VideoXpert Professional
v 2.0 User Guide

USER GUIDE
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PELCO™

Contents

About VxPro

VideoXpert Professional consists of three major components. While you can install all three, you should only install the VxPro components that best suit your needs on any workstation; in particular, you should avoid installing or running VxPro Server services on non-server hardware.

- **VxPro Server** is what enables you to run a VideoXpert Professional server. Recording, media routing, user administration, permission checking, and all the server-side operations that you would expect from your VMS are consolidated within VxPro Server.
- **VxToolbox** is the administrative application for VxPro, from which you can configure VxPro servers and find cameras. You can install this application on the server itself and configure VxPro locally, or you can install VxToolbox on remote workstations and configure VxPro remotely, after performing basic initial configuration on the server (IP address, installing VxPro Server, etc).
- **VxOpsCenter** is the operator application; the application that operators will use to view and recall video from the system.

Typical Deployments

- For **Rack Mounted Servers**, install VxPro Server and VxToolbox.
- For **Desktop Servers (Pelco Flex and Eco models)**, install VxPro Server, VxToolbox, and VxOpsCenter.
- For **Workstations**, install VxOpsCenter and VxToolbox (if configuring the server remotely).

Getting Started with VxPro

Ensure that your VxPro server is on the network and is associated with an NTP server before you run the VxPro installer.

Download the latest version of VxPro, posted to https://www.pelco.com/vxpro, before you begin.

1. Run the VxPro installer.
2. Accept the license agreement.
3. Click **Begin Installation**.

   NOTE: If you are upgrading an existing version of VxPro, click **Begin Update**.
4. Click to select the checkboxes for the Applications to install. For example, if installing on a server, you might not need to install VxOpsCenter; if installing on a workstation, you should not install the VxPro Server application.
5. Click to select the radio button for *Default Installation* or *Custom Installation*, and then click **Next**.

   All installations, default or custom, will require you to specify the directory for video storage.
6. If you selected *Custom Installation*, for each Application, click **Browse**, browse to the directory in which to install each Application, and then click **Next**.
7. Review the directories for VxPro Server Video Storage. If necessary, for each directory, click **Browse**, and then browse to the correct directory.
8. Click **Install**.
9. (Optional) To immediately configure VxPro (using VxToolbox), click **Configure**. In most cases, you should perform basic configuration using VxToolbox immediately after installation.

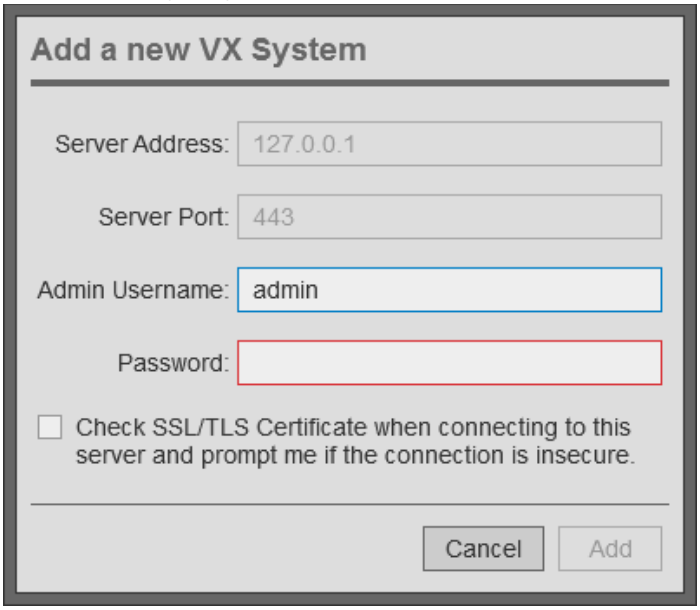
VxToolbox

Performing Initial VideoXpert Server Configuration Using VxToolbox

VideoXpert Enterprise and VideoXpert Professional each come with a 60-day trial license. During this 60-day trial, you have access to all VideoXpert features, and you can ignore the **Licensing** tab within VideoXpert.

To use VideoXpert beyond the 60-day trial, you must apply a license to the server. Licensing requires either an internet connection on the VideoXpert server itself, or access to a separate computer with internet access.

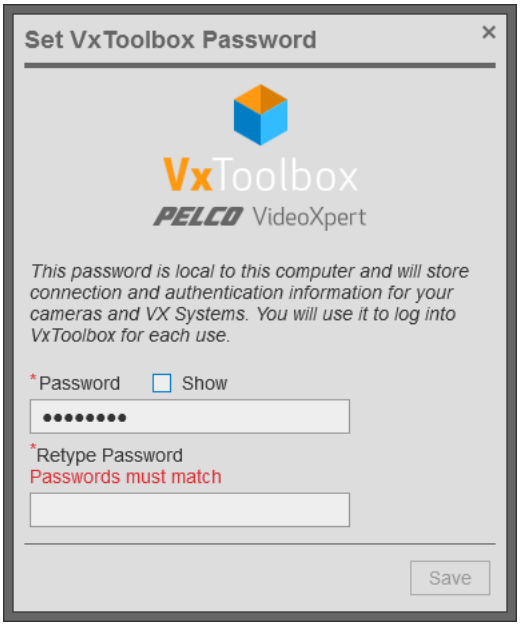
1. After installing VideoXpert, click ***Configure*** or run VxToolbox for the first time on your system.
2. Set the password for the ***admin*** user on your system.



NOTE: The default user name is admin. You must set a new password.

3. (Optional) Click to select the checkbox to ensure that the system checks the SSL/TLS Certificate when connecting to the server. Enable this feature if your organization uses signed HTTPS certificates and the certificate has already been loaded using VxToolBox
4. Click **Add**.
5. In the *VxToolbox Password Confirmation Window*, click **Set Password** (recommended) or **No Thanks**.

6. If you clicked **Set Password**, in the *Set VxToolbox Password* dialog box, enter a password in the *Password* and *Retype Password* fields, and then click **Save**.



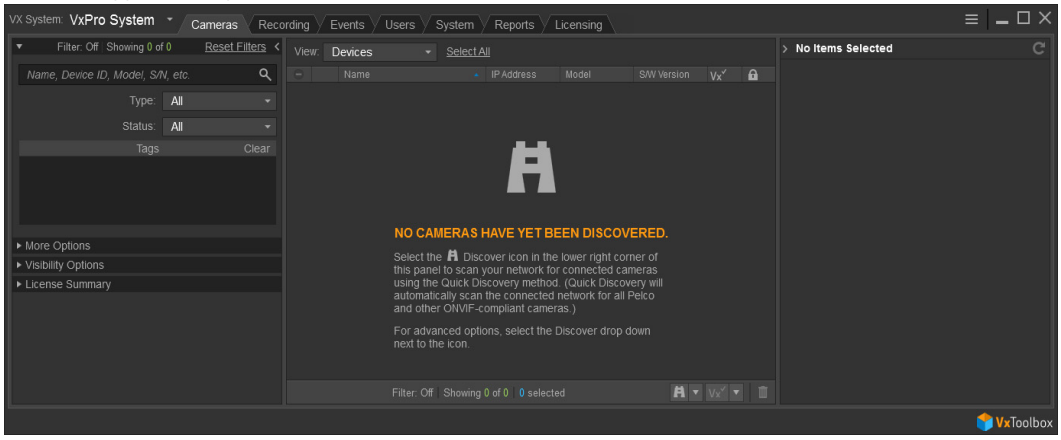
7. In the *Configure VxToolbox* dialog box, click **OK**.

8. If you enabled SSL/TLS Certificate checking, you might be required to interact with more dialog boxes. If so, follow the prompts.

9. In the *Configuration Required* dialog box, enter a *Company Name*. This the name by which the Pelco licensing portal will recognize your VX server. The name cannot be changed later.

10. Cick **Save & Continue**.

    The VxToolbox application opens.



You can now add cameras to the system. See Discovering Cameras.

Using VxToolbox Credentials

When starting VxToolbox, the application requests credentials. These credentials are local to the workstation and your VxToolbox installation; they do not log you in to any system or camera. Rather, your VxToolbox credentials protect your settings and the credentials for the individual cameras and systems you want to access from other users on the same workstation.

After logging in to VxToolbox, you can add systems with independent credentials, and pass credentials to cameras requiring them (closed authentication or third-party cameras).

Because your local VxToolbox environment may connect you to multiple systems and cameras, it is recommended that you protect your credentials and log out when you have finished using the application.

To change your VxToolbox password:

1. Click the menu icon (☰), and then select **Change VxToolbox Password**.
2. In the *Account Settings* dialog box, enter a new password, and then click **Save Changes**.

Discovering Cameras

VxToolbox can search the local network or the network belonging to any particular VideoXpert system for cameras. Or you can add cameras manually to the VxToolbox list. Through VxToolbox, you can manage camera settings for all the devices on the network, without having to go to individual camera interfaces.

VxToolbox can discover Pelco cameras or third-party cameras supporting ONVIF.

NOTE: You must be connected to a VideoXpert system to add cameras to the system.

Finding Cameras (Quick Discovery)

Click the *Quick Discovery* icon ( ) to perform a quick search for cameras. This option discovers cameras, but does not add them. You must add cameras manually or use the *Quick Discovery and Add* option.

Finding and Adding Cameras (Quick Discovery and Add)

1. Click the *Advanced Discovery Options* icon ( ) to the right of the *Quick Discovery* icon.
2. Click **Quick Discovery and Add**.

   All Devices and Data Sources that are discovered by VxToolbox are added to the VX System to which you are connected.

Finding Cameras (Advanced Discovery)

Using Advanced Discovery, you can search for cameras by protocol type or you can add individual cameras by IP address. You may want to add cameras that do not support ONVIF or Pelco discovery methods using the IP address.

1. Click the *Advanced Discovery Options* icon ( ) to the right of the *Quick Discovery* icon.
2. Click **Advanced Discovery**.
3. To use Quick Discovery, but specify using either SSDP (Simple Service Discovery Protocol) or WS-Discovery (Web Services Dynamic Discovery):
   a. Click to select the radio button for *Quick Discovery*.
   b. Click to select or deselect the checkbox for *SSDP*.
   c. Click to select or deselect the checkbox for *WS-Discovery*.
4. If you want to discover cameras by IP address:
   a. Click to select the radio button for *Discover by IP*.
   b. Enter a value in the *IP Address* field.
      If you enter an invalid IP address, the field will show as outlined in red. Correct the address and continue.
   c. (Optional) Enter a value in the *Port* field.
   d. (Optional) Click **Add Another**, and repeat the previous two steps.

5. (Optional) Click to select the checkbox to *Add discovered cameras to the VX System*.

6. Click **Discover**.

   NOTE: While this feature adds cameras to the system, it does not commission them. To commission the cameras, you must select them, right-click a camera that is selected, and then click **Commission**.

Recognizing Camera Credentials

Some cameras require credentials for you to access their video or change their settings.

Icon	Description
	Device requires authentication.
	Device does not require authentication.
	VxToolbox has authenticated to this device.
	This camera is authenticated in VxToolbox, but not on the system with which it is associated. Click the icon to attempt to authenticate the camera with the system.
	This camera is authenticated on a particular system with which it is associated, but not in VxToolbox. You must first authenticate to view and/or edit the device.

Adding Credentials to a Camera

To add credentials to a camera:

1. Select the camera requiring credentials.

2. Enter credentials in the appropriate fields, and then click **Submit**.

Devices and Data Sources

The audio and video sources produced by cameras are referred to as **data sources**. These data sources are not necessarily one per device. For example, a multi-channel encoder may have multiple cameras connected to it, each with its own data source; a camera may have a microphone, producing audio and video data sources.

1. Click to select a camera.

2. In the *View* field drop-down menu, at the top of the center panel, select **Devices** or **Data Sources**.

3. (Optional) If you selected **Devices**, and the device and its data sources are distinguishable, click the expand icon ( ) next to the device to see the individual data sources.

Finding and Filtering Sources

Use filtering options to show the devices and data sources relevant to you within the system or environment you have selected. Filters appear in the left-most panel of the *Cameras* tab and in some other tabs. Click to the left of *Filter* to reveal the *Filters* panel, and then do one or more of the following.

- Enter values in the *Filters Devices* field to filter by name, ID, model, IP address, vendor, or software version.

- Select a source *Type* from the pull-down menu.

- Click in the *Tags* field, and type in or select a tag for which to filter. Tags are set in VxOpsCenter. Refer to the *VxOpsCenter User Guide* for more information.

Selecting More Options

In the left panel, below the *Filter*, click to expand **More Options**. Click in the *List Shows* field, and select the appropriate option from the drop-down menu.

Selecting Visibility Options

In the left panel, below *More Options*, click to expand **Visibility Options**. Click to select the checkboxes for the fields you want to show in the list of devices; click to deselect the checkboxes for the fields to hide.

Viewing the License Summary

In the left panel, below *Visibility Options*, click to expand **License Summary**. View the system license information.

Licensing Your System

VideoXpert is licensed for the system, for upgrades, and by channel--the video streams you record. It comes with four (4) licenses to start, but you must license additional channels to view or record additional streams.

You can license the system automatically or manually.

- Manual licensing allows you to license a system that does not have an Internet connection.
- Automatic licensing requires your VideoXpert system to be connected to the Internet and have access to the Pelco licensing server.

VxToolbox allows you to apply licenses to various systems. For assistance, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or+1-559-292-1981 (international).

Manually Activating Licenses

For manual licensing, you must have your activation ID and a separate computer with access to the licensing server at *http://licensing.pelco.com*. During the manual licensing process, you will need to transfer your Licensing Request File to a computer with Internet access during the activation process. If you received multiple activation IDs for VideoXpert products, you must complete the process below for each individual activation ID.

As a part of the manual licensing process, you will download an Entitlement Request File and a Entitlement File; both files are specific to the product for which they were requested. It is recommended that you rename both files to reflect the system for which they are intended to prevent confusion during the licensing process.

1. Open VxToolbox and click the **Licensing** tab.
2. At the lower right corner of the *Entitlements* table (top panel), click the *Add License* icon (+).
3. Enter your activation ID in the *Activation ID* box.
4. Click to deselect the checkbox to *Automatically activate online*.

5. Click **Enter**.
   - The *Entitlement Pending* status message appears at the top of the *Entitlements* table.
   - An entitlement named *Pending* will be listed in the table. At the far left of the *Pending* entitlement row will be two icons: *Download a new request (.bin) file* ( ) and *Remove this activation ID* ( ).
6. You will be prompted to save a request.bin file. Select a folder, (optional) type in a file name, and then click **Save**.

   An Entitlement Request File (named either what you typed in or the same name as the *Activation ID*) with a .bin extension is downloaded to your computer.
7. On a system connected to the Internet, open a new browser window or tab and go to the Pelco licensing server at *http://licensing.pelco.com*.
8. Under *Login*, click to select logging in **With User Name**, **With Entitlement ID**, or **With Activation ID**. You can also register as a **New User**.
9. Enter your credentials, and then click **Login** to access the Pelco licensing server.
10. Click the **Manage Devices** tab, and then click **Generate License**. The Entitlement File, named *response.bin*, will be downloaded to your computer. Copy the file and save it to the system on which you are hosting VxToolbox.
11. Return to the *Licensing* page within VxToolbox.
12. Click **Choose file** under the *Entitlements* section.
13. Select your Entitlement File (response.bin), and then click **Open**.
14. Click **Import License File**.

    When the process is complete, VxToolbox will display the installed license in the *Entitlements* table.

Automatically Activating Licenses

If your system has an active Internet connection with access to http://licensing.pelco.com, you can automatically activate licenses for your system.

1. Open VxToolbox and click the **Licensing** tab.
2. At the lower right corner of the *Entitlements* table (top panel), click the *Add License* icon ( ).
3. Enter your activation ID in the *Activation ID* box.
4. Click to select the checkbox to *Automatically activate online*.
5. Click **Enter**.

   The system logs in to the Pelco licensing server and performs several tasks. Do not navigate away from this page until you see the *Add License* dialog box.
6. Click **OK**.

   VxToolbox will display the installed license in the *Entitlements* table.

Viewing the License Summary

Entitlements are associated with licenses. A license might be a consolidation of several entitlements.

1. Open VxToolbox and click the **Licensing** tab.

2. In the *License Summary* table (bottom panel), view the list of licenses. For each license:
   - The license *Name* is listed. Unactivated *Entitlements* are listed as one license with the name *Pending*.

     The names in the *License Summary* table correspond to the names in the *Entitlements* table.
   - The *Total* column lists how many licenses and channels (sources) are included.
   - The *In Use* column identifies how many of the licenses and channels are in use.
   - The *Remaining* column identifies how many of the licenses and channels are not currently in use.

Installing Entitlements After Restoring Your System

It is highly recommended that you back up your system and save the response file used to apply your initial entitlement.

- If restoring your system after uninstalling VideoXpert, you can re-apply your initial entitlement or license.
- If you re-image your system, you cannot apply your previous entitlement. If you have re-imaged your system, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or+1-559-292-1981 (international) for assistance.

Managing the System

VxToolbox provides a single interface from which to manage and configure both cameras and your VideoXpert Systems. From VxToolbox, you can manage any system you can access by IP address.

Selecting a system (by name) from the *VX System* menu allows you to configure that system; the settings you see are relevant to the system, and any discovery operations you perform are issued directly from that system.

Use the *VX System* menu to switch between various VideoXpert systems.

Adding Systems

VxToolbox allows you to administer systems remotely. To add a system to VxToolbox, you must have network access to the system and your user account must be assigned the administrative role.

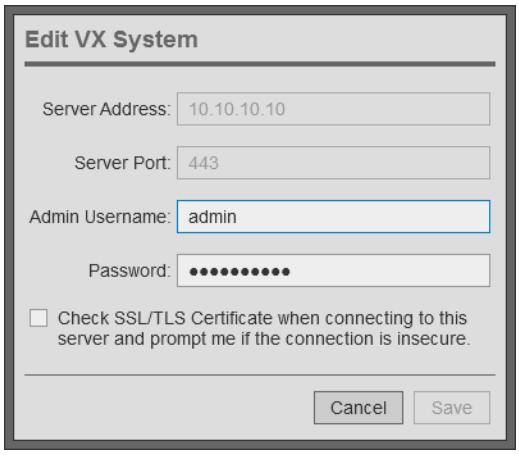
1. Click the menu icon (☰) at the upper right corner of the window, and then click **Manage VX System Connections**.
2. Click the *Add a new VX System* icon (+).
3. Enter an IP address in the *Server Address* field.
4. Enter a value in the *Server Port* field, or use the default port.
5. Enter the *Admin Username* and *Password* for the system you are adding.
6. Click **Add**.
7. Click the **X** at the top left of the *Manage VX System Connections* window to close it.

Editing a System

Editing a system only affects your settings within your local VxToolbox installation. You may need to edit a system if your credentials for a particular system expire or are changed by an administrator.

1. Click the menu icon (☰) at the upper right corner of the window, and then click **Manage Vx System Connections**.
2. Select the system you want to edit.

3. Click the *Edit VX System* icon ( ) to edit system settings.
   a. If appropriate, enter a new value in the *Admin Username* field.
   b. If appropriate, enter a new value in the *Password* field.
   c. Click to select or deselect the checkbox for *Check SSL/TLS Certificate...*



4. Click **Save**.
5. In the *Update* dialog box, click **OK**.
6. Click the **X** at the top left of the *Manage VX System Connections* window to close it.

Removing a System

Editing a system only affects your settings within your local VxToolbox installation. You may need to edit a system if your credentials for a particular system expire or are changed by an administrator.

1. Click the menu icon ( ) at the upper right corner of the window, and then click **Manage VX System Connections**.
2. Select the system you want to remove.
3. Click the *Delete* icon ( ) to remove the system.
4. In the *Delete System* dialog box, click **OK** to confirm the deletion.
5. Click the **X** at the top left of the *Manage VX System Connections* window to close it.

Adding Devices to a System

You must add a device to VideoXpert to make it visible within the system--VxOpsCenter--and to manipulate its settings. You must commission a device to view its video or to use its video or resources within VideoXpert. In many cases, commissioning a device requires a license; the type of license required depends on the type of device you are commissioning. In most cases, adding and commissioning devices is a single, simplified operation.

Icon	Status
	Not added; not commissioned
Vx*	Added; not commissioned
Vx✓	Added; commissioned

Add or Commission operations are available from the **Cameras** tab for the selected system. Commissioning information is shown in the Vx✓ column; you can expose this column by selecting *Added/Commissioned* from *Visibility Options* in the filtering pane.

Adding and Commissioning Devices

VxToolbox will only provide commissioning options applicable to the camera(s) you have selected. Add or Commission operations are relevant to the system you have selected from the *VX System* menu.

1. Select the devices you want to add or commission within the *Cameras* tab.
2. Click Vx✓ and select an add and/or commission operation.

Configuring a Device

1. In VxToolbox, in the center panel, in the *View* field, from the drop-down menu, select **Devices**.
2. In the list of *Devices*, click to select a specific device.
3. (Optional) In the right panel, click to expand **Camera Information**, and view the camera information available for the camera type.
4. (Optional) Click the *Edit* icon ( ) to the right of *Camera Information* to open the *Settings Editor* window, enter a value in the *Name* field, click to select or deselect the checkbox to *Apply name to Data Sources*, and then click **Save Changes**.
5. (Optional) In the right panel, click to expand **System** (if present) and view system information:
   a. (Optional) Click to expand **FIRMWARE** to see the current *VERSION* information. If necessary, click **Update Firmware**, navigate to the location of the file, and then click **Open**.
   b. (Optional) Click to expand **MAINTENANCE**, click **Reboot**, and then, in the confirmation dialog box, click **OK**.
   c. (Optional) Click to expand **BACKUP & RESTORE**, and then click either **Backup** or **Restore** to perform the appropriate action.
   d. (Optional) Click to expand **TIME SETTINGS**, and then view the available information.
6. (Optional) Click to expand **Driver Selection** (if present) and view the available information.
7. (Optional) Click the *Edit* icon ( ) to the right of *Driver Selection* to open the *Settings Editor* window, select drivers from the drop-down menus, and then click **Save Changes**.
8. (Optional) Click to expand **Video Configuration** (if present), click to expand **PRIMARY STREAM** or **SECONDARY STREAM**, and then view the available information. The information included varies by device type.
9. (Optional) Click the *Edit* icon ( ) to the right of the appropriate stream (primary or secondary) to open the *Settings Editor* window, select values from each drop-down menu in the screen (these vary based on the device type), type a value in the *Multicast Address* field, and then click **Save Changes**.
10. (Optional) Click to expand **Analytics** (if present), click to expand any of the analytics listed, and view the available information. The information included varies by device type and analytic.
11. (Optional) Edit the analytic settings:

    NOTE: The analytics settings window is only available when VxToolbox is logged into a system.

    a. Click the *Edit* icon ( ) to the right of the appropriate stream (primary or secondary) to open the *Edit [analytic type] Settings for* window.

       NOTE: If the selected device is a camera and it supports the Motion Detection analytic, you can use Pixel Search in VxOpsCenter to search recordings for motion. To use Pixel Search, you must configure it by clicking to select the radio button for *On Server*.

    b. (Optional) You can open Web UI for the device by clicking **Edit camera settings in browser**. Refer to the camera documentation for details on using this interface.
    c. Make any selections and change any settings that are necessary, and then click **Done**.

Configuring Recording

The *Recording* tab allows you to assign data sources (video and audio) to recorders within the *VX System* you have selected.

You can assign devices to recorders and create recording schedules through VxToolbox and VxStorage Portal; assigning data sources to a recorder without creating a schedule will prevent data sources from recording. You can perform advanced VxStorage configuration by connecting to the recorder using its IP address on port 9090.

Configuring a Recorder

1. Click the **Recording** tab.
2. Click **Recorders**.
3. Click to select the recorder to configure.
4. Click to expand **Recorder Configuration**.
5. (Optional) Under *Maximum Retention Period*, enter a number in the *Discard Video after [#] Days* field, either by typing in a value or selecting a value using the up and down arrows.
6. Click to select the radio button for the *Transmission Method* field: *Multicast* or *Unicast*.
7. Click to select the radio button for the *Stream to Record* field: *Primary*, *Secondary*, or *Primary+Secondary*.
8. Click **Save Changes**.

Editing a Recording Schedule

1. Click the **Recording** tab.
2. Click **Schedules**.
3. In the *Recording Groups* (left) panel, click to select the recording group for which to configure the schedule.
4. (Optional) In the *Sources* (center) panel, click the *Edit Sources for Recording Group* icon ( ) to open the *Edit Sources for Recording Group* window.
   a. Click to select the radio button for *All Resources* or *Selected Resources*.
   b. If you selected *Selected Resources*, in the *All Sources* table, click to select the checkboxes for the sources to include in the recording group; click to deselect the checkboxes for the sources to exclude from the recording group.
   c. Click **Save Changes**.
5. In the *Schedules & Triggers for [recording group name]* (right) panel, click to select an existing schedule.
6. Click the *Edit Schedule* icon ( ).
7. In the *Edit Recording Schedule for* dialog box, click to select the radio button for the *Recording Mode and Triggers*: *Continuous Recording* or *Event-Triggered Recording (Full Frame Rate)*.
8. If you selected *Continuous Recording*, click to select the radio button for either *Full Frame Rate* or *Reduced Frame Rate*.
9. If you selected *Event-Triggered Recording (Full Frame Rate)*, in the *Start Full Frame Rate Recording on* table:
   a. Click to select the radio button for the type of event associated with the recording. Select an option in the *Associated Events* area (*Motion Detected* or *Alarm Active*) or in the *[camera] Analytic Events* area.
   b. Select a value in the *Start* field either by typing in a number or selecting one using the up and down arrows.
   c. In the *Stop Full Frame Rate Recordings on* table, click to select the radio button for *Timeout* or *No [analytic name]*, enter a value in the *Stop Recording* field, either by typing-in a number or selecting one using the up and down arrows.
10. Click **Update**.

Adding a Recording Schedule

1. Click the **Recording** tab.
2. Click **Schedules**.
3. In the *Recording Groups* (left) panel, click the *Create a New Recording Group* icon ( ), enter a value in the *Name* field of the *Create a new Recording Group* dialog box, and then click **Add**.
4. In the *Sources* (center) panel, click the *Edit Sources for Recording Group* icon ( ) to open the *Edit Sources for Recording Group* window.
   a. Click to select the radio button for *All Resources* or *Selected Resources*.
   b. If you selected *Selected Resources*, in the *All Sources* table, click to select the checkboxes for the sources to include in the recording group; click to deselect the checkboxes for the sources to exclude from the recording group.
   c. Click **Save Changes**.
5. At the bottom of the *Schedules & Triggers for [recording group name]* (right) panel, click the *Create a New Recording Schedule* icon ( ).
6. In the *New Recording Schedule for* dialog box, click to select the radio button for the *Recording Mode and Triggers*: *Continuous Recording* or *Event-Triggered Recording (Full Frame Rate)*.
7. If you selected *Continuous Recording*, click to select the radio button for either *Full Frame Rate* or *Reduced Frame Rate*.
8. If you selected *Event-Triggered Recording (Full Frame Rate)*, in the *Start Full Frame Rate Recording on* table:
   a. Click to select the radio button for the type of event associated with the recording. Select an option in the *Associated Events* area (*Motion Detected* or *Alarm Active*) or in the *[camera] Analytic Events* area.
   b. Select a value in the *Start* field either by typing-in a number or selecting one using the up and down arrows.
   c. In the *Stop Full Frame Rate Recordings on* table, click to select the radio button for *Timeout* or *No [analytic name]*, enter a value in the *Stop Recording* field, either be typing in a number or selecting one using the up and down arrows.
9. Click **Add & Create Another** or **Add**.

Deleting a Recording Schedule

1. Click the **Recording** tab.
2. Click **Schedules**.
3. In the *Recording Groups* (left) panel, click to select the recording group for which to delete the schedule.
4. In the *Schedules & Triggers for [recording group name]* (right) panel, click to select the schedule to delete.
5. At the bottom of the *Schedules & Triggers for [recording group name]* (right) panel, click the *Delete Schedule* icon ( ).
6. In the *Delete [schedule name]* dialog box, click **OK**.

Managing Users and Roles

A role is a group of permissions defining abilities and responsibilities within a system. A user must be assigned at least one role to perform actions within the system.

Understanding Internal and Restricted User Accounts

VideoXpert contains some hard-coded user accounts that are integral to the system. You cannot edit, disable, or delete these accounts, nor can you change roles or permissions for these users. You can, however, change the password for these accounts in the case of the admin and aggregator accounts, it is recommended that you change the password from the default.

User	Description
admin	This is the basic administrative user for VideoXpert. This user account possesses the "administrator" role is granted all available permissions within the system.
aggregator	This role is used internally by VideoXpert's aggregation feature to communicate accross sites.
internal	This role is used internally within the system to perform server-side tasks.
rule_engine	This role supports the rules engine.
snmp	This role is used to collect diagnostic information for the SNMP service that is available on the product.

Creating a Role

There are four default roles within VideoXpert:

- **Administrator** has full rights to the system.
- **Manager** has all Supervisor rights and the ability to configure recorders and devices within the system, including tags, recorder assignment, etc. Managers can also assign roles to users. (This role is available on VxPro Systems only.)
- **Supervisor** has advanced access to live and recorded video including investigations, PTZ control, and plug-ins. Supervisors can use plug-ins, configure events, and access workspaces configured by other users. (This role is available on VxPro Systems only.)
- **User** has basic rights to view live and recorded video.

Custom roles can also be created and assigned. To create a custom role:

1. Click the **Users** tab, and then click **Roles** at the top left of the window.
2. Click the *Add a new Role* icon (+).
3. Enter a name for the new role.
4. (Optional) Add permissions for the role:
   a. Click **Add a Permissions Category**.
   b. Click to select from the available categories.
   c. Click to select the radio button to *Allow All Surveillance Permissions* or *Allow Selected Surveillance Permissions*.
   d. If you selected *Allow Selected Surveillance Permissions*, click **Add a Permission**; click to select the permission; in the confirmation dialog box, click **OK**; if necessary, add required parameters. (Optional) Click **Add Another Permission**, and repeat the process.
5. Click **Save**.

Editing a Role

Renaming a role does not affect the users to whom the role is assigned.

1. Click the **Users** tab, and then click **Roles** at the top left of the window.

2. Click the *Edit the selected* Role icon ( ) and change the role name and/or permissions as needed.
3. Click **Save**.

Duplicating a Role

By default, a duplicate role retains the permissions of the original role.

1. Click the **Users** tab, and then click **Roles** at the top left of the window.
2. Click the *Create a copy of the selected Role* icon ( ).
3. Enter a name for the duplicated role and edit permissions as needed.
4. Click **Save**.

Deleting a Role

1. Click the **Users** tab, and then click **Roles** at the top left of the window.
2. Click to select the role to delete.
3. Click the *Delete Role* icon ( ).

Adding Users

When adding users to the system, you give them a temporary password. Upon logging in for the first time, the system will require users to change their passwords.

You can also provide additional user information, like name, phone number, and ID, to easier associate user names with personnel; *Name* fields appear anywhere the system provides a user name.

1. Click the **Users** tab, and then click **Users** at the top left of the window.
2. Click the *Create a new User* icon ( ).
3. Enter a user name and password.
4. Assign a role to the user.
5. Provide additional user information (First Name, Last Name, etc).
6. Click **Save**.

Assigning Roles

VideoXpert contains pre-defined roles that you can assign to users. You cannot change these roles but you can create new roles (see Creating a Role); each user must be assigned a role to use VideoXpert. Any locking features or competing actions performed by users are prioritized by user level.

To assign roles:

1. Click the **Users** tab, and then click **Users** at the top left of the window.
2. Select the user to whom you are assigning a role, and then click the *Edit the selected User* icon ( ).
3. Assign the user a role.
4. Click **Save**.

Resetting Passwords

Users with appropriate permissions can either reset users' passwords or force users to change their passwords.

Resetting a user's password will allow you to grant the user a temporary password. Upon logging in, the system will require the user to change his or her password. You may want to reset a user's password if a user does not remember his or her password, or the user is locked out of the system because he or she is locked out of the system due to failed login attempts or let the password change timer lapse.

Users with appropriate permissions can also reset other users' passwords and force users to change their passwords.

1. Click the **Users** tab, and then click **Users** at the top left of the window.
2. Select the user whose password you want to reset, and then click the *Edit the selected User* icon ( ).
3. Click **Change Password**
4. Enter a password in both of the required fields.
5. Click **Save**.

Deleting Users

1. Click the **Users** tab, and then click **Users** at the top left of the window.
2. Click to select the user you want to remove.
3. Click the *Delete the selected User* icon ( ).
4. Click **Delete** to confirm your selection.

Renaming Users

1. Click the **Users** tab, and then click **Users** at the top left of the window.
2. Click to select the user you want to rename.
3. Click the *Edit the selected User* icon ( ).
4. Enter a new user name.
5. Click **Save**.

Using LDAP Authentication

You can configure VideoXpert to validate user credentials from an LDAP server; VideoXpert supports LDAP for Microsoft Active Directory. While the system can validate credentials over LDAP, you must create corresponding users within VideoXpert to validate credentials against. You must also assign roles and permissions through VideoXpert; there are no analogs for VideoXpert permissions in Active Directory or LDAP.

NOTE:

- After changing a password in an environment using LDAP authentication, a user's old password may still work for a short period of time (less than one hour). This is a Windows NTLM authentication behavior, designed to allow accounts logged in to multiple computers or network services to access the network while the password change propagates.

While VideoXpert may support other LDAP authentication schemes, this guide focuses on -- and the product has been tested against -- two common methods for LDAP authentication: simple (single bind) and two-stage bind with a service account:

- Simple (single-bind) authentication, associates a user name and password with a distinguished name (DN) to validate user credentials.
- Two-stage bind authentication uses a service DN and a service DN password to establish the initial bind with the LDAP server. Upon a successful initial bind, a search is performed using the base DN, the first key from the Search Attributes box, and the user name. If the user's information is found, the second bind is performed using the DN to authenticate user credentials.

Configuring LDAP Authentication

1. Click to access the *System* page.
2. Click **LDAP**, and then click to select the radio button for *LDAP*.

   NOTE: If you do not want LDAP Authentication, then click to select the radio button for *VideoXpert Authentication*, click **Save Settings**, and then skip the rest of this procedure.
3. If you selected *LDAP*, configure the following *Server* settings:
   a. Enter a *Path* for the server, and then select the checkbox for *SSL/TLS*, if appropriate.
   b. Enter a *Port*, if the LDAP server is not on the default port.
4. If you selected *LDAP*, configure the following *Authentication Directory* settings:
   a. For both Simple Search Authentication and Two-Stage Bind Authentication, enter a *Base DN*.
   b. For Two-Stage Bind Authentication only, enter a *Search DN* and a corresponding *Search DN Password*.
   c. For both Simple Search Authentication and Two-Stage Bind Authentication, enter comma delimited *Search Attributes*. Valid search attributes are sAMAccountName and/or distinguishedName.
   d. Click **Test Connection** to ensure that the connection is valid.
5. When the connection test passes, click **Save Settings**.
6. (Optional) If you previously changed the LDAP settings, you can click **Revert**, click **Revert** in the *Revert to Default?* dialog box, and then click **OK** in the *Revert to Default* confirmation dialog box.

Configuring General Settings

1. Click the **System** tab.
2. Click **General Settings**, and then specify the following:
   - Enter a value in the *VideoXpert System Name* field.
   - Enter a value in the *NTP Server Address* field.
   - Under *Clip Lock Retention (Bookmarks)*, click to select the radio button for either *Keep Clips Locked* or *Unlock Clips after [#] Days*, and then select the number of days.
   - Under *Server Configuration*, specify the *RTSP Port* and *HTTPS Port*, either by typing a value in the field, or by using the up and down arrows.
   - (Optional) Click **Show current certificate details** to view information including *Issued to*, *Issued by*, and *Period of Validity*. To close this field, click **Hide current certification details**.

- (Optional) Click **Export current certificate to .pfx**; enter the password in the *Authenticate Certificate* dialog box, *Password* field; click **OK**; in the *Select SSL/TLS Certificate* window, browse to the appropriate folder, enter a name for the file, and then click **Save**.
- (Optional) Click **Install New Certificate**, browse to and select the certificate, click **Open**; in the *Install SSL/TLS Certificate* dialog box, in the *Password* field, enter the password, and then click **OK**. Click **OK** again in the *Install SSL/TLS Certificate* confirmation dialog box.
- (Optional) If you previously installed a new certificate, you can click **Revert to default**, click **Revert** in the *Revert to Default Certificate?* dialog box, and then click **OK** in the *Revert to Default Certificate* confirmation dialog box.

3. Click **Save Changes**.

Managing Events

From the Events tab, you can configure event details and notifications to ensure that the right users are notified when the system records a particular action or alarm.

Viewing and Configuring Event Details

1. Click the **Events** tab and select the event you want to modify.
2. In the right panel, click to expand **Device Added**.
3. Click to expand **Event Details**, and view the event information.
4. Click the edit icon ( ) to the right of *Event Details*.
5. In the *Event Details for* window, change event settings as necessary.
   - Click to deselect the checkbox for *Active* to prevent VideoXpert from reporting the event.
   - Click to select or deselect the *Use Custom Display Name*.
   - If you selected *Use Custom Display Name*, enter a name in the corresponding field.

     The *Custom Display Name* is how VideoXpert will represent the event.
   - Change the *Severity* as necessary, either by typing a value in the *Severity* field, or by using the up and down arrows to select a value. The severity may help users determine whether or not they need to act on an event.
6. Click **Save Changes**.

Viewing and Configuring Event Notifications

1. Click the **Events** tab and select the event for which you want to modify notification settings (for example: **Device Added**).
2. In the right panel, click to expand the event name line.
3. Click to expand **Notification Settings**, and view the notification information.
4. (Optional) Click to the right of *Notification Settings* to open the *Notification Settings* dialog box.
5. Click to select the radio box for the appropriate *Notification Type*.
6. If you selected *Pop-Up Banner*, configure these notification settings:
   a. Click the checkbox to select or deselect *Play Sound With Banner*.
   b. Select the radio button for either *Standard Chime* or *Custom Sound*. If you select *Custom Sound*, browse to the *Audio File*, and then click **Open**.
   c. Select a value for *Play Sound [#] times*.
   d. Select a value in the *Delay Sound Playback For [#] seconds between iterations* field.
   e. In the *Auto-Acknowledge After* area (automatically selected, and cannot be deselected), select a number either by typing in a value or using the up and down arrows, and then select a unit of time (for example, **Minutes**) from the drop-down menu.
   f. Click to select or deselect the checkbox for *Do Not Hide Cell Alerts*. Events associated with individual video sources provide alerts within VxOpsCenter cells; these alerts hide after three seconds. Select this option to prevent the alert from hiding.
   g. Click to select and deselect the checkboxes for the *User Roles to Notify*.
7. If you selected *Pop-Up Banner; Requires Acknowledgment*, configure these notification settings:
   a. Click the checkbox to select or deselect *Play Sound With Banner*.
   b. Select the radio button for either *Standard Chime* or *Custom Sound*. If you select *Custom Sound*, browse to the *Audio File*, and then click **Open**.
   c. Select a value for *Play Sound [#] times*.
   d. Select a value in the *Delay Sound Playback For [#] seconds between iterations* field.
   e. (Optional) Click to select the checkbox for *Auto-Acknowledge After*, select a number either by typing in a value or using the up and down arrows, and then select a unit of time (for example, **Minutes**) from the drop-down menu.
   f. (Optional) Click to select the checkbox for *Allow Snooze (And Set Snooze Time)*, and then click to select and deselect the checkboxes for the available intervals.
   g. Click to select or deselect the checkbox for *Do Not Hide Cell Alerts*. Events associated with individual video sources provide alerts within VxOpsCenter cells; these alerts hide after three seconds. Select this option to prevent the alert from hiding.
   h. Click to select and deselect the checkboxes for the *User Roles to Notify*.
8. If you selected *No Pop-Up Banner; Requires Acknowledgment*, configure these notification settings:
   a. Click the checkbox to select or deselect *Play Sound With Banner*.
   b. Select the radio button for either *Standard Chime* or *Custom Sound*. If you select *Custom Sound*, browse to the *Audio File*, and then click **Open**.
   c. Select a value for *Play Sound [#] times*.
   d. Select a value in the *Delay Sound Playback For [#] seconds between iterations* field.
   e. (Optional) Click to select the checkbox for *Auto-Acknowledge After*, select a number either by typing in a value or using the up and down arrows, and then select a unit of time (for example, **Minutes**) from the drop-down menu.
   f. Click to select or deselect the checkbox for *Do Not Hide Cell Alerts*. Events associated with individual video sources provide alerts within VxOpsCenter cells; these alerts hide after three seconds. Select this option to prevent the alert from hiding.
   g. Click to select and deselect the checkboxes for the *User Roles to Notify*.
9. Click **Save Changes**.

Filtering the Events

1. Click the **Events** tab.
2. In the left panel, click to expand **Filter**.
3. Use the search field to search by Name or Device ID, select a *Category*, select a *Notification* type, select a *Severity* level, and/or select *Roles*.

   The events matching the filter criteria will be listed in the main panel.

Using Reports

From the *Reports* page, you can create and generate reports, and export them from the system. Reports are exported in CSV format.

Generating reports containing a large number of events might take some time. You can navigate away from the *Reports* page while the system generates your report. If your report parameters are too large, the request might time-out and the system might ask you to narrow your search.

Creating a Report Template

You can generate reports either manually or automatically from any of the templates in the *Report Templates* panel. Create a new template, as described here.

1. Click the **Reports** tab.
2. In the *Report Templates* list in the left panel:
   a. To start with a copy of an existing template, click the *Create a copy of the selected Report Template* icon ( ). A new template (named the same as the original template *- Copy*) is added to the list.
   b. To start with a blank template, click the *Create a new Report Template* icon ( ). A *New Unsaved Template* is added to the list.
3. Click to select a *Report Type* from the drop-down menu.
4. If the *Include Cameras (rows)* field is displayed:
   a. Click to select **All** or **Selected** from the drop-down menu.
   b. If you clicked *Selected*, click the *Select report filter sources* icon ( ) under the drop-down menu; in the *Select Cameras* window, click to select and deselect the appropriate cameras, and then click **OK**.
5. In the *Include Info (columns)* field, click to select and deselect the checkboxes for information to include in the report template.

   As you select and deselect this information, you can preview the report in the *Column Preview for [report template name]* panel in the middle of the window.
6. If the *Time Range* field is displayed, select an option from the drop-down menu.
7. (Optional) To generate a report for this template automatically:
   a. Click to select the checkbox for *Automatically Generate this Report*.
   b. From the drop-down menu below the option, select the day of the week on which the report will be generated.
   c. Type in or select a time in the *at* field.
   d. (Optional) Click to select the checkbox for *Automatically Export to .csv*, enter a *Network Path*, *Username*, and *Password*. The user name and password are optional.
8. Click **Save**.
9. In the *Save New Template* dialog box, type a name in the *Template Name* field, and then click **Save**.

Editing a Report Template

If appropriate, you can edit an existing template, as described here.

1. Click the **Reports** tab.
2. In the *Report Templates* list in the left panel, click to select the template to edit.
3. Click to select a *Report Type* from the drop-down menu.
4. In the *Template Details for [template name]* (right) panel, make any changes needed to the template, except for the *Report Type*. The *Report Type* cannot be edited.
5. To save this over the existing template (edit the report), click **Save template changes**.

   If you do not want to overwrite the existing template, you can click **Save as new template**.

   You can also click **Revert** (before you save your changes) to refrain from saving the changes.

Deleting a Report Template

If appropriate, delete a template, as described here.

1. Click the **Reports** tab.
2. In the *Report Templates* list in the left panel, click to select the template to delete.
3. Click the *Delete Template* icon ( ).
4. In the confirmation dialog box, click **OK**.

Generating a Report Manually

Even if a report is generated automatically, you can generate the report manually, as needed.

1. Click the **Reports** tab.
2. In the *Report Templates* list in the left panel, click to select the report to generate.
3. Below the *Column Preview for [report template name]* area, at the right of the window:
   a. Type a value in the *Name your report* field, or keep the default report name.
   b. Click **Generate Report**.
      The report is listed in the *Generated Reports* table at the bottom of the window.

Exporting a Generated Report

To export a report from the Generated Reports table:

1. Click the **Reports** tab.
2. In the *Generated Reports* table at the bottom of the window, click to select the report to export.
3. Click **Export to .csv**.
4. Browse to a file location and, if appropriate, type a new value in the *File name* field.
5. Click **Save**.

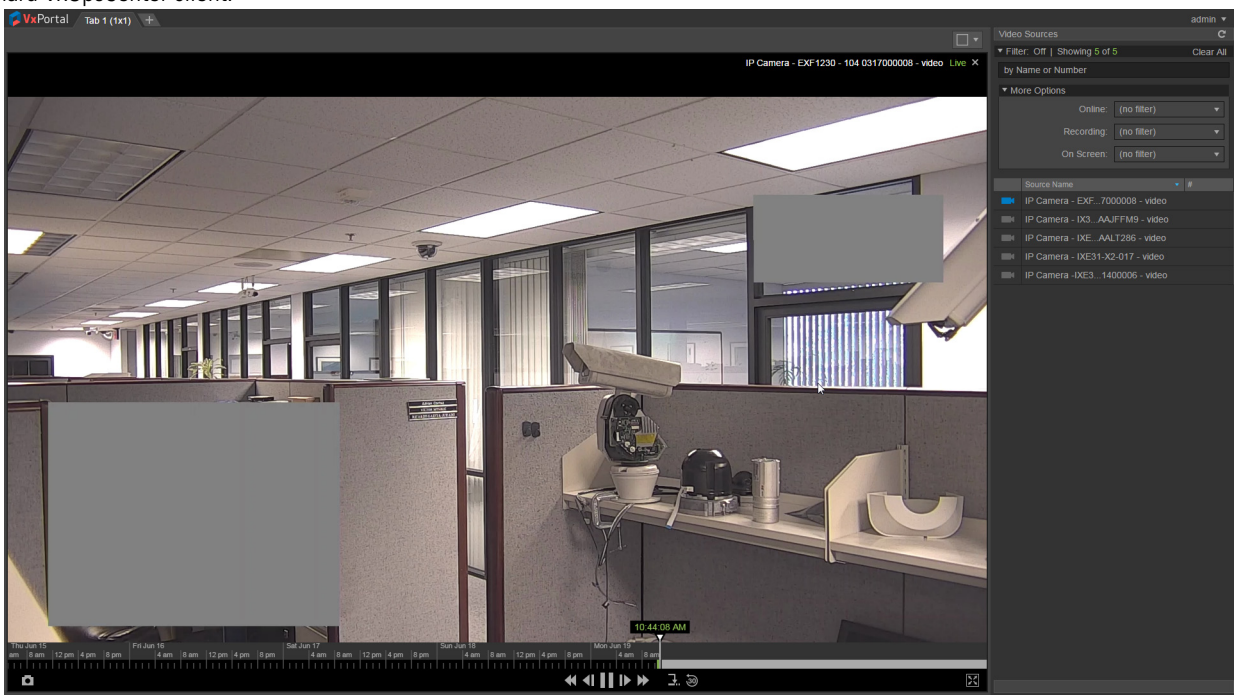
Deleting a Generated Report

To delete a report from the *Generated Reports* table:

1. Click the **Reports** tab.
2. In the *Generated Reports* table at the bottom of the window, click to select the report to delete.
3. Click the *Remove report file* icon ( ).
4. In the confirmation dialog box, click **OK**.

Using VxPortal

VxPortal is a Web interface that enables you and other users to view live and recorded video from your VxPro system without using the hard VxOpsCenter client.



VxPortal operates as a simplified version of VxOpsCenter.

- To view cameras, simply double-click or drag them into the cell you want to view them in.
- Roll over a cell to engage playback controls.
- Change layouts, use filters, create bookmarks perform other operations as you would in VxOpsCenter. Refer to the chapter *Using VxOpsCenter* for instructions.

Accessing VxPortal

1. Launch VxPortal by one of the following methods:
   - Click the VxPortal icon on the desktop.
   - Open a web browser and go to the IP address of VxPortal (for example: https://[ip address of VxPro]).
2. Enter your *Username* and *Password*, and then click **Log In**.

Changing the System Password in VxPortal

For security purposes, you should change the default password for your system. To change it using VxPortal:

1. Click **admin** in the upper-right of the window to access the pull-down menu.
2. Click **Change Password**.
3. In the *Change Password* dialog box, enter the requested information in the fields, and then click **Save**.

Managing Exports

1. Click **admin** in the upper-right of the window to access the pull-down menu.
2. Click **Manage Exports**.
3. In the *Export Archive* window, view the list of exports in the table.
   - (Optional) Sort by any column title except *Action*.
   - (Optional) Click to expand **Filter**, and then select *From* and *To* start and end dates and times, and/or select a *Status* to view a subset of all exports. Click **Clear All** to clear the filter fields.
4. (Optional) To download an Export Archive record, click **Download** in the *Action* column for the archive row, and then click **Open** in the dialog box, or click **Save** and select an option from the drop-down menu.
5. (Optional) To edit the export name, click the pencil icon in the *Action* column for the archive row; in the *Edit Export Name* dialog box, type a value in the *New Name* field, and then click **Save**.
6. (Optional) To delete an export, click the trashcan icon in the *Action* column for the archive row; in the confirmation dialog box, click to select or deselect the checkbox to *Delete Permanently*, and then click **Yes**.
   - If you did not select *Delete Permanently*, the archive is removed from the current list, and is added to the *Export Trash Bin*.
   - If you did select *Delete Permanently*, the archive is deleted, but not added to the *Export Trash Bin*.
7. If you want to view deleted exports, click the down arrow to the right of *Export Archive*, and then select **View Trash Bin**.
   - To move an export from the *Export Trash Bin* to the *Export Archive* window, click the export **Restore** button.
   - To delete the items in the *Export Trash Bin*, click the down arrow to the right of *Export Trash Bin*, and then click **Empty Trash Bin**. In the confirmation dialog box, click to select or deselect the checkbox for *Delete Permanently*, and then click **Yes**.
   - To return to the *Export Archive* window, click the down arrow to the right of *Export Trash Bin*, and then click **Close Trash Bin**.
8. If you want to delete failed exports, click the down arrow to the right of *Export Archive*, and then click **Delete All Failed Exports**. In the confirmation dialog box, click to select or deselect the checkbox for *Delete Permanently*, and then click **Yes**.
9. To exit the window, click the **X** in the upper-right corner of the window, or click outside the window.

Logging Out

To properly exit VxPortal:

1. Click **admin** in the upper-right of the window to access the pull-down menu.
2. Click **Log Out**.

Configuring Advanced Storage Using VideoXpert Storage Portal

VideoXpert Storage Portal provides advanced settings and status that can help you fine-tune and monitor your VideoXpert Storage devices.

Accessing the VideoXpert Storage Portal

1. Login to VxPortal.
2. In VxPortal, click **admin** in the upper-right of the window to access the pull-down menu.
3. Click **Configure Server**.
4. Enter the *Username* and *Password*, and then click **Log In**. The default *Username* and *Password* are both "admin".

Checking VideoXpert Storage Status

The *Status* page provides basic status information about your storage/recorder to help you determine whether you are under-utilizing or over-burdening the recorder.

1. In VideoXpert Storage Portal, click the **Status** tab.
2. View the available information.

Downloading Storage Logs

Storage logs can provide insight to an anomaly with the recorder or one of the sources recording to it. When requesting support from Pelco, a Pelco technician may request logs from the recorder. To get Storage logs:

1. In VideoXpert Storage Portal, click the **Status** tab.
2. Click **Generate Log Archive**.
3. In the *Generate Logs* dialog box, click **Generate**.
4. When the log has been successfully generated, click **Download Log Archive** (to the left of the *Generate Log Archive* button).
5. Open the zip file and then save it to an appropriate location.

Configuring the Server

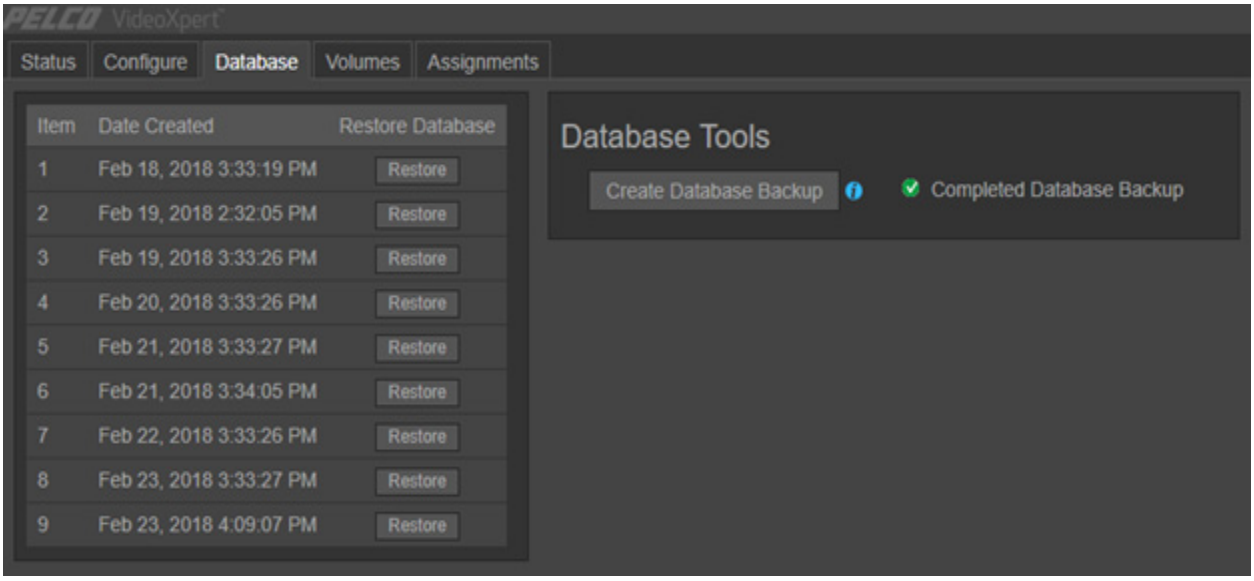
Use the *Configure* page to assign an NTP address to the recorder. You should assign the recorder to the same NTP server as the rest of your VideoXpert network to ensure time is properly synchronized.

From this page, you can also change the transmission method and retention period for the recorder.

1. In VideoXpert Storage Portal, click the **Configure** tab.
2. Enter the IP address in the *NTP Server* field.
3. Enter an appropriate number of days in the *Maximum Retention Period* field.
4. In the *Transmission Method* field, click to select the radio button for *Multicast* or *Unicast*.
5. Click **Save**.

Backing Up and Restoring the Database

VideoXpert Storage takes database recovery points daily, and stores these points for eight days. You can also initiate a manual backup, an example of which is shown as *Item 9* in the screen capture below. If your database enters an error state, you can restore to one of the available points from the *Database* page.



Restoring the Database

Restoring the database restores camera associations (provided the camera still exists within the VideoXpert environment) and storage settings. Restoring the database will not affect video directly; you will not lose video when restoring to an earlier time. However, if you have added cameras to the recorder after a backup was taken, and restore to that backup, you will lose access to video for any cameras the database restore process removes from the database.

NOTE: The NTP server address is not recovered during backup or restore. The NTP address must be reset manually after the backup or restore is complete.

1. In VideoXpert Storage Portal, click the **Database** tab.
2. In the table, locate the backup to be restored, and then click the corresponding **Restore** button.
3. In the confirmation dialog box, click **Restore**.

   Restoring can take several minutes, and there is no way to cancel a restoration that is in progress.
4. When the database has been restored, in the *Attention* dialog box, click **OK**.
5. In the *VideoXpert Storage Portal* login screen, enter the *Username* and *Password*, and then click **Log In**.

Manually Backing Up the Database

1. In VideoXpert Storage Portal, click the **Database** tab.
2. In the *Database Tools* area, click **Create Database Backup**.
3. In the *Backup Database* confirmation dialog box, click **Backup**.

   When the backup is complete, *Completed Database Backup* will be displayed in the *Database Tools* area of the window.

Using Volume Groups and Volumes

You can organize your device video storage by creating and managing Volumes and Volume Groups.

- A **volume** is a logical directory in which you want to store video.
- A **volume group** is a group of volumes to which cameras are assigned and distributed. You can use volume groups to:
  - Separate types of storage (like internal vs. external)
  - Set different retention parameters for different sets of drives.
  - Write video to more than one volume. When all volumes are full, the system will overwrite volume containing the oldest stored video.

  The system ships with a volume group called *Default Volume Group*. You can rename or delete this volume group.
- An archive volume group is a volume group to which the recorder will move the oldest video from the other volume groups, instead of deleting the oldest video. See Using External NAS Storage (Archive Volume Group)for more information about the archive volume group.

Using External NAS Storage (Archive Volume Group)

By connecting an external volume (network storage/NAS), you can extend your retention time for VideoXpert Storage recorders. When your VideoXpert Storage recorder achieves its maximum capacity and would normally begin to delete the oldest video, it will send video to the NAS instead. Video will still adhere to retention parameters, even when moved to external storage. The experience in accessing video is the same, whether a recording is served from a the VideoXpert Storage recorder or an external server.

The external storage server must reside on the VideoXpert network. You can select whether to require login credentials. If the server requires and is provided login credentials, NAS Authentication is enabled.

As video transfers from a VideoXpert Storage recorder to an external storage server, bandwidth of your incoming cameras is equal to the bandwidth out to external storage. When using external storage, you should plan storage distribution to ensure bandwidth availability for incoming cameras, storage overflow, and user impact in viewing recorded video.

NOTE: While each VideoXpert Storage recorder can only have a single archive group, multiple VideoXpert Storage recorders can use the same NAS server. In this case **each VideoXpert Storage must point to a different path/folder on the NAS server**; pointing multiple VideoXpert Storage recorders to the same archive group network path will cause video to expire earlier than expected and without warning. You can individually select whether each path uses NAS Authentication.

Creating a New Volume Group

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. At the bottom right of the *Volume Groups* panel, click the plus sign icon.
3. In the *Create New Volume Group* dialog box:
   a. Enter a value in the *Name* field.
   b. Click to select or deselect the checkbox for *Designate this Volume Group as the Archive Volume Group*.
   c. Click **OK**.

Editing a Volume Group

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. At the bottom right of the *Volume Groups* panel, click the pencil icon.
3. In the *Edit Volume Group* dialog box:
   a. Enter a value in the *Name* field.
   b. Click to select or deselect the checkbox for *Designate this Volume Group as the Archive Volume Group*.
   c. Click **Save**.

4. If you selected this volume group to be the archive volume group, and there is already a designated archive volume group, the *Attention* dialog box will inform you of this, and instruct you to remove the current archive volume group. To proceed:
   a. Click **OK**
   b. Identify the current archive volume group by the *Archive Volume Group* icon ( ) to the left of the volume group name.
   c. Edit the existing archive volume group, and deselect the checkbox.
   d. Edit the appropriate volume group, and select the checkbox to set it as the *Archive Volume Group*.

Deleting a Volume Group

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. Click to select the volume group to be deleted.
3. At the bottom right of the *Volume Groups* panel, click the trashcan icon.
4. In the *Delete Volume Group* dialog box, click **OK**.

   If there is no designated archive volume group, the system will not archive video.

Creating a New Volume

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. In the Volume Groups panel, click to select a Volume Group to which the new Volume will be assigned.
3. At the bottom right of the *Volumes* panel, click the plus sign icon.
4. In the Create New Volume Group dialog box:
   a. Enter a value in the *Path* field.
   b. Click to select or deselect the checkbox for *Requires credentials*. If you select this checkbox, enter values in the *Username*, *Password*, and *Domain* fields.
   c. Enter a value in the *Buffer Size* field, either by using the up and down arrows or by typing-in the value.
   d. Click to select or deselect the checkbox for *Reserve bandwidth for this volume*.
   e. Click **OK**.

Editing a Volume

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. In the *Volumes* panel, click to select the volume to edit.
3. At the bottom right of the *Volumes* panel, click the pencil icon.
4. In the *Edit Volume Path* dialog box:
   a. Enter a value in the *Path* field.
   b. Click to select or deselect the checkbox for *Requires credentials*. If you select this checkbox, enter values in the *Username*, *Password*, and *Domain* fields.
   c. Enter a value in the *Buffer Size* field, either by using the up and down arrows or by typing-in the value.
   d. Click to select or deselect the checkbox for *Reserve bandwidth for this volume*.
   e. Click **Save**.

Deleting a Volume

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. Click to select the volume to be deleted.
3. At the bottom right of the *Volumes* panel, click the trashcan icon.
4. In the *Delete Volume* dialog box, click **OK**.

Associating Devices With a Volume

If you have more than one non-archive volume group, you can associated devices (cameras) with specific volume groups. This enables you to control data streams between the system and the volume groups.

1. In VideoXpert Storage Portal, click the **Volumes** tab.
2. In the *Volume Groups* panel, click to select the volume group with which you will associate devices.
3. In the *Associated Devices* panel, click the pencil icon.
4. In the *Edit Devices in Volume Group "[group name]"* dialog box, click to select or deselect the checkboxes for the devices to associate with the volume group, and then click **Save.**
5. (Optional) To show a subset of the devices in a volume group:
   a. In the *Volume Groups* panel, click to select the volume group.
   b. In the *Associated Devices* panel, in the *Filter* field, type in a value (for example "IP").

Viewing Storage Assignments

You can check the status of individual streams and whether or not they are recording from the VideoXpert Storage Portal *Assignments* page.

1. In VideoXpert Storage Portal, click the **Assignments** tab.
2. In the *Recorders* panel, click to select a recorder.
3. Scroll through the device list to see the *Name*, *ID*, *IP* address, and *Status* of each device.
4. Hover over a device name or ID to see the full text.

Changing the Password

1. In VideoXpert Storage Portal, in the upper right corner of the window, click **Change Password**.
2. Enter the current password, and new password in the appropriate fields.
3. Click **Change Password**.
4. In the *Success* dialog box, click **OK**.
5. Login to VideoXpert Storage Portal using the new password.

Logging Out

To log out of VideoXpert Storage Portal, in the upper right corner of the window, click **Logout**.

VxOpsCenter

Installing and Configuring VxOpsCenter

Your system must meet the minimum requirements and have Microsoft®.NET 4.6.1 or later installed before you can install the VxOpsCenter Client application.

1. Run the VxOpsCenter EXE installer.
2. Read and accept the terms of the End User License Agreement, and then click **Next**.
3. Click **Begin Installation**.
4. Follow the instructions in the Installation Wizard to complete the installation.
5. Click **Close**.

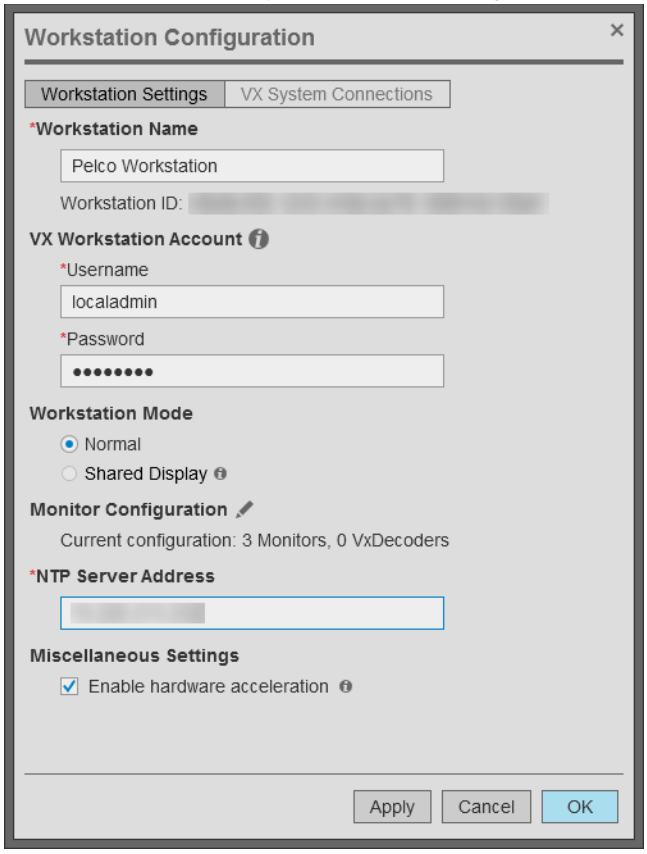
Running the Application for the First Time

When you run the application for the first time, you will create your user account, configure basic VxOpsCenter and video behaviors, and, most importantly, point VxOpsCenter to the VideoXpert system(s) you want to use. Some steps in initial setup are optional; you only need to access these options if your workstation and network differ from default settings.

1. Run VxOpsCenter.
2. Create your *Workstation Configuration Account*.
   - This account is local to the workstation and preserves your configuration and your VideoXpert system credentials from other users who might access your workstation.
   - Your workstation configuration account credentials may be the same as your VideoXpert user credentials, though you may want to use different credentials for your workstation configuration account to maximize security.
3. Configure your workstation, including your monitor layout. See Setting Up Your Workstation for more information about workstation configuration and monitor layout.
4. Configure *System Server Connections*. See Configuring VX System Connections for more information about configuring system connections.
5. Indicate whether or not to allow multi-system access. See Enabling or Disabling Multi-System Access (Simultaneous Server Connections) for more information.
6. Click **Save**.
7. Login to VideoXpert with your standard credentials (not the Workstation Configuration Account) to begin using VideoXpert.

Setting Up Your Workstation

Workstation settings determine the basic behavior of the system. You can re-configure the workstation at any time.



1. Log in using the Workstation Configuration Account.
2. If necessary, or to update the configuration, in Mission Control, click the User Menu icon ( ) , and then select **Configure Workstation**.
3. Enter a *Workstation Name*. This is the name by which VxCore will recognize the workstation and the name by which other users will recognize the workstation when sending video, responding to workstation-related events, etc.
4. (Optional) Edit your *Workstation Configuration Account* credentials.
5. Under, *Workstation Mode*, select *Normal* or *Shared Display* mode. *Shared Display* mode provides monitor-wall functionality for a workstation operating a single monitor. See Configuring Shared Display Mode for more information about *Shared Display* mode.
6. Enter your *NTP Server Address*.
7. (Optional) click the checkbox to select or deselect *Enable hardware acceleration*. Hardware acceleration is enabled by default and should only be disabled if your workstation uses an unsupported graphics chipset or you need to troubleshoot graphics issues that may result from your graphics drivers and chipset.
8. Click **Apply**, **OK**, or **VX System Connections** to save your workstation configuration settings. If you clicked **VX System Connections**, see Configuring VX System Connections.

Configuring VX System Connections

The list of *VX System Connections* determines the VideoXpert environments your VxOpsCenter can connect to. When a users log in, they will use their VideoXpert system credentials, and VxOpsCenter will connect them to relevant VideoXpert environments. If a server is not in the list of system server connections, a VideoXpert user will not be able to connect to it using VxOpsCenter.

Only the **Workstation Configuration user** can define system server connections. When you add systems using the Workstation Configuration Account, you can elect to provide credentials. If you add credentials for systems, then your Workstation Configuration Account will also immediately connect you with your systems. If you do not provide credentials, then you must manually enter credentials for each system after you log in as the workstation configuration user.

When setting up a connection to a server, you can also determine streaming performance to the system. By default, system connections use the best possible streaming options, but you may need to disable settings or adjust your connection speed to account for the network between the workstation and the system to which you will connect. See System Streaming Performance Settings.

NOTE: To optimize decoder performance in Windows 7, download and install the DFMirage mirror driver. Do not install the DFMirage driver if running a version of Windows other than Windows 7.

Enabling or Disabling Multi-System Access (Simultaneous Server Connections)

Multi-system access allows you to access multiple VideoXpert environments simultaneously using your VX Workstation account. When enabled, your VX Workstation account will store credentials for your VX systems, acting like a master key for VideoXpert (on this workstation). When you log in with your VX Workstation account, you will be able to select and access video from all of your VX systems without having to provide credentials for each of your systems.

NOTE: The multi-system access option takes effect whether or not you have configured the workstation to connect to multiple systems.

To enable multi-system access:

1. Select the system to which you will connect; to log in as the *Workstation Configuration User*, you must select **None - Configure Workstation**.
2. Log into VxOpsCenter with the Workstation Configuration Account.
3. In Mission Control, click the *User Menu* icon (▼), and then select **Configure Workstation**
4. Click the menu icon (☰) at the lower left of the *Workstation Configuration* window.
5. Click to select or deselect *Enable simultaneous access to multiple systems*. When you select this checkbox, the *Multi-System Access Login* dialog box opens. Click **OK** to acknowledge the information and close the dialog box.

With multi-system access enabled, the *Systems* section is available within VxOpsCenter. You can select or deselect systems to show or hide sources belonging to your various systems.

If the *Enable simultaneous access to multiple systems* setting is disabled, before you log in, you must select the system to which you will connect; to log in as the *Workstation Configuration User*, you must select **None - Configure Workstation**.

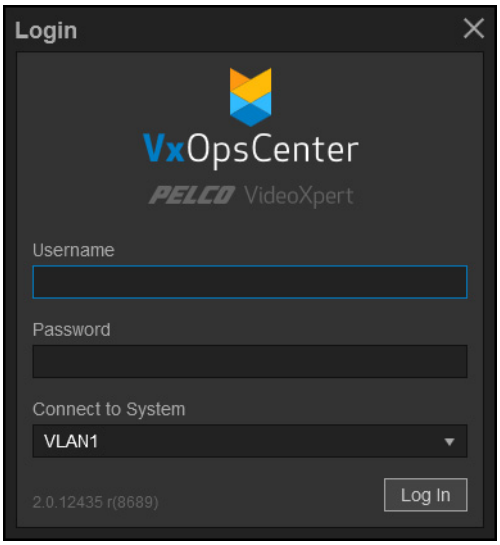


Figure 1: Login prompt with simultaneous system access disabled

Adding Servers to VxOpsCenter

1. Log into VxOpsCenter with the Workstation Configuration Account.
2. In Mission Control, click the *User Menu* icon ( ), and then select **Configure Workstation**.
3. Click **VX System Connections**.
4. If there is an existing system list, import it.
   a. Click the menu icon ( ) at the lower left of the *Workstation Configuration* window.
   b. Click **Import System List**.
   c. Click **Browse**, and then select the appropriate file.
   d. Review the information in the *Import System List* window, and make any changes, as appropriate.
   e. Click **Import**.
5. To add another server:
   a. Click the *Add System Connection* icon ( ) at the lower right of the *Workstation Configuration* window.
   b. (Optional) Provide notes about the server. The notes are only available to the Workstation Configuration Account.
   c. Provide the IP of the server in the *IP Address* field, and adjust the HTTPS *Port* value if different from the default.
   d. (Optional) Adjust *System Streaming Performance* settings. See System Streaming Performance Settings for more information about streaming performance settings and your connection speed.
   e. Click *Test Connection* to ensure that you have provided the correct server address; testing the connection will require you to provide credentials to the server.
   f. Click **Save**.
6. If you want to export the System List:
   a. Click the menu icon ( ) at the lower left of the *Workstation Configuration* window.
   b. Click **Export System List**.
   c. In the *Export System List* window, enter a *System List File Name*,
   d. Click **Browse** and browse to the location at which the file will be saved.
   e. (Optional) Click to select *Include Username & Password for each System*.
   f. Click **Save**.
7. When you have added all appropriate connections, click **OK**.
8. If the *Log Out Required* dialog box opens, click **OK**. You will be logged out. The configuration changes are applied when you log back in.

Editing a System Connection

1. Log into VxOpsCenter with the Workstation Configuration Account.
2. In Mission Control, click the *User Menu* icon ( ), and then select **Configure Workstation**.
3. Click **VX System Connections**.
4. Click to select the system connection to be edited.
5. Click the *Edit System Connection* icon ( ) at the lower right of the *Workstation Configuration* window.
6. In the *Configure System Connection* window, make all necessary updates, and then click **Save**.

7. In the *Workstation Configuration* window, click **OK** to save the settings.
8. If the *Log Out Required* dialog box opens, click **OK**. You will be logged out. The configuration changes are applied when you log back in.

Deleting a System Connection

1. Log into VxOpsCenter with the Workstation Configuration Account.
2. In Mission Control, click the *User Menu* icon (▼), and then select **Configure Workstation**.
3. Click **VX System Connections**.
4. Click to select the system connection to be deleted.
5. Click the *Delete System Connection* icon (🗑) at the lower right of the window to delete the connection to the server.
6. In the *Delete System Server Connection* dialog box, click **OK** to confirm the deletion.
7. In the *Workstation Configuration* window, click **OK** to save the settings.
8. If the *Log Out Required* dialog box opens, click **OK**. You will be logged out. The configuration changes are applied when you log back in.

System Streaming Performance Settings

System streaming performance settings determine the quality of streams you receive or, in some cases, whether you receive a stream at all from a particular system. These settings affect frame rate and latency of video, typically for the better with each subsequent setting. However, these options may not be available for your network. VxOpsCenter uses the deepest selected option that is provided by the server.

If you deselect all Streaming Performance options, you will engage JPEG Pull streaming. JPEG Pull streaming is always available and works on virtually all network types (anywhere a TCP connection is available). It works even on slow connections, in part because of its lower quality (low frame rate and high latency).

To set the *System Streaming Performance*, log in with the Workstation Configuration Account and add or edit a system.

Allow RTSP/RTP is recommended for most system configurations. Select this to enable RTSP streaming over TCP (or Unicast or Multi-cast UDP, depending on subsequent settings). This option provides a higher quality stream than JPEG Pull on all but the slowest networks.

Allow UDP is recommended for most LAN configurations. This setting enables Unicast streaming over UDP. Streaming over UDP is more efficient and has lower latency than streaming over TCP. However, UDP traffic is blocked by some WAN networks, and by fewer LAN networks. If you encounter streaming problems, try deselecting it.

Allow Multicast is recommended for most enterprise-level networks whose switches allow multicast traffic. This setting enables Multicast streaming over UDP. Multicast UDP streaming is even more efficient than unicast UDP streaming. However, multicast traffic is blocked by most WAN networks, and by some LAN networks.

Connection Speed determines the type and resolution of video available to you; at slower connection speeds, you will receive video transcoded into lower resolutions. When streaming JPEGs, your connection speed determines the compression of JPEG images (the lower the speed, the greater the compression).

- 512k restricts you to JPEG streaming.
- 1 Mbps restricts video to CIF resolution (352 x 240) or smaller.
- 5 Mbps restricts video to D1 resolution (720 x 480) or smaller.
- 10 Mbps restricts video to secondary streams when available.
- Connection speeds greater than 10 Mbps can access full resolution video. Options are 50 Mbps, 100 Mbps, 1 Gbps, and 10 Gbps.

Configuring Shared Display Mode

A **Shared Display** is a single-monitor workstation that provides monitor wall functionality within VideoXpert. In this mode, local controls are disabled; you will not control the application locally. Rather, you and other users will send tabs and video to the shared display and control the shared display remotely.

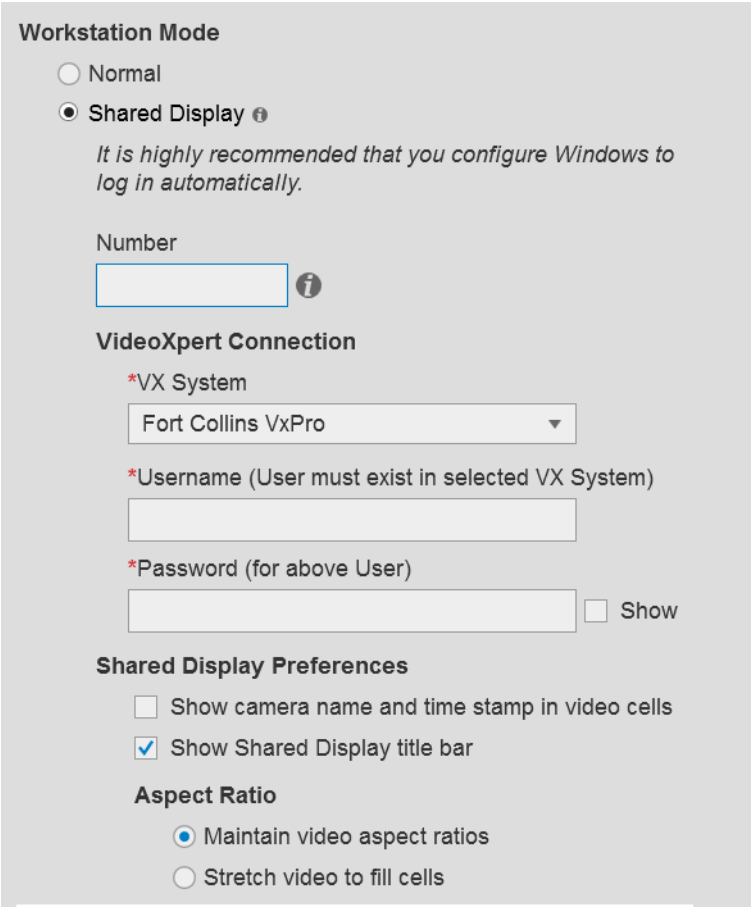
Your workstation must have only one, locally-connected monitor to support Shared Display mode. (If more than one monitor is connected to the workstation, you will be unable to put the workstation into Shared Display mode.) Putting the VxOpsCenter in Shared Display mode causes the VxOpsCenter application to start and log-in automatically when Windows starts. Because the workstation is intended to start without user interaction, it is recommended that you configure Windows to start and log-in automatically for shared displays.

The user account you provide when setting up Shared Display mode must have the *Setup Edge Devices* permission. The account should also have rights to view and control any cameras you send to the monitor; the shared display cannot display cameras it does not have permission to access, even if the user sending something to the shared display has permission to view those cameras.

NOTE: Shared display is not available if multi-system access is enabled.

To configure an VxOpsCenter for Shared Display mode:

1. If you have not already done so access the *Configure Workstation* window:
   a. Log into VxOpsCenter with the Workstation Configuration Account.
   a. In Mission Control, click the *User Menu* icon (▼), and then select **Configure Workstation**.
2. Click the **Workstation Settings** tab.
3. In the *Workstation Mode* section of the window, click to select the checkbox for *Shared Display*.



4. Provide a number for the monitor. The number will allow you to set rules to send video to your shared display, or to send video to the shared display by number.

5. (Optional) Enter or select a *VX System* to create a VideoXpert Connection. Selecting this option opens a dialog to configure system server connections. See Configuring VX System Connections.
6. Provide the user name and password of an account with credentials to view video; the account provided must have access to cameras and functions you want to use through the shared monitor.
7. (Optional) Click the checkbox to select or deselect *Show camera names and timestamps in video cells.* Whether the user sharing video has names and timestamps enabled, the shared display uses this preference to determine whether or not to display overlays.
8. (Optional) Click the checkbox to select or deselect the *Show Shared Display title bars*.
9. In the *Aspect Ratio* area, click to select the radio button to either maintain video aspect ratios or stretch video to fill the cells.
10. Click **Save**.

Logging In

1. Open the VxOpsCenter application.
2. Enter your credentials.
3. (Optional) If VxOpsCenter is configured to connect to a single system at a time, select the system you want to access. See Understanding User Account Types for relevant information.
4. Click **Log In**.

Understanding User Account Types

VxOpsCenter supports two types of users:

- The Workstation Configuration Account provides access to VxOpsCenter settings and allows you to configure connections to VX systems. The configuration account should be reserved for administrators, especially if multiple users will share the same workstation.
- Logging in as a standard VideoXpert system user provides access to standard VX features - viewing video, controlling cameras, etc.

NOTE: If multi-system access is enabled, only configuration accounts are supported.

If your user account is both the Workstation Configuration Account and a VideoXpert system user, VxOpsCenter will log you into applicable VideoXpert systems and allow access to workstation configuration settings.

When you log in as a standard VX user, the system will only populate sources and options you have permissions to see (determined by the roles assigned to your user account). If a system or camera does not appear when you log in, then the system or camera may be offline, or you may lack the appropriate permissions.

Setting Your Display Language

The localization presented by the VxOpsCenter client is based on the Region and Language settings within Windows.

NOTE: You must have the appropriate Windows language pack to expose display languages in the VxOpsCenter Client.

To set or change your VxOpsCenter display language:

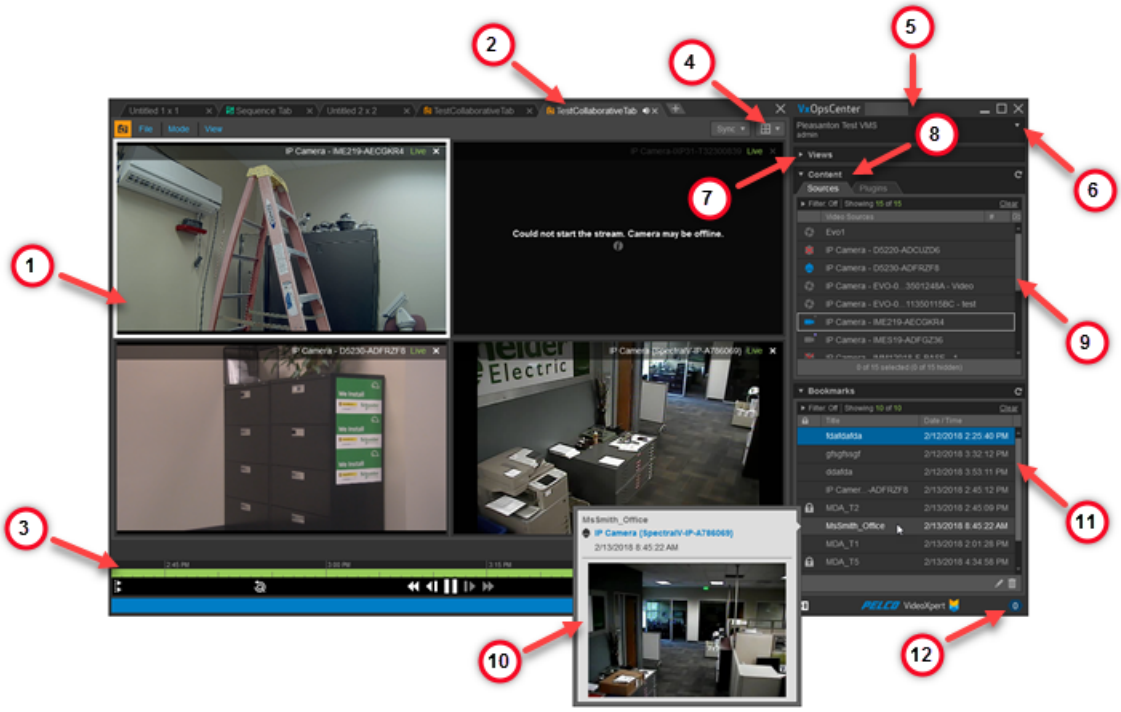
1. Close the VxOpsCenter software if it is already running.
2. Click **Start**, search for and click to open **Region & language settings**.
3. In the *Languages* area, if the appropriate language is not present, click **Add a language**. Follow the prompts to add the appropriate language.

4. In the *Languages* area, click on the appropriate language, then click **Set as default**.
5. Close the **Settings** window.
6. Run the VxOpsCenter Client.

Changing Your Workstation Account Password

1. Log into VxOpsCenter with the Workstation Configuration Account.
2. In Mission Control, click the *User Menu* icon (▼), and then select **Configure Workstation**
3. Click **Workstation Settings**.
4. In the *VX Workstation Account* area, in the *Password* field, enter a new password.
5. Click **Apply**.
6. Click **OK**.

Using the VxOpsCenter Interface



1	A **Cell** displays a single camera or plug-in within VideoXpert. Cell highlights determine whether a cell is selected, playing-back video, or is in PTZ mode.
2	A **Tab** is a window of the VxOpsCenter containing cells. Hover over the tab to reveal additional controls for the tab.
3	**Playback Controls** and the timeline apply to selected cells. When using synchronized playback, playback controls shift to the bottom of the tab and apply to all cells in the tab.
4	The **Layout** controls determine the number of cells in a tab.

5	**Mission Control**: Contains settings, and all the items with which you may populate workspaces. Click the *Undock Mission Control* icon ( ) to undock Mission Control from its current location or click the Dock Mission Control icon ( ) to dock it to any tab in the workspace.
6	The **User Menu** contains preferences and controls specific to the current user. Through this menu, you can reach application *Preferences*, the *Export Archive*, the *View Launcher*, and other user options.
7	The **Views** panel provides access to **Tab Layouts**, **Saved Tabs**, and **Workspaces**. Your workspace consists of tabs and monitors populated with cameras or plug-ins. You may have one active workspace at a time containing some number of tabs (typically one tab per monitor, but that is not a limitation); each tab contains some number of video streams or plug-ins.
8	The **Content** panel provides access to the **Sources** tab, which shows all the video sources that the current user can access. Use the filters in the panel to sort the list in real time.
9	The **Content** panel provides access to the **Plug-ins** tab, which contains content and overlay plug-ins. **Content** plug-ins consume a cell, like the **Mapping** or **Image Viewer** plug-ins. **Overlay** plug-ins operate in the same cell as video, providing additional information about the video in question.
10	**Tooltips** show additional information about your video sources. Hover over entries in the *Sources* and *Bookmarks* panels to reveal tooltips.
11	The **Bookmarks** panel shows clips of video that you or other users have bookmarked. Use the filters in the panel to sort the list in real time.
12	The **Event Counter** shows how many active events that require response from you or someone with similar permissions.

Using Context Menus

You can right-click entries in the source list or cameras in your active workspace to reveal additional options available to your user and the devices you want to use. VxOpsCenter provides users with only the options available to you at any given time; availability may be limited by factors including your user permissions, the types of cameras you use, and whether or not PTZ mode is engaged.

Using Tooltips

Hovering over any bookmark in a cell reveals additional information about the bookmark.

Using Watched By

If you have the "Multiview" permission, you will see a *Watched by* field in tooltips throughout the VxOpsCenter interface. The *Watched by* field shows users watching live video from a particular video source; the *Watched by* field does not show users playing back video recorded from a video source.

If the users listed in the *Watched by* field are viewing video from a different site than you, the tooltip will also attempt to indicate the site from which other users are watching video. If users are watching video from an aggregated site, the tooltip will state the site name in parenthesis. If you are watching video from an aggregated site, and the users listed in the *Watched by* field are accessing VideoXpert from the Aggregation (parent) site, then the tooltip will simply list *parent site*.

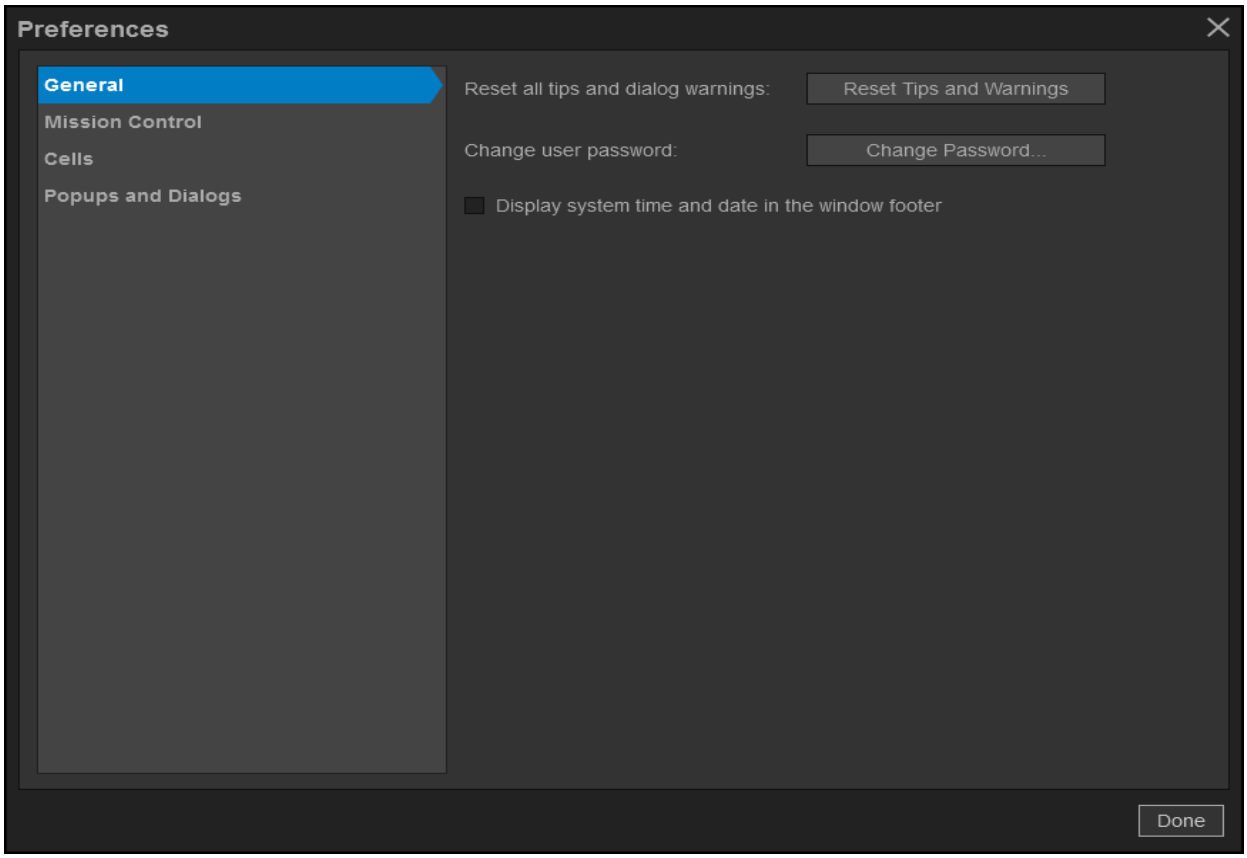
Setting User Preferences

When logged in to VideoXpert, you can set some basic preferences for behaviors within the VxOpsCenter application. To access the *Preferences* window:

1. In Mission Control, click the *User Menu* icon ( ).

2. Click **Preferences**.

   The *Preferences* window opens.



Updating General Settings

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Preferences**.
3. In the *Preferences* window, click **General**.
4. (Optional) Click **Reset Tips and Warnings**, and then click **OK** in the *Reset Warnings* confirmation window.
5. (Optional) Click **Change Password**, enter new values in the fields, and then click **Set Password**.
6. (Optional) Click to select the checkbox to enable *Display system time and date in the window footer*.
7. Click **Done** to exit the *Preferences* window,.

Updating Mission Control Settings

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Preferences**.
3. In the *Preferences* window, click **Mission Control**.
4. (Optional) Click to select and deselect radio buttons in the *When double-clicking a source...* area, to control how a source is opened.
5. (Optional) Click the checkbox to select or deselect *Allow docking Mission Control via drag-and-drop*.

6. (Optional) Click the checkbox to select or deselect *Highlight source of the selected cell in the source list*. If you select this option, you can also select *Automatically scroll source list to reveal highlighted source*.
7. (Optional) Click the checkbox to select or deselect *Show video thumbnails on hover in the source list*.
8. Click **Done** to exit the *Preferences* window.

Updating Cells Settings

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Preferences**.
3. In the *Preferences* window, click **Cells**
4. (Optional) Click to select or deselect the checkbox for *Always show source names in videos*. If you select this option, you can also select *Show overlay behind persistent source names in videos*.
5. (Optional) Click to select or deselect the checkbox for *Automatically enter PTZ mode upon loading source in cell*.
6. (Optional) Click to select or deselect the checkbox for *Display in-cell feedback for playback controls*.
7. (Optional) Click to select or deselect the checkbox for *Display timestamp above timeline playhead*.
8. (Optional) In the *When placing multiple cameras* area, click to select the radio button for *Replace video content and create new tabs as needed* or *Only fill empty cells and create new tabs as needed*.
9. (Optional) In the *When playing back over a low-bandwidth connection:* area, click to select the radio button for *Decrease frame-rate to match the network capability* or *Play at full frame-rate, but stop playback to buffer as needed*.
10. (Optional) In the *When creating snapshots* area:
    a. Click to select the radio button for *JPG* or *PNG*.
    b. Click the checkbox to select or deselect *Show overlays on snapshot*.
    c. Click to select or deselect the checkbox for *Auto-save snapshots*. If you select it, the *to folder* field is displayed. Browse to and select the folder.
11. (Optional) Click to select or deselect the checkbox for *Automatically play audio when available*.
    - If you selected it, click to select the radio button for *From selected cell only* or *From all visible cells*.
    - If you deselected it, *From selected cell only* is selected, and *From all visible cells* is not available.
12. Click **Done** to exit the *Preferences* window.

Updating Popups and Dialogs Settings

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Preferences**.
3. In the *Preferences* window, click **Popups and Dialogs**.
4. Click to select or deselect the checkbox for *Sort alerts by severity level instead of timestamp*.
5. Click **Done** to exit the *Preferences* window.

Using Tabs and Workspaces

A workspace is comprised of tabs; each tab consists of a layout populated with sources and plug-ins. You can save your entire workspace or individual tabs for easy access later. Users with appropriate permissions can even make their workspaces or tabs arrangements available to other users. The server automatically saves your workspace when you log out, and recalls it when you log in again.

Using Tab View Options and Modes

For each tab, use the *Mode* and *View* panels to control the display.

Configuring Tab View Options

From the *View* menu, you can select whether to display the tab in full screen mode; in **Full Screen** mode, the tab controls and outer borders vanish, maximizing the size of video and cells.

From the *View* menu, you can also set the **Max Video Quality** within the tab. Unless the tab is in collaborative mode, video quality settings affect video locally; they will not determine the behavior of a tab displayed on another user's workspace or a shared display, nor do they affect the quality of recorded video.

- **Highest Available Quality** sets the tab to behave normally; it will display the camera's primary stream when possible, as dictated by cell size and system resources.
- **Secondary Stream** forces the tab to display secondary streams for all cameras.
- **D1 (720 x 480)** displays video at 720 x 480 resolution.
- **SIF (352 x 240)** displays video at 352 x 240 resolution.
- **JPEG Stream** sets the tab to have all streams transcoded into JPEG frames. The rate of the JPEG stream is dependent on network bandwidth and Media Gateway availability; this setting can be stressful on your Media Gateway.
- **Thumbnail** sets the tab to images that refresh roughly every 30 seconds, rather than video. This mode uses few resources and significantly reduces the impact of the tab on your workstation. Use this mode for large areas in which a low frame rate is still enough to capture activity within the scene.
- **No Video** prevents the tab from displaying video locally. Use this mode when controlling a tab on a monitor wall, so that the tab has little or no impact on your local workstation resources.

Changing Tab Modes

Tab modes determine the features available to you within a tab. Changing tab modes without saving the current tab will cause you to lose your settings. Modes are exclusive; for example: a tab cannot support a sequencing mode and also the collaborative mode. Putting the tab in either mode will remove the abilities granted by the previous mode.

- **Normal** mode sets the tab to behave normally.
- **Collaborative** mode allows you and other users to view and affect changes in the tab simultaneously; use this mode to collaborate with other users.
  - Collaborative tabs do not support plug-ins and are not available when multi-server access is enabled.
  - Collaborative tabs are always global tabs; you cannot restrict the users who have access to the collaborative tab.

– Tabs marked with the *Collaborative Tab* icon ( ) are collaborative, and allow multiple users to view and affect changes in the tab simultaneously. User commands against the collaborative tab are performed on a first-come, first-served basis. Users should account for latency and the total number of collaborative users when affecting the tab to coordinate efforts.

- **Live Sequence** mode allows you to add more cameras to a tab than the layout would traditionally support, and to rotate cameras through the tab at a particular interval.
- **Alarm Sequence** mode allows you to designate cameras that you want to watch only when a meaningful event occurs.

Creating a New Tab or Workspace

1. Click the *New Tab* icon ( ), and select a layout for your new tab. Or, in Mission Control, in the *Views* panel, click **Tab Layouts**, and then click to select a layout.
2. Move the workspace to the monitor in which you want it to appear. When recalling this workspace, it will appear on the appropriate monitor.
3. Populate the tab with sources or plug-ins. Use the filter function in Mission Control to find cameras to add to your workspace:
   a. Click **Filter** to expand the view.
   b. Type a value in the *Filter by* field.
   c. Double-click a source or drag it to an empty cell.

   NOTE: You can also drag cells to rearrange your workspace.
4. If configuring a complete workspace, repeat the above steps for tabs to fill your remaining monitors.
5. Save the tab or workspace if you want to recall it later.

Saving a Tab

Saving a tab allows you to recall the complete tab, including all cameras, viewing states (live or recorded video), and plug-ins. Save tabs that you or other users will recall frequently.

1. While viewing the tab to be saved, click **File** at the upper left corner of the window, and then click **Save As**.
2. Enter the following information:
   - A *Name* for the tab.
   - (Optional) Select a keyboard *Shortcut*.
   - (Optional) To make the tab available to all users in the VideoXpert environment, click to select the checkbox for *Save as global tab*.
   - (Optional) To make the tab globally available, and allow multiple users to view and simultaneously manipulate the contents of the tab, click *Save as collaborative tab*.
3. Click **Save**.

Saving a Workspace

Saving a workspace allows you to recall the complete workspace, including all cameras, viewing states (live or recorded video), and plug-ins. Save workspaces that you or other users will recall frequently.

1. While viewing the workspace to be saved, in Mission Control, click to expand **Views**, and then click the **Workspaces** tab.
2. Click the *Save Workspace* icon ( ).
3. Enter a *Name* for the workspace.

4. (Optional) Select a keyboard *Shortcut*.
5. (Optional) To make the workspace available to all users in the VideoXpert environment, click to select the checkbox for *Save as global workspace*.
6. Click **Save**.

Opening a Saved Tab or Workspace

Opening a saved workspace will close your current workspace; you can save your current workspace before you open a new one. If you set a shortcut for a saved item, you can also recall it using keyboard shortcuts.

1. In the Mission Control, click to expand the *Views* area.
2. Click **Saved Tabs** or **Workspaces**.
3. Double-click the tab or workspace you want to open, or drag a tab into the monitor in which you want it to open.

Editing Tabs

You can edit the contents of a tab at any time. After you have arranged the tab, click **File** in the task bar at the top of the tab panel, and then click **Save** to save your changes.

To edit the name, hotkey, or description for tabs:

1. In Mission Control, under *Views*, click **Saved Tabs**.
2. Click to select the tab to edit, and then click the *Edit Tab* icon ( ).
3. In the *Edit Tab* dialog box, edit the values as appropriate.
4. When complete, click **Save**.

Changing Tab Layouts

The grid icon in any tab shows your current layout. Click it to select a new layout option. If you select a layout with fewer cells than your current layout, the client will retain camera-cell assignments and repopulate cells accordingly if you return to the original layout or a layout with more cells than the original.

1. Select the tab to be changed, or open a new tab.
2. Do one of the following:
   - Click the *Select Grid Layout* menu next to the grid icon ( ) in the top right of the tab task bar.
   - In Mission Control, under *Views*, click **Tab Layouts**.
3. Select the new layout for the tab.
4. (Optional) Click **File**, click **Save As**, update information in the *Save Tab As...* dialog box, and then click **Save**.

Deleting a Tab from the Workspace

1. Open the workspace from which to delete the tab.
2. Click the **X** at the far right of the tab.
3. If this is not a global or collaborative tab, or if you have permission to edit/update the workspace, save the workspace as described in Editing a Workspace.

Deleting a Saved Tab from the System

1. In Mission Control, under *Views*, click **Saved Tabs**.
2. Do one of the following:
   - Click to select the tab, and then click the *Delete Tab* icon ( ).
   - Right-click the tab, and then click **Delete Tab**.
3. In the *Delete Tab* dialog box, click **OK**.

Editing a Workspace

You can edit the contents (layout, plug-ins, sources, etc.) of a workspace at any time.

1. Make all changes to the workspace, including editing, adding, or deleting tabs.
2. In Mission Control, under *Views*, click **Workspaces**.
3. Click to select the workspace to edit and then click the *Edit Workspaces* icon ( ).
4. In the *Edit Workspace* dialog box, make any needed changes, and then click **Save**.

Deleting a Workspace from the System

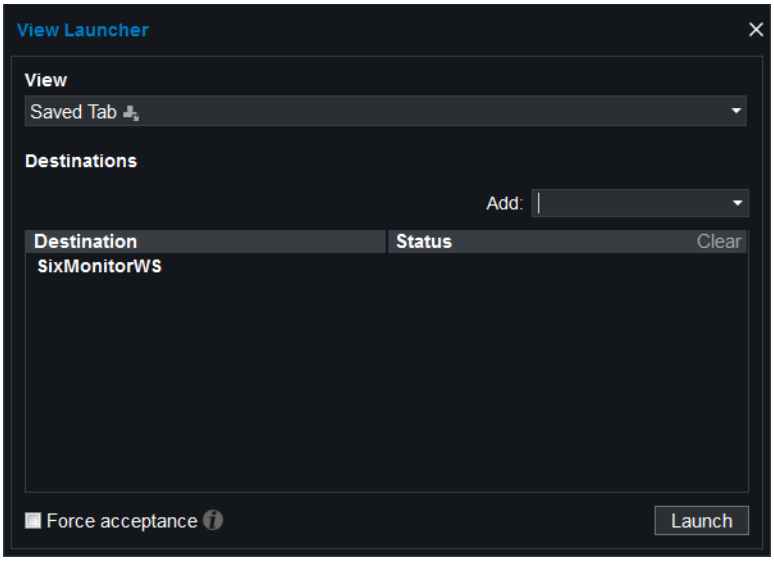
1. In Mission Control, under *Views*, click **Workspaces**.
2. Do one of the following:
   - Click **Workspaces**, click to select the workspace, and then click the *Delete Workspace* icon ( ).
   - Right-click the workspace, and then click **Delete Workspace**.
3. In the *Delete Workspace* dialog box, click **OK**.

Sending Views to Users, Workstations, or Shared Displays

Using the **View Launcher**, you can send cameras or tabs to other workstations in your VideoXpert network. The recipient can choose to accept the view you send, or you can force the recipient to accept the view; upon receipt, the view will open in the user's active window. When sending an individual source to a user, the source opens in a new 1 x 1 tab. When sending a saved tab, the tab will open as normal; if the tab is open and you have manipulated video within the tab at the time you send it, the recipient will receive the tab as it appears on the sender's workstation.

The *View Launcher* displays the disposition of views sent to other users.

1. Click *File* in the tab and select *Send To*. To send an individual source, right click it and select *Send To*. You can also open the *View Launcher* from the drop-down menu in Mission Control.



2. Select the View you want to send if it is not already selected.
3. Use the *Add* menu to select recipient workstations for the view you want to send; recipients marked by  are shared displays. You can select multiple recipients.
4. (Optional) Select *Force Acceptance* to automatically launch the view in the user's active window.
5. Click *Launch*. You can determine the disposition of the sent view using the *Status* column.

Sending Cells to Shared Displays

To use the quick launch feature, your shared displays must be assigned numbers. See to Configuring Shared Display Mode.

Figure 2: Quick Launch Dialog

You can quickly launch a cell to a shared display using the *Insert* key. Insert opens the Quick Launch feature within your selected cell.

Insert the number to which you want to send and then an **M** to indicate the monitor and **C** to indicate the cell you want to replace on the shared display. Command *1m2c* would indicate that I want to send a cell to the second cell on shared display number 1.

Watching Video

The *Sources* section of Mission Control shows the list of video and audio sources you are authorized to access.

If a particular source is online but does not appear in your source list, try refreshing the list. Cameras that come online after you log in or perform a search will not appear until you refresh the list. If the camera still does not appear, request access to the source from your administrator.

When watching live video, cells 1/4 the size of the tab or larger will use the primary stream from a video source. Cells smaller than 1/4 the size the tab will use the secondary video stream. In a 2x2 layout, for example, all cells will use the primary stream. In a 1+12 tab, the largest cell will use the primary stream and the other twelve will use the secondary stream.

When watching recorded video, cells 1/4 the size of the tab or larger will display full-framerate video. Cells smaller than 1/4 the size of the tab will playback only iFrames.

1. In Mission Control, click **Content**, and then click **Sources**.
2. Find the camera you want to watch. To use the *Filter* to search for cameras:
   a. Click **Filter** to expand the filter panel.
   b. Type a value in the *Filter by* field or select a saved filter from the *Advanced Filter Options* drop-down menu.

   To save a filter, under *Advanced Filter Options,* in the *Advanced Filter Options* drop-down menu, click **Save Filter**.
3. Add the camera to your workspace.
   - Drag a camera to the cell in which you want it to appear.
   - Double-click a camera to add it to the next available cell in the current tab.

Enabling and Disabling Audio

Video sources marked with a small blue dot ( ) are associated with an audio source. In any cell containing or associated with an audio source, click the *Mute/Unmute* icon ( ) to enable or disable audio within a cell; you can control volume through Windows' standard audio controls.

To change the audio preferences on one or more cells:

1. In Mission Control, click the *User Menu* icon ( ), and then click **Preferences**.
2. In the *Preferences* dialog box, click **Cells**.
3. Click to select or deselect the checkbox for *Automatically play audio when available*.
4. Click to select *From selected cell only* or *From all visible cells*.
5. Click **Done**.

Expanding a Cell to Full-Screen

In the source cell, click the *View Video in Full-Screen* icon ( ) to expand a cell to the full-screen. Click the same icon, now labeled *Exit Full Screen*, or press Esc to exit full-screen mode.

Watching Recorded Video

Users with sufficient permissions can access recorded video from any video source in a workspace. Placing the pointer on a cell containing a source with recorded video will reveal playback controls.

1. Place your cursor over the cell containing the source with recordings that you want to watch.
2. Click the *Jump to Specific Date/Time* icon ( ) to select the date and time of the recording.
3. Use the timeline to quickly navigate to a different time in the recording. Green areas on the timeline represent recorded video.
4. Use the playback controls to direct video playback. Click to jump to live video.

Watching Recorded Video with Edge Storage

If your camera or video source is recording video locally (using a micro SD card or in concert with ONVIF Profile G), the timeline will display the local storage icon ( ); the device tooltip will also alert you to multiple recording locations. Click the local storage icon ( ) to open an investigation tab showing the camera's various recording locations as separate timelines.

You cannot view video while it is stored on the camera; you must push video from the camera to a VideoXpert Storage recorder, to view video stored on a camera. See Using Investigations to View Video Stored on a Camera's Local Storage.

Using Pixel Search

Pixel Search enables you to quickly access motion detection events on a specific camera for a selected range of time.

1. For the specific camera (one at a time) that has the events you want to view, ensure that you have set the Motion Detection analytic, *Detect Motion* setting to *On Server* in VxToolbox. See *VxToolbox User Guide* for instructions.
2. Display the camera in a cell in VxOpsCenter; expand the cell, if appropriate.
3. Right-click the cell, and select **Search Recordings for Motion (Pixel Search).**
4. In the dialog box, click to select the checkbox for *Don't show again* (if appropriate), and then click **OK**.
5. In the grid that now overlays the camera view in the cell, select one or more zones (squares) in the grid, using one of these methods:
   - Click to select a single zone.
   - Click and drag to select multiple adjoining zones in a rectangular pattern.
   - Hold down the Shift key on your keyboard, and click to select each zone. These do not need to be adjoining zones.
   - Hold down the Shift key on your keyboard, click individual zones, and click and drag to also select groups of adjoining zones.
   - To clear the selected zones, click the *Clear Selected Zones* icon () at the upper left of the cell.
   - To search in the zones that you did not choose, instead of the zones you chose, click the *Invert Selected Zones* icon ( ) at the upper left of the cell.
6. To select a different date and time range than what is currently selected, click the edit icon ( ) at the upper right corner of the cell, to the right of the date range; in the *Set Time Range* window, select a start date, start time, end date, and end time; and then click **Set**.

   The length of time included in the default time range is based on the current time bar selection. For example, if **1hr** is selected in the time bar drop-down menu at the bottom of the workspace, then one hour will be the default time included in the search range.
7. (Optional) To cancel exit the Pixel Search, click the *Cancel* icon ( ) at the upper left of the cell.
8. In the upper right of the cell, click **Search**.
   - The first event (chronologically) plays immediately.
   - Clips with motion events detected are indicated by blue bars in the timeline in the playback controls area.
   - To jump to the next event, click the Alt key, and then click the *Next Clip* icon ( ) in the playback controls area.
   - To jump to any event, select an event from the *Jump to Event* drop-down menu at the top of the window, or click the blue bar associated with the event in the playback controls area.
9. When finished, click **Done** in the top right corner of the window.

   This returns you to live viewing.

Creating Bookmarks

When watching recorded video, you can implement a bookmarks to note a moment in video to reference later. Bookmarks appear in a section in Mission Control, and are global resources; all users can see the bookmarks you create. Within Mission Control, bookmarks behave like cameras; you can add a bookmark to a tab or workspace to recall the portion of video captured by the bookmark.

1. While watching a recorded video, click the *Create Bookmark* icon ( ).
2. Provide a *Title* for the bookmark. The title can be searched within Mission Control.
3. Click *Save*.

Finding and Recalling Bookmarks

Bookmarks behave like any other camera or video source. Adding a bookmark to a workspace adds the camera to the workspace in playback mode, paused at the date and time specified by the bookmark.

1. Click *Bookmarks* in Mission Control to expand bookmark resources.
2. Use the filters to search for a bookmark. The list of results only displays the source, date, and time for the bookmark in question, but you can also search by the plain-text note attached to the bookmark. Hover the cursor over a bookmark to get more information about it.
3. Add the bookmark to a workspace.
4. To see the lock on the timeline, scroll to a time within the lock, and notice the white bar at the top of the timeline, with arrows pointing down to indicate the start and stop times.

Editing, Unlocking, and Deleting Bookmarks

Select a bookmark in Mission Control and click the *Edit Bookmark* icon ( ) to edit the plain text for the bookmark, or to lock or unlock the bookmark. You cannot change the date, time, or camera.

Select a bookmark in Mission Control and then click to delete it.

Locking a Video/Audio Clip

You can apply a lock to segments of video/audio recordings, called clips, to prevent them from being deleted unless they are purposely unlocked. This is done through a bookmark.

1. While watching recorded video, click the *Create Bookmark* icon ( ).
2. Enter a *Title* for the bookmark. The title can be searched within Mission Control.
3. (Optional) Enter relevant information in the *Notes* field.
4. Click to select the checkbox for *Lock Video*.
5. Use the date and time selectors to set the start and end parameters for the lock.
6. Click *Save*.

Synchronizing Video Playback

You can synchronize playback across multiple cells within a tab to provide different perspectives for a single recording event.

1. Click *Sync* in the tab containing the cells you want to synchronize.
2. Select the cells you want to synchronize; select *Sync All* to select all cells in the tab.

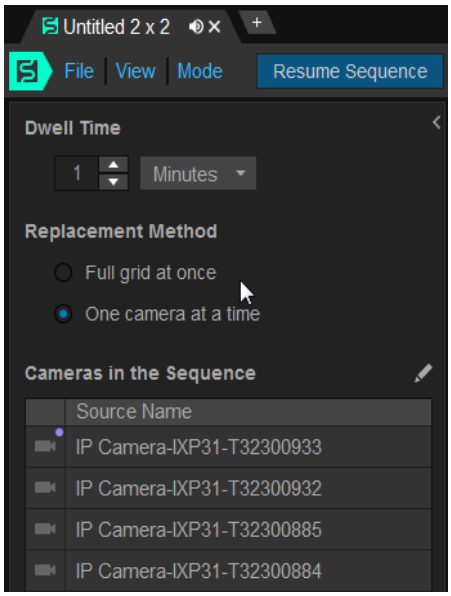
3. If necessary, click the *Play* icon ( ) to playback video. Cells will remain synchronized until you click *Sync* again, even if you jump to live video and re-engage playback.
   - When using sync playback on any of your current monitors, click the *Activate Synchronous Play for This Cell* icon ( ) in the bottom left corner of the tab to add a tab to the sync group. The controls in any monitor belonging to the sync group will affect playback for all cells and tabs in the group.
   - Click the *Add to Multi-Tab Sync Group* icon ( ) to add cells in a tab to the global sync group.
   - If you want to add individual cells in a monitor to the global sync group, click **Sync** to open the *Select Cells for Synchronized Playback* box, select the cells you want to add to the group, and then click **Sync**.
   - To remove a cell from the group, click the *Deactivate Synchronous Play for this Cell* icon ( ).

Creating a Live Sequence Mode

A video sequence, indicated by the sequence symbol ( ), is a series of cameras set to rotate through a tab at a user-defined period of time. When you configure a sequence, you can determine which cameras appear in the sequence; how often the cameras rotate; and whether or not to rotate an entire set of cameras, or just one at a time. A sequence may be helpful when you have more locations to track than you have monitors or attention.

To create a sequence:

1. In any tab, click *Mode* and select *Live Sequence*.



2. Set the *Dwell Time* period. This is the length of time that the tab will dwell on cameras before advancing to the next camera(s) in the sequence.
3. Set the *Replacement Method*. This determines how many cameras you want to replace at the end of each dwell period: all of the cameras in the grid, or one camera at a time. When replacing a single camera at a time, the cameras rotate through the grid, left-to-right, top-to bottom. (The next camera in the sequence moves into the top-left cell; the camera formerly in the top-left cell moves to the right, and so on. The bottom-right cell is bumped off the grid, until it re-enters the sequence.)
4. Add cameras to the **Live Sequence**.
   a. To the right of *Cameras in the Sequence*, click the edit icon ( ) to enter the *Edit Mode*.
   b. Either double-click cameras, or drag cameras into the *Cameras in the Sequence* box.
5. Click **Save**.
6. Click **Resume Sequence**.

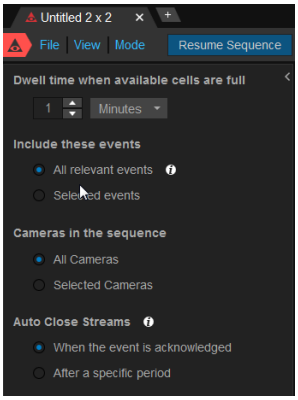
Creating an Alarm Sequence Mode

Alarm Sequence mode allows you to designate cameras that you want to watch only when meaningful events occur, so that you never miss activity relevant to your surveillance operations.

By default, the sequence will any camera-associated events that have been configured to provide a notification for your user account and role. You can refine the sequence to a subset of system cameras and a subset of camera-associated events that you want to watch.

To create an alarm sequence:

1. In any tab, click **Mode** and then click **Alarm Sequence**.



2. Type in a value or select a value using the up and down arrows for *Dwell time when available cells are full*. This indicates how quickly video rotates through the sequence when you have more current events than available cells in the sequence.
3. (Optional) In the *Include these events* area, click to select the radio button for *Selected Events* if you only want to use a subset of events in your sequence, click the *Edit* icon (), click to select or deselect checkboxes for the *Event Types* to include, and then click **Save**; otherwise, leave the *All relevant events* radio button selected.
4. (Optional) In the *Cameras in the Sequence* area, click to select the radio button for *Selected Cameras* if you want the sequence to follow a specific subset of cameras, and then drag cameras into the sequence (the order does not matter for alarm sequences); otherwise, leave the *All Cameras* radio button selected.
5. (Optional) In the *Auto Close Stream* area, click to select the radio button for *After a specific period*; otherwise, leave the *When the event is acknowledged* radio button checked.
6. Click **Resume Sequence** to run the sequence.

Editing Sequences

Click the *Edit* icon () to edit the cameras, events, and other settings belonging to a sequence.

You do not need to pause the sequence to edit the cameras in the sequence.

Pausing and Resuming Sequences

Click *Pause Sequence* to stop cameras from rotating in or out of the sequence. The cameras in the tab will continue to play until you resume the sequence.

Setting up Snapshots

You can automatically save snapshots in a folder of your choosing.

1. In Mission Control, click the *User Menu* icon (), select *Preferences*, and click *Cells* to find snapshot options.

2. In the *When creating snapshots* area:
   a. Click to select the radio button for either *JPG* or *PNG* in the *Use format* field.
   b. Click to select or deselect the checkbox for *Show overlays on snapshot.*
   c. Select to select or deselect the checkbox for *Auto-save snapshots*. If you select this feature, click *Browse* and select the folder in which you want to save snapshots.
3. Click **Done**.

Taking Snapshots

1. Click the *Take Snapshot* icon ( ) to take a snapshot of the current frame.
2. If you have not set up a location for saved snapshots, provide a location and file name for the snapshot.
3. Click **Save**.

Displaying Statistics

Right-click any cell and select *Toggle Statistics* to display camera statistics over live video in the pane. Right-click the cell and select *Toggle Statistics* again to hide the information.

Viewing and Filtering Sources

In Mission Control, click to expand **Content**, and then click the **Sources** tab to see a list of all video and audio sources that you are authorized to access.

- Use the *Filter* area box to shorten the list of sources.
  - Enter a Source Name, Model, Number or IP address in the *Filter by* field.
  - In the *Advanced Filter Options* field, select a filter from the *Save and Recall Source List Filter Sets* pull-down menu.
  - Click to expand *Advanced Filter Options* to reveal additional options; you can find cameras by *Tags*, whether they are *Online*, whether they are *Recording*, whether they are *On Screen*, and whether they are equipped with *Storage*.

    When you use two or more tags, the filter will find only those sources that have all of the tags assigned to them.
- To find a filter, click to expand *Advanced Filter Options*, click **Saved Filter Sets**, and then click the appropriate filter.
- To save a filter, click to expand *Advanced Filter Options*, populate the filter, click **Saved Filter Sets**, and then click **Save Filter**.
- To toggle between the *Folder View* and the *Video Sources* view, click the *Show Folder View* icon ( ) or the *Show List View* icon ( ), whichever is visible. These are located at the far right of the window, below the *Filter*.

See *Managing Tags* to create and manage folders.

Managing Tags

The *Manage Tags* window enables you to see information about a selected camera or cameras, create tags in the system, and organize cameras in a folder structure.

To access the *Manage Tags* window, do one of the following:

- In Mission Control, click the *User Menu* icon ( ), and then select **Manage Tags**.
- Right-click a video source, and then select **Manage Tags**.
- In Mission Control, click to expand **Content**, click **Sources**, if necessary, click the *Show Folder View* icon ( ), if *No Folders have been created*, click **Click here to create some**.

Viewing Tags in the Selected Camera(s) Panel

The *Selected Camera(s)* panel in the *Manage Tags* window displays folder tag information. It also allows you to create new tags.

1. To use this panel, you must open the *Manage Tags* window by right-clicking one or more sources, and then selecting **Manage Tags**.
2. Click the **Selected Camera(s)** tab.
3. Click to select or deselect the checkboxes in the *Show* field, for *My tags* and *Global tags*.
   - Global tags are signified by the *Global Tags* icon ( ). These tags are available to all users within the system. All users can filter sources, exports, and bookmarks according to the listed tags.
   - Personal tags are indicated by the *My Tags* icon ( ). These tags are only available to you and administrator-level users. You can use your personal tags to assign and sort resources in a way that best reflects how you use VideoXpert.
4. In the *Show tags applicable to selected camera(s)*, select **Any** or **All**.
   - **Any** shows tags that are assigned to any of the selected cameras.
   - **All** shows only those tags that are assigned to all of the selected cameras.

Creating and Assigning Tags in the Selected Camera(s) Panel

You create tags while assigning them. It is important to have a strategy for tags and camera organization before you begin creating and assigning tags.

1. Access the *Manage Tags* window.
2. Click within the tag field and type the name of the tag you want to assign; if the tag exists, you can select it and it will autofill.
3. If the tag does not exist, do one of the following:
   - Click *Create this tag (personal)* to create a tag that is private to your user account.
   - Click *Create this tag (global)* to create a tag that other users can see and use.
4. Click **Done** to exit the window.

Deleting Tags in the System Panel

Through OpsCenter, users with sufficient rights can delete global tags.

1. Access the *Manage Tags* window.
2. Select the **System** tab.
3. (Optional) Click to select the checkboxes in the *Show* field to enable or disable *My tags* or *Global tags*.
4. Do one of the following:
   - Select the tag you want to delete, and then click the *Delete* icon ( ).
   - Right-click the tag you want to delete, and then click **Delete**.
5. In the confirmation dialog box, click **Delete**.
6. Click **Done** to exit the window.

Creating Folders in the Folders Panel

1. Access the *Manage Tags* window.

2. Access the *Create New Folder* dialog box by doing one of the following:
   - Right-click in the *Folder View*, click **Add**.
   - Select the *Folders* tab, and then in the *Folder View* area, click the *Add New* folder icon ( ).
3. In the *Create New Folder* dialog box, enter a folder name in the *Name* field.
4. In the *Create as* field, click to select either the *Top-level folder* or *Child of* radio box. If you select *Child of*, use the pull-down menu to select the appropriate parent folder.
5. Click **OK**.
6. In the *Drag Cameras To and From Folders* area:
   a. (Optional) Use the filter to find the appropriate camera(s).
   b. Click and drag the camera(s), one at as time, to the new folder.
      A camera can be assigned to only one folder at a time.
7. Click **Done** to exit the window.

Renaming a Folder in the Folders Panel

1. Access the *Manage Tags* window.
2. Select the **Folders** tab.
3. To rename a folder, do one of the following:
   - Right-click the existing folder, click **Edit**, enter a new name in the *Edit Folder* dialog box, *Name* field, and then click **Save**.
   - Click to select the existing folder, click the *Edit* icon ( ), enter a new name in the *Edit Folder* dialog box, *Name* field, and then click **Save**.
4. Click **Done** to exit the window.

Deleting a Folder in the Folders Panel

1. Access the *Manage Tags* window.
2. Select the *Folders* tab.
3. To delete a folder, do one of the following:
   - Right-click the existing folder, click **Delete**, and then, in the *Delete Folder?* dialog box, click **OK**.
   - Click to select the existing folder, click the *Delete* icon ( ), and then, in the
   - *Delete Folder?* dialog box, click **OK**.
4. Click **Done** to exit the window.

Playback Controls

Playback controls appear when you hover over a cell containing recorded video.

Icon	Description
	Select the date and time of video you want to watch

Icon	Description
	Click to activate or deactivate synchronous play for a cell; select in all cells that you want to synchronize within a tab.
	Play video at normal speed.
	Pause playback and move video forward a single frame.
	Pause playback and rewind video a single frame.
	Fast-forward video. Click again to increase speeds from 2x, 4x, 8x, 16x, 32x, 64x, or 128x.
	Rewind video. Click again to increase speeds from 2x, 4x, 8x, 16x, 32x, 64x, or 128x.
	Rewind video 30 seconds and initiate playback.
	Forward video to live playback.
	Take a snapshot of the current frame.
	Add a bookmark
	Enter investigation mode for all selected cells.

Controlling Cameras (PTZ)

Engaging PTZ control changes the color of the border around the cell containing the source (camera) you want to control: blue indicates native PTZ control, and purple indicates digital PTZ mode.

PTZ mode functions when PTZ cameras are operating in live mode.

Digital PTZ engages when you:

- Engage PTZ controls for cameras.
- Attempt to place PTZ cameras in playback mode; return to live video to engage native mode for supported cameras.
- Press Alt+Enter to force digital PTZ mode

In **Digital PTZ** mode, all PTZ controls affect their digital equivalents. Pan or tilt commands to a camera in digital PTZ mode cause the camera to digitally zoom in the requested direction (as opposed to physically moving the camera's field of view). Zoom commands will digitally zoom the camera from the center of the field of view. Digital PTZ enhancements may affect video quality.

PTZ mode icons are:

Icon	Description
	Locks or unlocks PTZ controls for other users. (This icon is located in the cell heading.)
	The *Zoom In* icon is located in the cell heading.

Icon	Description
	The *Zoom Out* icon is located in the cell heading.
	In the cell video, this icon engages the click-to-center mode. • Click to center video. • Double-click to center video and zoom in.

1. Select the cell you want to control.
2. Engage PTZ controls by one of the following methods:
   - In the upper left corner of the cell, click the *Activate Digital PTZ Mode* icon ( ) or the *Activate PTZ Mode* icon ( ), whichever is present.
   - Press Alt+Enter to force digital PTZ mode, or enter PTZ mode when standard PTZ controls are unavailable.

     The cell border will turn blue or purple depending on the PTZ mode supported by the source.
3. Control the camera. Use the joystick to affect broad motions and the keyboard to perform more precise movements.
   - Move the joystick up and down to tilt the camera; press the up and down arrows to nudge the camera vertically.
   - Move the joystick left and right or press to pan the camera; press the left and right arrows to nudge the camera laterally.
   - Twist the joystick right to zoom in and left to zoom out; press + or Page Up to zoom in and - or Page Down to zoom out. When zooming the camera in, video may jump briefly when the camera switches from physical to digital zoom; to prevent this behavior, disable the camera's digital zoom feature.
4. To exit PTZ mode, click the *Deactivate Digital PTZ Mode* icon ( ) or the *Deactivate PTZ Mode* icon ( ), whichever is present.

Click-to-Center PTZ

When PTZ mode is enabled, you can click within the cell to center a camera's field of on any point you click within the cell. Click-to-center functionality is not supported for all cameras.

When PTZ mode is enabled within a cell:

- Click in the cell to center the camera's field of view on the location that you clicked.
- Double-click to center video and zoom in on the location that you clicked.
- Hold Alt and click to center the video on the location that you clicked and zoom out.

Executing PTZ Presets and Patterns

A PTZ preset is a defined PTZ position; you can send the camera to the defined position by calling the preset. A PTZ pattern (or a preset tour) is a series of presets; you can configure most patterns to dwell at each preset for a specific period of time.

If a pattern or preset exists on the camera, to execute it:

1. Click the cell in which the camera video is being displayed.
2. Right-click, select *Presets* or *Pattern*, and then select the preset or pattern you want to execute.

3. To exit a preset or a pattern:
   - To stop a preset or a pattern, click the *Deactivate Digital PTZ Mode* icon ( ) or the *Deactivate PTZ Mode* icon ( ), whichever is present.
   - To stop a pattern only, right-click the cell, select **Pattern** and then select **Stop Pattern**.

Creating Presets

VideoXpert does not store presets. Any presets or patterns you create through VxOpsCenter are created and stored camera-side. When you create a preset through VideoXpert, you will assign the preset a numerical value; the preset will appear in the camera or encoder interface as "Preset <value>". Some cameras and encoders have limitations -- a maximum value for presets or reserved values that you cannot change.

If you want to assign a non-numerical friendly name to a preset, you must change the name of the preset from within the camera interface.

NOTE: For Pelco NET5500 and NET5400 series encoders, you can edit presets, but you cannot create new ones.

1. In the upper left corner of the cell, click the *Activate Digital PTZ Mode* icon ( ) or the *Activate PTZ Mode* icon ( ), whichever is present.
2. Move the camera to the position you want to mark as a preset.
3. Right click and select *Create Preset*.
4. Provide a number for the preset. The maximum number for the preset is determined by the camera or encoder on which you are creating a preset. Some cameras have reserved values that you cannot use to set a new preset.

Editing Presets

Some presets are pre-defined by the camera or encoder; you cannot edit these presets.

NOTE: For Pelco NET5500 and NET5400 series encoders, you can edit presets, but you cannot create or delete presets.

1. In the upper left corner of the cell, click the *Activate Digital PTZ Mode* icon ( ) or the *Activate PTZ Mode* icon ( ), whichever is present.
2. If necessary, position the camera to the location that you will make the preset.
3. Right-click in the cell, go to presets, and hover over the preset you want to change.
4. Click the *Reposition the preset to the current PTZ spacial coordinates* icon ( ), and then click **OK** in the confirmation dialog box.

Deleting Presets

Some presets are pre-defined by the camera or encoder; you cannot delete these presets.

NOTE: For Pelco NET5500 and NET5400 series encoders, you can edit presets, but you cannot create or delete presets.

1. In the upper left corner of the cell, click the *Activate Digital PTZ Mode* icon ( ) or the *Activate PTZ Mode* icon ( ), whichever is present.
2. Right click in the cell, go to presets, and hover over the preset you want to delete.
3. Click the *Delete* icon ( ), and then click **OK** in the confirmation dialog box.

Using Investigation Mode

Investigation mode provides a more detailed interface for synchronized playback and video search in a single window, making it easier to investigate a scene. From investigation mode, users can also trim and export video clips from the system's network video recorders for evidentiary safe keeping.

As you add cameras to the investigation window, the cameras appear in a detailed timeline at the bottom of the tab populates with recording information for each camera. the green areas for each camera indicate recorded video. You can use the timeline to navigate the composite recording.

Entering Investigation Mode

Investigation mode provides robust, synchronized playback controls with up to nine total cells, allowing users to fully investigate an incident across multiple cameras simultaneously. Investigation mode always opens in a new tab.

1. Synchronize the cells you want to investigate. To investigate a single cell, do not synchronize any cells; if there cells are already synchronized, then apply **Sync** to only the cell that you want to investigate.
2. Click in a cell in the **Sync** group, and then click the *Investigate* icon ( )
3. (Optional) Add cameras to the layout. As you add cameras, they will appear in the cells of the investigation tab, and in the camera list at the bottom of the workspace. A timeline is included in the playback controls area, indicating the availability of recorded video for all cameras.

Creating Clips

Operators can create clips of recorded information, trim video clips, save them to a playlist for safekeeping, or delete them.

The trim tool [ ] enables users to select a portion of a recording and save it to a within an investigation as a clip. Clip selections persist in the timeline, even if you choose not to add the clip to the playlist. Once you've selected a clip, you can resize or delete the selection using the time-box controls on the timeline.

1. When in Investigation Mode, click on the timeline where you want to select a clip.
2. Drag to select the start and end time of the clip you want to add to a playlist.
3. Click the selection arrow ( ) above the clip symbol.
4. To add a clip to a playlist, click on the clip you want to select to expose the down arrow symbol ( ), and then select **Add to Playlist**.
5. To delete a clip, click on the clip to expose the down arrow symbol ( ), and select **Delete**.

   When you delete the clip, it will be removed from any playlists that you have not exported.
6. If you have changed a clip, but would like to undo the change, click on the clip to expose the down arrow symbol ( ), and then select **Revert Changes**.

Creating a Playlist

A **playlist** is a series of recorded clips. Operators can trim video clips and save them to a playlist for safekeeping. Playlists are saved locally. You can reference your playlist later, but if you absolutely want to be sure that you don't lose the clips or video in your investigation playlist, you should export the playlist to your Core server.

1. When in Investigation Mode, click the selection arrow ( ) above the clip symbol.
2. On the timeline, click on the clip to expose the down arrow symbol ( ), and select *Add to Playlist*. Repeat as necessary.
3. Refer to the following sections to preview, edit, or export the playlist.

Previewing and Editing Playlists

You can preview your playlist at anytime to ensure that it adequately captures your investigation. If it does not, you can reorganize the clips in the playlist or re-trim clips to refine the action captured by each clip.

- Click the playlist tools icon ( ), and then click **Preview Playlist** to playback your playlist. Clips are stitched together in the order that they appear in the playlist.
- Click and drag clips in the playlist to reorder them.
- Re-trim a clip by either of the following methods:
  - Right-click a clip and select **Re-trim clip** to open a new window in which you can manipulate the start and end times of the clip. Click **Apply** when complete to save your changes back to the clip and playlist.
  - Click the playlist tools icon ( ), and then click **Re-trim clip** to open a new window in which you can manipulate the start and end times of the clip. Click **Apply** when complete to save your changes back to the clip and playlist.
- Delete a clip from the playlist and from the timeline by one of the following methods:
  - In the playlist, click to select one or more clips, right-click one of the selected clips, and then click **Delete selected clips**.
  - In the playlist, click to select one or more clips, click the playlist tools icon ( ), and then click **Delete selected clips**.
- In the timeline, click on a clip to expose the down arrow symbol ( ), and then select **Delete**.

Exporting a Playlist

Exporting a playlist allows you to save a collection of video clips, so that you can easily find and download your investigation later. Exporting video from network storage to your Core allows you to store video independently of your VideoXpert recorders for quick access later. The system exports unencrypted files in the MKV format, and encrypted files in ZIP format.

If you do not have permission to export video for the video sources in your investigation video, or the recordings saved to your playlist are no longer available from network storage, you will not be able to export a full playlist. You can still export a playlist with missing clips.

1. At the upper right corner of the playlist (left) panel, click the *Export Playlist* icon ( ).
2. In the *Export Playlist As* dialog box, enter a value in the *Export Name* field.
3. Click to select or deselet the checkbox for *Encrypt this export*; if you select encryption, enter a password in the fields.
4. Click **Save**.
5. Click **Open Export Archive** to view the status of your export.
6. When your export is complete, you can click **Download** to download it locally.
7. At any time, you can view exports by clicking **View Exports** in the *Export Playlist As* dialog box.

Encrypting Export Files

When you export a playlist, the VxOpsCenter gives you the option to encrypt the file. Encrypting the file ensures that no one can tamper with your exported video. To decrypt and playback an export, you must have the password used when generating the export and the **VideoXport Player**; you cannot playback encrypted exports with another video player.

Encrypted exports appear as ZIP archives containing the playlist file, video clips (MKV) and a signature file. When you attempt to open an encrypted export, it will prompt you for the password. The password will allow the player to decrypt the export. The player will then use the signature file and public key (within the signature) to validate the export and verify that it has not been tampered with. It will then playback the file.

If you lose or forget the password to an export, your administrator can recover it for you by returning to the export archive and selecting the export for which you need a password.

Using Investigations to View Video Stored on a Camera's Local Storage

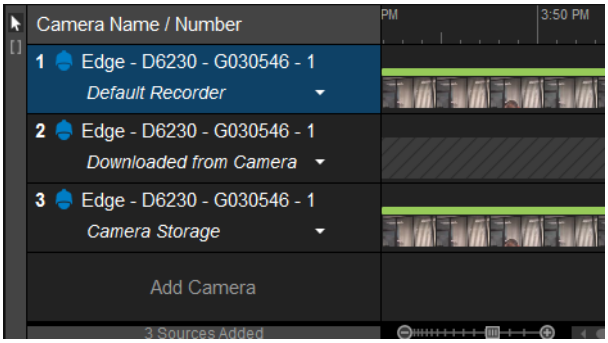
If your camera or video source is recording video locally (using an SD card or in concert with ONVIF Profile G), the timeline will display the ; the device tooltip will also alert you to multiple recording locations. You cannot view video while it is stored on the camera; you must first push video from the camera to a VideoXpert Storage recorder in order to view a camera's local recordings.

NOTE: Refer to documentation for your camera to enable and setup local recording. The process to enable and use local recordings may differ by camera model.

Click to open an investigation tab showing the camera's various recording locations as separate timelines. The timelines are labeled as follows:

- **Default Storage**: Video recorded by your VideoXpert Storage recorder. These are the recordings you would normally see when you playback video.
- **Downloaded from Camera**: Video pushed from the camera to the recorder does not overwrite video already stored on the recorder; the video recorded on the camera and the video recorded on the VXS recorder coexist. This timeline shows video that has been pushed from the camera to the recorder. You can only view these recordings when in the multi-recording investigation tab.
- **Camera Storage**: Displays thumbnails representing video stored on the camera. You must use the timeline to create and push video clips to default storage to view it.

Figure 3: Investigation with Edge Storage



Pushing Video from the Camera to Storage

This process assumes your camera is recording video locally.

1. Click to enter an investigation with timelines representing VideoXpert Storage, the camera's local storage, and video pushed from the camera to the recorder.
2. Within the *Camera Storage* timeline, click and drag along the section of the Camera Storage timeline to indicate the clip or section of video that you want to view.
3. Right click and select *Add to Default Recorder*. Video from the camera's timeline will now appear in the *Downloaded from Camera* timeline.

   You can now play video that was moved from the camera to Storage; it will appear in the second timeline.

Playing Back Video After Moving it to Storage

Video that has been copied from the camera to Storage will appear in the second timeline, title *Downloaded from Camera*. Select the section of video you want to play from here and play back. Video is synchronized between your default recorder and the *Downloaded from Camera* timeline.

Using the Export Archive

From the *Export Archive* window, you can download, edit the name of, or delete exports.

Editing an Export Name

1. To access the *Export Archive*, click the *User Menu* icon ( ) in mission control, and then select **Show Export Archive**.
2. (Optional) Use the filters to sort the list of available exports by camera tag or other data associated with the export (camera name, ID, exporting user, etc).
3. Click the pencil icon ( ) in the left column for the archive row.
4. In the *Edit Export Name* dialog box, type a value in the *New Name* field.
5. Click **Save**.

Deleting one or more Exports

Deleting an export from the *Export Archive* sends it to the Trash Bin; you must delete an export from the Trash Bin to permanently remove it from the system. This two-step process prevents users from inadvertently removing exported files from the system.

1. To access the *Export Archive*, click the *User Menu* icon ( ) in mission control and select **Show Export Archive**.
2. In the *Export Archive* window, view the list of exports in the table.
   - (Optional) Sort by any column title.
   - (Optional) Click to expand **Filter**, type a value in the search field; and/or click in the *Camera Tags* field, and then click to select the tags. Click **Clear** in the *Camera Tags* field to clear the tags, or click **Clear Filters** at the upper right of the *Export Archive* window to clear both of the filter fields.
3. (Optional) To delete an export, click the trashcan icon ( ) in the left column for the archive row; in the confirmation dialog box, click to select or deselect the checkbox to *Delete Permanently*, and then click **Yes**.
   - If you did not select *Delete Permanently*, the archive is removed from the current list, and is added to the *Export Trash Bin*.
   - If you did select *Delete Permanently*, the archive is deleted, but not added to the *Export Trash Bin*.
4. (Optional) To delete multiple exports:
   a. Click to select the exports to delete (use the Ctrl or Shift keys).
   b. Click the trashcan symbol ( ) in one of the selected rows.
   c. Click to select or deselect the checkbox to *Delete Permanently*, and then click **Yes**.
   If you did not select *Delete Permanently*, the archive is removed from the current list, and is added to the *Export Trash Bin*.

   If you did select *Delete Permanently*, the archive is deleted, but not added to the *Export Trash Bin*.
5. If you want to view deleted exports, click the down arrow to the right of *Export Archive*, and then select **View Trash Bin**.
   - To move an export from the *Export Trash Bin* to the *Export Archive* window, click the export **Restore** button.
   - To delete multiple exports from the trash bin, click to select the exports (use Ctrl or Shift), click the *Export Archive Menu* icon ( ), click **Delete Selected Exports**, and then click **Delete Permanently** in the confirmation dialog box.
   - To return to the *Export Archive* window, click the **X** symbol in the upper right corner of the *Export Trash Bin* window.
6. If you want to delete failed exports, click the down arrow to the right of *Export Archive*, and then click **Delete All Failed Exports**. In the confirmation dialog box, click to select or deselect the checkbox for *Delete Permanently*, and then click **Yes**.
7. To exit the window, click the **X** in the upper-right corner of the window, or click outside the window.

Working with Plug-ins

Plug-ins are components that add enhance the capabilities of your Ops Center Client. The Ops Center Client supports two types of plug-ins:

- **Overlay** plug-ins provide information supplemental to video and audio sources, and are meant to be used in conjunction with a source; both a source and overlay plug-in will populate the same cell.
- **Content** plug-ins consume a cell by themselves; adding a content plug-in to a cell that is already populated will replace whatever was in the cell.

1. Select the cell in which you want to add a plug-in.
2. Click Overlay or Content, and select the plug-in you want to add to your workspace.
3. Drag the plug-in to a cell or double-click it. Double clicking a plug-in will open the plug-in in a manner that is consistent with video sources, as defined by the *When double-clicking a source* setting, available under *Preferences*.

Installing Plug-ins

Close the Ops Center application before installing plug-ins.

To install a plug-in, run the plug-in installer, typically an MSI file.

Plug-ins install under *C:\ProgramData\Pelco\OpsCenter\Plugins*. The Ops Center application searches this directory recursively on start-up to populate the plug-ins available to it.

Image Viewer Plug-in

The Image Viewer Content plug-in allows you to display a directory of images within a cell of the Ops Center Client. The images rotate at a designated interval, or you can manually tab through the images. You can use the Image Viewer to scroll through important snapshots from your Ops Center, or to display a series of important images (persons of interest, etc) in the same workspace that you use for video.

NOTE: The Image Viewer path is stored on the Core, and will follow your account across workstations; if you set a path local to a particular workstation, you will not be able to view your images on another workstation.

1. Click *Content*, and select the *Image Viewer* plug-in.
2. Select the directory containing the images you want to view; this directory can be local or a network location.
3. Click ☰ to change the image directory, the speed at which images scroll, and other options.

The VideoXpert Ops Center Mapping Plug-in

The Mapping Plug-in provides an interface to arrange cameras according to their physical locations on a map, making it easier to find the right camera and view to suit your needs.

NOTE: You should not run more than one mapping plug-in per workstation.

If running the Ops Center software on Windows 8N, you may have to install the Media Player and Visual C++ redistributables to run the Mapping Plug-in.

Adding the Plug-in to your Workspace

In Mission Control, click *Content* and select the *Mapping* to use the plug-in. You can use the plug-in in any layout; however, it may be easier to use in larger cells.

NOTE: You should not run more than one mapping plug-in per workstation.

Using the Mapping Plug-in for the First Time

When you first run the mapping plug-in, it will prompt you to add a map. Select a DWG, JPEG, or GIF file that you want to use as a map, and then click *OK*.

Configuring the Plug-in

Click to enter the mapping plug-in's *Edit Mode*. From here, you can add maps, add cameras to maps, and configure the visible layers for DWG-based maps.

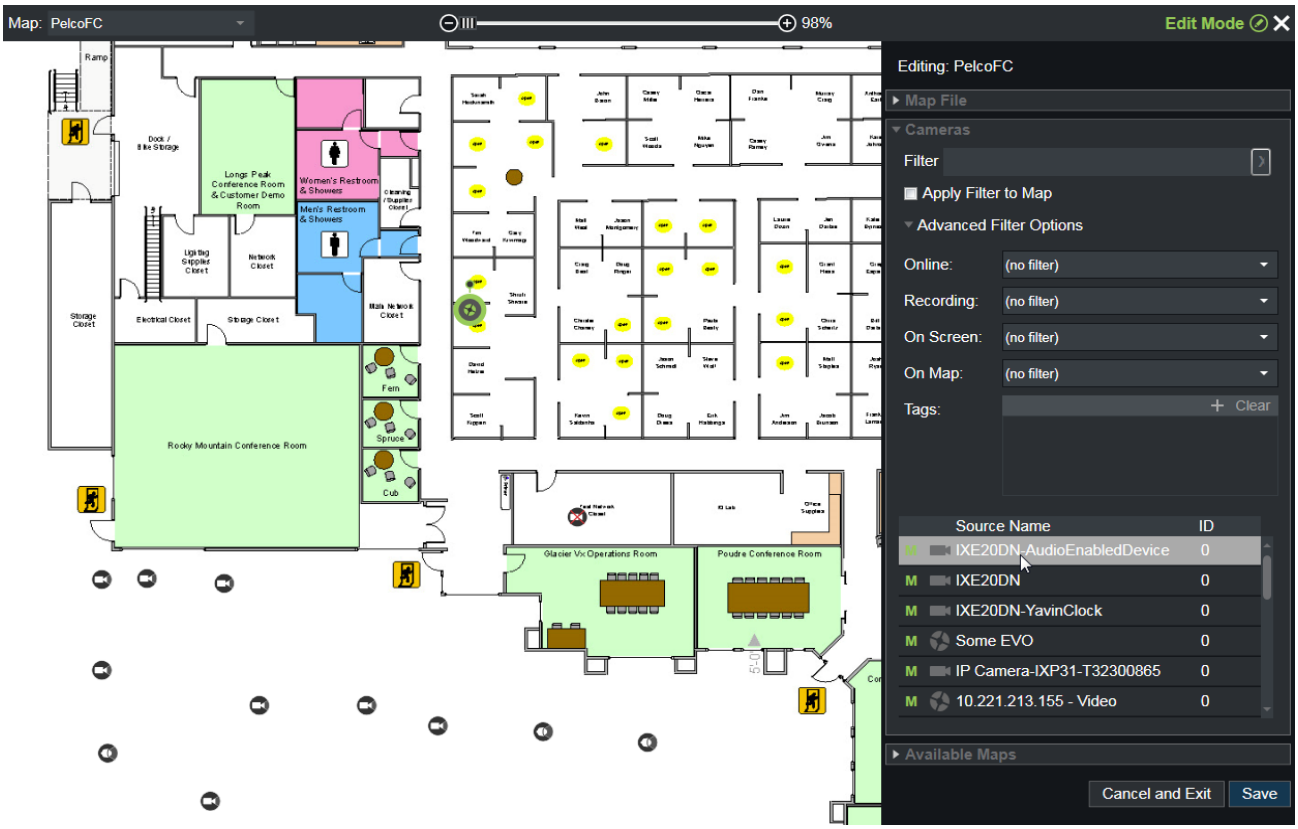


Figure 4: The Mapping Plug-in's Edit Mode

Adding Maps to VideoXpert

The Mapping plug-in supports DWG, JPEG, and GIF image files. For DWG files, you can select the layers you want to make available within VideoXpert. Large DWG files are rasterized when you add them to the plug-in, providing faster load times and smoother interactions with the map.

1. Click to enter Edit mode.
2. Expand the *Available Maps* section.
3. Click +.
4. Select your map file, and then click *Open* If adding a DWG file, select the layers that you want to import.

Selecting Visible Layers

While in Edit Mode, you can use the *Layer Visibility* function to hide and display layers within your vector-based (DWG) map. Cameras are placed on their own map layer, so showing or hiding layers of the map will only apply to the map itself, and not your camera placements.

If you want to hide cameras on the map, click when outside of *Edit Mode*.

Updating or Exporting Map Files

You can update a map file, if, for example, you have re-arranged furniture within the environment or if you want to add layers, you can update a map file.

Exporting

1. Click to enter Edit mode.
2. Click *Map File*.
3. Click *Update or change map file*.
4. Select your map file, and then click *Open* If adding a DWG file, select the layers that you want to import.

Deleting Maps

Maps are backed up as a part of Core backups. If you delete a map in error, you can recover the map along with camera associations by performing a Core recovery.

1. Select the map you want to change and then click to enter Edit mode.
2. Expand the *Available Maps* section, and select the map you want to delete.
3. Click to delete the map.

Adding Cameras to the Map

While in *Edit Mode*, you can place cameras on the map and rotate them to reflect their orientation within the environment. Cameras marked with a green "M" are already placed on the current map. When adding, moving, and rotating cameras, you must save before you exit *Edit Mode* or you will lose all of your changes.

NOTE: Do not try to add cameras to the map from Mission Control. You must add cameras to the map from the Edit Mode Cameras menu. Dragging cameras from Mission Control will replace the mapping plug-in with a video source rather than placing a camera on the map.

1. Enter Edit Mode.
2. Expand the *Cameras* menu and drag cameras onto the map. You can use the *Filter* field to sort and find the cameras you want to place on the map.
3. Click *Save*. to save your camera placements.

Moving and Rotating Cameras on the Map

Click cameras on the map to enable movement. Selecting a camera enables a handle ( ), allowing you to turn the icon to reflect its field of view or to "pick it up" and move it to another location on the map.

Using the Mapping Plug-in

Use the *Map* menu to select the map you want to use.

Figure 5: The Mapping Plug-in's Standard Mode

Navigating the Map

Click and drag to move the map's field of view. Click to hide or show all cameras on the map; you may want to hide cameras on the map to unobstruct your view while you find a particular location on the map.

Zooming in and Out

You can zoom in and out using the scroll wheel on your mouse. You can also click or press + on your keyboard to zoom in; and you can click or press - on your keyboard to zoom out.

Cameras will not block or impede areas of the map at different zoom levels.

Opening Cameras from the Map

Click a camera on the map to get more information about it, including a thumbnail of the scene; double-click a camera or a group of cameras to open them in a new tab.

Press Ctrl while dragging to select multiple cameras.

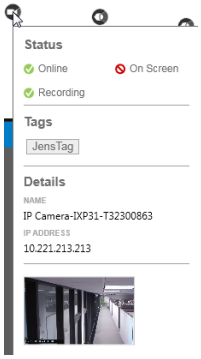


Figure 6: Camera Tooltips

Closing the Plug-in

Click to close the Mapping plug-in. If you exit the plug-in without saving your changes in Edit Mode, you will lose your changes when you close the plug-in.

Using the eConnect Plug-in

The eConnect overlay plug-in displays real-time gaming and register data accompanying the view of a particular Video source. Sources are associated with gaming data by ID. Add the plug-in to a cell containing a camera, or a camera to a cell containing the plug-in to start streaming simultaneous video and gaming data. A camera that is not associated with gaming data will not produce gaming data in the plug-in.

Click to move the eConnect data stream to the opposite side of the cell.

1. Click *Overlay*, and drag the *eConnect Data Stream* plug-in to the desired cell. You can drag the overlay into a cell already containing a camera, or drag a camera into the cell after adding the plug-in.
2. If this is your first time using the plug-in, provide the address of the eConnect server and your credentials; you can change this information by clicking *Advanced*. After logging in, the plug-in saves your eConnect credentials and automatically logs you in.
3. Add a camera to the cell if you did not drag the overlay into a cell already containing a camera.

Responding to Events

Events in VxOpsCenter are reported in the following locations of the UI:

- The *Event Viewer* lists all events, and allows you to filter and sort the full list of events to include only those that you want to view.
- The *Event Notifications* window enables you to research, snooze, and acknowledge current events.

Using the Event Dialog Box

When an event pertinent to your user account occurs, an event notification dialog box will pop-up on your monitor and present ways in which you can respond to the event. Event notifications requiring acknowledgment persist until you or other users with the same role acknowledge them.

The events icon in the lower-right corner of your workspaces also shows the number of active events that require your attention. Click it to reveal event notifications.

1. Access an event notification by one of the following methods:
   - Click the *Notifications* icon ( ) at the lower right of the window, and then click to select the notification to open. Click again to close the list of notifications.
   - Click the *Expand* icon ( ) in the bottom left corner of the event notification window that pops-up on your screen, and then click to select the notification on which to act. Click the icon again, now labeled *Collapse*, to close the window.

   Then event notification includes the type of event, the device (for example, the specific camera) on which the event occurred, the date and time of the event, and the severity of the event.
2. (Optional) Click **In Progress** to indicate that you are either investigating the event or are in the process of correcting an event condition.
3. Click **Acknowledge** to indicate that the event is no longer relevant; the event condition has been accounted for or corrected. Acknowledging an event clears the event notification.
4. (Optional) If you accessed an event from the event notification pop-up window, you can click **Acknowledge All**, and then click **OK** in the confirmation dialog box, to clear all existing events from the event notification window.
5. (Optional) Click **Event Log** to open the *Event Viewer* window.

Using the Event Viewer

The *Event Viewer* lists events on the system. The list can be filtered and sorted.

1. Click **Event Log** to open the *Event Viewer* in a cell of the workspace.
2. In the *Filter* (right) panel of the *Event Viewer*, you can make the following selections to filter the list of events, as needed:
   - Enter values in the *From* and *To* area, *Select a date* and *Select a time* fields, to show only those events that occurred during that time.
   - In the *Show events with status* area, click to select and deselect the checkboxes for the status of events on which to filter.
   - In the *Severity* areas, enter values in the *Range* fields, to limit events shown to the selected severity range.
   - In the *User* area, select a user from the drop-down menu, or click to select the checkbox for *Only show user related actions* to limit events shown to only those actions initiated by users.
   - In the *Events* field, select a category of events from the drop-down menu, to limit the events to the category specified.
   - At the top of the filter panel, click **Reset Filter** to clear the filter settings. This will display all events.
3. In the left panel of the *Event Viewer*, you can further control the events that are listed, if appropriate:
   - Click to select or deselect the checkbox to *Pause events*. Pausing events will stop the *Event Viewer* from refreshing until you deselect the checkbox.
   - Use the *Sort by* drop-down menu to sort the events either by **Time** or **Severity**, and either in **Ascending** or **Descending** order.

Logging Out

When you log out, the application saves your desktop configuration, including video stream and plug-ins.

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Log Out**.
3. In the *Log Out* confirmation dialog box, click **Log Out**.

Closing the Application

It is important to close the application gracefully. Attempting to close the application through the start bar or by other means will leave the application processes open, continuing to consume resources.

All plug-in processes must be closed before the application itself can close. When you attempt to exit the application, the application will first save and close all plug-in applications before it can close. Depending on the number of plug-ins populating your workspace, this may take a few moments; do not attempt to forcefully close the application while it is shutting down, or you may lose unsaved workspace information or leave plug-ins and application processes open.

1. In Mission Control, click the *User Menu* icon ( ).
2. Click **Exit VxOpsCenter**.
3. In the *Exit VxOpsCenter* dialog box, click **Exit**.

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