

Release Notes

**UNITED VMS 8.0**

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**Rel 8.0.4.6119**

**Software Update**

Latitude / Horizon / Meridian

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### Document History

Version	Date	Comment
1_0	26-Feb-19	Release

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# 1. Introduction

The release of FLIR's United VMS V8.0.4 boosts the VMS 8.0 product, introducing newly integrated video analytics on existing Ariel Gen III and Quasar Fixed box cameras, supporting storage on the edge recording, added functionality to camera discovery, streaming and feature support as well as alarm management.

The newly introduced Video Analytics added to the Ariel Gen III and CF-6308 4K is included with a new firmware, allowing existing customers, with supported cameras, to utilize analytic capabilities on their installed cameras and allowing new customers to do the same with reasonably priced cameras. Customers can take advantage of the analytics feature using the United VMS, which shows analytic rule OSD overlays, receives events triggered by analytic rules and arm/disarm controls.

The CM-6308-P1-I Multi-Imager's "5th Imager" is now supported in the UVMS, allowing the user to utilize the full coverage offered by this camera accessory.

United VMS has always boasted strong camera support and advanced functionality. We continue to improve with some important updates to our infrastructure. The UVMS has improved by auto-creating networks during the camera discovery process, improving video streaming on unstable networks and simplifying the creation of self-signed certificates from the camera.

Alarm/Event management now supports conditional events using Boolean logic, allowing the administrator to set an action to only be performed when two originating events occur within a given time. This broadens the use cases of the already extensive actions list offered in the VMS.

## 2. Product Features

FLIR has added several important under-the-hood enhancements that recognize day-to-day situations in the system where improvements could be made.

### 2.1 Video Analytics

FLIR has added useful analytic rules to several existing visible camera models, giving them the ability to perform analytic events and trigger actions within the UVMS. This addition allows new, and existing customers with these cameras, to utilize camera analytics at a reasonable price.

This feature is available via a camera firmware update in conjunction with this Software Update, allowing customers with these cameras already installed to take advantage of this major addition.

These cameras provide motion detection as well as video analytics allowing the user to choose according to the scene whichever is more suitable for him

**Supported Models:**

Firmware 20190125 or later

CF-6308-00-0, CM-3304-XX, CM-3308-XX, CB-3304-XX, CB-3308-XX

**Note:** Prior to enabling a rule from Admin Center, the analytics rule must be configured via the web page.

**Note: Only one functionality can be active in the camera, the user needs to select whether to use Motion Detection or Video analytics as both cannot be active at the same time.**

There are several scenarios which will be affected by this behavior.

1. Enabling analytics on a system with an already configured motion zone.
2. Setting a new motion zone while analytics are enabled.
3. Copy Configuration from a camera to another camera that has analytics enabled.

These scenarios will produce a popup message explaining the specific issue

**Rules:**

The following rules will be configured on the camera and utilized by the UVMS:

Rule	Purpose	Design	Example
Counting	Count the number of people crossing a line	Up to three separate lines working in concert. <i>Note: The camera should be mounted looking down at the line (at 90 degrees)</i>	Monitoring customers entering a store
Border Line	Keep track of people or vehicles crossing a line	Up to three separate lines working in concert	Intrusion detection along a fence

Product Features

Loitering	Detect encroachment and trespassing based on the time spent in the scene	A single defined area	Monitoring an ATM or outside an apartment building
Area Protection	Detect people or vehicles coming into or going out of the scene	A single defined area	Secure a courtyard from trespassing or a no parking area
Object Removed	Detect objects being removed from the scene	Up to three defined zones	Monitoring shoplifting
Object Dropped	Detect objects being introduced to the scene	A single defined area	Securing public areas, such as transportation hubs, against suspicious objects

### 2.1.1 Analytics in Latitude Admin Center

#### Admin Center Analytics Tab:

Video Analytics rules are configured via the camera’s webpage, however, there is a basic user interface for enabling/disabling, arming/disarming a camera that supports basic analytics and seeing analytics overlay.

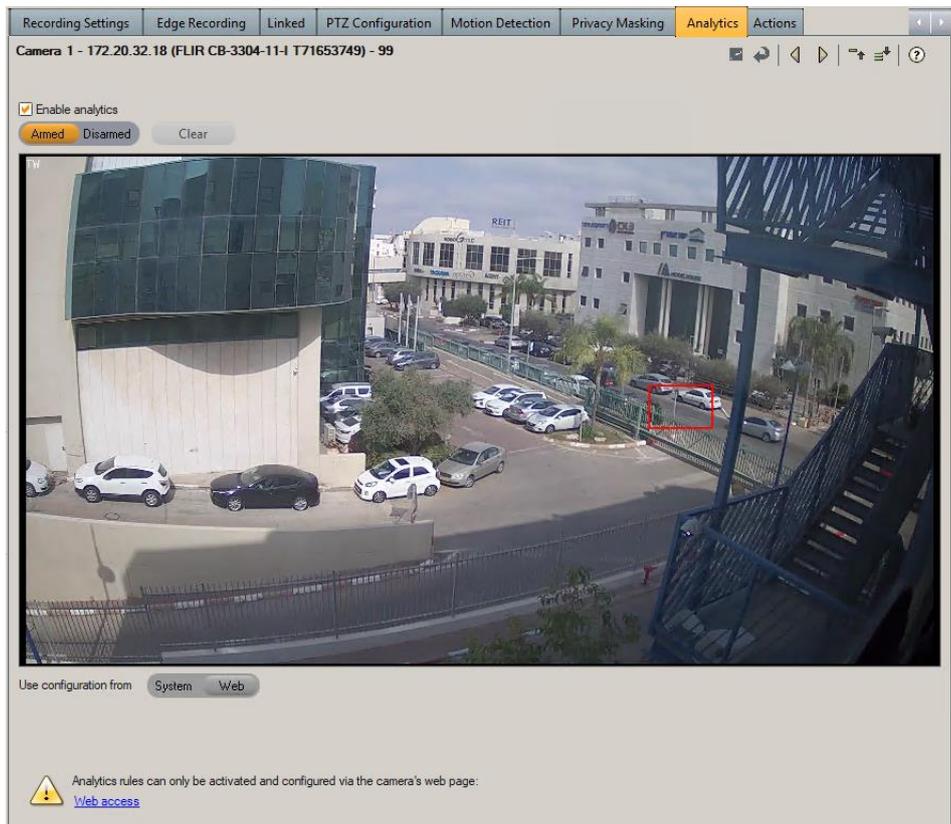


Figure 1 - Admin Center Analytics Tab with Analytic OSD

### 2.1.2 Analytics in Horizon/Meridian Admin Center

Horizon and Meridian support this feature just the same as Latitude and adds an Analytics tab in Admin Center.

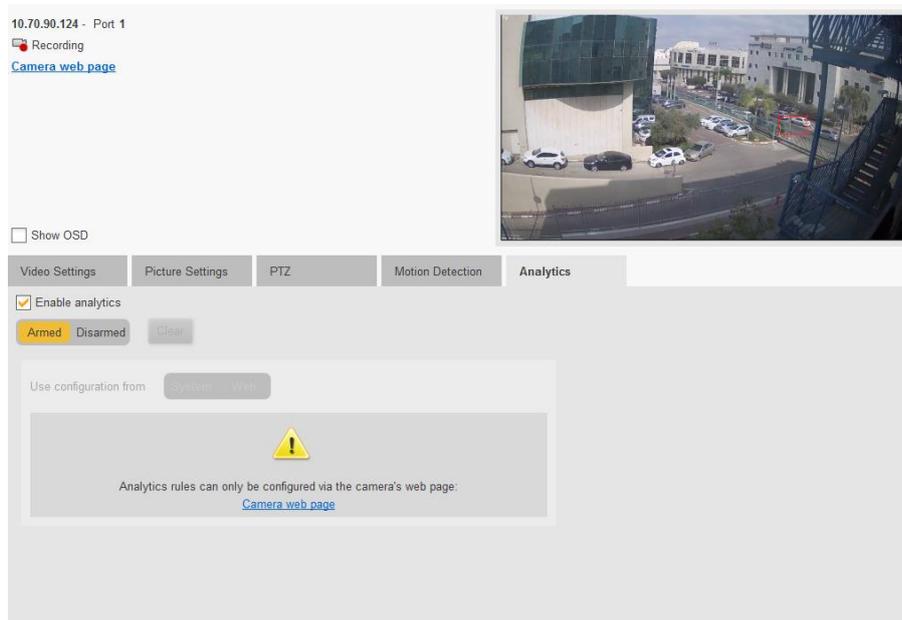


Figure 2 - Horizon/Meridian Admin Center Analytics Tab

### 2.1.3 Analytics in Control Center and EZ Client

Control Center and EZ Client will show the Analytics OSD on Live and playback as well as showing the OSD when exporting via DVT and AVI. Additionally, the actions and events will trigger an alarm via an incoming analytic rule.

Please note that MP4 exported files will not show OSD.

**Note: the analytics functionality requires a license; license file can be obtained from FLIR Operations and uploaded to the camera via the web interface or using the DNA (from version 2.2.1 onwards). New cameras will be delivered with the license file.**

## 2.2 Edge Recording Support (Latitude Only)

The Edge Recording feature allows video to be recorded directly to an SD card mounted directly to the camera. In scenarios where there is network interruption between the camera and the Archiver, the video recording will begin recording on the SD card. Once the connection resumes, the video will automatically be offloaded from the SD card and saved to the Archiver, which will be seamlessly integrated in to the video timeline as integral recording.

With the growing demand of Edge Recording capabilities (Storage on the Edge = SOE) we have added functionality to improve the user experience.

It is now possible, with supported ONVIF cameras, to set the Edge recording profile to be "same as recorded profile" for always recording cameras.

The Edge Recording feature gives peace of mind for instances when there may be gaps in regular recording. By recording directly to the Camera, there is backed up footage saved on an internal SD card which can fill in the blanks from unexpected recording gaps.

The newly support firmware offers the ability to set the Edge Recoding profile to be the same as the recorded profile or to configure and set dedicated SOE recording profiles. This gives the option to choose different recording settings for Archiver and SOE, depending on needs or to set the same

profile for both, while eliminating the dependencies of recording the archiver and the SOE using the same recording settings.

(e.g. Setting the recorded stream to 4K and a dedicated SOE stream to 4K results in a conflict and isn't possible. 'Same as recorded' uses the same stream for both applications, making this configuration possible)

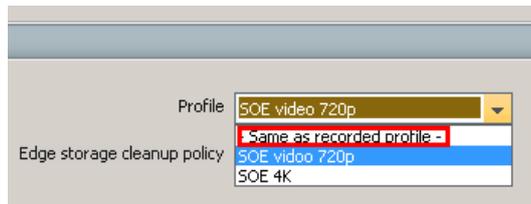


Figure 3 - SOE Video Profile

Additionally, it is now possible to utilize the copy configuration function in Admin Center between two cameras with SOE allowing the user to copy SOE settings between those two cameras.

These make setup and configuration of Edge recording on multiple cameras to be quicker and easier.

For more information about Edge Recording and configuration please refer to the Latitude Help file under Configuration - Entities > Camera > Camera Edge Recording Tab.

**Supported Cameras with earliest supported Firmware:**

CF-6308 (20190125), Ariel Gen II including CC-3103 (20190122), Ariel Gen III (20190125), CP-6302 (20190114), CM-6308-P1-I (20190130)

**Notes:**

Description
Edge Recording is supported for Latitude only.
SOE is only supported with an 'Always' recording schedule.
If the user changes the camera's video configuration (e.g. resolution), there might be a small gap in the recording. An example of this is when using boost upon alarm.
If a FLIR camera is set to record on the edge and is factory defaulted, the user must disable edge recording and then re-enable and save.
If Edge Recording is recording and user changes password or changes security mode under System > Edge Security, the recording and offload will stop Workaround: Secure and change password prior to setting up Edge Recording configuration. If password must be changed, Edge Recording should be disabled, then the password changed and then re-enabled.
Cannot set profiles above 15 FPS when there is a live/recorded profile and a dedicated SOE profile of 4K and 720P. Otherwise, the camera may reduce the resolution of one of the streams.
There is no TTL enforcement for the recordings downloaded from the camera. If there is enough external storage it may last for longer than the required storage time.
When there is not enough external storage to allow for all the SOE downloads, the external storage will be recycled and may not attain the required storage period

Description
Latitude does not support audio for Edge Recording
When the Archiver is querying for SOE clips, the camera returns the first 90 clips. Therefore, on a very fragmented SD card, there can be a significant delay between the recording of a clip and its offload to the VMS.
Privacy mask is not supported with SOE; downloaded clip will not have a privacy mask
For Multi-Imager camera, the SOE is not supported on the 5 <sup>th</sup> imager

## 2.3 Camera Improvements

### 2.3.1 Multi-Imager - 5th Imager

The UVMS has added support for the Multi Imager camera “5<sup>th</sup> imager” accessory. This accessory adds a middle view camera to the CM-6308-P1-I. UVMS will show two camera scenes, one with all 4 built in sensors and another with the 5<sup>th</sup> imager. The PIP (Picture in Picture) capability is used to show the 5<sup>th</sup> imager over the 4-imager scene to keep an eye on all scenes in a single tile. The 5<sup>th</sup> imager PIP will appear both on Control Center and in EZ Client web interface.

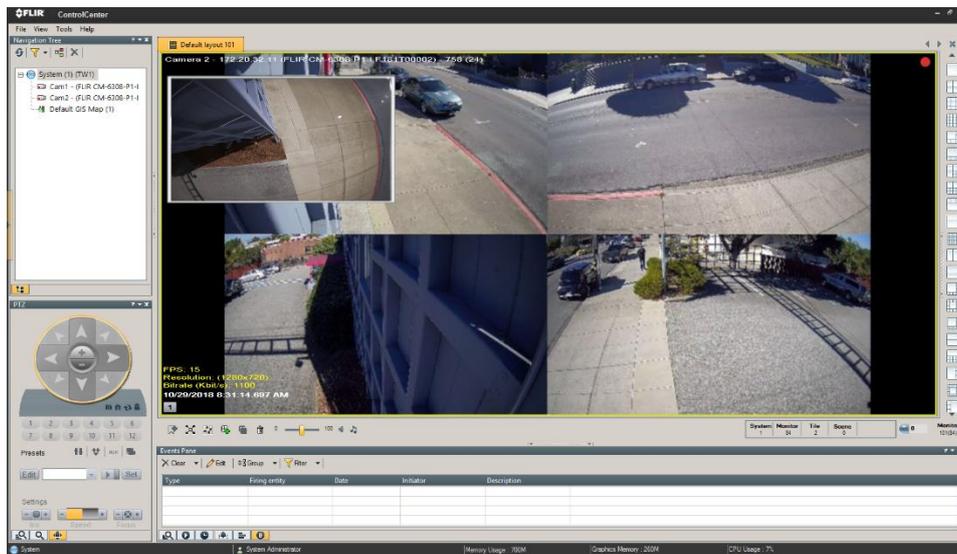


Figure 4 - Multi Imager two scenes in Control Center

### 2.3.2 Generic plugin supports TCP connection

The generic plugin allows users to attach cameras that are not natively supported by an existing plugin. The Generic plugin now supports TCP connections, allowing for better and more reliable streaming.

### 2.3.3 New DNA added to build

The New DNA (Version 2.2.0.35), fitted with a fresh new skin has been added to this UVMS update. Additional to the skin change, this new version allows the user to export a report to HTML or CSV as well as removed support for old cameras which are end of life. You can see more details on the changes and on how to access DNA for older cameras in the DNA release notes.

The new DNA is provided as part of the 8.0.4 UVMS package and can also be found on our website with the resources of United VMS and for every camera.

### 2.3.4 FLIR Cameras support generating self-signed certificates

FLIR Visible cameras now have the ability to generate self-signed certificates from Latitude, Horizon and Meridian Admin Center, increasing the end to end security of the entire system.

Previously, in order to produce self-signed certificates, the user needed to navigate to the webpage of the camera, locate the security settings generate the certificate and then return to the UVMS to secure the connection.

With this new feature, the entire process can be completed directly from the UVMS with a single click. This reduces the steps needed to be taken by an administrator and allows this important security configuration to be completed in a single application, along with all other camera configurations.

#### Supported Cameras with earliest supported Firmware:

CF-6308 (20190125), Ariel Gen II including CC-3103 (20190122), Ariel Gen III (20190125), CP-6302 (20190114), CM-6308-P1-I (20190130)

## 2.4 Infrastructure and GUI Changes

### 2.4.1 Latitude Network creation

Admin Center Network creation has been significantly simplified with this update. The user can now add a camera and be prompted whether they want to add a network with that same IP scheme and attach it to the archiver automatically.

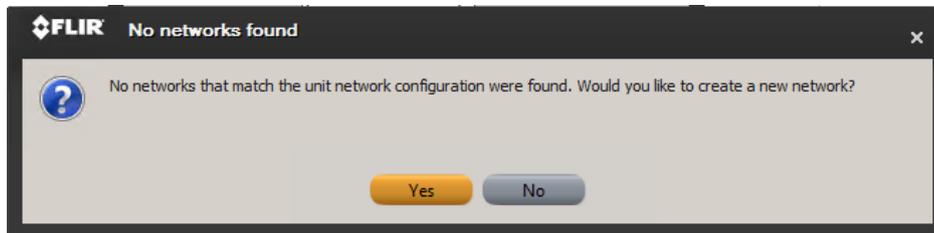


Figure 5 - Create Network Popup

Additionally, if a network already exists but was not added to the Archiver, the user will be prompted with a message, allowing them to do it on the spot.

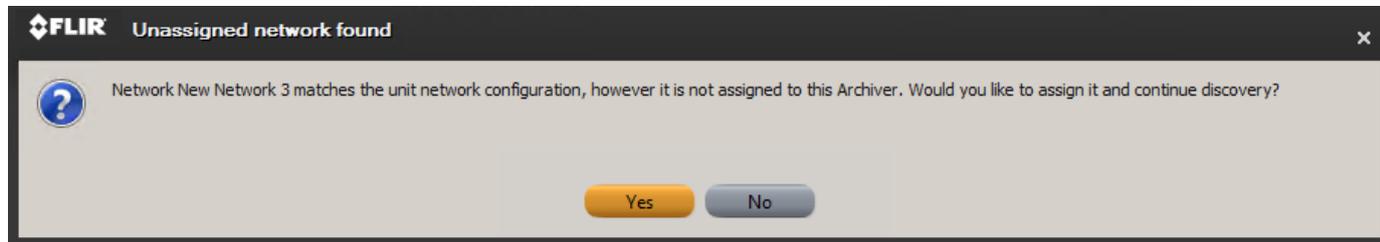


Figure 6 - Unassigned Network Found

These changes streamline the setup process of a system, by building in required steps, ultimately reducing the amount of time for setting up a new system.

### 2.4.2 Collapse-all button

A new button has been added to the Latitude Admin Center and the Control Center Applications. The Collapse all button allows a user to click this button  to collapse all items in System tree:

- With a single system logged in, the tree will collapse down to the server level (showing all server entities)
  - If the tree is collapsed, showing only the system entity (all servers hidden) clicking this button will expand the tree to the server level
- With multiple systems logged in, this button will collapse the tree down to the system level (all servers hidden). With all systems collapsed, clicking the button again will have no effect.



Figure 7 - Toolbar with Collapse-all button

### 2.4.3 Conditional Events

Events and Actions have always been a UVMS strong point. This capability is expanded with the addition of conditional events.

The Conditional Events feature uses a Boolean logic between two events two sources as the trigger for subsequent VMS operations. The VMS administrator sets an action to only be performed when two originating events occur, or do not occur, within a given time duration.

This feature set offers endless configurations to the Latitude System. Allowing to link events and actions, as well as daisy-chain conditional events to one another, allowing for activity to take place under a detailed and specific scenario. The capability allows the use of any event available in the system include internal system events and external event such as camera, alarm, IO, etc.

**Events must occur within X seconds** - Duration in which both configured events should occur for this condition to be met.

An example would be if an administrator configures a conditional event for a scenario where a motion detection event AND an intrusion alarm event take place within 10 seconds of each other, which results in a camera beginning to record.

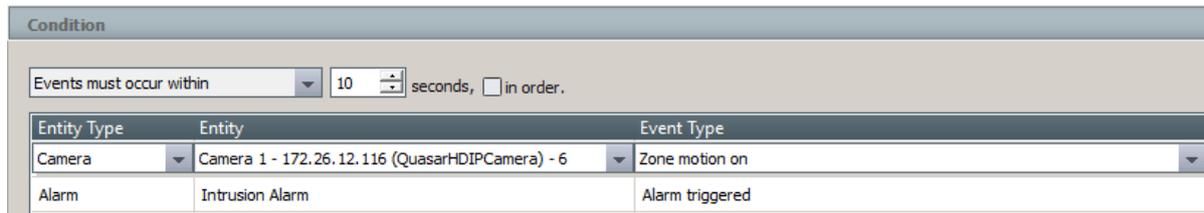


Figure 7 - Events must occur within

**Other event must NOT occur within X seconds** - Duration after one of the configured events has occurred, in which the other event must NOT occur for this condition to be met.

An example here would be if an administrator configures a conditional event of a scenario where a door of a high security area opens but does not close within a certain duration of time, which results in an alarm.

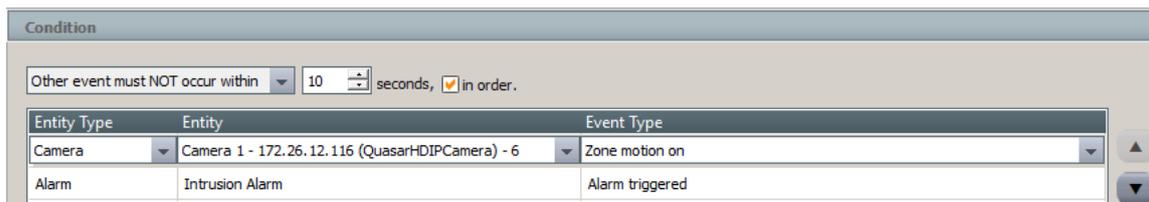


Figure 8 - Events must NOT occur within

An additional configuration is to set that the events must occur, or not occur, by the order in which they were defined in the list for the condition to be met. If unchecked, the order in the list would not matter.

Any action can be set to trigger when a Condition is met. A user may add multiple actions to a single “Condition met” event, further expanding the use cases of this feature.

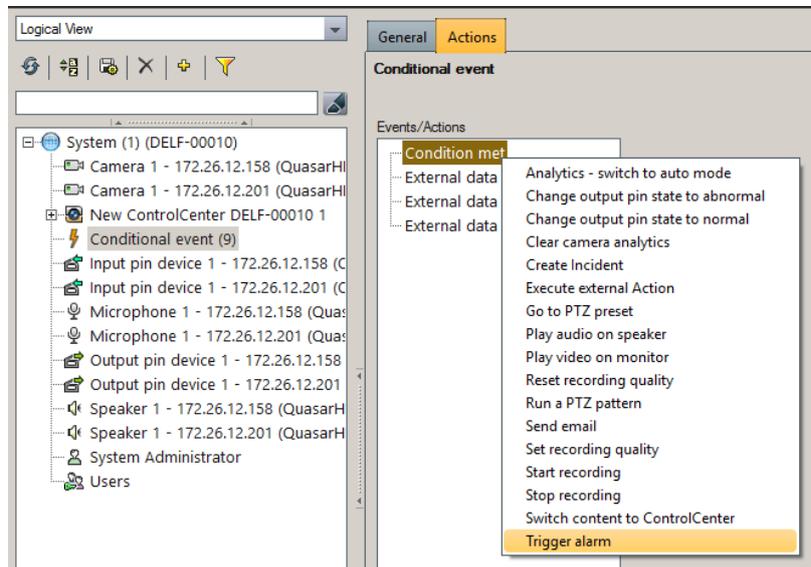


Figure 9 - Conditional Event Actions

### 2.4.4 Improved packet drop handling

An enhancement has been made to handle packet drops in problematic networks resulting in less stream restarts and frozen video and more stable video streaming with continued motion.

Prior to this release frames with packet losses were dropped and sometimes all the GOP was dropped until the next key frame. This resulted in video freeze. With this improvement we decode frames even in the case of large packet drops. Note that in cases of high packet loss level it will result in video smears.

This capability is available for H.264 and H.265 (HEVC) streams, for UDP streams.

### 2.4.5 Ability to change IR and Day/Night setting controls from Keyboard

Users are now able to change IR and Day/Night Settings controls of the FLIR CP-6302-31-I (FW 20190114 or later) directly from their PC/CCTV FLIR keyboard.

This will allow an operator to change these settings and easily revert them back in case of a change in scenery that requires these settings to be changed at ease.

#### FLIR CCTV Keyboard

Function	Keyboard Command
Set night mode	6 → FN
Set Night mode with IR On	7 → FN
Set Day mode	8 → FN
Reset to current system picture profile	9 → FN

**PC Keyboard**

Function	Keyboard Command
Set night mode	F6
Set Night mode with IR On	F7
Set Day mode	F8
Reset to current system picture profile	F9

**Note:** In order to utilize this function, there must be a video profile assigned in the camera’s Picture Settings tab.

The Default timeout for these functions is 3 minutes at which time it will revert back to the system picture profile settings

Modifying the default timeout of 3 minutes requires a change to the config file. For more information, contact Enterprise Support.

### 3. Additional Features

CR-ID	Description
46173	Export SDK sample has been updated to demonstrate the interleaved option for MP4
45463	VMS now supports FLIR Visible cameras without VMSLib
46759	Increased Byte Buffer Max Size from 150,000 to 300,000
46767	Added Support configurable RTSP port for ONVIF based units. Note: This feature Requires a change to the config file. For more information, contact Enterprise Support.
46772	Resizing range selector updates continuously rather than when user releases from dragging/resizing
46730	Support TRK binding for FLIR Gen III cameras with analytics
46778	The VMS now supports 6 instances of tripwire and intrusion area rules on FC Series ID video scene Limitation: FC Series ID analytics events are not supported in Horizon and Meridian in this version.
46919	Now supports Arecont model AV6655DN – Case# 84490

Fixed Issues

CR-ID	Description
46768	Archiver supports ONVIF cameras with an internal IP address which is different from the one known by the VMS. Note: This feature Requires a change to the config file. For more information, contact Enterprise Support.
46685	The Web Client now supports different camera Time zones
46766	The Archiver now supports preferring pull point with an unsecured connection. Note: This feature Requires a change to the config file. For more information, contact Enterprise Support.
46846	Now supports the Axis Horn Speaker C3003
46870	System now supports changing password for Axis cameras from Admin Center
46883	Quasar Gen I Video and Audio support Over TCP
47029 Case # 84504	Ability to configure CCTV Keyboard zoom speeds Note: This feature Requires a change to the config file. For more information, contact Enterprise Support.

## 4. Fixed Issues

All the cases described in the table below were fixed in V8.0.4

CR-ID	Description	Support Ticket
47368	<p>Fixed issue which caused problem on Windows 10 build 1809 when opening file explorer from the client application.</p> <p><i>Remaining Issues:</i></p> <ol style="list-style-type: none"> <li>Cannot export reports from Reporting Tool</li> </ol> <p><i>Workaround:</i></p> <p>Use the Print function and Print to PDF</p> <ul style="list-style-type: none"> <li>If the option isn't available. Go to 'Start' and type 'Windows Feature' and open 'Turn Windows features on or off'. Find "Microsoft Print to PDF" section and make sure it's checked. Click OK</li> </ul> <ol style="list-style-type: none"> <li>When choosing to add a picture to Map Builder, the user cannot open Explorer and navigate to the photo to select.</li> </ol>	86644

Fixed Issues

CR-ID	Description	Support Ticket
	<i>Workaround:</i> The user must copy the entire path (with file name and extension) and paste it into the path area	
45130	Resolved issue where Browsers kept cached version of the EZ Client not always loading correctly after upgrade	78157 78158
46027	Solved problem of Directory Crashing because of a missing feature in the license	81580 81532
46029	Solved issue where timeline wasn't appearing and then producing an exception when pressing the area where the timeline should have been	83031
46125	Resolved issue where pressing favorites in CC, closed all the layouts when Control Center language was set to Spanish	81792
46487	Fixed issues where exporting a linked scene from EZ Client in interleaved MP4 failed if there was no audio clip for the selected time	Limitation from 6113
46506	Resolved update popup message shortened to "A newer version is avail..."	82450
46543	Solved issue of Sync Playback freezing video upon changing playback speed (FF RW, etc.)	82997
46554	Active Directory no longer fails to import groups because of unauthorized groups access	82874
46615	Added support to be able to configure 120 FPS in the AC settings for cameras that support it. Note: To truly receive 120FPS, the monitor must have a refresh rate of 120Hz	83165
46683	Fixed problem where logs failed to save on a different drive	83373
46689	Fixed issue where the feature set appeared blank in the dashboard in Latitude v8.0	83689
46700	Fixed problem of Directory server failing to sync with Active Directory server	83757
46554	Solved problem where Active Directory failed to import groups because of unauthorized groups access	82874
46712	Resolved issue where Archiver would lose sync when using camera sequence	83552
46720	Fixed EZ Client where highlighting text in the Site Filter or in the Search box minimized the camera catalog	83903
46742	Resolved issue of newly created user with output pin access rights not having ability to control it	83451
46776	Fixed issue where Archivers would stop responding unexpectedly	83378
45266	Fixed issue where User and User groups in AC asked users to save changes when no changes were made	78640
46161	Fixed issue where QCC failed to start on Windows 10 build 1803	82275
46763	Solved problem where Adaptive stream did not recover after camera reboot	82485

CR-ID	Description	Support Ticket
46791	Resolved Slow Forward in 1-2FPS playback not working properly	84167
46819	Fixed problem where Archiver got to high CPU because of high number of ONVIF events	82966
46278	Client Auto Update - the auto update popup is displayed when connecting a newer version client to an older server	83465
47061	Resolved problem of Active Directory taking a long time, preventing over Directory operations	84944
47292	Fixed issue where Control Center application would crash when removing map from tile	86181
47586	UVMS GIS Map Integration stop working on February 14, 2019 due to Google API update 3.35	00525

## 5. Upgrade Instructions

The following upgrade paths are supported:

- Latitude 8.0
- Latitude 8.0 LU
- Horizon 8.0
- Horizon 8.0 LU
- Meridian 8.0
- Meridian 8.0 LU

Users on prior versions must upgrade to 8.0 before applying this LU.

### 5.1 Upgrade Steps

To obtain the update executable follow one of the steps below:

1. Check the FLIR website:
  - For Latitude <https://www.flir.com/support/products/latitude#Resources>
  - For Horizon <https://www.flir.com/support/products/horizon#Resources>
  - For Meridian <https://www.flir.com/support/products/meridian#Resources>
2. If the desired update version number is not available on the website, please contact support at +1 888 388 3577

This VMS update must be deployed on all machines – servers, clients and SDK applications.

Note that SDK applications must be closed manually.

Note that AdminCenter and ControlCenter won't start automatically.

1. Close the client applications before running the installation package.
2. Start the installation program and proceed as guided by the installation wizard.

**Note:** This stops your VMS Windows Services, which resume upon completion of the wizard.

3. Upgrade the server side of the system, starting with the Directory server if not an all-in-one system.
4. Once the server upgrade concludes, open ControlCenter over a client workstation.
5. Connect to the server. You will be prompted to upgrade to the new version. After accepting, the new version will be downloaded over the network and installed automatically without requiring any further input.

After installation is finished, Windows Services will be launched automatically

## 5.2 Upgrade Limitations

1. During upgrading, Directory synchronization is not maintained until all Directories are upgraded
2. Using Windows "Remote Desktop Protocol" (RDP) to load the update with "Automatic Client Update" feature is not supported.
3. If Mentor is installed on the client machine, Automatic Client updates will not work.
4. When running Automatic Client updates while not signed into Windows as an administrator, Update screen and Progress Bar will be hidden from the user.

## 6. Additional Resources

For more information about the VMS system, visit <https://www.flir.com/browse/security/video-management-systems/>

## 7. Windows Updates

**Note:** The VMS Windows Services must be stopped prior to applying Windows Updates

## 8. Protecting Your FLIR Security Product

FLIR strongly recommends following good security practices that protect against malware in general, as that will also help protect against possible exploitation. This includes ensuring devices that are using a Windows OS such as Latitude, Horizon, Meridian and USS servers are deployed with the recent Windows Updates and employing anti-virus updates

## 9. Disclaimer

By providing this document, FLIR Systems, Inc. is not making any representations regarding the correctness or completeness of its contents.

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# Appendices

## A.1. Version 8.0.3.6113

Please refer to V8.0.3.6113 Release Notes for full details.

### A.1.1 Summary of Features in 8.0.3.6113

#### Infrastructure Improvements

**Support Proxy of H.264 RTSP Streaming via SDK** - The SDK now supports streaming proxy video as H.264. This is an important improvement as it expands the abilities of the SDK streaming capability and will allow for more applications to take advantage of this interface. The video proxy is a significant technological upgrade from the Direct Show Filter (DSF), which only allowed MJPEG to be streamed over the SDK.

**Note:** This feature requires a specific license (P/N: VMS-SDK-STRM). Please contact Operations for ordering information.

**New Licensing for Smart Vehicle Search** - A new licensing feature has been added in preparation for the upcoming "Smart Vehicle Search Channel". When released, this feature will allow users to take advantage of existing cameras to analyze and record license plates along with the video, with ability to search and investigate based on that information.

**Support Interleaved Audio/Video Export with MP4 Format** - The ability to export interleaved audio and video files has been long supported with .dvt and then .avi file formats. MP4 format now supports the capability to export interleaved audio and video. The default export setting for both CC and EZ Client is now MP4 with interleaved turned on. This can be changed in the CC options. In EZ Client, it can be changed during export, and the EZ Client will remember the last used export configuration.

**Note:** This update will change the default behavior for both upgrades and new installations, so long as the defaults were never changed. If a user had changed this setting in the past, it will be unaffected.

#### Client Application UI/UX Changes

**Predefined "Clear Alarm" Descriptions** - Clear alarm description has previously been used to inform an administrator of the nature of the alarm and why it was cleared. While we are still allowing free-text descriptions, for those situations that require it, the VMS now allows the User to save a list of pre-defined "clear alarm description" for consistency and efficiency when handling alarm situations. This allows the operator to move to the next high-priority task in a quick paced environment.

**Note:** The setup for this feature is done via Latitude AC and the functionality is available only when 'Force adding description on clear' is checked in the AC alarm setup

**Improved Auto Clear Alarm Default Functionality** - Auto-clear alarms is now on by default and set to 24 hours. Prior to this change, auto-clear was off by default, causing unnecessary backlog and using system resources in high alarm traffic sites. Alarms are generally important only for a short time and keeping them for more than a day is rare, so this change will benefit most. The ability to turn off auto-clear still exists and can be used in appropriate situations. This is configured in AC for each individual alarm.

**Note:** Alarms existing in the system prior to the update will be unaffected. New alarms created after the update will have this setting as the default functionality.

**Analytics Delayed Alarm Action** - A new functionality has been added to the “Arm Analytics” action that allows the Arm Analytics event to fire after a pre-defined amount of time. This is useful in environments where an operator needed to disarm an analytics camera for manual investigation but requires it to re-arm itself after a specified amount of time.

**Send Analytics Disarm When Manual PTZ is Acquired** - When a TRK-101-P is connected to a PTZ, the analytics now automatically disarms when manual PTZ controls are acquired. This reduces potential issues when an operator needs to take control of a PTZ that is trying to run PTZ tracking due to an analytics rule.

**Note:** This feature is configurable via the config file. This requires specific FW version for the TRK, please contact support for details.

**Start & Stop TRK Preset Playlist Upon Arm & Disarm** - A new functionality has been added that allows an operator to configure the TRK PTZ preset playlist to Start when the unit is Armed and to Stop when the unit is Disarmed. This allows for an operator to take over a camera quicker in a pressing situation without needing to manually stop the preset playlist.

**Note:** This feature is configurable via the config file. Please contact support for details.

**Added “Password Confirmation” to Edge Security Password Change** - The Edge Security page in Admin Center allows an administrator to change the password of a camera for added security. The interface now requires the user to reenter the password for confirmation, avoiding typos which can cause a user to get locked out of a camera. There is also an added “show password” option for users who would like to check the password before submitting.

## EZ Client Improvements

**EZ Client Supports up to 16 tiles in Chrome and Opera** - EZ Client now support up to 16 live stream tiles for the Chrome and Opera Browsers, a big upgrade from the previous supported 9 tiles. This improvement further allows the EZ Client to be useful and robust to use in enterprise settings and large camera systems.

### A.1.2 Fixed Issues

All the cases described in the table below were fixed in V8.0.3.6113

CR-ID	Description	Support Ticket
45176	Fixed CC issues where tiles would stay black after opening inaccessible scenes	78461
45947	Resolved problem where CC would freeze on Windows 10	79786
46036	CC no longer shows blank tiles when opening favorites on 3 monitors	80973
46038	Fixed issues with Analytics OSD from binding camera that didn't clear from the video tile in CC while playing in Sync Playback or Playback after jump to time	81620
46067	Fixed Video Issues with Sony VB770 even when Live Buffering is turn on with 1000ms	81276
46148	Fixed issue with failing to add Axis M3047-P on FW 7.15.2.1	82172

CR-ID	Description	Support Ticket
45897	Resolved problem when exporting MP4 subtitles (non-embedded) as a large file, the subtitles were delayed. The fix includes reducing subtitles to once every second for exports longer than 15 minutes.	80290
46238	Unicast TCP on a high packet drop environment no longer causes the ART CPU to spike.	82558
46108	Fixed issue where alarms were delayed due to busy directory	78471
46196	Fixed problems where CC crashed when client recovery was enabled	82115
46290	Solved problem where ONVIF PTZ cameras were auto-selecting Samsung driver over ONVIF driver	82915

### A.1.3 Limitations

Description
Limitations of SDK Proxy stream <ol style="list-style-type: none"> <li>1) MJPEG streams are not supported</li> <li>2) Streams with privacy mask are not supported (since they revert to MJPEG)</li> <li>3) Streams with linked audio will only send video but not audio</li> <li>4) Streams with analytics will send video but not analytics</li> </ol>
When exporting an MP4 interleaved (audio and video) clip from the WebClient, the export fails if there is a portion of the export that does not contain an audio clip. A solution is to split the exported clip; export the portion of audio and video separate from the portion with video only

## A.2. Version 8.0.2.6112

Please refer to V8.0.2.6112 Release Notes for full details.

### A.2.1 Summary of Features in 8.0.2.6112

#### Product Features

**Enhancements to Failover mechanism** - The Failover Archiver mechanism has always been one of Latitude's strongest components, allowing for a system to continue recording video even in the event that something happens to the primary Archiver server. This gives the system administrator peace of mind that their system is reliable in all situations. Even though Failover Archiving is strong, we felt we could make it stronger.

**Reduce recording gaps upon archiver failover using Unicast** - When an Archiver with many cameras fails over, in a Unicast environment, there is an inevitable gap in recording between the time the primary archiver goes down, and the new one begins recording. Knowing how important every second of video is, this software update strives to reduce that gap. In instances when a system is configured with cameras using Unicast, this gap will be reduced, allowing the cameras to recover quicker and get back to doing what they were meant to do. The length of the gap depends on the number of cameras managed by this archiver, and in some cases the type and models of those camera. In most cases the gap will be under two minutes, however there might be scenarios where this gap is longer.

**Un-interrupted live monitoring during archiver failover using Multicast** - Users who utilize a multicast configuration from the camera to their Latitude system will now be able to continue monitoring live video, un-interrupted, during the process of an Archiver failover. In the event that an Archiver is unable to respond, and requires failover to another Archiver, the users will not lose live video monitoring from multicast configured cameras that are currently being view. The user will be able to continue securing their site with no interruption from both Control Center and EZ client.

Note: This feature is available for FLIR visible cameras. It is also available for ONVIF based cameras which support continuous multicast (i.e. they support the StartMulticastStreaming and StopMulticastStreaming Onvif commands).

Note: For full configuration contact Enterprise Support.

Limitations: This feature requires the stream to be recorded. If a stream is not recording or in separate mode, the system should be configured the retry interval. This is set in Admin Center, Physical view > System > Advanced > "Client Detection and Recovery of Stream Failure" pane.

## Infrastructure Improvements

**Updated FFmpeg version** - In an effort to use the most up to date technologies, the FFmpeg version has been updated from version 2.2.3 to 3.3.3. This update builds upon our system infrastructure improvements. The new library reduces some previously seen issues such as those produced when using TCP streaming, and boosts overall performance. It also will allow us to develop new and improved features in the future.

**H265 Ready** - Latitude is ready to support H.265 Video Format from H.265 cameras, positioning the VMS to expand itself, leveraging up to date technologies used by new and future cameras.

At this point, we provide limited support, only via the Generic Camera plugin. Support for H.265 will be enhanced with future plugin releases.

Note: For full configuration contact Enterprise Support.

## UI/UX Changes

**MP4 Export with embedded timestamp OSD** - Control Center and EZ Client offer the option to export MP4 files with the timestamp OSD embedded in the video file. This option will allow the user to export a clip to MP4 and have the timestamp already embedded in the file and not as a separate file.

Note: When selecting to embed OSD into MP4 clips, it is recommended that the user only use this option for short clips

### EZ Client Web Interface

**Scrubbing and Timeline Hovering in Playback view** - Timeline scrubbing and hovering, allows the user to investigate footage in a quicker and more efficient manner. These features allow the user to navigate to and locate a specific clip by viewing the relevant video while dragging the timeline cursor or simply hovering over an area of interest in the timeline.

**Timeline Scrubbing** - When a user clicks and drags the playback cursor over the playback timeline, the video will move along with the cursor to show a snapshot of the video that exists at that point in time. When the cursor is released, the video will continue playing from that point. Therefore, the user can skim the video as they move along, making it easier to find the desired video.

**Timeline Hovering** - When a user hovers over the timeline, a thumbnail will appear above the mouse cursor showing a snapshot of the video that exists at that point in time. This allows the user to simply hover over a point in the timeline, without needing to divert attention from what is currently on the screen. If something of interest is seen, the user can choose to jump to that point.

**Save site filters, live view layouts and more** - EZ client now saves session information specific to users so that a user can log in and pick up where they left off. The following items are saved when a user logs in after logging out or closing the browser:

- a) Sites Filter
- b) Selected Cameras in Live
- c) Viewed alarms
- d) Export format

Additional items will be saved if the webpage is reloaded, but the user remains logged in, such as: Camera Filter and Camera Catalog show\hide.

Note: In order for this feature to be supported the user, machine, browser and UVMS system must remain the same. If one of those change, the settings will revert to the default settings. All supported EZ Client browsers support this feature.

**Keyboard shortcuts** - EZ Client now supports keyboard shortcuts to make navigations quick and simple. When a user presses Ctrl+Backspace in Live view, all the cameras currently opened in the Live view will be removed from the layout. When a user presses Ctrl+Backspace in Playback view, the camera currently opened in the Playback view will be removed.

When the user presses Ctrl+~ the view will switch from Live to Playback and vice versa.

Note: This feature is supported in Chrome and Edge browsers

**Playback view changes** - As EZ client becomes more functional, the look and feel continues to develop as well. As a result, the playback view has undergone cosmetic changes to make it sleek and modern. Most noticeable, the timeline itself has been made thinner, allowing more space for the video tile. In addition, the thumbnail search has been optimized to work quicker and smoother.

**Edit Duration** - Searching for videos just got simpler with the ability to edit the time duration of the desired clip. This ability gives more control to the user to specify exactly how long the clip should be. The user simply needs to Double click the playback duration time to make it editable. The user can then type in the desired duration time and the other values, as well as the timeline, will update accordingly.

**Latency Indicator** - The EZ Client is now equipped with an indicator that will alert the user if there is latency in the displayed video being shown in the browser. Latency can be caused by several factors which can cause the client machine to have low resources or networking issues, which result in lagging video. EZ client will now inform the user that their system may be experiencing such problems.

In some circumstance, the system will take automatic steps to reduce the latency and bring the system back to working condition.

Yellow = 3-10 seconds lag

Red = Over 10 seconds lag

### **Admin Center/Control Center Improvements**

**Support multiple audio out sessions** - Control Center now supports multiple audio-out sessions from a single audio-in device allowing the user to use a single microphone to transmit audio to multiple locations at once. To initiate multiple audio out sessions, drag supported cameras into live view. Press 'speaker' button on for each unit and speak into a supported and linked audio in device. If some units are removed from live view and sessions that remain will continue to transmit audio out.

**Updated Archiver Span calculation message** - The Archiver span calculations have been simplified to better inform the user of what the span range is.

**Do not remember user credentials on login** - The new setting requires password validation at login through windows authentication, as well as disabling the option to remember the credentials for the future login. This only applies to Windows Authentication. There is no change for Server Authentication.

This feature is established by making a change to the config file.

Note: Config file changes are made by FLIR Enterprise Support personnel.

**Horizon/Meridian Admin Center login screen saves previously connected system in dropdown list** - Horizon and Meridian Admin Center now saves the Server name of previously logged in systems. This is useful to users who utilize multiple Horizon/Meridian servers from a single client machine. Instead of needing to retype the server name for every login, there is a new dropdown menu which holds onto this information.

## Camera Related Enhancements

**Latitude Supports ioi Binding with FLIR IR PTZ** - ioi encoders support binding with the FLIR IR PTZ (CP-6302-31-l) for detection on presets and PTZ tracking.

In this release the user now has the ability to bind the ioi TRK encoder with the IR PTZ, enabling the Latitude VMS to receive the ioi alarms and to see the relevant OSD in the client application.

**New Keyboard Shortcuts** - New Keyboard controls were added to support PiP (Picture in Picture) for FLIR multisensory cameras.

Function	Command (PC Keyboard/CCTV Keyboard)
Toggle PIP views	F2 / 2 + FUN
Show/Hide PIP window	F3 / 3 + FUN
Switch Playback window to Live view	F5 / 5 + FUN
Expand focused Layout to Full Screen	F11 / 11 + FUN
Expand focused Tile to Full Screen	F12 / 12 + FUN

### Improved ONVIF Support

**Added Configurable Audio Buffer for ONVIF** - Until today the buffer size was set to a fixed size. This sometimes caused distortion in audio streamed at a sample rate higher than ~ 32KHz. In this release we have added a new config file entry which enables modification of the audio buffer size for ONVIF plugin to support audio with higher sample rate than before. Any value below the default buffer of 25 will be blocked

Note: Config file changes are made by FLIR Enterprise Support personnel.

## A.2.2 Additional Requirements

CR-ID	Description
45600	Prioritize the order of the ONVIF based plugins that will try to discover a unit.
45828	Axis VMD4 motion detection support for Axis models when discovered via the ONVIF camera plugin
44931	Now support the same Multicast Address with different Ports for the Pelco and Bosch plugins

### A.2.3 Fixed Issues

All the cases described in the table below were fixed in V8.0.2.6112

CR-ID	Description	Support Ticket
44876	Fixed issue where Axis motion indication always showed as 94-100%	77014
44975	Archiver Span calculation improved look for older clips	77325
45182	Fixed issue where Pelco unit was not initializing after failing to bind for events	77729
45351	Fixed issue where Failover Archiver would not release licenses if Failing over twice in a row.	71553
45400	Fixed issue with jittering video while using RTSP plugin cameras	78562
45471	Fixed Control Center issue with multi-threaded decoding	79407
45544	List of cameras in Redundant Archiver now appears on the dashboard	79283
45547	Fixed problems where Multi-Threaded Decoding, fast forward showed green video	79700
45619	Resolved issue where Webserver was creating Crypto files in Window's Machine Keys and didn't delete them	79873
45630	Fixed problems where cameras stopped recording, Archiver not functioning from ByteBufferPool maxing out	79223
45671	Fixed Archiver issue when a Keyboard connected via a serial port	77084
45681	Resolved issue where the timeline would sometimes produce an application error	77639 79686
45259	Fixed problem where after rediscovering Arecont cameras other cameras stop working	78526
45231	Fixed problem where camera sequence can cause stream manager issues	77706 77984
45077	Fixed issue where after failover some cameras were marked as not recording even though they are recording	77870
45384	Improved issues with Active Directory integration	78824
45839	Fixed issue where Transcoder wouldn't work well after a stream was unable to recover	80292
45821	Fixed issue where overused resources caused Transcoder to stop streaming	
45818	Fixed problem where sync playback video would freeze when jumping to time	79963
45702	Solved problem when replacing a camera with a different model via rediscovery, the system kept the old Picture Settings and applied them to the new camera resulting in poor picture quality	80181
45902	Fixed problem with smart search not returning proper results	

## A.2.4 Limitations

CR-ID	Description
45853	Backwards Compatibility when using an IRPTZ – <ol style="list-style-type: none"> <li>1) When a system is upgraded to support the IR PTZ, a user connecting with a client on an older version, which does not support the IR PTZ (e.g. 8.0 GA) will be unable to modify the PTZ plugin from the older Admin Center</li> <li>2) If a system is upgraded to a version which supports the IR PTZ, the Webserver MUST be upgraded as part of the system upgrade.</li> </ol>
	Automatic Client Update is not supported for client workstations connected via the Gateway

## A.3. Version 8.0.1.6105

Please refer to V8.0.1.6105 Release Notes for full details.

### A.3.1 Summary of Features in 8.0.1.6105

#### Edge Device Enhancements

The following cameras have been added in this version. For more details, see Release Notes for version 6105:

- Quasar Gen II CM-6212 Hemispheric Camera
- Ariel Gen III Cx-330x Series Cameras
- New Ariel Extended Temperature Series
- Quasar Gen III CP-6302 IR PTZ Camera
- New Quasar 4x2K Panoramic Camera

#### Product Features

**EZ Client session management** - If an EZ Client user navigates away from the EZ Client, substantial resources and network bandwidth can be tied up, as the EZ Client still runs in the non-focused Browser Tab. New functionality has been added to monitor this situation, and as soon as the EZ Client is not the focused tab, decoding of the streams being displayed in the EZ Client will be paused.

**EZ Client sessions restart automatically after interruptions** - If there was an interruption in communications between the Transcoder and the target computer, the EZ Client will restart when communication from the Transcoder is resumed.

**Improved stability and recovery from interruptions** - The mechanisms that detect devices and report accessibility have been upgraded to allow connections to be made more quickly and for the system to recover from interruptions more easily. For the Admin Center user, this speeds up the process of discovering and attaching new devices. Control Center users will also benefit, as connections to existing units are recovered more quickly after interruptions in communications.

**Backward Compatibility** - The system is now more flexible with regard to upgrades. After Directories and Archivers have been upgraded, the user can continue to connect from Clients that are on earlier versions, until the system-wide upgrades are complete. This makes it easier to

maintain operation while upgrades are taking place. However, the user should take care to upgrade all Directories in order to maintain Directory synchronization. *Note: When using the new Unicast TCP feature for live viewing (see below), it is imperative that ALL system components are updated to version V8.0.1.6105 or higher before starting to use it.*

## Improvements to streaming and rendering

**Live viewing can use TCP Streaming** - Live viewing can now use Unicast TCP on cameras that support this mode. This is particularly attractive on noisy or troublesome networks. Unicast TCP allows the system to resend blocks that were lost or interrupted on the network, resulting in better-quality and smoother video viewing of live content. The option is only available for Latitude, and will appear in the dropdown when supported by the camera

**Improved Playback of hi-res streams utilizing additional CPU cores** - Where a Control Center is being used to play back a few high-resolution streams the viewing experience is enhanced by allowing each stream to use multiple cores for decoding.

**Decoding buffers for devices using the ONVIF plugin** - Decoding buffers provide for smoother decoding of hi-resolution video streams. These buffers were introduced for FLIR devices in VMS 8.0, and the implementation has now been extended to all devices discovered using the ONVIF plugin. This applies to the Control Center only. The setting is disabled by default and must be explicitly set in order to be used, as there may be issues with some legacy units.

## EZ Client improvements

**Full support for Bookmarks in the EZ Client** - The EZ Client has had a major upgrade, with full support now provided for inserting Bookmarks while in Playback.

**Scroll bars and Close buttons added to EZ Client popups** - Dropdowns and Dialog Windows have been equipped with scroll-bars and Close buttons for ease of use and consistency.

## Control Center improvements

**'Switch to Live' when you've finished viewing a clip** - Corresponding to the 'Send to Query' option in Live mode, the Playback mode context menu now offers 'Switch to live'. The live video replaces the playback video in the same tile.

**Snapshot files are now .png format** - The default file format for Snapshot clips has now been set to .png. Should the user not want to use this format, the setting can be changed by Support.

## Cyber Security - TLS features added to Horizon and Meridian

A Security Tab has been added to the Main screen sidebar, and this provides access to the Edge Devices Security and Security Policy Settings screens to support TLS

### A.3.2 Fixed Issues in 8.0.1.6105

CR-ID	Description	Support Ticket
44692	Fix for DSF stream recovery issue	75071

CR-ID	Description	Support Ticket
44802	Tile goes blank during layouts uploading and no content can be displayed on this tile	75989
44946	CC shows an error of failure to display scene when using a matrix with Axis plugin	77357
44962	Failover synchronization – Admin Center shows warning of no sync on FOD wrongly.	75200
44963	EDB memory is very high	76399
44968	PTZ Zoom is fixed - not variable for Philips/Bosch	72695
45070	Matrix output results in infinite video switching and no video displayed	77357
45150	Black tiles when switching between layouts when using adaptive streaming	77775
45151	Web Server isn't visible and cannot be added by users in AC (except "admin")	78342
45190	User sometimes gets exception upon login	78440
45169	Half the audio is being exported for linked generic camera	78227
45146	Axis P1367 firmware with firmware 7.15.1.1 can't be discovered in Latitude	78111
45171	AXIS PTZ patterns don't work - record and play	78415
45188	Not all streams recover in the Web Client after Transcoder restart	78486
45199	Web Client - Jump to time shows loading spinner instead of video	78534
45030	Status of Input Pin and Output pin does not change on Map in CC	66079
45307	Admin Center – manual discovery – discovering units that are already attached do not say the name of the unit or which Archiver it is connected to.	
45227	Video jittering in live and playback in Sony cameras	78686
45395	Philips Bosch Variable zoom is not working with FLIR PTZ keyboard	79156

### A.3.3 Limitations in 8.0.1.6105

CR-ID	Description
45052	Multi-threaded decoding: last N-1 frames of the last clip are not played

### A.3.4 Known Issues in 8.0.1.6105

CR-ID	Description
45061	TCP streamed image is smudged on high bitrate and high-resolution combination
45073	TCP live stream quality is degraded compared to UDP

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