

View Management System (AntarVis2.0)

User Manual

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I. Product Overview

1. Overview

View management system (AntarVis2.0, hereinafter “AntarVis2.0”) 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.

AntarVis2.0 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.

AntarVis2.0 currently supports five protocols including active registration, ZKTeco, ONVIF and GB28181, among which, active registration, ZKTeco is the proprietary protocol of the company, thus there is no restriction on the amount of authorization path and time of use of them and they are free of charge. ONVIF and GB28181 protocol have free authorizations for one month, commencing on the date of setup. Upon the expiration of authorization, the device can't access normally. Please contact the distributor for the permanent 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: Intel HD 630 above integrated graphics or NVIDIA GTX750 above discrete graphics.

Network card: Gigabit Ethernet or above

CD-ROM drive: DVR-R

Hard disk: 250G or more, with 20G available space

Switch: Gigabit switch or above

2.2 Software Requirements

1) server2003、server2008、windows xp、windows 7、windows 8、windows 10

2) Microsoft Visual C++2010 X86 Redistributable Setup

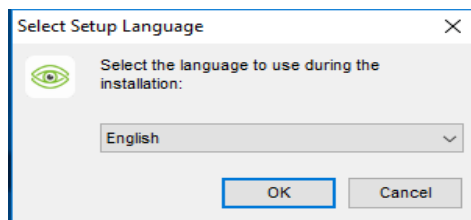
3) Microsoft Visual C++2015 X86 Redistributable Setup

2.3 System Environment

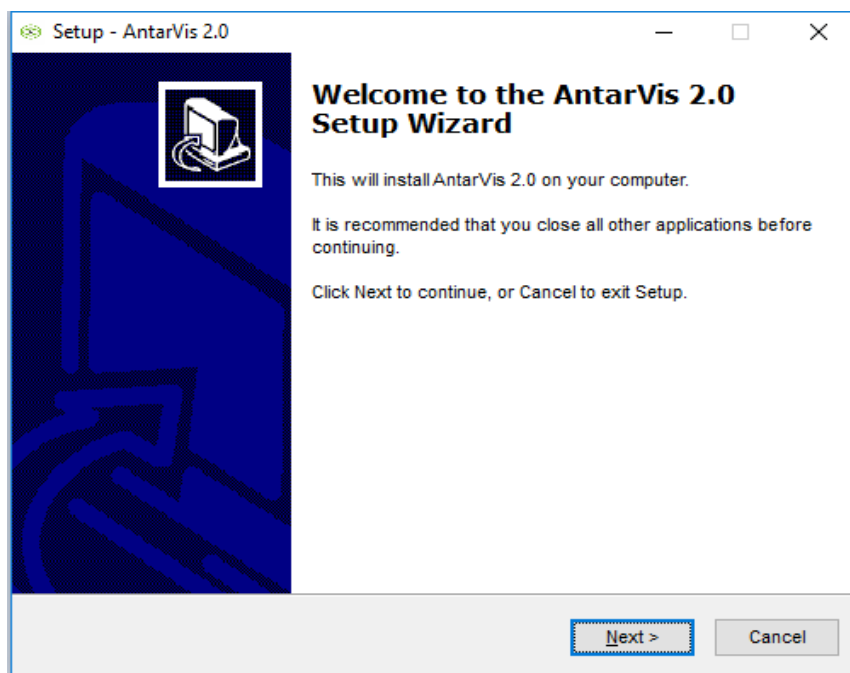
System Environment: program operation requires occupancy of database, 5050 port and 6666 port. Since a PC can only run one database, please make sure no other database runs and two data ports have not been occupied, otherwise, the program may not run normally.

II. Program Overview

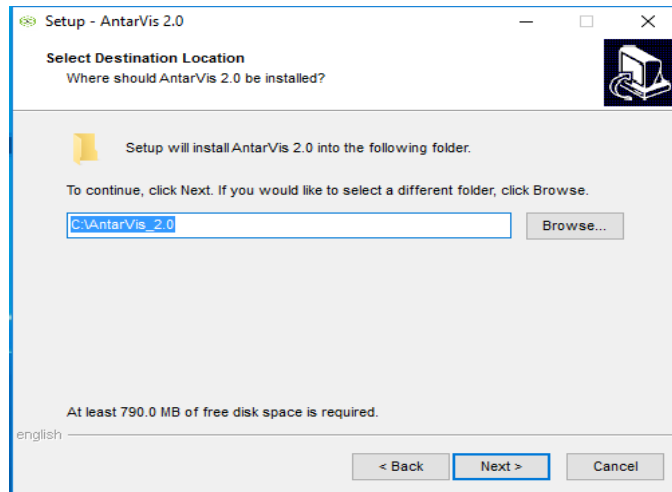
Setup overview, double click to run setup program to open setup wizard:



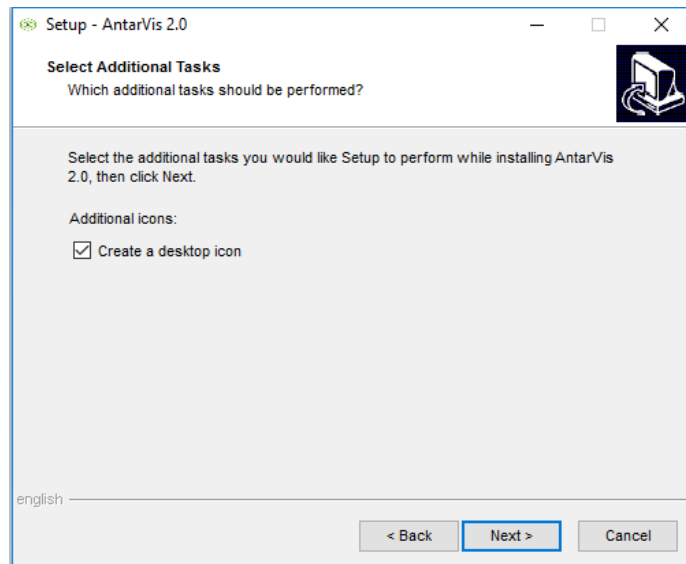
Select setup language, the program automatically recognizes the system language as default option; if other language required for setup, please select in the drop-down box. The initial program supports simplified Chinese and English. If other languages needed, please contact the distributor for translation;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



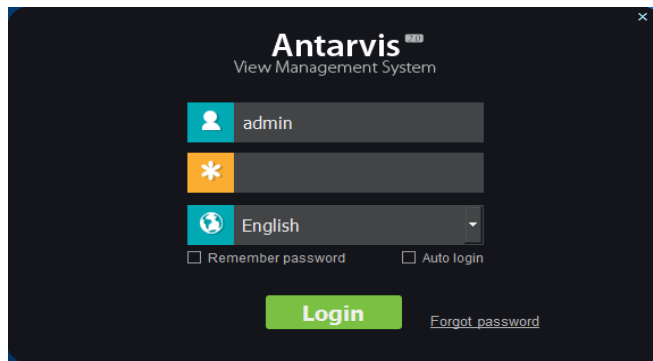
Click next, select setup path:



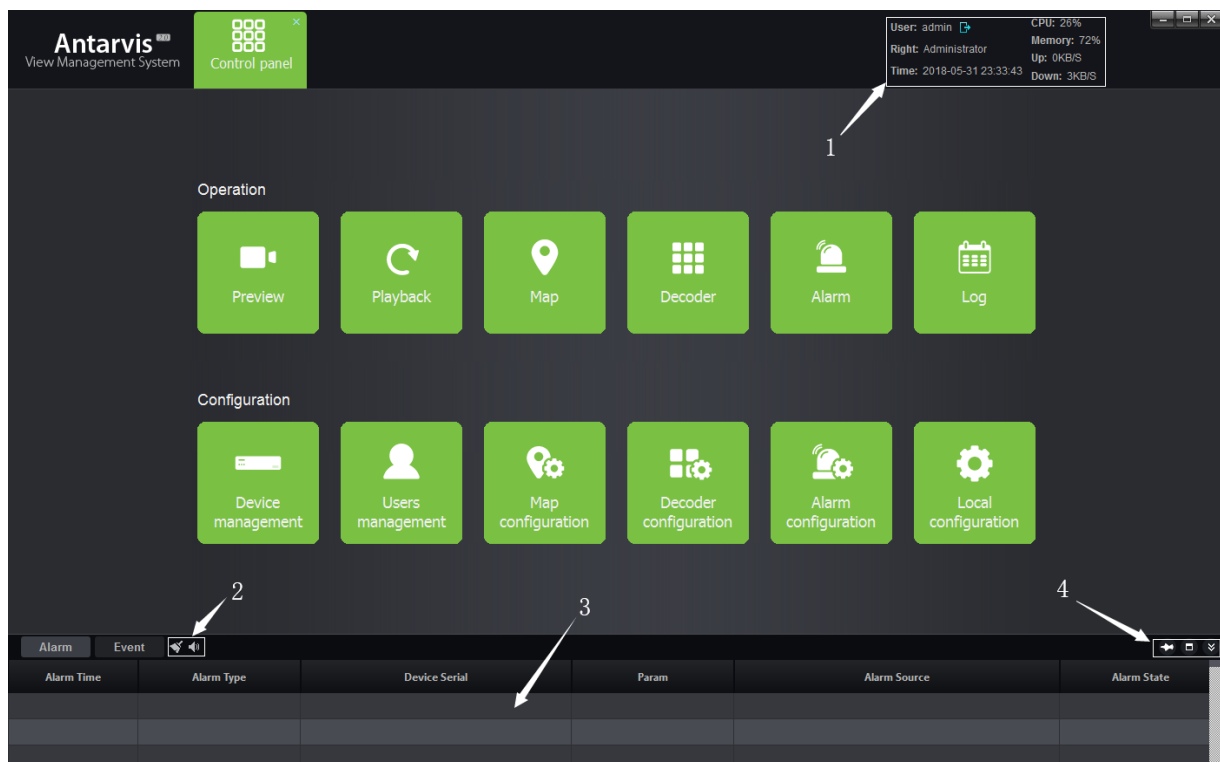
System default path **C:\AntarVis_2.0**, user can modify as the actual demand, and click “Next” to continue:




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:



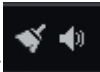
User may manually switch language, initial user name is **admin**, and initial password is **123456**. Enter the password, click “Login”, the password may not need to be entered as “Remember password” selected; the program automatically logs in as “Auto login”; the function of automatic login can be 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.

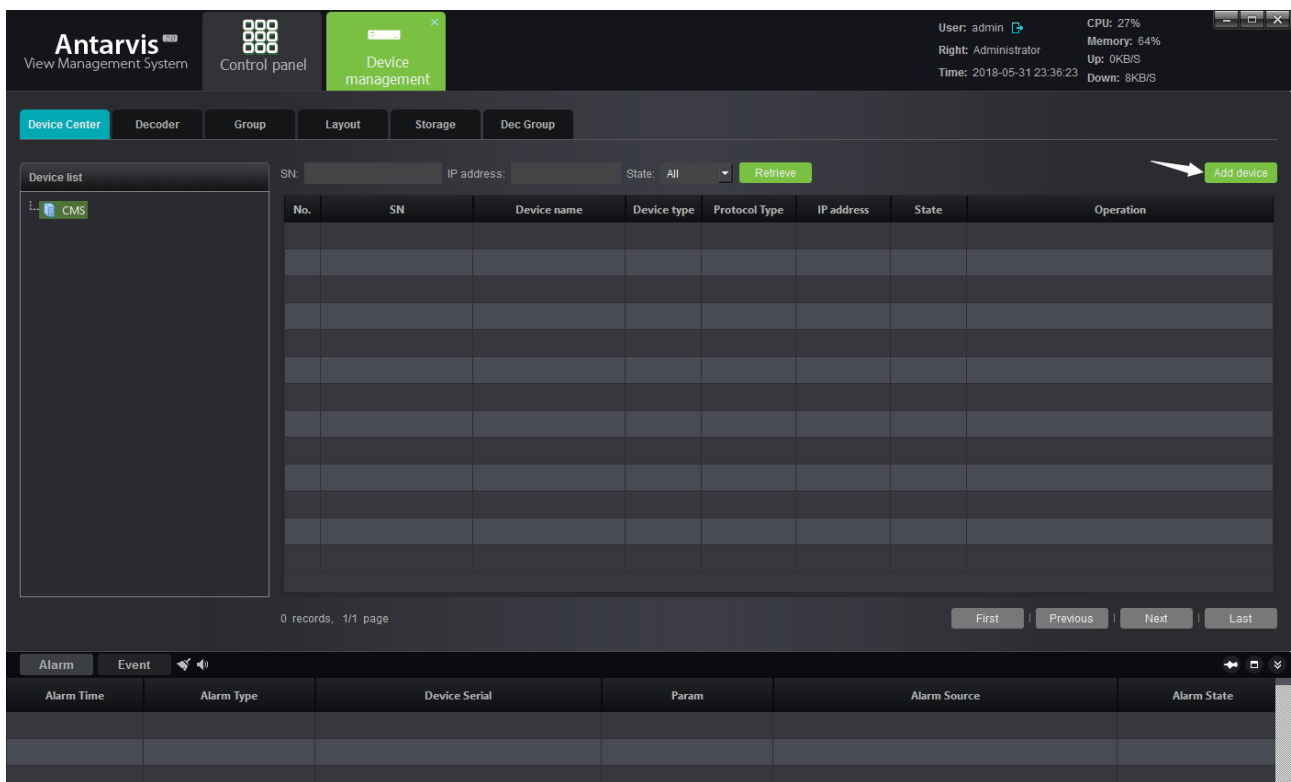
3) The functions in the toolbar , from left to right, are: clear alarm/event message, close alarm sound/open alarm sound.

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

1. Device Management

1.1 Add Device

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



The screenshot displays the Antarvis View Management System interface. The top navigation bar includes 'Antarvis View Management System', 'Control panel', and 'Device management' (highlighted in green). The right side shows system status: User: admin, Right: Administrator, Time: 2018-05-31 23:36:23, CPU: 27%, Memory: 64%, Up: 0KB/S, Down: 8KB/S. Below the navigation bar, the 'Device Center' tab is active, showing a 'Device list' on the left and a table of devices on the right. The table has columns: No., SN, Device name, Device type, Protocol Type, IP address, State, and Operation. A green 'Add device' button is located at the top right of the table area, indicated by a white arrow. The bottom of the interface shows an 'Alarm' tab and a table with columns: Alarm Time, Alarm Type, Device Serial, Param, Alarm Source, and Alarm State.

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 protocol, **ZKTeco protocol** is an independently developed protocol of our company, front-end devices should support ZKTeco protocol, ZKTeco front-end devices currently used for shipping basically supports this protocol; ONVIF protocol is the joint ownership protocol for the access of the third party device that supports this protocol; GB28181 is the national standard protocol for access of third party device which supports this protocol.

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

No.	Serial No	Device type	IP	Port	Device name	User name	Password	Protocol	Net Mode
1	059E0123CE0498B2F1E0	NVR	10.5.0.160	80	NVR_10.5.0.160	admin	*****	ZKTeco	TCP
2	02D301232E33AF5C39F7	IPC	10.5.0.203	80	IPC_10.5.0.203	admin	*****	ZKTeco	TCP
3	02D3012333124BB4EDB5	IPC	10.5.0.13	80	IPC_10.5.0.13	admin	*****	ZKTeco	TCP
4	0BD30123601C09B3C262	IPC	192.168.0.154	80	IPC_192.168.0.154	admin	*****	ZKTeco	TCP
5	02D301230DA45AE8B2CB	IPC	10.5.0.185	80	IPC_10.5.0.185	admin	*****	ZKTeco	TCP
6	0BD3012324B116CA1ECC	IPC	10.5.0.116	80	IPC_10.5.0.116	admin	*****	ZKTeco	TCP
7	0B6B0123B5E33A2D62B0	IPC	10.5.0.90	80	IPC_10.5.0.90	admin	*****	ZKTeco	TCP
8	0BD301238EC0E2940DD8	IPC	10.5.0.33	80	IPC_10.5.0.33	admin	*****	ZKTeco	TCP
9	02D001238BFCF9B50608	IPC	10.5.0.226	80	IPC_10.5.0.226	admin	*****	ZKTeco	TCP
10	0B6B0123823A2C77889D	IPC	10.5.0.199	80	IPC_10.5.0.199	admin	*****	ZKTeco	TCP
11	0BD30123F375D189A770	IPC	10.5.0.193	80	IPC_10.5.0.193	admin	*****	ZKTeco	TCP
12	02D30123248A2C652382	IPC	192.168.1.188	80	IPC_192.168.1.188	admin	*****	ZKTeco	TCP
13	0B6B0123228BFD6D19FC	IPC	10.5.0.58	80	IPC_10.5.0.58	admin	*****	ZKTeco	TCP
14	0BD30123454E9C5620C1	IPC	10.5.209.183	80	IPC_10.5.209.183	admin	*****	ZKTeco	TCP
15	02D30123E87EEF33AAB8	IPC	10.5.0.205	80	IPC_10.5.0.205	admin	*****	ZKTeco	TCP
16	0000043B1A00AAACAE00	IPC	10.5.0.240	80	IPC_10.5.0.240	admin	*****	ZKTeco	TCP
17		IPC	10.5.0.199	80	IPC_10.5.0.199	admin		ONVIF	
18		IPC	192.168.1.86	80	IPC_192.168.1.86	admin		ONVIF	

(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:

Add device

Search

IP: 10.5.0.193

Port: 80

Device name: IPC_10.5.0.193

User name: admin

Password: ••••••••

Area: CMS

Protocol: ZKTeco

Save Cancel

Device Name: define by the user as the actual demand

User Name: device user name

Password: device password

Enter correct user name, password can add the device into the device list, also, can batch add the device without password (note: for safety consideration, the password can't be retrieved and the device with password need to be filled in manually; no password filled in or wrong password leads to add failure.)

Fast match function means when there are multiple devices with same username and password, after checking them together, choose fast match, just need to input username and password one time. Modify IP function is used to batch modify the IP address of device, it just support ZKTeco protocol, check the device that needs to modify, click to modify IP address, input initial address, the device IP address will be modified in order, and will exit after the modification is completed.

After the equipment added, as shown in the figure :

Antaris
View Management System

Control panel

Device management

User: admin CPU: 34%
Right: Administrator Memory: 67%
Time: 2018-05-31 23:43:34 Up: 1KB/S
Down: 11KB/S

Device Center Decoder Group Layout Storage Dec Group

Device list

SN: IP address: State: All Retrieve Add device

No.	SN	Device name	Device type	Protocol Type	IP address	State	Operation
1	059E0123CE0498B2F1E0	NVR_10.5.0.160	NVR	HTTP-TCP	10.5.0.160	Online	Edit Delete Remote cfg Edit Ch
2	02D301232E33AF5C39F7	IPC_10.5.0.203	IPC	HTTP-TCP	10.5.0.203	Online	Edit Delete Remote cfg Edit Ch
3	02D30123331248B4EDB5	IPC_10.5.0.13	IPC	HTTP-TCP	10.5.0.13	Online	Edit Delete Remote cfg Edit Ch
4	02D3012300A45AEB83CB	IPC_10.5.0.185	IPC	HTTP-TCP	10.5.0.185	Online	Edit Delete Remote cfg Edit Ch
5	08D3012324B116CA1ECC	IPC_10.5.0.116	IPC	HTTP-TCP	10.5.0.116	Online	Edit Delete Remote cfg Edit Ch
6	086B0123B5E33A2D62B0	IPC_10.5.0.90	IPC	HTTP-TCP	10.5.0.90	Online	Edit Delete Remote cfg Edit Ch

6 records, 1/1 page

First Previous Next Last

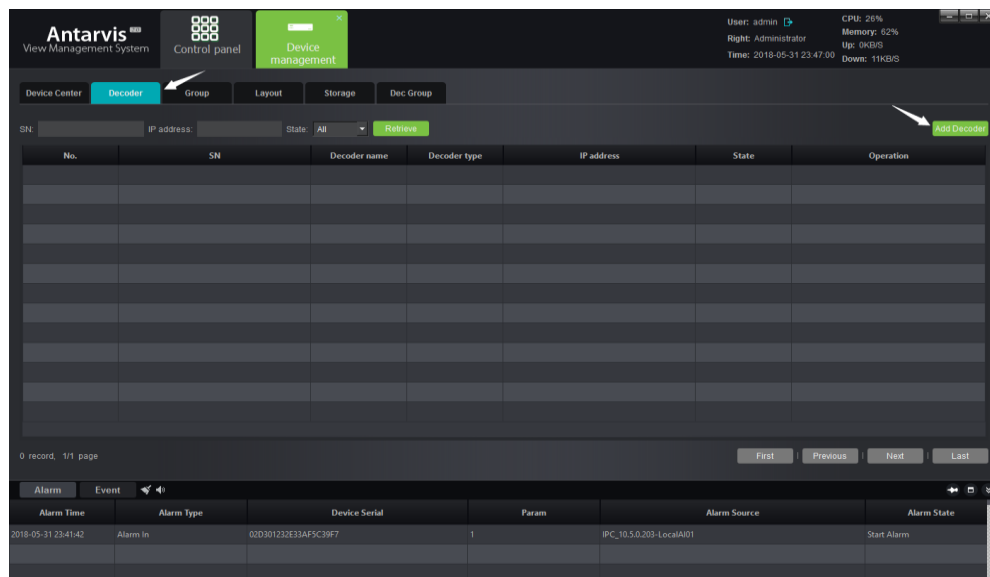
Alarm Event

Alarm Time	Alarm Type	Device Serial	Param	Alarm Source	Alarm State
2018-05-31 23:41:42	Alarm In	02D301232E33AF5C39F7	1	IPC_10.5.0.203-LocalA01	Start Alarm

We can edit&delete the device, call remote configuration and modify the channel name. The remote configuration is only supported by ZKTeco protocol, calling the remote configuration can view or modify

related parameters of the front-end device. Modifying the channel name is only supported by ZKTeco protocol, after calling it can be quickly and conveniently to modify channel name of the front-end device .

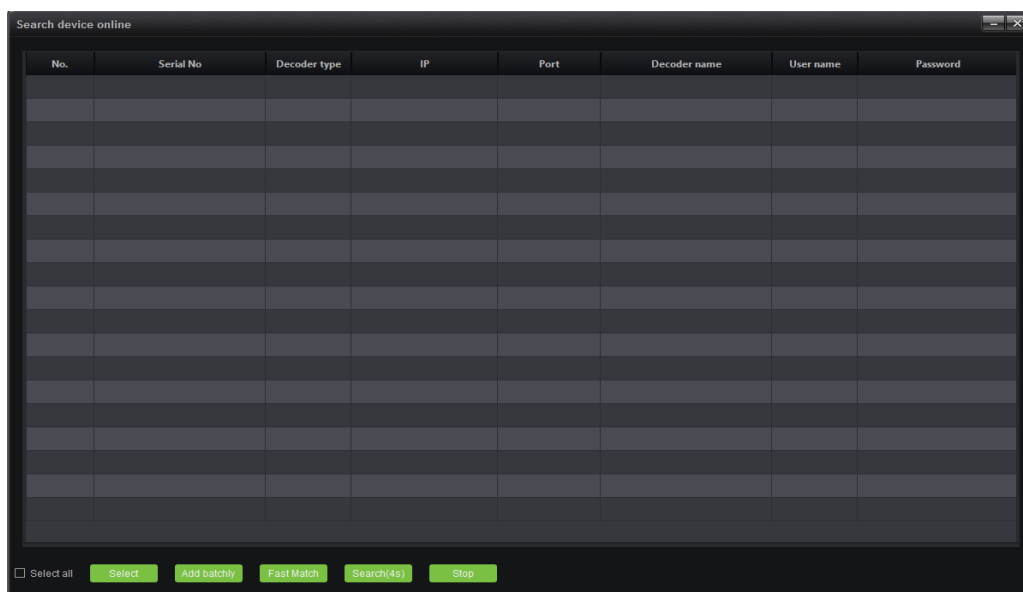
1.2 Add Decoder



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 **Decoder** button in the top right corner:

The 'Add Decoder' dialog box is shown. It has a title bar with 'Add Decoder' and standard window controls. Inside the dialog, there's a 'Search' button at the top. Below it are input fields for 'IP:', 'Port:', 'Decoder name:', 'User name:', and 'Password:'. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

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

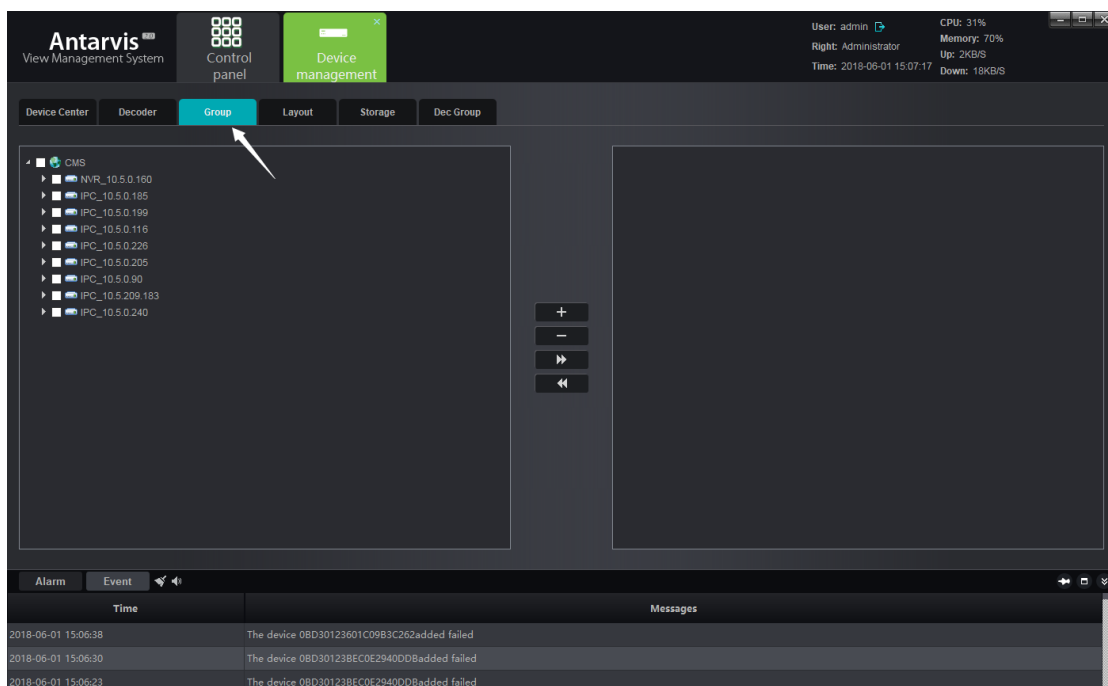
User Name: default as admin

Password: default as null

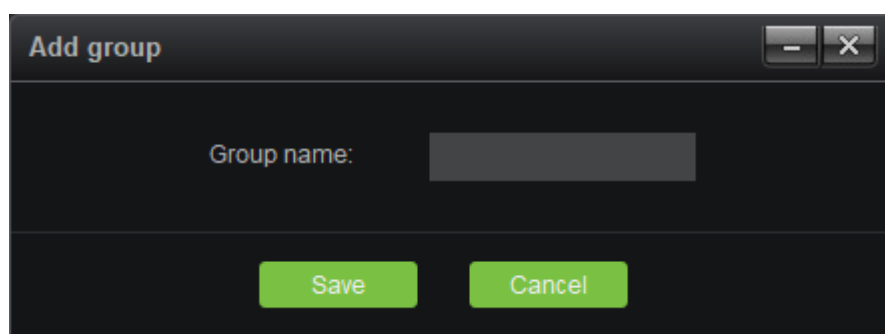
As completed, click “Save” below can then add the decoder to the server; in case add batch needed, select multiple decodes in the search interface, fill in the right password, click “Add batchly” to add **multiple** devices with one key.

1.3 Channel Group

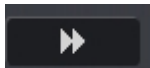
Switch to the page of “Group” in the device management module, as shown in figure:

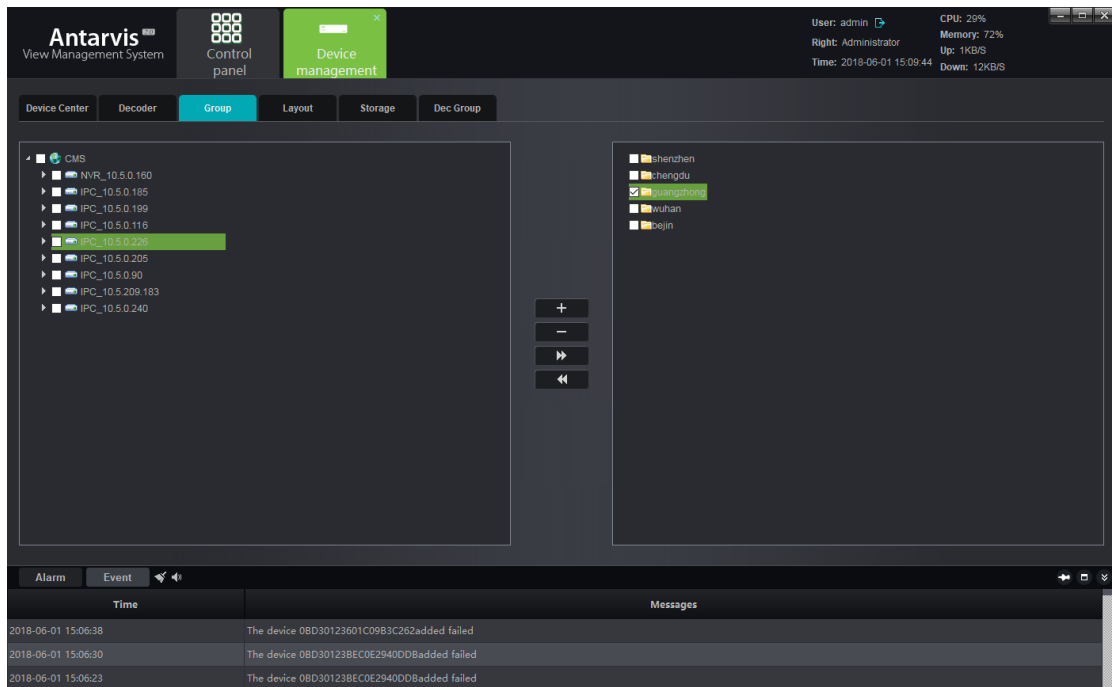


Right-click in the blank area on the right side, select to add group:



Fill in the group name, click “Save”, create the group; when succeed, select the left side device

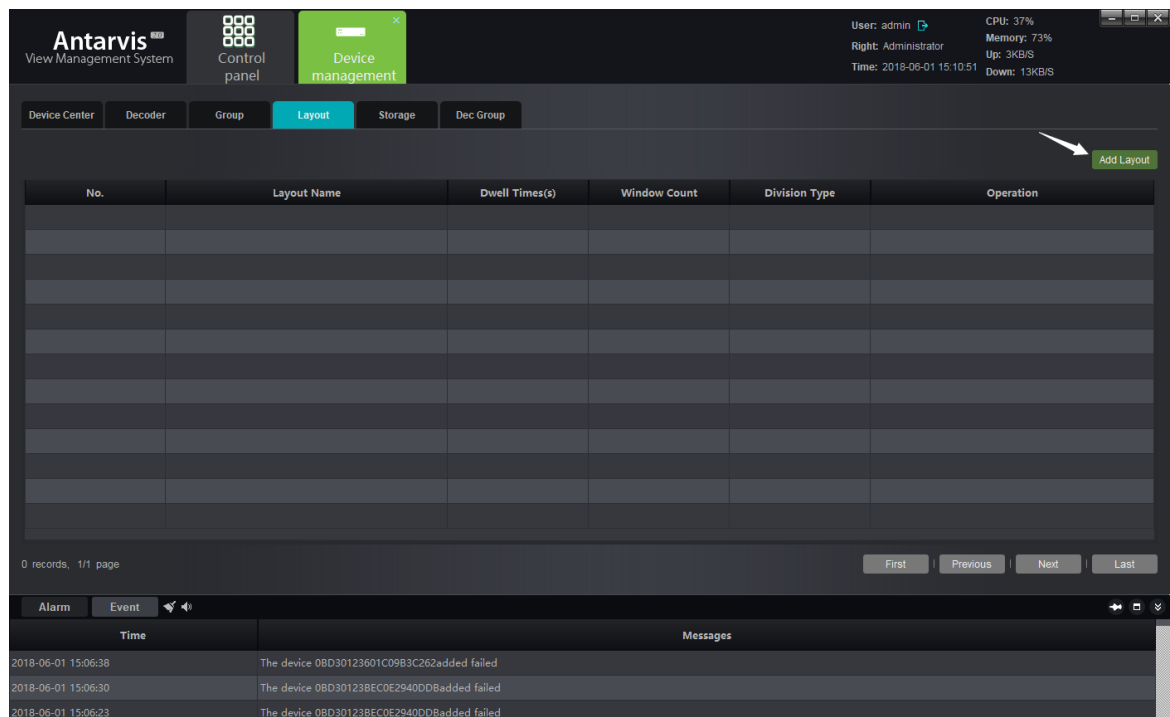
channel, then select group, click  button to add the relevant channels to the corresponding group; the actual application of grouping will be described in the preview module. When adding has been done, the effect as shown in figure:



Similarly, check the channel in the group and click  to remove the channel from the 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:



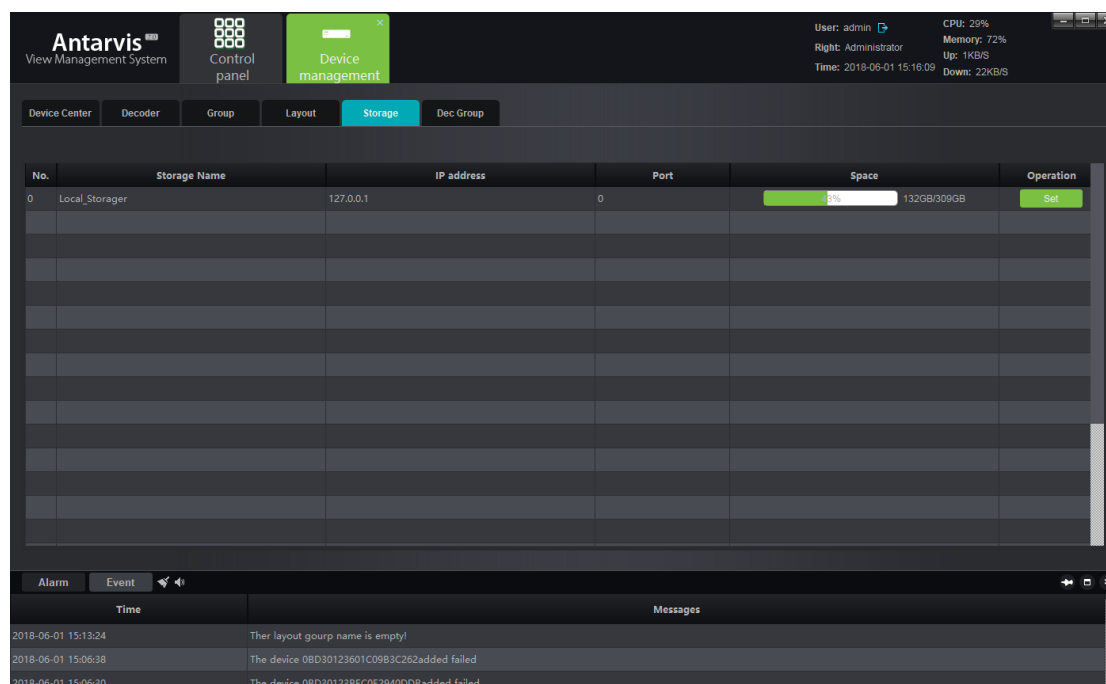
Click “New” or click “Save” as layout completed and the saved layout information shall be displayed on the right side:



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

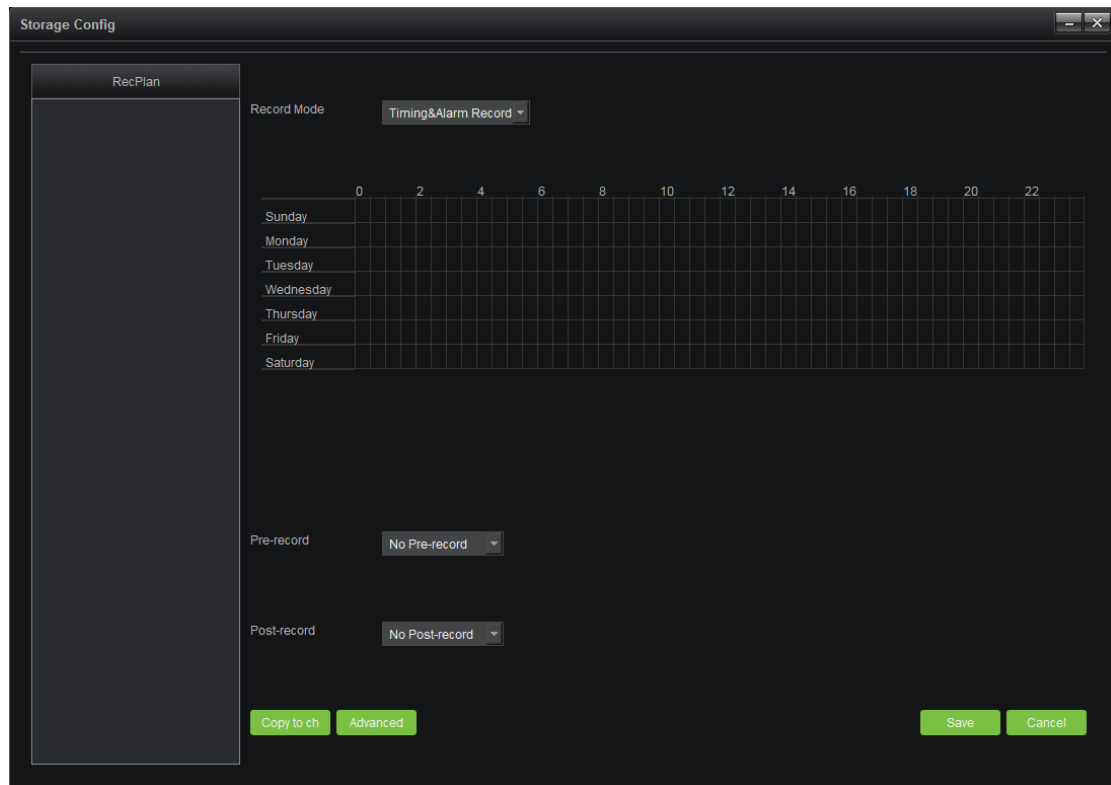
1.5 Storage Server

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

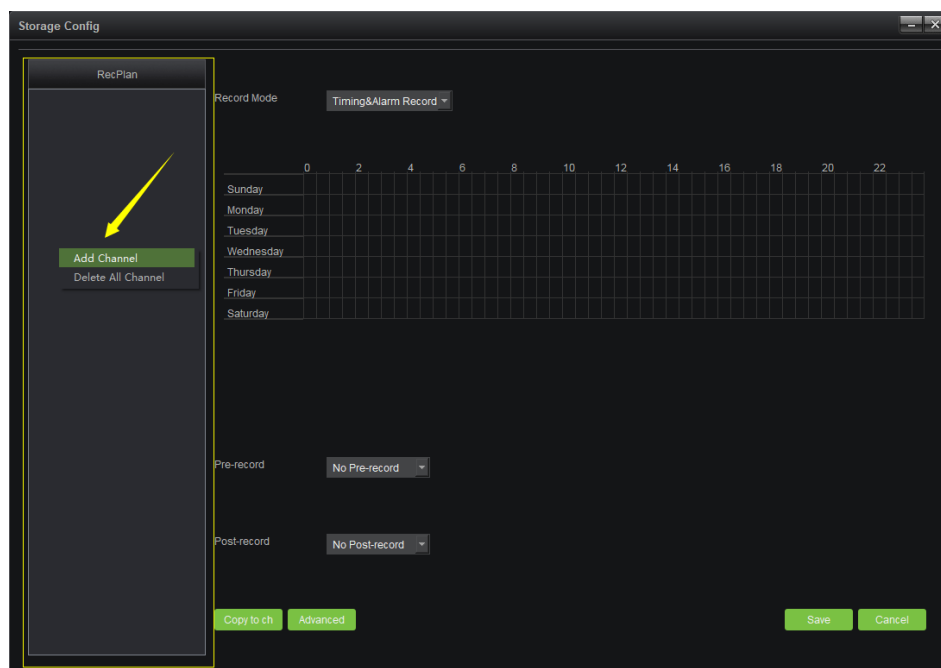


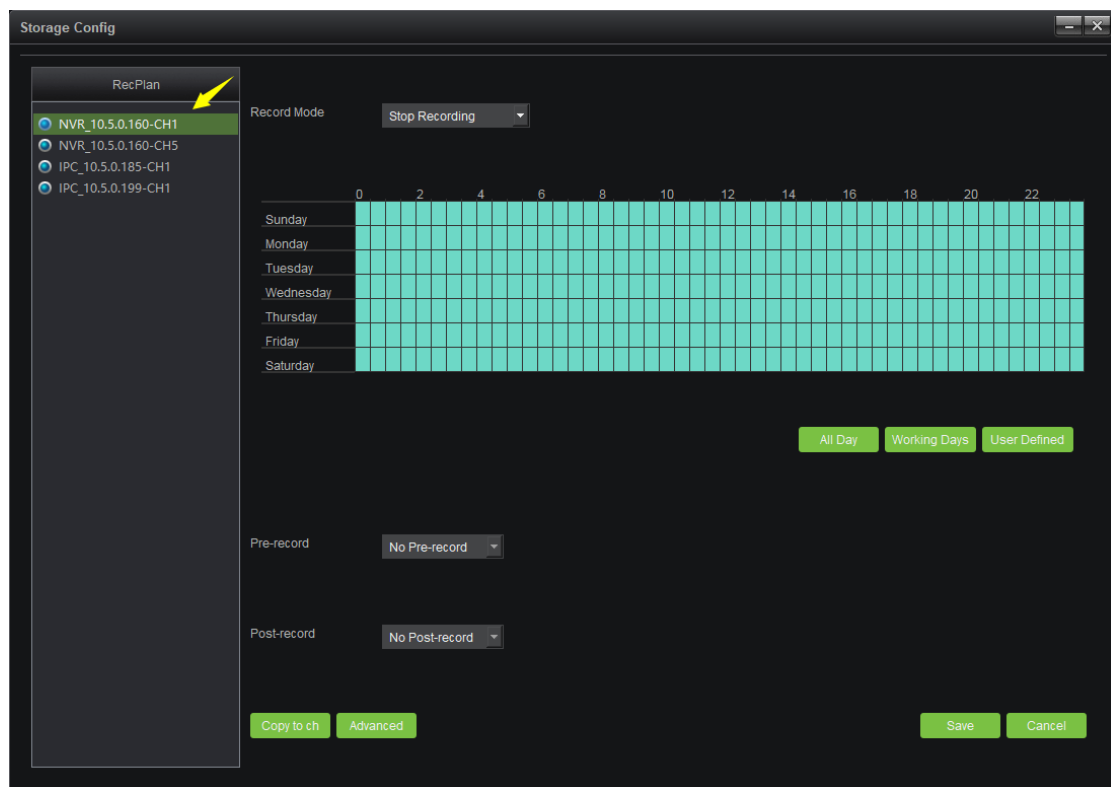
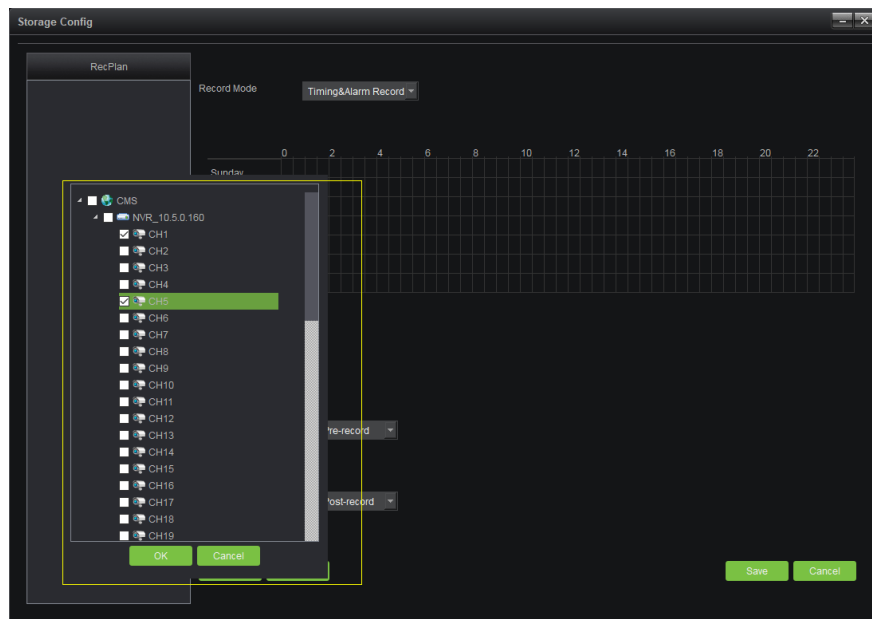
This page displays storage server relevant information, including server name, server address and

used space of disk,  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.





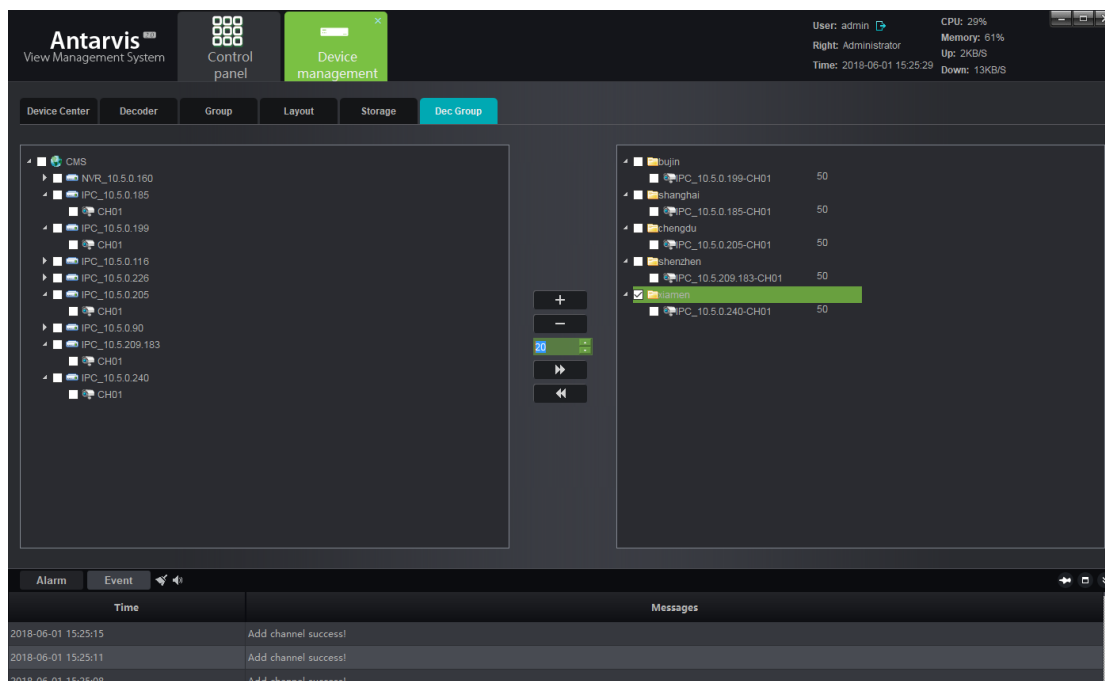
RecPlan has default whole day template and working day template; in case the user need other RecPlan template, click “User Template” to add; start to record as the RecPlan set, the red arrow indicated place in the figure shows the recording status of the channel; red means the channel is working, blue means otherwise.

Recording mode includes four kinds of timing & alarm recording, timing recording, alarm recording and stop recording, among which, timing & alarm recording refers to the timing plus alarm recording, i.e. timing recording runs if no alarm recording has been triggered while alarm recording runs as alarm has been triggered; timing recording refers to only timing record; alarm recording means record as alarm triggered, stop recording means no recording. Pre-record and time delay function only specialized in the two modes of timing & alarm recording and alarm recording, particularly the alarm triggered recording; copy to channel refers to copy the RecPlan of certain channel to other channel that already added to the storage server; advanced setting can set up partition of disk for recording while some others not; the default is other disks can be used for recording besides system disk. Click “Save” to effect as the configuration completed.

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

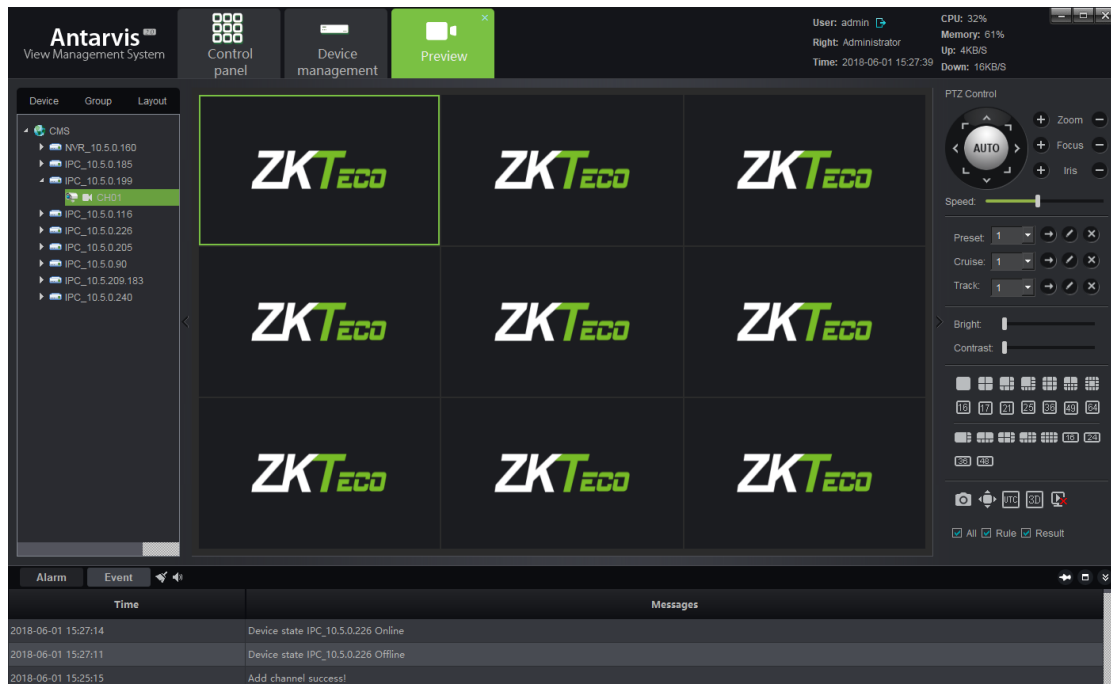
Switch to the page of “Dec Group” in the device management module, as shown in figure:



The operation configuration method of this Group is similar to the preview group mentioned above, except that this group is used for intra-group patrol on the decoder. For details, please refer to the introduction of the decoding management module in the following section.

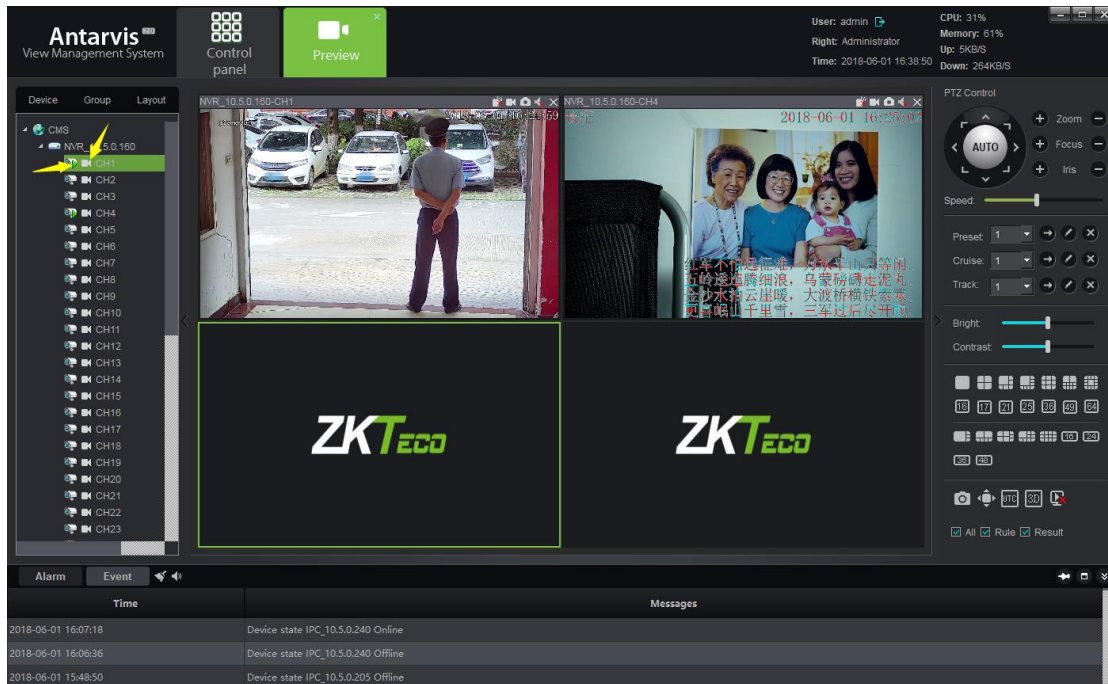
2.Preview



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;

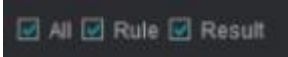
4)  audio preview switch, click on it can Open/Close the audio of this channel, and  shows it is in the off-state,  shows it is in the on-state;

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

2.3 Preview Interface Right Click Function Button Overview

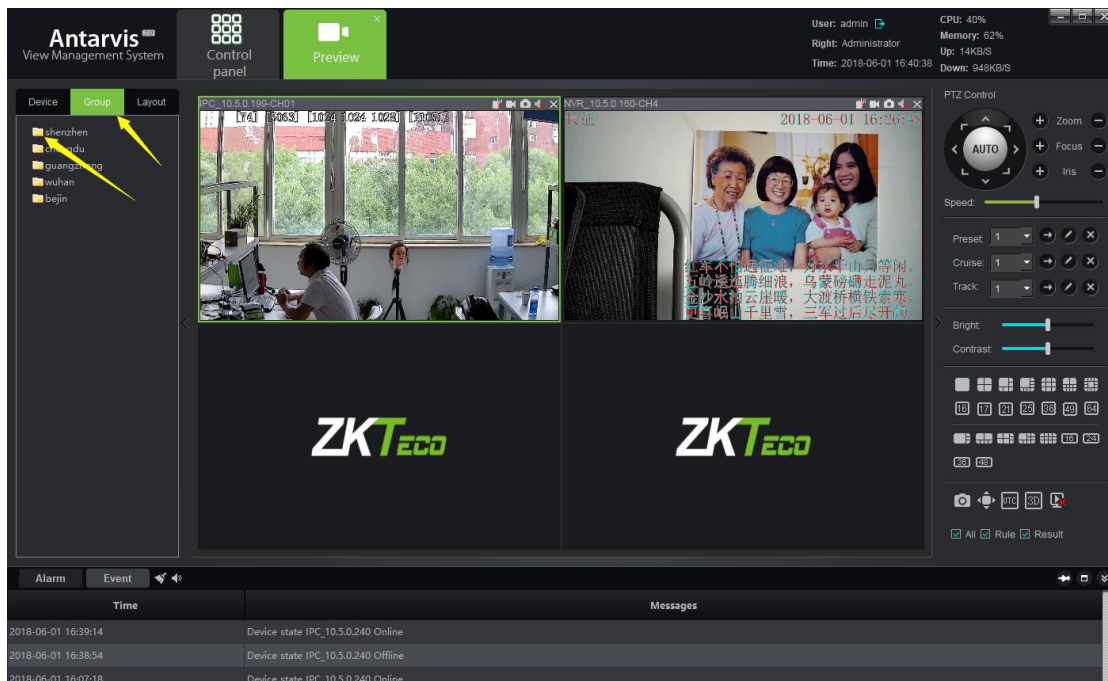
There is a row of function buttons on the right lower side of the preview interface, among which:

- 1)  the capture button, select preview window, click on this button to capture the picture in the selected window;
- 2)  full-screen button, click on it can switch the selected window into full-screen;
- 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 through 18H 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 Patrol

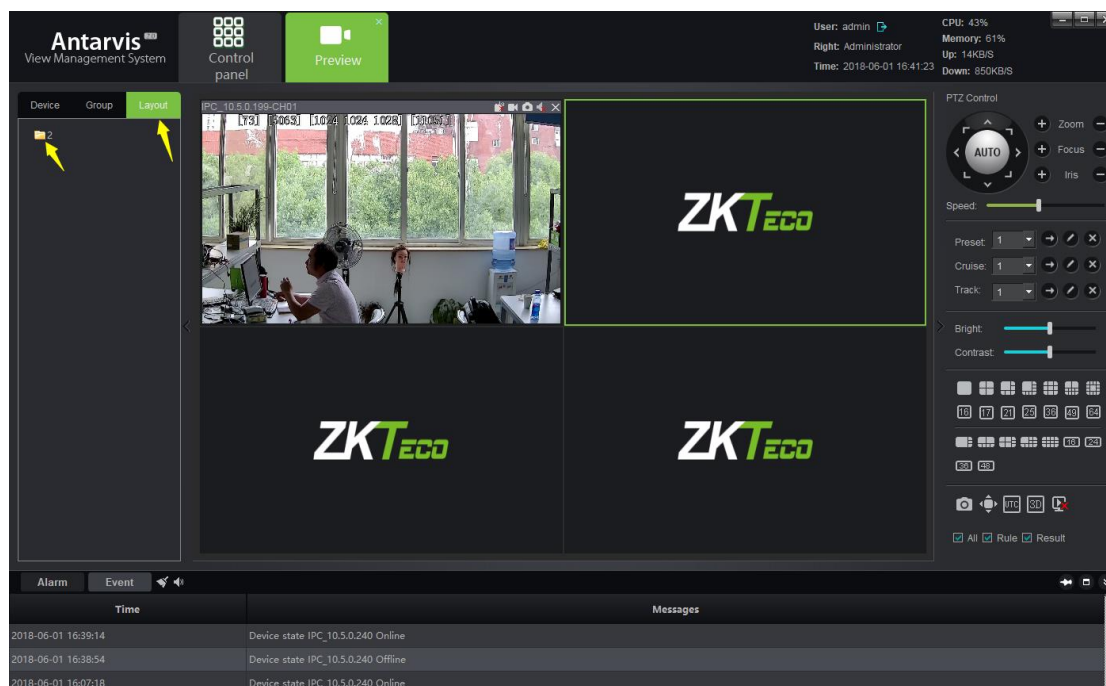
Add two or more groups (see device management—group for specific operation), as group created, switch to group page in the preview interface, as shown in figure:



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

2.5 Device Layout **Patrol**

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 Patrol**” can start **Patrol** among several layouts and the interval between **Patrols** can be set up when the layout has been set up; click “**Stop all**” stops the **Patrol** or close current preview.

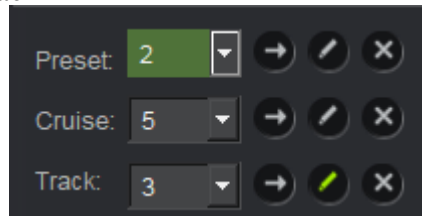
2.6 PTZ










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:



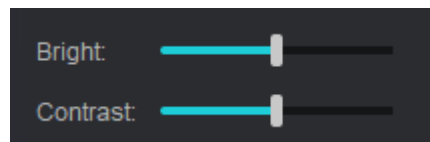
2.6.2 Preset, Cruise and Track



- 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 pathset.
- 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

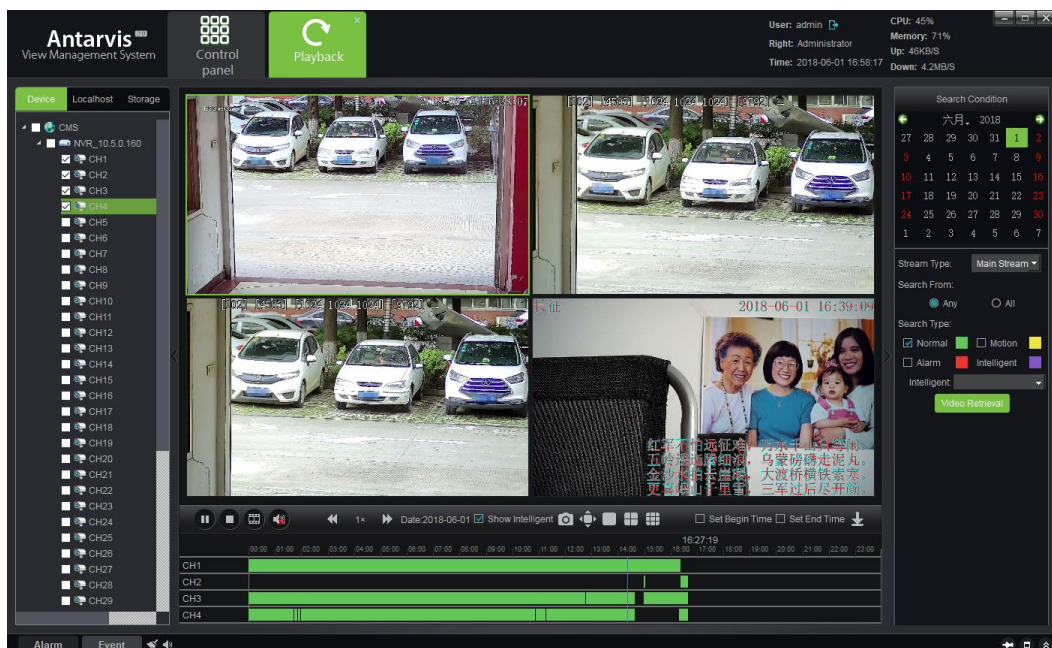
Select the device channel for the video to be playback in the device tree on the left side (note: only the video in the same device or same storage server can be played simultaneously, and only 9 channels can be selected at most each time), select the storage path of the video on the left side, then 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:



(Note: AntarVis2.0 differentiates NVR1.0 and NVR2.0; the search interface of NVR2.0 is slightly different. The illustration here takes NVR1.0 as example; see the IE or local interface of NVR2.0 for the search interface of NVR2.0)


3.2 Video Playback

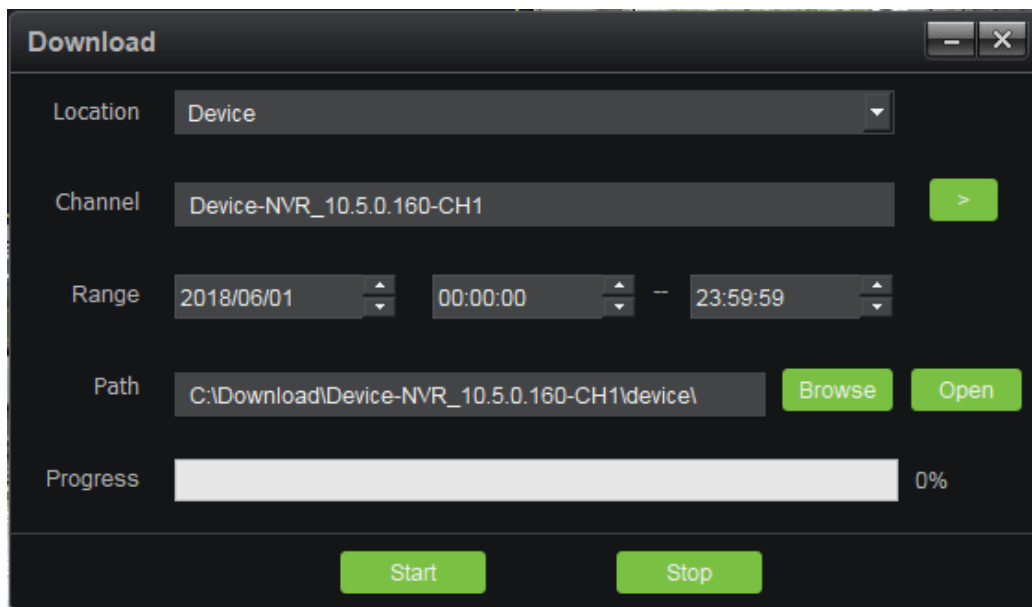
Click on  in the interface can start/pause play,  stops play, place the mouse on the video bar and scroll the wheel can enlarge/reduce the scale of video bar; double click mouse left on the video bar, the play can be located, and double click in the course of playback can switch the locate, as shown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

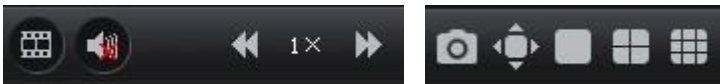





3.3 Video File Download


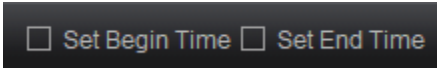
Click on the  button in the interface to enter the download interface of the video file, as shown in figure:



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.

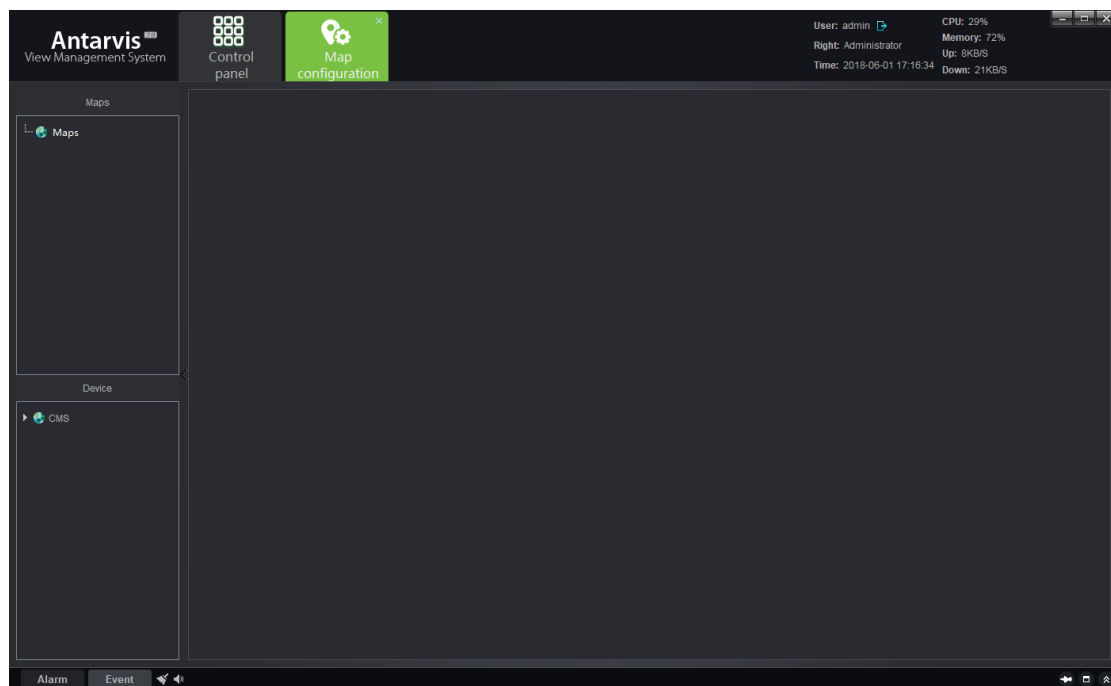
3.4 Toolbar Overview

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 1/16X and 16X;  capture button, the picture can be captured in the course of playback;  full-screen button, click to switch to full-screen (under the full-screen 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.

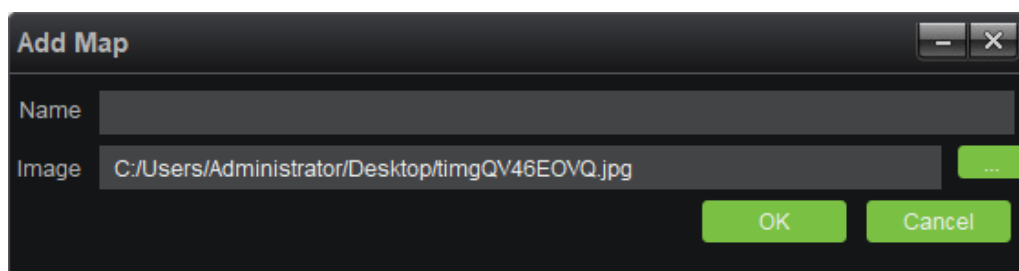
4. Map Configuration

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



4.1 Add Map

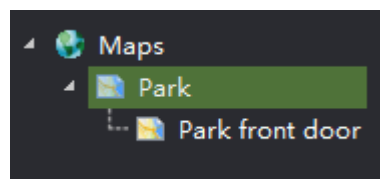
Right click on the signed place in the figure, select “Add map”, pop up the add box:





Fill in the name, select picture, click “OK” to add map, several maps can be added; meanwhile, **Sub-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 **sub-map**; as **sub-map** added, drag the **sub-map** to the main map to complete association and the **sub-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 **sub-map**; and click on the  button in the **sub-map** can return to main map.

4.3 Map Deployment

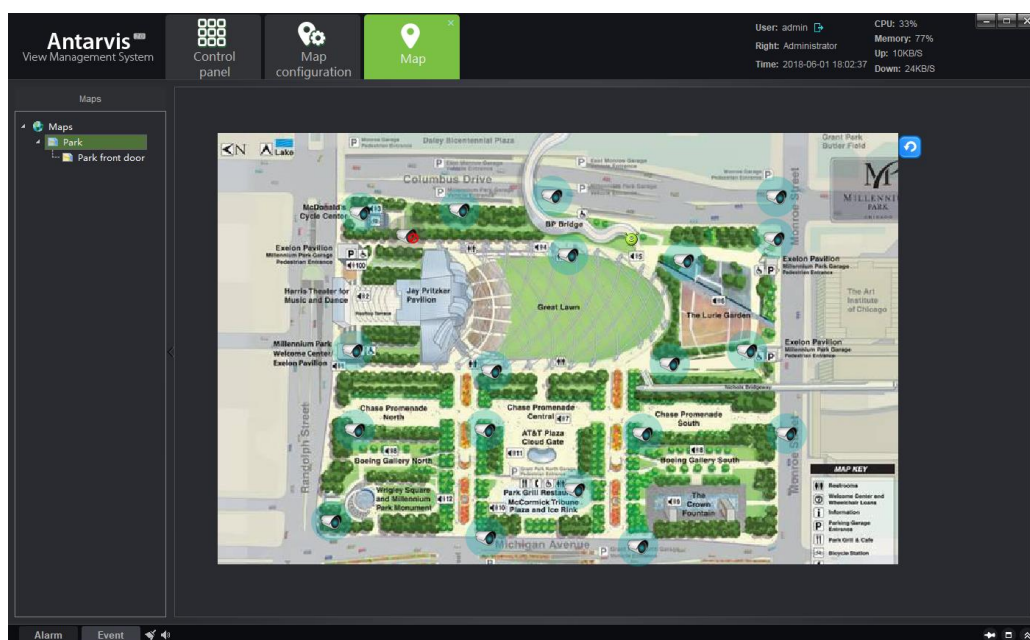
Drag the device channel or alarm input on the left lower side to the map, then the deployment completes, as shown in figure:



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 allows to select icon(bullet/dome/PTZ) or delete. 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:

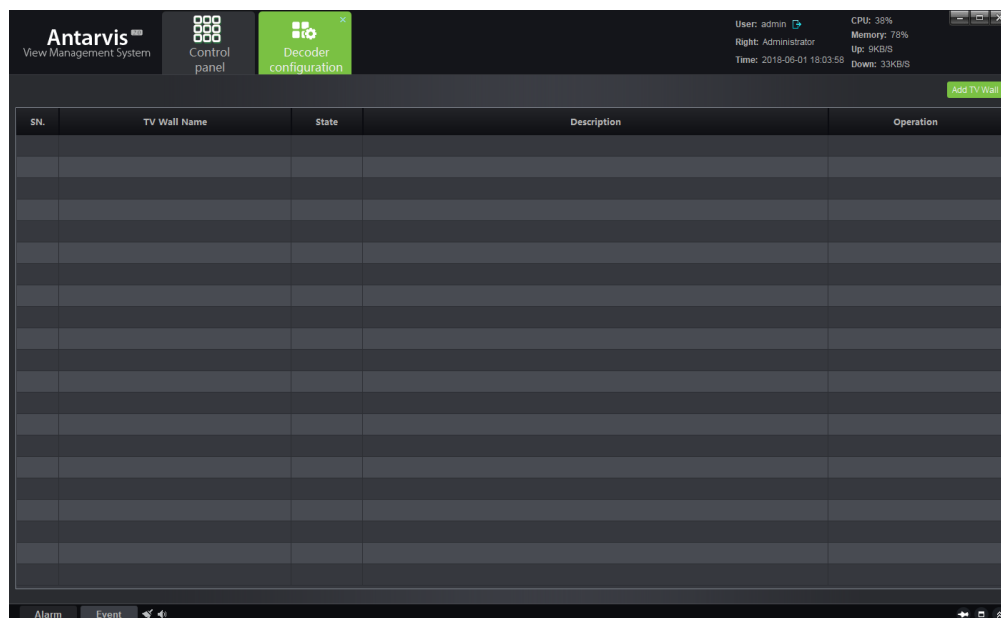


Double click on the map shows the map configured and deployment channel; the module is

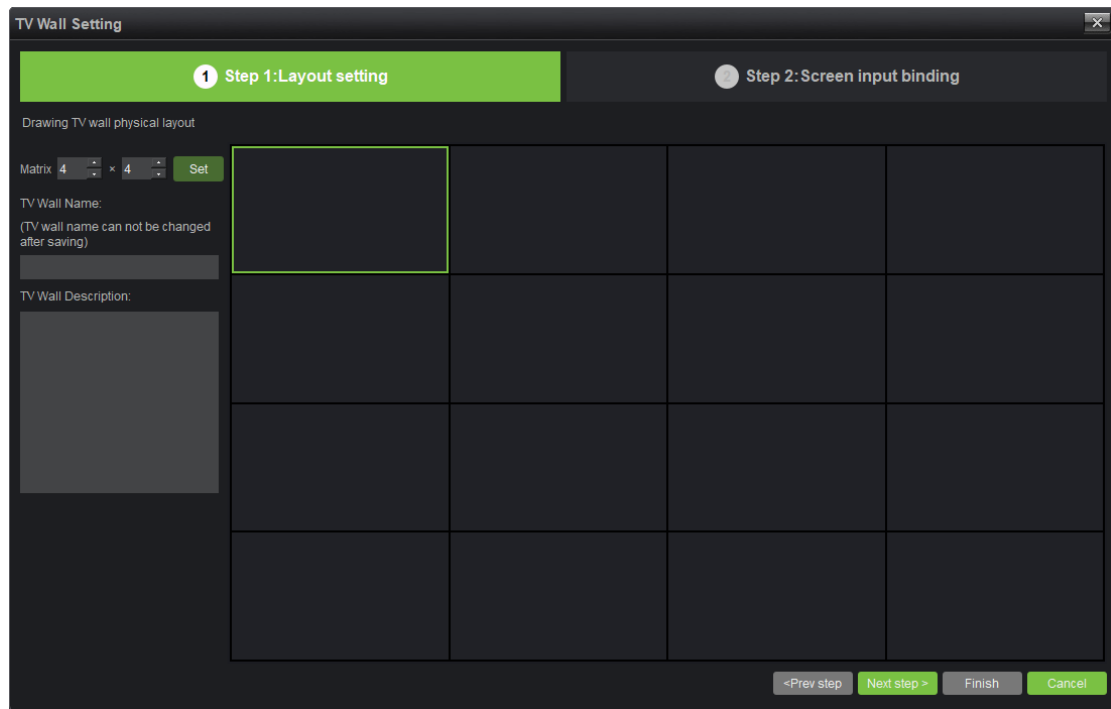
operation module, on which, the relevant configuration and modification can't be executed on the map; right click on the channel deployed on the map opens the preview and playback of the corresponding channel. User, in the actual application, can swiftly call the preview and playback of the corresponding channel according to the map, which makes the operation clearer and easier. When alarm triggered, and the associated channel deployed on the map, the channel icon on the map turns into red.

6. Decoder Configuration

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

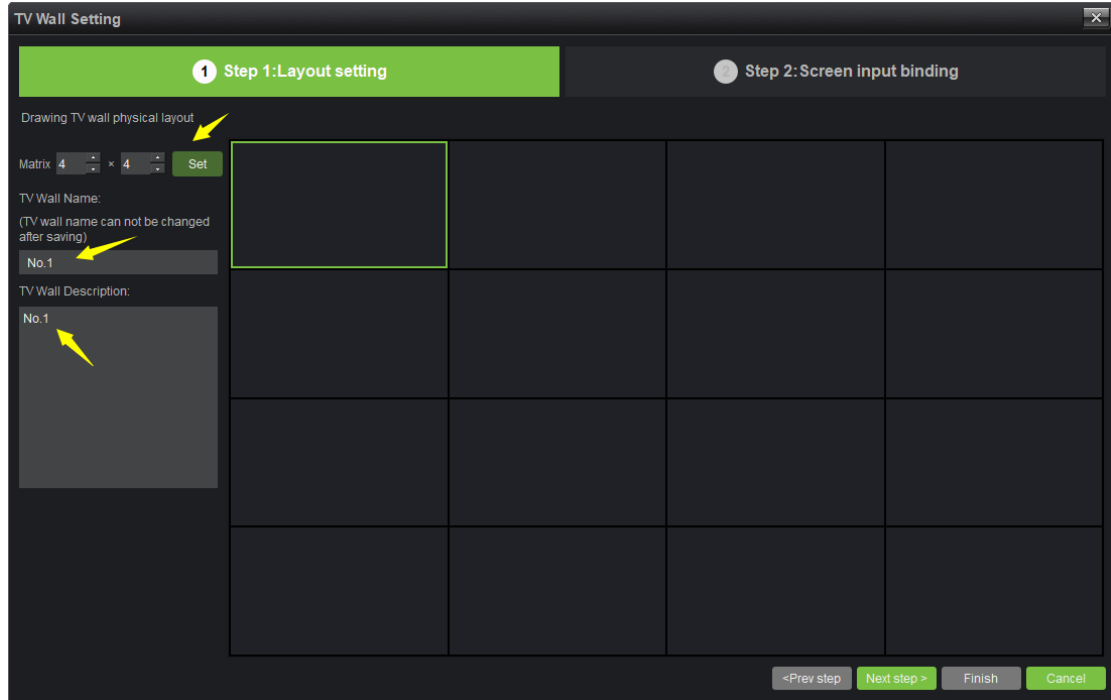


The Decoder Configuration shows the TV wall scheme currently set and the Enable Status of the scheme; in terms of the existing TV wall scheme, the “modify”, “delete” and “disable/enable” can be operated. Click “Add TV wall” button in the top right corner to add new TV wall scheme, as shown in figure:



6.1 Layout Setting

Set TV wall layout, fill in the relevant information:



1) Matrix layout setting: user can 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).

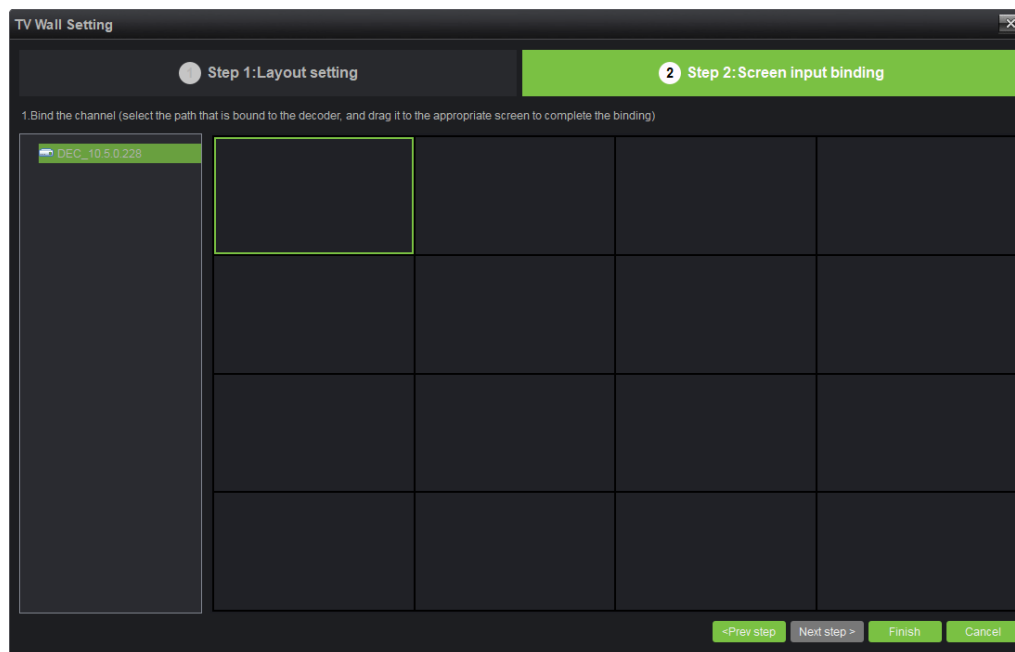
3) TV wall scheme description: user describes the scheme for differentiation, optional.

4) TV wall splice: user can set the TV wall as splice or non-splice.

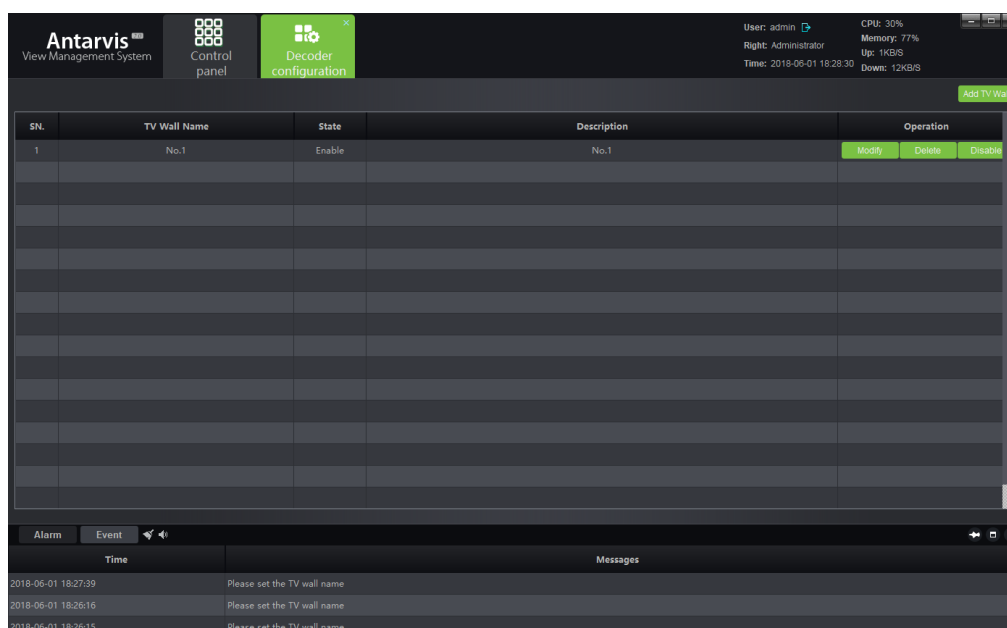
As completed, click “Next step”.

6.2 Screen Input Binding

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



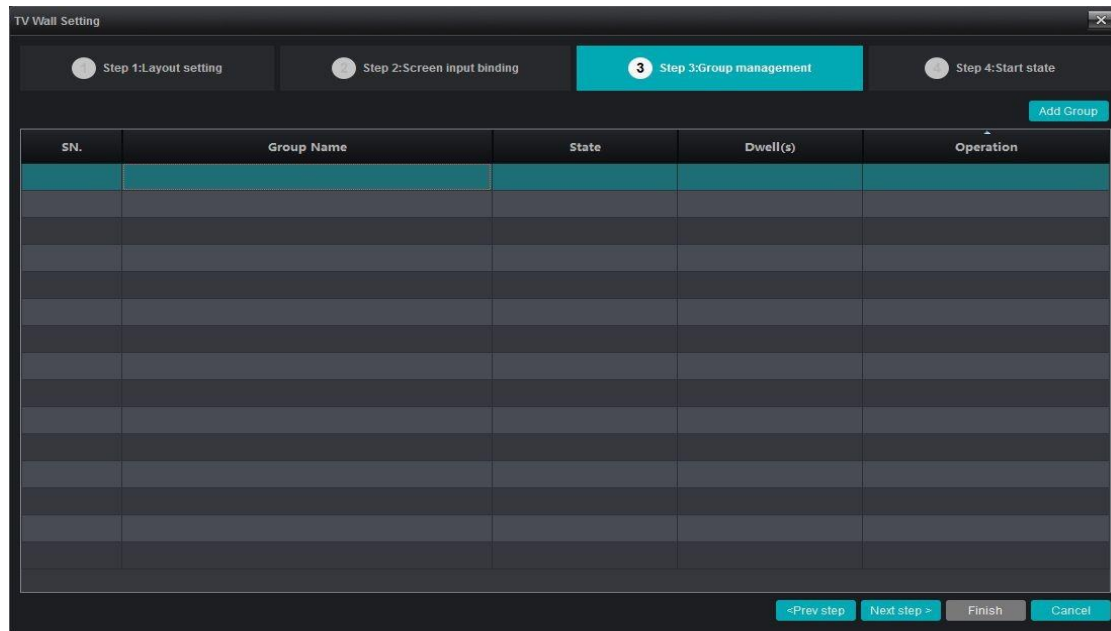
In this interface, user can set layout as the situation, associate the decoder to the TV wall matrix layout; if finish the setting, please select “Finish”.



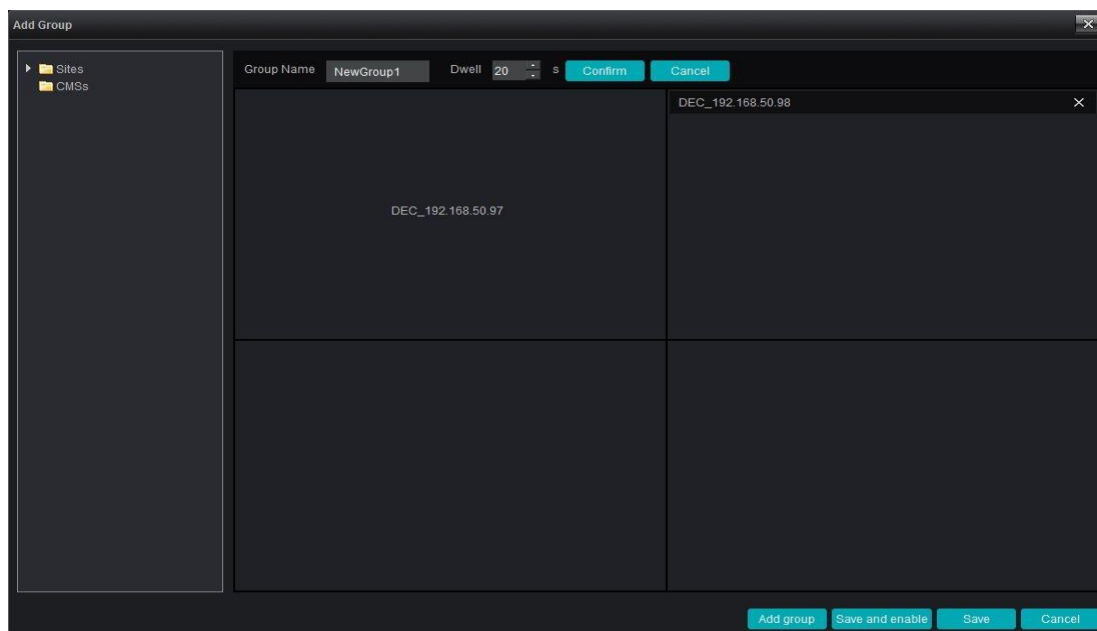
After finishing the setting, the saved TV wall can be seen at the Decoder Configuration interface, can operate edit,delete and forbid/enable for the saved TV wall.

6.3 Group Management

Enter group management, as shown in figure:

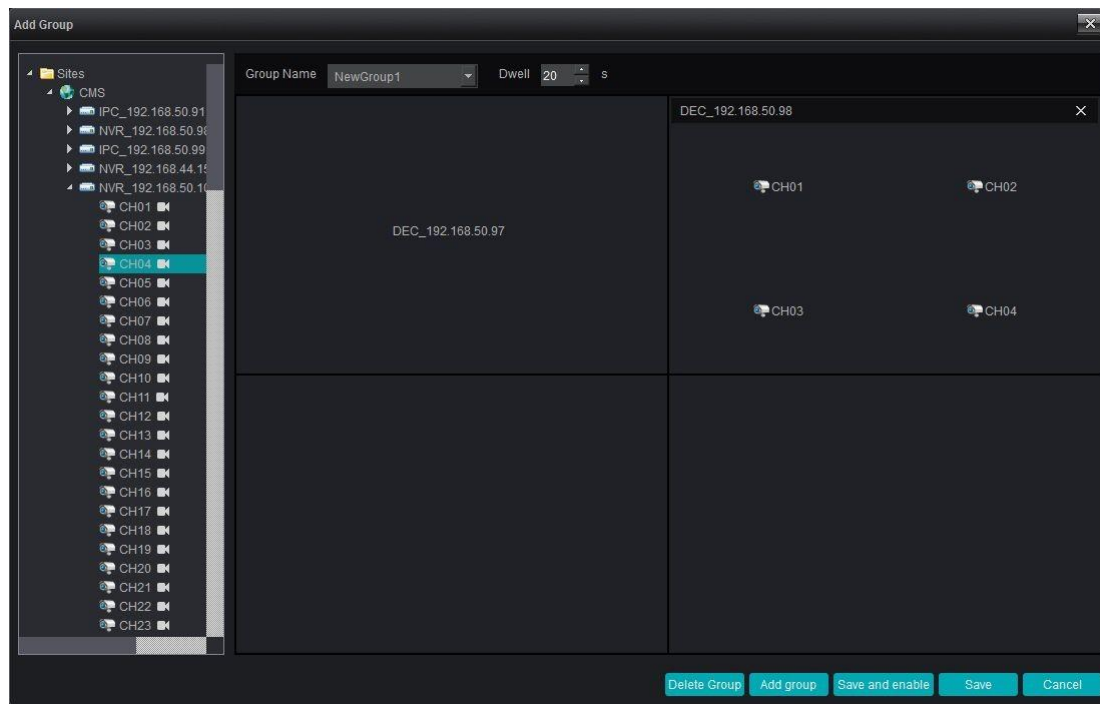


Click to add group (note: only roll screen can add group; if there is no roll screen, directly click “Next step” to skip this page):

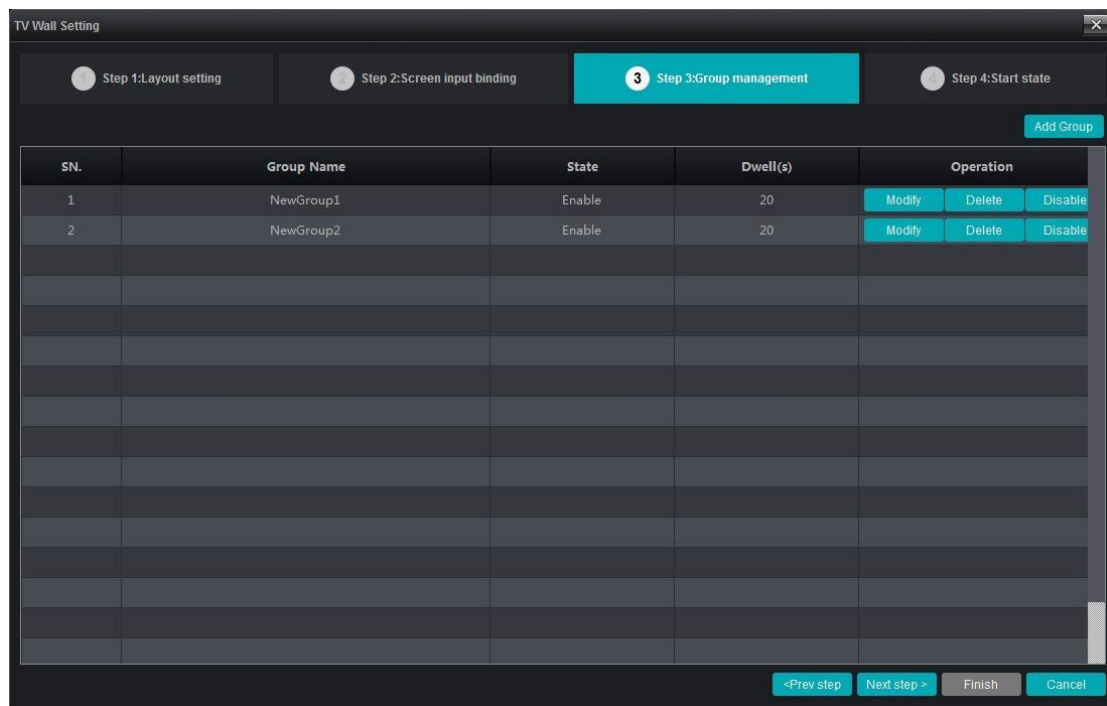


The screen 2 in the figure is roll screen, group can be set; first of all, set the group name and the stay time of this group, user can define the group name as the actual situation; group stay time can be selected by user between the range of 20 to 6,000 seconds. Click “Confirm” as setting completed, then drag the

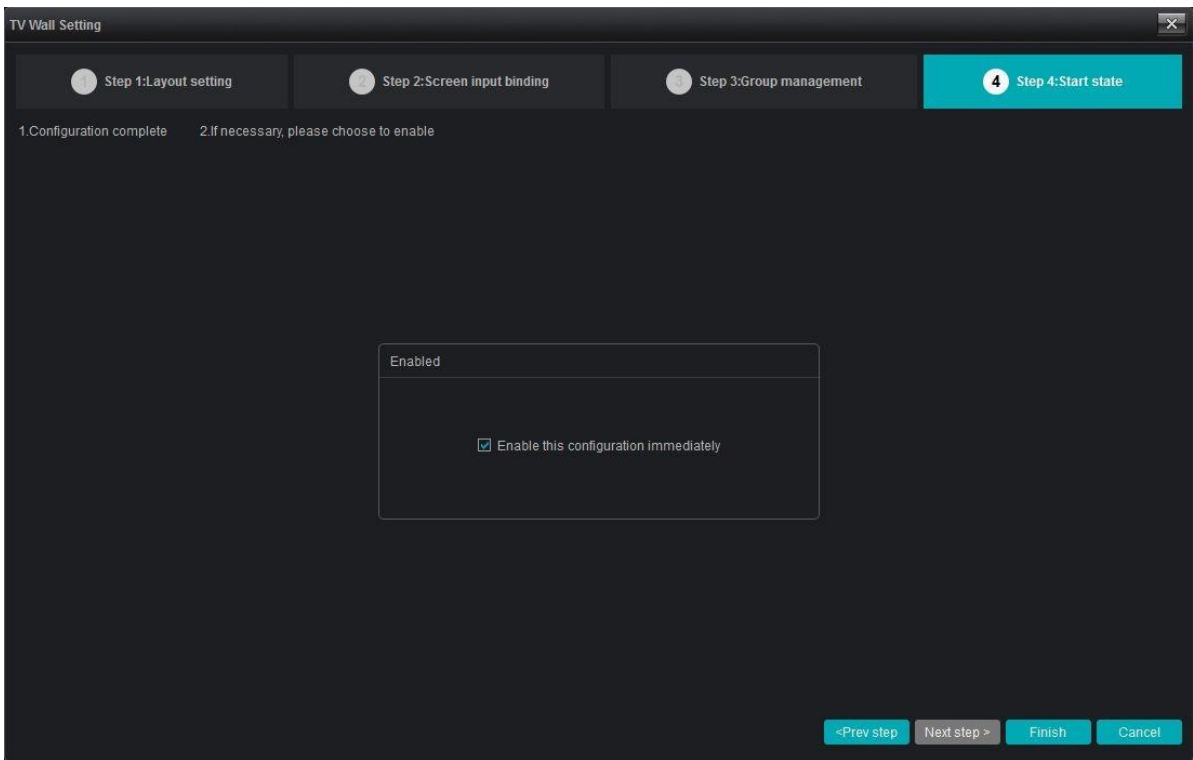
device channel to split screen 2, complete the layout of the first group, as shown in figure:



As the setting completed, click on “Add group” below to continue to add a new group. The operation is same as before. As multi-group set, select a group, click on “Delete group” to delete certain group. When all groups set, click on “Save and enable” to save the group set and enable; if click on “save”, the group can only be saved but the status is disabled, as shown in figure:



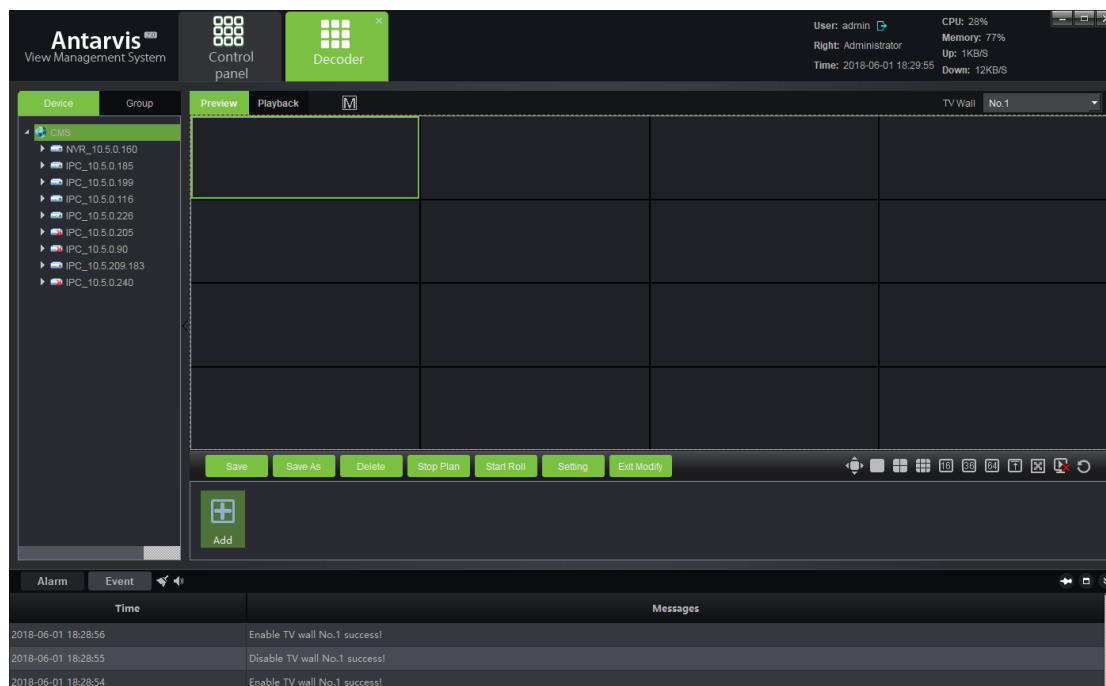
6.4 Enable Status



If the configuration shall be enabled as the setting completed, select “Enable this configuration immediately” and then click the “Finish” button below. If it doesn’t need to be enabled, directly click on “Finish” to exit the interface. As the setting completed, this configuration scheme shows in the Decoder Configuration list.

7. Decoder Management

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



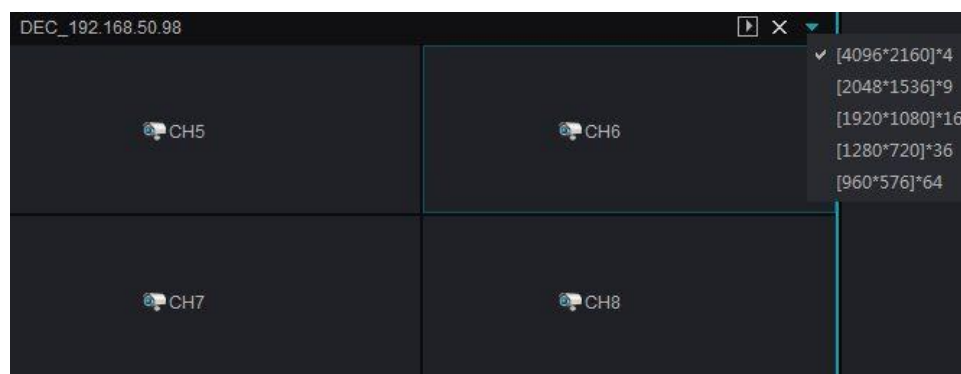
Firstly, drop-down the check box in the signed place of the figure to select TV wall, all rules set and enabled shows in this check box, select one scheme.

7.1 Decoding Mode Selection

As the scheme selected, please set the decoding mode of the decoder to ensure the normal decoding; the decoding mode is relevant to the decoder, the corresponding decoding mode differs for different decoders, and the decoding mode is the expression of the decoding capability of the decoder. Click on the




button in the figure, as shown in figure:



Decoding mode represents the current decoding capability of the decoder; the decoder listed in the

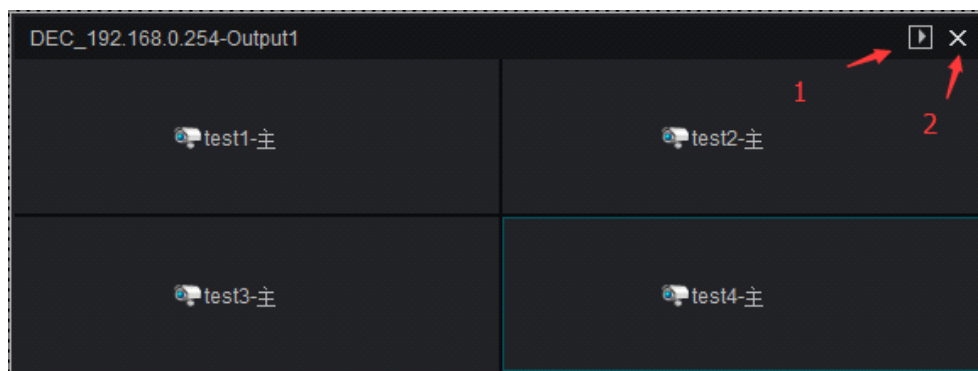
figure supports 3 decoding modes, i.e. 16 channels 720 x576, 9 channels 1280 x960 and 4 channels 2048 x1536 (note: the subsequent number represent the maximum resolution of decoding, e.g. under the 9 channels mode, the maximum resolution of decoding is 1280x960; the decoding mode of different decoder differs as well). It shall be normally decoded and displayed as the resolution of the front end IPC has been guaranteed to not exceed the resolution restriction of the current decoder mode.



7.2 Decoding on the wall

As the scheme selected, select the channel for decoding on the wall in the device list on the left side, drag the relevant decoder to the corresponding decoding screen to complete decoding on the wall, can use  button to switch the stream type of the decoding on the wall before dragging, select main stream or sub-stream on the wall.



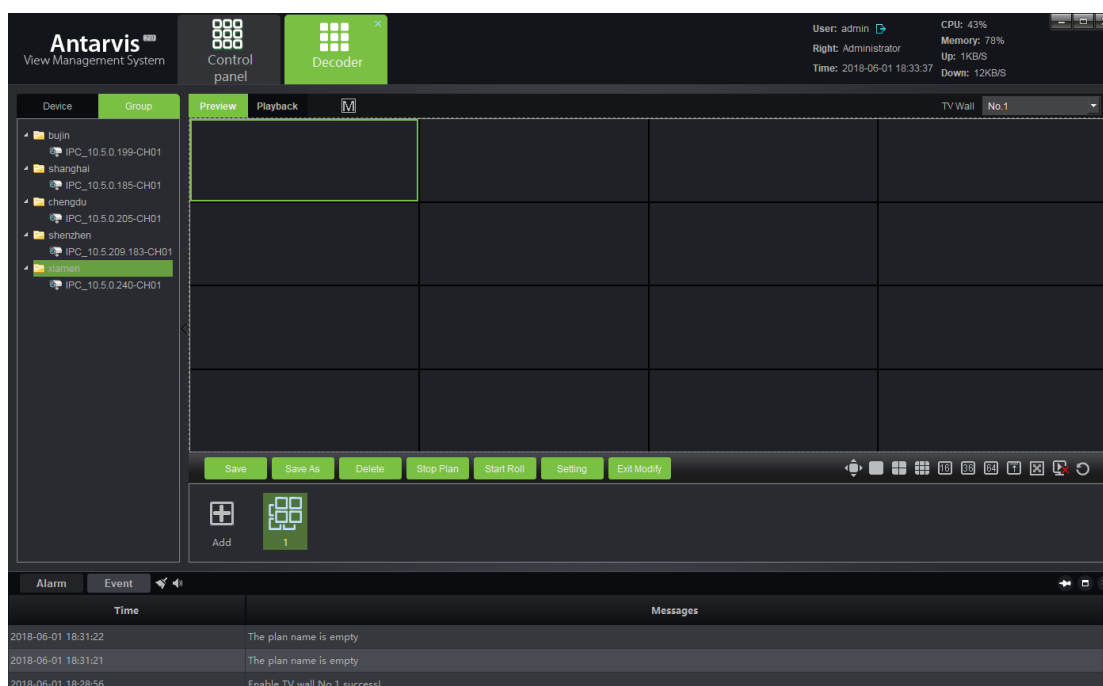
If the channel dragged to the channel of the decoding screen shall be changed to other channels, the other channels shall be directly dragged to the corresponding window.



- 1)  is open the decoding module preview button,after clicking will open preview on the current page, which is convenient for customer to view the picture on the wall.
- 2)  is delete the channel button,after clicking will delete the decoding channel of the current split screen.

7.2 Decoding group Patrol

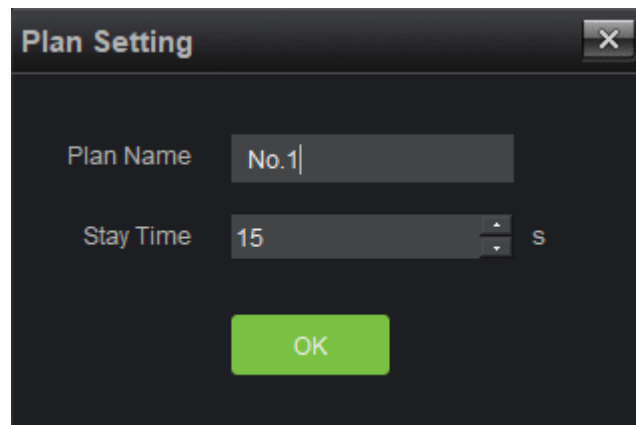
The device management module discussed above have referred to decoding group. After setting up the decoding group, users can drag the group to TV Wall in decoding group module, as following:



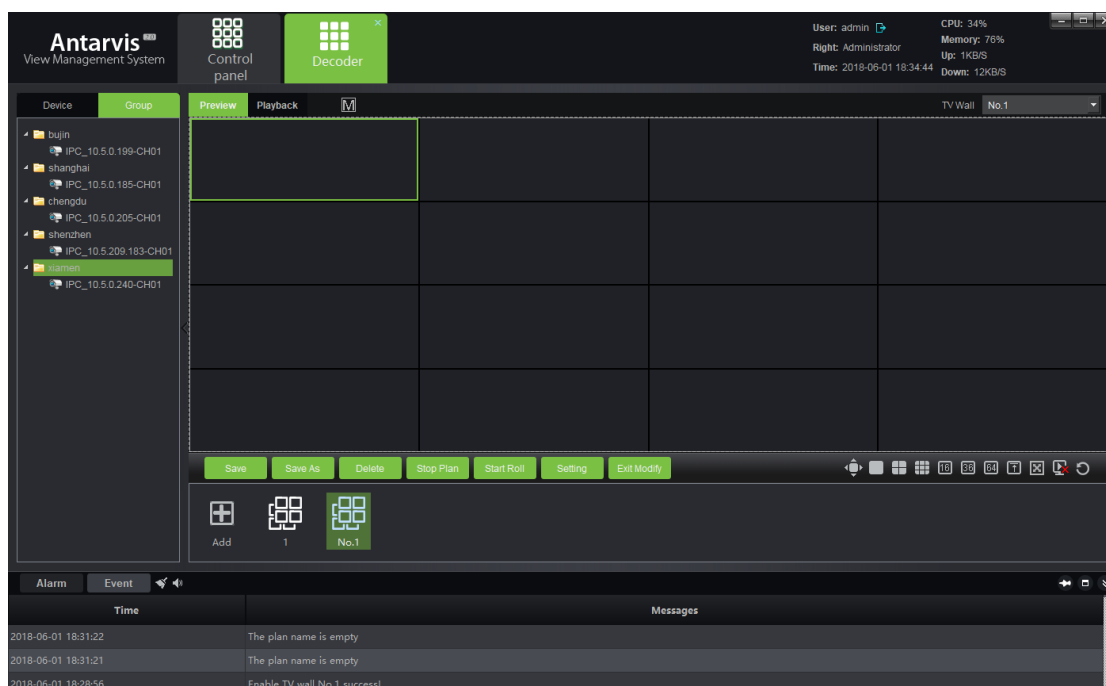
The group that was dragged to TV wall output can automatically open the patrol within group.The patrol interval can be set at the time of configuring decoding group,and its default value is 2s.

Decoding preplan Patrol

Click below “ADD”button to add preplan:



Set Preplan Name and Preplan Stay Time, which is the preplan stay time when operating preplan patrol, and its default value is 15s, mini value is 10s. After setting is finished, please click “OK” to enter Preplan edit mode:




Configure the Preplan. Select the decoder split screen, decoding stream type and channel to do Preplan editing. After it is finished, please click “Save Preplan” to finish the edit.

After it is finished, clicking “Preplan” can make this group of Preplan to TV Wall directly with no necessary for manual operation, which is much convenient for user operating. For saved Preplan, user can execute delete, stop and other operation. If setting several Preplan, after clicking “Start Preplan Patrol”, decoder will start cruise according to configured preplan.

7.3 Decoding rolling

In case Decoding rolling to be fulfilled in certain decoder, the decoder must be selected for Cruise in the course of TV wall scheme setting (elaborated in 6.2), and the roll group has been determined in the course of scheme setting.

As the roll group and roll screen has been assured to be set in the scheme, click on the  button



below in the interface to start/pause the Cruise , click the  button in the process of roll to stop roll (note:roll control button is only effective to roll decoder but general decoder).




7.4 Introduction of Function Buttons on Preview Operation Interface

On the preview operation interface, there is a row of function buttons



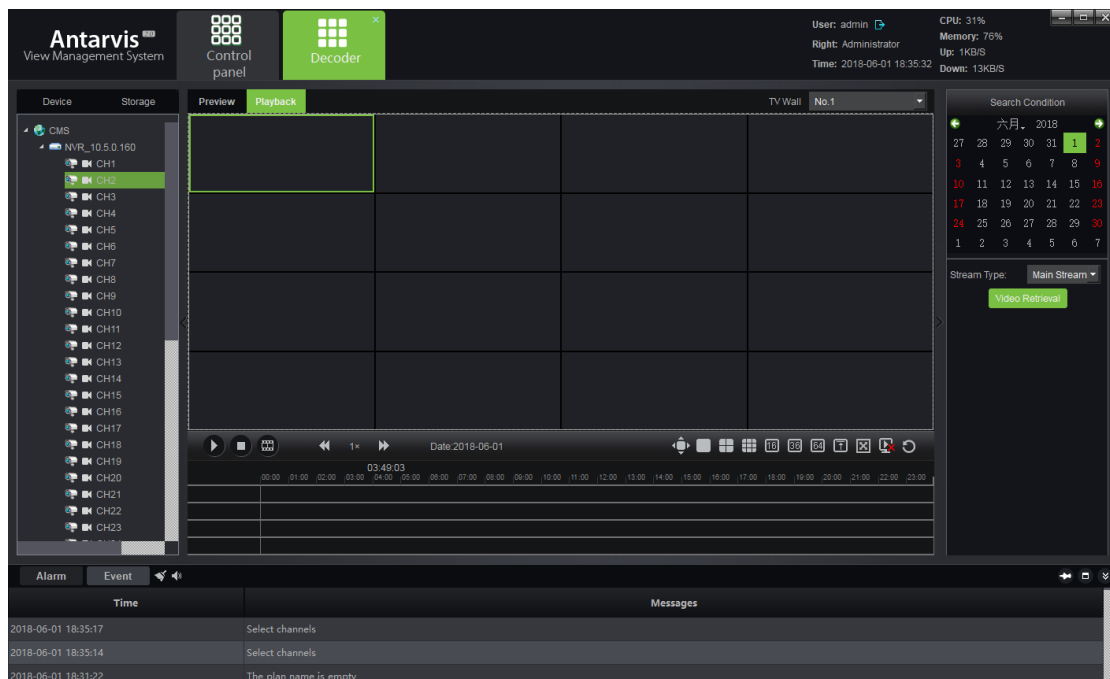
is split screen switch control button; as user selected the decoding screen, the button here can be used to

switch the number of split screens in order of 1, 4, 9, 16, 36, 64;  is full screen control button, to open full screen mode, click the right mouse button can exit full screen mode ;  is splice control button, user can open/close decoder splice;


 is the channel clear button,  used to clear all decoding channels in certain decoder with one key,  used to clear all decoding channels in all decoders with one key.

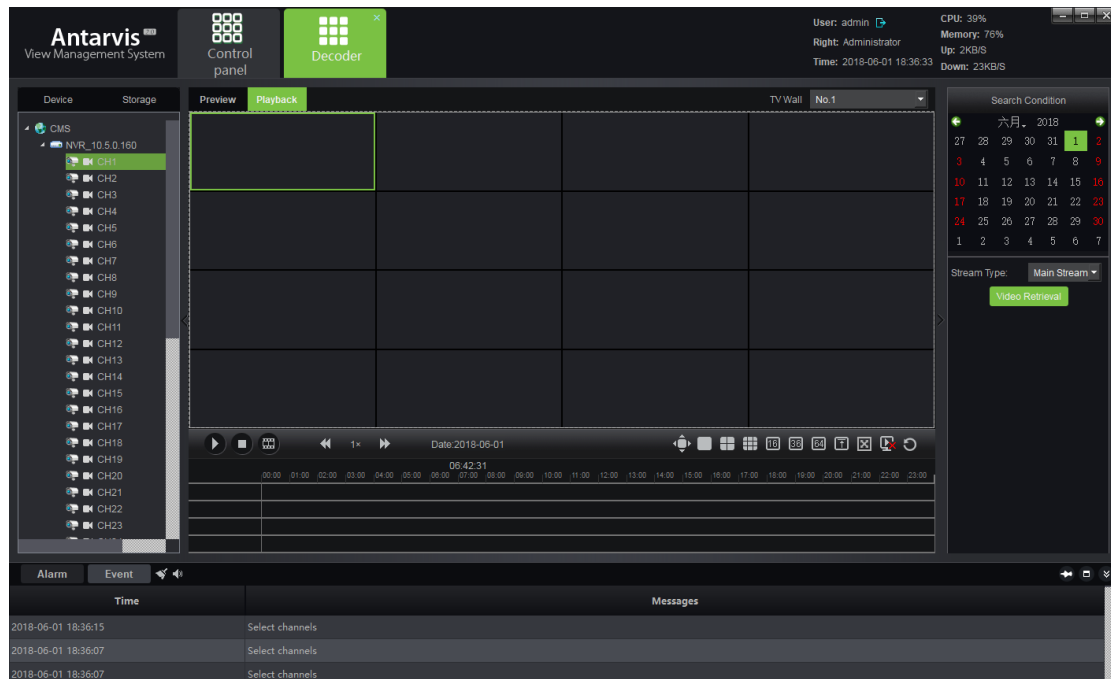
7.5 Decoder Playback

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 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. After the video

search is 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 Introduction of Function Buttons on Playback Operation Interface

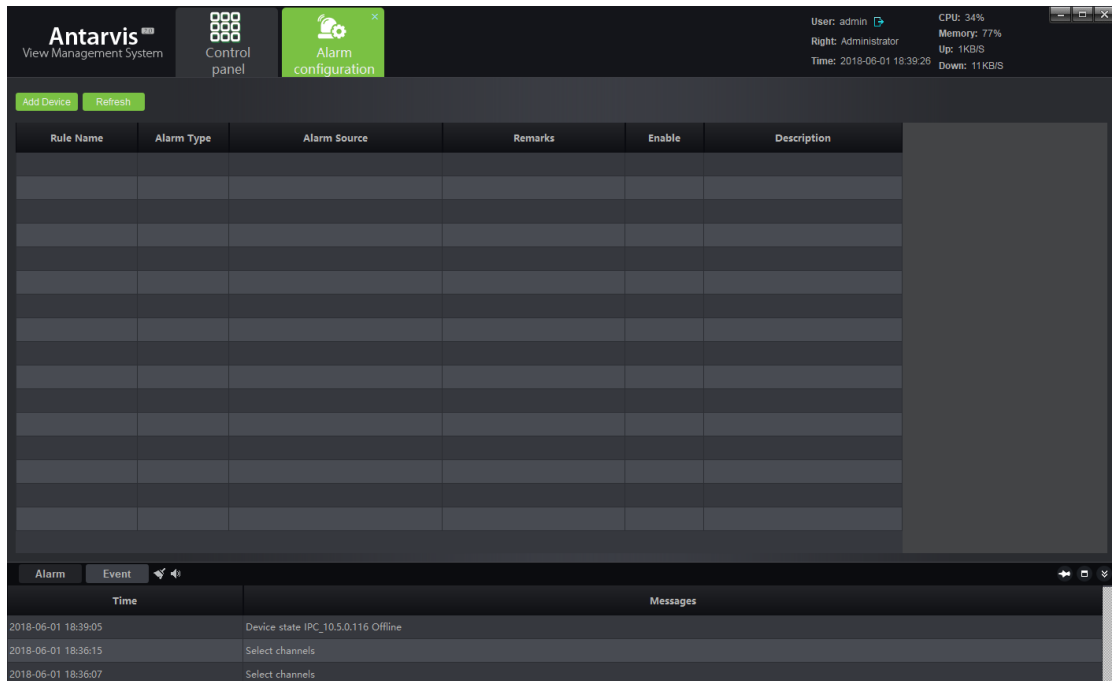
The function buttons in the lower part of playback operation interface

are ,

since it has been elaborated before, it shall no longer be introduced in details. Its functions are successively: play/pause, stop, frame play, playback speed adjustment, full screen, split number adjustment button, decoder CLS, splice offset settings, splice open/close, TV wall CLS.

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:

Add Linkage Rule

Rule Name

Alarm Type

☒ Alarm In

☐ Motion

☐ Tampering

☐ Video Loss

☐ Counter

☐ Area Det.

☐ Object Det.

☐ Line Crossing

Alarm Source

>

Linkage Action

☐ Map

☐ Capture

☐ PTZ

☐ Record

☐ Pop Image

☐ TV Wall

Action Param

Remarks

Save

Cancel

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; It can be user-defined and optional to fill in.

Upon completion, the effect as shown in figure:

Add Linkage Rule

Rule Name:

Alarm Type: ☒ Alarm In ☐ Motion ☐ Tampering ☐ Video Loss
☐ Counter ☐ Area Det. ☐ Object Det. ☐ Line Crossing

Alarm Source:

Linkage Action: ☒ Map ☒ Capture ☒ PTZ
☒ Record ☒ Pop Image ☒ TV Wall

Action Param:

-----Map-----
[Channels]
(1)NVR_10.5.0.160_CH2
[Stop Mode]
Auto Stop

-----Pop Image-----
[Channels]
(1)IPC_10.5.0.90_CH01
[Stop Mode]
Auto Stop

-----Record-----

Remarks:

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

8.2 Modify Alarm Rule

<input type="button" value="Add Device"/> <input type="button" value="Refresh"/>					
Rule Name	Alarm Type	Alarm Source	Remarks	Enable	Description
Alarm No.1	Alarm in	DEVICES-NVR_10.5.0.160-LocalAI01		<input checked="" type="checkbox"/>	<input type="button" value="Modify"/> <input type="button" value="Delete"/>

Upon alarm rule adding is completed, user can click “Modify” indicated in the figure to edit the existing rule.

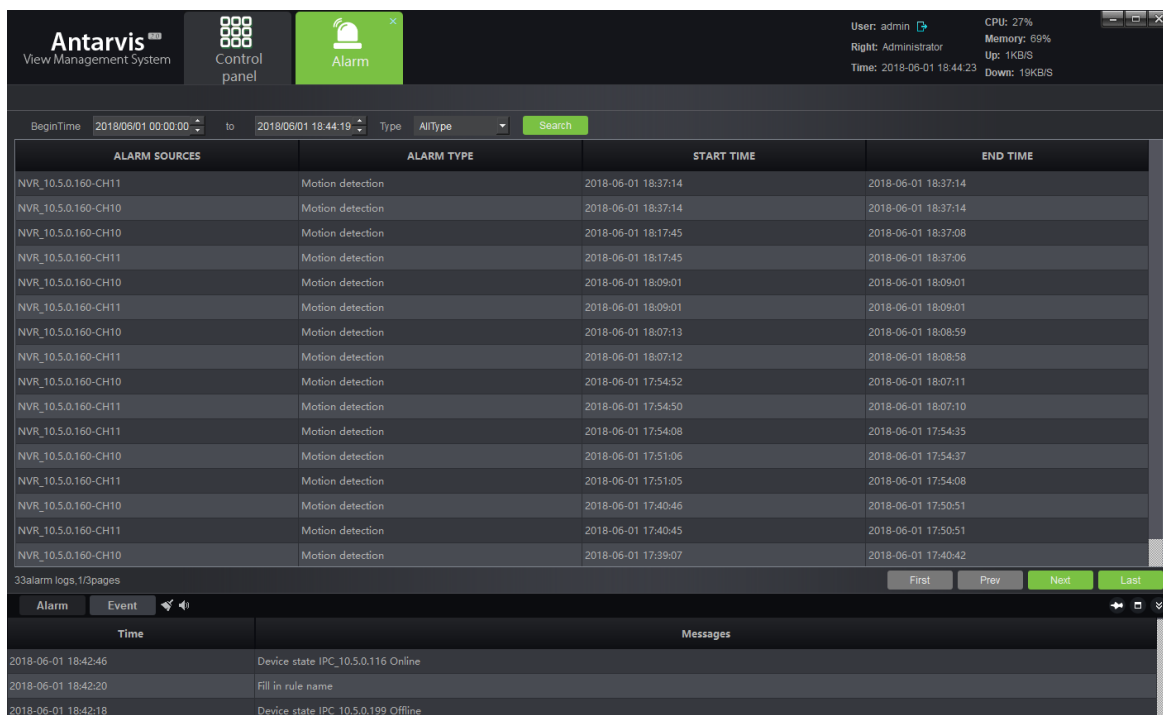
8.3 Delete Alarm Rule

<input type="button" value="Add Device"/> <input type="button" value="Refresh"/>					
Rule Name	Alarm Type	Alarm Source	Remarks	Enable	Description
Alarm No.1	Alarm in	DEVICES-NVR_10.5.0.160-LocalAI01		<input checked="" type="checkbox"/>	<input type="button" value="Modify"/> <input type="button" value="Delete"/>

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

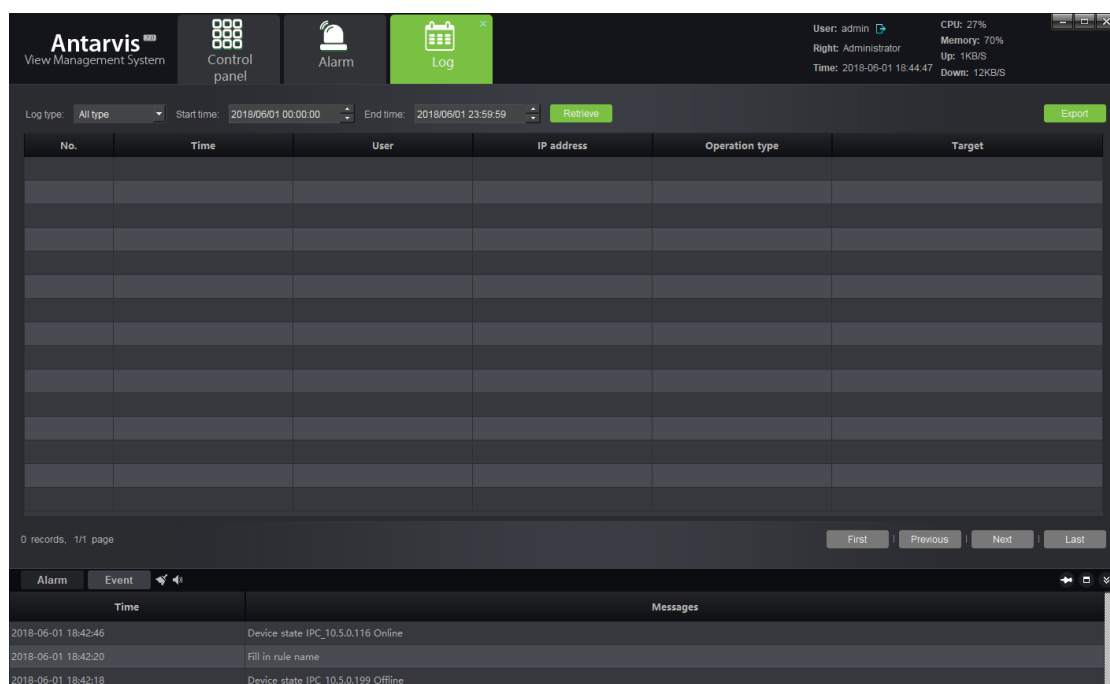
Click “Alarm” button in the main interface to enter the alarm management interface:



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:



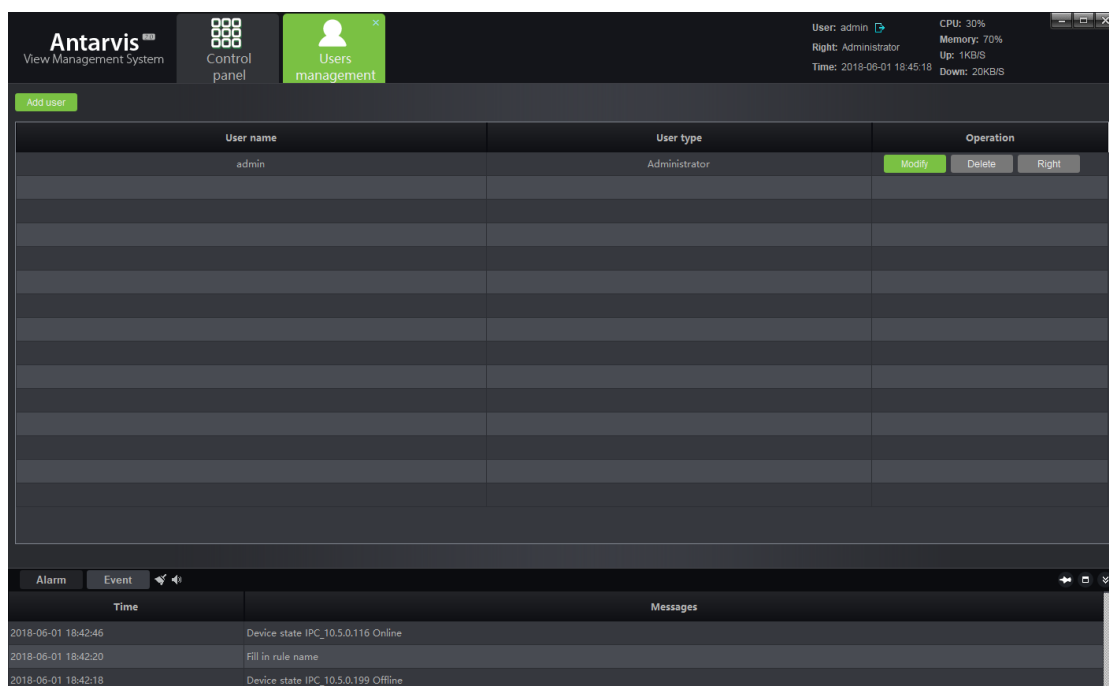
Log management interface displays all important operation records of user; select log type and time, click “Retrieve” to search. The log type includes login/logout, device management, start/stop rec, linkage management and remote configuration.

- 1) login/logout: The user login/logout record.
- 2) Device management: record of user addition, modification and deletion of device.
- 3) Start/stop recording: 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 will record the operation time, operation user, operation IP address, operation type and target address of the relevant important operations in details, which will help 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:

Add

User type: Guest

User name:

Password:

Confirm password:

OK

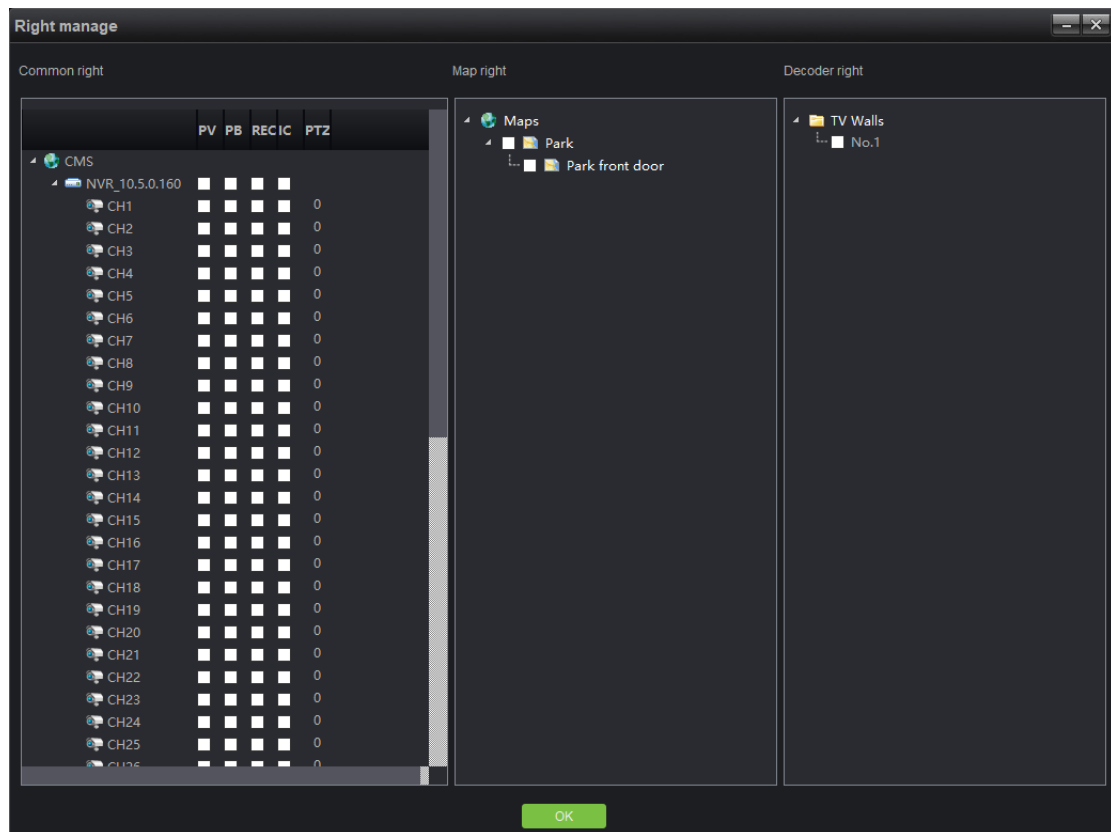
User type is Guest, which means it is not administrative user; the user type can’t be modified; successively fill in user name, password, password confirmation and then click on “OK” to add new user;

please make sure the consistency of the password and password confirmation in the course of filling in.

11.2 Sub-user Access Distribution

Add user		
User name	User type	Operation
admin	Administrator	Modify Delete Right
test	Guest	Modify Delete Right

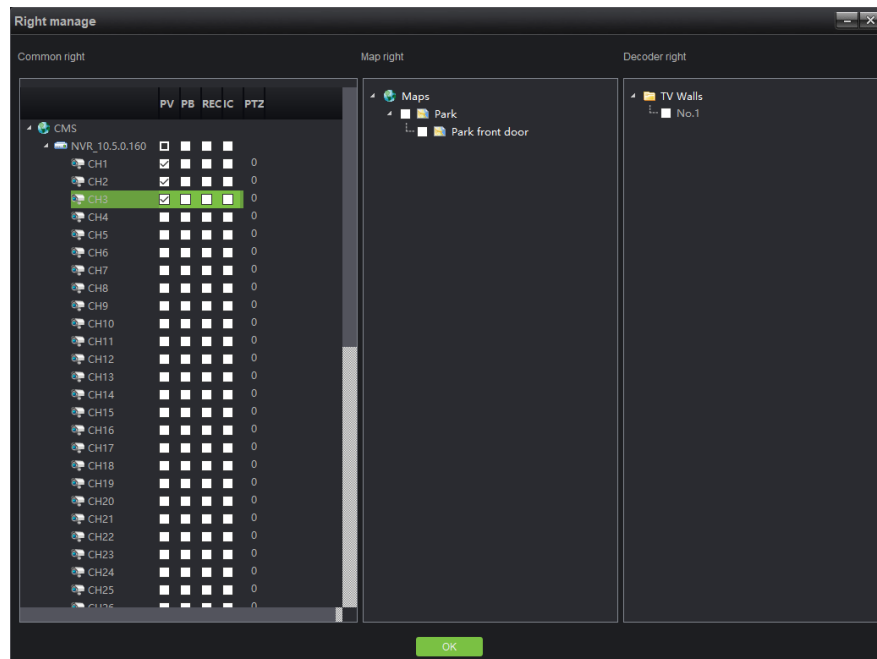
To distribute access for the sub-user added, click on the “Right” button indicated in the figure to distribute the access:



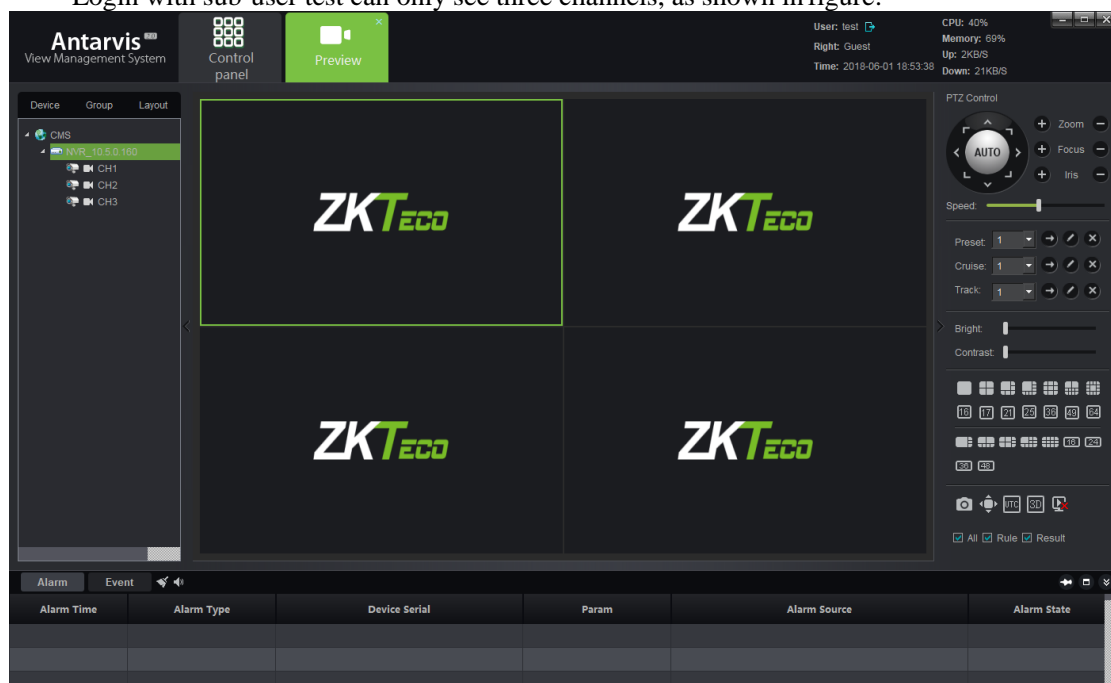
Access includes common access, map access and decoder access.

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 logs in (similarly the accesses of playback, video and intercom, the channels without access can't apply the corresponding functions), for instance, preview access of only 3 channels has been distributed to test sub-user, as shown in figure:

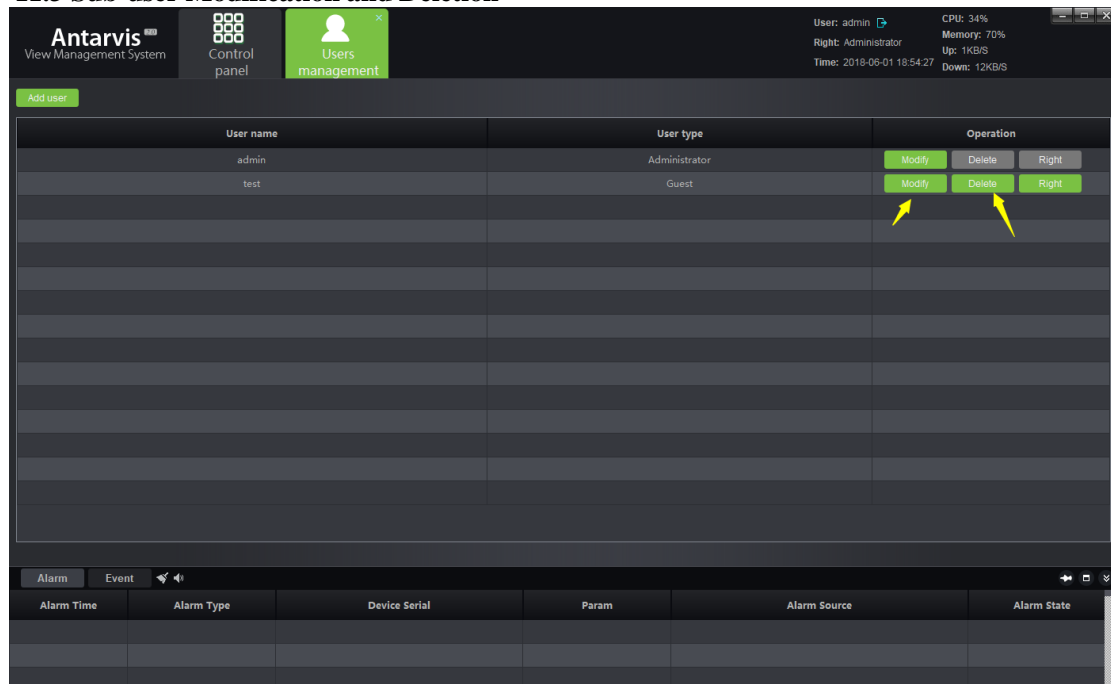


Login with sub-user test can only see three channels, as shown in figure:



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

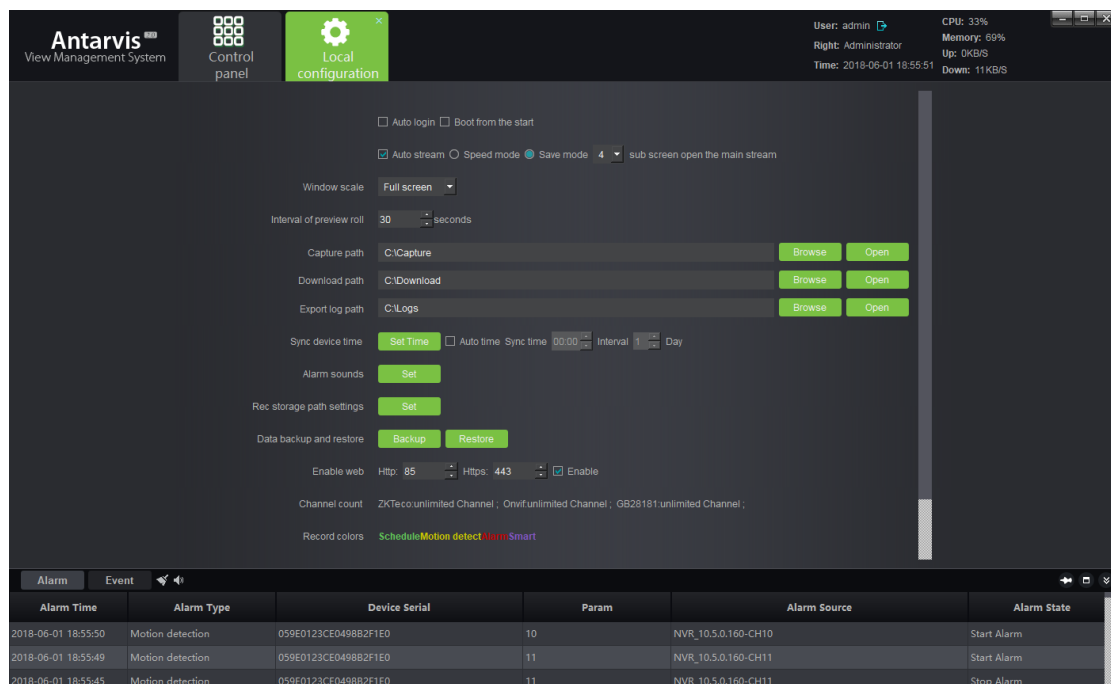
User modifies password as needed and click “OK” button as modification completed.

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

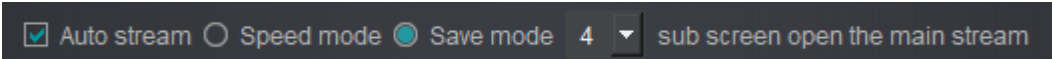
Click “Local configuration” button in the main interface to enter the local configuration interface:



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

2) **Boot auto-starting**: 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 Patrol**: the default interval of **Preview Patrol** is 30s, and it can be selected between 30-600s.

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) Record storage path setting: set local record storage path.
 - 12) Data backup and restore: user can backup and restore database to prevent data loss.
 - 13) Enable Web: enable web service and login with IE. Following it is port, which can be modified as needed.
 - 14) Total Channels: display the authorized total channels; The initial installation will have a trial period of one month without limiting the number of roads. The number of non-private protocols will become 0 after the end of the trial period, indicating that the authorization of the protocol has expired and cannot be used again.
 - 15) Record colors: Define the color of different types of video.
 - 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

AntarVis2.0 performance, for current structure, need only one host, which is used to install program. One host has no limit on the management of equipment currently, but the suggested number is within 200 pcs. The number of equipment channel which can be stored by one host is restricted by network and disk-writing, etc. The maximum write speed is 200Mb/s at present, that is the video camera of code stream 4Mb, it supports storage 50CH at most. The Time of storing video is restricted by the disk space, for example, code stream 4Mb video camera, the video storage file size $= (4 \times 3600) / 8 \text{MB} = 1800 \text{MB}$, namely video file size is about 1800MB of a code stream video camera 4Mb in one hour, that is to say 1.8GB. Video file size of one day $= 1.8 \text{G} \times 24 = 43.2 \text{GB}$, Video file size of one month $= 3.2 \text{GB} \times 30 = 1296 \text{GB} = 1.296 \text{TB}$. So on, with the formula, we can calculate the video storage time according to accessing disk space and video camera's routes & code streams 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