Navigator Control Center and Navigator Client User Manual

Table of Contents

Introduction....2
System Requirements of Navigator Client....2
Function Keys of Navigator Client....3
Local Device Manager of Navigator Client....3
View Group Scheduling....5
Live View Template....5
Chapter 1 Live Monitoring of Navigator Client....5
1.1 Configure Live View Group....6
1.2 PTZ Control....6
1.3 Audio Monitoring....7
1.4 Dynamic Video Channel Editing....7
Chapter 2 Remote Device Playback and Backup....7
2.1 Remote Device Download and Backup....8
2.2 Remote Multiple Channel Playback....8
2.3 Remote Multiple Channel Backup....8
2.4 Snapshot....9
2.5 Remote POS/ATM Transaction Report from NVR....9
Chapter 3 Synchronous Playback....10
3.1 Asynchronous Playback....10
Chapter 4 Navigator Control Center....10
4.1 Before Using Navigator Control Center....10
4.2 Add Navigator Corporate Servers....12
4.3 Manually add Navigator Corporate Servers....13
4.4 Device Status and Alarm Management....14
4.5 Alarm Management for Navigator Corporate Servers....14
4.6 Alarm Management for Cameras....14
4.7 Existing Alarm Output for Cameras....15
4.8 User Management....15
4.9 Operation Management....15
4.10 Device Management....16
4.11 Add Cameras....16
4.12 Auto Import Cameras for NVR and NAV....17
4.13 Scan and Setup Network Cameras....18
Chapter 5 Device Manager....18
5.1 HDD Status Report....19
Chapter 6 Mosaic TVWall....20
6.1 Mosaic TVWall Monitor Setting....20
6.2 Mosaic TVWall Camera Setting....21
6.3 Mosaic TVWall Camera Groups....21
6.4 How to Setup Mosaic TVWall Function....21
Appendix....32
Minimum System Requirements....32

Introduction

Navigator Client is a Windows based application for managing cameras of LILIN Navigator Enterprise servers, NVRs, and DVRs. Major features of Navigator Client include remote live monitoring, remote video playback, remote video backup, remove device status report, PTZ control, and user authentication.

With Navigator Corporate servers, Navigator Control Center can be used as the management server software for Navigator Enterprise servers, NVRs/DVRs, and IP cameras. The differences between Navigator Corporate and Enterprise are: Navigator Enterprise is operated as a standalone recording device, whereas Navigator Corporate can communicate user database, event information, and device database among Navigator Corporate servers. Navigator Control Center can also manage Navigator Corporate servers. Main features of Navigator Control Center include:

- Hierarchical management for Navigator Corporate servers
- Centralized user management database for Navigator Client at remotes
- Centralized view groups management database for Navigator Client
- Pre-configured video groupings for user login
- Centralized event management for Navigator Client
- Centralized alarm management for camera under Navigator servers
- Remote device management under Navigator servers
- Centralized HDD/device report management for Navigator servers

For remote live monitoring, a user can customize viewing window. User authentication allows accessing a user's own grouping windows. Remote video playback and backup allows remote access to the video clips in Navigator Software, NVR, DVR, and/or IP camera SD card. Device status report such as video loss information, recording status, and connection status can be provided by the software.

Note: Navigator Enterprise cannot be managed by Navigator Control Center.

Navigator Client is a 64-bit Windows program that supports up to 20,000 cameras and 300 group views. Each group views can have a maximum of 144 channels. This software is an ideal solution for managing a large amount of installations across the Internet.

Note: Navigator Client is a free application.

System Requirements of Navigator Client

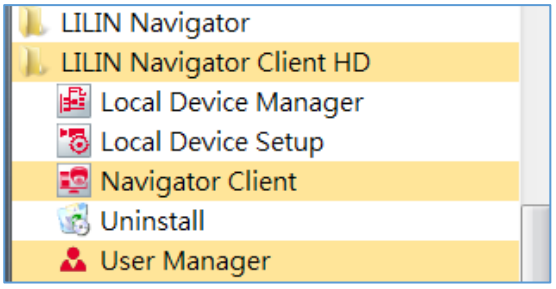
CPU model: Intel i7 Quad-Core 3.0GHZ or higher
RAM: 8 GB DDR III or higher
OS: Windows 7/10, 64-bit, SP1
Dedicated graphics card is highly recommended

Function Keys of Navigator Client

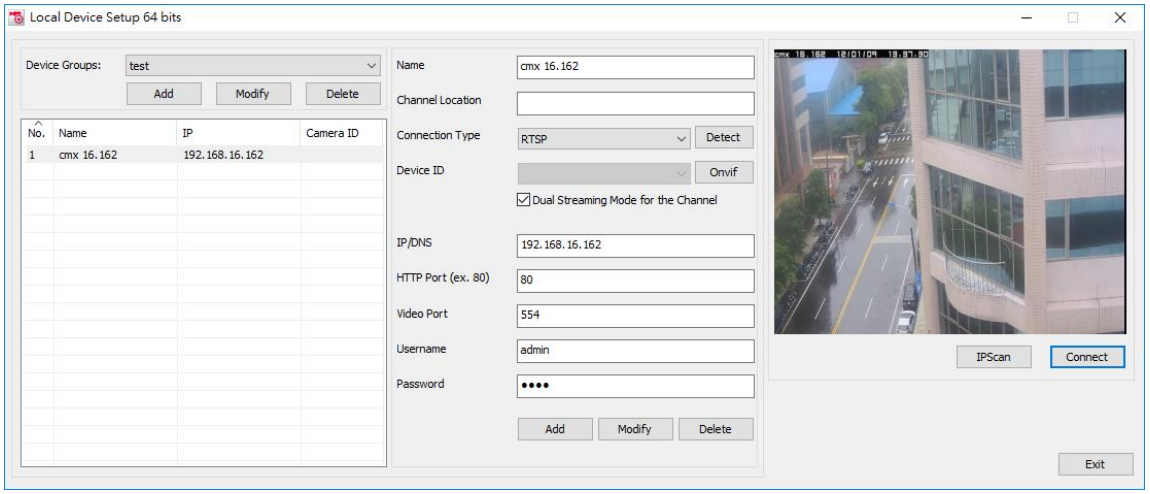
Press **F1** to expand the screen to the full screen. Press **F1** again to return to the normal mode.
Press **F2** to see the bitrate and frame rate (FPS) information, which can be used to determine the smoothness of the video. When the bandwidth is very low, a user chooses a proper stream according to the bandwidth information.

Local Device Manager of Navigator Client

To manually add a local device in Navigator Client, please launch Local Device Manager at Start->LILIN Navigator Client HD-> Local Device Setup.

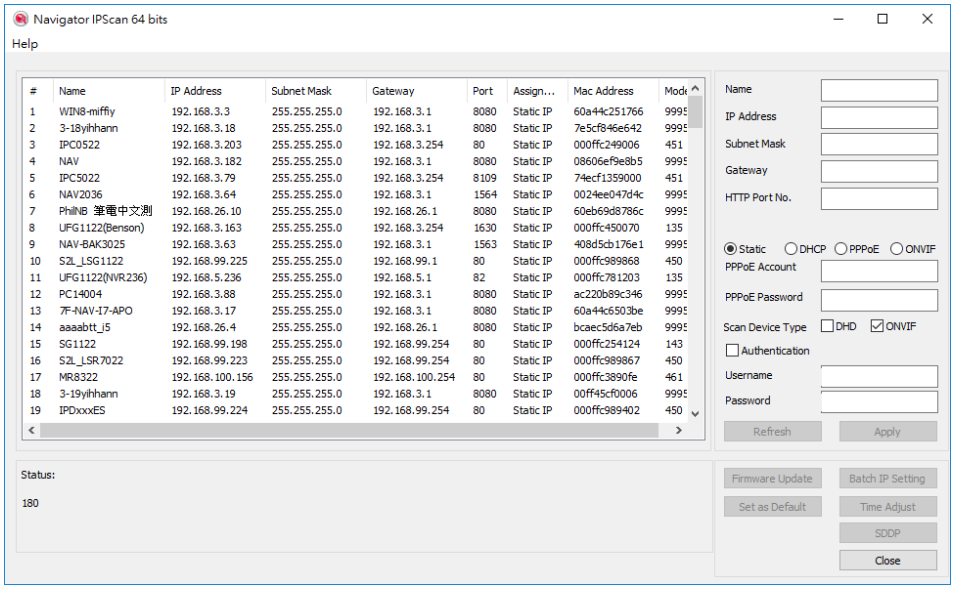


Local Device Setup allows adding IP cameras, DVRs/NVRs, or cameras in Navigator Enterprise.

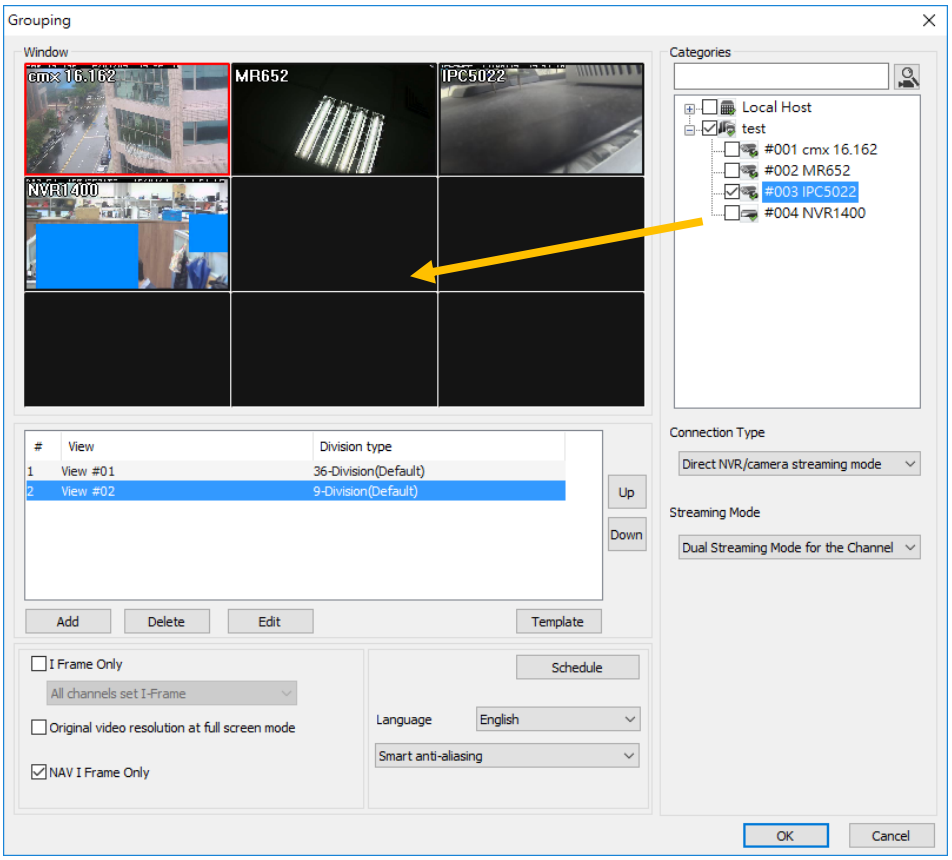


- Name—Camera name
- Location—Location of a camera
- URL (required)—IP or URL of a camera
- HTTP Port (required)—Port number of a camera
- Video Port—DVR's video port or IP camera's RTSP
- Username (required)—Username of a camera
- Password (required)—Password of a camera

To add a camera, click **IPScan** for searching devices within a LAN. Select one or more devices to automatically import cameras.



Once the camera is set up, launch Navigator Client and click **Live Properties** to use Add, Edit, or Delete to modify the views. You can also use Up and Down to change the sequence of the views.



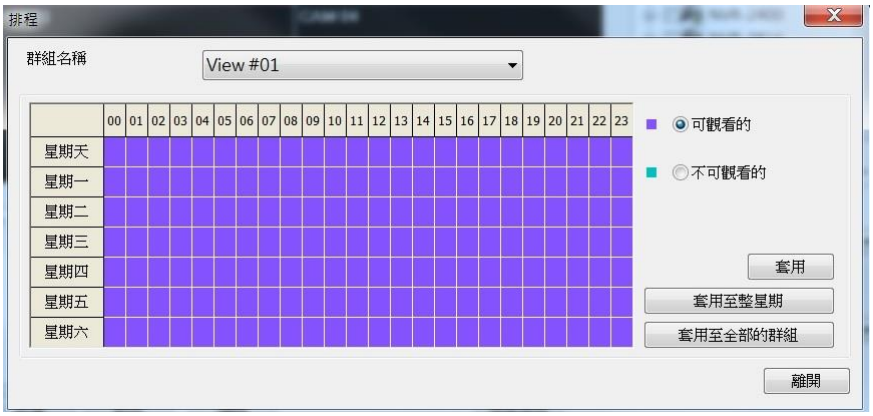
- I Frame Only—To save CPU load, you can choose I Frame Only.
- Original video resolution at fullscreen — Auto fit to fullscreen
- Smart anti-aliasing — Anti-aliasing settings
- Connection Type：
  Direct NVR/camera streaming mode — directly connected to IP Camera or DVR / NVR

NAV relay streaming mode — connected to Navigator server

- Streaming Mode：
  Dual Streaming Mode for the Channel
  HD or SD Streaming Mode
  HD or SD at Low Bitrate Mode
  Dual Streaming at Low Bitrate Mode

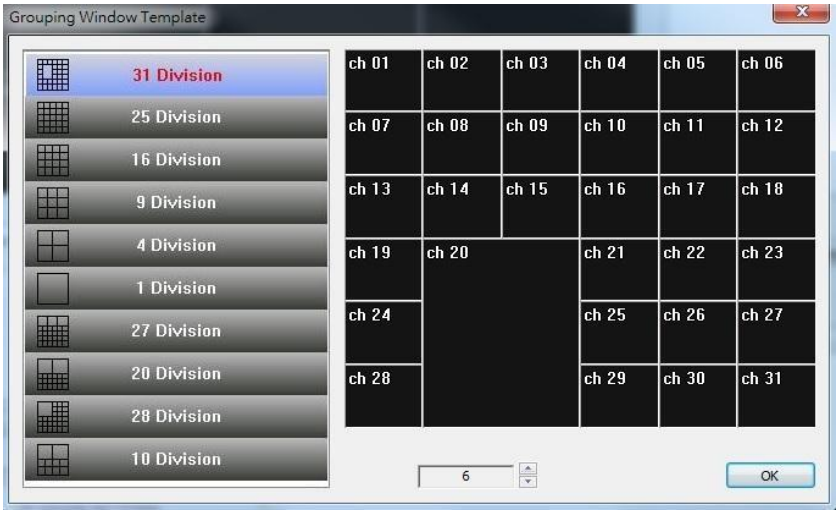
View Group Scheduling

To schedule Navigator Client accessed by a user, click **Schedule**, and Apply the hourly schedule for the live view.



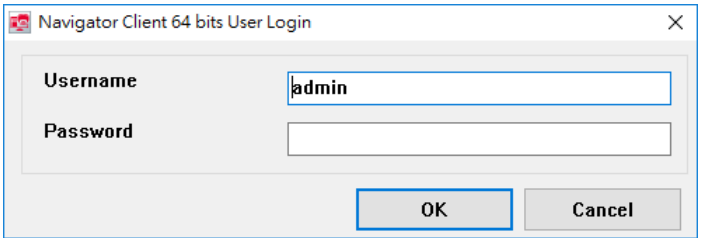
Live View Template

Click **Template** to customize live view layout. Choose a division on the left pane, and then drag on the right pane to customize the grids. This provides a flexible way to set up groups of cameras on screen.



Chapter 1 Live Monitoring of Navigator Client

First, log into the system. The default username is admin and the password is left blank.



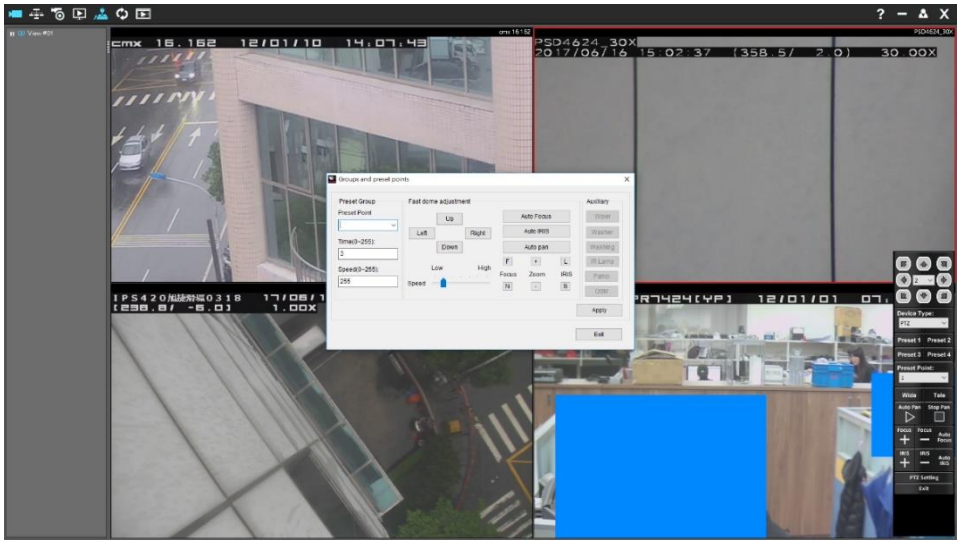
To log out the system, please click **Logout**  . Click **Live**  to display live video. Click the red circle to collapse the left pane.

1.1 Configure Live View Group

Click **Configure**  to drag a device from the left pane to the right pane. You can also check multiple devices and drag them to the right.

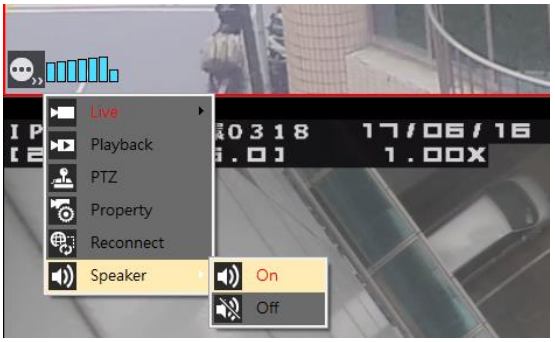
1.2 PTZ Control

Select a PTZ camera and click **PTZ Control**  . Features include presets recall, PTZ controls, auto focus, and zoom in and out among others. These features can be operated via the network.



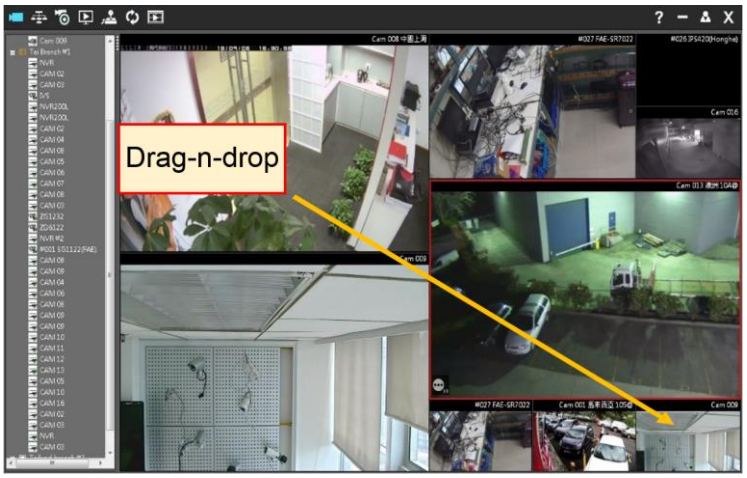
1.3 Audio Monitoring

If a device supports audio monitoring, select the channel and right-click the screen. When the speaker turned **On**, you will be able to listen to the audio. To change the volume of the channel, click the **volume control**.



1.4 Dynamic Video Channel Editing

If you want to change the layout of camera channels, you can drag a camera and drop it to another video channel. This operation swaps the two cameras' positions dynamically in the software. If you need to change the position of a specific camera after the installation is completed, you will not need to re-assign all the IP settings.



Chapter 2 Remote Device Playback and Backup

To perform remote playback on the screen, click **Remote Playback** and log in automatically to the remote device.

The following image indicates the taskbar of Remote Playback and Backup.

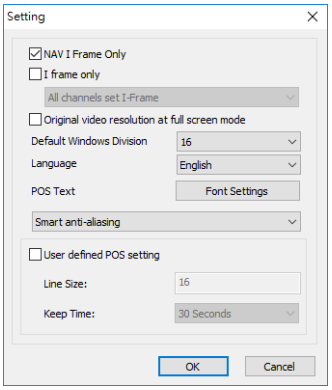
2.1 Remote Device Download and Backup

Step 1. Click on the date on the calendar control.
Step 2. Specify starting time and ending time.
Step 3. Click **Search** button to search the video clips.

To perform remote video backup, click **Backup** and select specific channels. Specify date, time, and destination directory. Finally, select Start Backup or Convert AVI for multiple channels video backup.

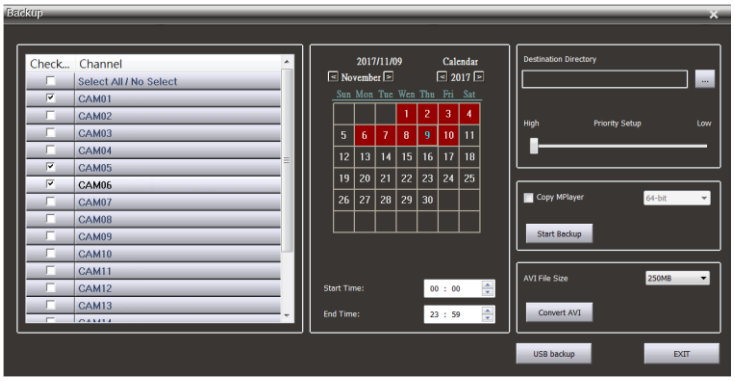
2.2 Remote Multiple Channel Playback

The playback settings are (1) NAV I frame only (2) I frame only. Navigator Client shows 1 frame/sec for reducing CPU load. This setting is recommended to be checked, and should be unchecked if CPU usage is too low.



2.3 Remote Multiple Channel Backup

The software supports multi-channel playback, backup download, and AVI format conversion. To perform remote video backup, click **Backup**  and select channels. Specify date, time, and destination directory. Finally, select Start Backup or Convert AVI for multiple channel video backup.



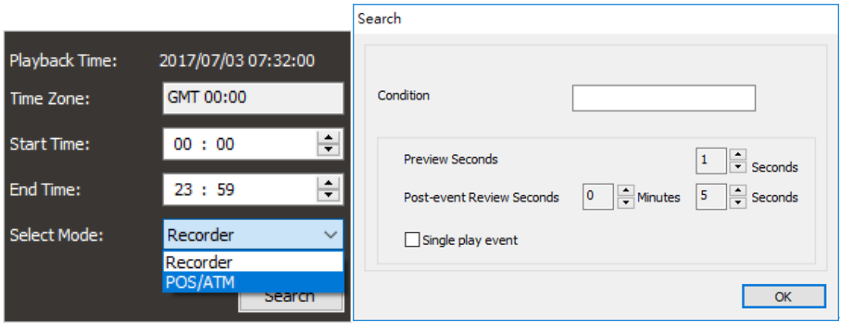
2.4 Snapshot

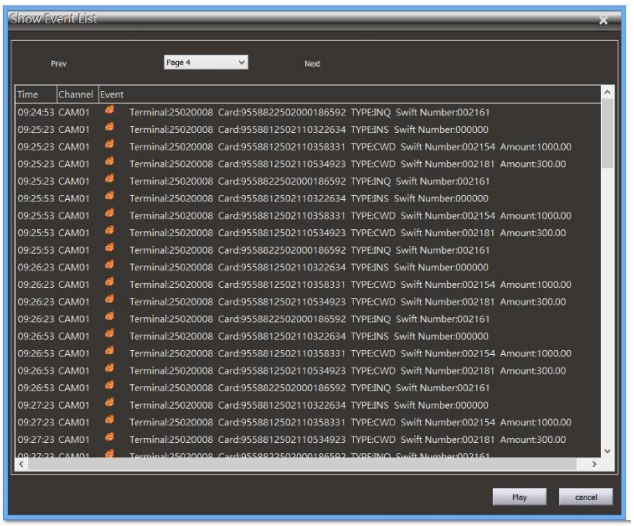
For IP-based devices, you may want to capture still images in videos. Press **Snapshot**  , and the image will be exported to a JPEG file format. For DVR devices, right-click and select Save As JPEG to capture the image.

2.5 Remote POS/ATM Transaction Report from NVR

If a POS/ATM is connected to a NVR, Navigator Client can perform remote POS/ATM transaction query. To do so, click **Playback** and specify the date and time to search for the POS/ATM transaction.

Select the POS/ATM option and press **Search** button, next, **POS Search Condition** will be displayed, enter the keyword in the field and press **OK**.



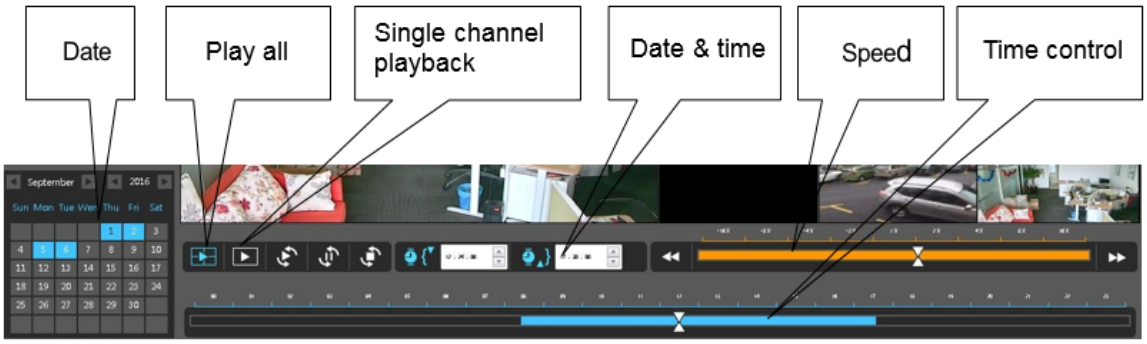


Chapter 3 Synchronous Playback

Click **Playback**  to play synchronous videos in a group. Supported camera recordings include different NVR, AHD camera, DVR, and Navigator. Click the date and drag the timebar for video playback. The speed bar also supports fast forward and rewind functions.

3.1 Asynchronous Playback

For asynchronous playback, select a camera from left device tree and drag it to the playback view group. Click **Single Playback** and select date and time. Select cameras and drag their individual timebar to play videos at different time.



During the playback, right-click **Live** to refresh a specific camera. To refresh a particular camera's recording, click on **Calendar Refresh** menu to retrieve the date and time for the camera.

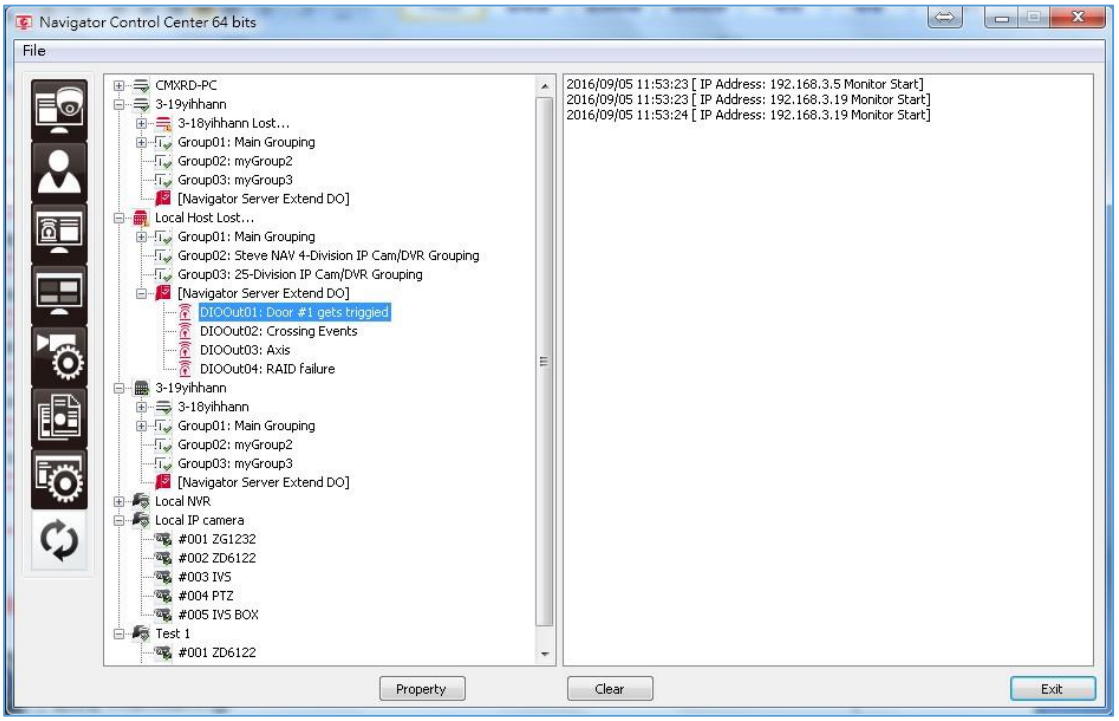
Chapter 4 Navigator Control Center

4.1 Before Using Navigator Control Center

Once Navigator Control Center is installed, click **Viewer Management** (i.e., Navigator Client) to manage all kinds of local Navigator Corporate servers, local NVR/DVR, AHD cameras, and local IP cameras. If you want to manage remote Navigator Corporate servers, please purchase Navigator Corporate.

	Viewer Management
	User Management
	Alarm Management
	TVWall
	eMap Center
	Device Management
	IPScan
	Device Manager
	Control Station Settings
	Refresh

Note: Navigator Control Center can only work with Navigator Corporate for central management features.

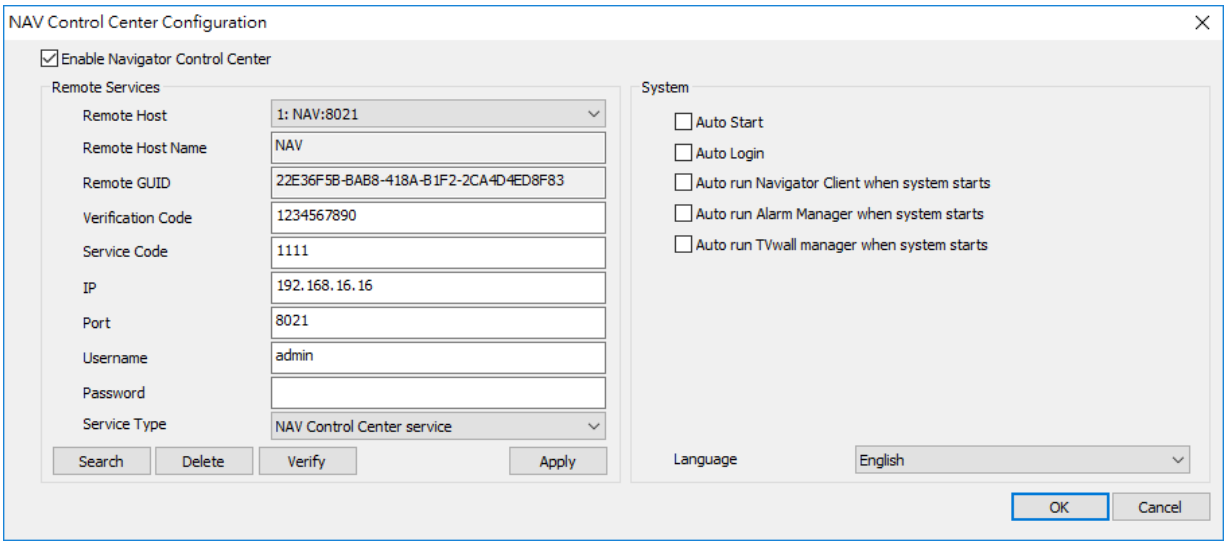


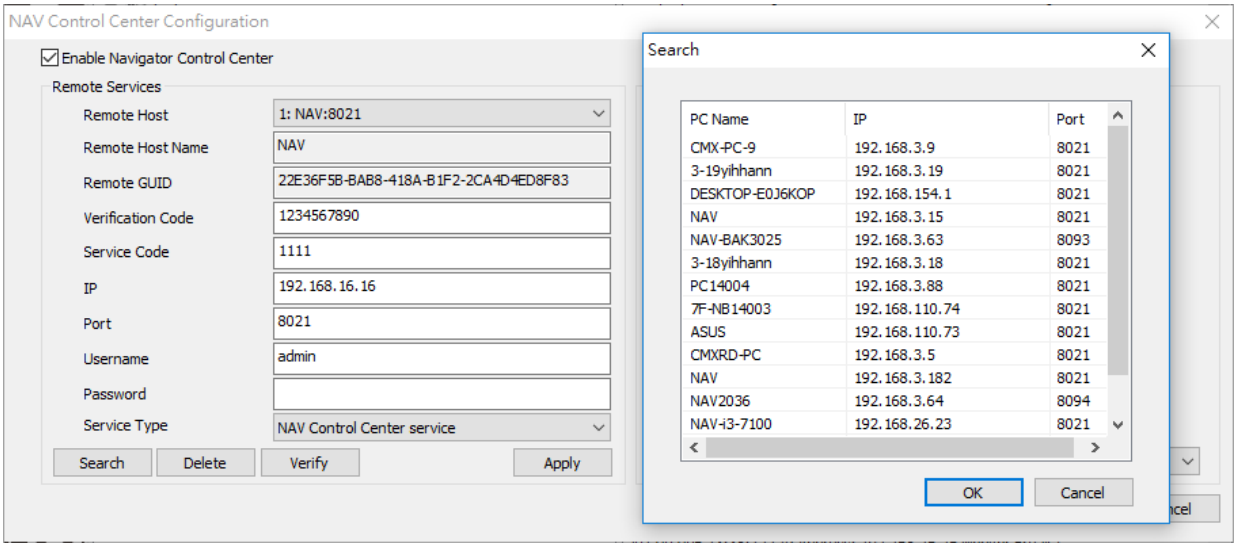
4.2 Add Navigator Corporate Servers

To add a Navigator Corporate server, click **Control Station Settings**  to enable Navigator Control Center and add the following information:

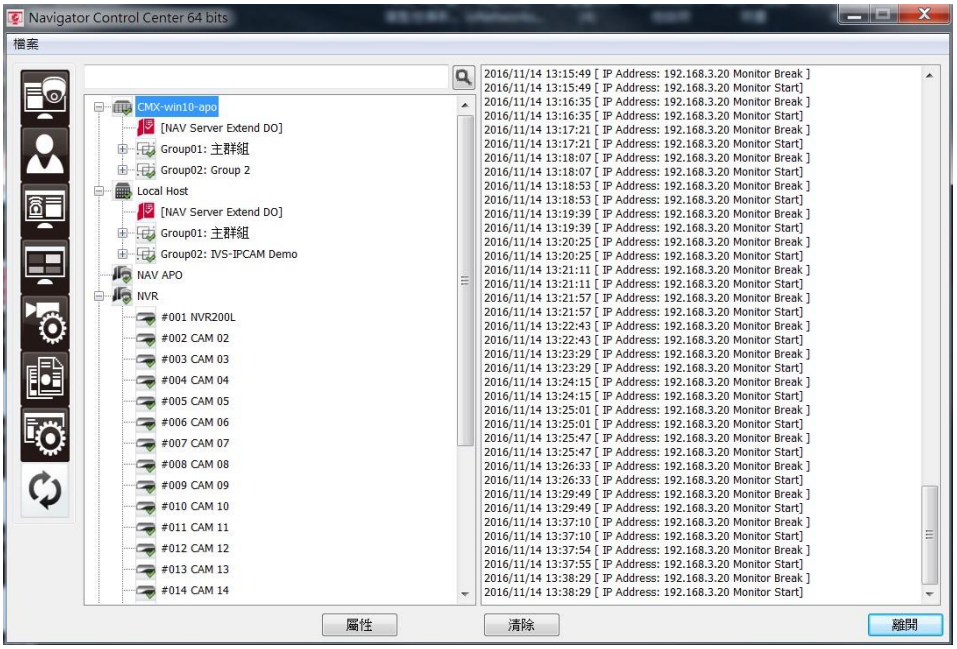
- Verification Code
- Server Code
- IP Address: IP address of the **Navigator** server
- Port Number: Port number of the **Navigator** server
- Username
- Password

You can click **Search** for adding a Navigator Corporate server.



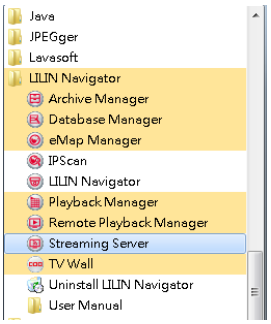


Select one of the Navigator Corporate server to add.



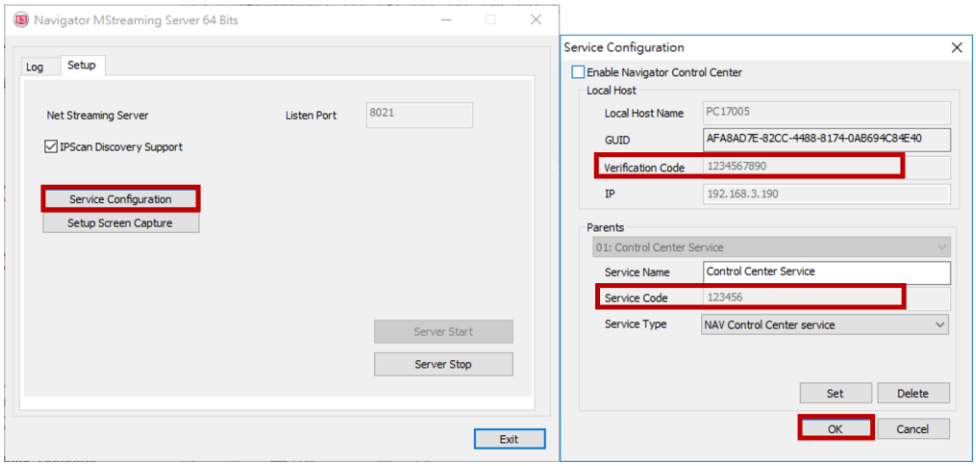
4.3 Manually add Navigator Corporate Servers

To manually add a Navigator Corporate server, please launch Streaming Server at Windows->Start up->LILIN Navigator->Streaming Server.



Click **Service Configuration**. Find the Service Code of your device. The verification code is for security purposes.

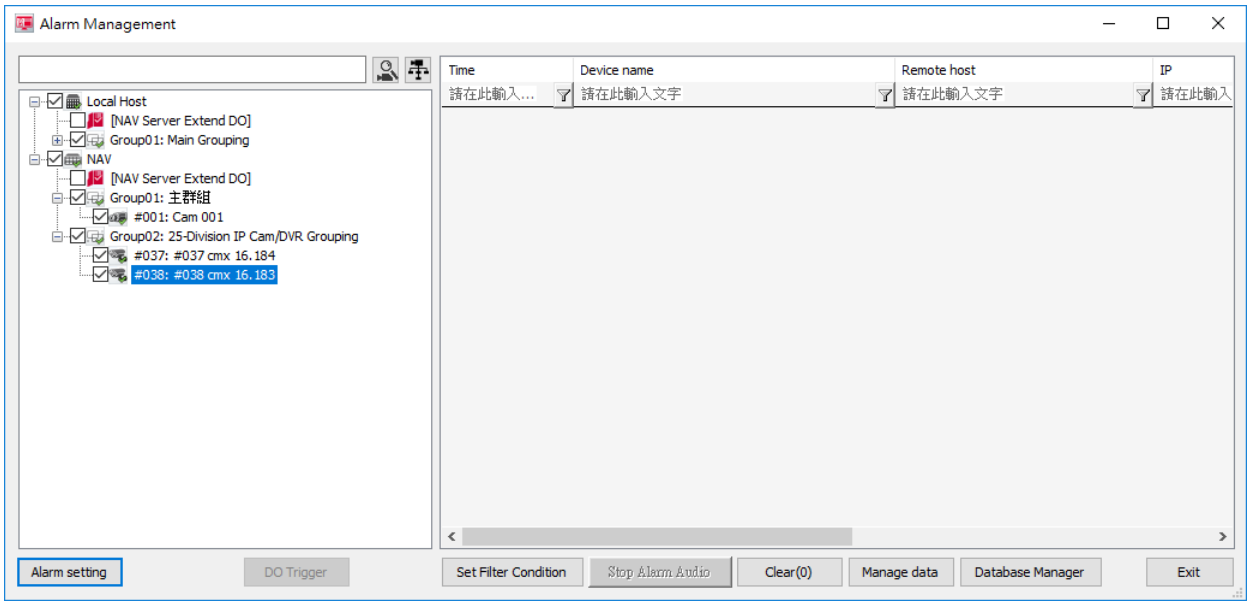
If the Navigator Corporate server is on the Internet, please enter the verification code and service code in the Navigator Control Center's configuration.



Note: Navigator Corporate can be managed by Navigator Control Center.

4.4 Device Status and Alarm Management

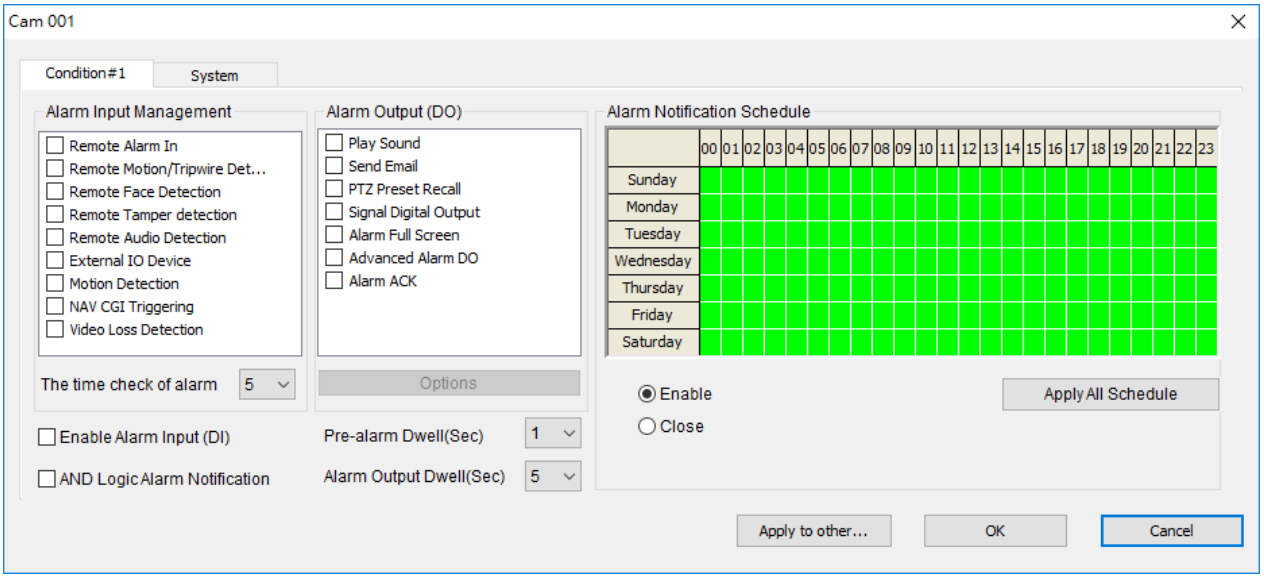
To monitor online status of Navigator Corporate, press **Alarm Management**  and check one of the Navigator Corporate in the dialog box. Once checked, the devices under the Navigator Corporate server will appear in the database and can be monitored for its online status.



4.5 Alarm Management for Navigator Corporate Servers

To monitor IP cameras, DVR, and NVR, Navigator Corporate servers, see if any Navigator Corporate server is in the list. Once checked, the server will be documented in Database Manager.

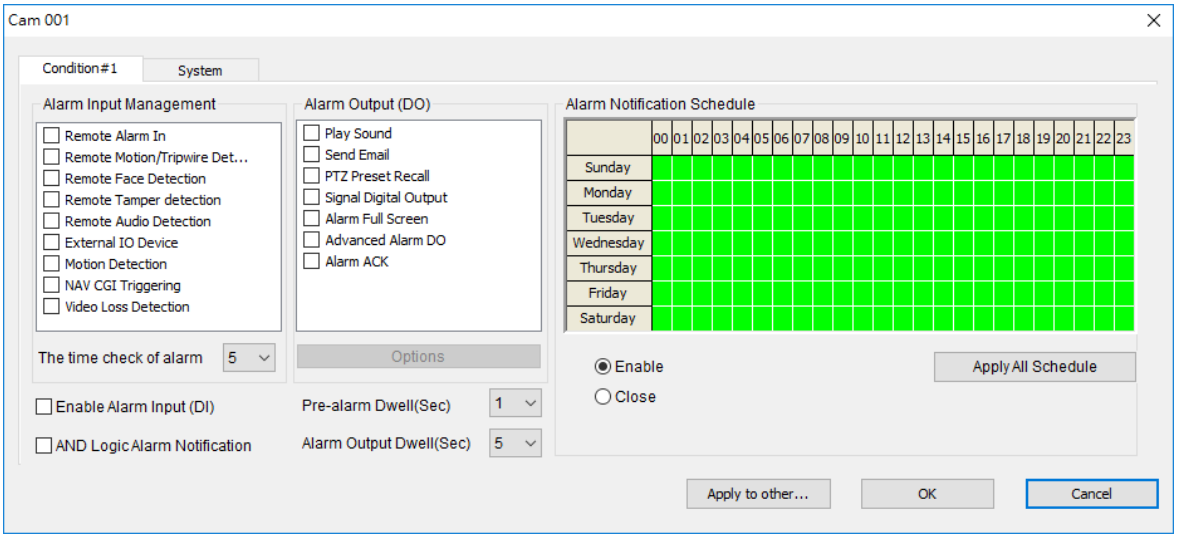
Click **Alarm Setting** for remote monitoring: (1) File Write Error, (2) Network Error, and (3) Database Error detections. Specify alarm outputs for Play Sound and/or Send Email, when a server alarm is detected.



4.6 Alarm Management for Cameras

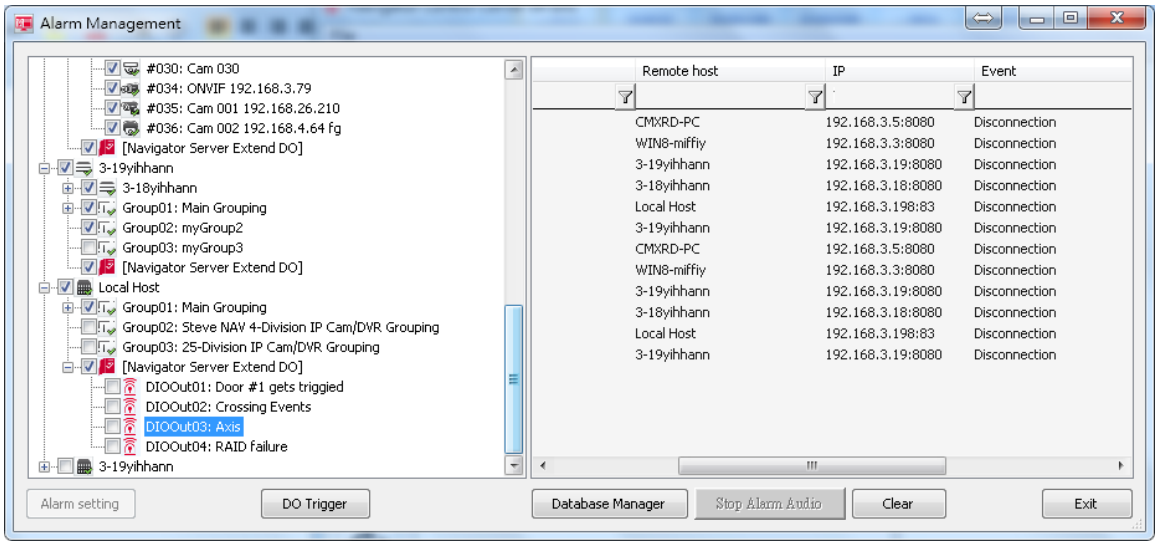
Check a camera and press **Alarm Setting** to specify alarm inputs and alarm outputs. Once checked, the camera alarm status will be captured in Database Manager.

Features such as tripwire, motion detection, alarm digital input, tampering detection, audio detection, and ANPR/LPR detection can be activated individually.



4.7 Existing Alarm Output for Cameras

If an alarm has been created via Navigator Corporate, you can trigger the alarm in Alarm Management of Navigator Control Center.

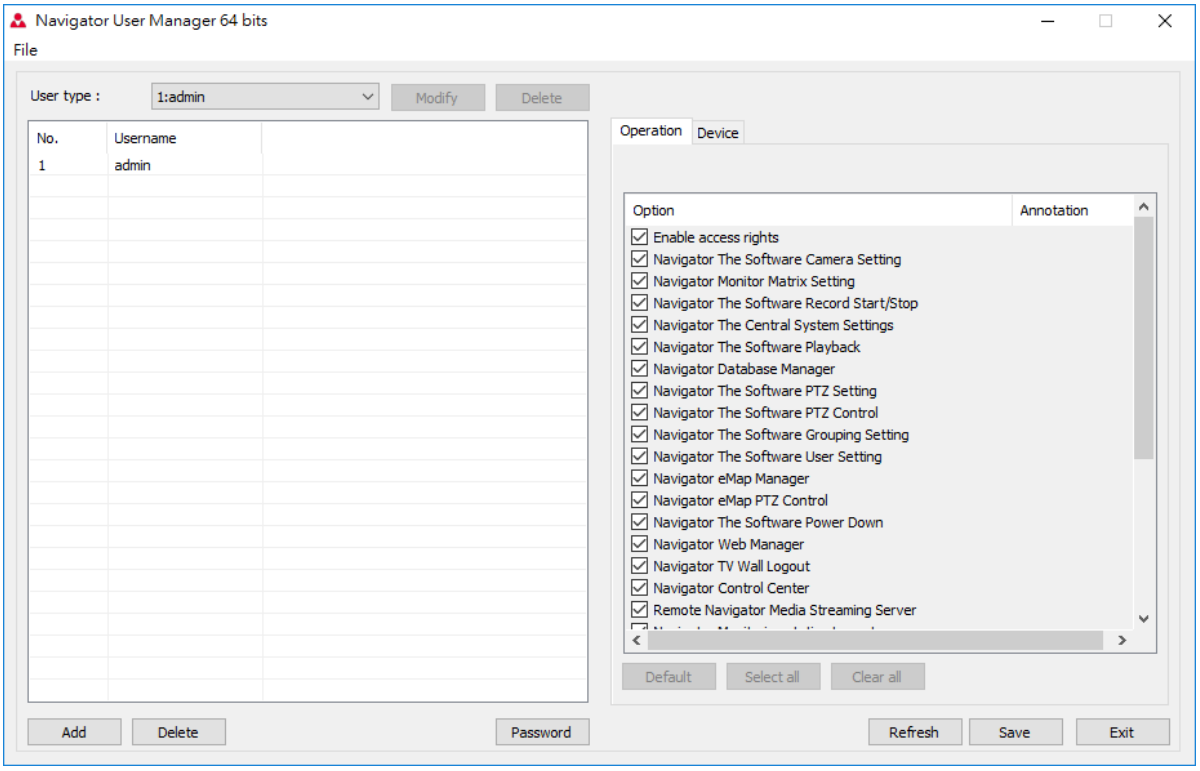


4.8 User Management

To add users, click **User Management**, which supports up to 64 user groups. Each group can assign individual accounts for operations and camera access privilege. Choose one of the user types and click **Add** to create an account.

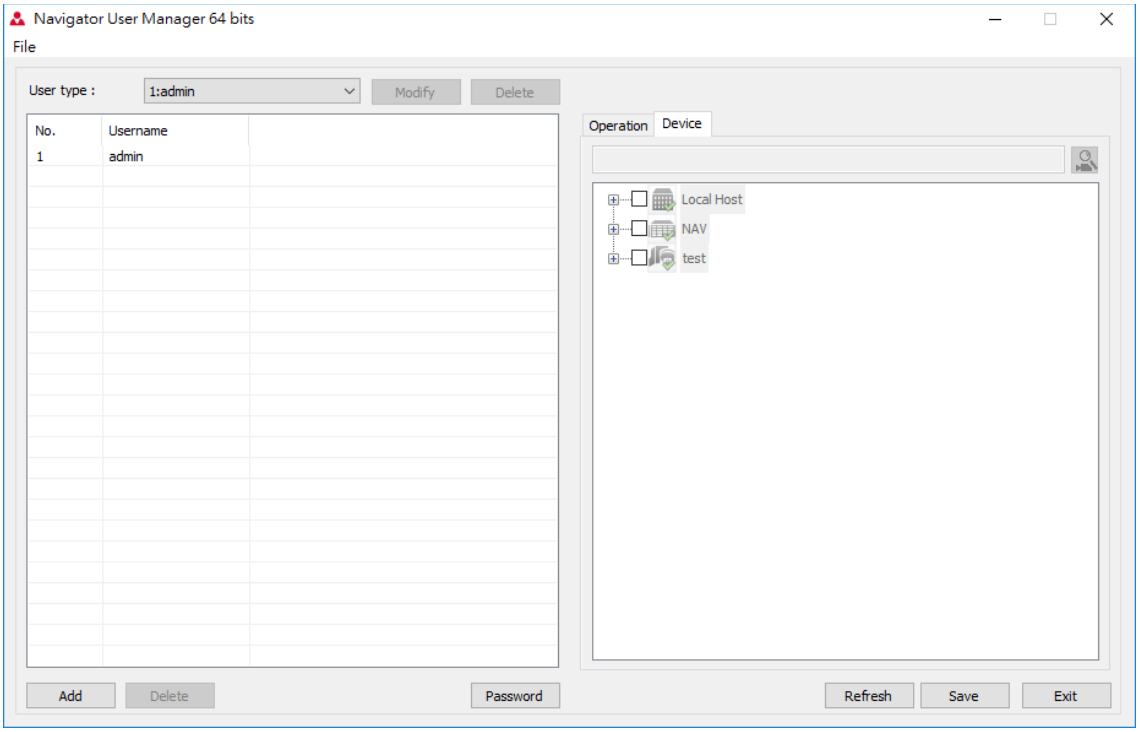
4.9 Operation Management

Click one of the users in User Management, and the Operation tab will be shown on the right side. The tab can allocate permissions for any user group.



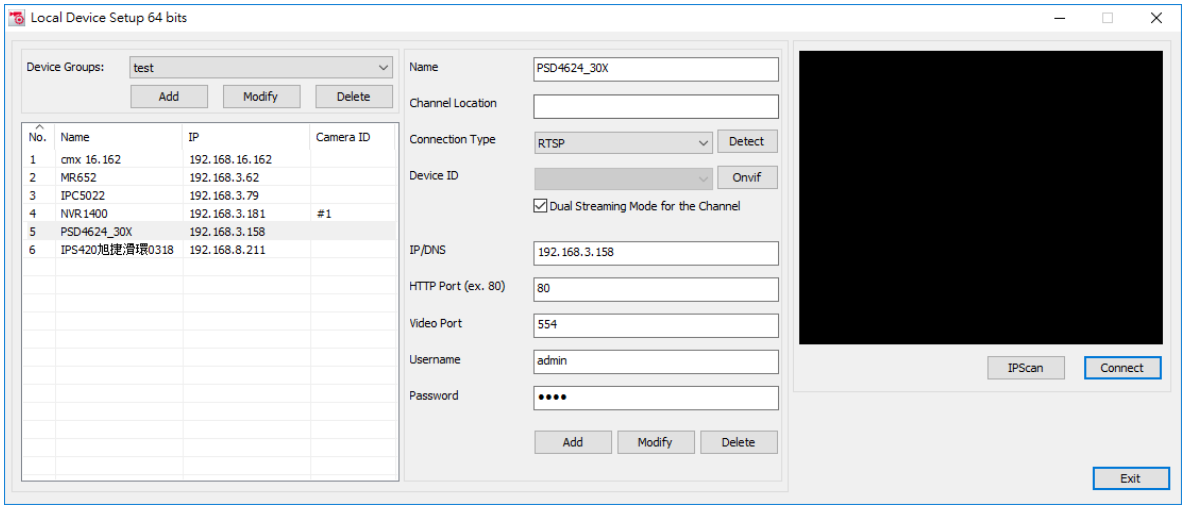
4.10 Device Management

Click one of the users in User Management, and the Device tab will be shown on the right side. Check the devices you need for the said permissions to be accessed.



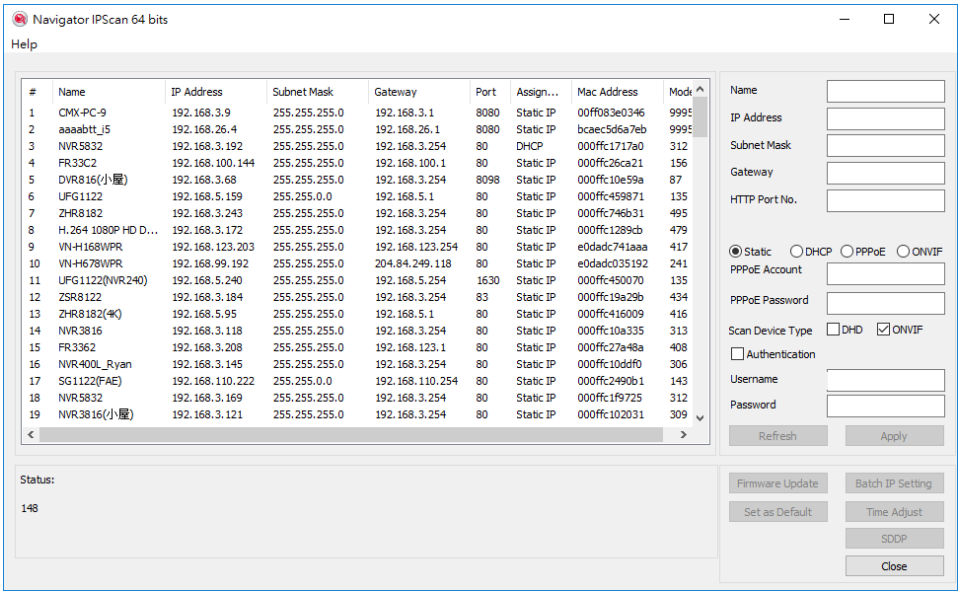
4.11 Add Cameras

To add IP camera or DVR/NVR camera, press **Device Management**  . You can directly modify the group to name it. To delete a group, click **Delete**.



Next, select IPScan to show a list of discovered devices, and the information is as follows:

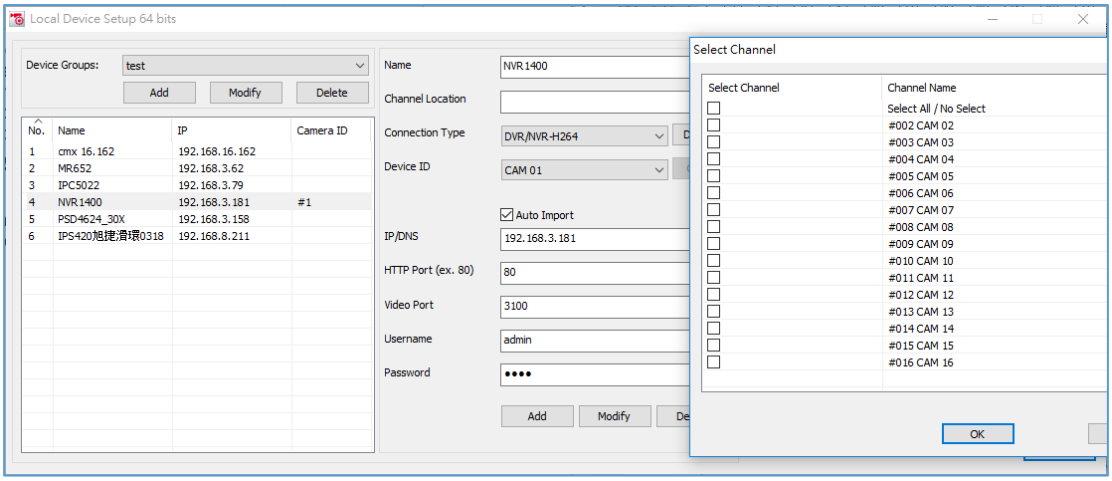
- Name—camera name displayed on the top of live video
- IP address—IP address of the camera
- Subnet mask—subnet mask of the device
- Gateway—gateway of the device
- HTTP port number—the HTTP port number of the device
- Username—the username for the device
- Password—the password for the username



Click **Close** to appear the “Do you want to auto set the IP/DNS and the host port?” dialogue. Press **Yes** to automatically configure the required fields. Click **Connect** to preview if the camera is working properly; if nothing is wrong, press **Add** to save the information to the database. If any information needs corrected, click **Modify** to change the values you need, or you can delete the device by clicking **Delete**.

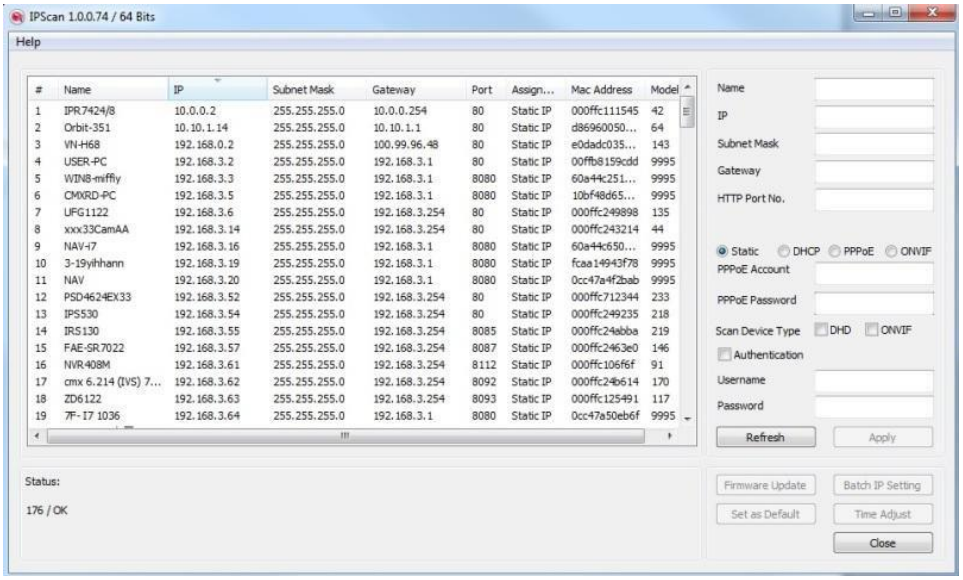
4.12 Auto Import Cameras for NVR and NAV

For multiple channels device such as DVR/NVR/NAV, the Auto Import feature can be used to automatically import cameras of the devices into Navigator Client. To import the cameras, first check Auto Import, and then select the checkbox of the channels and cameras and click **OK**.



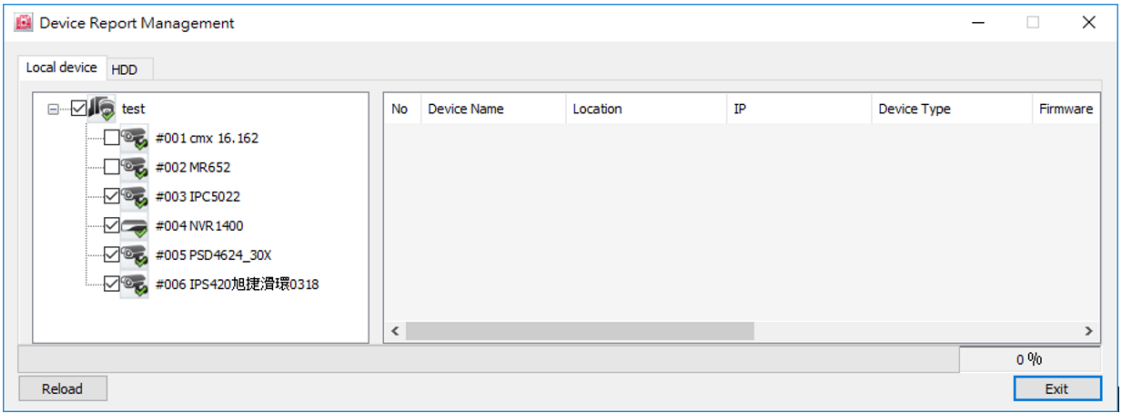
4.13 Scan and Setup Network Cameras

To discover the network devices, IPScan is a great application for scanning through all IP address within the LAN.



Chapter 5 Device Manager

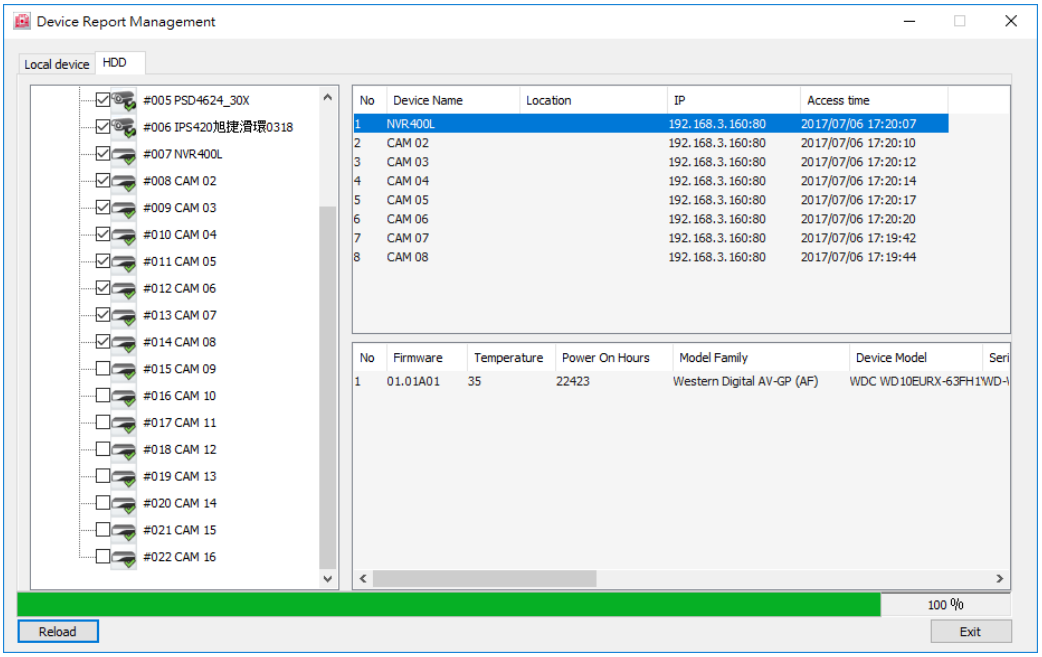
Click **Device Manager**  to show device status reports and related information. Click **Local Device** to check the status report. Press **Reload** to refresh the report.



- Device name—the name of the camera
- Location—the installation location of the camera
- IP—IP address and port number
- Device type—DVR, NVR, Navigator, or IP camera
- Firmware version—the firmware version of the device
- Ch No.—channel number of DVR, NVR, or Navigator
- Current recording time—the recording time of the camera
- Status—connection status of the camera
- Reboot time—last reboot time of the camera

5.1 HDD Status Report

Press **HDD** in the Device Manager tab and check the NVR in the device tree. This can scan the NVR and provide a HDD S.M.A.R.T report, which shows all the HDDs installed for all NVRs.

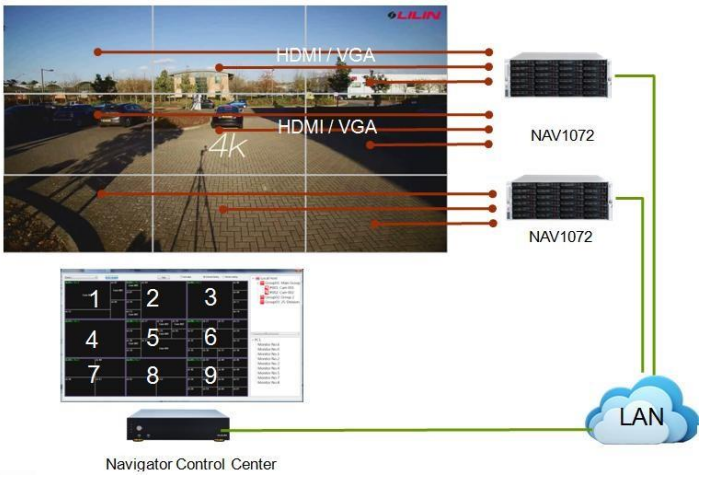


- Firmware—firmware of the HDD
- Temperature—temperature of the HDD
- Power on Hours—the length of time between failures of the HDD
- Model family—manufacturer of the HDD
- Device model—model of the HDD
- Device ID—ID of the HDD
- Capacity—maximum capacity of the HDD
- S.M.A.R.T—S.M.A.R.T. status of the HDD

S.M.A.R.T. report is the potential indicators of imminent electromechanical failure. It does not mean that the HDD is broken. See appendix for detail.

Chapter 6 Mosaic TVWall

Mosaic TVWall supports HDMI/VGA outputs to form a TVWall, which can display one camera's full screen video across multiple TVWall monitors.

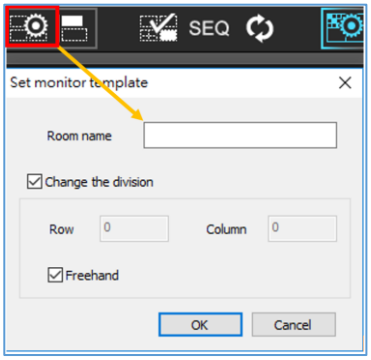


Major features are described below:

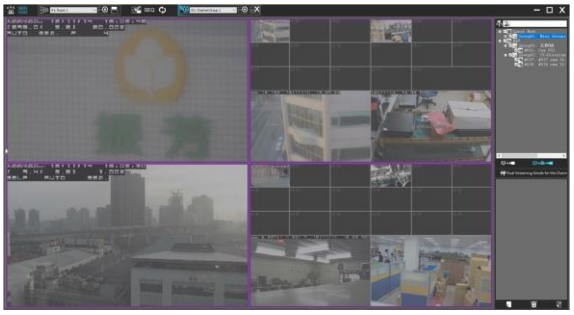
- Monitor Template — monitor setup for Mosaic TVWall.
- Run — display assigned monitor template for monitors.
- Sequence — display all the monitor templates .
- Channel setting — drag and drop cameras on monitors.
- Monitor setting — add monitors to a Mosaic TVWall.

6.1 Mosaic TVWall Monitor Setting

To setup Mosaic TVWall, open Mosaic TVWall, and select **Set monitor template** and specify Room # to create M x N TVWall for a room.

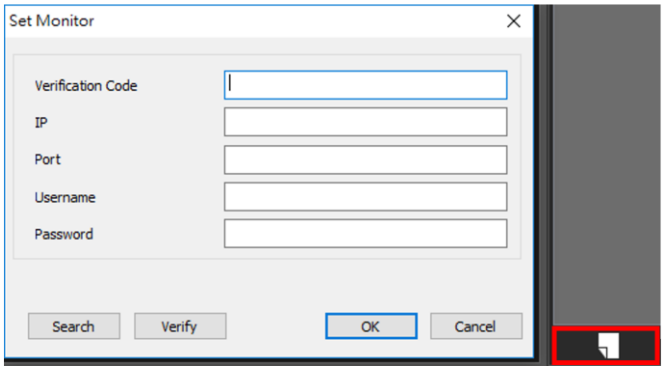


The example below shows Room #1, and the test environment has four monitors.



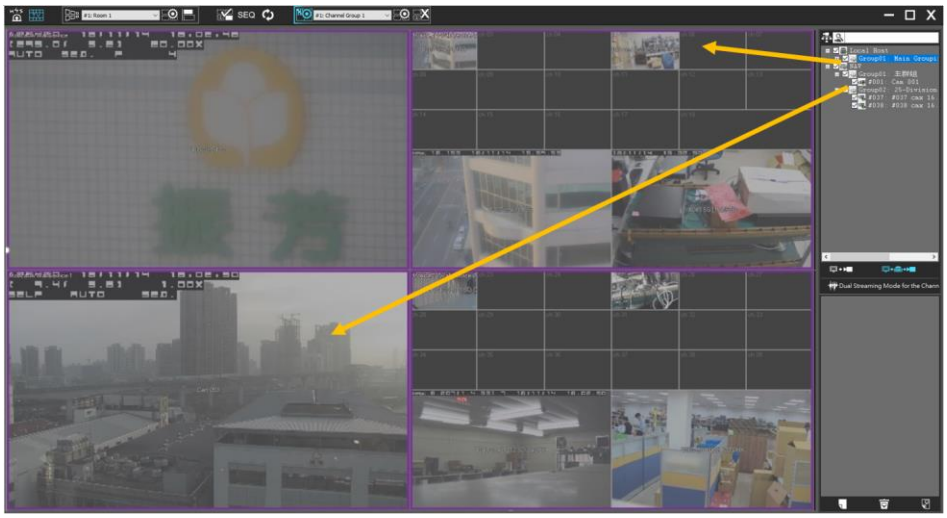
6.2 Mosaic TVWall Camera Setting

To add monitors, click **Add** at the bottom right to add new monitors. Click **Search** to discover available Navigator Corporate servers. Next, click **OK** and enter required information. Click **Verify** to test if the server is working properly. If two monitors are connected to the server, the outputs will be shown on the TVWall window.



To finish setup:

- Drag and drop monitor outputs to the left pane to assign a monitor.
- Drag cameras into the position of a monitor.



Press **Run**  at the top of the window to start using the TVWall. Press **Sequence**  to change the view according to the preconfigured time slot.

6.3 Mosaic TVWall Camera Groups

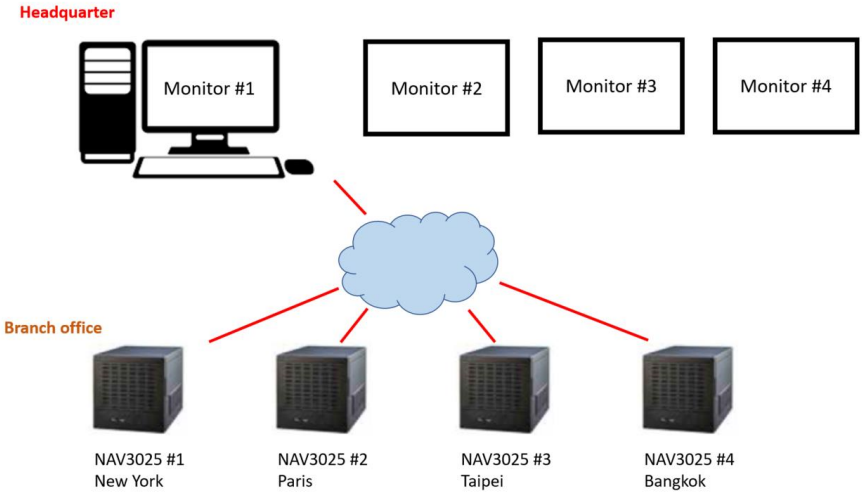
Once the monitors are set, press the **Group** drop-down menu  and select a group layout.

Click **all channels**  to delete all channel settings.

6.4 How to Setup Mosaic TVWall Function

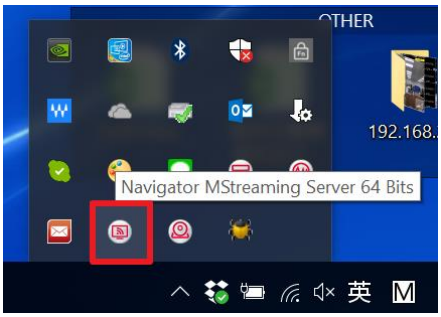
For example, one company headquarter wants to display their branch office NAV device camera all in a customized Mosaic TVWall.

Assume the computer supports 4 monitors. Each branch office has one or several NAV recorders.

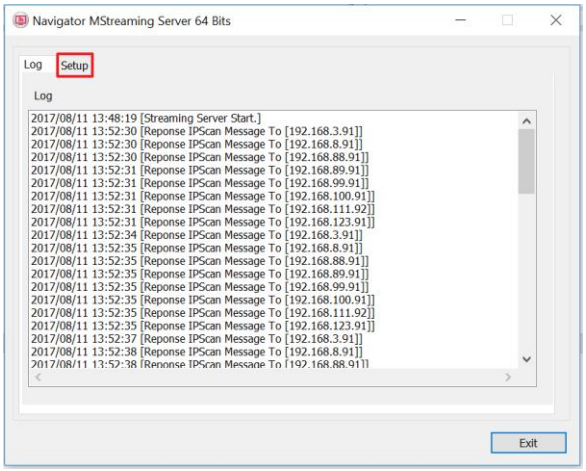


Please make sure that every branch office NAV recorder has LILIN Navigator and LILIN Control Center launched.

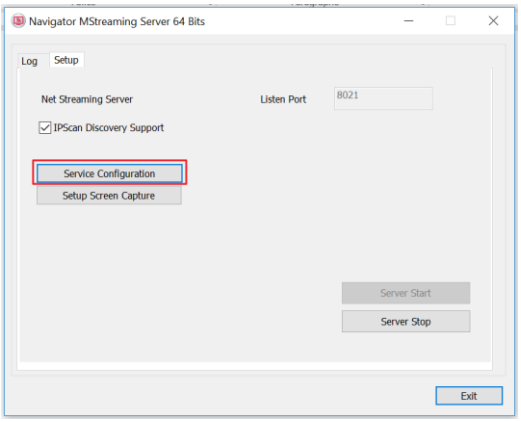
In the HQ computer, launch LILIN Navigator and LILIN Control Center.
Please scroll to computer bottom right icon and look for the **Navigator MStreaming Server 64 bits** icon. Click on the button.



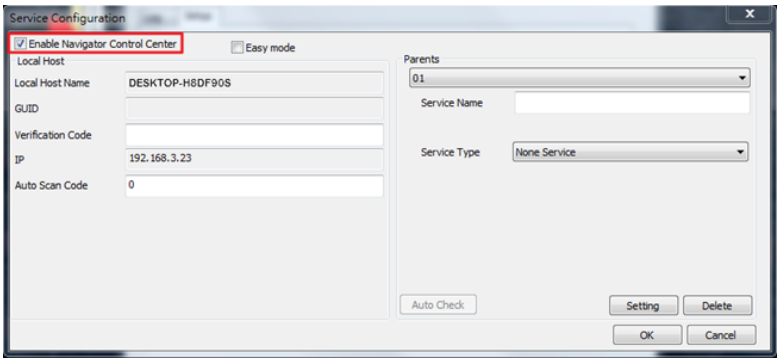
Click on **Setup** button.



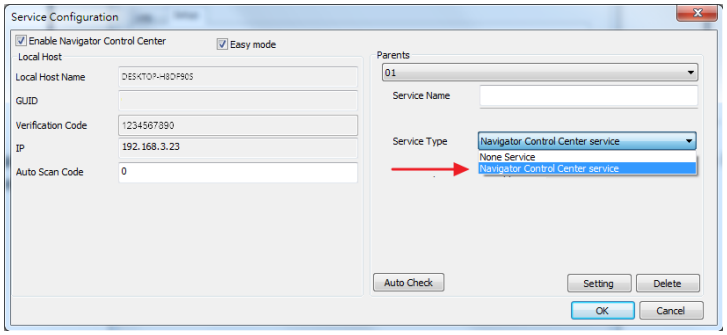
Click on **Service Configuration** button.



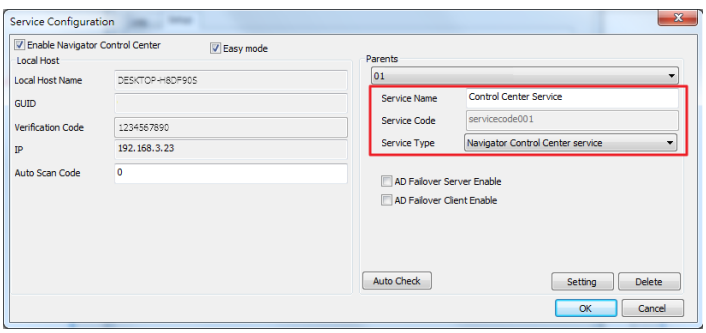
Tick **Enable Navigator Control Center** box.



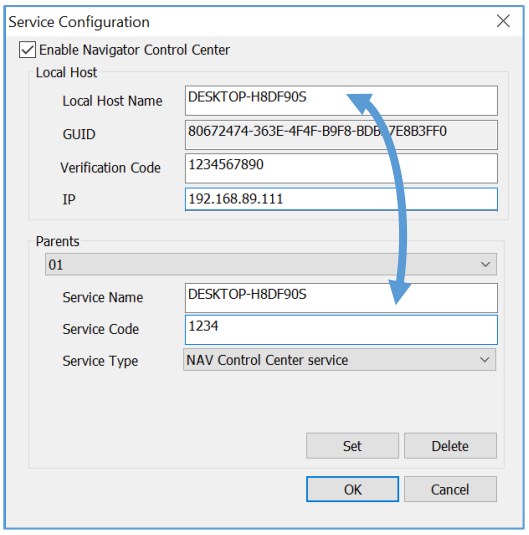
After Navigator Control Center is enabled, **Service Type** scrolling menu will be enabled. Please select **NAV Control Center Service**.



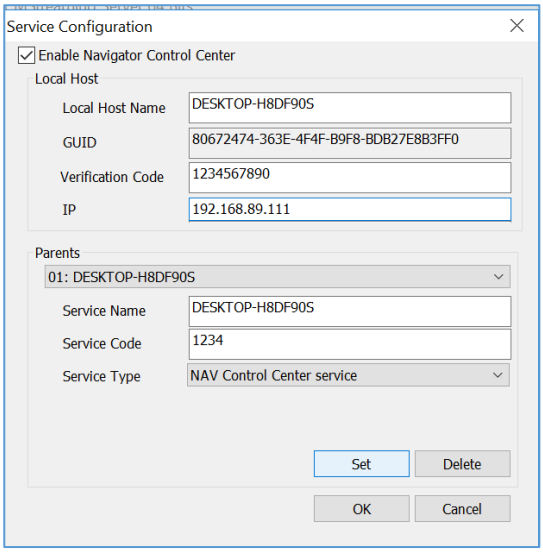
After **NAV Control Center Service** is selected, the window content will automatically modify.



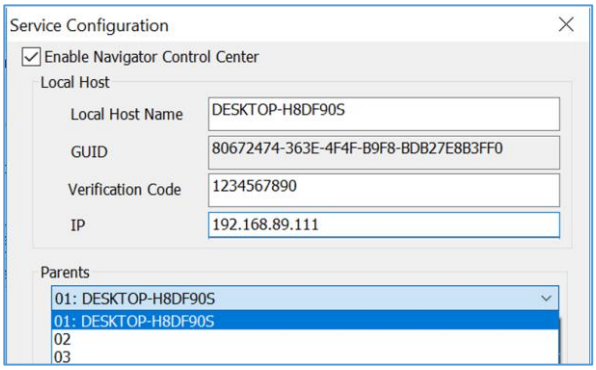
It is recommended to set the **Service Name** same as **Local Host Name** for better management, and change the **Service Code** different for each device.



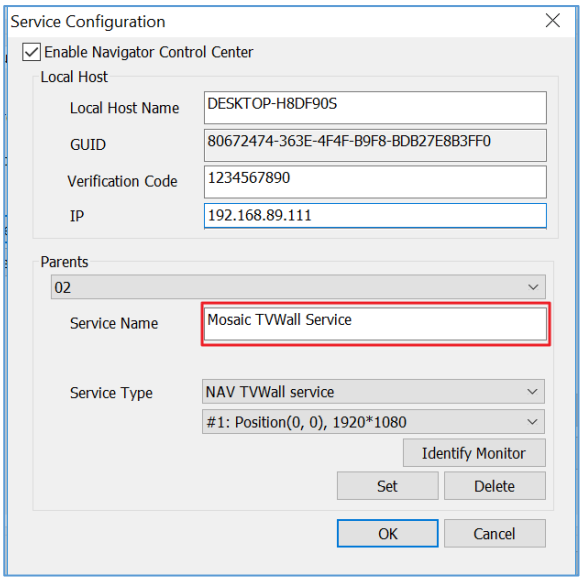
Click on **Set** button. The **Parents 01** will become your computer name.



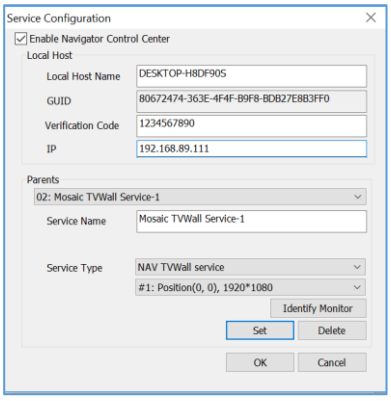
Click on **Parents** scrolling menu and select **02** to assign a TVWall service. The TVWall server will be displayed on a monitor.

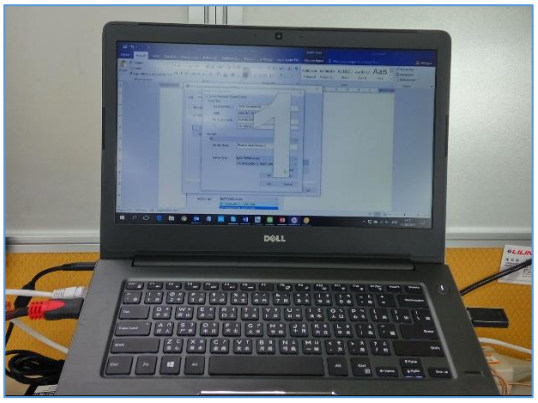


Select **NAV TVWall Service**, and the **Service Name** will be changed to **Mosaic TVWall Service**. It is recommended to add a **-1** in order to differentiate easily for further operation.

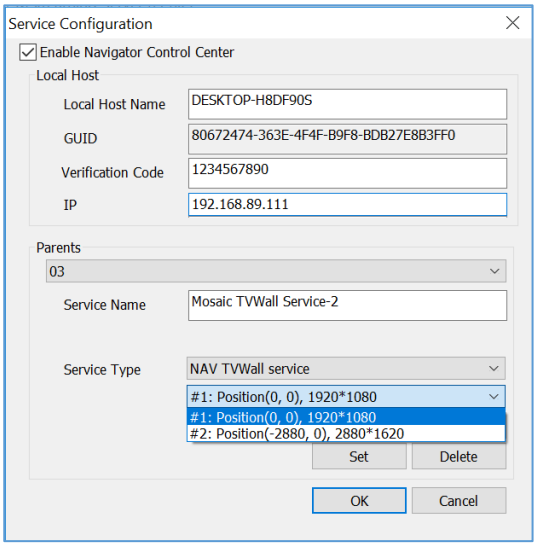


Click on **Set** button. Make sure that the correct monitor is selected. Please click on **Identify Monitor** button.

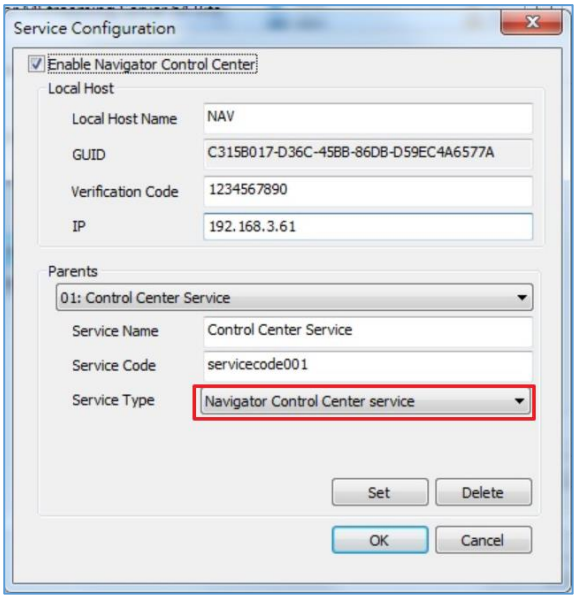




Please follow the same steps for **Parents 03** and select second monitor.



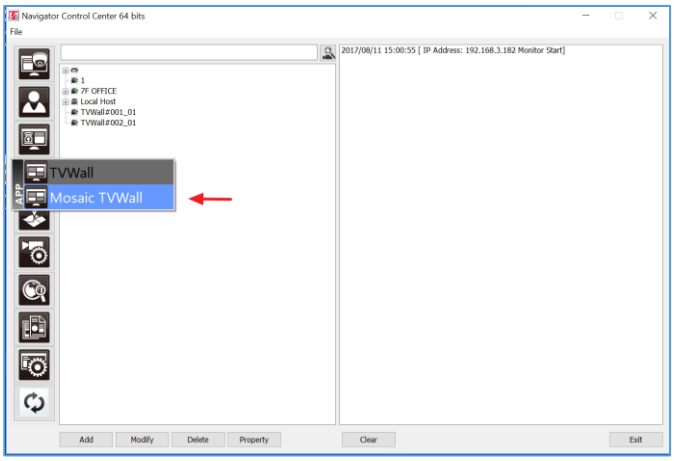
In each NAV Recorder, proceed the same steps and enable **Navigator Control Center**. Make sure that **Parents Service Type** is set to **Navigator Control Center Service**.



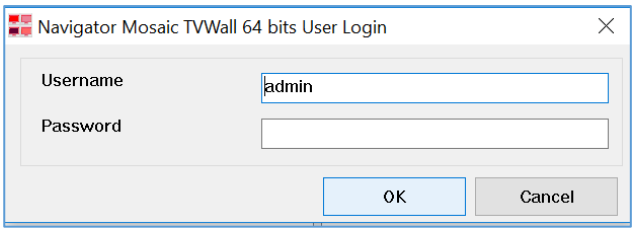
It is recommended to change the **Service Code** and to use different service code for each NAV recorder.

After setting **Navigator MStreaming Server 64 bits** is done, please restart Navigator and Control Center application on each device.

Launch LILIN Control Center. Click on **TV Wall** icon and select **Mosaic TVWall** button. **TVWall** is for VD022 purposes.

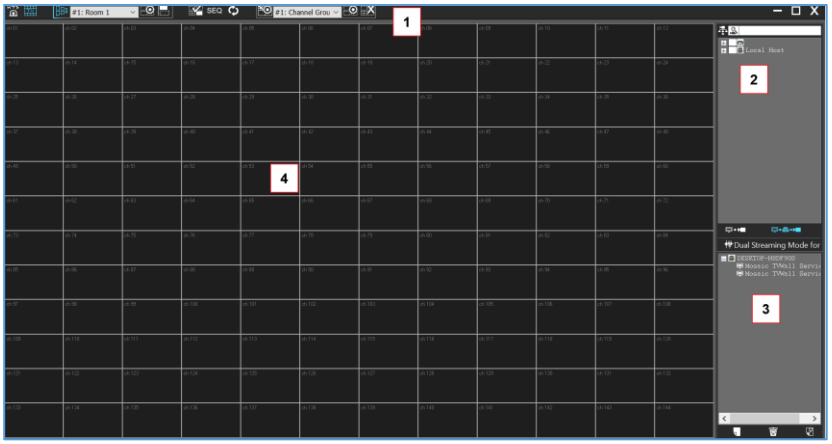


Enter username and password, then click on **OK** button.

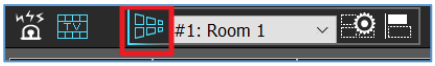


The Mosaic TVWall is consist of the following:

1. Monitor setting.
2. Device tree where you can see all the NAV device channel.
3. All the Mosaic TVwall service available.
4. Main screen.

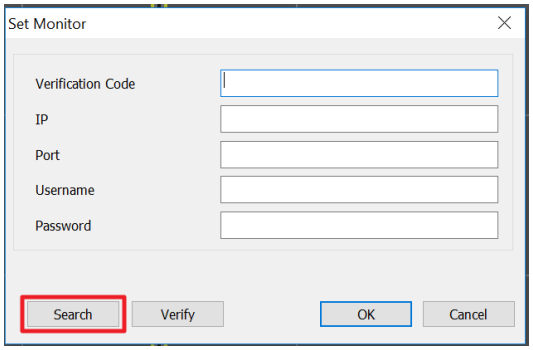


On the top left, click on **Layout Monitor** icon.

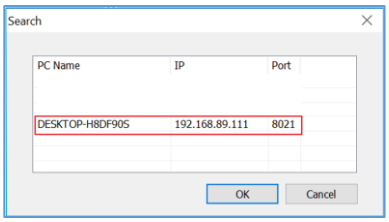


On the bottom right, click on **Add** icon.

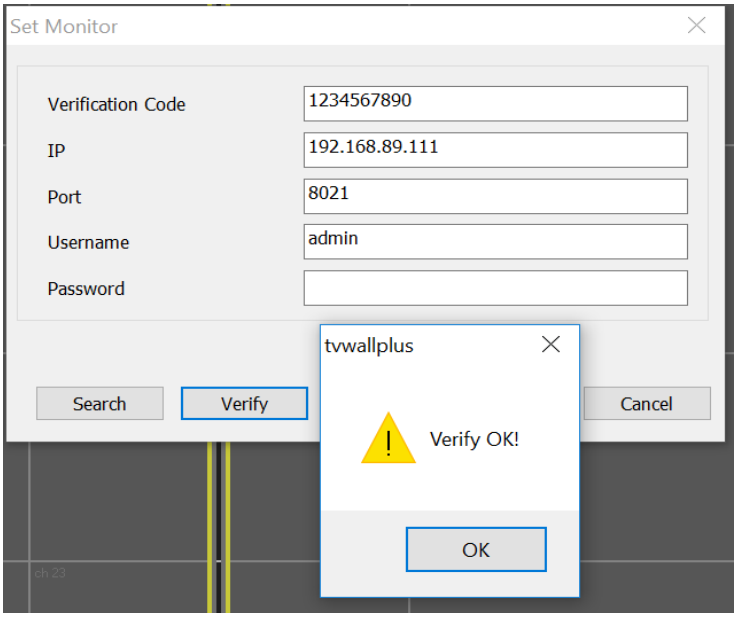
Click on **Search** button.



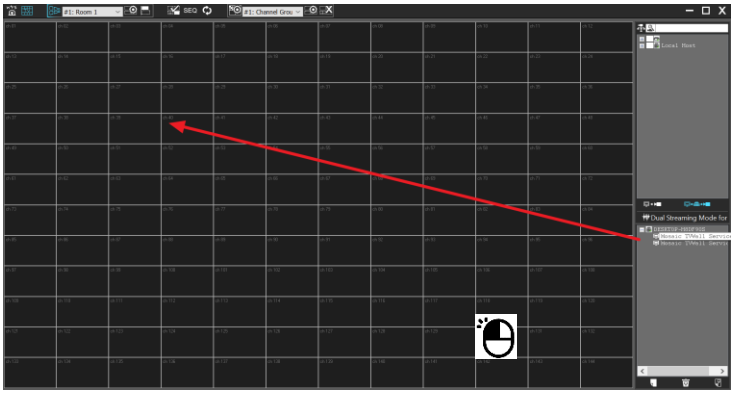
Select the computer that is being used as server. Click on **OK** button.



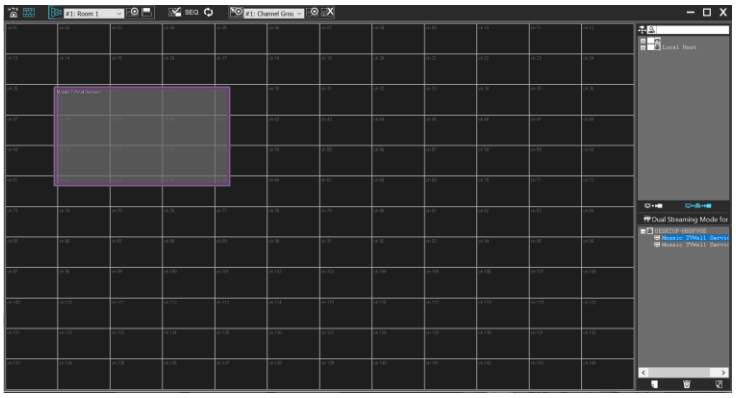
Click on **Verify** button. It will pop up “Verify OK’”, if the server is working properly.



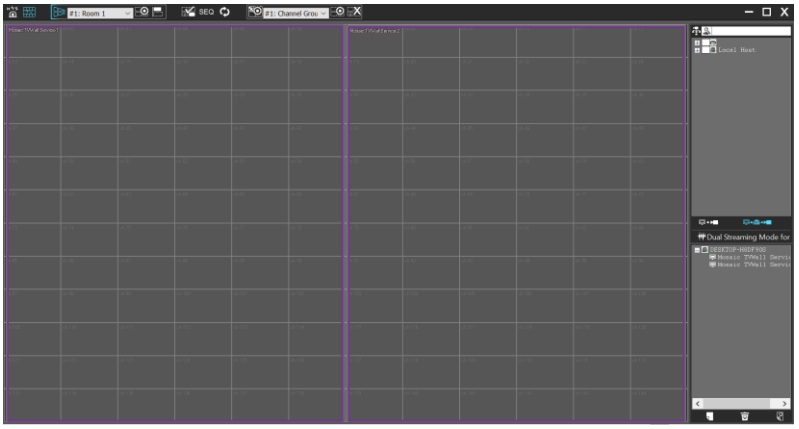
Pull the first Mosaic TVWall service icon by maintaining left mouse click.



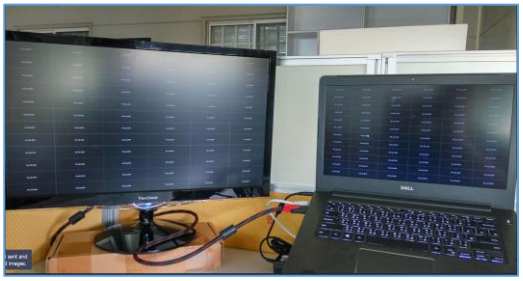
An adjustable purple window will appear.



Please follow the same step for the second Mosaic TVWall service. Readjust the size of each TVWall.

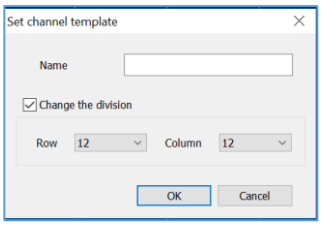


Click on the **run** button  located on the top bar. For example, when a 12x12 channel display split into two screen is selected, the monitors will show below images. These images represent Mosaic TVWall is correctly setup.

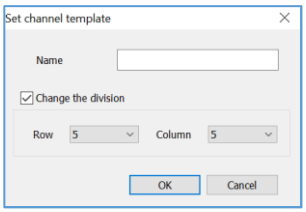


By clicking **layout channels** button, it will also customize how the channel are displayed.

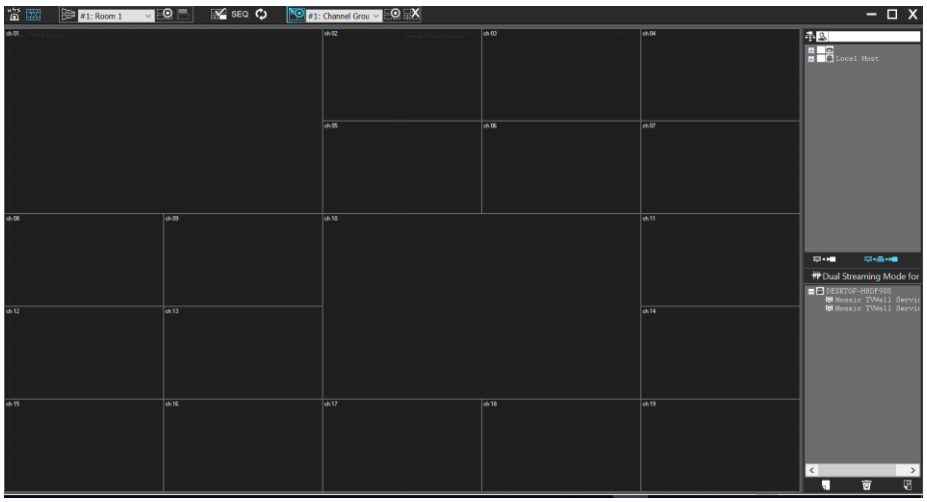
Click on the **set template** button to define a multiple window. Any template combination can be setup. However, be aware that some combination may result to distorted picture.



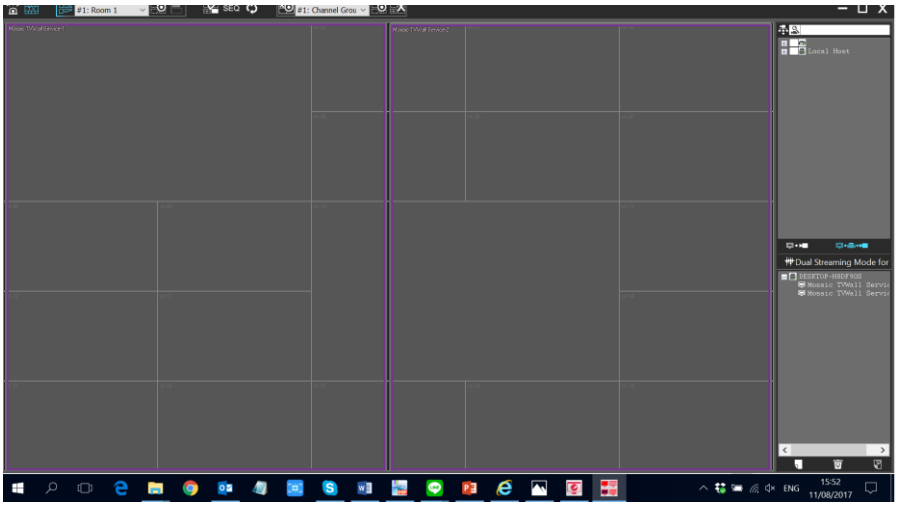
As example, we will select 5x5 display mode, select row **5**, and column **5**. Click on **OK** button.



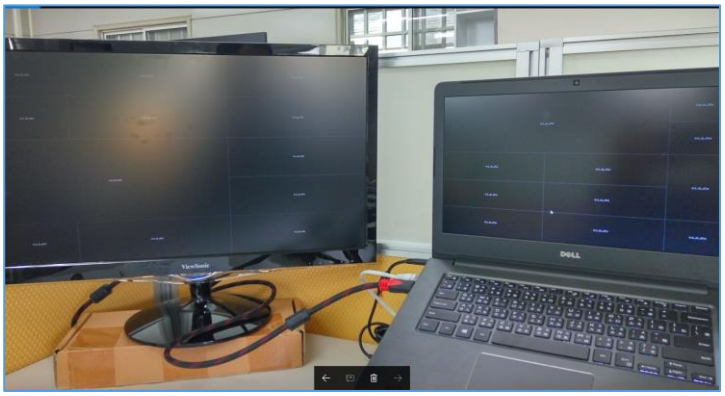
After adjusting some channels size, it will show below image:



Click on the layout monitor icon  to display the two TVWall preview.



Click on the **run** icon  to see the results.



Appendix

Minimum System Requirements

CPU—Intel® Core™ Intel i5-4590S processor
RAM—DDR3-1600 4G x2
Graphics card—intel® HD Graphics integrated graphics card
OS—Windows7/10 64-bit
Network speeds—Up to 250Mbps (download & upload)