NVMS-5000

User Manual

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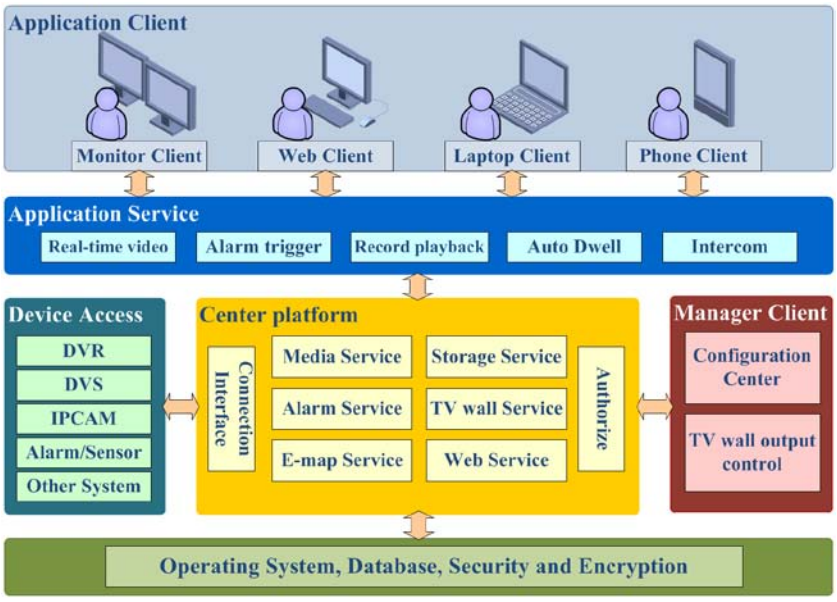
1 Introduction

1.1 NVMS-5000 Brief Introduction

1.1.1 Summerization

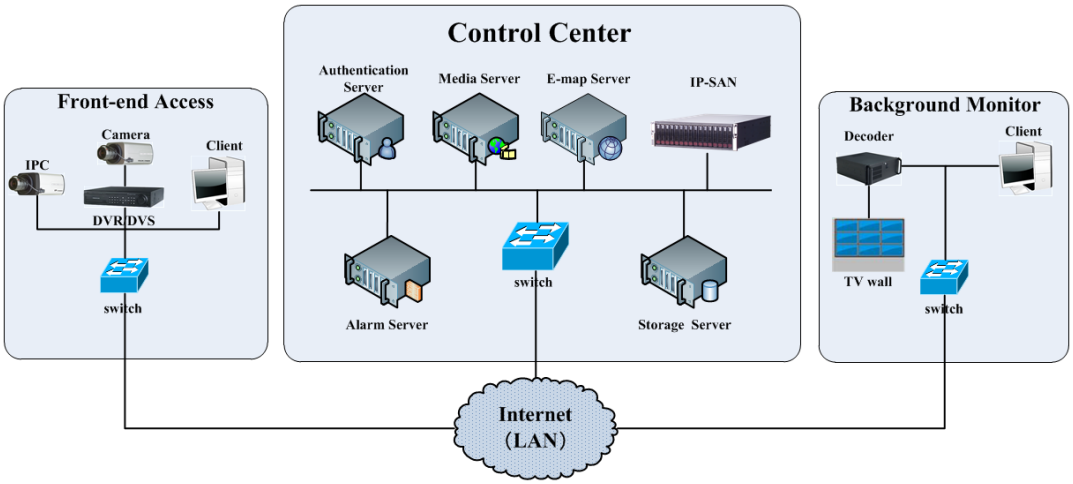
NVMS-5000 which combines video capture devices (including various DVR/DVS/IPC), alarm capture devices (including various alarms and sensors), servers, IP-SAN, clients (including mobile phones) and background monitor (monitor and TV-Wall) is a set of network video surveillance and management software. It is suitable for large, medium and small enterprises to use.

1.1.2 Software Architecture



1.2 System Components

1.2.1 System



1.2.2 Front-end Access

- Front-end devices include IPC, DVR and DVS.
- You need to connect monitor devices such as IPC, DVR and DVS to internet through hubs or routers accessed by Cat5 or Cat5e cables (less than 100 meters) or optical fiber.
- Run monitor client through local PC to configure the local video monitor, monitor devices and so on.

1.2.3 Background Monitor

- Background monitors include TV Wall Client, Config Client and Monitor Client.
- You can setup the real-time image of display devices, these display devices including TV-Wall (decoding images to show on the TV-Wall through video decoder), digital display screen and so on.
- Run config client through local PC to configure and manage the whole system.
- Run monitor client through local PC to view, playback and remotely configure and manage the real-time video of front-end monitor devices.

1.2.4 Control Center

- In the control center, configure servers including authentication server, media transfer server, storage server, alarm server to realize various service, such as, device authentication(including Web), video transmission, image storage, alarm handling, etc.
- In the control center, add IP-SAN storage array to realize centralized storage.
- In the control center, connect servers and IP-SAN storage array to internet through hub.
- We take the following IP addresses for example in this manual. (Please set up IP addresses in accordance with the actual situation) :

NO.	Server	Function	IP address
1	Authentication server	Authenticate devices（including Web）	192.168.6.67
2	Media transfer server	Transfer images	192.168.6.68
3	Storage server	Image storage	192.168.6.69
4	Alarm server	Alarm handling	192.168.6.70
5	Emap server	Emap application	192.168.6.71

Note：If servers are installed in the same PC, these servers shall have the same IP address.

1.3 NVMS-5000 Version Introduction

Version	Average signal access	Max signal access
NVMS-5000 v1.2	300-400 channels video signals	30000-ch video signals

2 Configuration Requirement

2.1 Software and Hardware Configuration Requirement

2.1.1 S&H Config Requirement for Contorl Center

No.	NVMS-5000 components	Recommendation for hardware configuration	Recommendation for software configuration	Number
1	Authentication server/ Media server/ Storage server/ Alarm Server/ E-map Server	● CPU：XEON 3430 2.40GHz/Core 4,8M ● Main board：Intel 3420 ● Memory：4GB DDR3 ECC ● HDD：500GB SATA ● NIC：2×1000M（More NICs need if more networks access）	Windows server 2003 32 bit /Windows server 2008 32bit	It is up to the video format and the number of channel previewing simultaneously for media server and storage server. Authentication Server: 1 Alarm Server:1 E-Map Server: 1
2	HDD	● Capacity: 500GB/1TB/2TB	--	It is up to the stream, channel and time of the storage video
3	IP-SAN (optional)	● Supports 12/16/24 SATAs	--	It is up to the number of the HDD

2.1.2 S&H Config Requirement for Background Monitor

No.	NVMS-5000 components	Recommendation for hardware configuration	Recommendation for software configuration	Number
1	Monitor Client	Intel Core i3 530 double core	Windows 7 SP1 32bit	As required by user

		2.93GHz or above/4GB DDR3/NV GT430 or AMD HD 6570 or above, above 512MB GDDR5 Memory (recommend 1GB GDDR5 memory) /500GB SATA/100M NIC	Professional/ Ultimate	
2	TV-Wall Server	Use 8/4-ch decoder	Windows 7/Windows XP 32 bit	It is up to the number of the decoding channel and output display screen
3	Config Client TV-Wall Client	● CPU：2G or above ● Memory：2GB DDR3 ● HDD：500GB SATA ● NI：1000M	Windows XPSP3 32bit Professional /Windows 7 SP1 32bit Professional/Ultimate	1

2.2 Requirement for Firewall

In order to ensure the network security, it is necessary for the system to setup firewall. All monitor ports shall be opened in the installed servers. The open ports are as follows:

Server	Port Type	Port	Server	Port Type	Port
Authentication server	Internal port	6003	Web server	Service port	8088
Media transfer server	Internal port	6006	Storage server	Internal port	6009
	Auto report	2009	Alarm server	Internal port	6033
E-map server	Internal port	6039			

Note: The above-mentioned ports are the default internal ports of servers. If all these ports are modified, these open ports shall be modified accordingly in the firewall configuration.

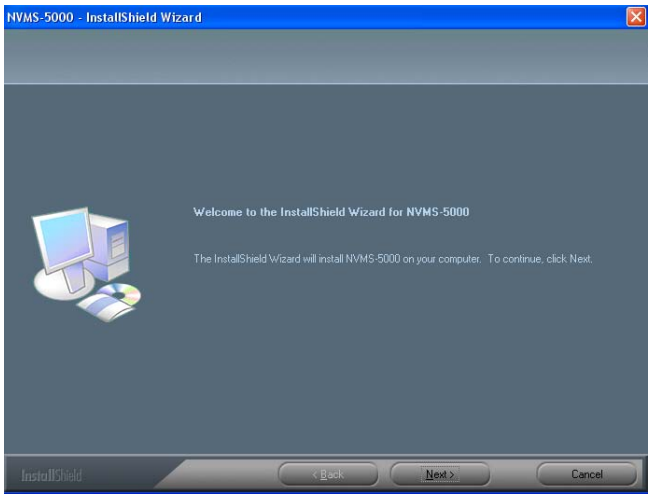
2.3 Confirm Installation Environment

Item	Checkup Standard
Hardware	Checkup whether the hardware meets the standard required. （including CPU, memory, HDD, etc.）
Software	Checkup whether the software meets the standard required.（including the type and version of the operation system, NVMS-5000 version, etc.）
Front-end device	Checkup whether the device access is normal and the DVR version is 3.1.9 or above.
Firewall setup	Checkup whether those open ports of firewall meet the standard required.
Network	Checkup whether the networks of front-end devices and center equipments are normal.
TCP/IP config	Checkup whether the settings of IP address, subnet mask, gateway and DNS correct.

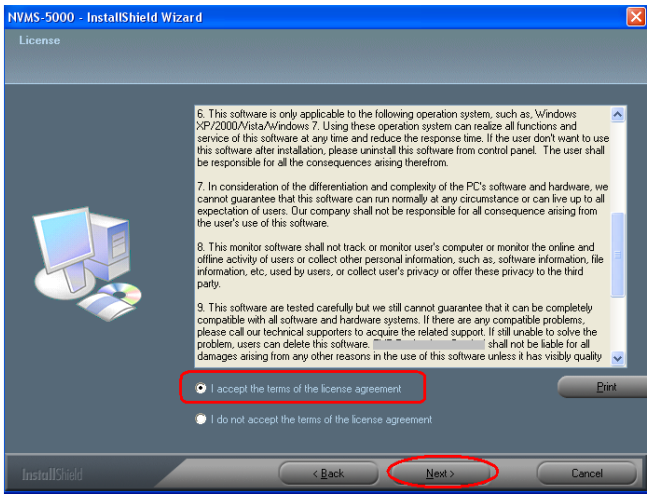
3 Install and Uninstall the Software

3.1 Install the software

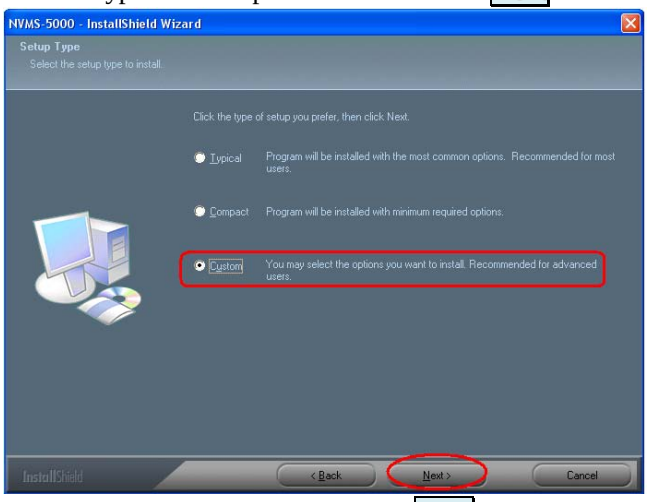
1）Find the “setup.exe” file in the DVD disk. A welcome interface will pop up by double clicking it. Now click ‘**Next**’ button.



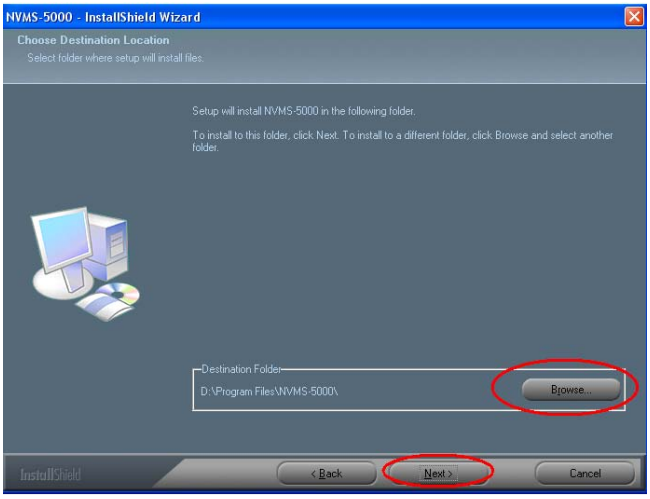
2）Select “**I accept the terms of the license agreement**” and then click ‘**Next**’ button。



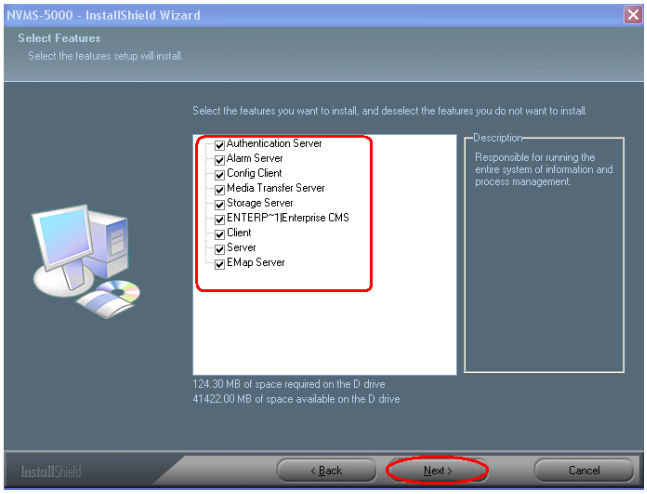
3）Select the setup type（take custom type for example）and then click ‘**Next**’ button。



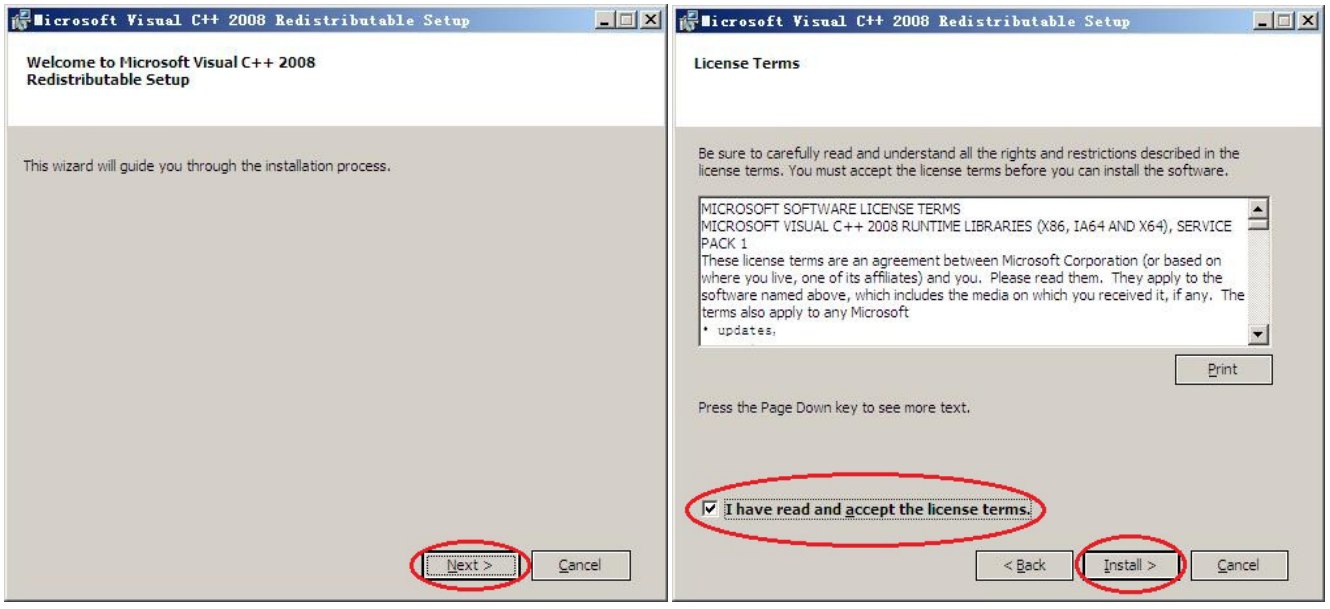
4）Click ‘**Browse**’ to choose the destination folder and then click ‘**Next**’。



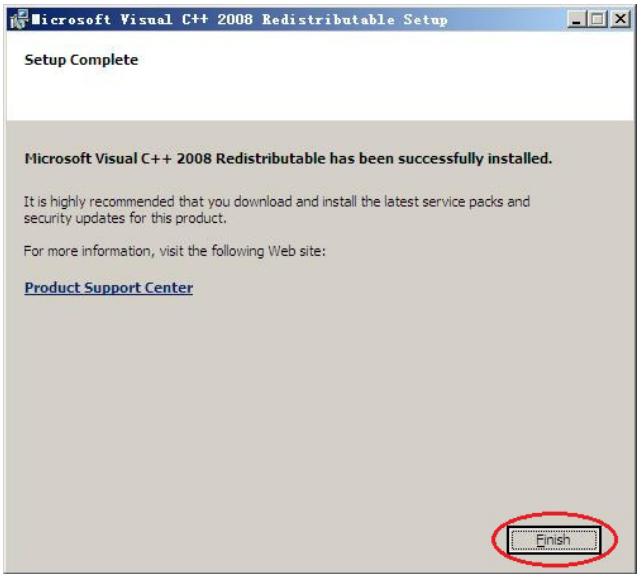
5）Select features and then click '**Next**' button.



6）It will pop up "Microsoft Visual C++ 2008 Redistributable Setup" wizard. If it is not installed in your PC, the following interface will pop up. Click '**Next**" →select "**I have read and accept the license terms**"→click '**Install**".

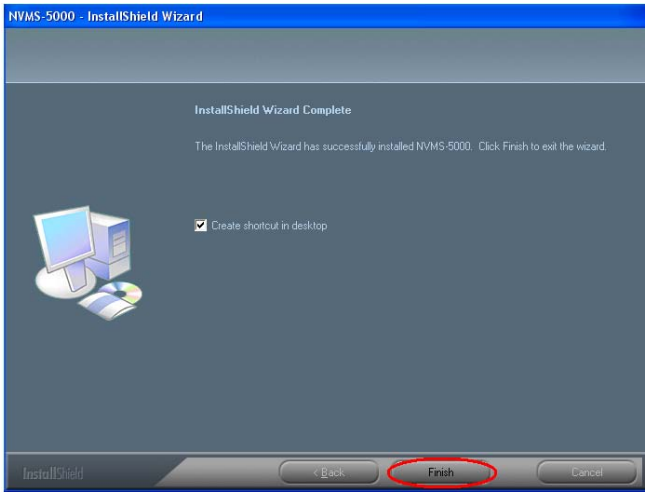


7）Click '**Finish**' button to complete.

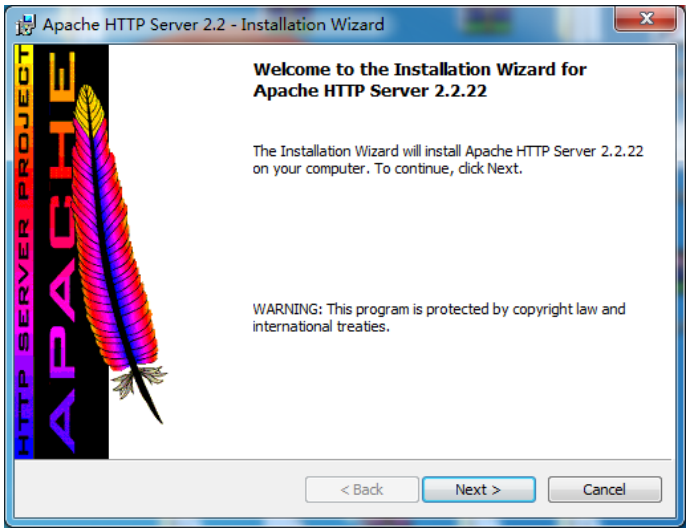


8） Return to the installation interface of NVMS-5000 to review settings. Then click '**Next**' button.

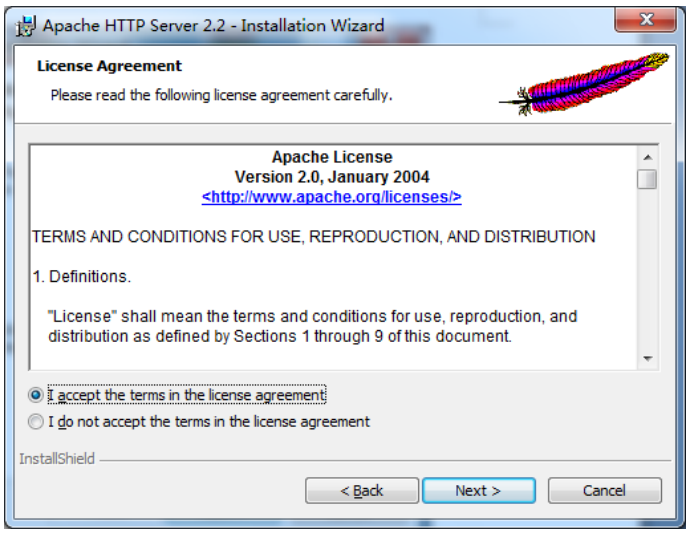
9） Select "Create shortcut in desktop" as needed and then click '**Finish**' button. Now the NVMS-5000 installation is completed.



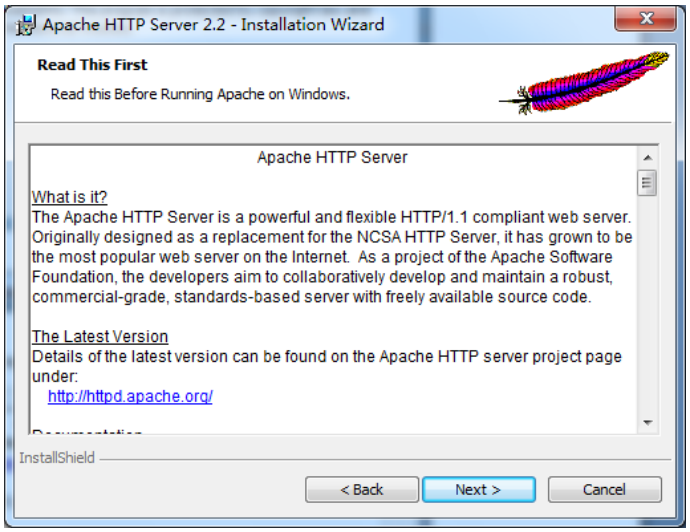
10) After you finish installing NVMS-5000, a wizard for Apache HTTP Server pops up. If you want to access web client, please click '**Next**' button to install.



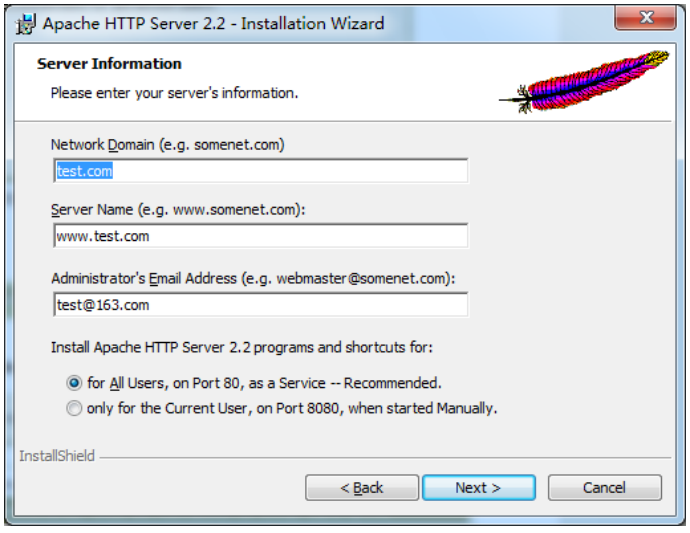
10）Select "I accept the terms in the license agreement" and click **Next** to continue.



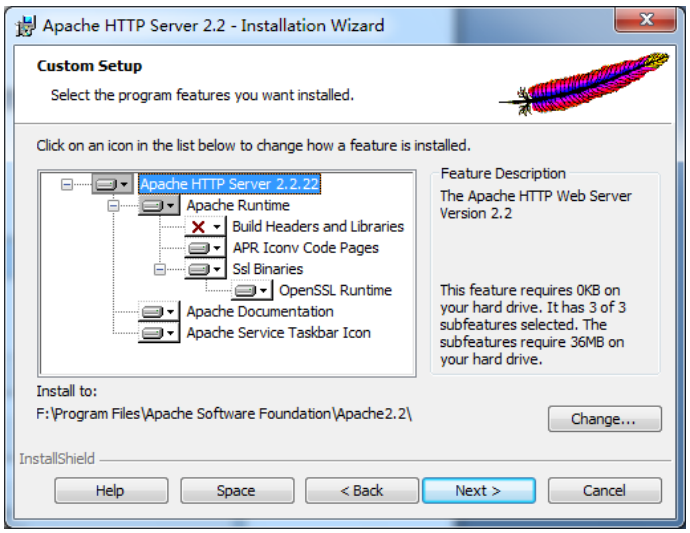
11) Read the information of Apache HTTP Server and then click **Next** .



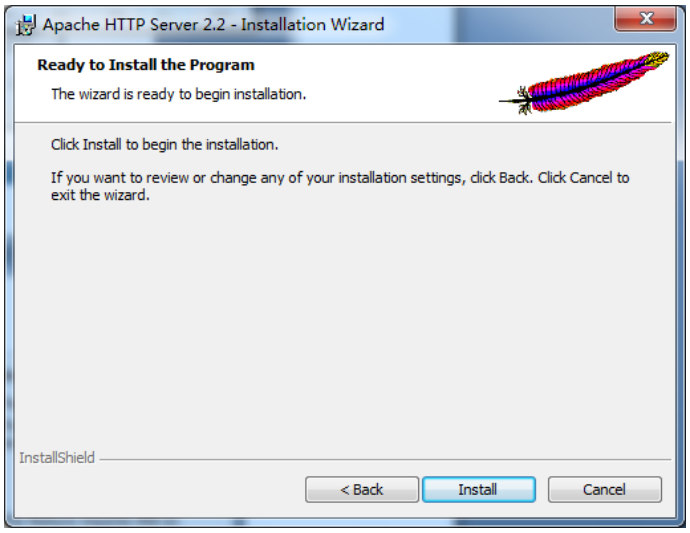
12） Set the server information as shown below. The information inputted below is for reference only. It is recommended to choose port 80as a service. Then click **Next** to continue.



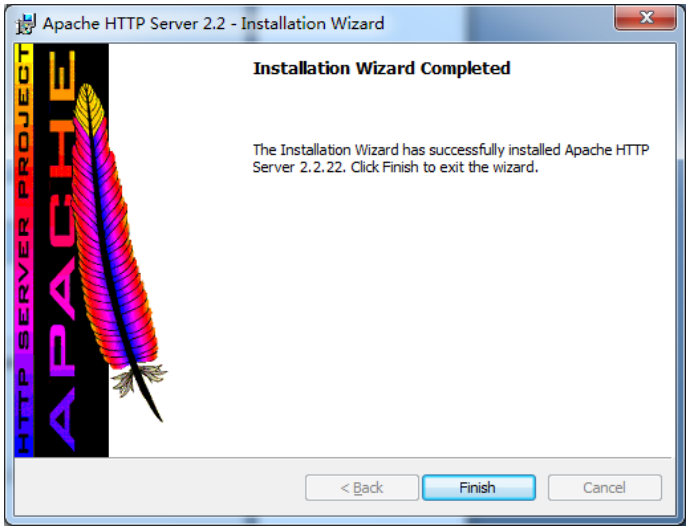
13） Select the installation type. Options: Typical, Custom and Custom. Then click “Change...” to assign the path to install and click **Next** to continue.



14）Click **Install** to install the program.



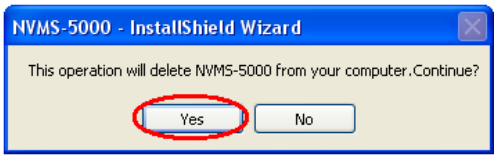
15）Click **Finish** to complete the installation wizard of Apache HTTP Server.



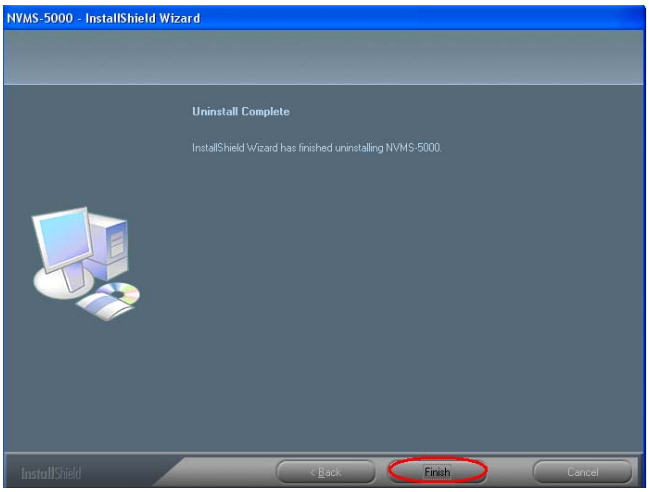
3.2 Uninstall the software

If the new version needs to be installed or there is no necessary to use this software, you can uninstall this software. We strongly recommend that you back up your configuration data before you install the new version of NVMS-5000.

The methods of uninstallation are as follows: Click 'Start' →Programs→NVMS-5000→Uninstall to pop up the following wizard. Click 'Yes" to confirm.



Then click 'Finish' button to completely uninstall this software.



If you have already installed the Apache HTTP Server, the configuration tool can still call the Apache installation files. You can select "Repair" or "Uninstall" or close this interface to continue.

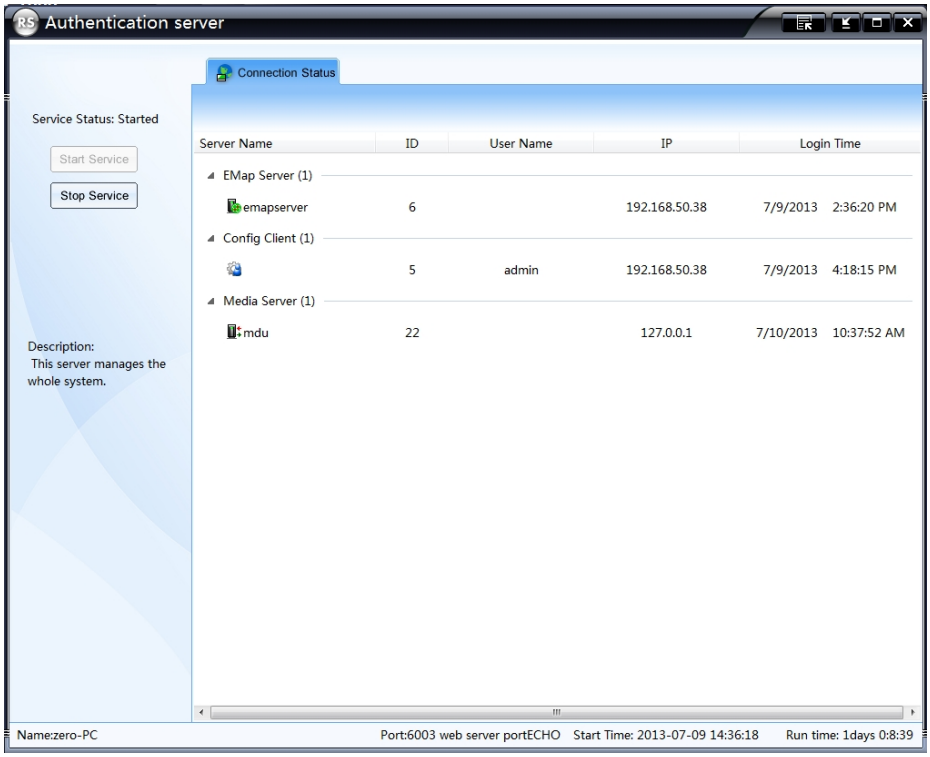
4 System Configuration

4.1 Authentication Server

Authentication server provides a uniform authentication for all devices, servers and clients to access. Therefore, the authentication server must be started first and continuously.

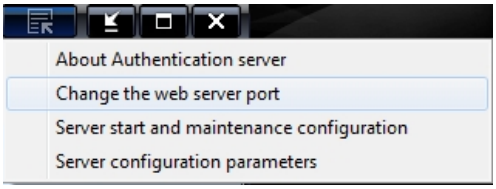
Double click 

icon（or click 'Start'→Programs→NVMS-5000→Server→Authentication Server） to run this server as shown below. Because other modules are not started, there is no information listed.

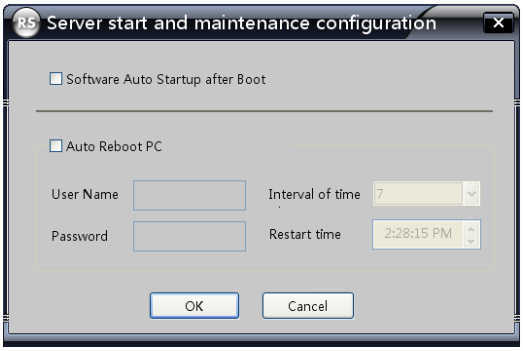


Click  icon to pop up the dropdown list through which you can view the version of servers, change the web server port and set up login and maintenance and server parameters.

Click **Change the web server port** to modify the web server port. The default port of Web Server is 8088.

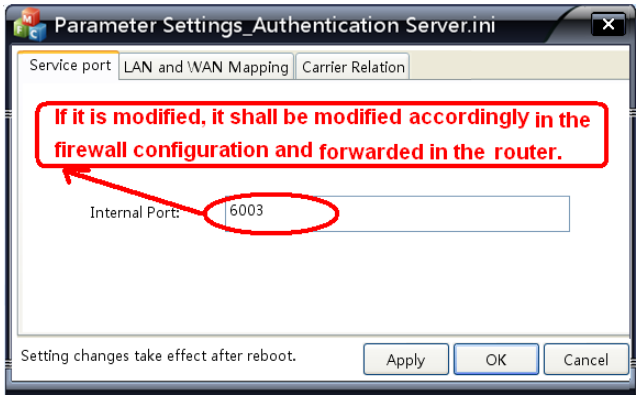


To start the software automatically after Boot, click **Server start and maintenance configuration** and check 'Software Auto Startup after Boot'. If 'Auto Reboot PC' is selected, please input the username and password of the PC, the time interval and restart time. Finally, click 'OK' to save settings.



Click **Server configuration parameters** to pop up the following window. You can modify the internal port. The default internal port of Authentication Server is 6003. If it is changed, the changed internal port shall take effect after

reboot.

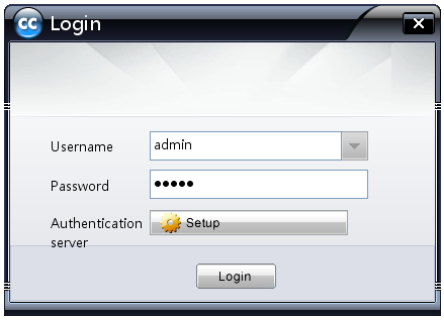


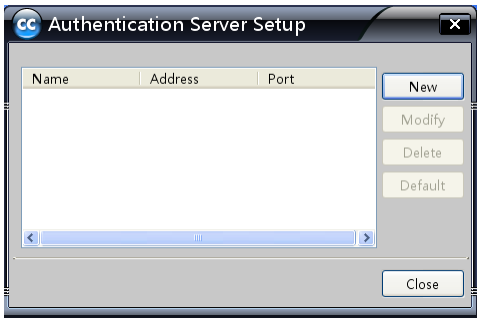
4.2 Config Client

Config Client can configure all resource approved by Authentication Server, including devices, users, media servers, storage servers, alarm server and TV walls. After starting the authentication server, please run Config Client to create servers, add front-end devices and configure the whole system.

Double click 

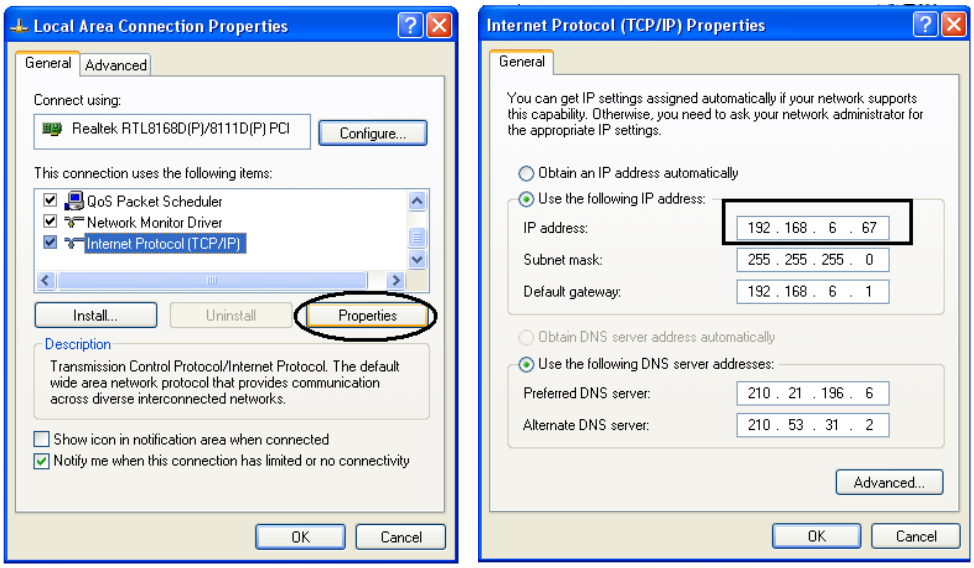
icon (or click 'Start'→ Programs→NVMS-5000→Client→Config Client) to run Config Client. A login window will pop up as shown below. Please input the username and password. The default username is **admin** and the default password is **admin**. Then you should setup the IP address and port of the authentication server at the first time. Please click 'Setup" to pop up a window.





Then click 'New" (Here we will introduce two ways to input).

- You can self-define the name. If the authentication server runs in the PC which the authentication server is installed, you can input your LAN IP address (Double click 'My Network Places'→ click 'View network connection' under the field of Network Tasks →right click 'Local area connection'→select 'Properties'→choose 'Internet protocol(TCP/IP)→click 'Properties' button to see). The default port is 6003 (If it is modified, please input the modified port).



- If the authentication server runs in LAN， please input the LAN IP address and port of the authentication server.
- If the authentication server runs in WAN, please input the WAN IP address or select ‘Domain’ to input the domain name and port of the authentication server.

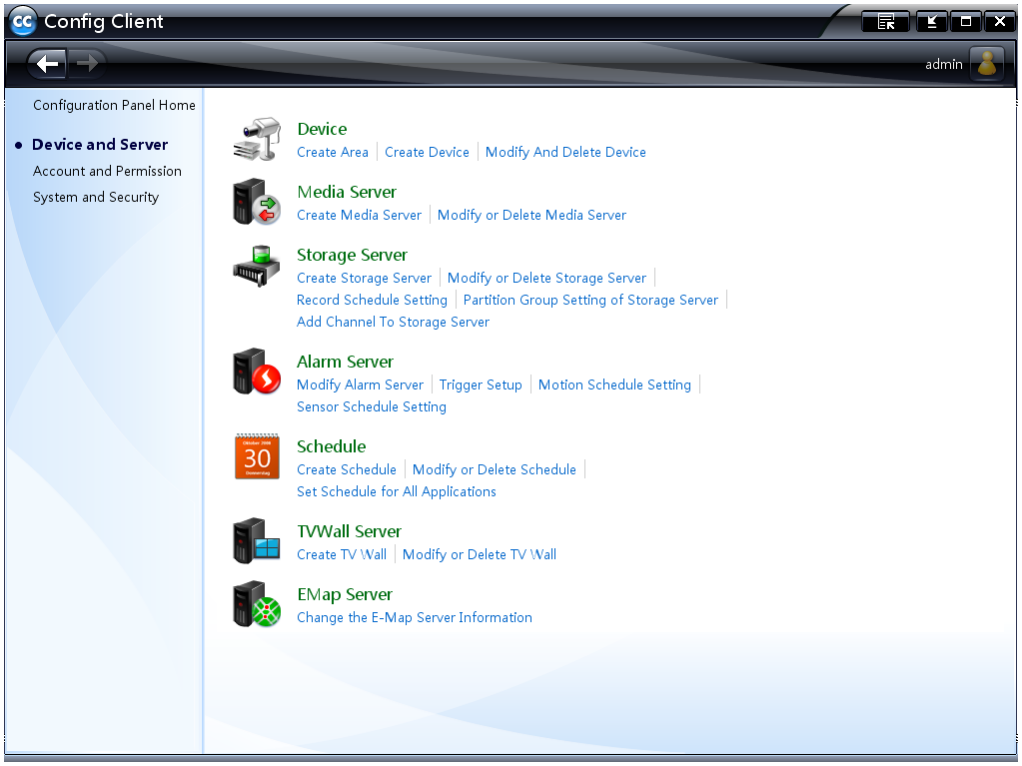
After inputting all information, please click ‘OK’ button and then click ‘Close’ button to return to the login window. Then click ‘Login’ button to enter into the Config Client interface.

Config Client includes three modules: **Device and Server**, **Account and Permission**, **System and Security.** Click the relevant icon or blue letters to enter into the relevant module.

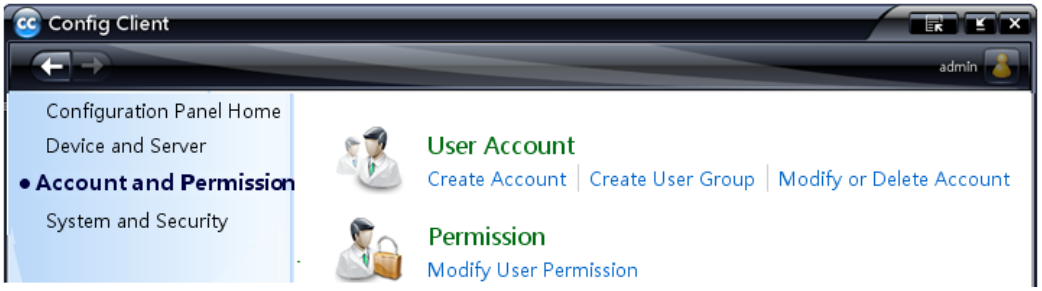
按钮	含义
	Return to the previous interface
	Enter into the next interface
	Display the server information and configure parameters
	Shrink the window
	Minimize the window
	Exit

Device and Server interface includes adding, modifying and deleting device, Media Server, Storage Server, TV

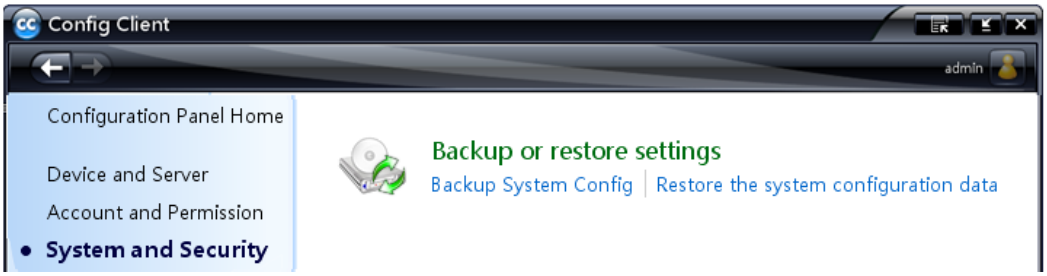
Wall and Schedule as well as modifying Alarm Server and E-Map Server.



Account and Permission interface includes creating, modifying or deleting account and user group as well as user permission.



System and Security interface includes system backup and restoration**.**

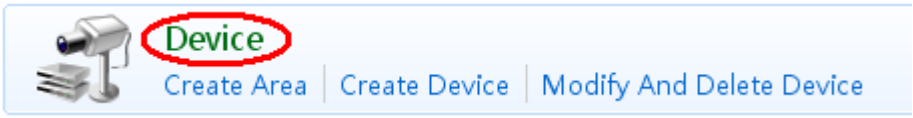


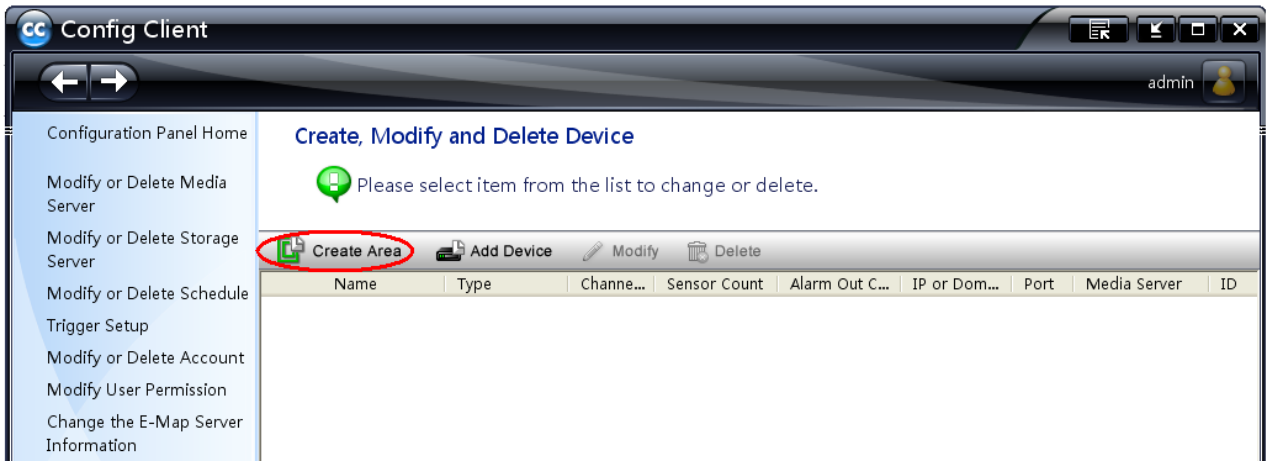
4.3 Device Settings

Create area and add or delete device.

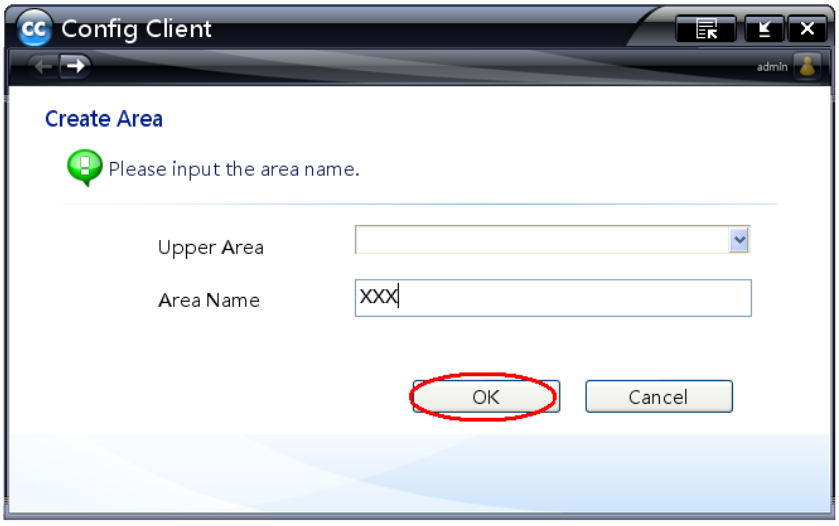
4.3.1 Create area

In the Configuration Panel Home, enter into the device and server configuration interface by clicking '**Device and Server'**. Then click '**Device'** to enter into the device configuration interface.

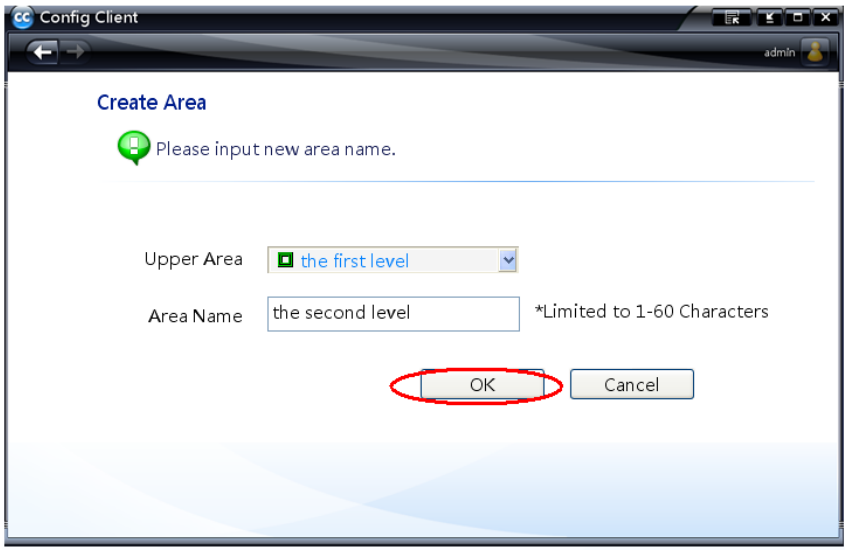




To pop up an area creation window, click ‘Create Area’ button. Then input new area name to create the upper area. After that, please click ‘OK’ button to save settings.



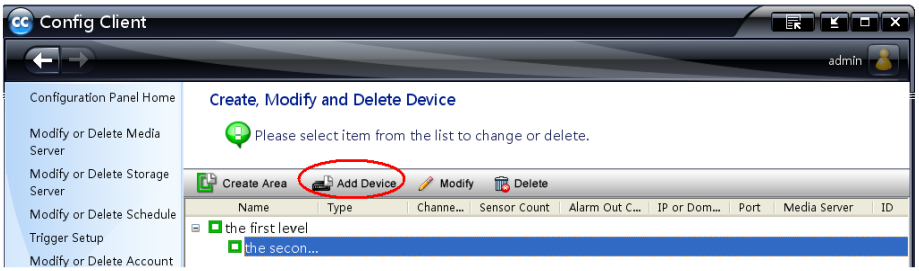
To create the lower area, please click ‘Create Area” and then choose the Upper Area and input the area name. After that, click ‘OK’ button to save settings.



If you want to create another upper Area, please don’t choose the upper area. Input the area name directly. Then click ‘OK’ to save settings.

4.3.2 Add Device

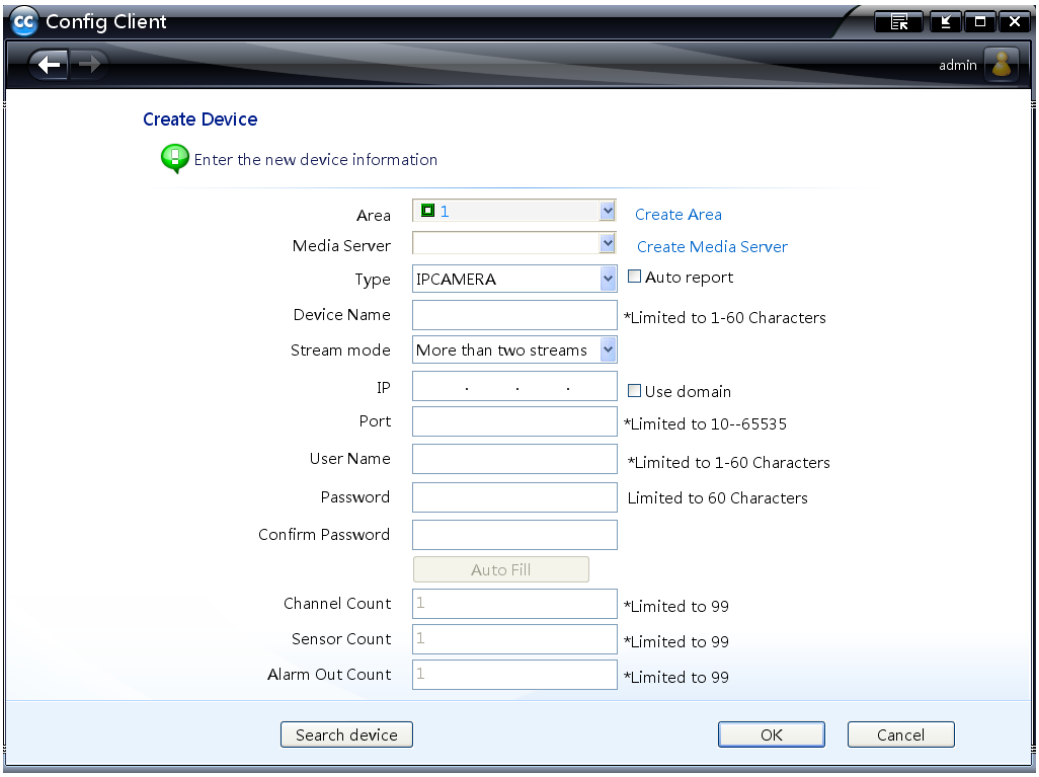
Select the created area and click ‘Add Device” to add device to this area as shown below.



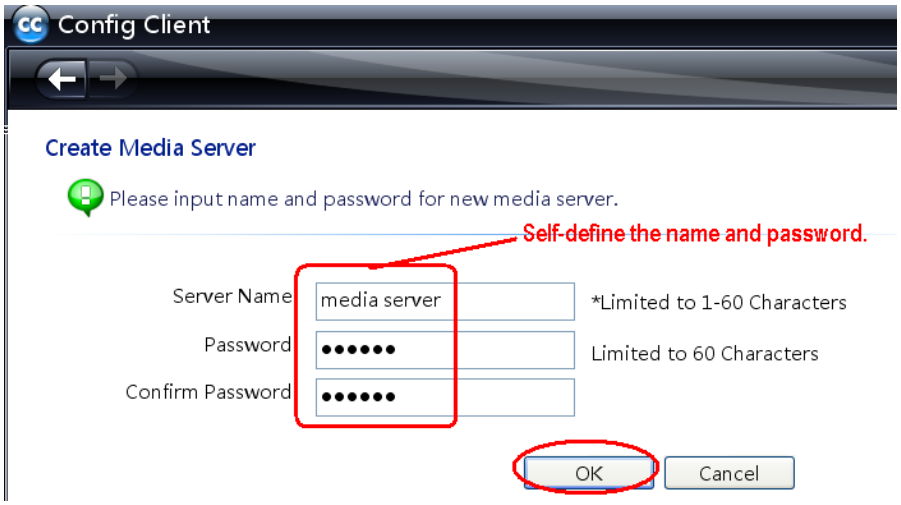
There are three ways to add device.

- **Input Device Information Manually**

  In device creation interface, input the device information as shown below.



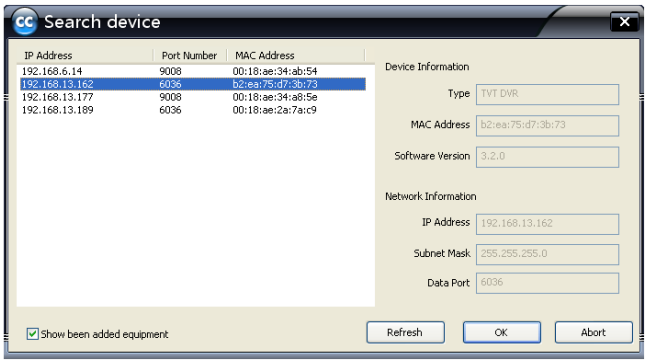
If the media server doesn’t create in advance, please click ‘Create Media Server’ to create media server as shown below.



After you create the media server, please return to the device creation interface to select a media server and then click 'Create Device' button to add the device.

- **Search Online Device**

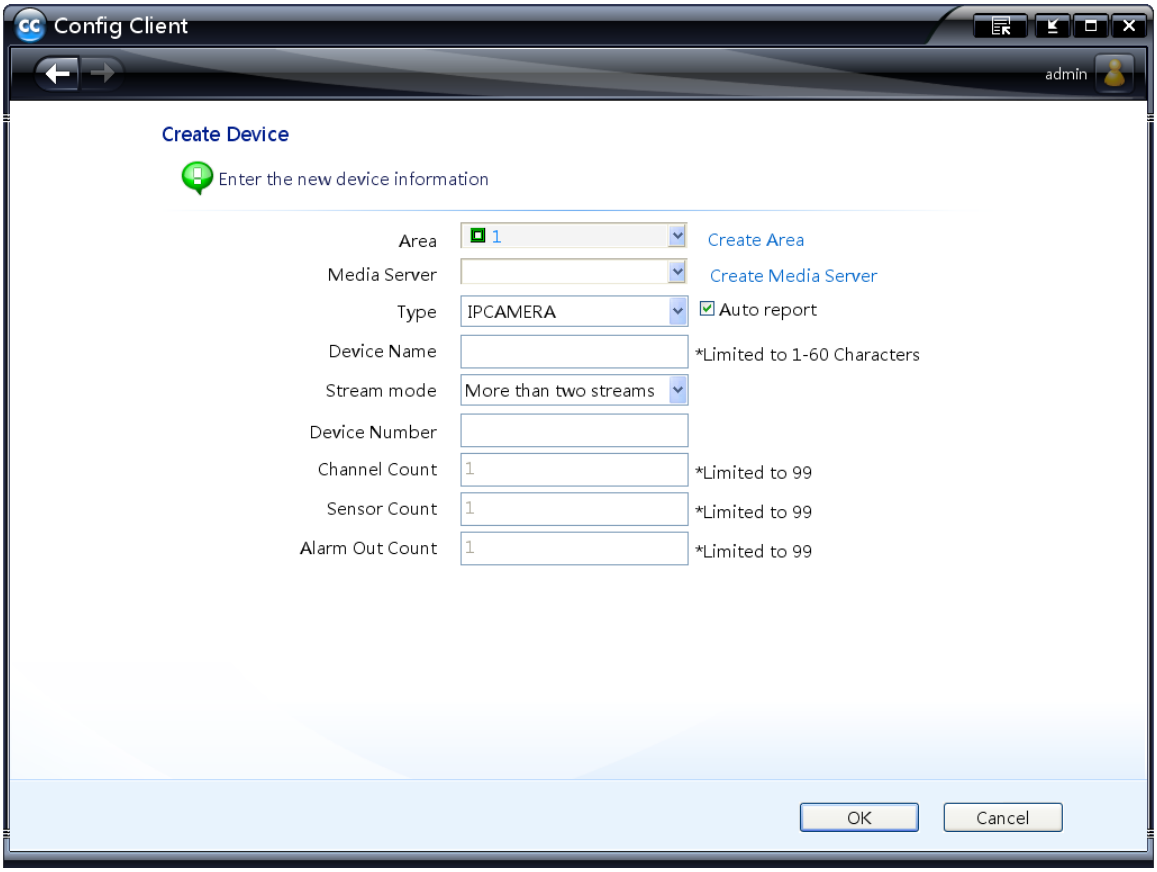
In device creation interface, a device list will pop up by clicking "Search Device" button.



The device IP address, port and MAC address automatically on the same network area will list on the Search Device window. You can double click the IP address which is on the same network segment as the authentication server's. The device type, stream mode, IP address and port will be added automatically. Then you just need to select area and input device name, username and password. The channel count, sensor count and alarm out count will be automatically filled by clicking "Auto Fill" button.

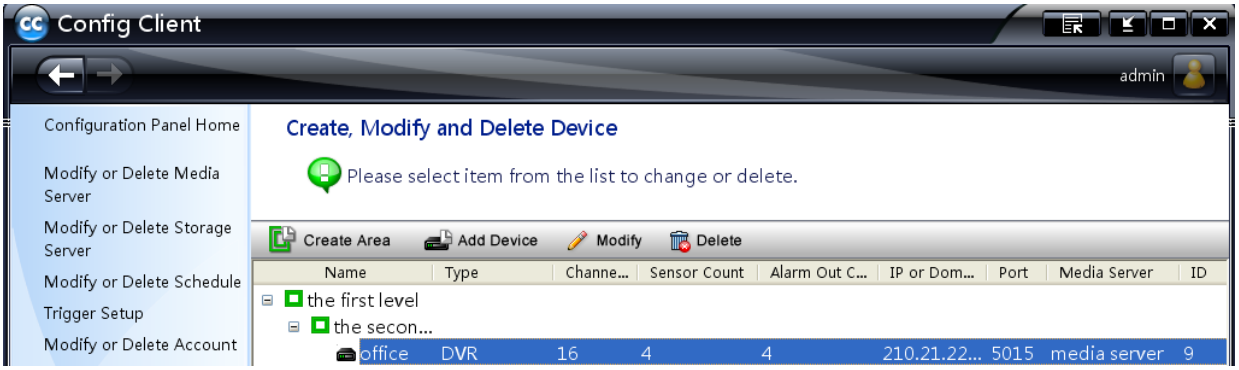
- **Auto Report**

In device creation interface, select device type and checkmark "Auto report" as shown below.



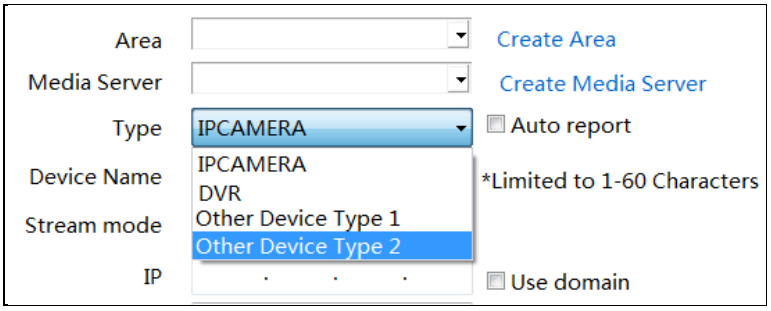
Select area and media server and input device name, device number, channel count, sensor count and alarm out count. You also need to configure the network of the device before the auto report takes effect (Please see the network configuration chapter of the device user manual for the detail configuration).

After adding the device, return to the device configuration interface. Now you can see the information of the device listed as below.



To modify the device name, password, IP address, Port and the media server of the device, please select the device and click ‘Modify’ button. To delete this device, please select the device and click ‘Delete’ button.

If the video signals connected to this software are more than 300 channels, you shall register. The system will support to add the third-party device after registration. Please refer to the below picture. Here you can choose to add other device Type 1 or other device type 2.

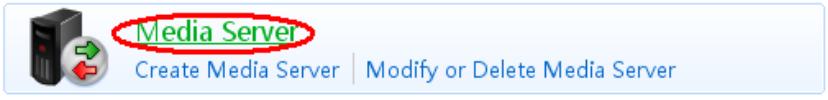


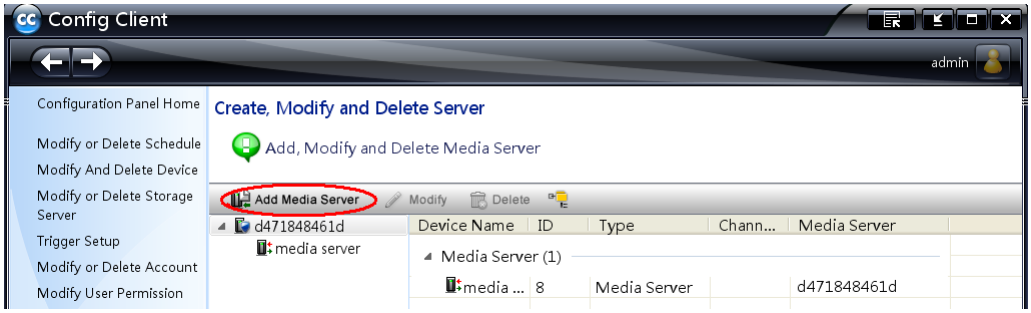
4.4 Media Server Settings

Media server is in charge of the video signal receival of the front-end devices and transfers the signal to the client to preview or to the storage server to record. The client or storage server sends the command of viewing the video of the front-end devices that is also transferred by the media server to the front-end devices.

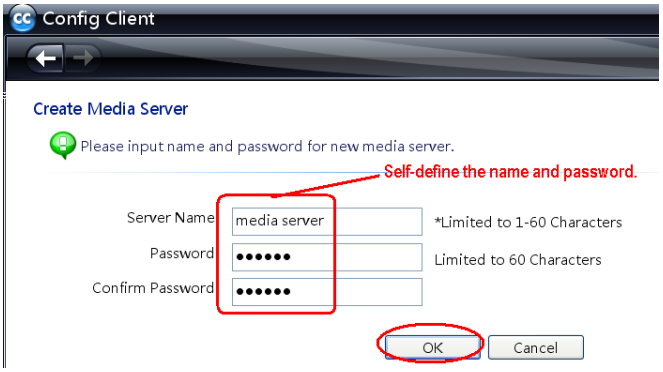
4.4.1 Create Media Server

Before creating devices, please create media server first. In the configuration panel home, click ‘Device and Server” → click ‘Media Server’ to enter into the configuration interface of the media server. Next, click ‘Add Media Server’ button.



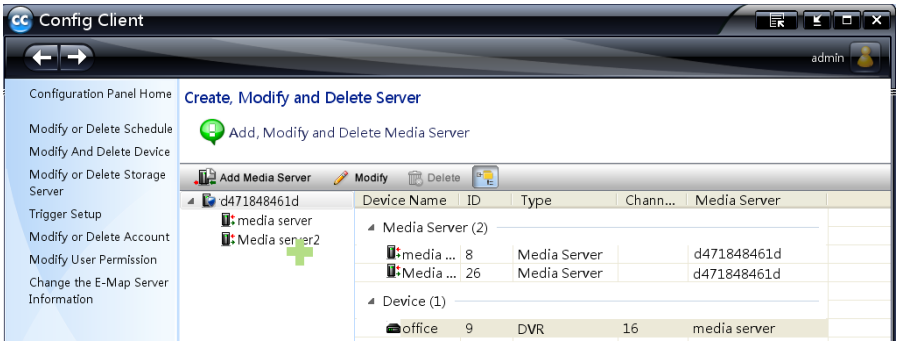


Please input the server name and password and then click ‘OK’ button.

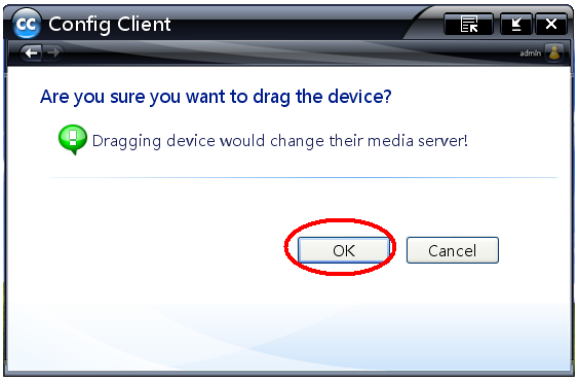


4.4.2 Modify Device of the Media Server

In the configuration interface of the media server, to see the device information, click  button. Then select the media server and the device of this media server and drag the device to another media server. When the cursor becomes a green cross, release the mouse.



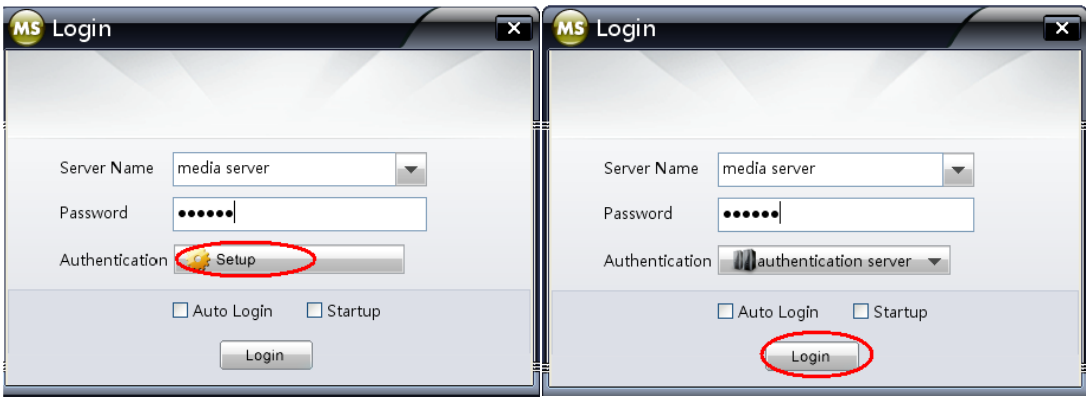
Now, a dialog box will pop up to ask whether to drag the device. Please click ‘OK’ button to confirm the modification.



4.4.3 Start Media Server

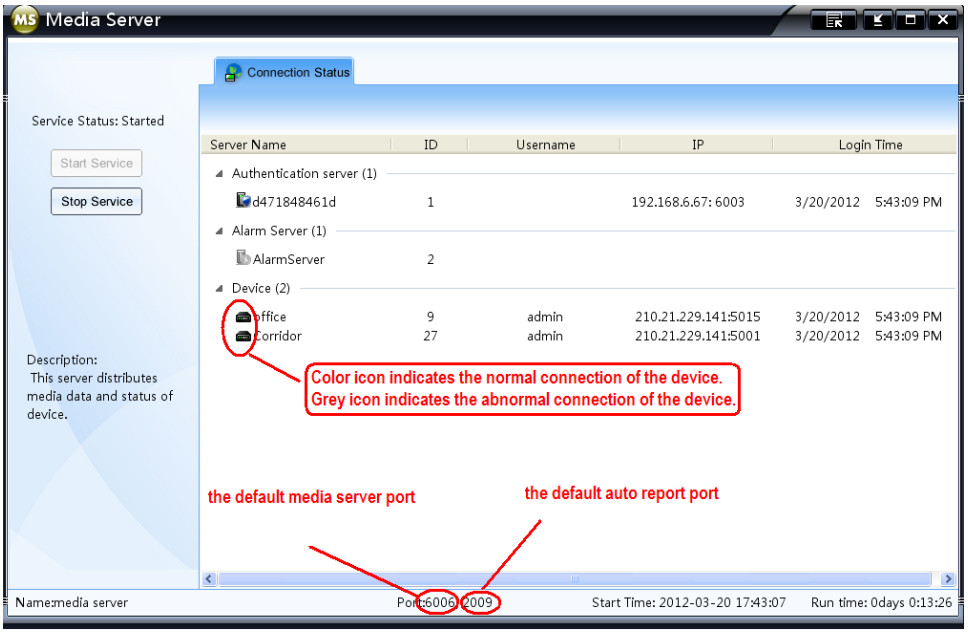
Double click 

icon (or click ‘Start’→ Programs→NVMS-5000→Server→Media Server) to start the media server. A login window will pop up as follows. Input the created media server name and password. Then click ‘Setup’ button to input the authentication information (please refer to Chapter 4.2 Config Client). After that, please click ‘Login’ to enter into the media server interface.

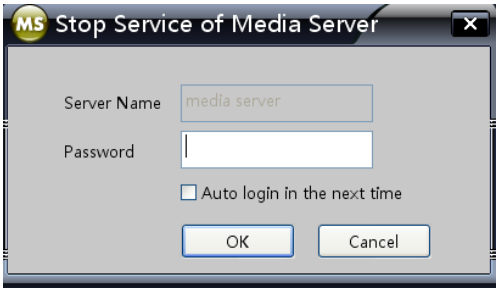


You can aslo check ‘Auto Login’ or ‘Startup’ button to set the logging method next time. Auto login means the server will auto login and there is not neccessry to input in the filed of server name, password and authenticaiton when you start this server. Startup means the server will auto start when you start you PC.

The media server interface is as shown below:



If you want to stop media server, please click ‘Stop Service’ button. A window will pop up to ask for password. You should input the correct password of the media server and click ‘OK’ button to stop service. If you want to start service, you still need to input the password. It is the same with the following server to stop/start service.



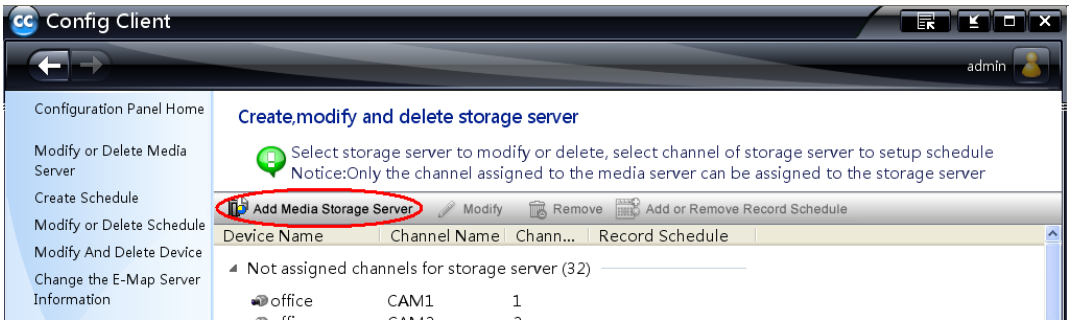
4.5 Storage Server Settings

Storage server is in charge of the storage of resource information, including the information of manual record, schedule record, sensor alarm and motion alarm record and responds to the research and read of all storage data. Additionally, it also supports self-defined storage path settings and IP-SAN access.

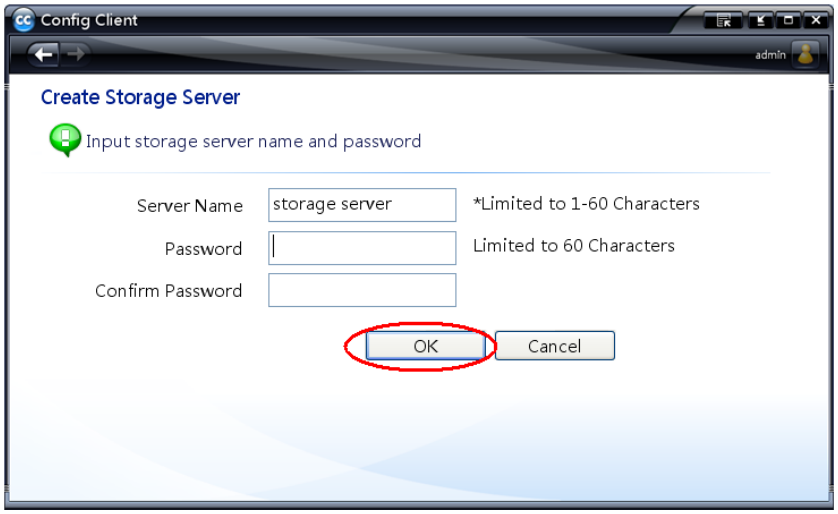
4.5.1 Add Storage Server

In the configuration panel home, click **Device and Server** and then click ‘Storage server” as shown below.

Enter into the configuration interface of the storage server as shown below.



Click ‘Add Media Storage Server’ to display a dialog box as shown below.

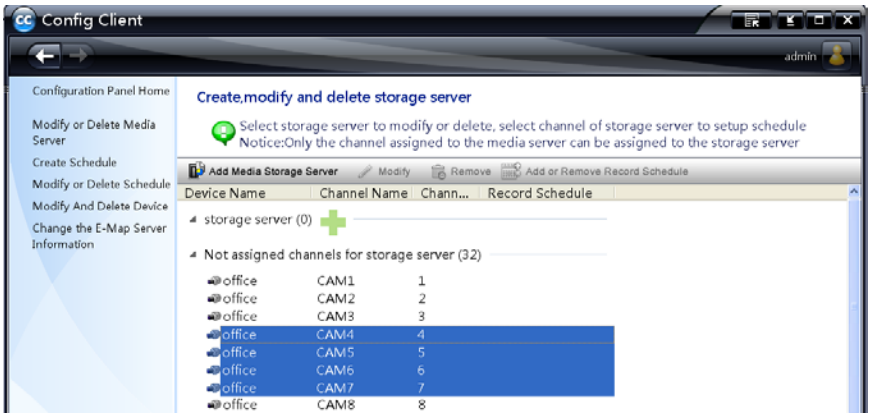


Input the storage server name and password and then click ‘OK’ to create a storage server.

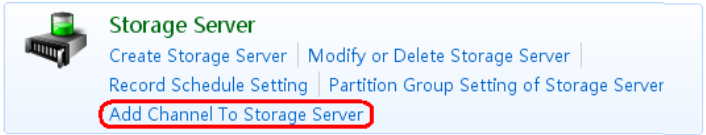
Return to the configuration interface of the storage server. If you want to modify the created storage server, please select the storage server and click ‘Modify’ button to change the name and password. To delete the storage server, please select the storage server and click ‘Delete’ button.

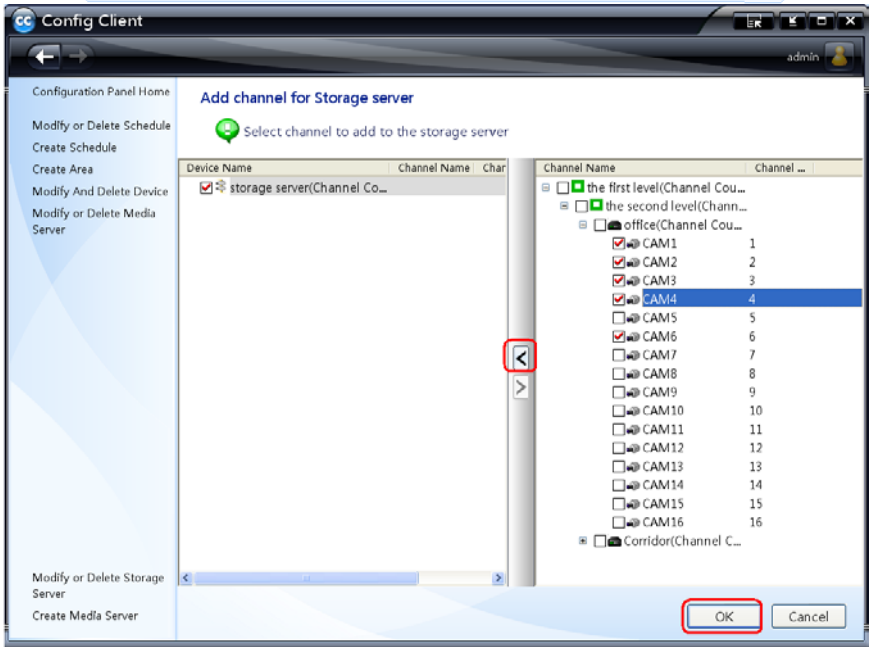
4.5.2 Add Channels to Storage Server

Method 1: In the configuration interface of the storage server, select channels and drag these channels with the mouse into the storage server. Release it when the cursor changes into a green cross. Then a dialog box will pop up to ask you whether to move these channels. Please click ‘OK’ to confirm.



Method 2: Enter into Configuration Panel Home→ Add Channels to Storage Server interface as shown below.

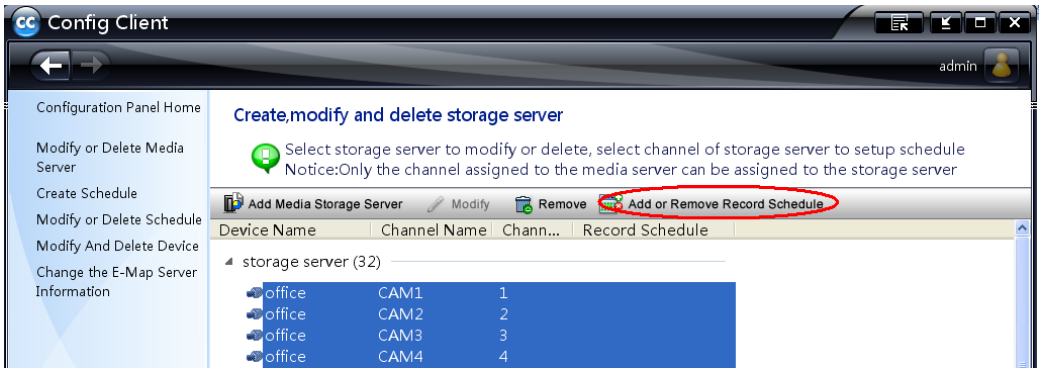




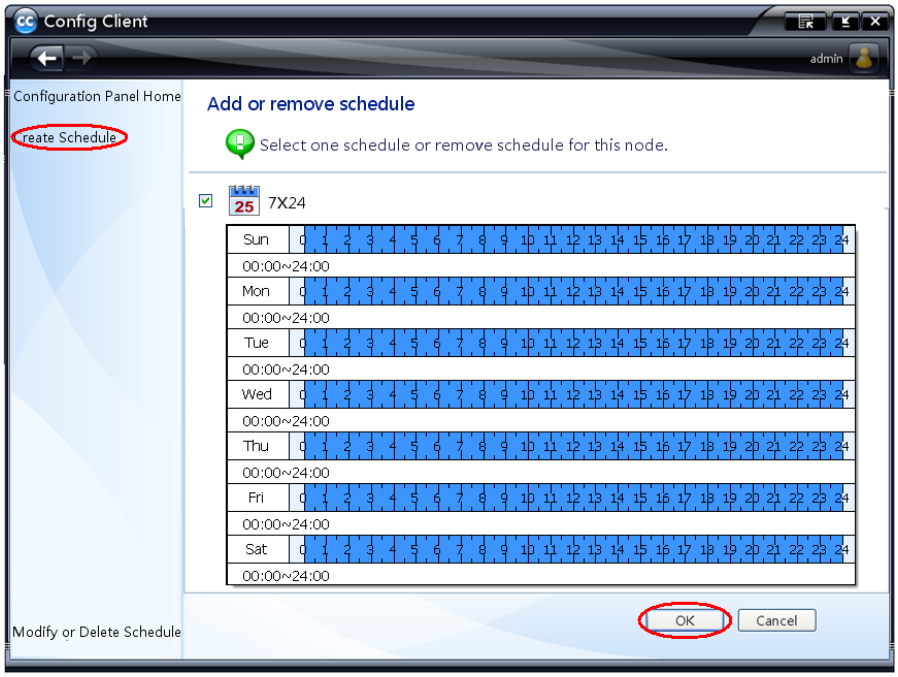
Steps: First, select storage sever. Second, select channel. Third, click < icon to add the channel to the storage server. Finally, click 'OK' button to save settings. If you want to add all channels of a device to a storage server, please select the storage server and then select the device name and < icon. If you want to delete channels listed in a storage server, please select the storage server and channels and then click > icon to delete.

4.5.3 Setup Record Schedule

Return to the configuration interface of the storage server to setup record schedule for these channels. Select a channel and click 'Add or Remove Schedule Channel" or directly click 'Record Schedule Settings" in the Device and Server interface.



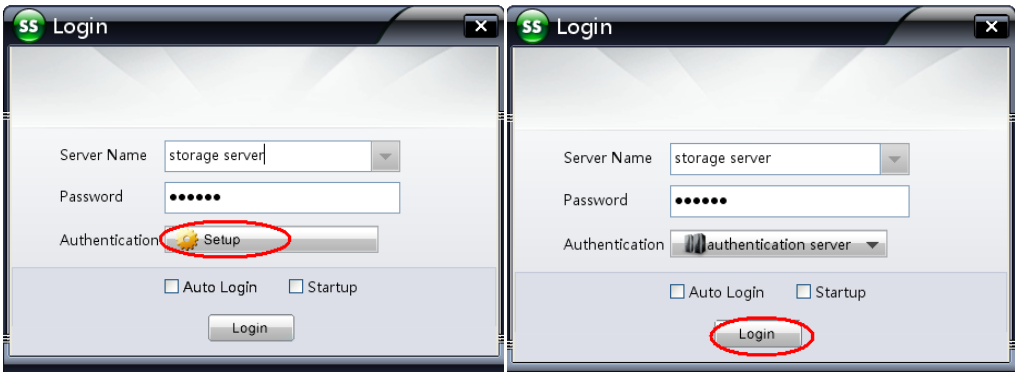
Put the cursor on the schedule name to see the schedule. The default schedule is "7×24". You can click this schedule and then click 'OK' button to save settings. You can also click 'Create Schedule' button on the left menu bar to set other schedules (please refer to Chapter 4.7.1 Schedule Settings for detail information).



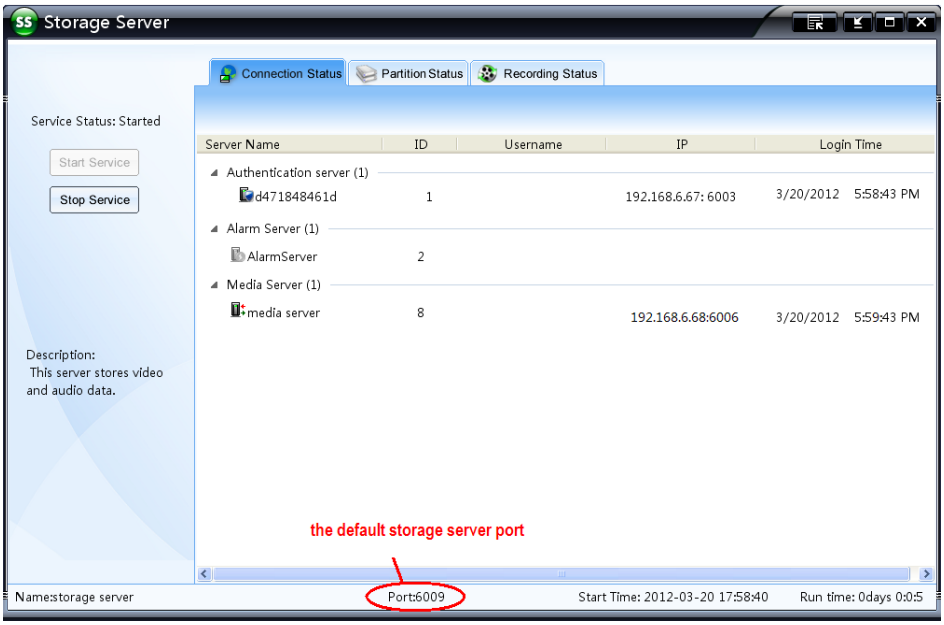
4.5.4 Start Storage Server

Double click 

icon （or click 'Start' → Programs → NVMS-5000 → Server → Storage Server） to run storage server. A login window will pop up as shown below. Please input the above created storage server name and password. Then click 'Setup' button to input the authentication server information (Please refer to Chapter 4.2 Config Client for more detail information). Finally, click 'Login' button to login to the storage server.



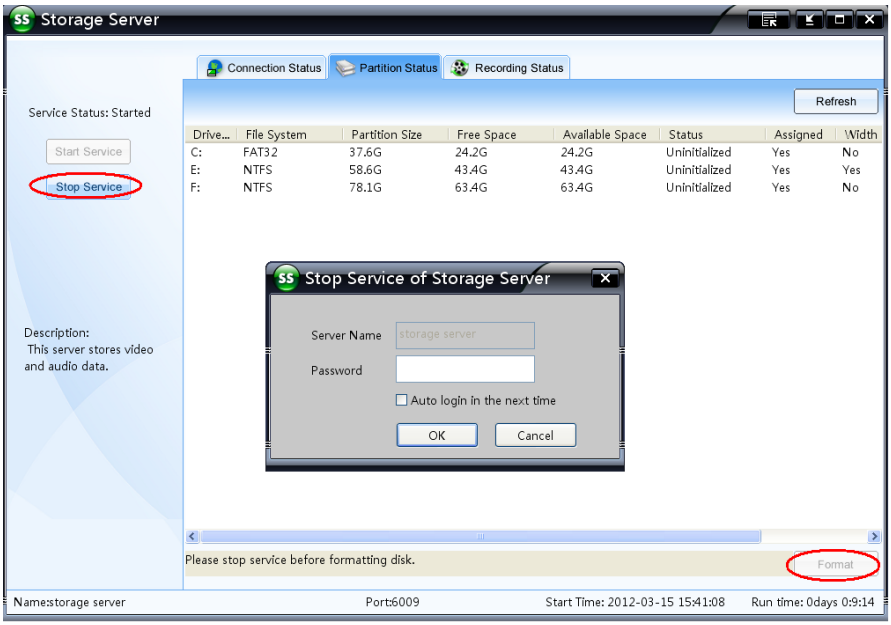
The storage server interface displays as below.



Partition Status: Check the information of disks. Click 'Refresh' button to refresh disk information.

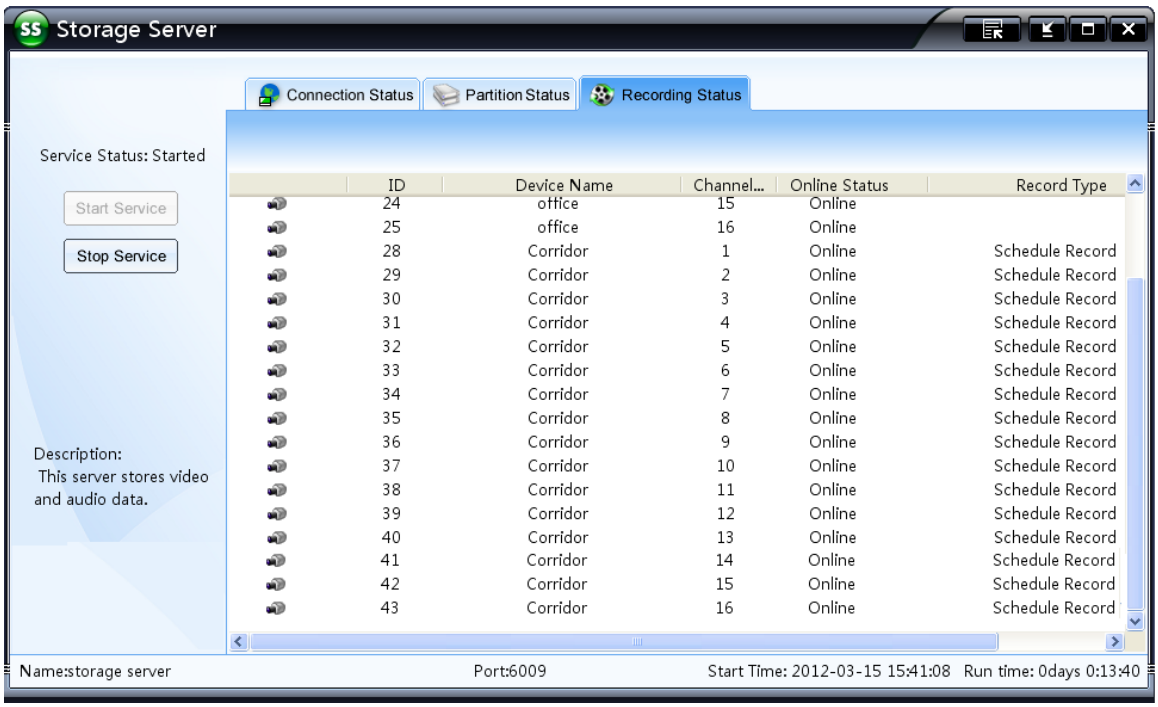
Format the Disk: You can format disks. Before formatting, you shall click 'stop service" to stop the service of storage server first. You should input the password of this server when you stop or start service. Then select the disk to format. Finally, click 'Format' button.

Note: The disk cannot be set to record partition before formatting.



Recording Status: Check whether the device is online or not and view the record type. The record type includes schedule record, sensor alarm record and motion alarm record. These records will display after the schedule is set.

For example, when the device is under schedule record condition, the recording status will display as below.

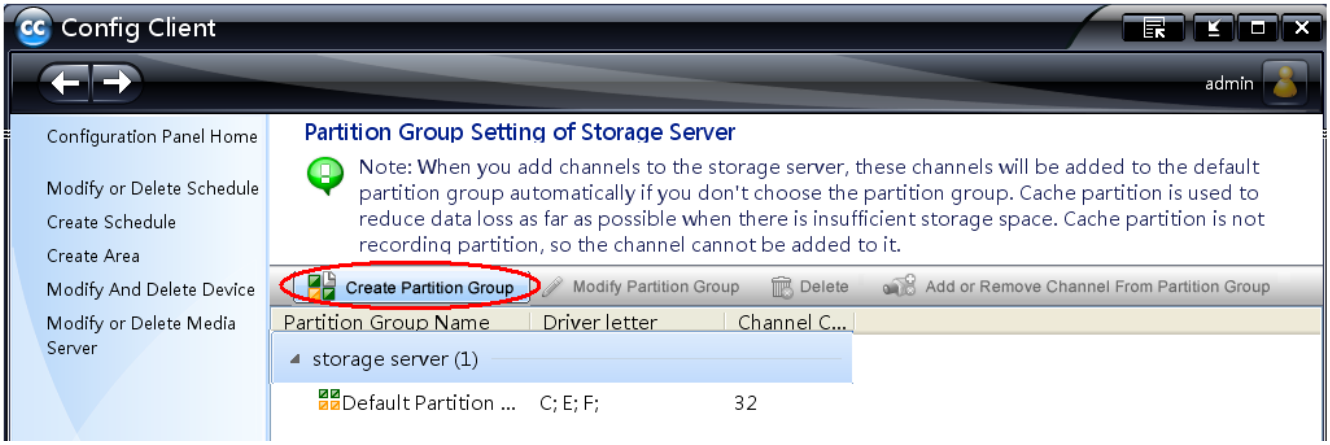


4.5.5 Partition Group Settings of Storage Server

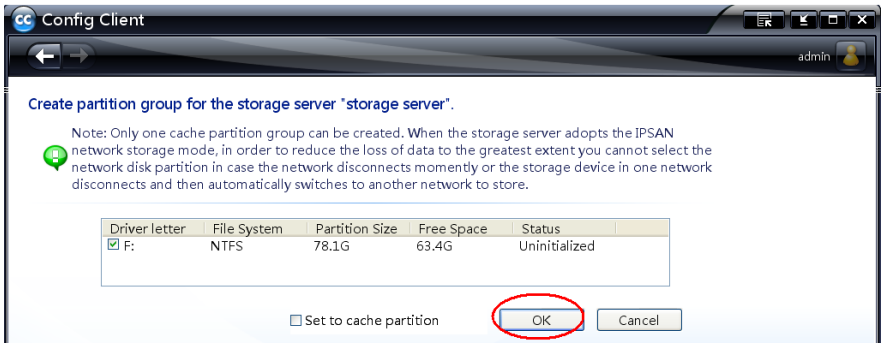
Partition group which is comprised of disk partitions stores record data of different devices. Storage server must be started before setting partition group. In the Device and Server interface, click ‘Partition Group Settings of Storage Server’ button.

1）Create Partition Group

Select storage server and click ‘Create Partition Group’ button.



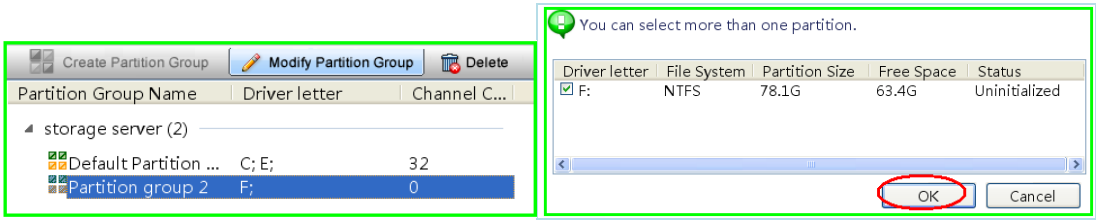
Select the disk partition and then click ‘OK’ button to create a new partition group for the storage server.



You can also set a cache partition by checking “Set to cache partition”.

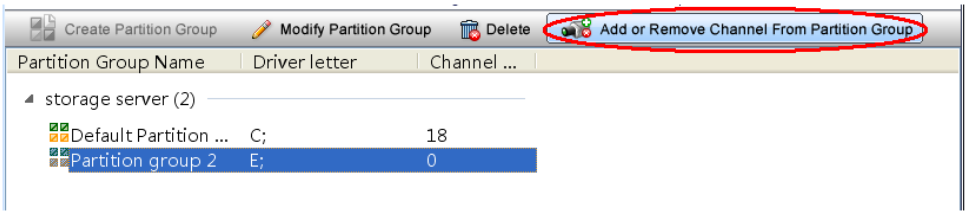
2）Modify Partition Group

Return to Partition Group Settings interface. Select partition group and click ‘Modify Partition Group’ button to modify this partition group.



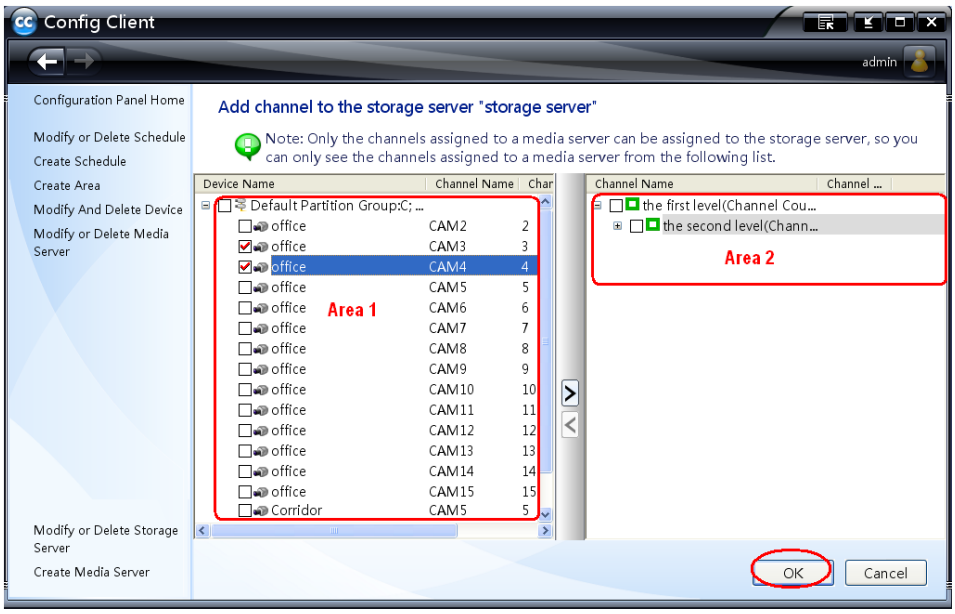
3）Add or Remove Channel from Partition Group

Select partition group and click ‘Add or Remove Channel from Partition Group’ button.



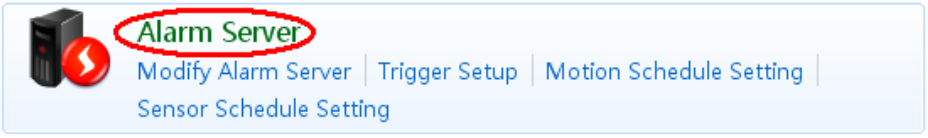
Add channel to partition group: Select channels of area 2 and click < button to add. Then click ‘OK’ to save settings.

Remove channel from partition group: Select channels of area 1 and click > button to remove. Then click ‘OK’ to save settings.



4.6 Alarm Server

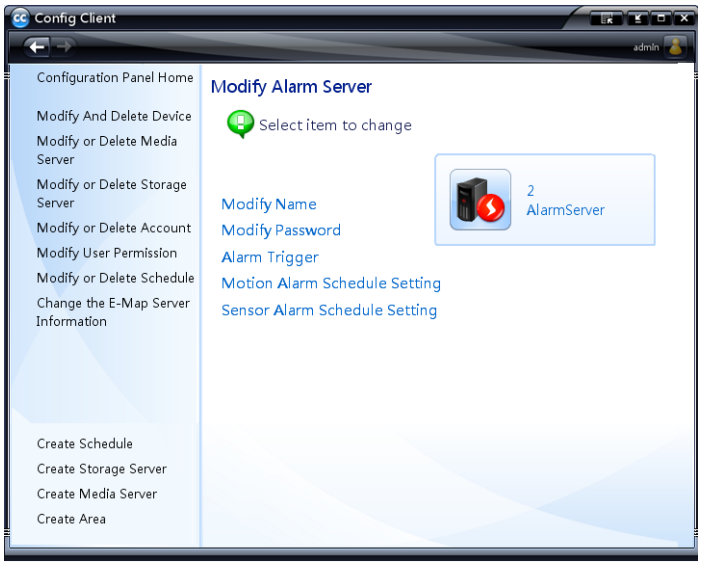
Alarm server is in charge of receiving and recording alarm information of connected devices and then sending the alarm information to the relevant user terminal system or devices in accordance with prior alarm settings.



4.6.1 Alarm Server Setting

There is only one alarm server in NVMS-5000 system and the system has already created an alarm server named AlarmServer. The default password is null. When logging into the alarm server, no password needs to input.

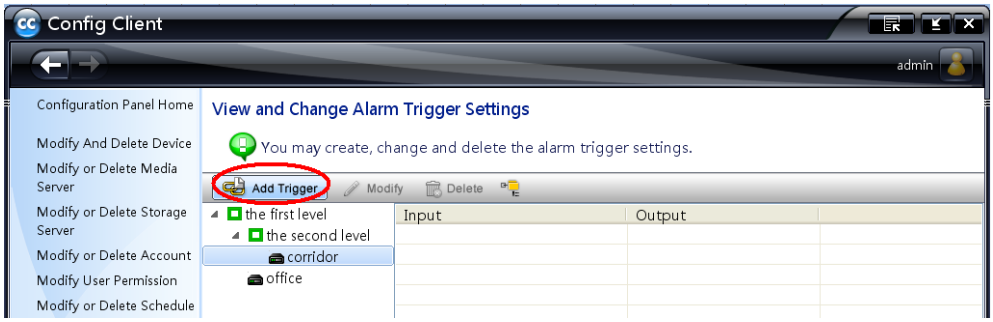
Enter into Configuration Panel Home → Device and Server → Alarm server interface as shown below. You can modify the alarm server name and password and set alarm trigger (including record alarm trigger, big screen trigger), motion alarm schedule and sensor alarm schedule.



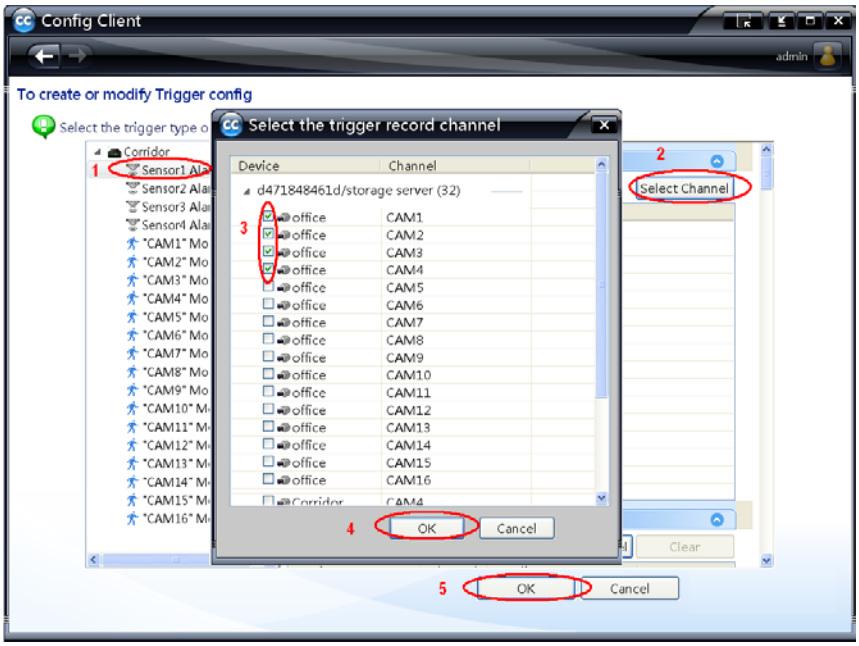
Click ‘Modify name” and “Modify password’ button to change the name and password of the alarm server.

4.6.2 Alarm Tirgger Settings

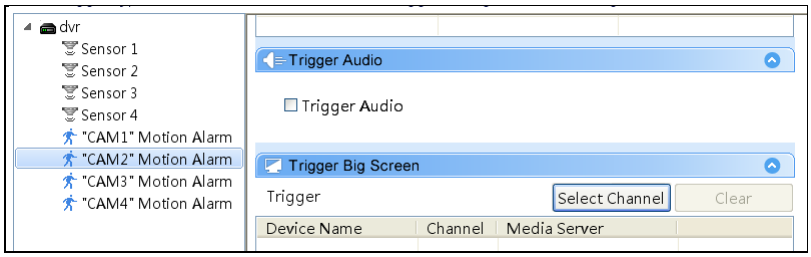
In the configuration interface of the alarm server, click ‘Alarm Trigger” to enter into alarm trigger interface. Select the device and click ‘Add Trigger”.



Trigger Record: Select a channel, click ‘Select Channel’ button under the title of Trigger Record and then select the trigger record channels. After that, click ‘OK’ to save the selected channel. Finally, click ‘OK’ button in the alarm trigger interface to save all settings.

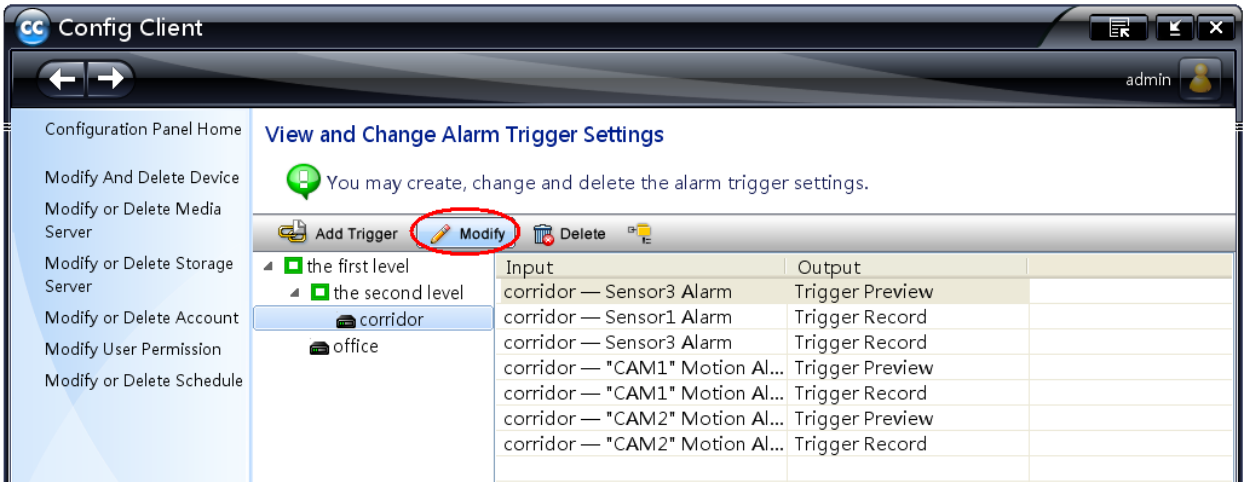


Trigger Audio: Checkmark trigger audio. There will make a sound on an alarm.



Trigger Big Screen: Select a channel, click 'Select Channel' button under the title of Trigger Big Screen and then select the trigger record channels. After that, click 'OK' to save the selected channel. Finally, click 'OK' button in the alarm trigger interface to save all settings.

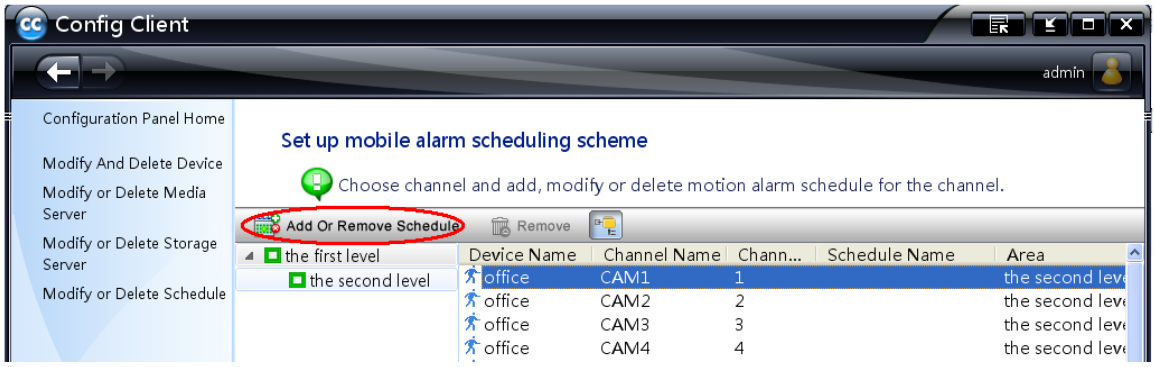
Finishing setting, you can see all alarm trigger information in the alarm trigger interface. To modify the alarm trigger information, please select the relevant channel and click 'modify' button. To delete the alarm trigger information, please select the channel and click 'delete' button.



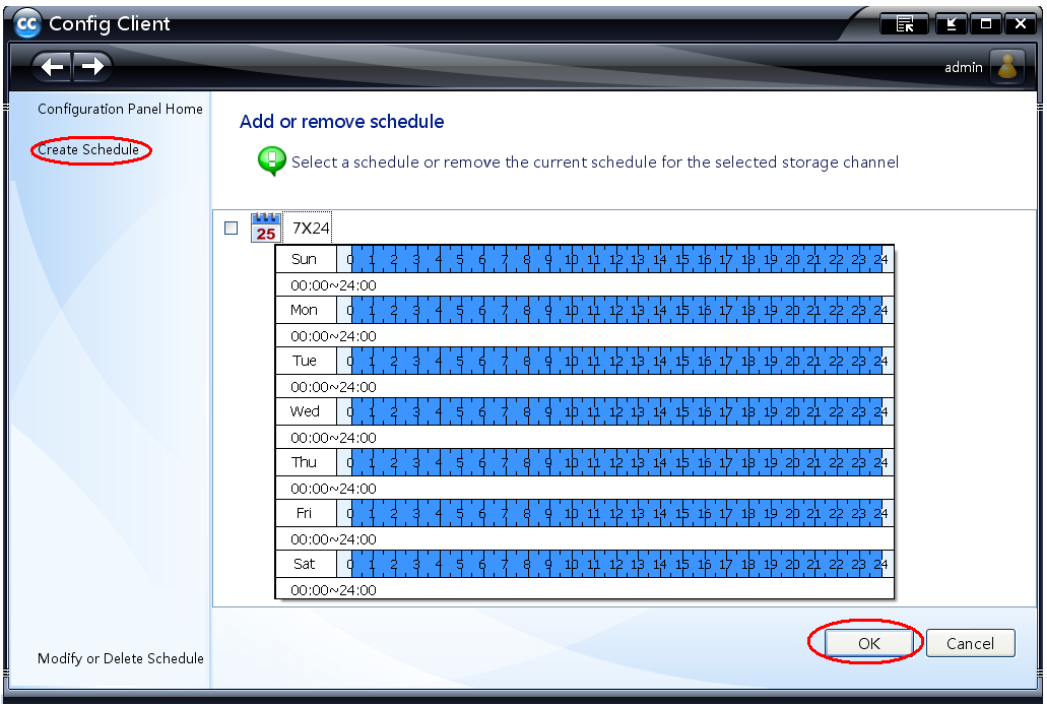
To conceal or reveal the input and output information of DVR, please click  icon.

4.6.3 Motion Alarm Schedule Setting

Click  icon to return to the configuration interface of the alarm server. Select "Motion Alarm Schedule Setting' button to enter into its configuration interface. Choose channels and click 'Add or Remove Schedule' button as shown below:



Put the cursor on the schedule name to see the schedule. The default schedule is "7×24". You can click this schedule and then click 'OK' button to save settings. You can also click 'Create Schedule' button on the left menu bar to set other schedules (please refer to Chapter 4.7.1 Schedule Settings for detail information).



If you want to delete the set schedule, please choose the schedule and click 'Remove' button to delete it.

4.6.4 Sensor Alarm Schedule Setting

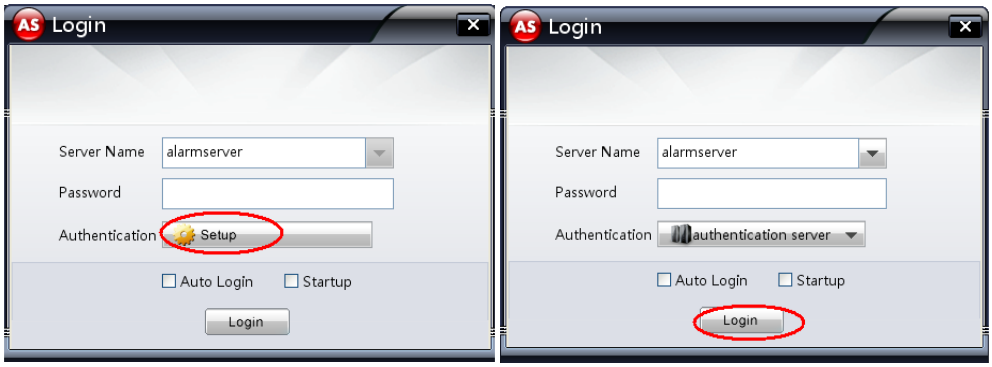
Click icon to return to the configuration interface of the alarm server. Select "Sensor Alarm Schedule Setting' button and do the relevant settings. Please refer to Chapter 4.6 Motion Alarm Schedule Setting for more details.

Note: If no motion alarm schedule or sensor alarm schedule is set up, the default schedule (7×24) will be used.

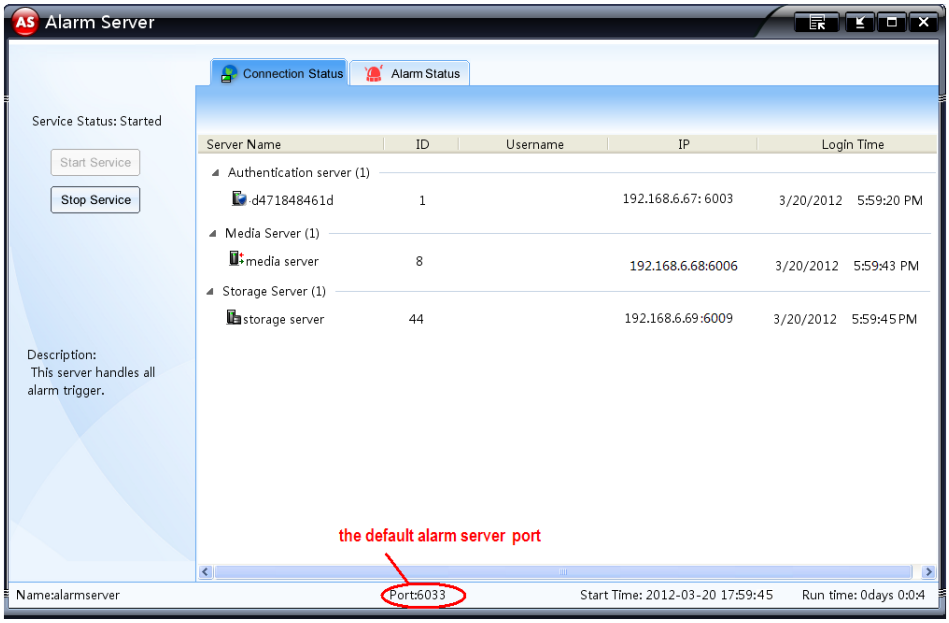
4.6.5 Start Alarm Server

Double click 

icon (or click 'Start'→Programs→NVMS-5000→Server→Alarm Server) to run alarm server. A login window will pop up as follows. Please input the above mentioned alarm server name and password (If no modification is made, the default name is AlarmServer and the password is null). Then click 'Setup' button to input the information of the authentication server (please refer to Chapter 4.2 Config Client for more details).



After that, please click 'Login' button to login to the alarm server. The alarm server interface is as follows.

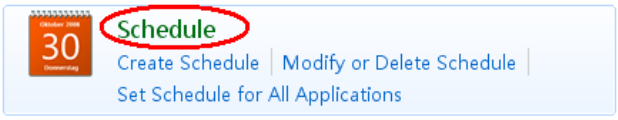


Alarm Status: Clicking the tab of "Alarm Status" can see the alarm status of devices.

4.7 Schedule Settings

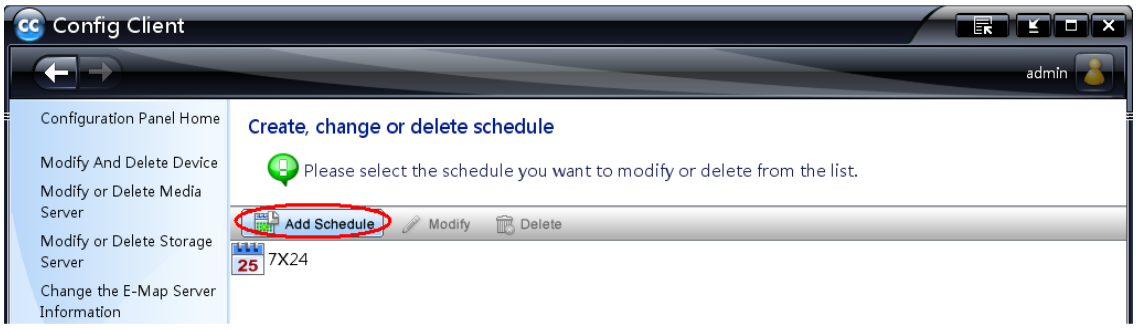
Return to Configuration Panel Home. Enter into Device and Server→Schedule interface.

In this interface, you can create, modify or delete schedule and set schedule for all applications.

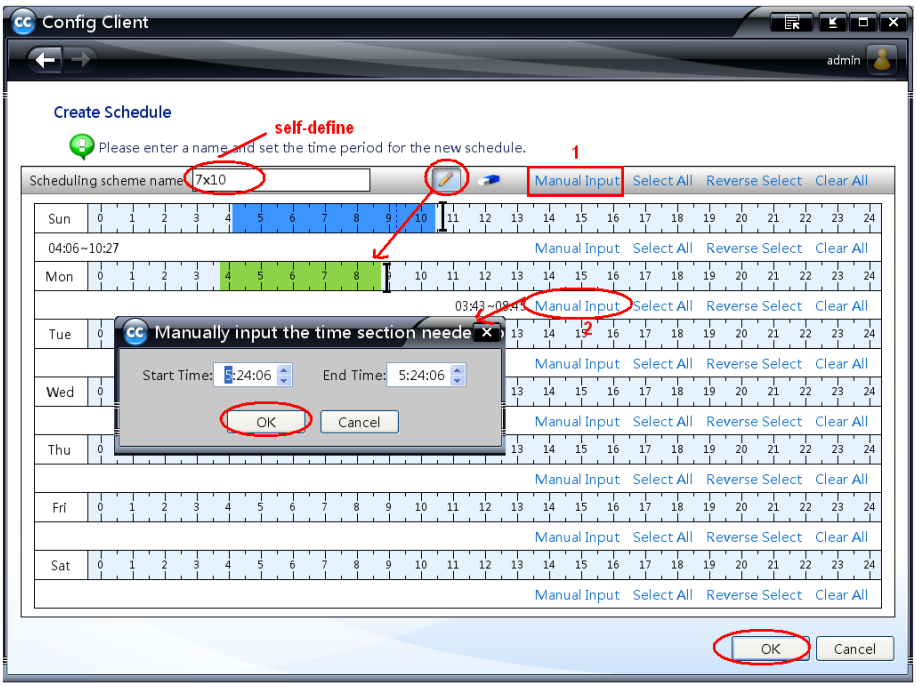


4.7.1 Create Schedule

Enter into the Schedule configuration interface. There is a default schedule (7×24). You can also create other schedules.



You can self-define the schedule name and manually set time or set time through "Select All or Reverse Select' button to complete the schedule time and date setting. Then click 'Create Schedule' button to save all settings.



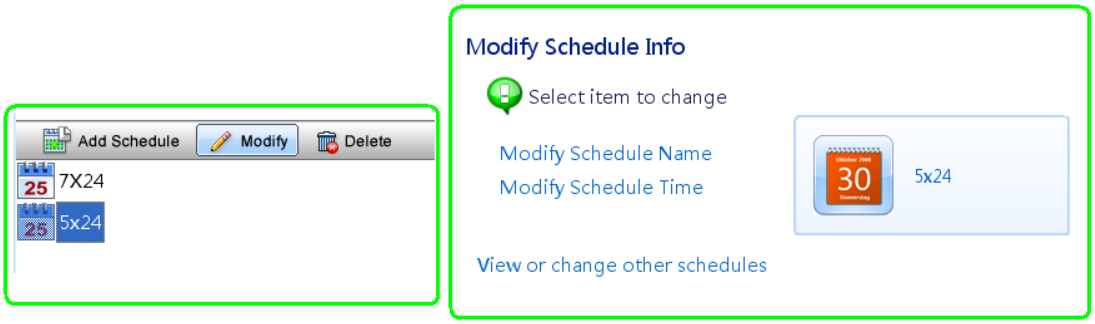
1 Manually input the start time and end time of the whole week.

2 Manually input the start time and end time of one day.

4.7.2 Modify or Delete Schedule

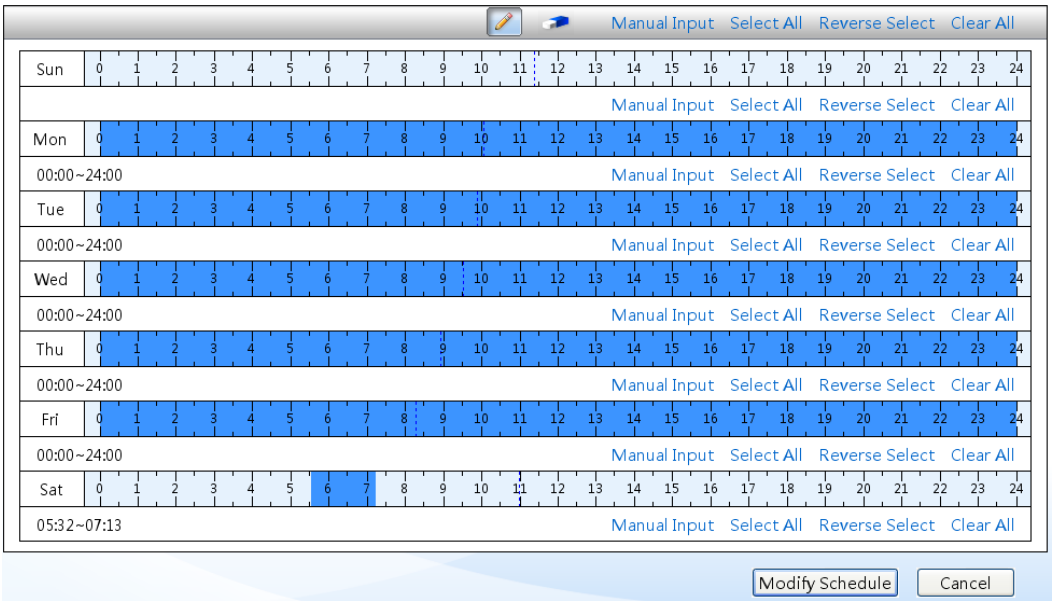
1) Modify Schedule

Enter into the schedule configuration interface. Select the schedule and click ‘Modify’ button as shown below.



Select “Modify Schedule Name” to help you modify the schedule name.

Select “Modify Schedule Time” to help you modify the schedule time. After clicking “Modify Schedule Time”, the schedule will pop up. Click  icon and move the cursor to select time. Click  icon and move the cursor in the blue area to erase the time selection. You can also manually input the time or modify schedule time through clicking “Select All”, “Reverse Select” or “Clear All’ button. Finally, click ‘Modify Schedule’ button to save all settings.



2) Delete Schedule

Enter into the schedule configuration interface. Select the schedule you want to delete and then click 'Delete' button.

4.7.3 Set Shedule for All Applications

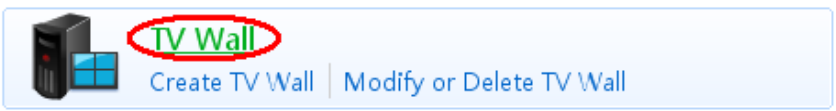
Click  icon to return to Device and Server configuration interface. Click 'Set Schedule for All Applications' button to set record schedule, motion alarm schedule and sensor alarm schedule.

4.8 TV Wall Server Settings

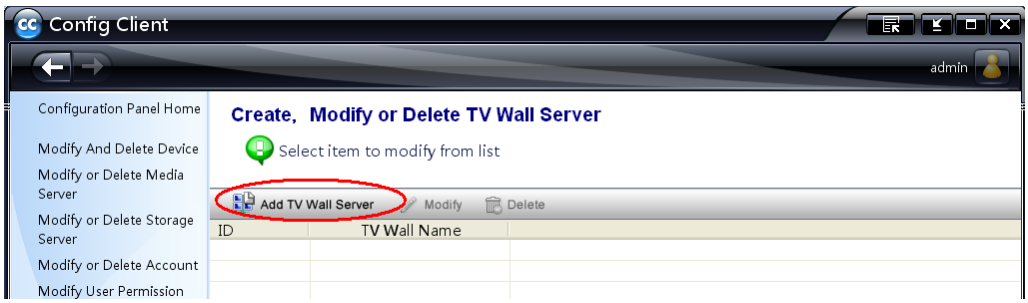
TV Wall Server is in charge of decoding the video signal sent by media server and display images on the TV wall. However, decoding the video signal and displaying images on the TV Wall must install decoding card in the PC.

4.8.1 Create TV Wall Server

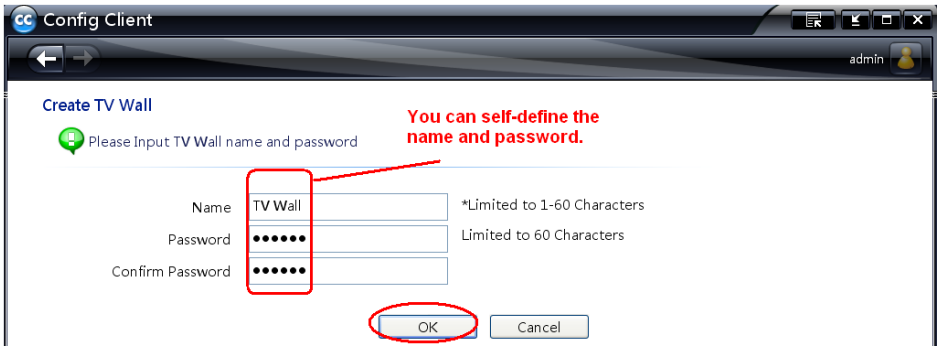
Start Authentication Server and Config Client and then enter into Configuration Panel Home → Device and Server → TV Wall Server interface.



Click 'TV Wall" to enter into TV Wall Server configuration interface. Click 'Add TV Wall Server' button.



Input the name and password of the TV Wall Server and then click 'OK' button.

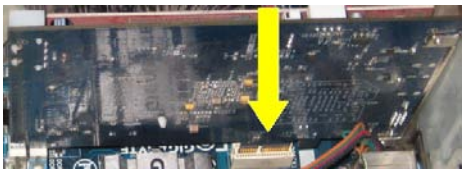


As for the created TV Wall Server, you can click 'Modify' button to change its name and password and click 'Delete' button to delete the TV Wall Server.

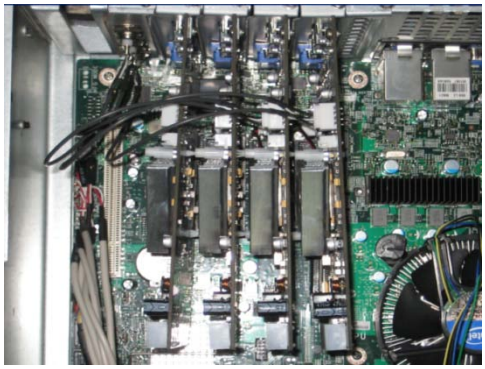
4.8.2 Install Video Decoding Card

In order to decode video and display video on the wall, user must install video decoding card in the computer. The steps are as follows:

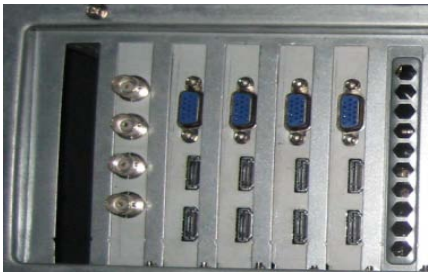
Step 1: Open the back cover of the PC and insert the video decoding card into the PCI port of the PC as shown below:



Step 2: Connect BNC port and video decoding card (take the decoding server which supports 4 decoding card for example) as shown below:



The port will display as shown in the following picture after you install the video decoding card.

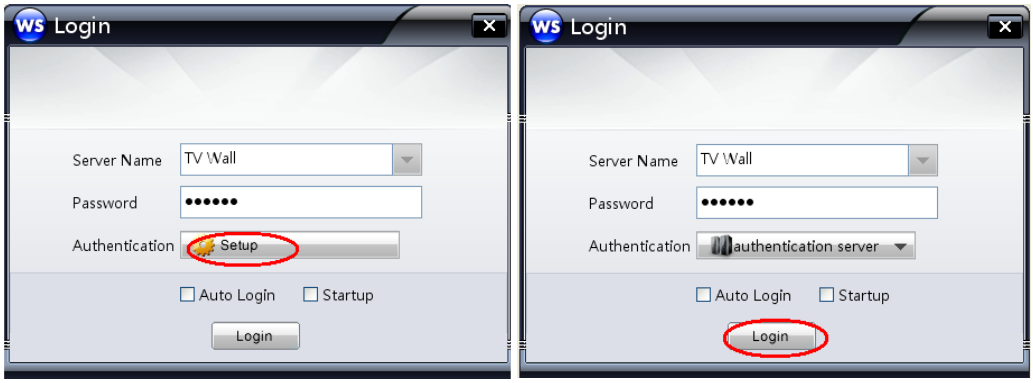


Step 3: Right click ‘My computer’ and then click ‘Manage’ → ‘Device Manager’ to unfold ‘sound, video and game controllers’ to check whether there are decoding cards listed or whether the decoding card displays well. If the number of decoding cards is wrong or there is question mark, please re-install the driver software.

4.8.3 Start TV Wall Server

Double click 

icon (or click ‘Start’ → Programs→NVMS-5000 → Server→TV Wall Server) to run the TV Wall Server. A login window will pop up as shown below. Please input the name and password of the TV Wall Server and then click ‘Setup’ button to input the relevant information about Authentication Server (Please refer to Chapter 4.2 Config Client). Finally, click ‘Login’ button to enter into TV Wall Server interface.



After starting TV Wall Server, it is a full black screen. Right click the screen to see the following list. Click ‘About TVWall Sever’ to see the version information of TV Wall Server. Click ‘Server start and maintenance configuration’ to set the login method next time. Click ‘Exit TVWall Server’ or press ‘ESC’ button to exit the TV Wall Server.

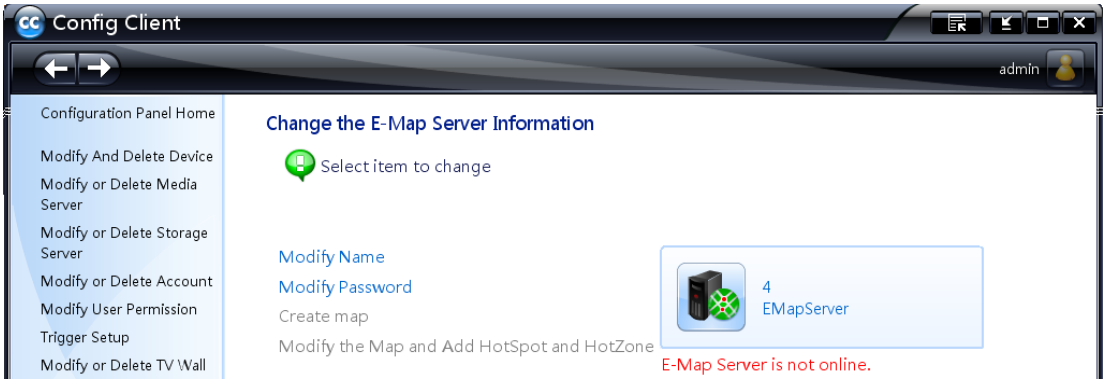
4.9 E-Map Server

The E-Map server stores the E-map information of the system. The clients of the system landing anywhere can share the same E-map.

4.9.1 E-Map Server Setting

There is only one E-map server in NVMS-5000 system and it has been already created named EMapServer. The default password is null. When logging into the EMap server, no password needs to input.

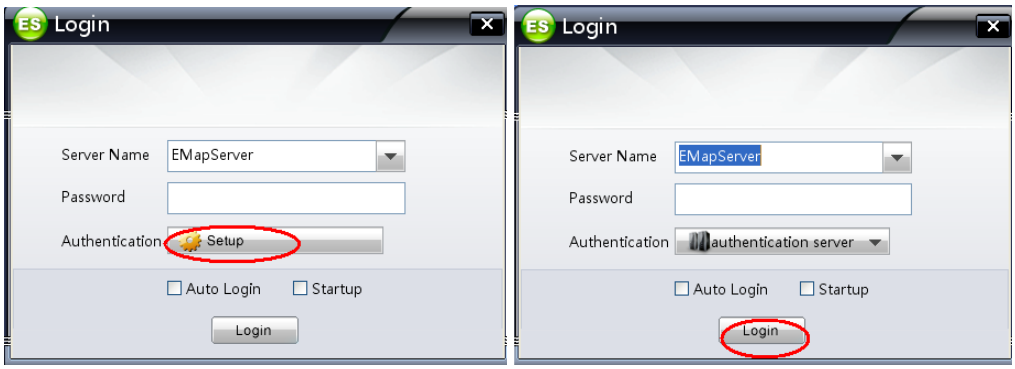
Enter into Configuration Panel Home → Device and Server → EMap server interface as shown below. You can modify the EMap Server name and password.

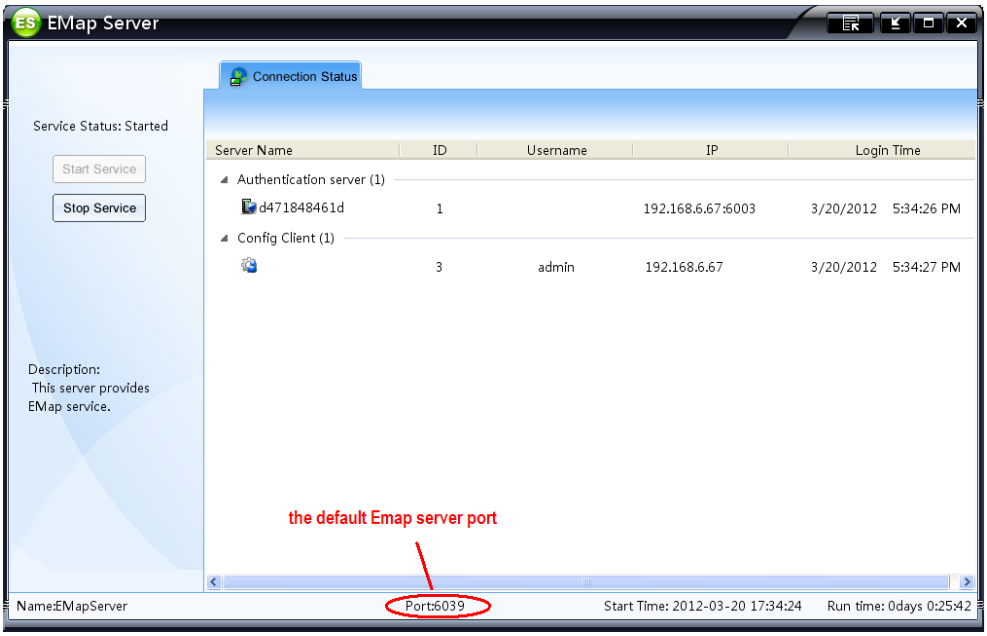


To create map or modify the map, you must start the E-Map Server.

4.9.2 Start E-Map Server

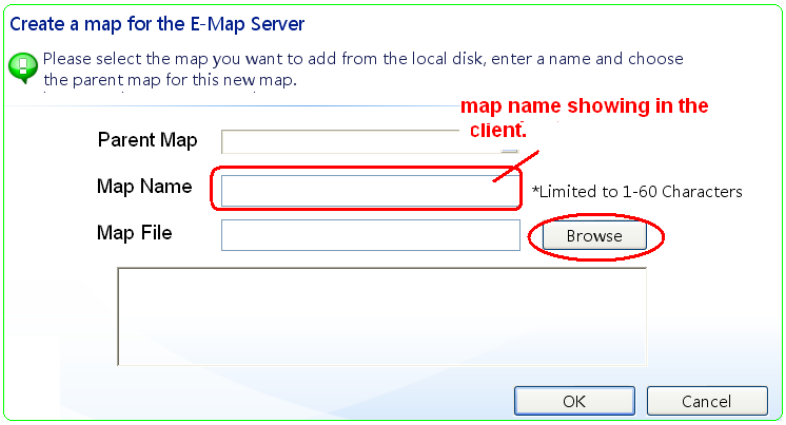
Double click EMap Server icon (or click 'Start' → Programs→NVMS-5000 → Server→EMap Server) to run the EMap Server. A login window will pop up as shown below. Please input the name and password of the TV Wall Server and then click 'Setup' button to input the relevant information about Authentication Server (Please refer to Chapter 4.2 Config Client). Finally, click 'Login' button to enter into EMap Server interface.





4.9.3 Create E-Map

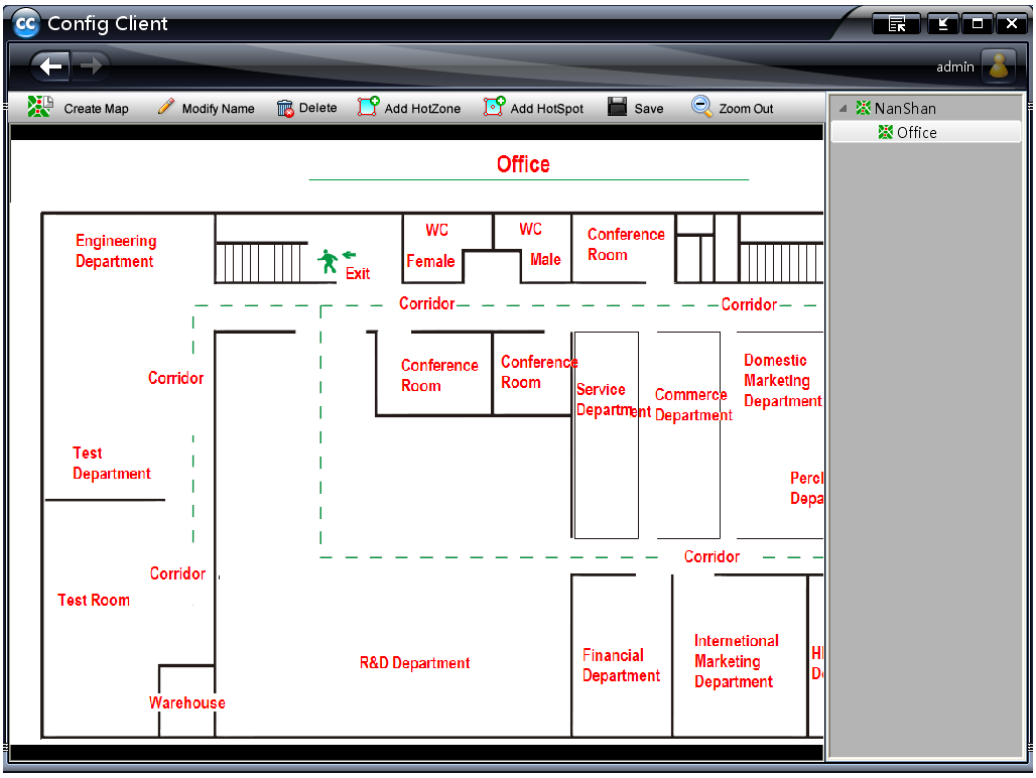
After the startup of the EMap server, return to the Configuration Panel Home → Device and Server → EMap server interface and click 'Create map' button.



Input the map name, click 'Browse' button to find the map you want to add, double click the map file and click 'OK' to save settings.

4.9.3 Modify Map & Add Hotspot and Hotzone

Enter into the Configuration Panel Home → Device and Server → EMap server interface and click 'Modify Map and Add HotSpot and HotZone' button.



Click the map display area, scroll the mouse wheel to zoom in the map and click Zoom Out button to zoom out the map.

- **Modify Map**

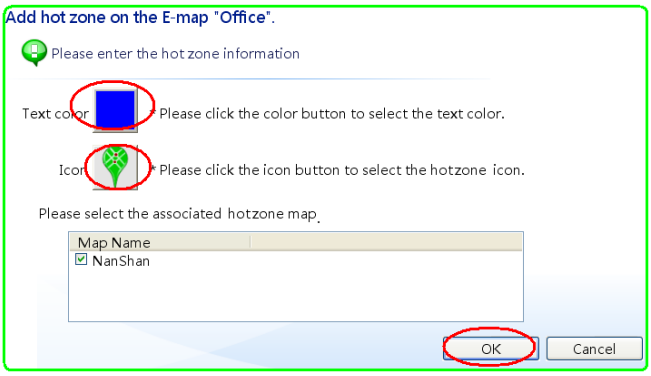
  Select the map name on the right hand and click 'Modify Name' on the menu bar to modify the map name.

- **Add HotZone**

  If there are multiple maps to manage, you will needs to use this function. Because you can quickly switch maps from one to another through clicking hotzone icon after you add the hotzone. It's much convenient for users to browse the map. The steps are as below:

  Step 1: Select the map name on the right hand and click 'Add HotZone' button on the menu bar. Then a dialog

box will pop up as follow:

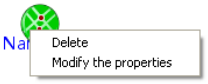


Step 2: Click color box  to select text color displaying under the hotzone icon.

Step 3: Click  icon to choose the hotzone icon displaying on the map.

Step 4: Check the associated map.

Step 5: Click 'OK' button to save settings.



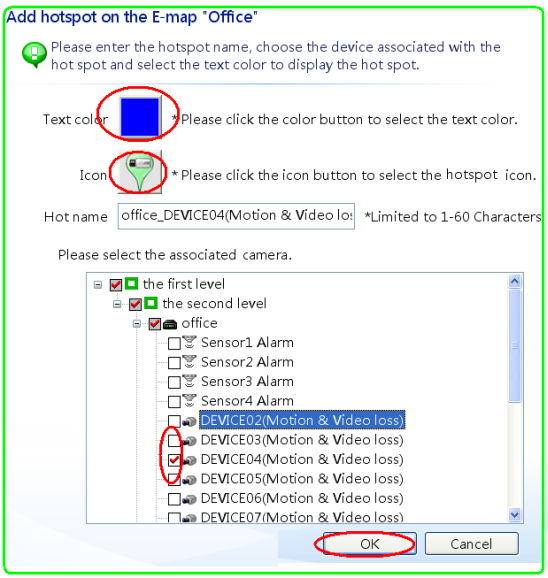
The hotzone icon can be moved anywhere. To switch to the designated map, click this icon. If you delete or modify this hot zone, you can right click and select 'Delete' or 'Modify the properties'.

Step 6: Adjust the position of this hotzone icon and then click 'Save' button to save hotzone.

- **Add Hotspot**

The position of the monitor can be displayed on the map by adding hotspots so that the position of cameras and alarms can be vividly shown. The setting steps are as follows:

Step 1: Select the map on the right hand and click 'Add HotSpot' button on the menu bar.

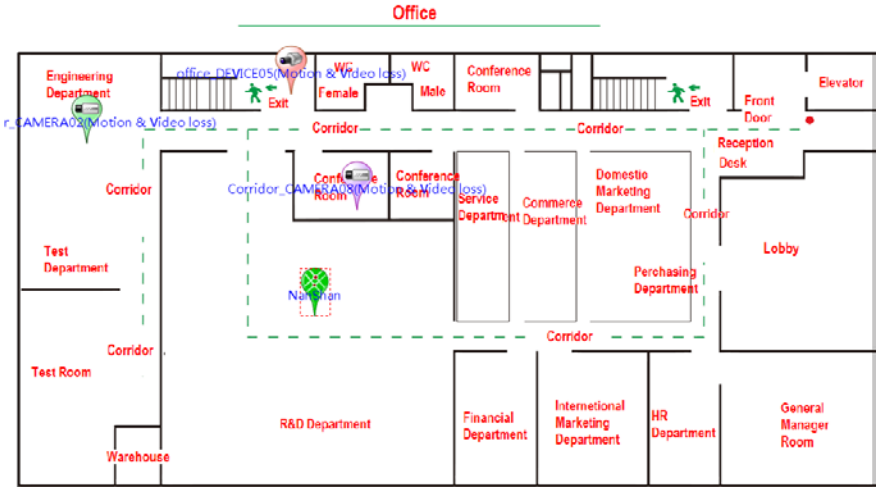


Step 2: Select the text color of the hotspot.

Step3: Input the hotspot name and select the associated camera.

Step 4: Click  icon to select the hotspot icon.

Step 5: Click 'OK' button to save settings.



You can drag the hotspot icon anywhere. Please move it to the right position on the map according to the actual position of the camera.

Right click the hotspot to delete or modify the hotspot.

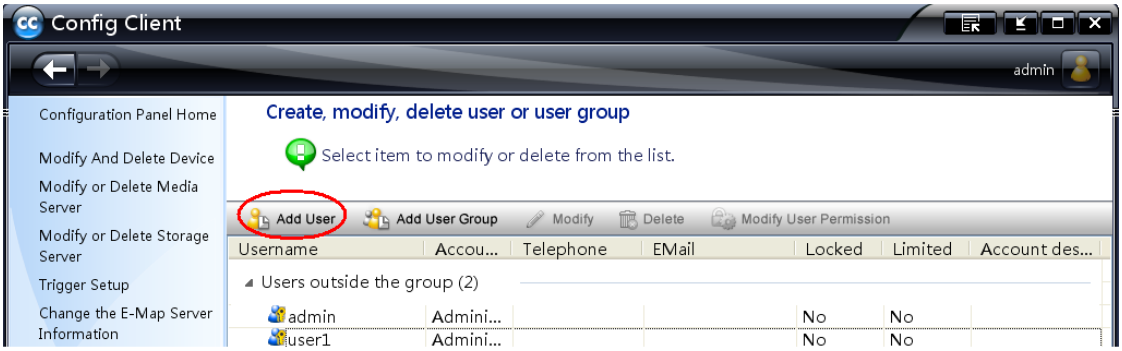
Step 6: Adjust the position of the hotspot and then click ‘Save’ button on the menu bar.

4.10 Account and Permission

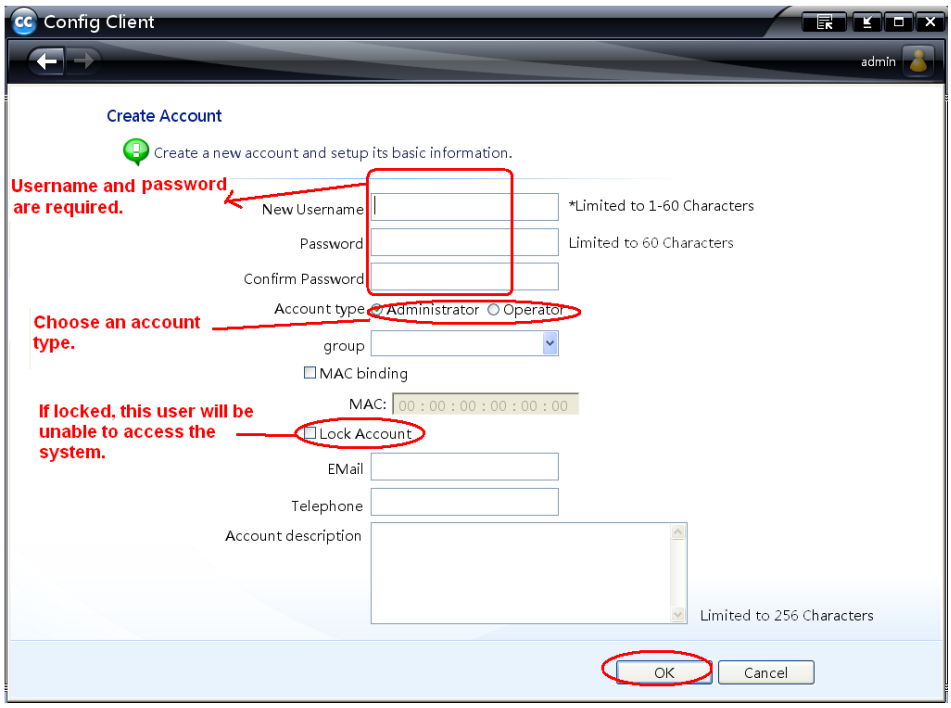
NVMS-5000 user consists of operator and administer. The permission of administer cannot be modified. Only the permission of the operator can be set.

4.10.1 Add User

Enter into Config Client →Account and Permission→User Account interface and click ‘Add User’ button.

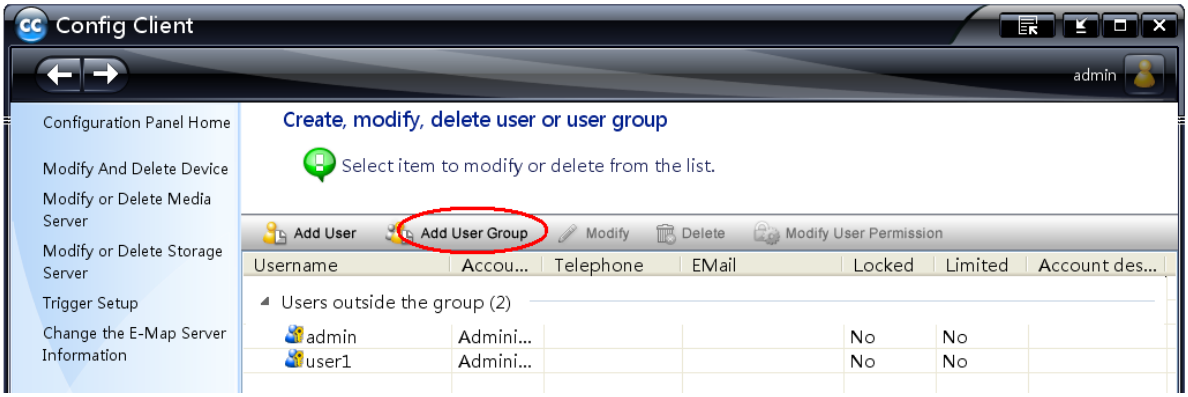


Input username, password and select account type. Then click ‘Create Account” to add a user.



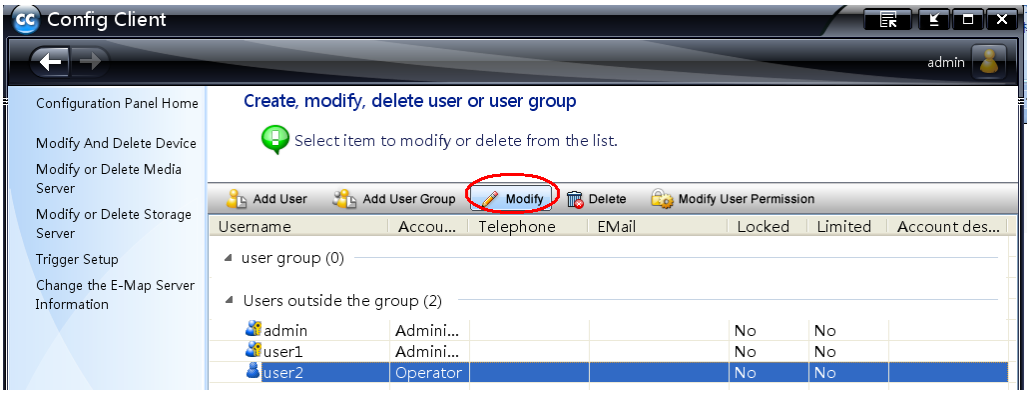
4.10.2 Add User Group

Enter into User account interface to click ‘Add User Group’ button. Input the user group name and click ‘Create User Group”.

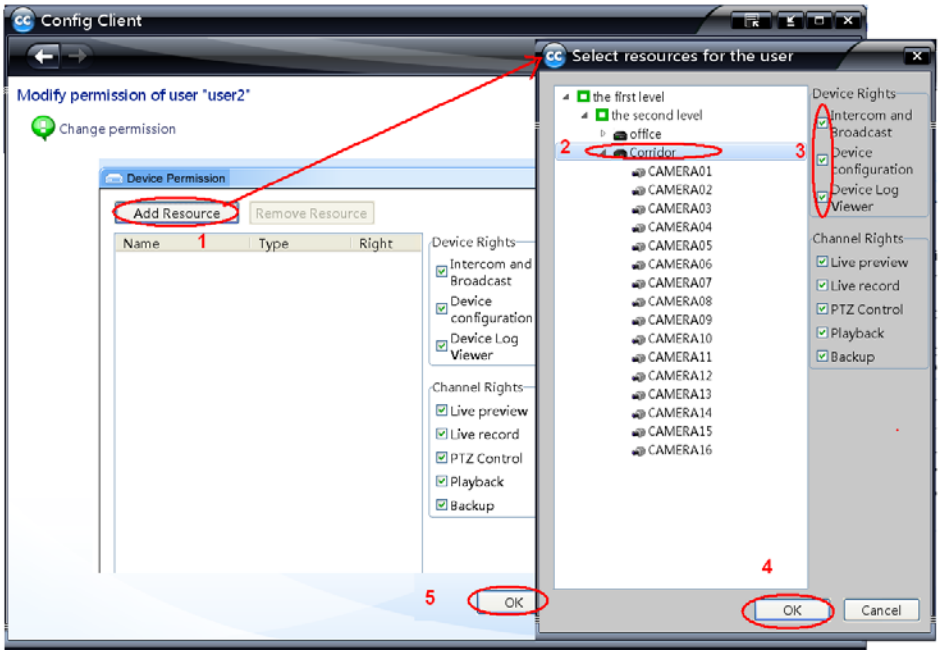


4.10.3 Modify User Permission

If the added user is an operator user, you can modify the permission. Select this user and click ‘Modify User Permission’ button as shown below:



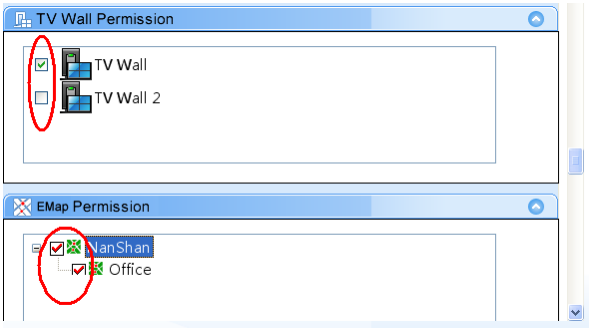
The permission includes system permission, device permission and TV Wall Server permission.



Steps:

➢ Click ‘Add Resource’ button to pop up a dialog box. Select the area, device or channel you want to add. Finally, click ‘OK’ to add a new permission list.

➢ Drag the scroll bar down to set TV Wall Server permission. You just need to select the relevant TV Wall Server and then click ‘OK’ to save the setting. **You must have already added TV Wall Servers before permission settings.**



➢ Drag the scroll bar down to set E-map server permission. You must have already added the map and started the E-map server, otherwise you cannot set the E-map permission. Here if you have added the map and started the E-map server, you just need to check the relevant map and click ‘OK’ to save the setting.

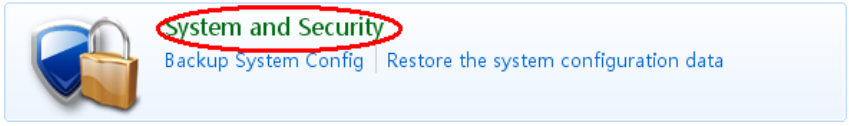
Additionally, you can also click ‘Modify’ button to change user’s permission, name, password, user group and so on.

Note：The permission of administer cannot be modified.

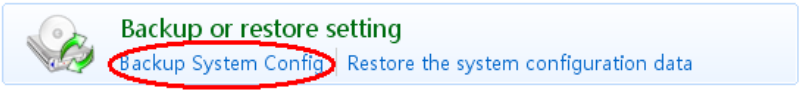
4.11 System and Security

Return to Configuration Panel Home and click ‘System and Security’ to backup or restore system configuration.

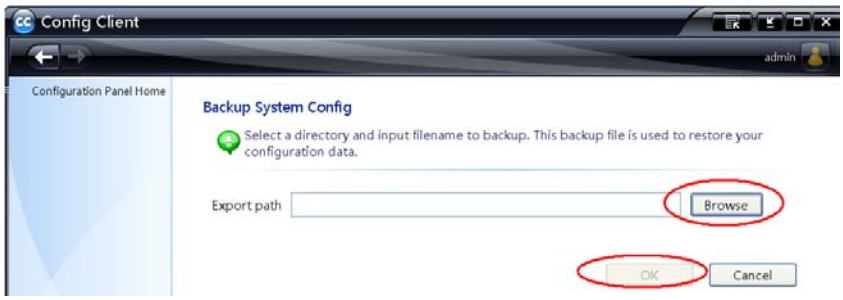
The user must register in this software for using this function. If you don't register, you cannot backup or restore the configuration here.



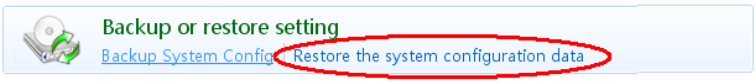
Export system configuration: enter into Configuration Panel Home → System and Security interface and click 'Backup System Config".



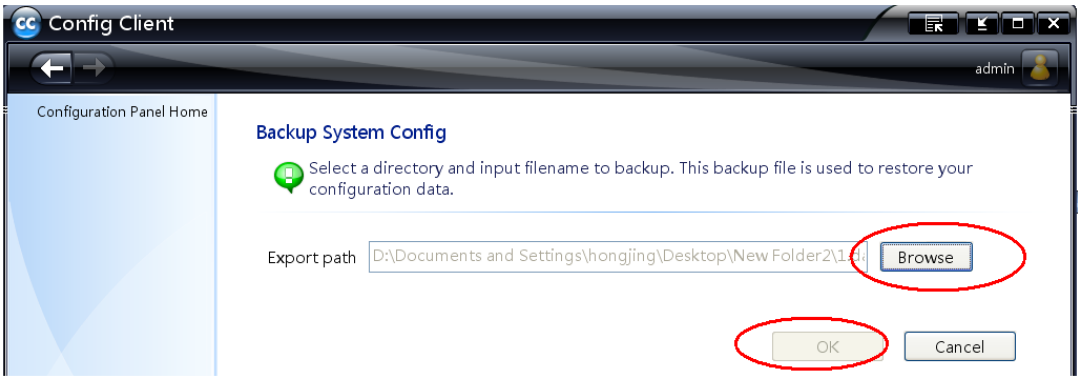
Click 'Browse" to select the storage path, input the file name and then click 'OK'.



Import system configuration: enter into Configuration Panel Home → System and Security interface and click 'Restore the system configuration data'.



Click 'Browse" to select the configuration file you need to import and then click 'OK' button.



5 NVMS-5000 Client

5.1 Monitor Client

Monitor client is in charge of real-time preview, playback, PTZ control, alarm preview and so on. Real-time preview includes preview snap, single channel dwell, group dwell, tab dwell and alarm big screen preview. Only when

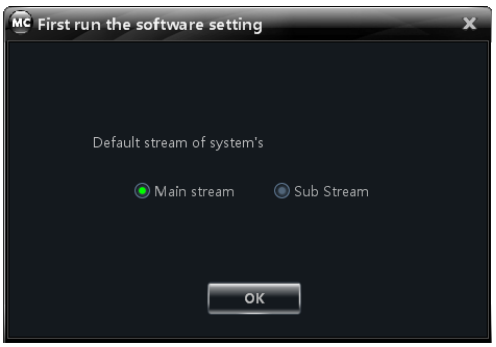
the authentication server, media server, storage server and alarm server is started, can you start monitor client to view real-time video, record and alarm information.

5.1.1 Start Monitor Client

Before starting monitor client, you must start authentications server, media server, storage server and alarm server first. Double click 

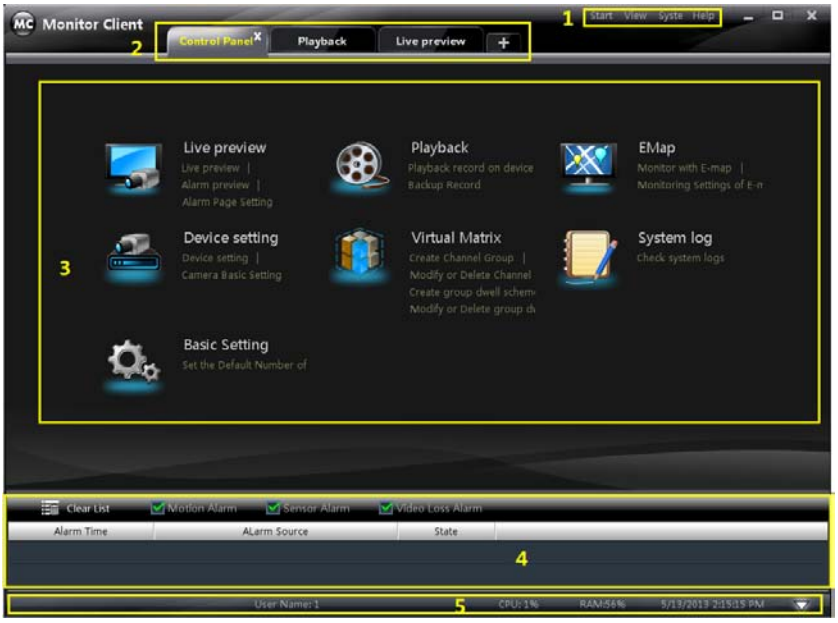
(or click 'Start'→Programs→NVMS-5000→Client→Monitor Client) to run monitor client. A login window will pop up as shown below. Please input user name and password created in Chapter 4.9. Then click 'Setup' button to input the information about authentication server (please refer to Chapter 4.2 Config Client for detail information). Finally, click 'Login' button to enter into Monitor Client interface.

➢ **Note：One user can only login to one client. For example, user1 who has already logged in to Config Client cannot login to Monitor Client at the same time. If user1 wants to login to Monitor Client, he needs to exit Config Client first and then log into Monitor Client.**



If you login to the Monitor Client for the first time, you should choose the stream before you log in. Please select it according to the actual condition of your camera.

After logging in to the monitor client, the following interface shows.



There are five areas in the main interface of this software. The descriptions of each area are as follows：

Area	Description	Area	Description
1	Function Area	**2**	Tab Bar—to display the operated functions
3	Menu Bar	**4**	Alarm Information List.
5	Status information list		

Description of Menu Bar

Menu	Description
Start	Export the control panel, live preview, playback tab and lock or exit the client.
View	Export the live preview, control panel, local log, E-map, alarm preview, playback, user account and permission, basic configuration and device management and organize the live view
System	Including lock client， broadcast to device, switch user, import or export configuration, etc.
Help	View user manual and software version

Descriptions of Function Module

Menu	Description
	Live Preview: To view live images and record, snap, control PTZ, etc.
	Playback: To remotely play the local record.
	E-map: To manage and display maps, hot zones and hotspots. To operate E-maps – zoom in/out e-maps, view hot zones and hotspots, display alarm information on the map.
	Device Setting.
	Virtual Matrix: To create, modify or delete camera groups and schemes.
	System Log: To search, view and backup local log.
	Basic Configuration: To setup record partition and path, system startup and maintenance & backup and restoration.

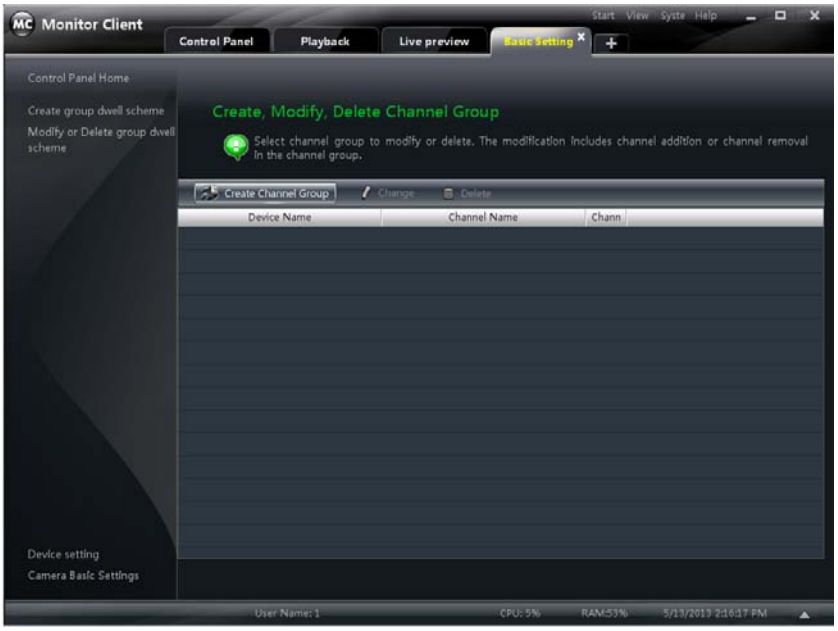
Descriptions of Other Buttons

Button	Description
	Click to hide the window
	Click to zoom in/out the window
	Click to exit the window
	Click to extend or shrink the window (eg. Extend or shrink the list of alarm information list)

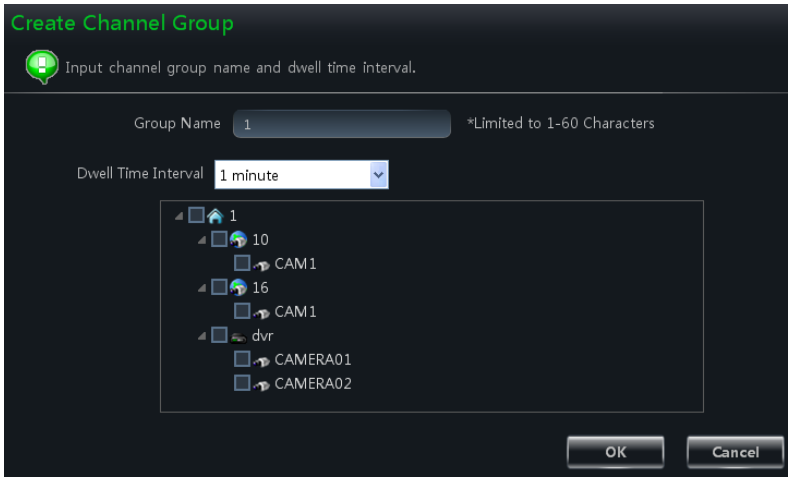
5.1.2 Group and Scheme Setting

- **Channel Group Setting**

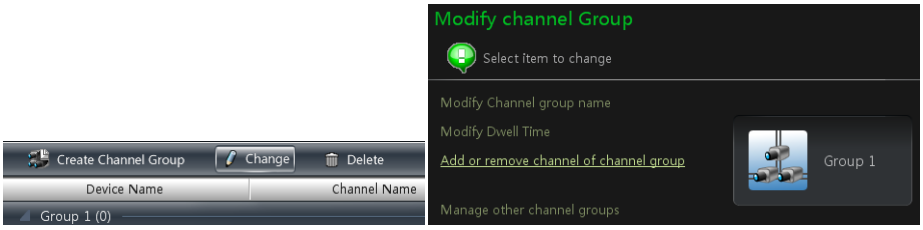
In monitor client control panel interface, click “Virtual Matrix” to pop up the following window.



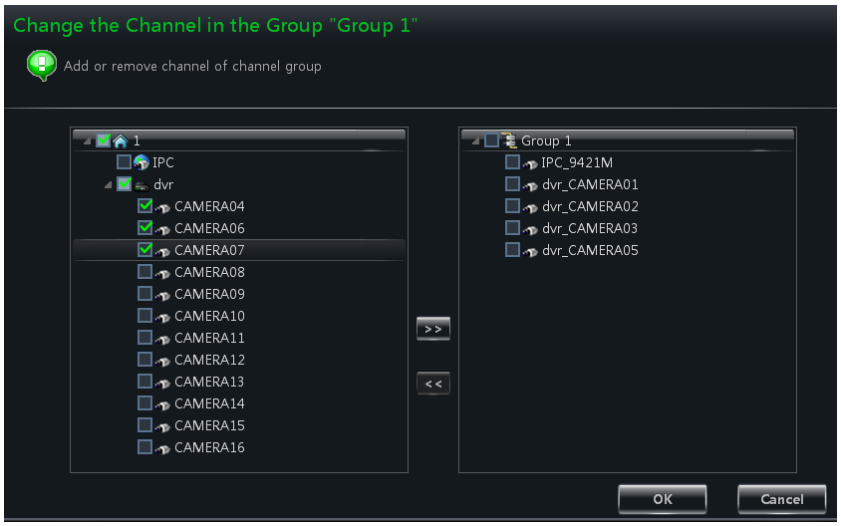
Click “Create Channel Group” to create a channel group.



After you create a channel group, choose this channel group and click “Change” button.



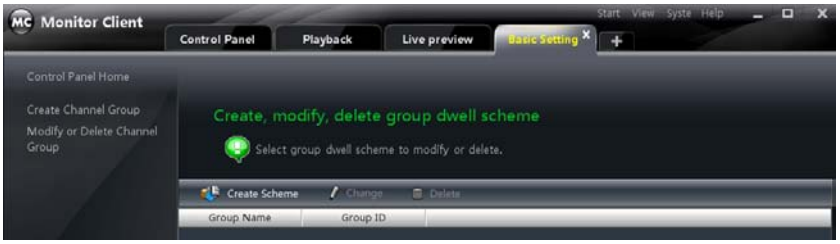
Then click “Add or remove channel or channel of channel group.



Check cameras on the left and click  button to add the selected cameras to the group on the right. Check cameras on the right, then click  button to remove them from the group.

- **Group Dwell Scheme Setting**

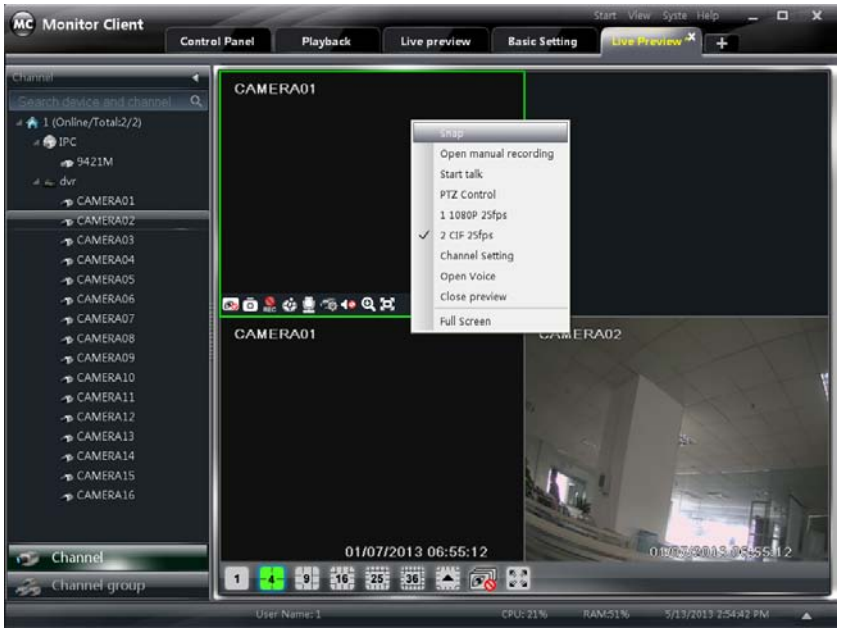
In Virtual Matrix interface, click the shortcut menu “Modify or Delete Group Dwell Scheme” on the left hand.



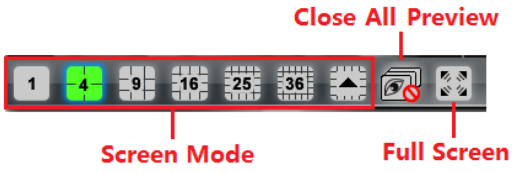
Click “Create Scheme” to create a group dwell scheme. Then select this scheme and click “Change” button; choose “Add or remove channel group of group dwell scheme”. The way to add or remove channel group of group dwell scheme is the same as the channel group setting. Please see the above-mentioned setting.

5.1.3 Live Preview

In the interface of control panel, click “**Live Preview” to** enter the interface:



Buttons description of live preview:



Toolbar on the display window:

Icon	Description	Icon	Description
	Close image		Snap
	Start/stop manual record		PTZ control. Clicking the icon will display the control panel of PTZ.
	Start/stop talk		Camera configuration
	Open/close audio		Zoon in
	Fit to window		

Right button functions:

Menu	Description	Menu	Description
Snap	Snap picture	**Open Manual Recording**	Start manual record
Start talk	Start or stop talk	**Camera Configuration**	Enter the interface of the area and Camera configuration
Stream	Choose stream to view.	**PTZ Control**	To display the control panel of PTZ
Enable Audio	Enable or close audio	**Close Preview**	Close single channel preview
Full Screen	To display in full screen		

➢ **Note：Click**  **icon to turn off all channels，but click**  **icon to turn off the single channel.**

- **Monitory Point Preview**

To start the live preview, drag the cameras from the list to the right display window or select a window and double-click the camera to display the live image.

You can drag the image to any window at random.

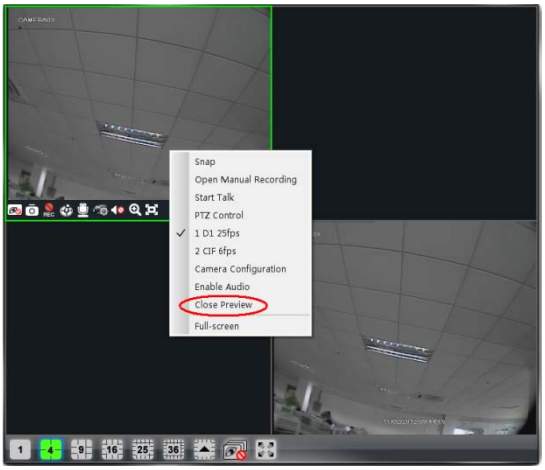
Note: Node unfold rule: After the first time for setting the device and area, you shall obey the following rule to view all tree nodes: when the tree node is more than 64 nodes, the system will unfold the upper node by default.

For example: A (There is camera group AC under A; sub-area a under AC; camera group ac under sub-area a). If the nodes number is more than 64, A will be unfolded and AC will be displayed, but a will not be unfolded and ac will not be displayed. If the node number of A is less than 64, A will be folded and all nodes need to be unfolded manually.

- **Stop Preview**

➢ Close Preview of Channel

Place your mouse on the window to display the menu toolbar, then click  icon to close preview of this channel.



➢ Close Preview by Right-clicking

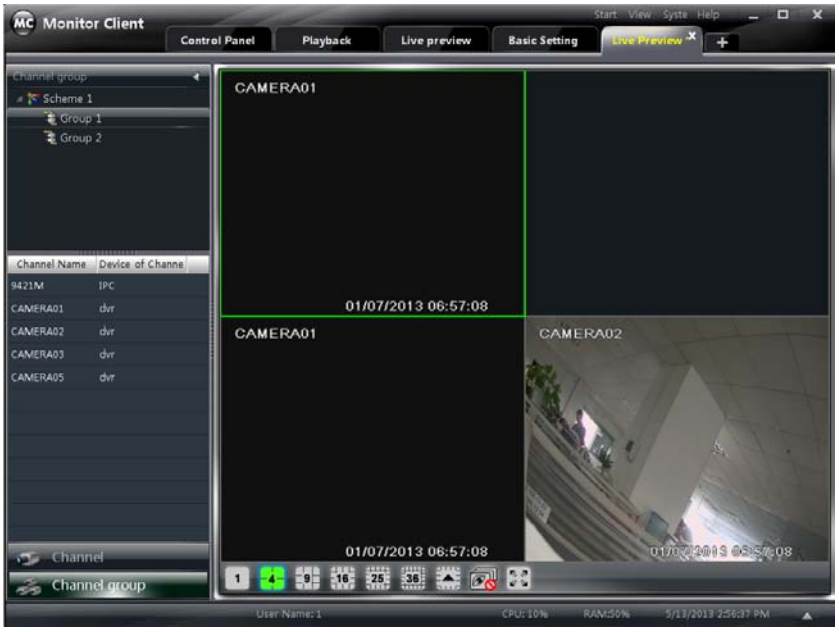
Choose ***"Close Preview"*** by right-clicking the display window to close preview of this channel.

➢ Close All Preview

Click  icon on the main menu toolbar to close all the windows.

- **Group Dwell Preview**

Click "Channel Group" button on the lower left corner.



Choose the group and the window and then double click this group to view the group dwell image.

Choose the scheme and double click this scheme to view the group dwell scheme. The system will display the screen mode automatically.

➢ Stop Channel Group or Group Dwell Scheme

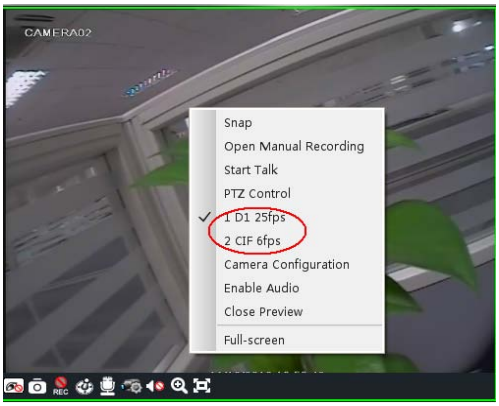
Click  icon to close all the windows for stopping channel group or scheme dwell.

- **Preview Control**

➢ Full Screen

Click  icon on the display window or right-click to choose "Full Screen" to view in full screen.

Right-click to choose "Exit Full Screen" to exit full screen preview.



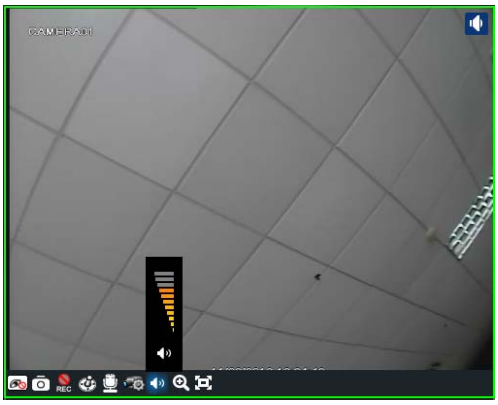
➢ Single Channel in Full Screen

Double click the selected window to view in full screen. Double click again to recover the window.

➢ Stream of Live Preview

Right click on the display window to choose recording stream as shown on the right. The above stream is mainstream (eg: D1 25fps) and the below is sub stream (eg: CIF 6fps).

Modify Device Stream: Click  button on the display window to enter the Area and Camera Management interface. Click ***"Image Quality"*** under Image Setting to modify device stream. Please refer to chapter 3.3.2 Image Settings for details.



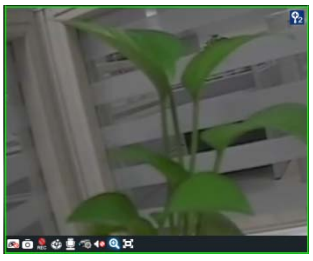
➢ Audio

Right click on the displaying window to choose "Enable Audio" or click  icon to enable audio of this channel.

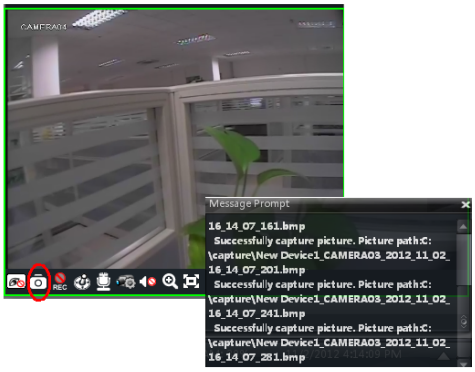
Note: Only one audio can be enabled at the same time. If enabling another channel's audio, the enabled audio will be closed automatically.

➢ Zoom In

Click  icon on the toolbar in the displaying window to zoom in the image; click  icon to recover the image.



➢ **Snap**

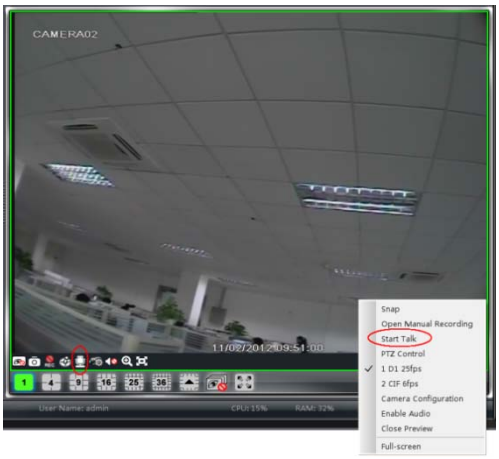


Click  button on the toolbar of the selected channel or right click to choose ***"Snap"*** to capture the pictures.

After snapping pictures, a message prompt box will pop up to remind you the pictures are captured successfully and where the pictures are stored.

Note: Capturing pictures can be realized only in live preview or playback.

➢ **Talk**



Click  button on display window or right click to pop up a menu bar. Choose "Start Talk" to enable bidirectional audio.

Note: Since NVMS-1000 only allow you to open one device's talk at the same time, the system will stop talk with the current device for enabling new talk with another device which is launching talk.

➢ **Broadcast**

① Click ***"System"*** on the menu bar of software at the upper right; choose ***"Broadcast"*** to enter the interface.

② Click 

button to pop up a window; then check the devices you want to broadcast, click 【OK】button to save the setting.

③ Click 

button to stop broadcast.

➢ **PTZ Control**

Please confirm the parameter of PTZ has been configured correctly before operating PTZ. Click  icon in display window or ***"Change Camera Setting"*** under ***"Device"*** to enter the interface. Click ***"PTZ Setting"*** to enable PTZ and setup protocol, baud rate and address of PTZ.

Note: Here the protocol, baud rate and address of PTZ must be consistent with the PTZ decoder.

Select the channel and click  icon or right click to choose ***"PTZ Control"*** to open the control panel of PTZ.

Click the direction buttons to control its rotational direction; drag the slider to control its speed.

Click  and  buttons to adjust focus, iris and zoom.

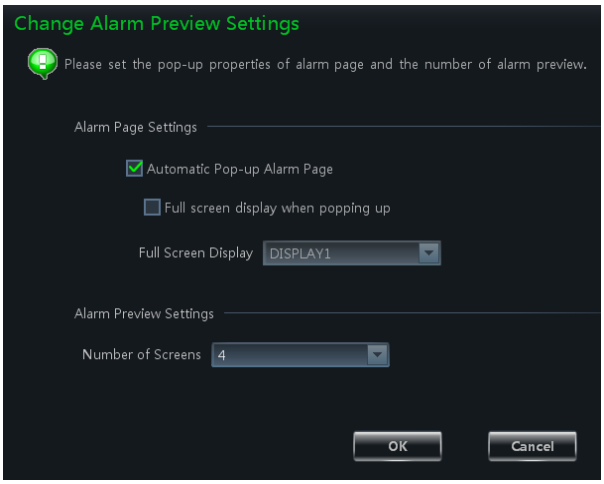
Select a preset point and click  to operate this preset point or double click the preset point to operate it.

Click【Cruise】button to list the cruises. Select a cruise and click  button to cruise; click button to stop cruising.

PTZ can also support track, auto scan, wiper and light function.

5.1.4 Alarm Preview

- **Alarm Preview Setting**



In the control panel, click "***Alarm Page Settings*** under Live Preview to pop up the window

① Alarm preview will pop up automatically when alarm is triggered if checking "Automatic Pop-up Alarm Page".

② Alarm preview will pop up automatically in full screen when alarm if triggered if checking "Full Screen Display When Popping Up".

③ Choose a display monitor from the "Full Screen Display" drop-down menu. The alarm image will display on the designated monitor when alarm is triggered.

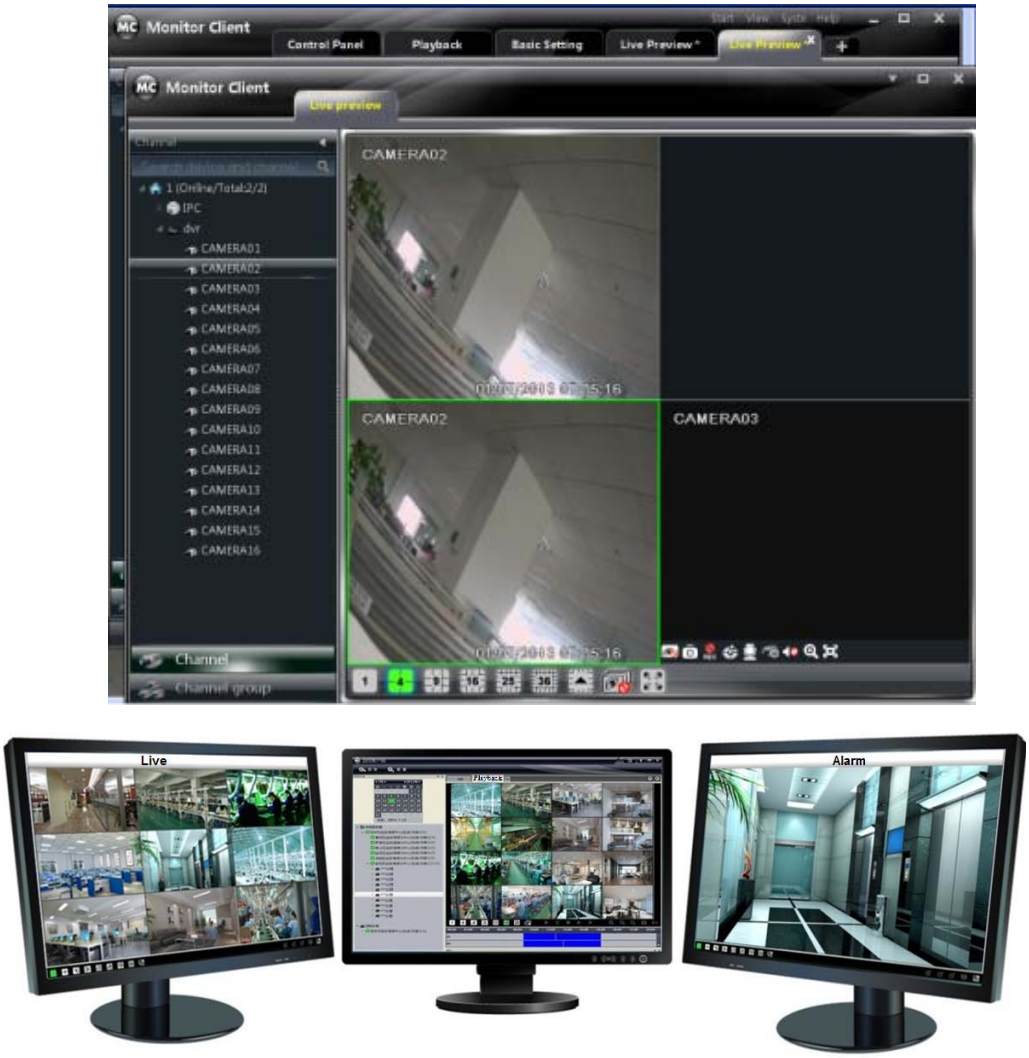
④ Choose the number of screen.

- **Alarm Preview**

In the Config Client, set up alarm trigger and alarm schedule for alarm server. The monitor client will pop up the relevant image on an alarm. In the monitor client, click "Alarm Preview" to pop up the following window.

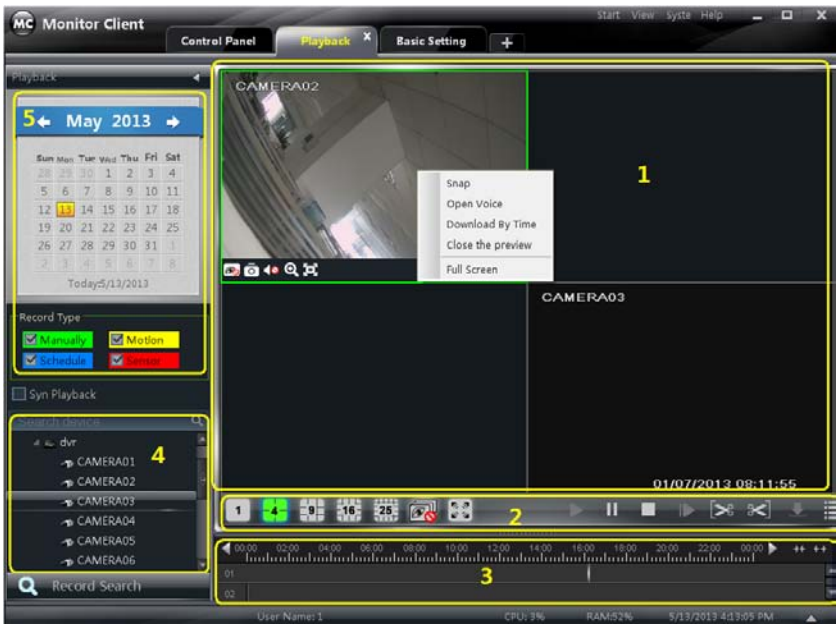
5.1.5 Multi-screen Display

In the interface of live preview, click  button to plus a tab of live preview. Drag any tab of live preview or right click the tab of live preview to select "Float" to pop up an independent live preview interface as below. Multi-screen to display can be realized by dragging the independent interface to other screen (graphics card should support multi-screen output at the same time).



5.1.6 Playback

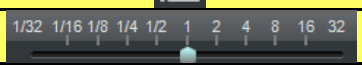
In the interface of control panel, click **"Playback"** to enter the interface. You can play back the record files stored in the HDD of device and storage server.



Area Descriptions:

Area	Description	Area	Description
1	Playback Area	**2**	Toolbar
3	Record time Area	**4**	Resources Area
5	Time search or type search Area		

Buttons Description of Area 2

Icon	Description
	Screen mode. 1,4,9,16,25 channels are optional
	Close playback of all channels
	Full screen
	Play
	Pause
	Stop
	Playback by single frame. When playback, click  button firstly and then click this button to play frame by frame.
	Backup the start time
	Backup the end time
	Download
	Event list. Click this button to pop up the event list
	Playback speed bar

Toolbar on Playback Window:

Icon	Description	Icon	Description
	Close playback		Snap
	Open/close audio		Zoom in
	Fit to window		

Right button functions:

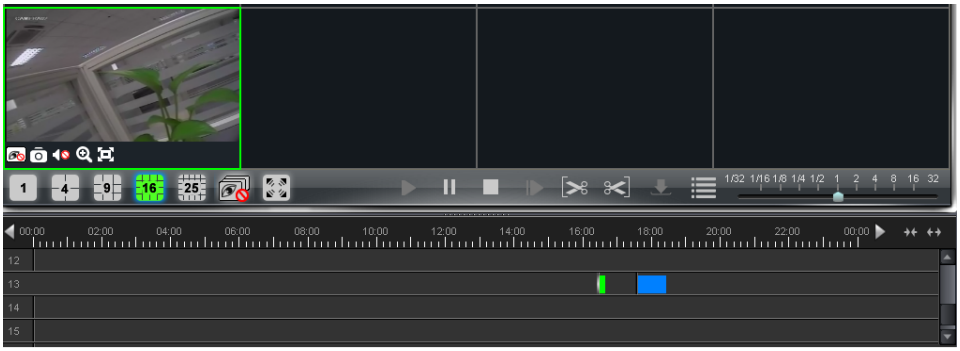
Menu	Description	Menu	Description
Snap	Snap picture	**Enable Audio**	Enable or close audio
Download By Time	To download record by time search	**Close Channel**	Close single channel preview
Full Screen	To display in full screen		

In the playback interface, select date and record type, then drag the camera to the right display window for playing. You can click 

button to search the record file, then click  button to playback.

Playback Record type includes manual record, motion detection record, schedule record, and sensor record.

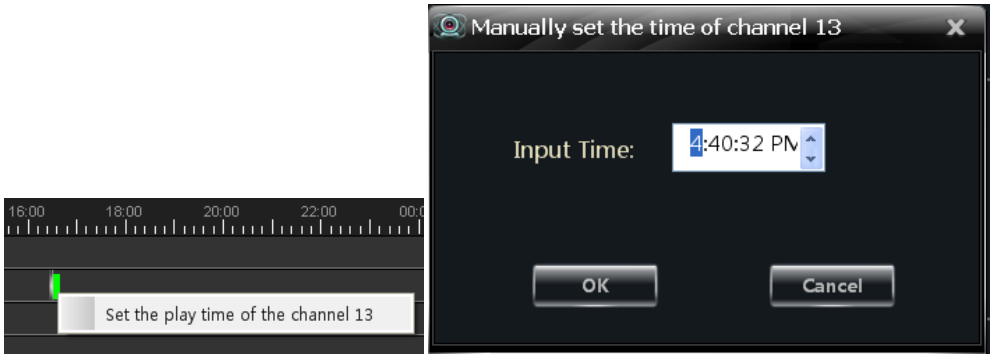
In the timeline, green bar stands for manual record data; yellow bar stands for motion record data; blue bar stands for schedule record data; red bar stands for sensor record data.



5.1.6.1 Playback Mode

- **Playback by Setting Time**

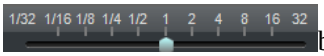
Right click the color bar to select ***"Set the Play Time of the Channel X"*** and then a dialog window pops up. Input time manually or click button to select time. The system will play the video from the time you set.



- **Playback by Searching Event**

Click button to display the event list. Double click an event to play this event record.

Note: and buttons on the timeline are used to expand and narrow down the time bar, so you can choose a more accurate playback time.

What's more, you may also change playback speed by dragging 

bar.

5.1.6.2 Take Snapshot When Playback

Click button on the playing window to capture pictures. A message prompt will pop up after snapping.

5.1.6.3 Clip and Backup Record

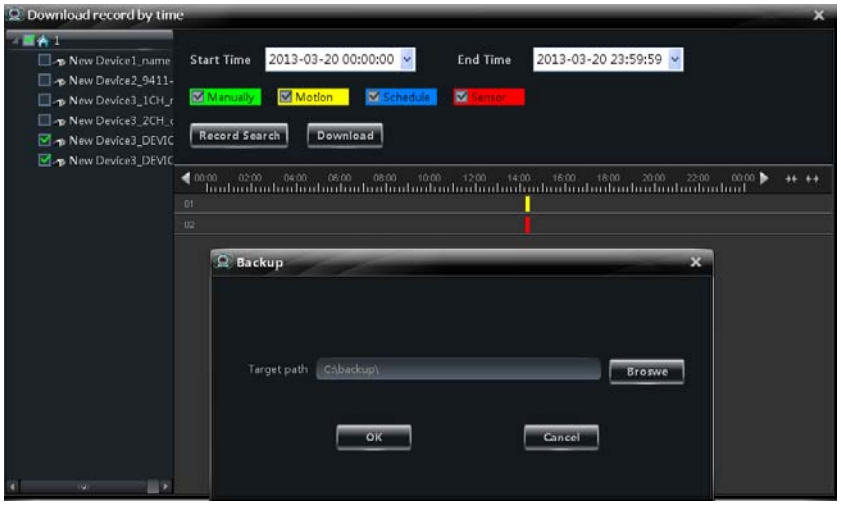
When playing back record file, click button to set the start time; click button to set the end time. Then click button to download the video files within the configured time.

Note: The default path is C:\\backup.

5.1.6.4 Download Record

- **Download Record by Time Search**

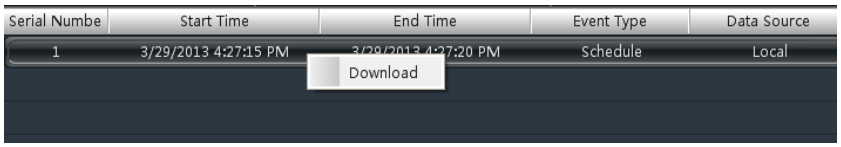
Right click the image in the playback interface to pop up a drop-down list as shown on the left hand.
Click "***Download By Time***" to pop up a window as follows:



Select record channel, start time and end time, checkmark event type and then click【Record Search】button to search record information. After the information is searched, a backup information window will pop up by clicking【Download】button. Click【Browse】button to choose save path. Then click【OK】button to download record.

- **Download Record by Event Search**

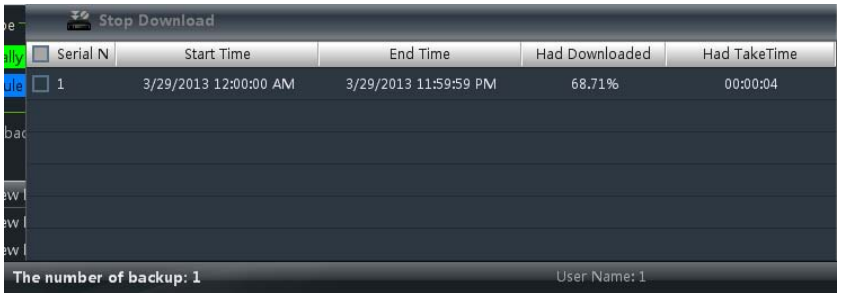
Click  button to display event information list. Choose an event and right click to download this event.



- **View the Progress of Downloading**

When starting downloading, you can view the progress of downloading and stop downloading manually by put the cursor on the lower right corner (under 

button).



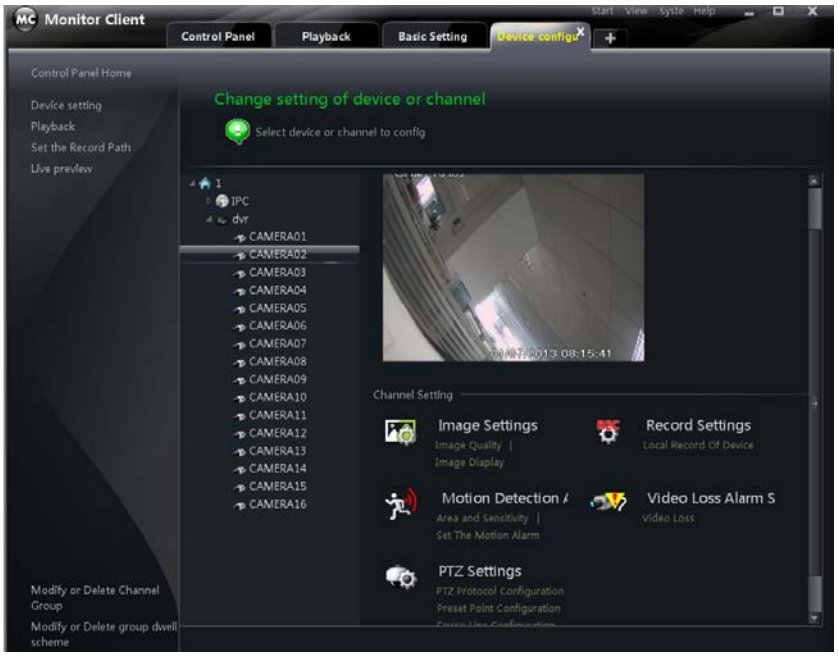
5.1.6.5 Synchronized Playback

In the playback interface, select the playback channel and check synchronized playback.

5.1.7 Device Setting

In the control panel interface, click "Device Setting" to pop up the following window. Here you can set the device

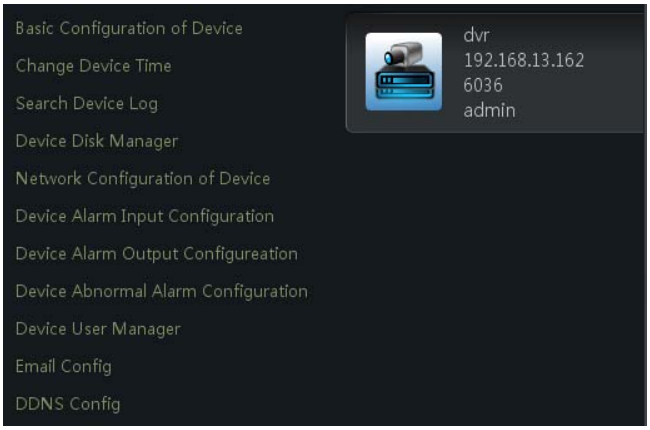
parameter.



The real time image will display when you click one channel. You can set the parameter of this channel like the parameter of image, record, motion detection, video loss alarm and PTZ. Different device settings will be displayed for different device. You shall configure it according to its user manual.

Camera Basic Setting

In monitor client, click “Camera Basic Setting” to pop up the following device settings.



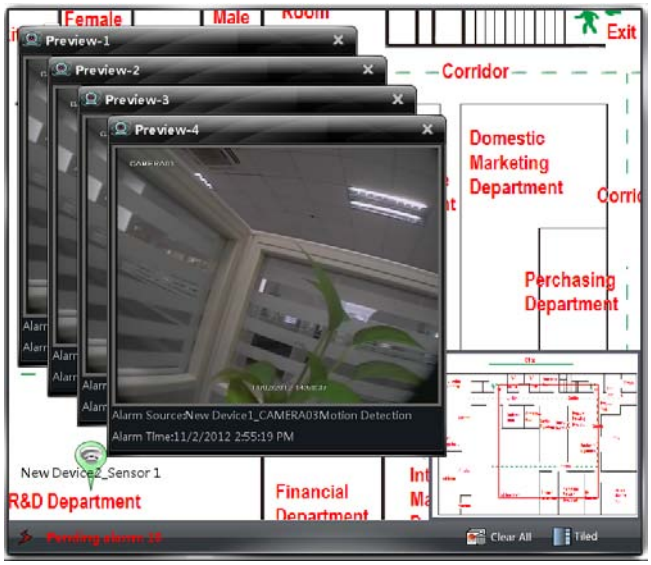
You can change device time, search device log, manage device disk, configure device network., etc.

5.1.8 E-Map

To see the Emap tab, please enter into the monitor client interface and then click ‘Emap’ button. **The EMap Server must be started before the use of this function.**

You can double click the hotspot in the map to see the channel image. The hotspot icon will become a twinkling alarm light when there is an alarm triggered and the alarm image will also pop up automatically.

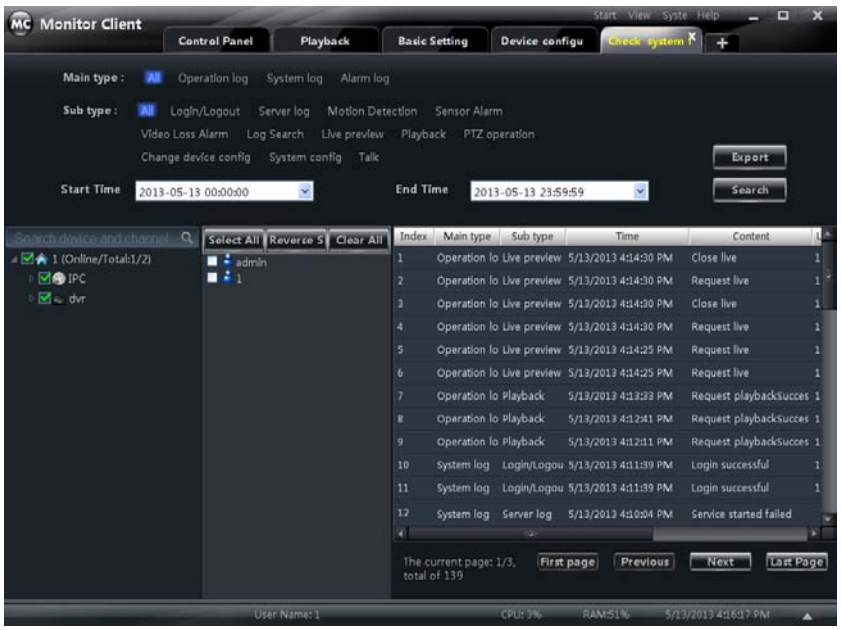
Click ‘Clear All Alarm’ to clear the current all alarm. Click ‘Tile’ button to unfold all alarm images as shown below. Click ‘Pile’ button to pile all these images.



Click  button to tile the alarm preview windows on the right side.

5.1.9 System Log

Enter into the monitor client interface and click ‘ System Log’ button to see the following tab. You can check all kinds of logs and export these logs.



Select the main type and sub type, start time and end time and then click ‘Search’ button to see the relevant log information.

If you need to export the log information, you can click ‘Export’ button after you search the relevant log information and then click ‘Browse’ button to find the export path. Finally, click ‘OK’ button to export those log to the designated folder.

5.1.10 Basic Setting

Click “Basic Setting” on the monitor client to pop up the following window.

In this interface, you can set record path, record backup path, snap path and the default number of the snap as well as system startup and maintenance.

- **Video Path Setting**

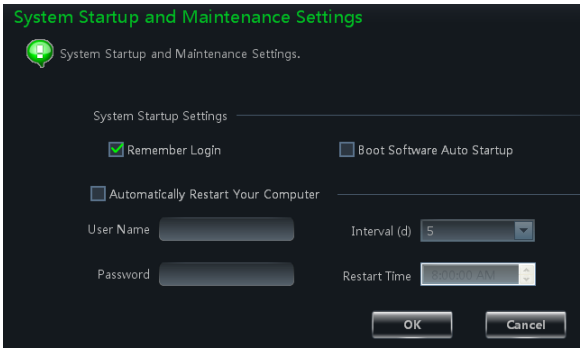
You just need to click the shortcut menu and enter to choose the path separately.

- **System Startup and Maintenance**

In the interface of Basic Configuration, click “***System Startup and Maintenance”*** to enter the interface.

Under the system startup settings, two ways to enable the software can be select.

If checking “Automatically Restart Your Computer” , user name and password of the computer need to be input; time interval and restart time need to be selected.



5.2 Web Client

5.2.1 Operating Environment of Web Client

The web client supports IE 8/IE9/IE10, Firefox or Google browser. Please make sure that your browser supports the downloading and use of the Web Client.

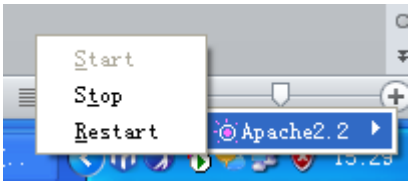
Checkup whether the IE browser prohibits Active X control from downloading:

Open IE browser, click ‘tools”, click ‘Internet Options”, select “Security” and click ‘Custom level…” to pop up a security settings window. Then enable all sub options under “Active X controls and plug-ins”.

- Checkup whether there are other components or antivirus to stop downloading Active X control. Please close other components and configure antivirus and firewall to allow the installation of the file named WebMonitor.ocx.

5.2.2 Start IE Client

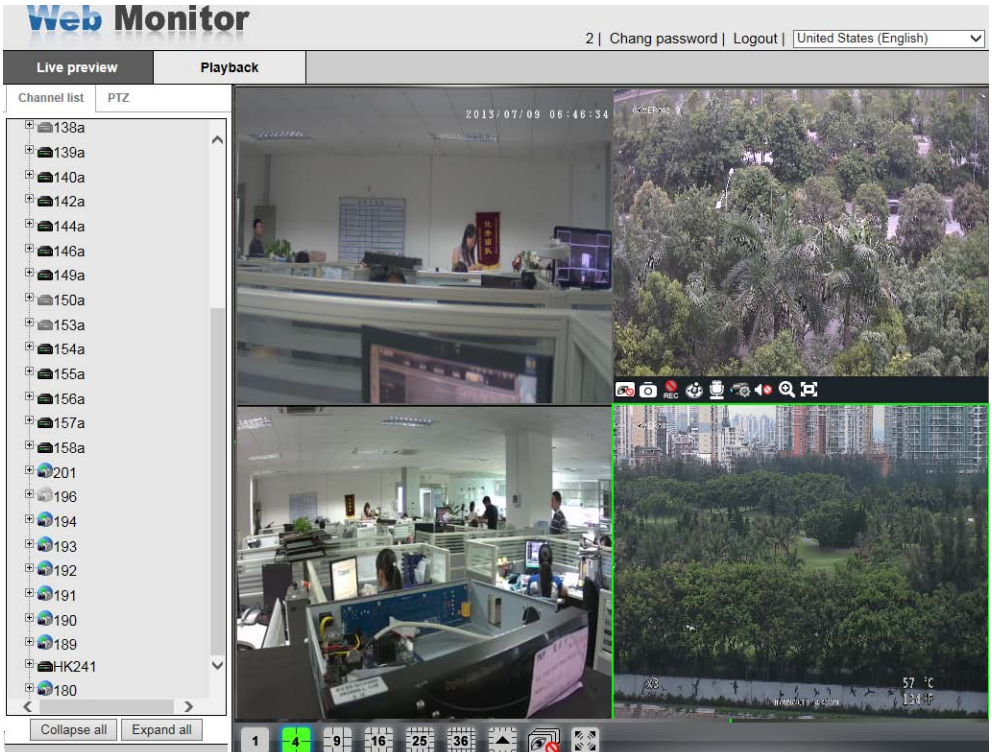
Before starting IE client, Authentication Server, Media Server and Storage server must be started first. Then Open Apache. You can check it from the lower right corner of the PC as shown below.



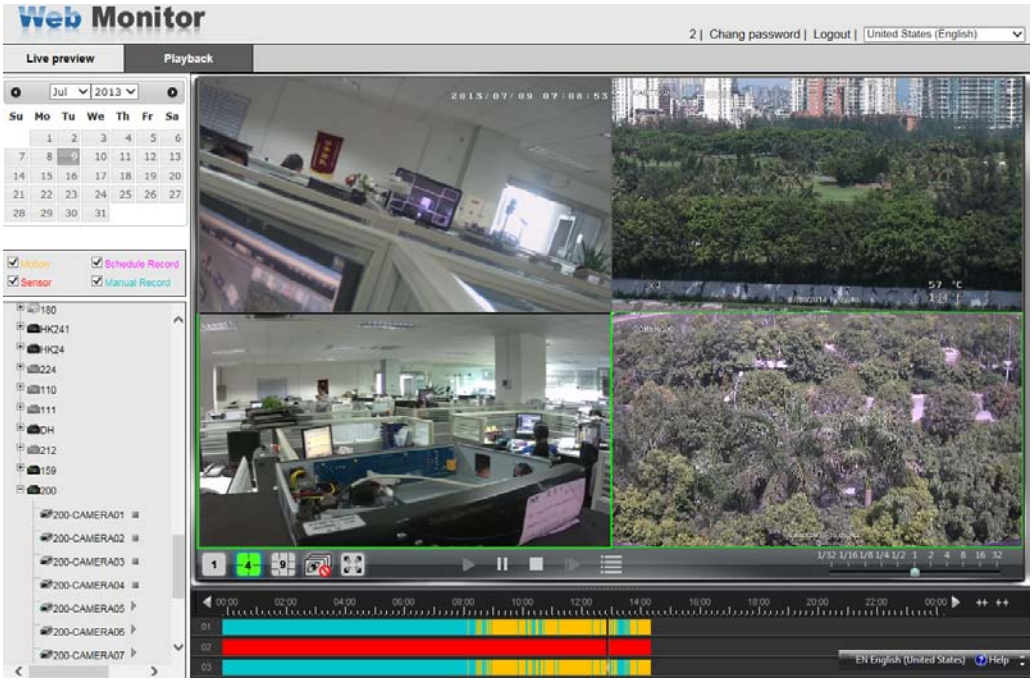
❖ Login

Input the IP address or domain name of Authentication Server and the web server port, for example: http://192.168.6.67:80088 (In this example, IP address is 192.168.6.67. The default web server port is 8088) to enter into IE Client. Then input the user name and password you created in Account and Permission interface.

After you log in, a downloading Active X control information will pop up. Please install this Active X control. After that, you will see the live interface as shown below.



Click Playback tab to see the playback interface.



Select the play screen in the playback area and click ▶ button beside the camera name. This will take you to see the image.

The operation steps of this IE monitoring interface are similar to that of the monitor client. Please refer to relevant chapter for details.

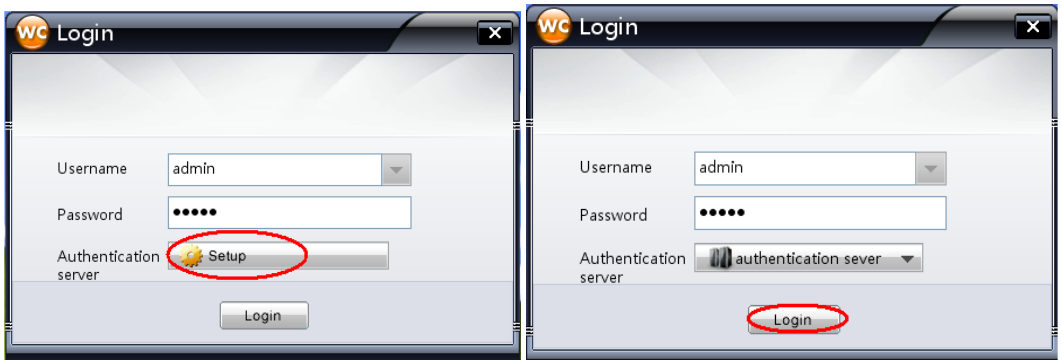
5.3 TV Wall Client

5.3.1 Start TV Wall Client

Authentication Server, Media Server and TV Wall Server must be started first. Please make sure images can be

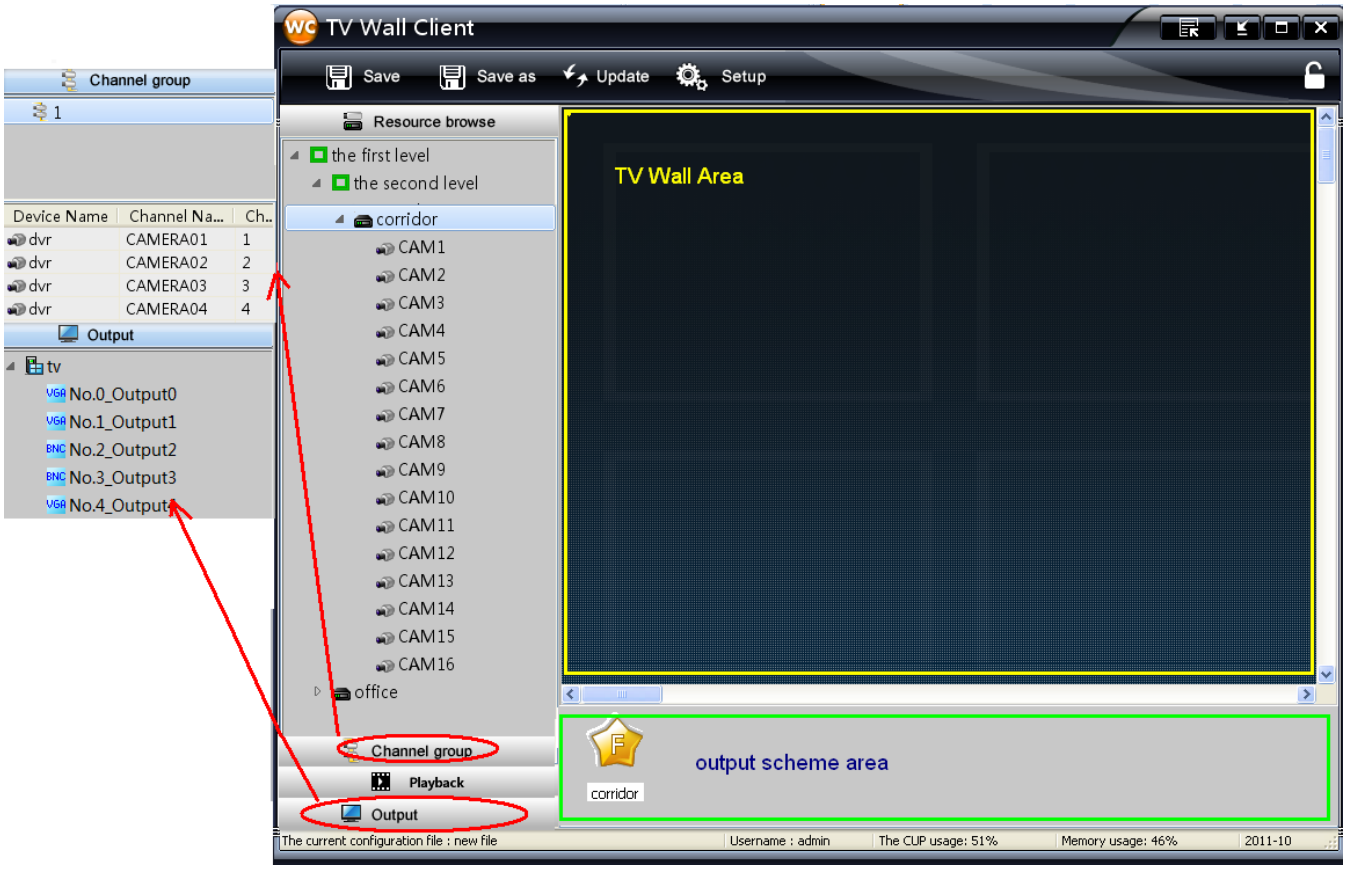
normally displayed on the TV Wall Screen. Double click 

icon (or click 'Start' → Programs → NVMS-5000 → Client → TV Wall Client) to run the TV Wall Server. A login window pops up as shown below. Input the username and password created below. Then click 'Setup' button to input the relevant information of authentication server (please refer to Chapter 4.2 Config Client for more details). Finally, click 'Login' button to enter into the TV Wall Client interface.



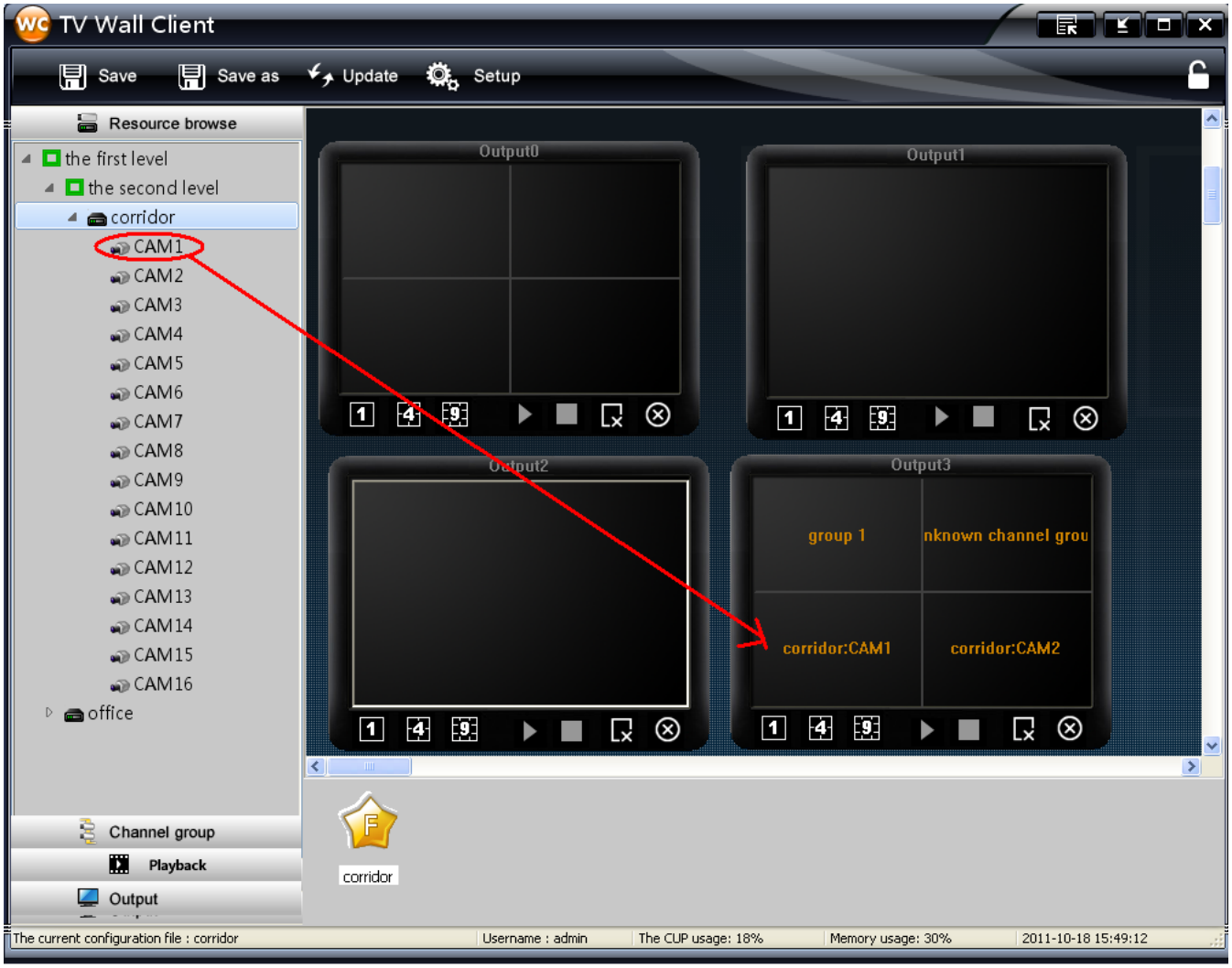
The main interface of TV Wall Client displays as follows. "Resource browse" includes all front-end video devices and their channels. "Channel group" includes all defined channel dwell scheme; "Output" includes all decoding outputs of TV Wall which have started.

Note: The quantity of the video decoding outputs is determined by the quantity of decoding cards installed in the computer. The video decoding card available for the software supports two HDMI outputs, one VGA output and two BNC outputs. The VGA output and the HDMI output beside it display the same contents, therefore, the resolution of the display connected to VGA port must be 1920*1080. The utmost decoding capacity for each card is to output 16 CH images with the resolution at 1080P and 16CH images with the resolution at 960H, that is to say, each card can decode a maximum of 32 CH images.



5.3.2 TV Wall Output

Left press the output name and drag them to the TV Wall Area one by one. Then select a screen mode, click ‘Resource browse” (or click ‘ Channel Group’ or click ‘Playback’) and drag channel (or channel group) to one screen as shown below.



Click ‘ Update ” and then the live images will be displayed on the TV Wall Server. The following pictures are the sample pictures displayed on the TV Wall.

➢ **Note：Please make sure that Authentication Server and Media Server have run and TV Wall Client has been set well and devices have connected well. Then the TV Wall Server can display images normally.**

Button explanations of output interface:

Button	Function
	Lock or unlock the output status of channel
	Screen mode
	Play/Stop
	Stop
	Turn off all channels
	Turn off the current video output

Save the video output scheme: After dragging channels or channel groups to the output mode, click 

button to pop up a dialog box. Input the file name and click ‘Save’ button as shown in the following picture. Then the file name will be listed in the output scheme area.

If this output scheme is needed, double click the file name 

and then click 

button. The images will display on the TV Wall Server. Right click this output scheme to pop up a dropdown list 

. Click ‘Rename” to modify the file name. Click ‘Delete” to delete this scheme. Click ‘Clear All” to clear all output schemes.

If you change the channels or channel groups of the current output scheme, clicking 

button can save the modified scheme on the output scheme area.

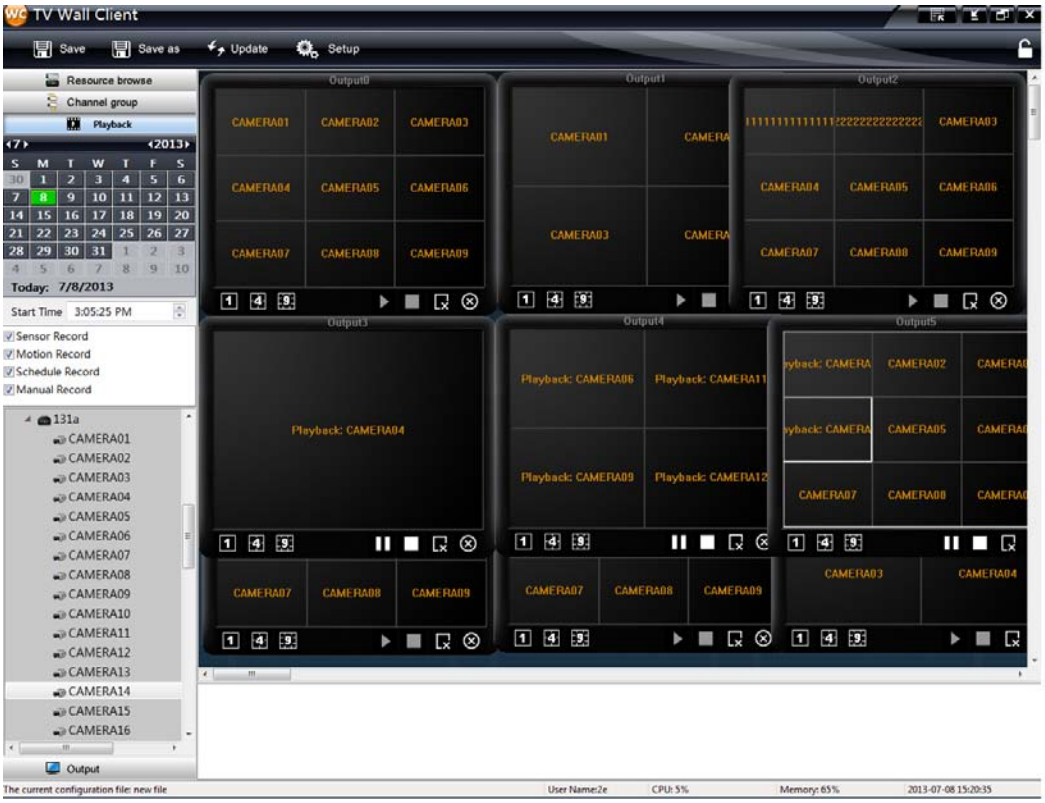
Note: Each time you change channels or channel groups, please click ‘ 

’ button to display the images set currently on the TV Wall.

5.3.3 Playback

Click “Playback” tab to enter playback setting interface. Here it can only playback the record saved in the device HDD(s).

To playback, select the date and event (like sensor record, motion record., etc) you want to playback and then drag the channel into the output screen which will display “playback xxx” as shown below. After that, you will see the playback images on the TV Wall. Please don’t click “Update” button on the tool bar after dragging the channel into output screen, or the playback images will not display.



5.3.4 Setup

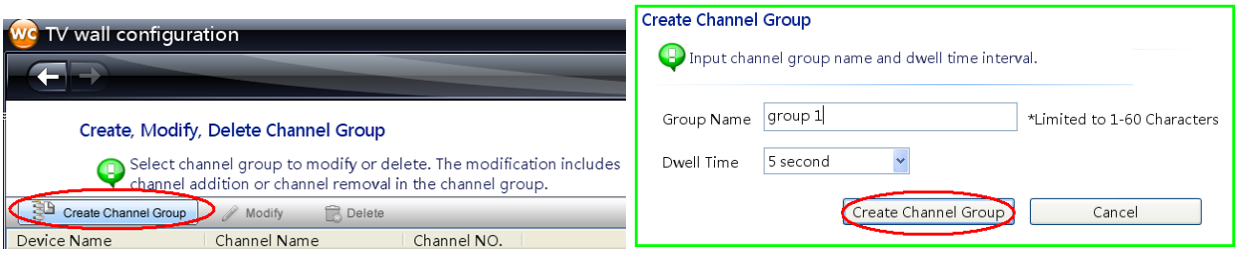
In the TV Wall Client, you can set up channel group and import and export settings. Please enter into TV Wall Client and click ‘Setup’ button to display the following window:

5.3.4.1 Create or Delete Group Dwell Scheme

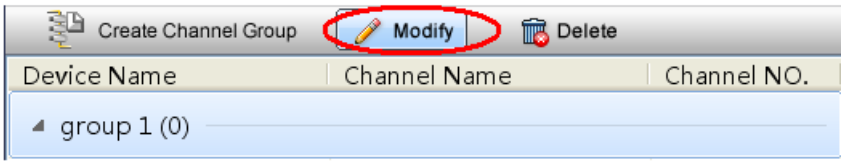
Enter into TV Wall Client→ Setup interface. Click ‘Virtual Matrix’ button to pop up a window as shown below:

Channel group setting steps:

1. Click ‘Create Channel Group’ button to create a channel group. Input the channel group name, select dwell time and then click ‘Create Channel Group’ button as shown below:

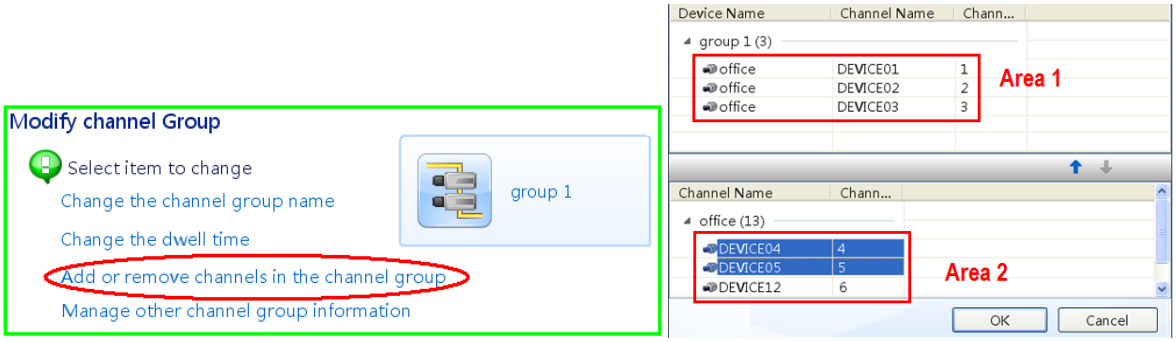


2. Select a channel group and click ‘Modify’ button.



3. Select ‘Add or remove channels in the channel group to pop up the following left window.

Select the channel in area 2 and then click icon to add the channel to group. Select the channel in area 1 and click icon to remove the channel from the group.



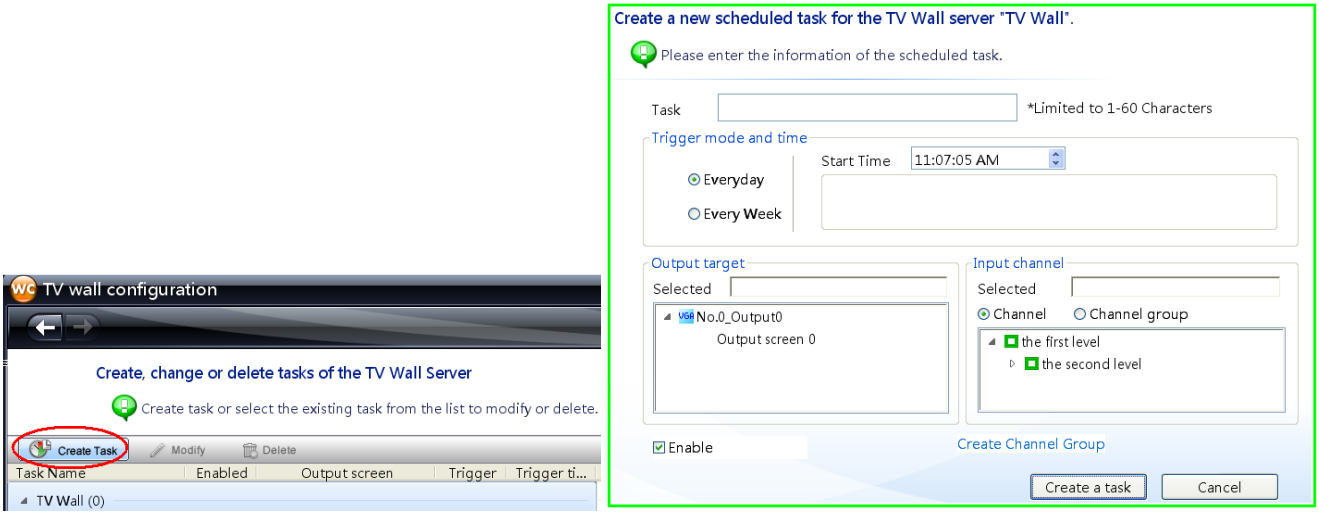
4. Click ‘OK’ button to save settings.

If you want to delete the created group, please select this group and click ‘Delete’ button to delete.

Having configured the channel groups, you can click ‘Channel group” on the left menu list of TV Wall Client to see these group.

5.3.4.2 Scheduled Task Configuration

Enter into TV Wall Client → Setup → Scheduled Task interface to create tasks. You can see the designated channel image by the configuration of task in designated time.



Note: Before you create a task, you must start your TV Wall Server.

The steps of task creation:

Step 1: In the Scheduled task interface, click ‘Create Task’ button to display the dialog box as shown above on the right.

Step 2: Input the task name.

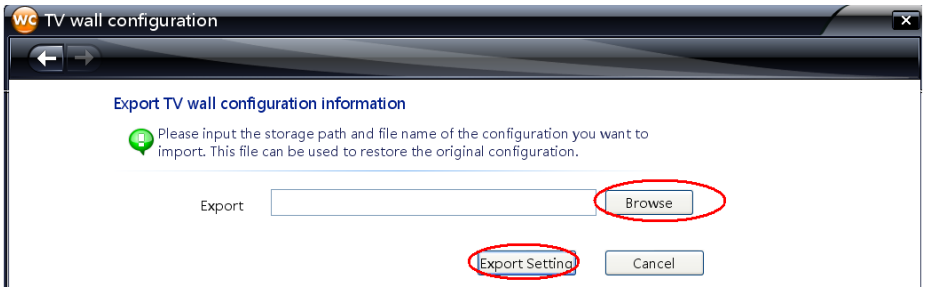
Step 3: Select the trigger mode and time.

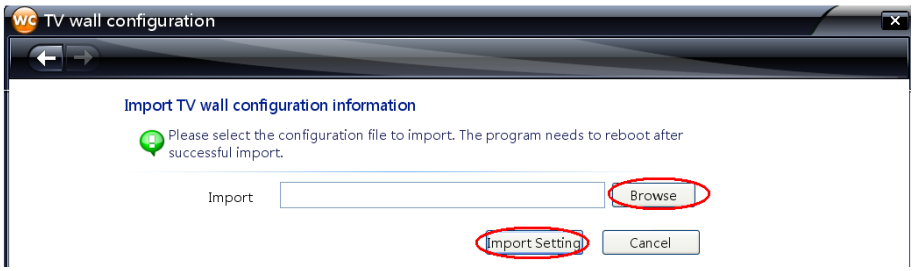
Step 4: Select the output target and channel or channel group.

Step 5: Checkmark ‘Enable’ and click ‘Create a task’.

5.3.4.3 Backup & Restore Settings of TV Wall Client

Enter into TV Wall Client → Setup interface. Click ‘Export Settings” to backup the settings of TV Wall Client. Click ‘Import Settings” to restore the settings of TV Wall Client.

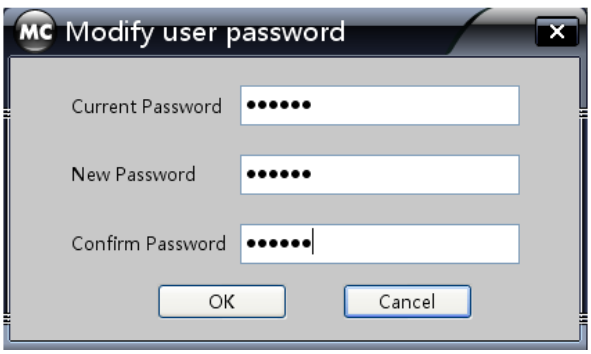




6 FAQ

1：How to modify the password by yourself

A：Login monitor client and click  icon to pop up a drop-down list as shown in the left picture. Click ‘Modify password” to see a window as below. Input the current password and new password; confirm password and then click ‘OK’.



2：Unable to login IE client

A：1）Please checkup whether the Active X control is forbidden to download and refer to the operating environment in Chapter 5.2.1.

2）Please checkup whether the IP address input in the browser address bar is right.

Suppose the LAN IP address of the authentication server is 192.168.6.67，WAN IP address is 58.251.86.194，domain name is renzheng.meibu.com and Web port is 8088. If logging in to the IE client in LAN, please input http://192.168.6.67:8088，or http://58.251.86.194:8088，or http://renzheng.meibu.com:8088；If logging in to the IE client in WAN，please input http://renzheng.meibu.com:8088，or http://58.251.86.194:8088（only when the WAN IP is a fixed IP, will it take effect.）

3：The device information cannot be seen after the user logins to the monitor client.

A：1）Please checkup whether this user account is a administer account. If this account is an operator account, please checkup whether it has the authority to view the device information.

2）Please checkup whether the media transfer server of the device has been started.

4：The alarm information cannot be received after the user logins to the monitor client.

A: 1）Please checkup whether the alarm server has been started.

2）Please checkup whether the schedule of sensor alarm or motion detection alarm are set in the NVMS-5000 system.

3）As for remote login device in the monitor client, please checkup whether sensor alarm and motion detection alarm of the remote login device have enabled

5：The images of online TV Wall servers cannot be seen after the user logins to the TV Wall client.

A：1）Please checkup whether the TV Wall server starts correctly.

2）Please checkup whether the user has the authority to enter into the TV Wall server.

6：The record cannot playback after the user logins to the monitor client.

A： 1）Please checkup whether the storage server has started.

2）Please checkup whether channels are added to the storage server.

3）Please checkup the record schedules of the storage server are set correctly.

4）Please checkup whether the partition groups of the storage server are set correctly.

7：The configuration of devices cannot be modified remotely after the user logins to the monitor client.

A： 1）When the device configuration is required by the monitor client and pop up the prompt “Someone is configuring. Please try later”, please open the IE browser to login to the device remotely and then enter into “Info” → “Online user” interface to see if there are any other users logging in.

2）Please go to the live to see whether the device is setting up.

3）If the problem still exists, please contact your device manufacturer.

8：The preview image on the client cannot display fluently.

A：1）Please check whether the CPU occupancy rate of the client platform is 100% or there still has usable memory. This situation will not emerge when the CPU occupancy rate is less than 75% and there still has usable memory.

2）Please checkup whether the network environment is supported, including whether the uplink bandwidth of the device and stream match and whether the downlink bandwidths of the media transfer server and the streams of all channels of devices match.

3）Please checkup whether the media transfer server is overload operation.

9：After starting the authentication server, media transfer server and storage server, the storage server still

cannot save.

A：1）Please checkup whether channels of devices are added to the storage server.

2）Please checkup whether the partition groups are set for the storage server.

10：After the device is changed, it still cannot record when re-logging in to the storage server.

A： Please login the config client to reset the partition of the storage server. You must reset the partition group of the storage server after changing PC because the different PC maybe have different partition group. Finishing the configuration, the “record status” of the storage server shall be normal.

11：When entering to the TV Wall server, prompt “Login failed! Reason: This server name does not exist”. When entering into the TV Wall Client, prompt “Login failed! Reason: This user does not exist”.

A：1）Please checkup whether the relevant server name and user account of TV Wall Server has been created.

2）Please checkup whether the server name is right when logging in to the TV Wall server. Please checkup whether the username is right when logging in to the TV Wall Client.

12：Why does the PTZ control interface is blank after the user enters into the monitor client?

A：You need to drag channels to the live preview area and then operate in the PTZ control interface.

13：Under normal record condition, why there is no record in the front of the record bar sometimes when viewing a channel record in the monitor client?

A：Because the HDD room saving the record data of the channel is full, so the earlier record files are covered by new created record data.

14：Under normal record condition, why the record bars of two channels with the same schedule is different in the monitor client?

A：Please checkup whether these two channels belong to different partition group in the storage server or their allocated storage room is different.