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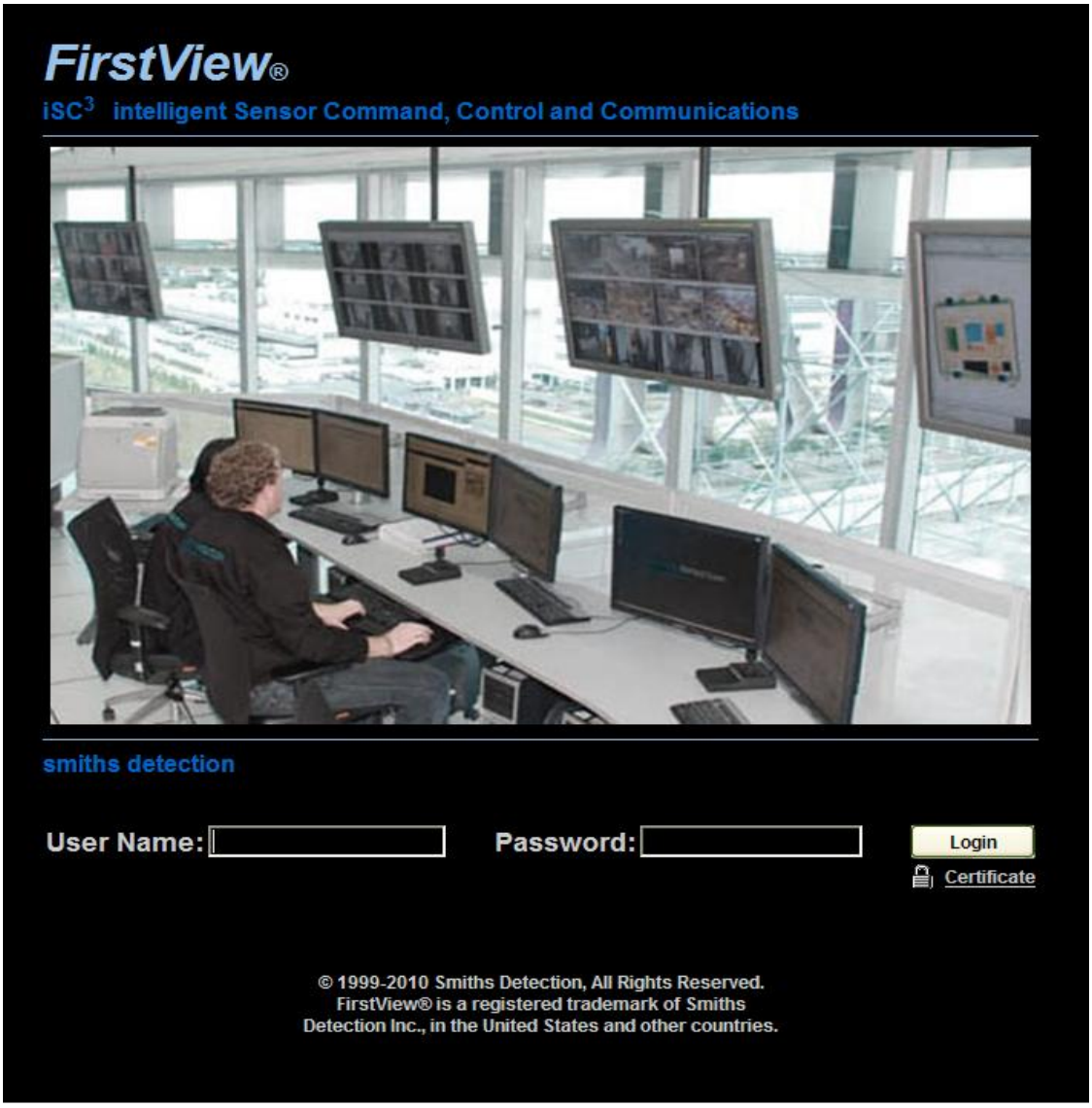
FirstView®
Administrative Guide & User Manual



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Chapter 1: Getting Started with FirstView®

1.1: System Overview

The FirstView® system is a powerful network-based software solution for managing your security systems.

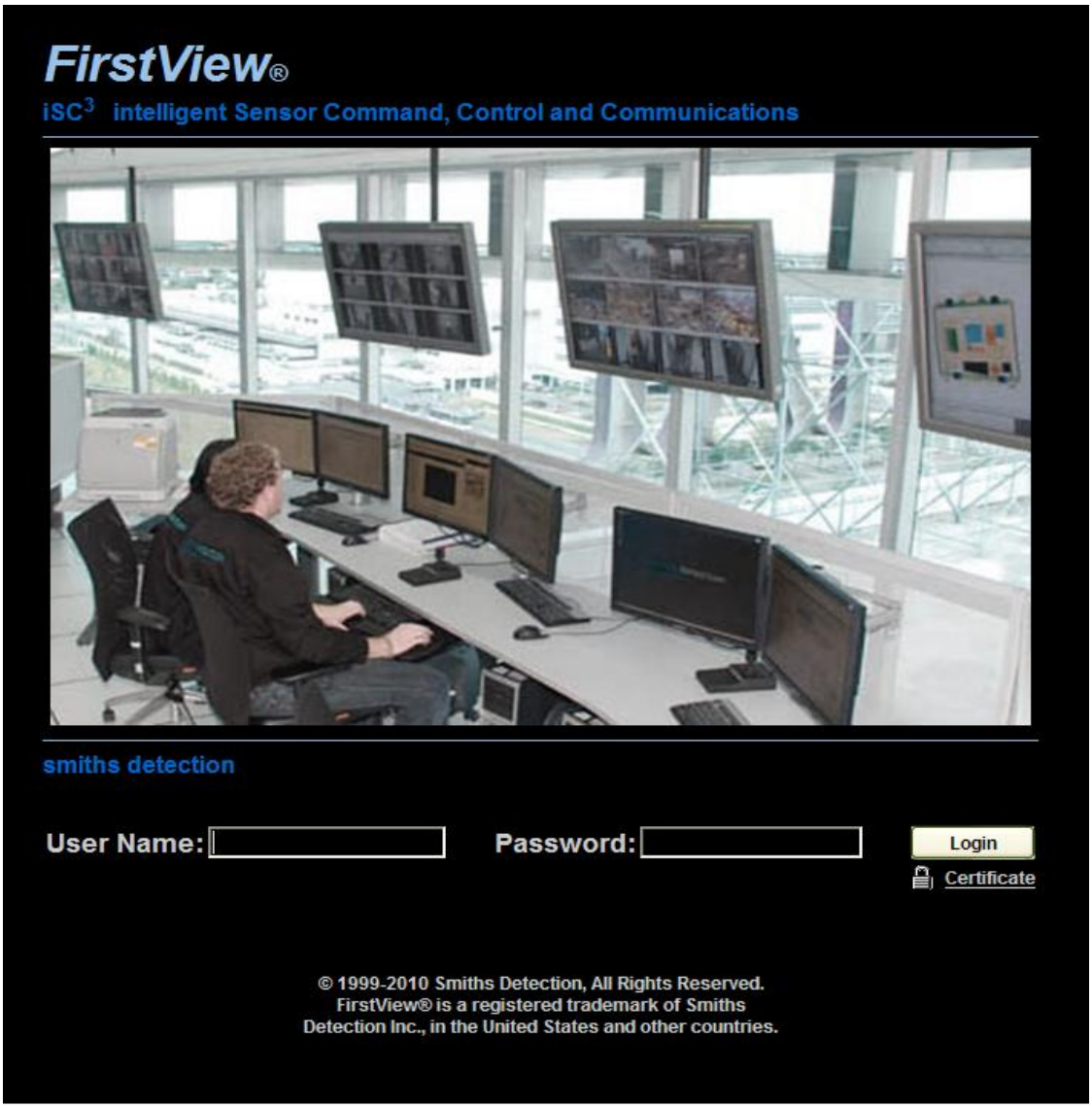
FirstView® iSC³ intelligent Sensor Command, Control and Communications Core Features:

- **CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) Monitoring**
  - Supports Smiths Detection and third-party sensors to alert users to CBRNE threats. The system tracks and records data and associated video footage giving users all the information they need to take decisive and timely action.
- **Video Camera Management**
  - Manage thousands of cameras with fluid PTZ (Pan, Tilt, and Zoom) controls and hierarchical user levels, supporting numerous analog or IP camera/encoder vendors including MJPEG, MPEG-4, and H264 video CODECs. Record any video stream from anywhere on the network. Unlimited storage options available to ensure maximum flexibility and scalability.
- **GIS / Mapping**
  - Interface with Google™ Maps Enterprise to overlay camera and sensor locations with video imagery, or import your own maps, drawings and blueprints. Supports geospatial inputs from ground radar systems and acoustic gunshot detectors.
- **Alarm Management**
  - Input alarms from any supported sensor system or security device and intuitively view or analyze events in real-time using the unique, management-by-exception, 'black screen' interface. Alarms can be configured to trigger pre-defined actions including record index, PTZ preset triggers, video screen pop-up displays, and audible cues.
- **X-Ray Screening Integration**
  - Integrates market leading X-Ray technology to screen material from packages to cargo for explosives, weapons, narcotics and contraband. All of this can be monitored remotely, archiving the hi-definition images of all screened material and viewing live images from the local monitor of the X-Ray machine.

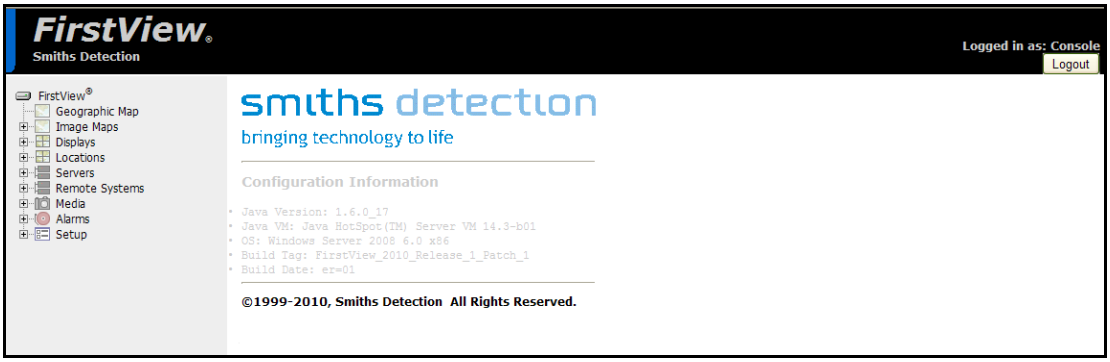
1.2: User Login

FirstView® is a web-based system, and can be accessed using Internet Explorer. The network address of the system is established at the time of installation and can either be a named URL like http://demo.livewave.net or an IP address (e.g. http://10.0.40.10). Consult your system administrator or FirstView® Support if you do not know the address of your system.

The login screen can be obtained by typing the address of your system into a web browser's address bar. The network address can be saved as a favorite or a desktop shortcut like any other web site. To login, obtain a username and password from your system administrator or FirstView® Support. The username and password are case sensitive and should be entered on the screen shown below:



Click the “Login” button, and the FirstView® interface will be displayed within the browser window as seen below. On the left hand side will be the FirstView® Menu showing the maps, display groups, servers, sensors, and cameras. The active username will be displayed in the top right corner of the screen.



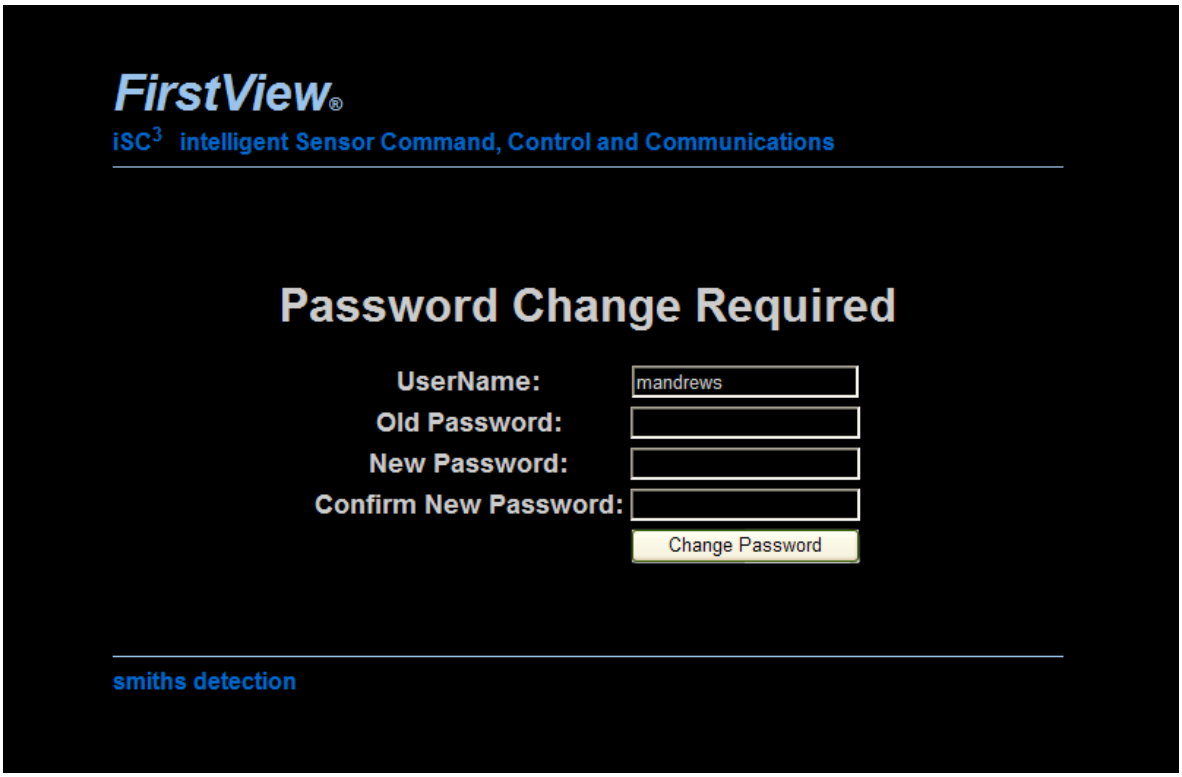
To logout of the system, click the “Logout” button below the active username. The login screen will be displayed after successful logout.

1.3: Password Changes

FirstView® supports three types of password changes:

- Periodic Password Changes
- Administrator Password Reset
- User Password Reset

When a user’s password has been reset, either by the system or by an administrator, the user will see the page shown below after attempting to login:



Enter the username, current password, and the new password in the appropriate fields and click the "Change Password" button. The new password will be stored in the database until the next required password update.

Please see **Section 1.3.3** for more details about user-initiated password changes.

1.3.1: Periodic Password Changes

During the initial setup of a FirstView® system, the periodic required password changes can be set at any number of days (e.g. 180 or 365). As soon as a password reaches the age specified during setup, the user will be prompted to complete the password change process outlined in **Section 1.3**.

Note: Periodic password changes must be enabled on a per user basis by the system administrator. Please see **Section 2.6.2** for more details on enabling this during the user setup process or **Section 2.7.2** for details about configuring the password requirements.

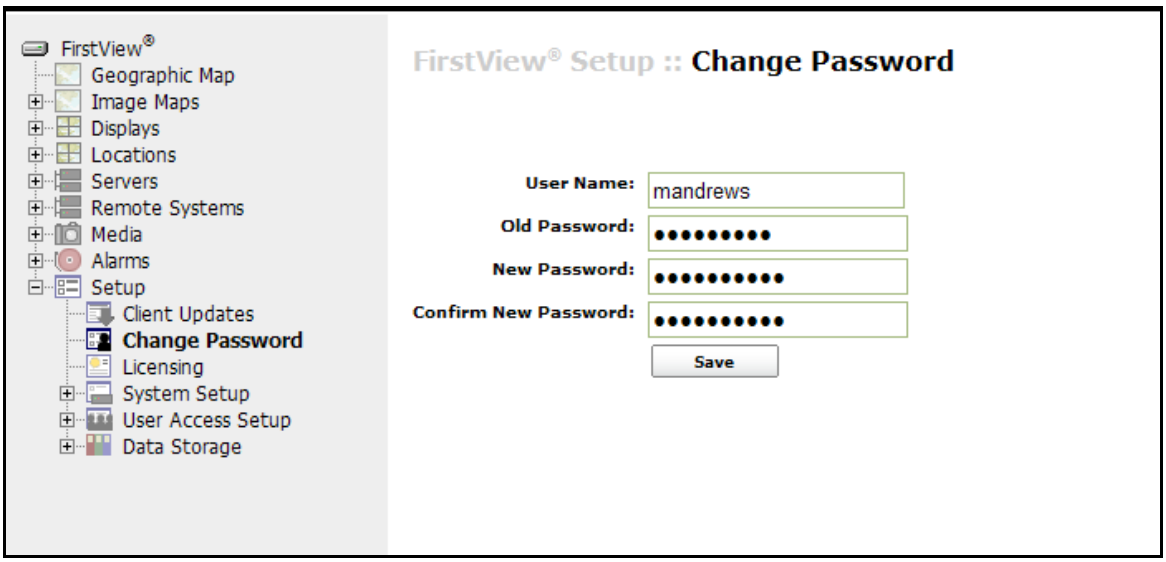
1.3.2: Administrator Password Reset

If a user forgets their password, the system administrator can reset it for them (please see **Section 2.6.2** for more details). After the password has been reset, the user will be prompted to complete the password change process outlined in **Section 1.3**. A temporary password will be provided by the system administrator so the user can complete the password change process.

1.3.3: User Password Reset

FirstView® Menu / Setup / **Change Password**

To initiate a password change without consulting your system administrator, select "Change Password" from the FirstView® Setup menu.



Enter the username, current password, and the new password in the appropriate fields and click the "Save" button. The new password will be used until the next required password update.

1.4: Password Complexity Requirements

During the initial setup of a FirstView® system, the password complexity requirements can be set at one of the following three levels:

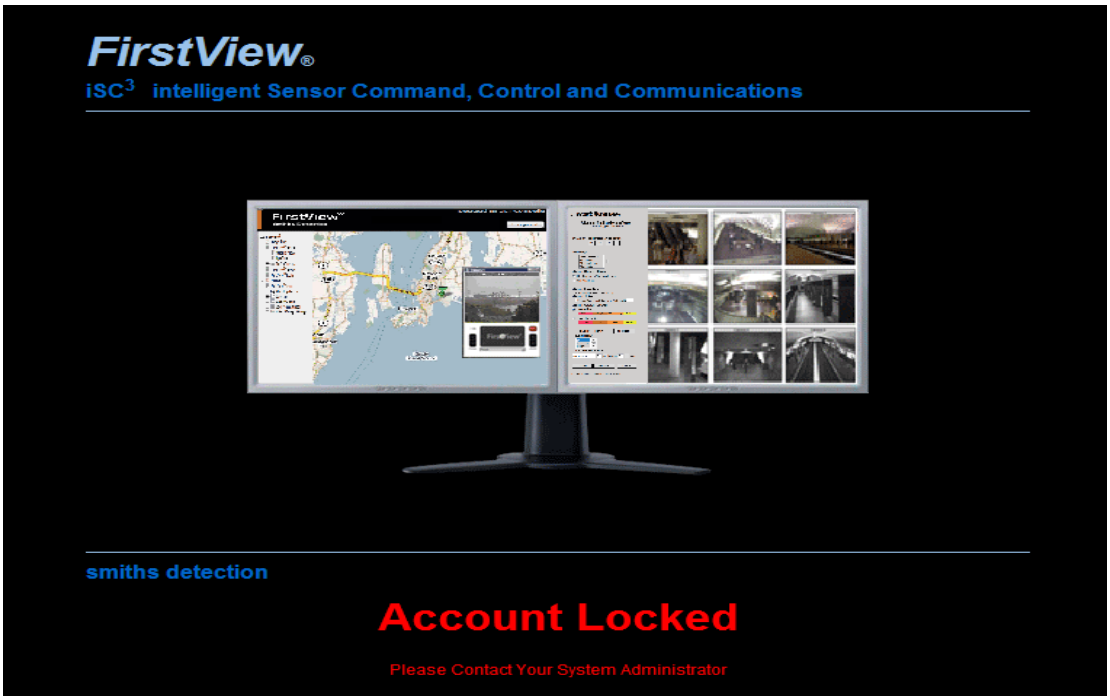
- **Low (Default)**
  - Password must be at least 8 characters
- **Medium**
  - Password must be at least 8 characters
  - Password must contain a character from **at least 2 of the following 4 groups**:
    - Uppercase letters
    - Lowercase letters
    - Numbers
    - Symbols: **! @ # $ % ^ ( ) * + -**
- **High**
  - Password must be at least 8 characters
  - Password must contain a character from **at least 3 of the following 4 groups**:
    - Uppercase letters
    - Lowercase letters
    - Numbers
    - Symbols: **! @ # $ % ^ ( ) * + -**
- **None (Not recommended)**
  - There are no requirements. Passwords can be any length and no character restrictions are imposed.

Note: Please consult your system administrator if you are unsure about the password complexity level for your FirstView® system.

For more details about configuring the password complexity requirements, please see **Section 2.7.1**.

1.5: User Account Lock

After four consecutive unsuccessful login attempts, a user will be presented with the following message:



The system administrator must unlock the user's account before they can login to the FirstView® system (please see **Section 2.6.2** for more details).

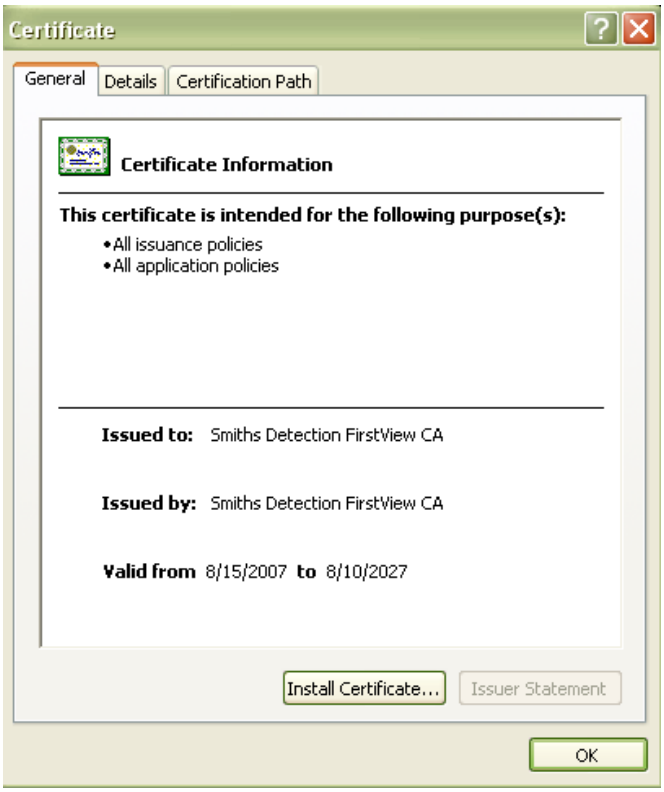
Note: The system administrator can also manually lock a user's account. Please see **Section 2.6.2** for more details.

1.6: Install Security Certificate

Each workstation that will access the FirstView® system must install the Smiths Detection security certificate to ensure uninterrupted access to the system.

To install a FirstView® security certificate:

- Click the "Certificate" link below the "Login" button on the login screen.
- Click the "Open" button to open the screen shown below.



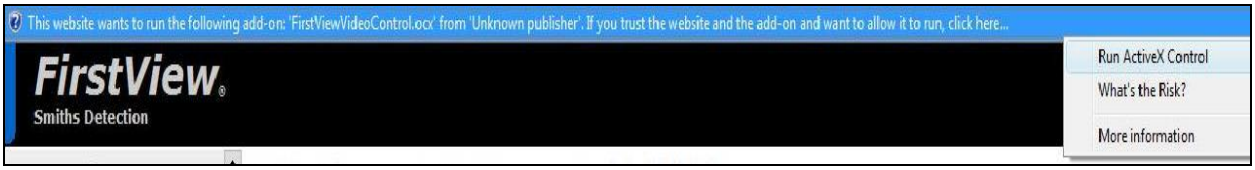
- Click the “Install Certificate” button to launch the Certificate Import Wizard.
- Follow the Wizard’s instructions to store the FirstView® security certificate.
- When prompted, select “Place all certificates in the following store” and select “Trusted Root Certification Authorities” as the storage location for the security certificate.
- Click the “OK” button on the certificate screen and login to FirstView®.

1.7: Allow ActiveX Control to Run

The FirstView® system uses an add-on called “ActiveX Control” to display live video and allow users to access recorded video within the Internet Explorer (IE) browser window.

The first time a user logs into the FirstView® system, a message will appear at the top of the IE browser window that says:

“This website wants to run the following add-on: “FirstViewVideoControl.ocx” from Unknown Publisher. If you trust this website and the add-on and want to allow it to run, click here …”



Click the message and select “Run ActiveX Control.” The page will automatically refresh and the following message will appear:

Click “Run.” The ActiveX Control will now be used to display video.

1.8: Client Updates

FirstView® Menu / Setup / **Client Updates**

If client updates are required to continue successful operation of the FirstView® system, a red message will appear on the main screen that says “Install required client updates.” Click the hyperlink in the red message shown below.

Follow the instructions below to install the required updates.

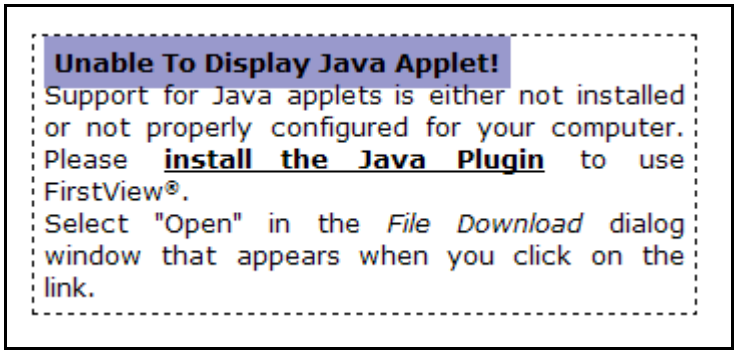
- Click “Run” or “Save” to download the FirstView® Client Installer
- Click “Run” to run the installer
- Click “Install” to start the Client Installation Wizard
- **Close all copies of Internet Explorer when prompted and click “Yes” to continue**

- Click “Next” to move through the Installation Wizard
- Click “Finish” to complete the installation
- Open Internet Explorer and return to the FirstView® login screen

1.8.1: Installing Java

FirstView® Menu / Setup / **Client Updates**

If a workstation does not already have Java installed, the message shown below will be displayed on the welcome page after a user logs in.



Click the “Install the Java Plugin” link or go to the Client Updates Page on the FirstView® Setup menu and download the “jre-6u13-windows-i586-p.exe” file, and follow the instructions to download and install Java.

1.9: Using the FirstView® Menu

The FirstView® Menu is organized into the following hierarchical categories:

- **Geographic Map:** This brings users to the Geographic Map screen.
- **Image Maps:** This allows users to view the uploaded Image Maps.
- **Displays:** This lists all the “display” video groups associated with the user logged in.
- **Locations:** This lists all the “location” video groups in the FirstView® system with links to the device pages of cameras in those groups.
- **Servers:** This displays the server(s) associated with the FirstView® system. Clicking on a server name displays the list of associated devices (including cameras and sensors).
    - PTZ (Pan, Tilt and Zoom) Camera Icon:
    - Fixed Camera Icon:
    - Sensor Icon:
- **Remote Systems:** This allows authorized users to access other FirstView® systems remotely.

  - **Note:** This category will only appear on the menu when remote systems have been configured.
- **Media:** This allows users to access recorded video and captured images from all cameras in the system.
- **Alarms:** This allows users to access the FirstView® Alarm System.
- **Setup:** This area of the FirstView® Menu contains the following sub-categories:
  - Client Updates (for all users)
  - Change Password (for all users)
  - Licensing (for system administrators)
  - System Setup (for system administrators)
    - Server Setup
    - Device Setup
    - Display and Location Setup
    - Image Map Setup
    - Geographic Map Setup
    - Alarm Setup
    - SNMP Monitoring
    - Remote Systems
    - Multicast Setup
  - User Access Setup (for system administrators)
    - User Administration
    - Resource Administration
    - User Auditing
    - Current Activity
  - Data Storage (for system administrators)
    - Video Archive
    - Sensor Data Archive

Throughout this document, the following format will be used to explain how different parts of the system can be accessed:

First-View® Menu / Category / Sub-Category (if applicable) / **Page Name**

Example: FirstView® Menu / Setup / System Setup / **Geographic Map Setup**

Chapter 2: FirstView® Setup

Note: All FirstView® Setup settings are configured during the initial system setup process performed by Smiths Detection. System administrators should contact FirstView® Support before modifying any of these settings.

2.1: Data Storage Settings

FirstView® Menu / Setup / Data Storage

2.1.1: Video Archive

FirstView® Menu / Setup / Data Storage / **Video Archive**

The Video Archive settings are configured for each server during the initial system setup process performed by Smiths Detection, and are used to define server specifications like the video storage directory and the maximum file size. To modify these settings, please consult FirstView® Support.

The image below shows the following fields that should be defined:

FirstView® Server	This drop-down menu lists all available servers that store video. (**Note:** Each server has its own set of parameters for video storage.)
Video Directory	This is the server's storage location for video.
Video Cache Size	Amount of storage space on the server allocated for video storage.
Video Max File Size	Maximum size of a video clip. When a recorded clip reaches the Max File Size, the clip is closed and a new clip is created.
Video Cache Used	This is the current amount of video in the directory.
Max Retention (Days)	Video will be cleared from the directory after the number of days defined here, **regardless of whether there is space left in the cache**.
Archive Recordings	This drop-down menu has two options: True and False, and determines whether or not to perform a process called **Recording Archiving** (see note below).

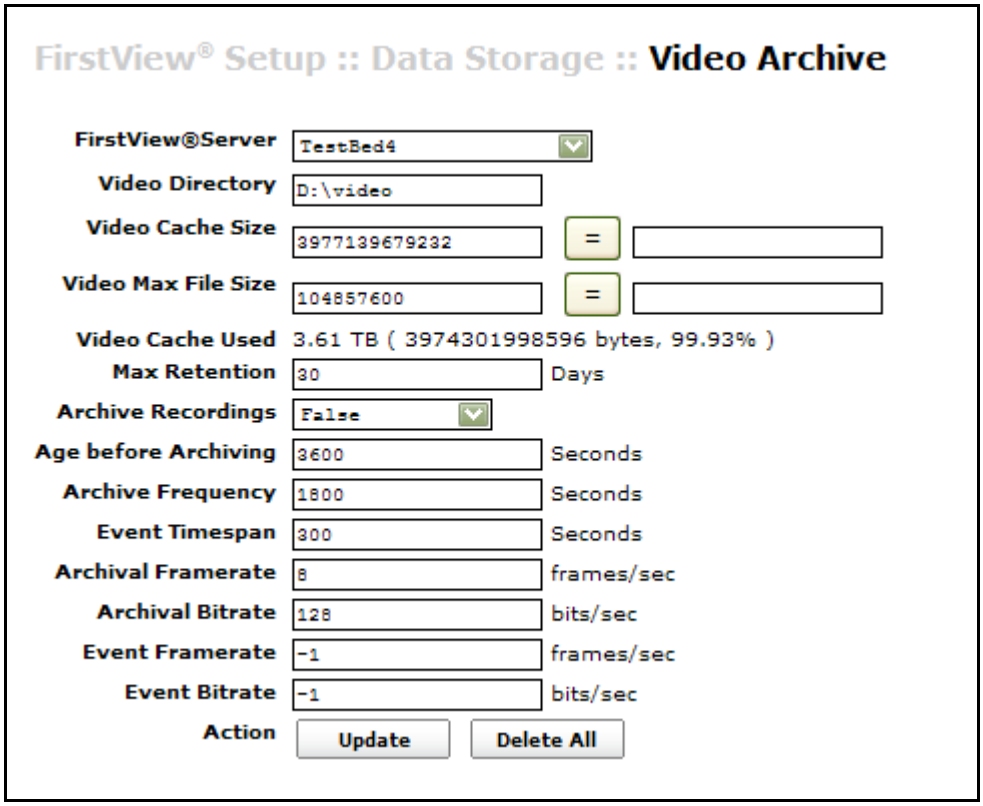
Recording Archiving is a process that compresses sections of video clips to allow a larger quantity of video to be stored (compressed video is smaller). Clips that do not contain any "Events" (time an alarm was generated) are compressed and stored as a whole. Clips that do contain an "Event" are only partially compressed. The "Event Timespan" defined on the Video Archive screen determines the length of time in the clip that is stored at full quality. This process allows users to view video of an alarm at full quality. The diagram below represents a video clip after the Recording Archiving process.

	Event Timespan	
Compressed Video	**Full Quality Video**	**Compressed Video**

Age Before Archiving	Amount of time to store video clips at full quality before performing the Recording Archiving process.
Archive Frequency	Amount of time between runs of the Recording Archiving process.

Event Timespan	Amount of time before and after an “Event” to keep the video at full quality.
Archival Framerate	Number of frames per second (fps) in the compressed sections of the video clip. **Note:** The number frames per second affects the aesthetic quality of the video – the higher the number of fps, the smoother the video.
Archival Bitrate	Number of bits per second in the compressed sections of the video clip.
Event Framerate	Number of frames per second in the Event Timespan. To archive this section of the video clip without any compression, enter -1 in this field.
Event Bitrate	Number of bits per second in the Event Timespan. To archive this section of the video clip without any compression, enter -1 in this field.
“Update” Button	Saves any changes.
“Delete All” Button	**Deletes <u>all recorded video</u> in the Video Directory.**

Note: FirstView® services must be restarted after any changes are made on this page.



2.1.2: Sensor Data Archive

FirstView® Menu / Setup / Data Storage / **Sensor Data Archive**

The Sensor Data Archive settings are configured for each server during the initial system setup process performed by Smiths Detection, and are used to define server specifications like the sensor data storage directory. To modify these settings, please consult FirstView® Support.

Note: Normal Status Data is processed and stored for all sensors.

Native Status Data is processed and stored for the following sensor device types:

- AvirSensors ChemSight
- BioSeeq+
- Bruker RAID-AFM
- Canberra RDS-100
- Centurion (I and II)
- External Sensor Systems
- GID-3 (24/7)
- HGVI
- HPRID
- IonScan 500DT
- LCD 3.X (Lightweight Chem. Detector)
- MMTD
- RaeSystems MultiRaePlus
- SmartBio Sensor
- Vaisala WXT520

The image below shows the following fields that should be defined:

FirstView® Server	This drop-down menu lists all available servers that store sensor data. (**Note:** Each server has its own set of parameters for sensor data storage.)
Status Deletion Frequency **(hours)**	Amount of time (in hours) between runs of the status deletion process. **This process deletes any sensor status information that is older than the age(s) defined in the following fields.**
Age before Normal Status Deletion **(days)**	Amount of time (in days) to store the normal status information from sensors. (**Note:** The "Normal Status" is the data from the sensor that has been processed and stored in the central FirstView® database.)
Native Data Storage Directory	This is the server's storage location for native sensor data. (The default location is either D:\Sensor or C:\Sensor.) Each sensor will have a folder in this directory that contains the status messages from the sensor.
Age before Native Status Deletion **(days)**	Amount of time (in days) to store the native status information from sensors. (**Note:** The "Native Status" is the raw, unprocessed data that has been received from the sensor and stored in the directory defined above.)
Subsampling	This drop-down menu has two options: On and Off, and determines whether or not to perform a process called **Data Subsampling** (see note below).

Data Subsampling is a process that compresses sensor data stored in the FirstView® database to allow a larger quantity of data to be stored. Sensor data that is stored during periods of inactivity (no active alarms from the sensor) is averaged according to the time limit defined in the "Normal Averaging Data Period" field. Sensor data that is stored during periods of activity (active alarms from the sensor) is averaged according to the time limit defined in the "Critical Averaging Data Period" field.

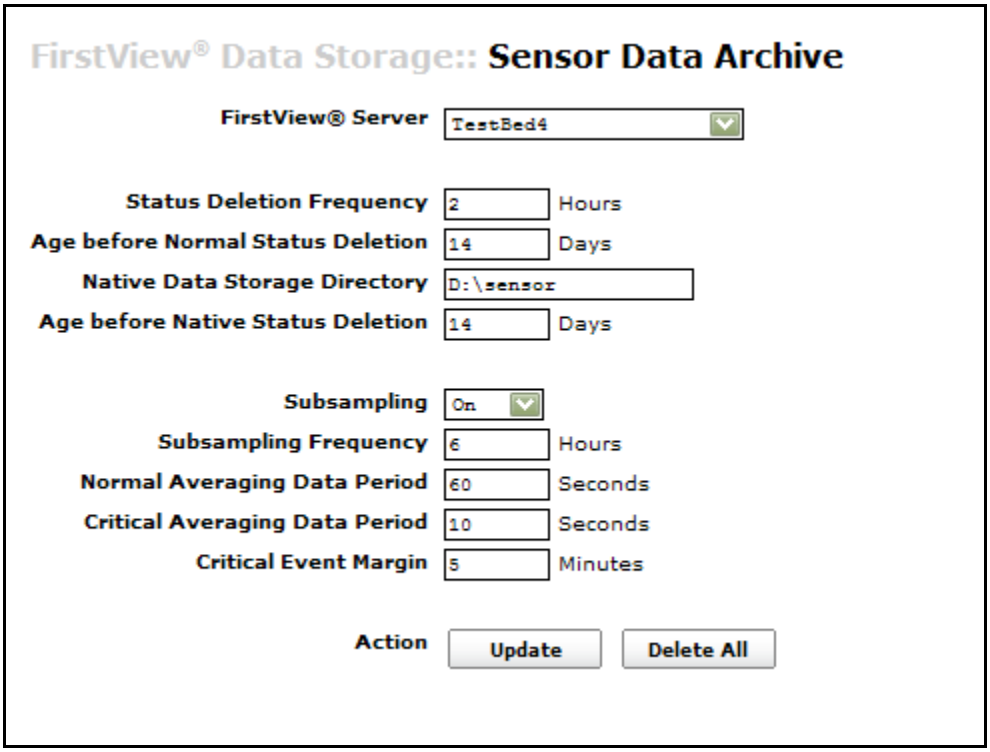
For example: If the Normal Averaging Data Period is set to one minute, each category of sensor data will be averaged in one minute intervals, and the average value of each minute will replace the individual values that were recorded during that minute.

The "Critical Event Margin" defined on the Sensor Data Archive screen determines the length of time before and after an alarm occurs to subsample data using the Critical Averaging Data Period. This process allows users to view additional sensor data surrounding an alarm.

Note: To preserve a high level of detail, set the Critical Averaging Data Period to 10 seconds or less.

Subsampling Frequency **(hours)**	Amount of time (in hours) between runs of the Data Subsampling process.
Normal Averaging Data Period **(seconds)**	Amount of time (in seconds) to average sensor data during periods of inactivity (no active alarms from the sensor).
Critical Averaging Data Period **(seconds)**	Amount of time (in seconds) to average sensor data during periods of activity (active alarms from the sensor).
Critical Event Margin **(minutes)**	Amount of time (in minutes) before and after an alarm occurs to subsample sensor data using the Critical Averaging Data Period.
"Update" Button	Saves any changes.
"Delete All" Button	**Deletes all recorded sensor data in the Data Storage Directory and in the FirstView® database.**

Note: FirstView® services must be restarted after any changes are made on this page.



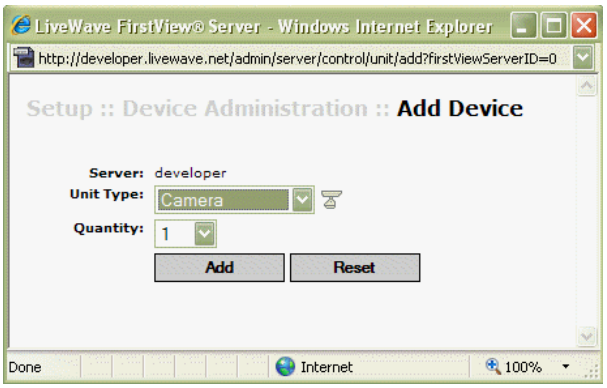
2.2: Camera Setup

2.2.1: Initial Setup

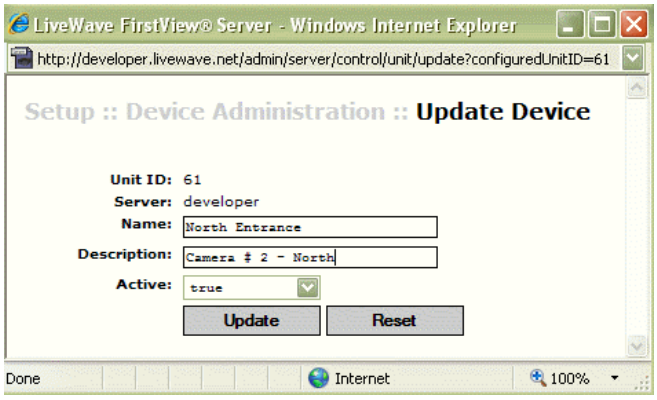
FirstView® Menu / Setup / System Setup / **Device Setup**

To add a new Camera to the FirstView® system:

- Click the “Add New Device” link on the Device Setup screen
    - **Note:** If there is more than one server, click the “Add New Device” link under the name of the appropriate server.
- Assign a Unit Type and Quantity using the drop-down menus on the window shown below.



- Click the “Add” button and close the pop-up window.
- Click the “Edit” link next to the new camera to open the pop-up window shown below.

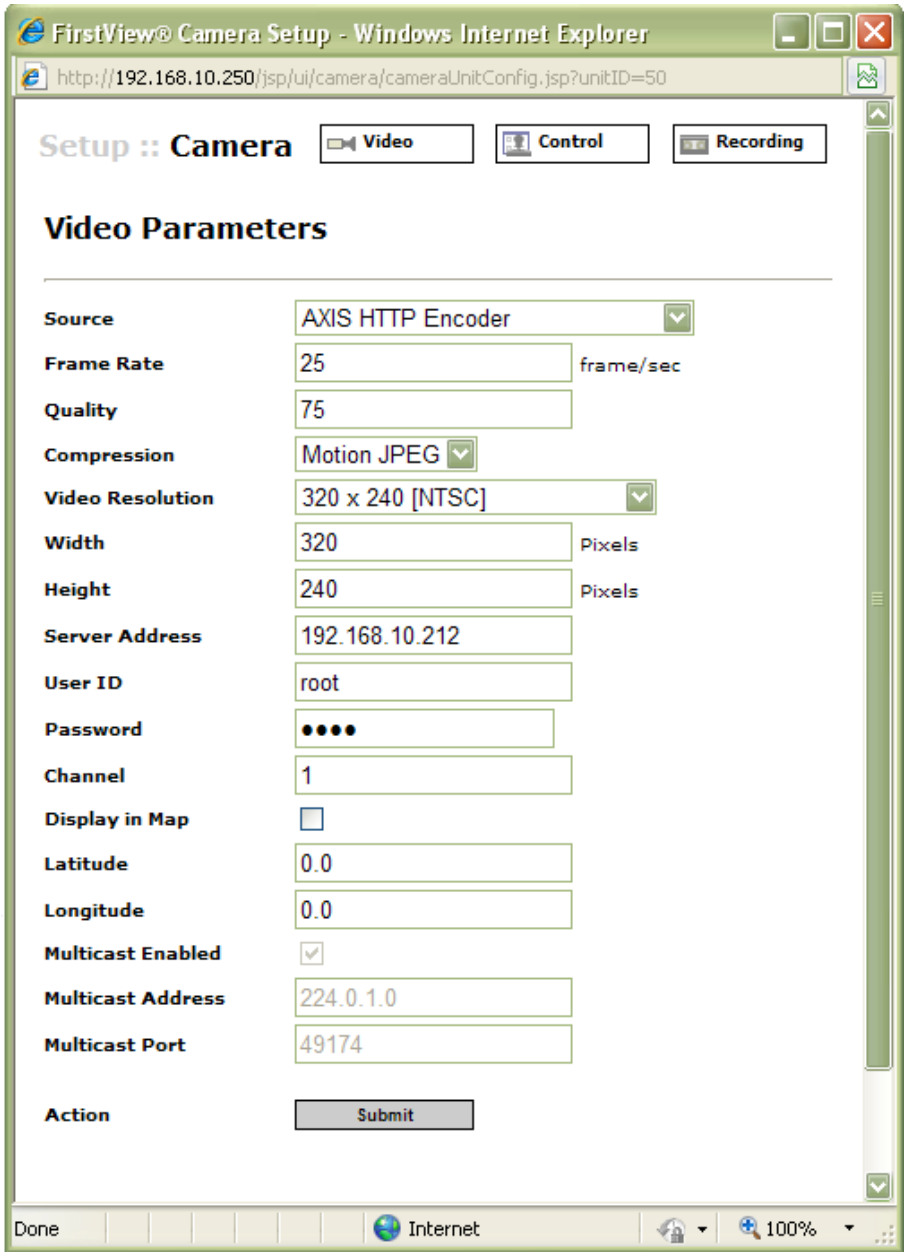


- Assign a Name and a Description and click the “Update” button to save any changes. To remove any changes, click the “Reset” button.
- A pop-up window will appear when changes are successfully saved – click “OK” to continue and close the Update Device window.
- Refresh the FirstView® window and the new camera will appear in the list of devices of the server it was associated with.

2.2.2: Video Configuration

FirstView® Menu / Servers / Name of Server / **Camera Name**

To specify the Video Parameters for a new camera, click the Setup button to open the pop-up window shown below.



The following editable fields should be defined on the Video tab:

Source	This drop-down menu is the only field available the first time video is configured because the rest of the fields are dependent on the type of video encoder selected.
Frame Rate (in fps)	The number frames per second affects the aesthetic quality of the video – the

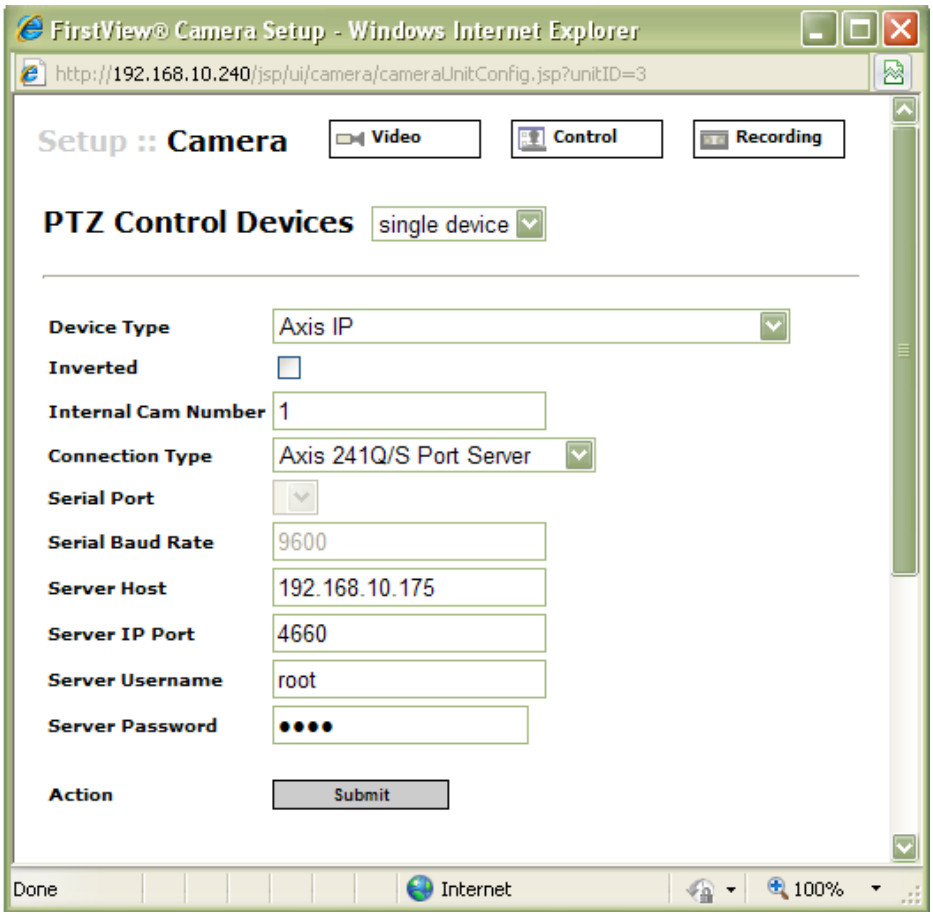
	higher the number of fps, the smoother the video.
Quality (MJPEG and H264)	An entry in this field is only required if the format of the video is Motion JPEG. Quality is measured on a scale from 1-100 with 100 being the highest. The typical range is between 50 and 75.
Data Rate (MPEG-4)	An entry in this field is only required if the format of the video is MPEG-4. Data Rate is measured in kbps. The typical range is between 1200 and 1800 kbps.
Compression	This drop-down menu determines the format of the video. **The options are MotionJPEG (MJPEG), MPEG4, and H264.**
Video Resolution	This drop-down menu determines the number of pixels in a video stream. Different sizes are available in the NTSC or PAL video size types.
Width (in pixels)	This field is automatically populated based on the Video Resolution selection.
Height (in pixels)	This field is automatically populated based on the Video Resolution selection.
Server Address	This is the network address of the camera.
User ID	This is defined through the camera's interface and is not always required.
Password	This is defined through the camera's interface and is not always required.
Displayed in Map	When a camera is placed on the Geographic Map, this checkbox will be checked and the latitude and longitude fields will be automatically populated.
Latitude	This field is only populated if the camera unit has been configured in the GeoMap.
Longitude	This field is only populated if the camera unit has been configured in the GeoMap.
Action	The "Submit" button saves any changes.
Multicast Enabled	When the camera has been configured for Multicast Video, this checkbox will be checked and the Multicast Address and Port fields will be automatically populated. (Please see **Section 2.11** for more information on configuring Multicast.)
Multicast Address	This field is only populated if the camera unit has been configured to multicast video and is the address for the stream.
Multicast Port	This field is only populated if the camera unit has been configured to multicast video and is the port number for the stream.

2.2.3: Camera Control Configuration

FirstView® Menu / Servers / Name of Server / **Camera Name**

To define the PTZ (Pan, Tilt, and Zoom) Control Device(s) for a new camera that possesses the ability to be remotely controlled through the FirstView® system, click the

button to open the pop-up window shown below.



The following editable fields should be defined on the Control tab:

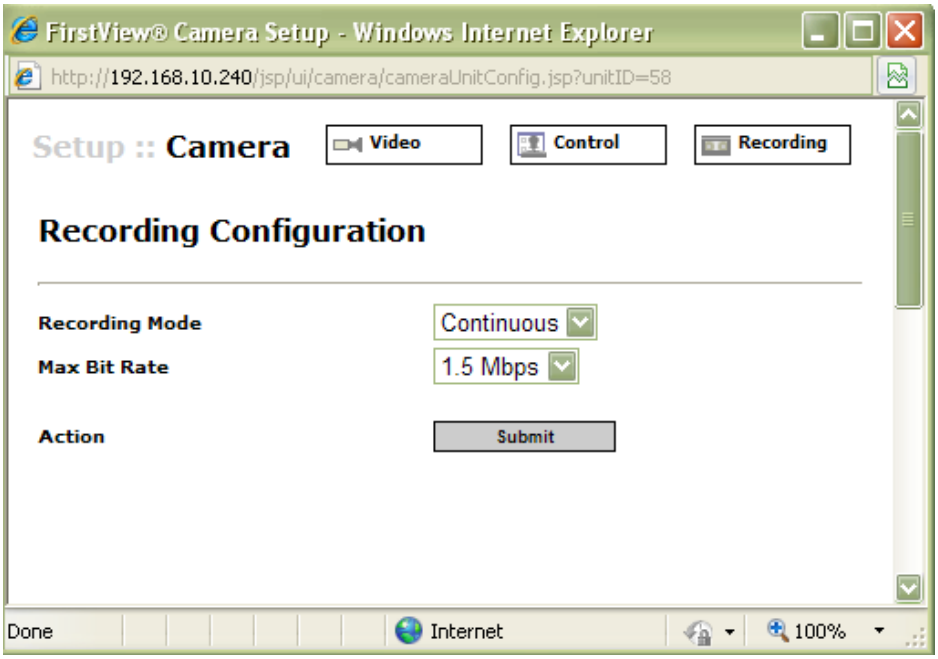
PTZ Control Devices	This drop-down menu has two options: Single Device and Dual Device. If dual device is selected, the following fields will appear on two tabs and must be defined for each device.
Device Type	This is a list of supported cameras that can be remotely controlled.
Inverted	If a camera is mounted upside down, checking this checkbox will invert the video so it is displayed properly.
Internal Cam Number	This number can be 0, 1, or 2 depending on the camera model.
Connection Type	This field defines the connection between the camera and the server.
Serial Port	An entry in this field is only required if the “Serial Port” is selected as the connection type.
Serial Baud Rate	An entry in this field is only required if the “Serial Port” is selected as the connection type.
Server Host	This is the network address of the camera.
Server IP Port	This is the port number the camera will use to communicate with the server.
Server Username	This is defined through the camera’s interface and is not always required.

Server Password	This is defined through the camera's interface and is not always required.
Action	The "Submit" button saves any changes.

2.2.4: Video Recorder Configuration

FirstView® Menu / Servers / Name of Server / **Camera Name**

To specify the Recording settings, click the Setup button to open the pop-up window shown below.



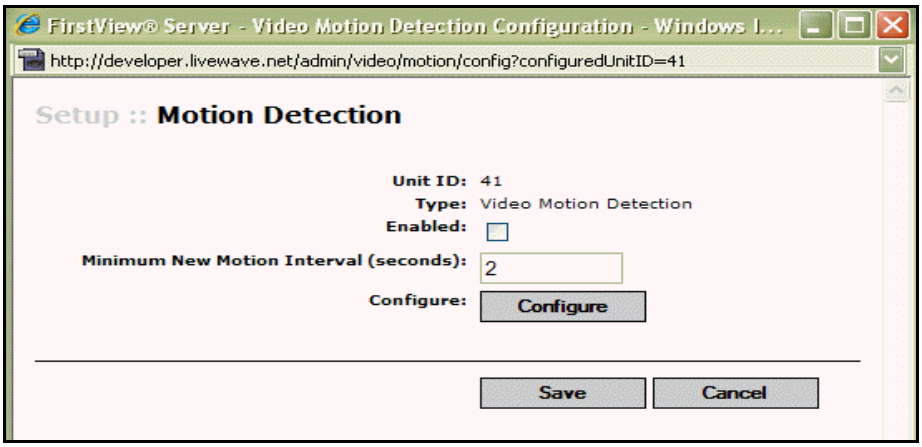
The following editable fields should be defined on the Recording tab:

Recording Mode	This drop-down menu has three options: • Inactive: If this is selected, video will not be recorded from the camera. • Manual: If this is selected, users can create video clips manually. (See **Section 3.2.1** for more details on this process.) • Continuous: If this is selected, video clips are automatically created based on settings defined in the Video Archive. (See **Section 2.1** for more details.) **Note:** The default setting for new cameras is Continuous.
Max Bit Rate	This drop-down menu sets a Maximum Bit Rate for recorded video. The bit rate affects the aesthetic quality of the video – the higher the bit rate, the smoother the video. **Note:** The default setting for new cameras is 1.5 Mbps.
Action	The "Submit" button saves any changes.

2.2.5: Motion Detection Configuration

FirstView® Menu / Servers / Name of Server / **Camera Name**

Motion Detection can only be enabled on cameras that possess the capability. Once it has been enabled, any motion detected in the video image or a specified part of the image triggers an alarm. By default, motion detection is disabled. To edit the motion detection settings for a camera, click the Motion button to open the pop-up window shown below.



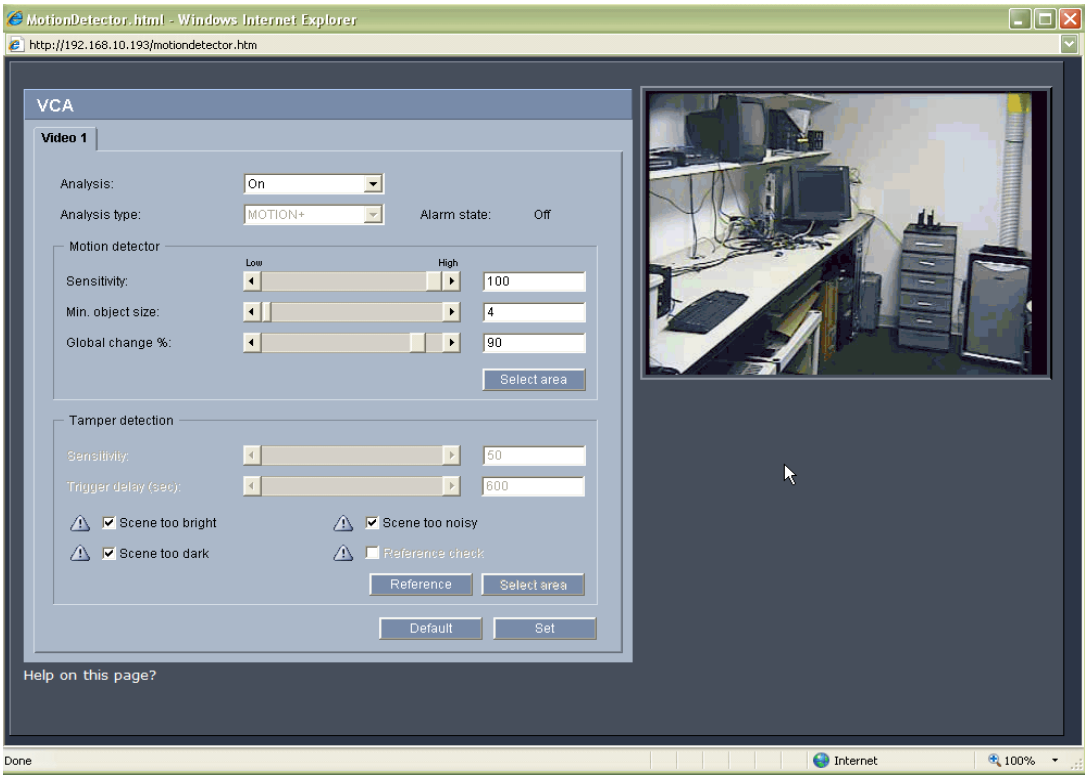
To enable Motion Detection, click the checkbox next to "Enabled." The Minimum New Motion Interval field is the number of seconds the scene in a video must be still before a new alarm is triggered; the default is 2 seconds, but this can be modified by the user. Click the "Save" button to save new settings, and the "Motion" button will change to Motion when Motion Detection has been successfully enabled.

When motion detection is enabled, it is initially enabled for the whole scene being recorded, but it can be modified to focus on a defined area of interest.

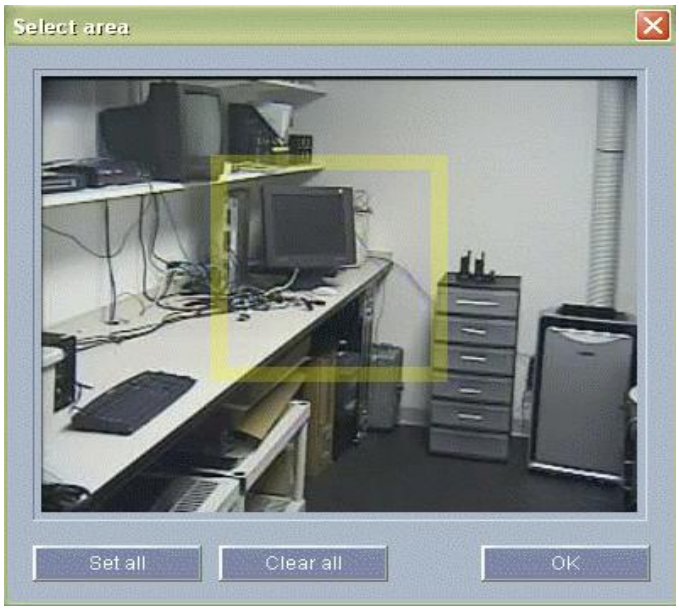
Note: This process is different for Bosch and Axis cameras and is described in detail below.

For Bosch cameras, the "Configure" button is available on the pop-up window shown above.

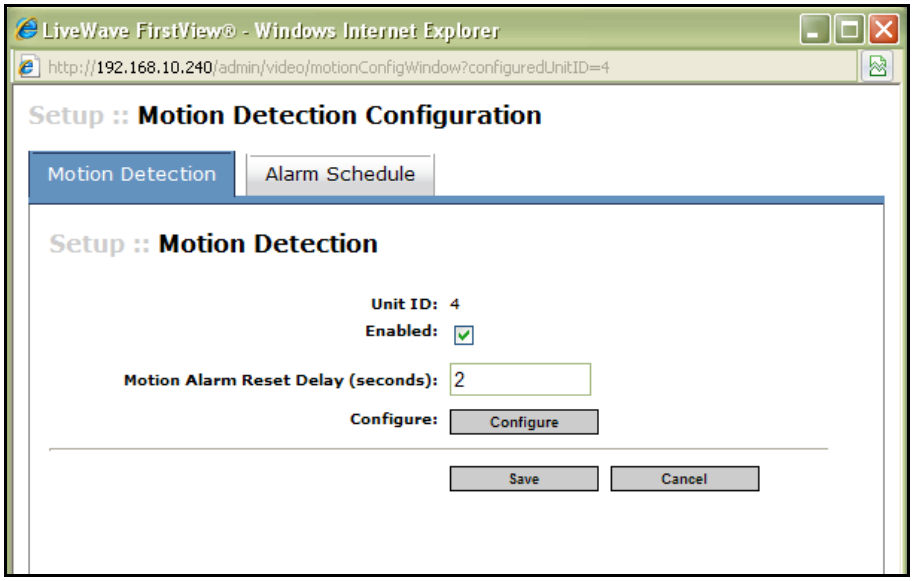
To define the area of Motion Detection within a scene, click the "Configure" button to open the pop-up window shown below.



To limit Motion Detection to an area of interest within a scene, click the “Select Area” button in the middle of the window shown above. Using the mouse, draw a square or rectangle around the desired area (as shown below). Click the “Set All” button to select the entire scene, the “Clear All” button to remove any existing specified areas, and the “OK” button to save the new area.

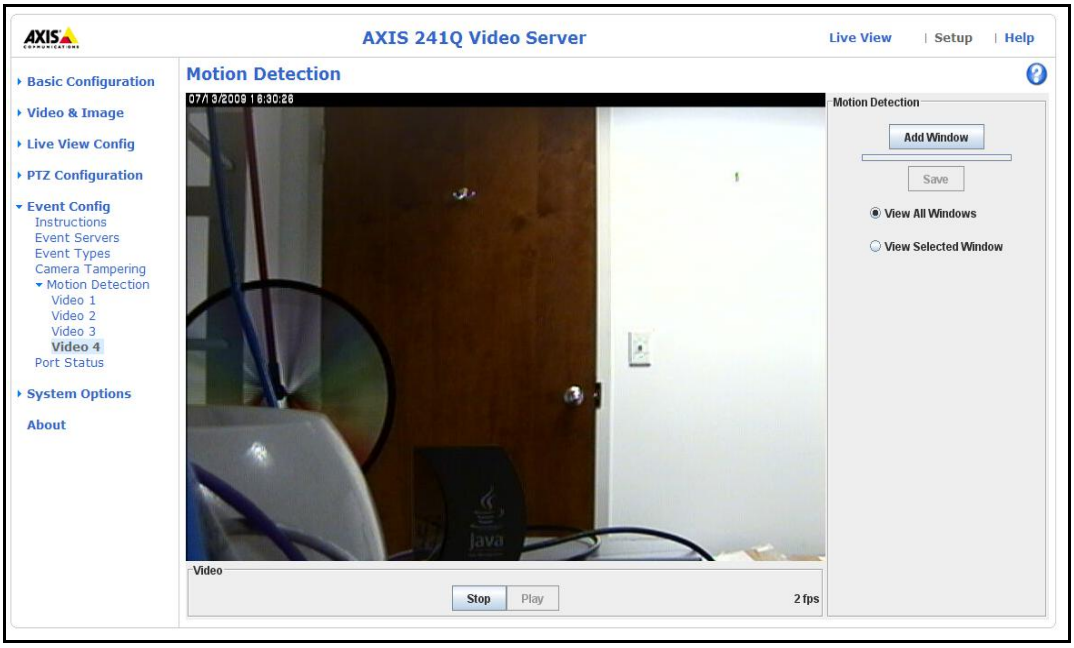


For Axis cameras, the “Configure” button is not available on the Motion Detection configuration window and motion detection must be configured outside of the FirstView® system.

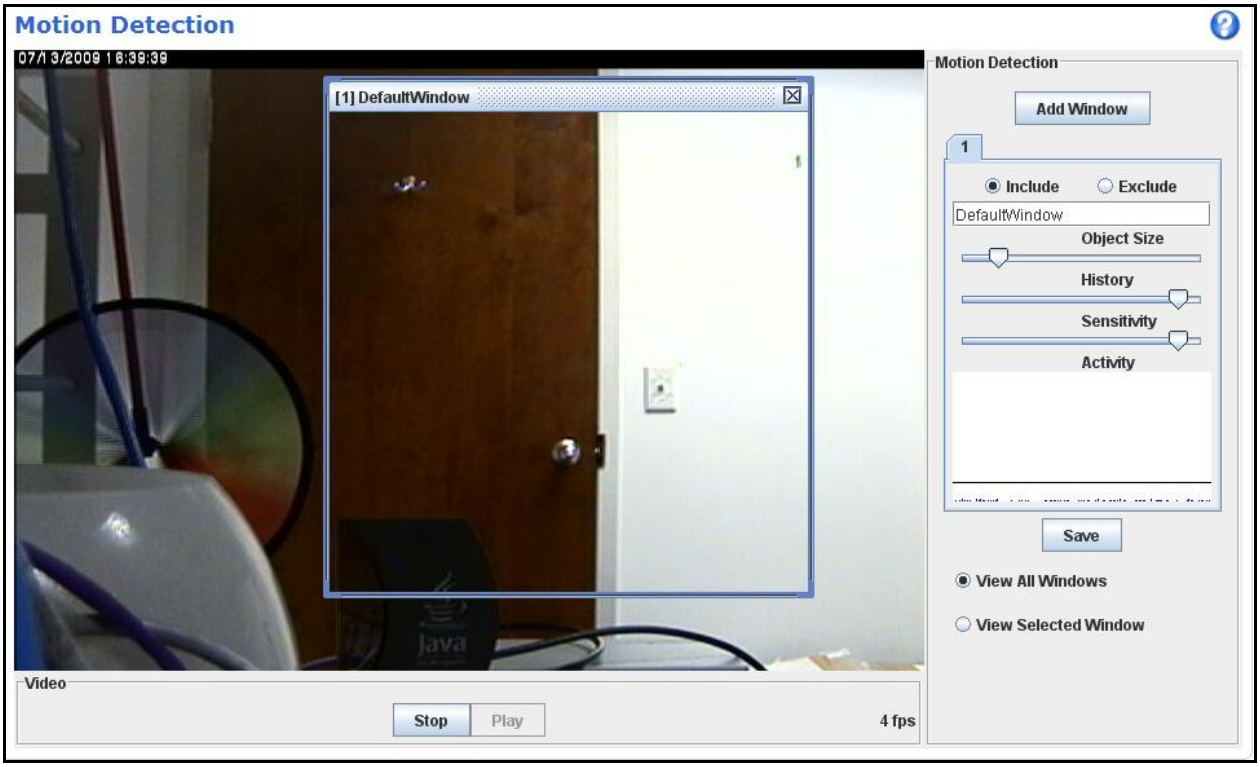


To configure Motion Detection for an Axis camera, follow the procedure defined below.

- Open a web browser (e.g. Internet Explorer) and navigate to the address of the Axis camera or encoder that needs to be configured.
- Click “Setup” and open “Event Config” on the Setup menu.
- Select “Motion Detection” to open the page shown below.
    - For encoders that support multiple video streams, select the appropriate channel.



- To define the area of Motion Detection within a scene, click the “Add Window” button.
    - **Note:** Multiple windows may be defined using this process.
- A “default window” will appear:
    - Drag and drop the title bar of the window to position it over the desired area in the video.
    - Click and drag the sides of the box to resize the window.
    - The example below shows that a motion detection alarm should only be generated if there is movement in the door area (e.g. a person enters or exits the room).

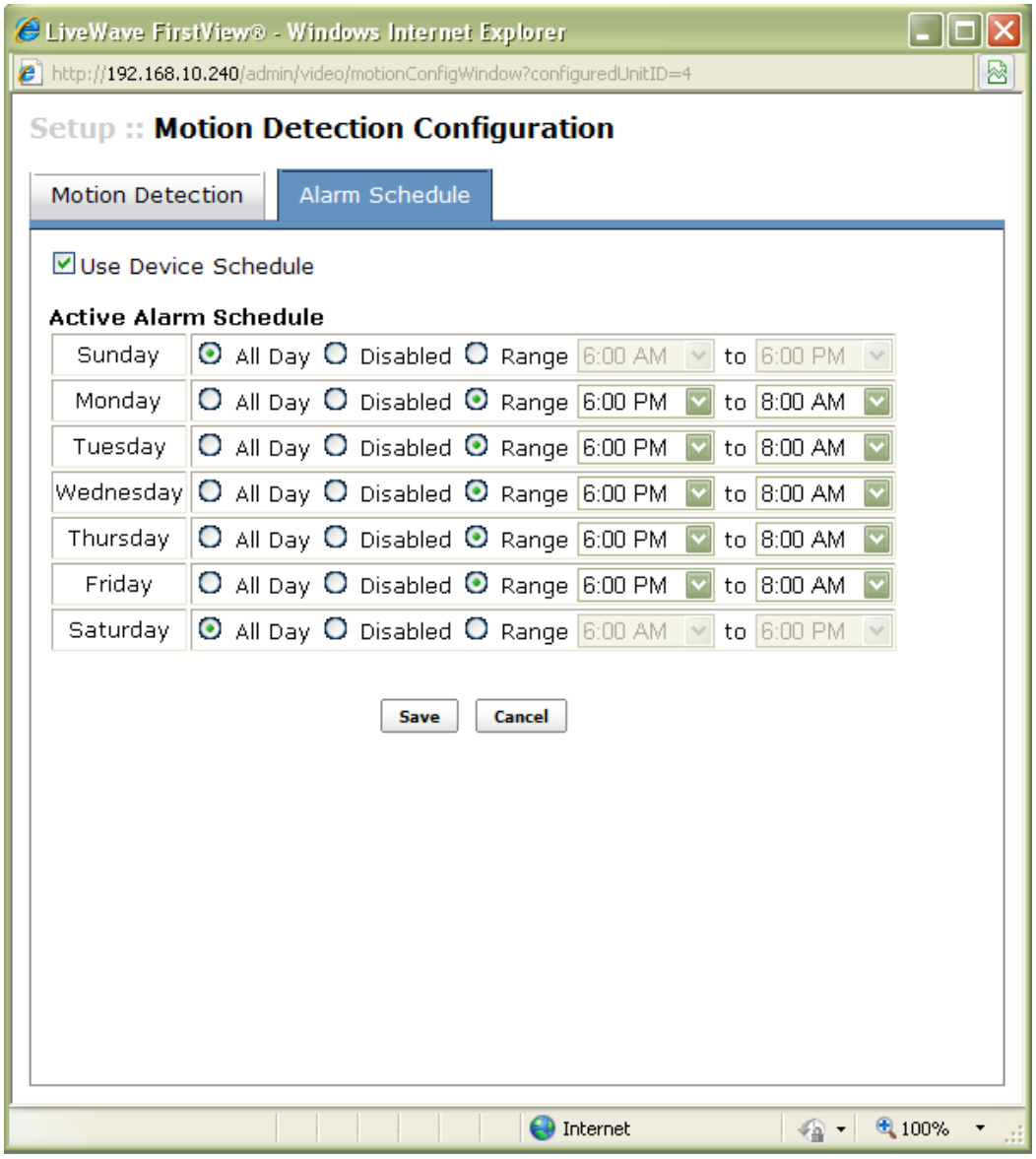


- Use the “include” and “exclude” radio buttons determine how the window(s) will be used to detect motion within the scene.
    - Include the area within the window(s)
    - Exclude the area within the window(s)
- The text field can be used to define a name for the window(s).
- Use the sliders to determine appropriate settings for:
    - Object Size, History, and Sensitivity
    - **Note:** These settings should be adjusted according to the level of detail desired. For example, a higher sensitivity setting will result in a larger number of motion detection alarms.
- Click “Save” to save settings.
    - If multiple windows are created, be sure to save each window.

- Use the radio buttons to view multiple windows within a scene at once or just the window currently being configured.

Once Motion Detection has been enabled and configured, a Motion Detection alarm will be triggered any time motion is detected in the scene or specified area. Please see **Chapter 6** for a complete description of viewing and processing alarms.

To define the alarm schedule for Motion Detection, click on the "Schedule" tab. This screen allows users to define the alarm schedule for the camera.



- **Use Device Schedule:** Checking this box will ignore the system-wide rules for alarm scheduling and implement a schedule specific to the camera on a day-by-day basis. Please see **Section 2.12** for more details on configuring the system-wide alarm schedule.

- **All Day:** If this option is selected, alarms from this camera will never be suppressed and will always be processed as active alarms in FirstView®.
- **Disabled:** If this option is selected, alarms from the camera will always be suppressed and will never appear as active alarms in FirstView®.
- **Range:** If this option is selected, a time range must be specified. Alarms from this camera will be processed as active alarms in FirstView® **only during the time range specified**. Alarms will be suppressed during all other times.

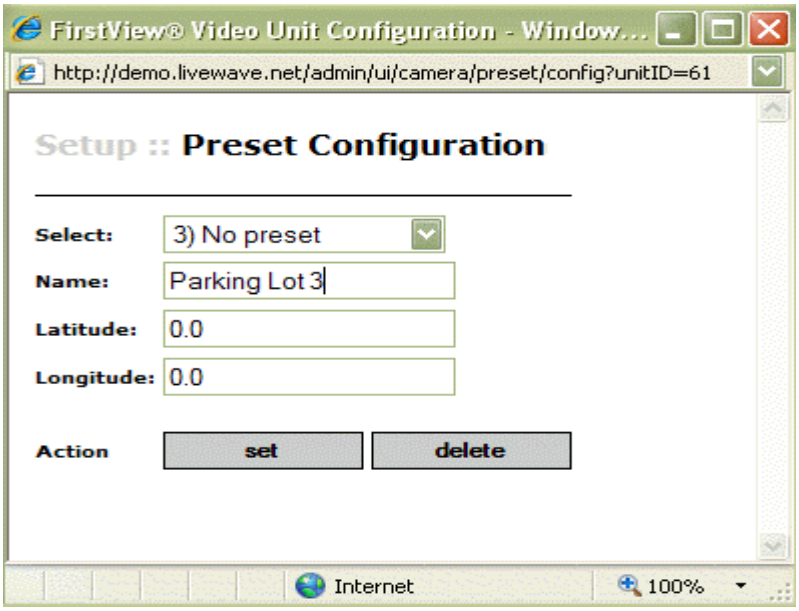
- **Action:** Click the "Save" button to save and the "Cancel" button to disregard any changes.

2.2.6: Configuring Presets

FirstView® Menu / Servers / Name of Server / **Camera Name**

FirstView® allows users to define specific locations, called Presets, for PTZ cameras to automatically view. To set a preset, use the camera controls (please see **Section 3.1.1** for details about using camera controls) to view the desired location (including zoom level), and then click the

button to open the pop-up window shown below:



Complete the following steps to configure Presets:

- Use the drop-down menu to select the next available Preset number (in the example shown above, the next available number was 3).
- Assign a name to the new Preset (in the example shown above, "Parking Lot 3" was an appropriate name).
- Leave the Latitude and Longitude fields blank.

- Assign a precise Latitude and Longitude using the Preset Location Configuration feature on the Geographic Map Setup screen (please see **Section 2.4.3** for more details on this process).

- Click the “Set” action button.
- Close the Preset Configuration pop-up window.
- Refresh the FirstView® web page.
- Return to the live video feed from the camera you set the Preset for and Take Control.
- Select the new Preset from the drop-down menu and the camera will display the specified location.

Note: If the camera does not display the desired location, select any other preset (even an empty one) then select the new preset again. If this still does not work properly, repeat the Preset Configuration Process.

To delete a Preset, click the

button, select the Preset to be deleted from the drop-down menu, and click the “Delete” action button. The Preset will not be removed until the FirstView® web page has been refreshed.

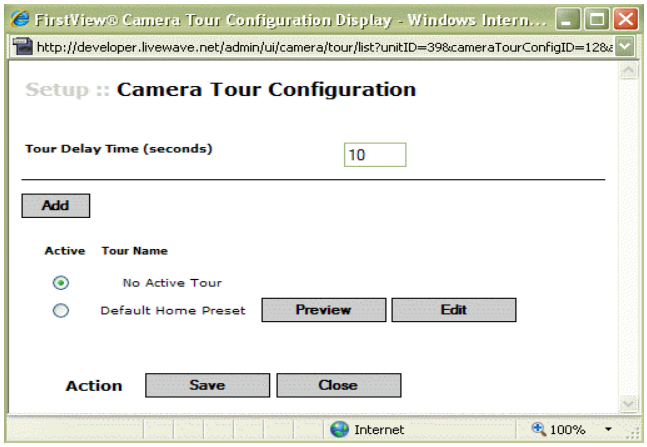
2.2.7: Configuring Tours

FirstView® Menu / Servers / Name of Server / **Camera Name**

FirstView® allows users to define sequences of Presets, called Tours, for a camera to automatically view when users are not actively controlling the camera.

To configure a camera’s Tours click the

button to open the pop-up window shown below:



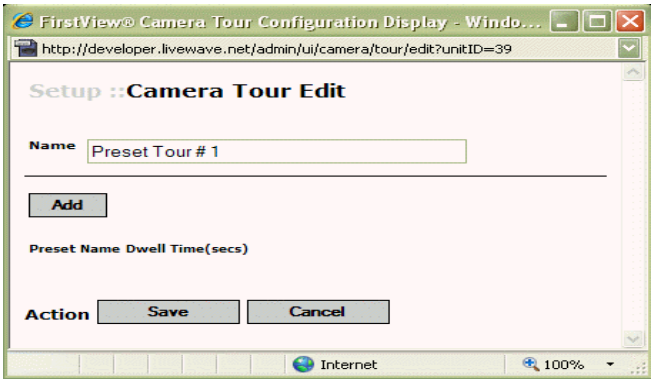
The first time this window is opened by a user, two Tour options will be seen:

- **No Active Tour:** This is selected by default.
- **Default Home Preset:** If this tour is selected, the camera will return to the default preset each time it is not being actively controlled. This can be a default setting of the camera or can be configured by clicking the “Edit” button.

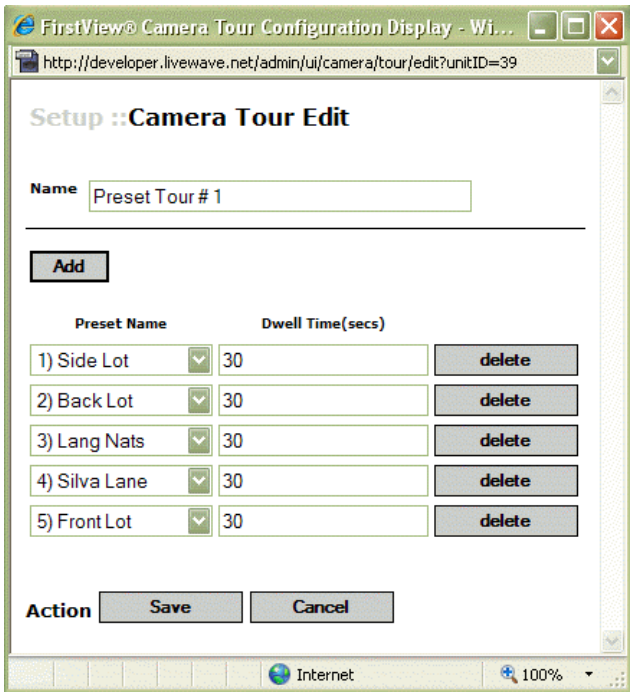
Note: The "Tour Delay Time" is the amount of time (in seconds) to delay the start of a tour. For example, if a user enters 3,600 seconds in this field, the tour will begin one hour after a user releases control of that camera.

To create a new Tour:

- Click the "Add" button to open the pop-up window shown below.



- Assign a Name
- Click the "Add" button to add preset steps in the tour.
  - Click this link repeatedly to add additional steps as shown in the example below.



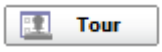
- Select a Preset from the drop-down menu for each Preset Step added
  - The drop-down menus will contain configured presets for the camera. Please see **Section 2.2.6** for a complete description of the Preset configuration process.
- Assign a "Dwell Time" (in seconds)
  - This is the amount of time the camera will view each preset.

- Click the “Save” button to save any changes or the “Cancel” button to return to the list of Tours.

To edit an existing Tour:

- Click the “Edit” button next to a Tour name.
- Preset Steps can be added, modified or deleted.
- Click the “Save” button to save any changes or the “Cancel” button to return to the list of Tours.

To assign a Tour as the default action when no users are actively controlling the camera:

- Click the 

button to open the list of tours.
- To Preview a Tour, click the “Preview” button and the camera will run through the Tour once.
- Select the desired tour and click the “Save” button. The Tour will automatically begin viewing the sequence of Presets each time a user is not actively controlling the camera.
- The selected Tour will end as soon as a user takes control of a camera.
- Select “No Active Tour” to leave the camera in the last position a user viewed.

To delete a Tour:

- Click the “Delete” button on the list of tours.

2.2.8: Camera Menus

FirstView® Menu / Servers / Name of Server / **Camera Name**

The

button enables system administrators to access a camera’s hardware menus through the FirstView® system. Some cameras do not have this capability – please consult the camera manufacturer’s documentation or FirstView® Support for more details.

2.2.9: PTZ Joystick Configuration

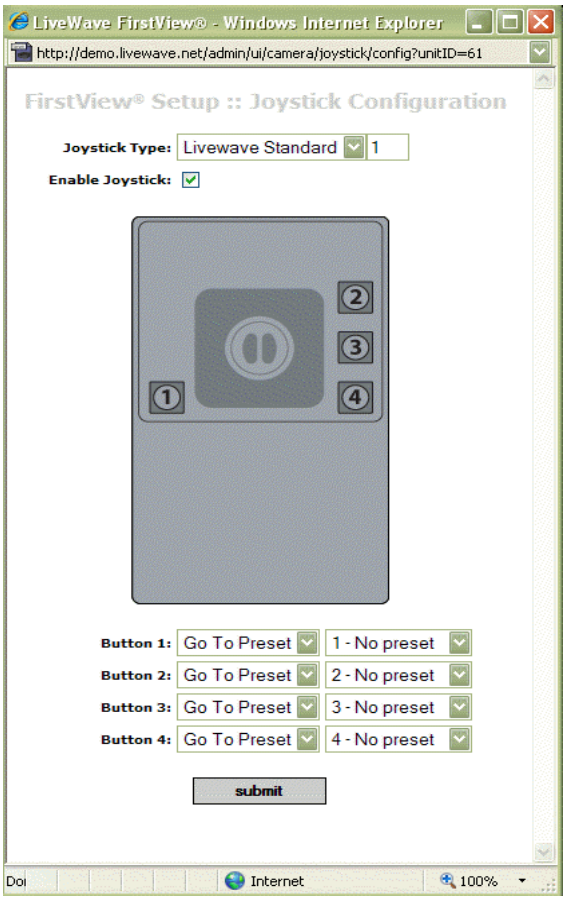
FirstView® Menu / Servers / Name of Server / **Camera Name**

The PC Joystick is an optional addition to the FirstView® system that allows users to switch video control from the web browser window to a 3-axis hardware joystick that is enabled for the PC. The on-screen camera controls are still fully functional when the Joystick is enabled.

The default setting for the Joystick is “Off” and users will see this button

to the right of the camera controls. To enable the Joystick, click the “Joystick” button. The page will refresh and the button will change to say

. To access the Joystick configuration, click the “Setup” button to open the pop-up window shown below.



The “Enable Joystick” box will be automatically checked.

To assign actions to the four buttons on the PC Joystick:

- Use the drop-down menus on the left to select one of the following actions for each button:
  - **No Action**
  - **Go to Preset:** If this action is selected, select one of the presets from the corresponding set of drop-down menus on the right. These lists show the camera’s presets – for a complete description of creating presets, please see **Section 2.2.6.**
  - **Invoke Wiper:** For cameras equipped with a wiper, this action will turn the wiper on.

To disable the Joystick:

- Click the Enable Joystick checkbox.
- The Joystick Configuration pop-up window will automatically close and the

button will return to the default

setting.

Please see **Section 3.1.2** for a complete description of how to use the PTZ joystick.

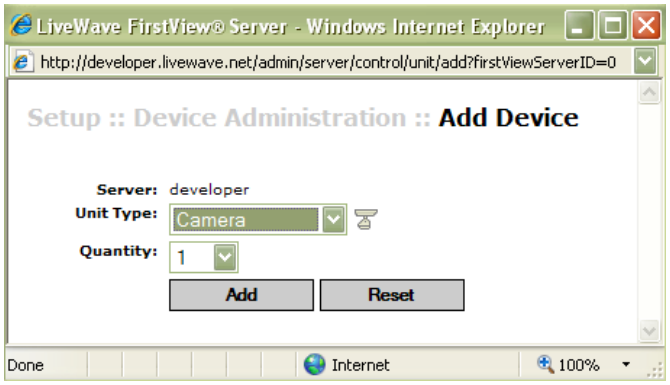
2.2.10: Video Repeater Configuration

Video repeaters are designed to allow users of one FirstView® system to view video being captured by a camera on a separate FirstView® system. Video repeaters can also provide an on-demand connection to external cameras. Please see **Section 3.1.5** for a complete description of using video repeaters.

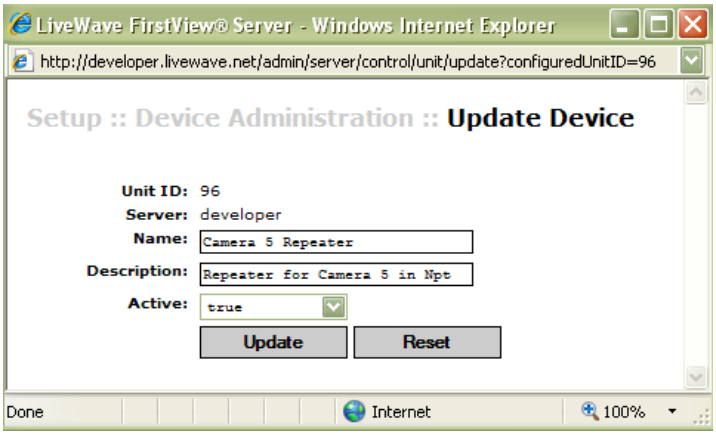
To add a new Video Repeater to the FirstView® system:

FirstView® Menu / Setup / System Setup / **Device Setup**

- Click the "Add New Device" link on the Device Setup screen
    - **Note:** If there is more than one server, click the "Add New Device" link under the name of the appropriate server.
- Assign a Unit Type (Camera) and Quantity using the drop-down menus on the window shown below.



- Click the "Add" button and close the pop-up window.
- Click the "Edit" link next to the new repeater to open the pop-up window shown below.

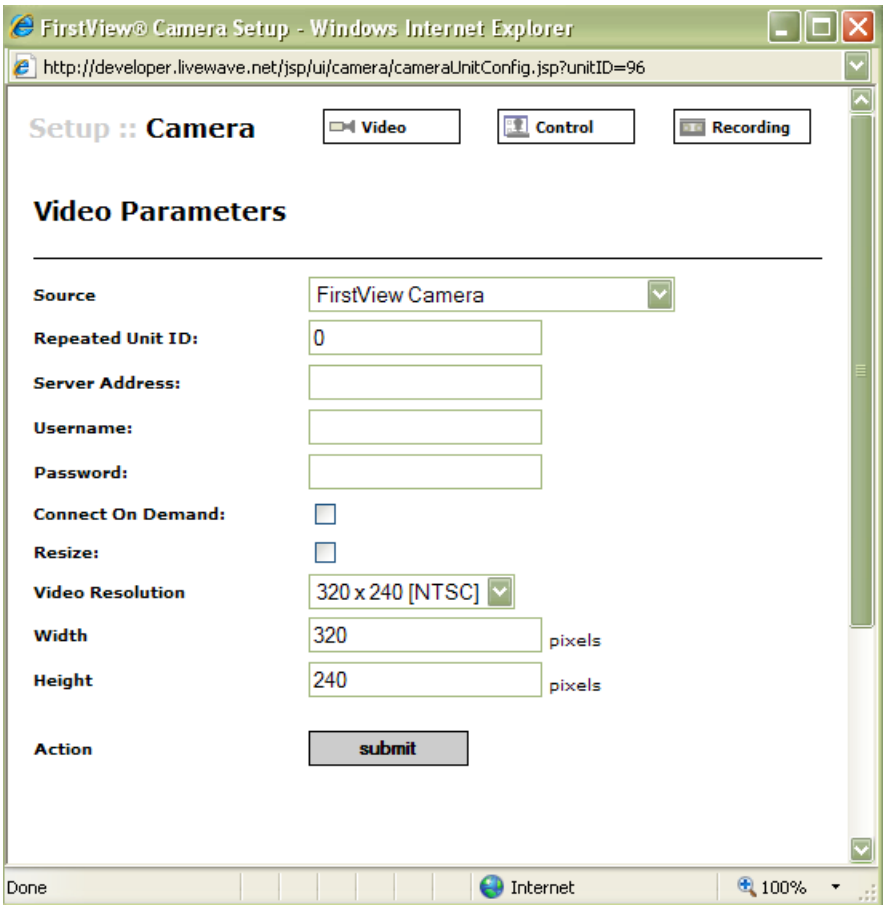


- Assign a Name and a Description and click the "Update" button to save any changes. To remove any changes, click the "Reset" button.
- A pop-up window will appear when changes are successfully saved – click "OK" to continue and close the Update Device window.
- Refresh the FirstView® window and the new video repeater will appear in the list of devices of the server it was associated with.

To configure a Video Repeater:

FirstView® Menu / Servers / Name of Server / **Video Repeater Name**

- Click the Setup button to open the Video configuration pop-up window.
- Select **FirstView® Camera** as the Source to display the appropriate fields shown below on the Video tab.



The following editable fields should be defined:

Repeated Unit ID	This is the Unit ID for the video feed to be repeated.
Server Address	This is the network address of the server the repeated camera is associated with.
Username	This should be the Username for the FirstView® system the camera being repeated is associated with.
Password	This should be the Password for the FirstView® system the camera being repeated is associated with.
Connect on Demand	If checked, the repeater will only connect when accessed by a user instead of constantly repeating a video stream.
Resize	If checked, the repeated video will be resized according to the Video Size specified on this screen.

Video Resolution	This drop-down menu determines the number of pixels in a video stream. Different sizes are available in the NTSC or PAL video size types.
Width (in pixels)	This field is automatically populated based on the Video Resolution selection.
Height (in pixels)	This field is automatically populated based on the Video Resolution selection.
Submit	The "Submit" button saves any changes.

Note: Video repeaters can be configured to record video clips on the Recording tab just like any other camera. Please see **Section 2.2.4** for more details on configuring video recorders.

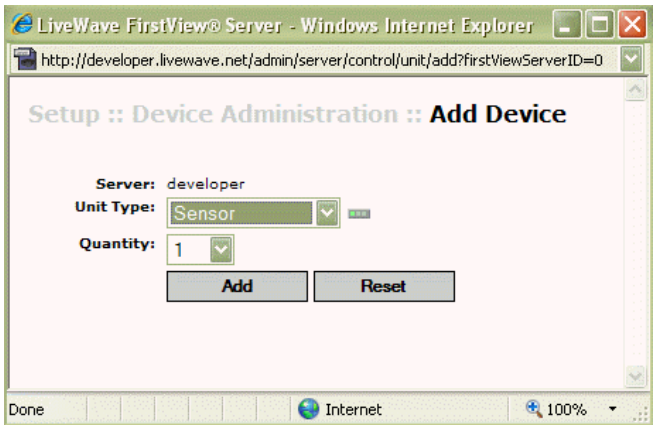
2.3: Sensor Setup

2.3.1: Initial Setup

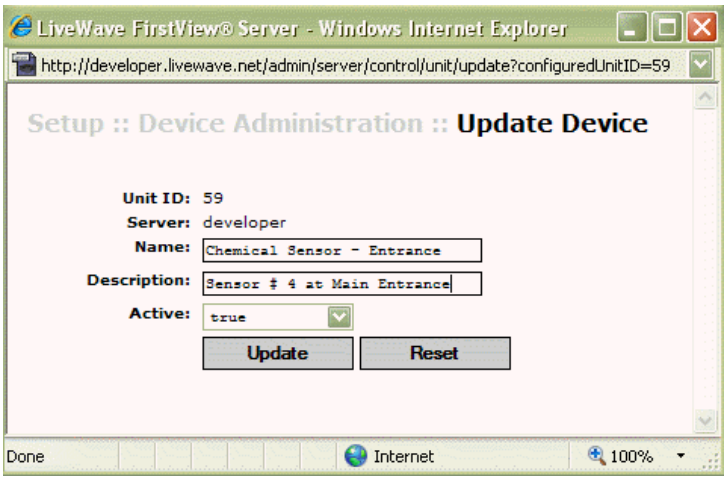
FirstView® Menu / Setup / System Setup / **Device Setup**

To add a new sensor to the FirstView® system:

- Click the "Add New Device" link on the Device Setup screen
  - **Note:** If there is more than one server, click the "Add New Device" link under the name of the appropriate server.
- Select "Sensor" as the Unit Type and select a Quantity using the drop-down menus on the window shown below.



- Click the "Add" button and close the pop-up window.
- Click the "Edit" link next to the new sensor to open the pop-up window shown below.



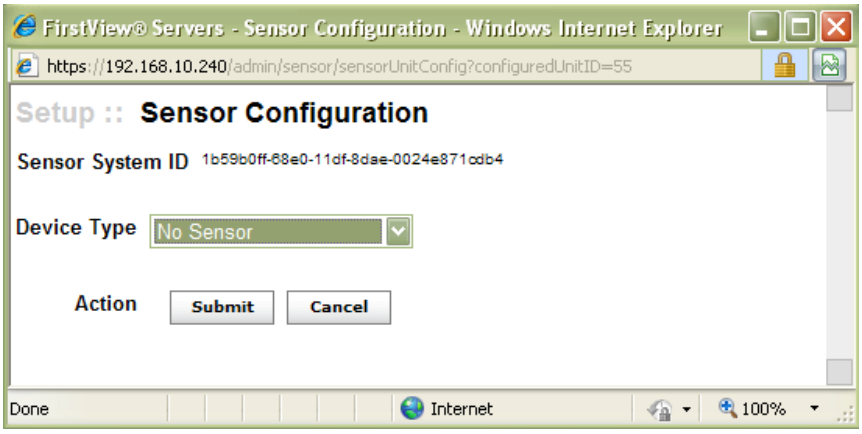
- Assign a Name and a Description and click the “Update” button to save any changes. To remove any changes, click the “Reset” button.
- A pop-up window will appear when changes are successfully saved – click “OK” to continue and close the Update Device window.
- Refresh the FirstView® window and the new sensor will appear in the list of devices of the server it was associated with.

2.3.2: Sensor Setup

FirstView® Menu / Servers / Name of Server / **Sensor Name**

To define the basic settings for a new sensor, click the Setup button on the sensor screen.

- The pop-up window shown below will open:



- Select a Device Type and the appropriate fields below will be displayed:
  - **Device Type:** This drop-down menu allows users to select a sensor type from the list of sensors supported by the FirstView® System. (Please see **Chapter 4** for more details on Sensor Types.)
  - **Sensor Host:** This is the network address of the sensor.

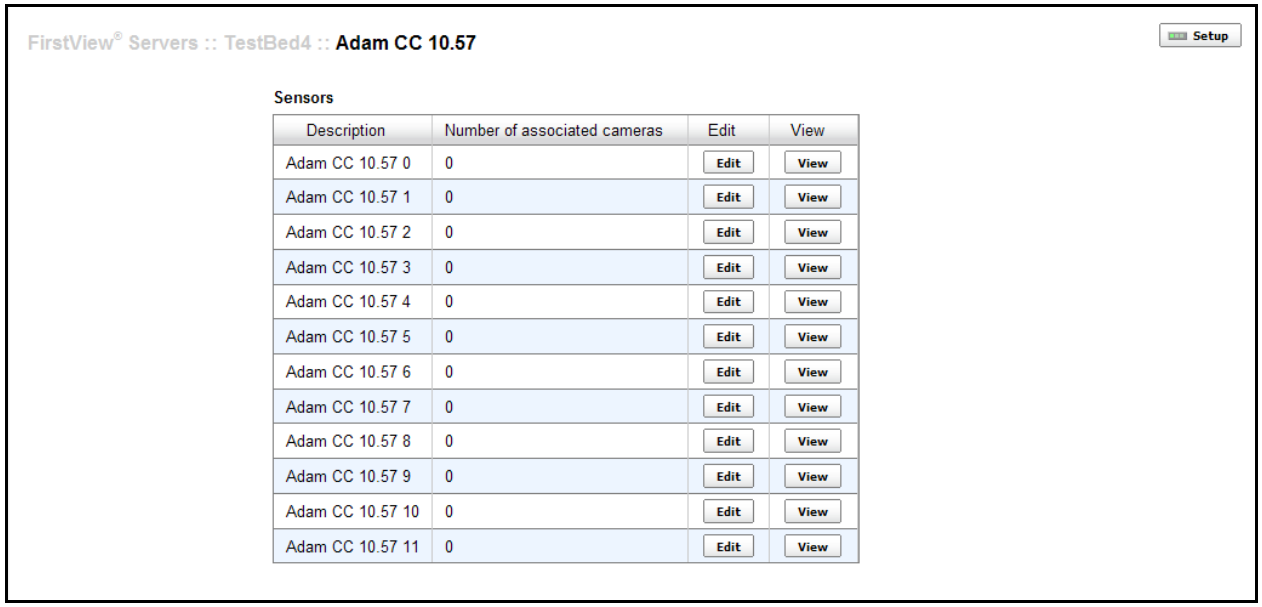
- **Sensor Port (not required for all sensors):** This is the port number the sensor will use to communicate with the server.
- **Sensor Polling Interval (not required for all sensors):** This is the amount of time (in ms) between requests for status from the sensor.

2.3.3: Sensor Configuration

FirstView® Menu / Servers / Name of Server / **Sensor Name**

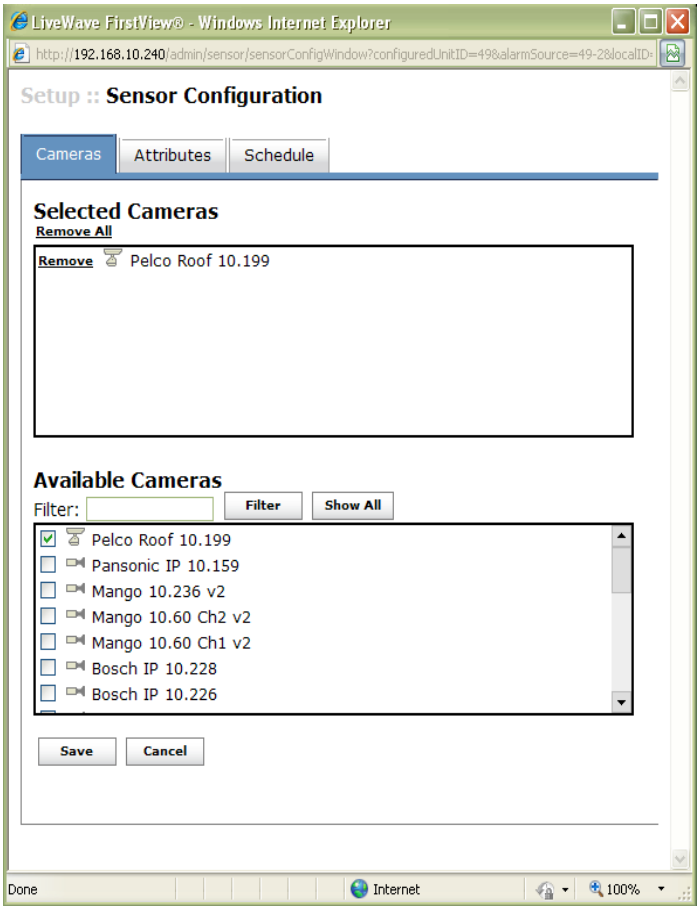
After the Sensor Setup process is complete, complete the following process to define additional details about the new sensor:

For the Adam 6051, Axis Encoder Device, and Intelligent Video Types that contain multiple sensors within each device (or multiple video analytics within each server), click the edit button next to the sensor you wish to configure.



For all other Device Types, click the Alarming button to configure the sensor.

- The pop-up window shown below will open with the “Cameras” tab selected:



To associate a camera with the sensor:

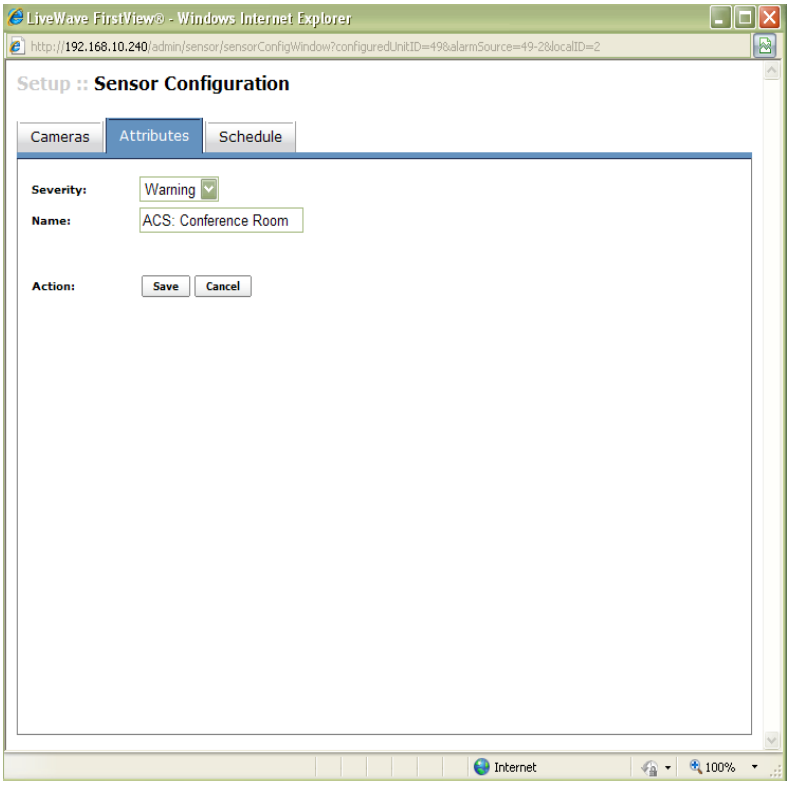
- Click the checkbox next to the camera name in the “Available Cameras” section.
- Click the “Save” button.

- **Note:** When a sensor generates an alarm, the associated camera can display video of the area of interest at the time of the alarm. Please see **Section 6.5** for more details.
- **If a PTZ camera is associated with a sensor,** a preset must be created for that camera that has the exact name as the sensor device and a view of the sensor area. When an alarm is generated from that sensor, the PTZ camera will move to that preset to capture video from that area.
    - For example, the device name of the chemical sensor in the example above is **7 – GID-3 10.155**, and the associated camera is a PTZ camera called **Pelco Roof 10.199**. A preset called **7 – GID-3 10.155** must be created on the **Pelco Roof 10.199** camera device. Please see **Section 2.2.6** for more details on configuring presets.

To remove an association:

- Click the “Remove” link next to the camera name in the “Selected Cameras” section.
- There is also an option to “Remove All” associated cameras.

To access the “Attributes” screen, click on the “Attributes” tab. This screen allows users to define the type of alarm generated by a sensor. Please see **Section 6.4** for more details on how the FirstView® Alarm System uses the details defined on this screen.

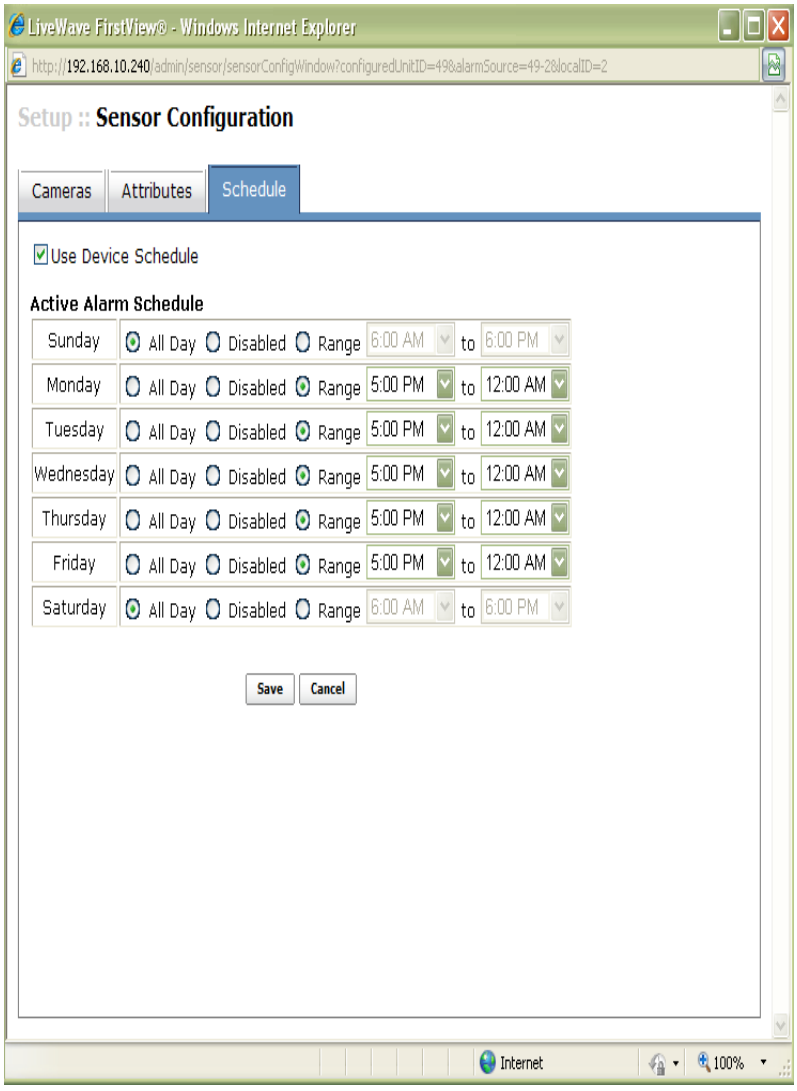


- **Severity:** This drop-down menu offers the following levels of alarm severity:
    - None
    - Info
    - Warning

- High
- Critical

- **Description:** This field is pre-populated with the name of the sensor and can be modified to be more specific.
- **Action:** Click the “Save” button to save and the “Cancel” button to disregard any changes.

To access the “Schedule” screen, click on the “Schedule” tab. This screen allows users to define the alarm schedule for the sensor.



- **Use Device Schedule:** Checking this box will ignore the system-wide rules for alarm scheduling and implement a schedule specific to the sensor on a day-by-day basis. Please see **Section 2.12** for more details on configuring the system-wide alarm schedule.
    - **All Day:** If this option is selected, alarms from this sensor will never be suppressed and will always be processed as active alarms in FirstView®.
    - **Disabled:** If this option is selected, alarms from the sensor will always be suppressed and will never appear as active alarms in FirstView®.

- **Range:** If this option is selected, a time range must be specified. Alarms from this sensor will be processed as active alarms in FirstView® **only during the time range specified**. Alarms will be suppressed during all other times.

- **Action:** Click the "Save" button to save and the "Cancel" button to disregard any changes.

2.4: Geographic Map Setup

FirstView® Menu / Setup / System Setup / **Geographic Map Setup**

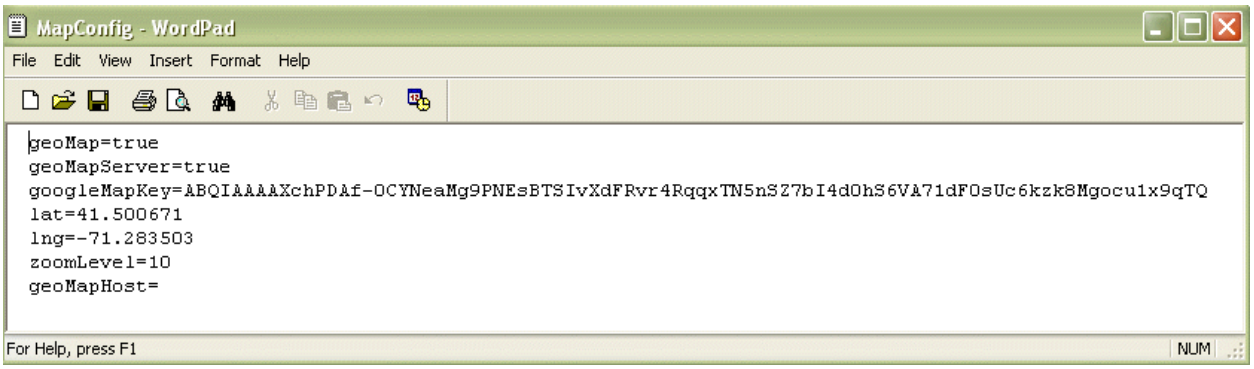
Note: A public internet gateway is required for this feature so the FirstView® system can communicate with GoogleMaps.

2.4.1: Initial Setup

The Initial Setup for Geographic Maps is performed outside the FirstView® system. Administrators should complete the following process on the primary server to activate the Geographic Maps feature.

- Create a Google Account at: http://www.google.com/accounts
  - An active email address is the only requirement.
- Sign up for Google Maps API (Application Programming Interface) at: http://code.google.com/apis/maps/signup.html
  - Enter the URL of your FirstView® server
  - Example: http://developer.livewave.net
- Click the "Generate API Key" button, copy the key to a text file, and save the file.
  - Sample API Key:
    `ABQIAAAANEXdyJdNNdev1SgG_FP54BSlw24INOCwA8N19AehPDQB9d-SThSpwRTcMKkMkfE9xk5VJ6qhujjcHA`
- Modify the Map Configuration Properties File
  - Open the **MapConfig** file:

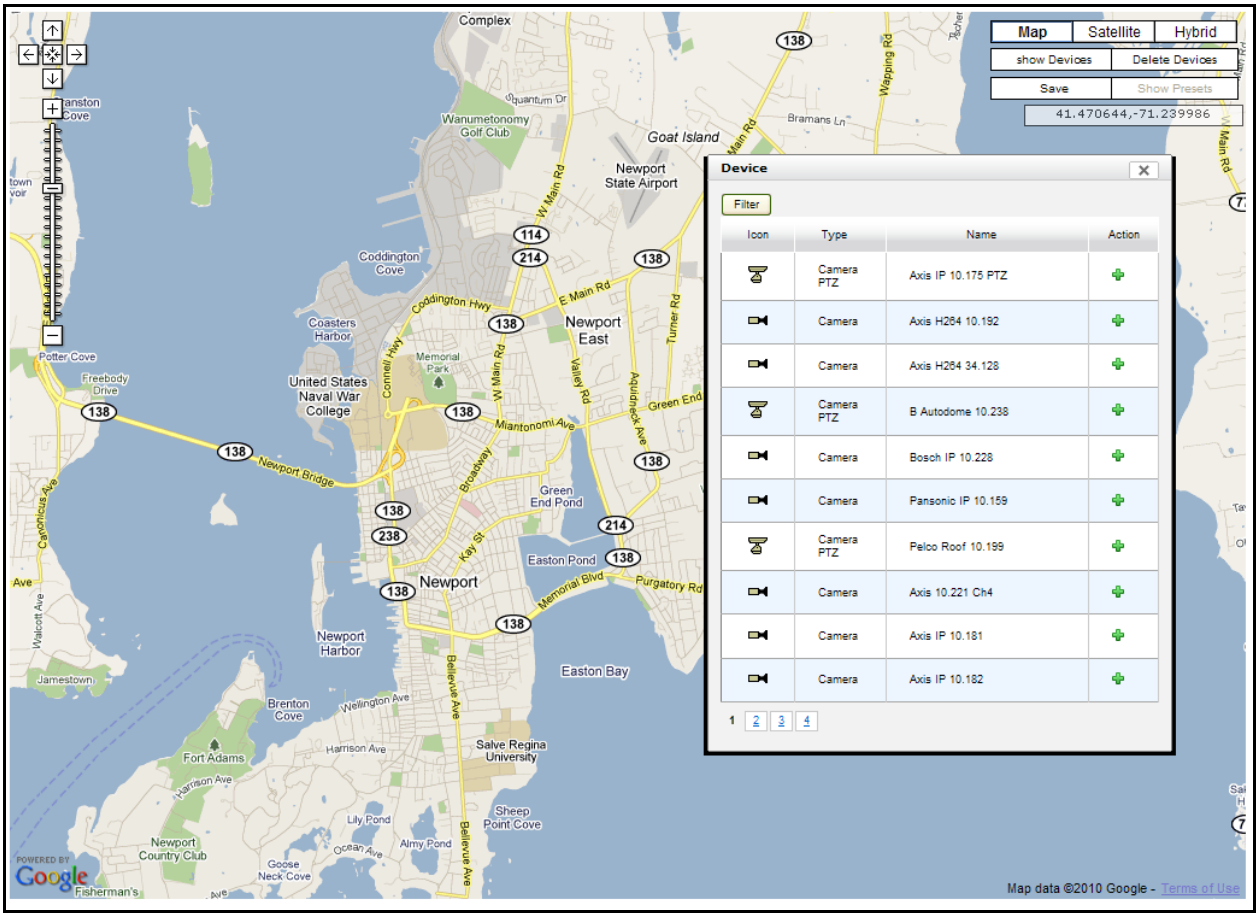
    Located in C:\LiveWave\FirstViewWeb\webapps\ROOT\WEB-INF\data
  - Define the Geographic Map Properties as follows:
    - geoMap=true
    - geomapServer=true
    - googleMapKey=**(Paste API Key here.)**
    - lat=**(This should be an exact latitude – e.g. lat=41.500671)**
      - **Note:** lat and lng determine the initial focal point of the Geo Map.
    - lng=**(This should be an exact longitude – e.g. lng=-71.283503)**
    - zoomLevel=**(This can be any number between 1 and 18, which corresponds with the zoom levels on the Geographic Map.)**
    - geoMapHost=**(leave blank)**



- Restart FirstView® services to apply changes.

2.4.2: Geographic Map Configuration

To add or remove devices to the Geographic Map on the Geographic Map Setup screen, click the “Show Devices” button at the top of the screen. As the image below shows, a pop-up window will appear listing all available devices.



To add a device:

- Click the “ ” button on the “Devices” pop-up window

- The cursor will change into a hand with a blue arrow – drag the arrow onto the map and drop the device icon onto the map.
- Devices can be moved on the map by dragging and dropping the device icon.
- **Note:** A device can only appear once on the Geographic map.

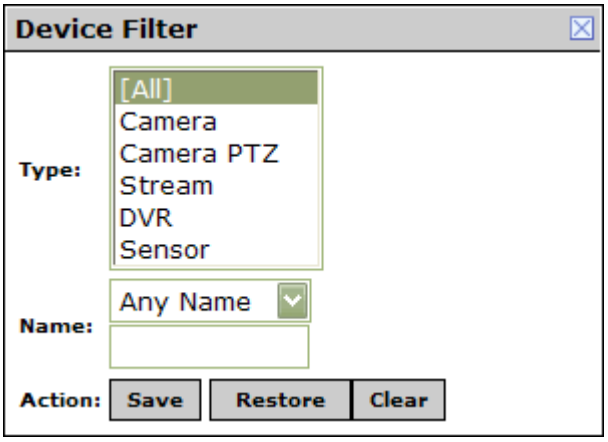
To remove a device:

- Click the “ ” button on the “Devices” pop-up window, or
- Click the “Delete Devices” button at the top of the screen and then click a device icon on the map to delete it.
- Once a device has been deleted, it can be added again.

Note: Addition or removal of devices will not be saved unless the user clicks the “Save” button at the top of the screen before navigating to a new page.

To filter the list of available devices, click the “Filter” button to open the pop-up window shown below. Users can filter according to:

- **Type:** Users can select “All” or an individual device type.
- **Name:** Users can filter by device name using this drop-down menu and the entry field below it.
    - Drop-down Menu Options: Any Name, Starts With, Ends With, Contains

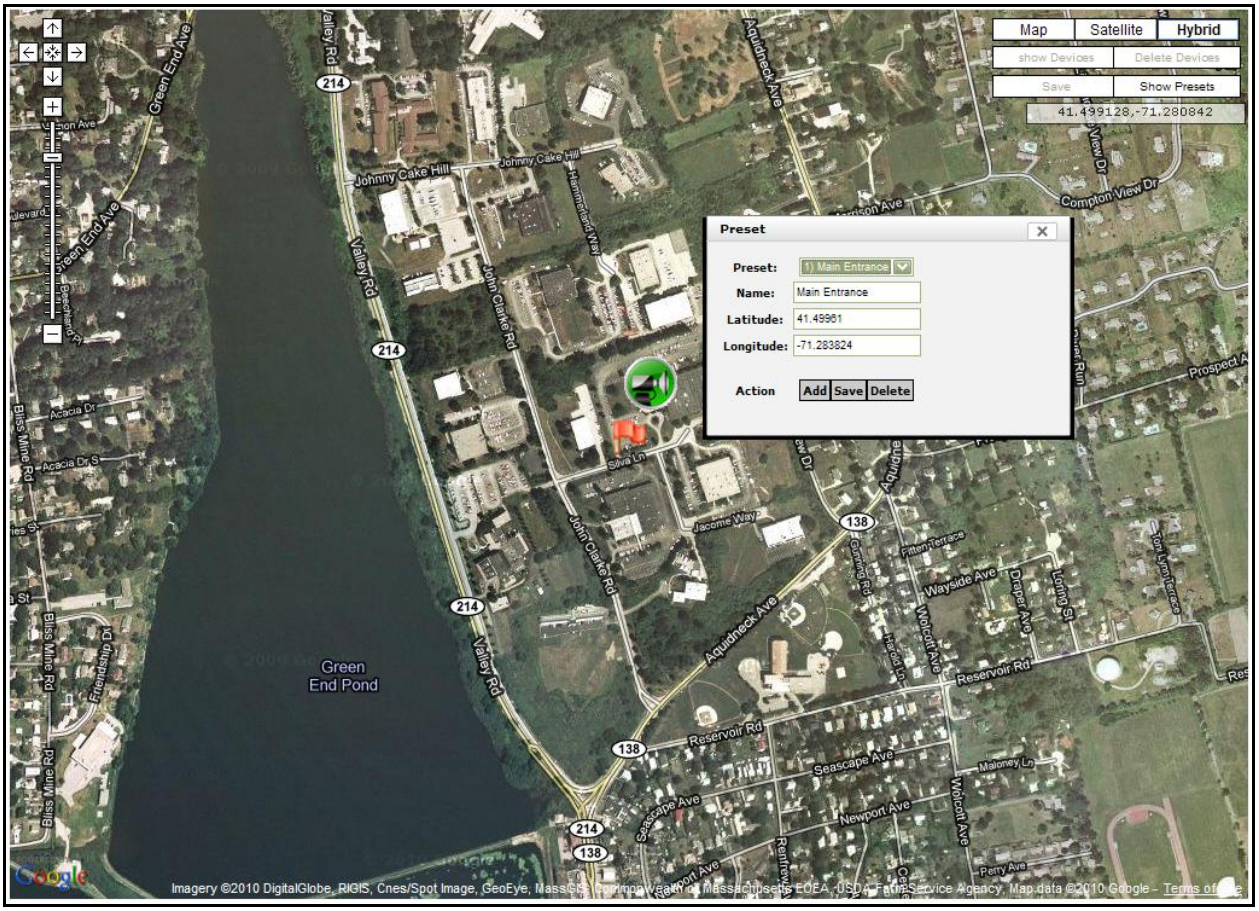


- To apply the filter, click the “Save” button.
- To erase any filters applied before saving, click the “Restore” button.
- To clear any filters, click the “Clear” button and then the “Save” button to remove the filter.

2.4.3: Preset Location Configuration

To assign a precise latitude and longitude for a PTZ camera's existing presets:

- Click on a camera device icon on the Geographic Map.
- Click the "Show Presets" button to open the screen shown below:



- Select an existing Preset from the drop-down menu.
- Click the "Add" button.
- The cursor will change into a blue arrow – drag the arrow onto the map and drop the red flag icon onto the map.
- Preset locations can be moved on the map by dragging and dropping the red flag icon. The latitude and longitude fields will be automatically populated based on the location of the red flag icon on the Geographic Map.
    - **Note:** Make sure the area viewed by a camera matches the physical location assigned to each Preset.
- Click the "Save" button to save the precise latitude and longitude of the Preset.
- Click the "Delete" button to delete the Preset.

Note: This process ensures that camera presets are properly configured with an accurate latitude and longitude. Accurate preset locations are required for the Geographic Map Spotter to work properly. Please see **Section 5.1.4** for more details on using the Spotter.

2.5: Image Map Setup

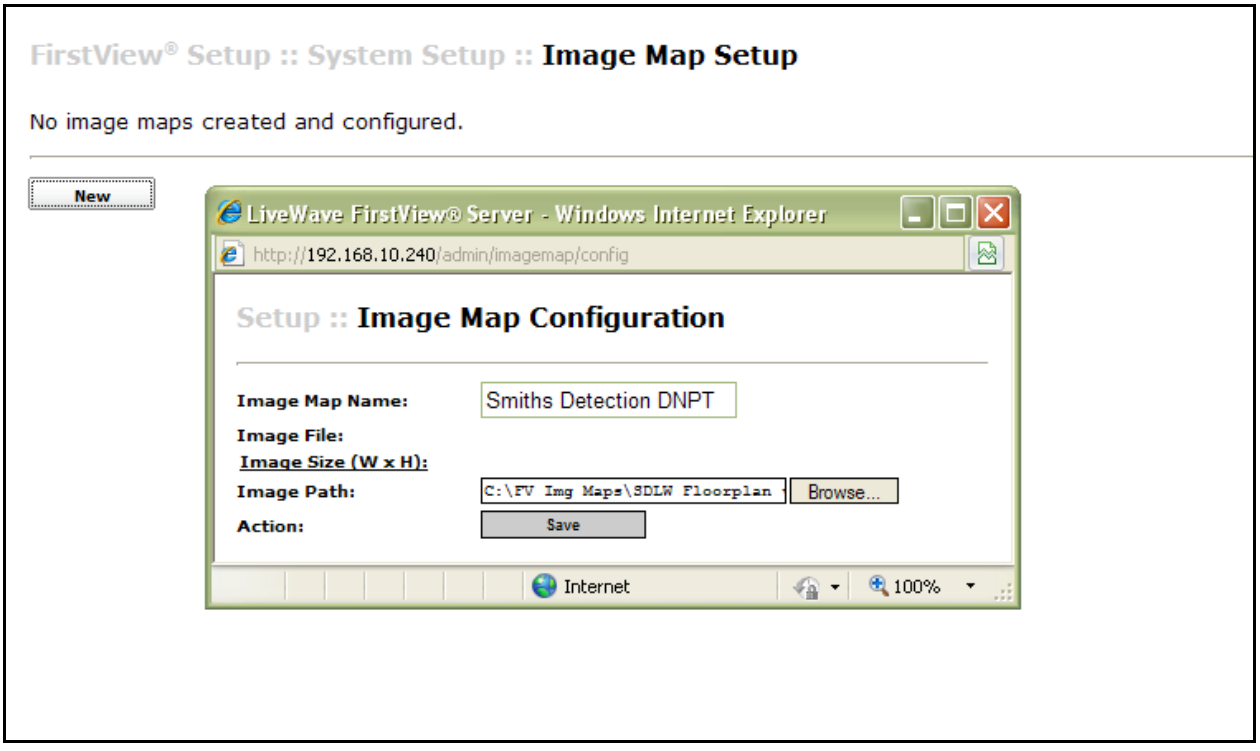
FirstView® Menu / Setup / System Setup / **Image Map Setup**

2.5.1: Uploading Image Maps

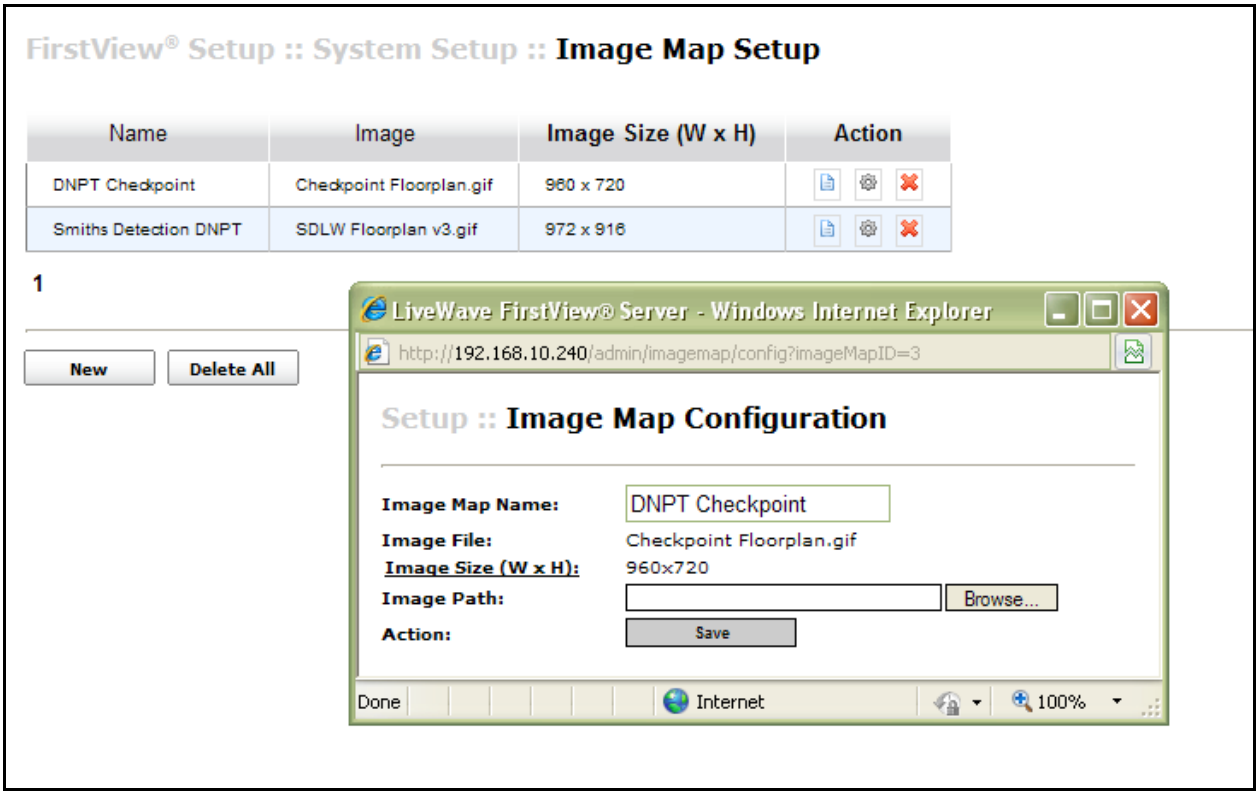
To add an Image Map, click the "New" button. The pop-up window shown below will appear, requesting a name for the new Image Map and a location to upload the file from. Once you have completed the required information, click the "Save" button and the Image Map will appear on the Image Map Setup screen.

The following file types can be uploaded as Image Maps:

- .gif
- .png
- .jpg or .jpeg



To edit the name of an Image Map, click the " " button on the Image Map Setup screen to open the pop-up window shown below. Update the Image Map Name field, and click the "Save" button before closing the window.

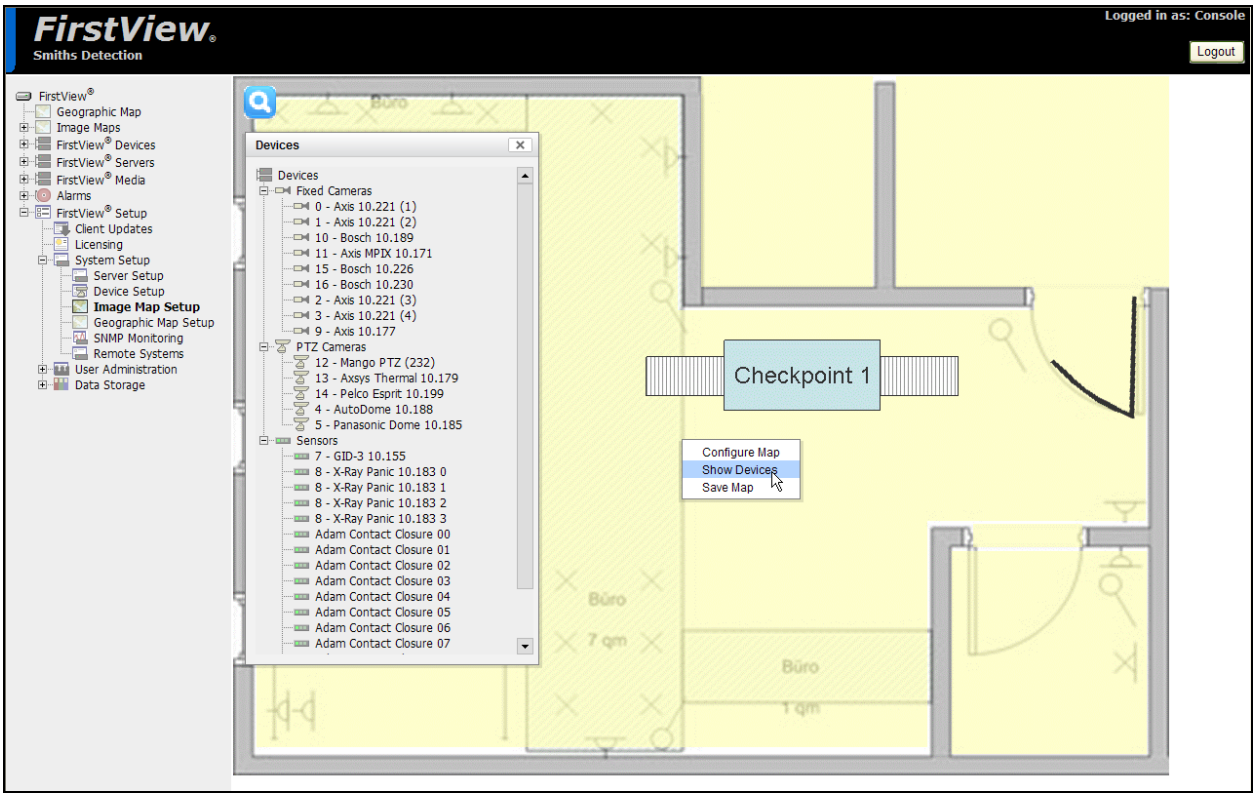


To delete an Image Map, click the "✖" button on the Image Map Setup screen. A pop-up window will open to confirm the action – click "OK" to continue.

To delete all Image Maps, click the "Delete All" button on the Image Map Setup screen.

2.5.2: Image Map Configuration

To configure an uploaded Image Map, click the "⚙" button on the Image Map Setup screen. To add devices to, or remove devices from, the Image Map, click the Image Map menu button at the top left of the screen and select "Show Devices" from the menu. As the image below shows, a pop-up window will appear listing all available devices.



To add a device:

- Drag any device from the list and drop onto the image map.
- Devices can be moved on the map by dragging and dropping the device icon.
- **Note:** A device can only appear once on each map.

To remove a device:

- **Right-click on a device icon** and select “Delete.”
- Once a device has been deleted, it can be added again.

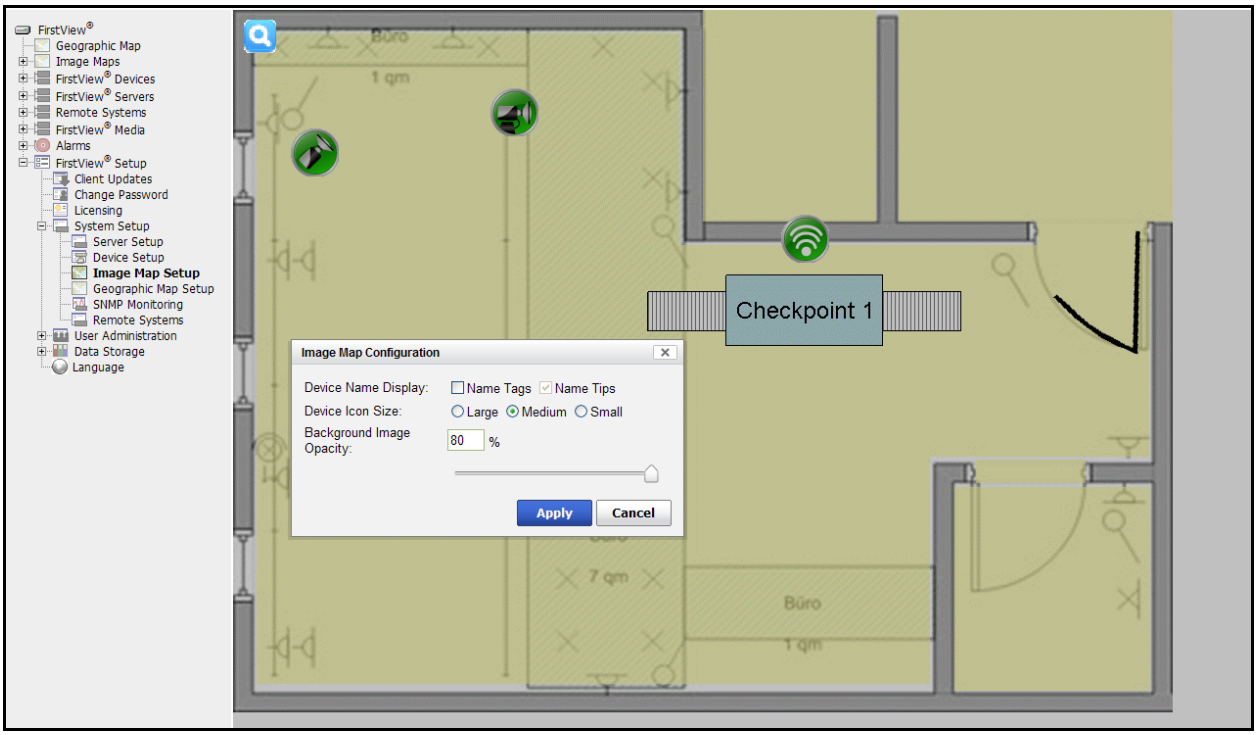
To change the direction of a fixed camera device icon:

- **Right-click on a fixed camera device icon** and select one of the eight possible directions for the device icon to point.
    - North, North East, East, South East, South, South West, West, North West
- **Note:** PTZ camera and Sensor device icons cannot be rotated.

Note: Modifications to the image map will not be saved unless the user clicks the Image Map menu button at the top left of the screen and selects “Save Map” from the menu before navigating to a new page.

2.5.3: Image Map Settings

To modify the settings for an image map, click the Image Map menu button at the top left of the screen and select “Configure Map” from the menu.



The following settings can be modified:

- **Device Name Display**
  - Checking the “Name Tags” checkbox will display the device name above the icon.
  - The “Name Tips” checkbox is selected by default. When a user holds the cursor over an icon, the device name is displayed in a pop-up box.
- **Device Icon Size**
  - Select the radio button for Large, Medium, or Small Device Icons.
- **Background Image Opacity**
  - Modifying this setting will change the level of transparency of the image map.
  - The user can either enter a percentage (in increments of 10%) or use the slider to select the desired amount of image map transparency.

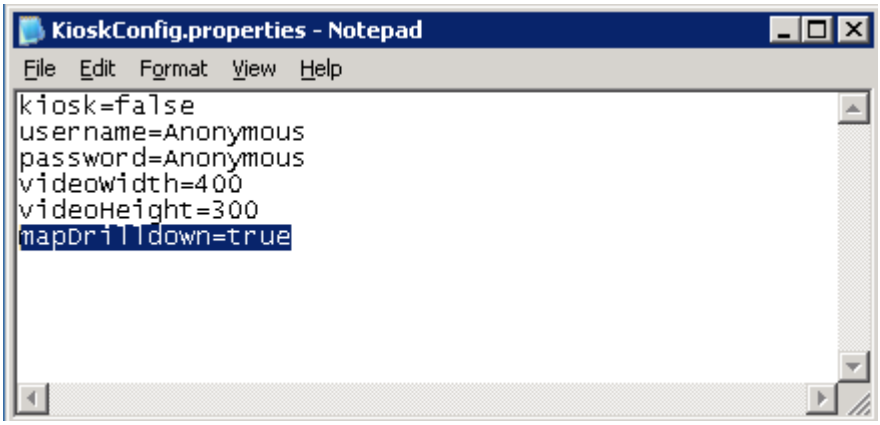
Note: Click the “Apply” button to apply the new settings or “Cancel” to return to the Image Map.

2.5.4: Enabling Layered Image Maps

To enable the layered image maps feature, a system administrator should complete the following process on the primary server.

- Modify the Kiosk Config Properties File
  - Open the **KioskConfig.properties** file:

    Located in C:\LiveWave\FirstViewWeb\webapps\ROOT\WEB-INF\data
  - Define the Layered Image Map setting as follows:
    - **mapDrilldown=true**
      - **Note:** The default value is false.
    - All other settings in this file can be left with the default values.



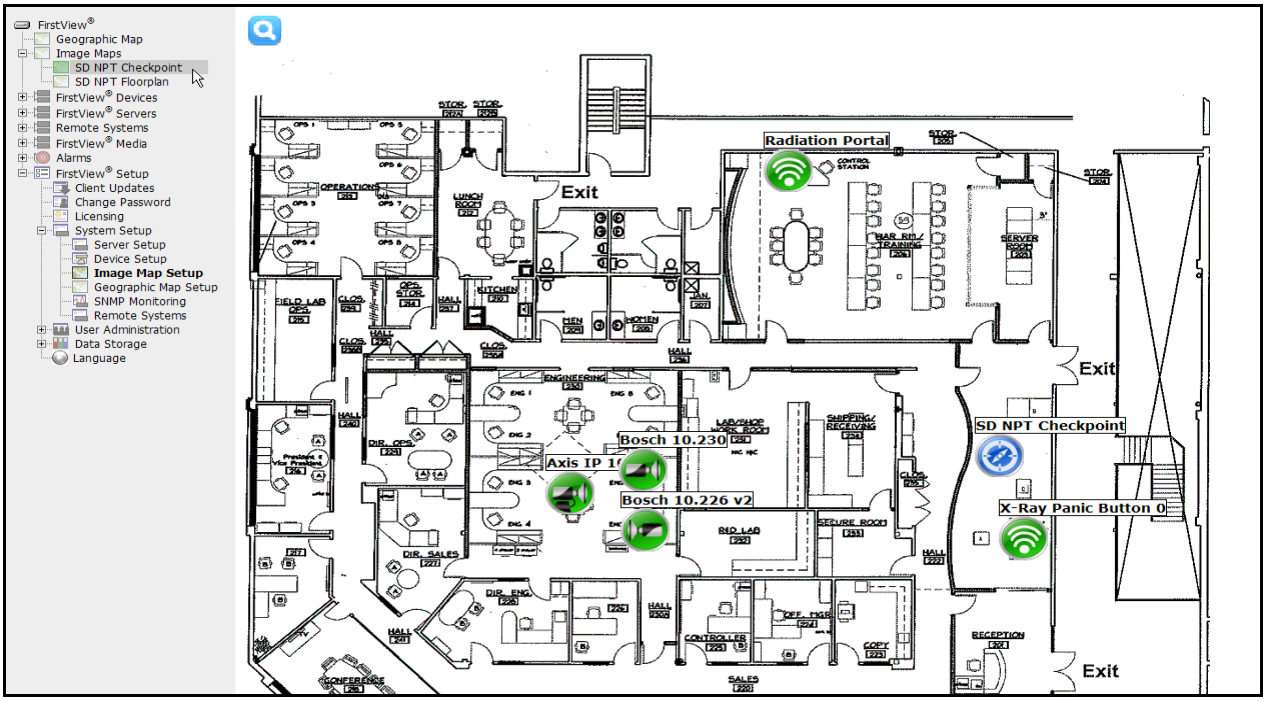
- Restart the FirstView® services to apply changes.

2.5.5: Layered Image Map Configuration

Once all image maps have been configured according to the process outlined in **Section 2.5.2**, users can nest secondary image maps within a primary image map to create a layered image map.

To create a layered image map, click the “Config” button on the Image Map Setup screen to configure the primary image map.

- Open the list of configured image maps on the FirstView® Menu (FirstView® Menu / Image Maps)
- Drag and drop the secondary image maps from the menu onto the primary image map



As shown above, the secondary image maps will appear as icons on the primary image map. Please see **Section 5.2.4** for more details on accessing layered image maps.

2.6: User Access Setup

FirstView® Menu / Setup / User Access Setup

Note: The User and Role tabs on the User Administration page allow users to sort data by the "Name" column on each tab. Click on the column title to sort the data.

2.6.1: Resource Access and Permissions Overview

Access to resources (e.g. cameras and sensors) within a FirstView® system is controlled through a combination of user roles and permissions. The descriptions below outline the relationship between these core aspects.

User Roles:

- Assigned to users – each user is assigned to one user role.
- Used to organize groups of users and control access to resources and permitted actions.
- Permissions are assigned by user role.
- Custom roles may be created to provide a more granular level of detail – a FirstView® system can have as many user roles as necessary to appropriately control a user's actions and access within the system.

Permissions:

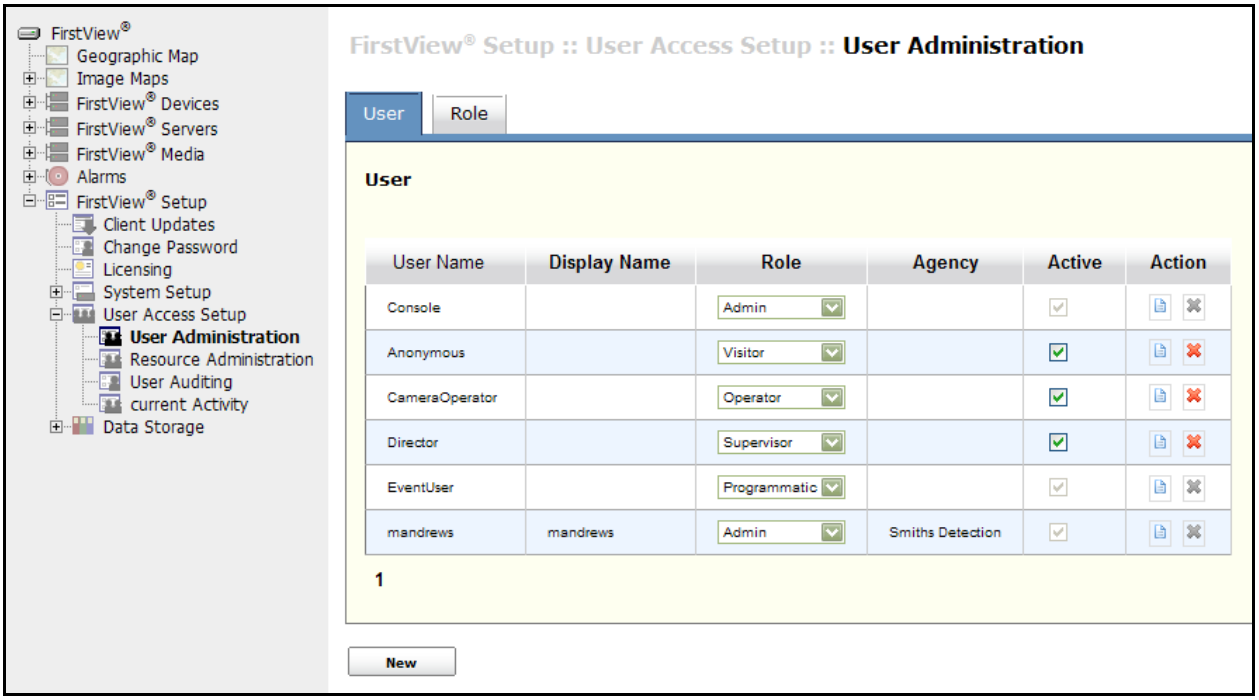
- Control what actions users are allowed to perform within a FirstView® system.
- **Permissions assigned to each resource or resource type by user role.**

- Consist of two basic types: System Permissions and Resource Permissions
    - System Permissions control what actions users are allowed to perform in a FirstView® system (e.g. View Alarms)
    - Resource Permissions control what actions users are allowed to perform for specific resources (e.g. View Camera)

2.6.2: Managing Users

FirstView® Menu / Setup / User Access Setup / **User Administration**

The User Administration page allows system administrators to manage users and edit user roles. Click the "User" tab to open the screen shown below.

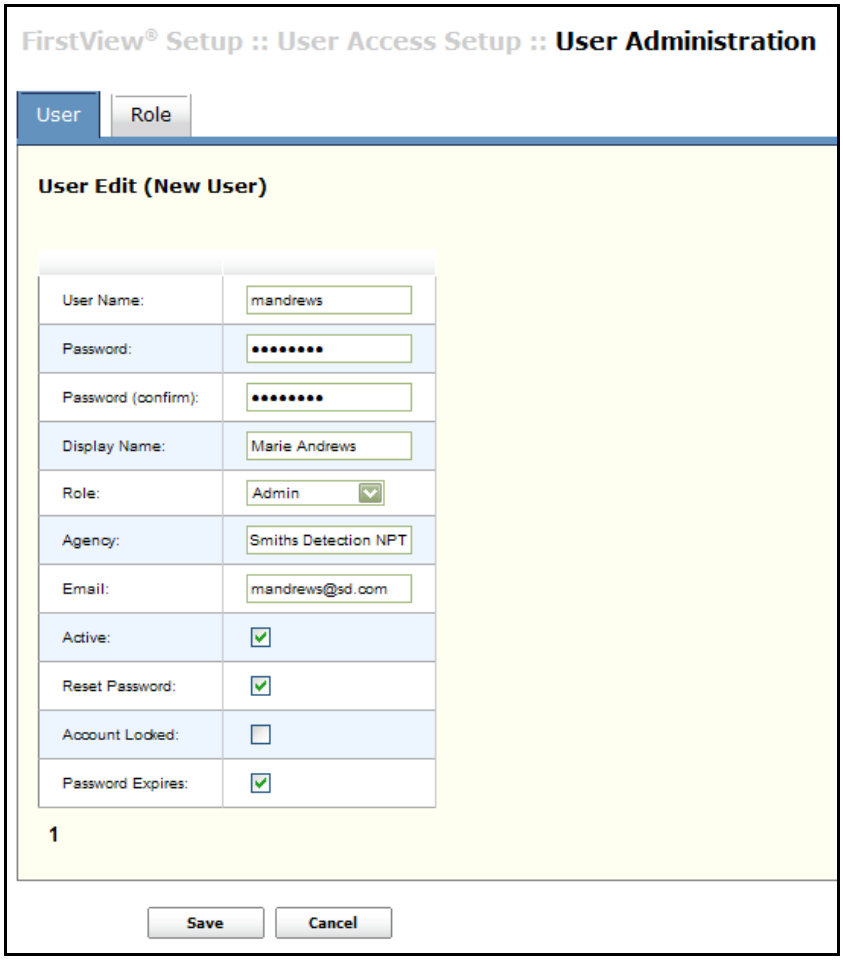


To add a new user:

- Click the "New" button at the bottom of the screen.
- A new screen will open with the following fields:
    - **Username:** Enter the username (case sensitive).
    - **Password:** The password complexity requirements defined for the system determine the length and types of characters required for a password. Please see **Section 2.7.1** for more details on defining these requirements.
    - **Password (confirm)**
    - **Display Name:** This optional field should be the same as the username.

- **Role:** Select a user role from the drop-down menu.
  - **Default Roles:** Administrators, Operators, Supervisors, and Visitors.
  - New roles can be created and assigned to users. Please see **Section 2.6.3** for more details on creating User Roles.
  - Click the “Save” button to save the assigned role or the “Cancel” button to undo any changes made before saving.
  - **Note:** The Role assigned to a user determines the level of access granted within the system. Please see **Section 2.6.4** for more details on permissions.
- **Agency:** This optional field allows the administrator to associate each user with the company or department they work for.
- **Email:** This optional field allows the administrator to include the user’s email address.
- **Active:** Check the checkbox to activate the user, uncheck to deactivate. If an account is not active, the user will not be allowed to login to the system.
- **Reset Password:** Check the checkbox to reset the password, which will force the user to create a new password the first (or next) time they login. A temporary password must be assigned and given to the user so they can complete the password change process.
  - This allows the user to create their own password instead of using the password assigned by the system administrator. Please see **Section 1.3.2** for more details.
- **Account Locked:** Check the checkbox to manually lock the user out of the system or uncheck to unlock the user account.
  - User accounts are locked after four consecutive unsuccessful login attempts. Please see **Section 1.5** for more details.
- **Password Expires:** Check the checkbox to enforce the periodic password change requirements defined for the system.
  - If periodic password changes should be enforced for all users, be sure to check this checkbox during each user setup. Please see **Section 2.7.2** for more details about configuring password expiration.

- Click the “Save” button to save the new user or the “Cancel” button to undo any changes made before saving.



Note: To edit a user's information, click the "" button on the User tab after a user has been created.

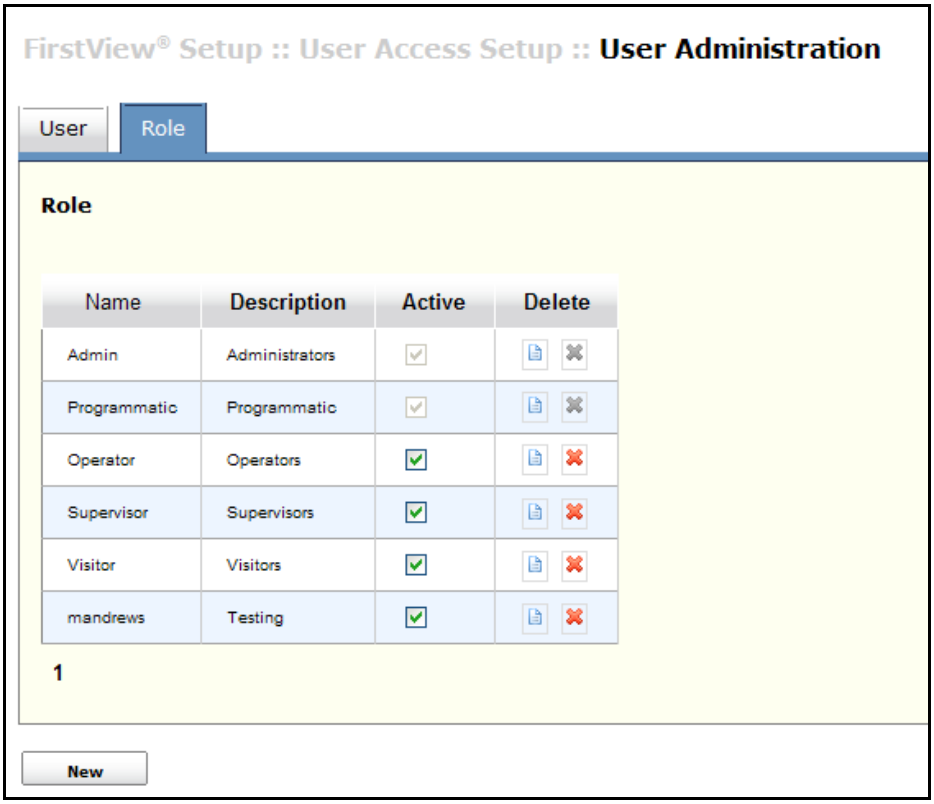
To delete a current user:

- Click the "" button next to a user's name. The user will be immediately removed from the list.

2.6.3: Configuring User Roles

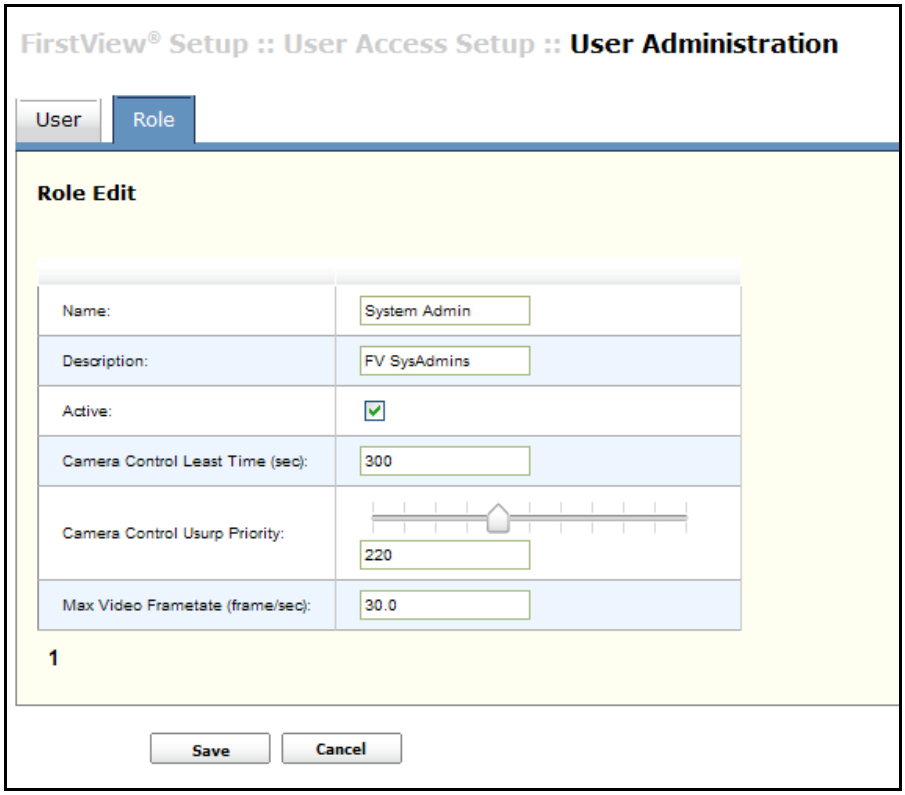
FirstView® Menu / Setup / User Access Setup / **User Administration**

To view the list of User Roles, click the "Role" tab to open the screen shown below.



To add a new User Role

- Click the “New” button, and define the following fields:
  - **Name**
  - **Description**
  - **Active:** Use the checkbox to activate or deactivate a user role.
  - **Camera Control Lease Time:** The amount of time (in seconds) a user role is allowed to control a camera.
  - **Camera Control Usurp Priority:** Low priority numbers indicate more power within the system. User roles with lower Usurp Priority can take control of a camera if a user with a higher Usurp Priority is controlling it.
    - e.g. Administrators are priority level 100 and Visitors have priority level 400
  - **Max Video Framerate:** The maximum number of frames per second in a video stream that can be defined during the video configuration process.



To edit a User Role:

- Click the "" button to modify any of the information after a User Role has been created.

To delete a User Role:

- Click the "" button next to a role name. The role will be immediately removed from the list.
    - **Note:** The Administrator and Programmatic roles cannot be deleted.

2.6.4: Configuring Permissions by User Role

FirstView® Menu / Setup / User Access Setup / **Resource Administration**

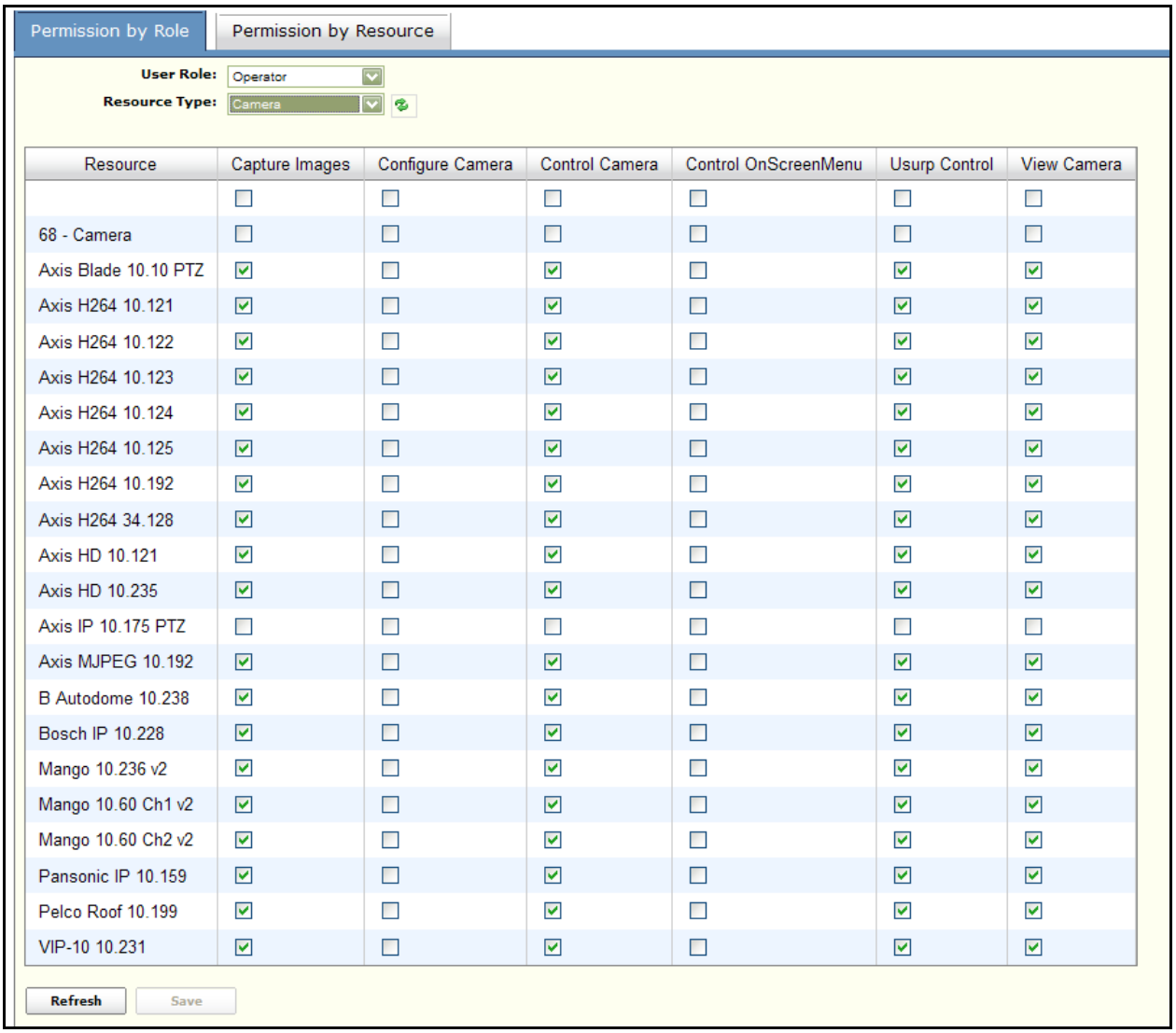
On the **"Permission by Role"** tab, permissions are assigned to resource types (e.g. cameras or sensors) by user role. Permissions define which actions can be performed by each user role. Assigning permissions by role is an efficient way to define access to all resources in a FirstView® system.

To edit the Permissions associated with a Resource Type:

- Use the first drop-down menu to select a User Role.
- Use the second drop-down menu to select a Resource Type.

- Resource Types:
  - **Camera:** Actions related to viewing, controlling, or configuring cameras.
  - **FirstView® System:** Actions related to configuring maps, groups, alarms, and system settings.
  - **Image Map:** Actions related to viewing and configuring image maps.
  - **Sensor System:** Actions related to viewing or configuring sensors.
  - **Web Content:** Actions related to viewing or configuring web content units.
- **Note:** The permissions displayed on the page will change depending on which resource type is selected. There are different permissions associated with each resource type.

- The page shown below will display with the list of actions that can be restricted by user role.



Resource	Capture Images	Configure Camera	Control Camera	Control OnScreenMenu	Usurp Control	View Camera
	☐	☐	☐	☐	☐	☐
68 - Camera	☐	☐	☐	☐	☐	☐
Axis Blade 10.10 PTZ	☑	☐	☑	☐	☑	☑
Axis H264 10.121	☑	☐	☑	☐	☑	☑
Axis H264 10.122	☑	☐	☑	☐	☑	☑
Axis H264 10.123	☑	☐	☑	☐	☑	☑
Axis H264 10.124	☑	☐	☑	☐	☑	☑
Axis H264 10.125	☑	☐	☑	☐	☑	☑
Axis H264 10.192	☑	☐	☑	☐	☑	☑
Axis H264 34.128	☑	☐	☑	☐	☑	☑
Axis HD 10.121	☑	☐	☑	☐	☑	☑
Axis HD 10.235	☑	☐	☑	☐	☑	☑
Axis IP 10.175 PTZ	☐	☐	☐	☐	☐	☐
Axis MJPEG 10.192	☑	☐	☑	☐	☑	☑
B Autodome 10.238	☑	☐	☑	☐	☑	☑
Bosch IP 10.228	☑	☐	☑	☐	☑	☑
Mango 10.236 v2	☑	☐	☑	☐	☑	☑
Mango 10.60 Ch1 v2	☑	☐	☑	☐	☑	☑
Mango 10.60 Ch2 v2	☑	☐	☑	☐	☑	☑
Pansonic IP 10.159	☑	☐	☑	☐	☑	☑
Pelco Roof 10.199	☑	☐	☑	☐	☑	☑
VIP-10 10.231	☑	☐	☑	☐	☑	☑

- Use the checkboxes to add or remove permissions assigned to each user role.
  - **Note:** The checkbox at the top of each column with select or de-select all.

- **Default Roles:** Administrators, Operators, Supervisors, and Visitors. New roles can be created and will appear on this drop-down menu. Please see **Section 2.6.3** for more details on creating User Roles.
- **Note:** By default, permissions associated with the Administrator role cannot be modified.

- Click the "Save" button to save the defined permissions.
- Select another Resource Type and repeat the above process until all resources have been assigned permissions for the selected user role.

Important note: Repeat this process for each role in the FirstView® system.

The table below explains the role of each permission within the FirstView® system.

Permission Name	Resource Type	Description
Capture Images	Camera	Controls the ability to capture images from live and recorded video.
Configure Camera	Camera	Controls the ability to configure the settings for live video, camera controls, and video recordings.
Control Camera	Camera	Controls the ability to use the PTZ controls for cameras.
Control On Screen Menu	Camera	Controls the ability to access the camera's hardware menus through FirstView®.
Usurp Control	Camera	Controls the ability to usurp control of a camera from another user with a lower priority level.
View Camera	Camera	Controls the ability to view live video from a camera.
Acknowledge Alarm	FirstView® System	Controls the ability to acknowledge an alarm on the Alarm View screen.
Clear Alarm	FirstView® System	Controls the ability to clear an alarm on the Alarm View screen.
Configure Alarms	FirstView® System	Controls the ability to define the email and global alarm schedule settings.
Configure Display Groups	FirstView® System	Controls the ability to define owners of Display camera groups.
Configure Geographic Map	FirstView® System	Controls the ability to add devices to the Geographic Map and change device locations.
Configure Location Groups	FirstView® System	Controls the ability to create and modify Location camera groups.
Configure System ***Administrators Only***	FirstView® System	Controls the ability to access the FirstView® Setup menu and configure user administration, server and device setup, licensing, and video storage settings.
Control Recorder	FirstView® System	Controls the ability to start and stop recordings (in Manual and Continuous Modes), and switch

		between the three recording modes.
Delete Recordings	FirstView® System	Controls the ability to delete recordings.
Playback Recordings	FirstView® System	Controls the ability to play recordings.
Export Recordings	FirstView® System	Controls the ability to download recordings (via "download" function on FV Media and "export" function on device pages).
View Alarm	FirstView® System	Controls the ability to view alarms on the Alarm View screen and in Alarm MuxView.
View Geo Map	FirstView® System	Controls the ability to view the Geographic Map.
Configure Image Map	Image Map	Controls the ability to add devices to Image Maps and change device locations.
View Image Map	Image Map	Controls the ability to view image maps.
Configure Sensor System	Sensor System	Controls the ability to configure the settings for sensors.
Control Sensor System	Sensor System	Controls the ability to send commands to sensors through FirstView®.
View Sensor System	Sensor System	Controls the ability to view sensor status on Image and Geographic Maps.
Configure Web Content	Web Content	Controls the ability to define the source for a web content unit.
View Web Content	Web Content	Controls the ability to view a web content unit.

Dependent Permissions:

There are nine permissions that are dependent on one (or more) other permissions. Each of these dependent permissions does not give users the ability to perform any actions unless the associated permission(s) is also assigned to the user role. (e.g. If a user is assigned the "Capture Images" permission but does not have the "View Camera" permission, he will not be able to view video from a camera and will therefore be unable to capture images from the video.)

The table below defines these dependent relationships:

Dependent Permission Name	Associated Permission(s)
Configure Camera	View Camera
Capture Images	View Camera
Control Camera	View Camera
Configure Image Map	View Image Map & Configure System
Configure Geographic Map	View Geographic Map & Configure System
Acknowledge Alarm	View Alarm
Clear Alarm	View Alarm
Configure Sensor System	View Sensor System
Configure Web Content	View Web Content

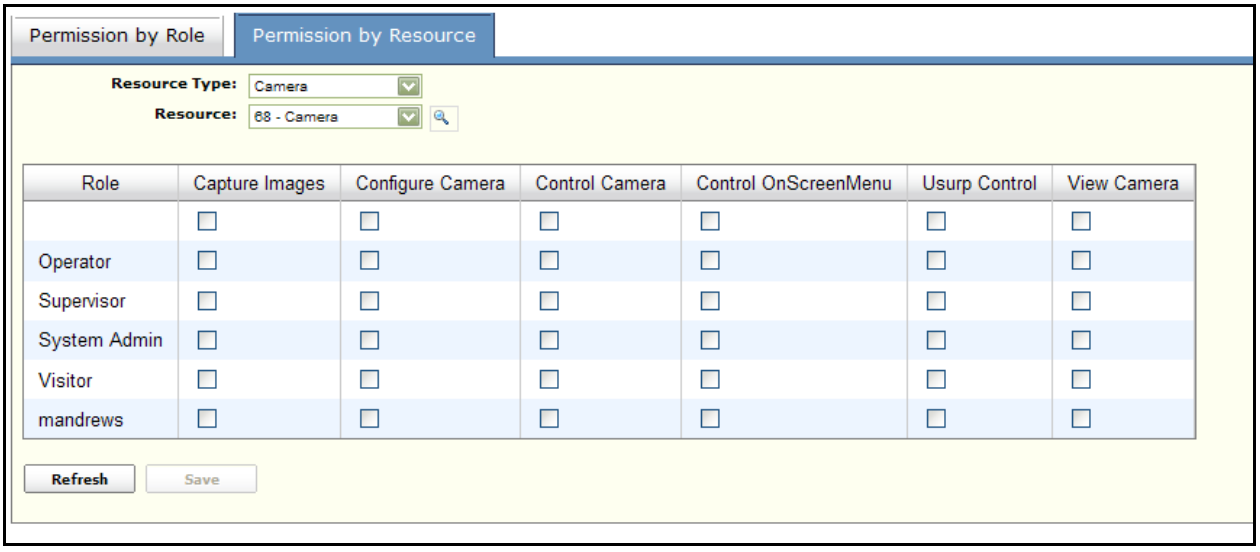
2.6.5: Configuring Permissions by System Resource

FirstView® Menu / Setup / User Access Setup / **Resource Administration**

On the **"Permission by Resource"** tab, permissions are assigned to individual resources (e.g. cameras or sensors) by user role. Permissions define which actions can be performed by each user role. Assigning permissions by resource is an efficient way to control access to a particular resource in a FirstView® system.

To edit the Permissions associated with a specific resource:

- Use the first drop-down menu to select a Resource Type.
- Use the second drop-down menu to select a Resource (e.g. a camera).
    - Resource Types:
        - **Camera:** Actions related to viewing, controlling, or configuring cameras.
        - **FirstView® System:** Actions related to configuring maps, groups, alarms, and system settings.
        - **Image Map:** Actions related to viewing and configuring image maps.
        - **Sensor System:** Actions related to viewing or configuring sensors.
        - **Web Content:** Actions related to viewing or configuring web content units.
    - **Note:** The permissions displayed on the page will change depending on which resource type is selected. There are different permissions associated with each resource type.
- The page shown below will display with the list of actions that can be restricted by user role.



- Use the checkboxes to add or remove permissions assigned to each user role.

- **Note:** The checkbox at the top of each column with select or de-select all.
- **Default Roles:** Administrators, Operators, Supervisors, and Visitors. New roles can be created and will appear on this page. Please see **Section 2.6.3** for more details on creating User Roles.
- **Note:** By default, permissions associated with the Administrator role cannot be modified.

- Click the "Save" button to save the defined permissions.
- Select another Resource and repeat the above process until all resources have been assigned permissions.

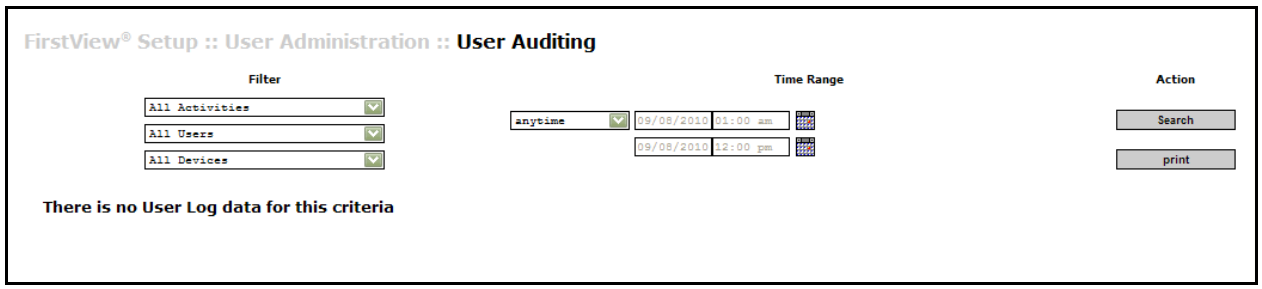
2.6.7: User Auditing

FirstView® Menu / Setup / User Access Setup / **User Auditing**

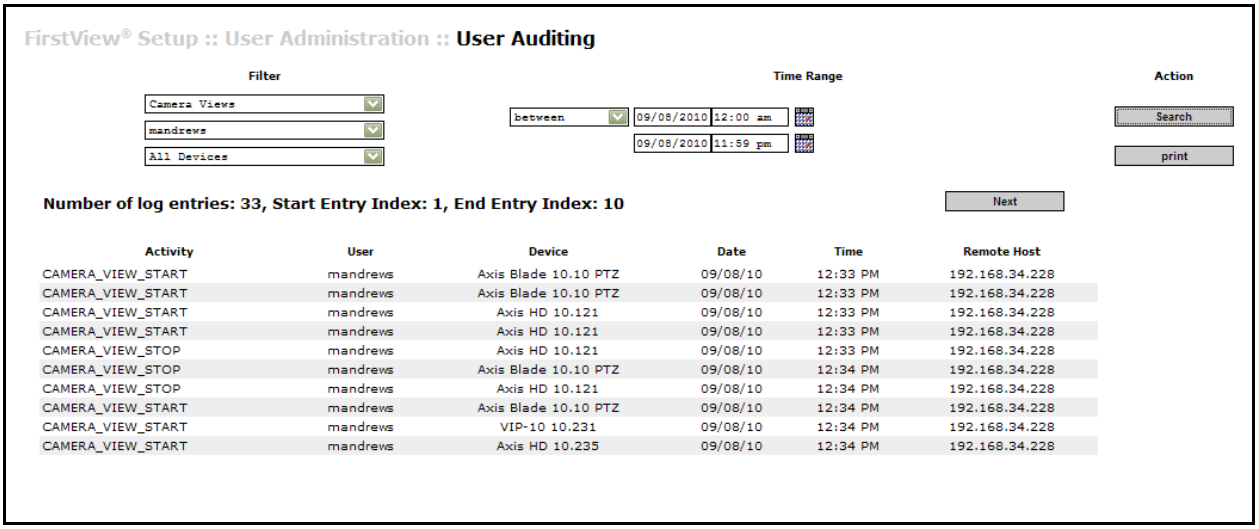
The User Auditing screen allows system administrators to view the actions of any or all users of the FirstView® system. As the image below shows, administrators can filter the results by choosing one or all of the following options:

- **Type of activity:** Administrators can sort by individual activities, such as Camera View Start or Camera Control Stop, or they can sort by Activity Groups, such as Camera Views or Camera Controls.
- **User name:** Administrators can select an individual user name or All Users.
- **Device name:** Administrators can select an individual camera name or All Devices.

Administrators can also specify a Time Range – with a beginning and ending date and time. The drop down menu to the left of the Time Range offers the following options: anytime, between, before, after, and at time. Click the "Search" button to filter by the specified date range.



In the following example, an administrator searched for "Camera Views" on all devices for one specific user (mandrews) during the course of one morning (Beginning at 12:00am on 8/18/10 and ending at 11:59pm).



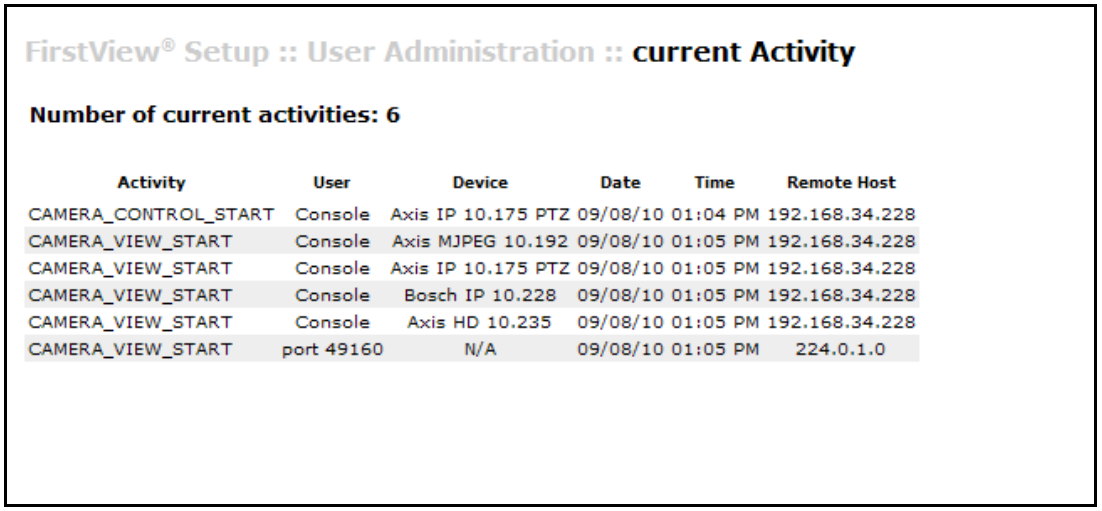
To print the results of the search, click the “Print” button.

2.6.8: Current Activity

FirstView® Menu / FirstView® Setup / User Administration / **Current Activity**

The Current Activity screen allows system administrators to monitor current system activity by all users. If a user is viewing a video feed or group of cameras or controlling a camera, the user name and activity details will show up on this screen.

As the example below shows, the user mandrews is logged in, viewing cameras, and controlling a PTZ camera at the time a system administrator checked the Current Activity.



2.7: Configuring Password Requirements

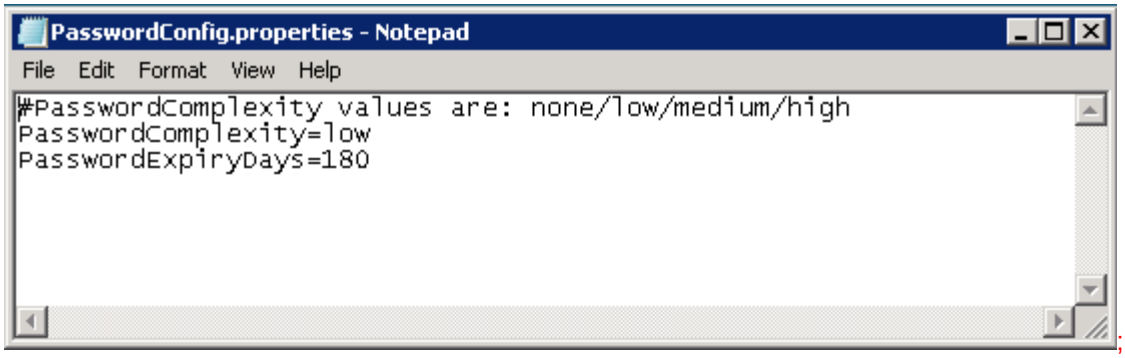
The password complexity level and frequency of periodic password changes are defined outside the FirstView® system and apply to all users.

2.7.1: Password Complexity

The password complexity requirements are configured outside the FirstView® system. Administrators should complete the following process on the primary server to define the desired level of password complexity. (Please see **Section 1.4** for more details on the complexity levels.)

- Modify the Password Config Properties File
  - Open the **PasswordConfig.properties** file:

    Located in C:\LiveWave\FirstViewWeb\webapps\ROOT\WEB-INF\data
  - Define the Password Properties as follows:
    - **Password Complexity=low** (or medium or high or none)
    - **Note:** The default value is low.



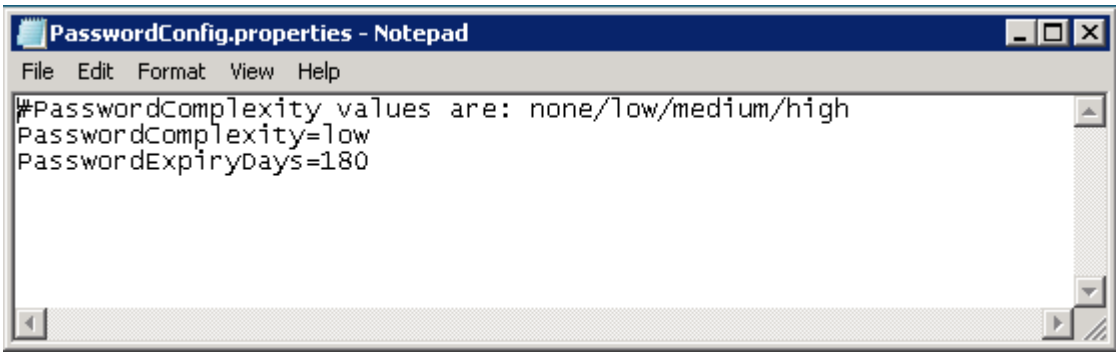
- Restart the FirstView® services to apply changes.

2.7.2: Periodic Password Changes

The periodic password change requirements are configured outside the FirstView® system. Administrators should complete the following process on the primary server to define the frequency of password changes. (Please see **Section 1.3.1** for more details on required password changes.)

- Modify the Password Config Properties File
  - Open the **PasswordConfig.properties** file:

    Located in C:\LiveWave\FirstViewWeb\webapps\ROOT\WEB-INF\data
  - Define the Password Properties as follows:
    - **PasswordExpriyDays=180** (or any number of days – e.g. 365 to require a password change each year)
    - **Note:** The default value is 180 days (approximately 6 months)



- Restart the FirstView® services to apply changes.

2.8: Licensing

FirstView® Menu / Setup / Licensing

Each FirstView® system comes with a software license to authorize the use of the software on each server. Licensing is performed by Smiths Detection and allows the company to monitor and restrict any unauthorized use of the system. This is strictly a Smiths Detection administration feature and should never be changed by the end user. Failure to adhere to this policy could result in the FirstView® system becoming unusable.

The FirstView® license displays server information, a list of devices associated with the server(s), and contact information for your Smiths Detection representative.

One license per FirstView® Server is uploaded by Smiths Detection during the initial setup process. Please contact FirstView® Support if any of the licenses expire.

2.9: External System Integration

2.9.1: Configuring Remote Systems

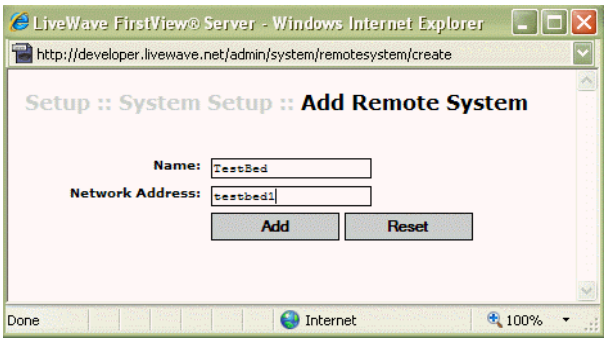
Remote Systems are an optional feature in the FirstView® system, and are designed to allow authorized users of FirstView® to seamlessly access other systems.

Example: A large city with several police departments may want to allow certain users from each department to access other department's FirstView® systems, and the Remote Systems feature makes this possible.

To add a Remote System:

FirstView® Menu / Setup / System Setup / **Remote Systems**

- Click the "Add a Remote System" Link to open the pop-up window shown below.



- Assign a Name and enter the Network Address for the Remote System.
- Click the “Add” button to save the new system or the “Reset” button to erase any changes.

This message will be displayed if the Network Address has been verified. Click “OK” to continue.	This message will be displayed if the Network Address cannot be currently verified. Click “OK” to continue or “Cancel” to try again.

- Refresh the FirstView® window. “Remote Systems” will now be displayed on the FirstView® menu.
- Before accessing the new Remote System, an authorized user of that system must create a new user with the **exact same Username**. The password and user role can be different, but the username must be the same in all systems.
    - **Example:** User A may be an Administrator with a password of pass123 in their local FirstView® system but can be setup as an Operator with a password of word321 in the Remote System.

Note: To return to the user’s local FirstView® system while logged into the Remote System, the local system must be configured as a Remote System. Each system must be able to access all others in order to be able to transition back and forth.

Please see **Section 7.1** for a complete description of accessing Remote Systems.

2.9.2: Configuring X-Ray Monitoring Systems

X-Ray Monitoring Systems are an optional feature in the FirstView® system, and are designed to allow users to monitor X-Ray images of items from carry-on luggage to cargo containers. Users can view the current X-Ray image being scanned and store archives.

The initial setup for integrating X-Ray Monitoring Systems is performed outside the FirstView® system. Before FirstView® can receive images from an X-Ray monitoring system, the IP address of the FirstView® server must be entered into the Image Transfer properties of the X-Ray machine. Please consult the hardware documentation for more details on this process.

To configure the FirstView® system to receive images from an X-Ray monitoring system:

- Create a folder called “xport” on the storage drive of the FirstView® server. (**Example:** D:\xport)
- Enable sharing in the new folder’s Properties
- Create a user called “xport” with a password of “xport-pwd” and grant all permissions to the shared “xport” folder
- Modify the **resin.conf** file to update the location of the xport folder
    - Located on the server in: **C:\ Livewave \ FirstViewWeb \ Resin \ Conf**
    - Define the path of the xport folder as follows:
        - <real-path>D:\xport</real-path>
- Modify the X-Ray Configuration Properties File
    - Open the **xrayconfig** file:

      Located in C:\LiveWave\FirstViewWeb\resin\webapps\ROOT\WEB-INF\data
    - Define the X-Ray Properties as follows:
        - showxray=true
- Restart the FirstView® Server Service
    - Right-click on My Computer
    - Select Manage
    - Select Services & Applications
    - Select Services
    - Right-click on FirstView® Server
    - Select “Stop”
    - Wait for service to stop. Select “Start” to restart the service.
- Start FirstView® and View X-Rays: Current and Archive will now be available in FirstView® Menu / FirstView® Media / **View X-Rays**.

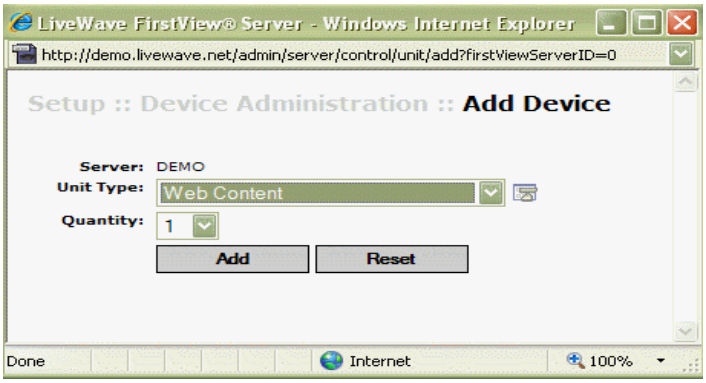
Please see **Section 7.2** for a complete description of accessing X-Ray Monitoring Systems.

2.9.3: Configuring Web Content Units

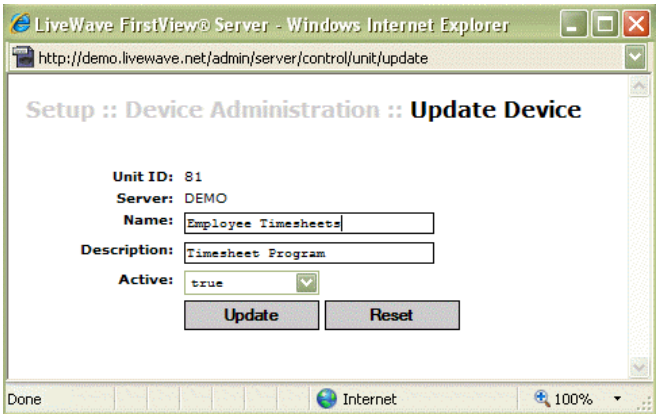
Web Content Units allow users to view and access an external web site through the FirstView® browser window. This feature can be used to integrate any external web site into FirstView®. For example, a web-based timesheet site could be inserted into FirstView® as a Web Content Unit, allowing users to access their timesheets in the same browser.

FirstView® Menu / Setup / System Setup / **Device Setup**

- Click the “Add New Device” link on the Device Setup screen
  - **Note:** If there is more than one server, click the “Add New Device” link under the name of the appropriate server.
- Assign a Unit Type and Quantity using the drop-down menus on the window shown below.



- Click the “Add” button and close the pop-up window.
- Click the “Edit” link next to the new web content unit to open the pop-up window shown below.

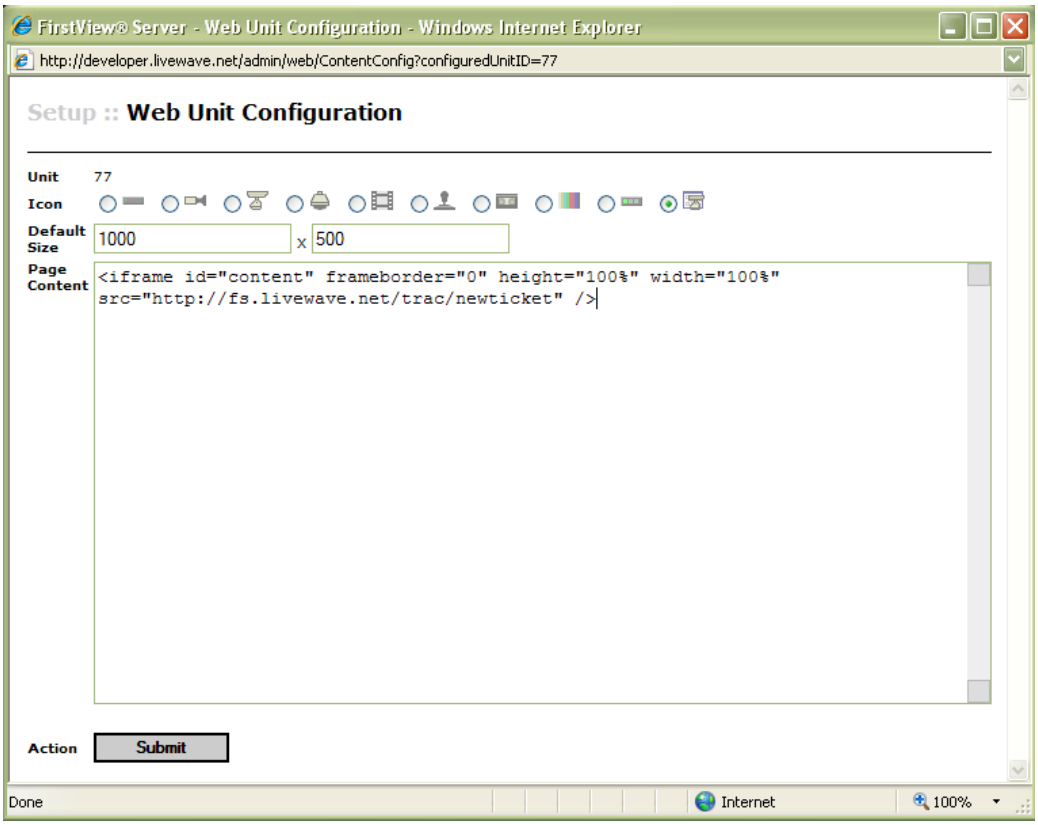


- Assign a Name and a Description and click the “Update” button to save any changes. To remove any changes, click the “Reset” button.
- A pop-up window will appear when changes are successfully saved – click “OK” to continue, and close the Update Device window.
- Refresh the FirstView® window and the new web content unit will appear in the list of devices of the server it was associated with.

To configure a Web Content Unit:

FirstView® Menu / Servers / Name of Server / **Web Content Unit Name**

- Click the Setup button to open the pop-up window shown below.



- Assign a device icon.
    - The default icon for web content is .
- Assign a “Default Size” (in pixels) for the web content.
- Define the “Page Content” in HTML.
    - This is usually comprised of a basic iframe (a way to embed a web page within the FirstView® browser window) and a defined source (the URL of the web content).
    - **Sample Page Content:** <**iframe id=**”content” frameborder=”0” height=”100%” width=”100%” **src=**http://fslivewave.net/trac/newticket />
- Click the “Submit” button to save any changes.

Note: The external web page will open in the FirstView® browser window when a user clicks on the Web Content Unit name on the FirstView® menu.

2.10: Alternative Languages

FirstView® Menu / Setup / **Language**

The user interface of FirstView® can be displayed in languages other than English. Currently, the only alternative language available is Chinese. Please contact FirstView® sales for more information about the availability of additional translations.

To change the default language, click “Language” on the FirstView® Setup menu to open the page shown below:

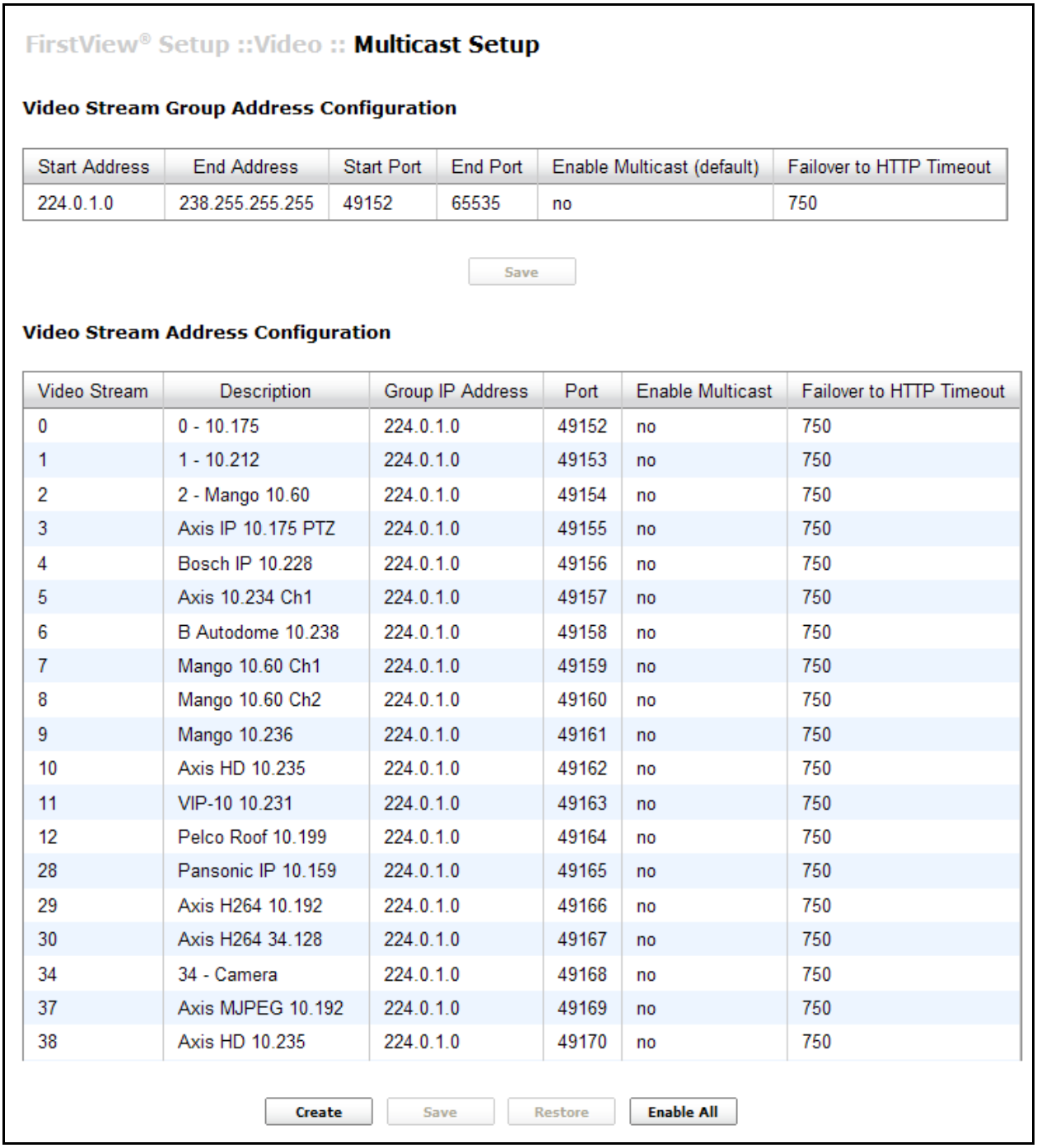
To select a new language, click the radio button next to the desired language and click the “Apply” button. A message will appear asking to confirm the selection – click “OK” to continue. The only text that will remain in English are the device names on the FirstView® menu because those are customized by users.

2.11: Multicast Video

FirstView® Menu / Setup / System Setup / **Multicast Setup**

The Multicast Setup page allows system administrators to enable and configure multicast IP video. However, this feature can cause network congestion depending on the network configuration.

Please contact FirstView® Technical Support for more details on this feature.



FirstView® Setup ::Video :: **Multicast Setup**

Video Stream Group Address Configuration

Start Address	End Address	Start Port	End Port	Enable Multicast (default)	Failover to HTTP Timeout
224.0.1.0	238.255.255.255	49152	65535	no	750

Save

Video Stream Address Configuration

Video Stream	Description	Group IP Address	Port	Enable Multicast	Failover to HTTP Timeout
0	0 - 10.175	224.0.1.0	49152	no	750
1	1 - 10.212	224.0.1.0	49153	no	750
2	2 - Mango 10.60	224.0.1.0	49154	no	750
3	Axis IP 10.175 PTZ	224.0.1.0	49155	no	750
4	Bosch IP 10.228	224.0.1.0	49156	no	750
5	Axis 10.234 Ch1	224.0.1.0	49157	no	750
6	B Autodome 10.238	224.0.1.0	49158	no	750
7	Mango 10.60 Ch1	224.0.1.0	49159	no	750
8	Mango 10.60 Ch2	224.0.1.0	49160	no	750
9	Mango 10.236	224.0.1.0	49161	no	750
10	Axis HD 10.235	224.0.1.0	49162	no	750
11	VIP-10 10.231	224.0.1.0	49163	no	750
12	Pelco Roof 10.199	224.0.1.0	49164	no	750
28	Pansonic IP 10.159	224.0.1.0	49165	no	750
29	Axis H264 10.192	224.0.1.0	49166	no	750
30	Axis H264 34.128	224.0.1.0	49167	no	750
34	34 - Camera	224.0.1.0	49168	no	750
37	Axis MJPEG 10.192	224.0.1.0	49169	no	750
38	Axis HD 10.235	224.0.1.0	49170	no	750

Create | Save | Restore | Enable All

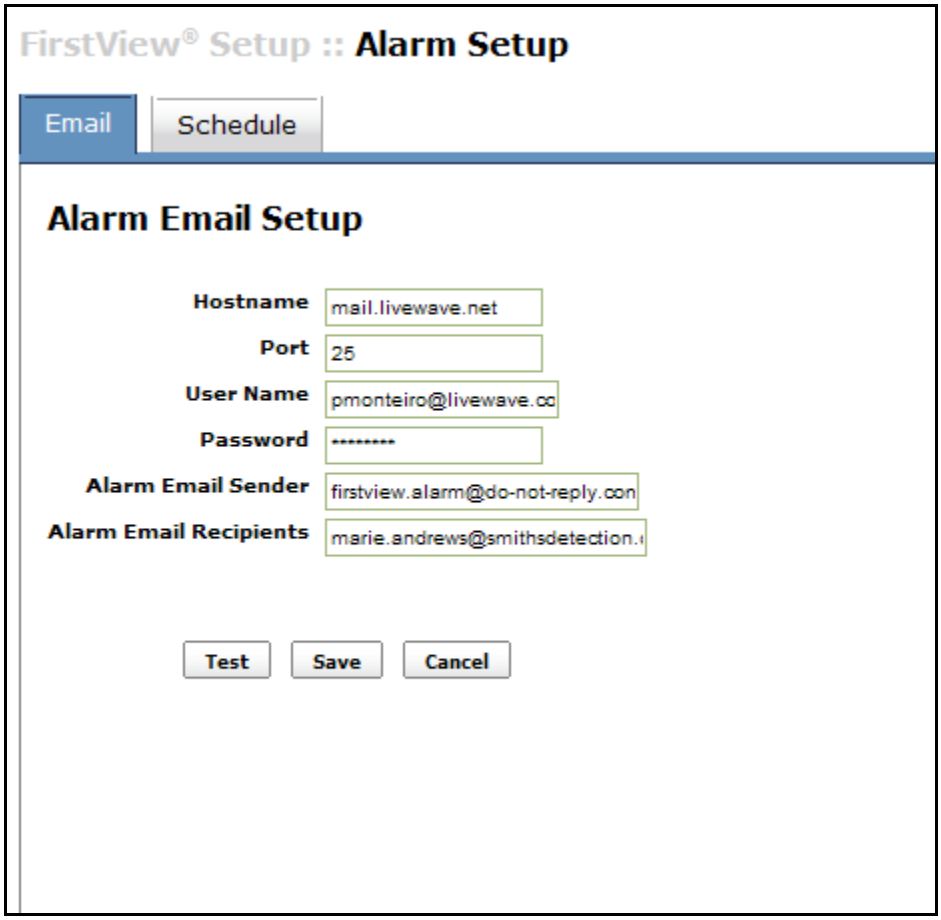
2.12: Alarm Setup

FirstView® Menu / Setup / System Setup / **Alarm Setup**

The Alarm Setup page allows system administrators to enable and configure email notifications to be sent for each alarm and define the global alarm schedule for the FirstView® system.

2.12.1: Alarm Email Setup

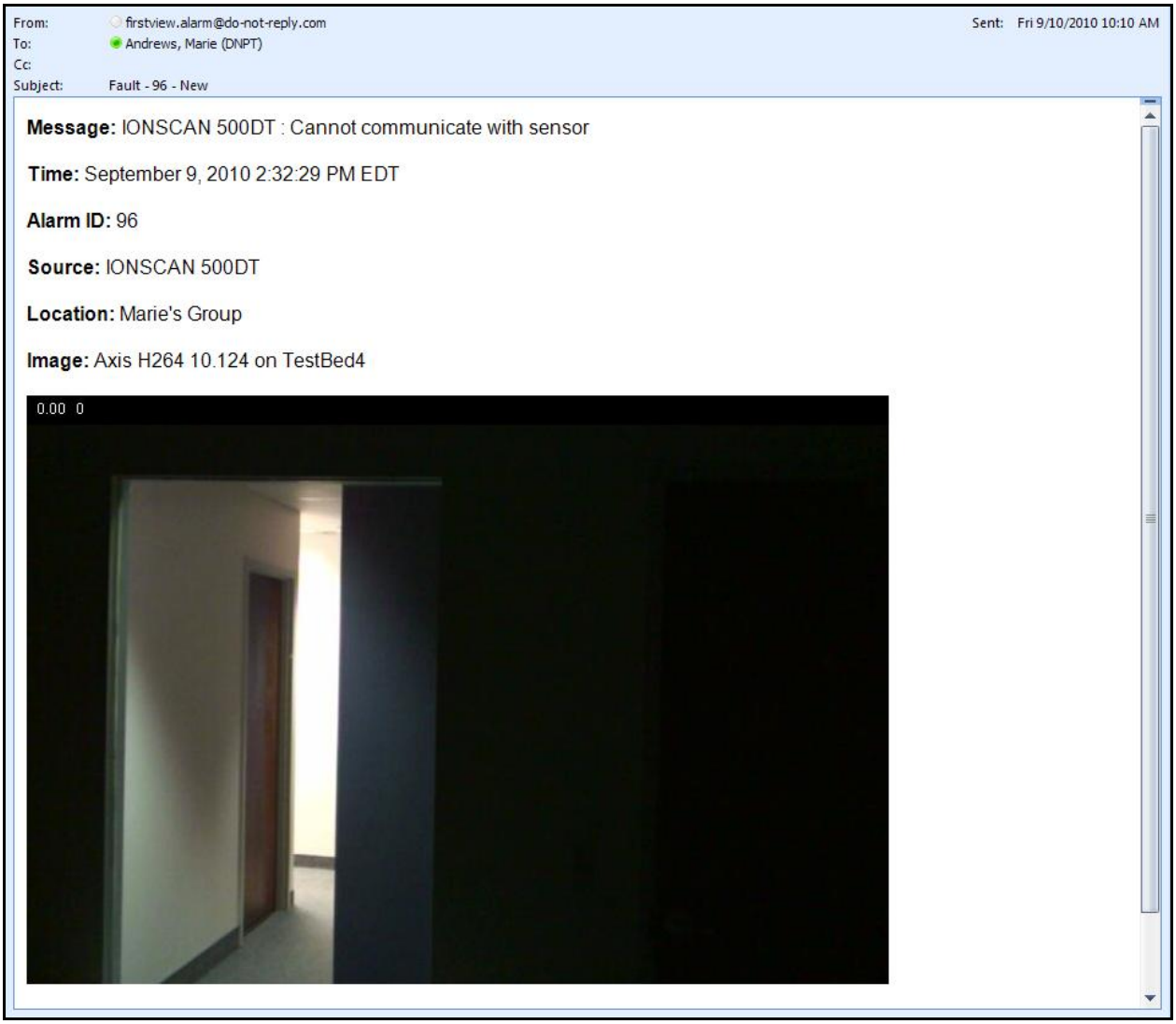
On the **"Email"** tab, the system administrator can configure settings for the mail server to be used to process email notifications and define who should receive an email notification for each alarm that is processed by the FirstView® alarm system.



The following fields should be defined on the Email tab:

Hostname	This is the address of the mail server.
Port	This is the port used by the mail server.
User Name	This is an authorized sender on the mail server.
Password	This is the password for the authoirzed sender.
Alarm Email Sender	This is the "From" address used for the email notifications.
Alarm Email Recipients	This is the email address(es) for the recipient(s) of the email notificatons. **Note:** Use a comma (,) to separate multiple email addresses.

Email notifications contain the details from the alarm (including alarm message, time, and souce) and if there is a camera associated with the alarm source, the image captured at the time of the alarm will be included in the email. An example email notification from a FirstView® alarm is shown below.

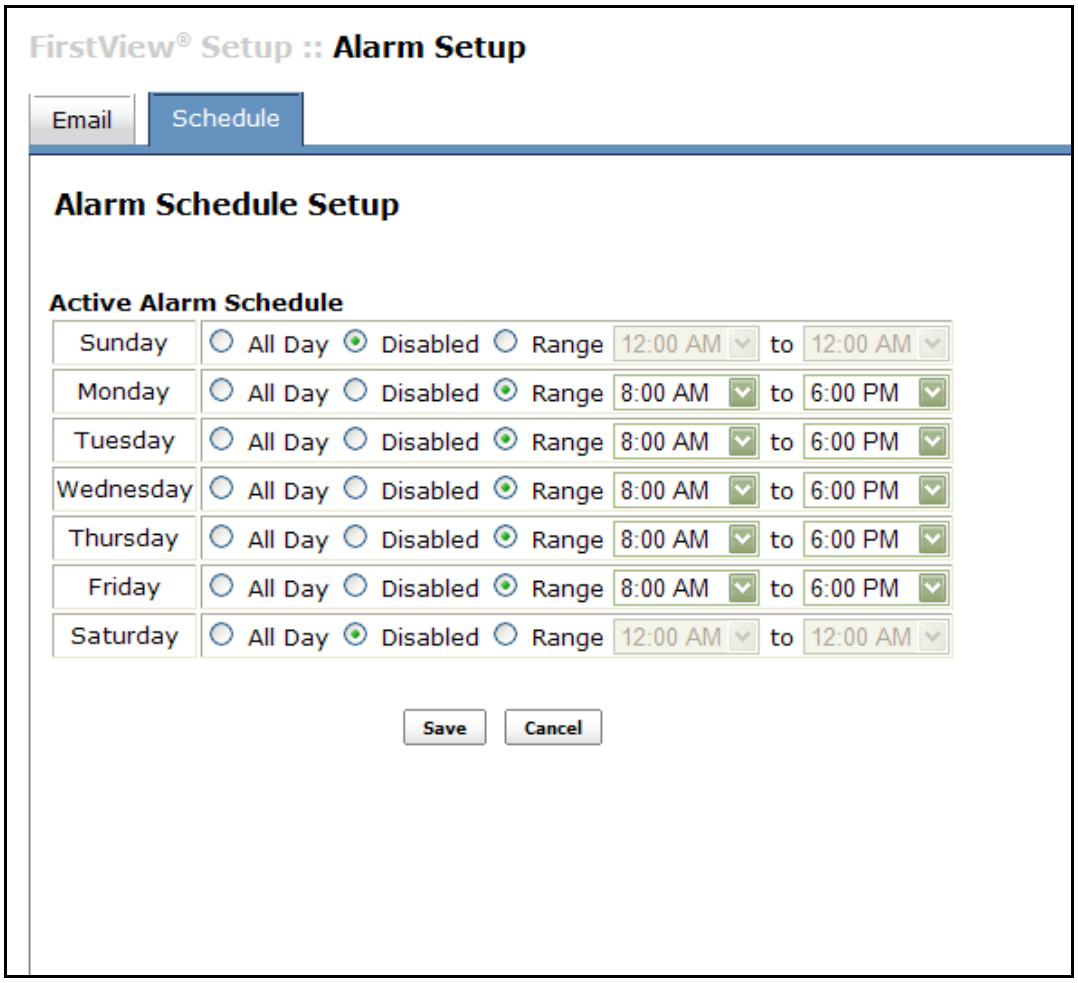


2.12.2: Alarm Schedule Setup

On the **"Schedule"** tab, the system administrator can define the global alarm schedule for the FirstView® system. The global alarm schedule affects all alarm inputs in the system (e.g. cameras configured for motion detection and all types of supported sensors).

The global alarm scheule defined on this page determines when (or if) alarms should be suppressed by the FirstView® system. (A suppressed alarm will be processed and stored in the database but will not appear in the Alarm View. Suppressed alarm(s) will appear in the Alarm Archive page.)

For example, alarms from cameras that are configured for motion detection or a video analytics sensor that is configured to detect people loitering in a restricted area may only be valuable during the evening hours. So instead of ignoring lots of alarms received during the day while an area is occupied, the FirstView® system can be configured to suppress alarms that occur during working hours.



To configure the global alarm schedule for each day:

- **All Day:** Alarms will always be displayed in the Alarm View and will never be suppressed.
- **Disabled:** Alarms will always be suppressed and will never be displayed in the Alarm View.
- **Range:** Alarms will be displayed in the Alarm View during the time range defined and will be suppressed during all other times.
    - In the example shown above, alarms will only be displayed in the Alarm View during the 8:00am – 6:00pm workday. Alarms that occur in the overnight hours or on the weekend are suppressed and will only be displayed in the Alarm Archive.

Note: If there are alarm inputs in the system that are exceptions to the global alarm schedule, the system administrator can configure the device alarm schedule separately.

Please see **Section 2.3.3** for more details on the device alarm schedule.

2.13: Configuring System Groups

FirstView® Menu / Setup / System Setup / **Display and Location Setup**

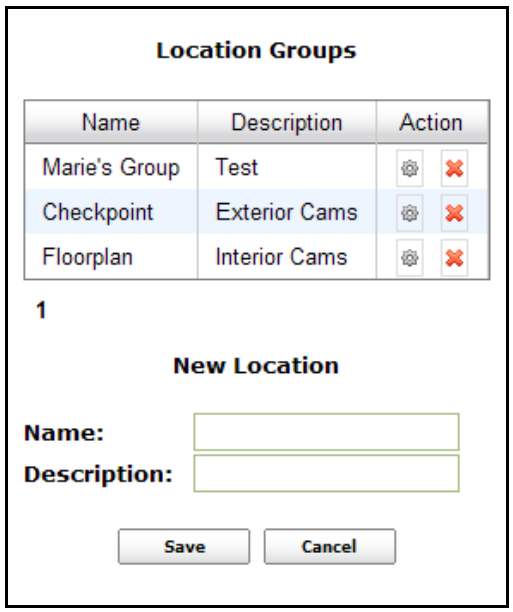
System Groups for viewing groups of video feeds in FirstView® fall into two categories: Location Groups and Display Groups.

Location Groups: Are accessible by all users in a FirstView® system on the tree menu under FirstView® Menu / Locations. They are created by administrators but can be viewed and modified by any user. These groups allow users to view up to 16 cameras simultaneously.

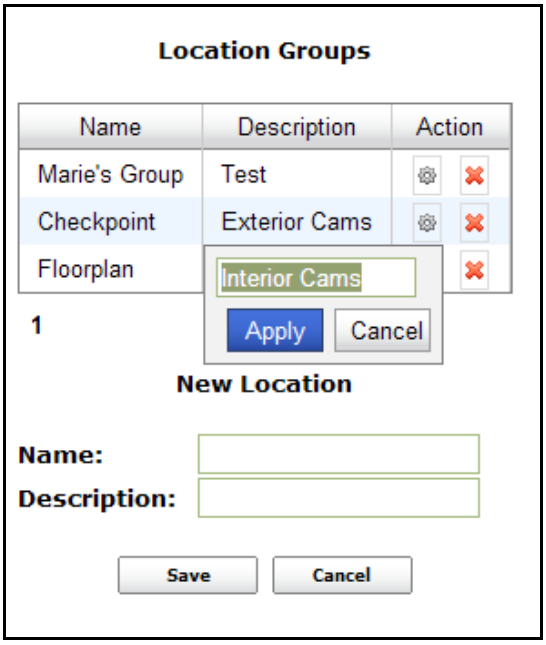
Display Groups: Are accessible on a user basis on the tree menu under FirstView® Menu / Displays. These groups are created by users and can only be viewed by the user who created them. These groups allow users to create a customized group display of up to 16 video feeds.

2.13.1: Creating Location Groups

To create a Location Group, enter a name and description in the fields under “New Location.” Click the “Save” button to add the group to the list shown below. The new Location Group will appear on the FirstView® Menu under Locations.



To modify the name or description for a Location Group, click the Name cell and the pop-up editing field shown below will open. Make any necessary changes and click “Apply” to save or “Cancel” to close the editing window.

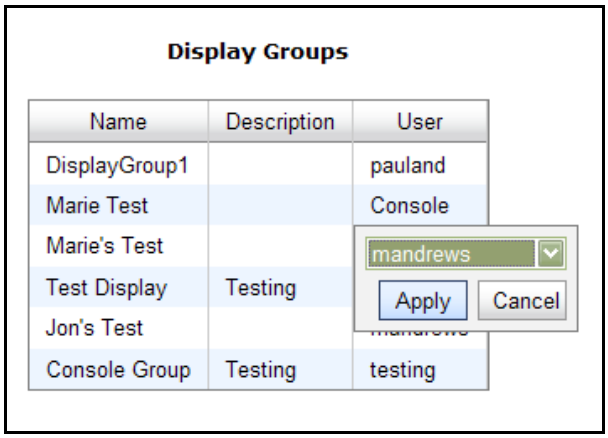


To configure the location group, click the button. The Location Group page will automatically be opened. Please see **Section 3.4** for more details on modifying Location Groups.

To delete a location group, click the button. The group will be immediately deleted from the list.

2.13.2: Assigning Owners to Display Groups

Display Groups are created by users and can only be viewed by the user who created them. To transfer ownership of a Display Group from one user to another, click the User cell and the pop-up editing field shown below will open. Select the desired user from the drop-down menu and click “Apply” to save or “Cancel” to close the editing window.



Please see **Section 3.5** for more details on creating and modifying Display Groups.

Chapter 3: FirstView® Cameras

3.1: Viewing Live Video

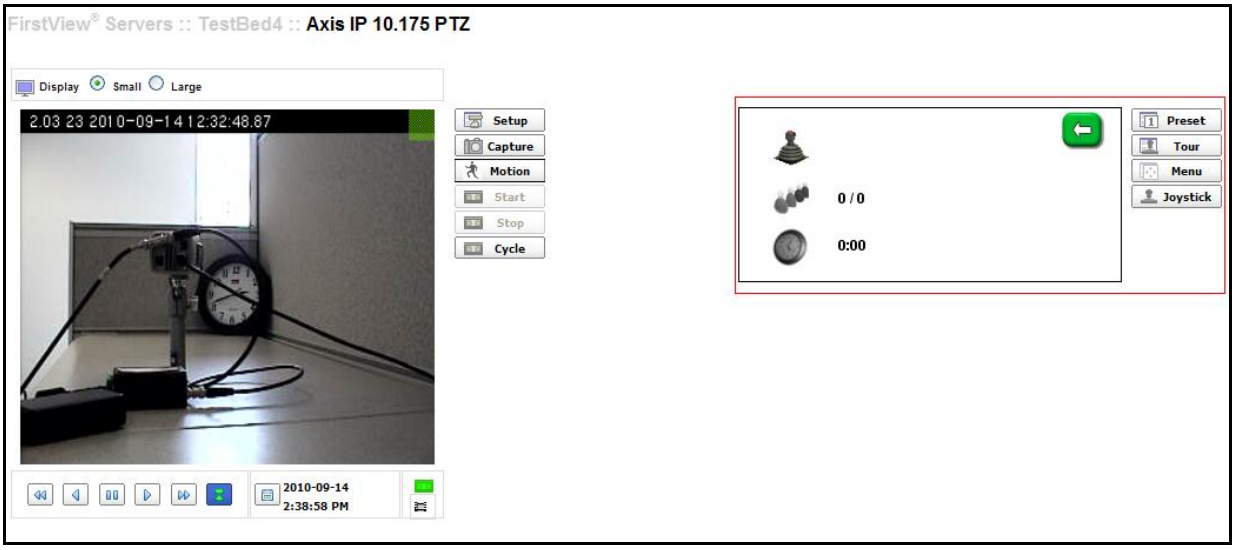
FirstView® Menu / Servers / Name of Server / **Camera Name**

(Pan, Tilt, and Zoom) PTZ Camera Icon:

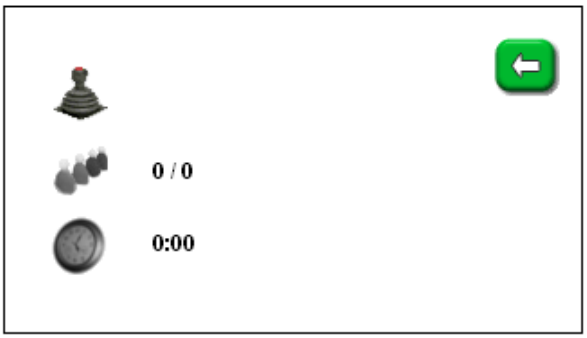
Fixed Camera Icon:

3.1.1: Camera Controls

To view and/or control a live video feed, click either a camera name or device icon to open the screen shown below. The area highlighted in red will only appear if a camera is PTZ capable.



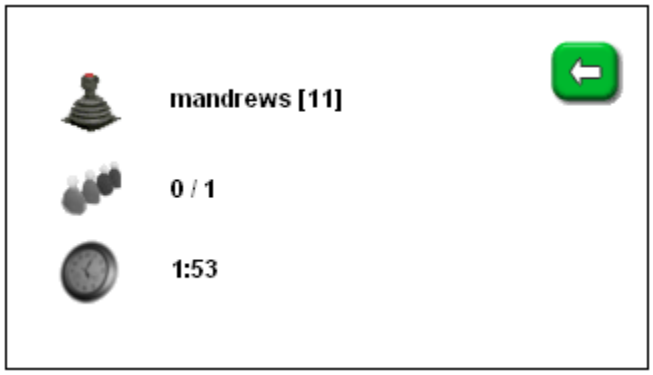
Taking Control of a Camera

	
Click the Green Arrow button to view Camera Control.	**Camera Control Click the Red X button to release control.**

Note: If a user is controlling a camera and a user with an authorized user role and a higher priority level needs to control the camera, they can usurp control from the original user. The original user will enter the queue (please see below) and can wait for the control to become available.

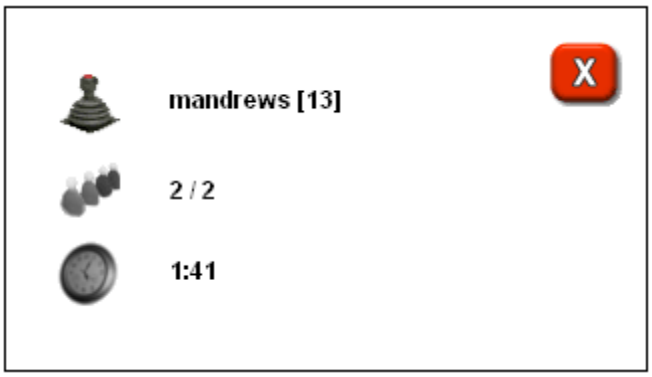
Entering the Queue

Each user is given a pre-determined amount of time to control a camera (in the examples below, each user has 2 minutes). If other users are in the queue, control is automatically relinquished after time expires and is given to the next user. If there are no users in the queue, a user may keep control of a camera until they click the red X button.



Click the Green Arrow button to Enter the Queue.

* The user name displayed next to the Joystick icon indicates who is currently using the PTZ controls.
  - In this example, “mandrews” is controlling this camera.
* The numbers displayed next to the Queue icon indicates your location in the queue.
  - In this example, the user is not yet in the queue, which contains one other user. (Location = 0 of 1)
* The time displayed next to the clock icon indicates how much time the current user has left to use the PTZ control.



Click the Red X button to Exit the Queue.

- In this example, “mandrews” is controlling this camera.
- In this example, the user is in the queue, which contains one other user. (Location = 2 of 2)
- In this example, the user has to wait 1 minute and 41 seconds before they can use the PTZ controls.

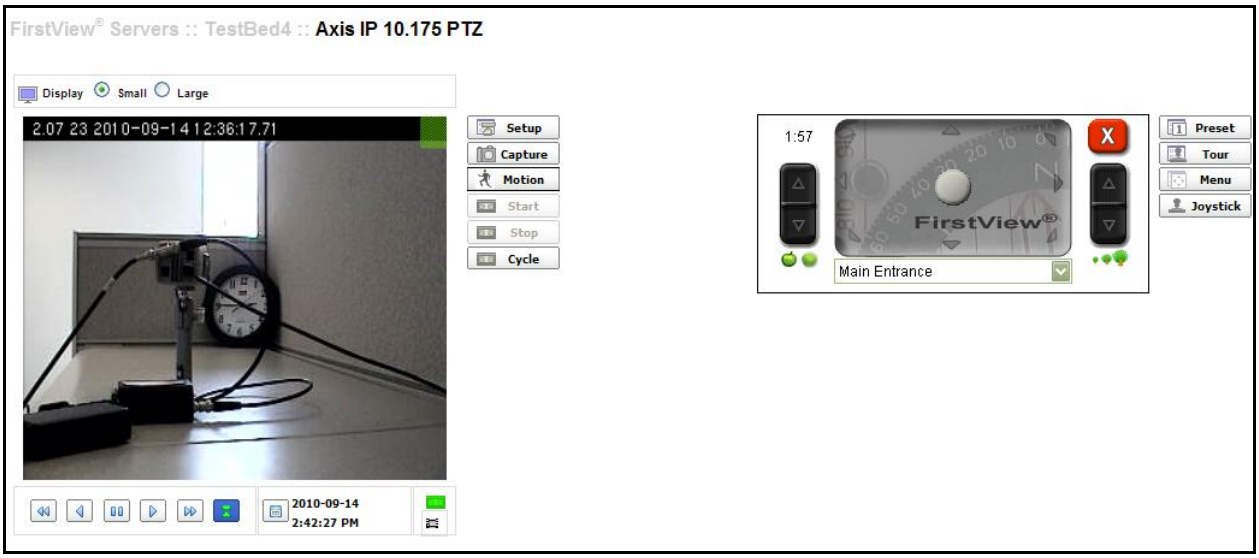
Wait for time to expire and control to appear.

Controlling the Camera

The Camera Control (shown below) consists of:

- Pan and Tilt Touch Pad: Used to tilt the camera up and down and pan from side to side.
- Puck: Circle in center of touch pad – click and drag to tilt and pan camera.

- Zoom Control **(On Right)**: Click the up and down arrows to zoom in and out.
- Focus Control **(On Left)**: Click the up and down arrows to raise or lower the focus level.
- Red X Button: Click to release control of the camera.
- Preset Selector: Drop down menu - click to view presets. (Please see **Section 2.2.6** for a complete description of configuring presets.)



In addition to sliding the puck to move the camera, users can also click any of the gray arrows on the touch pad to tilt and pan the camera.

3.1.2: Using the PTZ Joystick

The FirstView® PTZ joystick can be used in place of (or in tandem with) the standard camera controls. Once the PTZ controls have been enabled for a camera, the user must take control of a camera before using the PTZ joystick (shown below).

- To Pan and Tilt the camera, move the joystick in the same basic directions available on the PTZ touch pad (up, down, left, right, and to each of the four corners).
- To Zoom In, twist the knob at the top of the joystick to the right.
- To Zoom Out, twist the knob at the top of the joystick to the left.
- To Raise the Focus Level, click the right button on top of the joystick knob.
- To Reduce the Focus Level, click the left button on top of the joystick knob.
- To execute a programmed preset or other action, click any of the 4 Action Buttons on the joystick base.

Please see **Section 2.2.9** for a complete description of how to configure and enable the PTZ joystick.

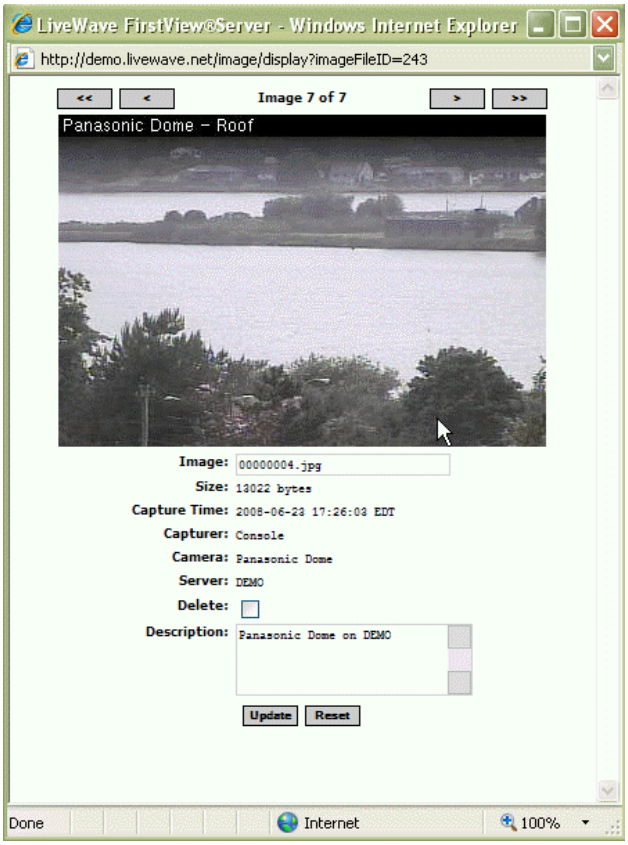
3.1.3: Display

The Display selector allows users to resize the video display within the FirstView® window. The default setting is “Small.” To increase the size of the video, click the “Large” radio button and the page will automatically refresh.

Note: The displayed size of the video is not necessarily the same as the resolution of the video.

3.1.4: Image Capture

FirstView® allows users to capture and store still images from live and recorded video. To record a still image from a live video feed (or recorded video), click the Capture button. The pop up window shown below will open, allowing the user to save the captured image to FirstView® Media.



There are two editable fields in this window: “Image” and “Description.” These fields will have default entries, but the user can change the image name (be sure to leave the .jpg extension) and the image description. To erase any changes before saving, click the “Reset” button to return to the default entries.

Click the “Update” button to save the image before closing the window.

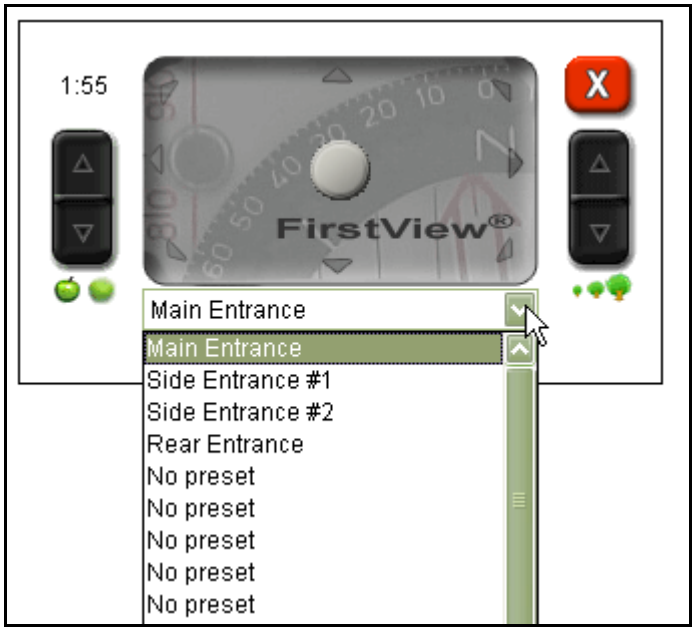
To delete the image, check the “Delete” checkbox and click the “Update” button.

To save a copy of an image to a local machine, print an image, or email an image, right click on the image in the pop up window and click “Save Picture As,” “Print Picture,” or “Email Picture.”

To view all captured images that have been stored in FirstView®, click View Images under Media on the menu. Please see **Section 3.3.6** for more details on this process.

3.1.5: Presets

To view a Preset, click the drop-down menu below the camera control. The image below shows a list of sample Presets – click a Preset name and the camera will automatically pan, tilt, and zoom to the exact location defined during the Preset configuration process. (Please see **Section 2.2.6** for more details.)



3.1.6: Viewing Repeated Video

FirstView® Menu / Servers / Server Name / **Repeater Name**

Video repeaters are designed to allow users of one FirstView® system to view video being captured by a camera on a separate FirstView® system.

To view live video being repeated by a Video Repeater:

- Click the Repeater Name on the FirstView® Menu to open the screen shown below.

- To modify the configuration settings for the repeater, click the Setup button.
  - For complete details on how to configure a video repeater, please see **Section 2.2.10**.
- To capture an image from the live video, click the Capture button.
  - For complete details on how to capture images, please see **Section 3.1.4**.
- To change the size of the video feed, click the Small or Large radio buttons.

Note: If a repeater is configured to record video, the recordings can be controlled just like any other camera. Please see **Section 3.2.1** for more details on controlling video recorders.

3.1.7: Viewing Full Screen Video

Users can view full screen video from the following locations in a FirstView® system:

- Device Pages
- Location Groups
- Display Groups
- Alarm View, Alarm Archive, and Alarm MuxView
- Image Maps
- Geographic Map

To view full screen video, double-click the video feed and the video will change to full screen.

To exit full screen mode, click the “Esc” key or double-click the video feed again.

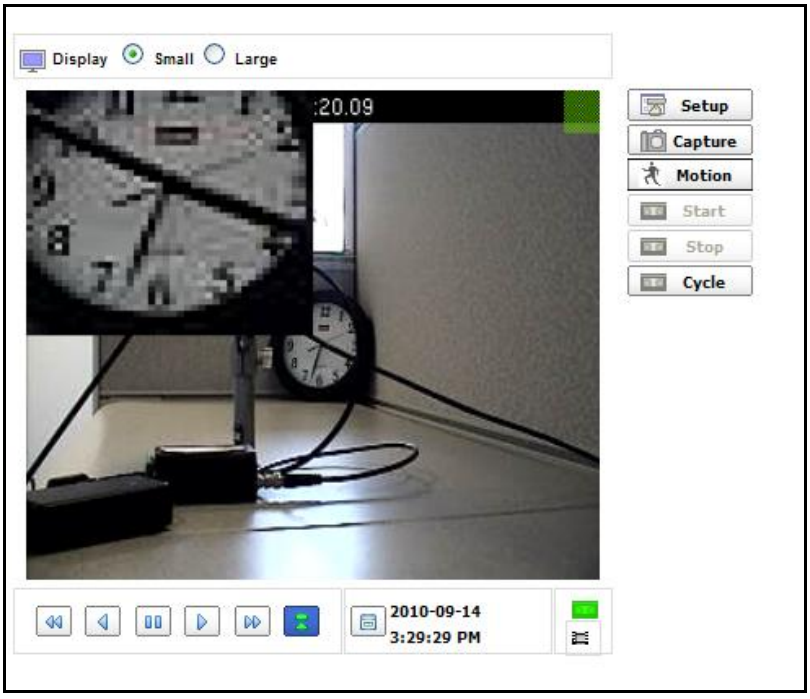
3.1.8: Viewing Magnified Video

Users can view magnified video from the following locations in a FirstView® system:

- Device Pages
- Location Groups
- Display Groups
- Alarm View, Alarm Archive, and Alarm MuxView
- Image Maps
- Geographic Map

To open the magnifier, right-click on the video feed. Move the mouse to the part of the video that needs to be magnified. The magnified portion of the video will be displayed in the upper left or bottom right of the video area.

To lock the magnifier in place, right-click again.



To close the magnifier, right-click on the video feed a third time.

3.2: Viewing Recorded Video

FirstView® Menu / Servers / Name of Server / **Camera Name**

All new units are automatically configured to continuously record video. Please see **Section 2.2.4** for more details about modifying the recording mode or changing settings.

3.2.1: Creating Video Clips

Depending on the Video Recorder settings defined during the Camera Setup process, video clips can be created manually or continuously (please see **Section 2.2.4** for more details).

- If the Video Recorder is configured to record clips manually, click the Start button to begin recording a video clip.
- If the Video Recorder is configured to record clips manually and a video clip is currently being recorded, click the Stop button to end recording a video clip.
- If the Video Recorder is configured to record clips on a continuous loop, click the Cycle button to end the current clip and begin a new clip.
    - **Note:** If clips are being continuously recorded, the Start and Stop buttons will not be available.

3.2.2: Understanding the Playback Controls

The Playback Control toolbar allows users to access a camera's video archives.

The toolbar consists of the following components:

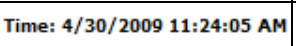
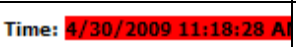
Control Name	Button - Inactive	Button - Active	Control Description
Export Recording		N/A	Clicking this button opens the custom export dialog and allows the user to set a start and end time and export video from FirstView® on-demand. Please see **Section 3.2.6** for more details about custom exporting.
Jump to a Date and Time		N/A	Clicking this button opens a date and time calendar that allows the user to jump to a specific point in the camera's archive. • "Jump" from Live or Archive: Video will play forward at normal speed from the time selected. • "Jump" from Live or Archive (While Paused): Video will jump to the selected time and return to pause.
Fast Rewind			When a camera is in live mode, clicking this button will move the camera into archive mode and begin play video backward at **16x** normal speed.
Rewind			When a camera is in live mode, clicking this button will move the camera into archive mode and begin play video backward at normal speed.

Pause			Clicking this button will pause the video in either live or archive mode.
Forward			When a camera is in archive mode, clicking this button will play video forward at normal speed. (**Note:** While in live mode, clicking this button will have no effect.)
Fast Forward			When a camera is in archive mode, clicking this button will play video forward at **16x** normal speed. (**Note:** While in live mode, clicking this button will have no effect.)
Play Live Video			When a camera is in archive mode, clicking this button will immediately return the user to live mode.

The following Messages and Information are provided below the toolbar:

Category	Description	Icon	Status	Icon	Status
Recording Indicator	Visual indicator to the user whether the camera is currently recording.		Recording		Not Recording

Category	Description	Icon	Status
Message Area	When the user goes backward to the end of the archive, an “End of Archive” icon will be displayed and the video will pause on the last available frame.		End of archive reached.
Message Area	If a user attempts to jump to a date or time that is invalid, or tries to play (forward, backward, etc.) through a point in the archive where video is unavailable or missing, a “Skipping” icon will be displayed to the right of the recording indicator.		Skipping Missing or Unavailable Video (**Note:** The date and time will flash red to indicate footage is being skipped.)

Category	Description	Icon	Status
Date and Time of Video	The date and time of the video currently being viewed in live or archive mode.		Normal
Date and Time of Video	When the background of the date and time flashes red, missing or unavailable video is being skipped and the date and time will update to reflect the next available date and time of video.		Skipping Missing or Unavailable Video

The controls are available when viewing video on the following pages in FirstView®:

- **Geographic Map**
  - Click a camera device icon to view video and the control toolbar will be displayed directly below the video. (Please see **Section 5.1.2** for more details.)

- **Image Maps**
  - Click a camera device icon to view video and the control toolbar will be displayed directly below the video. (Please see **Section 5.2.2** for more details.)
- **Camera Device Pages**
  - FirstView® Menu / Servers / Server Name / **Camera Name**

- **Alarm View and Alarm Archive**
  - The controls will be displayed below the video for each alarm. When an alarm is selected, the video will cue to five seconds prior to the alarm and begin playing. Please see **Section 6.5** for more details.)

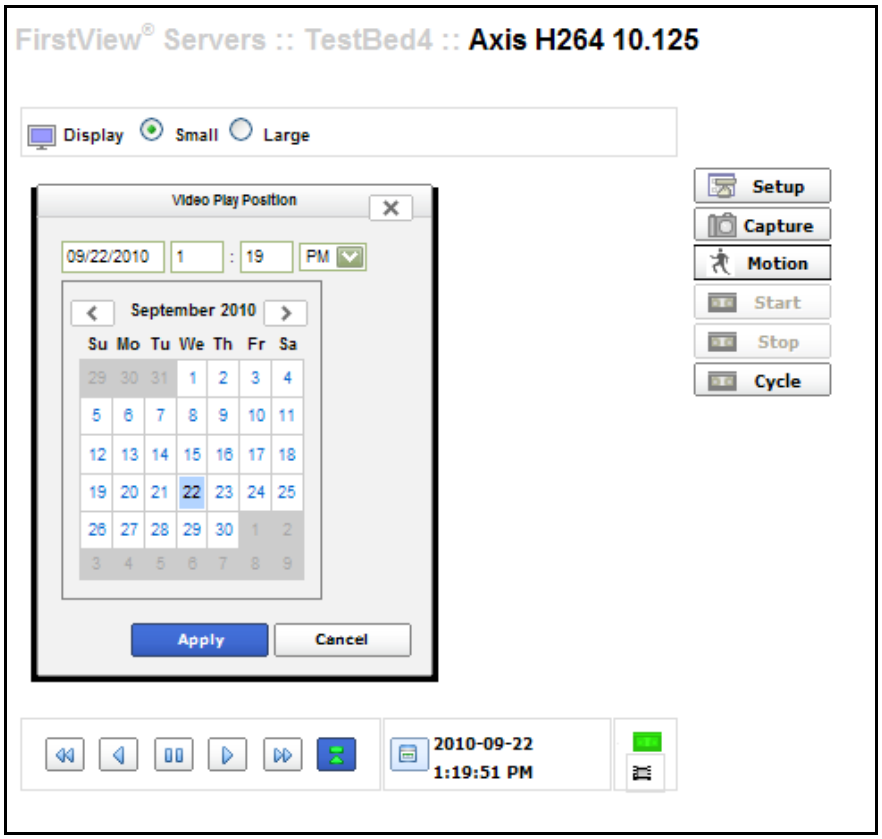
3.2.2: Entering Archive Mode

There are two ways to enter archive mode and access a camera's video archive:

- Click the "Jump" button and select a specific date and time to go to.
- Click the "Rewind" or "Fast Rewind" button to move back into the archive.

To jump to a specific date and time:

- Click the “Jump” button to open the calendar shown below.



- Select a date using the calendar or manually enter the desired date in the text box.
- Enter a time and select am or pm.
- Click “Apply” to jump to the selected date and time and begin playing video forward at normal speed.

Important Note: Users can jump to any valid point in the archive while in live mode or archive mode. If the desired date and time are not available, the closest available video will be displayed. The “skipping” icon will be displayed next to the recording indicator and the date and time will flash red to inform the user that the selected date and time were not available.

3.2.4: Using the Playback Controls in Archive Mode

Once in archive mode, users can move through the archives using:

- The “Jump” button
- Rewind and Fast Rewind
- Forward and Fast Forward

The date and time displayed below the control toolbar will tell the user exactly where they are in the archive.

3.2.5: Returning to Live Mode

To return to live video at any time while in archive mode, click the “Play Live Video” button on the Playback Control Toolbar.

3.2.6: Custom Video Export

When a user clicks the “Export Recording” button, the custom export dialog will open to allow the user to set a start and end time and export video from FirstView® on-demand.

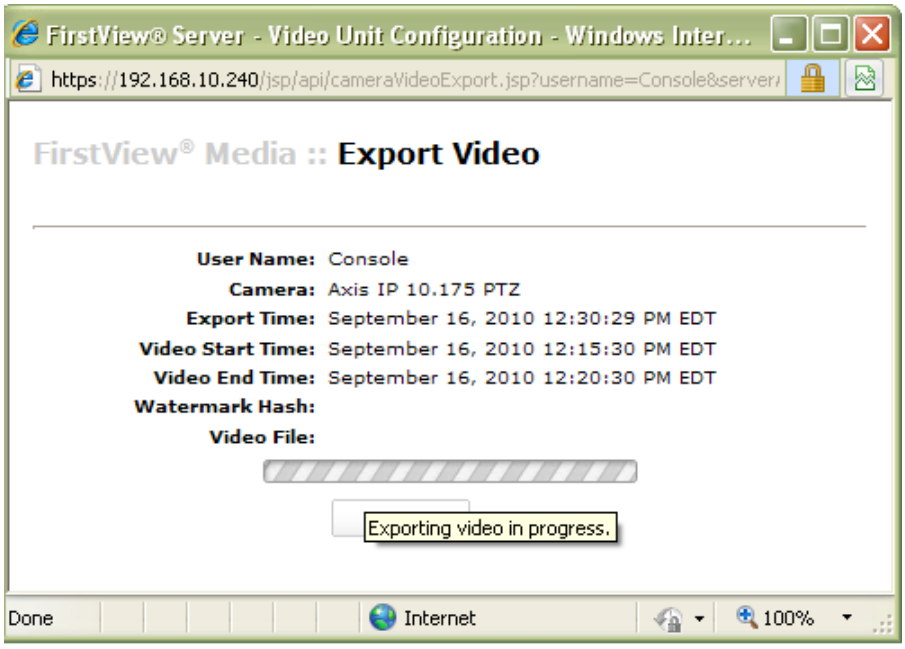
Note: Custom video exports are only available on the device page. The device page is accessible by going to: FirstView® Menu / Servers / Name of Server / **Camera Name**.

To create a custom video export:

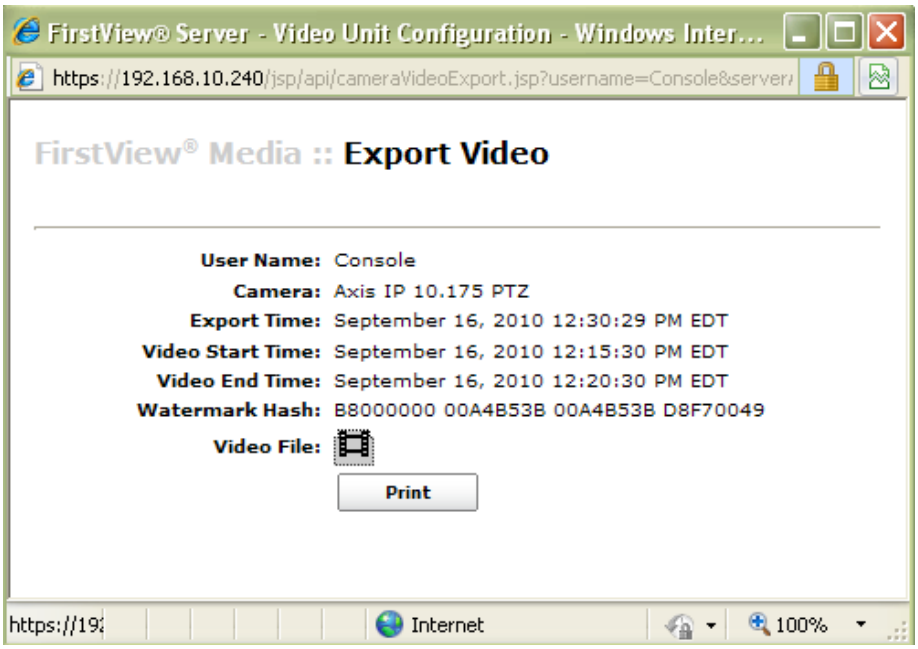
- Click the “Export Recording” button
- The dialog shown below will open underneath the playback control toolbar:

- To set the start time, click the “Jump” button (on left side of custom export dialog) and select a date and time. The video will jump to that time and start playing forward.
- Use the archive controls to find the exact starting time of the video you wish to export.

- Once the video is at the desired time, click the “Set Start Time” button (on left side of custom export dialog).
- To set the end time, click the “Jump” button (on right side of custom export dialog) and select a date and time. The video will jump to that time and start playing forward.
- Use the archive controls to find the exact ending time of the video you wish to export.
- Once the video is at the desired time, click the “Set Start Time” button (on right side of custom export dialog).
- Click the “Export Video” button to create a custom video file. The pop-up window shown below while the export is in progress.

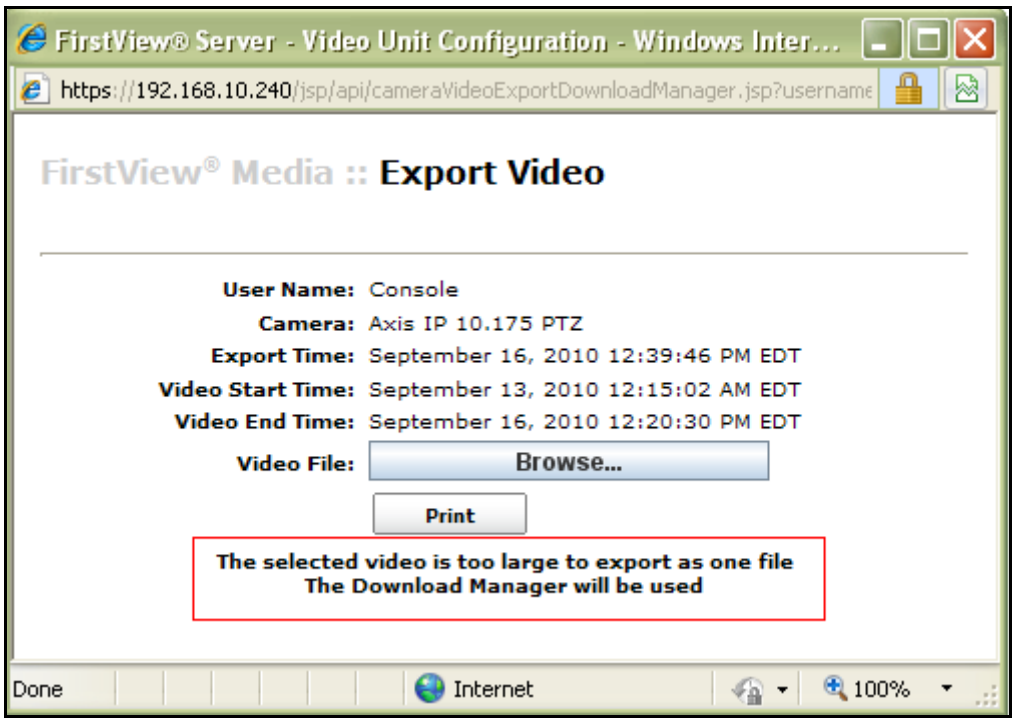


- Once complete, the Watermark Hash for the file will be displayed, the link to download the file will appear, and the user will be able to click the “Print” button to print the pop-up window (as shown below).



- To download the file, click the “Download” button and save the file.
- To print a record of the video export, click the “Print” button.

Note: If the size of the custom video export requested exceeds a file size of 200MB, the message highlighted in red below will be displayed:



Follow the process below to export multiple video files simultaneously:

- Click the “Browse” button and select a folder on the computer being used to store the requested video files to.
    - **Note:** All files that fall within the requested start and end times of the export will be downloaded.
- To print a record of the video export, click the “Print” button.
    - Each file that was exported will be listed with the start time, end time, filename, and watermark hash.

3.3: FirstView® Media: Viewing Stored Video and Images

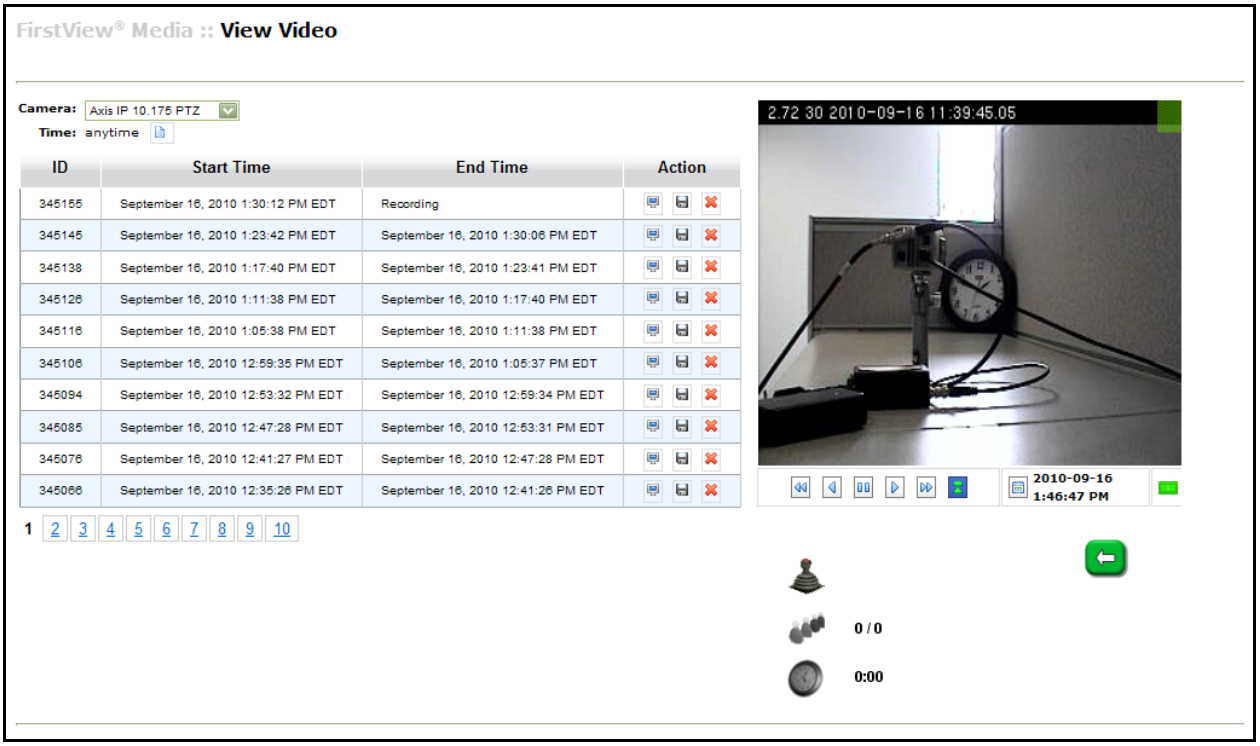
FirstView® Menu / Media

FirstView® Media allows users to access video clips recorded by all cameras in the FirstView® system and images captured from any camera.

3.3.1: Searching for Video Clips

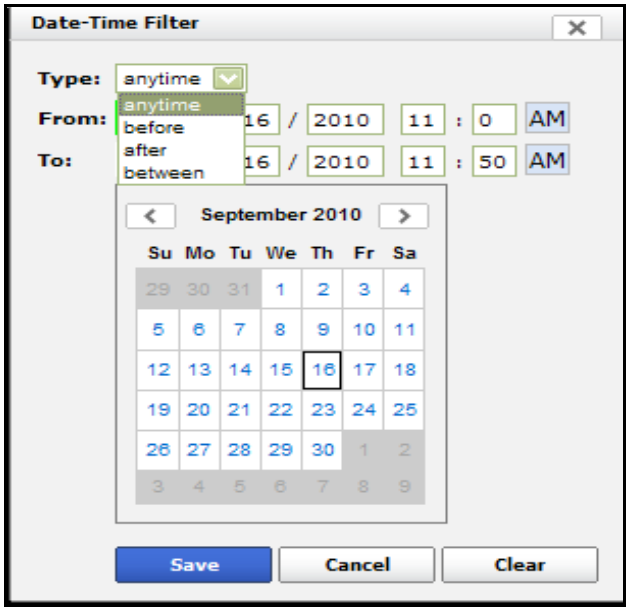
FirstView® Menu / Media / View Video

Select a camera from the drop-down menu at the top of the page to view all recordings associated with that camera. The live video (with archive controls and PTZ controls if applicable) will be displayed to the right of the list of recordings.



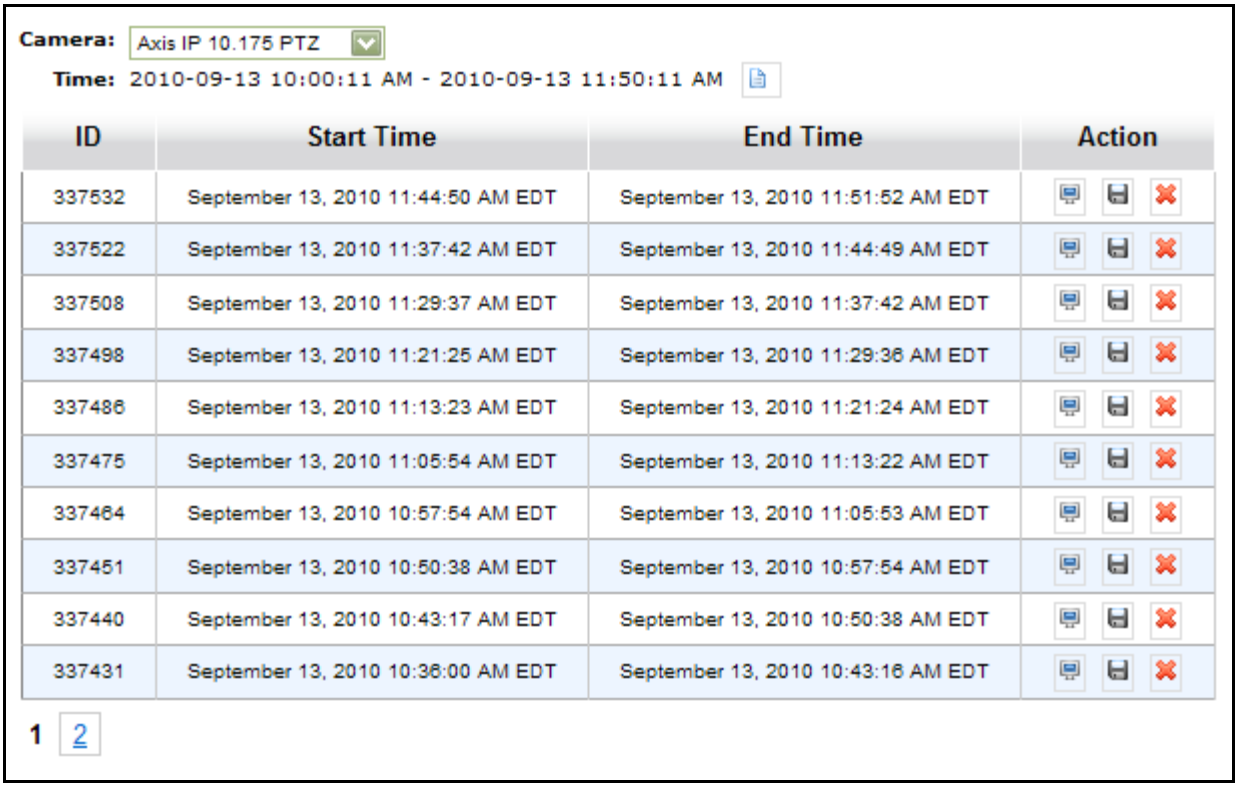
Users can filter the list of recorded video clips by specifying one or all of the following options:

- **Camera:** This is a drop-down menu listing all cameras that record video.
- **Time:** Clips can also be sorted by specifying a Time Range:
  - Click the button to define the time range and the pop-up shown below will open.
  - Select one of the following options:
    - Anytime: This will display all recordings associated with the selected camera.
    - Before: This will display all recordings before the date and time entered.
    - After: This will display all recordings after the date and time entered.
    - Between: This will display all recordings between the from and to dates and times entered.



After specifying the parameters, click “Save” to display the search results.

In the following example, a user searched for clips from the Camera called “Axis IP 10.175 PTZ” during the course of a morning (between 10:00am and 11:50am on 09/13/2010).



ID	Start Time	End Time	Action
337532	September 13, 2010 11:44:50 AM EDT	September 13, 2010 11:51:52 AM EDT	
337522	September 13, 2010 11:37:42 AM EDT	September 13, 2010 11:44:49 AM EDT	
337508	September 13, 2010 11:29:37 AM EDT	September 13, 2010 11:37:42 AM EDT	
337498	September 13, 2010 11:21:25 AM EDT	September 13, 2010 11:29:36 AM EDT	
337486	September 13, 2010 11:13:23 AM EDT	September 13, 2010 11:21:24 AM EDT	
337475	September 13, 2010 11:05:54 AM EDT	September 13, 2010 11:13:22 AM EDT	
337464	September 13, 2010 10:57:54 AM EDT	September 13, 2010 11:05:53 AM EDT	
337451	September 13, 2010 10:50:38 AM EDT	September 13, 2010 10:57:54 AM EDT	
337440	September 13, 2010 10:43:17 AM EDT	September 13, 2010 10:50:38 AM EDT	
337431	September 13, 2010 10:36:00 AM EDT	September 13, 2010 10:43:16 AM EDT	

1 2

If the number of results exceeds ten recordings, use the page numbers at the bottom of the list (e.g. 1 and 2 in the example above) to view all recordings.

3.3.2: Viewing and Deleting Video Clips

FirstView® Menu / Media / View Video

To view a clip in the FirstView® window, click the "Play" button and the video to the right of the recording will Jump to the start time of the selected recording and begin to play. The user can then move around in the archive using the playback controls.

To delete a clip, click the "Delete" button .

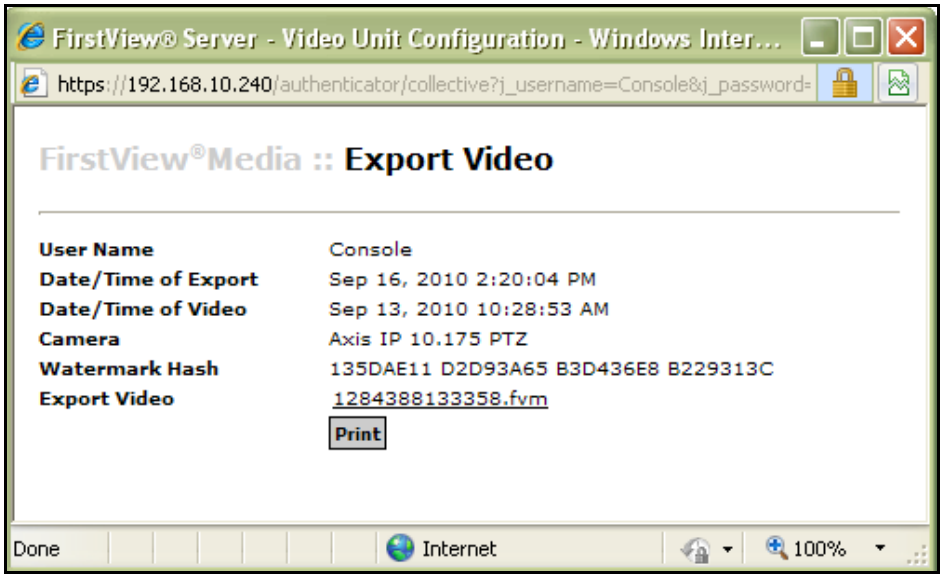
Note: The recording will be deleted immediately.

3.3.3: Downloading Video Clips

FirstView® Menu / Media / View Video

In addition to viewing video in the FirstView® window, users can also download a recording to view in the external FirstView® Media Player and/or save to a local machine.

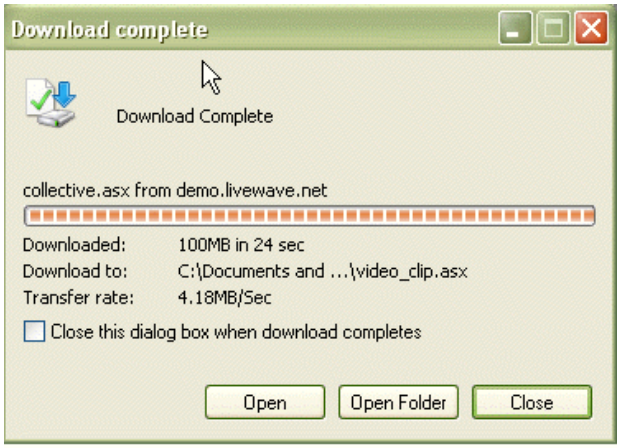
To download a recording, click the "Download" button . The pop-up window shown below will open once the file is ready for download.



To print a record of the video download, click the “Print” button.

To download the file, click the link to the filename or right-click the link to the filename and select “Save Target As”.

After the file download is complete, the pop up window shown below will appear. Users can decide to open the video clip, open the folder the clip was saved to, or close the window.



Exported clips can also be viewed with the FirstView® Media Player (available to download in Client Updates). Please see the following section for more details on this process.

Note: FirstView® video files are unique. To play a FirstView® video file on any machine, install the LiveWaveClient.exe from Client Updates to that machine before opening the file with the FirstView® Media Player.

3.3.4: FirstView® Media Player

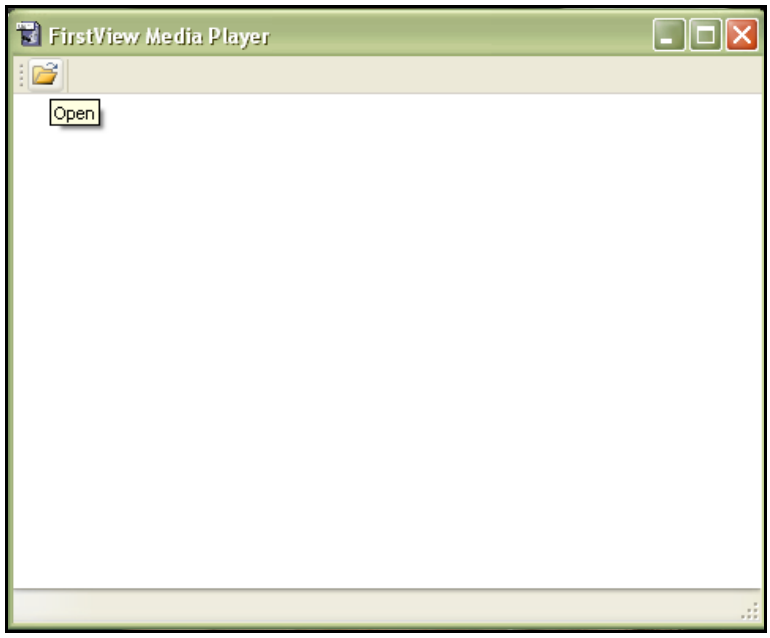
The FirstView Media Player® is automatically installed on any machine that has the LiveWave client installed. The client is available to manually download in Client Updates in: FirstView® Menu / Setup / **Client Updates / LiveWave Client.exe.**

To open the FirstView Media Player® go to:

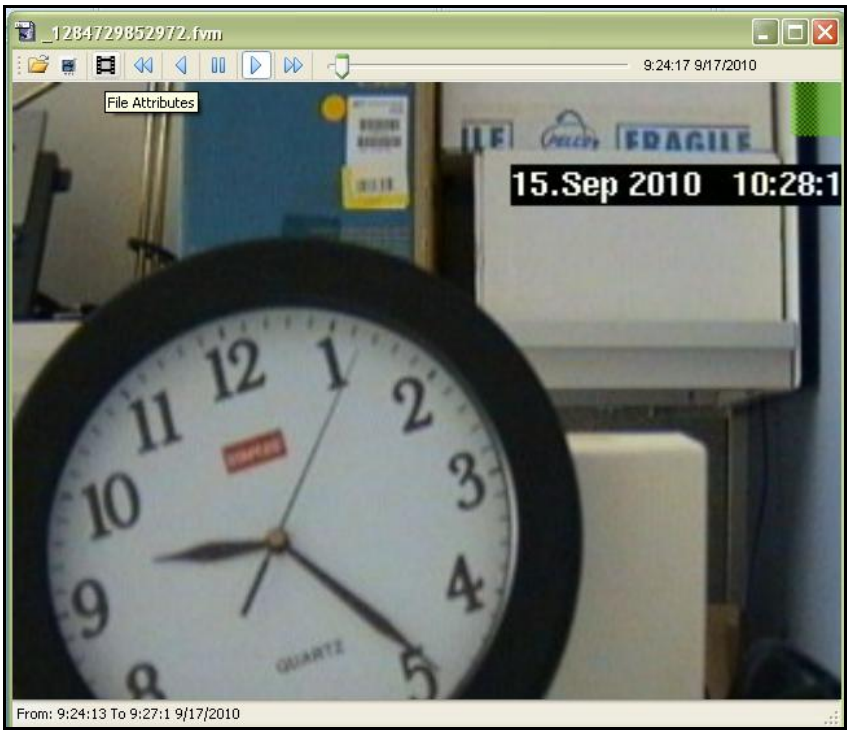
- Start Menu
- All Programs
- Smiths Detection
- FirstView Media Player

To play a file that has been exported from a FirstView® system (please see Section 3.3.3 or Section 3.2.6 for more details on exporting video):

- Open the FirstView® Media Player



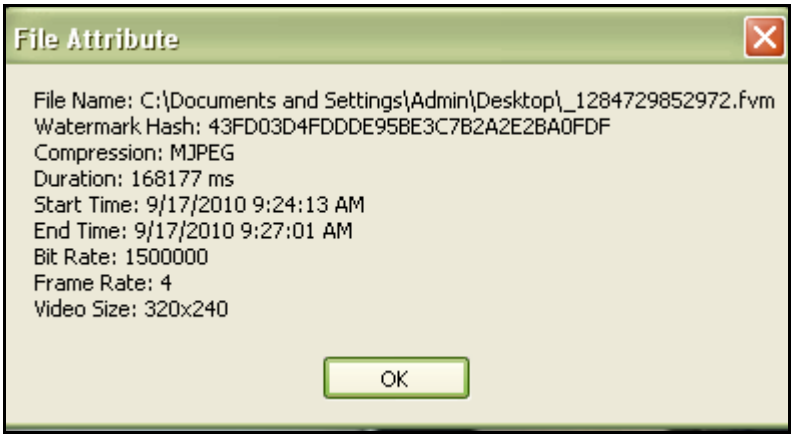
- Click “Open” and open the video file.
- The FirstView® Media Player will play the video.



- Use the playback controls at the top of the player to move back and forth within the file or click and drag with the slider. The current time of video being played will be displayed on the upper right corner of the player.

To view information about the file:

- Click the File Attributes button and the pop-up window shown below will open.

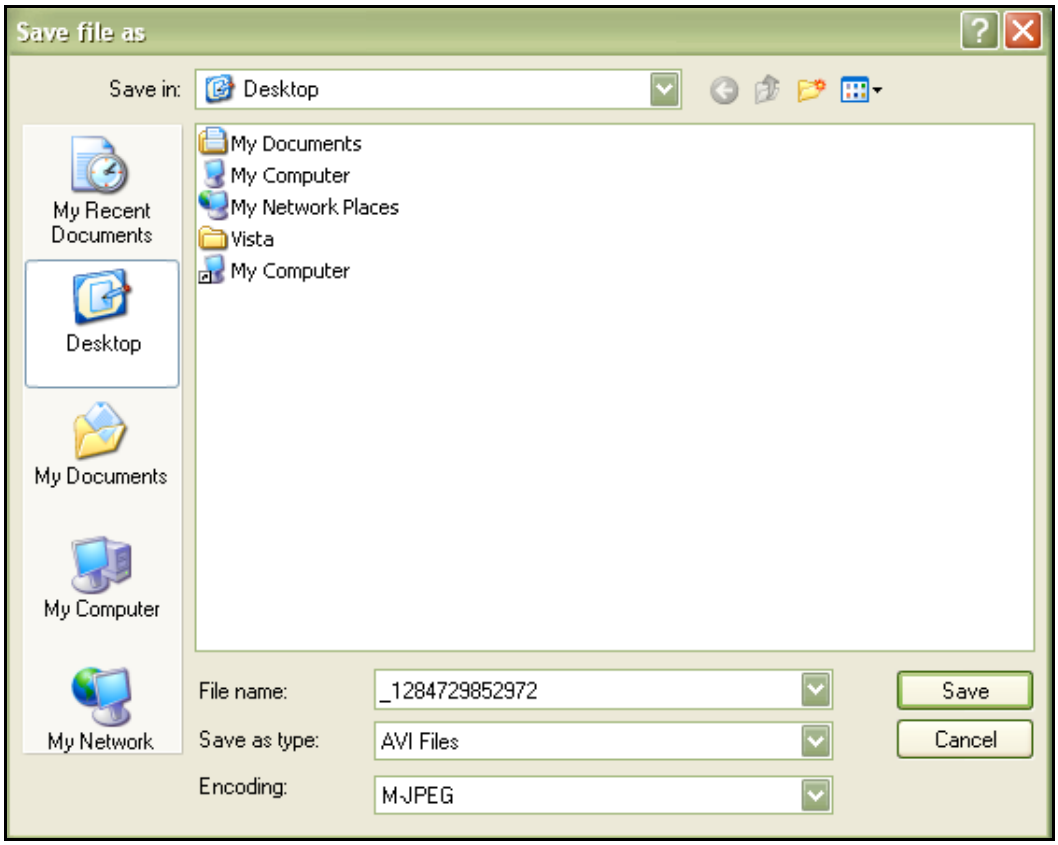


- Click the "OK" button to close the window.

To convert the exported .fvm (FirstViewMedia file format) file to an .avi file:

Note: Files that are.avi format can be played using external video players, such as Windows Media Player.

- Click the Convert to AVI button to open the pop-up window shown below.



- Select a location to save the .avi file to.
- Change the filename (if desired).
- Leave the Type as “AVI Files”.
- Select “M-JPEG” (Motion JPEG) or “Original Encoding” from Encoding drop-down menu.
- Click “Save”.
- A progress bar will appear at the bottom of the FirstView® Media Player. Once the progress bar reaches the end point (as shown below), the .avi file will appear in the specified location.

- The .avi file can be played using external players that support the format, such as Windows Media Player.

3.3.5: Watermarking

When exporting video as described in **Section 3.3.3** or **Section 3.2.6**, FirstView® provides a “Watermark Hash” reference number for each video clip. Watermarking is a technique used to verify that digital video exported from the FirstView® system has not been tampered with.

The Watermark Hash is a character/number sequence produced by an algorithm; it is unique to the file it is calculated from. Should the contents of the file be changed, a different Watermark hash would be calculated. The Watermark Hash in the example below is 43FD03D4 FDDDE95B E3C7B2A2 E2BA0FDF, and **must be saved at the time a video is exported in order to be used as a verifier**. By saving the Watermark Hash in a safe place, it is possible to recalculate the value of the file at a later date using the FirstView® Media Player and to compare the new Hash with the old to determine if the video had been tampered with.

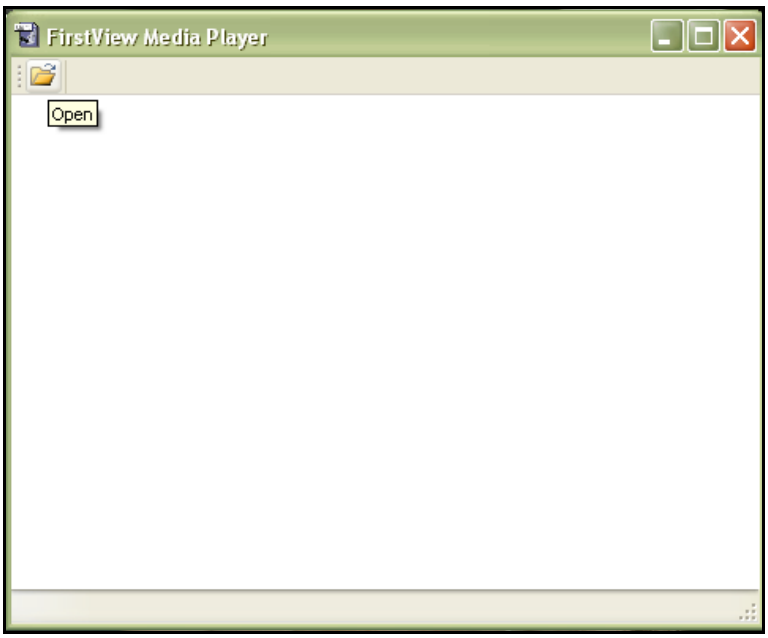
In order to submit video as evidence, the integrity of the video must be verifiable, and the Watermark Hash is one way to verify that a clip has not been altered.

The following process should be followed in order to use a video clip as evidence:

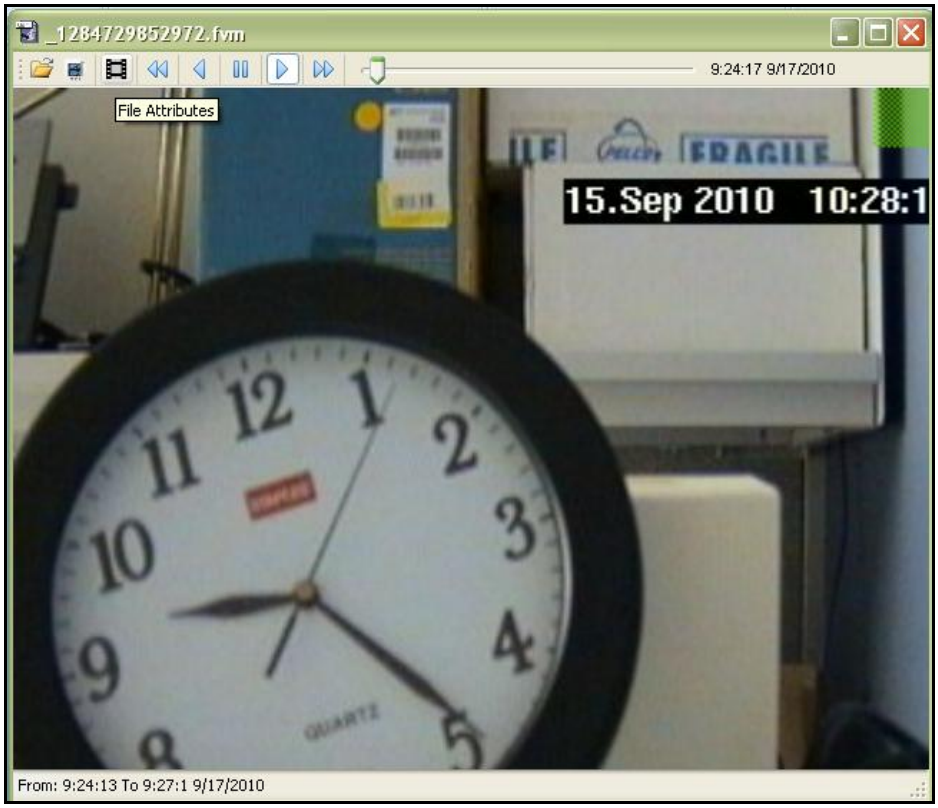
- Export the video clip or create a custom export.
- Record the Watermark Hash (use the “Print” button to print the screen shown above) and save in a secure location.
- Save the file.

To verify that a clip has not been altered:

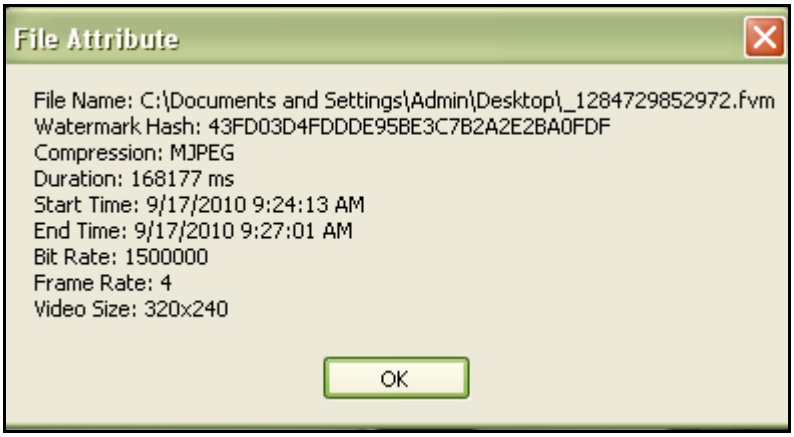
- Open the FirstView® Media Player
    - Available to download in Client Updates in: FirstView® Menu / Setup / **Client Updates / LiveWave Client**



- Click “Open” and open the saved clip.
- The FirstView® Media Player will play the clip.



- Click the File Attributes button to display information about the file.
    - As you can see in the example above, the Watermark Hash of the clip is exactly the same as when the clip was exported.



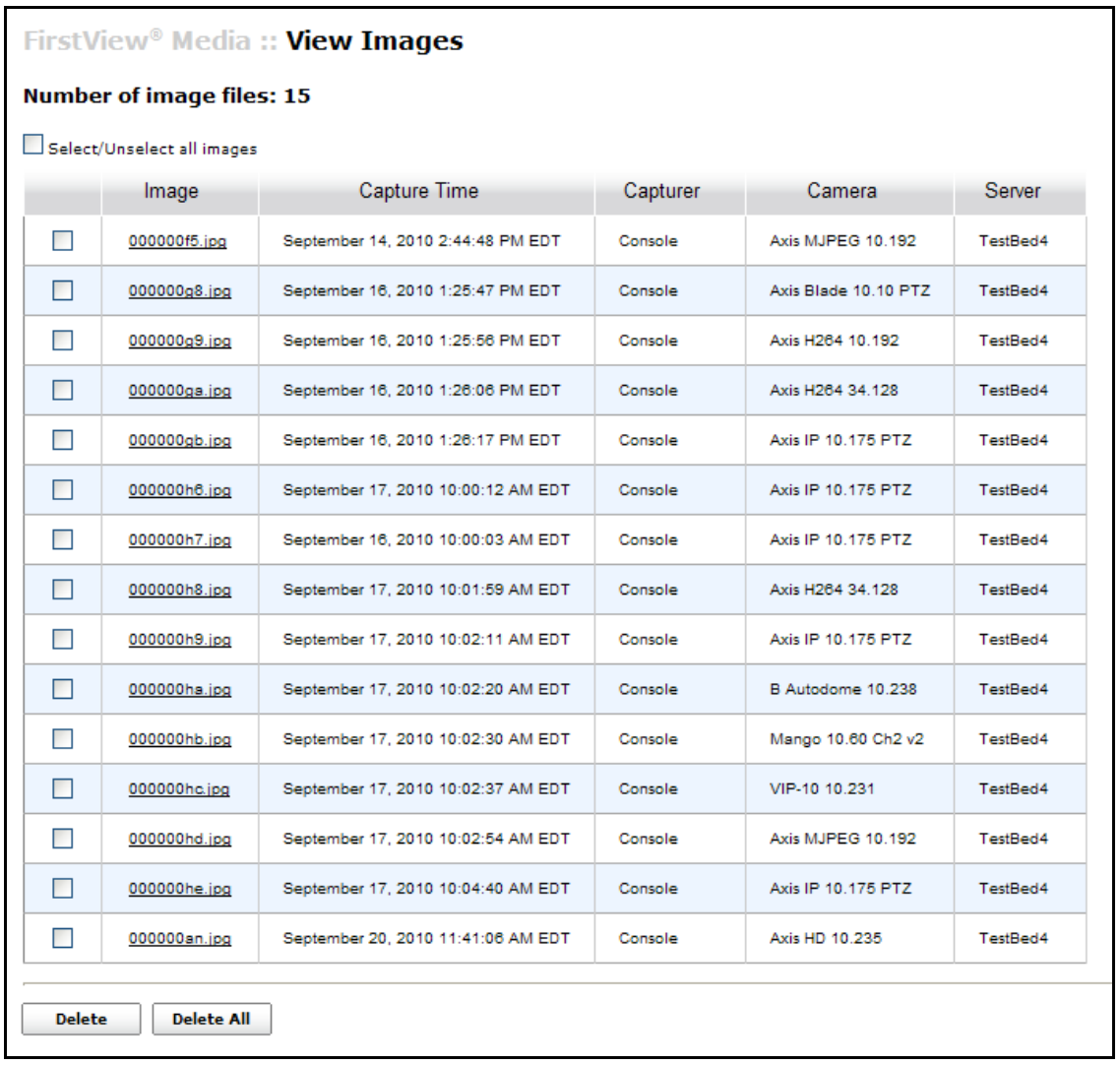
- Compare the Watermark Hash with the original Watermark Hash recorded at the time a clip was exported. If they match, the clip can be presented as evidence. If they do not, the clip has been tampered with since it was exported and cannot be presented as evidence.

Note: The integrity of video can also be verified using the visual cue located in the top right corner of all video. A green box indicates that the recording has not been tampered with and a red box indicates that the recording has been modified in some way.

3.3.6: Viewing Captured Images

FirstView® Menu / Media / View Images

The “View Images” page shown below houses a collection of images captured by all users.



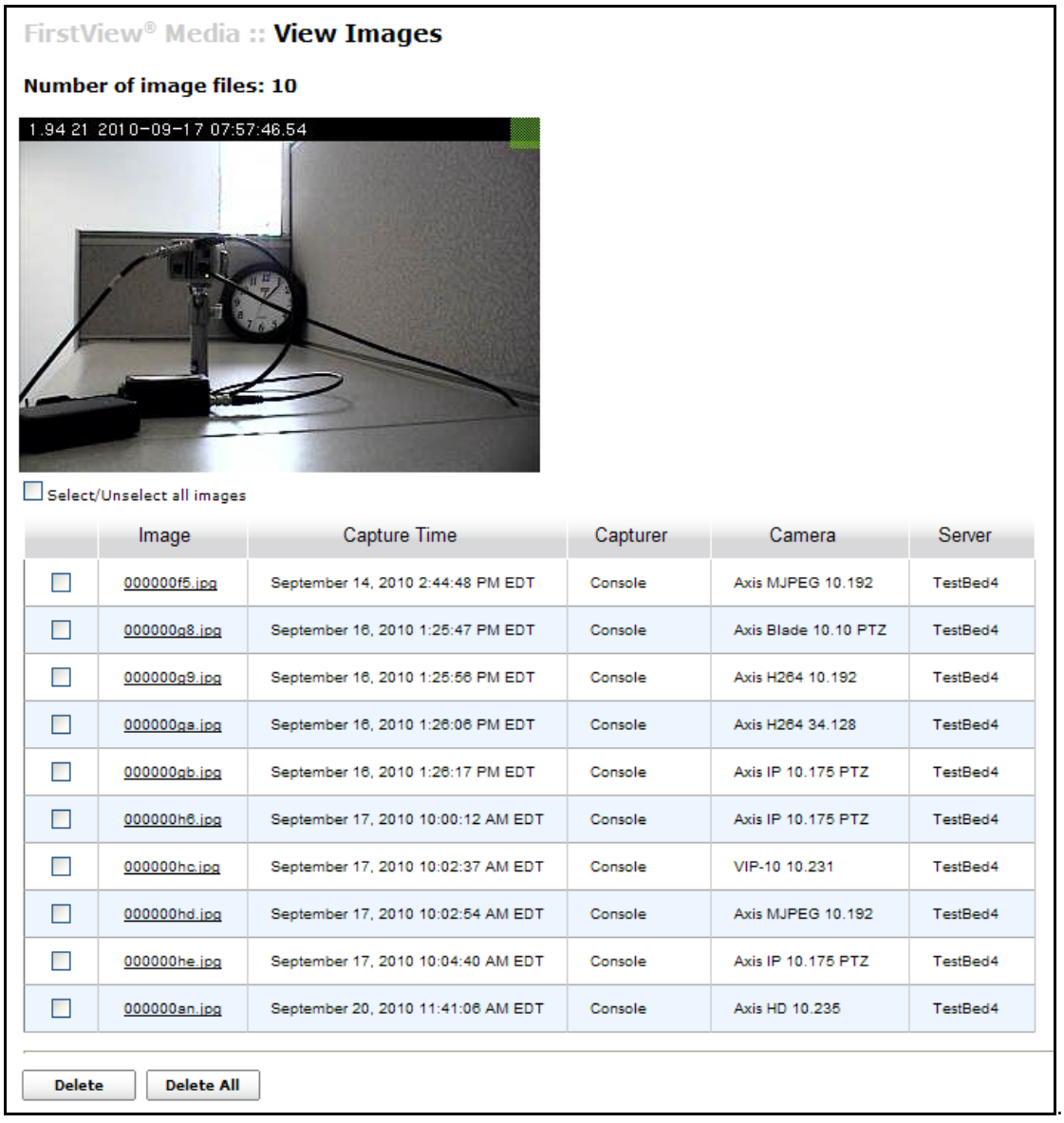
Basic details about each image are displayed on this screen:

- **Image:** Name assigned by user.
- **Capture Time:**
    - If image was captured from live video, the capture time will be the date and time the image was captured by the user.

- If image was captured from recorded video, the capture time will be the date and time the image was captured from the archive.

- **Capturer:** Name of user who recorded the image.
- **Camera:** Name of camera the image was captured from.
- **Server:** Name of server camera is associated with.

To view an image, click the name of the image and the image will appear above the list of images.



To delete an image, click on the checkbox next to the image(s) you want to delete and then click the "Delete" button at the bottom of the View Images page.

To delete all images, click the “Delete All” button at the bottom of the View Images page.

To save a copy of an image to a local machine, print an image, or email an image, right click on the image and click “Save Picture As,” “Print Picture,” or “Email Picture.”

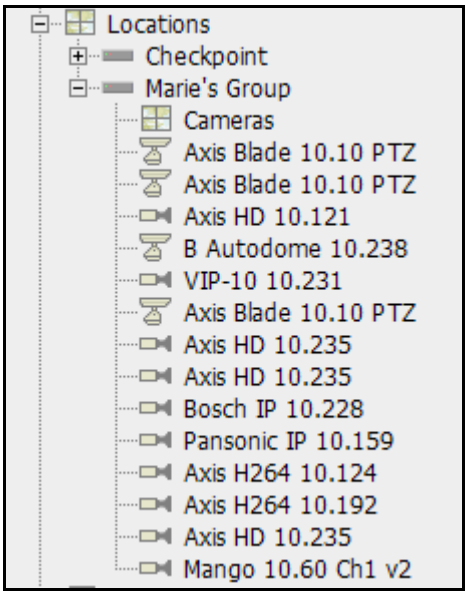
Please see **Section 3.1.4** for a complete description of the image capture process.

3.4: Viewing and Modifying Location Groups

FirstView® Menu / Locations / **Group Name**

Location groups allow users to create groups of up to sixteen (16) live video feeds that can be viewed simultaneously. These groups are system groups and can be viewed by any user in the system. On the FirstView® Menu, the group name will be displayed with a link to the group view page (called “Cameras”).

Clicking the Cameras link will open the Location Group page.



Below the Cameras link will the the link to the device pages for each camera in the group.

Clicking a camera name will open the device page. Please see **Section 3.1** for more details.

Note: Viewing multiple cameras may reduce overall frame rates and increase network bandwidth consumption. Performance will also be affected by the end user’s CPU and available memory.

3.4.1: Selecting a Layout

There are seven options for the number of video feeds in a screen layout: 1, 4, 9, 16, 1+5, 1+7, and 1+12.

To select a layout, click one of the numbered buttons on the toolbar (shown below).

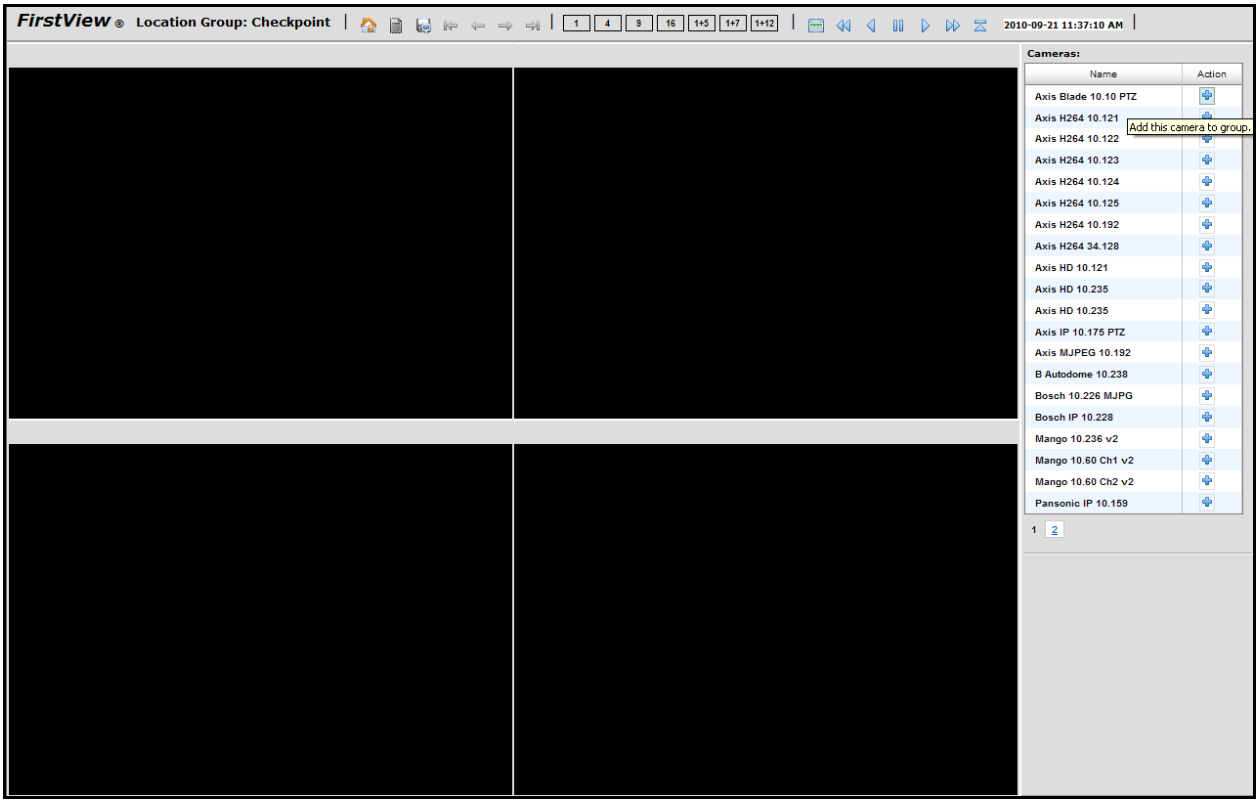
The black screen will show the selected number of slots and the user can begin to add video feeds to the layout. Please see **Section 3.4.2** for more information on this process.

Note: When switching from a larger layout to a smaller layout (e.g. 16 to 9 or 9 to 4), the video feeds to the right of and below the first feed will be moved to a secondary page and can be viewed using the arrow buttons on the toolbar.

For example, if a group contains 16 video feeds and the user selects a layout with four slots, there will be four pages worth of video, and each page will contain four of the video feeds in the group. Use the arrows to move back and forth between the pages.

3.4.2: Adding Cameras to a Layout

To open the Location Group menu and add cameras to a layout, click the Menu button .



Click the “Add camera” button next to the desired camera(s) to add cameras to the Location Group. The user can add as many cameras to the group as there are slots in the layout. Each camera added to the group will be added to the next available slot.

The camera name will appear on the gray bar above each video slot.

The Location Group will be automatically saved to the system as each change is made.

3.4.3: Modifying a Location Group

To modify an existing group, open the Location Group from the FirstView® Menu.

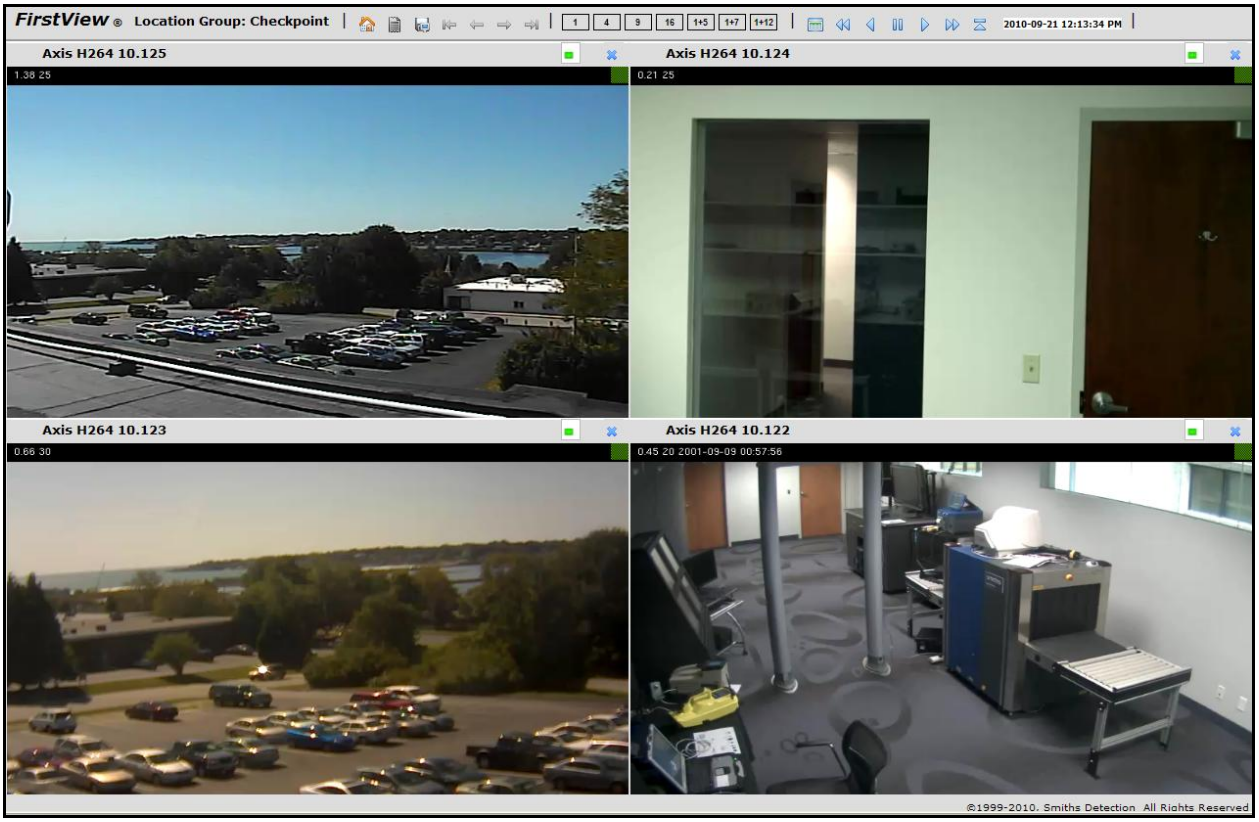
To remove a camera from a group, click the “Delete” button on the right corner of the gray bar above the video slot.

To select a different layout (e.g. go from a 9 slot layout to a 1+7 layout), click one of the numbered buttons on the toolbar.

The Location Group will be automatically saved to the system as each change is made.

3.4.4: Viewing a Location Group

To view the Location Group page, click the “Cameras” link on the FirstView® Menu. The page shown below will open and live video will begin to play from all cameras in the group.



3.4.5: Synchronized Video Playback

On the Location Group page, users can use the Synchronized Playback toolbar (shown below) to view archived video from multiple cameras simultaneously.

Note: All cameras will be selected for synchronized playback by default. The visual indicator is located next to the “Delete” button on the right corner of the gray bar.

- If the indicator is green ( ), the camera is selected for synchronized playback.
- If the indicator is gray ( ), the camera is not selected for synchronized playback.

Click the indicator to select or deselect the camera.

The Synchronized Playback toolbar is a simplified version of the standard Playback Control toolbar. The actions will apply to all cameras selected. For example, a user is viewing a group of four cameras that are all selected for synchronized playback. When the user clicks the “Jump” button and selects a date and time to jump to, all four cameras will jump to that point in their archive and begin playing recorded video.

For a complete description of using these controls, please see **Section 3.2.2**.

3.4.6: Closing a Location Group

To close the Location Group page and return to the FirstView® welcome page, click the "Home" button on the toolbar.

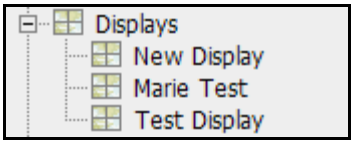
3.5: Viewing and Modifying Display Groups

FirstView® Menu / Displays / **Group Name**

Display groups allow users to create groups of up to sixteen (16) live video feeds that can be viewed simultaneously. These groups are custom groups and can only be viewed by the user that created them. On the FirstView® Menu, the group name will be displayed as the link to the group view page. Only Display Groups that have been created by the user will be displayed on the FirstView® Menu.

Note: Please see **Section 2.13.2** for details on assigning owners to an existing Display Group.

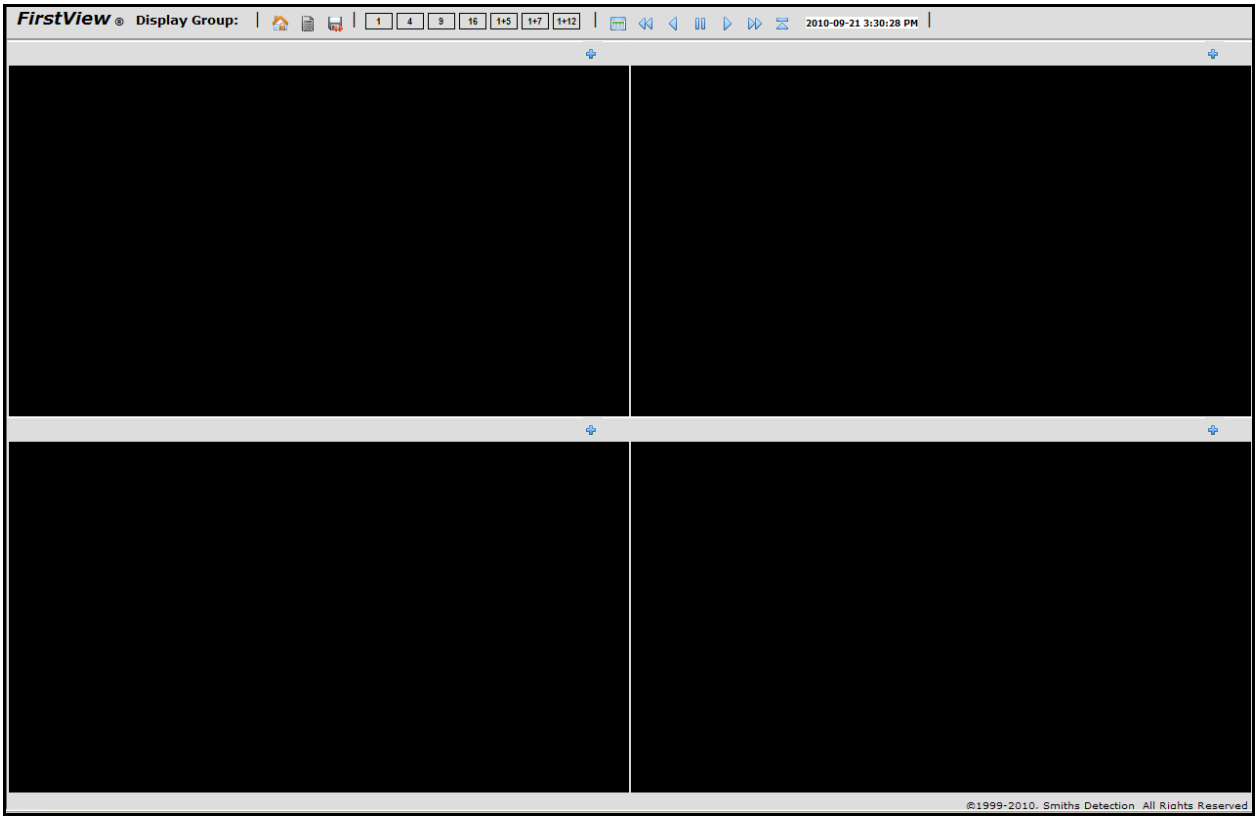
Clicking the group name will open the Display Group page.



Note: Viewing multiple cameras may reduce overall frame rates and increase network bandwidth consumption. Performance will also be affected by the end user's CPU and available memory.

3.5.3: Creating a Display Group

To create a new display group, click the "New Display" group name on the FirstView® Menu under "Displays". The Display Group page shown below will open. Follow the steps in the following sections to select a layout and add cameras to the layout.



Once the group information has been defined, click the “Save Display Configuration As” button on the toolbar. The fields shown below will open on the toolbar. Enter a name and a description and click the green “Save” button or the red “Cancel” button to discard the new group information.

The new Display Group will appear on the FirstView® Menu under “Displays”.

3.5.2: Selecting a Layout

There are seven options for the number of video feeds in a screen layout: 1, 4, 9, 16, 1+5, 1+7, and 1+12.

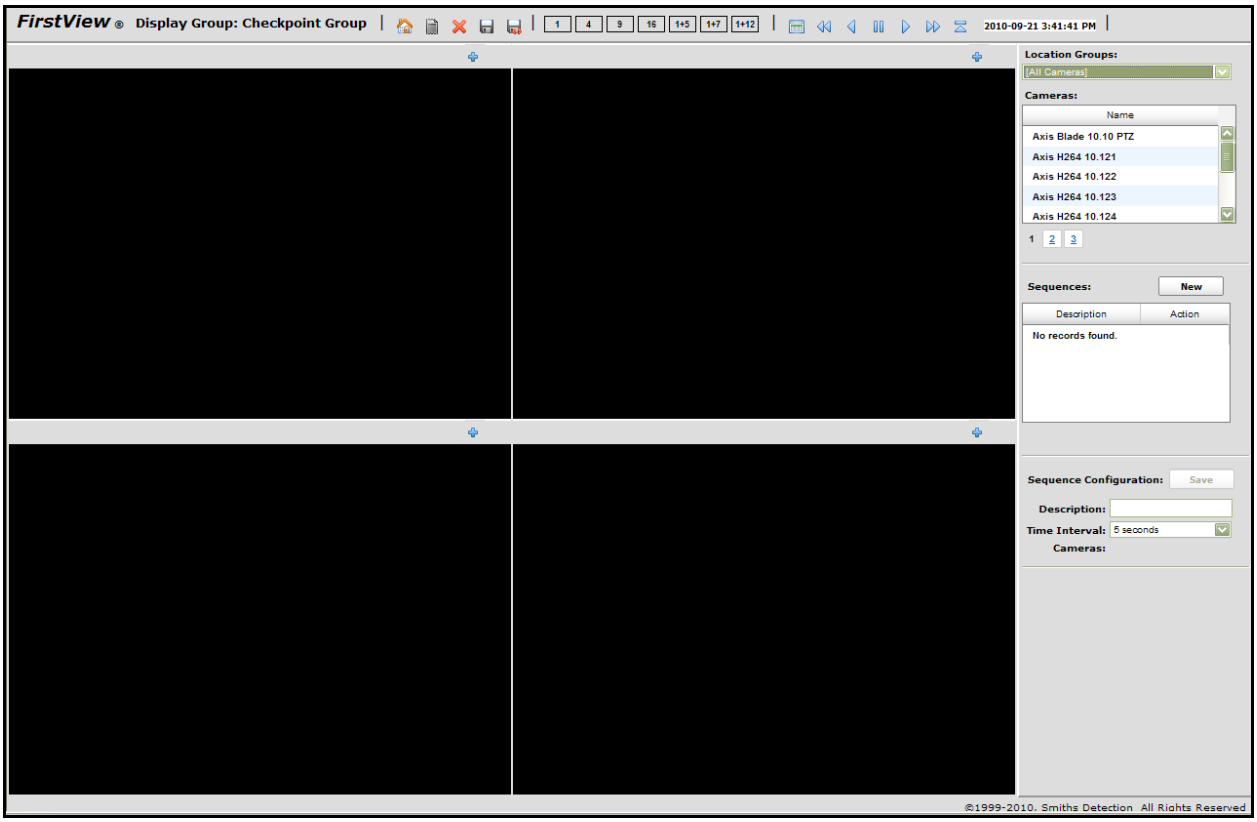
To select a layout, click one of the numbered buttons on the toolbar (shown below).

The black screen will show the selected number of slots and the user can begin to add video feeds to the layout. Please see **Section 3.5.3** for more information on this process.

Note: When switching from a larger layout to a smaller layout (e.g. 16 to 9 or 9 to 4), the video feeds to the right of and below the first feed will be removed.

3.5.3: Adding Cameras to a Layout

To open the Display Group menu and add cameras to a layout, click the Menu button .



The list of cameras available to be added to a Display Group can be sorted by “All Cameras” (a list of all cameras in the system sorted alphanumerically) or by Location Group. For example, if there is a Location Group of all cameras monitoring the perimeter of a facility and the user wants to build a Display Group of a subset of those cameras, he can select the “Perimeter Cameras” group name on the drop-down menu and be able to easily create a Display Group containing those cameras.

Select the desired camera name and click the “Add camera” button on the slot where that camera should go in the layout. This allows users to customize where to place each camera in a layout.

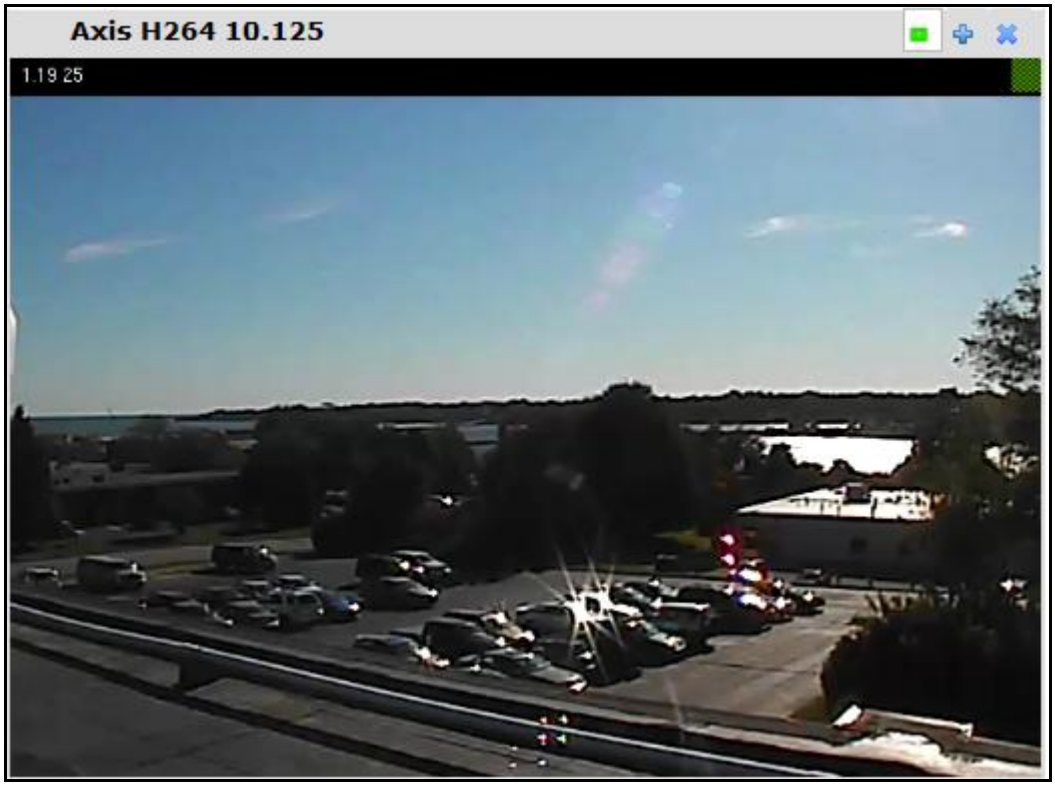
The camera name will appear on the gray bar above each video slot.

3.5.4: Saving a Display Group

To save a Display Group, click the “Save” button on the toolbar.

3.5.5: Modifying a Display Group

To modify an existing group, open the Display Group from the FirstView® Menu.



To remove a camera from a group, click the “Delete” button on the right corner of the gray bar above the video slot.

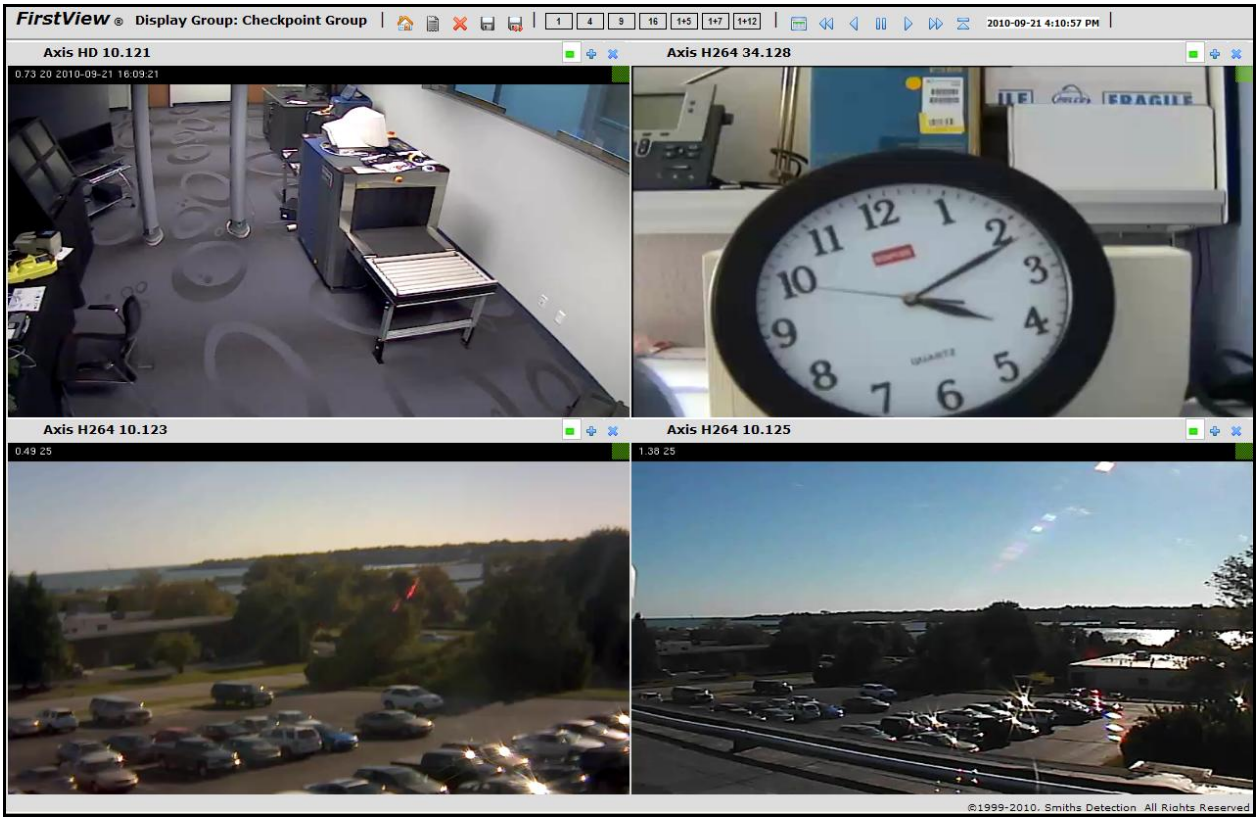
To select a different layout (e.g. go from a 9 slot layout to a 1+7 layout), click one of the numbered buttons on the toolbar.

To replace a camera with a different camera, select the desired camera name and click the “Add camera” button on the slot where that camera should go in the layout.

Click the “Save” button on the toolbar to save changes.

3.5.6: Viewing a Display Group

To view the Display Group page, click the group name on the FirstView® Menu. The page shown below will open and live video will begin to play from all cameras in the group.



3.5.7: Synchronized Video Playback

On the Display Group page, users can use the Synchronized Playback toolbar (shown below) to view archived video from multiple cameras simultaneously.

Note: All cameras will be selected for synchronized playback by default. The visual indicator is located next to the "Add camera" button on the right corner of the gray bar.

- If the indicator is green ( ), the camera is selected for synchronized playback.
- If the indicator is gray ( ), the camera is not selected for synchronized playback.

Click the indicator to select or deselect the camera.

The Synchronized Playback toolbar is a simplified version of the standard Playback Control toolbar. The actions will apply to all cameras selected. For example, a user is viewing a group of four cameras that are all selected for synchronized playback. When the user clicks the "Jump" button and selects a date and time to jump to, all four cameras will jump to that point in their archive and begin playing recorded video.

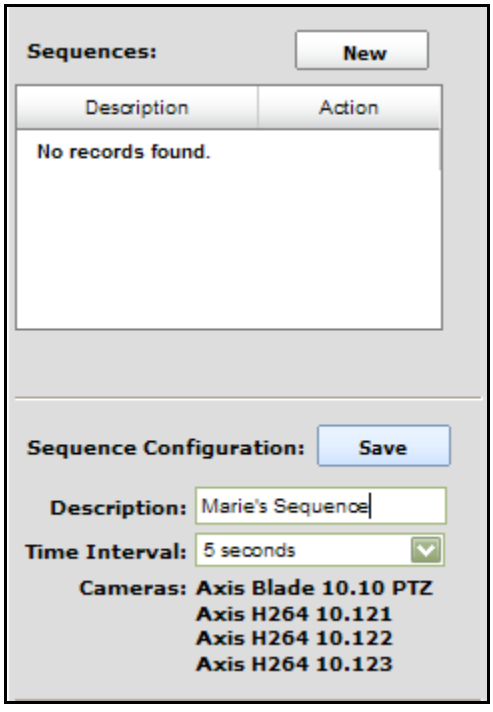
For a complete description of using these controls, please see **Section 3.2.2**.

3.5.8: Creating and Modifying Sequences

Video sequences allow users to create a customized loop of video feeds that can be placed in a layout.

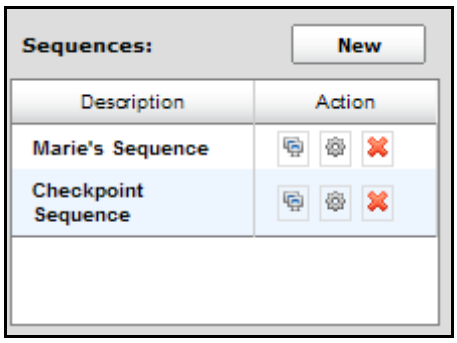
To create a video sequence:

- Create a display group, select a layout, add cameras to the layout, and save the group.
- Ensure the layout has the cameras in the desired order (left to right and top to bottom).
- Click the Menu button to open the Display Group menu.
- Click the "New" button next to "Sequences".
- The cameras in the layout will be listed under "Cameras".
- Enter a name in the "Description" field.
- Set a **time interval** (amount of time to display video from one camera before switching to the next camera in the sequence). The time Interval options are: 5, 15, or 30 seconds, or 1 or 5 minutes.

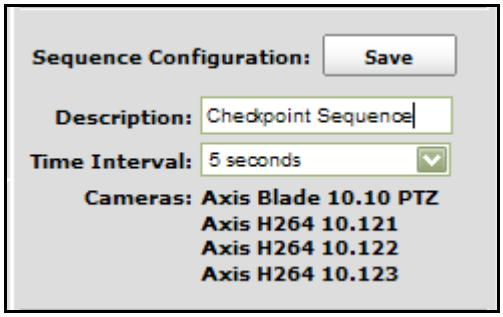


- Click the "Save" button to save the sequence. The new sequence will appear in the list of sequences.

To add a sequence to a layout, click the “Add” button next to the sequence name. The sequence will be added to the next available slot in the layout.



To edit a sequence, click the click the “Configure” button next to the sequence name.



The information for that sequence will be displayed under Sequence Configuration.

The user can change the name of the sequence and/or change the time interval. The time Interval options are: 5, 15, or 30 seconds, or 1 or 5 minutes.

Click the “Save” button to save any changes to the sequence.

To delete a sequence, click the button next to the sequence name.

3.5.9: Deleting a Display Group

To delete a Display Group, click the “Delete” button on the toolbar. The Display Group page will automatically close and the user will be returned to the FirstView® welcome page.

3.5.10: Closing a Display Group

To close the Display Group page and return to the FirstView® welcome page, click the “Home” button on the toolbar.

Chapter 4: FirstView® Sensors

During the sensor setup process, (please see **Section 2.3.2** for more details), a “Device Type” is defined for each sensor. The sensor types currently supported by FirstView® are:

- Access Control Systems (Device Type = Generic ACS System)
- Chemical Sensors (Device Type = Centurion I, II, GID-3 24-7, AvirSensors ChemSight, Bruker RAID-AFM, HGVI, LCD 3.X, RaeSystems MultiRaePlus)
- Biological Sensors (Device Type = BioSeeq+, Smart BioSensor)
- Radiation Sensors (Device Type = Canberra RDS-100, HPRID)
- Explosives and Narcotics Detectors (Device Type = MMTD, IonScan 500DT)
- Weather Sensors (Device Type = Vaisala WXT520)
- Contact Closure Sensors (Device Type = Adam 6051 or Axis Encoder)
- Video Analyzers (Device Type = ObjectVideo System or Intelligent Video)
- External Sensor Systems (Device Type = External Sensor System)
- Gunshot Location System (Does not use the typical sensor setup process)

Each sensor type is described in detail in the following sections, and can generate an alarm in the FirstView® system. Please see **Chapter 6** for more details on the role of sensors in the FirstView® Alarm system.

4.1: Access Control Systems

FirstView® is capable of integrating with several types of Access Control Systems (ACS). An ACS can monitor perimeter security and/or internal security, and FirstView® can associate a camera with each access point in the ACS. Every time an access point reports a problem to FirstView®, an alarm is generated and the associated camera displays video of the access point.

Example Access Control Alarms:

- Access denied
- Access card reader tampering
- Card reader communication loss
- Door held open
- Door forced open
- Perimeter breach

4.2: Chemical Sensors

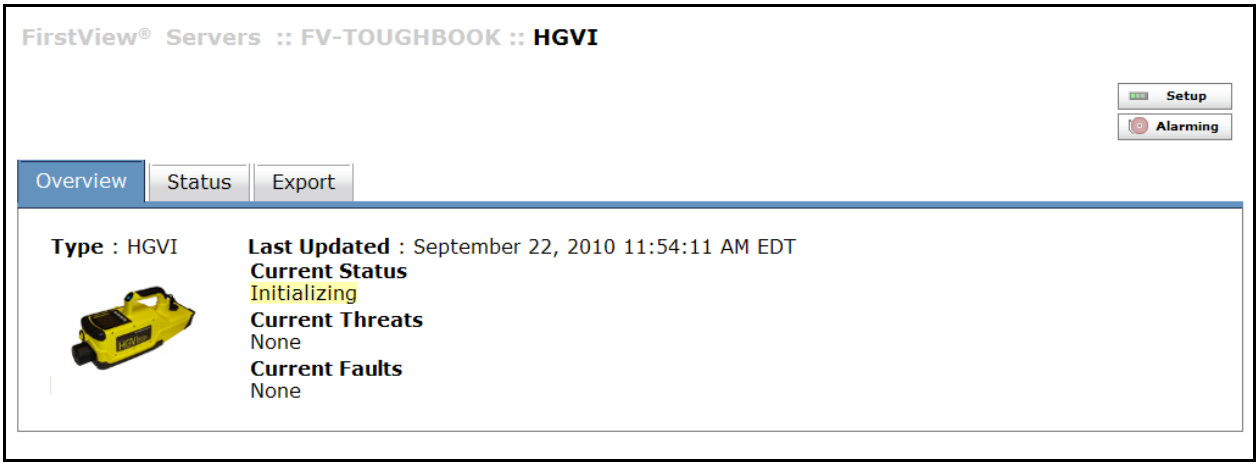
FirstView® is capable of integrating with several types of chemical sensors, including sensors produced by Smiths Detection. Chemical sensors can monitor indoor and outdoor environments, and FirstView® can associate cameras with each sensor. If any substances are detected, an alarm is generated and the associated camera(s) displays video of the area.

FirstView® supports the following Chemical Sensors:

- Centurion I and II
    - For detailed hardware specifications about the Centurion II sensor, please visit: http://smithsdetection.com/eng/centurion_II.php
- GID-3 24-7
    - For detailed hardware specifications about the GID-3 24/7 sensor, please visit: http://smithsdetection.com/eng/GID-3_24_7.php
- AvirSensors ChemSight
    - For detailed hardware specifications about the ChemSight sensor, please visit: http://www.avirsensors.com/hazardous-gas-detection-technology.php
- Bruker RAID-AFM
    - For detailed hardware specifications about the RAID-AFM sensor, please visit: http://www.bdal.com/products/mobile-detection/nuclear-detection/raid-afm-nc-version.html
- HGVI
    - For detailed hardware specifications about the HGVI sensor, please visit: http://www.smithsdetection.com/HGVI.php
- LCD 3.X
    - For detailed hardware specifications about the LCD 3.X sensor, please visit: http://www.smithsdetection.com/LCD3_3.php
- RaeSystems MultiRaePlus
    - For detailed hardware specifications about the MultiRaePlus sensor, please visit: http://www.raesystems.com/products/multirae-plus

The image below shows the device page for an **HGVI** sensor.

FirstView® Menu / Servers / Server Name / **Sensor Name**



The user can navigate between the three tabs to view the following information:

- **Overview:** This tab allows users to see the current state of the sensor, any active threats, and any active faults (e.g. a loss of communication with the sensor).
- **Status:** This tab allows users to view the current status details provided by the sensor. These status details are updated from the sensor and this information is stored in the FirstView® database.
    - **Note:** Each sensor type provides different status details.
    - **Examples of Status Details:**
        - Battery level remaining
        - Detector descriptions
        - Internal temperature
        - Time and result of last reading
- **Export:** This tab allows users to export stored sensor data in CSV (Comma Separated Values) format.
    - **Note:** CSV format files can be opened using Microsoft Excel.
    - For complete details about interpreting this sensor data, please consult the sensor documentation.
    - Sensor Data can be exported in CSV format in the following categories:
        - **Status:** Sensor data containing the historical values for information displayed on the “Status” tab.
        - **Threat:** Sensor data containing information about any detected chemicals.
        - **Fault:** Sensor data containing information about any faults (e.g. loss of communication between the sensor and a / FirstView® Server) reported by the sensor.
        - **Trimscan:** (Supported Smiths Detection Sensor Only) Sensor data that is exported in a format that can only be displayed using the Smiths Detection Trimscan application.
    - Specify a format (Status CSV, Threat CSV, or Fault CSV or Trimscan), select a From Time (either Now or a defined date and time), select one of the time range options to Go Back to (from 1 hour to 1 day), and click the “export” button.
    - Click the “Download” button to Open or Save the CSV file.

4.3: Biological Sensors

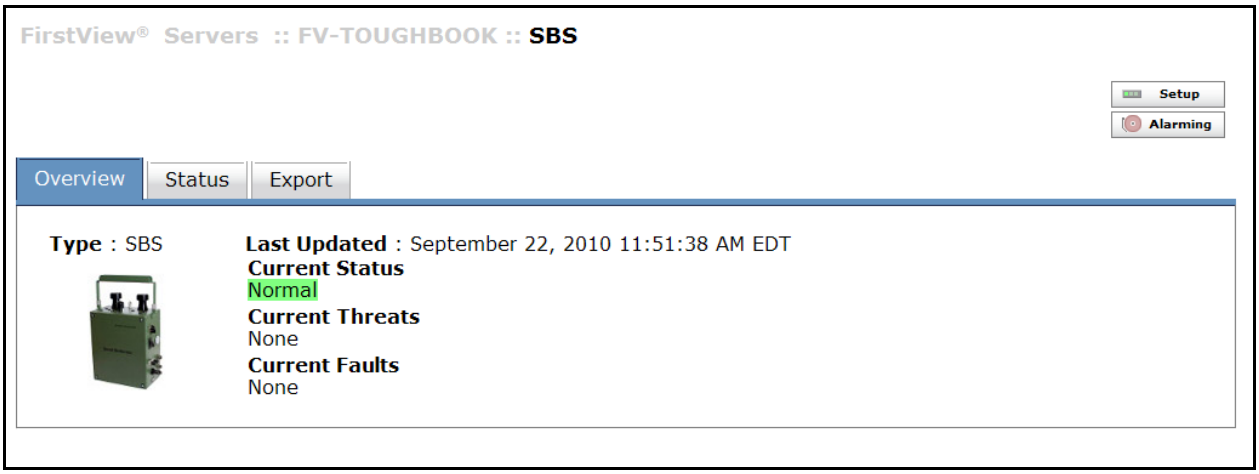
FirstView® is capable of integrating with several types of biological sensors, including sensors produced by Smiths Detection. Biological sensors can monitor indoor and outdoor environments, and FirstView® can associate cameras with each sensor. If any substances are detected, an alarm is generated and the associated camera(s) displays video of the area.

FirstView® supports the following Biological Sensors:

- BioSeeqPLUS
    - For detailed hardware specifications about the BioSeeqPLUS sensor, please visit: http://www.smithsdetection.com/Bio-Seeq_PLUS.php
- SmartBioSensor
    - For detailed hardware specifications about the SmartBioSensor, please visit: http://www.smithsdetection.com/SmartBio_Sensor.php

The image below shows the device page for the **SmartBioSensor**.

FirstView® Menu / Servers / Server Name / **Sensor Name**



The user can navigate between the three tabs to view the following information:

- **Overview:** This tab allows users to see the current state of the sensor, any active threats, and any active faults (e.g. a loss of communication with the sensor).
- **Status:** This tab allows users to view the current status details provided by the sensor. These status details are updated from the sensor and this information is stored in the FirstView® database.
    - **Note:** Each sensor type provides different status details.
    - **Examples of Status Details:**
        - Battery level remaining
        - Detector descriptions
        - Internal temperature
        - Time and result of last reading
- **Export:** This tab allows users to export stored sensor data in CSV (Comma Separated Values) format.
    - **Note:** CSV format files can be opened using Microsoft Excel.
    - For complete details about interpreting this sensor data, please consult the sensor documentation.
    - Sensor Data can be exported in CSV format in the following categories:
        - **Status:** Sensor data containing the historical values for information displayed on the “Status” tab.
        - **Threat:** Sensor data containing information about any detected chemicals.
        - **Fault:** Sensor data containing information about any faults (e.g. loss of communication between the sensor and a / FirstView® Server) reported by the sensor.
        - **Trimscan:** (Supported Smiths Detection Sensor Only) Sensor data that is exported in a format that can only be displayed using the Smiths Detection Trimscan application.

- Specify a format (Status CSV, Threat CSV, or Fault CSV or Trimscan), select a From Time (either Now or a defined date and time), select one of the time range options to Go Back to (from 1 hour to 1 day), and click the “export” button.
- Click the “Download” button to Open or Save the CSV file.

4.4: Radiation Sensors

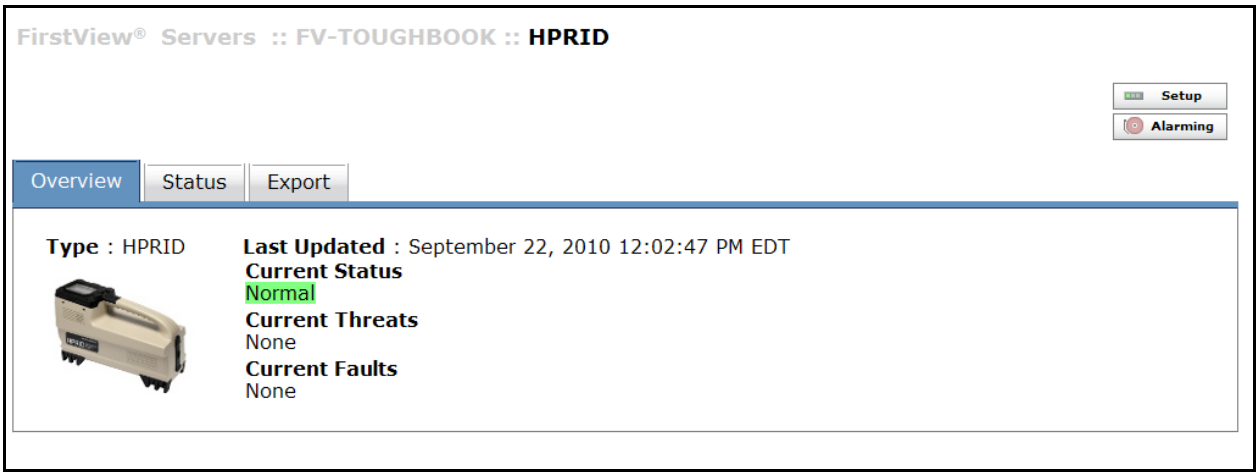
FirstView® is capable of integrating with several types of radiation sensors, including sensors produced by Smiths Detection. Radiation sensors can monitor indoor and outdoor environments, and FirstView® can associate cameras with each sensor. If any substances are detected, an alarm is generated and the associated camera(s) displays video of the area.

FirstView® supports the following Radiation Sensors:

- Canberra RDS-100
  - For detailed hardware specifications about the Canberra RDS-100 sensor, please visit: http://www.canberra.com/products/438127.asp
- HPRID
  - For detailed hardware specifications about the HPRID sensor, please visit: http://www.smithsdetection.com/hprid.php

The image below shows the device page for the **HPRID** sensor.

FirstView® Menu / Servers / Server Name / **Sensor Name**



The user can navigate between the three tabs to view the following information:

- **Overview:** This tab allows users to see the current state of the sensor, any active threats, and any active faults (e.g. a loss of communication with the sensor).
- **Status:** This tab allows users to view the current status details provided by the sensor. These status details are updated from the sensor and this information is stored in the FirstView® database.
  - **Note:** Each sensor type provides different status details.

  - **Examples of Status Details:**
    - Battery level remaining
    - Detector descriptions
    - Internal temperature
    - Time and result of last reading

- **Export:** This tab allows users to export stored sensor data in CSV (Comma Separated Values) format.
  - **Note:** CSV format files can be opened using Microsoft Excel.
  - For complete details about interpreting this sensor data, please consult the sensor documentation.
  - Sensor Data can be exported in CSV format in the following categories:
    - **Status:** Sensor data containing the historical values for information displayed on the "Status" tab.
    - **Threat:** Sensor data containing information about any detected chemicals.
    - **Fault:** Sensor data containing information about any faults (e.g. loss of communication between the sensor and a / FirstView® Server) reported by the sensor.
    - **Trimscan:** (Supported Smiths Detection Sensor Only) Sensor data that is exported in a format that can only be displayed using the Smiths Detection Trimscan application.
  - Specify a format (Status CSV, Threat CSV, or Fault CSV or Trimscan), select a From Time (either Now or a defined date and time), select one of the time range options to Go Back to (from 1 hour to 1 day), and click the "export" button.
  - Click the "Download" button to Open or Save the CSV file.

4.5: Explosives and Narcotics Sensors

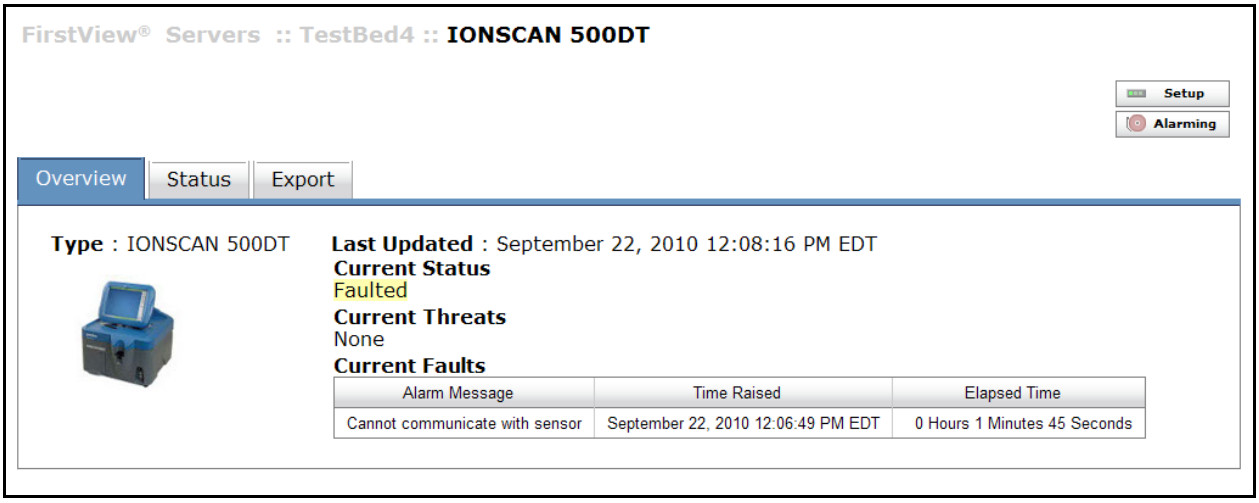
FirstView® is capable of integrating with several types of explosive and narcotics sensors, including sensors produced by Smiths Detection. Explosives and narcotics sensors can be used indoors and outdoors, and monitor on demand. If any substances are detected, an alarm is generated and the associated camera(s) displays video of the area.

FirstView® supports the following Explosive and Narcotics Sensors:

- MMTD
  - For detailed hardware specifications about the MMTD sensor, please visit: http://smithsdetection.com/eng/mmtd.php
- IonScan 500DT
  - For detailed hardware specifications about the IonScan 500DT sensor, please visit: http://www.smithsdetection.com/IONSCAN_500DT.php

The image below shows the device page for the **IonScan500DT** sensor.

FirstView® Menu / Servers / Server Name / **Sensor Name**



The user can navigate between the three tabs to view the following information:

- **Overview:** This tab allows users to see the current state of the sensor, any active threats, and any active faults (e.g. a loss of communication with the sensor).
- **Status:** This tab allows users to view the current status details provided by the sensor. These status details are updated from the sensor and this information is stored in the FirstView® database.
    - **Note:** Each sensor type provides different status details.
    - **Examples of Status Details:**
        - Battery level remaining
        - Detector descriptions
        - Internal temperature
        - Time and result of last reading
- **Export:** This tab allows users to export stored sensor data in CSV (Comma Separated Values) format.
    - **Note:** CSV format files can be opened using Microsoft Excel.
    - For complete details about interpreting this sensor data, please consult the sensor documentation.
    - Sensor Data can be exported in CSV format in the following categories:
        - **Status:** Sensor data containing the historical values for information displayed on the “Status” tab.
        - **Threat:** Sensor data containing information about any detected chemicals.
        - **Fault:** Sensor data containing information about any faults (e.g. loss of communication between the sensor and a / FirstView® Server) reported by the sensor.
        - **Trimscan:** (Supported Smiths Detection Sensor Only) Sensor data that is exported in a format that can only be displayed using the Smiths Detection Trimscan application.
    - Specify a format (Status CSV, Threat CSV, or Fault CSV or Trimscan), select a From Time (either Now or a defined date and time), select one of the time range options to Go Back to (from 1 hour to 1 day), and click the “export” button.
    - Click the “Download” button to Open or Save the CSV file.

4.6: Weather Sensors

FirstView® is capable of integrating with one type of weather sensor. Weather sensors are used outdoors, and report weather information to the FirstView® system. If any defined thresholds are met, an alarm is generated and the associated camera(s) displays video of the area.

FirstView® supports the following Weather Sensor:

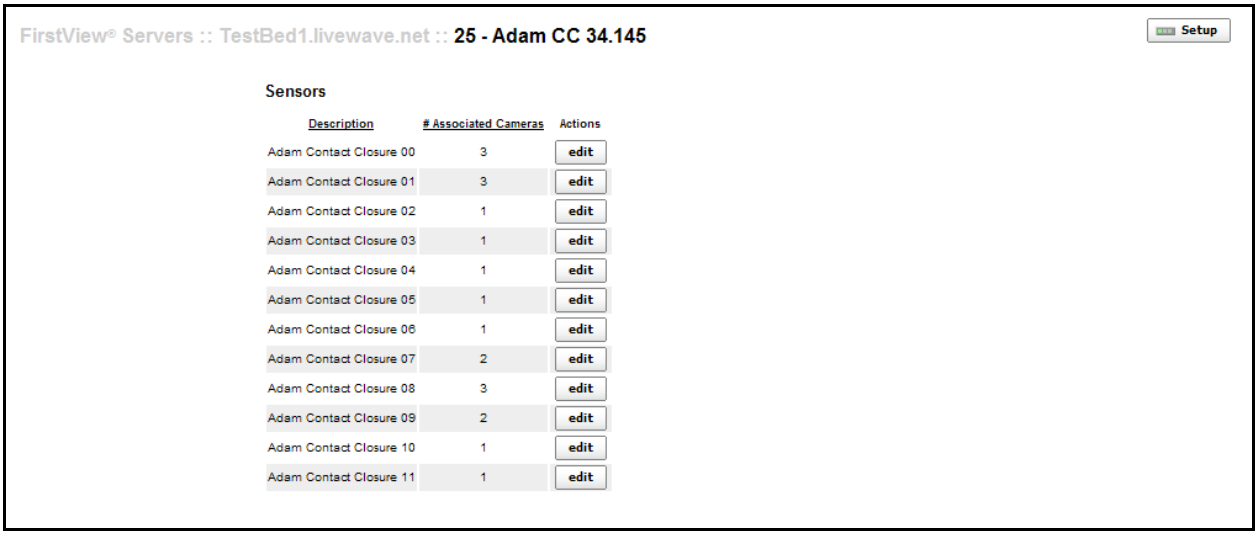
- Vaisala WXT520
    - For detailed hardware specifications about the Vaisala WXT520 sensor, please visit: http://www.vaisala.com/en/products/multiweathersensors/Pages/WXT520.aspx

4.7: Contact Closure Sensors

FirstView® is capable of integrating with several types of contact closure sensor systems and FirstView® can associate a camera with each sensor. Contact closures can monitor the open/closed status of equipment doors, switches, and other access control applications. If a contact closure is disconnected, an alarm is generated and the associated camera(s) displays video of the area.

As the image below shows, this “Adam CC” sensor system hosts several contact closures, each of which can be associated with a camera by clicking the “Edit” button.

FirstView® Menu / Servers / Server Name / **Sensor Name**



4.8: Video Analyzers

FirstView® is capable of integrating with several types of Video Analytics (VA) systems. Video Analyzers can detect activity in the video stream and apply pre-defined rules to determine if conditions for an alarm have been met. Each system has different capabilities, but the basic features of VA systems are:

- **Left Object Detection:** This can be used to determine if a stationary object was brought into and then left in an area, and is useful when monitoring public areas for suspicious items.

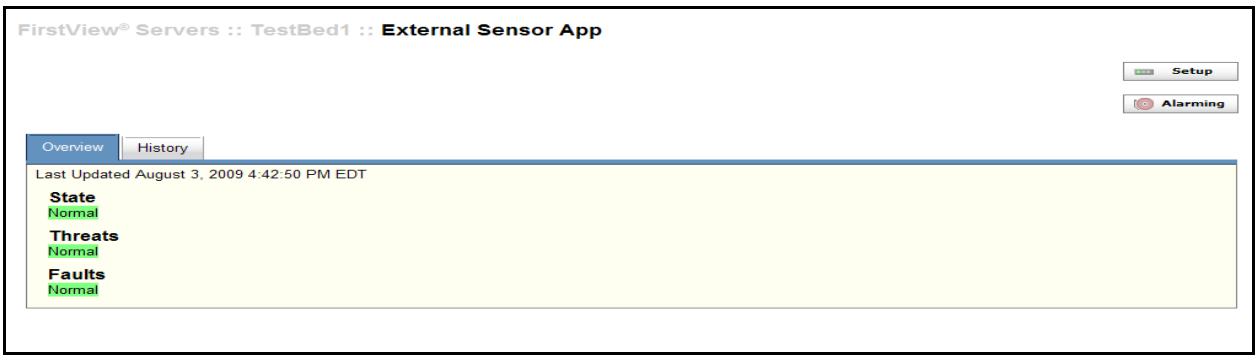
- **Tripwire and Area Breaches:** This can be used to determine if an object of pre-defined size has entered or exited an area, and is useful when monitoring access to restricted areas.
- **Object Tracking:** This can be used to determine the speed and path of an object, and is useful when monitoring entrances and exits.
- **Facial Detection:** This can be used to capture images of faces as people walk through a security checkpoint and store those images for easy retrieval.

If any of the conditions for an alarm are met, an alarm is generated in FirstView®, the Video Analyzer captures an image of the scene (at the time of the alarm), and the associated camera displays video of the area.

4.9: External Sensor Systems

FirstView® is capable of integrating with a variety of external sensor systems (e.g. a hand-held radiation sensor) using the External Sensor System API. An example FirstView® Alarm Application is available. The example application itself has customizable fields and values, and it provides a basis to easily integrate data provided from virtually any external sensor system into FirstView®.

Please refer to the FirstView® SDK documentation for complete details about configuring and using the External Sensor System.

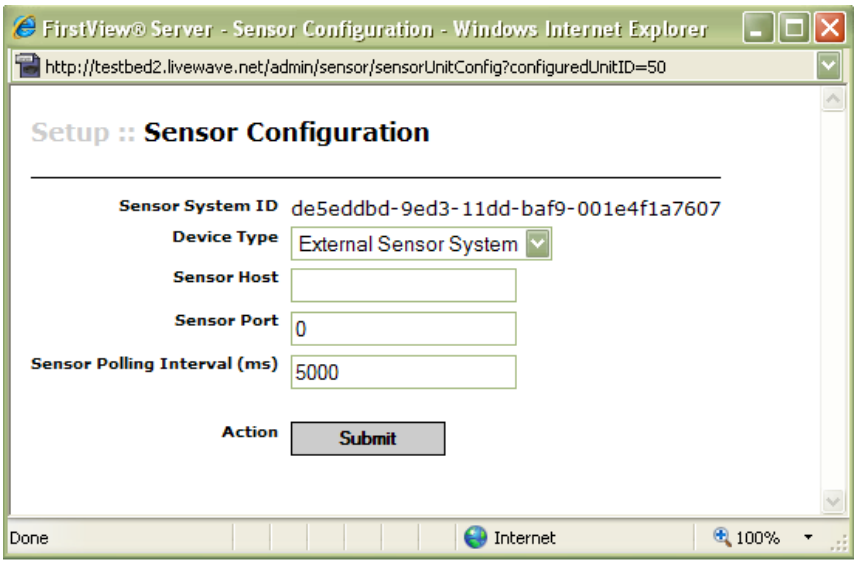


Sensor data from an external sensor system may be exported in the CSV format for threats and faults using the export functionality on the “History” tab.

4.9.1: Creating an External Sensor System Unit

To create an External Sensor Unit in the FirstView® System:

- Add a new sensor device
- Click the “Setup” button on the device page to open the Sensor Configuration page (shown below)



- Select the “External Sensor System” device type
- Leave the Sensor Host field blank (this field is not used for External Sensors)
- Enter 0 in the Sensor Port field (this field is not used for External Sensors)
- Leave the Sensor Polling Interval field as is (this field is not used for External Sensors)
- Click the Submit button

Note: An alarm will appear on the sensor page because it is not receiving input from the external sensor. This alarm will automatically clear as soon as the FirstView® Alarm Application has been configured.

To associate a camera with the External Sensor, click the “Alarming” button, select the appropriate camera name, and click “Associate.”

4.10: Gunshot Location System (GLS)

The Gunshot Location System (GLS) is an optional FirstView® feature provided by a Shotspotter® system. The GLS is capable of determining the location of a gunshot and reporting its coordinates (latitude and longitude) to FirstView®. FirstView® creates an alarm, automatically locates the closest configured preset, and moves a PTZ camera to view the location reported by the GLS. This feature provides the best chance of recording visual evidence in the case of gun-related crime.

Note: The Shotspotter® Gunshot Location System (GLS) is a registered trademark of ShotSpotter, Inc. For more information on this system, please visit http://www.shotspotter.com.

Chapter 5: FirstView® Maps

The table below defines the device icons used on Geographic and Image Maps:

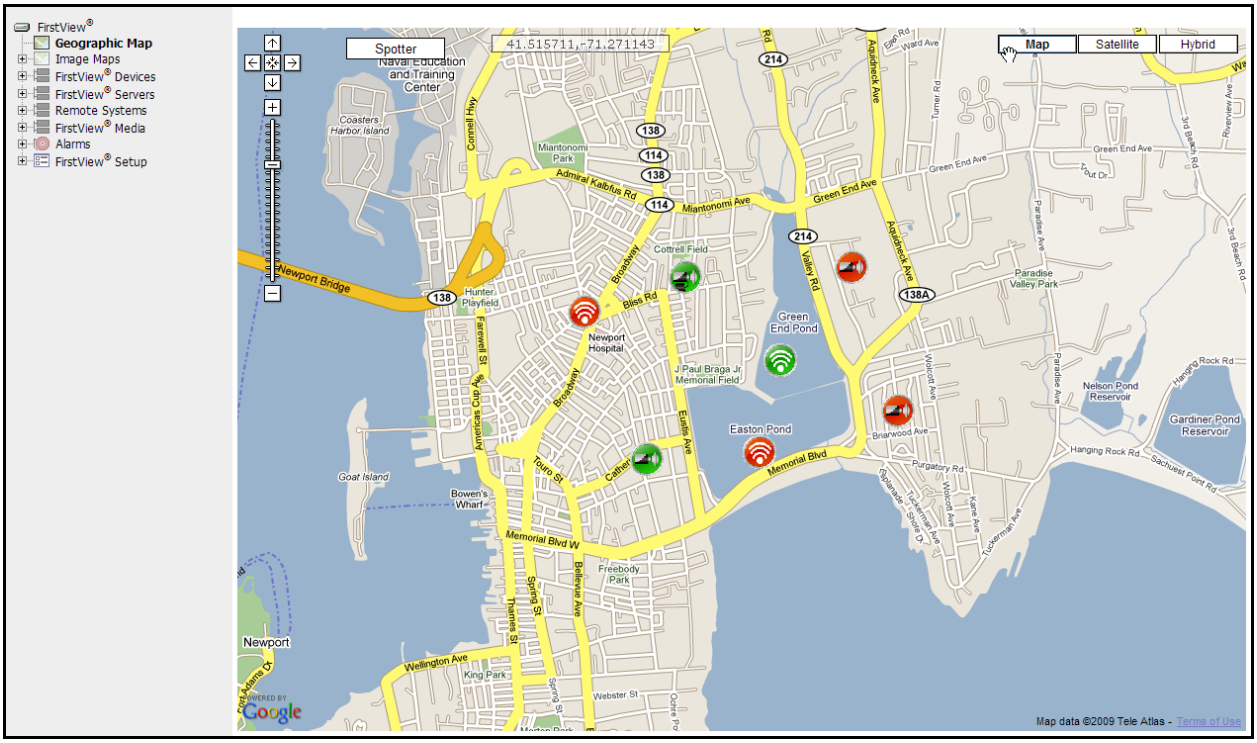
PTZ Camera:		Sensor:		Fixed Camera:		Nested Map: (Only on Image Maps)	

5.1: Geographic Map

FirstView® Menu / **Geographic Map**

The Geographic map is an optional FirstView® feature that can display the location of cameras and other devices at a glance. Click “Geographic Map” to open an Illustrated Map showing devices that have been assigned to physical locations (please see **Section 2.4.2** for more details on this process).

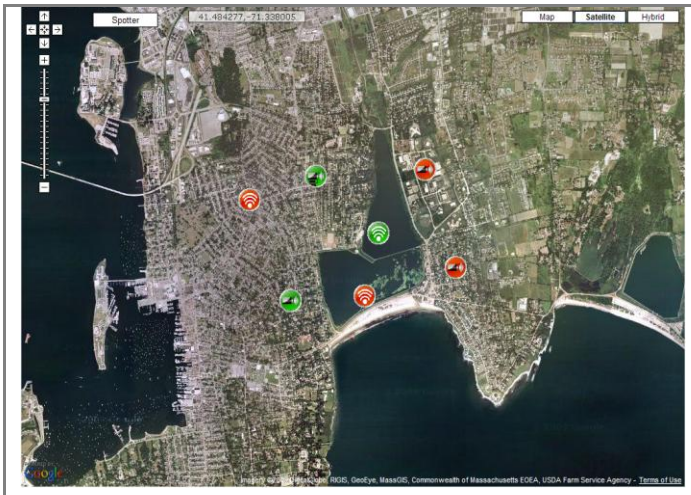
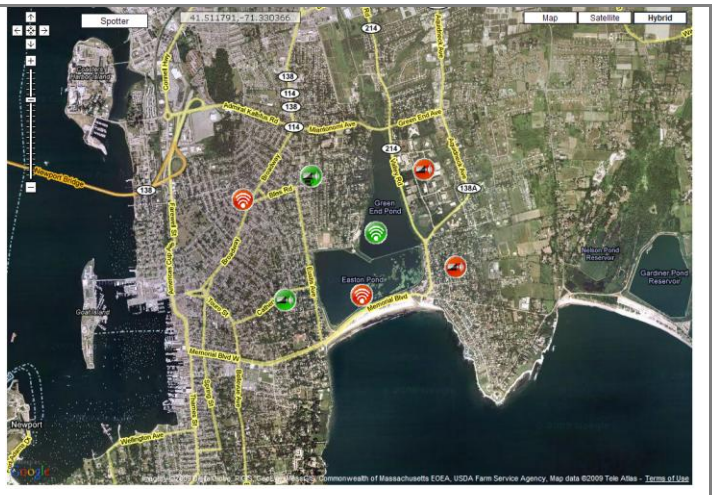
- The navigation tool is located at the top left corner of the map. Use the four arrow buttons to navigate the map by compass points. You can also click and hold on the map to move the displayed portion of the map.
- Use the vertical slider to zoom in and out. You can also click one increment at a time by clicking the + and - signs at either end of the slider.
- The latitude and longitude of the cursor’s current location on the map are displayed at the top of the screen.



5.1.1: Selecting Map Type

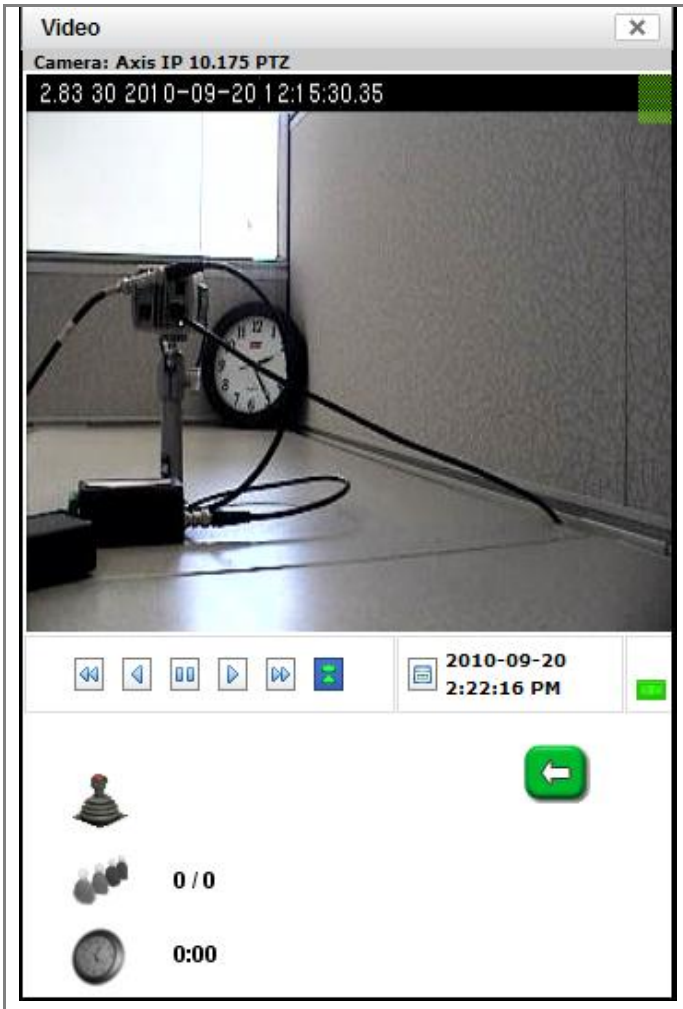
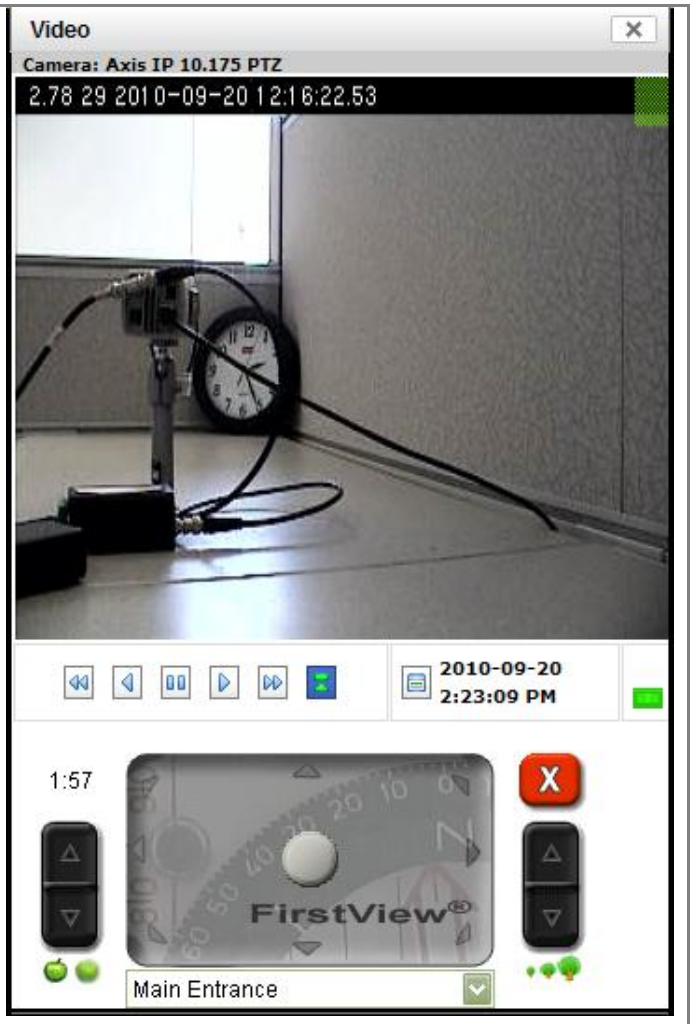
The image above is an example of an Illustration-Based Map, and the images in the table below show the differences between Satellite and Hybrid Geographic Maps. To switch between the three types, click one of the three buttons “Map” “Satellite” or “Hybrid” at the top right corner of the Geographic Map.

Note: The process of viewing video or sensor alarms or using the Spotter function is exactly the same for all three map types.

	
Satellite Geographic Map	**Hybrid Geographic Map**

5.1.2: Viewing Video and Alarms

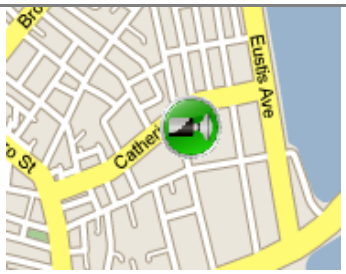
Video: To view live video from a camera located on a Geographic Map, click on the device icon. Two pop up windows will appear – one is the live video stream (shown below) and the other lists any alarms (please see the following section for more details about viewing alarms).

	
Live Video Stream **(Click green arrow button to access Camera Control)**	**Live Video Stream with Camera Control** **(Click red x button to release Camera Control)**

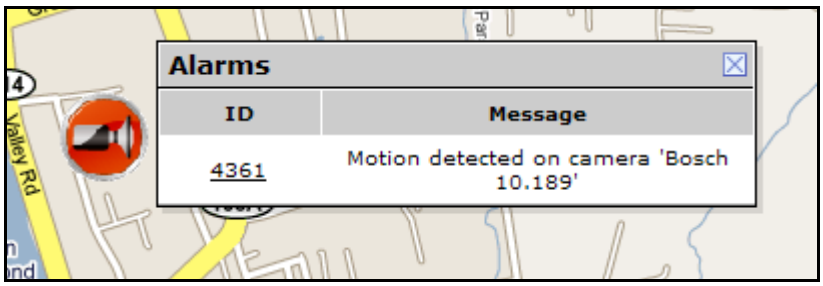
For a complete description of using the camera controls, please see **Section 3.1.1**.

To access the camera's archive, use the playback controls located below the video. For a complete description of using these controls, please see **Section 3.2.2**.

Alarms: Device icons for cameras that are equipped with motion detection will turn from green to red if an alarm has been generated.

	
Camera Device Icon Without an Alarm	**Camera Device Icon With an Alarm**

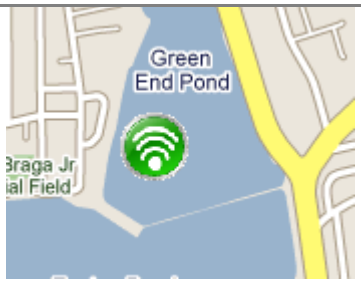
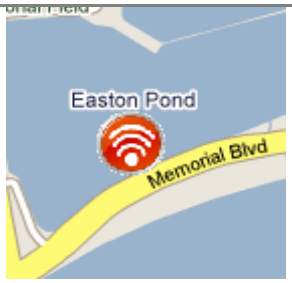
To view the list of alarms, click on the red device icon and the pop up window shown below will open. To view additional details about the alarm, click the Alarm ID number link to open the “Alarm View” screen.



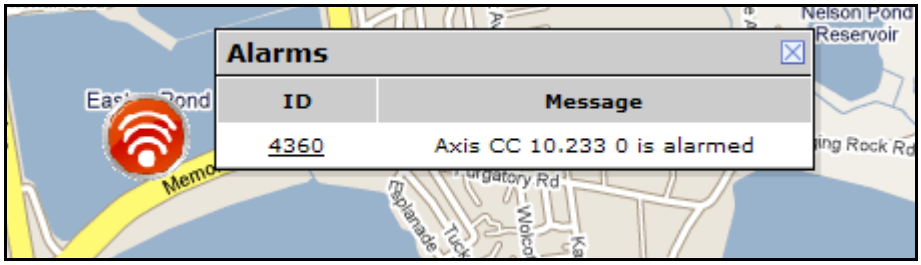
Please see **Chapter 6** for a complete description of alarm sources, displays, and controls.

5.1.3: Viewing Sensor Alarms

Sensor Alarms on Geographic Maps are viewed in the same way as cameras. If a sensor generates an alarm, the device icon will turn red.

	
Sensor Device Icon Without an Alarm	**Sensor Device Icon With an Alarm**

To view the list of alarms, click on the red device icon and the pop up window shown below will open. To view additional details about the alarm, click the Alarm ID number link to open the “Alarm View” screen.



Please see **Chapter 6** for a complete description of alarm sources, displays, and controls.

5.1.4: Spotter Function

When a user clicks a spot on the Geographic Map, the Spotter function determines which configured Preset has the best view of the selected spot, and automatically moves a PTZ camera to the Preset location and displays video of the area.

To use the Spotter function:

- Click the

button to enable the Spotter on the Geographic Map.
    - The button will turn gray when the Spotter function is active.
- Click a spot on the map within range of any PTZ camera (with configured Presets) to view live video of the selected spot.
    - Please see **Section 2.2.6** and **Section 2.4.3** for more details on configuring Presets.
- The Spotter will move the selected camera to the appropriate Preset, and display the live video in a pop-up window.
    - If the user clicks another spot on the map while viewing live video, the live video window will refresh to display video of the new area.
- If there are no configured Presets that can view the selected spot, or the user does not have permission to view video from the camera with the appropriate Preset, the error message shown below will be displayed.

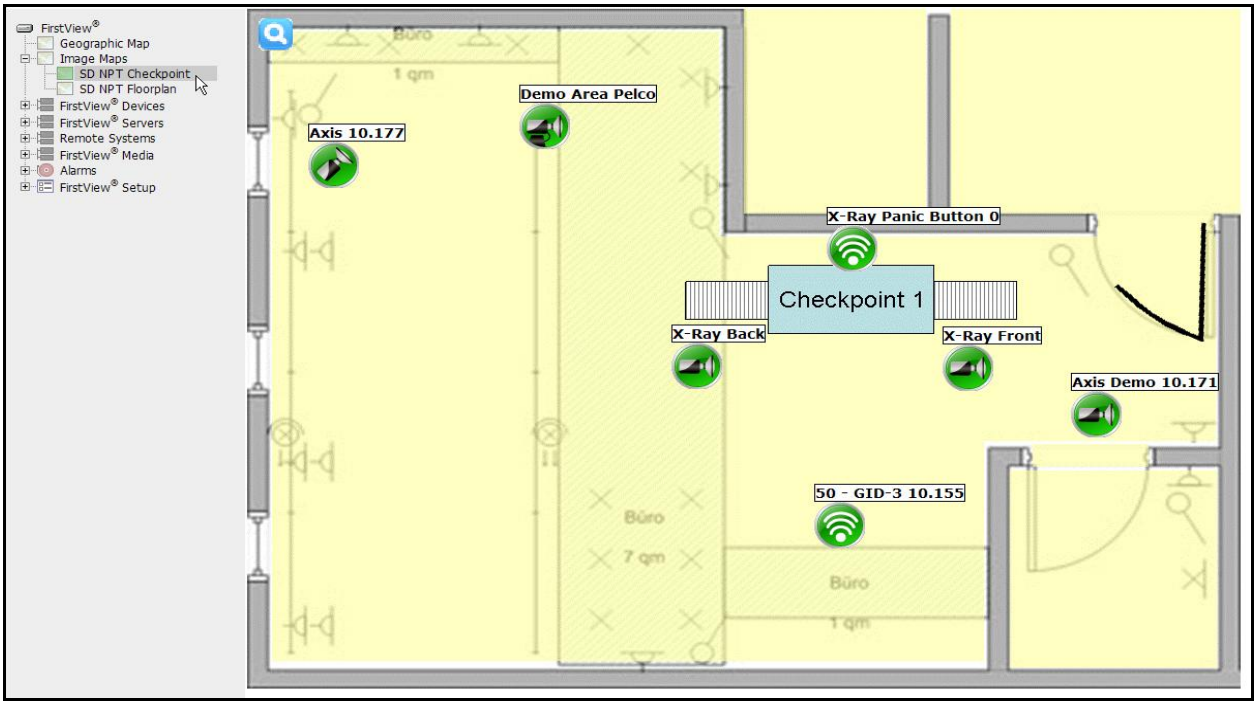
- If the camera with the appropriate Preset is currently being controlled by another user, the error message shown below will be displayed.

5.2: Image Maps

FirstView® Menu / Image Maps / **Map Name**

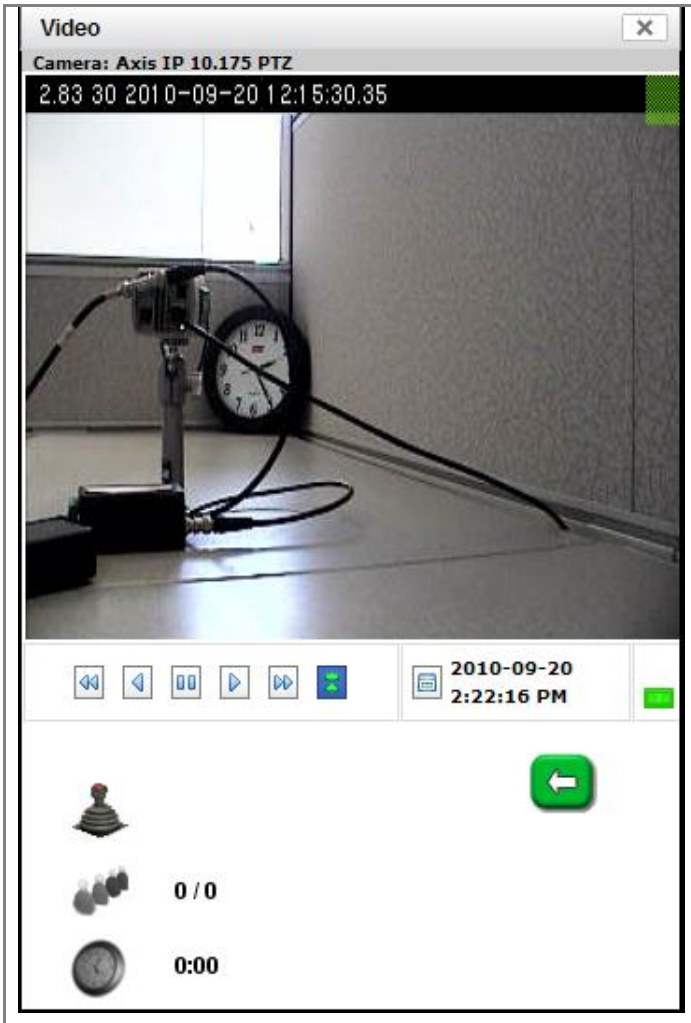
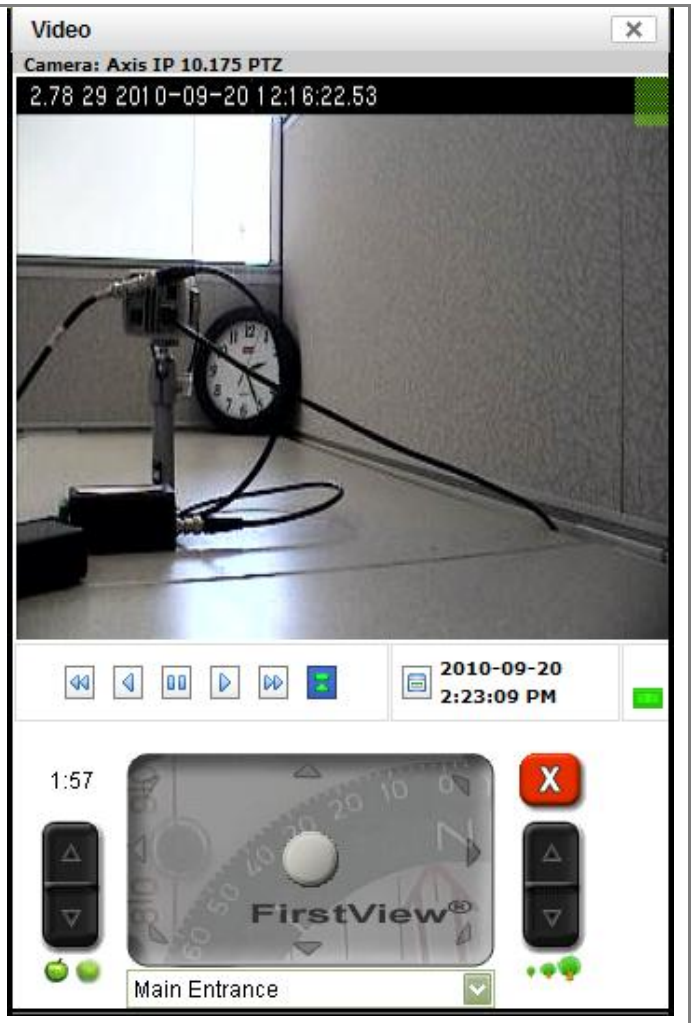
5.2.1: Selecting an Image Map

Click “Image Maps” to view all maps that have been uploaded into the system (please see **Section 2.5.1** for more details on this process). Click the name of the map you wish to view, and it will open in the FirstView® browser window. As seen in the image below, devices that have been added to the Image Map will be displayed as device icons.



5.2.2: Viewing Video and Alarms

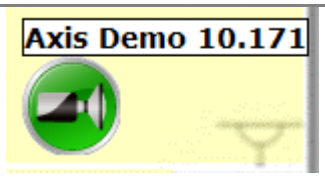
Video: To view live video from a camera located on an Image Map, click on the device icon. Two pop up windows will appear – one is the live video stream (shown below) and the other lists any alarms (please see the following section for more details about viewing alarms).

	
Live Video Stream **(Click green arrow button to access Camera Control)**	**Live Video Stream with Camera Control** **(Click red x button to release Camera Control)**

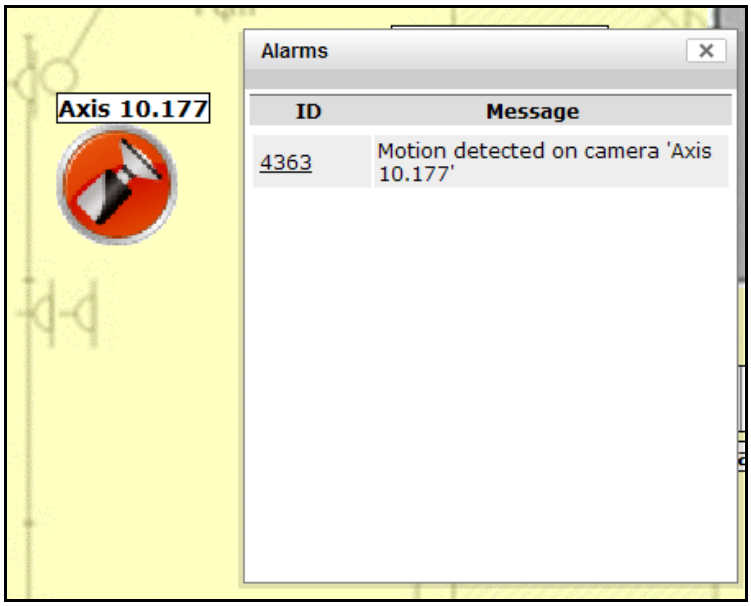
For a complete description of using the camera controls, please see **Section 3.1.1**.

To access the camera's archive, use the playback controls located below the video. For a complete description of using these controls, please see **Section 3.2.2**.

Alarms: Device icons for cameras that are equipped with motion detection will turn from green to red if an alarm has been generated.

	
Camera Device Icon Without an Alarm	**Camera Device Icon With an Alarm**

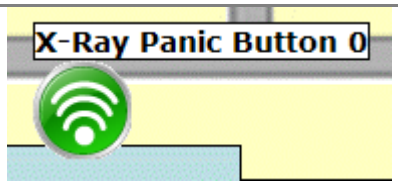
To view the list of alarms, click on the red device icon and the pop up window shown below will open. To view additional details about the alarm, click the Alarm ID number link to open the “Alarm View” screen.



Please see **Chapter 6** for a complete description of the alarm sources, displays, and controls.

5.2.3: Viewing Sensor Alarms

Sensor Alarms on Image Maps are viewed in the same way as cameras. If an alarm on a sensor is triggered, it will turn red.

	
Sensor Device Icon Without an Alarm	**Sensor Device Icon With an Alarm**

To view the list of alarms, click on the red device icon and the pop up window shown below will open. To view additional details about the alarm, click the Alarm ID number link to open the “Alarm View” screen.

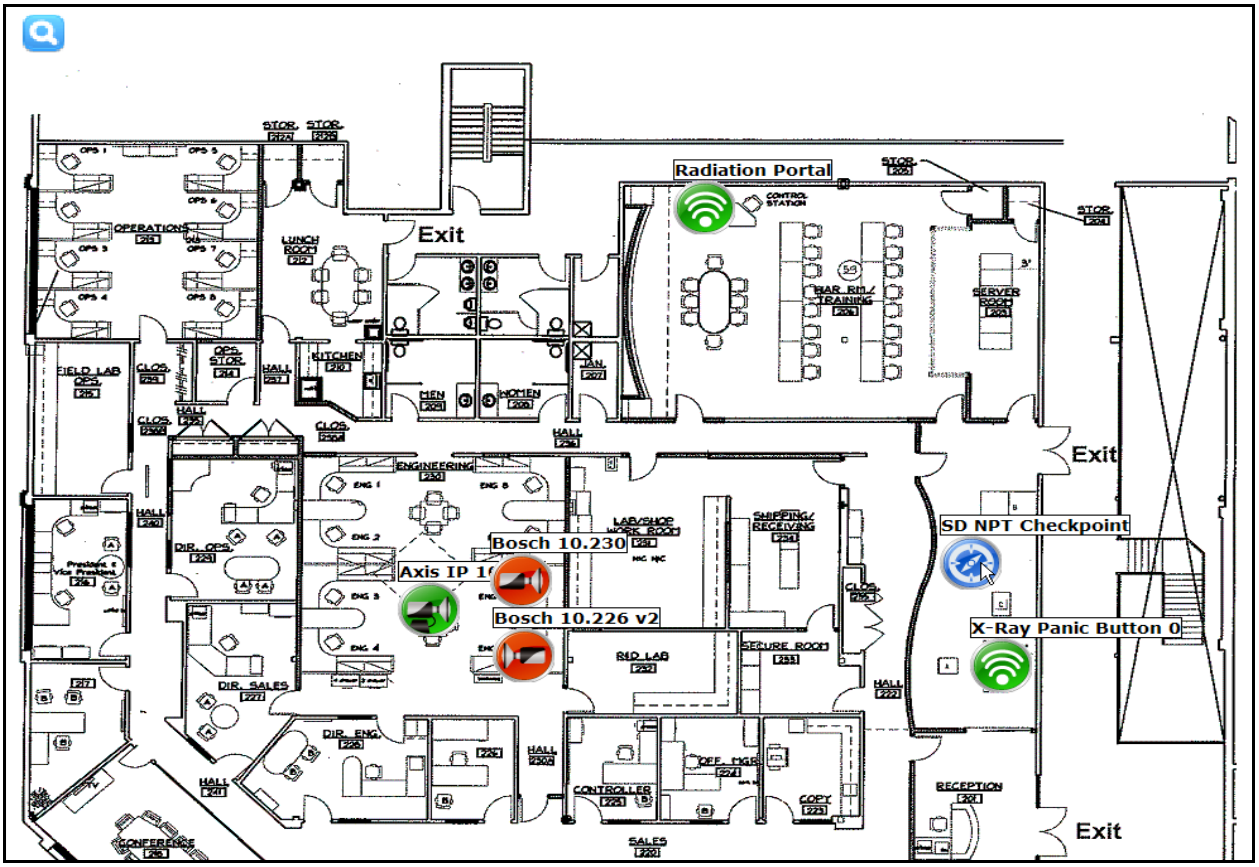
Please see **Chapter 6** for a complete description of the alarm sources, displays, and controls.

5.2.4: Using Layered Image Maps

Secondary maps that have been nested within a primary map will be displayed as icons on the primary map as shown below.

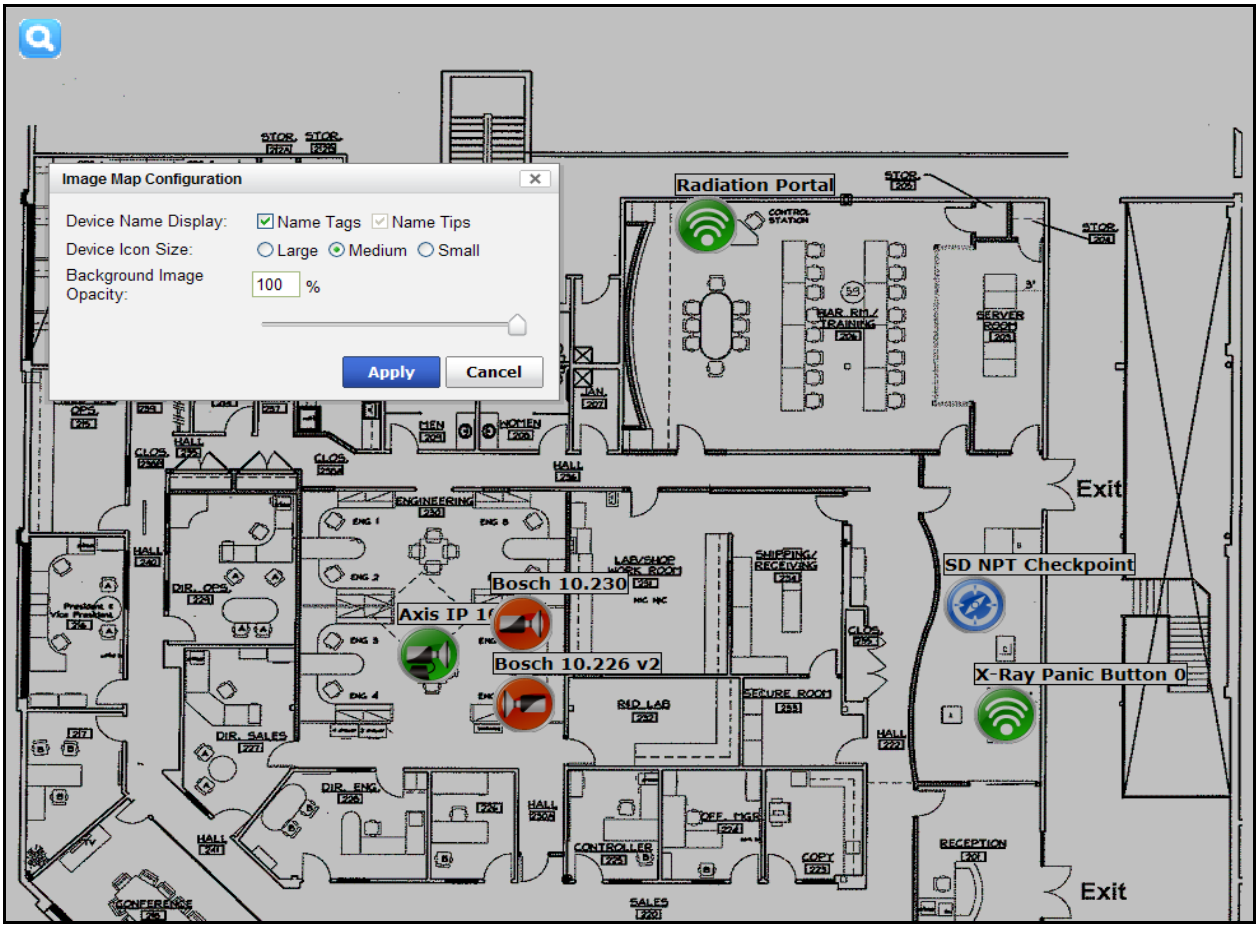
To navigate between the layered maps:

- Click a secondary map icon to navigate to the nested map
- To return to the primary map, click the Image Map menu button at the top left of the screen and select “Up to Parent Map” from the menu.



5.2.5: Modifying Image Map Settings

To modify the settings for an image map, click the Image Map menu button at the top left of the screen and select “Configure Map” from the menu.



The following settings can be modified:

- Device Name Display
  - Checking the “Name Tags” checkbox will display the device name above the icon.
  - The “Name Tips” checkbox is selected by default. When a user places the cursor over an icon, the device name is displayed in a pop-up box.
- Device Icon Size
  - Select the radio button for Large, Medium, or Small Device Icons.
- Background Image Opacity
  - Modifying this setting will change the level of transparency of the image map.
  - The user can either enter a percentage (in increments of 10%) or use the slider to select the desired amount of image map transparency.

Note: Click the “Apply” button to apply the new settings or “Cancel” to return to the Image Map.

Chapter 6: FirstView® Alarm System

6.1: Alarm System Overview

The FirstView® Alarm System allows users to monitor the entire security system by focusing on areas that require immediate attention instead of trying to monitor all areas simultaneously.

The Alarm System consists of the following components that are detailed in this chapter:

- **Alarm Sources:** The sensors and sensor systems that generate alarms.
- **Alarm Actions:** The actions automatically performed each time an alarm is generated.
- **Alarm Multiplex View:** The configurable display that shows video of alarm areas each time a new alarm is generated.
- **Alarm View and Archives:** The system that allows users to view active alarms and archive inactive alarm records.

6.2: Alarm Sources

The FirstView® Alarm System supports several types of alarm sources. Each alarm source notifies FirstView® that an event requiring attention has occurred and begins a series of actions as determined by the sensor configuration (please see **Section 6.3** for more details on alarm-related actions).

The following alarm sources are currently supported:

- **Access Control Systems:** Physical security systems can be integrated with FirstView® to generate alarms based on activity at access points.
    - Please see **Section 4.1** for more details about this alarm source.
- **Chemical Sensors:** Chemical sensors are supported by FirstView® and monitor the environment for dangerous chemicals.
    - Please see **Section 4.2** for more details about this alarm source.
- **Biological Sensors:** Biological sensors are supported by FirstView® and monitor the environment for hazardous biological agents.
    - Please see **Section 4.3** for more details about this alarm source.
- **Radiation Sensors:** Radiation sensors are supported by FirstView® and monitor the environment for types and levels of radiation.
    - Please see **Section 4.4** for more details about this alarm source.
- **Explosives and Narcotics Detectors:** These detectors can be used to scan for dangerous substances and generate alarms in FirstView®.
    - Please see **Section 4.5** for more details about this alarm source.
- **Weather Sensors:** These sensors report weather information to FirstView® and can generate alarms based on defined levels.
    - Please see **Section 4.6** for more details about this alarm source.
- **Contact Closure Sensors:** Contact closures can generate alarms in FirstView® based on connectivity status between contact closures.
    - Please see **Section 4.7** for more details about this alarm source.

- **Video Analyzers:** Video analytics systems can be integrated with FirstView® to raise alarms based on movement or object location in the scene.
    - Please see **Section 4.8** for more details about this alarm source.

- **Video Motion Detection:** Cameras that support this feature can be configured to detect motion within a scene and generate an alarm in the FirstView® system.
    - Please see **Section 2.2.5** for more details about this alarm source.

- **External Sensor Systems:** The FirstView® Alarm application can be used to integrate data from external sensor systems and generate alarms in FirstView®.
    - Please see **Section 4.9** for more details about this alarm source.

- **Gunshot Location System (GLS):** The Shotspotter® Gunshot Location System (GLS) can be integrated with FirstView® to generate alarms when a gunshot is detected and direct the closest camera to record video of the area.
    - Please see **Section 4.10** for more details about this alarm source.

6.3: Alarm Actions

The following table outlines the actions automatically performed by the FirstView® Alarm System when an alarm is generated:

Type of Alarm	Action(s) in Alarm System
Motion Detector	Live video, images captured at the time of the alarm and at the time of any alarm updates, and alarm information is displayed, and all alarm media and information is recorded in Alarm View.
Video Analysis	Live video and alarm information is displayed, images are captured (depending on the video analysis type, this can be before and after the alarm is generated or just at the time of alarm, and certain analysis types do not capture still images at all), and all alarm media and information is recorded in Alarm View.
Sensor System (A, B)	
A: Sensor with no associated camera(s)	Alarm information is displayed and recorded in Alarm View.
B: Sensor with associated camera(s)	Live video, images captured at the time of the alarm and at the time of any alarm updates, and alarm information is displayed, and all alarm media and information is recorded in Alarm View.

Note: The alarm actions are the same regardless of whether the user is monitoring the Alarm System in Multiplex View or Alarm View. However, images captured during an alarm can only be viewed in Alarm View.

6.4: Alarm Multiplex View (MuxView)

FirstView® Menu / Alarms / **Alarm Multiplex View**

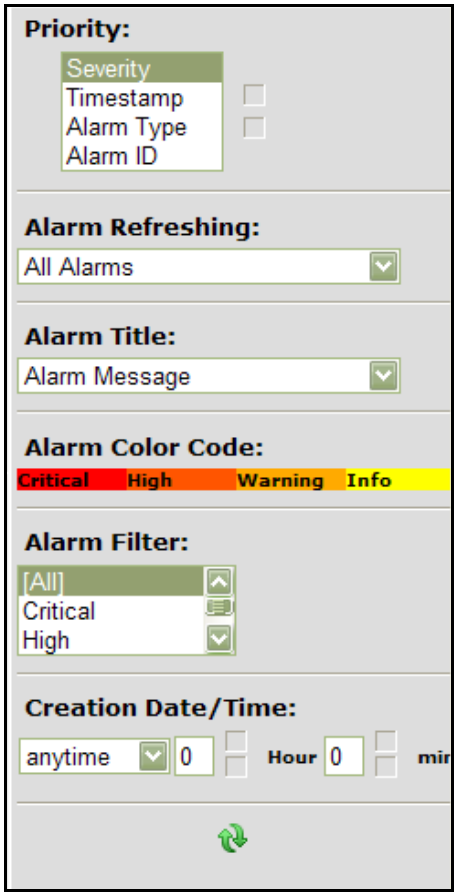
Multiplex View for the Alarm System is designed to prevent operator overload in security systems with large numbers of cameras. If there are no active alarms, the screen will remain black. When an alarm is generated, a live video feed will appear on the screen with information about the alarm so the operator can take any appropriate actions. Alarms will be removed from this display as they are cleared from the FirstView® system.

6.4.1: Starting Multiplex View

Click the

button on the FirstView® Menu to open the black screen shown below.

To open the Alarm Multiplex menu, click the “Menu” button on the toolbar.



To close the menu, click the “Menu” button on the toolbar again.

6.4.2: Creating a Layout

There are seven options for the number of video feeds in a screen layout: 1, 4, 9, 16, 1+5, 1+7, and 1+12.

To select a layout, click one of the numbered buttons on the toolbar (shown below).

The black Alarm MuxView screen will show the selected number of slots.

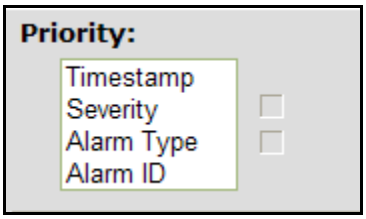
Note: When switching from a larger layout to a smaller layout (e.g. 16 to 12 or 9 to 4), the slots to the right of and below the first slot will be removed from the screen.

6.4.3: Priority Configuration

Assigning a priority in Alarm MuxView allows users to define the order new alarms will be displayed in. The four priority classifications are:

- **Severity:** The severity levels are: Info, Warning, High, and Critical
- **Timestamp:** The time an alarm is generated

- **Alarm Type:** The types of alarms are: Motion Detector, Video Analysis, and Sensor System
- **Alarm ID:** The ID number is automatically generated by FirstView®

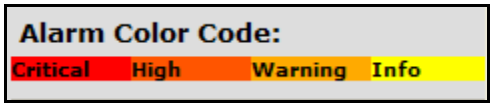


To determine the priority of alarms, click on one of the four priority classifications and use the up and down arrows to assign the order of importance.

In the example shown above, the order is Timestamp, Severity, Alarm Type, and Alarm ID, so newest alarms (regardless of severity) are given the highest priority on the Alarm MuxView screen. If Severity were at the top of this priority list, alarms with the highest severity level would be given the highest priority.

6.4.4: Alarm Color Code

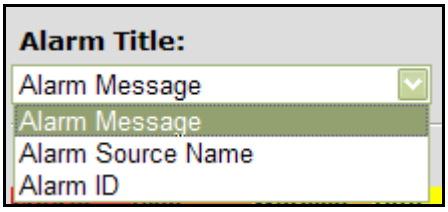
Each alarm has a colored square on the far right of the title area above the video feed that communicates information to operators. The color code is dictated by the severity level of the alarm.



6.4.5: Alarm Title

Users can define the format of the alarm title that appears in the title area above the video feed. As shown in the image below, there are three options:

- **Alarm Source Name / Alarm ID:** The name of the sensor or camera will be displayed with the ID number of the alarm.
  - **Example:** 41 – Camera 12
- **Alarm ID:** The ID number of the alarm will be displayed by itself.
  - **Example:** 41
- **Alarm Message:** The message automatically generated by the alarm will be displayed.
  - **Example:** “Motion Detected on Camera 12”

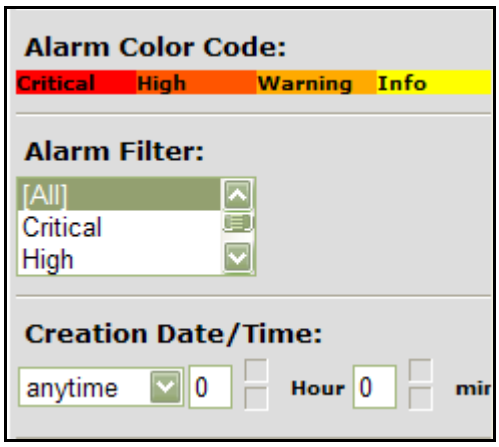


6.4.6: Alarm Filter

Users can filter the alarms displayed on the MuxView screen. As shown in the image below, there are two types of filters:

- **Severity:** Select a severity level (or more than one level by holding down the Ctrl key and clicking on the desired levels) to filter the displayed alarms by severity level.
- **Creation Time:** Select an option from the drop-down menu (Anytime, Within, More Than) and set a time in hours and/or minutes using the up and down arrows to filter the displayed alarms by creation time.

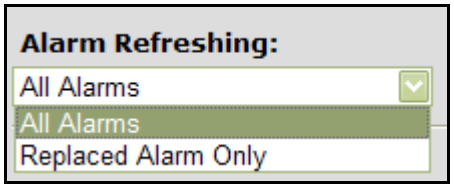
Note: Alarms that do not meet the defined filter requirements will be removed from the MuxView screen when the user clicks the "Refresh" button.



To remove any filters, select "All" in Severity and "anytime" in Creation Time and click the "Refresh" button .

6.4.7: Alarm Refreshing

Users can define the refresh method used on the MuxView screen. As shown in the image below, there are two refresh methods:



- **Replaced Alarms Only:** This method does not refresh the entire layout for each new alarm. If a layout is full of active alarms (A, B, C, and D) and a new alarm (E) with a higher priority level is generated, it replaces the lowest priority alarm.

Original Layout

Alarm A, Priority =1	Alarm B, Priority = 2
Alarm C, Priority = 3	**Alarm D, Priority = 4**

New Layout

Alarm A, Priority =1	Alarm B, Priority = 2
Alarm C, Priority = 3	**Alarm E, Priority = 4**

Alarm D is removed from the layout until one of the higher priority alarms is cleared.

- **All Alarms:** This method refreshes the entire layout each time a new alarm is generated. If a layout is full of active alarms (A, B, C, and D) and a new alarm (Alarm E) with a higher priority level is generated, the lowest priority alarm is dropped off the screen and the layout is refreshed.

Original Layout

Alarm A, Priority =1	Alarm B, Priority = 2
Alarm C, Priority = 3	**Alarm D, Priority = 4**

New Layout

Alarm A, Priority =1	**Alarm E, Priority = 2**
Alarm B, Priority = 3	Alarm C, Priority = 4

Alarm D is removed from the layout until one of the higher priority alarms is cleared.

6.4.8: Closing the Alarm Multiplex View

To close the Alarm Multiplex View page and return to the FirstView® welcome page, click the “Home” button on the toolbar.

6.5: Alarm View

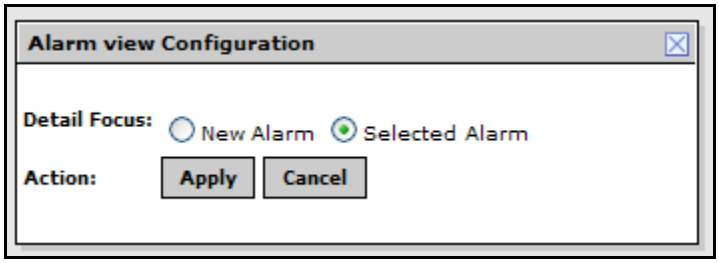
FirstView® Menu / Alarms / **Alarm View**

6.5.1: Alarm View Configuration

Like the Alarm Multiplex View, the Alarm View screen can also be used to monitor the Alarm System. New alarms are automatically displayed with information about the alarm, images captured at the time of the alarm, and video from any associated cameras.

To configure the Alarm View screen:

- Click the “Config” button to open the pop-up window shown below:



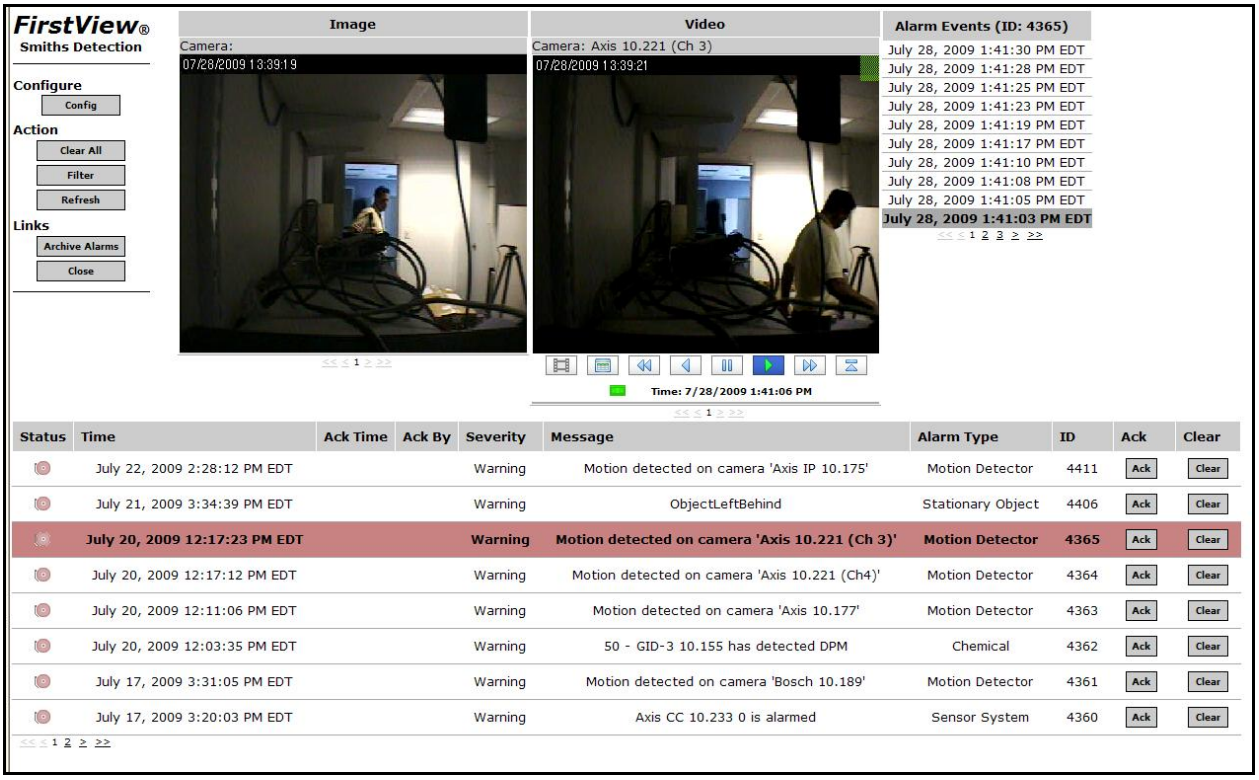
- **Detail Focus:** Use the radio buttons to define how the Alarm View page will react to incoming alarms.
    - “Selected Alarm” is the default value. This means that when a user is viewing an alarm and a new alarm occurs, the Alarm Detail (captured images, video, and event list) will remain focused on the currently selected alarm and only the Alarm List will be updated.
    - Selecting “New Alarm” will refresh the entire alarm view, and details from the latest alarm will always be displayed at the top of the page.
- Click the “Apply” button to save any changes or the “Cancel” button to close the window.

6.5.1: Viewing Alarms

To view an alarm, click any cell in the row of the Alarm List. The row will be highlighted in red and the Alarm Detail will update to show images and video from the selected alarm.

As seen in the image below, the **Alarm Details** (captured images, associated video, and event lists) for the currently selected alarm are shown at the top of the screen. Images captured at the time of the alarm are shown on the left and live video with the playback controls are shown in the middle. If applicable, the list of alarm events (e.g. multiple occurrences of motion detection) is shown on the right.

If more than one camera is associated with a sensor, there will be arrows below the video that can be used to view each of the video streams. If there are multiple captured images, the user can use the arrows to move between images.



When an alarm is selected, video will automatically beginning playing forward at normal speed beginning five seconds prior to the time of the alarm (or the selected alarm event). To view live video, click the button.

To access the camera's archive, use the playback controls located below the video. For a complete description of using these controls, please see **Section 3.2.2**.

To navigate between multiple alarm events (as seen in the example above), select the desired event from the Alarm Events list and the captured image and video will update to the selected event time.

Note: If there are more active alarms than can fit on the page, older alarms can be viewed by using the arrows below the alarm list.

6.5.2: Acknowledging and Clearing Alarms

The **Alarm List** section of this screen is used to acknowledge and clear alarms from the system. Operators should acknowledge an alarm as soon as they become aware of the situation and begin investigating the problem to determine the proper course of action.

To acknowledge an alarm, click the "Ack" button. The alarm list will refresh to reflect which user acknowledged the alarm and what time the alarm was acknowledged.

To clear an alarm, click the "Clear" button. Clearing an alarm automatically moves the alarm and associated media (images and video) to the Alarm Archive. To clear all active alarms, click the "Clear All" action button.

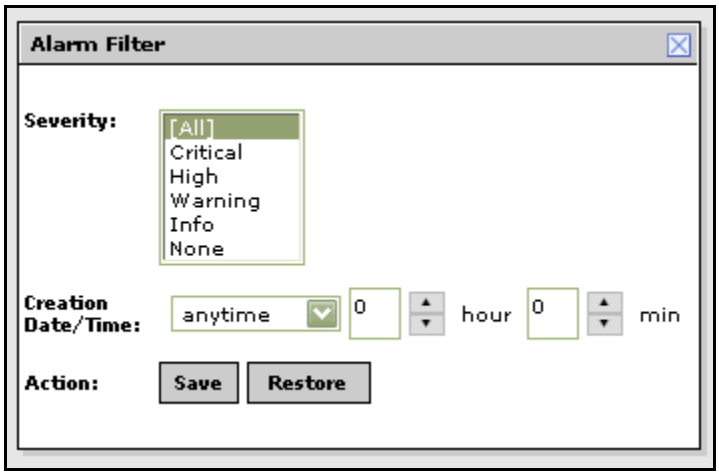
Note: Operators should only clear an alarm when a situation has been resolved and is no longer a threat.

6.5.3: Filtering and Refreshing Alarms

To filter the Alarm List by a specific severity level or amount of time alarms have been active, click the "Filter" action button and specify the parameters for the filter.

For example, defining a filter with a severity of "All" and a creation time of "more than" one hour would allow a supervisor to only be notified of alarms that have been active for more than one hour.

Click the "Save" button to apply the filter or the "Restore" button to reset the filter.

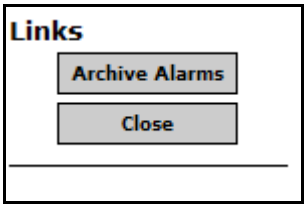


To refresh the list of alarms, click the "Refresh" action button.

6.5.4: Closing the Alarm View

To close the alarm view and return to the FirstView® welcome page, click the "Close" button.

To close the alarm view and open the alarm archive, click the "Archive Alarms" button.



6.6: Alarm Archive

FirstView® Menu / Alarms / **Alarm Archive**

After an alarm has been cleared on the Alarm View screen, it is automatically moved to the Alarm Archive. Alarms are stored in the system for a total of thirty days.

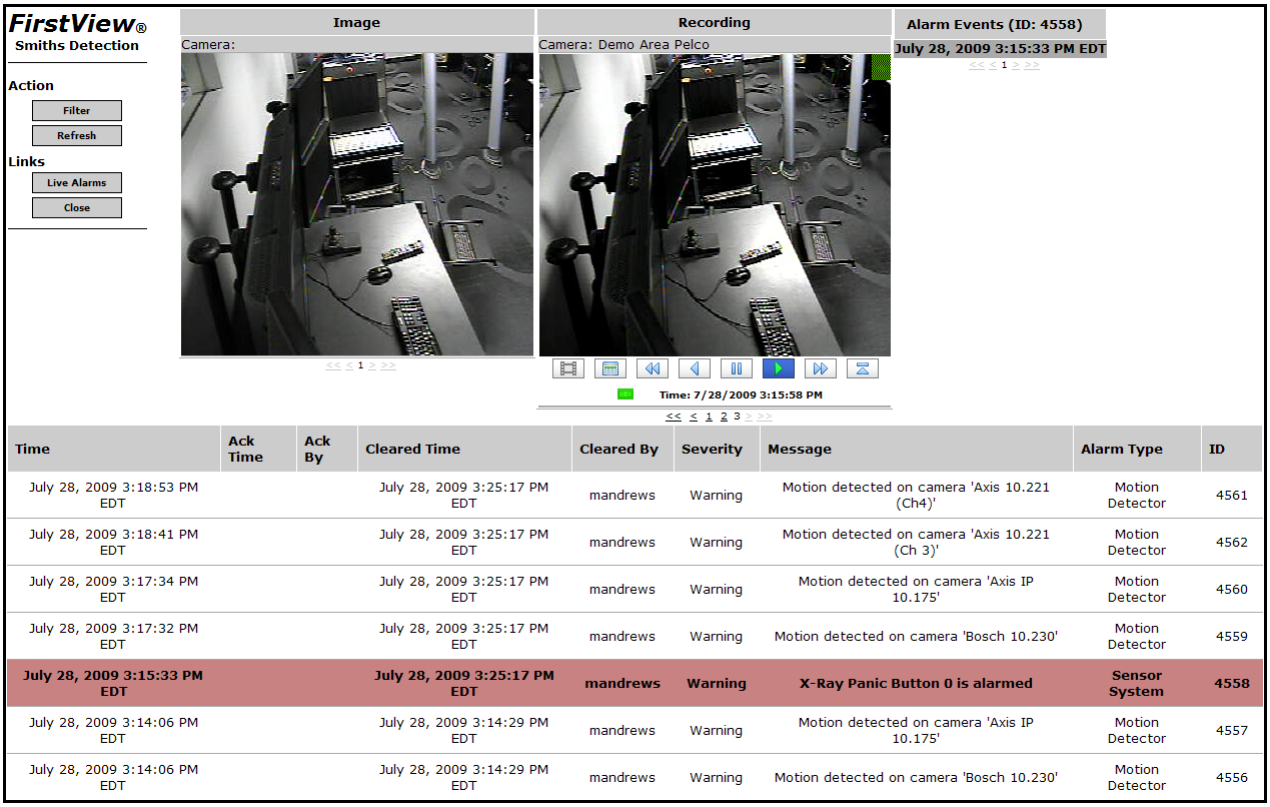
Images captured during an alarm are stored with the alarm information in the archives, but **video of the alarm area is only stored if the alarm source is associated with a camera that records video**.

6.6.1: Viewing Archived Alarms

To view an archived alarm, click any cell in the row of the Alarm List. The row will be highlighted in red and the Alarm Detail will update to show images and video from the selected alarm.

As seen in the image below, the **Alarm Details** (captured images, associated video, and event lists) for the currently selected alarm are shown at the top of the screen. Images captured at the time of the alarm are shown on the left and live video with the playback controls are shown in the middle. If applicable, the list of alarm events (e.g. multiple occurrences of motion detection) is shown on the right.

If more than one camera is associated with a sensor, there will be arrows below the video that can be used to view each of the video streams. If there are multiple captured images, the user can use the arrows to move between images.



Time	Ack Time	Ack By	Cleared Time	Cleared By	Severity	Message	Alarm Type	ID
July 28, 2009 3:18:53 PM EDT			July 28, 2009 3:25:17 PM EDT	mandrews	Warning	Motion detected on camera 'Axis 10.221 (Ch4)'	Motion Detector	4561
July 28, 2009 3:18:41 PM EDT			July 28, 2009 3:25:17 PM EDT	mandrews	Warning	Motion detected on camera 'Axis 10.221 (Ch 3)'	Motion Detector	4562
July 28, 2009 3:17:34 PM EDT			July 28, 2009 3:25:17 PM EDT	mandrews	Warning	Motion detected on camera 'Axis IP 10.175'	Motion Detector	4560
July 28, 2009 3:17:32 PM EDT			July 28, 2009 3:25:17 PM EDT	mandrews	Warning	Motion detected on camera 'Bosch 10.230'	Motion Detector	4559
July 28, 2009 3:15:33 PM EDT			**July 28, 2009 3:25:17 PM EDT**	**mandrews**	**Warning**	**X-Ray Panic Button 0 is alarmed**	**Sensor System**	**4558**
July 28, 2009 3:14:06 PM EDT			July 28, 2009 3:14:29 PM EDT	mandrews	Warning	Motion detected on camera 'Axis IP 10.175'	Motion Detector	4557
July 28, 2009 3:14:06 PM EDT			July 28, 2009 3:14:29 PM EDT	mandrews	Warning	Motion detected on camera 'Bosch 10.230'	Motion Detector	4556

When an alarm is selected, video will automatically beginning playing forward at normal speed beginning five seconds prior to the time of the alarm (or the selected alarm event). To view live video, click the **button.**

To access the camera's archive, use the playback controls located below the video. For a complete description of using these controls, please see **Section 3.2.2**.

To navigate between multiple alarm events, select the desired event from the Alarm Events list and the captured image and video will update to the selected event time.

Note: If there are more archived alarms than can fit on the page, older alarms can be viewed by using the arrows below the alarm list.

6.6.2: Filtering and Refreshing Archived Alarms

To filter the list of archived alarms by the creation date and time, or to view alarms from a specific device, click the “Filter” action button and specify the parameters for the filter.

For example, defining a filter with a specific device selected and a creation time of “anytime” would display all archived alarms from that device.

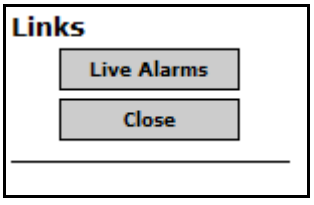
Click the “Save” button to apply the filter or the “Restore” button to reset the filter.

To refresh the list of archived alarms, click the “Refresh” action button.

6.6.3: Closing the Alarm Archive

To close the alarm archive and return to the FirstView® welcome page, click the “Close” button.

To close the alarm archive and open the alarm view, click the “Live Alarms” button.



Chapter 7: External Systems

7.1: Remote Systems

FirstView® Menu / Remote Systems / **Remote System Name**

Remote Systems are an optional feature in the FirstView® system, and are designed to allow authorized users of FirstView® to seamlessly access other systems.

To access a Remote System:

- Click the Remote System Name on the FirstView® Menu.
    - **Note:** This category will only appear when remote systems have been configured.
- FirstView® will generate a Cryptographic Signature to verify the authenticity of the user and submit that key as an access request to the remote system.
- If the user has been properly set up in the Remote System (please see **Section 2.8.1** for more details), the request will be approved and the user will be given access to the Remote System.
    - **Note:** If the user has not been set up, the user will be logged out of FirstView® and the login screen for the Remote System will appear in the window.
- A new session in the Remote System will be launched as if the user had logged in manually with a username and password.
    - **Note:** The user is logged off the local system after being logged on to the remote system.
- The FirstView® Menu and all features will work exactly the same in the Remote System.

Note: In order to return to the user's local FirstView® system while logged into the Remote System, the local system must be configured as a Remote System. Each system must be able to access all others in order to be able to transition back and forth. (Please see **Section 2.8.1** for more details on configuring remote systems.)

7.2: X-Ray Monitoring

FirstView® Menu / Media / View X-Rays

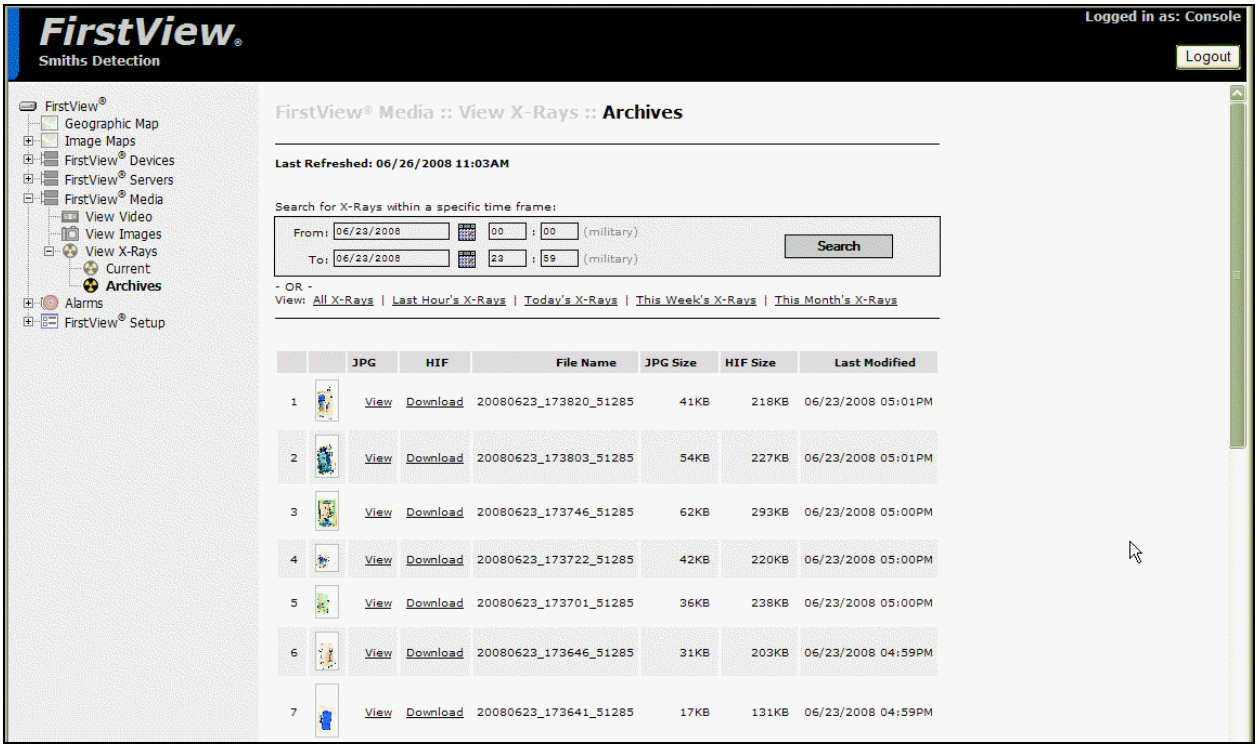
The X-Ray feature is an optional addition to the FirstView® system. Systems that are equipped with an X-Ray machine will record and store images as each item is scanned by the machine.

Current: This screen will display the most recently completed X-Ray scanned and recorded by the machine. The below image is an example of an X-Ray image.

FirstView® Menu / FirstView® Media / View X-Rays / **Current**

Archives: This screen will display X-Ray images recorded by the machine. As the image below shows, users can filter the X-Ray Archives to show “All X-Rays,” “Last Hour’s X-Rays,” “Today’s X-Rays,” “This Week’s X-Rays,” and “This Month’s X-Rays,” or search for all X-Rays recorded during a specific time range.

FirstView® Menu / FirstView® Media / View X-Rays / **Archives**



Appendix A: Software License Agreement

Smiths Detection Inc.
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SOFTWARE LICENSE AGREEMENT ("AGREEMENT"). REDISTRIBUTION NOT PERMITTED
IMPORTANT-READ CAREFULLY BEFORE USING THIS SOFTWARE: This License Agreement for certain Smiths Detection Products ("License Agreement") is a legal agreement between you (either an individual or an entity ("Customer") and Smiths Detection Inc. and its suppliers and licensors (collectively "Smiths Detection") for the Smiths Detection FirstView® Software ("the Software"). By using this Software, you agree to be bound by the terms of this License Agreement.

CUSTOMER AGREES THAT ITS USE OF THE SOFTWARE ACKNOWLEDGES THAT IT HAS READ THIS LICENSE, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

1. SOFTWARE LICENSE a) Subject to the terms and conditions of this Agreement, Smiths Detection hereby grants to Customer a nonexclusive, nontransferable license to use the Software, solely for Customer's own business purposes in connection with the transmission of images and camera control from Smiths Detection FirstView® Software ("FirstView®"). The license granted herein is limited to use of the Software purchased by Customer. Customer may not use the Software on additional Smiths Detection Server systems or any computer PC, server, workstation or CPU, or on any other audio/video system without the prior written consent of Smiths Detection, which shall be at the sole discretion of Smiths Detection, and payment of additional license fees as determined by Smiths Detection.

b) Customer shall not, and shall not permit any third party, to modify, reverse engineer, decompile, disassemble, translate, or convert the Software, or apply any procedure or process to the Software in order to ascertain or derive the source code in the Software.

c) The term "Software" as used in this Agreement shall include all software, interfaces and documentation provided by Smiths Detection to Customer. Smiths Detection and its licensors reserve all right, title and interest in and to the Software and Customer's rights in the Software are limited to those expressly granted in this Agreement.

2. PROPRIETARY MATERIAL; SECURITY OF THE SOFTWARE a) Definition. "Proprietary Material" means all information and materials that are not generally known to the public and in which either party, or its suppliers, customers or other persons (to the extent such party owes a duty of confidence to any such person) has rights, which is marked confidential, restricted or proprietary, or which, under all of the circumstances, ought reasonably to be treated as confidential and/or proprietary, including this Agreement. Smiths Detection's Proprietary Material shall include, without limitation, the Software and all documentation and information provided to Customer by Smiths Detection pertaining to the operation of the Software and/or the Smiths Detection FirstView software and system.

b) Restrictions. Customer agrees that with respect to any Proprietary Material that is disclosed by Smiths Detection that, except as expressly specified in this Agreement, the Customer shall: (i) maintain in confidence such Proprietary Material, using the same degree of care as it uses to protect its own confidential information of like nature, but not less than a reasonable degree of care; (ii) not disclose any such Proprietary Material to any person outside Customer's business organization; and (iii) use such Proprietary Material only for the purposes set forth in this Agreement, subject to the terms and conditions of this Agreement.

c) Further Customer Obligations. Customer shall limit the use of and access to the Software and all other Proprietary Material provided by Smiths Detection hereunder to its employees whose use of or access to the Software is necessary for Customer's business and who are bound to keep such Proprietary Material confidential. Customer shall immediately notify Smiths Detection in writing of any unauthorized use of or access to Smiths Detection's Proprietary Material. Customer shall not copy any of Smiths Detection's Software. Customer shall not remove any copyright, proprietary rights or confidentiality notices included in or affixed to any Proprietary Material, and shall reproduce all such notices on any copies of Proprietary Material made by Customer. Customer is solely responsible for the

supervision, management and control of its exercise of the processes of the Software, including providing all reasonable checkpoints, control techniques, and other measures for detecting promptly and minimizing the effects of any errors, failures, or interruptions that might occur in the use or exercise of the Software.

d) Exceptions. Nothing in this Agreement shall limit the ability of the Customer to disclose the Proprietary Material if such disclosure is: (i) required to be made pursuant to a duly authorized subpoena or court order, whereupon the Customer will provide prompt notice to Smiths Detection and give such Smiths Detection an opportunity to respond prior to such disclosure and seek a protective order or other appropriate remedy; (ii) required to be made to a court or other tribunal in connection with the enforcement of the Customer's rights under this Agreement to the extent allowed by such court or tribunal, whereupon the Customer will provide prompt notice to Smiths Detection and give such Owning Party Smiths Detection an opportunity to respond prior to such disclosure and seek a protective order or other appropriate remedy; or (iii) is approved by the prior written consent of the Customer.

3. LIMITED WARRANTY a) Smiths Detection warrants that (i) for 1 year after delivered to Customer, the Software will be capable of functioning substantially in accordance with the user documentation provided by Smiths Detection for use with the specific version or release of the Software licensed hereunder; and (ii) the digital or electronic media on which the Software is provided will be free of defects in materials and workmanship. Notwithstanding any other provisions of this Agreement, Smiths Detection and Customer acknowledge that Customer's use of the Software may not be uninterrupted or error-free. Customer's sole and exclusive remedy and Smiths Detection's entire liability for any breach of the foregoing warranty is that Smiths Detection shall, at its sole option and expense, either (i) repair or replace the portion of the Software that is nonconforming; (ii) advise Customer how to achieve substantially the same functionality with the Software as described in the documentation through a procedure different from that set forth in the documentation; or (iii) if the above remedies are impracticable, terminate the license granted herein and refund the license fee, if any, Customer paid for the Software.

b) Customer will be deemed to have accepted the Software upon receipt thereof. Smiths Detection shall have no liability under the foregoing warranty to the extent that: (i) Customer has failed to report in writing to Smiths Detection any nonconformance claimed to be a breach of warranty promptly after becoming aware of such nonconformance; (ii) Customer has modified the Software without the prior written consent of Smiths Detection; (iii) the Software has been misused or exposed to environmental or operating conditions beyond those specified by Smiths Detection; (iv) the Software has been damaged, altered by accident, neglect, misuse or other abuse; (v) the claimed defect or error has been caused, in whole or in part, by a person or persons other than Smiths Detection; (vi) the Customer has loaded any third party hardware or software in the system or altered any system configuration files, system registry, operating system, dll's or any related files required for the Smiths Detection software and OS to perform properly; or (vii) Customer fails to incorporate in the Software any update, enhancement or revision thereto that Smiths Detection, at Smiths Detection's sole discretion, has provided to Customer.

4. WARRANTY DISCLAIMER. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, SMITHS DETECTION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING TO THE SOFTWARE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE. SMITHS DETECTION'S EXPRESS WARRANTIES SHALL NOT BE ENLARGED, DIMINISHED OR AFFECTED BY, AND NO OBLIGATION OR LIABILITY SHALL ARISE OUT OF, SMITHS DETECTION'S RENDERING OF ADVICE OR SERVICES IN CONNECTION WITH THE SOFTWARE.

5. LIMITATION OF LIABILITY. a) IN NO EVENT WILL SMITHS DETECTION OR ITS LICENSORS BE RESPONSIBLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, DAMAGES RESULTING FROM LOSS OF USE, LOSS OF DATA, LOSS OF PROFITS OR LOSS OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THIS AGREEMENT, EVEN IF SMITHS DETECTION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

b) Smiths Detection's and its licensors' aggregate liability, whether in contract, tort, or otherwise, arising out of or in connection with the Software or this Agreement shall not exceed the amount of License Fees paid to Smiths Detection by Customer hereunder.

c) The provisions of this Agreement allocate the risks between Customer and Smiths Detection. Smiths Detection's pricing reflects this allocation of risks and the limitations of liability set forth herein.

6. INDEMNIFICATION. This Software is intended for use only with properly licensed media and content. It is the Customer's responsibility to ascertain whether any copyright, patent, other licenses or releases are necessary. Customer agrees to record, play back and transmit only those materials for which it has the necessary patent, copyright and other permissions, licenses and/or clearances. Customer agrees to hold harmless indemnify and

defend Smiths Detection, its officers, directors and employees, from and against any losses, damages, fines and expenses (including attorneys' fees and costs) arising out of or relating to any claims that Customer has (i) viewed, or transmitted any materials in violation of any other party's rights or in violation of any law or (ii) violated any terms of this License Agreement. If Customer is importing the Software from the United States, Customer shall indemnify and hold Smiths Detection harmless from and against any import and export duties or other claims arising from such importation or (iii) damage based on the use of the product produced, used, and/or sold by Customer containing or in any way relating to the Software.

7. TERM AND TERMINATION a) This Agreement shall be effective from the date hereof and shall remain in effect unless terminated as provided herein.

b) If Customer shall (i) violate any provision of Section 1 or 2 hereof; (ii) fail to make any payment required hereunder when due, or (iii) materially fail to perform or be in material breach of any other of its obligations hereunder and fail to remedy said failure or breach within thirty (30) days after receipt of notice from Smiths Detection with respect thereto, Smiths Detection may terminate this Agreement and the license granted hereunder by giving written notice of termination to Customer, effective immediately upon its sending.

c) Within five (5) days after the termination of this Agreement for any reason, Customer shall return to Smiths Detection all Proprietary Material of Smiths Detection and all copies thereof in the possession, custody or control of Customer and shall destroy or render unusable all other Proprietary Material and all copies thereof which for any reason cannot be delivered to Smiths Detection. The provisions of Sections 2, and 4-8 10 shall survive any termination of this Agreement.

8. GENERAL TERMS a) This Agreement may only be modified by a written document signed by Smiths Detection and Customer, and no waiver, alteration, modification or cancellation of any of the provisions of this Agreement shall be binding unless made in writing and signed by the parties. Nothing in this Agreement shall be construed to place the parties in the relationship of partners or joint venturers, and the parties shall have no power to obligate or bind the other in any manner whatsoever. If any provision of this Agreement (or any portion thereof) shall be held to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remainder of this Agreement shall not in any way be affected or impaired thereby.

b) Smiths Detection shall not be liable or deemed to be in default for any delay or failure to perform under this Agreement resulting, directly or indirectly, from any force majeure event, including any acts of God, war, fire, flood, strike, labor dispute, action of any governmental authority or other cause beyond Smiths Detection's reasonable control.

c) Customer acknowledges that a breach of any provision of this Agreement by Customer relating to the Software or Smiths Detection's intellectual property rights therein will cause Smiths Detection immediate and irreparable injury as to which there may be no adequate remedy at law. Customer acknowledges that Smiths Detection shall be entitled to injunctive relief, in addition to any other rights or remedies which may be available to Smiths Detection. The remedies in this Agreement are cumulative and in addition to all other rights and remedies available to Smiths Detection by operation of law or otherwise.

d) All notices or demands under this Agreement shall be deemed to have been duly given if in writing and delivered in person or mailed with postage prepaid to the address of the party being notified set forth in the front page of this Agreement, or to such other address as such party shall have specified in writing to the other party.

e) This Agreement shall not be assignable by Customer without prior written consent of Smiths Detection, and any attempt to assign any rights, duties or obligations that arise under this Agreement without such consent will be void. This Agreement shall be binding upon and inure to the benefit of the parties hereto, their successors and permitted assigns.

f) This Agreement shall be governed by, and construed in accordance with, the laws of the State of Rhode Island, without regard to its conflicts of laws principles. Each party hereby waives any right to jury trial in any forum.

g) No waiver, alteration, modification or cancellation of any of the provisions of this Agreement shall be binding unless made in writing and signed by the parties.

h) Customer agrees to pay all taxes, however designated, levied or based on the License Fees payable by Customer pursuant to this Agreement (other than taxes based upon Smiths Detection's income), including state and local sales, use or equivalent taxes or amounts in lieu thereof paid or payable by Smiths Detection in respect thereto.

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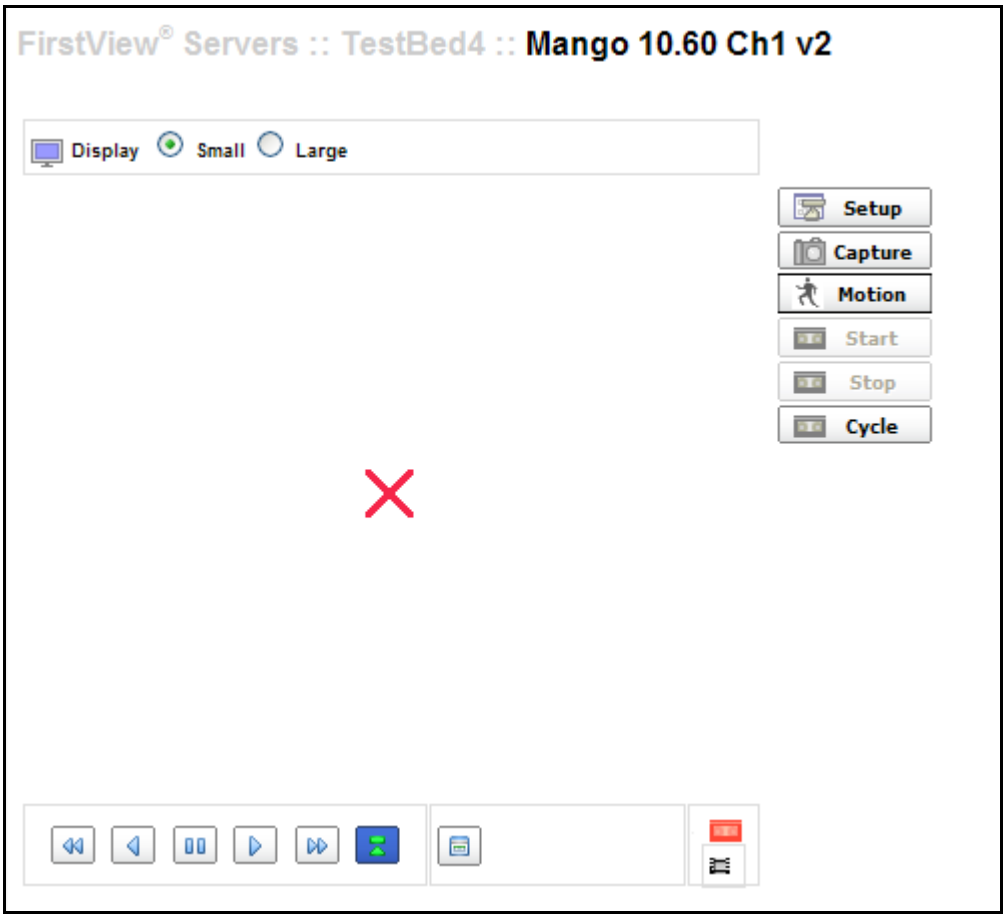
Appendix B: Troubleshooting

The FirstView® system may occasionally experience communication issues with devices. As seen in the image below, there is a red “x” where the live video stream for this camera should be because FirstView® was unable to communicate with the camera at the time the request to view the video was made.



The following factors can lead to a communication issue between a device and the FirstView® system:

- Network connectivity problems
- Changes made to a device’s settings by another user
- Hardware malfunctions

The first two factors can be addressed by following the processes described in the following sections. If a communication issue still exists after completing all of the troubleshooting processes, please contact FirstView® support or consult the hardware documentation for the device.

B.1: Troubleshooting Processes for Users

1.) Isolate the problem:

- If a device does not display information or video:
    - Select another device from the FirstView® menu.
        - If the other device displays information or video, return to the original device and proceed to Troubleshooting Process # 2.
        - If the other device does not display information or video, return to the original device and proceed to Troubleshooting Process # 3.

2.) Refresh the device configuration settings:

- Open the configuration window for the device.
- Verify the accuracy of the configuration settings.
- Click the “submit” button to refresh the settings.
    - If the device does not display information or video, close the configuration window and proceed to Troubleshooting Process # 3.

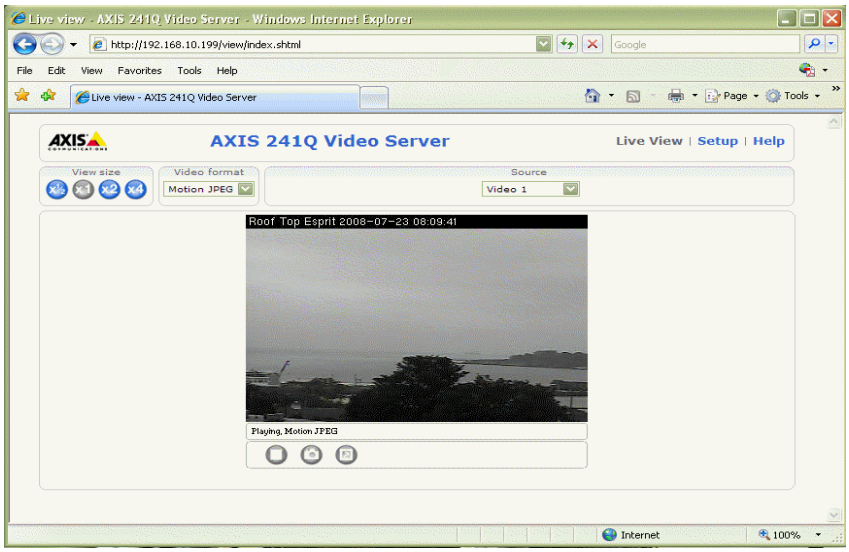
3.) Refresh the FirstView® browser:

- Click the button on the browser window.
- Return to the original device that had the communication issue.
    - If the device does not display information or video, please contact FirstView® Support or ask your system administrator to perform the processes described in the following section.

B.2: Troubleshooting Processes for Administrators

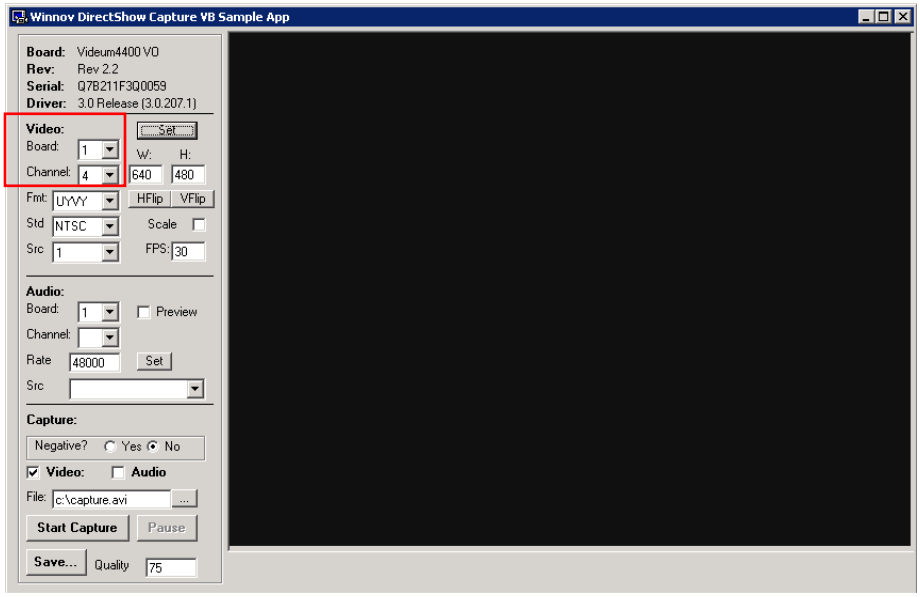
1.) Verify that the video feed can be viewed through an alternate source:

- For Cameras that communicate with FirstView® over an IP connection:
    - Open a web browser.
    - Enter the IP address of the camera.
    - As the image below shows, the live video will be displayed in the browser if the camera is functioning properly. Close the browser window and proceed to Troubleshooting Process # 2.



- If the video feed cannot be viewed through the browser, there could be a hardware malfunction. Please contact FirstView® support or consult the hardware documentation for the device.

- For Cameras that communicate with FirstView® through an analog connection:
- **Note:** To perform this process, use the Remote Desktop Connection to access the FirstView® server directly.
  - Open the Videum Sample Capture Application
    - **Located in:** All Programs \ Videum \ Sample Capture Application
  - **Select a Board Number**
  - **Select a Channel Number**
    - If a camera is configured as an analog video feed, the Channel number will be defined in the Video configuration.
  - As the image below shows, the live video will be displayed in the black area if the camera is functioning properly. Close the Videum window and proceed to Troubleshooting Process # 2.



- If the video feed cannot be viewed through the Videum Sample Capture Application, there could be a hardware malfunction. Please contact FirstView® support or consult the hardware documentation for the device.

2.) Restart the FirstView® Server Service:

- **Note:** To perform this process, use the Remote Desktop Connection to access the FirstView® server directly.
  - Right-click on My Computer
  - Select Manage
  - Select Services & Applications
  - Select Services
  - Right-click on FirstView Server
  - Select “Stop”
  - Wait for service to stop. Select “Start” to restart the service.
- Log off the Remote Desktop Connection and open FirstView®
- Return to the original device that had the communication issue.
  - If the video feed cannot be viewed in FirstView®, there could be a hardware malfunction. Please contact FirstView® support or consult the hardware documentation for the device.

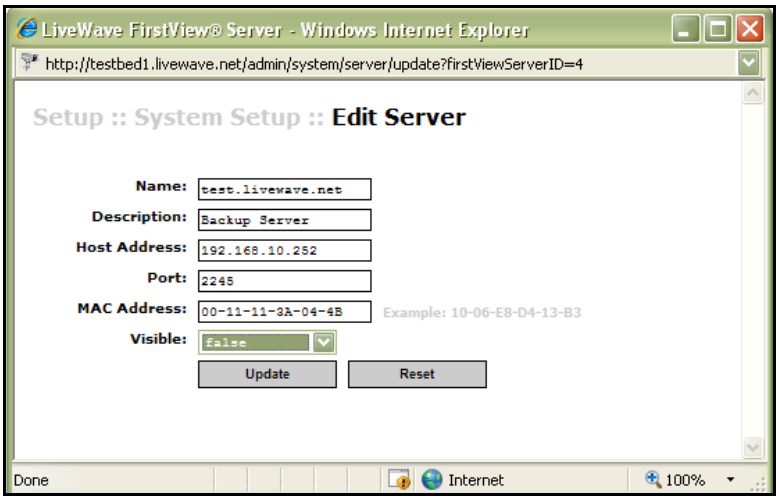
Appendix C: Maintenance Procedures

C.1: N+1 Redundancy for Secondary Servers

In the event of hardware failure on a secondary FirstView® server (any server that does not host the central database), the N+1 Redundancy feature can be used to transfer units to a designated backup server. Once the units are transferred via the procedure defined in **Section C.1.2**, camera and sensor units will begin recording data to the backup server.

C.1.1: Designate a Backup Server

- Install FirstView® and license the server.
- Add the server to the collective.
- On the **Primary Server**, create a new license to include the backup server.
- On the **Primary Server**, set the backup server as "not visible" (this designates the server as an available N+1 backup server).
    - FirstView® Menu / FirstView® Setup / System Setup / Server Setup
    - Click the "Edit" link and set the "Visible" field to "false."

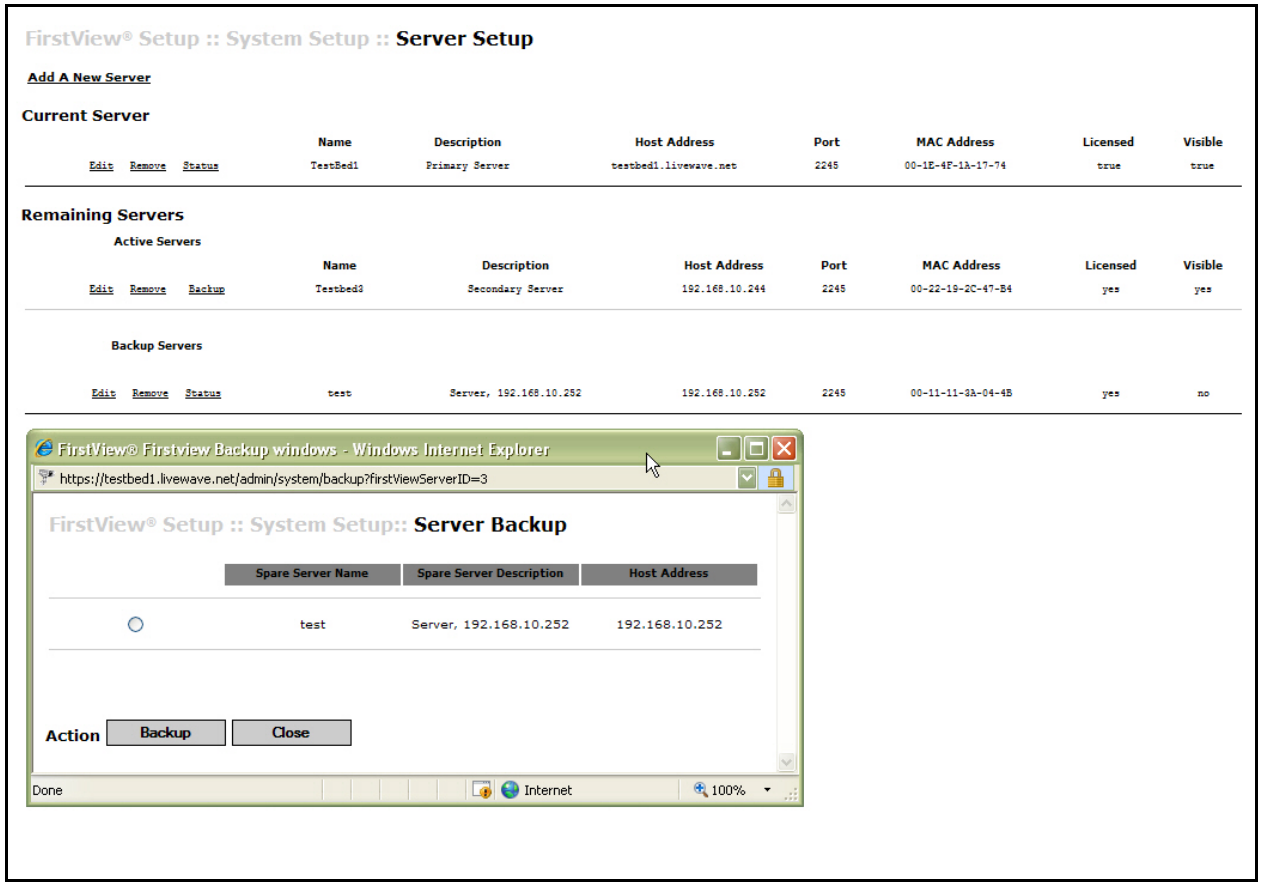


Note: Multiple backup servers can be designated in a FirstView® system.

C.1.2: N+1 Transfer Procedure

FirstView® Menu / FirstView® Setup / System Setup / Server Setup

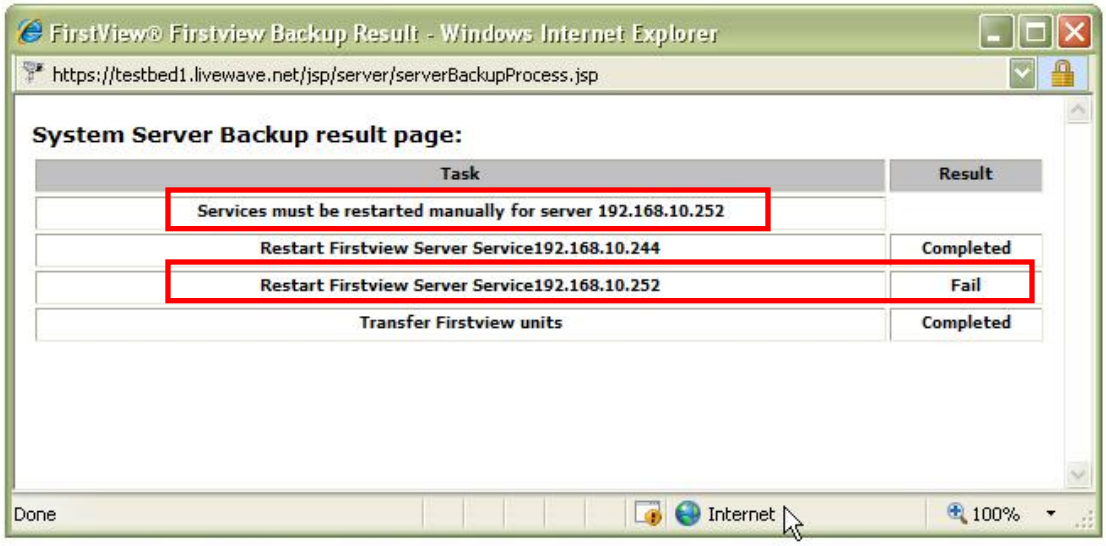
In the event of hardware failure on a secondary FirstView® server, open the Server Setup page and click the “Backup” link next to the server that is no longer accessible. The pop-up window shown below will open.



All available backup servers will be displayed. Click the radio button next to the desired backup server and click the “Backup” button.

A confirmation message will appear – click “OK” to continue.

The results of the transfer procedure will be displayed in a pop-up window. If any additional steps are required (e.g. restart services on the “backup” server), the user will be notified as shown below.



If necessary, manually restart services on the “backup” server. The server that was swapped out will be automatically designated as a system backup server.

Click the “Remove” link on the Server Setup page to delete that server from the FirstView® system.

Important Note: In some cases the secondary server and backup server may have physical configuration dependencies and this must be managed outside of the N+1 Redundancy procedure.

For example: If a server has analog video feeds connected through a device like a Winnov card, the backup server must have the same hardware configuration in place to support the transfer.