



# TruVision Navigator 6.0 User Manual

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# Chapter 1

## Overview

TruVision Navigator is video management software that enables security-related personnel to easily and remotely gather video evidence, monitor live situations, and configure and maintain a video surveillance system that consists of UTC digital video recorders (devices), analog video cameras, network video recorders, and IP cameras. TruVision Navigator provides a more intuitive way to find and provide relevant video content. Version 6 features a redesigned interface and functionality enhancements for a more intuitive user experience. Figure 1 shows the TruVision Navigator main screen.

Figure 1: TruVision Navigator Main Window



- |    |  |
|----|--|
| 1  | Navigator Panel  |
| 2  | Search Dialog  |
| 3  |  Add Devices and Add Folders Icons  |
| 4  |  Settings, Show Selected Tasks, Help, and Logout Icons                            |
| 5  | Viewer Panel, multiple tabbed viewing panels (up to 10) can be added by clicking on the + icon   |
| 6  | Event Monitor Panel  |
| 7  |  Custom View, Toggle (maximized and normal view), Select All, and Close All icons |
| 8  | Notifier Panel   |
| 9  |  Details icon: Launches the Event Center  |
| 10 | Collector Panel and  Export, Select all, and Close All icons                      |
| 11 |  Controller Panel and Playback controls   |
| 12 |  Live and Sub stream toggle controls  |
| 13 |  Zoom In/Out, Center TimeLine, and Go To Date icons                               |
| 14 |  Save Video, Snapshot, PTZ Controls, and Push to Talk icons                       |

TruVision Navigator consists of 5 panels, several major dialogs, and numerous program icons as listed above. Panels are resizable by dragging the vertical left or right splitter bars. Arrow icons next to panel names signify the ability to hide/unhide the panel. This

provides custom application layout styles depending on the activities that you want to perform. TruVision Navigator will remember your custom panel layout upon logout and restore you to that same point when you log back in.

The **Navigator** panel (1) is the central administration area in the software and allows you to quickly search and access any device or camera in your system.

The Navigator features double-click or drag n' drop capability to view cameras or devices as a whole. By right-clicking on any object in the Navigator, you will be exposed to a number of operations that can be performed on the object. These include health diagnostics, device configuration, disk analysis, properties, search, firmware uploads, and more. Maps or floor plans can be added using .jpg or .png files. Live camera icons can be placed on the maps to represent their physical locations. Clicking on these camera icons loads video into the Viewer panel.

This panel is permission-based, so if you do not have rights to perform certain actions, you will not see the options.

The **Viewer** panel (5) allows you to view both live and recorded video from any video source in the system to verify and act on the content. It contains live or previous recorded videos that can be launched from the Notifier, Navigator, or Collector. Multiple tabbed viewing panels can be added (up to 10). These additional viewing panels can also be detached and become free floating windows. An embedded viewer, the Event Monitor is now available in the Viewer panel.

Users have several tile layouts to choose from when arranging the video sources. Standard tile layouts include 1×1, 2×2, 3×3, 4×4, and 5×5. We also support a Custom Tile Layout with 1 large tile and 7 smaller surrounding tiles for additional flexibility. Double-clicking in any single tile will bring that video to full screen. Double-clicking the video again will restore the video to the previous tile layout. As well, Instant Replay is available from the video tile itself by clicking on the Instant Replay icon.

If your system contains PTZ (pan/tilt/zoom) cameras, the Viewer panel has mouse support for PTZ features from within the video tile. Left-click and move the mouse left/right/up and down to adjust the pan and tilt of the camera. Right-click and move the mouse up and down to allow the camera lens to zoom in and out.

The **Controller** panel (11) allows you to manage video once it is loaded in the Viewer. The Controller features a toolbar, a timeline, playback controls, and stream switching capabilities. When a specific video tile is selected (blue outline around the video tile), the Controller features will affect that video tile.

The Controller toolbar allows you to select all video tiles in the viewer, zoom in and out on the timeline, center the timeline, open the PTZ control palette, perform a Go To search, and put video in live or playback. The Snapshot button allows you to take a snapshot of the current play time of a selected video tile and send it to the Collector for

export. The Video button allows you to send a desired video segment (of the time range you specified with the green and red indicators) to the Collector for export.

The Controller timeline allows users to seek for video at specific points in time. Double-clicking anywhere on the timeline will automatically playback the selected video at that specific date and time. Use the current live/playback cursor (appears as a blue seek triangle icon) to seek and play the video anywhere along the timeline. Use the green and red triangle icons to mark the beginning and end of a desired video segment. Use the playback controls beneath the timeline to further manipulate playback video.

The **Collector** panel (10) contains all relevant video segments, snapshots, and local recordings ready for export. From here, you can select the desired content to export to your hard drive on demand or via a schedule.

To re-open a video clip for further analysis, double-click the thumbnail and the video will launch in the Viewer. You can then manipulate the timeline to refine the clip and send it back to the Collector. To delete video clips from the Collector, click the delete icon next to the thumbnail. Rename, print, or E-mail snapshots with a right-click of the mouse on the thumbnail.

The **Tasks** (4) panel affords the user one central place to monitor the tasks that have been created and scheduled in the system. These tasks include video exports, firmware upgrades, bulk configurations, database backups, and database restores. The Tasks panel provides a real-time status of the tasks in the queue, and the reason if a task was unsuccessful. The Tasks panel is launched using the *Show Scheduled Tasks* icon in the Navigator panel.

The **Settings** dialog (4) allows the user to configure several options within the application. These include settings for client, server, notifications, audit history, and health diagnostics.

Client settings apply to each client station. These settings include CPU threshold control, POS activation, aspect ratio and bandwidth controls for video monitoring, and audio activation. Enable the maximum CPU threshold here to prevent your CPU from reaching 100% during video rendering. As with all applications, you will experience a system slow down as you reach 100% CPU.

Enable your alert sound when new device notifications are received in TruVision Navigator's Notifier.

Enable the aspect ratio for live and playback video in the Viewer.

Server settings include the SMTP server settings, permission settings, custom help link settings, and server/client URL information.

Notifications settings include the network settings necessary to receive events from each device. Also, this menu includes the e-mail notification settings as well as a filter of specific notification types.

Health diagnostics settings include a filter of diagnostics to be received, as well as e-mail settings to receive notifications of diagnostics information. Also, automatic diagnostic polling can be scheduled from this menu.

The **Help** dialog (4) offers an easy to use Help function for more detailed system instructions. You can also obtain TruVision Navigator version information, copyright, and end user license agreement information here. Organizations have the ability to add their own custom Help or training link here to facilitate the adoption of the product.

The **Event Center** dialog allows you to collect and manage any notifications sent to you from the devices. The **Event Center** dialog window is launched with the **Details** icon (9) in the **Notifier** (8) panel. You must configure your devices to send these notifications over the network via TCP or SMTP to the IP address of the TruVision Navigator Server machine. In addition, the firewall must be configured on the TruVision Navigator Server machine to accept these network notifications. Video associated with these events can also be directly sent to the **Event Monitor** (6) embedded in the Viewer panel.

These notifications may include Alarm, Video Loss, Motion, Fan Failed, Disk Failed, User Locked at Device, Video Erased, Disk Full, Device Powered Up, and more depending on the device model.

## Client Software Requirements

TruVision Navigator supports all of the following Operating Systems and other software components.

**Table 1: Client Software Requirements**

Component	Version	Notes
Operating System	Microsoft Windows XP Pro SP3	Prerequisite to loading TruVision Navigator
	Microsoft Windows Vista SP1 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows 7 SP1 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows 8.1 32-bit/ 64-bit	Prerequisite to loading TruVision Navigator (WinPCAP needs to be installed separately and ran in compatibility mode for operation on Windows 8 systems)
	Microsoft Windows Server® 2003 R2 32-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows Server® 2008 R2 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
Other	Microsoft .NET Framework 4.0	Packaged with the installation

## Client Hardware Guidelines

The PC industry is constantly improving on product performance / configurations while reducing cost to the customer.

As a result, we have listed some Client PC specifications for TruVision Navigator as to what is commercially available in August 2013.

These specifications are meant to serve as a **GUIDELINE** for the customer. TruVision Navigator will perform to varying degrees on lesser or more robust machines.

Please review the Expected Performance metrics at the bottom of the table to determine what will meet your needs. You can make your PC decision based upon that need.

**Table 2: Client PC Hardware Specifications**

<b>Component</b>	<b>Minimum</b>	<b>Recommended</b>	<b>High</b>	<b>Notes</b>
Processor	3rd Gen Intel Core i3-3220 Processor (Dual Core, 3.30GHz, 3MB, w/ HD2500 Graphics)	3rd Gen Intel Core i5-3470 Processor (6MB, 3.2GHz) w/HD2500 Graphics	3rd Gen Intel Core i7-3770 Processor (8MB, 3.4GHz) w/HD4000 Graphics	CPU power is directly related to the performance of the application when running and rendering video. The better the CPU, the more responsive your application will be.
Memory	4GB, NON-ECC, 1600MHZ DDR3,2DIMM	6GB, NON-ECC, 1600MHZ DDR3,2DIMM	8GB, NON-ECC, 1600MHZ DDR3,2DIMM	RAM is related to the number of different applications that can run simultaneously as well as the number of different operations that TruVision Navigator can perform at once. The higher the RAM, the better performance you can expect.
Hard Drive	500GB - 7200RPM, SATA 3.0Gb/s, 16MB Cache	500GB5 - 7200RPM, SATA 3.0Gb/s, 16MB Cache	500GB5 - 7200RPM, SATA 3.0Gb/s, 16MB Cache	Optional - TruVision Navigator requires approximately 880 MB to install. If you wish to store exported video from the devices on the machine, you may want to increase storage.
Graphics Card	Intel Integrated Graphic w/Single HDMI/VGA	Dual 1GB AMD Radeon™HD 7470	Dual 1GB AMD Radeon™HD 7470	Video Card capability is directly related to the video rendering performance within TruVision Navigator. The better the video card, the better video rendering performance you can expect.
Resolution	1024 x 768	1024 x 768	1024 x 768	
Network	Integrated PCIE 10/100/1000	Integrated PCIE 10/100/1000	Integrated PCIE 10/100/1000	The network interface card can be a performance bottle neck depending upon the throughput of the card. If the card's throughput is less than the amount of data streaming to the machine, you will experience performance issues.

# Server Software Requirements

TruVision Navigator supports all of the following Operating Systems and other software components.

**Table 3: Server software requirements**

<b>Component</b>	<b>Version</b>	<b>Notes</b>
Operating System	Microsoft Windows XP Pro SP3	Prerequisite to loading TruVision Navigator
	Microsoft Windows Vista SP1 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows 7 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows 8 32-bit/ 64-bit	Prerequisite to loading TruVision Navigator (WinPCAP needs to be installed separately and ran in compatibility mode for operation on Windows 8 systems) (SQL drivers need to be installed for Windows 8 before Navigator installation)
	Microsoft Windows Server® 2003 R2 32-bit	Prerequisite to loading TruVision Navigator
	Microsoft Windows Server® 2008 R2 32-bit / 64-bit	Prerequisite to loading TruVision Navigator
Database	Microsoft's SQL 2008	Microsoft's SQL Express 2008 R2 is packaged with the installation.  Microsoft SQL is not required for Standalone installation
	Microsoft's SQL Express 2008 R2	
Other	Microsoft .NET Framework 4.0	Packaged with the installation
Other	WinPCAP 4.1.2	Packaged with the installation

## Server Hardware Guidelines

This specification is meant to serve as a **GUIDELINE** for the customer. TruVision Navigator will perform to varying degree on a lesser or more robust machine. Table 5 lists the recommended server hardware specification.

**Table 4: Server Hardware Specifications**

Component	Recommended	Notes
Processor	3rd Gen Intel Core i5-3470 Processor (6MB, 3.2GHz) w/HD2500 Graphics	
Memory	6GB, NON-ECC, 1600MHZ DDR3,2DIMM	
Hard Drive	500GB5 - 7200RPM, SATA 3.0Gb/s, 16MB Cache	Optional - this storage requirement will vary widely depending on many factors including whether or not the database is being hosted on the server, the size of the actual database, and whether or not you want to store video on the server.
Graphics Card	Dual 1GB AMD Radeon™ HD 7470	Optional - depending on whether or not you want to view video from a Client on this machine.
Network	1024 x 768 Integrated PCIE 10/100/1000	

## Supported Video Units

Table 6 shows the supported devices and related firmware versions.

**Table 5: Supported Recording Devices**

UTC Devices	Supported Firmware
TruVision NVR20*	2.0h
TruVision NVR50*	1.0m
TruVision TVN10	1.1
TruVision TVR20*	1.0.36
TruVision TVN21(P)	2.0
TruVision DVR12	1.0
TruVision DVR41*	1.0

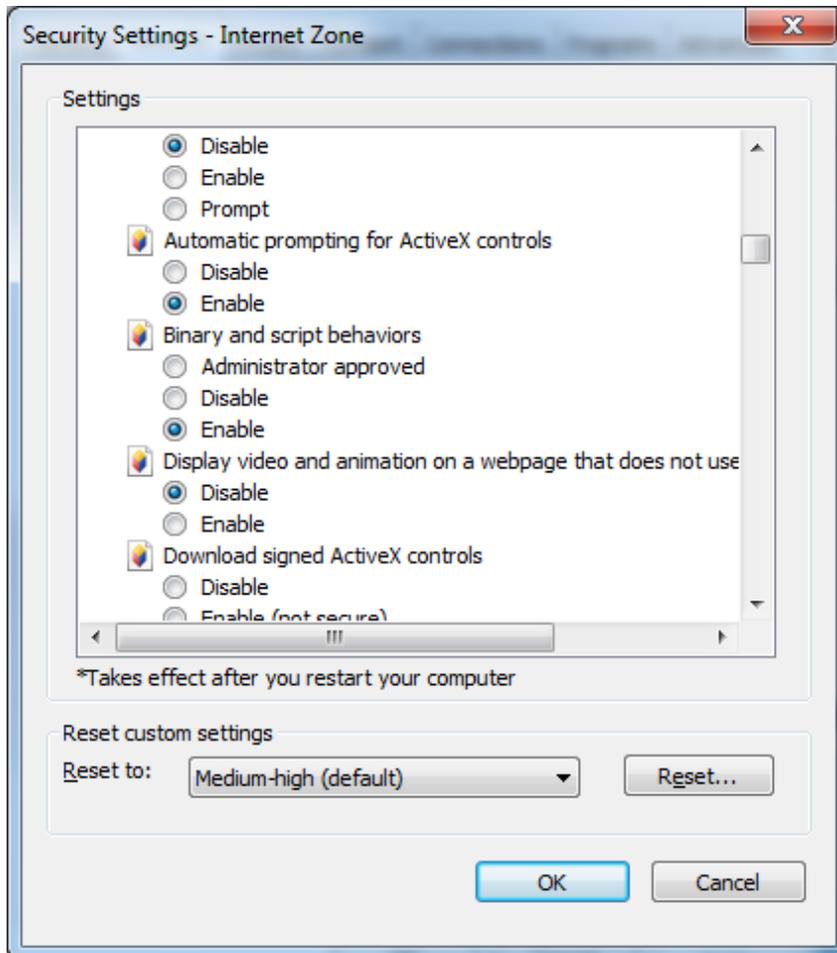
TruVision DVR42	1.0
TruVision NVR40 (TVN40)*	4.2.1 Changelist 53820
TruVision DVR60 (TVR60)	4.0
TruVision DVR40 (TVR40)*	V3.0 build 100416
TruVision DVR10 (TVR10)*	2.0 Build 090722 and 2.2 Build 091210
TruVision DVR11 (TVR11c)*	1.0m
TruVision DVR11 (TVR11)*	1.0k

\* These models are in End of Life status and are not actively supported.

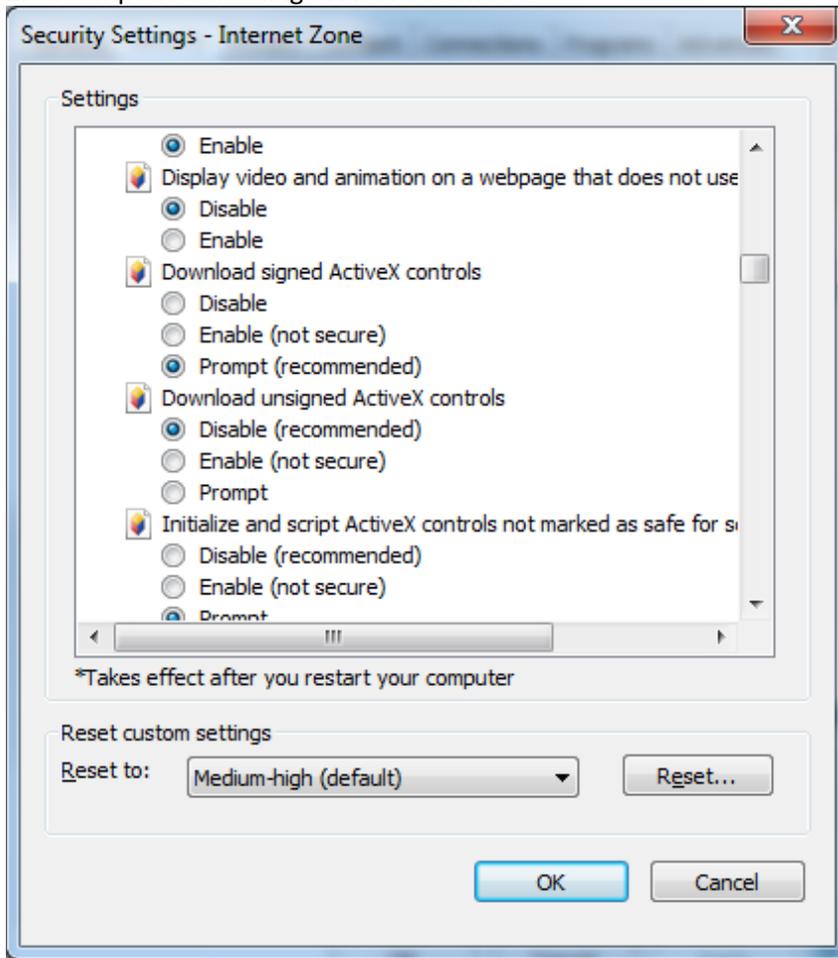
## Plug-in Requirements Internet Explorer

The following ActiveX controls in the Security Settings Dialog box need to be enabled.

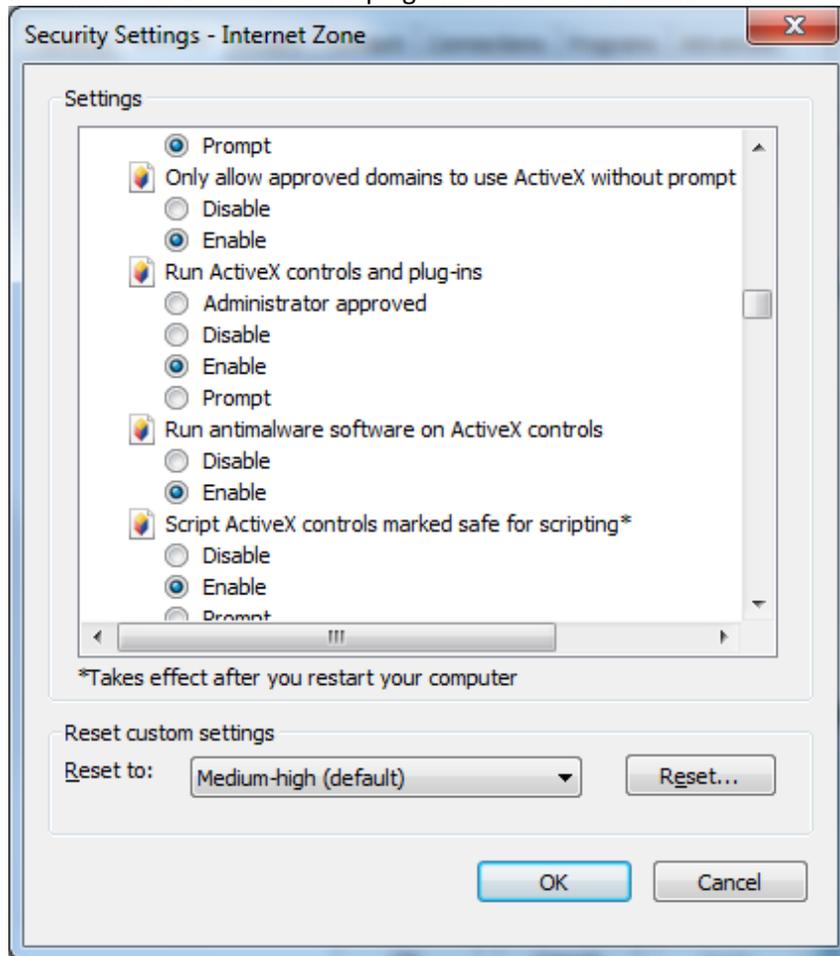
1. Enable automatic prompting of ActiveX Controls.



## 2. Prompt downloading of ActiveX Controls



## 3. Run ActiveX controls and plug-ins should be enabled.



# Chapter 2

# Installation

## Architecture

TruVision Navigator is made up of 3 components:

- Client
- Services
- Database

The TruVision Navigator architecture is flexible enough to allow all 3 of these components to co-exist on the same PC (i.e. a single Windows 7 machine) in small-scale environments.

As well, TruVision Navigator allows each of these 3 components to operate on separate machines (i.e. a virtual server for Services, a dedicated database machine for Database, and multiple PCs distributed on the network hosting Clients) for large-scale, distributed environments.

## Installation Options

There are 2 installation options for TruVision Navigator:

**Standalone Model (or Direct Database Connection)** - this installation option allows the Client, the Database, and the Services to be located on the same machine. The one limitation is that no other Clients on the network can connect to the database on this machine. This installation option is ideal for small, standalone systems.

**Multi-Client Model (or Traditional Client/Server)** - This installation option allows the Client, the Database, and the Services to be located on the same or separate machines. This installation option is ideal for larger systems with many geographically dispersed users, PCs, and recording devices.

Whatever installation option you choose, the core features, and functions of TruVision Navigator remain the same.

You will need Administrator's rights on the machine to install the application, but the software will be available to all users who successfully log on to a Windows account on that machine.

## Languages

The following languages are supported in TruVision Navigator: Arabic, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Lithuanian, Italian, Polish, Portuguese, Russian, Slovak, Spanish, Swedish, and Turkish.

After launching the TruVision Navigator Installation Setup.exe, the InstallShield Wizard will auto-detect the language setting on the PC, and if it is supported, will translate to that language. If the language detected is not supported, the InstallShield Wizard will default to English.

Upon launching the Client, TruVision Navigator will always auto-detect the language setting on the PC, and if it is supported, will translate to that language. If the language detected is not supported, the Client will default to English.

## Installation – Standalone Model

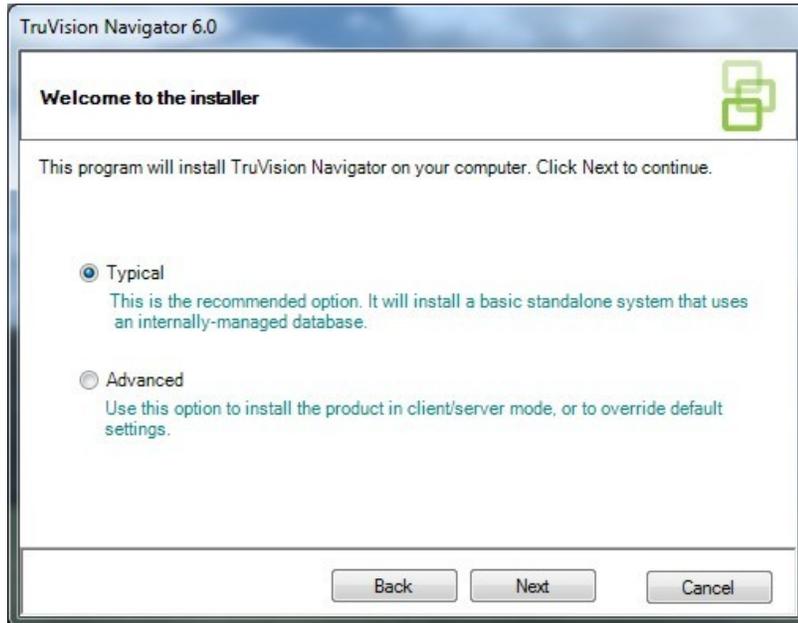
To install a new standalone instance of TruVision Navigator on your computer do the following:

Place the TruVision Navigator setup.exe program on the desktop of the PC.

Launch the InstallShield Wizard from the auto-run page or double-click the TruVision Navigator setup.exe to begin the installation.

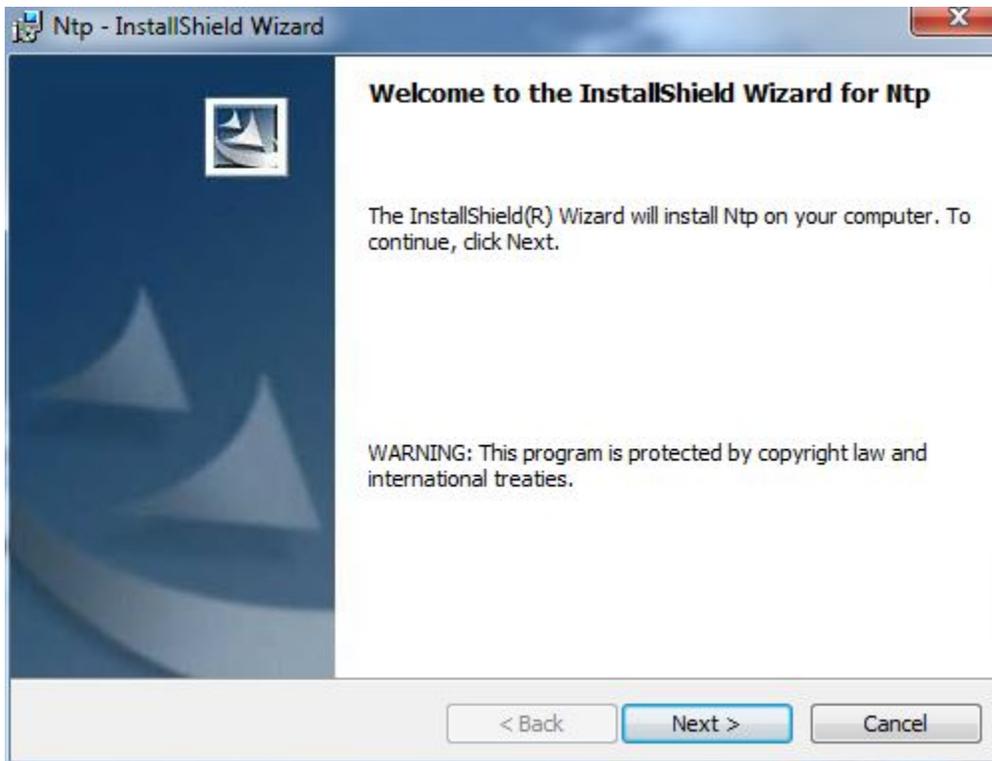
The Open File – Security Warning window displays. Click on the *Run* button. The End User License Agreement window displays. Click the Accept checkbox and the Next button to continue. The *Welcome* window displays. Select Typical for a standalone installation.

**Figure 2: Welcome to the Installer window**



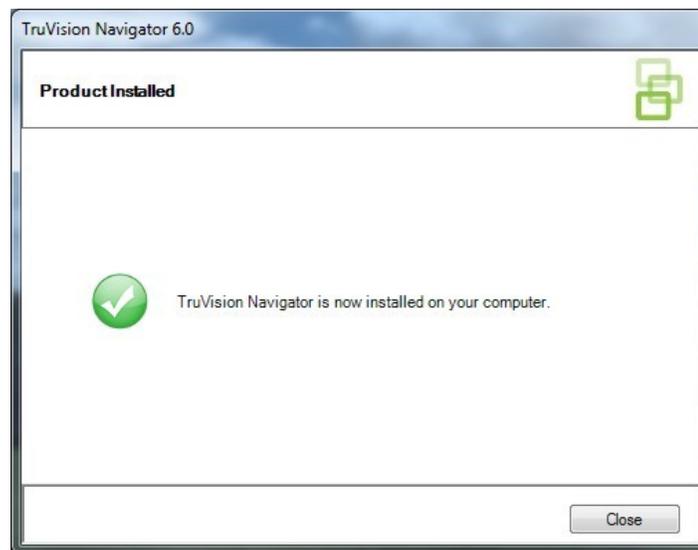
The Confirm Selections window displays, click on the Install button. The Installing product window displays briefly, then the Ntp – InstallationShield Wizard displays.

**Figure 3: Ntp - InstallationShield Wizard**



Click Next to continue. The Ntp License Agreement window displays. Click the Accept checkbox and the Next button to continue. The Setup Type window displays. Click the Complete radial button and the Next button to continue with a normal setup. The Ready to Install the Program window displays. Click on the Install button to continue. When completed the InstallShield Wizard Completed window displays. Click on the Finish button to continue. The Product Installed window will display. Click on the Close button to complete the installation.

**Figure 4: Product Installed window**



## Installation – Multi-Client Model

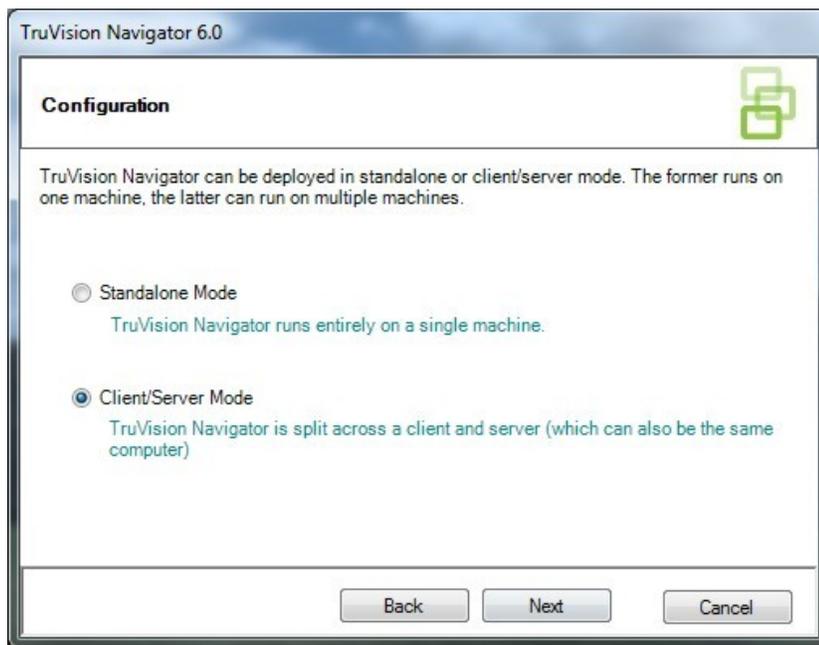
To install a new traditional Client/Server instance of TruVision Navigator on your computer do the following:

Place the TruVision Navigator setup.exe program on the desktop of the PC.

Launch the InstallShield Wizard from the auto-run page or double-click the TruVision Navigator setup.exe to begin the installation.

The Open File – Security Warning window displays. Click on the *Run* button. The End User License Agreement window displays. Click the Accept checkbox and the Next button to continue. The *Welcome* window displays. Select Advanced for a Client/Server installation. The Installation Folder window displays. Click the Next button to accept the default installation folder.

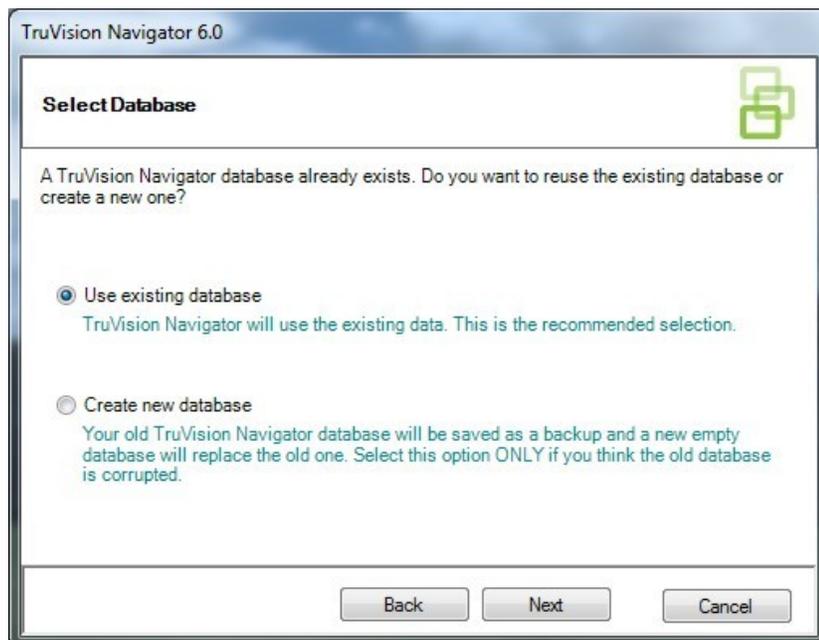
**Figure 5: The Configuration window**



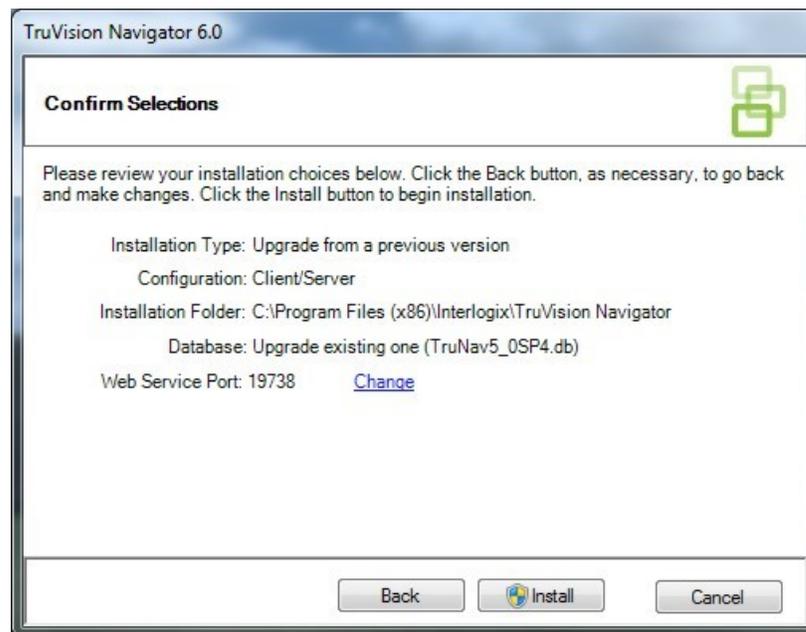
The Configuration window displays click the Client /Server Mode radio button and Next to continue.

The *Select Database* window displays.

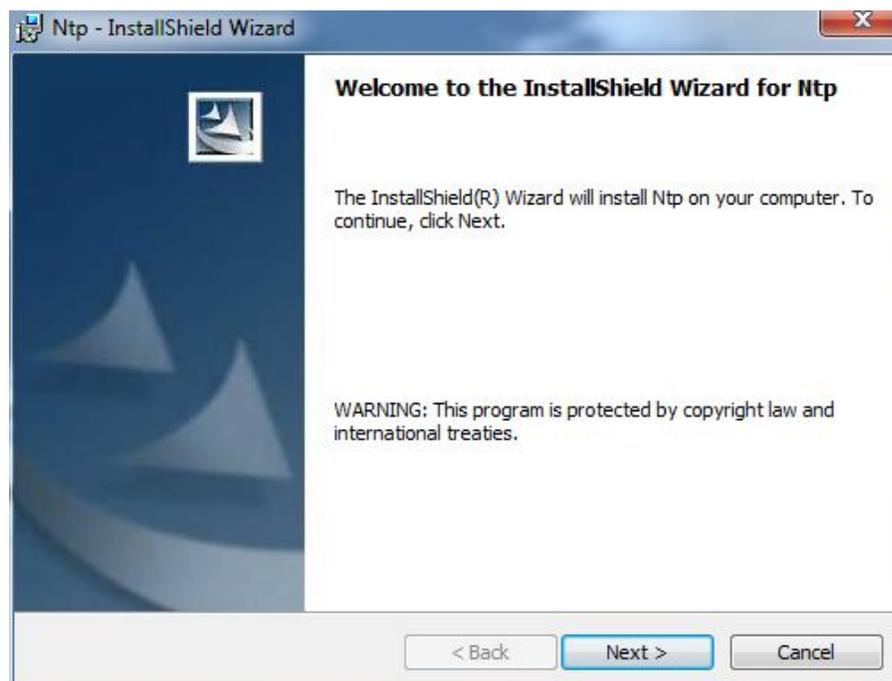
**Figure 6: Select Database window**



Select the database option and click **Next**. The Confirm Selections window displays.

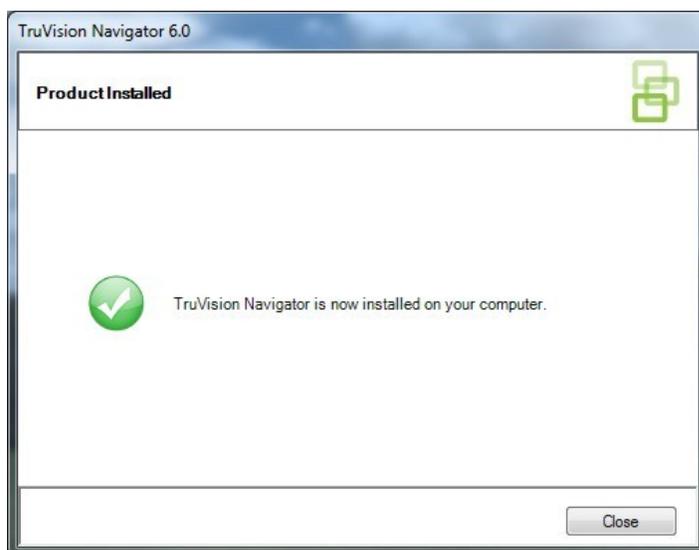
**Figure 7: The Confirm Selections window**

The Confirm Selections window displays, click on the Install button. The Installing product window displays briefly, then the Ntp – InstallShield Wizard displays.

**Figure 8: Ntp - InstallShield Wizard**

The Ntp License Agreement window displays. Click the Accept checkbox and the Next button to continue. The Setup Type window displays. Click the Complete radial button and the Next button to continue with a normal setup. The Ready to Install the Program window displays. Click on the Install button to continue. When completed the InstallShield Wizard Completed window displays. Click on the Finish button to continue. The Product Installed window will display. Click on the Close button to complete the installation.

**Figure 9: Product Installed window**



## Initial Login

After successful installation, launch TruVision Navigator using one of the following methods:

- Double-clicking on the TruVision Navigator icon on your desktop.
- Access the Start menu, All Programs, and TruVision Navigator.

When TruVision Navigator launches, a login window displays. Log in as the default Administrator using the following default credentials:

**Username** - admin

**Password** - 123456

Figure 10: Login window



After initial login, a window displays prompting you to change the default admin password which protects its security.

Figure 11: Change Password Dialog



To change the password, do the following:

Enter the new password in the *Password* field.

Re-enter the password in the *Confirm Password* field.

Select one of the following challenge questions from the drop-down list.

Enter the answer to your challenge question in the *Challenge Answer* field.

Press **OK**.

If you ever forget your password, simply click on the **Forgot?** button on the Login dialog. This will allow you to answer your challenge question, and if successful, change your password and re-enter the application without calling for any assistance. In case you don't remember the Challenge Answer to recover your password, click on **Forgot?** button once again, and call UTC technical support team with the "tech support key" automatically provided in the related field. Technical support team will recover your password with this information.

Figure 12: User Account Challenge Dialog



The image shows a Windows-style dialog box titled "Change Password". It contains the following fields and controls:

- Username:** A text box containing "Admin".
- Password:** A text box containing five dots.
- Confirm Password:** A text box containing five dots.
- Challenge Question:** A dropdown menu with the selected option "What is your mother's maiden name?".
- Challenge Answer:** A text box containing "Klatt".
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

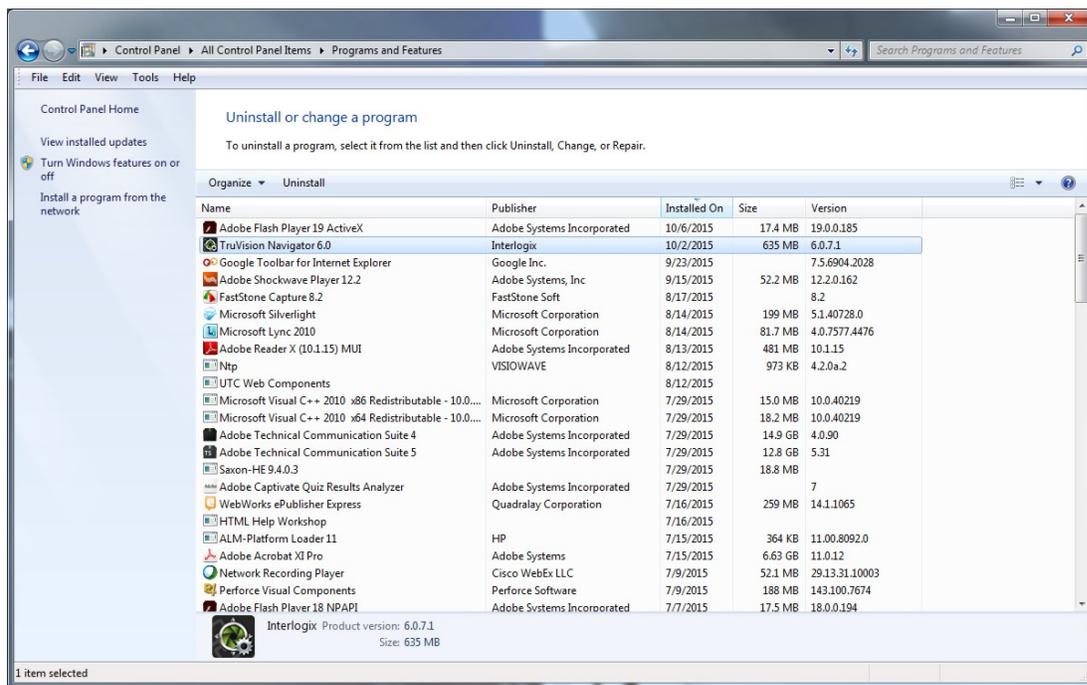
## Uninstall

To uninstall TruVision Navigator do the following:

Launch the Add/Remove Programs application from Windows Control Panel.

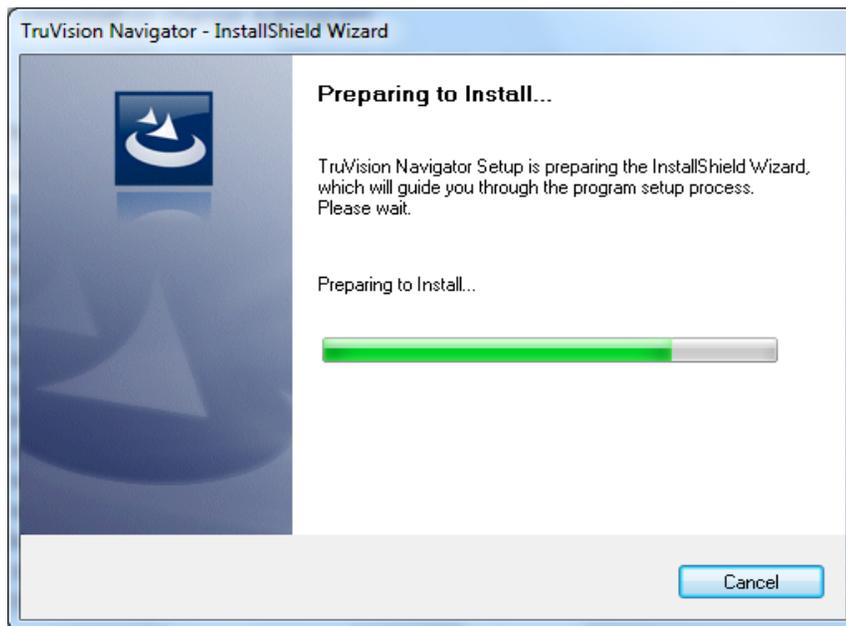
Navigate to TruVision Navigator Server and click on the **Remove** or **Uninstall** button.

**Figure 13: Add or Remove Programs window**

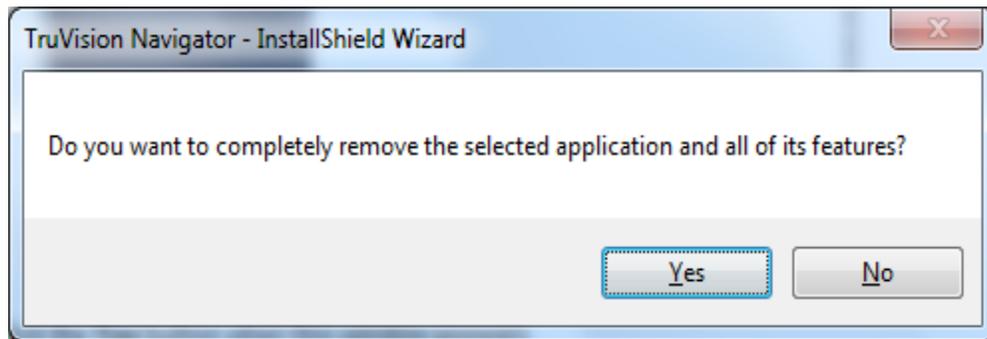


The InstallShield window appears and the application will prepare to remove your selection.

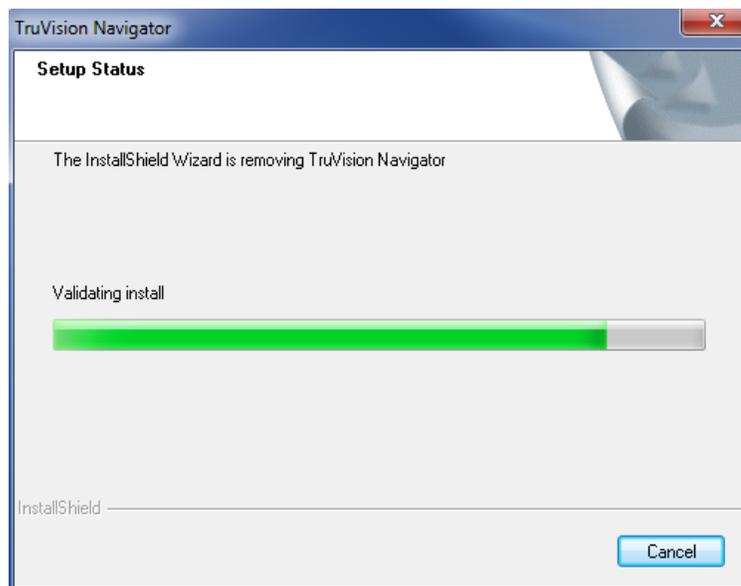
**Figure 14: InstallShield Wizard window**



Click the **Yes** button when this window appears.

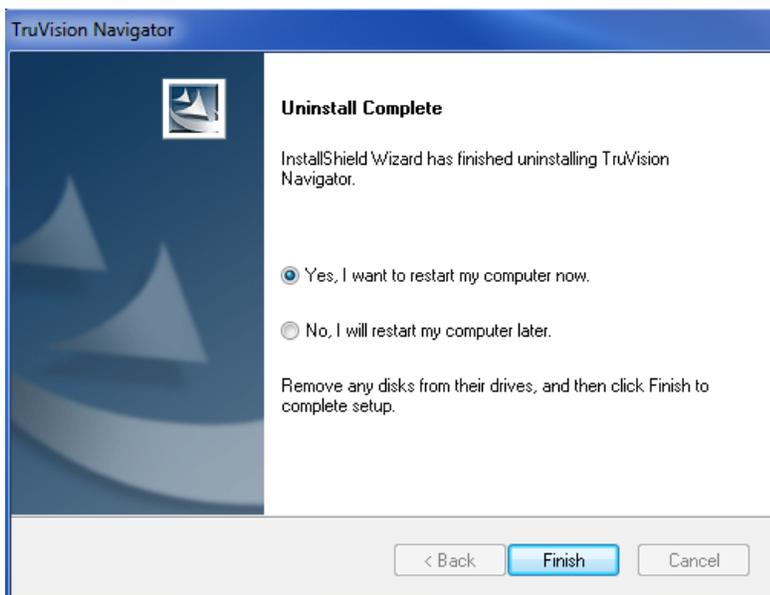
**Figure 15: Confirmation window**

The uninstall will begin and the status window will appear.

**Figure 16: Setup Status window**

When complete, click on the **Finish** button and restart your computer.

**Figure 17: Uninstall Complete window**



Repeat these same uninstall steps for the TruVision Navigator Client application in the *Add or Remove Programs* window.

Note: This process will remove all TruVision Navigator files and logs from your system. No Registry edits are necessary to remove TruVision Navigator from the machine.

## Network Time Protocol (NTP) Service

The TruVision Navigator Server has the ability to act as an NTP Service for devices on the network (you also have the flexibility to use other 3rd party NTP Services should you choose).

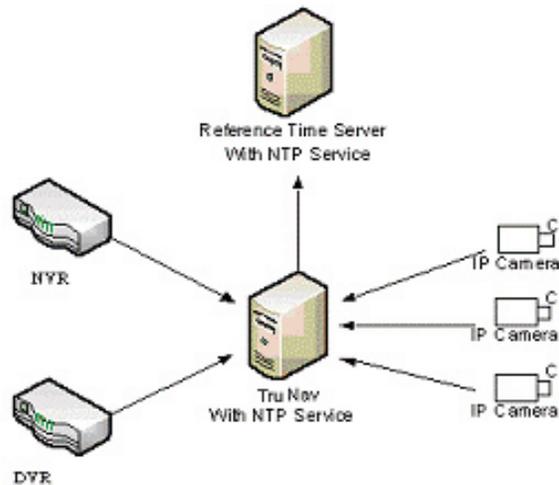
Enable the NTP Service in TruVision Navigator by going to *Start – All Programs – TruVision Navigator – Enable NTP Service*. This will enable the NTP Service on the TruVision Navigator Server. You will need to configure the device's NTP Server field with the IP Address of the TruVision Navigator Server where this NTP Service is running.

Figure 18: Enable NTP Service dialog



If your system is closed (meaning no Internet access), the devices configured to point to the TruVision Navigator NTP Service will use that server machine's CMOS clock. Please ensure this clock is up to date. If your system is open (meaning it has Internet access), you can still have the devices point to the TruVision Navigator NTP Service for time sync AND have the TruVision Navigator NTP Service point externally to a time reference server to maintain that system time. This alleviates the maintenance of manually ensuring the time on the TruVision Navigator Server is up to date.

Figure 19: NTP Diagram



## Windows 7 and Vista – Local Scheduling Service

If this is a Windows 7 or Vista installation, you may experience issues with your Local Scheduling Service. The Local Scheduling Service on the Client machine is responsible for executing all tasks on behalf of the Client. These tasks include video exports, firmware upgrades, bulk configurations, and database backup/restores.

To be sure that you do not have issues, you can perform the following steps below:

### If you have Admin privileges on the machine:

Open up Windows Explorer and locate the directory where the TruVision Navigator application is installed. By default, TruVision Navigator is placed in *C:\Program Files\Interlogix\TruVision Navigator*. If you changed that default pathway, navigate to the revised location now.

Open the "ClientInstaller" folder and find the TruVision Navigator Client.exe.

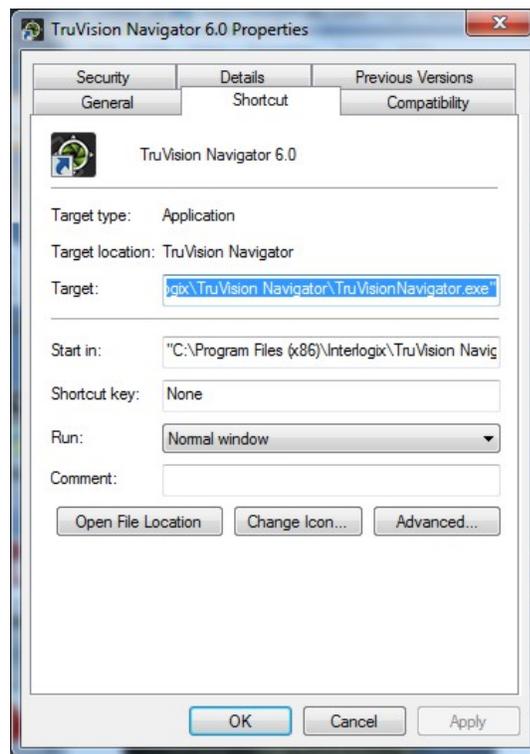
Right-click on the executable and select "Properties."

Click on the Compatibility Tab and check the "Run the program as an administrator" option.

Click **OK**.

Login to the application and begin using TruVision Navigator.

Figure 20: TruVision Navigator Client Properties



**If you do NOT have Admin privileges on the machine**, contact your Administrator to turn off the User Account Control (UAC) for the user who will be running the TruVision Navigator Client.

To do so, have the Admin perform the following steps:

Click the Start button and under the "Start Search" section, enter MSCONFIG.

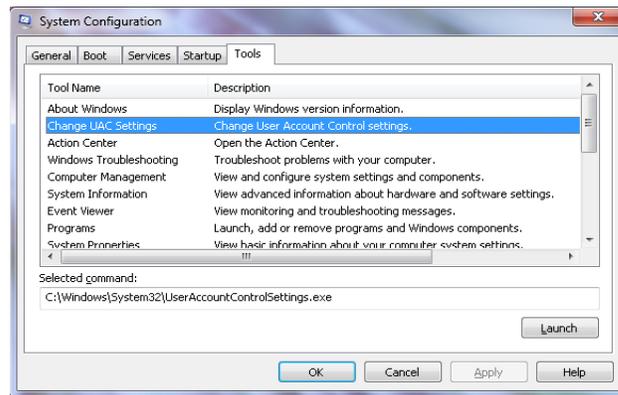
Click **Enter**.

On the System Configuration Window, select the Tools Tab.

Highlight the Disable UAC row and click the **Launch** button.

Restart the machine.

Upon restart, the user can login to the application and begin using TruVision Navigator.

**Figure 21: Disable UAC**

## Installing Navigator on Windows 8 platforms

TruVision Navigator can be installed on Windows 8 platforms with the following prerequisites met before installation. Microsoft Windows 8 OS needs to support Microsoft SQL database drivers fully before the TruVision Navigator installation starts. Therefore, these prerequisites are needed to make your system ready for TruVision Navigator installation.

Please follow below instructions before installing Navigator on Windows 8 platforms.

1. Client/Server type installations: There are two scenarios:
  - a. Windows 8 (without SQL installed)
    - i. Must install all the important updates from Microsoft.
    - ii. Install WinPcap 4.1.2 manually prior to, or after installing Navigator.
    - iii. Navigator will install SQL 2008 express when detecting no SQL installed in the machine.
  - b. Windows 8 (with SQL2008 Express R2 – SP1 or SP2 installed)
    - i. Must install all the important updates from Microsoft.
    - ii. Install WinPcap 4.1.2 manually prior to, or after installing Navigator.
    - iii. Navigator will allow user to use existing SQL 2008 Express.
2. To make the WinPCAP compatible with Windows 8:
  - a. Right click on WinPcap.exe file
  - b. Select Properties

- c. Compatibility
- d. Check Run this program in compatibility mode for: Select Windows 7 and click Apply.
- e. Right click on WinPcap.exe and select Run as Administrator.

# Chapter 3

# Operation

## Adding Devices

To add a single or multiple Devices to Navigator by doing the following:

Click the *Add Devices* button in the Navigator. A drop down menu displays with the following options:

- *Add Manually*
- *Add Via Discovery Tool*

## Adding Devices Manually

Once *Add Manually* option is selected, below screen will display for required input.

Figure 22: Add Device window (Manually)

**Note:** After you click OK, fields highlighted with a red exclamation point indicate rejected values. Place your mouse pointer over the exclamation points for tips on why your values were invalid. All fields must be valid to successfully add a device.

- Enter a *Recorder Title*. Values are alphanumeric.
- Select the appropriate *Recorder Type* from the drop-down menu.
- Based on your device type, you may need to select a *Streaming Type*. For some devices, there is only one option for the Streaming Type so it is selected by default. The Streaming Types are defined as follows:
  - **TCP** - TCP is a reliable stream delivery service that guarantees delivery of a data stream sent from one host to another without duplication or losing data.
  - **Reverse TCP** - the application connects to the device and the device streams video back to the application over the existing connection. This option negates firewall issues on a WAN and is primarily the best option.
  - **Reverse TCP I-Frame** - this connection type is similar to the Reverse TCP except the device only sends I-Frames. This option is useful in limited bandwidth environments.
  - **UDP** - the application connects to the device and asks the device to stream video back to the application on a UDP address and port. For this option, the firewall needs to be configured to allow the device to stream to the application on that specific port.

- **Wavelet/Wavejet** - This type is based upon Wavelet/Wavejet compression methodologies. This streaming type cannot be changed and is the default streaming type for the DVMRe and StoreSafe DVR lines.
  - Enter the *Recorders IP Address*, or, the DynDNS or EzDDNS URL.
- Note:** You can add a recorder using a Domain Name System (DNS) name as well as a static IP Address. Simply place the DNS name in the IP Address field on the form
- Enter the device's listen *Port*. This field is pre-populated with a default value based upon the type of device you selected. If you changed this port on the device, add that specific port in this field.
- Note:** The port number must be added to the device address when using DynDns with a HTTP port other than port 80 (i.e. mydvr.dyndns.org:2222 if the HTTP port being used is 2222). When using No-IP instead of DYNDNS, you also need to add the HTTP port number.
- Enter the *Username* and *Password*. This field is only required if the device being added has been configured to require a username and password.
  - Check the *Add Recorder Offline* checkbox if you wish to add the device to the Navigator but you know the device is currently offline.
  - Click OK.

**Note:** You may see an error message stating that your device was added but it has unsupported firmware. However, you should still be able to view video. See the supported devices and firmware versions section of this document.

## Adding Devices via Discovery Tool

Click the *Add Devices* button and select *Add via Discovery Tool*. Once the *Add via Discovery Tool* option is selected, the device discovery window will display. The device discovery window provides a list of available devices in the network. To add devices to the Navigator, select one or multiple devices from the list and click **Add**. Your device should appear under the Device node in the Navigator panel.

**Note:** You can select the TruVision Recorder Driver from the drop-down list for any TruVision device. Using this driver will enable the browser based configuration page of the device.

**Note:** The Discovery Tool will attempt to add devices (recorders or TruVision cameras) by using their default credentials. If the credentials of a device are previously changed from default values, device is still going to be added to the device tree, but will be shown as offline. In this case, updated credentials need to be applied manually by user from the device properties or configuration menu with a right-click on the device.

Once the recorder or TruVision camera shows online, expand the device icon to view your cameras. If you chose to add the device offline via the Add Device Offline checkbox, your device will appear in the Navigator with a red X on it. You can bring the device online by right-clicking on the device and selecting **Connect**. Upon successful connection, the Navigator will populate the respective cameras under the device.

**Figure 23: Connect to off-line device**

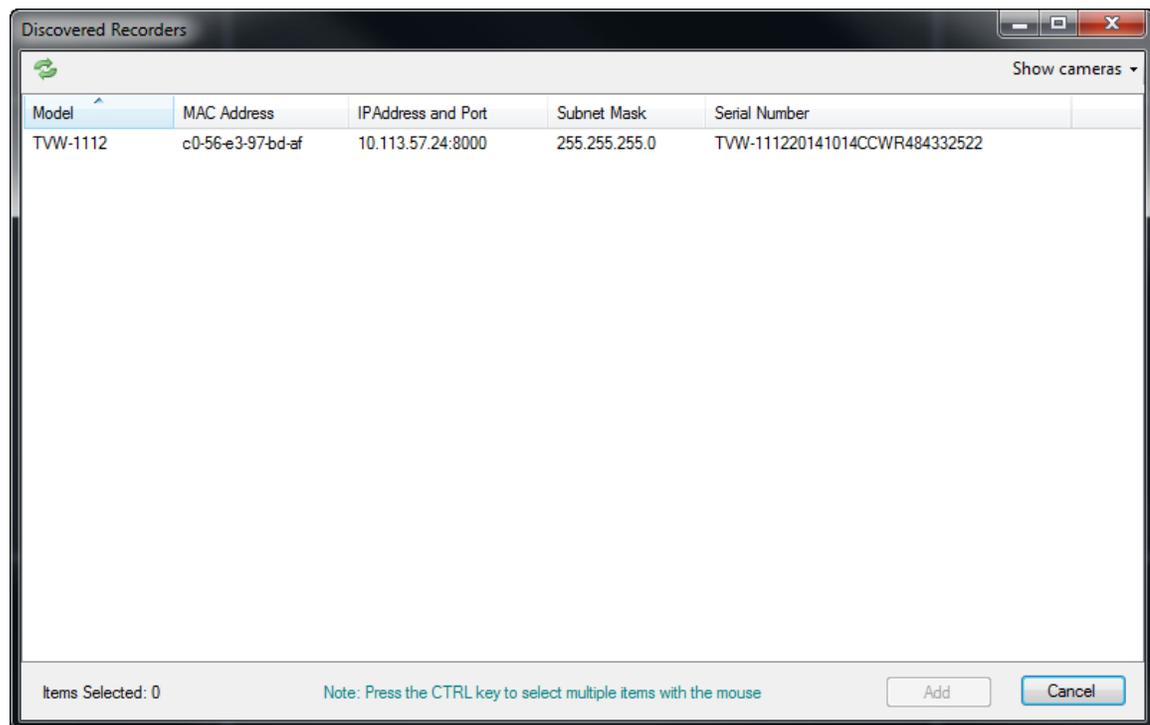


If you have channels on a RECORDER that will not be used, you can mark them as "unused" so they do not appear in the Navigator under the RECORDER. To do this, go to the Camera Title section under the RECORDER Configuration menus, mark the "Camera Not in Use" check box, and click Save. This will hide the cameras in the Navigator. To show them again, simply un-check the same box in the configuration and click Save.

## Adding Cameras via Discovery Tool

TruVision Navigator is equipped with an embedded device discovery tool that discovers the devices in the network, and lets the user to add one or more of those devices to the Navigator.

Figure 24: Discovery Tool Window



Device discovery tool provides an easy way to discover the devices and make them ready for recording in the system. Device discovery tool is available via various paths in TruVision Navigator, and is used for discovering recorders, cameras, and encoders in the network.

Following are the paths and functions device discovery tool can be located and used for:

- Click the *Add Recorder* button in the Navigator Panel or right click on a recorder in the device tree.
- Click [Add Recorder], and select [Add via Discovery Tool].
- Click on the Show drop down menu and select Show Cameras.
- A list of discovered cameras in the network will be given. Select desired cameras and click [Add].
- Selected cameras should be automatically added under the selected device in Navigator.

**Note:** Discovery Tool will attempt to add cameras by using their default credentials. If the credentials of a camera are previously changed from default values, camera is still going to be added to the device tree, but will be shown as offline. In this case, updated credentials need to be applied manually by user from the camera configuration menu with a right click on the device/camera.

## Adding a TruVision 360 degree Camera

TruVision Navigator 6.0 supports the Interlogix 360 degree panoramic cameras. These cameras can be added to TruVision NVRs as a regular IP camera, manually, or, via discovery tool.

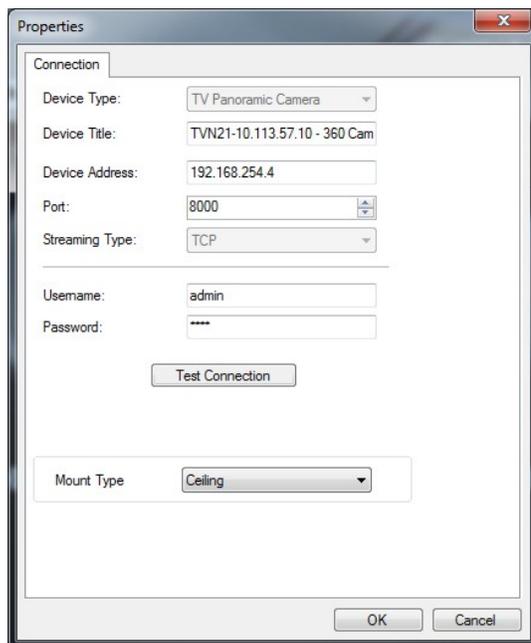
Each Panoramic camera provides five streams to the user.

- 1x Raw 360 degree image
- 1x Two 180 degree bands in one video stream
- 3x 120 degree streams with digital PTZ capability

When a panoramic camera is added to a device, the camera will show up in the device tree, and have its own node with up to five channels listed under it. By default, the panoramic camera will be added with only 360 degree mode enabled. To add the rest of the views:

- Right click on the camera and select properties.
- In the properties menu, select the views desired, and click Ok.

**Figure 25: Panoramic Cameras Properties tab**

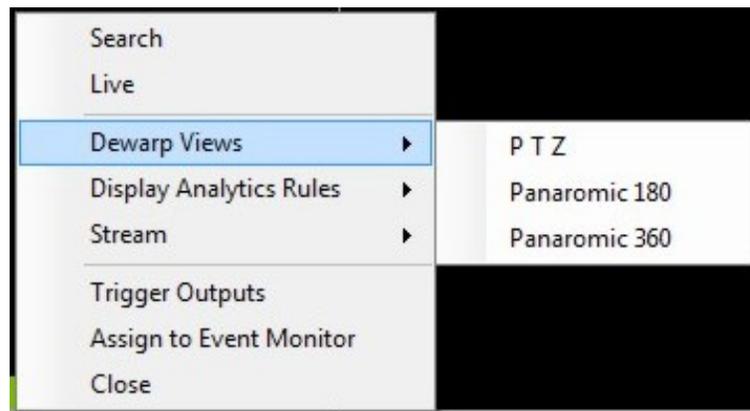


## Dewarping Feature

Dewarping commands are available on 360 degree cameras. Dewarping provides an alternate view other than the fisheye type image normally associated with 360 degree cameras. This feature only requires 1 fisheye view (live or playback) from the device. Navigator will dewarp from this 1 view multiple dewarped views

- Right click on the 360 degree camera and select dewarping.
- Select the views desired, and click Ok.

**Figure 26: Dewarping menu**



## Organize the Navigator

The Navigator allows you to organize your devices in a logical manner. As systems get a larger, this will enable you to find your devices and cameras easily.

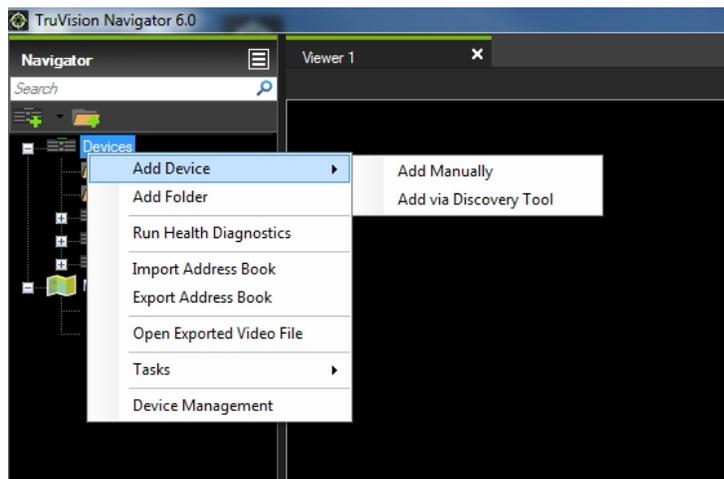
To organize your Navigator, do the following:

In the Navigator, click the Add Folder button. This creates a new folder.

Enter a name for the new folder and press Enter.

To add a sub-folder within the previously created folder, right-click on the parent folder and select Add Folder from the context menu.

**Figure 27: Navigator folders**



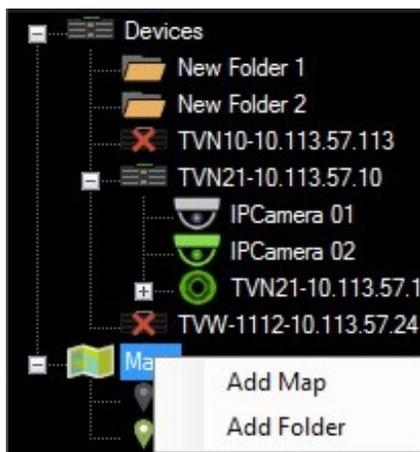
Click and drag devices into folders or folders within folders until your organization is complete. Remember that cameras will always stay attached to their respective devices.

Another easy way to find any object (user, group, folder, device, or camera) in the Navigator is to use the Search at the top of the panel. Simply type any alphanumeric string into the Search field and press Enter. Focus will go instantly to the object that matches the string. Press Enter again to move to the next object that matches the string, and so on, until you have been to each object. Enter a different alphanumeric string to perform another search.

## Maps

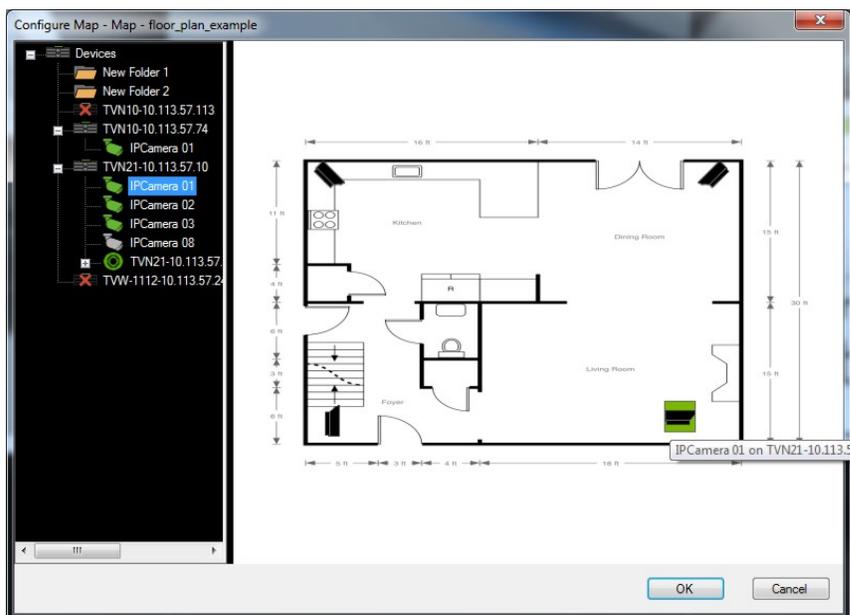
Maps or floor plans can be added using .jpg or .png files. Camera icons can be placed on the maps to represent their physical locations. Clicking on these camera icons loads video into the Viewer panel. Right-Click on the Map icon in the navigator tree.

Figure 28: Add Map drop down menu



The Open Map file window will display. Navigate to the image file that you want to use and click Open. The Map will appear in the device tree under maps. Right-click on the map name and select **Configure Map** to add cameras. Click and drag a camera from the device tree to the map to add the camera to the map.

Figure 29: Configure Map



Click OK to save. Double-click on the map name to open in a video pane. Clicking on the camera icons placed on the map will launch that cameras video.

## Find and export video

There are three ways to load video from the Navigator into the Viewer:

Drag n' drop a specific camera to the Viewer

Drag n' drop a specific device to the Viewer which will load all of the cameras applicable to the device

Double-click on a specific camera

**Figure 30: Viewer and Controller**



By default, video will be loaded in the Viewer in Live mode. Video status (Live or Playback), camera type, and device name can be found in the video tile status bar (thick bar at the bottom of the video tile) along with the Instant Replay and Close Video Tile buttons.

To go from Live to Playback video, you must first select camera(s) in the Viewer by clicking on that video tile - a blue frame should surround the selected video tile. If you want to select multiple video tiles, use the Select All check box in the Controller.

Once video tiles are selected, perform one of the following operations to retrieve Playback video (assuming there is video on the device for the specified time):

- **Go To Search** – click on the Go To button in the Controller, enter a date and time, and click OK. Playback will start at the desired date and time.
- **Playback Button** – click on the Playback button in the Controller to go back a user-defined period of time (the same time you set for Instant Replay - i.e. 5 minutes).
- **Instant Replay Button** - click on the Instant Replay button in the video tile status bar to go back a user-defined period of time (i.e. 5 minutes).
- **Controller timeline** - double-click on the Controller timeline for a point-in-time in the past. Playback will start at the desired date and time.
- **Playback Controls** - use the playback controls (as devices permit) for Frame Advance, Fast Forward, Frame Reverse, Rewind, Pause, and Play to pinpoint the exact incident you want.

Once the video is in Playback, a blue seek triangle displays in the Controller timeline indicating where the selected video is playing in time. Drag and drop the blue seek triangle backwards or forwards along the timeline to locate video.

Place your cursor over the blue seek triangle and green / red markers will display underneath. The green marker represents the beginning time and the red marker represents the ending time of the video segment you want to export. Slide both markers as appropriate to mark the video segment.

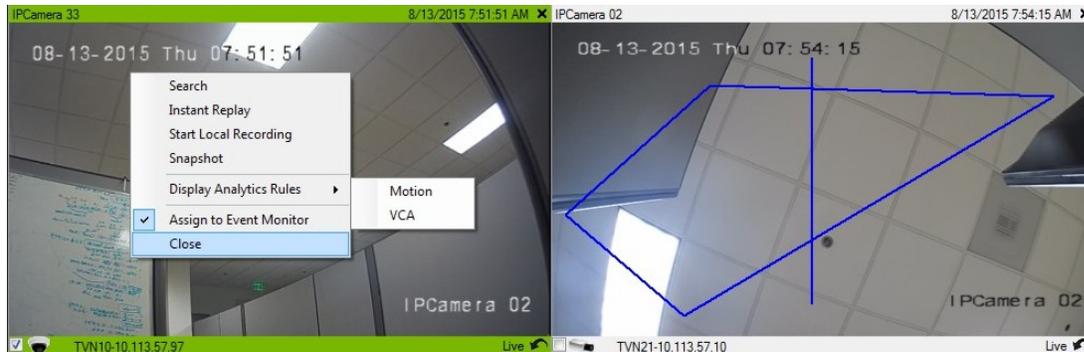
To move the video segment to the Collector for export, click the Video button in the Controller. To move a snapshot to the Collector for export, click the Snapshot button in the Controller.

Thumbnails for snapshots and video segments will be added to the Collector and readied for export. Snapshots display a start time as it is a single point in time. Video segments display a time range that corresponds to the time range you marked on the timeline. Double-click a snapshot or video segment thumbnail to replay it in the Viewer and refine your time/date ranges.

## Display Analytic Rules

Show & Hide Video Analytic Rules in Video through the Context Menu. Right-Click on a live video window to reveal the context menu.

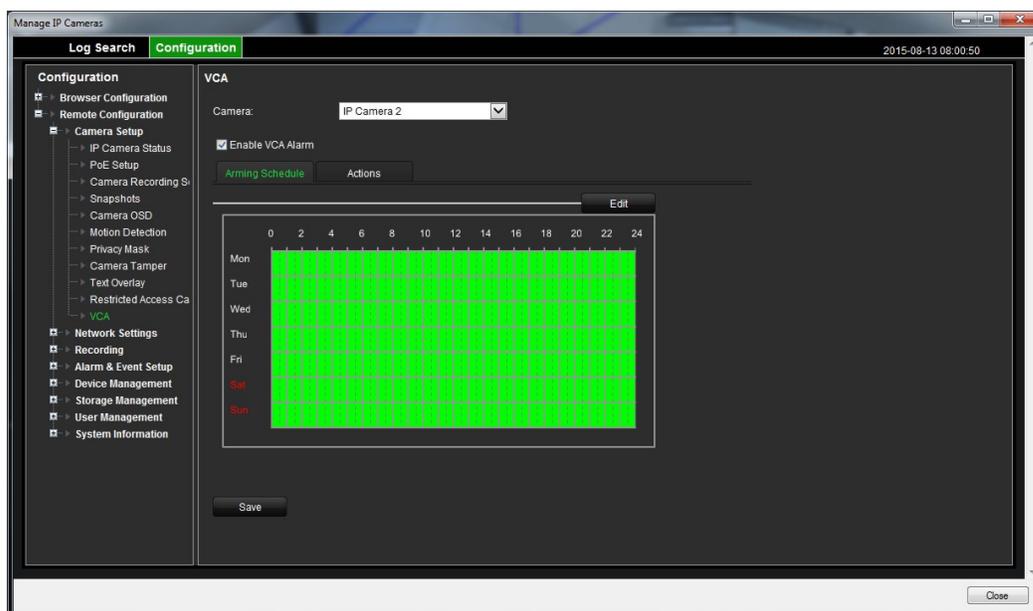
Figure 31: Show & Hide Video Analytic Rules



Select Motion or VCA to show or hide. Right-Click on a recorder name to reveal the context menu. Select Manage IP Cameras to display the cameras configuration window. Select VCA, this will launch the VCA Configuration Window. Select the VCA rules that you want and click OK to enable.

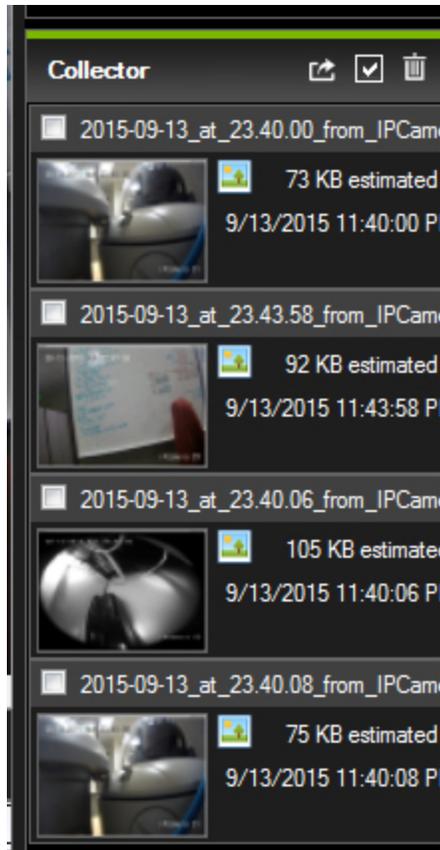
**Note:** VCA configuration only works with cameras that have this feature. To view the alarms generated, click on the **Actions** tab and select **Send to Alarm Host**.

Figure 32: VCA Configuration window



# The Collector Panel

Figure 33: Collector panel



Export all collected video and snapshots to a specific location using the Collector.

To export video or snapshots, do the following:

Access the Collector and select each thumbnail that you wish to export (you can use the select all/unselect all button in the Collector header bar for quick selections). You can also right-click on snapshots to print, email, or rename them.

Check the Include Standalone Player checkbox. This ensures that the TruVision Navigator standalone player is included in your destination folder.

Click Browse and specify a destination location for your export.

**Note:** Make sure you have an appropriate amount of disk space at the destination location for the export. Use the Total Size estimation in the Collector as a guideline.

To start the export process immediately, click the Export Now button. Your export task is automatically added to the Tasks panel. You can mouse over the status column in Tasks to get detailed progress of the export.

To schedule the export process, click the Schedule button and specify a date/time when you want the export process to start. An export task is automatically added to Tasks. Refer to it for status.

**Note:** Your Local Scheduling Service must be running to execute these export tasks. Refer to the Services dialog for status and actions on all services.

When export tasks are complete, you can find exported video and snapshots at the location you specified. These files can now be reviewed, burned to media, or stored for later use.

In addition, you can use the Local Record button to record live video to your machine. To create a local record video clip, do the following:

Display and select a camera in the Viewer.

In the Controller, click on the red Local Record button (to the right of the playback controls) to begin recording. A thumbnail will display with a start time along with a red dot in the Collector.

The red Local Record button will blink when any camera is being recorded locally

Click on the red Local Record button again to stop the recording to the machine. An end time for the thumbnail will automatically display in the Collector.

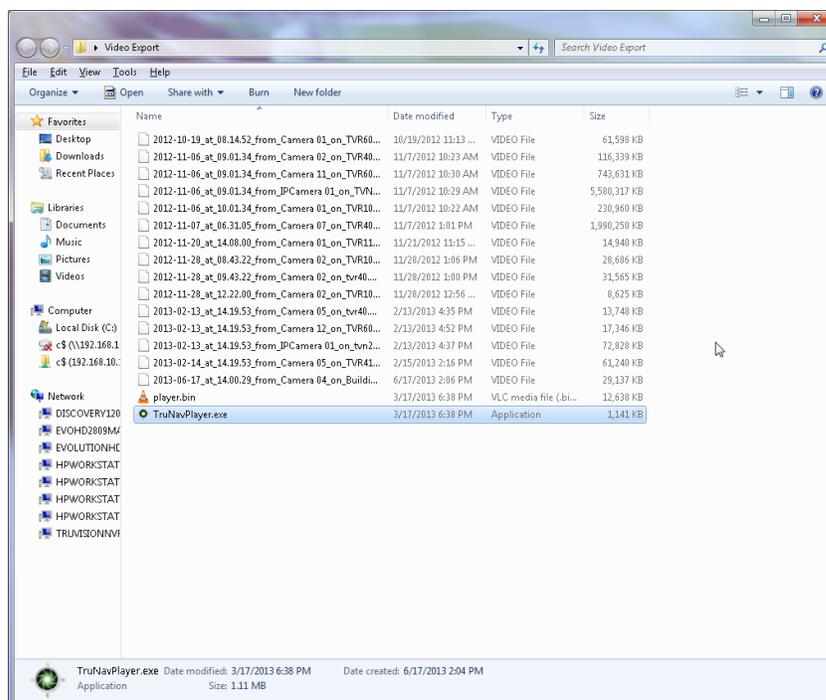
Follow export operations as necessary to retrieve the local recording from the machine.

## TruVision Navigator Player

The TruVision Navigator Player is a standalone player that can be used to replay any video clip that has been exported using TruVision Navigator (proprietary file formats include .wvf, .mpc, .asf, .mp4, and .drv). This player should be copied to media along with the video clips for authorities. It has a zero footprint – meaning it will launch from the media itself and does not require installation to a machine.

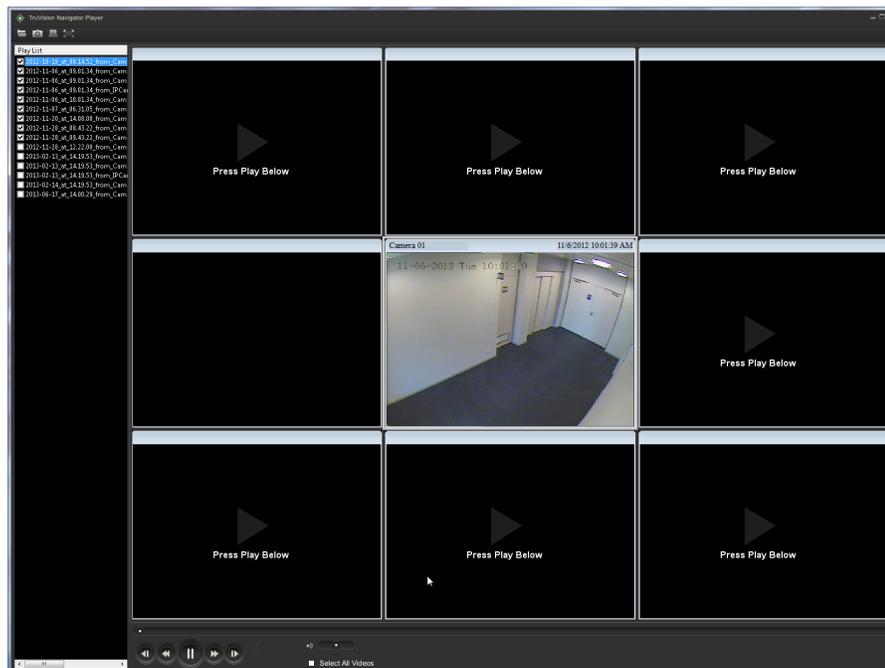
After exporting video clip(s) from the Collector to the user-defined location, you can launch the TruVision Navigator player by double-clicking the TruVision Navigator Player icon in the file folder where the video clips are located. **The player.bin file must be in the same directory as the TruVision Navigator Player.exe or the TruVision Navigator Player will not work.**

Figure 34: Video Export window



Once launched, the TruVision Navigator Player will automatically sweep the directory and load the associated video clips in the *Play List* from that directory. By clicking the checkbox next to the clip in the *Play List*, the video will load in a tile (9-up maximum). Highlight the video tile and click the Play button to play the video.

Figure 35: TruVision Navigator Player window



The features of the TruVision Navigator Player are:

- **Browse** – allows the user to browse for a specific video clip in another directory and load it into the Play List.
- **Snapshot** – allows the user to take a snapshot of the highlighted video tile.
- **Print** - allows the user to print a snapshot of the highlighted video tile.
- **Maximize Screen** – takes the TruVision Navigator Player full screen and hides the Play List and Tool Bar at the top of the application.
- **Playback Controls** – allows for FFWD, RWD, Play, Pause, Frame Reverse, and Frame Advance.
- **Timeline** – allows the user to jump ahead or back in time for a single selected video tile.
- **Audio** – allows the user to hear audio (if present) for only the selected video tile. If all video tiles are selected, no audio will play.
- **Select All Videos** – allows the user to select all video tiles. Once all video tiles are selected (white outline around the video tiles), the Playback Controls will affect all video tiles and not just a single one. However, each clip will begin at its own start time and end at its own end time. This holds true for the snapshot and print capability as well. The timeline will not appear when multiple video clips are selected.
- **Sync Playback Start** – allows the user to start all video clips at the same time.

**Note:** As the video clips are played, there may be time gaps due to the different video settings on each clip source (i.e. different fps). This function will ensure that the initiation of the playback for all tiles happen at the same time to keep the time gaps between the clips at a minimum.

- **Time/Date Stamp** – on playback, each video will have a time/date stamp on it for evidentiary purposes.

Double-click on any video tile to go full screen or use the maximize button in the Tool Bar.

Double-click to go back again to the normal state.

When in Full Screen, right-click to hide/show the Playback Controls to expose only the video tiles and nothing else.

## Camera Level Disk Analysis

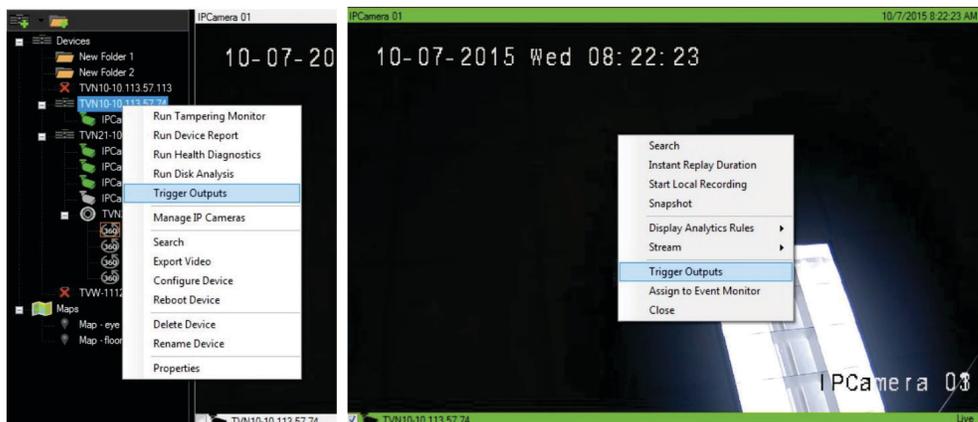
Camera level disk analysis in the Timeline. This feature is only supported for TruVision based devices (TVR10,11,12,12HD,41,42,44HD,60 and TVN10,20,21,50,70)

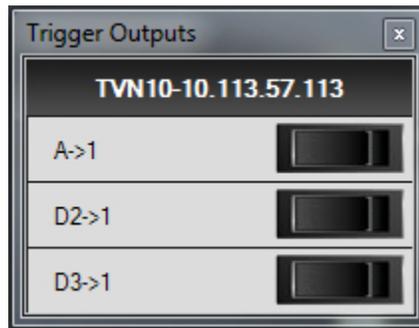


Camera analysis on the time line is tied to the Disk Analysis Permissions.

## Trigger Output

This feature is only supported for TruVision based devices



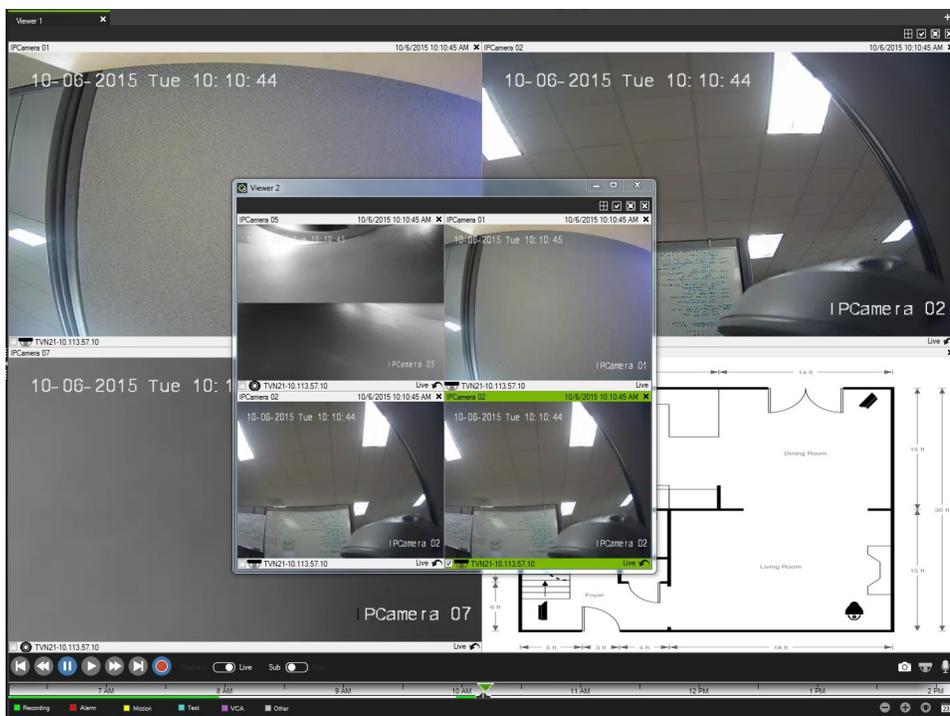


There are two types of Alarms (A->) (D->). Alarm type (A->) are alarms from the trigger through the back of the recorder. Alarm (D->) are the alarms trigger out of the IP Camera. Only NVR/Hybrid devices will have the (D->) type alarms.

**Note:** TVR60 & TVN20 do not support (D->) types alarm. This is a hardware limitation.

## The Viewing Panel

Figure 36: Viewer Panel



The TruVision Navigator Viewer panel allows you to manage cameras and camera views in different ways, as outlined below:

Tab views – Up to 10 separate detachable tabbed viewing panels can running.

Multi-site - The multi-site feature allows you to view video from multiple cameras from different devices simultaneously in the Viewer. TruVision Navigator can render Wavelet, Wavejet, MJPEG, MPEG4, and H.264 compression streams simultaneously, which allows you to mix and match the cameras from your many devices seamlessly. Standard video tile layouts include 1x1, 2x2, 3x3, 4x4, and 5x5. You can also use the 8-up custom tile layout that features 1 large video tile surrounded by 7 smaller ones. When in a multi-up view (i.e. 4x4), you can double-click in a video tile to bring the video to full screen. Double-click in the video tile again to return to multi-up viewing.



Maximize Viewer - If you would like to close all panels instantly except for the Viewer, use this option. Click it again to return to the previous layout.

Close All Video - Select this option to close all video.

Instant Replay - Click on the Instant Replay button on the video tile to go from Live to Playback by a user-defined and pre-configured period of time (i.e. 5 minutes) for quick viewing of an incident.

Custom View - Custom views allow you to define and save multi-site view templates for future use. You can create as many custom views as you want. Custom views are available by selecting the Custom View option in the Viewer header bar dropdown menu. To define a custom view, do the following:

Load all the cameras you want to include in the custom view in the Viewer.

Organize your cameras by dragging and dropping the video tile's status bar to other video tiles.

Click Custom View from the Viewer panel header bar dropdown menu.

Select Save Custom View.

Enter a title in the *Title* field.

Click OK.

Close all videos.

From the Viewer panel header bar dropdown menu, highlight the Custom View title in the menu and select.

## PTZ control

TruVision Navigator has the ability to control PTZ camera and motorized zoom cameras with auto focus feature. Supported features include pan, tilt, and zoom moves, as well as set and go to presets, and record and go to tours. The tours functionality is only available for certain device types. See the device-specific chapters for the support for this feature.

First, the camera must be marked as a PTZ camera in its configuration as the camera does not identify itself as such to the device. To mark a camera as a PTZ, simply right-click on the camera and select, Configure Camera. From the camera configuration dialog, check the PTZ Enabled checkbox, select a PTZ protocol, assign an address, and click Ok. Ensure the camera also has the appropriate address and protocol settings. Upon completion, you'll notice that the camera's icon in the Navigator changes from a fixed camera icon to a PTZ camera icon.

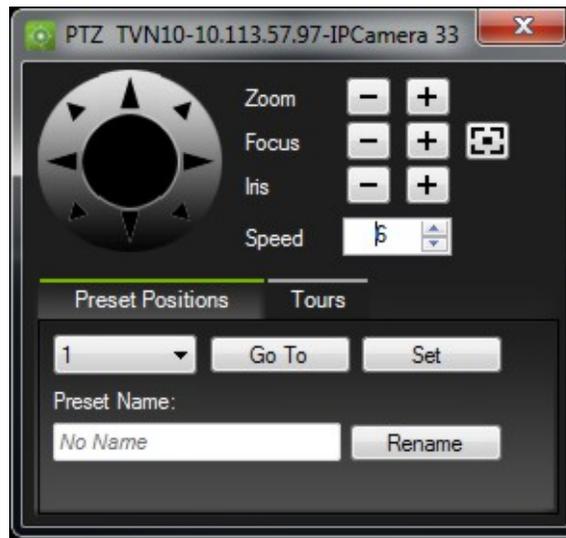
Once you have marked a camera as PTZ, you can now control it using the PTZ Controls or with mouse commands in the video tile.

To control a PTZ camera using the PTZ Controls:

Load the PTZ Camera into the Viewer and select it.

Click the PTZ icon on the Controller toolbar and the PTZ dialog will open. Adjust the dialog to optimize video viewing.

Figure 37: PTZ controls



Use the controls to move the PTZ Cameras as well as zoom, focus, auto focus and iris. Set the speed to the appropriate level for your network and operations. You can also go to, name, and set presets and return cameras to tour (on certain devices). See the device-specific chapters for applicable functionality.

**Note:** PTZ control responsiveness will vary depending upon the frame rate, resolution, and quality of the video stream. D1/ 30FPS/Quality 9 will afford you the most responsive PTZ control over the network. Weigh PTZ control responsiveness with your storage requirements to find the best fit. You can also balance the PTZ speed setting with the stream configuration to find the best fit.

To control a PTZ camera using mouse commands within the video tile:

Load the PTZ Camera into the Viewer and select it.

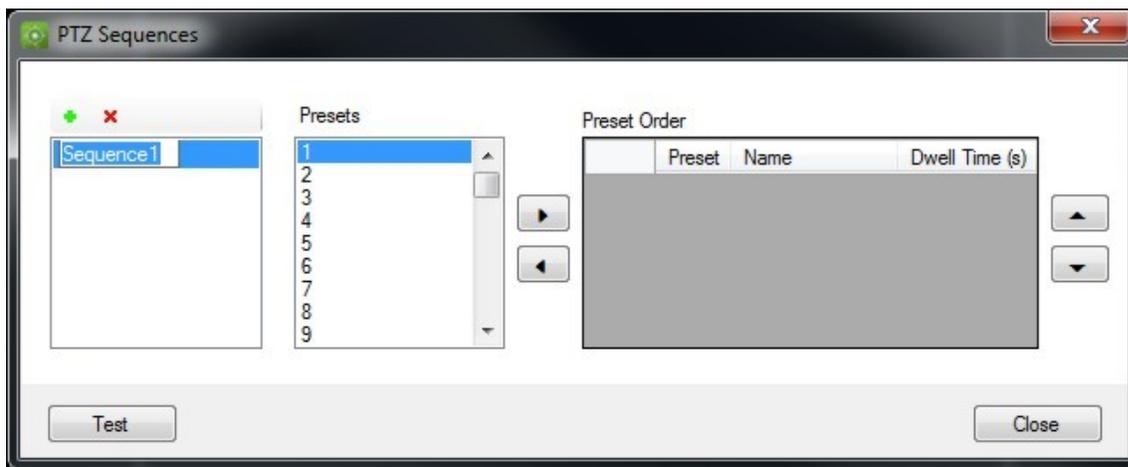
Place your cursor in the center of the Viewing tile.

Left-click and hold the mouse, then drag to the right-left-up-or down. Notice the further from center the cursor gets, the faster the camera will move.

Right-click and hold the mouse, then drag up or down to zoom in and out with the camera.

**Note:** Interlogix cameras with motorized lens can also be controlled as a PTZ camera via the PTZ palette for iris and focus adjustments.

Users also have the ability to link a PTZ camera's presets into a sequence based upon a specific order and dwell time. These sequences can be managed and tested by right-clicking on the PTZ camera in the Navigator and selecting Preset Sequences, Manage Sequences.

**Figure 38: PTZ preset window**

These sequences can be activated by right-clicking on the PTZ camera in the Navigator and selecting Preset Sequences, and then the name of the sequence that was created.

## Digital Zoom

TruVision Navigator allows you to perform digital zoom in/out functions to the live and recorded view. To zoom in, scroll up with the mouse wheel, and to zoom out scroll down. When in digital zoom mode, you can click and hold the mouse left button to Navigate in the zoomed image.

## Tampering Monitor

TruVision Navigator is equipped with a tampering monitor that compares the current image with a reference image taken during the installation. Tampering monitor keeps a record of each camera by taking a reference snapshot and restoring it in the database.

To open the tampering monitor, right click on a recorder and select Tampering Monitor, and Tampering Monitor window will display.

**Figure 39: Tampering Monitor**

On the left hand side, reference images will be listed with the date and time they were taken. For the first time applications of this feature, the reference images will be empty; therefore, user should click Update All to save the reference images. By comparing reference images with live images located on the right hand side, user can easily measure any tampering activity on each camera.

## Configuring discovered device(s)

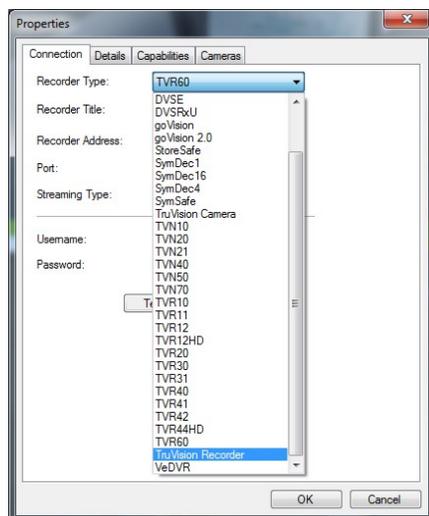
Discovered devices (Recorders and Cameras) can be configured within TruVision Navigator. New with this release is the ability to configure the devices through the devices internal configuration web page.

TruVision Recorder Browser Configuration is currently available for the Recorders listed below. To configure these devices through their native configuration web page see TruVision Recorder Drive Configuration on page 72.

**Table 6: Browser Configuration Compatibility**

Recorder Model	Firmware version
TVN 10	2.0 and above
TVN 21	3.0 and above
TVR 44HD	All versions
TVR 12 HD	All versions
TVR 70	All versions

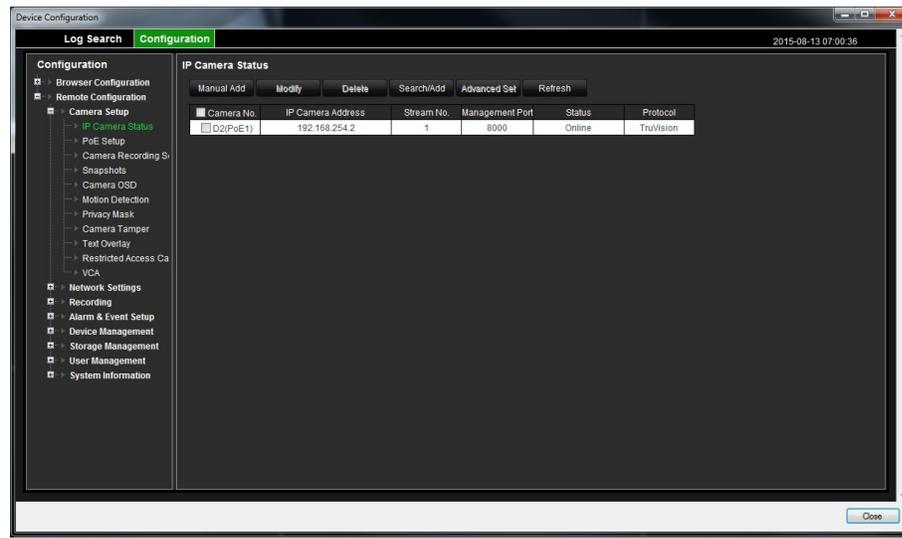
Older model recorders can still be configured through the browser but you will need each recorders password and you need to use the TruVision Recorder driver in the Recorders Properties window.



## Configure a device with TruVision Navigator

To configure a single device, right-click on the device in Navigator and select Configure Device. A configuration dialog will open. Navigate through the settings, make changes as appropriate, and either click Ok or Cancel. Ok will save the settings to the device and Cancel will abort the configurations you made.

Figure 40: Device Configuration Window



Some devices cannot be configured remotely via TruVision Navigator.

## Configure a camera

The steps required to modify a camera's configuration is similar to that of configuring a device. To change a specific camera's configuration do the following:

Right-click on a camera in the Navigator and select Configure Camera. A configuration dialog will open.

Navigate through the settings, make changes as appropriate, and either click Ok or Cancel.

Ok will save the settings to the device and Cancel will abort the configurations you made.

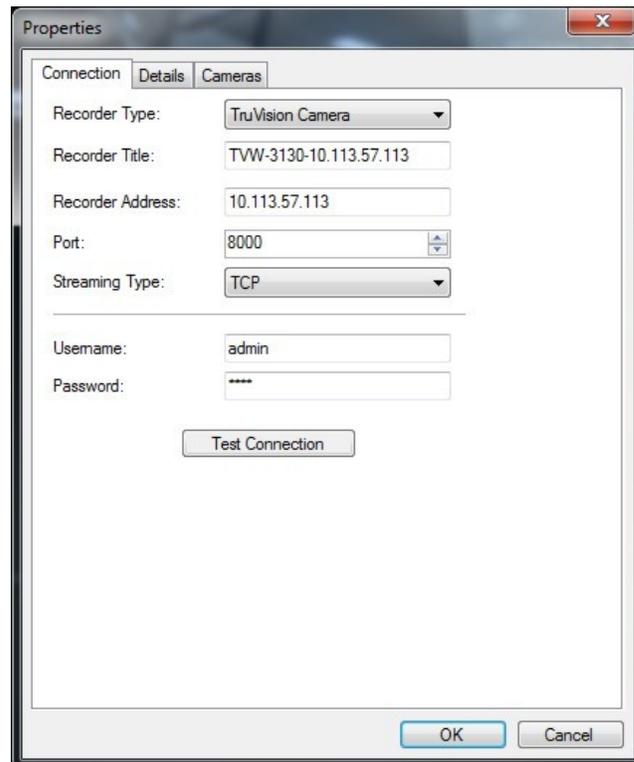
**Note:** The trusted source for camera titles is the device itself. When adding a device for the first time, TruVision Navigator will not pull the device's configuration information at the time of connection. Therefore, the cameras under the device in the Navigator panel may display generic camera titles (Camera 1, Camera 2, Camera 3, etc.). Camera titles are updated in TruVision Navigator after you pull the device configuration for the first time. Afterwards, any changes to camera titles through TruVision Navigator will update both the Navigator and the device.

**Note:** For protocol configuration of analog PTZ cameras attached to an embedded NVR via an encoder, please use encoder web administration rather than the embedded recorder configuration menu.

## Device properties

Device properties consist of connection, detail, and capability information. To obtain a device properties, simply right-click on the device and select Properties.

**Figure 41: Device Properties Window**



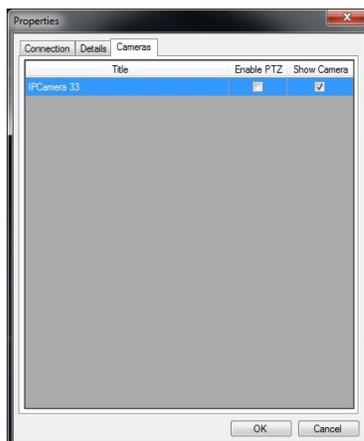
The Connection tab shows all of the information previously entered when adding the device. Make changes as appropriate and click OK to save changes.

The Details tab provides an area for you to enter any data you would like around a device to help facilitate management of the system. If the device was imported and data existed in the original WaveReader or SymNav address book, this data will appear in these fields. If the device was added manually, the fields will remain blank until you add data and click OK.

The Capabilities tab shows you exactly what features the device supports.

Added the ability to hide/show cameras, enable/disable ptz controls via the Camera Properties Tab. To access the cameras tab go to Device's context menu use the Properties dialog box to access the Show/Hide cameras and enable PTZ feature..

Figure 42: Camera Properties tab

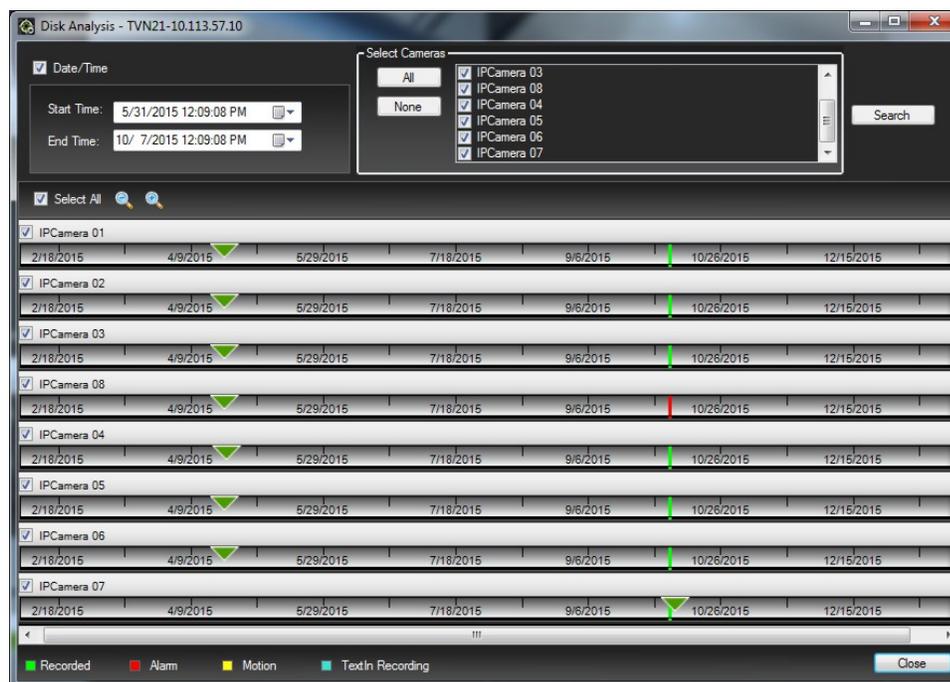


## Device disk analysis

TruVision Navigator features the ability to run a disk analysis on a device in order to get a broader sense of the different types of video data recorded to disk. This video data can include alarms, events, video loss, motion, and more.

To run a disk analysis for a device, right-click on the device in the Navigator and select Run Disk Analysis. The disk analysis dialog will appear.

Figure 43: Disk Analysis dialog



From this dialog, you can zoom in and out on the timeline to view different levels of time granularity for the video. The legend outlines the types of video by color (i.e. alarm is red).

For periods marked as “Unknown,” the device may/may not have recorded video available. It was just not tagged with a specific type per its device configuration parameters.

Double-click on colored areas in disk analysis, and the video will begin to play in the Viewer. By multi-selecting the checkboxes to the left of each camera name, you can achieve synchronous playback across those selected cameras.

Once video is playing in the Viewer, you can manage and export it as normal. See the device-specific chapters for more detail on what types of video tagging is available per device.

## Upgrade Firmware

TruVision Navigator offers the ability to upgrade firmware to devices remotely.

To upgrade firmware to device(s), either right-click on the device in the Navigator and select Configure Recorder then Device Management/Upgrade Firmware or right-click on the Recorders node and select Tasks/Bulk Configuration. The Firmware Upload dialog will appear.

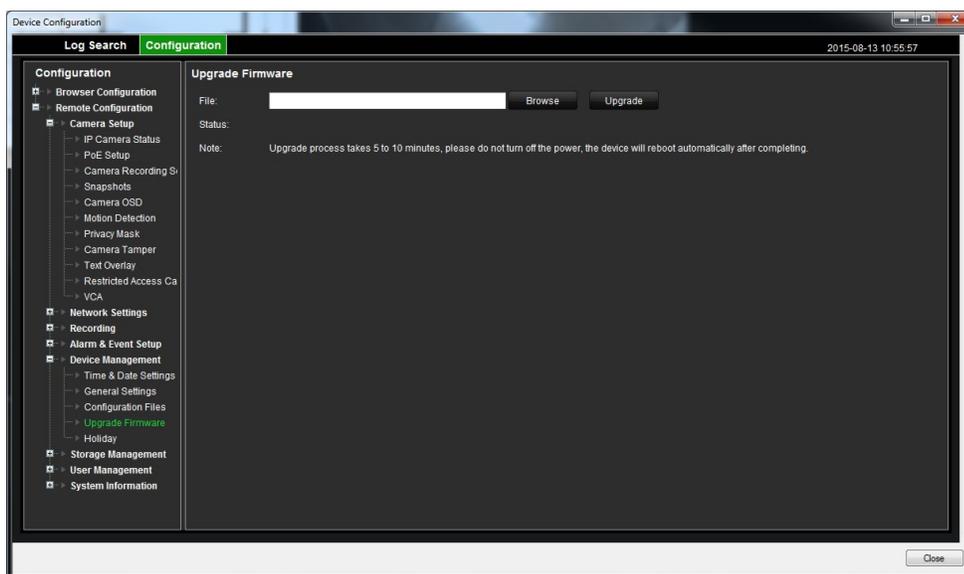
Select your source device type, browse for the applicable firmware, and select the destination device(s) for the firmware upload.

Remember, TruVision Navigator does not do a file format check on the firmware file, so ensure it is the proper file for that device type. In addition, the firmware file must reside on the local machine. It cannot be accessed across network paths.

Click on the Upgrade button or schedule the firmware upload for a future date/time via the Schedule button.

For any scheduled task that will take place in the future, you must ensure that the machine where the task was created is powered up and the Local Scheduling Service is running on that machine. The TruVision Navigator application itself can be closed but the machine and Local Scheduling Service must be running for the task to be initiated and completed.

Figure 44: Firmware Upload Window



## Camera search

TruVision Navigator allows you to search cameras for alarms, alarms plus events, motion, and point-of-sale text-related video.

For those searches, the device must first be configured to tag the camera's video based upon those parameters (which must be available in the device). For instance, to be able to search a camera for motion in TruVision Navigator, the motion grid must be setup for that camera in the device and tagged for motion. This device setup can be done remotely via the configuration capability within TruVision Navigator or from the device itself.

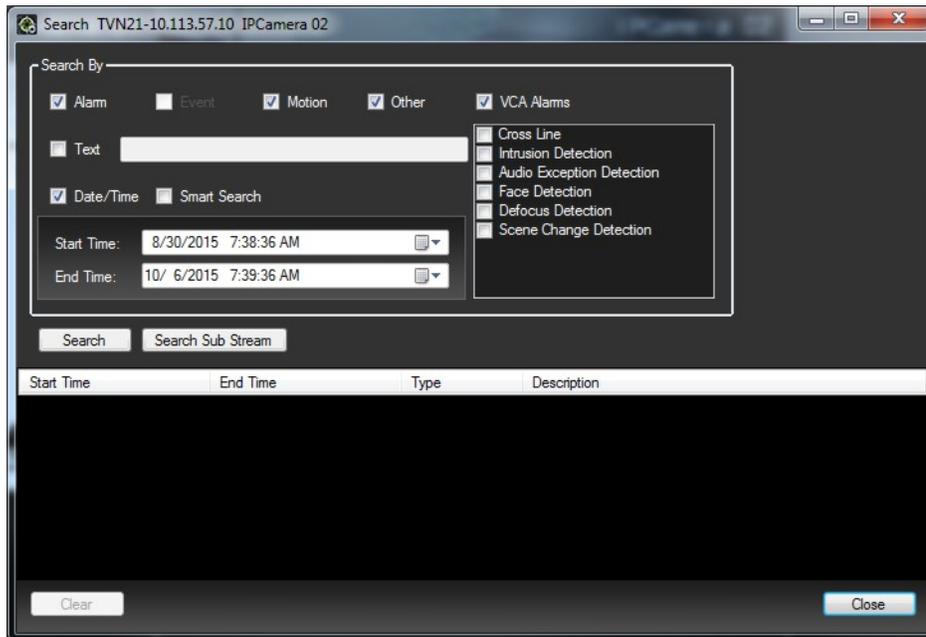
To search for video tagged with text, enter the text string you want to search for and click Search. Toggle the Overlay Text on Video checkbox to overlay the text on the video or place it beside the video. This checkbox is dynamic so if you toggle it during playback, the text will switch from overlay to side-by-side and vice-versa (it will take a few seconds to switch).

Remember that for text searches, the device must be working in conjunction with a ProBridge. The ProBridge acts as a bridge between the recording device and the Point-of-Sale (POS) device (i.e. a cash register or ATM). It essentially feeds the POS text data into the recording device where it is tagged to the applicable video.

Different devices support varying levels of camera search. See the device-specific chapters for more detail on what types of video data is available per device.

To perform a camera search, right-click on the camera in the Navigator and select Search. The search dialog will appear. From the search dialog, you can specify the video type and time/date range, and upon clicking Search, the results will appear in the table. Click the hyperlinked start times to review the video in the Viewer.

**Figure 45: Search dialog**



## TruVision Recorder Browser Configuration

TruVision Recorder Browser Configuration is currently available for the Recorders listed below. To configure these devices through their native configuration web page see TruVision Recorder Drive Configuration on page 72.

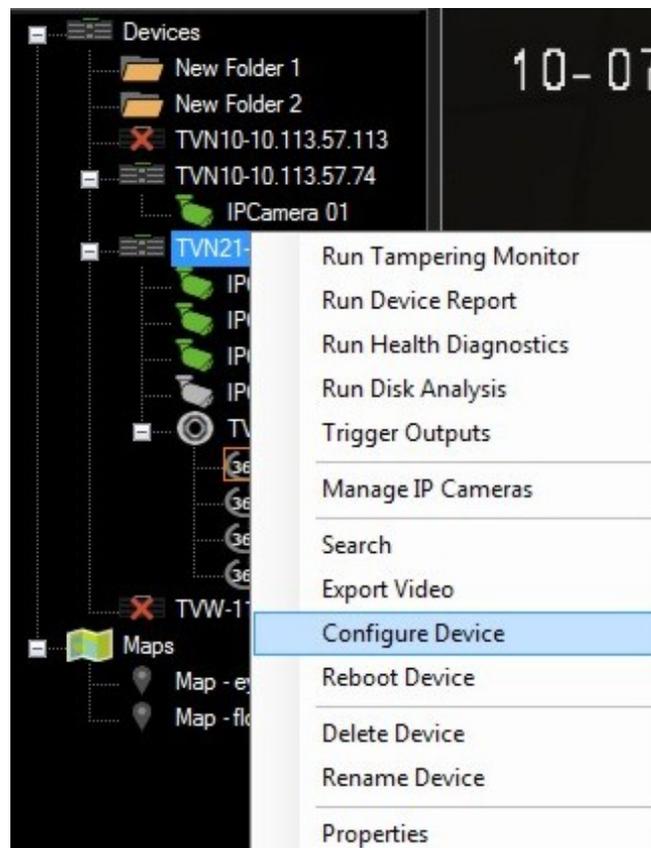
**Table 7: Browser Configuration Compatibility**

Recorder Model	Firmware version
TVN 10	2.0 and above
TVN 21	3.0 and above
TVR 44HD	All versions
TVR 12 HD	All versions
TVR 70	All versions

Older model recorders can still be configured through the browser but you will need each recorder's password and you need to use the TruVision Recorder driver in the Recorders Properties window. Configuring a Device

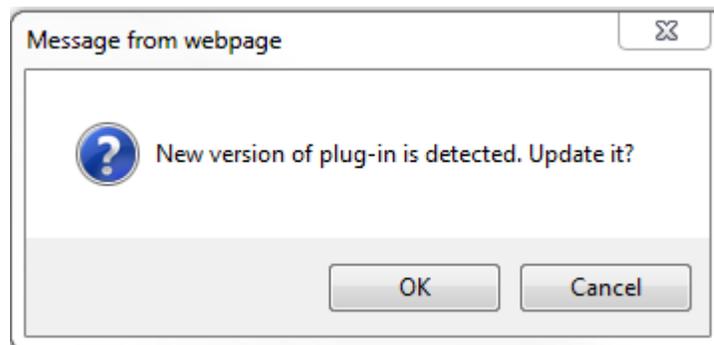
Right-click on a device in the Navigator Panel and select Configure Device in the pop-up menu.

Figure 46: Configure Device



If the device has not been previously configured you will be prompted to update the plug-ins.

**Figure 47: Plug-in dialog**

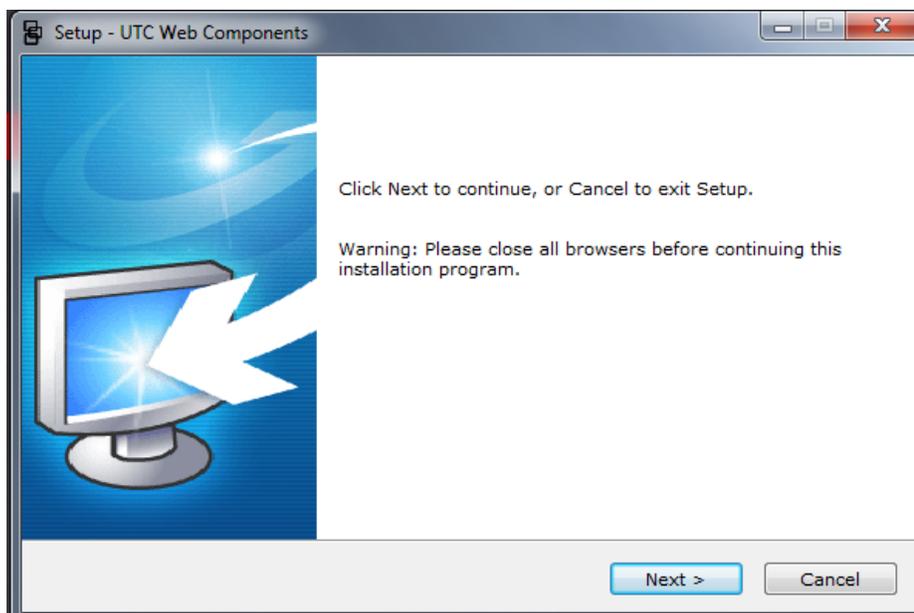


Click OK to update the plug-ins.

**Note:** If the device has been connected to and previously configured through the devices internal web browser the plug-in should already be installed.

Follow the instructions in the Setup-UTC Web Components dialog window.

**Figure 48: Setup-UTC Web Components dialog**

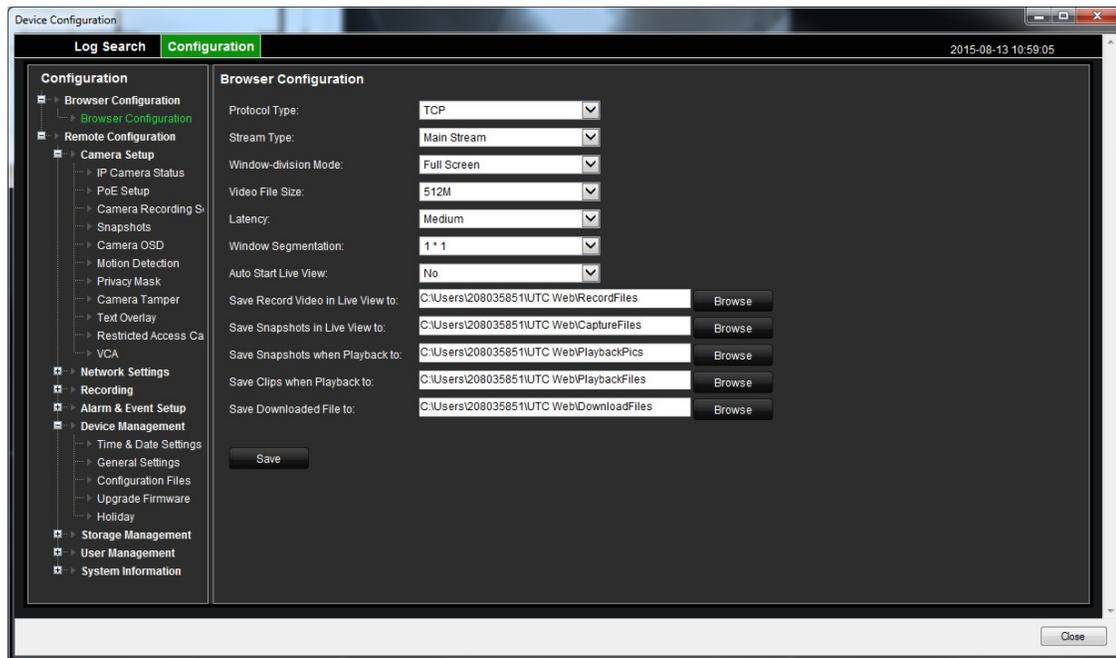


**WARNING: Close all Browser windows when instructed. You also need to close TruNav before continuing.**

When completed relaunch TruVision Navigator.

Right-click on the TruVision device and select Configure Device. TruVision Navigator now opens the devices internal configuration web page.

Figure 49: Device Configuration dialog



Configure the device with your required preferences. (See the device's User Manual for all configuration options.)

**Note:** For cameras not connected to a recorder you will be required to enter the camera's log-in credentials to proceed.

When completed click the Close button to save any configuration changes and return to TruVision Navigator.

# Chapter 4

# TruVision Navigator

# Settings

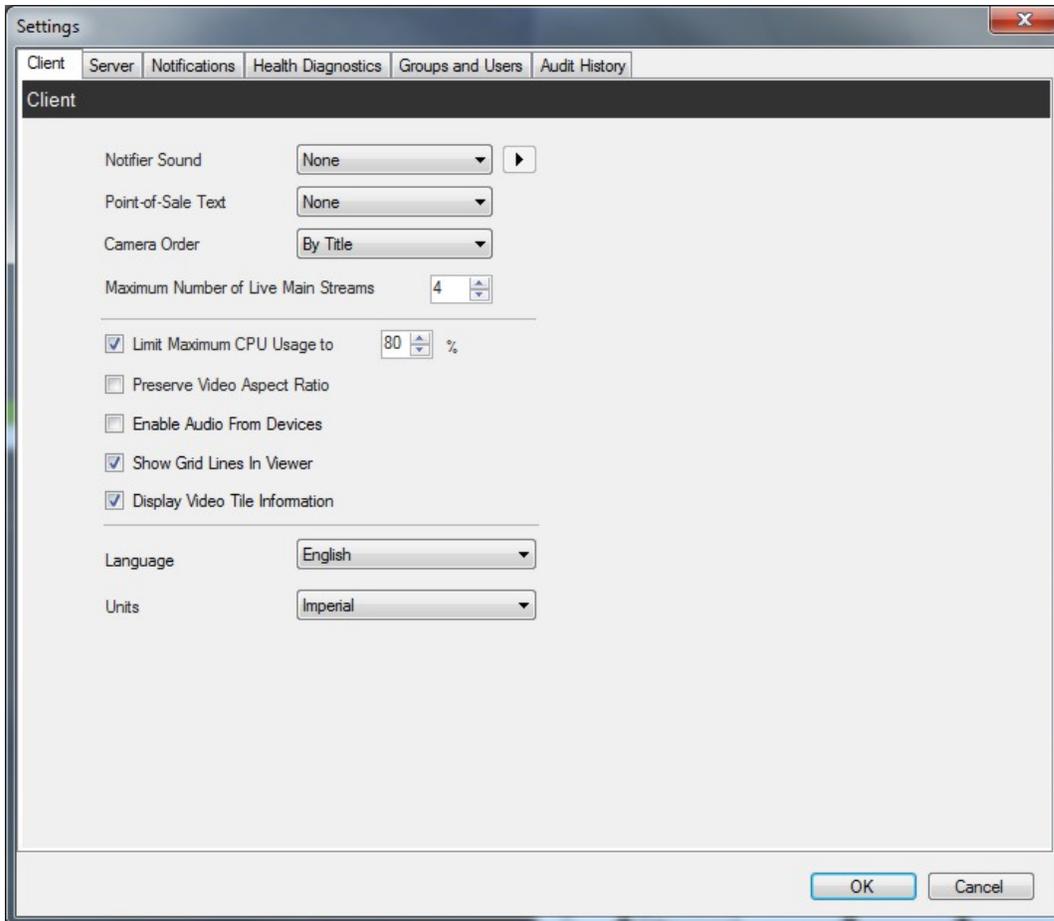
For both the standalone and multi-client installation models, you have the ability to configure the TruVision Navigator Client and Server for specific features. To configure the TruVision Navigator Client and Server, Click on the Settings icon in the Navigator title bar. The Settings dialog will appear.

The following configuration tabs are available:

- Client Settings
- Server Settings
- Notifications Settings
- Health Diagnostics Settings
- Groups and Users Settings
- Audit History Settings

# Client Settings

Figure 50: Client Window



The Client tab of Settings Window provides following settings:

- Notifier Sound: Select from None, Beep, Hand, Exclamation, Asterik, Bus Horn, Drive Horn , and Buzzer
- Point of Sale Text: Select from None, In Band, or Out of Band
- Camera Order: Select By Title or By Number
- Maximum Number of Live Streams
- Limit Maximum CPU usage to a percentile
- Preserve Aspect Ratio checkbox
- Enable Audio from Recorders checkbox
- Show Grid Line in Viewer checkbox
- Show Caption Information checkbox
- Language Selection: Select your language

- Units of Measure: Select English or Metric

## Server Settings

Figure 51: Server window

The screenshot shows the 'Server' tab of the 'Settings' window. The fields and controls are as follows:

- SMTP Server: [Text Input]
- Port: 25 [Dropdown]
- Username: [Text Input]
- Password: [Text Input]
- SSL:
- Test: [Button]
- Permission Model: Advanced [Dropdown]
- Authentication Complexity: Low [Dropdown]
- Instant Replay Duration: 0 [Spin] Min 30 [Spin] Sec
- Custom Help Title: [Text Input]
- Custom Help Link: [Text Input]
- Database Backup: [Button]
- Database Restore: [Button]
- Client Download URL: http://ah451492:19738/Web Server/Clie [Text Input]

Note: Changes won't take effect until you restart the TruVision Navigator Service

The Server tab of Settings Window provides following server settings:

- SMTP Setup
- Permissions Model
- Authentication Complexity
- Instant Replay
- Custom Help Link
- Database Backup and Restore
- Server URL: Multi-client installations (client/server) only
- Client Download URL: Multi-client installations (client/server) only

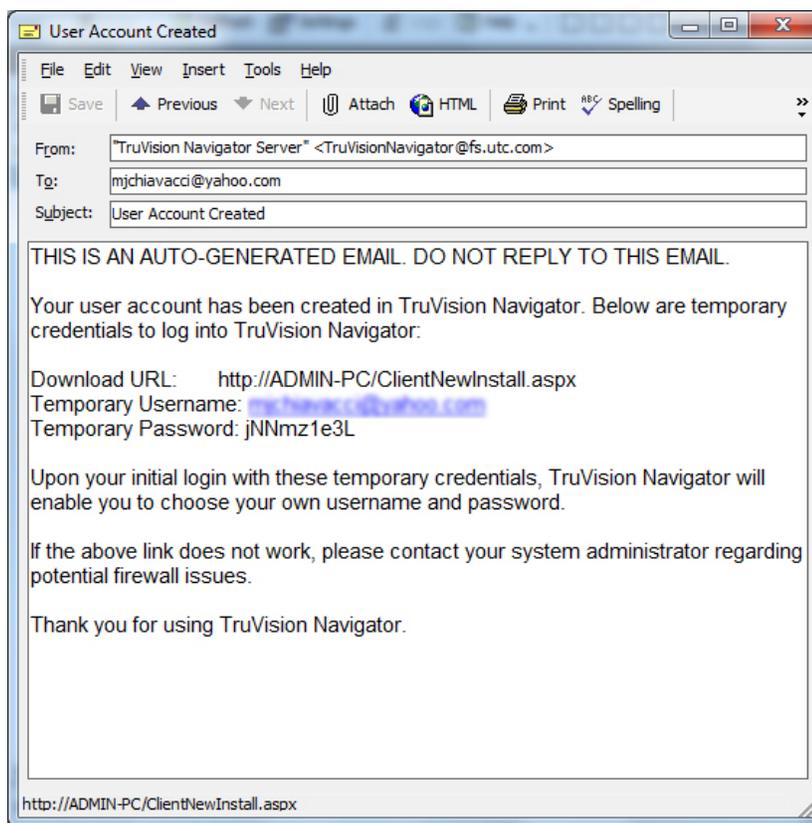
## SMTP Setup

Simple Mail Transfer Protocol (SMTP) is a de facto standard for email transmissions across the Internet. TruVision Navigator Server can be configured to use an SMTP server to send automated email messages (with Client Download URL, Username, Password) to users when they are created in TruVision Navigator and when their login credentials (Username, Password) need to be reset in the system by an Administrator. If SMTP is not setup, this information will need to be delivered via an alternative method (i.e. phone or personal email).

Enter the SMTP Server IP Address, the port, any username/password credentials that may be mandated by the SMTP server you are using, and SSL, if necessary. Test this setup by clicking Test and entering the email address of where you want the test message sent. Check the application status bar for feedback on the test. As well, check your email to ensure there is a test message from the TruVision Navigator Server confirming proper setup of the SMTP server.

You should see an email like the one below. After several minutes, if you still have not received the message, check your Junk Mail folder to see if the email was classified and stored there.

**Figure 52: Test Email Window**



## Permission Model

TruVision Navigator has two permission models – Simple or Advanced. The default for a new installation is the Simple model.

**Simple model** - Administrators only have the ability to create, edit, and delete users and their corresponding permissions.

**Advanced model** - Administrators have the ability to create, edit, and delete both users AND groups. Groups allow you to scale user permissions in your system across many users. For instance, many users can be placed into a single group, and that single group can be assigned permissions against the folders/ devices in the system. Without groups, the Administrator would have to permission each user against those same devices.

To change your permission model from Simple to Advanced, select it from the Permission Model drop-down and click OK. Groups should now appear as a node in the Navigator panel. The table below outlines the actual permissions that can be granted to users or groups within TruVision Navigator, the user interface impact of that permission, and the dependencies of specific permissions.

**Table 8: Permission Matrix**

Permission	User Interface Impact	Dependent Permissions
Configure Server	Enable/disable right-click options on TruVision Navigator Server node (i.e. Properties and Database Backup and Restore)	
Manage User Permissions	Show/Hide Users and/or Groups nodes in Navigator	
Manage Device Folders	Show/Hide Add Folder button and context menus in Navigator	
	Show/Hide Folder (folder may also be visible due to other permissions or parent/child permissions)	
	Show/Hide Address Book Import context menu for Devices node.	
Manage Devices	Show/Hide Add Device button and context menus (rename and delete) in Navigator	
	Show/Hide Folder (folder may also be visible due to other permissions or parent/child permissions)	
	Show/Hide Device (device may also be visible due to other permissions or parent/child permissions)	
	Show/Hide Camera (camera may also be visible due to other permissions)	

	Show/Hide Bulk Tasks (Firmware Upload and Configuration) context menus for Devices node.	
	Enable/Disable Device Properties (Connection, Details, Capabilities) dialog on device	
	Show/Hide Camera Search and Configuration context menus	
	Show/Hide Firmware Upload context menu for device	
	Show/Hide Tasks Panel (panel may also be visible due to other permissions)	
View Device Diagnostics	Show/Hide Run Health Diagnostics in Device node and specific device context menus in Navigator.	
	Show/Hide Folder (folder may also be visible due to other permissions or child permissions)	
	Show/Hide Device (device may also be visible due to other permissions or child permissions)	
View Notifications	Show/Hide Folder (folder may also be visible due to other permissions or child permissions)	
	Show/Hide Device (device may also be visible due to other permissions or child permissions)	
	Enable/Disable Notifier icon in application status bar.	
	Show/Hide Device Notification in Notifier dialog	
	Show/Hide Camera Notification in Notifier dialog for permissioned device	
Acknowledge Notifications	Show/Hide Acknowledge All button in Notifier dialog	
Watch Live Video	Show/Hide Folder (folder may also be visible due to other permissions or child permissions).	
	Show/Hide Device (device may also be visible due to other permissions or child permissions).	
	Show/Hide Camera (camera may also be visible due to other permissions).	

	Allow/Disallow Open Video from Camera (all methods: double-click and drag-n-drop in Navigator).	
	Show/Hide PTZ and in-tile mouse controls.	
Watch Playback Video	Show/Hide Folder (folder may also be visible due to other permissions or child permissions).	If you have Watch Playback Video, you will automatically receive Watch Live Video.
	Show/Hide Device (device may also be visible due to other permissions or child permissions).	
	Show/Hide Camera (camera may also be visible due to other permissions).	
	Enable/Disable Controller Playback controls including Go To, Playback, Live, double-click on timeline)	
	Enable/Disable notifications in Notifier dialog.	
Watch Video HBW	Enable/Disable Stream and Bandwidth menus in the Controller.	Requires at least one of the Watch Video permissions (Live or Playback).
Export Video	Enable/Disable Local record button in Controller.	Requires both of the Watch Video permissions (Live and Playback).
	Enable/Disable Snapshot and Video buttons in the Controller.	
	Show/Hide Collector Panel.	
	Show/Hide Tasks Panel (panel may also be visible due to other permissions).	
View Disk Analysis	Show/Hide Disk Analysis context menu for device.	
	Show/Hide camera row in Disk Analysis dialog.	Requires both of the Watch Video permissions (Live and Playback).

## Authentication Complexity

TruVision Navigator has three Authentication Complexity standards - Low, Medium, and High. The default for a new installation is Low. To change the Authentication Complexity, select a choice from the drop-down and click OK.

All new users to the application will be required to meet the new Authentication Complexity standard. However, existing users of the application will not be prompted to change their credentials to meet the new standard once it is changed. Therefore, the Administrator must reset each of the existing user accounts for the standard to take effect. This reset will only affect the password for that user – not the username. It is recommended to set the Authentication Complexity early before any users are created in the system to avoid having to do resets.

The table below outlines the components of each of these standards.

**Table 9: Authentication complexity**

Authentication complexity	Maximum login failure attempts	Username complexity	Password complexity	Password reuse	Password expiration
Low	n/a	At least 6 characters	At least 6 characters	n/a	n/a
Medium	3	At least 6 characters	At least 8 alphanumeric characters	n/a	n/a
High	3	At least 12 characters	At least 8 characters with at least: 1 Upper- case letter 1 lower-case letter 1 numeric 1 special character (~, !, @, #, \$, %, ^, &, +, =)	Cannot use the last password	User must change password every 60 days

## Instant Replay

TruVision Navigator supports Instant Replay from the video tile itself via the Instant Replay icon. This affords an operator the ability, with one mouse click, to rewind selected video by a user-defined, pre-configured amount of time (99 minutes and 59 seconds maximum). To set your Instant Replay time, enter the minutes and seconds, and

click OK. This setting can be found at the Server Settings screen in the Settings menu located in the bottom toolbar

Load video into the Viewer and mouse over the Instant Replay icon (white back-arrow to the left of the close video icon) on the far right of the video tile status bar. Notice your pre-configured amount of time in the Tool Tip. Click on the icon to go back that amount of time with the selected video. See the specific device chapters for limitations on instant replay per device.

## **Custom Help**

TruVision Navigator has Custom Help access that allows individual organizations to provide their own additional content to facilitate adoption of the software. This content is completely user-defined. TruVision Navigator simply provides a pathway for users to access it.

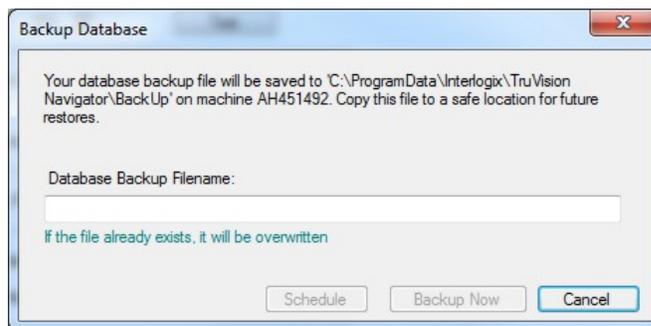
To add a Custom Help link, enter the Custom Help title of the content that you want to expose to users. Next, enter the Custom Help link, which is the actual path to the content (users will not see what you enter in this field). Click OK.

Open the Help dialog (Question Mark icon) from the application status bar and notice the Custom Help title there. Click on the link to access the content.

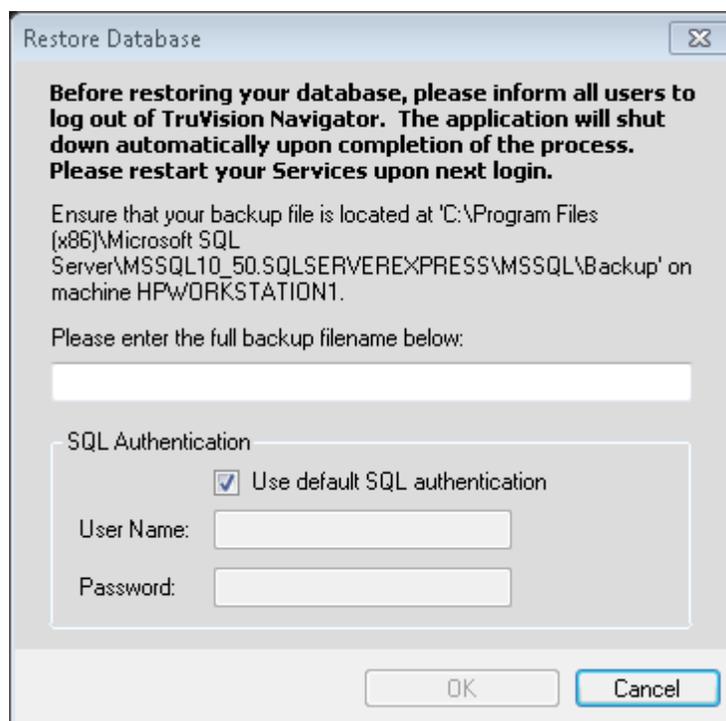
## **Database backup and restore**

TruVision Navigator offers users the ability to backup the TruVision Navigator database. This backup should be moved off-machine by an Administrator for safekeeping. Should something happen to the machine where the TruVision Navigator database resides, the Administrator can install that same version of TruVision Navigator and restore the database with the backup file. This will bring the system back into operation quickly without manual re-entry of device, user, group, permission, or other system configuration data.

To backup the TruVision Navigator database, right-click on the TruVision Navigator Server node and select Database Backup. The Backup Database dialog will appear. Provide a database backup name (no file extension is necessary) and take note of the path where the database backup file will reside. The Administrator should copy or move this file to a safe location. Upon initiation of the backup, refer to the Tasks panel for status. After successful completion, your database backup file will reside at the designated location.

**Figure 53: Settings Server Database Backup Dialog Window**

To restore the TruVision Navigator database, right-click on the TruVision Navigator Server node and select Database Restore. The Restore Database dialog will appear. Ensure that a copy of the backup database file has been placed in the directory listed on the form. Enter the exact name of the file in the text field provided. If you are restoring the database to a SQL instance that requires SQL authentication credentials, enter them. Otherwise, use the default setting. Upon initiation of the restore, refer to the Tasks panel for status. Once you see the Restore Task in the Task panel, logout of the application. Log back in and your database should be restored.

**Figure 54: Restore Database Window**

## Multi-client (client/server) Installations

The Server and Client Download URL fields only appear on Client/Server installations.

### Server URL

For Multi-client installations (client/server), the Server URL is the network location of the TruVision Navigator Server. This is the URL that TruVision Navigator Clients use to communicate with the TruVision Navigator Server.

For Standalone installations (Direct Database Connection), this field will be disabled, as no other networked TruVision Navigator clients can connect to this instance of the TruVision Navigator Server.

### Client Download URL

For Multi-client installations (client/server), the Client Download URL is the network location of the TruVision Navigator Client software package. Administrators can deliver this URL to new users in order to download the Client software remotely from the TruVision Navigator Server. If SMTP (see below) is in use, this is done automatically for the Administrator during user setup.

For Standalone installations (Direct Database Connection), this field will be disabled, as no other networked TruVision Navigator clients can connect to this instance of the TruVision Navigator Server.

## User Management & Client Software Delivery Overview

With Multi-client (client/server) installations of TruVision Navigator, PCs on the same network with the TruVision Navigator Server have the ability to download the TruVision Navigator Client. This alleviates the need for an Administrator to physically ship media or visit the PC's site to install the client software.

Remember:

Remote distribution of client software is NOT available for the Standalone (Direct Database Connection) installation option.

The person installing the client software must have administrative rights on the machine to perform the client installation.

The mechanism for delivering the client software is slightly different if you use the SMTP capability within TruVision Navigator. If you use the SMTP capability, the entire process of adding a user and distributing the client software is automated. If you do not use the SMTP capability, there are several manual steps required to deliver the client software as described below.

## Fully Automated Client Software Delivery

TruVision Navigator can be configured to use an SMTP server to send automated email messages (with Client Download URL, username, and password) to new users or when an existing user's login credentials (username and password) need to be reset in the system by an Administrator.

To distribute the client software remotely to a new user, you must first configure TruVision Navigator with an SMTP Server; add the new user, and permission the new user.

To add a user, right-click on the Users node in the Navigator and select Add User. The Add User dialog will appear. Enter the user's First Name, Last Name, and Email Address (these fields are required while the Username, Password, and Confirm Password fields are disabled due to SMTP configuration) and click OK. The new user will be added under the Users node in the Navigator.

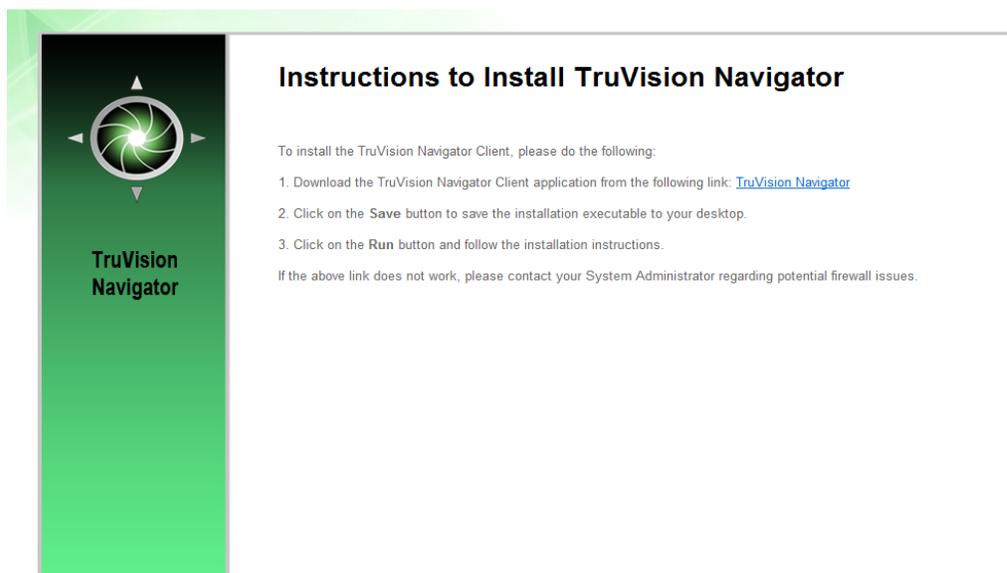
### Add User

At this time, TruVision Navigator generates the new user with a temporary username and password in the system and delivers an automated email to the SMTP server for the user.

The user can now click the download URL or cut/paste the string into a web browser. From the Client Installation page, follow the instructions to install the client software.

## Client Installation

Figure 55: Client Installation Window



When the installation is complete and you have rebooted your machine, click on the TruVision Navigator icon on your desktop.

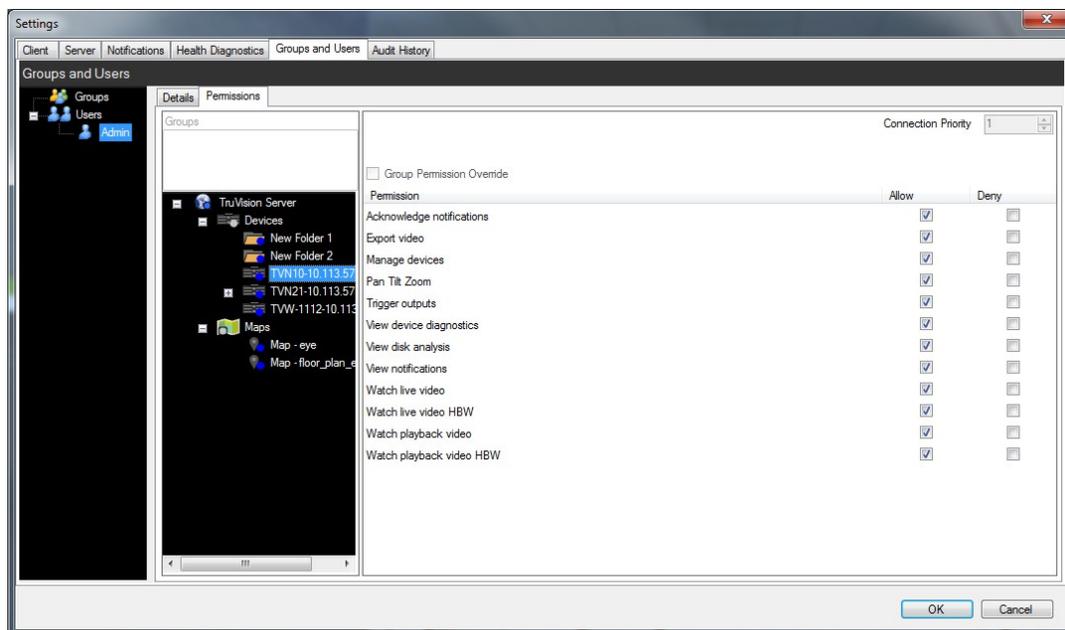
Login to the application using the credentials from the email. You will be prompted to change those credentials upon initial successful login. You will also be prompted to provide a challenge question and response that, in the future, will allow you to reset your own password without Administrator assistance.

Once inside the application, you should see all of the devices in the Navigator – per the permissions granted by the Administrator.

Remember, when a new user is added to the system, that user does not have any permissions assigned, and therefore, will not be able to login to the application. You must assign user permissions before the user can login.

To assign permissions to a user, click on the user in the **Settings/Groups and Users** tab and click on the Permissions tab.

**Figure 56: Settings Group and User Permissions tab**



Highlight the TruVision Navigator Server node in the device tree and allow/deny the permissions for this user in the Permission section. If your Permission Model is set to Simple (only users), you will only see the Allow column. If your Permission Model is set to Advanced (both users and groups), you will see both the Allow and Deny columns.

As you do this, the permissions you are granting will cascade down to all of the devices that you have listed under the TruVision Navigator Server. A blue breadcrumb will appear on all of the folders, devices, and cameras that the user has permissions.

When assigning permissions, you have the ability to specify whether the permission is applied at the parent or child node. Granting permissions at a parent node will cascade those permissions down to the child nodes. For example, granting permissions at the TruVision Navigator Server level will cascade down over all folders, devices, and cameras beneath it. These are indicated with a blue breadcrumb. Conversely, granting permissions at the child node will not change permissions up at the parent node. In this case, the child node will show a blue breadcrumb and the parent will show a grey breadcrumb. The table below describes this feature in detail.

**Table 10: Permission breadcrumbs**

Permission Breadcrumb	Description
Blue	A blue breadcrumb indicates that there are express permissions granted on that node. These permissions are inherited by the children nodes underneath the parent node.
Grey	A grey breadcrumb indicates that there are express permissions assigned to a child of the parent node, but not at the parent node itself. This serves as a quick visual cue for the Administrator to find express permissions granted to a user on devices buried in the Permission Tree. If you continue to expand all of the grey breadcrumb nodes, you will eventually arrive at the camera or device with one or more express permissions, denoted by the blue breadcrumb.

Remember, permissions within TruVision Navigator can be as simple or as complex as you like. Very simply, an Administrator can grant permission to users across all devices in the system by applying those permissions at the TruVision Navigator Server node (parent) and let them cascade across all child nodes in the system.

On the other hand, an Administrator can grant permission from the child nodes up for granularity and control within the system. Groups will also come into play to ease the task of permissions in the system.

### Partially Automated Client Software Delivery

Remember that the process for delivering the client software is slightly different whether you choose to use SMTP or not. If you do NOT have access to SMTP, you can still deliver the client software remotely. However, there are a few additional steps you must engage in around delivering the Client Download URL and login credentials to the user.

First, validate that there is no SMTP configuration in TruVision Navigator by right-clicking on the TruVision Navigator Server node and select Properties. Ensure that the SMTP Server IP Address is empty.

Second, when adding a user, the Administrator will have to generate a username and password for the user, himself.

Figure 57: Add User Window

The screenshot shows a standard Windows-style dialog box titled "Add User". At the top, there is a message: "User will be prompted to set new User Name and Password after login." Below this, there are several input fields:
 

- Username:** A text box containing "bamin".
- Password:** A text box with masked characters "\*\*\*\*\*".
- Confirm Password:** A text box with masked characters "\*\*\*\*\*".
- First Name:** A text box containing "Bruce".
- Last Name:** A text box containing "Amin".
- Email Address:** A text box containing "bamin@systemflux.com".

 At the bottom right of the dialog, there are two buttons: "OK" and "Cancel".

Third, the Administrator has to deliver the user's login credentials and Client Download URL to the user via phone or through private email. An example of this information is listed below. You can cut and paste the Client Download URL from the TruVision Navigator Server Properties dialog - General Tab. Remember to assign the user's permissions or he/she will not be able to login.

Finally, if you do not want to use the remote software distribution feature, you can physically load the client software on PCs by doing the following:

Download the ClientInstall.exe from the Client Installation web page and place it on a thumb drive or other media.

Physically deliver the .exe file to the specific PC.

Run the ClientInstall.exe and follow the installation prompts (the ClientInstall.exe file is preconfigured to point to the server that it was obtained from).

Login with the credentials for that user.

### Inactivate a user

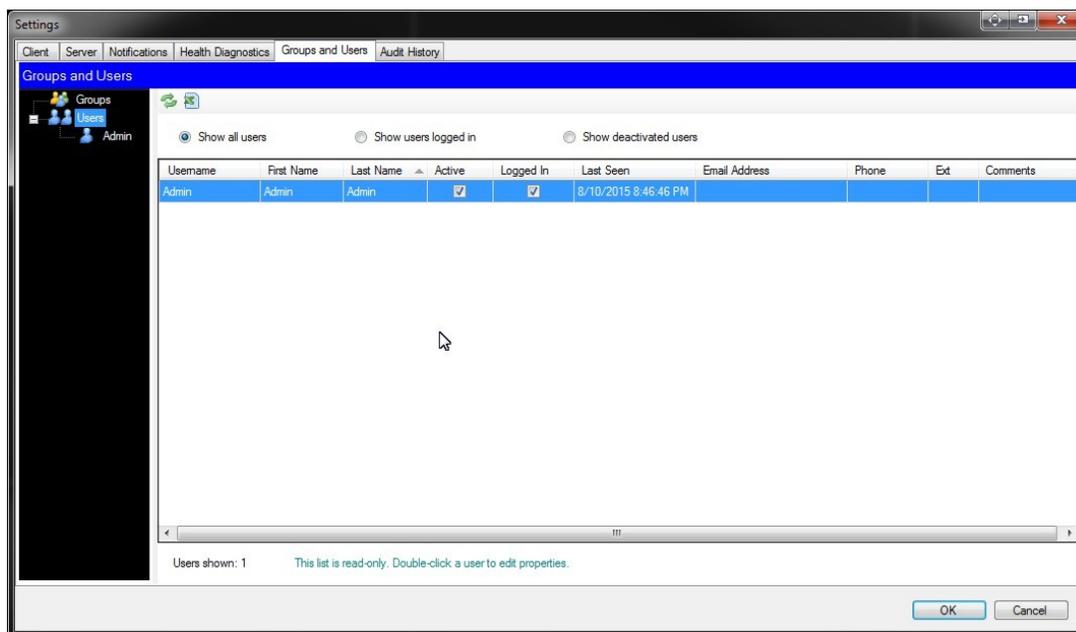
For whatever reason, an Administrator may want to inactivate a user from the system. TruVision Navigator does not delete users from the database. The user is simply placed in an Inactive status and all rights to the system are revoked.

To make a user inactive, right-click on the user under the Users node in the Navigator and select Inactivate User. Click Yes when prompted with "Are you sure you want to inactivate this user?"

Inactive users will be removed from the Users node in the Navigator unless you right-click on the Users node and select Include Inactive Users. The Inactive User icon is shaded grey while the Active User icon is shaded blue.

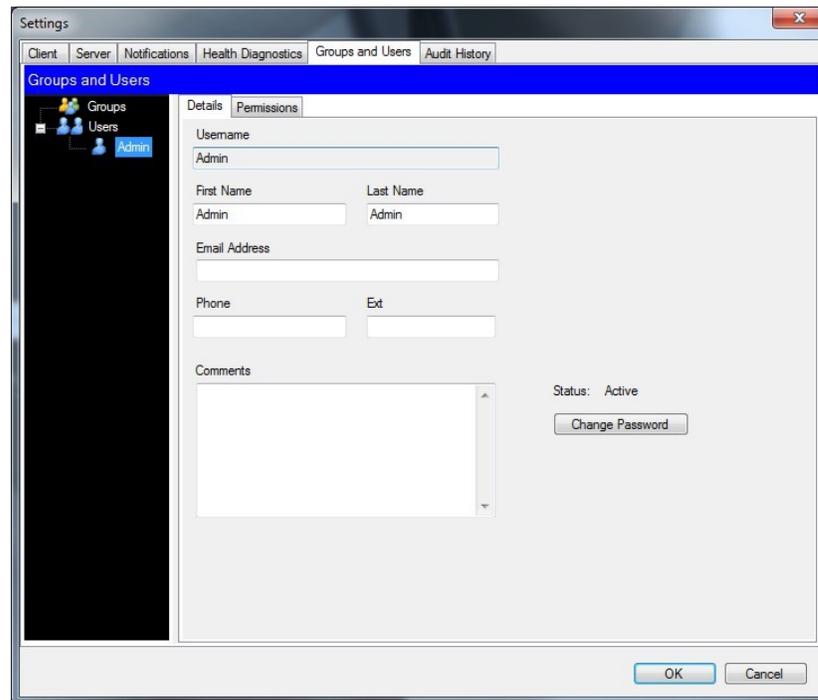
To view all users in the database (active or inactive) in a list, right-click on the Users node and select Show User List. The Users dialog will appear. All of the columns in this dialog are sortable so you can find users quickly. Double-click on any user row to view that user's details dialog.

**Figure 58: Users Window**

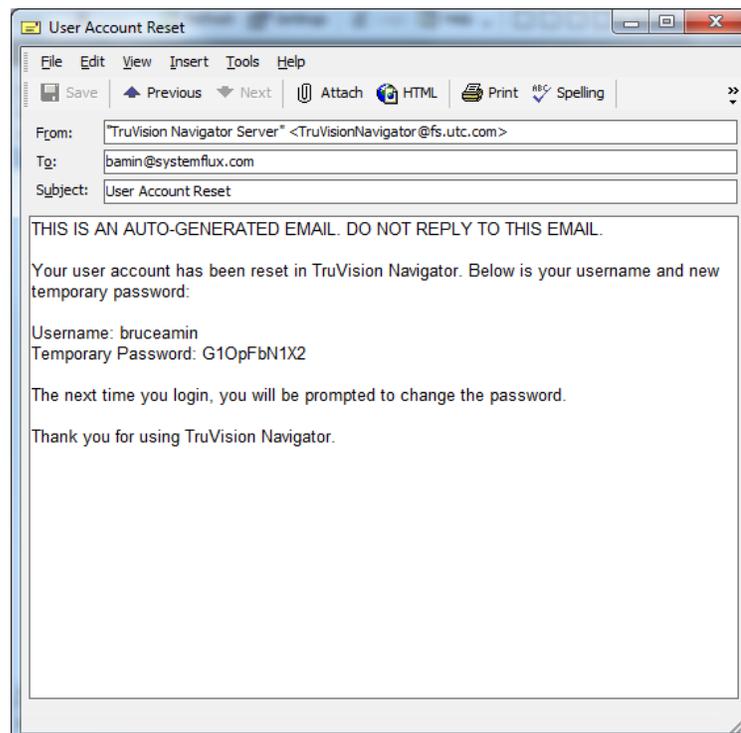


### Restore an inactive user

When an Administrator needs to restore an inactive user in the system, right-click on the inactive user under the Users node in the Navigator and select Activate User. You can also right-click on the inactive user under the Users node in the Navigator and select Properties and use the Reset Account button on the Details Tab. Finally, you can launch the user list and double-click on the user for the Details dialog to appear, and again use the Reset Account button.

**Figure 59: Groups and Users Details tab**

If SMTP is in use, the user will get an email automatically sent to him with his temporary password for login. The user will be prompted to change this password upon initial login.

**Figure 60: User Account Reset Window**

If SMTP is not in use, the Administrator will have to provide the user a new temporary password at the Change Password dialog. These temporary credentials will need to be delivered to the user via phone or the Administrator's personally generated email.

**Figure 61: Change Password Window**

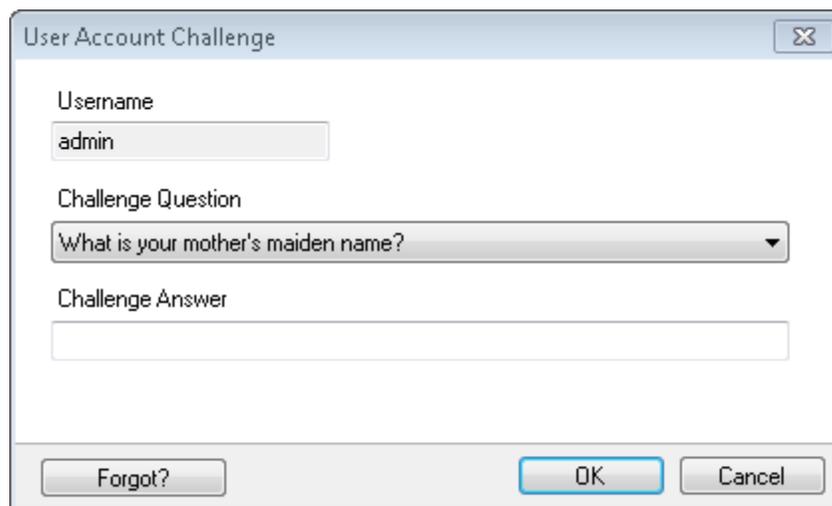


The image shows a dialog box titled "Change Password". It has a standard Windows-style title bar with a close button (X) in the top right corner. The dialog contains two text input fields: the first is labeled "Password" and the second is labeled "Confirm Password". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

### Reset a user after lockout

If a user forgets his or her username or password and challenge question, that user can be locked out of the system. If a user has been locked out for login failures, they can unlock themselves by answering their challenge question via the Login form's Challenge Dialog window

**Figure 62: User Account Challenge Dialog Window**

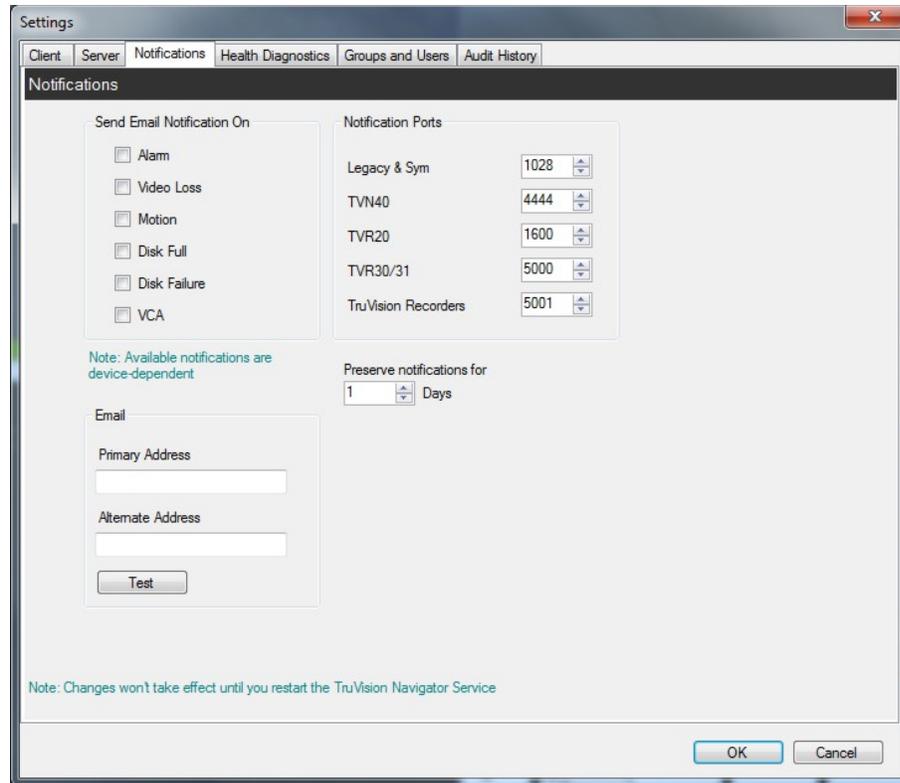


The image shows a dialog box titled "User Account Challenge". It has a title bar with a close button (X) in the top right corner. The dialog contains three input fields: a text box for "Username" with the value "admin", a dropdown menu for "Challenge Question" with the selected option "What is your mother's maiden name?", and a text box for "Challenge Answer". At the bottom of the dialog, there are three buttons: "Forgot?", "OK", and "Cancel".

If a user cannot remember his/her challenge question, a call to the Administrator is necessary to reset the account. Follow the instructions in Initial Login section.

# Notification Settings

**Figure 63: Notification tab**



The Notifications tab of Settings Window provides following server settings:

- Select events for notification
- Notifications Ports
- Primary and Alternate Email Addresses
- Length of notification preservation

## Notifications and Notifier

Devices have the ability to push notifications out to an IP Address and port for proactive issue resolution. These notifications typically include alarm, video loss, motion, etc... See the device-specific chapters for what notifications are supported per device.

In order to receive notifications from devices in TruVision Navigator, there are configurations that need to be made at both the device and TruVision Navigator service-level.

**Device configuration** - each device must be set up to push its available notifications to the IP Address and port of where the Notification Services are located. See the device-specific chapters for detailed instructions per device.

**TruVision Navigator Service configuration** - the Notification Service settings must be configured to listen on that same port for those notifications.

**Note:** Routers and firewalls may have to be configured accordingly to allow for this traffic. Ensure that either the TCP Listener Port or the Email Listener Port (SMTP) on the Notifications Tab of the TruVision Navigator Server Properties dialog matches the port setup on the device itself.

TruVision Navigator offers you the ability to prune the notification data out of your database to keep the size down. Set the retention period for this data as such.

If any of these values are changed, please restart the Notification Writer and Notification Processor services via the Services dialog for the changes to take effect.

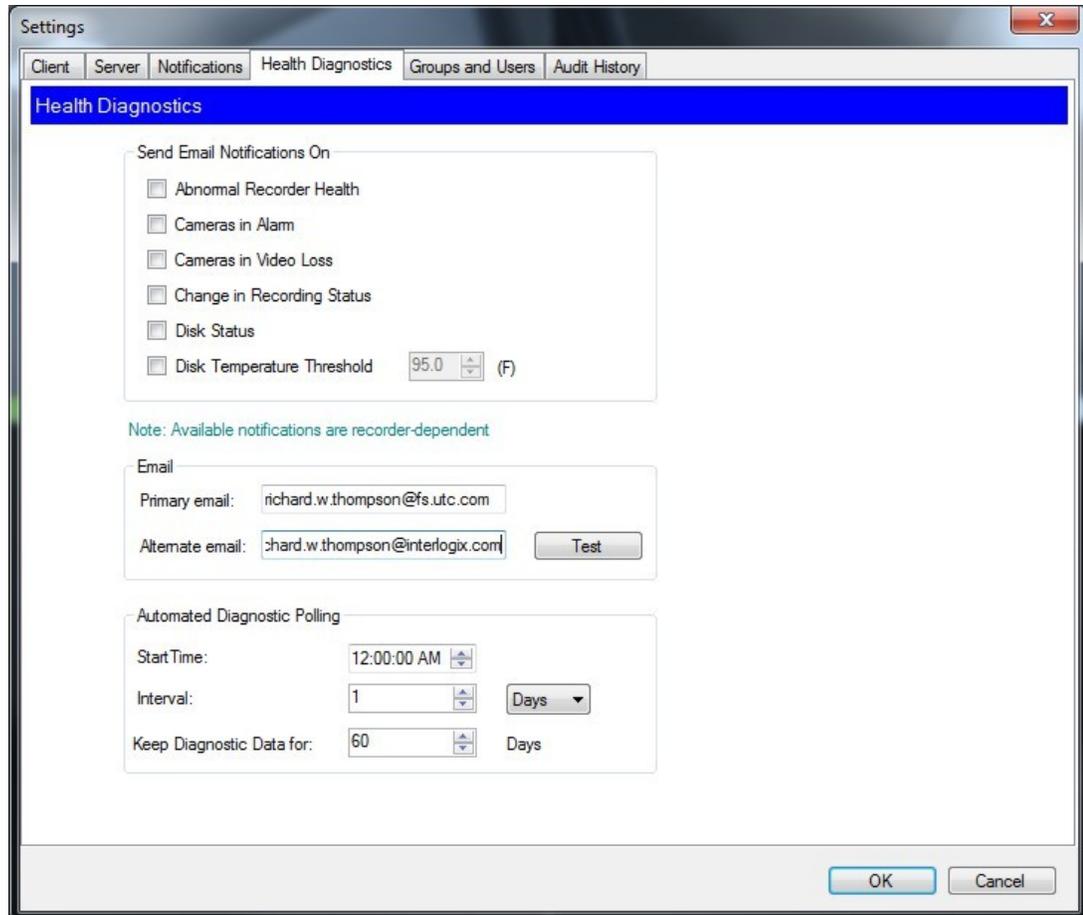
The central repository for notifications is the Notifier dialog. You can launch this dialog from the notification icon in the application status bar.

From the Notifier, you can view video for live notifications as they are received by double-clicking on the camera name link in the dialog. This will launch the video in the Viewer. New, unacknowledged notifications are signified with a red alert icon over the Notifier icon in the application status bar. You can also tie these live notifications to an audible sound. See the Settings section for more information on this feature.

Once a live notification is acknowledged, it is considered a stored or historic notification that can be searched. You can use the filters and time/date ranges to further define your notification search. While in search mode (View Stored), a red alert icon will appear over the Notifier icon in the application status bar if new live notifications are received. To view the new notifications, select View Live in the Notifier and then sort and filter on the columns as needed to find the latest notification. Double-click to access the video.

# Health Diagnostic Settings

Figure 64: Health Diagnostic window



The Health Diagnostics tab of Settings Window provides following server settings:

- Select Health events for notification
- Primary and Alternate Email Addresses
- Automated Diagnostic Polling

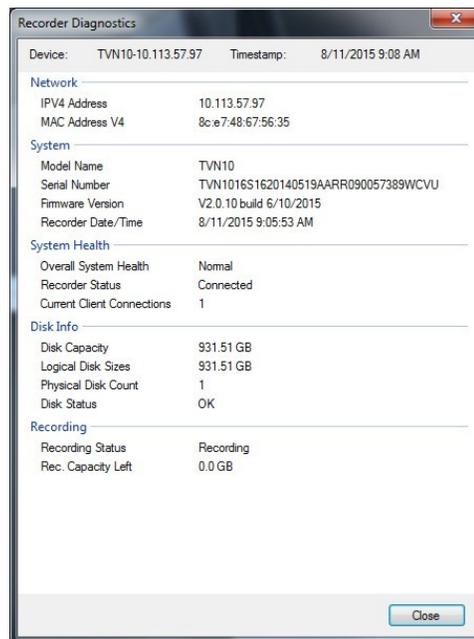
## Health Diagnostics

TruVision Navigator offers the ability to run a health diagnostic snapshot on a single device or aggregate health diagnostic reporting across all of the devices in the system.

To run a manual health diagnostic snapshot on a single device, right-click on the device in the Navigator and select Run Health Diagnostics.

The Diagnostics dialog will appear and show the full set of health diagnostic data for that particular device. See the device-specific chapters for more details on the different health diagnostics that are available per device.

**Figure 65: Recorder Diagnostics Window**



To run automated health diagnostic polling on an interval across all of the devices in the system, the Diagnostic Polling service must first be configured. To configure the Diagnostic Polling service, right-click on the TruVision Navigator Server node and select Properties. The Settings dialog will appear with the Server tab selected.

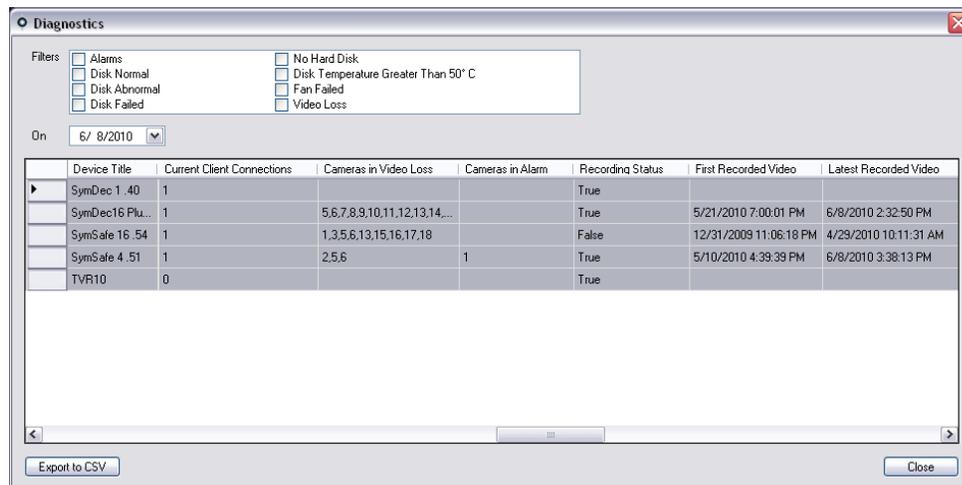
From the Health Diagnostics Tab, enter the Diagnostic Polling Start Time and Interval. Enter the retention period for the length of time to keep the health diagnostic polling data in the database and click OK. Finally, restart the Diagnostic Polling service from the Services dialog for the automated polling to begin. Remember, if any of these values are changed, please restart the Diagnostic Polling service via the Services dialog for the changes to take effect. (restarting the service in services dialog is only required on client/server type installations.)

Once manual snapshots or automated health diagnostic data has been captured, that data is stored in the TruVision Navigator database. That data is now searchable by users to aid in maintaining up-time of the system.

Remember if you are searching in the Navigator for health diagnostic information and no results can be found, you most likely have not setup your automated polling or run a manual diagnostic against a single device.

To review health diagnostic data for all devices, right-click on the Devices node in the Navigator and select Run Health Diagnostics. The Diagnostics dialog will appear. Use the filters and date parameter to pinpoint your search. You can export the contents of the dialog to .csv via the Export to CSV button for case management, work orders, or issue resolution documentation.

**Figure 66: Diagnostics Window**



## Device Report

TruVision Navigator lets the health diagnostics information to be exported by generating a device report. To generate the device report;

- Right click on a recorder
- Select Device Report

After selecting device report option, a new window will display.

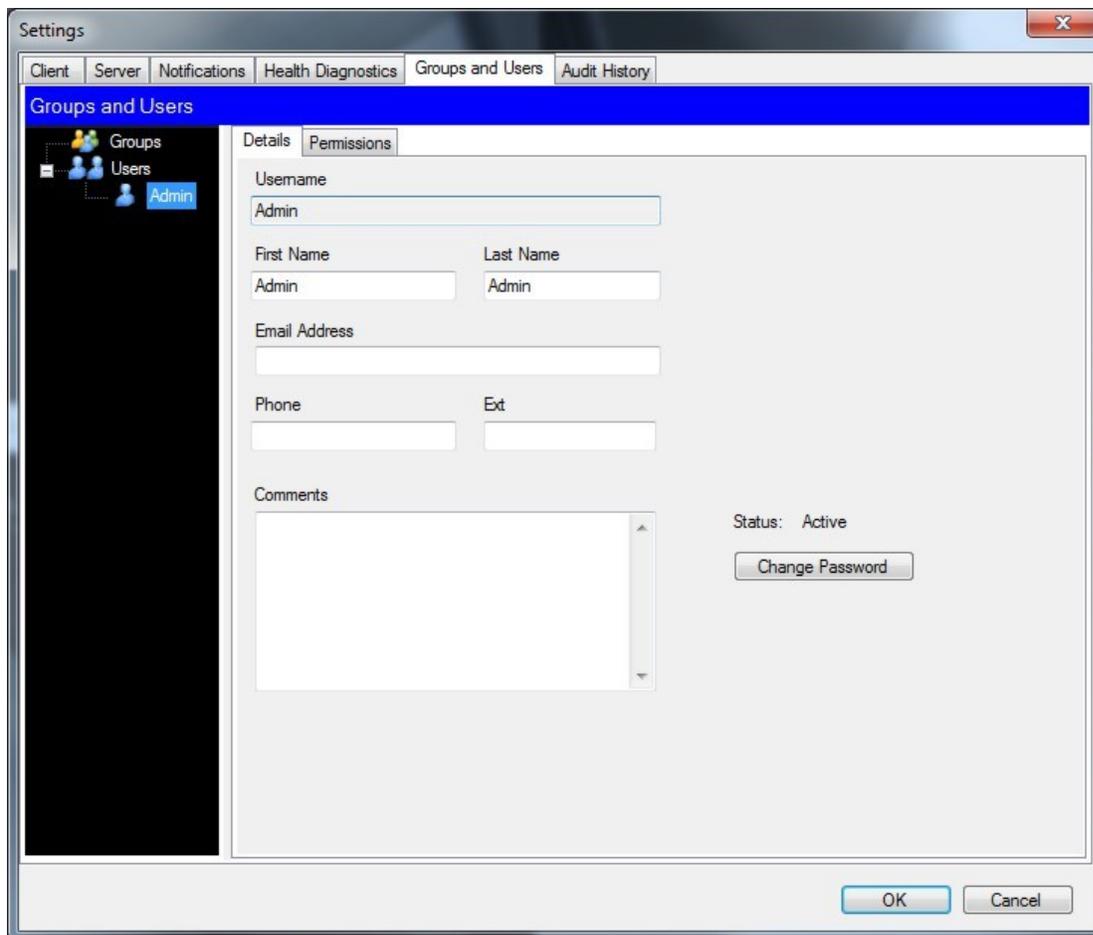
**Note:** It may take up to a minute to complete the device report, based on the number of cameras recording to the device, and the network connection.

As a part of the report, tampering monitor images are also provided at the end. For more information on tampering monitor, please see "Tampering Monitor" section.

Device report can be saved as .pdf or printed from the options given in the window toolbar.

# Groups and User Settings

Figure 67: Groups and User window



Group and User tab of Settings Window provides following server settings:

- Details
- Permissions Model

## Group management

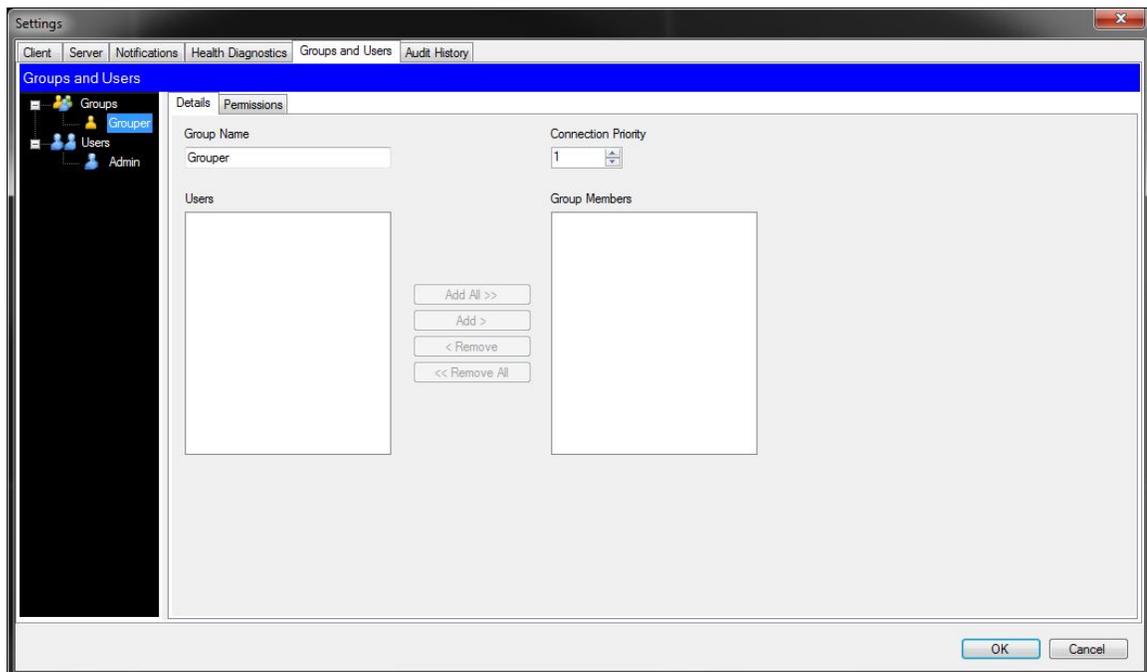
The Advanced Permission Model (on the TruVision Navigator Server Permissions dialog) allows you to utilize groups within TruVision Navigator. Groups allow you to scale user permissions in your system across many users. For instance, many users can be placed into a single group, and that single group can be assigned permissions against the folders/ devices in the system. Without groups, the Administrator would have to permission each user against those same devices.

Before you create a group, right-click on the TruVision Navigator Server node in the Navigator and select Permissions. The Permissions dialog will appear. Ensure the Permission Model is set to Advanced.

Now, right-click on the Groups node in the Navigator and select Add Group. Provide a name for the group on the Add Group dialog and click OK.

Right-click on the name of the group under the Groups node in the Navigator and select Permissions. The Group Permissions dialog will appear.

**Figure 68: Group Permissions Window**

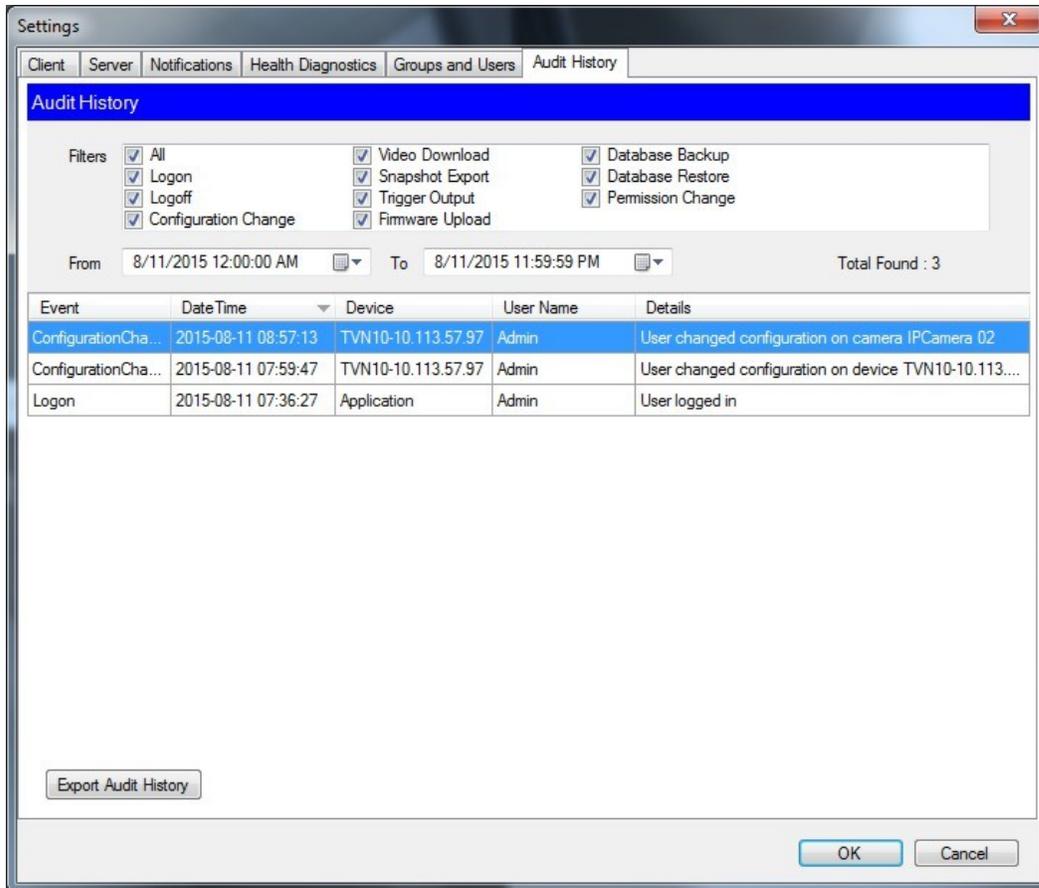


On the Details Tab, you can change the group name, add users to the group, and set the group's Connection Priority. On the Permission Tab, you can permission the group as appropriate.

On the Permissions Tab, you can assign permissions to the group across the devices in your system. Remember, these group permissions will affect all of the specific users that are members of the group.

## Audit History Settings

Figure 69: Audit History window



Audit History tab of Settings Window provides following server settings:

- Filters
- Date Range
- Export Audit History

## Help

TruVision Navigator offers an easy to use Help function for more detailed system instructions. You can also obtain TruVision Navigator version, copyright, and End-user License Agreement information here. Organizations have the ability to add their own custom Help or training link here to facilitate the adoption of the product.

Click on the question mark icon in the application status bar to launch the Help dialog.

**Figure 70: Help Dialog Window**



# Appendix A

## Device Details

### Summary

This Appendix contains important device information.

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### TruVision TVR10 (DVR)

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	

Feature	Support	Notes
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	24 Live or Playback streams simultaneously with a maximum of 6 streams per channel.	If connection lease is transferred among users when connection limit is reached, the user whose connection is taken will be disconnected from the device and all videos closed - see Connection Manager.
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	
Stream Nomenclature	The Mainstream is referred to as:  On-Screen-Display = Time Lapse Web Browser = Mainstream TruVision Navigator = Mainstream  The Sub stream is referred to as:  On-Screen-Display = N/A Web Browser = Sub stream TruVision Navigator = Sub stream	Event Stream is not supported on the device.
Playback Controls	Switch to Live Switch to Playback Play Pause Frame Advance Fast Forward (2x,4x)	Frame Reverse, Rewind, and Playback Speeds are not supported.  Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance.  When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.

<b>Feature</b>	<b>Support</b>	<b>Notes</b>
Instant Replay	Yes	There is a 2 to 5 minute video buffer in the device. While video is in the buffer, it cannot be viewed. Once the buffer fills, the video is written to the hard drive and is available for playback. This affects Instant Replay and the Playback button in TruVision Navigator. Those 2 features get their time increment from the user-defined Instant Replay configuration on the TruVision Navigator Server Properties Tab. As a result, set this time increment to greater than 5 minutes to be safe. If you try to search for video that is still in the buffer, you will be taken to Live video.
Disk Analysis	Alarm Motion Recorded Unknown	Video Loss is not supported in disk analysis. Disk analysis takes approximately 15-45 seconds depending on the amount of recorded data on the device.
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	
Presets	Yes	
Tours	Go To Record	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion	Text Search is not supported on the device.
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Configuration option associated with each camera.
Audio	Yes	There is 1 audio input per device. That input can be mapped to any camera on the device simply by enabling audio on that camera. Access the setting by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To setup the device to send TCP notifications for cameras, right-click on the device in the Navigator and select Configure Device. On the Camera Tab's Event Section, select the events you would like to receive and set the schedules as appropriate. On the Camera Tab's Rules Section, for each event type, ensure that "notify me" is selected. Repeat for each event type. On the Notifications Tab, the Notify IP Address should be the IP address of where the TruVision Navigator Server services are located (Notification Writer and Notification Processor). The Notify Port is defaulted to 5001 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server Properties dialog, Notifications Tab.</p> <p>To setup the device to send TCP notifications for the device itself (i.e. Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. On the Notification Tab, for each notification type, ensure that "notify me" is selected. Repeat for each notification type and click Save. Ensure the notification port on the device matches that of TruVision Navigator Server as described above.</p> <p>Restart both the Notification Writer and Notification Processor for TruVision Navigator to process the notifications.</p> <p>Email notification is not supported at the device-level.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	

Feature	Support	Notes
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	
Device log support	Yes	

## TruVision TVR11 / TVR12 (DVR)

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	64 Live or Playback streams simultaneously including those viewed via web alarm.	If connection lease is transferred among users when connection limit is reached, the user whose connection is taken will be disconnected from the device and all videos closed - see Connection Manager.
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	

Feature	Support	Notes
Stream Nomenclature	<p>The Mainstream is referred to as:</p> <p>On-Screen-Display = Time Lapse Web Browser = Mainstream TruVision Navigator = Mainstream</p> <p>The Sub stream is referred to as:</p> <p>On-Screen-Display = N/A Web Browser = Sub stream TruVision Navigator = Sub stream</p>	Event Stream is not supported on the device.
Playback Controls	<p>Switch to Live Switch to Playback Play Pause Frame Advance Fast Forward (2x,4x, 8x 16x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)</p>	<p>Frame Reverse, Rewind, and Playback Speeds are not supported.</p> <p>Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance.</p> <p>When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.</p>
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	<p>There is a 2 to 5 minute video buffer in the device. While video is in the buffer, it cannot be viewed. Once the buffer fills, the video is written to the hard drive and is available for playback. This affects Instant Replay and the Playback button in TruVision Navigator. Those 2 features get their time increment from the user-defined Instant Replay configuration on the TruVision Navigator Server Properties Tab. As a result, set this time increment to greater than 5 minutes to be safe. If you try to search for video that is still in the buffer, you will be taken to Live video.</p>
Disk Analysis	<p>Alarm Motion Recorded Unknown</p>	<p>Video Loss is not supported in disk analysis.</p> <p>Disk analysis takes approximately 15-45 seconds depending on the amount of recorded data on the device.</p>
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	

<b>Feature</b>	<b>Support</b>	<b>Notes</b>
Focus, Iris Control	Yes	
Presets	Yes	
Tours	Go To Record	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion Text	
POS Text	Yes	
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Configuration option associated with each camera.
Audio	Yes	There are 4 audio inputs per device. That input can be mapped to any camera on the device simply by enabling audio on that camera. Access the setting by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.
Bi-directional Audio	Yes	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To setup the device to send TCP notifications for cameras, right-click on the device in the Navigator and select Configure Device. On the Camera Tab's Event Section, select the events you would like to receive and set the schedules as appropriate. On the Camera Tab's Rules Section, for each event type, ensure that "notify me" is selected. Repeat for each event type. On the Notifications Tab, the Notify IP Address should be the IP address of where the TruVision Navigator Server services are located (Notification Writer and Notification Processor). The Notify Port is defaulted to 5001 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server Properties dialog, Notifications Tab.</p> <p>To setup the device to send TCP notifications for the device itself (i.e. Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. On the Notification Tab, for each notification type, ensure that "notify me" is selected. Repeat for each notification type and click Save. Ensure the notification port on the device matches that of TruVision Navigator Server as described above.</p> <p>Restart the Notification Processor service for TruVision Navigator to process the notifications. Email notification is not supported at the device-level.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	

Feature	Support	Notes
Bulk Configuration	Yes	
Device Log Support	Yes	
Remote Reboot	Yes	

## TruVision TVR41 / TVR42 (DVR)

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	64 Live or Playback streams simultaneously including those used by the web alarm.	If connection lease is transferred among users when connection limit is reached, the user whose connection is taken will be disconnected from the device and all videos closed - see Connection Manager.
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	

Feature	Support	Notes
Stream Nomenclature	<p>The Mainstream is referred to as:</p> <p>On-Screen-Display = Time Lapse Web Browser = Mainstream TruVision Navigator = Mainstream</p> <p>The Sub stream is referred to as:</p> <p>On-Screen-Display = N/A Web Browser = Sub stream TruVision Navigator = Sub stream</p>	Event Stream is not supported on the device.
Playback Controls	<p>Play</p> <p>Pause</p> <p>Frame Advance</p> <p>Fast Forward (1x, 2x, 4x, 8x, 16x)</p> <p>Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)</p> <p>Rewind (1x, 2x, 4x) -8 simultaneously</p>	<p>Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance.</p> <p>When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.</p>
Digital Zoom	Yes	
Snapshot	Yes	
Local Record	Yes	
Instant Replay	Yes	
Disk Analysis	<p>Alarm</p> <p>Motion</p> <p>Recorded</p> <p>Unknown</p>	<p>Video Loss is not supported in disk analysis.</p> <p>Disk analysis takes approximately 15-45 seconds depending on the amount of recorded data on the device.</p>
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	
Presets	Yes	
Tours	<p>Go To</p> <p>Record</p>	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).

<b>Feature</b>	<b>Support</b>	<b>Notes</b>
Camera Search	Alarm Event Motion Text	
Smart Search	Yes	Browser only
Point-of-Sale Text	Yes	
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Configuration option associated with each camera.
Audio	Yes	There are 4 audio inputs per device. That input can be mapped to any camera on the device simply by enabling audio on that camera. Access the setting by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.
Bi-directional Audio	Yes	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To setup the device to send TCP notifications for cameras, right-click on the device in the Navigator and select Configure Device. On the Camera Tab's Event Section, select the events you would like to receive and set the schedules as appropriate. On the Camera Tab's Rules Section, for each event type, ensure that "notify me" is selected. Repeat for each event type. On the Notifications Tab, the Notify IP Address should be the IP address of where the TruVision Navigator Server services are located (Notification Writer and Notification Processor). The Notify Port is defaulted to 5001 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server Properties dialog, Notifications Tab.</p> <p>To setup the device to send TCP notifications for the device itself (i.e. Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. On the Notification Tab, for each notification type, ensure that "notify me" is selected. Repeat for each notification type and click Save. Ensure the notification port on the device matches that of TruVision Navigator Server as described above.</p> <p>Restart the Notification Processor service for TruVision Navigator to process the notifications.</p> <p>Email notification is not supported at the device-level.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	

Feature	Support	Notes
Bulk Configuration	Yes	
Device Log Support	Yes	
Remote Reboot	Yes	

## TruVision Generic TVR / TVN

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	16 Live and 4 Playback streams	
Stream Overlay	No	
High / Low Bandwidth	No	
Dual Streaming	Yes	
Stream Nomenclature	The Mainstream is referred to as:  On-Screen-Display = Time Lapse Web Browser = Mainstream TruVision Navigator = Mainstream  The Sub stream is referred to as:  On-Screen-Display = N/A Web Browser = Sub stream TruVision Navigator = Sub stream	Event Stream is not supported on the device.

Feature	Support	Notes
Playback Controls	Play Pause Frame Advance Fast Forward (1x, 2x, 4x, 8x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x) Frame Reverse and Rewind Speeds are directly dependent on the actual device capabilities.	Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance.  When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.
Digital Zoom	Yes	
Snapshot	Yes	
Local Record	Yes	
Instant Replay	Yes	
Disk Analysis	Alarm Motion Recorded Unknown	Video Loss is not supported in disk analysis.  Disk analysis takes approximately 15-45 seconds depending on the amount of recorded data on the device.
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	
Presets	Yes	
Tours	Go To Record	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion Text	
Smart Search	No	
Point-of-Sale Text	Yes	
Motion	No	

<b>Feature</b>	<b>Support</b>	<b>Notes</b>
Audio	Yes	There are 4 audio inputs per device. That input can be mapped to any camera on the device simply by enabling audio on that camera. Access the setting by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.
Bi-directional Audio	No	
Notifications	No	
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	No	
Device Configuration	No	
Bulk Configuration	No	
Device Log Support	No	
Remote Reboot	Yes	

## TruVision TVR60 (Hybrid DVR)

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	48 Live or Playback streams simultaneously with a maximum of 6 streams per channel.	If connection lease is transferred among users when connection limit is reached, the user whose connection is taken will be disconnected from the device and all videos closed - see Connection Manager.
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	

Feature	Support	Notes
Stream Nomenclature	<p>The Main stream is referred to as:  On-Screen-Display = Time Lapse  Web Browser = Time Lapse  TruVision Navigator = Main stream</p> <p>The Sub stream is referred to as:  On-Screen-Display = Alarm  Web Browser = Alarm  TruVision Navigator = Sub stream</p> <p>The Event stream is referred to as:  On-Screen-Display = N/A  Web Browser = Event  TruVision Navigator = Event</p> <p>The Schedule stream is referred to as:  On-Screen-Display = Schedule  Web Browser = Schedule  TruVision Navigator = Schedule</p>	
Playback Controls	Switch to Live Switch to Playback Play Pause Frame Advance Fast Forward (2x,4x,8x,16x)	Frame Reverse, Rewind, and Playback Speeds are not supported. Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance. When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.

Feature	Support	Notes
Instant Replay	Yes	There is a 2 to 5 minute video buffer in the device. While video is in the buffer, it cannot be viewed. Once the buffer fills, the video is written to the hard drive and is available for playback. This affects Instant Replay and the Playback button in TruVision Navigator. Those 2 features get their time increment from the user-defined Instant Replay configuration on the TruVision Navigator Server Properties Tab. As a result, set this time increment to greater than 5 minutes to be safe. If you try to search for video that is still in the buffer, you will be taken to Live video.
Disk Analysis	Alarm Motion Recorded Unknown	Video Loss is not supported in disk analysis. Disk analysis takes approximately 45 to 90 seconds depending on the amount of recorded data on the device.
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	PTZ protocol ge RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion	Text Search is not supported on the device.
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Configuration option associated with each camera.
Audio	Yes	There are 16 audio inputs per device (1 per channel). Enabling audio on the device is a per channel setting. Access the settings by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To setup the device to send TCP notifications for cameras, right-click on the device in the Navigator and select Configure Device. On the Camera Tab's Event Section, select the events you would like to receive and set the schedules as appropriate. On the Camera Tab's Rules Section, for each event type, ensure that "notify me" is selected. Repeat for each event type. On the Notifications Tab, the Notify IP Address should be the IP address of where the TruVision Navigator Server services are located (Notification Writer and Notification Processor). The Notify Port is defaulted to 5001 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server Properties dialog, Notifications Tab.</p> <p>To setup the device to send TCP notifications for the device itself (i.e. Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. On the Notification Tab, for each notification type, ensure that "notify me" is selected. Repeat for each notification type and click Save. Ensure the notification port on the device matches that of TruVision Navigator Server as described above.</p> <p>Restart both the Notification Writer and Notification Processor for TruVision Navigator to process the notifications.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	

Feature	Support	Notes
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Cameras	<p>UTC CamPlus2 IP Models - Firmware:</p> <p>UTCC-IP2VD-DN - V1.00E3</p> <p>UTCC-IP2VD-DNP - V1.00E3</p> <p>UTCC-IP2D - V1.00E2</p> <p>UTCC-IP2D-P - V1.00E2)</p> <p>UTCC-IP2B - V1.00E2)</p> <p>UTCC-IP2B-P - V1.00E2)</p> <p>UTC UltraView IP - Firmware:</p> <p>UVC-IP-EVRDN-HR - 4.2.1, 53820</p> <p>UVD-IP-EVRDNR - 4.2.1, 53820</p> <p>UVC-IP-EVRDN-HR-P - 4.2.1, 53820</p> <p>UVD-IP-EVRDNR-P - 4.2.1, 53820</p> <p>UVC-IP-XP3DN-HR - 4.2.1, 53820</p> <p>UVD-IP-XP3DNR - 4.2.1, 53820</p> <p>UVC-IP-XP3DN-HR-P - 4.2.1, 53820</p> <p>UVD-IP-XP3DNR-P - 4.2.1, 53820</p> <p>UTC UltraView Encoder - Firmware:</p> <p>UVE-101/DC105 (NTSC) - 4.2.1, 53820</p> <p>UVE-101/DC105 (PAL) - 4.2.1, 53820</p> <p>UTC TruVision H.264 Models TBD</p> <p>Panasonic I-Pro Network Cameras - Firmware:</p> <p>NW484S - 1.50E2</p> <p>NF284 - 1.50E2</p> <p>NP-244 - 1.80E4</p>	<p>Adding the UltraView IP or Encoder to the device via TruVision Navigator can take 10-20 seconds.</p> <p>The UltraView IP or Encoder can take 10-20 seconds to stream video once its configuration has been changed.</p> <p>Motion JPEG is not supported on the CamPlus2.</p> <p>If IP cameras are added through the device's OSD or Web Browser, they MUST be added in sequential order in the 16 available slots on the device (i.e. 1, 2, 3, and 4).</p> <p>The device supports up to 8 IP cameras.</p> <p>For the TruVision H.264 IP Camera, turn off Display Name and Display OSD via the camera's Web Browser or you will see duplicate time/date stamps overlaid on the video – 1 from the camera and 1 from TruVision Navigator.</p>

## TruVision TVN10/20/21/50 (NVR)

Feature	Support	Notes
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	TVN20: 48 Live or Playback streams simultaneously with a maximum of 6 streams per channel. TVN21/50: 128 Live or Playback streams simultaneously with a maximum of 6 streams per channel.	If connection lease is transferred among users when connection limit is reached, the user whose connection is taken will be disconnected from the device and all videos closed - see Connection Manager.
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	

Feature	Support	Notes
Stream Nomenclature	<p>The Main stream is referred to as:  On-Screen-Display = Time Lapse  Web Browser = Time Lapse  TruVision Navigator = Main stream</p> <p>The Sub stream is referred to as:  On-Screen-Display = Alarm  Web Browser = Alarm  TruVision Navigator = Sub stream</p> <p>The Event stream is referred to as:  On-Screen-Display = N/A  Web Browser = Event  TruVision Navigator = Event</p> <p>The Schedule stream is referred to as:  On-Screen-Display = Schedule  Web Browser = Schedule  TruVision Navigator = Schedule</p>	
Playback Controls	Switch to Live Switch to Playback Play Pause Frame Advance Fast Forward (2x,4x,8x,16x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)	Frame Reverse and Rewind Speeds are not supported. Video jumps back 4 seconds after resume playback from Fast Forward and Frame Advance. When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile will remain paused until the user clicks the Live button in the Controller. No other playback controls will work until the Live button is selected.
Digital Zoom	Yes	Live & Playback
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.

Feature	Support	Notes
Instant Replay	Yes	There is a 2 to 5 minute video buffer in the device. While video is in the buffer, it cannot be viewed. Once the buffer fills, the video is written to the hard drive and is available for playback. This affects Instant Replay and the Playback button in TruVision Navigator. Those 2 features get their time increment from the user-defined Instant Replay configuration on the TruVision Navigator Server Properties Tab. As a result, set this time increment to greater than 5 minutes to be safe. If you try to search for video that is still in the buffer, you will be taken to Live video.
Disk Analysis	Alarm Motion Recorded Unknown	Video Loss is not supported in disk analysis. Disk analysis takes approximately 45 to 90 seconds depending on the amount of recorded data on the device.
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	PTZ protocol ge RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only 1 tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion	Text Search is not supported on the device.
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Configuration option associated with each camera.
Audio	Yes	There are 16 audio inputs per device (1 per channel). Enabling audio on the device is a per channel setting. Access the settings by going to the device configuration, and enabling the audio option on the Recording Tab for each camera. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer and selected, the audio will play.
Bi-directional Audio	No	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To setup the device to send TCP notifications for cameras, right-click on the device in the Navigator and select Configure Device. On the Camera Tab's Event Section, select the events you would like to receive and set the schedules as appropriate. On the Camera Tab's Rules Section, for each event type, ensure that "notify me" is selected. Repeat for each event type. On the Notifications Tab, the Notify IP Address should be the IP address of where the TruVision Navigator Server services are located (Notification Writer and Notification Processor). The Notify Port is defaulted to 5001 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server Properties dialog, Notifications Tab.</p> <p>To setup the device to send TCP notifications for the device itself (i.e. Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. On the Notification Tab, for each notification type, ensure that "notify me" is selected. Repeat for each notification type and click Save. Ensure the notification port on the device matches that of TruVision Navigator Server as described above.</p> <p>Restart both the Notification Writer and Notification Processor for TruVision Navigator to process the notifications.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Date/Time Total Device Health HDD Status HDD Capacity Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	For TVN21 and TVN50, Synchronize IP Camera option should be enabled to have camera parameters applied completely.

Feature	Support	Notes
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Cameras	<p>UTC CamPlus2 IP Models - Firmware:</p> <p>UTCC-IP2VD-DN - V1.00E3</p> <p>UTCC-IP2VD-DNP - V1.00E3</p> <p>UTCC-IP2D - V1.00E2</p> <p>UTCC-IP2D-P - V1.00E2)</p> <p>UTCC-IP2B - V1.00E2)</p> <p>UTCC-IP2B-P - V1.00E2)</p> <p>UTC UltraView IP - Firmware:</p> <p>UVC-IP-EVRDN-HR - 4.2.1, 53820</p> <p>UVD-IP-EVRDNR - 4.2.1, 53820</p> <p>UVC-IP-EVRDN-HR-P - 4.2.1, 53820</p> <p>UVD-IP-EVRDNR-P - 4.2.1, 53820</p> <p>UVC-IP-XP3DN-HR - 4.2.1, 53820</p> <p>UVD-IP-XP3DNR - 4.2.1, 53820</p> <p>UVC-IP-XP3DN-HR-P - 4.2.1, 53820</p> <p>UVD-IP-XP3DNR-P - 4.2.1, 53820</p> <p>UTC UltraView Encoder - Firmware:</p> <p>UVE-101/DC105 (NTSC) - 4.2.1, 53820</p> <p>UVE-101/DC105 (PAL) - 4.2.1, 53820</p> <p>UTC TruVision H.264</p> <p>TVC-M1120-1-N</p> <p>TVD-M1120V-3-N</p> <p>TVC-M2110-1-N</p> <p>TVD-M2110V-3-N</p> <p>TVD-M2110-2-N</p> <p>Panasonic I-Pro Network Cameras - Firmware:</p> <p>NW484S - 1.50E2</p> <p>NF284 - 1.50E2</p> <p>NP-244 - 1.80E4</p>	<p>See “device feature matrix” at <a href="http://www.interlogix.com">www.interlogix.com</a> for updated information.</p> <p>Adding the UltraView IP or Encoder to the device via TruVision Navigator can take 10-20 seconds.</p> <p>The UltraView IP or Encoder can take 10-20 seconds to stream video once its configuration has been changed.</p> <p>Motion JPEG is not supported on the CamPlus2.</p> <p>If IP cameras are added through the device’s OSD or Web Browser, they MUST be added in sequential order in the 16 available slots on the device (i.e. 1, 2, 3, and 4).</p> <p>The device supports up to 8 IP cameras.</p> <p>For the TruVision H.264 IP Camera, turn off Display Name and Display OSD via the camera’s Web Browser or you will see duplicate time/date stamps overlaid on the video – 1 from the camera and 1 from TruVision Navigator.</p>
Device Log Support	Yes	