

Knowledge Base

Text: Jimmy Wang

KB - NVR 4.0 the new UI and Enhanced Features

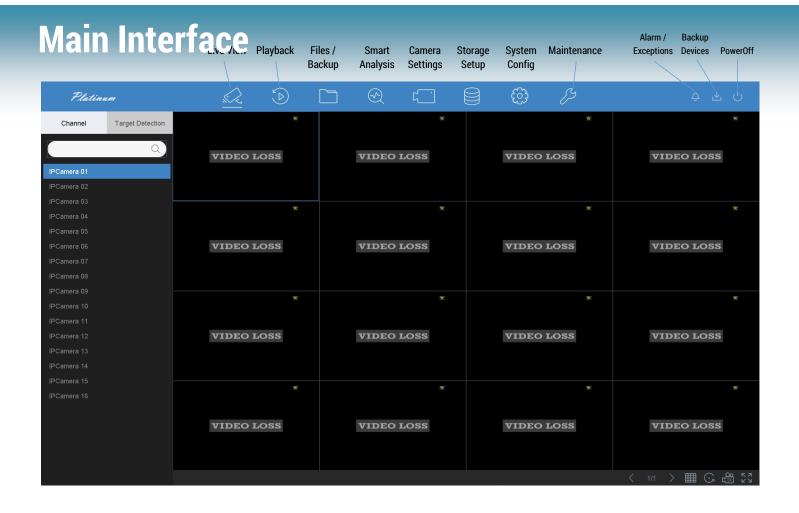
This reading material is for internal technician training purposes. For all legal warnings and instructions, please refer to the official manual.

Welcome to the NVR 4.0 Interface. We do the total redesign UI and improve the user experience. Here is the Quick Overview Guide I made for you...



NVR 4.0 Main Features

- 1. Easy to Operate & Dark UI
- 2. Improved the Playback Experience
- 3. Improved the Backup function, Support AVI
- 4. More direct Camera Settings (WDR settings)
- 5. Extend the Analytic features
- 6. Improved the local PTZ usage/experience
- 7. Support LPR Vehicle Detection features
- 8. More Built-in-PoE Controls
- 9. NVR to NVR projection (continuous record only)
- 10. HTML5 support (less powerful, but no Plugin needed)



LTS NVR & Network Switch

NVR & NVR-P

LTS provides two NVR Solutions: Regular NVR and NVR-P with Built-in-PoE.

Most of our NVR with the built-in-PoE.

For example: LTN8932-P16

https://www.youtube.com/watch?v=NPe967FBDgk



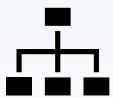
For the regular NVRs without PoE are usually supporting more than 16 channels. (32ch,64ch,128ch,256ch) For example, LTN07256

Network Structure

For the regular NVR system, you need a clear network structure.

Recommend should always to keep a document record for the future inspection and troubleshooting.

Recommend have a Network Main Switch: For the most situation, 1000LAN Main Network Switch is needed. Please don't treat your internet router as the main switch. Also, the PoE network performance will never equal to a good network main switch. Especially, when you have more devices directly connects to the router, it will increase slowing/freeze chances based on the quality. Plus, most PoE switches each port is 10/100 most. So, it won't transmit more speed like the 1000 network switch. When you have more network devices or the wireless bridge, having a main switch is getting important. All the network switch layer depths design should keep under 2 levels.



The regular network cable distance is 300ft max.

LTS DVR/NVR currently only support IPv4 address. Each device obtains an IP address.

Important: NVR-P & IP Cameras

Do not connect a network switch to the built-in PoE port. It is not recommended.

There are 4 major reasons that you shouldn't connect that way. **Explain**:

- 1. Built-in-PoE channel# is reserved. It won't exceed the reserved number (1-16).
- 2. Limited Bandwidth. Each Port is 10/100 speed. Therefore, it won't able to handle more cameras with high megapixel resolution. Usually, this will cause intermittent signal drops or lagging issue based on not enough bandwidth.
- 3. Built-in-PoE contains the Isolate DHCP router. It will reset the camera IP when the channel plug & play is not disabled.
- 4. Hard to maintain.

Exception: If you are the expert, it is a very small project, like 8CH built-in-PoE and you have no other way to run another wire.

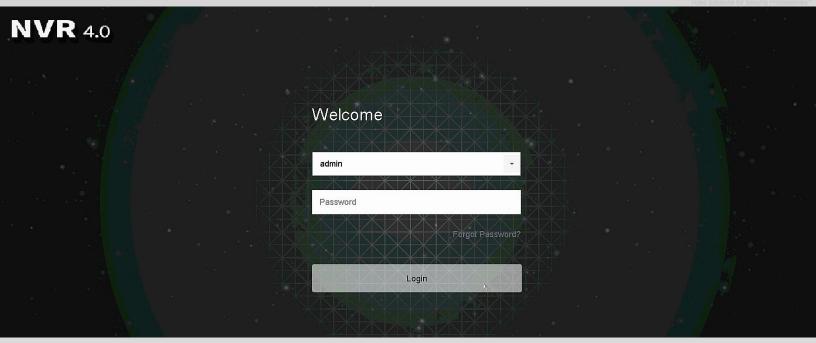
You may try connects 1 switch after the built-in port. But remember; we don't recommend it. There are 3 things need to notice first.

1. Each channel must set to manual. 2. IP address must be activated/assigned before you connected. 3. Do not more than 4 cameras with one network connections. Always recommend connecting the PoE to the main switch instead using the built-in-PoE port.

Network Isolation: Use an extra router to isolate IP Camera network traffic/package away from the existing network environment.

Wireless Suggestion: When you use the Ubiquiti Wireless Solution, make sure calculate the total bandwidth it can carry. Normally, one antenna can handle 4 IP Camera signal and always recommend connects to the 1000 network main switch.



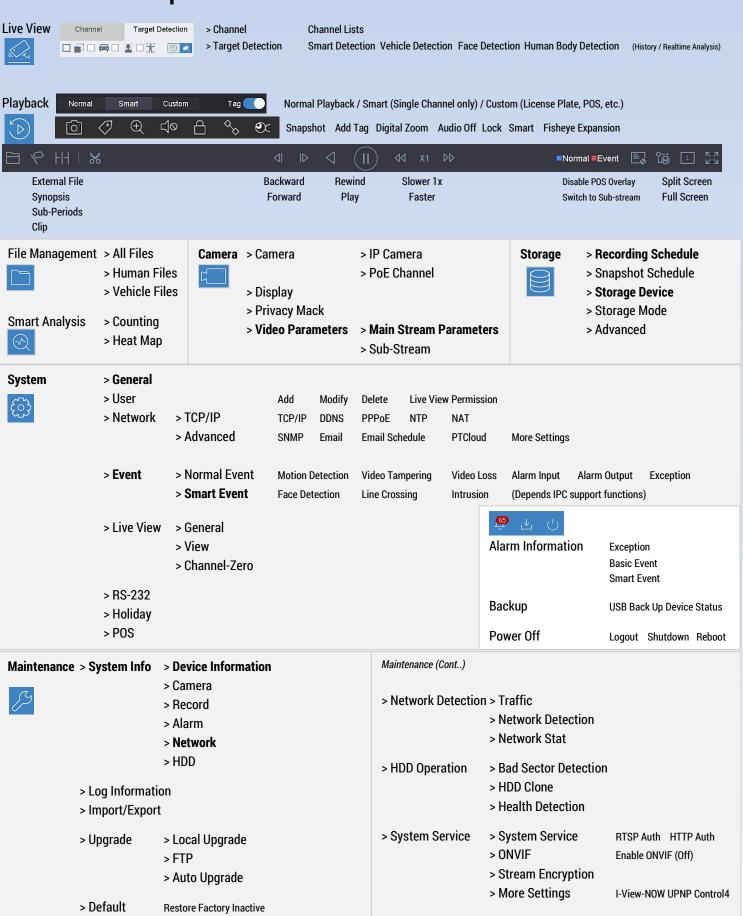


Index

Menu Map			4
Quick Guide Sheet			5
Wizard			6
Live View			7
	Target Detection	Live View – PTZ Control	8
Playback	Normal Search	Smart Search	9
	Clip, External File, Synopsis, Sub-Period		
File Management	Backup		1
Alarm Information	Exception / Event / B	ackup Device Status / Power Off	1:
Browser Support	Internet Explorer (Liv	e View / Playback / Download)	1:
	HTML5 Support (Chr	ome / Firefox / Edge / Safari)	10
(NVR4.0 Advanced	Configuration; see and	other KB – NVR4.0 Advanced Configuration part II)	
System, Storage			
Maintenance			
Smart Analysis			
Camera			
PoE			

GILTS Video Solutions for Security Professionals

NVR 4.0 Menu Map





NVR 4.0 Quick Guide Sheet:

This reading material is for internal technician training purposes. For all legal warnings and instructions, please refer to the official manual.

Wizard > Language > Create Password > Date/Time > Network IP > HDD Status > IPC > PTCloud > Change Admin Password > Finish

Same as the Wizard:

Adjust Date/Time: Modify Account/Password Network IP Add/Remove IP Camera

(System > General) (System > User > Modify) (System > Network > TCP/IP) (Camera > Camera > IP Camera)

The wizard setup covers the most important sections. The previous Menu Map, I already emphasized the most common setup with **bold**. You can check it again. The rest of the common setup I list in here when you needed.

Local Display Monitor:

Adjust Monitor Display Resolution: Define the monitor as the Main Display: Disable Wizard when booting up.

(System > General > VGA Resolution) (Screen > General > Menu Output Mode) (System > General > Enable wizard)

Adjust Camera Name / Title (24hr/12hr)

Adjust Camera Brightness/Contrast

Show/Hide Camera

(Camera > Display > OSD Settings) (Camera > Display > Image Settings) (System > Live View > View)

Modify Recording / Schedule:

Adjust Record Resolution/FPS/etc.... Adjust Record Schedule (Motion/24hr REC)

(Camera > Video Parameters > Main Stream Parameters) (Storage > Recording Schedule)

Adjust Motion Detection Area Enable Audio Recording Adjust Pre/Post-Record Time

(System > Event > Normal Event...) (Storage > Recording Schedule > Advanced) (Storage > Recording Schedule > Advanced)

UPnP Port Forwarding / Ports:

Enable UPnP Port forwarding Change DVR/NVR Network Port# How to do the Port Forwarding?

(System > Network > TCP/IP > NAT) (System > Network > Adv... > More Settings) see KB – How to do the Port forwarding.

IP Camera Setup:

IP Camera Add/Remove/Activate Display Camera Status All Built-in PoE Ch# is Reserved, modify only

(Camera > Camera > IP Camera) (Maintenance > System... > Camera) You can modify the setting but not delete it.

Backup Video File

(File Management > All files > (Condition) > Search > (Select Video/Picture) > Export ______ pg. 11

Find out the Information

DVR/NVR Model# DVR/NVR IP Address

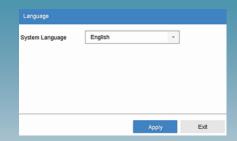
(Maintenance > System Info > Device Info) (Maintenance > System Info > Network)

Firmware Upgrade

(Maintenance > Upgrade > Auto Upgrade)

Wizard

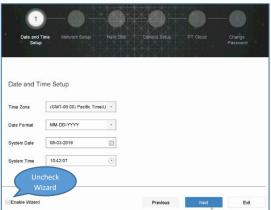
Welcome to the NVR 4.0. When the first time to use, you should see the Wizard. All steps should be very simple. When you create the activation password, please make sure read the instruction clearly. Password must be minimal 8 chars, Mix with Letter & Numbers.



Wizard > Language > Create Pattern/Password > Date/Time > Network IP > HDD Setup > IPC > PTCloud > Change Admin Password > Finish

- 1. Disable Wizard. Wizard only need use once, please disable it.
- 2. Create Pattern/Password. If you want to create a Password instead of the Pattern, click Switch User ID at the bottom right.
- 3. Make sure setup the correct Time Zone, Date/Time. (Important)
- 4. Setup Network IP. If you are not sure, please enable the DHCP to get the correct IP address.
- 5. Always check the HDD Status. If it is not formatted, please initialized again.
- 6. IP Camera. If you want to add the additional IPC, you can activate the camera and add it in here.
- 7. Enable PTCloud (Optional)
- 8. Change Admin Password. Just in case, you create a Pattern password but not the Admin password. You may change it in here.





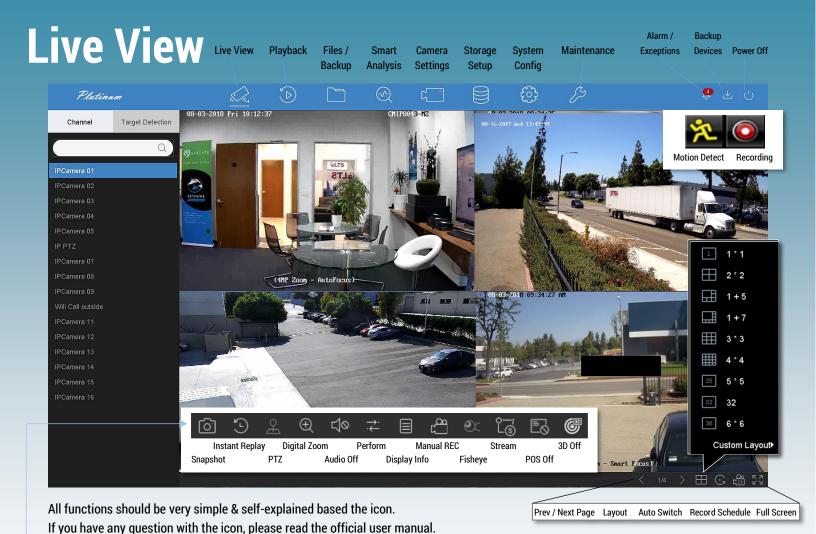












Q&A (Tip & Tricks)

- 1. How to show full screen without any UI interface?
- A: You need to switch the <u>Live View</u> first and make sure stay on the <u>Channel panel</u>. Right click on the video screen. Or, go to the bottom right corner "Full Screen" icon.
- 2. The live video contains the camera function panel is showing on top of the video. How to make it disappear? A: Don't move your mouse. It will automatically disappear after 1min.
- 3. How to make the Target Detection working?
- A: Target Detection can detect a significant target and capture. Then captured snapshots link directly to event video playback. The Target Detection only available with the Smart Event. (System > Event > Smart Event...) (See next page...)

Set

10-08-2018 19:21:17

- 4. Where I can find the rest of Detection Event?
- A: Alarm Information > Basic / Smart Event
- 5. How to change the Camera Title?
- A: (Camera > Display > Image Settings)
- 6. How to move the Live View Camera to different Position?
- A: Use mouse to Drag & Drop the camera to a different position, or (System > Live View > View).
- But please remember, the playback channel is still based on the original camera order, not the live view order.







Target Detection

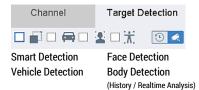
Target Detection can detect a significant target and capture. Then captured snapshots link directly to event video playback. The Target Detection only available with the Smart Event.

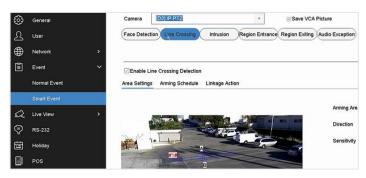
Important Please remains the Target Detection Panel opened. Either Logout or switch to a different menu will clear out the thumbnail. But, you can find the event back from the Alarm Information Panel.

System > Event > Smart Event

For example,

Enable a Line Cross smart event.







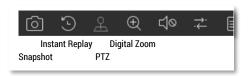
PTZ Control

We re-design the PTZ panel and enhanced the User Experience

Shortcuts:

- 1. Drag the image to adjust PTZ View
- 2. Click on the image to focus automatically.
- 3. Scroll up/down to Zoom in/out.
- 4. Click the lower-right corner icon to set the Preset.







Preset Set:

Move the camera to proper potion and click the Flag icon. Complete Preset# & Apply it.





Patrol: 1. Click Set to define.

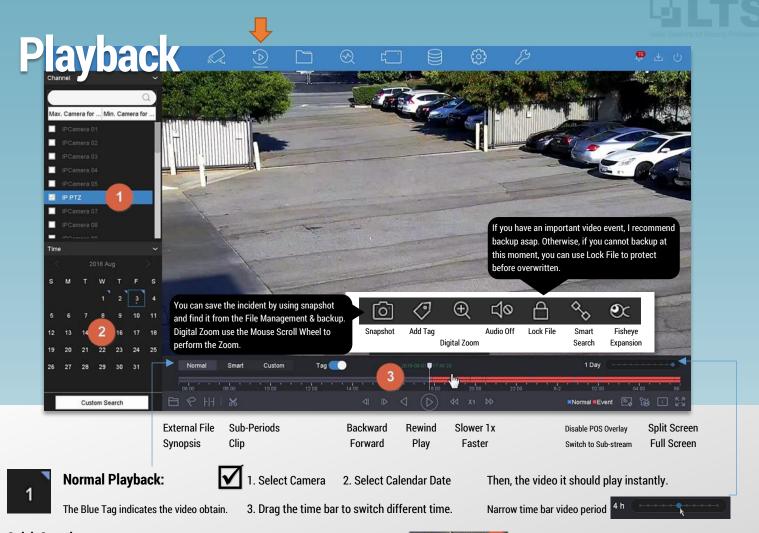
2. Click Call to play.



Pattern: 1. Click Record to define

2. Click Call to play.





Quick Overview

- "Single Click" the Red bar.
 Move cursor on top of the Red bar. Then, you should see the Quick overview thumbnail is faster switching
- 2. Click on the thumbnail that will switch to the time you want.



Smart Playback: (Support Single Channel Only) Smart Search might take a while to get the result.

- 1. Switch to Smart Tab first. Then, single click on the video to show the bottom panel.
- 2. Click the Smart Search button
- 3. Select Motion Smart Detection or Intrusion Smart Detection
- 4. Define an area.

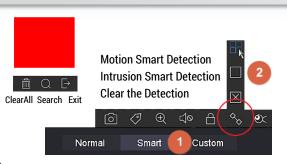
Define the Motion Smart Search Area: Tagging video drag & draw a zone.

Intrusion Smart Detection: Click 4 time on the video to define a quadrilateral area (require VCA video)

5. Click Search/icon, then you should see a different color mark on top of your existing time bar. Use < > skip to the next event.

Important

Please remember always go back to the (Normal Tab) before you exit the Playback. Otherwise, the Smart Search may still process in the background.





Playback



Tag (

NVR 4.0 enhanced the playback functions include with new features. External File, Synopsis, Sub-Periods, and Clip.

HH | % [%]

Start Time

Clip Time Export Clip

Fnd Time



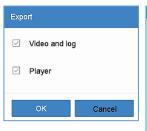
Clip (Partial Backup)

The Clip supports partial backup video to the USB sticks.

- 1. Please insert a USB memory stick into the NVR/DVR.
- 2. Then, you should see two icons is showing beside.
 There are two ways to do the clipping.
- 3. Adjust the Beginning & Ending bracket and click Export Clip icon.
 - Or, click the <u>Clip Time</u> icon to define the precise time and Export.

 You can use this to narrow down precisely timing, click OK will go back to the previous screen.

 The Beginning Time and Ending time bracket will change. Or, use the Export button to back up.





File Home Share View Drive Tools

→ ↑ → ↑ This PC → USB Drive (E:)

Name

Quick access
Desktop
Downloads

Downloads

Player



The new backup function supports file format FAT32 / NTFS for the USB.

Also, the backup video format support MP4 (default), or AVI (more convenient but need more times)

If you choose the Player option, the USB will include a simple video player with it.



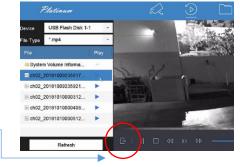
External File (Read from USB Memory Stick)

(Only Support MP4 video format)

After using the Clip to back up the video file, you can verify it from here.

Remember click the Exit icon when finishing





Synopsis

(Single Channel only; Powerful but takes more time to analysis)

It will display all the activities during the time-period in a single screen.

Use the Neon Green highlight to show the object appear area.

Click the area, it will reveal the actual footage in a small window.

(Suggestion: Don't set a long time period when search. When more activities, it might cause the NVR performance slower to respond)





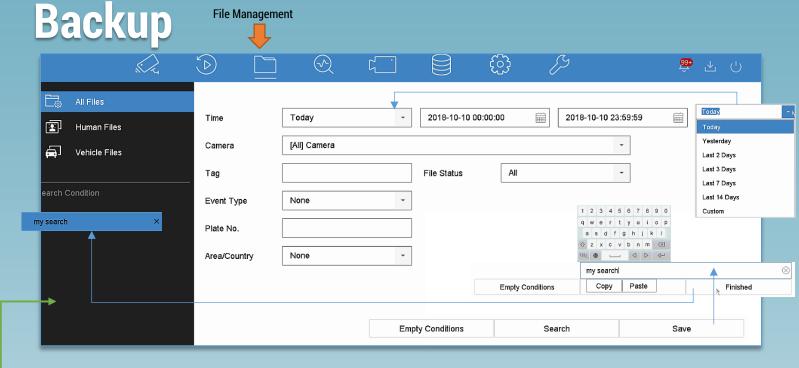
Sub-Period

(Single Channel only; can view different time periods in one screen.)
The sub-period will display 4-period from your total search range.
This is designed to break down the search result and accelerate to find.

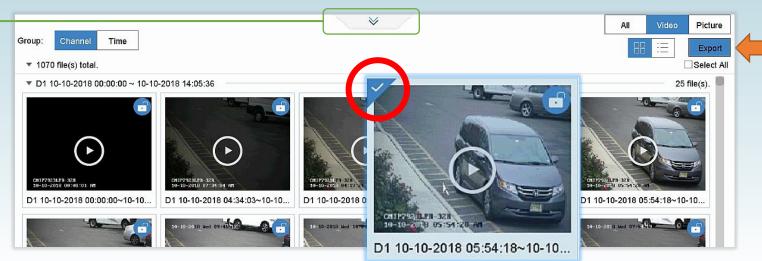


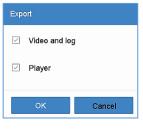




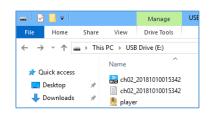


- 1. Insert a USB Memory Stick to the DVR/NVR first. (max USB memory stick support up to SanDisk 128GB)
- 2. Select the File Management Tab. Select All Files on the Left Panel.
- 3. Define the Search Condition. Specify the <u>Time Period Begin & End</u>. Click **Search**. Bookmark the Search. If you use a certain keyword tag every time. You can save it (For example, my search). So, you don't need to type again.
- 4. After the search result comes up. You can select Video or Picture to back it up.
- Single click the item. Make sure the <u>Check Mark</u> is selected, or use <u>Select All</u> checkbox to select all the video or pictures. If you want to Lock the video file, you can select the Lock icon.
- 6. Select Export to save to the USB stick. (Done)











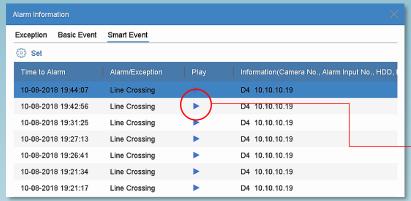


Status

We redesign the Status Panel and make it more useful and efficient.

The Power Off, just Logout / Shutdown / Reboot. I don't need to explain it.







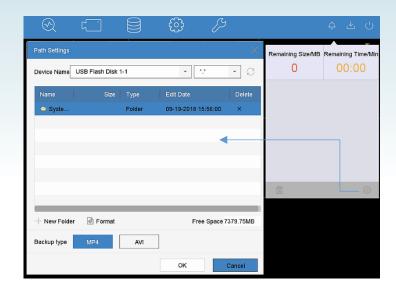
Alarm Information The alarm information is always displaying the correct status.

If you want to disable some message, go to the Set to change it. Basic Event and Smart Event will efficiently display the event when occurred. But please notice; the alarm information is not the Push notification. So, please don't miss understand it.

USB Backup Memory Stick Status

You can check the USB backup status from here.

Click the Set icon, you can manage the device.





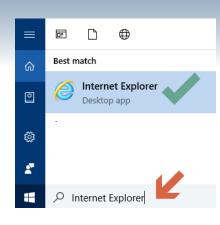
Browser Support (PC)

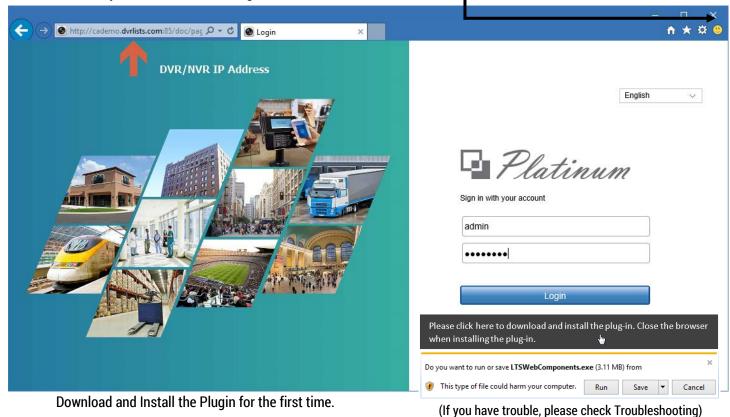
To view is simple, open **internet explorer** first. (Require Open Ports: 80, 8000, 8554)

If you are using Windows10, please make sure using the **Internet Explorer**. not the Edge. Simply type Internet Explorer in the search section. Then, you should able to find it.

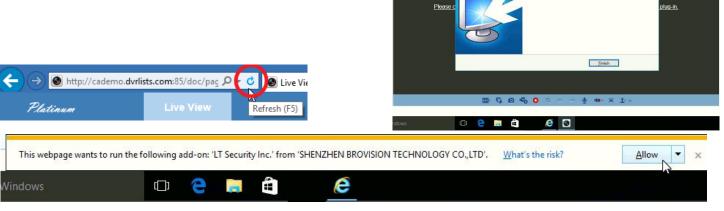
The other simple way to identify IE in the Windows10 is the Unicon. Enter DVR/NVR IP address, then you should see the Login window.

For the first time, you need to load the Plugin first.



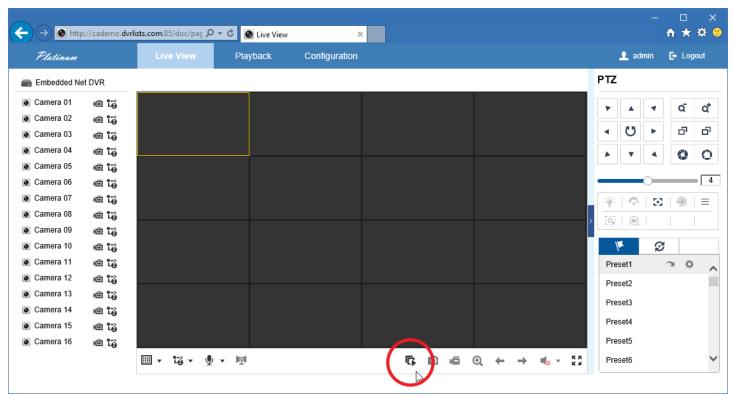


Refresh the browser after Install the Plugin, make sure click **Allow** at the bottom first.

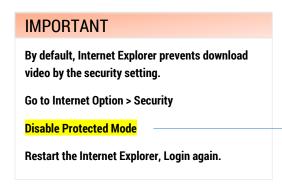


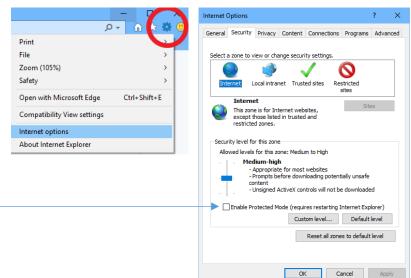
Browser Support – Live View

If you see the screen divider line, that means the Plugin is activated. Click to Start view all camera.



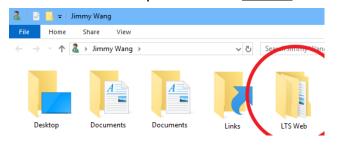
Disable IE Protected Mode





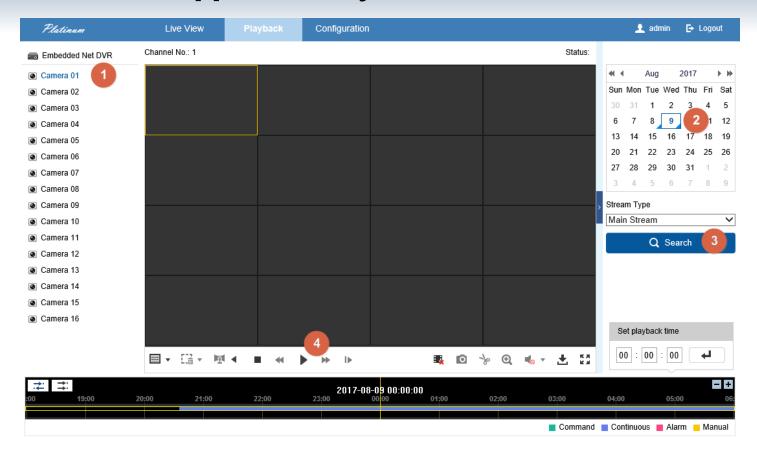
Snapshot / Save / Download

The file saved into the personal folder. **LTS Web**



re Configuration					
Local	○ 256M		○ 1G		
T 2000	C:\Users\Jimmy.V	/ang\LTS Web\Re	cordFiles		Browse
Save downloaded files to	C:\Users\Jimmy.V	Vang\LTS Web\Do	wnloadFiles		Browse
Picture and Clip Settings					
Save snapshots in live view to	C:\Users\Jimmy.V	Vang\LTS Web\Ca	ptureFiles		Browse
Save snapshots when playback to	C:\Users\Jimmy.V	Vang\LTS Web\Pla	ybackPics		Browse
Save clips to	C:\Users\Jimmy.V	Vang\LTS Web\Pla	ybackFiles		Browse

Browser Support - Playback



Select Camera Number (1) first, then select Date (2). Click Search (3). And finally, click Play (4) button. During the play, you also can drag the timeline at the bottom switch to another time.



Click the Download button,

then you can select file & download it into the folder.

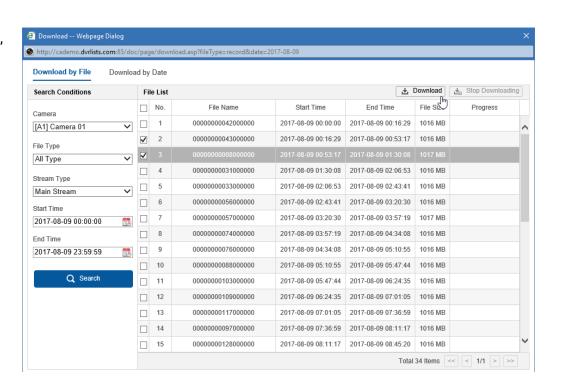
IMPORTANT

By default, Internet Explorer prevents download video by the security setting.

Go to Internet Option > Security

Disable Protected Mode at bottom

Restart the Internet Explorer, Login again.





HTML5 Browser (Chrome/Firefox/Edge/Safari)

NVR4.0 now supports the HTML5 Browser. However, there are a couple things do require first. (Require Open Ports: 80, 8000, 8554, **7681**)

- 1. The open port requires one more, 7681. This hidden port number cannot be changed.
- 2. Only single channel supports both Main/Sub Stream.
- 3. Multiple Live View window only supports up to 4 channels with the Sub Stream.

Live View

Based on the HTML5 programming limitations, the Live view cannot support more than 4 windows with substream. If you need more windows to view at the same time, please use the Internet Explorer or use the Client software NVMS7000 (PC).

Playback

The playback section is also the same. By default, it is pre-selected as the Substream with 4 windows.

- Select Single Screen first.
- Select Camera
- 3. Select Date
- Search
- 5. Click the Play button.
- Move the Time bar or Set Playback Time

Important

You need to switch it back the Main Stream first. Otherwise, you will get the "No file found" error.

All rest of functions should be very similar to the IE except the configuration maintenance section.

