

# exacqVision Command Line Interface (eV-CLI)

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## Introduction

In many applications it is desirable to display live or recorded video from your exacqVision System in response to an event or user interaction. For example, an access control system may want to display a live video window from a camera pointed at a doorway when the door sensor indicates the door opened, or a POS data management application may want to open a searched video window from the camera and time corresponding to a particular transaction. The exacqVision Client supports these applications by being highly configurable from a command line interface.

## Requirements

1. exacqVision Client version 2.6 or higher installed
2. The user of the eV-CLI have a basic understanding of XML. Since the eV-CLI offers so many options for configuration, the interface is implemented by passing an XML file into the exacqVision Client from the command line.

## XDV files

An XDV file is just an XML file. During installation the exacqVision client will automatically associate itself with the .xdv file extension. The XML format of these files is described in [XML Definition](#).

## Command Line Options

- filename (no parameters)
  - Same as -F
- -Ffilename
  - Specifies an XDV to launch the client with
- -Ifilename
  - Specifies an alternative location to read/write the client ini file
  - Defaults
    - Windows: `%UserProfile%\edvrclient.ini`
    - Linux: `$HOME/.edvrclient`
    - Mac: `$HOME/Library/Preferences/edvrclient\ Preferences`
- -Dpath
  - Specifies the data path used when saving blobs, configs, logs, thumbnails, event buttons, etc.
  - Defaults
    - Windows: `%AppData%\edvrclient`
    - Linux: `$HOME/.edvrclient.dir`
    - Mac: `$HOME/Library/Application\ Support/edvrclient`
- -Spath
  - Specifies the stream path. No longer used.
- -Lfilename
  - Enables logging of client messages to a file.
  - Defaults if not specified:

- Windows: Debug output (use dbgview)
  - Linux/Mac: stderr
- -V
  - Enables logging of verbose client messages. This mostly consists of rendering information.

## Notes

- It is intentional that there is no space between the parameter and filename.
- If there is a space in the filename you must use quotes.

## Usage

The exacqVision Command Line Interface operates via an XML file. To use the eV-CLI, the user should create a file called, for example, cmdLineCfg.xdv, and start the exacqVision Client with the following command line:

```
edvrclient -FcmdLineCfg.xdv
```

A Windows shortcut could be created with -FcmdLineCfg.xml appended after the target line of the shortcut, like this:

```
"C:\Program Files\exacqVision\Client\edvrclient.exe" -FcmdLineCfg.xml
```

You can also simply double click on an XDV file to launch the client with it.

## Custom URL Protocol Handler

In addition to the command line options above the exacqVision client also registers a custom URL protocol handler with the OS to help better support web applications. Any url starting with **xdv:** or **xdv://** will automatically launch the client and pass the remaining portion as the -F parameter.

Example URLs:

```
xdv://http://mywebapp/launch_search?
camera_id=12345&start_time=1183068255&end_time=1183068355
```

```
xdv://https://domain.com/file.xdv
```

```
xdv://file:///C:/path/to/file.xdv
```

```
xdv://file:///home/user/file.xdv
```

Example Usage Command Line:

- Windows: **explorer xdv:file:///C:/path/to/file.xdv**
- Linux: **xdg-open xdv:file:///path/to/file.xdv**
- Mac: **open xdv:file:///path/to/file.xdv**

## Launching From a Browser

To use this from a browser the process is as simple as navigating the browser to the **xdv://** URL. Depending on the browser you may also receive a prompt to allow the website to open an application on your computer. Please consult your intended browser to determine how it handles custom protocol handlers.

# XML Definition

## Type Definitions

- **Integer** - Numeric value
- **Bool** - 1 or 0 value where 1 is on or true and 0 is off or false
- **String** - Any text value
- **DIP** - Device independent pixel (represents screen coordinates and sizes)
  - Windows
    - If the system is not using any sort of DPI or screen scaling represents actual pixel values
    - If screen scaling is in use then this number is multiplied by the scaling value
      - Example: A 4k monitor would typically use 200% scaling. A value of 1920 would represent your full display width ( $1920 * 200\% = 3840$ )
  - Other platforms this is simply pixel values or may be scaled automatically by the OS
- **Epoch** - Numeric value representing the number of seconds since January 1st, 1970.

## exacqVisionInit Element

This is the root XML element and there can only be one. The following attributes are available in the exacqVisionInit XML element:

- **Top** - Y coordinate for where to launch the client. (DIP)
- **Left** - X coordinate for where to launch the client. (DIP)
- **Width** - Default width of the client when it starts up. (DIP)
- **Height** - Default height of the client when it starts up. (DIP)
- **Maximize** - Start maximized. (Bool)
  - NOTE: Client will startup maximized on the monitor based on the X/Y starting coordinates
- **FullScreen** - Client will start up full screen (F11 no window border). (Bool)
- **ShowToolbars** - Client will startup with toolbars shown (F8). (Bool)
- **ShowNavPanel** - Client will startup with nav tree shown (F4). (Bool)
- **MainSashPos** - Default width of the nav tree panel. (DIP)
- **LiveModeNavButtons** - Number of live mode buttons to display on the left. Equivalent of collapsing down the tree to only show buttons for Groups, Maps, Views, etc rather than full text. (Integer)
- **SearchModeNavButtons** - Same as **LiveModeNavButtons**, but only applies to the search trees. (Integer)
- **AllowAccelerators** - Enables or disables shortcut keys in the client such as F2, F3, F4, F8, F11 and others. (Bool)
- **LiveMode** - Default nav tree for live. Cameras, groups, views, maps, etc. (Integer)
- **ShowSunkenBorder** - Enables or disables sunken border around video panels. (Bool)
- **ShowRecStatusBorder** - Enables or disables recording status border on video panels. (Bool)
- **ShowPTZFocusBorder** - Enables or disables PTZ focus border on video panels. (Bool)
- **ShowOnScreenDisplay** - Enables or disables video panel OSDs. (Bool)
- **UseOsdColor** - Use OSD color for serial profiles. (Bool)
- **KeepAspectRatio** - Keep aspect ratio during resize. (Bool)
- **RestoreOnAttnReq** - Restore client on user attention request. (Bool)
- **MySystemsColMask** - Determines which columns to show by default on the systems page. (Integer)
- **EntCamColMask** - Determines which columns to show by default on enterprise cameras page. (Integer)

- **AnalogCamColMask** - Determines which columns to show by default on analog camera recordings page. (Integer)
- **IPCamColMask** - Determines which columns to show by default on IP camera recordings page. (Integer)
- **EntCamFilterTreeSize** - Default width of the filter tree on enterprise cameras. (DIP)
- **NonEntCamFilterTreeSize** - Default width of the filter tree on camera recordings. (DIP)
- **VGAAccelMode** - VGA acceleration mode. (Integer)
- **VGAAccelColorspace** - VGA acceleration color space. (Integer)
- **TimelapsePlaybackInterval** - Timelapse playback, immediate jump to next frame if gap exceeds X seconds. (Integer)
- **PanelSizeRatio** - Panel size (Content, Window, 16x9, 4x3). (Integer)
- **CameraSortOrder** - Default sort order of the cameras nav tree. (Integer)
  - 0 = Native, 1 = Alphabetical, 2 = Reverse Alphabetical
- **GroupsSortOrder** - Default sort order of the groups nav tree. (Integer)
- **MapsSortOrder** - Default sort order of the maps nav tree. (Integer)
- **ViewsSortOrder** - Default sort order of the views nav tree. (Integer)
- **EventsSortOrder** - Default sort order of the events nav tree. (Integer)
- **BookmarksSortOrder** - Default sort order of the bookmarks nav tree. (Integer)
- **LiveAudioLipSync** - Lip Sync / Video smoothing. (Integer)
  - 0 = Auto, 1 = Enabled, 2 = Disabled
- **AudioInputDevice** - Default device number for 2-way audio. (Integer)
- **MuteDuringTwoWayAudio** - Mute during 2-way audio. (Bool)
- **HWAccelLimit** - Maximum number of pixels per second to limit GPU to. (Integer)
- **HWAccelResult** - Maximum number of pixels per second for GPU decoding (calibration result). (Integer)
- **EnableIndicators** - Enables or disables indicators. (Bool)
- **ConfirmClose** - Requires confirmation when closing the client. (Bool)
- **CollapseLiveAutoContexts** - Hide individual quality streams. (Bool)
- **CombineRegionOfInterestStreams** - Manage all streams as quality streams. (Bool)
- **CameraPreviewMode** - Camera preview style. (Integer)
  - 0 = None, 1 = Thumbnail, 2 = Video
- **NormalLayoutCollapseMode** - Layout collapse mode. (Integer)
  - 0 = Auto, 1 = Expanded, 2 = Collapsed
- **WidescreenLayoutCollapseMode** - No longer used. (Integer)
- **CustomLayoutCollapseMode** - No longer used. (Integer)
- **EventButtonCollapseMode** - Event button collapse mode. (Integer)
- **LastUsedNormalLayout** - Last used layout (in number of panels). This is what shows up when collapsed. (Integer)
- **LastUsedWidescreenLayout** - No longer used. (Integer)
- **LastUsedEventButton** - Last used event button index. This is what shows up when collapsed. (Integer)
- **DeblockingMode** - H.264 Deblocking. (Integer)
  - 0 = Auto, 1 = Enabled, 2 = Disabled
- **DirectSearch** - Direct search setting. (Integer)
  - 0 = Disabled, 1 = Prefer Server, 2 = Prefer Target
- **CurrentTheme** - Name of the them to use. (String)
- **LastUsedLayout** - Name of the last used layout. This is what shows up when collapsed. (Integer)

- **Caption** - Title of the client window. (String)
- **RemoteControlName** - Name that shows up in videoPush. (String)
- **RemoteControlEnabled** - Enables or disables video push. (Bool)
- **ViewLayout** - Default startup layout (in number of panels). (Integer)
- **LegacyAuthentication** - Enables or disables legacy authentication. (Integer)
  - 0 = OnlyIfRequired, 1 = Force, 2 = Never
  - NOTE: This will eventually stop working.
- **TimeoutEnabled** - Enables or disables inactivity timeout. (Bool)
- **TimeoutMinutes** - Inactivity timeout minutes. (Integer)
- **OnlyShowConfig** - Only show the config page. (Bool)
- **IsEmbedded** - Act as an M-series client (only allow one system connection). (Bool)
- **RestrictedUser** - Act as an OS restricted user. (Bool)
- **Delete** - Deletes the file when done parsing. (Bool)
- **DisableLiveStreams** - Prevents streaming of live video. (Bool)
- **ShowSystemGroups** - Show system group folders. (Bool)
- **ShowTrayIcon** - Run client as a system tray icon (preventing application shutdown). (Bool)
- **RequireSSLCert** - Require SSL certificate validation for internet communication. (Bool)
- **TimelapseResolution** - Desired number of seconds between frames for a timelapse search export. (Integer)
- **StartUpInstanceCount** - Desired total number of instances to start when initially launching the client. (Integer)

The following sections list child XML elements that go inside the `exacqVisionInit` element:

## Layout

Custom layout XML to start up with a custom layout. XML for this is not defined in this document.

## Filter Element

Allows advanced search control filters for user defined metadata to be set via the CLI.

- Nav Cameras - Child XML element - Navigation cameras for Live and Search
  - **Name** (Bool)
  - **Address** (Bool)
  - **City** (Bool)
  - **State** (Bool)
  - **PostalCode** (Bool)
  - **Country** (Bool)
  - **Location** (Bool)
  - **Department** (Bool)
  - **Phone** (Bool)
  - **Contact** (Bool)
  - **Email** (Bool)
  - **AssetTag** (Bool)
  - **AdditionalData** (Bool)

## Remote Element

This allows videoPush of the live view via the CLI. If you would like to send to multiple remote instances then simply create multiple Remote elements each with a different instance name to send to. The following attributes and child elements are supported:

- **Instance** - Name of the remote instance. (String)

## Live Element

There can only be 1 live XML element. The exacqReplay feature in the exacqVision Client is implemented via the eV-CLI using this element. The following attributes and child elements are supported:

- **View** - Name of the view to display in live. (String)
  - If the view is in a folder you should use the format `path\to\view` where each folder is separated by a `\`.
  - User Role Views should be prefixed with `User Group Views::`
  - User Views should be prefixed with `User Views::`
- **Tour** - Name of the tour to display in live. (String)
  - If the tour is in a folder you should use the format `path\to\tour` where each folder is separated by a `\`.
  - User Role Tours should be prefixed with `User Group Tours::`
  - User Tours should be prefixed with `User Tours::`
- **EventMonitor** Name of the event monitoring profile (switch view) to display on live. (String)
- **System** - Child XML element
  - Video - Child XML element (See [System](#))
  - Serial - Child XML element (See [System](#))
  - Audio - Child XML element (See [System](#))
- Profile (Event monitoring profile switch video) - Child XML element
  - **Name** - Name of event monitoring profile. (String)
  - **Position** - Position in live layout. (Integer)
- **WebView** - Child XML element
  - **Name** - Name of web view. (String)
  - **Position** - Position in live layout. (Integer)
- **Layout** - Child XML element

## Search Element

The search element is used to determine which cameras to specify a search and/or export. Multiple search elements are allowed for exports. If multiple searches are specified and they are not exports then only the first search will be performed. The exacqReplay feature in the exacqVision Client is implemented via the eV-CLI using this element. The following attributes and child elements are supported:

- **Start** - Search start time in epoch time. (Integer)
- **End** - Search start end in epoch time. (Integer)
- **IsClientTime** - Indicates the time should be relative to the clients clock. In case of discrepancies between client and system time (not timezone). For example, used by exacqReplay to see last 5 minutes etc. (Bool)
- **Filename** - Indicates this is an export and should export to specified filename. (String)
  - The export format is determine by the extension in the filename.

- Supported export formats: exe, psx, ps, avi, mov, mp4
- **CaseID** - GUID of case to export. (String)
- **AllowExpansion** - Allow moving of the ruler panel to expand the search range. (Bool)
- **CropX** - X coordinate for cropped exports. (Integer)
- **CropY** - Y coordinate for cropped exports. (Integer)
- **CropWidth** - Width for cropped exports. (Integer)
- **CropHeight** - Height for cropped exports. (Integer)
- View - Child XML element
  - **Name** - Name of view. (String)
    - If the view is in a folder you should use the format `path\to\view` where each folder is separated by a `\`.
    - User Role Views should be prefixed with `User Group Views::`
    - User Views should be prefixed with `User Views::`
- **System** - Child XML element
  - **Connect** - Indicates whether or not to connect to the system when searching (ie in order to do a direct archive search). (Bool)
  - Case - Child XML element
    - **ID** - Case GUID (Seems redundant, but used to determine which systems are in the case for connection purposes). (String)
  - Bookmark - Child XML element
    - **ID** - Bookmark GUID. (String)
  - Video - Child XML element (See [System](#))
  - Serial - Child XML element (See [System](#))
  - Audio - Child XML element (See [System](#))
  - AccessDevices - Child XML Element
    - **Value** - Filter value. (String)
    - **Name** - Name of access device. (String)
    - **Number** - Input number of access device. (Integer)
- **Layout** - Child XML element

## Config Element

The config element lets you startup the client on a specific config page. The following attributes and child elements are supported:

- **System** - Child XML element
  - NOTE: System here can indicate to connect to the system without doing anything else
  - PageName - Child XML element (Not literal, this element could have multiple different names indicating which page to go to)
    - See [Available Pages](#)
    - **TabName** - Name of the tab on the page to go to. (String)
    - **ElementName** - Page specific element name. May be a camera name to select the camera by default, etc. (String)
    - **ElementID** - Page specific element ID. May be a camera ID to select the camera by default, etc. (Integer)

## Available Pages

- **Systems** - Systems
- **Add\_Systems** - Add systems
- **Groups** - Groups
- **Views** - Views
- **Tours** - Tours
- **Layouts** - Layouts
- **Enterprise\_Config** - Enterprise Config
- **Enterprise\_Users** - Enterprise Users
- **Enterprise\_Cameras** - Enterprise Cameras
- **Enterprise\_Notifications** - Enterprise Notifications
- **Enterprise\_Storage** - Enterprise Storage
- **Event\_Monitoring** - Event Monitoring
- **Joystick** - Joystick
- **Storage** - Storage
- **Event\_Linking** - Event Linking
- **SystemSettings** - Configure System
- **Notifications** - Notifications
- **Schedule** - Schedule
- **Archiving** - Archiving
- **Users** - Users
- **System\_Information** - System Information
- **Device\_Settings** - Device Settings
- **Add\_IP\_Cameras** - Add IP Cameras
- **Trigger\_Inputs** - Trigger Inputs
- **Alarm\_Outputs** - Alarm Outputs
- **Camera\_Recording** - Camera Recordings
- **CameraSettings** - Camera Settings
- **Serial\_Profiles** - Serial Profiles
- **Serial\_Ports** - Serial Ports
- **Auto\_Export** - Auto Export
- **Audio\_Inputs** - Audio Inputs
- **Client** - Client Settings
- **Maps** - Maps
- **Video\_Output\_1** - Video Output 1
- **Video\_Output\_2** - Video Output 2
- **Indicators** - Indicators
- **Add\_Access\_Control** - Add Security Integrations
- **Access\_Control** - Security Integration
- **PoEPorts** - PoE Management

## System Element

The System XML element is used under Live, Search, or Config elements in order to specify system and input/source information. It is also used to determine which systems the client should connect to on startup. The following attributes and child elements are supported:



- **Name** - Name, Mac Address, or IP address (port optional) of a system to connect to (if IP specified system in ini must match). (String)
- **Username** - Username to use when connecting to system. (String)
  - Optional. If not specified the value from the ini will be used.
- **Password** - Password to use when connecting to system. (String)
  - Optional. If not specified the value from the ini will be used.
- Video - Child XML element
  - Input - Child XML element
    - **Name** - Name of the camera. (String)
    - **CameraID** - CameraID to display (optional). (Integer)
      - A camera's ID is available by right clicking on the video panel and selecting Properties; requires exacqVision Client version 5.0 or greater.
    - **Device** - Camera IP address (optional) or "Group" to indicate a map. (String)
    - **Number** - Camera input number (optional, required if Name and CameraID not specified). (Integer)
    - **Context** - Context number (optional, default 0). (Integer)
    - **AutoContext** - Automatically choose the best context. (Bool)
    - **Position** - Position in live layout. Maximum position number will also determine which layout to use if not specified. (Integer)
      - Preset - Child XML element
        - DigPTZ - Child XML element
          - **SubMode** - Corresponds to the Dewarping parameter used (Integer)
          - **Pan** - Camera pan value (Double)
          - **Tilt** - Camera tilt value (Double)
          - **Zoom** - Camera zoom value (Double)
          - **Left** - Camera left value (Integer)
          - **Top** - Camera top value (Integer)
          - **Width** - Camera width value (Integer)
          - **Height** - Camera height value (Integer)
          - Specify either Pan/Tilt/Zoom values for dewarp mode in fisheye cameras or Left/Top/Width/Height for other modes
- Serial - Child XML element
  - **Value** - Default serial filter text (Search Only). (String)
  - Input - Child XML element
    - **Name** - Name of serial input. (String)
    - **Number** - Serial input number (optional, required if Name not specified). (Integer)
    - **Position** - Position in live layout. (Integer)
- Audio - Child XML element
  - Input - Child XML element
    - **Name** - Name of the audio input. (String)
    - **Device** - Device IP address (optional, required if Name not specified). (String)
    - **Number** - Audio input number (optional, required if Name not specified). (Integer)

## Additional Notes

- The Username and Password attributes for the tag are required only if Always Prompt for Credentials is selected for the named system on the Add Systems page in the exacqVision Client. (Always Prompt for

Credentials is available in eV Client version 4.7 and later.)

- The exacqVision Client keeps a list of exacqVision Servers to which it will connect in an initialization file. When started using the eV-CLI, the System element under the Live element specifies a subset of the Servers to which the eV-CLI Client will connect. If the eV-CLI System element specifies a server which has not been configured and enabled on the Add Systems page, that server will not be connected and that video will not be populated.
- If a Live View or Tour was specified, and the View or View Tour contains cameras from Systems not identified in the XML, those View positions will not be populated.
- Only one search audio stream is available. If more than one audio input is specified in the XML file, the last one will be used.
- Upon startup, if a search has been specified by the eV-CLI, the exacqVision Client attempts to connect only to the exacqVision Servers specified in the Search element in order to minimize the time required to start playing video. If the eV-CLI Live element specifies a server which has not been configured and enabled on the Add Systems page, that server will not be connected and the search will stall.

## XML Samples

### Live Samples

```
<exacqVisionInit>
  <Live View="Lobby">
    <System Name="exacqVision Demo Server" />
  </Live>
</exacqVisionInit>
```

```
<exacqVisionInit>
  <Live Tour="Door Tour">
    <System Name="exacqVision Demo Server" />
  </Live>
</exacqVisionInit>
```

```
<exacqVisionInit>
  <Live>
    <System Name="exacqVision Demo Server" Username="user" Password="pass">
      <Video>
        <Input Name="Engineering (analog)" Position="0" />
        <Input Name="Color Bars (analog)" Position="3" />
      </Video>
      <Serial>
        <Input Name="COM1" Position="3" />
      </Serial>
      <Audio>
        <Input Name="TV audio" />
      </Audio>
    </System>
    <System Name="192.168.100.10" Username="user" Password="pass">
```

```

        <Video>
            <Input Name="Input 1" Device="192.168.100.232" Position="2" />
            <Input Number="2" Device="192.168.100.232" Position="1" />
        </Video>
    </System>
</Live>
</exacqVisionInit>

```

## Event Monitoring Samples

```

<exacqVisionInit Top="100" Left="100" Width="1200" Height="650" FullScreen="1"
ShowToolbars="1">
    <Live>
        <System Name="192.168.1.2:22609" Username="user" Password="User123!">
            <Profile Name="Event Monitoring Profile 1" Position="0"/>
        </System>
        <System Name="192.168.1.3" Username="user" Password="User123!">
            <Profile Name="Event Monitoring Profile 2" Position="1"/>
        </System>
    </Live>
</exacqVisionInit>

```

## videoPush Samples

```

<exacqVisionInit>
    <Remote Instance="BOBS-PC" />
    <Live>
        <System Name="system.company.org">
            <Video>
                <Input CameraID="3277568" Position="0" />
                <Input CameraID="459264" Position="1" />
                <Input CameraID="1704960" Position="2" />
                <Input CameraID="1704961" Position="3" />
            </Video>
        </System>
    </Live>
</exacqVisionInit>

```

```

<exacqVisionInit>
    <Remote Instance="JULIAS-PC" />
    <Live View="Warehouse Cameras">
        <System Name="192.168.1.2" />
    </Live>
</exacqVisionInit>

```

## Search Samples

```
<exacqVisionInit>
  <Search Start="1183068255" End="1183068260" AllowExpansion="0">
    <System Name="192.168.100.10:22609" Username="user" Password="pass">
      <Video>
        <Input CameraID="2556160" Name="Entrance 1" Position="0" />
        <Input CameraID="2556163" Name="Entrance 4" Position="3" />
      </Video>
    </System>
    <System Name="exacqVision Server" Username="user" Password="pass">
      <Video>
        <Input CameraID="2556162" Name="Break Room" Position="2" />
        <Input CameraID="2556163" Name="TV" Position="1" />
      </Video>
      <Audio>
        <Input Name="TV audio" />
      </Audio>
    </System>
  </Search>
</exacqVisionInit>
```

```
<exacqVisionInit Caption="Quick Export" Top="0" Left="0" Width="650" Height="139"
Maximize="0" ShowNavPanel="0" ShowToolbars="0" FullScreen="0"
AllowAccelerators="0" PanelSizeRatio="0" ShowSunkenBorder="1"
ShowRecStatusBorder="1" KeepAspectRatio="1" LiveAudioLipSync="0"
DeblockingMode="0" VAAccelMode="0" VAAccelColorspace="0" ViewLayout="4"
DirectSearch="0" Delete="0" TimeoutEnabled="0" TimeoutMinutes="5">
  <Search
Filename="C:\Users\User\Documents\dallasCustomView_20200206_142704.psx"
Start="1581017224" End="1581017658" IsClientTime="1">
    <System Name="172.19.226.202:22609" Connect="1">
      <Video>
        <Input CameraID="2556160" Context="0" Name="Entrance 1"
Device="192.168.100.8" Position="0" />
        <Input CameraID="2556161" Context="0" Name="Entrance 4"
Device="192.168.100.9" Position="3">
          <Preset Position="3">
            <DigPTZ SubMode="2" Left="0" Top="0" Width="2992"
Height="2992" />
          </Preset>
          <Input CameraID="2556162" Context="0" Name="Break
Room" Device="192.168.100.10" Position="3">
            <Preset Position="3">
              <DigPTZ SubMode="1" Pan="186.599945" Tilt="-31.928944"
Zoom="0.500000" />
            </Preset>
          </Input>
        </Video>
      </System>
```

```

        <Layout Rows="5" Cols="4">
            <Item X="0" Y="0" Width="3" Height="3" />
            <Item X="3" Y="0" Width="2" Height="2" />
            <Item X="3" Y="2" Width="2" Height="2" />
            <Item X="0" Y="3" Width="3" Height="1" />
        </Layout>
    </Search>
</exacqVisionInit>

### Export Samples
```xml
<exacqVisionInit>
    <Search Start="1183068255" End="1183068260" Filename="C:\Exports\export.psx">
        <System Name="192.168.100.10:22609" Username="user" Password="pass">
            <Video>
                <Input CameraID="2556160" Name="Entrance 1" Position="0" />
                <Input CameraID="2556163" Name="Entrance 4" Position="3" />
            </Video>
        </System>
        <System Name="exacqVision Server" Username="user" Password="pass">
            <Video>
                <Input CameraID="2556162" Name="Break Room" Position="2" />
                <Input CameraID="2556163" Name="TV" Position="1" />
            </Video>
            <Audio>
                <Input Name="TV audio" />
            </Audio>
        </System>
    </Search>
</exacqVisionInit>

```

## Command Line Shim

Many of the applications which may make use of the eV-CLI already have well-defined, working interfaces which may not map directly to the eV-CLI. As such, a translation or shim layer may be needed between the existing application and the eV-CLI. Exacq has provided a template for such a translation layer. It is a simple C++ application called evCmdLineShim. Source code and a Microsoft Visual C++ project file can be downloaded from [here](#).

The target application for this example translation program is POS data analysis. The POS data contains a POS terminal number and time for each transaction. If it is desired to view video associated with a transaction, a search can be initiated via the eV-CLI. The search needs to specify a camera and time for searching. The time is easy – it is stored in the POS data and simply needs to be converted to Unix time. Mapping a POS terminal number to a camera is a little more involved.

In evCmdLineShim.zip is a file called termToInput.xml. This is a human-readable file which will specify the mapping of POS terminals to inputs on the exacqVision Server. It is expected that the terminal number is an integer. The exacqVision Server input can be specified by Name or by Number. There are examples of both in the file. If the input is on an IP device (such as an Axis camera or video server) and it is specified by Number, the IP address of the device must also be included. See the termToInput.xml for an example. Also at

the top of termToInput.xml are the default parameters for the initial size of the search window and the pre and post transaction search durations, in seconds. The point of this file is that you can modify it in any text editor (being sure to follow xml formatting rules) to customize the searching for each particular application.

The interface program is called evCmdLineShim.exe. It takes command line parameters as follows:

```
evCmdLineShim -n101 -t2007-06-05 15:51:10.
```

- -n specifies terminal number. In this example, the terminal number is 101. The terminal number must be an integer and correspond to a terminal number specified in the termToInput.xml file.
- -t specifies time of the search. It must be specified as in the example with dashes separating the year-month-date and colons separating the hour-minute-second. Include all four digits of the year and use a 24 hour clock, not AM/PM. This time format is easy to modify in the source code if necessary.

Once evCmdLineShim is called with these parameters, it reads the termToInput.xml file in order to determine which input to search on the exacqVision Server, creates the command line xml file (eVCmdLine.xml) required by the eV-CLI, then starts an instance of the exacqVision Client passing the -FeVCmdLine.xml command line parameter.