



TruVision Navigator 7.1 User Manual

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Chapter 1

Introduction

TruVision® Navigator by Interlogix® represents the latest advancement in video management system software, delivering powerful centralized and remote video management capabilities combined with backward compatibility to accommodate legacy recorders and TruVision DVRs, NVRs, and TruVision IP cameras.

Navigator is scalable for deployment in either SMB or SME environments since it can be used as a standalone application or in a client/server architecture.

Default credentials

The default credentials for TruVision Navigator are:

- **User Name** – admin
- **Password** – admin

See “Initial login” on page 20 for further information.

TruVision Navigator user interface

The Navigator user interface is comprised of main window panels and components as well as buttons that launch program functions and options. See Figure 1 on page 11.

Figure 1: Main window



- 1 **Navigator toolbar.** Contains the Navigator main menu drop-down list (includes **Settings**, **Device Manager**, **Bookmark Manager**, **Tasks**, **Open Exported Video File**, **Storage Calculator**, **Help**, and **Logout**), the **Search** field, and the **Add Devices** and **Add Folders** buttons
- 2 **Navigator panel.** Contains recorders, cameras, maps, websites, access control points, and logical views that can be organized within folders.
- 3 **Viewer panel.** Multiple tabbed viewing panels (up to 10) can be added by clicking on the **+** button.
- 4 **Event Monitor.** A detachable viewing window to view live video from cameras linked to the notifier.
- 5 **Notifier panel.** View real time events coming from TruVision devices. Contains links to video event notifications as well as the **Details** button that launches the Event Center window. Also contains a **Filters** menu to filter event types shown in the Notifier.
- 6 **Collector panel.** Contains all relevant video segments, snapshots, and local recordings ready for export. Also contains the **Export**, **Select All**, and **Trash** buttons.
- 7 **System indicators.** Contains CPU and Memory usage meters as well as server and keypad connection status. Move the mouse pointer over the meters to see the percentage of CPU and amount of memory in current use.
- 8 **Playback controls.** Control playback and recording of video.
- 9 **Timeline.** Provides a graphical view of recorded video over a period of time. Contains **Live** and **Sub stream** toggle controls, **Zoom In/Out**, **Center TimeLine**, **Add Bookmark to Video**, **Jump to the previous bookmark**, **Jump to the next bookmark**, **Bookmarks show/hide on Timeline**, **Go To Date**, **Save Video**, **Snapshot**, **PTZ Controls**, and **Push to Talk** buttons. Color coded video tags are defined in the bottom left underneath the timeline. See Appendix B “Device details” on page 125 for details on what types of video tagging is available for applicable devices.

The Navigator and Notifier/Collector panels are resizable by dragging the vertical left or right splitter bars. Arrow icons on the side of the panels hide or unhide the panel to

provide custom layout styles. Navigator remembers custom panel layouts on logout and restores them after the next login (see “Custom view” on page 93).

User interface languages










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









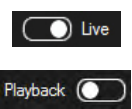
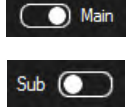







After launching the Navigator Setup.exe program, the InstallShield Wizard auto-detects the language setting on the computer and, if it is supported, translates the user interface to that language. If the language detected is not supported, the InstallShield Wizard defaults to English. The same auto-detection conditions occur when launching the Navigator client.




Buttons and indicators

The following table describes the function of each button and indicator in the top-level view of the Navigator application.



Note: Not all buttons and indicators listed are supported by all devices.

Button	Description
Navigator panel	
	Navigator menu drop-down list that contains the following:
	Settings. See “Settings” on page 23.
	Device Manager. See Chapter 4 “Device Manager” on page 49.
	Bookmark Manager. Edit and delete bookmarks, or play back bookmarked video. See “Bookmark manager” on page 46.
	Tasks. Monitor scheduled tasks such as video exports, database backups, and database restores. See “Tasks” on page 46.
	Open Exported Video File. Browse for and launch an exported video in the Viewer.
	Storage Calculator. Select recorder and camera details to estimate total storage per day (in GB) value. See “Storage calculator” on page 47.
	Help. Includes a Help file as well as version, copyright, and end user license agreement information. Custom Help or training links can be added to this menu for specific uses. See “Custom Help” on page 27.
	Logout. Log out of the Navigator program. Logging out permits another user to log in on the same machine.




Button	Description
	Add Devices. Add recorders and cameras to the device panel. See “Adding devices (recorders and cameras)” on page 60
	Add Folder. Organize devices in the device panel by adding folders. See “Adding folders” on page 73.
Viewer panel	
	Custom/sequence view. Use custom views to define and save view templates for future use and set up camera sequencing. See “Custom view” on page 93.
	Lock Current Layout. Prevents changes to the current viewer panel setup.
	Select all. Select all tiles in the viewer or collector.
	Toggle. Toggle between normal view and maximized view.
	Close All. Close all tiles in the viewer.
	New Viewer. Add a tabbed viewing panel (10 maximum)
	Live and Playback stream toggle control.
	Main and Sub stream toggle control. See “Stream” on page 100.
	Add Bookmark. Add a bookmark with notes to the camera timeline for quick navigation to a marked incident. See “Bookmarks” on page 91.
	Save Video. Send a video segment of the time range selected and highlighted in green in the timeline to the Collector for export. See “Timeline” on page 90.
	Snapshot. See “Snapshot” on page 97.
	PTZ control. Launches the PTZ window. See “PTZ control” on page 95.
	Push to Talk. Speak through an attached microphone into a selected recorder or camera that has speakers installed.
	Move to previous/Move to next bookmark on the timeline.
	Show/Hide bookmarks on the timeline. These icons only appear when a single video tile is selected.

Button	Description
	Zoom In/Out on the timeline. Zoom out to the date level and zoom in to the minute level.
	Center the timeline to the location of the green timeline cursor.
	Go To Date of recorded video





Notifier panel

	Filters. Select color coded notification filters to see notifications in the Notifier based on specific criteria.
	Event Center. Launches the Event Center, which contains a list of notifications sent from Navigator devices.

Collector panel



	Export. See “Export video and snapshots” on page 106.
	Select/Deselect All. Select all items in the collector.
	Delete All Collector Items. Delete all items in the collector.






Admin

	Server Online. Indicates that the server is online in a client/server installation.
	Server Offline. Indicates that the server is offline. See Chapter 9 “Server offline mode” on page 108.
	Keypad status. Indicates that the keypad is connected to the client computer.
	Keypad Not Connected. Indicates that the keypad is not connected to the client computer.

Playback controls

The following table describes each playback control in the Navigator application.

Button	Description
	Frame Step Reverse. Go to previous frame.
	Rewind. Rewind video.

Button	Description
	Pause. Pause video.
	Play. Play back video. Clicking the Play button multiple times increases playback speed.
	Fast Forward. Fast forward video.
	Frame Step Forward. Go to next frame.
	Local Record. See “Local record” on page 91.

Chapter 2

Installation

Installation options

There are two installation options for TruVision Navigator. The core features and functions remain the same regardless of which of the two installation options are selected.

Standalone model – This installation option permits the client and database to reside on the same computer. No other clients on the network can connect to the database on this computer. This installation option is ideal for small, standalone systems.

Multi-client model (traditional client/server) – This installation option permits the client and server to reside on the same or separate computers. This installation option is ideal for larger systems with many geographically dispersed users, computers, and recording devices.

Administrator rights are required to install Navigator on a computer, but the application is available to any user that successfully logs in to a Windows® account on that computer.

Installation prerequisites

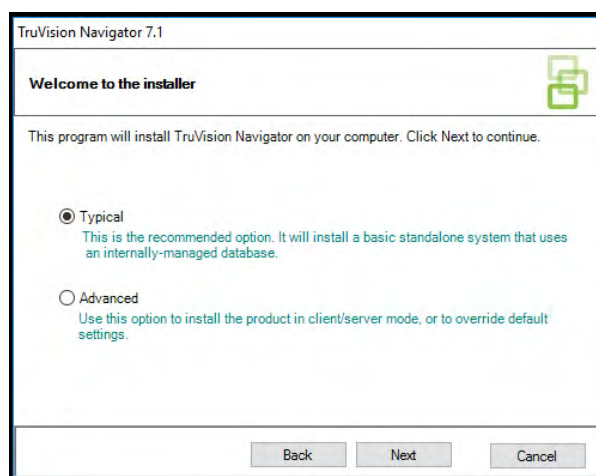
For each computer:

- Download the latest operating system service pack from the Microsoft Download Center.
- Check for Windows updates at <http://update.microsoft.com>.
- Download the latest video driver.
- For the minimum software and hardware requirements, see Appendix A “Minimum system requirements” on page 119.

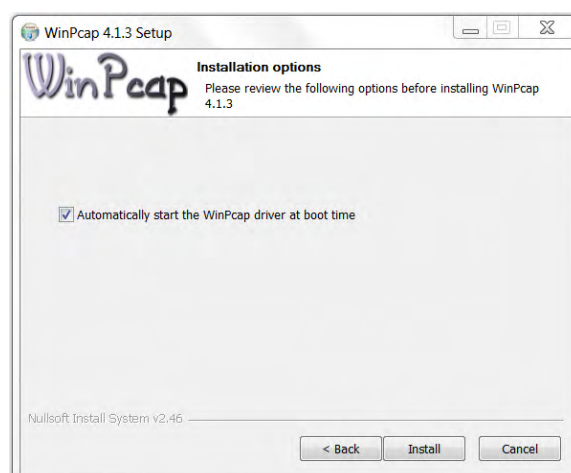
Installation – standalone mode

To install a new standalone instance of TruVision Navigator:

1. Double-click the TruVision Navigator Setup.exe installer to begin the installation. If prompted, right-click on the Setup.exe file and select **Run as Administrator**.
2. If necessary, click **Yes** in the User Account Control window to make changes to the computer.
3. The End User License Agreement window appears. Select the **I Accept these terms and conditions** check box and then click **Next** to continue.
4. The Welcome window appears. Select **Typical** or **Advanced** (to change the default installation location), and then click **Next**.



5. *Advanced installation only:* Accept the default installation folder or click ... to select a different location and then click the **Next** button.
6. The Confirm Selections window appears. Click **Install**.
7. The WinPcap Setup Wizard appears. Click **Next** to continue.
8. The WinPcap License Agreement window appears. Click **I Agree** to continue.
9. The Installation options window appears. The **Automatically start the WinPcap driver at boot time** check box is selected by default. Click **Install** to continue.

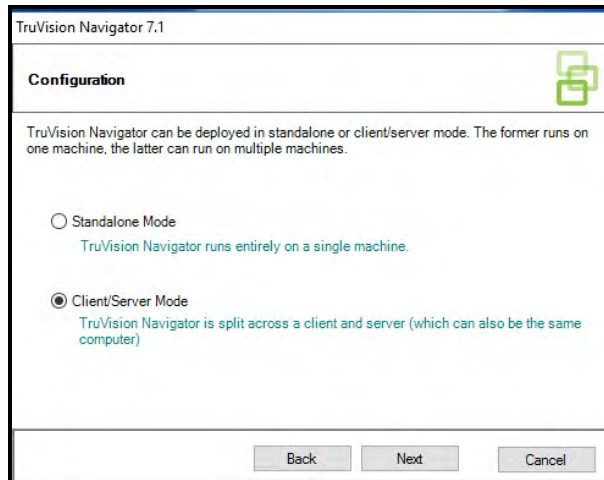


10. Click **Finish** to continue.
11. Click **Close** to complete the installation.

Installation – client/server mode

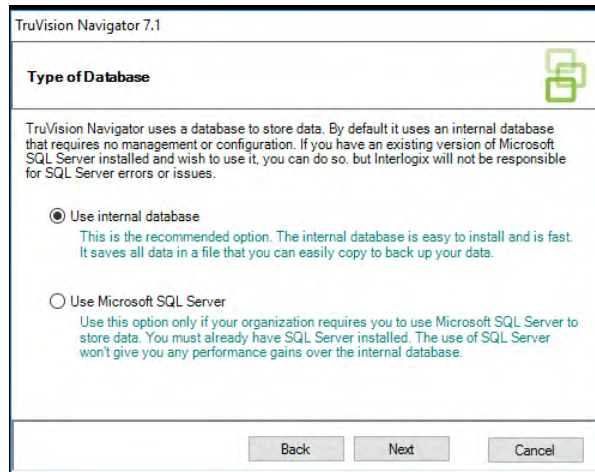
To install a new client/server instance of TruVision Navigator:

1. Double-click the TruVision Navigator Setup.exe installer to begin the installation. If prompted, right-click on the Setup.exe file and select **Run as Administrator**.
2. Click **Yes** to make changes to the computer.
3. The End User License Agreement window appears. Select the **I Accept these terms and conditions** check box and then click **Next** to continue.
4. The Welcome window displays. Select **Advanced** for a client/server installation, and then click **Next**.
5. The Installation Folder window appears. Click the **Next** button to accept the default installation folder or click ... to select a different location.
6. The Configuration window appears. Select the **Client/Server Mode** radio button and click **Next** to continue.



7. The Type of Database window appears. Select **Use internal database** (recommended option) and then click **Next**. If the organization requires use of Microsoft SQL Server and it is already installed, select **Use Microsoft SQL Server** and then click **Next**.

Note: Interlogix will not be responsible for SQL Server errors or issues.



8. The Confirm Selections window appears. Click **Install**.
9. The WinPcap Setup Wizard appears. Click **Next** to continue.
10. The WinPcap License Agreement window appears. Click **I Agree** to continue.
11. The Installation options window appears. The **Automatically start the WinPcap driver at boot time check box** is selected by default. Click **Install** to continue.
12. Click **Finish** to continue.
13. Click **Close** to complete the installation.

Note: Recorders connected to the network must be reachable over the network from the Navigator server computer. If there are firewalls between the server computer and the recorder network, make sure to open the following inbound ports into the recorder network:

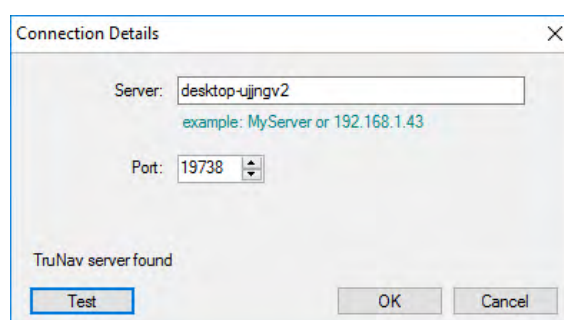
1. The HTTP ports used by all recorders on the network.
2. The Command ports used by all recorders on the network.

By default, recorders use 80 for HTTP and 8000 for Command traffic. If the server computers can't connect to the recorders, the following features will not work:

- Automatic Diagnostic Polling.
- Device Health Checking.

Connection details


Click **Connection Details** in the login screen in client/server mode to view and/or change the default server name and port number, and to test the server connection.



Initial login

To log into TruVision Navigator for the first time:

1. After successful installation, launch TruVision Navigator using one of the following methods:
 - Double-click the TruVision Navigator icon on the desktop.
 - Go to **Start > All Programs/Apps > TruVision Navigator**.
2. When TruVision Navigator launches, a login window appears. Log in as the default administrator by typing in the following default credentials:
 - **User Name** – admin
 - **Password** – admin

Note: The user name and password are masked by default. Click  to reveal the user name and password.



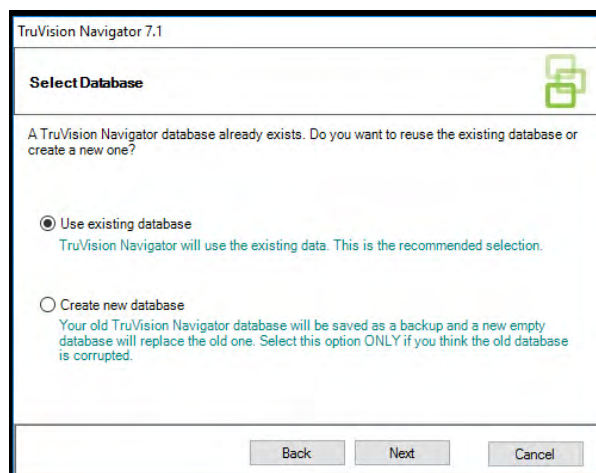
3. Click **Login**. After initial login, the Change Password window displays and prompts to change the default password for security purposes.
4. Type the new password in the **Password** field.
5. Re-type the password in the **Confirm Password** field.
6. Select a question from the **Challenge Question** drop-down list.
7. Type the answer to the challenge question in the **Challenge Answer** field.
8. Click **OK**.

If you forget the password set up during initial login, click the **Forgot?** button in the Login window to answer the challenge question, change the password, and re-enter the application without calling for assistance.

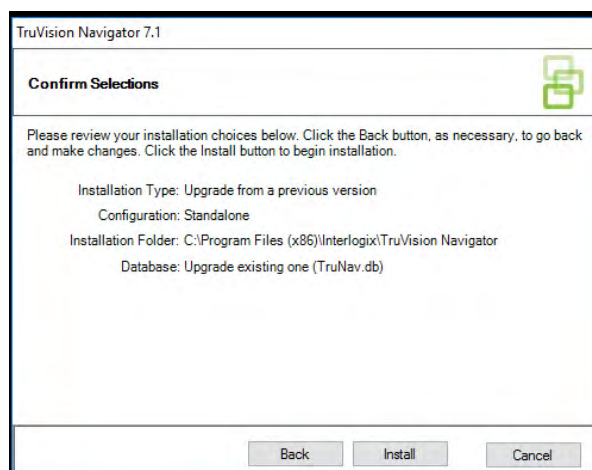
If the **Challenge Answer** cannot be obtained to recover the password, click the **Forgot?** button again and call the UTC technical support team with the “tech support key” automatically provided in the related field. The technical support team can recover the password with this information.

Upgrading an existing installation

1. Double-click the new TruVision Navigator Setup.exe installer to begin the installation. If prompted, right-click on the Setup.exe file and select **Run as Administrator**.
2. Click **Yes** to make changes to the computer.
3. The End User License Agreement window appears. Select the **I Accept these terms and conditions** check box and then click **Next** to continue.
4. The Welcome window displays. Select **Advanced** for a client/server installation, and then click **Next**.
5. The Installation Folder window appears. Click the **Next** button to accept the default installation folder.
6. The Configuration window appears. Select the required configuration mode and then click **Next** to continue.
9. The Select Database window appears. Select the **Use existing database** option (recommended) and then click **Next**. If the organization requires use of Microsoft SQL Server and it is already installed, select **Use Microsoft SQL Server** and then click **Next**.



10. The Confirm Selections window appears. Click **Install**.

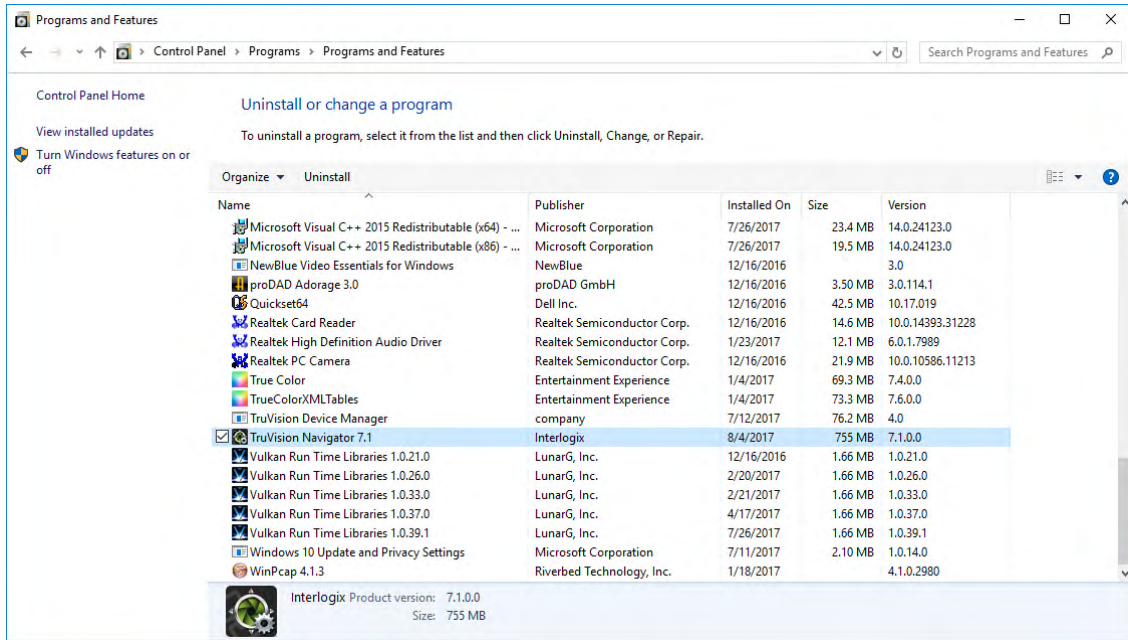


11. Click **Close** to complete the installation.

Uninstall

To uninstall Navigator:

1. Launch the Programs and features application from the Windows Control Panel.
2. Navigate to TruVision Navigator and click **Uninstall**.



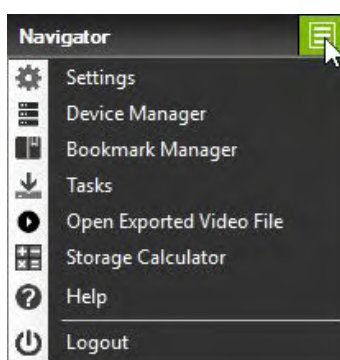
3. Click **Yes** to make changes to the computer.
4. The Uninstaller window appears. If required, select the **Also delete the TruVision Navigator database** check box before clicking **Uninstall**.
5. The Uninstalling Product window appears, followed by the Product Uninstalled window. Click **Close** and restart the computer.

Note: This process removes all TruVision Navigator files and logs from the computer. No registry edits are necessary to remove Navigator from the computer. The NTP service and WinPcap programs should also be uninstalled for complete removal of all files installed during Navigator installation.

Chapter 3

Navigator main menu

Click the button at the top of the Navigator panel to display the Navigator main menu drop-down list.



Settings

For both the standalone and multi-client installation models, the TruVision Navigator client and server can be configured for specific features using the Settings window.

To access the Settings window, click the Navigator menu button in the Navigator title bar and then select **Settings**.

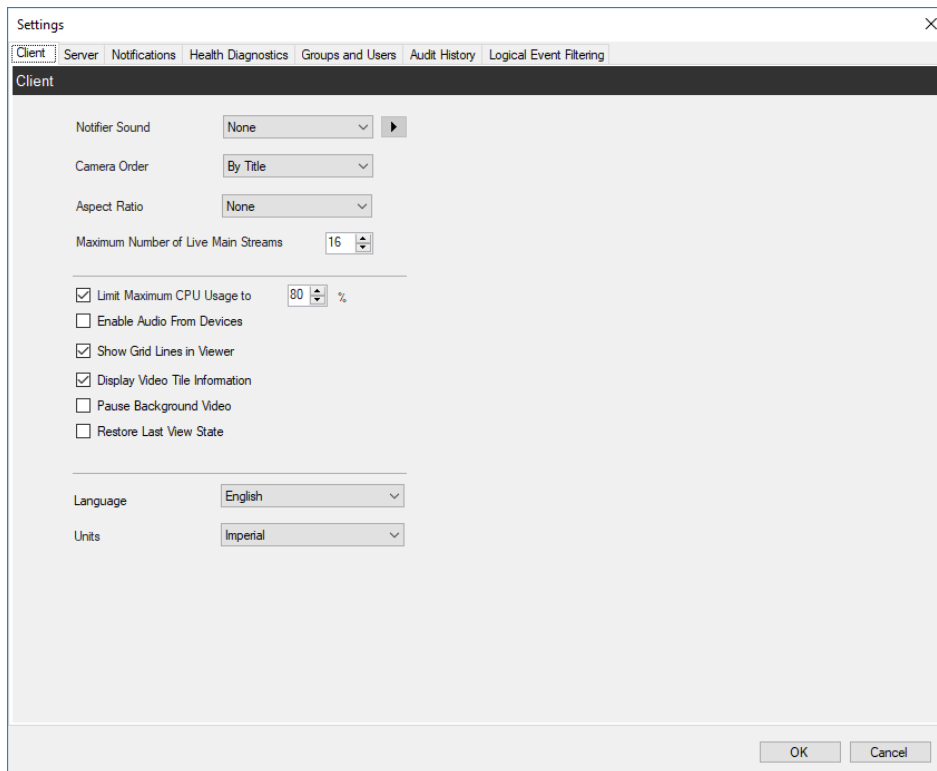
Note: User and/or group permissions are required to see all tabs in the Settings window. See “Permission models” on page 36 for further information.

The following configuration tabs are available in the Settings window:

- **Client** – Includes a variety of settings that apply to each client station.
- **Server** – Includes the SMTP server settings, permission settings, instant replay duration custom help link settings, and server/client URL information.
- **Notifications** – Includes the port settings necessary to receive events from each device, email notification settings, and a filter of specific notification types.
- **Health Diagnostics** – Includes a filter of diagnostics to be received, as well as email settings to receive notifications of diagnostics information. Automatic diagnostic polling can also be scheduled from this menu.

- **Groups and Users** – Add new users and user logins, assign permissions, and create groups in this tab.
- **Audit History** – Set event filters and a time range for viewing user activity.
- **Logical Event Filtering** – Set customized, interdependent notifications from cameras and TruPortal access control systems.

Client

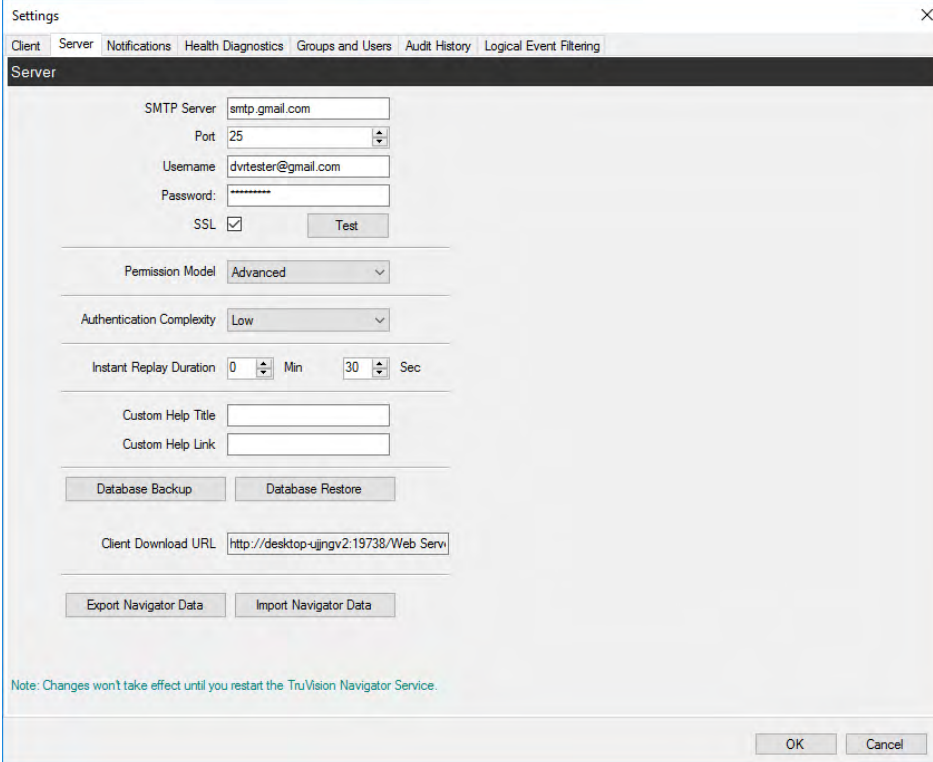


Client settings apply to each client station. These settings include:

- **Notifier Sound** – Enable the alert sound when new device notifications are received in the Notifier panel. Click the ► button next to the **Notifier Sound** drop-down list to preview the selected sound.
- **Camera Order** – Arrange cameras in the Navigator panel by title or number.
- **Aspect Ratio** – Enable the aspect ratio (**4:3** or **16:9**) for live and playback video in the Viewer.
- **Maximum Number of Live Main Streams** – Set the maximum number of live main streams. When set to 0 (zero), only substreams display.
- **Limit Maximum CPU Usage to** – Set the maximum CPU threshold to prevent the client machine CPU from reaching 100% during video rendering.
- **Enable Audio From Devices** – Turn on audio from applicable devices.
- **Show Grid Lines in Viewer** – Remove/show gridlines between video tiles in the Viewer.
- **Display Video Tile Information** – Remove/show camera title and time and date.

- **Pause Background Video** – Pause video not running in the current view in Navigator. This selection closes the video streams that are not currently being viewed. Use this setting if bandwidth usage is an issue. There will be a slight delay when switching to the background views.
Note: Background video remains active for 30 seconds before pausing.
- **Restore Last View State** – Cameras, views, and tile layouts are restored to their previous state after exiting and restarting Navigator.
- **Language** – Select the preferred language for the user interface in this drop-down list.
- **Units** – Select **Imperial** or **Metric** units of measure.

Server



The screenshot shows the 'Settings' window with the 'Server' tab selected. The settings are as follows:

- SMTP Server: smtp.gmail.com
- Port: 25
- Username: dvrtester@gmail.com
- Password: [Redacted]
- SSL: Test
- Permission Model: Advanced
- Authentication Complexity: Low
- Instant Replay Duration: 0 Min 30 Sec
- Custom Help Title: [Empty]
- Custom Help Link: [Empty]
- Database Backup: [Button]
- Database Restore: [Button]
- Client Download URL: http://desktop-ujngv2:19738/Web Serv
- Export Navigator Data: [Button]
- Import Navigator Data: [Button]

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

The **Server** tab includes the following server settings:

- **SMTP Setup (SMTP Server, Port, Username, Password, SSL)**
- **Permission Model** (see “Permission models” on page 36)
- **Authentication Complexity**
- **Instant Replay Duration**
- **Custom Help Title and Custom Help Link**
- **Database Backup and Database Restore**
- **Server URL:** Multi-client installations (client/server) only
- **Client Download URL:** Multi-client installations (client/server) only

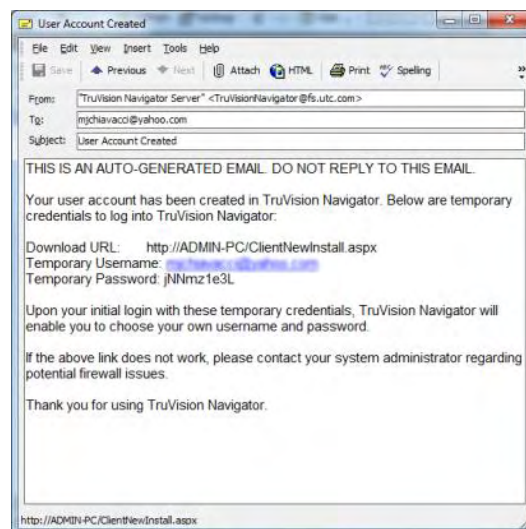
- **Export Navigator Data and Import Navigator Data**

SMTP setup

Simple Mail Transfer Protocol (SMTP) is a de facto standard for email transmissions across the Internet. The Navigator server can be configured to use an SMTP server to send automated email messages (with client download URL, username, and 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 set up, this information must be delivered via an alternative method such as by phone or personal email.

To set up SMTP:

1. Enter the **SMTP Server IP address**, the **Port**, and any **Username** and **Password** credentials required by the SMTP server. Select **SSL** as well if required by the server.
2. Test this setup by clicking **Test** and entering a destination email address for the test message. Check the application status bar for feedback on the test. Also check the email account to ensure there is a test message from the Navigator server confirming proper setup of the SMTP server.
3. An email similar to the one below is sent. If not received after several minutes, check the Junk Mail folder to see if the email was classified and stored there.



Authentication complexity

TruVision Navigator has three authentication complexity standards – Low, Medium, and High. The default authentication for a new installation is **Low**. To change the authentication complexity, select an option from the drop-down list and click **OK**.

All new users are required to meet the new authentication complexity standard. However, existing users of the application are not 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 only affects the password for that user, not the username. To avoid resets, we recommend setting the authentication complexity before any users are created in the system.

Table 1 on page 27 outlines the components of each of these standards.

Table 1: Authentication complexity

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

Instant replay duration

Navigator supports instant replay from the video tile. This feature rewinds video in a tile by a user-defined, pre-configured amount of time (30 seconds default, 99 minutes and 59 seconds maximum).

To set instant replay time, type the minutes and seconds or click the spin wheels to enter the required value in the **Instant Replay Duration** fields and click **OK**.

See Appendix B “Device details” on page 125 for limitations on instant replay for each device.

Custom Help

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

To add a custom Help link:

1. In the Server Settings screen, type the name of the Help title to share with users in the **Custom Help Title** field.
2. Type the link to the Help file in the **Custom Help Link** field.
3. Click **OK**.
4. Open the Help window by clicking the Navigator main menu button and selecting **Help**. The custom Help title appears in the Help screen.

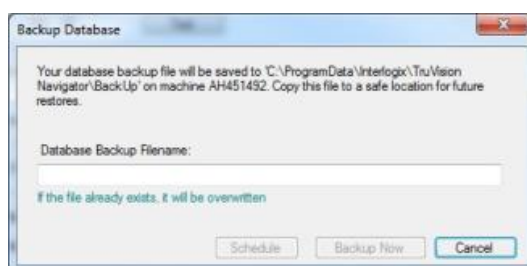
- Click on the link to access the content.

Database backup and restore (standalone installations only)

Navigator database backup should be backed up in a separate location by an administrator for safekeeping. If there is a problem with the computer 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 brings the system back into operation quickly without manual re-entry of device, user, group, permission, or other system configuration data.

To back up the Navigator database:

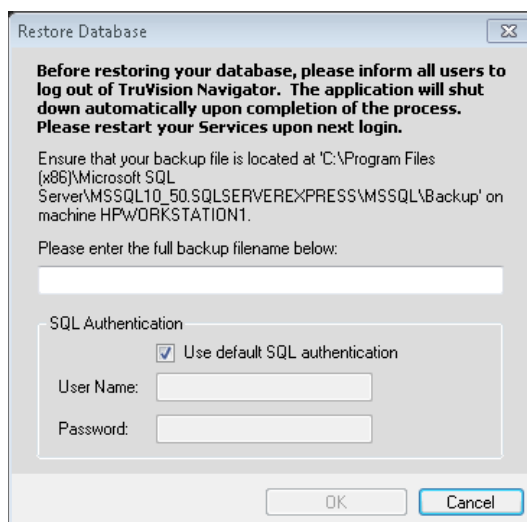
- Select the **Server** tab in the Settings window and then click the **Database Backup** button. The Backup Database window appears.



- Type 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.
- Click **Schedule** to schedule the backup or click **Backup Now**. Upon initiation of the backup, refer to the Tasks window for status (see “Tasks” on page 46)
- After successful completion, the database backup file resides at the designated location.

To restore the Navigator database:

- Select the **Server** tab in the Settings window and then click the **Database Restore** button. The Restore Database window appears. Ensure that a copy of the backup database file has been placed in the directory listed on the form.



2. Type the exact name of the file in the text field provided. If restoring the database to a SQL instance that requires SQL authentication credentials, enter them here. Otherwise, use the default setting.
3. Upon initiation of the restore, refer to the Tasks window for status. After Restore Task appears in the Task window, log out of the application. Log back in and the database is restored.

Multi-client (client/server) installations

Client download URL

The **Client Download URL** field only appears in client/server installations.

For multi-client installations (client/server), the client download URL is the network location of the Navigator client software package. Administrators can deliver this URL to new users so they can download the client software remotely from the Navigator server. If SMTP is in use, this is done automatically for the administrator during user setup.

For standalone installations (direct database connection), this field is disabled since no other networked Navigator clients can connect to this instance of the Navigator server.

User management and client software delivery

With multi-client (client/server) installations of Navigator, computers on the same network with the Navigator server have the ability to download the Navigator client.

Note the following:

- Remote distribution of client software is NOT available for the standalone (direct database connection) installation option.
- The person installing the client software must have administrator rights on the computer to perform the client installation.
- When a new user is added to the system, that user does not have any permissions assigned and therefore cannot log in to Navigator. User permissions must be assigned before the user can log in (see “User management” on page 34).
- After installation of the client software, all items that the user has permission to access appear in the Navigator panel.

Fully automated client software delivery

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 (see “SMTP setup” on page 26).

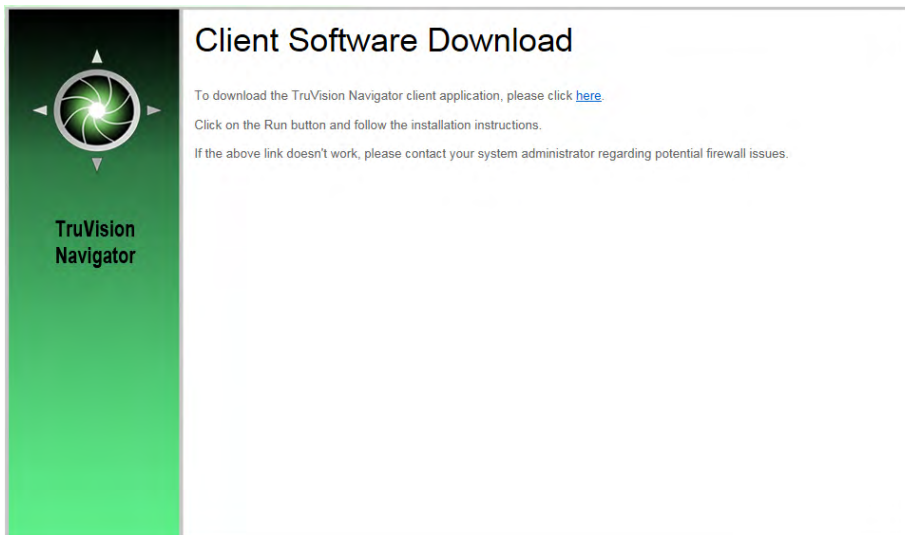
To distribute the client software remotely to a new user, first configure TruVision Navigator with an SMTP server, and then add the new user and grant permission to the new user (see “User management” on page 34).

Partially automated client software delivery

If SMTP capability is not used, there are alternate methods that can be used to deliver the client software.

To deliver client software remotely without access to SMTP, do the following:

1. Ensure that the **SMTP Server** field is empty in the Settings window **Server** tab.
2. Add the user (see “User management” on page 34).
3. The administrator delivers the user’s login credentials and client download URL to the user via phone or private email. Cut and paste the URL from the **Client Download URL** field in the **Server** tab in the Settings window. Remember to assign the user’s permissions or he/she will not be able to log in.
4. Copy or type the client download URL into a browser, or click on the link in an email.
5. Follow the instructions in the Client Software Download page to download the ClientOnlySetup.exe file.



6. Run the ClientOnlySetup.exe file (the ClientOnlySetup.exe file is preconfigured to point to the server that it was obtained from) and follow the installation prompts.
7. Launch Navigator and log in with the credentials provided via phone or email.
8. Enter the required information in the Change Password window (see “Initial login” on page 20 for further information).

To manually install the client software on computers, do the following:

1. Download the ClientOnlySetup.exe file from the Client Installation web page and place it on a thumb drive or other media.
2. Physically deliver the .exe file to the specific computer.
3. Run the ClientOnlySetup.exe file (the ClientOnlySetup.exe file is preconfigured to point to the server that it was obtained from) and follow the installation prompts.
4. Launch Navigator and log in with the user credentials.

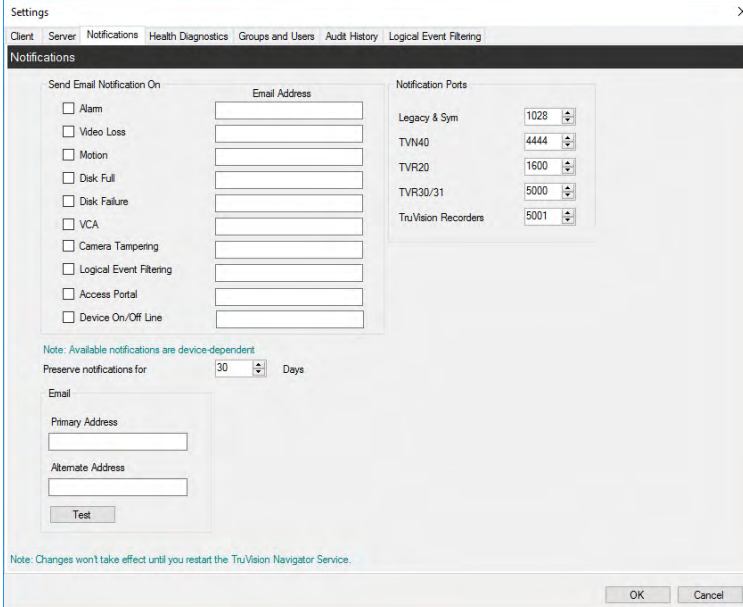
5. Enter the required information in the Change Password window (see “Initial login” on page 20 for further information).

Import/export Navigator data

A Navigator address book stores the title, IP address, and credentials of recorders and cameras, as well as website pages, TruPortal panels, and logical views in the Navigator panel. This data can be imported or exported into Navigator as needed to save and restore these settings.

- Click **Export Navigator Data** to save Navigator settings in the CSV file format.
- Click **Import Navigator Data** to import previously configured Navigator panel settings in the CSV file format.

Notifications



The screenshot shows the 'Settings' window with the 'Notifications' tab selected. The window is divided into several sections:

- Send Email Notification On:** A list of checkboxes for various events: Alarm, Video Loss, Motion, Disk Full, Disk Failure, VCA, Camera Tampering, Logical Event Filtering, Access Portal, and Device On/Off Line.
- Email Address:** A column of text input fields corresponding to the checkboxes above.
- Notification Ports:** A list of ports with dropdown menus: Legacy & Sym (1028), TVN40 (4444), TVR20 (1600), TVR30/31 (5000), and TruVision Recorders (5001).
- Preserve notifications for:** A dropdown menu set to '30' and the label 'Days'.
- Email:** A section with 'Primary Address' and 'Alternate Address' text input fields, and a 'Test' button.

At the bottom of the window, there is a note: "Note: Available notifications are device-dependent." and "Note: Changes won't take effect until you restart the TruVision Navigator Service." There are 'OK' and 'Cancel' buttons at the bottom right.

The **Notifications** tab in the Settings window includes the following server settings:

- Select events for notification by email to send to specific email addresses.
- Notifications ports
- Primary and alternate email addresses
- Length of notification preservation

Notifications and notifier

Devices can push notifications out to an IP address and port for proactive issue resolution. These notifications typically include alarm, video loss, motion, etc. See Appendix B “Device details” on page 125 for details on which notifications are supported by each device.

To receive notifications from devices in the Notifier panel, configurations are required at both the device and Navigator service level.

Device configuration – Each device must be set up to push its available notifications to the IP address and port of the Navigator server. See Appendix B “Device details” on page 125 for detailed instructions for each device.

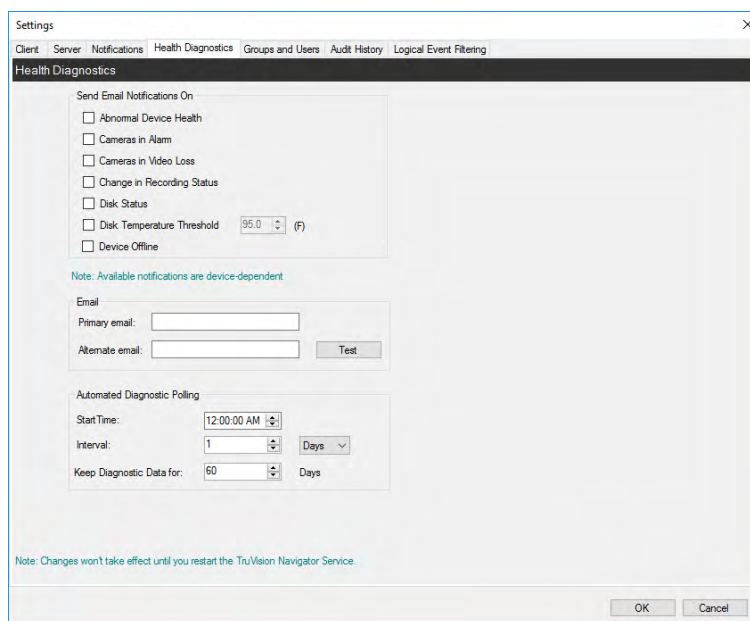
Navigator service configuration – The TruVision Navigator service or TruVision server settings must be configured to listen on that same port for those notifications.

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 Settings window **Notifications** tab matches the port setup on the device itself.

Navigator provides the ability to limit the notification data in the database to keep the size down. Set the retention period in number days for this data in the **Preserve notifications for** field.

If any of these values are changed, restart the Navigator program (standalone installations) or restart the TruVision Navigator service (client/server installations) for the changes to take effect.

Health diagnostics



The **Health Diagnostics** tab in the Settings window provides the following server settings:

- Select health events for email notification
- Primary and alternate email addresses
- Automated diagnostic polling

Note: Changes made in the **Health Diagnostics** tab won't take effect until a restart of the Navigator program (standalone installations) or the TruVision Navigator server (client/server installations).

Email notifications

Select check boxes for any of the following notifications to receive them via email:

Abnormal Device Health – This notification indicates that either the hard drive is corrupt or the device cannot encode or record video (DVRs only).

Cameras in Alarm – Any cameras that are in an alarm state.

Cameras in Video Loss – Any camera that is not transmitting video.

Change in Recording Status – A recording has stopped or started.

Disk Status – Health status of the hard drive.

Disk Temperature Threshold – Temperature has exceeded the set threshold.

Device Offline – A device is offline during polling after having previously been online.

Email addresses

Enter valid email addresses in the **Primary email** and **Alternate email** fields. If SMTP has been set up in the system, click **Test** to send test emails.

Automated diagnostic polling

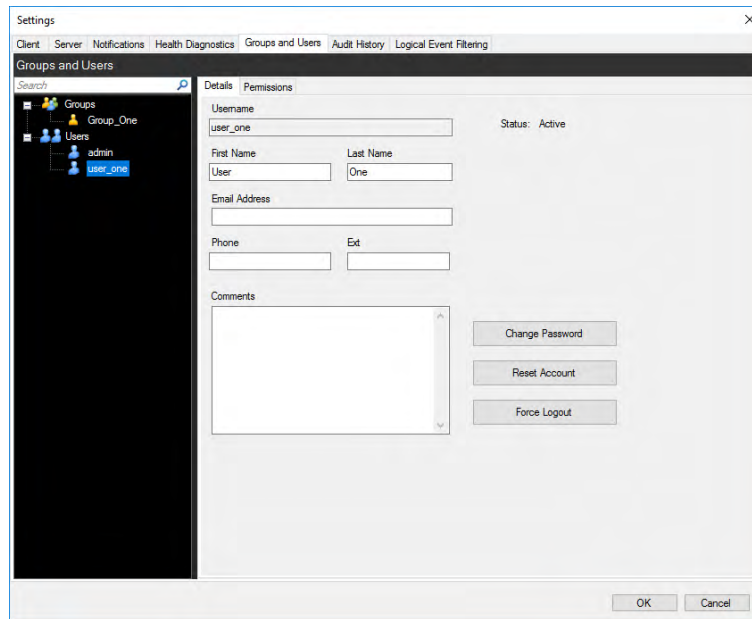
To run automated health diagnostic polling on an interval across all of the devices in the system, the diagnostic polling service must first be configured.

To configure the diagnostic polling service:

1. From the **Health Diagnostics** tab in the Settings window, type the Automated Diagnostic Polling **Start Time** and **Interval** (retention period).
2. Select **Days** or **Hours** for the length of time to keep the health diagnostic polling data in the database.
3. Restart Navigator to begin the automated polling. If any of these values are changed, restart the Navigator program (standalone installations) or restart the TruVision Navigator server (client/server installations) for the changes to take effect.

After manual snapshots or automated health diagnostic data have been captured, the data is stored in the Navigator database. The data is now searchable by users to aid in maintaining system up-time.

Groups and users



The **Group and Users** tab of the Settings window provides the following server settings:

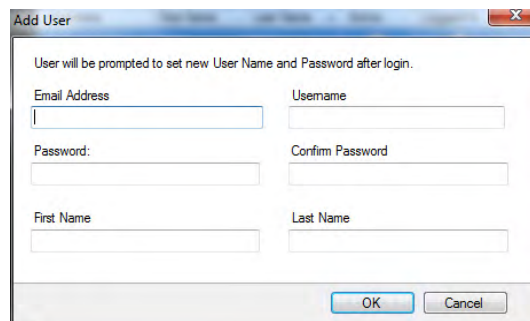
- **Details**
- **Permissions**

User management

Note: Adding or assigning permissions to a user requires that the individual performing those functions has the “Manage user permissions” permission assigned to them in Navigator.

To add a user:

1. Click on the **Groups and Users** tab in the Settings window.
2. Right-click the **Users** node in the Navigator and select **Add User** or click the **Add User** button. The Add User window appears.

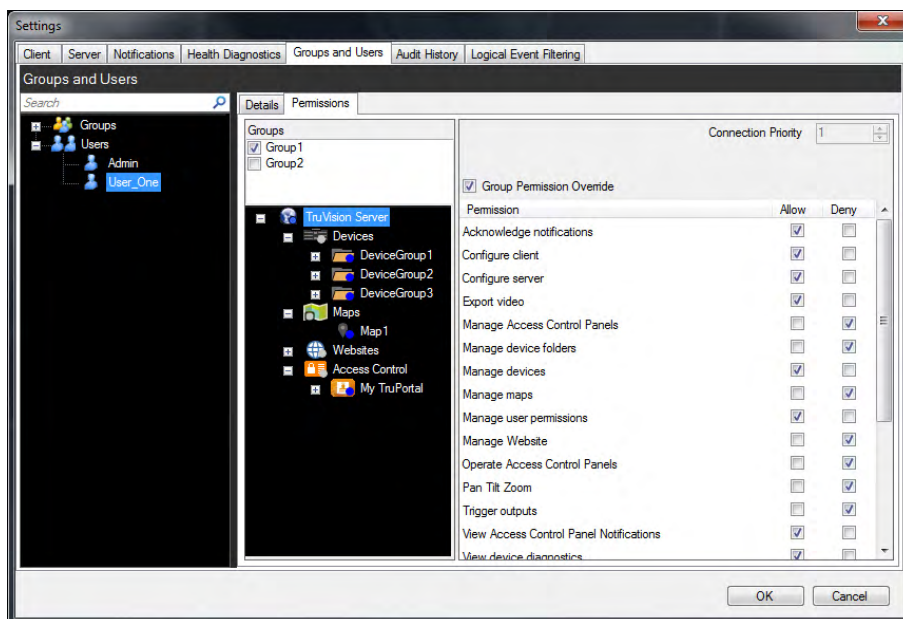


3. Type the required user information in the fields shown. The **Username**, **Password**, and **Confirm Password** fields are disabled if SMTP is configured in the system.
4. Click **OK**. The new user is added under the **Users** node in the Navigator panel.

- To install Navigator on the new user's client computer. If SMTP is set up in the system, follow the instructions under "Fully automated client software delivery" on page 29. For systems without SMTP set up, follow the instructions under "Partially automated client software delivery" on page 30.

To assign permissions to a user:

- Click on the user icon in the **Groups and Users** tab and click the **Permissions** tab.
- Highlight the TruVision Server node or any sub nodes, folders, devices, or other items in the permissions panel and allow/deny permissions for this user in the **Permissions** tab. If the Permission Model is set to **Simple** (only users), only the Allow column appears. If the Permission Model is set to **Advanced** (both users and groups), both the Allow and Deny columns appear.



- When finished, click **OK**.

Permission indicators

When assigning permissions, specify whether the permission is applied at the parent or child node. Granting permissions at a parent node cascades those permissions down to the child nodes. For example, granting permissions at the Navigator server level cascades down over all folders, devices, and cameras beneath it. These are indicated by a blue dot. Conversely, granting permissions at the child node does not change permissions at the parent node. In this case, the child node displays a blue dot and the parent displays a gray dot.

Table 2: Permission indicators

Permission Indicator	Description
Blue	A blue dot indicates express permissions granted on that node. These permissions are inherited by the children nodes underneath the parent node.

Permission Indicator	Description
Gray	<p>A gray dot indicates express permissions assigned to a child of the parent node, but not at the parent node itself.</p> <p>This serves as a quick visual cue for the administrator to find express permissions granted to a user on devices in the permission panel.</p> <p>If all of the gray dot nodes are expanded, the camera or device with one or more express permissions appears, indicated by a blue dot.</p>

Permission models

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 the scaling of user permissions 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 and devices in the system. Without groups, the administrator would have to grant permission to each user individually.

To change the permission model to advanced, select **Advanced** in the **Permission Model** drop-down list and click **OK**. Groups 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 Navigator, the user interface impact of that permission, and the dependencies of specific permissions.

Table 2: Permission matrix

Permission	User Interface Impact	Dependent Permissions
Acknowledge notifications	Show/hide Acknowledge All button in Notifier dialog	
Configure client	Enable/disable Client tab in Settings	
Configure server	Enable/disable right-click options on TruVision Navigator Server node (i.e., Properties and Database Backup and Restore)	
Export video	Enable/disable Local record button in Controller	Watch live video Watch playback video
	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 access control panel notifications	Enable/disable notifications from TruPortal in the Notifier	

Permission	User Interface Impact	Dependent Permissions
Manage access control panels	Enables/disables access control context menus	Operate access control panels
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)	
Manage maps	Show/hide map context menus	View maps
Manage user permissions	Show/hide Users and/or Groups nodes in Navigator	
Manage website	Show/hide website context menu	View website

Permission	User Interface Impact	Dependent Permissions
Operate access control panels	Show/hide door icon context menu	
Pan tilt zoom	Enables/disables PTZ control in camera tile	Watch live video
	Show/hide PTZ button in timeline (PTZ settings access)	
Trigger outputs	Show/hide Trigger Outputs selection in device context menu	
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 disk analysis	Show/hide Disk Analysis context menu for device	Watch live video Watch playback video
	Show/hide camera row in Disk Analysis dialog	
View maps	Show/hide the map node	
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	
View website	Shows/hides the website node	
Watch live video	Show/hide Folder (folder may also be visible due to other permissions or child permissions)	

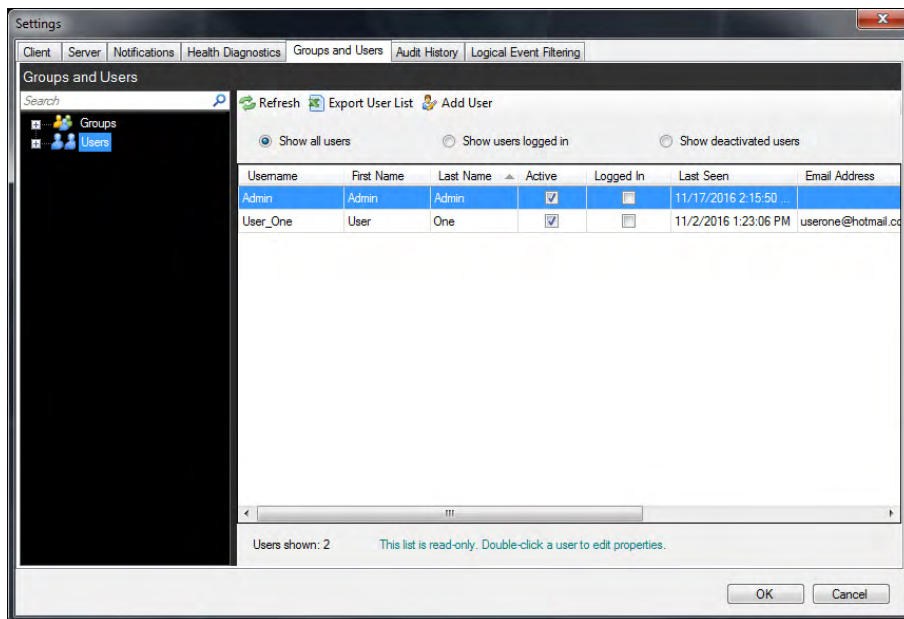
Permission	User Interface Impact	Dependent Permissions
	Show/hide Device (device may also be visible due to other permissions or child permissions)	
	Show/hide Camera (camera may also be visible due to other permissions)	
	Allow/Disallow Open Video from Camera (all methods: double-click and drag-and-drop operation 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)	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 live video main stream	Enable/disable Stream and Bandwidth menus in the Controller	Watch live video Watch playback video

Deactivate a user

Deactivation revokes all user rights to the system but does not delete users from the database.

To deactivate a user:

1. Right-click on the user under the Users node and select **Deactivate User**.
2. Click **Yes** when prompted with “Are you sure you want to deactivate this user?”
3. Deactivated users are removed from the Users node in the Navigator unless **Include Deactivated Users** is selected by right-clicking the Users node. The Inactive User icon is shaded gray while the Active User icon is shaded blue.
4. To view all active or deactivated database users in a list, click the Users node and select **Show all users**. The Users screen appears. All of the columns in this dialog are sortable. Double-click any user row to view that user’s details dialog.

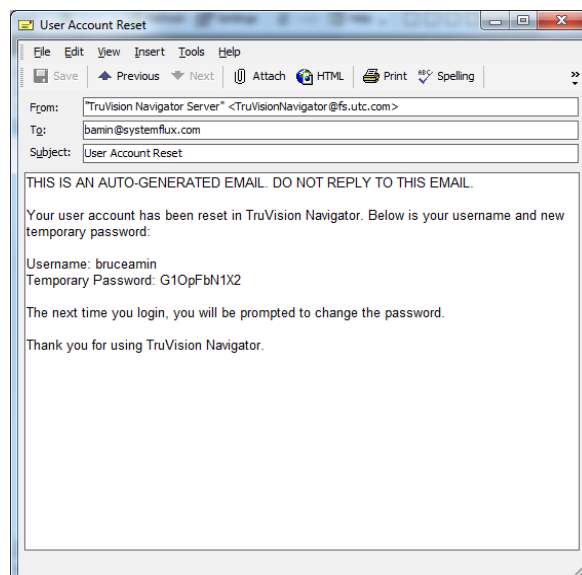


Restore a deactivated user

To restore a deactivated user in the system (three possible methods):

- Right-click the deactivated user under the Users node and select **Activate User**.
- Right-click the deactivated user under the Users node, select **Properties**, and click the **Reset Account** button on the **Details** tab.
- From the user list, double-click the user icon to launch the **Details** tab, and then click the **Reset Account** button.

If SMTP is in use, the user automatically receives an email with a temporary login password. The user is prompted to change this password upon initial login.



If SMTP is not in use, the administrator must provide the user with a new temporary password in the Change Password window. These temporary credentials must be delivered to the user via phone or email.

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 must answer the challenge question in the User Account Challenge window.

If a user cannot remember the challenge question, the administrator must reset the account. Follow the instructions under “Initial login” on page 20.

Force a user to log out

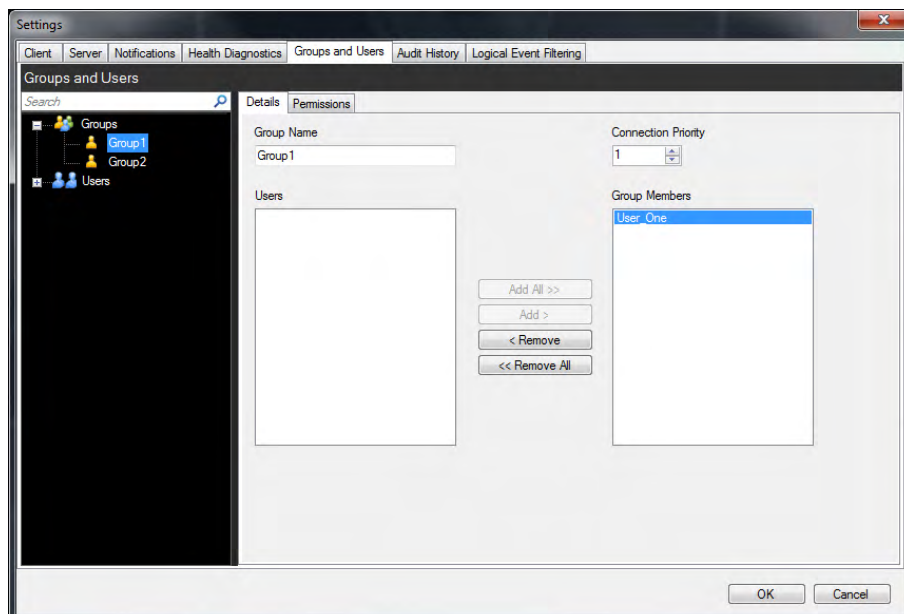
From the user list, double-click the user icon to launch the **Details** tab, and then click the **Force Logout** button. This logs the user out immediately. Administrator rights are required to execute this function.

Group management

The advanced permission model permits group management in Navigator. Groups allow the scaling of user permissions across many users. For instance, users can be placed into a single group, and that single group can be assigned permissions against folders, devices, and other items in the system. Without groups, the administrator would have to grant permission to each user against those same devices.

To create a group:

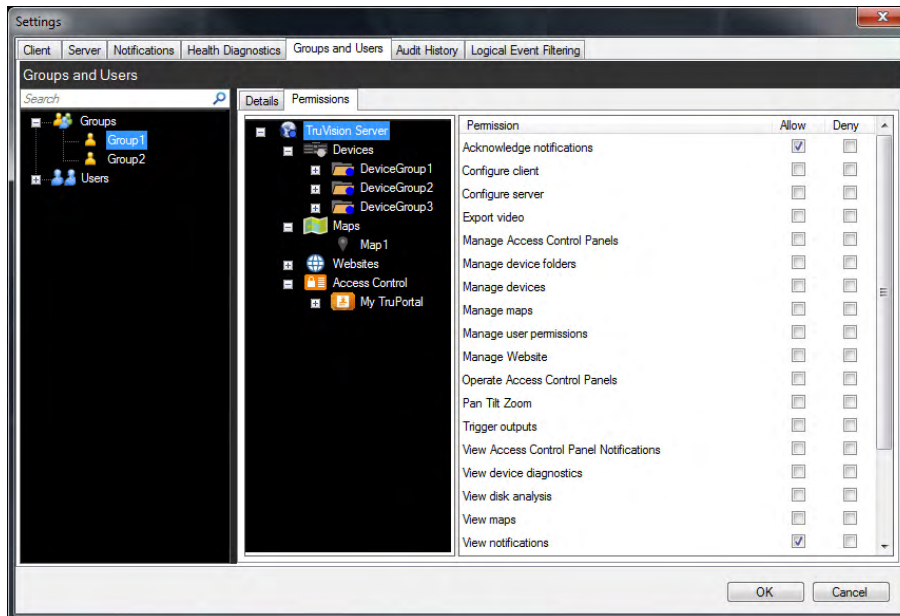
1. Click the **Server** tab in Settings and ensure that the **Permission Model** drop-down list is set to **Advanced**.
2. Right-click the Groups node in the **Groups and Users** tab and select **Add Group**.
3. Type a name for the group in the Add Group window and click **OK**.
4. Click on the group name and then click the **Details** tab to change the group name and add users to the group.



5. When finished, click **OK**.

To assign permissions to a group:

1. Click on the group icon in the **Groups and Users** tab and then click the **Permissions** tab.
2. Highlight the TruVision Server node or any sub nodes, folders, devices, or other items in the permissions panel and allow/deny permissions for the group in the **Permissions** tab. Group permissions affect all of the specific users that are members of the group.



3. When finished, click **OK**.

To add a user to a group:

1. Click on the group icon in the **Groups and Users** tab and click the **Details** tab.
2. Select one or more users in the **Users** field and then click **Add All** or **Add** to add users to the **Group Members** field.
3. When finished, click **OK**.

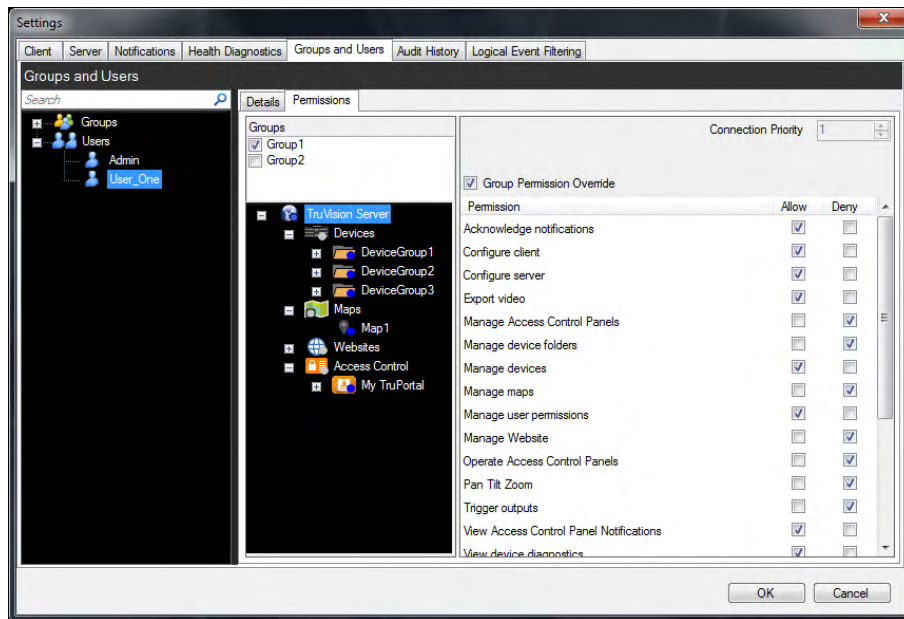
Group permission override

Users with group permissions can have the permissions overridden by the administrator. In this way, the administrator can customize the permissions of a group member.

To override group permissions for a user:

1. Click on the user icon in the **Groups and Users** tab and click the **Permissions** tab.
2. If necessary, add the user to a group by selecting one or more group check boxes in the **Groups** panel.
3. Highlight the TruVision Server node or any sub nodes, folders, devices, or other items in the permissions panel and allow/deny permissions for this user in the **Permissions** tab.

4. Select the **Group Permission Override** check box and then click **OK**.



Search

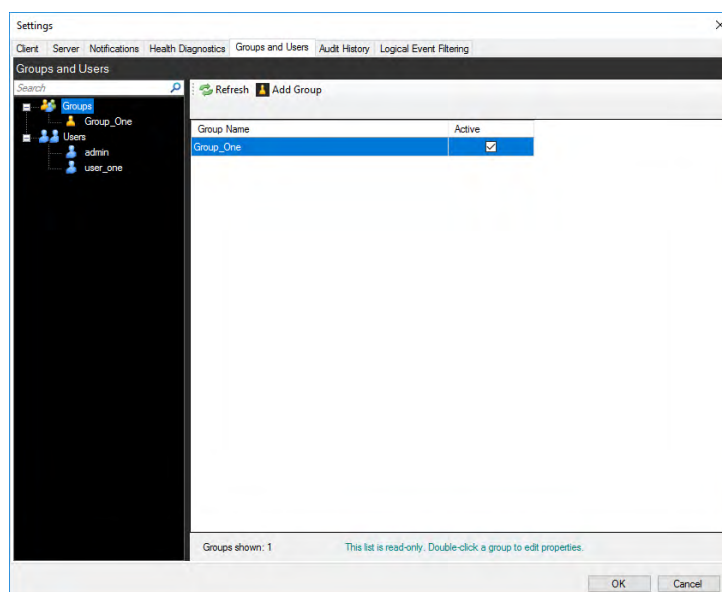
Use Search to find any user or group in the Groups and Users panel.

To perform a Groups and Users search:

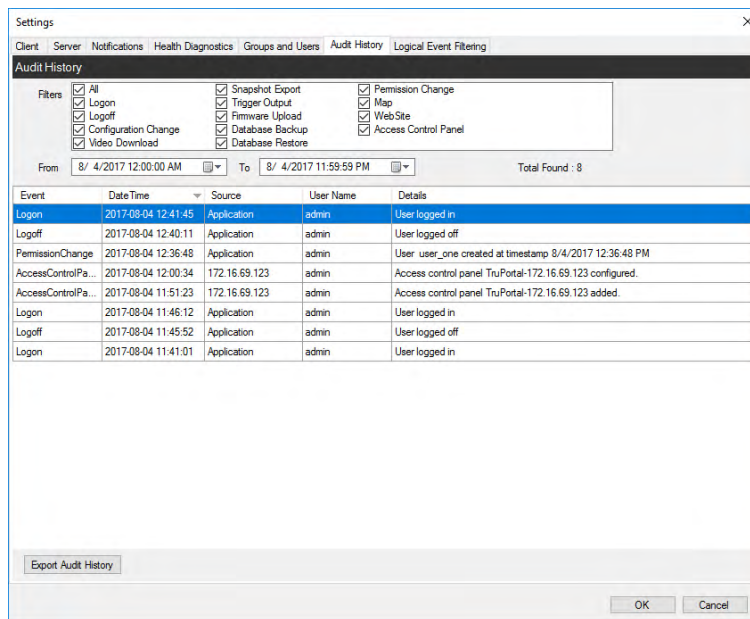
1. Type any alphanumeric string into the **Search** field at the top of the Navigator panel and press Enter. Focus goes instantly to the user or group that matches the string.
2. Press Enter again to move to the next object that matches the string until each item matching the search criteria has been found. Type a different alphanumeric string into the **Search** field to perform another search.

Group summary

After one or more groups have been created, click on the Groups node to view a list of all groups and their Active status. Click on a group name to rename a group.



Audit History



The **Audit History** tab logs all user activity which can be searched using **Filters** selections. Click **OK** when finished making selections.

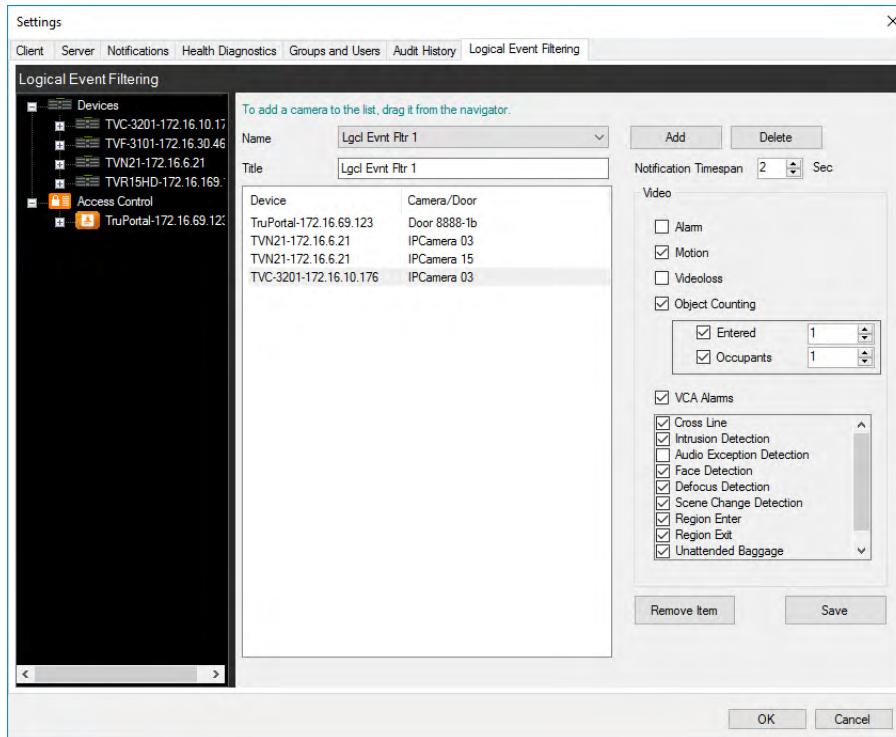
Click **Export Audit History** to save the list of configured events in the CSV file format.

Logical event filtering

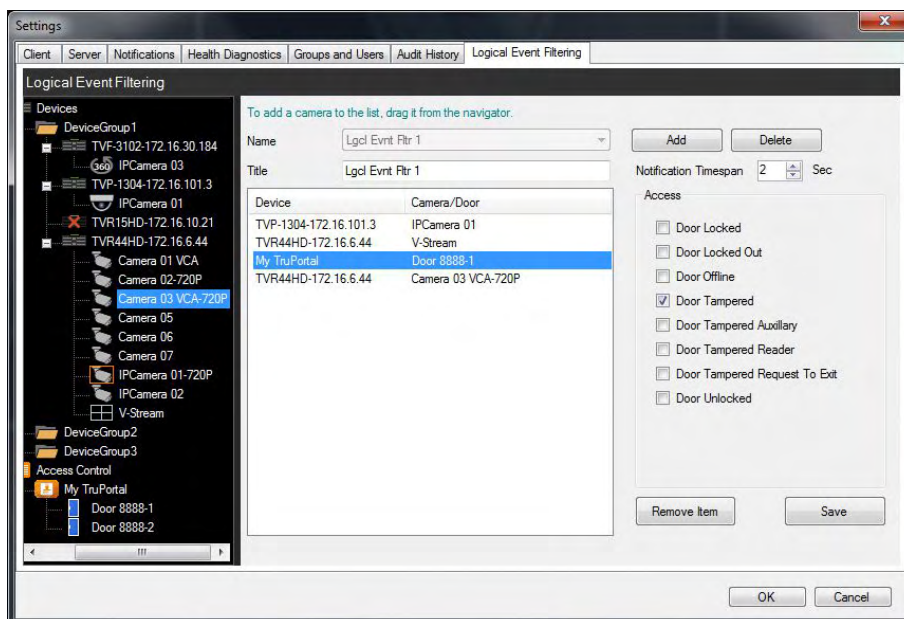
Logical event filtering provides a way to create customized, interdependent notifications from cameras connected to recorders as well as, optionally, doors connected to TruPortal access control systems.

To create a customized notification in Logical Event Filtering:

1. Click on the **Logical Event Filtering** tab in the Settings window.
2. Type in a title for the notification in the **Title** field.
3. Drag cameras from the Logical Event Filtering navigator panel into the device list.
4. Highlight each camera in the list and select the required Video notifications for each. Note that the number of people detected as **Entered** or **Occupants** before sending a notification under Object Counting can be configured by typing a number into those fields or clicking the spin wheels. Also note that the VCA Alarms notification can be customized by selecting specific VCA alarm events.



5. *Optional:* To include doors in a Logical Event Filtering notification, highlight each door in the list and select the required Access notifications for each.

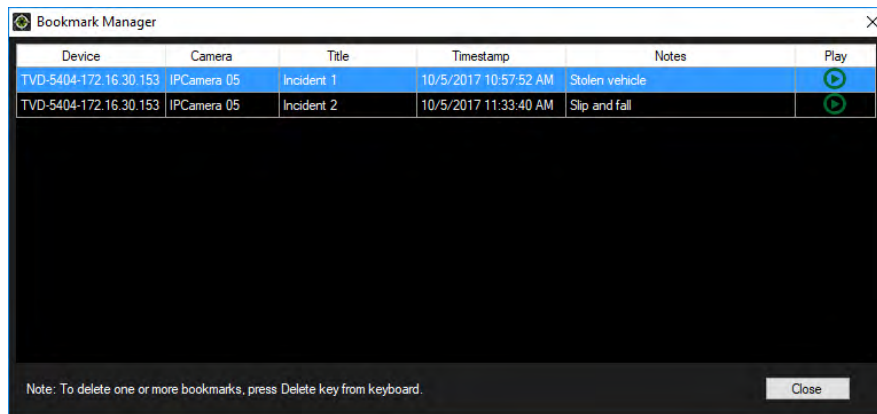


6. Type or click the spin wheels to enter a value in seconds in the **Notification Timespan** field. Logical Event Filtering generates a notification when all notifications configured in the list occur within the length of time specified in the **Notification Timespan** field.
7. If necessary, click on an item in the list and click **Remove Item** before saving the custom notification.
8. When finished configuring the notification, click **Save** and configure another notification, or click **OK** to exit Logical Event Filtering.

Bookmark manager

The Bookmark Manager window is a central location that contains all device-level bookmarks. When bookmarks are added, edited, or deleted on the timeline, the Bookmark Manager automatically updates. Deleting the device or camera associated with one or more bookmarks removes them from the Device list in the Bookmark Manager.

See “Adding bookmarks” on page 91 for details on adding bookmarks and “Export video” on page 91 for details on exporting bookmarked video.



The following operations are available in the Bookmark Manager:

- **Edit** – Double-click on a bookmark to edit the title, time, and notes.
- **Delete** – Press the Delete key on the keyboard to delete the bookmark.
- **Play** – Click the bookmark’s play icon to play video associated with the bookmark in the timeline.

Note: Bookmarks are stored in application memory, so all bookmark data is erased when Navigator is closed.

Tasks

The Tasks window is a central location that monitors tasks created and scheduled in the system. These tasks include both executed and scheduled/pending video exports, database backups, and database restores. Tasks provides a real-time status of the tasks in the queue, and the reason if a task was unsuccessful.

Click the Navigator main menu button and select **Tasks** to access the Tasks window.

Task	Scheduled Date/Time	Status	Cancel
VideoExport	10/14/2016 2:36:52 PM	Successful	✖
DatabaseBackUp	10/17/2016 10:00:07 AM	Successful	✖
VideoExport	11/1/2016 8:36:40 AM	Successful	✖
VideoExport	11/1/2016 8:39:19 AM	Successful	✖
VideoExport	11/1/2016 8:39:19 AM	Successful	✖
VideoExport	11/2/2016 10:59:53 AM	Pending	✖
VideoExport	11/2/2016 10:59:53 AM	Pending	✖
VideoExport	11/2/2016 10:59:53 AM	Pending	✖

Click **Clear** to clear the list of tasks or **Export** to export the list of tasks in CSV file format.

Storage calculator

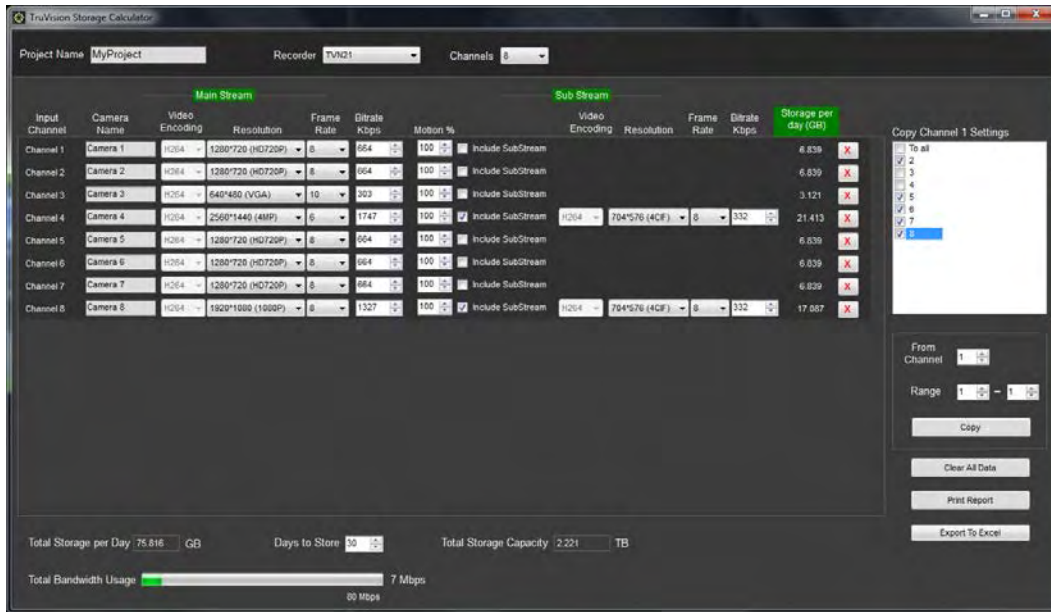
Storage calculator is a tool that permits the creation of a storage capacity requirement report for TruVision recorders that can be printed or exported to Microsoft Excel (XLS file format).

Note: Storage requirement calculations provided by the calculator are only an estimation based on medium quality video settings. More storage capacity could be needed depending on the scene complexity of images captured by the cameras.

Note: Storage calculator only supports the TruVision recorders listed in the **Recorder** drop-down list in the TruVision Storage Calculator window.

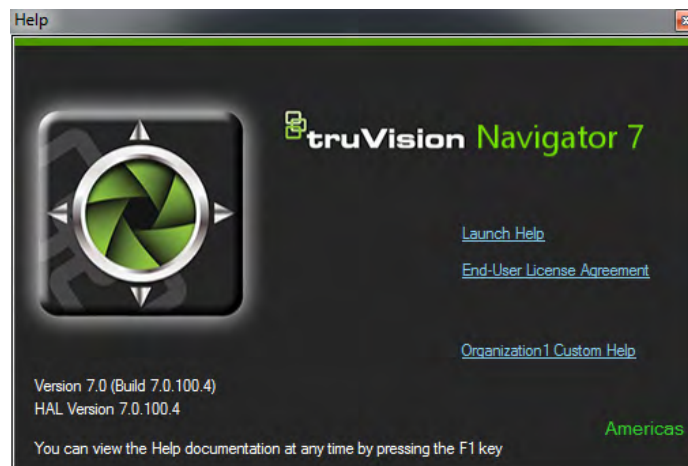
To generate a storage calculator report:

1. Click the Navigator main menu button and select **Storage Calculator** or click the **Storage Calculator** button when in Device Manager.
2. Type a value into the **Project Name** field.
3. Select the recorder model from the **Recorder** drop-down list.
4. Select the number of camera channels in the **Channels** drop-down list.
5. Type camera names into the Camera Name fields as necessary and enter values for each camera in the Main Stream and Substream (if applicable) sections. Use the **Copy Channel 1 Settings**, **From Channel**, and **Range** fields to copy values between cameras.
6. The Storage per day (GB) columns and the **Total Storage per Day** and **Total Storage Capacity** fields populate with storage requirement calculations. When finished configuring the storage calculator project, click the **Print Report** or **Export to Excel** button to generate a storage calculator report for future reference.



Help

Click the Navigator main menu button and select **Help** to access the **Help** dialog. The version number displays along with links to launch Help and view the End User License Agreement. Custom Help links also appear if they have been configured (see “Custom Help” on page 27).



Logout

To log out of Navigator:

1. Click the Navigator main menu button and select **Logout** to access the **Please Confirm** dialog.
2. Click **Yes** to log out of Navigator. Logging out permits another user to log in on the same machine.

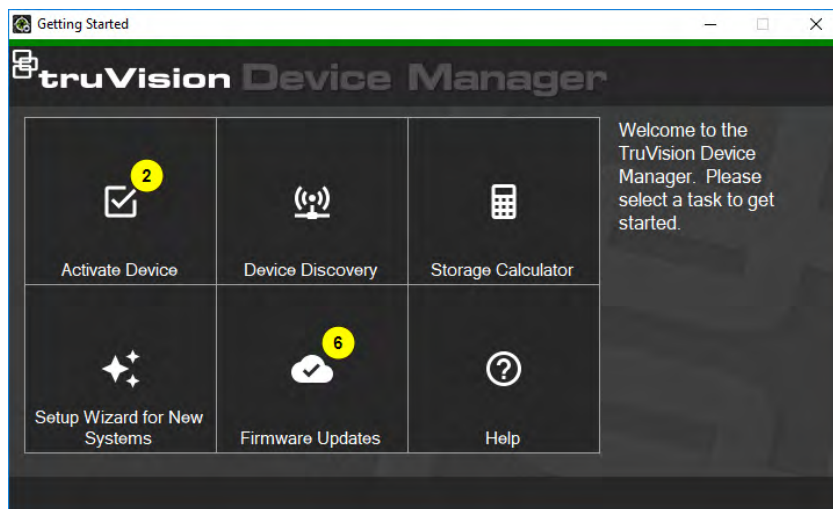
Chapter 4

Device Manager

The TruVision Device Manager can discover Interlogix IP devices such as IP cameras, DVRs, NVRs, encoders, decoders, IFS switches, and TruPortal access panels on a network.

This chapter explains how to use Device Manager to find and configure network related settings of TruVision devices, use the New System Setup Wizard, and upgrade the firmware of individual devices or perform a bulk upgrade.

To access Device Manager, click the button at the top of the Navigator panel and select **Device Manager** from the Navigator main menu drop-down list.



Note: The New System Setup Wizard is intended only for setting up devices that have not previously been connected to the network.

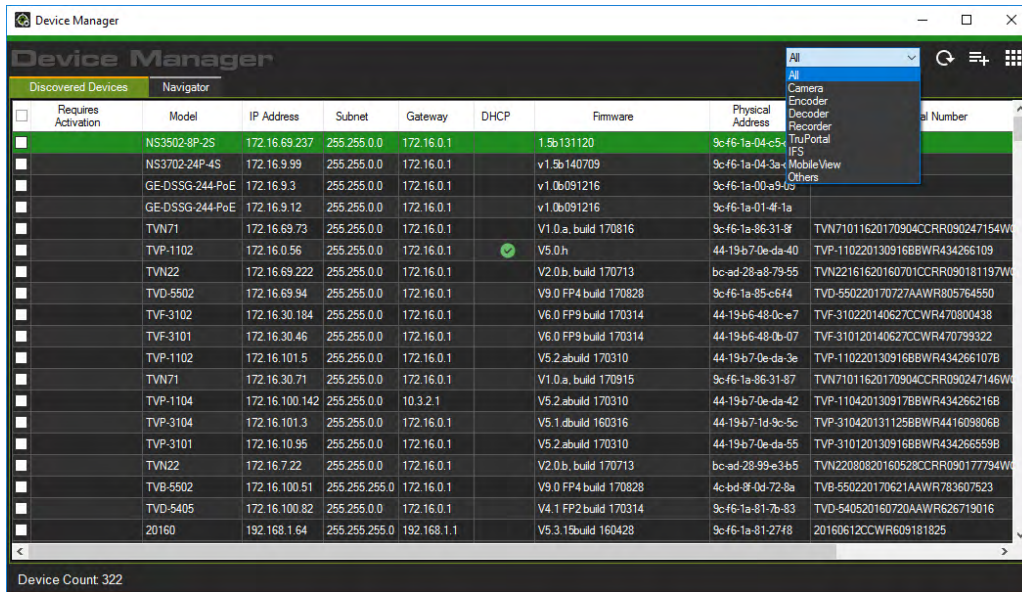
Device discovery

Device Manager searches for online devices within the local network and displays network information for the devices. It automatically searches every 15 seconds for the online devices in the computer's local network and then displays the information for the found devices.

Note: Unmanaged devices do not support the discovery feature.


Search for active devices online

After launching Device Manager, click the **Device Discovery** button in the Getting Started window. The Device Manager window appears.



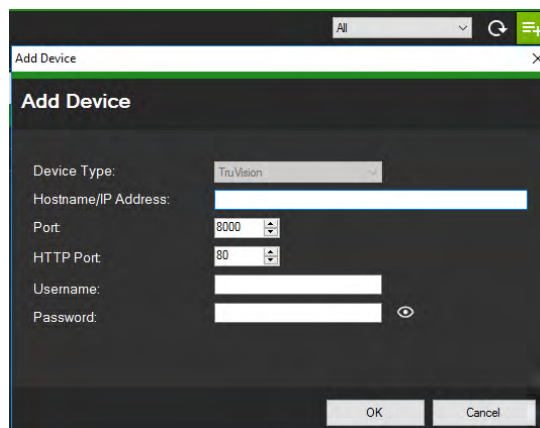
The device information that appears in the **Discovered Devices** tab includes the device type, IP address, port number, gateway, firmware version, serial number, MAC address, etc. Discovery results can be filtered by clicking the **Navigator** tab (shows only devices added to the Navigator panel), and/or by making a selection from the device filter drop-down list (**Camera**, **Recorder**, **TruPortal**, etc.)

Note:

- Click the **Refresh** button to perform a new search for online devices. When the **Refresh** button appears with a yellow dot, it indicates that new devices have been added in the background. Click  to add the newly found devices to the list.
- Click on a column heading button to sort the information.

Add device

If a TruVision IP device connected to the network does not appear in the Device Manager's list of discovered devices, it can be added by clicking the **Add Device** button.



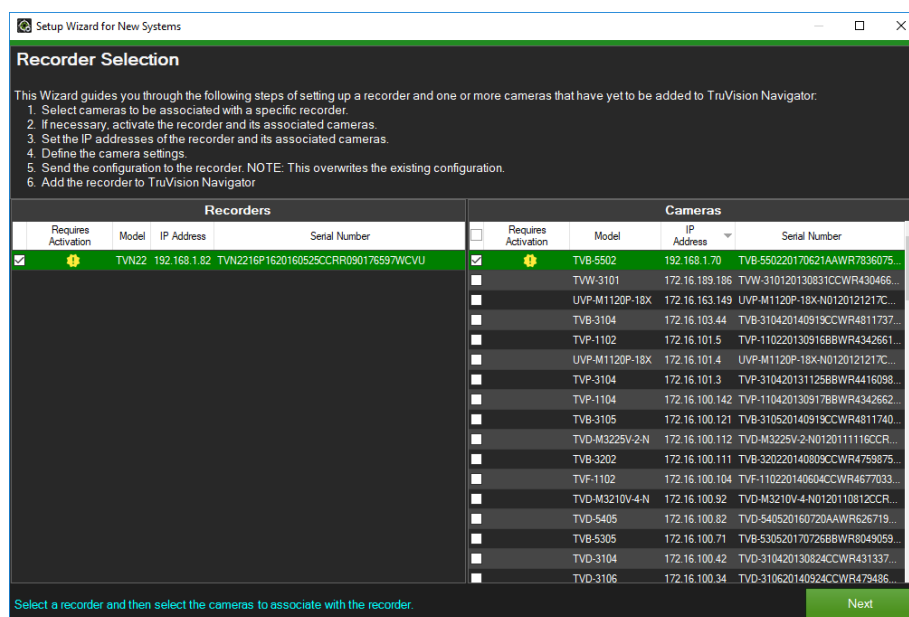
Type in the appropriate device location information along with the device's user name and password, and then click **OK**.

New system setup wizard

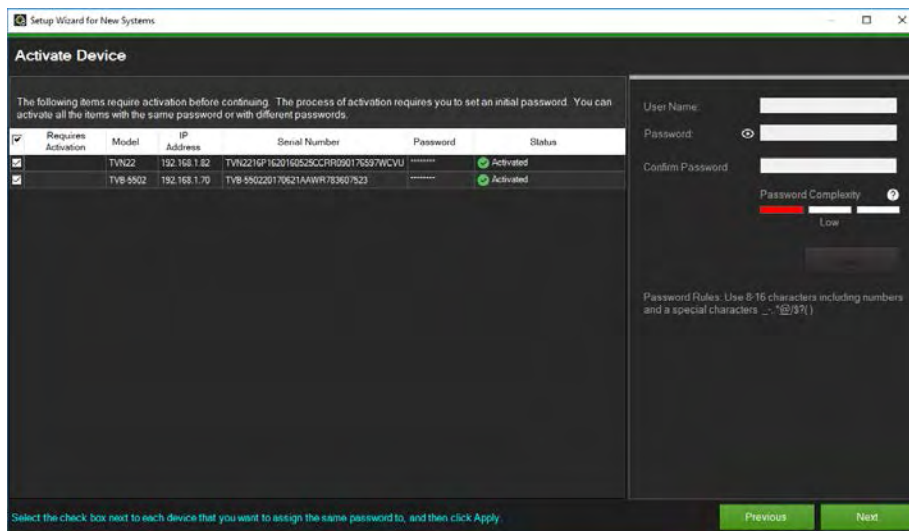
Use the New System Setup Wizard to set up new devices that have not previously been connected to the network.

To set up devices using the Wizard:

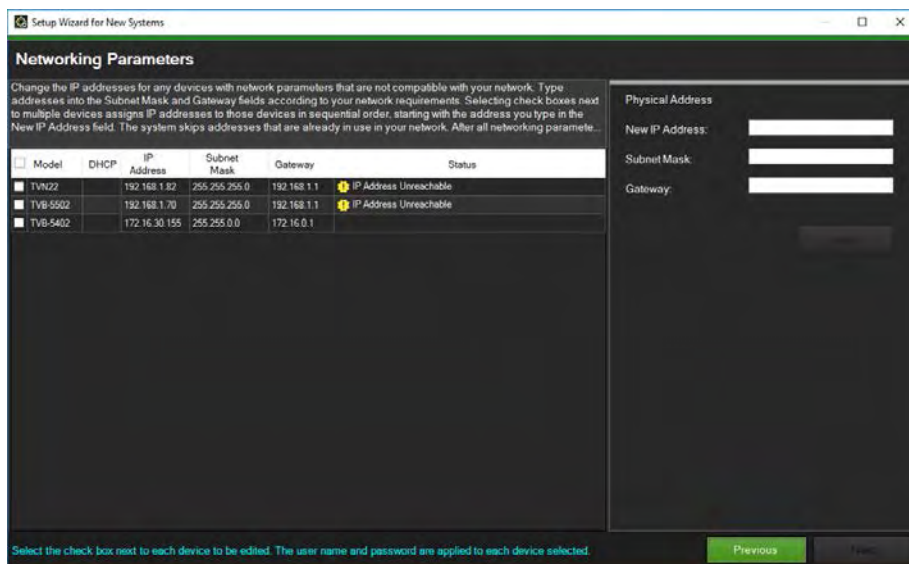
1. Click the **New System Setup Wizard** button in the Getting Started window.
2. Select a recorder and one or more cameras to set up in the Recorder Selection window.



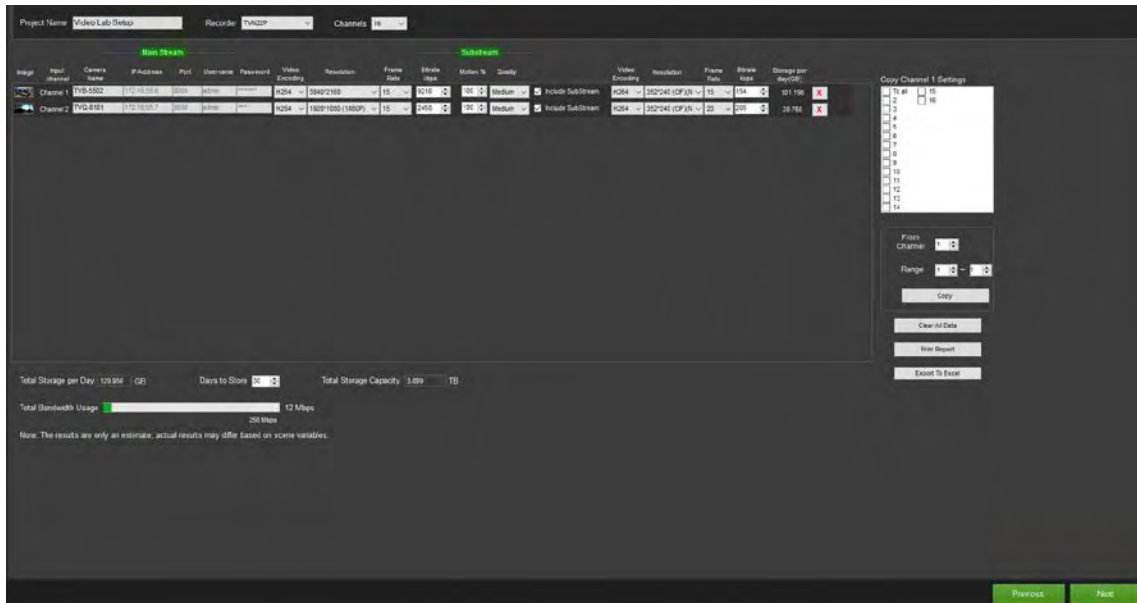
3. In the Activate Device window, select one or more devices to continue with setup. If multiple devices are selected, IP addresses are automatically assigned in sequence (in this case, all devices must have the same password). Select individual devices to assign specific IP addresses to each. Type in a new IP address, subnet, and gateway manually or click on an IP address to use default settings.
4. Type 'admin' as the user name and type in a new password for the device(s). Click **Apply** to determine if the IP addresses are available. Click **Next** when finished.



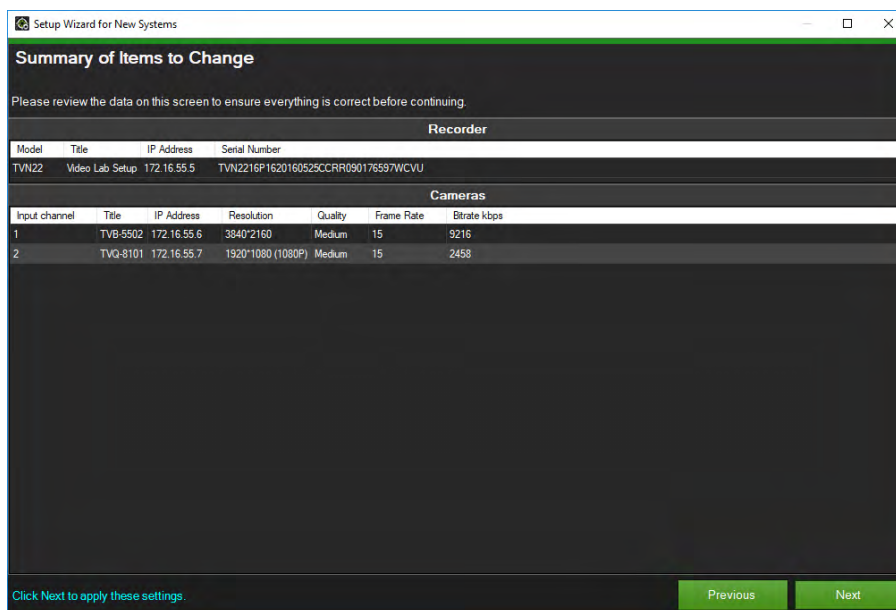
5. The Credentials Required window appears. Select the check box next to each device, type the user name and password, and then click **Apply**. Click **Next** when finished.
6. The Networking Parameters window appears. Change the IP addresses for any devices with network parameters that are not compatible with your network by typing addresses into the Subnet Mask and Gateway fields according to your network requirements. Selecting check boxes next to multiple devices assigns IP addresses to those devices in sequential order, starting with the address you type in the **New IP Address** field. The system skips addresses that are already in use in your network. Click **Apply** after all networking parameters are set correctly.



7. Click **Yes** to confirm the IP address changes. When finished, click **Next** again and wait several seconds for the storage calculator window to appear.
8. Select resolution and frame rate. If necessary, change the camera name and add substream information. The bitrate number auto-calculates and can also be changed if required.



- Click **Next**. The Summary window appears, showing the device information along with the location of the recorder configuration file.



- Click **Next**, and then click **Yes** to send the new configuration to the recorder.
- The completion dialog appears. Click **Complete** to finish setup.

Activate an inactive device

Newer TruVision devices appear as “Inactive” in the Device Manager window upon initial connection to the network.

To activate an inactive device:

- Click **Activate Device** in the Getting Started window. A list of inactive devices appears in the Device Activation/Change IP Address screen.

2. Follow the steps under “Change IP address” on page 55.
3. An activate device success message appears.

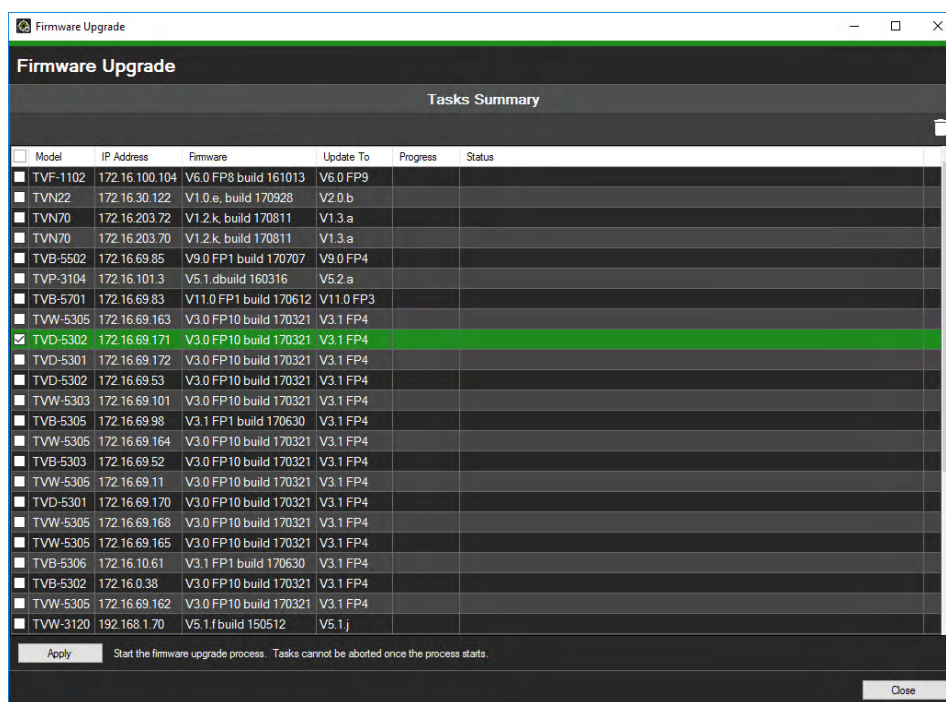
Firmware upgrade

Use the Firmware Upgrade window to upgrade the firmware of the selected device or devices.

Note: The local computer must be connected to the internet to connect with the firmware server.

To select devices for firmware upgrade:

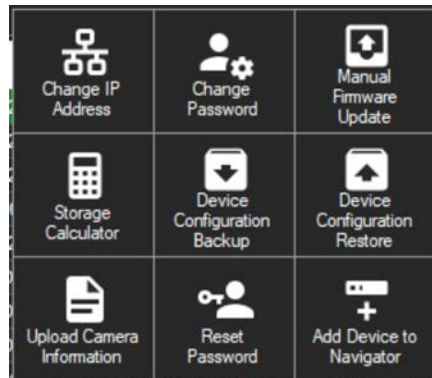
1. Click the **Firmware Updates** button in the Getting Started window, and then click **Yes** in the Updates Available dialog to proceed.
2. The Firmware Download screen appears. Wait for the firmware files to download to the local computer.
3. The Firmware Upgrade screen appears. In the Model list, click a device to select it or hold the Ctrl or Shift key to select multiple devices.



4. Click **Apply**, and then click **Yes** to start the firmware upgrade process. The Credentials Required dialog box appears.
5. Type the **User Name** and **Password** for the device(s) (if necessary, select **Use this credential for all devices**), and then click **OK** to begin the firmware upgrade.
6. Firmware upgrade progress appears in the Firmware Upgrade window. When upgrading is complete, the updated version information of the device(s) appear in the device list.

Device Manager tools

Click on the **Device Manager Tools** button in the Device Manager window to access the tools.



Change IP address

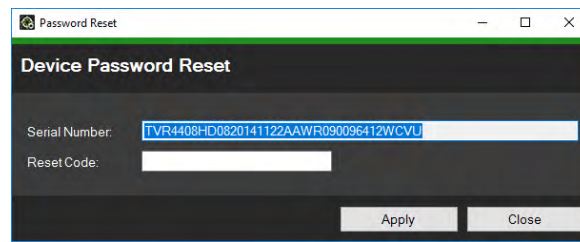
1. Click the **Change IP Address** tool button to bring up the Device Activation / Change IP Address window.
2. Select one or more devices to continue with setup. If multiple devices are selected, IP addresses are automatically assigned in sequence (in this case, all devices must have the same password). Select individual devices to assign specific IP addresses to each. Type in a new IP address, subnet, and gateway manually or click on an IP address to use default settings.
3. Click **Test**
4. If the IP addresses were recognized as available, click **Apply**.
5. Click **Yes** to change the IP address for the selected devices.

Reset password

If an admin (not a specific user) device password is lost, contact Technical Support to restore the password. There are two ways to restore the password. The method to be used depends on the device and its currently installed firmware.

To restore the default password (method 1):

1. Select the device for password reset in the main Device Manager window.
2. Click **Device Manager Tools**, and then click the **Reset Password** tool button.
3. Copy the serial number from the **Device Serial No.** field in the Device information panel and paste it into an email to send to Technical Support. Technical Support will provide a security key by email.

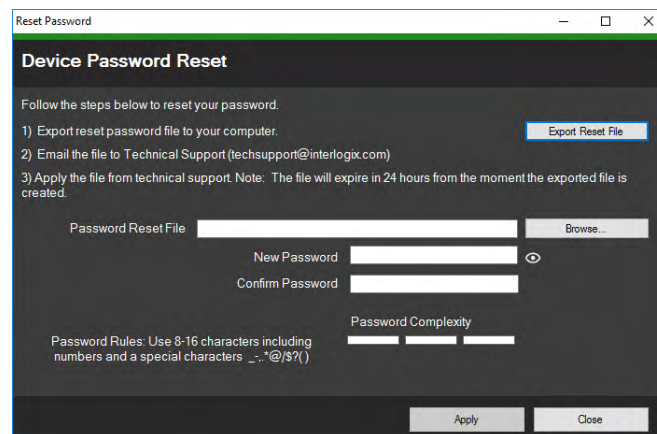


4. Enter the security key received from Technical Support in the **Security Code** field and click **OK** to restore the default password. The default password is **1234**.

Note: The security key provided is related to the date the serial number was sent to Technical Support and expires after the day specified. If the current date was not specified in the request, Technical Support provides a security key valid for three days following the date of the request.

To set a new password using an XML file (method 2):

1. Select the device for password reset in the main Device Manager window.
2. Click **Device Manager Tools**, and then click the **Reset Password** tool button.
3. Click the **Reset Password** button.



4. Click **Export Reset File** in the Reset Password window to save the XML file, and then email the file to Technical Support. Technical Support will provide a new XML file.
5. Save the XML file received from Technical Support on the computer, click **Browse**, and select the new XML password file.
6. Type a new password and then confirm it in the **New Password** and **Confirm Password** fields. Click **Apply**.

Note: Do not restart the device after the password recovery XML file has been exported, otherwise the steps above must be repeated. The password recovery XML file expires after 24 hours.

Manual firmware update

Follow these instructions only if the firmware update file has already been downloaded to the local computer.

To perform a manual firmware update:

1. Select one or more devices for firmware update in the main Device Manager window.
2. Click **Device Manager Tools**, and then click the **Manual Firmware Update** tool button. The Firmware Upgrade window appears.
3. Click **Browse** to locate the firmware file, and then type in the user name and password for the highlighted device in the Device List.
4. Click **Add** to add the highlighted device to the Tasks Summary list, or click **Add All** to add all the devices in the Device List to the Tasks Summary list.
5. Click **Apply**, and then click **Yes** to start the firmware upgrade process.
6. Firmware upgrade progress appears in the Firmware Upgrade window. When upgrading is complete, the updated version information of the device(s) appear in the device list.

Storage calculator

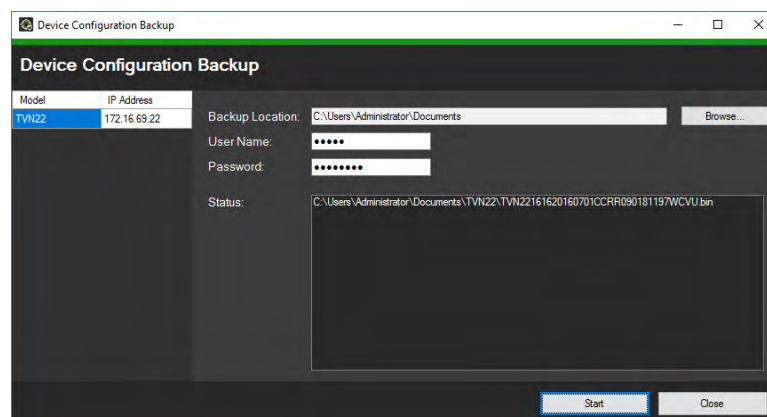
Select one or more devices in the main Device Manager window, click **Device Manager Tools**, and then click the **Storage Calculator** tool button. See “Storage calculator” on page 47 for details about the storage calculator.

Device configuration backup and restore

Use these tools to backup and restore device configurations.

To back up a device configuration:

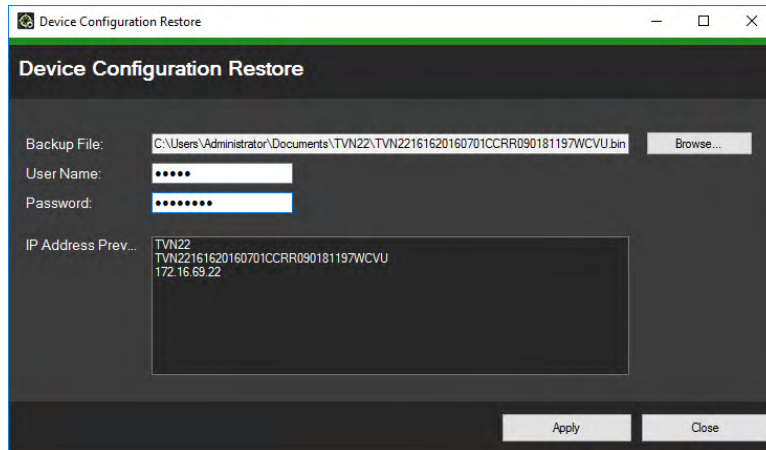
1. Select a device in the main Device Manager window, click **Device Manager Tools**, and then click the **Device Configuration Backup** tool button.
2. If required, click **Browse** to select a new backup location.
3. Enter the device user name and password and select **Start** to begin the backup process.



4. Click **Close** when backup is complete.

To restore a device configuration:

1. Select a device in the main Device Manager window, click **Device Manager Tools**, and then click the **Device Configuration Restore** tool button.
2. If required, click **Browse** to select the location of the backup file.
3. Enter the device user name and password and click **Apply**.



4. Click **Yes** to restore the device configuration.

Upload camera information

Use this tool to restore the device configuration for cameras only.

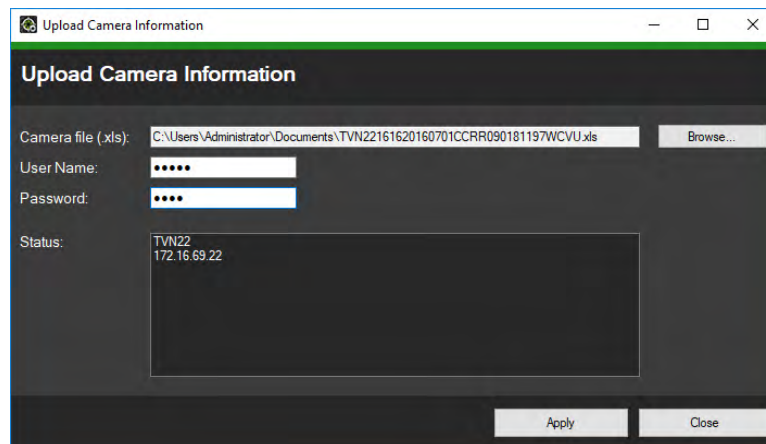
Note: Not all cameras support this feature.

The list of recorders that can upload camera information is as follows:

- TVN21
- TVN22
- TVN70
- TVN71
- TVR15HD
- TVR45HD

To upload camera information:

1. Select a supported recorder in the main Device Manager window, click **Device Manager Tools**, and then click the **Upload Camera Information** tool button.
2. Click **Browse** to select the location of the configuration file.
3. Type in the recorder user name and password and click **Apply**.



4. Click **Yes** to upload the camera information.

Change password

1. Select one or more devices the main Device Manager window (if multiple devices are selected, all must have the same password), click **Device Manager Tools**, and then click the **Change Password** tool button.
2. Type the correct information in the **Old Password**, **New Password**, and **Confirm Password** fields.
3. Click **Apply**.

Add device to Navigator

1. Select one or more devices the main Device Manager window (if multiple devices are selected, all must have the same password), click **Device Manager Tools**, and then click the **Add Device to Manager** tool button.
2. Type the correct information in the **User Name** and **Password** fields in the **Credentials Required** window.
3. Click **OK**. The device is added to the Navigator panel.

Chapter 5

Navigator panel

The Navigator panel is the central administration area of the application where recorders, cameras, maps, websites, access control systems, and logical views are added, listed, and configured.

Items in the Navigator panel can be located quickly by typing a device name into the **Search** field at the top of the Navigator panel and pressing Enter.


Note: The Navigator panel is permission-based, so if a user does not have rights to perform certain actions, they will not see the options.

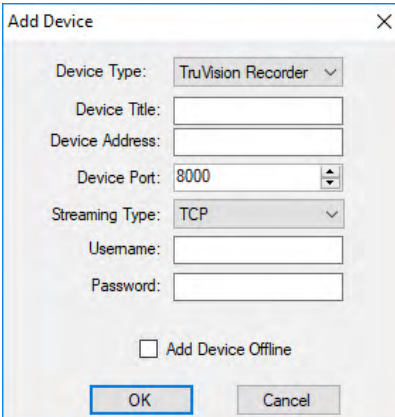
Adding devices (recorders and cameras)

Add a single or multiple devices to the Navigator panel by choosing one of the following options:

- Add manually
- Add via discovery tool

Adding devices (recorders and cameras) manually

1. Click the **Add Devices** button  in the Navigator panel and select **Add Manually**, or right-click the Devices icon and then select **Add Device > Add Manually** from the drop-down list. The Add Device window appears.



2. Select the appropriate model from the **Device Type** drop-down list.

Note: Select **TruVision Recorder** or **TruVision Camera** from the drop-down list for any TruVision device. Using one of these drivers enables the device's browser-based configuration page.

3. Type a name in the **Device Title** field. Values are alphanumeric.
4. Based on the device type, a selection from the **Streaming Type** drop-down list may be required. For some devices, there is only one option for the **Streaming Type** so it is selected by default. 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 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.
 - **Multicast** – This type of streaming only requires one stream and one user connection to the recording device and can be connected to many clients. This saves connections and network bandwidth. Multicast is supported in live view only.
 - **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.
5. Type the device's IP address or the DynDNS, No-IP, or EzDDNS URL in the **Device Address** field.

Note: A recorder can be added using a Domain Name System (DNS) name as well as a static IP address by typing the DNS name in the **Recorder Address** field.

6. The **Port** field is pre-populated with a default value based on the type of device selected. If the port assigned to the device is different from the default value, type the correct port value 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 (e.g., mydvr.dyndns.org:2222 if the HTTP port being used is 2222). When using No-IP instead of DynDNS, also add the HTTP port number.

7. If applicable, type the required values in the **Username** and **Password** fields. These fields are only required if the device being added has been configured to require a username and password.

8. Select the **Add Device Offline** check box to add the device to the Navigator if it is currently offline. Bring an offline device online by right-clicking on the device in the Navigator panel and selecting **Connect**.
9. Click **OK**.

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

Note: An error message may appear stating that the device was added but it has unsupported firmware. This should not prevent the viewing of video. See Appendix B “Device details” on page 125 and “Upgrade firmware” on page 82.

Adding devices (recorders and cameras) using the discovery tool

Navigator is equipped with an embedded device discovery tool that discovers devices such as recorders, cameras, and encoders in the network and permits the addition of one or more of those devices.

1. Click the **Add Devices** button in the Navigator or right-click the Devices icon, and then select **Add Device > Add via Discovery Tool** from the drop-down list.
2. The Device Discovery window displays and provides a list of available devices in the network.

Model	MAC Address	IP Address and Port	Subnet Mask	Serial Number
TVF-1102	44-19b6-3e-a4-0a	172.16.100.104-8000	255.255.0.0	TVF-110220140604CCWR467703385
TVF-1103	44-19b6-3f-48-12	172.16.30.45-8000	255.255.0.0	TVF-110320140611CCWR468929267
TVF-3101	44-19b6-32-85-4d	172.16.30.44-8000	255.255.0.0	TVF-310120140513CCWR464841121
TVF-3101	44-19b6-49-0b-07	172.16.30.46-8000	255.255.0.0	TVF-310120140627CCWR470799322
TVF-3102	44-19b6-49-0c-e7	172.16.30.184-8000	255.255.0.0	TVF-310220140627CCWR470800438
TVF-3104	44-19b6-3f-47-9e	172.16.30.187-8000	255.255.0.0	TVF-310420140611CCWR468929141
TVN10	8c-e749-67-56-37	172.16.10.18-8000	255.255.0.0	TVN1016S1620140519AARR090057391WCVU
TVN10	8c-e749-4f-1d-45	172.16.6.10-8000	255.255.0.0	TVN10161620140117AARR090047441WCVU
TVN10	8c-e749-4f-1c-ca	172.16.10.22-8000	255.255.0.0	TVN1004c-0420140117AARR090047400WCVU
TVN10	8c-e749-4f-1d-17	172.16.6.110-8000	255.255.0.0	TVN1004c-50420140117AARR090047400WCVU
TVN20	8c-e749-19bb-d1	172.16.10.16-8000	255.255.0.0	TVN20161620130409BRRR090023831WCVU
TVN20	00-40-30-47b5-02	172.16.10.12-8000	255.255.0.0	TVN20081620110621BRRR000522802WCVU
TVN20	00-40-48-28-6a-9b	172.16.4.2-8000	255.255.0.0	TVN20161620110621BRRR401128283WCVU
TVN21	c0-56-a3-34-a1-a1	172.16.10.20-8000	255.255.0.0	TVN2116S1620150115BRRR090103863WCVU
TVN21	8c-e749-0b-d7-77	172.16.10.14-8000	255.255.0.0	TVN21161620121207BRRR090014958WCVU
TVN21	c0-56-a3-40-e0-a0	172.16.6.23-8000	255.255.0.0	TVN2116S1620150302BRRR090108337WCVU
TVN21	8c-e749-35-d4-80	172.16.6.21-8000	255.255.0.0	TVN2122P1620130927BRRR090040085WCVU
TVN21	8c-e749-78f0-6c	172.16.10.150-8000	255.255.0.0	TVN2116S1620140723BRRR090071777WCVU
TVN21	8c-e749-0b-d7-79	172.16.6.210-8000	255.255.0.0	TVN21161620121207BRRR090014950WCVU
TVN22	bc-ad-28-96f6-93	172.16.30.122-8000	255.255.0.0	TVN2219P1620160529CCRR090176597WCVU
TVN22	bc-ad-28-a8-79-55	172.16.69.22-8000	255.255.0.0	TVN22161620160701CCRR090181197WCVU
TVN22	bc-ad-28-99-e3b5	172.16.7.22-8000	255.255.0.0	TVN22080820160529CCRR090177794WCVU

3. To add devices to the Navigator, select one or multiple devices from the list using the mouse and Ctrl key, and then click **Add**. The device(s) appear under the Device node in the Navigator panel.

Note: The discovery tool attempts to add devices (recorders or TruVision cameras) by using their default credentials. If the credentials of a device are previously changed from default values, the device still gets added to the Navigator panel, but it is shown as offline. In this case, updated credentials need to be applied manually by right-clicking on the device and selecting **Properties** or **Configure Device**.

4. After the recorder or TruVision camera appears online, expand the Device icon to view all devices added to the system.
5. Upon successful connection, the Navigator populates the respective cameras under the device.

To remove a camera icon from the Navigator panel:

1. Right-click the recorder icon associated with the camera and select **Properties**.
2. Click on the camera to be removed and select the **Camera Not in Use** check box.
3. Click **Save**. Repeat these steps, deselect the **Camera Not in Use** check box, and then click **Save** to add the camera back to the Navigator panel.

To remove a recorder icon from the Navigator panel:

1. Right-click the recorder icon and select **Delete Device**.
2. Click **Yes**.

Configuring discovered devices

Discovered devices (recorders and cameras) can be configured either in Navigator or through the device's internal configuration web page.

TruVision recorder browser configuration is currently available for the recorders listed below:

Table 3: Browser configuration compatibility

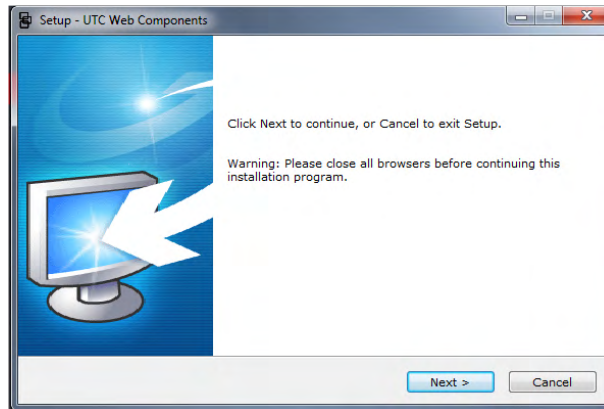
Recorder Model	Firmware version
TVN 10	2.0 and above
TVN 21	3.0 and above
TVN 22	1.0 and above
TVR 12 HD	All versions
TVR15 HD	All versions
TVR44 HD	All versions
TVN 70	All versions

To configure a device using the device's internal configuration web page:

1. Right-click a device in the Navigator panel and select **Configure Device** or **Configure Camera**.
2. If necessary, click **OK** to update the plug-ins.

Note: The plug-in should already be installed if the device has been connected to and previously configured through the device's internal web browser

3. Follow the instructions in the Setup-UTC Web Components window. When complete, restart Navigator.



WARNING: Close all browser windows when instructed and close Navigator before continuing.

4. Right-click the TruVision device and select **Configure Device**. Navigator opens the device's internal configuration web page.
5. Configure the device with the required preferences. See the device's user manual for all configuration options.

Note: For cameras not connected to a recorder, enter the camera's login credentials to proceed.

6. When complete, click the **Close** button to save any configuration changes and return to Navigator.

Note: Some devices cannot be configured remotely using Navigator.

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

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

Adding a TruVision 360° camera

Navigator supports Interlogix 360° fisheye cameras. These cameras can be added to TruVision NVRs as a regular IP camera either manually or using the discovery tool.

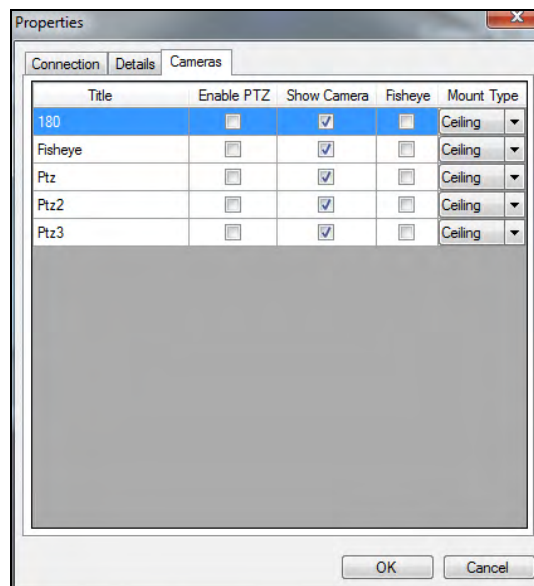
Each fisheye camera provides five streams to the user.

- 1 x Raw 360° image (also contains a substream)
- 1 x Two 180° bands in one video stream
- 3 x 120° streams with digital PTZ capability

When a fisheye camera is added to a device, the camera appears in the Navigator panel and has its own device node with up to five channels listed under it. By default, the fisheye camera is added with only the 360° mode enabled.

To add the rest of the views:

1. Ensure that the Fisheye Mode in the camera configuration menu is set to Multi Channel Mode. See the camera's user manual for details.
2. Right-click on the camera's device node and select **Properties**.
3. In the **Properties** menu, click the **Cameras** tab and select the **Show Camera** check boxes for the views to display.
4. Click **OK**.



For information about dewarping 360° cameras, see “Dewarp views” on page 97.

Adding a V-Stream

V-Streams combine output from all camera channels in a recorder into a single stream. V-Streams only appear if they are configured in the recorder.

To view a V-Stream, click on a V-Stream icon in the Navigator panel and drag it to a video tile in the Viewer panel.

Adding maps

Maps or floor plans can be added as PNG, JPEG, GIF, or BMP files. Camera icons can be placed on the maps to represent their physical locations. Clicking these camera icons loads video into the Viewer panel.

To add a map:

1. Right-click the Map icon in the Navigator panel and select **Add Map**.

2. The Open Map File window appears. Navigate to the image file for the map required and click **Open**. The map appears in the Navigator panel under Maps.
3. Double-click the map name to open it in a video tile. Clicking the camera icons placed on the map launches the selected camera's video. When the camera receives a notification, a color-coded box appears around the camera icon.
4. Click the left mouse button inside the video tile to move the map in any direction inside the tile.
5. Right-click on the map and select **Zoom to fit** to re-center the map and have it fill the video tile.

To rename or delete a map:

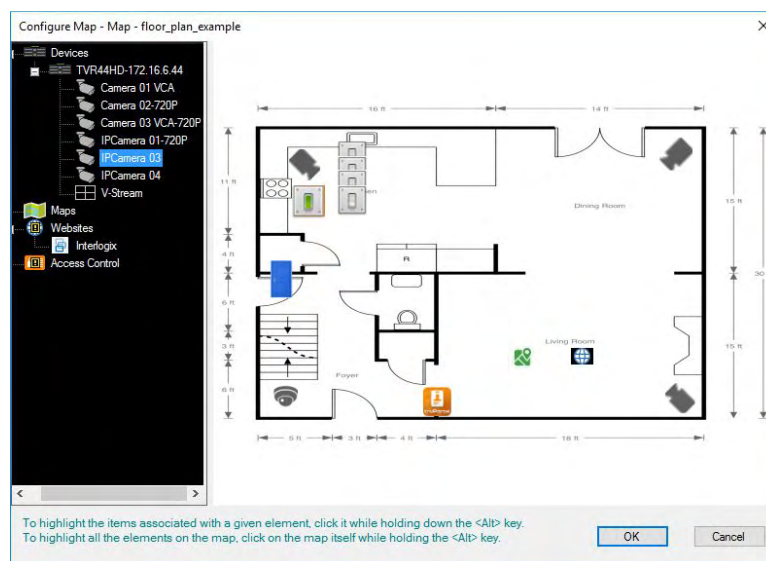
Right-click on the map name in the Navigator panel and select **Rename Map** or **Delete Map**.

Configuring maps

Camera, access control door, and access control panel icons can be added to maps to represent their physical locations. Cameras can be connected to doors to enable the launching of video whenever a door is opened. Selecting any element in a map while pressing the Alt key highlights other elements associated with the selection. Clicking on the map itself while pressing the Alt key highlights all elements on a map.

Adding and positioning icons:

1. Right-click the map name in the Navigator panel and select **Configure Map**.
2. Click and drag a camera, recorder (if the recorder has trigger outputs, an option appears to include trigger output icons), access control panel (if a TruPortal system has been added to Navigator), access control point (door icon), a website, or another map from the Navigator panel to any point on the map.

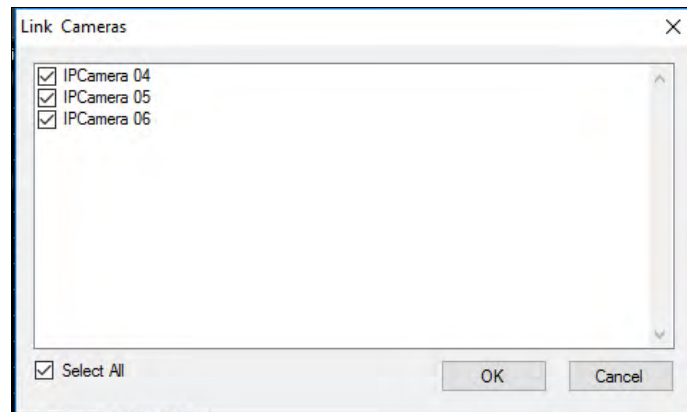


6. Right-click on a camera and select **Orientation** to change the position of the camera to mimic its physical orientation.

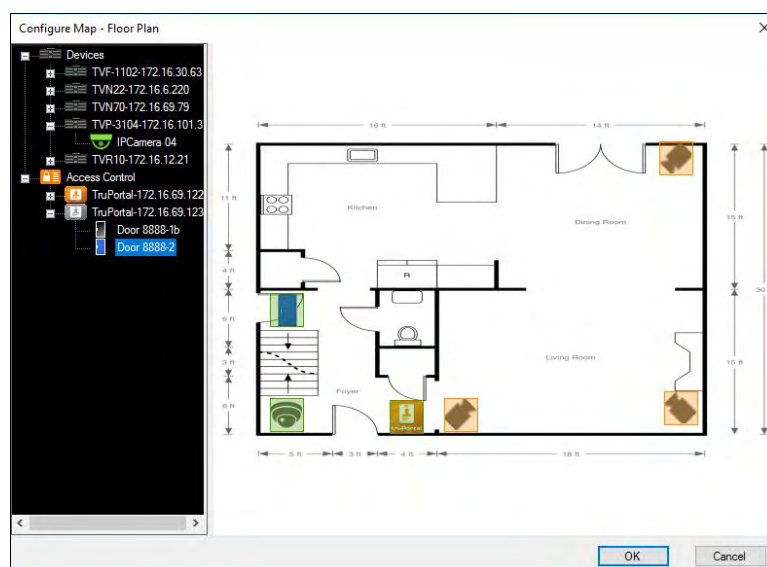
7. Click **OK** to save.
8. To remove an icon, right-click on it and select **Delete**.

Connecting an access control point to cameras on a map:

1. Right-click on an access control point (door) and select **Link Cameras**.
2. Select all cameras on the map to link to the door (or select **Select All**), and then click **OK**.



3. To see which cameras on the map are linked to a door, hold down the Alt key while clicking on the door icon and orange boxes appear around the connected camera icons.



4. Whenever the door is opened, notifications from linked cameras appear in the Notifier panel (see Chapter 7 “Notifier panel” on page 103). Click the camera notification in the Notifier panel to launch video recorded when the door was opened in the Viewer panel (see Chapter 6 “Viewer panel” on page 87). If a linked camera has been assigned to the Event Monitor, video from the camera displays in the Event Monitor if the door’s reader is swiped or if the door is opened. Doors can be opened from maps in the Viewer Panel by double-clicking on a door icon.

Configuring or viewing recent activity—access control panel icon:

- Right-click on an access control panel icon and select **View Recent Activity** to view a list of recent events associated with the panel. Click the Microsoft Excel[®] icon to export the list of events to a spreadsheet.
- Right-click on an access control panel icon and select **Configure** to bring up the TruPortal login page. Refer to the *TruPortal Software User Guide* or TruPortal Help for configuration instructions.

Launching maps and websites from a map in the Viewer Panel:

In a map in the Viewer Panel that has been configured to include one or more submaps and/or websites, double-click on a submap or website icon to launch it in a Viewer Panel tile.

Operating trigger outputs:

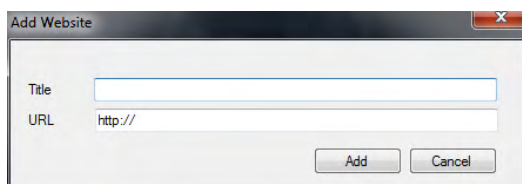
In a map in the Viewer Panel that has been configured to include one or more recorder or camera output triggers, double-click on a trigger icon to turn it on or off.

Adding websites

Websites can be added to the Navigator panel for viewing and navigating in the Viewer panel.

To add a website:

1. Right-click on the Websites node in the Navigator panel and select **Add Website**. The Add Website window appears.



2. Type a title for the website in the **Title** field, and then type or copy/paste the website's URL into the **URL** field.
3. Double-click on the website icon or drag it to a tile in the Viewer panel to view and navigate the website.

Navigate the website in the Viewer panel tile using the pointer, scroll bar, and the icons in the top menu (**Forward**, **Back**, and **Refresh**). To delete a website, right-click on the website icon in the Navigator panel and select **Delete Website**.

To configure a website in the Navigator:

1. Right-click on the website icon in the Navigator panel that requires configuration and select **Configure Website**. The Configure Website window appears.
2. Type a new title for the website in the **Title** field or type or copy/paste a new URL into the **URL** field.

Adding TruPortal access control systems

TruPortal™ is an IP appliance-based access control system that integrates with TruVision Navigator.

After installing the TruPortal SDK, add TruPortal systems to the Navigator panel by choosing one of the following options from Access Control:

- Add manually
- Add via discovery tool

Installing the TruPortal SDK

Note: The TruPortal SDK 1.1.54 or later plug-in must be installed before Navigator can communicate with the TruPortal panel.

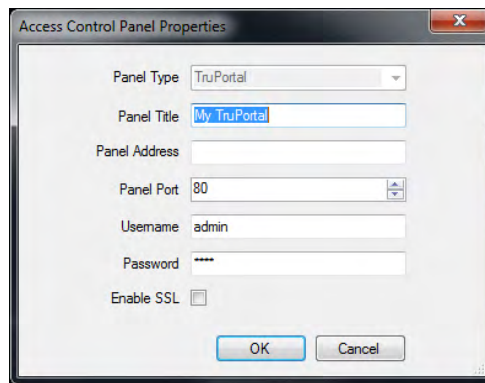
To download and install the TruPortal SDK plug-in:

1. Go to www.interlogix.com/library.
2. Type “TruPortal SDK” into the **Search Download Library** field.
3. Download the TruPortal SDK plug-in Zip file and extract the contents to a folder on the local computer.
4. Launch Internet Explorer 9 or later and type the IP address of a TruPortal panel installed in the local network into the Address bar.
5. Log into the system as a user with *Plugins > Modification* permissions.
6. Select *System Administration > Plugins*.
7. Click the **Install** button.
8. Click the **Select File** button.
9. In the Open dialog box, navigate to the folder containing the plug-in package (the file has a .LFF extension), select the file, and then click **Install**.

Note: Plug-in installation may take up to 10 minutes. The panel restarts after successful installation. The plug-in automatically starts after the panel restarts.

Adding TruPortal systems manually

1. Follow the instructions under “Installing the TruPortal SDK” above.
2. Right-click the Access Control node, and then select **Add Panel > Add Manually** from the drop-down list. The Access Control Panel Properties window appears.



Note: There is only one option for the **Panel Type** so it is selected by default.

3. Type a name in the **Panel Title** field. Values are alphanumeric. The default panel title is My TruPortal.
4. Type the device's IP address in the **Panel Address** field.
5. The **Port** field is pre-populated with a default value based upon the type of device selected. If the port assigned to the device is different from the default value, type the correct port value in this field.
6. Type the required values in the **Username** and **Password** fields. These fields are only required if the device being added has been configured to require a username and password.
7. Select the **SSL** check box if required by the server.
8. Click **OK**.

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

Adding TruPortal systems using the discovery tool

Navigator is equipped with an embedded device discovery tool that discovers devices such as recorders, cameras, and encoders in the network and permits the addition of one or more of those devices.

1. Follow the instructions under "Installing the TruPortal SDK" on page 69.
2. Right-click the Access Control node, and then select **Add Panel > Add via Discovery Tool** from the drop-down list. The Access Control Panel Properties window appears.
3. The Discovered Access Control Panels window displays and provides a list of available control panels in the network.
4. To add control panels to the Navigator, select one or multiple panels from the list and click **Add**. The panel(s) appear under the Access Control node in the Navigator panel.

Note: The discovery tool attempts to add access control panels by using their default credentials. If the credentials of a panel are previously changed from default values, the panel still gets added to the Navigator panel, but it is shown as offline. In this case, updated credentials need to be applied manually by right-clicking on the panel and selecting **Properties** or **Configure**.

5. Once the control panel appears in the Navigator panel, expand the Access Control node to view all panels added to the system.
6. Upon successful connection, the Navigator populates the respective doors under the panel. To unlock a door, right-click on the door icon and select **Unlock**.

Access Control configuration requires that Adobe Flash be installed on the computer performing the configuration. See the *TruPortal Software User Guide* for instructions on configuring TruPortal.

Performing lock and unlock operations

Right-clicking on the Access Control node provides the following lock/unlock operations:

- **Global Lockout** –
- **Global Reinstate** –

Right-clicking on an Access Control panel provides the following lock/unlock operations:

- **Reinstate All Doors** – Restores all doors to their normal state, unless a designated unlock input is active (see the *TruPortal Software User Guide* for details).
- **Lockout All Doors** – Locks all doors and ignores credentials, so that nobody can enter or exit. After issuing this command, reinstate all doors so that individual doors can be controlled directly.
- **Unlock All Doors** – Releases the locks on all doors, allowing free access and egress. After issuing this command, reinstate all doors so that individual doors can be controlled directly.

Right-clicking on a door icon provides the following lock/unlock operations:

- **Unlock** – Releases the lock on the door, allowing free access and egress until the door state is changed by either a reader schedule or a global (“all doors”) command.
- **Reinstate** – Restores the door to default behavior based on the schedule.
- **Lockout** – Locks the door and ignores credentials so that nobody can enter or exit.
- **Secure** – Locks the door.

Recent activities

Select Recent Activities in the Access Control panel context menu to view a list of time stamped events associated with each door in the panel. Click the **Export List** button to export the list of recent activities in the CSV file format.

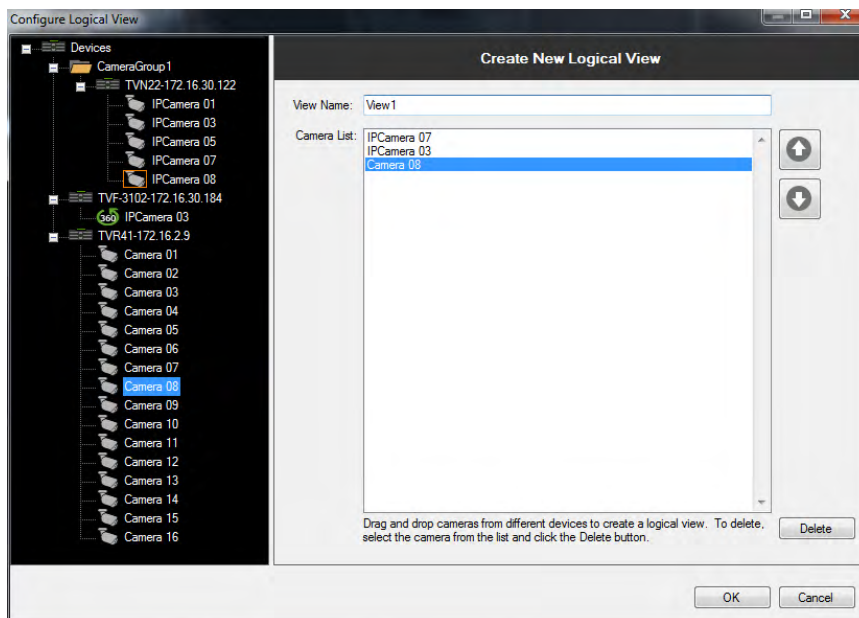
Person	Door	Event	Date Time
	Door 8888-1b	Door Unlocked	8/8/2017 12:51 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/7/2017 5:05 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/7/2017 4:44 PM
	Door 8888-1b	Door Unlocked	8/7/2017 4:37 PM
	Door 8888-1b	Door Unlocked	8/7/2017 4:02 PM
	Door 8888-1b	Door Unlocked	8/7/2017 3:08 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/7/2017 10:51 AM
	Door 8888-1b	Door Unlocked	8/3/2017 5:42 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/3/2017 5:11 PM
	Door 8888-1b	Door Unlocked	8/3/2017 4:28 PM
	Door 8888-1b	Door Unlocked	8/3/2017 4:21 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/3/2017 11:32 AM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/3/2017 11:32 AM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/1/2017 2:13 PM
Administrator	Door 8888-1b	Door Momentarily Unlocked	8/1/2017 2:12 PM

Adding logical views

Logical views provide the flexibility to display the physical devices in any configuration required.

To add a logical view:

1. Right-click on the Logical View node in the Navigator panel and select **Add Logical View**. The Configure Logical View window appears.
2. Type a title for the view in the **View Name** field, and then drag and drop cameras from the Logical View panel into the **Camera List** field.



3. Use the up and down arrow buttons to move cameras within the list. When finished, click **OK** to create the new logical view. To delete a logical view, right-click on the logical view icon in the Navigator panel and select **Delete**.

Search

Use Search to find any recorder, camera, map, website, access control point, or logical view in the Navigator panel.


To perform a Navigator panel search:

1. Type any alphanumeric string into the **Search** field at the top of the Navigator panel and press Enter. Focus goes instantly to the object that matches the string.
2. Press Enter again to move to the next object that matches the string, and so on, until each item matching the search criteria has been found. Type a different alphanumeric string into the **Search** field to perform another search.

Adding folders

Adding folders provides a way to organize Navigator panel items in a logical manner.

To organize the Navigator panel:

1. Click on a top-level node (Devices, Maps, Websites, Access Control, or Logical Views) and click the **Add Folder** button . This creates a new folder.
2. Type a name for the new folder and press Enter.
3. To add a sub-folder within the previously created folder, right-click the parent folder and select **Add Folder**.
4. Click and drag items into folders or folders within folders. Cameras always stay attached to their respective devices.

Devices context menu

Right-click on the Devices node to bring up a context menu. Available selections are as follows:

Add device

See “Adding devices (recorders and cameras)” on page 60.

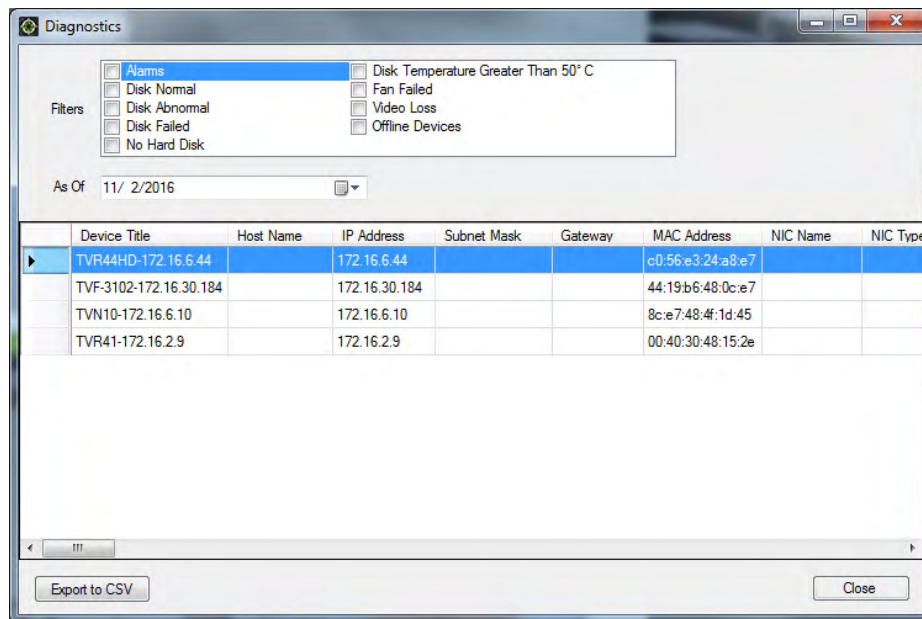
Add folder

See “Adding folders” above.

Run health diagnostics

Right-click on the Devices node and select **Run Health Diagnostics** to review health diagnostic data across all of the devices in the system. Move the scroll bar at the bottom of the window to the right to see all health diagnostic information.

Use the filters and date parameters to pinpoint the search. Export the contents of the dialog to the CSV file format for case management, work orders, or issue resolution documentation by clicking the **Export to CSV** button.



Note: For devices to appear in the Diagnostics window, health diagnostics must be run at the device level first. See “Automated diagnostic polling” on page 33 for information on setting automatic diagnostic polling for recorders or “Run health diagnostics” on page 77 for manual, device-level generation of health diagnostics.

Open exported video file

Right-click on the Devices icon and select **Open Exported Video File** to browse for and launch an exported video in the Viewer.

Device management

Right-click the Devices node and select **Device Management** to display the Device Management window. All devices that can be discovered automatically appear in this window.

Model	MAC Address	IP Address and Port	Subnet Mask	Version	Serial Number	Command Status
Interlogix						
TVN10	8c-e7-48-4f-1c-ca	172.16.10.28:8000	255.255.0.0	V2.1.g, build 16...	TVN1004c0420140117A...	Ping succeeded
TVN10	8c-e7-48-4f-1d-17	172.16.6.110:8000	255.255.0.0	V2.1.h, build 16...	TVN1004c0420140117...	
TVN10	8c-e7-48-4f-1d-24	172.16.69.105:8000	255.255.0.0	V2.1.g, build 16...	TVN1008S0820140116...	
TVN10	8c-e7-48-67-56-37	172.16.10.18:8000	255.255.0.0	V2.1.h, build 16...	TVN1016S1620140519...	
TVN10	8c-e7-48-4f-1d-45	172.16.6.10:8000	255.255.0.0	V2.1.h, build 16...	TVN10161620140117A...	
TVN10	8c-e7-48-67-56-31	173.196.197.36:8000	255.255.255.0	V2.0.k, build 15...	TVN1008S0820140519...	
TVN20	00-40-30-48-12-19	173.196.197.45:8000	255.255.255.0	V3.0.d, build 130...	TVN20161620120303B...	
TVN20	00-40-30-47b5-02	172.16.10.12:8000	255.255.0.0	V3.2.a, build 140...	TVN20081620110621B...	
TVN20	00-40-48-28-6e-9b	172.16.4.2:8000	255.255.0.0	V3.2.a, build 140...	TVN20161620110621B...	
TVN20	8c-e7-48-19bb-d1	172.16.10.16:8000	255.255.0.0	V3.2.a, build 140...	TVN20161620130409B...	
TVN21	8c-e7-48-0b-d7-6e	192.168.0.111:8000	255.255.255.0	V3.1.g, build 16...	TVN21161620121207B...	
TVN21	8c-e7-48-31-56-40	57.200.119.71:8000	255.255.255.192	V3.1.g, build 16...	TVN2108P0820130902...	
TVN21	8c-e7-48-36-dd-80	172.16.6.22:8000	255.255.0.0	V3.1.g, build 16...	TVN2132P1620130927...	
TVN21	8c-e7-48-0b-d7-79	172.16.6.210:8000	255.255.0.0	V3.1.h, build 16...	TVN21161620121207B...	
TVN21	8c-e7-48-0b-d7-77	172.16.10.14:8000	255.255.0.0	V3.1.h, build 16...	TVN21161620121207B...	
TVN21	8c-e7-48-0b-d7-9b	172.16.10.17:8000	255.255.0.0	V3.1.g, build 16...	TVN21080820121207B...	
TVN21	c0-56-e3-40-e0-a0	172.16.6.23:8000	255.255.0.0	V3.1.g, build 16...	TVN2116S1620150302...	
TVN21	8c-e7-48-78f0-6c	172.16.10.15:8000	255.255.0.0	V3.1.i, build 160...	TVN2116S1620140723...	
TVN21	c0-56-e3-34-a1-a1	172.16.12.170:8000	255.255.0.0	V3.1.g, build 16...	TVN2116S1620150115...	

Device management contains the following functions:

Show devices – Device management only shows recorders by default. To see other device types, click the **What to display** drop-down list and select **Show cameras**, **Show IFS Switches**, or **Show all** to see all devices.

Grouping – Device management groups devices by manufacturer by default. Click the **Grouping** drop-down list and select **Don't Group** to see all devices grouped together alphabetically.

Refresh – Click the **Refresh** button to reset the list of devices and clear Command Status column messages.

Reboot – Select a device and click the **Reboot** button to reboot it. This puts a red x on the device icon in the Navigator panel to indicate that it is offline. After the device reboots, right-click on its icon in the Navigator panel and select **Connect** to reconnect it.

Show web page – Click the **Show web page** button to launch the browser interface for a selected recorder or camera. See the device's user manual for configuration instructions.

Change network settings – Click the **Change network settings** button to change a device's IP address or subnet mask.

Ping – Click the **Ping** button to ping the device. See the Command Status column for a ping message (ping succeeded or ping failed).

Check for default credentials – Click the **Check for default credentials** button to check if a device is using default credentials. See the command status column for a message (using or not using default credentials).

Export list – Click the **Export List** button to export the list of devices in the CSV file format.

Recorder context menu

Right-click on a recorder's device icon to bring up a context menu. Available selections are as follows:

Run tampering monitor

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

To open the tampering monitor, right-click a recorder and select **Tampering Monitor**. The Tampering Monitor window appears.



Reference images are listed with the date and time they were taken in the Reference Image column. For the first time applications of this feature, the reference images are empty. In this case, click **Update All** to save the reference images. Tampering activity on each camera can be monitored by comparing reference images with live images located on the right side of the window.

Run device report

Navigator permits export of health diagnostics information by generating a device report.

To generate the device report:

1. Right click a recorder icon in the Navigator panel.
2. Select **Run Device Report**. The device report displays in a new window.

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

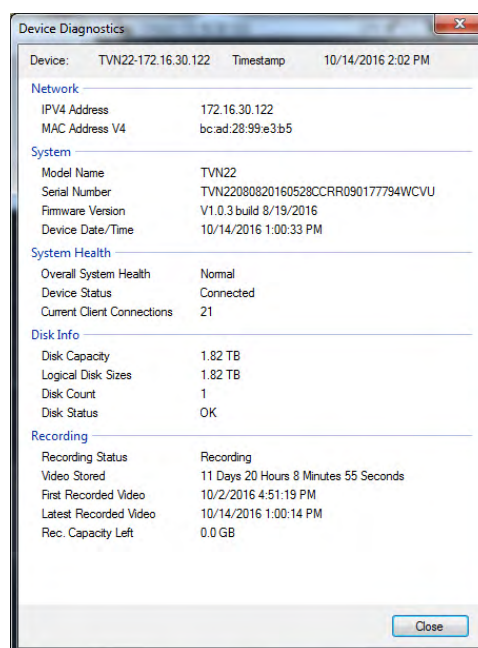
3. Click **Export to PDF** to save the report as a PDF.

As a part of the report, tampering monitor images are also provided at the bottom of the report in the Camera Check section. For more information on the tampering monitor, see “Run tampering monitor” on page 76.

Run health diagnostics

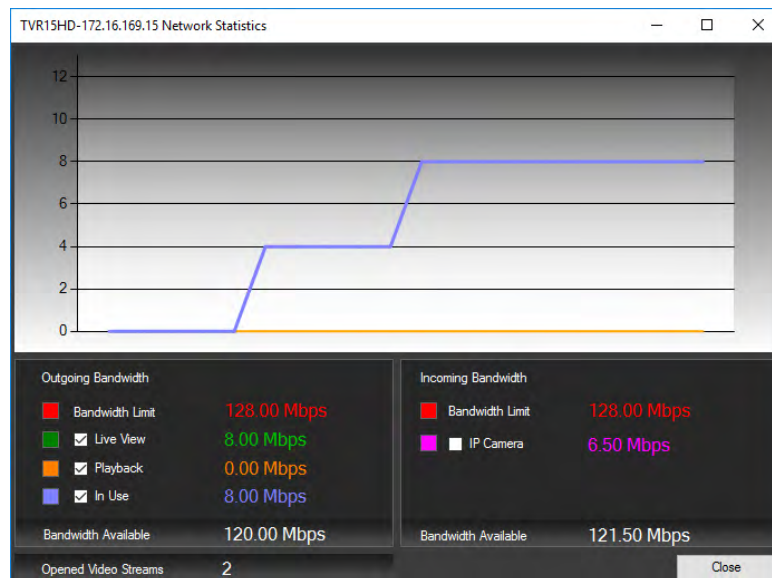
To run a manual health diagnostic snapshot on a single recorder, right-click the device in the Navigator panel and select **Run Health Diagnostics**.

The Device Diagnostics window appears and displays the full set of health diagnostic data for that particular device. See Appendix B “Device details” on page 125 for more details on the different health diagnostics available for each device.



Run network statistics

Right-click the device in the Navigator and select **Run Network Statistics** to launch the Network Statistics window. The outgoing and incoming network bandwidth limit and usage appear in a graphical format. The number of open video streams on the system at the device level also appears.



Select or deselect items under Outgoing Bandwidth and Incoming Bandwidth. Click **Close** to exit the Network Statistics window.

Note: Incoming bandwidth statistics do not appear when running network statistics on DVRs.

Run disk analysis

Disk analysis provides a timeline view of video recorded to disk on all connected cameras. Color coded video tags are defined in the bottom of the Disk Analysis window.

Note: Areas in the timeline tagged as Other (gray) may or may not contain recorded video. The device may have been offline or not configured to record video during the period of time indicated.

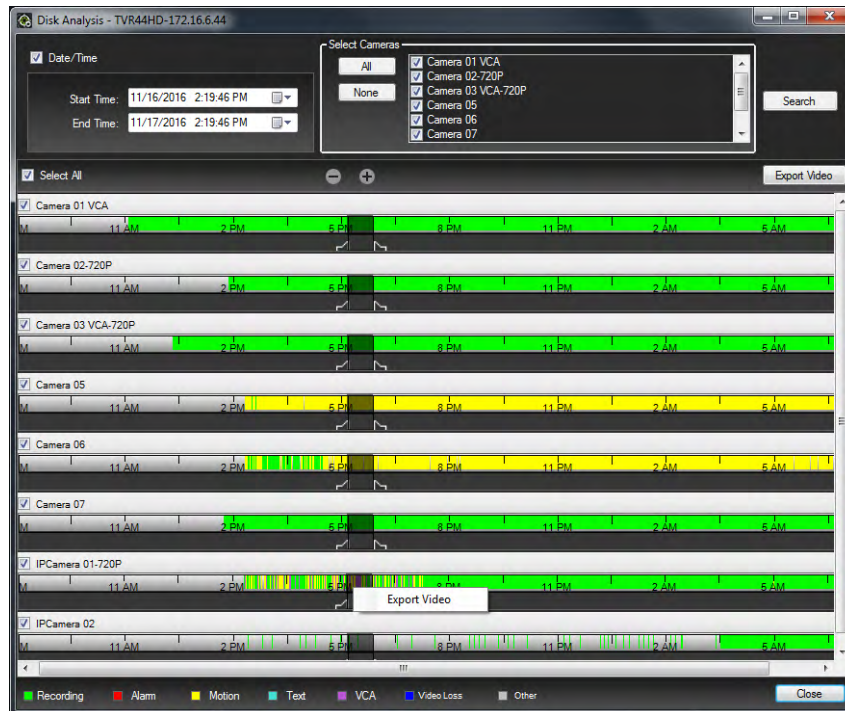
To run disk analysis and play back video:

1. Right-click on the device icon in the Navigator panel and select **Run Disk Analysis**. The disk analysis window appears.
2. Select a time range of recorded video in the **Start Time** and **End Time** fields.
3. Select cameras for disk analysis in the Select Cameras section and click **Search**.
4. Select check boxes to the left of each camera name as necessary. Video from all cameras selected play back simultaneously in the Viewer during playback.
5. If necessary, click the **Zoom In** and **Zoom Out** buttons or click on the timeline and slide it to the left or right to locate a specific point in time.
6. Double-click anywhere on the disk analysis timeline to play video in the Viewer from that point in time.

To export video from the Disk Analysis window:

1. If necessary, click the **Zoom In** and **Zoom Out** buttons or click on the timeline and slide it to the left or right to locate a specific point in time

- Slide the beginning and ending timeline markers to highlight a segment of time in green on the timeline bar.
- Right-click a disk analysis track and select **Export Video** from the menu or click the **Export Video** button.



Trigger outputs

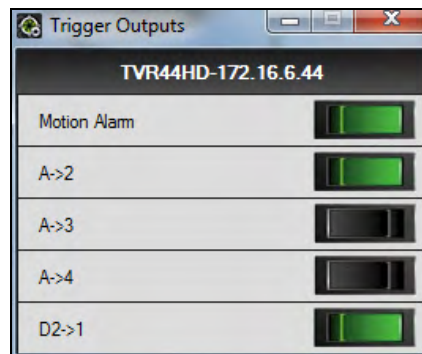
Note: This feature is only supported for TruVision devices. Refer to Appendix B “Device details” on page 125 to see which devices have trigger outputs.

Some TruVision recorders have alarm output ports that can connect to external devices. Alarm outputs can be configured to be triggered by an event, such as camera motion detection.

There are two types of trigger outputs: (A-> – Analog) and (D-> – Digital). Alarm type (A->) are alarms from the trigger through the back of the recorder. Alarm (D->) are the alarms triggered out of the IP Camera. Only NVR/Hybrid devices have the (D->) type alarms.

To set trigger outputs:

- Right-click a recorder and select **Trigger Outputs**. Alarm output numbers are replaced with alarm output names when configured in the device’s configuration interface (see the device’s user manual for details).
- Toggle the trigger output switches to the on position (green) as necessary.



Note: TVR 60 and TVN 20 do not support (D->) types alarm. This is a hardware limitation.

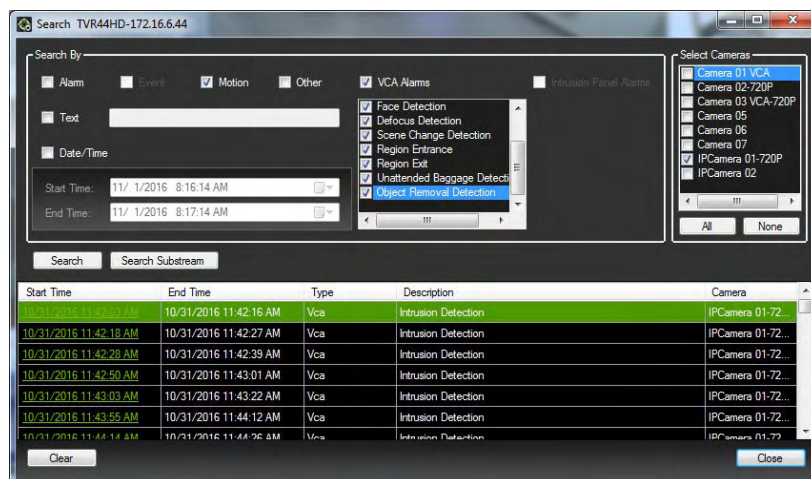
Manage IP cameras (IP camera recorders only)

Right-clicking a recorder and selecting **Manage IP Cameras** launches the IP Camera Status page in the Configuration interface. See the recorder's user manual for details about IP camera configuration.

Search

Search multiple cameras for alarms, alarms plus events, motion, and point-of-sale text-related video in the Search window. Searchable cameras must be configured for the search criteria specified.

Select check boxes in the Search by and Select Cameras areas to customize a search, and then click **Search** when finished. If a camera is set to record a substream in Navigator, search criteria can only be located by clicking **Search Substream**.



To search for video tagged with text:

1. Ensure that the device being searched for is working in conjunction with a ProBridge. The ProBridge acts as a bridge between the recording device and the Point-of-Sale (POS) device (a cash register or ATM, for example). It feeds the POS text data into the recording device where it is tagged to the applicable video.
2. Click the **Text** check box, type the text string in the **Text** field, and click **Search**.

Select or deselect the text overlay feature in the camera or recorder configuration settings to overlay the text on the video or place it beside the video (see the device's user manual for details). This check box is dynamic and, if selected or deselected during playback, the text switches from overlay to side-by-side and vice-versa (the switch takes a few seconds).

Different devices support varying levels of search capabilities. See Appendix B "Device details" on page 125 for further details on what types of video data are available for each device.

Export video

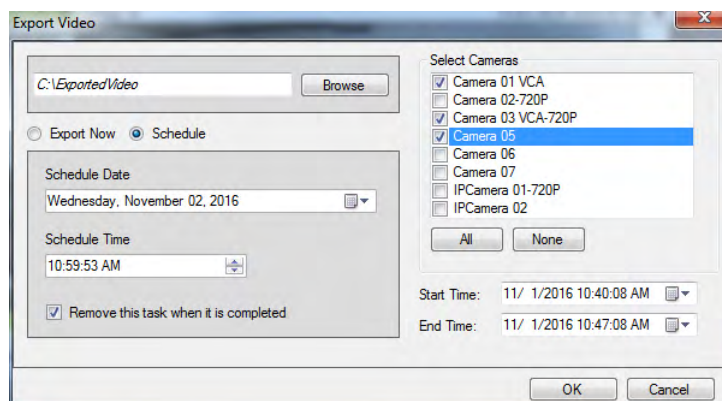
Export video from one or more cameras either immediately or at a specified time in the future in the Export Video window.

To export video from the recorder:

1. Right-click on a recorder icon in the Navigator panel and select **Export Video**.
2. Accept the default location or click **Browse** and specify a destination location for the export.

Note: Ensure that the destination location for the export has enough disk space capacity to store the exported video.

3. Select one or more cameras for video export in the **Select Cameras** list.
4. To start the export process immediately, click the **Export Now** button. The export task is automatically added to Tasks. Move the mouse pointer over the status column in the **Tasks** window to see detailed progress of the export.
5. To schedule the export process, click the **Schedule** button and specify a date/time to start the export process. An export task is automatically added to Tasks. To remove the record of the scheduled export from Tasks, select the **Remove this task when it is completed** check box.



6. Click **OK**.
7. When export tasks are complete, the exported video can be found at the location specified along with the TruVision Navigator Player program. See Chapter 10 "TruVision Navigator Player" on page 112.

Configure device

Right-clicking a recorder icon in the Navigator panel and selecting **Configure Device** launches the recorder's configuration interface. See the recorder's user manual for details on recorder configuration.

Upgrade firmware

Devices that support the upgrade firmware function are listed in the "Supported Devices" row in the device details tables (see "TruVision Recorder" on page 125 and "TruVision Camera" on page 128).

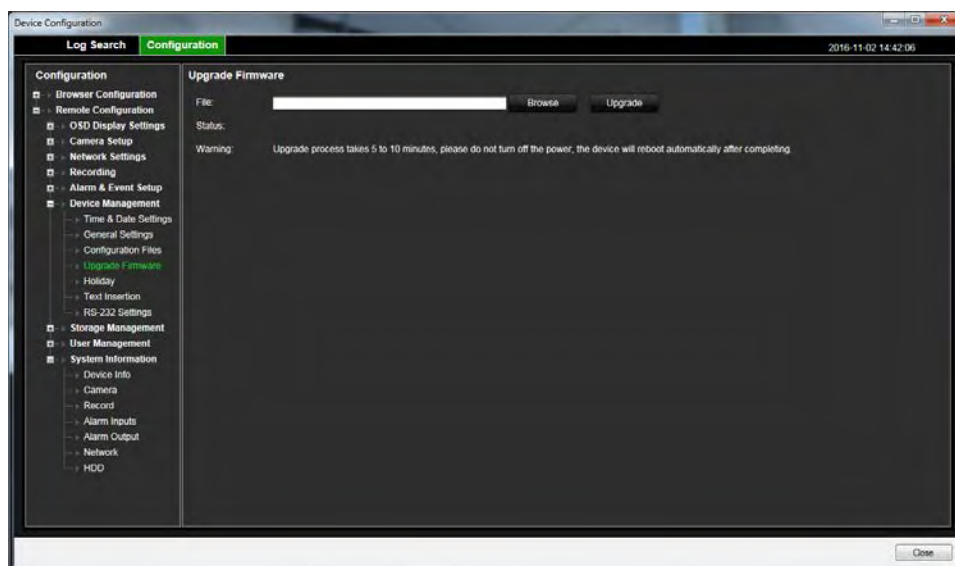
Follow the instructions below to upgrade firmware on TruVision recorders with the newer recorder configuration.

To upgrade firmware to device(s):

1. Right-click a recorder icon in the Navigator panel and select **Configure Device**.
2. Select Upgrade Firmware under Device Management.
3. Click **Browse** to find the applicable firmware file.

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

4. Click the **Upgrade** button.



Download/upload configuration

Devices that support the download/upload function are listed in the "Supported Devices" row in the device details tables ("TruVision Recorder" on page 125 and "TruVision Camera" on page 128).


Use the **Download Configuration** and **Upload Configuration** selections to transfer recorder configurations between individual devices.

- Right-click on the recorder and select **Download Configuration** to save the recorder's configuration in CFG file format.
- Right-click on the recorder and select **Upload Configuration** to upload a different recorder configuration to the selected recorder in CFG file format.

Upload firmware


Follow the instructions under “Bulk firmware upload” on page 183. Refer to Appendix B “Device details” on page 125 to see which devices support this feature.

Reboot device

1. Right-click a recorder icon in the Navigator panel and select **Reboot** to reboot it.
2. Click **Yes** to confirm reboot of the device. The recorder icon changes to  in the Navigator panel to indicate that it is offline.
3. After the device reboots, right-click on its icon in the Navigator panel and select **Connect** to reconnect it.

Restore factory defaults

Devices that support the restore factory defaults function are listed in the “Supported Devices” row in the device details tables (“TruVision Recorder” on page 125 and “TruVision Camera” on page 128).

1. Right-click a recorder icon and select **Restore Factory Defaults** to have the device default to factory settings (the same settings on the device when it was shipped).
2. Click **Yes** to confirm reboot of the device. The recorder icon changes to  in the Navigator panel to indicate that it is offline.
3. After the device reboots, right-click on its icon in the Navigator panel and select **Connect** to reconnect it.

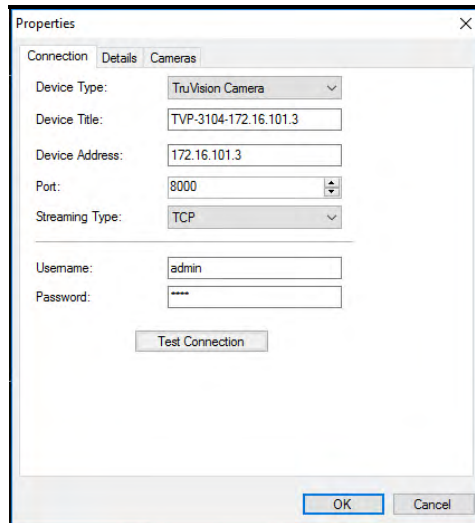
Delete/rename device

- Right-click on the recorder icon and select **Delete Device** to remove the recorder from the Navigator panel.
- Right-click on the recorder icon and select **Rename Device** to change the name of the recorder in the Navigator panel.

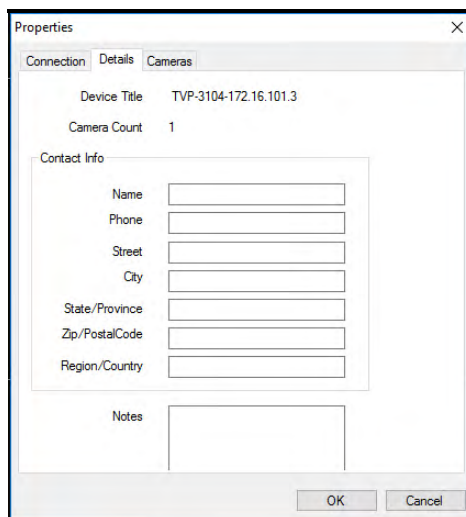
Properties

Right-click on the recorder icon in the Navigator panel and select **Properties** to display the Properties window.

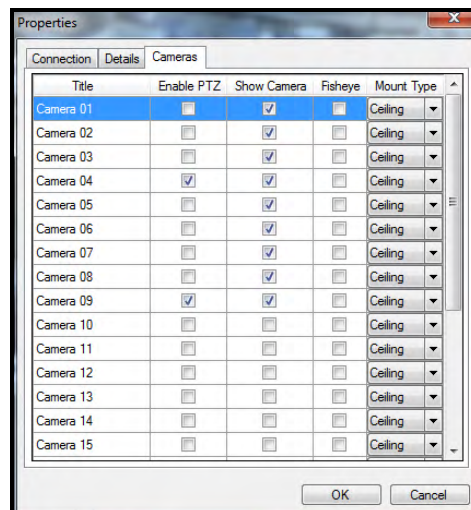
- The **Connection** tab shows all of the information previously entered when adding the device. Make changes as appropriate and click **OK** to save changes.



- The **Details** tab provides an area to type in contact information and notes to help facilitate management of the system. If the device was imported from an address book that contained information in this window, data appears in these fields. Type in data as appropriate and click **OK** to save changes.



- Use the **Camera** tab to hide or show cameras, enable or disable PTZ and fisheye controls, and set the mount type. When finished, click **OK** to save changes.



Camera context menu

Search

This function is the same as searching from a recorder, but only the camera selected can be searched. See “Search” on page 80.

Export video

This function is the same as exporting video from a recorder, but video can only be exported from the camera selected. See “Export video” on page 81.

Configure camera


Devices that support the configure camera function are listed in the “Supported Devices” row in the device details tables (“TruVision Recorder” on page 125 and “TruVision Camera” on page 128).

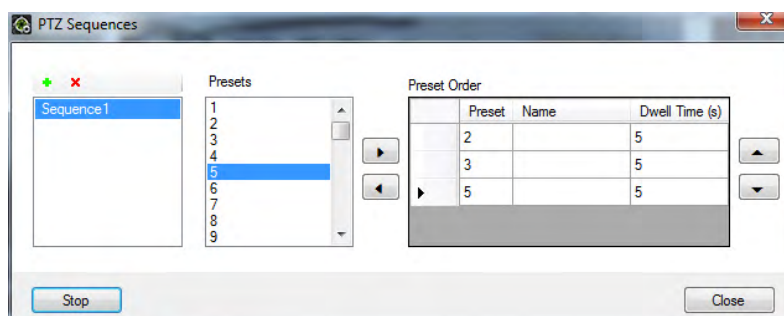
Right-click on an analog camera and select **Configure Camera** to access the camera configuration menu. See the camera’s user manual for further information on camera configuration.

Preset sequences

A PTZ camera’s presets can be built into a sequence based on a specific order and dwell time. These sequences can be created, managed, and tested by right-clicking on the PTZ camera in the Navigator and selecting **Preset Sequences > Manage Sequences**.

To create a preset PTZ sequence:

1. Click the  button to add a sequence.
2. Type a name for the sequence or leave the default name as-is.
3. Click on a preset number in the Presets list and then click the right arrow button to add the preset to the Preset Order list.
4. Repeat step 3 as necessary and use the up and down arrows to change the order of presets in the Preset Order list.

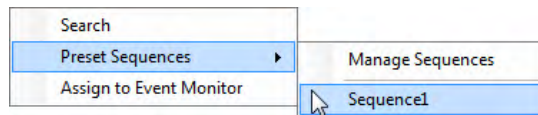


To test a preset sequence:

1. Create a preset sequence following the steps above.
2. Click **Test**. The sequence deploys in a video tile in the Viewer.
3. Click **Stop** to finish the test.

To stop or start a preset sequence:

Right-click the PTZ camera icon in the Navigator panel and select **Preset Sequences**, and then the name of the sequence to be stopped or started.



Assign to Event Monitor

The **Event Monitor** tab in the Viewer panel plays video of events and alarms configured on individual cameras as soon as they occur. As a possible action for an event, set up "Notify Alarm Host." The alarm host is set up under Alarm Settings. This function is not supported by all cameras. See the camera's user manual for instructions on camera configuration.

For further details about the Event Monitor, see "Event Monitor" on page 90.

To assign a camera to the Event Monitor:

1. Right-click on a camera and select **Assign to Event Monitor**. An orange border surrounds the camera icon in the Navigator panel.
2. Right-click on a camera assigned to the Event Monitor and click the check mark next to **Assign to Event Monitor** to remove the camera from the Event Monitor.

Chapter 6

Viewer panel

The Viewer panel displays both live and recorded video that can be launched from the Navigator panel, Notifier, or Collector. Maps and websites can also be loaded into the Viewer panel. With Custom Views, the Viewer panel can display one of 18 different tile layouts.

Populating video tiles

To add an item to a single tile:

- Double-click a camera, map, or website in the Navigator panel to add it to the next open video tile.
- Drag a camera, map, or website from the Navigator panel to an open video tile.
- Double-click an applicable event in the Notifier or a Collector panel video or snapshot to add it to the next open video tile.
- Drag an applicable event in the Notifier or a Collector panel video or snapshot to an open video tile.

To add items to multiple tiles:

- Drag a recorder or logical view from the Navigator panel to an open video tile.
- Hold down Shift while clicking the right mouse button or hold down Ctrl while clicking the right mouse button to select multiple cameras, maps, or websites in the Navigator panel and drag them to an open video tile.

When adding multiple items, tiles automatically increase in number and the layout adjusts based on how many items are being added, unless the layout has been locked with the **Lock Current Layout** button.

Double-clicking in any single tile enlarges it to full screen. Double-clicking the full screen tile restores the previous tile layout.

Note: To ensure that a web page displays correctly in full screen mode, double-click on the green bar at the top of the web page's video tile.

Organize/swap items in the Viewer by dragging a video tile's status bar to another video tile.

Tabbed viewer panels

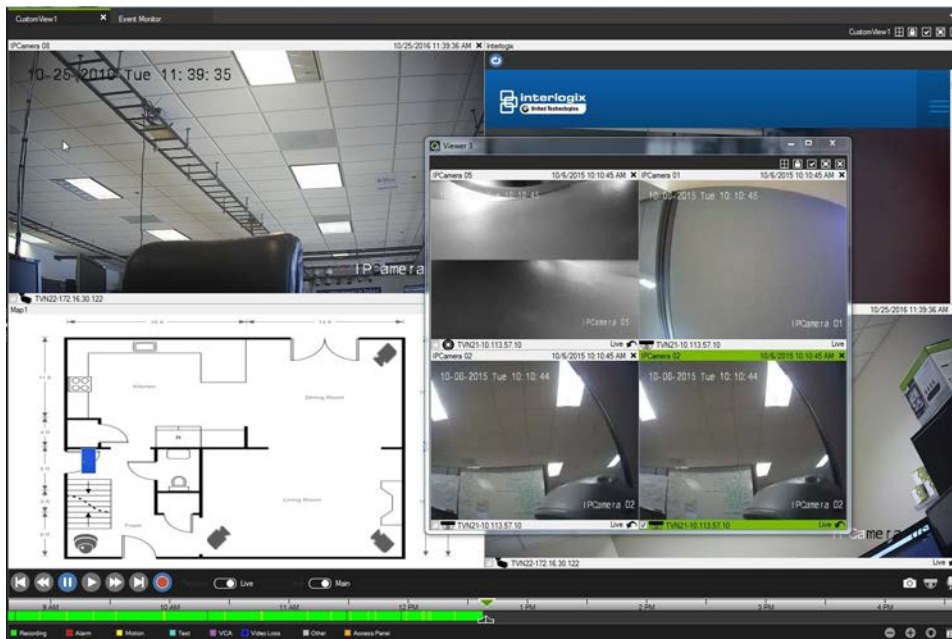
Multiple tabbed viewer panels can be added to the Viewer (up to 10). These additional viewer panels can also be detached and become free floating windows.

Videos in tabs not in the background can be paused to improve system performance. See "Client" on page 24.

Note: A maximum of 75 substream video tiles with H.264 compression can be added to tabbed viewer panels. Running too many videos in tabbed viewer panels may degrade system performance.







To add a tabbed viewer panel:

1. Click the **New Viewer** button to add a new layout panel. A new viewing panel is added as a tab in the Viewer panel title bar.
2. Populate the new viewing panel as described above. Drag a viewer tab out of the Viewer title bar to turn the viewing panel into a free-floating window accessible in the Windows taskbar. Drag the free-floating panel back into the title bar to access it again as a tab.



3. Right-click on a viewing panel tab to access the tab's context menu (**Delete Tab** or **Rename Tab**).

Viewer tab button functions

	Custom/sequence view. Use custom views to define and save multi-site view templates for future use.
	Lock Current Layout. Prevents changes to the current viewer panel setup.
	Select all. Select all tiles in the viewer.
	Toggle. Toggle between normal view and maximized view.
	Close All. Close all tiles in the viewer.
	New Viewer. Add a tabbed viewing panel (10 maximum).

Video tile properties

Status bars at the top and bottom of camera video tiles provide the following information:

Top bar

- Camera name
- Date and time of currently streaming video (live or playback)
- **Close this video tile button**

Bottom bar

- Tile selection check box (selecting the check box in multiple tiles permits the simultaneous use of timeline controls for all tiles selected)
- Camera type icon
- Recorder name
- Video stream status (Live, Playback, Recording, Closed, Live Paused, and Playback Paused)

Bar color

- Green – Indicates that the tile is selected
- Gray – Indicates that the tile is not selected
- Yellow – Indicates that the tile is playing back a local file.

Event Monitor

The **Event Monitor** tab in the Viewer panel plays video of events and alarms configured on recorders and individual cameras as soon as they occur. See the camera's user manual for instructions on camera configuration.

Event Monitor features include the following:

- The **Event Monitor** tab turns orange as soon as video begins playing in the monitor.
- If multiple events assigned to the Event Monitor occur simultaneously, additional video tiles are added automatically.
- The latest Event Monitor video is indicated by a red border around the video tile.
- After 16 cameras appear in the Event Monitor, the oldest video is replaced with the newest video.
- A maximum of 25 video tiles can be displayed in the Event Monitor.

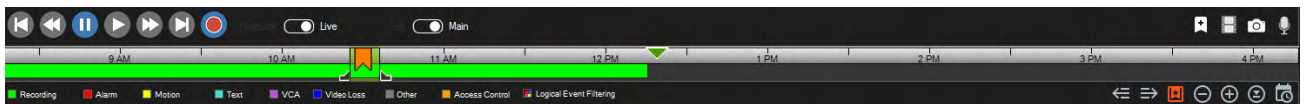
Note: The Event Monitor cannot play back an event that has already happened. To view the last event, drag the video from the Event Monitor into a video tile in the Viewer.

Event Monitor tab button functions

The Event Monitor buttons have the same functions as the Viewer tab buttons. See “Viewer tab button functions” on page 89.

Timeline

When a specific video tile is selected (indicated by a green outline around the video tile), the timeline functions affect that video tile. See “Buttons and indicators” on page 12 and “Playback controls” on page 14 for details on the function of each button and the toggle switches in the timeline area.



To find a specific point in time in the timeline:

Search for video at specific points in time using any of the following methods:

- Click the **Zoom In** and **Zoom Out** buttons to locate a date and time in the timeline.
- Click on the gray timeline bar and slide it to the left or right to find a specific point in time.
- Click the **Go To Date** button to specify a date and time in the timeline.

To play back video in the timeline:

- Double-click anywhere on the timeline to automatically play back the selected video at that specific date and time.
- Click and drag the current live/playback cursor, which appears as a green seek triangle icon on the gray timeline bar, to play video from anywhere along the timeline.

Export video

Note: The **Export video** permission is required to export video from the timeline.

To export video from the timeline to the Collector:

1. Slide the beginning and ending timeline markers to highlight a segment of time in green on the timeline bar.
2. Click the **Save Video** button.

Local record

Use the **Local Record** button to record live video to the client computer.

Note: Be sure to turn off local recording before it takes up too much storage space on the client computer's hard drive.

To create a local record video file, do the following:

1. Select a camera video tile in the Viewer.
2. Click the **Local Record** button (to the right of the playback controls) or right-click in the tile and select **Start Local Recording** to begin recording. A thumbnail appears with a start time along with a red dot in the Collector.
3. The red **Local Record** button blinks when any camera is recording locally.
4. Click the red **Local Record** button again to stop the recording. An end time for the thumbnail automatically appears in the Collector.
5. Follow export operations as necessary to save the local recording. See "Export video and snapshots" on page 106.


Bookmarks**Adding bookmarks**

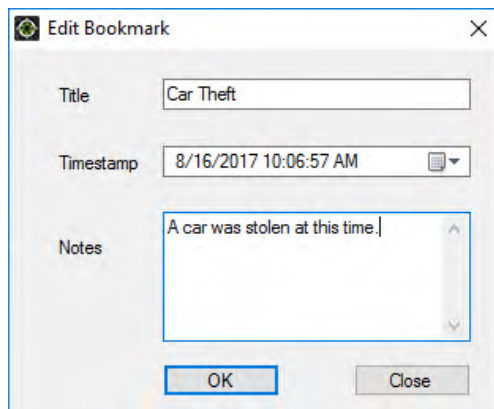
Add a bookmark to the timeline for quick navigation to an incident.

Note: Bookmarks are stored in application memory, so all bookmark data is erased when Navigator is closed.

To add a bookmark, do the following:

1. Select a single video tile.

- Right-click on the timeline and select **Add Bookmark** or click the Bookmark icon  in the timeline controls (clicking the icon places the bookmark at the same location as the play cursor). The Edit Bookmark window appears.





- Type a title for the bookmark (16 characters maximum) in the **Title** field.
- If necessary, the time stamp can be modified and text can be added into the **Notes** field (256 characters maximum).
- Click **OK**. The bookmark icon appears in the timeline at the specified time stamp.

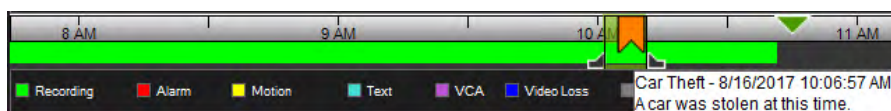
Working with bookmarks

Right-click on a bookmark in the timeline to access the bookmark context menu.

- Edit** – Opens the Edit Bookmark window.
- Delete** – Deletes the bookmark.
- Play** – Opens a new tile and starts playing the video from the bookmark time stamp position.

Viewing bookmarks

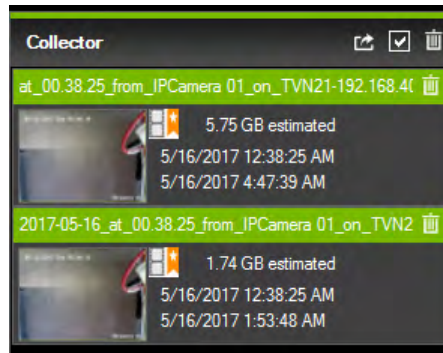
- Click the bookmark show/hide buttons  /  to hide or display bookmarks.
- Hover the cursor over a bookmark icon to display bookmark information, The bookmark title and time stamp appear in the 1st line and the notes appear in the second line.



- Only bookmarks for the selected video tile are visible on the timeline bar — no bookmarks display if multiple tiles are selected.
- It is not possible to create more than one bookmark with the same time stamp on the same camera.
- It is not possible to edit a specific bookmark when the timeline is in Zoom In mode and there are multiple bookmarks around the same time stamp.

Bookmarks in exported video

Exported video retains bookmarks if the time stamp of the bookmarks fall within the time range of the video. Bookmarks are retained in videos in the Collector after exiting Navigator. Videos in the Collector that contain bookmarks appear as follows:



Double-clicking on a Collector video with bookmarks opens a video tile. The bookmarks appear in the video playback timeline as shown below:



Hover the cursor over a bookmark icon to display bookmark information during playback of exported video.

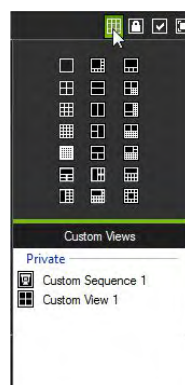
Note: Bookmarks cannot be edited or deleted during Collector video playback.

Custom view

Use custom views to define and save multi-site view templates for future use. Custom views are available by clicking the **Custom View** button in the Viewer header bar .

Several different tile layouts can be chosen when arranging the video sources. Standard tile layouts include 1x1, 2x2, 3x3, 4x4, and 5x5. Ten different custom tile layouts are also available for additional flexibility. Click the **Custom View** button to change the 3x3 default layout.

Note: A maximum of 20-30 custom views can be created. The maximum number depends on the complexity of the custom views (factors such as tile layout, number of videos in the tiles, and names of the custom views).

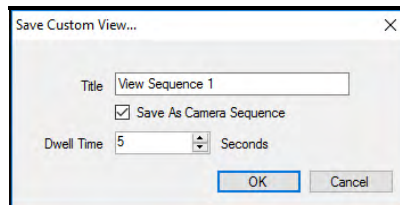



To define a custom view:

1. Load all the cameras to be included in the custom view into the Viewer.
2. Click the **Custom View** button in the Viewer panel header bar.
3. Select **Save custom view/sequence**.
4. Type a title in the **Title** field.
5. Click **OK**.
6. Close all videos.
7. Select the Custom View title in the Viewer panel header bar drop-down list.

To define a custom view as a camera sequence:

1. Load all the cameras to be included in the custom view into the Viewer.
Note: Maps and websites are ignored in camera sequences.
2. Click the **Custom View** button in the Viewer panel header bar.
3. Select **Save custom view/sequence**.
4. Type a title in the **Title** field.
5. Create a single-screen sequence of each tile from left to right by selecting the **Save as camera sequence** check box.



6. If necessary, type a new value for dwell time in the **Dwell Time** field.
7. Click **OK**.
8. Close all videos.
9. Select the Custom View title in the Viewer panel header bar drop-down list. A custom view camera sequence is indicated by the  icon. A single video tile displays each camera in sequence in the custom sequence.

Digital zoom

Navigator can perform digital zoom in/out functions in the live and recorded view. To zoom in, select a tile and scroll up with the mouse wheel. Scroll down to zoom out. When in digital zoom mode, click and hold the left mouse button to navigate in the zoomed image.


PTZ controls

To use PTZ controls, the camera must be identified to the recording device as a PTZ camera.


To activate a camera for PTZ:

1. Right-click the recorder icon in the Navigator panel and select **Properties**.
2. Click the **Cameras** tab and select the **PTZ Enabled** check box next to the PTZ camera.
3. Click **OK**. The camera's icon in the Navigator panel changes from a fixed camera icon to a PTZ camera icon.

To control a PTZ camera using the PTZ controls:

1. Drag a PTZ camera from the Navigator panel into the Viewer and select it.
2. Click the PTZ icon  on the Controller toolbar above the timeline to open the PTZ window.



- **PTZ button** – Click and hold the arrows on the PTZ button to move the camera in different directions.
- **Zoom** – Click the **-** and **+** buttons to zoom in and out inside the PTZ camera video tile.
- **Focus, Autofocus** – Click the **-** and **+** buttons to manually focus the camera, or click the  button to autofocus.
- **Iris** – Click the **-** and **+** buttons to adjust the size of the camera iris. The amount of light allowed into the camera increases as the iris opening gets larger.
- **Speed** – Set the speed to the appropriate level for the network and operations.

Note: PTZ control responsiveness varies depending on the frame rate, resolution, and quality of the video stream. D1/ 30FPS/Quality 9 provides the most responsive PTZ control over the network. Weigh PTZ control responsiveness against storage requirements to find the best fit. The PTZ speed setting can also be balanced with the stream configuration to find the best fit.

Preset positions

- Go to a camera preset by clicking the **Preset Positions** tab, choosing a preset number from the drop-down list, and then clicking **Go To**.
- Create a new camera preset by using PTZ controls to find the required camera view, clicking the **Preset Positions** tab, typing a name into the **Preset Name** field (if required), and then clicking **Set**.
- Name or rename a preset by selecting the preset number from the drop-down list and typing a new name into the **Preset Name** field.

Tours

A tour is a series of checkpoints assigned in a specific sequence with times assigned to reach each point.

- Go to a tour preset by clicking the **Tours** tab, choosing a preset number from the drop-down list, and then clicking **Go To**.
- Record a tour preset by clicking **Record** and performing a series of PTZ control actions. When finished, click **Stop**.

Note: The tours function is not available for all PTZ cameras. See Appendix B “Device details” on page 125 for applicable functionality.

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

1. Drag the PTZ camera from the Navigator panel into the Viewer and select it.
2. Place the cursor in the center of the Viewing tile.
3. Left-click and hold the mouse, then drag in any direction. Note that the further from center the cursor is positioned, the faster the camera moves.
4. Scroll up with the mouse wheel to zoom in and scroll down with the mouse wheel to zoom out.

Note: An Interlogix camera with a motorized lens can also be controlled as a PTZ camera with the PTZ controls for iris and focus adjustments.

Camera tile context menu

Right-click on a video tile containing a camera to bring up a context menu. Available selections are as follows:

Search

This function is the same as searching from a recorder, but only the camera selected can be searched. See “Search” on page 80.

Instant replay

Right-click on a video tile containing a camera and select **Instant Replay** or 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 (30 seconds is the default setting) for quick viewing of an incident. See “Instant replay duration” on page 27 for instant replay setup instructions.

To start instant replay in a video tile, do one of the following:

- Click the **Instant replay** button in the lower left corner of the video tile.
- Right-click on the video tile and select **Instant Replay**.
- Set the Live/Playback toggle switch in the timeline to **Playback**.

To stop instant replay in a video tile, do one of the following:

- Right-click on the video tile and select **Live**.
- Set the Live/Playback toggle switch in the timeline to **Live**.

Start local recording

See “Local record” on page 91.

Snapshot

Taking a snapshot of a selected video tile containing a camera sends a still image file to the Collector for export.

To take and deploy a snapshot:

1. Click the **Snapshot** button above the timeline or right-click a video tile containing a camera and select **Snapshot**.
2. Right-click on the snapshot in the Collector panel to **Print Preview**, **Print**, **Email**, **Rename**, or **Export** the snapshot image. See “Export video and snapshots” on page 106.

Dewarp views

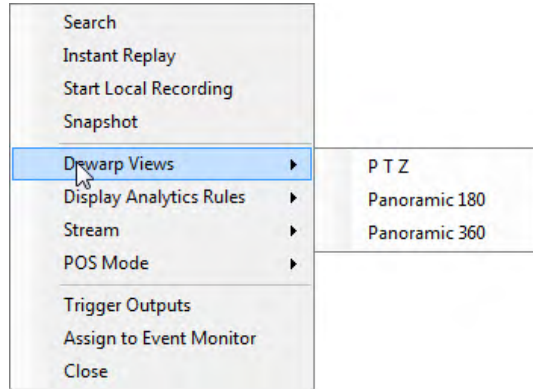
Dewarping provides an alternate view other than the fisheye image normally associated with 360° cameras. This feature only requires one fisheye view (live or playback) from the device. The Navigator dewarps multiple views from a single dewarped view.

To enable dewarping:

1. Right click on the camera recorder and select **Properties**.
2. Select the **Fisheye** check box.
3. The **Mount Type** drop-down list is set to **Ceiling** by default. If required, select **Wall** or **Desktop**.

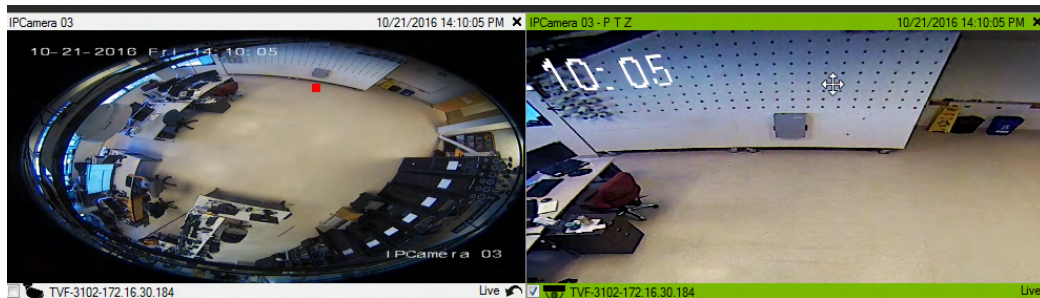
To access dewarped views:

1. Right click on the camera video tile and select **Dewarp Views**.
2. Select a view from the context menu. A new video tile opens with the dewarped view type indicated in the video tile header bar.



PTZ

Click the left mouse button inside the PTZ video tile and drag it in any direction to change the view. A red square inside the camera tile indicates the position of the dewarped view as the four-headed arrow cursor is moved inside the PTZ video tile.



Panoramic 180

This selection displays two 180° views inside a single video tile.

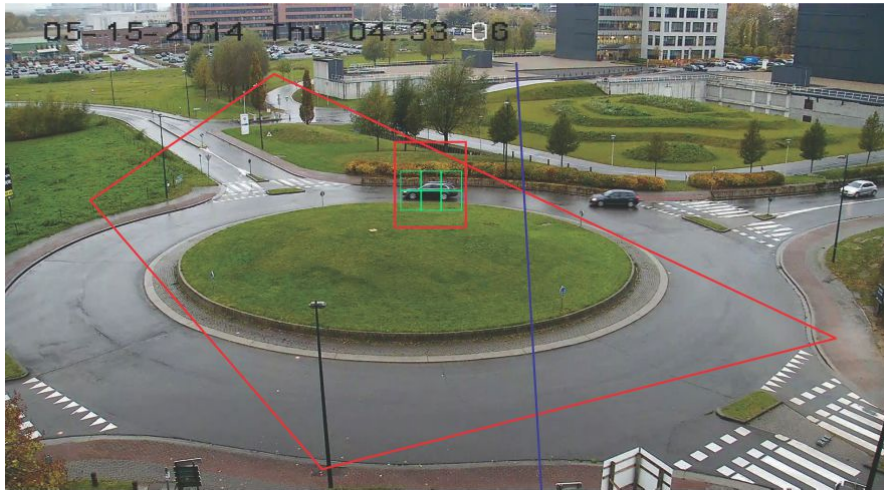
Panoramic 360

This selection displays a 360° view inside a single video tile.

Display analytics rules

Note: Display analytics rules (**Motion**, **VCA**, and **Thermal OSD**) only work with cameras that support this feature. Devices that support display analytics rules are indicated in the “Stream Overlay” row in the device details tables by the “VCA Rules” entry in Appendix B “Device details” on page 125.

Enabling analytics rules for motion and VCA provides dynamic display indicators in the video tile for each selection. Motion and VCA indicators, as well as the on-screen drawing that defines a region of interest, differ depending on the model of recorder.



Motion

To enable motion analytics for newer IP cameras:

1. Right click on the camera's recorder and select **Manage IP Cameras**.
2. Under Camera Setup, click Motion Detection.
3. Select the camera to display motion from the **Camera** drop-down list.
4. Select the **Enable Motion Detection** and **Enable Dynamic Analysis** for Motion check boxes.
5. If necessary, draw a new area setting in the **Area Settings** tab and select **Notify Alarm Host** in the **Actions** tab to so that motion notifications display in the Notifier panel. Close the configuration window.
6. Right-click the camera's video tile and select **Display Analytics Rules > Motion** to enable or disable motion analytics. Motion analytics may appear as green rectangles in the video tile when they occur.

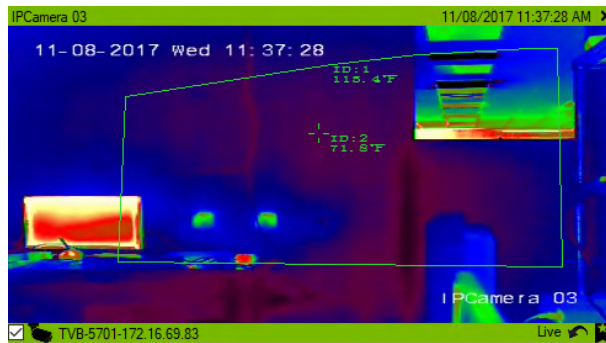
VCA

To enable VCA analytics for newer IP cameras:

1. Right click on the camera's recorder and select **Manage IP Cameras**.
2. Under Camera Setup, click VCA.
3. Select the camera to display VCA analytics from the **Camera** drop-down list.
4. Select the **Enable VCA Alarm** check box.
5. If necessary, select **Notify Alarm Host** in the **Actions** tab to so that VCA notifications display in the Notifier panel. Close the configuration window.
6. Right-click the camera's video tile and select **Display Analytics Rules > VCA** to enable or disable VCA analytics. VCA analytics may appear as red rectangles in the video tile when they occur.

Thermal OSD (thermal cameras only)

Right-click a thermal camera’s video tile and select **Display Analytics Rules > Thermal OSD** to enable or disable on-screen temperature display.



Stream

Change the **Stream** setting by clicking the **Main/Sub** toggle switch above the timeline or by right-clicking on a video tile and selecting **Stream > Sub** or **Stream > Main**.

The **Main** setting provides the highest possible resolution while the **Sub** setting activates a substream that provides lower resolution video that does not consume as much bandwidth.

POS mode

This function enables point of sale (POS) data display (from a device such as a cash register or ATM) in a video tile. The device providing the POS information must work in conjunction with a ProBridge. The ProBridge acts as a bridge between the recording device and the POS device, and feeds the POS text data into the recording device.

To display POS data on top of the camera view, right-click on the POS-configured camera’s video tile and select **POS Mode > In Band**.

To display POS data on the side of the camera view, right-click on the POS-configured camera’s video tile and select **POS Mode > Out of Band**.



Trigger outputs

This function is the same as the recorder context menu in the Navigator panel. See “Trigger outputs” on page 79.

Assign to Event Monitor

This function is the same as the camera context menu in the Navigator panel. See “Assign to Event Monitor” on page 86.

Object counting

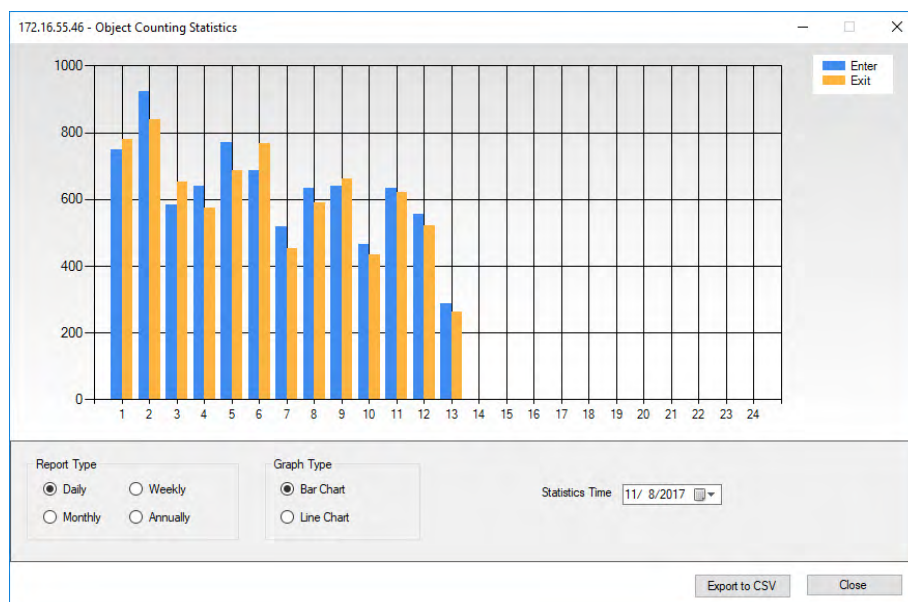
This function can be used with cameras that support object counting. Available selections are as follows:

Statistics

Right click on an object counting camera tile and select **Object Counting > Statistics**.

View object counting statistics by Report Type (select from **Daily**, **Weekly**, **Monthly**, or **Annually**), Graph Type (select **Bar Chart** or **Line Chart**), and **Statistics Time**.

Click **Export to CSV** to export statistics data to an external file.



Reset

Right click on object counting camera tile and select **Object Counting > Reset**. This action resets the Enter and Leave numbers in the object counting on-screen counter to zero.

Display Counter

Right click on object counting camera tile and select **Object Counting > Display Counter** to display the object counting on-screen counter (Enter and Leave numbers).

Close

Closes the camera tile.

Map tile context menu

Right-click on a map tile to bring up a context menu. Available selections are as follows:

Zoom to fit

Focuses to the map image, eliminating any white space around the map in the Viewer tile.

Close

Closes the map tile.

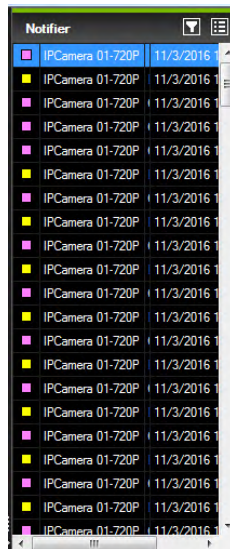
Website tile context menu

Right-click a website tile in the Viewer to access Internet Explorer options. See Internet Explorer Help for further information on these options.

Chapter 7

Notifier panel

The Notifier panel is the central repository for notifications in Navigator. Devices send these notifications over the network via TCP to the IP address of the TruVision Navigator server. The firewall must be configured on the server to accept these network notifications. Refer to the recorder's or camera's user manual for information on configuring notifications so that they appear in the Notifier panel.



View video for live notifications as they are received by double-clicking on the camera name link in the Notifier panel. This launches the video in the Viewer.

Live notifications can be set to make an audible sound. See “Client” on page 24 for more information on this feature. After 1000 notifications occur in the Notifier panel, the oldest notifications are purged in the system.

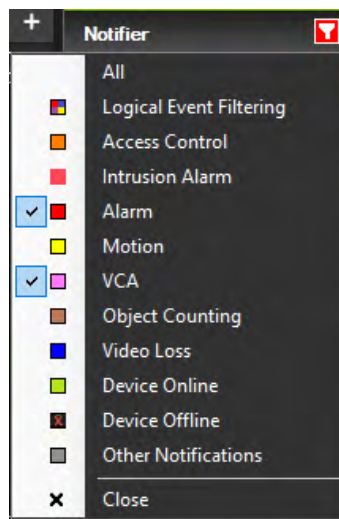
Filters

The Filters feature allows customization of the Notifier panel so that it shows only certain types of notifications.

To set filters in the Notifier panel:

1. Click the **Filters** button in the Notifier panel.

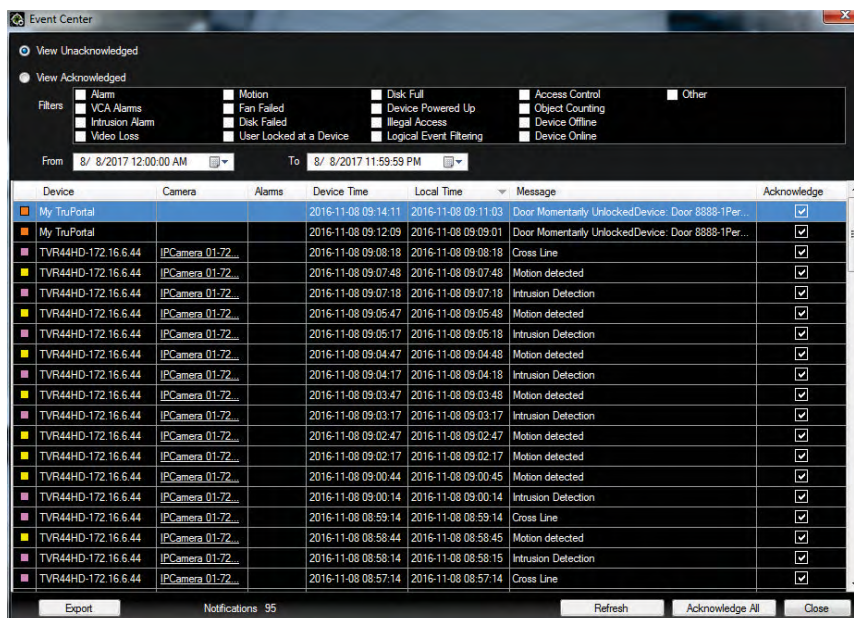
2. Select one or more notification types to show only those types of notifications in the Notifier panel. The **Filters** button turns red when a filter is set.



3. Click **Close**. To remove filters, click the **Filters** button and select **All** or click on the individual notification types to remove the check marks.

Event center

The Event Center window provides a record of all events, both acknowledged and unacknowledged, over a specified time range.



To find, view, and acknowledge events in the Event Center:

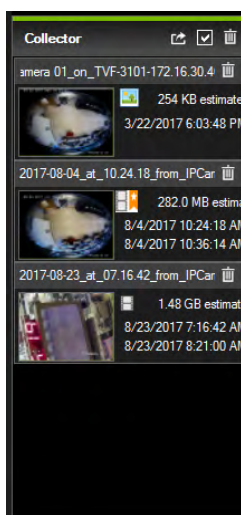
1. Click the **Event Center** button in the Notifier panel to launch the Event Center.
2. Select the **View Unacknowledged** or **View Acknowledged** radio button.
3. Set filters to see only certain event types by selecting the check box next to each event type.

4. Set a date range using the **From** and **To** drop-down lists.
5. Click the top of each column in the list of events to sort events by Device, Camera, Alarms, Device Time, Local Time, or Message.
6. Click on the camera link in an event to view it in the Viewer panel.
7. Click **Acknowledge All** to acknowledge all unacknowledged events. After a live notification is acknowledged, it is considered a stored or historic notification that can be searched.
8. Click **Export** to export a list of the events displayed in the Event Center in CSV file format.

Chapter 8

Collector panel

The Collector panel contains video and snapshots from the timeline (see “Timeline” on page 90), the camera context menu in the Navigator panel (see “Export video” on page 85), and the camera tile context menu in the Viewer panel (see “Start local recording” on page 97).



To view a video clip in the Collector, double-click on the video's thumbnail to launch it in the Viewer. Double-click on a snapshot to play video from the camera that provided the snapshot at the point in time the snapshot was taken.

To delete items from the Collector, click the **Delete** button in the item's thumbnail or click the **Delete All Collector Items** at the top of the Collector panel.

Export video and snapshots

Export all collected video and snapshots in the Collector panel to a specific location either on demand or via a schedule.

To export video or snapshots from the Collector:

1. Select each video or snapshot thumbnail for export in the Collector, or use the **Select/Deselect All** button in the Collector header bar.
2. Click the **Export** button at the top of the Collector panel.

3. Click **Browse** and specify a destination location for export.

Note: Make sure there is enough disk space at the destination location for the export. Use the file size estimate in the Collector as a guideline.

4. To start the export process immediately, click the **Export Now** button. The export task is automatically added to Tasks (see “Tasks” on page 46). Move the mouse pointer over the status column in **Tasks** to obtain information about the progress of the export.

5. To schedule the export process, click the **Schedule** button and specify a date/time to start the export process. An export task is automatically added to Tasks.

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

6. When export tasks are complete, exported video and snapshots can be found at the location specified along with the TruVision Navigator Player program. See Chapter 10 “TruVision Navigator Player” on page 112.

Collector context menu

Right-click on a snapshot to make any of the following selections from the context menu:

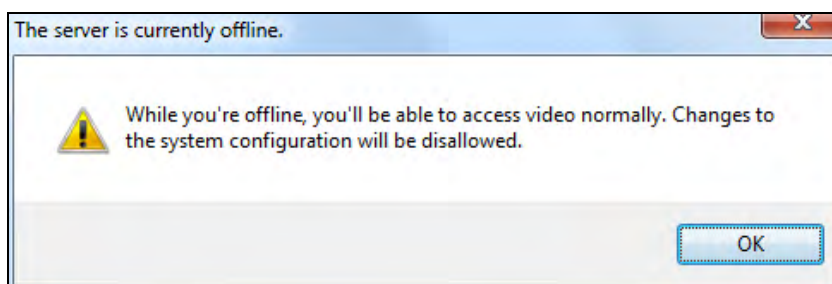
- **Print Preview**
- **Print**
- **Email**
- **Rename** (also available in the Collector video context menu)
- **Export** (also available in the Collector video context menu)

Chapter 9

Server offline mode

The Navigator client can still operate in a client/server configuration when the server is offline. However, some configuration options are not available in server offline mode.

A dialog appears when starting Navigator with the server offline:



Server offline mode is indicated by the  icon next to Admin in the Navigator screen. The Notifier is empty and notifications do not appear when in server offline mode.

Note: The Navigator client can take up to five minutes to recognize the Navigator server after the TruVision Navigator service is started.

Available options, server online and server offline mode:

Function	Online	Offline Mode
Navigator main menu	Settings Tasks Storage Calculator Help Logout	Settings Storage Calculator Help Logout
Settings window	Client tab Server tab Notifications tab Health Diagnostics tab Groups and Users tab Audit History tab Logical Event Filtering tab	Client tab
Add Folder menu	Enabled	Disabled
Add Devices menu	Enabled	Disabled

Function	Online	Offline Mode
Devices menu	Add Device Add Folder Run Health Diagnostics Import Address Book Export Address Book Open Exported Video File Tasks Device Management	Open Exported Video File
Device folder menu	Add Device Add Folder Delete Folder Rename Folder	Disabled
Device offline menu	Connect Delete Device Rename Device Properties	Connect Properties
Device online menu	Run Tampering Monitor Run Device Report Run Health Diagnostics Run Network Statistics Run Disk Analysis Trigger Outputs Manage IP Cameras Search Export Video Configure Device Reboot Device Delete Device Rename Device Properties	Run Health Diagnostics Run Disk Analysis Trigger Outputs Search Export Video Reboot Device Properties
Export Video window	Export Now Schedule	Export Now
Properties window	Enabled	Device or camera detail are visible but cannot be changed.
Camera menu (camera icon)	Search Export Video Assign to Event Monitor	Search Export Video

Function	Online	Offline Mode
Camera menu (device icon)	Run Tampering Monitor Run Device Report Run Health Diagnostics Trigger Outputs Search Configure Device Reboot Device Delete Device Rename Device Properties	Run Health Diagnostics Trigger Outputs Search Reboot Device Properties
Multi selection menu, devices	Delete Devices	Disabled
Multi selection menu, folders (devices, maps, websites, access control)	Delete Folders	Disabled
Maps main menu	Add Map Add Folder	Disabled
Maps folder menu	Add Map Add Folder Delete Folder Rename Folder	Disabled
Map menu	Configure Map Rename Map Delete Map	Disabled
Multi selection menu, maps	Delete Maps	Disabled
Websites main menu	Add Website Add Folder	Disabled
Website menu	Configure Website Delete Website	Disabled
Website folder menu	Add Website Add Folder Delete Folder Rename Folder	Disabled
Multi selection menu, websites	Delete Websites	Disabled
Access Control main menu	Add Panel Add Folder Global Lockout Global Reinstate	Global Lockout Global Reinstate

Function	Online	Offline Mode
Access Control panel menu	Configure Panel Recent Activities Delete Panel Rename Panel Reinstate All Doors Lockout All Doors Unlock All Doors Properties	Reinstate All Doors Lockout All Doors Unlock All Doors Properties
Access Control panel menu	Enabled	Enabled
Multi selection menu, access control panels	Delete Panels	Disabled
Logical Views main menu	Add Logical View Add Folder	Disabled
Logical View folder menu	Add Folder Add Logical View Rename Folder Delete Folder	Disabled
Logical View menu	Edit Delete	Disabled

Chapter 10

TruVision Navigator Player

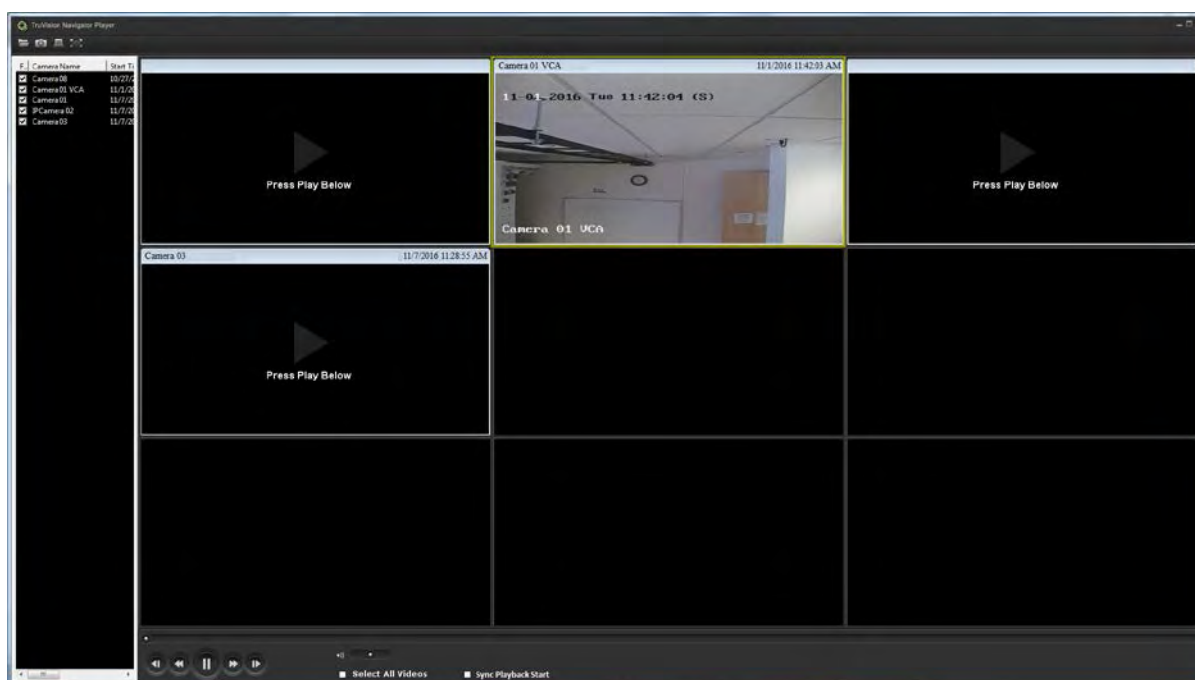
The TruVision Navigator Player is a standalone player that can be used to replay any video clip exported using TruVision Navigator (proprietary file formats include .wvf, .mpc, .asf, .mp4, and .drv). This player should be copied to media along with video clips for authorities. It launches from the media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

To play video with the TruVision Navigator Player:

1. After exporting video clip(s) from the Collector to the user-defined location, launch the TruVision Navigator player by double-clicking the TruVision Navigator Player icon in the file folder where the video clips are located.

Note: The player.bin file must be in the same directory as the TruVision Navigator Player.exe or the TruVision Navigator Player will not work.

2. The player automatically sweeps the directory and loads 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 loads in a tile (nine-up maximum). Highlight the video tile and click the **Play** button to play the video.



The features of the TruVision Navigator Player are as follows:

- **Browse** – Browse for a specific video clip in another directory and load it into the Play List.
- **Snapshot** – Take a snapshot of the highlighted video tile.
- **Print** – Print a snapshot of the highlighted video tile.
- **Maximize Screen** – Launches a full screen view and hides the Play List and Tool Bar at the top of the application.
- **Playback Controls** – FFWD, RWD, Play, Pause, Frame Reverse, and Frame Advance.
- **Timeline** – Jump ahead or back in time for a single selected video tile.
- **Audio** – Listen to audio (if present) for only the selected video tile. If all video tiles are selected, no audio will play.
- **Select All Videos** – Select this check box to select all video tiles. After all video tiles are selected (a white outline appears around the video tiles), playback controls affect all video tiles and not just a single one. However, each clip begins at its own start time and ends at its own end time. This holds true for the snapshot and print capability as well. The timeline does not appear when multiple video clips are selected.
- **Sync Playback Start** – Select this check box 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 (e.g., different frame per second (fps) settings). This function ensures that the initiation of playback for all tiles happens at the same time to keep the time gaps between the clips at a minimum.

- **Time/Date Stamp** – Each video has a time/date stamp on it for evidentiary purposes.
- Double-click any video tile to go to full screen or use the maximize button in the tool bar.
- Double-click to any video tile to return to the normal state.
- When in full screen mode, right-click to hide/show the playback controls. Only the video tiles display.

Chapter 11

Using a compatible keypad

Compatible keypads provide an alternate method of navigating the TruVision Navigator user interface. A high level of usability and control can be achieved by connecting keypads and using them with the Navigator client.

Compatible keypads are:

- Interlogix TVK-400USB

Connecting the keypad

The keypad must be connected to the client machine's USB port *before* launching the Navigator client. The keypad driver is installed automatically the first time the keypad is connected.

A successful connection of the keypad is indicated by the keypad icon appearing in the bottom right of the Navigator screen.

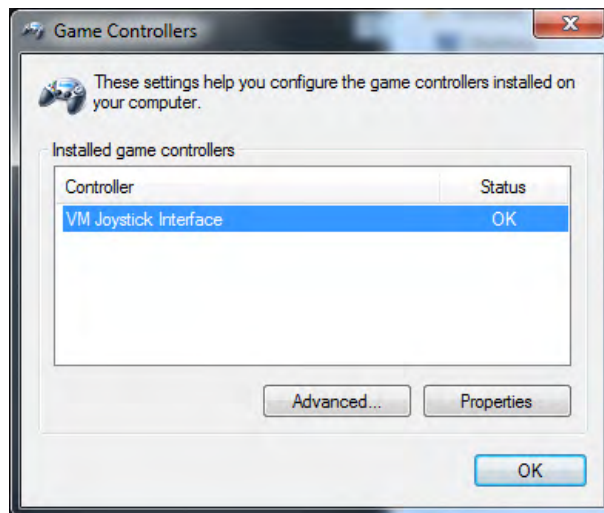
Calibrating the keypad

We recommend calibrating the keypad to avoid erratic PTZ movements.

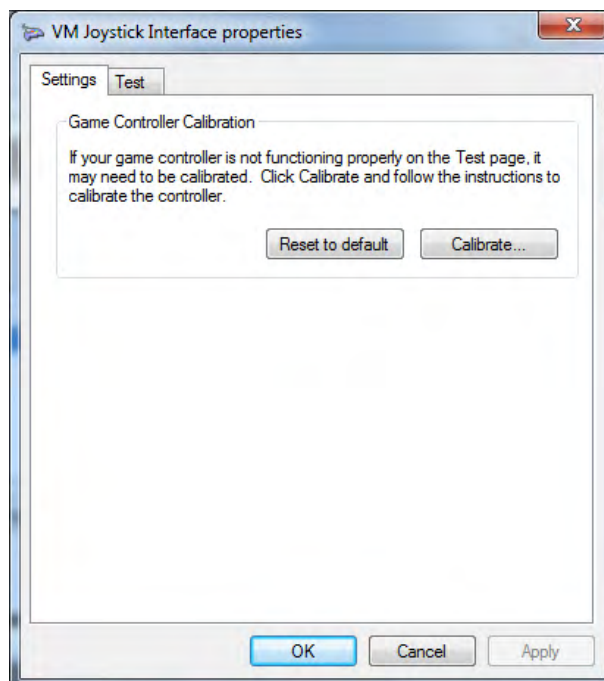
To calibrate the keypad:

Follow the instructions above for connecting the keypad.

1. Go to **Control Panel > Devices and Printers**.
2. Right-click on the VM Desktop icon and select **Game controller settings**.
3. The Game Controllers window appears. Click **Properties**.



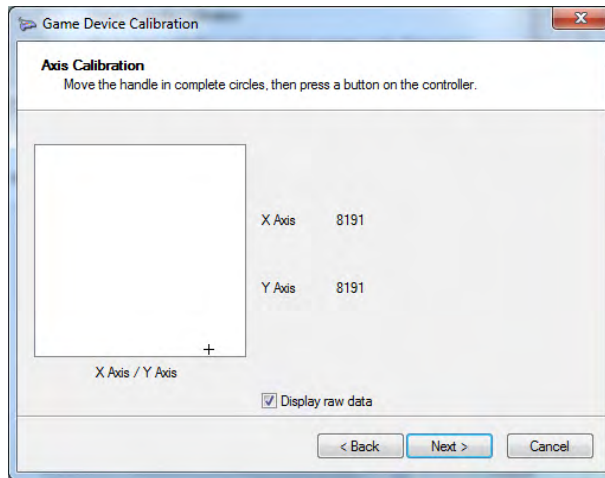
4. Click the **Settings** tab, and then click **Calibrate**.



5. The Device Calibration Wizard appears. Click **Next**.

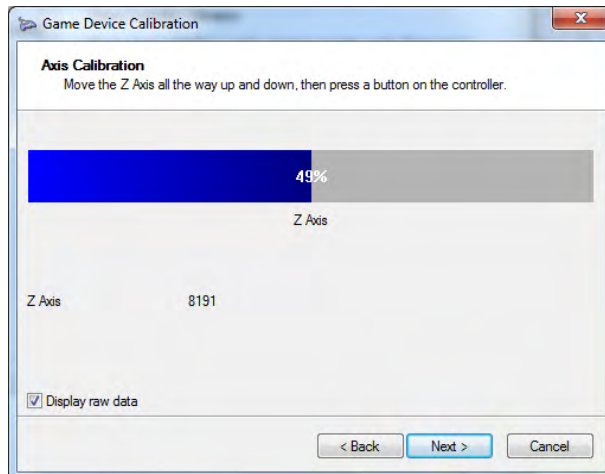


6. The Find Center Point window appears. Leave the joystick handle centered, press a button on the keypad, and then click **Next**.
7. The Axis Calibration window appears. Move the joystick handle in complete circles, press a button on the keypad, and then click **Next**.

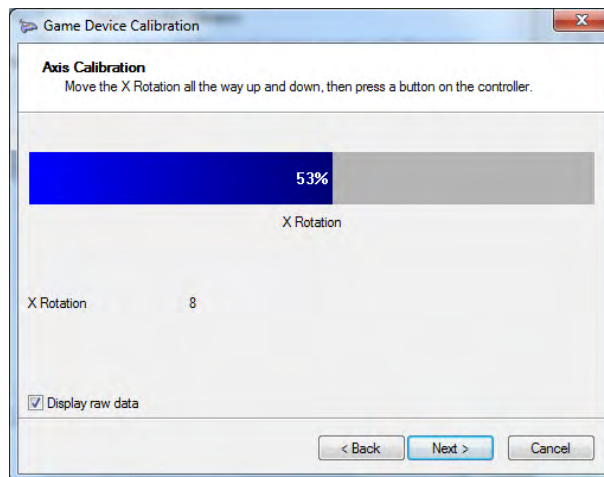


Note: Select **Display Raw Data** to see a numerical value for the current position of the joystick.

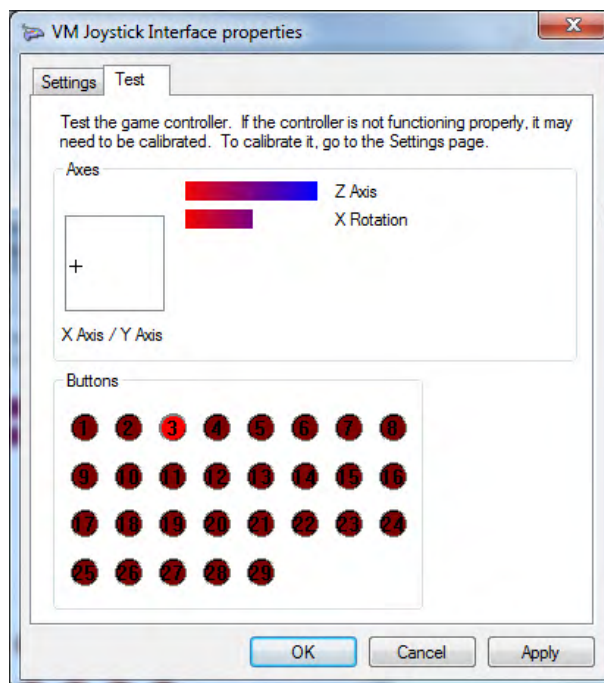
8. The Verify Center Point window appears. Leave the joystick handle centered, press a button on the keypad, and then click **Next**.
9. The Z Axis Calibration window appears. Twist the PTZ knob on top of the joystick handle, press a button on the keypad, and then click **Next**.



10. The X Axis Calibration window appears. Move the joystick handle all the way up and down, press a button on the keypad, and then click **Next**.



11. Click **Finish** to save the calibration settings.
12. Click the **Test** tab in the VM Joystick Interface properties window.



13. Test the joystick by moving it and observing onscreen behavior. The Axes indicators should indicate a value of 50% after moving the joystick or PTZ knob as far as possible one way or the other.
14. Press buttons on the keypad to test their functionality. Pressing a button should illuminate one of the circled numbers in the Buttons section.
15. Click **Apply**, and then click **OK** when finished.

Keypad functions

Figure 2: TVK400USB keypad



1. Enter. Enters PTZ camera presets.
2. Sub/Main stream switching.
3. Number keys for selecting presets.
4. Snapshot
5. Go to playback.
6. Switch to live.
7. Scroll. Scrolls between video tiles in multi-up view and scrolls the timeline in one-up view.
8. Wheel. Rotate right to fast forward and rotate left to rewind.
9. Fast forward
10. Pause/resume
11. Rewind
12. Joystick. PTZ: Rotate knob to zoom in/out, joystick moves the camera. Non PTZ: Rotate knob to zoom in/out, joystick pans inside the zoom in view.
13. Zoom. Live: Zooms the camera in/out. Playback: Zooms in/out on the timeline.
14. Iris open/close
15. Focus near/far
16. Set preset. Press this button, a preset number, and Enter to enter a new PTZ preset.
17. Toggle between one-up and multi-up views.
18. Local record

Appendix A

Minimum system requirements

Software requirements

The following operating systems and other software components are prerequisites for client and server installation:

Table 3: Client software requirements

Component	Version	Notes
Operating System	Microsoft® Windows XP Pro SP3	
	Microsoft Windows Vista® SP1 32-bit/64-bit	
	Microsoft Windows 7 SP1 32-bit/64-bit	
	Microsoft Windows 8.1 32-bit/64-bit	WinPCAP needs to be installed separately and ran in compatibility mode for operation on Windows 8 systems
	Microsoft Windows 10 64-bit	
	Microsoft Windows Server® 2003 R2 32-bit	
	Microsoft Windows Server 2008 R2 32-bit/64-bit	
	Microsoft Windows Server 2012 R2 64-bit	
	Microsoft Windows Server 2016	
	Other	Microsoft .NET Framework 4.0

Table 4: Server software requirements

Component	Version	Notes
Operating System	Microsoft Windows XP Pro SP3	
	Microsoft Windows Vista SP1 32-bit/64-bit	
	Microsoft Windows 7 32-bit/64-bit	

Component	Version	Notes
	Microsoft Windows 8 32-bit/64-bit	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 10 64-bit	
	Microsoft Windows Server 2003 R2 32-bit	
	Microsoft Windows Server 2008 R2 32-bit/64-bit	
	Microsoft Windows Server 2012 R2 64-bit	
	Microsoft Windows Server 2016	
Database	Microsoft's SQL 2008 Microsoft's SQL Express 2008 R2	Microsoft's SQL Express 2008 R2 is packaged with the installation. Microsoft SQL is not required for Standalone installation.
Other	Microsoft .NET Framework 4.0	Packaged with the installation
Other	WinPCAP 4.1.2	Packaged with the installation

Server/client hardware guidelines

The following specifications are only meant to serve as a guideline as Navigator system performance varies according to the robustness of the machine.

Table 5: Server hardware specifications

Component	Recommended	Notes
Processor	3rd Gen Intel Core i5-3470 Processor (6MB, 3.2GHz) w/HD2500 Graphics	CPU power is directly related to the performance of the application when running and rendering video. The better the CPU, the more responsive the application will be.
Memory	6GB, 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 the performance of the application.

Component	Recommended	Notes
Hard Drive	500GB - 7200RPM, SATA 3.0Gb/s, 16MB Cache	Optional - TruVision Navigator requires approximately 700 MB to install. To store exported video from the devices on the machine, an increase storage size may be required.
Graphics Card	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 the video rendering performance.
Resolution	1920 x 1080	
Network	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, performance issues may occur.

Supported recording devices

Table 6 shows the supported recording devices and related firmware versions.

Table 6: Supported recording devices

UTC Devices	Supported Firmware
TruVision NVR10 (TVN 10/10S/10C/10CS)	2.0b
TruVision NVR21 (TVN 21)	3.1.g
TruVision TVN22	1.0.d
TruVision TVR12HD	1.2.g
TruVision TVR15HD	1.0
TruVision TVR44HD	1.2.g
TruVision TVR45HD	1.0
TruVision NVR70 (TVN 70)	1.2.f
TruVision NVR20 (TVN 20)*	3.2a
TruVision NVR40 (TVN40)*	4.3
TruVision NVR50 (TVN 50)*	2.2i
TruVision DVR10 (TVR 10)*	2.7
TruVision DVR11/11C (TVR 11/11C)*	3.1a
TruVision DVR12/12C (TVR12/12C)*	1.2.a
TruVision DVR20 (TVR 20)*	1.0.36
TruVision DVR30/31 (TVR 30/31)*	8000
TruVision DVR40 (TVR 40)*	3.2.d

UTC Devices	Supported Firmware
TruVision DVR41 (TVR 41)*	3.0c
TruVision DVR42 (TVR42)*	1.2d
TruVision DVR60 (TVR 60)*	4.7a
Lenel® GoVision*	2.1
Lenel GoVision 2.0*	1.0.0 build 100617
Verex® VeDVR*	2.1
Interlogix DVSR-xU*	2.31s
Interlogix SymDec/SymSafe*	1.60c/1.40c
Interlogix DVMRe/StoreSafe*	v5.71/6.32C

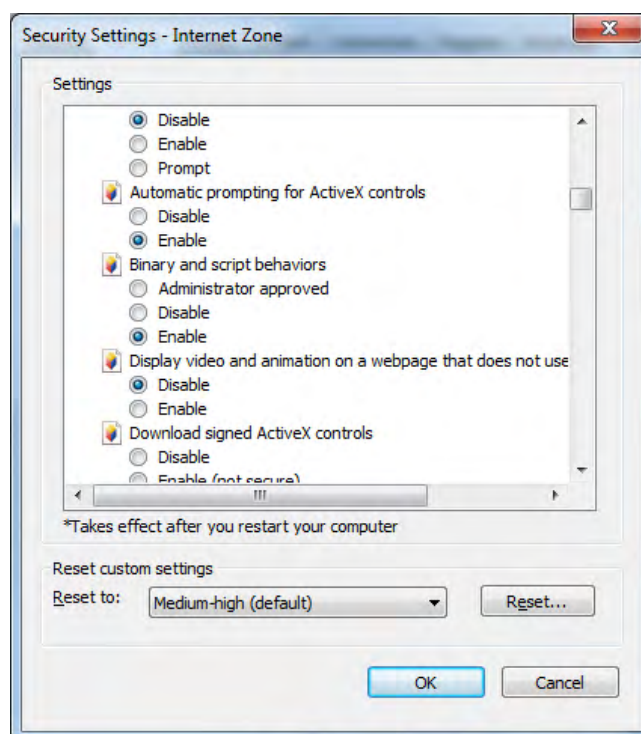
* These models are in End of Life status and are not actively supported.

Internet Explorer plug-in requirements

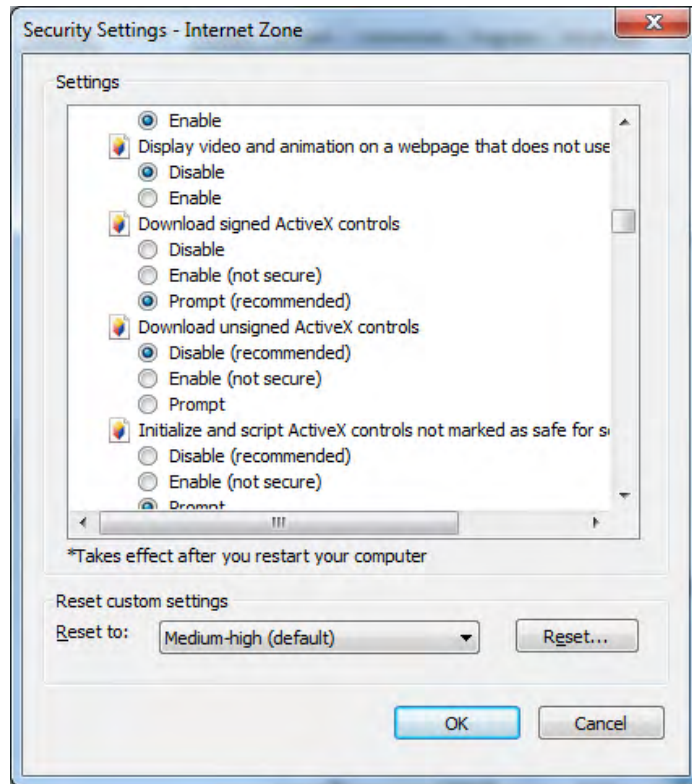
The following ActiveX control settings are prerequisites for Navigator installation.

To enable the settings:

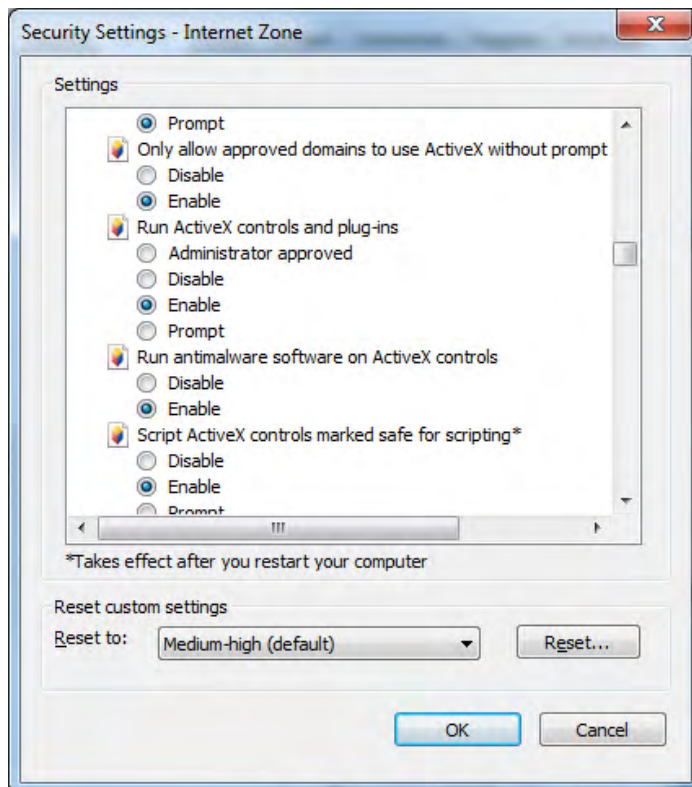
1. Open Internet Explorer.
2. Click the **Tools** menu, and then click **Internet Options**.
3. On the **Security** tab, click the **Custom level** button.
4. Scroll down and select the **Enable** radio button under **Automatic prompting of ActiveX controls**.



5. Select the **Prompt (recommended)** radio button under Download signed ActiveX controls.



6. Select the **Enable** radio button under Run ActiveX controls and plug-ins.



Windows 8 installation requirements

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

Follow these instructions before installing Navigator in a client/server configuration on Windows 8 platforms:

Windows 8 without SQL installed:

- Must install all the important updates from Microsoft.
- Manually install WinPcap 4.1.2 before or after installing Navigator.
- Navigator installs SQL 2008 express if it does not detect SQL installed in the machine.

Windows 8 with SQL2008 Express R2 SP1 or SP2 installed:

- Must install all the important updates from Microsoft.
- Manually install WinPcap 4.1.2 before or after installing Navigator.
- Navigator allows the user to use existing SQL 2008 Express.

To make the WinPcap program compatible with Windows 8:

1. Right-click on the WinPcap.exe file and select **Properties**.
2. Click the **Compatibility** tab.
3. Select the **Run this program in compatibility mode for:** check box, select **Windows 7** from the drop-down list, and then click **Apply**.
4. Right-click on WinPcap.exe and select **Run as Administrator**.

Appendix B

Device details

Summary

This Appendix contains important compatible device information.

TruVision Recorder

Feature	Support	Notes
Supported Device(s)	TVR12HD, TVR44HD, TVN 70, TVN 21, TVN22, TVN 10, TVR15HD, TVR45HD	
H.265 Support	Depends on device model	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at the time of installation.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	Depends on the actual device capabilities	
Stream Overlay	VCA Rules, Motion Rules, POS Text, Camera Name, Date and Time	
High / Low Bandwidth	No	

Feature	Support	Notes
Dual Streaming	Yes – Depends on the actual device capabilities.	
Stream Nomenclature	The Mainstream is referred to as: TruVision Navigator = Mainstream The Substream is referred to as: TruVision Navigator = Substream	
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 directly depend on the actual device capabilities. Video jumps back four seconds after resuming 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 remains 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	Live & Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five 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 two 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 five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	Alarm Motion Recording VCA Text	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.
Time Line Disk Analysis	Yes	Shows the different types of recorded video in the timeline.
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	Yes	Dependent on camera and device

Feature	Support	Notes
Camera Search	Alarm Event Motion Text VCA	
Smart Search	Yes	
Point-of-Sale Text	Yes	
Motion	Yes	
Audio	Yes	
Bi-directional Audio	Yes	
Notifications	Alarm Video Loss Motion VCA Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. For each notification type on the Notification tab, 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>

Feature	Support	Notes
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	Via browser page.
Bulk Firmware Upload	No	
Device Configuration	Yes	Via browser page.
Bulk Configuration	No	
Remote Reboot	Yes	
IP Camera Support	Yes	Depending on device
Device log support	Yes	
Trigger Outputs	Yes	

TruVision Camera

Feature	Support	Notes
Supported Device(s)	TVB, TVC, TVD, TVE, TVF, TWW, TVP, UVP, RS (Interlogix Open Standard Cameras)	
H.265 Support	Depends on model	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 80 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at the time of installation.

Feature	Support	Notes
Default IP Address	192.168.1.70	
Network Discovery	Supported	
Compression	H.264, H.265	
Connection Types	TCP UDP	
Streaming Limits	Depends on the actual device capabilities	
Stream Overlay	VCA Rules, Motion Rules, POS Text, Camera Name, Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	Depends on the actual device capabilities.
Stream Nomenclature	The Mainstream is referred to as: TruVision Navigator = Mainstream The Substream is referred to as: TruVision Navigator = Substream	
Playback Controls	Play Pause Frame Advance Fast Forward (1x, 2x,4x, 8x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)	Video jumps back four seconds after resuming 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 remains 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	Live and Playback*	*For models that support SD cards.
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes*	*For models that support SD cards.
Disk Analysis	No	
Time Line Disk Analysis	Yes	
Video Export	Yes*	*For models that support SD cards.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes*	*For TVP and UVP models
Focus, Iris, Zoom	Yes*	*For TVP and UVP models
Presets	Yes*	*For TVP and UVP models
Tours	Yes*	*For TVP and UVP models

Feature	Support	Notes
Camera Search	Alarm Event Motion VCA	Text Search is not supported on the device.
Smart Search	No	
Point-of-Sale Text	No	
Motion	Yes	
Audio	Yes	
Bi-directional Audio	Yes	
Notifications	No	
Health Diagnostics	Yes	
Firmware Upload	Yes	Via browser page.
Bulk Firmware Upload	No	
Device Configuration	Yes	Via browser page.
Bulk Configuration	No	
Remote Reboot	Yes	
IP Camera Support	N/A	
Device log support	Yes	Via browser page.
Trigger Outputs	Yes	

TruVision TVR 10 (DVR)

Feature	Support	Notes
Supported Firmware Versions	2.7	
H.265 Support	No	
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 the time of installation.
Default IP address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	24 Live or Playback streams simultaneously with a maximum of six streams per channel.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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 Substream is referred to as: On-Screen-Display = N/A Web Browser = Substream TruVision Navigator = Substream	Event Stream is not supported on the device.
Playback Controls	Play Pause Frame Advance Fast Forward (1x, 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 four seconds after resuming 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 remains 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	Live and Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.

Feature	Support	Notes
Instant Replay	Yes	There is a two to five 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 two 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 five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	Alarm Motion Recorded	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.
Time Line Disk Analysis	Yes	
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 one 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.
Smart Search	No	
Point-of-Sale Text	No	
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 one 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 plays.
Bi-directional Audio	No	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. For each notification type on the Notification tab, 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>
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	
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Camera Support	N/A	
Device log support	Yes	

Feature	Support	Notes
Trigger Outputs	Yes	

TruVision TVR 11 / TVR12 (DVR)

Feature	Support	Notes
Firmware Versions	3.1.a (TVR 11/11C) 1.2.a (TVR12/12C)	
H.265 Support	No	
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.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	64 Live or Playback streams including those used by the web page.	
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Main streams and substreams are available on live view mode only.	

Feature	Support	Notes
Stream Nomenclature	<p>The Mainstream is referred to as: On-Screen-Display = Time Lapse Web Browser = Time Lapse TruVision Navigator = Main stream</p> <p>The Substream is referred to as: On-Screen-Display = Alarm Web Browser = Alarm TruVision Navigator = Substream</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	Play Pause Frame Advance Fast Forward (1x, 2x, 4x, 8x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x) Rewind (1x, 2x, 4x) - Eight videos simultaneously	<p>Video jumps back four seconds after resuming 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 automatically switches to Live view..</p>
Digital Zoom	Live and Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five 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 two 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 five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	Alarm Motion Recorded	<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>

Feature	Support	Notes
Time Line Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	Go To Record	Only one tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion Text	
Smart Search	Yes	
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 four 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 set up 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 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 set up the device to send TCP notifications for the device itself (e.g., 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	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Camera Support	N/A	

Feature	Support	Notes
Device Log Support	Yes	
Trigger Outputs	Yes	

TruVision TVR 20 (DVR)

Feature	Support	Notes
Supported Firmware Versions	1.0.36	
H.265 Support	No	
Default Ports	Video = 80 (editable) Command and Control = 80 (editable) Configuration = 80 (editable) Notifications = 1600 (editable) Firmware Upload = 80 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at the time of installation.
Default IP address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP	
Streaming Limits	16 Live and four Playback streams simultaneously.	
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Main streams and substreams are available on both live and playback. Dual streaming can be set on each camera rather than globally for the entire device.	
Stream Nomenclature	N/A	

Feature	Support	Notes
Playback Controls	Play Pause Frame Advance Fast Forward (1x, 2x,4x, 8x) Frame Reverse Rewind (1x, 2x,4x, 8x)	
Digital Zoom	No	
Snapshot	Yes	
Local Record	Yes	
Instant Replay	Yes	
Disk Analysis	Alarm Motion Video Loss Untagged	
Time Line Disk Analysis	No	
Video Export	Yes	There will be approximately 4 seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.avr proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	No	
Camera Search	Alarm Motion Text	Text Search is not supported on the device.
Smart Search	Yes	
Point-of-Sale Text	Yes	Overlay on video only (via the Settings screen, In Band setting).
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	Four channel and eight channel devices have two audio input ports. 16 channel has four audio input ports. Audio channels corresponds to cameras. (i.e. port 1 to camera 1, port 2 to camera 2)
Bi-directional Audio	Yes	

Feature	Support	Notes
Notifications	Alarm Motion Video Loss Disk failed Disk full Fan failed Abnormal temperature Device powered up Recording stopped Recording started Authentication lockup Network disconnected	
Health Diagnostics	IP address Subnet mask Gateway MAC Address Model name Serial number Firmware version Date/time Cameras in video loss Current client connections Disk capacity Logical disk count Physical disk count Disk temperature Celsius Disk temperature Fahrenheit Recording status First recorded video Last recorded video Video format	
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Camera Support	N/A	
Device log support	Yes	
Trigger Outputs	No	

TruVision TVR 30 / TVR31 (DVR)

Feature	Support	Notes
Supported Firmware Versions	8000	
H.265 Support	No	
Default Ports	Video = 80 (editable) Command and Control = 80 (editable) Configuration = 80 (editable) Notifications = 5000 (editable) Firmware Upload = 80 (editable)	Video and control port changes must be done from the front panel of the device.
Default Username / Password	admin / 1234	We recommend changing this default password at the time of installation.
Default IP address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP TCP I-frame	
Streaming Limits	16 channel: 16 Live or 16 playback streams per connection (maximum of five connections). 8 channel: 8 Live or 8 playback streams per connection (maximum of five connections).	
Stream Overlay	Camera Name Date and Time	
High / Low Bandwidth	Yes	High/Low bandwidth stream switching is global and affects all cameras of a device.
Dual Streaming	Yes	Main stream and substream switching is global and affects all cameras of a device. Substream switching during Playback is not supported.
Stream Nomenclature	N/A	

Feature	Support	Notes
Playback Controls	Play Pause Frame Advance Fast Forward (2x, 4x, 8x, 16x, 32x) Frame Reverse Rewind (2x, 4x, 8x, 16x, 32x)	When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile remains paused until the user clicks the Live button in the Viewer Toolbar. No other playback controls will work until the Live button is selected. Live and Playback video will drop frames and slow down if there is substantial network traffic. When executing a seek operation for playback, video will temporarily switch to live, and then switch to the new seek time.
Digital Zoom	No	
Snapshot	Yes	
Local Record	Yes	The device only supports local record for one camera at a time. If the user has a local recording going and tries to initiate another camera from the same device, the original local recording stops and then a new local recording begins.
Instant Replay	Yes	
Disk Analysis	Alarm Motion Video Loss Untagged	Disk analysis takes approximately 30-60 seconds depending on the amount of recorded data on the device.
Time Line Disk Analysis	No	
Video Export	Yes	The file size approximation in the Collector for video export is not accurate for this device.
TruVision Navigator Player	Yes	.video proprietary file format.
PTZ Control	Yes	
Focus, Iris Control	Yes	
Presets	Yes	
Tours	No	
Camera Search	Alarm Event Motion Text	
Smart Search	No	
Point-of-Sale Text	Yes	Overlay on video only (via the Settings screen, In Band or Out of Band setting).

Feature	Support	Notes
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	<p>There is one audio input 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 Cameras 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.</p> <p>Audio is not supported when switching to the substream.</p>
Bi-directional Audio	Yes	
Notifications	Alarm Motion Video Loss Disk full Hard Disk Error	<p>To set up 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 to receive per camera. On the Alarms tab, Remote Alert section, the Notify IP Address should be the IP address of where the TruVision Navigator Server service is located (Notification Processor). The Notify Port is defaulted to 5000 and is editable. Ensure this port matches the one listed on the TruVision Navigator Server - Notifications Dialog.</p> <p>Restart the Notification Processor service for TruVision Navigator to process the notifications.</p>

Feature	Support	Notes
Health Diagnostics	Host Name IP address MAC Address Equipment Name Model Name Hardware Revision Firmware Version Device Time/Date Current Client Connections Record Status First Recorded Video Latest Recorded Video Video Stored (Days) Video Stored (Hours) Physical Disk Model Name Physical Disk Count HDD Status HDD Capacity (Gb) HDD Temperature (C) HDD Temperature (F)	
Firmware Upload	Yes	<p>To upload firmware to this device via TruVision Navigator, download the firmware file with file extension .tgz. Extract the .tar file to the computer desktop from the .tgz. Right-click on the device in the Navigator and select Upload Firmware. Browse for the .tar file when prompted. Execute the upload. Remember the Local Scheduling Service needs to be running</p> <p>After TruVision Navigator reports firmware upload success in the Task Panel, the device requires one to two minute wait before the user can reconnect to the device.</p>
Bulk Firmware Upload	Yes	
Device Configuration	Yes	<p>Does not currently support remote configuration of resolution for recording.</p> <p>DDNS when enabled usually causes the box to slow down when getting / setting configuration.</p>
Bulk Configuration	Yes	
Remote Reboot	Yes	Closing video tiles while the device is rebooting will cause TruVision Navigator to freeze and require the user to log back into the application.
IP Camera Support	N/A	
Device log support	Yes	

Feature	Support	Notes
Trigger Outputs	No	

TruVision TVR 40 (DVR)

Feature	Support	Notes
Supported Firmware Versions	3.2.d	
H.265 Support	No	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	Administrator / 3477	We recommend changing this default password at time of installation.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	24 Live or Playback streams simultaneously with a maximum of six streams per channel.	
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 = Schedule Web Browser = Main stream TruVision Navigator = Main stream</p> <p>The Substream is referred to as: On-Screen-Display = N/A Web Browser = Substream TruVision Navigator = Substream</p> <p>The Event stream is referred to as: On-Screen-Display = Event Web Browser = Event TruVision Navigator = Event</p> <p>The Time Lapse stream is referred to as: On-Screen-Display = Time Lapse Web Browser = Time Lapse TruVision Navigator = Time Lapse</p>	<p>The Substream, Event, and Time Lapse streams are derivative configurations of the Main stream.</p> <p>Typically, the Main stream is recorded on a schedule, the Event stream is recorded on Event, the Time Lapse stream is recorded continuously, and the Substream can be viewed Live.</p>
Playback Controls	Play Pause Frame Advance Fast Forward (1x, 2x,4x, 8x 16x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)	<p>Frame Reverse and Rewind Speeds are not supported.</p> <p>Video jumps back four 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 remains 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	Live and playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five minute video buffer in the device. While video is in the buffer, it cannot be viewed. After 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 two features get their time increment from the user-defined Instant Replay configuration on the TruVision Navigator Server Properties tab. As a result, this time should be set to an increment to greater than five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	Alarm Motion Recorded Untagged	<p>Video Loss is not supported in disk analysis.</p> <p>Disk analysis takes approximately 45 to 90 seconds depending on the amount of recorded data on the device.</p>

Feature	Support	Notes
Timeline Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	PTZ protocol GE RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only one 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	Overlay on video only (via the Settings Dialog - In Band setting)
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 (one 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	Yes	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., 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>
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	
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Camera Support	N/A	

Feature	Support	Notes
Device Log Support	Yes	
Trigger Outputs	Yes	

TruVision TVR 41 / TVR42 (DVR)

Feature	Support	Notes
Supported Firmware Versions	3.0c (TVR 41) 1.2d (TVR42)	
Support H.265	No	
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.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	64 Live or Playback streams simultaneously including those used by the web alarm.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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: On-Screen-Display = Time Lapse Web Browser = Time Lapse TruVision Navigator = Main stream</p> <p>The Substream is referred to as: On-Screen-Display = Alarm Web Browser = Alarm TruVision Navigator = Substream</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	Play Pause Frame Advance Fast Forward (1x, 2x, 4x, 8x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x) Rewind (1x, 2x, 4x) -8 simultaneously	Video jumps back four 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 remains 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	Live & Playback	
Snapshot	Yes	
Local Record	Yes	
Instant Replay	Yes	
Disk Analysis	Alarm Motion Recorded Untagged	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.
Timeline Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	

Feature	Support	Notes
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	Go To Record	Only one tour is supported (which is hard coded to Tour 1 on the PTZ camera).
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 four 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 set up 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 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 set up the device to send TCP notifications for the device itself (e.g., 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	
Bulk Configuration	Yes	
Remote Reboot	Yes	

Feature	Support	Notes
IP Camera Support	N/A	
Device Log Support	Yes	
Remote Reboot	Yes	

TruVision Generic TVR/TVN and TVN 70 / TVR12HD / TVR44HD / TVN22

Feature	Support	Notes
Supported Firmware Versions	1.2.f (TVN 70) 1.2.g (TVR44HD/TVR12HD) 1.0.d (TVN22)	
H.265 Support	Yes (TVN22) No (TVN 70/TVR44HD/TVR12HD)	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable)	
Default Username / Password	admin / 1234	We recommend changing this default password at time of installation.
Default IP address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	128 Live or Playback streams	
Stream Overlay	VCA Rules, Motion Rules, POS Text, Camera Name, Date and Time	
High / Low Bandwidth	No	
Dual Streaming	Yes	
Stream Nomenclature	The Mainstream is referred to as: TruVision Navigator = Mainstream The Substream is referred to as: TruVision Navigator = Substream	

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 directly depend on the actual device capabilities. Video jumps back four 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	Live and Playback	
Snapshot	Yes	
Local Record	Yes	
Instant Replay	Yes	
Disk Analysis	Alarm Motion Recorded VCA Text	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.
Time Line Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	Yes	Dependent on camera and device.
Camera Search	Alarm Event Motion Text VCA	
Smart Search	Yes	
Point-of-Sale Text	Yes	
Motion	Yes	
Audio	Yes	
Bi-directional Audio	Yes	

Feature	Support	Notes
Notifications	Alarm Motion VCA Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. For each notification type on the Notification tab, 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	Via browser page.
Bulk Firmware Upload	No	
Device Configuration	Yes	Via browser page.
Bulk Configuration	No	
Remote Reboot	Yes	

Feature	Support	Notes
IP Camera Support	Yes	
Device Log Support	Yes	
Trigger Outputs	Yes	

TruVision TVR 60 (Hybrid DVR)

Feature	Support	Notes
Supported Firmware Versions	4.7a	
Support H.265	No	
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.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	48 Live or Playback streams simultaneously with a maximum of six streams per channel.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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 Substream is referred to as: On-Screen-Display = Alarm Web Browser = Alarm TruVision Navigator = Substream</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	Play Pause Frame Advance Fast Forward (1x, 2x,4x, 8x,16x) Slow motion (1.0x, 0.5x, 0.25x, 0.125x, 0.0625x)	<p>Frame Reverse, Rewind, and Playback Speeds are not supported.</p> <p>Video jumps back four 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	Live & Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five 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 two 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 five minutes. If a search is executed for video still in the buffer, Live video appears.

Feature	Support	Notes
Disk Analysis	Alarm Motion Recorded Untagged	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.
Timeline Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	PTZ protocol GE RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only one 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.
Smart Search	No	
Poin-of-Sale Text	No	
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 (one 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 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 (e.g., 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	
Bulk Configuration	Yes	
Remote Reboot	Yes	

Feature	Support	Notes
IP Cameras	UTC CamPlus2 IP Models - Firmware: UTCC-IP2VD-DN - V1.00E3 UTCC-IP2VD-DNP - V1.00E3 UTCC-IP2D - V1.00E2 UTCC-IP2D-P - V1.00E2) UTCC-IP2B - V1.00E2) UTCC-IP2B-P - V1.00E2) UTC UltraView IP - Firmware: UVC-IP-EVRDN-HR - 4.2.1, 53820 UVD-IP-EVRDNR - 4.2.1, 53820 UVC-IP-EVRDN-HR-P - 4.2.1, 53820 UVD-IP-EVRDNR-P - 4.2.1, 53820 UVC-IP-XP3DN-HR - 4.2.1, 53820 UVD-IP-XP3DNR - 4.2.1, 53820 UVC-IP-XP3DN-HR-P - 4.2.1, 53820 UVD-IP-XP3DNR-P - 4.2.1, 53820 UTC UltraView Encoder - Firmware: UVE-101/DC105 (NTSC) - 4.2.1, 53820 UVE-101/DC105 (PAL) - 4.2.1, 53820 Panasonic I-Pro Network Cameras - Firmware: NW484S - 1.50E2 NF284 - 1.50E2 NP-244 - 1.80E4	Adding the UltraView IP or Encoder to the device via TruVision Navigator can take 10-20 seconds. The UltraView IP or Encoder can take 10-20 seconds to stream video once its configuration has been changed. Motion JPEG is not supported on the CamPlus2. 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). The device supports up to eight IP cameras.
Device Log Support	Yes	
Trigger Outputs	Yes	

TruVision TVN 10/20/21/50 (NVR)

Feature	Support	Notes
Supported Firmware Versions	2.0b (TVN 10m 10S, 10C, 10CS) 3.2a (TVN 20) 3.1.g (TVN 21) 2.1i (TVN 50)	

Feature	Support	Notes
Support H.265	No	
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.
Default IP Address	192.168.1.82	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	TVN 10: 64 Live or Playback streams including those used by the webpage. TVN 20: 48 Live or Playback streams simultaneously with a maximum of six streams per channel. TVN 21/50: 128 Live or Playback streams simultaneously with a maximum of six streams per channel.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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 Substream is referred to as: On-Screen-Display = Alarm Web Browser = Alarm TruVision Navigator = Substream</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 four 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	Live & Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five minute video buffer in the device. While video is in the buffer, it cannot be viewed. After 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 five minutes. If a search is executed for video still in the buffer, Live video appears.

Feature	Support	Notes
Disk Analysis	Alarm Motion Recorded Untagged (TVN 10/TVN 20 only) VCA (for firmware that supports VCA – TVN 21 only)	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.
Timeline Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	PTZ protocol GE RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only one tour is supported (which is hard coded to Tour 1 on the PTZ camera).
Camera Search	Alarm Event Motion	
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 (one 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	Yes No (TVN 20 only)	

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 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 (e.g., 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 TVN 21 and TVN 50, Synchronize IP Camera option should be enabled to have camera parameters applied completely.
Bulk Configuration	Yes	
Remote Reboot	Yes	

Feature	Support	Notes
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 www.interlogix.com 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 duplicate time/date stamps will be overlaid on the video – one from the camera and one from Navigator.</p>
Device Log Support	Yes	
Trigger Outputs	Yes No (TVN 20 only)	

GoVision 2/GoVision/VeDVR

Feature	Support	Notes
Supported Firmware Versions	1.0.0 build 100617 (GoVision 2) 2.1 (GoVision/VeDVR)	
H.265 Support	No	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	admin / 12345	We recommend changing this default password at time of installation.
Default IP address	192.168.0.1 (GoVision 2) 192.0.0.64 (GoVision/VeDVR)	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	48 Live or Playback streams simultaneously with a maximum of six streams per channel.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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 = Normal High (GoVision2)</p> <p>On-Screen-Display = Cont HQ (GoVision2/VeDVR)</p> <p>Web Browser = Main stream</p> <p>TruVision Navigator = Main stream</p> <p>The Substream is referred to as:</p> <p>On-Screen-Display = N/A</p> <p>Web Browser = Substream</p> <p>TruVision Navigator = Substream</p> <p>The Event stream is referred to as:</p> <p>On-Screen-Display = Event</p> <p>Web Browser = Event</p> <p>TruVision Navigator = Event</p> <p>The Schedule stream is referred to as:</p> <p>On-Screen-Display = Normal Low (GoVision2)</p> <p>On-Screen-Display = Cont LQ (GoVision2/VeDVR)</p> <p>Web Browser = Schedule</p> <p>TruVision Navigator = Schedule</p>	
Playback Controls	<p>Play</p> <p>Pause</p> <p>Frame Advance</p> <p>Fast Forward (2x, 4x, 8x, 16x)</p>	<p>Frame reverse, rewind, and playback speeds are not supported.</p> <p>Video jumps back four 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	Live and Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.

Feature	Support	Notes
Instant Replay	Yes	There is a two to five 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 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 five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	Alarm Motion Recorded	Video Loss is not supported in disk analysis. Disk analysis takes approximately 45-90 seconds depending on the amount of recorded data on the device.
Time Line Disk Analysis	No	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	PTZ protocol GE RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	No	
Camera Search	Alarm Event Motion	
Smart Search	No	
Point-of-Sale Text	No	
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	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.
Bi-directional Audio	Yes	

Feature	Support	Notes
Notifications	VeDVR: No GoVision 2/GoVision: Alarm Video Loss Motion Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. For each notification type on the Notification tab, 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	
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	

Feature	Support	Notes
IP Camera Support	N/A	
Device Log Support	Yes	
Trigger Outputs	Yes	

DVSRxU

Feature	Support	Notes
Supported Firmware Versions	2.31s	
H.265 Support	No	
Default Ports	Video = 8000 (editable) Command and Control = 8000 (editable) Configuration = 8000 (editable) Notifications = 5001 (editable) Firmware Upload = 8000 (editable)	
Default Username / Password	Administrator / 3477	We recommend changing this default password at time of installation.
Default IP address	192.168.1.10	
Network Discovery	Supported	
Compression	H.264	
Connection Types	TCP UDP	
Streaming Limits	24 Live or Playback streams simultaneously with a maximum of six streams per channel.	If users try to open more streams than a recorder supports, they will get a black video tile containing an error message.
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: On-Screen-Display = Schedule Web Browser = Main stream TruVision Navigator = Main stream</p> <p>The Substream is referred to as: On-Screen-Display = N/A Web Browser = Substream TruVision Navigator = Substream</p> <p>The Event stream is referred to as: On-Screen-Display = Event Web Browser = Event TruVision Navigator = Event</p> <p>The Time Lapse stream is referred to as: On-Screen-Display = Time Lapse Web Browser = Time Lapse TruVision Navigator = Time Lapse</p>	<p>The Substream, Event, and Time Lapse streams are derivative configurations of the Main stream.</p> <p>Typically, the Main stream is recorded on a schedule, the Event stream is recorded on Event, the Time Lapse stream is recorded continuously, and the Substream can be viewed Live.</p>
Playback Controls	<p>Play Pause Frame Advance Fast Forward (2x, 4x)</p>	<p>Frame reverse, rewind, and playback speeds are not supported.</p> <p>Video jumps back four 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	Live and Playback	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	There is a two to five 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 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 five minutes. If a search is executed for video still in the buffer, Live video appears.
Disk Analysis	<p>Alarm Motion Recorded</p>	<p>Video Loss is not supported in disk analysis.</p> <p>Disk analysis takes approximately 45-90 seconds depending on the amount of recorded data on the device.</p>

Feature	Support	Notes
Time Line Disk Analysis	Yes	
Video Export	Yes	There will be approximately four seconds of additional video exported prior to the specified start time.
TruVision Navigator Player	Yes	.mp4 proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	PTZ protocol GE RS-485 does not support Focus and Iris commands in this release.
Presets	Yes	
Tours	Go To Record	Only one 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	Overlay on video only (via the Settings Dialog – In Band setting)
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 (one 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	Yes	

Feature	Support	Notes
Notifications	Alarm Video Loss Motion Disk Full Disk Failure	<p>To set up 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 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 set up the device to send TCP notifications for the device itself (e.g., Disk Full and Disk Failure), right-click on the device in the Navigator and select Configure Device. For each notification type on the Notification tab, 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	
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	

Feature	Support	Notes
IP Camera Support	N/A	
Device Log Support	Yes	
Trigger Outputs	Yes	

SymDec 16/SymSafe

Feature	Support	Notes
Supported Firmware Versions	1.60c/1.40c	
H.265 Support	No	
Default Ports	Video = 5858 for TCP or 8100 to 8115 for UDP (editable) Command and Control = 1024 (editable) Configuration = 1024 (editable) Notifications = 1027 (editable) Firmware Upload = 1024 (editable)	
Default Username / Password	Front Panel: user 1 / 111111 user 2 / 222222 user 3 / 333333	
Default IP address	192.168.1.82	
Network Discovery	Not Supported	
Compression	MPEG4	
Connection Types	Reverse TCP Reverse TCP I-frame UDP	
Streaming Limits	32 Live and 16 Playback streams simultaneously.	This is however further restricted by the bandwidth maximum of 32 * 3 Mb/sec. Example: When all cameras are full D1 30FPS/ High quality (3 Mbs), only 32 streams (e.g., 16 Live, 16 Playback) are available. When the frame rate/resolution/quality is changed to low (1 Mb/s), 32 Live+16 Playback can be achieved.
Stream Overlay	Camera Name Date and Time Bit Rate Alarm Detection	

Feature	Support	Notes
High / Low Bandwidth	Yes	Low bandwidth is only I-frames. High bandwidth is I and P-frames.
Dual Streaming	No	
Stream Nomenclature	N/A	
Playback Controls	Play Pause Frame Advance Fast Forward (4x,8x,16x,32x,,64x,100x, 300x) Frame Reverse Rewind (4x,8x,16x,32x,,64x,100x, 300x)	When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile pauses and will resume fast forward as video becomes available.
Digital Zoom	No	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	
Disk Analysis	Alarm Motion Video Loss Recorded	
Time Line Disk Analysis	No	
Video Export	Yes	
TruVision Navigator Player	Yes	.mpc proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	Go To Record	16 tours are supported
Camera Search	Alarm Event Motion Text	Text search is not available on SymDec 1
Smart Search	Yes	
Point-of-Sale Text	Yes	Overlay on video or placed next to the video (via the Settings Dialog - In Band or Out of Band setting)
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Detection tabs associated with each camera.

Feature	Support	Notes
Audio	Yes	<p>There are two (SymSafe) or four (SymDec) audio inputs per device that are mapped to Cameras 1 to 2 or 1 to 4 respectively. Microphones would need to be in the locations with those cameras. Enabling audio on the device is a per channel setting. Access the setting by going to the camera configuration and enabling the audio option on the Recording tab. If enabled, audio plays after adding that camera in the Viewer and selecting it. Audio will only play for the selected camera.</p>
Bi-directional Audio	Yes	
Notifications	Alarm Video Loss Disk Full Disk Failed Authentication Lock Up Device Powered Up Fan Failed Abnormal Temperature	<p>To set up a SymSafe or SymDec16 to send TCP notifications, get the configuration of the device. under the Network menu, and then go to Network Notification and make sure each notification on the page is set to TCP. Under Notification Setup, make sure the Alarm Server 1 is set to the IP address of where the TruVision Navigator Server service is located (Notification Processor). Set the Alarm port as the same port (TCP Listener Port) set on the Notifications Dialog of the TruVision Navigator Server. Click Save for the device configuration changes to be sent to the device. Restart the TruVision Navigator Notification Processor Service via the Services dialog in TruVision Navigator.</p> <p>To setup a SymDec 1 or 4 to send SMTP notifications, get the configuration of the device. Under the Alarm menu, go to Email. Enable each of the notifications using the radio buttons. Set the SMTP Server to the IP address of where the TruVision Navigator Server service is located (Notification Processor). Set the SMTP port as the same port (Email Listener Port) set on the Notifications Dialog of the TruVision Navigator Server. Click Save for the device configuration changes to be sent to the device.</p> <p>Restart the Notification Processor service for TruVision Navigator to process the notifications.</p>

Feature	Support	Notes
Health	IP Address	
Diagnostics	MAC Address	
	Model Name	
	Serial Number	
	Firmware Version	
	Device Date/Time	
	Total Device Health	
	Device Temperature (C)	
	Device Temperature (F)	
	HDD Status	
	HDD Temperature (C)	
	HDD Temperature (F)	
	HDD Capacity (Gb)	
	Fan Status	
	Cameras in Video Loss	
	Cameras in Alarm	
	Current Client Connections	
	Record Status	
	First Recorded Video	
	Latest Recorded Video	
	Record Time Left (hours)	
Video Stored (days)		
Video Stored (hours)		
Power on Duration		
Device Export Time Left		
Firmware Upload	Yes	
Bulk Firmware Upload	Yes	
Device Configuration	Yes	
Bulk Configuration	Yes	
Remote Reboot	Yes	
IP Camera Support	N/A	
Device Log Support	No	
Trigger Outputs	No	

DVMRe/StoreSafe

Feature	Support	Notes
Supported Firmware Versions	v5.71/6.32c	
H.265 Support	No	
Default Ports	Video = 1024 (editable) Command and Control = 1024 (editable) Configuration = 1024 (editable) Notifications = 1027 (editable) Firmware Upload = 1024 (editable) Browser = 80 (Not available on DVMRe-CS or DVMRe-CD)	
Default Username / Password	Front Panel: 3477 for 8 or 16 channel / 3444 for 4 channel Username: admin Password: admin	
Default IP address	3.18.173.10	
Network Discovery	Not Supported	
Compression	Wavelet	
Connection Types	TCP	
Streaming Limits	16 Live and one Playback stream simultaneously.	
Stream Overlay	Camera Name Date and Time Alarm Detection	
High / Low Bandwidth	Yes	High bandwidth is color video and Low Bandwidth is black and white video.
Dual Streaming	No	
Stream Nomenclature	N/A	
Playback Controls	Play Pause Frame Advance Fast Forward (4x,8x,16x,32x,,64x,100x, 300x) Frame Reverse Rewind (4x,8x,16x,32x,,64x,100x, 300x) Adjustable Playback Speed	When fast forwarding video and it catches up to present time (or Live video), the video in the viewing tile begins to play at the beginning of the recorded video.

Feature	Support	Notes
Digital Zoom	No	
Snapshot	Yes	
Local Record	Yes	Pause during local record is not supported.
Instant Replay	Yes	
Disk Analysis	Alarm Motion Video Loss Recorded	
Time Line Disk Analysis	No	
Video Export	Yes	
TruVision Navigator Player	Yes	.wvf proprietary file format.
PTZ Control	Yes	
Focus, Iris, Zoom	Yes	
Presets	Yes	
Tours	No	
Camera Search	Alarm Event Motion Text	Text search is not available on the DVMRe CS, DVMRe CD, DSR, or DVSE models.
Smart Search	Yes	
Point-of-Sale Text	Yes	Overlay on video or placed next to the video (via the Settings Dialog - In Band or Out of Band setting)
Motion	Yes	Get the configuration for this device via TruVision Navigator and set the active zones on a per camera basis via the Motion Detection tabs associated with each camera.
Audio	Yes	An audio module is required in these units. There is one audio input per device. That input can be mapped to any camera on the device simply by where the microphone is located. Enabling audio on the device is a global setting. Access the setting by going to the device configuration, and enabling the G711 audio option on the Audio Setup tab. If enabled, as soon as any camera from the device is added in the TruVision Navigator Viewer, the audio plays.
Bi-directional Audio	No	

Feature	Support	Notes
Notifications	Alarm Video Loss Disk Full Disk Failed Authentication Lock Up Device Powered Up Fan Failed Abnormal Temperature	<p>DVMRe Pro, DVMRe CT or DVMRe CTII - to set up these devices to send TCP notifications, get the configuration of the device. Under the Alarm menu, go to Notification and make sure the notification method on the page is set to TCP. Enable each of the notifications using the radio buttons. Set the Primary host to the IP address where the TruVision Navigator Server service is located (Notification Processor). Set the port as the same port as set on the Notifications dialog of the TruVision Navigator Server. Click Save for the device configuration changes to be sent to the device. Restart the TruVision Navigator Notification Processor Service via the Services dialog in TruVision Navigator.</p> <p>DVMRe ezT, StoreSafe, StoreSafe Pro, and StoreSafe Pro II - to set up these devices to send SMTP notifications, get the Configuration of the device. Under the Alarm menu, go to Notification and make sure the notification method on the page is set to Email. Enable each of the notifications using the radio buttons. Set the SMTP Server to the IP address of where the TruVision Navigator Server service is located (Notification Processor). Set the SMTP port as the same port as set on Notifications Dialog – Email Listener Port of the TruVision Navigator Server. Click Save to push the configuration to the device.</p> <p>Restart the Notification Processor service for TruVision Navigator to process the notifications.</p> <p>No Notifications available for DSR, DVSE, DVMRe CS, and DVMRe CD.</p>
Health Diagnostics	IP Address MAC Address Model Name Serial Number Firmware Version Device Time/Date HDD Capacity (Gb) Cameras in Video Loss Cameras in Alarm Current Client Connections Record Status Record Time Left Video Stored (Hours) Power on Duration Device Export Time Left	

Feature	Support	Notes
Firmware Upload	No	Remote firmware uploads must be done from the device's web browser and not via TruVision Navigator. This includes all DVMRe Triplex models, all StoreSafe models, the DSR, and the DVSE. The DVMRe-CD and DVMRe-CS must be upgraded at the units.
Bulk Firmware Upload	No	
Device Configuration	Yes	For certain models - DVSE and DSR, configuration must be done via the device's web browser and not via TruVision Navigator. The DVMRe CS and DVMRe CD must be configured from the front panel of the unit.
Bulk Configuration	Yes	
Remote Reboot	No	
IP Camera Support	N/A	
Device Log Support	No	
Trigger Outputs	No	

Discovery support (transmission products)

The following table indicates support status of device discovery for transmission products:

Model number	Device discovery supported?
ES2402-16P-2C	Yes
ES2402-24P-2C	Yes
ES2402-8P-2C	Yes
GE-DS-242-POE	No
GE-DS-82	No
GE-DS-82-POE	No
GE-DSG-244	Yes
GE-DSH-73	No
GE-DSH-82	No
GE-DSH-82-POE	No
GE-DSSG-244	No
GE-DSSG-244-POE	Yes
MC-355-1T/1S	Yes
MCR-205-1T/1S	Yes

Model number	Device discovery supported?
NS2503-24P/2C	No
NS2503-8P/2C	No
NS3500-28T-4S	Yes
NS3502-8P-2S	Yes
NS3502-8P-2T-2S	Yes
NS3503-16P-4C	Yes
NS3550-24T/4S	Yes
NS3550-2T-8S	Yes
NS3550-8T-2S	Yes
NS3552-16P-2T-2S	Yes
NS3552-8P-2S	Yes
NS3562-8P-2S	Yes
NS3601-24P/4S	Yes
NS3702-24P-4S	Yes
NS4702-24P-4S-4X	Yes
NS4702-24P-4X	Yes
NS4750-24S-4T-4X	Yes
NS4750-24S-4T-4X	Yes
NS4802-24P-4S-2X	Yes
POC2502-16CXP-2T-2S	Yes
POC2502-8CXP-2T-2S	Yes
WMC251-1W-1T-300	Yes
WMC251-1W-1T-300	Yes
WMC251-1W-2T-150	Yes
WMC252-1W-1T-300	Yes
WMC303-1W-1T-1200	Yes

Tasks menu (legacy recorders)

The Tasks menu option provides a way to apply configuration and firmware updates across multiple legacy TruVision recorders. Refer to Appendix B “Device details” on page 125 to see which legacy TruVision recorder models support Tasks.

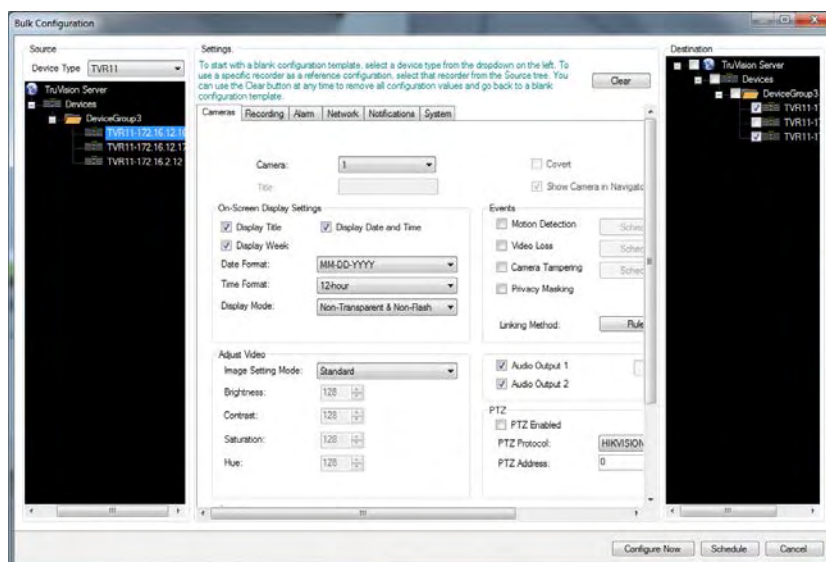
Note: See “Upgrade firmware” on page 82 for instructions on uploading/upgrading firmware on newer TruVision devices.

Bulk configuration

Bulk configuration copies configuration settings from one recorder to other recorders. These recorders must all have the same model number.

Note: Bulk configuration is only available for certain legacy products. See Appendix B “Device details” on page 125 for compatible products.

1. Right-click on the Devices node in the Navigator panel and select **Tasks > Bulk Configuration**.
2. Select the recorder model for configuration from the **Device Type** drop-down list.
3. Click on the recorder to copy settings from in the Source panel. Change settings as needed for the selected recorder in the tabs under Settings.
4. Select the check boxes next to the Devices or folder icons in the Destination panel to select all recorders in a directory or select check boxes next to individual recorders.
5. Click **Configure Now** to copy settings to the destination recorders immediately or click **Schedule** to schedule a future point in time to apply the settings.



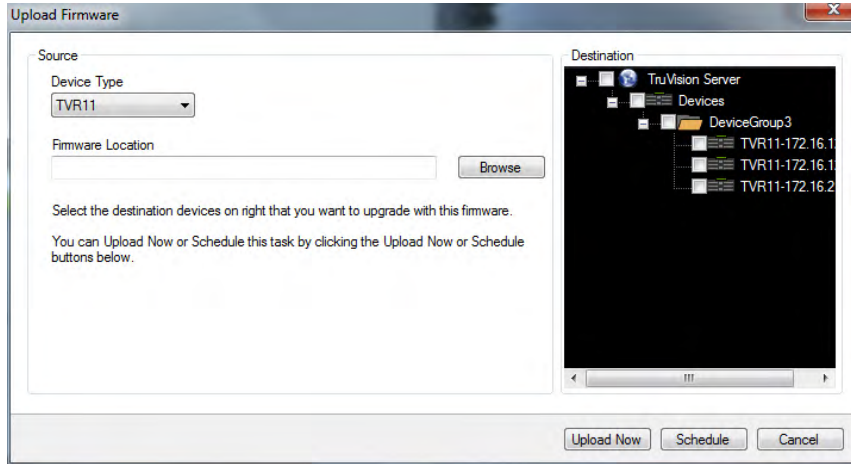
Bulk firmware upload

Bulk firmware upload updates firmware on multiple recorders. These recorders must all have the same model number.

Note: Bulk firmware upload is only available for certain legacy products. See Appendix B “Device details” on page 125 for compatible products.

1. Right-click on the Devices node in the Navigator panel and select **Tasks > Bulk Firmware Upload**.
2. Select the recorder model corresponding to the new firmware file from the **Device Type** drop-down list.
3. Click **Browse** and navigate to the new firmware file (DAV file format) and load it into the **Firmware Location** field.

4. Select the check boxes next to the Devices or folder icons in the Destination panel to select all recorders in a directory or select check boxes next to individual recorders.
5. Click **Configure Now** to upload firmware to the destination recorders immediately or click **Schedule** to schedule a future point in time to upload firmware.

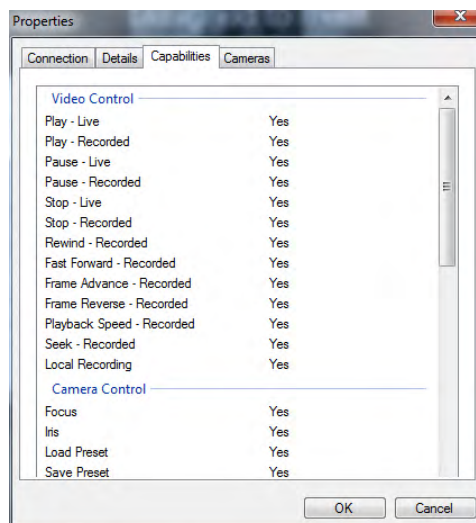


Legacy properties

Right-click on a recorder in the Navigator panel and select **Properties** to display the Properties window.

The **Capabilities** tab contains a read-only list that indicates which video, camera, and device controls as well which connection types are supported.

Devices that support the capabilities tab are listed in the “Supported Devices” row in the device details tables (“TruVision Recorder” on page 125 and “TruVision Camera” on page 128).



Glossary

Term	Definition
Access control	Physical restriction to access or entry. Requiring a security badge to open a door is an example of access control.
Address book	A file containing the title, IP address, and credentials of recorders and cameras in the Navigator panel. This data can be imported or exported into Navigator as needed to save and restore these settings.
Bookmark	Denotes a date and time on the timeline that can be returned to quickly. Bookmarks contain editable information for describing an event. See also "timeline" and "bookmark manager."
Bookmark manager	The Bookmark Manager window is a central location that contains all device-level bookmarks. See also "bookmark."
Dewarping	Fisheye cameras produce an ultra-wide field of view image which looks round and distorted. To make the image usable, the image needs to be flattened out (dewarped).
DVR	Digital Video Recorder. A type of security footage recorder connected to analog or coaxial cameras.
Dwell time	A user-selectable amount of time that a PTZ camera remains at a preset before the camera moves to the next preset position.
Fisheye camera	Fisheye cameras produce an ultra-wide field of view image.
IP camera	A digital video camera that connects directly to the network with its own IP address and has the ability to transmit images using a standard communications protocols such as TCP/IP.
Logical event filtering	Logical event filtering provides a way to create customized, interdependent notifications from cameras connected to recorders as well as doors connected to TruPortal access control systems.
Main stream	The video or audio stream that has priority. See also "substream".
NTP	Network Time Protocol. This synchronizes the time and date of a device with an NTP server.
NVR	Network Video Recorder. A type of security footage recorder connected to IP cameras.
Object counting	Refers to the number of people or objects detected passing either direction across a virtual line drawn by the user in the camera configuration UI.

POS	"Point-of-sale" as in a POS terminal. Examples: electronic cash register or an ATM.
Preset	A preconfigured action for a dome camera that will run automatically after a defined dwell time.
ProBridge	The ProBridge is a text translation device that captures an ATM's transaction data and translates it to a format that can be interpreted by a DVR.
PTZ	Pan/Tilt/Zoom. A feature on cameras that can pan, tilt, and zoom via computer control. PTZ allows for a larger viewing area for a camera by allowing it to rotate in different directions.
Server offline mode	Mode of operation in which the Navigator client can still operate in a client/server configuration when the server is offline. Some configuration options are not available in server offline mode.
Sequence	A series of camera streams that are programmed to switch, rotating one after another, in an individual video tile.
SMTP	Simple Mail Transfer Protocol. A standard for e-mail transmission across the network.
Substream	A secondary video stream that is set at a lower quality setting to reduce the amount of bandwidth needed. See also "main stream".
Timeline	A graphical view of video over an interval of time that allows users to navigate through recorded videos.
Tour	A series of checkpoints assigned in a specific sequence with times assigned to reach each point.
VCA	Video Content Analytics. The intelligent analysis of video to detect events of interest.
V-Stream	When available bandwidth is limited, V-stream encoding allows you to remotely view several channels in real time over the web browser.

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