



# Avigilon Control Center Client User Guide

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# Introduction

## What is the Avigilon Control Center Client?

The Avigilon Control Center Client software works with the Avigilon Control Center Server software to give you access and control of your Avigilon High Definition Surveillance System.

The Client software allows you to view live and recorded video, monitor events, and control user access to the Avigilon Control Center. The Client software also gives you the ability to configure your surveillance system.

The Client software can run on the same computer as the Server software, or run on a remote computer that connects to the Site through a local area network (LAN) or a wireless area network (WAN).

What you can do in the Client software depends on the Server software edition. There are three editions of the Server software available: Core, Standard and Enterprise. Visit the Avigilon website for an overview of the features available in each edition:

<http://avigilon.com/products/avigilon-control-center/editions/>

A copy of the Client software can be downloaded from the Avigilon website, or installed with the Server software.

## System Requirements

	Minimum requirements	Recommended requirements
<b>Monitor resolution</b>	1280 x 1024	1280 x 1024
<b>OS</b>	Windows XP with Service Pack (SP) 2 or later, Windows Vista, Windows 7 or	Windows XP with Service Pack (SP) 2 or later, Windows Vista,

	Windows 8 64-bit	Windows 7 or Windows 8 64-bit
<b>CPU</b>	Intel Single Core 2.4 GHz processor	Intel Dual Core 2.0 GHz processor
<b>System RAM</b>	1 GB	2 GB
<b>Video card</b>	PCI Express, DirectX 9.0c compliant with 128 MB RAM (Intel GMA 900 or better, NVIDIA 6600 or better, ATI X1300 or better)	PCI Express, DirectX 10.0 compliant with 256 MB RAM (NVIDIA GeForce 600 series or better)
<b>Network card</b>	100 Mbps	1 Gbps
<b>Hard disk space</b>	500 MB	500 MB

## For More Information

Visit Avigilon at <http://www.avigilon.com/> for additional product documentation.

## Avigilon Training Center

The Avigilon Training Center provides free online training videos that demonstrate how to set up and use the Avigilon Surveillance System. Register online at the Avigilon Partner Portal site to begin: <http://avigilon.force.com/login>

## Support

For additional support information, visit <http://avigilon.com/support-and-downloads/>.

The Avigilon Partner Portal also provides self-directed support resources - register and login at <http://avigilon.force.com/login>.

Regular Avigilon Technical Support is available Monday to Friday from 12:00 a.m. to 6:00 p.m. Pacific Standard Time (PST):

- North America: +1.888.281.5182 option 1

- International: +800.4567.8988 or +1.604.629.5182 option 1

Emergency Technical Support is available 24/7:

- North America: +1.888.281.5182 option 1 then dial 9
- International: +800.4567.8988 or +1.604.629.5182 option 1 then dial 9

E-mails can be sent to: [support@avigilon.com](mailto:support@avigilon.com).

## Upgrades

Software and firmware upgrades will be made available for download as they become available. Check <http://avigilon.com/support-and-downloads/> for available upgrades.

## Feedback

We value your feedback. Please send any comments on our products and services to [feedback@avigilon.com](mailto:feedback@avigilon.com)





# Getting Started

Once the Avigilon Control Center Client software has been installed, you can start using the Avigilon High Definition Surveillance System immediately. Refer to any of the procedures in this section to help you get started.

## Starting and Shutting Down the Avigilon Control Center Client


The Avigilon Control Center Client software can be started or shut down at anytime - video recording is not affected because it is controlled separately by the Server software.

### Starting the Client Software

Perform one of the following:


- In Windows, select **All Programs** or **All Apps > Avigilon > Avigilon Control Center Client**.



- Double-click the  shortcut icon on the desktop.
- From the Avigilon Control Center Admin Tool, click **Launch Control Center Client**. See the *Avigilon Control Center Server User Guide* for more information.

Log in to your Site when the Log In dialog box appears. See [Logging\\_In](#) for more information.

### Shutting Down the Client Software




1. In the top-right corner, select  > **Exit**.
2. In the confirmation dialog box, click **Yes**.

## Discovering Sites

If your computer is on the same network segment (subnet) as a Site, that Site is automatically discovered and displayed in the System Explorer on the left side of the application window.

If the Site you want to access is not listed, it is because the Site is on a different subnet and must be manually discovered. There is no limit to the number of Sites that can be discovered by the Client software.

By default, when a server is first connected to the system, it is added as a server within a Site of the same name. If you need to locate a new server, you would search for its Site.

1. Open the Find Site dialog box.
  - o In the Log In dialog box, click .
  - o In the top-right corner, select  **Client Settings > Site Networking**. In the Site Networking tab, click .

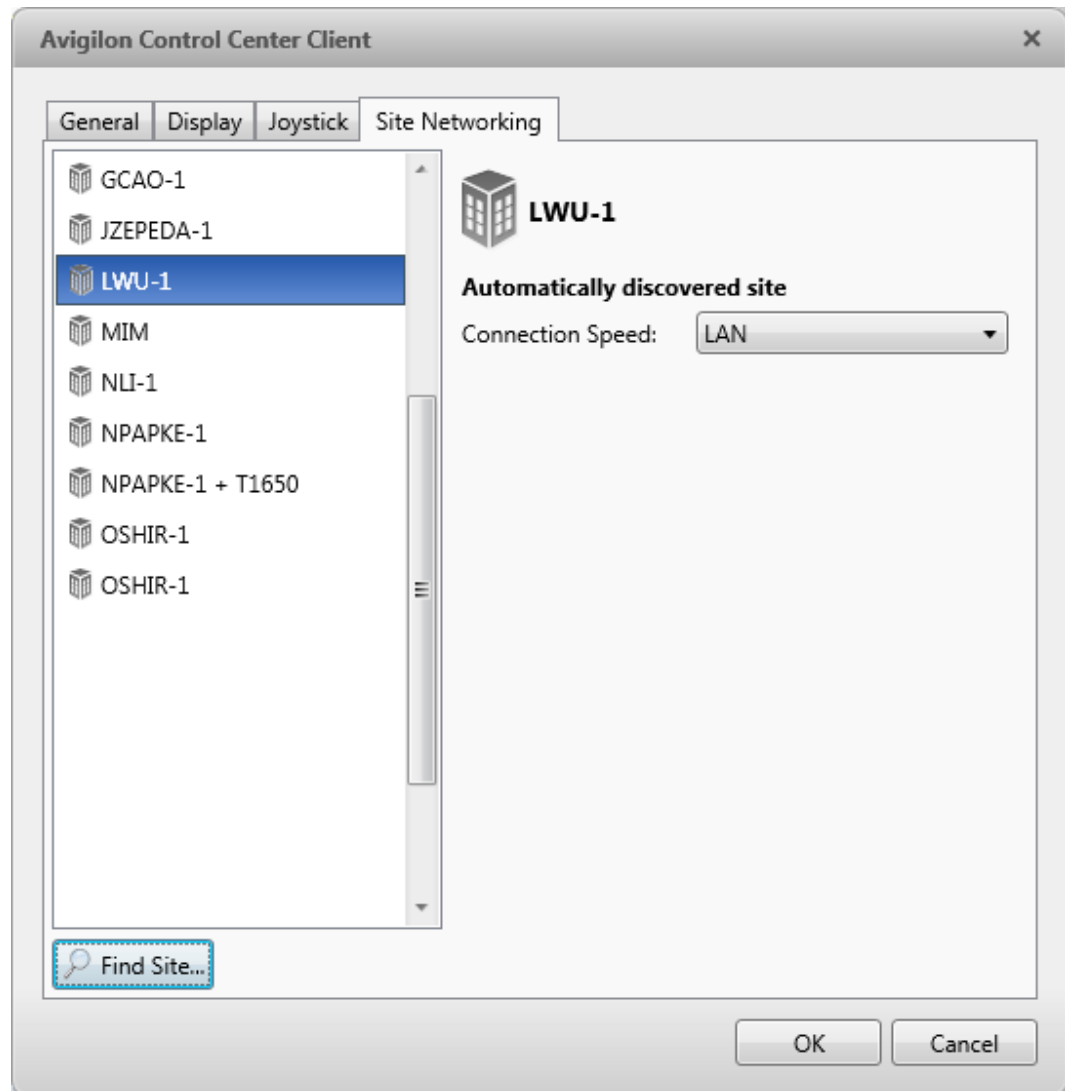


Figure A. Site Networking tab

2. In the dialog box, enter the **Hostname/IP Address** and the **Base Port** of the server in the Site you want to discover.

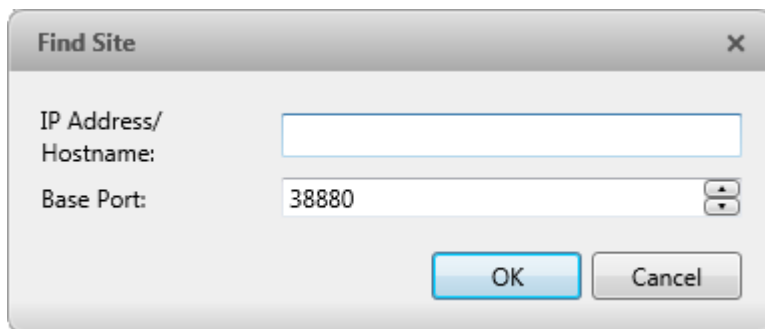


Figure B. Find Site dialog box

The base port is 38880 by default. You can change the base port number in the Avigilon Control Center Admin Tool. See the *Avigilon Control Center Server User Guide* for more information.

3. Click **OK**.

If the Site is found, it is automatically added to the Site list in the Site Networking tab.

If the Site is not found, check the following then try again:

- The network settings are configured correctly.
- The firewall is not blocking the application.
- The Avigilon Control Center Server software is running on the server you searched for in step 2.

## Logging Into and Out of a Site


To access any of the features in your Avigilon High Definition Surveillance System, you must log in to a Site.

The default administrator access uses *administrator* as the username and no password. To maintain the security of the administrator account, it is recommended that your system administrator immediately create a password for this account after the first login. Your system administrator can then create user accounts for other users.

### Logging In

1. Open the Log In dialog box. The Log In dialog box automatically appears when the Client software is launched.

To manually access the Log In dialog box, perform one of the following:

- In the top-right corner, select  > **Log In** to log in to all available Sites.
  - In the System Explorer, right-click a Site and select **Log In** to log in to the selected server.
2. In the Log In dialog box, select a specific Site or select **All Sites** from the **Log in to** drop down list.

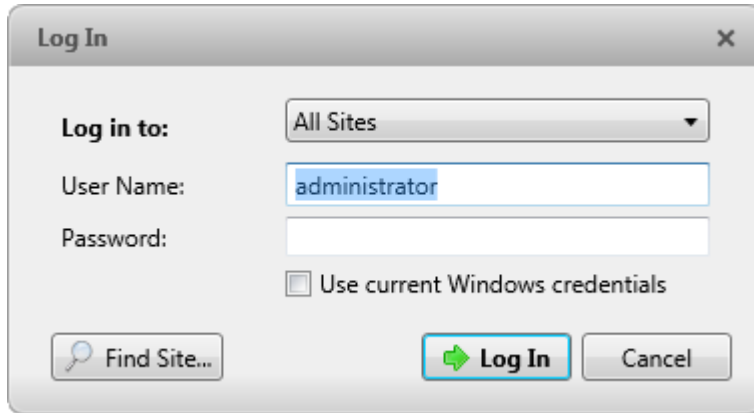



Figure A. Log In dialog box

**Tip:** If you accessed the Log In dialog box from a specific Site, you will not have the option of logging into All Sites.


If the Site you want to log into is not shown, click  to discover the Site.

3. Enter your **User Name** and **Password**, or select the **Use current Windows credentials** check box if your system administrator has imported your Windows account information to the Site.
4. Click **Log In**.

After logging in the first time, you can set up automatic login from the Client Settings dialog box. See [General Settings](#) for more information.

## Logging Out

You can log out of one or all Sites at any time.

To...	Do this...
Log out of one Site	1. Right-click the Site in the System Explorer and select <b>Log Out</b> .
Log out of all Sites	1. Select  > <b>Log out</b> . 2. In the confirmation dialog box, click <b>Yes</b> .

## Navigating the Application

Once you log in, the Avigilon Control Center Client application window is populated with all the features that are available to you.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

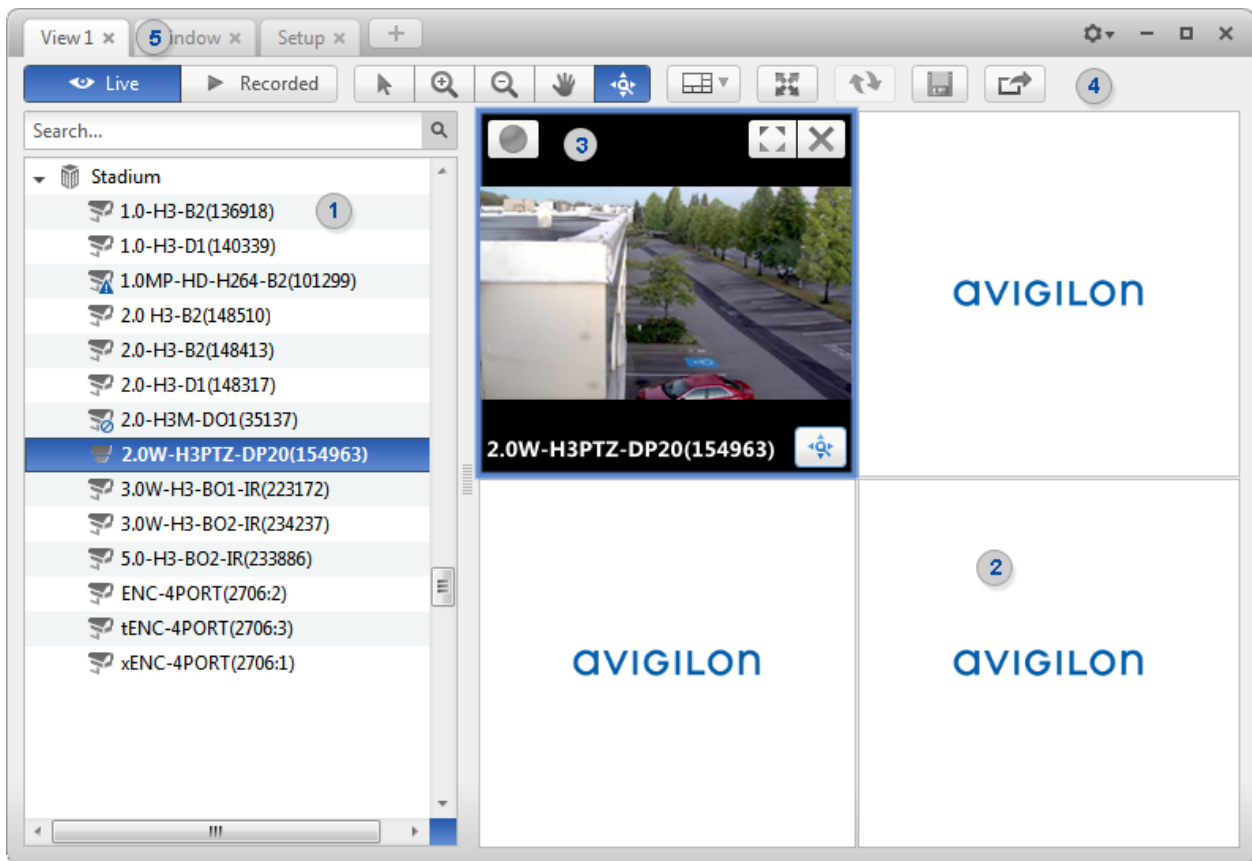









Figure A. Avigilon Control Center Client application window.






### Application Window Features

	Area	Description
1	System Explorer	Displays all the elements in your surveillance system. Use the <b>Search</b> bar to quickly locate anything that is available in the System Explorer. You can search for items by name, and devices can also be searched for by location,

		logical ID, serial number and IP address. <b>Tip:</b> The System Explorer changes depending on the tab you have open. For example, servers are not listed in the View tab.
2	View tab	Allows you to monitor video and organize image panels. You can have multiple Views open at once.
3	Image panel	Displays live or recorded video from a camera. The video control buttons are displayed when you move your mouse in to the image panel.
4	Toolbar	Provides quick access to commonly used tools.
5	Task tabs	Displays all the tabs that are currently open.
	Add Task button	Opens the New Task menu so you can select and open new task tabs. You can access advanced tools like Search and Export, or system administrative features like Site Setup.
	Settings menu	This menu gives you access to local application settings like Client Settings and Site connections.
	System message list	The highlighted number shows the number of system messages that need your attention. Click the number to display the list of messages. The highlight color indicates the severity of the most recent message. <ul style="list-style-type: none"> <li>▪ <b>Red</b> = Error</li> <li>▪ <b>Yellow</b> = Warning</li> <li>▪ <b>Green</b> = Information</li> </ul>

### System Explorer Icons

Icon	Description
	A Site. Listed under a Site are all the connected devices and linked features.
	A server.
	A camera.
	A PTZ camera.

	An encoder.
	A Virtual Matrix monitor.
	A saved View.
	A map.
	A web page.

## Adding and Removing Cameras in a View

To monitor video, add a camera to the View. The camera video can be removed from the View any time.

### Adding a Camera to a View

Perform one of the following:


- Drag the camera from the System Explorer to an empty image panel in the View.
- Double-click a camera in the System Explorer.
- In the System Explorer, right-click the camera and select **Add to View**.

The camera is added to the next empty image panel in the View layout.

**Tip:** You can drag the same camera to multiple image panels to watch the video at different zoom levels.

### Removing a Camera From a View

Perform one of the following:

- Right-click the image panel and select **Close**.
- Inside the image panel, click .



## Viewing Live and Recorded Video

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

When you monitor video, you can choose to watch live and recorded video in the same View, or only one type of video per View.

Once you've added the required cameras to the View, perform the following:



- To switch the View between live and recorded video, click either  **Live** or  **Recorded** on the toolbar.
- To switch individual image panels between live and recorded video, right-click the image panel and select either **Live** or **Recorded**.

Image panels displaying recorded video have a **green** border.



# Managing a Site

The default settings in the Avigilon Control Center Client software allow you to start using the application immediately after installation. However, you may want to customize and setup your Site to reflect how the system would be used in daily operations.

In Avigilon Control Center 5.0, servers are maintained in clusters called Sites. Each Site can contain multiple servers and share configuration settings across the entire Site. At the Site level, you can manage your server and camera connections, as well as set up Site wide system events.

At the server level, you can manage the recording and bandwidth for each of its connected cameras. While at the camera level, you can edit the camera image quality and camera specific features.

All the Site, server and camera settings can be configured from the Setup tab.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

## Sites and Servers

In the Avigilon Control Center software, servers are organized in clusters called Sites. By organizing the system into clusters, you are able to control user access and system wide events through the Site settings. Site settings are stored on the server, or across all servers in a multi-server system.

Depending on your system and license edition, you may have multiple servers in a Site. When there are multiple servers in a Site, the Site is able to distribute tasks and system data between the servers so that the system can continue running even if a server fails.




Within a Site, each individual server is responsible for managing the devices that are connected to it. Specifically, the server controls video recording. Through the server settings, you control when video is recorded, how long it is stored and how much bandwidth is used to stream video.

## Discovering Sites

If your computer is on the same network segment (subnet) as a Site, that Site is automatically discovered and displayed in the System Explorer on the left side of the application window.

If the Site you want to access is not listed, it is because the Site is on a different subnet and must be manually discovered. There is no limit to the number of Sites that can be discovered by the Client software.

By default, when a server is first connected to the system, it is added as a server within a Site of the same name. If you need to locate a new server, you would search for its Site.

1. Open the Find Site dialog box.
  - In the Log In dialog box, click .
  - In the top-right corner, select  > **Client Settings > Site Networking**. In the Site Networking tab, click .

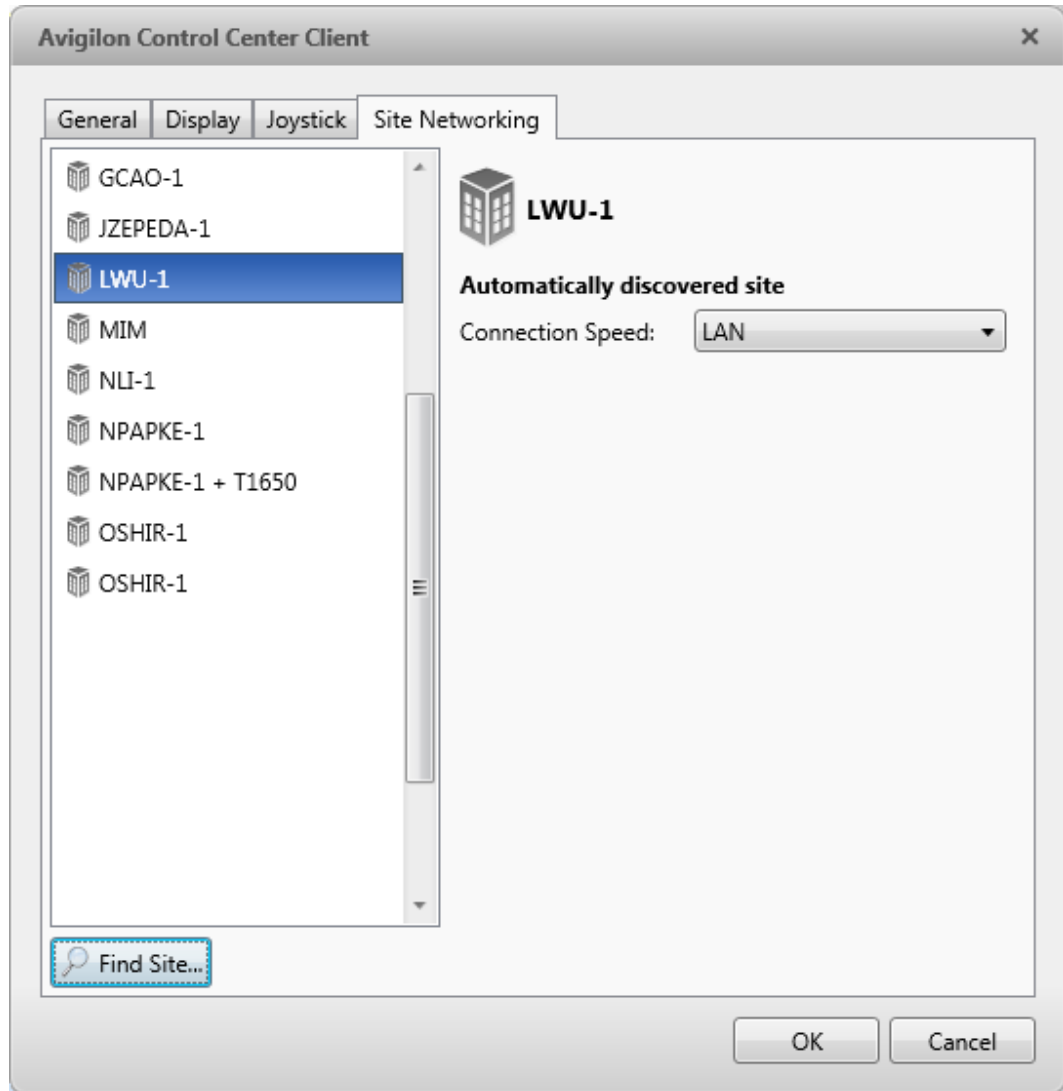


Figure A. Site Networking tab

2. In the dialog box, enter the **Hostname/IP Address** and the **Base Port** of the server in the Site you want to discover.

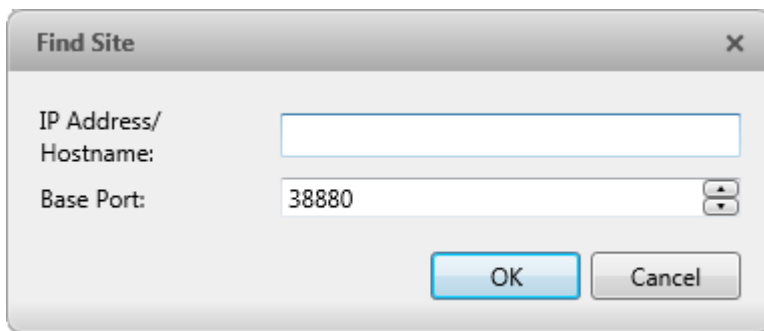


Figure B. Find Site dialog box

The base port is 38880 by default. You can change the base port number in the Avigilon Control Center Admin Tool. See the *Avigilon Control Center Server User Guide* for more information.

3. Click **OK**.

If the Site is found, it is automatically added to the Site list in the Site Networking tab.

If the Site is not found, check the following then try again:

- The network settings are configured correctly.
- The firewall is not blocking the application.
- The Avigilon Control Center Server software is running on the server you searched for in step 2.

## Accessing the Setup Tab

Perform one of the following steps to open the Setup tab:



- At the top of the application window, click  to open the New Task menu. When the menu appears, click  .
- Right-click the device you want to configure then select **Setup**.



Figure A. Setup tab

In the Setup tab, the System Explorer is displayed on the left and the Setup options are displayed on the right. The Setup options change depending on the device that is selected in the System Explorer.

## Site Settings


The settings stored at the Site level impact all users and devices within the Site.

These settings include user account information, email notifications, alarms and rules. This is also where you would setup how the System Explorer is laid out, and where you would add or remove servers and cameras in a Site.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

## Site Name

Give the Site a meaningful name so that it can be easily identified in the System Explorer. Otherwise, the Site uses the name assigned to the server it was originally discovered with.

1. In the Setup tab, select the Site then click .
2. In the dialog box, give the Site a name.

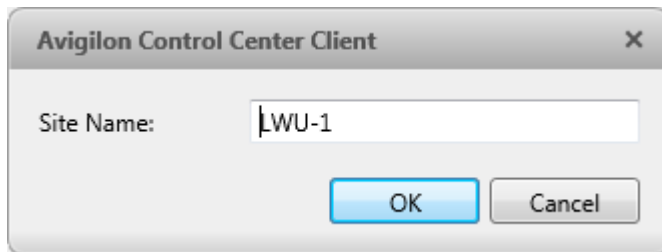


Figure A. Site Name dialog box


## Editing Site View

You can edit the way your Site is organized in the View tab so that it reflects how your system is set up.

Through the Site View Editor, you can organize the System Explorer to display cameras by location, group maps and saved Views for convenience, or hide cameras that are not relevant to an on-going investigation.

By default, all cameras are listed in alphabetical order by Site in the System Explorer.

**Note:** These settings only affect the System Explorer in the View tab.

1. In the Setup tab, select the Site then click .



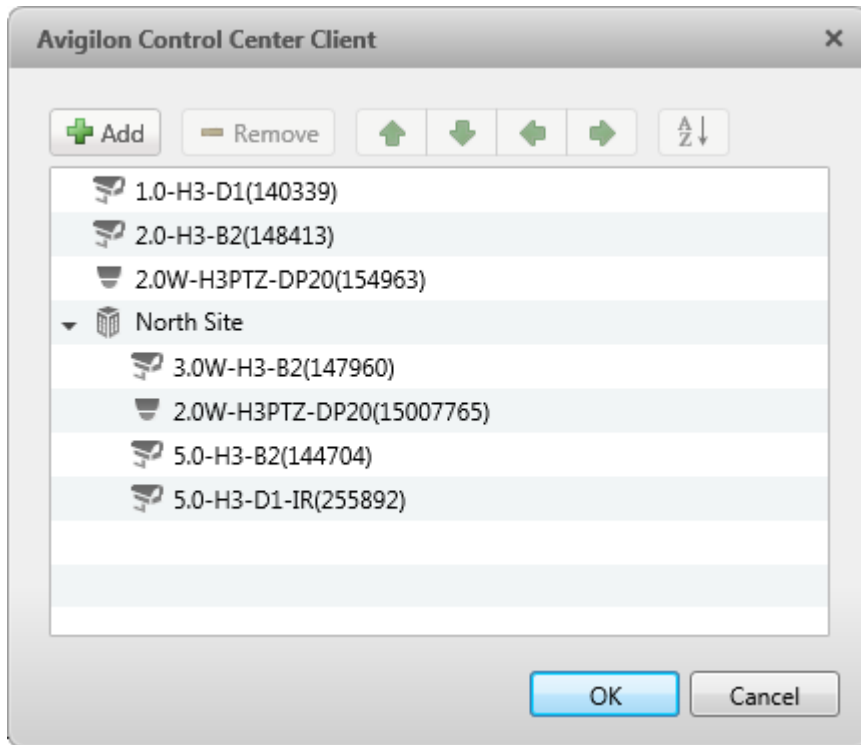





Figure A. Site View Editor dialog box

2. In the Site View Editor dialog box, you can perform the following:
  - Select any of the listed elements and use the green arrows to move it up and down the list, or move it under a new Site.
  - Click  to sort the list in alphabetical order.
  - Click  to add a new Site. The new Site is for organizational purposes only and will not have any Setup options.  
  
Double-click the new Site to give the Site a name.
  - Click  to delete a Site. You can only delete a Site that was added through the Site View Editor.
3. Click **OK** to save your changes.


When you open a new View tab, your changes are displayed in the System Explorer.

## Managing Servers in a Site

A Site can contain multiple servers to share settings and tasks across all the servers. For example, Users and Groups that are added to the Site would automatically have access to all linked servers.

By default, when a server is first discovered on the network, it is added to the System Explorer as a server within a Site that uses the same name. You can move the server to a different Site to share resources.



1. In the Setup tab, select a Site then click .
2. In the Site Management tab is a list of all the Sites you have access to and all the servers connected to each Site.

If you do not see the Site or server that you want to configure, see [Discovering Sites](#) for more information.

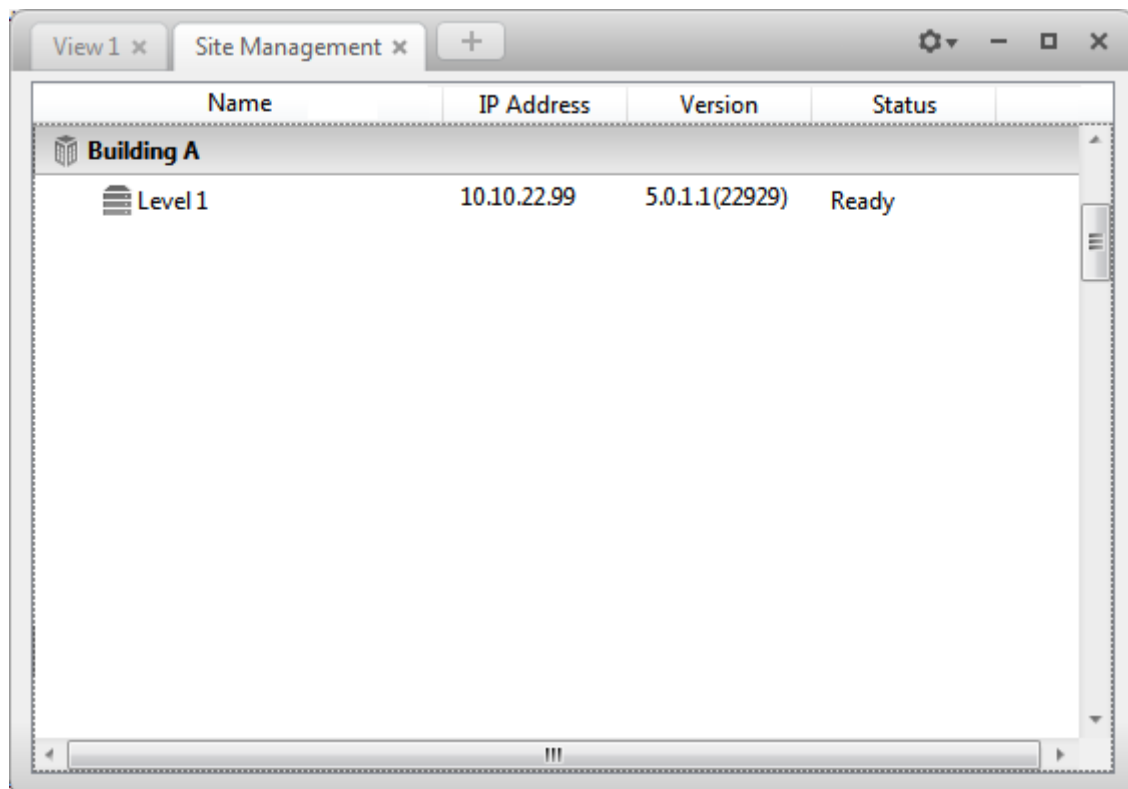


Figure A. Site Management tab

3. When you select a server, you will see the available options at the bottom of the screen.
4. To move a server, perform one of the following:

- Select a server and drag it to a different Site.
- Select a server then click **Connect**. In the following dialog box, select the Site you want the server connected to.

**Note:** Sites without any servers are automatically removed from the list.

Once the server is connected to the Site, the settings are merged.

- Unique settings from the server are added to the Site.
- If the settings are identical, only the Site version is kept.
- If a server setting and a Site setting have the same name but are configured differently, the server setting is added to the Site and renamed in this format: *<setting name> (server name)*, like Email1 (Server2F).
  - In the rules engine, the Notify users (default) rule is always added and renamed, even if the settings are the same. The Site version remains enabled but the added rules are disabled by default.
- The two Site Views are combined.
  - The Site settings take precedence. For example, a map from the Site was copied to the server in the past. In the server, the map was placed at the top of the Site View. But in the Site, the same map is placed at the bottom. After the server is connected to the Site, the map takes the position used by the Site (the bottom).
  - New, unorganized elements from the server are listed at the bottom of the Site View.
- User permission groups are merged.
  - If groups have the same name, the Site settings are used and the users from both the Site and the server are added to the group.
  - Groups that are new to the Site automatically get access to all the devices in the Site.
  - Groups that are new to the server automatically get access to all the devices that are connected to the server.
- Users with the same name will use the settings configured in the Site (including passwords), and gain group permissions from the server.

- If the Site is connected to a Windows Active Directory, the server must be connected to the same Active Directory domain or the connection will fail. For more information, see [Importing Active Directory Groups](#).
5. If the Site has multiple servers, you can choose to disconnect a server from the current Site and re-assign the server to its own Site.
- Select a server from the Site then click **Disconnect**.





Once a server is disconnected, it maintains all the settings it received from the Site.

## Connect/Disconnect Cameras

Cameras are connected to a Site through the linked servers. The server manages and stores the camera's recorded video, while the Site manages the events that can be linked to the camera's video.

You can connect and disconnect cameras through the Connect/Disconnect Cameras tab.

A camera's connection status is indicated by the icon beside the camera name in the System Explorer. The status icons may appear over any device icon in the System Explorer.

Icon	Definition
 <b>Camera Connected</b>	The camera is connected to the server.
 <b>Camera Upgrading</b>	The camera is connected to the server and is currently upgrading its firmware.
 <b>Camera Connection Error</b>	The camera cannot connect to a server. This may be because the camera is no longer on the network or there is a network conflict
 <b>Camera Disconnected</b>	The camera is disconnected but there is recorded video from the camera still on the server.
No icon	The camera is disconnected and there is no recorded video left on the server.

## Discovering a Camera

When cameras are connected to the network, they should be automatically discovered by the Client software.

If a camera is not automatically discovered, you can try to manually discover the camera on the network.



- In the Setup tab, select the Site then click

In the Connect/Disconnect Cameras tab, all Avigilon and ONVIF cameras that are connected to the same network segment (subnet) are automatically detected and appear in the Discovered Cameras list.

If the camera you want to connect to is on a different subnet, or is manufactured by a third-party, perform the following:

1. At the top of the Connect/Disconnect Cameras tab, click **Find Camera...**
2. In the Find Camera dialog box, complete the following fields:

The screenshot shows the 'Find Camera' dialog box with the following fields:

- Search From Server: CLIENTXPSTD
- Search Type: IP Address
- Camera Type: Avigilon
- IP Address/Hostname: (empty text box)
- Control Port: 55080

Buttons: OK, Cancel

Figure A. Find Camera dialog box: IP Address

The screenshot shows the 'Find Camera' dialog box with the following fields:

- Search From Server: CLIENTXPSTD
- Search Type: IP Address Range
- Camera Type: Avigilon
- Start IP Address: 0 . 0 . 0 . 0
- End IP Address: 0 . 0 . 0 . 0
- Control Port: 55080

Buttons: OK, Cancel

Figure B. Find Camera dialog box: IP Address Range

- **Search From Server:** select the server that you want the camera to connect to.
- **Search Type:** select a search type.
- **Camera Type:** select the camera's brand name.

**Tip:** Select ONVIF to discover cameras that are ONVIF compliant.

- **IP Address/Hostname:** (For IP Address search only) enter the camera's IP address or hostname. The camera and server's gateway IP address must be set correctly for the camera to be found.
- **Start IP Address** and **End IP Address:** (For IP Address Range search only) enter the start and end IP addresses. Only addresses in that range will be searched for the selected camera type.
- **Control Port:** enter the camera control port number.
- Provide the **User Name** and **Password** for the camera if required.

3. Click **OK**.

If the camera is discovered, it will appear in the Discovered Cameras list. You can now connect the camera to a server.

## Connecting a Camera to a Server

To access a camera from a Site, it must be connected to server within the Site. The server manages and stores the camera's recorded video, while the Site manages the events that can be linked to the camera's video.

Once the camera has been discovered on the network, it can be connected to the server. If you do not see the camera you want to connect to, see [Discovering a Camera](#).



1. In the Setup tab, select a Site then click

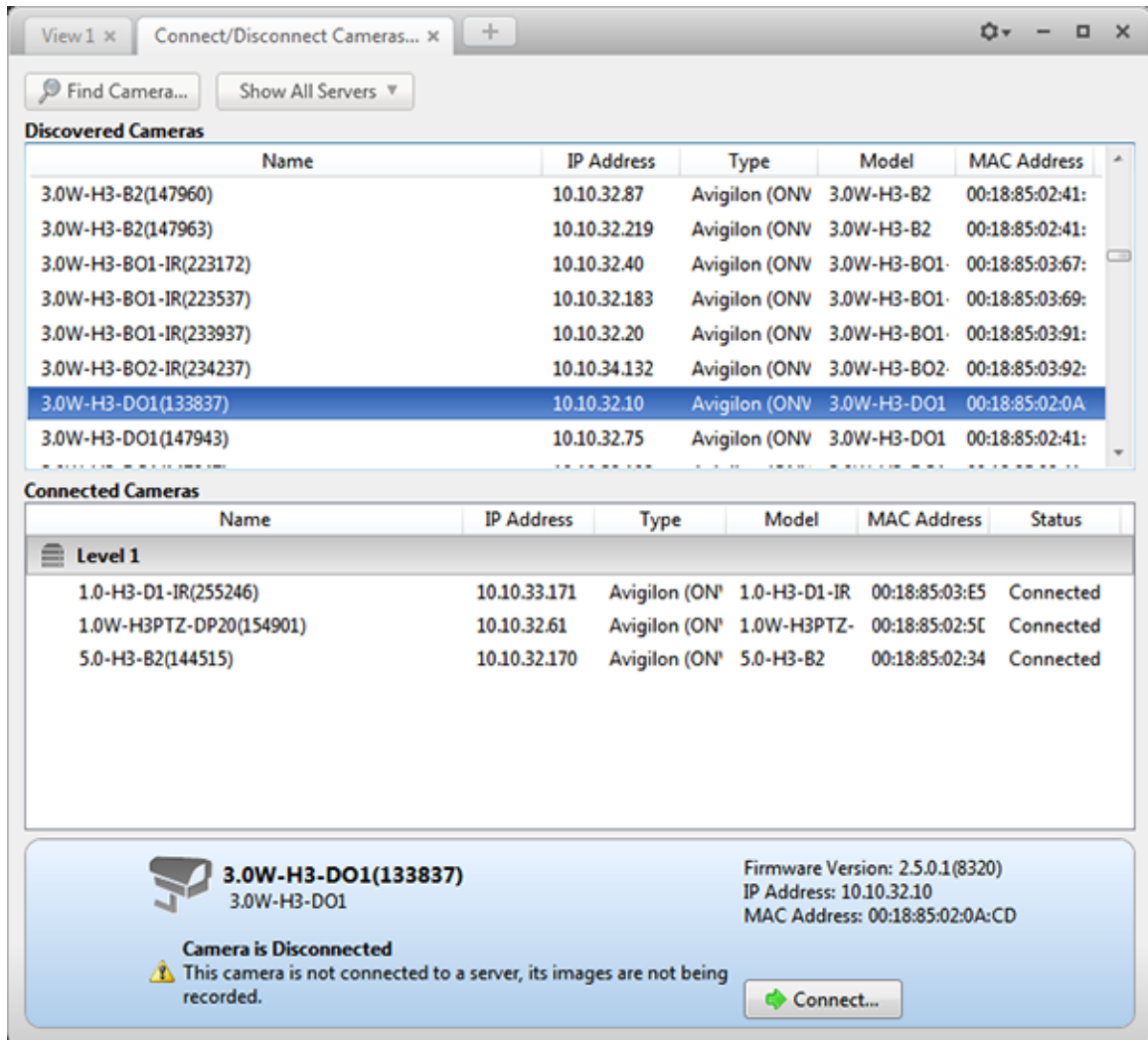


Figure A. Connect/Disconnect Cameras tab

- In the Discovered Cameras area, select a camera then click **Connect...**
  - Tip:** You can also drag the camera to a server on the Connected Cameras list.
- In the Connect Camera dialog box, select the server you want the camera to connect to.

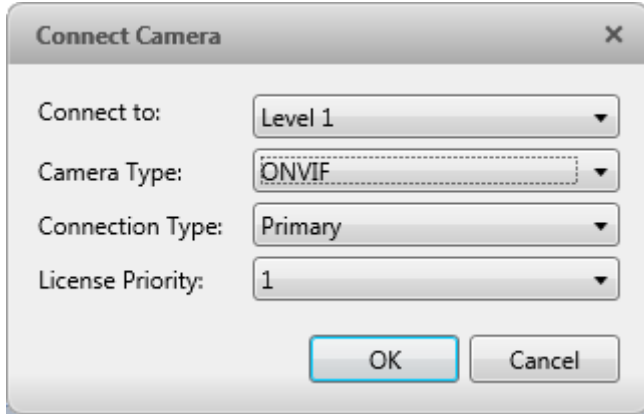


Figure B. Connect Camera dialog box

4. If you are connecting a third-party camera, you may choose to connect the camera by its native driver. In the **Camera Type** drop down list, select the camera's brand name. If there is only one option in the drop down list, the system only supports one type of driver from the camera.
5. In the **Connection Type** drop down list, select **Primary**. The camera will automatically connect to this server if they are in the same network.

If you plan to create failover connections, see [Failover Connections](#) for more information.

6. In the **License Priority** drop down list, select the appropriate license priority. **1** is the highest priority and **5** is the lowest.

**Note:** This option is only available if you are connecting to a secondary or tertiary server.


The License Priority setting decides the order that cameras are connected to the server. The server will try to connect cameras with a higher license priority before cameras with lower priority. If the server does not have enough camera channel licenses, low priority cameras may not be connected. A camera channel license is only used when the camera actually connects to the server.

7. Click **OK**.
8. If the camera is password protected, the Camera Authentication dialog box appears. Enter the camera's username and password, then click **OK**.

## Editing the Camera Connection to the Server

**Note:** You can only edit manually discovered camera connections.



1. In the Setup tab, select a Site then click  .
2. In the Connect/Disconnect Cameras tab, select the camera connection you want to edit from the Connected Cameras list.



3. Click **Edit**. Refer to [Connecting a Camera to a Server](#) for details about the editable options.
4. Click **OK**.

## Failover Connections

**Note:** Failover connections can only be made between servers within the same Site.

You can set up failover connections so that if a server fails, the cameras connected to it will automatically connect to a backup server and continue recording.

Failover connections are set up in the Connect/Disconnect Cameras tab and are defined by the Connection Type setting and the License Priority setting.

The Connection Type determines when the camera will connect to a server:

- **Primary:** the camera will automatically connect to this server if they are in the same network.
- **Secondary:** if the primary server is not available, the camera will try to connect to this server in the same Site.
- **Tertiary:** if the primary and secondary server are not available, the camera will try to connect to this server in the same Site.

The License Priority setting decides the order that cameras are connected to the server — **1** is the highest and **5** is the lowest. The server will try to connect cameras with a higher license priority before cameras with lower priority. If the server does not have enough camera channel licenses, low priority cameras may not be connected. A camera channel license is only used when the camera actually connects to the server.

To set up a failover connection, perform the following:

1. In the Connect/Disconnect Cameras tab, select a camera that is currently connected to its primary server.
2. At the bottom of the application window, click **Connect**.
3. When you see the Connect Camera dialog box, select a different server within the same Site and set the **Connection Type** as either **Secondary** or **Tertiary**.
4. Select a license priority for the failover connection.
5. Click **OK**.
6. Repeat this procedure until all the required failover connections have been made.

The following is an examples of how failover will work in the event of a server failure.

**Example**

Cameras A, B, C, D, E and F have failover connections set up to two different servers. Assume each server has 6 camera channel licenses, and the license priority is set to 1 for each connection.

Connection Type	NVR 1 	NVR 2 	NVR 3 
Primary	<ul style="list-style-type: none"> <li>  A</li> <li>  B</li> </ul>	<ul style="list-style-type: none"> <li>  C</li> <li>  D</li> </ul>	<ul style="list-style-type: none"> <li>  E</li> <li>  F</li> </ul>
Secondary	<ul style="list-style-type: none"> <li> E</li> <li> F</li> </ul>	<ul style="list-style-type: none"> <li> A</li> <li> B</li> </ul>	<ul style="list-style-type: none"> <li> C</li> <li> D</li> </ul>
Tertiary	<ul style="list-style-type: none"> <li> C</li> <li> D</li> </ul>	<ul style="list-style-type: none"> <li> E</li> <li> F</li> </ul>	<ul style="list-style-type: none"> <li> A</li> <li> B</li> </ul>

Figure A. Primary connections

When the first server fails, cameras A and B from NVR 1 automatically connect to their Secondary server, NVR 2.



Figure B. NVR 1 fails


When the second server fails, cameras E and F automatically connect to their Tertiary server, NVR 2.



Figure C. NVR 2 fails


## Disconnecting a Camera from a Server




1. In the Setup tab, select a Site then click  .
2. In the Connect/Disconnect Cameras tab, select the camera you want to disconnect from the Connected Cameras list then perform one of the following:
  - o Click **Disconnect**.  
The camera is disconnected from the server and moved to the Discovered Cameras list.
  - o Drag the camera into the Discovered Cameras list.

## Upgrading Camera Firmware

Camera firmware updates are typically included with the Avigilon Control Center Server update packages. Camera firmware updates are automatically downloaded and installed to the camera.

When the camera firmware is being upgraded, video from that camera cannot be displayed and the System Explorer will display  beside the camera name.



When the firmware upgrade is complete, the System Explorer will display  again, and video from the camera will display.

## Users and Groups

When users are added to the Avigilon Control Center, they are assigned to a group that defines their access permissions in a Site. Use the Users and Groups dialog box to create and manage users and groups.

## Adding a User



1. In the Setup tab, select the Site then click  .
2. In the Users tab, click  .

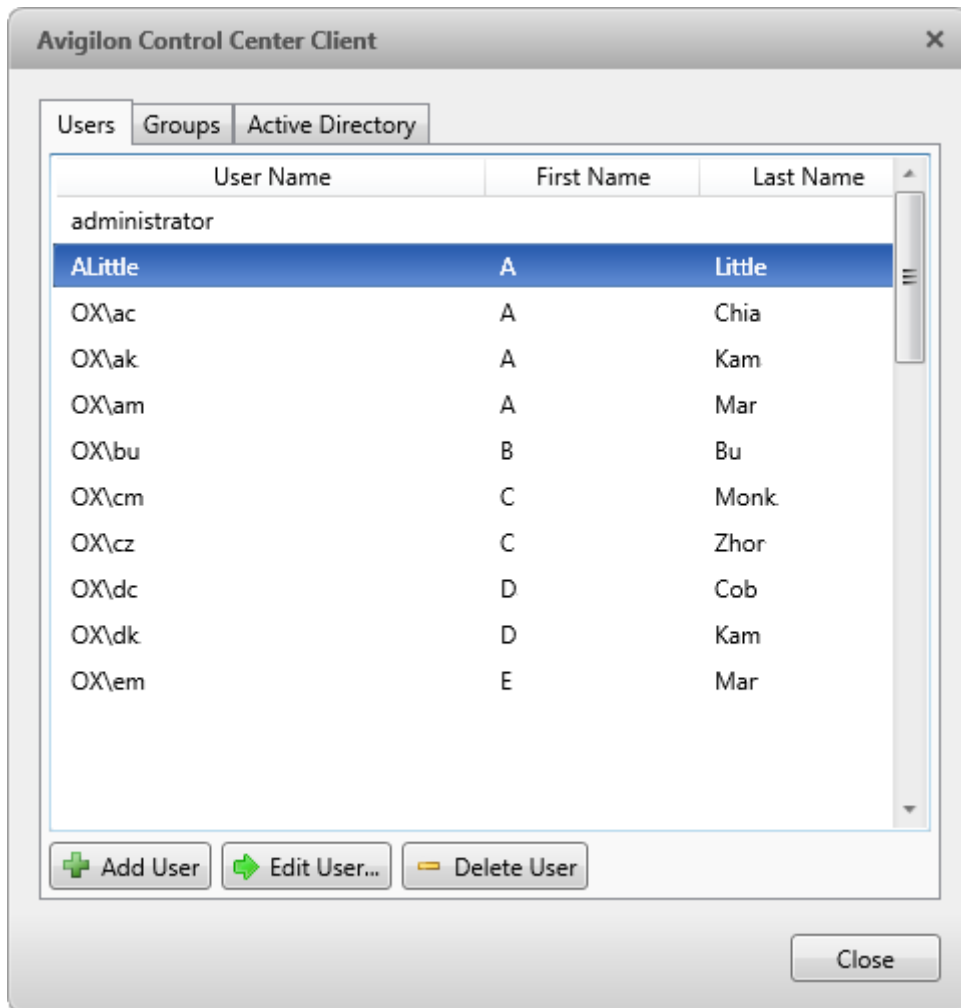


Figure A. User and Groups dialog box

3. When the Add User dialog box appears, complete the User Information area.

The screenshot shows the 'Add User' dialog box with the 'General' tab selected. The 'User Information' section includes text boxes for 'User Name', 'First Name', 'Last Name', and 'Email Address', along with a 'Disable user' checkbox. The 'Login Timeout' section features an 'Enable login timeout' checkbox and an 'Idle Time' field with spinners for 'hour' and 'min'. The 'Password' section contains 'Password' and 'Confirm Password' text boxes, checkboxes for 'Require password change on next login' and 'Password never expires', and a 'Password Expiry (Days)' field with a spinner.

Figure B. Add User dialog box, General tab

4. If you don't want this user to be active yet, select the **Disable user** check box. Disabled users are in the system but cannot access the Site.
5. In the Login Timeout area, select the **Enable login timeout** check box to limit the amount of time the user can be logged in while the application is idle.
6. In the Password area, complete the following fields:
  - o **Password:** enter a password for the user.
  - o **Confirm Password:** re-enter the password.

- **Require password change on next login:** select this check box if the user must replace the password after the first login.
  - **Password Expiry (Days):** specify the number of days before the password must be changed.
  - **Password never expires:** select this check box if the password never needs to be changed.
7. Select the Member Of tab and select the check box beside each access group the user belongs to.

The other two columns display the permissions linked to the selected group.

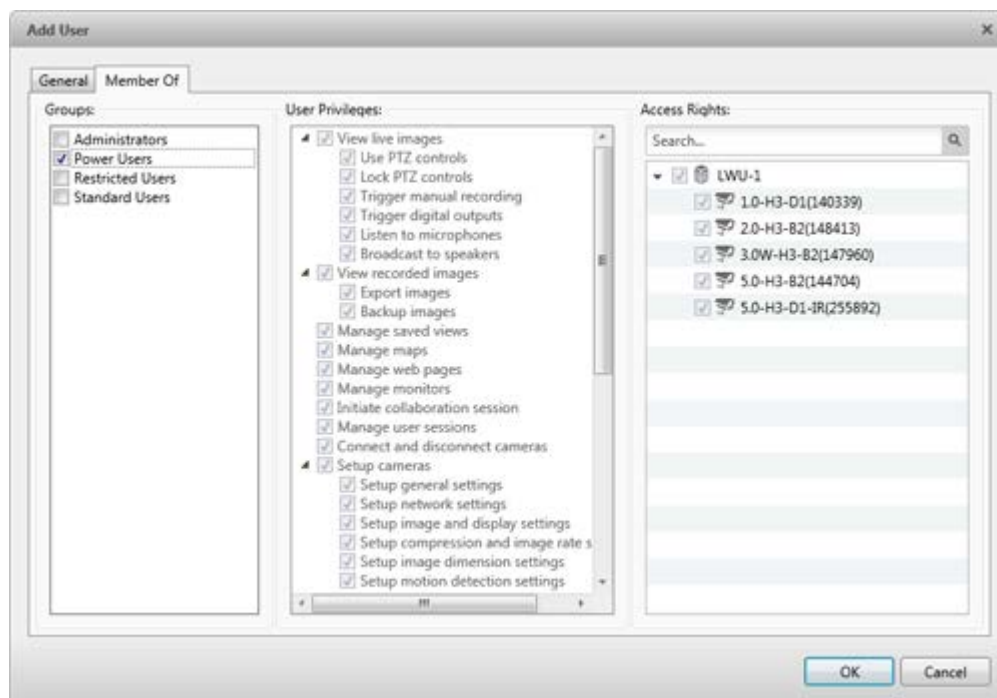



Figure C. Add User dialog box, Member Of tab



8. Click **OK**. The user is added to the server.

## Editing and Deleting a User

You can edit and delete users as needed.

**Note:** If a user has access to more than one Site, the changes to the user need to be made on each Site.

1. In the Setup tab, select the Site then click .


2. In the Users tab, select a user then perform one of the following:
  - o To edit the user's information, click . Refer to [Adding a User](#) for details about the editable options.
  - o To delete the user, click .

**Note:** Users imported through the Active Directory tab cannot be deleted, only disabled.

## Importing Active Directory Groups

You can import Windows Active Directory groups to the Site so users can log in using their Windows credentials. Members of an imported Active Directory group are automatically added as users to the Site and are all added to the same permissions group.

Changes to member accounts in the Active Directory are automatically synchronized.

1. In the Setup tab, select the Site then click .
2. Select the Active Directory tab.



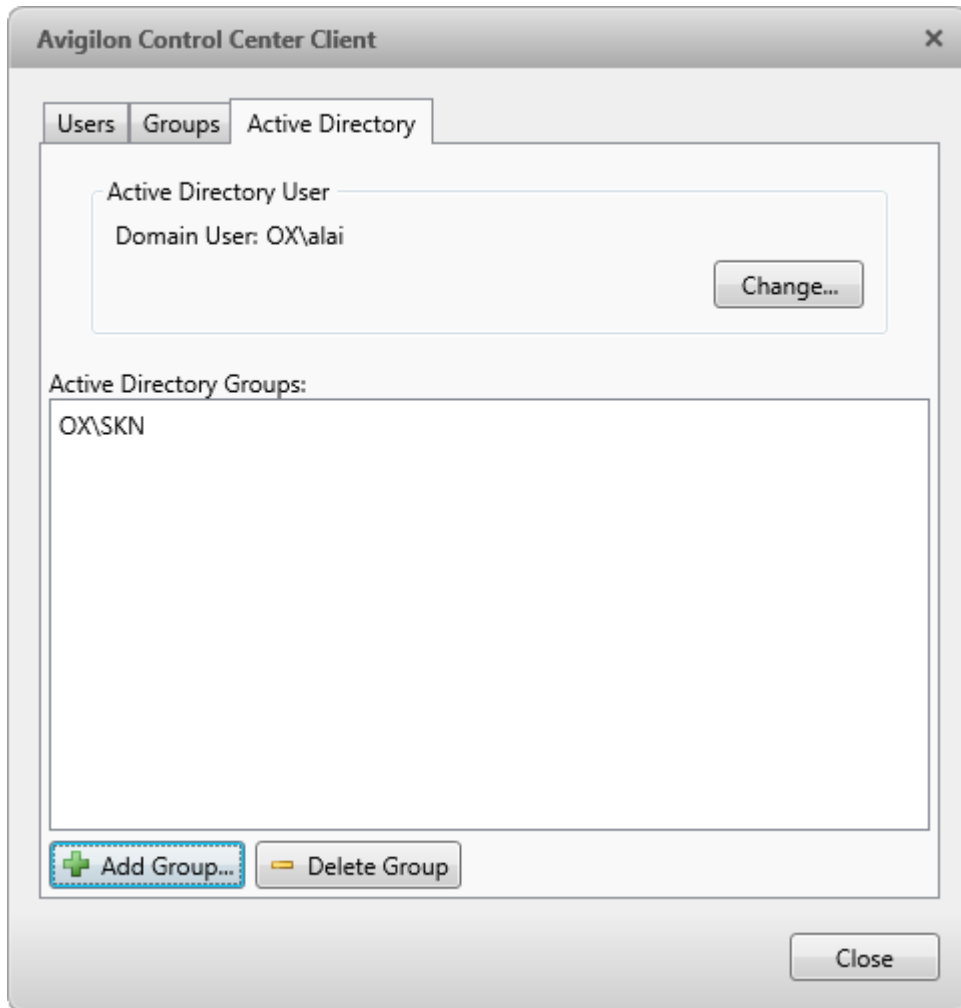


Figure A. Users and Groups dialog box

3. If it says *Active Directory Synchronization is Disabled* at the top, you need to enable the feature first.
  - a. Click **Change**.
  - b. In the dialog box, select the check box to enable Active Directory.
  - c. Enter your username and password for the network domain.
  - d. Click **OK**.
4. Click **+**.
5. Assign a set of permissions to the Active Directory group then click **OK**. You can edit the permissions for the group later.

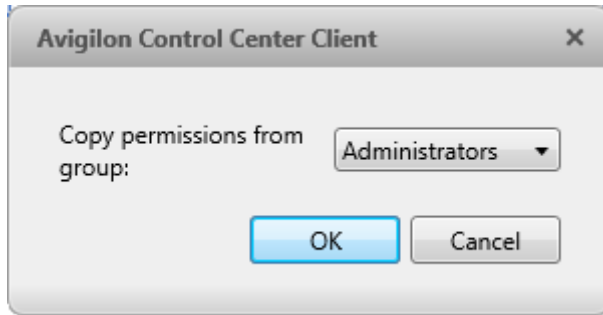


Figure B. Copy Permissions dialog box

6. In the Select Groups dialog box, locate the Windows group you want to import by performing one of the following:
  5.
    - o Enter the name of the Windows group in the **Enter the object names to select** field and click **OK**.
    - o Click the **Advanced** button and search for the group you want.

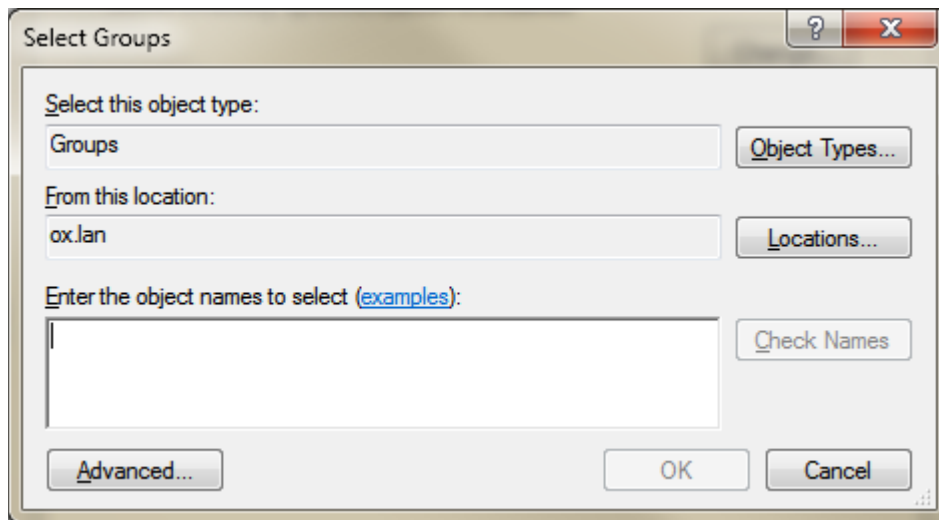


Figure C. Select Groups dialog box



Once located, the group is automatically added to the Active Directory Groups list and the Groups list. All the users in the group are imported into the Users list.

To edit the permissions assigned to the imported group, see [Editing and Deleting a Group](#).

Imported user information, including log in credentials, are maintained by the Active Directory. In the Users and Groups dialog box, you can only disable an imported user or configure the login timeout settings. For more information see [Editing and Deleting a User](#).

## Adding Groups

Groups define what features users have access to. Create new groups to tailor what users can access.

1. In the Setup tab, select the Site then click .
2. Select the Groups tab and click .

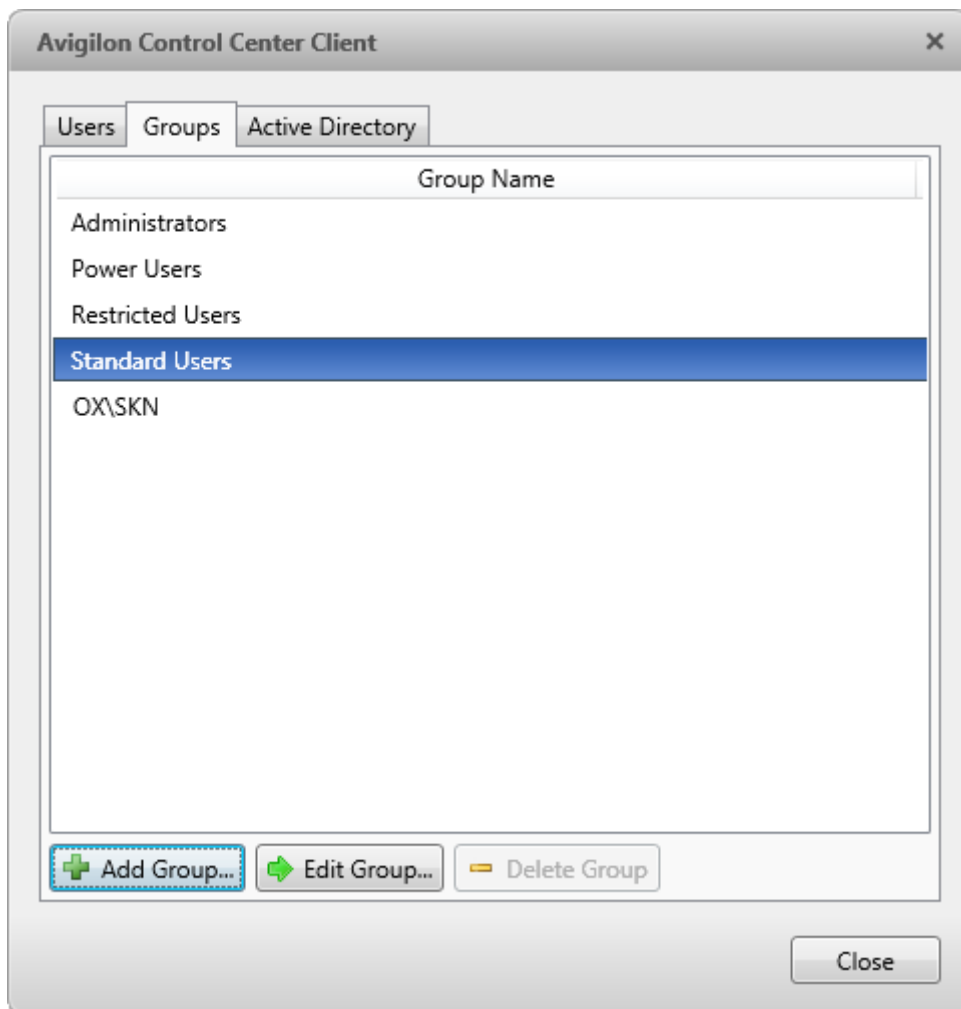


Figure A. User and Groups dialog box

3. Select an existing group to use as a template for your new group then click **OK**.

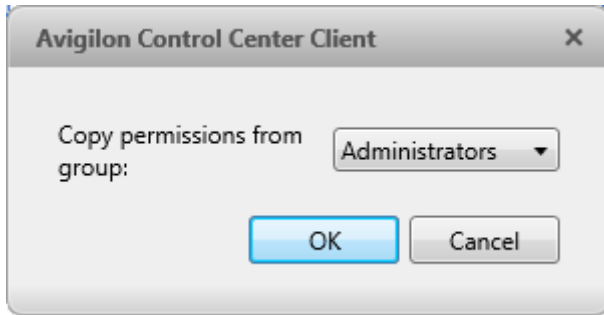


Figure B. Copy Permissions dialog box

4. In the Edit Group dialog box, give the new group a name then select the permissions and camera access rights for the group.

Clear the check box of any feature or camera you do not want the group to access.

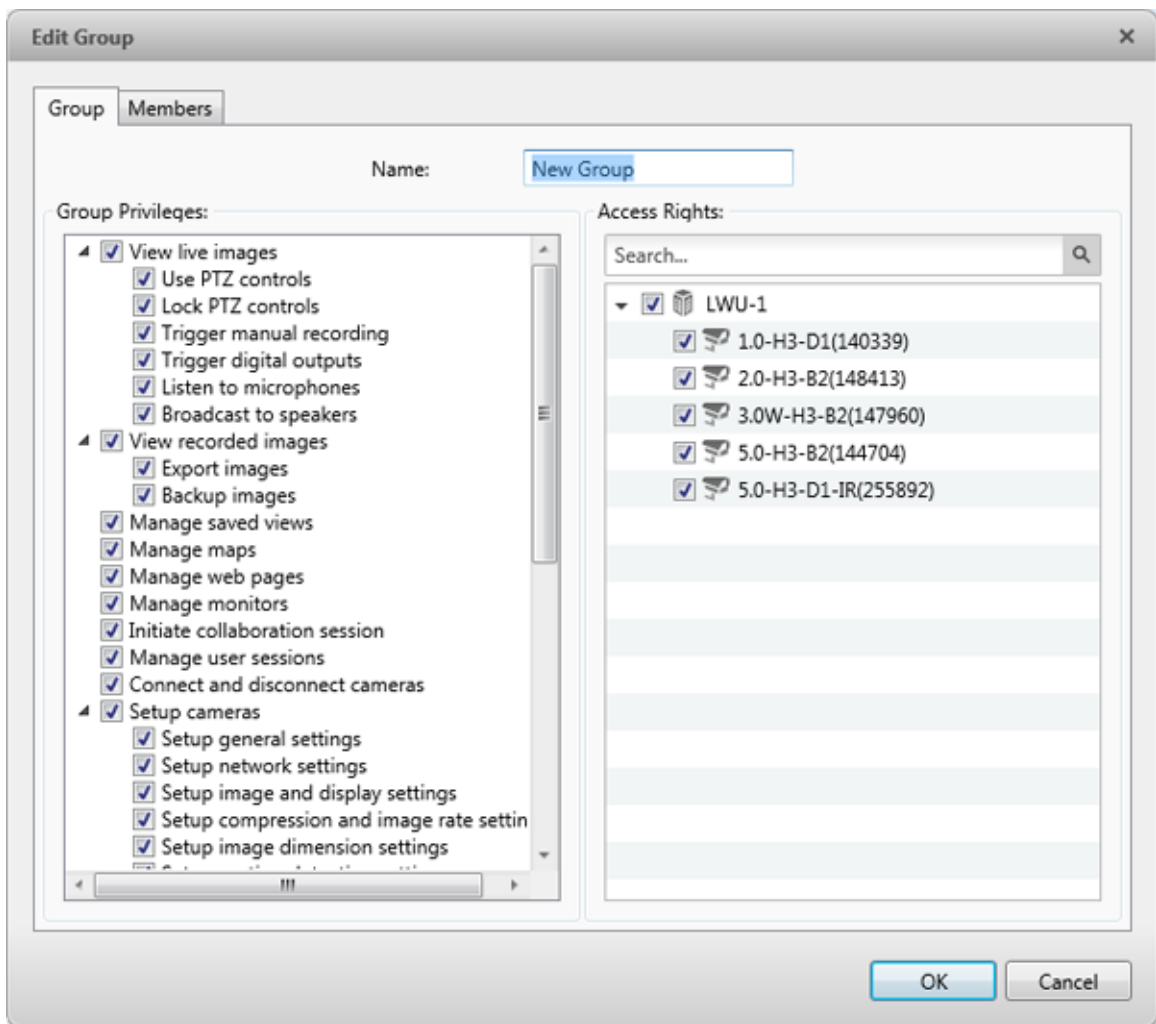


Figure C. Edit Group dialog box: Group tab

5. Select the Members tab to add users to the group.

If a user is added to the group through the Add User dialog box, the user is automatically added to the group's Members list. See [Adding a User](#) for more information.

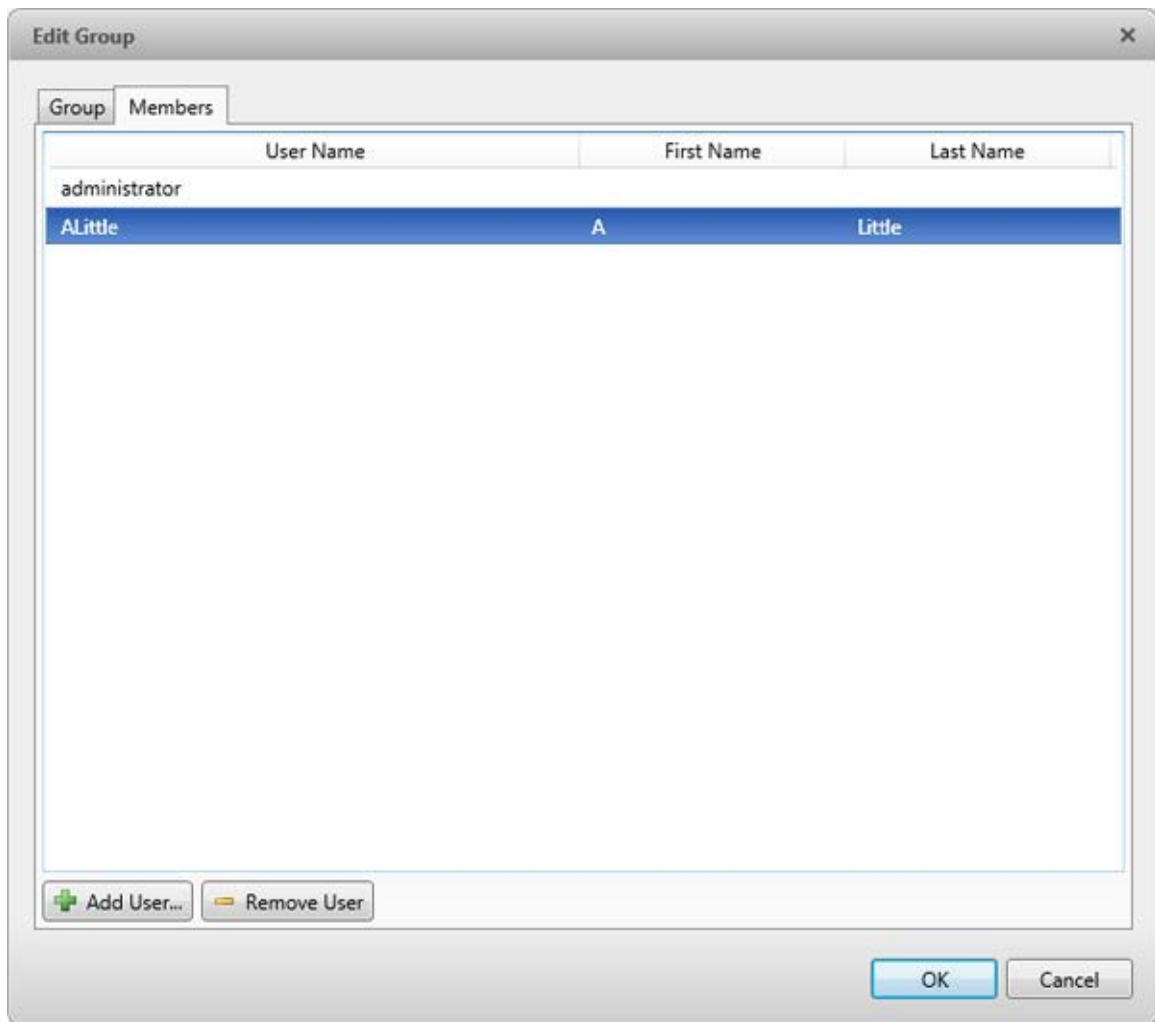



Figure D. Edit Group dialog box: Members tab

- a. Click .
- b. Select the users that should be part of this new group. Only users that have been added to the Site are displayed.

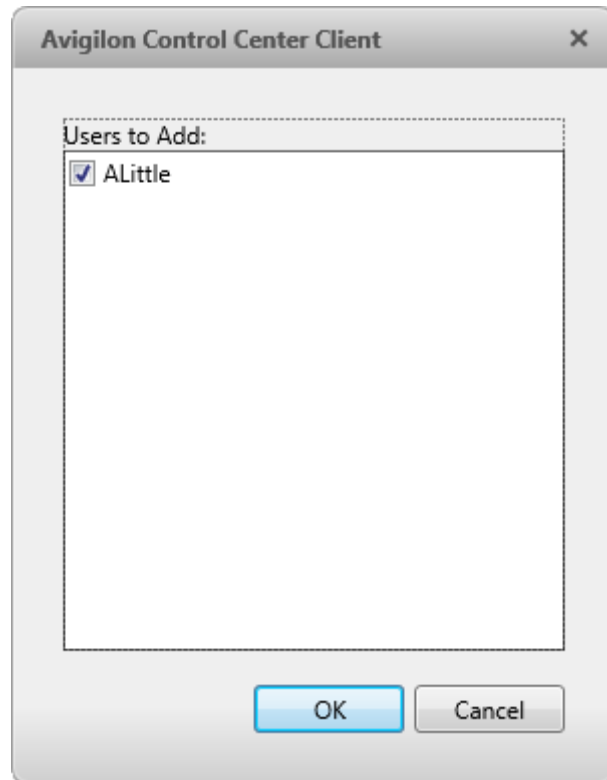





Figure E. Add users to groups dialog box

- c. Click **OK**. The users are added to the Members list.
6. Click **OK** to save the new group.

## Editing and Deleting a Group

You can change the access permissions for a set of users by editing their access group.

**Note:** Active Directory groups can only be deleted from the Active Directory tab.

1. In the Setup tab, select the Site then click .
2. Select the Groups tab.
3. Select a group and perform one of the following:
  - o To edit the group, click . Refer to [Adding Groups](#) for details about the editable options.
  - o To delete the group, click .




**Note:** Default groups cannot be deleted.

## Alarms

Use the Alarms dialog box to create and manage alarms. Once the alarm has been created, you can monitor alarm events in the Alarms tab. See [Accessing the Alarms Tab](#) for more information.

### Adding a New Alarm

Alarms need to be added to the Site before they can be monitored in the Alarms tab.

1. In the Setup tab, select the Site then click .
2. In the Alarms dialog box, click .
3. Select an **Alarm Trigger Source** then select the required features of the alarm. Click  when you are ready to continue. The alarm trigger options include:
  - **Motion Detection** - movement within a camera's field of view.
  - **Digital Input Activation** - when a digital input connected to a camera is activated.
  - **POS Transaction Exception** - a transaction exception is detected by a POS transaction source.
  - **Camera Error** - a camera error has occurred.
  - **System Error** - a system error has occurred.
  - **External Software Event** - an event generated by a third-party integration software has occurred.

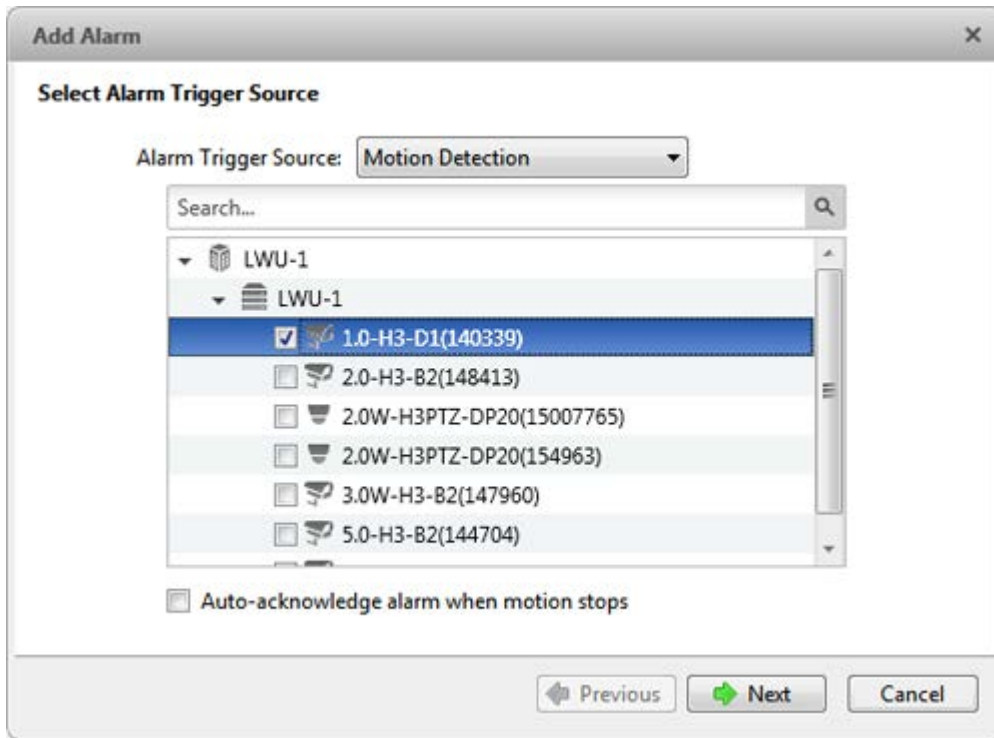


Figure A. Select Alarm Trigger Source page

4. Select the cameras to link to this alarm then complete the following:

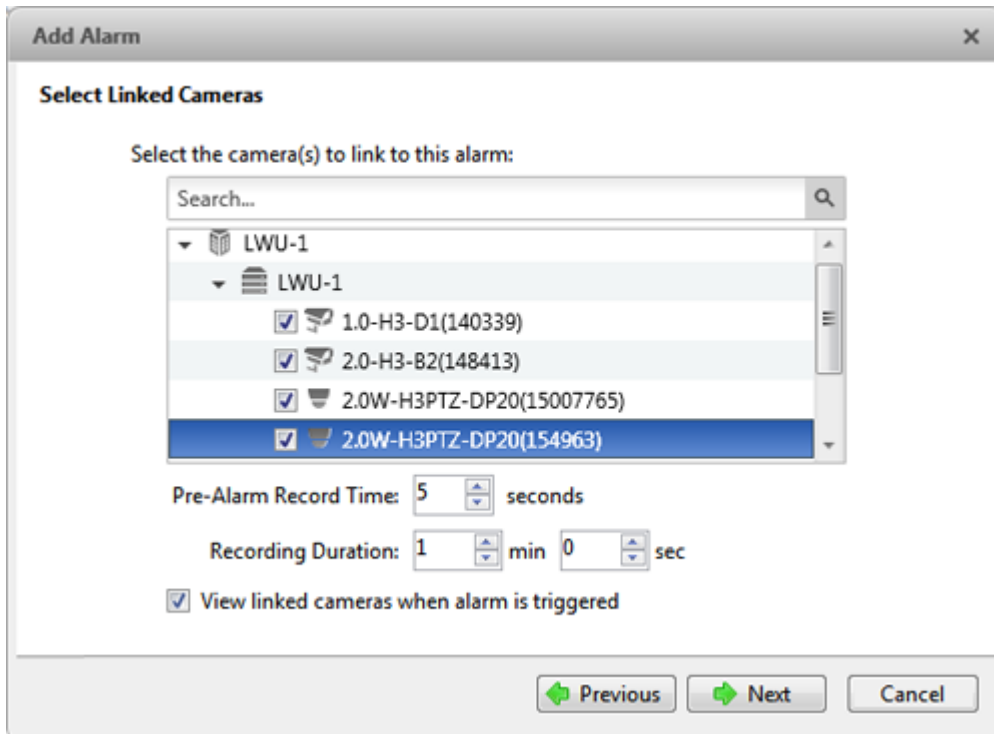




Figure B. Select Linked Cameras page



3.
  - a. Set the **Pre-Alarm Record Time** and the **Recording Duration**.
  - b. Select the **View linked cameras when alarm is triggered** check box to automatically display the alarm video in a View when the alarm is triggered.
  - c. Click .
4. Select the groups and users that need to receive alarm notifications, and decide if the application will play a sound whenever the alarm is triggered. Then click .

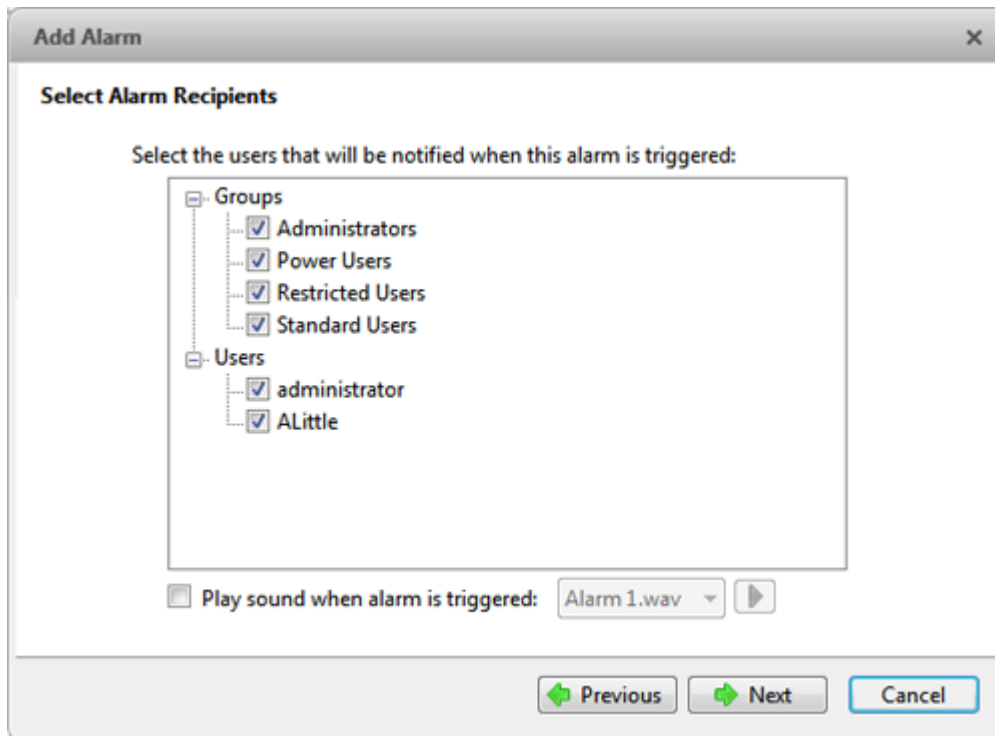


Figure C. Select Alarm Recipients page

5. (Optional) Set the actions that must occur when an alarm is acknowledged.

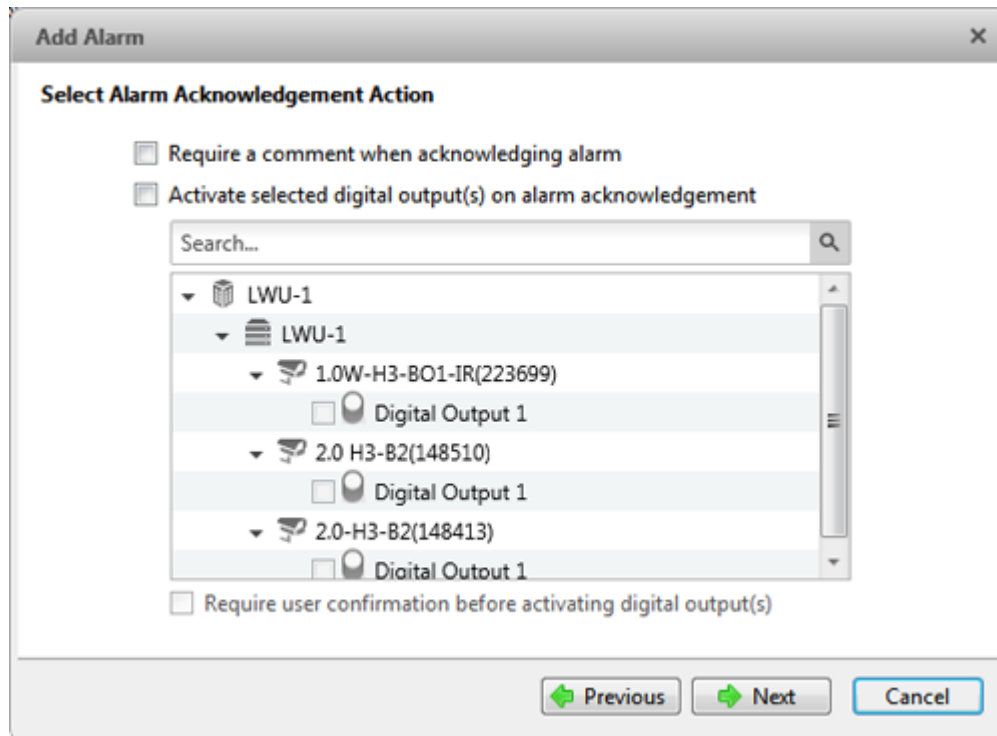

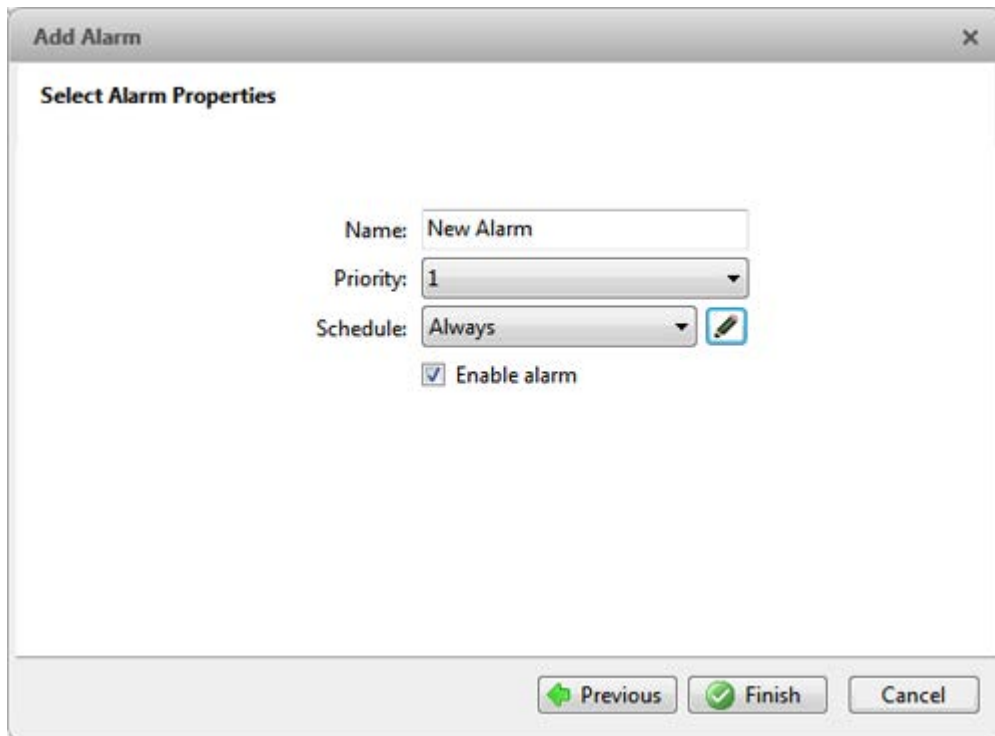


Figure D. Select Alarm Acknowledgement Action page

- a. If the user must add comments about the alarm, select the **Require a comment when acknowledging alarm** check box.
  - b. If a digital output must be activated when the alarm is acknowledged, select the **Activate selected digital outputs on alarm acknowledgement** check box. Then, select the digital outputs to be activated.
  - c. If the digital output should only be activated when confirmed by a user, select the **Require user confirmation before activating digital output(s)** check box.
  - d. Click .
6. On the last page, complete the following:




The screenshot shows a dialog box titled "Add Alarm" with a close button (X) in the top right corner. The main content area is titled "Select Alarm Properties". It contains the following fields and controls:


- Name:** A text input field containing "New Alarm".
- Priority:** A dropdown menu showing "1".
- Schedule:** A dropdown menu showing "Always" with a pencil icon to its right.
- Enable alarm:** A checked checkbox.

At the bottom of the dialog box, there are three buttons: "Previous" (with a left arrow icon), "Finish" (with a checkmark icon), and "Cancel".

Figure E. Select Alarm Properties page

- a. Enter a name for the alarm.
  - b. Select a priority for the alarm. **Priority: 1** is the highest alarm priority.
  - c. Select a schedule for the alarm. See [Scheduling Site Events](#) for more information.
  - d. Make sure the **Enable Alarm** check box is selected to enable the alarm.
7. Click .

## Editing and Deleting Alarms

1. In the Setup tab, select the Site then click .
2. In the Alarms dialog box, select an alarm then perform one of the following:

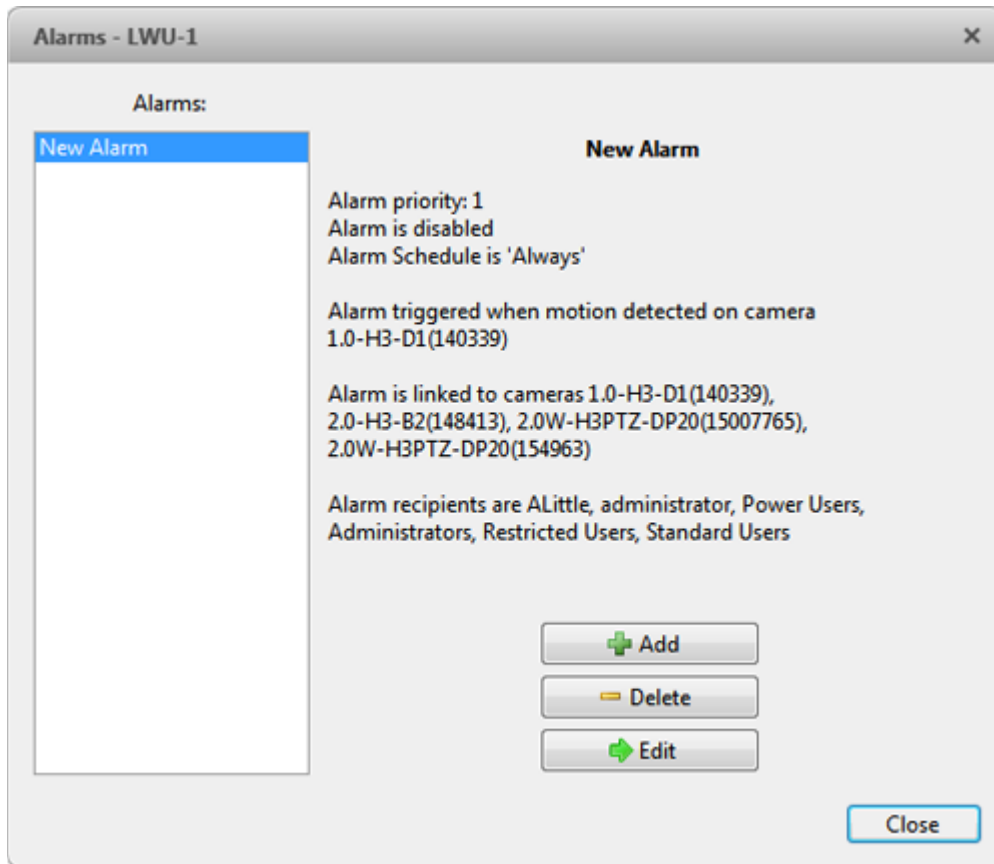





Figure A. Alarms dialog box: alarm properties


3. Perform one of the following:
  - To edit the alarm, click . Go through the Add Alarm wizard and make the required changes on each page. On the last page, click  to save your changes. Refer to [Adding a New Alarm](#) for details about the editable options.
  - To delete the alarm, click .

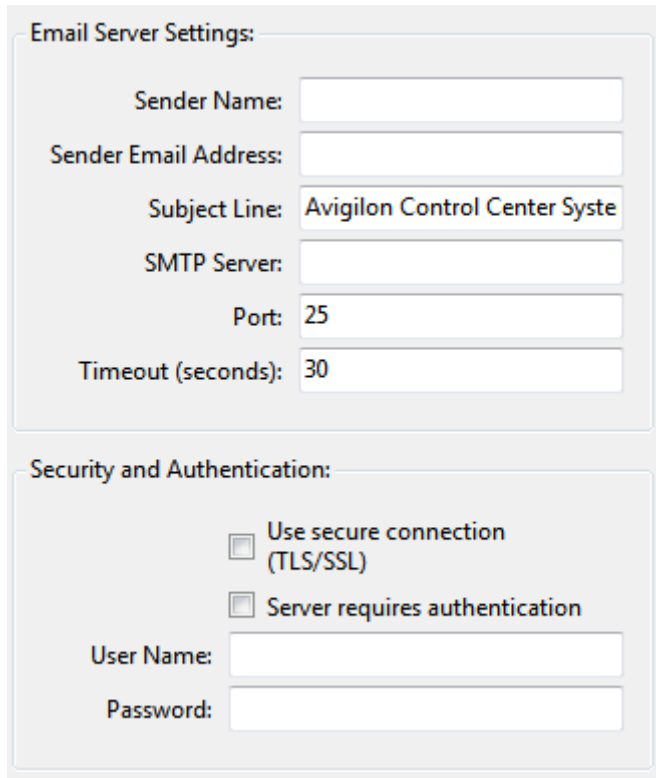
## Email Notifications

Use the Email Notification dialog box to set up the Site to send email messages in response to specific events. You can set what events require email notifications and who receives the emails.

### Setting Up the Email Server

Before email notifications can be sent, the Site must be given access to an email service.

1. In the Setup tab, select the Site then click .
2. Select the Email Server tab.



**Email Server Settings:**

Sender Name:

Sender Email Address:

Subject Line:

SMTP Server:

Port:

Timeout (seconds):

**Security and Authentication:**

Use secure connection (TLS/SSL)

Server requires authentication

User Name:

Password:

Figure A. Email Notifications dialog box: Email Server tab

3. In the Email Server Settings area, complete the following
  - a. **Sender Name:** enter a name to represent the Site in all email notifications.
  - b. **Sender Email Address:** enter an email address for the Site.
  - c. **Subject Line:** enter a subject line for all emails sent from the Site. The default subject is *Avigilon Control Center System Event*.
  - d. **SMTP Server:** enter the SMTP server address used by the email.
  - e. **Port:** enter the SMTP port.
  - f. **Timeout (seconds):** enter the maximum amount of time the server will try to send an email before it quits.
4. (Optional) If the email server uses encryption, you can select the **Use secure connection (TLS/SSL)** check box.



5. (Optional) If the email account has a username and password, select the **Server requires authentication** check box.
  - a. Enter the **Username** and **Password** for the email account.
6. Click **OK**.

## Configuring Email Notification

In the Email Notification dialog box, you can create email notification groups to specify who will receive email notifications when certain events occur.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.



1. In the Setup tab, select the Site then click .
2. In the Email Notification dialog box, make sure the Email Notification tab is selected.
3. Click .

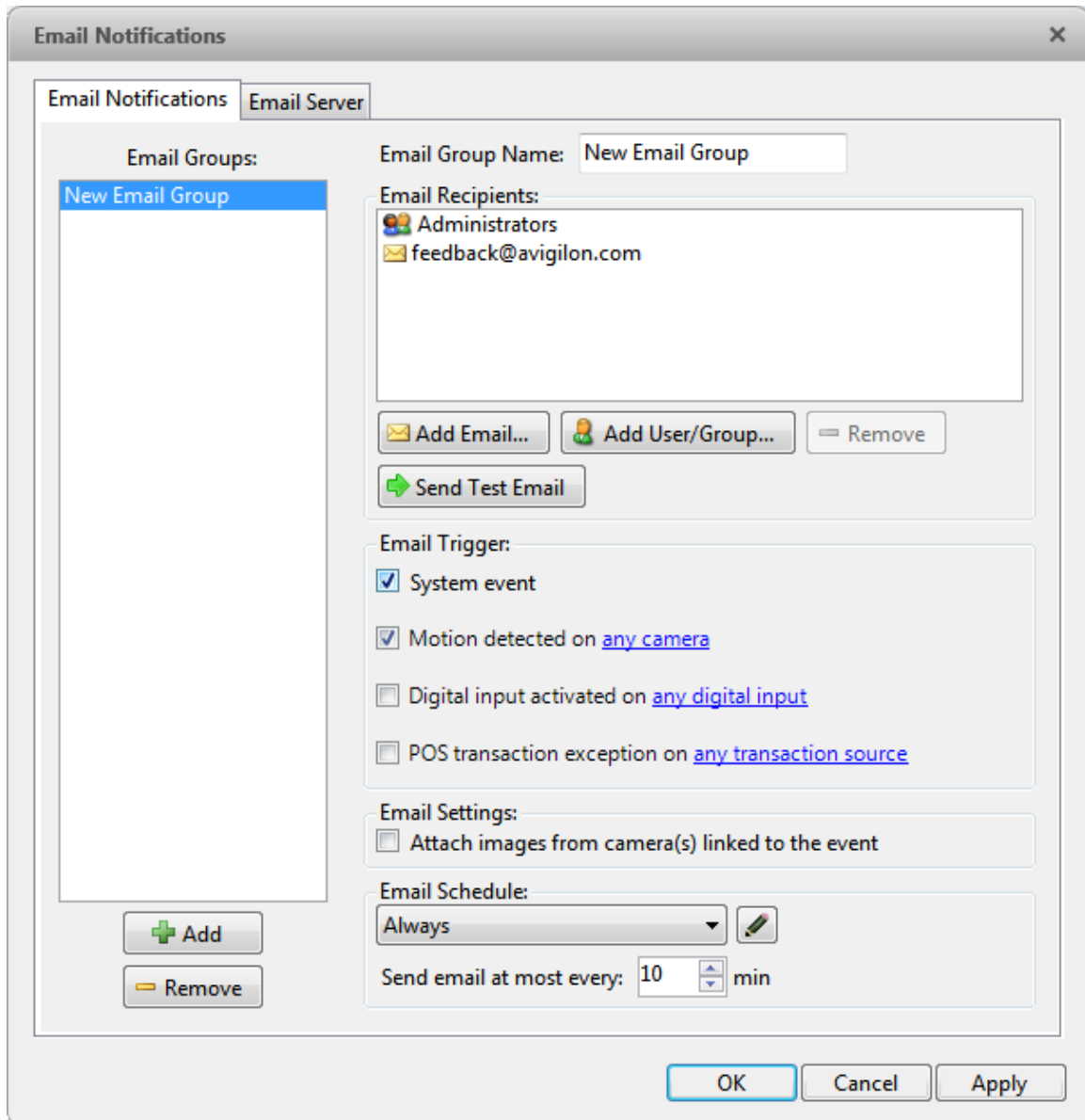





Figure A. Email Notifications dialog box

4. Enter a name for the new email group.
5. In the Email Recipients area, add all the users, groups and individual emails that are part of this email group. Perform any of the following:
  - Click  to add a Site user or access group. In the dialog box, select all the required users and groups then click **OK**.
  - Click  to add individual emails. In the dialog box, enter the email address then click **OK**.

**Tip:** Make sure the Site users in the Email Recipient list have a valid email in their user account.

6. Click  to send a test email to everyone on the Email Recipients list.
7. In the Email Trigger area, select all the events that this email group will receive email notifications about. Click the blue underlined text to define the event requirements.

**Tip:** If you require other events or more specific requirements, you can also configure email notification in the rules engine. See [Rules](#) for more information.



8. To attach a snapshot of the email notification event, select the **Attach images from camera(s) linked to the event** check box.

**Note:** This option is disabled if only System Event is selected because cameras cannot be linked to system events.

9. In the Email Schedule area, select a schedule for the email notification. See [Scheduling Site Events](#) for more information.
10. To limit the number of emails sent, enter the minimum amount of time between each email in the **Send email at most every:** field.
11. Click **OK**.

## Editing and Deleting an Email Notification

You can edit or delete email notifications as needed.

1. In the Setup tab, select the Site then click .
2. In the Email Notification tab, perform one of the following:
  - o To edit the email notification, select the Email Group then make the required changes. Refer to [Configuring Email Notification](#) for details about the editable options.
  - o To delete the email notification, select the Email Group then click .

## Rules



The rules engine allows you to trigger specific actions when a certain event, or set of events, occur.

For example, you can create a rule that starts a live stream when the back door is opened.

If the default email notification options are insufficient for your needs, you can use the rules engine to set up more specific trigger events.



## Adding a Rule

1. In the Setup tab, select the Site then click .
2. In the Rules dialog box, click .
3. Select the events that will trigger the rule. If blue underlined text appears in the rule description, click on the text to further define the event.

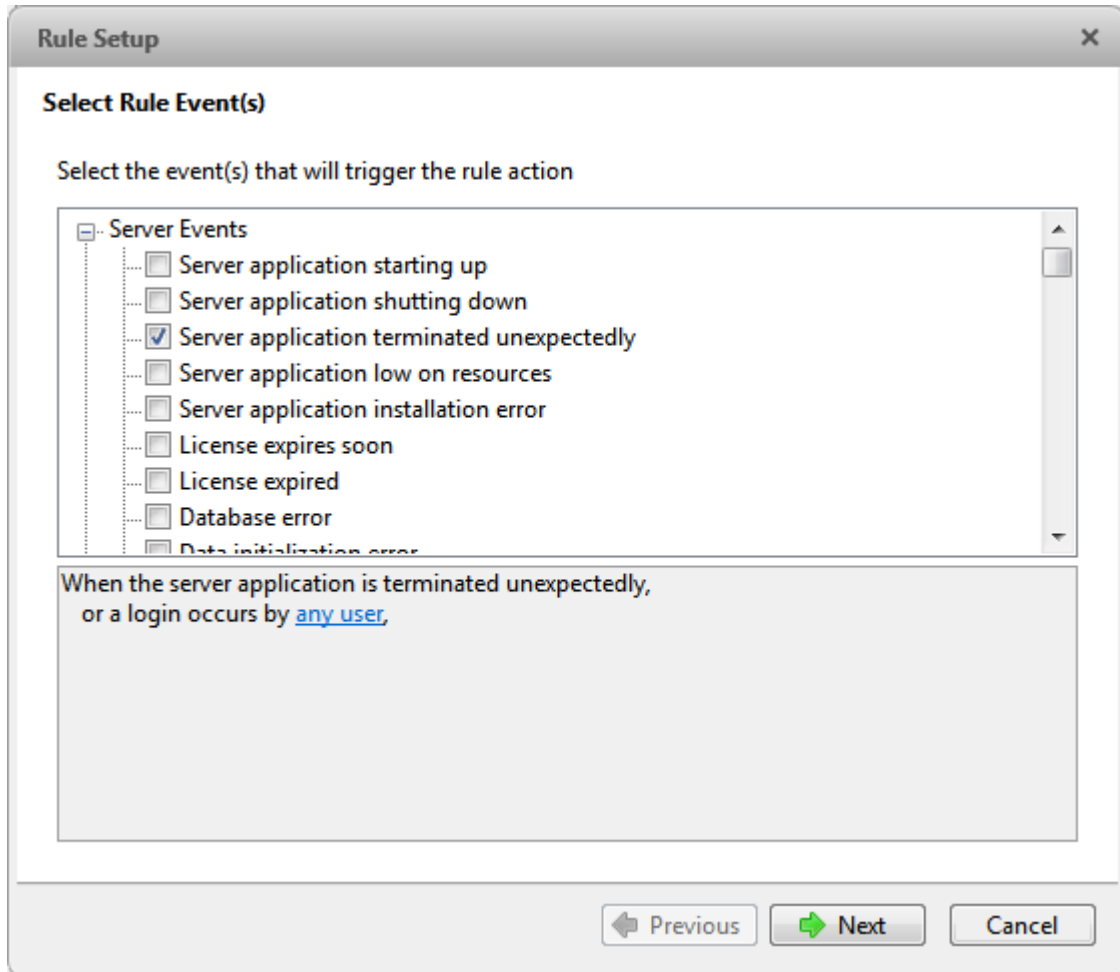




Figure A. Select Rule Event(s) page

4. When the trigger event is defined, click .
5. Select the actions that will occur when the rule is triggered. If any blue underlined text appears in the rule description, click on the text to further define the action. When the action is defined, click .

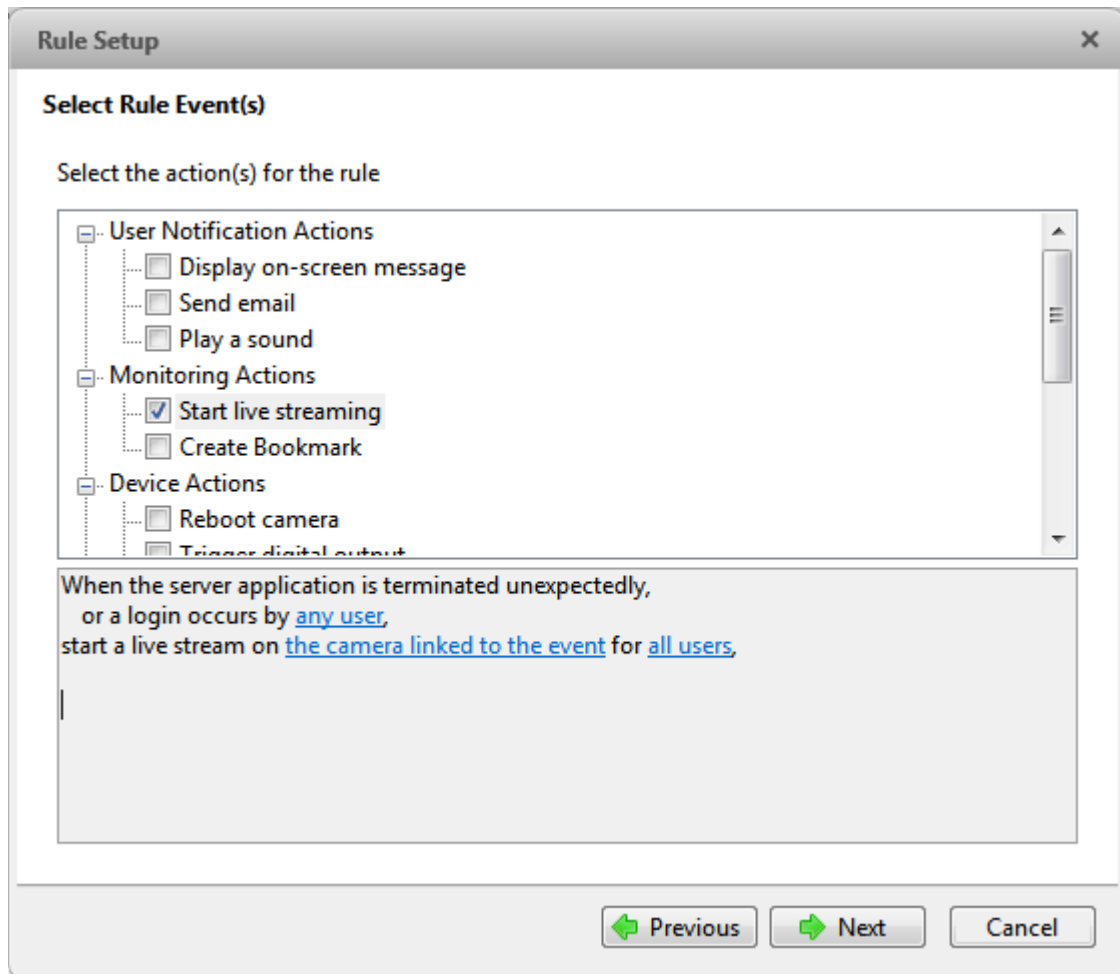




Figure B. Select Rule Action(s) page

6. On the final page, complete the following:

Figure C. Set Rule Name and Description page

- a. Give the rule a name and description.
  - b. Select a schedule for the Rule. See [Scheduling Site Events](#) for more information.
  - c. Make sure the **Rule is enabled** check box is selected to enable the rule.
7. Click .

## Editing and Deleting a Rule

1. In the Setup tab, select the Site then click .
2. In the Rules dialog box, select a rule then perform one of the following:

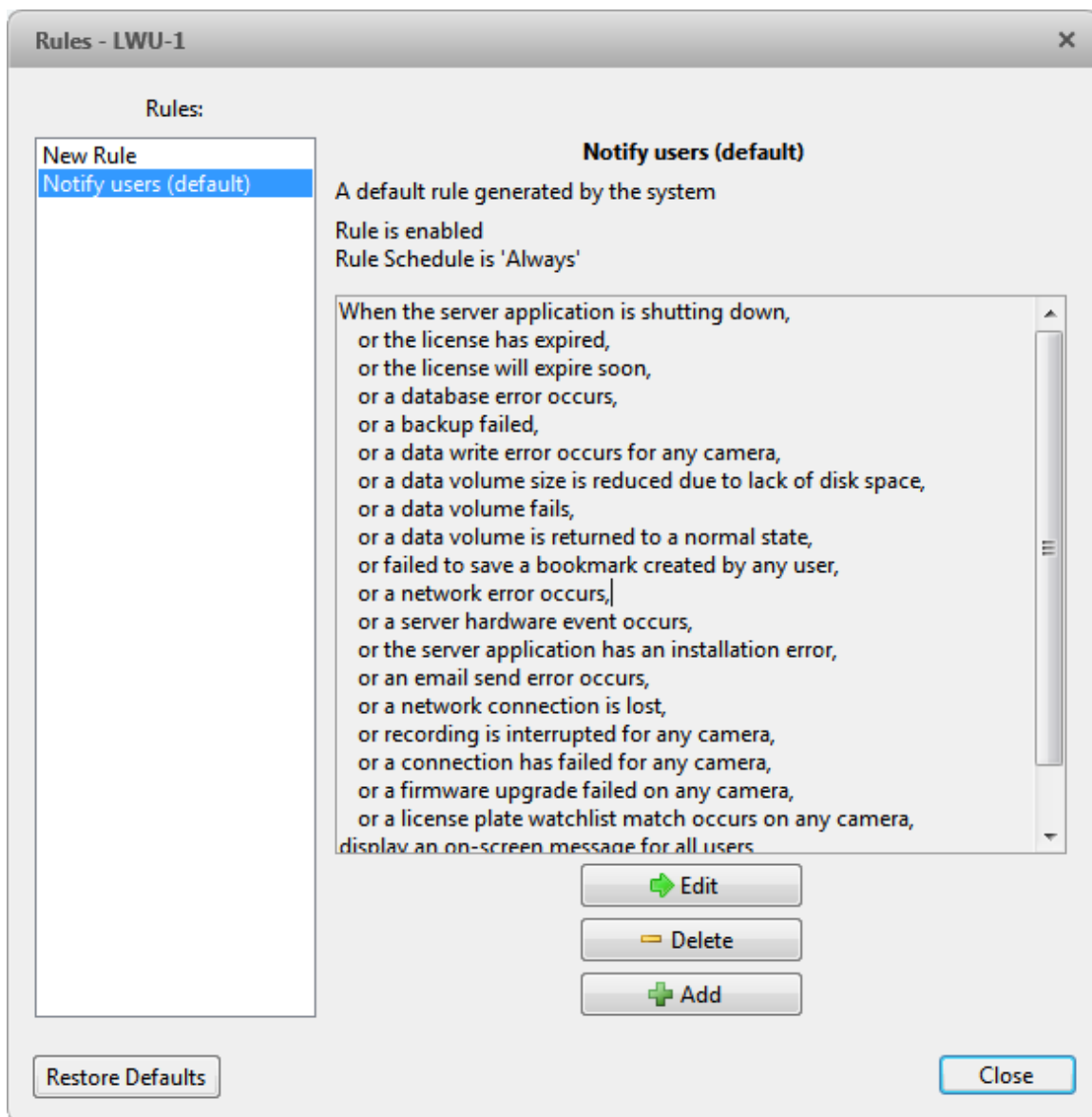





Figure A. Rules dialog box

- To edit the rule, click .  
Go through the Rules Setup wizard and make the required changes on each page. On the last page, click  to save your changes. Refer to [Adding a Rule](#) for details about the editable options.
- To delete a rule, click .  
When the confirmation dialog box appears, click **OK**.

## Scheduling Site Events







Site events are actions that can affect the entire Site, like email notifications. When you configure a Site event, you are given the option to assign a schedule to the event. Schedules control when events can occur — at specific times during a day or only on specific days.

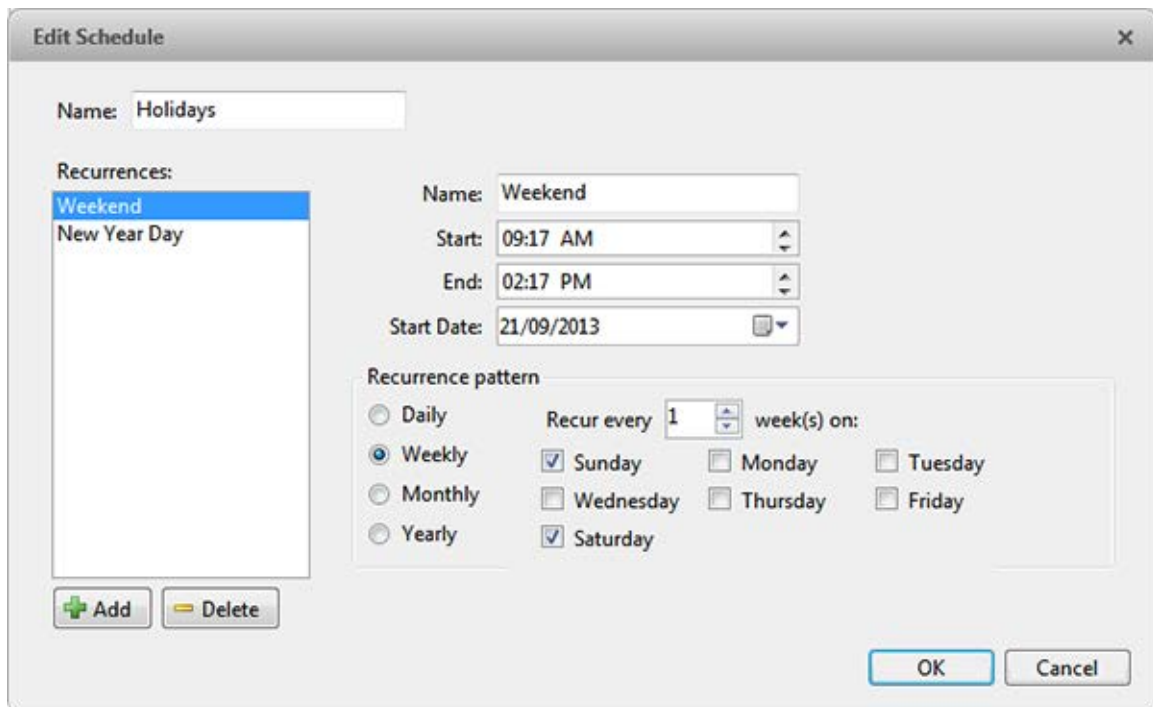
When you see the **Schedule** option while configuring an event, you can select an existing schedule or create a new schedule.

**Note:** Schedules are shared across a Site.

Schedule:  

Figure A. Schedule option

- To use a configured schedule, select an option from the drop down list. The default option is **Always**, which allows the event to run constantly.
- To change a schedule, select a schedule then click  and select .
- To delete a schedule, select a schedule then click  and select .
- To create a schedule, click  then select . When you see the Edit Schedules dialog box, complete the following steps:



**Edit Schedule**

Name:

Recurrences:

- Weekend
- New Year Day

Name:

Start:

End:

Start Date:

Recurrence pattern

Daily    Recur every  week(s) on:

Weekly     Sunday     Monday     Tuesday

Monthly     Wednesday     Thursday     Friday

Yearly     Saturday

Figure B. Edit Schedules dialog box.

1. Give the new schedule a name.
2. Give the recurrence a name.

You can add multiple recurrences to create a detailed schedule. For example, you could create one recurrence to cover every weekend, plus extra recurrences to cover public holidays.

- To add a recurrence, click **+**.
  - To delete a recurrence, select the recurrence then click **-**.
3. In the **Start** and **End** fields, enter the time the recurrence will cover.

Be aware that if you enter an End time that is earlier than the Start time, the event will span two days. For example, if the schedule is set to start at 12:00pm and end at 11:59am, the event is automatically enabled from 12:00pm on day 1 and end at 11:59am on day 2.

4. In the **Start Date** field, enter when the recurrence would begin.
5. In the Recurrence Pattern area, schedule how often the event would be enabled during this recurrence.

4.


Option	Description
Daily	The event is enabled during the same time every day. <ul style="list-style-type: none"> <li>• Select the number of days between each schedule recurrence.</li> </ul>
Weekly	The event is enabled during the same day and time every week. <ul style="list-style-type: none"> <li>• Select the day(s) of the week, then select the number of weeks between each schedule recurrence.</li> </ul>
Monthly	The event is enabled during the same day and time every month. <ul style="list-style-type: none"> <li>• Select the specific day or weekday, then select the number of months between each schedule recurrence.</li> </ul>
Yearly	The event is enabled during the same day and time every year. <ul style="list-style-type: none"> <li>• Select the specific day or weekday and month, then select the number of years between each schedule recurrence.</li> </ul>

- 5.
6. Complete any other recurrences that have been added to the schedule.
7. Click **OK** to save the new schedule.

## Exporting Settings

You can export the Site settings so that they can be backed up or used on a different Site.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

1. In the Setup tab, select the Site then click 
2. Select the settings you want to export.

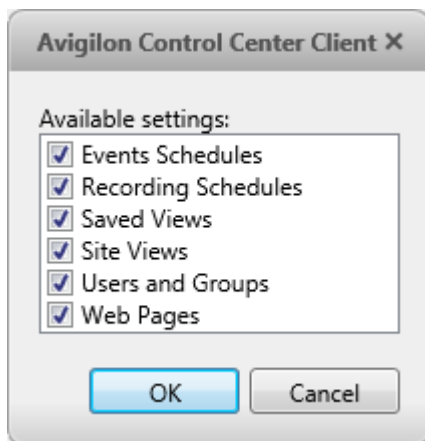


Figure A. Export Settings dialog box

3. Click **OK**.
4. In the Save As dialog box, name and save the file.

Exported client settings can only be saved in Avigilon Settings File (.avs) format.

## Import Settings

Import and use settings that were previously exported from the Site.

1. In the Setup tab, select the Site then click 
2. In the Select File to Import From dialog box, find the Avigilon Settings File (.avs) you want to import then click **Open**.

**Note:** .avc files are not compatible with this version of the Avigilon Control Center Client software.

3. Select the settings you want to import. Only the settings included in the .avs file are displayed.

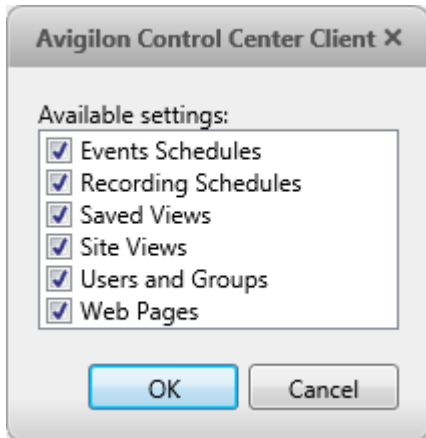


Figure A. Import Settings dialog box

4. Click **OK**.

The settings are merged.

- Unique settings are added to the Site.
- If the settings are identical, only the current Site version is kept.
- If an import setting and a Site setting have the same name but are configured differently, the import setting is added to the Site and renamed in this format: *<setting name> (Import)*, like *Email1 (Import)*.
  - In the rules engine, the Notify users (default) rule is always added and renamed, even if the settings are the same. The import version is enabled and the Site version is disabled by default.
- The two Site Views are combined.
  - The import settings take precedence. For example, a map from the import file is still used in the Site. Currently, the map is stored at the top of the Site View. But in the import file, the map is kept at the bottom. After the import settings are merged with the current Site settings, the map is moved to the bottom.
  - Unorganized elements from the import file are listed at the bottom of the Site View.
- User permission groups are merged.



- If groups have the same name, the import settings are used and the users from both the import file and the current Site are added to the group.
- Groups added from the import file automatically gain access to all the new devices that were added since the settings were exported.
- Users with the same name will use the import settings, including passwords.


## Server Settings

Server settings are related to video recording. This includes configuring the recording schedule, data aging and bandwidth usage, as well as POS transactions and scheduled video backups.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

### Server Name

Give the server a meaningful name so that it can be easily identified in the System Explorer. Otherwise, the server uses the name that is assigned by Windows.

1. In the Setup tab, select the server then click .
2. In the dialog box, give the server a name.

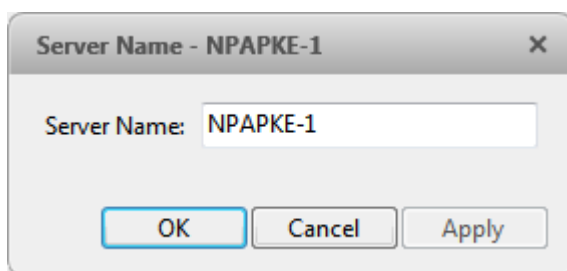


Figure A. Server Name dialog box

3. Click **OK**.

## Recording Schedule

Use the Recording Schedule dialog box to set the recording schedule for the cameras connected to the server. By default, the server is set to record motion and configured events when they occur.

Once the recording schedule is set, video is recorded automatically.


### Using Templates to Modify the Recording Schedule

The recording schedule is set by using templates that tell cameras what to record and when to record. For example, you can create one recording schedule template for the weekdays and another for the weekend.

**Note:** Recording templates are shared across a Site.

### Adding a Template

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

1. In the Setup tab, select the server then click  .
2. In the Recording Schedule dialog box, click **Add Template** in the Templates pane.

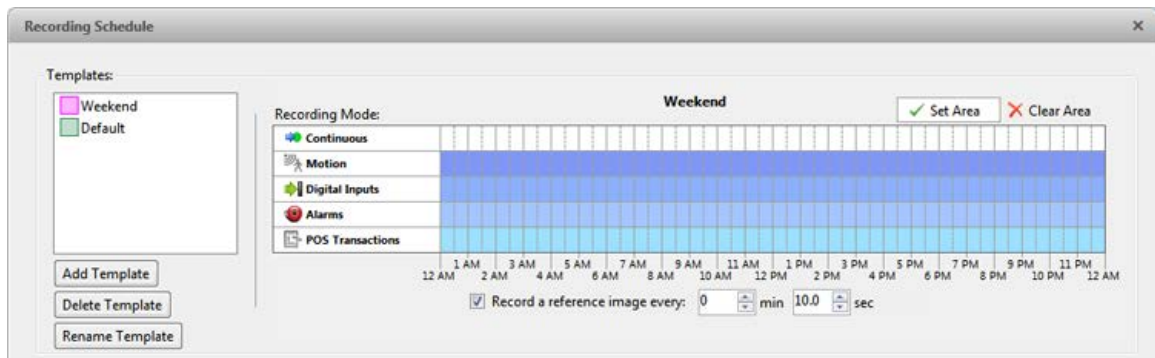


Figure A. Schedule dialog box

3. Enter a name for the template.
4. Click the **Set Area** button then click or drag the cursor across the **Recording Mode** timeline to set the types of events that the cameras will record throughout the day.


Record Mode	Definition
-------------	------------

<b>Continuous</b>	Record video constantly.
<b>Motion</b>	Only record video when motion is detected.
<b>Digital Input</b>	Only record video when a digital input is activated.
<b>Alarms</b>	Only record video when an alarm has been activated.
<b>POS Transactions</b>	Only record video when point of sale (POS) transactions are made.

5. To disable recording in parts of the template, click the **Clear Area** button then click or drag the cursor across the timeline to remove the set recording areas.
6. If cameras are *not* recording in Continuous mode all day, you can set cameras to record reference images between events in the recording schedule.
  - o Select the **Record a reference image every:** check box then set the time between each reference image.

### Editing and Deleting a Template




1. In the Setup tab, select the server then click .
2. In the Schedule dialog box, select a template from the Templates pane and perform one of the following:
  - o To edit a template, modify the schedule.
  - o To rename a template, click **Rename Template** and enter a new name.
  - o To delete a template, click **Delete Template**.
3. Click **OK** to save your changes.

### Setting Up a Weekly Recording Schedule

You can set up a week's recording schedule by applying templates to cameras for each day of the week.



1. In the Setup tab, select the server then click .
2. In the Recording Schedule dialog box, select a template from the Templates pane.
3. In the Default Week area, click the days of the week this template applies to for each camera.

Default Week:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
t001 - 5.0MP-HD-DOME-DN(18267)	Weekend	Default	Default	Default	Default	Default	Weekend
t002 - 11MP-HD-PRO-M(55547)	Weekend	Default	Default	Default	Default	Default	Weekend
t003 - ENC-4PORT-2AI(11153:1)	Weekend	Default	Default	Default	Default	Default	Weekend
t004 - 8.0MP-HD-DOME-360(20108:1)	Weekend	Default	Default	Default	Default	Default	Weekend


Figure A. Recording Schedule dialog box: Default Week

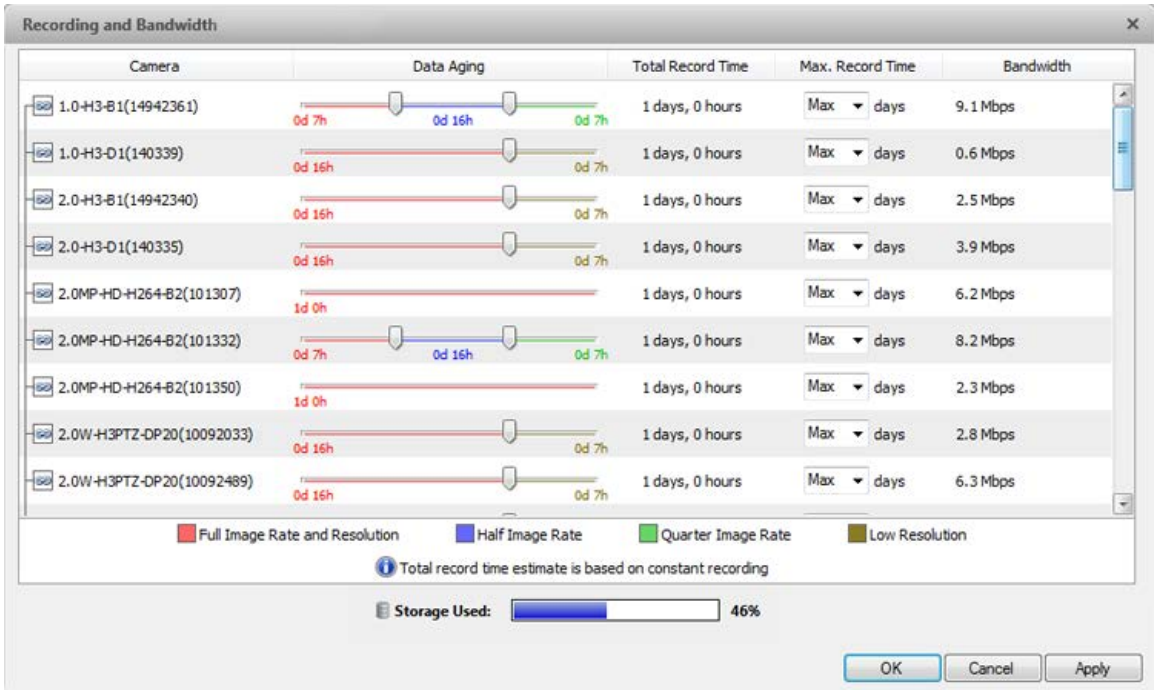
4. Click **OK**.

## Recording and Bandwidth

While the Recording Schedule dialog box sets what cameras record, the Recording and Bandwidth dialog box sets how long recorded video is stored.

In the Recording and Bandwidth dialog box, you can change the data aging settings and set the maximum record time for each connected camera.

1. In the Setup tab, select the server then click  .



The screenshot shows the 'Recording and Bandwidth' dialog box with a table of camera settings. The table has columns for Camera, Data Aging, Total Record Time, Max. Record Time, and Bandwidth. Below the table is a legend for image rates and a storage usage indicator.

Camera	Data Aging	Total Record Time	Max. Record Time	Bandwidth
1.0-H3-B1(14942361)	0d 7h (Full) / 0d 16h (Half) / 0d 7h (Quarter)	1 days, 0 hours	Max days	9.1 Mbps
1.0-H3-D1(140339)	0d 16h (Full) / 0d 7h (Quarter)	1 days, 0 hours	Max days	0.6 Mbps
2.0-H3-B1(14942340)	0d 16h (Full) / 0d 7h (Quarter)	1 days, 0 hours	Max days	2.5 Mbps
2.0-H3-D1(140335)	0d 16h (Full) / 0d 7h (Quarter)	1 days, 0 hours	Max days	3.9 Mbps
2.0MP-HD-H264-B2(101307)	1d 0h (Full)	1 days, 0 hours	Max days	6.2 Mbps
2.0MP-HD-H264-B2(101332)	0d 7h (Full) / 0d 16h (Half) / 0d 7h (Quarter)	1 days, 0 hours	Max days	8.2 Mbps
2.0MP-HD-H264-B2(101350)	1d 0h (Full)	1 days, 0 hours	Max days	2.3 Mbps
2.0W-H3PTZ-DP20(10092033)	0d 16h (Full) / 0d 7h (Quarter)	1 days, 0 hours	Max days	2.8 Mbps
2.0W-H3PTZ-DP20(10092489)	0d 16h (Full) / 0d 7h (Quarter)	1 days, 0 hours	Max days	6.3 Mbps


Legend: Full Image Rate and Resolution (Red), Half Image Rate (Blue), Quarter Image Rate (Green), Low Resolution (Brown)

Total record time estimate is based on constant recording

Storage Used: 46%

Figure A. Recording and Bandwidth dialog box

The Data Aging column shows an estimate of the recording time that is available at each image rate given the amount of space on the server.

- For JPEG2000 or JPEG compression cameras, data aging is available at three rates. **Full Image Rate and Resolution** keeps recordings in its original quality, while **Half Image Rate** discards half of the recorded data to make room for new recordings, and **Quarter Image Rate** keeps 1/4 of the original recorded data so that you can still see older video.
  - For H.264 cameras that support data aging, data aging is available at two rates. **Full Image Rate and Resolution** keeps the original high quality video and the secondary stream of low resolution video. **Low Resolution** only keeps the secondary stream of low resolution video.
- Note:** Data aging can only occur when the secondary stream is enabled.
- For H.264 cameras that *do not* support data aging, only the **Full Image Rate and Resolution** video is kept.
2. In the Data Aging column, move the sliders to adjust the amount of time video is stored at each image rate.
    - To change the data aging settings for all linked cameras, move the slider for one linked camera and all linked cameras are updated.
    - To change the data aging setting for one camera, break the camera's link to the other cameras by clicking the  icon to the left of the camera's name, then make your changes.
  3. In the Max. Record Time column, manually enter a maximum record time or select one of the options from the drop down list for each camera.

**Note:** If the time estimated in the Total Record Time column is shorter than what is set in the Max. Record Time column, the camera's actual recording time will be shorter than what is set.


4. Click **OK**.

## Scheduled Backup

Video backup must be enabled in the Avigilon Control Center Admin Tool before Scheduled Backup settings can be made in the application. The Admin Tool is also where you would manually set the backup file location. See the *Avigilon Control Center Server User Guide* for more information.

Files are always backed up in the Avigilon Backup (AVK) format. You can review backed up video in the Avigilon Control Center Player.

Once backups are enabled, you can schedule the application to automatically back up recorded video.

1. In the Setup tab, select the server then click .

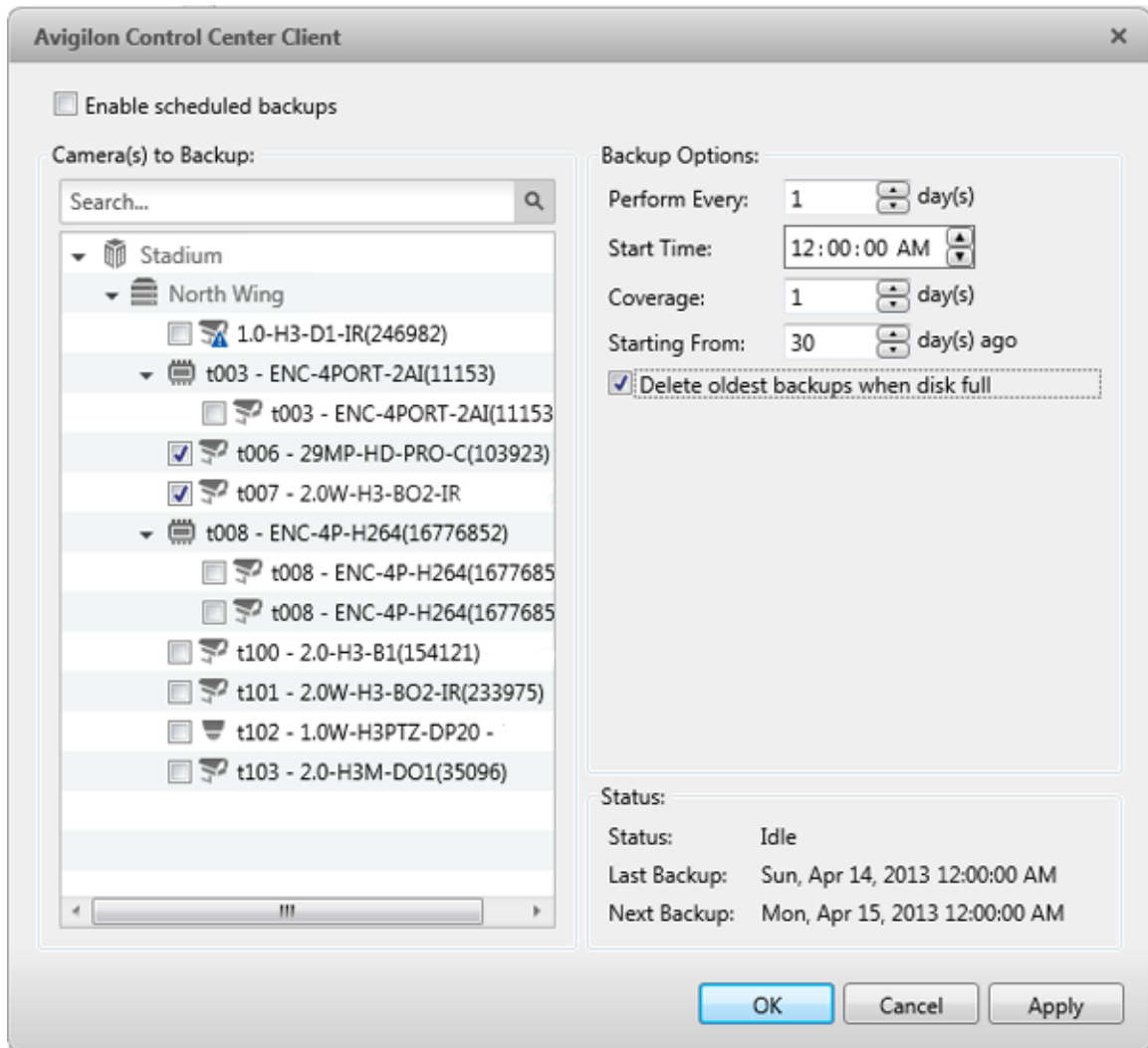


Figure A. Scheduled Backup dialog box

2. Select the **Enable scheduled backups** check box.
3. In the Camera(s) to Backup list, select all the camera video to backup.
4. In the Backup Options area, complete the following:
  - o **Perform Every <X> day(s)**: specify the number of days between backups
  - o **Start Time**: the time when backup occurs

- **Coverage:** the amount of recorded image data that is backed up
- **Starting From:** starting point for the backup
- **Delete oldest backups when disk full:** select this check box to automatically delete the oldest backups when the backup storage location is full

For example in the figure above, the Scheduled Backup is configured to occur every day at 12a.m. Video from 30 days ago is backed up and will cover 1 day of video, so only the 30th day is backed up to the remote server each night.

5. Click **OK**.

The Status area displays when the next backup will be.

## POS Transaction




The Point of Sale (POS) Transaction Engine is a licensed feature that records raw data from POS transaction sources. You can link cameras to specific POS transaction sources, and set up the system to make note of transaction exceptions.

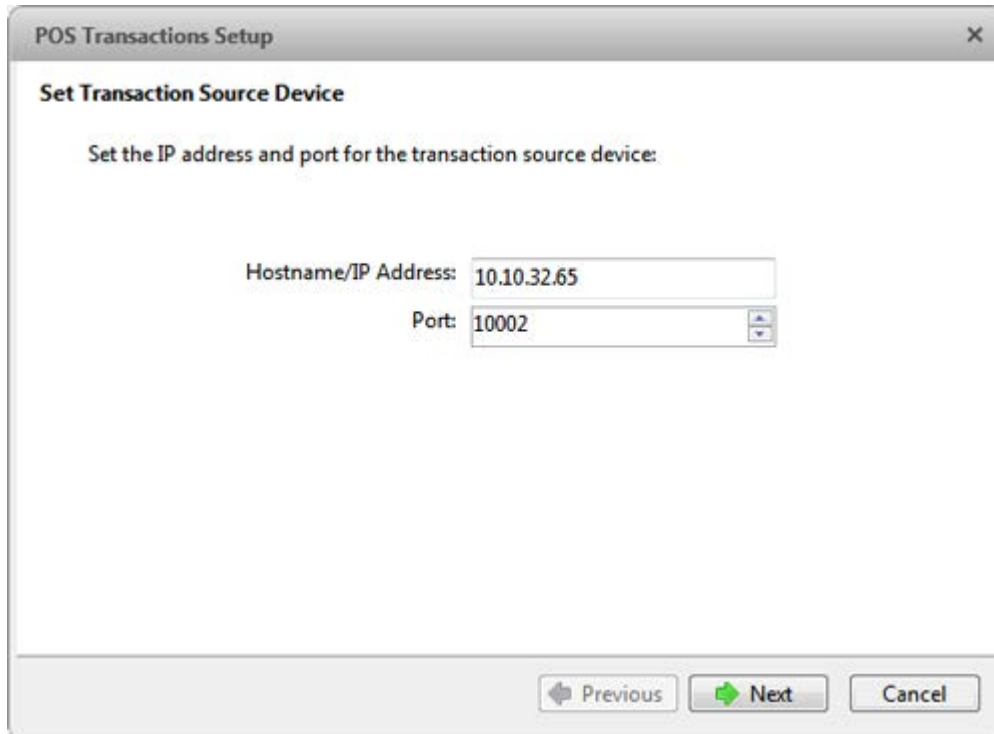
Once POS transactions have been set up, you can see live and recorded POS transaction data in the View tab while watching any linked video.

To monitor live POS transactions, see [Monitoring POS Transactions](#).

To monitor recorded POS transactions, see [Reviewing POS Transactions](#).


## Adding a POS Transaction Source



1. In the Setup tab, select the server then click .
2. In the POS Transactions dialog box, click .
3. Enter the **Hostname/IP Address** and the **Port** number for the POS Transaction Source device, then click  **Next**.



The screenshot shows a window titled "POS Transactions Setup" with a close button (X) in the top right corner. The main heading is "Set Transaction Source Device". Below this, the instruction reads "Set the IP address and port for the transaction source device:". There are two input fields: "Hostname/IP Address" with the value "10.10.32.65" and "Port" with the value "10002". At the bottom of the window, there are three buttons: "Previous" (with a left arrow), "Next" (with a right arrow), and "Cancel".

Figure A. Set Transaction Source Device page

4. Select a Transaction Source Data format then click  **Next**.

If the source data format needs to be added, click . Or, click  **Copy From** to create a new data format based on the selected data format. See [Adding a Transaction Source Data Format](#) for more information.



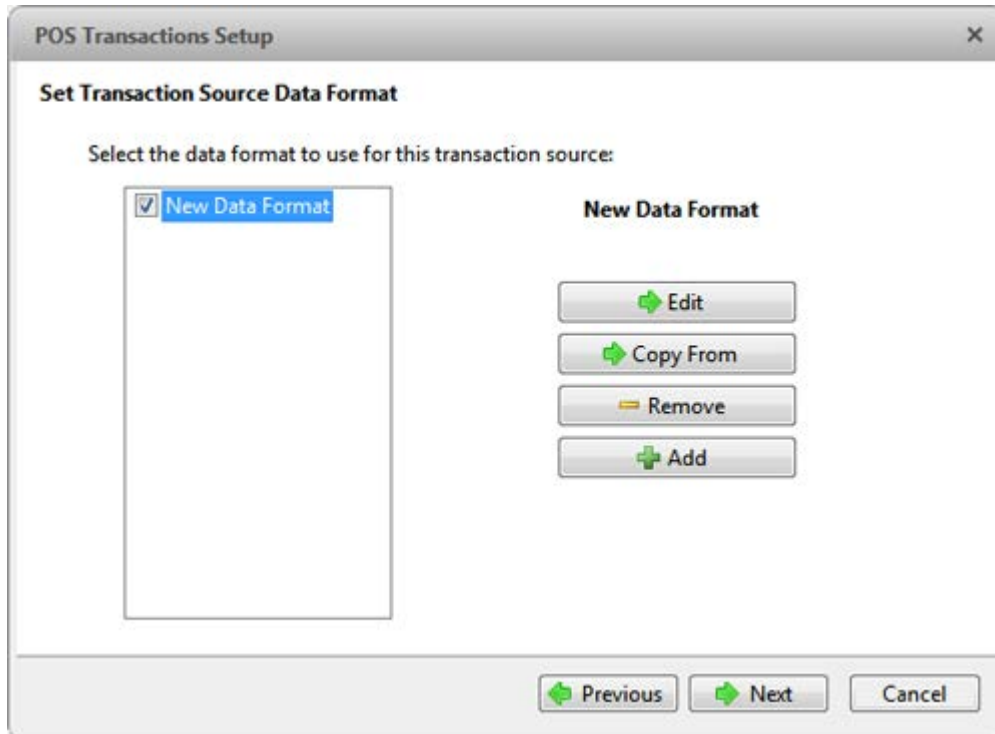


Figure B. Set POS Transaction Source Data Format page

5. On the Set Transaction Exceptions page, select any exceptions that need to be monitored then click **Next**. If you do not need to monitor for exceptions, just click **Next**.

Click **+** to add an exception. See [Adding a Transaction Exception](#) for more information.

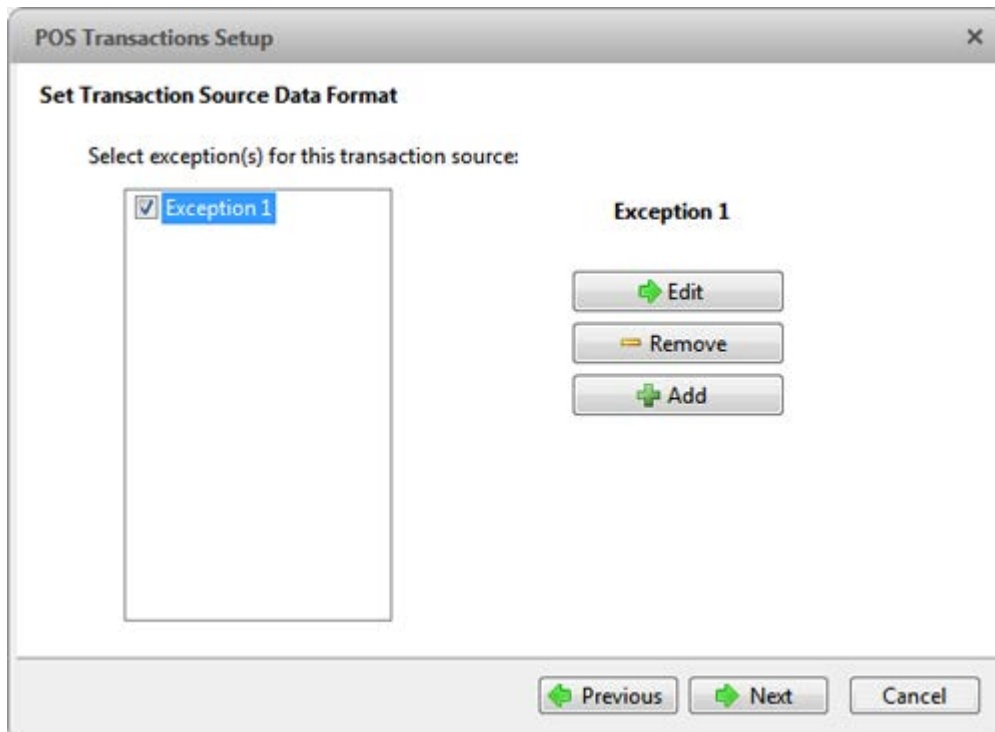


Figure C. Set Transaction Exceptions page

6. Select any cameras you want to link to the transaction source, and set the amount of time video needs to be recorded before and after each transaction. Then click **Next**.

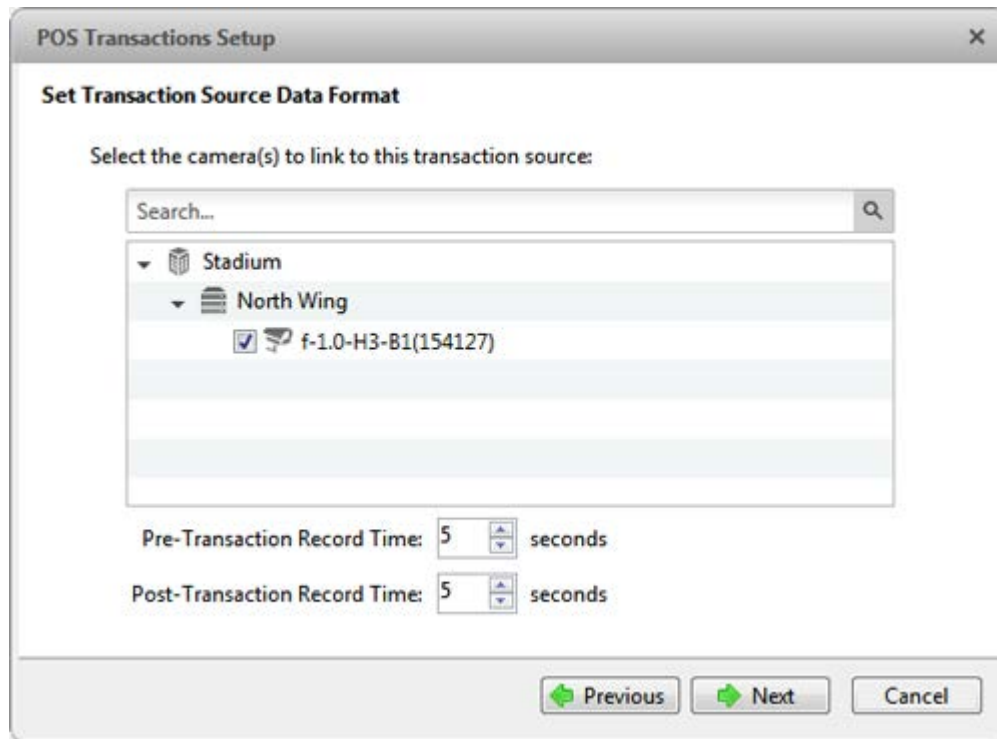


Figure D. Select Linked Cameras page

7. Enter a name and description for the transaction source, then select **Enable transaction source** to start receiving data from the transaction source.

The screenshot shows a dialog box titled "POS Transactions Setup" with a close button (X) in the top right corner. The main heading is "Set Transaction Source Data Format". Below this, there are two text input fields: "Transaction Source Name:" with the text "Cafeteria 1" entered, and "Transaction Source Description:" which is empty. Below the description field is a checked checkbox labeled "Enable transaction source". At the bottom of the dialog, there are three buttons: "Previous" (with a left arrow icon), "Finish" (with a green checkmark icon), and "Cancel".


Figure E. Set Transaction Source Name and Description page

8. Click  **Finish**.

## Adding a Transaction Source Data Format

**Note:** POS transaction source data formats are shared across a Site.

When you add a new POS transaction source, be aware that the transaction source must have a source data format.

In the POS Transaction Setup wizard, click  when you arrive on the Set Transaction Source Data Format page. When the Configure Data Format dialog box appears, complete the following procedure:

1. In the Properties area, specify the following:

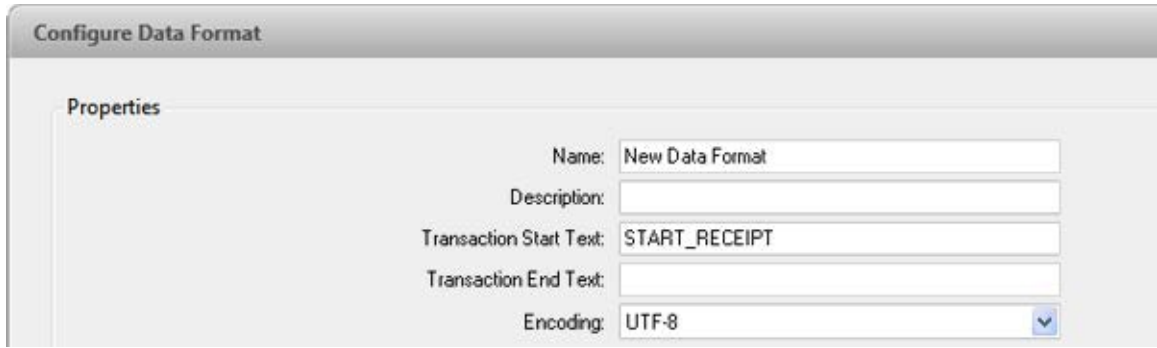


Figure A. Configure Data Format dialog box

- **Name:** enter a name for the data format.
  - **Description:** enter a description of the data format.
  - **Transaction Start Text:** (required) enter the text that identifies the start of each transaction from the POS transaction source.
  - **Transaction End Text:** (optional) enter the text that identifies the end of each transaction.
  - **Encoding:** Select the encoding used by the POS transaction source.
2. The following figure shows raw transaction data on the left and filtered transaction data on the right. Perform any of the following to capture raw data for the source data format:

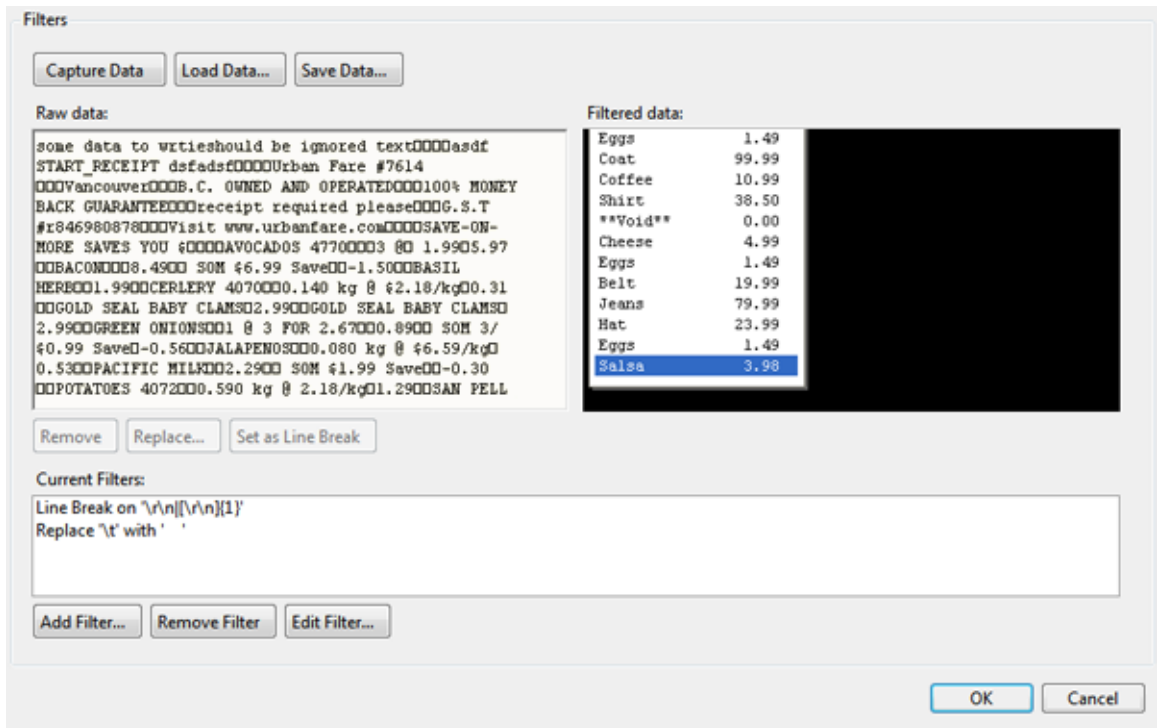


Figure B. Configure Data Format dialog box

- o Click **Capture Data** to start capturing a raw transaction data sample.
  - o Click **Stop Capture** to stop capturing transaction data.
  - o Click **Load Data** to load raw transaction data from a file.
  - o Click **Save Data** to save a copy of the transaction data that has been captured.
3. (Optional) Click **Add Filter** to create a new filter for the raw transaction data file.

There are two default filters in the Current Filters area: one to create line breaks and the other to delete extra white space at the beginning of each line. If you do not need extra filters, skip this step.

The screenshot shows a dialog box titled "Configure Filter". It has a close button (X) in the top right corner. The dialog is divided into two main sections. The first section, "Text to Match:", contains a text input field labeled "Text:", two checkboxes labeled "Match case" and "Match whole word", and a dropdown menu labeled "Method:" with "Wildcards" selected. The second section, "Action to Take:", contains four radio button options: "Remove", "Replace with line break", "Remove empty lines", and "Replace with:" followed by an empty text input field. At the bottom right of the dialog are "OK" and "Cancel" buttons.

Figure C. Configure Filter dialog box

- 2.
- a. In the **Text** field, enter text for the filter to search for.
  - b. Select the **Match case** and/or **Match whole word** check box to focus the text filter to only find text with the same capitalization or match the text exactly.
  - c. In the **Method** drop down list, select a search method. You can choose to filter text found through a **Normal** search, **Wildcard** search or **Regular Expression** search.

- d. In the Action to Take area, select which action to take when the filter finds a match to your text criteria.
  - e. Click **OK**.
3. On the Configure Data Format screen, click **OK** to add the new data format to the data format list.

### Adding a Transaction Exception

**Note:** POS transaction exceptions are shared across a Site.

To help monitor unusual transactions, you can set up transaction exceptions. Transaction exceptions can help you identify unauthorized discounts, fake returns, and manual price overrides.

In the POS Transaction Setup wizard, click **+** when you arrive on the Set Transaction Exceptions page. When the Configure Exception dialog box appears, complete the following procedure:

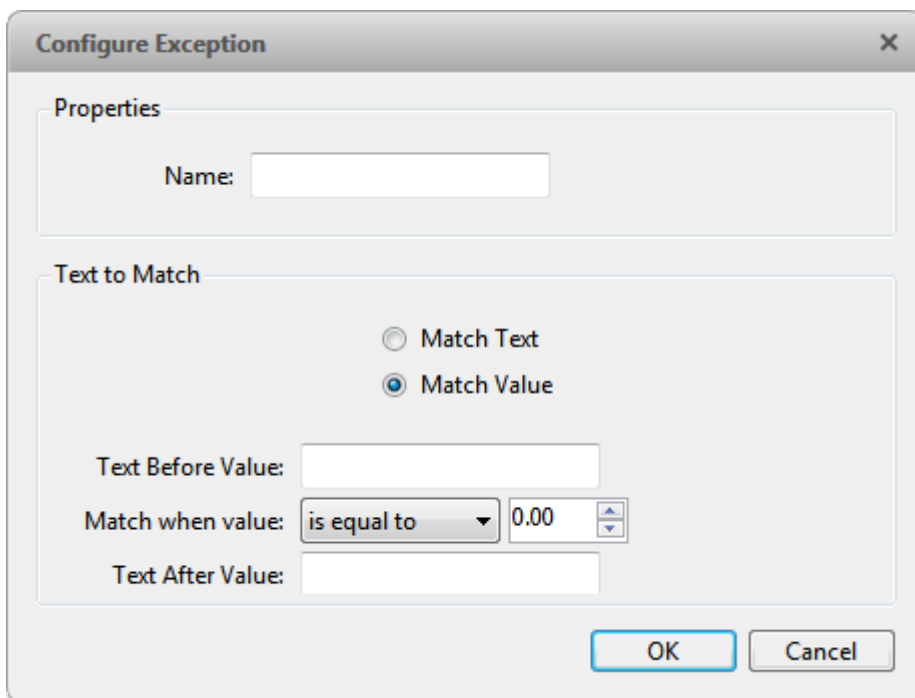


Figure A. Configure Exception dialog box


1. Enter a name.
2. Select one of the Text to Match options:

Select	And do this...
<b>Match Text</b>	Enter text for the exception to search for.

	The exception will monitor all transactions for the text entered in the <b>Text to Match</b> field.
<b>Match Value</b>	Enter the value that triggers the exception, and enter the text that may appear around the value.  The exception will monitor all transactions for values that match what you enter in the <b>Text Before Value</b> , <b>Match When Value</b> and <b>Text After Value</b> fields

3. Click **OK**.

## Editing and Deleting a POS Transaction Source

1. In the Setup tab, select the server then click  .

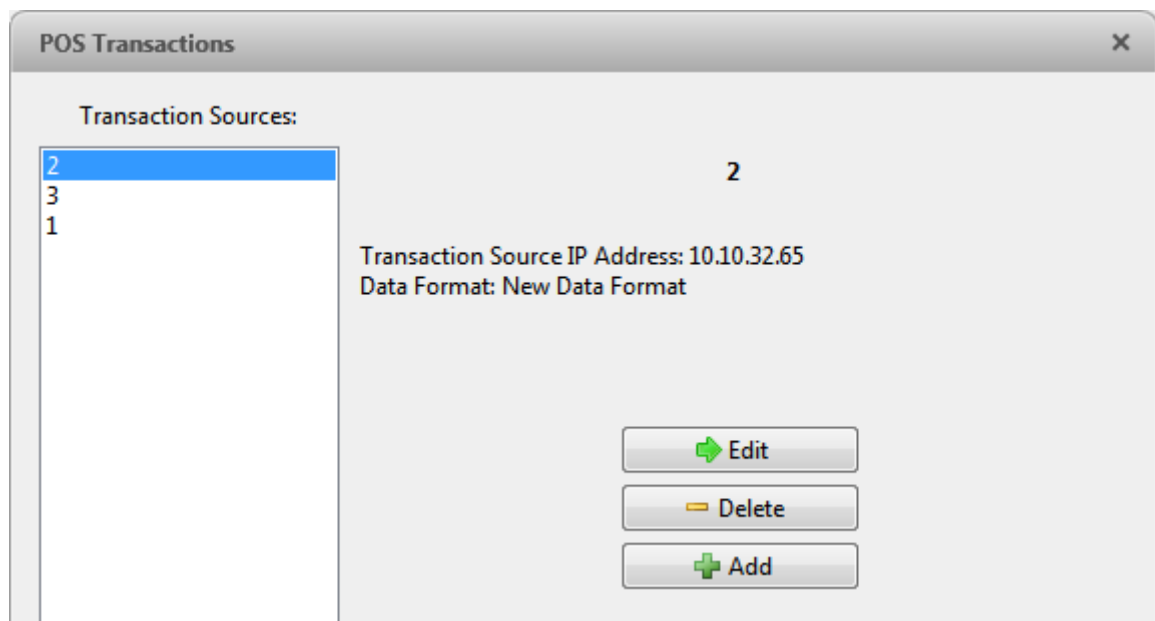





Figure A. POS Transactions dialog box

2. In the POS Transaction dialog box, select a POS transaction source then perform one of the following:
  - o To edit the POS transaction source, click . Go through the POS Transaction Setup wizard and make the required changes on each page. On the last page, click  **Finish** to save your changes. Refer to [Adding a POS Transaction Source](#) for details about the editable options.
  - o To delete the POS transaction source, click . When the confirmation dialog box appears, click **OK**.

# Camera Settings

Camera settings are used to adjust video quality and set up devices that can be connected to cameras. These settings include adjusting camera display quality, video compression and image rate, plus digital and audio inputs/outputs.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

## General

Use the camera General dialog box to set the camera's identity and configure the camera's PTZ settings. You can also reboot the camera through the General dialog box.

### Setting the Camera's Identity

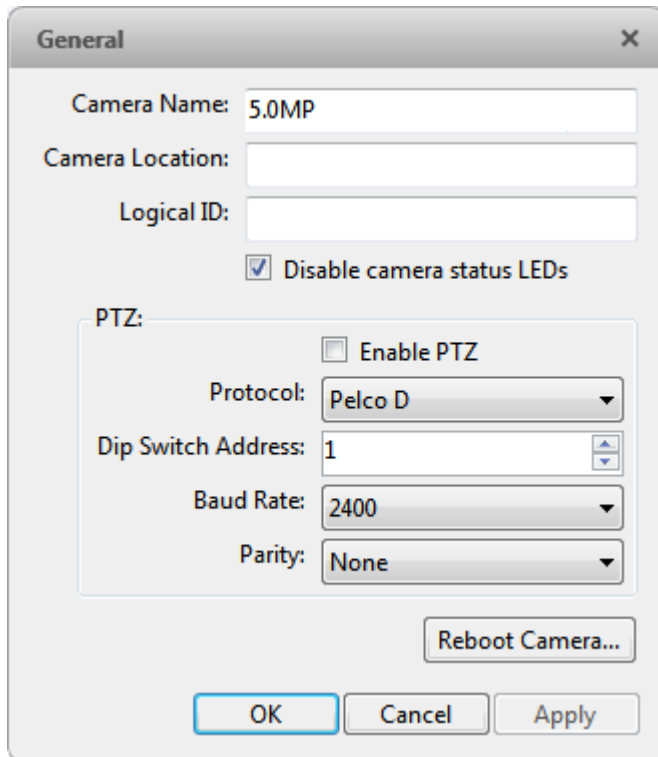
In the camera General dialog box, you can give the camera a name, describe the camera's location, and give the camera a logical ID. The logical ID is needed to control the camera through keyboard commands and joystick commands.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

1. In the Setup tab, select the camera then click







The image shows a 'General' dialog box with the following fields and options:

- Camera Name: 5.0MP
- Camera Location: (empty)
- Logical ID: (empty)
- Disable camera status LEDs
- PTZ:
  - Enable PTZ
  - Protocol: Pelco D
  - Dip Switch Address: 1
  - Baud Rate: 2400
  - Parity: None
- Reboot Camera... button
- OK, Cancel, and Apply buttons at the bottom.

Figure A. General dialog box

2. In the **Camera Name** field, give the camera a meaningful name to help you identify the camera. By default, the camera model number is used as the camera's name.
3. In the **Camera Location** field, describe the camera's location.
4. In the **Logical ID** field, enter a unique number to allow the application and integrations to identify this camera.
5. To disable the LEDs on the camera, select the **Disable camera status LEDs**. This may be required if the camera is installed in a covert location.
6. If the camera has a motorized zoom and focus lens, the **Enable PTZ Controls** check box is displayed. See [Configuring PTZ](#) for more information.
7. Click **OK**.

## Configuring PTZ

Use the camera General dialog box to enable and configure the motorized pan, tilt, zoom (PTZ) devices that may be connected to Avigilon cameras. PTZ devices are connected to Avigilon cameras through the RS-485 inputs.

Third-party PTZ camera controls cannot be configured through the Avigilon Control Center software.



1. In the Setup tab, select the camera then click .
2. In the PTZ area, select the **Enable PTZ** check box.

**Note:** If the following options are not displayed, the camera only has a motorized zoom and focus lens that can be controlled through the PTZ controls pane. Other PTZ controls will not be available.

3. In the **Protocol** drop down list, select the appropriate PTZ protocol. The available protocols include:
  - o American Dynamics Sensormatic
  - o AXSYS
  - o AXSYS DCU
  - o Ernitec ERNA
  - o Honeywell Diamond
  - o Kalatel ASCII
  - o Pelco D
  - o Pelco P
  - o TEB Ligne
  - o Vicon extended
  - o Vicon normal
  - o Videotec Legacy
  - o Videotec MACRO
4. Enter the **Dip Switch Address**, **Baud Rate** and **Parity** for the PTZ device.
5. Click **OK**.

Once PTZ has been configured, you can use the camera's PTZ controls while you watch the camera's live video stream. See [Controlling PTZ Cameras](#) for more information.

## Rebooting the Camera

You can restart all Avigilon cameras through the camera's General dialog box. This feature is not available for third party cameras.



1. In the Setup tab, select the camera then click .
2. Click **Reboot Camera**.

The camera disconnects from the Avigilon Control Center and shuts down. When the camera starts up again, the camera should automatically reconnect with the Avigilon Control Center.

## Network

Use the camera Network dialog box to change how a camera connects to the server network.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.



1. In the Setup tab, select the camera then click .
2. In the Network dialog box, select how the camera obtains an IP address:

Figure A. Network dialog box

- o **Obtain an IP address automatically:** select this option for the camera to connect to the network through an automatically assigned IP address.

The camera will attempt to obtain an address from a DHCP server. If this fails, the camera will obtain an address through Zero Configuration Networking (Zeroconf) and select an address in the 169.254.0.0/16 subnet.

- **Use the following IP address:** select this option to manually assign a static IP address for the camera.

Enter the **IP Address**, **Subnet Mask** and **Gateway** you want the camera to use.

3. Select the **Control Port** for connecting to the camera. This port is also used for manually discovering the camera on the network.
4. Select the **Enable Multicast** check box to enable multicast streaming from the camera. You must enable multicast to set up redundant recording to multiple servers.

Use the default generated **IP Address**, **TTL** and **Base Port**, or enter your own values.

5. Click **OK**.

## Image and Display


Use the Image and Display dialog box to control a camera's display settings for live and recorded video.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

## Changing Image and Display Settings

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.



1. In the Setup tab, select the camera then click  .
2. In the Image and Display dialog box, make the required changes to adjust the camera's image settings. A preview of your changes are displayed in the image panel.

**Tip:** Use the **Maximum Exposure**, **Maximum Gain** and **Priority** options to control low light behavior.

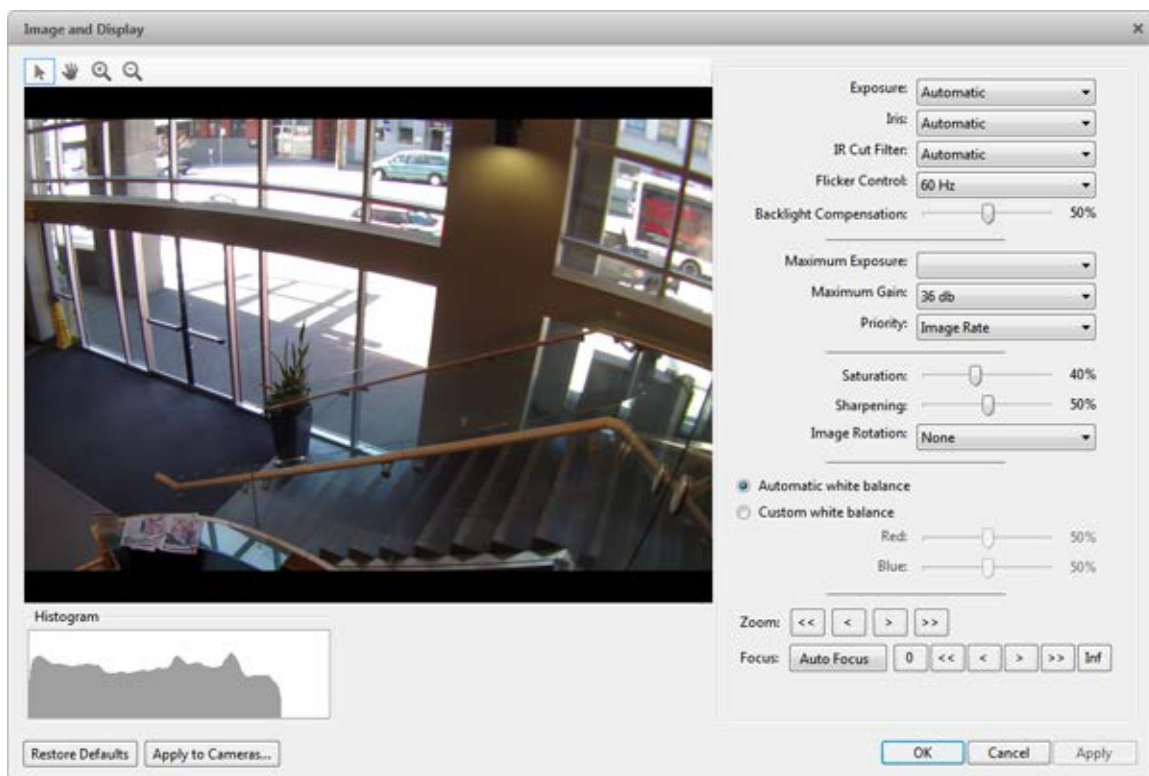


Figure A. Image and Display dialog box

Option	Description
<b>Exposure</b>	<p>You can allow the camera to control the exposure by selecting <b>Automatic</b>, or you can set a specific exposure rate.</p> <p><b>Note:</b> Increasing the manual exposure time may affect the image rate.</p>
<b>Iris</b>	<p>You can allow the camera to control the iris by selecting <b>Automatic</b>, or you can manually set it to <b>Open</b> or <b>Closed</b>.</p>
<b>IR Cut Filter</b>	<p>You can allow the camera to control the infrared cut filter by select <b>Automatic</b>, or set the camera to <b>Color</b> or <b>Monochrome</b> mode.</p>
<b>Flicker Control</b>	<p>If your video image flickers because of the fluorescent lights around the camera, you can reduce the effects of the flicker by setting the Flicker Control to the same frequency as your lights. Generally, Europe is <b>50Hz</b> and North America is <b>60Hz</b>.</p>
<b>Backlight Compensation</b>	<p>If your scene has areas of intense light that cause the overall image to be too dark, move the <b>Backlight Compensation</b> slider</p>

	until you achieve a well exposed image.
<b>Enable Wide Dynamic Range</b>	You can enable automatic color adjustments through Wide Dynamic Range (WDR). This allows the camera to adjust the video image to accommodate scenes where bright light and dark shadow are clearly visible.
<b>Maximum Exposure</b>	<p>You can limit the automatic exposure setting by selecting a maximum exposure level.</p> <p>By setting a maximum exposure level for low light situations, you can control the camera's exposure time to let in the maximum amount of light without creating blurry images.</p>
<b>Maximum Gain</b>	<p>You can limit the automatic gain setting by selecting a maximum gain level.</p> <p>By setting a maximum gain level for low light situations, you can maximize the detail of an image without creating excessive noise in the images.</p>
<b>Priority</b>	<p>You can set <b>Image Rate</b> or <b>Exposure</b> as the priority.</p> <p>When set to <b>Image Rate</b>, the camera will maintain the set image rate as the priority, and will not adjust the exposure beyond what can be recorded for the set image rate.</p> <p>When set to <b>Exposure</b>, the camera will maintain the exposure setting as the priority, and will override the set image rate to achieve the best image possible.</p>
<b>Saturation</b>	You can adjust the video's color intensity by moving the <b>Color Saturation</b> slider until the video image meets your requirements.
<b>Sharpening</b>	You can adjust the video sharpness to make the edges of objects more visible. Move the <b>Sharpening</b> slider until the video image meets your requirements.
<b>Image Rotation</b>	You can change the rotation of captured video. You can rotate the video 90, 180 or 270 degrees clockwise.
<b>White Balance</b>	<p>You can control white balance settings to adjust for differences in light.</p> <p>You can allow the camera to control the white balance by selecting <b>Automatic</b>, or select <b>Custom</b> and manually set the <b>Red</b> and <b>Blue</b> settings.</p>


- To focus the camera, see [Focusing the Camera Lens](#).

4. Click **Apply to Cameras...** to apply the same settings to other cameras of the same model.
5. Click **OK**.

## Zooming and Focusing the Camera Lens

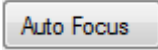



If the camera has remote zoom and focus capabilities, you can control the camera's zoom and focus through the Image and Display dialog box.






1. In the Setup tab, select the camera then click .
2. If the camera has a built-in auto focus feature, you can choose one of the following:
  - o **Continuous Focus:** the camera will automatically focus itself whenever the scene changes. Skip the following step.
  - o **Manual Focus:** you can manually focus the camera through the **Focus** buttons. Once the focus is manually set, it will not change.
3. While you watch the preview in the image panel, complete the following steps to zoom and focus the camera:

**Tip:** For Avigilon HD Professional cameras, the lens must be set to auto-focus (AF) mode on the camera. If the camera does not detect the lens, the **Focus** buttons are not displayed.

2.
  - a. Use the **Zoom** buttons to zoom in to the distance you want to focus.
  - b. In the **Iris** drop down list, select **Open**. When the iris is fully open, the camera's depth of field is the shortest.
  - c. Use the **Focus** buttons until the image becomes clear.

Button	Description
	The camera will automatically focus once.
	Focused as close to zero as possible
	Large step toward zero
	Small step toward zero

	Small step toward infinity
	Large step toward infinity
	Infinity

3. Click **Apply to Cameras...** to apply the same settings to other cameras of the same model.
4. Click **OK**.


## Compression and Image Rate

Use the camera Compression and Image Rate dialog box to modify the camera's frame rate and image quality settings for sending image data over the network.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

For more information about the supported compression technologies, see [Understanding Compression Technologies for HD and Megapixel Surveillance](#) white paper on the Avigilon website.



1. In the Setup tab, select the camera and click  .

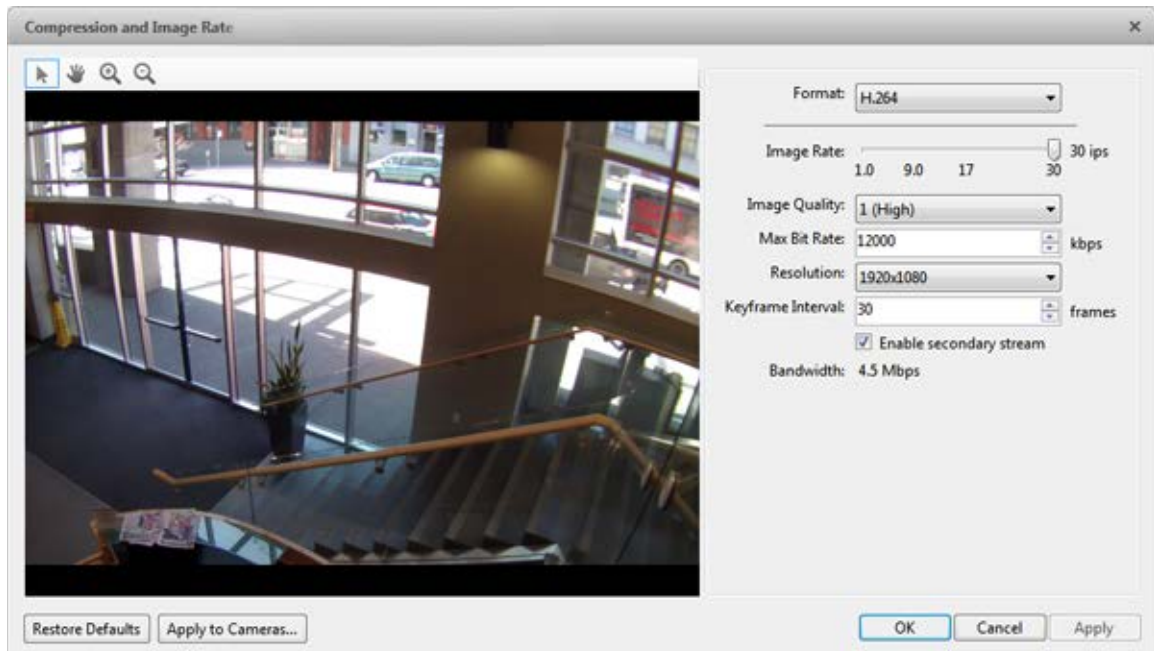




Figure A. Compression and Image Rate dialog box.

The Bandwidth area gives an estimate of the bandwidth used by the camera with the current settings. Adjust the settings as required.

**Note:** For cameras capable of maintaining multiple streams, the settings in this dialog box only affect the primary stream.

2. In the **Format** drop down list, select the preferred streaming format.
3. In the **Image Rate** bar, move the slider to select the number of images per second (ips) you want the camera to stream over the network.

For H.264 cameras and encoders, the image rate setting must be divisible by the maximum image rate. If you set the slider between two image rate settings, the application will round to the closest full number.

4. In the **Image Quality** drop down list, select an image quality setting.

Image quality setting of **1** will produce the highest quality video and require the most bandwidth. The default setting is **6**.

5. In the **Max Bit Rate** drop down list, select the maximum bandwidth the camera can use in kilobits per second (kbps).
6. In the **Resolution** drop down list, select the preferred image resolution.
7. In the **Keyframe Interval** drop down list, enter the preferred number of frames between each keyframe.

It is recommended that you have at least one keyframe per second. So, if the image rate is set to 30 ips, you should enter **30** for the Keyframe Interval setting.


8. If your camera supports multiple video streams, you can select the **Enable secondary stream** check box.

When enabled, the secondary stream is a lower resolution video stream that is used by Avigilon's HDSM feature to maximize bandwidth and storage efficiencies.

9. Click **Apply to Cameras...** to apply the same settings to other cameras of the same model.
10. Click **OK**.

## Image Dimensions

Use the Image Dimension dialog box to set the image dimensions for the camera. You can crop the video image to help reduce bandwidth and increase the maximum image rate.

1. In the Setup tab, select the camera then click .
2. In the Image Dimensions dialog box, adjust the image dimensions by performing one of the following:
  - o Drag the edges of the image until the video is cropped to fit your requirements.
  - o Change the values for the **Top**, **Left**, **Width**, and **Height** field.

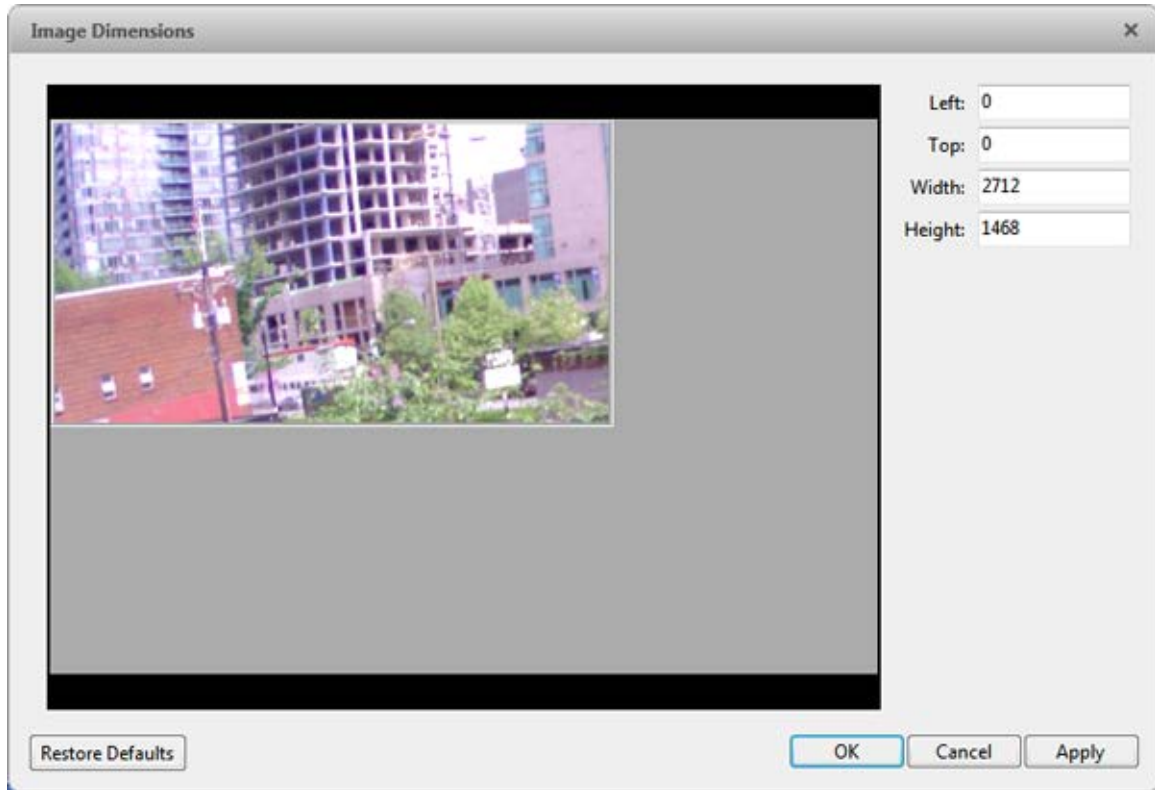


Figure A. Image Dimensions dialog box


3. Click **OK**.






## Motion Detection

In the Motion Detection dialog box, you can define specific motion detection areas and configure the camera's sensitivity and threshold for motion.

### Selecting an Area to Detect Motion

In the Motion Detection dialog box, you can set the green motion detection areas in the camera's field of view. Motion detection is ignored in the areas not highlighted in green.

1. In the Setup tab, select the camera then click .
2. In the Motion Detection dialog box, use the tools above the image panel to define the green motion detection area:

- : select this button then draw green rectangles to define the motion detection areas. You can draw multiple rectangles to create your motion detection area.
- : select this button and draw rectangles to erase sections from the motion detection area.
- : select this button and manually draw motion detection areas with your mouse. This tool allows you to be very specific and highlight unusual shapes.
- : click this button to highlight the entire image panel for motion detection.
- : click this button to clear the image panel of all motion detection areas.

**Tip:** Avoid areas with continuous motion, like a TV or computer monitor, so that the camera is not constantly detecting unimportant motion events.

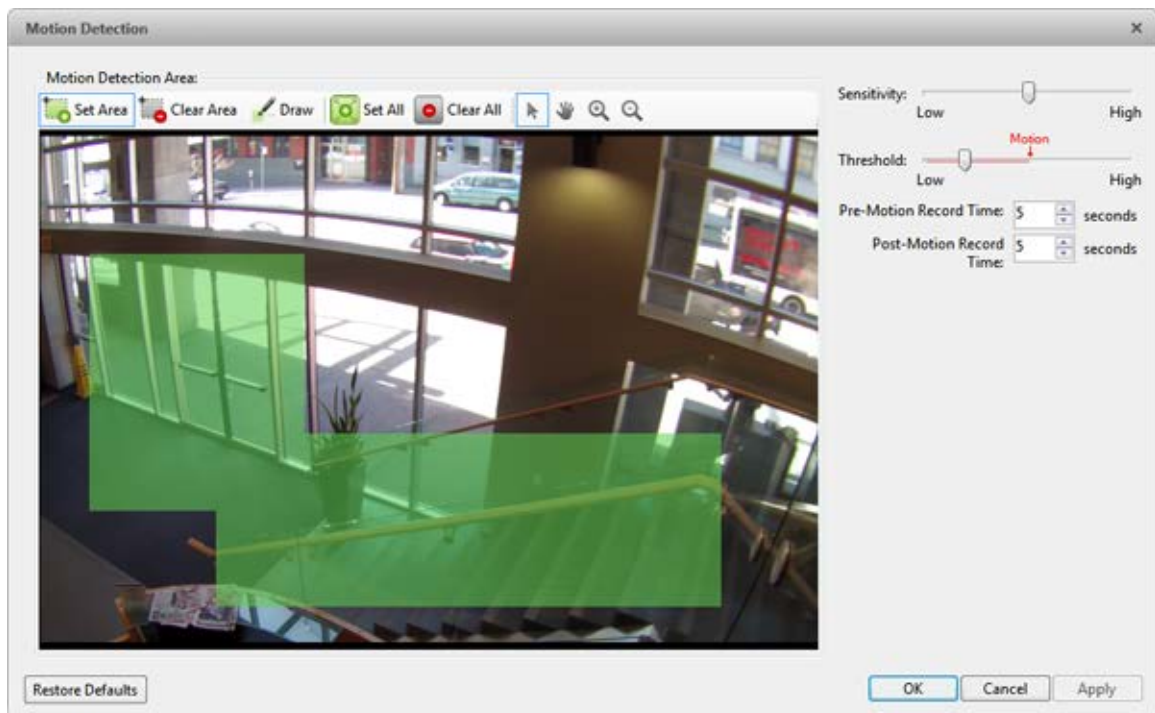


Figure A. Motion Detection dialog box

3. Click **OK**.

To define the sensitivity and threshold of the motion detection area, see [Controlling Motion Sensitivity and Threshold](#).

## Controlling Motion Sensitivity and Threshold

In the Motion Detection dialog box, you can control the camera's sensitivity and threshold for motion. You can also define how much time should be recorded before and after each motion event.

1. In the Setup tab, select the camera then click

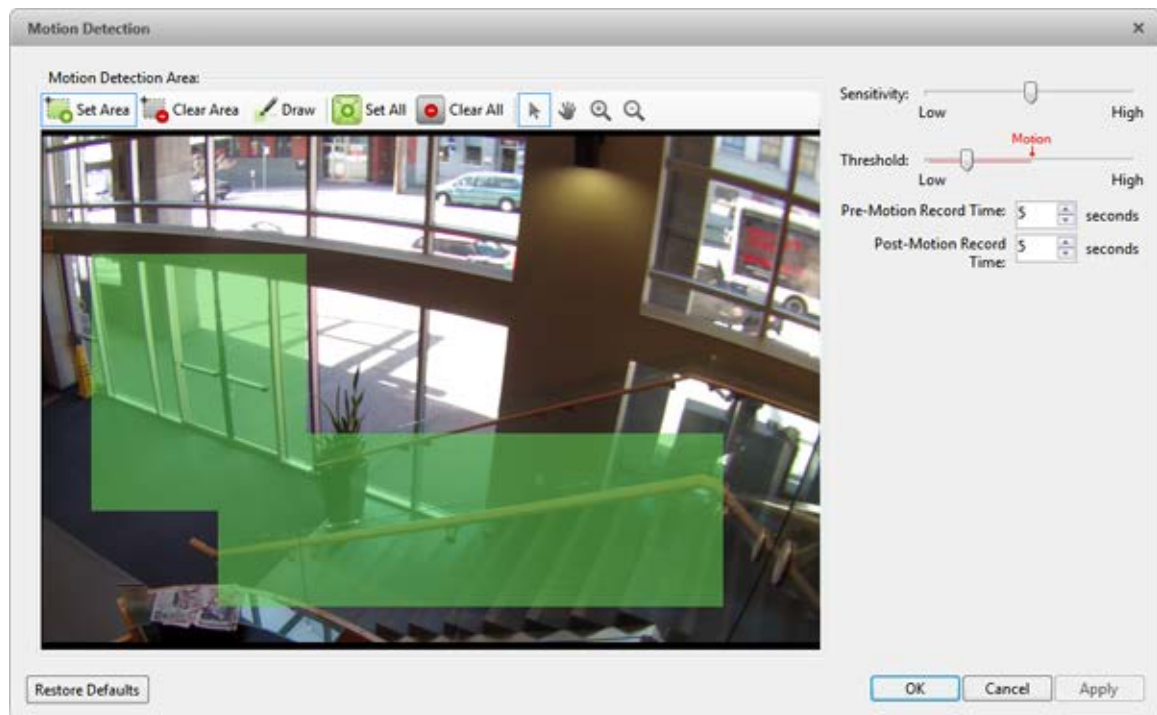


Figure A. Motion Detection dialog box

2. Move the **Sensitivity** slider to adjust how much each pixel must change before it is considered in motion.

When the sensitivity is High, even small movements are detected - like dust floating immediately before the camera lens.

3. Move the **Threshold** slider to adjust how many pixels must change before the image is considered to have motion.

When the threshold is High, only large motions are detected - like a truck driving across the scene.

**Tip:** The **Motion** indicator above the Threshold slider will move to indicate how much motion is occurring in the current scene. Only when the motion indicator moves to the right of the Threshold marker will the camera note the motion.

4. In the **Pre-Motion Record Time** and **Post-Motion Record Time** boxes, specify how long video is recorded before and after the motion event.
5. Click **OK**.



## Privacy Zones

You can set privacy zones in the camera's field of view to block out areas that you do not want to see or record, like bathroom entrances and other private areas.

### Adding a Privacy Zone

**Note:** You can add no more than 4 privacy zones per camera.



1. In the Setup tab, select the camera then click  .
2. In the Privacy Zones dialog box, click  and a green box will appear on the image panel.

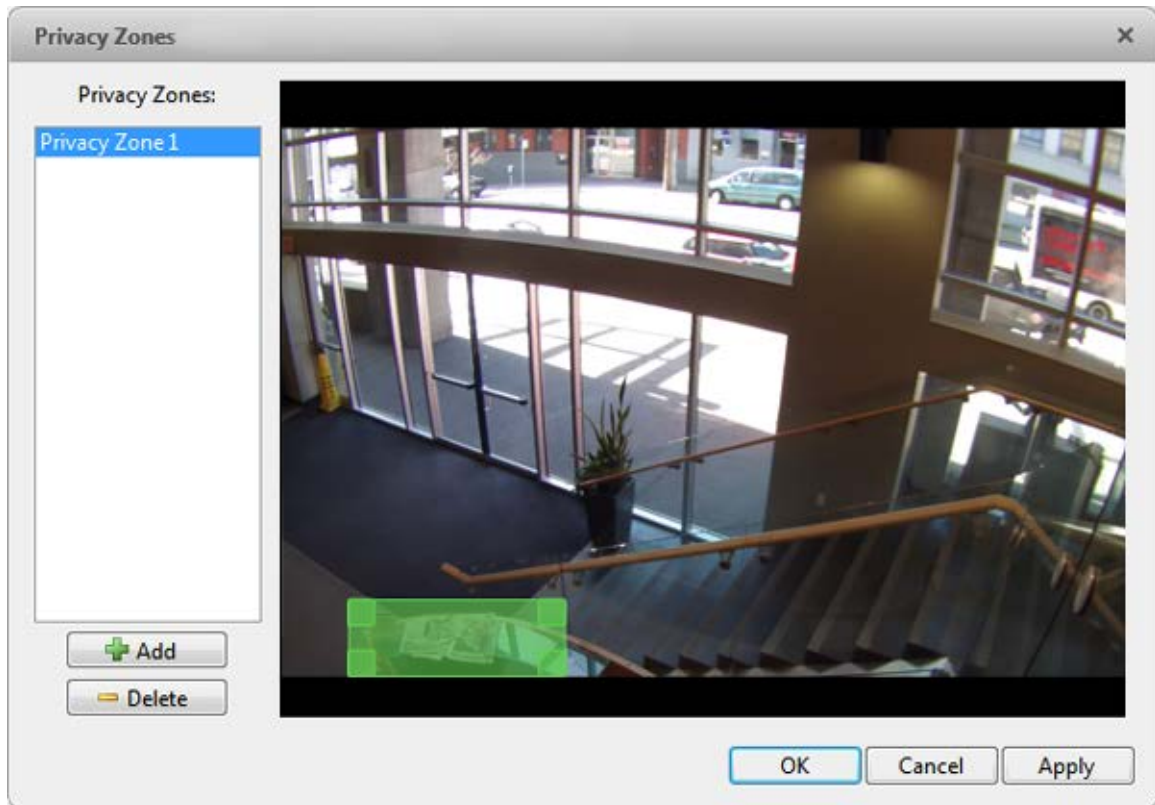




Figure A. Privacy Zones dialog box

3. Move and resize the green box until it covers the area you want to block out.
4. Click **OK**.


## Editing and Deleting a Privacy Zone

1. In the Setup tab, select the camera then click .
2. In the Privacy Zones dialog box, select a privacy zone from the Privacy Zone list and perform one of the following:
  - o To edit the privacy zone, adjust the green box on the image.
  - o To delete the privacy zone, click .
3. Click **OK** to save your changes.

## Manual Recording

When you trigger manual recording in an image panels, you are telling the camera to record video outside of its recording schedule. Manual recording continues until it is stopped, or until the maximum manual recording time is reached.

To set the maximum manual recording time, perform the following:

1. In the Setup tab, select the camera then click .

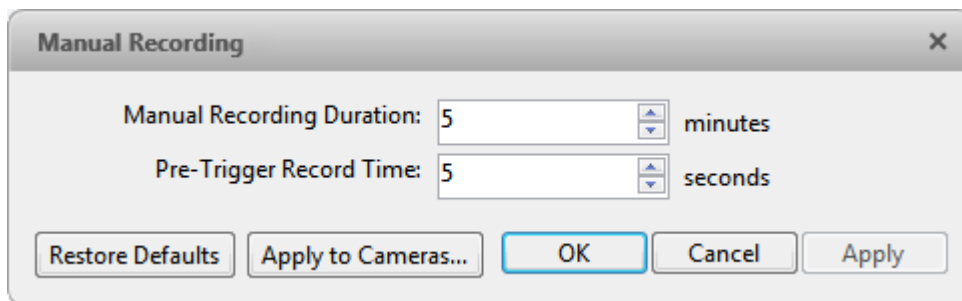


Figure A. Manual Recording dialog box

2. Specify the following:
  - o **Manual Recording Duration:** enter how long the camera should record for if recording is not manually stopped.
  - o **Pre-Trigger Record Time:** enter the amount of time video is recorded before manual recording is activated.
3. Click **Apply to Cameras...** to apply the same settings to other cameras of the same model.
4. Click **OK**.


To manually record video, see [Triggering Manual Recording](#).

## Digital Inputs and Outputs

Use the Digital Inputs and Outputs dialog box to set up external digital input and output devices that are connected to the camera.

The external devices can be used to create alarms or trigger recording events and specific actions through the rules engine. See [Rules](#) for more information.

## Setting Up Digital Inputs

1. In the Setup tab, select a camera then click .
2. In the Digital Inputs area, select an input.

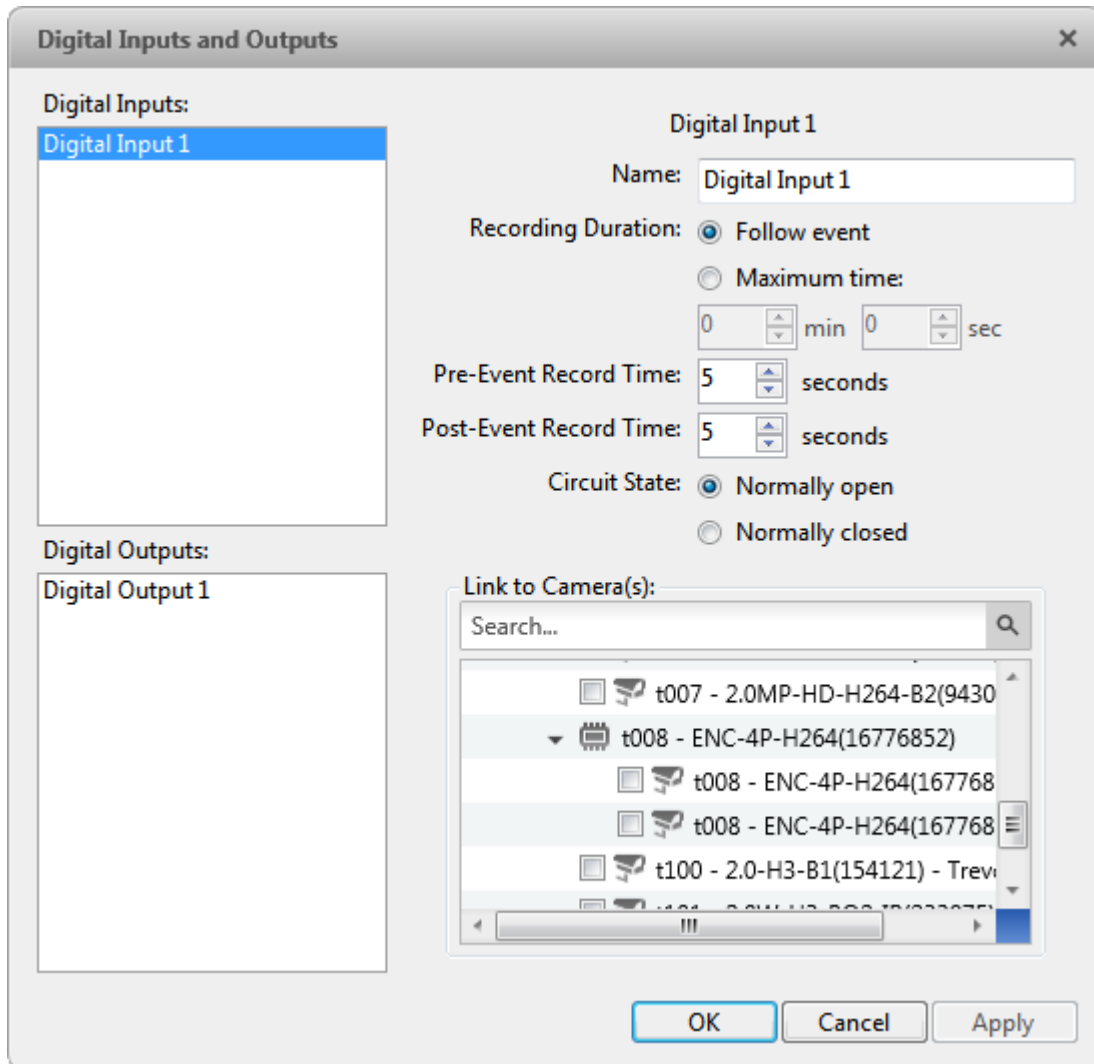


Figure A. Digital Inputs and Outputs dialog box: Digital Inputs Settings

3. Enter a name for the digital input.
4. In the Recording Duration area, select one of the following:
  - o Select **Follow Event** to record the entire digital input event.
  - o Select **Maximum Time** to limit the recording time.
5. Enter how long video is recorded before and after the digital input event.



6. Select the digital input's default Circuit State.
7. Select the cameras that should be linked to this digital input.


If the Recording Schedule is configured to record digital inputs, the cameras selected in the Link to Camera(s) area are used to record the events triggered by this digital input.

8. Click **OK**.

## Setting Up Digital Outputs

Once a digital output is configured, you can manually trigger the digital output in an image panel. See [Triggering Digital Output](#) for more information.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

1. In the Setup tab, select a camera then click .
2. In the Digital Outputs area, select an output.

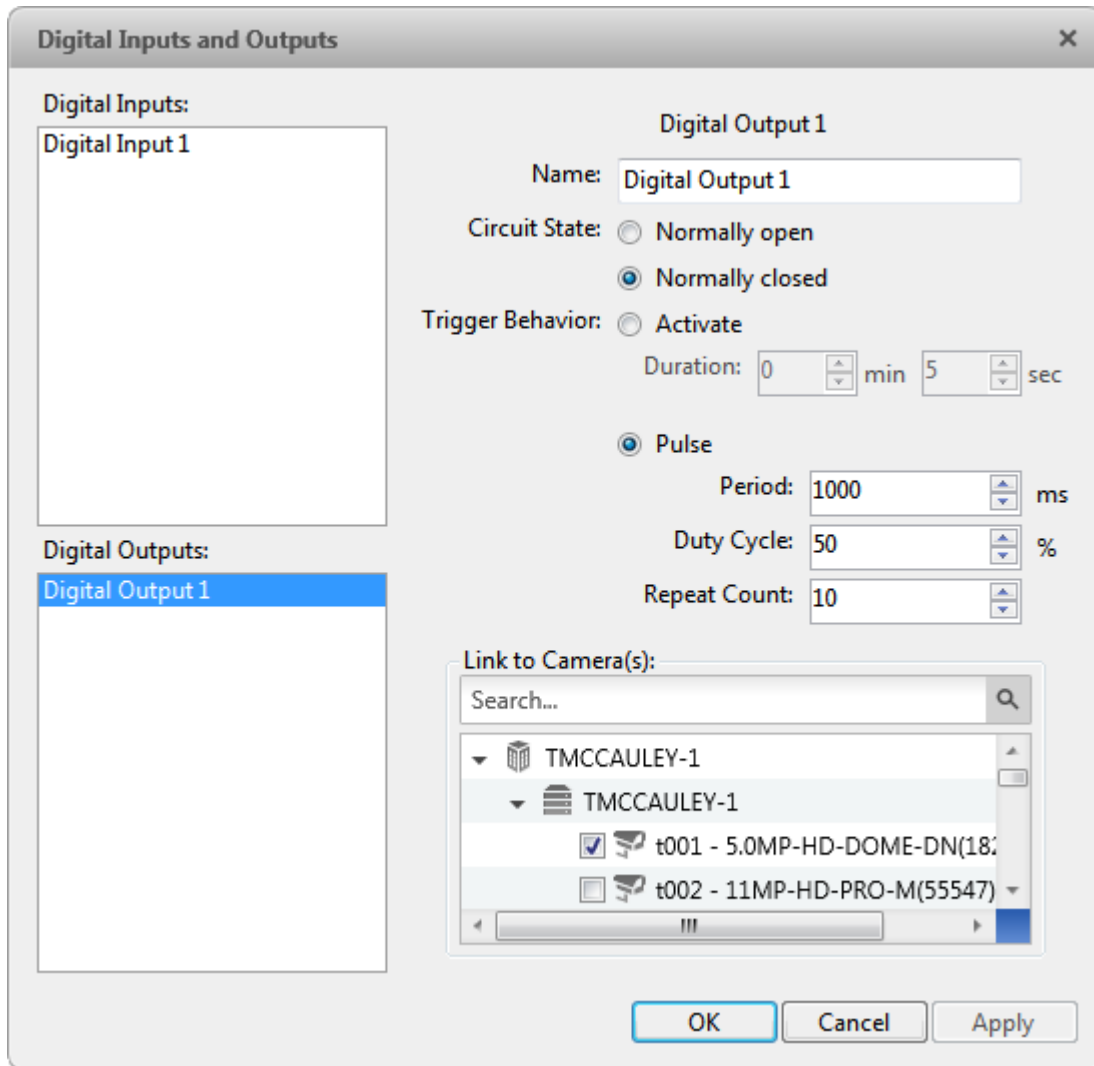


Figure A. Digital Inputs and Outputs dialog box: Digital Output Settings

3. Enter a name for the digital output.
4. Select the digital output's default Circuit State.
5. The Trigger Behavior options define what occurs when the digital output is activated.
  - o Select **Activate** to enable the digital output in continuous mode. The **Duration** fields allow you to specify how long the digital output should be active for.
  - o Select **Pulse** to enable the digital output in pulse mode. Specify the **Period**, **Duty Cycle**, and **Repeat Count** for the pulse.
6. Select the cameras that should be linked to this digital output.

When the digital output is triggered, all the cameras linked to this digital output will begin recording.


7. Click **OK**.

## Microphone

Use the Microphone dialog box to change the settings for any audio input device that is connected to the camera. You can also link the audio to other cameras.

To use this feature, a microphone must be connected to the camera.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

1. In the Setup tab, select the camera then click .

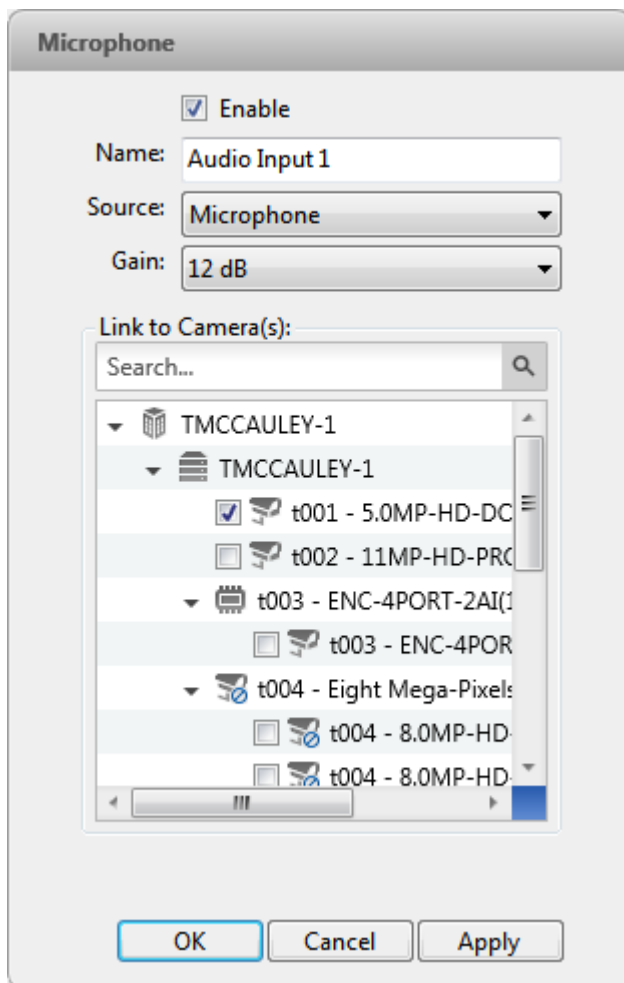


Figure A. Microphone dialog box


2. Select the **Enable** check box to enable audio recording from microphones connected to the camera.
3. Enter a name for the microphone.
4. In the **Source** drop down list, select the audio input source.
5. In the **Gain** drop down list, select the amount of analog gain that is applied to the audio input. The higher the **dB** setting, the louder the volume.
6. In the Link to Camera(s) area, select the cameras that need to be linked to this audio.
7. Click **OK**.

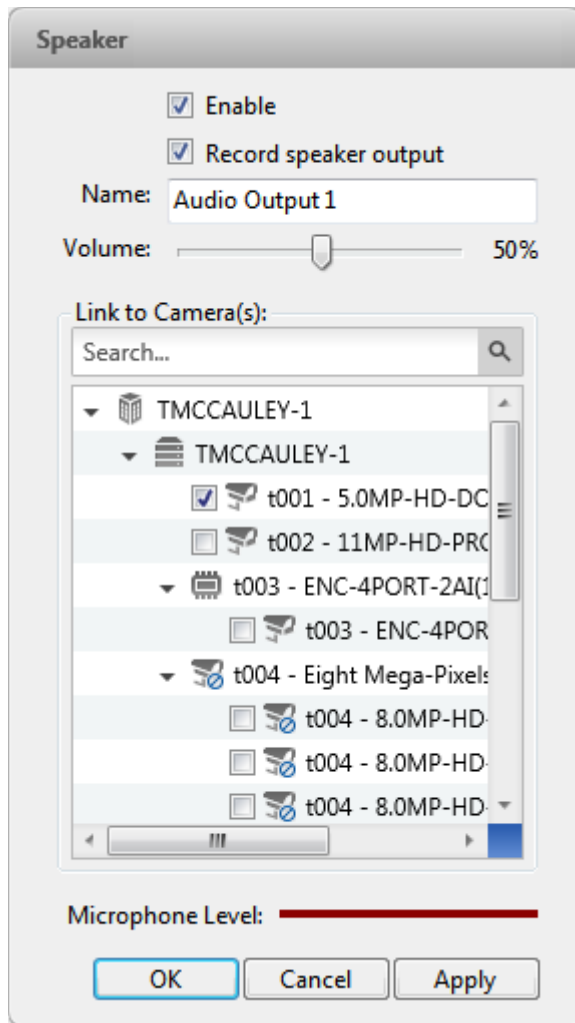
## Speaker

Use the Speaker dialog box to change the settings for any audio output device that is connected to the camera. You can also link the audio to other cameras.

To use this feature, speakers must be connected to the camera and a microphone must be connected to your local client.

**Note:** The dialog box may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

1. In the Setup tab, select the camera then click  .



2.

Figure A. Speaker dialog box

3. Select the **Enable** check box to enable audio broadcasting. Speakers connected to the camera would broadcast audio from the microphone that is connected to the local client.
4. Select the **Record Speaker** check box to record what is broadcast.
5. Enter a name for the speaker.
6. The **Volume** slider controls the volume of the speakers.
7. In the Link to Camera(s) area, select the cameras that need to be linked to the speakers.
8. To test the microphone level, speak into the microphone. The red bar will move to show the audio input level.
9. Click **OK**.

If you want to enable two-way audio, see [General Settings](#) for the local client.


# Client Settings

Client settings are used to set your preferences for your local copy of the Client software. This includes saving your password, setting the language, saving your last window layout, configuring your joystick and manually adding and removing Sites.

## General Settings

Use the General settings to set your local application preferences. Any changes you make will only affect this copy of the Client software.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

1. In the top-right corner, select  > **Client Settings**.
2. In the General tab, make any required changes:

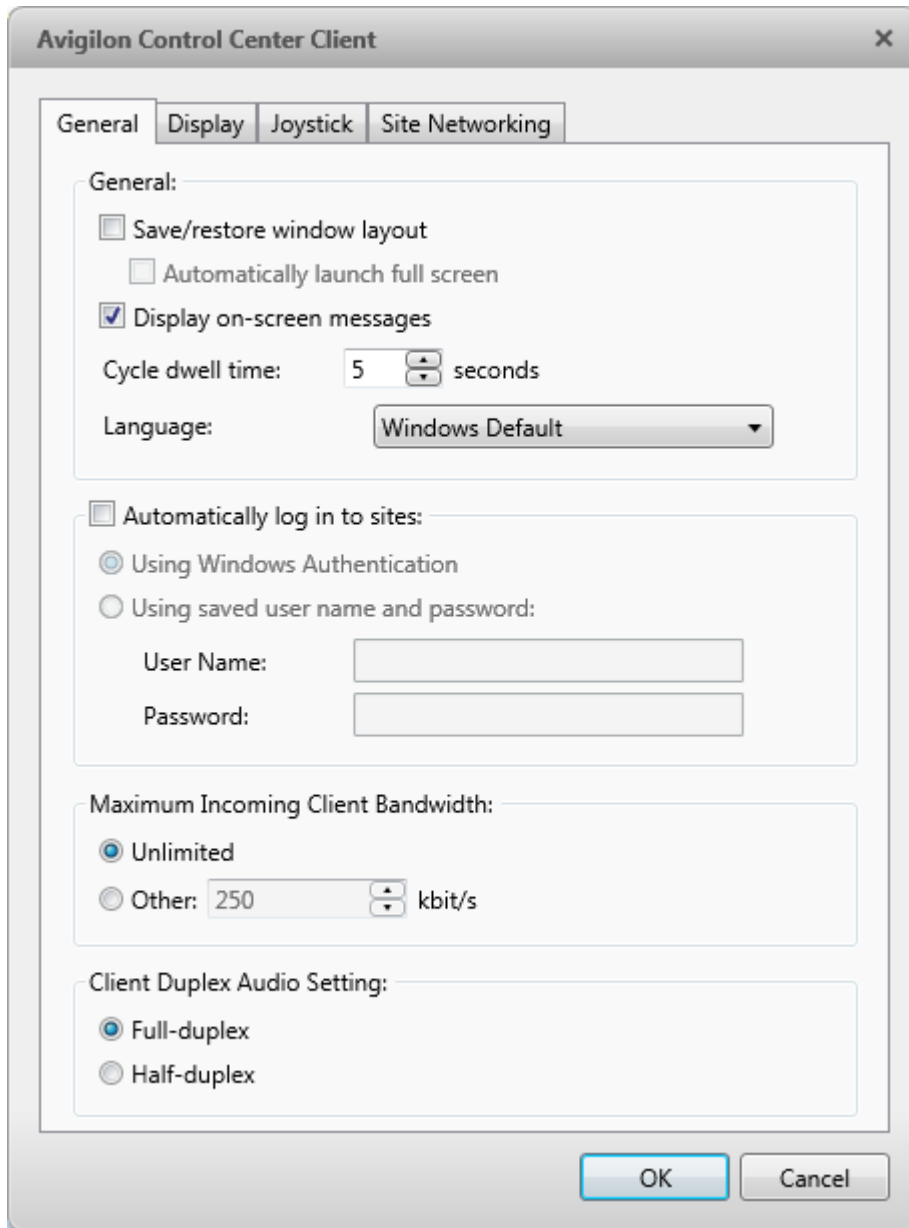


Figure A. Client Settings dialog box

- **Save/restore window layout:** select this check box if you want the application to remember your layout preferences.
- **Automatically launch full screen:** select this check box if you want the application to automatically launch in full screen each time it starts.
- **Display on-screen messages:** select this check box if you want the application to display system messages. System messages are listed in the red box at the top-right corner of the application window - click the red box to see the messages.

System messages notify you of Site events, system events and possible device connection issues.

If the check box is cleared, all event notifications are hidden.

- **Cycle dwell time:** enter the number of seconds the application waits before it cycles to a different View tab. See [Cycling Through Views](#) for more information.
- **Language:** select a language from the drop down list to change the application language. Select **Windows Default** for the application to use the same language as the operating system.
- **Automatically log in to sites:** select this check box to automatically login to all Sites that you have access to. Select the type of login you use:
  - Select **Windows Authentication** if you use your Windows login to access Sites.
  - Select **Using saved user name and password** if you use your Avigilon Control Center username and password.
- In the Maximum Incoming Client Bandwidth area, you can set how much bandwidth is received by the client. This would include video streaming.

You can select **Unlimited**, or **Other** and specify the maximum bandwidth allowance in kilobits per second (kbits/s).

- In the Client Duplex Audio Settings area, decide if you want to enable two-way audio. This allows people in the video to talk with the operator monitoring the video.

You have the option of **Full-duplex** audio, which allows simultaneous communication; or **half-duplex**, which only allows communication from one side at a time. To use this feature, you need to setup microphones and speakers to cameras. See [Microphone](#) and [Speaker](#) for more information.

3. Click **OK** to save your changes.

## Adjusting Video Display

You can adjust the Display settings to improve how video is displayed on your monitor.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

1. In the top-right corner of the application window, select  > **Client Settings > Display**.



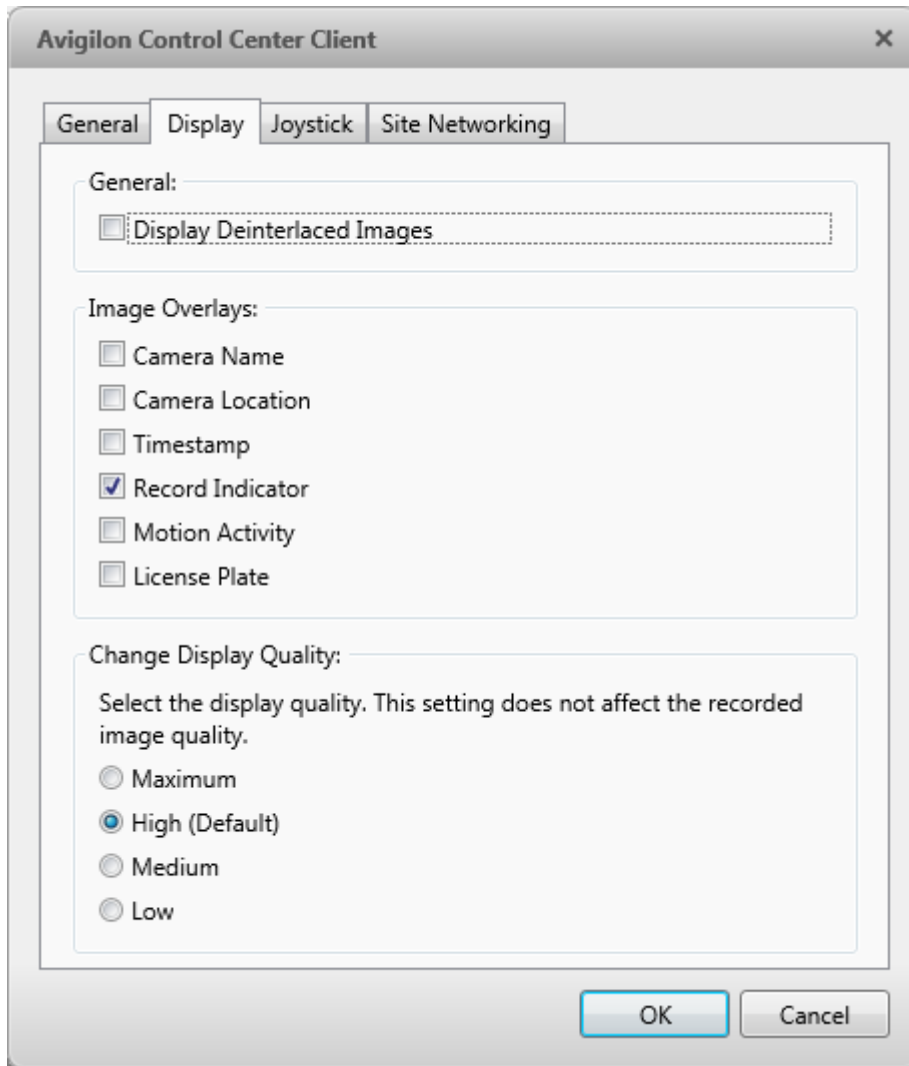


Figure A. Display Settings

2. Perform any of the following procedures to adjust how video is displayed in image panels.




### Displaying Analog Video in Deinterlaced Mode

Select the **Display Deinterlaced Images** check box if the analog video you are watching is showing interlacing artifacts. This setting will help improve video image and smooth out some of the artifacts.

### Displaying Image Overlays

Select any of the Image Overlays options to set the type of information that is displayed over video.

Option	Description
--------	-------------

<b>Camera Name</b>	Displays the name assigned to the camera.
<b>Camera Location</b>	Displays the location assigned to the camera.
<b>Timestamp</b>	(Recorded video only) Displays the exposure timestamp for the video.
<b>Record Indicator</b>	<p>(Live video only) Displays the recording status of a camera.</p> <p>The recording status is indicated by the round icon on the top left corner of the image panel. The color of the icon shows the camera's recording status.</p> <ul style="list-style-type: none"> <li>▪ : recording triggered by a motion event</li> <li>▪ : recording</li> <li>▪ : not recording. Click this icon at any time to begin manual recording.</li> </ul>
<b>Motion Activity</b>	Highlights motion in red.
<b>License Plate</b>	<p>(Live video only) Displays license plate numbers as they are detected.</p> <p><b>Note:</b> This feature is only available if the License Plate Recognition feature is installed.</p>

## Changing Display Quality

If your computer does not have enough network bandwidth or processing power, you may not be able to watch video at its full image rate and full quality. You can bias the image panels to display video in high quality and low frame rate, or lower quality and high frame rate.

Select a higher setting if you need to see specific details or faces in the scene. Select a lower setting if it's more important to see moving events as they occur.

The Change Display Quality settings only affect the image panel display and does not affect the actual video quality or image rate between the camera and the server. So, you can review recorded footage later to confirm what you saw in the image panel.

In the Change Display Quality area, select one of the following options:

- **Maximum:** displays video at full resolution with the lowest image rate.
- **High (Default):** displays video at 1/4 resolution.
- **Medium:** displays video at 1/16 resolution.

- **Low:** displays video at 1/64 resolution with the highest image rate.

## Joystick

There are two types of joysticks supported by the application: standard Microsoft DirectX USB Joysticks and the Avigilon Professional Joystick Keyboard.

Access the Joystick settings to install the required drivers and configure your joystick options.

### Configuring an Avigilon Professional Joystick Keyboard

The Avigilon Professional Joystick Keyboard is a USB add-on that contains a joystick for controlling zoom and pan within image panels, a jog shuttle for controlling the Timeline, and a keypad programmed with the application's keyboard commands. Refer to [Keyboard Commands](#) for the keypad commands that control the application.

By default, the keyboard is installed in right-hand mode, change the Joystick settings to configure left-hand mode.

1. Connect the keyboard.
2. In the top-right corner, select  > **Client Settings > Joystick**.

If the keyboard is not automatically detected, an error message will appear. Click **Scan for Joysticks...**

Otherwise, the following option is displayed.

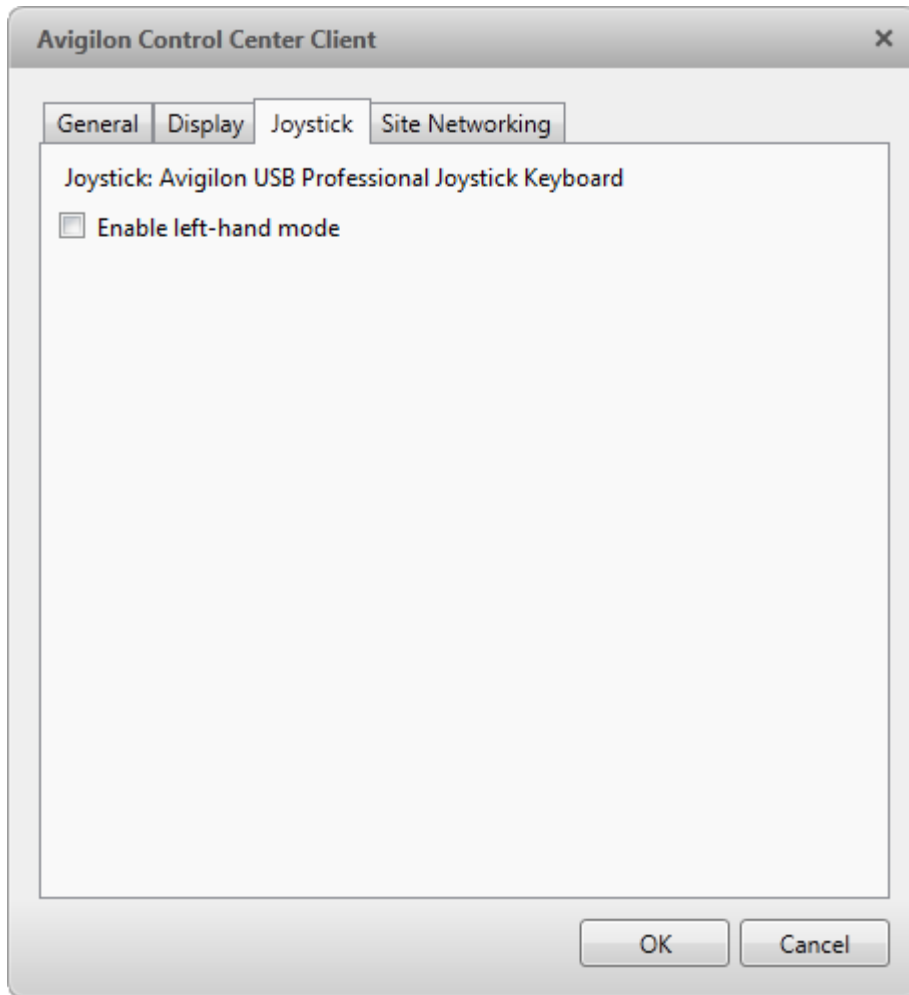


Figure A. Joystick dialog box

3. Select the **Enable left-hand mode** check box.
4. Click **OK**. The keyboard is now configured for left-hand mode.
5. Rotate the keyboard until the joystick is on the left and the jog shuttle is on the right. Reinstall the keypad cover with the View button labels at the top.

For more information about the Avigilon Professional Joystick Keyboard, see the installation guide included with the device.

## Configuring a Standard USB Joystick

Use the Joystick settings to configure the buttons used in your standard Microsoft DirectX USB joystick.

1. Connect the joystick.

- In the top-right corner, select  > **Client Settings** > **Joystick**.

If the joystick is not automatically detected, an error message will appear. Click **Scan for Joysticks...**

Otherwise, the following options are displayed.

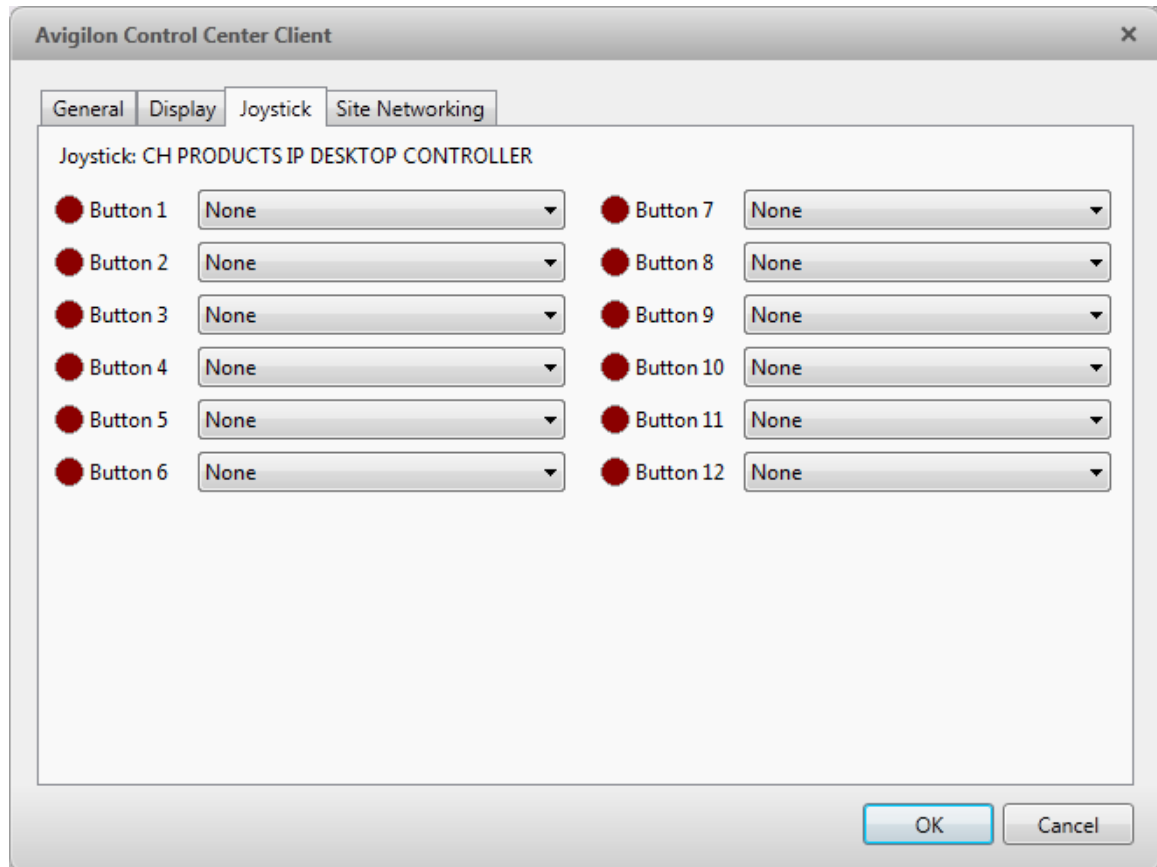


Figure A. Joystick dialog box

- Set up an action for each button on the joystick:
  - Press a button on the joystick and the button label is highlighted in the dialog box.
  - Select an action for the button from the drop down list.




Options include ways to control recorded video, control Views and image panels, activate instant replay, audio, snapshots and PTZ controls.
  - Repeat this procedure for each button on the joystick.
- Click **OK**.

## Discovering Sites

If your computer is on the same network segment (subnet) as a Site, that Site is automatically discovered and displayed in the System Explorer on the left side of the application window.

If the Site you want to access is not listed, it is because the Site is on a different subnet and must be manually discovered. There is no limit to the number of Sites that can be discovered by the Client software.

By default, when a server is first connected to the system, it is added as a server within a Site of the same name. If you need to locate a new server, you would search for its Site.

1. Open the Find Site dialog box.
  - o In the Log In dialog box, click .
  - o In the top-right corner, select  **Client Settings > Site Networking**. In the Site Networking tab, click .

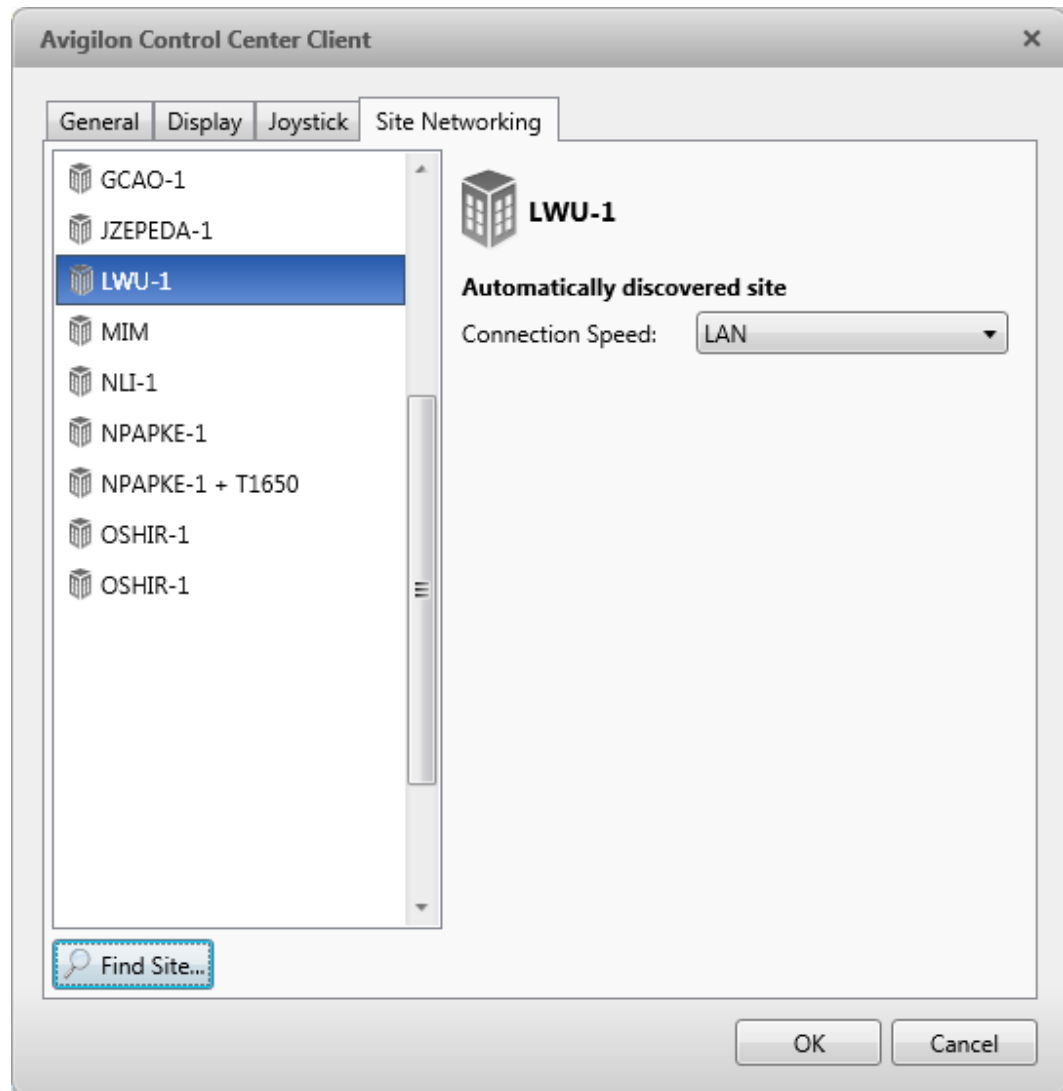


Figure A. Site Networking tab

2. In the dialog box, enter the **Hostname/IP Address** and the **Base Port** of the server in the Site you want to discover.

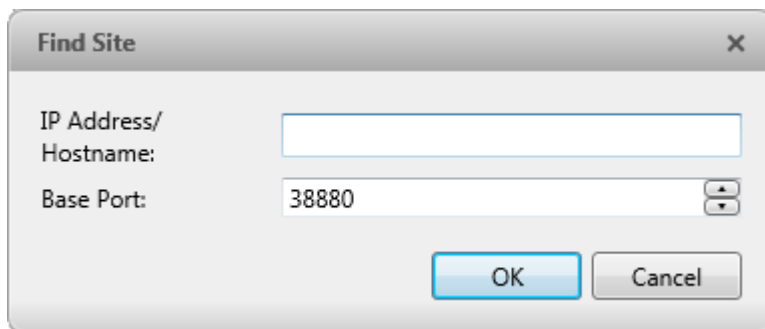


Figure B. Find Site dialog box

The base port is 38880 by default. You can change the base port number in the Avigilon Control Center Admin Tool. See the *Avigilon Control Center Server User Guide* for more information.

3. Click **OK**.

If the Site is found, it is automatically added to the Site list in the Site Networking tab.

If the Site is not found, check the following then try again:


- The network settings are configured correctly.
- The firewall is not blocking the application.
- The Avigilon Control Center Server software is running on the server you searched for in step 2.

## Managing Site Logs

The Site Log records events that occur in the Avigilon Control Center. This can be useful for tracking system usage and diagnosing issues.

You can filter the items displayed in the log and save the log to a separate file for sending to Avigilon support.

**Note:** The Site Log maintains a record of system events for as long as video data is available or 90 days, whichever is longer.

1. In the New Task menu, click .



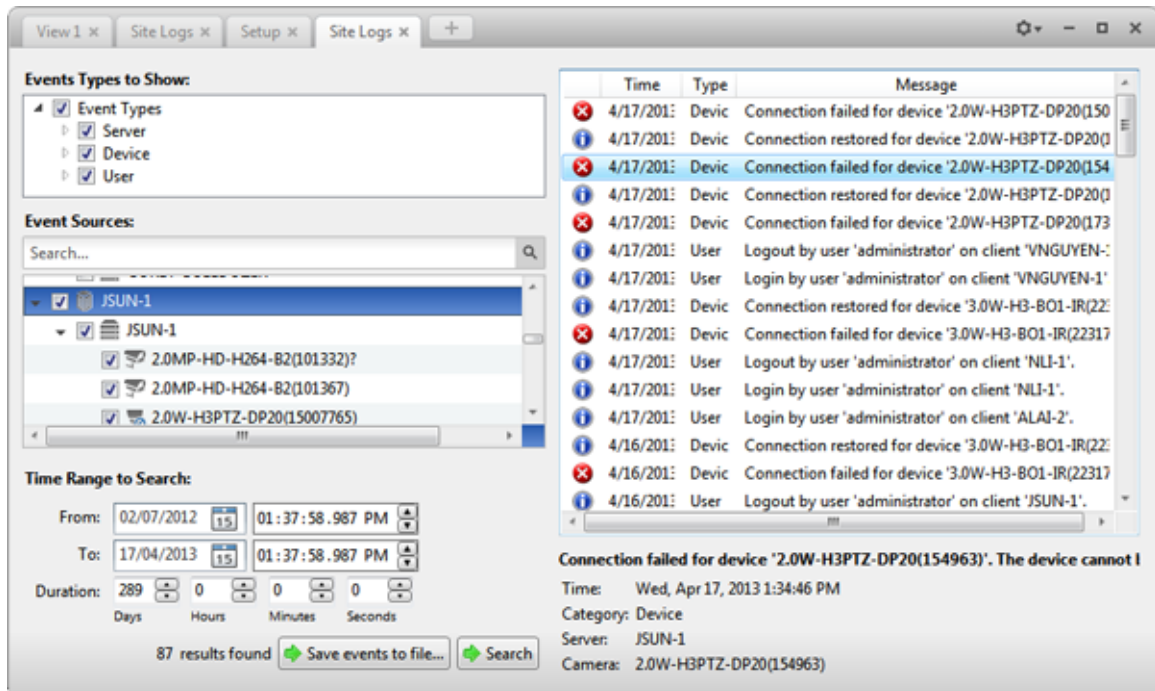



Figure A. Site Logs tab

2. In the Site Logs tab, select the types of events you want to see.
3. Next, select the specific Sites, servers and cameras you want to see logs about.
4. In the Time Range to Search area, set the date and time range of your search.
5. Click **Search**.
6. Select a result to display the event details.
7. To save the log search results, click **Save events to file** and save the file. You can choose to save the search results as a text file or a CSV file.

## Managing User Connections

If you find that too many users are logged in through the same username or inactive users are preventing active users from accessing a Site, you can force specific users to log out.



1. In the New Task menu, click .
2. In the User Connections tab, select a Site from the System Explorer and a list of all the current users are displayed on the right.

Site	User Name	Login Duration	Machine Name
Building A	administrator	1 hours, 50 minutes	ALAI-2
	administrator	1 hours, 42 minutes	ALAI-2


Log Users Out

Figure A. User Connections tab

- The users are listed by user name and computer name so that users that share a login are displayed separately.
  - The Login Duration column lets you know exactly how long that user has been logged in to the Site.
3. To force a user to log out of a Site, select a user then click **Log Users Out**.

## Monitoring Server Status

To help you monitor the health of your Site, you can now get a quick overview in the Server Status tab.

- In the New Task menu, click  .

View 1 x Setup x Server Status x +

Site: Building A

Level 1

Server IP: 10.10.20.53:38880

Total Camera Licenses: 128

Camera Licenses In Use: 3

CPU Load of the ACC Service: 1%

Memory usage of the ACC Service: 94.53 MB

System Available Memory: 3509.42 MB

Up Time: 1 days, 4 hours, 8 minutes, 1 seconds

Networks:

Adapter Name	Link Speed	IP	Incoming	Outgoing
Local Area Connection	100 Mbps	10.10.20.53	161.34 kB/s	4.24 kB/s

Export to PDF

Figure A. Server Status tab

In the System Explorer, select a Site and the server status is displayed on the right. Listed information include:

- Server IP address
- Total camera licenses - the total number of camera channel licenses that have been activated on the server.
- Camera licenses in use - the number of cameras that are currently connected to the server.
- CPU load of the ACC Service - the percentage of server processing power used by the Avigilon Control Center Server software.
- Memory usage of the ACC Service - the amount of memory used by the Avigilon Control Center Server software.
- System Available Memory - the amount of storage available for video recording.
- Up Time - the amount of time the server has been running since it was last rebooted.
- Networks - the networks that the server is connected to, including the IP address of the network connection, the network speed and the amount of data passing through the connection.

Click [Export to PDF](#) to export the listed server information.



# Views

## What are Views?

A View tab is where you watch camera video. Inside the View tab is a set of image panels that allows you to organize how video is displayed.





You can arrange image panels into layouts to take advantage of different camera angles, save View layouts that you like, share Views with other users during investigations, and organize how video is displayed across multiple monitors.


To control live and recorded video, see [Video](#) for more information.

## Adding and Removing a View

View tabs allow you to customize how you monitor video. You can open a new View in the current application window or open a View in a new window to make use of multiple monitors. Views can also be removed as required.

If you want to make use of a large number of monitors, like a video wall, see [Virtual Matrix](#)

To...	Do this...
To open a new View tab	Click   .
To open a new window	Select  > <b>New Window</b> . A new window appears. You can now position this window to make use of multiple monitors.
To close a View tab	On the View tab, click  .

To close a window	On the top-right corner of the window, click  . <b>Note:</b> If you see a confirmation dialog box, it is because there is only one window open and closing this window will also close the application.
-------------------	---

## View Layouts

You can organize how video is displayed through View layouts. You can choose to display video in 1 image panel or 36 image panels. You can also customize the shape of image panels to accommodate cameras that are installed vertically to capture long hallways.

There are 10 pre-configured layouts that you can edit to fit your needs.

### Selecting a Layout for a View

You can organize how video is displayed by selecting a View layout. The figure shows the default View layouts.

- On the toolbar, select  then select one of the layout options.

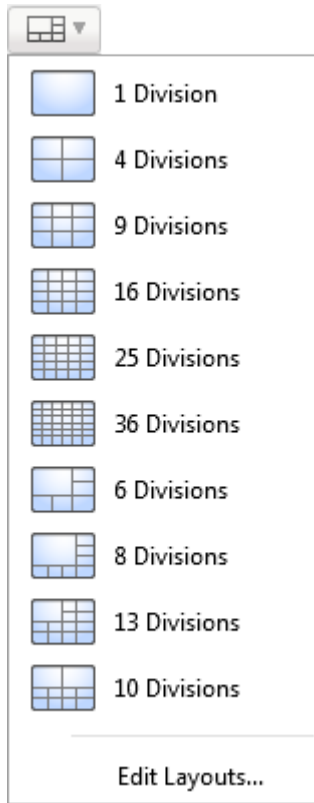


Figure A. Layouts on the toolbar

## Editing a View Layout

If the default View layouts do not fit your surveillance requirements, you can customize a View layout.

1. On the toolbar, select  > **Edit Layouts**.

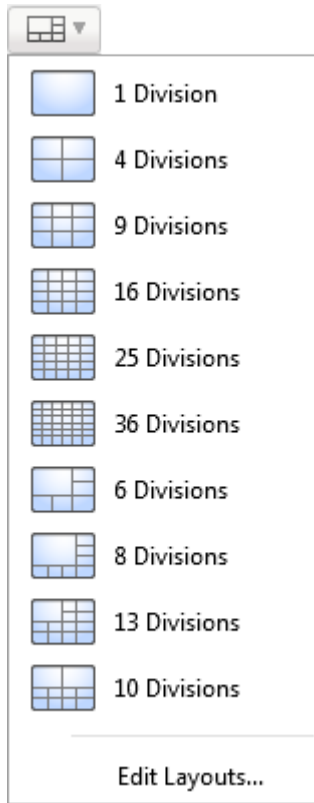


Figure A. Layouts on the Toolbar

2. In the Edit Layouts dialog box, select the layout you want to change.
3. Enter the number of **Columns** and **Rows** you want in your layout.
4. In the layout diagram, do any of the following to further customize the layout.



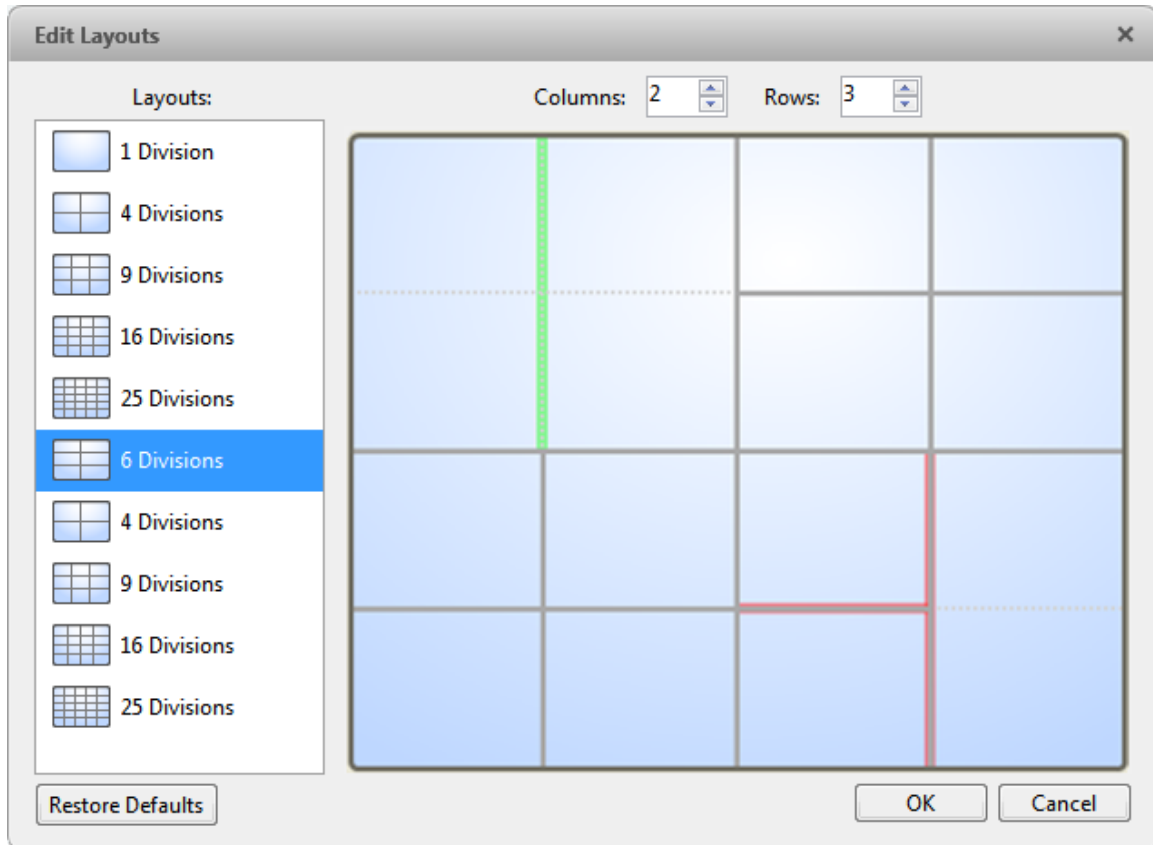


Figure B. Edit Layouts dialog box

- To create a larger image panel, select a grey line to delete the border between two image panels. When a line is highlighted in red, the line can be deleted.
- To restore an image panel, select a dotted line to divide a larger image panel into two. When a dotted line is highlighted in green, the line can be restored.
- To restore all default View layouts, click **Restore Defaults**. All custom layouts in the Layouts list will be replaced.


**Note:** You can only add or subtract lines to create a rectangular shape.

5. Click **OK** to save your changes. The previous View layout has been replaced with your customized layout.


**Tip:** The keyboard commands used to access View layouts are linked to the layout's position in the Layouts list. For example, if your custom layout is placed at the top of the Layouts list (layout 1), you can press Alt + 1 to use that layout.

## Making a View Full Screen

You can maximize a View to fill an entire monitor screen.

- On the toolbar, click .

## Ending Full Screen

- While the View is in full screen mode, click .

## Cycling Through Views

If you have multiple Views open, you can cycle through the View tabs by displaying each one for a few seconds. This is useful when monitoring a large number of cameras.

- To activate the Cycle Views feature, click .

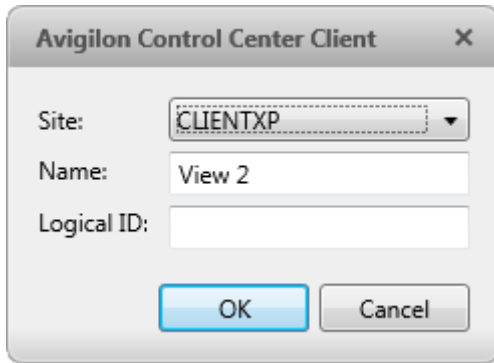
To change the amount of time each View is displayed for, change the Cycle Dwell Time setting. See [General Settings](#) for more information.

## Saving a View

Once you've set up a View you like, you can save the View to share with other users in the Site. A Saved View remembers the current View layout, the cameras displayed in each image panel, and the image panel display settings.

## Saving a View

1. On the toolbar, click .
2. In the following dialog box, complete the following:



- a. Select the Site that the View should be added to.
- b. Give the Saved View a name.
- c. Give the Saved View a logical ID. The logical ID is a unique number that is used to open the Saved View through keyboard commands.
- d. Click **OK**.


Your Saved View is added to the System Explorer, under the selected Site. You can now manage the Saved View as a part of your site.

## Opening a Saved View

Perform one of the following

- In the System Explorer, double-click the Saved View.
- In the System Explorer, right-click the Saved View and select **Open**.
- Drag the Saved View from the System Explorer to the current View in the application or new window.

## Editing a Saved View

1. Open a Saved View.
2. Make any required changes to the View tab.
3. Click .

## Renaming a Saved View

1. In the System Explorer, right-click the Saved View and select **Edit**.
2. In the Rename View dialog box, enter a new name or logical ID and click **OK**.


## Deleting a Saved View

1. In the System Explorer, right-click the Saved View and select **Delete**.
2. In the confirmation dialog box, click **Yes**.

## Collaborating

If you want to show another user an incident or need help investigating an event, you can share your current View with another user. You will both be able to control the View and show each other your findings.

## Sharing a View

1. In the toolbar, click .
2. In the following dialog box, select the user you want to collaborate with then click **OK**.

The users are listed by username and computer name. The computer name is used to help you identify a specific user if the username is shared by several people. Only users who are currently logged in to the Site are displayed.

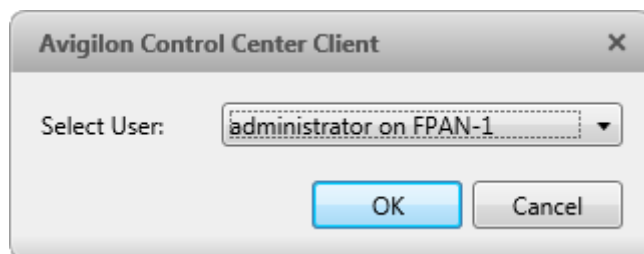


Figure A. Collaborate: Select User dialog box

- a. The user you select will see a popup message with your invitation to collaborate and may choose to accept or decline.
- b. You will receive a popup message with the user's response to your invitation.

If they say *Yes*, the View you are looking at is automatically opened as a new tab in your collaborator's window.

3. Repeat this procedure to collaborate with multiple users.

While you are collaborating, any changes made to the current View by a collaborator is shared with the others. Anything that you can do in a standard View can be performed on a shared View.

## Leaving a Shared View


- To leave a shared View, just close the View tab. The remaining users stay in collaboration mode.

## Virtual Matrix


The optional Virtual Matrix feature allows you to control the View displayed on multiple monitors, or a video wall, from any instance of the Client software. To use this feature, the Virtual Matrix software must be installed on the system that all the displays are connected to.

A copy of the Virtual Matrix software can be downloaded from the Avigilon website.



For more information about the Virtual Matrix software, see the *Avigilon Control Center Virtual Matrix User Guide*.

Once the Virtual Matrix has been installed and loaded, the monitors connected to the system are automatically added to a Site. All monitors linked by the Virtual Matrix software are displayed in the System Explorer as  followed by the monitor name.

## Controlling Virtual Matrix Monitors

In the System Explorer, each  represents a View that is displayed on a connected Virtual Matrix monitor.

To control what is displayed on each Virtual Matrix monitor, you need to open the monitor:

- In the System Explorer, right-click  and select **Open**.
- Double-click or drag  from the System Explorer to the current View.

The Virtual Matrix monitor is opened in a new tab and can be controlled like any View - you can change the View layout, control video display and use any active PTZ controls. The changes you make should automatically appear on the Virtual Matrix monitor.

When you are done, you can close the Virtual Matrix monitor tab. The monitor will continue to display the View you have configured until you make new changes or the Virtual Matrix is shut down.

## Adding and Removing Virtual Matrix Monitors

You can only add or remove Virtual Matrix monitors through the Virtual Matrix software.

For more information, see the *Avigilon Control Center Virtual Matrix User Guide*.




# Maps

## Working with Maps

A map is a graphical reference of your surveillance site. You can create a map out of any image of your location, then add cameras, encoders, saved Views, and other maps to the image to help you quickly navigate through your surveillance site.

## Using a Map

You can open a map in any image panel, then open video or alarms from the map.

1. To open a map in an image panel, perform one of the following:
  - o Double-click  from the System Explorer.
  - o Drag  from the System Explorer to an image panel.
  - o In the System Explorer, right-click  and select **Add to View**
2. When the map appears in an image panel, perform any of the following:

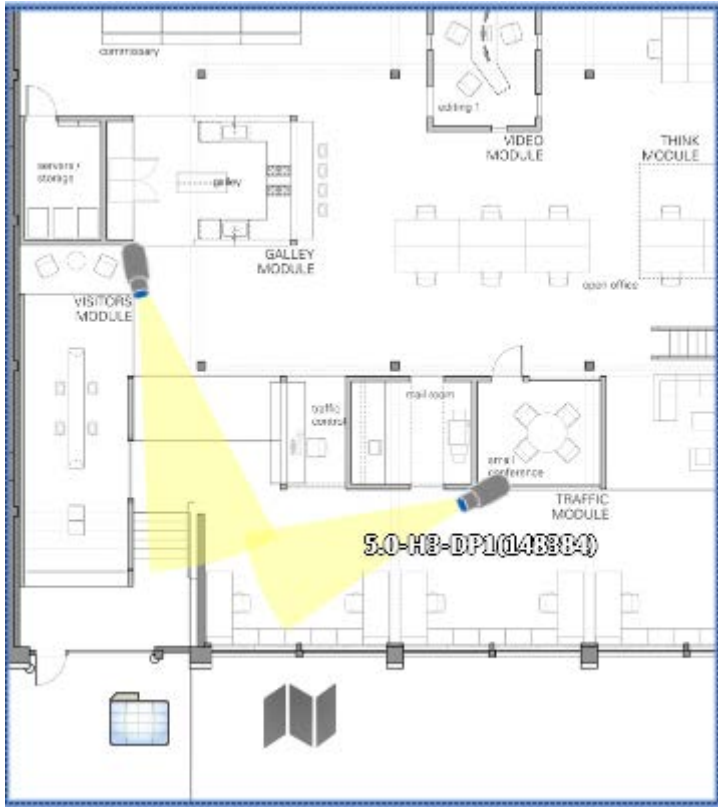


Figure A. Map in an image panel.

To...	Do this...
Review an alarm	<p>When a camera flashes in red, the alarm linked to the camera has been triggered.</p> <ul style="list-style-type: none"> <li>Click the camera to monitor the live alarm video.</li> </ul>
Display video from a camera on the map	<ul style="list-style-type: none"> <li>Drag a camera from the map to a different image panel.</li> <li>Click the camera on the map.</li> </ul>
Open a linked map	<ul style="list-style-type: none"> <li>Click the map icon on the map.</li> </ul> <p>You can use the <b>Forward</b> and <b>Back</b> buttons to move between maps.</p>
Open a linked View	<ul style="list-style-type: none"> <li>Click the Saved View on the map.</li> </ul>



## Adding a Map

You can create a map from any image in JPEG, BMP, PNG, or GIF format. The image is used as the map background and cameras are added on top to show where they are located in your surveillance site.

1. In the System Explorer, right-click a Site then select **New Map**.
2. In the Select Map Image dialog box, locate your map image and click **Open**.
3. In the **Map Name** field, enter a name for the map.
4. In the **Editing: Map** tab, drag and place cameras from the System Explorer onto the map.



Figure A. Editing: Map tab

By default a camera is displayed as an icon with a yellow triangle to represent its field of view.

- Drag the black points at the end of the yellow field of view to resize and position the camera angle.
5. Drag encoders, Saved Views, Virtual Matrix monitors and other maps that you need from the System Explorer onto the map.
  6. In the **Map Icon Properties** options, you can change the way icons are displayed on the map. Select any icon on the map then perform the following:

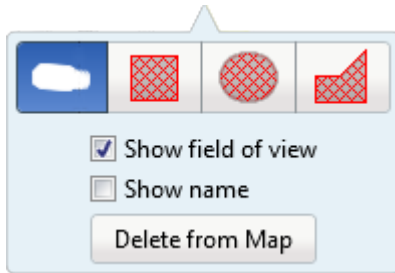


Figure B. Camera icon properties


5.
  - a. To replace an icon with a clickable shape region, select one of the shape buttons. You can replace the icon with a rectangle, ellipse, or polygon region.
  - b. Select the **Show name** check box to display the object's name on the map.
  - c. Click **Delete from Map** to remove the object from the map.
  - d. (Cameras only) Select the **Show field of view** check box to display the camera's yellow field of view. This option is only available when the camera icon is used.

Drag the corners of the yellow triangle to expand the field of view. Drag the black circle at the end of the triangle to rotate the field of view.

6. Click  to save your new map.

## Editing and Deleting a Map

You can update a map or delete an old map anytime.

1. In the System Explorer, right-click  then select one of the following:
  - o To edit the map, select **Edit**. Refer to [Adding a Map](#) for details about the editable options.
  - o To delete the map, select **Delete**. When the confirmation dialog box appears, click **Yes**.




# Web Pages

You can review online content while monitoring videos by adding web pages to the System Explorer.

**Note:** Web pages will not load if you do not have internet access.

## Using a Web Page

To open a web page, perform one of the following:

- Double-click  in the System Explorer.
- Drag  from the System Explorer to an image panel.
- In the System Explorer, right-click  and select **Add to View**.

The web page is displayed in one of the image panels. Use the web browser buttons to navigate through the internet.



Figure A. Web page controls.

## Adding a Web Page

You can add web pages to the Site for quick access to internet content that is related to your surveillance system.

1. In the System Explorer, right-click a Site then select **New Web Page**.

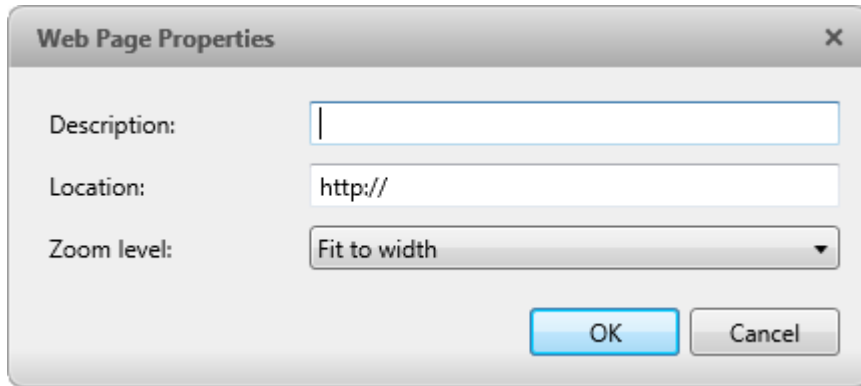



Figure A. Web Page Properties dialog box

2. Enter a name for the web page.
3. Enter the web page URL in the **Location** field.
4. Select a **Zoom Level** for viewing the web page inside an image panel.
5. Click **OK**.

## Editing and Deleting a Web Page

Whenever a web page address becomes out of date, you can choose to update the web page or delete the web page from the Site.

1. In the System Explorer, right-click  then select one of the following:
  - o To edit the web page, select **Edit**. Refer to [Adding a Web Page](#) for information about the editable options.
  - o To delete the web page, select **Delete**. When the confirmation dialog box appears, click **Yes**.

# Video

Inside a View tab, you can monitor and control video from multiple cameras. Once you open a camera in a View tab, you can control the camera's live and recorded video stream. You would also have access to the camera's PTZ controls, audio devices, digital outputs and other playback settings.

To organize how video is displayed in the View tab, see [Views](#) for more information.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

## Adding and Removing Cameras in a View

To monitor video, add a camera to the View. The camera video can be removed from the View any time.

### Adding a Camera to a View

Perform one of the following:


- Drag the camera from the System Explorer to an empty image panel in the View.
- Double-click a camera in the System Explorer.
- In the System Explorer, right-click the camera and select **Add to View**.

The camera is added to the next empty image panel in the View layout.

**Tip:** You can drag the same camera to multiple image panels to watch the video at different zoom levels.

## Removing a Camera From a View

Perform one of the following:

- Right-click the image panel and select **Close**.
- Inside the image panel, click .

## Viewing Live and Recorded Video

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

When you monitor video, you can choose to watch live and recorded video in the same View, or only one type of video per View.

Once you've added the required cameras to the View, perform the following:



- To switch the View between live and recorded video, click either  **Live** or  **Recorded** on the toolbar.
- To switch individual image panels between live and recorded video, right-click the image panel and select either **Live** or **Recorded**.



Image panels displaying recorded video have a **green** border.

## Zooming and Panning a Video

Use the zoom and pan tools to focus on specific areas in the live or recorded video stream.

### Using the Zoom Tools


There are two ways to digitally zoom in and zoom out of the video image:

- Move your mouse over the video image then rotate your mouse wheel forward and back.
- On the toolbar, select  or  then click the image panel until you reach the desired zoom depth.

---

## Using the Pan Tools

There are two ways to pan through the video image:


- Right-click and drag inside an image panel
- On the toolbar, select  then left-click and drag the video image in any direction inside the image panel.

## Maximizing an Image Panel

You can maximize an image panel to enlarge the video display.


### Maximizing an Image Panel

Perform one of the following:


- Right-click an image panel and select **Maximize**.
- Inside the image panel, click .
- Double-click the image panel.


### Restoring an Image Panel

In an maximized image panel, perform one of the following:


- Right-click the maximized image panel and select **Restore Down**.
- Inside the image panel, click .
- Double-click the image panel.

## Listening to Audio in a View

If there is an audio input device linked to a camera, the  button is displayed in the image panel when you watch the camera's video. To listen to the streaming audio, make sure there are speakers connected to your computer. By default the audio is muted.

The camera's microphone must be enabled before you can listen to any audio. The  button is not displayed if the microphone is disabled.

To control the audio playback, perform any of the following:

- In the lower-right corner of the image panel, click  to mute or activate the audio.
- Move the slider to change the volume.

To enable the camera's microphone, see [Microphone](#) for more information.

## Triggering Custom Keyboard Commands

If your system has custom keyboard commands set up to run specific rule events, you can activate the keyboard commands by performing the following:



1. Press **Ctrl** + **K** on your keyboard.
2. Enter the custom keyboard command number and the rule event starts running.


Consult your system administrator for details about the custom keyboard commands that are available in your system. Custom keyboard commands are set up through the rules engine, see [Rules](#) for more information.

## Controlling Live Video


Listed in this section are the features that are only available while monitoring live video.

### Broadcasting Audio in a View

If there are speakers linked to a camera, the  button is displayed in the image panel when you watch the camera's video. The  button allows you to broadcast your verbal response to what is occurring in the video, like a Public Address (P.A.) system.

The camera's speakers must be enabled before you can broadcast any audio. The  button is not displayed if the speakers are disabled.



- To broadcast audio, hold  and speak in to your microphone. The red bar moves to show the microphone's audio input levels. If the level is low, speak louder or adjust the microphone volume in the Windows Control Panel.
- Release the button to stop the broadcast.

To set up two-way audio, see [General Settings](#).

To enable the camera's speakers, see [Speaker](#) for more information.

## Using Instant Replay

To review an event that just occurred, you can immediately access recently recorded video through the instant replay feature.

- Right-click the image panel and select one of the instant replay options:
  - **Replay - 30 Seconds**
  - **Replay - 60 Seconds**
  - **Replay - 90 Seconds**

The image panel immediately plays back the camera's most recently recorded video.

## Triggering Manual Recording

Cameras are set to follow a recording schedule. If an event occurs outside the camera's recording schedule, you can click the record indicator icon to force the camera to record the event. See [Recording Schedule](#) for more information about recording schedules.

The Record Indicator overlay must be enabled for manual recording to work. See [Adjusting Video Display](#) for more information.

Here are the camera recording states:



Recording




Recording triggered by an event




Not recording

## Starting and Stopping Manual Recording

In an image panel that is displaying video, perform either of the following:

- In the top-left corner of the image panel, click  to start manual recording.

The record indicator is highlighted to show that the camera is recording. Manual recording continues until it is stopped, or until the maximum manual recording time is reached.

- Click  to manually stop video recording.

The maximum manual recording time is configured in the Manual Recording dialog box, see [Manual Recording Settings](#) for more information.

## PTZ Cameras



PTZ cameras can be controlled through the image panel onscreen controls or by using the tools in the PTZ Controls pane.

Be aware that some of tools and features may not be displayed if they are not supported by your camera.

## Controlling PTZ Cameras

Pan, Tilt, Zoom (PTZ) controls allow you to control cameras with PTZ features. You can control a PTZ camera by using the onscreen controls or by using the tools in the PTZ Controls pane.

See [Keyboard Commands](#) for other ways to use the PTZ controls.

1. In the toolbar, click . The PTZ controls are now enabled in the image panels that are displaying PTZ video.
2. In the image panel, click .

The PTZ controls are displayed in a floating pane immediately beside the image panel.

**Note:** The controls may appear different depending on the camera. Some options are disabled or hidden if they are not supported by the camera.

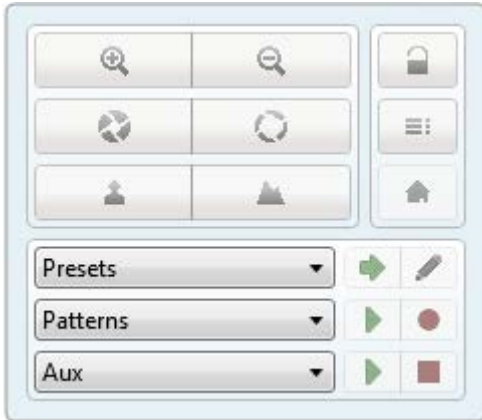












Figure A. PTZ controls












3. To pan or tilt, perform one of the following:
  - In the image panel, drag your mouse from center to move the camera in that direction. The farther the cursor is from the center of the image panel, the faster the camera will move.
  - If the camera supports Click to Center, click anywhere on the image panel to center the camera to that point.



Figure B. PTZ onscreen controls

## 4. Use the other PTZ controls to perform any of the following:

To...	Do this...
To zoom	<ul style="list-style-type: none"> <li>• Click  to zoom in.</li> <li>• Click  to zoom out.</li> <li>• Click the image panel and use the mouse scroll wheel to zoom in and out.</li> <li>• If the camera supports Drag to Zoom, click and drag to create a green box to define the area you want to zoom in and see.</li> <li>• Right-click the image panel and select <b>Zoom Out Full</b>.</li> </ul>
To control the Iris	<ul style="list-style-type: none"> <li>• Click  to close the iris.</li> <li>• Click  to open the iris.</li> </ul>
To control the Focus	<ul style="list-style-type: none"> <li>• Click  to focus near the camera.</li> <li>• Click  to focus far from the camera.</li> </ul>
To program a PTZ preset	<ol style="list-style-type: none"> <li>1. Move the camera's field of view into position.</li> <li>2. In the <b>Preset</b> drop down list, select a number then click .</li> <li>3. In the dialog box, enter a name for the preset.</li> <li>4. Select the <b>Set as home preset</b> check box if you want this to be the camera's Home preset.</li> <li>5. Click <b>OK</b>.</li> </ol>
To activate a PTZ preset	Select a preset then click  .
To return to the Home preset position	If the PTZ camera supports a Home preset position, click  to return the camera to its Home position.
To program a PTZ pattern	<ol style="list-style-type: none"> <li>1. In the PTZ controls pane, select a pattern number and click .</li> <li>2. Use the PTZ controls to move the camera and</li> </ol>


	<p>create the pattern.</p> <p>3. Click  to stop recording the pattern.</p>
To activate a PTZ pattern	<p>In the PTZ controls pane, select a pattern number and click .</p> <p>The pattern will repeat until the pattern is stopped or another pattern is run.</p>
To activate a PTZ tour	<p>In the PTZ controls pane, select a tour number and click .</p> <p>The tour will repeat until stopped or until other PTZ controls are used.</p>
To activate an auxiliary command	<p>1. Select an aux command number and click .</p> <p>2. Click  to turn off the auxiliary output.</p>
To display the PTZ camera onscreen menu	<p>1. Click .</p> <p>2. To move through the menu options, click any of the following:</p> <ul style="list-style-type: none"> <li>○ Click  to move down the options.</li> <li>○ Click  to move up the options.</li> <li>○ Click  to confirm your selection.</li> <li>○ Click  to cancel your selection.</li> </ul>
To lock the PTZ controls	<p>Click .</p> <p>No other user will be able to use the PTZ controls for this camera until you unlock the controls or log out.</p>

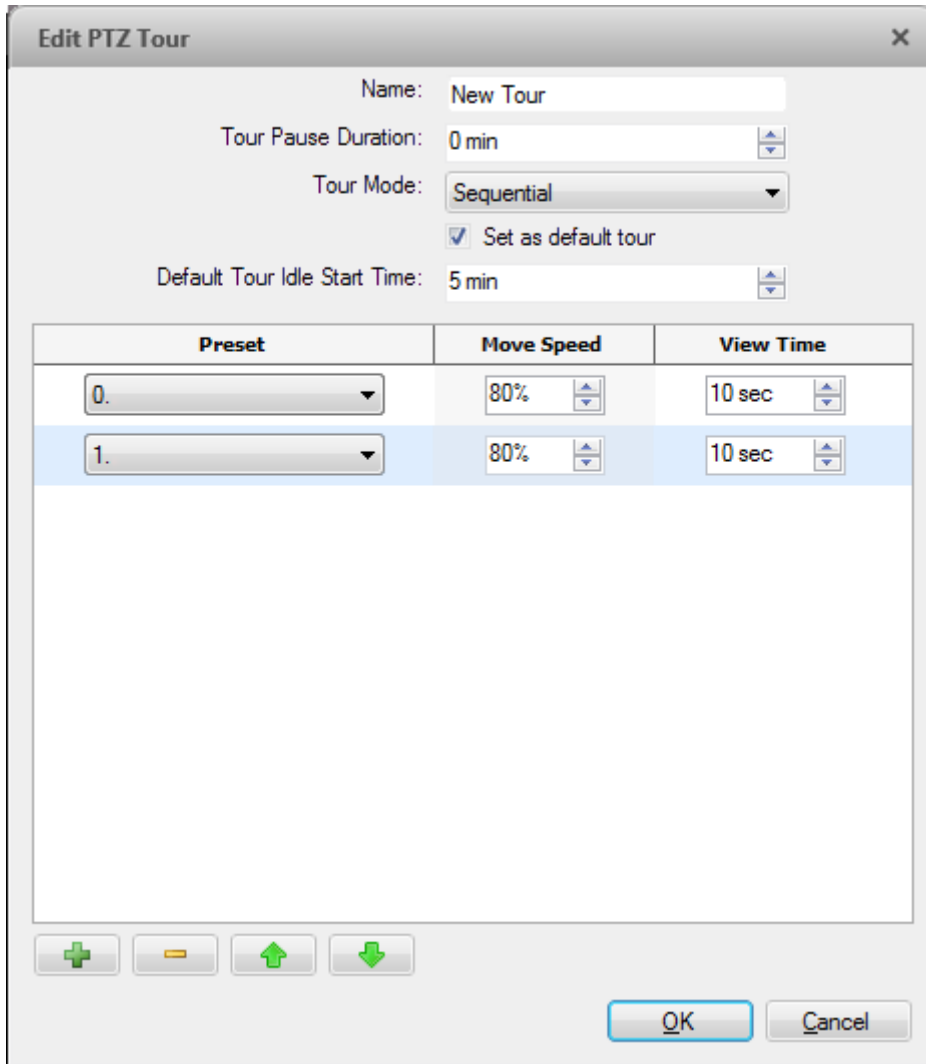
To program a PTZ tour, see [Programming PTZ Tours](#).

## Programming PTZ Tours

If the PTZ camera supports guard tours, the tours can be programmed through the PTZ controls pane. Tours allow the PTZ camera to automatically move between a series of preset positions, and can be set to pause at each preset for a specific amount of time for video monitoring.

1. Create all the PTZ presets you need for this tour.





- In the PTZ Controls pane, select a tour number then click . The Edit PTZ Tour dialog box is displayed.



Preset	Move Speed	View Time
0.	80%	10 sec
1.	80%	10 sec

Figure A. Edit PTZ Tour dialog box


- In the Edit PTZ Tour dialog box, give the tour a name.
- In the **Tour Pause Duration** field, enter the amount of time before a tour repeats. Tours repeat until manually stopped, or until other PTZ controls are used.
- In the **Tour Mode** drop down list, select one of the following:
  - Sequential**: the PTZ camera will go to each preset in the set order.
  - Random**: the PTZ camera will go to each preset in random order.
- Select the **Set as default tour** check box if you want this tour to run automatically.

- o The **Default Tour Idle Start Time** field is now enabled, enter the amount of time the PTZ camera must be idle before this tour automatically starts.
7. To add a preset, click  and a preset is added to the list.
  6.
    - a. In the Preset column, select a preset from the drop down list.
    - b. In the Move Speed column, enter how fast you want the PTZ camera to move to this preset. The higher the %, the faster the camera moves.
    - c. In the View Time column, enter the amount of time you want the PTZ camera to stay at this preset position. The view time is 10 seconds by default.
    - d. Repeat step 7 until all the presets for this tour have been added.
  7. To remove a preset, select the preset then click .
  8. To re-order a preset, select the preset then click  or . The preset order only affects tours that use Sequential mode.
  9. Click **OK** to save the tour.

## Triggering Digital Output

While you monitor live video in an image panel, you can manually trigger any digital output that is connected to the camera.


The digital output is configured in the Digital Inputs and Outputs dialog box, see [Setting Up Digital Outputs](#) for more information.

1. Open the camera's live video in an image panel.
2. In the image panel, click .
3. If there is more than one digital output linked to the camera, you will be prompted to select the digital output you want to trigger.

## Monitoring POS Transactions

If a camera is linked to a point of sales (POS) transaction source, you can monitor live POS transactions while you monitor video from the linked camera.


1. Open the camera's video in an image panel.

2. In the image panel, click .

**Note:** If the camera is not linked to a POS transaction source, the icon is not displayed.

If there are more than one POS transaction source linked to the camera, you will be prompted to select one. The POS transactions are displayed in the next image panel.

Each transaction is separated by date and time, and the most recent transaction is highlighted in blue.

3. To display cameras that are linked to the POS transaction source, click  in the POS transaction image panel.

If multiple cameras are connected to the POS transaction source, you will be prompted to select one.

## Controlling Recorded Video

Listed in this section are the features that are only available while monitoring recorded video.

### Playing Back Recorded Video

The Timeline displays when video was recorded and lets you control the video playback.

The colored bars on the Timeline show the camera's recording history:

- A red bar shows the camera recorded a motion event.
- A blue bar shows the camera recorded video.
- White areas show that the camera did not record any video.
- An orange bar is a bookmark in the camera's recording history.

See [Bookmarking Recorded Video](#) for more information about bookmarks.

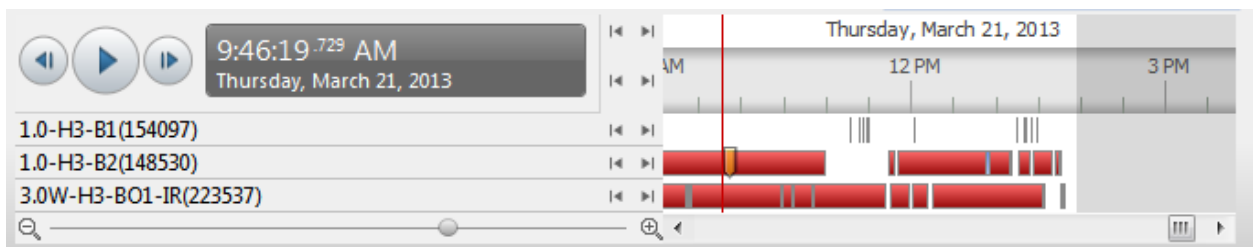






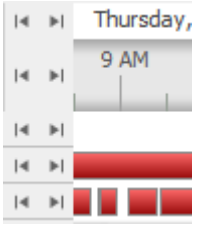



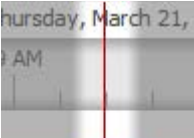


Figure A. Playback controls on the Timeline



To...	Do this...	
To select a playback time	<ul style="list-style-type: none"> <li>• Click the dark gray date display and select a specific date and time.</li> <li>• Or, click a point in the Timeline.</li> </ul>	
To start playback	<p>Click .</p> <ul style="list-style-type: none"> <li>• Click  to fast forward. Tap the arrow again to increase the playback speed.</li> <li>• Click  to rewind. Tap the arrow again to increase the playback speed.</li> </ul> <p>You can play the video up to eight times the original speed.</p>	
To stop playback	<p>Click .</p> <ul style="list-style-type: none"> <li>• Click  to step forward one frame.</li> <li>• Click  to step backward one frame.</li> </ul>	
To jump forward or back on the Timeline		<p>On the Timeline, click  or  to move to set points on the Timeline.</p>
To zoom in or out on the Timeline		<ul style="list-style-type: none"> <li>• Move the slider on the bottom left to zoom in or out on the Timeline.</li> <li>• Or, you can place your mouse over the Timeline and use the scroll wheel to zoom in or out on the Timeline.</li> </ul> <p>You can zoom in to a quarter of a second, and zoom out to see years if recorded video exists.</p>
To center the Timeline on the time marker		<p>Right-click the Timeline, and select <b>Center on Marker</b>.</p>

To pan the Timeline		<ul style="list-style-type: none"><li>• Click and drag the time marker through the Timeline.</li><li>• Move the horizontal scroll bar under the Timeline.</li><li>• Or, right-click and drag the Timeline.</li></ul>
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## Bookmarking Recorded Video

You can add bookmarks to recorded video to help you find and review an event later. Bookmarked video can be protected against scheduled data cleanup so the video is never deleted.

### Adding a Bookmark

**Tip:** You can add a bookmark any time the Timeline is displayed.

1. Drag the time marker to where you want to start the bookmark, then right-click the Timeline and select **Add Bookmark**.

The Edit Bookmark dialog box appears, and the bookmark time range is highlighted on the Timeline

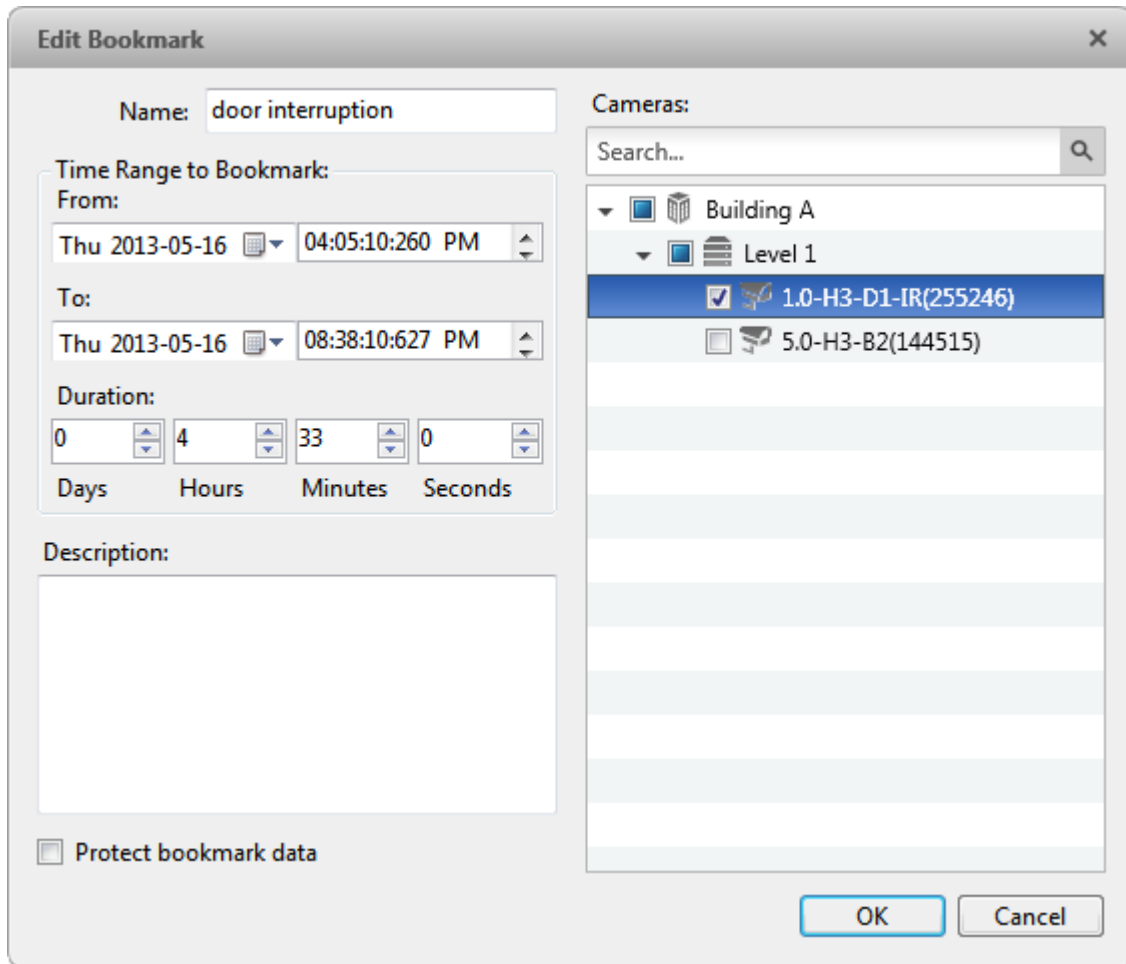


Figure A. Add Bookmark dialog box

2. Enter a name for the bookmark.
3. In the Cameras pane, select all the cameras that need to be attached to this bookmark.

**Note:** You can only bookmark multiple cameras from the same Site.

4. In the Time Range to Bookmark area, enter the full duration of the bookmark.

You can also move the black time range markers on the Timeline to adjust the time range.

5. In the **Description** field, enter extra any information you want to include with the bookmark.
6. To protect the bookmark video from being deleted, select the **Protect bookmark data** check box.

**Note:** Protected bookmarks are never deleted. Be aware that bookmarked video take up space and can become the oldest video on the server.

7. Click **OK**.

## Editing, Deleting or Exporting a bookmark

1. Click the bookmark on the Timeline then perform one of the following:

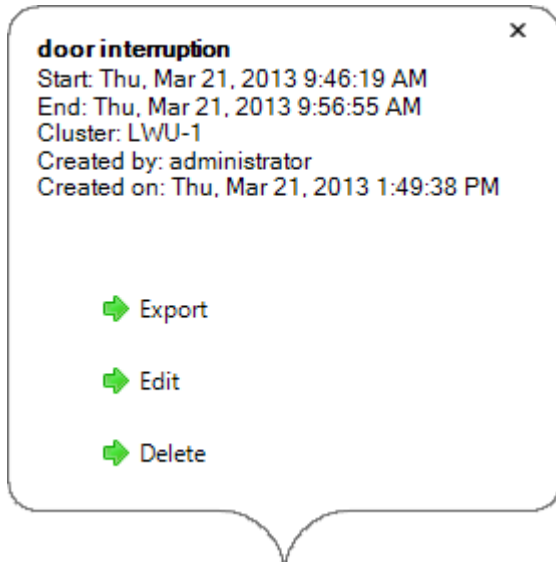


Figure B. Bookmark properties


To	Do this...
Edit a bookmark	Click <b>Edit</b> then make your changes.
Delete a bookmark	Click <b>Delete</b> . When the confirmation dialog box appears, click <b>Yes</b> .
Export a bookmark	Click <b>Export</b> then complete the Export tab.

When editing a bookmark, refer to [Adding a Bookmark](#) for details about the editable options.

When exporting a bookmark, refer to [Export](#) for information about the export options.


## Reviewing POS Transactions

While you watch recorded video, you can also review the POS transactions that occurred at the same time.

1. Select a camera that is linked to the POS transaction source and display the camera's recorded video
2. In the image panel, click .

---

If there is more than one POS transaction source linked to the camera, you will be prompted to select one. The POS transactions are displayed in the next image panel.

- Each transaction is separated by date and time.
  - When you select a transaction, the video jumps to that event on the Timeline.
  - Scroll up or down to see other recorded POS transactions.
3. To display cameras that are linked to the POS transaction source, click  in the POS transaction image panel.

If multiple cameras are connected to the POS transaction source, you will be prompted to select one.

4. Use the Timeline to review the video in more detail.


For more information about Timelines, see [Playing Back Recorded Video](#).

If you want to find a specific POS transaction, see [Performing a POS Transaction Search](#).

## Adjusting Video Display

You can adjust the Display settings to improve how video is displayed on your monitor.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

1. In the top-right corner of the application window, select  > **Client Settings > Display**.

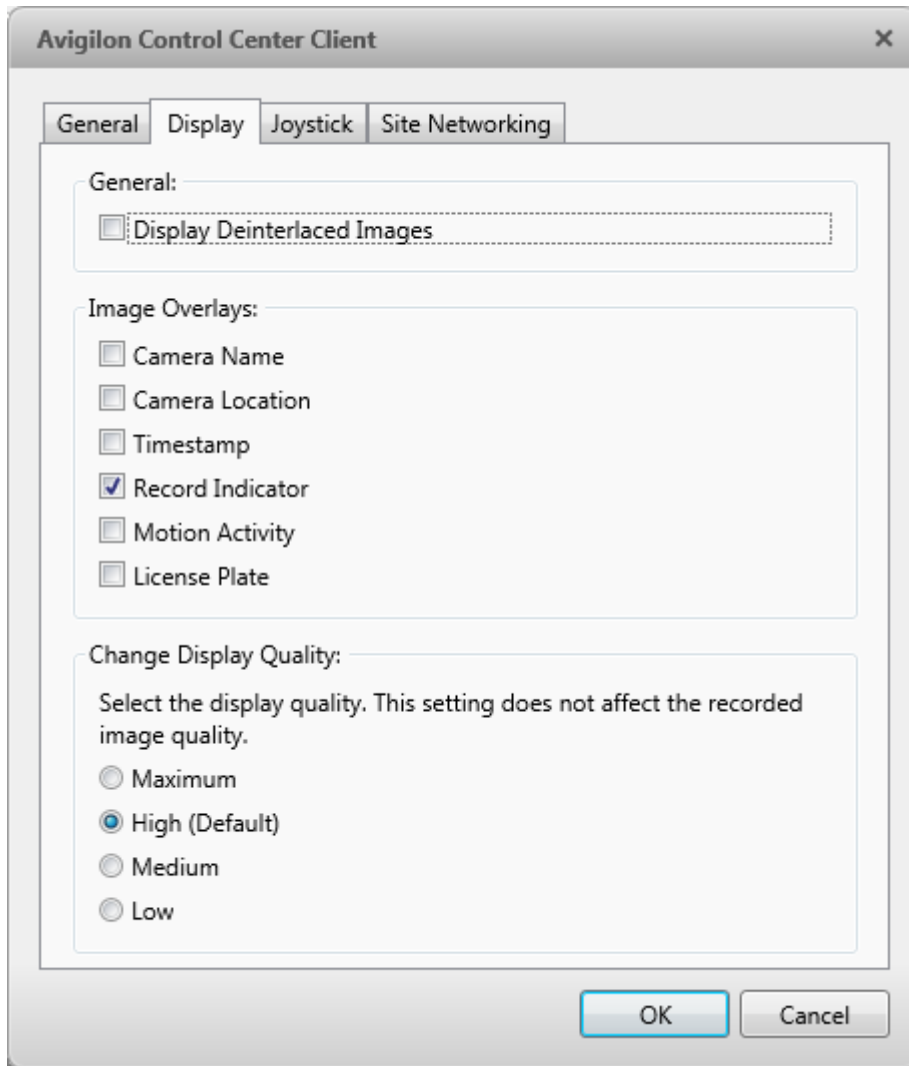


Figure A. Display Settings




2. Perform any of the following procedures to adjust how video is displayed in image panels.

## Displaying Analog Video in Deinterlaced Mode

Select the **Display Deinterlaced Images** check box if the analog video you are watching is showing interlacing artifacts. This setting will help improve video image and smooth out some of the artifacts.

## Displaying Image Overlays

Select any of the Image Overlays options to set the type of information that is displayed over video.

Option	Description
<b>Camera Name</b>	Displays the name assigned to the camera.
<b>Camera Location</b>	Displays the location assigned to the camera.
<b>Timestamp</b>	(Recorded video only) Displays the exposure timestamp for the video.
<b>Record Indicator</b>	<p>(Live video only) Displays the recording status of a camera.</p> <p>The recording status is indicated by the round icon on the top left corner of the image panel. The color of the icon shows the camera's recording status.</p> <ul style="list-style-type: none"> <li>▪ : recording triggered by a motion event</li> <li>▪ : recording</li> <li>▪ : not recording. Click this icon at any time to begin manual recording.</li> </ul>
<b>Motion Activity</b>	Highlights motion in red.
<b>License Plate</b>	<p>(Live video only) Displays license plate numbers as they are detected.</p> <p><b>Note:</b> This feature is only available if the License Plate Recognition feature is installed.</p>

## Changing Display Quality

If your computer does not have enough network bandwidth or processing power, you may not be able to watch video at its full image rate and full quality. You can bias the image panels to display video in high quality and low frame rate, or lower quality and high frame rate.

Select a higher setting if you need to see specific details or faces in the scene. Select a lower setting if it's more important to see moving events as they occur.

The Change Display Quality settings only affect the image panel display and does not affect the actual video quality or image rate between the camera and the server. So, you can review recorded footage later to confirm what you saw in the image panel.

In the Change Display Quality area, select one of the following options:

- **Maximum:** displays video at full resolution with the lowest image rate.
- **High (Default):** displays video at 1/4 resolution.

- **Medium:** displays video at 1/16 resolution.
- **Low:** displays video at 1/64 resolution with the highest image rate.

## Making Image Panel Display Adjustments

You can change the image panel display settings to bring out video details that are hard to see with the image panel's default settings.

1. Right-click an image panel and select **Display Adjustments....**

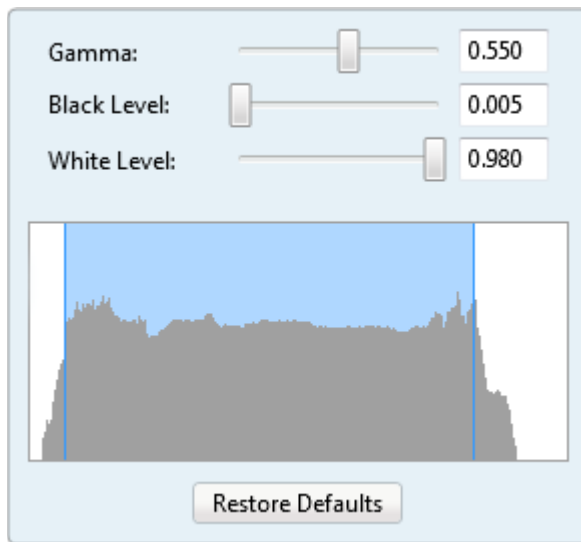


Figure A. Display Adjustments panel

The Display Adjustment settings are displayed in a floating pane immediately beside the image panel.

2. Move the sliders to adjust the **Gamma**, **Black Level** and **White Level**.

The image panel displays a preview of your changes.

3. Click **Restore Defaults** to clear your changes.



# Alarms

## Monitoring Alarms

The Alarms tab allows you to monitor and acknowledge alarms. You can quickly review video of the event, bookmark the recorded incident and export alarm video for further investigation.

## Accessing the Alarms Tab



At the top of the application window, click  .

Figure A. Alarms tab

The Alarms tab is divided into the following areas:

- In the Alarms list are the alarms that are currently active, acknowledged, or assigned to another user. The alarms are sorted by status, priority then time.
- In the Assigned Alarms list are the alarms that are assigned to you. If there are no alarms assigned to you, the Assigned Alarms list is not displayed.
- The bottom Alarm Details area are the triggers and video linked to the selected alarm.
- The Timeline is used to play back the recorded alarm video.

## Reviewing Alarms

In the Alarms tab, you can review alarm video and manage alarms. Active alarms can be assigned to yourself, and acknowledged alarms can be exported or purged as required.

## Reviewing Alarm Video

You can review active and acknowledged alarm video in detail through the alarm image panel, or opening the alarm video in a new View.

1. Select an alarm from the Alarms list. The alarm details are displayed.
2. In the Alarm Triggers list, select an alarm trigger to display the video for that instance of the alarm.
3. Use the alarm image panel controls to review the video in more detail.

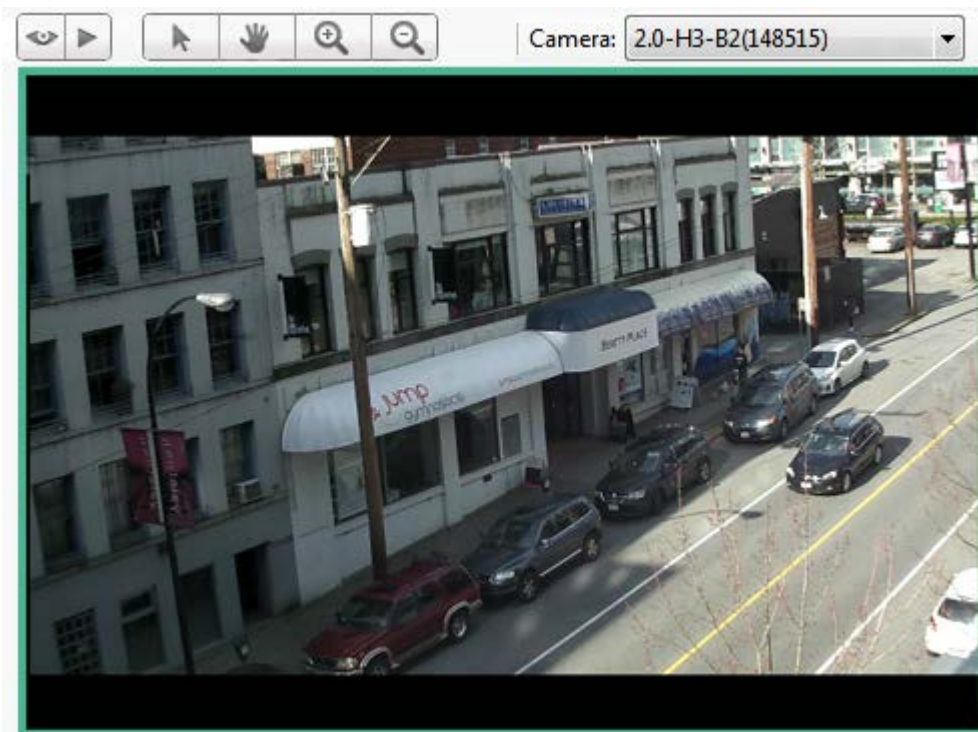


Figure A. Alarm image panel

- In the **Camera** drop down list, select a camera that is linked to the alarm to review the video.
  - Use the **Zoom** and **Pan** tools to review the video image in more detail.
  - Use the **Live** and **Recorded** buttons to alternate from the recorded alarm video and the camera's live stream.
4. Click **Open In View** to open the alarm video in a new View.
  5. Use the Timeline to control the video play back.

See [Playing Back Recorded Video](#) for information about the Timeline controls.

## Bookmarking an Alarm

You can bookmark active and acknowledged alarm video.

1. Select an alarm from the Alarms list then click **Bookmark Alarm**.
2. When the Edit Bookmark dialog box appears, define the details of your bookmark.

The Edit Bookmark dialog box automatically selects all the cameras that are linked to the alarm, and sets the time range to span the first and last alarm trigger. After you make the required changes, click **OK**.

See [Bookmarking Recorded Video](#) for more information about the bookmark options.

## Assigning an Alarm

You can assign an alarm to yourself to let others know that the alarm is being reviewed.

Although you can only assign alarms to yourself, you can unassign the alarm at any time.

1. Select an active alarm from the Alarms list.
2. When the alarm details are displayed, click **Assign Alarm**.

The alarm is added to your Assigned Alarms list.

3. To unassign an alarm, select the alarm from the Assigned Alarms list and click **Unassign Alarm**.

## Acknowledging an Alarm

Acknowledging an alarm shows that an alarm has been reviewed and is no longer active. You can acknowledge any alarm that is active or assigned to you.

1. After reviewing the alarm, enter notes describing the nature of the alarm in the Acknowledge Alarm text box.
2. Click **Acknowledge**.
3. If there is a digital output linked to the alarm, a dialog box may appear to ask for permission to activate the digital output. Activate the digital output as required.

The Alarm is given an Acknowledged status in the Alarms list.

## Searching Alarms

You can search through an alarm's history to review other instances of the alarm.

1. Select an acknowledged alarm from the Alarms list.
2. In the alarm details area, click **Search Alarm**.

See [Performing an Alarm Search](#) for information about the alarm search options.

## Exporting Alarms

You can export alarm video for review on other computers.

1. Select an acknowledged alarm from the Alarms list.
2. In the alarm details area, click **Export Alarm**.

See [Export](#) for information about the export options.

## Purging an Alarm

Purging an alarm removes the alarm from the Alarms list until the alarm is activated again. Although purged alarms are no longer listed in the Alarms list, you can still search through the alarm's history.

1. Select an acknowledged alarm from the Alarms list.
2. In the alarm details area, click **Purge Alarm**.

## Arming Image Panels




Arming an image panel reserves the image panel specifically for displaying video linked to alarms or rules. Armed image panels allow you to review and acknowledge alarms while monitoring video in a View. Any image panel can be armed or disarmed as required.

If there are no armed image panels, alarm video will appear in the next empty image panel in the current View, or in a new View if all current image panels are in use.



Figure A. Armed image panel

**Tip:** You can still use the features that are common to all image panels, like snapshot or maximizing an image panel.

To...	Do this...
Arm an image panel	In an image panel, click  . The image panel is given a <b>red</b> border and an alarm label to show that it is armed.
Acknowledge an alarm	Click  .
Move between linked alarm video	If the alarm is linked to multiple cameras, use the green arrows to move between the linked cameras.
Disarm an image panel	In an armed image panel, click  .

If multiple alarms are triggered at the same time, the linked video are queued inside the armed image panel. The alarm video are displayed by order of alarm priority then time. Once an alarm is acknowledged or assigned to a user, the alarm video is removed from the armed image panel.

**Note:** If you choose to close a video in the armed image panel, the video is removed but the alarm continues to be active.

Video triggered by a rule are queued in the armed image panel after alarms, with the most recent video displayed first. Rules video are not labeled and do not need to be acknowledged.


# Search

You can quickly search for recorded video that is linked to an event or search through the camera's recording history.

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

## Performing an Event Search

The Event Search allows you to search for specific motion events and digital input events.

1. In the New Task menu, click .  
The Search: Event tab is displayed.

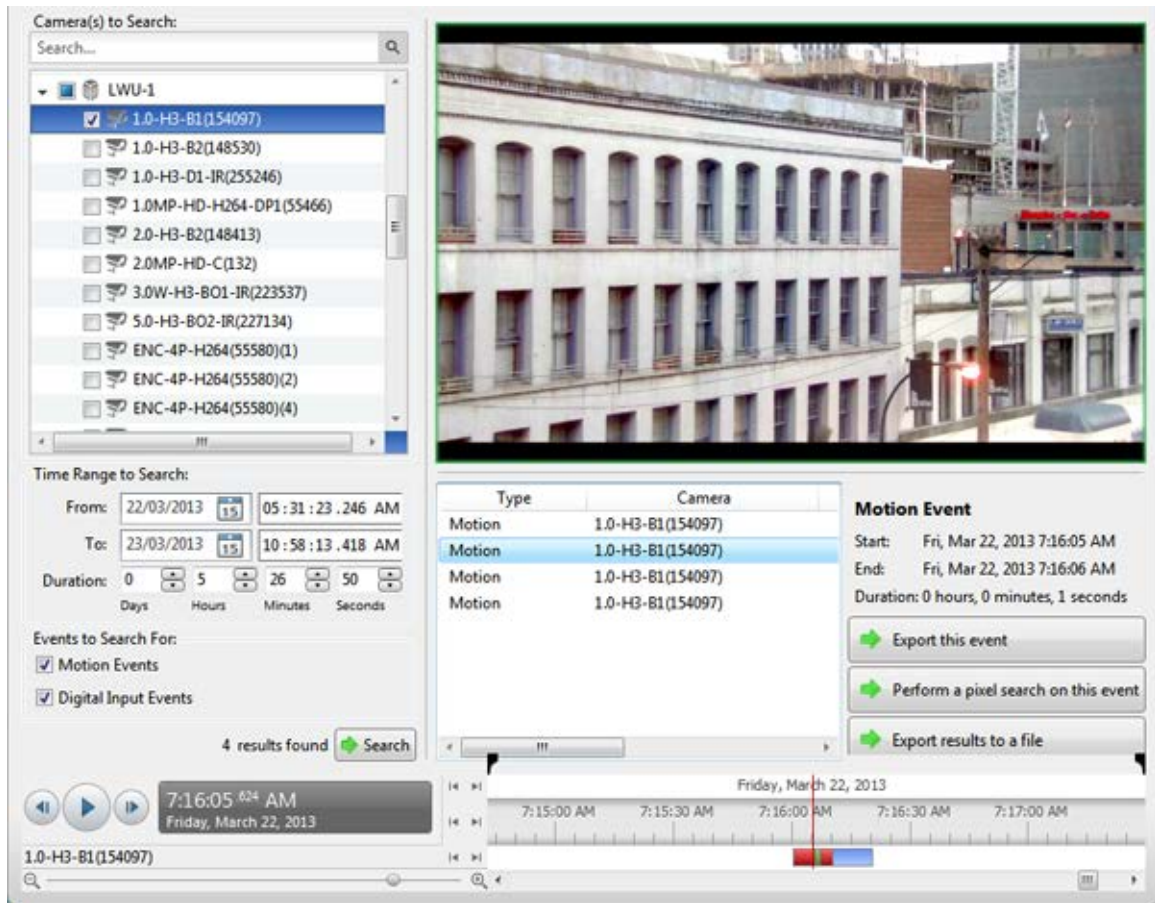


Figure A. Search: Event tab

2. In the Camera to Search area, select all the cameras you want to include in the search.
3. In the Time Range to Search area, set the date and time range of your search. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to modify the time range.
4. In the Events to Search For area, select the types of events to include in the search.
5. Click **Search**.

## Viewing Event Search Results

1. In the Search Results area, select a search result. The event is highlighted on the Timeline and the video is displayed in the image panel. Details about the search result are displayed to the right.
2. Use the Timeline controls to review the event.


See [Playing Back Recorded Video](#) for more information.



3. Click **Export this event** to export the selected event video.  
See [Export](#) for more information.
4. If you want to further refine your search, click **Perform a pixel search on this event**. You can now search for any pixel movement in the selected search result.  
See [Performing a Pixel Search](#) for more information.
5. Click **Bookmark this event** to bookmark the selected search result.  
See [Bookmarking Recorded Video](#) for more information.
6. To export all listed search results, click **Export results to a file** and save the file. The search results can be saved as either a CSV or TXT file.

## Performing a Pixel Search

The Pixel Search allows you to search for tiny pixel change in specific areas in the camera's field of view.

1. In the New Task menu, click   
The Search: Pixel tab displays.

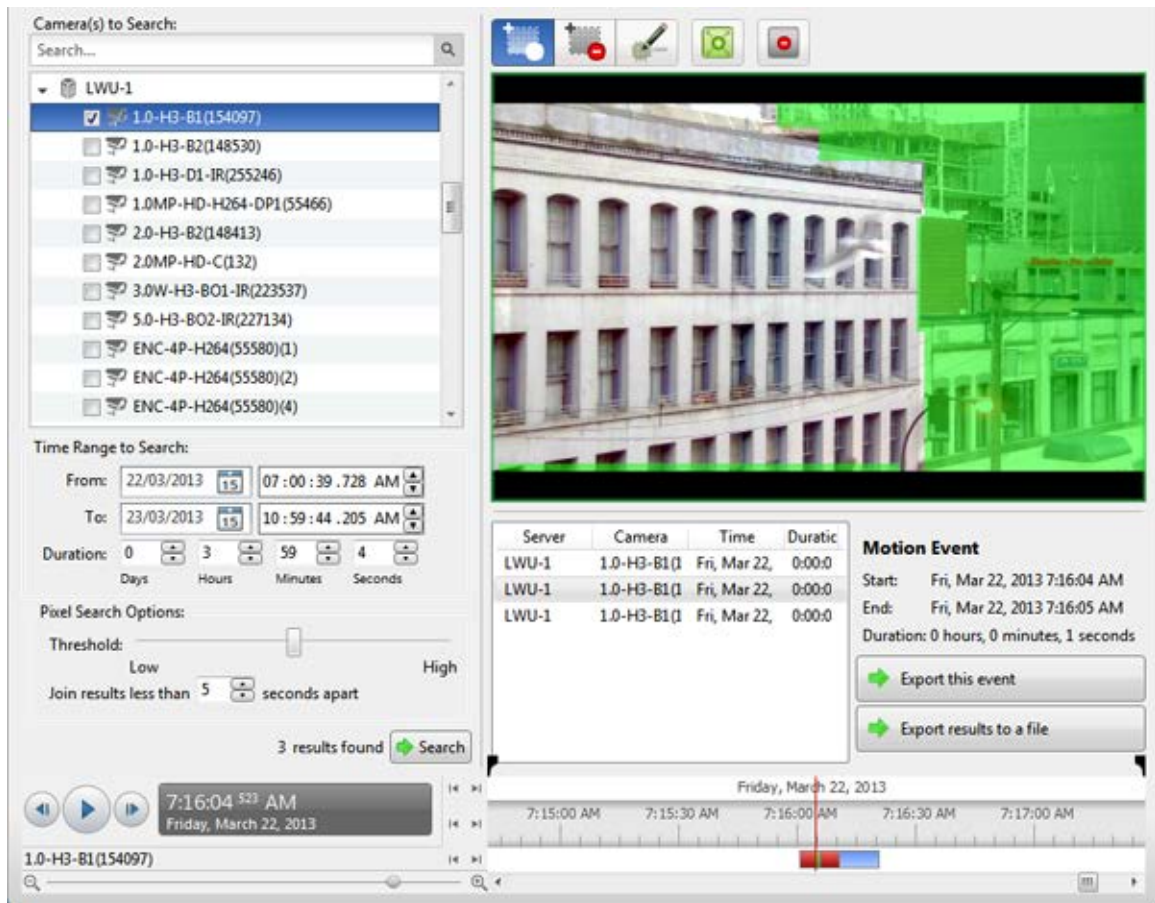


Figure A. Search:Pixel tab

By default, the entire search image panel is highlighted in green.

- In the Camera to Search area, select a camera.
- In the Time Range to Search area, set the date and time range of your search. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to modify the time range.
- Define the pixel search area by using the motion detection tools above the image panel. Only areas highlighted in green are searched.

**Tip:** If you are looking for something very specific, limit the green area to a dot to find what you're looking for more quickly.

- In the Pixel Search Options area, drag the **Threshold** slider to select the amount of motion required to return a search result.

A high threshold requires more pixels to change before results are found.

6. Enter a number in the **Join results less than** field to set the minimum number of seconds between separate search results. You can enter any number between 1-100 seconds.
7. Click **Search**.


## Viewing Pixel Search Results

1. In the Search Results area, select a search result. The event is highlighted on the Timeline and the video is displayed in the image panel. Details about the search result are displayed to the right.
2. Use the Timeline controls to review the event.  
See [Playing Back Recorded Video](#) for more information.
3. Click **Export this event** to export the selected event video.  
See [Export](#) for more information.
4. To export all listed search results, click **Export results to a file** and save the file. The search results can be saved as either a CSV or TXT file.

## Performing a Thumbnail Search

The Thumbnail Search is a visual search that displays the search results as a series of thumbnail images.



1. In the New Task menu, click .  
The Search: Thumbnails tab displays.

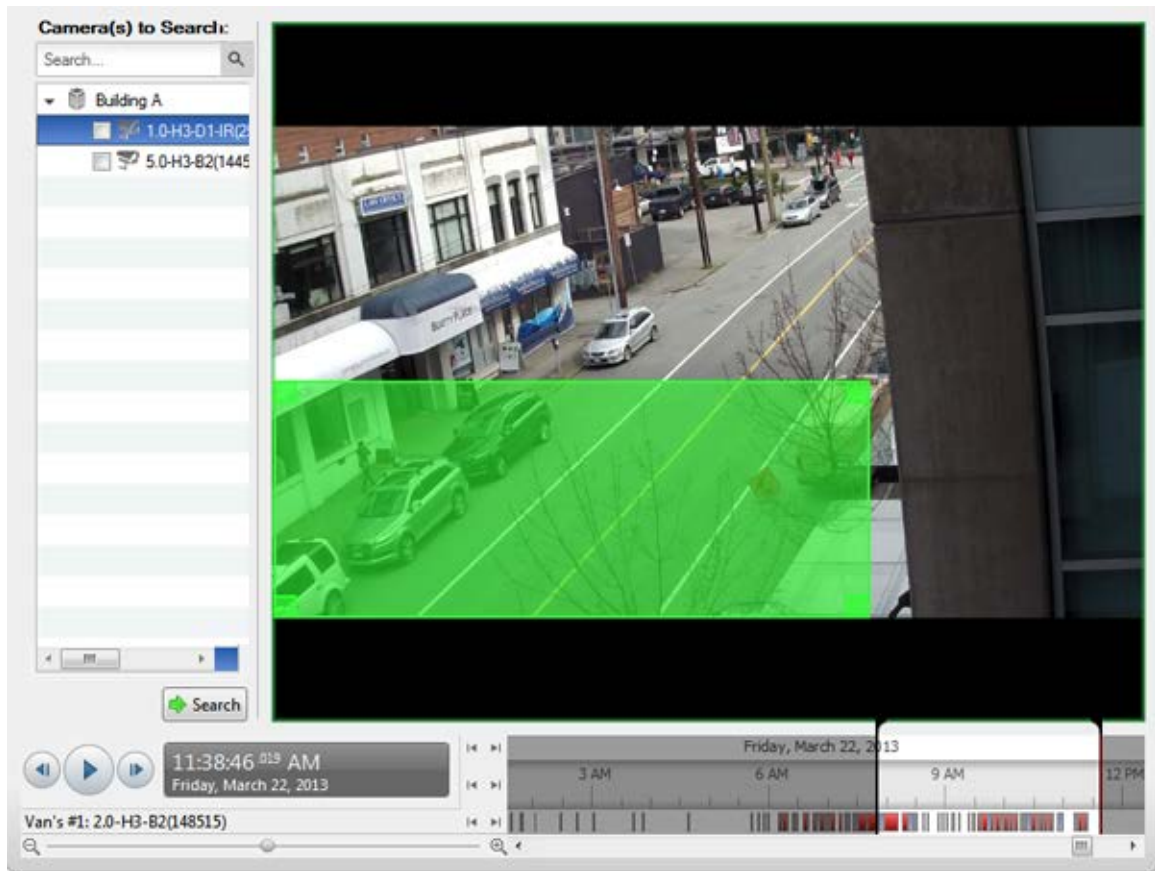


Figure A. Search:Thumbnails tab

2. In the Camera to Search area, select a camera.
3. In the Time Range to Search area, set the date and time range of your search. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to modify the time range.
4. In the image panel, move or drag the edges of the green overlay to focus the search on one area in the video image.

Only the area highlighted in green is searched.

5. Click **Search**.

## Viewing Thumbnail Search Results

The search results display thumbnails at equal intervals on the Timeline.

1. To change the size of the search result thumbnails, select **Large Thumbnails**, **Medium Thumbnails**, or **Small Thumbnails** from the drop-down menu above the search results and click **Search Again**.

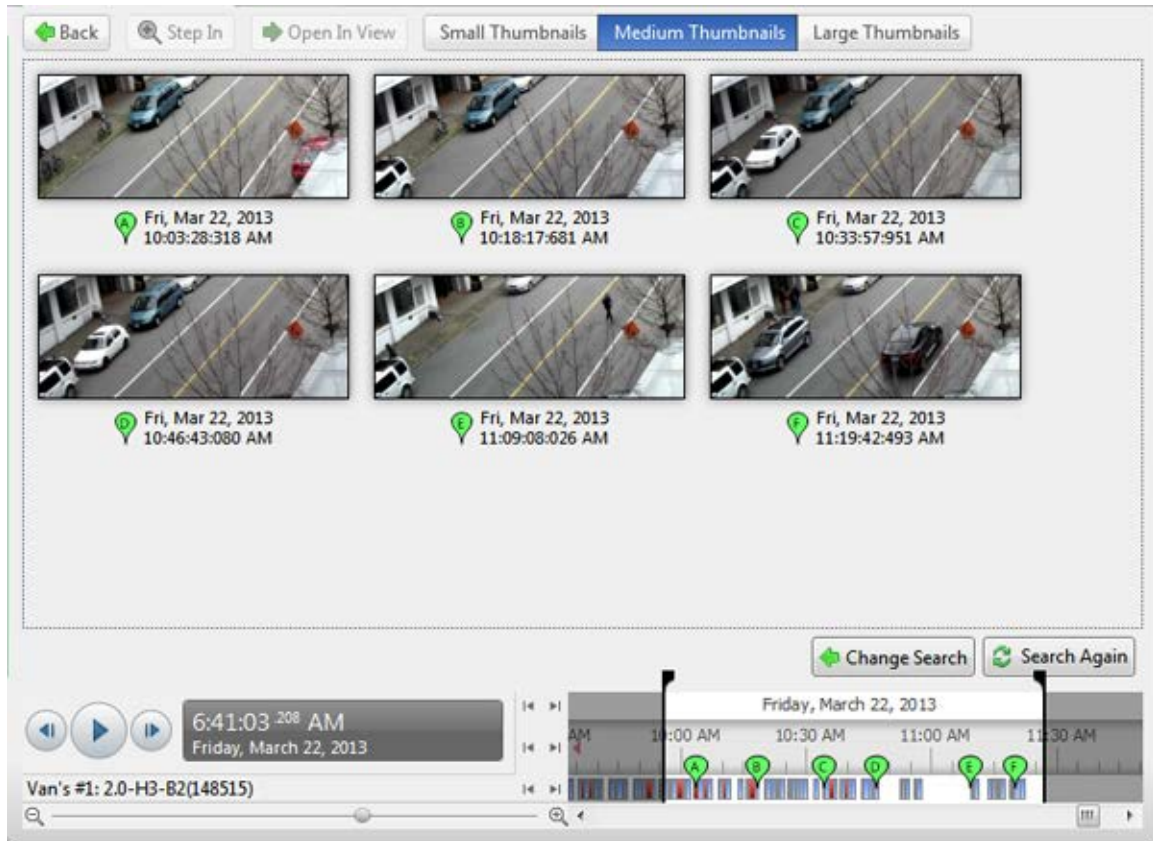



Figure B. Search: Thumbnail results tab

2. Select a thumbnail to highlight the video on the Timeline.
3. Click **Step In**, or double-click the thumbnail to perform another search around the thumbnail.  
Click **Back** to return to the previous results page.
4. Click **Open In View** to open the recorded video in a new View.
5. Click **Change Search** to change the search criteria.

## Performing an Alarm Search

Alarm search allows you to search through an alarm's history.

1. In the New Task menu, click **Search** .

The Search: Alarms tab is displayed.

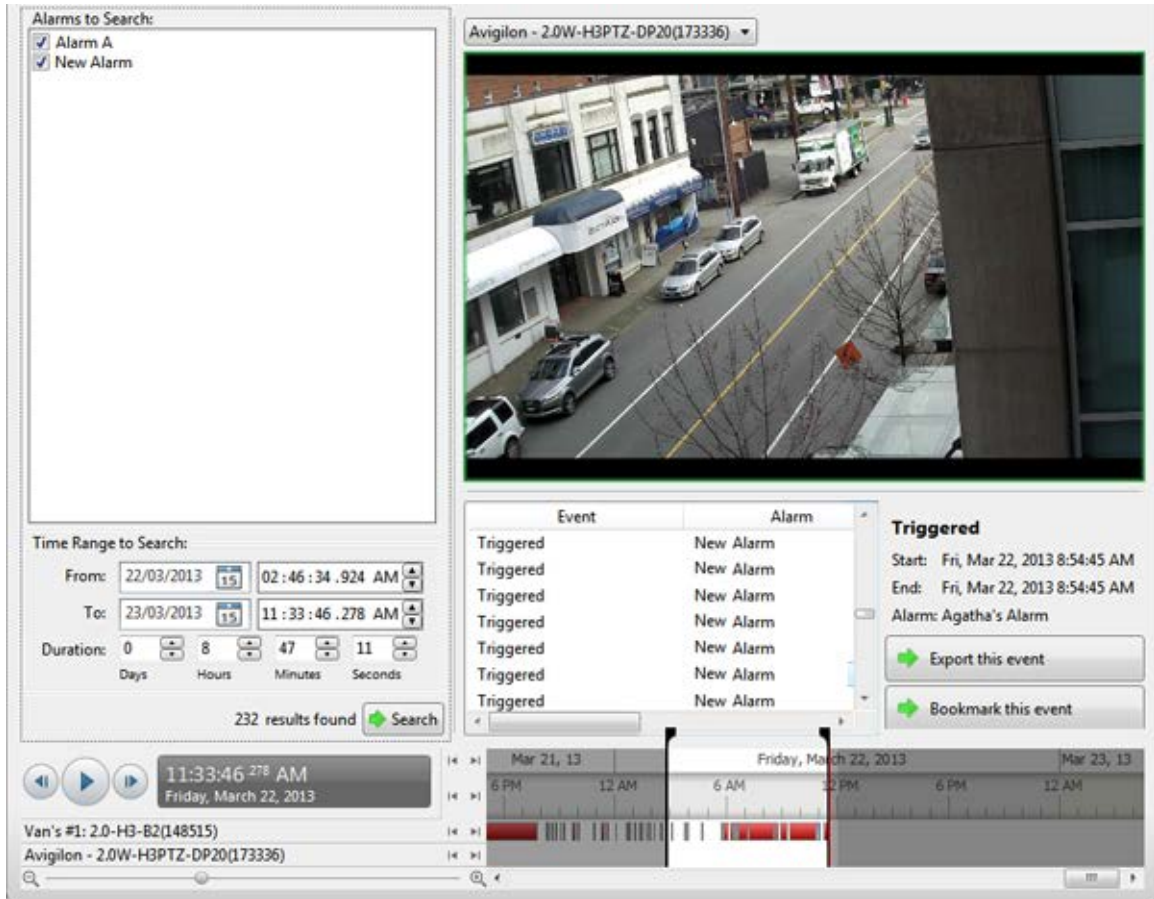


Figure A. Search:Alarms tab

2. In the Alarm to Search list, select all the alarms you would like to include in the alarm search.
3. In the Time Range to Search area, set the date and time range of your search. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to modify the time range.
4. Click **Search**.

## Viewing Alarm Search Results


1. In the Search Results area, select a search result. The event is highlighted on the Timeline and the video is displayed in the image panel. Details about the search result are displayed to the right.
2. Use the Timeline controls to review the event.

See [Playing Back Recorded Video](#) for more information.

3. If the search result is linked to multiple cameras, select a camera from the drop down list above the image panel to change the video that is displayed.
4. Click **Export this event** to export the selected event video.  
See [Export](#) for more information.
5. Click **Bookmark this event** to bookmark the selected search result.  
See [Bookmarking Recorded Video](#) for more information.
6. To export all listed search results, click **Export results to a file** and save the file. The search results can be saved as either a CSV or TXT file.

## Performing a Bookmark Search

The Bookmark Search allows you to search for a specific bookmark.

1. In the New Task menu, click 

The Search: Bookmark tab is displayed. All available bookmarks are listed on the left.

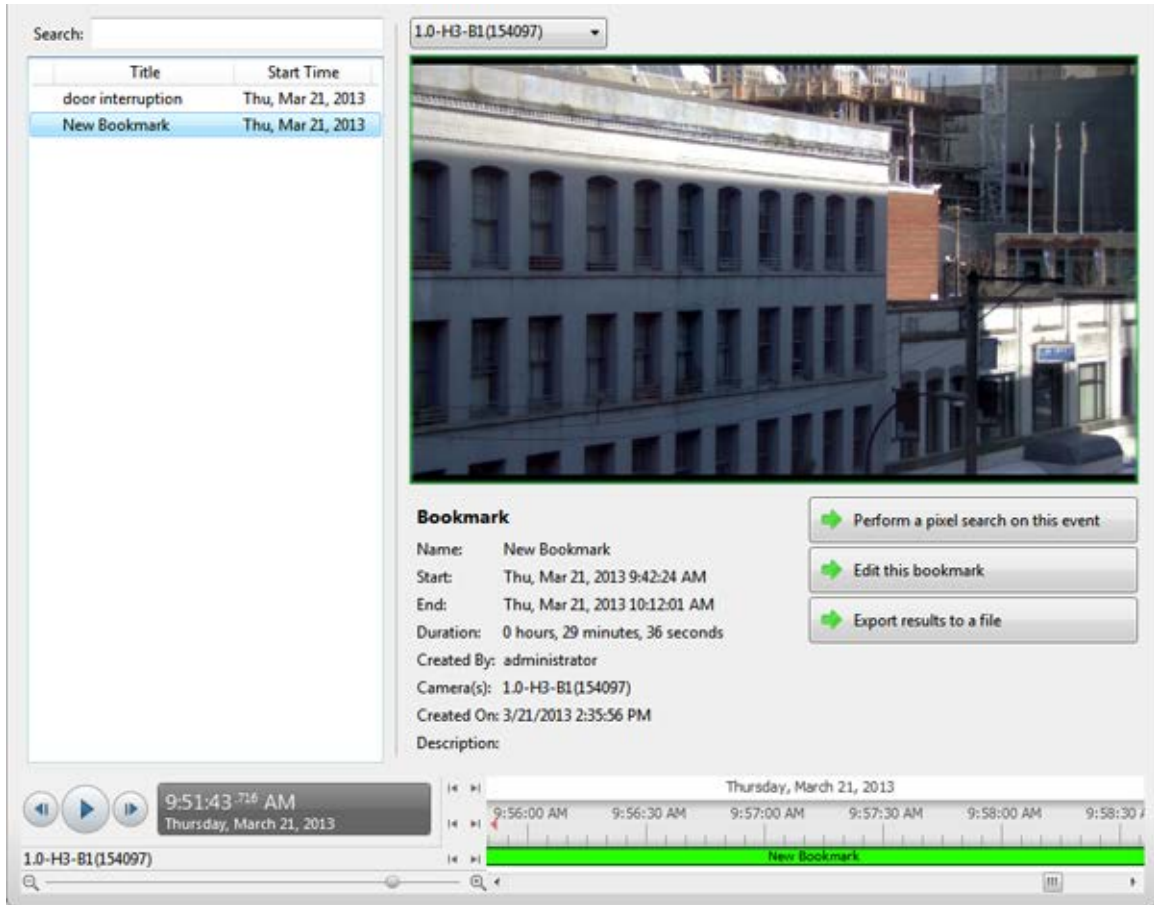


Figure A. Search:Bookmark tab

2. In the **Search** field, enter any text that may appear in the bookmark's title, description, linked camera name or the name of the user who created the bookmark.

The search is automatically performed on all the listed bookmarks until only the matches are displayed.

## Viewing Bookmark Search Results

1. In the Bookmark list, select a bookmark. The bookmark is highlighted on the Timeline and the video is displayed in the image panel. Details about the bookmark are displayed under the image panel.
2. Use the Timeline controls to review the event.  
See [Playing Back Recorded Video](#) for more information.
3. If the search result is linked to multiple cameras, select a camera from the drop down list above the image panel to change the video that is displayed.



4. Click **Export this bookmark** to export the selected bookmark.

See [Export](#) for more information.

5. If you want to further refine your search, click **Perform a pixel search on this event**. You can now search for any pixel movement in the selected bookmarked video.


See [Performing a Pixel Search](#) for more information.

6. Click **Edit this bookmark** to edit the bookmark.

See [Bookmarking Recorded Video](#) for more information.

## Performing a POS Transaction Search

The POS Transaction Search allows you to search for specific transactions.

1. In the New Task menu, click  .

The Search: POS Transactions tab is displayed.

The screenshot displays the 'Search:POS Transactions' interface. On the left, the 'POS Transaction Sources to Search' panel shows a search bar and a list of sources, with 'FPAN-1' selected. Below this is the 'Time Range to Search' section, where the search range is set from 08/05/2013 06:45:24.891 PM to 11/05/2013 09:07:48.797 PM. The 'Search Text' area is empty, and the search method is set to 'Wildcards'. A 'Search' button is visible at the bottom of this panel.

The central video feed shows a store interior with a 'Self ch' sign. Below the video is a table of search results:

Server	Transaction Source	Time	Duration
FPAN-1	1	Wed, May 08, 201	0:00:04
FPAN-1	1	Wed, May 08, 201	0:00:02
FPAN-1	1	Wed, May 08, 201	0:00:01
FPAN-1	1	Wed, May 08, 201	0:00:02
FPAN-1	1	Wed, May 08, 201	0:00:01
FPAN-1	1	Wed, May 08, 201	0:00:01
FPAN-1	1	Wed, May 08, 201	0:00:09
FPAN-1	1	Wed, May 08, 201	0:00:01
FPAN-1	1	Wed, May 08, 201	0:00:01

To the right of the table is a 'POS Transaction' details panel showing the start and end times, duration, and a preview of a receipt for 'Welcome to the Avigilon Store' with a total of \$21.98. Below the receipt are buttons for 'Export this event', 'Bookmark this event', and 'Export results to a file'.

At the bottom, a timeline for 'Wednesday, May 08, 2013' shows the search time range highlighted in black, with a play button and a search bar for the timeline.

Figure A. Search:POS Transactions tab

- In the POS Transaction Sources to Search area, select all the POS transaction sources you would like to include in the search.
- In the Time Range to Search area, set the date and time range of your search. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to modify the time range.
- In the Search Text area, enter any text that will help you filter the search results. For example, you can enter product names or transaction values.

Use the **Wildcards** and **Regular Expression** search methods to find a range of results. Leave the **Text** field blank to find all transactions.

- Click **Search**.

## Viewing POS Transaction Search Results

1. In the Search Results area, select a search result. The event is highlighted on the Timeline and the video is displayed in the image panel. Details about the search result are displayed to the right.
2. Use the Timeline controls to review the event.  
See [Playing Back Recorded Video](#) for more information.
3. If the search result is linked to multiple cameras, select a camera from the drop down list above the image panel to change the video that is displayed.
4. Click **Export this event** to export the selected event video.  
See [Export](#) for more information.
5. Click **Bookmark this event** to bookmark the selected search result.  
See [Bookmarking Recorded Video](#) for more information.
6. To export all listed search results, click **Export results to a file** and save the file. The search results can be saved as either a CSV or TXT file.



# Export

You can export video in multiple video and image formats. The Export tab can be accessed from bookmark options, the Search tab, the Alarms tab and by opening a new Task.

You can also export snapshots of an image panel as you monitor video.

## Exporting Native Video

The Native (AVE) format is the recommended format for exporting video. You can export video from multiple cameras in a single file, and the video maintains its original compression. AVE video is played in the Avigilon Control Center Player, where the video can be authenticated against tampering and be re-exported to other formats.

If there is audio linked to the video, the audio is automatically included in the export.

If you are exporting a large amount of video for your records, Backup the video instead. See [Backing Up Recorded Video On Demand](#) for more information.

1. Open the Export tab. In the New Task menu, click  .

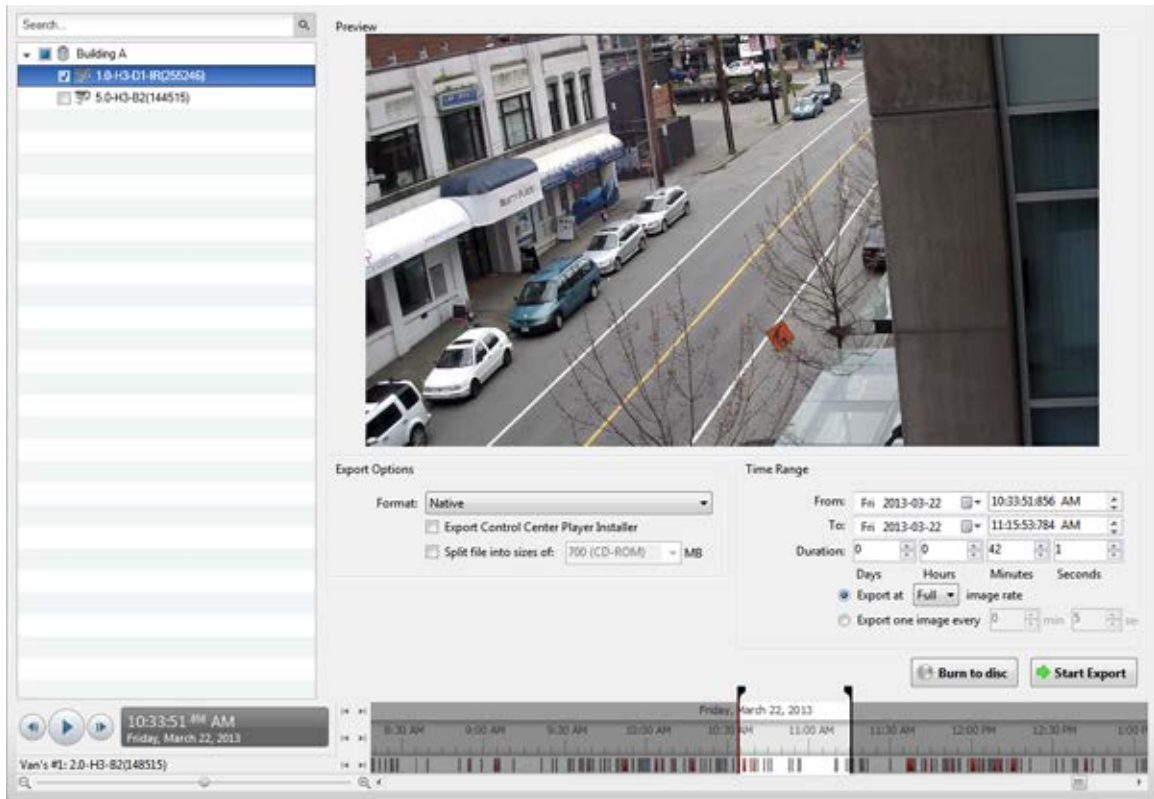


Figure A. Export tab for recorded video export

2. In the **Format** drop down list, select **Native**.
3. In the System Explorer, select the camera video you want to export.
4. To include a copy of the Avigilon Control Center Player with your export, select the **Export the Control Center Player Installer** check box.

Be aware that this option is automatically disabled if you choose to burn the export to disc.

5. To automatically divide the export into separate files, select the **Split file into sizes of:** check box then select one of the options from the drop down list, or manually enter the size of each file in MB.

This option allows you to export smaller files for storing in a flash drive or optical media later.

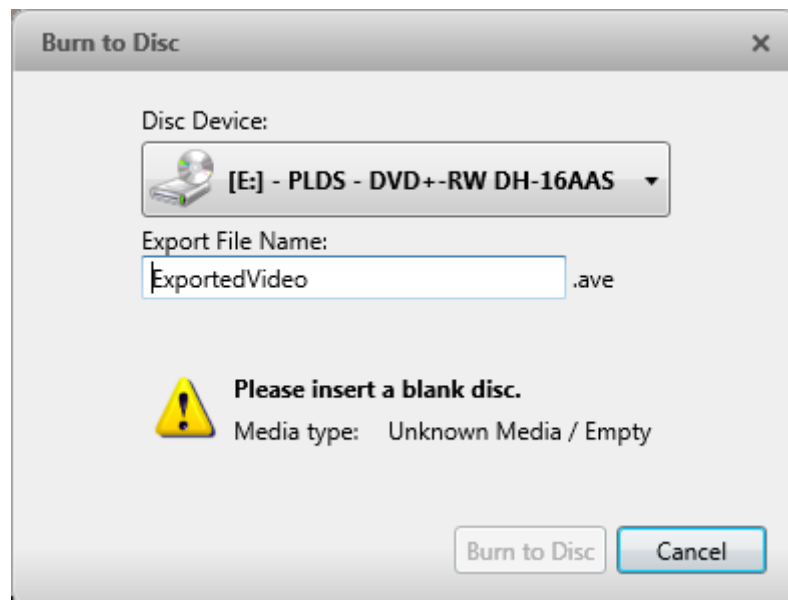
This setting is automatically disabled if you choose to burn the export to disc because the system auto-detects the disc size.

6. Enter the time range you want to export. The time range is highlighted on the Timeline by black time range markers. You can also drag the time range markers to modify the time range.
7. Set the export image rate:

Option	Description
<b>Export at __ image rate</b>	Select this option to control how many images per second are exported.  For example, the video is streaming at 30 images per second. If you select <b>1/2</b> , only 15 images for that second will be exported.
<b>Export one image every __ min __sec</b>	Select this option to control the time between each exported video image.  For example, if you enter 5 min. 0 sec., only one image will be exported every 5 minutes.

8. Click one of the following:

- o **Start Export** – to save the file locally.
  - a. In the Save As dialog box, name the export file and click **Save**.
- o **Burn to disc** – to burn the file directly to disc media.



- a. When the dialog box appears, insert a disc and select the media burning drive.
- b. Name the export file. The filename is automatically given a numbered suffix to help identify which file you are playing if the export spans multiple discs.

- c. Click **Burn to disc** to start the export. If this button is disabled, the disc may be corrupt or full.
- d. Monitor the export progress to see if extra discs are required. When a disc is full, the export automatically pauses and you are asked to insert a new disc. After you insert a new disc, click **Resume Export**.

The number of discs required to export a video varies widely depending on the camera and the type of disc used. Video is stored on the server with minimal compression to maximize the function of Avigilon's HDSM technology, so the size of an export can be quite large due to the camera's megapixel resolution and frame rate.

Generally, if you are exporting a 2 minute video from a 2MP H.264 HD camera into AVE format, you would be exporting a 93MB file. If you wish to further reduce the size of the export, you can lower the frame rate or use a disc type with a larger capacity. Be aware that reducing the frame rate too much may cause the exported video to be jerky or missing data.

9. When the export is complete, click **OK**.

## Exporting AVI Video

Video exported in Audio Video Interleave (AVI) format can be played in most media players. Be aware that you can only export one video at a time in this format.

If there is audio linked to the video, the audio is automatically included in the export.

1. Open the Export tab. In the New Task menu, click  .



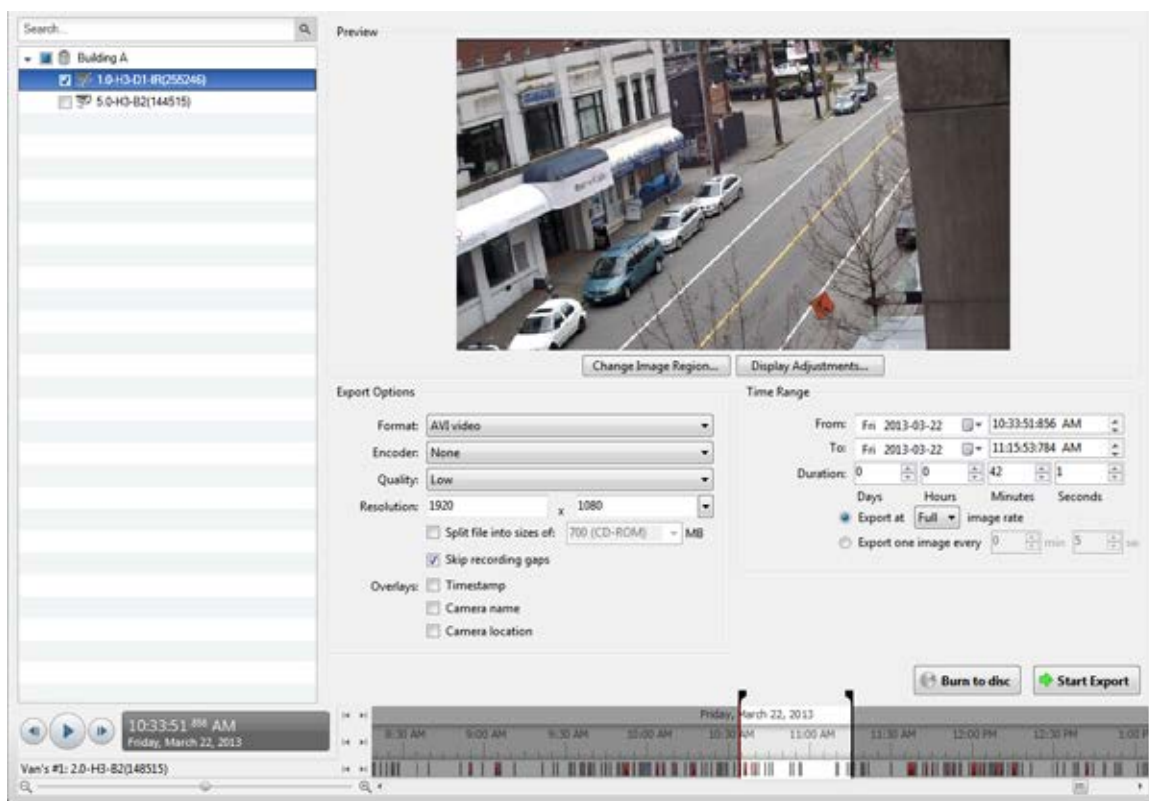


Figure A. Export tab for recorded video export

2. In the **Format** drop down list, select **AVI video**.
3. In the System Explorer, select the camera video you want to export.
4. In the **Encoder** field, select the compression used. The **VC-1 (Windows Media Video)** compression is included by default because it is tailored for high-resolution AVI encoding.

If you are planning to burn the export to disc, it is important to select a compression method to help reduce the export size and maintain video quality.

5. In the **Quality** drop down list, select the exported image quality level.
6. In the **Resolution** field, select a resolution for the video image. You can manually enter the resolution or click the drop down arrow to select a standard resolution.

**Note:** The **Resolution** field automatically maintains the image aspect ratio.

7. To automatically divide the export into separate files, select the **Split file into sizes of:** check box then select one of the options from the drop down list, or manually enter the size of each file in MB.

This option allows you to export smaller files for storing in a flash drive or optical media later.

This setting is automatically disabled if you choose to burn the export to disc because the system auto-detects the disc size.

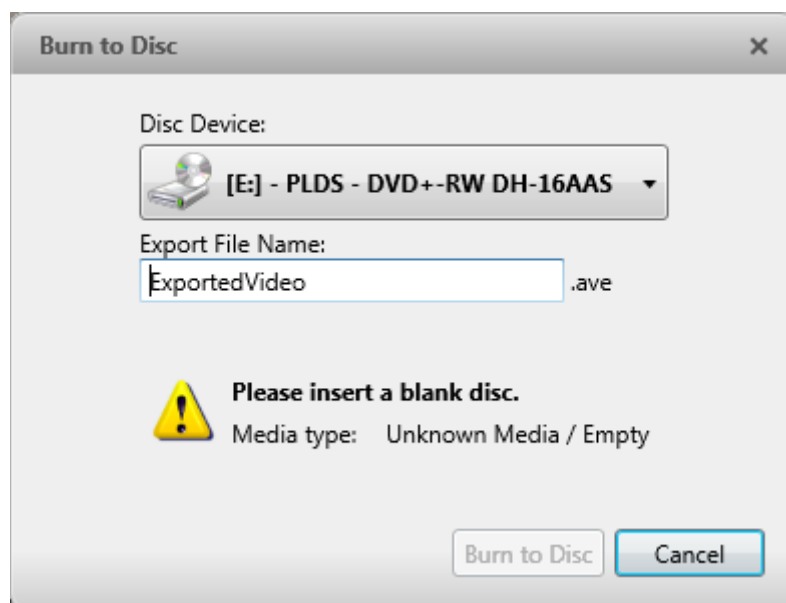
8. Select the **Skips recording gaps** check box to avoid pauses in the video caused by gaps in the recording.
9. Select the image overlays you want: **Timestamp**, **Camera name**, and **Camera location**.
10. Enter the time range you want to export. The time range is highlighted on the Timeline by black time range markers. You can also drag the time range markers to modify the time range.
11. Set the export image rate:

Option	Description
<b>Export at __ image rate</b>	<p>Select this option to control how many images per second are exported.</p> <p>For example, the video is streaming at 30 images per second. If you select <b>1/2</b>, only 15 images for that second will be exported.</p>
<b>Export one image every __ min __sec</b>	<p>Select this option to control the time between each exported video image.</p> <p>For example, if you enter 5 min. 0 sec., only one image will be exported every 5 minutes.</p>

12. Click **Change Image Region...** to only export part of the video image.

In the Change Image Region dialog box, move and resize the green overlay then click **OK**. Only areas highlighted in green are exported.

13. Click **Display Adjustments** to adjust the gamma, black level and/or white level.
14. Click one of the following:
  - o **Start Export** – to save the file locally.
    - a. In the Save As dialog box, name the export file and click **Save**.
  - o **Burn to disc** – to burn the file directly to disc media.



- a. When the dialog box appears, insert a disc and select the media burning drive.
- b. Name the export file. The filename is automatically given a numbered suffix to help identify which file you are playing if the export spans multiple discs.
- c. Click **Burn to disc** to start the export. If this button is disabled, the disc may be corrupt or full.
- d. Monitor the export progress to see if extra discs are required. When a disc is full, the export automatically pauses and you are asked to insert a new disc. After you insert a new disc, click **Resume Export**.

The number of discs required to export a video varies widely depending on the camera and the type of disc used. Video is stored on the server with minimal compression to maximize the function of Avigilon's HDSM technology, so the size of an export can be quite large due to the camera's megapixel resolution and frame rate.

Generally, if you are exporting a 2 minute video from a 2MP H.264 HD camera into uncompressed AVI format, you would be exporting a 2.7GB file. If you select an Encoder format and compress the video, you would be able to export a 224MB video at high quality. It is recommended that you always select an Encoder format for AVI export to help significantly reduce the file size.

To further reduce the file size you can also select a lower Quality setting, lower the export frame rate, reduce the video resolution, or focus the export on a specific image region. Be

aware that reducing each of the available settings too much may cause the export to be blurry or missing frames.

If it is important to have a high quality and full frame rate export, it is recommended that you use the AVE export format instead. AVE export intelligently compresses the video to create a smaller export file while maintaining video data so that you can search, re-export video, and authenticate the video against tampering through the Avigilon Control Center Player software.

- When the export is complete, click **OK**.

## Exporting Still Images

Video can be exported as a series of still images in PNG, JPEG, or TIFF format. When you export a series of still images, you are exporting each frame of video as an independent file.

If you only want one photo of the video you are watching, take a snapshot. For more information, see [Exporting a Snapshot of an Image](#).

- Open the Export tab. In the New Task menu, click  .

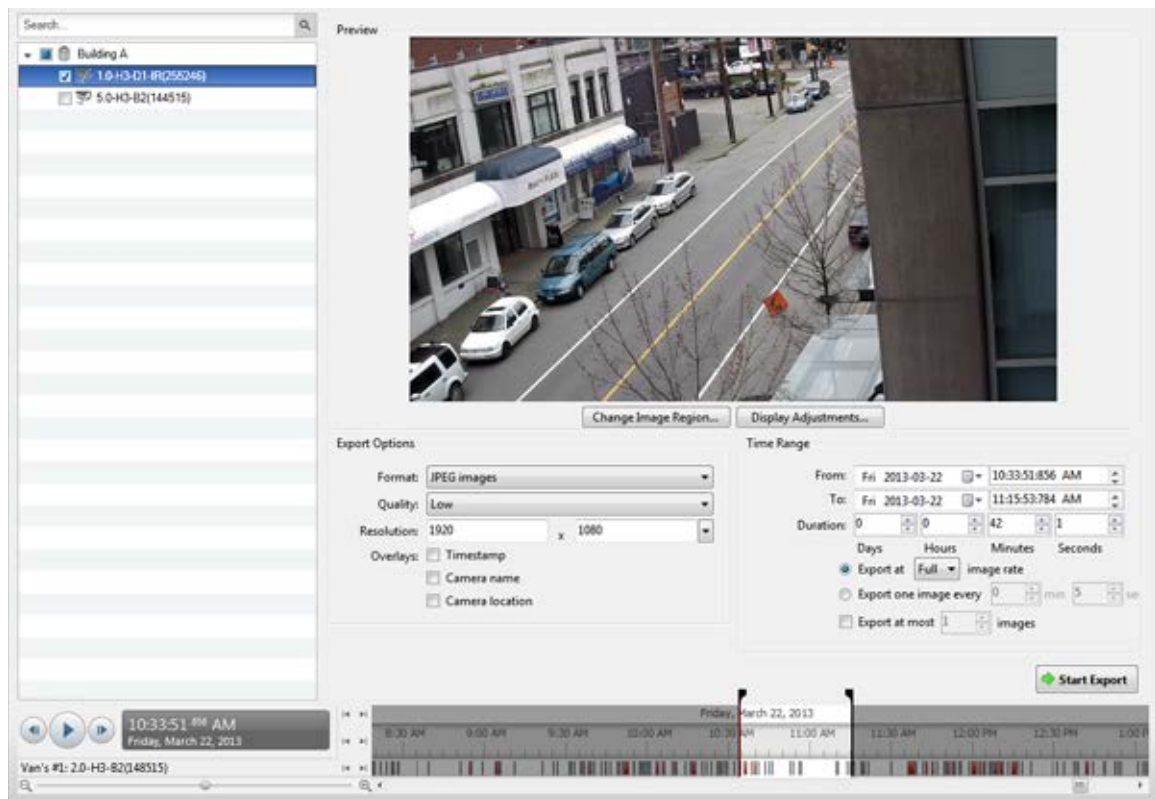


Figure A. Export tab for still image export

2. In the **Format** drop down list, select **PNG Images**, **JPEG Images**, or **TIFF Images**.
3. In the System Explorer, select the camera video you want to export.
4. (JPEG only)

In the **Quality** drop down list, select the exported image quality level.

5. In the **Resolution** field, select a resolution for the video image. You can manually enter the resolution or click the drop down arrow to select a standard resolution.

**Note:** The **Resolution** field automatically maintains the image aspect ratio.

6. Select the image overlays you want: **Timestamp**, **Camera name**, and **Camera location**.
7. Enter the time range you want to export. The time range is highlighted on the Timeline by black time range markers. You can also drag the time range markers to modify the time range.
8. Set the export image rate:

Option	Description
<b>Export at __ image rate</b>	Select this option to control how many images per second are exported.  For example, the video is streaming at 30 images per second. If you select <b>1/2</b> , only 15 images for that second will be exported.
<b>Export one image every __ min __sec</b>	Select this option to control the time between each exported video image.  For example, if you enter 5 min. 0 sec., only one image will be exported every 5 minutes.

9. Select the **Export at most \_\_ images** check box and enter a number to limit the amount of images that are exported.
10. Click **Change Image Region...** to only export part of the video image.

In the Change Image Region dialog box, move and resize the green overlay then click **OK**. Only areas highlighted in green are exported.

11. Click **Display Adjustments** to adjust the gamma, black level and/or white level.
12. Click **Start Export**.
13. In the Save As dialog box, name the export file and click **Save**.

The Preview area displays the video you are exporting.

- When the export is complete, click **OK**.

## Exporting a Print Image

You can export a frame of video directly to your printer or PDF, and include your notes related to the image.

If you want to print a photo of the video you are currently watching, take a snapshot. For more information, see [Exporting a Snapshot of an Image](#).

- Open the Export tab. In the New Task menu, click .

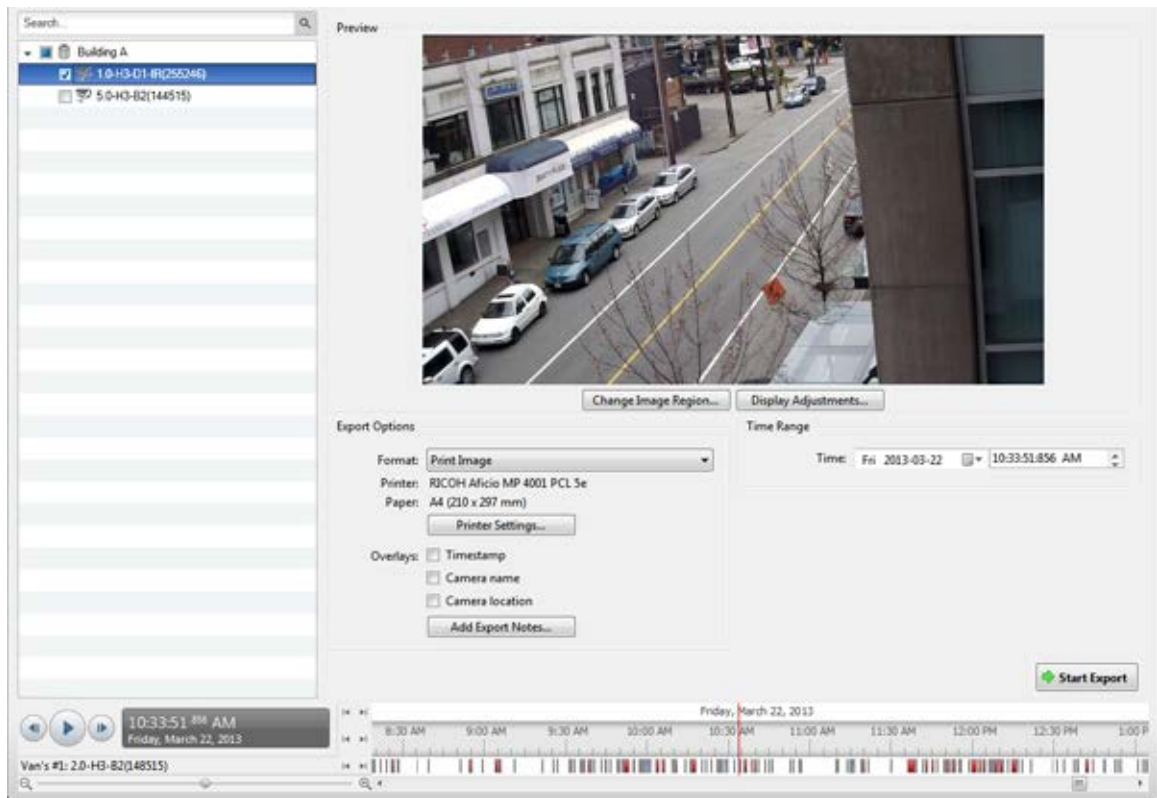


Figure A. Export tab for still image export

- In the **Format** drop down list, select **Print Image** or **PDF File**.
- In the System Explorer, select the camera video you want to export.
- (Print Image only) Click **Printer Settings** to change the printer and paper size that the image is printed on.

5. Select the image overlays you want: **Timestamp**, **Camera name**, and **Camera location**.
6. Click **Add Export Notes** to add notes about the exported image. The notes are added below the image.
7. In the **Time** field, enter the exact date and time of the video image you want to export.
8. Click **Change Image Region...** to only export part of the video image.

In the Change Image Region dialog box, move and resize the green overlay then click **OK**. Only areas highlighted in green are exported.

9. Click **Display Adjustments** to adjust the gamma, black level and/or white level.
10. Click **Start Export**.
  - If you are exporting a Print Image, the image is sent to the printer.
  - If you are exporting a PDF File, save the image.

The Preview area displays the video you are exporting.

11. When the export is complete, click **OK**.

## Exporting WAV Audio

If you want to export audio with video, simply export the video in AVI or Native format. Any audio that is linked to the video is automatically included in the export file.

This procedure would export the audio alone.

1. Open the Export tab. In the New Task menu, click  .

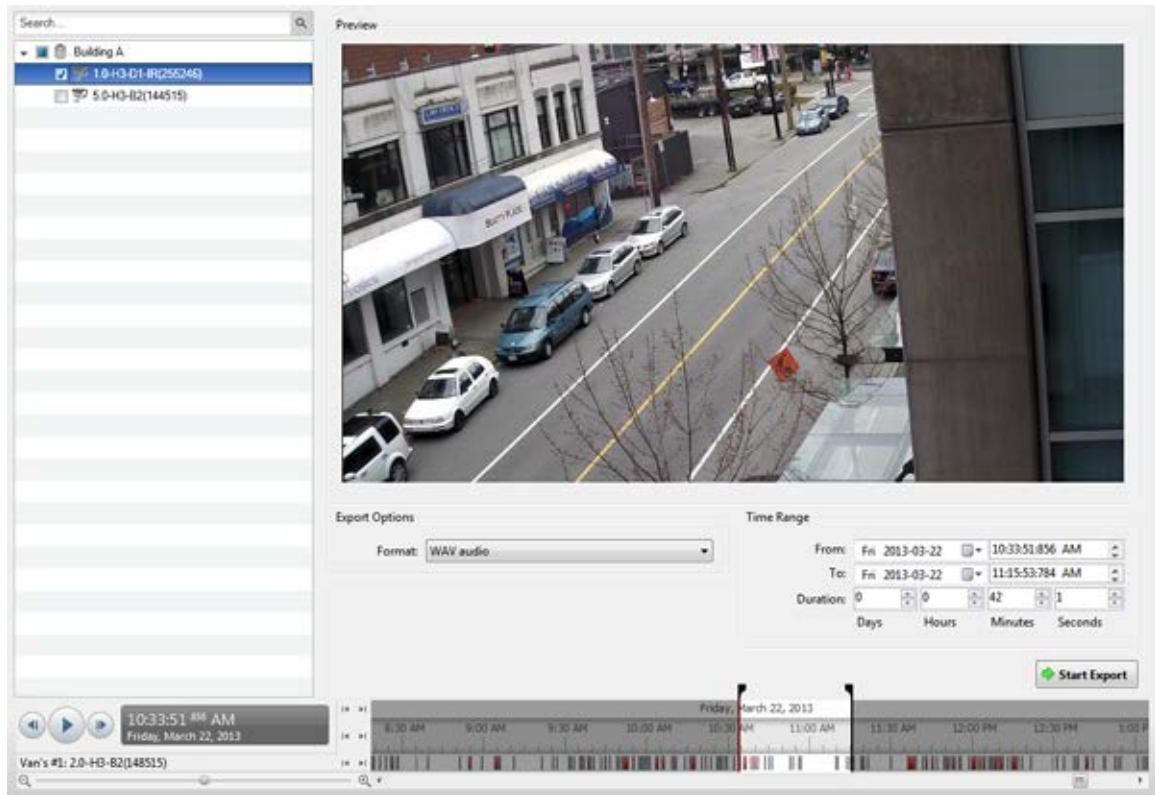


Figure A. Export tab for audio export

2. In the **Format** drop down list, select **WAV**.
3. In the System Explorer, select the camera that the audio is linked to.
4. Enter the time range you want to export. The time range is highlighted on the Timeline by black time range markers. You can also drag the time range markers to modify the time range.
5. Click **Start Export**.
6. In the Save As dialog box, name the export file and click **Save**.

The Preview area displays the video linked with the audio you are exporting.


7. When the export is complete, click **OK**.

## Exporting a Snapshot of an Image

You can export a snapshot of any image panel with video. When you export a snapshot, you are exporting whatever the image panel is currently displaying.

1. To export a snapshot, perform one of the following:



- In the image panel, click .
- Right-click the image panel and select **Save Snapshot**.

The snapshot Export tab is displayed, and the image you want to export is displayed.

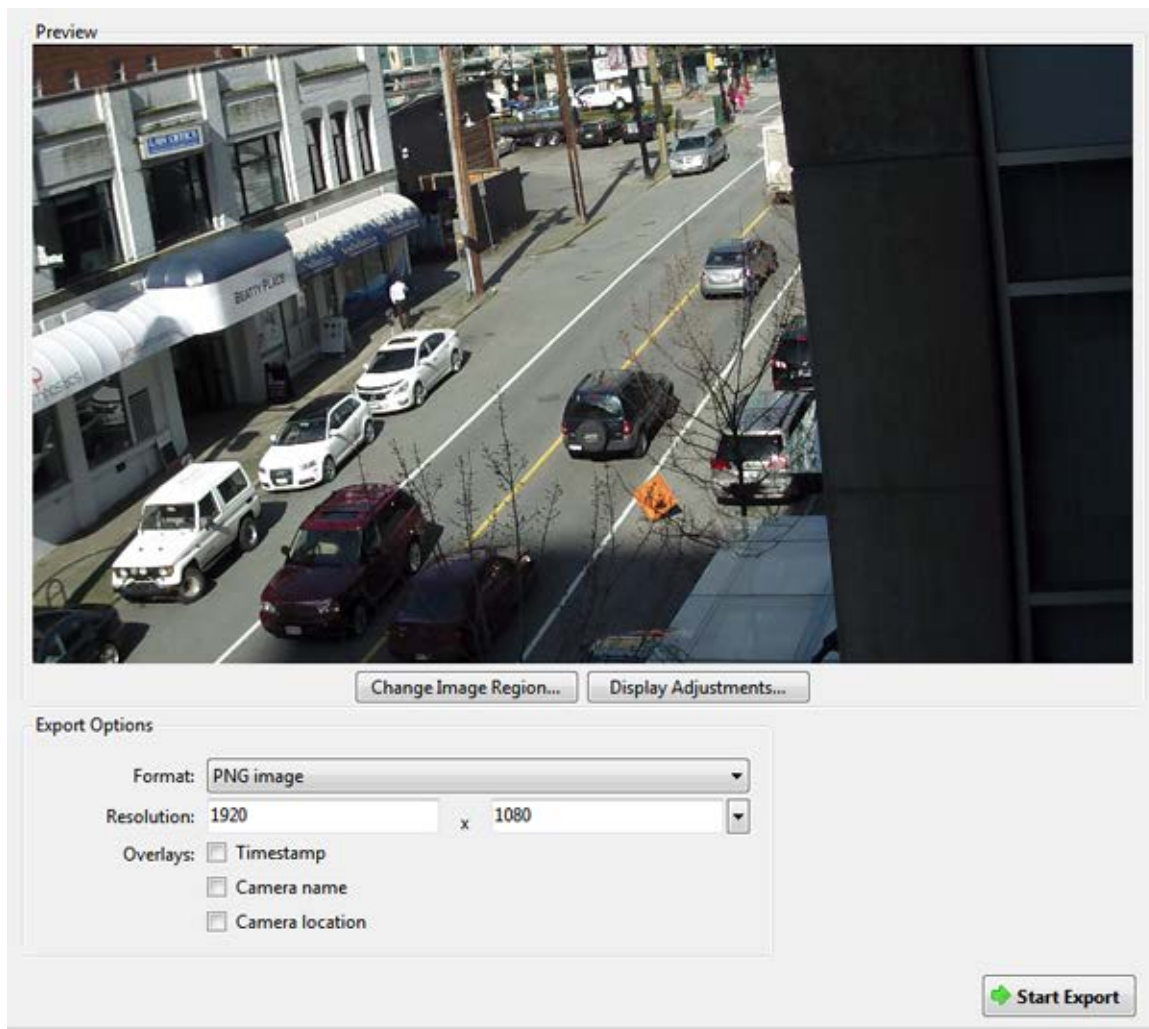


Figure A. Export tab for Snapshot export

2. In the **Format** drop down list, select an export format.
3. For the selected export format, define your preferences:

Format	Export options
<p><b>Native</b></p> <p><b>Note:</b> The Native format requires the Avigilon Control Center</p>	<p>This is the recommended export format because the exported image maintains its original compression and can be authenticated against tampering in the Avigilon Control Center Player.</p> <ul style="list-style-type: none"> <li>▪ Select the <b>Export the Control Center Player Installer</b> check box if you want a copy of the Avigilon Control Center Player to be</li> </ul>

<p>Player to view.</p>	<p>distributed with your Native image file.</p>
<p><b>PNG</b></p>	<ol style="list-style-type: none"> <li>1. In the <b>Resolution</b> field, select a resolution for the video image. You can manually enter the resolution or click the drop down arrow to select a standard resolution.</li> </ol> <p><b>Note:</b> The <b>Resolution</b> field automatically maintains the image aspect ratio.</p> <ol style="list-style-type: none"> <li>2. Select the image overlays you want: <b>Timestamp</b>, <b>Camera name</b>, and <b>Camera location</b>.</li> <li>3. Click <b>Change Image Region...</b> to only export part of the video image.</li> </ol> <p>In the Change Image Region dialog box, move and resize the green overlay then click <b>OK</b>. Only areas highlighted in green are exported.</p> <ol style="list-style-type: none"> <li>4. Click <b>Display Adjustments</b> to adjust the Gamma, Black Level and/or White Level.</li> </ol>
<p><b>JPEG</b></p>	<ol style="list-style-type: none"> <li>1. In the <b>Quality</b> field, select an image quality level.</li> <li>2. Set the image <b>Resolution</b>.</li> <li>3. Select the image overlays you want.</li> <li>4. Click <b>Change Image Region</b> to only export a part of the video image.</li> <li>5. Click <b>Display Adjustments</b> to modify the image quality.</li> </ol>
<p><b>TIFF</b></p>	<ol style="list-style-type: none"> <li>1. Set the image <b>Resolution</b>.</li> <li>2. Select the image overlays you want.</li> <li>3. Click <b>Change Image Region</b> to only export a part of the video image.</li> <li>4. Click <b>Display Adjustments</b> to modify the image quality.</li> </ol>
<p><b>Print Image</b></p>	<ol style="list-style-type: none"> <li>1. Click <b>Printer Settings...</b> to change the selected printer and paper size.</li> <li>2. Select the image overlays you want.</li> <li>3. Click <b>Add Export Notes...</b> to add notes about the exported image. The notes are printed below the image.</li> <li>4. Click <b>Change Image Region</b> to only export a part of the video image.</li> </ol>

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	5. Click <b>Display Adjustments</b> to modify the image quality.
<b>PDF</b>	<ol style="list-style-type: none"><li>1. Select the image overlays you want.</li><li>2. Click <b>Add Export Notes...</b> to add notes about the exported image.</li><li>3. Click <b>Change Image Region</b> to only export a part of the video image.</li><li>4. Click <b>Display Adjustments</b> to modify the image quality.</li></ol>

4. Click **Start Export**.

5. In the Save As dialog box, name the export file and click **Save**. If you are printing the snapshot, the image is sent to your printer instead.

The Preview area displays the snapshot you are exporting.

6. When the export is complete, click **OK**.



# Backup

The Avigilon Control Center can be set to back up files automatically, but you can also back up files as needed from the Backup tab.


For information about configuring automatic backup, see [Changing Scheduled Backup Settings](#).

## Backing Up Recorded Video On Demand

If you want a copy of the recorded video in your system, use the backup feature. Video is always backed up in the Avigilon Backup (AVK) format. You can review the backed up video in the Avigilon Control Center Player.

If you want backups to occur automatically at a scheduled time, see [Scheduled Backup](#).

The backup files are stored in a backup folder set by the Avigilon Control Center Admin Tool. See the *Avigilon Control Center Server User Guide* for information about changing the backup folder.

1. At the top of the application window, click .

The Backup tab is displayed.

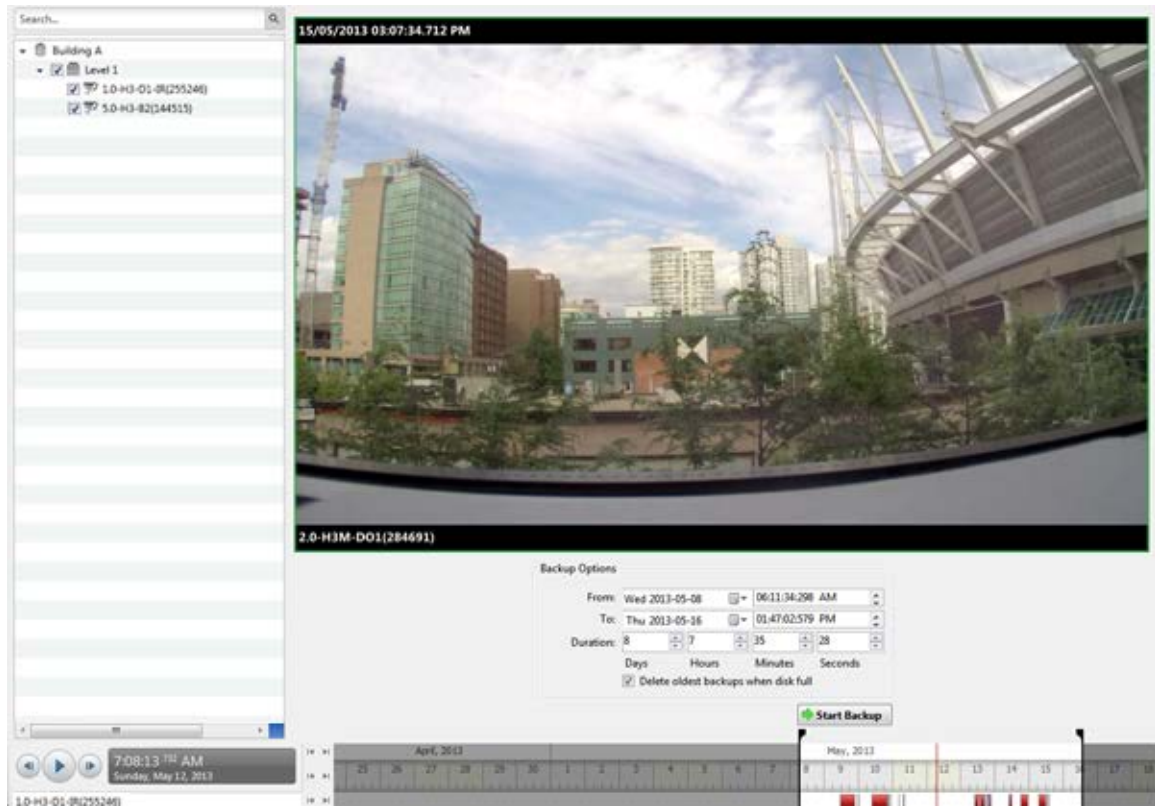


Figure A. Backup tab

2. In the System Explorer, select all the cameras you want to backup.
3. In the Backup Options area, set the time range you want to backup. The time range is highlighted on the Timeline by the black time range markers. You can also drag the time range markers to change the time range.
4. Select the **Delete oldest backups when disk full** check box to allow the application to automatically overwrite old backup files when the backup folder is full.
5. Click **Start Backup**.
6. When the backup is complete, click **OK**.

# Appendix

## Events and Descriptions

**Note:** Some features are not displayed if the server does not have the required license, or if you do not have the required user permissions.

Listed in this section are descriptions of the options available in the Site setup.

### Email Descriptions

The following table shows the email notification trigger options that are available when you set up an email notification. For more information about setting up an email notification, see [Configuring Email Notification](#).

Email Notification Trigger	Description
System event	Email notifications are sent when one of the following rule events occur: <ul style="list-style-type: none"><li data-bbox="716 1314 1105 1346">▪ Server application starting up</li><li data-bbox="716 1388 1146 1419">▪ Server application shutting down</li><li data-bbox="716 1461 1273 1493">▪ Server application terminated unexpectedly</li><li data-bbox="716 1535 1183 1566">▪ Server application low on resources</li><li data-bbox="716 1608 1170 1640">▪ Server application installation error</li><li data-bbox="716 1682 1117 1713">▪ Licensed feature expires soon</li><li data-bbox="716 1755 1052 1787">▪ Licensed feature expired</li><li data-bbox="716 1829 943 1860">▪ Database error</li></ul>

- Data initialization error
- Data volume size reduced
- Data write error for any camera
- Data upgrade started
- Data upgrade completed
- Data upgrade failed
- Volume failed
- Volume recovered
- Network connection found
- Network connection lost
- Network error
- Network error resolved
- Email send error
- Server hardware error
- Device connected to standby server
- Device disconnected from standby server
- Device connection error
- Device connection error resolved
- Data packets lost
- Data packets recovered
- Recording interrupted
- Recording resumed
- Firmware upgrade failed



Motion detection	An email notification is sent when camera motion detection has started. You can select the camera.
Digital input activated	An email notification is sent when a digital input has been triggered. You can select the digital input.
POS transaction exception	An email notification is sent when a POS transaction exception occurs.

## Group Permission Descriptions

The following table shows the options that are available when you set up a permission group. For more information about setting up a permission group, see [Adding Groups](#).

Group Permissions		Description
View live images		Allows users to watch a camera's live video stream in a View.
	Use PTZ controls	Allows users to use a camera's PTZ controls.
	Lock PTZ controls	Allows users to lock a camera's PTZ controls.
	Trigger manual recording	Allows users to trigger manual recording while watching video in a View.
	Trigger digital outputs	Allows users to trigger digital outputs while watching video in a View.
	Listen to microphones	Allows users to listen to microphones that are connected to a camera.
	Broadcast to speakers	Allows users to broadcast audio through speakers that are connected to the camera.
View recorded images		Allows users to watch a camera's recorded video in a View.
	Export images	Allows users to export recorded images.

	Backup images	Allows users to backup recorded images.
Manage saved views		Allows users to add and edit Saved Views.
Manage maps		Allows users to add and edit maps.
Manage web pages		Allows users to add and edit web pages.
Manage virtual matrix monitors		Allows users to edit Virtual Matrix monitors.
Initiate collaboration sessions		Allows users to collaborate with other users on the same network.
Manage user sessions		Allows users to log other users out of the Site.
Setup cameras		Allows users to configure cameras.
	Setup general settings	Allows users to edit the camera's General dialog box.
	Setup network settings	Allows users to edit the Network dialog box.
	Setup image and display settings	Allows users to edit the Image and Display dialog box.
	Setup compression and image rate settings	Allows users to edit the Compression and Image Rate dialog box.
	Setup image dimension settings	Allows users to edit the Image Dimensions dialog box.
	Setup motion detection settings	Allows users to edit the Motion Detection dialog box.
	Setup privacy zone settings	Allows users to edit the Privacy Zone dialog box.
	Setup manual recording settings	Allows users to edit the Manual Recording dialog box.
	Setup digital input & output settings	Allows users to edit the Digital Inputs

		and Outputs dialog box.
	Setup microphone settings	Allows users to edit the Microphone dialog box.
	Setup speaker settings	Allows users to edit the Speaker dialog box.
Setup sites		Allows users to configure Sites.
	Setup name	Allows users to edit the Site name.
	Manage site	Allows users to add servers to the Site.
	Setup site view	Allows users organize the order of cameras in the System Explorer.
	Setup user and group settings	Allows users to edit the Users and Groups dialog box.
	Setup alarm management settings	Allows users to edit the Alarms dialog box.
	Setup POS transaction settings	Allows users to edit the POS Transactions dialog box.
	Setup LPR settings	Allows users to edit the License Plate Recognition dialog box.
	Setup email settings	Allows users to edit the Email Notification dialog box.
	Setup rule engine settings	Allows users to edit the Rules dialog box.
	View site log	Allows users to view the Site Log.
	Connect and disconnect cameras	Allows users to connect and disconnect cameras to servers.
	Import and export settings	Allows users to import and export configuration settings.
	View server status	Allows users to see the server status details.
Setup servers		Allows users to configure servers.

	Setup name	Allows users to edit the server name.
	Setup schedule settings	Allows users to edit the camera recording schedule.
	Setup recording and bandwidth settings	Allows users to edit the camera recording and bandwidth settings.
	Setup schedule backup settings	Allows users to setup scheduled video backups.

## Alarm Descriptions

The following table shows the Alarm Trigger Source options that are available when you set up an alarm. For more information about setting up an alarm, see [Adding a New Alarm](#).

<b>Alarm Trigger Source</b>	<b>Description</b>
Motion Detection	The alarm is triggered when motion detection is detected by the selected cameras.
Digital Input Activation	The alarm is triggered when the selected digital input are activated.
License Plate Watchlist Match	The alarm is triggered when a license plate on the Watch List is detected.
POS Transaction Exception	The alarm is triggered when a POS transaction exception has occurred.
Camera Error	The alarm is triggered when a camera error occurs.
System Error	The alarm is triggered when a system error occurs.
External Software Event	The alarm is triggered by a third party integration software.

## Rule Event and Action Descriptions

The following tables describe the trigger events and actions that are available when you set up a Rule. For more information about setting up a Rule, see [Adding a Rule](#).

## Rule Events

Rule events are the events that trigger a rule.

Rule Events	Description
Server Events	
Server application starting up	The Server software starts up.
Server application shutting down	The Server software shuts down.
Server application terminated unexpectedly	The Server software shuts down unexpectedly.
Server application low on resources	The Server software is low on memory or storage.
Server application installation error	The Server software was installed incorrectly.
Licensed feature expires soon	The Server software license expires soon.
Licensed feature expired	The Server software license expired.
Database error	The Server database has generated an error.
Data initialization error	The Server database has generated an error during initialization.
Data volume failed	The Server data volume has failed.
Data volume recovered	The Server data volume was recovered.
Data volume size reduced	The Server data volume size was reduced.
Data write error	The Server generated an error while writing data.
Data upgrade started	The Server data upgrade has started.
Data upgrade completed	The Server data upgrade has completed.
Data upgrade failed	The Server data upgrade failed.

	Data recovery started	The Server data recovery has started.
	Data recovery completed	The Server data recovery has completed.
	Data recovery failed	The Server data recovery has failed.
	Bookmark save failed	The video bookmark failed to save.
	Network connection found	The Server network connection was found.
	Network connection lost	The Server network connection was lost.
	Email send error	An error was generated while sending an email notification.
	Server hardware event	A Server hardware event has occurred.
	Backup started	The Server backup has started.
	Backup completed	The Server backup has completed.
	Backup failed	The Server backup has failed.
	Server connection lost	The Server connection to the Site was lost.

#### Device Events

	Connection created	Camera or device connected to a server.
	Connection removed	Camera or device disconnected from a server.
	Connection created to standby server	Camera or device connected to a standby server.
	Connection removed from standby server	Camera or device disconnected from a standby server.
	Connection failure	Camera or device connection failed.
	Connection restored	Camera or device connected has been restored.
	Network packet loss unacceptable	Camera or device network packet loss

		was not accepted.
	Network packet loss acceptable	Camera or device network packet loss was accepted.
	Motion detection started	Camera motion detection has started.
	Motion detection ended	Camera motion detection has ended.
	Recording started	Camera or device recording has started.
	Recording ended	Camera or device recording has ended.
	Recording interrupted	Camera or device recording was interrupted.
	Recording resumed	Camera or device recording has resumed.
	Digital input activated	Camera or device digital input was activated.
	Digital input deactivated	Camera or device digital input was deactivated.
	Firmware upgrade started	Camera or device firmware upgrade has started.
	Firmware upgrade completed	Camera or device firmware upgrade has been completed.
	Firmware upgrade failed	Camera or device firmware upgrade has failed.

#### User Events

	User login	A user has logged in.
	User logout	A user has logged out.
	Server setting changed	A user has changed the server settings.
	Site setting changed	A user has changed the Site settings.
	Device setting changed	A user has changed the camera or device settings.

	Device connected	A user has connected a camera or device to a server.
	Device disconnected	A user has disconnected a camera or device from a server.
	Digital output triggered	A user has manually triggered a digital output.
	Bookmark added	A user has added a bookmark.
	Bookmark updated	A user has updated a bookmark.
	Bookmark deleted	A user has deleted a bookmark.
	PTZ moved	A user has moved a PTZ camera.
	PTZ idle	A user has left the PTZ camera idle.
	Export performed	A user has performed a video export.
	Speaker activated	A user is broadcasting audio through the camera or device speakers.
	Speaker deactivated	A user has stopped broadcasting audio.
	Virtual matrix monitor opened	A user has opened a virtual matrix monitor in the View.
	Map added	A user has added a new map.
	Map updated	A user has updated a map.
	Map deleted	A user has deleted a map.
	View added	A user has added a Saved View.
	View updated	A user has updated a Saved View.
	View deleted	A user has deleted a Saved View.
	Web Page added	A user has added a new web page.
	Web Page updated	A user has updated a web page.
	Web Page deleted	A user has deleted a web page.



	Site View updated	A user has updated the way cameras are organized in the System Explorer.
	Custom keyboard command triggered	A user has triggered the custom keyboard command.

## Alarm Events

	Alarm acknowledged	An alarm has been acknowledged.
	Alarm auto acknowledged	An alarm has been acknowledged automatically.
	Alarm triggered	An alarm has been triggered.
	Alarm assigned	An alarm has been assigned to a user.
	Alarm unassigned	An alarm has been unassigned from a user.
	Alarm purged	An alarm has been purged.

## POS Transaction Events

	POS transaction started	A POS transaction has started.
	POS transaction ended	A POS transaction has ended.
	POS transaction exception	A POS transaction exception has occurred.

## License Plate Recognition Events

	License plate detection started	License plate recognition has started.
	License plate detection ended	License plate recognition has ended.
	License plate watchlist match	A license plate on the LPR Watch List has been detected.

## Rule Actions

Rule actions are the response to a rule event.

Rule Actions		Description
User Notification Actions		
	Display on-screen message	An on-screen message is displayed about the rule event.
	Send email	An email notification is sent about the rule event.
	Play a sound	A notification sound is played when the rule event occurs.
Monitoring Actions		
	Start live streaming	The linked live video stream is displayed when the rule event occurs.
	Create Bookmark	The recorded video of the rule event is bookmarked.
	Open a saved view	The selected Saved View is automatically displayed.
	Start live streaming on a virtual matrix monitor	The live stream from the selected camera is automatically displayed on the selected virtual matrix monitor.
	Open a map on a virtual matrix monitor	The selected map is automatically displayed on the selected virtual matrix monitor.
	Open a web page on a virtual matrix monitor	The selected web page is automatically displayed on the selected virtual matrix monitor.
Device Actions		
	Reboot camera	The camera or device reboots when the rule event occurs.
	Trigger digital output	A digital output is triggered when the rule event occurs.
PTZ Actions		

	Go to preset	The PTZ camera moves to the preset position when the rule event occurs.
	Run a pattern	The PTZ camera runs a pattern when the rule event occurs.
	Set auxiliary	The PTZ camera starts the aux. command when the rule event occurs.
	Clear auxiliary	The PTZ camera ends the aux. command when the rule event occurs.

#### Alarm Actions

	Trigger an alarm	An alarm is triggered when the rule event occurs.
	Acknowledge an alarm	An alarm is acknowledged when the rule event occurs.

## Updating the Client Software

Avigilon Control Center Client software updates are typically included with the Avigilon Control Center Server update packages. When you first open the Client software, the following dialog box will appear if a Client software update is available:

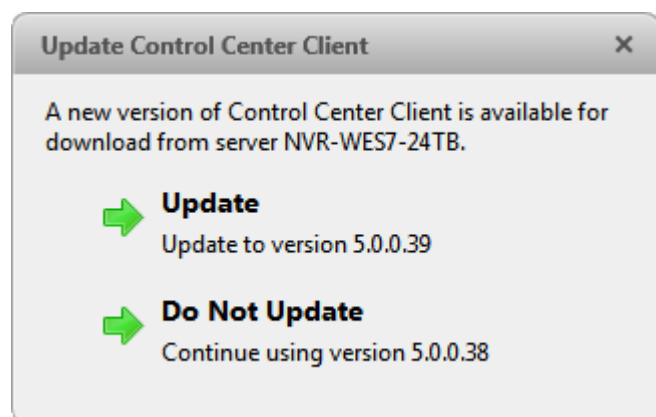


Figure A. Update Control Center Client

- Click the **Update** button to allow the Client software to update. The software update is automatically downloaded. The following dialog box will appear to show the download progress:

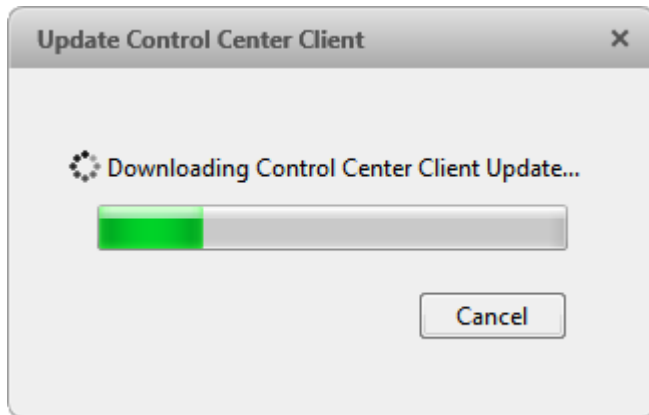


Figure B. Update progress

When the update has finished downloading, click **Update Control Center**. When the installation wizard appears, follow the prompts to complete the update.


- Click **Do Not Update** to continue working with the Client software without updating. The Client software will not be updated, and you can continue working with software as before.

The Client software can also be downloaded from the Software Download page of the Avigilon website: <http://avigilon.com/support-and-downloads/for-software/software-updates-and-downloads/>

## Reporting Bugs

If an error occurs in the Avigilon Control Center, you can contact Avigilon Support at [support@avigilon.com](mailto:support@avigilon.com) or +1.888.281.5182 option 1.

To help diagnose your problem, the Avigilon Technical Support team may ask you to provide a System Bug Report. The System Bug Report is a zip file generated by the Avigilon Control Center Client software that contains the system log and error reports for each of the servers you have access to.

















1. Select  > **System Bug Report....**
2. When the Download System Bug Report dialog box appears, click **Download**.
3. In the Save As dialog box, name the file and click **Save**.
4. Once the System Bug Report has downloaded successfully, click **Close**.







## Keyboard Commands








Use any of the keyboard commands below to help you navigate the Avigilon Control Center Client software.

The Key Combination column shows the commands used on a standard keyboard, while the Keypad Combination column shows the commands used on an Avigilon USB Professional Joystick Keyboard.






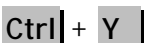

### Image Panel & Camera Commands




Command	Key Combination	Keypad Combination (Image Panel buttons)
Select an image panel  Image panel # are displayed after pressing the first key.	 + <image panel #> + 	 + <image panel #> + 
Add a camera to View  The camera <a href="#">logical ID</a> is required.	 + <logical ID> + 	 + <logical ID> + 
Select the next image panel		
Select the previous image panel	 + 	
Clear image panel selection	 +  + 	 + 0 + 

<p>Remove camera from the selected image panel</p>	<p><b>Backspace</b></p>	<p>CLOSE </p>
<p>Maximize/Restore the selected image panel</p>	<p><b>Ctrl + E</b></p>	<p>MAXIMIZE </p>
<p>Replay 30 seconds</p>	<p><b>Ctrl + ,</b></p>	
<p>Replay 60 seconds</p>	<p><b>Ctrl + .</b></p>	
<p>Replay 90 seconds</p>	<p><b>Ctrl + /</b></p>	
<p>Add bookmark for selected camera</p> <p><b>Note:</b> For recorded video only.</p>	<p><b>Ctrl + B</b></p>	
<p>Start/Stop manual recording for selected camera</p>	<p><b>R</b></p>	<p>RECORD </p>
<p>Activate/Mute audio for the selected camera</p>	<p><b>A</b></p>	<p>AUDIO </p>
<p>Broadcast audio</p>	<p><b>S</b></p> <p>Hold to speak. Release to stop broadcasting.</p>	<p>AUDIO </p> <p>Hold to speak. Release to stop broadcasting.</p>

Take a snapshot of the selected image panel		
Display linked POS/camera		
Enable digital output		
Acknowledge the alarm currently displayed in an armed image panel		
Trigger custom keyboard command		

## View Commands

Command	Key Combination	Keypad Combination (View buttons)
Select the next View		
Select the previous View		
Jump to View		
Start/Stop cycle Views		

Open a new View	<b>Ctrl</b> + <b>T</b>	
Close current View	<b>Ctrl</b> + <b>W</b>	<b>CLOSE</b> <b>6</b>
Open a new window	<b>Ctrl</b> + <b>N</b>	
Switch current View to display live video	<b>Ctrl</b> + <b>L</b>	
Switch current View to display recorded video	<b>Ctrl</b> + <b>P</b>	
Remove all cameras from the current View	<b>Ctrl</b> + <b>Backspace</b>	
Full screen a View End full screen	<b>F11</b>	
Open a Saved View The Saved View <a href="#">logical ID</a> is required.	<b>Ctrl</b> + <b>G</b> + <i>&lt;logical ID&gt;</i>	<b>OPEN</b> <b>3</b> + <i>&lt;logical ID&gt;</i> + <b>ENTER</b>
Open a Virtual Matrix monitor The Virtual Matrix monitor logical ID is required.	<b>Ctrl</b> + <b>G</b> + <i>&lt;logical ID&gt;</i>	<b>OPEN</b> <b>3</b> + <i>&lt;logical ID&gt;</i> + <b>ENTER</b>






## View Layout Commands





**Note:** Customized View layouts are linked to their position in the Layouts list. For example, if your custom layout is placed at the top of the Layouts list, you can use the keyboard command for layout 1 to select the custom layout.




Command	Key Combination	Keypad Combination (View buttons)
Change to layout 1	<b>Alt</b> + <b>1</b>	<b>LAYOUT 4</b> + <b>PREV 1</b>
Change to layout 2	<b>Alt</b> + <b>2</b>	<b>LAYOUT 4</b> + <b>NEXT 2</b>
Change to layout 3	<b>Alt</b> + <b>3</b>	<b>LAYOUT 4</b> + <b>OPEN 3</b>
Change to layout 4	<b>Alt</b> + <b>4</b>	<b>LAYOUT 4</b> + <b>LAYOUT 4</b>
Change to layout 5	<b>Alt</b> + <b>5</b>	<b>LAYOUT 4</b> + <b>5</b>
Change to layout 6	<b>Alt</b> + <b>6</b>	<b>LAYOUT 4</b> + <b>CLOSE 6</b>
Change to layout 7	<b>Alt</b> + <b>7</b>	<b>LAYOUT 4</b> + <b>7</b>
Change to layout 8	<b>Alt</b> + <b>8</b>	<b>LAYOUT 4</b> + <b>8</b>
Change to layout 9	<b>Alt</b> + <b>9</b>	<b>LAYOUT 4</b> + <b>9</b>
Change to layout 10	<b>Alt</b> + <b>0</b>	<b>LAYOUT 4</b> + <b>0</b>
Change to next layout	<b>Alt</b> + <b>]</b>	
Change to previous layout	<b>Alt</b> + <b>[</b>	



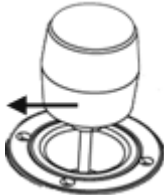
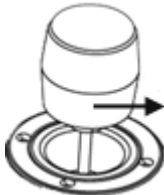

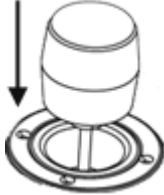


## Playback Commands









Command	Key Combination	Keypad Combination (Timeline buttons)
Play/Pause	Spacebar	
Increase playback speed	Page Up	
Decrease playback speed	Page Down	
Step to next frame	Shift + →	
Step to previous frame	Shift + ←	
Go to next event	Alt + →	
Go to previous event	Alt + ←	
Go forward one second	Ctrl + →	
Go forward five seconds	Ctrl + Shift + →	
Go back one second	Ctrl + ←	
Go back five seconds	Ctrl + Shift + ←	

Zoom in on the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>+</b>	
Zoom out on the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>-</b>	
Scroll forward on the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>→</b>	
Scroll backward on the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>←</b>	
Move the Timeline marker forward		
Move the Timeline marker backward		
Go to start of the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>Home</b>	
Go to end of the Timeline	<b>Ctrl</b> + <b>Alt</b> + <b>End</b>	
Center the Timeline on the time marker	<b>Ctrl</b> + <b>C</b>	

## PTZ Commands (Digital and Mechanical)

Command	Key Combination	Keypad Combination (PTZ buttons)
Toggle PTZ controls	<b>Ctrl</b> + <b>D</b>	

Zoom in	+	
Zoom out	-	
Pan left	←	
Pan right	→	
Tilt up	↑	
Tilt down	↓	
Open iris	Home	
Close iris	End	

Focus near	<b>Insert</b>	
Focus far	<b>Delete</b>	
PTZ menu left		
PTZ menu right		
PTZ menu up		
PTZ menu down		
Activate preset	<b>Q</b> + <Preset #>	<b>PRESET</b> + <Preset #> + <b>ENTER</b>
Run pattern		<b>PATTERN</b> + <Pattern #> + <b>ENTER</b>
Start auxiliary	<b>W</b> + <Aux #>	 + <Aux #> + <b>ENTER</b>
Stop auxiliary	<b>E</b> + <Aux #>	 + <Aux #> + <b>ENTER</b>