The Client system displays video from devices based on the settings in the device on the Live screen. If the streaming service is running, the Client system displays video transmitted through the streaming server, and it allows multiple users to monitor video simultaneously.

First, check the following and run the Client program.

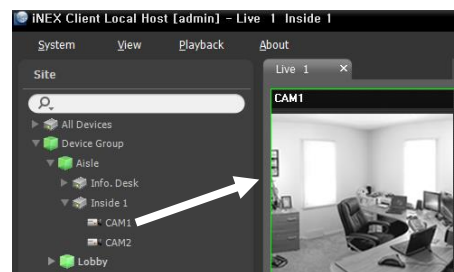
- Services should be running in the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

### 5.1 Monitoring Video

Live video monitoring is supported in the Live panel (maximum 4 – maximum 8 panels, 2 for each panel, in a 32-bit system). If the Live tab is not on the tab panel, go to the **System** menu, click **New Tab**, and then **Live**.



Click the **Live** tab on the tab panel → Select a camera, device or device group from the **Site** list, and drag and drop it on the Live screen. Live video from each camera is displayed on the screen. You can move a camera screen to the desired location on the Live screen without disconnecting the current connection while monitoring video. Select a camera screen and drag and drop it on the desired location.
















**NOTE:** The Client system performance might seriously deteriorate when simultaneously monitoring or playing back video with 1280x720 or higher resolution on more than one camera screen.

#### Panel Toolbar

The panel toolbar at the bottom allows you to control the Live panel.




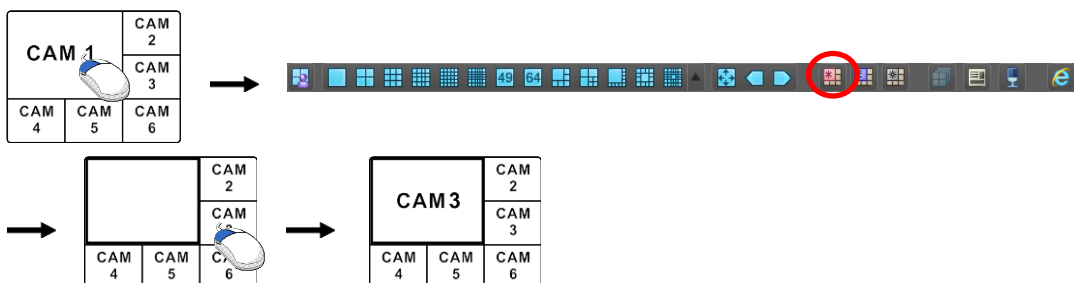
-  (Save to User Layout): Saves the current screen format.

-  (Screen Format): Changes the screen format. Clicking the  button displays more available screen formats. Clicking the  or  button moves to the previous or next camera groups.
-  (Hotspot): Sets up a selected camera screen as a hotspot screen. Refer to [Hotspot Setup](#) (p. 70) for details.
-  (Event Spot): Sets up a selected camera screen as an event spot screen. Refer to [Event Spot Setup](#) (p. 71) for details.
-  (Map Event Spot): Sets up a selected camera screen as a map event spot screen. Refer to [Map Event Spot Setup](#) (p. 71) for details.
-  (Layout Sequence): Starts or stops layout sequence. Refer to [5.1 Monitoring Video, Layout Sequence Monitoring](#) (p. 74) for details.
-  (Export Image)
  - Save Still Image: Saves the current image on the screen as an image or PDF file at its original size.
  - Export Image File, Print Image: Exports or prints the images currently displayed on the screen.
  - Export Panorama Screen: Exports the images currently displayed on the screens.
-  (Audio Broadcast): Broadcasts audio to all devices in the current Live tab.
-  (Panic Recording): Starts panic recording of all the videos on the screen (supported only when Panic Recording on Local Client PC is selected). Refer to [6.4 Setting up Panic Recording](#) (p.106) for details.
-  (Browser): Sets up the selected screen as a browser screen. Refer to [Browser Screen Setup](#) (p. 71) for details.
-  (Text-In Panel): Displays the Text-In panel. The Text-In panel shows the text-in data of devices currently connected to the iNEX system. If a camera is associated with the text-in device and video of the associated camera is displayed on the current Play screen, the text-in data is displayed overlapping video on the camera screen, too. You can change the length of time for the text-in data to be displayed at the Live Text-In Time Range setting.

## Hotspot Setup

**NOTE:** The “hotspot” in the iNEX program is a predefined camera screen in which video from any camera among those currently displayed can be monitored with emphasis. The hotspot screen is surrounded by a red outline.


1. Select a camera screen to set up as a hotspot screen on the current monitoring screen.
2. Click the  (Hotspot) button on the toolbar at the bottom of the Live panel, and the current connection in the selected camera screen is released. The hotspot screen is surrounded by a red outline.
3. Select any camera on the screen. Video from the selected camera is displayed on the hotspot screen, and you can control the camera.

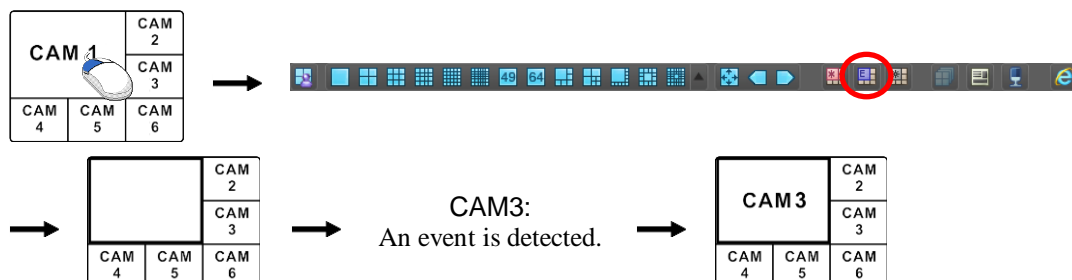




## Event Spot Setup


**NOTE:** The “event spot” in the iNEX program is a predefined camera screen in which video from a camera which an event is detected among cameras currently displayed can be monitored with emphasis. The event spot screen is surrounded by a blue outline.

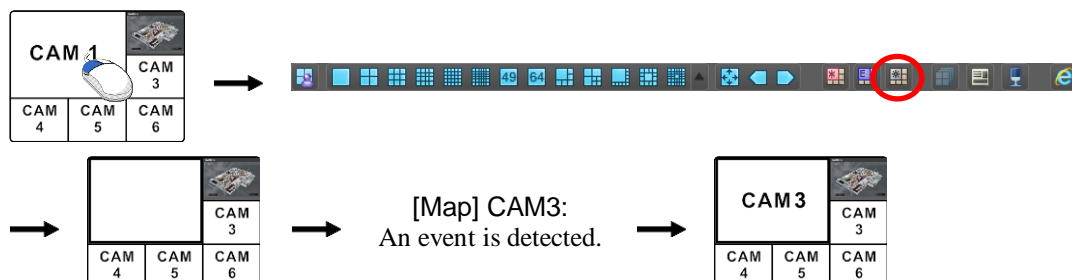
1. Select a camera screen to set up as an event spot screen on the current monitoring screen.
2. Click the  (Event Spot) button on the toolbar at the bottom of the Live panel, and the current connection in the selected camera screen is released. The event spot screen is surrounded by a blue outline.
3. When an event is detected, video from the event-detected is displayed on the event spot screen.




## Map Event Spot Setup

**NOTE:** The “map event spot” in the iNEX program is a predefined camera screen in which video from a camera which an event is detected among cameras on a map can be monitored with emphasis. The map event spot screen is surrounded by a gray outline.

1. Select a camera screen to set up as a map event spot screen on the current monitoring screen.
2. Click the  (Map Event Spot) button on the toolbar at the bottom of the Live panel, and the current connection in the selected camera screen is released. The map event spot screen is surrounded by a gray outline.
3. When an event is detected, video from the event-detected is displayed on the map event spot screen.



## Browser Screen Setup

1. Select a camera screen to set up as a browser screen on the current monitoring screen.
2. Click the  (Browser) button on the toolbar at the bottom of the Live panel, and the current connection in the selected camera screen is released.
3. A web browser page is displayed on the browser screen.



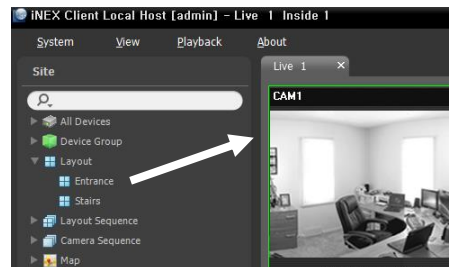
- (Prev. Page), (Next Page), (Enter URL), (Reload/Stop), (Fit to Pane)
- (Menu): Displays a browser menu.
  - Prev. Page, Next Page: Moves to the previous or next page.
  - Enter URL: Allows you to enter a URL (Uniform Resource Locator) address. Clicking the button in the right moves to the address.
  - Reload, Stop: Reloads the web page or stops the reloading.
  - Fit to Pane: Displays the web page by fitting it to the browser screen size.
- Enable Popup: Enables Displays the web page by fitting it to the browser screen size.
- Popup All New Window: Displays the popup screen of the web page on a separate screen.
- Print: Prints the current web page.
- Remove: Releases the browser screen.

## Layout Monitoring

You can monitor video from multiple cameras in a predefined layout. A layout should be registered on the administration service for layout monitoring. Refer to the following explanation for details about layout registration.

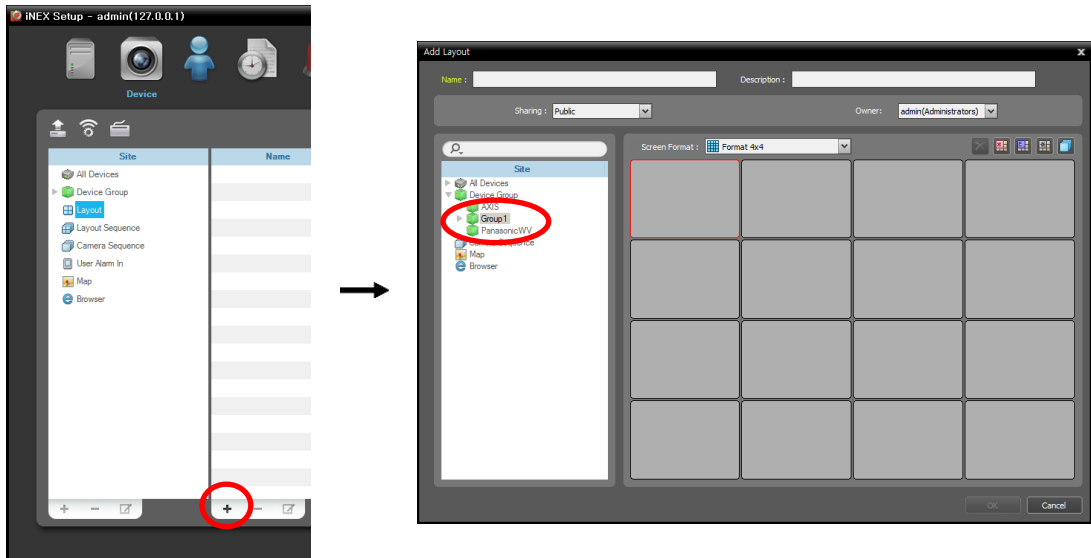
**NOTE:** A “layout” in this document refers to a screen organization created by arranging specific cameras in a specific screen format.







Select a desired layout from the Layout list. Then, drag&drop it on the Live screen, or double-click on the layout. Video from cameras added to the Layout is displayed in the predefined screen format on the screen.



## Registering Layouts

1. Go to the System menu, and click iNEX Setup, and select the Device menu.
2. Click Layout in the Site panel, and then the **+** button at the bottom of the Site List panel on the right. The Add Layout window appears.



- **Name:** Enter the layout name.
- **Sharing:** Specify the users who can see the layout being registered. The **admin** user can see all layouts.
  - **Public:** Displays the layout to all users.
  - **Group:** Displays the layout to a specific group of users. You can select the group from the **Owner** list.
  - **Private:** Displays the layout to the individual users selected from the **Owner** list.
- **Owner:** Allows you to display a different layout to different users.
- **Site:** Displays a list of registered devices, cameras or camera sequences. You can search for a registered device or camera sequence by entering text beside the  icon. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- **Screen Format:** Select a screen format for the layout to be registered. Select a device, a camera or camera sequence to assign to the layout in the **Site** panel, and drag and drop it in the desired camera screen of the layout screen.
-  (Remove): Selecting a camera screen in the layout screen and clicking this button deletes the camera assigned to the camera screen from the layout screen.
-  (Hotspot): Selecting a camera screen in the layout screen and clicking this button sets up the camera screen as a hotspot screen.
-  (Event Spot): Selecting a camera screen in the layout screen and clicking the button sets up the camera screen as an event spot screen.
-  (Map Event Spot): Selecting a camera screen in the layout screen and clicking the button sets up the camera screen as a map event spot screen.
-  (Camera Sequence): Selecting a camera screen in the layout screen and clicking this button allows you to create a camera sequence and assigns the created camera sequence to the camera screen.

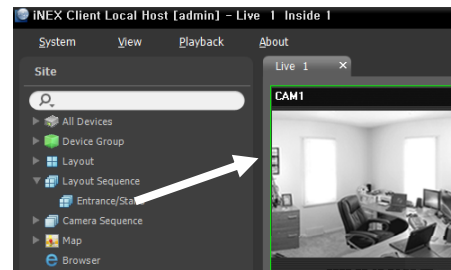
Clicking the OK button completes registration of the layout.


## Layout Sequence Monitoring

You can monitor video from multiple cameras sequentially in more than one predefined layout. A layout sequence should be registered on the administration service for layout sequence monitoring. Refer to the following for details about layout sequence registration.

**NOTE:** A “layout” in this document refers to a screen organization created by arranging specific cameras in a specific screen format.

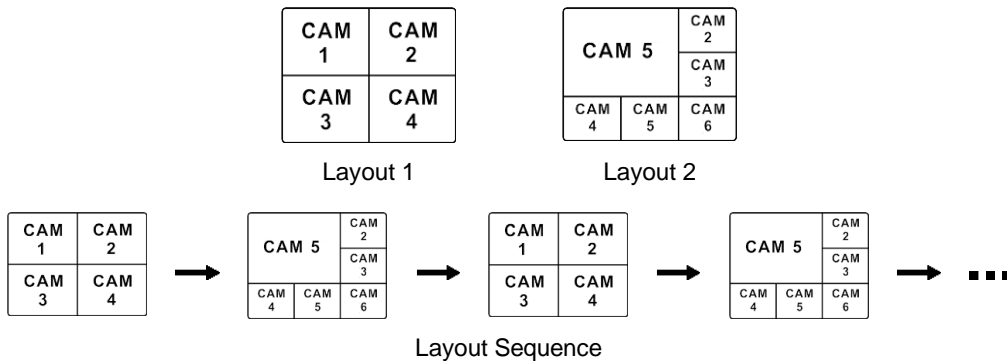
1. Select a desired layout sequence from the Layout Sequence list, and drag and drop it on the Live screen. Video from cameras added to the layout sequence is displayed in the screen format for each layout sequentially.



2. Clicking the  (Layout Sequence) button of the toolbar at the bottom of the panel stops or starts the layout sequence.

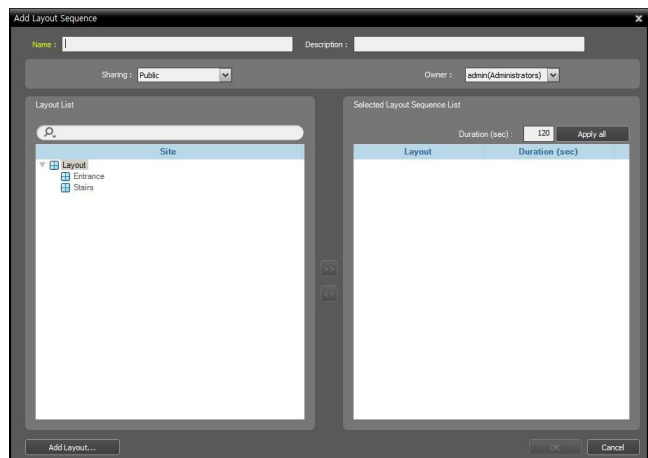
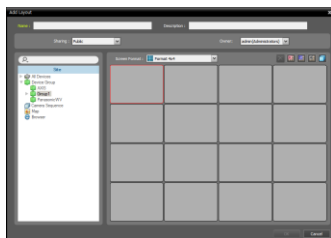
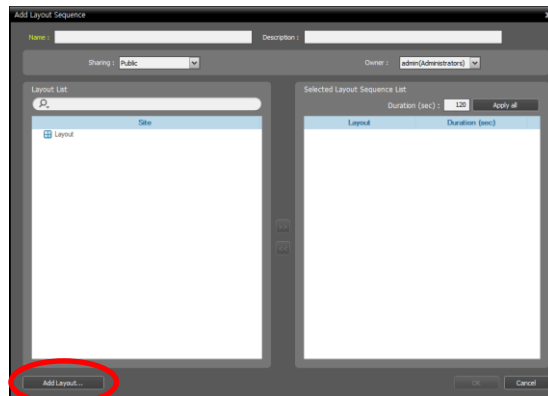
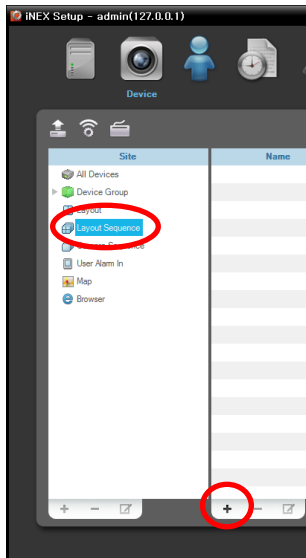



### Example



### Registering Layout Sequences

1. Go to the System menu, and click iNEX Setup, and select the Device menu.
2. Click Layout Sequence in the Site panel, and then the **+** button at the bottom of the Site List panel on the right. The Add Layout Sequence window appears.
3. If no layout to be sequenced is registered, click the Add Layout button. The Add Layout window appears. Register layouts to sequence referring to Layout Monitoring (p. 72). At least two layouts must be registered for sequencing.



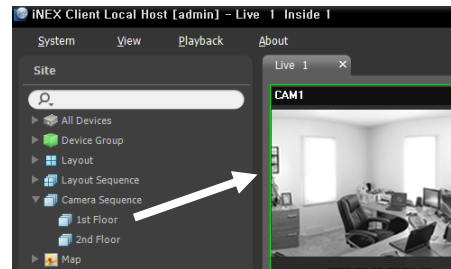
- **Name:** Enter the layout sequence name.
- **Sharing:** Specify the users who can see the layout sequence being registered. The admin user can see all layout sequences.
  - **Public:** Displays the layout sequence to all users.
  - **Group:** Displays the layout sequence to a specific group of users. You can select the group from the Owner list.
  - **Private:** Displays the layout sequence to the individual users selected from the Owner list.
- **Owner:** Allows you to display a different layout sequence to different users.
- **Layout List:** Displays a list of registered layouts. You can search for a registered layout by entering text beside the  icon. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- **Selected Layout Sequence List:** Displays the list of layouts registered for the layout sequence. Duration (sec) displays the duration for each layout to be displayed on the screen. Double clicking the number under Duration (sec) for a layout will allow you to change the duration time for this specific layout. Clicking the Apply all button applies the duration setting to all layouts in the list.


Select a layout from Layout List, click the **>>** button, and the selected layout is added to Selected Layout Sequence List. Clicking the OK button completes registration of the layout sequence.

## Camera Sequence Monitoring

You can monitor video from multiple cameras in the same camera screen sequentially. A camera sequence should be registered on the administration service for camera sequence monitoring. Refer to the following for details about camera sequence registration.

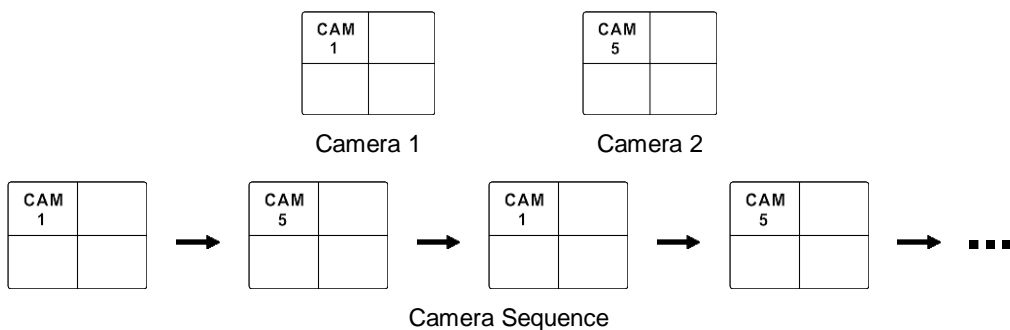
1. Select a desired camera sequence from the Camera Sequence list, and drag and drop it on the Live screen. Video from cameras added to the camera sequence is displayed on the screen sequentially.



2. Clicking the  (Camera Sequence) button on the camera screen control toolbar stops or starts the camera sequence.

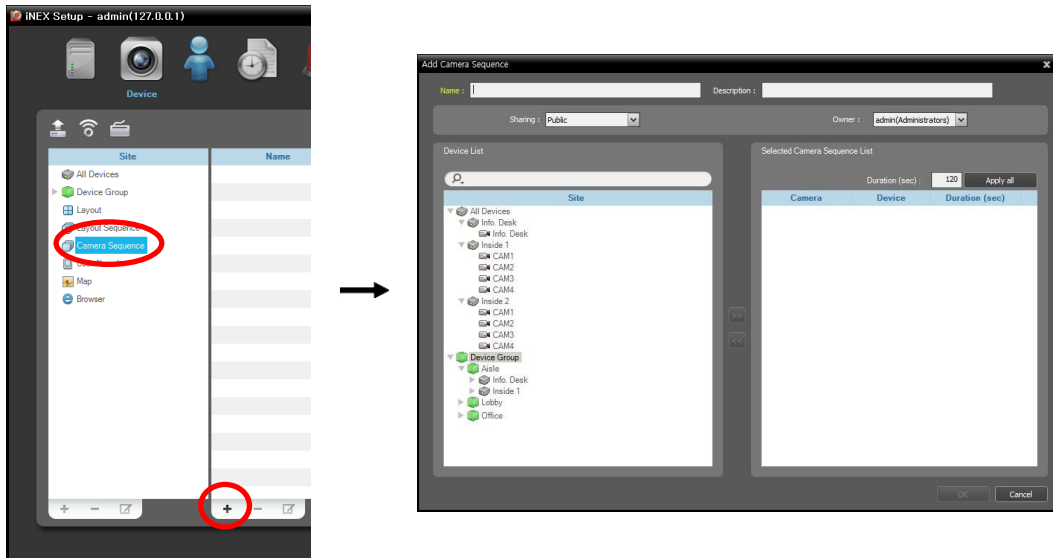


### Example



### Registering Camera Sequences

1. Go to the System menu, and click iNEX Setup, and select the Device menu.
2. Click Camera Sequence in the Site panel, and then the **+** button at the bottom of the Site List panel on the right. The Add Camera Sequence window appears.



- **Name:** Enter the camera sequence name.
- **Sharing:** Specify the users who can see the camera sequence being registered. The admin user can see all camera sequences.
  - **Public:** Displays the camera sequence to all users.
  - **Group:** Displays the camera sequence to a specific group of users. You can select the group from the Owner list.
  - **Private:** Displays the camera sequence to the individual users selected from the Owner list.
- **Owner:** Allows you to display a different camera sequence to different users.
- **Device List:** Displays a list of registered devices. You can search for a registered device by entering text beside the icon. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- **Selected Camera Sequence List:** Displays the list of cameras registered for the camera sequence. Duration (sec) displays the duration for video from each camera to be displayed on the screen. Double clicking the number under Duration (sec) for a camera will allow you to change the duration time for this specific camera. Clicking the Apply all button applies the duration setting to all cameras in the list.

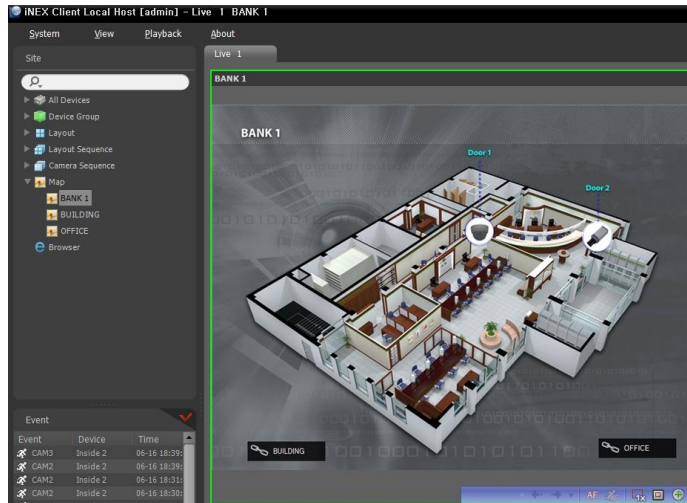
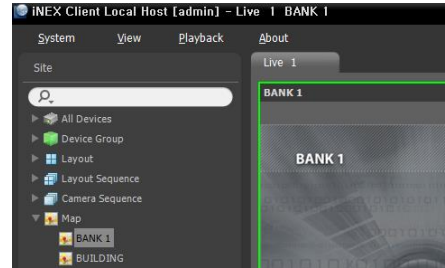
Select a camera from Device List, click the button, and the selected camera is added to Selected Camera Sequence List. Clicking the OK button completes registration of the camera sequence.

## 5.2 Map Monitoring

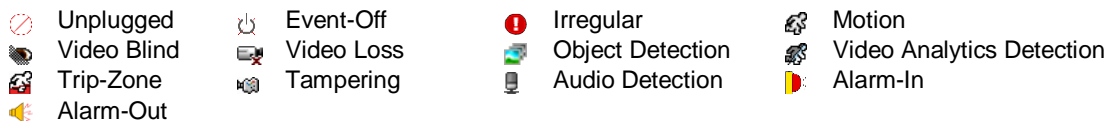
You can monitor video from cameras, event detection and input/output device status on a map for devices registered on the administration service. A map should be registered on the administration service for map monitoring. Refer to **Chapter 17 — Map Editor** (p. 201) for details about map registration.

Map monitoring is supported in the Live panel (maximum 4 – maximum 2 panels in a 32-bit system) and Map panel. If the Live or Map tab is not on the tab panel, go to the **System** menu, click **New Tab**, and then **Live** or **Map**.

Select a desired map from the Map list, and drag and drop it on the Live screen. The selected map is displayed on the screen. You can move a map to the desired location on the Live screen without disconnecting the current connection while monitoring video. Selecting an input/output device on the map, and dragging and dropping it on the Live screen, Play panel or Device Status panel allows you to monitor or play back video or to monitor device status.



Hovering the mouse cursor over the input/output device on the map displays the event detection and status of the input/output device. When the input/output device detects any event or is not working properly, the following icons appear sequentially to the maximum of 4 at a time (some event icons may not be supported, depending on the specifications and version of the device):



Event detection is displayed according to the event detection settings, and Irregular is based on the system check settings on the device that the input/output device is connected.

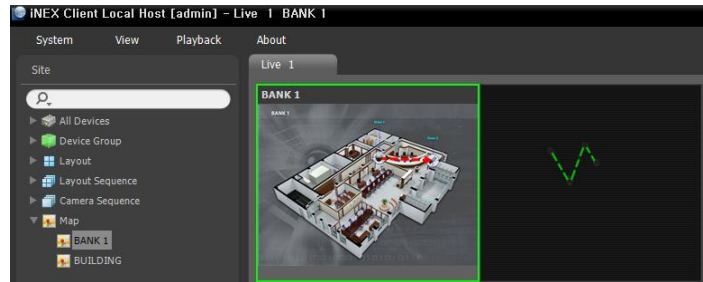
Event detection and status are displayed in unique colors if you have set up status color during the map setup. When more than one event or status is detected at the same time, the color reflecting each event detection or status is displayed sequentially.

## Path Sequence

You can monitor video from multiple cameras sequentially on a map in the same camera screen during map monitoring. A path sequence should be set up for path sequence monitoring. Refer to 17.2 Setting up Map, Path Sequence (p. 204) for details about the path sequence setup.



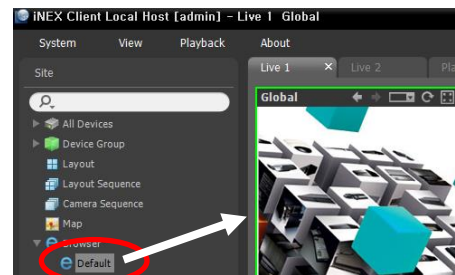
Select a desired path of the path sequence from the map, and drag and drop it on the Live screen. Video from the cameras associated to the path sequence is displayed sequentially during the preset duration period.



## 5.3 Launching Browser

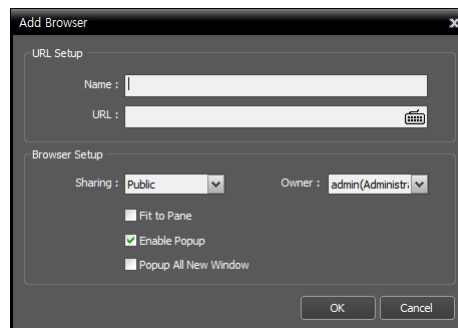
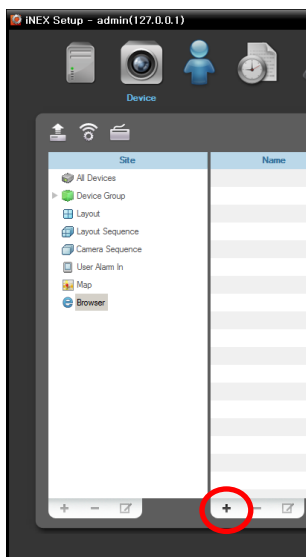
You can launch a browser registered on the administration service. A browser should be registered on the administration service for launching the browser.

Select a desired browser from the **Browser** list, and drag and drop it on the Live screen. The selected browser is displayed on the screen.



### Registering Browser

1. Go to the **System** menu, and click **iNEX Setup**, and select the **Device** menu.
2. Click **Browser** in the **Site** panel, and then the **+** button at the bottom of the Site List panel on the right. The **Add Browser** window appears.



- URL Setup: Enter the name and address of the URL (Uniform Resource Locator) to add.
- ☒ Fit to Pane: Displays the web page by fitting it to the browser screen size.
- Enable Popup: Enables Displays the web page by fitting it to the browser screen size.
- Popup All New Window: Displays the popup screen of the web page on a separate screen.

## 5.4 Controlling Cameras

A control toolbar and a screen menu are provided for controlling camera.

### Control Toolbar

When selecting a camera screen and hovering the mouse cursor over the camera screen, the control toolbar is displayed over that camera screen. The control toolbar allows you to control the selected camera. Hovering the mouse cursor over a button displays a tooltip for the button.



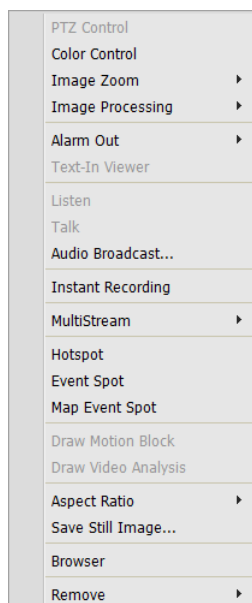
- (PTZ Control): Allows you to control PTZ for a camera that supports PTZ control. Refer to PTZ Control (p. 82) for details.
- (Color Control): Adjusts the brightness, contrast, saturation and hue of the current video. Clicking the button cancels the adjustment and reloads the original image. This change will be applied to both the video of the iNEX program and the device.
- (Image Effect): Adjusts the image effect. Refer to Image Effect (p. 86) for details.
- (Image Zoom): Zooms in on the image. Refer to PTZ Control (p. 82) for details.
- (Camera Sequence): Starts or stops camera sequence. Refer to 5.1 Monitoring Video, Camera Sequence Monitoring (p. 76) for details.
- (Listen/Talk): Receives audio from the device or sends audio to the device (Not all devices support audio).
- (Text-In Viewer): Pops up the text-in viewer window (supported only when a text-in event is detected). The camera title bar is highlighted in blue when a text-in event is detected. Refer to Text-In Viewer (p. 88) for details.
- (Instant Recording/Panic Recording): Starts or stops instant recording or panic recording.
  - Instant Recording: This is supported only for devices registered on one of the recording services. When instant recording, the Instant Recording OSD appears in the upper-right corner of the camera screen and scheduled recording stops. Recording might be delayed depending on system congestion, and the recording OSD might be displayed later or for longer than the scheduled time. Refer to 6.3 Setting up Instant Recording (p. 105) for details.
  - Panic Recording: This is supported only when Panic Recording on Local Client PC is selected. When panic recording, the Panic Recording OSD appears in the upper-right corner of the camera screen and the system records the video shown on the screen. Refer to 6.4 Setting up Panic Recording (p. 106) for details.

### NOTES:

- The Instant Recording function allows you to manually record video that is currently being monitored. You can record desired video with higher performance if the codec, resolution, frame rate and quality have been set up at higher values for instant recording. Instant recordings are saved in the iNEX system.
- The Panic Recording function allows you to manually record video that is currently being monitored. You can use this function to record the video shown on the screen. Panic recordings are saved in the Client system.

## Live Screen Menu

The screen menu is displayed when selecting a camera screen and clicking the right mouse button. The screen menu allows you to control the selected camera.



- PTZ Control, Color Control, Image Zoom, Listen, Talk, Instant Recording/Panic Recording: These function the same as clicking the individual buttons on the control toolbar. Refer to **Control Toolbar** (p. 80) for details.
- Image Processing: Adjusts the image effect. Refer to **Image Effect** (p. 86) for details.
- Text-In Viewer: Pops up the text-in viewer window (supported only when a text-in event is detected). The camera title bar is highlighted in blue when a text-in event is detected. Refer to **Text-In Viewer** (p. 88) for details.
- Audio Broadcast: Broadcasts audio to all devices in the current Live tab.
- Alarm Out: Activates or deactivates alarm out.
- MultiStream: Allows you to choose the desired stream if the device is in the multistream mode for live monitoring (supported only for devices which use the iNEX protocol and some versions of the Axis, Panasonic WV (DG), or ONVIF™ Conformance protocol registered in the streaming service).
- Hotspot: Sets up a selected camera screen as a hotspot screen. Refer to **5.1 Monitoring Video, Hotspot Setup** (p. 70) for details.
- Event Spot: Sets up a selected camera screen as an event spot screen. Refer to **5.1 Monitoring Video, Event Spot Setup** (p. 71) for details.
- Map Event Spot: Sets up a selected camera screen as a map event spot screen. Refer to **5.1 Monitoring Video, Map Event Spot Setup** (p. 71) for details.
- Draw Motion Block: Displays the area where motion is detected with red blocks when a motion detection event occurs for the selected camera (supported only for connection of network video transmitters which use the iNEX protocol).
- Draw Video Analysis: Displays video analytics detection results on the screen (supported only for devices which are registered on the video analytics service). If a VA box is connected, VA box analysis data is displayed over the live image.

### Video Analysis Service


- All detection objects: Displays detection results of any objects which there were any changes on the monitoring screen.
- Event triggering object only: Displays detection results of the events triggered according to the rules preset in the Setup program. Refer to **12.2 Configuring Video Analytics Detection Events** (p. 140) for details of setting rules.
- Not Display: Does not display any detection results.

### VA Box















- Displays the People Counting and Queue Management video analysis over the live image.
- Displays the real-time Heat Map data over the live image, and provides Heat Map image options.
- Refer to **Video Analysis Report (VA Box)** (p. 247) for more details.

- **Aspect Ratio:** Select the proper image aspect ratio.
  - **Fit to Screen:** Displays images by fitting them to the screen size regardless of the aspect ratio.
  - **Fit to Screen (Aspect Ratio):** Displays images by fitting them to the screen size keeping the aspect ratio. This might cause top and bottom or left and right side of images to be cropped depending on the screen size. This aspect ratio is not supported and **Original Ratio** is applied for camera screens that the following functions are activated: Image Zoom, Hotspot, Event Spot, Draw Motion Block, Draw Video Analytics.
  - **Original Ratio:** Displays images by fitting them within the screen size while maintaining their original ratio.
  - **Half Size (x0.5) to Quadruple Size (x4):** Selecting the desired image size displays images in the selected size. Options are enabled if the selected camera screen can display images in that size.
- **Save Still Image:** Saves the current image on the screen as an image or PDF file at its original size.
- **Browser:** Sets up the selected screen as a browser screen. Refer to 5.1 Monitoring Video, Browser Screen Setup (p. 71) for details.
- **Remove:** Disconnects the current connection.

## PTZ Control

Clicking the  (PTZ Control) button on the control toolbar displays the PTZ control toolbar and allows you to control PTZ. Depending on the PTZ camera specifications, some features may not work.




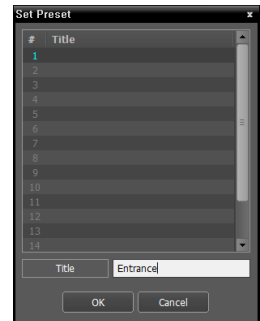
-  (Direction Control): Displays or hides the  (Direction Control Panel). You can control the direction of the PTZ camera by clicking the arrow buttons on the direction control panel or by clicking and dragging the mouse on the camera screen.
-  (OneClick Move): Controls Pan-Tilt to move the user's point to the center of the screen (only works for some models of Network Camera connections). See PTZ OneClick Move Control (p. 83) for an explanation of this function.
  -   (Zoom In/Out): Zooms the camera lens in or out.
  -   (Focus Near/Far): Focuses on near or far objects.
  -   (Iris Open/Close): Opens or closes the iris of the camera lens.
-   (Set/View Preset): See PTZ Preset Control (p. 82) for an explanation of this function.
-  (One Push): Automatically adjusts focus when the image is out of focus after the image is zoomed in or out (only works for some models of Network Camera connections).
-  (Advanced Menu): Displays the Advanced Menu window and allows you to use more features that the PTZ camera supports. Refer to the PTZ camera manufacturer's manual for details about additional features.
-  (Close): Exits the PTZ mode and returns to the control toolbar.


## PTZ Preset Control

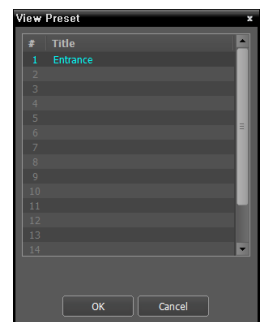
You can save camera directions as a Preset so that you can move the camera directly to a saved direction.

1. Move the PTZ camera to the desired position.

- Click the  (Set Preset) button on the PTZ control toolbar, and the Set Preset window appears. Enter a name for the Preset and click the OK button. The current position is saved as the Preset name.



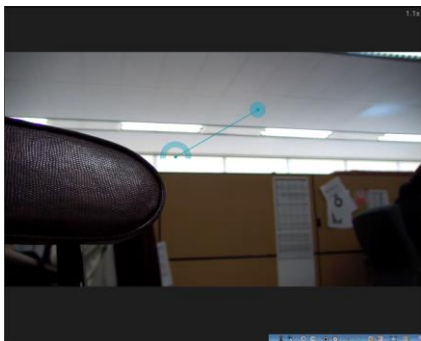
- Click the  (View Preset) button on the PTZ control toolbar, and the View Preset window appears. Select the desired Preset, and the PTZ camera moves to the position of the selected Preset.



## ePTZ Control

You can control Pan, Tilt, and Zoom function more accurately.

**NOTE:** This is supported only for some models of camera.



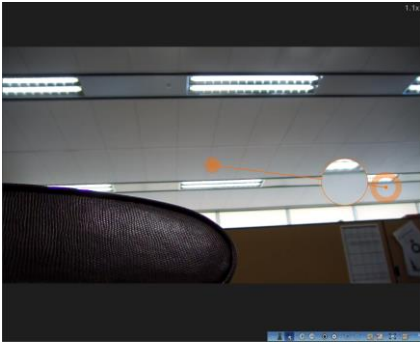
Controls Pan, Tilt, and Zoom function. Dragging the mouse, the size of dragging indicates the speed of PTZ.


- Left button drag: Left/Right (Pan control), Up/Down (Tilt control)
- Right button drag: Zoom control

## PTZ OneClick Move Control


You can control Pan-Tilt to move your point to the center of the screen. You can move the position exactly you want with minimum input.

**NOTE:** This is supported only for some models of camera.















Clicking the  (OneClick Move) button on the control toolbar and any point of PTZ camera pane moves anywhere you want. Dragging the mouse zooms the part of screen.


## Fisheye Dewarping

Clicking the  (Fisheye Dewarping) button on the control toolbar displays the fisheye dewarping toolbar and allows you to dewarp fisheye image. The mount type set in the device is a default.



-  (Mount Type): Choose a position that the camera is mounted. The available Screen Type changes depending on this setting.
-  (Image Ratio): Select the proper image aspect ratio.
-  (Layout): Select the layout, Main View and Main + 1~7 panes mode.
-  (Panoramic): Select the panoramic mode.
-  (Selection Mode): Drag and drop the area in the main view screen.
-  (Spot Mode): Move and select the area with the dewarp finder in the main view screen.
-  (Drag and Drop): Move and copy the main view and camera pane.
-  (Main PiP): Displays PiP (Picture in Picture) view to select the area easily in the main view screen.
-  (ePTZ): Controls Pan, Tilt, and Zoom function. Dragging the mouse, the size of dragging indicates the speed of PTZ.
  - Left button drag: Left/Right (Pan control), Up/Down (Tilt control)
  - Right button drag: Zoom control
-  (Auto Pan): Set to pan the camera automatically. +,- for direction and numbers for speed.
-  (Load/Save Preset): Load the saved preset of fisheye video control and save the current fisheye video control as preset.
-  (Display Source Image): Cancels the adjustment and reloads the original image.




## Zoom Control

Clicking the  (Image Zoom) button on the control toolbar allows you to zoom in on the current video.


**NOTE:** “PIP” is an abbreviation of *Picture in Picture* and describes a smaller screen within a screen.









Dragging the mouse on the camera screen moves the zoomed-in area.

-  (Slide Bar): Adjusts the enlargement ratio. You can adjust the enlargement ratio also by using the mouse scroll wheel.
-  (Actual Size Zoom): Enters the actual size zoom mode. In the actual size zoom mode, the image is displayed in its original size regardless of the camera screen size or image's aspect ratio.
-  (Zoom Finder): Displays or hides the PIP screen. The rectangle in the PIP screen indicates the zoomed-in area.


## Image Effect

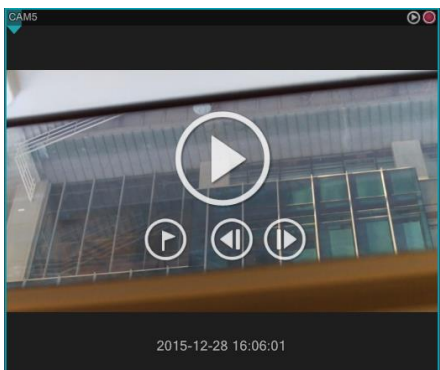
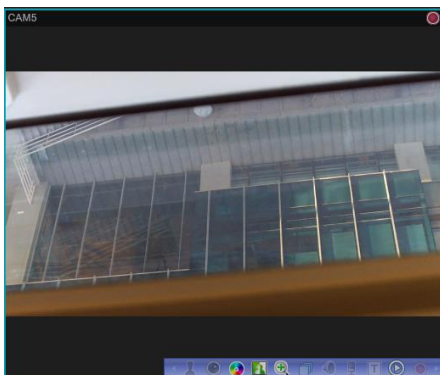
Clicking the  (Image Effect) button on the control toolbar displays the image effect control toolbar and allows you to control image effect. This change will be applied to only the video of the iNEX program and not to the device.



-  (Blur): Blurs the image to reduce noise.
-  (Sharpen): Sharpens an image.
-  (High-Boost): Increases the brightness and contrast of images.
-  (Histogram Equalization): Equalizes the image brightness to make it more natural.
-  (Edge Detection): Extracts the image edge.
-  (Revert): Cancels the adjustment and reloads the original image.

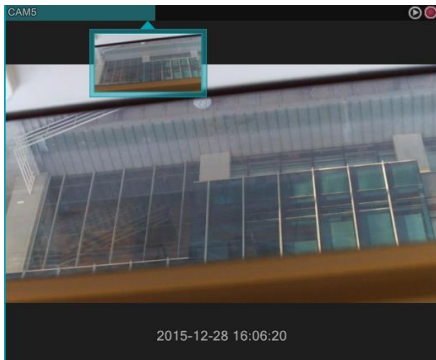
## Instant Playback

You can use Instant Playback function for the section with the recording information. Click the  (Instant Playback) button on the control toolbar and select a playback time on the popup menu.



- Hovering the mouse cursor over the screen allows you to use Play, Pause, Forward/Backward, and Bookmark buttons.
- Using the left/right arrow buttons and PageUp/PageDown buttons allows moving the playback point.
- Select reverse playback and slow playback from the context menu of the image.



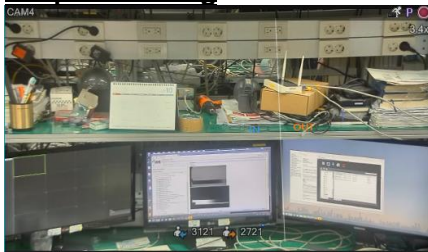


- The status of playback appears on the camera title bar.
- Clicking the inverted triangle image beneath the camera title bar displays a thumbnail image. When the thumbnail image is enabled, hovering the mouse cursor on the camera title bar displays the image of the corresponding site.
- Clicking a specific point on the camera title bar moves to the corresponding site.

## Video Analysis

Select a monitoring video and click the right mouse button to see the display menu. Select **Draw Video Analysis** from the display menu to activate the menu according to the current video analysis type.

### People Counting



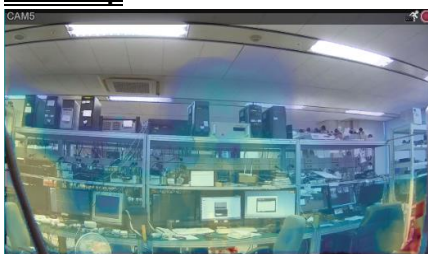
- Selecting **People Counting** displays real-time In/Out information over the selected video.

### Queue Management




- Selecting **Queue Management** displays queue information (the number of people, waiting time) for each area over the selected video.
- In the case of **Queue Management**, checking **Exceed People Limit** and **Exceed Time Limit** events is available.

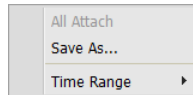
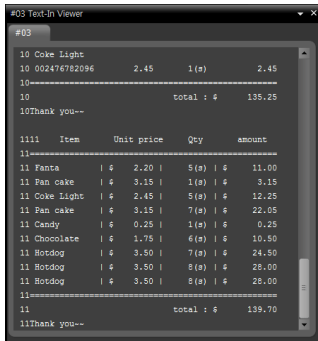
### Heat Map



- Selecting a **Heat Map** live icon displays a heat map image over the selected video.
- Select options of **Heat Map** live to change a heat map image setting (image spectrum color, transparency, image interpolation option).

## Text-In Viewer

Clicking the  (Text-In Viewer) button on the control toolbar displays the text-in viewer window and allows you to check the text-in data in real-time (supported only when a text-in event is detected). The camera title bar is highlighted in blue when a text-in event is detected.



Clicking the title bar in the Text-In Viewer window displays a text-in popup menu.

- **All Attach:** Docks all text-in viewer windows in one panel.
- **Save As:** Saves the text-in data as a text file (.txt).
- **Time Range:** Set up the length of time for text-in data to be displayed when a text-in event occurs. You can check the text-in data in the text-in viewer window within the established time range for the event.









## 5.5 Controlling Maps

A control toolbar and a screen menu are provided for controlling a map.

## Control Toolbar

When selecting a map and hovering the mouse cursor over the map, the control toolbar is displayed over that map. The control toolbar allows you to control the selected map. Hovering the mouse cursor over a button displays a tooltip for the button.



- 
-  ,  (Previous Map, Next Map): Moves to the previous or next connected map of the maps that have been connected to the current map screen. Maps can be connected by using map link or by selecting a map from the map list and dragging and dropping it on the current map screen.
  -  (Auto Focusing): Enlarges the area where the event-detected device is placed when any event is detected. When events are detected in more than one device at the same time, the canvas is enlarged as much as possible while still displaying all event-detected devices. When events are detected in more than one device consecutively, the focusing moves to the later detected event after the preset time expires. Refer to 4.8 Client, Menu – Preference Settings, Map (p. 64) for details about the auto focusing setting.
  -  (Focusing Event): Allows you to select a desired event for auto focusing.
  -  (Actual Size (x1)): Displays a map in its original size regardless of the map screen size or canvas's aspect ratio.
  -  (Zoom Finder): Displays or hides the PIP screen. The rectangle in the PIP screen indicates the enlarged area. When set to Auto, the PIP screen is displayed only while a canvas is enlarged.
  -  (Zoom In): Allows you to adjust the enlargement ratio of the canvas.

## Example

- When Zoom Finder is set to Off;

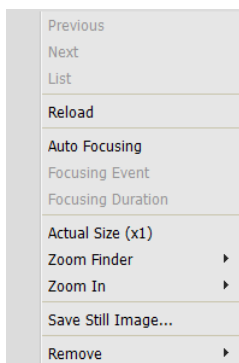


- When Zoom Finder is set to Auto or On;



## Map Screen Menu

The screen menu is displayed when selecting a map screen and clicking the right mouse button. The screen menu allows you to control the selected map.



- **Previous, Next, Auto Focusing, Actual Size (x1), Zoom Finder, Zoom In:** These function the same as clicking the individual buttons on the control toolbar. Refer to **Control Toolbar** (p. 80) for details.
- **List:** Displays the list of the previous or next connected maps. Selecting a map from the list moves to the selected map.
- **Reload:** Reloads the connection of the current map.
- **Focusing Event, Focusing Duration:** Allows you to set up auto focusing events and duration. Refer to **4.8 Client, Menu – Preference Settings** (p. 57) for details.
- **Save Still Image:** Saves the current image on the screen as an image or PDF file at its original size.
- **Remove:** Disconnects the current connection.



## Chapter 6 — Recording

You can record video from cameras connected to devices registered in the administration service and iNEX program provides three types of recording: Scheduled recording, instant recording, and panic recording. Scheduled recording is categorized as Time-Lapse Recording and Event-Based Recording (Event and Pre-Event). When scheduled recording, the system performs recording based on the settings of schedule Presets during the scheduled time. You can manually start and stop instant recording and panic recording while monitoring the video. Scheduled recordings and instant recordings are saved in the iNEX system, and the panic recordings are saved in the Client system.

When more than one recording mode is set up for the same period, the iNEX program records video with the recording settings of the highest priority recording mode. The priority order of recording modes is as follows: Pre-Event recording (lowest) → Time-Lapse recording or Event recording → Instant recording (highest). In the same recording mode, the schedule higher up the list in the Schedule Setup window has priority, and between the Time-Lapse recording and Event recording mode, Event recording has priority. You can change a schedule's priority by changing its position in the schedule list. Panic recording does not have priority, so you can record video in scheduled recording mode at the same time.

First, check the following and run the Setup program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

**NOTE:** Recording is not supported for DVRs.

### 6.1 Setting up Recording Storage

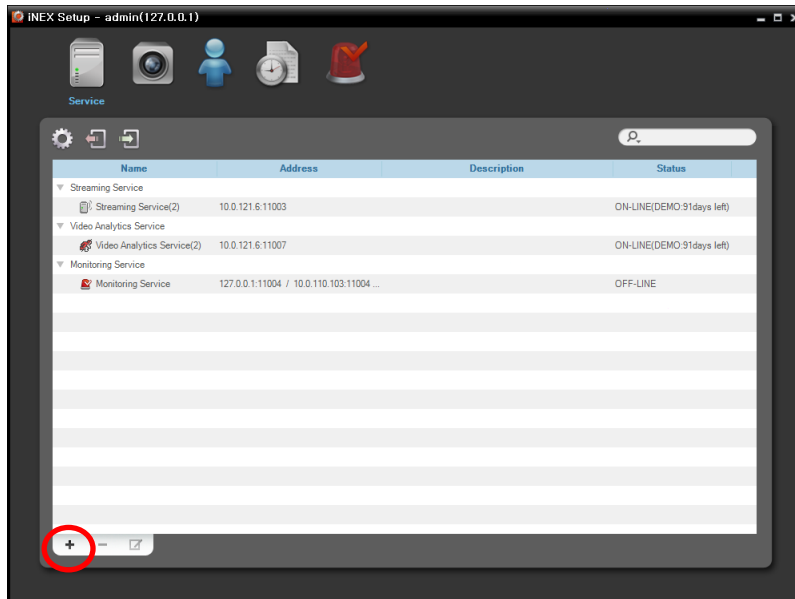
You must allocate storage in order to record video from cameras. Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program → Select the **Service** menu, and allocate storage following the procedures below.

**NOTES:**

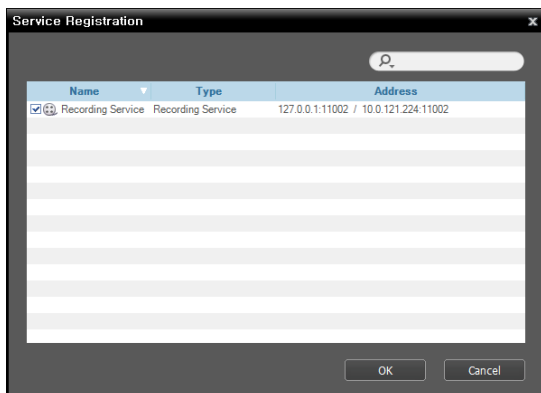
- USB hard disks and network hard disks cannot be allocated storage.
- It is recommended to add a new unformatted hard disk drive to ensure stable recording. If you are setting up a hard disk drive which contains data, however, you are to delete partition(s) and the file system in advance after formatting. Refer to the PC/server's user manual or consult with the PC/server manufacturer for details about how to format or delete the partition(s) and file system.
- When removing a hard disk drive that contains recorded video from a recording server and installing it in another recording server, you cannot search or play back the video recorded on the original recording server.
- The total amount of storage for one hard disk drive cannot exceed 50,000 GB.

## Registering Recording Service

If any recording service is not registered, select the **Service** menu and register recording services following the procedures below.



1. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.



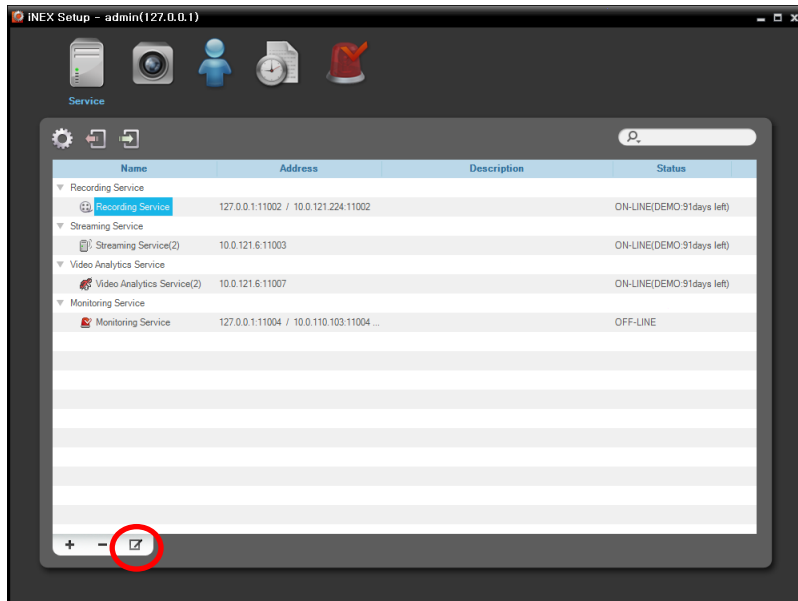
- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.


**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

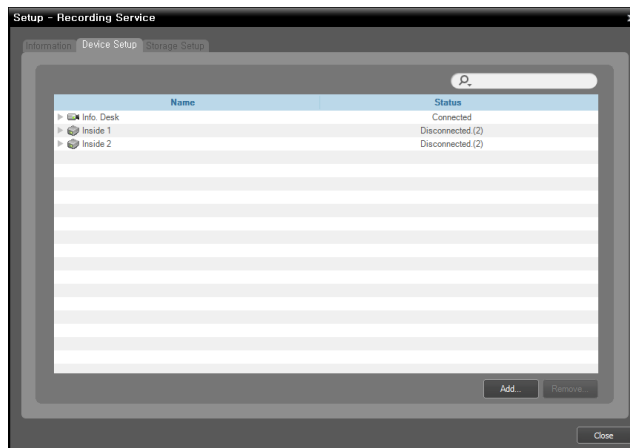
2. Select a recording service to register on the iNEX system.

## Allocating Storage

Select the **Service** menu. Then select a recording server and allocate storage to hard disk drives in the selected server following the procedures below.




1. Select a recording service and click the  button at the bottom. The **Setup – Recording Service** window appears. Select the **Device Setup** tab.

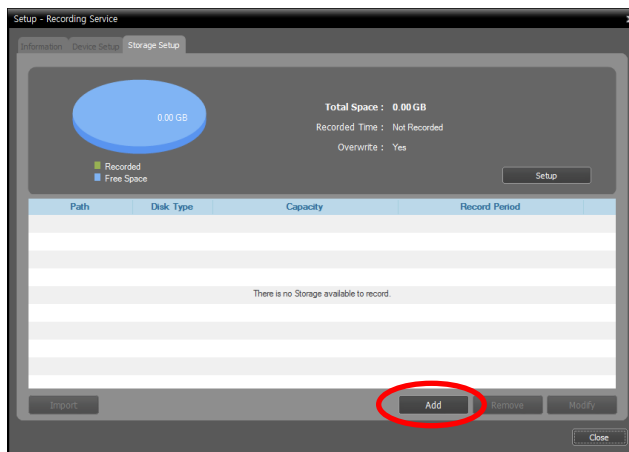


The list of cameras registered on the current recording service is displayed. Clicking the **Add** button at the bottom allows you to register additional cameras on the current recording service.

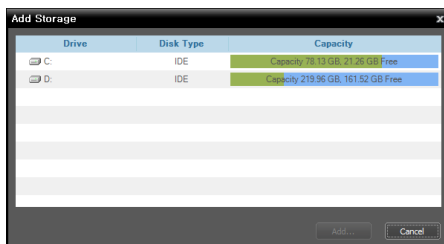
**NOTES:**

- The number of devices that can be recorded in a recording server differs depending on the type and the number of the WIBU-Keys connected to the administration server.
- If you remove a device for which some recording has been done and register the device again, the iNEX system considers the device as a new device. In this case, you can search or play back video recorded before the device was removed as follows: go to the *Play* panel → click the  (Additional Menu) button → select *Removed Devices*.

2. Select the **Storage Setup** tab and click the **Add** button at the bottom.

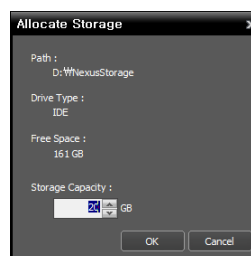
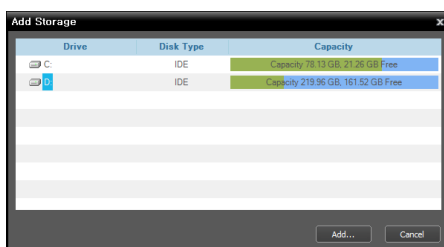


3. The **Add Storage** window appears, and a list of available hard disk drives is displayed with information about each drive.



- **Drive:** Displays the drive name.
- **Disk Type:** Displays the type of hard disk drive.
- **Capacity:** Displays the total storage capacity and available storage capacity.

4. Select a hard disk drive to allocate storage and click the **Add** button at the bottom. The **Allocate Storage** window appears.





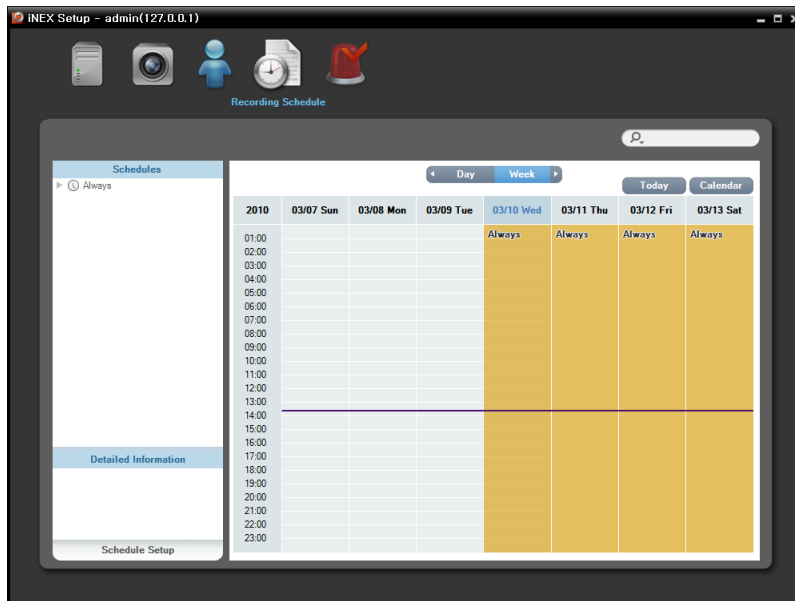
- **Path:** Displays the storage folder path.
- **Disk Type:** Displays the type of hard disk drive.
- **Free:** Displays the available storage capacity.
- **Storage Capacity:** Sets up the storage capacity to be allocated to the hard disk drive (Min. 20GB). If the Windows operating system is installed on the hard disk drive, you must reserve more than 10GB of free hard disk space for proper system operation. If no file system has been created on the hard disk drive, the recording server automatically creates a proprietary video database file system when storage is allocated to ensure more stable recording and allocates storage to the entire hard disk drive automatically.

## 6.2 Setting up Scheduled Recording

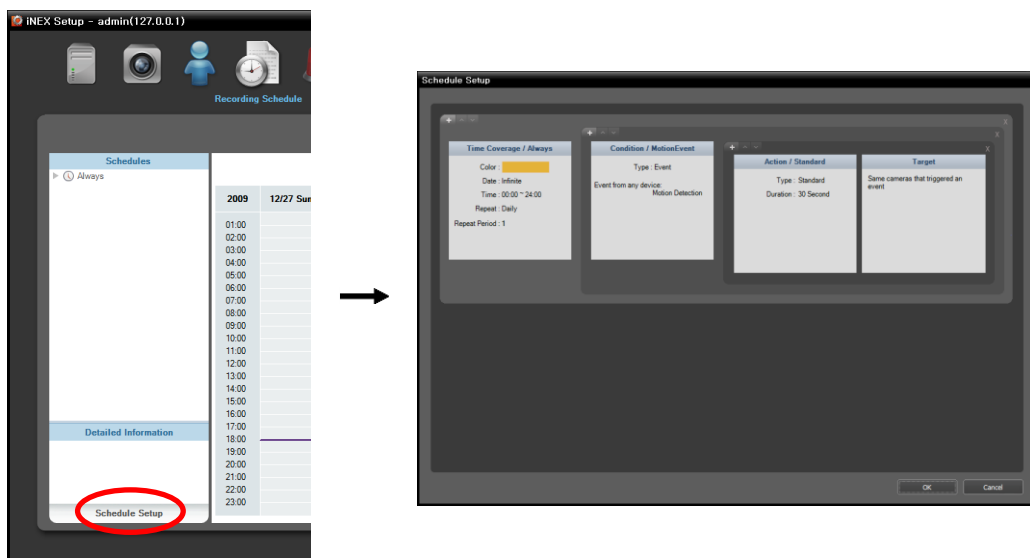
Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program → Select the **Recording Schedule** menu, and set up the recording schedule following the procedures below.

### NOTES:

- The recording function is supported only for the device registered as the *admin* user.
- If the same device is registered on another recording service which is registered on another administration service, only the first recording server that is connected to the device records video. Once a recording service connects to the device, other recording servers will not record video from the device unless the connection of the first recording service is released.
- The iNEX program performs recording with the settings of codec, resolution, frame rate and quality set in the device if the device uses protocols other than iNEX or ONVIF™ Conformance.
- If the device uses the ONVIF™ Conformance or Axis protocol, the iNEX program performs recording with the settings of the profile designated in the iNEX program among preset profiles. You can designate which profile to use for recording when editing the device settings. Refer to *13.2 Managing Devices, Editing Device Information* (p. 152) and *13.3 Remote Setup of ONVIF™ Conformance Protocol Devices, Profiles* (p. 167) in *Chapter 13 — Device Management* for details.
- When the recording speed and resolution set in the iNEX program are higher than the *Frame Rate* and *Max. Resolution* set on the device, the recording servers will record video at the *Frame Rate* and *Max. Resolution* set on the device (four-channel network video transmitters only which use the iNEX protocol).
- If network connection is temporarily lost between the device and the recording server because of network problems or recording server reboot, the device saves video temporarily while the network is down (supported only for devices which use the iNEX protocol). When network connection is re-established, the device transmits the saved video to the recording server at a time. In this case, video recording during the period might be made with different settings from those in the recording schedule.
- Recording speed might be decreased depending on the network conditions or system performance.
- Recording may be delayed because of network conditions or system performance, and the recording OSD may be displayed later or for a longer period than was scheduled.
- Some videos may not be recorded for devices which do not use the iNEX protocol or associated cameras depending on the network conditions or system performance.
- Video playback might not be smooth during recording depending on the recording server's system performance.
- For devices that do not support the pre-event or recording redundant services, the actual recording of a pre-event may differ from the set time. When an event occurs after the recording services or recording redundant services have connected to the device, only the pre-event after connection is recorded. For example, if the pre-event duration is set for 30 seconds but the event occurs 5 seconds after the services connected to the cameras, only 5 seconds of pre-event video will be recorded before the event occurrence.



Click the Schedule Setup button at the bottom. The Schedule Setup window appears, and schedule windows are displayed with the current settings for each Preset.



- **Time Coverage:** Sets up the schedule time. You can set up more than one time range. The higher the schedule position is in the **Schedule Setup** window, the higher its priority is.
- **Condition:** Sets up the recording type. You can set up more than one recording type for the same recording period. The higher the schedule position is in the **Schedule Setup** window, the higher its priority is. Event related recording types may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CoVuHD and ONVIF™ Conformance protocols). Ask your dealer or distributor for details.

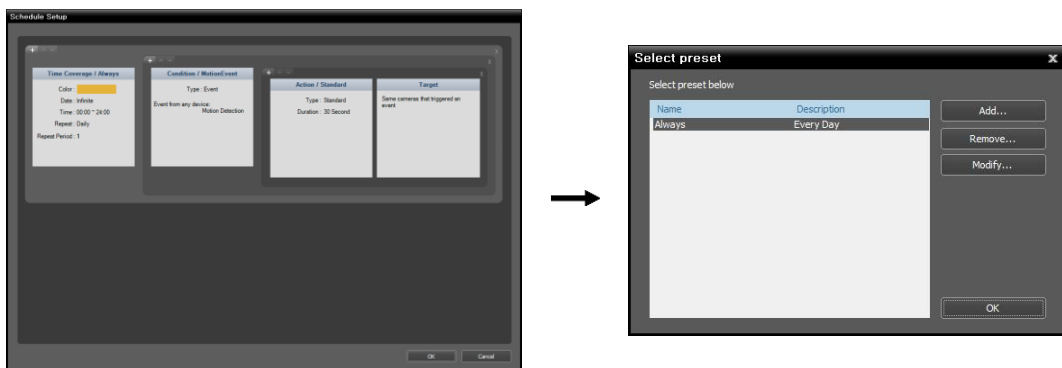
- **Action:** Sets up the stream to use for recording (network cameras only) or the recording settings (network video transmitters only). You can set up more than one recording setting for the same recording type. This function is supported only for devices which use the iNEX protocol. The event and pre-event duration setting is supported for all devices.
- **Target:** Sets up the cameras to be recorded.

**NOTE:** In the schedule setup, “Preset” indicates a single setting in which the setting values of *Time Coverage*, *Condition* or *Action* are saved.

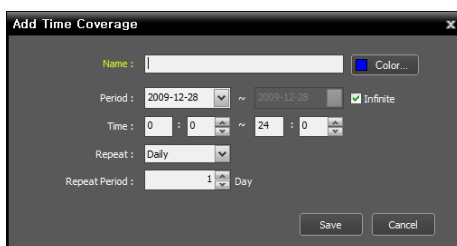
## Setting up Time-Lapse Recording

During Time-Lapse recording, the recording server performs recording continuously based on the schedule settings for the scheduled time (supported only for devices registered on one of recording services).

1. Set up the schedule time by double clicking the **Time Coverage** schedule window, and then selecting a desired Preset.

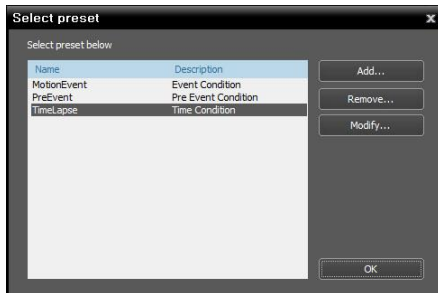


You can add a new Preset or edit a saved Preset by clicking the **Add** or **Modify** button. Refer to the following explanation for setting up a schedule.



- **Name:** Enter the Preset name.
- **Color:** Click the button and select a desired color. The scheduled time section will be highlighted with the selected color in the schedule table.
- **Period:** Set up the schedule time. Selecting the **Infinite** option causes continuous recording based on the **Condition**, **Action** and **Target** preset settings without limiting the period.
- **Time:** Set up the schedule time.
- **Repeat, Repeat Period:** Set up the recording interval and interval period. The recording server will perform recording at the designated interval during the interval period.

- Set the recording mode to the Time-Lapse Recording mode by double clicking the Condition schedule window and selecting a desired Preset of time condition.

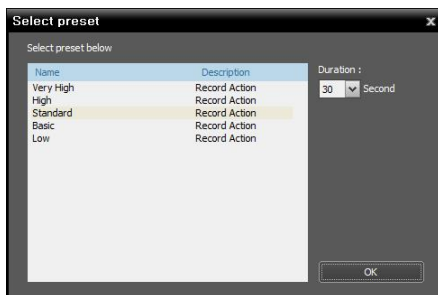


You can add a new Preset or edit a saved Preset by clicking the Add or Modify button. Clicking the Add or Modify button displays the following setup screen.



Enter the Preset name and select Time Condition from the Condition Type list.

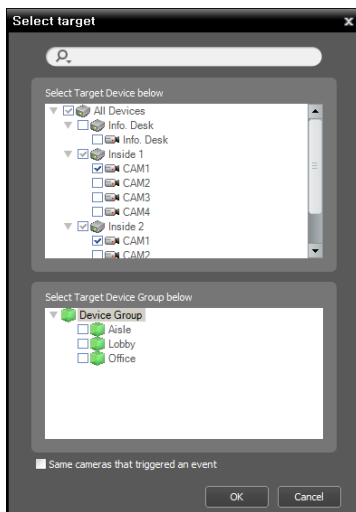
- Double click the Action schedule window and select the desired Preset (supported only for devices which use the iNEX protocol). Devices which do not use the iNEX protocol will record video by default.



A stream to use for recording (network cameras only) or a codec, resolution, frame rate and quality setting values (network video transmitters only) are allocated to each Preset. The stream or setting values allocated to each Preset is different depending on the device. Refer to 13.2 Managing Devices, Editing Device Information (p. 152) for details.

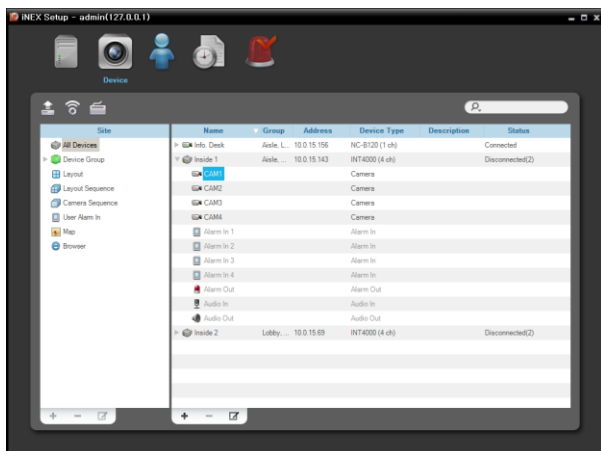
- Duration: This is not supported for time-lapse recording.

- Select the cameras to be recorded after double clicking the Target schedule window.



Select cameras from the device list to record video or select device groups from the device group list. The Same cameras that triggered an event option is not supported during Time-Lapse recording.

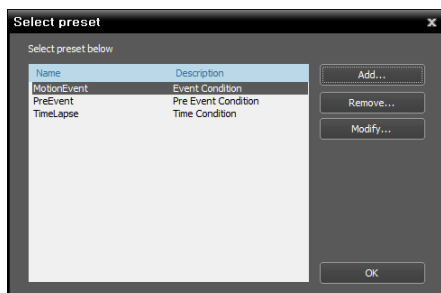
5. You can check the recording status in the Device menu. Click **All Devices** in the Site panel and all registered devices are displayed in the Site List panel. Click the arrow button (▼) beside the device name, and check the status (**Record**: During scheduled recording, **Panic**: During instant recording, **Idle**: Ready to record). The Scheduled Recording OSD (●) is displayed in the upper right corner of the camera screen of the Live screen in the Client program.



## Setting up Event-Based Recording

During Event or Pre-Event recording, the recording server records video based on the event detection for the scheduled time (supported only for devices registered on one of recording services). Event related functions may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Ask your dealer or distributor for details.

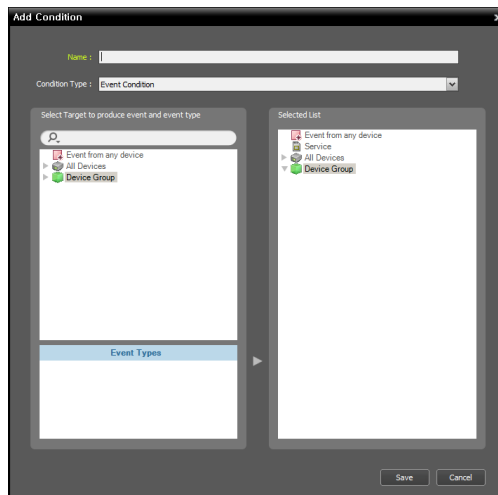
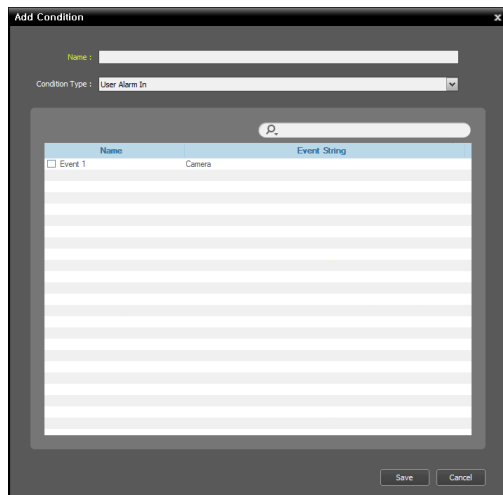
1. Set the schedule time by double clicking the **Time Coverage** schedule window, and then selecting a desired Preset. The way to set up the schedule time for Event or Pre-Event recording is identical to the way to set up for Time-Lapse recording. Refer to **Setting up Time-Lapse Recording** (p. 97) for details.
2. Set up the recording mode to Event Recording or Pre-Event Recording by double clicking the **Condition** schedule window. Then select a desired Preset of event or pre-event condition.



You can add a new Preset or edit a saved Preset by clicking the **Add** or **Modify** button. Clicking the **Add** or **Modify** button displays the following setup screen.

## Event Recording Condition

The recording server records video when predefined events are detected. This function may not be supported depending on the protocol that the device uses and device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Ask your dealer or distributor for details.



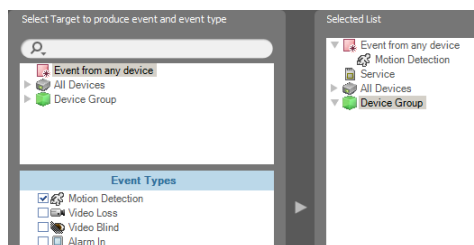
- **Name:** Enter the Preset name.
- **Condition Type:** Select an event type.
  - **User Alarm-In:** Records video from the devices designated during the Action schedule setup when the iNEX program detects a user alarm-in event. Refer to **Chapter 13 — Device Management, User Alarm-In Event Setup** (p. 144) for details about registering the user alarm-in event.
    - **Name:** Displays a list of user alarm-in events registered on the administration service.
    - **Event String:** Displays the event string that triggers a user alarm-in event.

Select a user alarm-in event to record.

- **Event Condition:** Records video when specific events are detected in devices.

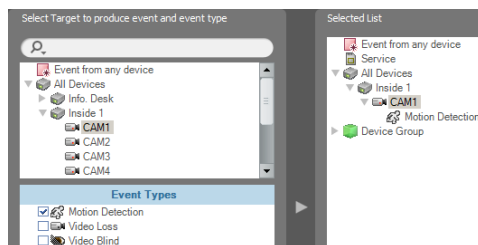
- **Event from any device:** Select to record video when user-defined types of events are detected.

Click **Event from any device**, and the list of event types is displayed in **Event Types** below → Select the desired event types, and the selected event types are added to the list under **Event from any device** on the right.



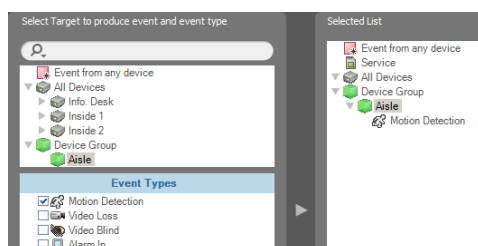
- **All Devices:** Select to record video when user-defined types of events are detected from the selected device or camera.

Click **All Devices**, and the list of registered devices and cameras is displayed → Under **All Devices**, click a device or camera to trigger Event recording, and the list of event types supported by the device or camera is displayed in **Event Types** below → Select the desired event types, and the selected event types are added along with the selected device or camera to the list under **All Devices** on the right.



- **Device Group:** Select to record video when the user-defined types of events are detected in the selected device group.

Click **Device Group**, and the list of registered device groups is displayed → Under **Device Group**, click a device group to trigger Event recording, and the list of event types is displayed in **Event Types** below → Select the desired event types, and the selected event types are added along with the selected device group to the list under **Device Group** on the right.



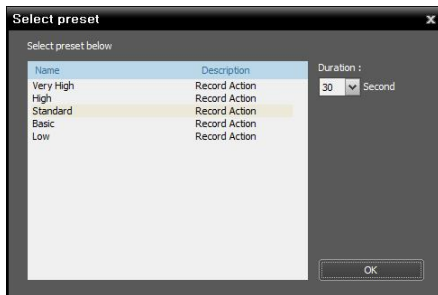
### Pre-Event Recording Condition

The recording server records video prior to event detection when predefined events are detected.



Enter the Preset name and select **Pre Event Condition** from the **Condition Type** list.

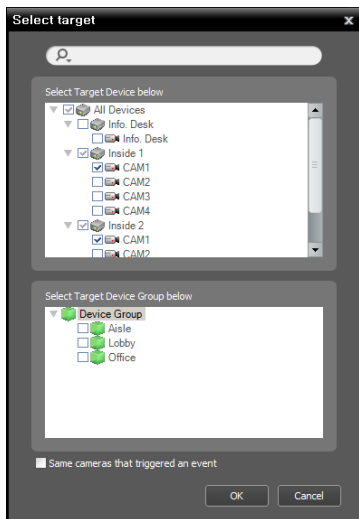
- Double click the Action schedule window, and then select a desired Preset (supported only for devices which use the iNEX protocol). The devices which do not use the iNEX protocol record video as default. The duration setting of event and pre-event is supported for the all devices.



A stream to use for recording (network cameras only) or a codec, resolution, frame rate and quality settings (network video transmitters only) are allocated to each Preset. The stream or settings allocated to each Preset is different depending on the device. Refer to 13.2 Managing Devices, Editing Device Information (p. 152) for details.

- Duration:** Set up the duration (maximum of 60 seconds) of recording when a predefined event is detected. For Event recording, the system records video from the time an event is detected until the event is released and for the duration from the time the event is released. For Pre-Event recording, the system records video for the duration prior to event detection.

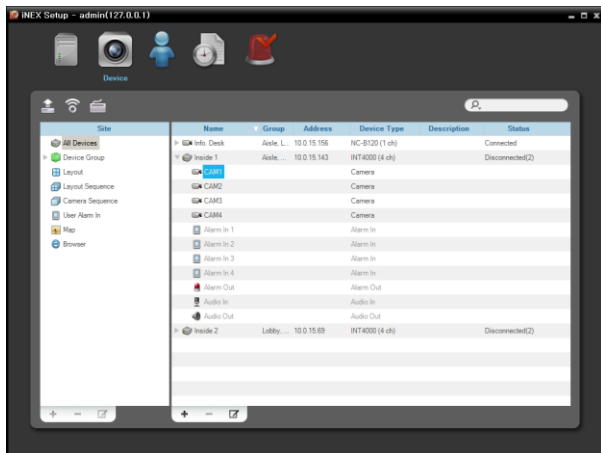
- Select the cameras to record after double clicking the Target schedule window.



Select cameras from the device list or device groups from the device group list from which to record video whenever any predefined event is detected. Selecting the Same cameras that triggered an event option records video only from the camera where the predefined event is detected (not supported for alarm-in events, audio detection events, and user alarm-in events). The Same cameras that triggered an event option is not supported for Pre-Event recording.

- You can check the recording status in the Device menu. Click All Devices in the Site panel and all registered devices are displayed in the Site List panel. Click the arrow button (▼) beside the device name, and check the status (**Record**: During scheduled recording, **Instant Recording**: During instant recording, **Idle**: Ready to record, **Not Use**: Camera disabled, **Video Loss**: On video loss). The Scheduled Recording OSD (●) is displayed in the upper right corner of the camera screen of the Live screen in the Client program.

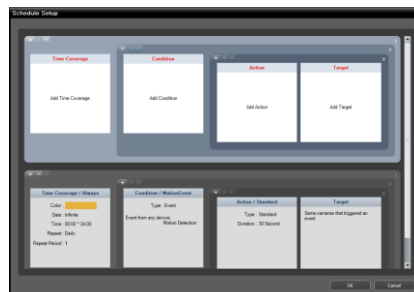
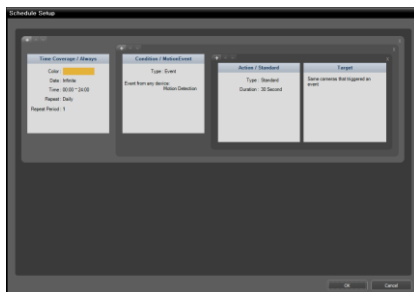




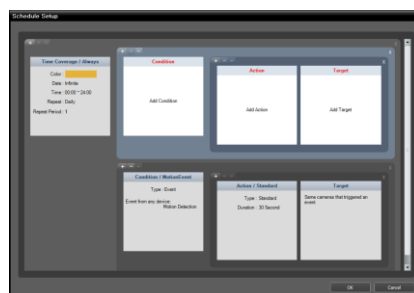
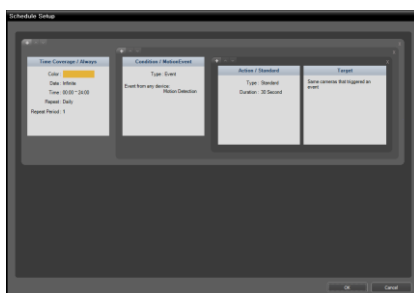
## Managing Schedule


### Adding a New Schedule

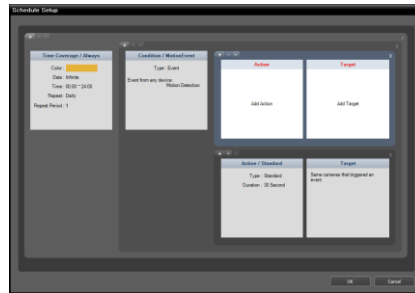
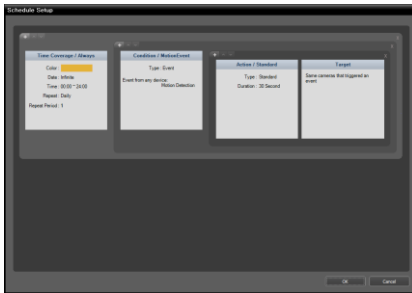
- Adding a new schedule with a different time range: Clicking the **+** button in the upper left corner of the Time Coverage schedule window allows you to add a new schedule with a different time range.




- Adding a new schedule with the same time range: Clicking the **+** button in the upper left corner of the Condition schedule window allows you to add a new schedule with the same time range.





- Adding a new schedule with the same time range and target: Clicking the  button in the upper left corner of the Action schedule window allows you to add a new schedule with the same time range and target. This feature is not worked for the devices which do not use the iNEX protocol.



## Deleting a Schedule

Clicking the  button in the upper right corner of any schedule window deletes the schedule.

## Changing Schedule Priority

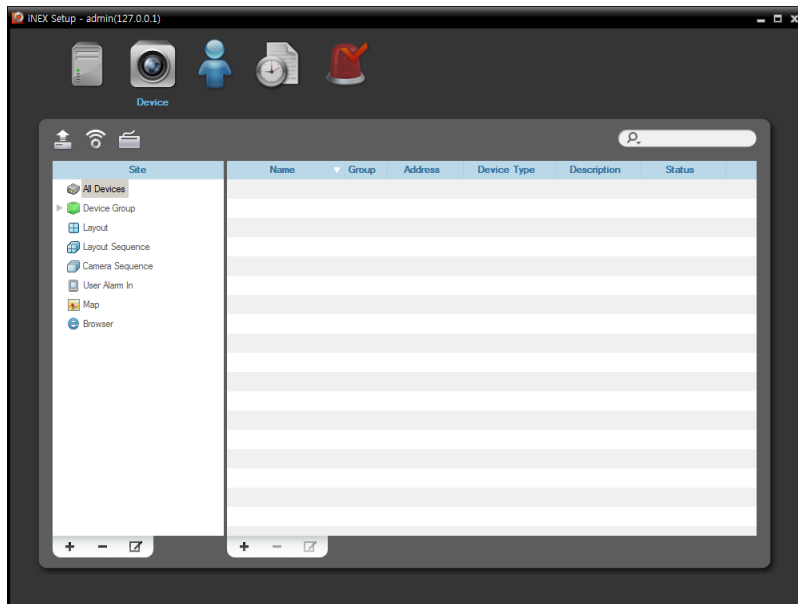
Clicking the  or  button in the upper left corner of each schedule window changes the priority of the schedules. The higher the schedule position is in the **Schedule Setup** window, the higher its priority is. The order of priority is Event, Time Lapse, and then Pre-Event.


## 6.3 Setting up Instant Recording

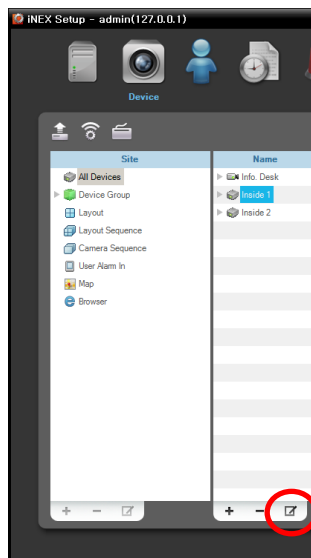
**NOTE:** The recording redundant service does not support instant recording.

Instant recording can be manually started or stopped while monitoring video (supported only for devices registered on one of recording services).

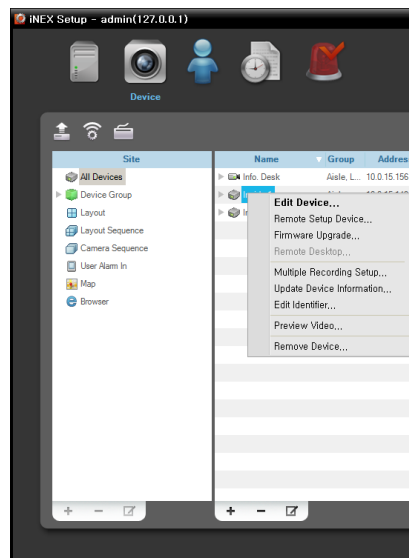
1. Select the Device menu.



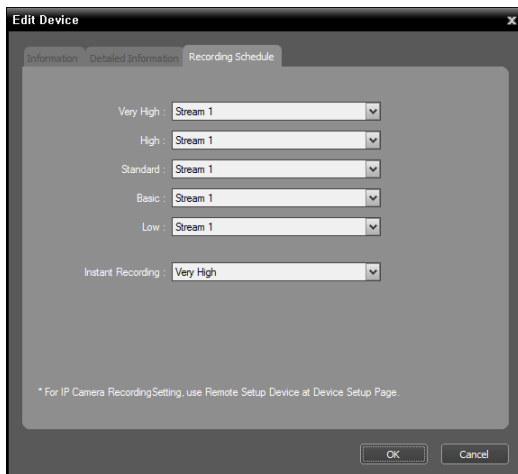
2. Click a device group in the Site panel and then click a device in the Site List panel. Clicking the  button at the bottom of the Site List panel, or clicking the right mouse button displays the device menu.






OR



3. Select Edit Device from the device menu. Select the Recording Schedule tab.



- **Instant Recording:** Select a Preset to use for instant recording. Refer to 13.2 Managing Devices, Editing Device Information (p. 152) for details about setting up the Preset.

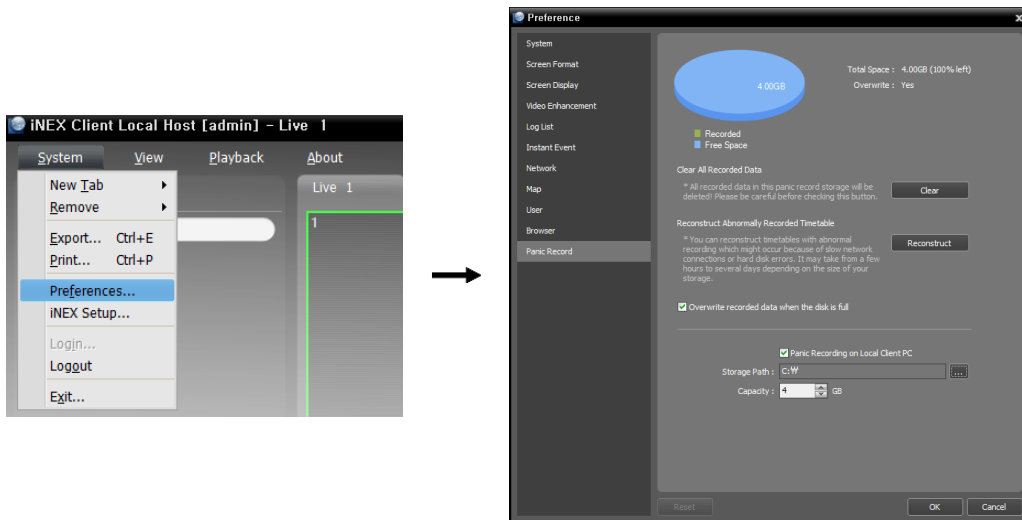
4. Run the Client program. Select a camera screen (on the Live screen) on which video to record is displayed and click the  (Instant Recording) button on the control toolbar. The Instant Recording OSD () appears in the top right corner of the camera screen, and the system starts recording with the Preset selected in the **Recording Schedule** tab above. Clicking the  (Instant Recording) button again stops recording. Recording might be delayed because of system congestion, and the recording OSD might be displayed later or for longer than the scheduled time.






## 6.4 Setting up Panic Recording

You can manually start or stop panic recording while monitoring the video (panic recordings are saved in the Client system).

1. Go to the **System Menu** → Click **Preference**, and the **Preference** window appears. → Click **Panic Record**. Check the **Panic Recording on Local Client PC** box to enable panic recording in the Client System.



- Run the iNEX Client program. Select a camera screen (on the Live screen) on which video to record is displayed and click the  (Panic Recording) button on the control toolbar. The Panic Recording OSD () appears in the top right corner of the camera screen, and the system starts recording the video on the screen. Clicking the  (Panic Recording) button again stops recording.



**NOTE:** Panic record is available only when video is currently displayed on the Live tab. For example, if you change the screen format during panic record and monitoring video is hidden on the Live tab, panic record will stop for the hidden video.



## Chapter 7 — Recorded Video Playback & Exportation

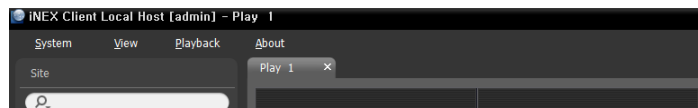
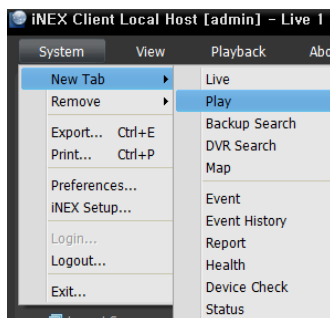
You can play back recorded video or export recorded video to USB devices.

First, check the following and run the Client program.

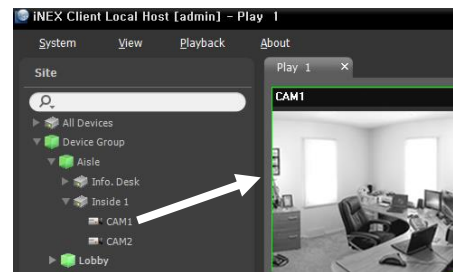
- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.
- There should be recorded data in the allocated storage. Refer to 6.1 Setting up Recording Storage (p. 91) for details.

### 7.1 Playing back Recorded Video

1. Search and playback of video recorded in a recording server are supported in the Play panel (maximum 4). Search and playback of video recorded in DVRs, Client system, or SD (SDHC) memory cards inserted to network cameras using the iNEX protocol are in the DVR Search panel (maximum 4 – maximum 2 panels in a 32-bit system). If the Play or DVR Search tab is not on the tab panel, go to the **System** menu, click **New Tab** and then **Play** or **DVR Search**.





2. Click the Play or DVR Search tab on the tab panel → Select a site to connect to from the **Site** list and drag and drop it on the Play or DVR Search screen. Recorded video from the selected site is displayed on the screen. You can move a camera screen to the desired location on the Play or DVR Search screen without stopping the current playback while playing back video. Select a camera screen and drag and drop it on the desired location.



If a layout is registered on the administration service, you can play video in the layout format by selecting a desired layout from the **Layout** list and dragging and dropping it on the Play or DVR Search screen. Refer to 5.1 Monitoring Video, Layout Monitoring, Registering Layouts (p. 72) for details about the registration of a layout.

**NOTES:**







- When a recording failover server or recording redundant server has recorded video, the iNEX program plays back video recorded in a server with the highest priority. The priority order of server is as follows: recording failover server (lowest) → recording redundant server → recording server (highest). If you want to play back video recorded in the recording failover server or recording redundant server, click the  (Recording Failover Service) or  (Recording Redundant Service) button in the panel toolbar.
  - The Client system performance might seriously deteriorate when simultaneously monitoring or playing back video with 1280x720 or higher resolution on more than one camera screen.
  - A “layout” in this document refers to a screen organization created by arranging specific cameras in a specific screen format.
3. A panel toolbar, a timetable, a control toolbar and a screen menu are provided for playing back recorded video.

**Panel Toolbar**























The toolbar at the bottom of the panel allows you to search and play back recorded video.

**NOTE:** The toolbar may be different and some functions below may not be supported, depending on the specifications and version of the device.





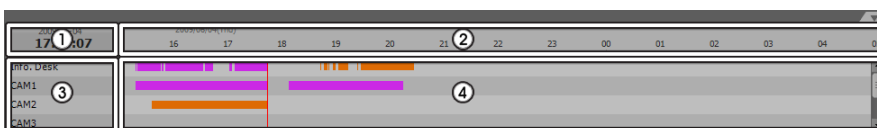
-  /  (Event Search/Time-Lapse Search): Switches search mode between event search and time-lapse search. Refer to *Timetable/Event List* (p. 111) for details.
-  (Search Filter): Sets search conditions for event search. Refer to the device's user manual for details about the search condition.
-  (Calendar): Searches video for a specific date. Selecting a date displays the recorded data for that date in the timetable. The dates containing recorded images are enabled in the calendar.
-  (Move to): Searches video for a specific time.
  - Go To: Displays a time setup window. Entering a specific time moves to the image for that time.
  - Move First: Moves to the first recorded image in the data displayed in the timetable.
  - Move Last: Move to the last recorded image in the data displayed in the timetable.
-  (Additional Menu): Displays a menu.
  - Data Source: Selects the data source to be searched.
    - Search on Local: Searches recorded data on primary storage installed in the DVR.
    - Search on Archive: Searches archived data on backup storage installed in the DVR.
    - Search on Other: Searches recorded or archived data on Storage used for another DVR then installed in the DVR. This may not be supported, depending on the specifications and version of the DVR.
  - Add Bookmark: Bookmarks the recorded video.
  - Deleted Recording Devices: Allows you to search for a removed device and play back video from that device if video was recorded in the iNEX system before the device was removed.
  - Select Segment: Allows you to select a video segment when the DVR's time and date have been reset to a time that is earlier than previously recorded video and there is more than one video segment in the same time range due to time overlap (supported only for DVRs which provide the hour segments timetable).







-  (Export Video File): Exports recorded video as a self-player file (.exe) or an AVI file (.avi). Refer to 7.2 Exporting Recorded Video (p. 117) for details.
  - Save Still Image: Saves the current image on the screen as an image or PDF file at its original size.
  - Export Image File, Print Image: Exports or prints the images currently displayed on the screen.
  - Export Panorama Screen: Exports the images currently displayed on the screens.
-  (Recording Failover Service): Allows you to play back video recorded in recording failover servers. The transparent red vertical bar  is overlapped at the timetable bar if there is any recorded video in recording failover servers.
-  (Recording Redundant Service): Allows you to play back video recorded in recording redundant servers. When you click the button, you will be asked to choose whether to play on the current Play screen or on a new Play screen. If you choose to play on the current Play screen, the connection on the current Play screen will be released and the iNEX system will connect to the recording redundant servers.
-  (Bookmark): Allows you to bookmark the selected recorded video. Refer to Bookmark (p. 114) for details.
-  (Snapshot on Motion Event): Displays snapshot of images recorded during the event-based recording (event and pre-event) in the Play panel. Refer to Snapshot on Motion Event (p. 114) for details.
-  (Step Playback): Moves the video forward or backward based on the setting displayed between the  and  buttons. Clicking the arrow between the  and  buttons allows you to change the interval the video moves.
-  (Fast Backward/Fast Forward): Plays back recorded video fast backward or fast forward.
-  (Stop/Play): Stops or plays recorded video on the screen.
-  (Jog Shuttle): You can adjust the playback direction and speed by using the jog shuttle. The vertical line in the jog shuttle indicates the current playback direction and speed. Video is played backward when the vertical line is to the left of center and video is played back forward when the vertical line is to the right of center. The farther the position is from the center, the faster video is played back. Clicking the vertical line and dragging it to the desired position on the jog shuttle and holding it plays video at a constant speed. Releasing the mouse button causes the vertical line to return to the center position. Clicking the  (Play) button plays video at normal speed. Clicking the  (Shuttle Lock) button and dragging and dropping the vertical line to a desired position fixes the vertical line in that position.
-  (Jog Shuttle): You can adjust the playback speed by using the jog shuttle. The vertical line in the jog shuttle indicates the current playback speed.
-  (Save to User Layout): Saves the current screen format.
-  (Screen Format): Changes the screen format. Clicking the  button displays additional screen formats. Clicking the  or  button moves to the previous or next camera groups.

## Timetable/Event List

- Time-Lapse Search Mode: When in the time-lapse search mode, the timetable is displayed at the bottom of the screen and it displays the recording information for each camera. Clicking the  button in the top right corner of the timetable displays the recording information for all cameras. Clicking the  button displays the recording information for the selected camera on the screen.

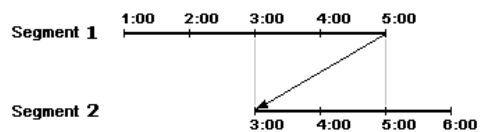


**NOTE:** The timetable will differ depending on the model of the device.






- ① **Current Playback Date/Time:** Indicates the video time for the current playback location on the timetable.
- ② **Recorded Period:** Displays the date and time period of the recorded data. Clicking anywhere in the empty space and dragging it to the left or right moves to the earlier or later date or time. Scrolling the mouse wheel while holding the **Ctrl** key on the keyboard zooms in and out the time section.
- ③ **Camera Title:** Displays the camera title.
- ④ **Recorded Data:** Displays the recorded data by time in one minute or one hour segments depending on the device.
  - **Minute Segments Timetable (all devices except some DVR models)**
    - Red vertical line: Indicates the current playback location of video on the timetable. Clicking the mouse on the desired time displays the first image recorded within the time.
    - Yellow separation line: Separates segments when time overlap occurs. In this case, the recorded data in the time range located after the separation line is the latest. Clicking the  (Calendar) button in the Play panel allows you to move to a specific segment directly (Click the  (Calendar) button → Select a date → Select a segment → The first image recorded within the selected segment is displayed on the screen).
    - The color of the bar: Indicates different recording modes (Navy blue for Time-lapse, Pink for Event, Purple for Pre-event, Sky blue for Instant Recording, Navy blue for Panic Recording, and Orange for Irregular recording caused by temporary disconnection from the device).
  - **Hour Segments Timetable (some DVR models only)**
    - Yellow color bar: Indicates the current playback location of video on the timetable.
    - Pink color bar/Gray color bar: Indicates the segment of video that is currently displayed/not displayed on the screen when time overlap occurs. Clicking the  (Additional Menu) button in the DVR Search panel allows you to change the segment to be displayed on the screen (Click the  (Additional Menu) button → Select the **Select Segment** menu → Select a desired segment → The first image recorded within the selected segment is displayed on the screen).


**NOTE:** If the administration server's or DVR's time and date have been reset to a time that is earlier than previously recorded video, it is possible that there is more than one video segment in the same time range due to time overlap. In this case, you can individually play video that was recorded during the overlapping time by selecting a segment.

For example, when the administration server or DVR has recorded video from one to five o'clock and the user changes the time backward from five to three o'clock and then continues recording until six o'clock, there will be two segments from three to five o'clock.



- **Event Search Mode:** When in the event search mode, the event list is displayed at the bottom of the screen as follows:
  - **Play panel:** Events only that were recorded during Event recording.
  - **DVR Search panel:** All events when searching for video recorded in a DVR, and events only that occurred while recording on an SD (SDHC) memory card is enabled when searching for video recorded on an SD (SDHC) memory card.

Event	Device	Date/Time
 Motion Detection	CAM8 (Inside 2)	2010-03-11 23:54:02
 Motion Detection	CAM5 (Inside 2)	2010-03-11 23:54:02
 Motion Detection	CAM1 (Inside 2)	2010-03-11 23:54:02
 Motion Detection	CAM3 (Inside 2)	2010-03-11 23:54:02
 Motion Detection	CAM8 (Inside 2)	2010-03-11 23:49:46

Clicking an event from the list displays the event-recorded video on the screen if the events were recorded during Event recording. Clicking the  button in the top right corner of the event list displays next results.

## **Control Toolbar**

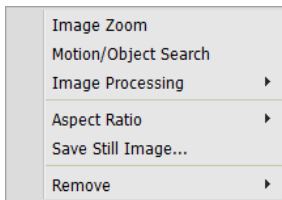
The control toolbar is displayed over a selected camera screen when hovering the mouse cursor over the camera screen. Hovering the mouse cursor over each button displays a tooltip for the button.



- (Object/Motion Search): Allows you to search for changes or motion in the recorded images on the iNEX system or the Client system. Refer to **Object/Motion Search** (p. 115) for details.
- (Image Zoom): Zooms in on the image. Refer to **Zoom Control** (p. 116) for details.
- (Color Control): Adjusts the brightness, contrast, saturation and hue of the current video. Clicking the button cancels the adjustment and reloads the original image. This change will not be applied to the recorded video.
- (Image Effect): Adjusts the image effect. Refer to **Image Effect** (p. 116) for details.
- (Audio Play): Plays audio when playing back video that has recorded audio (1x1 screen format only).


## **Play Screen Menu**

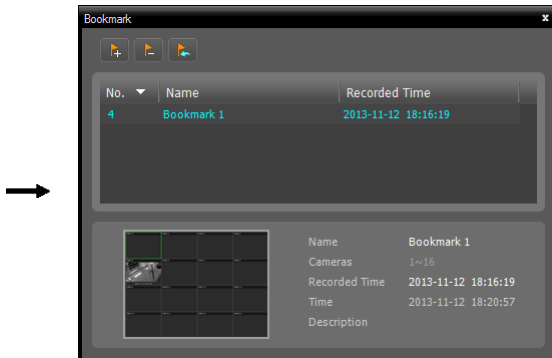
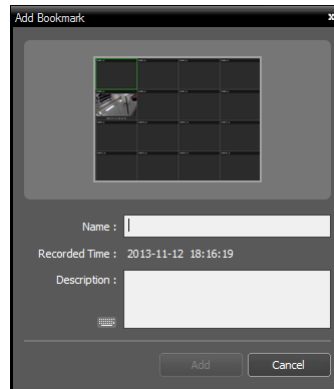
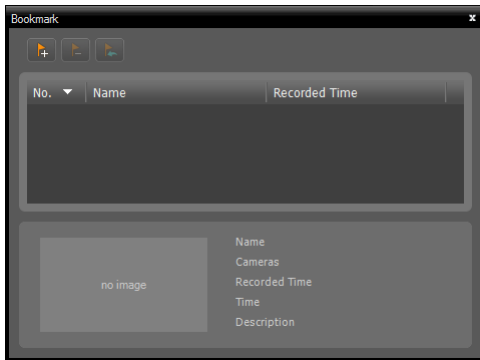
The screen menu is displayed when selecting a camera screen and clicking the right mouse button.






- **Image Zoom:** Functions as the same as clicking the button in the control toolbar. See **Control Toolbar** (p. 113) for details.
- **Object/Motion Search:** Allows you to search for changes or motion in the recorded images on the iNEX system or the Client system. Refer to **Object/Motion Search** (p. 115) for details.
- **Image Processing:** Enhances playback images. Refer to **Control Toolbar** (p. 113) for details.
- **Aspect Ratio:** Select the proper image aspect ratio.
  - **Fit to Screen:** Displays images by fitting them to the screen size regardless of the aspect ratio.
  - **Fit to Screen (Aspect Ratio):** Displays images by fitting them to the screen size keeping the aspect ratio. This might cause top and bottom or left and right side of images to be cropped depending on the screen size. This aspect ratio is not supported and **Original Ratio** is applied for camera screens that the following function is activated: Image Zoom.
  - **Original Ratio:** Displays images by fitting them within the screen size while maintaining their original ratio.
  - **Half Size (x0.5) to Quadruple Size (x4):** Selecting the desired image size displays images in the selected size. Options are enabled when the selected camera screen can display images in that size.
- **Save Still Image:** Saves the current image on the screen as an image or PDF file at its original size.
- **Remove:** Disconnects the current connection.


## Bookmark

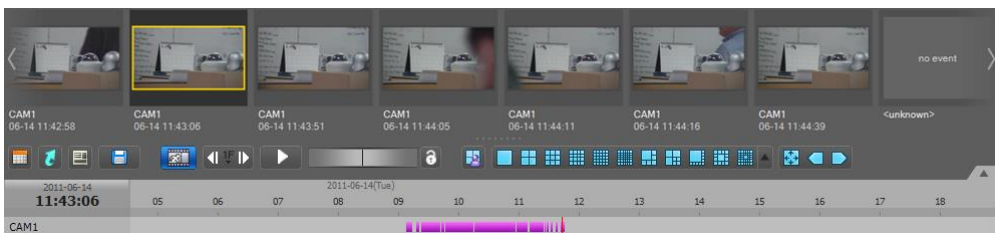
Clicking the  (Bookmark) button on the panel toolbar allows you to bookmark the selected recorded video.



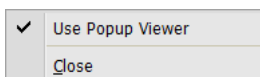
1. Click the  (Add Bookmark) button.
2. Enter the bookmark name and description. Clicking the Add button bookmark the recorded video.
3. Clicking a bookmark from the bookmark list displays the bookmark information at the bottom. Clicking the  (Play Recorded Data) button displays the bookmarked video on the Play screen. Clicking the  (Remove Bookmark) button deletes the bookmark.

## Snapshot on Motion Event

Clicking the  (Snapshot on Motion Event) button on the panel toolbar displays snapshot of images recorded during the event-based recording (event and pre-event) in the Play panel.




The timetable displays the recording information of the selected snapshot. Clicking anywhere on the recorded data in the timetable displays a snapshot of the selected time. Hovering the mouse cursor over each snapshot displays a popup viewer screen above the snapshot.







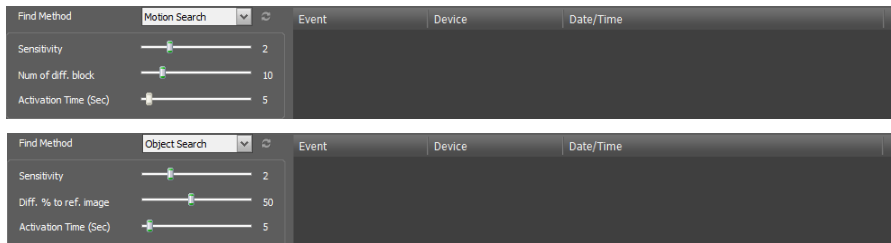
- Use Popup Viewer: Enables display of the popup viewer screen.

## Object/Motion Search

Clicking the  (Object/Motion Search) button on the control toolbar opens the Object/Motion Search panel at the bottom on the screen. You can use the options in this panel to search for changes or motion in the recorded images on the iNEX system or the Client system.




-  (Draw Search Zone): Allows you to define the area to search for changes or motion on the camera screen by dragging the mouse. The search zone is displayed with red blocks.
-  (Erase Search Zone): Allows you to erase the search zone set on the camera screen by dragging the mouse.
-  (Set Ref. Image): Sets the image currently displayed on the camera screen as a reference image for change detection (Object Search only).
-  (View Ref. Image): Displays or hides a PIP screen with the reference image (Object Search only).



- **Find Method:** Selects a search method.
  - **Motion Search:** Searches for images with changes in the Search Zone between two consecutive images (for example, when there was movement).
  - **Object Search:** Searches for images with changes which last for the Activation Time in the Search Zone when compared to the reference image (for example, when an object disappeared).
- **Sensitivity:** Sets the sensitivity of the change detection. The higher the number is, the more sensitive it is.
- **Num of diff. block:** Sets the minimum number of blocks that must be activated to be considered as a change (Motion Search only).
- **Diff. % to ref. image:** Sets the minimum proportion (%) of blocks that must be activated to be considered as a change (Object Search only).
- **Activation Time:** Sets the duration that the change must last to be considered as a change. If a change is detected but does not last as long as the Activation Time, the change is not considered as a change.




## Zoom Control

Clicking the  (Zoom) button on the control toolbar allows you to zoom on the current video.


**NOTE:** “PIP” is an abbreviation of *Picture in Picture* and indicates the smaller screen within a screen.









Dragging the mouse on the camera screen moves the zoomed-in area

-  (Slide Bar): Adjusts the enlargement ratio. You can adjust the enlargement ratio also by using the mouse scroll wheel.
-  (Actual Size Zoom): Enters the actual size zoom mode. In the actual size zoom mode, the image is displayed in its original size regardless of the camera screen size or image's aspect ratio.
-  (Zoom Finder): Displays or hides the PIP screen. The rectangle in the PIP screen indicates the zoomed-in area.


## Image Effect

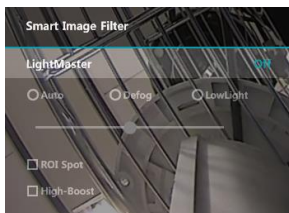
Clicking the  (Image Effect) button on the control toolbar displays the image effect control toolbar and allows you to control image effect. This change will not be applied to the recorded video.



-  (Blur): Blurs the image to reduce noise.
-  (Sharpen): Sharpens an image.
-  (High-Boost): Increases the brightness and contrast of images.
-  (Histogram Equalization): Equalizes the image brightness to make it more natural.
-  (Edge Detection): Extracts the image edge.
-  (Revert): Cancels the adjustment and reloads the original image.

## Smart Image Filter

Clicking the  (Smart Image Filter) button on the left bottom of the recorded image allows you to apply filters to an image according to the conditions of the image or purpose.



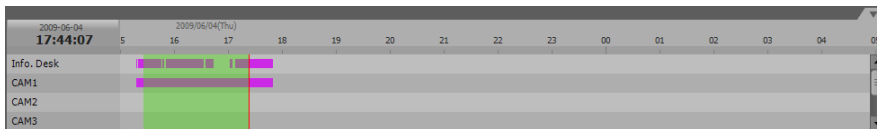
- Auto, Defog, Lowlight: Applies filters and set each value.
- ☒ ROI Spot: Applies filters to the selected area only.
- ☒ High-Boost: Applies high-frequency enhancement filter.



## 7.2 Exporting Recorded Video

You can export recorded video to USB devices. Click the  (Export Video File) button on the toolbar at the bottom of the panel, and the export menu is displayed.



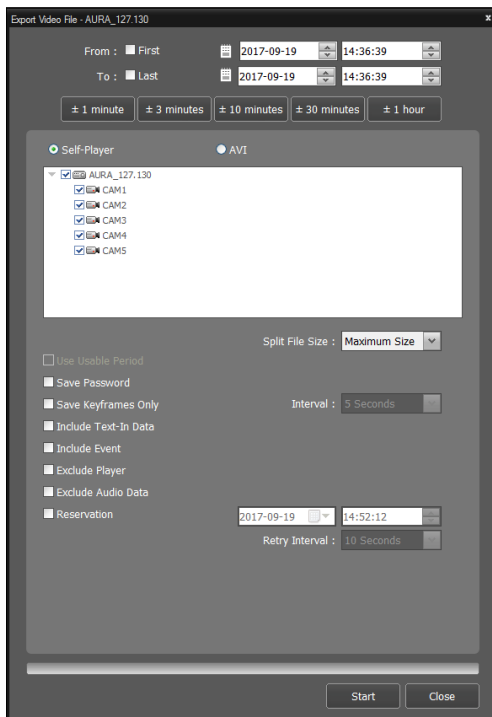
- **A-B Export Video File:** Sets up the section of video to be exported by using the timetable. Select **A-B Export Video File** from the export menu. Click the starting point and ending point to specify an area. The **Export Video File** window appears and allows you to export video of the selected period as a self-player file (.exe) or an AVI file (.avi). Refer to **Exporting as a Self-Player File** (p. 118) and **Exporting as an AVI File** (p. 122) for details.



- **Export Video File:** Sets up the section of video to be exported by entering the date and time manually. Select **Export Video File** from the export menu. The **Export Video File** window appears and allows you to export video for the period as a self-player file (.exe) or an AVI file (.avi). Refer to **Exporting as a Self-Player File** (p. 118) and **Exporting as an AVI File** (p. 122) for details.
- **Reserved Self-Player:** Displays the list of reservations of exporting as a self-player file. Clicking the  button performs the reserved exporting manually, and clicking the  button cancels the reservation. Refer to **Exporting as a Self-Player File** (p. 118) for details about reservation of exporting as a self-player file.
- **Save Still Image:** Saves the current image on the screen as an image file at its original size.
- **Export Image File:** Exports the images currently displayed on the screen.
- **Export Panorama Screen:** Exports the images on the screen of all panels.
- **Print Image:** Prints the images currently displayed on the screen.

## Exporting as a Self-Player File


The recorded video is exported as a self-player file (.exe).



- **From, To:** Enter the date and time of video to export. Selecting **First** sets the date and time to the date and time of the first recorded video. Selecting **Last** sets the date and time to the date and time of the last recorded video. Clicking the **± 1 Minute**, **± 3 Minute**, **± 10 Minute**, **± 30 Minute** or **± 60 Minute** button increases or decreases the time by the selected amount from the time selected on the timetable.
- **Self-Player, AVI:** Select Self-Player.
- ☒ **Save Password:** Set up a password for playing back the exported video. You will be asked to enter the password to initiate the Player program.
- ☒ **Save Keyframes Only:** Saves keyframes only for the selected interval. This is used when saving videos in summary.
- ☒ **Include Text-In Data:** Includes text-in data when saving video if the video was recorded with text-in data.
- ☒ **Exclude Player:** Saves the recorded data without including the Self-Player program (supported only for the DVR Search panel). The file size will be smaller, and it will take less time to save, but you will need to run the Self-Player program (ClipPlayer.exe) which is provided in the iNEX installation folder (\Client\selfplayer) to play the saved file. This may not be supported, depending on the specifications and version of the device.



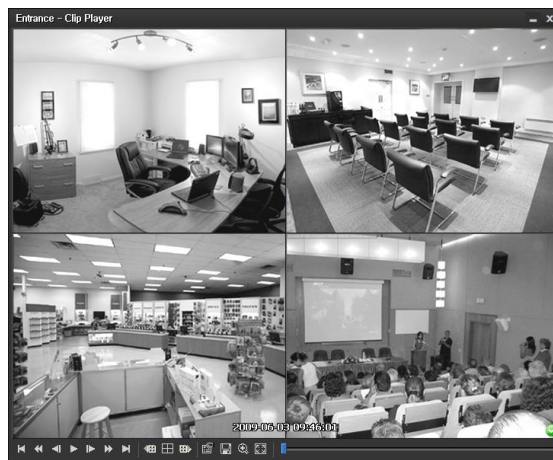
## Playing Self-Player File

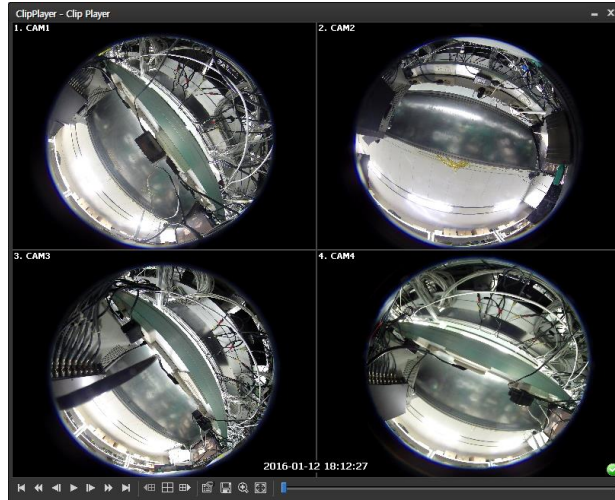
You do not need to install any special software to play video exported as a self-player file because the self-player file contains a player program (Clip Player). Double clicking the target file starts the Player program, and video is displayed on the screen. Clicking the slide bar at the bottom of the Player program displays the playback image of the selected time on the screen. Clicking the  button exits the Player program.

**NOTE:** It is suggested that the computer used for the Player program has at least an 800MHz Pentium III (Intel Pentium Dual Core 2.2GHz recommended). If your CPU is slower than this, video clips recorded at maximum speed with very high image quality will be played back slowly. Also DirectX 9.0 or higher is required to install, and the VGA card with 16MB or higher video RAM is recommended for proper operation.

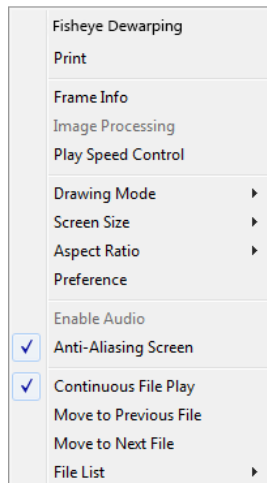
### **NOTES:**

- Proper image display depends on the display settings of your PC. If you are experiencing display problems, click the right mouse button on the background screen and select *Properties* → *Settings* then set the *Color quality* to "32 bit". Then select *Advanced* → *Troubleshoot*, and then set the *Hardware Acceleration* to "Full". Please make sure that DirectX version 9.0 or higher has been installed if the display problem continues. To check the version of DirectX, click *Start* → *RUN* and type "dxdiag" then hit the enter key which will display DirectX Diagnostic Tool dialog box. Then move to the *Display* tab and make sure *DirectDraw Acceleration* is set to "Enabled". Test DirectDraw by selecting the *DirectDraw Test* button when using the Microsoft® Windows® XP operating system. Please check the driver version of the video card and update it to the latest version available. If you still have display problems after changing all display settings as described above, try replacing the video card. Video cards with an AMD chipset are recommended.
- Some functions may not be supported by certain devices.
- If you selected the *Exclude Player* option when saving recorded video, you must run the Self-Player program (ClipPlayer.exe) which is provided in the iNEX installation folder (\\Client\\selfplayer) to play the saved file.
- It is required to have Window Vista or a higher operating system for Fisheye Dewarping. Fisheye Dewarping is supported in the 1x1 screen format only. You can control by clicking the right mouse button on the screen.






- : Goes to the beginning of the video.
 : Goes to the end of the video.
- : Plays the video in fast reverse.
 : Plays the video in fast forward.
- : Goes backward one frame of the video.
 : Goes forward one frame of the video.
- : Plays the video at regular speed.
- : Shows the previous camera group if there is recorded video in the previous camera group based on the current screen format.
- : Cycles through the screen formats. It cycles through 2x2, 1+7, 3x3, 4x4, 4x5, 5x5 and 1+32.
- : Shows the next camera group if there is recorded video in the next camera group based on the current screen format.
- : Sets up the properties of the player program.









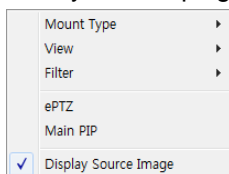
- **Fisheye Dewarping:** Controls Fisheye Dewarping. Refer to the following Dewarp menu for more accurate functions.
- **Print:** Prints the current image.
- **Frame Info.:** Displays Channel, Title, Time, Type, Size and Resolution information about the image.
- **Image Processing:** Controls brightness, blur and sharpness of playback images. (1x1 screen format only)
- **Play Speed Control:** Changes the playback speed (Play) or fast forward/backward playback speed (FF/RW).
- **Drawing Mode:** Selects the draw mode level. If you are not sure about the best draw mode level for your system, try each level until the image displays properly.
- **Screen Size:** Changes the screen size of the player program.
- **Aspect Ratio:** Changes the image aspect ratio displayed on each camera screen.
- **Preference:** Changes the basic settings on each camera screen.
- **Enable Audio:** Plays audio while playing back recorded video that has recorded audio. (1x1 screen format only)
- **Anti-Aliasing Screen:** Enhances image display quality on the screen by smoothing stair-stepping (aliasing) effects in the enlarged image. If video plays slow because of your CPU's slow speed, releasing the Anti-Aliasing Screen option might improve playback speed.

- **Show Text-In:** Displays text-in data if the video was recorded with text-in data. In the single-screen layout, text-in data is displayed with images on the screen. In multi-screen layouts, click the right mouse button on a camera screen and then a text-in menu.
- **Continuous File Play:** Plays the files that compose the split file successively. For example, if video is split to 3 files of abc\_01.exe, abc\_02.exe and abc\_03.exe when it is saved, you don't need to play each file one by one manually. When you play the abc\_01.exe file, abc\_01.exe, abc\_02.exe and abc\_03.exe files will be played successively.
- **Move to Previous File:** Moves to the previous file from the currently playing file or the file to be played when playing a split file.
- **Move to Next File:** Moves to the next file from the currently playing file or the file to be played when playing a split file.
- **File List:** Lists the files that compose the split file in sequence. Selecting a file from the list moves to the selected file.
-  : Saves the current images.



- **Save as Image:** Saves the current image as a bitmap or JPEG file.
- **Save as Image (Actual Size):** Saves the current image as a bitmap or JPEG file in its actual size. (1x1 screen format only)
- **Save as Video:** Saves video of desired time range as an AVI file.
- **Save Frame Info:** Saves the frame information as a CSV file.

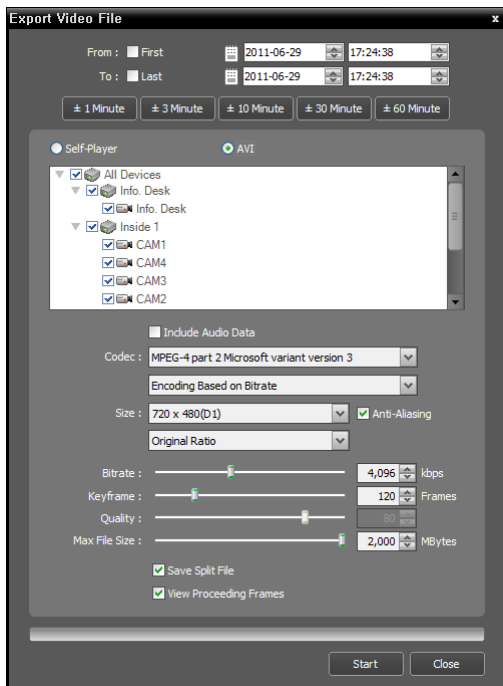
-  : Selects the image size option to enlarge the image or display the image in its actual size (1x1 screen format only). You can move the enlarged image by clicking the left mouse button and dragging.
-  : Displays the image in the full screen.
- ,  : Is displayed at the bottom-right corner of the screen.  indicates that the clip file has not been tampered with, and  indicates that the system has detected tampering and playback stops.
- **Fisheye Dewarping**



- **Mount Type:** Chooses a position that the camera is mounted. Choose from Auto, Wall, Ceiling and Desktop. The available Screen Type changes depending on this setting.
- **View:** Displays the original fisheye dewarping video. Choose from Single, Quad and Panoramic view. When ePTZ is on, you can control Pan, Tilt and Zoom by clicking the left/right mouse button. The Main PiP is selected as a default.
- **Filter:** Choose a filter to improve the resolution. Choose from Nearest, Linear, Cubic, and Linear, NN OnPTZ filters.
- **ePTZ:** Controls Pan, Tilt and Zoom function. Dragging the mouse, the size of dragging indicates the speed of PTZ. The left button drag controls Left/Right (Pan) and Up/Down (Tilt). The right button drag controls Zoom.
- **Main PiP:** Displays PiP (Picture in Picture) view to select the area easily in the main view screen.
- **Display Source Image:** Cancels the adjustment and reloads the original image.

## Exporting as an AVI File

The recorded video is exported as an AVI file (.avi).



- **From, To:** Enter the date and time of video to export. Selecting **First** sets the date and time to the date and time of the first recorded video. Selecting **Last** sets the date and time to the date and time of the last recorded video. Clicking the **± 1 Minute**, **± 3 Minute**, **± 10 Minute**, **± 30 Minute** or **± 60 Minute** button increases or decreases the time by the selected amount from the time selected on the timetable.
- **Self-Player, AVI:** Select AVI.
- ☒ **Include Audio Data:** Includes audio data when saving video with recorded audio. This option is not available when more than one camera is selected. Audio might not be saved properly when the recording speed is set to less than 1 ips.
- **Codec, Bitrate, Quality:** Set up the desired values for compressing the file.
  - **Encoding Based on Bitrate:** Encodes video based on the bitrate. Selecting this option enables the **Bitrate** setting below.
  - **Encoding Based on Video Quality:** Encodes video based on the quality. Selecting this option enables the **Quality** setting below.

- **Size:** Set up the file size for compressing the file.
  - **Original Ratio:** Saves images with fitting within the screen size while maintaining their original ratio.
  - **Fit to Screen:** Saves images with fitting to the screen size regardless of the aspect ratio regardless of the aspect ratio.
  - **Fit to Screen (Aspect Ratio):** Saves images with fitting to the screen size keeping the aspect ratio. This might cause top and bottom or left and right side of images to be cropped depending on the screen size. This aspect ratio is not supported and **Original Ratio** is applied for camera screens that the following function is activated: **Image Zoom**.
- ☒ **Anti-Aliasing:** Enhances image display quality for all cameras on the screen by eliminating stair-stepping (aliasing) effects in the enlarged image.
- **Keyframe:** Sets up the keyframe for compressing the file.
- **Max. File Size:** Sets up the maximum file size.
- ☒ **Save Split File:** Exports video by creating multiple files of the **Max. File Size** units set above when the data file reaches the maximum file size. If this option is not selected, it exports only as much as the maximum file size.
- ☒ **View Proceeding Frames:** Displays a popup window showing the video currently being exported.

## Playing AVI File

Run the video player program and open the exported AVI file. If the codec selected during exporting video as an AVI file is not installed, you will need to install the codec manually.

## Chapter 8 — Event Handling

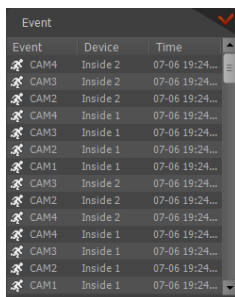
You can monitor video from a camera where an event is detected and play back event-recorded video. Event related functions may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Ask your dealer or distributor for details.

First, check the following and run the Client program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.
- There should be recorded data in the allocated storage. Refer to 6.1 Setting up Recording Storage (p. 91) for details.
- The event detection functions of the device should be enabled.

### 8.1 Handling a Monitoring Event

You can monitor live video from a camera where an event is detected or play back event-recorded video if video of the selected event has been recorded.



Event	Device	Time
CAM4	Inside 2	07-06 19:24...
CAM3	Inside 2	07-06 19:24...
CAM2	Inside 2	07-06 19:24...
CAM4	Inside 1	07-06 19:24...
CAM3	Inside 1	07-06 19:24...
CAM2	Inside 1	07-06 19:24...
CAM1	Inside 1	07-06 19:24...
CAM3	Inside 2	07-06 19:24...
CAM2	Inside 2	07-06 19:24...
CAM4	Inside 2	07-06 19:24...
CAM4	Inside 1	07-06 19:24...
CAM3	Inside 1	07-06 19:24...
CAM2	Inside 1	07-06 19:24...
CAM1	Inside 1	07-06 19:24...

The event list displays live and callback events from the registered devices. The callback events are listed only when the remote callback function is set up in the device.

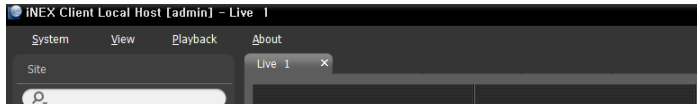
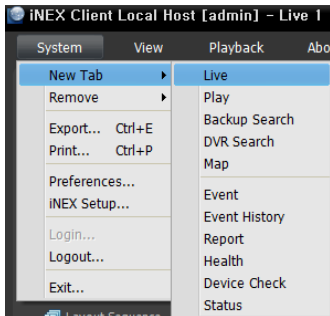
You can change the options of the event list display during Menu – Preference Settings. Refer to 4.8 Client, Menu – Preference Settings (p. 57) for details.

The description of event icons which are displayed in the event list is as follows (some event icons may not be supported, depending on the specifications and version of the device):

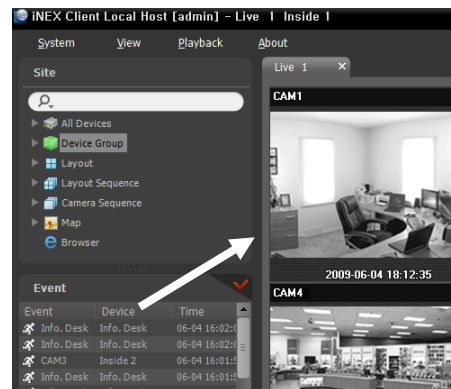
	Motion Detection		Video Blind		Video Loss
	Object Detection		Audio Detection		Video Analytics Detection
	Trip-Zone		Tampering		Text-In
	Alarm-In On/Off		Alarm-In Bad/Good		External Storage In/Out
	Device Connected/Disconnected				System Boot Up
	System Alive		System Restart		System Shut Down
	Recorder Bad		Disk S.M.A.R.T.		Disk Bad
	Disk Full		Disk Almost Full		Disk Config Change
	Disk Temperature		Panic Recording On/Off		Fan Error On/Off
	Face Detection		Exceed People Limit On/Off		Exceed Time Limit On/Off
	VA Loss/No VA		Recording Fail/Complete		Auto-tracking Detection
	Loss				On/Off
	Network Alarm-In		Cover Open/Closed		Storage Disconnected
	Detection On/Off				
	Stop Recording		Disk Partially Full		Disk Partially Almost Full
	PIR Detection		ANPR Detection On/Off		
	On/Off				

## Monitoring Video

Monitoring video from a camera where an event is detected is supported in the Live panel (maximum 4 – maximum 2 panels in a 32-bit system). If a Live tab is not on the tab panel, go to the System menu, click New Tab and Live.

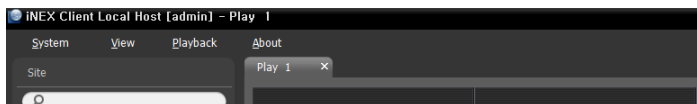
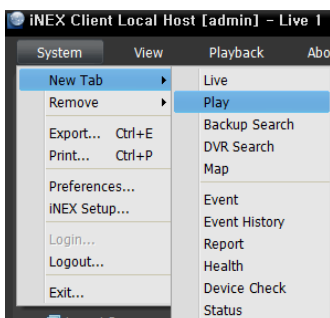


Click the Live tab in the tab panel → Select a desired event from the event list and drag and drop it on the Live screen. Live video from the camera where the selected event occurred is displayed on the screen.

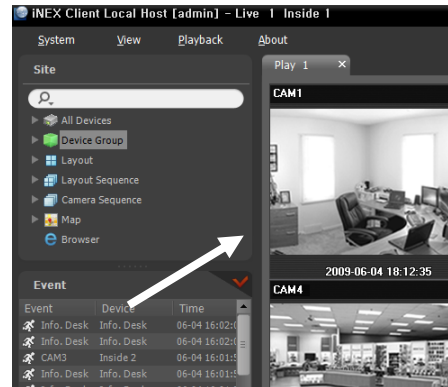


## Playing Video

Playing event-recorded video is supported in the Play panel. If the Play tab is not on the tab panel, go to the System menu, click New Tab and Play.



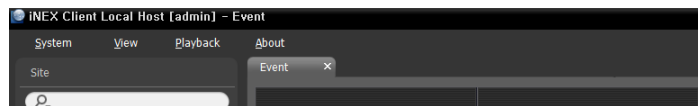
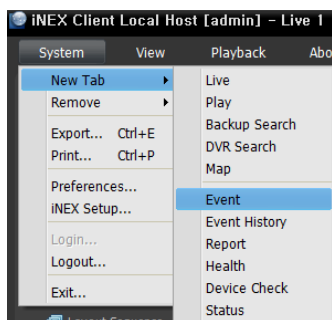
Click the Play tab on the tab panel → Select a desired event from the event list and drag and drop it on the Play screen. The event-recorded video is displayed on the screen.



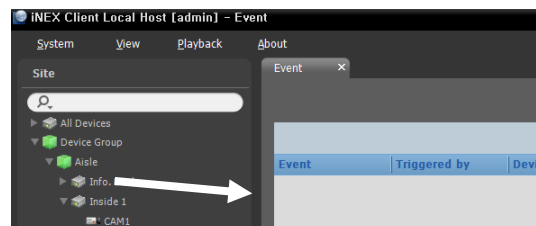
## 8.2 Handling Event Recorded Video

You can play back video which is recorded during Event recording.

Playback of event-recorded video is supported in the Event panel. If the Event tab is not on the tab panel, go to the **System** menu, click **New Tab** and **Event**.

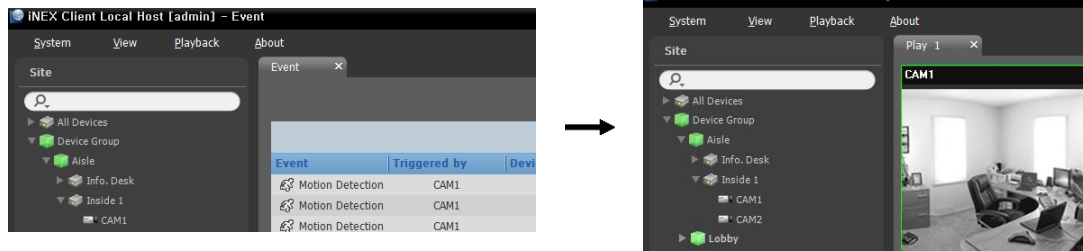


1. Click the Event tab on the tab panel → Select a device or camera to connect to from the **Site** list, and drag and drop it on the Event panel. The list of events recorded during Event recording is displayed in the Event panel. Clicking the right mouse button on a column header displays a menu and allows you to sort data as you want.



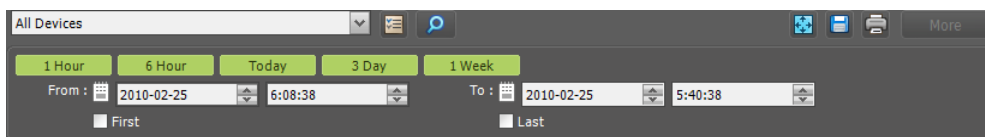
2. Double click the desired event in the Event panel. the Play panel is displayed and the event video is displayed on the Play screen. Clicking the right mouse button allows you to select a desired Play panel. If other cameras were associated with the Event Recording, recorded video from the associated cameras is displayed together on the screen.





## Event Toolbar

The toolbar at the bottom of the panel allows you to search events recorded during Event recording.



- **From, To:** Set up the date and time of the event to search. Enter a specific date and time or select **First** or **Last**. Clicking the **1 Hour**, **6 Hour**, **Today**, **3 Day** or **1 Week** button adjusts the time interval between **From** and **To**. Selecting **First** or **Last** searches events from the first recorded or to the last recorded.
- **(Condition):** Selects an event type to search.
- **(Search):** Starts searching events based on search conditions.
- **(Full Screen):** Displays the Event panel in full-screen format.
- **(Export):** Exports the resulting event search list as a text file (.txt) or CSV file (.csv).
- **(Print):** Prints the resulting event search list.
- **More:** Displays more results.



## Chapter 9 — Device Status Monitoring

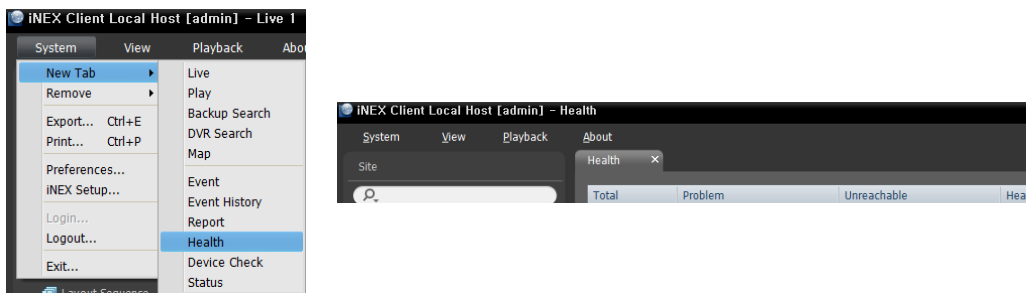
You can simultaneously check the status of registered devices.

First, check the following and run the Client program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

### 9.1 Health Monitoring

System health monitoring is supported in the Health panel (supported only for devices registered on recording services). If the Health tab is not on the tab panel, go to the System menu, click New Tab and Health.



The Client program automatically displays the health monitoring results when the Health tab is added.

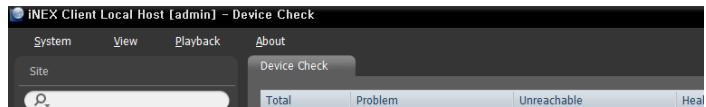
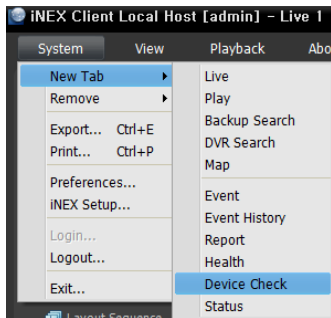


- ① **Summary List:** Displays the health monitoring status of all devices registered on recording services in summary.
  - **Total:** Displays the number of devices registered on recording services.
  - **Problem:** Displays the number of devices where a problem is detected.
  - **Unreachable:** Displays the number of devices that are not connected.
  - **Healthy:** Displays the number of devices where no problem is detected.
- ② **Detailed List:** Displays the status of each device in detail.
  - **Status:** Displays the status (Healthy: No Problem detected; Problem: Video loss event is detected or login failed because of the lack of available screens or because the software version is invalid; Unreachable: The device is not connected).
  - **Device:** Displays the device name.
  - **Model:** Displays the device's model name.
  - **Cameras:** Displays the number of cameras supported by the device.
  - **Problem:** Displays details regarding the problem.
- ③ **Function Button**
  - (Full Screen): Displays the Health monitoring panel in full-screen format.

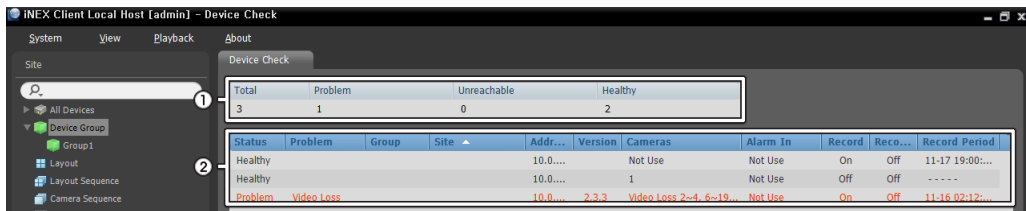
## 9.2 Device Check

Device check is supported in the Device Check panel (supported only for devices which use the iNEX protocol). If the Device Check tab is not on the tab panel, go to the **System** menu, click **New Tab** and **Device Check**.

**NOTE:** Connection or disconnection status check is also supported for the devices which do not use the iNEX protocol.



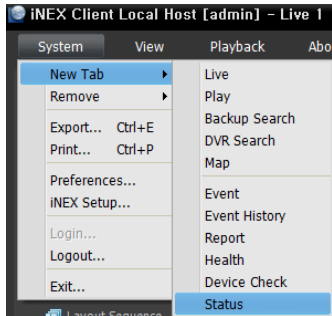
The Client program automatically displays the device check results when the Device Check tab is added.



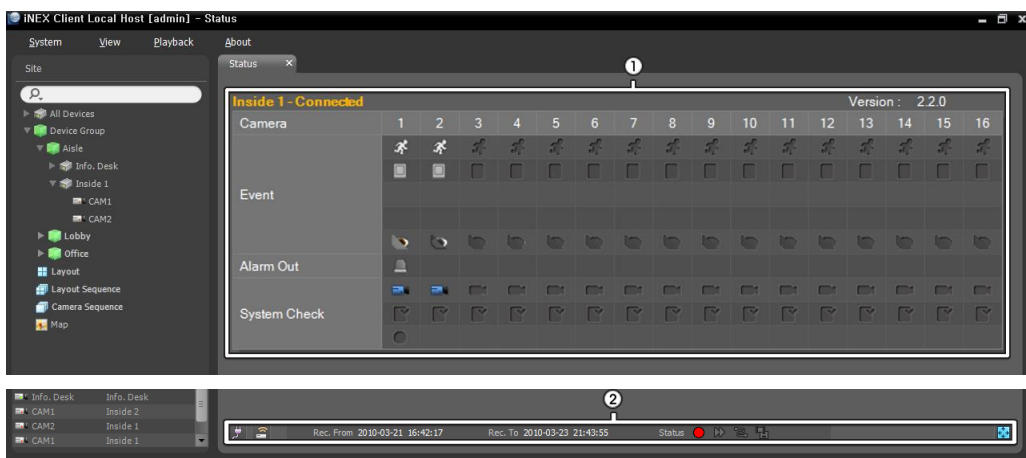
- ① **Summary List:** Displays the device check status of all devices registered on the administration service in summary.
  - **Total:** Displays the number of devices registered on the administration service.
  - **Problem:** Displays the number of devices where a problem is detected.
  - **Unreachable:** Displays the number of devices that are not connected.
  - **Healthy:** Displays the number of devices where no problem is detected.
- ② **Detailed List:** Displays the status of each device in detail.
  - **Status:** Displays the status (**Healthy:** No Problem detected; **Problem:** Video loss event is detected, alarm in device error or recording error; **Unreachable:** The device is not connected).
  - **Problem:** Displays details regarding the problem.
  - **Group:** Displays the list of device groups that the device is registered on.
  - **Site:** Displays the device name.
  - **Address:** Displays the IP address of the device.
  - **MAC Address:** Displays the device's MAC address.
  - **Version:** Displays the system version information.
  - **Cameras:** Displays the status of cameras that are enabled in the device.
  - **Alarm In:** Displays the status of alarm-in devices that are enabled in the device.
  - **Record:** Displays the recording status.
  - **Record Check:** Displays the recording check status.
  - **Record Period:** Displays the recording period.

## 9.3 Status Monitoring

Device status monitoring is supported in the Status panel (supported only for devices which use the iNEX protocol). If the Status tab is not on the tab panel, go to the System menu, click New Tab and Status.



Select a device to connect to from the Site list, and drag and drop it on the Status panel. The status of the selected device is displayed.



- ① Status Display Window: Displays the status as icons.
  - Camera: Displays the camera numbers.
  - Version: Displays the system version information.
  - Event: Displays the status of event detection. When an event is detected, the icon is displayed in corresponding color. Hovering the mouse cursor over an icon displays the event type in a tooltip.
  - Alarm Out: Displays status of the alarm-out signals.
  - System Check: Displays the function status of the device and recording.
- ② Function Buttons
  - (Disconnect): Disconnects the current connection on the Status panel.
  - (Panic Recording): Starts or stops panic recording remotely (supported only for DVRs with the panic recording function).
  - Rec. From/To: Displays the recording period.
  - Status: Displays the status of recording, playback, archiving, exporting of recorded video.
  - (Full Screen): Displays the Status panel in full-screen format.



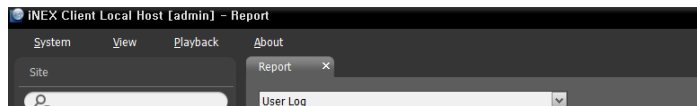
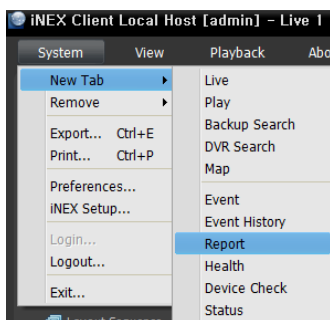
## Chapter 10 — Log Search

You can search log entries for the iNEX program and the devices.

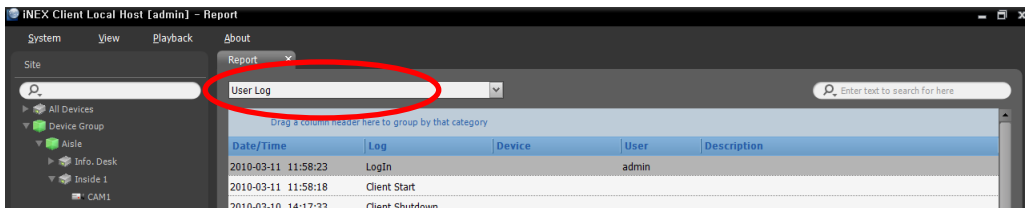
First, check the following and run the Client program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

Log search is supported in the Report panel. If the Report tab is not on the tab panel, go to the System menu, click New Tab and Report.



The various types of log entries are displayed. Clicking the right mouse button on a column header displays a menu and allows you to sort data as you want.



Select a log type to search from the drop-down list.

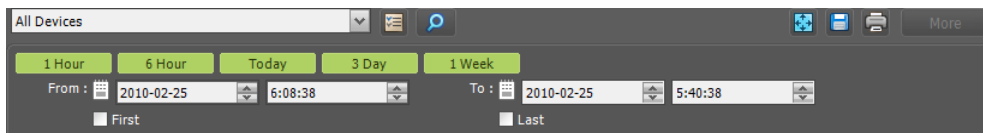
- User Log: Displays log entries from the Client program.
- User Audit Log: Displays log entries of the user audit of the iNEX system.
- Health Log: Displays log entries of the system health monitoring for the registered devices.
- Admin Service Log: Displays log entries from the administration service.
- Recording Service Log: Displays log entries for each recording service for all registered recording services.
- Streaming Service Log: Displays log entries for each streaming service for all registered streaming services.
- Video Analytics Service Log: Displays log entries for each video analytics service for all registered video analytics services.
- Monitoring Service Log: Displays log entries for each monitoring service for all registered monitoring services.

- **Device System Log:** Displays system log entries from the devices.
- **Device Event Log:** Displays event log entries from the devices. If the device is a network camera or network video transmitter, not all event logs are displayed but only the events that occurred while recording on an SD (SDHC) memory card is enabled.

If the connection was not made properly, the network disconnection log is displayed (only for devices registered on the recording service). Refer to **Appendix – Network Disconnection Log** (p. 263) for details.

## **Report Toolbar**

The toolbar at the bottom of the panel allows you to search for the desired log entries.



- **From, To:** Set up the date and time of the log entry to search. Enter a specific date and time or select **First** or **Last**. Clicking the **1 Hour**, **6 Hour**, **Today**, **3 Day** or **1 Week** button adjusts the time interval between **From** and **To**. Selecting **First** or **Last** searches log entries from the first or to the last.
- (Condition): Selects a log type to search.
- (Search): Starts searching log entries based on search conditions.
- (Full Screen): Displays the Report panel in full-screen format.
- (Export): Exports the searched log entries as a text file (.txt) or a CSV file (.csv). System and service log entries can also be exported as an encrypted HTML file (.html) which will ask you to enter a password to view the file.
- (Print): Prints the searched log entries.
- **More:** Displays more results.

## Chapter 11 — Streaming

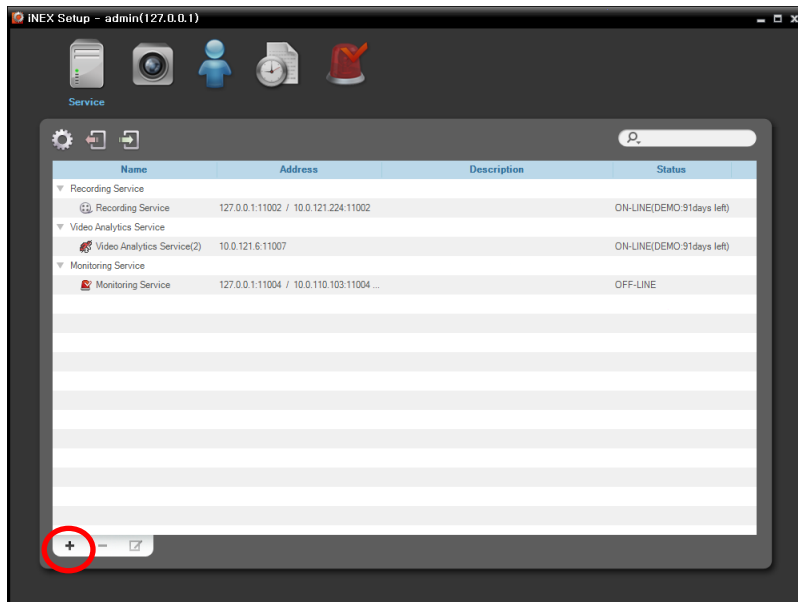
Multiple users can monitor video from devices through the streaming server. When the streaming service is not running, monitoring is still available, but it is restricted to fewer users based on the maximum number of simultaneous connections supported by the device.

There is no difference in the way to monitor video whether or not the streaming service is running. Refer to [Chapter 5 — Live Video Monitoring](#) (p. 69) for details about monitoring.

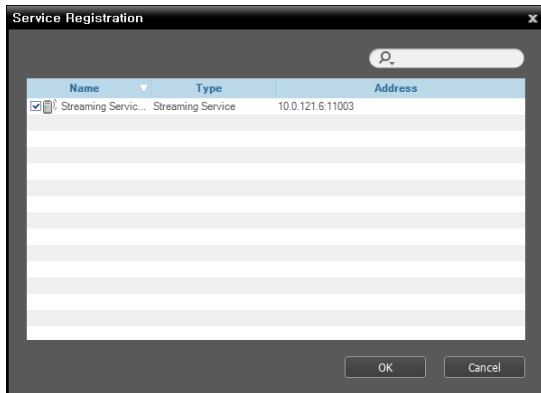
First, check the following and run the Setup program.

- Services should be running on the system. Refer to [3.1 Running Services](#) (p. 23) for details.
- Devices should be added to a device group. Refer to [Chapter 13 — Device Management](#) (p. 143) for details.

Select the **Service** menu, and then register a streaming service following the procedures below.



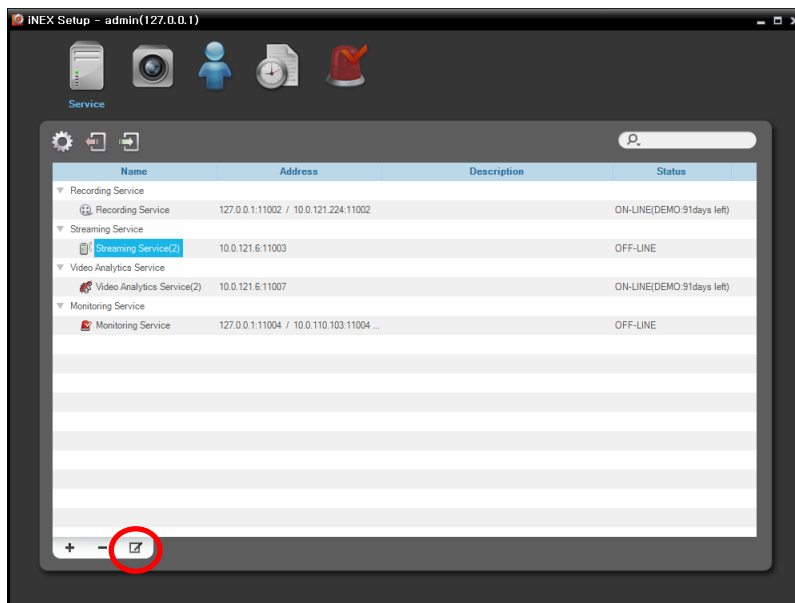
1. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.




- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

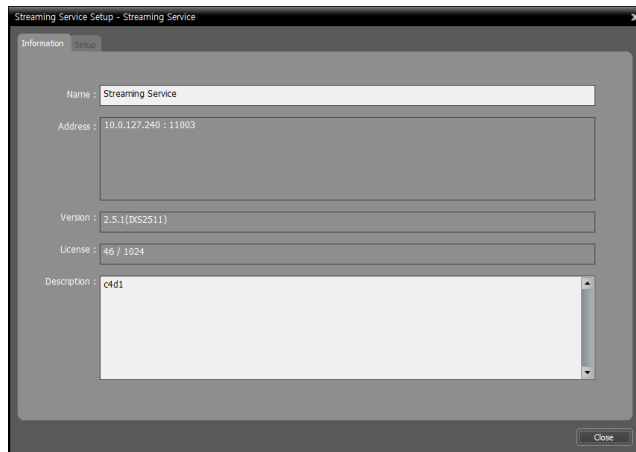
**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

2. Select the streaming service to register on the iNEX system, and the selected services are displayed in the service list.

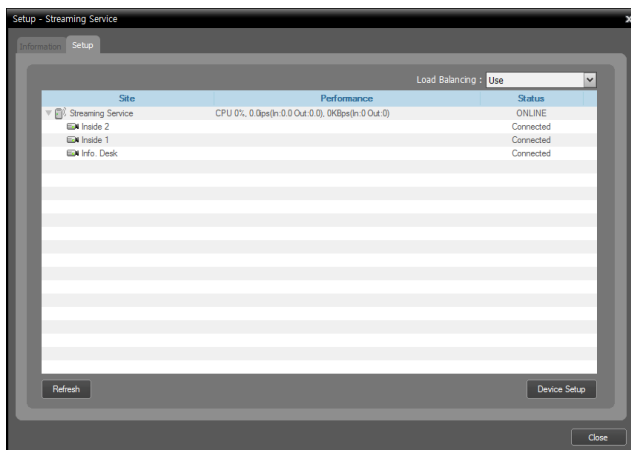




3. Select a streaming service and click the  button at the bottom. The Setup – Streaming Service window appears. Select the Information tab.



4. Enter the streaming service's name and select the Setup tab.



The list of cameras registered on the current streaming service is displayed.

- **Load Balancing:** Allows you to enable or disable the load balancing function.
- **Device Setup:** Clicking the button allows you to register additional cameras on the current streaming service or removes a camera from the current streaming service.

5. Video from the registered cameras on the current streaming service is streamed to the Client system.



## Chapter 12 — Video Analytics

The video analytics service enables video analytics function. When the settings are configured properly, the video analytics is detected according to the preset rules and the iNEX program considers the video analytics as an events. Refer to 12.2 Configuring Video Analytics Detection Events (p. 140) for details about setting up rules for the video analytics detection. The iNEX program allows displaying the detection results on the monitoring screen. Refer to 5.4 Controlling Cameras, Live Screen Menu (p. 81) for details.

### NOTES:

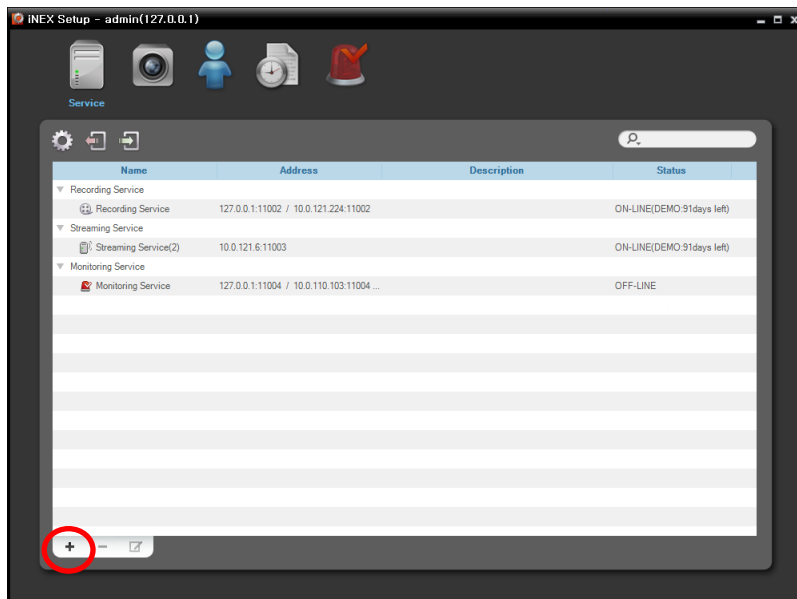
- For the video analytics function to work properly, cameras should be installed properly. Refer to *Appendix – Camera Installation Guide for Video Analytics Detection* (p. 263) for the proper installation of cameras for the video analytics function.
- If a device is higher than 2304x1296, then you cannot add the device in this service.

First, check the following and run the Setup program.

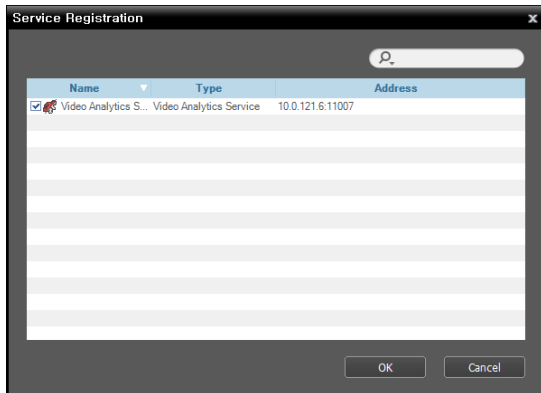
- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

### 12.1 Registering Service

Select the **Service** menu, and then register a video analytics service following the procedures below.



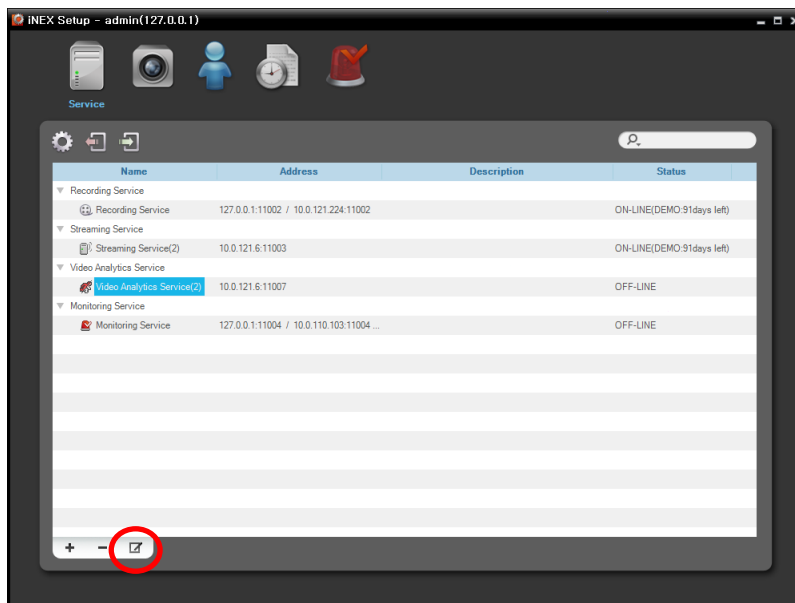
1. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.




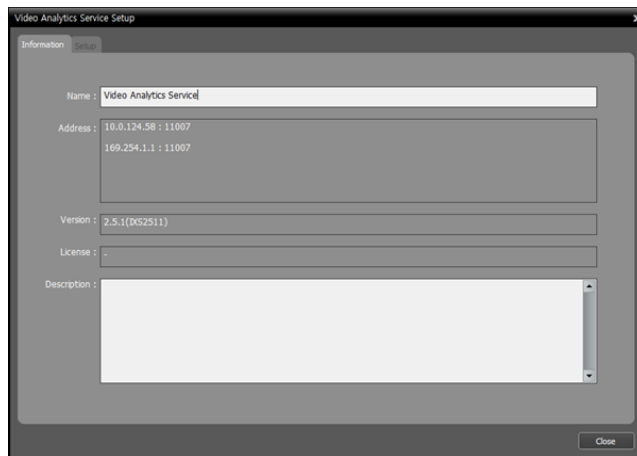
- Displays services that are currently connected to the administration service via the network.
- Type: Displays the service type.
- Address: Display the IP address and port number of each server.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

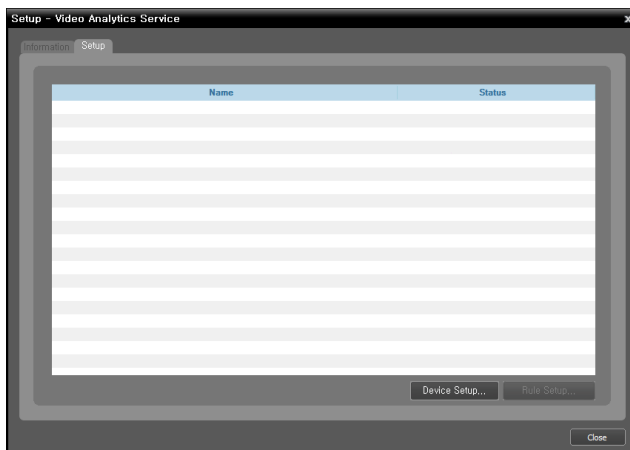
2. Select the video analytics service to register on the iNEX system, and the selected services are displayed in the service list.



3. Select a video analytics service and click the  button at the bottom. The **Setup – Video Analytics Service** window appears. Select the **Information** tab.



6. Enter the video analytics service's name and select the **Setup** tab.

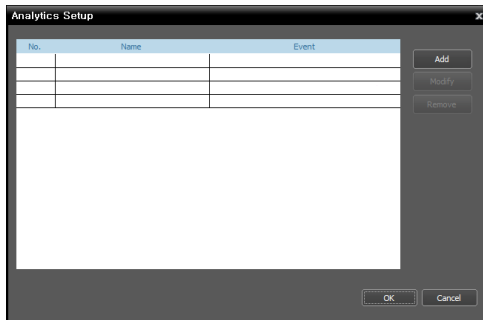


- **Device Setup:** Allows you to register devices to the video analytics service.
- **Rule Setup:** Selecting a camera from the list of registered devices and clicking the button allows you to set up the video analytics detection events.

- ## 7. Configure video analytics detection events.

## 12.2 Configuring Video Analytics Detection Events

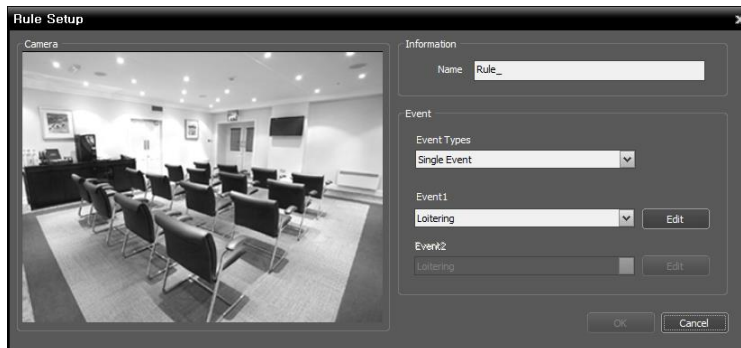
1. Click the Rule Setup button in the Setup – Video Analytics Service window.



The list of preset rules is displayed. Clicking the Add button allows you to add other rules.

- **No.:** Displays the rule number. The maximum of four rules are available.
- **Name, Event:** Displays the rule name and event type. You can change them by clicking the Modify button.

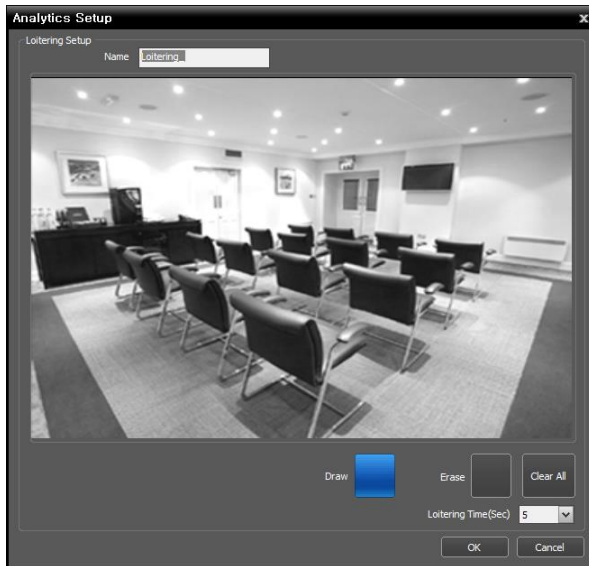
2. Click the Add button and set up the rules for the video analytics detection.



- **Camera:** Displays video of the current camera.
- **Name:** Enter a rule name.
- **Event Types:** Select an event type and set up events by clicking the Edit button. Refer to the following for details about setting up events. When the video analytics satisfying the settings is detected, the iNEX program considers the video analytics as an event.
  - **Single Event:** When the video analytics satisfying the settings of Event 1 is detected, the iNEX program considers it as an event.
  - **Double Event:** When the video analytics satisfying the settings of both Event 1 and Event 2 is detected in order, the iNEX program considers it as an event.

## Loitering

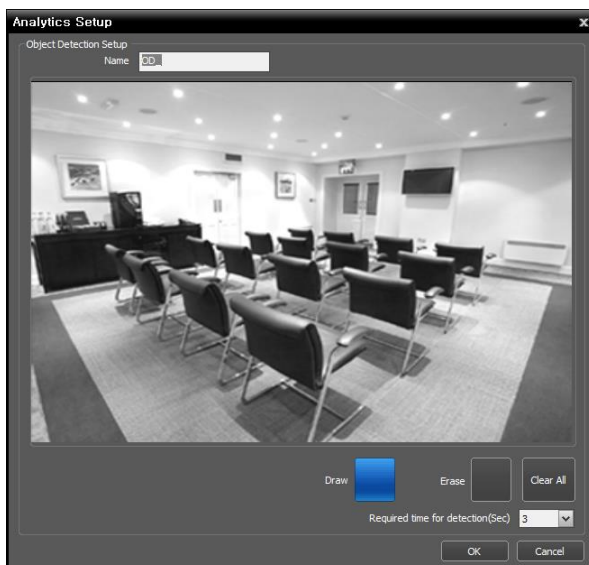
When any objects in motion are detected in the detection area during the loitering time, the iNEX program considers it as an event.



- **Name:** Enter the event name. The name will be displayed in the rule list.
- **Draw, Erase:** Allows you to set up detection areas by enabling blocks on the screen. Click the button and enable or disable blocks by using the mouse drag and drop on the screen.
- **Loitering Time (sec):** Set up the length of time for the detection to last and to be recognized as an event.

## Left/removed Object Detection

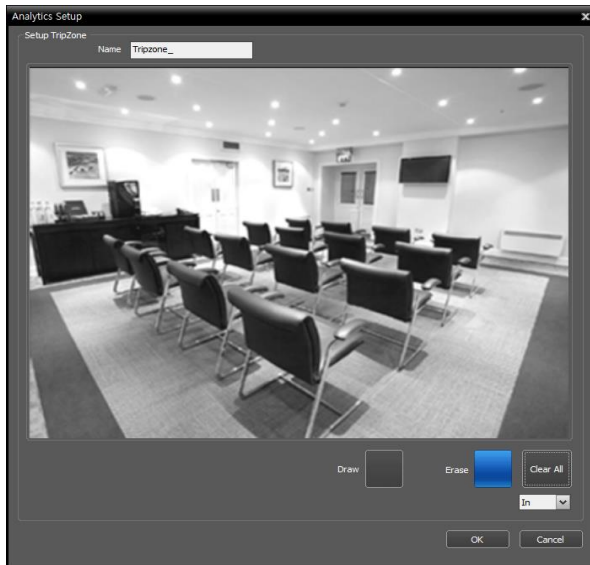
When an object is separated from another object in the detection area and left or removed during the required time for detection, the iNEX program considers it as an event.



- **Name:** Enter the event name. The name will be displayed in the rule list.
- **Draw, Erase:** Allows you to set up detection areas by enabling blocks on the screen. Click the button and enable or disable blocks by using the mouse drag and drop on the screen.
- **Required time for detection (sec):** Set up the length of time for the detection to last and to be recognized as an event.

## **Trip-Zone**

When any objects enter into the detection area or exit out from the detection area, the iNEX program considers it as an event.

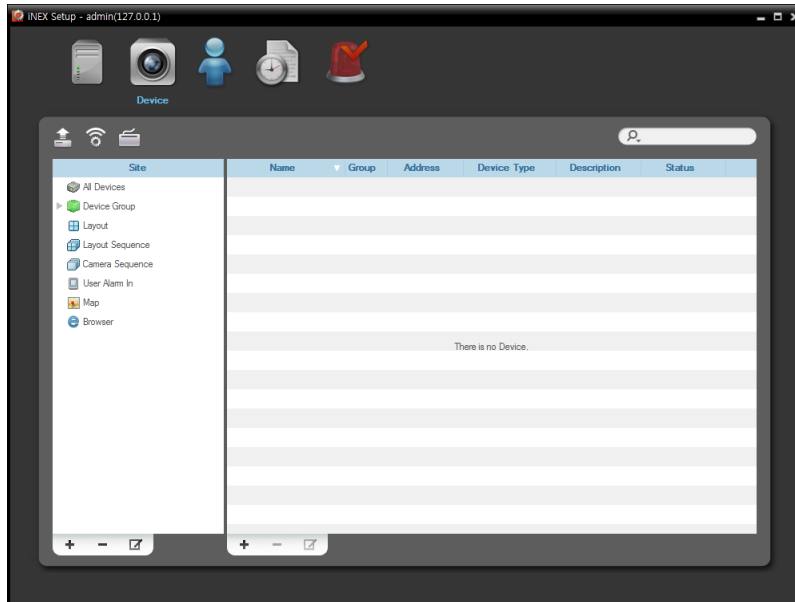


- **Name:** Enter the event name. The name will be displayed in the rule list.
- **Draw, Erase:** Allows you to set up detection areas by enabling blocks on the screen. Click the button and enable or disable blocks by using the mouse drag and drop on the screen.
- **In/Out:** Selecting In considers as an event when any objects enter into the detection area. Selecting Out considers as an event when any objects exit out from the detection area.



## Chapter 13 — Device Management

You can edit or delete the device from a list. You can also connect to a device to change its settings or upgrade its software remotely. Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information → Select the **Device** menu.

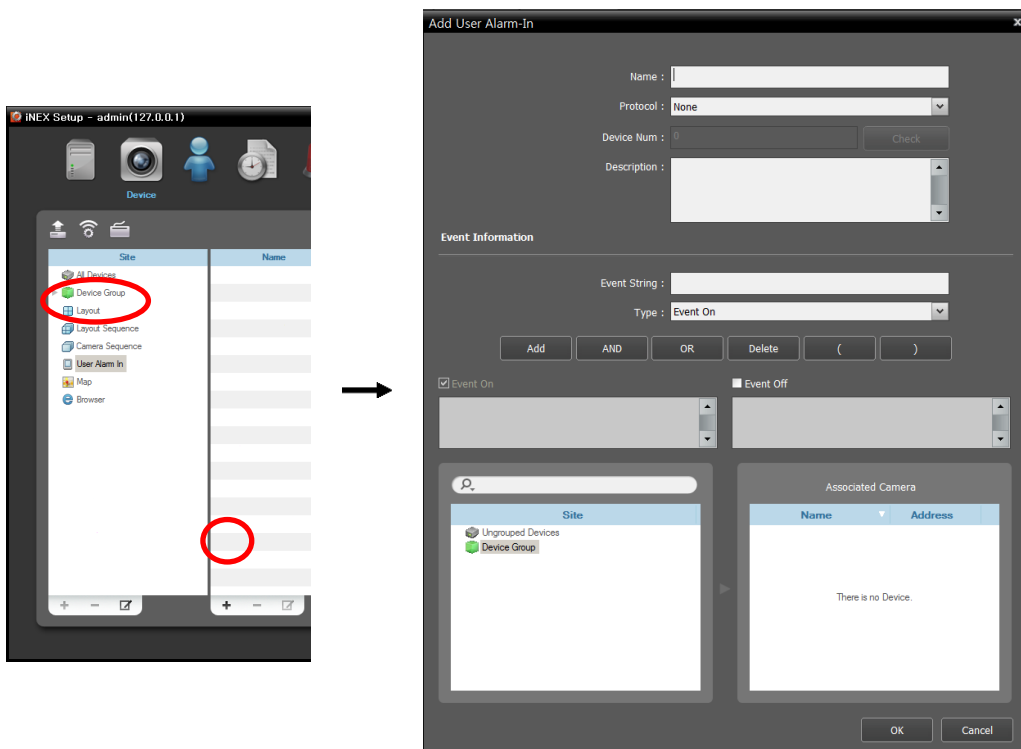


- **All Devices:** Displays devices registered in the administration service. If you delete a device from All Devices, it will not be available to search and play back previously recorded data even if the device is registered again (network video devices only). Refer to 13.1 Registering Devices (p. 147) for details about registering devices.
- **Device Group:** Displays registered device groups. You can monitor or play back recorded video from the cameras in device groups. You must register devices in the administration service and add the devices to a device group to perform any operation. Refer to 13.1 Registering Devices (p. 147) for details about registering device groups.
- **Layout:** Displays the registered layouts. You can monitor video from multiple cameras in a predefined layout. Refer to 5.1 Monitoring Video, Layout Monitoring (p. 72) for details.
- **Layout Sequence:** Displays the registered layout sequences. You can monitor video from multiple cameras sequentially in more than one predefined layout. Refer to 5.1 Monitoring Video, Layout Sequence Monitoring (p. 74) for details.
- **Camera Sequence:** Displays the registered camera sequences. You can monitor video from multiple cameras sequentially in the same camera screen. Refer to 5.1 Monitoring Video, Camera Sequence Monitoring (p. 76) for details.

- **User Alarm-In:** Displays the registered user alarm-in event settings. When the iNEX system receives a user-defined text string via TCP networking, the iNEX system notifies you of the user alarm-in events or records video according to the settings of the event management schedule or recording schedule. You can define the text strings during the user alarm-in event setup process. Refer to 16.1 Setting up Event Management Schedule (p.185) or 6.2 Setting up Scheduled Recording, Setting up Event-Based Recording (p. 99) for details about setting up notifications of user alarm-in events or video recording.
- **Map:** Displays the registered maps. You can monitor video from cameras, event detection and input/output device's status on a map. Refer to 5.2 Map Monitoring (p. 77) for details.
- **Browser:** Displays the registered browsers. You can launch a browser on a browser screen. Refer to 5.3 Launching Browser (p. 79) for details.

## User Alarm-In Event Setup

1. Set the alarm-in port number that the iNEX system uses to receive text strings via TCP networking:  
Run the Service Manager program → Click the monitoring service → Click the Option menu → Click Service Option.
2. Click User Alarm-In in the Site panel below, and then the **+** button at the bottom of the Site panel. The Add User Alarm-In window appears.

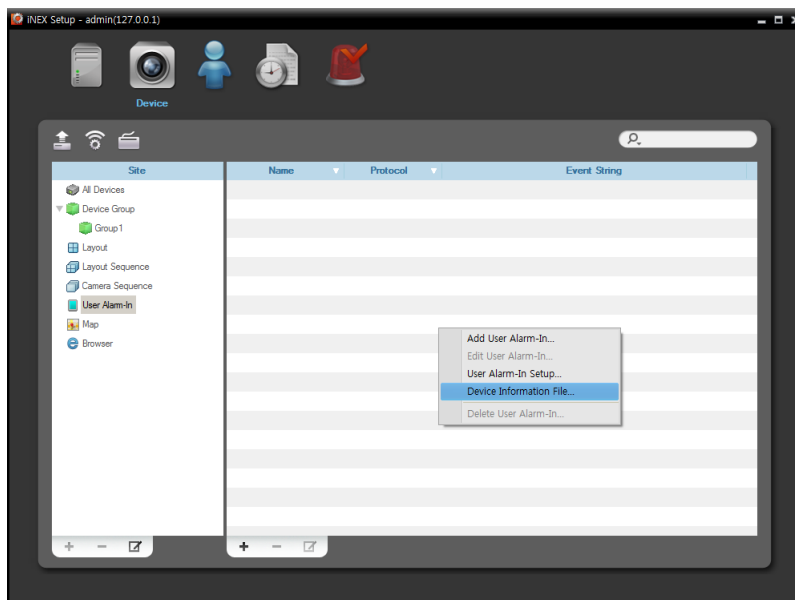


- **Name:** Enter the user alarm-in event name.
- **Protocol:** Specifies the protocol to use to send the user alarm-in event via SDK.
- **Device Num:** Enter the number for the user alarm-in identification when using the exclusive protocol.
- **Description:** Enter the user alarm-in description.


- **Event String:** Enter a text string to trigger a user alarm-in event. Clicking the Add button adds the text string. ( ) AND OR buttons can be used to create the text string. For example, if the event string is **Door AND Open**, the iNEX program considers a text string as a user alarm-in event when the text string includes both **Door** and **Open**. The iNEX program does not trigger a user alarm-in event though the event string is received until the connection via TCP networking is released or received text strings exceed a certain amount (128 words in English). When the connection via TCP networking is released or received text strings exceed the certain amount, the iNEX program checks text strings received by that time and triggers a user alarm-in event if the event string is included in the received text strings.
- **Type:** Select a user alarm-in event type to set up.
- ☒ **Event On**, ☒ **Event Off:** Enables releasing the user alarm-in event.
  - **Event On:** Triggers a user alarm-in event when the event string for a user alarm-in On is received.
  - **Event Off:** Releases a user alarm-in event when the event string for a user alarm-in Off is received after the user alarm-in event is detected. The user alarm-in event is not released until the event string for a user alarm-in Off is received. The iNEX system triggers a user alarm-in event also when the user alarm-in event is released.
- **Name, Address:** Select cameras to associate with the user alarm-in event. You can monitor video from the associated cameras when the user alarm-in event is detected by selecting a user alarm-in event from the event list and dragging and dropping it on the Live screen.

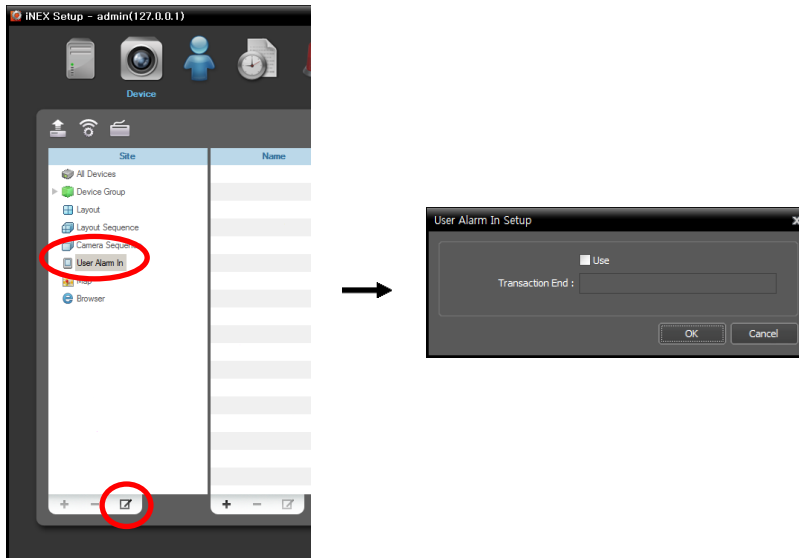
**NOTE:** For the iNEX protocol, enter the device number to identify the user alarm-in.


3. In the Site panel, click **User Alarm-In**, and then right-click the list panel. Click **Device Information File** to save the user alarm-in as an XML file.



- **Device Information File:** Add a user alarm-in from an XML file that contains information about the user alarm-in. Ask your dealer or distributor about purchasing the software and details about it.

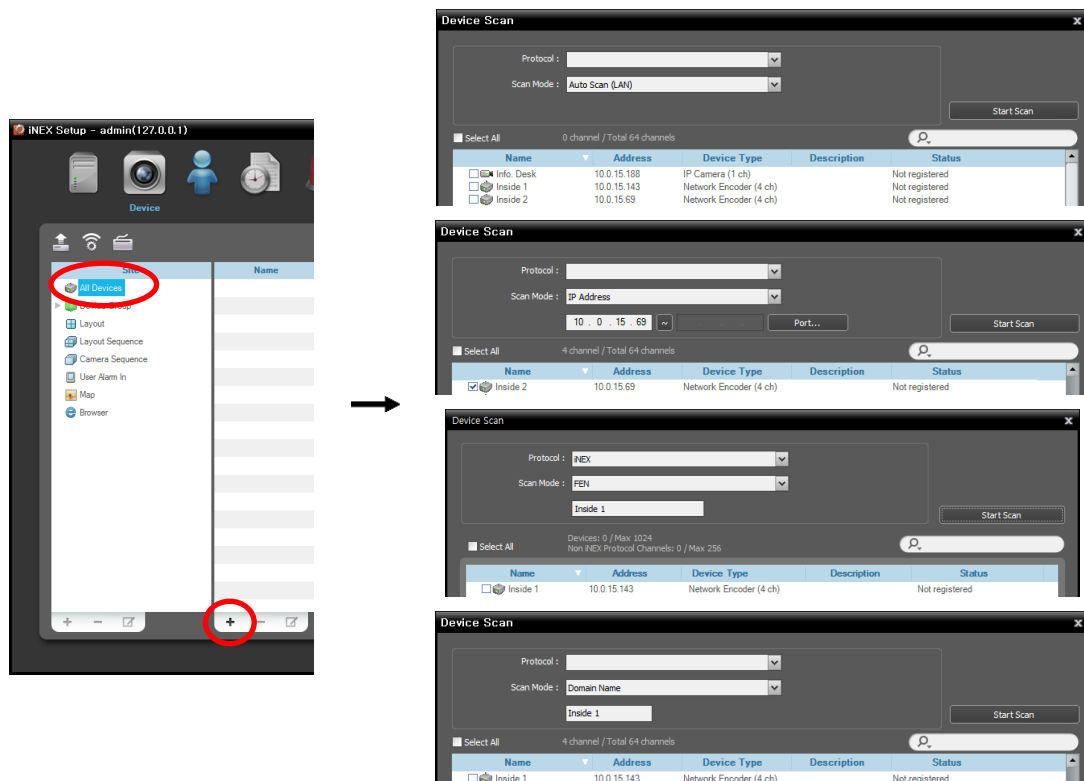
4. Click User Alarm-In in the Site panel, and then the  button at the bottom of the Site panel. The User Alarm-In Setup window appears.





-  **Use:** Enables the transaction end text string below. When the transaction end text string is received, the iNEX program considers that connection via TCP networking is released though the connection is not released. Then the iNEX program checks text strings received by that time and triggers a user alarm-in event if the event string is included in the received text strings.
- **Transaction End:** Enter a text string.

## 13.1 Registering Devices

1. Click All Devices in the Site panel, and then the **+** button at the bottom of the Site List panel. The Device Scan window appears.



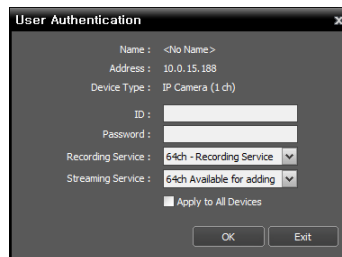
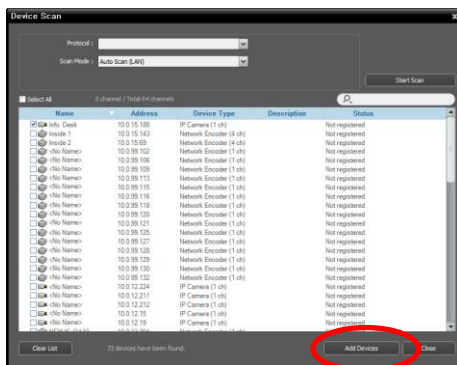
- **Protocol:** Select the protocol or manufacturer of the device to scan. Event related functions may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Some other functions may not be supported depending on the settings of the device. Ask your dealer or distributor for details.
- **Scan Mode:** Select the scan mode. Clicking the **Start Scan** button displays the results in the list. If the IP address range of the device is different from that of the administration server, the iNEX program considers the IP address invalid. In this case, you must change the device's IP address to register the device.
  - **Auto Scan (LAN):** Lists devices in a LAN environment (not supported for some models of DVRs). If the device uses the ONVIF™ Conformance protocol, this function is supported only when you have checked the **Disable WS-Discovery Windows Service (fdPHost, FDResPub)** box during the software installation in Microsoft® Windows® Vista or later operating systems. Also, if the device uses the ONVIF™ Conformance protocol, it is recommended that the device not be networked via DHCP (Dynamic Host Configuration Protocol). If the device is networked via DHCP, connection to the device may not be made properly depending on changes in the external network environment.
  - **IP Address:** Allows you to enter the IP address of a device. You can search more than one device at a time by entering a range of IP addresses. It is recommended that the device not be networked via DHCP (Dynamic Host Configuration Protocol). If the device is networked via DHCP, connection to the device may not be made properly depending on changes in the external network environment.

- **FEN:** Allows you to enter the device FEN name registered on a FEN server if the device uses the FEN function. Ensure the FEN server information on which the device is registered is correct (Service menu →  (System Setup) button). If the FEN server information is not correct, the device will not be found.
- **Domain Name:** Allows you to enter the device's domain name registered on a DNS server if the device uses the domain name service.
- **Device Information File:** Allows you to import an .xml file which has device connection information and lists the devices. Ask your dealer or distributor for details about the .xml file.
- **URI:** Allows you to enter URI (Uniform Resource Identifier). (supported only for the RTSP/RTP protocol)
-  : Select the devices to register by checking the box beside each device name in the list. Selecting the Select All box selects all devices in the list.

#### NOTES:

- Depending on the model, the device may not be supported even though the iNEX program supports the device's protocol. Ask your dealer or distributor about supported models.
- If the device uses the ONVIF™ Conformance protocol, you can select either the manufacturer (or iNEX protocol) or the ONVIF™ Conformance protocol. However, it is possible that one or both of them are not supported depending on the device model. Ask your dealer or distributor for details. Refer to the device's user manual about enabling the ONVIF™ Conformance protocol in the device, as procedures may differ for each model.
- If a device uses the iNEX protocol and is set up in DirectIP™ mode, then you cannot add the device. In this case, clicking the device allows you to change its mode and reboot the device. After rescanning, you can add the device.
- If the device uses the Protocol-H protocol and is registered in the *Auto Scan (LAN)* mode, *Auto Scan (LAN)* mode changes to *IP Address* mode automatically after the registration.
- If a device is higher than 2304x1296 and the iNEX service is installed in 32-bit mode, then you cannot add the device. In this case, iNEX system should be installed in 64-bit mode.

#### 2. Click the Add Devices button at the bottom.



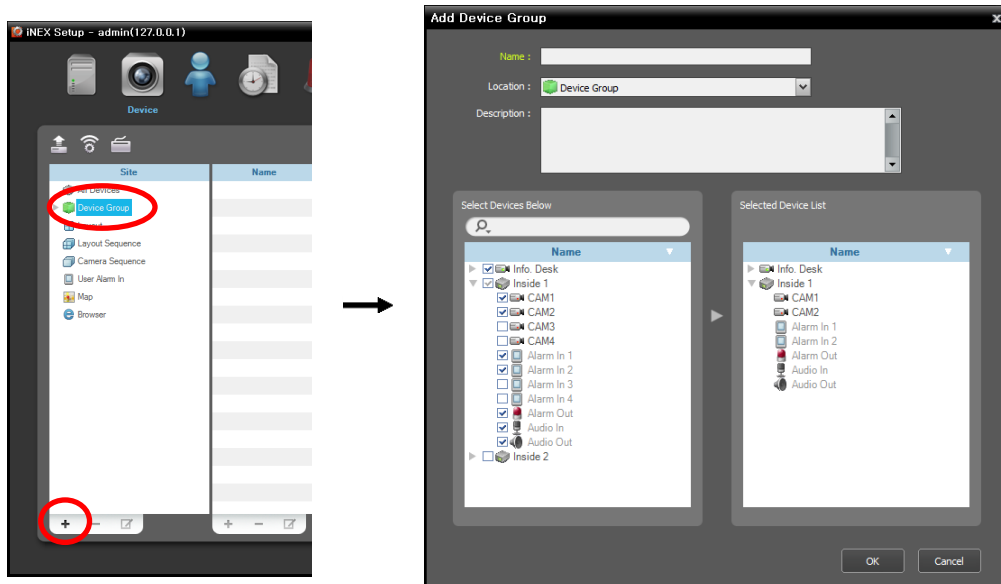
- **Name, Address, Device Type:** Displays the name, IP address and type of the selected device. The name will be updated automatically depending on the settings of the device.
- **ID, Password:** Enter the user ID and password which you set in the device in order to connect to that device remotely. The connection to the device is allowed only to the users under the Administrator group of the device, and recording is allowed only to the admin user under the Administrator group of the device.

- **Recording Service:** Select a recording server from the list to record video from the selected device (supported only for the network video devices). The device is registered on the recording server and the recording server performs recording according to a recording schedule. It is recommended that you do not change the recording server once any recording has been made. If you change the recording server after some recording has been done, you cannot search or play back the video recorded on the original recording server. The number in the recording server list indicates the maximum number of cameras that can be registered, and the name indicates the name of a recording service, which was set during the Service menu setup. The maximum number of cameras that can be registered differs depending on the type and number of the WIBU-Keys connected to the administration server. When selecting the **Do not record** option, the iNEX program treats the device as though it was not registered during the Schedule setup and does not perform any of the scheduled activities associated with the device. You can check the list of devices registered on the recording server on a **Device Setup** tab while setting up the recording server in the Service menu. Refer to **Chapter 15 — Storage Management** (p. 177) for details.
- **Streaming Service:** Select whether or not to use the streaming service for monitoring video from the device. If you use the streaming service, the iNEX program transmits video from the device to the client system through the streaming server, and it allows multiple users to monitor video simultaneously. The number of channels that can be streamed equals the number of channels that can be recorded unless streaming WIBU-Keys have been added. When you register more than one streaming service by buying additional WIBU-Keys, the iNEX program chooses any one of the streaming services depending on the system load of the streaming server. Refer to **Chapter 11 — Streaming** (p. 133) for details.
- **Apply to All Devices:** Select to apply the same user ID and password to all selected devices if you selected more than one device and the selected devices have the same user ID and password.

#### NOTES:

- If the device is a DVR, it might be necessary to enter the DVR port numbers depending on the specifications and version of the DVR.
- When registering a four-channel network video transmitter which uses the iNEX protocol, all four cameras are automatically registered even if some of the four cameras are disabled.

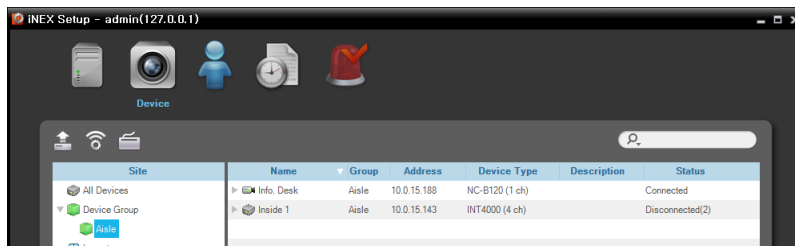
3. Click **Device Group** in the **Site** panel, and then the **+** button at the bottom of the **Site** panel. The **Add Device Group** window appears.



- **Name:** Enter the device group name.
- **Location:** Select an upper group to which the device group will belong.
- **Select Devices Below, Selected Device List:** Check the box beside cameras in the left panel, and the selected cameras are added to the right panel.

Clicking the OK button completes the device group registration.

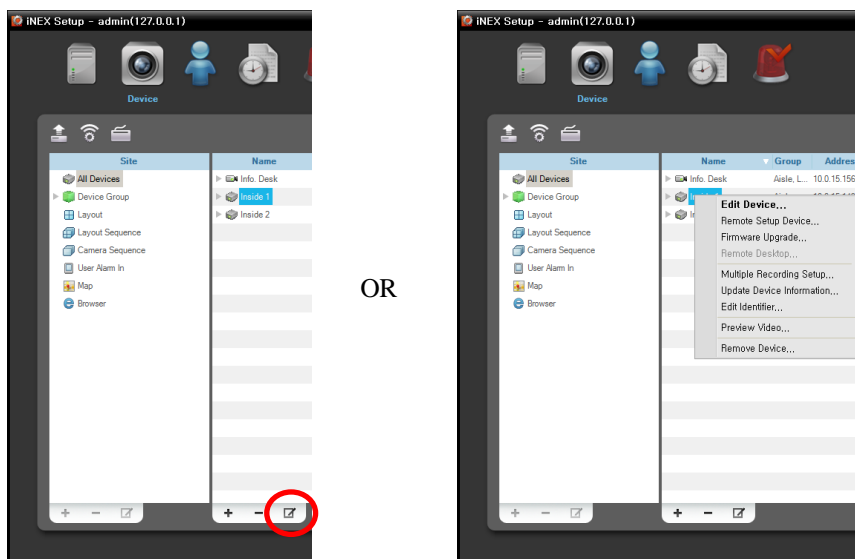
4. Check that the device was added to the device group correctly. Click **Device Group** in the **Site** panel and then the arrow button (▶) beside **Device Group**. Clicking the registered group displays the list of devices added to the device group and connection status in the **Site List** panel. If the connection was not made properly, the network disconnection log is displayed (only for devices registered on the recording service). Refer to **Appendix – Network Disconnection Log** (p. 263) for details about the network disconnection log.
- Check video analysis (📹) from the device group in the case of a device with a video analysis device.



Selecting the registered device group, and then the button at the bottom of the **Site** panel displays the **Edit Device Group** window and allows you to edit the selected device group.

## 13.2 Managing Devices

Click a device group in the **Site** panel and then click a device in the **Site List** panel. Clicking the button at the bottom of the **Site List** panel, or clicking the right mouse button displays the device menu.



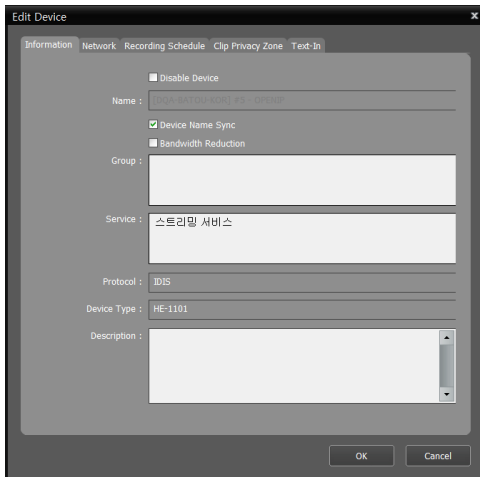


- **Edit Device:** Allows you to change information for connection to the device and each Preset of Recording Schedule – Action. Refer to **Editing Device Information** (p. 152) for details.
- **Remote Setup Device:** Allows you to change the device's settings remotely. Refer to **Changing Device's Setting Remotely** (p. 158) for details.
- **Firmware Upgrade:** Allows you to upgrade the device's software remotely (supported only for devices which use the iNEX protocol). Refer to **Multiple Upgrading Device's Software** (p. 159) for details.
- **Remote Desktop:** Allows you to connect to the device using the VNC (Virtual Network Computing) function. For this feature to work, the VNC function must be enabled in the device and a port number and password for the VNC remote connection must be registered during the device registration at iNEX program. Refer to **Editing Device Information, Remote Desktop** (p. 152) for details about registering the port number and password for the VNC remote connection at iNEX program. This function may not be supported, depending on the specifications and version of the device.
- **Multiple Recording Setup:** Allows you to set up each Preset of Recording Schedule – Action with the same values for more than one device. This is supported only for the same type of devices (network cameras/network video transmitters).
- **Update Device Information:** Allows you to update the registered device's information. If the input/output devices connected to the registered device are not displayed in the list, it is recommended that you update the registered device's information. Also, if the Event tab is not displayed during the **Edit Device** setting, it is recommended that you update the registered device's information (only for devices which do not use the iNEX protocol and for which event related functions are supported).
- **Edit Identifier:** Allows you to edit device's unique identifier. The identifier will be displayed beside the device in the Site List of the Video Wall Agent program. The identifier will be assigned automatically when the network keyboard or Video Wall service is registered on the iNEX program, and you can change the identifier. The identifier is used to distinguish the device from others when controlling the Video Wall Agent system with a network keyboard.
- **Preview Video:** Allows you to preview the device's video.
- **Remove Device:** Deletes the device from the administration service.

## Editing Device Information

Select Edit Device from the device menu.

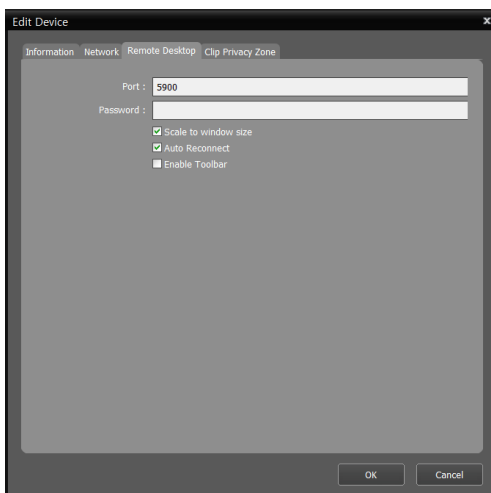
### Information



This allows you to change information of the device.

- ☒ **Disable Device:** The iNEX program no longer considers the device registered in the administration service.
- **Name:** Edit the device name. You can use the same name for more than one device. By selecting the **Disable Device** option, the iNEX program no longer considers the device registered in the administration service. You can type up to 31 em size Japanese characters.
- ☒ **Device Name Sync:** Automatically applies the name set in the device to the iNEX program (supported only for devices which use the iNEX protocol).
- ☒ **Bandwidth Reduction:** Reduces device's network bandwidth by using a streaming service (not supported for some models of the network video transmitters which use the iNEX protocol). When this option is enabled, the device should be registered on the streaming service, otherwise, recording will not work. The device records video with the same settings (frame rate, quality, etc.) as live monitoring.
- **Group, Service:** Displays the list of device groups and services that the device is registered on.
- **Protocol:** Displays the protocol that the device uses.
- **Device Type:** Displays the device type.
- **Event Handling:** Displays how the camera handles events (only for devices that use the ONVIF™ Conformance protocol).

### Remote Desktop



This allows you to register a port number and password for the VNC (Virtual Network Computing) remote connection. For this feature to work, the VNC function must be enabled in the device. This function may not be supported, depending on the specifications and version of the device.

- **Port, Password:** Enter a port number and password set in the device for VNC remote connection.
- ☒ **Scale to window size:** Scales the VNC Viewer screen to fit window size.
- ☒ **Auto Reconnect:** Reconnects automatically when the VNC remote connection is released.

## Network

The screenshot shows the 'Edit Device' window with the 'Network' tab selected. The 'Address Type' dropdown is set to 'Auto Scan (LAN)'. Below it, the 'Address' field contains two values: '00032235022b.local' and '10.0.130.175'. The 'Port' field is set to '8016'. The 'ID' field contains 'admin' and the 'Password' field is filled with dots. A 'Connection Test' button is located to the right of the password field. At the bottom are 'OK' and 'Cancel' buttons.

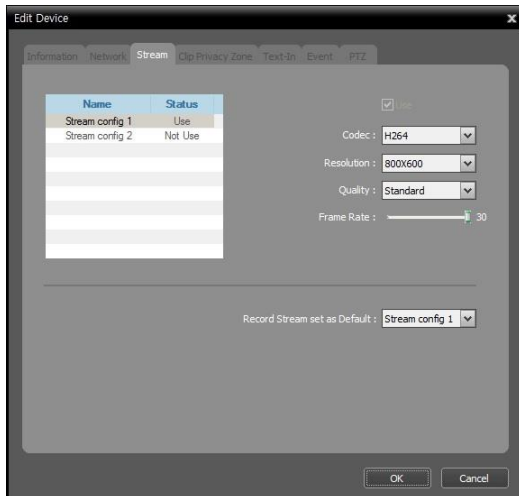
This allows you to change information for connection to the device. The device's authentication procedure, which is entering the user ID and password of the device, is required.

- **Address Type:** Select device's address type.
  - **Auto Scan (LAN):** Allows you to enter the device's mDNS number when you edit the device's address. If the device uses the Protocol-H protocol and is registered in the Auto Scan (LAN) mode, Auto Scan (LAN) mode changes to IP Address mode automatically after the registration.
  - **IP Address:** Allows you to enter the device's IP address when you edit the device's address.
  - **FEN:** If the device uses the FEN function, this allows you to enter the device FEN name registered on the FEN server when editing the device's address. The FEN name must match the one set during the FEN setup in the device.
- **Domain Name:** If the device uses the domain name service, this allows you to enter the device's domain name registered on a DNS server when you edit the device's address.
- **Address:** Edit the device's address based on the selected address type above.
- **Port:** Edit the port numbers. The port numbers you enter should match the port numbers set in the device for remote connection (Admin), remote monitoring (Watch), recording (Record) and two-way audio communication (Audio).
- **ID, Password, Connection Test:** The device's authentication procedure is required to change the information above. Enter the user ID and password of the device and click the **Connection Test** button. When the connection test succeeds, you can click the **OK** button to apply the changes.
- **Live Protocol, Record Protocols:** Select the protocol for monitoring or recording (supported only for devices which use some versions of the Axis or ONVIF™ Conformance protocols).
- **Live Profiles, Recording Profiles:** Select a preset monitoring or recording profile (supported only for devices that use some versions of the ONVIF™ Conformance protocols). Refer to 13.3 Remote Setup of ONVIF™ Conformance Protocol Devices, Profiles (p. 167) for details.

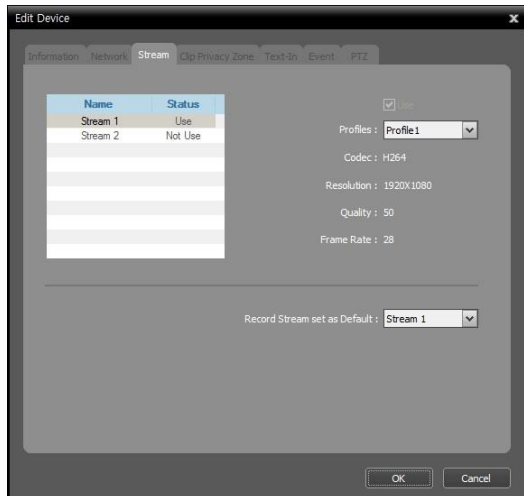
## Stream

This allows you to change the device's stream setting. This is supported only for network cameras which use some versions of the Axis, Panasonic WV (DG), or ONVIF™ Conformance protocol and may not be supported, depending on the specifications and version of the device.

**NOTE:** Multistream function works only for the device registered in the streaming service.



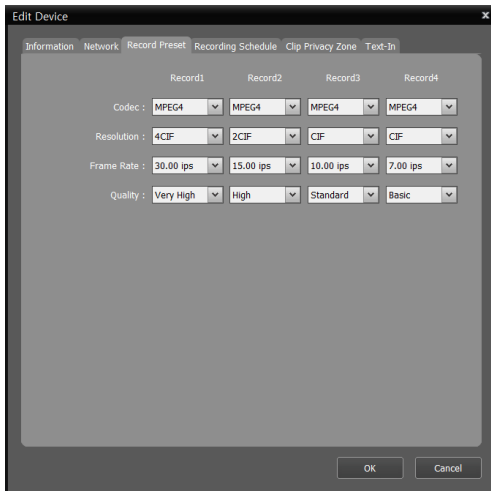
Axis/Panasonic WV (DG) protocol



ONVIF™ Conformance protocol

- ☒ **Use:** Enables the stream. When two streams are enabled, multistream is supported.
- **Codec, Resolution, Quality, Frame Rate:** Select the compression, resolution, quality, and frame rate of image for streaming (not supported for the devices which use ONVIF™ Conformance protocol).
- **Profiles:** Select a preset monitoring or recording profile (supported only for devices that use some versions of the ONVIF™ Conformance protocols). Refer to 13.3 Remote Setup of ONVIF™ Conformance Protocol Devices, Profiles (p. 167) for details.
- **Record Stream set as Default:** Select a stream to use for recording.

## Record Preset

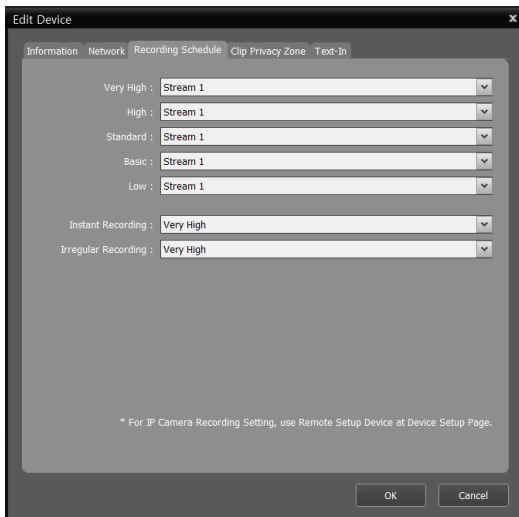


This is supported only for some models of network video transmitters which use the iNEX protocol.

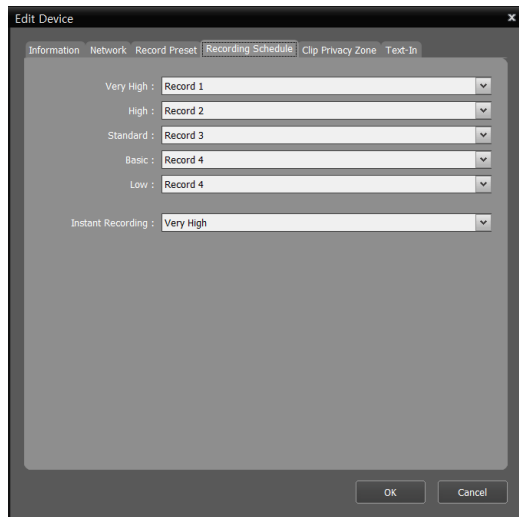
- **Codec, Resolution, Frame Rate, Quality:** Select the compression codec, resolution, frame rate and quality for recording. The frame rate cannot exceed 15 ips when video is recorded with the H.264 codec and 4CIF resolution.

## Recording Schedule

This allows you to change each Preset of Recording Schedule – Action (supported only for network cameras and some models of network video transmitters which use the iNEX protocol).



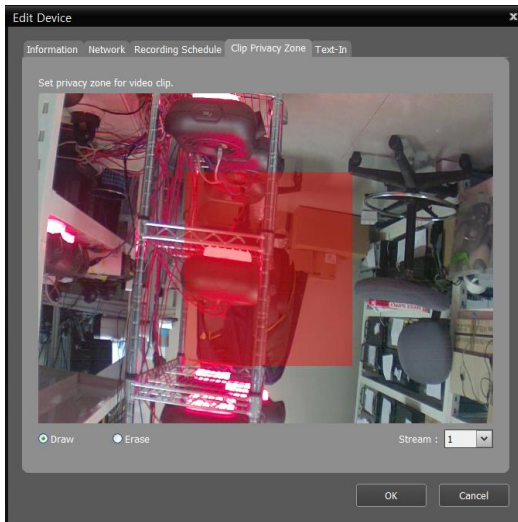
Network Camera



Network Video Transmitter

- **Network Camera:** Allocates a stream to use for recording to each Preset. Stream 1 indicates the device's Primary stream, Stream 2 indicates Secondary, Stream 3 indicates Tertiary, and Stream 4 indicates Quaternary.
- **Network Video Transmitter:** Allocates values for recording to each Preset.
- **Instant Recording:** Select a Preset to use for instant recording.

## Clip Privacy Zone



This allows you to restrict playback of specific areas to protect privacy (In case of DVR, tab is created only when this function is supported). The privacy zone is blacked out during playback of the video, which is saved as a self-player file.

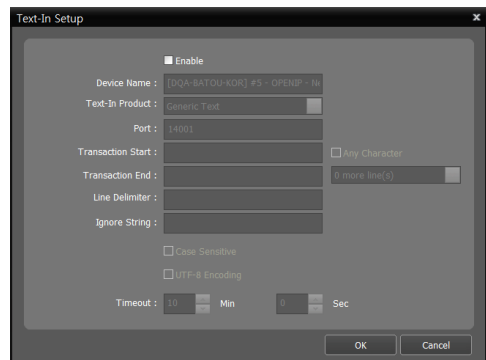
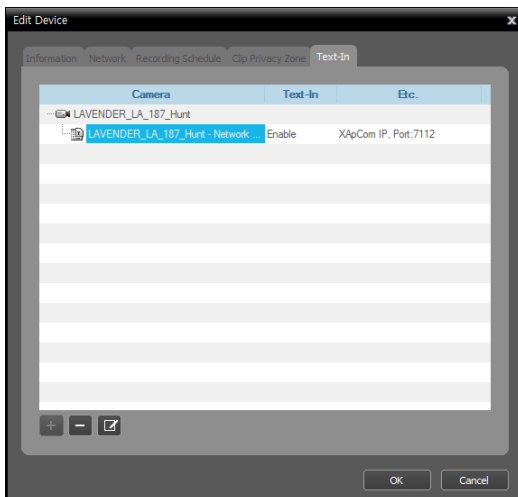
- **Include/Exclude:** Allows you to set up or release the clip privacy zone. To Set up the zone, click and drag the mouse on the screen until the box covers the appropriate area, and then release the mouse button.

## Text-In Setup

This supports the text-in function for the device by connecting a text-in product to the iNEX system via TCP networking (not supported for devices which support text-in function and for DVRs).

Double-clicking a camera or selecting a camera from the list and clicking the ☒ button enables the text-in function for that camera. When the text-in function is enabled, the iNEX system considers text input as a text-in event according to the settings listed below.

Clicking the **+** button allows you to register the text-in information. Clicking the **-** button removes the text-in information. If you remove the text-in information, then the recorded video of the text-in event no longer appears in the search results.

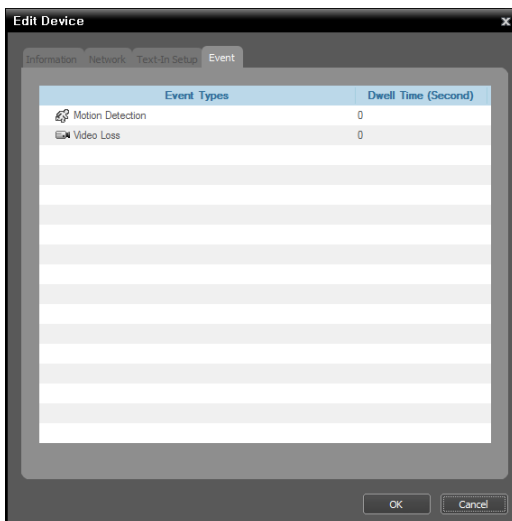


- ☒ **Enable:** Enables the text-in function.
- **Device Name:** Enter the text-in device name.
- **Text-In Product:** Select the text-in product from the list.
- **Port:** Enter the port number of the text-in product.

- **Transaction Start:** Enter the transaction start text string. The iNEX system considers that a transaction starts when the start text string is entered. If **Any Character** is enabled, you will not be able to enter a text string, and the iNEX system considers that a transaction starts when any text string is entered.
- **Transaction End:** Enter the transaction end text string. The iNEX system considers that a transaction ends when the end text string is entered. Select the number of additional text lines to be displayed after the end of the transaction from the drop-down list.
- **Line Delimiter:** Enter the character(s) that the text-in product uses to indicate the end of a line. Special characters can be created using ^ and a capital letter; e.g., ^J for NL (New Line), ^M for CR (Carriage Return). Refer to the text-in product manufacturer's user manual for Line Delimiter character(s).
- **Ignore String:** Enter any text strings to be ignored. Refer to the text-in product manufacturer's user manual for text strings that the text-in product sends during normal transactions so that those text strings will not be considered as text-in.
- ☒ **Case Sensitive:** Check the box if text strings are case sensitive. Refer to the text-in product manufacturer's user manual to determine if the text strings are case sensitive. If the text-in product distinguishes between upper and lower case letters, make certain this is enabled.
- ☒ **UTF-8 Encoding:** Check the box to apply UTF-8 encoding to the received strings. When the text-in data is transmitted in UTF-8 encoding, it must be re-encoded at the receiving end for the string to be properly presented. Refer to the text-in device manual about the text-in string encoding.
- **Timeout:** Set the length of time to wait for a new text string. The iNEX system will consider a transaction complete if no new text is entered during the time-out period after the last text input even though the transaction end text string is not entered.

**NOTE:** The required settings may differ depending on the text-in product. Refer to the text-in product manufacturer's user manual for details about settings.

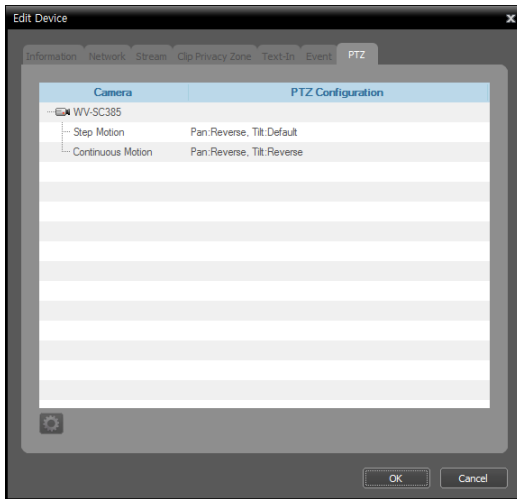
## Event




This is supported only for devices which do not use the iNEX protocol and which event related functions are supported for.

- **Dwell Time (Seconds):** If the device does not notify the iNEX system that the event has been released, the iNEX system considers an event complete and releases the event detection when the established dwell time has expired since the event detection is notified from the device. For example, if this dwell time is set to 0 the iNEX system considers that an event is complete as soon as the event is detected. If this dwell time is set to **disable** the iNEX system considers an event is not complete until the iNEX system is notified from the device that the event has been released. In this case, if event recording is set up, the iNEX system keeps recording video until it is notified of event release from the device.

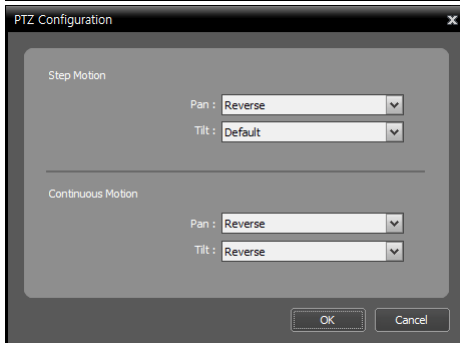
## PTZ



This is supported only for devices which do not use the iNEX protocol and which PTZ functions are supported for.

Selecting a camera from the list and clicking the  button allows you to control the direction of the selected camera.


- **Step Motion:** The PTZ camera moves each time you click the mouse.
- **Continuous Motion:** The PTZ camera moves continually if you click and hold the mouse for 3 seconds.



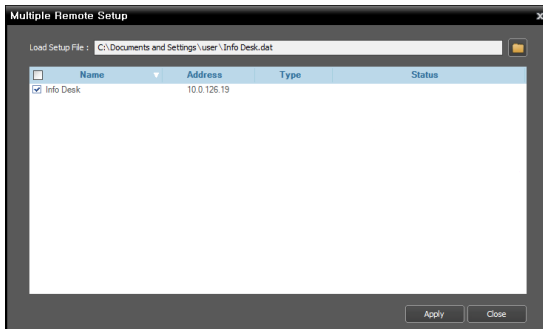
- **Default:** The PTZ camera moves in the direction clicked in the Client program.
- **Reverse:** The PTZ camera moves in the opposite way of the direction clicked in the Client program.


## Changing Device's Setting Remotely

Selecting **Remote Setup Device** from the device menu allows you to change the device's settings remotely. Changing the device's settings remotely might not be available for some settings. If the device supports more than one protocol, the settings for remote setup in the iNEX program might be different depending on the protocol in use. Refer to the device's user manual for details about the settings. Refer to **13.3 Remote Setup of ONVIF™ Conformance Protocol Devices** (p. 164) in this document for details about remote setup of a device which uses the ONVIF™ Conformance protocol.

You can change settings of several devices at the same time using a setup file. Clicking the  (Multiple Remote Setup) button above the Site panel displays the following screen.






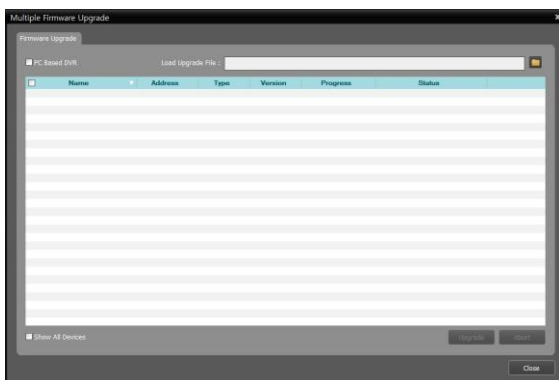
Click the  button at the top right corner and select a setup file. The list of available devices is displayed. This function might not be supported depending on the device model, and the devices that this function is not supported for will not be displayed in the list even if the setup file is available for the devices. Select devices and click the Apply button at the bottom to apply the change.



## Multiple Upgrading Device's Software

If you have an upgrade file, selecting **Firmware Upgrade** from the device menu allows you to upgrade the device's software remotely (supported only for devices which use the iNEX protocol).

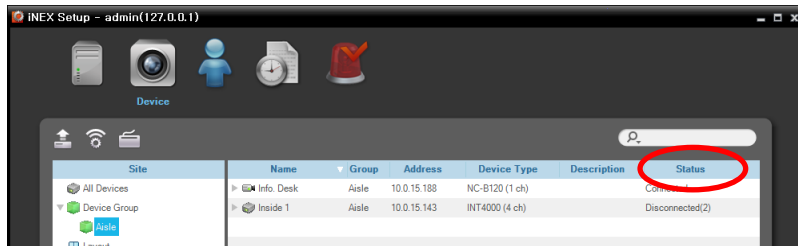
You can upgrade software of several devices at the same time. Clicking the  (Multiple Firmware Upgrade) button above the Site panel displays the following screen (supported only for devices which use the iNEX protocol).

### Firmware Upgrade



Click the  button at the top right corner and select an upgrade file. If the device is a PC-based DVR, check the **PC Based DVR** box and click the  button. The list of available devices is displayed. Selecting **Show all devices** displays all registered devices. Select devices and click the **Upgrade** button at the bottom to start upgrading.

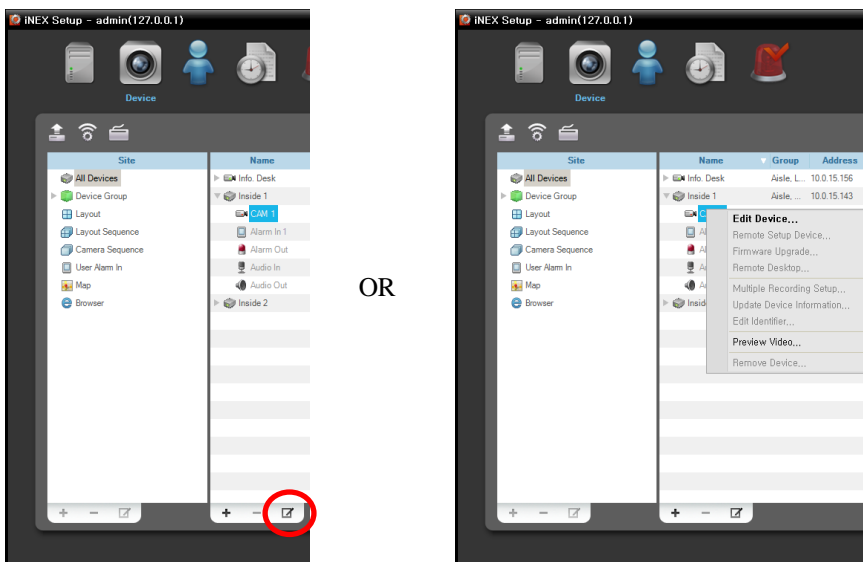
## Checking Device Status

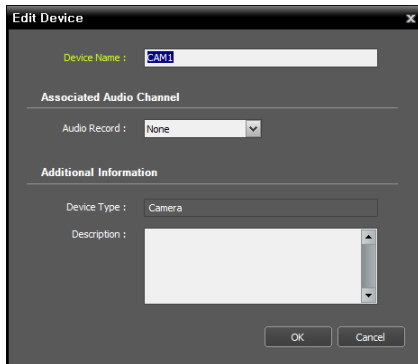


Click All Devices in the Site panel and then a device in the Site List panel. The device status is displayed in the Recording Status field (Connected: Recording is available, Disconnected: Recording is not available). Clicking the arrow button (▶) beside each device name displays the list of inputs and outputs supported by the device. You can check the input and output device's status (Record: During scheduled recording, Panic: During instant recording, Idle: Ready to record).

## Editing Input/Output Device Information

Click All Devices in the Site panel and then the arrow button (▶) beside each device name in the Site List panel. Click the input/output device in the list of video in, alarm in/out and audio in/out supported by the device. Clicking the button at the bottom of the Site List panel, or clicking the right mouse button and selecting Edit Device from the menu displays the Edit Device window.





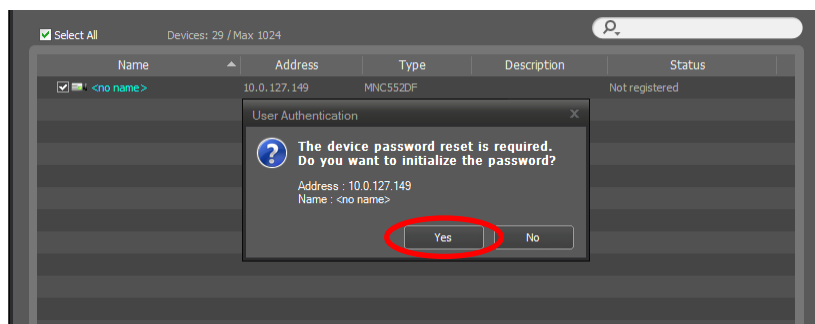
- **Device Name:** Edit the name of the input/output device. You can use the same name for more than one input/output device. The name will be updated automatically when the name of the device to which the input/output device is connected is updated.
- **Associated Audio Channel:** Select the audio channel to associate with the camera for audio recording (supported only for a camera). The selected audio channel will be recorded when video from the camera is recorded.
- **Associated Device:** Select a camera channel to associate with the alarm-in or audio-in device for display on the event spot screen (supported only for an alarm in or audio-in device). Video from the selected camera channel will be displayed on the event spot screen when an alarm-in or audio-in event is detected.

## Device Password Reissue

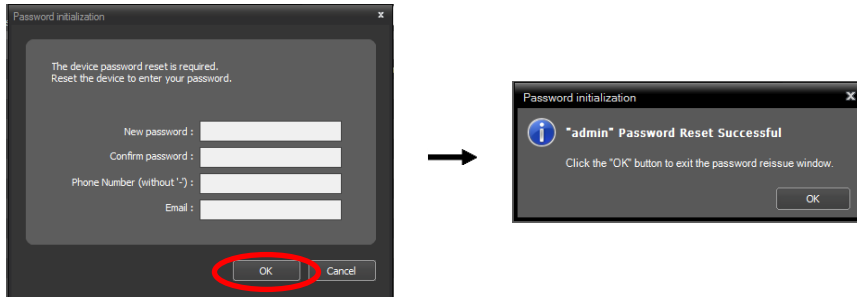
Reissue the remote device password. This function is only for the products that support the device password reissue function.

## Device Password Initialization

1. When registering a device, the User Authentication window pops up to ask whether to reset the password in the case of the devices that need the password initialization. For the device that needs the password initialization, device registration is enabled after the initialization. Click **Yes** to display the password initialization window.



2. Enter the information for the initialization and click OK to reset the device password.

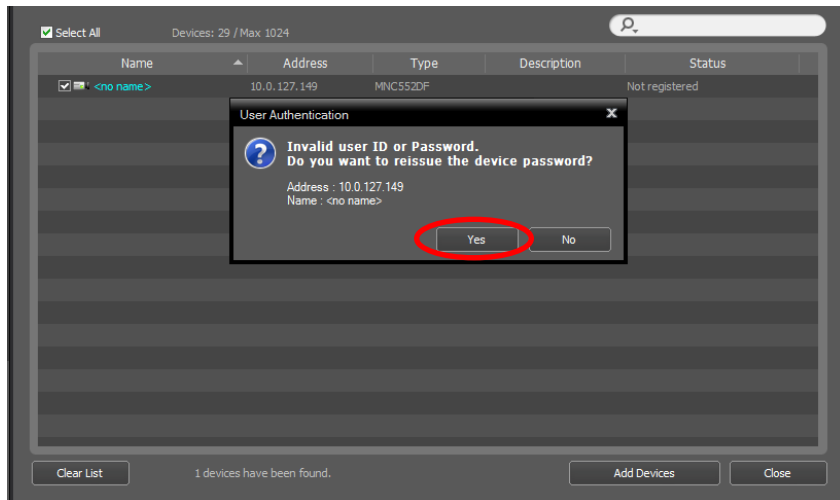


- New Password/Confirm Password: Enter the new password.
- Phone Number: Enter the phone number that allows SMS for receiving the One Time Password(OTP) when resetting the password.
- Email: Enter the email address for receiving the One Time Password(OTP) when resetting the password.

## Device Password Reissue

The password reissuance works only when the System Setup – FEN setup is configured and connected to the FEN service. Ask your dealer or retailer for more information.

1. If the user authentication fails (password error) during the device registration, the window pops up to check whether to reissue the password or not.



## 2. Click Request to reissue the password.

Reissuing a password for <no name>.  
Select an authentication method, and then request an authentication number.

ID :

Authentication method :

Email Address :

- ID: Enter the user ID that requests the password reissuance.
- Authentication Method: Select an authentication method between the email address/phone number.
- Email Address/Phone Number: Enter the email address or phone number that allows SMS for receiving the One Time Password(OTP) when resetting the password.

## 3. Enter the new password and click OK.

Enter a new password.


New password :

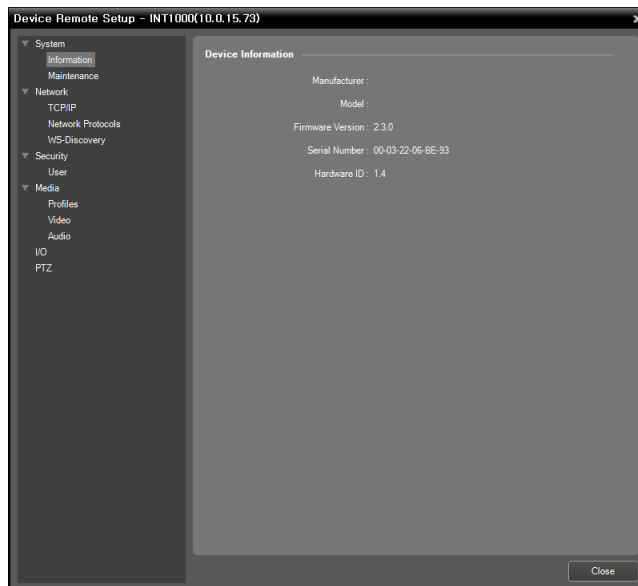
Confirm password :

**Password was reissued successfully.**  
Click the "OK" button to exit the password reissue window.

- New Password/Confirm Password: Enter the new password.

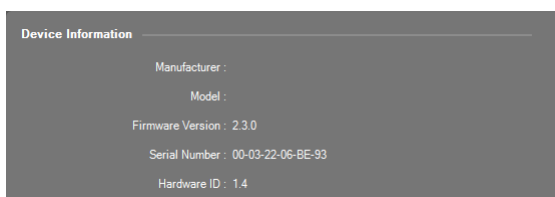
## 13.3 Remote Setup of ONVIF™ Conformance Protocol Devices

If the device uses the ONVIF™ Conformance protocol, the iNEX program displays live video or records video with the settings set during the device remote setup in the iNEX program. Click a device group in the Site panel and then click a device in the Site List panel. Clicking the  button at the bottom of the Site List panel, or clicking the right mouse button displays the device menu. Selecting **Remote Setup Device** displays the following setup screen and allows you to change the device's settings. The setup menu and options may be different depending on the model of the device.



Clicking the Apply button after changing the settings applies the changes.

### Information



Displays the device information.

## Maintenance

- **Restart:** Clicking the button restarts the system. The iNEX remote setup is closed when the system restarts.
- **Reset:** Returns all the settings of the system to the original factory settings
  - **Except Network Information:** Returns all the settings except network settings to the original factory settings.
  - **Include Network Information:** Returns all the settings including network settings to the original factory settings. The iNEX remote setup is closed when the network settings are included.

## TCP/IP

- **IP Address Configuration:** Sets up the device's IP address. Select the type of device's network configuration.
  - **Set Manually:** Select when the device is using a static IP address for network connection, and set up LAN parameters manually.
  - **DHCP:** Select when the device is networked via DHCP (Dynamic Host Configuration Protocol). Click the Apply button, and network information is automatically assigned to the device.
- **DNS Configuration – Type:** Enter the IP address of the DNS server. Select the type of DNS server's network configuration sets up the DNS server's network information.
  - **Set Manually:** Allows you to set up manually.
  - **DHCP:** Assigns the information automatically. Clicking the Apply button applies the change, and the changed information is displayed the next time it is connected. This will not be supported when the device's IP address is set to Set Manually.

## DDNS

- **Update Type:** Updates the device's IP address information in the iNEX system automatically when the device's IP address is changed.
  - **No Update:** Does not update the device's IP address information automatically.
- **Device Update, DHCP Server Update:** Updates the IP address of the device or that is registered on the DHCP server.
- **Name:** Sets up the DNS name.
- **TTL (Time to Live):** Sets up the interval that the DHCP is to be updated.

## Zero Configuration

**Zero Configuration**

☒ Enable Zero Configuration

IP Address :

- **Enable Zero Configuration:** Allocates an appropriate IP address proper for the current network condition automatically (supported only for devices that provide the function).

## Network Protocols

**Network Protocols**

Enable HTTP Server  
Port :

Enable HTTPS Server  
Port :

Enable RTSP Server  
Port :

- **Network Protocols:** Changes the port numbers of the network protocols that are used in the device (supported only for the protocols that are used in the device).

**NOTE:** When the HTTP server's port number is changed, the setup screen closes, and you should change the HTTP port number in the iNEX Setup program too. Refer to *13.2 Managing Devices, Editing Device Information* (p. 152) for details.

## WS-Discovery

**WS-Discovery**

Scope Parameters :

onvif://www.onvif.org/type/video_encoder
onvif://www.onvif.org/type/audio_encoder
onvif://www.onvif.org/hardware/NC-B120-DN

+ -

Discovery Mode :

☒ Discoverable ☐ Non-Discoverable

- **Scope Parameters:** Click the **+** button and add the scope parameters of WS-Discovery (Web Services Discovery) protocol if necessary.
- **Discovery Mode:** Sets whether or not to permit discovery of the device. When **Non-Discoverable** is selected, the Auto Scan function is not supported for the devices which use the ONVIF™ Conformance protocol during the device registration.

## User

**User**

User :

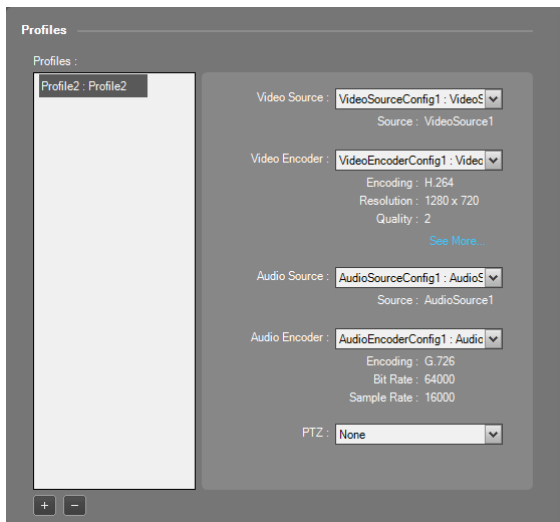
User Level	User Name
Administrator	admin

+ -

You can add or delete a user. Clicking **+** button allows you to add a user.



## Profiles

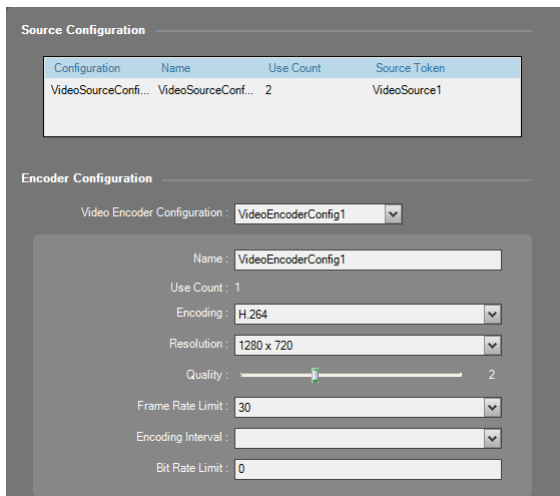


Set up the profiles using the following procedures.

Select a profile from the profile list. Clicking **+** button allows you to add a new profile. → Set up media. See the explanation below for details about setting media. → Click the Apply button at the bottom. → The settings are applied, and the iNEX system displays live video or records video based on the settings of the selected profile.

- **Video Source:** Select the desired video source from the list of video sources supported in the device.
- **Video Encoder:** Select a video encoder configuration. Clicking the **See More** button allows you to check the details of the selected video encoder configuration. Refer to Video (p. 167) for details about the video encoder configuration.
- **Audio Source:** Select a desired audio source from the list of audio sources supported in the device. When **None** is selected, audio monitoring and recording for the device will not be supported.
- **Audio Encoder:** Select an audio encoder configuration. Clicking the **See More** button allows you to check the details of the selected audio encoder configuration. Refer to Audio (p. 168) for details about the audio encoder configuration.
- **PTZ:** Select a PTZ setting. When **None** is selected, PTZ control of the device will not be supported.

## Video



- **Source Configuration:** Displays the source configuration information (Configuration: video source, Name: source name, Use Count: the number of profiles that use the source, Source Token: the number of tokens).
- **Encoder Configuration:** Set up an encoder.
  - **Video Encoder Configuration:** Select a video encoder from the list of video encoders supported in the device.
  - **Name:** Assign a name to the selected video encoder.
  - **Use Count:** Displays the number of profiles that use the selected video encoder.
  - **Encoding, Resolution, Quality:** Select a video compression codec, video resolution and video quality. There might be restrictions on the frame rate depending on the device model when video is recorded with the H.264 codec and 4CIF resolution if the device is a network video transmitter.

- **Frame Rate Limit:** Select a maximum frame rate.
- **Encoding Interval:** Select an encoding interval. The higher the value, the higher the bit rate and the worse the video quality.

- **Bit Rate Limit:** Enter the maximum bit rate. You can control the network bandwidth by limiting the bit rate depending on the network traffic.

## Audio

**Source Configuration**

Configuration	Name	Use Count	Source Token
AudioSourceConf1	AudioSourceConf1	2	AudioSource1

**Encoder Configuration**

Audio Encoder Configuration: AudioEncoderConfig1

Name: AudioEncoderConfig1

Use Count: 2

Encoding: G.726

Bit Rate: 64000

Sample Rate: 16000

- **Source Configuration:** Displays the source configuration information (Configuration: audio source, Name: source name, Use Count: the number of profiles that use the source, Source Token: the number of tokens).
- **Encoder Configuration:** Set up an encoder.
  - **Audio Encoder Configuration:** Select an audio encoder from the list of the audio encoders supported in the device.
  - **Name:** Assign a name to the selected audio encoder.
  - **Use Count:** Displays the number of profiles that use the selected audio encoder.
  - **Encoding:** Select an audio compression codec.
  - **Bit Rate:** Select a bit rate.
  - **Sample Rate:** Select the sampling rate. The higher the value is, the better the sound quality and the larger the data size.

## I/O

**I/O**

Mode	Delay Time	Idle State	Action
Bistable	0	Open	Active InActive

- **Mode:** Set the relay mode for the input and output devices.
  - **Monostable:** After setting the idle state, the relay returns to its idle state once the delay time expires.
- **Bistable:** After setting the idle state, the relay remains in this state.
- **Delay Time:** Set the delay time until the relay returns to its idle state in the Monostable mode.
- **Idle State:** Set the physical idle state of a relay output.
  - **Open:** Indicates that the relay is open when the relay state is set to Inactive and closed when the state is set to Active.
  - **Closed:** Indicates that the relay is closed when the relay state is set to Inactive and is open when the state is set to Active.
- **Action:** Controls the relay state.
  - **Active:** Clicking the button sets the relay state to Active.
  - **InActive:** Clicking the button sets the relay state to InActive.

## PTZ

**PTZ Node**

Node	Name	Maximum Preset	Home Supported
PTZNode1	PTZNode1	16	Supported

**PTZ Configuration**

PTZ Configuration: PTZConfig1

Name: PTZConfig1

Use Count: 0

Node: PTZNode1

Absolute Pan/Tilt Position: None

Absolute Zoom Position: None

Relative Pan/Tilt Translation: TranslationGenericSpace

Relative Zoom Translation: TranslationGenericSpace

Continuous Pan/Tilt Velocity: VelocityGenericSpace

Continuous Zoom Velocity: VelocityGenericSpace

Pan/Tilt Speed: GenericSpeedSpace X: 1 Y: 1

Zoom Speed: ZoomGenericSpeedSpace X: 1

PTZ Timeout: 0 (h) 0 (m) 0 (s)

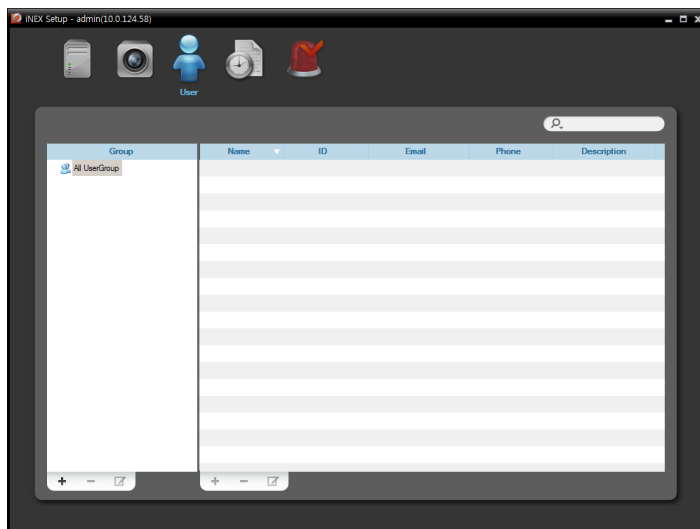
- **PTZ Node:** Displays the node information (Node: PTZ node, Name: source name, Maximum Preset: the maximum number of presets, Home Supported: availability of the home function).
- **PTZ Configuration:** Set up the PTZ.
  - **PTZ Configuration:** Select a PTZ from the list of the PTZs supported in the device.
  - **Name:** Assign a name to the selected PTZ.
  - **Use Count:** Displays the number of profiles that use the selected PTZ.
  - **Node:** Select a PTZ node. A PTZ node indicates mechanical PTZ drivers, uploaded PTZ driver or digital PTZ drivers.
  - **Absolute Pan/Tilt Position:** Select the movement setting to move to a certain position. If the position cannot be reached, the operation fails.
  - **Absolute Zoom Position:** Select the zoom setting to zoom in a certain position. If the position cannot be zoomed, the operation fails.

- **Relative Pan/Tilt Translation:** Select the movement setting to move in a certain direction based on the current position.
- **Relative Zoom Translation:** Select the zoom setting to zoom in in a certain direction based on the current position.
- **Continuous Pan/Tilt Velocity:** Select the movement setting to move continuously in a certain direction based on the current position with a defined speed.
- **Continuous Zoom Velocity:** Select the zoom setting to zoom in continuously in a certain direction based on the current position with a defined speed.
- **Pan/Tilt Speed:** Select the speed setting to move to a certain position or in a certain direction.
- **Zoom Speed:** Select the speed setting to zoom in a certain position or in a certain direction.
- **PTZ Timeout:** Set the duration of the PTZ operation. The operation will automatically stop after the timeout period.

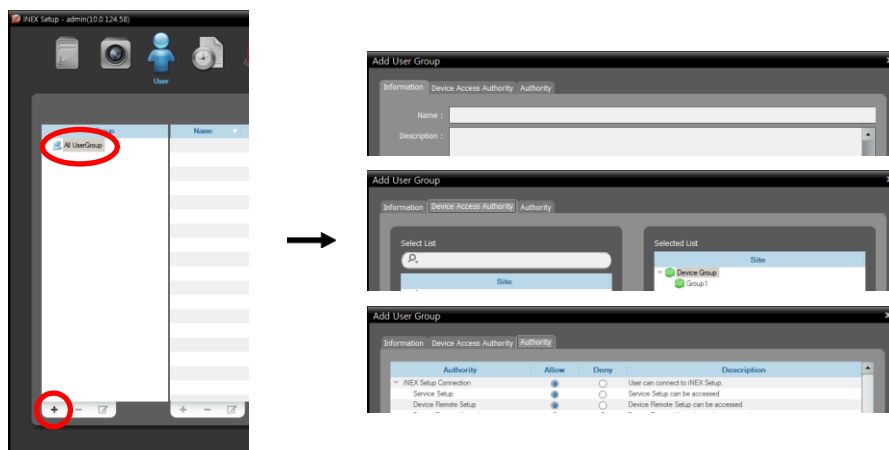


## Chapter 14 — User Management

You can assign every user different authority levels for each function of the iNEX program. The Administrators group has authority for all functions, and the authority settings are not editable. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information → Select the User menu.



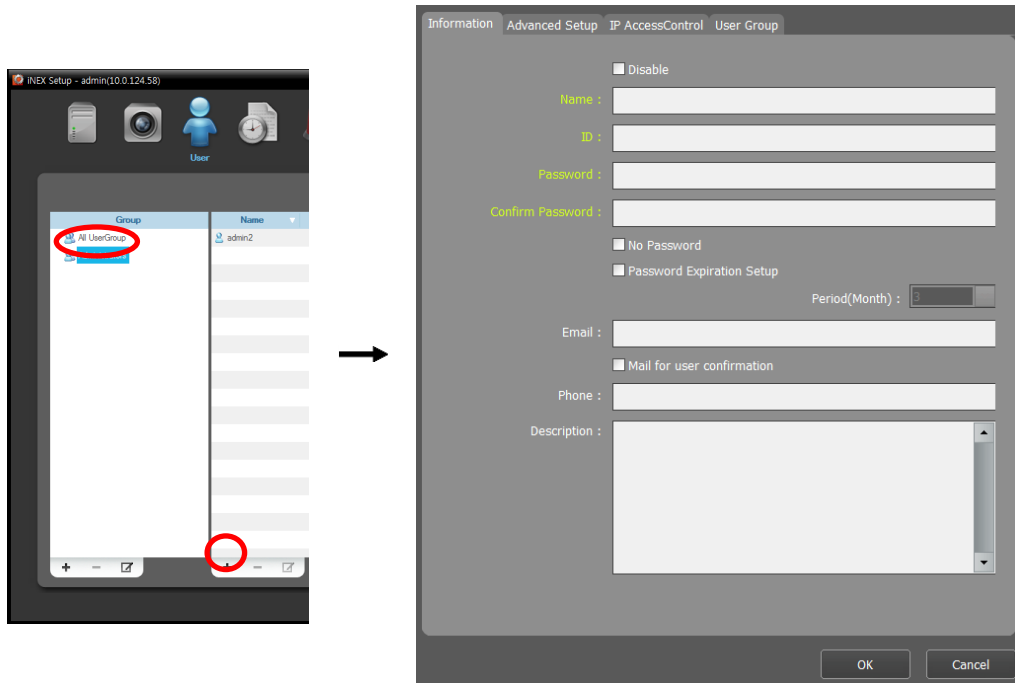
1. Click the **+** button at the bottom of the user group list. The Add User Group window appears.



- **Information** tab: Enters the user group name.
- **Device Access Authority** tab: Grants or limits authority for the access to each device.
- **Authority** tab: Grants or limits authority for each function.

Clicking the OK button completes registration of the user group.

2. Click the added user group in the Group list, and then the **+** button at the bottom of the user list. The Add User window appears.



### Information

- ☒ **Disable:** The iNEX program no longer considers the user registered in the administration service.
- **Name:** Enter the user name.
- **ID, Password, Confirm:** Enter a unique user ID and password (8 to 16 characters without spaces) for access to the iNEX program.
- ☒ **No Password:** Allows you to log in without a password when running the iNEX program.
- ☒ **Password Expiration Setup:** Set the password expiration period. If the password has not been changed during the password expiration period, you will be informed of it when you log on.
- **E-Mail:** Enter the email address of the user if you want to notify event detection to the user via E-mail. An email address must include the “@” character to be a valid address. Refer to Chapter 16 — Event Management (p. 185) for details about notifying event detection via E-mail.
- ☒ **Mail for user confirmation:** Send the confirmation mail to the email address preset by the user.
- **Phone, Description:** Enter the telephone number and description of the user if you want. Only numbers and “-” are allowed when entering a telephone number.

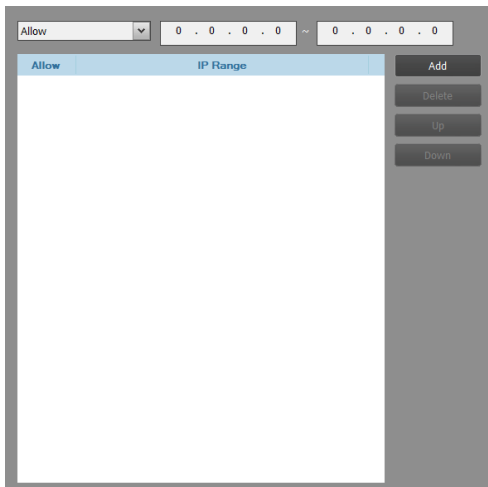
## Advanced Setup

- **Monitoring Group:** Displays the user who will be forwarded notification of events when events occur. Clicking the Modify button allows you to edit the users. Refer to 16.2 Managing Events, Event Acknowledgement (p. 195) for details about the event forwarding.
- **Time Allowed:** Allows you to limit the login time of the user to the iNEX program.
  - **Always Allowed:** Does not limit the login time.
  - **Time Coverage Setup:** Allows you to add, modify or delete a time Preset. An added Preset will be displayed in the list and selecting the Preset applies the Preset setting. The user will be allowed to log in the iNEX program only during the period set in the Preset.
  - **Set Manually:** The user will be allowed to log in the iNEX program only during the period you set.

## User Specific Layout

- **Live:** Select a layout displayed on the live tab when a user logs in to the iNEX client.

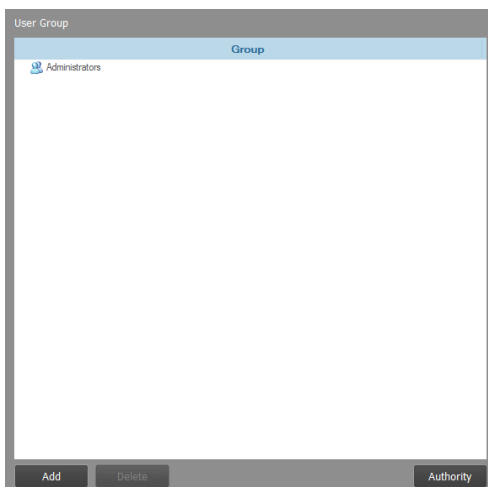
## **IP AccessControl**



The IP AccessControl interface features a header with a dropdown menu set to 'Allow' and two IP address input fields, both containing '0 . 0 . 0 . 0'. Below the header is a table with a single column titled 'IP Range'. To the right of the table are four buttons: 'Add', 'Delete', 'Up', and 'Down'.

- Grants or limits access from users using the IP addresses within a certain range.

## **User Group**



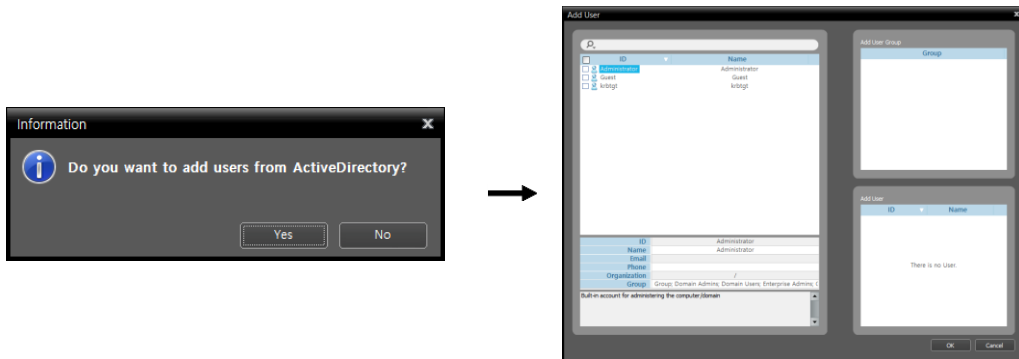
The User Group interface has a header with the title 'User Group' and a sub-header 'Group'. Below this is a table with a single column titled 'Group'. The first row of the table contains an icon and the text 'Administrators'. At the bottom of the interface are three buttons: 'Add', 'Delete', and 'Authority'.

- Select a user group to register the user. The user can be registered in multiple user groups. The user group's device access authority and the user's authority are combined to decide the ultimate authorities.



### Add User from ActiveDirectory

This option is supported only when all services are located with the server which has joined active directory domain.

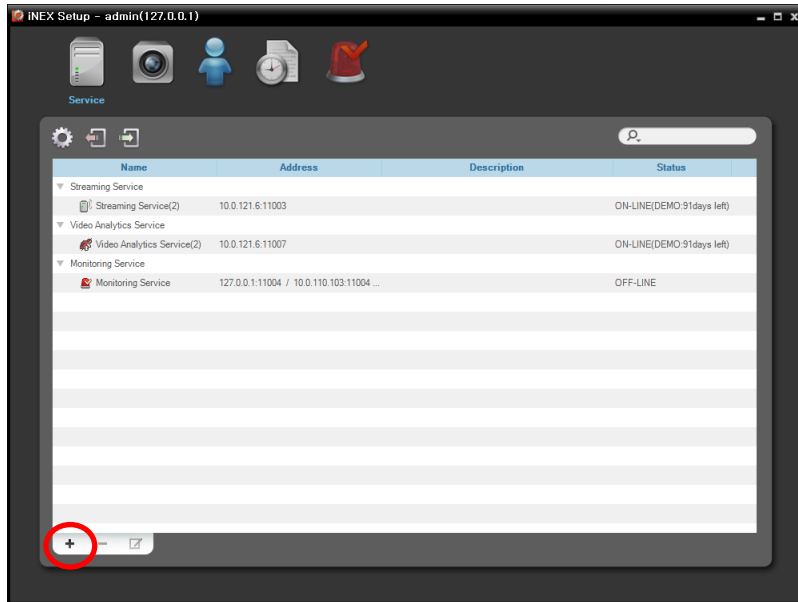


- Add User Group: Display the user group to be created when adding a user.
  - Add User: Display a user to be created.
3. Clicking the registered user group or a user in the list, and then the ☒ button at the bottom allows you to edit the information.
  4. Display all registered users in the iNEX system regardless of the user group if you select All UserGroup.
  5. Clicking the registered user in the list, and then drag and drop it in the other user group to change the group. Monitoring group is also changed when changing the user group.

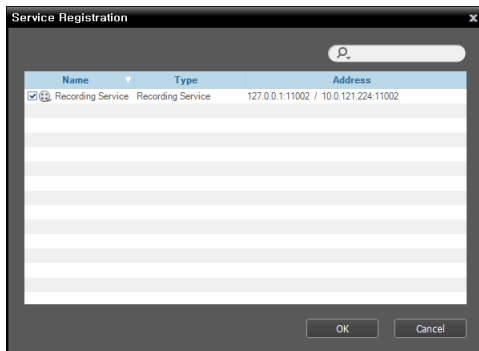


## Chapter 15 — Storage Management

You can allocate and manage storage for recording. Go to the Start Menu → Click iNEX → Run the iNEX Setup program → Select the Service menu.



1. If any recording service is not registered, select Recording Service and click the **+** button at the bottom. The Service Registration window appears, and a list of available services is displayed with information about each service.



- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

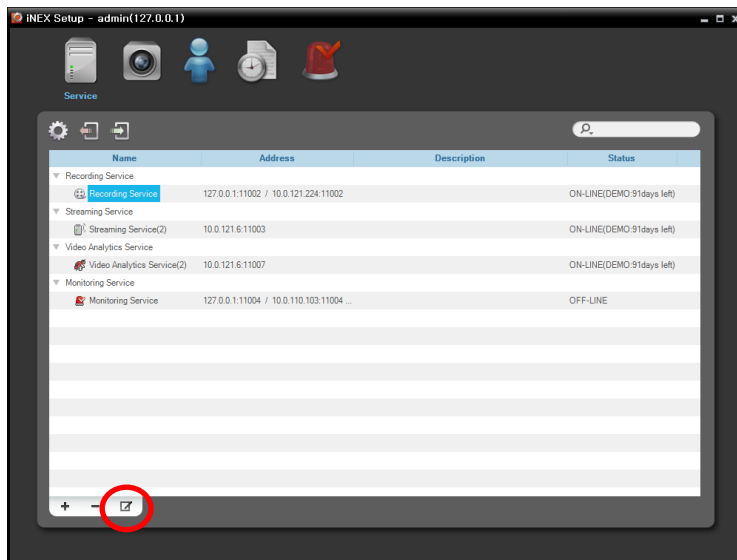
2. Select a recording service to register in the iNEX system.


## Allocating Storage

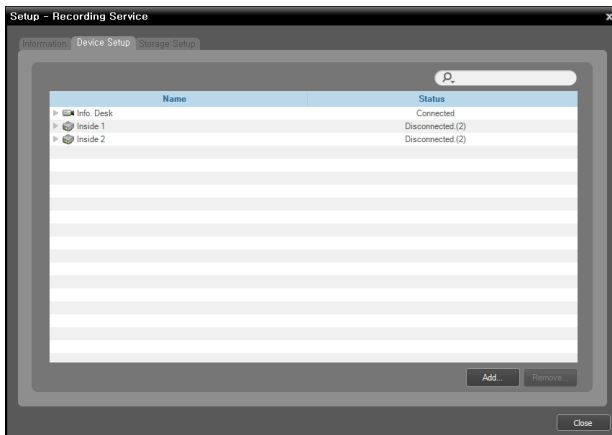
Select the **Service** menu, and then select a recording server and allocate storage to hard disk drives of the selected recording server following the procedures below.

### NOTES:

- USB hard disks cannot be allocated storage.
- It is recommended to add a new unformatted hard disk drive to ensure stable recording. If you are setting up a hard disk drive which contains data, however, you are to delete partition(s) and the file system in advance after formatting. Refer to the PC/server user's manual or consult with the PC/server manufacturer for details about how to format or delete the partition(s) and file system.
- The total amount of storage for one hard disk drive cannot exceed 50,000 GB.




1. Select a recording service and click the  button at the bottom. The Setup – Recording Service window appears. Select the Device Setup tab.



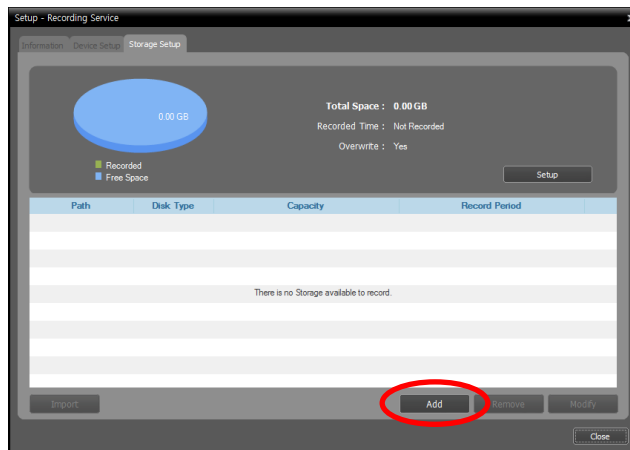
The list of cameras registered on the current recording service is displayed. Clicking the **Add** button at the bottom allows you to register other cameras on the current recording service. Selecting a device and clicking the **Remove** button deletes the device from the current recording service.

**NOTE:** The number of devices that can be recorded in a recording server differs depending on the type and number of the WIBU-Keys connected to the administration server.

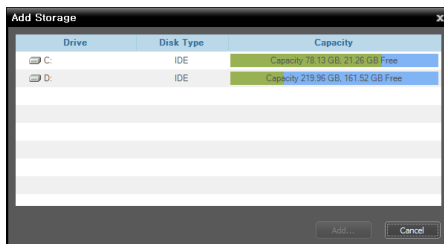
**NOTES:**

- If you remove a device for which some recording has been done and register the device again, the iNEX system considers the device as a new device. In this case, you can search or play back video recorded before the device was removed as follows: go to the *Play* panel → click the  (Additional Menu) button → select *Removed Devices*.
- Recording is not supported for DVRs.

2. Select the **Storage Setup** tab and click the **Add** button at the bottom.

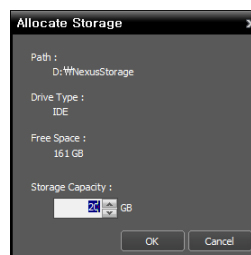
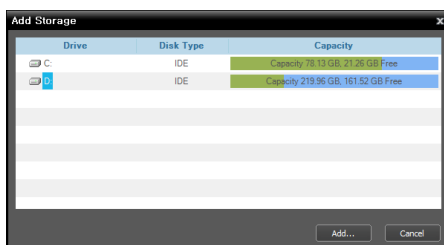


3. The **Add Storage** window appears, and a list of available hard disk drives is displayed with information about each drive.



- **Drive:** Displays the drive name.
- **Disk Type:** Displays the type of hard disk drive.
- **Capacity:** Displays the total storage capacity and available storage capacity.

4. Select a hard disk drive to allocate storage and click the **Add** button at the bottom. The **Allocate Storage** window appears.



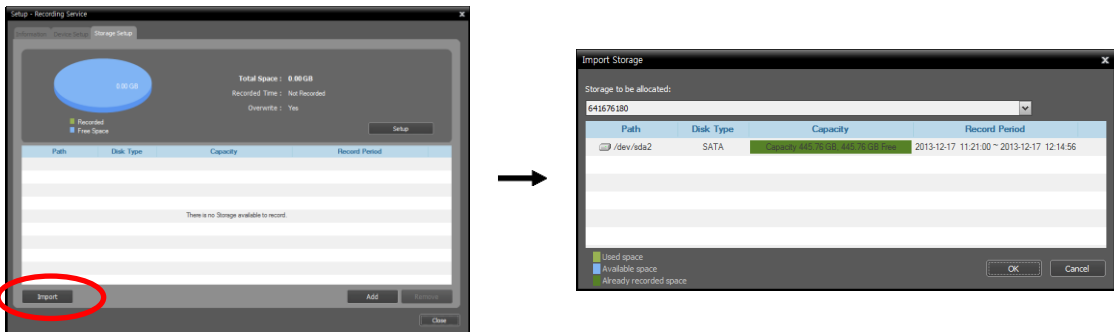
- **Path:** Displays the storage folder path.
- **Disk Type:** Displays the type of hard disk drive.
- **Free:** Displays the available storage capacity.

- **Storage Capacity:** Sets up the storage capacity to be allocated to the hard disk drive (Min. 20GB). If the iNEX program is installed on the hard disk drive, you must reserve enough free hard disk space depending on the installation environment. If the Windows operating system is installed on the hard disk drive, you must reserve more than 10GB of free hard disk space for proper system operation. If no file system has been created on the hard disk drive, the recording server automatically creates a proprietary video database file system when storage is allocated to ensure more stable recording and allocates storage to the entire hard disk drive automatically.

## Importing Storage

When installing a hard disk drive that contains recorded video from another recording service, you can search or play back the recorded video from the recording service by importing storage as follows. This function is supported only when there is no recorded data on the storage of current recording service.

1. Click the Import button. The Import Storage window appears.



- **Storage to be allocated:** Allows you to select a recording service. The number indicates a recording service identification key. If a hard disk drive contains recorded video from more than one recording service, the hard disk drive would have different Record Period depending on the recording service. Clicking the OK button at the bottom imports recorded video of the selected recording service.
- **Path:** Displays the storage folder path.
- **Disk Type:** Displays the type of hard disk drive.
- **Capacity:** Displays the storage capacity.
- **Record Period:** Displays the record period.

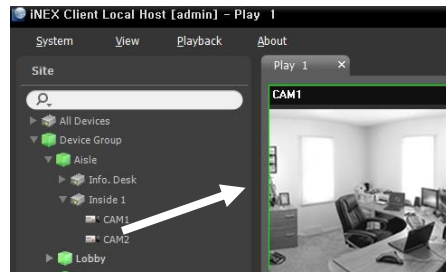
The imported storage will be displayed in the storage list of the Storage Setup tab.

2. Run the iNEX Client program and go to the Play panel → click the (Additional Menu) button on the panel toolbar → select **Removed Devices**, and you can search or play back the recorded video from the imported storage. If it is the case that you have restored the recording service of the imported storage by clicking the (Service Database Backup) (Service Database Restore) button (iNEX Setup program → Service menu) before importing the storage, you can search or play back the recorded video by clicking a device from the Site list and dragging and dropping it on the Play screen.

< If recording service has not been restored >



< If recording service has been restored >

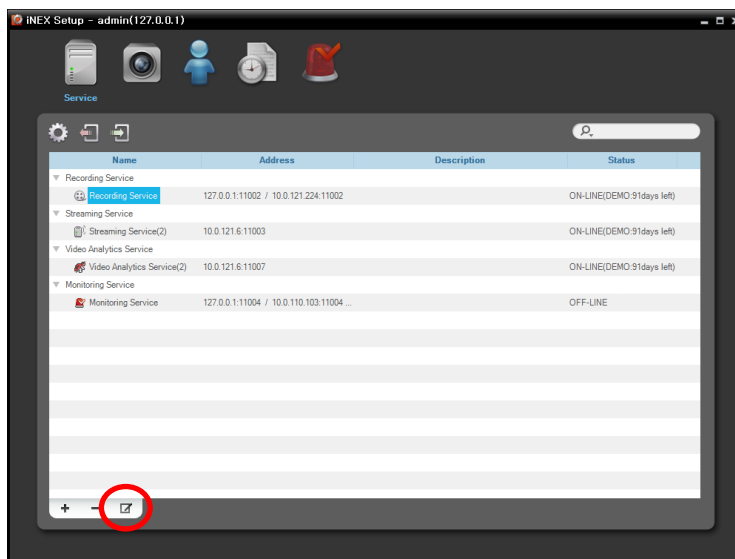



## Allocating NAS Storage

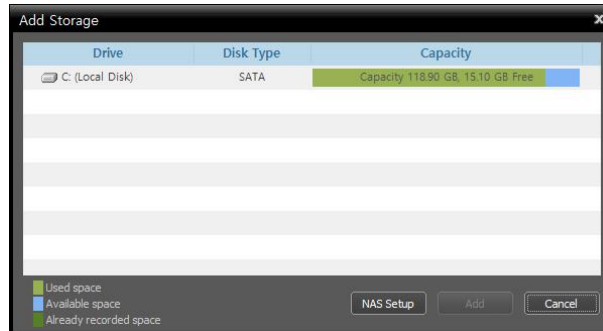
You can allocate storage to the selected NAS (Network Attached Storage) path.

### NOTES:

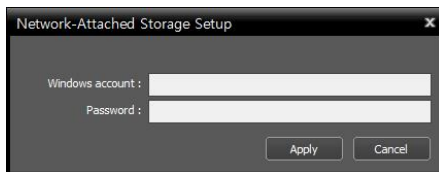
- The recording service and NAS must be connected in the same network, otherwise, NAS may not be recognized as storage in the case of network delay.
- To allocate NAS storage, the password must be set in the Windows account of the server where the recording service is installed.
- The NAS you want to use as storage space must have an accessible account and password. Anonymous access is not supported.
- NAS should be used only as recording service storage, and FTP or a shared folder should not be used as another account.
- The NAS path must be entered as “\\server address\path”.



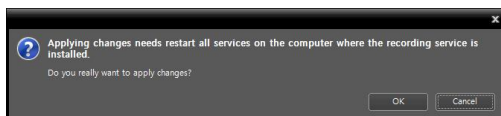
1. Select a recording service and click the  button at the bottom. The Setup – Recording Service window appears. Select the Storage Setup tab and click the Add button.



2. Select **NAS Setup** at the bottom.

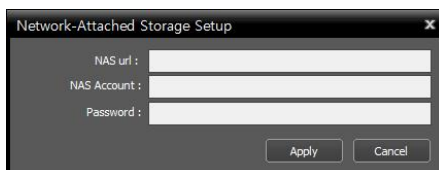


Enter the Windows account and password for the recording server where the recording service is installed and click **Apply**.

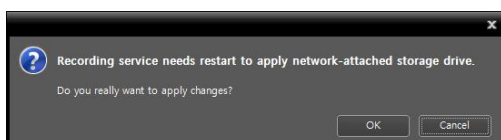


Click the **OK** button and if the correct account and password are entered, all iNEX services on the server with the recording service will restart.

3. After rebooting, open the recording service setup window and click the **Add** button on the **Storage Setup** tab. Select **NAS Setup**.

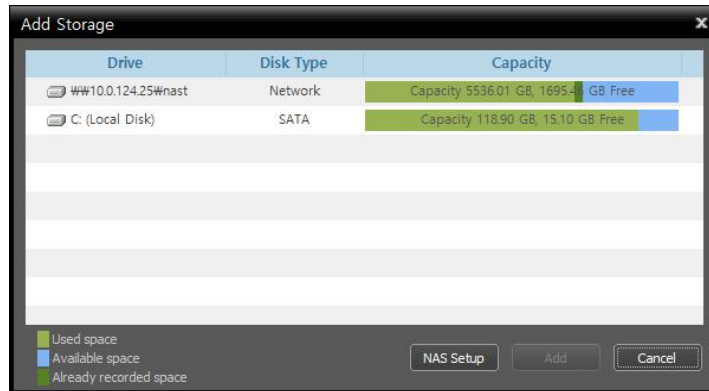


Enter the NAS path in the NAS url. Enter the NAS account and password to access the NAS server and click **Apply**.



Click the **OK** button and if the correct NAS account and password are entered, the recording service will restart.





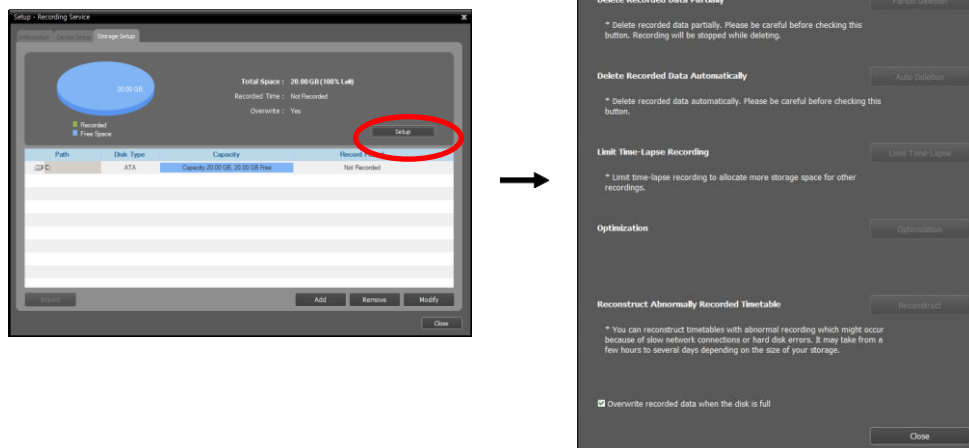
4. After rebooting, you can see that the Network type NAS path is added in the Add Storage window. The allocation process is the same as the one for hard disk drive allocation on the server.

## Managing Storage

You can manage storage of all hard disk drives used in the current recording server or of a specific hard disk.

### Storage of All Hard Disk Drives

Click the Setup button. The Storage Setup window appears.

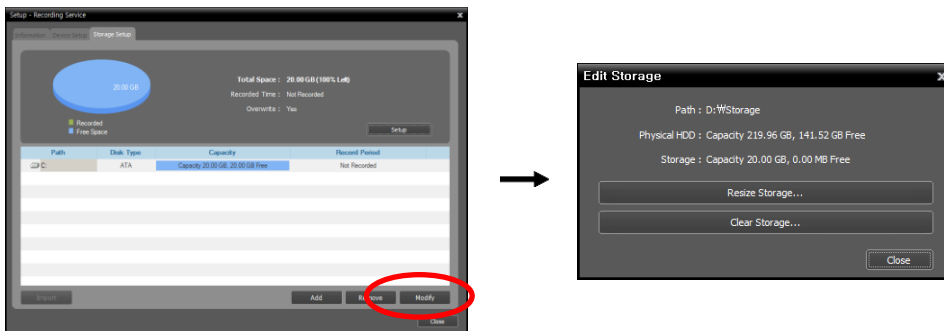


- **Clear All Recorded Data:** Deletes all recorded data on all hard disk drives used in the current recording server.
- **Delete Recorded Data Partially:** Allows you to delete recorded data for a specific period for each device. Recording will stop while data is being deleted.
- **Delete Recorded Data Automatically:** Allows the iNEX system to automatically delete data recorded earlier than the user-defined period. Click the Auto Deletion box and check the Use box to set up the period. For example, you can set the period to 30 days, and the iNEX system will automatically delete data older than 30 days from the current day on a daily basis.

- **Limit Time-Lapse Recording:** Limits time-lapse recording to secure more storage space for other recordings (event-based recordings and instant recordings). The system saves the time-lapse recordings for the period you set and preserves the rest of the storage for other recordings. Click the Limit Time-Lapse checkbox and select the Use box to set up the period. For example, if you can set the period to 30 days, then the iNEX system automatically saves time-lapse recordings for a maximum of 30 days. The time-lapse recording limited days are not applied if they are greater than the automatic deletion days.
- **Optimization:** Displays the optimized value when adding storage.
- **Reconstruct Abnormal Recorded Timetable:** When the network connection between the recording server and the devices is too slow or a hard disk drive in the recording server is damaged, the recorded data and the timetable information of the recorded data might not match and the timetable in the Client program might display incorrect information. In this situation, clicking the button reconstructs the timetable to display recorded data correctly on the timetable in the Client program.
- **Overwrite recorded data when the disk is full:** Checking the box records over the oldest video data once all available storage space has been used.

### Storage of a Specific Hard Disk Drive

Click the storage to edit in the storage list, and then the Modify button at the bottom. The Edit Storage window appears.



- **Resize Storage:** Allows you to increase the storage capacity.
- **Clear Storage:** Allows you to delete all data recorded in the selected storage.

**NOTE:** Search or playback of recorded data will be stopped when storage is resized or cleared.

**CAUTION:** Clearing storage deletes all data recorded in the storage and the deleted data cannot be restored.

## Chapter 16 — Event Management

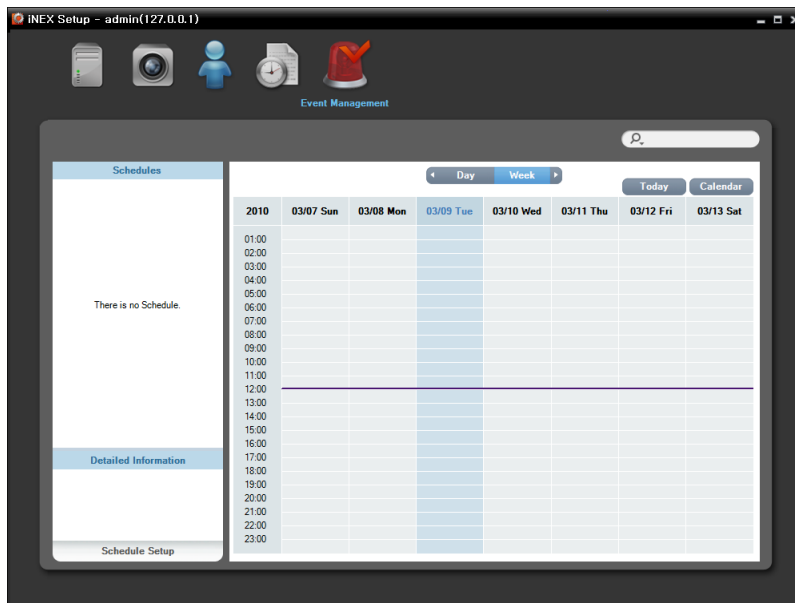
You can manage event detection notification to the Client system based on a preset event management schedule and monitor or play back the event-detected video on the Client system. Event related functions may not be supported depending on the protocol that the device uses and the device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIF™ Conformance protocols). Ask your dealer or distributor for details.

### 16.1 Setting up Event Management Schedule

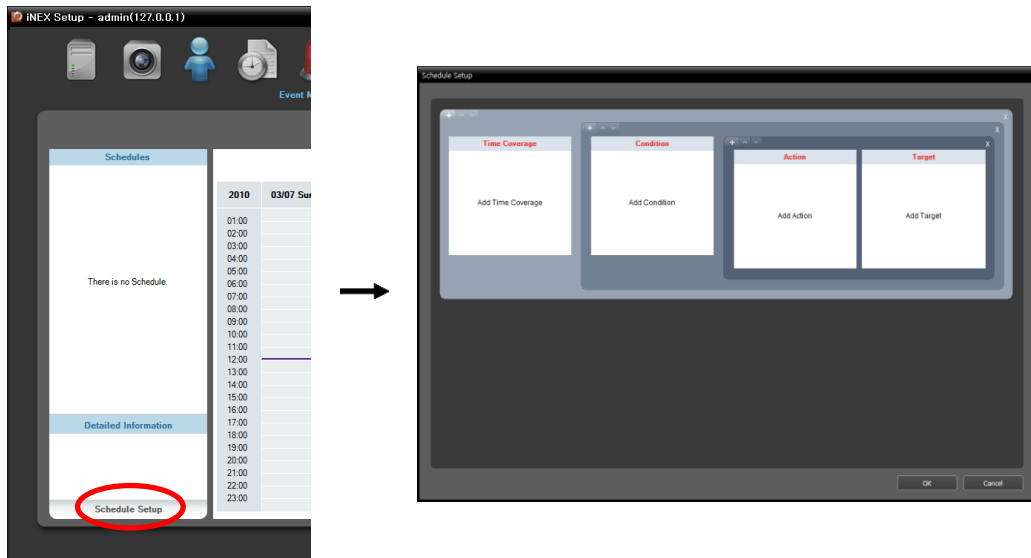
First, check the following and run the Setup program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.

Go to the Start Menu → Click iNEX → Run the iNEX Setup program → Select the Event Management menu, and set up the event management schedule following the procedures below.



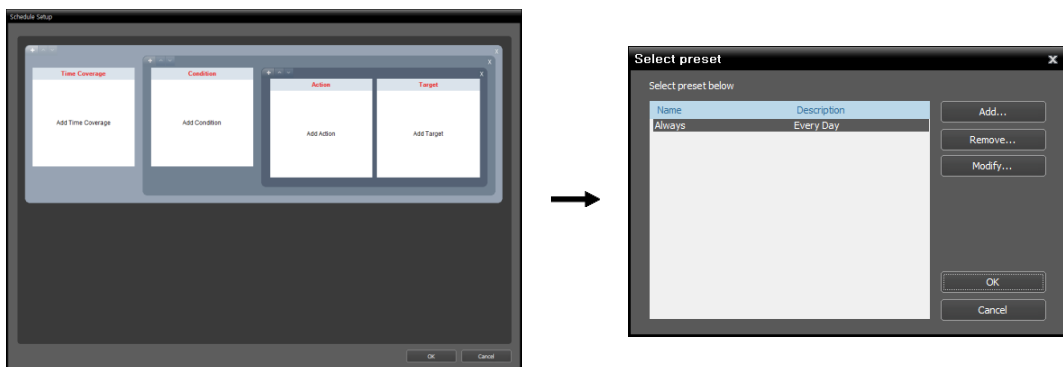
Click the Schedule Setup button at the bottom. The Schedule Setup window appears, and schedule windows are displayed with the current settings for each Preset.



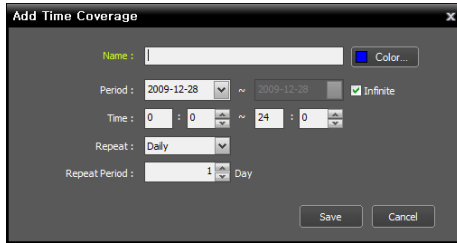
- **Time Coverage:** Sets up the schedule time. You can set up more than one time range.
- **Condition:** Sets up the event condition. You can set up more than one event condition for the same schedule time.
- **Action:** Sets up the event action. You can set up more than one event action for the same event condition.
- **Target:** Sets up the users to manage the events.

**NOTE:** In the schedule setup, “Preset” indicates a single setting in which the setting values of *Time Coverage*, *Condition* or *Action* are saved.

1. Set up the schedule time by double clicking the **Time Coverage** schedule window, and then selecting a desired Preset.



You can add a new Preset or edit a saved Preset by clicking the **Add** or **Modify** button. Refer to the following explanation for setting up a schedule.



**Add Time Coverage**

Name:  Color...

Period: 2009-12-28 ~ 2009-12-28 ☒ Infinite

Time: 0 : 0 ~ 24 : 0

Repeat: Daily

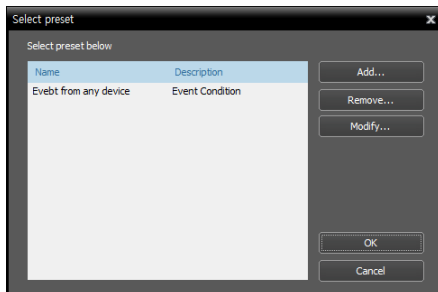
Repeat Period: 1 Day

Save Cancel

- **Name:** Enter the Preset name.
- **Color:** Click the button and select a desired color. The scheduled time section will be highlighted with the selected color in the schedule table.
- **Period:** Set up the period for the schedule time. Selecting the **Infinite** option causes continuous notification based on the **Condition**, **Action** and **Target** preset settings without limiting the period.

- **Time:** Set up the time for schedule time.
- **Repeat, Repeat Period:** Set up the interval and interval period. Events will be notified to the preset users at the designated interval during the interval period.

2. Set the event condition by double clicking the **Condition** schedule window and selecting a desired Preset of event condition.



**Select preset**

Select preset below

Name	Description
Event from any device	Event Condition

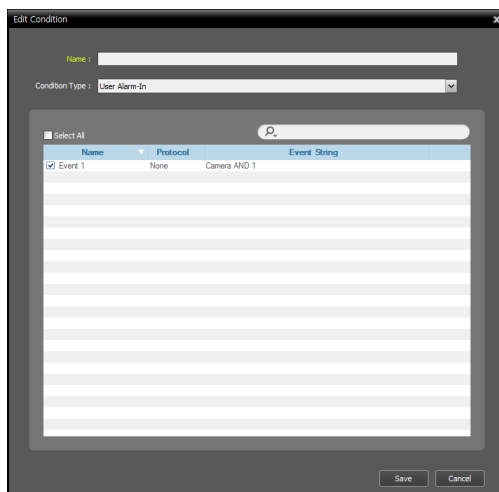
Add...  
Remove...  
Modify...

OK Cancel

You can add a new Preset or edit a saved Preset by clicking the **Add** or **Modify** button. Clicking the **Add** or **Modify** button displays the following setup screen.

- **Name:** Enter the Preset name.
- **Condition Type:** Select an event condition type.

## User Alarm-In



**Edit Condition**

Name:

Condition Type: User Alarm-In

☒ Select All

Name	Protocol	Event String
<input checked="" type="checkbox"/> Event 1	None	Camera AVID 1

Save Cancel

This notifies you of user alarm-in events based on the event action setting in the iNEX program. Refer to **Chapter 13— Device Management, User Alarm-In Event Setup** (p. 144) for details about registering the user alarm-in event.

- **Name:** Displays a list of user alarm-in events registered on the administration service.
- **Protocol:** Displays the protocol that the event uses.
- **Event String:** Displays the event string that triggers a user alarm-in event.

Select a user alarm-in event to be notified of.

## Time Condition

The 'Add Condition' dialog box has a title bar with a close button. It contains a 'Name' field, a 'Condition Type' dropdown menu set to 'Time Condition', and a 'Time' field showing '11:13'. At the bottom right are 'Save' and 'Cancel' buttons.

This notifies you at certain times based on the event action setting.

- Time: Specify the notification time.

## Event Condition

The 'Add Condition' dialog box shows 'Event Condition' selected in the 'Condition Type' dropdown. It features two main panels: 'Select Target to produce event and event type' on the left and 'Selected List' on the right. The left panel has a search bar and a tree view with 'Event from any device', 'All Devices', and 'Device Group'. Below this is an 'Event Types' section. The right panel shows a 'Selected List' with 'Event from any device', 'Service', 'All Devices', and 'Device Group'. 'Save' and 'Cancel' buttons are at the bottom.

This notifies you of specific events based on the event action setting in the devices.

- Event from any device: Select to notify events when user-defined types of events are detected.

Click Event from any device, and the list of event types is displayed in Event Types below → Select the desired event types, and the selected event types are added to the list under Event from any device on the right.

This view shows the 'Event from any device' configuration. The 'Event Types' section on the left has checkboxes for 'Motion Detection' (checked), 'Video Loss', 'Video Blind', and 'Alarm In'. The 'Selected List' on the right shows 'Event from any device', 'Service', 'All Devices', and 'Device Group'.

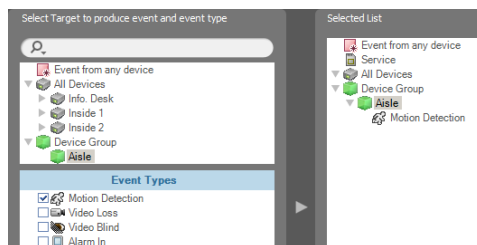
- All Devices: Select to notify events when user-defined types of events are detected from the selected device or camera.

Click All Devices, and the list of registered devices and cameras is displayed → Under All Devices, click a device or camera to trigger event notification, and the list of event types supported by the device or camera is displayed in Event Types below → Select the desired event types, and the selected event types are added along with the selected device or camera to the list under All Devices on the right.

This view shows the 'All Devices' configuration. The 'Select Target to produce event and event type' panel on the left shows a tree view with 'All Devices' expanded, showing 'Info Desk', 'Inside 1', and a list of cameras: 'CAM1', 'CAM2', 'CAM3', and 'CAM4'. The 'Event Types' section has checkboxes for 'Motion Detection' (checked), 'Video Loss', and 'Video Blind'. The 'Selected List' on the right shows 'Event from any device', 'Service', 'All Devices', 'Inside 1', 'CAM1', 'Motion Detection', and 'Device Group'.

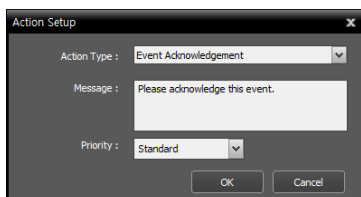
- **Device Group:** Select to notify events when the user-defined types of events are detected in the selected device group.

Click **Device Group**, and the list of registered device groups is displayed → Under **Device Group**, click a device group to trigger event notification, and the list of event types is displayed in **Event Types** below → Select the desired event types, and the selected event types are added along with the selected device group to the list under **Device Group** on the right.



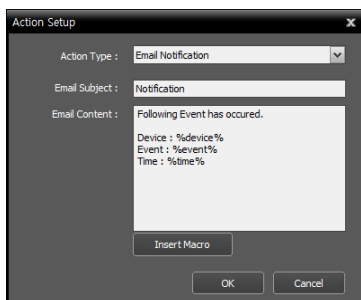
3. Set up the event action by double clicking the **Action** schedule window and selecting a desired action type.

- **Event Acknowledgement:** Select to display an event log in the Client program when an event is detected based on the event condition setting. Refer to 16.2 Managing Events, Event Acknowledgement (p. 195).



- **Message:** Enter the message to be displayed in the Client program.
- **Priority:** Select the priority of the event. The priority will be displayed in the event log.

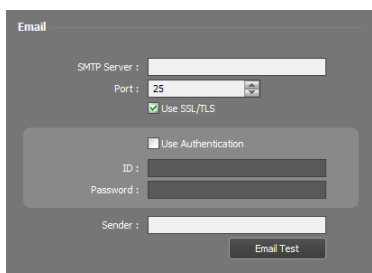
- **Email Notification:** Select to send an email to Client users when an event is detected based on the event condition setting.



- **Email Subject:** Enter the email subject.
- **Email Content:** Enter the contents of the email. Clicking the **Insert Macro** button displays a list of available macros. Selecting a macro from the list applies the macro when sending an email.

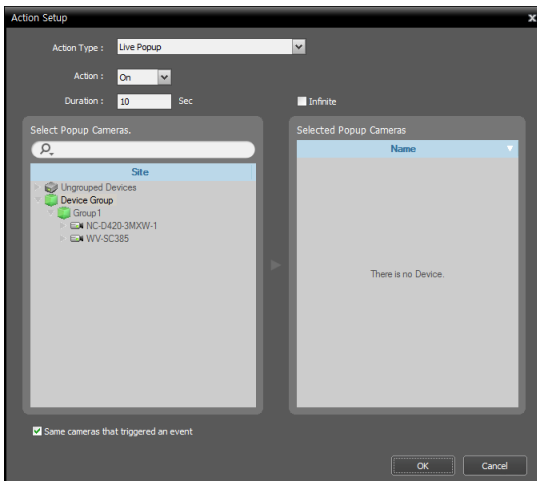
For this to work properly, you should enter the SMTP server information for sending email (iNEX Setup program → Service menu → (System Setup) button) and enter the email address of the Client user to be notified. Refer to Chapter 14 — User Management (p. 171) for details about entering the email address of the Client user to be notified.

Click the (System Setup) button in the Service menu to enter the SMTP server information.



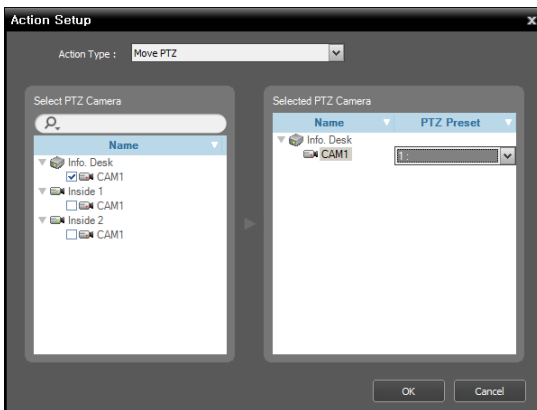
- **SMTP Server, Port:** Enter the email address and port number of the SMTP server. Select **Use SSL/TLS** if the SMTP server requires SSL (Secure Sockets Layer) authentication.
- **Use Authentication:** Select and enter the ID and password if the SMTP server requires user authentication.
- **Sender:** Enter the sender's email address.
- **Email Test:** Click the button to test if the SMTP server information is correct.

- **Live Popup:** Select to pop up a live video (maximum 36) from the event-detected camera in the Client system when an event is detected based on the event condition setting. Refer to 16.2 Managing Events, Live Popup (p. 194).



- **Action:** Specifies whether or not to display the popup window.
- **Duration:** Enter the duration for the display of popup video to last. Selecting the Infinite option keeps the popup window on the screen.
- **Select popup Cameras:** Select the cameras (maximum 4) from which video will pop up. Selecting the Same cameras that triggered an event option pops up video only from the camera where an event is detected.

- **Move PTZ:** Select to move the PTZ camera to a Preset position when an event is detected based on the event condition setting (supported only for devices which supports the PTZ Preset function).



- **Select PTZ Camera:** Select cameras to move. This is supported for PTZ cameras only.
- **Selected PTZ Camera:** Displays the selected cameras and allows you to select a Preset position for the camera to move. Refer to 5.4 Controlling Cameras, PTZ Control, PTZ Preset Control (p. 82) about setting up Preset positions.



- **Alarm Out:** Select to activate alarm out when an event is detected based on the event condition setting (supported only for devices which use the iNEX protocol).

The 'Action Setup' dialog box for 'Alarm Out' shows the following fields:

- Action Type:** A dropdown menu set to 'Alarm Out'.
- Duration:** A text input field containing '5' followed by 'Sec'.
- Select Alarm Out Devices:** A list box with a search icon and a 'Name' header. It currently displays 'There is no Device.'
- Selected Alarm Out Devices:** A list box with a 'Name' header. It also displays 'There is no Device.'
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

- **Duration:** Enter the duration for the alarm out to last.
- **Select Alarm Out Devices:** Select alarm out devices to activate.

- **Event Log:** Saves the event log when an event is detected based on the event condition setting. Refer to 16.2 Managing Events, Event Acknowledgement (p. 195).

The 'Action Setup' dialog box for 'Event Log' shows the following fields:

- Action Type:** A dropdown menu set to 'Event Log'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

- **User Alarm Out:** Send text strings (UTF-8 encoding) via TCP networking to the devices designated below when an event is detected (based on the event condition setting).

The 'Action Setup' dialog box for 'User Alarm Out' shows the following fields:

- Action Type:** A dropdown menu set to 'User Alarm Out'.
- Message:** A text area containing 'Following Event has occurred.' with placeholders: 'Device : %device%', 'Event : %event%', and 'Time : %time%'. Below the text area is an 'Insert Macro' button.
- Target Address:** A table with two columns: 'Address' and 'Port'. It is currently empty.
- Buttons:** '+', '-', 'OK', and 'Cancel' buttons at the bottom.

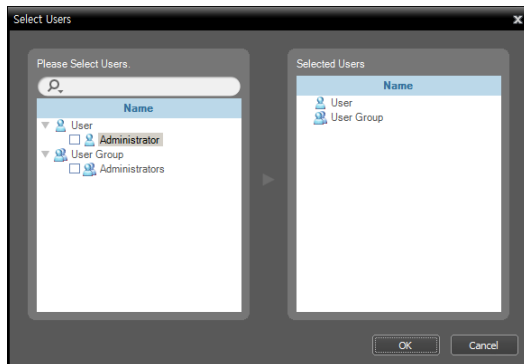
- **Message:** Enter the text string to be sent.
- **Target Address:** Click the **+** button at the bottom and enter the IP address and port number of the device to receive the text string.

**NOTE:** If you want to associate User Alarm Out with a user alarm-in event, enter the IP address of the iNEX system to trigger a user alarm-in event and the alarm in port number of the monitoring service of the iNEX system to trigger a user alarm-in event.

The 'Address' dialog box shows the following fields:


- Address:** A text input field.
- Port:** A text input field.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

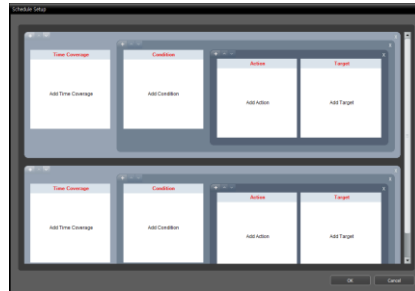
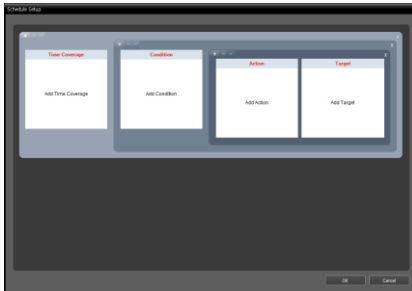
4. Select the users to be notified the events after double clicking the **Target** schedule window.




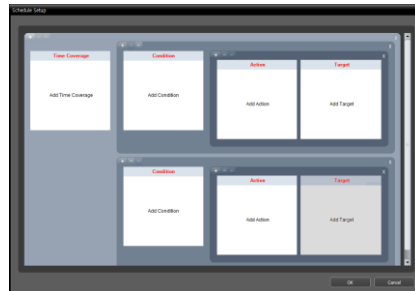
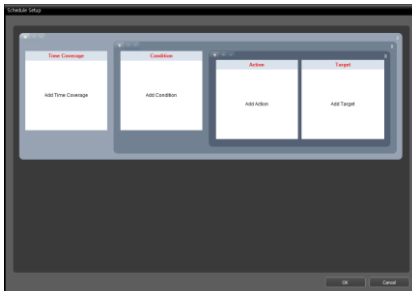
## Managing Schedule


### Adding a New Schedule

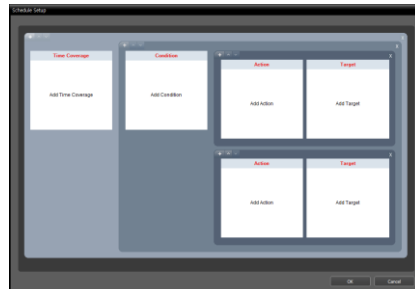
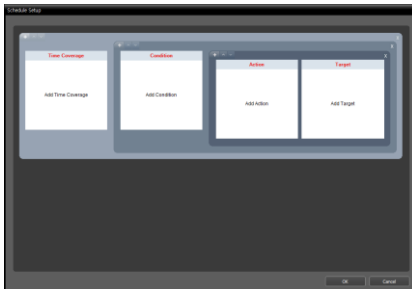
- Adding a new schedule with a different time range: Clicking the  button in the upper left corner of the Time Coverage schedule window allows you to add a new schedule with a different time coverage.




- Adding a new schedule with the same time range: Clicking the  button in the upper left corner of the Condition schedule window allows you to add a new schedule with the same time coverage.





- Adding a new schedule with the same time range and target: Clicking the  button in the upper left corner of the Action schedule window allows you to add a new schedule with the same time range and target.



### Deleting a Schedule

Clicking the  button in the upper right corner of any schedule window deletes the schedule.

### Changing Schedule Position

Clicking the  or  button in the upper left corner of each schedule window changes the position of the schedules. There is no priority between schedules and all schedules will be performed.

## 16.2 Managing Events

You can monitor or play back video of notified events based on the event management schedule.

First, check the following and run the Client program.

- Services should be running on the system. Refer to 3.1 Running Services (p. 23) for details.
- Devices should be added to a device group. Refer to Chapter 13 — Device Management (p. 143) for details.
- Event management schedules should be set up. Refer to 16.1 Setting up Event Management Schedule (p. 185) for details.

### Live Popup

#### Popup Screen

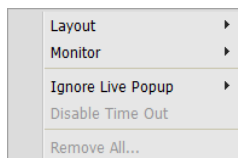
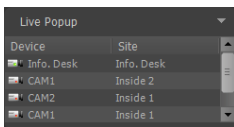
You can monitor live video from a camera with a detected event. Popup screens appear based on the event management schedule which is set on the **Action** schedule window – **Live Popup** action when events are detected. The **Live Popup** list displays the list of live popup screens currently displayed on the monitor.



When selecting a popup screen and hovering the mouse cursor over the popup screen, the control toolbar is displayed over that popup screen. The control toolbar allows you to control the camera. Hovering the mouse cursor over a button displays a tooltip for the button. Refer to 5.4 Controlling Cameras, Control Toolbar (p. 80) for details about the toolbar buttons.

When clicking the right mouse button on the popup screen, a popup screen menu is displayed. The screen menu allows you to change the popup screen settings or to control the camera. Items related to controlling a camera in the menu function the same way as those in the live screen menu. Refer to 5.4 Controlling Cameras, Live Screen Menu (p. 81) for details.

#### Live Popup List




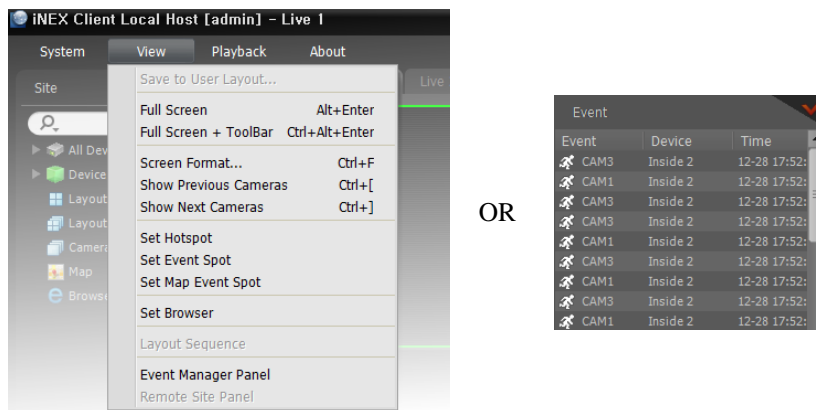
Clicking the arrow button in the upper right corner displays a live popup menu. The live popup menu allows you to change the popup screen settings.

- **Layout:** Select the display format of popup screens.
- **Monitor:** Select the monitor on which popup screens are displayed if you use dual monitors.
- **Ignore Live Popup:** Select a time span to disable the live popup function regardless of the event management schedule settings which is set on the **Action** schedule window – **Live Popup** action.
- **Disable Time Out:** Click if you want to close the popup screen manually regardless of the preset duration for the popup screen to be displayed.
- **Remove All:** Deletes the list.

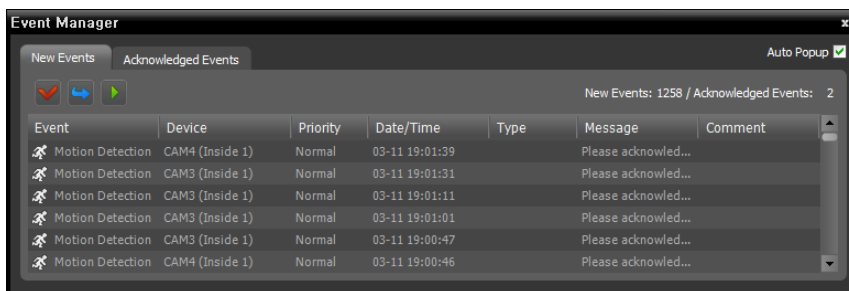
## Event Acknowledgement

You can monitor live video from the event-detected camera when an event is detected or play back event-detected video if the selected event has been recorded. The Event Manager panel appears automatically when events are detected based on the event management schedule which is set on the Action schedule window – Event Acknowledge action, or you can display the Event Manager panel manually as follows:





Go to the View menu, click Event Manager Panel. Or, click the  button in the Instant Event List.



The Event Manager panel is displayed.

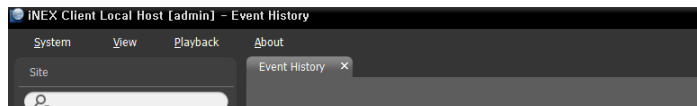
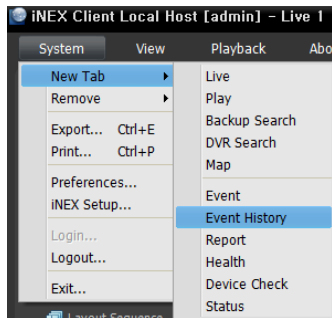


The list of events is displayed that notified to the Client system based on the preset event management schedule.

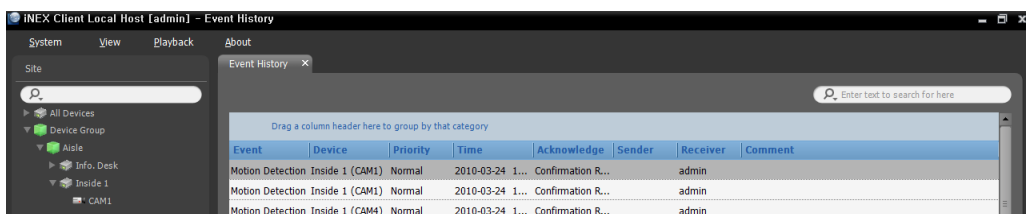
- **Auto Popup** : Pops up the Event Manager panel automatically when the Client system is notified of an event.
- **New Events**: Displays events that the Client system is notified of but not yet acknowledged.
  -  (Acknowledge Event): Acknowledges the selected event in the list, and the selected event is moved to the Acknowledged Events list.
  -  (Event Forwarding): Forwards the event to all users or the users defined in the Monitoring Group setting during the User setup. Only users currently connected to the Client system will be notified. Refer to Chapter 14 — User Management (p. 171) for details about the Monitoring Group setting.
  -  (Playback): Plays the event-detected video if the selected event has been recorded.
- **Acknowledged Events**: Displays events acknowledged by the client system.

## Log Search

You can search log entries of events displayed in the Event Manager panel. Log search is supported in the Event History panel. If the Event History tab is not on the tab panel, go to the **System** menu, click **New Tab** and Event History.

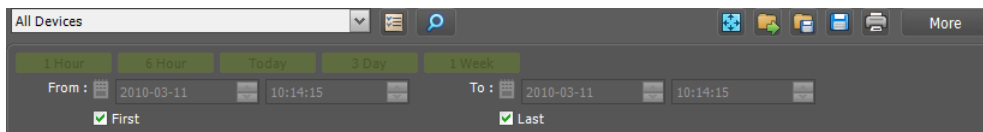


The log entries are displayed. Clicking the right mouse button on a column header displays a menu and allows you to sort data as you want.



## Event History Toolbar

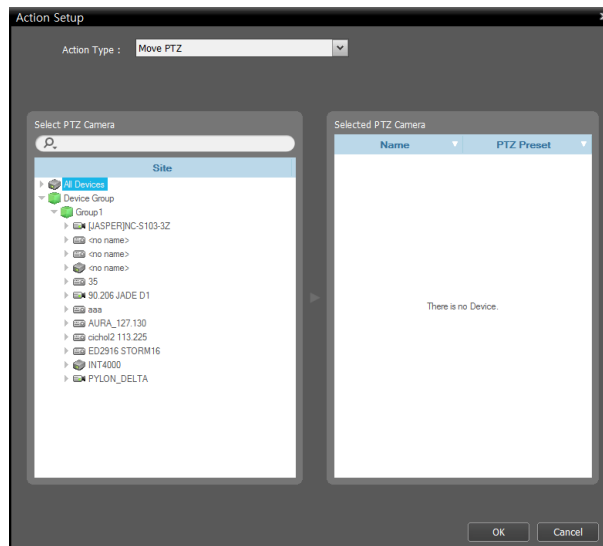
The toolbar at the bottom of the panel allows you to search for the desired log entries.



- **From, To:** Set up the date and time of the log entry to search. Enter the specific date and time or select **First** or **Last**. Clicking the **1 Hour**, **6 Hour**, **Today**, **3 Day** or **1 Week** button adjusts the time interval between **From** and **To**. Selecting **First** or **Last** searches log entries from the first one or to the last one.
- **(Condition):** Selects a log type to search.
- **(Search):** Starts searching log entries based on the search conditions.
- **(Full Screen):** Displays the Event History panel in full-screen format.
- **(Load Preset):** Applies the column sorting saved in the Client system.
- **(Save Preset):** Saves the current column sorting in the Client system.
- **(Export):** Exports the searched log entries as a text file (.txt) or a CSV file (.csv).
- **(Print):** Prints the searched log entries.
- **More:** Displays more results.

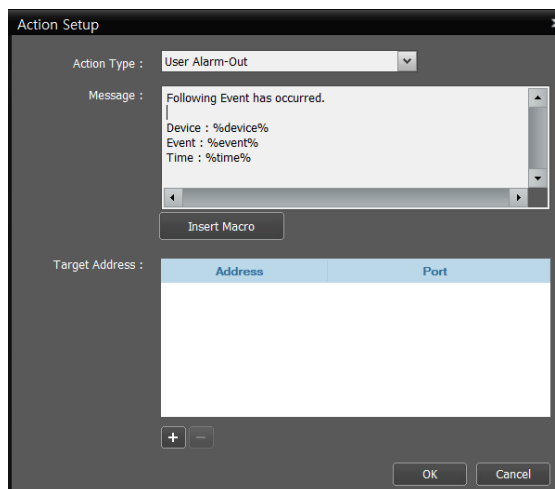
## Move PTZ

Moves PTZ Preset of the camera with the assigned event when an event is detected.



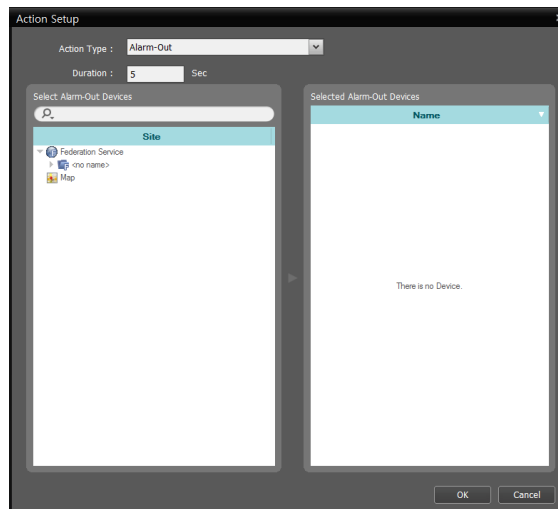
## User Alarm-Out

Sends a user custom message to the assigned server when an event is detected.



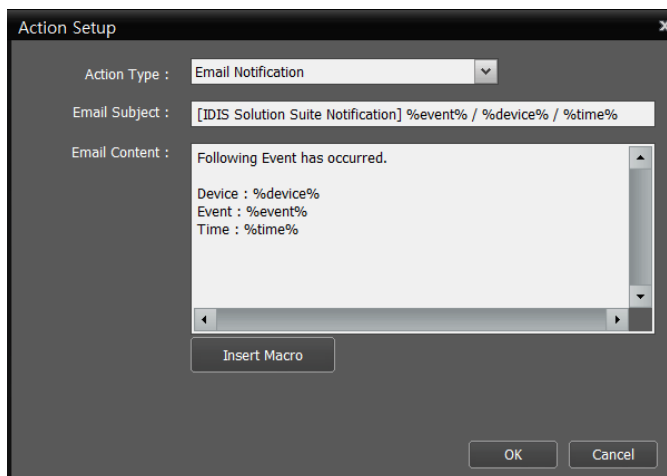
## Alarm-Out

Allows alarm-out to occur on the alarm-out device when an event is detected.



## Email Notification

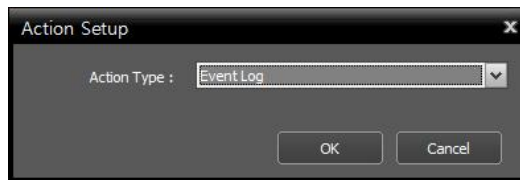
Sends an email notification customized by a user when an event is detected.





## Event Log

Saves the event log when an event is detected. You can search the saved logs from the event history panel.





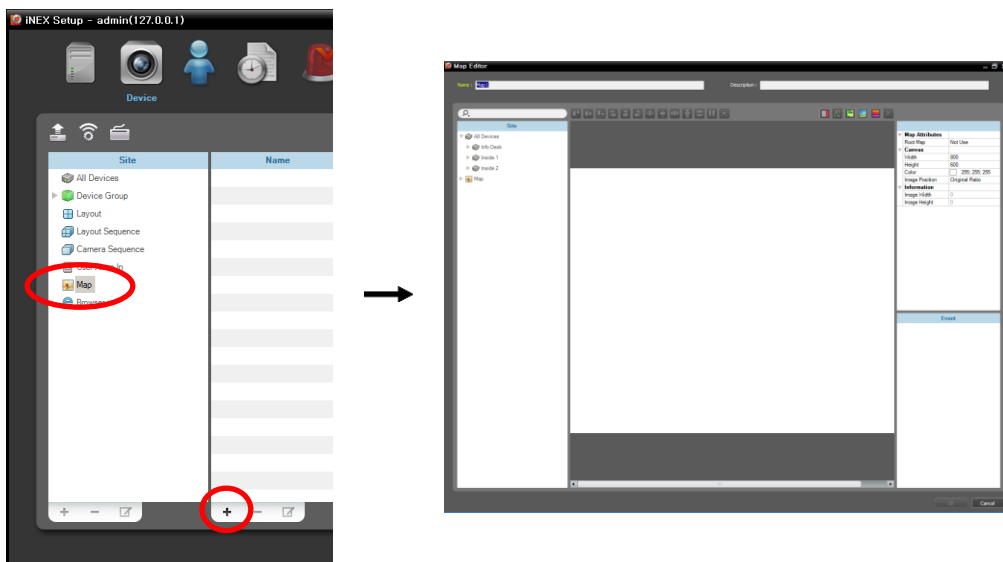
## Chapter 17 — Map Editor

You can register a map to monitor video from cameras, event detection and input/output device's status of devices registered on the administration service on a map on the Client system.

**NOTE:** This function may not be supported depending on the protocol that the device uses and device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIFTM Conformance protocols). Ask your dealer or distributor for details.

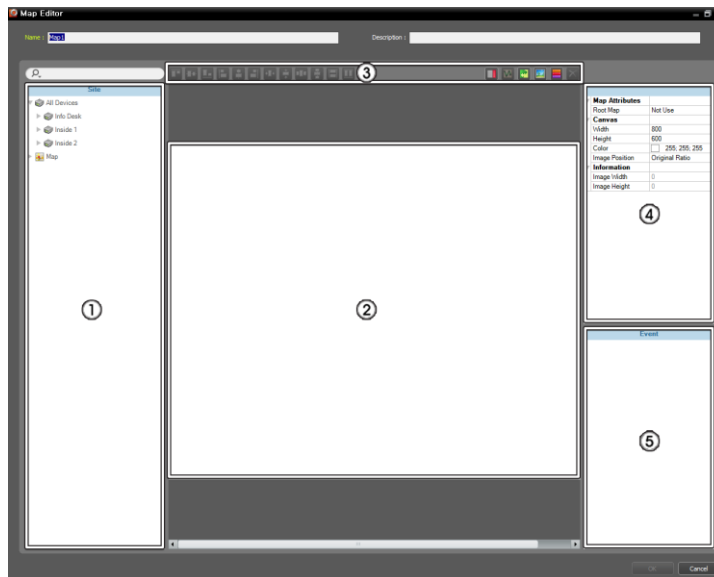
### 17.1 Registering Map

1. Go to the Start menu, and click iNEX Setup, and select the Device menu.
2. Click Map in the Site panel, and then the **+** button at the bottom of the Site List panel on the right. The Map Editor window appears.



3. Select an input/output device connected to a device or a sub-map in the Site panel and drag and drop it on the canvas.
4. Set up the map. Refer to 17.2 Setting up Map (p. 202) for details.
5. Entering a map name and clicking the OK button completes registration of the map.

## 17.2 Setting up Map



- ① **Site:** Displays a list of registered devices and map. You can search for a registered device and map by entering text beside the icon. Entering text that you want to search for causes the search results to be displayed. Search results are displayed immediately as matching text is found. As you enter more text, the results narrow.
- ② **Canvas:** Allows you to create a map by inserting a background image and placing input/output device icons or map links from the Site list.
- ③ **Setup Buttons:** Sets up the map.
  - Align: Aligns the input/output device icons or map links on the canvas.
  - (Text Box): Inserts a box which allows you to enter text.
  - (Path Sequence): Sets up a path sequence. Refer to **Path Sequence** (p. 204) for details.
  - (Synchronize Map Objects Name): Synchronizes the input/output device's name based on the settings in the device.
  - (Background Image): Inserts a background image on a canvas.
  - (Status Color): Sets up a unique color for each event detection or status of input/output devices.
  - (Delete): Selecting an input/output device icon or a map link on the canvas and clicking this button deletes the icon or link from the canvas.
- ④ **Property:** Sets up the property of the map, canvas, input/output device icons or map links.
- ⑤ **Event Action:** Sets up the event action of the input/output device icons. When you monitor video on the map and events are detected, notification on the map is made based on the event action settings.

### Icon Alignment

You can adjust the alignment on the canvas and size of one or more input/output device icons or map links at a time by selecting the icons or links and clicking the icon alignment button.



- / (Position): Aligns one or more icons to the center vertically or horizontally on the background image.

- (Position): Aligns two or more icons to the top or bottom, to the vertical or horizontal center, or to the left or right based on the last selected icon.
- (Distance): Equalizes the distance between each icon of three or more icons.
- (Size): Equalizes the width, height, or size of two or more icons (supported only for icons that are of the same type but of a different width-height ratio).

## Property

You can set up properties of the canvas, or input/output device icons or map links on the canvas. Select the canvas, icons or map links, and then each field of the property. You can enter or select a value from the drop-down list.

Map Attributes	
Root Map	Not Use
<b>Canvas</b>	
Width	800
Height	600
Color	255; 255; 255
Image Position	Original Ratio
<b>Information</b>	
Image Width	0
Image Height	0

<b>General</b>	
Name	Alarm In
Icon	Alarm In Sensor
Ratio	50
X Coordinate	416
Y Coordinate	75
Width	32
Height	32
Associated Camera	Select target
Halo effect	Not Use
<b>Information</b>	
Name	Alarm In
IP Address	10.0.15.47
Device Num	1


<b>General</b>	
Name	BANK 1
X Coordinate	139
Y Coordinate	401
Width	128
Height	32
Text Color	255; 255; 255
Background Color	85; 110; 215
Opacity	80
Align Text	Left
<b>Information</b>	
Name	BANK 1



<b>General</b>	
Text	test
Font	Microsoft Sans Serif
Font Size	9
Text Color	0; 0; 0
Background Color	255; 255; 255
Align Text	Left, Top
Bold	Not Use
Italic	Not Use
Underline	Not Use
Strikethrough	Not Use
X Coordinate	149
Y Coordinate	171
Width	61
Height	25

- **Map Attributes:** Sets the properties of the map.
  - **Root Map:** Displays a list of devices registered on the map at the right of the Map panel during the map monitoring (supported only for the Map panel).
- **Canvas:** Sets the properties of the canvas and background image inserted on the canvas.
  - **Width, Height, Color:** Sets the width, height and color of the canvas.
  - **Image Position:** Sets the position of the background image.
  - **Information:** Displays the width and height of the background image.
- **Input/Output Device:** Sets the properties of the input/output device icon.
  - **Name:** Sets the name of the device icon.
  - **Icon, Ratio:** Sets the image and ratio of the device icon.
  - **X Coordinate/Y Coordinate, Width/Height:** Sets the position and size of the device icon. You can also set the position and size by using the mouse drag and drop on the canvas.
  - **Associated Camera:** Associates the device with a camera (supported only for an alarm in or audio-in device). You can monitor video from the associated camera when an event is detected.
  - **Halo Effect:** Sets the color of the background of the icon. It allows you to more easily find the device icon on the map.
  - **Camera View:** Sets the angle, pan, distance, etc (supported only for a camera).
  - **Information:** Displays the information about the device.
- **Map Link:** Sets the properties of the map link.
  - **Name:** Sets the name of the map link. The name will be displayed on the map link.
  - **X Coordinate/Y Coordinate, Width/Height:** Sets the position and size of the map link. You can also set the position and size by using the mouse drag and drop on the canvas.
  - **Text Color, Background Color:** Sets the text color and background color of the map link.
  - **Opacity:** Sets the opacity of the background color of the map link.
  - **Align Text:** Aligns the name text of the map link.
  - **Information:** Displays the map name.
- **Text Box:** Sets the properties of the text box.

- **Text:** Sets the text. The text will be displayed on the map.
- **Font, Font Size:** Sets the font and font size.
- **Text Color, Background Color:** Sets the text color and background color of the text box.
- **Align Text:** Aligns the text.
- **Bold, Italic, Underline, Strikethrough:** Makes the text bold, italicizes the text, underlines the text, draws a line through the text.
- **X Coordinate/Y Coordinate, Width/Height:** Sets the position and size of the text box. You can also sets the position and size by using the mouse drag and drop on the canvas.

## Path Sequence

This allows you to set up a path sequence and monitor video from multiple cameras sequentially in the same camera screen during map monitoring. A path sequence should be set up for each camera on the canvas for path sequence monitoring (Click the  (Path Sequence) button → Click each camera icon on the canvas in order of monitoring → Click the right mouse button to finish the setting).

General	
Name	Path Sequence 1
Color	 50; 100; 255
Opacity	70
Width	5
Shape	Ellipse
Background Color	 0; 0; 255
Opacity	63
Margin	4; 4; 4; 4
Reverse	
Associated Device	
▼ CAM1	Disconnect
Duration	10
▼ CAM2	
Duration	10

- **Name:** Sets the name of the path sequence.
- **Color/Opacity/Width:** Sets the color/opacity/width of the path displayed on the map.
- **Shape:** Sets the shape of the alert icon to distinguish a camera when displaying video from a camera set for the path sequence during map monitoring.
- **Background Color/Opacity/Margin:** Sets the color/opacity/margin of the alert icon when displaying video from a camera set for the path sequence during map monitoring.
- **Reverse:** Reverses the direction of the path sequence.
- **Associated Device:** Displays the list of cameras set for the path sequence. Video from cameras in the list is displayed on the screen sequentially for the Duration period. Clicking a camera in the list and the Disconnect button deletes the camera from the path sequence.

## Event Action

You can set up event actions to be taken when events are detected by the input/output devices. Select the icon, and then each field of the property. You can enter or select a value from the drop-down list.

Event	
▼ Action	
▼ Click	
Instant Viewer	Use
▼ Motion Detection	
Live Popup	Not Use
Event Spot	Use
▼ Object Detection	
Live Popup	Not Use
Event Spot	Use
▼ Video Loss	
Live Popup	Not Use
▼ Video Blind	
Live Popup	Not Use
Event Spot	Use

- **Click:** Sets the Instant Viewer window to be displayed when clicking the input/output device icon on the map. When clicking an alarm-in icon, clicking activates or deactivates alarm out.
- **Motion Detection, Object Detection, Video Loss, Video Blind, Alarm In, etc.:** Enables or disables event actions to be taken when each event is detected. The event actions will be disabled regardless of the settings below if you disabled the event actions of the input/output devices during the map monitoring (Disabling event actions: Place the mouse cursor over the input/output device on the map → Click the right mouse button → Select Ignore Event Action).
- **Live Popup:** Pops up video from a camera (associated camera if the device is not a camera).
- **Event Spot:** Displays video from a camera (associated camera if the device is not a camera) on the event spot screen.
- **Event Sound:** Sounds by playing back a selected audio file (.wav).

## Chapter 18 — Video Wall Service

The video wall service allows you to control monitoring on multiple monitors with network keyboards for centralized monitoring in a surveillance center.

If the video wall service is registered on an administration service, the iNEX system allows you to control monitoring for devices registered on the administration service.

Number of video wall services, video wall agent systems and monitors are as follows:

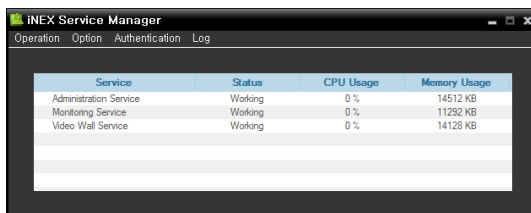
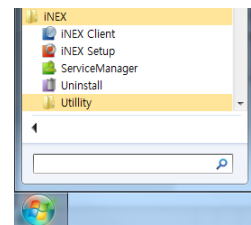
- Video Wall Service Registration: Maximum of eight per administration service
- Video Wall Agent System Registration: Maximum of 64 per video wall service depending on the type and number of the licenses. Ask your dealer or distributor about the number of video wall agent system that can be registered using your iNEX software.
- Monitor Registration: Maximum of 6 per video wall agent system

### NOTES:

- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).
- The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (*OpenSourceGuide*) *OpenSourceGuide.pdf*) or as a printed document included along with this document.

## 18.1 Running Services

When the video wall service is installed, the service runs automatically. You can also start or stop running the service manually. Go to the Start Menu → Click iNEX → Run the Service Manager program.

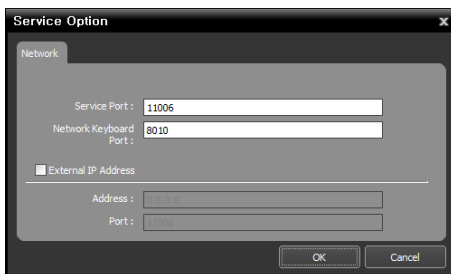
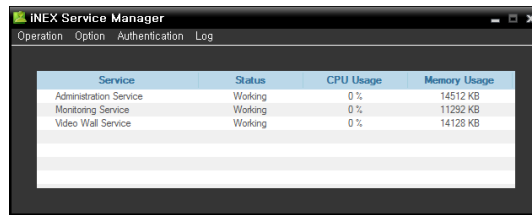
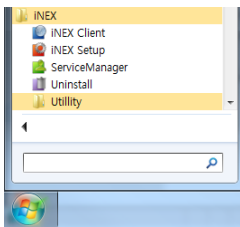


Check the status of the service. If the service is not listed as **Working** under **Status**, start the service manually.

## 18.2 Registering Video Wall Service

You must register video wall services (max. 8) on the administration service. If the IP address and port number of the administration server is entered correctly during the installation, the service is registered on the administration service automatically. Registering the video wall service on the administration service allows you to control monitoring for devices registered on the administration service.

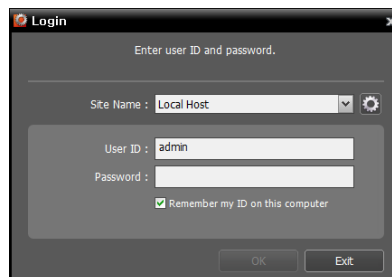
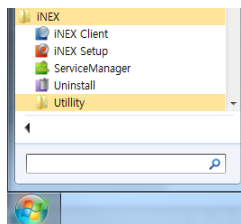
The video wall service should be connected to the administration service via the network connection, on which the video wall service is registered. Go to the Start Menu and click iNEX. Run the Service Manager program and click the Option – Service Option menu.



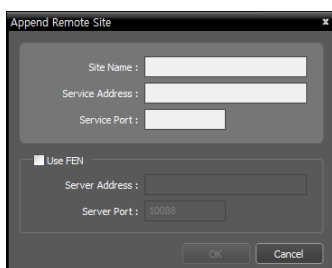
- **Service Port:** Enter the port number for connection to the service.
- **Network Keyboard Port:** Enter the port number for connection to the video wall service from a network keyboard. The port number will be used when you control the Agent system with the network keyboard.
- **External IP Address:** Enter the external IP address and port number for connection to the service from an external network.

## Registering on Administration Service

1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



- **Site Name:** Select the administration service to connect to from the list. You can add other administration services to the list or modify information about the administration service in the list by clicking the button at the right.



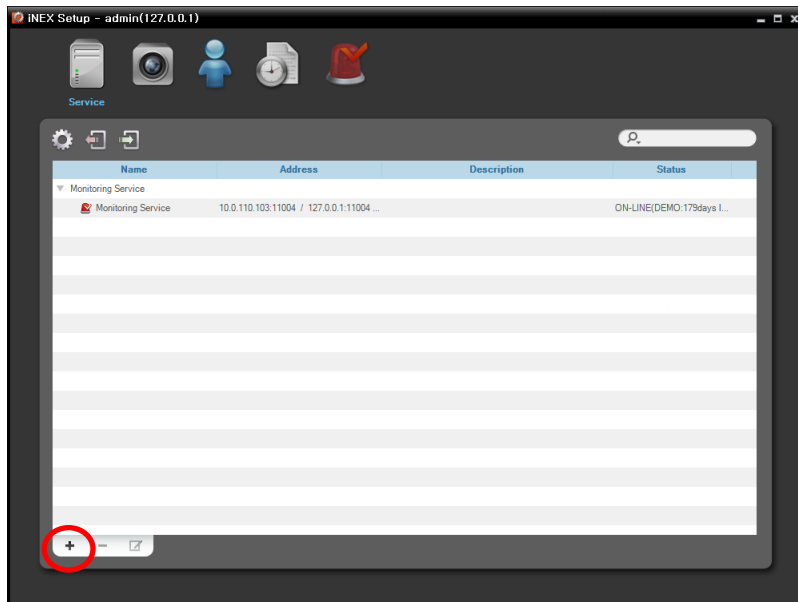
- **Site Name, Service Address, Service Port:** Designate the name of the administration service and enter the IP address and port number of the administration server to which the video wall service is connected (default: 11001).

- **User ID, Password:** Enter your user ID and password. The default user ID is admin and default password is 12345678. You can change the user ID and password in the User menu.

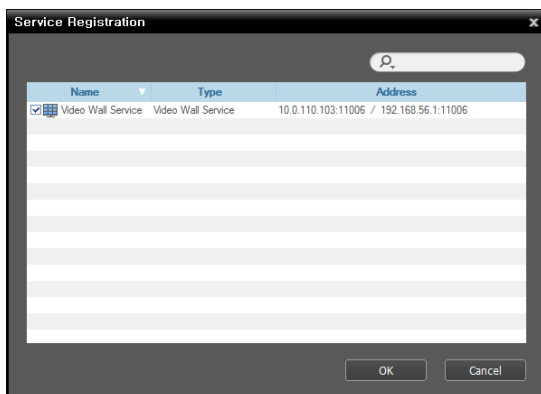
2. Remember my ID on this computer: Check the box if you want to save your ID for logging on.



3. Select the **Service** menu, and then register a video wall service on the administration service following the procedures below.

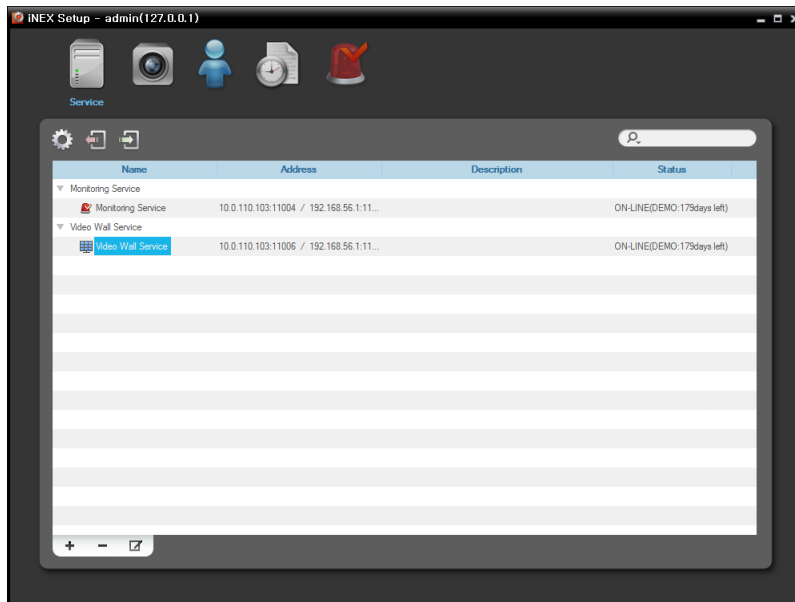



4. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.

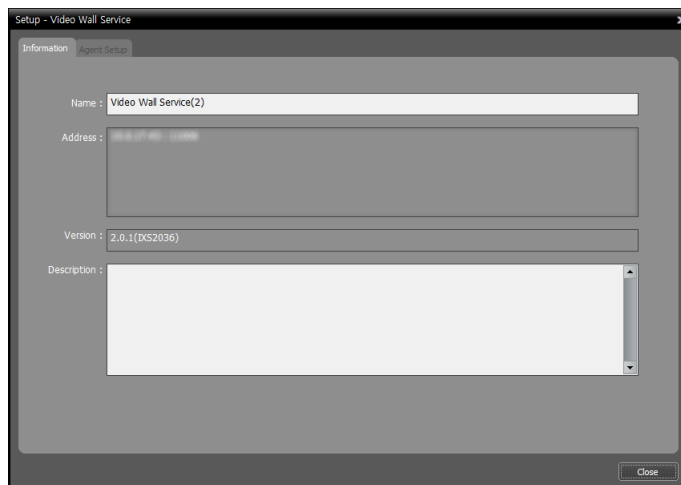


- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

5. Select a video wall service to register on the administration service and click the OK button.



6. Select a video wall service and click the  button at the bottom. The Setup – Video Wall Service window appears. Select the Information tab.



7. Enter the video wall service's name and click the Close button.

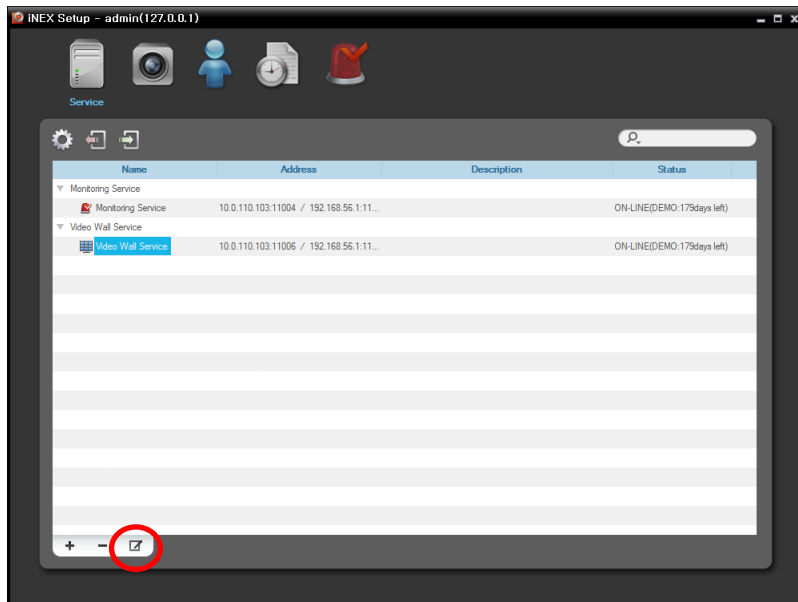
## 18.3 Registering Video Wall Agent System


You can control monitoring on multiple monitors with network keyboards.

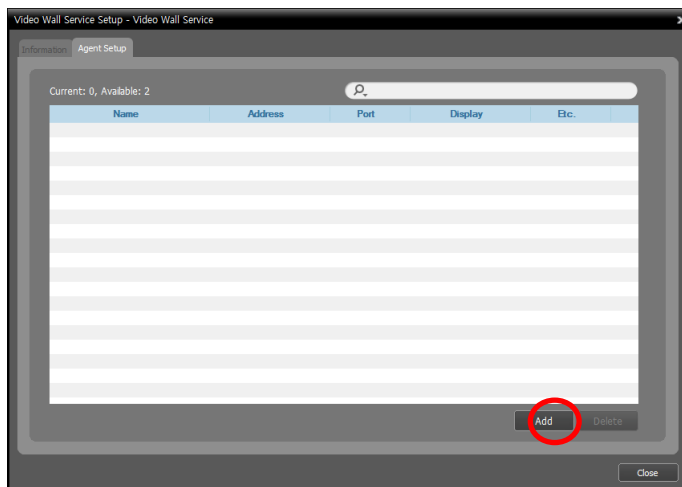
**NOTE:** If User Account Control is turned on in the Agent system, the Video Wall Agent program may not work. In this case, turn User Account Control off (*Start menu → Control Panel → User Accounts and Family Safety → User Accounts → Turn User Account Control off*) and run the Video Wall Agent program.

## Registering Agent System

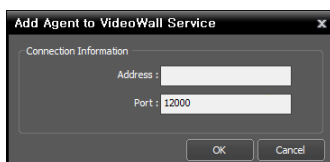
1. Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.



2. Select a video wall service and click the  button at the bottom in the Service menu. The **Setup – Video Wall Service** window appears. Select the **Agent Setup** tab.



3. Click the **Add** button at the bottom. The **Add Agent to Video Wall Service** window appears.



- **Address, Port:** Enter the IP address and port number of the Agent system.

4. Click the OK button. The Modify Agent window appears.


Number	Resolution	Description	Etc.
1	1280 x 1024	WWW.WDIDisplay2	Primary
2	1520 x 1080	WWW.WDIDisplay1	

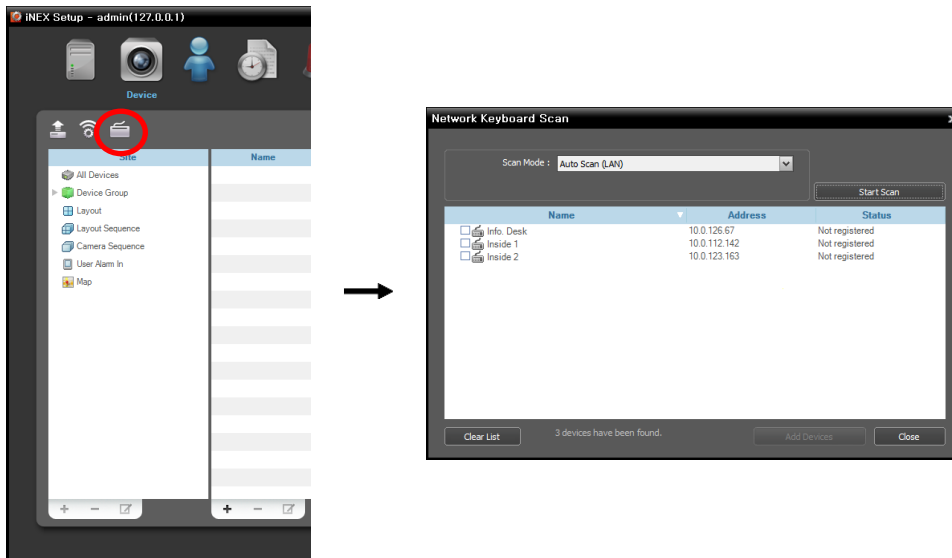
- **Name:** Allows you to change the Agent system name.
- **Address, Port:** Displays the IP address and port number of the Agent system.
- **Description:** Displays the Operating System information of the Agent system.
- **User:** The list of users registered on the administration service is displayed. Select a user of the Agent system to be registered. The Agent program will automatically run logging on as the selected user. Each user may have different authority for each device and function depending on the settings at the iNEX Setup program → User menu. You can change the authority or password of each user at the User menu.
- **Number:** Displays ID of each monitor connected to the Agent system. The ID is used to distinguish the monitor from other monitors when controlling the Agent system with a network keyboard, so each must have a unique ID.

- **Resolution:** Displays the resolution of each monitor connected to the Agent system.
- **Description:** Displays information of each monitor connected to the Agent system.

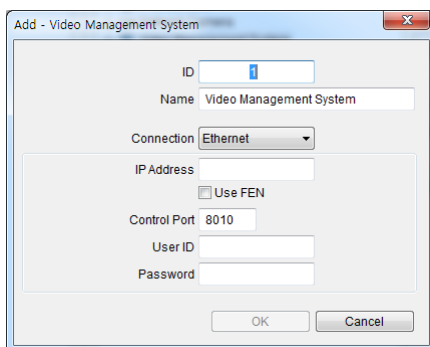
5. Click the OK button. A list of registered Agent system is displayed.

Name	Address	Port	Display	Etc.
DESIGN-HP [1] - WWW.WDIDisplay1	10.0.129.38	12000	1	1680 x 1050

6. Register the network keyboard on the administration service: Select the Device menu→ Click  (Network Keyboard Setup) button, and the Network Keyboard Scan window appears. The way to register a network keyboard is identical to the way to register a device.



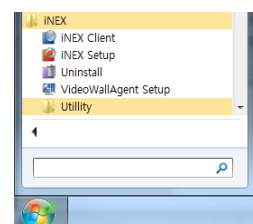
7. Register the video wall service on the network keyboard. Refer to the network keyboard's user manual for details.

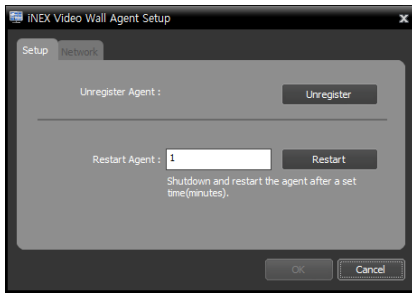


- **ID (video wall service ID):** The network keyboard assigns the ID automatically when the video wall service is registered, and you can change the ID. The ID is used to distinguish the video wall service from other video wall service when connecting to the video wall service with a network keyboard, so each must have a unique ID.
- **Name:** Set up a video wall service name for your reference.
- **IP Address:** Enter the video wall server's IP address. Do not check Use FEN.
- **Control Port:** Enter the Network Keyboard Port number set in the video wall service (Check the Network Keyboard Port number in the Service Manager program → Option menu → Service Option setting).
- **User ID, Password:** Enter the user ID and password for the connection to the video wall service. Check the user ID and password in the iNEX Setup program → Service menu → video wall service → ☒ button → User Setup tab.

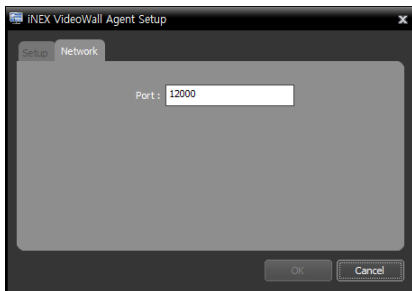
## 18.4 Setting up Video Wall Agent Setup

Go to the Start Menu → Click iNEX → Click VideoWallAgent Setup.





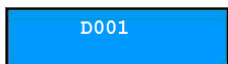
- **Unregister Agent:** If the Agent system is not removed from a video wall service and all data is deleted while the iNEX software is uninstalled, the Agent system cannot be registered again. In this case, clicking the **Unregister** button allows you to register the Agent system.
- **Restart Agent:** The Agent program runs automatically when the Agent program is registered on the video wall service, and the Agent program keeps running as long as the Agent system is operating. If you want to stop running of the Agent program temporarily, enter the duration and click the **Restart** button. The Agent program stops running and restarts after the entered length of time has expired.
- **Port:** Allows you to change the port number for the connection to the Agent system.



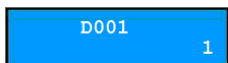
## 18.5 Connecting to Agent System



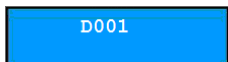
1. Press on the network keyboard the video wall service ID on which the Agent system is registered.



2. Press the **DEV** button.



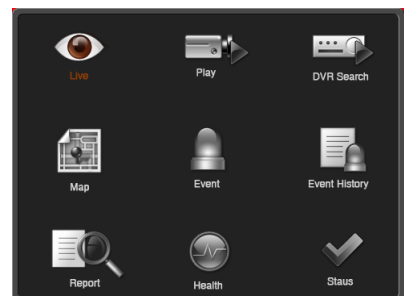
3. Press the monitor ID.



4. Press the **MON** button.




## Monitoring Video and Playing Back Recorded Video

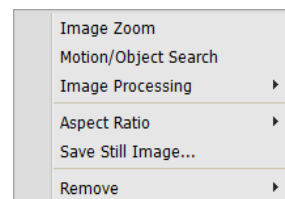
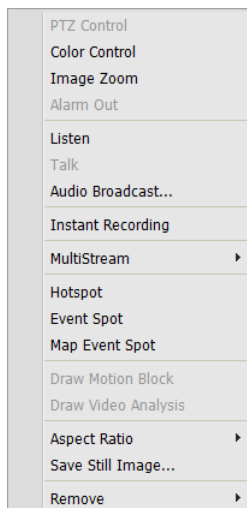
1. Press on the network keyboard the F2 button. A list of panels appears → Click **Live** or **Play/DVR Search** by using the mouse connected to the network keyboard.



2. Press on the network keyboard the F4 button. A site list is displayed in the current Live or Play/DVR Search panel → Select a site to connect to from the site list, and drag and drop it on the Live or Play/DVR Search screen by using the mouse connected to the network keyboard. Live or recorded video from the selected site is displayed on the screen.



3. Press on the network keyboard the  (Menu) button. The live or play screen menu is displayed.
4. Moving to the desired item by using arrow buttons and pressing the enter button () selects the item in the menu or releases the selection. If you want to exit the current item setting, press the  (Menu) button and releases the selection.



5. Refer to 23.4 – Network Keyboard Buttons (p. 255) for the explanations about controlling with other buttons of the network keyboard.





## Chapter 19 — Recorded Video Backup

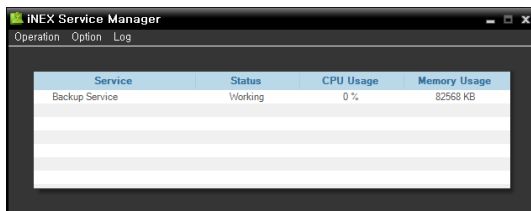
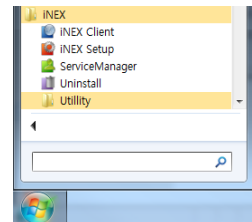
You can back up recorded video saved in the recording servers or DVRs.

First, check the following and run the Setup program.

- Services should be running on the system.
- There should be recorded data in a recording server or DVR.
- The backup service should be registered on the administration service.

### 19.1 Running Services

When the backup service is installed, the service runs automatically. You can also start or stop running the service manually. Go to the **Start Menu** → Click **iNEX** → Run the **Service Manager** program.

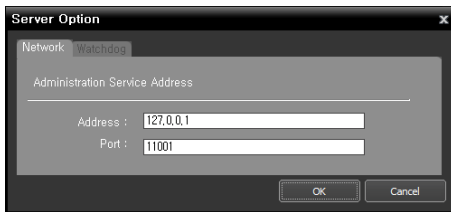
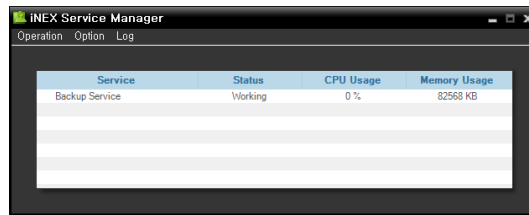
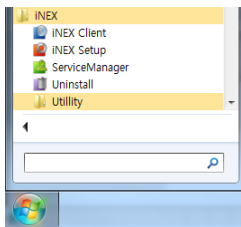


Check the status of the service. If the service is not listed as **Working** under **Status**, start the service manually.

### 19.2 Registering Backup Service

You must register backup services (max. 64) on the administration service. If the IP address and port number of the administration server is entered correctly during the installation, the service is registered on the administration service automatically. Registering the backup service on the administration service allows you to back up video saved in the recording servers and DVRs registered on the administration service.

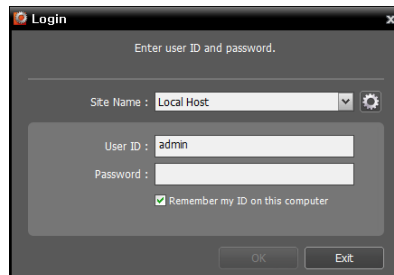
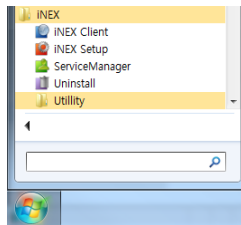
The backup service should be connected to the administration service via the network connection, on which the backup service is registered. Go to the **Start Menu** and click **iNEX**. Run the **Service Manager** program and click the **Option – Service Option** menu.




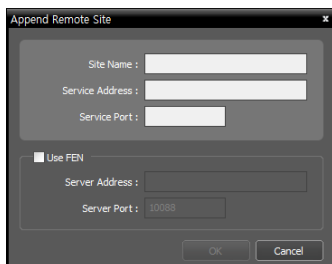
- **Address, Port:** Set up the IP address and port number of the administration server for connection to the administration service.

## Registering on Administration Service

1. Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.



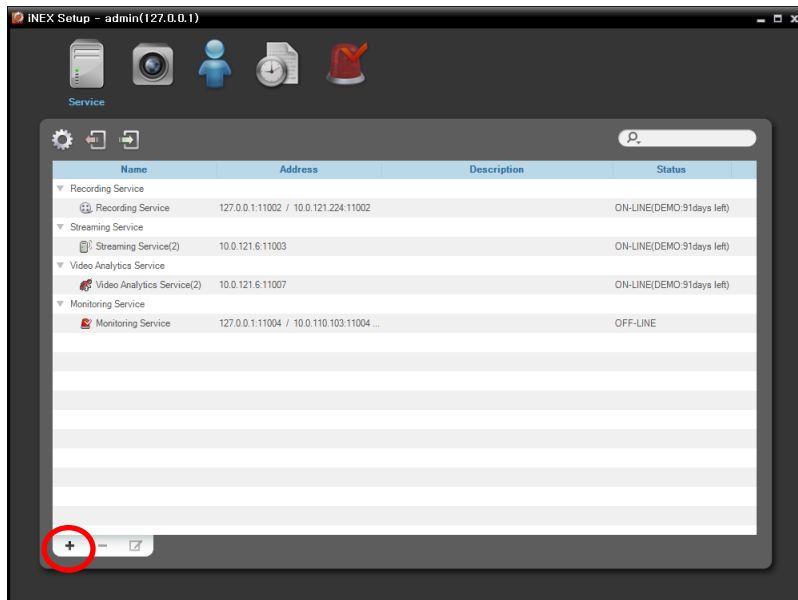
- **Site Name:** Select the administration service to connect to from the list. You can add other administration services to the list or modify information about the administration service in the list by clicking the  button at the right.



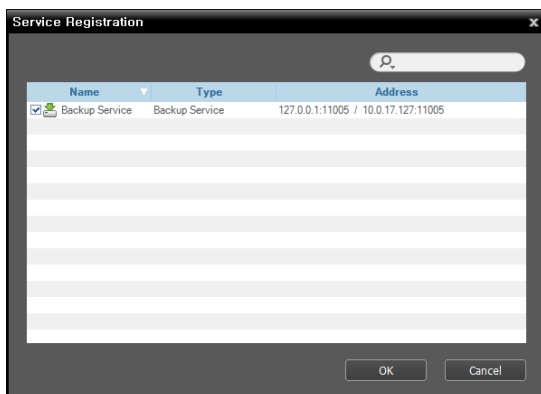
- **Site Name, Service Address, Service Port:** Designate the name of the administration service and enter the IP address and port number of the administration server to which the backup service is connected (default: 11001).

- **User ID, Password:** Enter your user ID and password. The default user ID is **admin** and default password is **12345678**. You can change the user ID and password in the **User** menu.
- **Remember my ID on this computer:** Check the box if you want to save your ID for logging on.

2. Select the **Service** menu, and then register a backup service on the administration service following the procedures below.



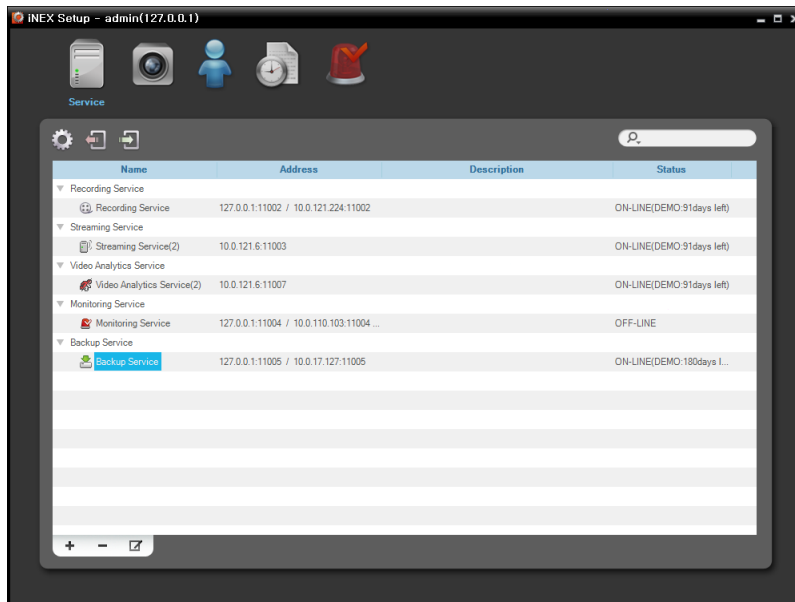
3. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.




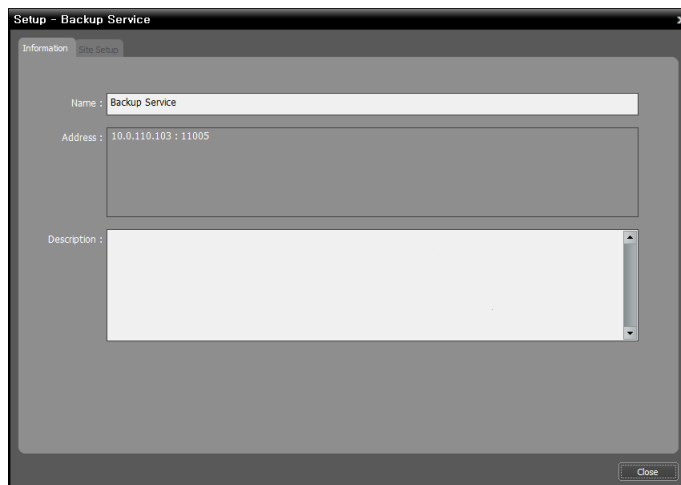
- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

4. Select a backup service to register on the administration service and click the OK button.



5. Select a backup service and click the  button at the bottom. The Setup – Backup Service window appears. Select the Information tab.

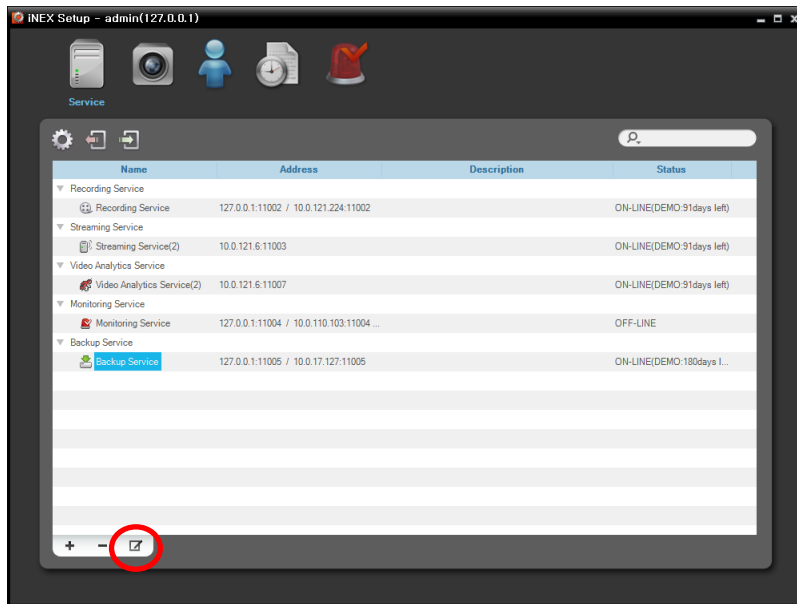



6. Enter the backup service's name and click the Close button.

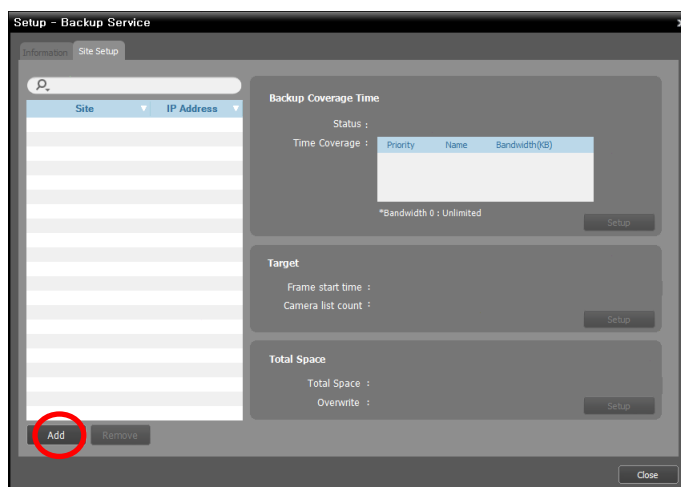
## 19.3 Adding Backup Sites

### Adding to Administration Service

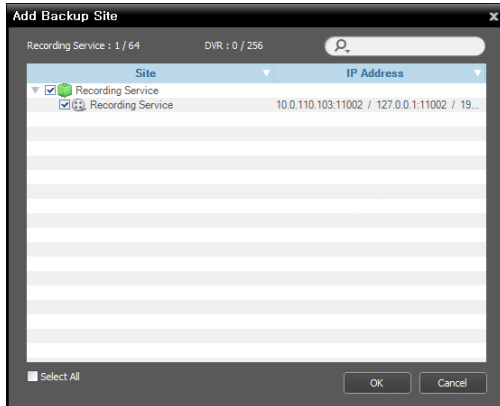
1. Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.



2. Select a backup service and click the  button at the bottom in the Service menu. The Setup – Backup Service window appears. Select the Site Setup tab.



3. Click the Add button at the bottom. The Add Backup Site window appears, and a list of available recording services and DVRs is displayed.

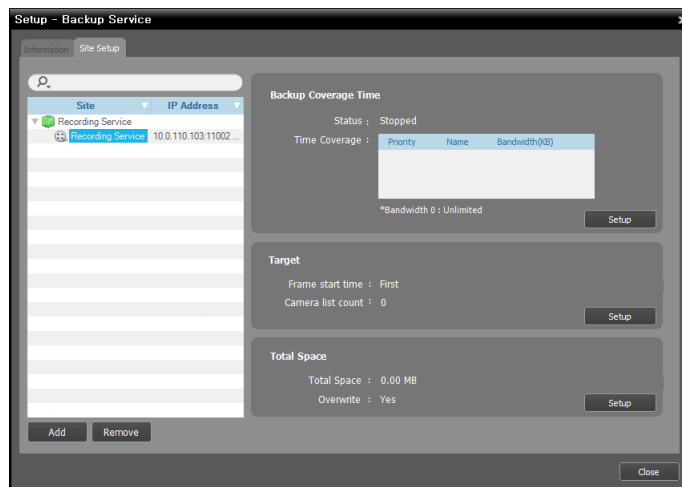


- **Site:** Displays recording services and DVRs that are currently connected to the administration service via the network.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

4. Select recording services and DVRs to back up and click the OK button.

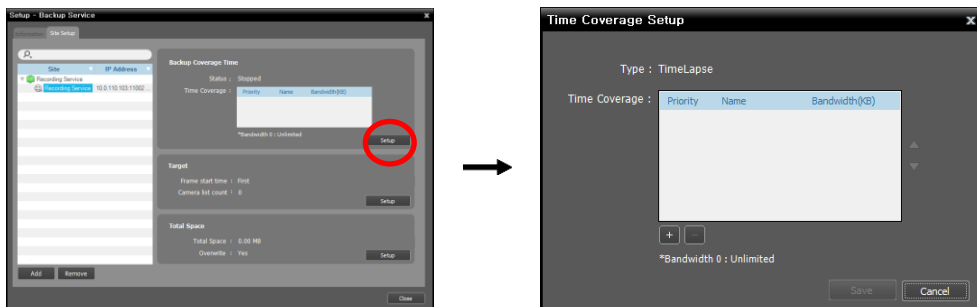
## 19.4 Setting up Backup Schedule



Select a recording service or DVR from the Site list after adding backup sites. You must set up a backup schedule separately for each recording service and DVR.

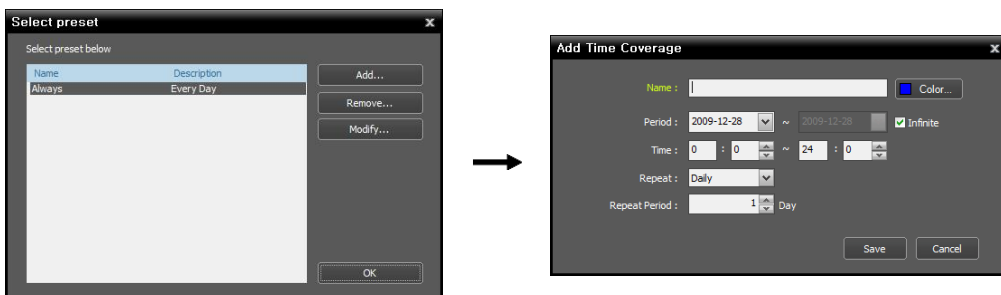
## Backup Coverage Time

Click the Backup Coverage Time – Setup button and add a backup period Preset by clicking the **+** button.



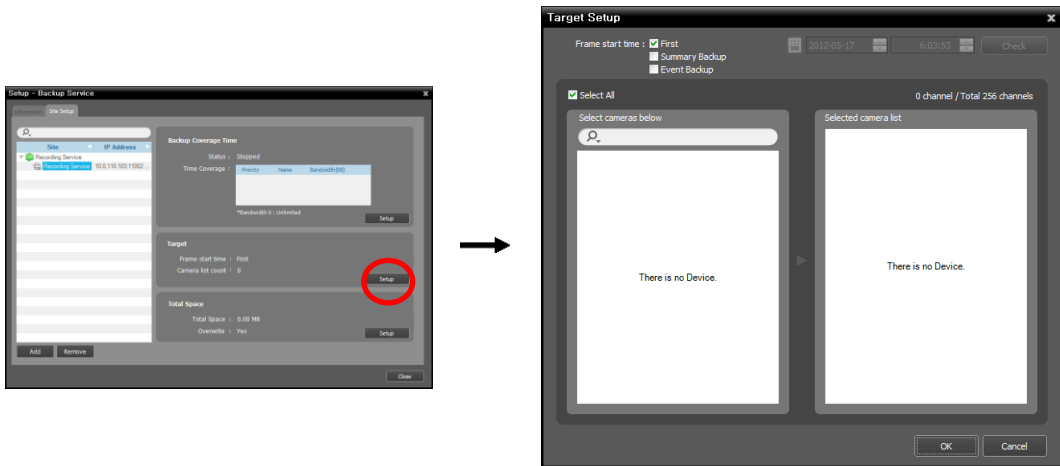
- **Priority:** Displays the priority of backup period Preset. You can change the priority by using the ▲ or ▼ button.
- **Name:** Displays the name of backup period Preset.
- **Bandwidth:** Sets up the maximum bandwidth. You can control the network bandwidth by limiting the network bandwidth depending on the network traffic. The proper bandwidth limit setting can minimize the decrease of recording speed when video is backed up while recording. However, if you limit the network bandwidth, backup speed might decrease.

You can add a new Preset or edit a saved Preset by clicking the Add or Modify button. Setting up the time span Preset for backup is identical to setting it up for recording.

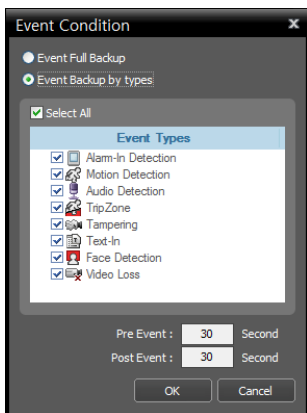


## Target

Click the Target – Setup button and select cameras to back up video.



- **Frame start time:** Set up the time of the first frame of the recorded video to start backup, and click the Check button. You are required to select a segment if the administration server's time and date has been reset to a time that is earlier than previously recorded video and there is more than one video segment in the same time range. Selecting First starts backup from the first recorded video.
- **Summary Backup:** Backs up only key frames of recorded video. It allows backing up recorded data of longer period and makes the backup speed faster, but movements might not be smooth when playing back backed-up video. The key frame frequency is different depending on the encoding, and the higher the recording speed, the higher the frequency.



- **Event Backup:** Backs up event-based recorded video.
  - **Event Full Backup:** Backs up the entire event videos.
  - **Event Backup by types:** Backs up the selected events only. The pre/post of the event detect time is backed-up.

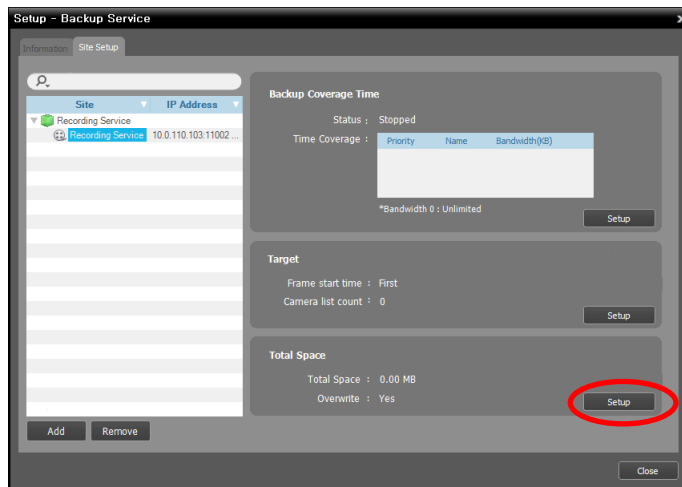
- **Select cameras below:** Displays a list of cameras that have recorded video, which can be backed-up.
- **Selected camera list:** Displays the list of cameras to be backed up.



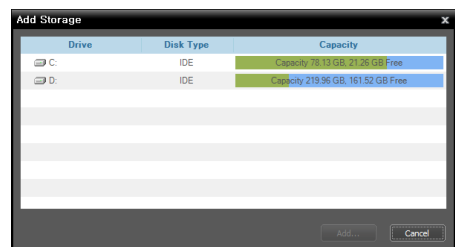
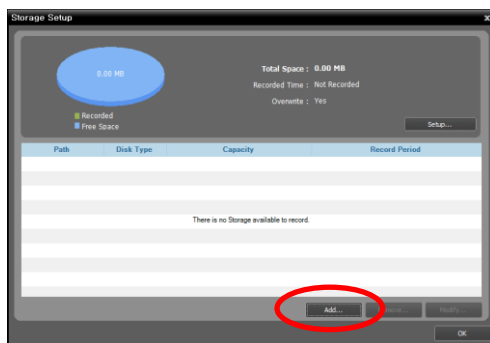
## 19.5 Allocating Storage

### NOTES:

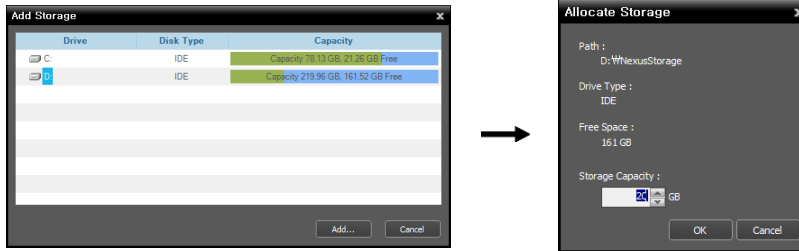
- USB hard disks and network hard disks cannot be allocated storage.
- It is recommended to add a new unformatted hard disk drive to ensure stable backup. If you are setting up a hard disk drive which contains data, however, you are to delete partition(s) and the file system in advance after formatting. Refer to the PC/server's user manual or consult with the PC/server manufacturer for details about how to format or delete the partition(s) and file system.
- When removing a hard disk drive that contains backed-up video from a backup server and installing it in another backup server, you cannot search or play back the video backed-up on the original backup server.
- The total amount of storage for one hard disk drive cannot exceed 50,000 GB.



1. Click the **Total Space – Setup** button after adding backup sites and the **Storage Setup** window appears. Click the **Add** button at the bottom. The **Add Storage** window appears, and a list of available hard disk drives is displayed with information about each drive.



- **Drive:** Displays the drive name.
  - **Disk Type:** Displays the type of hard disk drive.
  - **Capacity:** Displays the total storage capacity and available storage capacity.
2. Select a hard disk drive to allocate storage and click the **Add** button at the bottom. The **Allocate Storage** window appears.



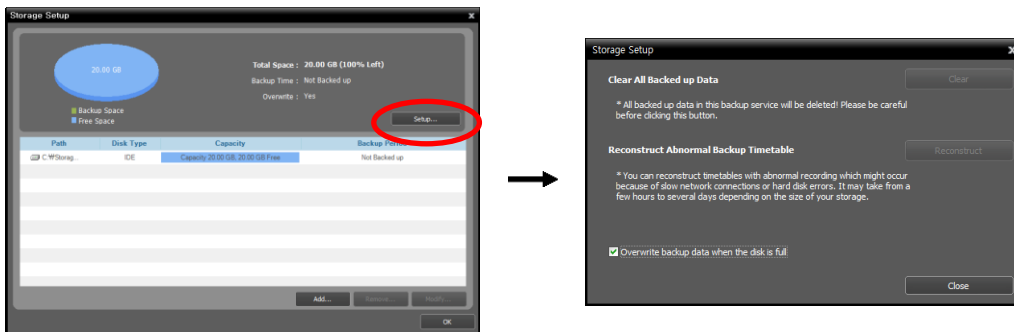
- **Path:** Displays the storage folder path.
- **Drive Type:** Displays the type of hard disk drive.
- **Free:** Displays the available storage capacity.
- **Storage Capacity:** Sets up the storage capacity to be allocated to the hard disk drive (Min. 20GB). If the iNEX program is installed on the hard disk drive, you must reserve enough free hard disk depending on the installation environment. If the Windows operating system is installed on the hard disk drive, you must reserve more than 10GB of free hard disk for proper system operation. If no file system has been created on the hard disk drive, the backup server automatically creates a proprietary video database file system when storage is allocated to ensure more stable backup and allocates storage to the entire hard disk drive automatically.

## Managing Storage

You can manage storage of all hard disk drives used in the current backup server or of a specific hard disk.

### Storage of All Hard Disk Drives

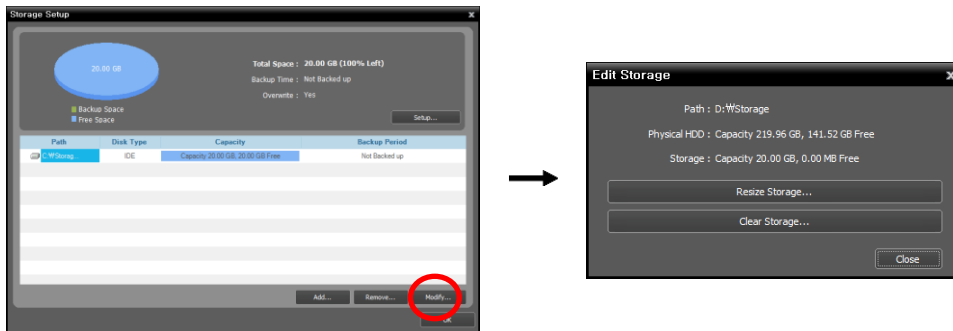
Click the Setup button. The Storage Setup window appears.



- **Clear All Backed-up Data:** Deletes all backed-up data on all hard disk drives used in the current backup server.
- **Reconstruct Abnormal Backup Timetable:** When the network connection between the backup server and the recording server or DVR is too slow or a hard disk drive in the backup server is damaged, the backed-up data and the timetable information of the backed-up data might not match and the timetable in the Client program might display incorrect information. In this situation, clicking the button reconstructs the timetable to display backed-up data correctly on the timetable in the Client program.
- ☒ **Overwrite backup data when the disk is full:** Checking the box backs up over the oldest video data once all available storage space has been used.

## Storage of a Specific Hard Disk Drive

Click the storage to edit in the storage list, and then the Modify button at the bottom. The Edit Storage window appears.



- **Resize Storage:** Allows you to increase the storage capacity.
- **Clear Storage:** Allows you to delete all data backed-up in the selected storage.

**NOTE:** Search or playback of backed-up data will be stopped when storage is resized or cleared.

**CAUTION:** Clearing storage deletes all data backed-up in the storage and the deleted data cannot be restored.

## 19.6 Backed-up Video Playback & Exportation

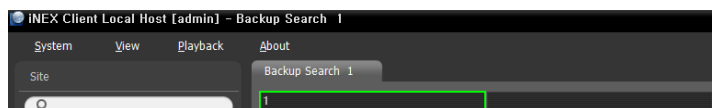
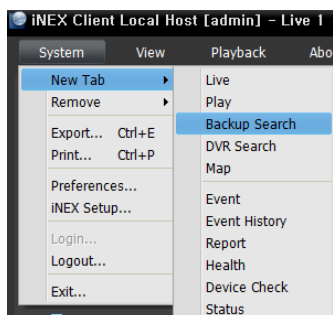
You can play back backed-up video or export backed-up video to USB devices.

First, check the following and run the Client program.

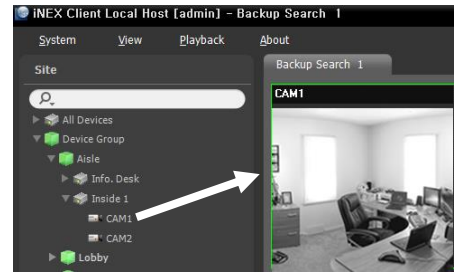
- Services should be running on the system.
- Devices should be added to a device group.
- There should be backed-up data in the backup server.

### Playing back Backed-up Video

1. Search and playback of backed-up video in a backup server are supported in the Backup Search panel (maximum 4). If the Backup Search tab is not on the tab panel, go to the **System** menu, click **New Tab** and then **Backup Search**.



- Click the Backup Search tab on the tab panel → Select a device or a camera to connect to from the **Site** list and drag and drop it on the Backup Search screen. Backed-up video from the selected device or camera is displayed on the screen. You can move a camera screen to the desired location on the Backup Search screen without stopping the current playback while playing back video. Select a camera screen and drag and drop it on the desired location.



If a layout is registered on the administration service, you can play video in the layout format by selecting a desired layout from the **Layout** list and dragging and dropping it on the Backup Search screen.

**NOTE:** The Client system performance might seriously deteriorate when simultaneously monitoring or playing back video with 1280x720 or higher resolution on more than one camera screen.

- A panel toolbar, a timetable, a control toolbar and a screen menu are provided for playing back backed-up video. The way to play back backed-up video is identical to the way to play back recorded video.

## Exporting Backed-up Video

You can export backed-up video to USB devices. Exporting backed-up video is identical to exporting recorded video.

## Playing back Backed-up Video with HDP Player

The backed-up video saved in the hard disk drive can be played with the HDP player. Play the video by opening the file, named after the backed-up device (xxxx.bsd), in the Client system or drag&drop the file.

**NOTE:** This function does not work when the backup service is using the selected storage.

## Chapter 20 — Failover Service

The failover service enhances system stability using a failover function. The failover services replace the administration, monitoring, recording or video wall service if any problems occur in the service. You can register as many failover services as the number of administration, monitoring, recording and video wall services.

### NOTES:

- The system with the administration service and the system with the failover service must be time-synchronized.
- The failover service will replace only one of the recording or video wall services when a problem occurs in two or more services. The number of failover services must equal the number of recording or video wall services to replace all services.
- The failover service license expires after 70 days (administration, recording and video wall failover services only), and stabilize the service to complete the failover before the expiration date.
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).
- The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (*OpenSourceGuide\OpenSourceGuide.pdf*) or as a printed document included along with this document.

### 20.1 Installation

**NOTE:** Disable your PC's Windows power saving function: *Start* menu → *Power Options* → set both *Turn off the display* and *Put the computer to sleep* to *Never* (*Power Options* → *Power Schemes* tab → set both *Turn off monitor* and *Turn off hard disks* to *Never* when using the Microsoft® Windows® XP operating system).

**CAUTION:** If an older version of iNEX software is installed on your computer, a screen appears asking you to upgrade the software. In this case, you are required to upgrade the software according to the instructions in the screen.

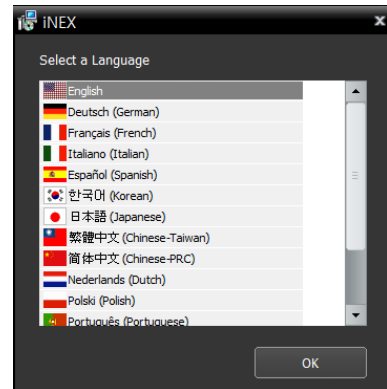
1. Insert the software CD in the failover server.
2. Run the *setup.exe* file in the *Setup* folder of the software CD.

**NOTE:** The *User Account Control* window might appear when using the Microsoft® Windows® Vista or later operating system. Click *Allow* and install the software following the instructions.

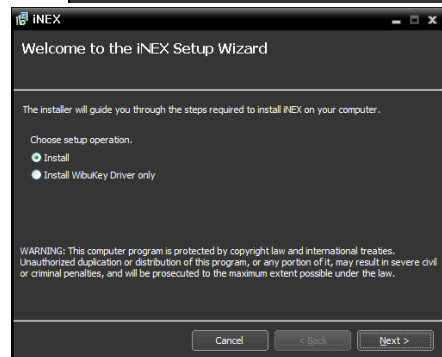
3. Select the language in which to run the program and then click OK.

**NOTES:**

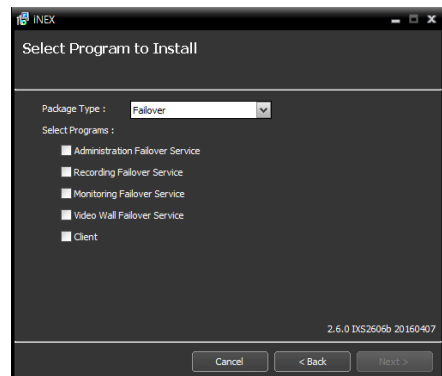
- To properly display the selected language, your PC's operating system should be set to support the selected language.
- To change the iNEX program's language after the software has been installed, select *Language Selector* in the *iNEX* → *Utility* folder of the *Start* menu before running the *iNEX* program.



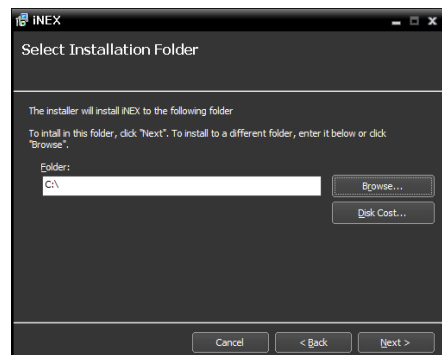
4. When the following screen appears, select **Install** and click **Next**.



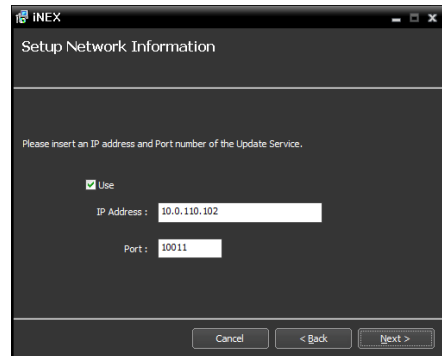
5. Select a service to install and click **Next**.



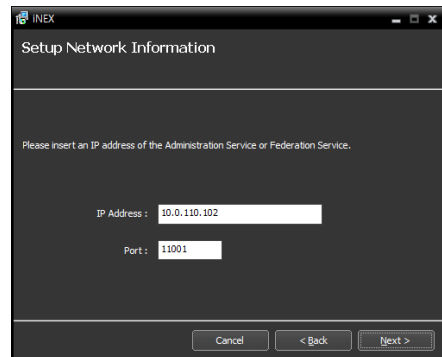
6. Designate the folder path to install the services. Clicking the **Disk Cost...** button shows the available and required disk space for each hard disk drive for the installation. Then click **Next**.



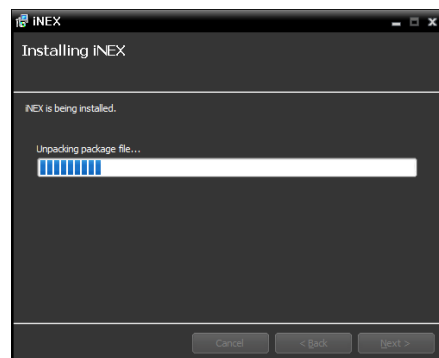
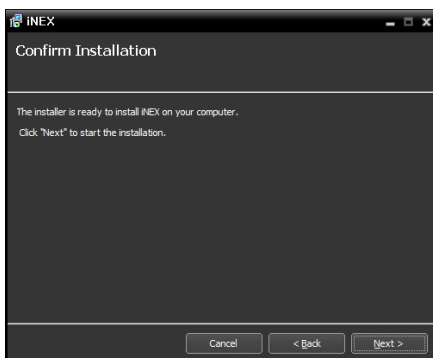
7. If you use the update service, it is required to enter the IP address and port number of the update server when installing the failover service. You can change the settings in the Service Manager program after completing installation.



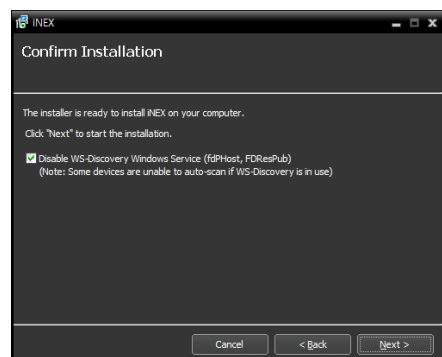
8. It is required to enter the IP address and port number of the administration server. You can change the settings in the Service Manager program after completing installation if necessary. When the installation is complete, the failover service is connected to the administration service via the network if the both services are operating.



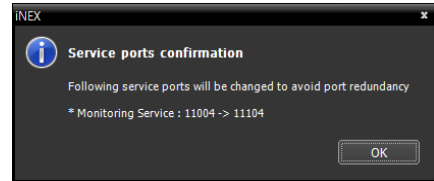
9. When the following screens appear, click Next.



**NOTE:** The following screen appears when using Microsoft® Windows® Vista or later operating systems. It is recommended that you check the *Disable WS-Discovery Windows Service (fdPHost, FDResPub)* box. If you do not check the box, the iNEX program cannot auto-scan devices using ONVIF™ Conformance protocol when scanning devices for device registration.

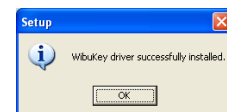
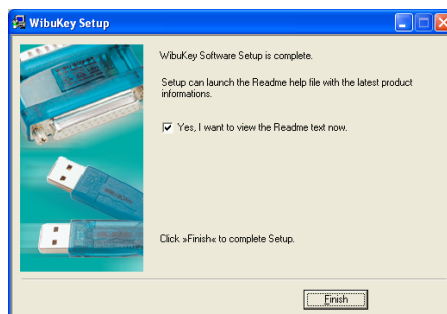
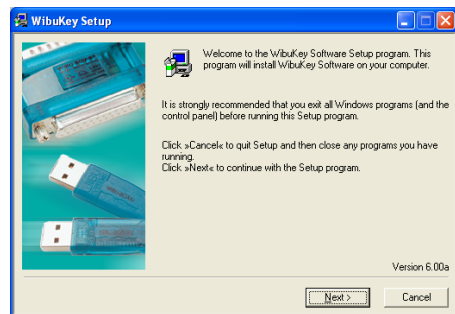
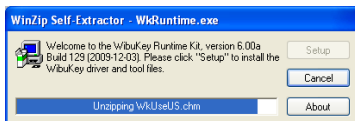
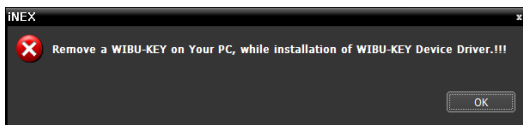
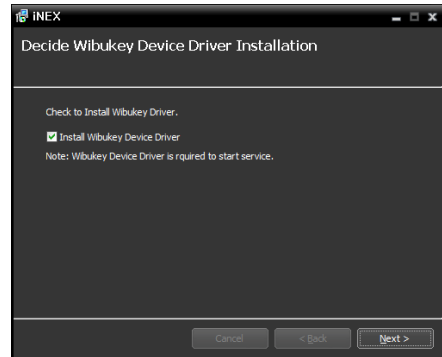


**NOTE:** The following screen appears when the port number of the service being installed is already in use, and the screen displays the port number that will be changed. The changed port number will be applied when the service starts operating after installation.



**NOTE:** .NET Framework and the Visual C++ Runtime Libraries are installed automatically, and it may take some time. This installation step will be skipped if the programs are already installed on your computer.

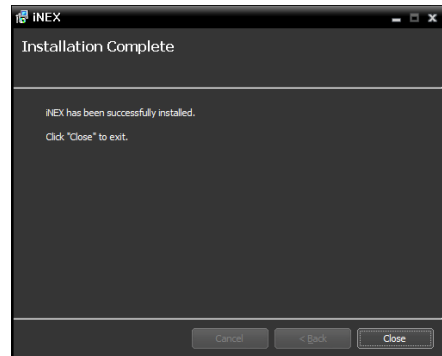
10. In order to use the WIBU Key license authentication, select Install Wibukey Driver and click Next. Disconnect the WIBU-Key from the server if a WIBU-Key is connected. Then install the WIBU-Key device driver following the instructions.





11. When the following screen appears, click the Close button to complete the installation.

**NOTE:** After successfully installing WIBU-Key device driver, select whether to restart the PC.



12. Connect WIBU-Keys to the failover server.

## 20.2 Uninstall

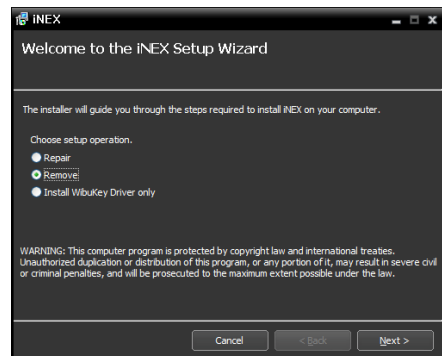
1. Stop running the services and iNEX program first.

**NOTE:** The iNEX software might not be uninstalled correctly if you uninstall it while the services or Client program is running.

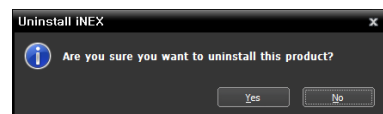
**CAUTION:** The iNEX software should be uninstalled following the procedures below. If you delete the installation folder manually, the iNEX software cannot be uninstalled or reinstalled.

2. Go to the Start Menu, and click iNEX. Click Uninstall iNEX.

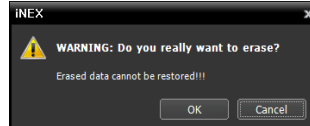
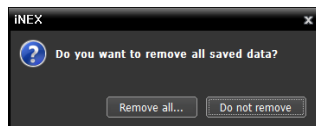
**NOTE:** You can uninstall the software by using the software CD. Insert the software CD in the server or Client PC and run the *setup.exe* file. Select *Remove* and click *Next*.



3. Click Yes when the following screen appears.



4. Click the Remove All or Do not remove button when the following screen appears. Clicking the Remove All button deletes all saved data including recorded video and previous settings in the system. Clicking the Do not remove button uninstalls the software without deleting any saved data in the system and keeps all saved data in the system.

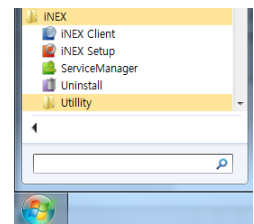


**NOTE:** The deleted data cannot be restored once the data is deleted.

5. Click the OK button to complete the uninstall process.

## 20.3 Running Services

When the service is installed, the service runs automatically. You can also start or stop running the service manually. Go to the Start Menu → Click iNEX → Run the Service Manager program.



Administration failover service

Service	Status	CPU Usage	Memory Usage
Administration Failover Service	Working	0 %	20188 KB

Monitoring failover service

Service	Status	CPU Usage	Memory Usage
Monitoring Failover Service	Working	0 %	14104 KB

Recording failover service

Service	Status	CPU Usage	Memory Usage
Recording Failover Service	Working	0 %	366572 KB

Video wall failover service

Service	Status	CPU Usage	Memory Usage
Video Wall Failover Service	Working	0 %	24316 KB

Streaming failover service

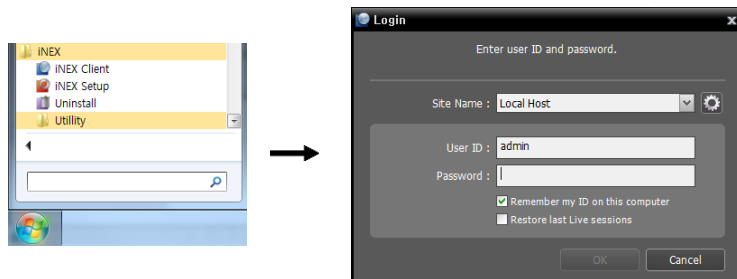
Service	Status	CPU Usage	Memory Usage
Streaming Failover Service	Working	0 %	148580 KB


Check the status of service. If the service is not listed as **Working** under **Status**, start the service manually.

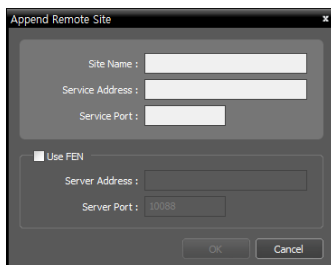
## 20.4 Log In

You are required to log in to the administration service as follows when running the Setup and Client programs.

Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.



- **Site Name:** Select the administration service to connect to from the list. You can add other administration services to the list or modify information about the administration service in the list by clicking the  button at the right.



- **Site Name, Service Address, Service Port:** Designate the name of the administration service and enter the IP address and port number of the administration server (default: 11001/11000).

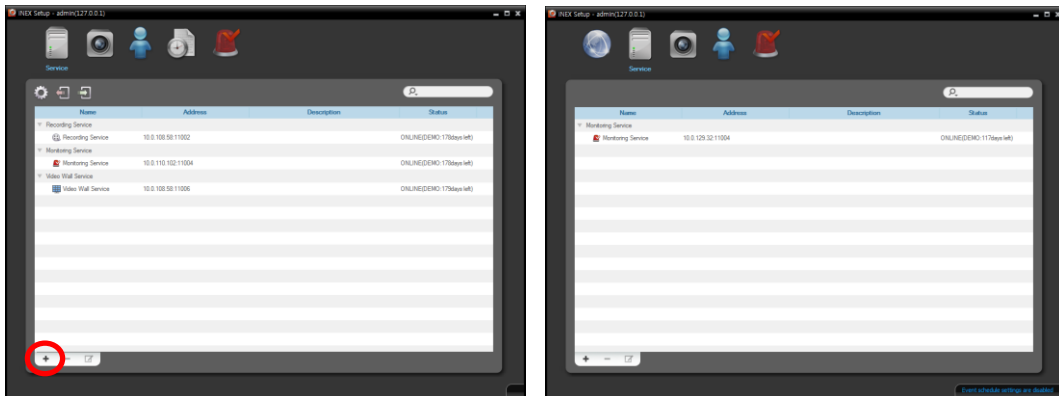
- **User ID, Password:** Enter your user ID and password. The default user ID is **admin** and default password is **12345678**. You can change the user ID and password in the User menu.
- **Remember my ID on this computer:** Check the box if you want to save your ID for logging on.
- **Restore last Live sessions:** Check the box if you want to restore the previous live monitoring sessions in the current Live panels of the Client program (supported only for the Client program).

## 20.5 Registering Services

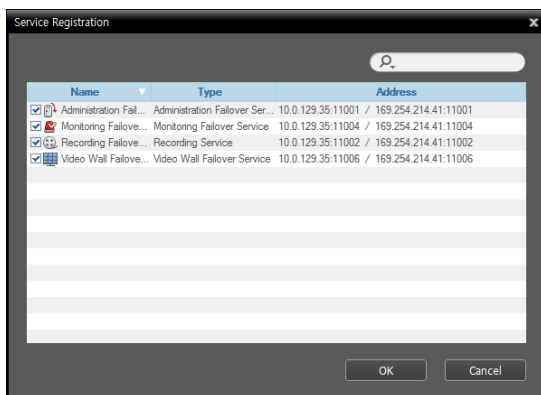
**NOTE:** Check that a monitoring, recording, or video wall service is registered. It is available to register each service's failover service only when the service is registered.

Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.

Select the **Service** menu, and then register administration, monitoring, recording or video wall failover service following the procedures below.

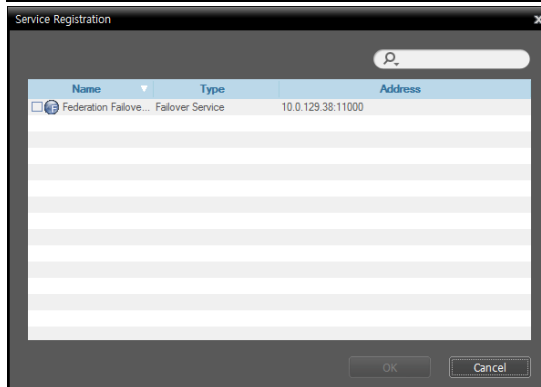


1. Click the **+** button at the bottom. The **Service Registration** window appears, and a list of available services is displayed with information about each service.

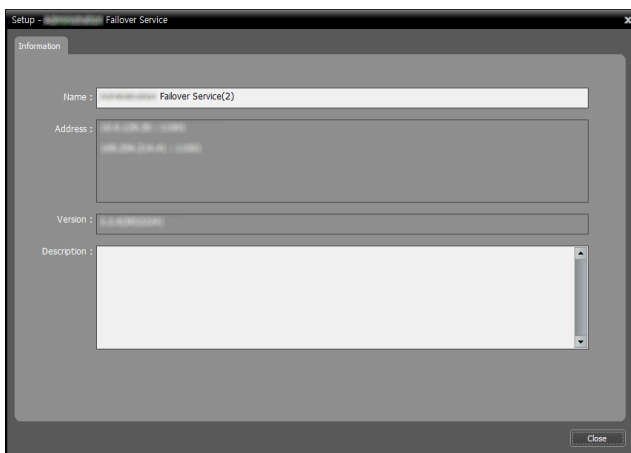
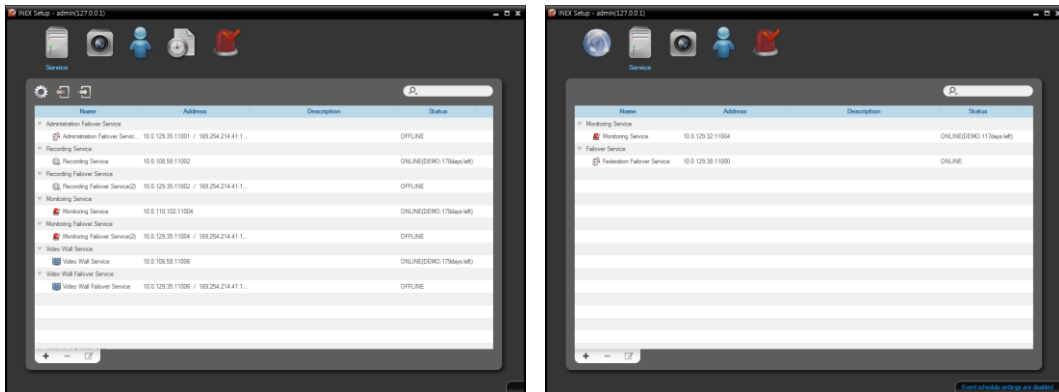



- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.



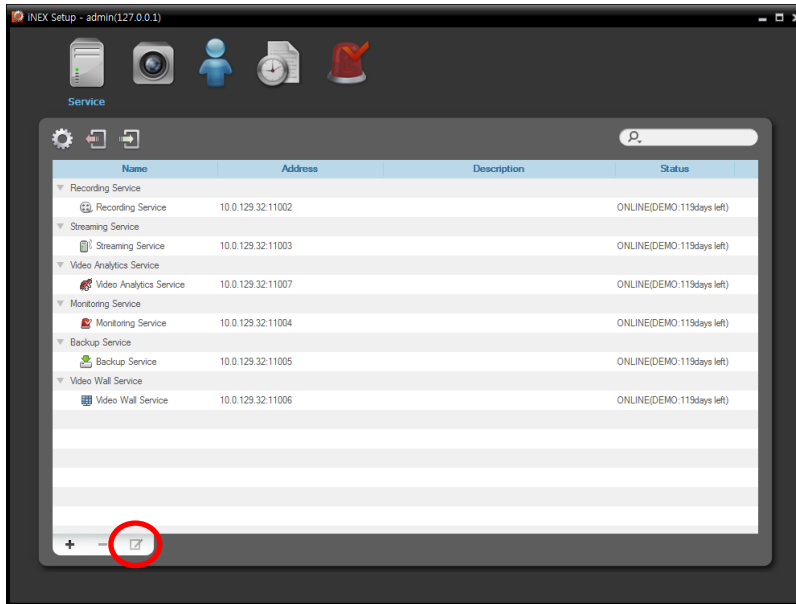
2. Select administration, monitoring, recording or video wall failover service to register on the iNEX system, and the selected services are displayed in the service list.




Select a failover service and click the  button at the bottom. You can change the failover service's name.

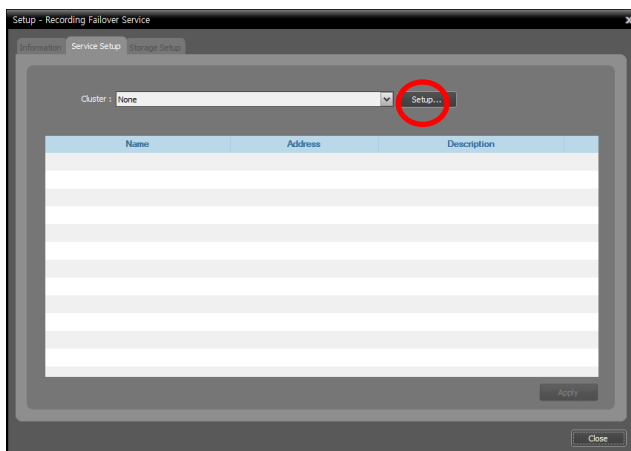
## 20.6 Failover Service Configuration

You are required to configure the recording failover service, streaming failover service and video wall failover service for the services to operate properly. Setting up and operating the iNEX Client program of the iNEX failover software is identical to that of the iNEX Standard software.



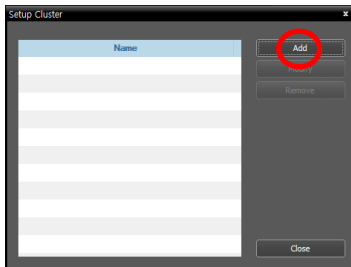
Select a failover service and click the  button at the bottom.

### Recording Failover Service

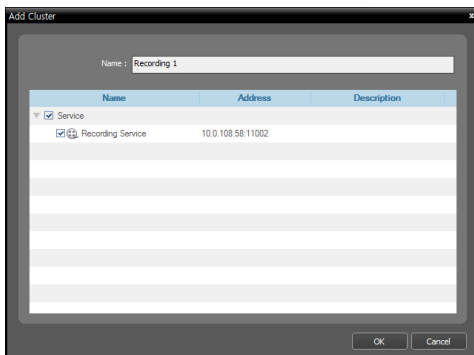


Click the Service Setup tab and click the Setup... button.





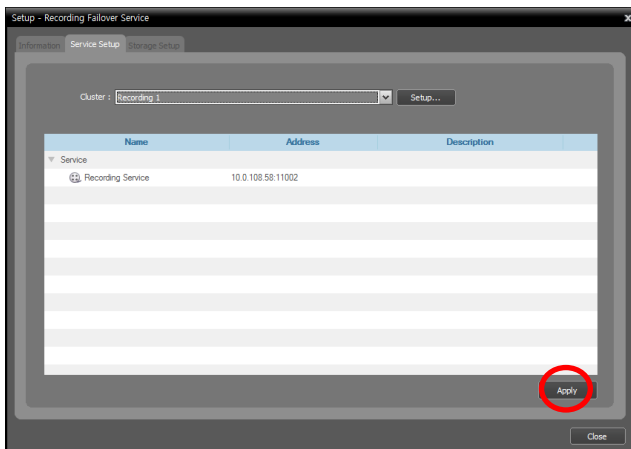
Click the Add button.



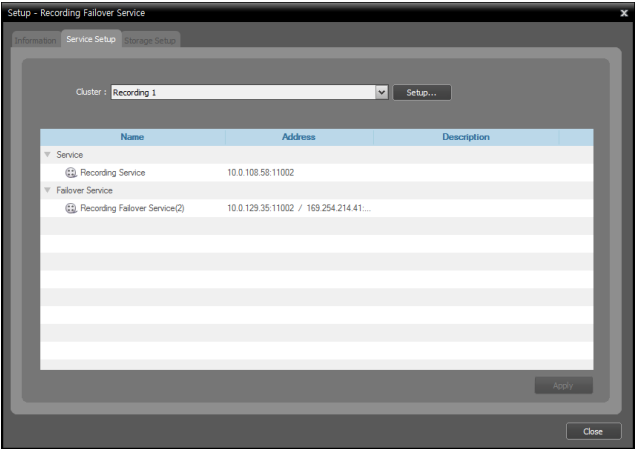
A list of available services is displayed. You can cluster more than one recording service for one failover service. Select recording services to cluster.

Enter the cluster name and click the OK button.

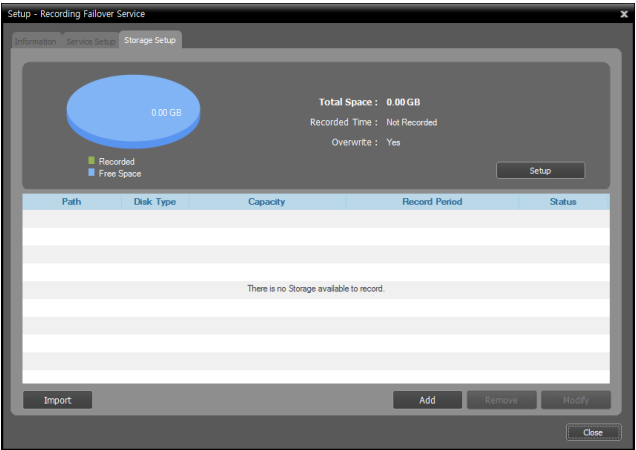
**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.



A list of clustered services is displayed. If you have added more than one cluster, you can choose from the Cluster drop-down list. Click the Apply button.

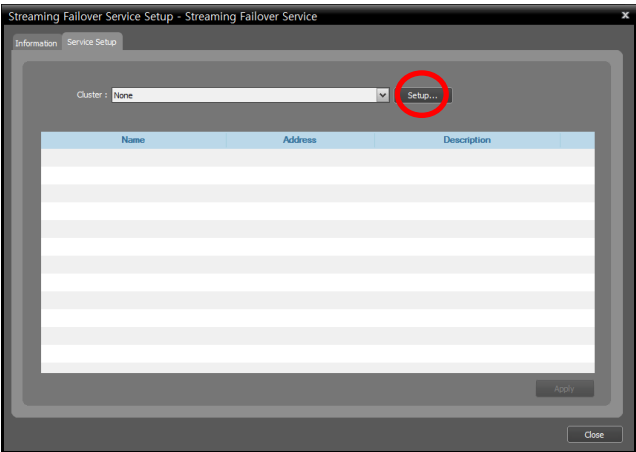


Whenever any problem occurs in one of the listed recording services, the failover service will replace the recording service.



Click the Storage Setup tab and assign storage for recording.

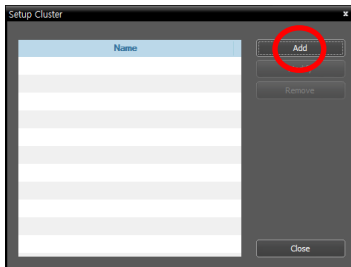
## Streaming Failover Service



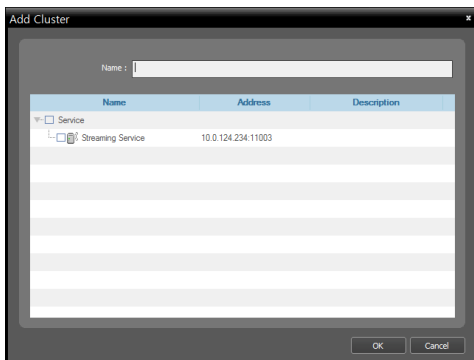
Click the Service Setup tab and click the Setup... button.







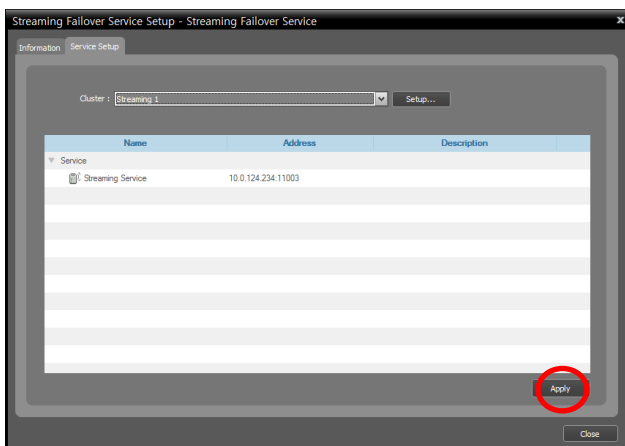
Click the Add button.



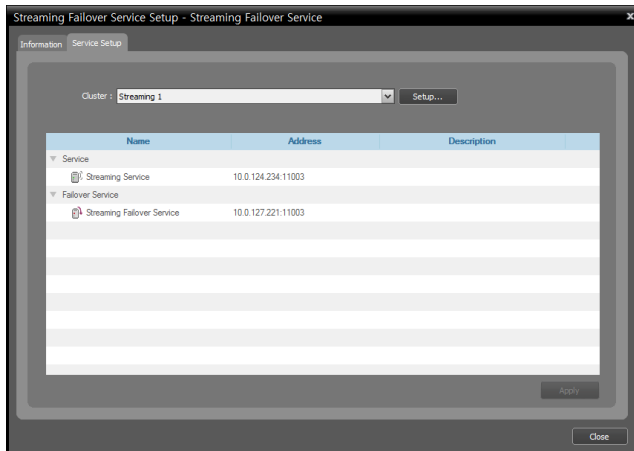
A list of available services is displayed. You can cluster more than one streaming service for one failover service. Select streaming services to cluster.

Enter the cluster name and click the OK button.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

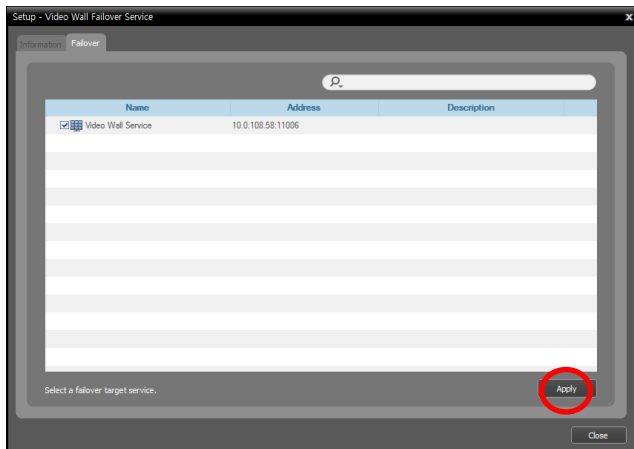


A list of clustered services is displayed. If you have added more than one cluster, you can choose from the Cluster drop-down list. Click the Apply button.



Whenever any problem occurs in one of the listed streaming services, the failover service will replace the streaming service.

## Video Wall Failover Service



Click the Failover tab and select a video wall service. It is not allowed to cluster video wall services, and the failover service will replace only one service.

Click the Apply button.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

## Chapter 21 — Recording Redundant Service

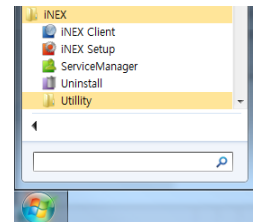
The recording redundant service enhances system stability by recording video redundantly from the recording service.

### NOTES:

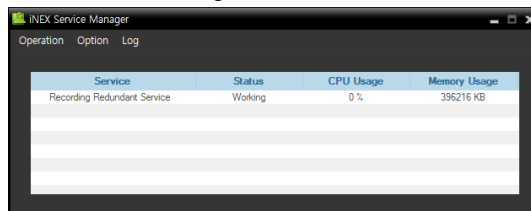
- The recording redundant service has some limitations unlike the recording service or recording failover service.
- The recording redundant service records video from every device the way video is recorded from devices which do not use the iNEX protocol (Not supported for instant recording).
- The recording redundant service matches the recording service one to one.
- The recording redundant service demo license expires after 70 days. It is valid when the authentication is complete with the software or WIBU-Key license before the expiration date.
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).
- The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (*OpenSourceGuide\OpenSourceGuide.pdf*) or as a printed document included along with this document.
- The information in this manual is believed to be accurate as of the date of publication even though explanations of some functions may not be included. We are not responsible for any problems resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

### 21.1 Running Services

When the service is installed, the service runs automatically. You can also start or stop running the service manually. Go to the Start Menu → Click iNEX → Run the Service Manager program.



Recording redundant service

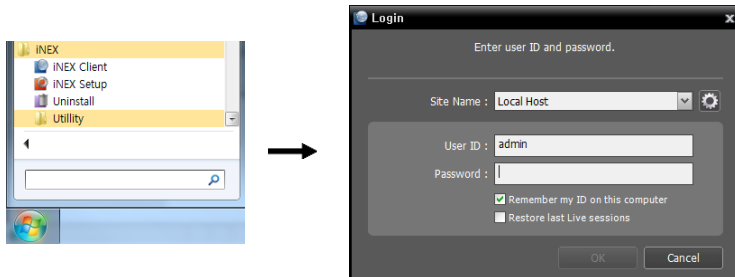



Check the status of service. If the service is not listed as Working under Status, start the service manually.

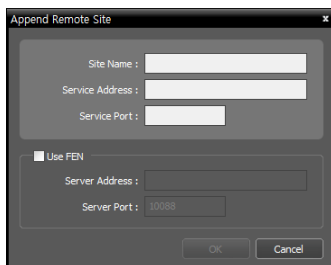
## 21.2 Log In

You are required to log in to the administration service as follows when running the Setup and Client programs.

Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information.



- **Site Name:** Select the administration service to connect to from the list. You can add other administration services to the list or modify information about the administration service in the list by clicking the  button at the right.



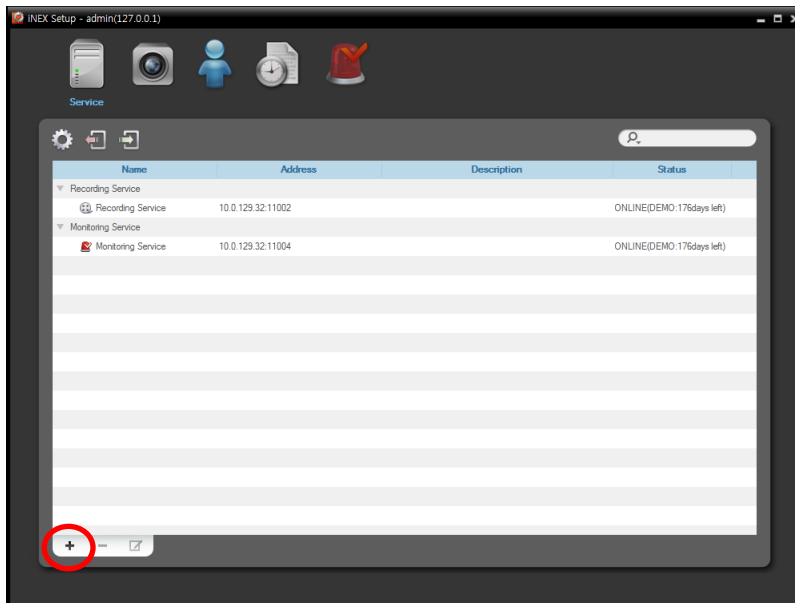
- **Site Name, Service Address, Service Port:** Designate the name of the administration service and enter the IP address and port number of the administration server (default: 11001).

- **User ID, Password:** Enter your user ID and password. The default user ID is **admin** and default password is **12345678**. You can change the user ID and password in the User menu.
- **Remember my ID on this computer:** Check the box if you want to save your ID for logging on.
- **Restore last Live sessions:** Check the box if you want to restore the previous live monitoring sessions in the current Live panels of the Client program (supported only for the Client program).

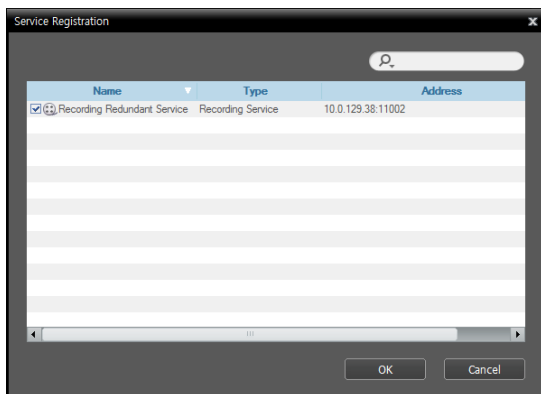
## 21.3 Registering Services

Go to the Start Menu → Click iNEX → Run the iNEX Setup program and enter login information.

Select the Service menu, and then register recording redundant service following the procedures below.



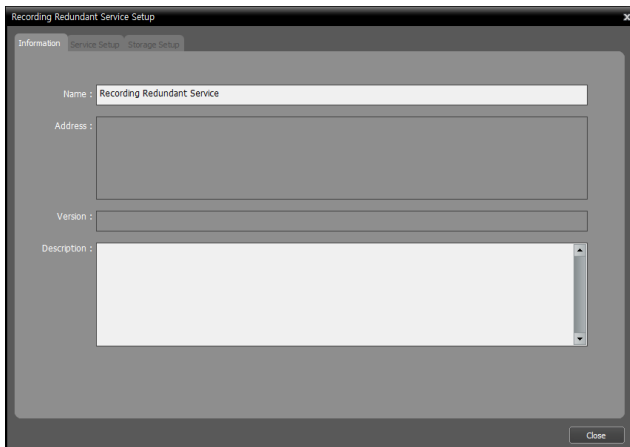
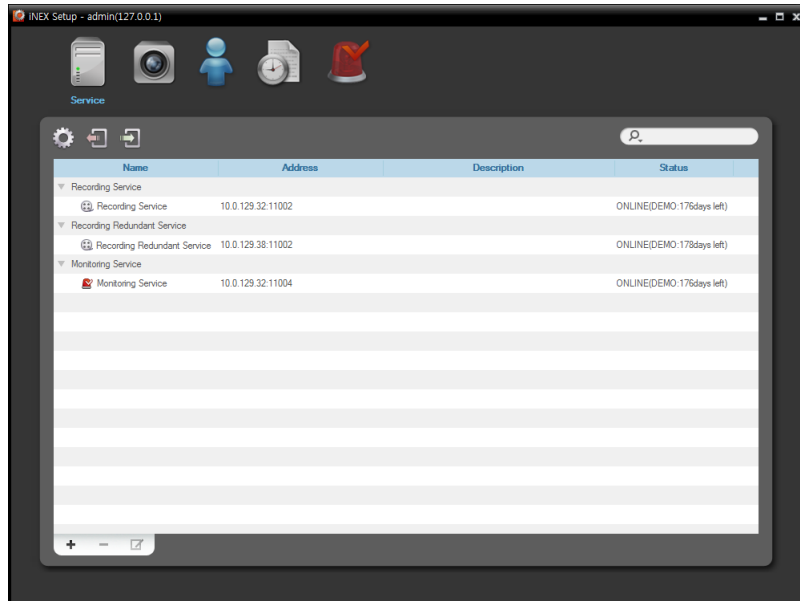
1. Click the **+** button at the bottom. The Service Registration window appears, and a list of available services is displayed with information about each service.




- **Name:** Displays services that are currently connected to the administration service via the network.
- **Type:** Displays the service type.
- **Address:** Display the IP address and port number of each server.

**NOTE:** Only the services of which the administration server information (*Service Manager* → *Option* → *Server Option*) matches the currently connected administration server are available.

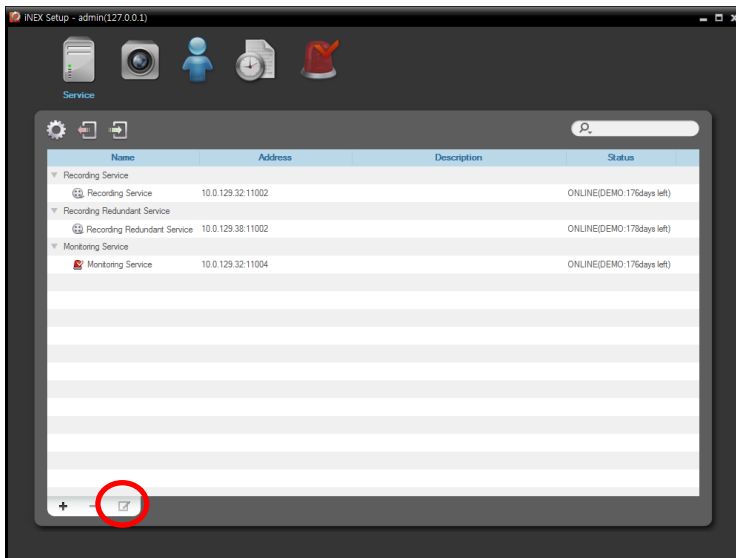
2. Select recording redundant service to register on the iNEX system, and the selected services are displayed in the service list.



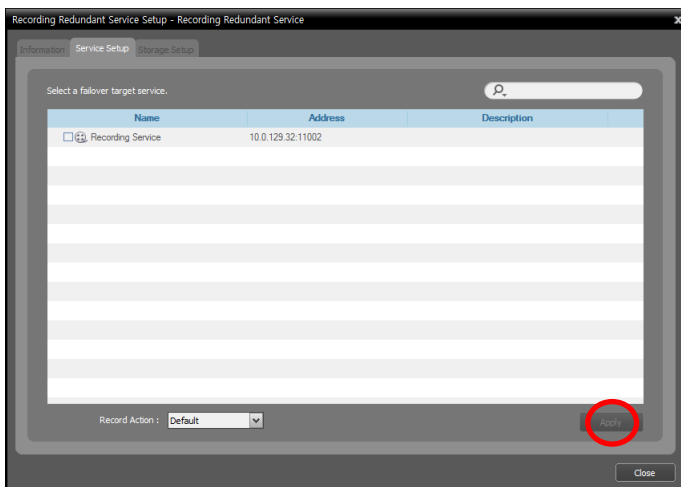
Select a recording redundant service and click the  button at the bottom. You can change the recording redundant service's name.

## 21.4 Service Configuration

You are required to configure the recording redundant service for the services to operate properly. Setting up and operating the iNEX Client program of the iNEX recording redundant software is identical to that of the iNEX Standard software.



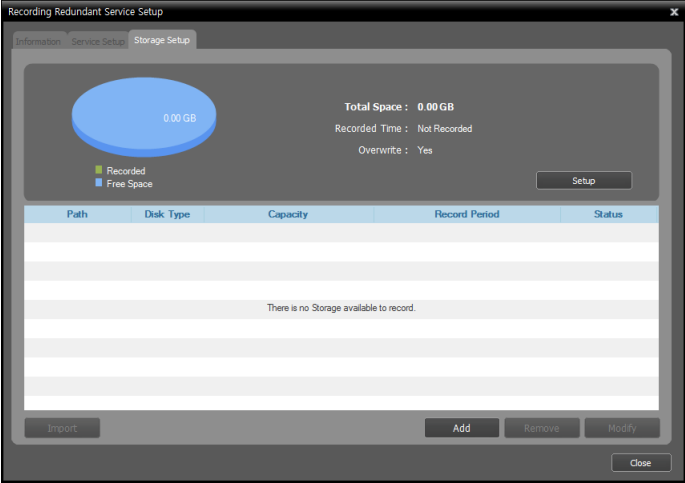
Select a recording redundant service and click the ☒ button at the bottom.



Click the recording redundant service and click the Apply button.

- **Record Action:** Select the record action for the recording redundant service.

**NOTE:** If you select *Default*, the recording redundant service records in the same way as the recording schedule (recorded as default if the devices do not use the iNEX protocol).



Click the Storage Setup tab and assign storage for recording.

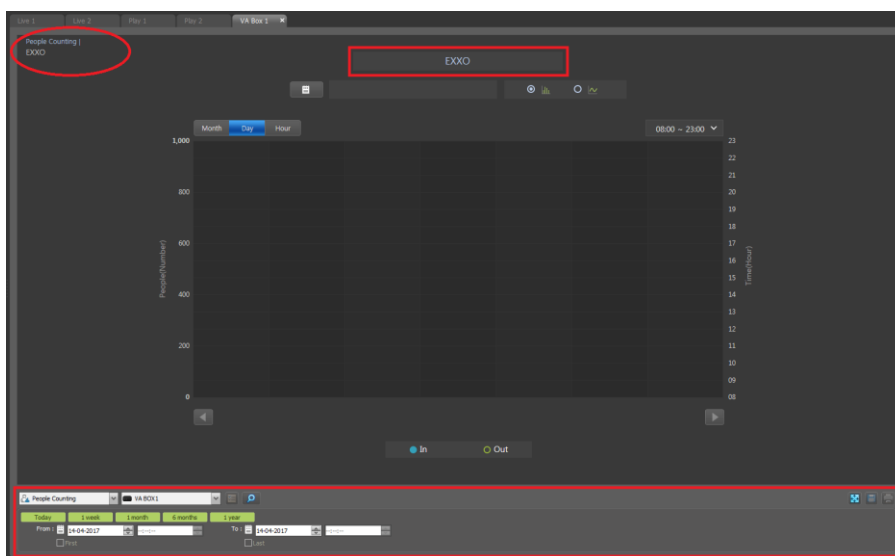


## Chapter 22 — Video Analysis Report (VA Box)

You can search video analysis information and analyze with graphs and images by using devices connected to VA Box. Video Analysis Report is supported in the VA Box panels (max. 3). Select **New Tab** from the menu and click **VA Box** to add a tab.

### 22.1 Connection and Search

1. Select a device from the devices connected to VA Box on the **Site** list, and drag and drop on the device VA Box panel. When connected, the name of the device is displayed on the top right and top center of the panel, and time search, VA function and device select options are activated at the bottom left.







2. Select a VA function (People Counting, Queue Management, Heat Map) page from the bottom left combo box.
3. Select a VA device and time range, and click **Search** button (🔍) to see the video analysis data as a graph and image.
4. Drag and drop other device on the VA Box panel to change the device. Select **Logout** from the **System** menu to disable the device.

### Report Toolbar



Use the toolbar at the bottom of the panel to search a specific VA report.

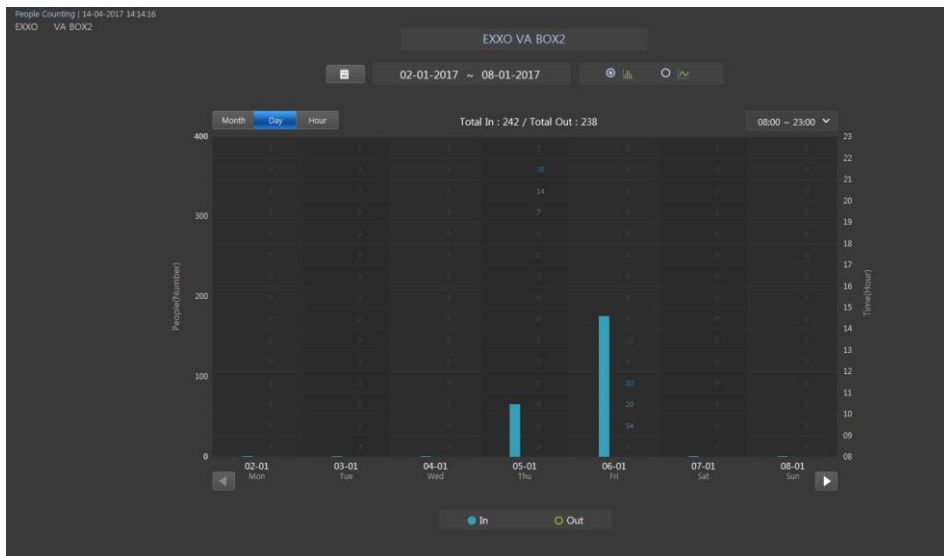
- **From, To:** Set date and time for VA report search. Type specific date and time, or select **First** or **Last** option. Click **Today**, **1 week**, **1 month**, **6 months** or **1 year** to adjust the **From** and **Last** interval.
-  **People Counting** (VA function): Select a VA function page.
-  **VABOX1** (Select VA device): Select a VA Box device.
-  **(Full Screen)**: Displays the report panel in full-screen format.
-  **(Save)**: Saves the data of the report page as an excel (.csv) or image file.







## Page Information

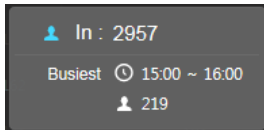
People Counting | 14-04-2017 13:48:11  
EXXO VA BOX2

- Current VA page type
- Current time of the VA report search
- The name of the device connected to VA Box
- The name of VA Box device

## 22.2 People Counting

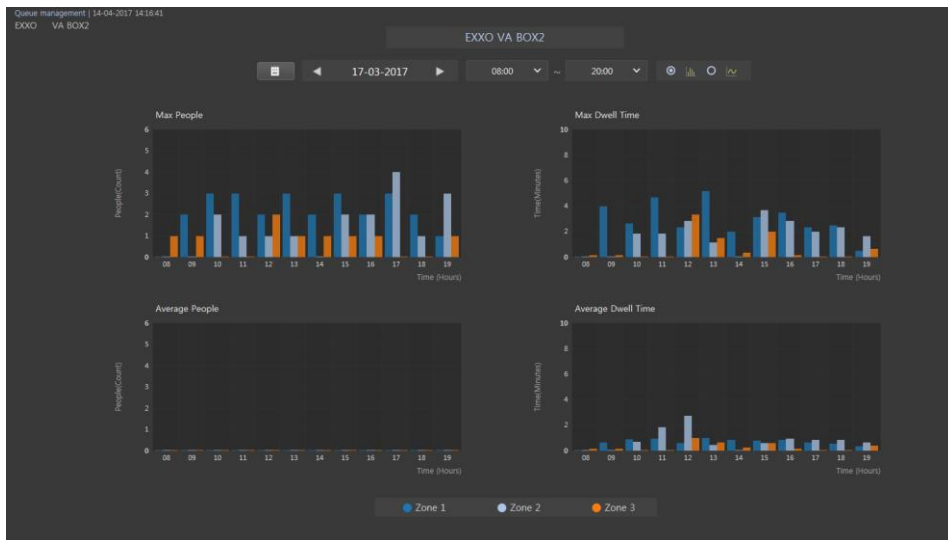


- **Total In/Total Out:** Displays the total number of In/Out counts of the current page period.
-  : Select a specific date from the calendar.
- **Search Period:** Displays the period shown on the current page.
-  : Select between a bar graph and a line graph.
- **Month Day Hour** : Select the X-axis value (Month, Day, Hour).
- **08:00 ~ 23:00** : Select from 08:00~23:00, 24 Hour, AM, PM to display people counting of the specific time zone according to the selected time unit, as a bar or line graph. The number of people is displayed on the graph.
- **People(Numbers):** The left Y-axis shows the value of the bar/line graph.
- **Time(Hour):** The right Y-axis shows the time of numbers indicated on the graph.
-  : Move backward by 1 year (Month), 1 week (Day), 1 day (Hour) according to the search period unit.
-  : Move forward by 1 year (Month), 1 week (Day), 1 day (Hour) according to the search period unit.
-  **In**  **Out** : Select between In/Out to see each data.
- **Graph Tooltip:** Hovering the mouse over the bar/line graph displays the Tooltip information.



- In : 2957 : Indicates the number of people of the selected data.
- Busiest 15:00 ~ 16:00 : Indicates the busiest time of the selected data.
- 219 : indicates the number of people during the busiest time of the selected data.

## 22.3 Queue Management

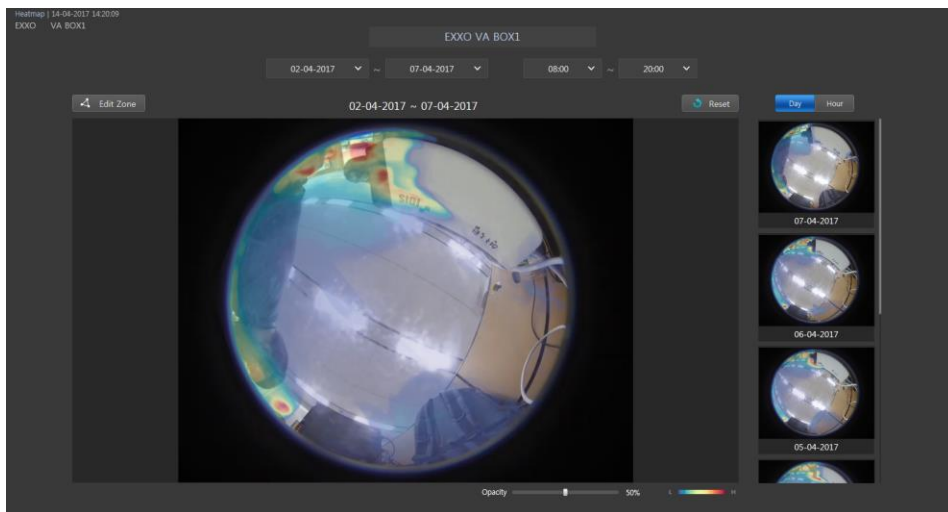


- [Calendar icon] : Select a specific date from the calendar.
- [Previous date icon] : Move to the date with the previous data.
- [Next date icon] : Move to the date with the later data.
- Search Date: Displays the date of the current page.
- 08:00 ~ 20:00 : Selecting start time and end time displays the graph of the specific time range.
- [Bar chart icon] [Line chart icon] : Select between a bar graph and a line graph.
- Zone 1 Zone 2 Zone 3 : Select a specific zone to see the data.

13:00 ~ 14:00	11:00 ~ 12:00
Zone 1 4	Zone 1 08m 00s
Zone 2 3	Zone 2 04m 00s
Zone 3 4	Zone 3 02m 00s

- Graph Tooltip: Hovering the mouse over the bar/line graph displays the Tooltip information.
  - 13:00 ~ 14:00 : Displays the time of the selected data.
  - 4 / 08m 00s : Displays the number of selected people and the dwell time for each zone.

## 22.4 Heat Map




- **Date/Time Search:** Selecting the start/end date and start/end time displays a corresponding heat map image on a still image and thumbnail images.
- **Edit Zone:** Edit a heat map zone. Check the box to define the zone with a mouse click. Specify the area on the still image with the left mouse button, and click the first point or the right mouse button to complete defining the zone. Press **Delete** to cancel the previous point while specifying the area, and press **Esc** to cancel the entire specification.
- **Reset:** Resets the still image with data from the area displayed in the date/time search and changes to the area set in NVR.
- **Day Hour:** Displays the unit of a single thumbnail.
- **Still Image:** Displays the latest image of the camera connected to the selected VA Box.
- **Thumbnail Images:** Displays images divided by a regular time unit, according to the selected date/time above. Select a thumbnail to enlarge the thumbnail image as a still image. Change the time unit or click the **Reset** button to change the still image back to the specified time range.
- **Opacity:** Adjusts the opacity of the heat map image.
- **Color Schema:** Displays a color schema of a heat map. 4 kinds of color schema are available.

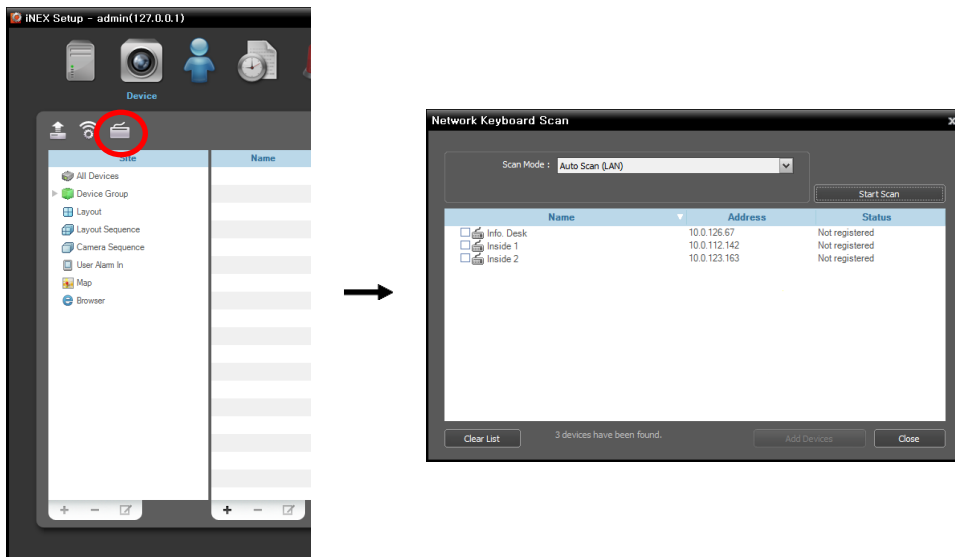
## Chapter 23 — Controlling With a Network Keyboard

You can control the Client program by using a network keyboard.

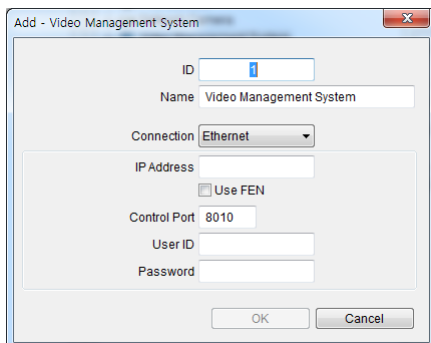
**NOTE:** This function is supported only for a specific model of a network keyboard which needs to be purchased separately.

### 23.1 Registering

1. Register the network keyboard on the administration service: Go to the **Start Menu** → Click **iNEX** → Run the **iNEX Setup** program and enter login information → Select the **Device** menu → Click  (Network Keyboard Setup) button, and the **Network Keyboard Scan** window appears. The way to register a network keyboard is identical to the way to register a device. Refer to 13.1 Registering Devices (p. 147) about registering a device.



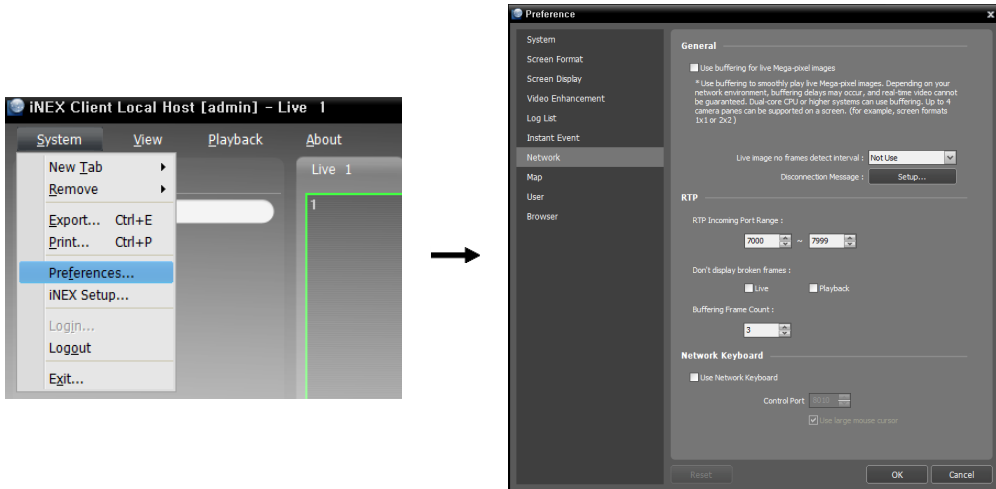
2. Register the Client system on the network keyboard. Refer to the network keyboard's user manual for details.



- **ID (Client system ID):** The network keyboard assigns the ID automatically when the Client system is registered, and you can change the ID. The ID is used to distinguish the Client system from other Client systems when controlling it with a network keyboard, so each must have a unique ID.
- **Name:** Set up a Client system name for your reference.
- **IP Address:** Enter the Client system's IP address. Do not check Use FEN.

- **Control Port:** Enter the Control port number set in the Client System (Check the Control port number in the System menu → Preference → Network → Network Keyboard setting).
- **User ID, Password:** Enter the user ID and password for the connection to the Client system.

3. Enable a network keyboard in the Client system by checking the Use Network Keyboard option.



## 23.2 Connecting

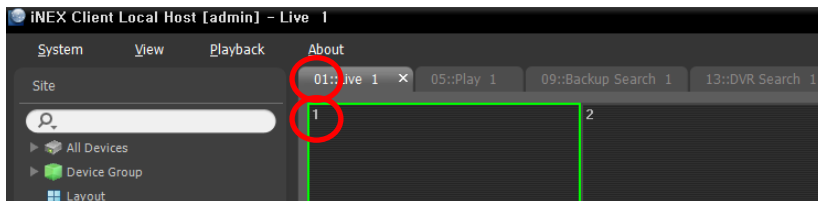
### Network Keyboard LCD Display

Select Devices:  
1

1. Press the Client system ID on the network keyboard.

D001

2. Press the **DEV** button. The network keyboard connects to the Client system. When the connection is succeeded, a unique ID is displayed on each camera screen and panel tab as follows.

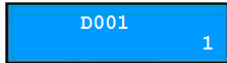


Select Devices:

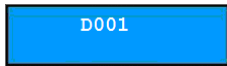
3. Pressing the **SHIFT** and **DEV** button at the same time releases the connection.

## 23.3 Operating

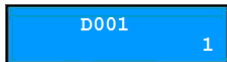
### Monitoring Video



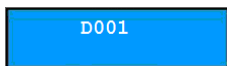
5. Press the Live tab ID on the network keyboard.



6. Press the **DEV** button.

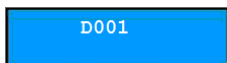
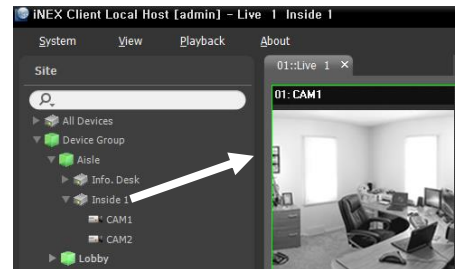


7. Press the camera screen ID.



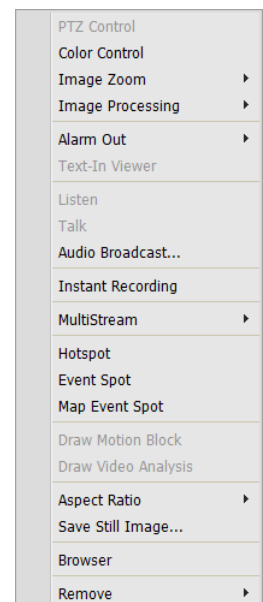
8. Press the **PANE** button.

9. Select a site to connect to from the **Site** list, and drag and drop it on the Live screen by using the mouse connected to the network keyboard. Live video from the selected site is displayed on the screen.



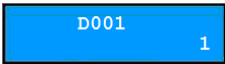
10. Press the **[Menu]** button. The live screen menu is displayed.

11. Moving to the desired item by using arrow buttons and pressing the enter button (**[Enter]**) selects the item in the menu or releases the selection. If you want to exit the current item setting, press the **[Menu]** button and releases the selection.

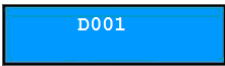


12. Refer to 23.4 Network Keyboard Buttons, Buttons for Client System Control (p. 256) for the explanations about other functions.

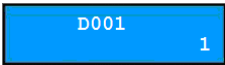
### Playing Back Recorded Video



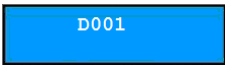
1. Press the Play or DVR Search tab ID on the network keyboard.



2. Press the  button.

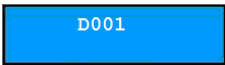
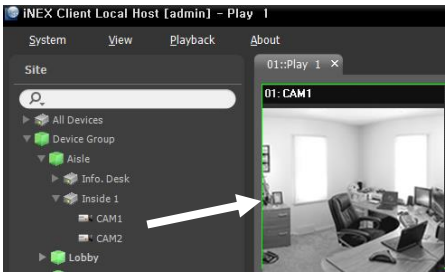


3. Press the camera screen ID.



4. Press the  button.

5. Select a site to connect to from the Site list, and then drag and drop it on the Play or DVR Search screen by using the mouse connected to the network keyboard. Recorded video from the selected site is displayed on the screen.



6. Press the  (Menu) button. The play screen menu is displayed.



7. Moving to the desired item by using arrow buttons and pressing the enter button (  ) selects the item in the menu or releases the selection. If you want to exit the current item setting, press the  (Menu) button and releases the selection.

Image Zoom	
Motion/Object Search	
Image Processing	▶
Aspect Ratio	▶
Save Still Image...	
Remove	▶











8. Refer to 23.4 Network Keyboard Buttons, Buttons for Client System Control (p. 256) for the explanations about other functions.



## 23.4 Network Keyboard Buttons

































The following is an explanation of the network keyboard buttons used to control the Client system. Refer to the network keyboard's user manual regarding buttons for PTZ control.






### Buttons for Operation Commands

Button	Designation	Operation
	Number (1 to 9)	<ul style="list-style-type: none"> <li>ID → <b>MON</b>, <b>PANE</b>, <b>DEV</b>: Selects a monitor, camera screen, panel tab or Client system to control.</li> </ul>
	Number (0)	<ul style="list-style-type: none"> <li>Does not function as a command button.</li> </ul>
	Shift	<ul style="list-style-type: none"> <li><b>SHIFT</b> → Button : Performs the secondary function for buttons that support two functions.</li> </ul>
	ESC	<ul style="list-style-type: none"> <li><b>ESC</b> : Cancels a command during its operation.</li> </ul>
	Connection	<ul style="list-style-type: none"> <li>Client system ID → <b>DEV</b> : Connects to the Client system.</li> </ul>
	Disconnection	<ul style="list-style-type: none"> <li><b>SHIFT</b> &amp; <b>DEV</b> : Releases the connection to the Client system.</li> </ul>
	Panel Tab	<ul style="list-style-type: none"> <li>Tab ID → <b>DEV</b> : Selects the panel tab.</li> </ul>
	Camera Screen	<ul style="list-style-type: none"> <li>Camera Screen ID → <b>PANE</b> : Selects the camera screen.</li> </ul>
	Monitor	<ul style="list-style-type: none"> <li>Monitor ID → <b>MON</b> : Selects the monitor.</li> </ul>
	—	<ul style="list-style-type: none"> <li> : Releases the connection of the currently selected camera screen or device.</li> </ul>
	Function (1 to 8)	<ul style="list-style-type: none"> <li>F1: Displays monitor ID when using more than one monitor.</li> <li>F7 (<b>SHIFT</b> &amp; <b>F3</b>) : Displays or hides the <b>Preference</b> setup screen of the Client program (<b>System</b> menu → <b>Preference</b>).</li> <li>F8 (<b>SHIFT</b> &amp; <b>F4</b>) : Displays or hides the Client program's software version.</li> </ul>

## Buttons for Client System Control

**NOTE:** Some functions may not be supported, depending on the connected device.

Button	Designation	Operation
	Instant Recording On/Panic Recording On	<ul style="list-style-type: none"> <li>Camera Screen ID →  : Starts instant recording/panic recording for the selected camera screen.</li> </ul>
	Instant Recording Off/Panic Recording Off	<ul style="list-style-type: none"> <li>Camera Screen ID → <b>SHIFT</b> &amp;  : Stops instant recording/panic recording for the selected camera screen.</li> </ul>
	Alarm Out On	<ul style="list-style-type: none"> <li>Camera Screen ID →  : Activates the alarm out 1 of the device connected to the selected camera screen.</li> <li>'Alarm-out device No.' →  : Activates the selected alarm out.</li> </ul>
	Alarm Out Off	<ul style="list-style-type: none"> <li>Camera Screen ID → <b>SHIFT</b> &amp;  : Deactivates alarm out 1 of the device connected to the selected camera screen.</li> <li>'Alarm-out device No.' → <b>SHIFT</b> &amp;  : Deactivates the selected alarm out.</li> </ul>
	Display	<ul style="list-style-type: none"> <li> : Allows you to change a screen format. Select a screen format by using arrow buttons and enter button (  ).</li> <li><b>SHIFT</b> &amp;  : Changes to the 1x1 screen format. Pressing the button again returns to the previous screen format.</li> </ul>
	Group	<ul style="list-style-type: none"> <li> : Moves to the next camera group.</li> </ul>
	Freeze	<ul style="list-style-type: none"> <li> : Freezes the current live images on the screen.</li> </ul>
	Zoom	<ul style="list-style-type: none"> <li><b>SHIFT</b> &amp;  : Zooms in the current live images on the screen. You can move the zoomed-in area by using arrow buttons and enter button (  ).</li> </ul>
	Full Screen	<ul style="list-style-type: none"> <li>'Panel tab ID' →  : Displays the panel tab in full-screen format.</li> </ul>
	Search/Live	<ul style="list-style-type: none"> <li> : Displays the Play or DVR Search panel and allows you to search and play back recorded video of the device connected to the selected camera screen in the Live panel is connected.</li> <li><b>SHIFT</b> &amp;  : Returns to the previous Live panel.</li> </ul>
	Fast Backward Play	<ul style="list-style-type: none"> <li> : Plays video backward at high speed in the playback mode.</li> </ul>
	Backward Step	<ul style="list-style-type: none"> <li><b>SHIFT</b> &amp;  : Plays video backward image-by-image in the playback mode.</li> </ul>
	Play, Pause	<ul style="list-style-type: none"> <li> : Plays back video. Pressing the button while playing back video pauses the video.</li> </ul>
	Fast Forward Play	<ul style="list-style-type: none"> <li> : Plays video forward at high speed in the playback mode.</li> </ul>
	Forward Step	<ul style="list-style-type: none"> <li><b>SHIFT</b> &amp;  : Plays video forward image-by-image in the playback mode.</li> </ul>
	Menu	<ul style="list-style-type: none"> <li>Displays the screen menu of the selected camera screen.</li> </ul>

	Enter Button (  )	<ul style="list-style-type: none"> <li>• Selects an item in the screen menu of the selected camera.</li> <li>• Toggles the zoom size when in the zoom mode.</li> </ul>
	Arrow Buttons	<ul style="list-style-type: none"> <li>• Navigates through items in the screen menu of the selected camera screen.</li> <li>• Moves the zoomed-in area when in the zoom mode.</li> </ul>
	Jog Dial	<ul style="list-style-type: none"> <li>• Functions only when in the playback mode.</li> <li>• Plays video forward or backward image-by-image by turning the jog dial clockwise or counterclockwise when playback video has been paused.</li> </ul>
	Shuttle Ring	<ul style="list-style-type: none"> <li>• Functions only when in the playback mode.</li> <li>• Plays video when in the playback mode. The shuttle ring is spring loaded and returns to the center position when released. Turning the ring clockwise or counterclockwise plays video forward or backward. The playback speed varies with the amount the ring is turned: fast forward and rewind.</li> <li>• Controls the playback speed in the DVR Search panel.</li> </ul>



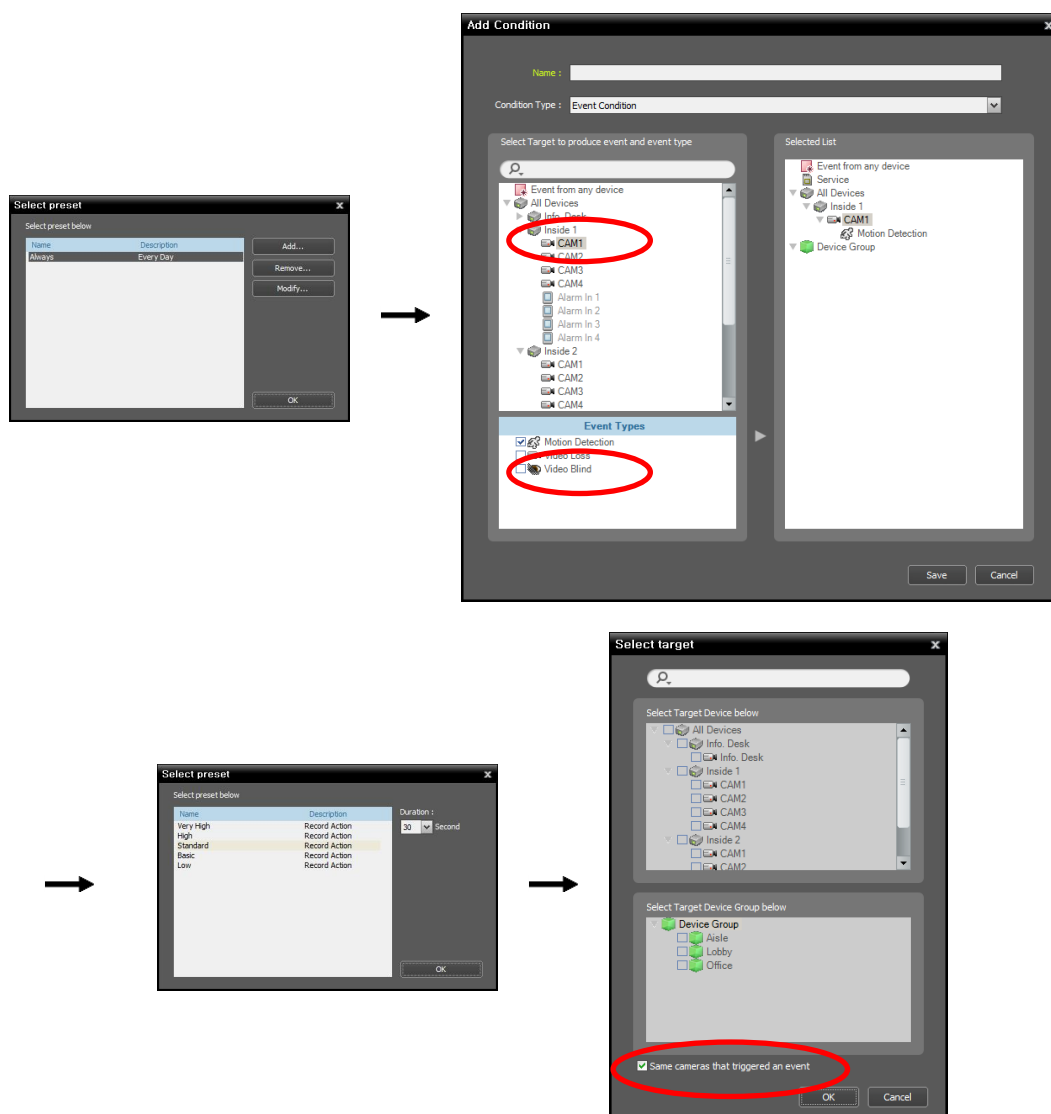
# Appendix

## Schedule Setup Examples of Event Recording

**NOTE:** Event recording may not be supported depending on the protocol that the device uses and device model (supported protocols: iNEX protocol, some versions of the Axis, Panasonic BB, Panasonic WV (DG), Baster, Mobotix, Pelco, RTSP/STP, Protocol-H, IQinVision, Sony, CohuHD and ONVIFTM Conformance protocols). Ask your dealer or distributor for details.

### Example I

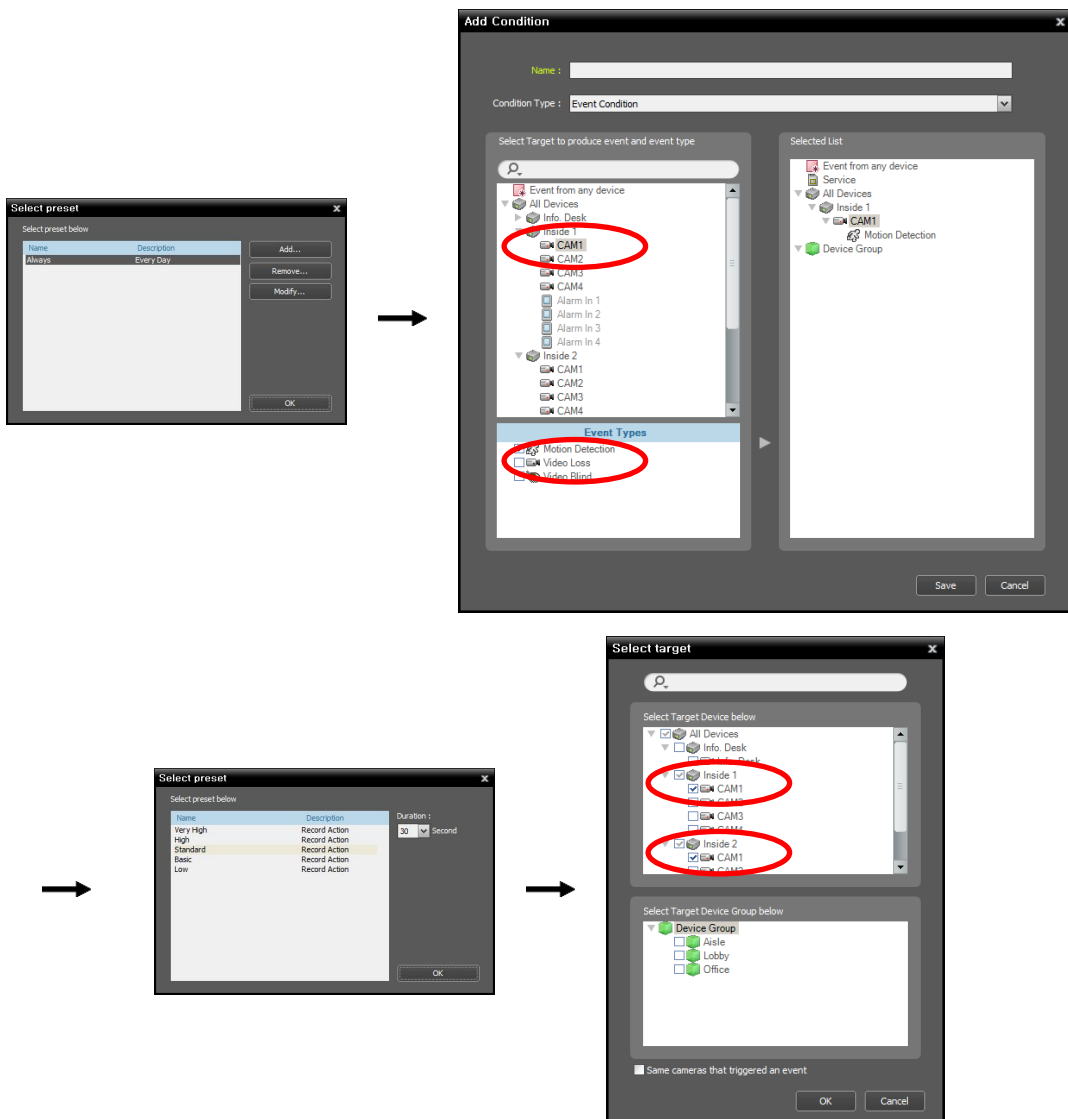
If motion detection events are detected at camera 1 on the Inside 1 device, and you want to record video from that camera, set up as follows:



- Time Coverage preset: Select the Always preset.
- Condition preset
  - Condition Type: Select Event Condition.
  - Select Target to produce event and event type: Select All Devices, Inside 1, and CAM1 in order.
  - Event Types: Select Motion Detection.
- Action preset: Select a desired Preset.
- Target preset: Select the Same cameras that triggered an event option.

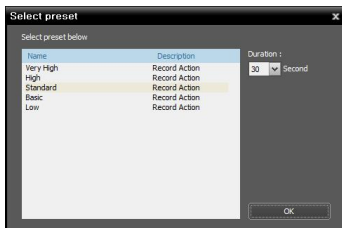
## Example II

If motion detection events are detected at camera 1 on the Inside 1 device, and you want to record video from that camera and camera 1 of the Inside 2 device, set up as follows:

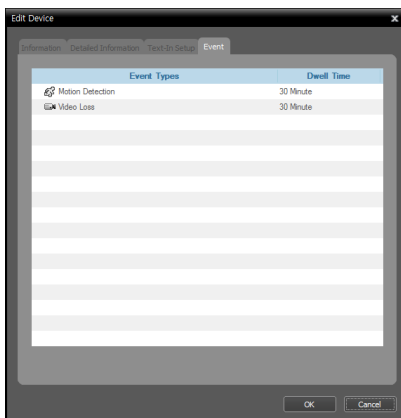


- Time Coverage preset: Select the Always preset.
- Condition preset
  - Condition Type: Select Event Condition.
  - Select Target to produce event and event type: Select All Devices, Inside 1, and CAM1 in order.
  - Event Types: Select Motion Detection.
- Action preset: Select a desired Preset.
- Target preset: Release the Same cameras that triggered an event option → Select CAM1 of the Inside 1 device and CAM1 of the Inside 2 device from the All Devices list.

### Example of Event Recording Period



- Recording Schedule menu > Action schedule window – Duration: 30 Second



- Device menu – ☒ button > Edit Device > Event tab – Dwell Time: 30 Minute

\* This dwell time setup is supported only for devices which do not use the iNEX protocol and which event related functions are supported for.

When the event recording duration is set to 30 second and the event dwell time is set to 30 minute, and event occurs at 1 o'clock, the recording period is as follows:

Protocol	Event Release Notification Time from Device	Recording Period
iNEX	N/A	1:00:00 ~ 1:30:00
Others	X	1:00:00 ~ 1:30:30
	1:30:10	1:00:00 ~ 1:30:40
	1:40:00	1:00:00 ~ 1:30:30

## OSD Information

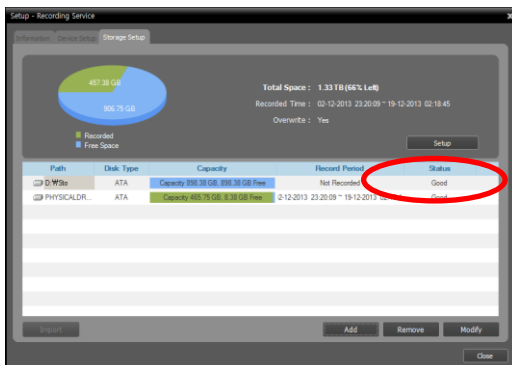
The OSD (On Screen Display) is displayed in each camera screen in the Live screen of the Client program.



- Camera Title: Indicates the camera name set in the iNEX program (upper left corner of the screen).
- (Listen or Talk): Indicates the Client system can receive audio from or sends audio to the device (upper right corner of the screen).
- (PTZ): Indicates PTZ control is enabled (upper right corner of the screen).
- (Camera Sequence): Indicates the cameras are being sequenced (upper right corner of the screen).
- (Red: Is displayed during scheduled recording), (Orange: Is displayed during panic recording), (Blue: Is displayed during instant recording): Indicates video is being recorded in a recording server (upper right corner of the screen).
- (Zoom In): Indicates video is zoomed in (upper right corner of the screen).
- Date, Time: Indicates the date or time of the administration server (bottom of the screen).
- Event Alert: Indicates an event detected (highlights the camera title bar in red).
- Motion Block: Indicates a motion event detected in the boxed area (on image) (supported only for network video transmitters which use the iNEX protocol).

## Hard Disk Status Display

The iNEX system displays storage's hard disk status (Go to the **Service** menu > Select a recording service > Click the right mouse button and select **Service Setup** > Click the **Storage Setup** tab).



- (Disk Bad): Indicates bad sectors are created on hard disk as much as or more than the defined percentage. Refer to 4.3 Setup, Service, System Setup (p. 46) for details about defining the percentage.



## Network Disconnection Log

ID	Explanation	ID	Explanation
0	Unknown error.	15	Cannot reach the recording service.
1	Logout.	16	No route is found to the device.
2	All channels of the device are being used.	20	Connection cancelled.
3	Invalid product version.	26	The RTP port is already in use.
4	Invalid user ID or password.	27	SSL connection failed.
10	No device is running.	28	Network connection timeout.
11	Network is down.	29	Host connection timeout.
12	Cannot reach the device's network.	30	The device does not support RTP over TCP.
13	Connection timeout.		

## Camera Installation Guide for Video Analytics Detection

For the video analytics detection to work properly, the cameras must be installed properly.

### Location

- **Indoors:** Check the lighting condition.
  - **Low Light:** Degrades the performance of the video analytics detection.
  - **Bright Light:** See the Lighting section below.
- **Outdoors:** Check the weather condition.
  - **Rain & Snow:** Makes it difficult to distinguish objects from rain and snow and can cause false detection.
  - **Light:** Swarms of bugs and birds which are attracted to the bugs can cause false detection. It is recommended to position lights as far as possible from cameras by using a bracket if possible.

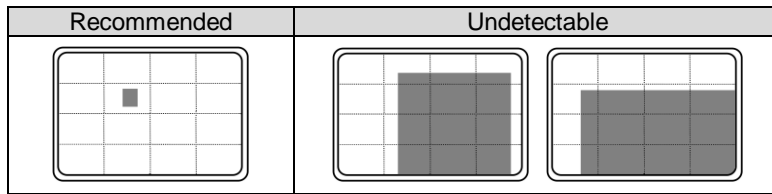
### Lighting

- **Sunlight:** If the camera is pointed directly at the sun, the video analytics function will not work.
  - Do NOT point cameras directly east or west which can blind the camera at sunrise or sunset.
  - Extend the camera's sun shield if possible to increase protection from direct sunlight and protect the lens from dust and weather.
- **Artificial Light:** If the camera is pointed directly at a light, the video analytics function will not work.
  - If lights are in front of the camera, avoid pointing the camera directly at the light or light reflected from shiny floors.

### Camera Position

- **Height/Angle:** Greater heights with steeper angles provide more pronounced sensation of movement in the detection area. The camera must be mounted higher than people's heads.
- **Object Size:** If an object size is too big or too small, the object cannot be recognized by video analytics detection. The object has to be large enough but not too big to be detected (bigger than 1/4 and smaller than 3/4 of the screen vertically and horizontally). If the object size is too big on the screen, place the camera farther from the object or use a shorter lens. Do NOT use digital zoom in order to adjust the object size. Refer to the images below for the detectable ratio of the object size.

**NOTE:** The detectable object size on the screen might be different from the ratios shown below depending on the camera installation environment. Check the proper image size for detection on the screen in the current environment and adjust the camera position accordingly.




## **Background**

- **Floor:** If the floor is made of glossy or transparent material and reflects light to the camera, place the camera as parallel as possible to the floor.
- **Windows:** If windows reflect sunlight or lights into the camera, place the camera as parallel as possible to the windows.

## **Camera Settings**

- **Focus:** The focus settings for night might be different from the settings from day. Check and adjust the focus to be optimized for both day and night.
- **BLC:** If the camera has an automatic backlight feature, disable the feature.
- **Shutter Speed Control:** If the camera has a slow shutter feature where the shutter speed is automatically reduced at night, disable the feature.

## **Troubleshooting**

Problem	Possible Solution
Login fails indicating no server running.	<ul style="list-style-type: none"> <li>• Click the  button in the login screen and check that information about the administration server is set up correctly.</li> </ul>
Monitoring is not available.	<ul style="list-style-type: none"> <li>• Check that devices have been added to a device group.</li> <li>• Check that you have authority for monitoring.</li> </ul>
The connection was released during monitoring and the Client system repeats reconnecting.	<ul style="list-style-type: none"> <li>• Check the device status and the network connections for the device and iNEX system.</li> <li>• Check that the streaming service is running. When the streaming service is not running, monitoring is still available but it is restricted to fewer users based on the maximum number of simultaneous connections supported by the device.</li> </ul>
No live video.	<ul style="list-style-type: none"> <li>• Check the camera connections in the device.</li> <li>• Video display might lag because of system or network congestion.</li> </ul>
Two-way audio communication is not available.	<ul style="list-style-type: none"> <li>• Check the speaker and microphone connections in the device and the iNEX system.</li> <li>• Check the audio input and output settings of the device.</li> <li>• Two-way audio communication is one-to-one communication. If the device is already in audio communication with another system, try again when the other audio communication is disconnected.</li> </ul>

Problem	Possible Solution
Recording is not available.	<ul style="list-style-type: none"> <li>• Check that storage is allocated and a recording schedule is set up.</li> <li>• Check the device registration information. The recording function is supported only for a device registered as <b>admin</b> user.</li> <li>• Check the recording status of the device. If the same device is registered on another recording service which is registered on another administration service, only the first recording server that is connected to the device records video. Once a recording service connects to the device, other recording servers will not record video from the device unless connection of the first recording service is released. To record video in the current recording server, delete the device registration or disable the device in the administration service on which the other recording service is registered by editing the device information.</li> </ul>
Recording OSD is not displayed.	<ul style="list-style-type: none"> <li>• The recording OSD might be displayed later or for longer than the scheduled time because of the recording delays caused by system congestion.</li> </ul>
A WIBU-Key is not recognized.	<ul style="list-style-type: none"> <li>• Disconnect the WIBU-Key from the current USB port and connect it to other USB ports. The problem might occur when you try to connect other USB devices to the same administration server as the WIBU-Key is connected.</li> </ul>
Cannot operate the iNEX program because of wrong ID and password.	<ul style="list-style-type: none"> <li>• Run the SecretKey program (Go to the <b>Start</b> Menu → Click <b>iNEX</b> and then <b>Utility</b>). When you provide the result to your dealer or distributor, you will receive a new user ID and password.</li> <li>• Uninstall and reinstall the iNEX program. You must delete all saved data, and the deleted data cannot be restored.</li> </ul>
Cannot operate the iNEX program because of wrong port number.	<ul style="list-style-type: none"> <li>• Check that the current port number is used in other programs or filtered or blocked for security purposes and change the port number during the Service Manager program setup. The default port number of administration service is 11001, recording service is 11002, monitoring service is 11004, streaming service is 11003 and video analytics service is 11007.</li> </ul>



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### **WEEE (Waste Electrical & Electronic Equipment)**

#### ***Correct Disposal of This Product***

***(Applicable in the European Union and other European countries with separate collection systems)***



This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.