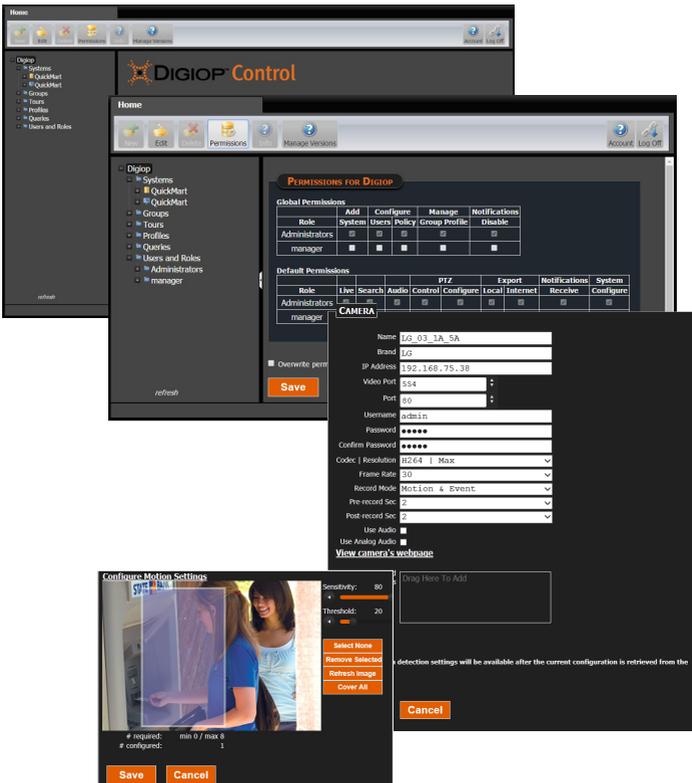# DIGIOP® Control V9.4 User Manual

Please read this manual before using your server, and always follow the instructions for safety and proper use. Save this manual for future reference.

Revision History

Date	Reason for Change
7/18/2011	Initial release.
1/31/2012	Includes V8.1 features.
2/7/2012	Includes updates to permissions screen.
10/30/2012	Includes V8.5 features.
5/16/2013	Includes V8.6 features.
9/20/13	Includes V8.7 features.
4/28/14	Includes V8.8 features.
6/9/15	Includes V9.0 features.
1/26/16	Includes V9.1 features.
11/21/16	Includes V9.2 features.
4/25/17	Includes V9.4 features.

Table of Contents

SECTION 1
System Overview

DIGIOP® is a ground breaking Video-Enhanced Intelligence Platform that provides a single, user-friendly interface to the critical video and data intelligence you rely on to effectively manage your business.

DIGIOP® extends the value of surveillance video beyond the traditional benefits of loss prevention and risk management, by combining raw video with information from back-office systems and video analytics. The result is an integrated dashboard that provides your functional leaders (management, operations, merchandising, marketing, and IT) with an accurate real-time and recorded view of the performance of the business.

DIGIOP® is an extensible video recording platform that provides real-time recording of analog and IP cameras. DIGIOP includes DIGIOP Control, an easy to use administration portal, and DIGIOP Connect, a user friendly dashboard that displays video and data on a single interface. You can also gain real-time management of video and data by adding DIGIOP Data to your video management solution.

- **DIGIOP® Control**
    — A web-based administration portal for DIGIOP Server that enables you to configure your systems and manage permissions.
    — DIGIOP® Control allows you to easily manage your single- or multi-site system. It includes: add and configure cameras and data devices, establish global and local level permissions for systems, cameras, and data streams.

- **DIGIOP® Connect**
    — Provides a unified dashboard that displays both video and data intelligence in a single user-friendly dashboard.
    — Provides search tools including thumbnail search, timeline search, replay search, digital zoom, and tours, allowing you to quickly locate, save and export video and data.

- **DIGIOP® Data**
    — DIGIOP® Data integrates external data with video recorded by DIGIOP®. This information can be displayed and retrieved with DIGIOP® Connect.
    — DIGIOP® Data can integrate video with retail Point-of-Sale (POS), Video Analytics, System Health and many other data sources to expand the potential of your system.

Locally Hosted and Cloud Managed (DIGIOP ELEMENTS™) Systems

The DIGIOP® server can be managed either locally or managed remotely by the DIGIOP ELEMENTS™ cloud. Locally managed systems retain all system configuration data and recordings on the local DIGIOP Server. These systems can be isolated on a private network and require no Internet access.

DIGIOP ELEMENTS™ cloud management provides businesses with a cloud-hosted infrastructure for remote access to business data. DIGIOP ELEMENTS™ offers a secure, hosted portal – (*elements.digiop.com*) for video and data management that allows administrators to configure systems, cameras, devices, data streams, users, roles and permissions across single or multi-site enterprises from anywhere an administrator has access to the cloud. All settings are accessed using private login credentials and all recorded video and data that is captured using DIGIOP Server software remain on the local server hard drive behind the user's firewall.

Additionally, with DIGIOP ELEMENTS™ all system settings and configurations are retained on *elements.digiop.com*. This option allows for quicker replacement and reconfiguration of settings if a system failure was to occur. Some special features of DIGIOP ELEMENTS™ include:

- Global management and access from anywhere
- Simplifies single and multi-site deployments
- Push server level updates directly to your servers
- Centralized remote management of multiple user roles and permissions
- System settings are saved to the DIGIOP hosted portal
- Failover capability in the event of local hardware failure
- Reduced client configuration time

Single Server

↘ Configure permissions across single or multi-site enterprises
↘ All system configurations and profiles are stored in the cloud

Multiple Servers/Multiple Locations

↘ Centralized configuration of systems, devices and users
↘ Only one log in needed for access to the full enterprise

Remote Management

↘ Establish global and local level permissions across one or multiple servers
↘ Push update feature – push server level updates directly to the NVR
↘ Access and configure all systems with a single log in credential

To request a DIGIOP ELEMENTS™ Customer Name, please contact your sales representative.

1.1 About this document

This document includes a user interface description of the DIGIOP® Control admin portal. DIGIOP® Control is used to manage IP and analog cameras, user accounts and data streams, and create groups, tours and user profiles for monitoring surveillance cameras and data. DIGIOP® Control is used concurrently with DIGIOP® Connect, which provides a local or remote view of live and recorded video and data streams.

SECTION 2
DIGIOP® Installation and Initial Setup

If you purchased a factory pre-configured DIGIOP® system, DIGIOP® server and DIGIOP® Connect are already preinstalled on your server for you. Skip to "2.3 System Setup Tool". If you are installing the DIGIOP® V9.4 application on your server, continue with "2.1 Getting ready".

> **NOTE** *If DIGIOP® Connect will be installed on the same machine where the DIGIOP® server will be installed, install and setup the DIGIOP® server first.*

2.1 Getting Ready

1. Before installing DIGIOP® server, ensure that your server hardware meets the following requirements.

   — **CPU**: Intel® Core™ i3 or equivalent processor (Core i7 recommended)
   — **RAM**: 4GB RAM (8GB or more recommended)
   — **HDD**: 250GB, 7200 RPM (add additional HDDs for more storage space)
   — **Video Card**: 256MB (or better)
   — **OS**: Microsoft® Windows® 7 Professional or better (with 64 bit operating system). DIGIOP® server also runs on Microsoft Windows 8/8.1/10, Server 2008, Server 2012.

   DIGIOP® can run on computers with lower specifications, but its performance is highly dependent upon number of cameras, camera resolution, and recorded frame rates. Contact DIGIOP® Support to determine the optimal specifications for your security needs.

2. Ensure that your server computer has:

   — The latest operating system updates installed
   — The latest hardware drivers installed
   — The computer system clock set correctly for both the time and time zone

3. There are two installation file types. Copy the preferred DIGIOP Server installation file to your computer:

   — **DigiopServer_Web.exe** (web installer, recommended for most installations)
   — **DigiopServer_Full.exe** (full Installer, needed if system does not have access to the internet):

> **NOTE** *Windows 8 / 8.1 / 10: An internet connection is needed during the initial installation of DIGIOP Server to access Windows Updates and install .NET Framework 3.5. (Web installer recommended.)*
> *Server 2008: Before installing DIGIOP Server, you must first go to the Server 2008 "Add a Role or Feature Wizard" and add .NET Framework 3.5. You can then start the DIGIOP Server installer. (Use either the Full or Web installer.)*
> *Server 2012: Before installing DIGIOP Server, you must first go to the Server 2012 "Add a Role or Feature Wizard" and add .NET Framework 3.5. An internet connection is needed during this step to access Windows Updates and install .NET Framework 3.5. You can then start the DIGIOP Server Installer. (Use either the Full or Web Installer.)*

2.2   Install the Application File

1.   Double click on the DIGIOP® application to open the installer. After extracting the main application files, the installer will open the DIGIOP® Server Setup Wizard. Click **Next** to continue.

2.   If a prerequisite software component is needed, a window similar to the one below may appear. If so, click **Next** to continue, then follow the on-screen instructions to complete the installation. Installation of some prerequisite software may require a system restart.
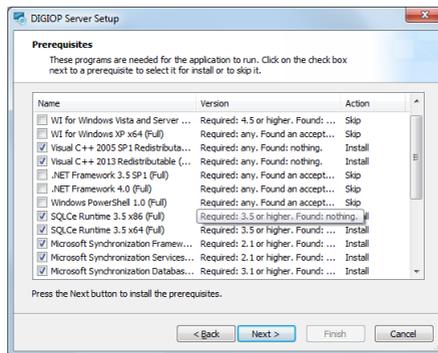
3. In the **Choose the features to install** window, select all features listed, then click Next to continue.

4. In the **Begin installation of DIGIOP Server** screen, click **Install** to continue.
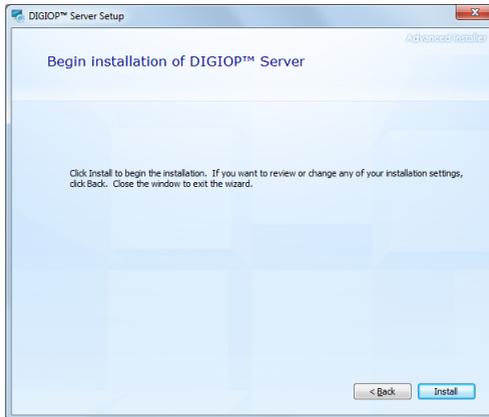
5.   During installation, follow any on-screen instructions to continue. When complete, the window below will open.

2.3   System Setup Tool

After you installed the DIGIOP Server software in the previous steps, or are starting a DIGIOP factory pre-configured system for the first time, the DIGIOP System Setup Tool will open.
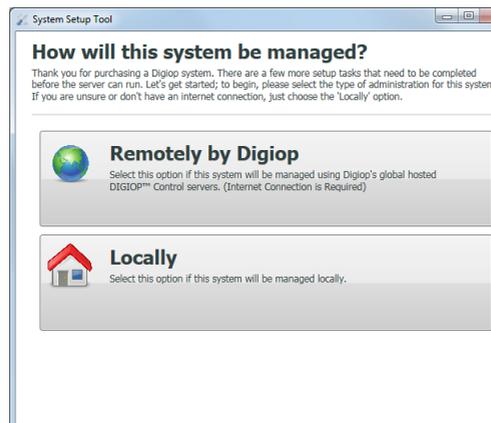
⚠ **WARNING**   *This decision to manage the system Remotely or Locally is irreversible. You cannot change this selection without uninstalling and then reinstalling the DIGIOP® Server software.*
If managing the system "Remotely by DIGIOP", contact your sales representative for your Customer name.

1. In the **System Setup Tool** window shown above, click **Remotely by Digiop** if your system will be managed through DIGIOP ELEMENTS™ (see ***SECTION 1 System Overview*** for more information). Otherwise, click **Locally**.

   — If you selected **Remotely by Digiop**, continue with "Systems managed remotely by DIGIOP".
   — If you selected **Locally**, skip to "Systems managed Locally".

2.3.1   Systems managed remotely by DIGIOP

Before continuing with the System Setup Tool, collect the **Customer Name**, **User Name**, and **Password** for the DIGIOP ELEMENTS™ managed system you received from DIGIOP. If you don't have these credentials, contact your sales representative.

1. After selecting Remotely by DIGIOP in the system management window, enter the **Customer Name**, **User Name**, and **Password** assigned to you by DIGIOP in the Connection Information window, and then click **Next**.

2. In the **Installation Option** window, select **New System** if you are setting up the system for the first time, or select **Existing System** if are want to re-imaging a system that was previously hosted by DIGIOP ELEMENTS™ with the Customer Name you entered in the **Connection Information** window.
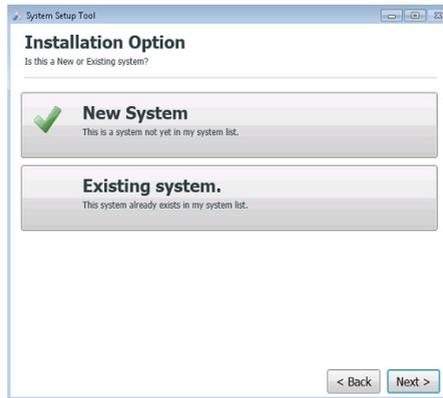
a. If you selected **New System**, read the information shown in the **System Configuration Summary** window, and then click Next.
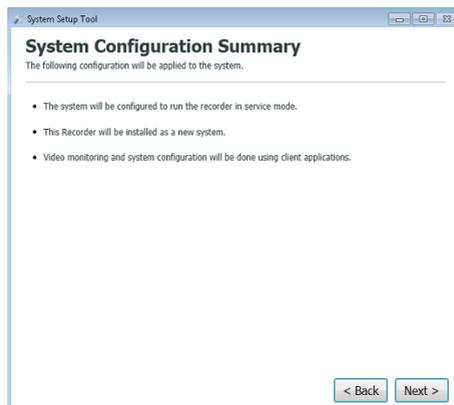
b.   If you selected **Existing System**, select the system you want to add in the **Select System** window, and then click **Next**. Read the information in the **System Configuration Summary** window and then click **Next**.
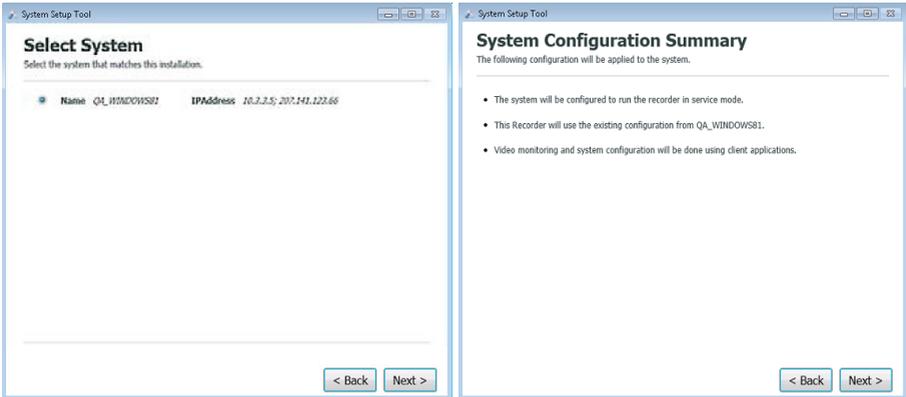
3.   Next, the System Setup Tool will apply changes to the system and restart the DIGIOP services. Allow this process to complete, and then click **Next** if the changes were applied successfully. If the changes were unsuccessfully applied, resolve whatever problems occurred before continuing.
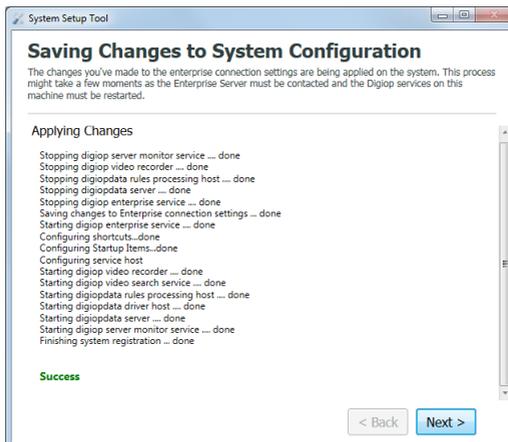
4.   If you are setting up the system for your Customer Name for the first time, the **Video Recorder Configuration** window will open. Enter a System Name for your DIGIOP® server. The system name defaults to the Full Computer Name of your operating system. Click **Save** and continue to subsection 2.3.3 "Activate DIGIOP Licenses".
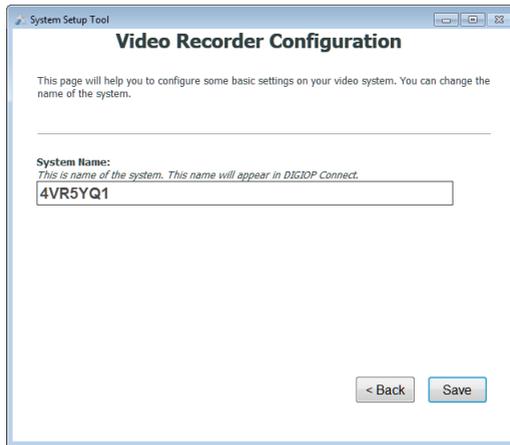
2.3.2   Systems Managed Locally

In the How will the system be managed window, if you selected **Locally**, perform the instructions in this subsection.

1.   In the **System Configuration Summary** window, read the information provided, and then click **Next**.
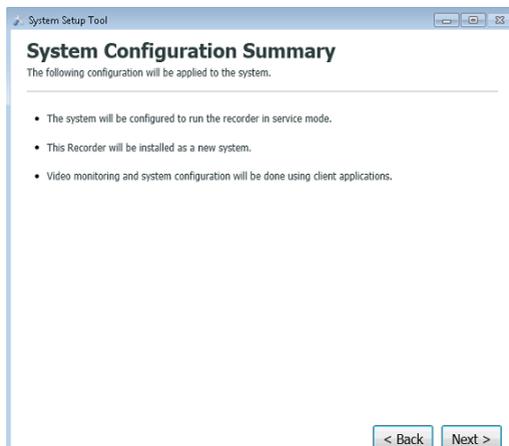
2. After the System Setup Tool applies changes successfully, click **Next**. If some changes failed, resolve those issues before continuing.
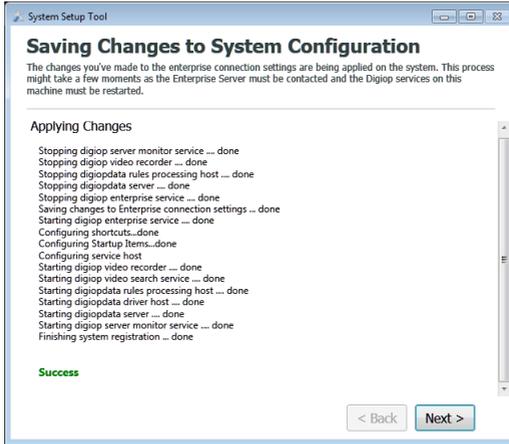
3. Enter a **System Name** for your DIGIOP® Server in the Video Recorder Configuration window. The system name defaults to the Full Computer Name of your operating system.
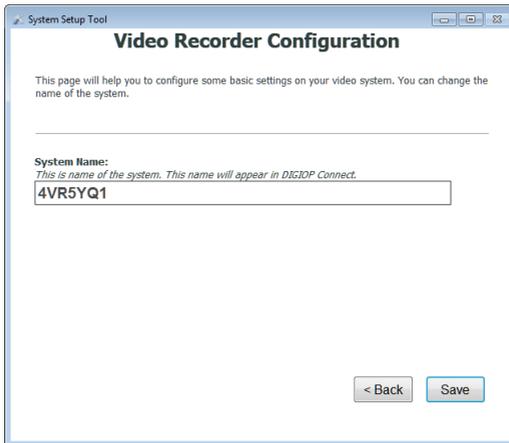
Click **Save**, and continue to the next subsection.

2.3.3   Activate DIGIOP Licenses

The software requires a base license, and camera licenses for the number and type of cameras your system can have. To support additional features, additional licenses may need to be be installed. Additional licenses can be activated at this time, or added later. Contact your sales representative for more information on expanding the features of your system.

1.   In the License Summary window, click **Add License**.
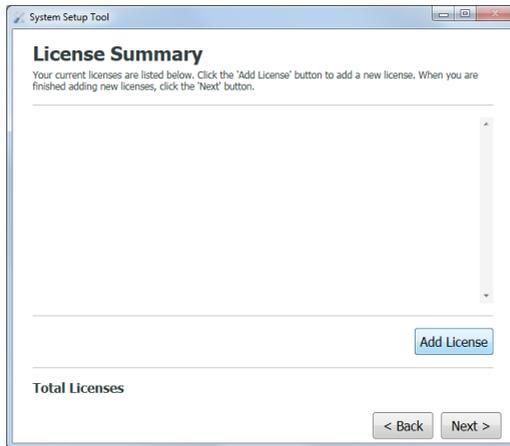
2.   In the License Activation window, enter the License ID and Password. Click either **Activate License Online** (requires internet access) or **Activate License Manually,** then follow the instructions to complete the process.

3.   After the license information you entered is activated, the Activate License window will show the Activation completed. Online license activation usually occurs in less than 10 seconds. Click **Next**.
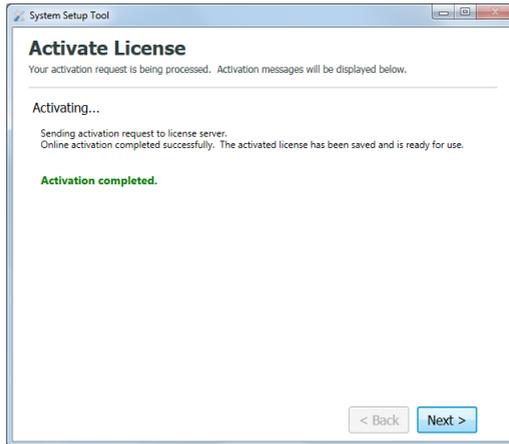
4.   The **License Summary** window will open, showing the License ID, Activation Date and Total Licenses data (see below). If you have additional licenses for your system, click **Add License** and repeat this procedure to add each one.
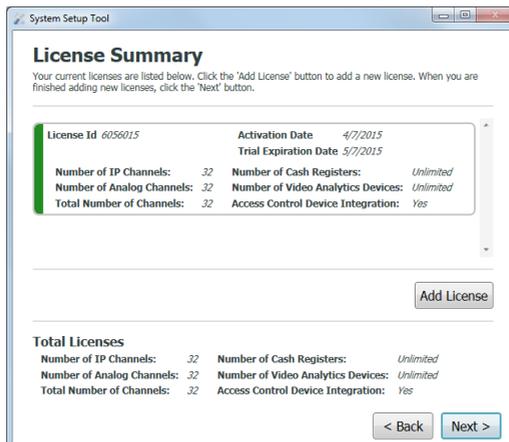
After entering all the license information, click **Next**.

5.   After **Restarting Services** completes, click **Next**.
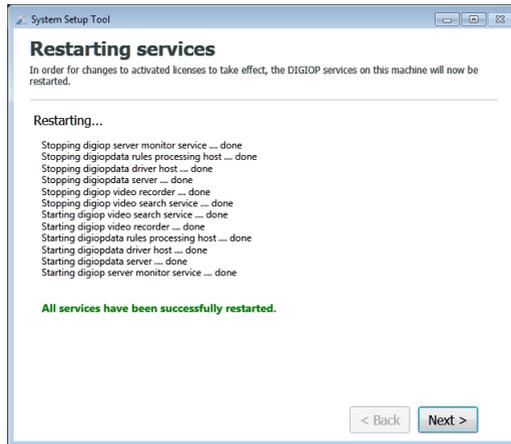
6.   In the **Setup Complete** window, click Finish to close the **System Setup Tool**, or click **Advanced Configuration** to close the tool and open DIGIOP Control in an internet browser.
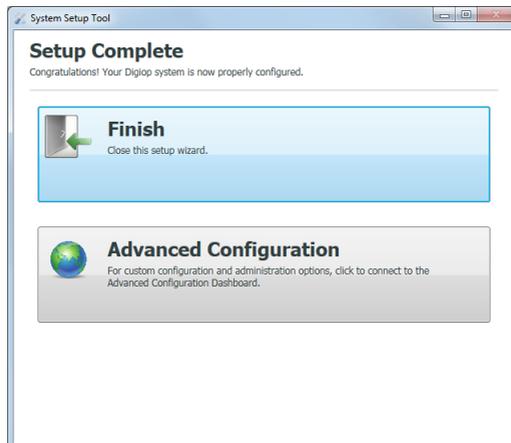
After the DIGIOP Server is fully running, you can perform any of the following:

·   Open DIGIOP® Control on the server desktop.
·   View or add additional licenses to the system.
·   All Windows 7 desktop options with Administrator privileges, including powering off and restarting the server.

2.4   Working with DIGIOP® Control

After setup is complete, you can log in to the system either locally or remotely through the DIGIOP® Control admin portal. DIGIOP® Control allows you to manage your video, data, and user information of a single- or multi-site system. Control includes: add and configure cameras and data devices, establish global and local level permissions for systems, cameras, and data streams.

2.4.1   Opening DIGIOP® Control

1.   The DIGIOP Control Login window opens automatically when you click **Advanced Configuration** in the **System Setup Tool** window, or if the DIGIOP server is powered on and you use one of the following methods:

     a.   **For DIGIOP Elements hosted servers:** Open an internet browser (IE, Mozilla® Firefox®, or Google® Chrome™) either from the DIGIOP Server or from a remote PC. Use the URL: *http://elements.digiop.com*.

     b.   **From a locally hosted server**: Open an internet browser on the DIGIOP Server (IE, Mozilla® Firefox®, or Google® Chrome™). Use the URL: *http://localhost/Digiop/*
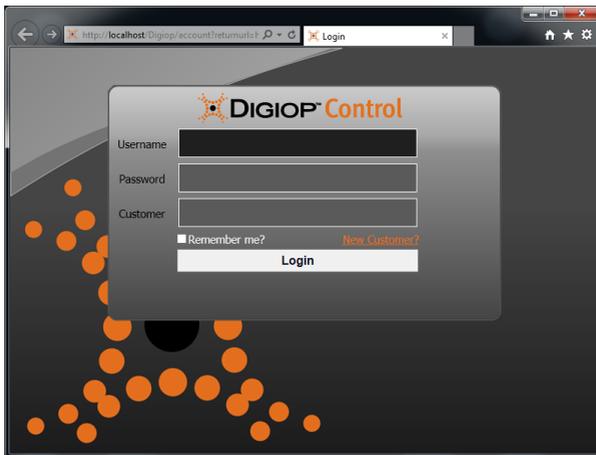
NOTE	When using Microsoft® Internet Explorer® to access DIGIOP Control, you may need to add the base URL to the Compatibility View settings list in IE. To add the URL to the settings list: 1. Direct the IE browser to the URL for DIGIOP Control. 2. When the Login window opens (see above), click the Tools icon in the upper right corner of the browser window, and then select Compatibility View settings from the drop-down list. 3. In the pop-up window that opens, click Add.

c. **From a computer on the LAN with access to a locally hosted DIGIOP Server:** DIGIOP® Control can be accessed from any computer with an internet browser across the LAN on the subnet where the DIGIOP Server is networked. Open the browser and use the URL: *http://<IP Address>/digiop* where <IP Address> is the IP address of the server. Example: *http://192.168.75.11/digiop*

d. **Connecting to a locally hosted DIGIOP Server from the Internet:** Open an internet browser and use the URL: *http://<public IP address>/digiop* where <public IP address> is the public IP (external IP) or DNS address of the server. Example: *http://207.46.130.0/digiop*. Accessing DIGIOP® Control from the internet may require additional network configuration settings. See ***APPENDIX D TCP/IP Port Configurations***.

2. In the login window, enter your **Username**, **Password**, and **Customer** name:

   — If your system is managed with DIGIOP ELEMENTS™, enter the Username, Password and Customer name assigned to you by DIGIOP®, and then click Login.
   — If your system is managed locally, enter the default Username and Password (admin and admin), and Customer name (digiop) and then click Login.

2.4.2   DIGIOP Control Main Window
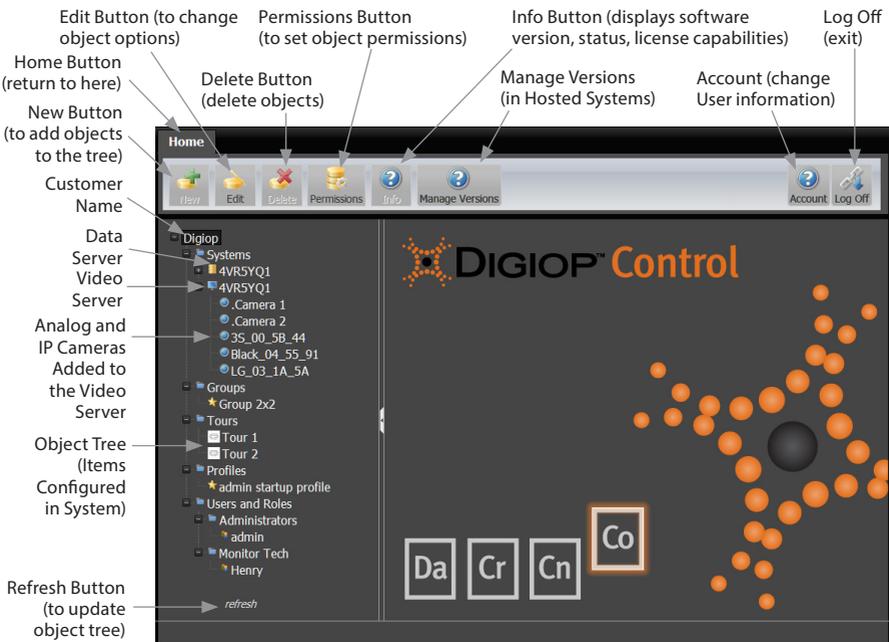
2.4.3   Setting the Administrator Account Password

To improve the security of your DIGIOP server, DIGIOP strongly encourages you to change your default or assigned password to a more secure version. To change the password of the administrative user account log into DIGIOP and:

1.   Click the **Account** button.
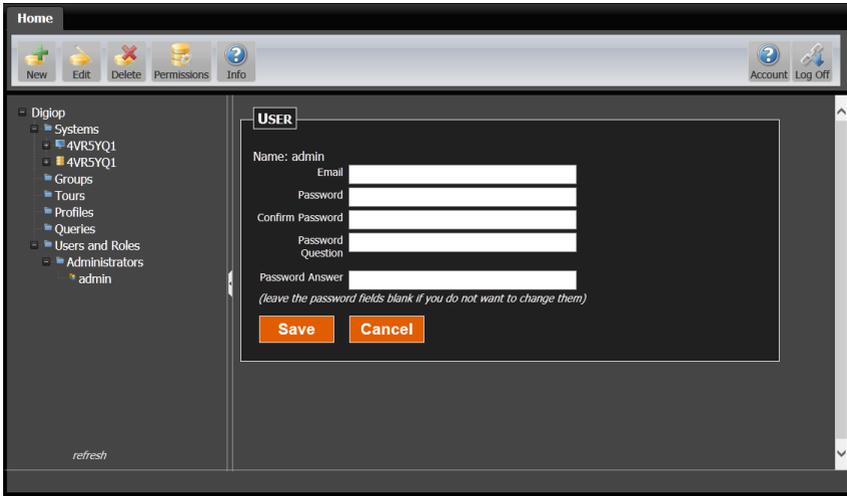
2.   Enter a strong password in the **Password** and **Confirm Password** fields. You can optionally enter a **Password Question** and **Password Answer** into those fields provided. Click **Save** to retain the new settings.

2.4.4   Manage Versions Button

The Manage Versions button appears on DIGIOP ELEMENTS™ (hosted) systems and is located at the top of the DIGIOP® Control window. This feature is useful in identifying and updating the software version level of your system(s).

To use the Manage Versions feature:

1.   Log into DIGIOP ELEMENTS™ with an Administrative user account and click the **Manage Versions** button.

2.   Enter the Custom URL provided to you by the DIGIOP support team for the update.

3.   Check the **Update** box in front of the system **Name**(s) you want to update, then select **Update Selected**. The Update Status will appear in the column to the right.

SECTION 3
Configuring Video

3.1   DIGIOP VIDEO SERVER - Edit Settings

To open the DIGIOP VIDEO SERVER settings window, click the Video Sever icon (blue monitor) in the object tree to highlight it, then click the **Edit** button in the application header.

In the DIGIOP VIDEO SERVER menu, you can rename the server, change Time Zones, setup a User-defined Address, and customize ports. The User-defined Address and customized ports are useful for unique network situations only. Changes to these configurations are not normally needed. See *How to Remotely Access DIGIOP* for more advanced network settings.

If you are configuring a hybrid DIGIOP server the menu will also include links for the video capture board, analog PTZ camera profiles, and Spot Monitor Tours.

There is also an option to **Discover IP Cameras**. When this is checked, DIGIOP will scan the local subnet on the network for any compatible IP cameras. These cameras will then be available in the **Add a Camera** page.

After changing any of these parameters, click **Save**. Click **Cancel** to close the window without saving.

3.2   Add Analog Cameras to a Hybrid DIGIOP Server

NOTE	*This section applies only to DIGIOP® factory pre-configured servers that support both analog and IP cameras (hybrid systems).*

DIGIOP® Control automatically adds analog cameras to the video server when they are connected to the adapter cable of the video capture card. Each camera is assigned to the video channel it is physically connected to. Analog cameras appear in DIGIOP® Control as "**.Camera 1**" for the camera connected to analog channel 1, "**.Camera 2**" for the camera connected to channel 2, etc.

3.2.1   Configure Hybrid DIGIOP Server Capture Board

Configuration of the analog video capture board affects all analog video channels. Different video capture boards may have different options. To configure the board:

Open the DIGIOP VIDEO SERVER settings window by clicking the Video Server icon and then click **Edit**.

Click the link **Configure the <type> capture board** to open the menu for the board.
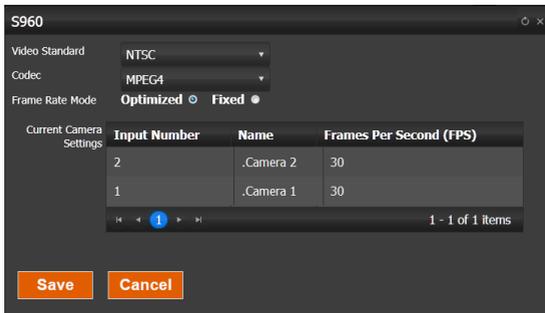
To change the settings of the board:

1.   Under **Video Standard**, select either NTSC (USA, other locations) or PAL (Europe, other locations).

2.   Under the CODEC drop-down menu, select either **MPEG4** or **H.264**.

NOTE	*H.264 compression is only available on capture cards with H.264 support.*

3.   Select the **Frame Rate Mode** option you prefer.

4.   Click **Save** to retain your settings, or **Cancel** to close the window.

3.2.2   Configure Individual Analog Cameras

To configure an individual camera:

1.   Find the Systems entry in the list in the left frame of the home page, then click the ⊞ icon to expand the Systems list. Inside the Systems list are two entries for each DIGIOP Server you can connect to. The one prefaced with the blue "display" icon identifies the video server. The one with the yellow "disk" icon identifies the data server. In the window below, **.Camera 1** and **.Camera 2** were added automatically.
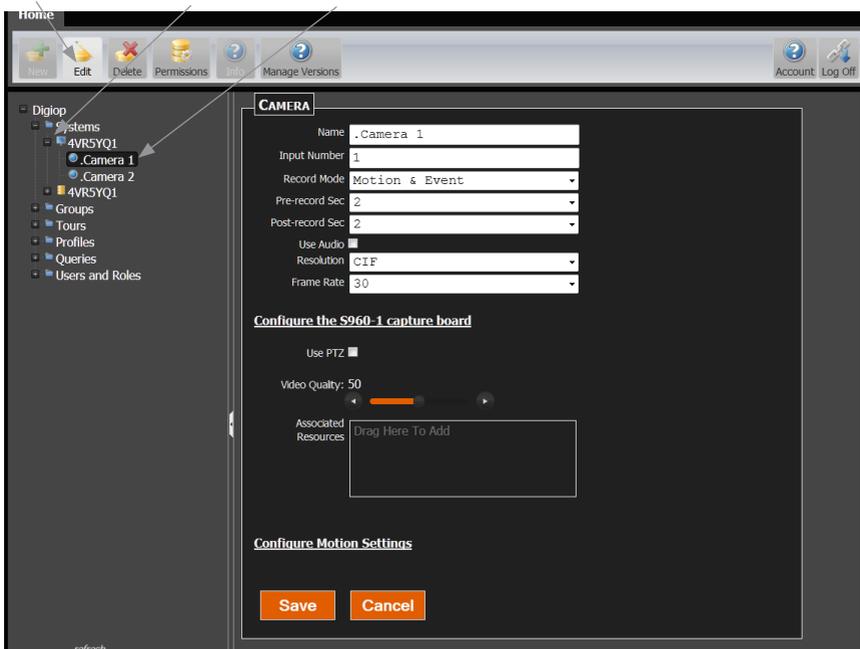
2.   In the list under the Video server, click the name of the analog camera you want to configure.

3.   Click the **Edit** button. The **Camera** configuration window will open. In this menu you can:

   a.   Change the name of the camera by editing the field.

   b.   Change the recording mode to **Motion & Event**, **Continuous & Event**, or **Event only**.

NOTE	*An event, such as a sensor input becoming active, can be used to trigger video recording. To configure your camera for event recording, see **4.3.2 Recorder Events**.*

c. Change the Pre-record and Post-record times using the drop-down menus (select 0 ~ 15 seconds).

d. Select the preferred **Resolution** and **Frame Rate** from the drop-down lists (if available for your system).

e. Check **Use Audio** and **Use PTZ** if these options apply.

f. Drag the slider on the Video Quality slider bar to set the video quality you need.

g. Click **Configure Motion Settings** to setup the motion detection zone(s), then scroll down to the bottom of the frame.
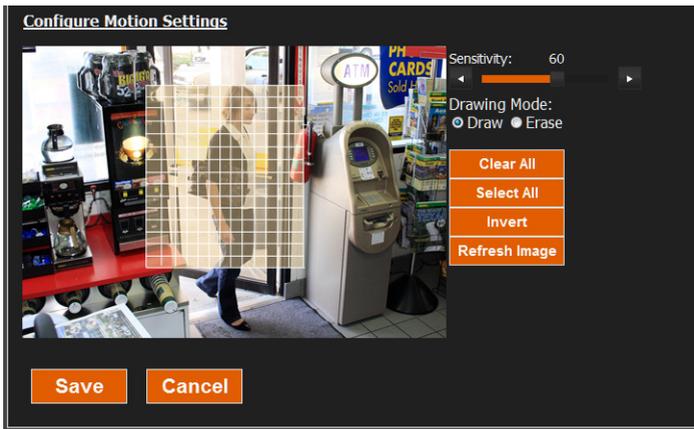
— The grid overlay identifies the area of the video that is sensed for motion. Initially, the entire video image is selected for motion sensing.

— The **Sensitivity** setting represents how sensitive the motion detection area is to detect motion. A large sensitivity number will detect small objects, whereas a small number will not. The default value is 60.

— **Drawing Mode**"**Draw**" enables you to select individual cells in the grid for motion sensing by holding down the left mouse button and dragging the cursor across the cells you want to select. Similarly, to de-select cells, click "**Erase**", then hold down the left mouse button and drag the cursor across the cells that are not important.

— Click **Clear All**, **Select All**, or **Invert** to act on the entire video image.

— Click **Refresh** to refresh the video image.

4. Click **Save** to retain your settings.

5. Repeat this procedure for all analog cameras added to the system.

3.2.3   Create New Analog PTZ Profile

Open the DIGIOP VIDEO SERVER settings window by clicking the Video Server icon and then clicking **Edit**.

Click the link **Create new analog PTZ profile** to open the menu for the PTZ profile.

In the menu above, open the **Protocol** drop-down menu to select the camera protocol, then open the **Serial Port** drop-down list to select the COM port to use with the protocol. Click **Save** to retain your settings, or **Cancel** to close the window.

3.2.4   Spot Monitor Tour

Some hybrid DIGIOP Server capture cards can be configured to sequentially display (Tour) analog cameras attached to the card. The video display signal is routed to VOUT on the capture card. Contact DIGIOP Support for questions about which hybrid servers have this feature.

To use this feature, drag an analog camera stream into the Spot Monitor Tour box. For each camera you add, open the drop-down list to the right of the camera and select the duration (dwell time) for the camera. Click **Save** to retain your settings, or **Cancel** to close the window.

3.3   Add "Discovered" IP cameras to the DIGIOP Server

If the **Discover IP Cameras** option was selected in the DIGIOP VIDEO SERVER window, DIGIOP® will automatically discover compatible IP cameras and list them in the Video Server **Add A Camera** window. To add these IP cameras to the DIGIOP Server:

1.   Find the Systems entry in the list in the left frame of the page, then click the ![+] icon to open the Systems list.

2.   Click the Video server (blue display screen) icon to select it.

3.   Click the **New** button at the top of the page. The Add Camera pane will open in the right frame. The hostname for the DIGIOP server in this example is 4VR5YQ1.
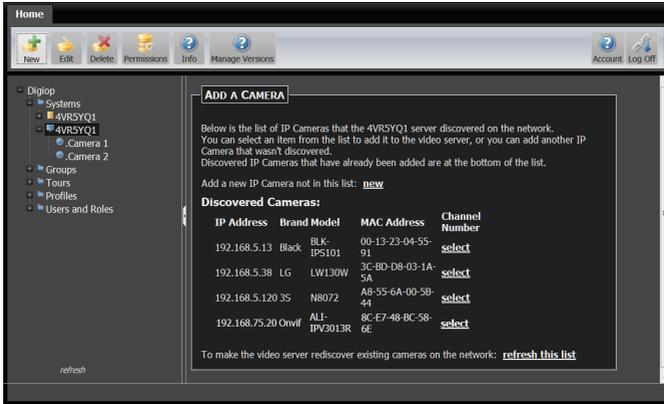
4. If "Discovered Cameras" are listed in the **Add a Camera** frame, find the IP address of the camera you want to add, then click **select**. In this example, the Onvif compatible camera ALI-IPV3013R was selected. If the desired camera is not listed, click **new**, and then add the camera manually. See *3.4 Add an IP Camera Not "Discovered"*.

5. Some camera IP addresses may be displayed twice, once with their Brand name and once with the Brand "ONVIF". ONVIF® is a global standard for the interface of IP-based security products. Select the line with the camera's Brand name to use the direct integration to that brand. Select the line with ONVIF to use the ONVIF integration. For assistance determining the best integration to use for your camera, contact a DIGIOP Support representative.
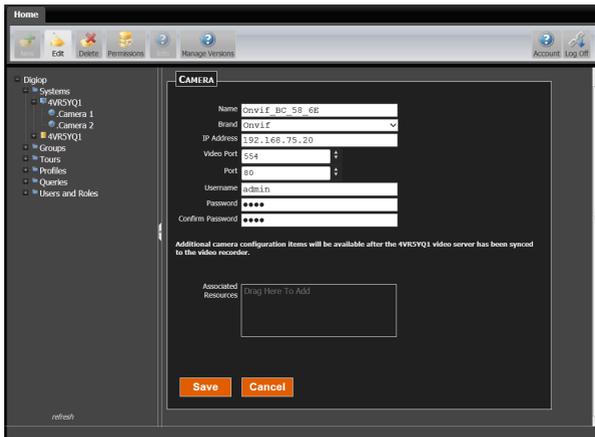
6. DIGIOP will assign the default manufacturer's settings for the camera. Make any needed changes, then click **Save**. The camera will be added to the system and automatically assigned to a camera channel in the DIGIOP server.

3.4   Add an IP Camera Not "Discovered"

If you chose not to Discover IP Cameras when you configured the Video Server, or if a camera was not "Discovered", you can manually add IP cameras to DIGIOP® Control. The cameras you add must be compatible with DIGIOP®.

1.   Click the **new** action link in the **Add a Camera** pane.

2.   In the Camera settings list, select the brand from the drop-down list. Most cameras will be added using the Brand "ONVIF". For assistance determining the best integration to use for your camera, contact a DIGIOP Support representative.

3.   Enter the remaining settings as needed and select **Save**.

3.5   Edit IP Camera Settings

Camera settings, such as the Name, resolution, frame rate, record mode, etc. are edited within DIGIOP® Control. Note that changing network settings here for an IP camera must also be performed within the camera setup.

1.   In the list of cameras added to the video server, click the entry for the camera whose settings you want to edit, then click the **Edit** button at the top of the Home page. Notice that the configuration screen for the camera includes additional options. (It may take a few minutes for the camera to initially sync and display these additional options.)
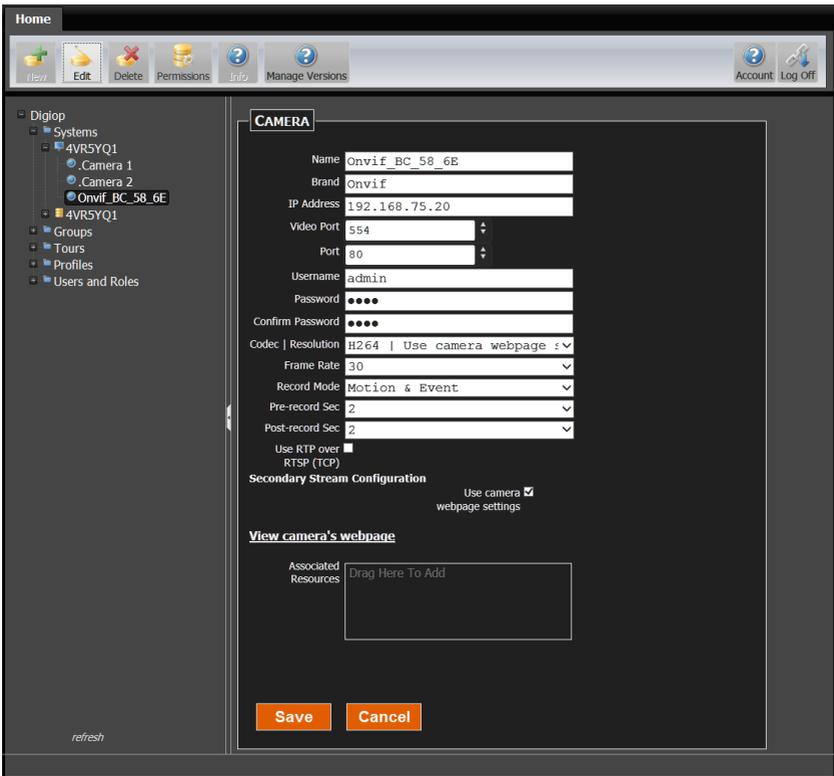
2.   Change the recording mode to **Motion & Event**, **Continuous & Event**, or **Event only**.

NOTE	*An event, such as a sensor input becoming active, can be used to trigger "Event only" video recording. To configure your camera for event recording, see **4.3.2 Recorder Events**.*

3. In the Camera menu, select the **Codec | Resolution**, **Frame Rate**, **Record Mode**, **Pre-record Sec** and **Post-record-Sec** you prefer from the drop-down lists.

4. Some cameras include a dual stream option. When this option is enabled, DIGIOP Connect will display video from the secondary stream by default. You can also view video in the high stream resolution in DIGIOP Connect by changing the viewing setting under the Media tab. The server will record the stream selected in DIGIOP Control. Select **Use Camera's Webpage Settings** to setup and utilize the secondary stream properties from the camera's webpage. If you don't select this box, DIGIOP will utilize the camera's recommended settings for the secondary stream.

5. Additional options may be available based on the features of the camera. Check the boxes that apply for **Use RTP over RTSP (TCP)**, **Tunnel RTSP over HTTP**, **Use Audio,** and **Use PTZ** as needed.

6. Click **Configure Motion Settings** to setup the motion detection areas(s), then scroll down to the bottom of the frame. Initially the entire video frame is selected for motion detection. To improve processor efficiency, select only the portions of the image that need to be sensed for motion:

    » Click **Remove Selected** to clear all motion detection areas.
    » Using a mouse, drag a rectangle over the area you want to sense for motion. The selected area is masked by a semi-opaque box with a light-colored border.
    » For the area selected, adjust the **Sensitivity** (slider) of the area you selected. A large sensitivity number will detect small objects, whereas a small number will not. The camera manufacturer's default values are utilized.
    » Adjust the **Threshold** (slider) of the area you selected. Threshold sets the amount of the detection area that has to change before motion is sensed.
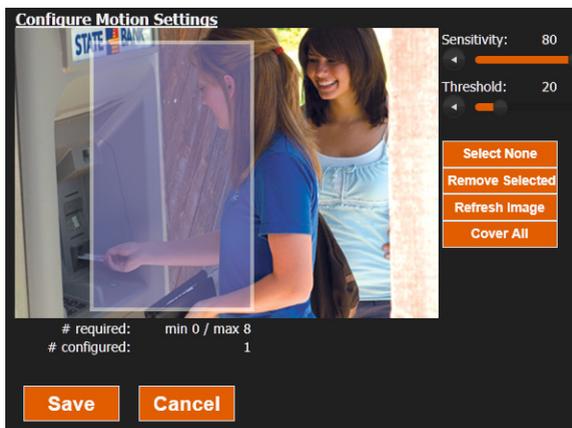
NOTE	*In the screen above:* • *3S, LG, and BLACK brand IP camera show motion detection areas in blue.* • *Axis cameras show motion detection areas in red.* • *Some camera models support both Sensitivity and Threshold adjustments. Only the supported settings are displayed.* • *Different camera models support a minimum and maximum number of regions. The menu indicates the number of regions configured and the minimum/maximum allowed for the camera* • *The following buttons are available:* — *Select None: deselect all motion detection areas* — *Remove Selected: remove the selected motion detection area. The selected area is bordered in white.* — *Refresh Image: fetch a new image from the camera* — *Cover All: remove all configured motion detection areas and create a new area to cover the entire image* • *Some cameras do not have the option to Configure Motion Settings from within DIGIOP Control. For these cameras, motion settings are configured in the camera's webpage.*

7.   Click **Save** to retain your settings.

3.6   Add an IP Encoder

An IP encoder can be added to the DIGIOP Server in a similar manner to how IP cameras are added. Each channel of an IP encoder will count towards 1 IP channel.

3.6.1   Add a "Discovered" IP encoder to the DIGIOP Server

To add automatically discovered IP encoder channels to the DIGIOP Server, find the IP encoder channel in the **Add a Camera** list the same way that you would find and add an IP camera:

1.   Find the Systems entry in the list in the left frame of the page, then click the ➕ icon to open the list.

2.   Click the **Video server** icon (blue display screen) to select it.

3.   Click the **New** button at the top of the page. The **Add Camera** menu will open in the right frame.

4.   If **Discovered Cameras** are listed in the **Add a Camera** menu, find the IP address and channel of the encoder you want to add, then click the associated **Select** link. If the encoder channel you want to add is not listed, click the **New** hyperlink above the list, and then add the encoder manually. See ***3.6.2 Add an IP Encoder Not "Discovered"***.

5.   DIGIOP will assign the default manufacturer's settings to the encoder. Make any needed changes, and then click **Save**. The encoder will be added to the system and automatically assigned to a camera channel in the DIGIOP server. After the first channel of an encoder is added and the encoder has synced for the first time, all other channels of the encoder will become available to add in the **Add a Camera** list (if not already present).

3.6.2   Add an IP Encoder Not "Discovered"

If you chose to not Discover IP Cameras when you configured the Video Server, or if the encoder you want to add was not "Discovered", you can manually add IP encoder channels to DIGIOP® Control the same way you can manually add IP cameras. The encoders you add must be compatible with DIGIOP® Control.

1.   Click the new action link in the **Add a Camera** pane.

2.   In the camera settings list, select the brand from the drop-down list, then enter the remaining settings as needed.

3.   Edit the items in the menu as needed to reflect the encoder and click **Save.**

4.   After the first channel of an encoder is added and the encoder has synced for the first time, all other channels of the encoder will become available to add in the **Add a Camera** list (if not already present).

3.6.3   Edit Encoder settings

Encoder settings, such as the Name, resolution, frame rate, record mode, etc. are edited within DIGIOP® Control. Note that changing network settings here for an IP encoder must also be performed within the encoder setup.

1.   In the list of cameras added to the video server, click the entry for the encoder you want to edit, then click the **Edit** button at the top of the Home page. Notice that the configuration screen for the encoder includes additional options. (It may take a few minutes for the encoder to initially sync and display these additional options.)

2.   Change all settings as needed, and the click **Save** to retain your settings.

3.6.4   Add and Configure Additional Encoder Channels

Encoders that are fully integrated with DIGIOP have the option to **Copy Encoder Configuration**. Once an initial encoder channel has been added, the other channels of the same encoder can be easily added with the same configuration as the initial channel, using the **Copy Encoder Configuration** section. Encoder settings, such as the resolution, frame rate, record mode, etc. can be copied.

1.   In the list of cameras added to the video server, click the entry for the encoder that was already added, then click the **Edit** button at the top of the Home page.

2.   Select one or more channels, or **Select All** channels then click **Save**. The channels selected will automatically be added to the System's Camera List in DIGIOP Control, and the channels will have the same configuration as the initial channels.

3.   The new channels will be assigned a default name for the camera, followed by "1", "2", etc. for the corresponding channel number. Once the additional channels have been added in the System's Camera List, click the entry for one of the new encoder channels, then click the **Edit** button at the top of the Home page.

4.   Modify the **Name** and any other desired configurations and click **Save**.

Copy Encoder Configuration can also be used to change the configuration of encoder channels that have previously been added for the same encoder.

1.   In the list of cameras added to the video server, click the entry for the encoder with the desired settings, then click the **Edit** button at the top of the Home page.

2.   Select one or more channels, or **Select All** channels then click **Save**. The channels selected will receive the same configuration (resolution, frame rate, record mode, etc.) as the initial channel configured.

3.7   Create Group

A group is a selection of cameras and/or data streams that can be displayed as a unit with DIGIOP® Connect. Groups can be displayed individually or with other groups in a Tour. To create a group:

1.   Click the **Group** entry in the left frame of the Home page, then click the **New** button at the top of the window.
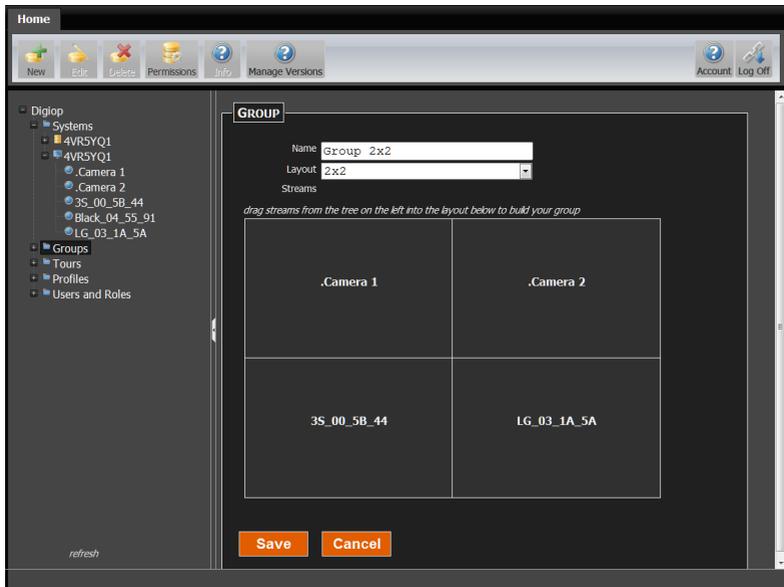
2.   In the Group settings window, enter the name of the group in the **Name** field.

3.   Open the **Layout** drop down list and select the preferred split-screen arrangement for the group. In the Example above, a 2x2 split-screen layout was selected.

4.   Add a camera or data stream to the group by dragging the stream entry from the tree in the left frame and dropping it into a frame in the group layout display. Four cameras were added to the layout shown above.

5.   Click **Save** to update DIGIOP® Control.

6.   The new group will now appear under the **Groups** list in the left frame.

You can Edit/Delete the group by clicking the group name, then clicking **Edit**/**Delete**. Groups can also be created in DIGIOP® Connect by users with admin permissions. See the ***DIGIOP Connect V9.4 User Manual*** for more information.

3.8 Create Tour

A Tour is a collection of video streams, data streams or groups that are displayed individually and sequentially with a pause time (dwell) on each item. The dwell time for each item can be either 1 sec, 5 sec, 10 sec, 30 sec, 1 min, or 5 min.

1. Click the **Tour** entry in the left frame of the Home page, then click the **New** button at the top of the window.

2. In the Tour settings window, enter the name of the tour in the **Name** field.

3. Add a camera, data stream or group to the tour by dragging an element from the tree on the left.

4. Click the down arrow to the right of the item, then select the dwell time for the item.

5. Repeat the two steps above to add additional streams or groups to the tour. The Tour configured above includes four cameras with a dwell time of 1 to 5 seconds.
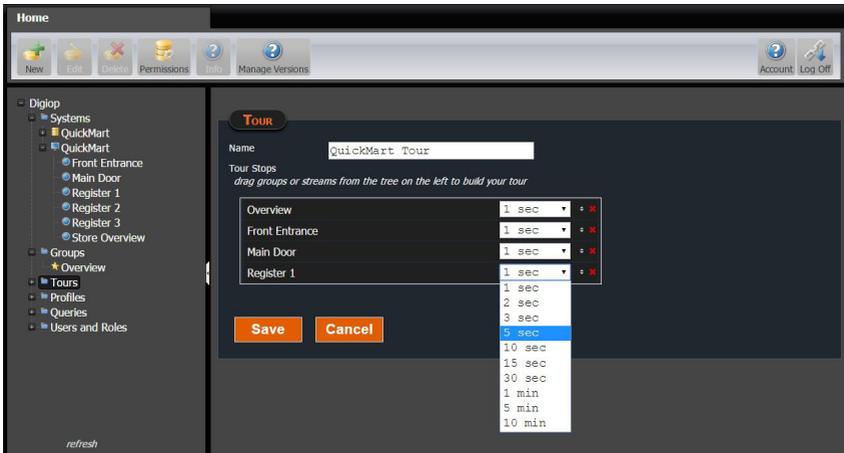
6. Click **Save** to update DIGIOP® Control.

You can Edit/Delete the tour by clicking the tour name, then clicking **Edit**/**Delete**. Tours can also be created in DIGIOP® Connect by users that have administrative permissions. See the ***DIGIOP Connect V9.4 User Manual*** for more information.

SECTION 4
Configuring Data

DIGIOP® Data integrates external data with video recorded by DIGIOP®. This information can be displayed and retrieved with DIGIOP® Connect. DIGIOP® has several built-in data capabilities including I/O and System Health. DIGIOP® can also integrate video with other data devices such as Point-of-Sale (POS) and Video Analytics with additional licensing.

4.1   DIGIOP DATA SERVER - Edit Settings

To open the DIGIOP DATA SERVER settings window, click the Data Sever icon in the object tree (yellow stack of discs) to highlight it, then click the **Edit** button in the application header.

In the DIGIOP DATA SERVER menu, you can rename the server, change Time Zones, setup a User-defined Address, and customize ports. The User-defined Address and custom ports are useful for unique network situations only. Normally changes to these configurations are not needed. See *How to Remotely Access DIGIOP* for more advanced network settings. After changing any of these parameters, click **Save**. Click **Cancel** to close the window without saving.

NOTE   *If the system you are configuring has 1) only analog cameras and 2) is not on a network, enter 127.0.0.1 in the User Defined Address field. DIGIOP® Connect must be run on the same computer used as the DIGIOP® Server system.*

Administrative actions allow for a download to, upload from, or remote execute commands on the system. This is useful for system maintenance. Click the **+ Create New Action** bar, then enter the required parameters in the window.

4.2   Associated Resources

Associated Resources allow users to associate a channel(s) of video with a data stream. For instance, users can associate a camera at a cash register, with a POS transactional data stream. At a more advanced level, users can associate a camera with an I/O device that can trigger recording, or associate an analytics counting device (camera) with a cash register to detect possible Fraudulent Exception Transactions.

Associated Resources entry boxes are included in all Data stream menus. To associate a camera with a data stream, drag the camera from the object tree into the Associated Resources box.

4.3   Built-in Data Devices

DIGIOP® has several built-in data capabilities that can be configured in DIGIOP® Control.

4.3.1   System Health

System Health is available to add to any system. This includes several system related reports such as CPU Sensor, Memory Sensor, Process Sensor, Hard Drive monitoring, and Windows Event Logs which are viewed with DIGIOP® Connect. To add System Health:

1.   Open the Systems list, then click the hostname of the data server.

2.   Click the **New** button at the top of the Home page. The Create Item pane will open in the right frame.
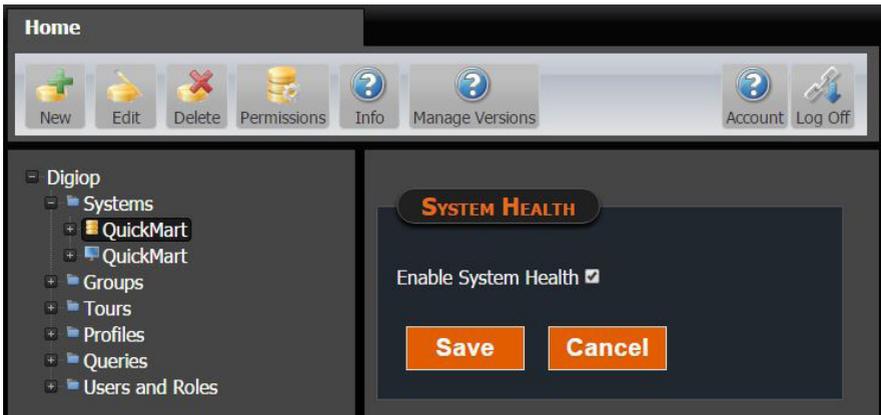
3.   Click **System Health**. A properties window will open.

4.   Check the box for **Enable System Health**, then click **Save**.

4.3.2   Recorder Events

Recorder events appear as Digital Inputs in the DIGIOP® Control object tree that are automatically created when a hardware sensor input contact closes (activates). There are two kinds of hardware sensors:

- Sensor inputs on a DIGIOP® factory pre-configured server chassis I/O board (see the hardware quick start guide for your server)
- Digital inputs to IP cameras

Digital Inputs are useful for triggering cameras to record when the sensor becomes active. Because DIGIOP® Control is preset with the rule to **Record Video On Digital Input**, associating a camera with a digital input (Recorder Event) can trigger DIGIOP® Control to record the channel. The digital inputs must be activated at least once before they appear in the DIGIOP® Control Recorder Events list (see below). To associate a camera to record on sensor input, do the following:

NOTE	*The rule Record Video On Digital Input can be configured to execute an action when any of the following conditions occur: Always, Any Data Received, Digital Input Inactive, Digital Input Active, or Digital Input Changed State. Refer to "Rules Engine" for more information on how to setup Recorder Event rules and actions.*

1.   Open the DIGIOP® Control Video server object tree to list the cameras configured in the system.
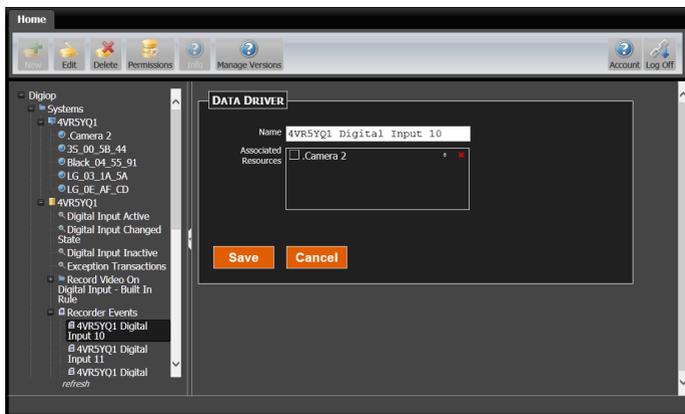
2.   Open the Data server object tree, then open the Recorder Events list (see above).

3.   Select the Digital Input with the number of the sensor input that will trigger recording and click **Edit**.

4.   Drag the camera you want to associate from the object tree to the Associated Resources box of the Digital Input.

5.   Click **Save**.

4.4   Add Data Server Streams

DIGIOP® can integrate video with additional data devices such as retail Point-of-Sale (POS), Video Analytics, Electronic Access Control, and many other data sources. Additional licensing may be needed to support these types of streams. Contact your sales representative for more information.

To add data server streams to DIGIOP® Control:

1.   Open the Systems list, then click the hostname of the data server.

2.   Click the **New** button at the top of the Home page. The Create Item pane will open in the right frame.

CREATE ITEM

A New Data Driver:

Point of Sale

- **APG Cash Drawer**
- **Gilbarco**
- **Microsoft RMS**
- **NCR Cash Register**
- **PC America Register**
- **Radiant**
- **Retalix**
- **Verifone Cash Register**

Video Analytics

- **Black Analytics**
- **DigiopNCB**

Access Control

- **Infinias Intelli-M**

General

- **Line Capture**
- **Multiline Capture**
- **System Health**
- **Universal**
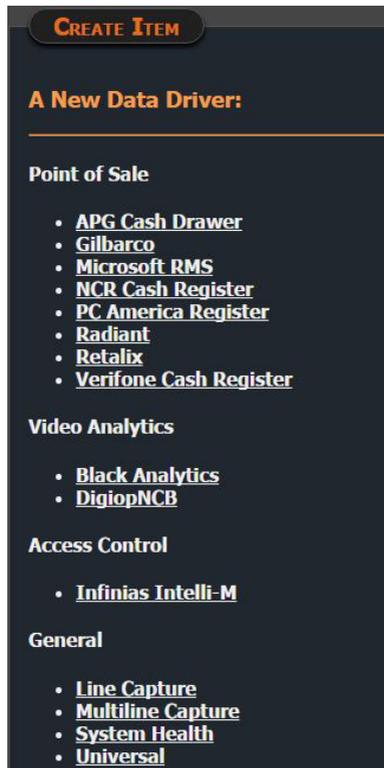
3.   Click the **New Stream** data stream you want to add to the server. A properties window will open.

4.   In the properties window for the data stream enter the appropriate parameters, then click **Save**.

4.5   Data Streams - New Integrations

A custom integration template can be made quickly and easily for most types of data. Some examples include POS Cash Registers, Thermometers, Scales, and more. Contact your DIGIOP Sales representative for more information on obtaining a custom template for your data integration needs.

Universal

Universal is an open and flexible data driver for the integration of custom data integration templates.

> **NOTE**   *If using Microsoft Internet Explorer, use version 10 or higher to correctly view and use this page in DIGIOP Control.*

Parameter settings:

- **Name** – Name assigned to the Universal Data stream.
- **Listen Port** – The TCP port through which the DIGIOP Server will receive data. The IP address of the DIGIOP Server is configured in the sending device.
- **Associated Resources** – Associate a camera to see the video that corresponds to each data entry. Associated Resources can also be used to configure fraudulent exception transactions if an analytic device and POS register are both present (see Fraudulent Exception Transactions).
- **Ignore Redundant Lines** – This option will ignore redundant data from the data driver. For example, if data from a scale is monitored and the data received is continuous "0's" (same value), only the first "0" is recorded. When the data from the device changes (for instance, something is placed on the scale or taken off the sale), only the first occurrence of the changed data is recorded.
- **Universal Settings Template** – Click **Browse** to find and then select the custom template for your data integration provided to you by DIGIOP®. Click **OK**.

4.6   Data Streams - Existing Integrations

DIGIOP® has several existing data integrations in place that can be used with compatible POS Registers, Video Analytic devices, and Electronic Access Control systems.

4.6.1   Cash Registers

APG Cash Drawer

In DIGIOP® Connect you can see when the cash drawer opens and closes, when the cash drawer powers on or off, and when it drops and gets a network connection. The IP address of the cash drawer and the Drawer Port can be found and programmed with the **APGCdRelUtil** utility from APG.
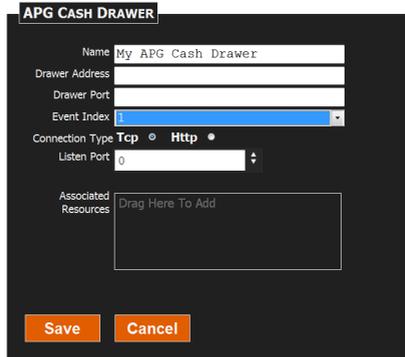
Parameter settings:

- **Name** - Name assigned to the data stream.
- **Drawer Address** - IP address of the drawer.
- **Drawer Port** - APG Drawer Port.
- **Event Index** - APG Event (1 .. 6)
- **Connection type (TCP or Http)**
    - For TCP connections, enter the parameter:
        - -- Listen Port - The port through which DIGIOP® Control will receive data from the drawer. The IP address of the DIGIOP Server is configured in the device. Ensure that the port you select is open in hardware and firewalls.
    - For Http connections, enter the parameters:
        - -- Address - IP Address of the Cash Drawer
        - -- Port - Web Port of the Cash Drawer
        - -- Username/password - Security credentials for the cash drawer.
- **Associated Resources** - Associate a camera to see the video that corresponds to each cash drawer event.

Gilbarco

Select this option for data stream capture from Gilbarco® devices.

Parameter settings:

- **Name** – Name assigned to the cash register.
- **TCP or Serial** – Option to receive data through a TCP/IP or Serial interface.
- **Listen Port** – (TCP connection type) The port through which the DIGIOP Server will receive data from the Gilbarco device. The IP address of the DIGIOP Server is configured in the device. Ensure that the port you select is open in hardware and firewalls.
- **Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity** – (Serial connection type) Settings of the Gilbarco device serial port that is connected to the DIGIOP Server serial port.
- **Associated Resources** – Associate a camera to see the video that corresponds to each POS transaction. Associated Resources can also be used to configure fraudulent exception transactions if an analytic device is present (see Fraudulent Exception Transactions).

Microsoft RMS, pcAmerica, Radiant, Retalix

Select one of these options for data stream capture from the register.
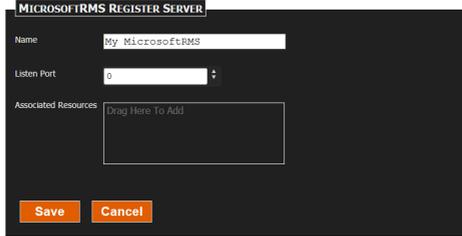
Parameter settings:

- **Name** – Name assigned to the register.
- **Listen Port** – The port through which DIGIOP® Control will receive data from the register. The IP address of the DIGIOP Server is configured in the device. Ensure that the port you select is open in hardware and firewalls.
- **Associated Resources** – Associate a camera to see the video that corresponds to each POS transaction. Associated Resources can also be used to configure fraudulent exception transactions if an analytic device is present (see Fraudulent Exception Transactions).

> **Microsoft RMS**: When integrating Microsoft RMS registers with DIGIOP Data, a DIGIOP application named *DigiopRMSHookSetup.exe* must be running on the register. This application informs the register where to send transactional data.
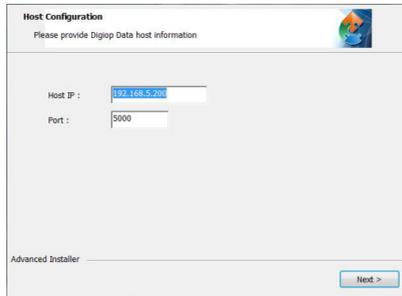
> In the **DIGIOP RMS Hook Setup** screen shown above, enter the Host IP address (address of the DIGIOP server), and the port assigned to the Microsoft RMS data device.

> **pcAmerica**: The pcAmerica integration requires you to configure the register to send data to a DIGIOP server. To setup the pcAmerica register, refer to the How-to "pcAmerica Register Configuration".

NCR Cash Register

Select this option for serial data stream capture from an NCR® cash register.

Parameter settings:

- **Name** – Name assigned to the cash register.
- **Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity** – Settings of the cash register serial port that is connected to the DIGIOP Server serial port.
- **Associated Resources** – Associate a camera to see the video that corresponds to each POS transaction. Associated Resources can also be used to configure fraudulent exception transactions if an analytic device is present.

VeriFone Cash Register

Select this option to receive a data stream from a VeriFone® cash register.

Parameter settings:

- **Name** – Name assigned to the cash register.
- **TCP or Serial** – Option to receive data through a TCP/IP or Serial interface.
- **Listen Port** – (TCP connection type) The port through which DIGIOP® Control will receive data from the register. The IP address of the DIGIOP Server is configured in the device. Ensure the port you select is open in any firewalls.
- **Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity** – (Serial connection type) Settings of the VeriFone cash register serial port that is connected to the DIGIOP Server serial port.
- **Associated Resources** – Associate a camera to see the video that corresponds to each POS transaction. Associated Resources can also be used to configure fraudulent exception transactions if an analytic device is present.

4.6.2   Video Analytics

Black Analytics

Select this option to receive data from DIGIOP® Black and UDP cameras with VCA analytics. The analytics can provide data on Traffic Entered, Traffic Exited, Occupancy, and Detection Zones depending on the licenses present in the camera.
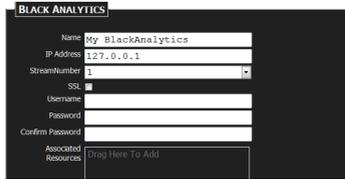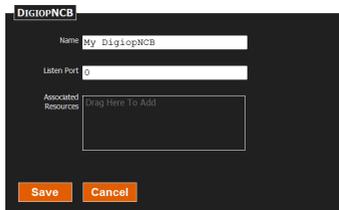

Parameter settings:

- **Name** – Name assigned to the camera.
- **IP Address** – IP address of the camera.
- **Stream number** – Camera data stream. Use stream number = 1.
- **SSL checkbox** – For secure socket layer use. (Not used in most cases.)
- **Username/password/confirm password** – Security credentials for the camera internal setup.
- **Associated Resources** – Associate a camera to see the video that corresponds to each analytic event. Associated Resources can also be used to configure fraudulent exception transactions if a cash register is present.

DigiopNCB

Select this option to receive data from a Brickstream analytic camera. The analytics can provide data on Traffic Entered, Traffic Exited, Occupancy, Queues, Service Zones, and Detection Zones depending on the licenses present in the camera.

Parameter settings:

- **Name** – Name assigned to the camera.
- **Listen Port** – The port through which DIGIOP® Control will receive data from the camera. The IP address of the DIGIOP Server is configured in the camera. Ensure that the port you select is open in hardware and firewalls.
- **Associated Resources** – Associate a camera to see the video that corresponds to each analytic event. Associated Resources can also be used to configure fraudulent exception transactions if a cash register is present.

4.6.3   Electronic Access Control

Infinias Intelli-M

Select this option for data stream capture from Infinias Intelli-M access control systems.

Parameter settings:

- **Name** – Name assigned to the access control system.
- **TCP Listener Port** – The port through which the DIGIOP Server will receive data from Intelli-M. The IP address of the DIGIOP Server is configured in the device. Ensure that the port you select is open in hardware and firewalls.
- **Address** – IP address of the Intelli-M server.
- **Port** – Web port of Intelli-M (80 is default)
- **Username/Password** – Security credentials for an administrator on Intelli-M.
- **Associated Resources** – Associate a camera to see the video that corresponds to each access control event.

4.7   Data Streams - Line Capture and Multiline Capture

Line Capture and multiline capture are generic drivers for receiving data from a data device that is not yet integrated into DIGIOP® Server. This can be used for things like testing cash registers that have not yet been integrated, or on generic data devices like thermometers or scales that don't necessarily need a full integration.

Line Capture

Line Capture will receive and display every line of data as it is sent by the data device.
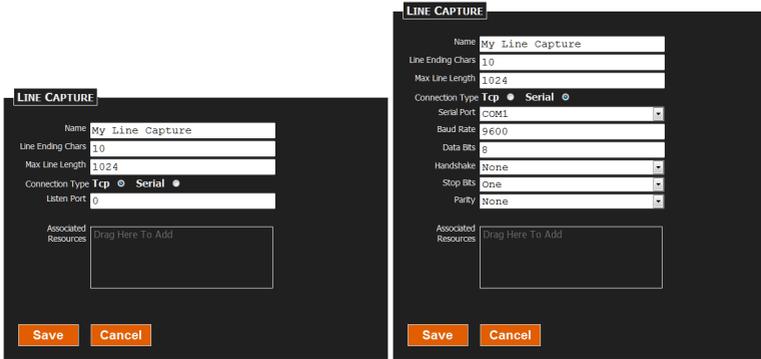
Parameter settings:

- **Name** – Name assigned to the line capture data.
- **Line Ending Chars** – Default setting is 10. Contact DIGIOP® support if the default settings don't work for your situation.
- **Max Line Length** – Default setting is 1024. Contact DIGIOP® support if the default settings don't work for your situation.
- **TCP or Serial** – Option to receive data through a TCP/IP or Serial interface.
- **Listen Port** – (TCP connection type) the port through which the DIGIOP Server will receive data. The IP address of the DIGIOP Server is configured in the sending device. Ensure the port you select is open in any firewalls.
- **Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity** – (Serial connection type) Settings of the sending device serial port that is connected to the DIGIOP Server serial port.
- **Associated Resources** – Associate a camera to see the video that corresponds to each line. Associated Resources can also be used to configure fraudulent exception transactions if both an analytic device and cash register are present.

Multiline Capture

Multiline Capture is similar to Line Capture, but takes it a step further by searching for the beginning of a transaction string. Multiline Capture can block an entire transaction by identifying Begin Transaction Strings. When that string of text appears in the data the last transaction closes and the new transaction begins.

Parameter settings:

- **Name** - Name assigned to the data stream.
- **Line Ending Character** – Default setting is 10. Contact DIGIOP® support if the default settings don't work for your situation.
- **Max Line Length** – Default setting is 1024. Contact DIGIOP® support if the default settings don't work for your situation.
- **Enable Filters** - Enables filters options. See below.
- **Enable Multiline** - Enables the Multiline capture features. See below.
- **TCP** or **Serial** - Option to receive data through a TCP/IP or Serial interface.
- **Listen Port** – (TCP connection type) the port through which the DIGIOP Server will receive data. The IP address of the DIGIOP Server is configured in the sending device. Ensure the port you select is open in any firewalls.
- **Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity** – (Serial connection type) Settings of the sending device serial port that is connected to the DIGIOP Server serial port.
- **Associated Resources** – Associate a camera to see the video that corresponds to each transaction. Associated Resources can also be used to configure fraudulent exception transactions if both an analytic device and cash register are present.

Multiline Capture - Enable Filters

When Enable Filters is selected, two options are available:

• **Ignore redundant**: Selecting this option will ignore redundant data from the data driver. For example, if data from a scale is monitored and the data received is continuous "0's" (same value), only the first 0 is recorded. When the data from the device changes (for instance, something is placed on the scale or taken off the sale), only the first occurrence of the changed data is recorded.

• **Filter by Expression**: In this text field, you can filter data using a *"regular expression"*.

Multiline Capture - Enable Multiline

When Enable Multiline is selected, two options are available:

• **Begin Transaction String**: In this field, enter the character string that identifies the start of a new transaction. A new or additional search of subsequent data begins at that point.

• **Ignore case**: Select this option to ignore the case (upper case or lower case) of alphabetic data during the search.

NOTE   *You can use both Enable Filters and Enable Multiline when using this feature.*

4.8   Filter Queries

Filter Queries allow users to mine data for exact events by extracting relevant transactional data. This allows users to quickly see important data. DIGIOP® provides several Built-in Queries, as well as the ability to construct Custom Queries both locally and globally.

4.8.1   Built-in Queries

DIGIOP Built-in Queries automatically appear when the user adds specific data device types. These queries prevent users from having to create a live or search filter query for every connection. Built-in Queries appear in DIGIOP™ Control and DIGIOP™ Connect as a magnified glass icon under your data tree. Built-in Queries include:

Exception Transactions

When adding a cash register data stream, DIGIOP® automatically creates the Exception Transaction filter query. An Exception Transaction is any transaction that is not completed by normal means (Void, Cancel, Returns, No Sale, Discounts, etc.). These are common transaction types used when theft is involved.

Fraudulent Exception Transactions

The Exception Transaction query will appear any time a cash register data stream is present; however, the Fraudulent Exception Transaction query will only work when a cash register data stream is associated with an analytics device. Fraudulent Exception Transactions associates a presence zone from an analytics data stream with a cash register. The assumption here is that if an Exception Transaction occurs when no one is in the presence zone from the analytics device, fraudulent behavior may have occurred. The presence zone is usually placed at a point of service, or where a customer is expected to be standing.

Traffic Queries

For systems with multiple Traffic devices, DIGIOP® will combine the data from each device into one built-in query for that device type.

- **Traffic Entered** – Displays the total Traffic Entered counts from all traffic counters present.
- **Traffic Exited –** Displays the total Traffic Exited counts from all traffic counters present.
- **System Queues –** Displays an accumulation of the data from all queues present.
- **System Service Zones –** Displays an accumulation of the data from all service zones present.

Conversion Rate

When both traffic counters from an analytic device and cash register data streams are present, DIGIOP® automatically creates a Conversion Rate query. Conversion Rate associates traffic entered with cash register transactions and calculates the conversion rate (ratio of how many transactions were made to how many entered the store). Conversion rate statistics are displayed in DIGIOP® Connect with the number of shoppers, number of transactions, total sales, conversion rate, dollars per shopper and dollars per transaction.

> **NOTE** *Use the live filter query to remove analytics counting devices not to be used to count shoppers entering the store.*

Recorder Event Queries

For systems with multiple Digital Inputs, DIGIOP® will combine the events from all of the Digital Inputs and display them in three different built-in queries.

- **Digital Input Active** – Displays the total number of times any digital input has gone active.
- **Digital Input Inactive –** Displays the total number of times any digital input has gone inactive.
- **Digital Input Changed –** Displays the total number of times any digital input has changed state, whether that be to active or inactive.

4.8.2 Custom Queries

Custom Queries can be created in DIGIOP Control for use in DIGIOP Connect. These queries appear as a magnifying glass icon under the data tree. Queries can be created for a single system, or they can be globally created and applied to an entire enterprise. Global Custom Queries are used to create one query in DIGIOP Elements that will be applied to every system in the system tree. This saves users the task of creating a common query in each system in their customer name.

When constructing a Custom query, conditions can be created using and/or (Boolean) logic to produce a true or false (met or not met) result. For instance, the following query is a Cash Register test for two cash register event conditions: Transaction Total >= $100 and Cashier ID = Linda.

NEW SINGLE SYSTEM QUERY

To create a new query for a single data server:

1. Click the **Data Server** icon in the left frame, then click **New**.

2. In the **Create Item** menu, scroll down and click **New Query** to open **Author New Query**.

3. Enter a name in the **Query Name** field.

4. Open the **Primary Device Category** drop-down list to select a category.
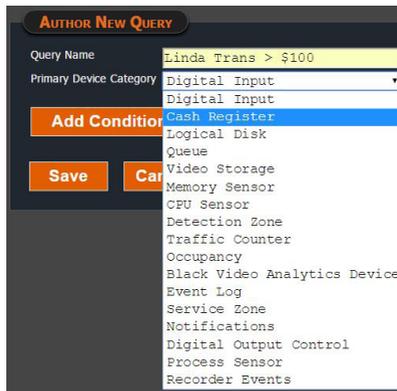
5. Click **Add Condition**.

6. On the condition line, open the drop-down list on the left to select a variable.
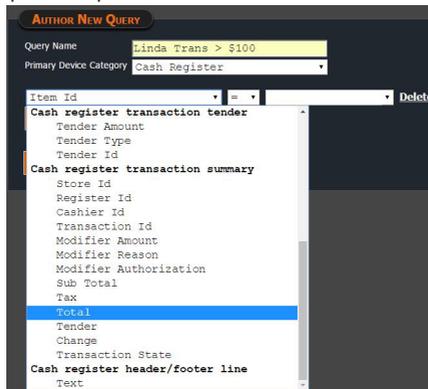
7. Select the boolean operator from the drop-down list in the middle.

8. Open the drop-down list on the right to select the status, or enter a value.

9. Add additional conditions as needed to form a precise boolean construct to test.

10. Click **Add Condition**. There is now an additional option to "AND" or "OR" the new condition. When condition 1 and 2 are "ANDed" together, both conditions must be met for the event to be displayed in the query. When condition 1 and 2 are "ORed" together, either condition 1 OR condition 2 can be met for the event to be displayed in the query.

11. Click **Save**. The queries you defined and those provided by default in the system are listed under the Data Server icon in the left frame.

NEW GLOBAL QUERY

To create a new global query for an entire enterprise:

1. In DIGIOP Elements, click the **Queries** folder under your **Customer Name**, and then click **New**.

2. An **Author New Query** window similar to the one used for a single system query will appear.

3. Name the query and create conditions for the query in the same way that you would for a single system query.

4. Click **Save**. The queries you defined are listed under the Queries folder in DIGIOP® Elements. In DIGIOP® Connect the global query you defined will be listed under the data server for each system.

SECTION 5
Users, Roles, and Permissions

All DIGIOP® Server Users are assigned a Role that includes a set of Permissions, that is, what level of access they have to the server. Initially, only the **admin** user with the Administrator Role (all permissions enabled) is configured in the system. The **admin**, or a user with System Configure permissions can create other roles and users. Once a role has been created, permissions can then be assigned to that role.

5.1   Create Role

Create Role is used to create classes of users who manage or view the system. Each role has a specific set of permissions. User identities are each assigned to a role when they are created. Initially, only an Administrator Role is established in the system. To create a Role:

1.   Click the **Users and Roles** entry in the left frame of the Home page, then click the **New** button.
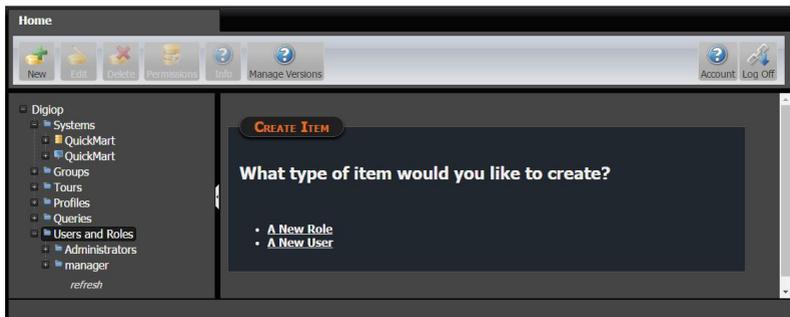
2.   In the Create Item frame, click **A New Role**.

3.   In the Role menu, enter the name of the Role in the **Name** field.

4.   Enter a description of the role in the space provided (optional).

5.   Click **Save** to update DIGIOP® Control.

5.2   Permissions

Once a role is created, or if a Role needs to be modified, permissions can be set at the Customer level, System level, or Device level. Permissions can also be set for Groups, Tours, and Startup Profiles.

5.2.1   Customer Level Permissions

1.   Click the Customer entry at the top of the tree in the left frame (in this example the customer is Digiop), then click the **Permissions** icon at the top of the window.

2.   In the **Permissions for Digiop** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

3.   After assigning permissions, if you check the box **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the systems and devices below that level in the tree. If this is not checked, permissions will need to be set at each level.

4.   Click **Save** to update DIGIOP® Control.

GLOBAL PERMISSIONS

Global Permissions are set at the Customer Level for hosted customers and allow the administrator to determine what roles can add, configure, and manage systems. Click the customer name (at the top of the tree), and then click the **Permissions** icon at the top of the window.

- **Add System** - The ability to add a system to an Elements hosted account during the DIGIOP System Setup Tool when setting up a new server.
- **Configure Users** - The ability to add users.
- **Configure Policy** - The ability to add and configure roles and permissions.
- **Manage Group Profile** - The ability to add groups, tours, and startup profiles.
- **Notifications Disable** - The ability to be able to enable and disable notifications for a system.

DEFAULT PERMISSIONS

Default Permissions are set at the Customer Level (top level) for both hosted and stand-alone customers, and determine what access Roles have at lower levels of the tree. These can then be applied to systems and individual devices under the customer name. Additionally, individual devices can have more restrictions. Click the customer name (at the top of the tree), and then click the **Permissions** icon at the top of the window.

- **Live** - The ability to view live video.
- **Search** - The ability to search recorded video.
- **Audio** - The ability to hear audio (if enabled for the camera(s)).
- **PTZ Control** - The ability to utilize PTZ controls such as pan, tilt, zoom, focus, and iris open/close.
- **PTZ Configure** - The ability to create and modify PTZ presets.
- **Export** - The ability to export video or save an image of a video clip after searching recorded video.
- **Notifications Receive** - The ability to see notifications (if enabled for a system).
- **System Configure** - The ability to make configuration changes (for example add/edit cameras or add/edit data streams) to a system.

PERMISSIONS FOR DIGIOP

Global Permissions

Role	Add System	Configure Users	Policy	Manage Group Profile	Notifications Disable
Administrators	☑	☑	☑	☑	☑
manager	■	■	■	■	■

Default Permissions

Role	Live	Search	Audio	PTZ Control	PTZ Configure	Export Local	Export Internet	Notifications Receive	System Configure
Administrators	☑	☑	☑	☑	☑	☑	☑	☑	☑
manager	☑	☑	☑	☑	☑	☑	☑	■	■

5.2.2   System Level Permissions

System level permissions allow Roles to be applied to specific systems.

1. Expand the system list for your customer. Select the video server for the desired system, then click the **Permissions** icon at the top of the window.

2. If checked, uncheck the **Inherit Permissions from Parent** box. When checked, the system is receiving its permission set from its parent, the overall customer. Unchecking this box will allow you to set a specific set of permissions for that system.

3. In the **Permissions for <System Name>** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4. After assigning permissions, if you check the box **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the cameras below that video server. If this is not checked, permissions will need to be set for each camera.

5. Click **Save** to update DIGIOP® Control.

6. If you would also like to change permissions for the data server, select the data server for the same system, then click the **Permissions** icon at the top of the window.

7. Make any changes to the permissions for the data server. If you check the box for **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the data devices below that data server. If this is not checked, permissions will need to be set for each data device.

8. Click **Save** to update DIGIOP® Control.

5.2.3   Camera Level Permissions

Camera level permissions allow Roles to be applied to a specific camera(s).

1.   Expand the system list for your customer, then expand the video server for the desired system. Select the desired camera then click the **Permissions** icon at the top of the window.

2.   If checked, uncheck the **Inherit Permissions from Parent** box. When checked, the camera is receiving its permission set from its parent, the video server. Unchecking this box will allow you to set a specific set of permissions for that camera.

3.   In the **Permissions for <Camera Name>** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4.   Click **Save** to update DIGIOP® Control.

5.2.4   Data Device Level Permissions

Data Device level permissions allow Roles to be applied to a specific data device(s).

1.   Expand the system list for your customer, then expand the data server for the desired system. Select the desired data device then click the **Permissions** icon at the top of the window.

2.   If checked, uncheck the **Inherit Permissions from Parent** box. When checked, the data device is receiving its permission set from its parent, the data server. Unchecking this box will allow you to set a specific set of permissions for that data device.

3.	In the **Permissions for <Data Device Name>** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4.	Depending on the data device, the data device may also have additional children. If you look at the example above, the data device **Registers** was added. This site has multiple registers, so each individual register displays under the overall parent **Registers**. After assigning permissions, if the data device has children present, you can check the box for **Overwrite permissions for ALL child elements with the current permission settings** and all of the permissions just created will be applied to all of the children devices below that data device in the tree. If this is not checked, permissions will need to be set for each child device.

5.	Click **Save** to update DIGIOP® Control.

5.2.5   Group Permissions

After a group has been created, members of the Administrators role will automatically be able to view the created groups. For other roles to be able to view the groups, the group permissions will need to be set:

1.	Click the **Groups** link in the left frame, then click the **Permissions** icon at the top of the window.

2.	If checked, uncheck the **Inherit Permissions from Parent** box. When checked, all groups are receiving their permission set from its parent, the customer. Unchecking this box will allow you to set a specific set of permissions for all groups.

3.	In the **Permissions for Groups** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4.	After assigning permissions, if you check the box for **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the individual groups. If this is not checked, permissions will need to be set for each individual group.

5.	Click **Save** to update DIGIOP® Control.

5.2.6   Tours Permissions

After a tour has been created, members of the Administrators role will automatically be able to view the created tours. For other roles to be able to view the tours, the tour permissions will need to be set:

1.   Click the **Tours** link in the left frame, then click the **Permissions** icon at the top of the window.

2.   If checked, uncheck the **Inherit Permissions from Parent** box. When checked, all tours are receiving their permission set from its parent, the customer. Unchecking this box will allow you to set a specific set of permissions for all tours.

3.   In the **Permissions for Tours** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4.   After assigning permissions, if you check the box for **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the individual tours. If this is not checked, permissions will need to be set for each individual tour.

5.   Click **Save** to update DIGIOP® Control.

5.3   Create User

Create User is used to create a user Username and Password, and assign a Role (permissions) to the user. By default, one user, **admin**, with password **admin** and the role **Administrators** (full system permissions), is provided. DIGIOP strongly recommends that the default **admin** password be changed to improve system security.
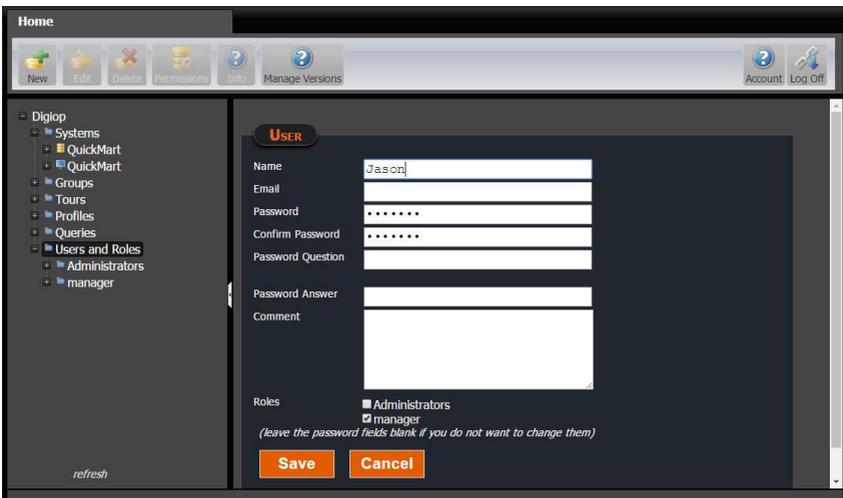
NOTE	*To change the admin password, expand the Administrators role tree in the left frame, click admin, then click the Edit button. Change the password on the edit menu, then click Save.*

To create a User:

1.   Click the **Users and Roles** entry in the left frame of the Home page, then click the **New** button at the top of the window.
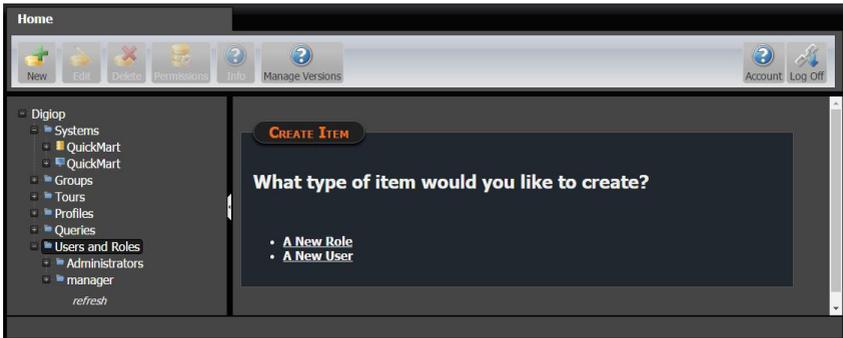
2.   In the Create Item frame, click **A New User**.

3.   In the User settings window, enter:
      — Name
      — Email address (optional)
      — Password and Confirm Password
      — Security Question and Answer (optional)
      — Comments (optional)

4.   Click the **Role** to assign to the user. Note that in the window above, Jason was given the manager role.

5.   Click **Save** to update DIGIOP® Control.

5.4   User Profiles

Users with administrative privileges can create and edit user startup profiles through DIGIOP® Connect. Profiles are pre-configured display setups that appear when the user (Username) logs into DIGIOP® Connect. For more information on creating and editing User Profiles, see the ***DIGIOP® Connect V9.4 Software User Manual***.

User profiles appear within DIGIOP® Control as "<username> startup profile". While the profile name can be deleted in Control, profiles can only be created in Connect. After creating a profile, you will need to verify that the user's role has permissions to view profiles.

5.4.1   Delete Profiles

To delete a user's startup profile:

1.   Drop down **Profiles** in the left frame, click the profile name you want to remove, then click **Delete**.

5.4.2   Profile Permissions

 To set permissions for profiles:

1.   Click the **Profiles** link in the left frame, then click the **Permissions** icon at the top of the window.

2. If checked, uncheck the **Inherit Permissions from Parent** box. When checked, all Profiles are receiving their permission set from its parent, the customer. Unchecking this box will allow you to set a specific set of permissions for all Profiles.

3. In the **Permissions for Profiles** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.

4. After assigning permissions, if you check the box for **Overwrite permissions for ALL child elements with the current permission settings** all of the permissions just created will be applied to all of the individual Profiles. If this is not checked, permissions will need to be set for each individual Profile.

5. Click **Save** to update DIGIOP® Control.

SECTION 6
Rules Engine

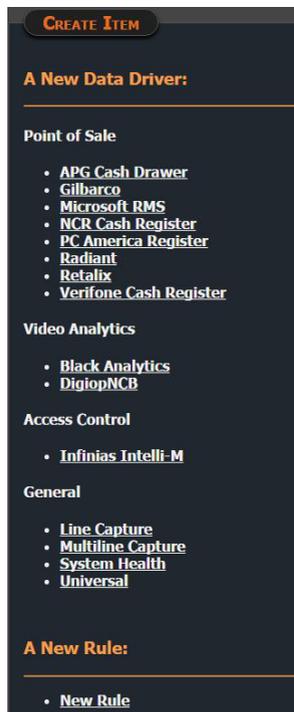DIGIOP® Control allows Admin users to configure rules. When a rule is violated, the action configured with it is performed. Actions include *send an email notification, forward counts to an FTP site, forward images, activate a Digital Output,* and *record video.*
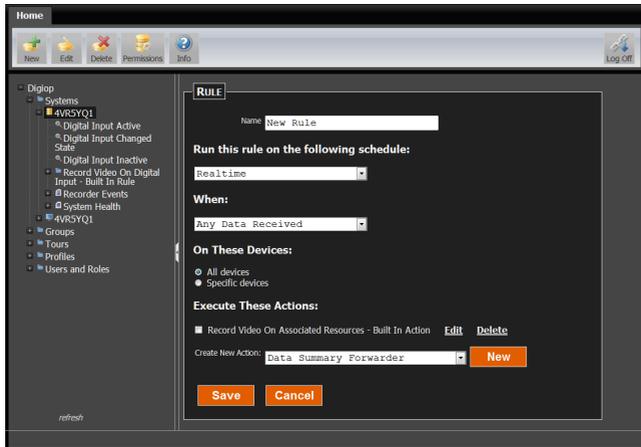
6.1   Create Rules

To create a rule:

1.   Click the **Data Server** icon in the left frame, then click **New**.


2.   Click the **New Rule** link.

3. In the **Name** field, assign a Name to identify the rule.

4. In the **Schedule** field, open the drop-down list and select one of the options to determine when the rule will be run.

- **Realtime** - Execute the action in realtime each time the rule is violated.
- **Every Minute, 15 Minutes, Hour, Day, Week** - Execute the action at the designated time interval if the rule has been violated, no matter how often the rule was violated.

5. In the **When** field, open the drop-down list and select when the action is executed per the schedule selected previously:

- **Always** - The action is always executed per the schedule.
- **Any Data Received** - The action is executed when any data is received per the schedule.
- **Digital Input Active** - The action is executed when one or more of the system's digital inputs is activated.
- **Digital Input Inactive** - The action is executed when one or more of the system's digital inputs are deactivated.
- **Digital Input Changed State** - The action is executed when one or more of the system's digital inputs changes state, whether that be to active or inactive.

6. In the **Device** list, select the option that applies to the rule.

- **All Devices** - The action is executed if any of a device type violate the rule. For example, if the "When" is Digital Input Active, the action is executed if any of the digital inputs are activated.
- **Specific Device** - The action is executed only if the specific device selected violates the rule. For example, if the "When" is Digital Input Active, the action is executed only if the specific digital input selected is activated.

7. In the **Execute These Actions** section, several options are available. See *6.2 Actions* for more information.

6.2   Actions

Each Rule has an Action associated with it. When a rule is violated, the action configured within the rule is performed. The action **Record Video On Associated Resources** is already built-in, and there are other actions that can be created. Both built-in actions, actions previously crated, and new actions appear under **Execute These Actions.** To edit a built-in or previously configured action, select **Edit** next to the action under **Execute These Actions** on the **New Rule** page. To create a new action, drop-down the **Create New Action** list, select the desired action, then click **New**.
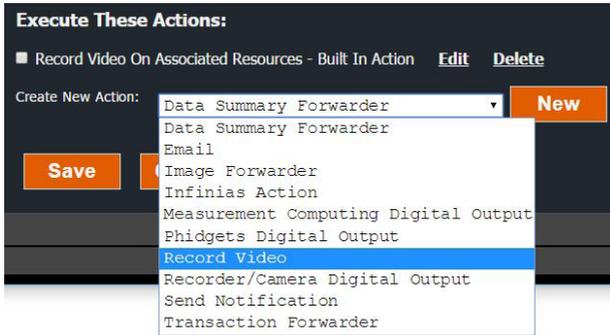
6.2.1   Record Video on Associated Resources

When a rule has been violated for a specific device or devices, the camera associated to the device(s) will record.
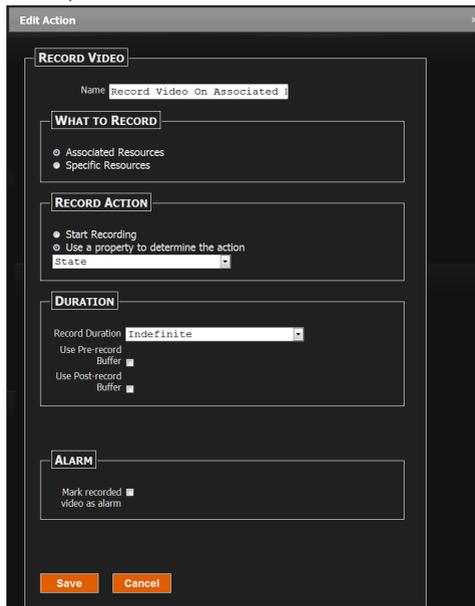
1.	In the **Name** field, assign a Name to identify the action.

2.	In the **What to Record** field, specify which cameras will record.

•	**Associated Resources** - Records the camera(s) associated with the device(s) violating the rule.
•	**Specific Resources** - Select the camera(s) you want to record when the rule is violated.

3.	The **Record Action** field defines what will trigger the recording.

•	**Start Recording** - The camera(s) will record on any event.
•	**Use a property to determine the action** - This allows you to select a specific property from the data to start recording and stop recording. Recording will start if the property is true (or non-zero), and stop if the property is false or 0.

4.	The **Duration** field defines how long the event or alarm records.

•	**Record Duration** - Select Indefinite to record until the state changes, or select a specific duration.
•	**Pre and Post Buffer** - This condition is based on the Pre and Post camera settings of the associated resource(s).

5.	Select **Mark recorded video as alarm** to identify the recording as alarm based, instead of event based. The timeline for the video will appear red in DIGIOP® Connect.

6.2.2   Data Summary Forwarder

This action allows you to forward a summary of event data to a FTP site for the device(s) selected in a rule anytime the rule is violated. Data is forwarded in XML format.

•	**Name** - Name to identify the action.
•	**Location ID** - Store number or register ID number.
•	**FTP Server** - Address of the FTP server.
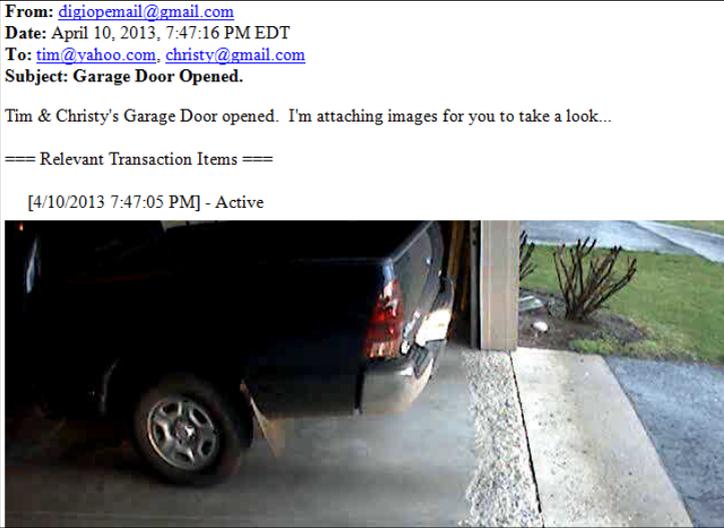•	**Username/Password** - Security credentials for the FTP server.

6.2.3   Email

This action generates and sends an email message when a rule is violated. Emails are sent using an SMTP server.

- **Name** - Name to identify the action.
- **SMTP Server** - Address of the SMTP server.
- **Use SMTP Authentication** - Select if required by the SMTP server.
- **SMTP Port** - The port where the SMTP server can be accessed.
- **Use SSL** - Select if required by the SMTP server.
- **Username/Password** - Security credentials of the SMTP server.
- **From** - Email address the email will be sent from.
- **Email Recipients** – List of recipients email addresses. Each email address is separated by a semicolon (;).
- **Attach Images** – Select to attach images to the email from the camera(s) associated to the device(s) defined in the rule.
- **Include Transaction Details** - Select to attach thr associated transaction to the email, for example, POS transactions.
- **Subject** – Subject line of the email.
- **Body** – Message body of the email.

Below is an example of an email sent as a result of a rule.

From: digiopemail@gmail.com
Date: April 10, 2013, 7:47:16 PM EDT
To: tim@yahoo.com, christy@gmail.com
Subject: Garage Door Opened.

Tim & Christy's Garage Door opened. I'm attaching images for you to take a look...

=== Relevant Transaction Items ===

   [4/10/2013 7:47:05 PM] - Active

6.2.4   Image Forwarder

This action performs an FTP or HTTP upload of an image when an event is triggered.

- **Name** - Name to identify the action.
- **Connection Type** - Select FTP or HTTP.
- **FTP Server** - (FTP) Address of the FTP Server.
- **Address** and **Port** - (HTTP) IP address and port to send to.
- **Username/Password** - Security credentials for FTP/HTTP.
- **Delay in milliseconds before sending** - Select milliseconds to delay before forwarding the image.

6.2.5   Recorder/Camera Digital Output

This action allows you to configure the digital output state of a digital output on the recorder or of a camera when a rule is violated.

- **Name** - Name to identify the action.
- **I/O Device** - Select the built-in capture card or a camera with a digital output configured.
- **Output Number** - Output number of the I/O device.
- **Output Value** - State of the output (active or inactive).

6.2.6   Transaction Forwarder

This action sends all event data to an FTP site in XML or CSV format.

- **Name** - Name to identify the action.
- **Location ID** - Store number or register ID number.
- **Export Format** - Select XML or CSV.
- **FTP Server** - Address of the FTP server.
- **Username/Password** - Security credentials for the FTP server.

APPENDIX A
Hard Drive Configuration

DIGIOP® factory pre-configured systems have specific hard drive partitioning.

- DIGIOP® systems are configured using multiple partitions.
- Partitions may contain the operating system, drivers, and setup or data files.
- Most files and software are in folders named DIGIOP or DissTech.

Table 1. Drive Partitions

Drive	Size	Description
⚠ CAUTION	Do not access or modify any drives unless specifically directed to by DIGIOP® Technical Support. Most files are encrypted and affect system operation.	
System C:\	Approx. 100GB	Windows OS and the system software; Windows folder structure
DATA D:\	Dependent on HDD size	DissTech (video files), Database, and Index files

OTHER DRIVES

Depending on the configuration of the system and the amount of storage space available, other drives may be used for data storage. Once the system has consumed all DATA storage drives, it searches for the next drive in alphabetical order and starts recording data on that drive. Data is written on a first in/first out basis. As the data drives start to fill, they will automatically record over the oldest video.

NOTE	*Any drive 4GB or greater in size is considered by the system to be a storage device. The system will attempt to write data to it.*

APPENDIX B
Adding DIGIOP® Licenses

DIGIOP server licenses enable the capabilities of the system. A base system license that enables cameras is normally activated on the server using the System Setup Tool during system installation. Additional licenses for adding additional cameras and enabling data features can also be activated during system installation, or acquired and activated later.

If a full system recovery is performed on the server, the base license and all additional licenses used must be re-activated. Licenses purchased with factory pre-configured systems are usually provided on stickers on the case of the server hardware.

| **NOTE**	*The license examples shown in this Appendix may be different from the ones required for your system. Consult your DIGIOP® sales representative for more information.*

Installing additional licenses

To install additional licenses, do the following:

1. Acquire your new License ID and Password from your DIGIOP® sales representative.

2. Click the Windows **Start** button, then select **All Programs** to open the program list. Depending on your system configuration, the Start menu and programs list may appear different from the screen captures shown below.
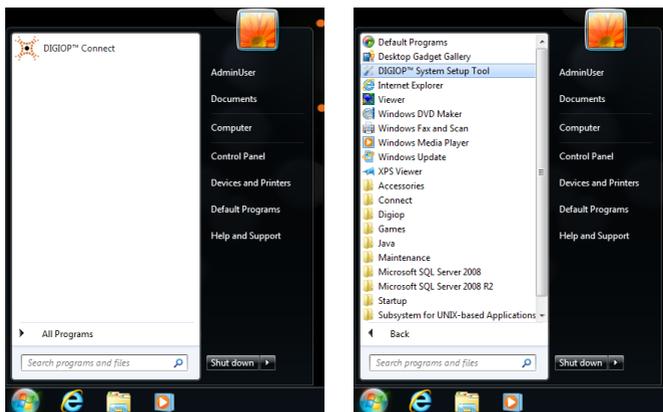
3. In the All Programs list, open the **DIGIOP™ System Setup Tool**.
4. In the System Maintenance window, click **Manage Licenses**.
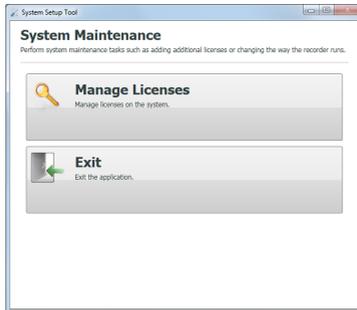
5.   On the License Summary display, click **Add License.**

6.   On the License Activation display, enter your new **License ID** and **Password.**

7.   Select **Activate License Online** if you have an Internet connection. Otherwise, select **Activate License Manually** and follow the on-screen instructions to complete the activation.

APPENDIX C
File Naming Conventions

NOTE	*Any drive 4GB or greater in size is considered a storage device by the system.*

DAILY DIRECTORIES

Each day the system runs, the Server application creates a new directory under DiSSTech\DiSS. These daily directories are formatted as YEAR-MONTH-DAY (yyyymmdd).

Example: The highlighted directory named 20120831 is for 31 August, 2012.
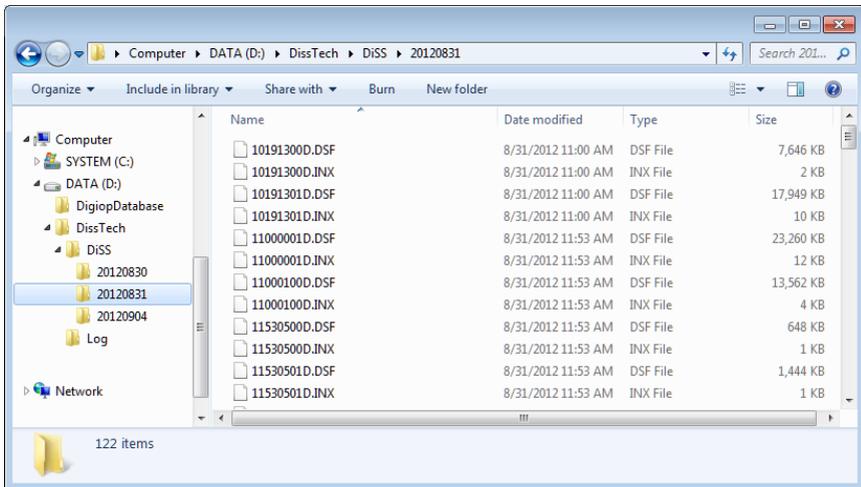

File Naming Convention

In each daily directory, files are saved in encrypted .DSF and index (.INX) format. The .DSF file can be viewed using a utility, such as *Viewer*.

These hour files are in the format HOUR (24 hours)—MINUTE—SECOND—CAMERA CODE—Event Type, using two digits each (hhmmsscce).

Example: The file called 10191300D.DSF is the hourly video file for the .INX and .DSF files in directory 20120831.

Files are for 1019 hours (10:19 AM)
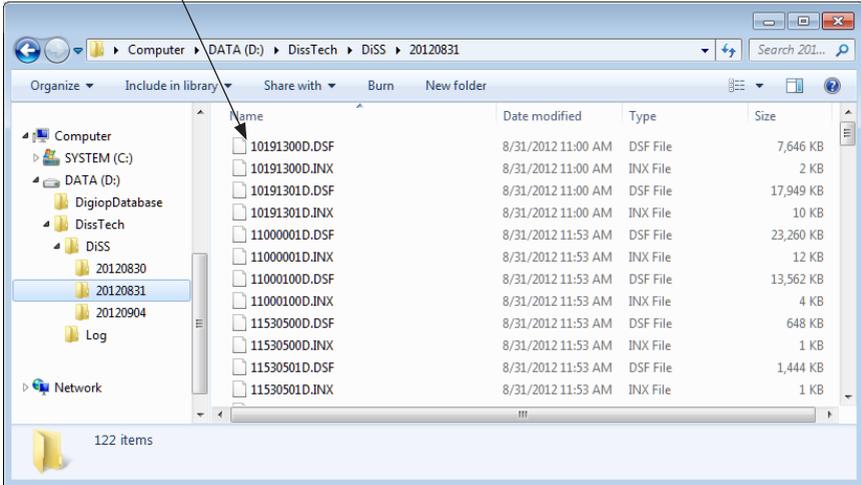
For the example above:

- HOUR = 10 (10 AM)
- MINUTE = 19 minutes
- SECOND = 13 seconds
- CAMERA CODE = Camera 00 (Camera 1 is 00, Camera 2 is 01, Camera 3 is 02, etc.)
- Event Type = D

The video file size depends largely on the duration of the recording, the recording modes (e.g., motion versus continuous), and compression type.

APPENDIX D
TCP/IP Port Configurations

You can access DIGIOP Control and DIGIOP Connect from a location that is outside of the Local Area Network of the DIGIOP Server you are using. If there is a firewall between the DIGIOP Server and the PC at the remote site, you must forward ports in your router and in any software firewalls to allow communications. Information herein includes TCP/IP port settings and router port forwarding settings for a basic DIGIOP server setup. For more advanced configurations, including custom port configuration for multiple servers behind the same public IP address, refer to the *Digiop Network Reference* How-to located on *Digiop.com*.

DIGIOP Connect Remote Access TCP/IP Settings

To be able to launch Connect and view video remotely, the following inbound ports must be forwarded:

Web Service Port	Port 24752 TCP
Video Service Port	Port 24754 TCP

DIGIOP Elements TCP/IP Settings

Systems hosted by DIGIOP Elements Cloud Hosting also utilize outbound ports. Most firewalls do not restrict outbound access, but if your location has outbound restrictions, you must allow outbound access for the following ports:

Digiop Elements Tunnel	Port 24753 TCP
Web Service Port	Port 24752 TCP

DIGIOP Control Remote Access TCP/IP Settings for Locally Hosted Systems

For locally hosted systems, you can access DIGIOP Control from a remote computer by forwarding the inbound port:

Configuration Port	Port 80 TCP

**Opening Ports in Windows Firewall for Data Devices**

The Web Service Port, Video Service Port, and Configuration Port needed for DIGIOP Connect and DIGIOP Control are automatically configured in the Windows Firewall by the DIGIOP Server Installer. However, if you are integrating data devices with DIGIOP, you may need to open additional ports in Windows Firewall. The steps shown below are for a Windows 10 system.
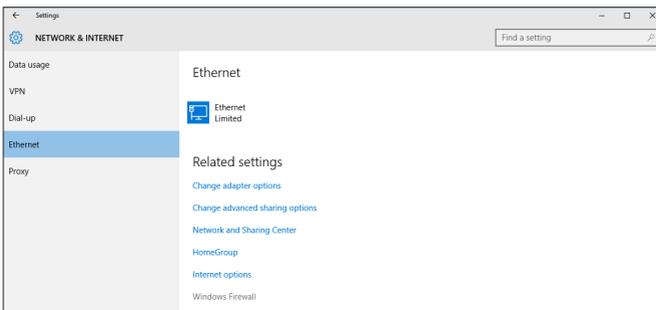
1. Click the Windows **Start** button and then open the **Settings** window.
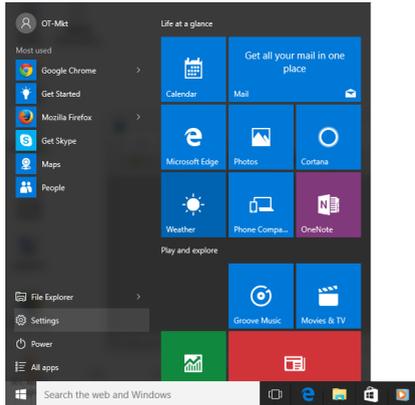
2. In the Settings window, click the **Network & Internet** icon.
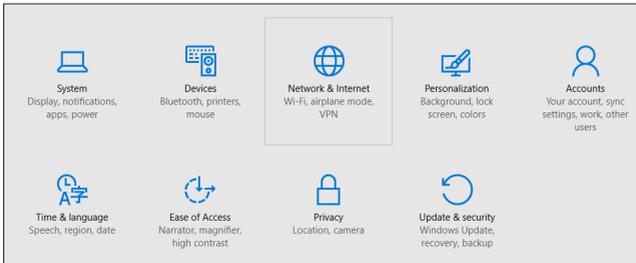
3. In the **Network & Internet** window, click the **Ethernet** link in the left frame, and then click on **Windows Firewall**.
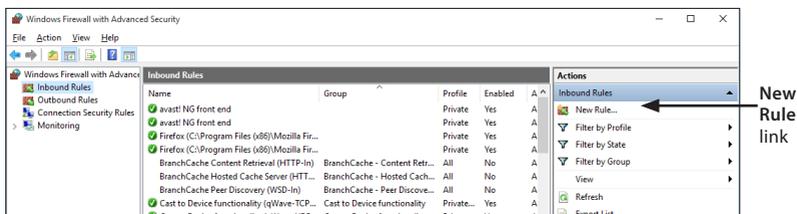
4.   In Windows Firewall, click **Advanced Settings**.

5.   Click on **Inbound Rules**, and then select **New Rule** from the **Actions** menu on the right side of the window.

New Rule link

6.   In the **New Inbound Rule Wizard**, choose **Port** and then click the **Next** button at the bottom of the window.
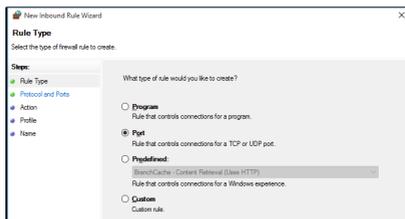
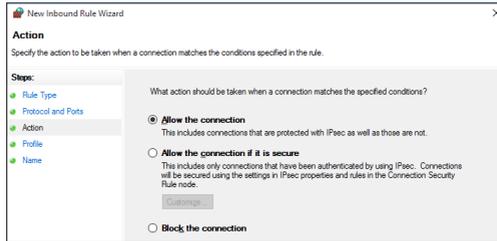7.   Set the protocol to TCP and then enter the TCP port number configured for the data device. Click **next**.
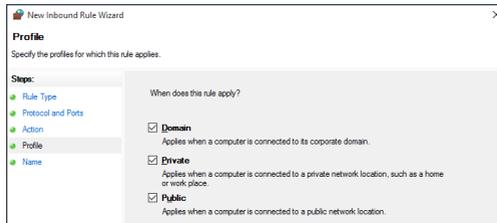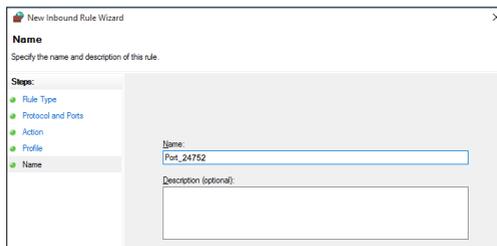
8. Choose **Allow the connection**, and then click the **Next** button at the bottom of the window.

9. Select all profiles (**Domain**, **Private**, and **Public**), then click the **Next** button at the bottom of the window.

10. Give the rule a unique name, and then click **Finish**.

APPENDIX E
Software Upgrade to DIGIOP® V9.4

To upgrade your existing server, verify that it meets at least the minimum hardware specifications:

- **CPU**: Intel® Core™ i3 or equivalent processor (Core™ i7 recommended)
- **RAM**: 4GB RAM (8GB or more recommended)
- **HDD**: 250GB, 7200 RPM (add additional HDDs for more storage space)
- **Video Card**: 256MB (or better)
- **OS**: Microsoft® Windows 7 Professional or better (64 bit operating system preferred).
  DIGIOP® server V9.4 also runs on Microsoft® Windows 8/8.1/10, Server 2008, and Server 2012.

Please contact DIGIOP Support for the latest version of the DIGIOP Server 9.4 Application Installer.

For servers running DIGIOP Server software V8.7 – V9.2

Installation method: These systems can be upgraded by running the DIGIOP Server 9.4 Application Installer.

For servers running DIGIOP Server software V8.5 or V8.6

Installation method:

1. Stop all DIGIOP services.

2. Run the DIGIOP Server 9.4 Application Installer. If you need assistance, please contact a DIGIOP support representative.

For servers running DIGIOP Server software V8.0 or V8.1

DIGIOP Servers with V8.0 or V8.1 cannot be directly upgraded to Digiop Server 9.4 because of a difference in database types. With these servers, you must perform a complete uninstall and reinstall of the software, or do a system re-image. Please contact a DIGIOP support representative for further assistance if using this method.

For servers running Digiop Server software V7.0 – V7.6.1

To upgrade a system installed with Digiop Server V7.0 – V7.6.1, please contact your DIGIOP® sales representative.

DIGIOP CONNECT

The version of DIGIOP Connect compatible with your version of DIGIOP Server must be at the same version or a higher version than the version of DIGIOP Server. Contact DIGIOP Support for the latest version of the DIGIOP Connect 9.4 Application Installer.

APPENDIX F
Using Viewer

Viewer is the video player included when you export a video recording in its native format (.dsf). See the **DIGIOP®
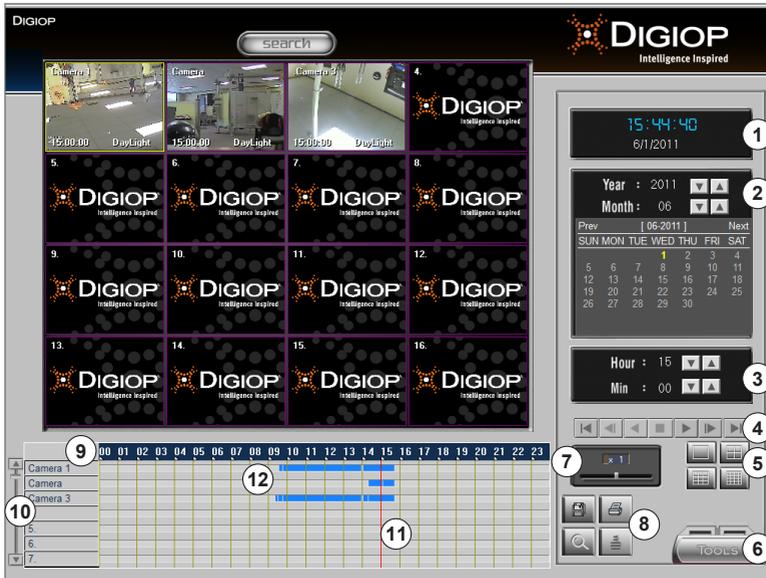Connect V9.4 Software User Manual** for information on performing exports.

Table 2. Search Preferences

Item	Name	Description
1	Current Date & Time	Displays the PC date and time
2	Record calendar	Use the calendar to find recorded video on the desired search date. Use the **Prev**(ious) or **Next** links to move the months forward or backward in time. Use the Up/Down arrows to adjust the Year and Month. Date codes: Pink – recordings available on that date Yellow – currently selected date Grey – no recordings on that date.
3	Time Line (Hour/Min)	Displays the current video time. Clicking anywhere on the time line causes the Scan Bar to jump to that position/time. Use the Hour and Minute up/down arrows to locate known records. This option is synchronized with the Scan Bar so any change to the Scan Bar position will be reflected here.
4	Playback Controls	Play, Stop, Pause, FWD, Step Forward, Step Backwards. See the section "Playback Controls" in this guide for more information about these controls.
5	Screen division display	Switches from 1, 4, 9, or 16 images. Individual images can be removed from the split screen by clicking the camera button (left of the graphical record log). The selected Screen Mode is highlighted.

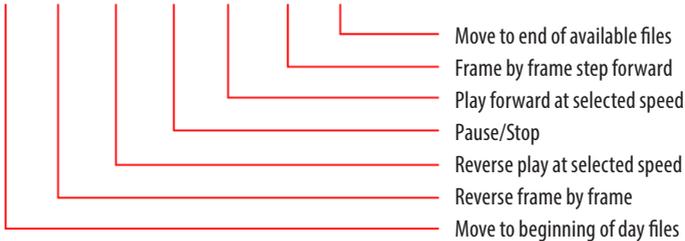| Item	Name	Description
6	Tools (image adjust)	Temporarily adjusts the image settings of the video recording being played. The image settings revert back to the default settings after playing the video. The image settings cannot be saved.
7	Playback speed	Lets you choose forward or playback at speeds of 1/8X, 1/4X, 1/2X, 1X, 2X, 4X, and 8X real-time speed. To adjust the playback speed, either drag the slide control or click on the slide control bar. The speed is displayed in the playback window.
8	Print, Zoom	Print – Prints the image
		Image Zoom – Magnifies the image in 48 incremental steps. Right-click with the mouse. When you place the mouse over the image, the cursor changes to the +/- magnifying glass. Clicking the left mouse button zooms out to a 1:1 ratio. By moving the mouse to different areas of the image, you can zoom in on parts on the image that you need to look at in more detail. This means that the zoom does not need to be centralized in the middle of the screen to work. See the section "Zoom" in this guide to see a zoomed image.
9	Graphical record log	Displays a 24 hour time period for the time and date selected. Double click to zoom in on the time line. The time zooms in from 24 hours to single hours. By double clicking the time line, the time line zooms in for searches in smaller time increments. Different colors represent different recording modes: pink=continuous; blue=motion; red=sensor. See the section "Manipulating the Graphical Record Log" in this guide for more information about how to use the timeline features.
10	Cameras selector and scroll bar	Displays camera images in multi-screen divisions of 1, 4, 9, and 16 cameras. Cameras not selected are not visible. For single images, use the camera selection buttons to move the displayed image from one camera to the next. For multi-screen divisions, use the camera selection buttons to select or de-select each camera from the search/display. The scroll bar can be used to access the other cameras not shown.
11	Scan bar (cursor)	Lets you slide a scan bar along the time line and quickly select and view video. A preview pane displays the images as soon as the files are accessed. By double clicking the time line, the time line zooms in for searches in smaller time increments.

F.1   Searching for Recorded Video

The Graphical Record Log is used to search for the video record you need. To search for a video record:

1.   Select a camera whose video you want to search. The selected camera is outlined in yellow in the viewer.

2.   Look at the calendar [1] to see when recorded video for the camera is available. Dates in pink indicate video was recorded on that day.

3. Select a date from the calendar of the video event you want to see. The video begins to run in the viewer.

4. The timeline is first displayed in 24 hour intervals. Click anywhere on the timeline to select an hour [2]. You can also select the date from the calendar [1, above] and change the hour or minute with the up and down arrows on the Hour/Min clock [3].

5. Use the video controls [4] to control the video playback. Be prepared to stop and rewind the video, fast forward, etc., to locate the desired segment. Speed up or slow down the playback speed of the video [6] using the slide control. The maximum playback speed is "8X."

Move to end of available files
Frame by frame step forward
Play forward at selected speed
Pause/Stop
Reverse play at selected speed
Reverse frame by frame
Move to beginning of day files

6. Double click once on the dark bar at the top of the time line to zoom in to a shorter time interval. The time zooms in (expands) from 24 hours to approximately six hours, with the selected time roughly in the center of the time line.

7. Slide the vertical scan bar along the time line to another time. You can also move the slide control below the time line [6] to the right or left to change the time.
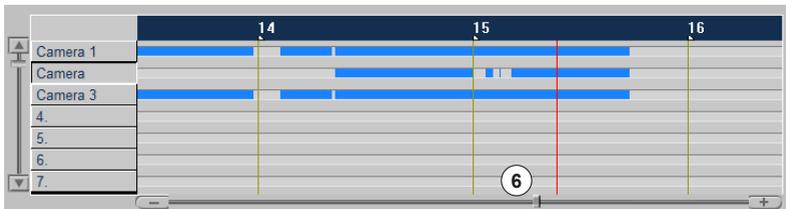
8. Double click a second time to zoom to a shorter time interval. The time line now shows slightly more than three hours. (The next time you double click, the time line returns to the 24 hour time period).

9. When you locate the desired section of video, you can zoom in to see more details. Zoom magnifies the image in 48 incremental steps.

10. The buttons [5] at the bottom of the window are used to print a still image and zoom into (or out from) the video image in the frame.

APPENDIX G
# Mobile Login to a DIGIOP® Server

You can login to your DIGIOP® server and view live video with most mobile phone types. For Apple® iOS devices (iPhones/iPads), download and install the DIGIOP® GoMobile application (free) and use it to access the server. For Android™, Windows Mobile® or Blackberry® mobile devices, you can login to your DIGIOP® server through a mobile web browser. Additional port forwarding in your router and in any software firewalls will be needed. See ***Appendix D: TCP/IP Port Configurations*** for more information on network configurations.

G.1 DIGIOP® GoMobile for iOS devices

Requirements: Apple iOS - 8.x platform

To install the DIGIOP® GoMobile app for your iPhone or iPad, go to the Apple® AppStore and search for DIGIOP® in the iPhone App section. Then download and install GoMobile.

1. Launch the DIGIOP® GoMobile app. When prompted, enter your **User Name** and **Password**.

2. Enter your **Site**:

   a. For DIGIOP ELEMENTS™ hosted systems, the site is *elements.digiop.com*

   b. For locally managed systems, the site is *<server IP address>* as follows:

      i. If your mobile device is connected to a WIFI router that is on the same network as your DIGIOP server, use the local IP address of the server. For example: *192.168.6.3*

      ii. If your mobile device is using cellular data, or is connected to WIFI outside the network from your DIGIOP server, use the public (external) IP address of the server. For example: *207.46.130.0*

3. Enter your **Customer** name

   a. For DIGIOP ELEMENTS™ hosted systems, use the **Customer** name assigned to you.

   b. For locally managed systems, the **Customer** name is *digiop*.

4. Select **Auto-Login** to automatically login with these credentials each time you launch the GoMobile app.

5. Click on **Login**.
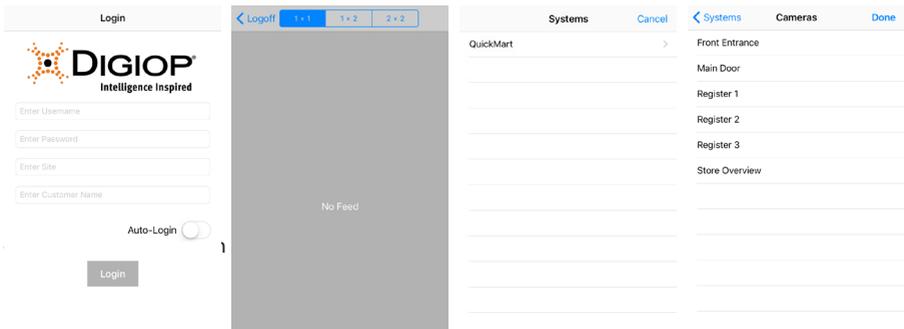
6. Click on **Select Feed**. Select a DIGIOP system, then select a camera. Live video for that camera will display in a 1x1 frame.

7. Tap once on the camera to switch to Full Screen mode. Tap again to toggle back to Select Feed mode.

8. To switch cameras, select the camera name on the bottom right, and select a new system and camera.
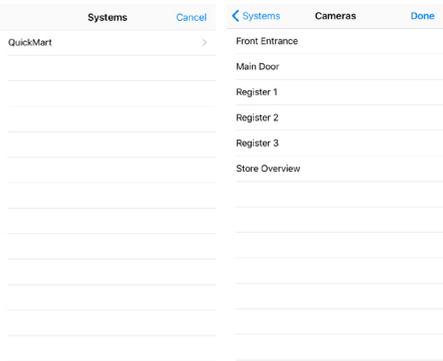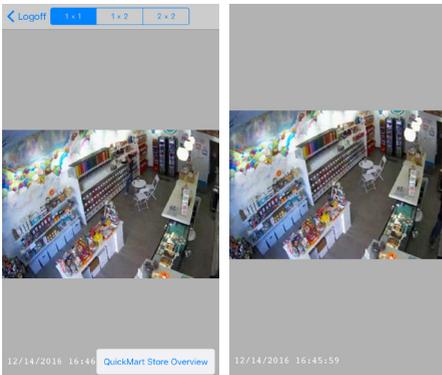
9. While in Select Feed mode, you can select 1x1, 1x2, and 2x2 accross the top to switch between frames that display 1 camera, 2 cameras, or 4 cameras.

10. Click **Select Feed** in each frame to choose a new system and camera to be displayed in that frame.

11. As in a 1x1, tap once on the screen to switch to Full Screen mode. Tap again to toggle back to Select Feed mode.
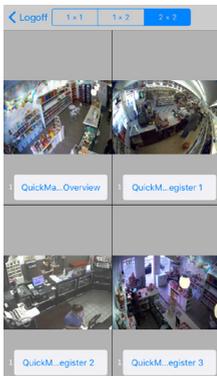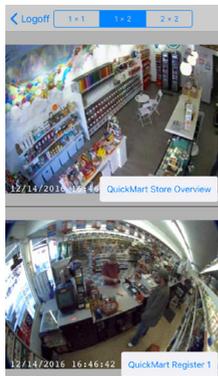
G.2   DIGIOP Mobile Login Using Android®, Windows Mobile™ and Blackberry® Devices

1.   Open your mobile web browser.

   a.   For DIGIOP ELEMENTS™ hosted systems, direct your browser to *elements.digiop.com*.

   b.   For locally managed systems, direct your browser to *<server IP address>/digiop* as follows:

      i.   If your mobile device is connected to a WIFI router that is on the same network as your DIGIOP server, use the local IP address of the server. For example: *192.168.6.3/digiop*

      ii.   If your mobile device is using cellular data, or is connected to WIFI outside the network from your DIGIOP server, use the public (external) IP address of the server. For example: *207.46.130.0/digiop*

2.   When prompted, enter your **User Name**, **Password**, and **Customer Name**:

   a.   For DIGIOP ELEMENTS™ hosted systems, use the **Customer** name assigned to you.

   b.   For locally managed systems, the **Customer** name is *digiop*.

3.   Select **Remember Me** to store your Username and Customer Name for future site visits. (optional)

4.   Click **Login**.

5.   Click on **Systems**.

6.   Select a DIGIOP system.

7.   Select any of the cameras in the list to view live video from the camera.

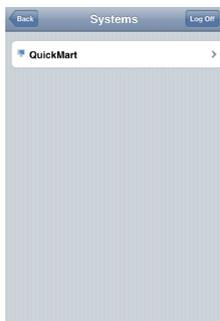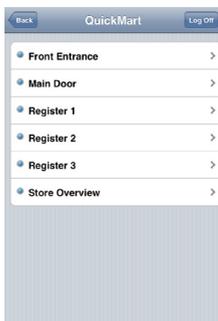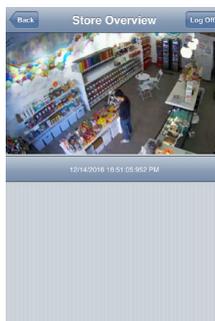| *Login* | *Select System* | *Select a camera* | *Camera Live View* |

APPENDIX H
Warranty Information

For warranty information about your system, please reference *digiop.com/support* or contact DIGIOP® support at 800.968.3606.