# CathexisVision 2019.1 Release Notes

# Contents

| Types | Feature (Addition) | Modification (Change) | Fix (Problem fix) | Deprecated (Removed) |
|-------|--------------------|-----------------------|-------------------|----------------------|

**Note**:

I. While **Cathexis** has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit nor implied. Specifications are subject to change without notice.

II. Further information on cameras listed in these Release Notes should be sought here: http://integrations.cathexisvideo.com/supported-i-p-cameras/

III. Further information on integrated devices listed in these Release Notes should be sought here: http://www.cathexisintegrations.com/supported-integrations/

## *CathexisVision 2019 Update Notices*

i. From 2019 onwards, all sites support direct SV connections, which relates to streaming video to Video Walls. The "Allow direct SV connections" setting (Enterprise Manager → Site Properties) has been removed from the interface.

ii. From 2019 onwards, varying levels of encryption is supported for all external site connections. Previously it was only available on high priority connections.

iii. CathexisVision 2019 will be the last release to support Windows 32-bit installs.

## *General Notices*

1. CathexisVision 2018 is the last release to support the Linux Fedora 16 operating system.

2. From CathexisVision 2018, the user interface may connect to previous versions of CathexisVision Server software, but with a loss of functionality. It is recommended that the viewing software and the recording software be of the same major version.

3. Support for Windows Vista and Windows Server 2008 has been dropped from CathexisVision 2018.3 and onwards. Support for Windows Server 2008 R2 remains.

4. The ID process used for licensing a system running on a virtual machine changed in CathexisVision 2018.

5. From CathexisVision 2017, the concept of unit groups for a user is no longer supported. Unit groups will be supported for connections to sites running earlier software versions.

6. The multisite user interface has been discontinued from 2016 onwards.

7. CathexisVision 2016 is the last major release to support the viewing of wavelet video (and VOM2x10 cards). CathexisVision 2016 software does not support wavelet hardware, but it does allow users to connect to and view wavelet video from earlier versions that do support it, subject to the usual restrictions on backward compatibility.

8. AVM3000 framegrabbers and SAM1000 encoders are not supported from CathexisVision 2016 onwards.

# 1 Critical Changes for 2019.1

| # | Key area | Software Change | Type |
|---|----------|-----------------|------|
| 1. | API | Feeds with video formats that are not supported by RTSP will be excluded from the API camera list. | Modification |
| 2. | Core | All external site connections now support encryption. Previously encryption was only available on high priority connections. A setting has been added in Server Configuration to control the level of encryption. Encryption level options are:<br><br>• Disabled,<br>• Minimal -- only critical connections are encrypted,<br>• Secure (default); all connections except those with high volume video are encrypted,<br>• All – all connections are encrypted (including high volume video links).<br><br>The encryption engine uses openssl (SHA512 hashes, ephemeral DH-RSA with forward secrecy (DH 2048 bit) and AES-GCM 128-bit symmetric ciphers) equivalent to TLS 1.3. | Feature |
| 3. | User Interface | From 2019 onwards, all sites support direct SV connections, which relates to streaming video to Video Walls. The "Allow direct SV connections" setting (Enterprise Manager → Site Properties) has been removed from the interface. | Modification |

## 2 Feature Changes for 2019.1

| # | Key area | Software Change | Type |
|---|----------|-----------------|------|
| 1. | Analytics | Added 'Capture area' overlay to Still Object analytics for the 'Background based algorithm.' Changed 'mask' name to 'custom capture area.' | Modification |
| 2. | Analytics | Added a 'tracking area' overlay to analytics and changed 'mask' name to 'tracking area.' | Modification |
| 3. | Analytics | Added an 'aura' to the calibration silhouette in order to increase visibility during general analytics setup. | Modification |
| 4. | Analytics | Made improvements to Dynamic Background setting in video analytics. This will improve small object detection while keeping its desired properties to ignore repetitive motion. It will also work better with flare and shadow suppression. | Modification |
| 5. | Analytics | Made the following changes to object tracking analytics:<br>• Object classification and databasing is now available as an advanced setting for the object tracking algorithms in the Basic, Intermediate and Advanced Analytics suites. If databasing is enabled then the colour information which enclosed in the object bounding box will also be databased. The metadata information will be databased to an integration metadatabase using the objecttracker driver.<br>• Added flare suppression (and flare suppression graphs to help in analytics setup). This allows mild flares to be filtered out without discarding frames, as well as to discard frames which have been contaminated with intense flares that significantly change the view of the scene (like lights switching on/off). The internals also contain an illumination change filter to help filter out weak illumination changes that would otherwise have been detected as possible objects.<br>• Improved object classifications; higher confidence on true classifications and a reduction in false classifications. | Modification |
| 6. | Analytics | Made the following improvements to the camera tamper algorithm:<br>• Tampers are defined after 30-seconds instead of 60,<br>• Improved robustness towards changes in lighting and changes in camera when switching between night/day mode,<br>• Camera shifts are picked up more accurately. | Modification |
| 7. | Analytics | Previously the different zones in SmartVMD were all displayed as red and therefore indistinguishable from one another. Zone colours are now differentiated. | Modification |
| 8. | Analytics | When configuring Advanced Analytics, the filter objects are no longer greyed out when selecting the Track Object filter. Previously, the greyed-out filter objects gave the impression they could not be selected. | Fix |

| # | Key area | Software Change | Type |
|---|----------|-----------------|------|
| 9. | Archiving | Added the Multi-Camera Archive Viewer which allows simultaneous review of multiple-camera archives and an improved file browsing interface.<br>**Note**:<br>1. Only supported on Windows.<br>2. Only launchable from Windows Start menu/Program Files.<br>3. Has not replaced the CathexisVision Archive Player, which is still installed with the CathexisVision software and launchable from desktop shortcut. | Feature |
| 10. | Archiving | The archive review response time has been improved on slow storage devices (like optical disks). | Modification |
| 11. | Configuration | Fixed a problem caused by camera names with newline characters being entered. | Fix |
| 12. | Failover | Fixed an issue with time zones in the failover insert information popup. The last video time written was always displayed at GMT. | Fix |
| 13. | Hardware | Fixed the following issues with the CNVR hardware:<br>• CNVR hardware was going undetected and unlicensed on Linux kernel 4.18 and later.<br>• Issue with the driver on Ubuntu kernel version 4.13. | Fix |
| 14. | Integration | Made the following modifications to the JVA/Stafix Electric Fence integration:<br>• Added support for zone sectors.<br>• Changed default metadatabase view to show 'All.' | Feature |
| 15. | Integration | Added the Cathexis POS integration driver. | Feature |
| 16. | Integration | Added secondary cameras to the Illovo Merebank integration metadatabase. | Modification |
| 17. | Integration | Made the following changes to the Paradox V2 integration:<br>• Modified metadatabase:<br>   ○ The "Time" column is now displayed for every view.<br>   ○ The "message type" column is now only displayed for the "All" view.<br>   ○ The metadatabase version has been set to 1.1.2.<br>• Resolved an issue with the driver which could crash the nvr_integration service. | Modification |
| 18. | Integration | Made the following changes to the Risco integration driver:<br>• Added support for Outputs.<br>• Added ability to arm/disarm ProSYS partitions.<br>• Added a mechanism to specify the number of partitions, zones, and outputs, to help with discovering objects.<br>• Added secondary cameras to the metadatabase. | Modification |

| #   | Key area      | Software Change | Type |
|-----|---------------|-----------------|------|
| 19. | Integration   | Fixed a bug in the TecnoAlarm integration's link between object and the "Remote Control" message. This bug caused the following symptoms in the "Remote Control" message:<br>• Messages in the metadatabase had empty camera links.<br>• Map state changes did not occur.<br>• Map notifications did not occur. | Fix |
| 20. | Integration   | Fixed a crash which occurred when the Honeywell Pro-Watch Access Control authentication details were entered incorrectly. | Fix |
| 21. | Integration   | Fixed the following with the Impro IXP20:<br>• A previous TCP connection would not be closed before attempting a new connection.<br>• Removed the "Reset anti-passback" button in the controller window as it had no effect.<br>• Removed the "Replace unit" button (found in the 'Advanced' section) as it had no effect. | Fix |
| 22. | Integration   | Made the following changes to the Impro Access Portal Pro integration:<br>• Updated the Map notifications to show the terminal and user name.<br>• Fixed an issue with multi-line entries in the metadatabase by limiting entries to one line. | Fix |
| 23. | Integration   | The Impro Portal Plus integration now has a drop-down list of options when configuring an event for the "Access Event" integration message. | Fix |
| 24. | Integration   | The DSC IT100 integration can now properly handle 4-digit passwords. | Fix |
| 25. | Integration.  | The Lenel integration now presents a drop-down menu for many device event fields when configuring events and when using metadatabase filters. | Modification |
| 26. | Keyboard      | Added support for the Cathexis KBD-3100 keyboard on Linux. (The KBD-3100 is an updated, USB-supported model of the KBD-3000) | Feature |
| 27. | Logic         | Scheduled recordings can now be conditionally recorded based on the state of an input. | Feature |
| 28. | Map           | Fixed the following issues with Maps:<br>• Intermittent crash which could occur when the 'Show block of text' actions were triggered.<br>• Fixed exclusion of custom icons from map files which could occur if the map file had minor errors in it.<br>• Fixed exclusion of comment icon when a comment was added.<br>• Fixed show/hide of text for cameras and integration devices.<br>• Fixed tooltips for toolbar buttons in the Map panel.<br>• Fixed memory leak during loading of maps on Windows. | Fix |

| # | Key area | Software Change | Type |
|---|----------|-----------------|------|
| 29. | Metadatabase | Added a metadatabase scheduled reporting system. | Feature |
| 30. | Network Cameras | Added support for encrypted camera connections. | Feature |
| 31. | Network Cameras | Added support for viewing edge recordings on the following drivers (audio also supported), however supported cameras depend on manufacturer:<br>• Axis,<br>• Bosch V2,<br>• Dahua,<br>• Dedicated Micros DVR,<br>• HikVision V2,<br>• TruVision V2,<br>• Onvif,<br>• Onvif V2,<br>• Pelco,<br>• Canon,<br>• Panasonic WV,<br>• Samsung V2,<br>• Wisenet. | Feature |
| 32. | Network Cameras | Fixed a possible crash in audio decoding which could occur if an encoder provided an empty block of audio data. | Fix |
| 33. | Network Discovery | Fixed a problem where it was possible to send a malformed IP address with leading zeroes (like 192.168.003.004) to an encoder. | Fix |
| 34. | Network Cameras | Added the AvTech camera driver. | Feature |
| 35. | Network Cameras | The Axis camera driver can now display overlays and generate triggers received from the Axis Perimeter Defender software. | Feature |
| 36. | Network Cameras | The Axis camera driver now allows HTTPS connections for control and video. | Feature |
| 37. | Network Cameras | A single HTTP instance will now be used to query multiple Axis cameras on the same IP with different video inputs. This resolves a potential resource issue where the camera did not respond to queries sent over multiple HTTP connections to an Axis camera with multiple video inputs.<br>**Note**: The I/O, PTZ and serial communication queries will still be done over individual connections. | Modification |
| 38. | Network Cameras | Made the following changes to the Dahua camera driver:<br>• Added LPR (ANPR).<br>• Added the option in Dahua cameras to use the legacy PTZ. | Modification |
| 39. | Network Cameras | The HikVision v2 camera driver now supports the following additional audio formats:<br>• G726 (all bitrates),<br>• MP2 and PCM L16 audio for network cameras. | Feature |

| # | Key area | Software Change | Type |
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| 40. | Network Cameras | Made the following modifications to Mobotix drivers:<br>• Fixed a possible crash which occurred when handling audio with Mobotix cameras.<br>• Added support for encryption to Mobotix and Mobotix V2 drivers. | Modification |
| 41. | Network Cameras | Added support for the Mobotix V2 camera driver. | Feature |
| 42. | Network Cameras | Added the ONVIF V2 driver. | Feature |
| 43. | Network Cameras | Fixed an issue with the SAM3204 encoder where the I/O states not being processed (due to a response code check). | Fix |
| 44. | Network Cameras | Added Sightlogix camera and metadata integration. | Feature |
| 45. | Network Cameras | Added the UNV camera driver. | Feature |
| 46. | User Interface | Added the ability to create bookmarks to save camera layouts in live/review on client systems. Major features:<br>• Bookmarking the current state of camera panels in the GUI will save:<br>    o Current panel layout and current live/review state.<br>• Bookmarks are stored locally on the client system. If the same user logs in from a different client the saved bookmarks will not be available.<br>• Bookmarks are hard-filtered by default by the client operating system user and site login details.<br>• Bookmarks can be exported as an archive. A bookmark is by definition an instance in time so at export time the user will need to set the time period before and after the bookmark time to archive. The bookmark's name will be used as a default filename and the bookmark's description will be used as the default archive description.<br>• Bookmarks can be filtered by name, description or content camera name.<br><br>**Important note:**<br>Bookmarking will not save:<br>• PTZ position,<br>• Current digital zoom parameters,<br>• Live camera sequence running in a panel.<br>• Bookmarks do not prevent data from being overwritten on the server. If the user requires bookmarked video to be retained then the user should create an archive. | Feature |

CathexisVision®
Video Surveillance Management Solutions

✉ info@cathexisvideo.com          🌐 www.cathexisvideo.com

| # | Key area | Software Change | Type |
|---|----------|-----------------|------|
| **47.** | User Interface | A reference image management system has been added. This system provides the following functionality:<br>• An interface for an administrator to capture a set of reference images for all of a server's camera (a reference point).<br>• A management tool to view, export or delete captured reference points for a server.<br>• A tool to compare an old reference point to the current orientation of a server's cameras. | Feature |
| **48.** | User Interface | Added a heatmap function that uses Motion Search database to generate a heatmap of recent motion on a still image. | Feature |
| **49.** | User Interface | Added the following options to the GUI:<br>• Use software OpenGL rendering (this fixes the rendering issues with Intel HD 620 video devices),<br>• Enable automatic high DPI scaling support. | Modification |
| **50.** | User Interface | After ten minutes the 'Edit Camera' dialog window will now present the user with the option to either continue editing the camera or to close the window. If the user does not respond within thirty seconds, the window will auto-close. | Modification |
| **51.** | User Interface | In Windows, the alarm window will appear on top of other application windows when a new alarm is received. | Modification |
| **52.** | User Interface | The taskbar icon in Windows will now flash if an event notification occurs while the GUI is minimised. On Linux, the event notification will appear on top of the open application. | Fix |
| **53.** | Video Wall | Made the following changes to the Video Wall software:<br>• The name of the connected site can now be shown.<br>• Overlay text size can now be modified.<br>• Fixed an issue with missing section labels in the context meu. | Modification |