View Management System 2.0(VMS)

User Manual

2018-07

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I. Product Overview

1. Overview

View management system (VMS 2.0, hereinafter "VMS 2.0") is the professional software for the central management of the front end network monitoring devices, including NVR, DVR, IPC, MDI, SDI and etc. It is to mainly fulfill the functions as real-time preview, video playback, E-map, alarm linkage, decoding on the wall, support the WEB access and mobile phone client access.

VMS2.0 program adopts independent setup package, which is easy for setup and contains the various basic functions for demand. It can be generally used for the small-sized project. Since VMS access data directly from device, the connection of one device with several clients has not been recommended for it intensifies tolerance capacity of device.

At present, VMS2.0 supports five protocols: Register, I8H, I8, SLINK, ONVIF and GB28181. Among them, Register, I8H, NSLINK and I8 are private protocol of our company, which do not limit the number of authorized channels and the duration of use. The free trial period of ONVIF and GB28181 protocol is one month. The trial period is free of charge. The trial period is calculated from the installation date. After the authorization expires, device will not be on line normally. For permanent authorization, please contact the dealer to purchase the encrypted dog and authorization.

2. System Requirements

2.1 Hardware Requirements

CPU：Intel(R) Core(TM) i5 6500 @2.6GHZ or above

RAM：4G or higher

Video card：Integrated graphics card above Intel HD630 or independent graphics card above NVIDIA GTX750

Network card：Gigabit Ethernet or above

CD-ROM drive：DVR-R

Hard disk：250G or more，20G of free space guaranteed

Switch: Gigabit switch or above

2.2 Software Requirements

1）Server2008 and above, windows 7, windows 8, windows 10 (XP is not supported)

2）Microsoft Visual C++2010 X86 Redistribuable Setup

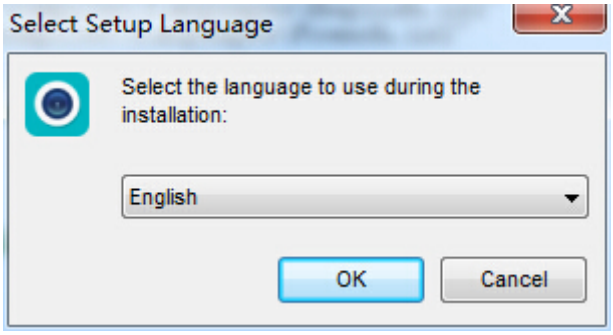
3）Microsoft Visual C++2015 X86 Redistribuable Setup

2.3 System Environment

System Environment: program operation requires occupancy of database, 5252 port and 6666 port. Since a PC can only run one database, please make sure no other database runs and two data ports have not been occupied, otherwise, the program may not run normally.

II. Program Overview

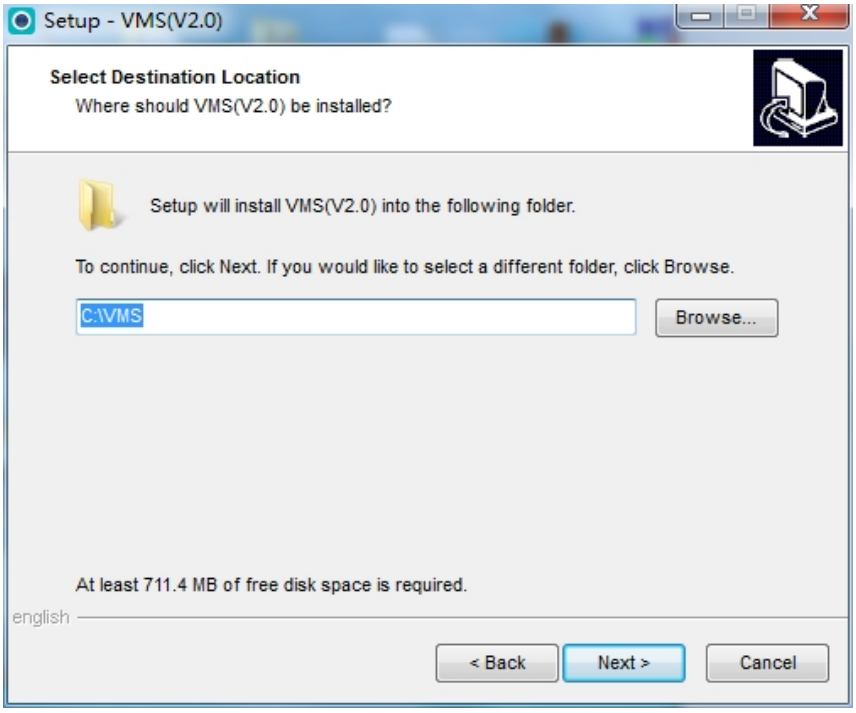
Setup overview, double click to run setup program to open setup wizard:



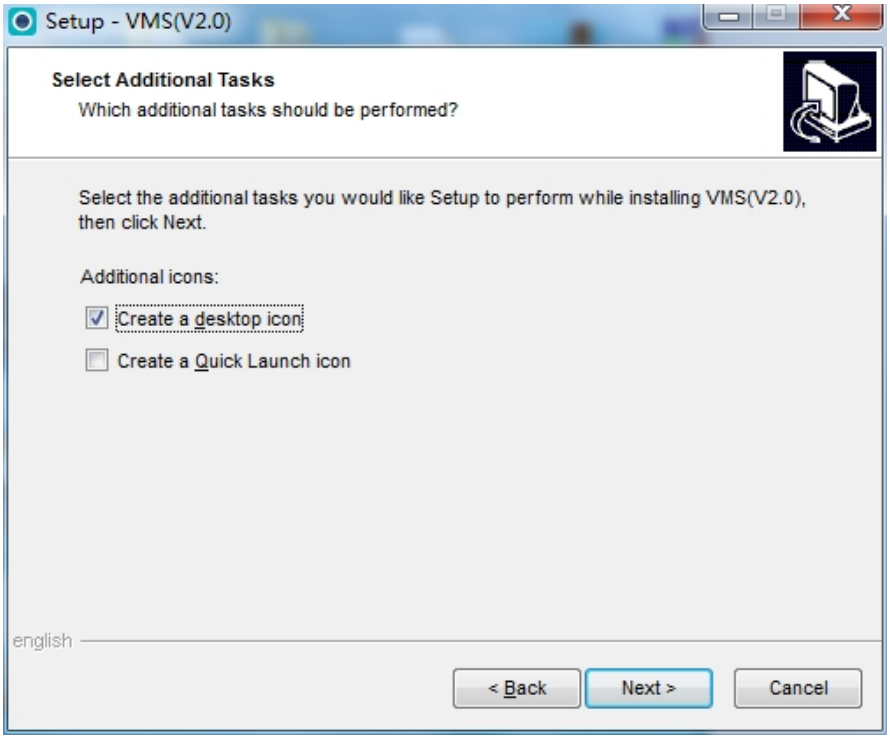
Select setup language, the program automatically recognizes the system language as default option; if other language required for setup, please select in the drop-down box. The initial program supports simplified Chinese and English. If other languages needed, please contact the distributor for translation; click “OK” to confirm as the setup language selected (take simplified Chinese as example):



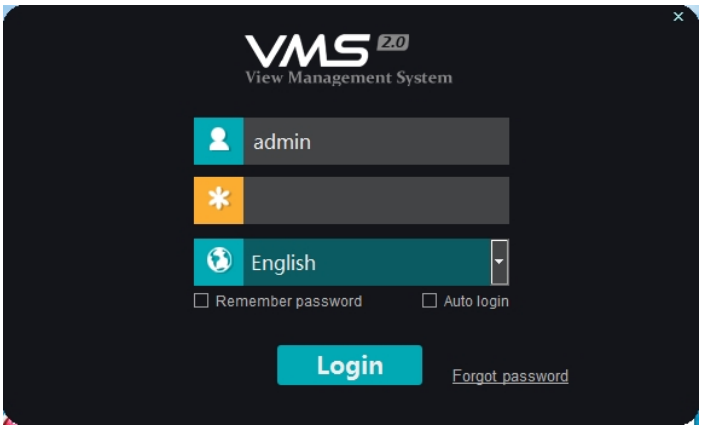
Click next, select setup path:



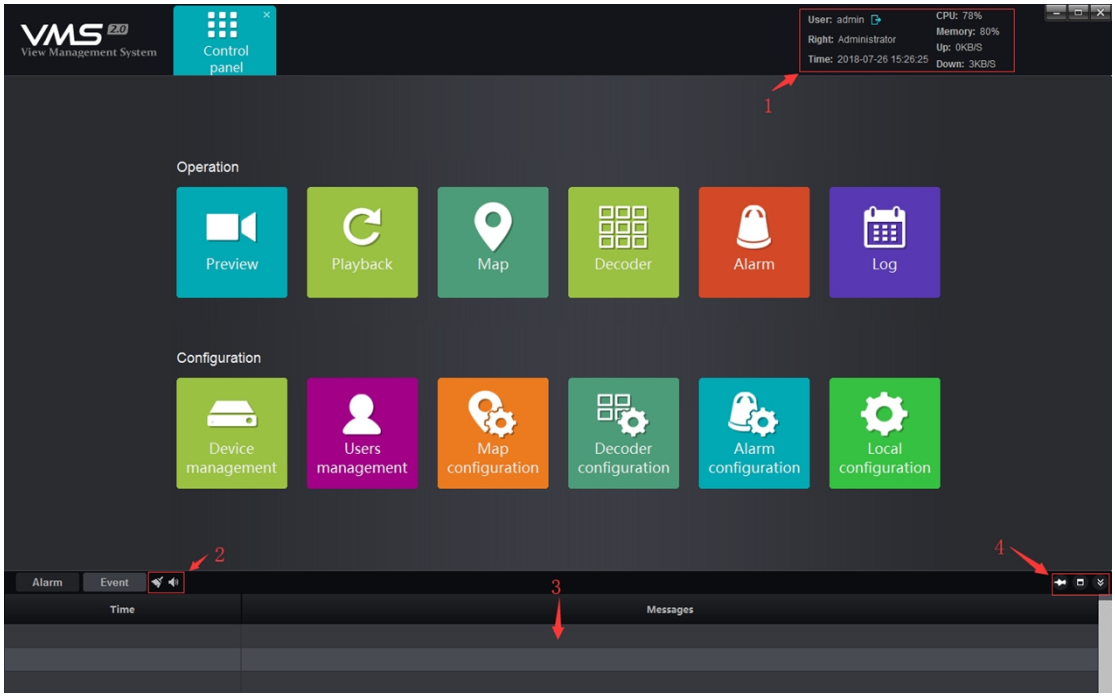
System default path C:\VMS, user can modify as the actual demand, and click "Next" to continue:



Click "Next" to confirm to create desktop shortcut, continue to complete setup (note: computer already setup antivirus program may pop-up prompt; please select "allow" with no exception for the normal setup start of the program), the program runs as the setup completed, as shown in figure:

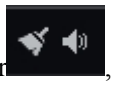


User may manually switch language, initial user name is admin, and initial password is 123456. Enter the password, click “Login”, the password may not need to be entered as “Remember password” selected; the program automatically login as “Auto login”; the function of automatic login can be canceled in the local configuration.When you forget password of admin, click the "Forgot password" to get the temporary key to the supplier for getting temporary password .Enter program main interface, as shown in figure:

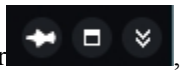


1) Display current user, user right, current time, system CPU memory consumption and real-time network data flow, click  to log out current login.

2) Display real-time alarm message and event message, double click on the alarm message to open the preview of the current alarm channel for user to view alarm in real-time manner.

3) The functions in the toolbar , from left to right, are: clear alarm/event message, close

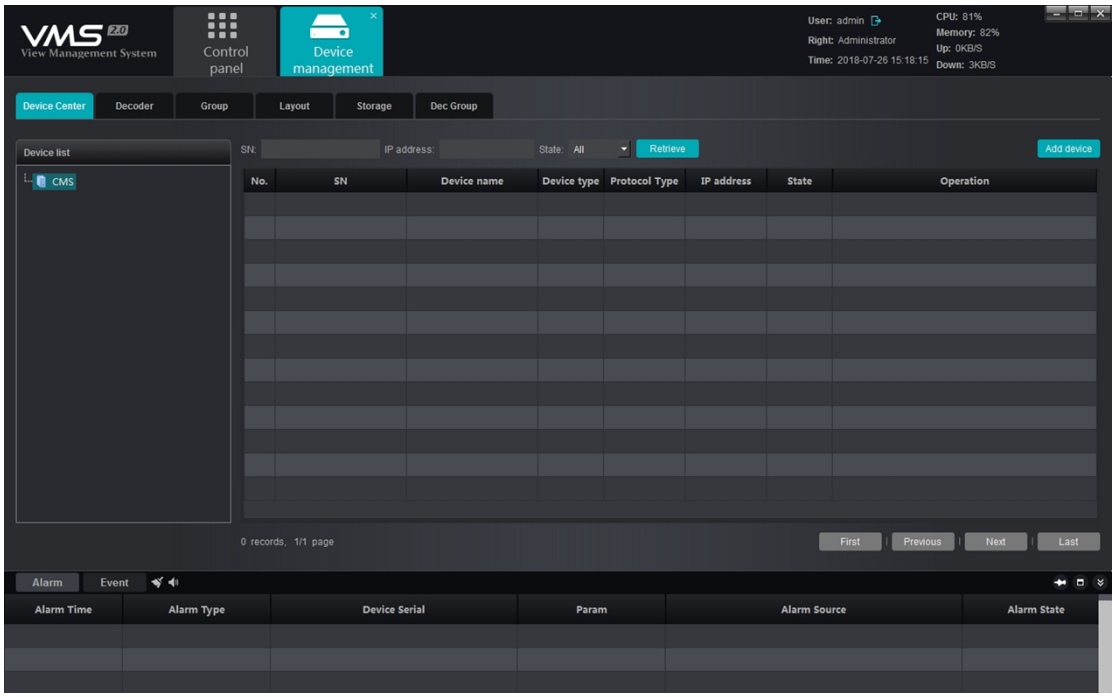
alarm sound/open alarm sound.

4) The functions in the toolbar , from left to right, are: stick window, window full-screen, hide window.

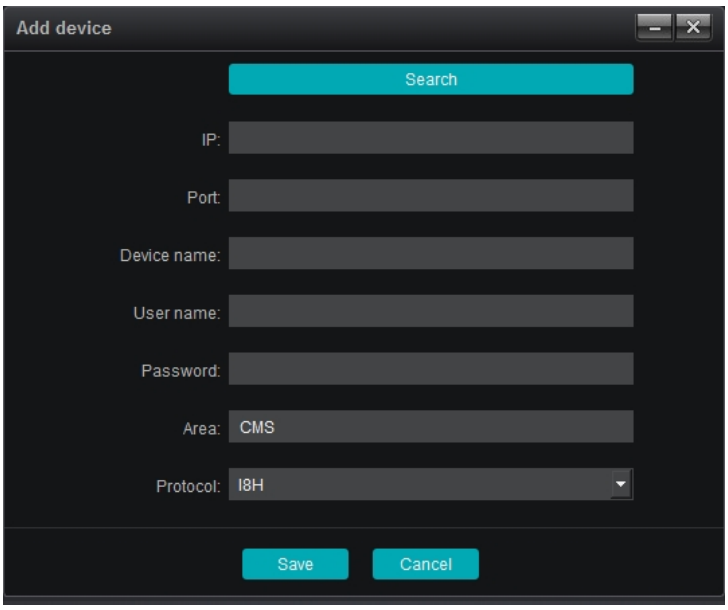
1. Device Management

1.1Add Device

Click main interface “Device management”, enter the main interface of device management.

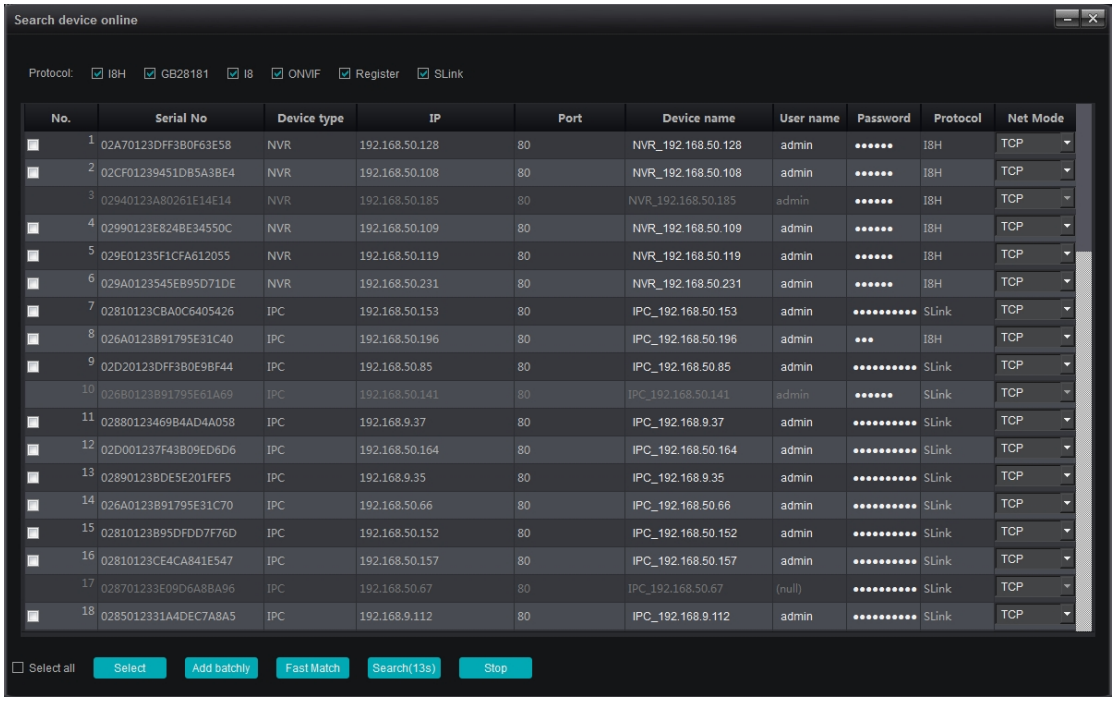


Device management interface displays relevant information of all devices added to VMS, including device type, protocol type and online and offline status; click “Add device” at the top right corner, the add device interface pops up:



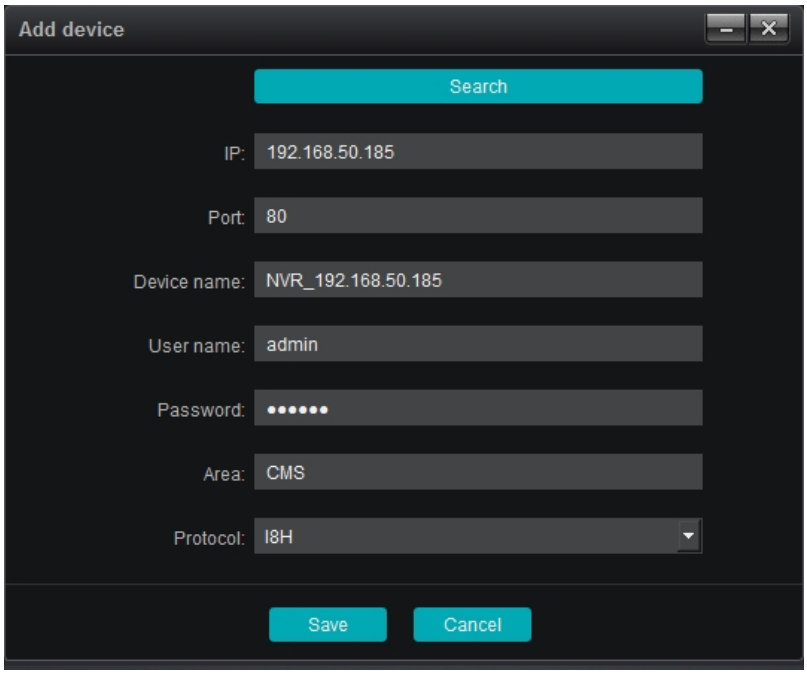
Select the protocol, Register protocol is the active registration protocol, this protocol is our independent development protocol, front-end device which supports this protocol to add device through this protocol; I8H, I8, SLINK are private protocol developed independently by our company. I8 is aimed at the device with older version. Device does not support I8H, It can be accessed through this protocol, SLINK is an improvement made on the basis of I8H. The two protocols are basically the same and can be used docking for each other. ONVIF protocol is a public protocol, which is used to access the third party device which supports this protocol. GB28181 protocol is the national standard protocol, and is used to access the third party device which supports this protocol. Active registration, I8H, SLINK and I8 protocol does not require a authorization, and can be accessed freely; ONVIF agreement and GB28181 protocol can be used free of charge during trial period. After trial period, it is necessary to purchase authorization to operate normally.

As the protocol selected, it is to click “Search” to search all online devices in the LAN (take I8H protocol as example):



(Note: devices displayed in gray are those devices that have been added to the device list; click on the "IP address" can sort them on the basis of the device IP)

Select the device to be added, click the "Select" button below:



Device Name: define by the user as the actual demand

User Name: device user name

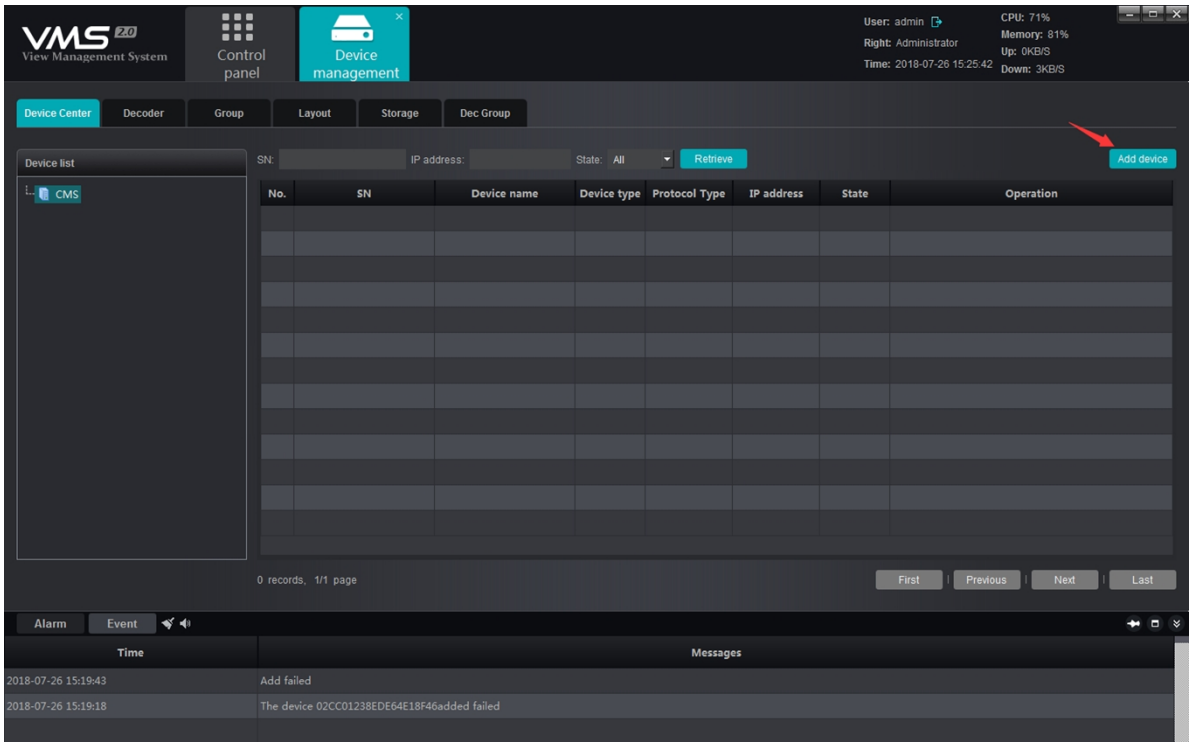
Password: device password

Enter the correct user name and password to add the device to the device list, in addition to the search interface to fill in the correct password click "batch add" can also be added normally (note: devices

connected by private protocol will automatically get the user name and password in the list, some older version devices may not get a password. Quick adding function is that there are more than one device use the same password, check them together, use quick adding, only need to fill in the password and user name for one time.

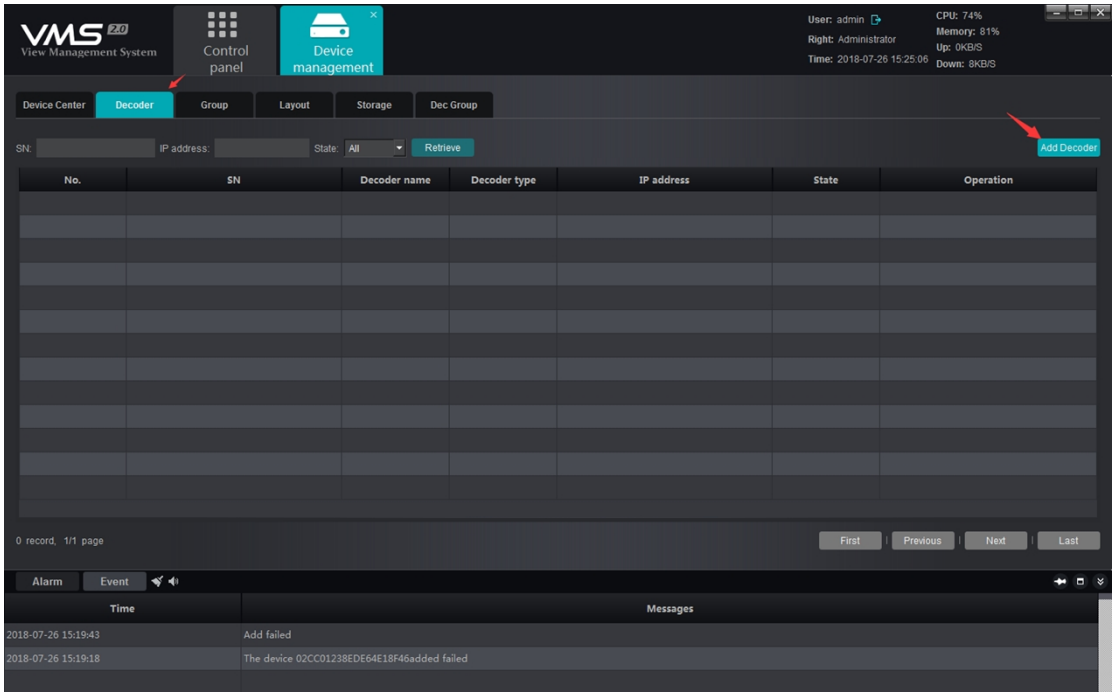
Modify IP function (part of VMS2.0 version is not supported) for batch modification of device IP address, this function only supports I8H, SLINK protocol, check the device that needs to modify IP, click “modify IP”, fill in the start address, the device IP will be modified in turn. When the modification is completed, it will exit.

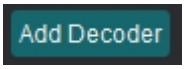
After the equipment added, as shown in the figure：



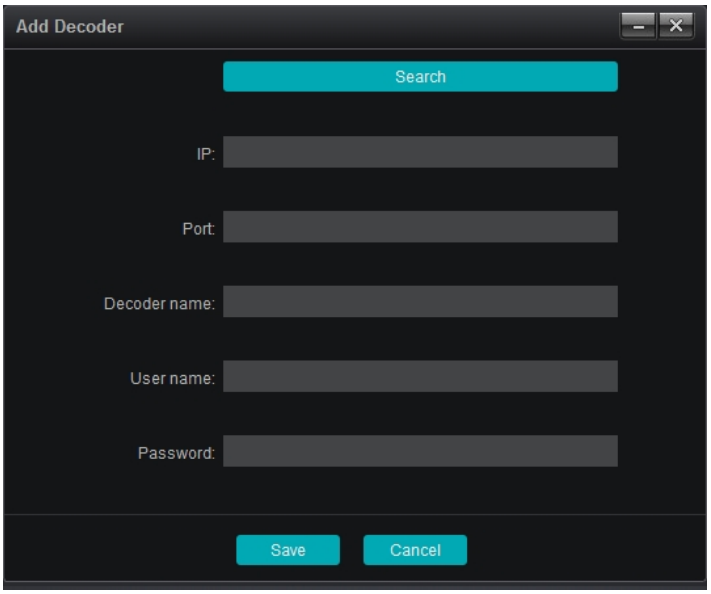
We can edit&delete the equipment,call remote configuration and modify the channel name.The remote configuration is only supported by 18H, SLINK protocol,calling the remote configuration can view or modify related parameters of the front-end equipment .Changing the channel name is only supported by 18H, SLINK and 18 protocol,after calling it can be quickly and conveniently to modify channel name of the front-end equipment . (Call IE to open the plug-in version）

1.2Add Decoder

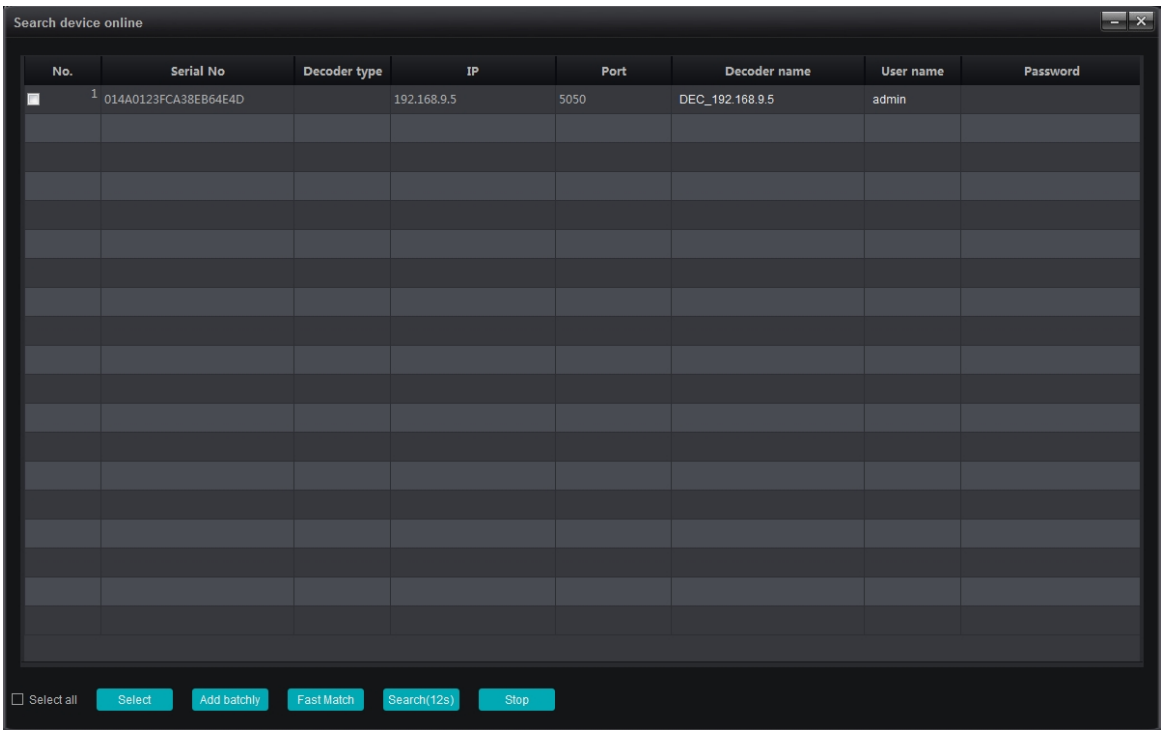


Switch to decoder interface, this interface, similar to add device, displays all decoders added to the server at present and the online and offline status of the decoder; the added decoders can be edited and deleted; in case of new decoder to be added, click the 

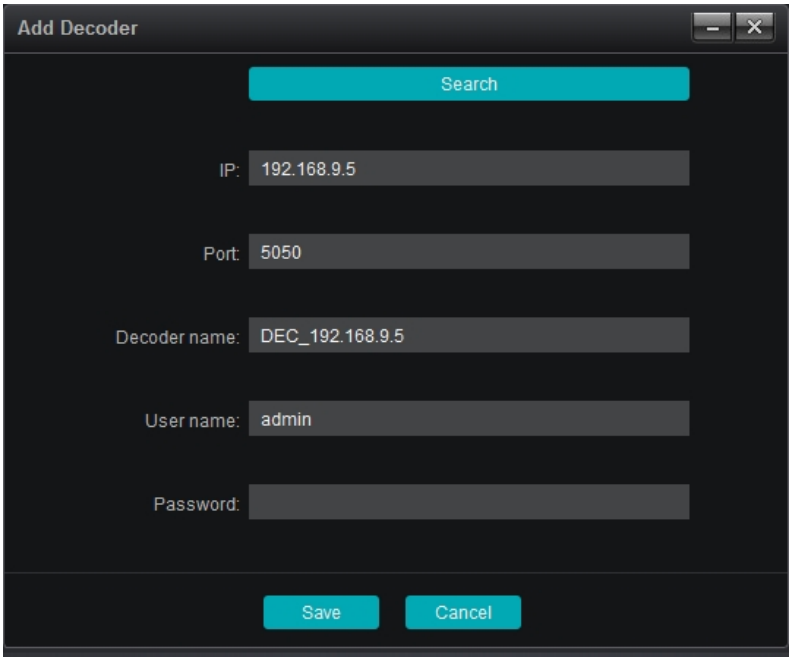
button in the top right corner:



Click “Search” can search all the online decoders in the LAN, similarly, the decoder added to the decoder list displays in grey and it can’t be added repeatedly:



Select decoder to be added, click “Select”:



Decoder Name: user can define and modify as the actual demand

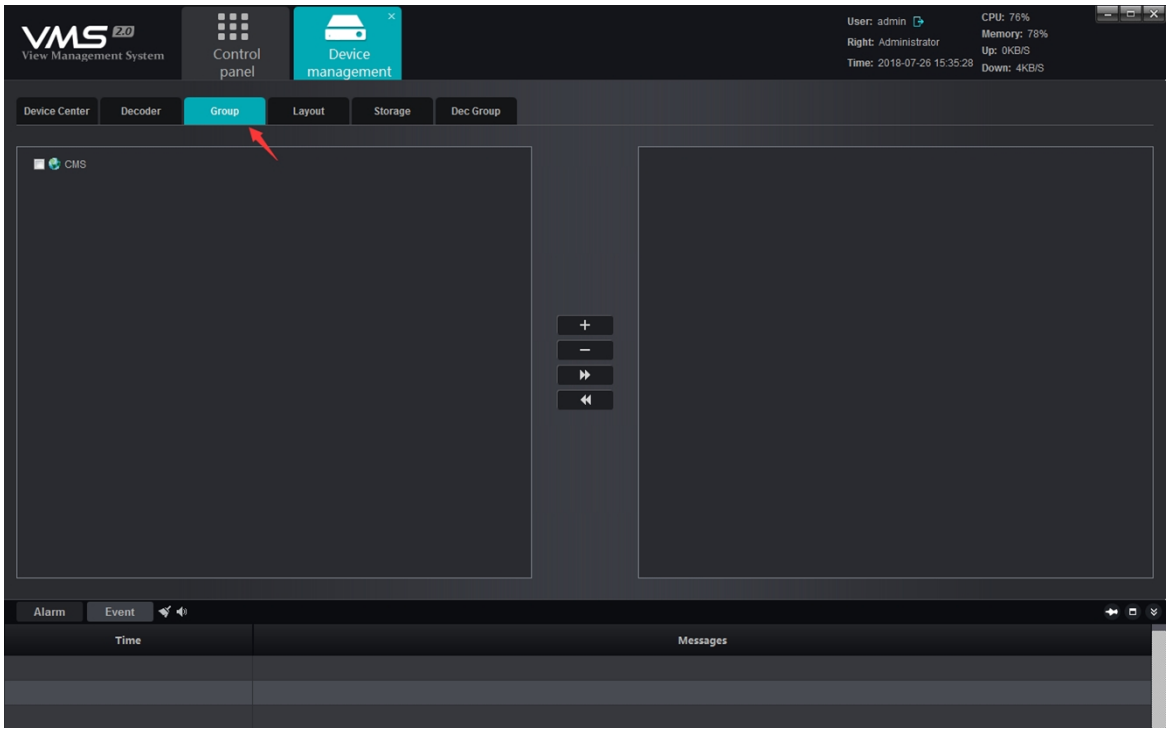
User Name: default as admin

Password: default as null

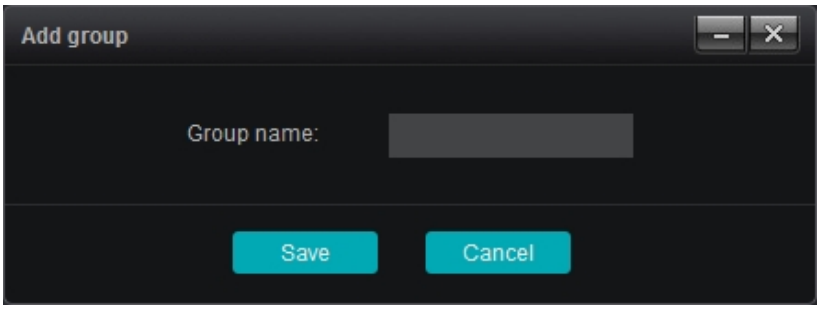
As completed, click “Save” below can then add the decoder to the server; in case add batchly needed, select multiple decodes in the search interface, fill in the right password, click “Add batchly” to add multi devices with one key.

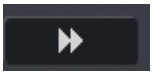
1.3 Channel Grouping

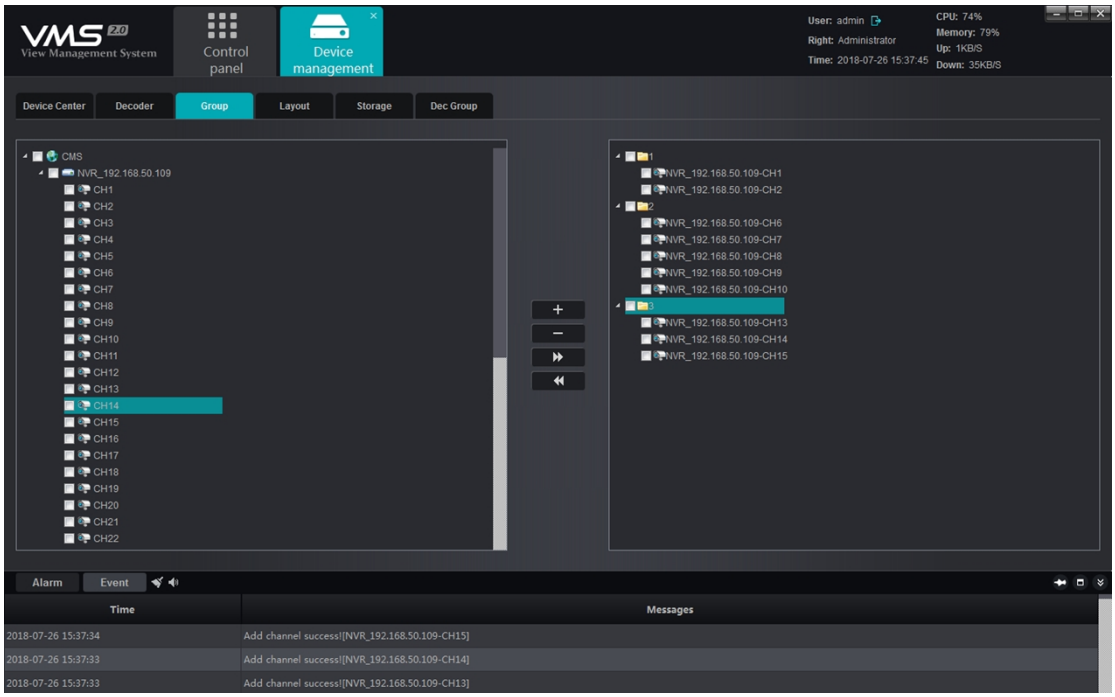
Switch to the page of “Group” in the device management module, as shown in figure:

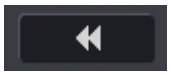


Right-click in the blank area on the right side, select to add group:



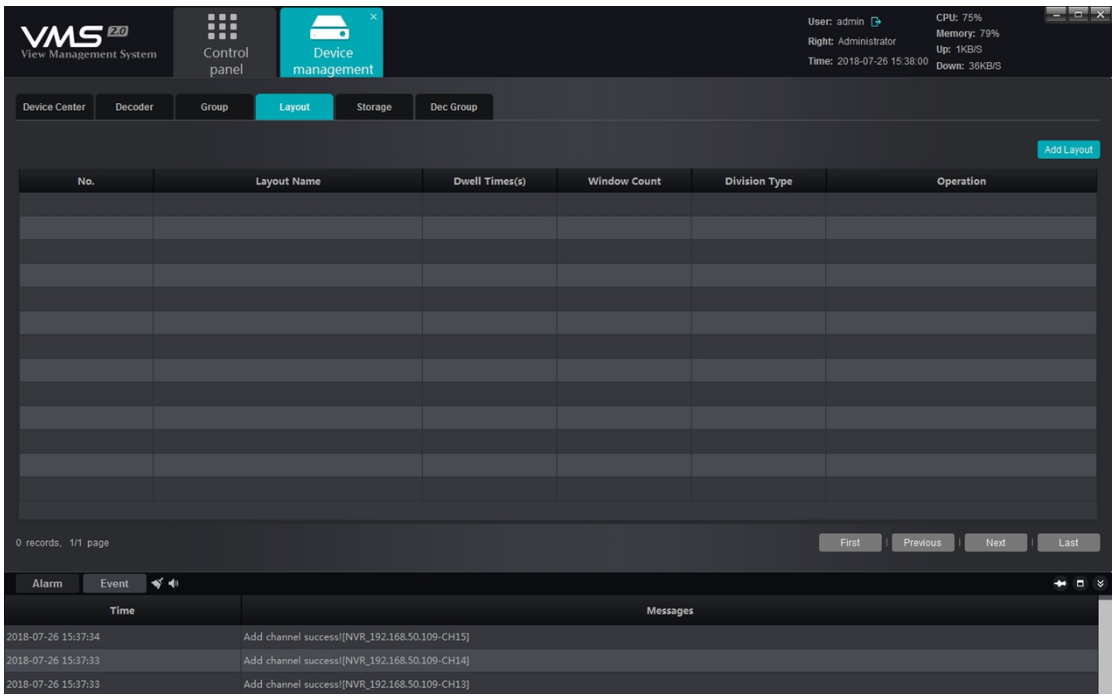
Fill in the group name, click “Save”, create the group; when succeed, select the left side device channel, then select group, click  button to add the relevant channels to the corresponding group; the actual application of grouping will be described in the preview module. When adding has been done, the effect as shown in figure:



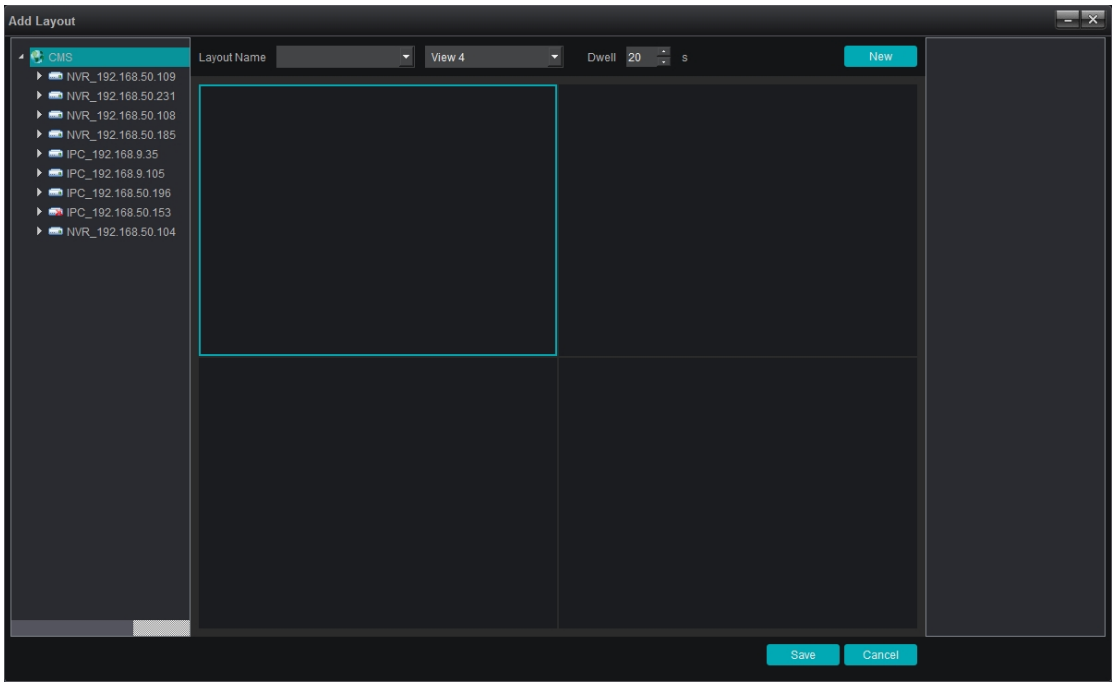
Similarly, select the channel in the group, click  can delete channel from group.

1.4 Layout

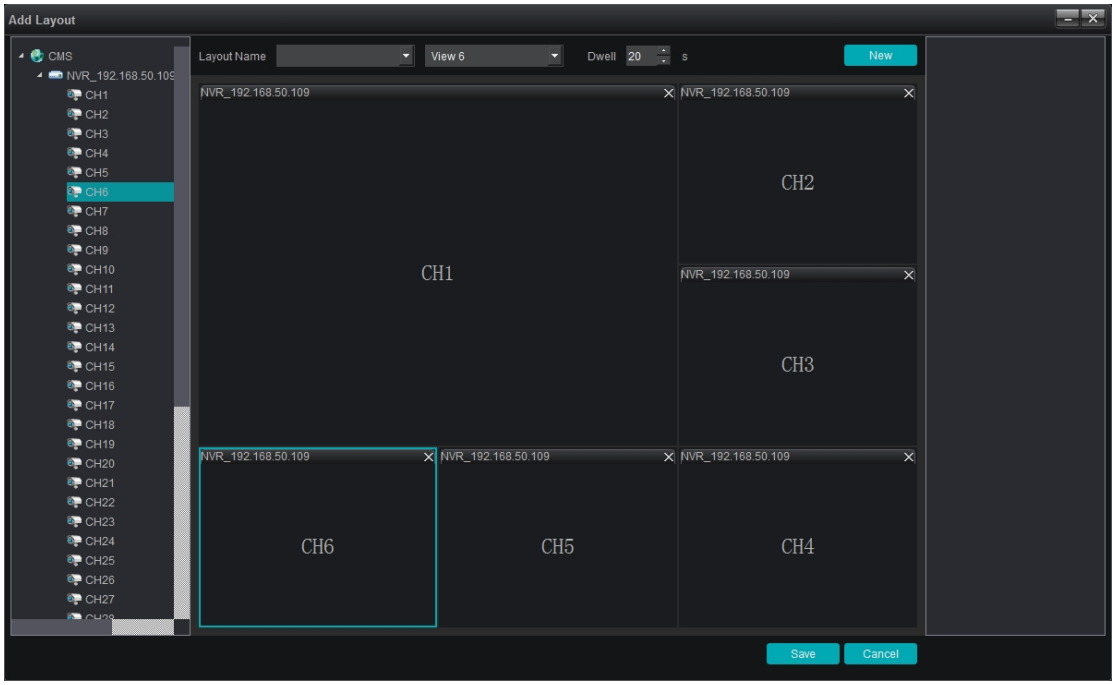
Switch to the page of “Layout” in the device management module, as shown in figure:



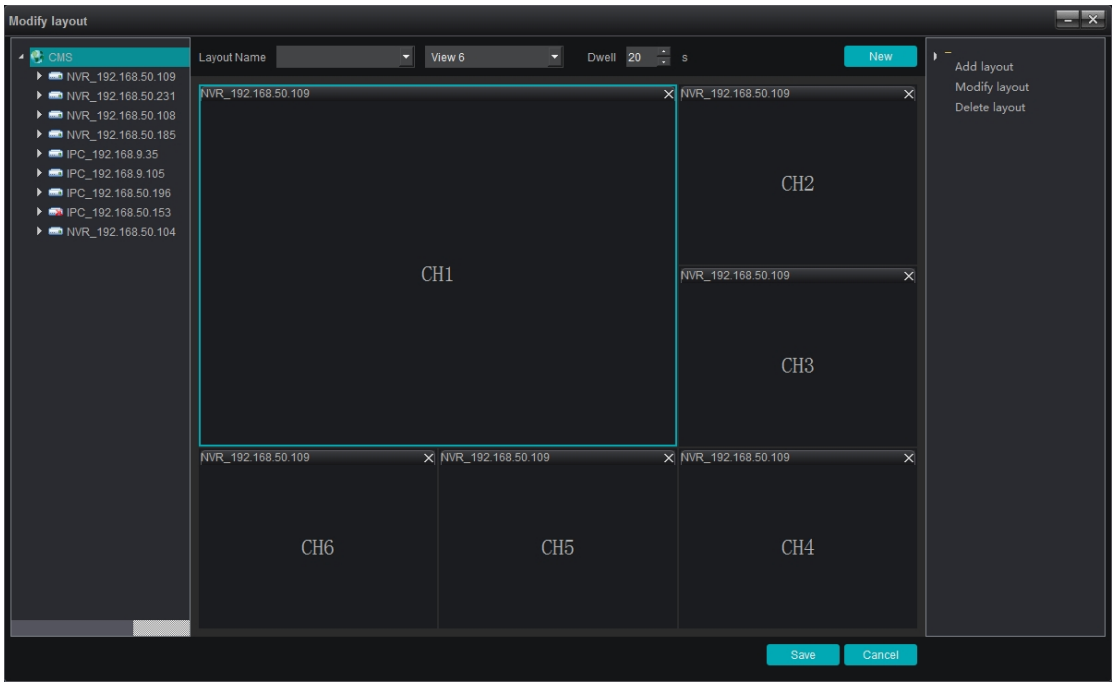
Click the button of “Add layout”, pop up the window:



Fill in the name of layout, select the number of split screens as the actual situation m; split screen include standard split and wide-screen split, in which, ordinary split screen picture displays in 16:9 and the wide-screen picture displays in 1:1; select the duration of stay and then drag the channel for layout, exemplifies with 6 split screens:



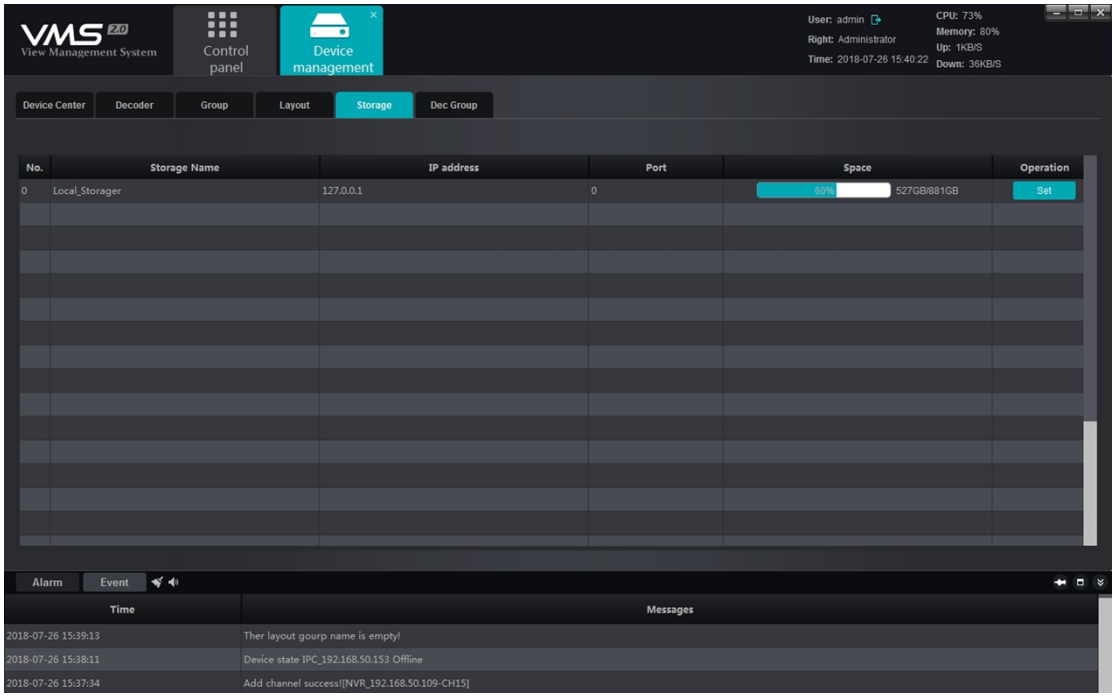
Click “New” or click “Save” as layout completed and the saved layout information shall be displayed on the right side:



Right click the existing layout to edit the layout; the application of the layout function elaborates in the preview module.

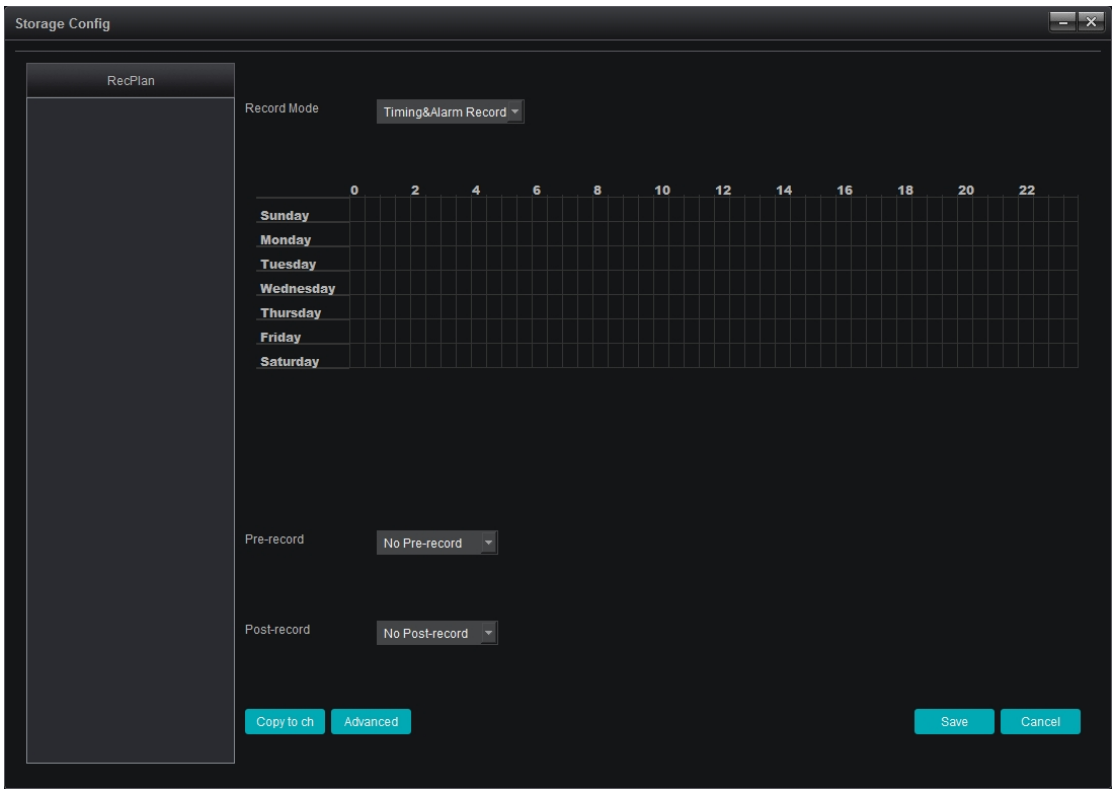
1.5 Storage Server

Switch to the page of “Storage” in the device management module, as shown in figure:

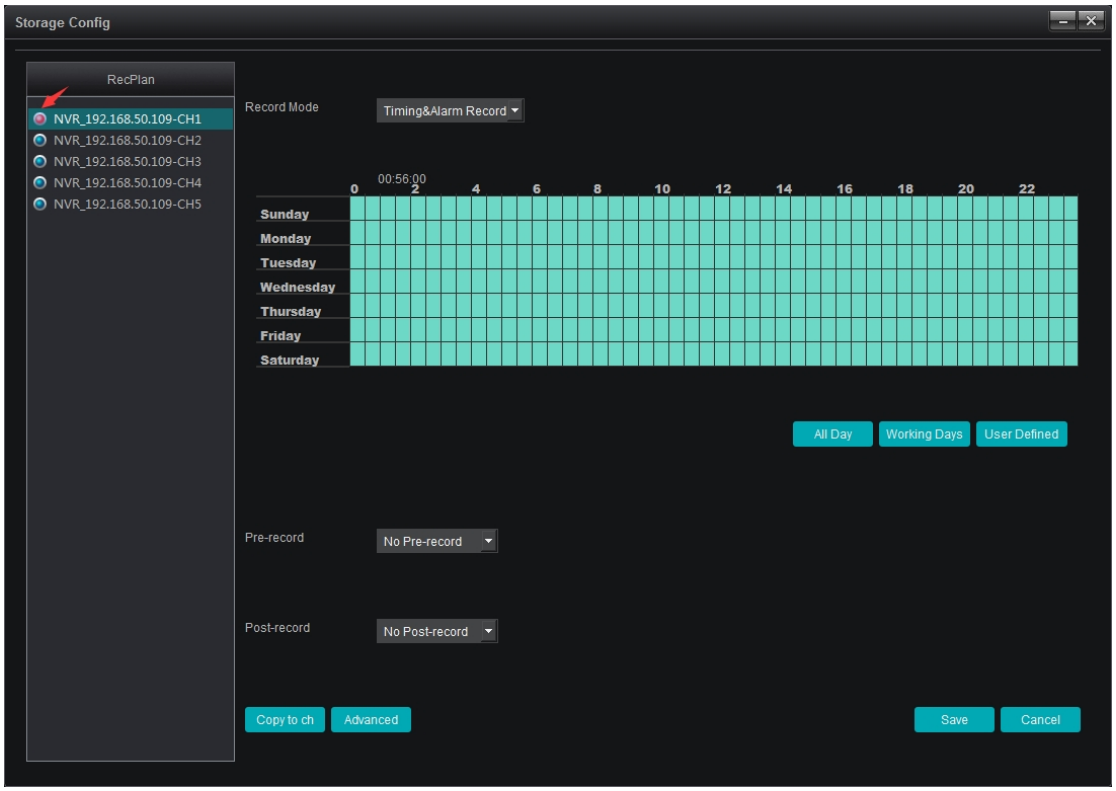


This page displays storage server relevant information, including server name, server address and used space of disk, click 

to set storage server, as shown in figure:



Right click the blank area of the RecPlan on the left side, add channel to the storage server; when done, and select the channel to set the RecPlan



RecPlan has default whole day template and working day template; in case the user need other RecPlan template, click “User Template” to add; start to record as the RecPlan set, the red arrow indicated

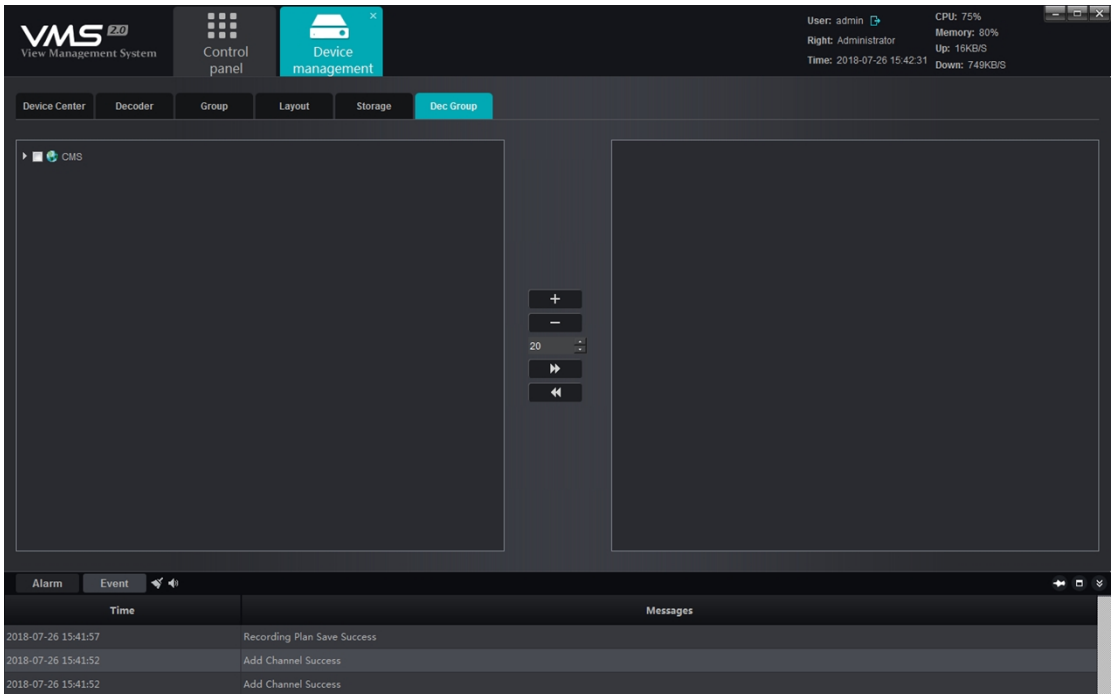
place in the figure shows the recording status of the channel; red means the channel is working, blue means otherwise.

Video recording mode includes four types: timing & warning video, timing video, alarm video, and stopping video, of which timing & alarm video refers to timing plus alarm video, that is to record timing video when no alarm triggered, record alarm video when alarm triggered; timing video refers to only record timing video; alarm video refers to only record the video triggered by the alarm; the stopping video refers don't record video; the pre-record and delay function only aims at the timing & alarm video and the alarm video, mainly aimed at the video triggered by the alarm; channel quota refers to the specified storage space for the channel; copy the channel can copy the video program of a channel to the other channel that has added to the storage server; in the advanced settings, which section can be used for video, which section are not used for video, the default is all other plates are used for video except the system disk. When the settings are completed, click the Save button to take effect.

In case the channel added to storage server shall be modified, right click the channel added to add channel, delete single channel and delete all channels; click "Save" as the configuration completed and recording starts.

1.6 Decoding group

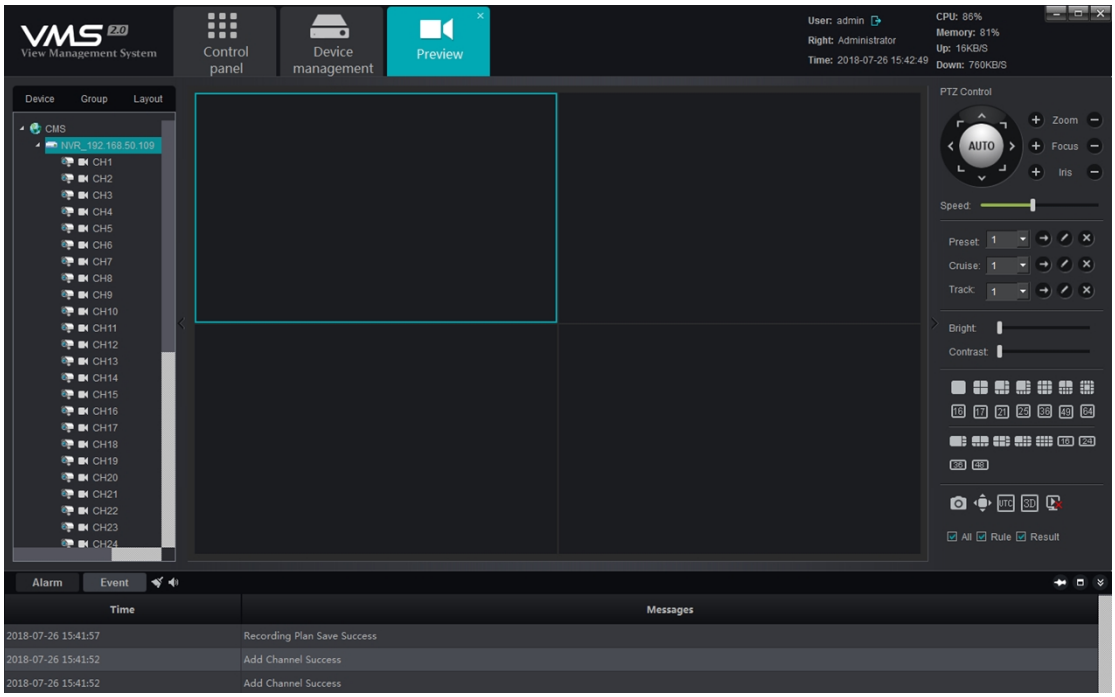
In the device management module, switch to decoding group page, as shown in figure:.



The operation configuration of this group is similar to the preview group mentioned above, except that this group is used for inner-group round touring on the decoder, please refer to the introduction of the decoding management module below.

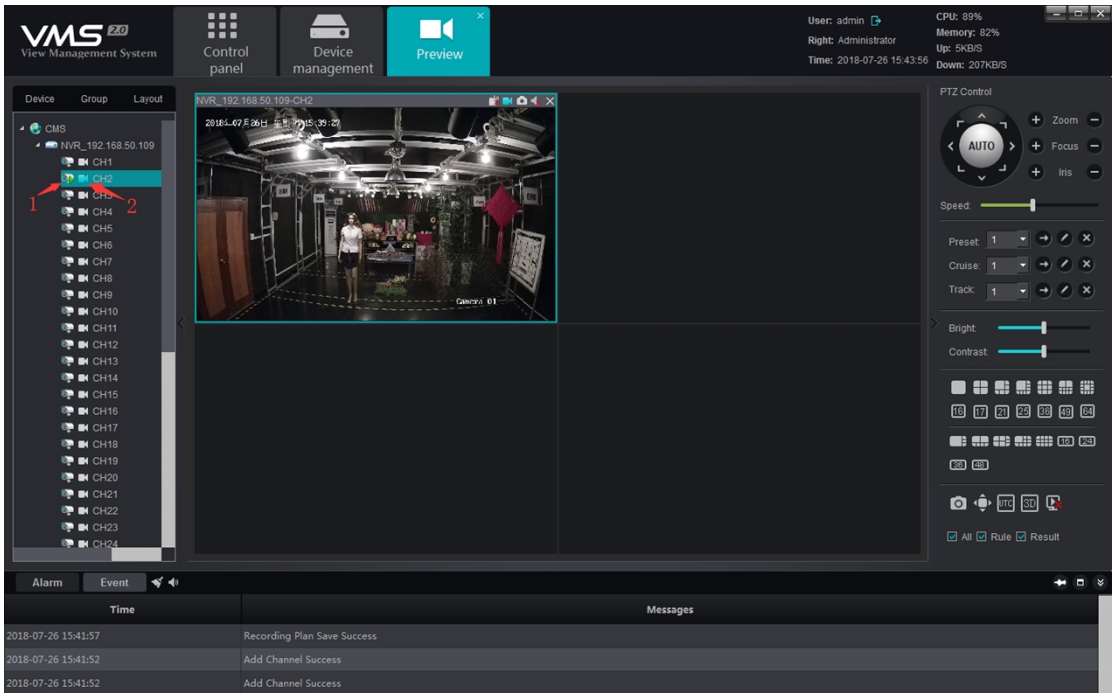
2.Preview

Click “Preview” in the main interface to enter into Preview module:



As shown in figure, device list is on the left side, displaying all devices added currently and the online and offline status of device. PTZ control interface and video parameter control interface are on the right side. Below the video parameter control interface is the split screen switch button, with which, user can manually switch the number of split screens according to the actual demand. Split screen mode includes standard split and wide-screen split, corresponding to different window scale. The differences between them have been elaborated in the layout module, thus no separate introduction now. Besides the regular kinds of split screens, there are several special-shaped splits for customers to select corresponding numbers as the actual situation.

Double click in the device list on the left side or drag the channel to window opens the preview of the device channel (channel opened preview indicates a triangle image, showing this channel is in preview):



Note: the green triangle on the channel shows this channel is in preview in figure 1; the image in figure 2 shows the local recording status of this channel, white  shows this channel doesn't turn on local recording, blue  shows this channel turns on local recording and is working; right click on the channel can Open/Close local recording.

2.1 Device/Right Click Function of Channel

1) Open all main streams

Open device main stream with one key, maximum 16 channels main stream can be opened with one operation;

2) Open all sub streams

Open device sub stream with one key, maximum 16 channels sub stream can be opened with one operation;

3) Close all previews

Close all previews that this device opens with one key;

4) Open recording

Open the local recording of all channels of the device with one key;

5) Open/close intercom

Open the intercom of PC and device

6) Open/close recording

Open/close the local recording of this channel;

7) Main stream (the option works only in the mode of non-automatic stream)

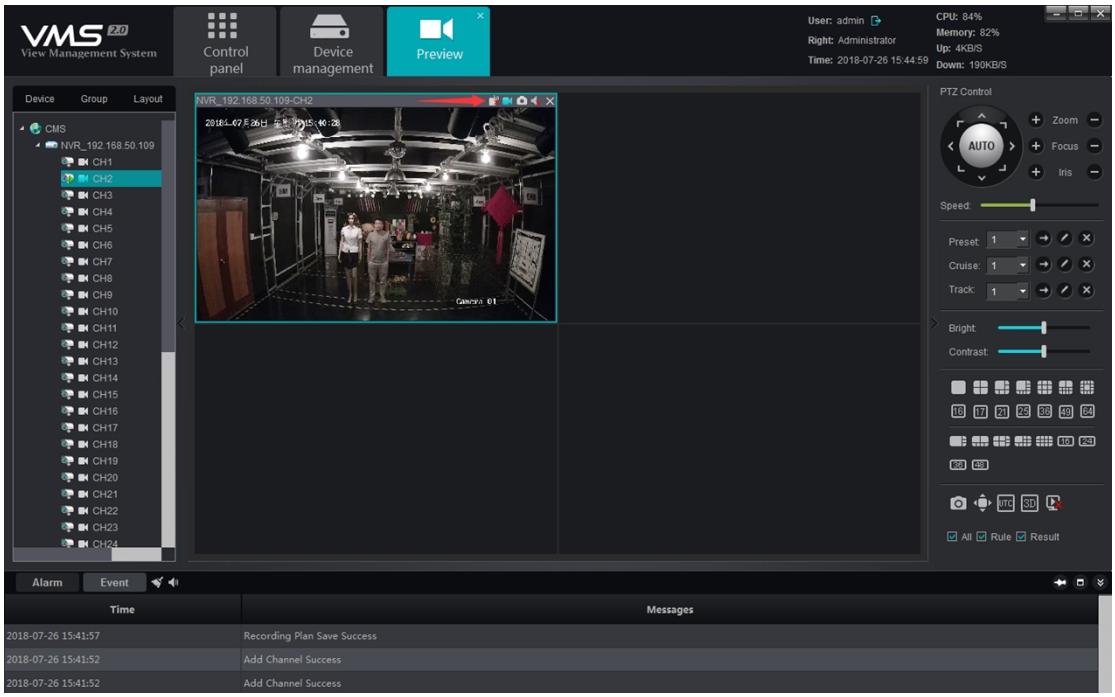
Manually switch the stream to main stream for the channel;

8) Sub stream (the option works only in the mode of non-automatic stream)

Manually switch the stream to sub stream for the channel.

2.2 Preview Window Toolbar

Open preview, there is a row of shortcut toolbar above the preview, as indicated in the figure:



1） channel intercom switch, click on it can Open/Close intercom of PC and this channel;

2） device recording switch, click on it can Open/Close the local recording of this channel, and blue shows it is in the on-state, while white shows it is in the off-state;

3） capture button, click on it can capture the current picture of this channel;

4） audio preview switch, click on it can Open/Close the audio of this channel, and shows it is in the off-state, shows it is in the on-state;

5） preview close button,click on it to close the current preview of this channel.

2.3 Preview Interface Right Click Function Button Overview

There is a row of function buttons on the right lower side of the preview interface, , among which:

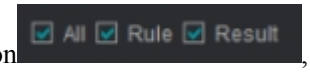
1） the capture button, select preview window, click on this button to capture the picture in the selected window;

2） fullscreen button, click on it can switch the selected window into fullscreen;

3） Open/Close button for UTC function button,click to open the UTC function,need the front-end equipment support;

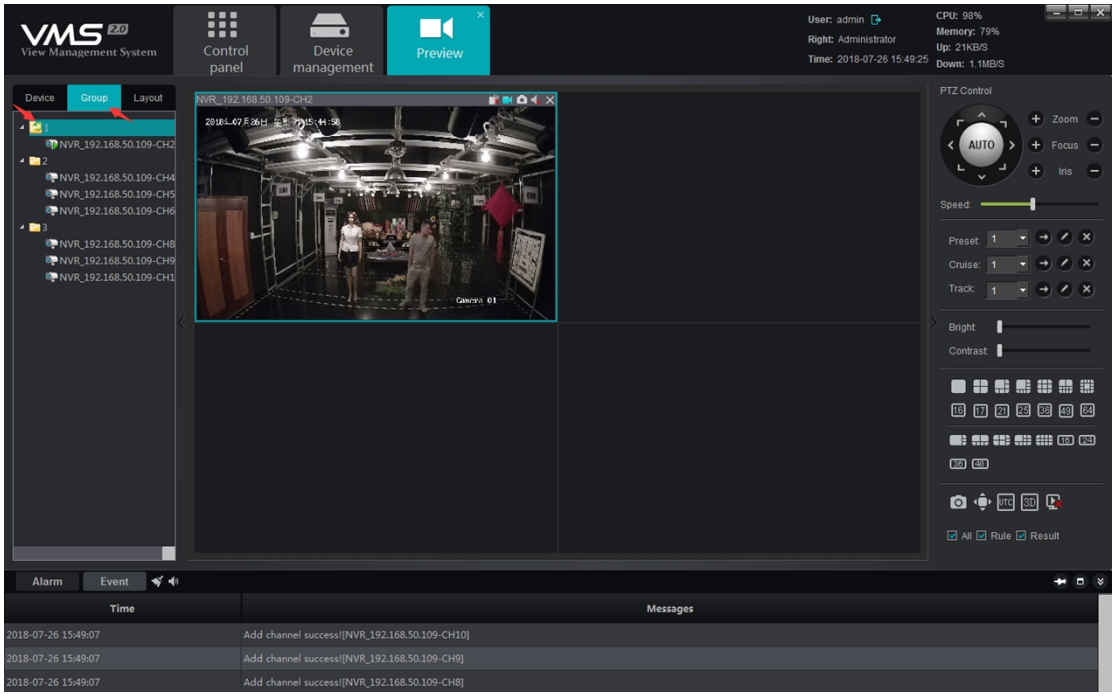
4）  Open/Close button for 3D positioning function button，click to open 3D positioning function, need the front-end equipment support and access through18H protocol;

5）  close all current preview button, click on it can close all preview opened at present.

Intelligent detection , front end device supporting intelligent detection including NVR and IPC; as selected, the setup intelligent rule can be displayed in the preview screen; if target triggers the intelligent alarm, the target triggering the alarm can be displayed in the preview screen.

2.4 Device Grouping Polling

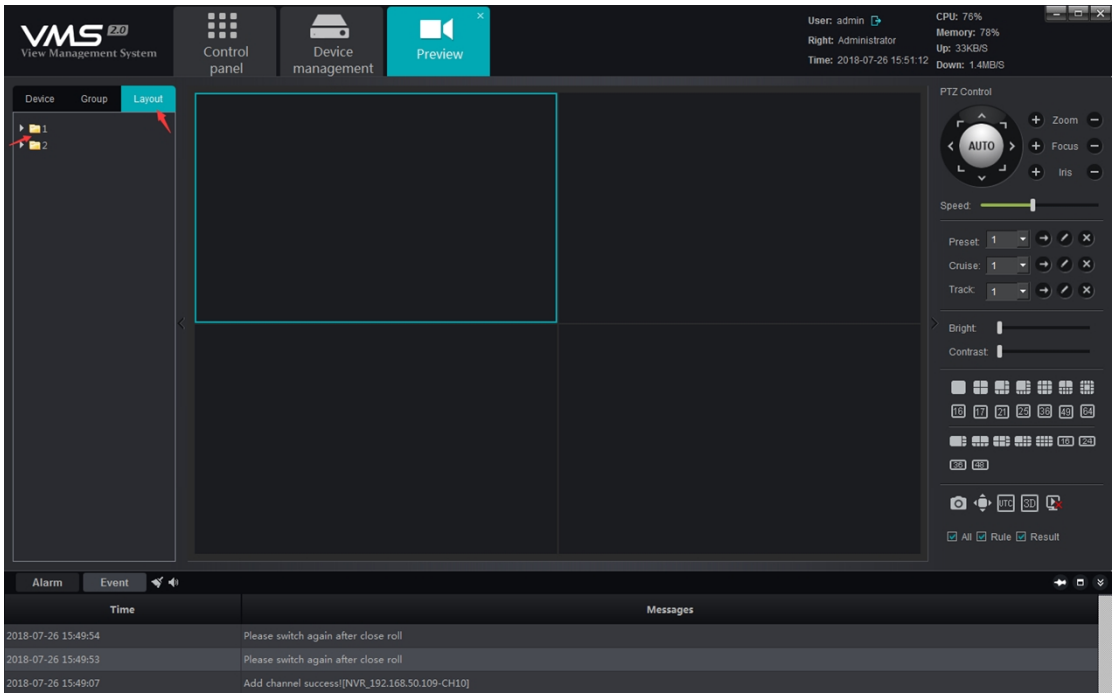
Add two or more groups (see device management—grouping for specific operation), as group created, switch to group page in the preview interface, as shown in figure:



Right click the selected group can operate on “Start polling ” and “Stop polling”, the interval between polling can be set up in the local configuration module (elaborate later) and the default interval is 30 seconds.

2.5 Device Layout Polling

Add two or more layouts (refer to device management—layout for specific operation), as layout created, switch to layout page in the preview interface, as shown in figure:

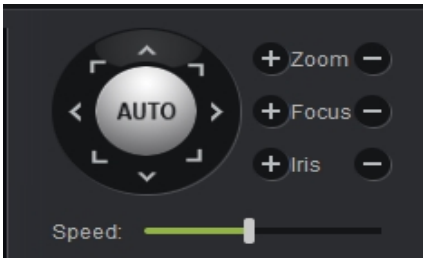


Right click the selected layout can open the preview of this layout with one key; select “Start polling” can start polling among several layouts and the interval between polling can be set up when the layout has been set up; click “Stop all” stops the polling or close current preview.

2.6 PTZ

2.6.1 PTZ Control

The camera has been controlled in 8 directions, including up, down, left, right, upper left, left lower, upper right and right lower; zoom can control the camera to zoom in or zoom out and adjust the visual angle; focus can adjust the focal length of the camera to ensure the clearness of the picture; the enlargement and narrowing of the aperture ensures the brightness and depth of field of the picture; the setting of the PTZ control speed can adjust the rotation speed of the speed dome camera; click on AUTO, the speed dome camera automatically starts Scanning; as shown in figure:



2.6.2 Preset, Cruise and Track



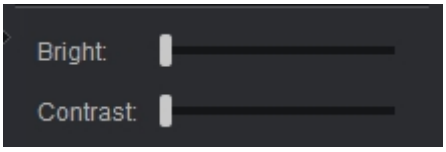
1） Preset: the rotation of the PTZ camera requires the setting of the direction of the preset, click can set up the preset, maximum 255 presets can be set; in case the preset shall be adjusted, select the preset, click to call; click on to delete the preset.

2） Cruise: as the preset done, click on to edit and set the Cruise path, maximum 255 Cruise paths can be set; click on can call the Cruise path set; click on to delete the Cruise path set.

3） Track: click on to edit and set the track; click on can call the track set; click on to delete the track set.

2.7 Picture Parameter

As the preview opened, the picture parameter can be adjusted; the adjustment here doesn't change the front end parameter of IPC but the display effect of the picture in the client end has been adjusted; as shown in figure:



User can adjust the relevant parameters as bright, contrast according to the demand.

2.8 Preview Digital Zoom

As the preview opened, select the corresponding window and then scroll the wheel of the mouse to adjust the digital zoom in and zoom out of the current picture.

2.9 Preview Multi-screen Display

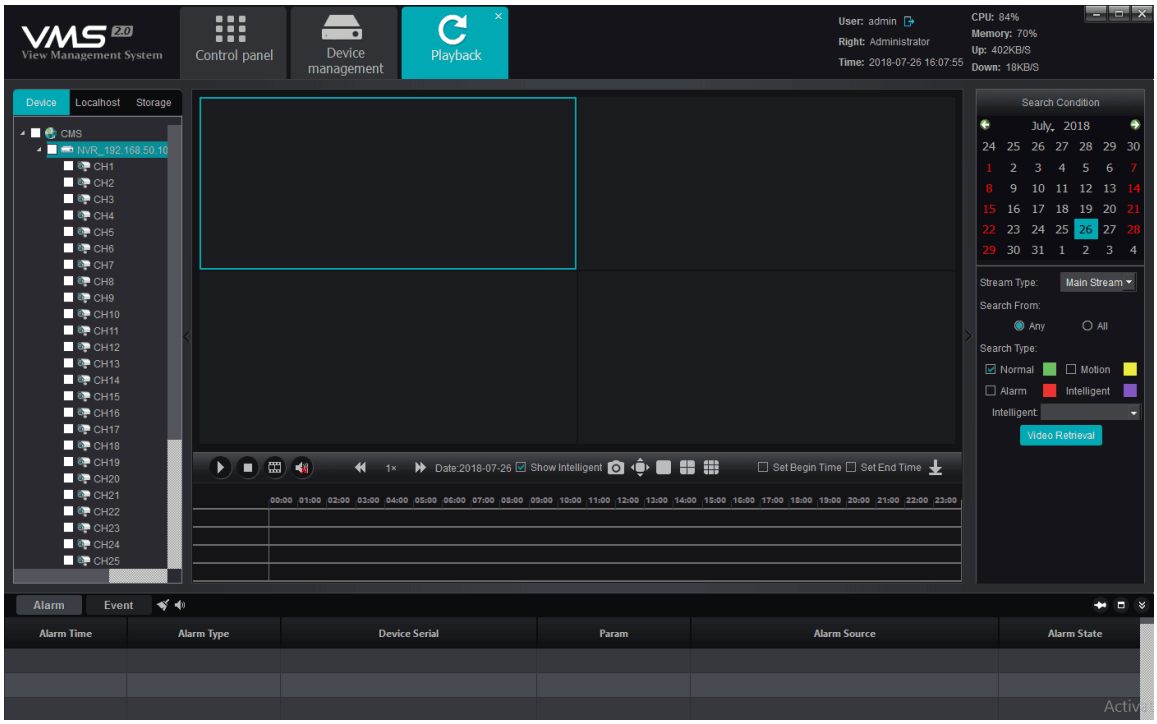
Preview module can open multiple modules and each of them is active and independent. If user VGA card supports multi-monitor output, the demand of multi-screen display can be fulfilled. Considering the actual situation, the maximum preview module to be opened can be restricted to 5. For instance, two preview modules have been opened, drag one of them out (the same operation can drag the module back as it has been dragged out) to another monitor, the specific effect as shown in figure:



Among them, the one on the left side is the primary screen and right side is the complementary screen; the operation of preview between two screens doesn't influence each other, and the close of complementary screen will not influence the primary screen, however, the complementary screen will be closed if the primary screen closes. User can select the number of the preview screen to be opened according to the actual demand in the actual application, for instance, one screen can be selected to open Cruise and display independently in one monitor and the other screen to carry out the operations of temporary preview, monitoring and intercom.

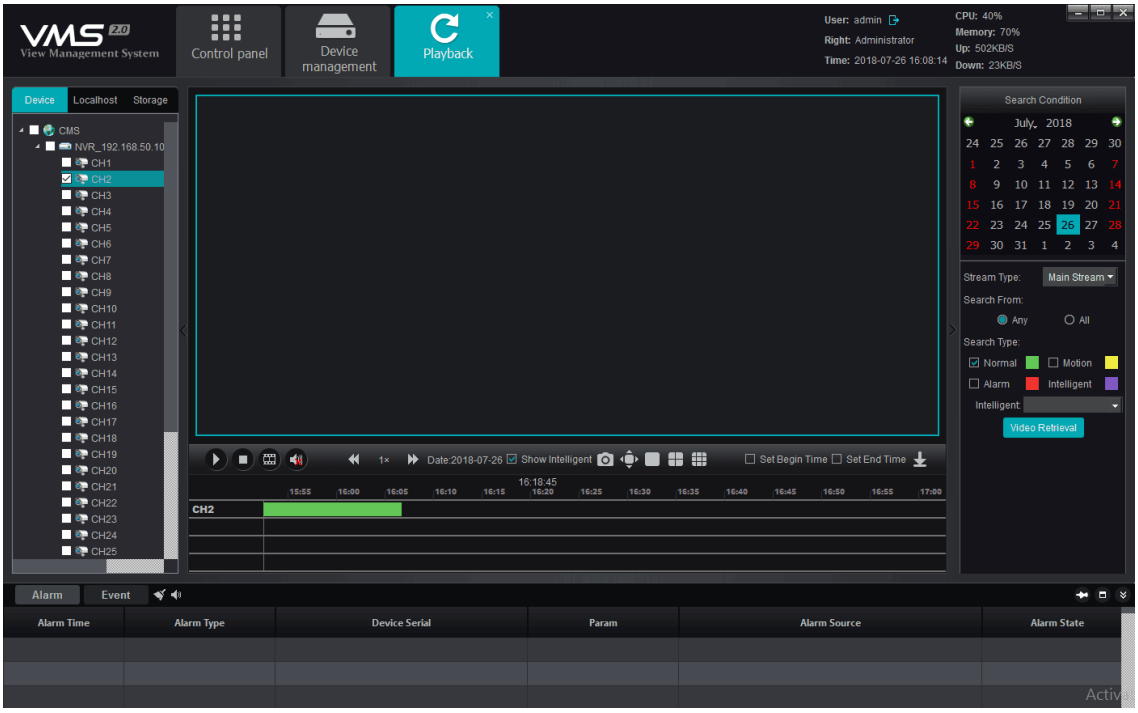
3. Video Playback

Click on the "Playback" button on the main interface to enter the video playback module:



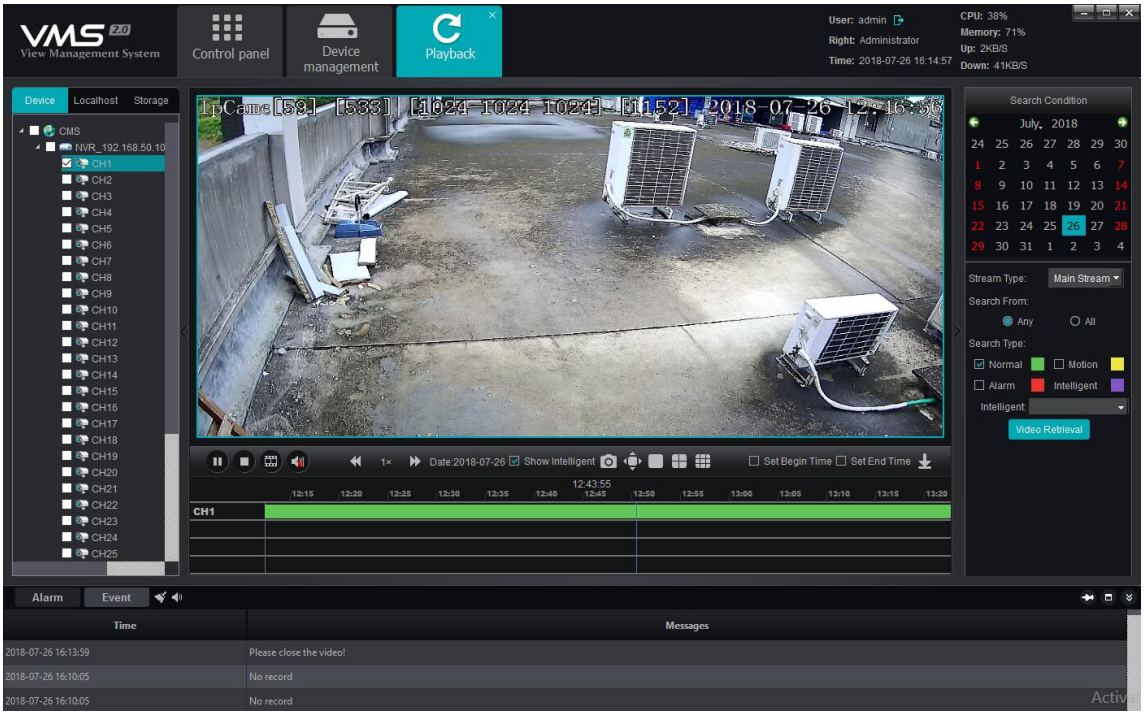
3.1 Video Search

Select the device channel for the video to be playback in the device tree on the left side (note: only the video in the same device or same storage server can be played simultaneously, and only 9 channels can be selected at most each time), select the storage path of the video on the left side, then select the stream type of the video to be playback in the column of “stream type”, select the date on the calendar, click on “video search” and then the system starts to search the video and then the result will be displayed on the search result panel. Video path includes “device”, “local” and “storage”, among which, the device video refers to the video stores in the hard disk or the SD card of the front end device, local video refers to the video stores in the PC of the client and the storage video refers to the video stores in the storage server. The stream type includes main stream and sub stream. When customer opens dual stream in the course of recording, the relevant video can be searched according to the demand. The search result has been shown in the figure:



3.2 Video Playback

Click on  in the interface can start/pause play,  stops play, place the mouse on the video bar and scroll the wheel can enlarge/reduce the scale of video bar; double click mouse left on the video bar, the play can be located, and double click in the course of playback can switch the locate, as shown in figure:

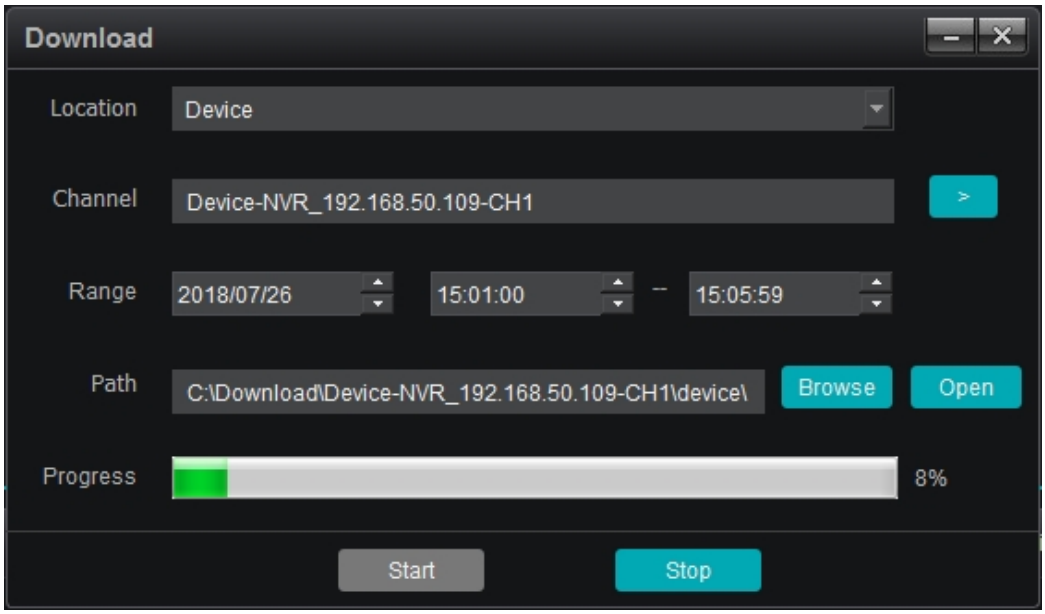


When playback in several channels, select certain window, double click mouse left can switch the

window into full screen; place the mouse on certain window, scroll the wheel to operate the digital enlargement of this window.

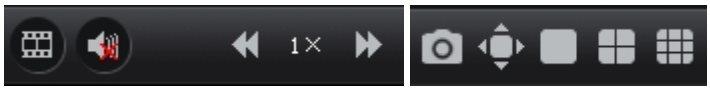
3.3 Video File Download

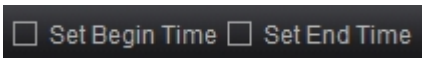
Click on the  button in the interface to enter the download interface of the video file, as shown in figure:



Select the video position (including device video and storage server video), channel, range (i.e. video download time range) file save path in proper order, click on “start” button to start download; as progress bar reaches 100%, the download completed.

3.4 Toolbar Overview

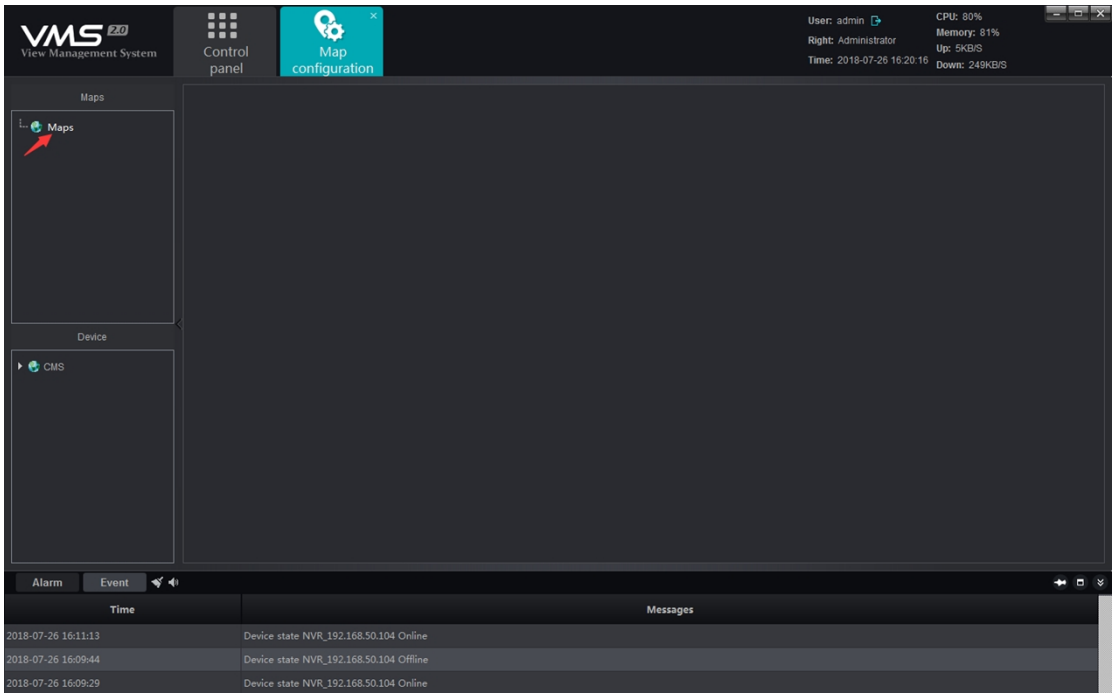
The functional buttons  in the interface, among which,  is frame play, click on the button, the playback will be played in manner of frame; one frame will be played for each click;  is audio switch, which can turn on/turn off the audio of playback;  play speed adjustment button, with which, user can adjust the play speed between 1/16 and 16;  capture button, the picture can be captured in the course of playback;  fullscreen button, click to switch to fullscreen (under the fullscreen mode, right click can exit);

split screen switch button, user can manually switch to 1 split screen, 4 split screen and 9 split screen as demanded; 

begin time and end time, locate to certain play point, select the begin time adds a sign on the video bar, similarly, the end time will be the same. When the begin time and end time selected, click on “Download” to rapidly download the video between two tags to facilitate the operation of user.

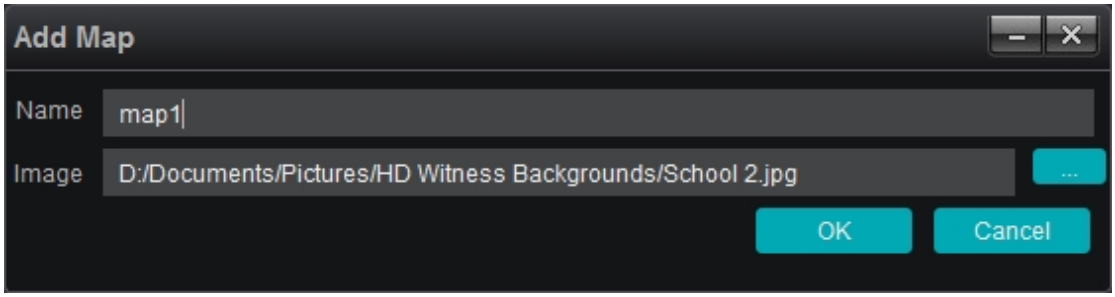
4. Map Configuration

Click on “Map configuration” button in the main interface to enter map configuration module, as shown in figure:

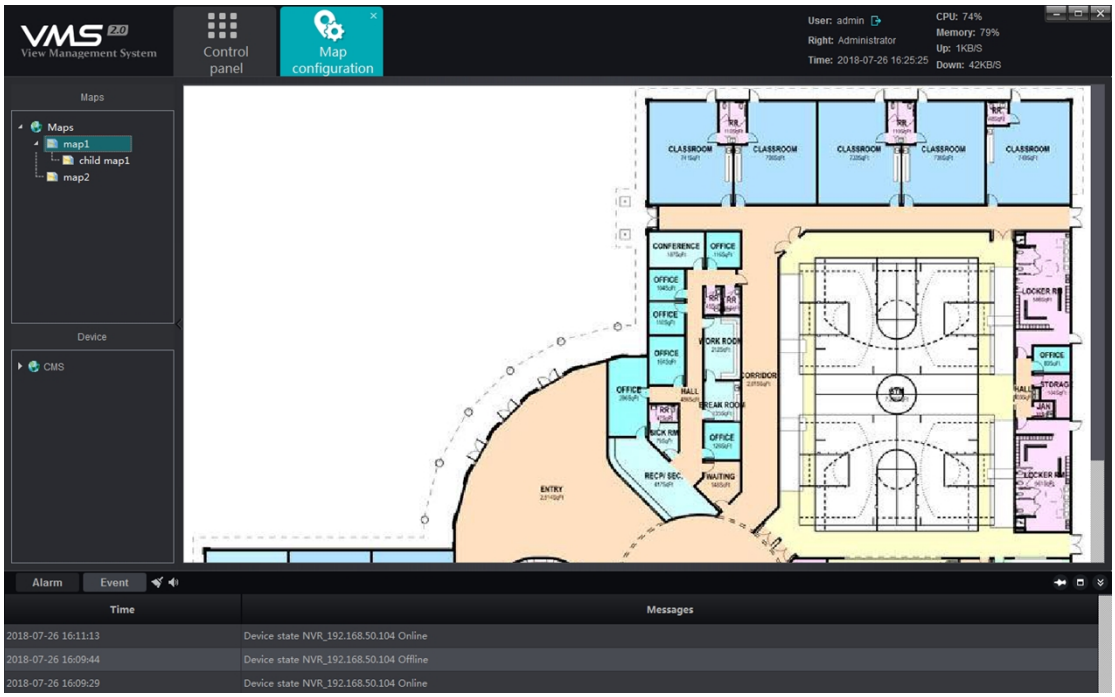


4.1 Add Map

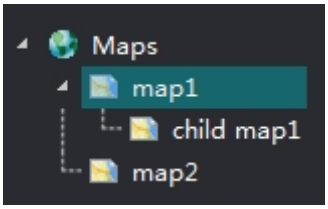
Right click on the signed place in the figure, select “Add map”, pop up the add box:



Fill in the name, select picture, click “OK” to add map, several maps can be added; meanwhile, child map can be added under the map, add completed, as shown in figure:



Among them, the map opened will be indicated with yellow for differentiation



4.2 Map Tree Right Click Function

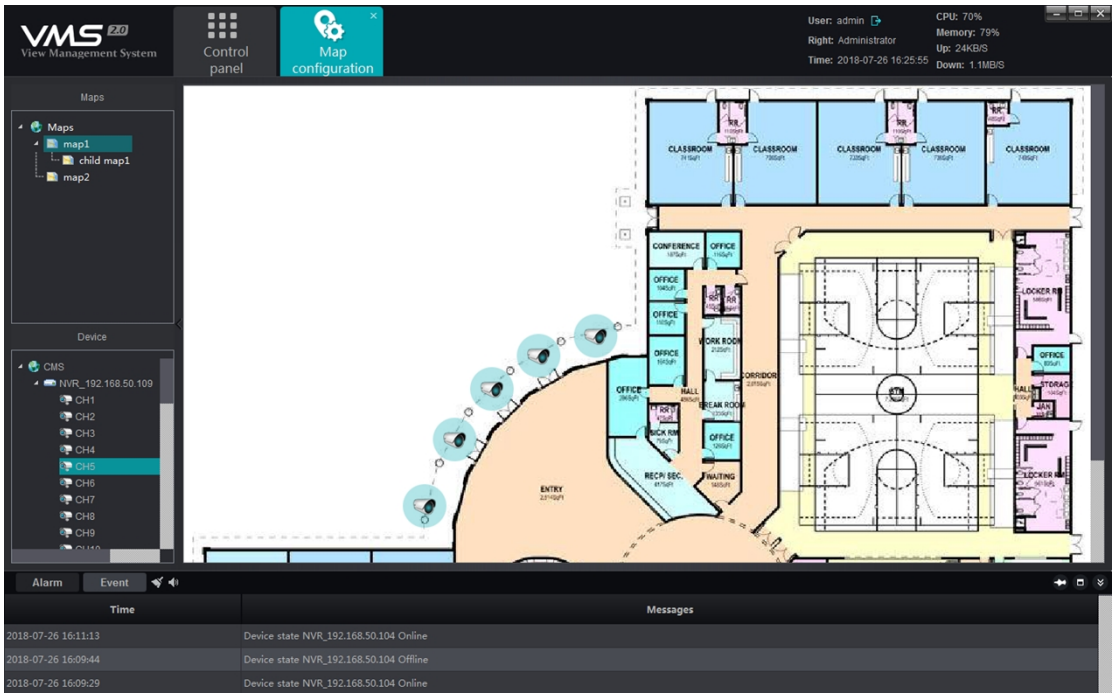
1) Add map: add new map

2) Delete map: delete the current map selected

3) Add child map: add child map under the current map list; one map can add several or multi-level of child map; as child map added, drag the child map to the main map to complete association and the child map shall be displayed in the main map as the icon  , double click of the icon in the main map can switch to the corresponding child map; and click on the  button in the child map can return to main map.

4.3 Map Deployment

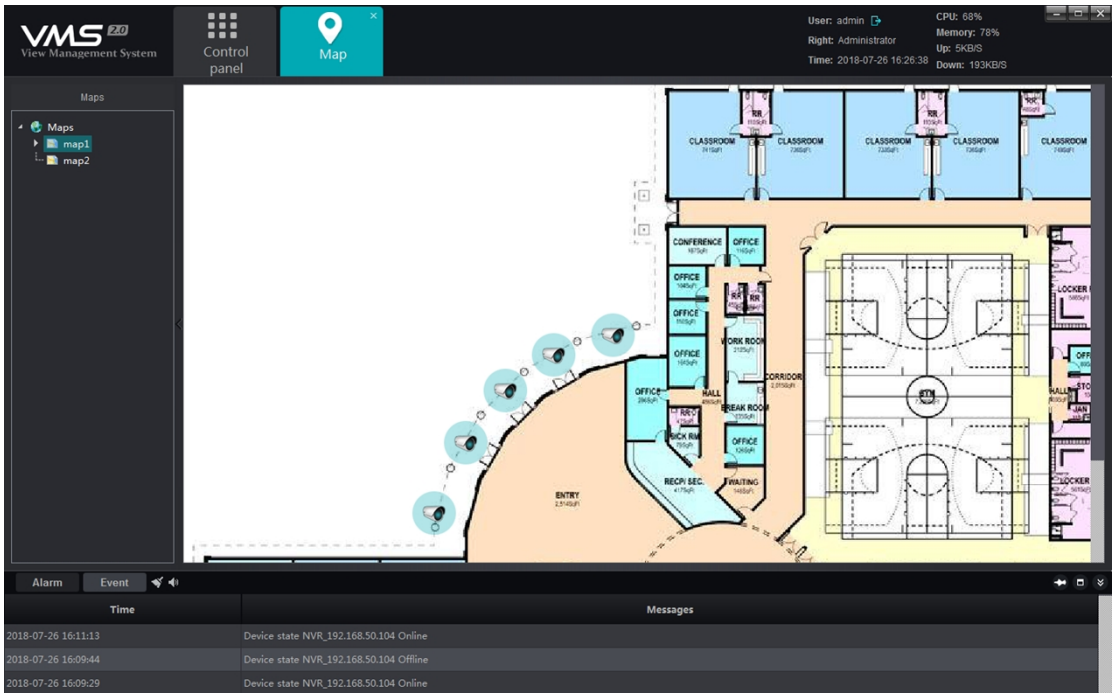
Drag the device channel or alarm input on the left lower side to the map, then the deployment completes, as shown in figure:



Note: as the channel has been dragged to the map, the position shall be adjusted by dragging it again; right click on the deployed channel, it shall be deleted. Place the mouse on the map, scroll the wheel can zoom in/zoom out the map. The channel deployed to the map shall not be dragged repeatedly, and place the mouse on the deployed channel, the channel information shows.

5 Map Management

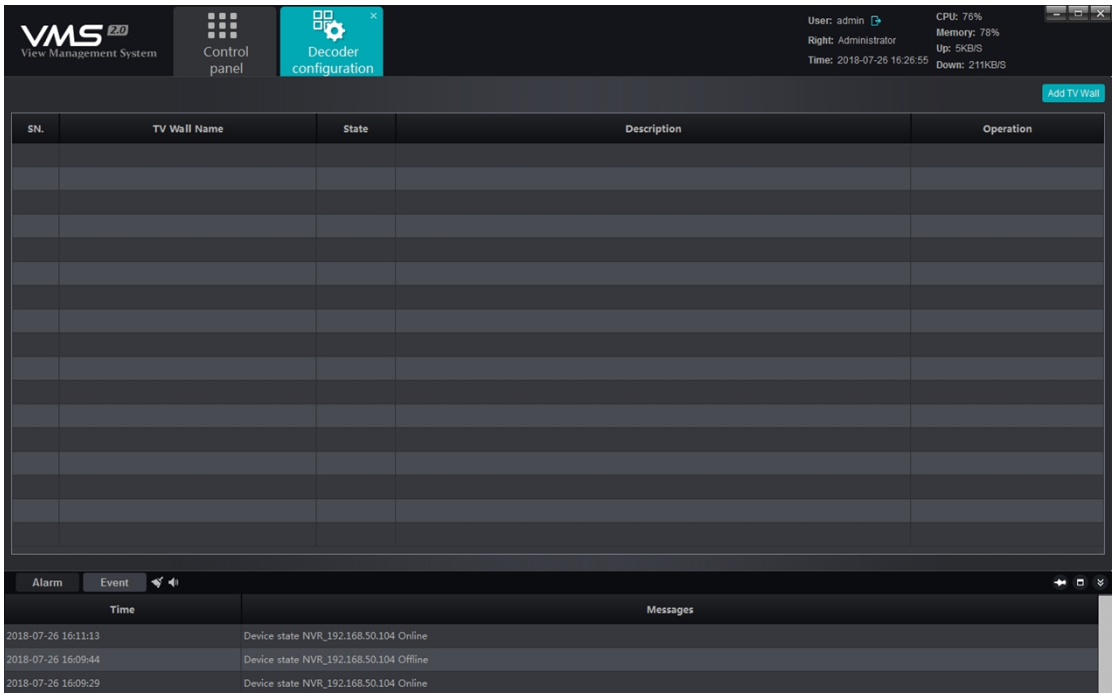
Click “Map” button in the main interface to enter map management module, as shown in figure:



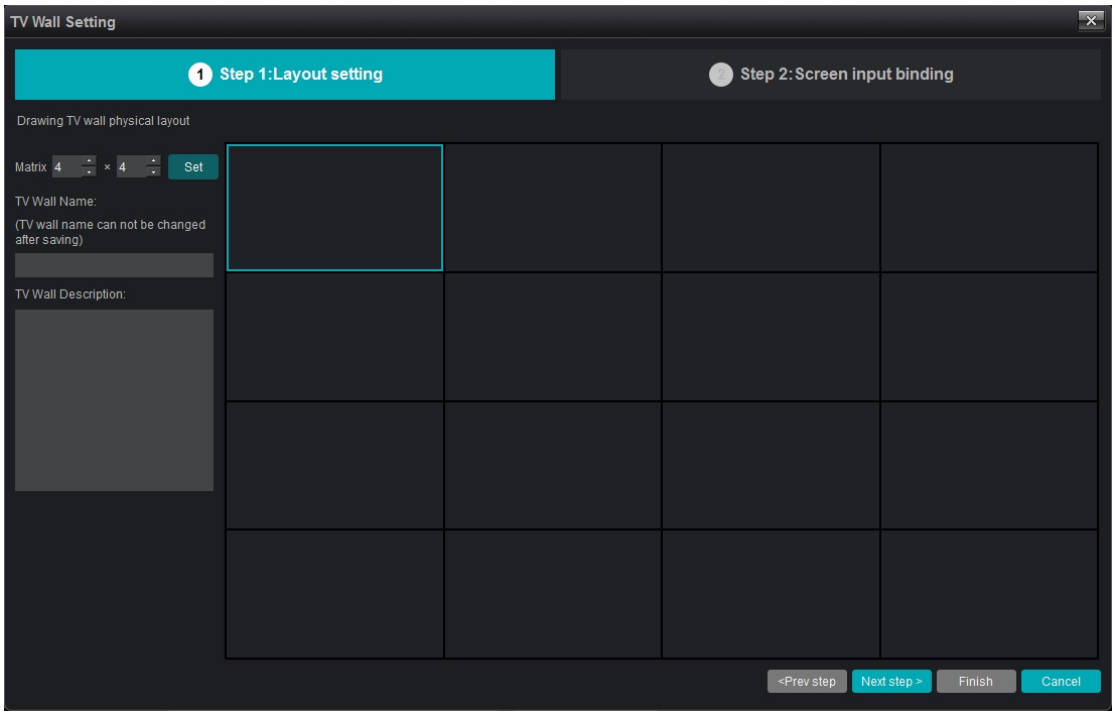
Double-click the map, you can display the configured map and layout channel, this module is an operation module, can not configure and modify map, right-click the layout channel, can open the preview and playback of the corresponding channel. In actual use, the user can refer the map, quickly pick up the preview and playback image of the corresponding location, more concise and clear operation. The channel icon flashes when an alarm is triggered and the linkage channel is on the map.

6. Decoder Configuration

Click on the “Decoder configuration” button on the main interface to enter Decoder Configuration module:

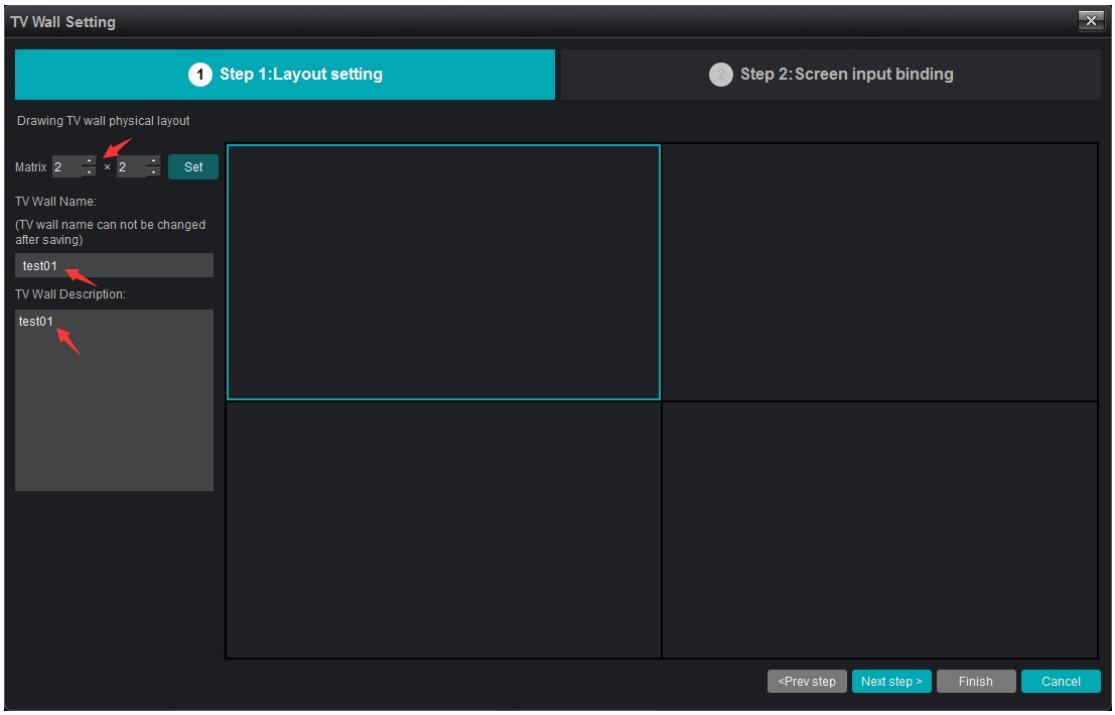


The Decoder Configuration shows the TV wall scheme currently set and the Enable Status of the scheme; in terms of the existing TV wall scheme, the “modify”, “delete” and “disable/enable” can be operated. Click “Add TV wall” button in the top right corner to add new TV wall scheme, as shown in figure:



6.1 Layout Setting

Set TV wall layout, fill in the relevant information:



1) Matrix layout setting: user cab set the matrix layout as actually demanded, maximally support 8x8 layout; when layout selected, click “set” to effect.

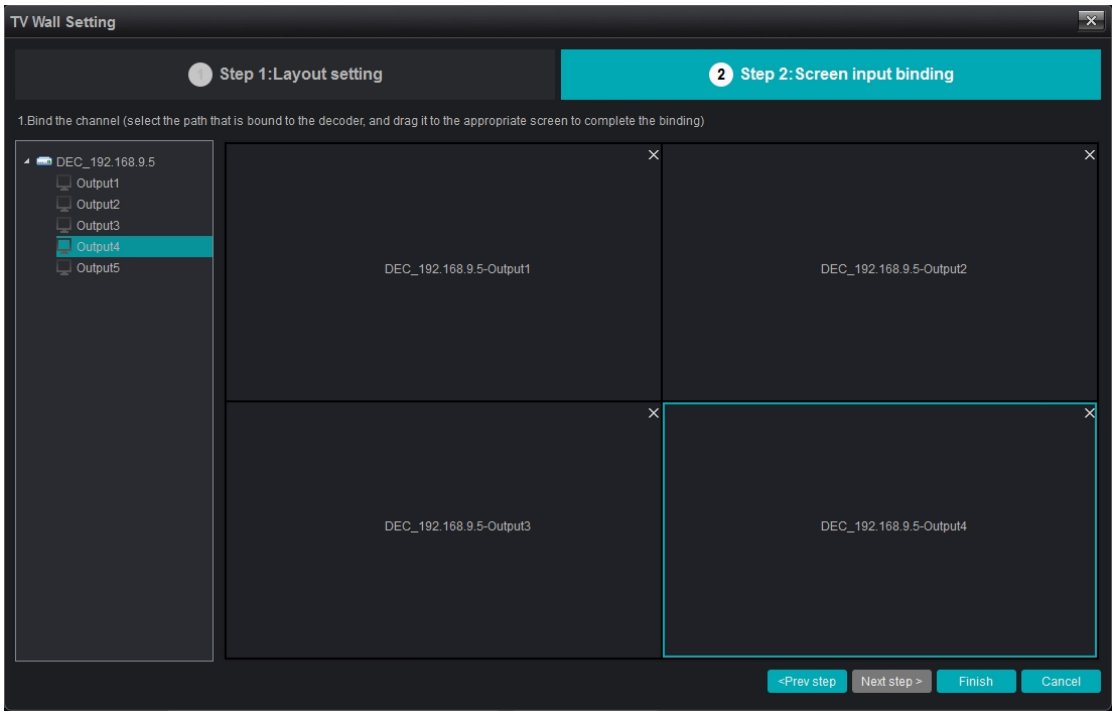
2) Fill in the name of TV wall scheme, user can customize the name of TV wall scheme as demanded (note: the name will not be modified as defined, please pay attention).

3) TV wall scheme description: user describes the scheme for differentiation, optional.

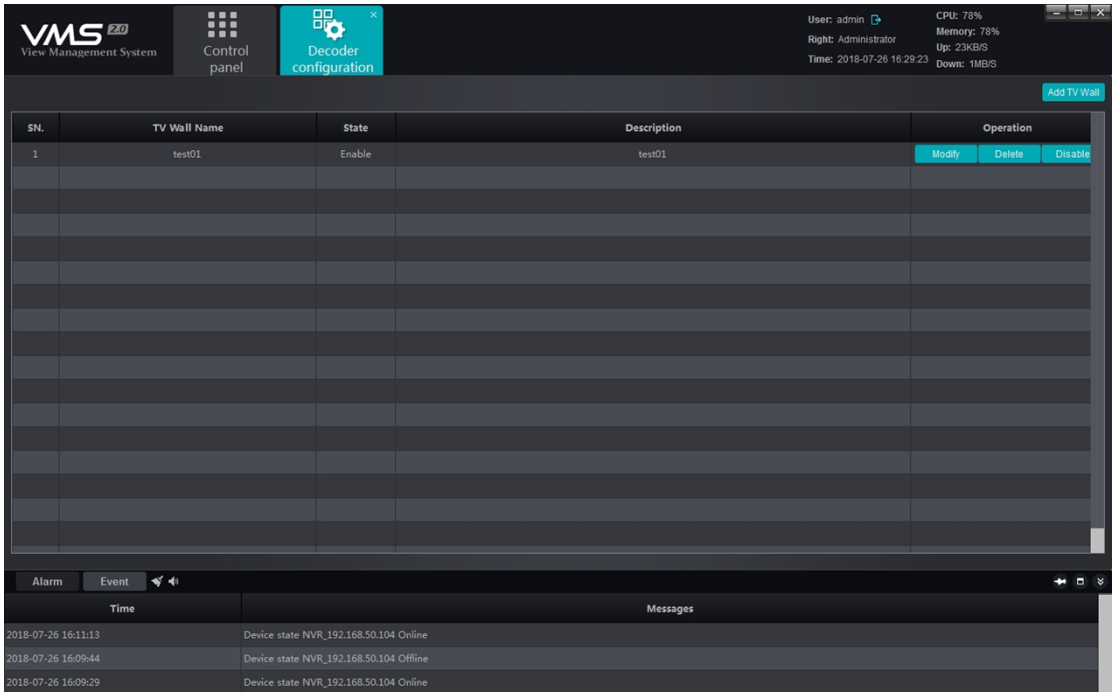
As completed, click “Next step”.

6.2 Screen Input Binding

Drag the decoder added to the layout set, as shown in figure:



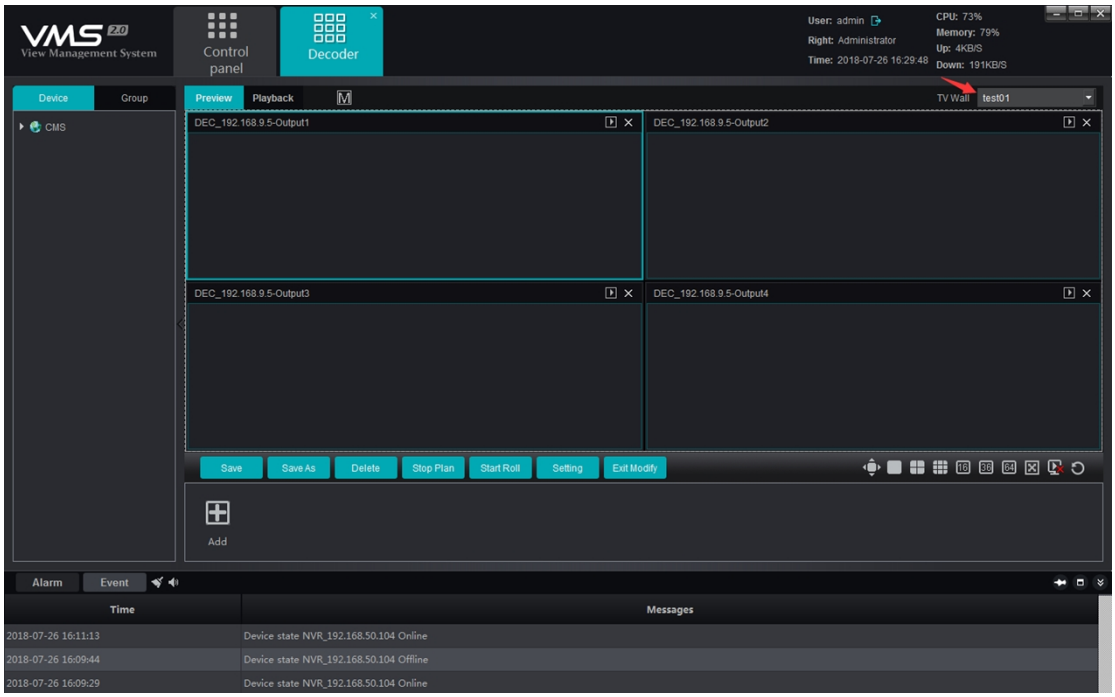
In this interface, the user can layout according to the actual situation, the decoder corresponding to TV wall matrix layout, set completed, click the finish button, as shown in the figure:



Once the settings is completed, you can see the saved TV walls on the decoding configuration page, can modify , delete, disable/enable the saved TV walls.

7. Decoder Management

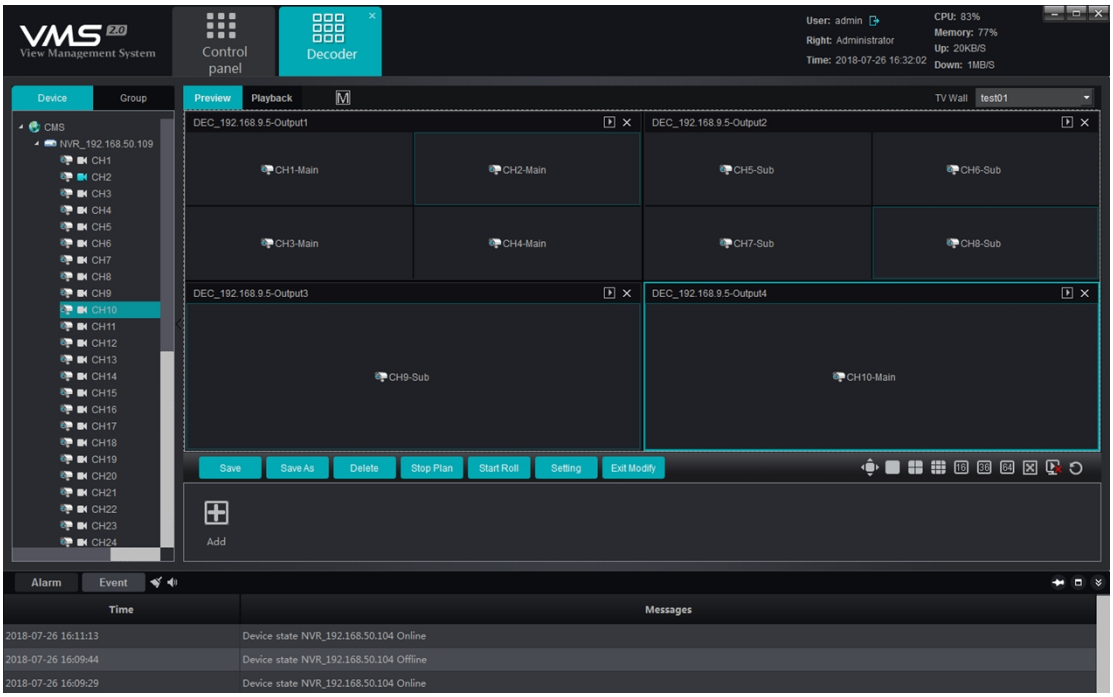
Click on “Decoder” button on the main interface to enter the decoder management module, as shown in figure:



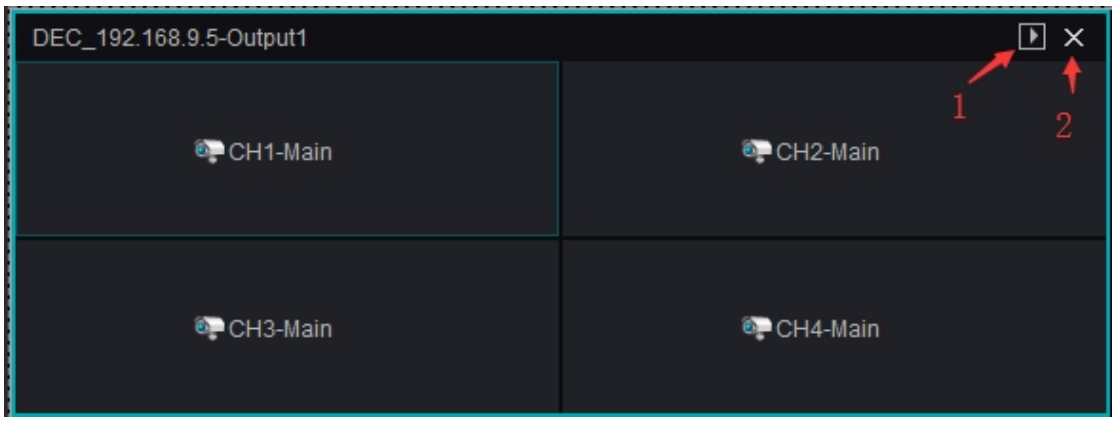
As shown in the figure, at the remarks in the image, drop down the check box, select the TV wall, and all the TV wall rules that have been set and enabled will appear in this check box.

7.1 Decoding Mode Selection

After the solution is determined, select the channel that needs to be decoded on the wall from the device list on the left side, and then dropped onto the decoding screen of the corresponding decoder to complete the decoding on the wall, and the stream type of decoding on wall can be switched by the button before dragging. Select whether the main stream on the wall or the sub-stream on the wall:



For channels that have been dragged to the decoding screen, to replace them with other channels, drag and drop the other channels directly to the corresponding window.

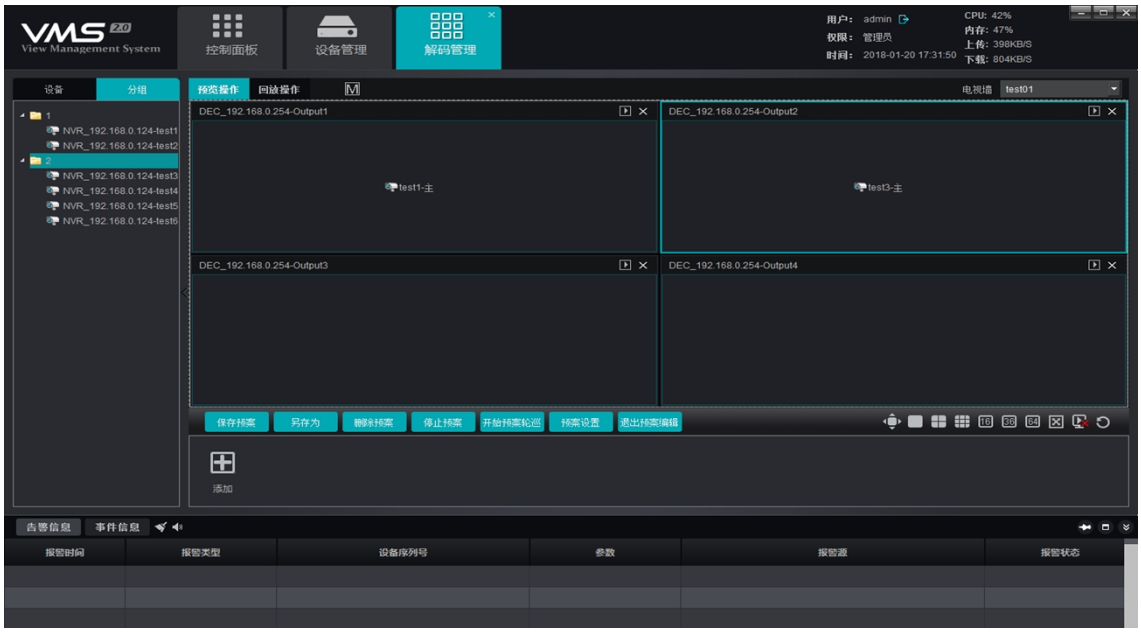


1）  is to open the decoding module preview button, click to open the preview of current page, so that the client can view the image on the wall.

2）  is to delete channel button, click to delete the decoding channel of current split screen.

7.2Decoding group round touring

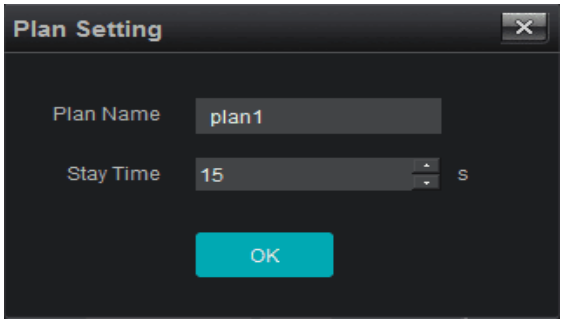
The device management module mentioned the decoding group, after the decoding group has been set, in decoding management module, can drag the group on the wall directly, as shown in figure:



Drag to the output group of TV wall, will automatically open the group round touring, the round touring time interval can be set when configuring decoding group, the default is 20S.

7.3 Decoding plan round touring

Click the adding button below to add the plan:



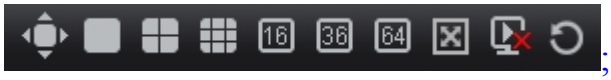
Set the plan name, plan stay time, this is the stay time when plans stat round touring, the default is 15S, the min. is 10S, after completed, click OK, enter the plan editing mode:



Configure the pre-arranged plan, select the decoder split screen, decoding stream type and channel to edit the plan, edit completed, click "save the plan", complete the editing.

After the configuration is completed, click on the plan, you can directly put the group plan on the wall, no need manual operation, easy for user to operate, for the saved plans, can delete, stop and other operations, after setting a number of plans, click "start plan round touring" and the decoder will start the round touring based on the configured plan.

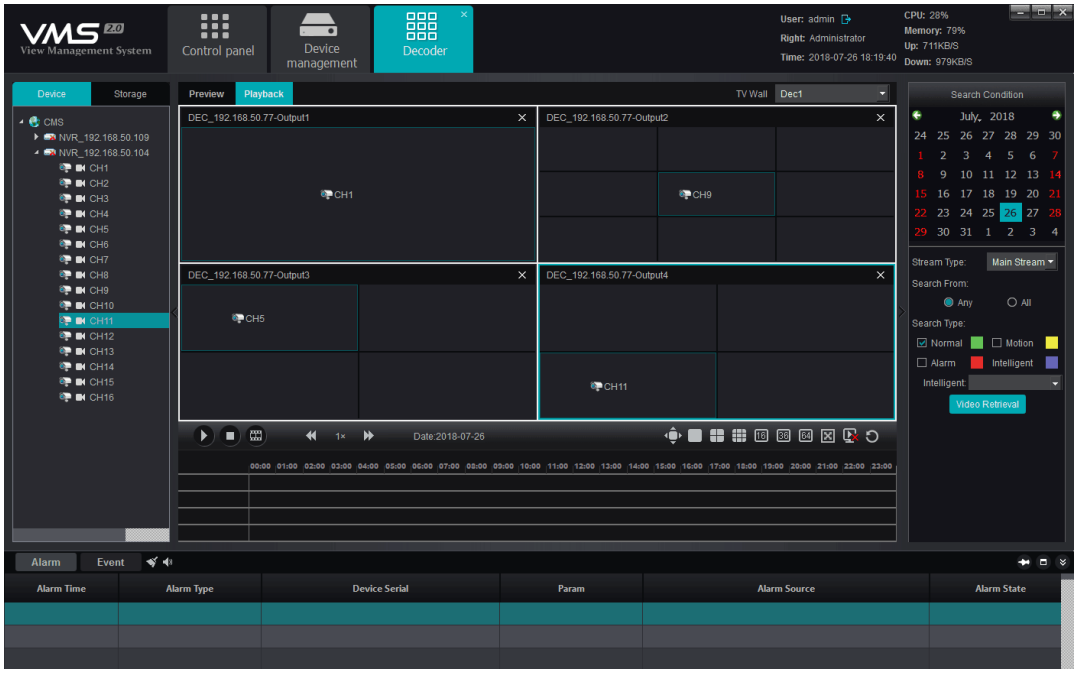
7.4 Function button introduction of preview operation page

On the preview operation page, there is a row of function buttons at the bottom: ; are

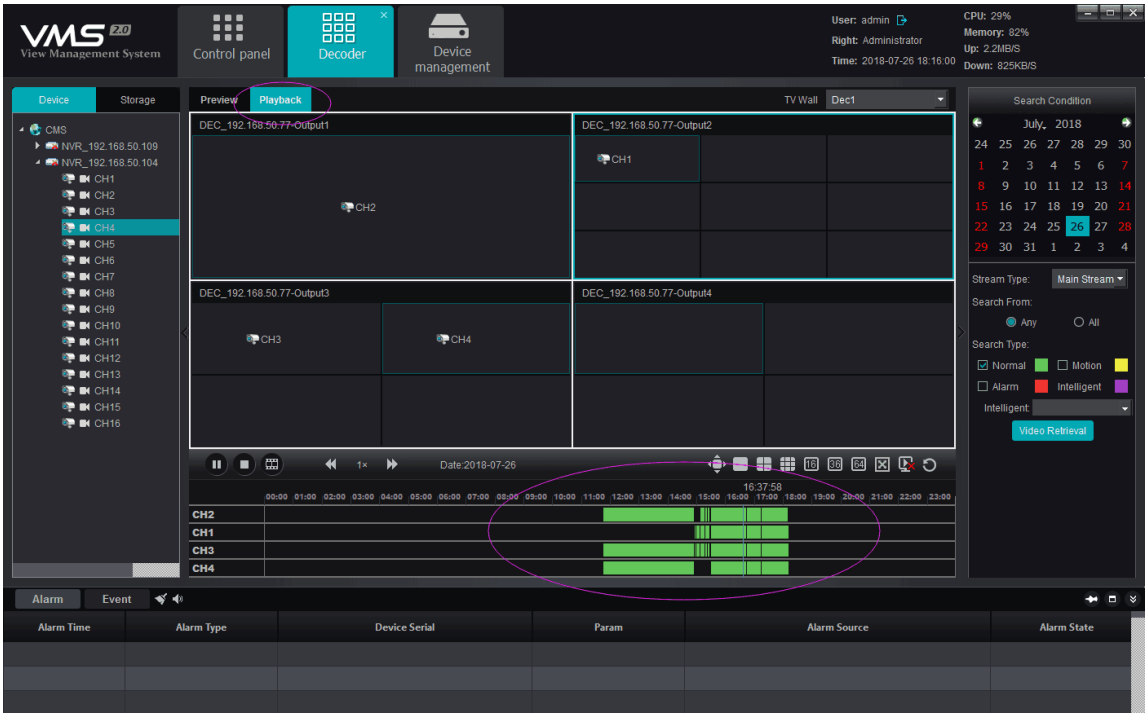
split screen switch controlling buttons, after the user selects the decoding split screen, the number of split screens can be switched to 1 / 4 / 9 / 16 / 36 / 64 by these buttons;  is full screen controlling button, used for full screen mode, right-click to exit full screen mode;  is split controlling button, used for opening / closing the decoder splicing;  is channel clearance button;  is used to one-key clear all decoding channels on a decoder split screen;  is used to one-key remove all decoding channels on the entire TV wall solution with one click.

7.5 Decoder Playback

Switch to playback operation page, as shown in figure:

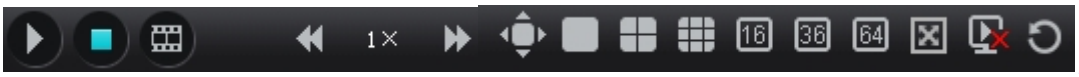


Drag the channel to be playback into the decoder, then select the search condition (date and video path), click on the “video retrieve” button below to search the video file of the corresponding channel; the operation here is similar to the operation of the video playback module operation; all the playback channels must be in the same device, and maximum 9 channels of playbacks simultaneously. As the video search completed, click the  button below or operate the mouse to double click to locate and start to play, double click of mouse can relocate in the course of play, as shown in figure:



7.6 Playback Operation Interface Function Button Overview

Function buttons at the bottom of the playback operation page:

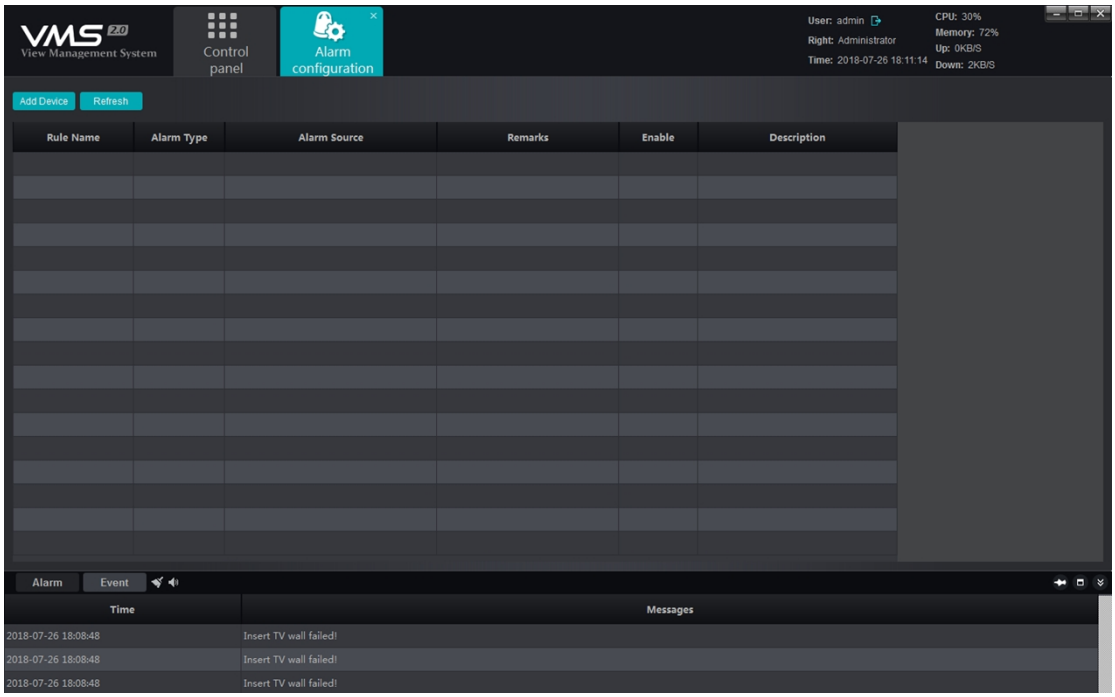


,

As a result of the previous detailed introduction, here no longer repeat, its functions in turn are: play / pause, stop, frame play, playback speed adjustment, full screen, split screen number adjustment button, split open and close, decoder split screen clear screen, TV wall clear screen.

8. Alarm Configuration

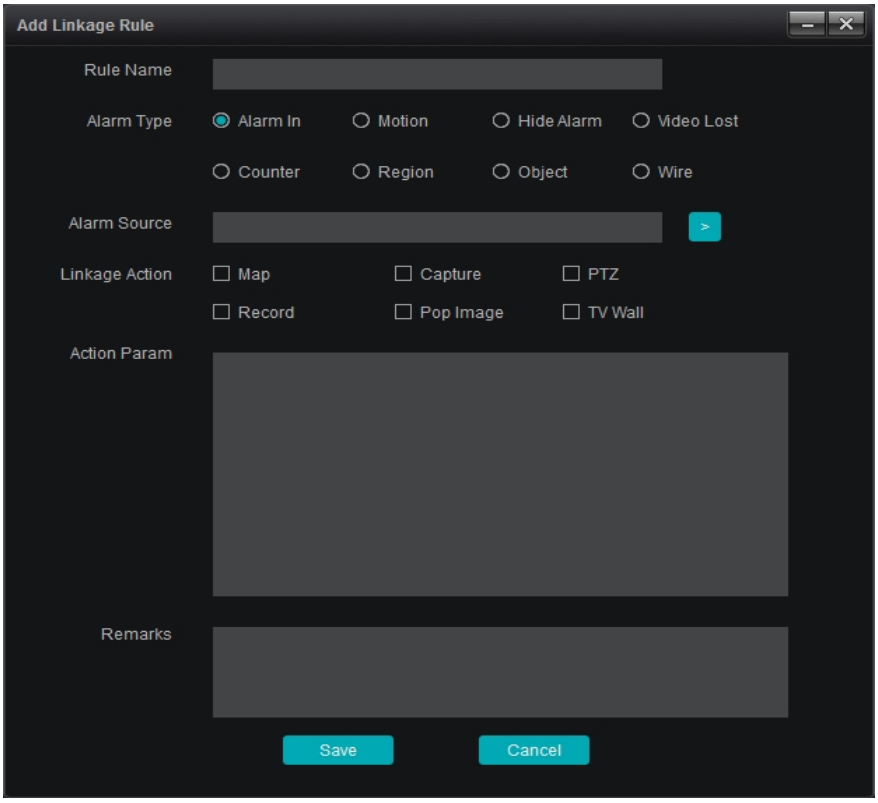
Click “Alarm configuration” button in the main interface to enter alarm configuration interface; alarm configuration is the alarm rule setting module; if user wants to fulfill alarm linkage in the client end, the alarm linkage rule must be set first, as shown in figure:



Alarm configuration interface shows the currently set linkage rule and the enabled state of the rule;

8.1 Add Linkage Rule

Add alarm linkage rule; please click on “Add” on the left upper corner, as shown in figure:



1) Rule name: alarm linkage rule name is user-defined.

2) Alarm type: currently support 8 alarm types, including alarm input, motion detection, video

tampering alarm, video loss, target count detection, area detection, object detection and line crossing detection, among which, the latter four kinds are specialized to the device the intelligent detection. Regarding the definition of the 8 alarm types, please see NVR specification.

3) Alarm source: which means alarm source, click on the check box, all the channels of all devices added to VMS currently can be selected.

4) Linkage action: including map, capture, PTZ, video, popup picture and TV wall, which have been respectively defined as below.

Map: displays alarm in map interface; for the linkage of map alarm, the channel to be linked shall be deployed on the map; as the alarm has been triggered, the icon of the channel turns into red on the map;

Capture: capture the picture of the linkage channel;

PTZ: PTZ controlling the linkage channel, it can select to call certain preset, call certain cruise or certain track; only the front device supporting PTZ control can be linked to PTZ;

Record: as alarm has been triggered, the channel linked to record starts local and storage server recording (storage server shall configure the RecPlan), the record can be reviewed via searching in playback module;

Pop image : as alarm has been triggered, the preview window pops up from the main interface displaying the real-time preview of linkage channel;

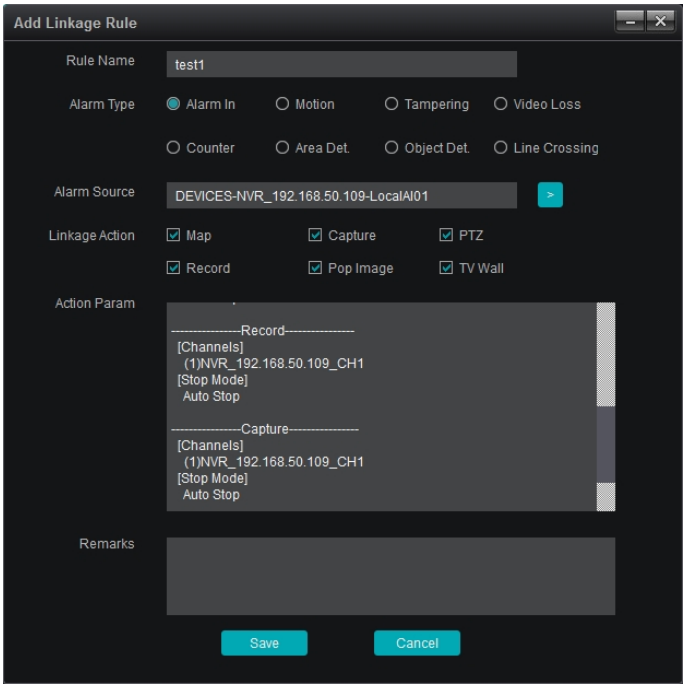
TV Wall: select the channel and TV Wall for wall-run, as alarm has been triggered, the real-time preview picture of this channel will be upload to the TV Wall.

Note: As the linkage action has been set as map, video, popup image and TV Wall, the end mode shall be selected; it shall be auto-end or timing end; auto end means that there is no linkage action upon the completion of alarm while timing end means the linkage action end at the agreed time, which can be selected between 1second. to 36,000 seconds

5) Action parameter: the linkage action set can be displayed in this column.

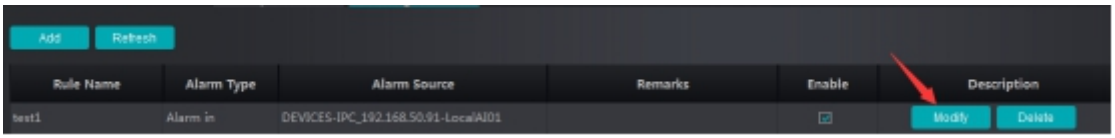
6) Remark: for indicating of the relevant information of this linkage rule; in case of user customization, optional

Upon completion, the effect as shown in figure:



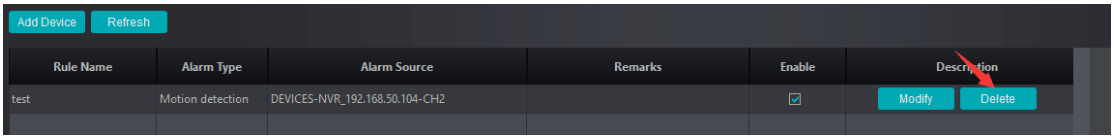
Click on the “Save” button below, the setting completed.

8.2 Modify Alarm Rule



Upon the completion of the addition of alarm rule, user can click “Modify” indicated in the figure to edit the existing rule.

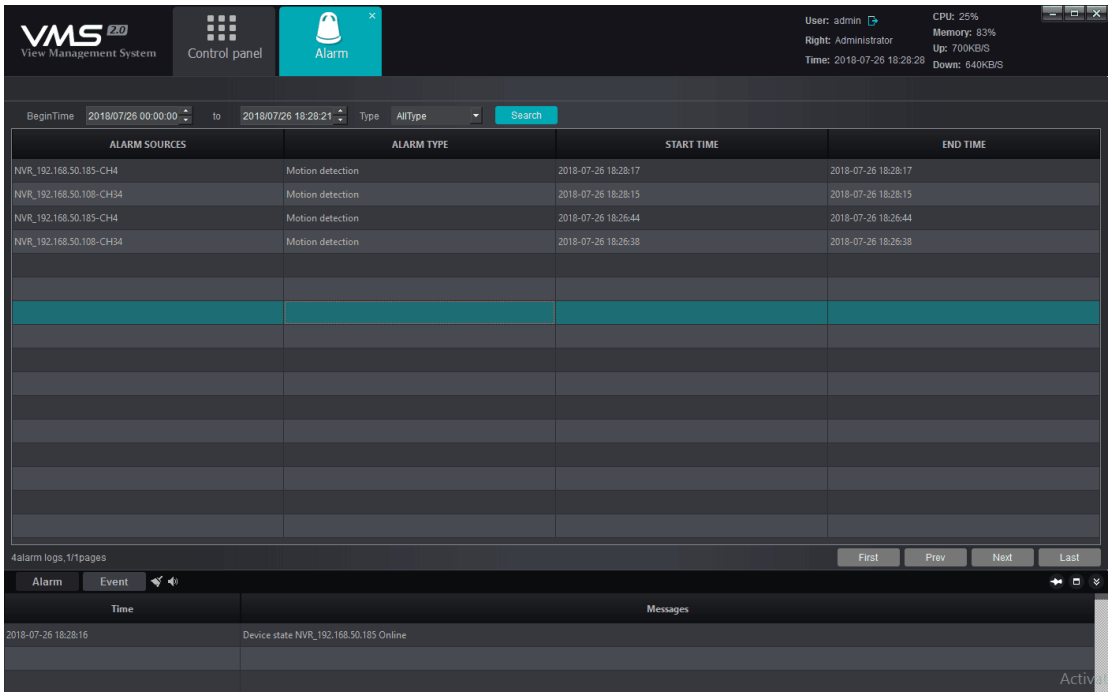
8.3 Delete Alarm Rule



To delete the existing rule, click on the “Delete” button in the figure; in case of disable for the moment, take out the “check” button in the figure.

9. Alarm Management

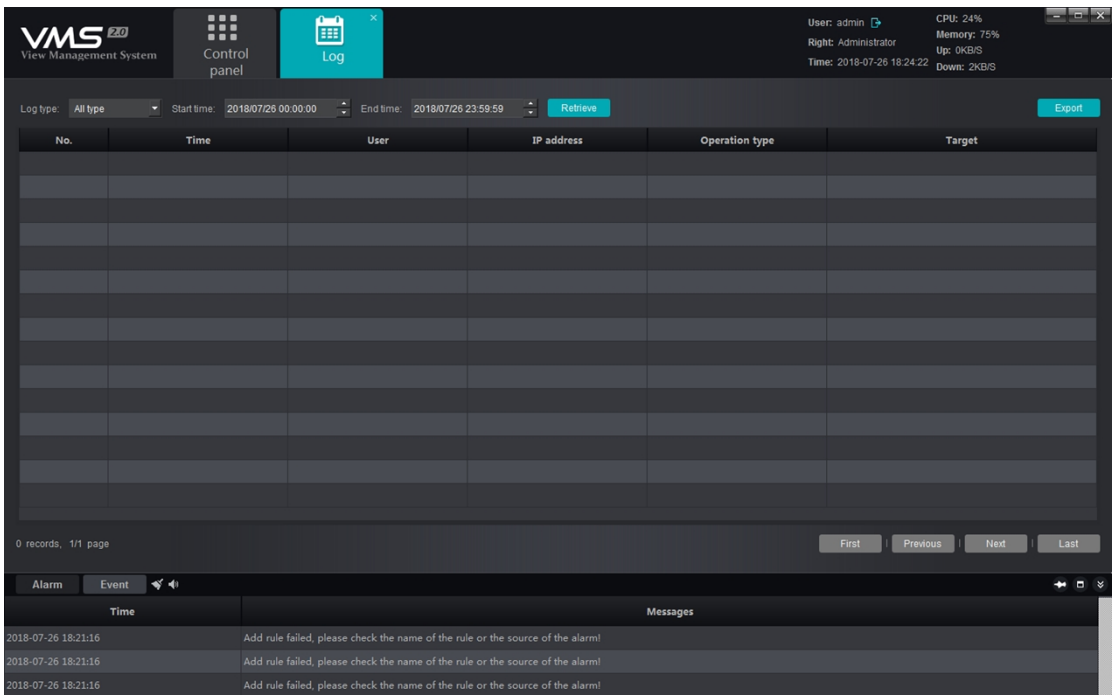
Click “Alarm” button in the main interface to enter the alarm management interface:



Alarm management interface can display all alarm information upload to VMS; select search time range and alarm type, click on “Search” button, then the relevant alarm information can be searched as required. The alarm type includes the 8 classifications of alarm input, motion detection, video tampering alarm, video loss, target count detection, area detection, object detection and line crossing detection.

10. Log Management

Click “Log” button in the main interface to enter the log management interface:



Log management interface displays all important operation records of user; select log type and time,

click “Retrieve” to search. The log type includes login/logout, device management, start/stop rec, linkage management and remote configuration.

1) login/logout: The user login/logout record.

2) Device management: record of user addition, modification and deletion of device.

3) Start/stop rec: The user start/stop local video record

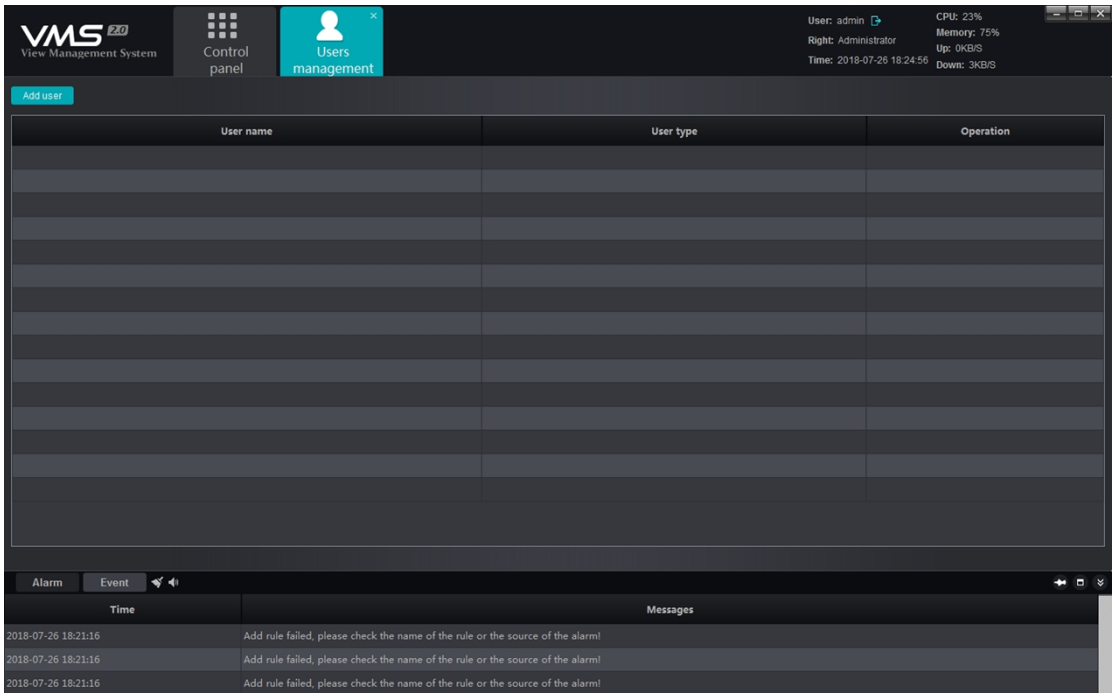
4) Linkage management: record of user operation of addition, modification and deletion of linkage rule.

5) Remote configuration: record of user operation of remote configuration, modification of front end device parameter

The log records in detail the operation time, operation user, operation IP address, operation type and target address of the relevant important operations, facilitating the administrator to figure out the problems.

11. User Management

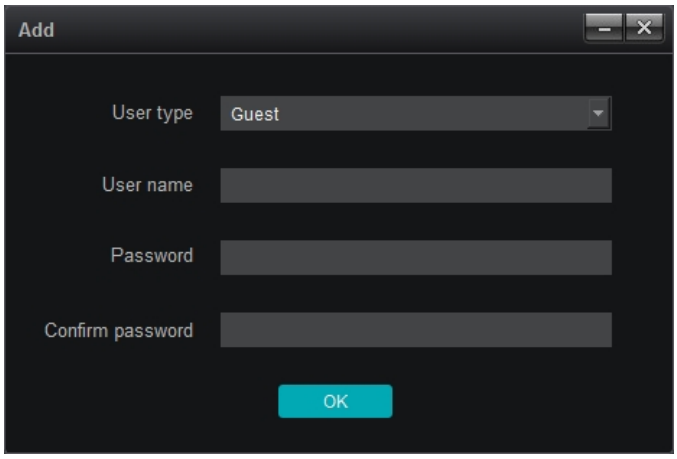
Click “User management” button in the main interface to enter the user management interface:



User administrator of the user management interface sets the right of sub-user and user; the setup of the software automatically creates super user “admin”, which can’t be deleted and has top right, click on “Modify” can modify the password of super user.

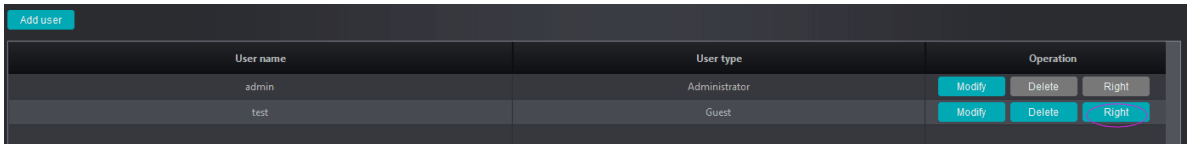
11.1 Add Sub-user

Click on “Add user” on the left upper corner to add new user:

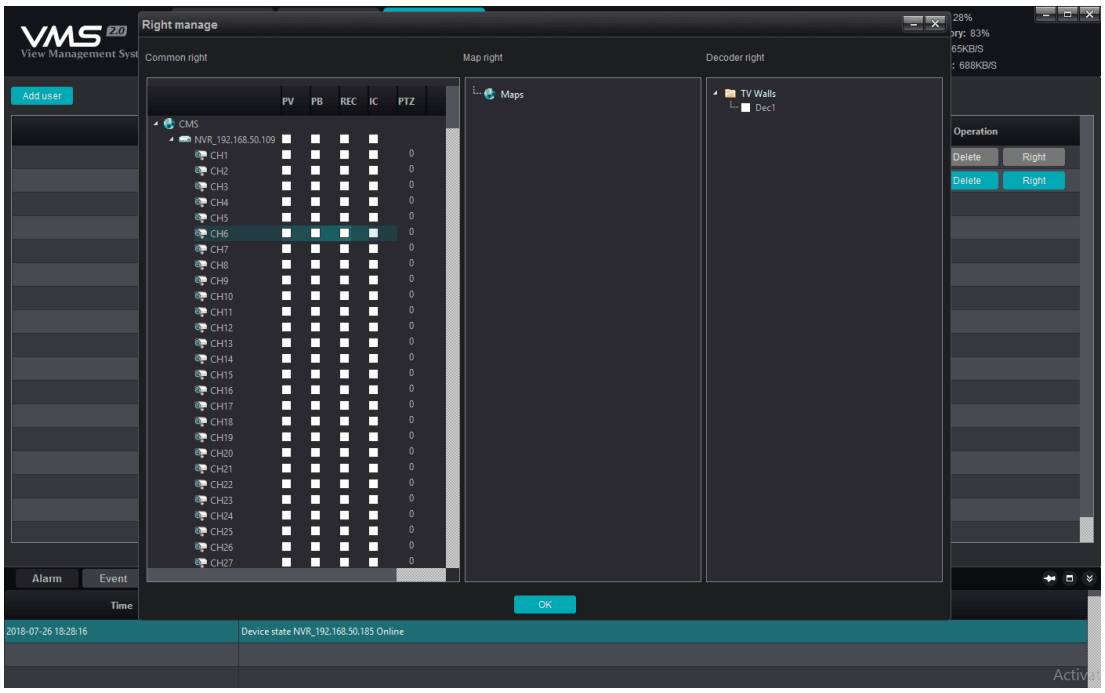


User type is Guest, which means it is not administrative user; the user type can’t be modified; successively fill in user name, password, password confirmation and then click on “OK” to add new user; please make sure the consistency of the password and password confirmation in the course of filling in.

11.2 Sub-user Access Distribution



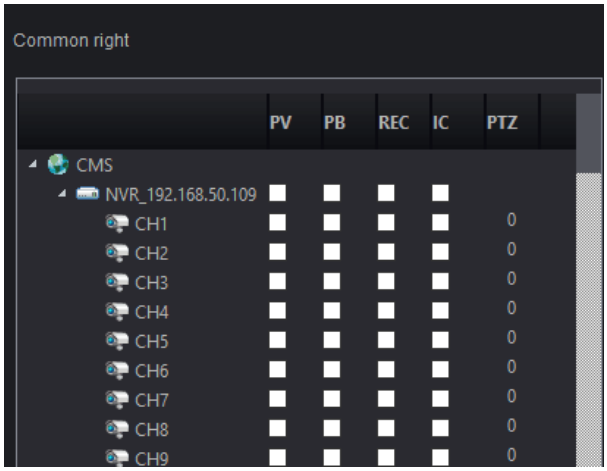
To distribute access for the sub-user added, click on the “Right” button indicated in the figure to distribute the access:



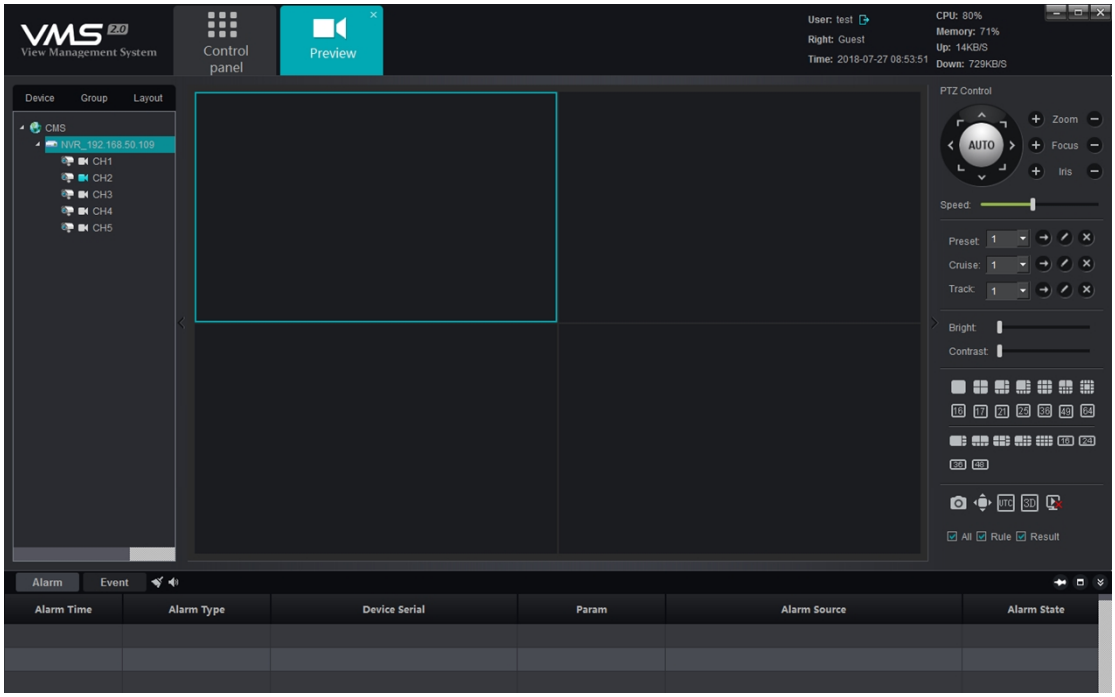
Access includes common access, map access and decoder access.

1) Common access: the common access includes preview, playback, video, intercom and PTZ control, specifying to channel; the administrator can distribute the relevant channel to the corresponding sub-user. The number corresponding to PTZ represents the control priority of PTZ; double click to edit, select among 0 to 10, 0 means no PTZ control access, 1-10 means the PTZ control access, the larger of the number means the higher authority, i.e. 10 means top priority of PTZ control while 1 means the lowest priority.

The channel that has no preview access distributed will be hidden when sub-user logins (similarly the accesses of playback, video and intercom, the channels without access can't apply the corresponding functions), for instance, preview access of only 5 channels has been distributed to test sub-user, as shown in figure:

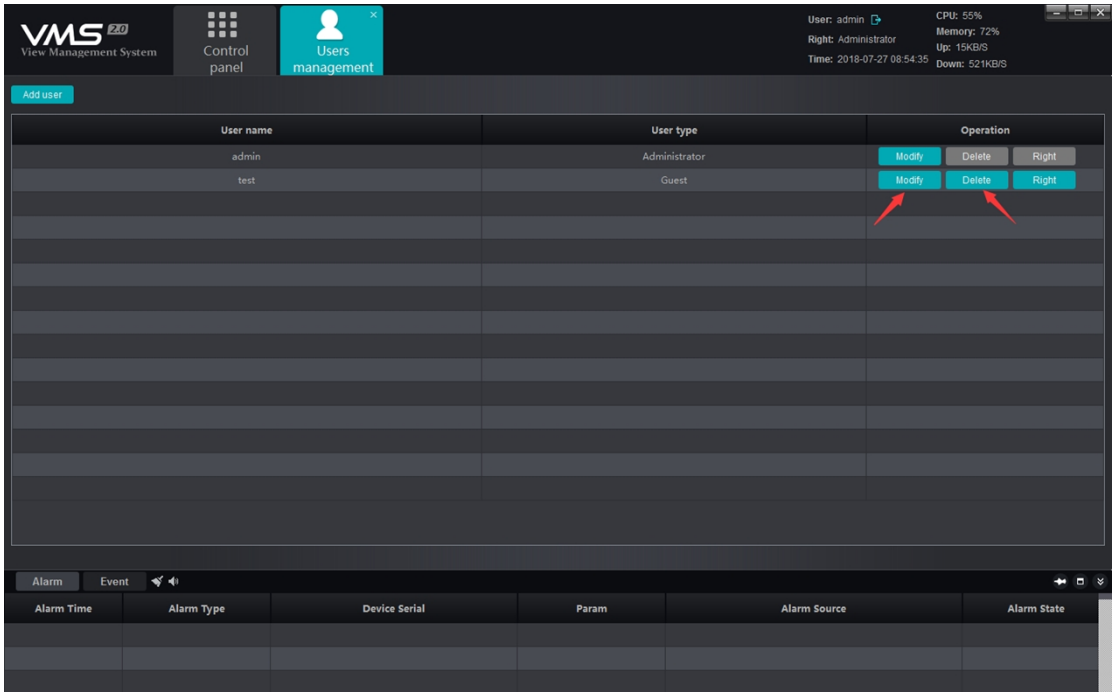


Login with sub-user test can only see five channels, as shown in figure:



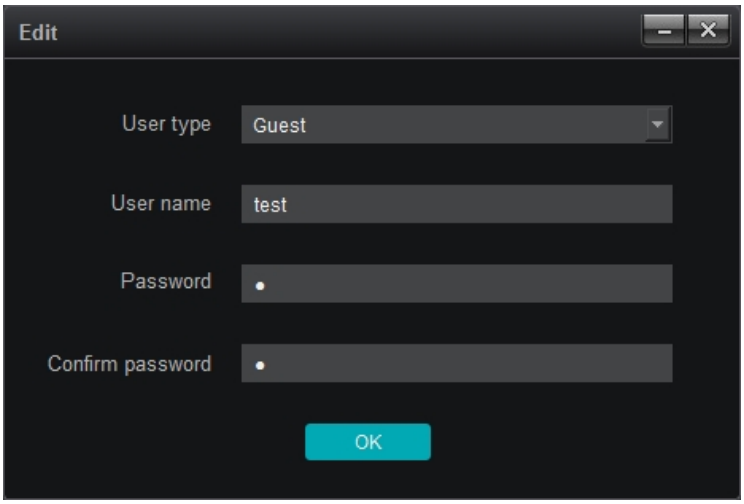
Note: super user admin has top priority access and it can’t be modified.

11.3 Sub-user Modification and Deletion



1) Modify sub-user

Click on the “Modify” button indicated in the figure to pop up edit interface



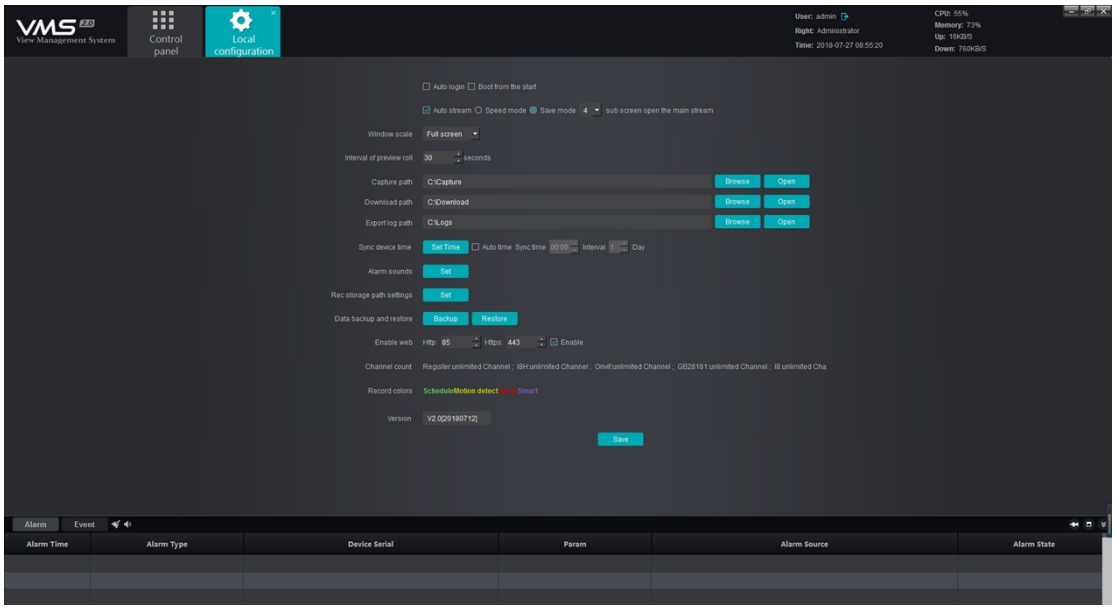
User modifies password as needed and click “OK” button as modification completed.

2) Delete sub-user

Click on “Delete” button in the user management interface to delete corresponding user, in which, super user admin can’t be deleted.

12. Local Configuration

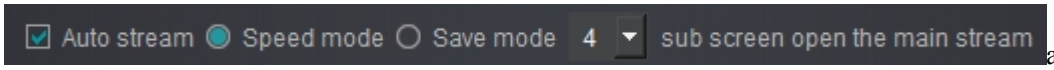
Click “Local configuration” button in the main interface to enter the local configuration interface:



1) Auto login: when VMS software opens, it will be automatically login.

2) Boot from the start :as selected, the client end program will run automatically when started up.

3)Auto stream, when selected, as shown in figure, including speed mode and save mode:



among which, open of preview will open main stream and sub stream under the speed mode, however, only one of them will be displayed, thus it will be rather faster for switching and also saves the bandwidth;Save mode means only one stream shall be opened at the same time; the current stream shall be closed to open another for switch; it is rather slower and saves the bandwidth as well; user can select the relevant mode as the actual situation may be. In addition, it can be selected under certain number of split screens to automatically switch to main stream under the circumstance of auto stream, 1, 4 and 9 are optional.

4) Window scale: window scale for preview or playback, full screen, 4:3, 16:9 are optional.

5) Interval of preview poll: the default interval of preview poll is 30s, and it can be selected between 30-600 s.

6) Capture path: capture picture save path, including preview capture, playback capture and alarm linkage capture.

7) Download path: video file download save path.

8) Export log path: export log file save path.

9) Sync device time:manual or automatic synchronization time of access devices

10) Alarm sounds: selection of alarm sound, used for alarm linkage sound, customization optional.

11) Rec. storage path setting: set local record storage path.

12) Data backup and restore: user can apply backup and restore of database to prevent data loss.

13)Start web: start web service, can be accessed by IE after enabled,rear side is the port, divided into http port and https port, access for two different forms of IE.

14）Total channels number: shows the number of authorized channels owned by all protocols. There will be a one-month trial period at the initial installation time, without limiting the number of channels. After the trial period ends, the number of non-private channels will become zero, indicating that the authorization has expired and can no longer be used.

15) Record colors: display different types of record color.

16) Version: version number of the current program (non-modifiable).

As the relevant parameter modified, click on “Save” button below to save.

III. Performance and storage introduction

VMS2.0 performance,for current structure,need only one host,which is used to install program.One has no limit on the management of equipments currently,but the suggested number is within 450.The number of the stored equipment channel by one host,which is restricted by network and disk-writing, etc.The maximum write speed is 200Mb/s at present,that is the video camera of code steam 4Mb,it supports storage 50CH at most.Time of storing video is restricted by the disk space,for example,code steam 4Mb video camera,the video storage file size =(4*3600)/8MB=1800MB,namely video file size is about 1800MB of a code steam video camera 4Mb in one hour,that is to say 1.8GB.Video file size of one day =1.8G*24=43.2GB,Video file size of one month=3.2GB*30=1296GB=1.296TB.So on, through the formula,we can calculate the video storage time according to accessing disk space and video camera’s routes &code steams in the project.

Resolution	Bit rate	The required storage space				
		Hour	Day	Week	Month	Six months
2560x1920	10Mbps	4.4GB	105.5GB	738GB	3.09TB	18.54TB
2048x1536	8Mbps	3.5GB	84.4GB	591GB	2.47TB	14.82TB
2048x1536	7Mbps	3.1GB	73.8GB	516.6GB	2.16TB	12.6TB
1600x1200	6Mbps	2.6GB	63.3GB	443GB	1.85TB	11.10TB
1920x1080	5Mbps	2.2GB	52.7GB	369GB	1.54TB	9.27TB
1280x960	4Mbps	1.8GB	42.2GB	295.3GB	1.24TB	7.42TB
1280x720	3Mbps	1.3GB	31.6GB	221.5GB	949.2GB	5.56TB
1280x720	2Mbps	900MB	21.1GB	147.7GB	632.8GB	3.71TB
640x360	1Mbps	450MB	10.5GB	73.8GB	316.4GB	1.85TB

FOUR: P2P Protocol introduction and fisheye camera access

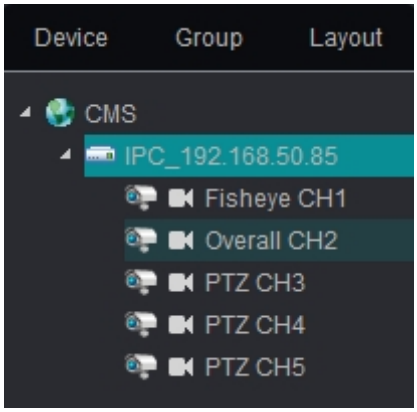
1. P2P Protocol introduction

At present, P2P has TUTK and Umeye protocols, which can be added to the platform separately, so that the client can connect to the device through the P2P protocol ID (device supports the protocol). The P2P protocol breaks the limitation of LAN and makes the platform and device can be connected through the external network. In addition device interface, select P2P protocol, to fill in the corresponding parameters according to the need and

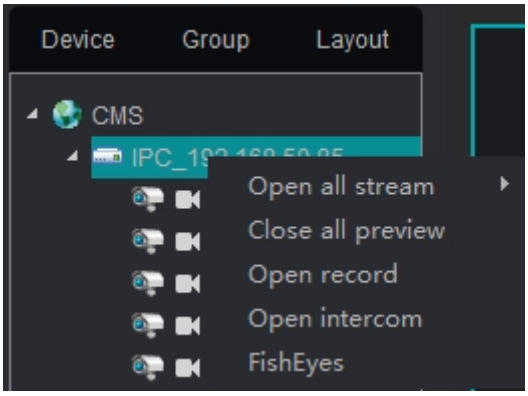
save. All operations except the protocol are used in the same way as the LAN protocol.

2. Access and use of fish-eye camera

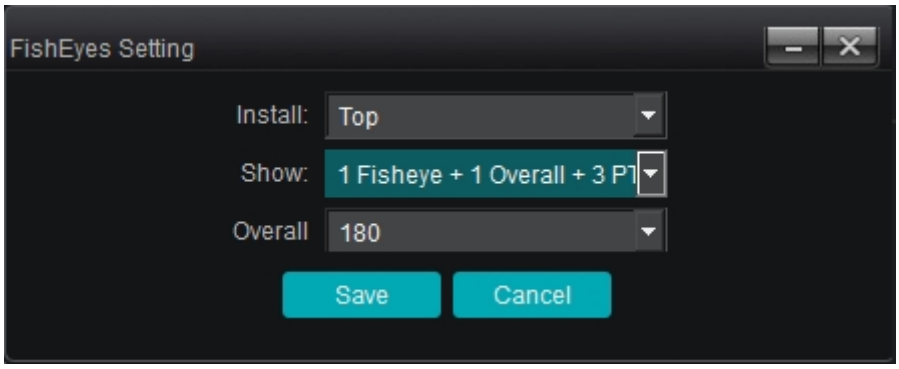
Connect the fisheye camera through I8H or SLINK protocol, open the preview interface to select fisheye camera device, and display the channel as shown in the figure:



Right-click the device , will appear the drop-down menu



Select fisheye, and the pop-up box shows the settings interface of fisheye camera, as shown in the following figure:



If the settings are modified successfully, the device restart will be prompted to take effect.