

VideoXpert Integration – JCI P2000

User Guide

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1. Introduction

This document is the release note for VideoXpert Integration with JCI P2000. The objective of this document is to provide information about the released version of integration component, its features, installation details and known issues.

2. Abbreviations

#	Abbreviation	Definition
1	VMS	Video Management System
2	VX	VideoXpert
3	VxSDK	VideoXpert Software Development Kit
4	ACS	Access control System

Table 1: Abbreviations

3. System Overview

The proposed solution is an integration driver for JCI P2000 security management system. This integration helps JCI P2000 to connect with VideoXpert. The integrated system allows end user to use VideoXpert to access information from JCI P2000. VideoXpert users may use Admin Portal or OpsCenter Client to view or acknowledge access control events from JCI P2000.

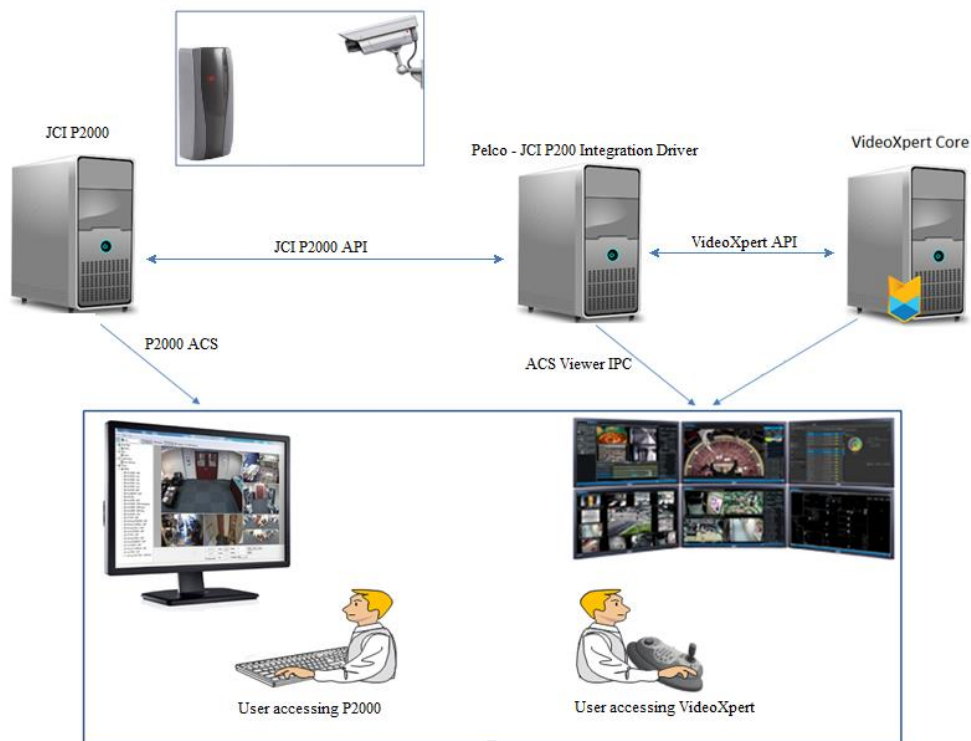


Figure 1: System Overview

The integration driver shall be using VxSDK for all its interfacing needs with VideoXpert. The integration driver also supports Pelco Access Control System Viewer to allow user information retrieval and control functionality of JCI P2000 devices in VideoXpert. This includes viewing JCI P2000 access control points and user lists in VideoXpert and sending control commands to the access control points.

4. Installation Manual

Refer *VideoXpert Integration – JCI P2000 [Installation Manual].docx*

5. System Operations

Before installing “VideoXpertJCI P2000_Setup-x.x.x.x.msi” make sure all the prerequisites are installed. Prerequisites are documented in *VideoXpert Integration JCI P2000 [Installation Manual].docx*

6.1 System Start up

During the installation the configurations setup will be performed and can be run from the start menu after installation.

5.1.1. Configuration setup

The JCI P2000 Driver Service Configuration Application can be found in the start menu under **Pelco → VideoXpert JCI-P2000 → JCI-P2000 Driver Configuration**.

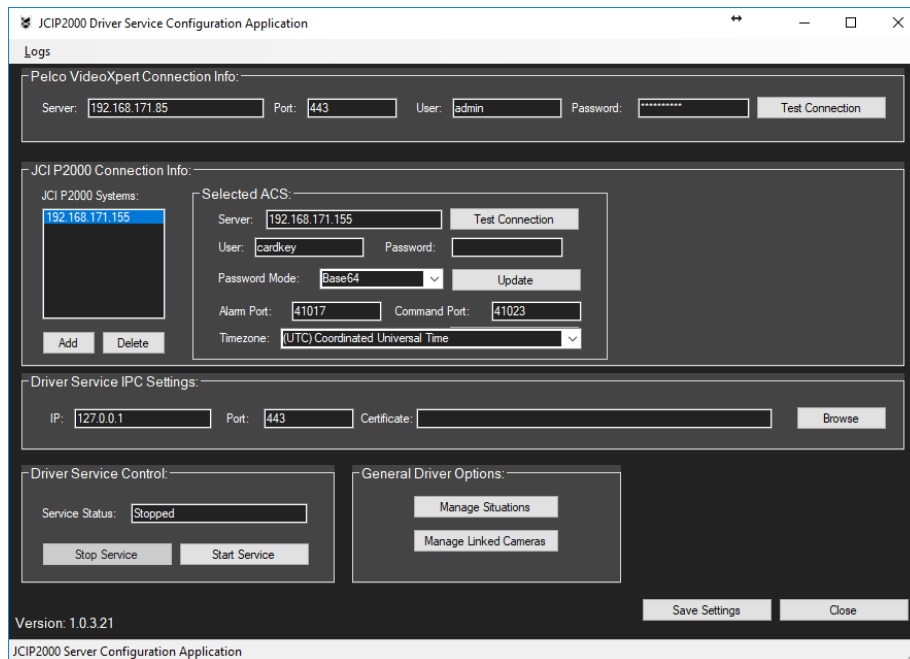


Figure 2: Driver Configuration Application

5.1.1.1 Pelco VideoXpert Connection

Enter the following fields in the **Pelco VideoXpert Connection Info** section:

- **Server:** Enter the hostname or IP address of the VideoXpert server
- **Port:** Enter the port VideoXpert VX System is configured with.

- **User:** Enter the username for a VideoXpert user with access to the system.
- **Password:** Enter the password for a VideoXpert user with access to the system
- To test the connection information is correct click on the **Test Connection** button. If all the fields are correct a **Successful connection** message will appear:

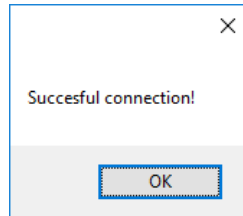


Figure 3: VideoXpert connection test success

If connection fails check the configuration tool logs from the application **Logs** menu and check all fields are entered correctly.

- Click on **Save Settings**.

5.1.1.2 JCI P2000 Connection

Enter the following fields in the **JCI P2000 Connection Info** section:

- **Server:** Enter the hostname or IP address of the P2000 server
- **User:** Enter the username with access to the P2000 system.
- **Password:** Enter the password for the P2000 user.
- **Password Mode:** Select the password mode for the P2000 XmlRpc interface. Note: this value is saved in the P2000 system configuration under Site Parameters→XmlRpc (If ignore is set on server the password can be left blank here as it will be ignored)

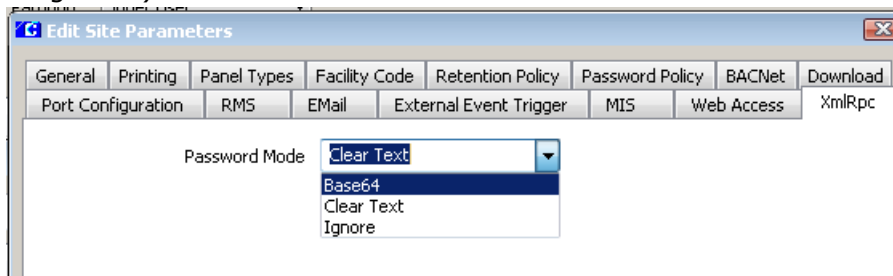


Figure 4: P2000 Password Mode

- **Alarm Port:** Enter the port to use for the alarm port, this is the port created on the driver PC to listen for incoming events from P2000. Firewall settings may need to be configured to allow incoming traffic on this port from the P2000 server. Note: this value is configured in the P2000 system configuration under Remote Server→<Server name>→Port

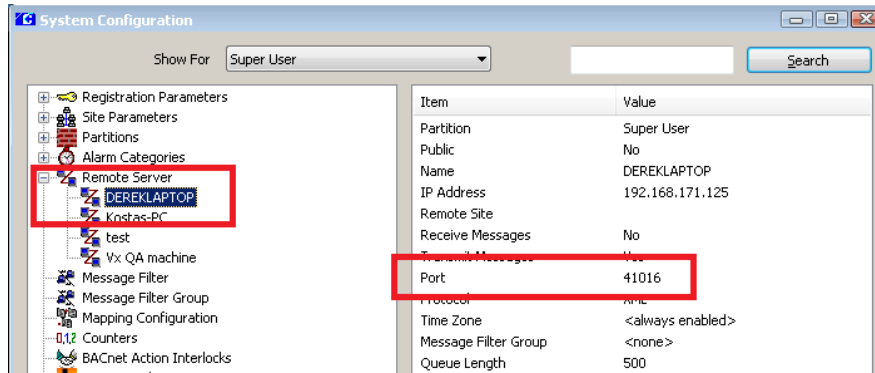


Figure 5: P2000 Event Port

- **Command Port:** Enter the P2000 XmlRpc Interface port, this setting is configured in the P2000 system configuration under Site Parameters→Port Configuration→P2000 XmlRpc Interface Port

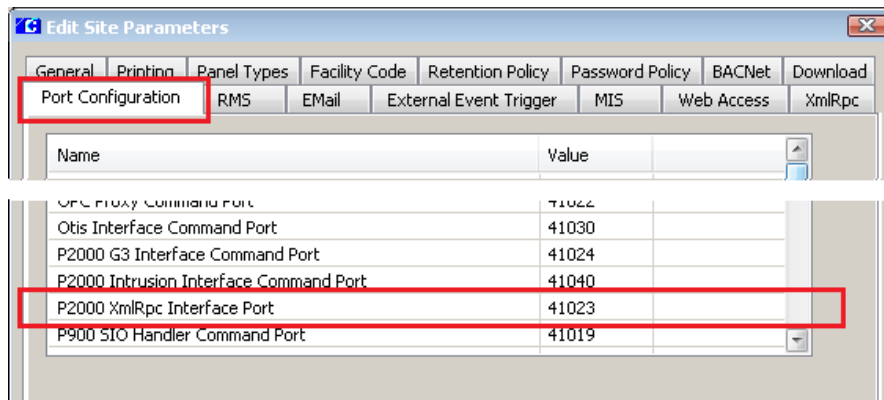


Figure 6: P2000 Command Port

- **Timezone:** Select the time zone the P2000 server is running in. This value is required to convert P2000 events timestamp correctly.
- To test the connection information is correct click on the **Test Connection** button. If all the fields are correct a **Successful connection** message will appear:

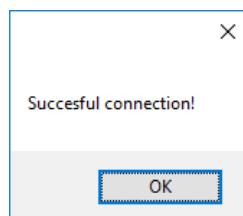


Figure 7: P2000 connection test success

If connection fails check the configuration tool logs from the application **Logs** menu and check all fields are entered correctly.

- Click on **Add** to add the new configuration to the list of P2000 systems.
- To edit a field:
 - Select the system in **JCI P2000 Systems** list
 - Edit the fields

- Click on **Update** to update the entry to the list. (Note you must click on update before clicking Save Settings)
- Click on **Save Settings**.

5.1.1.3 Driver Service IPC Settings

Enter the following fields in the **Driver Service IPC Settings** section:

- **IP:** Enter the IP address of the PC where this driver is installed. (If multiple network interfaces use the one which will be used to connect to from the VideoXpert Access Control Viewer.
- **Port:** Enter the port the IPC server will be listening on.

Note: The IP and port settings above will be used in the VideoXpert clients when connecting to this driver interface using the Access Control System Viewer. See **IP Address** and **Port** fields below:

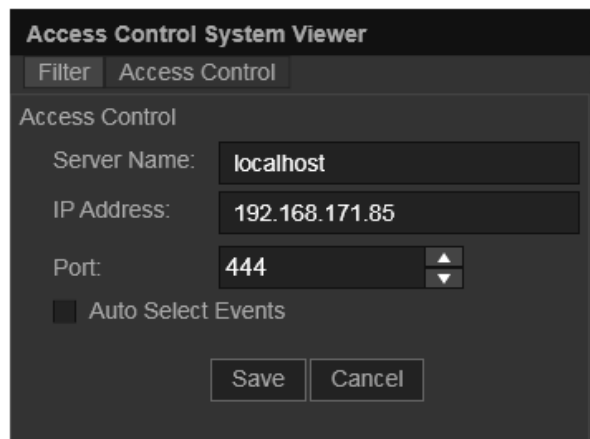


Figure 8: Access Control System Viewer IPC Settings

- **Certificate:** If SSL communication is required between IPC client/server enter the path to the SSL cert personnel exchange format file (.pfx file).

5.1.1.4 Manage Situations

- Click on the **Manage Situation** button under **General Driver Options** to configure the JCI P2000 situations list that will be imported into Pelco.
- The manage situations window will open as follows:

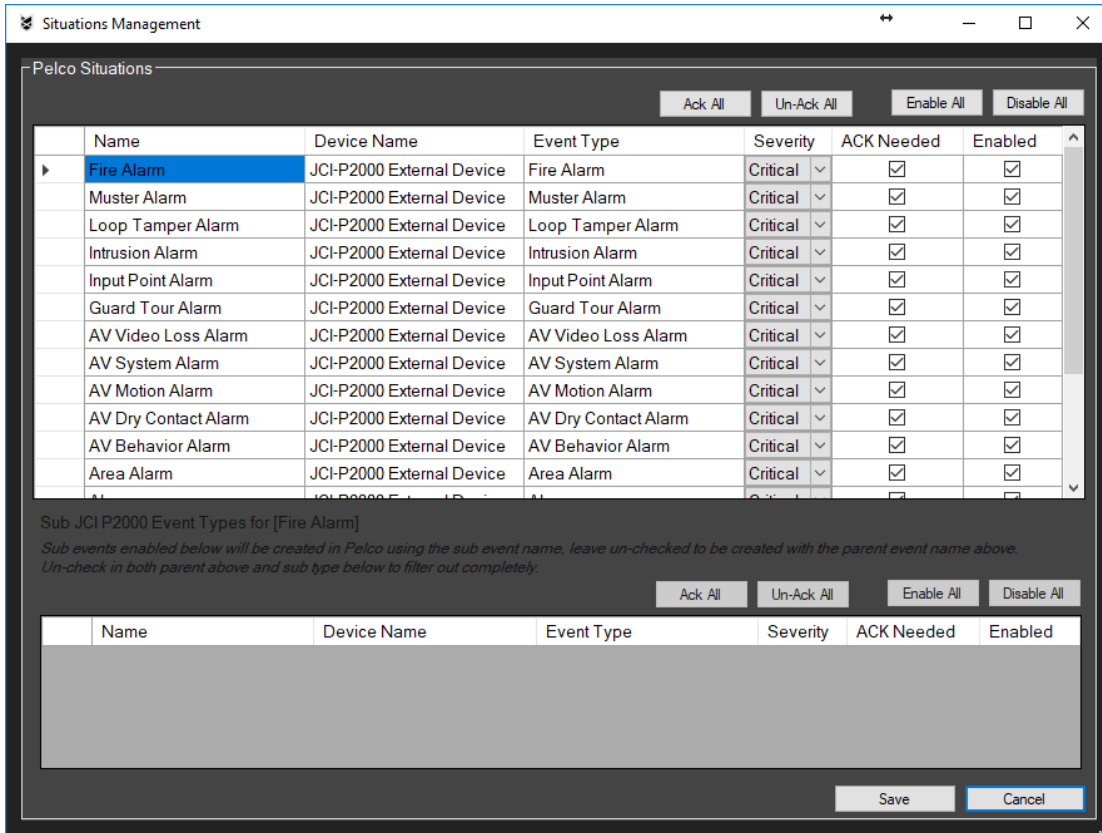
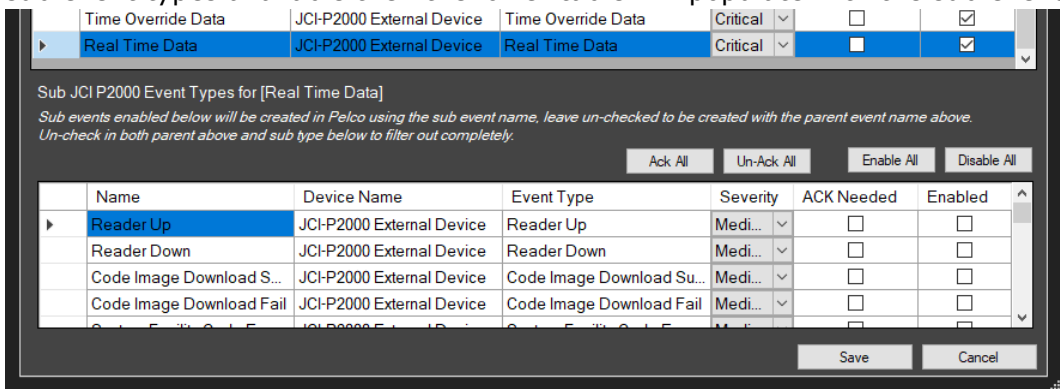


Figure 9: Situations management

- The configurable fields are:
 - Name – This must be edited before starting service for the first time as Situations are imported into VideoXpert they can only be edited via VxToolbox
 - Severity – This must be edited before starting service for the first time as Situations are imported into VideoXpert they can only be edited via VxToolbox
 - ACK Needed
 - Enabled – disabling will filter the event type at the driver and events will not be injected into VideoXpert.
- Some Event types also have Sub Event types. By clicking the event type if there are sub event types available then the lower table will populate with the sub event types.



Events are created as follows in VideoXpert:

- If the sub event type is enabled that sub event type will appear in VideoXpert
- Otherwise if the parent event type is enabled then that sub event will appear in VideoXpert with the parent event type name
- Other if neither sub event type or parent event type are enabled that event will be filtered out and not be sent to VideoXpert.
- When complete click **Save**.

5.1.1.5 Manage Linked Cameras

This allows cameras to be associated with events in VideoXpert based on the P2000 terminal (access control point) where the P2000 event occurred.

- Click on the **Manage Linked Cameras** button under **General Driver Options** to configure cameras for P2000 access control points.
- The **Pelco Camera / P2000 Access Control Point Management** window opens

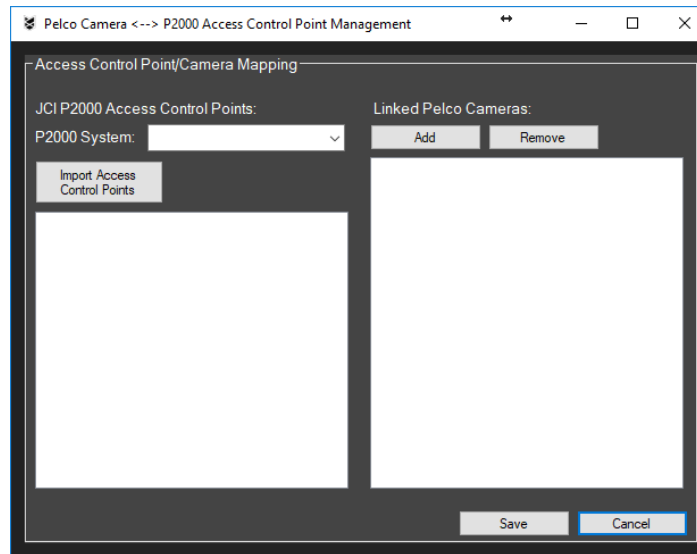


Figure 10: Pelco camera / P2000 Access Control Point association

- Select the P2000 system (Note: if this list is empty exit this window and click on **Save Settings** first)
- Click on **Import Access Control Points**. This will attempt to connect to the P2000 system configured in the previous sections and import the list of P2000 access control points into the list.
- Select a Access Control Point in the list

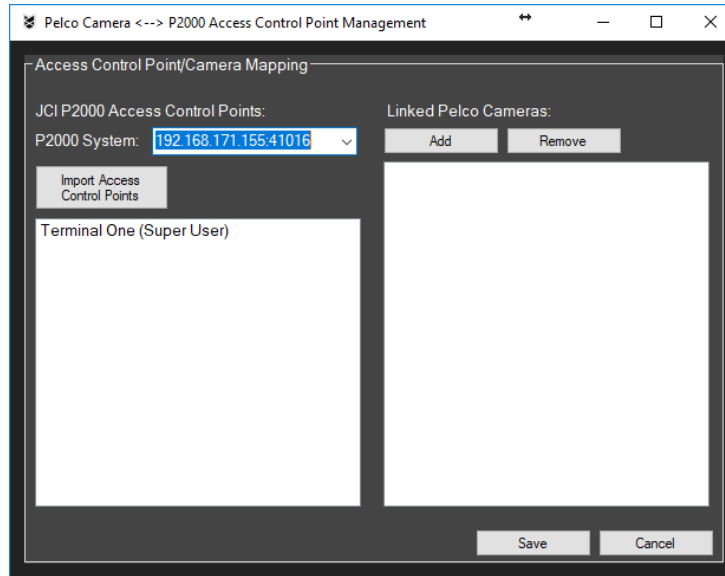


Figure 11: P2000 Access Control Point selection

- To associate a camera (or cameras) with the access control point click **Add**.
- A connection is made to VideoXpert and imports a list of video sources.

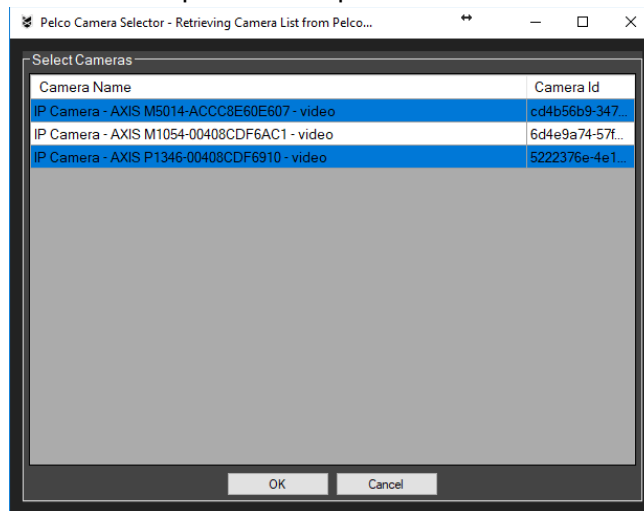
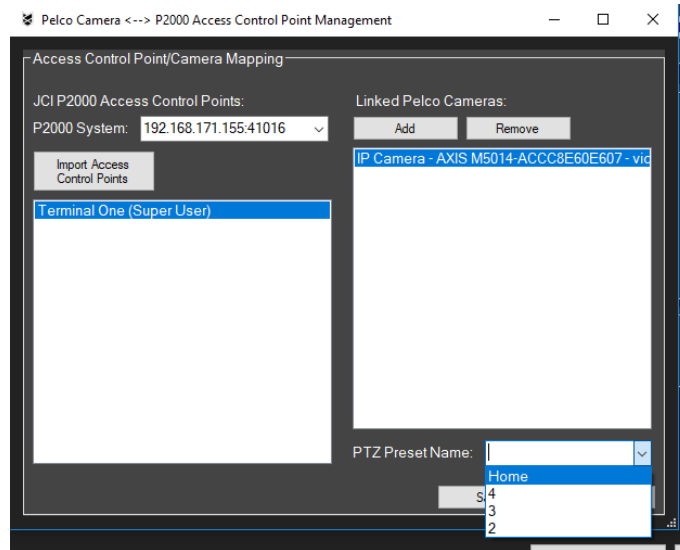


Figure 12: Pelco camera selection

- Select one or more of the video sources and click on **OK**.
- The cameras will be associated with the selected P2000 access control point.



- To configure a PTZ for this linked camera Enter the PTZ Preset name in the **PTZ Preset Name** field.
Note: After adding the camera the selecting list attempts to retrieve the list of PTZ presets from Pelco and populates the list. However, the auto-population doesn't occur the PTZ preset name can still be entered manually.
 When an event occurs is received in Pelco associated with this Access Control Point with this linked camera, a command will be sent to go to this PTZ preset if this field is configured.
- To disassociate a video source from an access control point, select the video source and click **Remove**.
- When mapping configuration is complete click **Save** to save and exit.
- Click on **Save Settings** to commit the changes.

5.1.1.6 Driver Service Control

The VideoXpert – JCI P2000 Driver can be started/stopped from within the **Driver Service Control** section.

Important Note: If any settings are changed the driver service must be restarted for the driver service to load the new settings.

5.1.2. Access Control System Plugin Setup

Each VideoXpert client that has the Access Control System plugin installed must be configured to add a connection to the JCI P2000 driver service.

To configure the connection in VxOpsCenter:

1. Open the Access Control System Viewer plugin

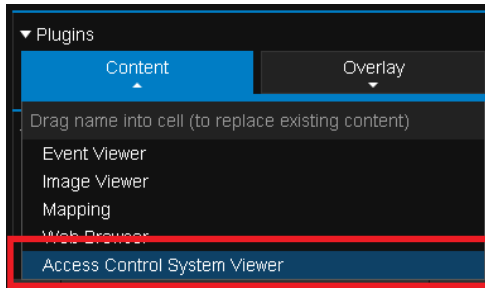


Figure 13: Access Control System Viewer plugin launch

2. Under Access Control tab click on the setting cog icon

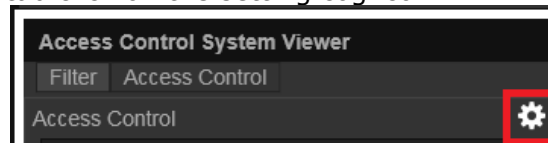


Figure 14: Access Control System Viewer settings.

3. Click on the plus icon to add a new Access Control System to the list.

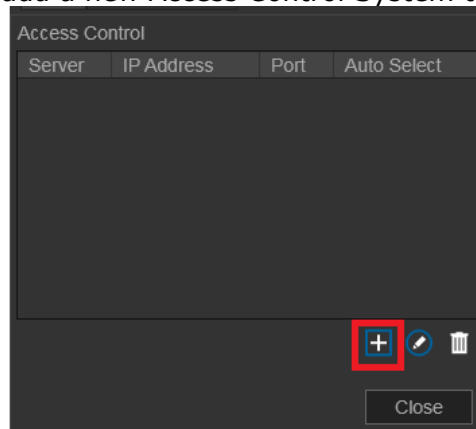


Figure 15: Add new Access Control System connection.

4. Enter the connection information to the JCI-P2000 driver (Note: IP and Port should match the settings configured under previous driver configuration steps – see section 6.1.1.3 Driver Service IPC Settings)

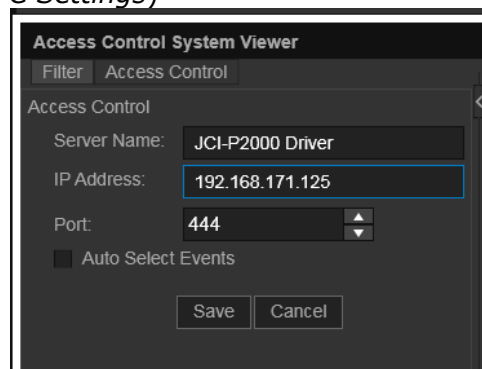


Figure 16: Driver connection settings.

5. Click on **Save** and then **Close**.

When the Access Control System is opened it should now connect to the JCI-P2000 driver service.

6.2 System Operations Procedure

After the complete installation and System Startup procedures, JCI alarms will be injected into VideoXpert and available to view in the VideoXpert Event Viewer. The integration also supports the VideoXpert Access Control System Viewer plugin.

6.2.1 JCI Alarms in VideoXpert

Alarms injected to VideoXpert from the JCI-P2000 driver will can be viewed from both the VideoXpert Event Viewer and the Access Control System Viewer.

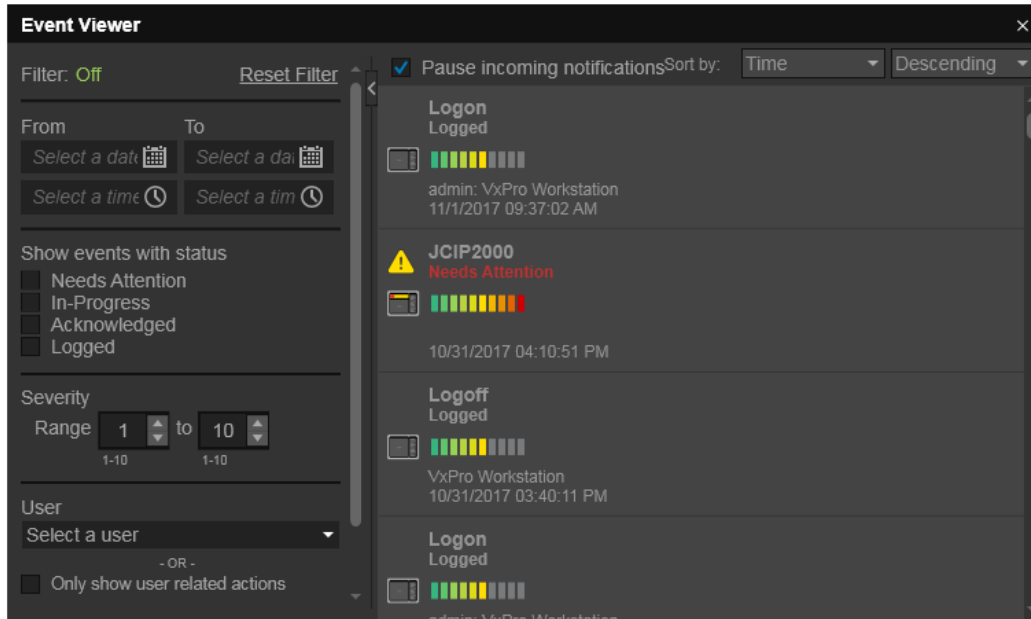


Figure 17: JCI P2000 alarm in Event Viewer

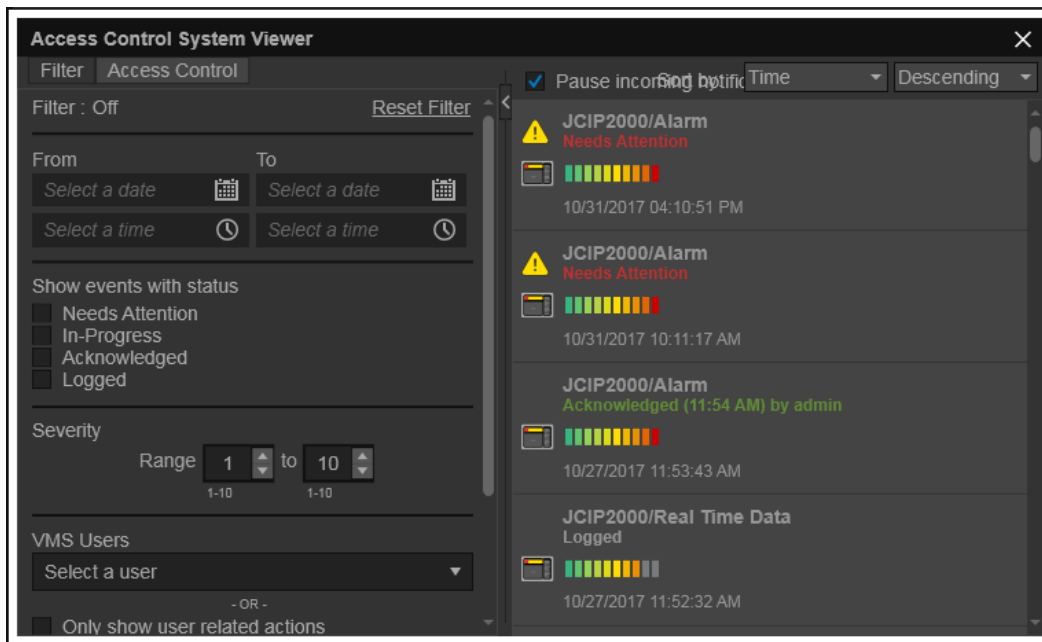


Figure 18: JCIP2000 alarm in Access Control System Viewer

Two-way alarm acknowledgement is support in VideoXpert. Alarms acknowledged in VideoXpert will be acknowledged on the P2000 system.

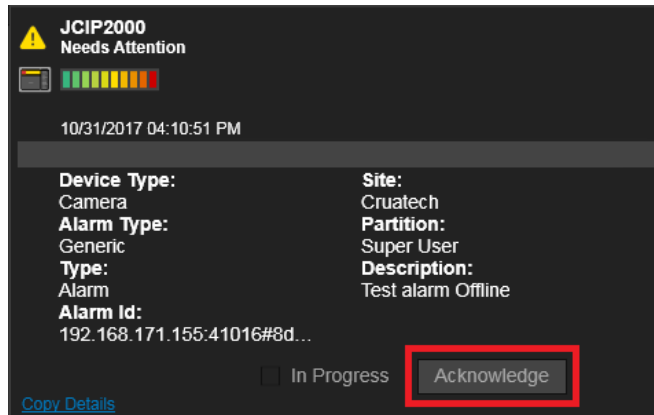


Figure 19: Acknowledge Alarm in VideoXpert

Also alarms acknowledged on the P2000 system will be acknowledged in VideoXpert.

When a camera is linked to a P2000 Access Control Point (see section 6.1.1.5 *Manage Linked Cameras*) the incoming event in VideoXpert will have the associated data source available for inspection at the time of the event.

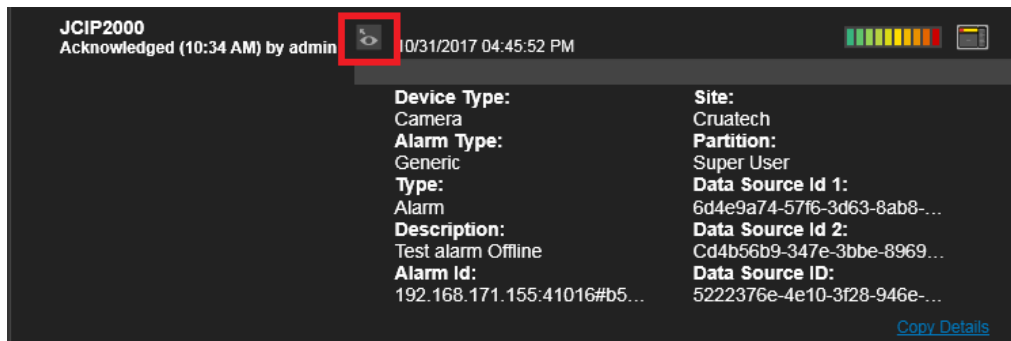
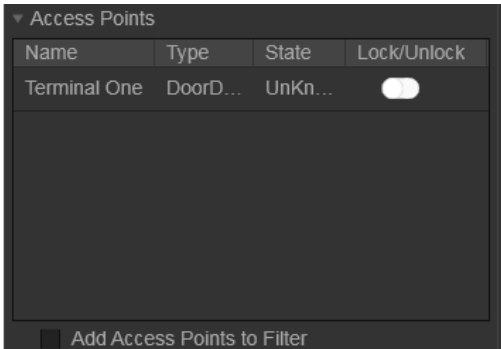


Figure 20: Event with linked camera and associated data source.

6.2.2 Access Control System Viewer

This integration supports the Access Control System Viewer plugin in VideoXpert. Once the plugin is installed on the client and connection is made the following features are supported:

5.1.2.1 Access Control Points



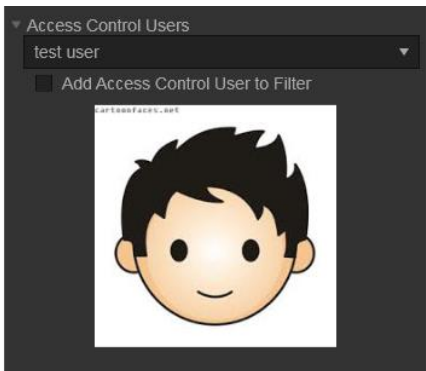
Expand the **Access Points** to show the list of Access Control Points on the P2000 system.

The state of each access point is shown in the **State** column.

The door can be locked/unlocked using the command button in **Lock/Unlock** column.

Click on the **Add Access Points to Filter** option to filter the list of events associated with that access point.

5.1.2.2 Access control users

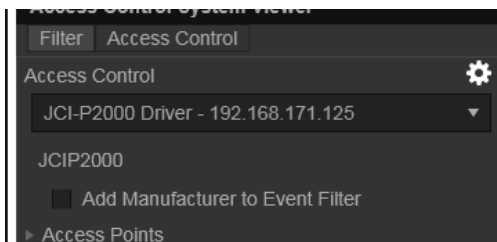


Expand the **Access Control Users** to show the list of users on the P2000 system.

Select the user from the drop down list to show the user image if configured on the P2000 system.

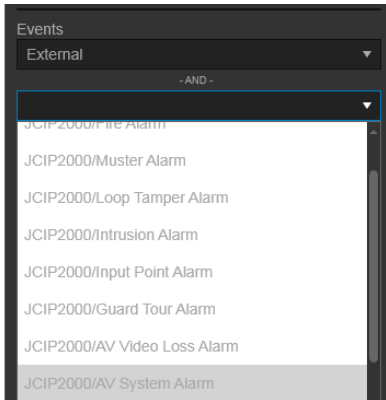
Click on the **Add Access Control Users to Filter** option to filter the list of events by that user.

5.1.2.3 Filter by Access control system.



If multiple access control systems are added select the access control system in the drop down list and click on **Add Manufacturer to Event Filter** to filter the list of events by that Access control system.

5.1.2.4 Filter by JCI P2000 event/situation type



Switch to the Access Control System Viewer **Filter** tab to see all other filter options. These options include filtering by situation.

In the **Events** filter select **External**.

In the list below select the situation to filter by.

5.1.2.5 View user image associated with event



If a user is associated with an event the user icon appears with the event. Hovering over that icon will open the users image for preview.

6. Issues and Limitations

- Only 1 linked camera is supported in VideoXpert per P2000 access control point. The configuration allows multiple cameras to be associated but only the first is available in VideoXpert to view video.

7. Troubleshooting Steps

Access Control Viewer Plugin not connecting to driver

1. IP and Port must match in the JCI P2000 Configuration settings to the Access Control System Viewer plugin settings
 - Check the IP and Port settings in the **Driver IPC Settings** section of the **JCI P2000 Driver Service Configuration** application.
 - Check the IP and Port in the **Access Control** settings in the **Access Control System Viewer** plugin settings.

2. Firewall on the JCI P2000 driver PC must be configured to allow incoming access on the Port configured in the previous step.
 - Go to windows (or 3rd party firewall) settings to add an exception for incoming TCP traffic on this port.
3. Check that the **VideoXpert JCI-P2000 Integration Driver** service is running.
 - Check the status of the service in either the **Driver Service Control** section of the **JCI P2000 Driver Service Configuration** application or under windows services.
4. Inspect the JCI P2000 driver service log files or errors.
 - The driver service log files are located at:
C:\Program Files\PelcoJCIP2000\Service\Logs\PelcoDriverService.log
 - On normal service start the log file should contain the following entries:

```
"[DEBUG]: Start ACS IPC Server on 192.168.1.10, Port: 443"
"[INFO]: ACS Server: Started!"
```

 Note: driver service log level can be changed in the file:
C:\Program Files\PelcoJCIP2000\Service\PelcoJCIP2000DriverService.exe.config

Access Control Viewer Plugin not showing Access Points / Users

1. JCI P2000 system must be configured to allow XmlRpc commands to be sent from the JCI P2000 driver PC.
 - See the External IPs configuration in the **Configuration in JCI P2000 system** section of the Prerequisites chapter in the Installation manual.
 - The **P2000 XmlRpc Interface Port** configured in the P2000 system must be the same port set for the **Command Port** in the **JCI P2000 Connection Info** section of the **JCI P2000 Driver Service Configuration** application.
2. Firewall on the JCI P2000 system must be configured to allow incoming access on the Port configured in the previous step.
 - Go to windows (or 3rd party firewall) settings to add an exception for incoming TCP traffic on this port.
3. Inspect the JCI P2000 driver service log files or errors.
 - The driver service log files are located at:
C:\Program Files\PelcoJCIP2000\Service\Logs\PelcoDriverService.log
 - Requests from the Access Control Viewer and requests to the JCI system for information can be seen as following sample:

```
"[DEBUG]: Trace: Sending response to client"
"[DEBUG]: Trace: Received ACSGetAccessPointList Command"
"[DEBUG]: Sending command [...]"
"..."
"[DEBUG]: Response [...]"
"[DEBUG]: Trace: Sending response to client"
```

JCI P2000 Alarms/Events are not listing in VideoXpert.

1. JCI P2000 system must be configured to send events to the VideoXpert JCI-P2000 Integration Driver.
 - See the Remote Server settings in the **Configuration in JCI P2000 system** section of the Prerequisites chapter in the Installation manual.
 - The Port configured in these settings must be the same port set for the **Alarm Port** in the **JCI P2000 Connection Info** section of the **JCI P2000 Driver Service Configuration** application.
2. Firewall on the JCI P2000 driver PC must be configured to allow incoming access on the Port configured for Alarm Port.
 - Go to windows (or 3rd party firewall) settings to add an exception for incoming TCP traffic on this port.
3. Check that the **VideoXpert JCI-P2000 Integration Driver** service is running.
 - Check the status of the service in either the **Driver Service Control** section of the **JCI P2000 Driver Service Configuration** application or under windows services.
4. Inspect the JCI P2000 driver service log files or errors.
 - The driver service log files are located at:
C:\Program Files\PelcoJCIP2000\Service\Logs\PelcoDriverService.log
 - On normal service start the log file should contain the following entries:
"[DEBUG]: Start RMS-XML Listener on Port: 41016" (this will be the **Alarm Port** value).
 - On successful event connection of the P2000 system to this port the following will appear in the log file for incoming events:
*"[DEBUG]: SerialConnectionManager.ReadDataThread: localhost:41016
IN: [3 ..."
"[DEBUG]: Recieved Event: Description: ..."*

Duplicate Alarms/Events found in VideoXpert.

1. This scenario shall be found if **VideoXpert JCI-P2000 Integration Driver** service is running in multiple machines accessing same JCI P2000 server or VideoXpert systems.

8. References

#	Documents/Inputs	Description
1	Discussions	Technical and requirement analysis discussions between all internal and external stakeholders.
2	VideoXpert SDK	Documentation of VideoXpert SDK
3	VideoXpert integration experience	Learnings from the development and testing of VideoXpert integration modules.

9. Support

If the instructions provided fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance.



Pelco, Inc.
625 W. Alluvial Way
Fresno, CA 93711
Tel (800) 289-9100
Fax (800) 289-9150