
# Vanderbilt ACT Integration White Paper

# Contents

# 1. Introduction

This document indicates the features/abilities of the Vanderbilt ACT Access Control solution when integrated with CathexisVision.

For a detailed guide on the installation and configuration of the Vanderbilt ACT Access Control device with CathexisVision please refer to the ***CathexisVision Vanderbilt ACT Access Control App-note,*** available on the Cathexis website.

## 1.1 Integration Purpose

The CathexisVision integration of the Vanderbilt ACT Access Control solution allows for local and remote monitoring and operation from within the CathexisVision interface. All device objects may be linked to cameras, allowing associated footage to be databased according to the configuration of CathexisVision events and alarms, which trigger on information received from the device. All messages from the device are also databased. Operators with sufficient access rights, are able to issue certain commands to the device, such as locking and unlocking doors, etc.

## 1.2 Requirements

### 1.2.1 General Requirements

- ACT Enterprise 1.3.0.4 (API v1)
  - Tested using ACTpro 4000 panel.
  - CathexisVision 2015 Service Pack 2 and later.
  - Windows 7 64-bit and later, Windows 2008 R2 and later.
  - Cathexis ACT Server (cathexis-act-server.msi).

- ACT Enterprise 2.8.0.44 (API v2)
  - Tested using ACTpro 1520e panel.
  - CathexisVision 2018 Service Pack 5 and later.
  - Windows 7 64-bit and later, Windows 2008 R2 and later, Ubuntu 12.04 32-bit, Ubuntu 16.04 64-bit and Fedora 16.
  - Cathexis ACT Server (cathexisactserver-20.msi).

**Note:**

- ACT Software must be licensed to use the API.
- The installer doesn't provide an option for the user to add it to the firewall, once the wrapper is installed it has to be manually added under apps that are allowed to communicate through the firewall.

### 1.2.2 CathexisVision License Requirements

| License | Name | Description |
|---|---|---|
| **CACC-2000** | Access control device license | This license is the “base” license to integrate with an access control system. It is applied to the server to which the access control device is connected. It will allow for the connection of a single controller. |
| **CACC-1001** | Access control single door license | These licenses apply to the doors, or readers, in an access control system. The **CMCO-1001** will license a single door/reader, and may be added on a door-by-door basis. |
| **CACC-3000** | Access control device bundle license (unlimited doors) | This license includes the **CACC-2000** access control device license, and also provides support for unlimited **CACC-1001** reader licenses. |

**Note**: In this integration, individual devices will require a license for each device.

## 1.3 Integration Components

All CathexisVision integrations have two component levels: **Device** and **Object**.

| | |
|---|---|
| **Device** | The device is CathexisVision software’s interface, which handles all the interaction between CathexisVision and the integrated hardware. When an integration is added to the CathexisVision system, a device is added. The messages received from the device are called Device Events. |
| **Objects** | Objects are the individual pieces of hardware that comprise the integration. There may be multiple "object types" under the objects group. For example, the main controller and door nodes of an access control system are both objects. They are different types of objects. |

**A NOTE ON CAMERA CHANNELS**

The CathexisVision software packages have **limits on camera channels**. A multi-sensor camera is physically a single device (camera) but it requires a camera channel for each one of the internal cameras. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathexisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

# 2. Features and Abilities

This section indicates the features/abilities of the Vanderbilt ACT Access Control software when integrated with CathexisVision.

## 2.1 General Device Features

- The CathexisVision ACT integration communicates via TCP socket (port number is user defined) with the Cathexis ACT Server installed on the server running the ACT Enterprise software.
- The Cathexis ACT Server communicates with the ACT Enterprise software using Windows Communication Foundation framework.
- The ACT Enterprise software sends messages to the Cathexis ACT Server as specified in the hardware's Reporting settings, which can be configured in the Advanced Setup of ACTInstall.
- All device events are received as Alarm events, Door events, General events, and Reader events.
- Reader and Door events are databased.
- Camera overlays are supported for Reader and Door objects, which can indicate access granted/denied, cardholder photo, door states, etc.
- Device objects can be used to trigger events, and Door objects can be controlled as Event Actions.

## 2.2 Device Objects

Objects are populated automatically as soon as communication between the ACT Enterprise software, Cathexis ACT Server, and CathexisVision is established.

| Object Type | | Abilities |
|---|---|---|
| **General** | | • This integration has Controller and Door objects.<br>• Objects are automatically created as soon as communication between the CathexisVision unit and device is established.<br>• Controller objects can't be controlled and only show the name of the controller and if the device is connected, or disconnected.<br>• Door objects are displayed with Name, Global ID, Controller ID, Local ID, Door Contact, Door Lock, Connected, and Licensed. |
| **Controller** | **Object Properties** | • Name.<br>• Is connected. |
| **Door** | **Object Properties** | • Name.<br>• Global ID.<br>• Controller ID.<br>• Local ID.<br>• Door Contact. |

| | | |
|---|---|---|
| | | • Door Lock<br>• Connected.<br>• Licensed. |
| | **States** | Door Contact States:<br>• Closed.<br>• Offline.<br>• Open.<br>Door Lock States:<br>• Locked.<br>• Offline.<br>• Unlocked.<br>Connected States:<br>• True.<br>• False.<br>Licensed states:<br>• True.<br>• False. |
| | **Commands** | • Lock.<br>• Normalise.<br>• Pass.<br>• Unlock. |

## 2.3 Device Events

The CathexisVision Vanderbilt integration generates Alarm Events, Door Events, General Events, and Reader Events, which are triggered on the device and reflected in CathexisVision.

| **Event Element** | | **Features/Abilities** |
|---|---|---|
| **General** | | • Events triggered on the device are sent to CathexisVision.<br>• Device event types are Alarm, Door, General, and Reader. |
| **Device Event Types** | **Alarm** | • Alarm.<br>• ACT Time.<br>• Event.<br>• Door ID.<br>• Location. |
| | **Door** | • System Time.<br>• ACT Time.<br>• Event.<br>• Door ID.<br>• Location. |

| | | |
|---|---|---|
| | **General** | • System Time.<br>• ACT Time.<br>• Event.<br>• Category.<br>• Door ID.<br>• Location.<br>• Username. |
| | Reader | • System Time.<br>• ACT Time.<br>• Event.<br>• Door ID.<br>• Location.<br>• Username. |
| **CathexisVision Event Actions** | | A Door object may be controlled via a CathexisVision event action to perform one of the following commands:<br>• Lock.<br>• Normalise.<br>• Pass.<br>• Unlock. |

## 2.4 Metadatabase

A unique metadatabase is created on the CathexisVision server for this integration. It is fully searchable, with configurable filters based on device event information (as above), and time stamping. The filtered event/s, and the associated video, will then be available for review in a new window from which an archive can be created and exported.

| Database Element | Features/Abilities |
|---|---|
| **General** | • All device events are databased.<br>• Database entries include the footage from the first camera linked to device objects.<br>• Multiple cameras may be linked to multiple objects.<br>• Device event metadata is displayed where applicable.<br>• Databased device events may be viewed in the embedded video player, which includes the usual CathexisVision video review tools. |
| **View Options** | • Reader Events.<br>• Door Events. |
| **Sort Options** | • Device event time. |
| **Easy Search** | • Door ID.<br>• Door Location.<br>• Event. |

| | |
|---|---|
| | • Username (only available in the Reader view). |
| **Filter** | • Time.<br>• Door ID.<br>• Door Location.<br>• Event.<br>• Username (only available in the Reader view). |
| **Export** | Database entries may be exported in CSV and PDF format. |

## 2.5 Maps

The CathexisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

| Map Element | Features/Abilities |
|---|---|
| **General** | Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action. |
| **Map Action Triggers** | • All device objects may be set to trigger a map action if the user left-clicks on map.<br>• Some device objects may be set to trigger a map action if a state change message is received from the device.<br>• All device objects may be set to perform a map action if a specific, or any event occurs on the device.<br>• Device objects, which can be configured to trigger CathexisVision events, may also be set to perform a map action when specific states, or events are triggered. |
| **Map Actions Options** | When triggered (see above), objects may perform the following map actions (where applicable):<br>• Connect to a site.<br>• Perform an animation.<br>• Go to a camera preset.<br>• Load a map.<br>• Set a PTZ relay output.<br>• Show a popup menu.<br>• Set a relay output.<br>• Show an HTML block.<br>• Show a block of text.<br>• Show a device popup menu.<br>• Show a device event notification. |

# 3. Conclusion

This document was designed to deal specifically with this integration. For further information about the CathexisVision software, consult the main manual (http://cathexisvideo.com/). For support, email support@cat.co.za.

**USEFUL LINKS**

*To view **tutorial videos** on CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*