NVMS-5000

User Manual

Contents

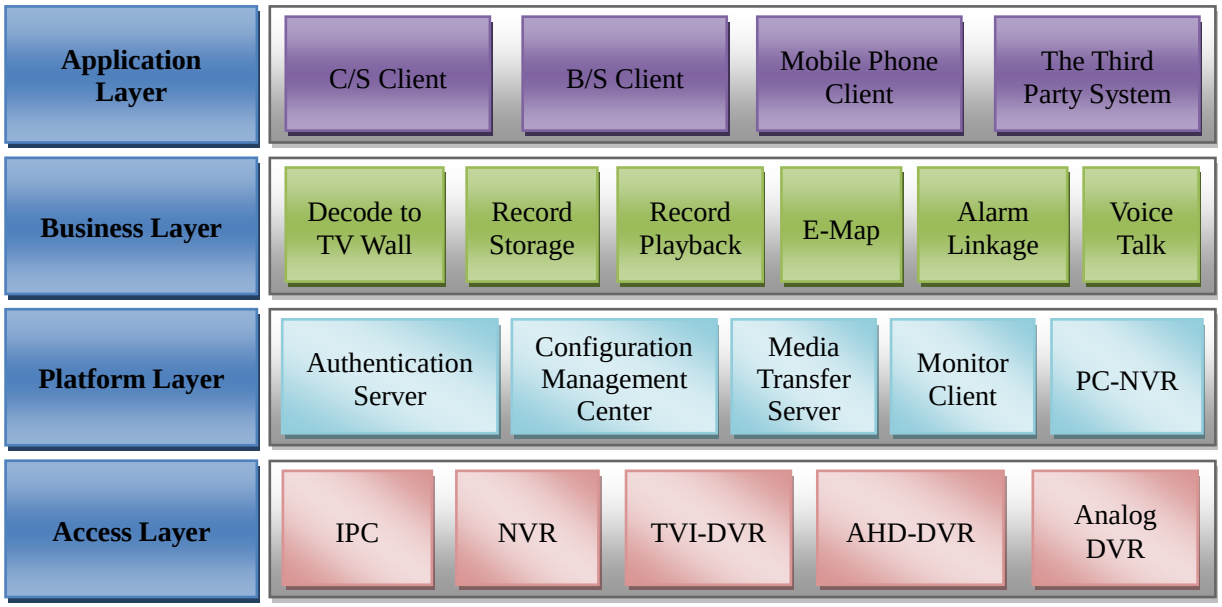
1 Introduction

1.1 NVMS-5000 Brief Introduction

1.1.1 Summerization

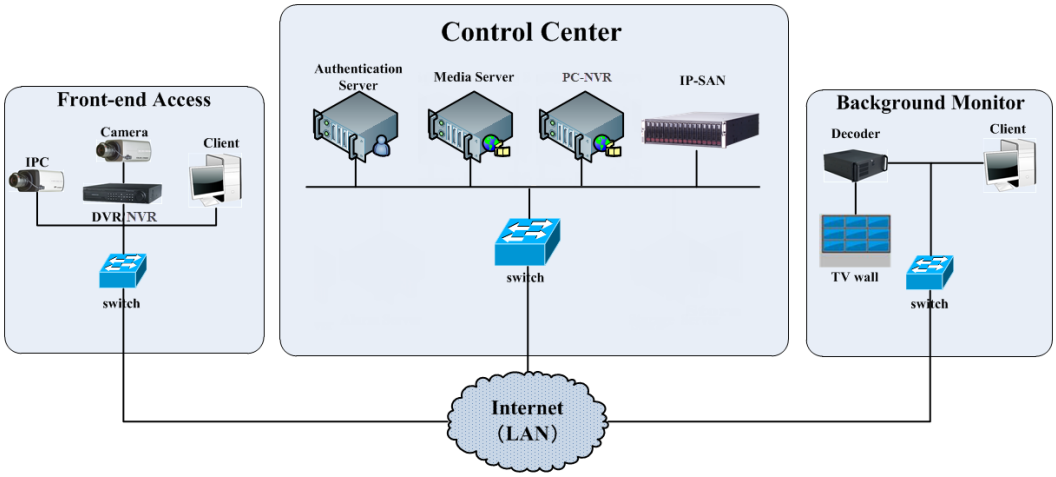
NVMS-5000 which combines video capture devices (including various DVR/NVR/IPC), alarm capture devices (including various alarms and sensors), servers, IP-SAN, clients (including mobile phones) and background monitor (monitor and TV-Wall) is a set of network video surveillance and management software. 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 NVR.
- You need to connect monitor devices such as IPC, DVR and NVR 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, Configuration Management Center 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 and media transfer 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）	192.168.50.3
2	Media transfer server	Transfer images	192.168.50.4
3	Storage Server PC-NVR	Store videos	192.168.50.5
4	Storage Server IP-SAN	Store videos	192.168.50.6

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

1.3 NVMS-5000 Version Introduction

Version	Signal access on trial	Average signal access	Max signal access
NVMS-5000 v1.3.2	16 channels video signals	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 (including Web Server/Alarm Server/E-Map Server)	Inter(R) Core(TM)i3 3.40GHz or above/4GB Memory/500GB SATA/2 ×1000M NICs	Windows Server 2008 32bit/64bit /Windows Server 2003 32bit/64bit	1
2	Media Server	Inter(R) Core(TM)i3 3.40GHz or above/4GB Memory/500GB SATA/2 ×1000M NICs	Windows Server 2008 32bit/64bit /Windows Server 2003 32bit/64bit	It is up to the video format and the number of channel previewing simultaneously
3	PC-NVR	Inter(R) Core(TM)i3 3.40GHz or above/4GB Memory/500GB SATA/2 ×1000M NICs	Windows Server 2008 32bit/64bit /Windows Server 2003 32bit/64bit	It is up to the video format and the number of channel previewing simultaneously
4	HDD	Capacity:500GB/1TB/2TB/3TB	——	It is up to the stream, channel and time of the storage video
5	IP-SAN	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	Inter(R) Core(TM)i3 3.40GHz or above/4GB DDR3/NV GT430 or AMD HD 6570 or above, above 512MB GDDR5 Memory (recommend 1GB GDDR5 memory) /500GB SATA/100M NIC	Windows 7 SP1 32bit/64bit Professional/Ultimate Windows 8 32bit/64bit Professional Windows 10 32bit/64bit Professional	As required by user
2	Configuration Management Center TV Wall Client	CPU：2G or above Memory：2GB DDR3 HDD：500GB SATA NI：1000M	Windows 7 SP1 32bit/64bit Professional/Ultimate Windows 8 32bit/64bit Professional Windows 10 32bit/64bit Professional	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
Authentication Server	Internal Port	6003
Web Server	Service Port	8088
Media Transfer Server	Internal Port	6006
	Auto Report Port	2009
Storage Server (PC-NVR/IP-SAN)	Internal Port	6009

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.
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.

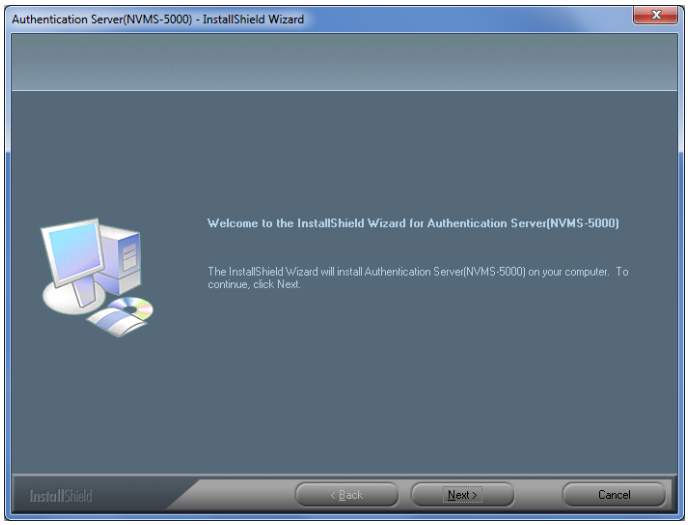
3 Install and Uninstall the Software

3.1 Install the software

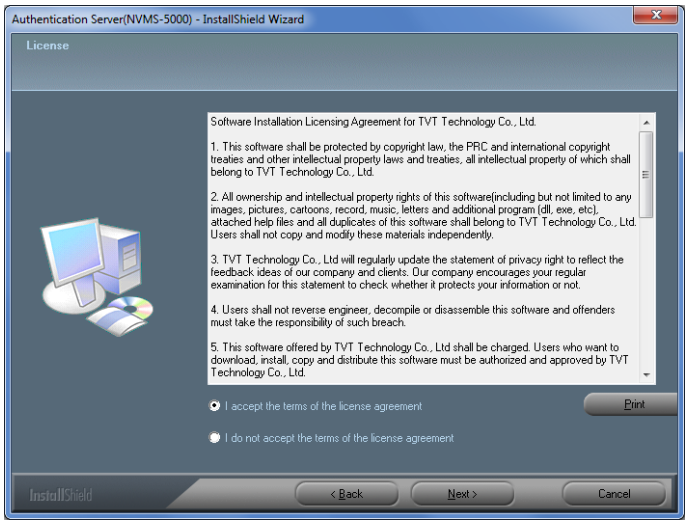
There are three setups, setup of Authentication Server, Media Transfer Server and Client.

3.1.1 Install Authentication Server

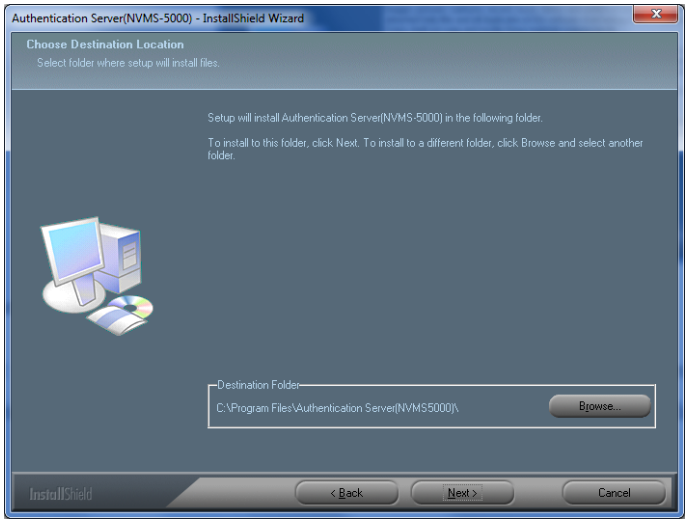
1) Find the "setup.exe" file of Authentication Server. A welcome interface will pop up by double clicking it. Now click "Next" button to continue.



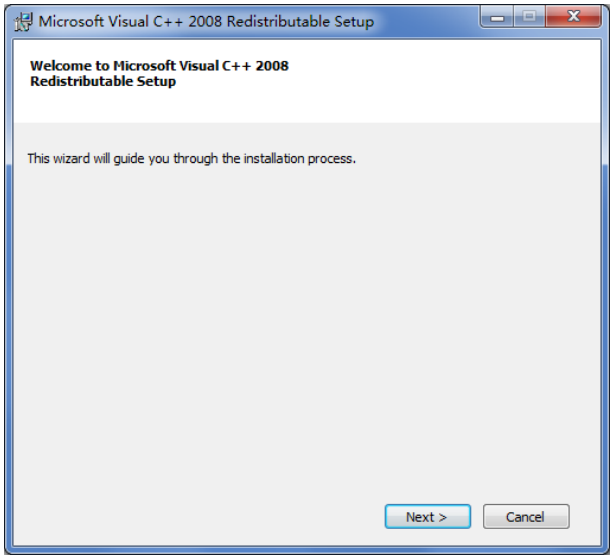
2) Select "**I accept the terms of the license agreement**" and then click "Next" button to continue.

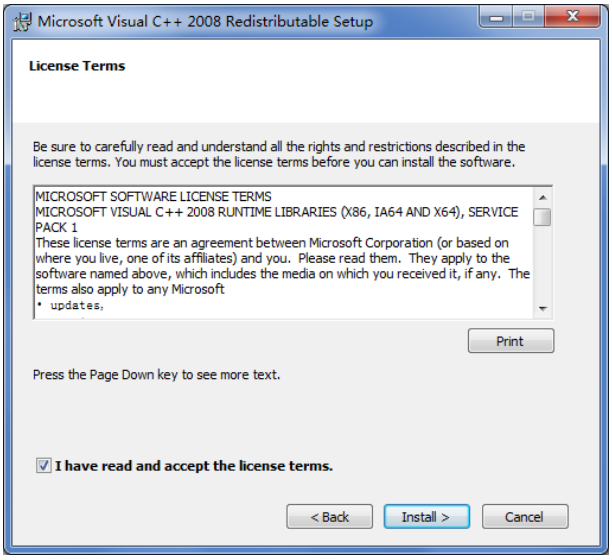


3) Click "Browse…" button to set the installation path and then click "Next" button to continue.

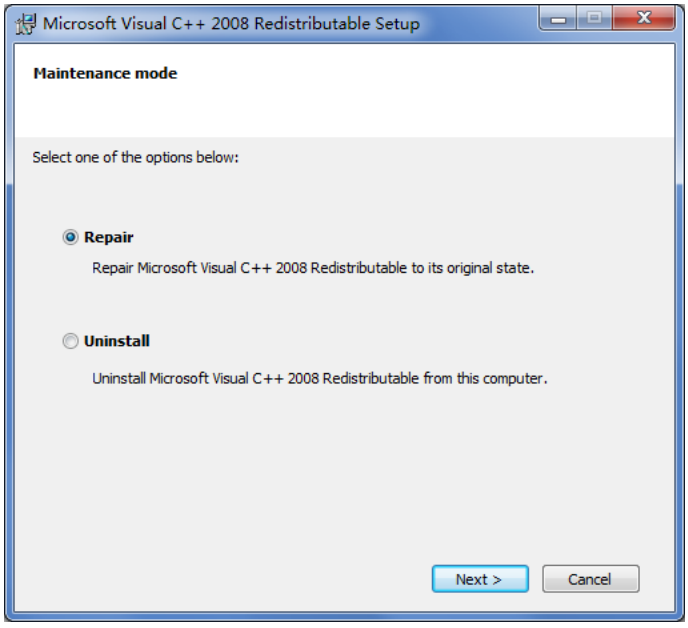


4) It will pop up "Microsoft Visual C++ 2008 Redistributable Setup" wizard. If it is not installed in your PC, the following interface will pop up. Click "Next" →select "I have read and accept the license terms"→click "Install".

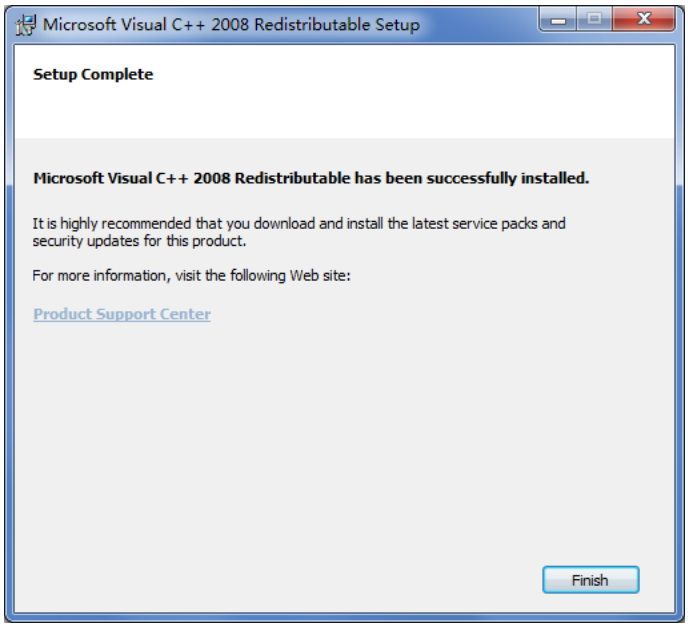




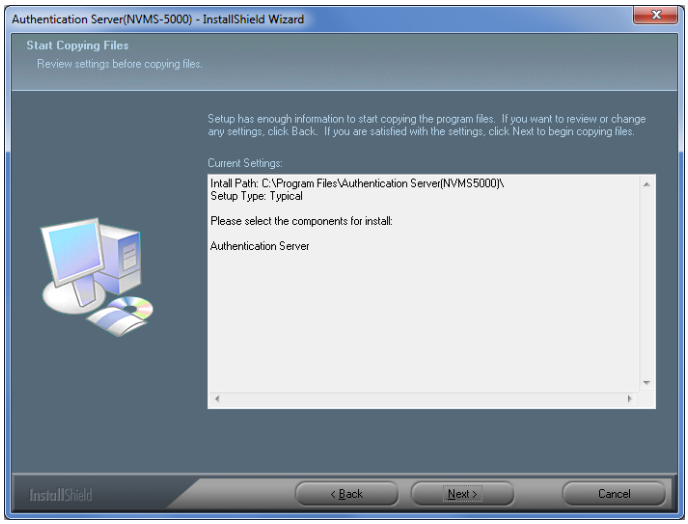
Note: If it is installed in your PC, the following interface will pop up. Select "Repair" and then click "Next" button.



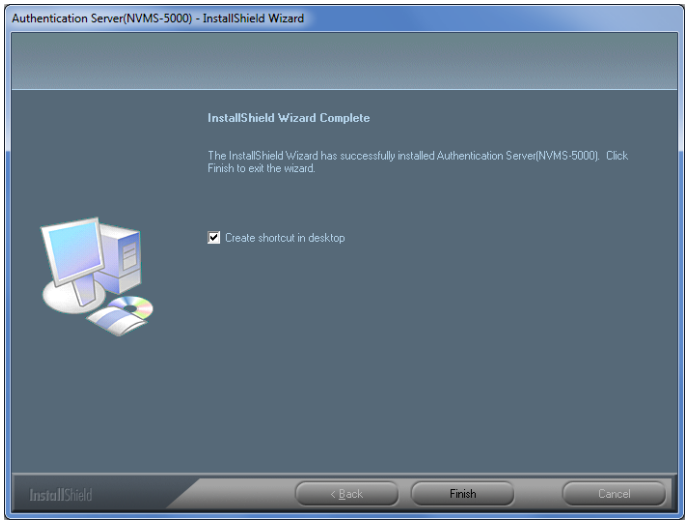
5) Click “Finish” to complete the setup of Microsoft Visual C++ 2008.



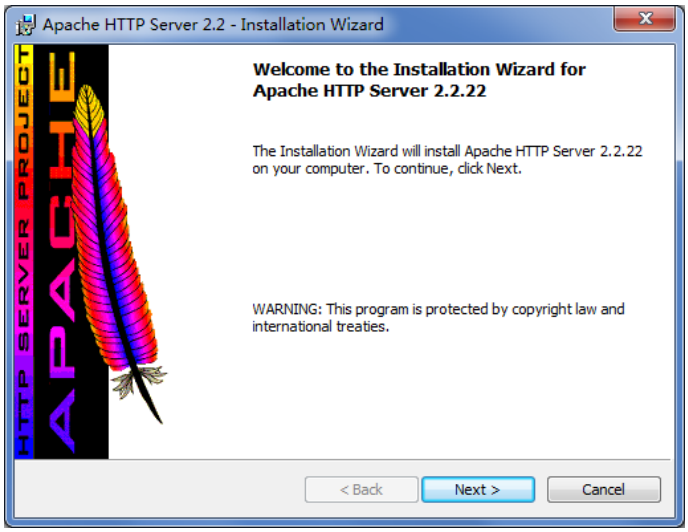
6) Return to the installation interface of Authentication Server to review settings. Click “Next” button to continue.



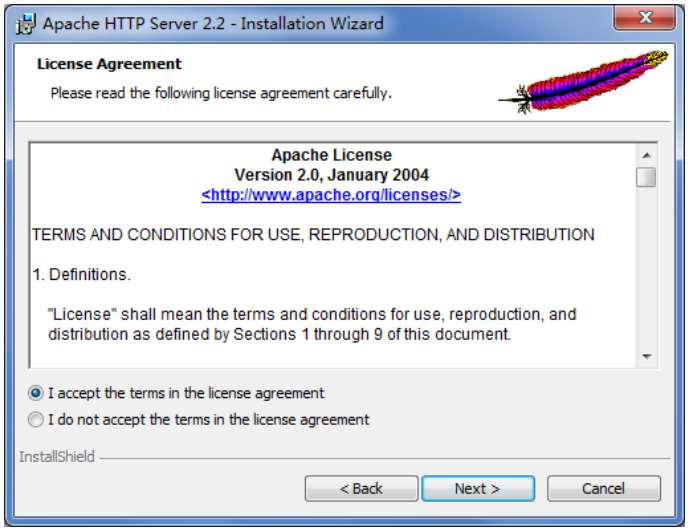
7) Check “Create shortcut in desktop” as needed and then click “Finish” button. Now the Authentication Server installation is completed.



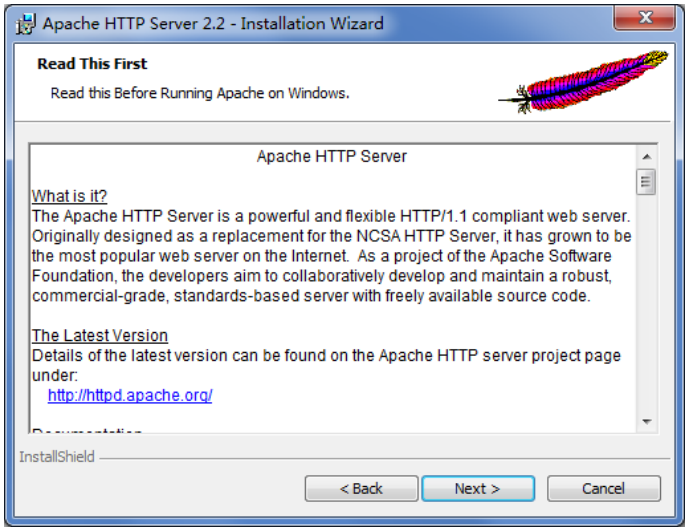
8) After you finish installing Authentication Server, a wizard for Apache HTTP Server pops up. If you want to access web client, please click "Next" button to install.



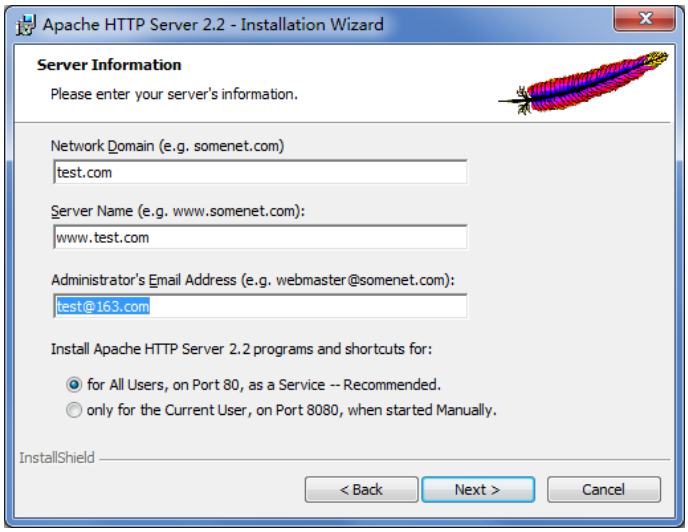
9) Select "I accept the terms in the license agreement", and then click "Next" to continue.



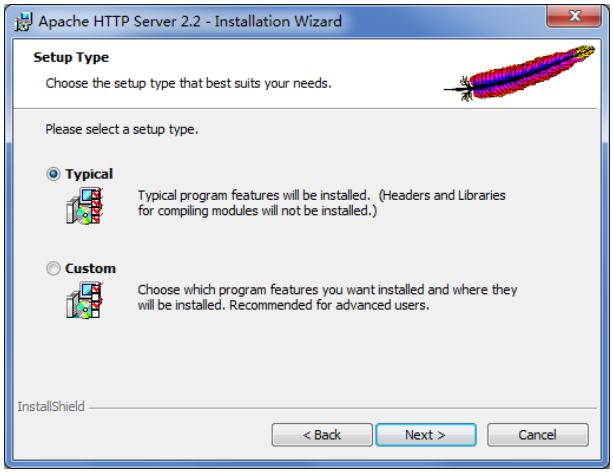
10) Click "Next" to continue.

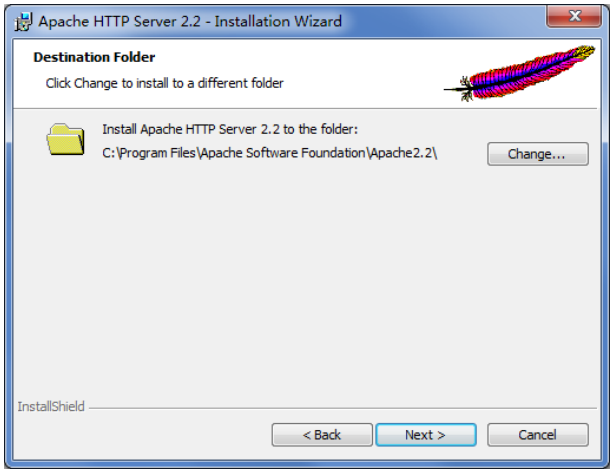


11) Set the server information as shown below. The information inputted below is for reference only. It is recommended to choose port 80 as a service port. Then click "Next" to continue.

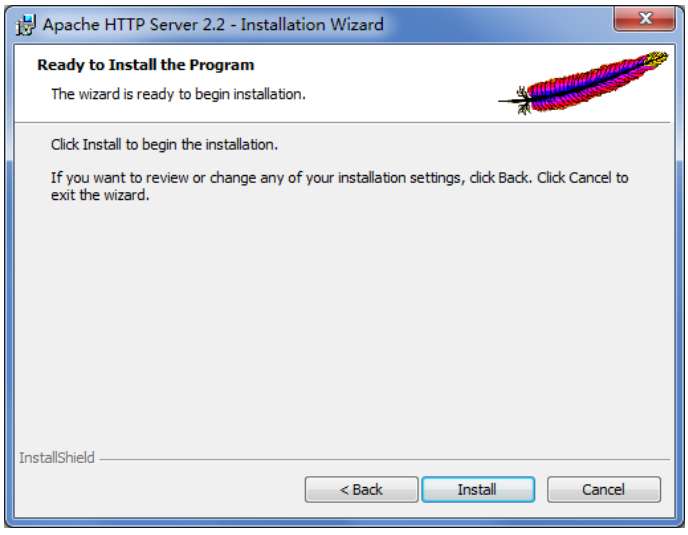


12) Select the setup type and then click "Next" to continue. Click "Change…" button to set the setup path and then click "Next" to continue.

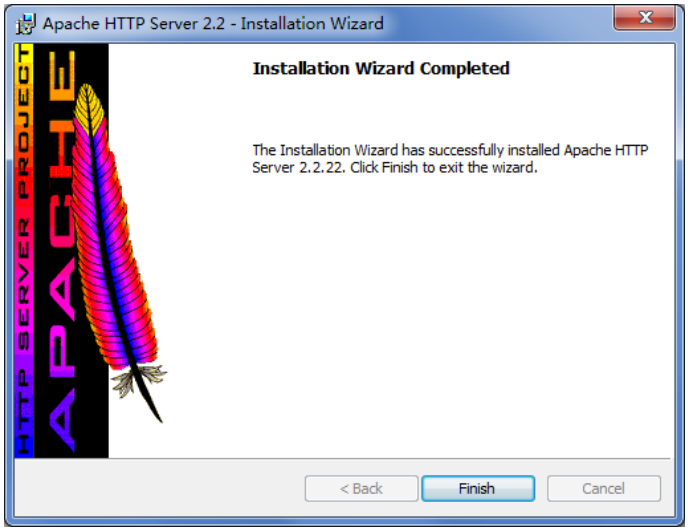




13) Click "Install" button to start installation.

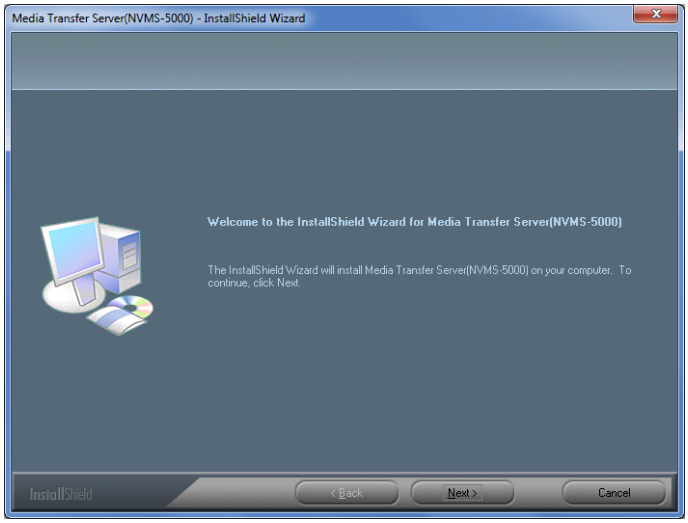


14) Click "Finish" button to complete the Apache installation.

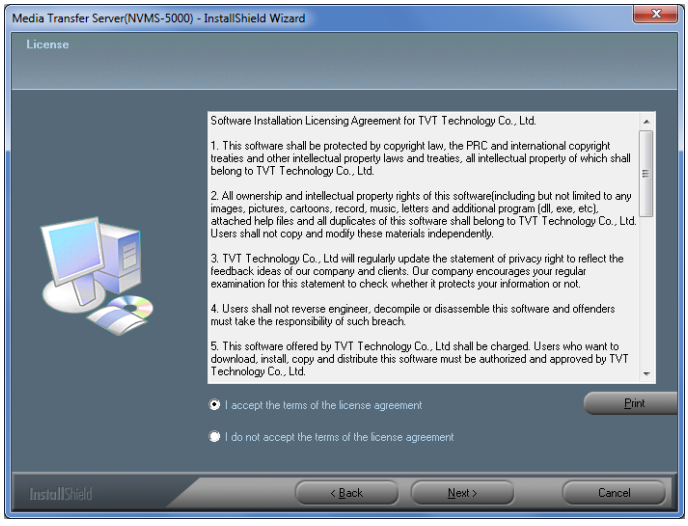


3.1.2 Install Media Transfer Server

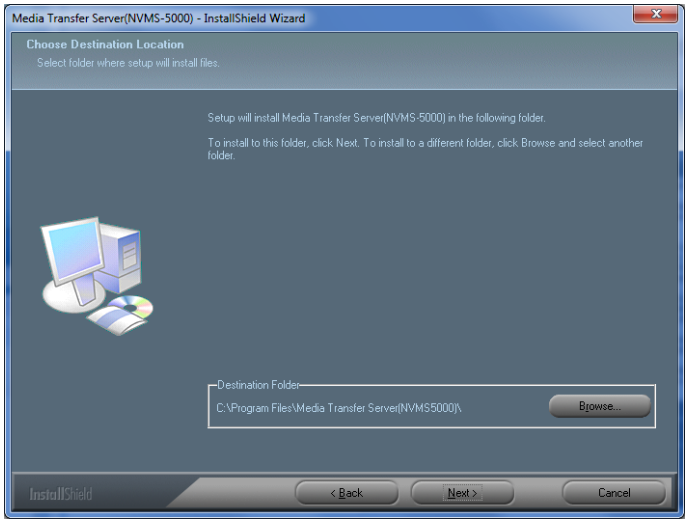
1) Find the "setup.exe" file of Media Transfer Server. A welcome interface will pop up by double clicking it. Now click "Next" button to continue.



2) Select "**I accept the terms of the license agreement**" and then click "Next" button to continue.

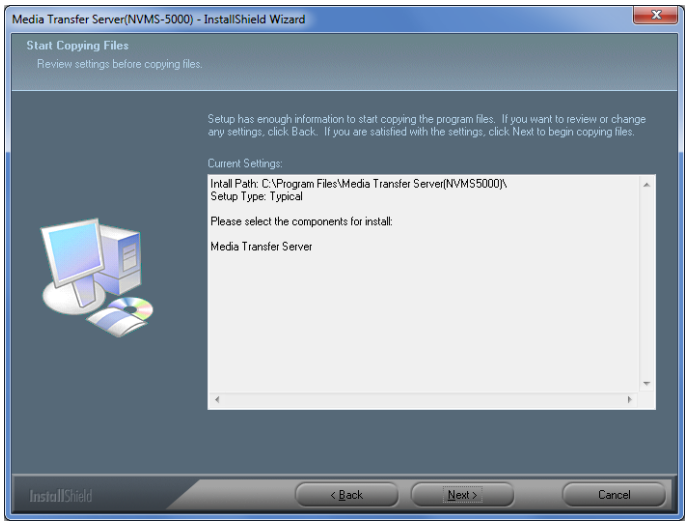


3) Click "Browse…" button to set the installation path and then click "Next" button to continue.

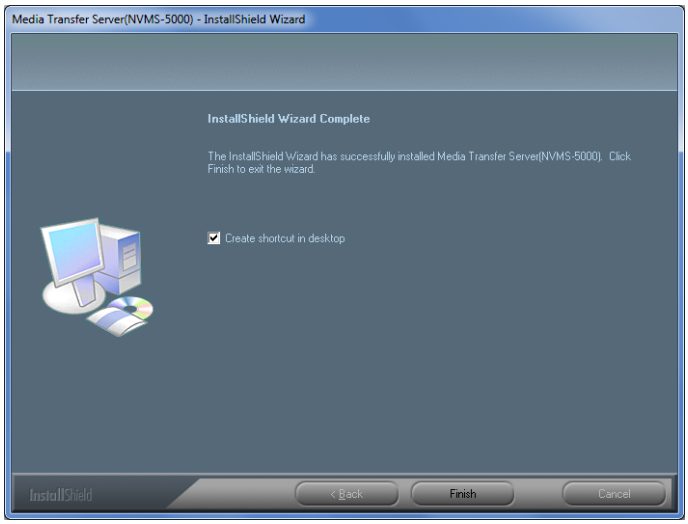


4) It will pop up "Microsoft Visual C++ 2008 Redistributable Setup" wizard. Please refer to its installation steps in Authentication Server installation.

5) Return to the installation interface of Media Transfer Server to review settings. Click "Next" button to continue.

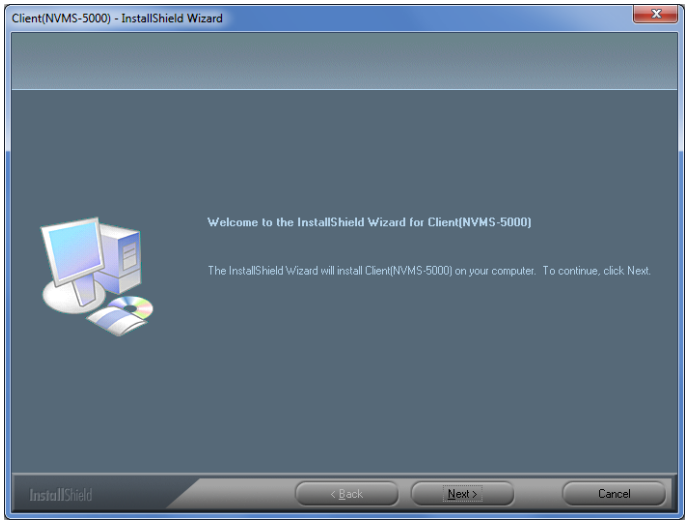


6) Check "Create shortcut in desktop" as needed and then click "Finish" button. Now the Media Transfer Server installation is completed.

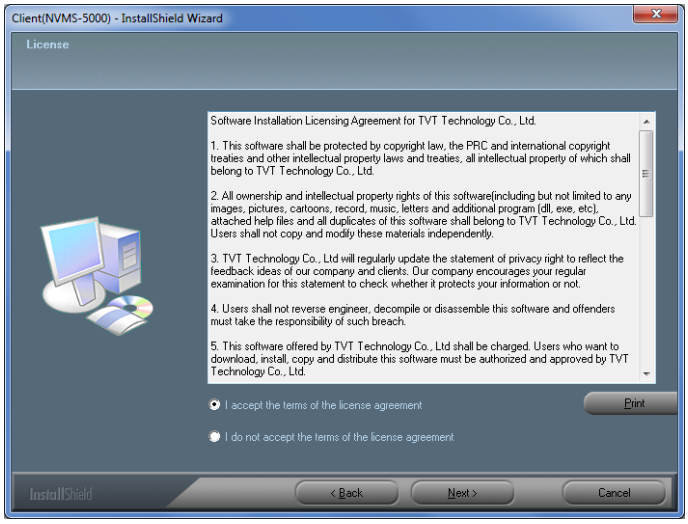


3.1.3 Install Client

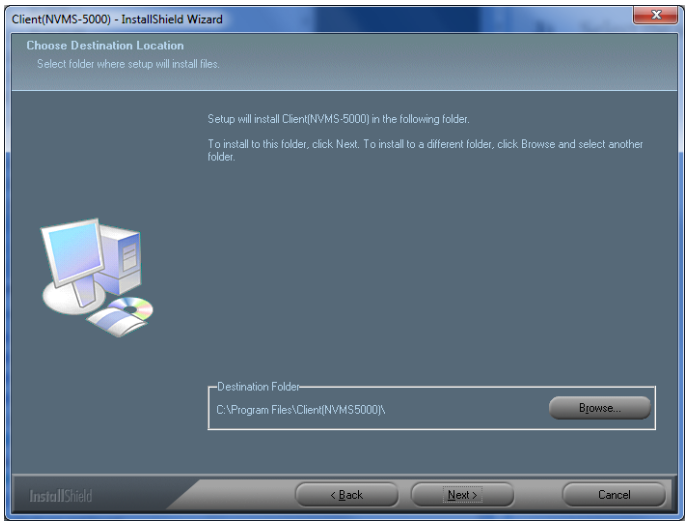
1) Find the "setup.exe" file of Client. A welcome interface will pop up by double clicking it. Now click "Next" button to continue.



2) Select "**I accept the terms of the license agreement**" and then click "Next" button to continue.

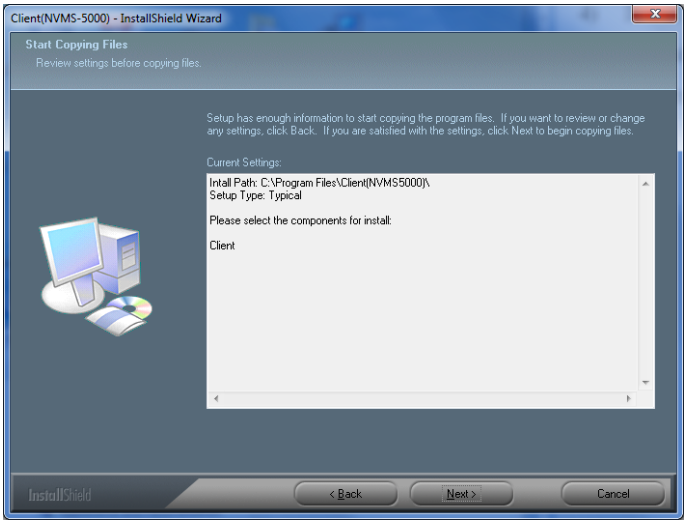


3) Click "Browse…" button to set the installation path and then click "Next" button to continue.

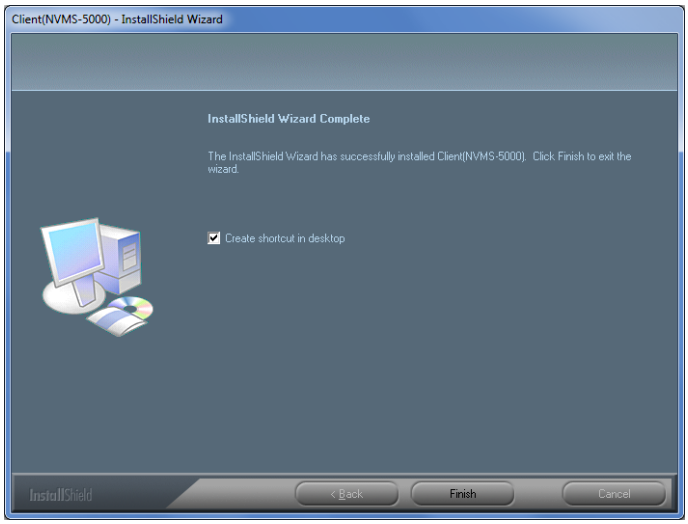


4) It will pop up "Microsoft Visual C++ 2008 Redistributable Setup" wizard. Please refer to its installation steps in Authentication Server installation.

5) Return to the installation interface of Client to review settings. Click "Next" button to continue.

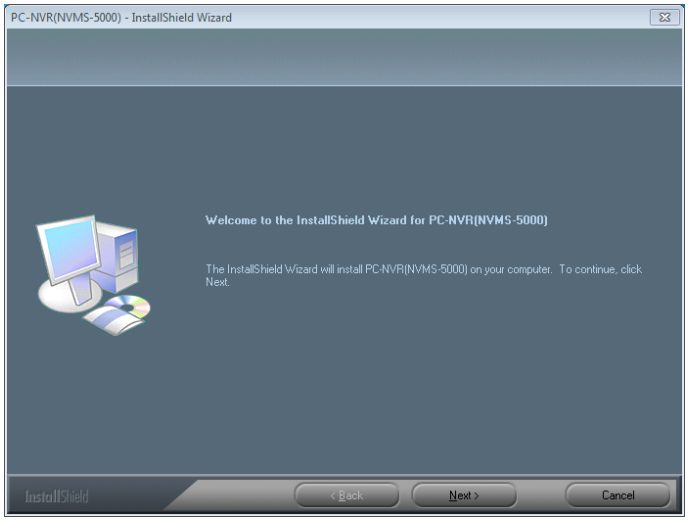


6) Check "Create shortcut in desktop" as needed and then click "Finish" button. Now the Client installation is completed.

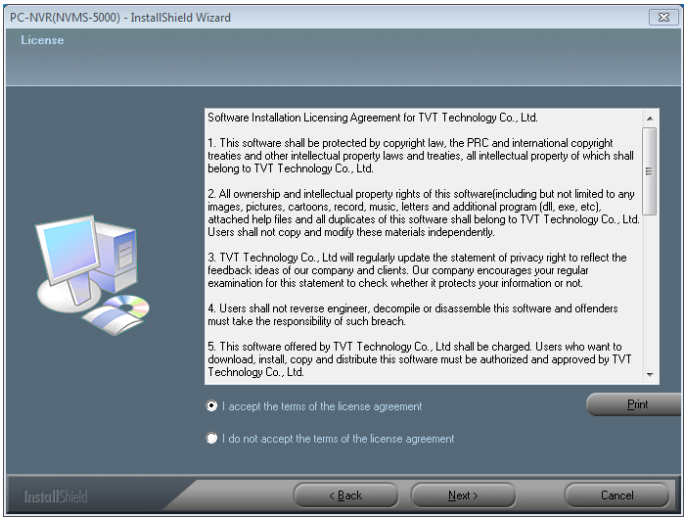


3.1.4 Install PC-NVR

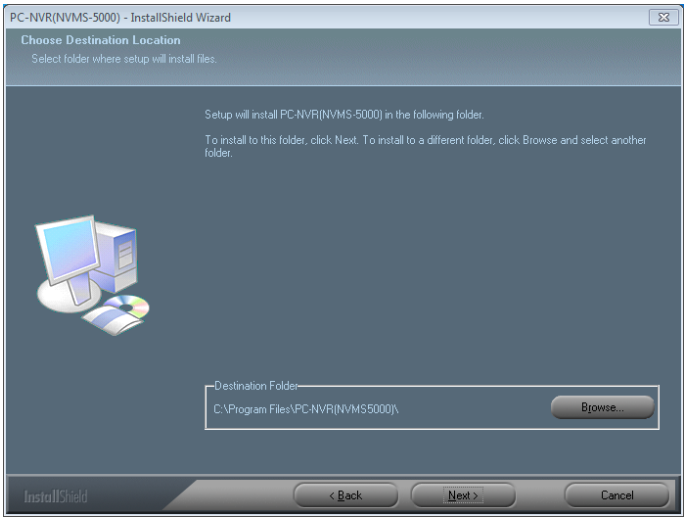
1) Find the "setup.exe" file of PC-NVR. A welcome interface will pop up by double clicking it. Now click "Next" button to continue.



2) Select "**I accept the terms of the license agreement**" and then click "Next" button to continue.

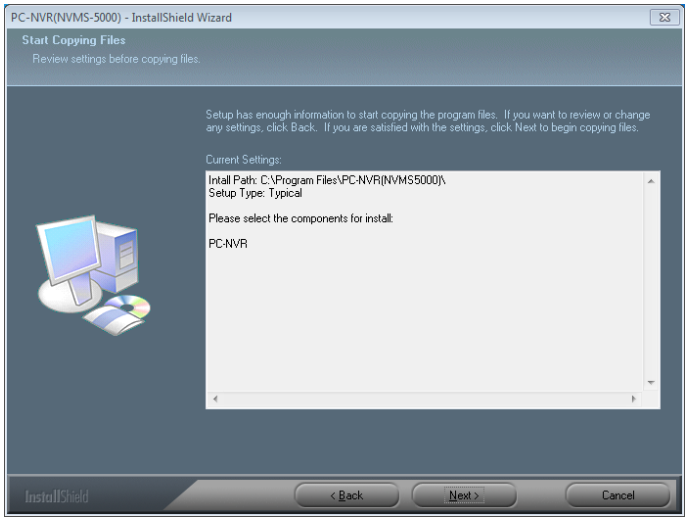


3) Click "Browse…" button to set the installation path and then click "Next" button to continue.

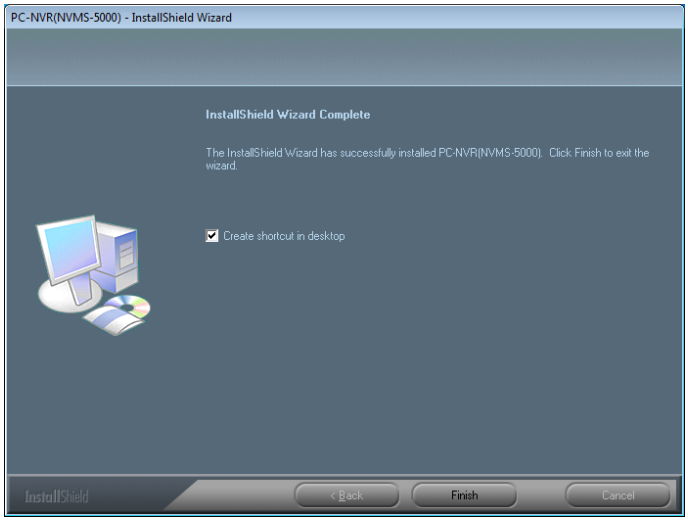


4) It will pop up "Microsoft Visual C++ 2008 Redistributable Setup" wizard. Please refer to its installation steps in Authentication Server installation.

5) Return to the installation interface of PC-NVR to review settings. Click "Next" button to continue.



6) Check "Create shortcut in desktop" as needed and then click "Finish" button. Now the PC-NVR installation is completed.

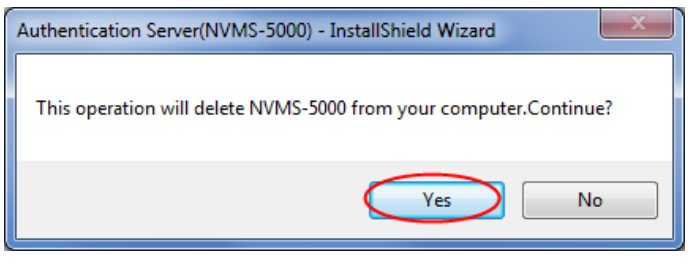


3.2 Uninstall the software

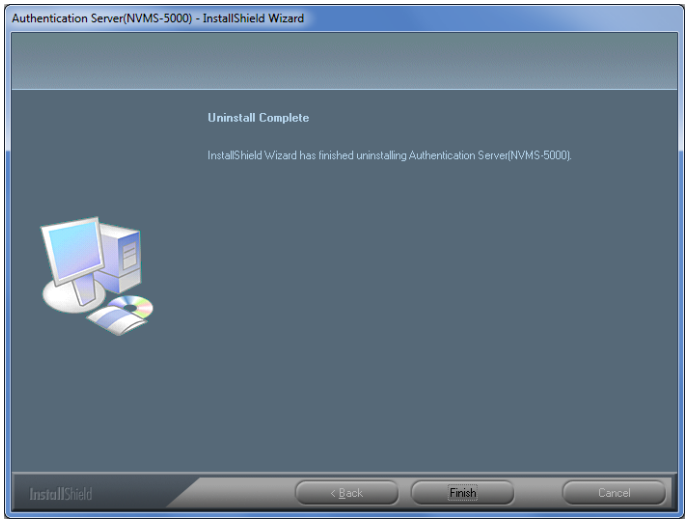
If the new version needs to be installed or there is no necessary to use this software, you can uninstall this software. We strongly recommend that you back up your configuration data before you install the new version of NVMS-5000.

The uninstallation steps of Authentication Server, Media Transfer Server and Client are similar. Here we take Authentication Server as an example to introduce the uninstallation steps.

Click "Start" →All Programs→ Authentication Server (NVMS-5000)→Uninstall to pop up the following wizard. Click "Yes" to confirm.



Then click "Finish" button to completely uninstall Authentication Server.



If you have already installed the Apache HTTP Server, please go to Control Panel to uninstall it.

Click "Start"→Control Panel→Programs→Programs and Features to go to the interface. Select the Apache HTTP Server 2.2.22 in the program list and then click "Uninstall" to start uninstallation.

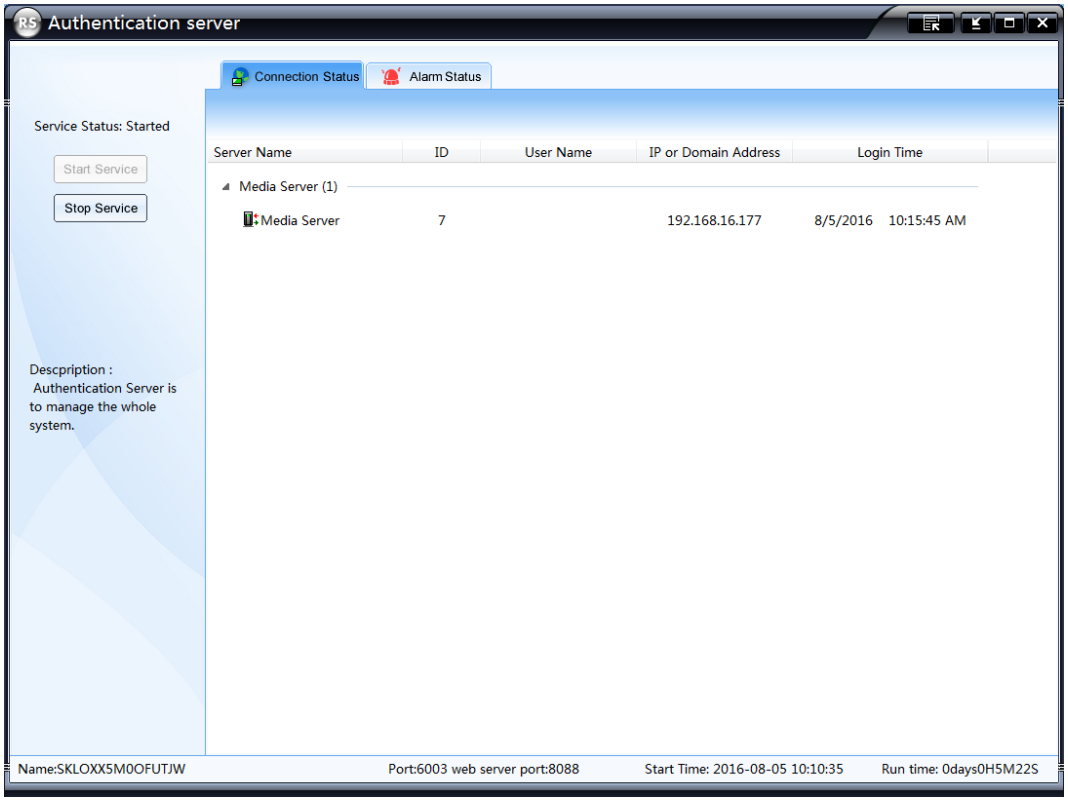
4 System Configuration

4.1 Authentication Server

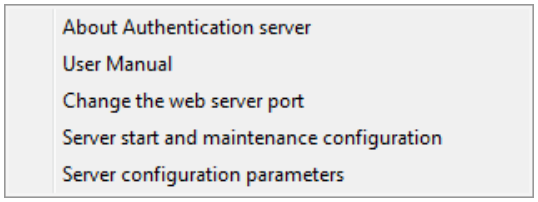
Authentication server provides a uniform authentication for all devices, servers and clients to access. Therefore, the authentication server must be started first and continuously.

Double click 

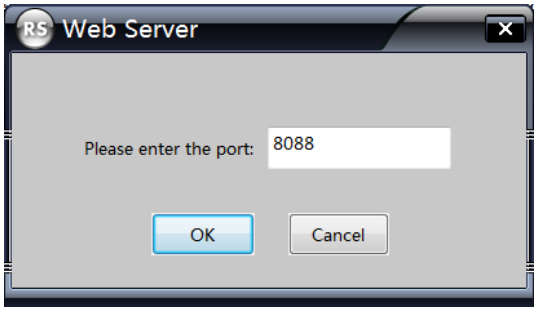
icon or click "Start"→All Programs→Authentication Server (NVMS-5000) →Authentication Server to run this server as shown below. If there are no other modules started, no information will be listed.



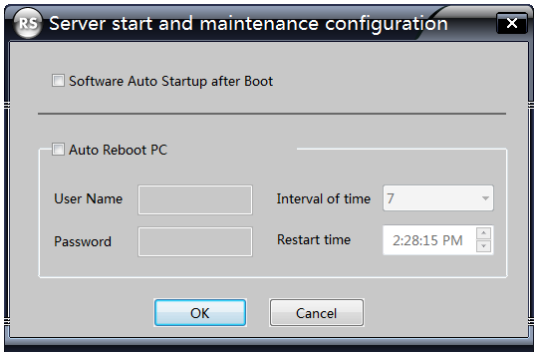
Click  icon to pop up the dropdown list through which you can view the version of the server, user manual, change the web server port and set up server configuration parameters, etc.



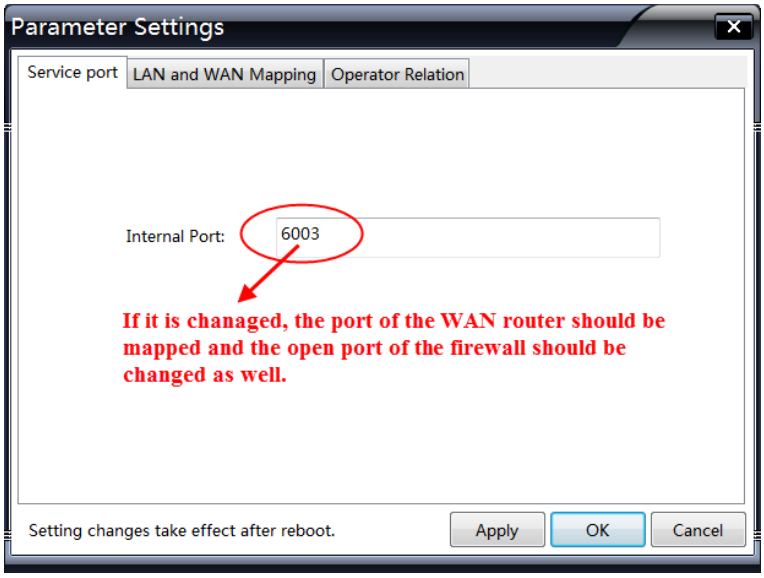
Click "Change the web server port" to modify the web server port. The default port of Web Server is 8088. The web server port is the port used to access the web client of NVMS-5000. Please refer to **5.2 Web Client** for details.



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 the 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.

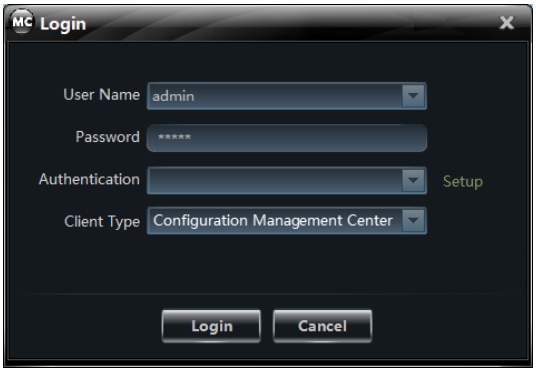


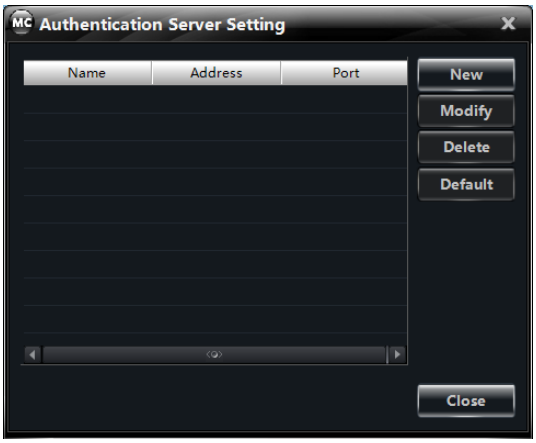
4.2 Configuration Management Center

Configuration Management Center 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 Configuration Management Center to create servers, add front-end devices and configure the whole system.

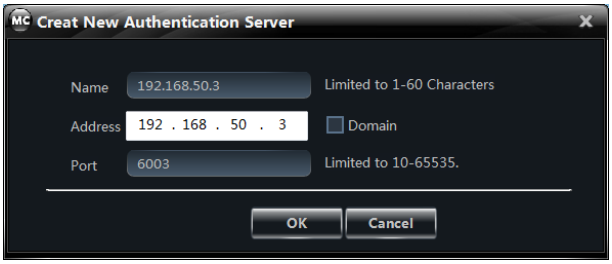
Double click  icon or click "Start"→ All Programs→Client (NVMS-5000) →Client to pop up a login window as

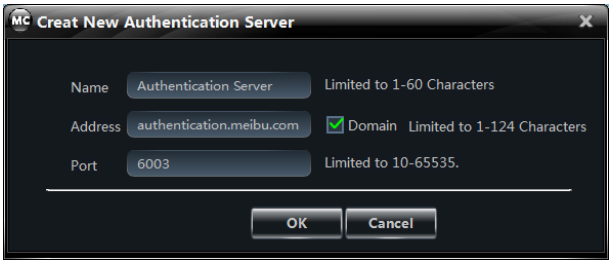
shown below. Input the username and password (the default username is **admin** and the default password is **admin**). Then set up the IP address and port of the authentication server at the first time. Click "Setup" to pop up a window.



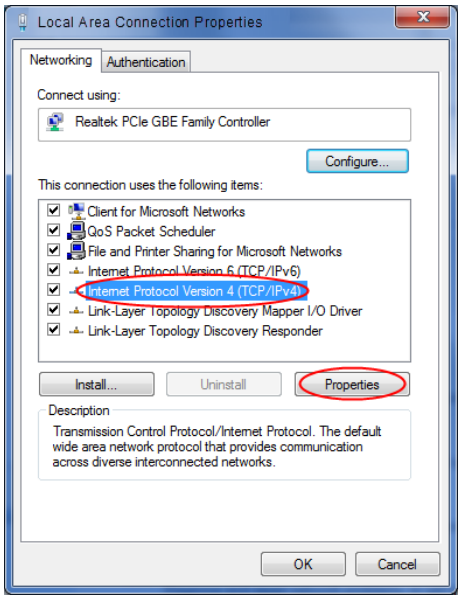


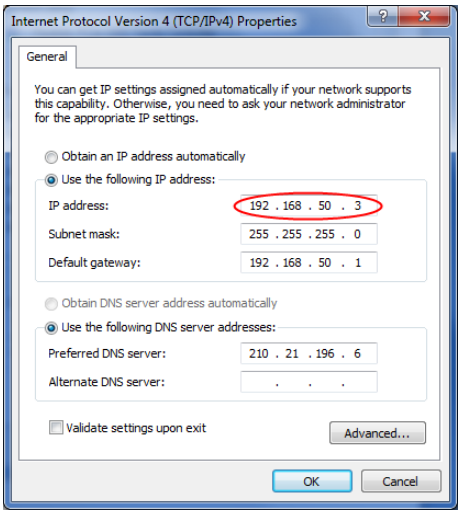
Click "New" button to pop up a window as shown below.





- You can self-define the authentication server name. If the authentication server runs in the PC which the authentication server is installed, you can input your LAN IP address (right click "Network" on the desktop→select "Properties"→click "Local Area Connection" → select "Properties" → choose "Internet Protocol Version 4(TCP/IPv4)"→click "Properties" button to see). The default port is 6003 (If it is modified, please input the modified port).

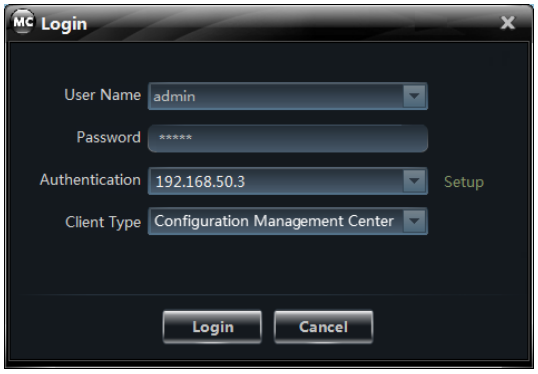




- If the authentication server runs in LAN，please input the LAN IP address and port of the authentication server.

- If the authentication server runs in WAN, please input the WAN IP address or check "Domain" to input the domain name and port of the authentication server.
- After inputting all information, click "OK" button and then click "Close" button to return to the login window.

Finally, select "Configuration Management Center" in the Client Type dropdown list and then click "Login" button to login to the Configuration Management Center.

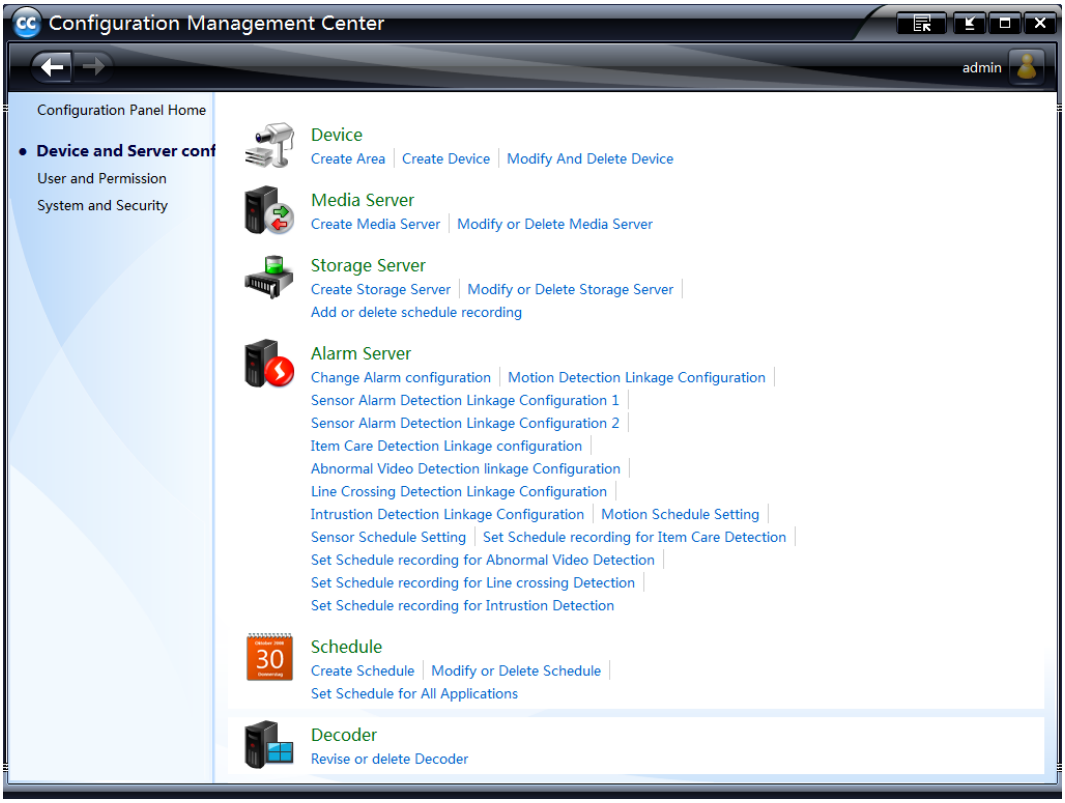


Configuration Management Center includes three modules: **Device and Server Configuration**, **User and Permission**, **System and Security**. Click the relevant icon or blue letters to go to the relevant module.

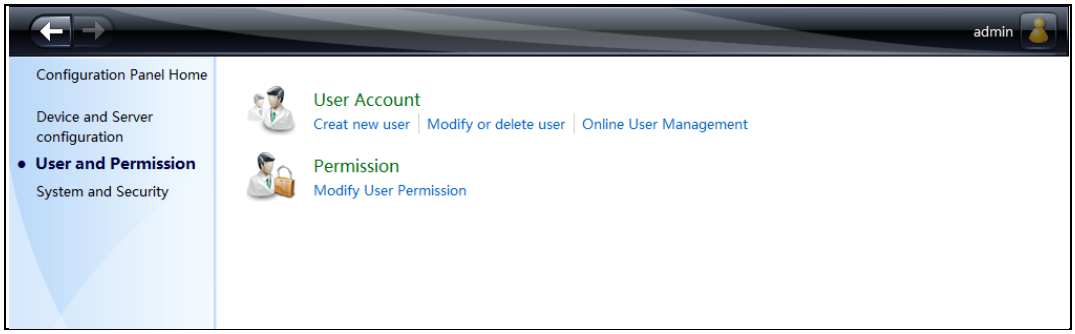
Button	Meaning
	Return to the previous interface
	Go to the next interface
	Display the server information and configure parameters
	Minimize the window

Button	Meaning
	Shrink the window
	Exit

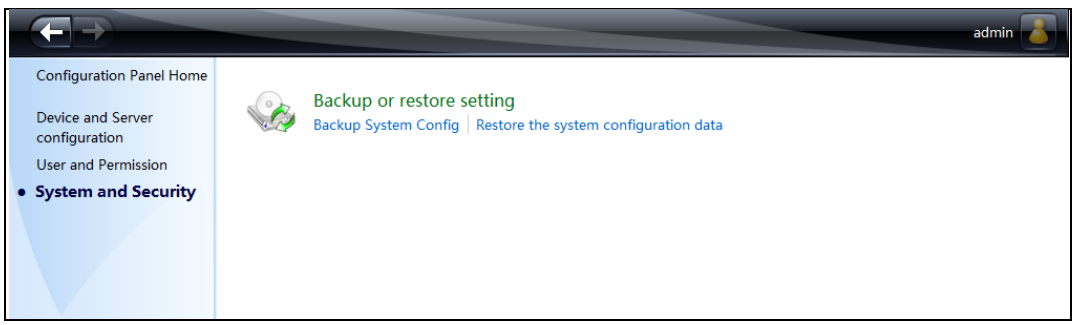
Device and Server Configuration interface includes adding, modifying and deleting devices, Media Server, Storage Server, TV Wall and Schedule as well as modifying Alarm Server and E-Map Server.



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



System and Security interface includes system backup and restoration.

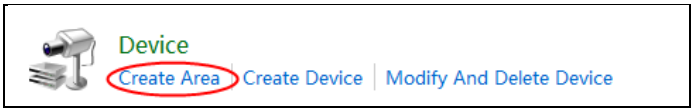


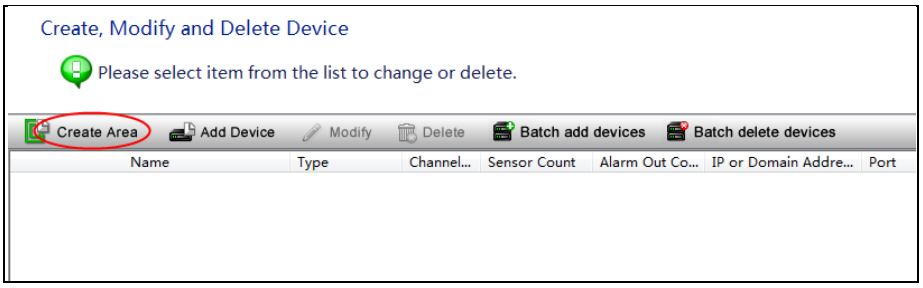
4.3 Device Settings

Create area and add or delete device.

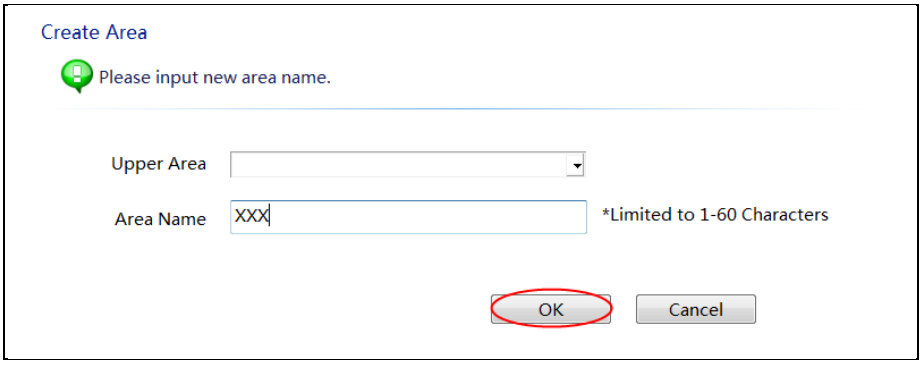
4.3.1 Create Area

In the Configuration Management Center interface, go to the device and server configuration interface by clicking **Device and Server Configuration**. Then click "Device" to go to the device configuration interface.

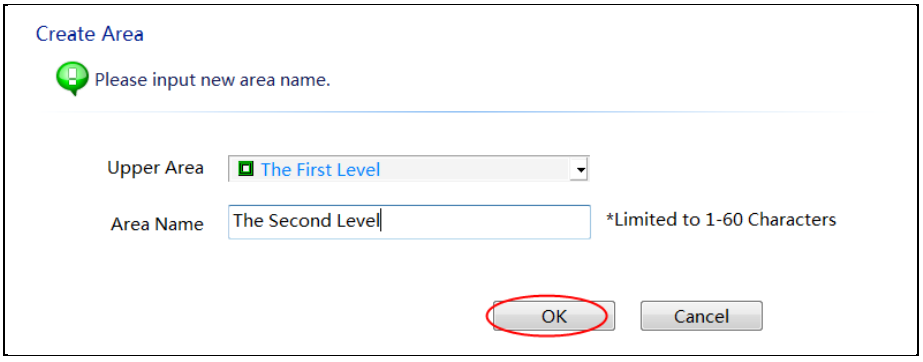




Click "Create Area" button to go to the interface as shown below. Then input area name to create the upper area. After that, please click "OK" button to save the settings.



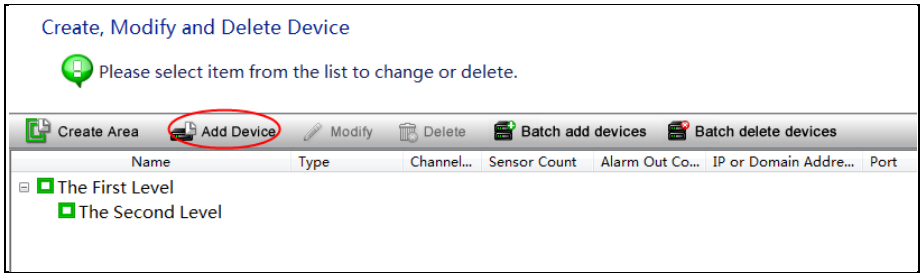
To create the lower area, please click "Create Area" and then choose the Upper Area and input the area name. After that, click "OK" button to save the settings.



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 the settings.

4.3.2 Add Device

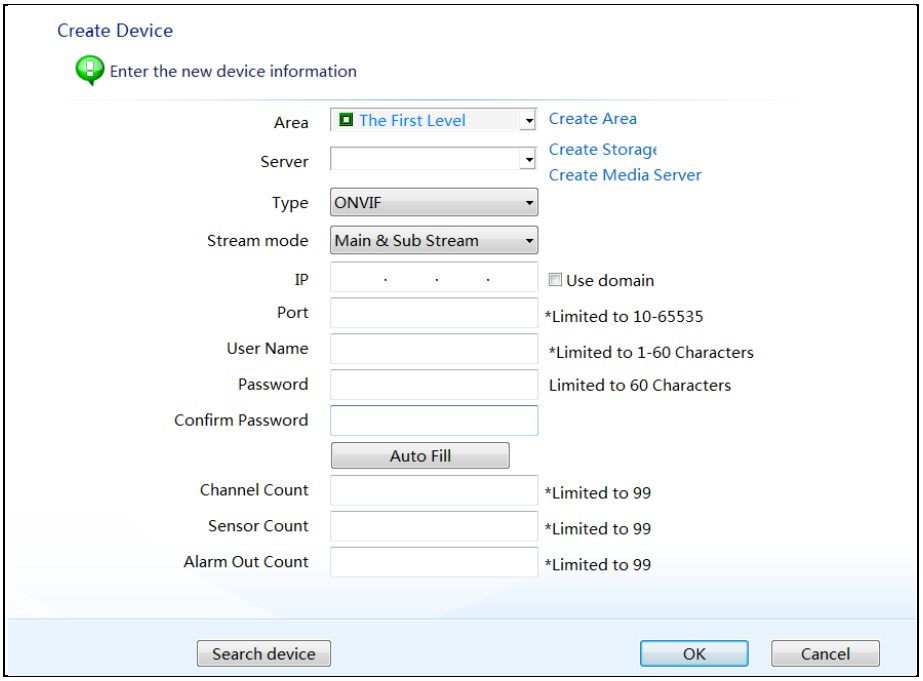
Click "Add Device" to add device as shown below.



There are four ways to add device.

- **Input Device Information Manually**

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



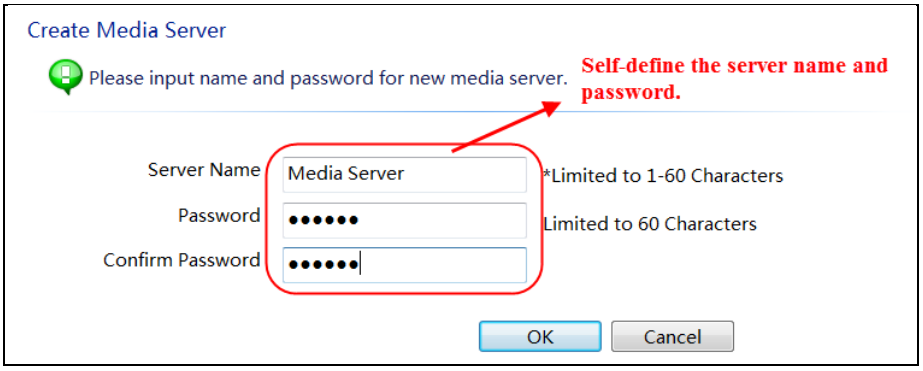
If the storage server and media server hasn't been created yet, please click "Create Storage" and "Create Media Server" to create storage server and media server. Here we take media server for instance.

Note:

The storage server IP-SAN has both the storage and transfer function. If the device you created is configured with an IP-SAN, it will use the IP-SAN to transfer its media; so you don't need to configure a media server for the device.

The storage server PC-NVR has not the transfer function. If the device you created is configured with a PC-NVR, you will have to configure a media transfer server for it.

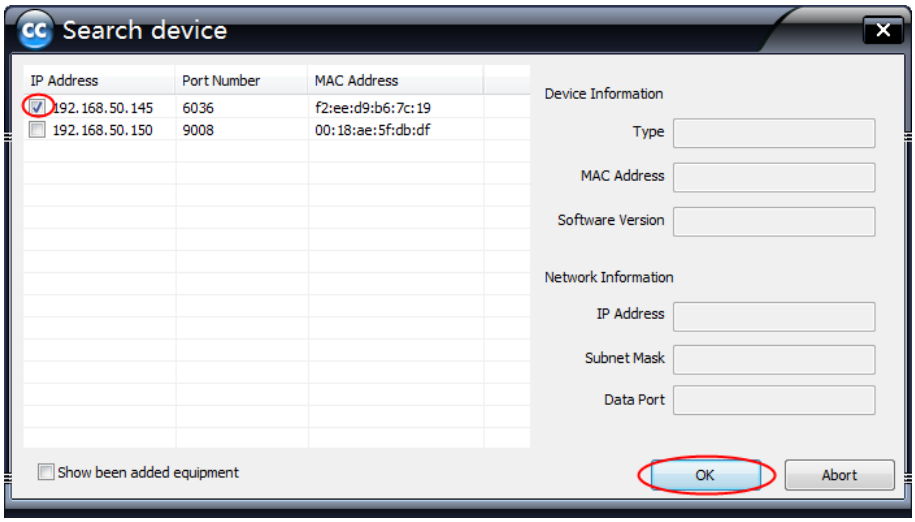
If the device you created is configured with a media transfer server, and it has not yet been configured with a storage server, you will have to configure a storage server for it if recording is needed.



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

- **Search Online Device**

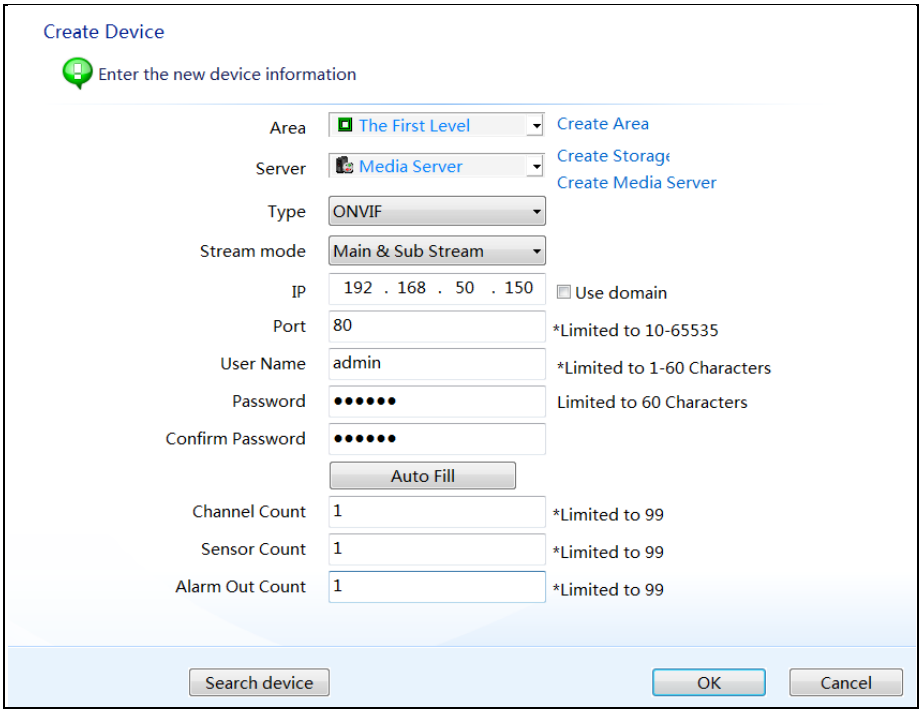
In device creation interface, a device list will pop up by clicking "Search Device" button.



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, server 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.

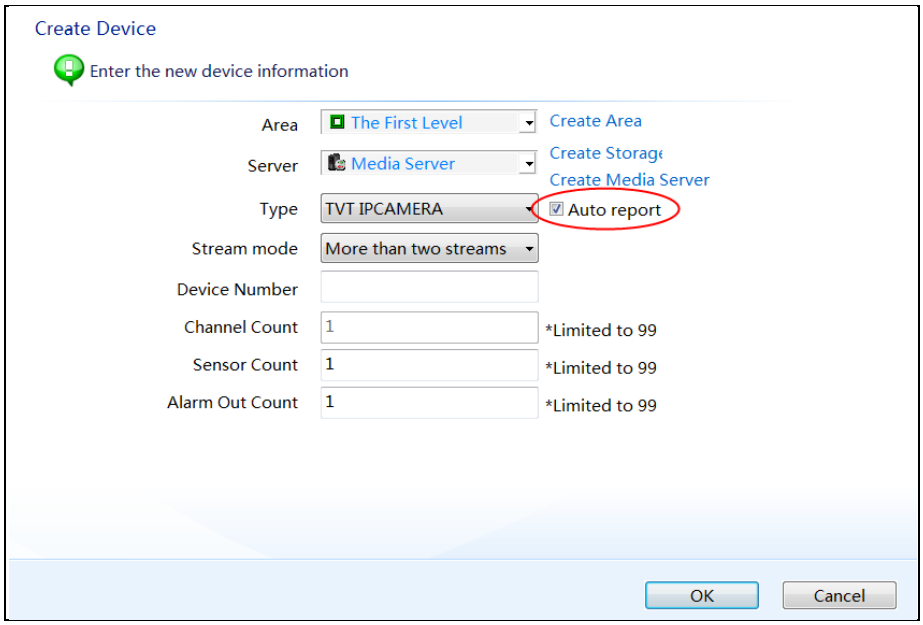
Note:

The channel count, sensor count and alarm out count will be filled automatically by the system if the device type belongs to private protocol.



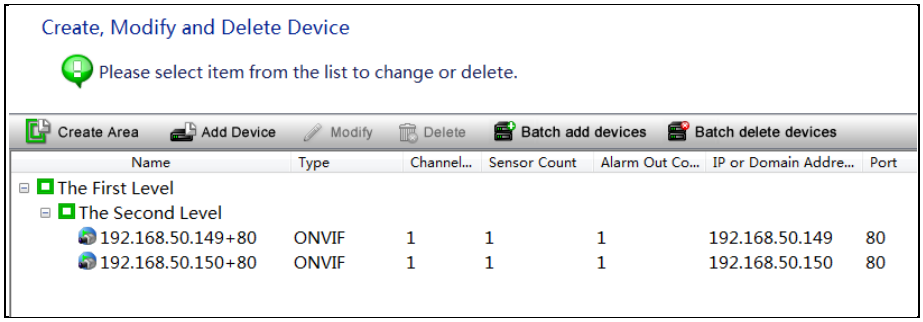
- **Auto Report**

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



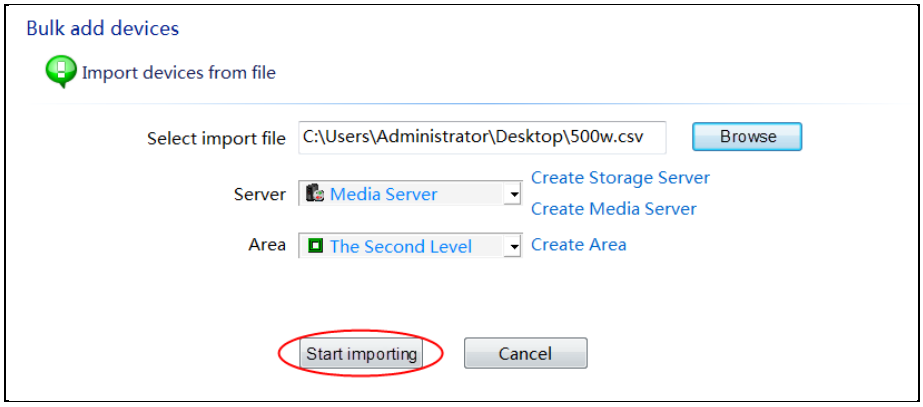
Select area, server and device type, input device number, channel count, sensor count and alarm out count. You also need to configure the network of the device before the auto report takes effect (Please see the network configuration chapter of the device user manual for the detail configuration).

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



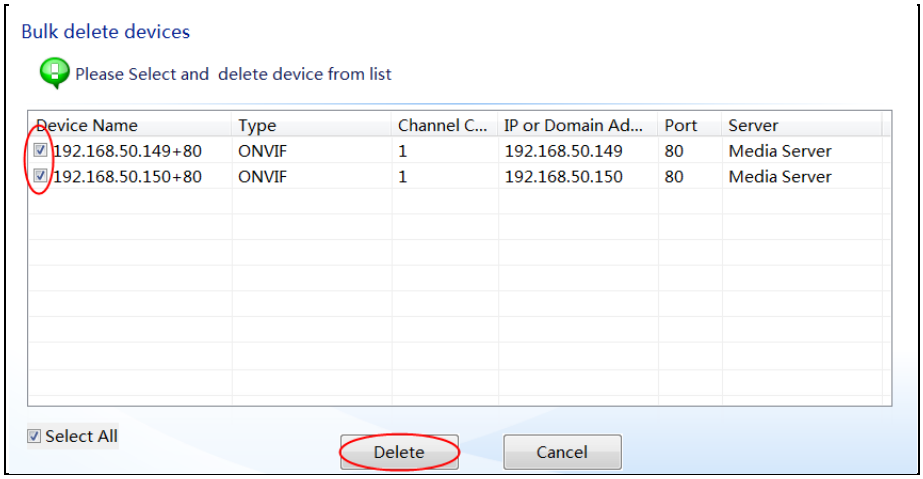
- **Batch Add Devices**

Click "Batch add devices" button to go to the interface as shown below, select the import file (generated by Device Tool; please refer to the user manual of Device Tool for details), server and area and then click "Start importing" button to batch import multiple devices.



To modify the device name, IP address, Port, user name, password, area 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.

Click "Batch delete devices" to go to the interface as shown below, check the devices you want to delete and then click "Delete" button to delete them.

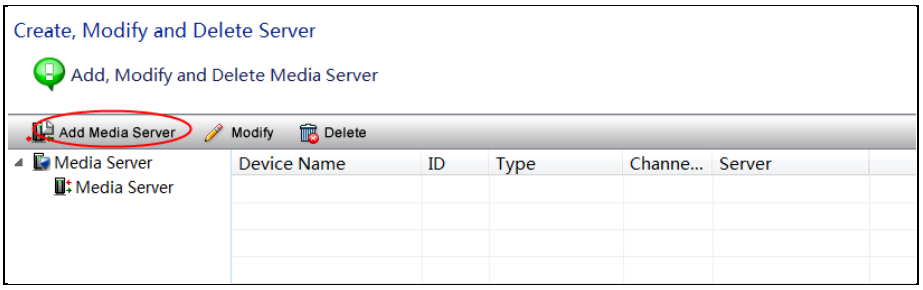


4.4 Media Server Settings

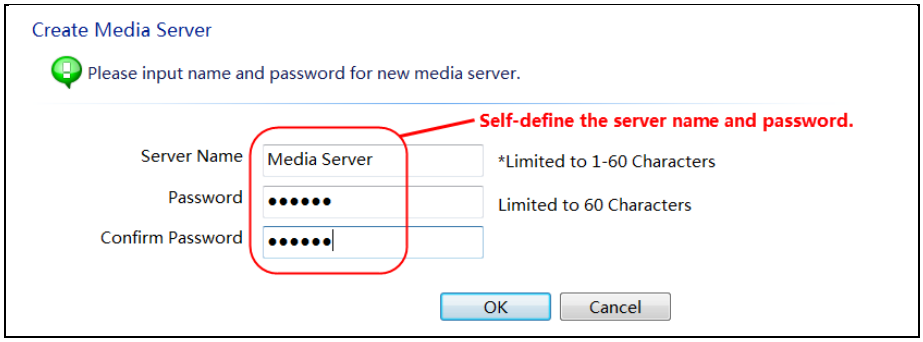
Media server is in charge of the video signal receival of the front-end devices and transfers the signal to the client to preview or to the storage server to record. The client or storage server sends the command of viewing the video of the front-end devices that is also transferred by the media server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

4.4.1 Create Media Server

Before creating devices, please create media server first. In the Configuration Management Center interface, click Device and Server Configuration →Media Server to go to the configuration interface of the media server. Next, click "Add Media Server" button.

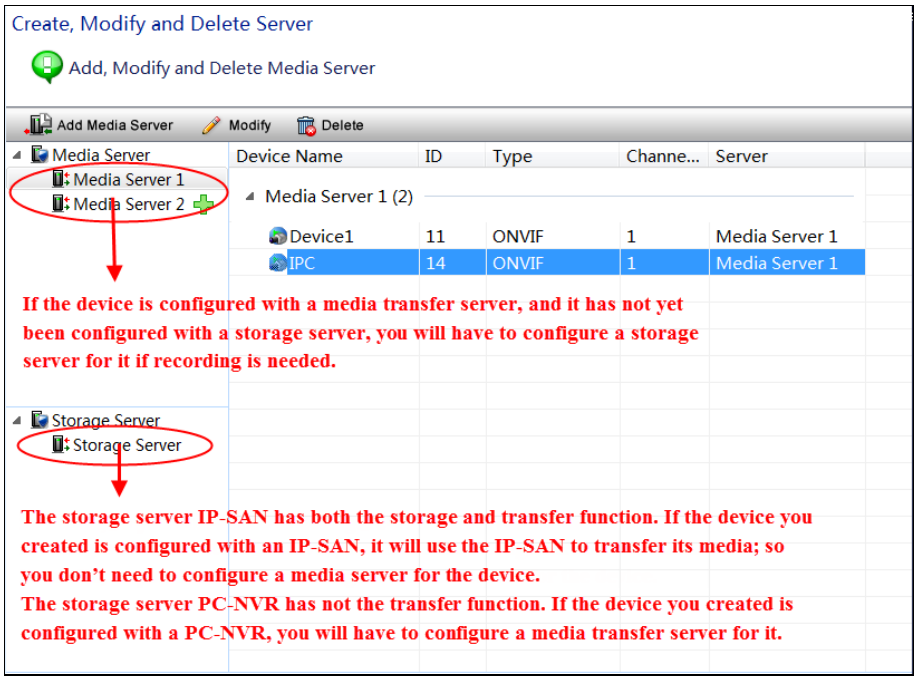


Please input the server name and password and then click "OK" button.

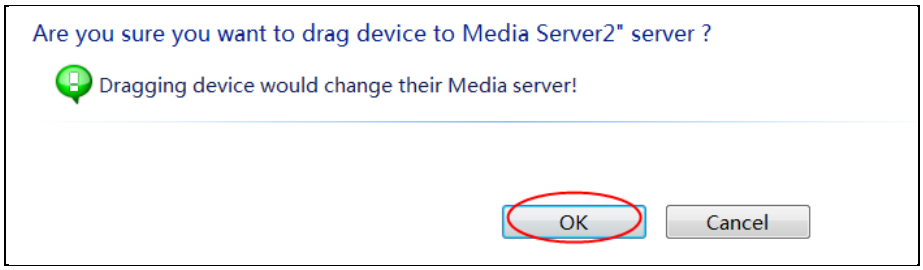


4.4.2 Modify the Media Server of the Device

In the configuration interface of the media server, 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.

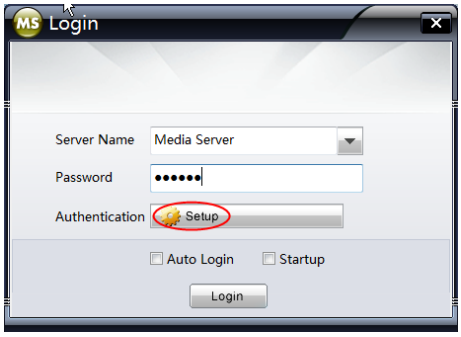


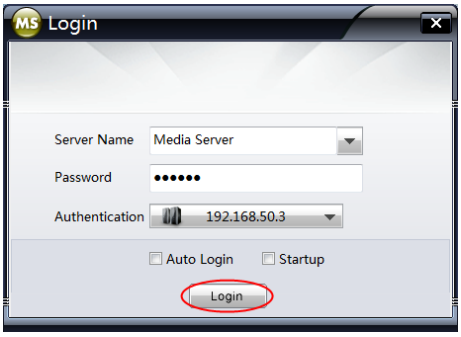
Please click "OK" button to confirm the modification.



4.4.3 Start Media Server

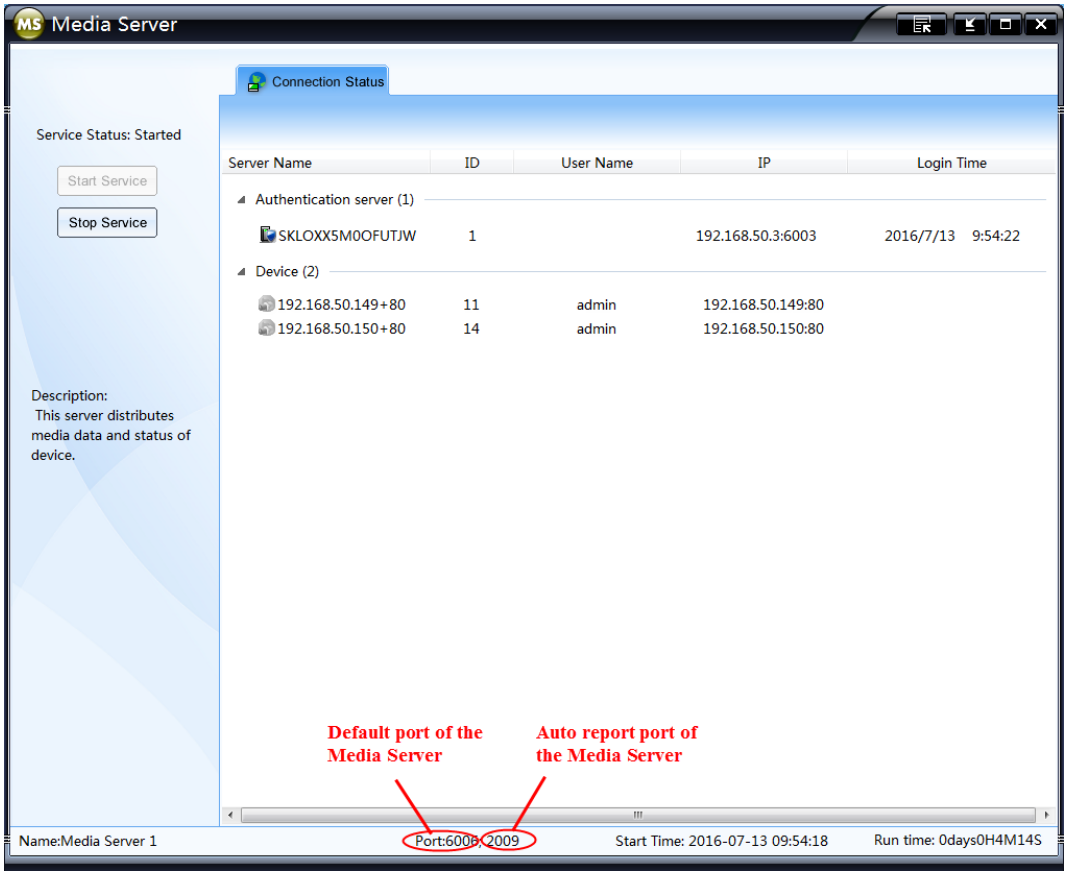
Double click  icon or click "Start"→All Programs→Media Transfer Server(NVMS-5000) →Media Transfer Server to start the media server. A login window will pop up as follows. Input the created media server name and password. Then click "Setup" button to input the authentication server information (please refer to **4.2 Configuration Management Center** for details). After that, please click "Login" to go to the media server interface.





You can also 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 necessary to input the server name, password and authentication 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:



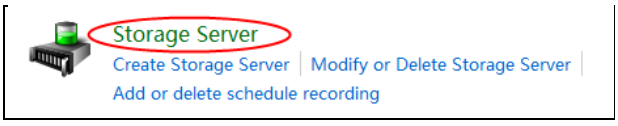
If you want to stop media server, please click "Stop Service" button. A window will pop up to ask for password. You should input the correct password of the media server and click "OK" button to stop service. Click "Start Service" to start the service.

4.5 Storage Server Settings

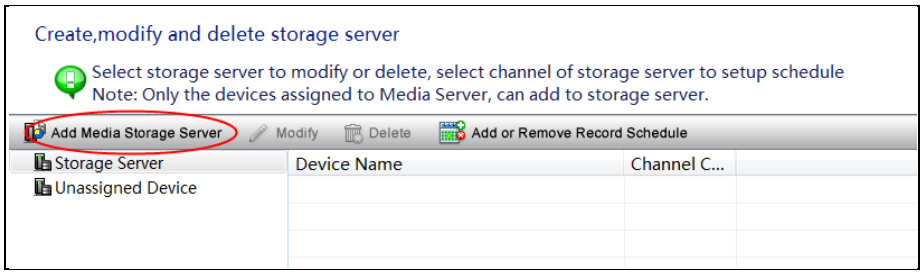
Storage server is in charge of the storage of record information, including the information of schedule record, sensor alarm, motion alarm and smart detection alarm record and responds to the search and playback of all storage data. It also supports self-defined storage path settings and IP-SAN access.

4.5.1 Add Storage Server

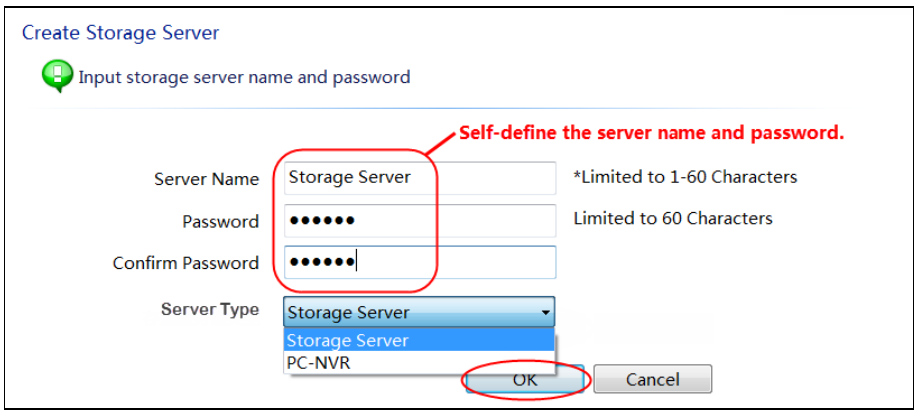
In the Configuration Management Center interface, click **Device and Server Configuration** and then click "Storage Server" as shown below.



Go to the configuration interface of the storage server as shown below.



Click “Add Media Storage Server” to go to the interface as shown below.

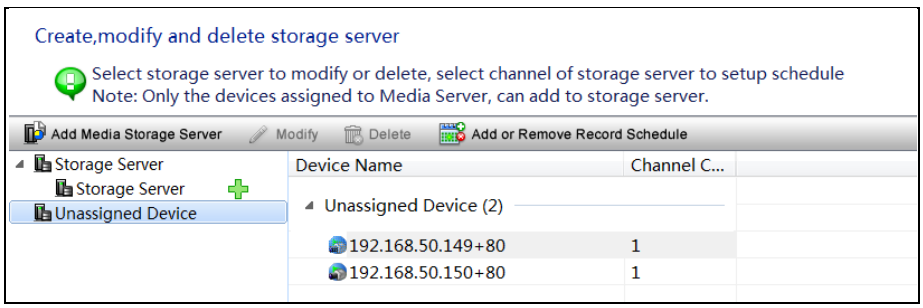


Input the storage server name and password, select the storage server type (PC-NVR and Storage Server IP-SAN are optional) and then click “OK” button to create a storage server.

Return to the configuration interface of the storage server. If you want to modify the created storage server, please select the storage server (IP-SAN or PC-NVR) and click “Modify” button to change the name and password. If the created PC-NVR is running, you can click “Modify Partition Group” to set its partition group. Select a storage server (IP-SAN or PC-NVR) and then click “Delete” button to delete it.

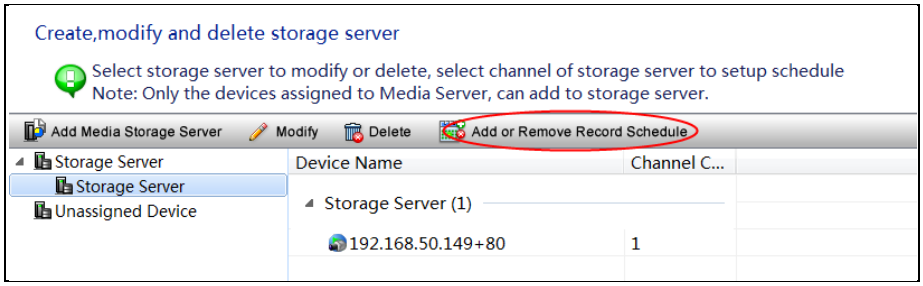
4.5.2 Add Channels to Storage Server

In the configuration interface of the storage server, select a channel and drag the channel 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 the channel. Please click “OK” to confirm.

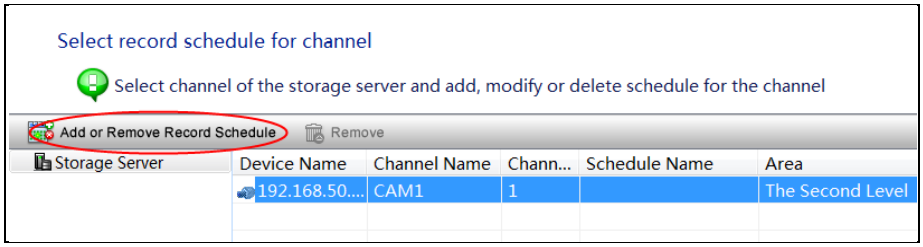


4.5.3 Setup Record Schedule

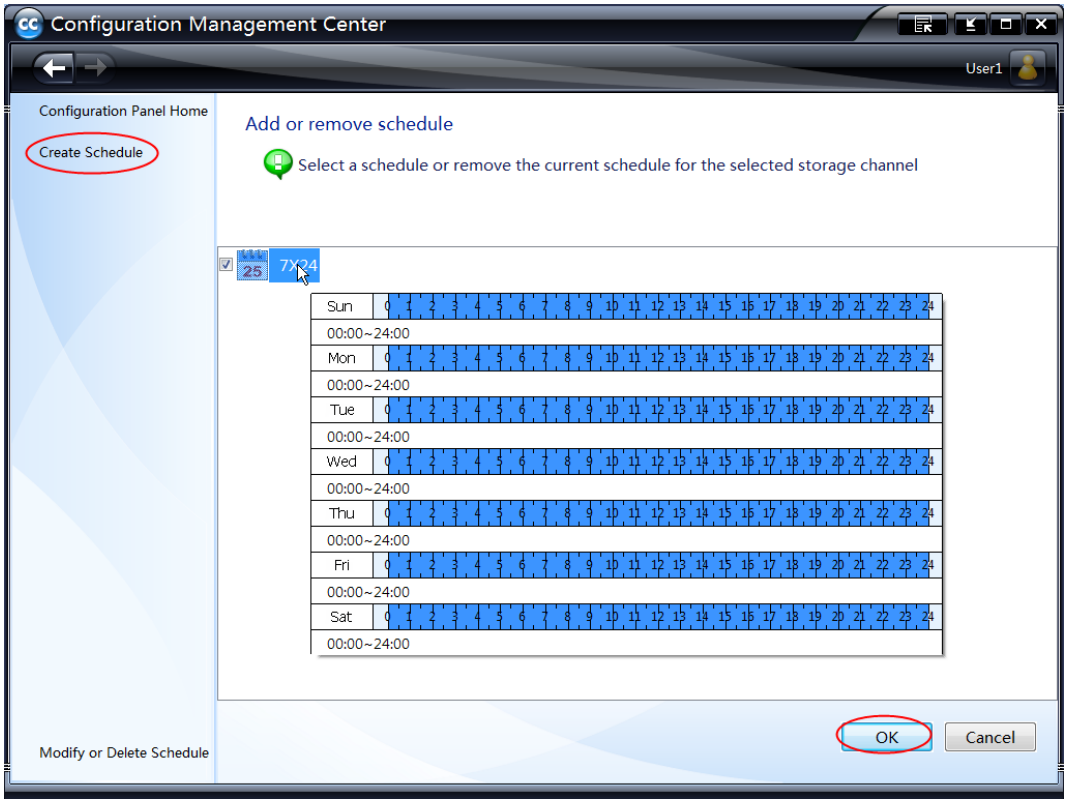
Return to the configuration interface of the storage server to set up record schedules for these channels. Click “Add or Remove Record Schedule”.



Go to the record schedule setting interface as shown below, click storage server to view the device list. Select a channel and click "Add or Remove Record Schedule".



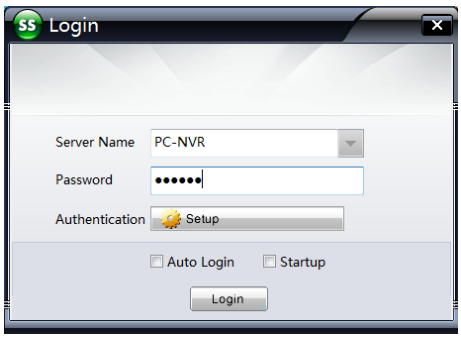
Go to the schedule setting interface as shown below, put the cursor on the schedule name to see the schedule. The default schedule is "7×24". You can check this schedule and then click "OK" button to save the settings. You can also click "Create Schedule" button on the left menu bar to set other schedules (please refer to **4.7.1 Create Schedule** for detail information).

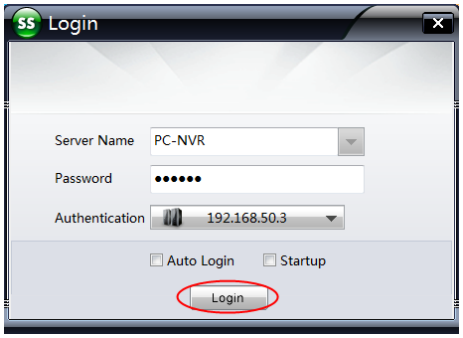


4.5.4 Start PC-NVR

Double click  icon or click "Start"→All Programs→PC-NVR (NVMS-5000) →PC-NVR to start PC-NVR. A login window will pop up as follows. Input the created PC-NVR name and password. Then click "Setup" button to

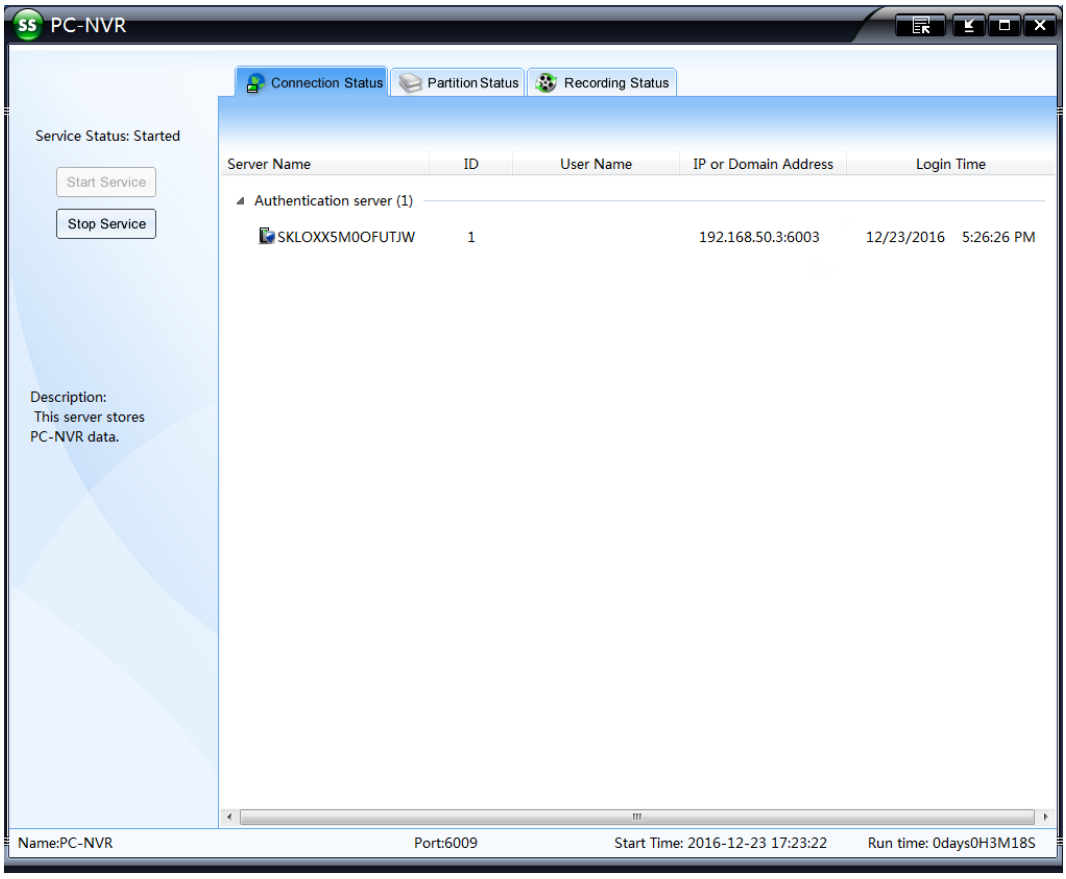
input the authentication server information (please refer to **4.2 Configuration Management Center** for details). After that, please click "Login" to go to the PC-NVR interface.



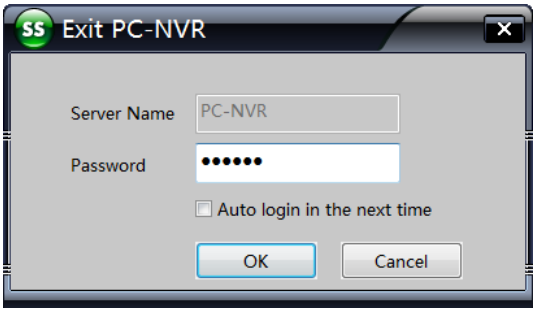


You can also check "Auto Login" or "Startup" button to set the logging method next time.

The PC-NVR interface is as shown below:



If you want to stop PC-NVR, please click "Stop Service" button. A window will pop up asking for password. You should input the correct password of the PC-NVR and click "OK" button to stop service. Click "Start Service" to start the service or login to another PC-NVR.

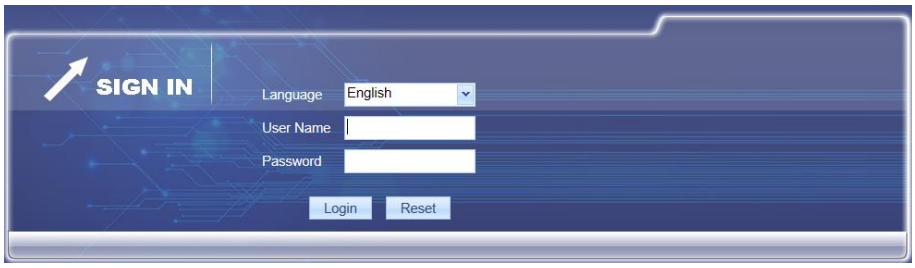


Click “Partition Status” tab to view the partition status of the PC-NVR. You can click “Format” button at the right bottom of the interface to format the partitions if the service status is stopped.

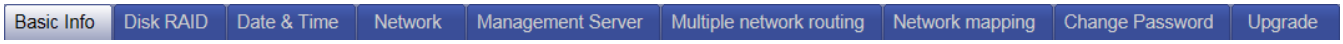
Click “Recording Status” tab to view the recording status.

4.5.5 IP-SAN Configuration

Start the IP-SAN, and then log in to the IE client of the IP-SAN to configure it. Input the default IP address 192.168.1.101 or 192.168.1.102 (connect the IP-SAN with a displayer to see it) in the IE address bar and then push Enter key to go to the interface as shown below. Input the username and password of the IP-SAN and then click “Login” button. The username is ***admin***, and the password is ***admin***.



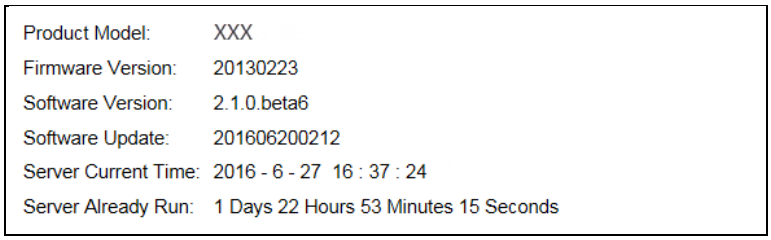
You can view the basic information and disk RAID of the IP-SAN, set its date and time, network, username and password, manage the server and upgrade the IP-SAN, etc.



Click “Refresh” menu on the top right corner to refresh the client interface; click “Logout” button menu to log out the system; click “Reboot” menu to reboot the IP-SAN; click “Power Off” menu to power off the IP-SAN.

➢ Basic Information

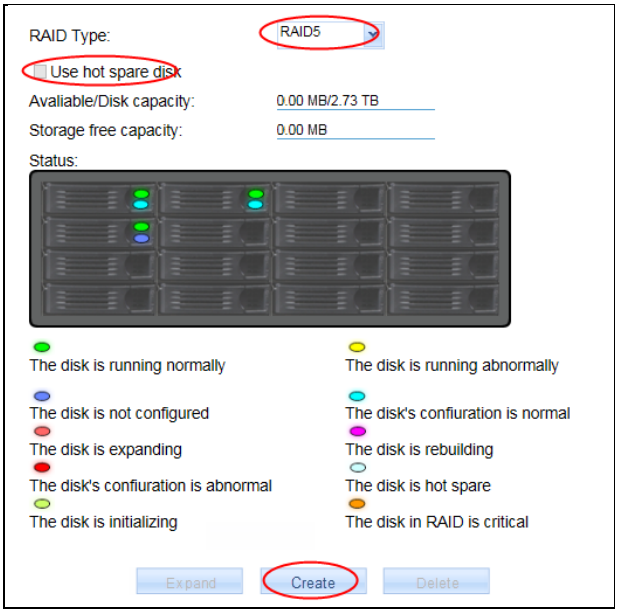
Click “Basic Info” menu to view the product model and software version, etc.



➢ Disk RAID

Click “Disk RAID” menu to manage the disk RAID of the IP-SAN.

Select the RAID type, check “Use hot spare disk” as required and then click “Create” button to create the disk RAID.



RAID 0: A minimum of one disk is needed to add RAID 0.

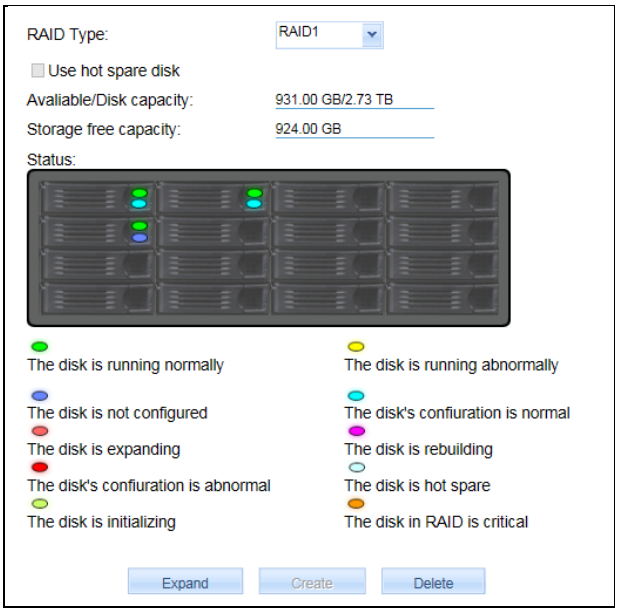
RAID 1: A minimum of two disks are needed to add RAID 1 and the number of the disks must be even.

RAID 5: A minimum of three disks are needed to add RAID 5.

RAID 6: A minimum of four disks are needed to add RAID 6.

Hot Spare Disk: if one disk in the RAID does not work, the hot spare disk will continue recording instead of the broken disk. You cannot set hot spare disk for RAID 0. The hot spare disk numbers of RAID 1, RAID 5 and RAID 6 are unlimited.

You can click "Delete" button to delete the created RAID (please be careful to delete RAID because it will cause the data loss).



If the disk room of the RAID is not enough for your requirement, you can expand your RAID.

Insert new disk to the IP-SAN, and then click "Expand" button to expand the RAID.

Note: the capacity of the HDD inserted into the IP-SAN for expanding should not be lower than each HDD capacity of the current RAID, or the expanding would fail. By RAID expanding you can increase the RAID capacity without losing the record data.

➢ Date & Time

Click “Date & Time” menu to set the date and time of the IP-SAN.

Set the time zone, manually set the date and time, and then click “Submit” to save the settings. Click “Reset” to reset system time.

➢ Network

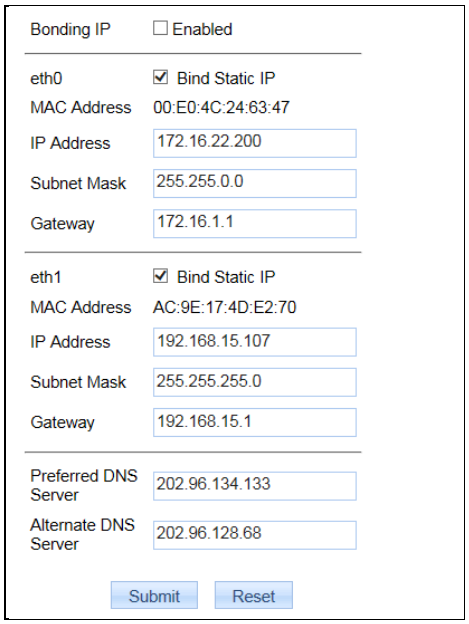
Click “Network” menu to set the network of the IP-SAN.

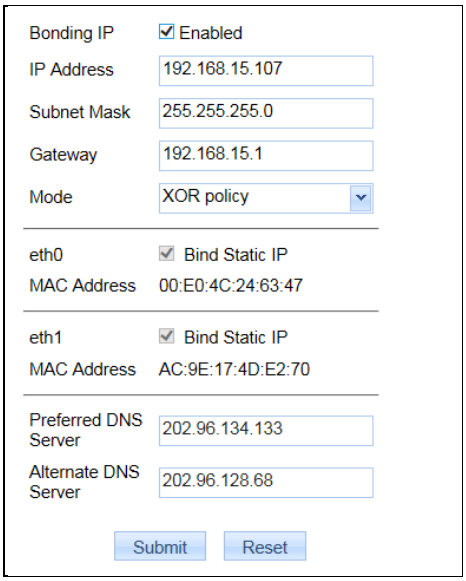
Bonding IP: bind two network ports or above to one IP address. The advantages of using bonding IP: 1. increase the bandwidth; 2. form a network redundant array to share the load. When a failure happens to one network port, the other port will take over the entire load immediately. The takeover process is seamless and the network service will not be broken off.

If the bonding IP is disabled, you should set the network addresses of eth0 and eth1 respectively. Refer to the below left figure. Check “Bind Static IP” of eth0 and eth1 and manually input the IP address, subnet mask and gateway. The network addresses of eth0 and eth1 will be obtained automatically if you don’t check “Bind Static IP”. Input the Preferred DNS Server and Alternate DNS Server address and then click “Submit” button to save the settings.

Refer to the below right figure. If the bonding IP is enabled, you should set the network address and mode of the bonding IP (the default mode is XOR policy).

Note: The IP-SAN should be set to be in the same network segment with the Authentication Server if recording is needed with the storage server.





➢ Management Server

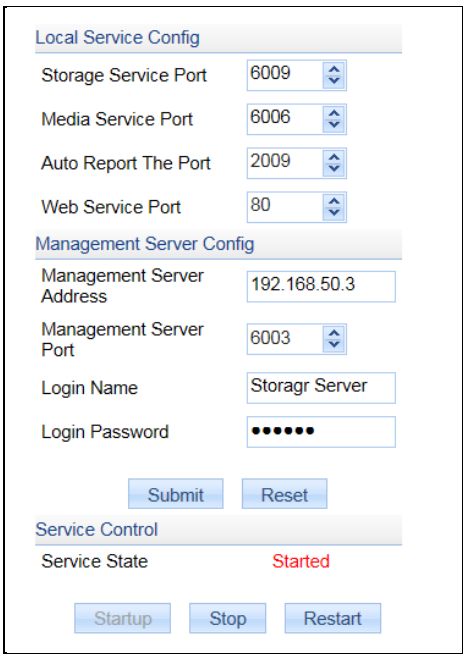
Click “Management Server” menu to configure the management server and the local service of IP-SAN.

The four ports under the “Local Service Config” can be self-defined.

The address and port of the management server should be the same with that of the Authentication Server (go to Authentication Server to view the IP address and port).

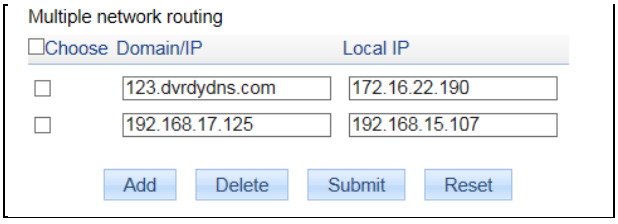
The login name and login password of the management server should be the same with that of the Storage Server created in the Configuration Management Center. Click "Submit" button to save the settings.

You can click "Stop" button to stop the service of the Authentication Server; click "Startup" button to start the service of the Authentication Server; click "Restart" button to restart the Authentication Server.



➢ Multiple Network Routing

If the IP-SAN has two network ports or above, you can set the local IP address of the IP-SAN to connect to the specified devices or servers automatically. Click "Multiple Network Routing" to go to the interface as shown below.



The setting steps are as follows:

① Click "Add" button to add a new configuration item.

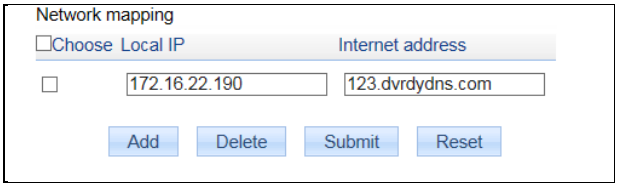
② Input the IP address or domain name of the target device or server in the "Domain/IP" column and the relavant LAN IP address of the IP-SAN in the "Local IP" column.

③ Click "Submit" button to save the settings.

Check the items you want to delete and then click "Delete" button to delete them; click "Reset" button to restore to previous setting status.

➢ Network Mapping

You can set the mapping relation between the local IP address and the WAN network IP address through network mapping. It is mostly used to meet the situation when a client wants to access the system via WAN. Click "Network Mapping" to go to the interface as shown below.



The setting steps are as follows:

① Click "Add" button to add a new configuration item.

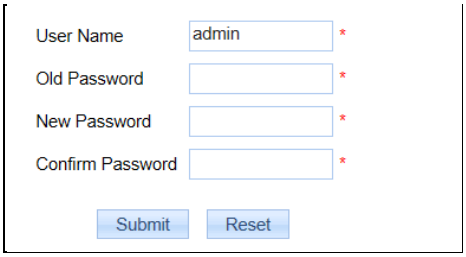
② Input the LAN IP address of the IP-SAN in the "Local IP" column and the relavant WAN IP address in the "Internet address" column.

③ Click "Submit" button to save the settings.

Check the items you want to delete and then click "Delete" button to delete them; click "Reset" button to restore to previous setting status.

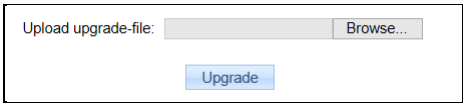
➢ Change Password

Click "Change Password" menu to change the login username and password of the web client of the IP-SAN.



➢ Upgrade

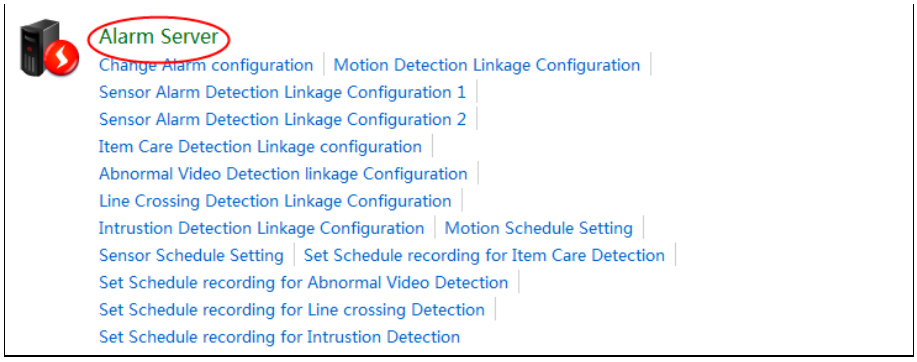
Click "Upgrade" button to upgrade the software of the IP-SAN. Click "Browse…" to choose the upgrading file and then click "Upgrade" button to start upgrading.

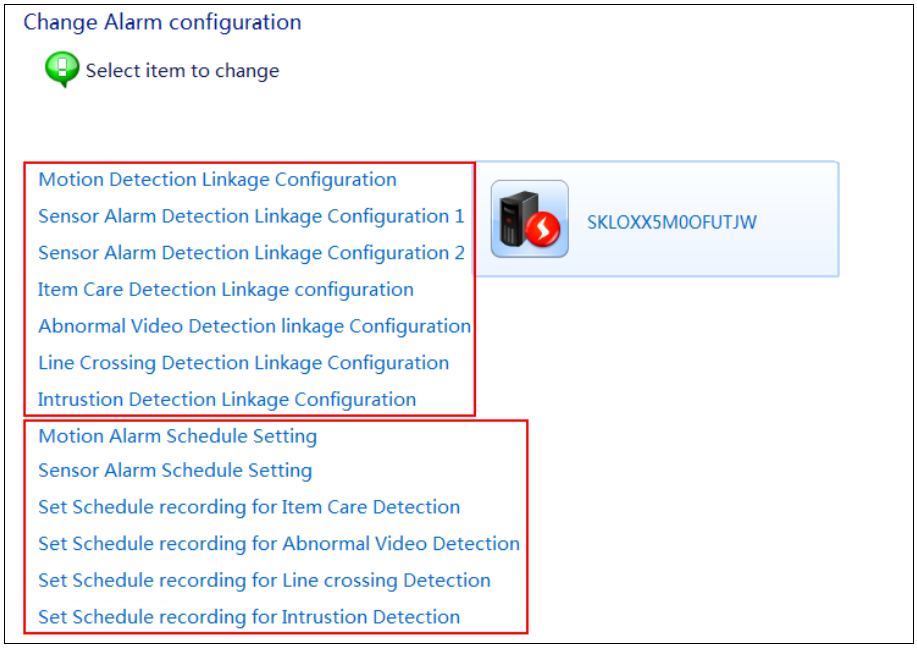


4.6 Alarm Server Settings

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.

Go to Configuration Management Center interface→Device and Server Configuration→Alarm Server interface as shown below. You can set alarm linkage and alarm schedule.

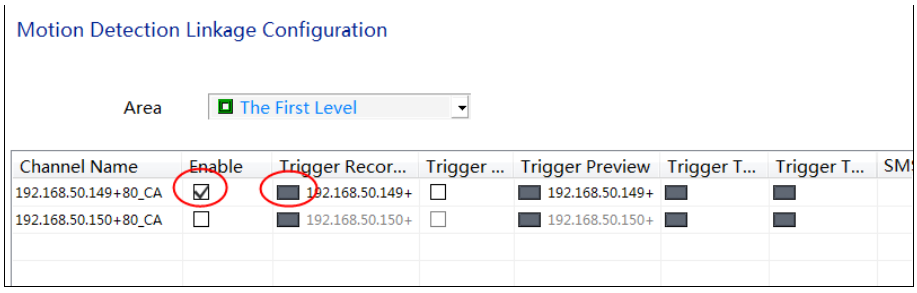




4.6.1 Alarm Linkage Settings

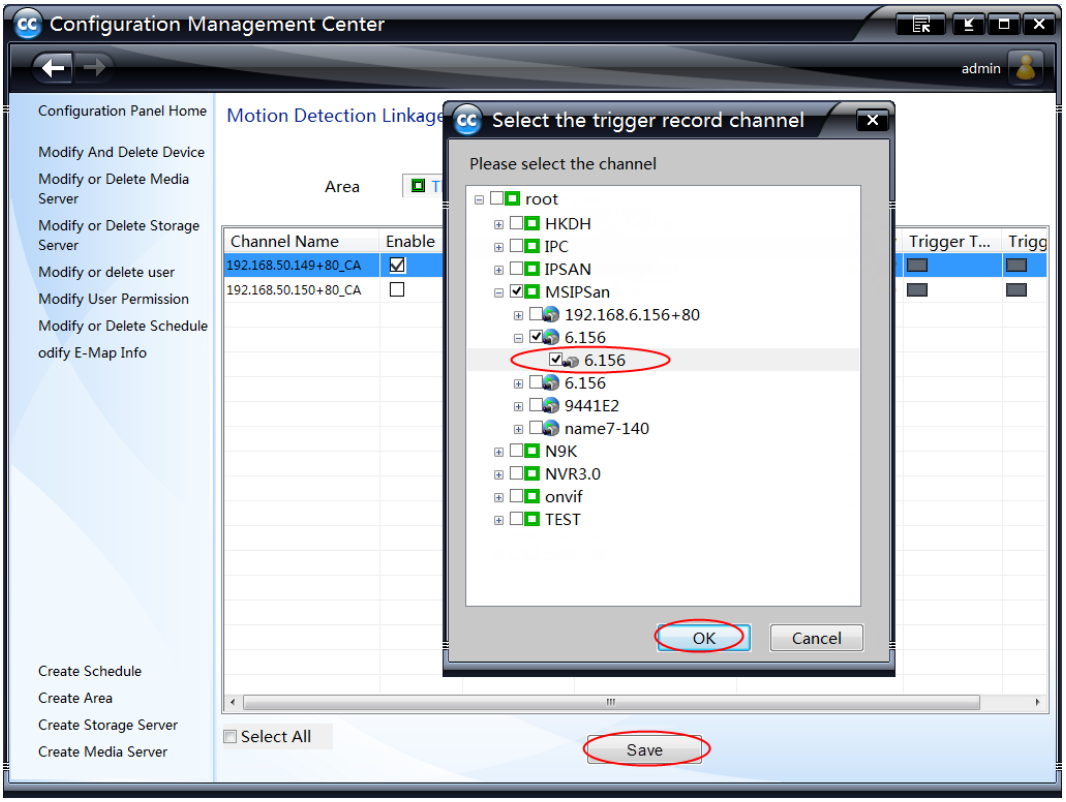
Alarm linkage setup includes Motion Detection Linkage Configuration, Sensor Alarm Detection Linkage Configuration 1, Sensor Alarm Detection Linkage Configuration 2, Item Care Detection Linkage Configuration, Abnormal Video Detection Linkage Configuration, Line Crossing Detection Linkage Configuration and Intrusion Detection Linkage Configuration. The setting steps of each alarm linkage are similar. Here we take motion detection linkage configuration for instance.

In the configuration interface of the alarm server, click "Motion Detection Linkage Configuration" to go to the interface as shown below.



Select the device and then check "Enable". The alarm linkage items are introduced as follows.

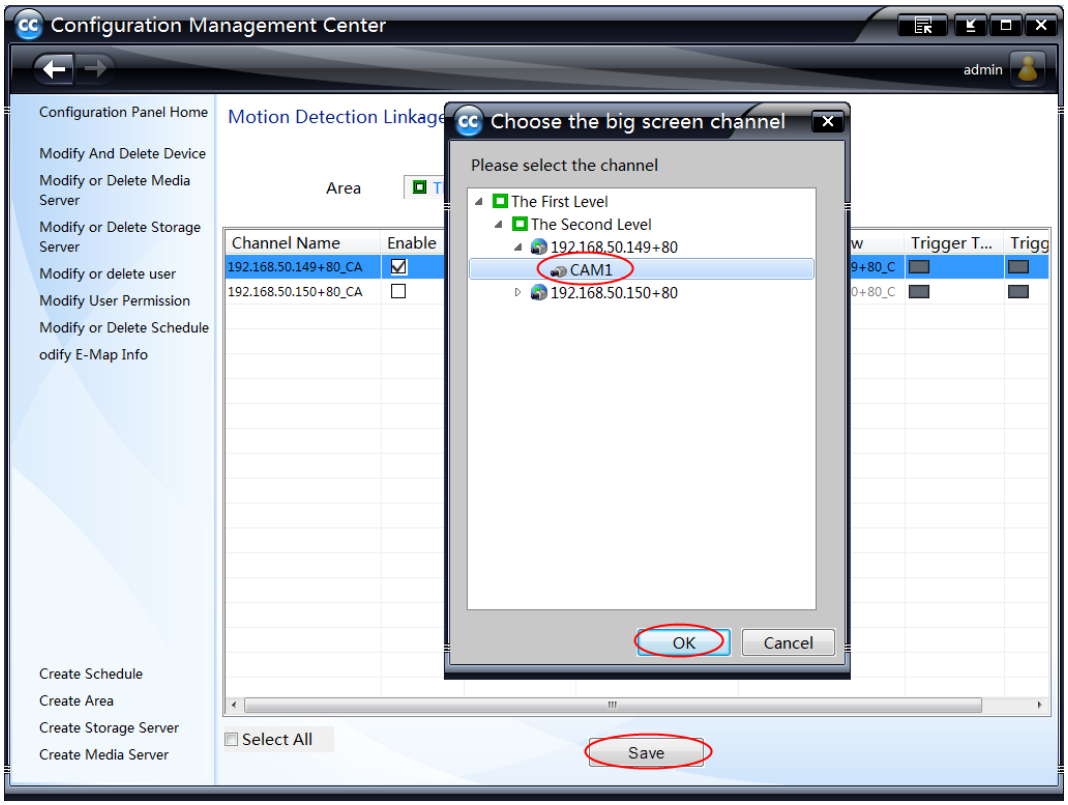
Trigger Recording: click  under the title of Trigger Recording to pop up the "Select the trigger record channel" window. Check the linkage record channels in the window and then click "OK" to save the selected channel. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.



Trigger Audio: Checkmark trigger audio and then click "Save" button to save the settings.

Trigger Preview: click  under the title of Trigger Preview to pop up the "Choose the big screen channel" window. Select one linkage preview channel in the window (you can check multiple linkage preview channels in "Sensor Alarm Detection Linkage Configuration 2") and then click "OK" to save the selected channel. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.

Note: if alarm is enabled, the alarm linkage image will pop up in the alarm preview window of the monitor client when alarm happens.



Trigger TV Wall: click under the title of Trigger TV Wall to pop up the "Select Channel and Decoder" window. Select the linkage TV wall in the window and then click "OK" to save the settings. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.

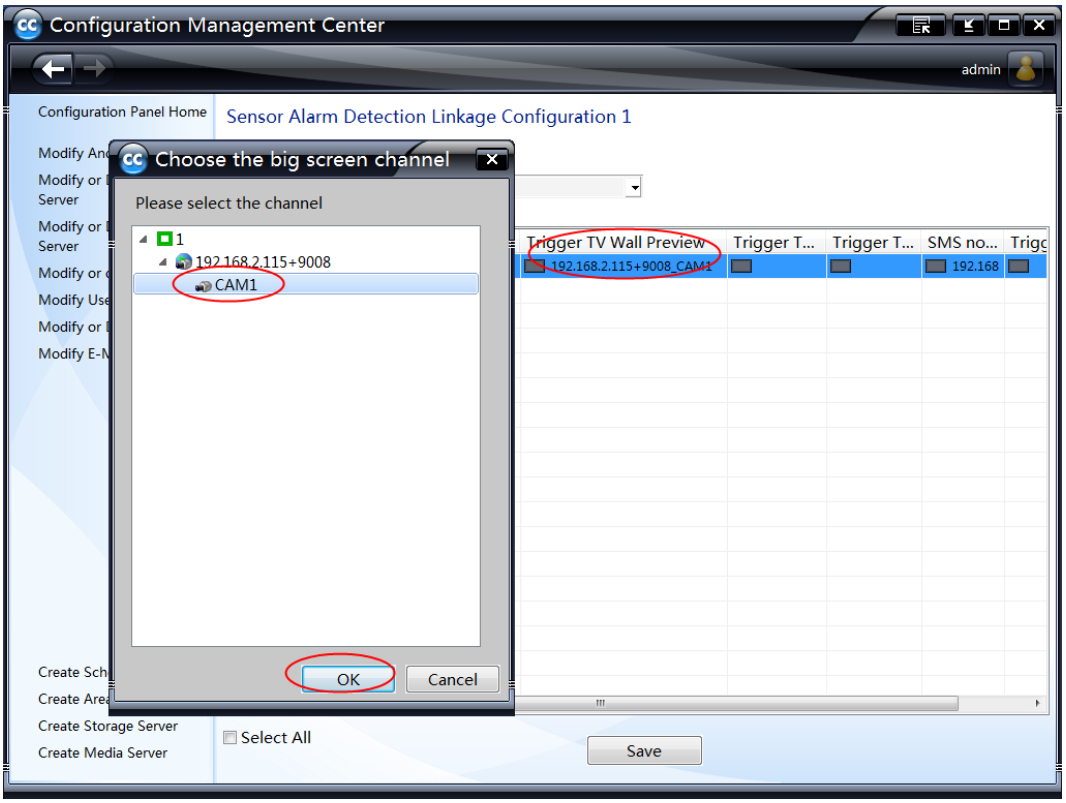
Trigger TV Wall Output: click under the title of Trigger TV Wall Output to pop up the "Select Channel and Decoder" window. Select the linkage TV wall output in the window and then click "OK" to save the settings. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.

Note: if alarm is enabled, the alarm linkage image set in the "Trigger Preview" will pop up in full screen at the corresponding output of the linkage decoder when alarm happens (as for sensor alarm, it will pop up the alarm linkage image set in "Trigger TV Wall Preview").

SMS Notification: click under the title of SMS Notification to pop up the "Channel by Alarm Linkage Message Notification" window. Select a channel in the window and then click "OK" to save the settings. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.

Trigger Alarm Out: click under the title of Trigger Alarm Out to pop up the "Trigger Alarm Out" window. Select the alarm out in the window and then click "OK" to save the settings. Finally, click "Save" button in the motion detection linkage configuration interface to save all the settings.

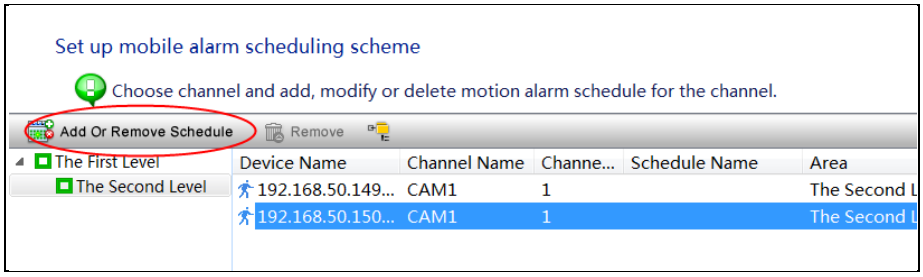
You can trigger TV wall preview in "Sensor Alarm Detection Linkage Configuration 1". Refer to the interface as shown below. Click under the title of Trigger TV Wall Preview to pop up the "Choose the big screen channel" window. Select the linkage channel in the window and then click "OK" button. Finally, click "Save" button in the interface to save the settings. "Trigger TV Wall Preview" won't work until "Trigger TV Wall" and "Trigger TV Wall Output" is configured.



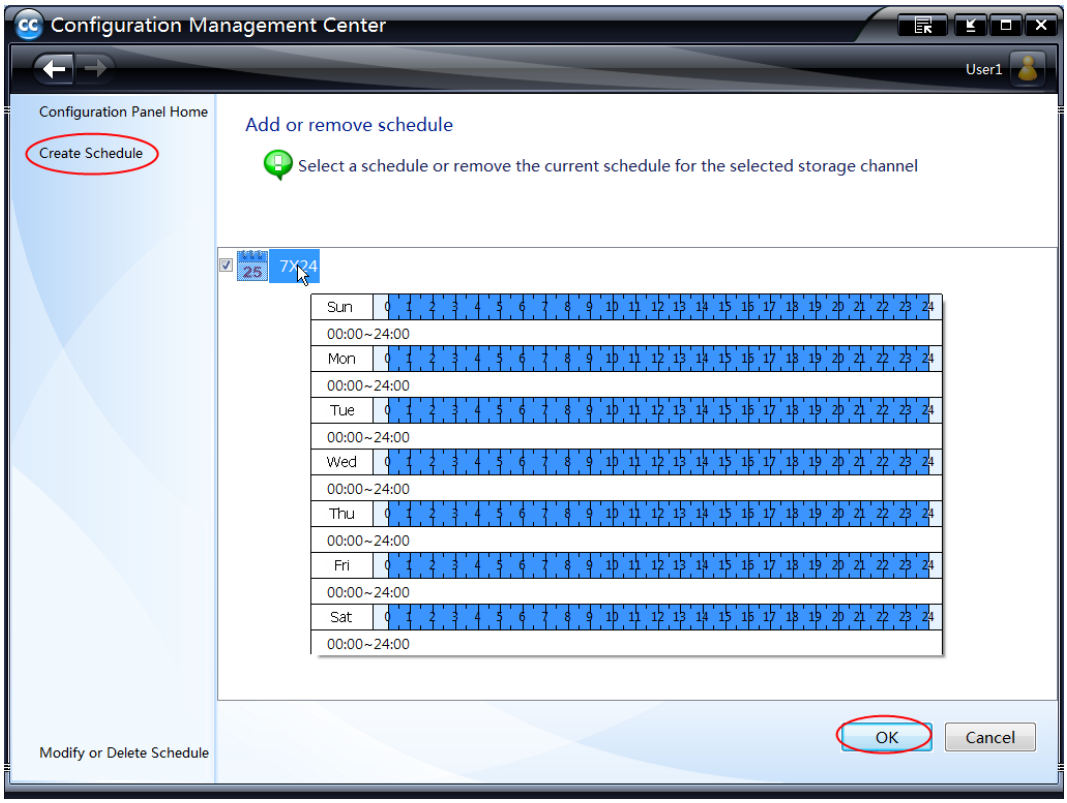
4.6.2 Alarm Schedule Setting

Alarm Schedule Setting includes Motion Alarm Schedule Setting, Sensor Alarm Schedule Setting, Item Care Detection Schedule Setting, Abnormal Video Detection Schedule Setting, Line Crossing Detection Schedule Setting and Intrusion Detection Schedule Setting. The setting steps of each alarm schedule are similar. Here we take motion alarm schedule setting for instance.

Click “Motion Alarm Schedule Setting” to go to its configuration interface. Choose channel 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 the settings. You can also click “Create Schedule” button on the left menu bar to set other schedules (please refer to **4.7.1 Create Schedule** for detail information).



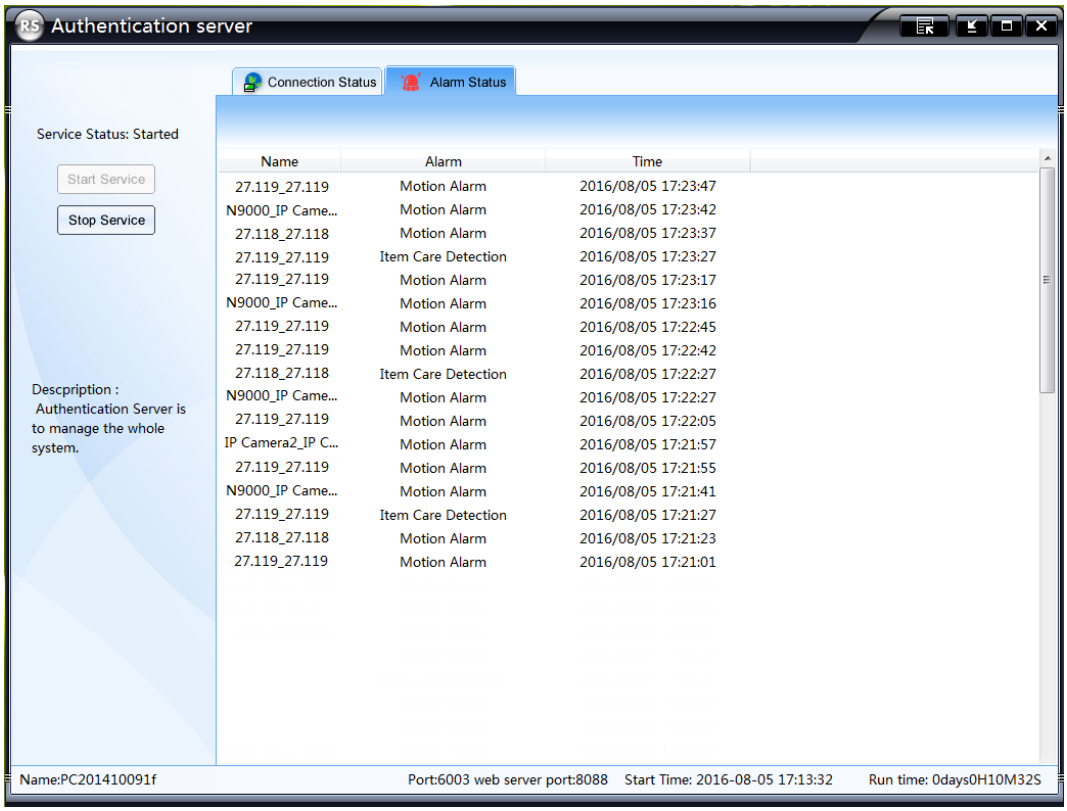
If you want to delete the set schedule, please choose the channel and then click “Remove” button to delete it.

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

To conceal or reveal the device list of the child node, please click  icon.

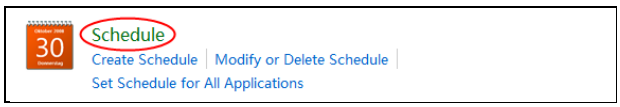
4.6.3 Alarm Status

Alarm Status: click "Alarm Status" tab of the Authentication Server to see the alarm status of the devices.



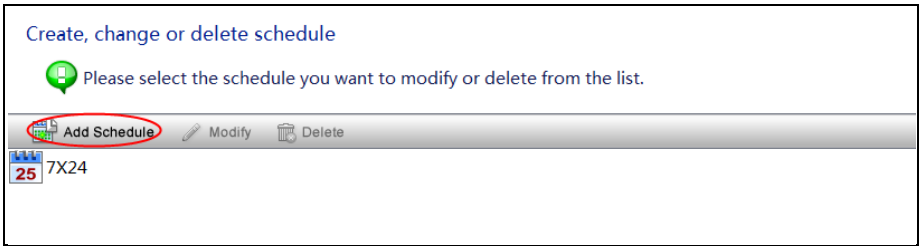
4.7 Schedule Settings

Return to Configuration Management Center interface. Click Device and Server Configuration→Schedule. In this interface, you can create, modify or delete schedule and set schedule for all applications.

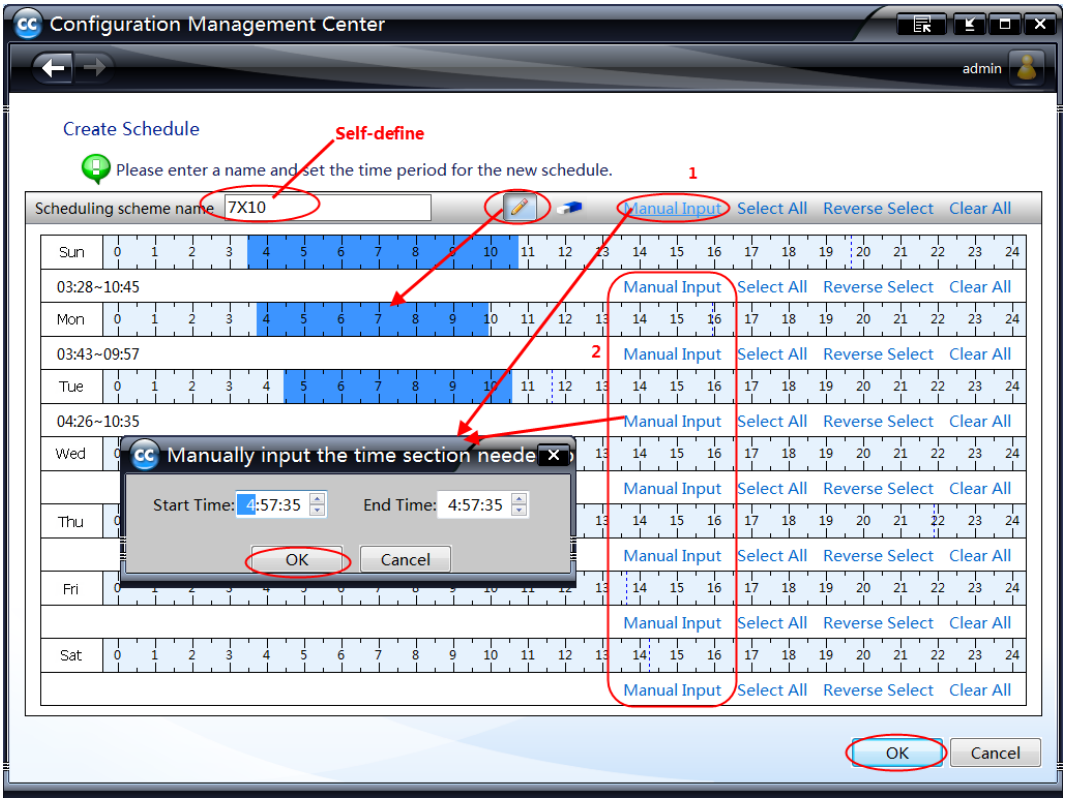


4.7.1 Create Schedule

There is a default schedule (7×24). You can also create other schedules by clicking "Add Schedule" button.



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



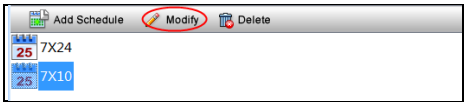
1: Manually input the start time and end time of the whole week.

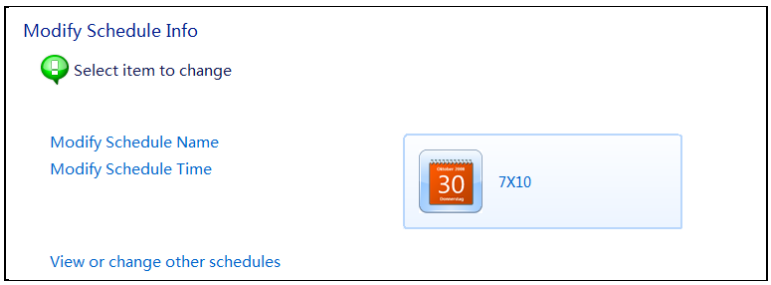
2: Manually input the start time and end time of one day.

4.7.2 Modify or Delete Schedule

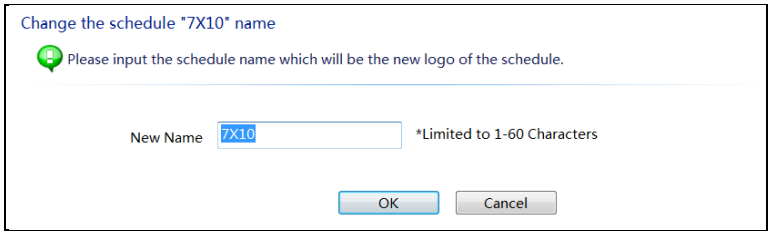
1) Modify Schedule

Go to the schedule configuration interface. Select the schedule and click "Modify" button as shown below.





Click "Modify Schedule Name" to help you modify the schedule name.

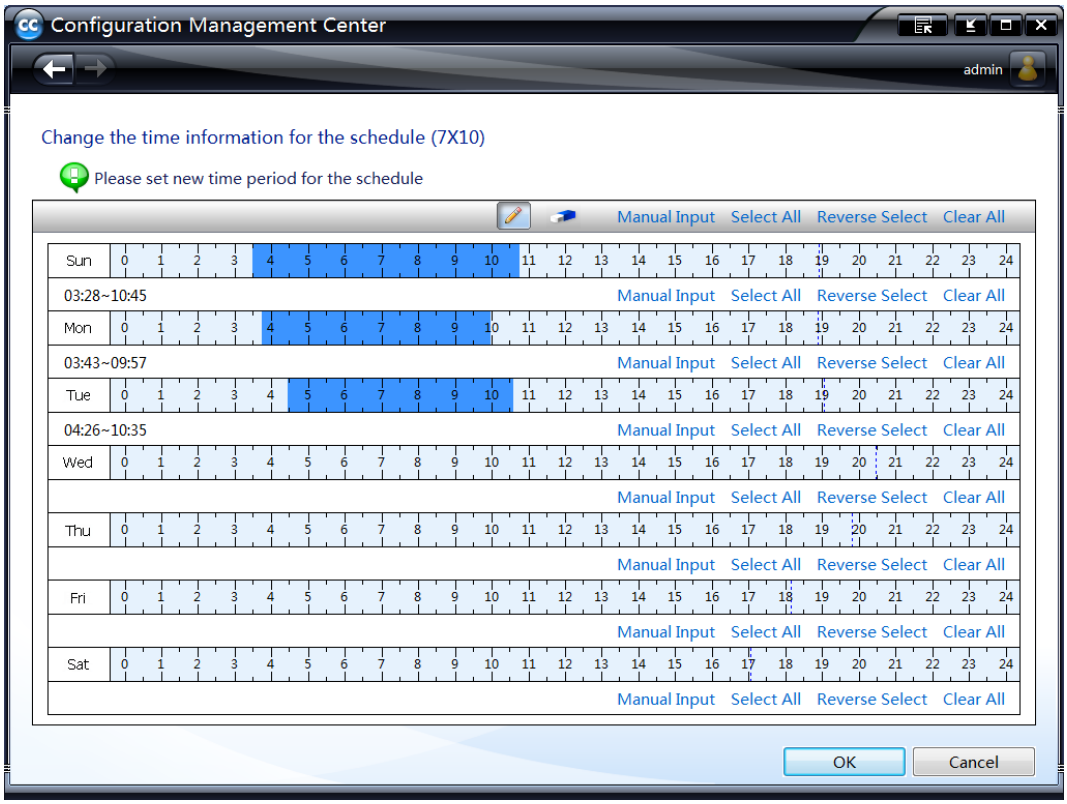


Click "Modify Schedule Time" to help you modify the schedule time.

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 “OK” button to save all settings.



2) Delete Schedule

Go to the schedule configuration interface. Select the schedule you want to delete and then click “Delete” button.

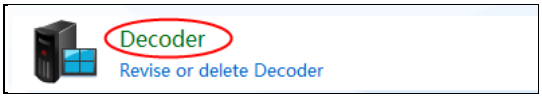
4.7.3 Set Shedule for All Applications

Go to Device and Server Configuration interface. Click “Set Schedule for All Applications” to set schedule recording, motion schedule, sensor schedule, item care schedule, abnormal video schedule, line crossing schedule and intrusion schedule.

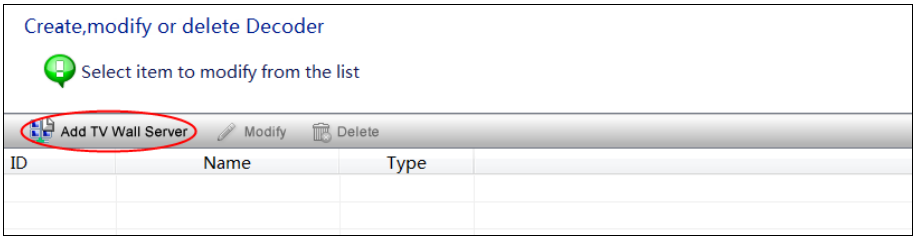
4.8 Decoder Settings

Decoder is in charge of decoding the video signal sent by media server and display images on the TV wall. However, decoders must be used for decoding the video signal and displaying images on the TV Wall.

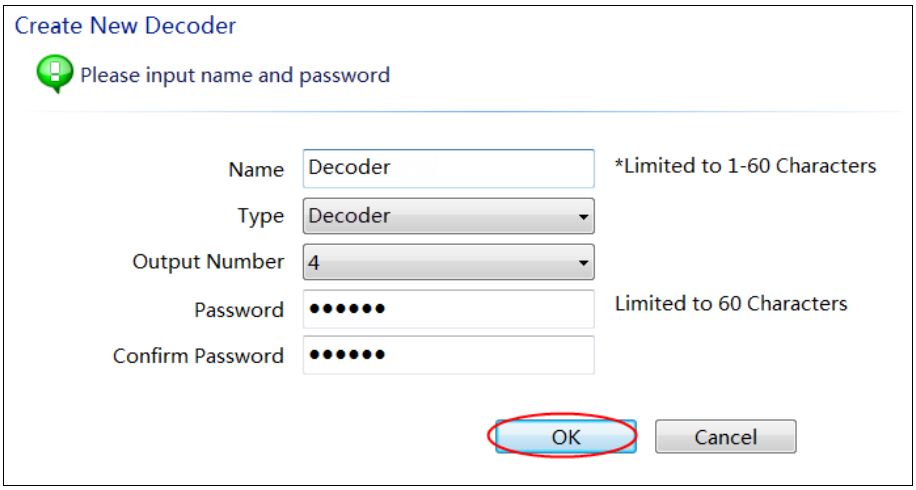
Start Authentication Server and Configuration Management Center and then go to Configuration Management Center interface→Device and Server Configuration→Decoder interface.



In the decoder configuration interface, click “Add TV Wall Server” button.



Input the decoder name and password (self-define them), select the type and output number and then click "OK" button to finish creating the decoder.



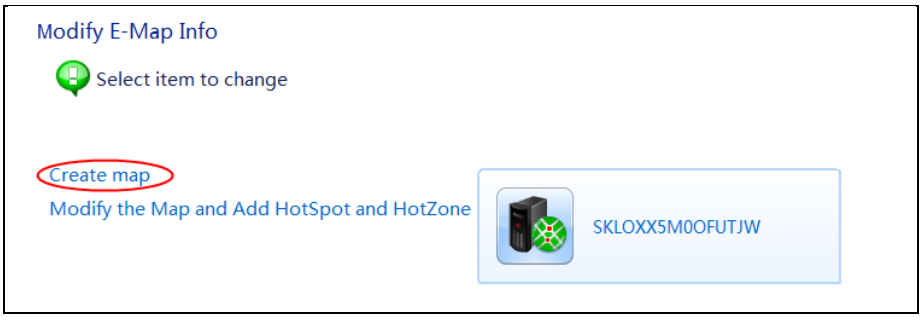
As for the created decoder, you can click "Modify" button to change its name and password and click "Delete" button to delete the decoder.

4.9 E-Map Server

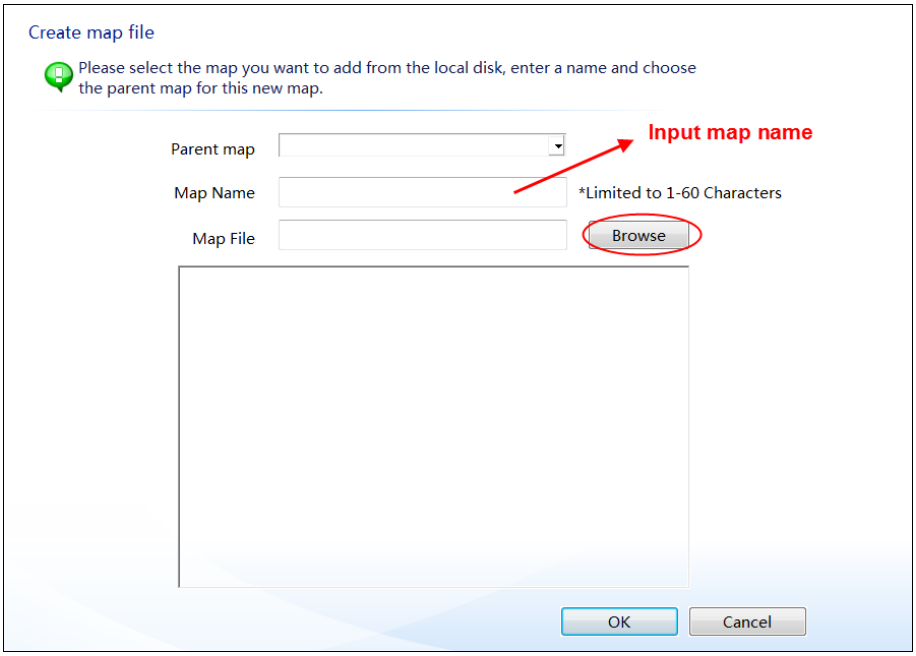
The E-Map server stores the E-map information of the system. The clients of the system landing anywhere can share the same E-map.

4.9.1 Create E-Map

Go to Configuration Management Center interface→Device and Server Configuration→E-Map interface and click "Create map".



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



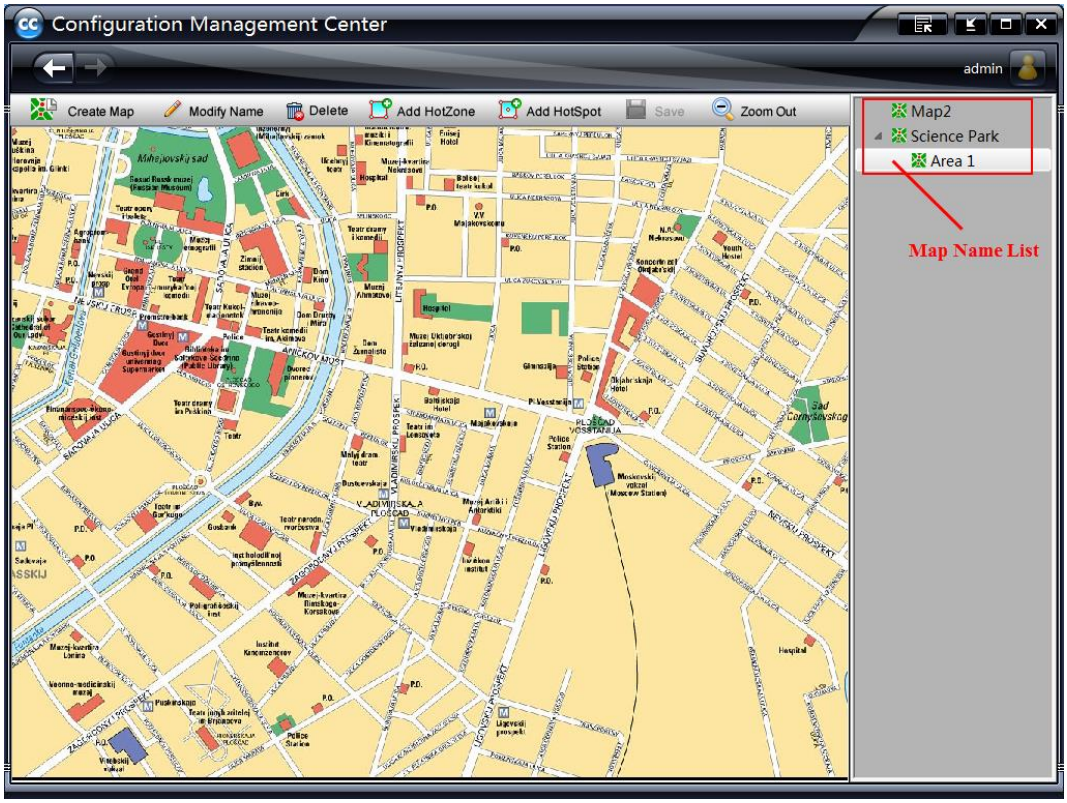
4.9.2 Modify the Map and Add HotSpot and HotZone

4.9.2.1 Modify Map

Go to the Configuration Management Center interface→Device and Server Configuration→ E-Map interface and click "Modify the Map and Add HotSpot and HotZone".

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

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



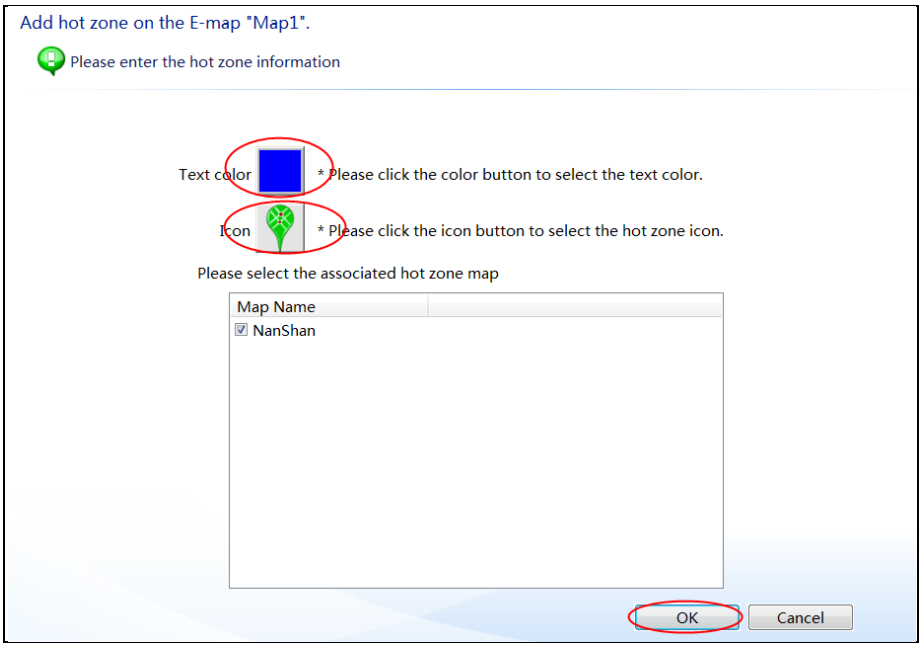
4.9.2.2 Add HotZone

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:

① Go to the Configuration Management Center interface→ Device and Server Configuration→E-Map interface and click “Modify the Map and Add HotSpot and HotZone”.

② Select the map name on the right hand and click “Add HotZone” button on the menu bar to go to the interface as shown below.

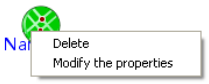


③ Click color box  to select text color displaying under the hotzone icon.

④ Click  icon to choose the hotzone icon displaying on the map.

⑤ Check the associated map.

⑥ Click “OK” button to save the settings.



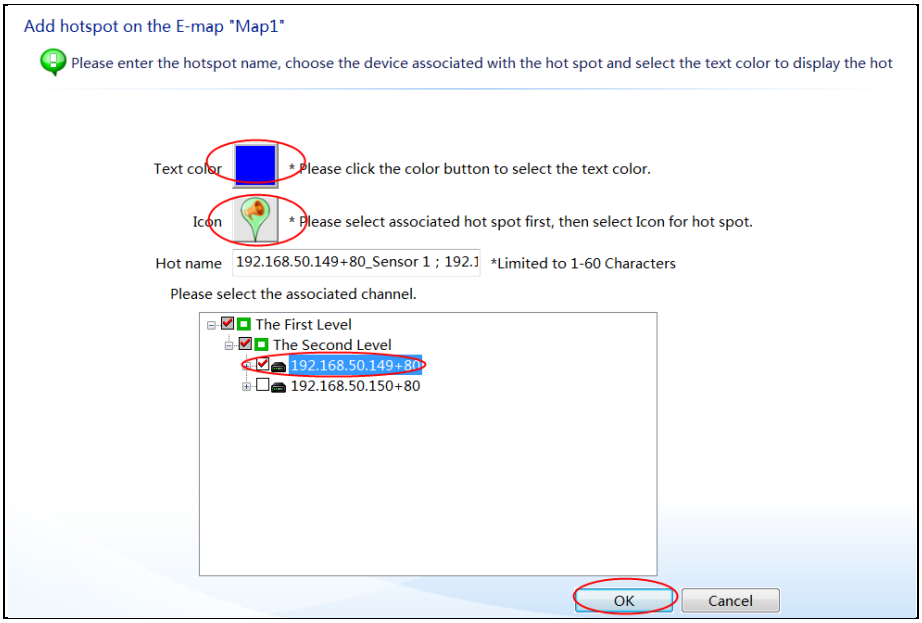
The hotzone icon can be moved anywhere. To switch to the designated map, click this icon. If you delete or modify this hot zone, you can right click and select “Delete” or “Modify the properties”.

⑦ Adjust the position of this hotzone icon and then click “Save” button to save the hotzone.

4.9.2.3 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:

① Select the map on the right hand and click “Add HotSpot” button on the menu bar.



② Select the text color of the hotspot.

③ Click  icon to select the hotspot icon.

④ Input the hotspot name and select the associated camera.

⑤ Click "OK" button to save the 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.

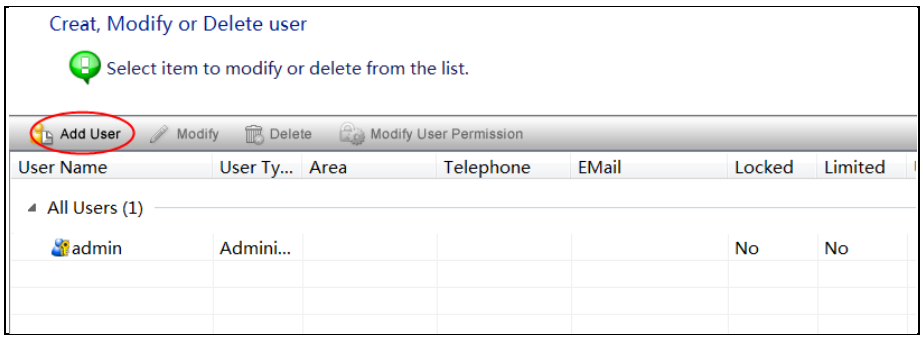
⑥ Adjust the position of the hotspot and then click "Save" button on the menu bar.

4.10 User and Permission

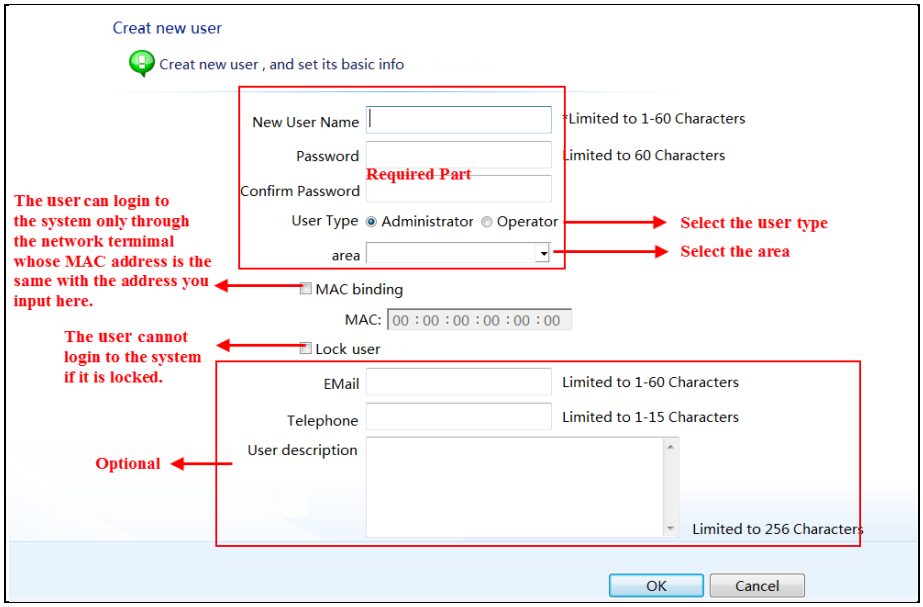
NVMS-5000 user consists of operator and administrator. The permission of administrator cannot be modified. Only the permission of the operator can be set.

4.10.1 Add User

Go to Configuration Management Center→User and Permission→User Account interface and click "Add User" button.

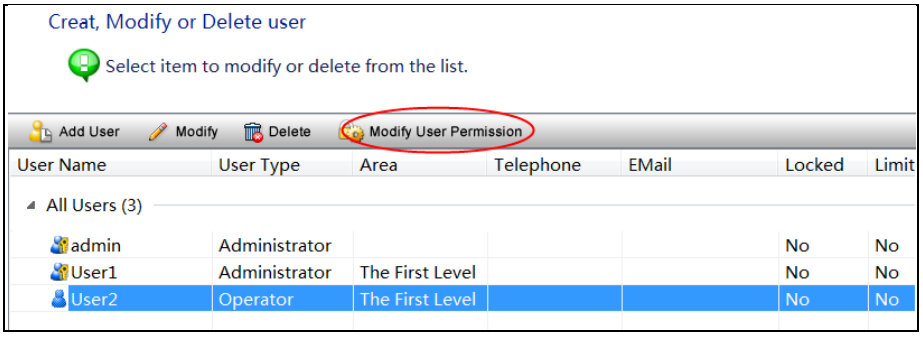


Input username, password and select user type and area. Then click "OK" to add a user.

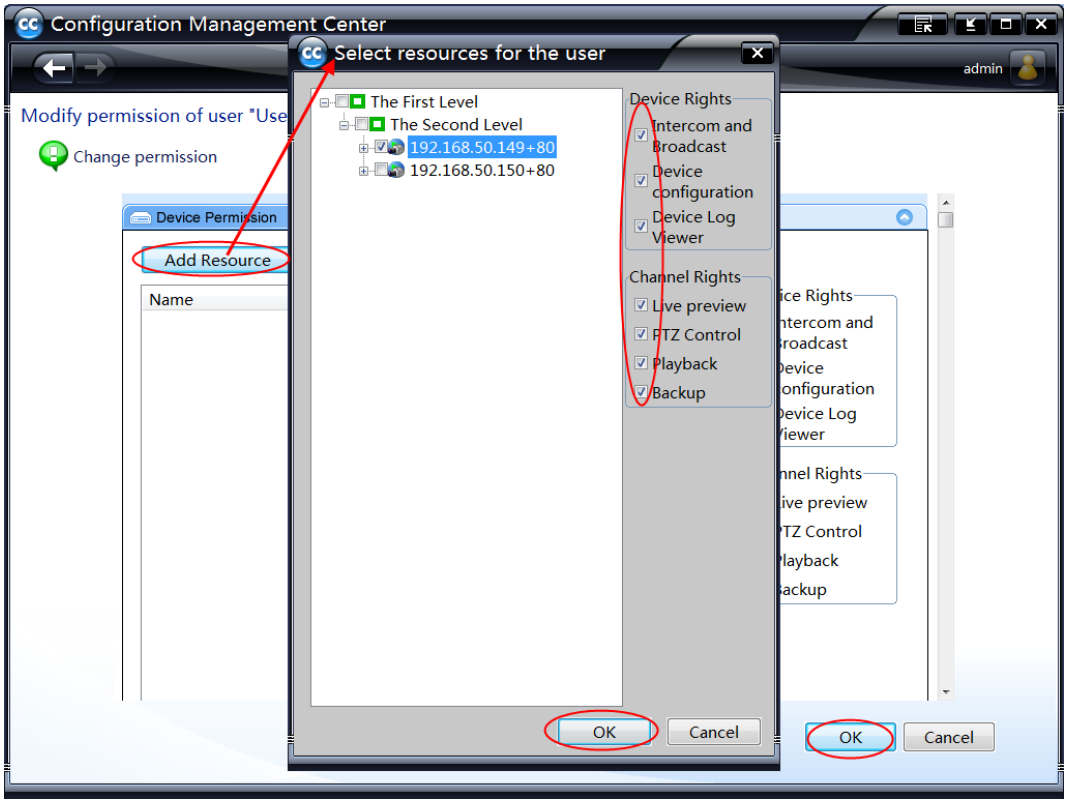


4.10.2 Modify User Permission

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:



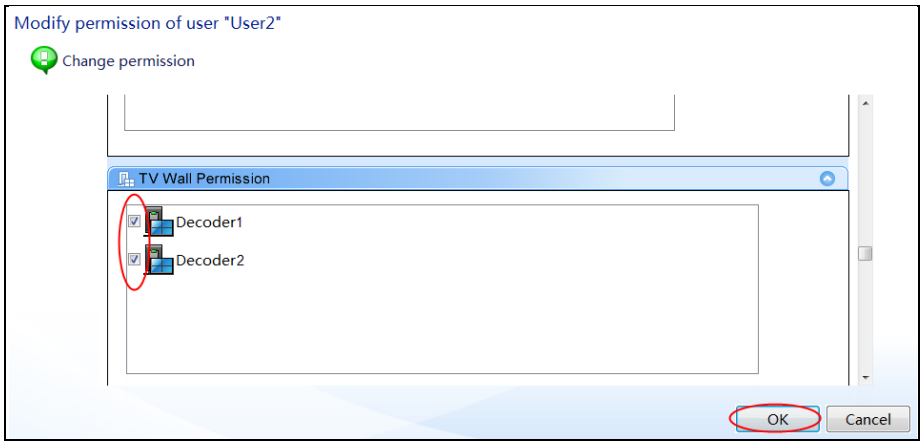
The permission includes device permission, channel permission, TV Wall permission and EMap permission.



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 permission and EMap permission.

You just need to check the relevant decoders and then click “OK” to save the setting. You must add decoders first before TV wall permission setting.

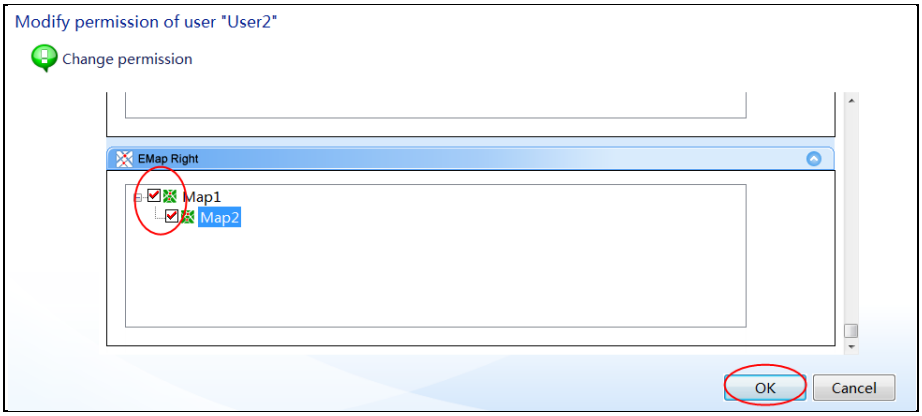


Notes of the TV wall permission configuration:

One user can only operate one TV wall (logic wall which can bind multiple decoders).

One user can only bind the decoders made by one manufacturer.

Drag the scroll bar down to set EMap permission. You must add maps first before EMap permission setting. Check the relevant maps and click “OK” to save the setting.



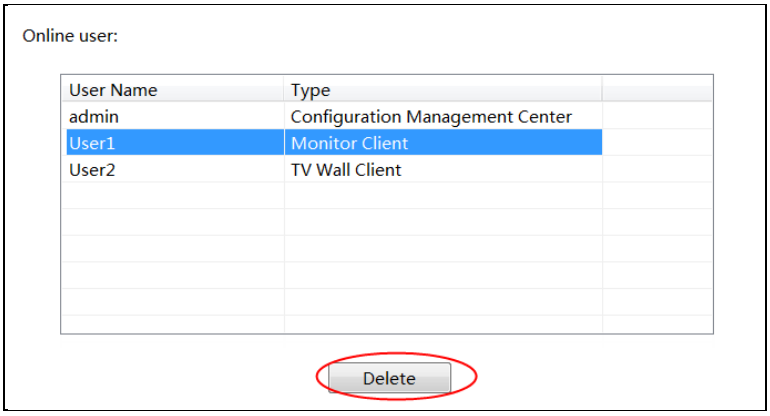
Additionally, you can also click “Modify” button to change user’s permission, name, and password and so on. You can click “Delete” button to delete the created users.

Note: The permission of administrator cannot be modified. If you close the permission control for the specified user, then the user will have the same permissions as the administrator.

4.10.3 Manage Online Users

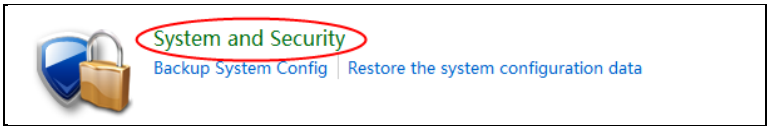
Go to Configuration Management Center interface→User and Permission→Online User Management to view the online users. Refer to the picture as shown below. Select the user and then click “Delete” button.

Note: The user deleted will log out the relevant client automatically and a popup window will show up to give knowledge about it.

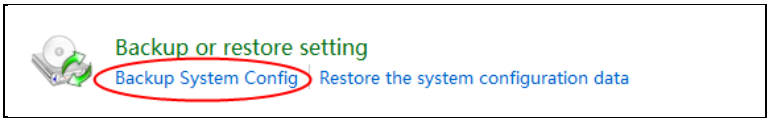


4.11 System and Security

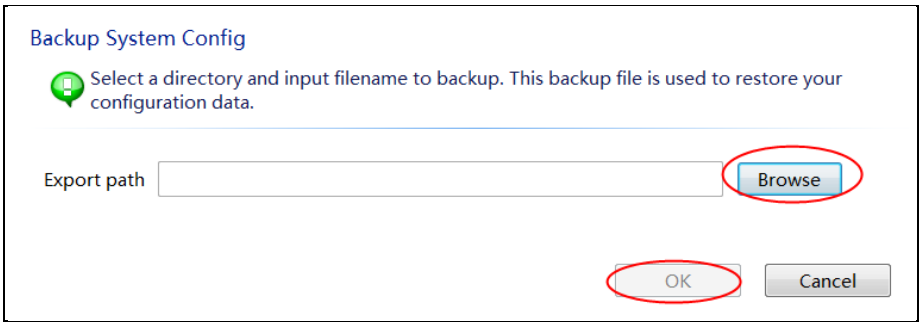
Go to Configuration Management Center interface and click “System and Security” to backup or restore system configuration.



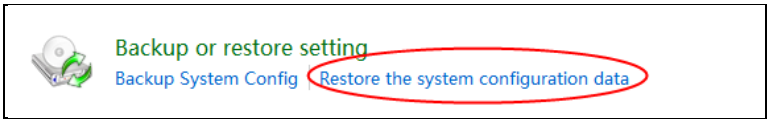
- Export system configuration: go to Configuration Management Center interface→System and Security interface and click “Backup System Config”.



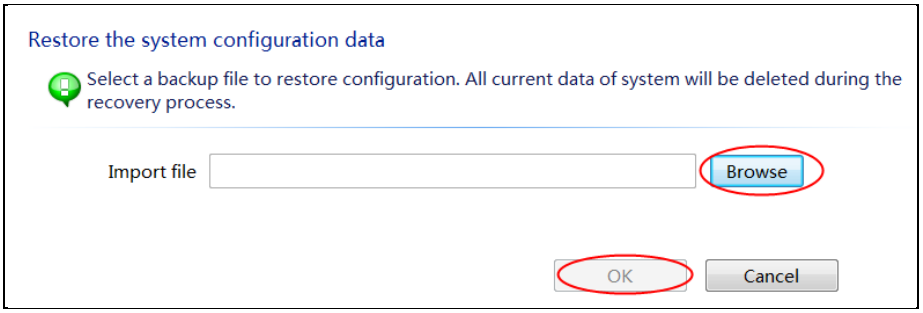
Click “Browse” to set the export path and the file name and then click “OK” button.



- Import system configuration: go to Configuration Management Center interface→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. Only when the authentication server, media server and storage 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 authentication server and media server first; create and configure the storage server as well as IP-SAN before recording and playback.

Double click  or click "Start"→All Programs→Client (NVMS-5000)→Client to pop up a login window as shown below. Please input the user name and password created in **4.10.1 Add User**. Then click "Setup" button to input the information about authentication server (please refer to **4.2 Configuration Management Center** for detail information). Finally, select Monitor Client in the "Client Type" and then click "Login" button to go to the Monitor Client interface.

Note: one user can login to monitor client, configuration management center and TV wall client which are installed in the same device and connected to a same authentication sever address at the same time; one user can login to multiple monitor clients which are installed in different devices but connected to a same authentication server address at the same time.

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

Description of Menu Bar

Menu	Description
Start	Export the control panel, system logs, EMap, alarm preview, playback, device configuration and basic setting tab; go to broadcast, modify password, batch timing and lock or exit the client.
View	Export the live preview and organize live view.
Help	View software version and user manual.

Descriptions of Function Module

Menu	Description
	Live Preview: To view live images and record, snap, control PTZ, etc.
	Playback: To remotely play the record.
	EMap: 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.

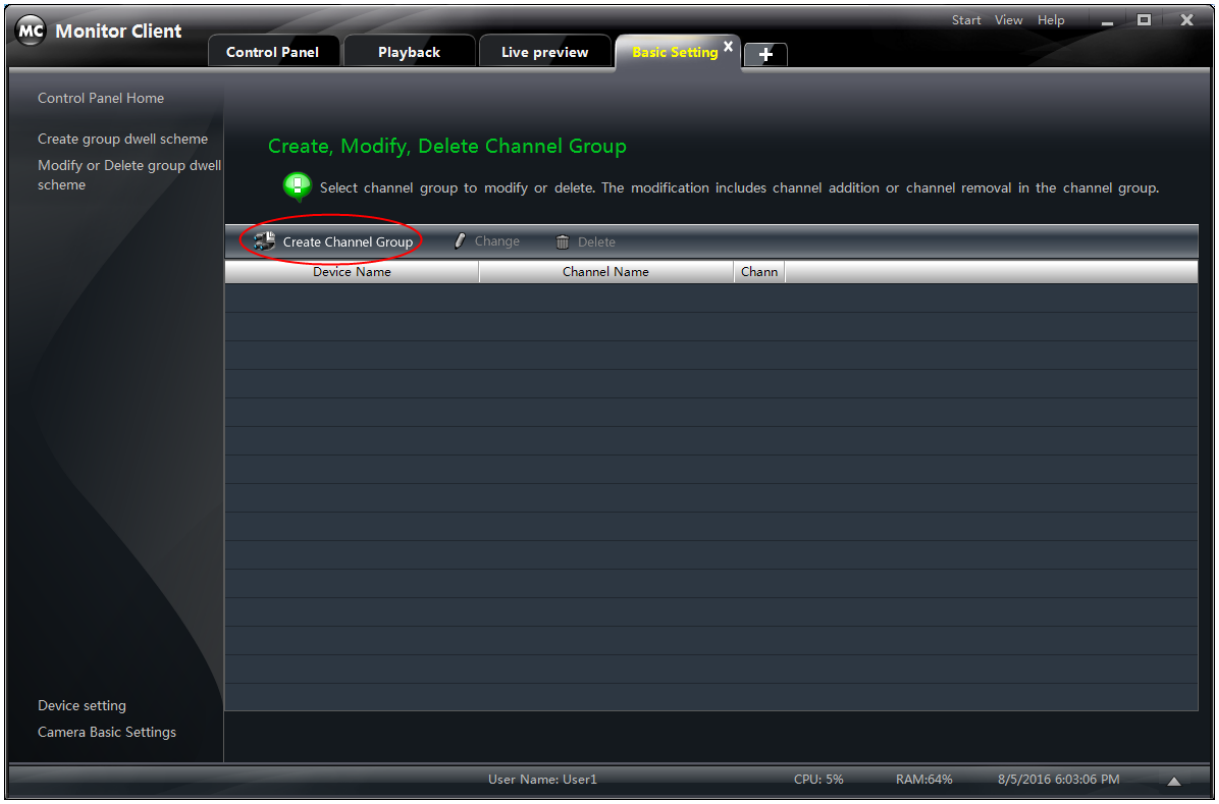
Menu	Description
	Virtual Matrix: To create, modify or delete camera groups and schemes.
	System Log: To search, view and backup system log.
	Basic Setting: To setup record path, system startup and maintenance.

Descriptions of Other Buttons

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

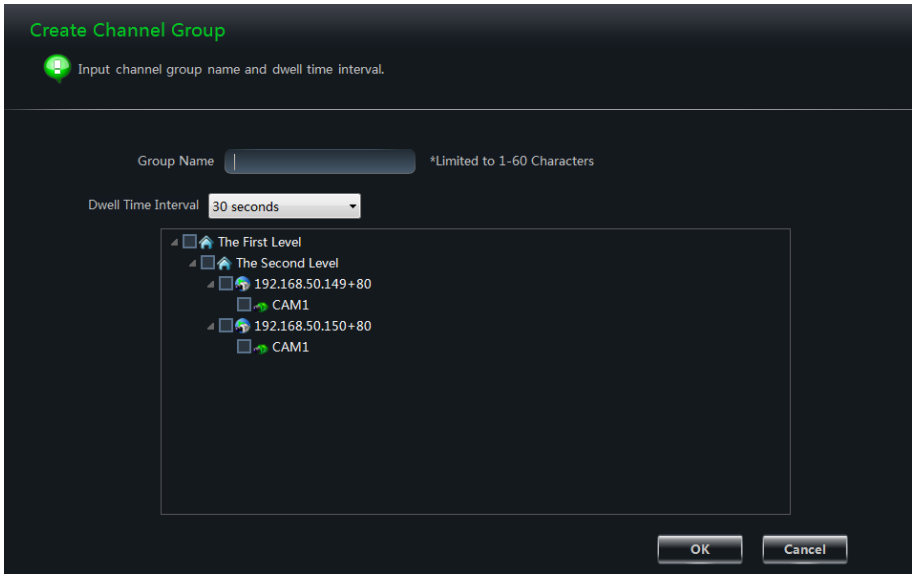
5.1.2 Group and Scheme Setting

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



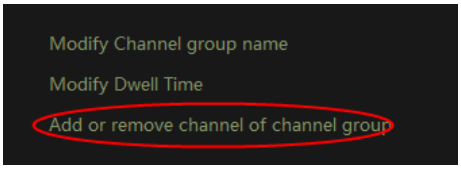
5.1.2.1 Channel Group Setting

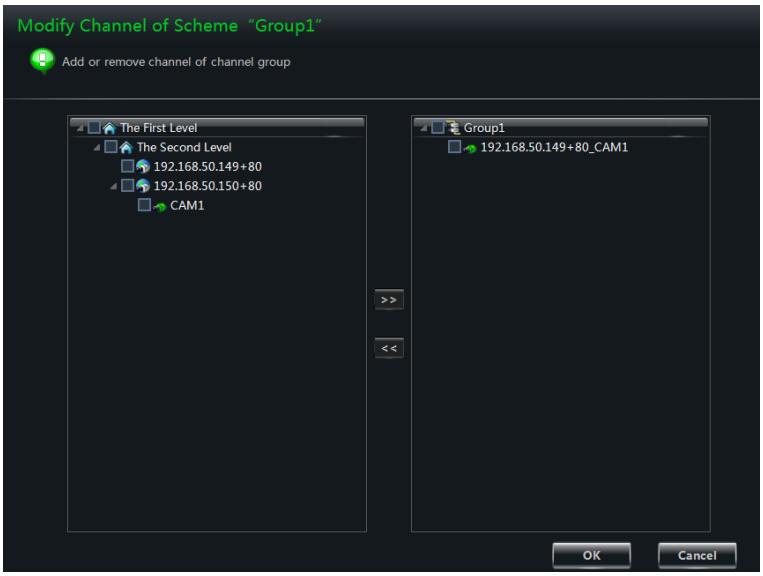
Click “Create Channel Group” to create a channel group.



After you create a channel group, choose this channel group and click "Change" button. Then click "Add or remove channel of channel group.

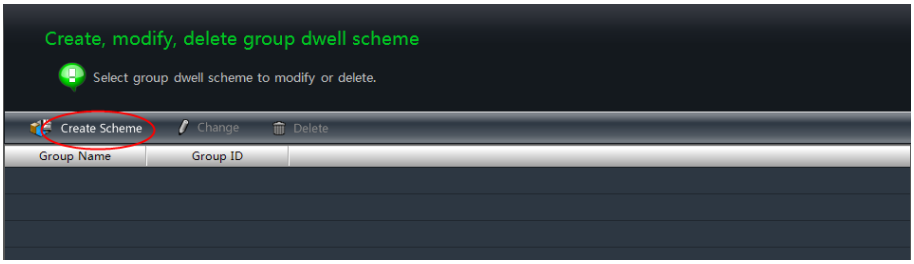
Check cameras on the left and click  button to add the selected cameras to the group on the right. Check cameras on the right, then click  button to remove them from the group.





5.1.2.2 Group Dwell Scheme Setting

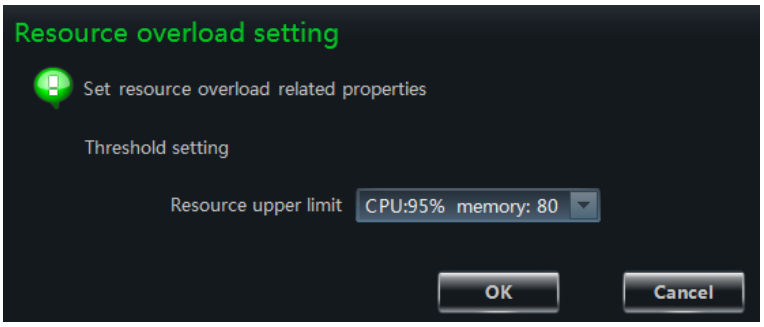
In Virtual Matrix interface, click the shortcut menu "Modify or Delete group dwell scheme" on the left hand.



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 and Alarm Preview

The monitor client supports the resource overload setting of CPU and memory. The client will prevent the new channels from viewing and playing if the resource overload has reached the upper limit which will show up as a reminder. In the interface of control panel, click “Overload configuration” under “Live preview” and then set the resource upper limit and finally click “OK” button to save the settings.



5.1.3.1 Live Preview

In the control panel interface, click “Live Preview” to go to the interface as shown below.

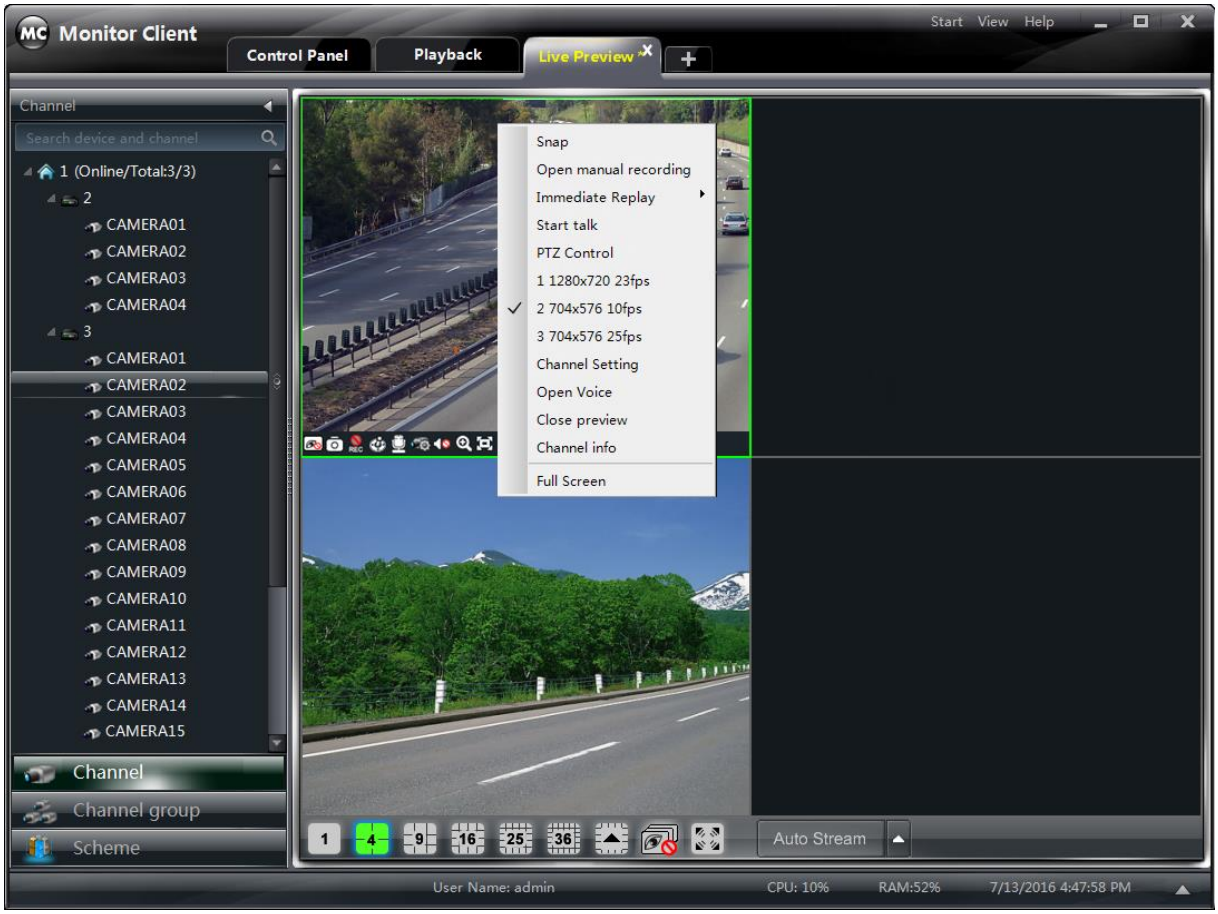
The display sequence of the devices on the left hand of the interface can be changed by editing the Sort.ini file in the installation path of the Authentication Server. There are two display sequences available right now.

- No sequence

The display sequence is to display the devices according to the resource ID (the resource ID of the added device will dynamically increase). This display sequence is available if the SORT value in the Sort.ini file is 0 and it is the default display sequence when Authentication Server is installed.

- Display the devices according to the device names

The display sequence is to display the devices through string comparison (by alphabetical order) which is the default display sequence of the windows tree control. This display sequence is available when the SORT value in the Sort.ini file is 1.



Buttons description of live preview:

Toolbar on the display window:

Button	Description	Button	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 recording
Immediate Replay	Click it and then set the replay time	**Start talk**	Start or stop talk

Menu	Description	Menu	Description
PTZ Control	To display the control panel of PTZ	**Stream**	Choose stream to view.
Channel Setting	Click it to go to the interface of the area and Camera configuration	**Open Voice**	Open or close audio
Close Preview	Close single channel preview	**Channel Information**	Click it to view the channel information
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.

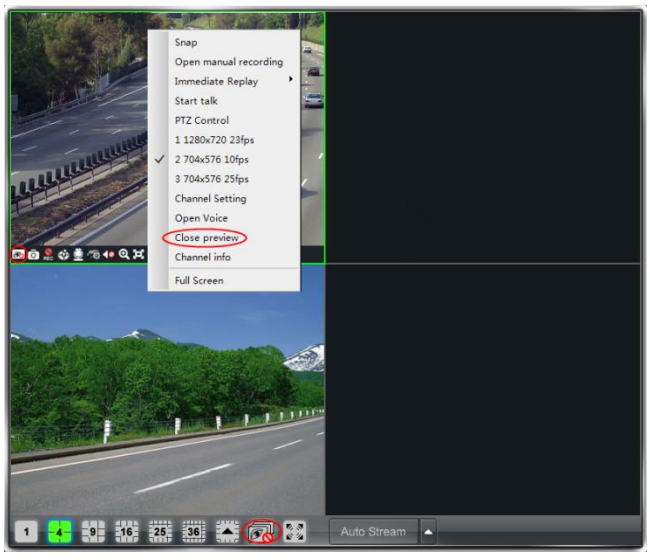
Note: Node unfold rule: After the first time for setting the device and area, you shall obey the following rule to view all tree nodes: the first-level nodes will be unfolded by default to show the devices and the second-level nodes; the second-level nodes will not be unfolded.

For example: A (There is camera group AC under A; sub-area a under AC; camera group ac under sub-area a). A will be unfolded and AC will be displayed, but a will not be unfolded and ac will not be displayed. You should unfold ac 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 a window and then double click the group to view the group dwell image.

- **Group Dwell Scheme Preview**

Click "Scheme" button on the lower left corner.

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

➢ Stop Channel Group or Group Dwell Scheme

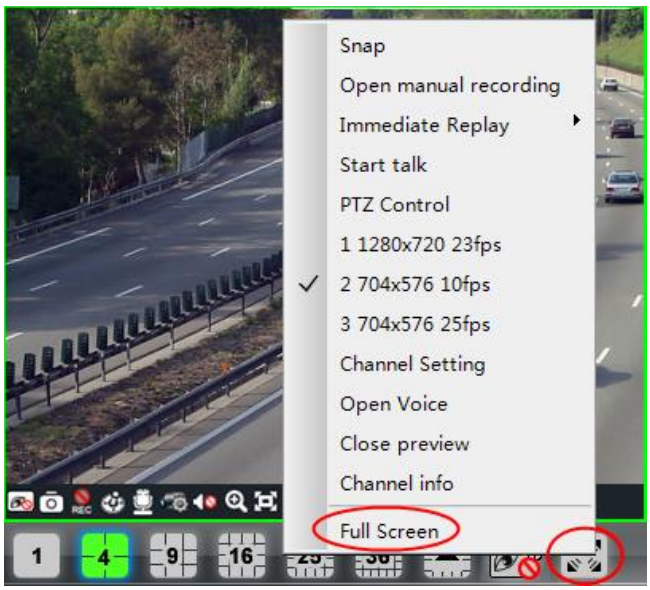
Click  icon to close all the windows for stopping channel group or group dwell scheme.

- **Preview Control**

➢ Full Screen

Click  icon in the live preview interface or right-click the preview window to choose “Full Screen” to view in full screen.

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

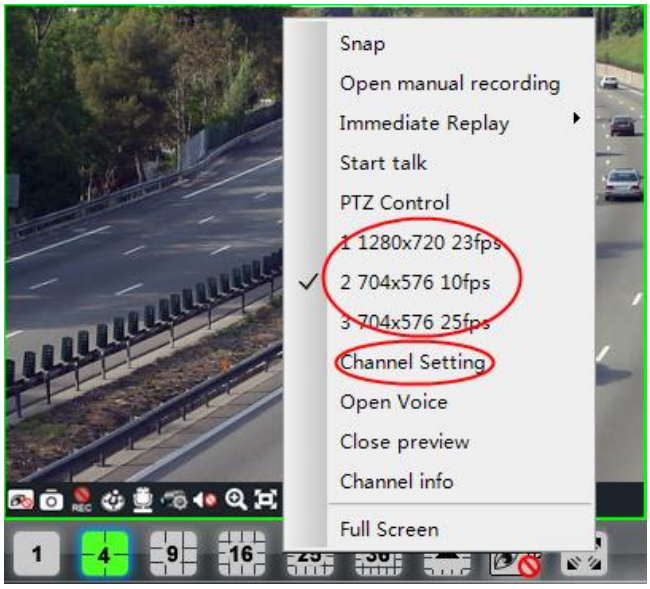


➢ Single Channel in Full Screen

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: 1080P 25fps) and the below is sub stream (eg: D1 25fps).



Modify Device Stream: Click  button on the preview window to go to the Area and Camera Management interface. Click “Image Quality” under Image Setting to modify device stream.

➢ Audio

Right click on the preview window to choose “Open Voice” 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

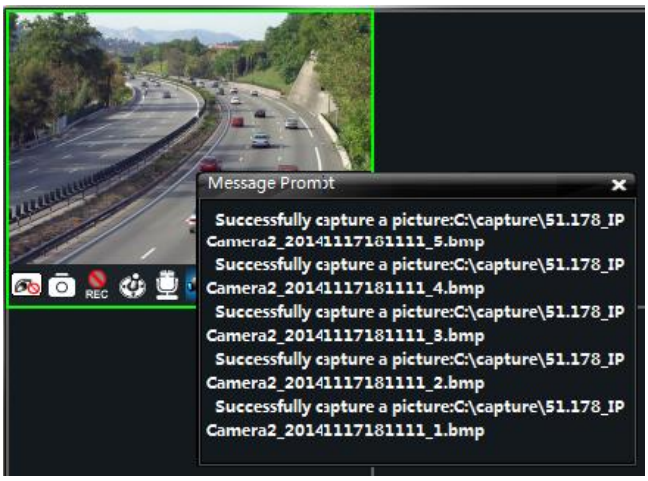
Click  icon on the toolbar in the preview window to zoom in the image; click  icon to recover the image.

➢ 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.

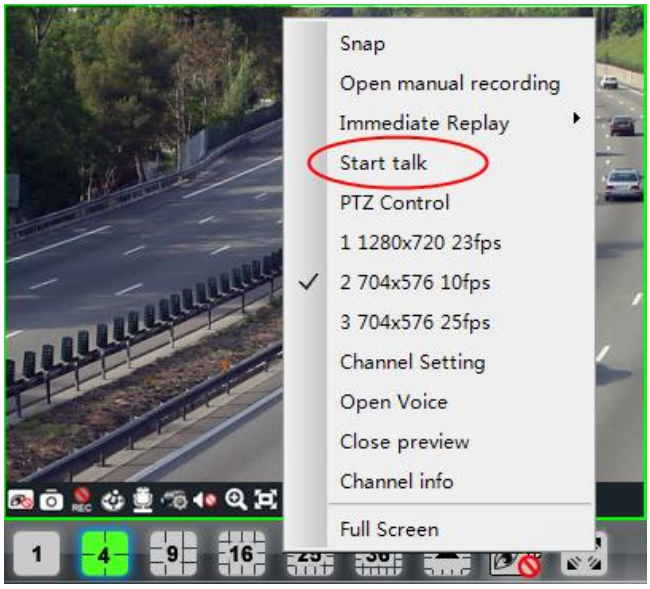
Note: Capturing pictures can be realized only in live preview or playback.



➢ Talk

Click  button on the preview window or right click to pop up a menu bar. Choose “Start Talk” to enable bidirectional audio.

Note: Since NVMS-5000 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.

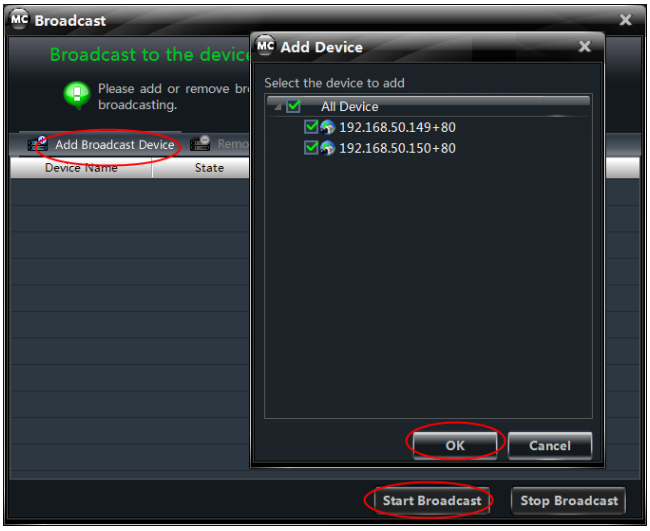


➢ Broadcast

① Click ***Start*** on the menu bar of software at the upper right; choose ***Broadcast*** to go to the interface.

② Click "Add Broadcast Device" button to pop up a window; then check the devices you want to broadcast, click "OK" button to save the setting.

③ Click "Start Broadcast" button to start broadcast.



➢ PTZ Control

Please confirm the parameter of PTZ has been configured correctly before operating PTZ. Click  icon in display window or ***Device Setting*** to go to 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.

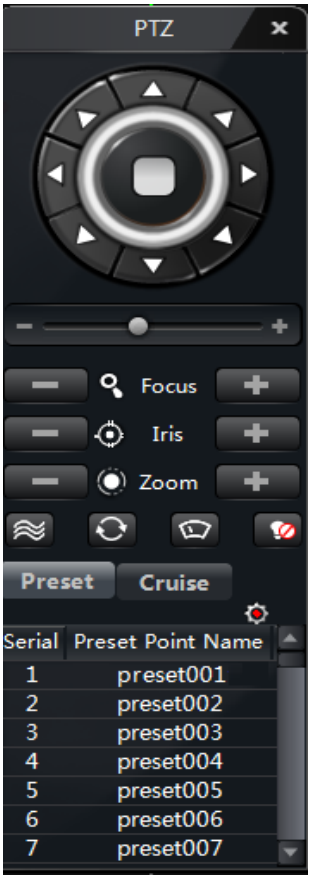
Click the direction buttons to control its rotational direction; drag the slider to control its speed.

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.

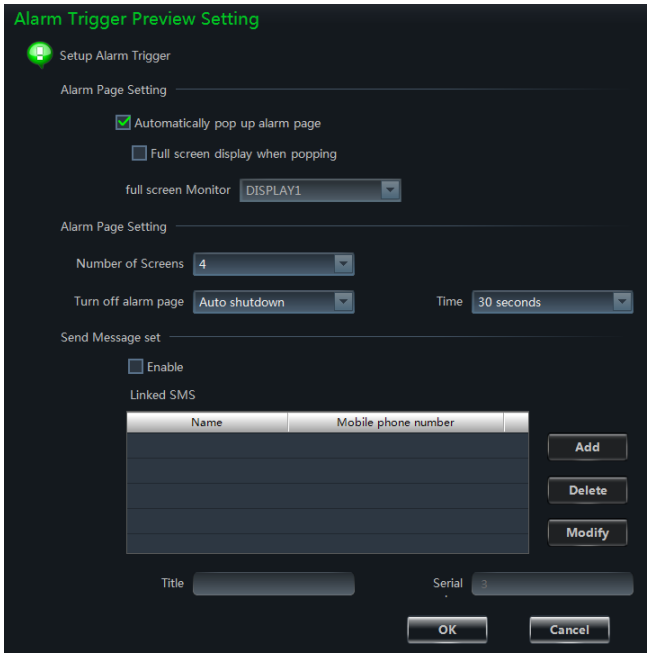
PTZ can also support track, auto scan, wiper and light function.



5.1.3.2 Alarm Preview

- **Alarm Preview Setting**

In the control panel, click ***Alarm Page Setting*** under Live Preview to go to the interface.



① Alarm preview will pop up automatically when alarm is triggered if checking "Automatically 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".

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

④ Choose the number of screens.

⑤ The alarm page can be closed automatically or manually. Set the close time if "Auto shutdown" is selected.

⑥ Enable SMS and then click "Add" button to add phone numbers, fill in the message title or leave it empty and input the serial No. (refer to the user manual of SMS cat hardware to see the serial No.) and then click "OK" button to save the settings. The certain mobile phone users will receive the alarm messages when alarm happens.

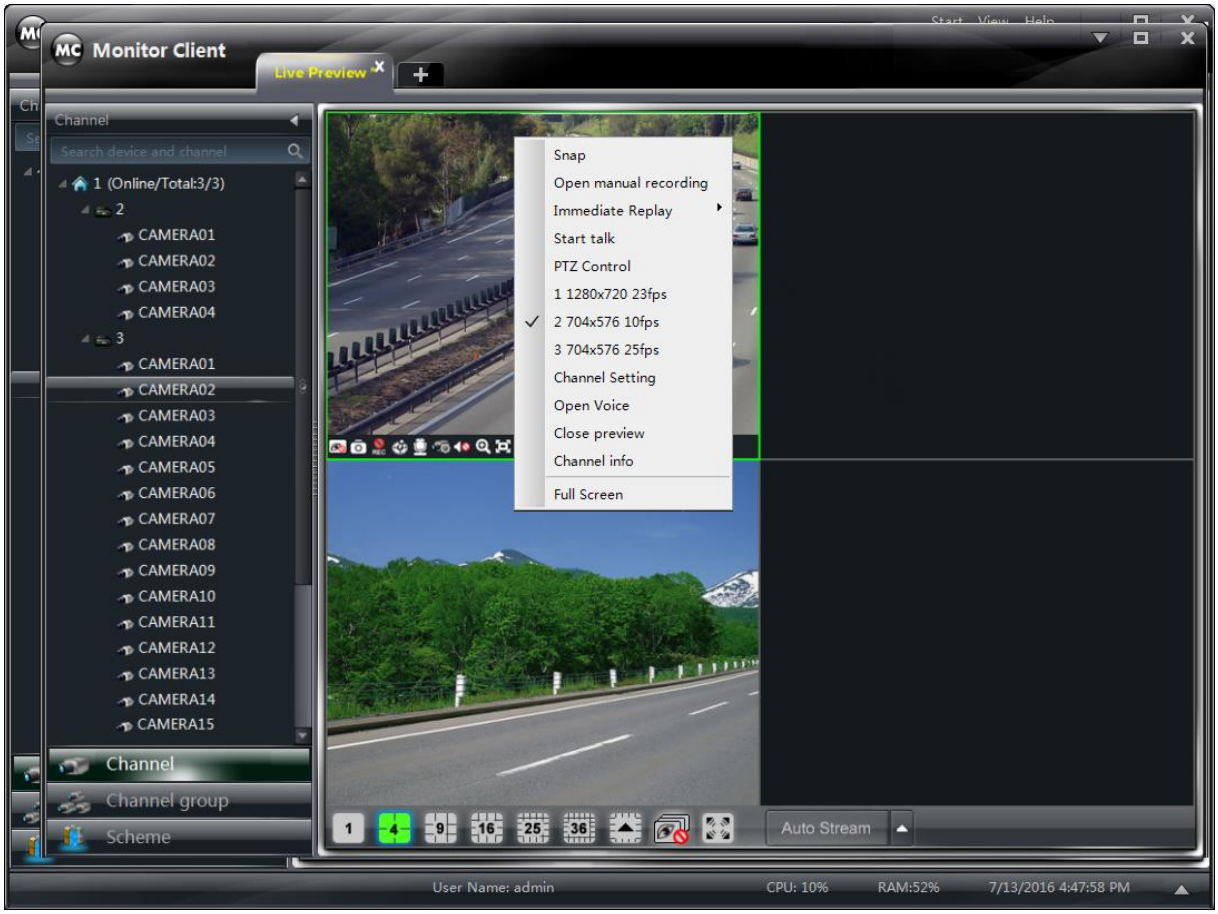
Note: the SMS function should be used cooperatively with the SMS cat hardware. Please refer to the user manual of SMS cat hardware for its installation and use.

- **Alarm Preview**

In the Configuration Management Center, set up alarm linkage 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 go to the following interface.

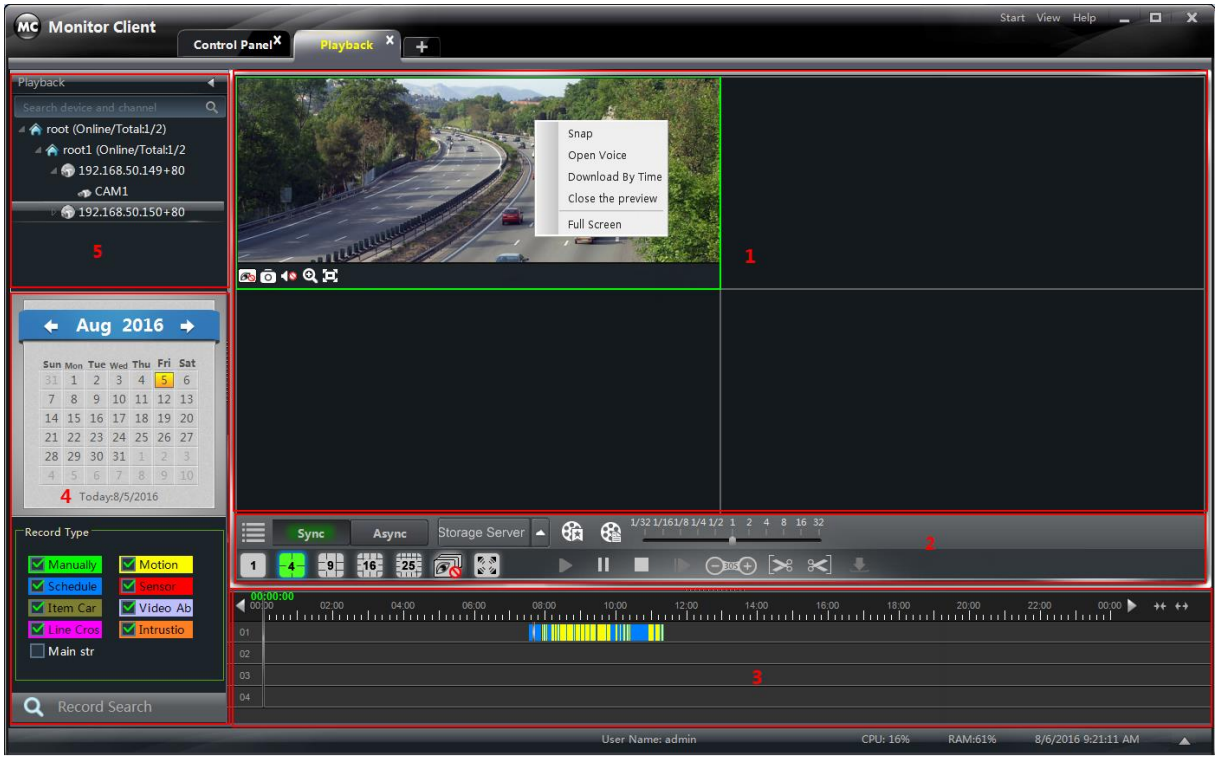
5.1.4 Multi-screen Display

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 shown 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).



5.1.5 Playback

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

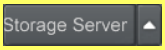


Area Descriptions:

Area	Description	Area	Description
1	Playback Area	**2**	Toolbar
3	Record time Area	**4**	Time search or type search Area
5	Resources 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.
	Forward 30s or backward 30s
	Backup the start time
	Backup the end time
	Download
	Event list. Click this button to pop up the event list

Icon	Description
	Record playback model. Synchronous or asynchronous
	Playback source setup. Storage Server or device
	Click it to add a record label in asynchronous playback mode
	Click it to show the record label 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:

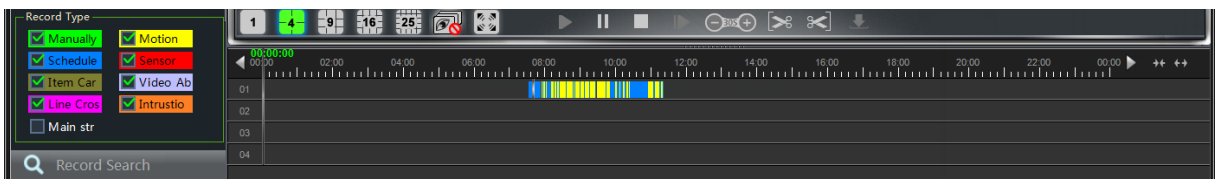
Menu	Description	Menu	Description
Snap	Snap picture	**Open Voice**	Enable or close audio
Download By Time	To download record by time search	**Close the preview**	Close single channel preview
Full Screen	To display in full screen		

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, sensor record, item care record, video abnormal record, line cross record and intrusion 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; brown bar stands for item care record data; gray bar stands for video abnormal record data; pink bar stands for line cross record data; orange bar stands for intrusion record data.

By default, the N9000 devices will use sub stream when playing the record. You can also choose to use the main stream. Refer to the picture as shown below. Select a N9000 device to show the "Main str" check box (it is unchecked by default) under the record type and then check it to play the record by main stream.



Notes: you can search the record stored in the device disk or the storage server to play them separately(the default playing source is the record stored in the device disk). Synchronous and asynchronous playback modes are available.

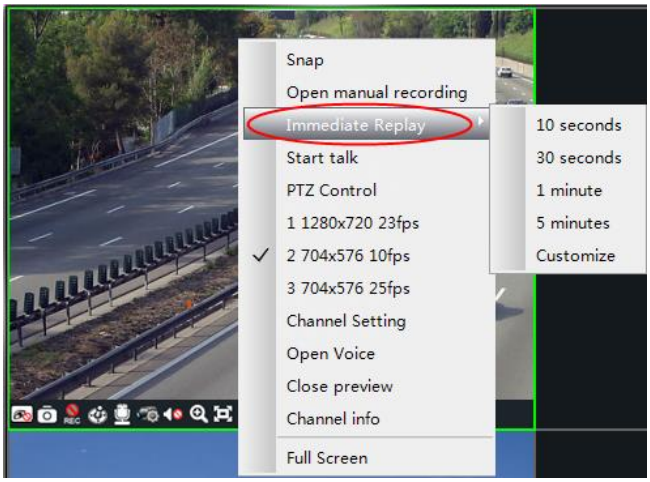
Different record can be searched according to different record types and the searched record will be shown on the time scale with different color blocks.

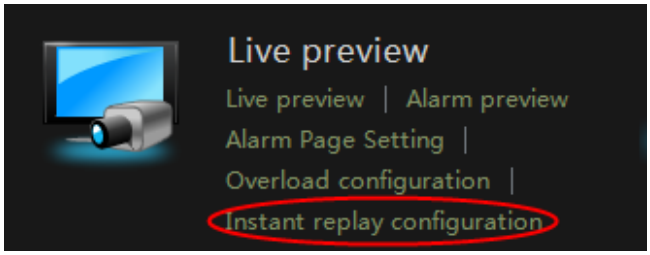
5.1.5.1 Playback Mode

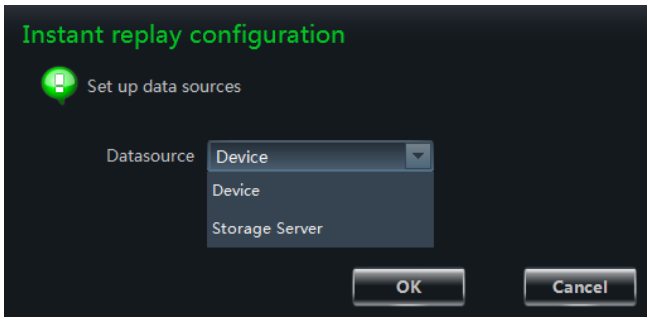
- **Instant Playback**

Right click on the image window in the live preview interface to pop up a menu. Click "Immediate Replay" and then set the playback time point to play the record instantly (the record of the channel in the past five minutes will be searched and played from the time point where the record exists). Refer to the picture as shown on the left hand below.

Instant replay configuration: click "Instant replay configuration" in the control panel to go to instant replay configuration interface. Select the data source and then click "OK" button to save the settings.

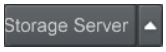




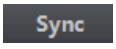


- **Synchronous Playback**

Synchronous Playback: in a certain time, all channels play back its record at the same time spot together; if one channel has no record data at this time spot, this channel will be waiting.

① Set the playback source by clicking 

on the toolbar (there are two playback source optional, storage server and device; if device is selected, the default playback mode is synchronous playback; if storage server is selected, the default playback mode is asynchronous playback).

② Click 

to switch to synchronous playback mode.

③ Select the playback date and record type on the left side of the playback interface.

④ Start to play back the record synchronously by one of these three ways mentioned as follows:

- Drag the channel to the playback window directly.
- Select one playback window and then double click one channel to play back the channel record in the selected window.
- Select one channel and then click "Record Search" button to search the record; the record searched will be shown in the record time area. Refer to the picture as shown below. Select one playback window and then click  on the toolbar to play back the channel record.

In synchronous mode, one camera can only have one play window. You can view all cameras' record information at the same time.

When playing record file in synchronous mode or asynchronous mode, clicking Sync or Async will be useless unless you close all the playback windows.

- **Asynchronous Playback**

Asynchronous Playback: when playing some channels' record at the same time, each channel is independent from the others and each channel's playback time can be different.

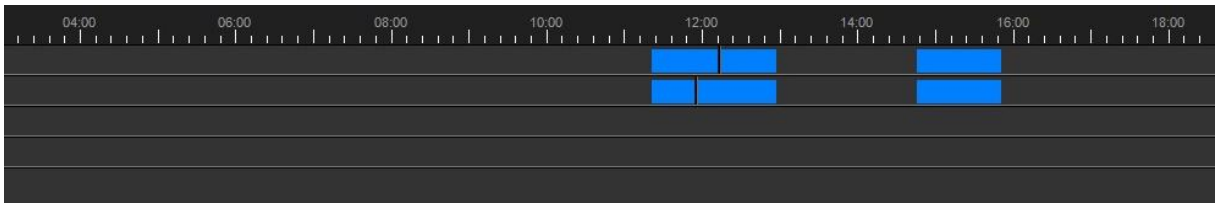
① Set the playback source by clicking Storage Server on the toolbar.

② Click Async to switch to asynchronous playback mode.

③ Select the playback date and record type on the left side of the playback interface.

④ Start to play back the record asynchronously by one of these three ways mentioned as follows:

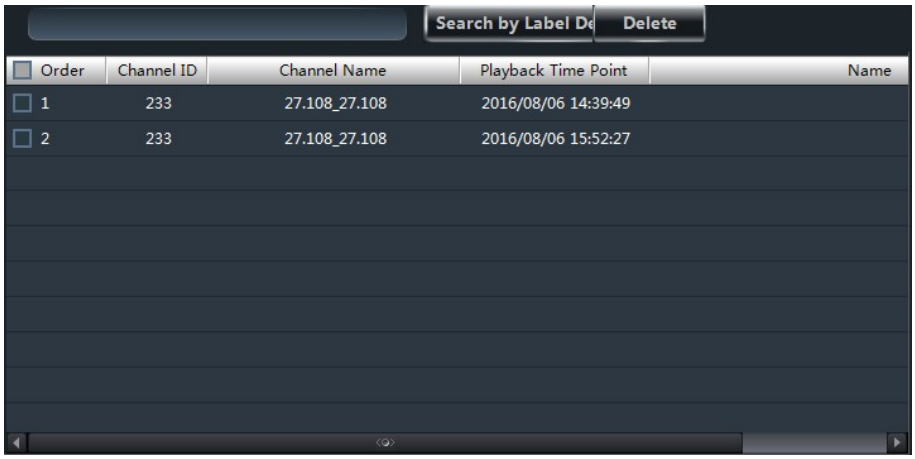
- Drag the channel to the playback window directly.
- Select one playback window and then double click one channel to play back the channel record in the selected window.
- Select one channel and then click "Record Search" button to search the record; the record searched will be shown in the record time area. Refer to the picture as shown below. Select one playback window and then click on the toolbar to play back the channel record.



- **Playback by Record Label**

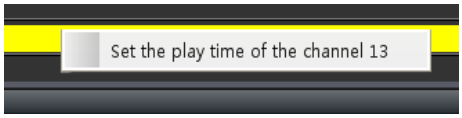
You can add record labels in asynchronous playback mode. Select one playing window in asynchronous playback mode and then click to pop up a window as shown below. Input the description of the label and then click "OK" button to save the label.

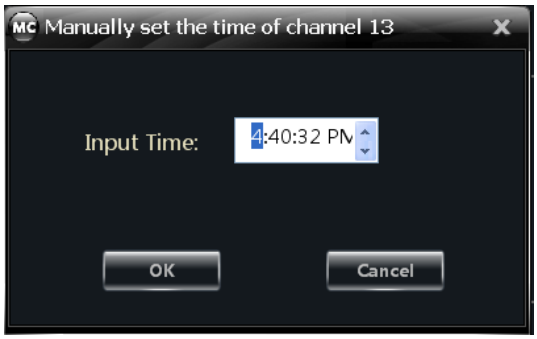
Click  to pop up the label list as shown below. Select one playback window and then double click one label in the list to play back the channel record from the time point saved by this label.



- **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.

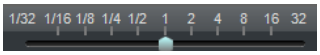




- **Playback by Searching Event**

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.

5.1.5.2 Take Snapshot When Playback

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

5.1.5.3 Clip and Backup Record

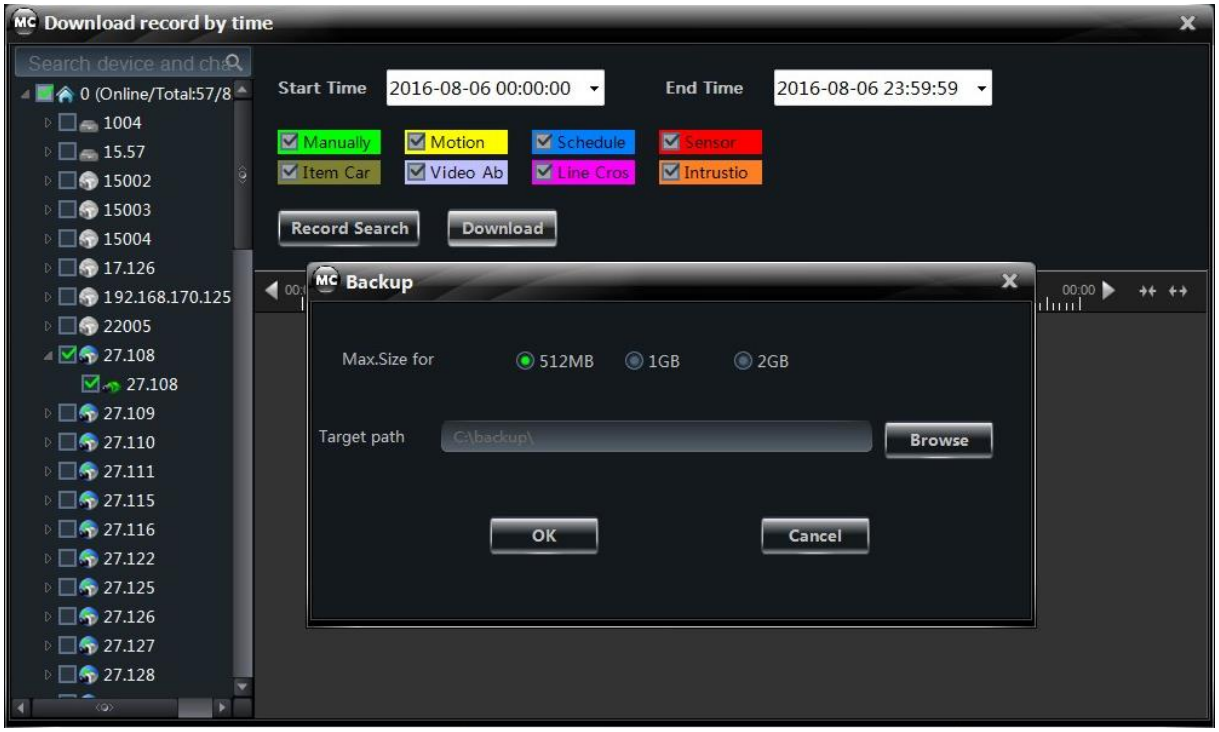
When playing back record file, click  button to set the start time; click  button to set the end time. Then click  button to download the video files within the configured time.

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

5.1.5.4 Download Record

- **Download Record by Time Search**

Right click the image in the playback interface to pop up a drop-down list and then click ***Download By Time*** to pop up a window as shown below:



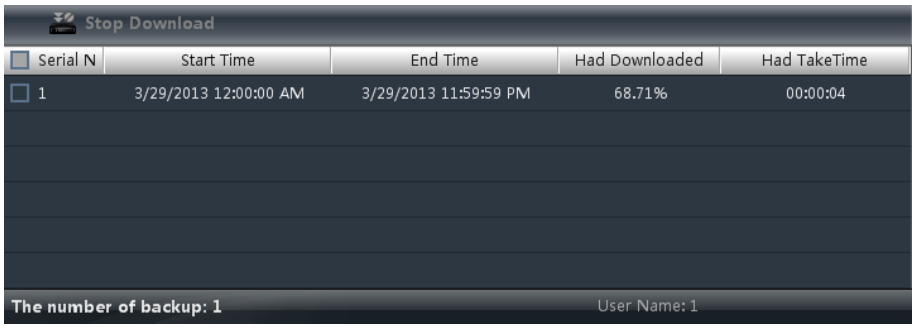
Select record channel, start time and end time, checkmark event type and then click "Record Search" button to search record information. After the information is searched, a backup information window will pop up by clicking "Download" button. Click "Browse" button to choose save path. Then click "OK"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

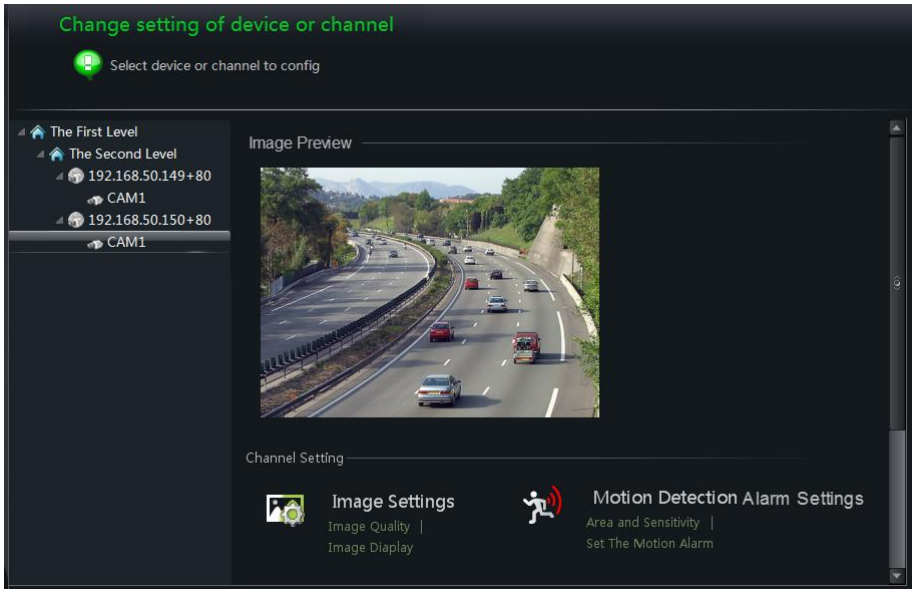
- **View the Progress of Downloading**

When downloading, you can view the progress of downloading and stop downloading manually.



5.1.6 Device Setting

In the control panel interface, click "Device Setting" to go to the following interface. Here you can set the device parameter.



Select a device in the list to show the interface as shown on the right. You can change the device basic configuration, device time, search device log, manage device disk, configure device network, etc.

For instant, click "Basic Configuration of Device" to go to the interface to edit the devie name (the changed device name will be synchronized to each module of the system), device ID, video format, video output, etc. Click "Save" button to save the settings. Different device settings will be displayed for different devices.

Camera Basic Setting

In the control panel interface, click "Camera Basic Setting" to go to the interface. 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 devices. You shall configure it according to its user manual.

5.1.7 E-Map

To see the EMap tab, please go to the monitor client interface and then click "EMap" menu.

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.

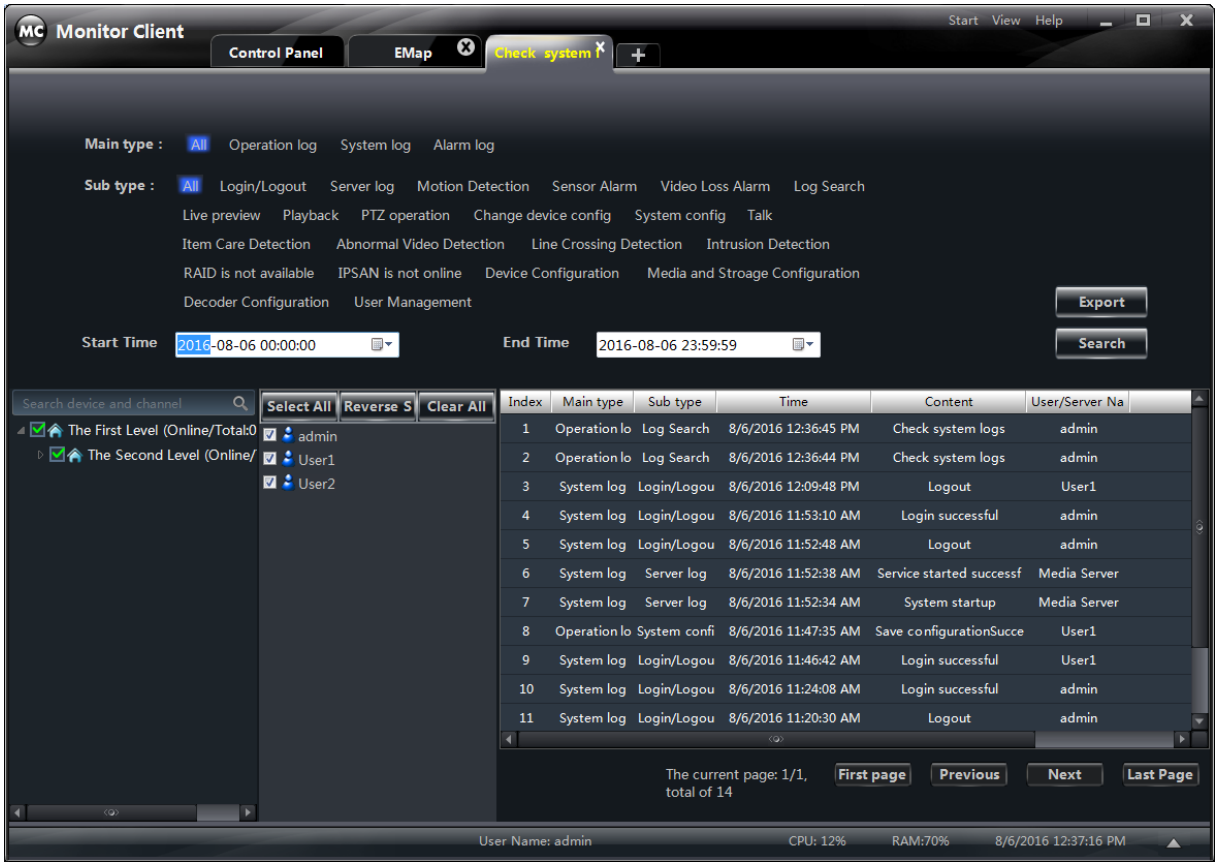
Go to the monitor client interface and then click ***Monitoring Settings of E-map*** under **EMap** to go to the E-map configuration interface. Check "Preview window to be automatic popup" and then click "OK" button to save the setting. The alarm image will show up automatically in the window on the right when there is an alarm triggered.

Click "Overlap" button to pile all these images. Click "Clear All" to clear the current all alarms. Click "Tiled" button to tile the alarm preview windows on the right side.

Click the triangle icon at the bottom right corner of the interface to pop up an alarm list. You can view the relevant alarms in the list.

5.1.8 System Log

Go to the monitor client interface and click “System Log” menu to see the following tab. You can check all kinds of logs and export these logs.

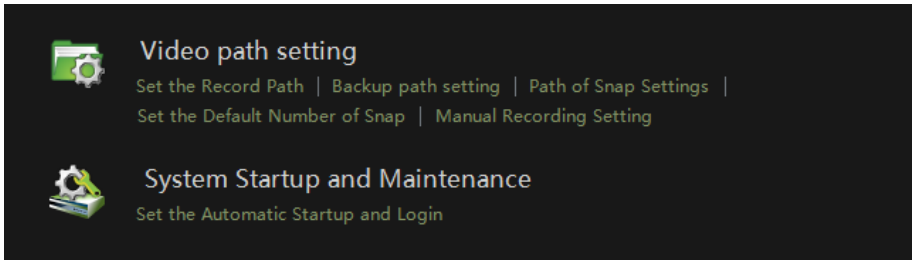


Select the main type and sub type, start time and end time and then click “Search” button to see the relevant log information.

If you need to export the log information, you can click “Export” button after you search the relevant log information and then select the export path. Finally, click “Save” button to export those logs to the designated folder.

5.1.9 Basic Setting

Click “Basic Setting” in the monitor client to go to the following interface.



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.

5.1.9.1 Video Path Setting

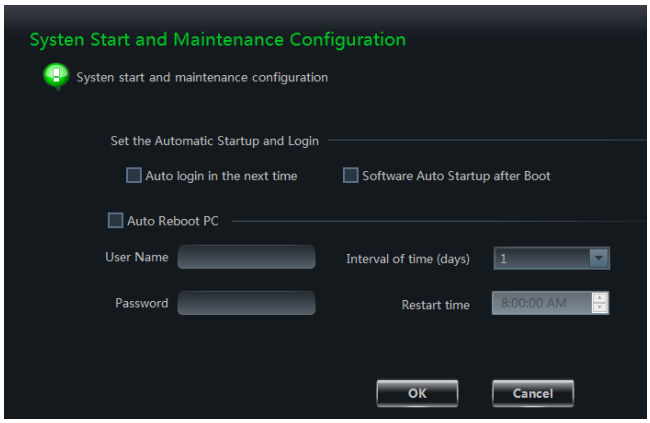
Click “Set the Record Path” to go to the interface and then click “Browse” to set the path; finally, click “OK” to save the setting. Click other shortcut menus to go to each interface and choose the path separately.

5.1.9.2 System Startup and Maintenance

In the interface of Basic Setting, click ***System Startup and Maintenance*** to go to the interface.

Under “Set the Automatic Startup and Login”, two ways to enable the software can be selected.

If checking “Auto Reboot PC” , 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 IE9/IE10/IE11, Firefox or Google browser. Please make sure that your browser supports the downloading and use of the Web Client.

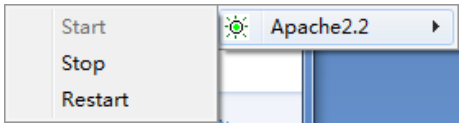
- Checkup whether the IE browser prohibits Active X control from downloading:

Open IE browser, click  →Internet Options→Security→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 files named NetLiveMonitor.exe and NetPlayback.exe.

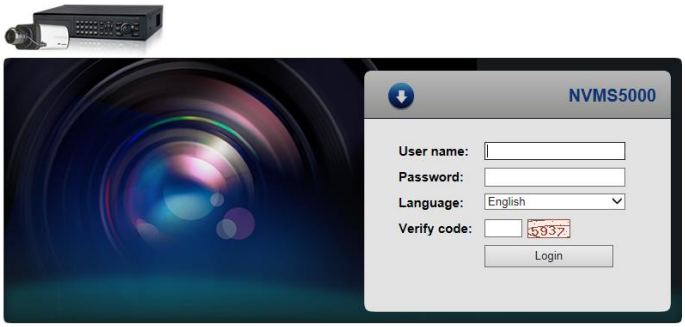
5.2.2 Start IE Client

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

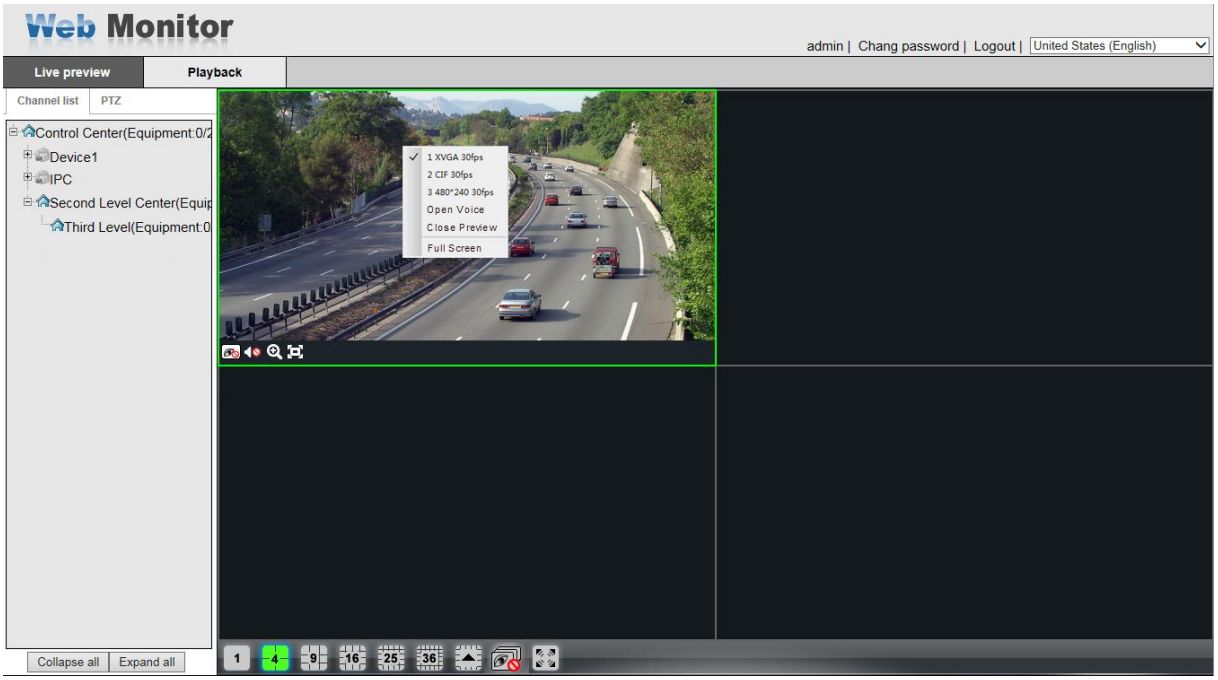


❖ **Login**

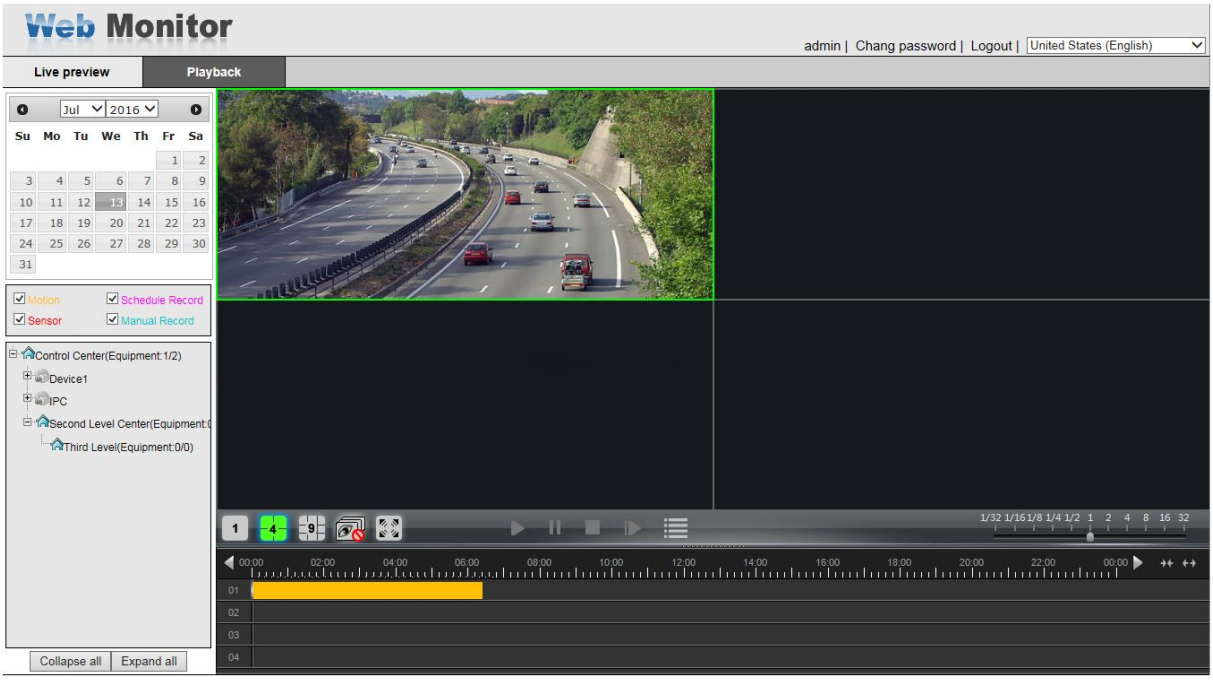
Input the IP address or domain name of Authentication Server and the web server port, for example: http://192.168.50.3:8088 (In this example, IP address is 192.168.50.3. The default web server port is 8088) to go to IE Client. Then input the user name and password you created in Account and Permission interface, select the language and input the verify code; click "Login" to login to the IE client.



Please download the relavant Active X controls according to the tips if you login to the IE client for the first time. The live interface is as shown below.



Click Playback tab to see the playback interface.



Select the playback window and playback date and then 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.

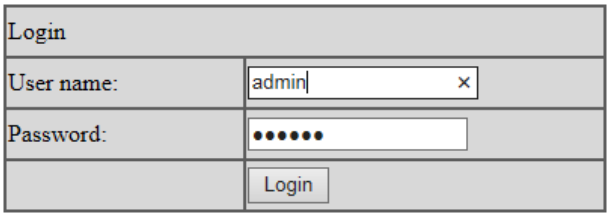
5.3 TV Wall Client

5.3.1 Create and Connect Decoder to TV Wall Client

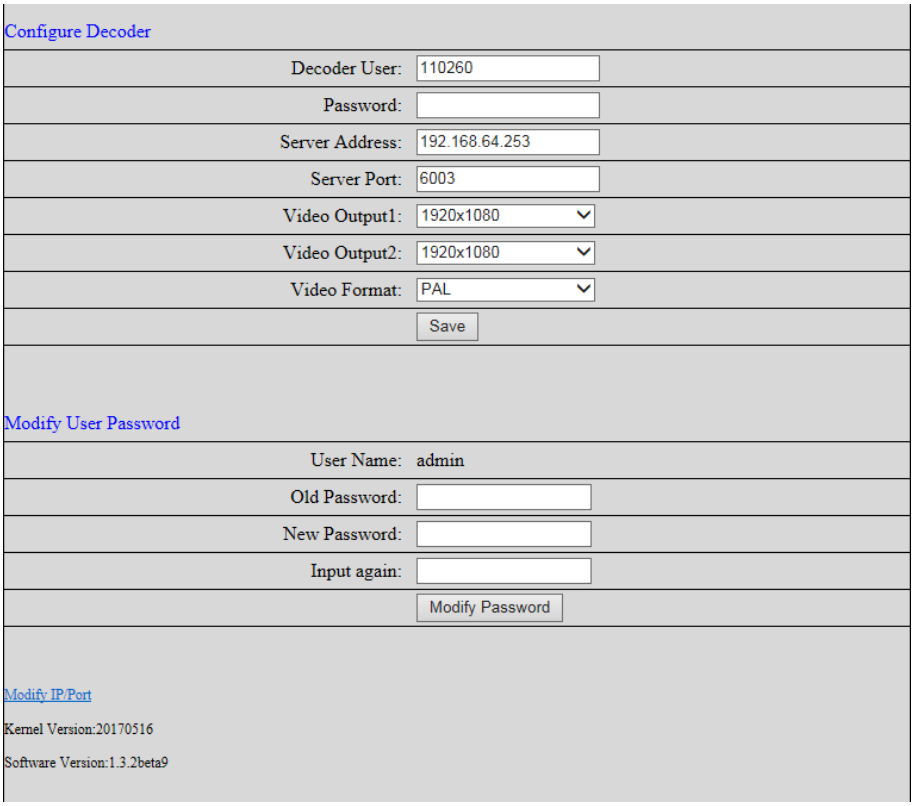
① Create a decoder in the Configuration Management Center. Please refer to **4.8 Decoder Settings** for details.

② Connect and power on the decoder and make sure the images can be normally displayed on the TV Wall Screen.

③ Double click the decoder in the IP-Tool to go to the web client of the decoder. Input the user name (***admin***) and password (***123456***) and then click "Login" button to go to the interface (or configure the decoder through local client, please refer to the user manual of the decoder for details).



Refer to the picture as shown below. You can configure the decoder, change the password and view the software version. Input the decoder name and password created in the Configuration Management Center and then input the IP address and port of the Authentication Server; click "Save" button to save the settings.



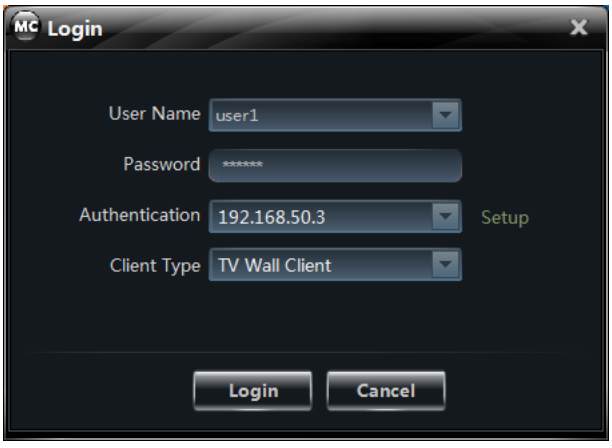
Note: The decoder will restart automatically if you change and save the settings of the decoder. Please check whether the decoder is connected to the Authentication Server, Media Server and TV Wall Client after the decoder is restarted.

5.3.2 Start TV Wall Client

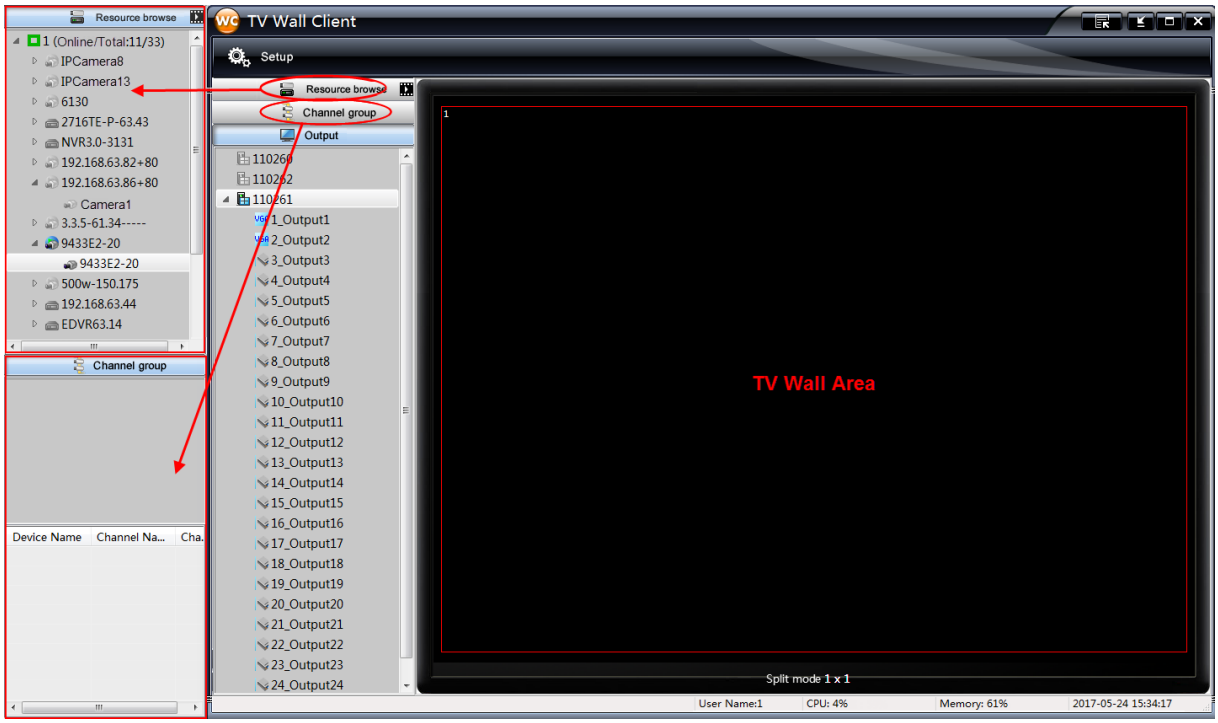
Decoders can be connected to the system to control the decoder output. **The Authentication Server and Media Server should be started first**.

Authentication Server and Media Server must be started first. Double click  icon or click "Start"→All Programs→Client (NVMS-5000)→Client to pop up a login window as shown below. Input the username and password created in the Configuration Management Center. Then click "Setup" button to input the relevant information of authentication server (please refer to **4.2 Configuration Management Center** for more details). Finally, select TV Wall Client in the "Client Type" and then click "Login" button to go to the TV Wall Client interface.

Note: multiple users can login to the TV wall client; only operator users can login to the client while administrator users cannot.



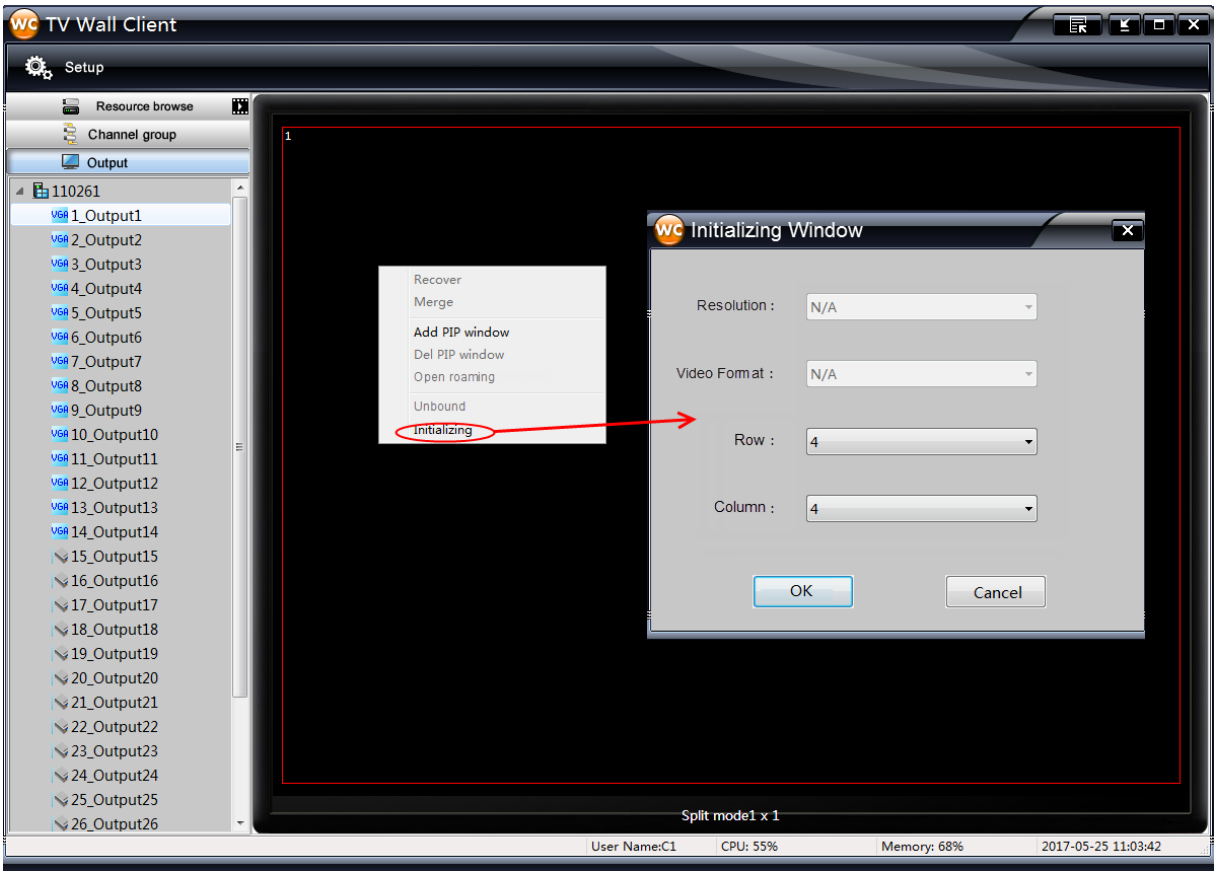
The main interface of TV Wall Client displays as follows. “Resource browse” includes all front-end video devices and their channels. “Channel group” includes all defined channel group; “Output” includes all decoding outputs.



Note: The quantity of the video decoding outputs is determined by the type of the decoder.

5.3.3 TV Wall Output

The TV wall area should be initialized before configuring decoder outputs. Refer to the interface as shown below.

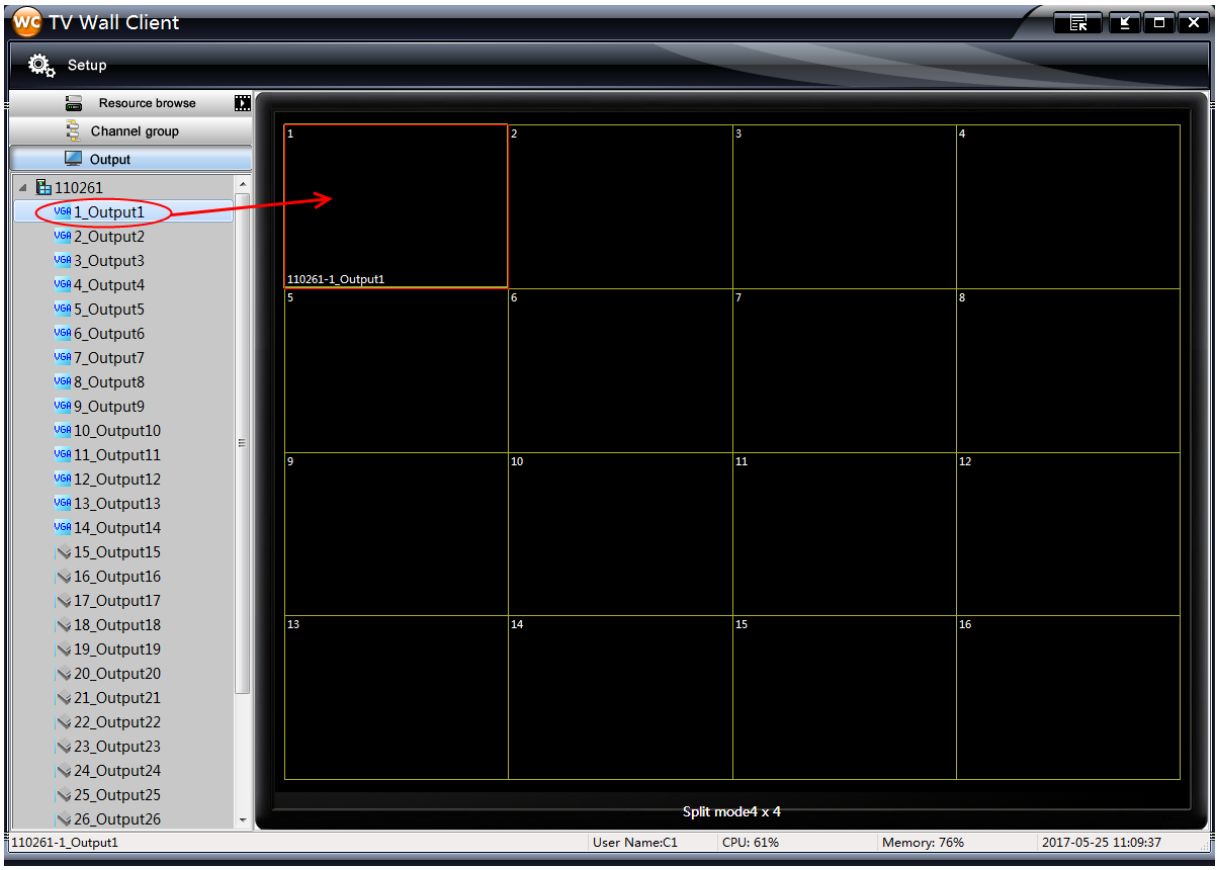


Right click on the TV wall area and then select “Initializing” to pop up the initializing window. Select resolution, video format, row and column number and then click “OK” button to save the settings.

If the TV wall area is initialized, multiple operations can be done such as binding and unbinding of the decoder outputs, merging and recovering of the video outputs, adding and deleting of the PIPs, etc.

Binding and unbinding of the decoder outputs: refer to the interface as shown below. Select one output on the left hand and drag it to one window in the TV wall area on the right hand; then the output is bound to the window. Right click on the window which is bound to the output and then click “Unbound” to clear the binding relation of the window and output.

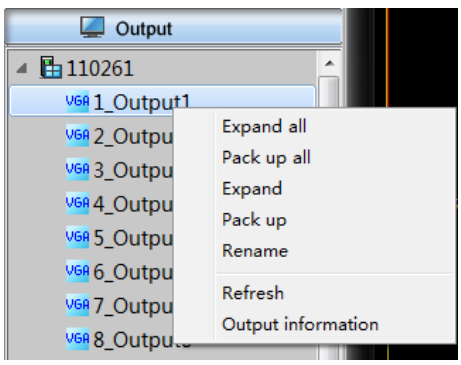
Note: the outputs in the “Output” menu on the left hand of the interface should be bound to real screens to enable the decoding operations in “Resource browse” menu, or the decoding operations will be disabled as the configuration data is not sent down.



Viewing and renaming of the outputs:

Select one output in the output list and then right click it to pop up a menu. Click “Output information” to view the output information; click “Rename” to rename the output.

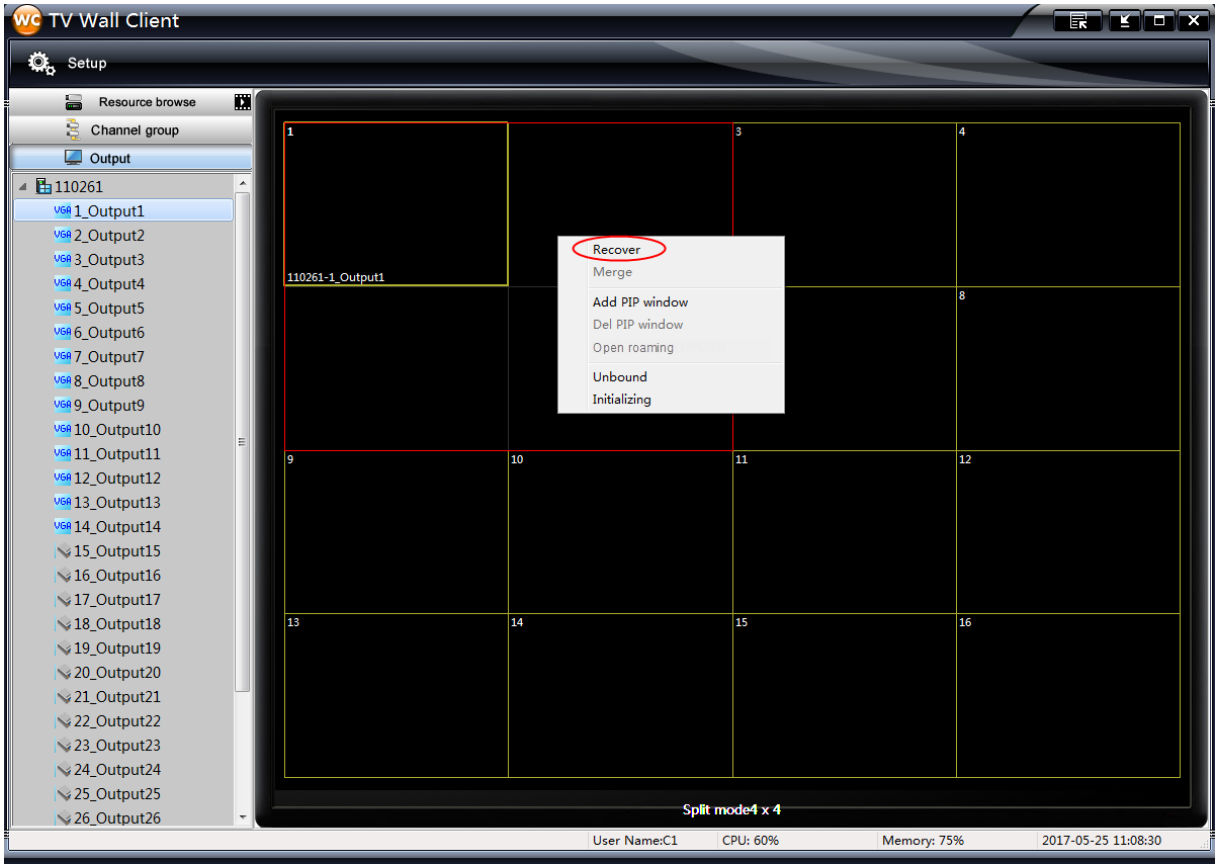
The display sequence of the output tree in the local client of the decoder is the same with that of the TV wall client. Once the output is renamed, the output tree in the local client and TV wall client will be updated at the same time. The output icon is light if it is online and grey if it is offline.



Merging and recovering of the video outputs:

Drag the mouse to select multiple video outputs and then right click to pop up a menu. Click "Merge" in the menu to merge the selected video outputs as a big video screen. Right click the big video screen and then select "Recover" to recover the video outputs. Refer to the interface as shown below.

Note: 4*4 merging available at most. The outputs of different main decoders cannot be merged.

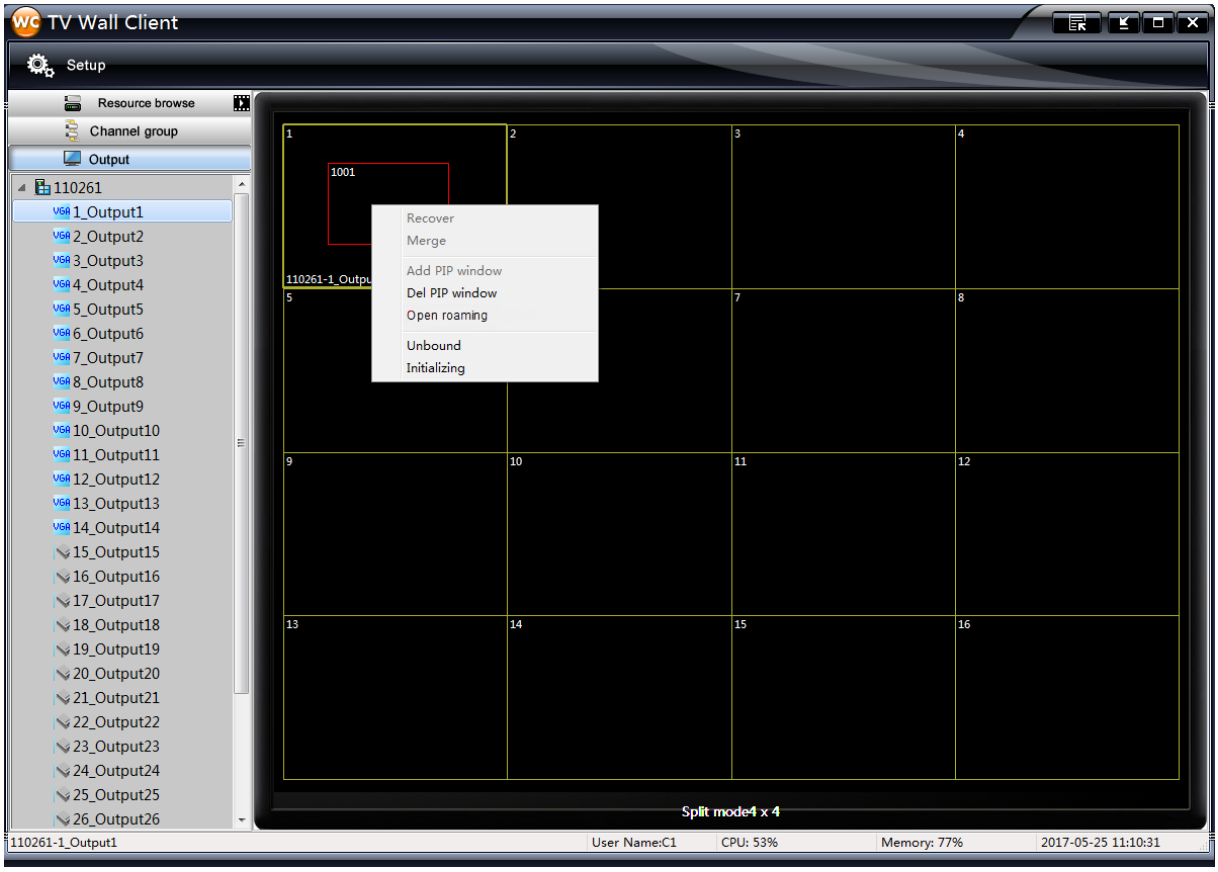


Adding and deleting of the PIPs:

Select a video output and then right click to pop up a menu. Click "Add PIP window" and then drag the mouse in the video output to add a PIP area. Refer to the interface as shown below. Right click the PIP window, click "Open roaming" and then drag the PIP window to move it. Click "Del PIP window" to delete the PIP window.

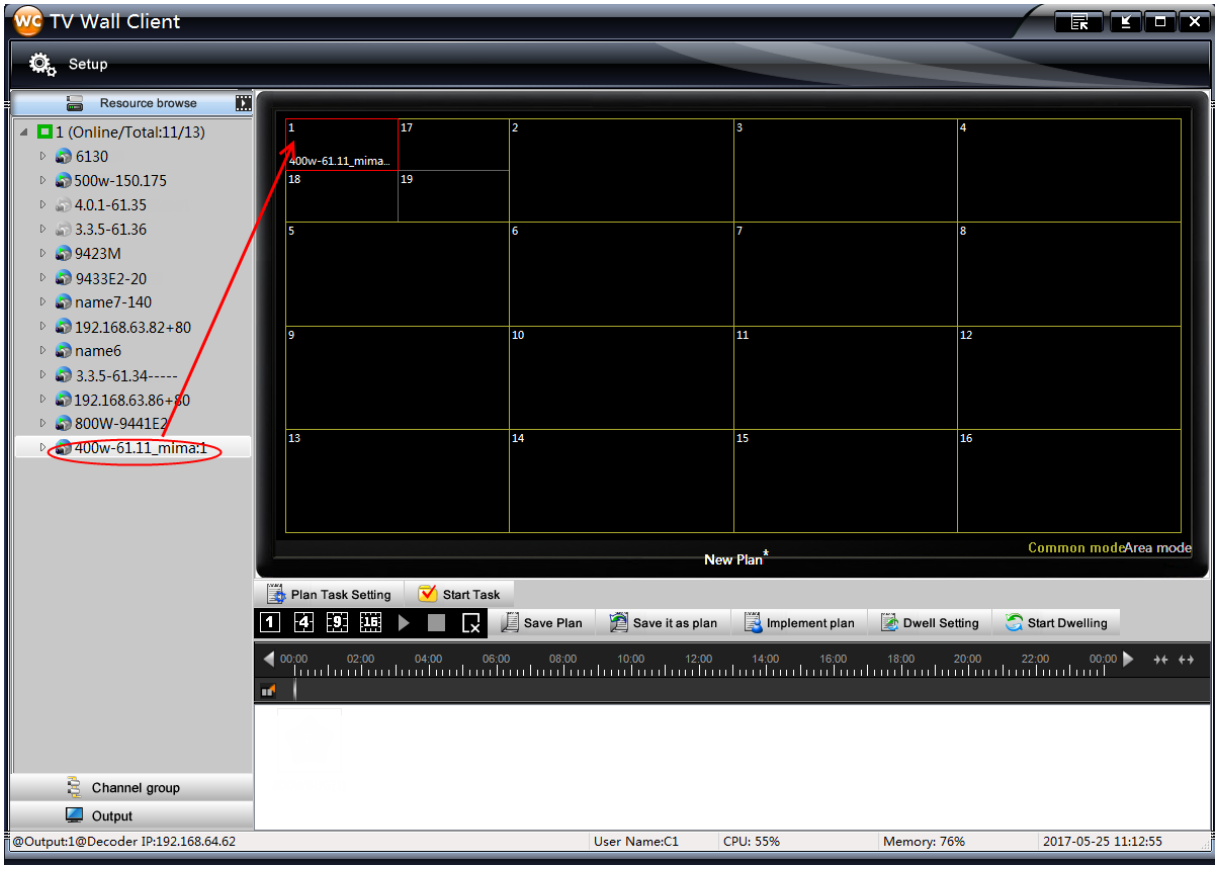
Note: 1. The PIP window area must be larger than 10 percent of the video output window, or you will fail to add PIP window. Only one PIP window can be added to each video output window.

2. The PIP window can only be used to decode the images. The alarm linkage channels are processed by the decoders and the alarm linkage images will be displayed at the fixed position with fixed length and width.

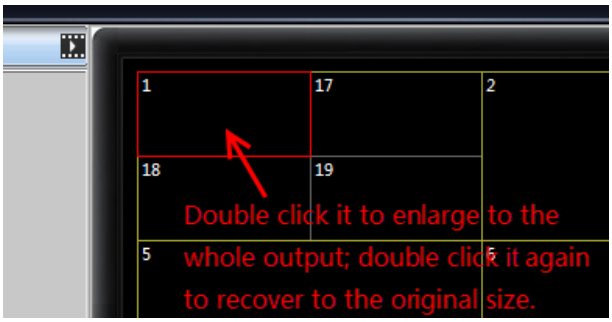


You can add channels for decoding after binding the decoder outputs to the video output screens. Click "Resource browse" and then drag one channel to one split window in the TV wall area (or click "Channel Group" and then drag one channel group to the split window). Refer to the interface as shown below. Drag the channel directly to the split window and then the channel will be decoded in real time. You can also drag the devices to the split windows for decoding.

Stream selection rules: 1/4 split windows use the main stream by default; 9/16 split windows use the sub stream; the third stream is not selected.



Zoom&undo zoom function: double click one split window to enlarge it to the whole output screen and double click it again to recover it to the original size.

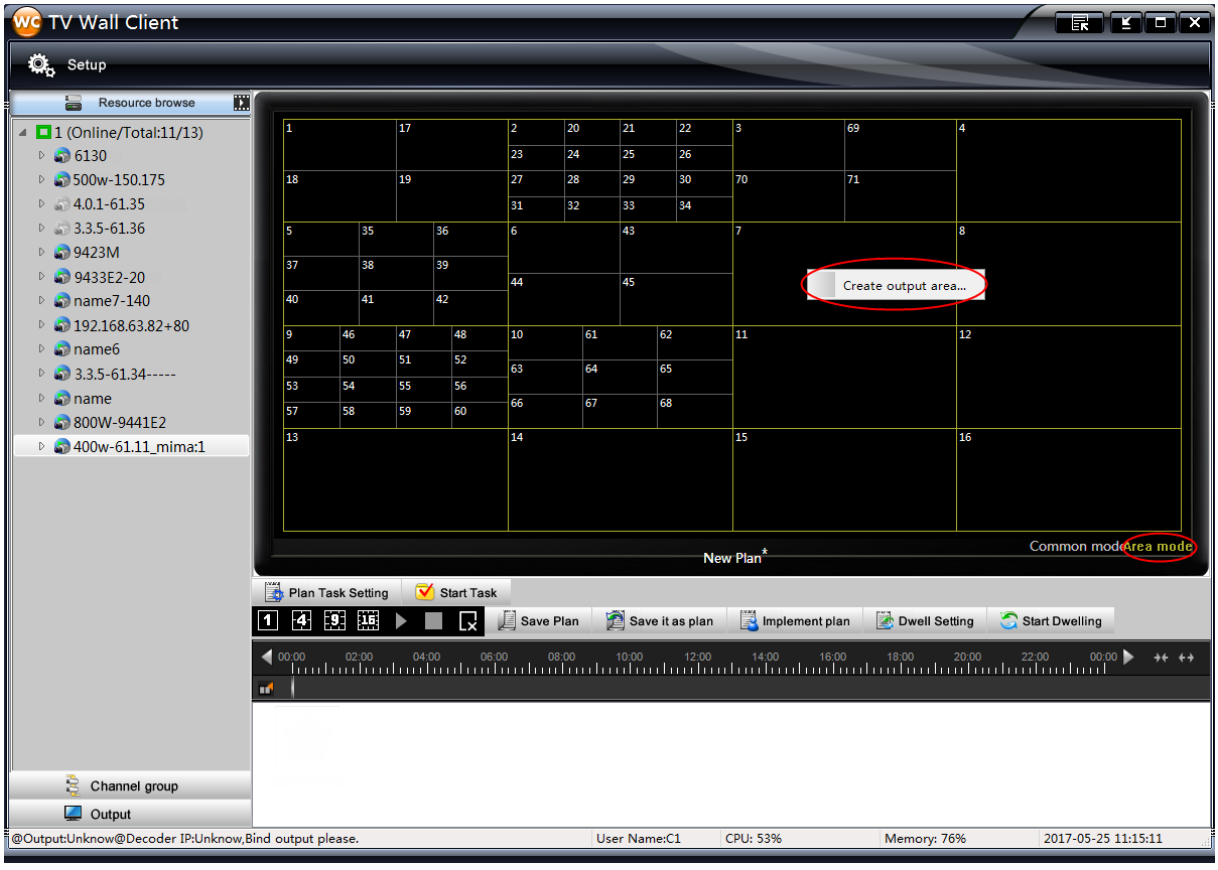


Click “Resource browse” to go to resource browse tab, select one output window in the TV wall area and the IP address of the decoder and output information corresponding to the selected output window will be shown at the bottom left corner of the interface.

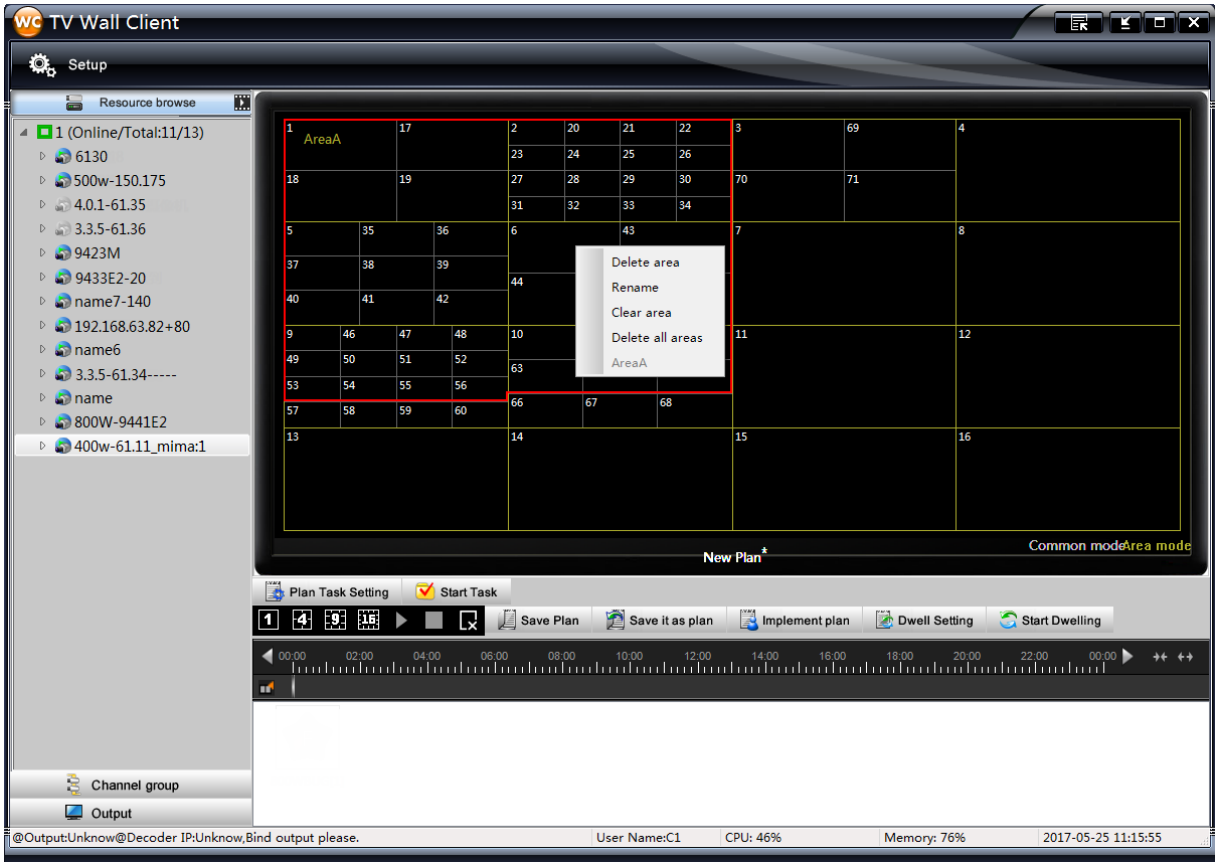
The following pictures are the sample pictures displayed on the TV Wall.

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.

There are two display modes available in the TV wall area: common mode and area mode. Click “Area mode” at the bottom right corner of the TV wall area to switch to the area mode. Refer to the interface as shown below. Right click the TV wall area and click “Create output area…” and then drag the mouse to select an area.



The name of the created area will be displayed at the top left corner of the area. Refer to the interface as shown below. Click “Resource browse” and then drag one channel to the area for decoding (or click “Channel Group” and then drag one channel group to the area). Right click the area the then click “Delete area” to delete the area; click “Rename” to change the area name; click “Clear area” to clear all the channels in the area; click “Delete all areas” to delete all the created areas in the TV wall area.



Area Configuration Rules:

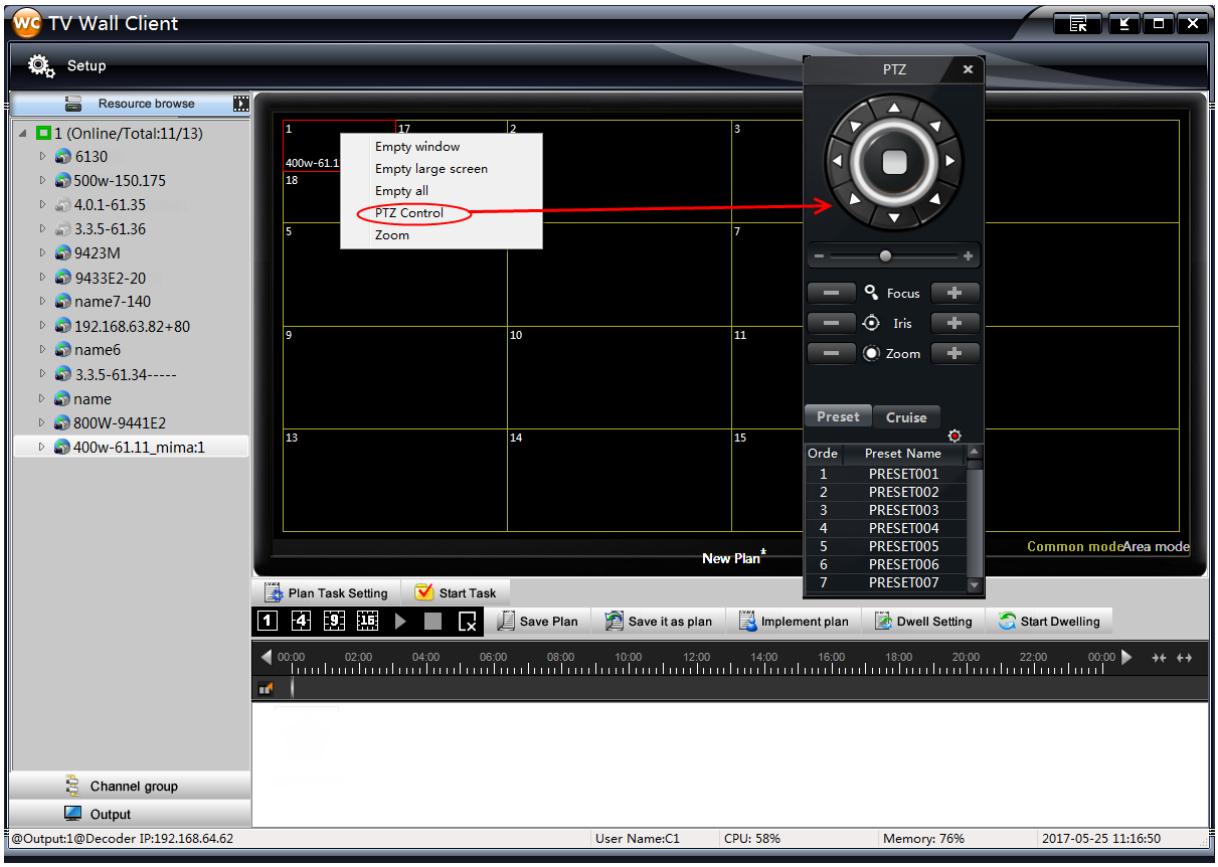
1. The display and operation of the areas can only be done in the area mode.
2. In area mode, you can only do the operations relating to areas such as draging the live channels , live devices, replay channels and channel groups to the areas. Draging the channels to the non-area windows is forbidden unless you go to the common mode first.
3. The created areas cannot be overlapped.
4. The areas created in the area mode will not be displayed in the common mode.
5. Some operations which are unrelated to the areas such as window spliting, zooming and recovering, PIP are not supported in the area mode; please go to common mode to do these operations.
6. You can go to the area mode if there are split windows which are zoomed in the common mode.
7. The configuration of the areas is a global operation. If there are areas, the areas will be applied to all the output plans(the split mode of the areas must be the same with that of the plans, or the areas will be deleted automatically).
8. You can create 10 areas at most.
9. In area mode, only areas have focus while the split windows in the areas have no focus.
10. There is no need to add and configure areas if there are no output plans. To add and configure areas, create and save output plans first and then you can back up and recover the output plans and the created areas: the created areas without output plan can not be saved and restored.
11. To judge whether the areas are valid: 1). all the areas can contain the whole PIP window or not contain it, but can not just contain part of the PIP window, or the areas will be invalid automatically; 2). the areas can contain the whole split window or not contain it, but can not just contain part of the split window, or the areas will be invalid automatically.
12. In the area mode, you cannot go to the output configuration interface directly; you should go to common mode

first and then click “Output” tab to go to output configuration interface.

13. The number of the invalid areas will be added to the total area number, you can delete the invalid areas manually; all the areas will be deleted automatically if you import or change the output split mode.

14. All the created areas will be cleared if the output split mode is changed. For instant, if you change the output split mode from 2*3 to 3*2 then all the created areas will be deleted.

Select one window which is now decoding images and right click it to pop up a menu; click “PTZ Control” to pop up the PTZ panel as shown below.

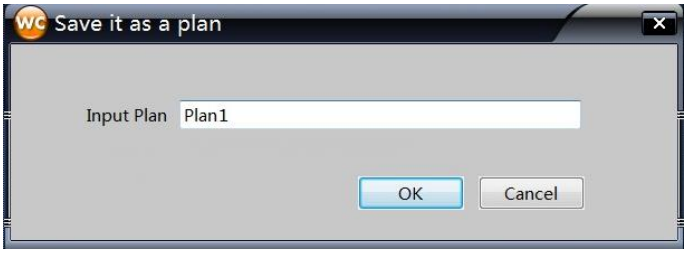


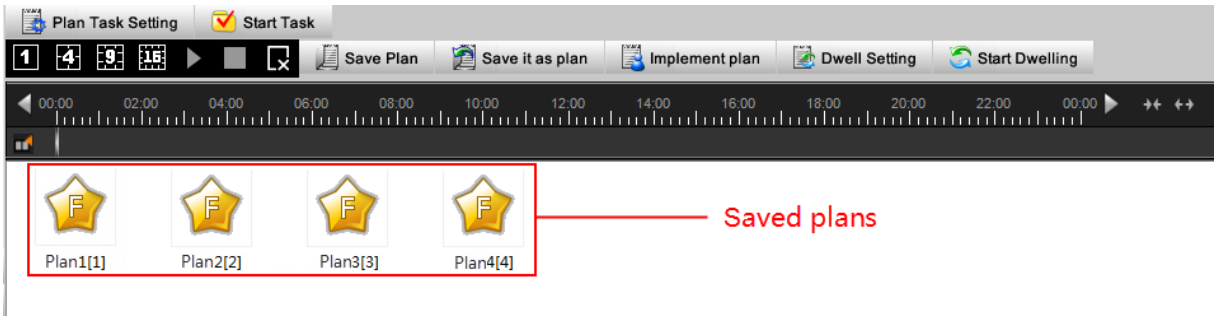
Click “Empty window” to clear the channel in this window; click “Empty large screen” to clear all the channels in this output screen; click “Empty all” to clear all the channels in the TV wall area; click “Zoom” to enlarge the window to the whole output screen; click “Undo Zoom” to recover the window to the original size.

Button explanations of TV wall client interface:

Button	Function	Button	Function
1 4 9 16	Screen mode		Stop
▶ ❚❚	Play/Pause		Clear all channels

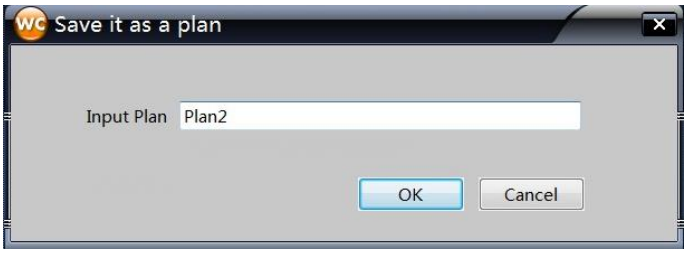
Save the video output plan: after dragging channels to the output area, click Save Plan to pop up a dialog box. Input the plan name and then click “OK” button as shown below. Then the plan will be listed in the output scheme area.



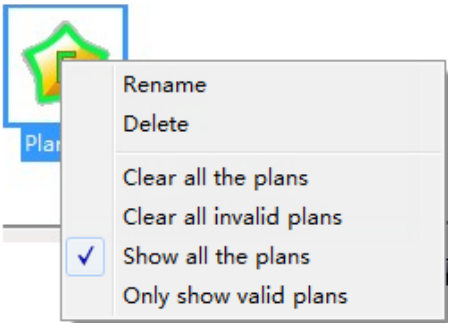


If one output plan is needed, double click the plan name in the output scheme area to display the images on the TV wall screen by the plan; as for the A120 decoder, you should click Implement plan after double clicking the output plan. Then the images will display on the TV Wall screen.

Click Save it as plan to save the current plan as another plan. Refer to the dialog box as shown below. Input the plan name and then click "OK" button to save the plan.



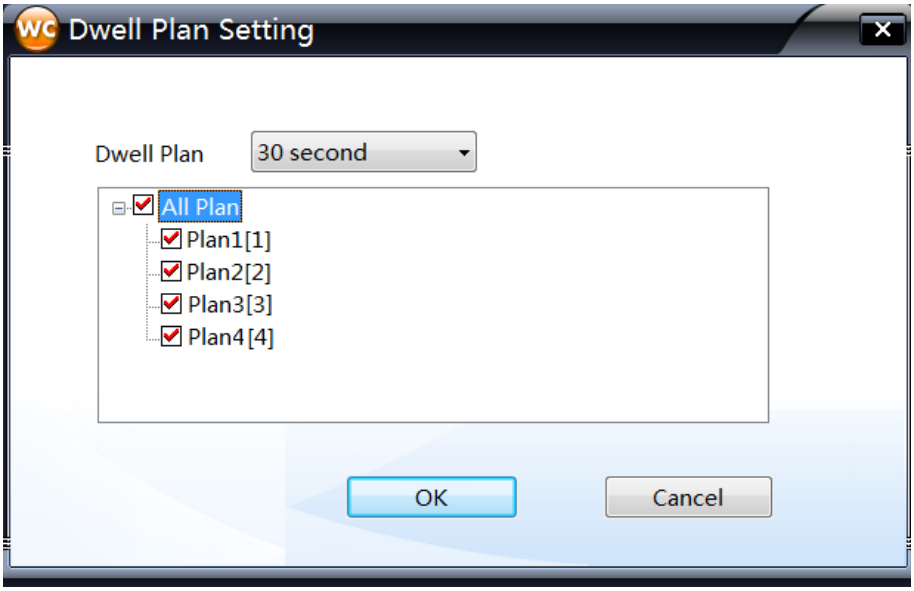
Right click one output plan to pop up a dropdown list as shown on the right. Click "Rename" to modify the plan name. Click "Delete" to delete the plan. Click "Clear all the plans" to clear all output plans (**be careful to click it**).



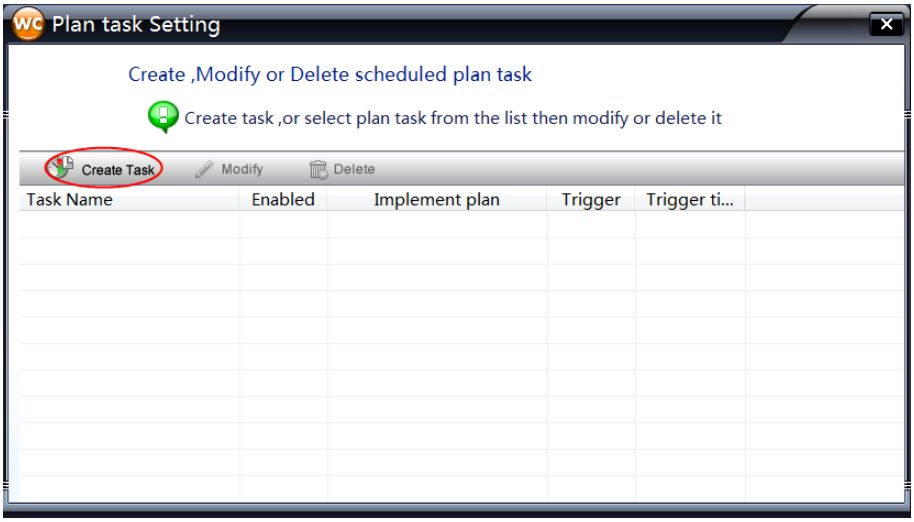
Some saved plans will be invalid plans if the decoders relating to them are deleted in the Configuration Management Center (these plans are still invalid even if you add the same decoders in the Configuration Management Center after you delete them). You can delete these invalid plans by clicking "Clear all invalid plans". You can also click "Show all the plans" or "Only show valid plans".

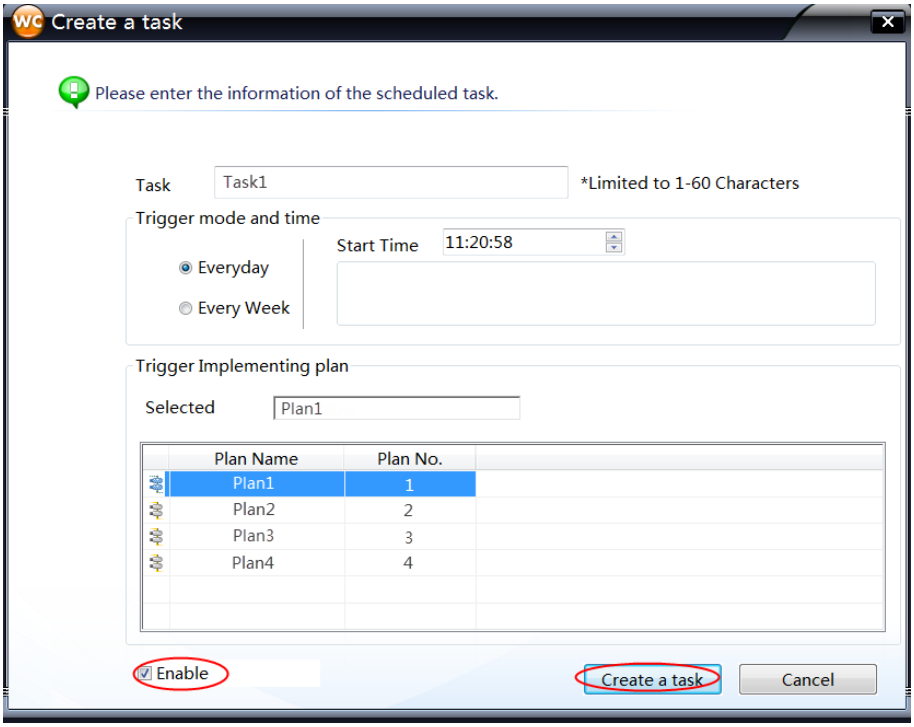
Double click one output plan and then modify the channels in the TV wall area; finnally, click Save Plan to save the plan.

Dwell Setting: click Dwell Setting button to pop up the following window. Select the dwell time, check the plans and then click "OK" button to save the settings. Click Start Dwelling to start dwelling; click Stop Dwelling to stop dwelling.



Plan Task Setting: click  to pop up the following interface. Click "Create Task" button and input the task name, select the trigger mode and time, select the plan in the plan list, check "Enable" and then click "Create a task" button to save the task.

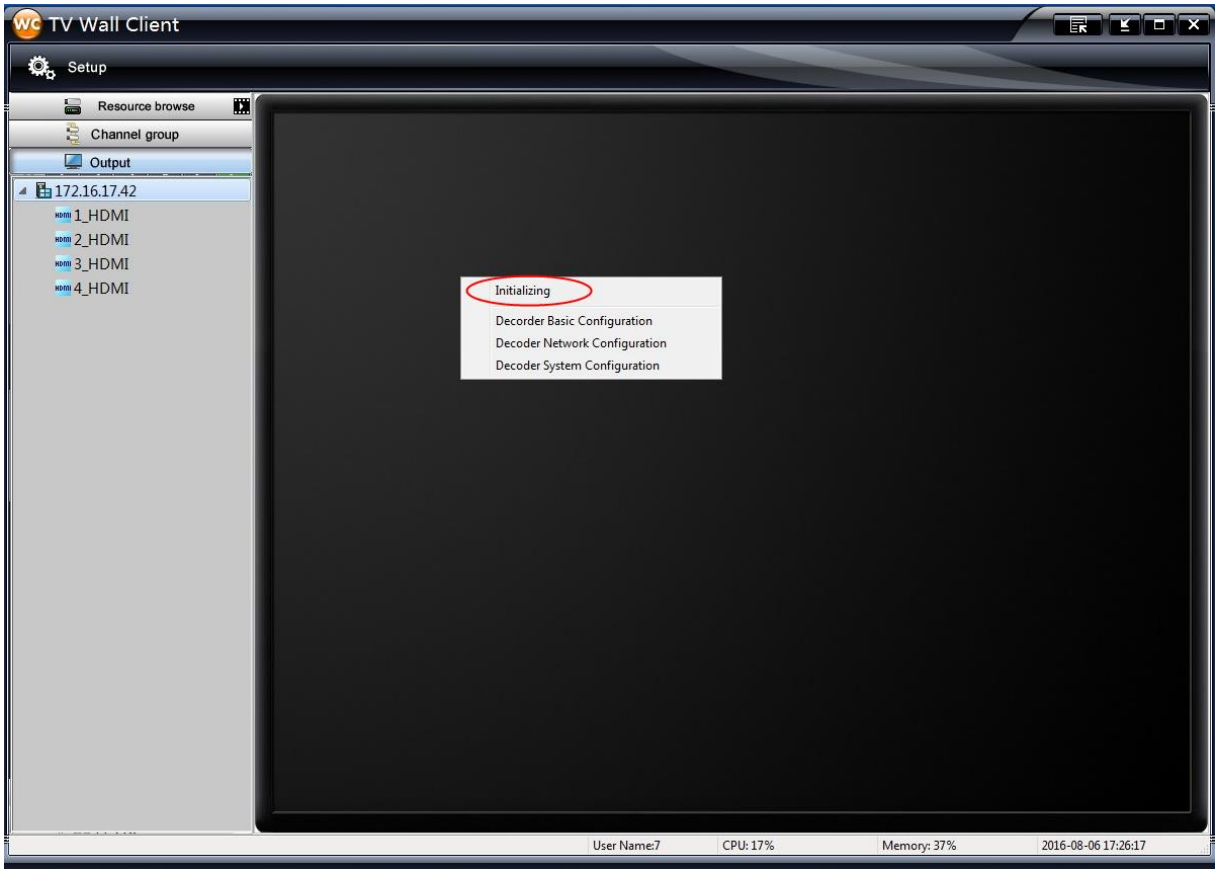


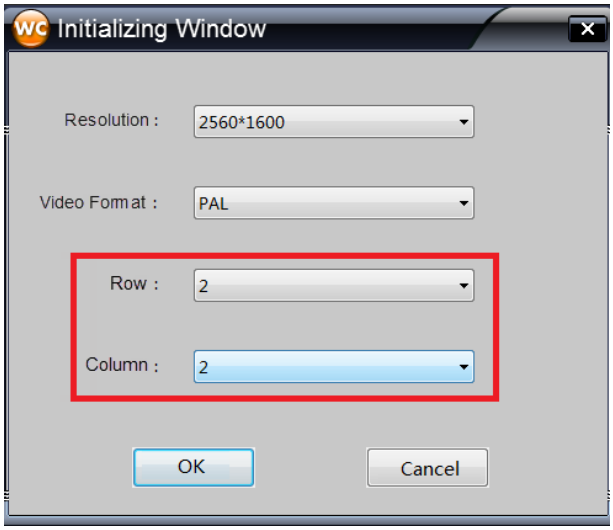


The created tasks will be listed in the "Plan Task Setting" window. You can create multiple plan tasks. Select a task in the list and then click "Modify" button to modify the task; click "Delete" button to delete the task. You can manually start the task by clicking Start Task and stop the task by clicking Stop Task.

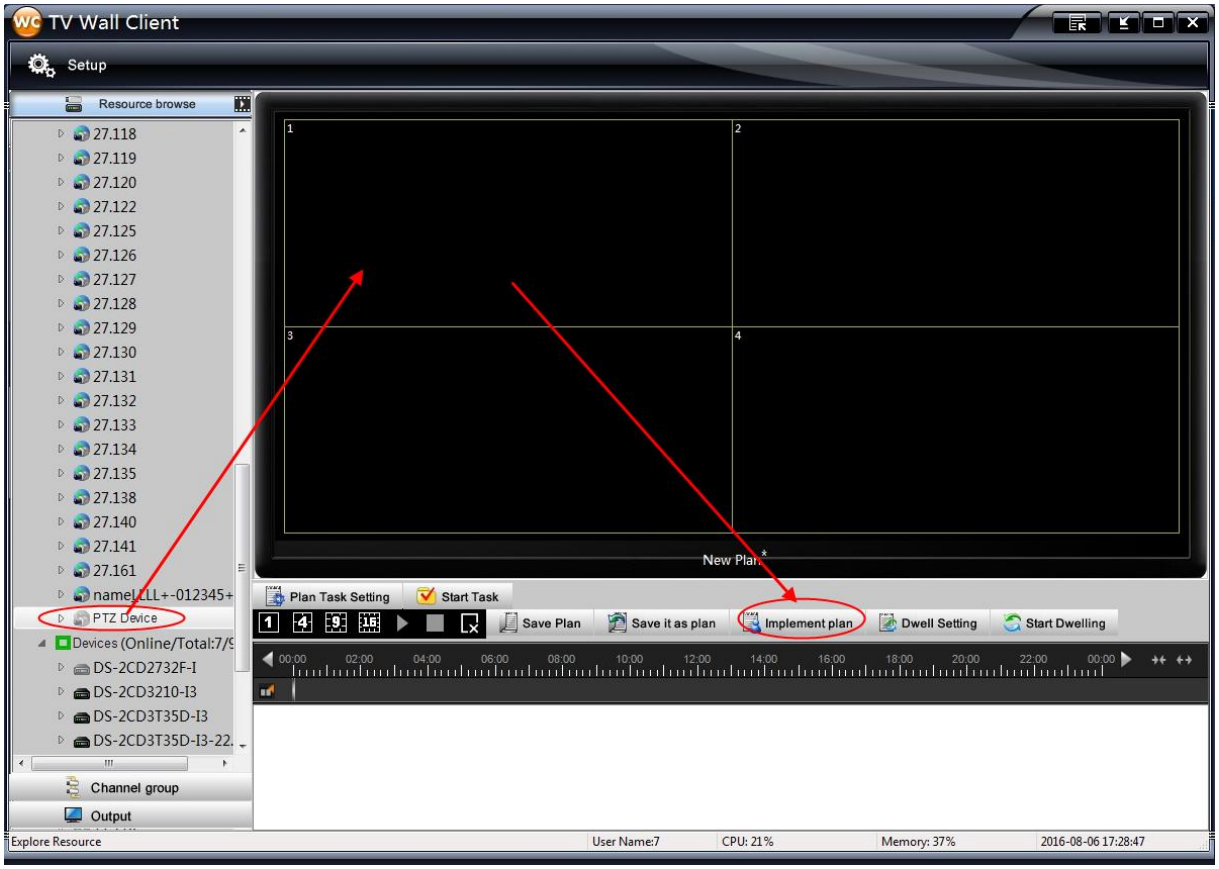
Operations of the A120 series decoder:

The A120 series decoder should be initialized first before use. Refer to the interface as shown below. Click "Initializing" to initialize the decoder.

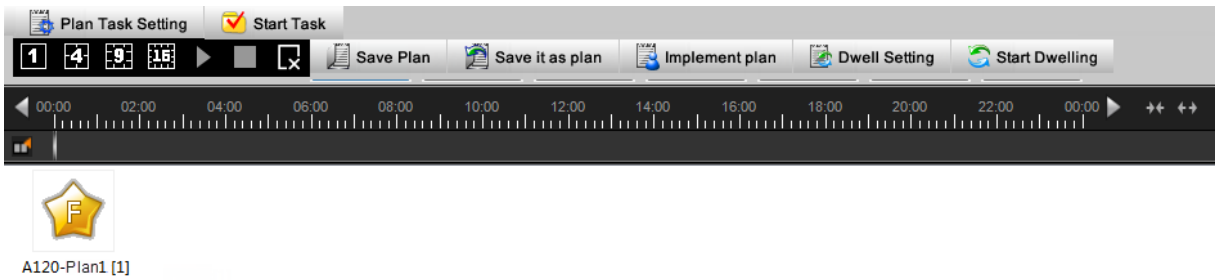




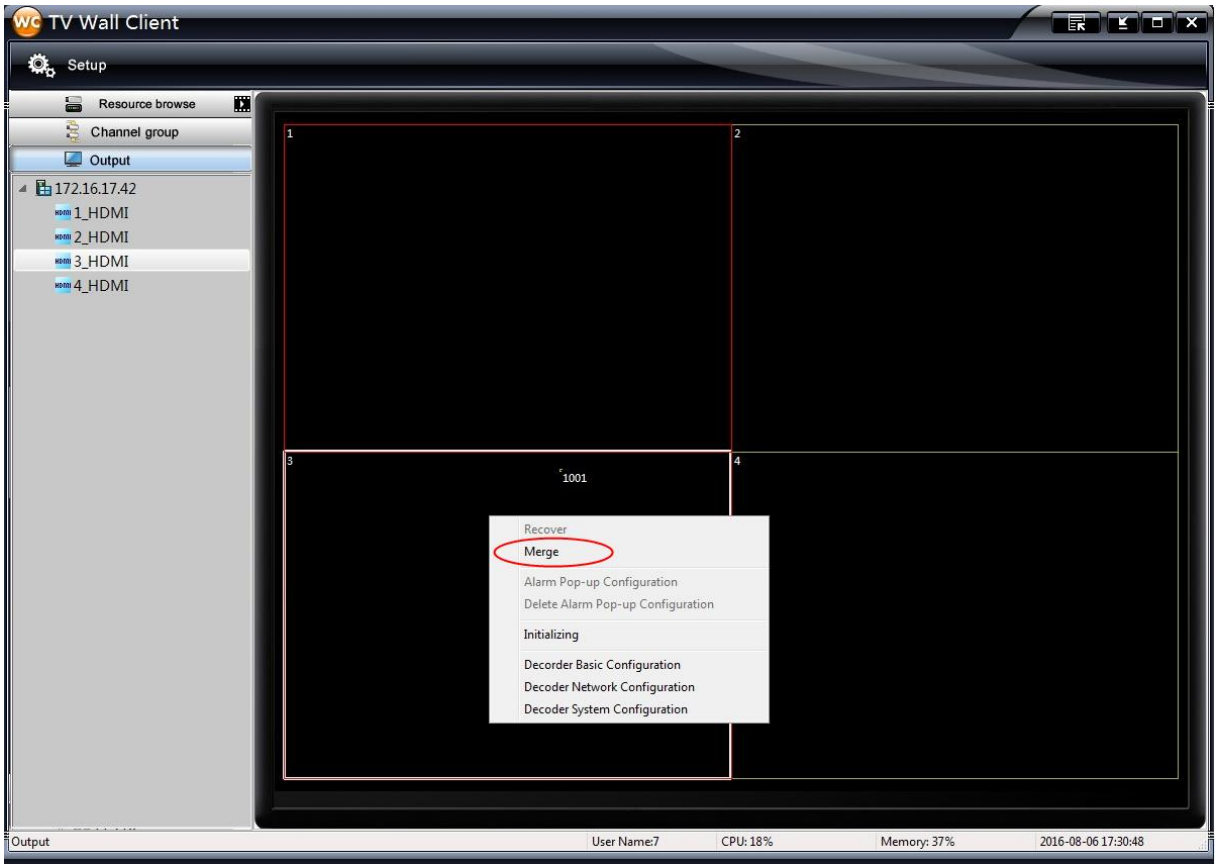
The A120 series decoder can decode the output channels after the initialization is completed. Drag the channels to the TV wall area and then click Implement plan to decode them.



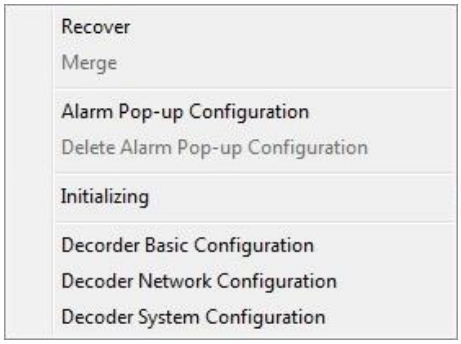
The A120 series decoder can also save plans, dwell plans and plan tasks, etc. as shown below.



Select multiple outputs in the TV wall area and then right click to pop up a dropdown list. Click “Merge” to merge the selected outputs. Refer to the interface as shown below.



You can also recover the merged outputs to the state before merging by clicking “Recover”. Refer to the picture as shown on the right.



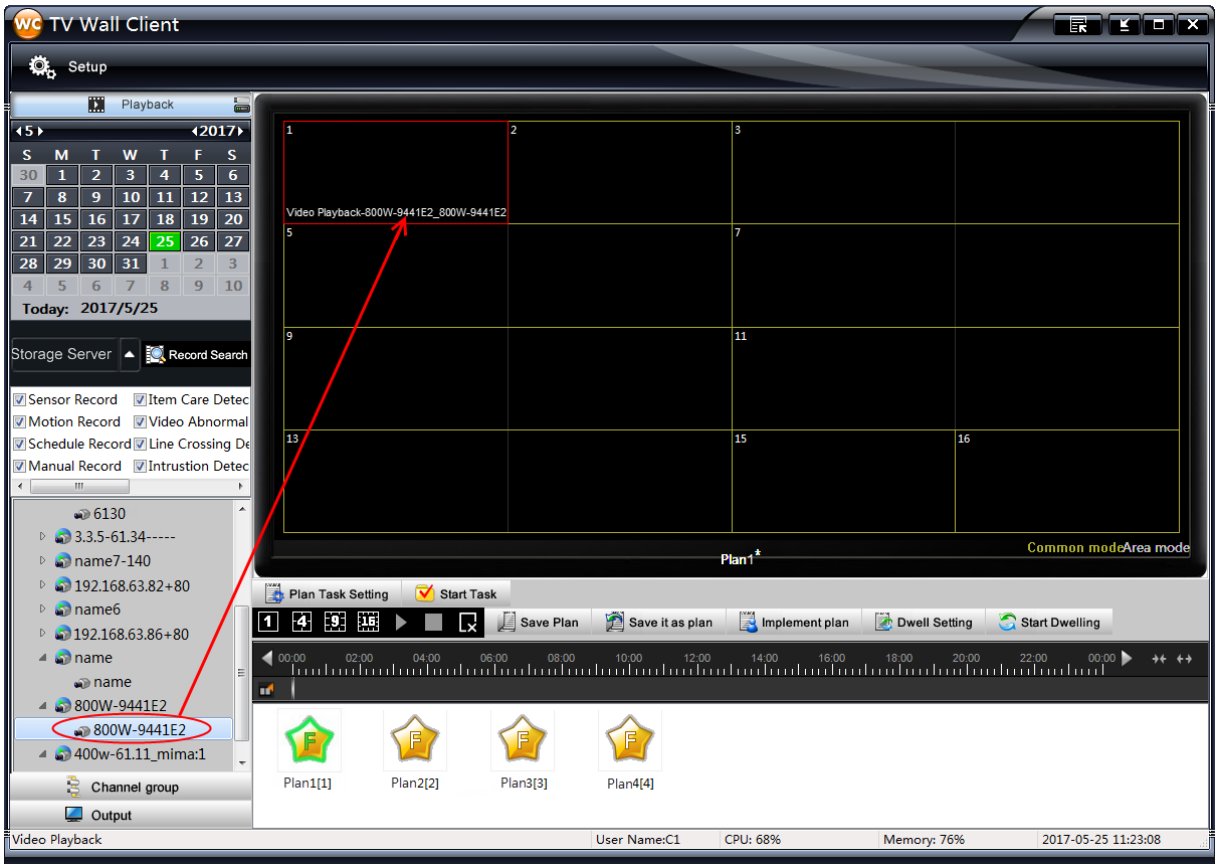
Click “Alarm Pop-up Configuration” and then draw the alarm popup window manually to complete the configuration. Refer to the picture as shown below. You can also delete the alarm popup window.

Here we only give a brief introduction of the operations of the decoder, please refer to the decoder's user manual for more detailed information.

5.3.4 Playback

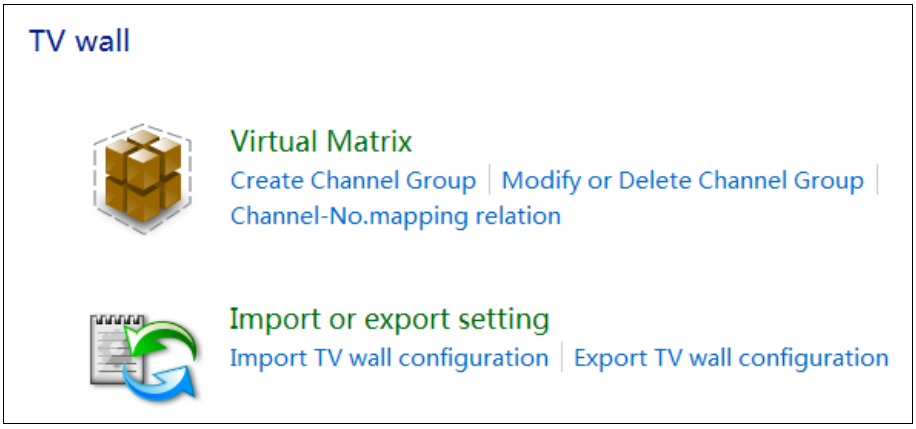
Click  on the right hand of "Resource browse" menu to go to playback interface. It can playback the record saved in the storage server.

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 "Video Playback-XXX" as shown below. After that, you will see the playback images on the TV Wall.



5.3.5 Setup

In the TV Wall Client, you can set up channel group, channel-NO. mapping relation and import and export settings. Please go to the TV Wall Client and click "Setup" button to pop up the following window.

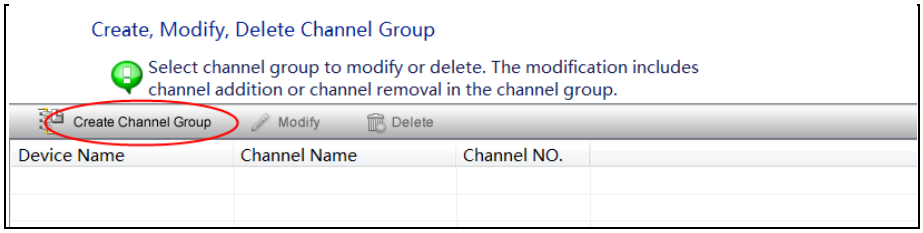


5.3.5.1 Create or Delete Channel Group

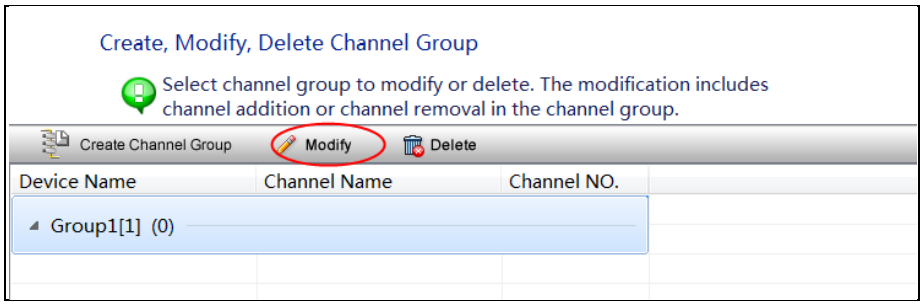
Go to TV Wall Client→ Setup interface. Click "Virtual Matrix" button to go to the interface.

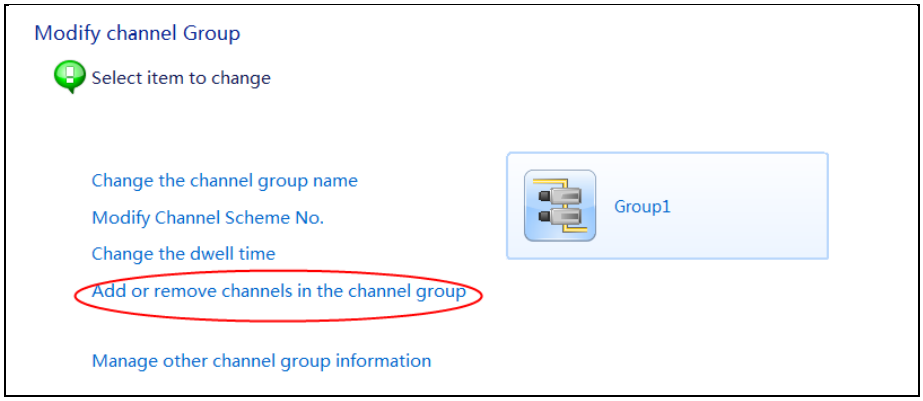
Channel group setting steps:

① Click "Create Channel Group" button to create a channel group. Input the channel group name and number, select the dwell time and then check and click "Add Channel" button to add channel to the group (refer to step ③ for details) and finally click "OK" button to save the settings.



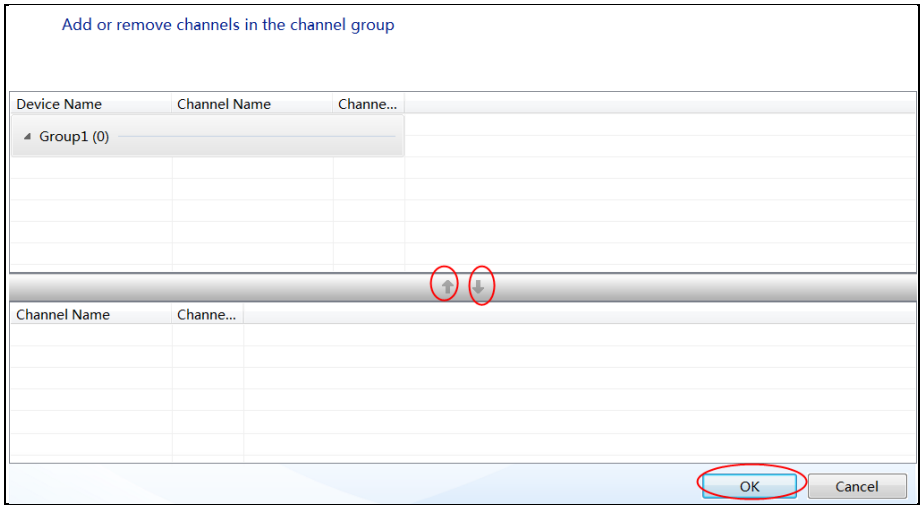
② Select a channel group and click "Modify" button.





③ Click “Add or remove channels in the channel group” to go to the interface as shown below.

Select the channel in the lower area and then click icon to add the channel to the channel group. Select the channel in the upper area and click icon to remove the channel from the channel group.

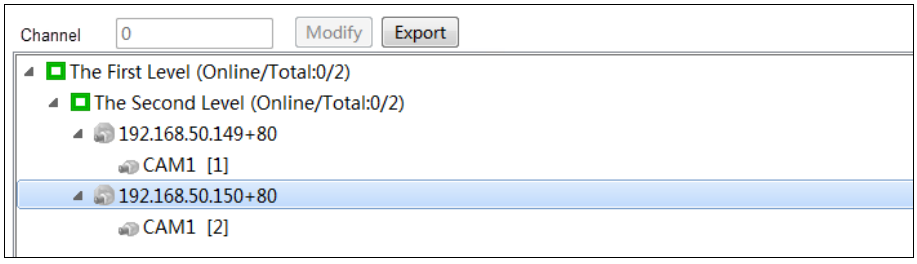


④ Click “OK” button to save the settings.

Click other relavant links in the “Modify Channel Group” interface to modify the channel group name, group number and dwell time. If you want to delete the created group, please select this group and click “Delete” button to delete.

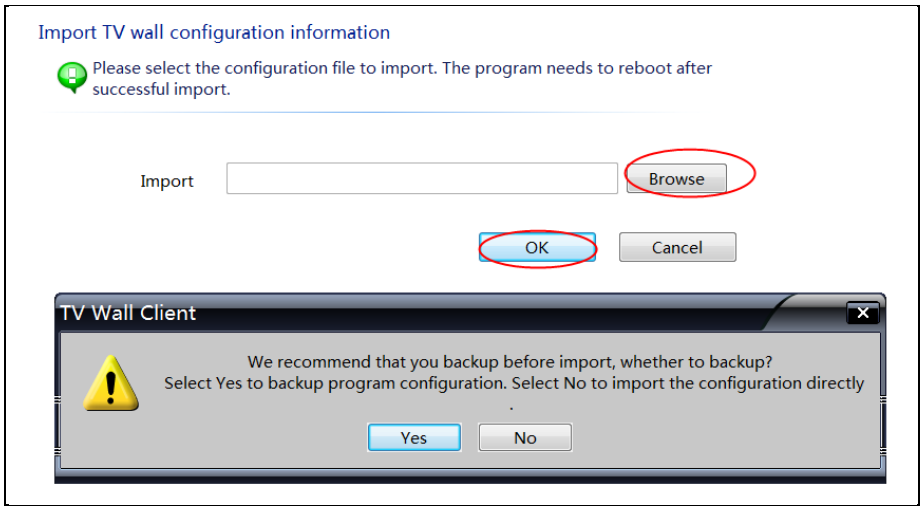
Having configured the channel groups, you can click “Channel group” on the left menu list of TV Wall Client to see these group.

Click “Channel-No. mapping relation” in the TV Wall setup interface to go to the interface as shown below. Click “Modify” button to modify the mapping relation between each channel and its channel number. Click “Export” button to export the mapping relation table of the channels and their channel numbers (set the file name and path and then click “Save” button).

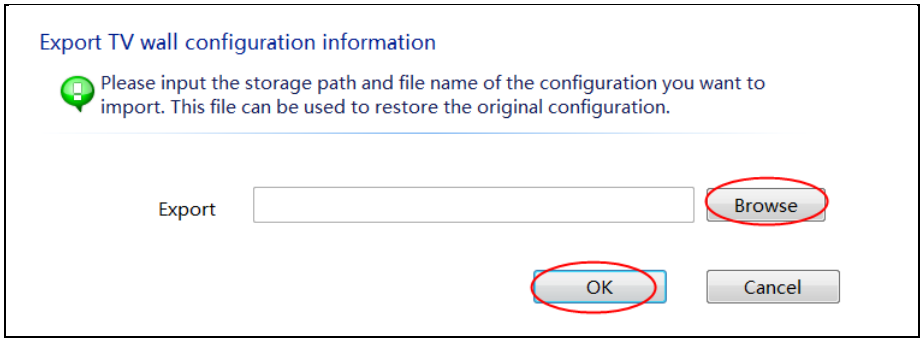


5.3.5.2 Backup & Restore Settings of TV Wall Client

Go to TV Wall Client→Setup interface. Click "Import TV Wall Configuration" to restore the settings of TV Wall Client.



Go to TV Wall Client→Setup interface. Click "Export TV Wall Configuration" to backup the settings of TV Wall Client.



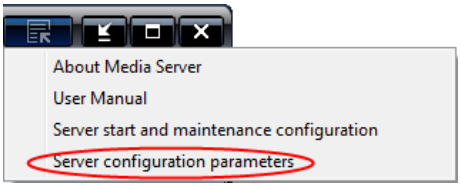
Note: the channel group information can only be imported if the configuration file is from an unknown manufacturer or the TV wall client of which the version is lower than that of the current TV wall client.

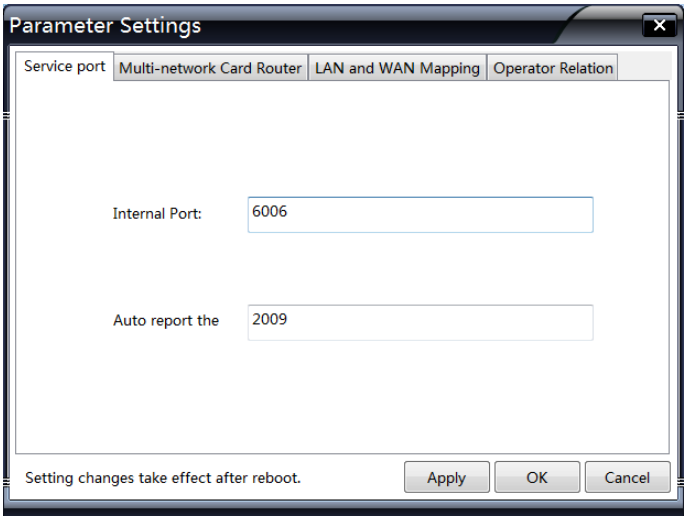
6 Common NVMS-5000 Networking

6.1 Server Parameters Configuration

The system can meet different networkings by configuring server parameters. Authentication Server, Media Transfer Server and PC-NVR's parameters can be configured.

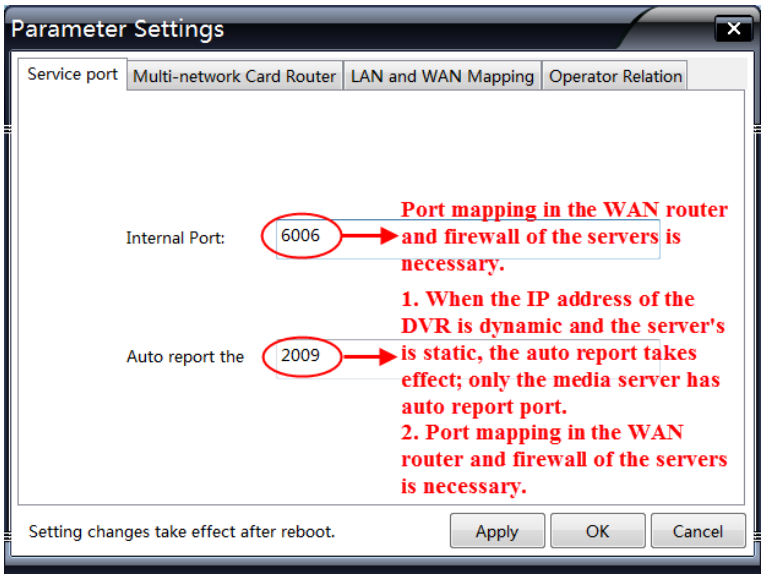
Configure the server parameters: here we take Media Transfer Server as an example. Click  on the top right corner of the main interface to show the menu list. Refer to the picture as shown below. Click "Server Configuration Parameters" to pop up the parameter settings interface. The "Service Port", "Multi-network Card Router", "LAN and WAN Mapping" and "Operator Relation" will be introduced respectively.





- **Service Port**

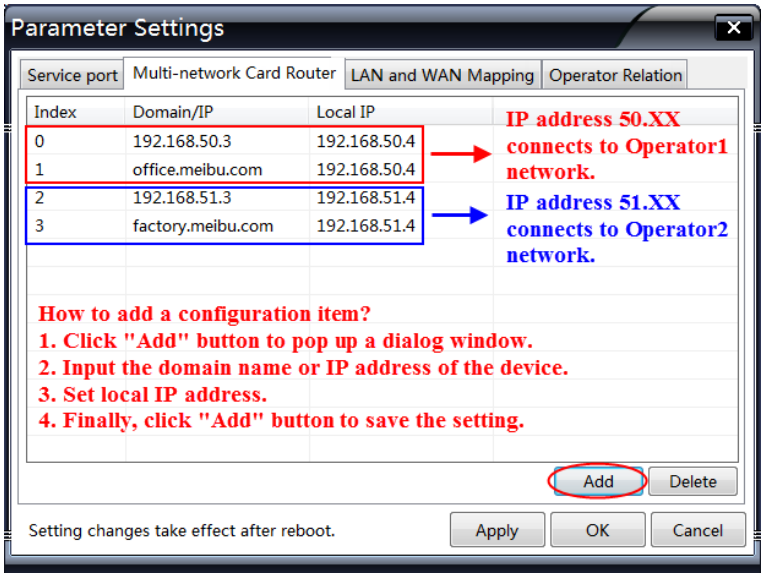
There are two ports: Internal Port and Auto Report Port. Make sure that all the ports of all the servers are different; port mapping in the WAN router and firewall of the servers is also necessary. Refer to the picture as shown below.



- **Multi-network Card Router**

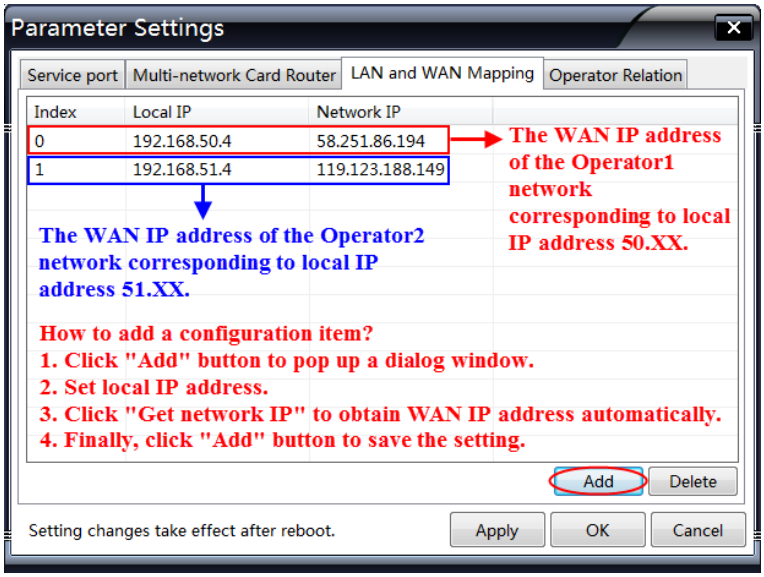
If the server has two network ports or above, you can set the local IP address of the server to connect to the specified

devices or servers automatically. It is mostly used to meet the situation when the devices are spreaded out in two network oprtators or above.



- **LAN and WAN Mapping**

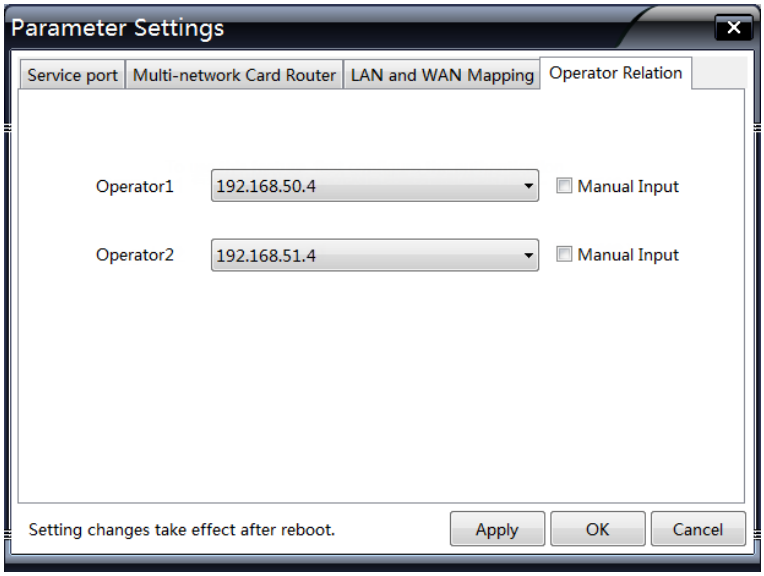
You can set the mapping relation between the local IP address and the WAN network IP address. It is mostly used to meet the situation when a client wants to access the system via WAN.



- **Operator Relation**

The local IP addresses of the server's network ports connected to different operator netwroks should be set under a system networking consisted of multiple operator networks. You should configure the Authentication Server's Operator Relation first before configuring media server's.

Note: if one server's Operator Relation is set, then all the servers' Operator Relation should be set and be sure that the setting sequences of the operator networks in each server are the same. If all the servers' Operator Relation are not set, the system will mark the IP addresses according to the value by default.



6.2 NVMS-5000 Networking in a Private Network Environment

If all the servers and devices are in the private network environment, you should respectively allocate a static IP address for each server and device and make sure that all the service ports of the servers are different. Refer to **1.2 System Components** to see the system topology.

6.3 NVMS-5000 Networking with One Network Operator

6.3.1 Servers with the WAN Static IP Address and Devices with the WAN Dynamic IP Address

Servers: The servers in the LANs are connected to the Internet through routers and firewalls and each server has a local IP address. Set the internal ports of all the servers and the auto report port of the media server and do port mapping in the WAN router and firewall of the servers. The configuration of LAN and WAN mapping is also necessary for all the servers. Refer to **1.2 System Components** to see the system topology.

Devices: by auto report.

Step 1: Add devices in the Configuration Management Center and make sure "Auto Report" is checked when adding the device. Then select the area and server, input the device name, device number, channel count, sensor count and alarm out account and then click "OK" to save the settings. Run the Media Server after you add the device and remember the device number.

Step 2: Login to the device to set its local settings. Login to the device system→Main Menu→Setup→Network→Server to go to the interface. Check "Enable", and then input the WAN static IP address of the media server in the "Server" box and the set auto report port number of the media server in the "Server Port" box, the device number mentioned in Step 1 in the "Device ID" box.

6.3.2 Servers and Devices both with the WAN Dynamic IP Address

Precondition: the WAN routers of all the servers and devices must have DDNS function and the DDNS (Dynamic Domain Name Service) must have been enabled to map the dynamic IP adress and the domain name.

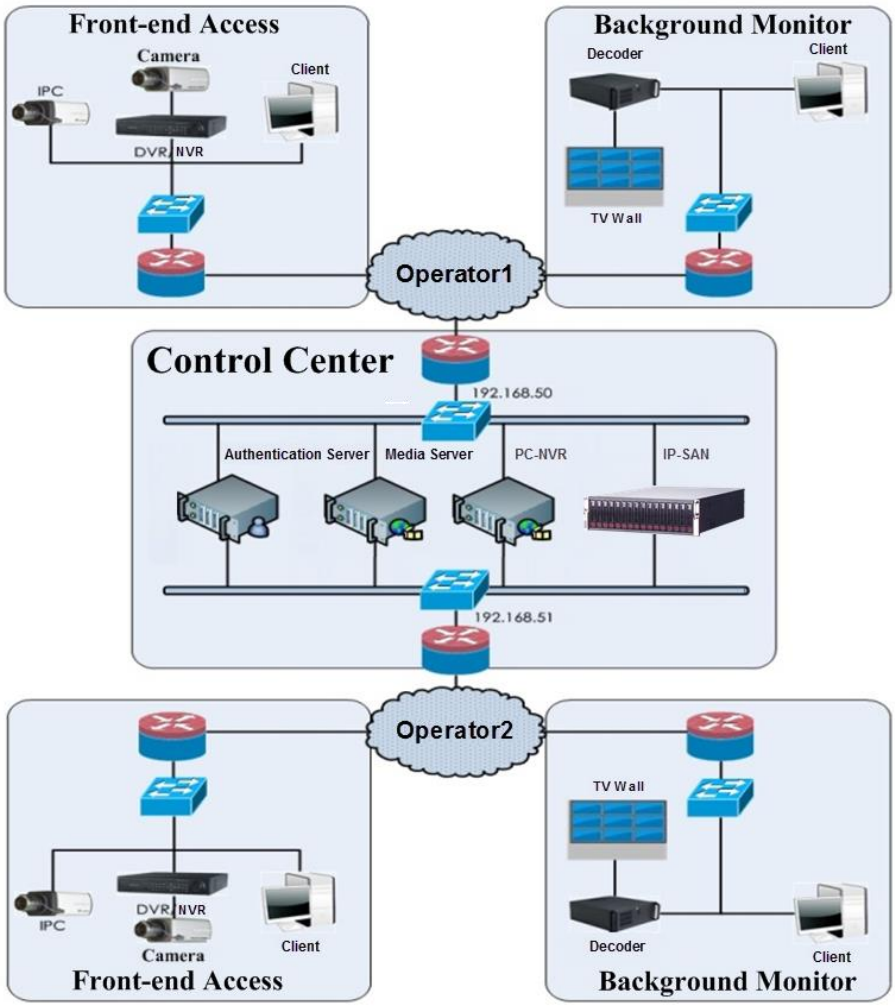
Servers: The servers in the LANs are connected to the Internet through routers and firewalls and each server has a local IP address. Set the internal ports of all the servers and the auto report port of the media server and do port mapping in the WAN router and firewall of the servers. Refer to **1.2 System Components** to see the system topology.

Devices: by DDNS. Set the DDNS domain name and password in the WAN router.

The servers' IP addresses are dynamic, and it can make the system unstable, so it is not suggested.

6.4 NVMS-5000 Networking with Multiple Network Operators

Here we take the system networking consisted of Operator1 and Operator2 networks as an example. The system topology is shown as below.



Servers: all the servers in the control center must have two network ports. One network port of each server in the LAN should be connected to the Operator1 network through the router and firewall and the other to the Operator2 network. If the servers adopt the WAN dynamic IP addresses, then the WAN routers of all the servers must have DDNS function and the DDNS must be enabled. Supposing that the local IP address of the network port which connects to the Operator1 network is 192.168.50.XX, and the local IP address of the other which connects to the Operator2 network is 192.168.51.XX. The IP addresses and service ports of the servers can be set referring to the table as shown below.

No.	Server	Function	Local IP Address (Operator1)	Local IP Address (Operator2)	Internal Port	Auto Report Port
1	Authentication Server	Device Authentication (including Web)	192.168.50.3	192.168.51.3	6003	—
2	Media Server	Media Transfer	192.168.50.4	192.168.51.4	6006	2009
3	PC-NVR	Store videos	192.168.50.5	192.168.51.5	6009	—

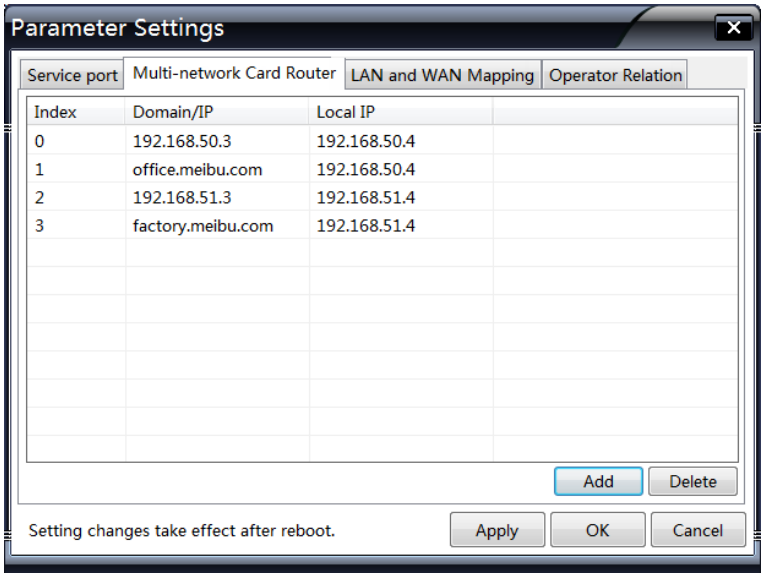
Server parameters configuration:

- **Service Port**

Set the internal ports of all the servers and the auto report port of the media server and do port mapping in the WAN router and firewall of the servers.

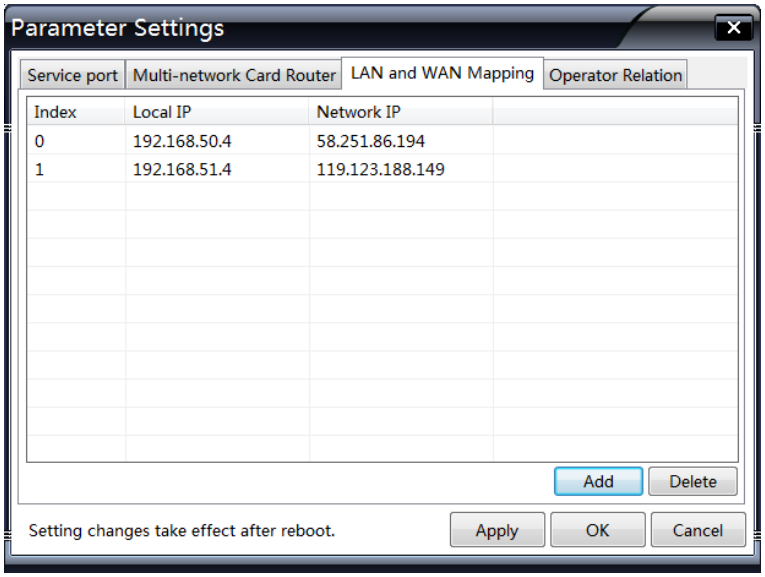
- **Multi-network Card Router**

Refer to the picture as shown below. Set the local IP addresses of the media server to connect to the IP addresses or domain names of the specified devices and servers automatically.



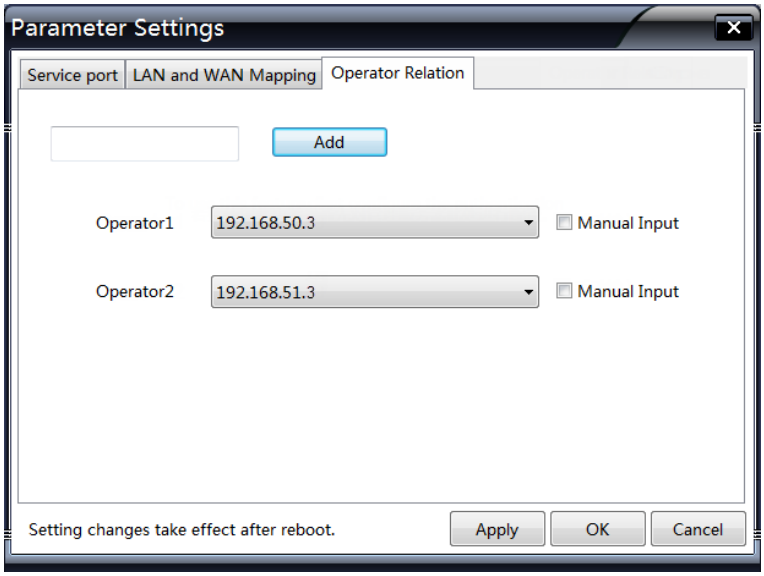
- **LAN and WAN Mapping**

Refer to the picture as shown below. The configuration of LAN and WAN mapping is necessary for all the servers. The network IP address should be set according to the real condition.



- **Operator Relation**

The Operator Relation should be set for all the servers. Refer to the picture as shown below. Set the local IP addresses of the network ports connected to different operator networks one by one and be sure that the setting sequences of the operator networks in each server are the same.



Devices: if the servers adopt the WAN static IP addresses, then the device should auto report (refer to section 6.3.1 for details); if the servers adopt the WAN dynamic IP addresses, then the device should enable DDNS (refer to section 6.3.2 for details).

6.5 Client Login via Different Network Environment

- In a private network (or LAN), input the private IP address (or LAN IP address) and port of the Authentication Server to login to the client.
- If you want to login to the client via WAN, please make sure the Authentication Server and Media Transfer Server are connected to the Internet; then input the domain name (or WAN IP address) and port of the Authentication Server to login to the client.

7 FAQ

1. How to modify the password by yourself?

Login to the monitor client and click Start→Modify Password to pop up a window as shown below. Input the current password and new password and then click "OK" button to save the settings.

2. Unable to login IE client.

1) Please checkup whether the Active X control is forbidden to download and refer to the operating environment in **5.2.1 Operating Environment of Web Client**.

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 192.168.50.3, WAN IP address is 58.251.86.194, domain name is authentication.meibu.com and Web port is 8088. If logging in to the IE client in LAN, please input http://192.168.50.3:8088，or http://58.251.86.194:8088，or http:// authentication.meibu.com:8088；If logging in to the IE client in WAN，please input http:// authentication.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.

1) Please checkup whether this user account is a administrator 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.

1) Please checkup whether the schedule of sensor alarm, motion detection alarm, etc. are set in the NVMS-5000 system.

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

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

1) Please checkup whether the user has the authority to access the decoders.

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

1) Please checkup whether the storage server has been created.

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

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

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

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 go to "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.

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 and media transfer server, the storage server still cannot save.

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

10. Why does the PTZ control interface is blank after the user goes to the monitor client?

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