



The Power of Perspective



# Product Release Notes

Version 6.0.0



Thank you for choosing to install Perspective Video Management Software (VMS) from LENSEC. Perspective VMS® is an intuitive, feature-rich, scalable, and yet fully flexible platform for monitoring, interfacing with, and reviewing video surveillance cameras and intelligent devices.

Our latest release (Version 6.0.0) was first made available for installation and world-wide distribution on May 4, 2025.

This document is designed to provide an informational overview of features and issues that may be relevant to your installation of Perspective VMS.

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We appreciate your choice with LENSEC and Perspective VMS®!

# 1. Introduction

Perspective VMS Version 6.0.0 a Major version release.

## 1.1. Scope

The release notes pertain to installations of Perspective VMS Enterprise, Professional, Standard, Express, Command View, and Trial Editions. Separately available is documentation for general use and installation of Perspective VMS.

# 2. System Requirements

## 2.1. Client-Side Operating Systems and Browsers Supported

Perspective VMS operates within a native HTML5 platform and can be run as a client version through standard web-browsers that allow including Google Chrome and Microsoft Edge.

NOTE	For servers and client recommendations LENSEC recommends Microsoft platforms including Windows Server (2022, 2019 and 2016), as well as Windows desktop versions of Windows 11 and 10 Professional 64-bit.
	Windows 2003 Server, 2008 Server, Windows XP, Windows 7, and Windows 8 are <b>NOT</b> supported.

Client Recommendations (specifications may vary based on anticipated video streaming requirements per installation)

Hardware	Software
Processor: 2.4 GHz (x64 Processor) or 1.3GHz (Dual Core).	Windows 10 or above (Recommended Windows 10)
Memory: Minimum 4 GB RAM.	macOS X or higher (Recommended macOS 10.4)
Available Disk Space: Minimum 10 GB.	Google Chrome 74.0 and above (Recommend 78.0 64-bit)
Display: SXGA (1280 x 1024) or higher resolution	

## 2.2. Server System Requirements

### Web Server\*

Hardware	Software
Processor: 2.4 GHz (x64 Processor) or 1.3GHz (Dual Core).	Windows 10 Pro, Windows 2012 R2 Server or above (Recommended Windows Server 2019).
Memory: Minimum 32 GB RAM.	Internet Information Services 7 or greater.
Available Disk Space: Minimum 320 GB	Microsoft .NET Framework 4.8.
OS Partition (if applicable): Minimum 60 GB	
Network Interface Controller: Minimum 1GB	

### Archive/Streaming Server\*

Hardware	Software
Processor: 2.4 GHz (x64 Processor) or 1.3GHz (Dual Core).	Windows 10 Pro, Windows 2012 R2 Server or above (Recommended Windows Server 2019).
Memory: Minimum 32 GB RAM.	Internet Information Services 7 or greater.
Available Disk Space: Minimum: 1 TB	Microsoft .NET Framework 4.8.
OS Partition (if applicable): Minimum 60 GB	
Network Interface Controller: Minimum 1GB	

### Database Server\*

Hardware	Software
Processor: 1.0 GHz.	Windows 10 Pro, Windows 2012 R2 Server or above (Recommended Windows Server 2019).
Memory: Minimum 16 GB RAM.	
Available Disk Space: Minimum: 320 GB.	Microsoft SQL Database Server 2012 or above - Express, Standard, or Enterprise

\* All services may be installed on a single stand-alone server

## 2.3. Server-based Software Prerequisites

### 2.3.1. Internet Information Services (IIS)

Internet Information Services with the following roles are required to host the application. These services will be installed from the Perspective VMS wizard.

Application Development	<ul style="list-style-type: none"> <li>• ASP.NET</li> <li>• .NET Extensibility (prerequisite for ASP.NET)</li> <li>• ISAPI Extensions (prerequisite for ASP.NET)</li> <li>• ISAPI Filters (prerequisite for ASP.NET)</li> <li>• CGI</li> </ul>
Security	<ul style="list-style-type: none"> <li>• Windows Authentication</li> <li>• SSL (optional)</li> </ul>
Web Services	<ul style="list-style-type: none"> <li>• IIS Management Compatibility</li> </ul>

### 2.3.2. .NET Framework 4.8

PVMS requires .NET Framework **4.8** to operate.

### 2.3.3. .NET Framework 6.0 (.NET Core)

PVMS requires .NET Framework **6.0** to operate.



## 3. Features

### 3.1. Perspective VMS 6.0.0 (Major Release)

This version is a **Major Release** update, including new features, feature enhancements and maintenance items. See below, for an itemized list of updates and descriptions:

Product Feature Name	Description
<b>Forensic Search Module</b>	<b>New module that allows users to search for objects, such as vehicles, humans, or animals, and their attributes. This enables tracking objects across multiple events and cameras. This requires the availability of metadata from ONVIF cameras.</b>
<b>Forensic Search - Person</b>	<b>Ability to search for a person by name or image in Forensic Search. This requires the availability of Face Recognition engines.</b>
<b>Multiple Events Extraction</b>	<b>Ability to extract multiple event videos from different cameras in Forensic Search Module.</b>
<b>Enhanced Player</b>	<b>Enhance archive player for smoother playback.</b>
<b>Linked Cameras</b>	<b>Ability to navigate between nearby cameras based on directions.</b>
<b>Highlighting Objects</b>	<b>Classify and highlight objects on archive timeline.</b>
<b>Embedded timeline</b>	<b>Camera cell embedded timeline.</b>
<b>Interlink – Live events</b>	<b>Ability to receive events from remote sites in real time.</b>
<b>Share Events</b>	<b>Provide interface for third parties to integrate with system events.</b>
<b>Dashboard – Remote Sites</b>	<b>Ability to view live updates of remote sites components in health widgets in Dashboard Module.</b>
<b>Dashboard – Text Editor Widget</b>	<b>Ability to add text or links in the text editor widget in Dashboard Module.</b>
<b>Camera Hardware Information</b>	<b>Ability to collect and save cameras hardware information.</b>
<b>Innovatrics (Smart Face) – Import Person</b>	<b>Enhancement: Ability to import person image and information from Innovatrics Smart Face.</b>
<b>BriefCam</b>	<b>Enhancement: Ability to receive events from BriefCam (L2A).</b>
<b>.NET 8.0</b>	<b>Enhancement: Software updated to .NET 8.0.</b>
<b>Multi-Channel Cameras</b>	<b>Enhancement: Improve configuration and licensing of multi-channel cameras.</b>
<b>Active Directory</b>	<b>Enhancement: Ability to merge/link Perspective VMS users with Active Directory users.</b>
<b>Face Recognition</b>	<b>Enhancement: Event Panel UI enhancements to include detected person information.</b>

### 3.2. Perspective VMS 5.3.2 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Workflow</b>	Improve security by removing login tokens from archive links in workflow E-mail notifications.
<b>PVMS Password</b>	Bug-Fix: Corrected password length limitation for integrations through camera service.
<b>Archive Playback</b>	Bug-Fix: Corrected archive rewind issue for non-English calendar.

### 3.3. Perspective VMS 5.3.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Login</b>	Bug-Fix: Corrected login issue when multi-login is disabled.

### 3.4. Perspective VMS 5.3.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Streaming - H.265</b>	Ability to view live streaming using H.265 codec if hardware supports it. Supported browsers: Chrome, Edge (with an extension) and Brave.
<b>Interlink - Remote Site License Management</b>	Ability to view and manage remote sites' licenses from HQ.
<b>Interlink - Remote Sites License Report</b>	A report to view remote sites' license information.
<b>Dewarping - Vivotek Cameras</b>	Ability to process images from fisheye camera to different views.
<b>Frameless Stream</b>	Ability to remote login to view cameras streaming as player only.
<b>Frameless Playback</b>	Ability to remote login to view cameras playback as player only.
<b>Bosch AMS - Integration</b>	Ability to receive events from Bosch AMS.
<b>Equature - Integration</b>	Ability to redact extractions to provide more privacy.
<b>Innovatrics (Smart Face) - Face Recognition Integration</b>	Ability to receive events from Smart Face.
<b>6SS - General Analytics Integration</b>	Ability to receive events from 6SS.

<b>Gallagher Access Control Device Import</b>	– Enhancement: Ability to import door/readers from Gallagher Access Control.
<b>Gallagher Access Control Device Status Monitoring</b>	– Enhancement: Ability to receive live status for devices from Gallagher Access Control and display it in map module.
<b>Device Actions</b>	Enhancement: Ability to assign actions to groups when adding the device.
<b>Multi Hierarchy Camera Collection</b>	Enhancement: Ability to create and view camera collections in multi hierarchy format.
<b>Windows Authentication</b>	Enhancement: General improvements on windows authentication.
<b>Extractions - Access level</b>	Enhancement: Ability to maintain access level last selection when creating extractions.
<b>API - Cameras GPS</b>	Enhancement: Expose cameras GPS location through API.
<b>API - Dynamic Resolutions</b>	Enhancement: Expose cameras dynamic resolutions through API.
<b>API - Dewarping</b>	Enhancement: Expose dewarping information for remote cameras through API.
<b>Archive - Datetime</b>	Bug-fix: Corrected issue of maximum datetime being displayed for archives records in ADAM.

### 3.5. Perspective VMS 5.2.2.1 (EBF Release)

This version is a **EBF Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Install Shield</b>	Bug-Fix: Corrected issue of Camera Service not supporting secure connection to API server.

### 3.6. Perspective VMS 5.2.2 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Camera Edge Archiving</b>	Bug-Fix: Corrected issue of archive not stopping on the camera event end signal, leading to continuous recording.

### 3.7. Perspective VMS 5.2.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Active Directory Integration</b>	Bug-Fix: Corrected issue of Active Directory synch not working if filtered group is deleted.
<b>Fleet Archive Import</b>	Bug-Fix: Corrected issue in Vehicle Archive Importing.
<b>API</b>	Bug-Fix: Corrected issue of retrieving Remote Camera Id.
<b>API</b>	Bug-Fix: Corrected issue of License API not retrieving Server number.
<b>Video Collage</b>	Bug-Fix: Corrected issue of Video Collage displaying multiple record in Image Extraction event panel.

### 3.8. Perspective VMS 5.2.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Dashboard – Map Widget</b>	Ability to add map viewers as a widget in dashboard module.
<b>Dashboard – Camera Widget</b>	Ability to add Camera player as a widget in dashboard module.
<b>Dashboard – Chart Widget</b>	Ability to group results by Source, Events, Control list or Vehicle Classification for LPR events
<b>Dashboard Module</b>	Enhancement: Order dashboards in list alphabetically.

<b>Live Events</b>	Enhancement: Ability to view Camera edge events as overlay in camera cell of camera viewer.
<b>Camera Edge Events</b>	Enhancement: Improve Axis edge analytic support to specify the event type and view the VCA drawing.
<b>Camera Edge Events</b>	Enhancement: General enhancements on the administration part of Camera edge events.
<b>License Plate Report</b>	Enhancement: Ability to exclude vehicle image and plate image from license plate report.re
<b>Archiving Service</b>	Enhancement: General enhancements of performance and memory utilization.
<b>API</b>	Enhancement: Add additional features and property under API version 2.
<b>API</b>	Enhancement: Expose Camera PTZ commands through API.
<b>Edge Recording</b>	Bug-Fix: Fix the problem of archive gaps being proceed on first run only.
<b>Install Shield</b>	Bug-Fix: Fix the problem of SQL Server installation failures occurring randomly.

### 3.9. Perspective VMS 5.1.2 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Administration Service</b>	Bug-Fix: Corrected memory leak issue.
<b>Archiving Service</b>	Bug-Fix: Corrected issue of service taking too long to start or stop when Web Server (IIS) is down.
<b>Camera Service</b>	Bug-Fix: Corrected issue of Camera Service unable to validate new client requests after API restart.
<b>Camera Selector Panel</b>	Bug-Fix: Corrected issue of left panel disappears after opening all cameras dialog from event info panel.

### 3.10. Perspective VMS 5.1.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Camera Selector Panel</b>	<b>Allows users to easily manage their camera views by providing a side panel within the Camera Viewer and Archive module, allowing them to add or remove cameras from their current view with just a few clicks.</b>
<b>Access Control Integration - Device Status Monitoring</b>	<b>Ability to receive live status from devices within an integrated Physical Access Control System (PACS) software and display it in map module.</b>

<b>System Galaxy - Device Status Monitoring</b>	<b>Ability to receive live status for devices from System Galaxy and display it in map module.</b>
<b>RS2 AccessIt! - Device Status Monitoring</b>	<b>Ability to receive live status for devices from RS2 AccessIt! and display it in map module.</b>
<b>Camera Service (RTSP Server)</b>	<b>Build enhancement that enables 3rd party systems to playback PVMS camera archives through RTSP stream.</b>
<b>Camera Service (RTSP Server)</b>	<b>Build enhancement that allows PVMS Streaming and Archiving Services to connect to camera stream through Camera Service.</b>
<b>LPR – Vehicle Classification</b>	<b>Build enhancement that allows users to view and filter LPR events by vehicle classifications including Country, Make, Model, and Vehicle Color.</b>
<b>Auto Focus (Camera)</b>	<b>Ability to auto focus Vivotek cameras from within the camera viewer container.</b>
<b>Interlink - Archive Copy Progress Report</b>	<b>A report to illustrate the archive copy progress for all remote cameras.</b>
<b>Camera Viewer - Live Events</b>	<b>Build enhancement that allows users to view Device and Analytic Rule events as overlay in Camera cell.</b>
<b>Open ALPR Integration</b>	<b>Ability to receive No Plate and Parked Vehicles events.</b>
<b>Halo Detector Integration - Event</b>	<b>Ability to receive events from Halo Smart Sensor Vape and air quality sensor</b>
<b>Halo Detector Integration – Camera Model</b>	<b>Add camera model for Halo Sensor to allow ability to view Sensor dashboard or graph as camera.</b>
<b>Advanced Detection Technology UVIS Integration</b>	<b>Ability to receive events for Under Vehicle Inspection System from Advanced Detection Technology.</b>
<b>SkiData Ticket Printing</b>	<b>Ability to send License Plate to SKiData to be printed on the parking ticket.</b>
<b>Gallagher Access Control - Events</b>	<b>Ability to receive events from Gallagher.</b>
<b>Gallagher Access Control – Cardholder Image Importing</b>	<b>Ability to import cardholder images from Gallagher Access Control.</b>
<b>Gallagher Access Control – Actions</b>	<b>Ability to control (open, close) door controls within Gallagher Access Control.</b>
<b>Interlink - Archive Copy</b>	<b>Enhancement: Improve archive copy of remote cameras from remote site to HQ.</b>
<b>Events Panel - LPR</b>	<b>Enhancement: Improve style of event panel to support vehicle classifications.</b>
<b>Access Control Integration - Device Importing</b>	<b>Enhancement: Ability to set Minimum Event Date from device import dialog.</b>
<b>License Plate Report</b>	<b>Enhancement: Improve style of License Plate report to support vehicle classifications.</b>

<b>Interlink Streaming Enhancement</b>	Enhancement: Interlink – Support streaming from HQ server for remote cameras
<b>Event Panel</b>	Enhancement: Improve event panel performance for large events with high frequency
<b>Dashboard Module</b>	Enhancement: Enhance Dashboard module accessibility from administration
<b>Archive Threshold Control</b>	Enhancement: Add system wide setting to disable target retention logic for all cameras.
<b>UI Notifications Enhancement</b>	Enhancement: Improve UI notifications for camera and device events to near real time
<b>Arabic Readability Enhancement</b>	Enhancement: Improve readability of Arabic font
<b>Image Snapshot</b>	Enhancement: Improve readability of camera name and datetime in snapshot
<b>Global Search</b>	Enhancement: Ability to navigate to remote cameras administration from global search
<b>Install Shield</b>	Enhancement: Add option within the services step that allows for service recovery in the event of failure.
<b>Camera Service (RTSP Server)</b>	Enhancement: General enhancements for improved stability and performance.
<b>Archiving Service</b>	Enhancement: General enhancements for improved stability and performance.
<b>Edge Archiving Performance</b>	Bug-Fix: Corrected performance issue in Edge Archiving caused by too many gaps



### 3.11. Perspective VMS 5.0.2 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
Install Shield	Corrected issue of server list not loading all servers.
Install Shield	Update SQL Client from version 11.2 to 11.4 to support TLS 1.2.

### 3.12. Perspective VMS 5.0.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>PTZ Support (Axis)</b>	Bug-Fix: Corrected PTZ settings for locked AXIS models.
<b>Install Shield</b>	Bug-Fix: Corrected Database update issue when upgrading from PVMS v4.3.1 to PVMS 5.0.0

### 3.13. Perspective VMS 5.0.0 (Major Release)

This version is a **Major Release** update, including new features, feature enhancements and maintenance items. See below, for an itemized list of updates and descriptions:

Product Feature Name	Description
<b>Dashboard Module</b>	New module that enables Users to build and view custom dashboards. Leveraging system health widgets and multiple event widgets to visualize Analytic Rules, Device Events, and Camera Events.
<b>LPR Event Validation</b>	Build enhancement that enables support for LPR event validation against 3rd party validator services.
<b>Camera Service (RTSP Server)</b>	Build enhancement that enables Camera Service, allowing 3rd party systems to connect to PVMS cameras through RTSP stream.
<b>Dynamic Interlink</b>	Build enhancement that doesn't require Interlinked Remote Sites to have a static IP.
<b>Log Retention Job (Job)</b>	Ability to set the frequency to run system logs retention routines for Windows IIS and System Access logs.
<b>Event Retention Job (Job)</b>	Ability to Set the frequency to run event logs retention routines for Camera Edge and Server events.
<b>Interlink for All Editions</b>	All Perspective VMS editions v5.0 or later are now Interlink enabled.
<b>Latest PVMS Version Check (Job)</b>	Ability to Set the frequency to check for latest PVMS version.



<b>Vaxtor ALPR - License Plate Recognition</b>	<b>Ability to read license plates and convert to text data using optical character recognition.</b>
<b>LPR Validator</b>	<b>Build integration for LPR Validator: Elm Kashef service for vehicle legal status check.</b>
<b>Modbus TCP/IP – Events</b>	<b>Ability to pull (as events) device reading and status from Programmable Logic Controllers (PLC) through the standard Modbus protocol.</b>
<b>Modbus TCP/IP – Actions</b>	<b>Ability to control devices connected to Programmable Logic Controllers (PLC) through the standard Modbus protocol.</b>
<b>ZKBioSecurity - Events</b>	<b>Ability to pull (as events) Access Control transactions from ZKBioSecurity's Access Control System by ZKTeco.</b>
<b>ZKBioSecurity - Actions</b>	<b>Ability to control (open, close) door controls within ZKBioSecurity Access Control system</b>
<b>ZKBioSecurity - Device Importing</b>	<b>Ability to import door devices into the administration configuration of PVMS from the Access Control database.</b>
<b>Archive Status Report</b>	Enhancement: Enable quick navigation to Camera and Camera Model administration by clicking on their name.
<b>Interlink</b>	Enhancement: Allow establishing interlink connection from remote site.
<b>External Notifications (Email)</b>	Enhancement: Enabling a new Workflow that sends an extraction audit trail in email notification.
<b>Events</b>	Enhancement: Improve loading performance of events.
<b>Alert Pop-up Message</b>	Enhancement: Support wildcard in popup message to include trigger details, in the case of camera, device, and analytic rule triggers.
<b>Archive Jobs</b>	Enhancement: Improve scheduled archive job execution times.
<b>Live Maps</b>	Enhancement: Improve performance of location search in Open Street Map.
<b>Database</b>	Enhancement: Update database compatibility level to latest version, for improved performance.
<b>Administration Service</b>	Enhancement: General improvements in Administration service logic.
<b>Camera Integrations</b>	Enhancement: Added Hanwha Wisenet camera models to the default cameras database.
<b>Archive Module</b>	Enhancement: Set the time for newly added second camera in archive module to existing camera time.
<b>Archiving Service</b>	<b>Bug-Fix: Corrected an issue of TCP connections consumed when attempting to connect to a camera that returns “errfindstreamfailed” errors.</b>
<b>Map Locator</b>	<b>Bug-Fix: Corrected an issue of Map Locator not working from mobile browser.</b>
<b>Archive Threshold Control</b>	<b>Bug-Fix: Corrected an issue of Target days not working in ADAM mode.</b>

## Archive Threshold Control

Bug-Fix: Corrected an issue of Archive secondary oversize it not working.

### 3.14. Perspective VMS 4.5.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
Access Control Integration - Cardholder Image Importing	Ability to import cardholder images for cross reference to video data
Connectors Status Report	A report to illustrate the updated status of an integration connection via external service.
CredoID - Cardholder Image Importing	Ability to import cardholder images from CredoID Access Control software.
Integration Data Synchronization (Job)	Ability to set frequency of data synchronization for integration connectors
Maintenance Period Expiration (License)	Ability for displaying the advanced notice of expiration of software maintenance
RS2 AccessIt!- Cardholder Image Importing	Ability to import cardholder images from RS2 Access Control software.
System Galaxy - Cardholder Image Importing	Ability to import cardholder images from System Galaxy Access Control software.
Shotspotter - Events	Ability to provide event detail and geo location mapping for events generated from ShotSpotter's gunshot detection analytic.
Soter - Vape Detector Event Integration	Ability to provide event detail and camera association with Soter Vape Detection.
Suprema Face Station - Events	Ability to pull (as events) Access Control transactions from Suprema Face Station Access Control System by Suprema.
Suprema Face Station - Device Access Control	Ability to send commands (i.e. Lock/Unlock) to devices within integrated the Suprema Face Station Access Control System (PACS) software from Suprema
Archive Video Extraction	Enhancement: Improve h.264 output on Video Extractions
Web Assembly	Enhancement: Improve Web Assembly with dynamic GOP/GOV
Camera Snapshots (Image Portfolio) Report	Enhancement: Add ability in Camera Snapshot report to select camera(s) from a point in time and take available images from that time
Image Snapshot	Enhancement: Display image time in metadata
Multi-view Presets	Enhancement: Allow for saving of PTZ presets within a multiview preset (provided the PTZ camera is not locked)
External Notifications (Email)	Enhancement: Includes Workflow trigger information in footer of email

<b>Custom Logon Script/Message</b>	Enhancement: Add Active/Inactive toggle checkbox to Welcome Message
<b>Custom Logon Script/Message</b>	Enhancement: Add Active Date/Parameter to Welcome Message dialog
<b>Mobile Browser - Auto Rotate Camera Viewer</b>	Enhancement: Auto-rotate select camera layouts if in mobile browser when rotated
<b>Touch Enabled</b>	Enhancement: Access Control Actions should function on touch enabled devices
<b>User Groups</b>	Enhancement: Improved logic on permissions of delegated groups
<b>Axis - Body Worn Camera Integration</b>	Enhancement: Improved support for encrypted files for Axis Body Worn
<b>ONVIF Camera Discovery</b>	Enhancement: Improved Bulk Add from Camera Discovery
<b>Dynamic Camera Icons</b>	Enhancement: Support for graphic change to the camera icon if reported offline
<b>Tagging</b>	Enhancement: Ability to tag event start/end date/time in order to define the covered period
<b>Dynamic Resolution Multi-View Streaming</b>	Bug-Fix: Corrected an issue in application of dynamic resolution based on number of options for stepping resolution dynamically
<b>Tagging</b>	Bug-Fix: Corrected an issue for create a tag button in camera viewer module would not work in IOS devices
<b>ALPR - License Plate Recognition Events</b>	Bug-Fix: Corrected display of letters in Arabic for LPR
<b>Scheduled Access Login Limitation</b>	Bug-Fix: Corrected auto logoff of scheduled Access Login Limitation

### 3.15. Perspective VMS 4.4.1.1 (EBF Release)

This version is a **EBF Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Sweep Archive Retention (Days)</b>	Bug-Fix: Corrected issue preventing deletion of files under conditions

### 3.16. Perspective VMS 4.4.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
Enhanced WebAssembly (WASM)	Ability to leverage Enhanced WebAssembly for managing archive playback per device

### 3.17. Perspective VMS 4.4.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Alert Pop-up Message (Action)</b>	Ability to trigger via workflow a pop-up message as an action response.
<b>Axis - Body Worn Camera Integration</b>	Ability to integrate and import videos from the Body Worn Camera system from Axis Communications.
<b>Camera List - Quick Actions</b>	Ability to quickly navigate to camera actions from a quick-access menu in the administrative camera list
<b>CredoID - SignalR Events Communication</b>	Ability for Real-time event communications using SignalR with CredoID
<b>Custom Event Panel Administration</b>	Ability to create and manage custom event panels for organizing device or behavioral events.
<b>DMP Panel - Events</b>	Ability to pull (as events) Intrusion Detection transactions from DMP
<b>DMP Panel - Device Access Control</b>	Ability to send commands (i.e. Lock/Unlock) to devices within integrated the DMP Physical Access Control System (PACS) software from DMP.
<b>DNA Fusion - Events</b>	Ability to pull (as events) Access Control transactions from DNA Fusion Access Control System by Open Options
<b>DNA Fusion - Device Access Control</b>	Ability to send commands (i.e. Lock/Unlock) to devices within integrated the DNA Fusion Physical Access Control System (PACS) software from Open Options.
<b>DNA Fusion - Device Importing</b>	Ability to import door devices into the administration configuration of PVMS from the DNA Fusion Access Control System from Open Options
<b>Dynamic Events Panel</b>	Ability to support dynamic actions panel associations where an administrator can assign devices to integration Event Panels
<b>Edge Analytics (Vivotek) - Deep Learning VCA LPR Feature</b>	Ability to support edge LPR events from Vivotek
<b>Event Snapshot Download</b>	Ability to download a snapshot of a defined event from the preview panel including the event metadata
<b>Event-based Trigger (Failover)</b>	Ability to initiate/trigger a programmable action (via workflow routine) based an defined an event from a Failover condition being met

<b>External Service Distribution</b>	<b>Ability to distribute the load of External Service over multiple servers</b>
<b>Google Maps Integration</b>	<b>Ability to leverage Google Maps for associating security objections geographically</b>
<b>Interlink - Remote Events</b>	<b>Ability to link remote events for viewing</b>
<b>Milesight – MJPEG Server-side streaming</b>	<b>Ability to support MJPEG from Milesight cameras</b>
<b>Milesight – H.264 support</b>	<b>Ability to support H.264 from Milesight cameras</b>
<b>Milesight – Edge Motion Detection</b>	<b>Ability to support edge motion detection from Milesight cameras</b>
<b>Print Screen</b>	<b>Ability to generate a user friendly layout for browser printing (Control-P).</b>
<b>RFID Tag Inventory Report</b>	<b>Ability to filter RFID data and run printable RFID Tag Inventory reports.</b>
<b>RFID Device Transactions Report</b>	<b>Ability to filter RFID data and run printable RFID device transaction reports.</b>
<b>SSL Camera Authentication</b>	<b>Ability to support SSL connections to camera devices</b>
<b>WebAssembly (WASM)</b>	<b>The VMS shall have an ability to leverage WebAssembly for managing archive playback per device</b>
<b>Email Settings</b>	Enhancement: Allow for anonymous SMTP mail settings
<b>Share View</b>	Enhancement: Support of the Fleet Module within ShareView
<b>RS2 AccessIt! – Door Control</b>	Enhancement: Includes API integration with SSL for newer versions of AccessIt!
<b>User Group Administration</b>	Enhancement: Allow for saving of group without having camera or map associated
<b>Axis Bi-Directional Audio</b>	Enhancement: Allow for bi-directional audio streaming of Axis Network Speakers
<b>Custom Themes</b>	Enhancement: Ability to make the Whisper Notification location semi-selectable (4 corners or center)
<b>Multi-Level Mapping</b>	Enhancement: Ability to expand/collapse Map items
<b>Custom Logon Script/Message</b>	Enhancement: Ability to assign user groups to Welcome Messages in administration
<b>Touch Enabled</b>	Enhancement: Ability to navigate between multi-view sequence views while using touch-enabled device via a swipe motion
<b>Multi-View Presets</b>	Enhancement: Labeling of multi-view preset in the camera viewer title
<b>Event Panel</b>	Enhancement: A dedicated UVSS event panel to illustrate event specific data and images more clearly
<b>User-defined Schedules</b>	Bug-Fix: Corrected an issue where editing the "Always" schedule will cause duration to be reset to "0" while the value appears as 24 hours on the UI
<b>Full Screen Monitoring</b>	Bug-Fix: Corrected an issue with full-screen on MAC devices
<b>PTZ Control</b>	Bug-Fix: Corrected and issue where the zooming Level in PVMS for PTZ is different than the Zoom level in the Camera Interface



### 3.18. Perspective VMS 4.3.1.1 (EBF Release)

This version is a **EBF Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Streaming Service</b>	Bug-Fix: Corrected an issue causing a black screen under certain conditions while streaming with Version 4.3.1

### 3.19. Perspective VMS 4.3.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Server-Side, Motion-based Archiving (H.264)</b>	Ability to archive on motion via a server-based motion analytic for cameras using the h.264 codec.
<b>Camera Tamper Analytic</b>	Ability to alert or trigger a workflow based upon a global change of the camera image or field of view using a server-based analysis of the video stream.
<b>Event-based Trigger (Workflows)</b>	Enhancement: Improves on "camera event" configuration in workflow triggers
<b>RS2 AccessIt! – Door Control</b>	Enhancement: Supports all RS2 device actions
<b>Administration Service</b>	Bug-Fix: Corrects 4.3.0 (new install) bug for Administration Service in non-AD environments
<b>Workflows by Camera Report</b>	Bug-Fix: Corrects input string error from Version 4.3.0
<b>Archiving Service</b>	Bug-Fix: Corrects error for Edge archiving when the GOP/GOV Length is much larger than the Archiving Frames per second

### 3.20. Perspective VMS 4.3.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Bosch IDS Panel Integration - Events</b>	Ability to pull (as events) Intrusion Detection transactions from Bosch
<b>CredoID Access Control Integration</b>	Ability to pull events from CredoID Access Systems
<b>CredoID Device Import</b>	Ability to import door/readers from CredoID Access Systems



<b>Email Snapshot Resolution</b>	<b>Ability to control email snapshot resolutions when sending from VMS via email.</b>
<b>Facemask Detection Video Analytic</b>	<b>Ability to detect if a person is wearing a face covering</b>
<b>Fleet Trips - Print Route Generator</b>	<b>Ability to print a route driven over a period of time within the Perspective VMS Fleet Module</b>
<b>Gatekeeper UVIS Integration</b>	<b>Ability to integrate with Intelligent Vehicle Undercarriage Scanner (IVUS) from Gatekeeper</b>
<b>Hanwah I/O Support</b>	<b>Ability to support Input/Output controls on Hanwah camera models</b>
<b>RS2 AccessIT! Device Import</b>	<b>Allows for importing of door readers from AccessIT! systems</b>
<b>ONVIF Edge Motion Detection</b>	<b>Allows for Edge Motion detection through ONVIF listener</b>
<b>User Profile – Stretch Stream Option</b>	<b>User option to display defined aspect ratio streams in alternate aspect ratio containers without stretching or cropping the video.</b>
<b>User Profile – Pop-up Notification</b>	<b>User option to display pop-up events</b>
<b>V-Authenticate Visitor Management</b>	<b>Integration with VAMS visitor management from V-Authenticate</b>
<b>Administration Service</b>	Enhancement: Improved deletion logic
<b>Action Button</b>	Enhancement: Allows for user-defined ordering of Action Buttons
<b>Archive Status Report</b>	Enhancement: Allows for filtering of report for status changed since a selected date value
<b>Archive Timeline Control</b>	Enhancement: Ability to scan through archive timeline with thumbnail previews
<b>Badgepass Access Control</b>	Enhancement: Allows for testing of the Badgepass connector from Administration
<b>Behavior Events</b>	Enhancement: Allows map locator column in behavior event information panel table
<b>Camera Models</b>	Enhancement: Addition of various camera models from several manufacturers
<b>Camera Network Settings</b>	Enhancement: Ability to address cameras via hostname
<b>Camera Discovery</b>	Enhancement: Improved camera discovery fields and columns
<b>Devices</b>	Enhancement: Ability to select historical data from newly added devices (integrations)
<b>Hanwah Camera Integration</b>	Enhancement: Ability to support newer protocols for Hanwah PTZ models
<b>Installation Shield</b>	Enhancement: Adds several new options to install shield including the ability to install SQL and Windows services user accounts for stand-alone, distributed, and ADAM servers.
<b>License Key</b>	Enhancement: Allows for tracking of Analog versus IP cameras independently



<b>.NET Framework</b>	Enhancement: Updates target .NET framework 4.8
<b>Scheduled Access Login</b>	Enhancement: Automatically logs off users when outside controlled access window (time)
<b>System Galaxy Access Control</b>	Enhancement: Ability to disregard repeated events during synchronization
<b>User Groups</b>	Enhancement: Addition of default groups for easier mobile user experience management
<b>User Experience</b>	Enhancement: Larger scrollbars for easier grab and drag functionality
<b>Video Collage</b>	Enhancement: Improves video collage extraction speed
<b>Video Collage</b>	Enhancement: Allows for video collage from Vehicle Incidents
<b>WebRTC</b>	Enhancement: Updated to Version 84
<b>Workflows</b>	Enhancement: Allow Acknowledge Response Report to be sent via a workflow
<b>Workflows</b>	Enhancement: Allows Stop/Start archiving upon external event trigger in workflows
<b>Axis Camera Integration</b>	Bug-Fix: Corrects multi-channel sensor configuration for Axis 3717 models

### 3.21. Perspective VMS 4.2.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Device Configuration Report</b>	<b>Provides a report to illustrate the relationship between integration connectors and devices</b>
<b>Event Analytic Playback Overlay</b>	<b>Provides a visible overlay of the analytic event's metadata during playback.</b>
<b>Event Analytic Snapshot Overlay</b>	<b>Provides a visible overlay of the analytic event's metadata via an image snapshot.</b>
<b>Planar Video Wall Distribution</b>	<b>Receives events from Planar Video Wall controllers.</b>
<b>PTZ Presets (Edge)</b>	<b>Ability to optionally set PTZ presets for configuration on the camera (at the edge).</b>
<b>PTZ Return to Home Timeout</b>	<b>Provides ability to set a timeout for PTZ to return to home.</b>
<b>Razberi Monitoring Events</b>	<b>Ability to receive server health alerts from appliances by razberi technologies.</b>
<b>Syslog (SNMP) Device Connection</b>	<b>Ability to add syslog connections for SNMP communication.</b>
<b>WinDSX Integration (DSX Systems)</b>	<b>Ability to pull access control events using WinDSX Events Cast API</b>
<b>Access Log Audit Report</b>	Enhancement: Added ability to log the user access date/time information when viewing archives
<b>Archive Video Extraction</b>	Enhancement: Improved handling of h.265 extractions in browser
<b>Camera Models Setup</b>	Enhancement: Added default models and encoders for various camera manufactures
<b>Camera Security Settings</b>	Enhancement: Allows ability to use anonymous camera access
<b>Camera Viewer Interface</b>	Enhancement: Container connecting background provides user preference option of a black empty background or a background populated by the camera image snapshot (from archives).
<b>CyberExtruder Events</b>	Enhancement: Supports "Uncertain" event category reporting from Aureus integration
<b>Edge-based Motion Settings</b>	Enhancement: Allows ability to set parameters for edge-based motion archiving on select camera models
<b>Interlink (Administration)</b>	Enhancement: Allows ability for SSL support on Interlink configuration deployments
<b>Interlink (Administration)</b>	Enhancement: Allows defined default groups for cameras, maps and remote camera administration

<b>Galaxy Integration</b>	Enhancement: Allows for the use of SignalR communication methods with System Galaxy and Cloud Concierge from Galaxy Control Systems.
<b>Health Monitor Alerts</b>	Enhancement: Issues alert on remote failure to copy archives in an Interlink configuration
<b>LDAP-Signing</b>	Enhancement: Allows for connection configuration settings for LDAP signing requirements.
<b>Mobile Device Configuration</b>	Enhancement: Provision of default user groups with optimized configuration settings for mobile users.
<b>Multi-Sensor Camera Configuration</b>	Enhancement: Enabled edge archiving on multiple multi-sensor camera configurations from Axis Communications.
<b>Workflow – UI Action</b>	Enhancement: Allows for opening a browser tab with a custom URL setting with an automated workflow based upon a triggerable event.
<b>Copy Administration Items</b>	Bug-Fix: Corrected an issue where camera archive settings would not populate on copied camera records.

### 3.22. Perspective VMS 4.1.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>JVA Energizer Fence Integration</b>	<b>Ability to receive events from JVA Technologies Electric Fence</b>
<b>Autonomous Distributed Archive Management (ADAM)</b>	Bug-Fix: Corrected configuration functionality bug (introduced in Version 4.1.0)
<b>Install Shield - Installation Wizard</b>	Bug-Fix: Corrected issue which limited Streaming Service from auto restarting after reboot (introduced in Version 4.1.0)
<b>ONVIF PTZ Handler</b>	Bug-Fix: Corrected issue with camera sequences on ONVIF PTZ handled devices
<b>ONVIF PTZ Handler</b>	Bug-Fix: Corrected missing PTZ preset lists on ONVIF PTZ handled devices
<b>Virtual Output Actions</b>	Bug-Fix: Correct archive configuration limit when using a virtual trigger
<b>Open ALPR</b>	Bug-Fix: Enable proper handling of duplicate records

### 3.23. Perspective VMS 4.1.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
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<b>CommPort UVSS Integration</b>	<b>Ability to receive events and video from CommPort's Under Vehicle Surveillance System</b>
<b>Alert pop-up stream (action)</b>	<b>Ability to trigger via workflow a pop-up stream of a camera as an action response</b>
<b>Live Stream Pop-up Alert</b>	<b>Movable window for streaming camera views from any module</b>
<b>Archive STORE Analysis</b>	<b>Ability to check for unhealthy or missing files on disk</b>
<b>Archive Timeline Seek</b>	<b>Ability to scroll/seek the archive timeline with image previews</b>
<b>Distributed Services Failover</b>	<b>Ability to configure fail-over services on alternative servers for increased system redundancy</b>
<b>Fleet Reports</b>	<b>An area inside of the reports module for launching the fleet reports</b>
<b>Idle Time Event (Fleet)</b>	<b>Ability to auto calculate and tag vehicle idle time in event timeline</b>
<b>Import Vehicle Incident</b>	<b>Ability to schedule vehicle incident imports from fleet recorders</b>
<b>Live Map Distance Measuring</b>	<b>Ability to measure between points and area within Live Maps (Maps Module)</b>
<b>MorphoTrack Events Pull</b>	<b>Ability to pull events from a MorphoTrack reader</b>
<b>Multi-Language Support (French)</b>	<b>Operation in French</b>
<b>Multi-Language Support (Portuguese)</b>	<b>Operation in Portuguese</b>
<b>Privacy Mask for Extractions</b>	<b>Ability to create privacy masks for video extractions</b>
<b>RAIN RFID Events</b>	<b>Ability to receive events and alerts with Impinj RFID connectors and devices</b>
<b>RS2 – AccessIt! Door Control</b>	<b>Ability to control (lock, unlock, pulse) door controls within AccessIt! Access Control</b>
<b>SDK Service (Service) x64</b>	<b>Ability to operate a 64-bit SDK service for 3rd-party interconnectivity with Perspective VMS</b>
<b>Sicurit HyperPower Event Detection</b>	<b>Event detection from Sicurit HyperPower Perimeter detection</b>
<b>Silence Sicurit HyperPower Alarms</b>	<b>Ability to silence Sicurit alarms</b>
<b>System Galaxy - SignalR Integration</b>	<b>Ability to integrate with actions and events with System Galaxy using SignalR communications</b>
<b>Vehicle Camera Health Status Report</b>	<b>Ability to generate health reports on camera health of remote fleet devices</b>
<b>Web Services Architecture Failover</b>	<b>Ability to configure fail-over web services on alternative servers for increased system redundancy</b>
<b>Zensors Analytic Integration</b>	<b>Ability to send images for analysis from Zensors enhanced analytics</b>
<b>Installation Package/Wizard</b>	<b>Enhancement: Improved handling of WSS/SSL configured sites during upgrades</b>

<b>Custom Map Shapes</b>	Enhancement: Allow for drawing of Polygon shapes
<b>Server-Generated Extraction Overlay</b>	Enhancement: Added ability to append the PVMS camera name to the timestamp during extraction
<b>User-defined Schedules</b>	Enhancement: Added ability for including Hours and Minutes to schedule recurrence
<b>Configurable Archive Service Settings</b>	Enhancement: Added optional setting (on by default) for notification of "camera not setup for archiving"
<b>Restrict Access</b>	Enhancement: Renamed "LOCKDOWN" to "Restrict Access"
<b>Authorized Pass-through Authentication</b>	Enhancement: Added ability to disable a generated pass-through login
<b>Event-based Trigger (System Alert)</b>	Enhancement: Added ability for Server Health alert to act as a trigger for a workflow
<b>Multiple Aspect Ratio Viewing</b>	Enhancement: Handle multiple aspect ratios 3:4
<b>Expandable Info Panel</b>	Enhancement: Improved display of fields and details
<b>Fit Window Viewing</b>	Enhancement: Allow for "Fill Screen" and "Borderless" in Archives module
<b>Archive Video Extraction</b>	Enhancement: Display confirmation dialog when user attempts to create an extraction with interval longer than 24 hours
<b>Global Search</b>	Enhancement: Added ability to find cameras by IP address in Global Search
<b>Secondary Archiving Configuration</b>	Enhancement: Added ability for on-demand switching between primary and secondary archives during playback
<b>Camera Setup</b>	Enhancement: Display Primary and Secondary store locations in Administration   Cameras   Cameras grid
<b>Auto Focus (Camera)</b>	Bug-Fix: Correct: AutoFocus not appearing on camera overlay (introduced in Version 4.0.0)
<b>H.264 Support (Hanwah)</b>	Bug-Fix: Adjust name of Hanwah models from Samsung
<b>Global Search</b>	Bug-Fix: Removed dependency of Administration access for searching cameras via global search
<b>Multi-Language Support (Russian)</b>	Bug-Fix: Corrected missing labels for Russian operation
<b>PTZ Control</b>	Bug-Fix: Corrected behavior on zooming select PTZ cameras

### 3.24. Perspective VMS 4.0.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Install Shield</b>	Bug-Fix: Corrected camera username and password field migration (introduced in Version 4.0.0)
<b>Install Shield</b>	Bug-Fix: Corrected servers dropdown population on installer

### 3.25. Perspective VMS 4.0.0 (Major Release)

This version is a **Major Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Analytic Rules Administration</b>	Ability within the Integrations section of Administration for naming and associating analytic rules with cameras for use in alerts and workflows.
<b>Android Mobile App Connection</b>	Connection with Version 4.x to Android Mobile Application
<b>Antenna (RFID) Administration</b>	Ability within the Integrations section of Administration for naming and associating RFID Antennas with cameras for use in alerts and workflows.
<b>Connectors Administration</b>	Ability within the Integrations section of Administration for naming and associating connectors (3rd-party controlling or reference objects) with devices for use in alerts and workflows.
<b>Custom Map Shapes</b>	Ability to design custom shapes for placement on a map
<b>Custom Reports</b>	Ability to save custom report filters and configurations
<b>Event-based Trigger (Multiple Cameras)</b>	Ability to initiate/trigger a programmable action (via workflow routine) based a defined an event from multiple cameras selected at once
<b>Event-based Trigger (White list / Black list)</b>	Ability to initiate/trigger a programmable action (via workflow routine) based an defined an event from a configured control list
<b>Filterable Fleet Timeline Events Legend</b>	Ability to filter via select box on Timeline Legend events for population in corresponding timeline.
<b>Filterable Timeline Events Legend</b>	Ability to filter via select box on Timeline Legend events for population in corresponding timeline.
<b>Fleet Security Management Module</b>	Ability to manage multiple fleet vehicles/devices centrally for viewing video across a timeline of events and including the ability for vehicle incident export.
<b>H.265 Support - Archiving</b>	Ability to archive video in H.265 (HEVC) format.
<b>Highlight Tags</b>	Ability to mark / highlight an area of interest within a tagged event
<b>Interlink Remote Connection</b>	Ability to link multiple remote independent sites for integrated client management
<b>Pelco Analog PTZ (Pelco D) Support</b>	Ability to support integration with analog Pelco-D PTZ control signals
<b>User Defined Side Panel Position Preference</b>	Ability to maintain preferred state of side panel (minimized/maximized) across user sessions.
<b>Vehicle Incident Events</b>	Ability to store vehicle video incidents for retrieval end extraction

<b>Virtual Vehicle Speedometer</b>	<b>Ability to track of vehicle's speed during transit route in association with video</b>
<b>Scheduled Access Login Limitation</b>	<b>Ability to restrict users access to the VMS during selected schedules</b>
<b>Fast Archive Rewind</b>	Enhancement: Allows for immediate rewind of MJPEG archiving from live view regardless of position in time of video/archive file generation.
<b>Administration Service</b>	Enhancement: Improved handling of faulty disks during file management routines
<b>Events Panel – Archive Playback</b>	Enhancement: Allows ability to play audio in events info panel playback
<b>Active Directory Integration</b>	Enhancement: Supports removal of users no longer listed in Active Directory
<b>Camera List (Administration)</b>	Enhancement: Added column for Monitored camera attribute
<b>Extractions Permissions</b>	Enhancement: Added ability to share extractions to a group (similar to presets and sequences)
<b>SDK/API</b>	Enhancement: Various enhancements to Module control via API for 3 <sup>rd</sup> -Party integrations
<b>Archive Timeline Control</b>	Enhancement: Allow for ability to drill into active timeline slider for quick navigation
<b>Connectors</b>	Enhancement: Renamed integration connectors for better interpretation of object
<b>Web Service</b>	Enhancement: Ability for Perspective VMS to operate as a client on Linux Ubuntu
<b>PTZ Sequence Editor</b>	Bug-Fix: Restricted ability to allow Time-to-path to exceed Hold Time
<b>Custom Icons</b>	Bug-Fix: Corrected issue of aspect ratio abnormalities on upload of image files for icons
<b>Side Panel</b>	Bug-Fix: Corrected issue of side-panel opening and closing during module transition

### 3.26. Perspective VMS 3.5.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Access It! Universal Integration</b>	<b>Ability to receive events from RS2 Access Control (Access It!)</b>
<b>ACTi Encoder Integration</b>	<b>Ability to receive video from ACTi Encoders</b>
<b>Aureus 3D Facial Recognition</b>	<b>Ability to receive events from Aureus 3D Facial Recognition</b>
<b>Camera Security Profiles</b>	<b>Ability to associate a password profile policy for camera security</b>



<b>Camera Password Management Push</b>	<b>Ability to auto-generate and push passwords generated in Perspective VMS compliant with designed password policy parameters to compatible cameras</b>
<b>Dual Stream Archiving</b>	<b>Ability to leverage dual camera streams for multi-streamed archiving using unique archiving parameters for each stream</b>
<b>Fleet Object Integration</b>	<b>Feature Set offering the ability to communicate with inputs and outputs of a vehicle fleet, including GIS mapping, Acceleration, Turn-signals and Stop-arms and apply the meta-data with the archived video</b>
<b>GOP/GOV length Adjustment</b>	<b>Ability to the adjust the GOP/GOV rates administratively within the VMS on compatible camera models</b>
<b>HIK I/O Integration</b>	<b>Ability to receive input signals and send output commands with HIK camera models</b>
<b>HIK Edge-based Motion Detection</b>	<b>Ability to receive edge-based motion events from HIK Camera models</b>
<b>HIK Audio Streaming Integration</b>	<b>Ability to stream audio from HIK camera models</b>
<b>Instant Replay – 10 Seconds back</b>	<b>Ability to interact with a quick replay button for instant rewind at 10 second intervals</b>
<b>Live Maps</b>	<b>Ability to integration to dynamic map tools showing street names and site facilities including the ability to search for sites and addresses.</b>
<b>Map Browser – Rapid Camera Loading</b>	<b>Ability to load all cameras from a map with one click from the Camera Dock interface</b>
<b>Map Coordinate Grid</b>	<b>Ability to generate an X,Y coordinate grid overlay to visually represent locations on any map</b>
<b>Multi-Store Archiving</b>	<b>Ability to segregate archiving to a primary and secondary archive store</b>
<b>Open Street map Integration</b>	<b>Integration with OpenStreet Maps®</b>
<b>Pelco NVR Support</b>	<b>Ability to leverage and pull video streams from Pelco NVRs</b>
<b>Rotate Camera Streams</b>	<b>Ability to rotate (via the VMS) camera streams 90, 180, and 270 degrees</b>
<b>Workflow History Report</b>	<b>Report showing historical transaction log of workflow events initiated by an action trigger.</b>
<b>WebRTC Integration</b>	<b>Ability to leverage WebRTC technology for video streaming across browsers</b>
<b>Archiving Service</b>	Enhancement: Archive service will take into account changes at camera settings level and restart the thread accordingly
<b>Map Locator</b>	Enhancement: Added ability to Navigate to Map once called via the Map Locator function
<b>Camera Icon Set</b>	Enhancement: Added ability to choose when to scale objects per individual map



<b>SQL Backup/Restore</b>	Enhancement: Add ability for scheduled SQL backup within Administration   Settings   Backup Utilities
<b>Server Administration</b>	Enhancement: System should query and display Server time and time source
<b>Extraction Detail View</b>	Enhancement: Added Created "Duration" to show how long system took to generate file
<b>Side Panel Interface</b>	Enhancement: Added ability to expand (resize) action panel vertically if more buttons exist
<b>Info Panel</b>	Enhancement: Added support audio playback in archive player in event info panel
<b>Administration: Bulk-edit</b>	Enhancement: Added function for Delete" keyboard button to delete records in administration sections
<b>Distributed Database Communication</b>	Bug-Fix: Addressed issue of extremely large databases recycling event identities
<b>Extractions</b>	Bug-Fix: Optimized Stored Procedures for extremely large databases on the extractions table
<b>Map Layout Designer</b>	Bug-Fix: Corrected issue where Map thumbnail would not show in dialog upon initial save/apply
<b>Map Layout Designer</b>	Bug-Fix: Corrected issue where a map layout could exceed the width of a custom design
<b>Google Chrome</b>	Bug-Fix: System better supports extremely large datasets within cached browser limitations

### 3.27. Perspective VMS 3.4.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Dahua Integration Support</b>	Enhancement: Added integration features for Audio, I/O handling, and PTZ Support
<b>BTZ Integration Support</b>	Enhancement: Added integration features for Bi-directional Audio, I/O handling, and PTZ Support
<b>Camera Models Setup</b>	Enhancement: Prevent overwrites of custom resolution parameters on default models
<b>Database Management</b>	Enhancement: Improved support for extremely large data sets and data management
<b>Installation Wizard</b>	Bug-Fix: Corrected Encryption on install/upgrade
<b>Mozilla Browser Support</b>	Bug-Fix: Corrected behavior in restarting services within Mozilla browsers

#### External Notifications

Bug-Fix: Corrected scenario in generating external reports in incorrect language

### 3.28. Perspective VMS 3.4.0.1/2 (EBF Release)

This version is an **EBF Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Database</b>	Enhancement: Improved speed during upgrade
<b>Install Shield</b>	Bug-Fix: Corrected functionality issue on certain upgrade instances to accommodate removal of old file structures
<b>Install Shield</b>	Bug-Fix: Corrected encrypted xml file implementation during installer.
<b>Administration Service</b>	Bug-Fix: Corrected procedure in Admin service introduced in 3.4.0.1

### 3.29. Perspective VMS 3.4.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Notifications Policy</b>	Ability to determine notification preferences on alerts, specifically which email addresses will be notified upon event occurrence.
<b>Password Policy</b>	Ability to determine password policy qualifiers (character limit and type) for users and camera devices.
<b>Camera Testing Report</b>	Audit report illustrating the last time a camera test was executed per camera
<b>Open ALPR Integration</b>	Ability to detect and define domestic and international License Plates using Optical Character Recognition
<b>Secondary Archiving Configuration</b>	Ability to archive a second continuous archive at a configurable frame per second on all motion-based archiving
<b>Web Service</b>	Enhancement: Improved scaling ability for mobile web browsers
<b>PTZ Control</b>	Enhancement: Improved handling and assignment of advanced PTZ controls per model
<b>Camera Setup</b>	Enhancement: Allow camera description field to be searchable in filter lists and Global Search
<b>Archiving Status Report</b>	Enhancement: Improved results for storage calculations by factoring in Missing Days column
<b>Archiving Status Report</b>	Enhancement: Adjust times from UTC to Web Server time zone

<b>Global Search</b>	Bug-Fix: Corrected functionality from Welcome Module
<b>Dynamic Camera Icons</b>	Bug-Fix: Corrected behavior where icons would remain flashing if multiple triggered at the same time.

### 3.30. Perspective VMS 3.3.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Video Collage</b>	<b>Ability to download multiple camera extractions into a single playback file as a video collage</b>
<b>Wall-Clock Archiving</b>	<b>Alternate method of archive writing using server time vs. P/DTS metadata</b>
<b>Fast-Find</b>	Enhancement: Update Fast Find (MJPEG) results and accuracy
<b>Fast-Find</b>	Enhancement: Handle H.264 searches more efficiently
<b>Archiving Service</b>	Bug-Fix: Corrected occurrence where archive records would be duplicated when moving servers
<b>Health Monitoring Service</b>	Bug-Fix: Correct logic fault when restarting an archive service after server failure

### 3.31. Perspective VMS 3.3.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Professional Edition Software</b>	<b>Introduction of the Professional Edition Version of Software</b>
<b>Archive STORE Location Foreign File Check</b>	<b>Ability to check and automate creation of a PowerShell script for removal of any archive location for any folders or files that are not cataloged in the database as valid archive files</b>
<b>Associated Schedules Report</b>	<b>Filtered report that shows the relationship between selected schedules and cameras</b>
<b>Mass Import / Upload</b>	<b>Ability to upload cameras from a CSV (excel) file</b>
<b>Motion-based Archive Masking</b>	<b>Ability to define select areas for motion detection within a Field of View</b>
<b>Priority Zones – Motion alerts</b>	<b>Provides the user the ability to define priority levels for motion detection zones.</b>
<b>System Galaxy Bi-directional Integration (Video Call-ups)</b>	<b>Ability to communicate via API for event transactions with System Galaxy by Galaxy Control Systems.</b>

<b>UI Action – Audible Alert (Workflow)</b>	<b>Ability to configure audible alerts as a part of a workflow.</b>
<b>User Inactivity Auto-expiration (custom setting)</b>	<b>Ability to set a configurable automatic expiration on user accounts who have not accessed the system in a configurable number of days</b>
<b>Virtual Output Actions (Workflow)</b>	<b>Ability to configure virtual output actions (daisy chain workflows) as part of a workflow</b>
<b>Watermarking</b>	<b>Security technology to provide chain of evidence information</b>
<b>Web Service</b>	Enhancement: Ability to support Digest Authentication
<b>System Health Reporting</b>	Enhancement: Improve DNS configuration impact upon WMI calls
<b>System Health Status Emails</b>	Enhancement: Improve orientation of email alerts for large systems
<b>Archive Video Extraction</b>	Enhancement: Allow for image extractions in queue to be deleted/removed
<b>Global Search</b>	Enhancement: Provide ability for Global Search to remain pinned open after selection
<b>Email Settings</b>	Enhancement: Encrypt sensitive user/password information on configuration
<b>User Groups</b>	Enhancement: Allow ability to define device permissions per user group
<b>Camera/Device Icon Set</b>	Enhancement: Allow for relative scaling of icons on a map
<b>Multi-View Layouts</b>	Enhancement: Allow for incorporation of a 1:1 container size
<b>Map Layout Designer</b>	Enhancement: Re-introduce keyboard controls to the map design tool
<b>Archive History Report</b>	Enhancement: Allow for printing of the Archive History Report
<b>Server Administration</b>	Enhancement: Improve loading of extremely large server data sets
<b>User Mass Editing (Bulk Edit)</b>	Enhancement: Ability to bulk edit user's expiration dates
<b>Archiving Audio</b>	Bug-Fix: Corrected a memory leak found in some h.264 archiving devices
<b>Custom User Profile</b>	Bug-Fix: Correct error when mail domain contains a leading numeric character
<b>Multi-View Presets</b>	Bug-Fix: Correct error on select/switch dialog from selecting a map on very large systems
<b>Archive Video Extraction</b>	Bug-Fix: Increased timeout value to allow for larger video extraction downloads
<b>Multi-Streaming Archive Viewer</b>	Bug-Fix: Corrected condition in Archive View playback when using full screen that would revert timeline

### 3.32. Perspective VMS 3.2.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
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<b>BadgePass Access Control Integration</b>	<b>Ability to pull events and control door functions from BadgePass Access Control</b>
<b>Camera Associative Door Control</b>	<b>Ability to control associated door(s) from the camera overlay to lock, unlock, and pulse door(s)</b>
<b>Event-based Trigger (External Input Alert)</b>	<b>The ability to initiate/trigger a programmable action (via workflow routine) based on defined an event from a configured External Input device</b>
<b>Event-based Trigger (System Alert)</b>	<b>The ability to initiate/trigger a programmable action (via workflow routine) based on defined an event from a System alert</b>
<b>Heat Map Report</b>	<b>Report illustrating the Heat Map analytic results from Video Analytic integration</b>
<b>Integration Objects (SG 600 Series Inputs)</b>	<b>System Galaxy Access Control Integration: Inputs/Outputs</b>
<b>Motion Path Report</b>	<b>Report illustrating the Motion Path analytic results from Video Analytic integration</b>
<b>Quantum Storage Integration</b>	<b>Ability to integrate for long term storage with Quantum Corporation Tape Storage Devices</b>
<b>Samsung Camera Integration (Audio)</b>	<b>Added ability for audio support to Samsung Camera models</b>
<b>SQL Server 2016 Integration</b>	<b>Provides the ability to operate and run using Microsoft SQL Server 2016</b>
<b>Store Status - Archiving Storage Deficit (Analysis) Report</b>	<b>A report showing archiving storage deficits based on archiving targets, actual archive span, and storage capacity.</b>
<b>User Profile - Default Audio Settings</b>	<b>Provides ability to set audio on / off by default when viewing cameras in camera viewer</b>
<b>Video Analytic: Area Counting Analytic</b>	<b>Counting and collection of the number and the dwell time of persons within virtual areas, and for each area signaling of the presence of a number of person higher than a defined threshold</b>
<b>Video Analytic: ATM Analytic</b>	<b>Detection and signaling of one or more than one persons who remain within a virtual area for longer than a defined time</b>
<b>Video Analytic: AVSpeed</b>	<b>Estimation and collection of the average speed of vehicles crossing double virtual gates, and for each double gate signaling of average speed lower or higher than a defined threshold</b>
<b>Video Analytic: Counting</b>	<b>Counting and collection of the number of subjects of interest crossing virtual gates in a certain direction</b>
<b>Video Analytic: Gate Flow</b>	<b>Counting and collection of the number of persons crossing virtual gates in a certain direction</b>

<b>Video Analytic: Hot Zones</b>	<b>Estimation and collection of the percentage of occupancy of virtual areas by subjects of interest, and for each area signaling of an occupancy percentage higher than a defined threshold</b>
<b>Video Analytic: Intrusion Analytic</b>	<b>Detection and signaling of the intrusion within virtual areas or the crossing of virtual lines in a certain direction by targets of interest</b>
<b>Video Analytic: Left Object</b>	<b>Detection and signaling of objects left unattended within virtual areas for longer than a defined time</b>
<b>Video Analytic: Loitering</b>	<b>Detection and signaling of subjects of interest that remain within virtual areas for longer than a defined time</b>
<b>Video Analytic: Occupancy Rate</b>	<b>Estimation and collection of the percentage of occupancy of virtual areas by subjects of interest, and for each area signaling of an occupancy percentage higher than a defined threshold</b>
<b>Video Analytic: Panic Disorder</b>	<b>Counting and collection of the number and the dwell time of persons within virtual areas, and for each area signaling of the presence of a number of person higher than a defined threshold</b>
<b>Video Analytic: Slip Fall</b>	<b>Detection and signaling of a person who lies down and remains on the ground for longer than a defined time</b>
<b>Video Analytic: Stolen Object</b>	<b>Detection and signaling of objects removed from virtual areas</b>
<b>Application Deployment (Out-of-Browser)</b>	<b>Enhancement: Reinroduce Out-of-browser functionality for HTML5 compatibility</b>
<b>Archiving Service Watchdog</b>	<b>Enhancement: Change Archive Service Watchdog from sequential to threaded</b>
<b>Archiving Status (Analysis) Report</b>	<b>Enhancement: Added column for calculating estimating total storage required</b>
<b>Administrative Bulk Edit</b>	<b>Enhancement: Reintroduced bulk edit functionality within Administration for HTML5 compatibility.</b>
<b>Camera Discovery</b>	<b>Enhancement: Reintroduced Camera Discovery utility with Administration for HTML5 compatibility.</b>
<b>Camera Dock</b>	<b>Enhancement: Allow for viewing of map with large expandable camera layout</b>
<b>Camera Dock</b>	<b>Enhancement: Allow for motion indication (red outline box) on docked cameras</b>
<b>Camera Dock: Rapid Map Call-up</b>	<b>Enhancement: Improve rapid map call-up to better handle multiple map associations</b>
<b>Camera Setup</b>	<b>Enhancement: Default select TCP on advanced settings of camera setup</b>
<b>Configurable Archive Service Settings</b>	<b>Enhancement: Added ability to disable thumbnail generation on archives older than a certain date</b>
<b>Conditions Setup</b>	<b>Enhancement: Allow for a timeout of UI action via a duration dialog</b>



<b>Dynamic Camera Icons</b>	Enhancement: Reintroduce dynamic camera icons on the map for HTML5 compatibility
<b>Dynamic Resolution Multi-View Streaming</b>	Enhancement: Improved handling of errant resolution attempts when using default dynamic resolution
<b>Expandable Info Panel</b>	Enhancement: Added ability to control door functions (Lock, Unlock, Pulse) from the events info panel.
<b>Global Search</b>	Enhancement: Global search to include results from Administration / Configuration on camera entries
<b>SSL Support</b>	Enhancement: Support of WSS (Secure WebSockets for full SSL support)
<b>User Mass Editing (Bulk Edit)</b>	Enhancement: Ability to bulk edit user's expiration dates
<b>Archiving Audio</b>	Bug-Fix: Corrected a trans-coding process from G711 that resulted in an ambient ticking noise
<b>Archiving Service</b>	Bug-Fix: Corrected multiple memory conditions resulting from archiving h.264 and h.264 audio on select camera models.
<b>Camera Setup</b>	Bug-Fix: Corrected a delay when opening cameras from administration where a large number of cameras were populated
<b>Fast-Find Analytic</b>	Bug-Fix: Correct motion search coordinate mismatch in 3.1.x
<b>Full Screen Monitoring</b>	Bug-Fix: Corrected condition where Full screen (from multiview in IE 11) displayed behind other camera views
<b>H.264 Archiving</b>	Bug-Fix: Corrected errant population of thumbnail images
<b>Informational Camera Header</b>	Bug-Fix: Adjust archive playback icon synchronization
<b>Multi-Streaming Archive Viewer</b>	Bug-Fix: Corrected condition in Archive View playback when using full screen that would revert timeline

### 3.33. Perspective VMS 3.1.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Auto Focus (Camera)</b>	<b>Ability to auto focus compatible cameras from within the camera viewer container.</b>
<b>Camera Access Report</b>	<b>An ability to run a report show all Users with access to a list of cameras</b>
<b>Drive/Location Failure Status Email Alert Notification</b>	<b>Ability for the system to detect and report via email health status exceptions if a store location path is inaccessible</b>
<b>Reserve Space Email Alert Notification</b>	<b>Ability for the system to detect and report via email when the reserve space on an archive store location is reached.</b>
<b>Services Memory Limit</b>	<b>A configurable setting for capping memory (RAM) utilization by a PVMS service. Upon reaching the threshold the service will be restarted and a alert message will be logged/sent.</b>

<b>Preferred Default Aspect Ratio</b>	Enhancement: Extended default camera ratio to navigation functions (per camera) from Maps and Administration.
<b>Time-lapse Extractions</b>	Enhancement: Extended the ability to extract video in elongated increments (Frames per Minute) to historical archives. This function allows for video to be extracted from higher frame rates into a time-lapse extraction post archiving.
<b>H.264 Streaming (Live)</b>	Enhancement: Reduced latency in live video streaming over higher GOV/GOP rates
<b>Fast-Find (H.264/MPEG4)</b>	Enhancement: More proficient handling of video search (Fast-Find) on video archives
<b>Door Alerts / Events</b>	Enhancement: Added ability to synchronize with compatible door controllers to reduce artificial latency in reporting. *requires a form of time synchronization across devices such as NTP.
<b>Archive Video Extraction</b>	Enhancement: Upon extraction of corrupted video, logging will be imitated and extraction will complete bypassing the corrupted segment.
<b>Configurable PTZ Control</b>	Enhancement: Reintroduced Click-to-Center, Click-to-Zoom, and the PTZ Sphere on compatible cameras in Version 3.x
<b>Archive Redistribution</b>	Enhancement: Auto restart of admin and archiving services upon save of a store when configuring for Archive Redistribution.
<b>Camera Models Setup</b>	Enhancement: Added default Generic camera types/models for each listed manufacturer.
<b>Workflow Editor</b>	Enhancement: Added indicator message if workflow is not enabled/active upon save.
<b>Camera Setup</b>	Enhancement: Added configuration fields for custom configuration of TCP or UDP Multicast on advanced camera configuration.
<b>Image Snapshot Email</b>	Enhancement: Added the username of the sender of the Image Snapshot to the message footer on all emails generated from Image Snapshot.
<b>Health Monitor Service</b>	Enhancement: Added alert if store location reaches reserve space threshold
<b>User Profile</b>	Enhancement: Added Ability to Empty the camera dock on a new session
<b>Access Log Query Report</b>	Enhancement: Added tracking for user initiated sequences and presets.
<b>Multi-view Sequence Editor</b>	Enhancement: Added permission set for users to view “all” sequences
<b>Archive Timeline Control</b>	Bug-Fix: Corrected errant time display of 00:00 for 12:00 PM (noon) in timeline
<b>Archive Timeline Control</b>	Bug-Fix: Corrected scaling of timeline to allow increased vertical scaling
<b>Health Service Settings</b>	Bug-Fix: Corrected condition where health service settings may be defaulted during an upgrade.
<b>Welcome Message</b>	Bug-Fix: Corrected condition where welcome messages where not word-wrapping text in paragraph format.



<b>Health Monitor Service</b>	Bug-Fix: Corrected a condition where ADAM configured sites would send duplicate health messages
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### 3.34. Perspective VMS 3.0.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>System Galaxy Integration</b>	Enhancement: Added User Interface Support for controlling doors with System Galaxy Software from Galaxy Control Systems.
<b>Custom Setting Attributes</b>	Enhancement: Remove plain text phassphrase values for increased application security
<b>Camera Setup</b>	Enhancement: Added resolution setting for <Optimal/Highest> resolution supported by the camera model configuration in PVMS' Camera Model Setup.
<b>Idle Timeout</b>	Enhancement: Allow for configuration of the system idle timeout period.
<b>Camera Integrations</b>	Enhancement: Added model updates to the default cameras database
<b>Live Audio Streaming</b>	Bug-Fix: Corrected known exclusion of live audio support present in Version 3
<b>External Audio Stitching</b>	Bug-Fix: Corrected known exclusion of external audio support present in Version 3
<b>Multi-View Monitoring</b>	Bug-Fix: Corrected incorrectly stacked layouts in Camera Viewer under select browsers
<b>Image Snapshot</b>	Bug-Fix: Corrected condition where a multi-sensor/multi-channel camera could display the incorrect snapshot feed for the selected channel.
<b>Multi-Level Mapping</b>	Bug-Fix: Corrected condition where more than 30 maps in the Maps Module tree could "lock-up" the user interface.
<b>PTZ Control</b>	Bug-Fix: Corrected condition where PTZ control was not relative to the position within the container.
<b>User Profile Settings</b>	Bug-Fix: Corrected ability to save user defined layout
<b>Workflow: UI Action</b>	Bug-Fix: Corrected the navigation to sub-modules of the Administration and Reporting modules as part of a workflow
<b>Out-of-Service (Camera Setup)</b>	Bug-Fix: Enabled ability to "Go Live" from a camera marked out-of-service (within Administration)
<b>System Lockdown</b>	Bug-Fix: Renaming of System Lockdown message
<b>Whisper Alert Notification</b>	Bug-Fix: Enabled configuration to show/hide whisper alerts.

### 3.35. Perspective VMS 3.0.0 (Major Release)

This version is a **Major Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>HTML5 Integration</b>	<b>Ability for Perspective VMS user-interface to operate and stream video within a native HTML5-compliant web-browser</b>
<b>Ultra-High Resolution Support</b>	<b>Ability for system to support archive and streaming of UHD resolution cameras</b>
<b>Whisper Alert Notifications</b>	<b>Ability to notify user of any events in fade-away dialog in bottom right of panel</b>
<b>Network Bandwidth Status Alert Notification</b>	<b>Ability for the system to send an email alert with Network Bandwidth exceeds 95% utilization</b>
<b>Action Button Workflows Report</b>	<b>Ability to display workflows associated to Action Buttons</b>
<b>H.264 Support Playback</b>	Enhancement: Improved performance on h.264 video playback
<b>Server Health Status Email Alert</b>	Enhancement: Improved email alerts with reciprocal send of server status upon returning online
<b>Server Health Status Email Alert</b>	Enhancement: Improved email alerts with alert upon Archive Server status unreachable
<b>Server Health Status Email Alert</b>	Enhancement: Reorient server health email alerts to improve readability in large systems
<b>Camera Status Email Alert</b>	Enhancement: Added camera totals for offline and online cameras to email alert
<b>Snapshots Repository Management</b>	Enhancement: Allow for reference snapshots to be served from Archive servers (in a distributed environment)
<b>Snapshots Cycle Refresh Setting</b>	Enhancement: Modified default setting for snapshot refresh from 20 seconds to 180 seconds to reduce burden on network of large systems
<b>Video Extract Player</b>	Enhancement: Allow for extraction playback to be viewed in full screen
<b>Archiving Status (Analysis) Report</b>	Enhancement: Added filtering of cameras by Server and by Store
<b>Custom Log Level</b>	Enhancement: Consolidated log min/max setting to one field within administration
<b>Maps Module</b>	Enhancement: Added ability to navigate to administration from any map
<b>Layout Editor</b>	Enhancement: Added ability to generate a graphic of a user-defined layout from the custom layout control
<b>Access Log Query Report</b>	Enhancement: Added tracking of user-initiated "Lockdown" in audit report

<b>Edge Archive Recording Settings</b>	Enhancement: Added system settings for edge recordings within Administration Module
<b>Camera Models List</b>	Enhancement: Added more column choices for the camera models list within the Administration Module
<b>Multi-view Presets</b>	Enhancement: Added ability to save presets as the same name, if marked private
<b>Archive Lock Management</b>	Enhancement: Added shortcut to open archive locks in archive module from within Administration Module
<b>Services Administration</b>	Enhancement: Increased timeout for slow responding server/services from remote commands in the Administration Module
<b>Camera Integrations</b>	Enhancement: Added model updates to the default cameras database
<b>PVMS Archiving Log</b>	Bug-Fix: Corrected a condition that would expose camera passwords in plain text in event logs
<b>Fast Archive Playback Control</b>	Bug-Fix: Adjusted Fast-Forward control on H.264 video for variable speeds to compensate for FPS of recording
<b>Image Snapshot Reference</b>	Bug-Fix: Corrected a condition where the continuous setting of an image snapshot may not populate correctly from a Video-codec archive
<b>Administration Service</b>	Bug-Fix: Corrected a condition introduced in Version 2.7.x, where deletion management could become slower than archive writes in very large systems
<b>User Groups / Welcome Message</b>	Bug-Fix: Corrected orphaning of welcome messages when group was deleted with welcome message attached
<b>User-defined Schedules</b>	Bug-Fix: Corrected condition (found with Silverlight) where the Schedules dialog could crash the browser
<b>Frame-by-Frame Archive Playback</b>	Bug-Fix: Corrected a condition that could cause playback to skip after fast-rewind
<b>Install Shield</b>	Bug-Fix: Corrected a condition with previous installs/updates would leave behind orphaned MSI packages in a temporary folder on the system volume

### 3.36. Perspective VMS 2.7.3 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Stores Administration</b>	Enhancement: Improved loading time of camera store location objects in large deployments.
<b>Server Administration</b>	Enhancement: Improved loading time of server objects in large deployments.

<b>Archiving Service</b>	Enhancement: Improved memory increases due to queue buffer threading in the snapshot repository collection process.
<b>Streaming Service</b>	Enhancement: Improved streaming service memory utilization and memory growth on large systems.
<b>Camera Integrations</b>	Enhancement: Added model updates to the default cameras database
<b>Camera Setup</b>	Bug-Fix: Corrected a condition that would prevent camera edits of the corresponding server if the ADAM service routine was not installed on the distributed server.
<b>Archive Audio</b>	Bug-Fix: Corrected a condition that could result in asynchronous Audio and Video under select conditions.
<b>Streaming Service</b>	Bug-Fix: Improved streaming service memory utilization and memory growth
<b>Direct Connection</b>	Bug-Fix: Corrected a condition that resulted in Direct Connection option selection for cameras being ignored.
<b>Real-Time Extraction</b>	Bug-Fix: Corrected a failure condition on real-time extractions of IQinVision cameras
<b>Image Extraction</b>	Bug-Fix: Corrected a condition that could prohibit the deletion of an extraction by a permissioned user under select circumstances.
<b>Image Snapshot Reference</b>	Bug-Fix: Corrected a failure condition on camera snapshot references when set to Interval
<b>Archive Redistribution</b>	Bug-Fix: Corrected a procedure to allow the removal of archives past expiration on store in which the original archives were re-distributed
<b>Audible Alert</b>	Bug-Fix: Corrected condition where full audio file would not play.
<b>Server Health Status Email Alert Notification</b>	Bug-Fix: Corrected an errant email notification for servers offline when a new server is added to the system.
<b>PVMS Streaming Log</b>	Bug-Fix: Corrected types of errors logged in event of a streaming service failure.

### 3.37. Perspective VMS 2.7.2.1 (EBF Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Archive Video Extraction</b>	Bug-Fix: Corrected a condition from Version 2.7.X that would duplicate archive transactions resulting in duplicated video segments within a video extraction
<b>Distributed Database Connectivity</b>	Bug-Fix: Corrected a condition from Version 2.7.X that would duplicate archive transactions resulting in erroneous duplicate data in the archives

table within the SQL database affecting size of the table as well as query reports.

### 3.38. Perspective VMS 2.7.2 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>ONVIF PTZ Handler</b>	<b>Added ability to add a PTZ handler for ONVIF Profile-S compliant devices</b>
<b>Active Directory (Read)</b>	Bug-Fix: Corrected a condition that would prohibit group importing from AD

### 3.39. Perspective VMS 2.7.1 (Maintenance Release)

This version is a **Maintenance Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>UHD Resolution Support</b>	<b>Added ability to support 4K (UHD) resolutions</b>
<b>Web Service SSL</b>	Enhancement: Ensured all external links are pointing to SSL locations, removing mixed content warnings.
<b>Autonomous Distributed Archive Management (ADAM)</b>	Bug-Fix: Corrected a condition that could lock the cameras table resulting in false camera status reporting.
<b>Custom Camera Attributes: Camera Overlay</b>	Bug-Fix: Corrected a condition where Axis cameras would display the date/time header if the "Show Camera Header" attribute was deselected in Additional Attributes.
<b>Events Panel – Archive Playback</b>	Bug-Fix: Corrected a condition where a user without archive permissions could playback archives through tagged events in the expanded Information Panel.
<b>Analog Encoder – Axis</b>	Bug-Fix: Corrected default db model for Axis P7404 and 241Q to include multi-Channel.

### 3.40. Perspective VMS 2.7.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Autonomous Distributed Archive Management (ADAM)</b>	<b>Ability for full autonomous archive management (creation, deletion, protection of archive locks and all other archive management features)</b>

	regardless of consistent network connectivity to a central database. ADAM allows for remote transaction logging of archive storage information during a degraded network state which allows for subsequent merging with the central database when connected.
<b>Axis Joystick Control Integration</b>	Ability to leverage joystick and preset buttons from Axis Communications for navigation of PTZ and selection of pre-defined presets of compatible PTZ cameras.
<b>Camera Image Portfolio Report</b>	A printable report that shows the image snapshot of each camera in the system for assessing camera image quality, focus and field-of-view.
<b>Dahua Camera Integration</b>	Added camera model configuration for Dahua cameras.
<b>Huawei Camera Integration</b>	Added camera model configuration for Huawei cameras.
<b>Pelco Camera Integration</b>	Added camera model configuration for Pelco cameras.
<b>Ipsotek Analytic Events</b>	Added ability to receive events from Ipsotek Video Analytics.
<b>Nedap ANPR Integration</b>	Added ability to receive events from NEDAP devices.
<b>PC-based Joystick Integration</b>	Enhancement: Ability to leverage joystick buttons to select defined PTZ presets. Also allows for PTZ presets to be re-ordered (via drag-and-drop functionality) for correspondence with ordered preset positions.
<b>System Lockdown</b>	Enhancement: Changes lockout status from non-authorized users to immediate upon initiation of the lockdown.
<b>User Groups</b>	Enhancement: Allow for the ability to import permissions, cameras, and maps from one group to another. This enhancement greatly aids the incorporation and configuration of groups imported from Active Directory.
<b>Multi-View Presets</b>	Enhancement: Allows for sharing of multi-view presets to selected groups as well as public and private access.
<b>Multi-View Sequences</b>	Enhancement: Allows for sharing of multi-view sequences to selected groups as well as public and private access.
<b>System Help</b>	Enhancement: Updated embedded help manual using a new HTML5 interface.
<b>Report - Access Log Query</b>	Enhancement: Audit Logging of Play/Download/Delete of Image Extractions.
<b>IP Addressable Camera Setup</b>	Enhancement: Allow for configuration of custom HTTP and RTSP ports per camera.
<b>PVMS Health Monitor Service Email Distribution</b>	Enhancement: Include versioning information in health monitor email reports footer
<b>Workflow External Notifications</b>	Enhancement: Added ability to attach a report from an email notification workflow action
<b>External Audio Stitching</b>	Bug-Fix: Corrected a condition where audio from an external IP source controller, may lose synchronization with associated camera video.



<b>MPEG-4 Support - Playback</b>	Bug-Fix: Corrected a condition where grey framers were interspersed during rewind of MPEG-4 video.
<b>Import Video from Source</b>	Bug-Fix: Corrected a timeout condition on imported videos that may have precluded select videos from logging.
<b>Snapshots Repository</b>	Bug-Fix: Corrected a condition where Image Snapshot Cycle request failures may result in rampant requests before camera can respond. (affected IQinVision cameras)
<b>Neighboring Cameras – Archive</b>	Bug-Fix: Corrected navigation error where neighboring cameras from archive would show time as the incorrect time-zone.
<b>Image Snapshot Reference</b>	Bug-Fix: Corrected error where the snapshot frequency would not save upon edit.

### 3.41. Perspective VMS 2.6.0 (Minor Release)

This version is a **Minor Release** update. There exist new features, feature enhancements and maintenance items, which include:

Product Feature Name	Description
<b>Camera Dock - Rapid Loading</b>	<b>Ability to load all visible cameras from a map to the camera dock</b>
<b>Edge-based motion event detection (Axis)</b>	<b>Ability to support edge-based Motion Detection alerts for Axis</b>
<b>PC-based Joystick Integration</b>	<b>Ability to leverage PC/USB joysticks (including Playstation and Xbox game controllers) for controlling Pan/Tilt/Zoom functionality of compatible cameras.</b>
<b>Map Layout Designer (Keyboard Controls)</b>	<b>Ability to utilize keyboard shortcuts to position cameras (fine-tune) on a map</b>
<b>System Volume Status Email Alert Notification</b>	<b>Ability for the system to detect and report via email health status exceptions if a system volume (C: Drive) is below 1.5 GB in free space.</b>
<b>Real-Time Extraction</b>	Enhancement: System should associate real-time extraction time to the camera/server time-zone rather than the client PC
<b>Archive Threshold Control</b>	Enhancement: Ability to add a storage size limit of archives per camera
<b>Cross Browser Interoperability</b>	Enhancement: Launch Out-Of-Browser if user attempts to login via Chrome or Edge browsers
<b>Archive Video (Image) Extraction</b>	Enhancement: Added ability to prioritize the Extraction Queue
<b>Camera Advanced Settings</b>	Enhancement: Allow for selection of archive stream as source for streaming service
<b>User-defined Schedules</b>	Enhancement: Added a column in the Settings   Schedules list view that shows current status of schedules



<b>Area of Interest - Motion Detection</b>	Enhancement: Modified schedule grid to drop-down selection of schedules for greater control of motion alerts scheduling
<b>External Notifications</b>	Enhancement: Added ability to recognize username or full name when adding an email recipient to workflow
<b>Conditions Setup (Workflows)</b>	Enhancement: Extend withholding time configuration value
<b>Custom Camera Attributes</b>	Enhancement: Optimized layout for custom camera attributes
<b>PVMS Web Log</b>	Enhancement: Change workflow event messages from Debug level to Informational level
<b>Multiview Administration Layouts</b>	Enhancement: Added ability to "un" merge the layouts in Edit Layout control
<b>Direct Camera Interface Link</b>	Enhancement: Added ability to open camera window (from network link in camera setup) in a new full window
<b>User Default PTZ Control Settings</b>	Enhancement: Added ability to invert joystick vertical navigation commands as a user preference
<b>Camera Collection</b>	Enhancement: Renamed Groupings to Camera Collections and moved to the Cameras container to simplify user interface and administration.
<b>Disable Basic Authentication Setting</b>	Enhancement: Added setting to allow for connections without basic authentication
<b>Archiving Service</b>	Bug-Fix: Corrected a memory leak in Archiving Service (under select conditions)
<b>Streaming Service</b>	Bug-Fix: Select cameras (potentially with buggy firmware) may not release sockets if disconnect not properly terminated
<b>Administration Service</b>	Bug-Fix: Prevented occurrence of a break in reconnecting logic when connection fails for administration service
<b>Camera Mass Editing</b>	Bug-Fix: Allow for separation of archive schedules and archive stores when bulk editing
<b>Downloadable Extracts</b>	Bug-Fix: Extraction download should not show complete if not able to download fully
<b>Image Snapshot</b>	Bug-Fix: Image snapshot from a video (h.264) archive better reflects exact scene at moment of capture
<b>Frame-by-Frame Archive Playback Controls</b>	Bug-Fix: Correct condition where rewinding one frame (in h.264) could move forward to closest iframe rather than back
<b>User-defined Schedules</b>	Bug-Fix: Correct condition where system would not allow schedules to become inactive if crossing over midnight
<b>Camera Setup</b>	Bug-Fix: Corrected an error when clicking save after GoTo (live or archive) from Administration

### 3.42. Perspective VMS Version 2.5.2 (Maintenance Release)

Product Feature Name	Description
<b>Panamorph De-warping (Immervision)</b>	<b>Ability to de-warp and navigate (server-side) video from a compatible IP camera with a Panamorph lens</b>
<b>Archive Video (Image) Extraction</b>	Enhancement: More efficient in Image Extraction generation based upon selectable camera resolution
<b>Server Health Report</b>	Enhancement: Add reporting of Analytics Service to system health reports
<b>Multiview Administration Settings</b>	Enhancement: Add Camera Layouts to all license levels
<b>Streaming Service</b>	Bug-Fix: Corrected errant appendage to CGI string on live streaming

### 3.43. Perspective VMS Version 2.5.1.1 (EBF Release)

Product Feature Name	Description
<b>PTZ control support (Panasonic)</b>	Bug-Fix: Controls for vertical movement are inverted and Zoom is too stepped
<b>PTZ control support (Axis)</b>	Bug-Fix: Problem found on newer firmware of some Axis Q-series PTZ

### 3.44. Perspective VMS Version 2.5.1

Product Feature Name	Description
<b>Analytic Communications Service</b>	<b>A service communicating independent analytic packages with Perspective VMS</b>
<b>Camera Tamper</b>	<b>An embedded video analytic that monitors the video and automatically detects camera failure or sabotage</b>
<b>Camera Timeout Value</b>	<b>Ability to custom define the amount of time when a service recognizes a camera stream as not connected (also known as a Timeout interval).</b>
<b>Intrusion Detector / Trip-line</b>	<b>An embedded video analytic that provides automated perimeter monitoring and secure area protection.</b>
<b>Multiview Administration Settings</b>	<b>An ability to define and show/hide both default and custom multi-view arrangements</b>
<b>Object Left Detector</b>	<b>An embedded video analytic that continuously monitors an area to detect objects or baggage that have been left unattended for too long in the scene</b>
<b>Camera List</b>	Enhancement: Allow for increased thumbnail in administration upon hover over a camera object.

<b>Camera Status Testing</b>	Enhancement: Live, archive, and snapshot stream parameters are displayed when testing each for pass or failure from the camera setup screen.
<b>Import Video from Source</b>	Enhancement: Allow for tagging of imported video from import wizard.
<b>Import Video from Source</b>	Enhancement: Allow for text description of each imported video clip.
<b>Import Videos Administration</b>	Enhancement: Allow for direct navigation to imported video within Archives from Administration list.
<b>Import Videos Administration</b>	Enhancement: Allow for post-import modification of date/time of video generation.
<b>System Settings</b>	Enhancement: Added ability to configure archiving service settings within a user interface of the Administration module.
<b>Action Button Trigger</b>	Enhancement: Allow for selectable user notification of action button success within a workflow.
<b>Neighboring Cameras</b>	Enhancement: An improved interface for defining neighboring camera arrangements.
<b>Archive Locking (Archive Lock)</b>	Enhancement: Removed archive lock from default permissions within Archive Module.
<b>Extraction detail view</b>	Enhancement: Added sortable column based on time extraction is generated/created
<b>Logon-based Trigger</b>	Enhancement: Added "Failed" login as a trigger item in workflows.
<b>Configuration Tree</b>	Enhancement: Reordered cameras configuration container in Administration.
<b>Report - Access Log Query</b>	Enhancement: Allow for search of apostrophe character in queries.
<b>User Groups</b>	Enhancement: Added a find/filter control on permissions dialog of User Groups.
<b>PTZ Control</b>	Bug-fix: Improved handling of PTZ errors on non-advanced models.
<b>Camera Mass Editing (Bulk edit)</b>	Bug-fix: Corrected a bug that would remove archive stores information upon bulk-edit.
<b>Install Shield - Installation Wizard</b>	Bug-fix: Corrected a bug that would limit the number of servers listed during a distributed installation to 29 records.
<b>Archiving Status (Analysis) Report</b>	Bug-fix: Modified timeout limitation for the Archive Status Report on a large dataset.

### 3.45. Perspective VMS Version 2.5.0

Product Feature Name	Description
<b>Camera Bitrate/Compression Quality Adjustment</b>	<b>An ability to set a value selection for compression quality (bitrate) if allowed per camera model for streaming bandwidth regulation.</b>

<b>Configuration Import/Export - Camera Model</b>	An ability to Export and Import custom camera model configurations across different systems of Perspective VMS.
<b>Edge-based Recording Import</b>	Ability to pull/import recordings from an SD card either from the camera or directly from the SD card
<b>Edge Storage (Axis)</b>	Ability to record and recall edge based storage on Axis Cameras
<b>Event-based Trigger (Camera Input)</b>	The ability to initiate/trigger a programmable action (via workflow routine) based a defined an input event from a camera
<b>Extraction Editing</b>	An ability to edit or refine extractions via editing start and end times thereby creating a second "trimmed" extraction in addition to the original.
<b>Import Video from Source</b>	An ability to import video files (.mp4, .mov) from an external source such as a mobile phone, tablet, or web-camera. The imported videos may be associated to a selected device and managed within the archive timeline for comparison against other camera objects during an investigation or search.
<b>Imported Videos Administration</b>	An ability to manage imported video information within the Administration module.
<b>Multiple Areas of Interest - Motion Detection</b>	Provides the user the ability to define multiple areas of interest for motion detection.
<b>Preferred Default Aspect Ratio</b>	Allows user to select default / preferred aspect ratio for camera (workflows maps)
<b>Server-Generated Extraction Overlay</b>	An ability to add metadata of a server generated overlay with camera name, date/time onto video extractions.
<b>User Default Archive Module Preferences</b>	Allows each user the ability to define default timeline start time and interval.
<b>Windows 10 - Client Support</b>	Ability for Perspective VMS to operate as a client on Windows 10
<b>Windows 10 - Server Support</b>	Ability for Perspective VMS Server application to operate on Windows 10
<b>Workflows by Camera</b>	An administrative view for showing cameras configured in a workflow.
<b>Workflows by User</b>	An administrative view for showing users configured in a workflow.
<b>Workflows with Cameras Report</b>	A report listing each workflow and associated camera(s)
<b>Workflows with Users Report</b>	A report listing each workflow and associated user(s)
<b>Multi-View Monitoring</b>	Enhancement: Provides text information of connection status when not live streaming.
<b>PTZ Control</b>	Enhancement: Allow for digital zoom of PTZ cameras beyond the optical zoom of the camera itself.
<b>Camera Setup - GUI</b>	Enhancement: Allow for ability for camera changes (additions or make active) to be reflected immediately within the same user session.

<b>Camera Setup - GUI</b>	Enhancement: Allow camera setup to maintain settings when switching models if the model supports the same codec options.
<b>User Default PTZ Control Setting</b>	Enhancement: User option to enable/disable Digital PTZ controls.
<b>Custom User Profile</b>	Enhancement: User profile interface reorganized to 3 distinct sections for easier management.
<b>Camera Status Report</b>	Enhancement: Added filters to camera status report.
<b>Camera Status Testing</b>	Enhancement: Expose connection string attempted if camera status test fails.
<b>Custom Archive Stream Types</b>	Enhancement: Change title names of archive settings to better reflect function
<b>Snapshots Repository</b>	Enhancement: Ability to take an image snapshot (for the snapshot repository) from an archive when no image snapshot path is available.
<b>UI Action - Camera Viewer</b>	Enhancement: Ability to start camera sequences as part of the workflow.
<b>User Default Camera View Arrangement</b>	Enhancement: Allow the user to select Borderless Multi-view as a default arrangement option.
<b>Camera Support Tracking</b>	Enhancement: Allow for bulk-editing of support tracking fields
<b>Camera Viewer Overlay - Advanced Options</b>	Enhancement: Add of feature to navigate to Administration from Archive Camera Container.
<b>Automated Real-Time Extraction</b>	Enhancement: Additional default values for Real-Time Extraction action in workflows.
<b>Universal Camera Model Driver</b>	Enhancement: Camera setup will ignore parameters not enabled by the model itself.
<b>User Groups</b>	Enhancement: Allow for bulk editing of user groups
<b>Expandable Info Panel</b>	Enhancement: Allow for individual filter resets on information panel.
<b>Archiving Service</b>	Bug-fix: Corrected an occurrence where a camera's date/time failure could send errant data in the archive record.
<b>IIS App Pool / Installation Package</b>	Bug-fix: Changed a condition that could cause the default application pool to recycle (log-out users) every 29 hours.
<b>Print-ready views</b>	Bug-fix: Corrected field labels on CSV exports or system reports
<b>SQL Backup/Restore</b>	Bug-fix: SQL utility will write a new folder if one does not exist from path configured in user interface.

### 3.46. Perspective VMS Version 2.4.1.1 (EBF Release)

Product Feature Name	Description
<b>Streaming Service</b>	Bug-Fix: Corrected random behavior noted in 2.4.1.0 that causes camera problem in authentication mechanism

### 3.47. Perspective VMS Version 2.4.1

Product Feature Name	Description
Custom Action (Button)	A user-defined button that can be utilized as a trigger for workflow-based actions. The button may be customized by the configuration user in both text and graphic icon. It will appear where assigned by group permissions on the Actions menu of the Side Panel.
Archiving Status Report	An exportable status report of all active camera's archiving statistics including: Camera Name, Model, IP Address, Archiving Server, Store Location, Oldest Archive Date, Newest Archive Date, Missing Dates, Archive Span, Archive Schedule, Archive Codec, Retention, Motion %, Storage per Day, Total Storage Used, Archive Lock Status.
Event-based Trigger (GUI)	The ability to initiate/trigger a programmable action (via workflow routine) based a defined event such as an input, video analytic, or system message.
Event-based Trigger (Behavioral)	The ability to initiate/trigger a programmable action (via workflow routine) based a defined an event from a configured behavioral analytic device.
Event-based Trigger (Camera)	The ability to initiate/trigger a programmable action (via workflow routine) based a defined an event from a camera.
Event-based Trigger (Door Alert)	The ability to initiate/trigger a programmable action (via workflow routine) based a defined an event from a configured Door device.
Interface Actions (GUI)	Ability to configure a user interface action as part of a workflow
Output Actions	Ability to configure device output actions as part of a workflow
User Mass Editing	Ability to edit multiple user profiles at once (bulk edit).
External Notifications	Enhancement: External delivery (via Email / SMS) of action notifications with snapshot
External Notifications	Enhancement: External delivery (via Email / SMS) of alarm notifications with Video
Archiving Service (Service) x64	Enhancement: When archiving service becomes overloaded, allow option to drop frames recorded to accommodate.
Archive Timeline Control	Enhancement: Enable timeline slider to encompass entire timeline to simplify user interface upon initial navigation to archive module.
Archive Timeline Control	Enhancement: Allow for larger scaling of archive thumbnails for easier viewing.
Image Extraction Search	Enhancement: Add a progress indicator when Image Extraction is in progress.



<b>Camera Setup – GUI</b>	Enhancement: Added indication in camera setup if variable FPS and/or Resolution are not able to be modified
<b>Camera Setup - GUI</b>	Enhancement: Allows users to add stores directly from Camera Setup page
<b>Camera Setup - GUI</b>	Enhancement: On Edit Camera page should have ability to navigate live and archives
<b>Camera List</b>	Enhancement: Ability to sort on Camera Name, Model, Description, IP, Resolution or Active
<b>Camera List</b>	Enhancement: Ability for sorting by server and store information in the camera list
<b>Camera Icon Set</b>	Enhancement: Added a default icon set for doors
<b>Cross Browser Interoperability</b>	Enhancement: Allow for detection if Google Chrome browser is blocking NPAPI and produce instructions on enabling
<b>ONVIF Camera Discovery</b>	Enhancement: Allow for detection if SSDP service is not running when attempting to use Camera Discovery and provides notification to user
<b>Camera Status Report</b>	Enhancement: Camera Status Report will show cameras that are marked Out-of-Service
<b>Multiple Aspect Ratio Viewing</b>	Enhancement: Allow for 9:16 aspect ratio viewing containers
<b>Welcome and Login (Module)</b>	Enhancement: Keep Top Navigation bar in Welcome Module
<b>System Health Status Email Alert Notification</b>	Enhancement: Health email displays online/offline column next to stalled archives for easier troubleshooting.
<b>Add Users</b>	Enhancement: Alphabetize groups in Add Users dialog box
<b>Add Users</b>	Enhancement: Allow filtering of users on username or full name
<b>Add Users</b>	Enhancement: Provide indication on Users list which users were added via AD
<b>Custom Log Level</b>	Enhancement: Allow for ability to set logging levels for all services from the General Settings
<b>Archiving Service (Service) x64</b>	Bug-fix: Addressed archiving service memory leak (h.264 archiving)
<b>Video Extract Player</b>	Bug-fix: Corrected an issue where video extraction (of large MPX video) were not compiling correctly for external playback.
<b>Multi-Language Support (Spanish)</b>	Bug-fix: Correct various language labels for Spanish translation
<b>AXIS Camera Integration</b>	Bug-fix: Correct problem found in Axis P5534 models whereby without the camera number set it is not controllable

## 3.48. Perspective VMS Version 2.4.0

Product Feature Name	Description
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<b>Archiving History Report</b>	Ability to report on statistical information in graphical format of archive storage utilization per day.
<b>Archiving Status Report</b>	An exportable status report of all active camera's archiving statistics including: Camera Name, Model, IP Address, Archiving Server, Store Location, Oldest Archive Date, Newest Archive Date, Missing Dates, Archive Span, Archive Schedule, Archive Codec, Retention, Motion %, Storage per Day, Total Storage Used, Archive Lock Status.
<b>Audio Streaming (Mobotix)</b>	Ability for audio streaming for Mobotix Cameras
<b>Camera Status Report</b>	An exportable status report of current camera status along with support reference information.
<b>Camera Support Tracking</b>	An ability to annotate reference information for support items per each camera object.
<b>Conditions Setup</b>	Ability to define scheduling conditions for enabling a workflow which consists of defined triggers and customized actions.
<b>Enhanced Recording</b>	An ability for PVMS to enhance normal camera configurations (FPS and Resolution) to a changed state on trigger-able (alarm/alert) conditions defined in a workflow.
<b>External Notifications</b>	An ability to notify externally of PVMS (such as email) on trigger-able (alarm/alert) conditions defined in a workflow.
<b>Logon-based Trigger</b>	The ability to initiate/trigger a programmable action (via workflow routine) based on a user's login.
<b>PTZ Preset Action</b>	An ability to move to a PTZ preset as a result of a workflow on trigger-able (alarm/alert) conditions defined in a workflow.
<b>Server Health Report</b>	Exportable status report of current server status along with support reference information.
<b>System Lockdown</b>	An ability to "one-click" lockdown the video surveillance system enabling access for only select users (based on permission assignments)
<b>Time-based Trigger</b>	The ability to initiate/trigger a programmable action (via workflow routine) based on a specific or recurring time.
<b>Visual Service Status Indication</b>	A visual alert within the events panel, annotating the service status for quick reference.
<b>Workflows Component</b>	Workflows are a logical association of objects, triggers, conditions and actions that allow for integration of physical and logical inputs into on-screen display actions or other notification alerts.
<b>PVMS Favicon (Logo) Update</b>	Enhancement: Updated with new PVMS Logo
<b>Email Settings</b>	Enhancement: Move IoC Email Settings to Database (Administration   Settings)
<b>Health Jobs Scheduler Settings</b>	Enhancement: Move Health Jobs Scheduler Settings to Database (Administration   Settings)

<b>Configuration Software Licensing</b>	Enhancement: Simple license option added for configuration only
<b>Archive Stores</b>	Enhancement: Addition of default Archive Store to new installation (for easier configuration).
<b>Camera List Configuration</b>	Enhancement: Allow for in-line editing of camera information within Camera's administration
<b>Copy Administration Records</b>	Bug-fix: System will not copy picture when copying user record in administration
<b>Copy Administration Records</b>	Bug-fix: System will keep focus on parent record after copy action
<b>Camera Setup</b>	Enhancement: Allow for duplicate IP addressing of cameras for testing or multi-stream
<b>Archive Timeline Control</b>	Enhancement: Add control to minimize Timeline Legend
<b>Archive Timeline Control</b>	Bug-fix: Remove condition where timeline control could become too detailed causing errors with Silverlight plug-in
<b>Arecont Integration</b>	Enhancement: Add multi-sensor support of Arecont models to default database configuration
<b>Mobotix Integration</b>	Enhancement: Add multi-sensor support of Mobotix models to default database configuration
<b>About Perspective VMS</b>	Enhancement: Add information for System Maintenance expiration to About page
<b>Active User Sessions</b>	Enhancement: Change "Delete" session to "Terminate" session for clarification purposes.

### 3.49. Perspective VMS Version 2.3.1.0 (EBF Release)

Product Feature Name	Description
<b>Archive Store Threshold Management</b>	Bug-fix: Resolve condition were moving a camera from one store to another could disable process of deleting archives meeting age threshold
<b>Archive Timeline Control</b>	Bug-fix: Resolve a memory leak in populating thumbnails from H.264 archives
<b>MJPEG Image Extractions</b>	Bug-fix: Resolve a condition for Image Extractions not generating for Motion JPEG archives
<b>Image Extraction Search</b>	Bug-fix: Resolve a condition that limits users from seeing "private" extractions created by the user.

### 3.50. Perspective VMS Version 2.3.0

Product Feature Name	Description
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<b>Archive Threshold Control</b>	<b>An ability that allows a user to determine the condition to remove archives (number of target days achieved or based on drive space only).</b>
<b>Audio streaming integration (IQEye)</b>	<b>Audio Integration for all general IQinVision camera models</b>
<b>Automated Database Size Maintenance</b>	<b>An ability to automatically maintain a database size so that it does not exceed 10GB (for SQL Express Version deployments).</b>
<b>Borderless Multi-view</b>	<b>An ability to view multi-view arrangements without pixel space or borders between containers.</b>
<b>Camera Dock - Rapid Map Callup</b>	<b>An ability that allows users to navigate to maps associated to cameras within the dock.</b>
<b>Camera Status Testing</b>	<b>An ability inside of camera configuration to test the camera stream status.</b>
<b>Custom Logon Script/Message</b>	<b>An ability to create a custom message for users logging into Perspective VMS. This message can be a one-time acceptance by the user, or persistent for each access attempt to the software. The message(s) may be custom tailored for each permission group and multiple messages may be prioritized or ranked for sequential viewing and acknowledgement.</b>
<b>Logon Acceptance Message Report</b>	<b>Provides the ability to generate a report for all users who have agreed to the Custom Logon Message Agreement.</b>
<b>Multi-channel / Multi-Sensor Camera Model Setup</b>	<b>Ability to configure multi-sensor / multi-channel cameras</b>
<b>Scheduled Recording</b>	<b>An ability to schedule various parameters of recording on camera during selected schedules</b>
<b>SQL Backup/Restore</b>	<b>A feature that would allow for an SQL database backup routine to be initiated and/or scheduled through PVMS</b>
<b>Full-screen Typing</b>	Enhancement: Resolved an issue where users were not able to type while in full screen mode.
<b>Fast-Find Analytic</b>	Enhancement: Add multiple clip extract button to Fast-Find Search results
<b>Panasonic PTZ support</b>	Enhancement: Panasonic PTZ Support Handler
<b>PTZ Control</b>	Enhancement: Added digital PTZ support
<b>NTSC/PAL support</b>	Enhancement: Allow for regional resolution support of cameras based on their supported values for NTSC and PAL.
<b>Services (64-bit)</b>	Enhancement: Allowing all services to leverage a 64-bit server infrastructure. This increases memory utilization per service as well as optimizes the host server/pc.
<b>Image Extraction Queue</b>	Enhancement: Allow for the deletion of a pending Image Extraction
<b>SSL Support</b>	Enhancement: Allow for easier configuration of SSL by a select checkbox in Server Administration

<b>Archived Neighboring Cameras</b>	Enhancement: Allow Neighboring Cameras to operate and navigate from Archive Playback in Camera Module
<b>Door Alerts</b>	Enhancement: Changed the grid format for pop-up display of door events
<b>Map Locator</b>	Enhancement: An ability to zoom in map (launched from Map Locator)
<b>Map Administration</b>	Enhancement: An ability to download previously saved maps
<b>Maps Module</b>	Enhancement: Need ability to present lower resolution maps to consolidate bandwidth
<b>Multiple Aspect Ratio Viewing</b>	Enhancement: Support for 8:3 aspect ratios
<b>User Profile</b>	Enhancement: Allow for user default map selection
<b>Tagging Preview</b>	Bug-Fix: Resolved a scenario where a tag will disappear from a preview container.
<b>Snapshot Preview</b>	Bug-Fix: Resolved a scenario where the snapshot preview was generating in low resolution
<b>Fast Archive Playback Control (h.264)</b>	Bug-Fix: Resolved a scenario where multi-speed rewind was not performing in h.264 archives

### 3.51. Perspective VMS Version 2.2.0

Product Feature Name	Description
<b>Archive Stores</b>	<b>Archive Stores provide the ability to dynamically store archived video across one or multiple drive volumes.</b>
<b>Audio out integration (Axis)</b>	<b>Audio out Integration for all general Axis camera models</b>
<b>Bi-Directional Audio</b>	<b>Ability to stream audio out via an on-screen control within the camera overlay of Perspective VMS. The feature utilizes the PC microphone and audio-output on selected cameras.</b>
<b>Camera Scan</b>	<b>Adds a default Multi-view sequence of all cameras the user has access to, enabling the user to quickly scan cameras one after another in a one-up configuration.</b>
<b>Cameras Service Report</b>	<b>An ability to run a report showing cameras marked as Out-of-Service</b>
<b>Group Permissions Report</b>	<b>An ability to run a report show all Groups and inherent permissions of each group for reference.</b>
<b>License Key Entry</b>	<b>Area under help to add license key information</b>
<b>S2 Enterprise Integration - Pull Events</b>	<b>Integration of S-2 Enterprise PACS for association of Access Control events and managed video surveillance.</b>
<b>S2 NetBox Integration - Pull Events</b>	<b>Integration of S-2 NetBox PACS for association of Access Control events and managed video surveillance.</b>
<b>SQL Server 2014 Express Integration</b>	<b>Provides the ability to operate and run using Microsoft SQL Server 2014 (Express).</b>
<b>SQL Server 2014 Integration</b>	<b>Provides the ability to operate and run using Microsoft SQL Server 2014.</b>

<b>TDSi Integration - Pull Events</b>	<b>Integration of TDSi readers for event association to cameras</b>
<b>User Default Map Selection</b>	<b>Provides the user the capability to select their own default map when logging into the Perspective VMS.</b>
<b>Mobile Streaming Enhancement</b>	<b>Mobile streaming service enhancement for iOS and Android devices</b>
<b>Archive Playback Enhancement</b>	Enhancement: Modified h.264 archive video playback increasing responsiveness to rewind.
<b>Android OS</b>	Enhancement: For connection, live streaming, and archive playback using the PVMS App on Android OS platforms 4.4
<b>Custom Overlay Height</b>	Enhancement: Allowing for ignoring pixels of a camera on-screen display overlay from the bottom (as well as the top) of the frame.
<b>Multi-View Dynamic Resolution</b>	Enhancement: For dynamic resolution feature of camera viewing in a multi-view setting allowing for the reconnect of the stream when navigating to a larger container size.
<b>Events Panel Navigation</b>	Enhancement: Allowing for Next/Previous controls on the information panel to review events.
<b>Touch Enabled</b>	Enhancement: For Surface Pro 3 touch inputs
<b>Archive Management</b>	Enhancement: To overall archive file management accounting for orphaned system files
<b>Archive Service Watchdog</b>	Enhancement: To configurable service watchdog utility for monitoring the archiving service

### 3.52. Perspective VMS Version 2.1.1.1/2 (EBF Releases)

<b>Product Feature Name</b>	<b>Description</b>
<b>Camera Health Monitor Check Interval</b>	<b>Ability to custom configure intervals and thresholds for health monitoring on Cameras, Servers, External Systems, and Drive Information</b>
<b>Camera Health Status Email Alert Notification</b>	<b>Ability for the system to detect and report via email health status exceptions such as non-responsive services, cameras offline, or excessive database size growth.</b>
<b>Camera Info and Server Status Health Monitor Check Interval</b>	<b>Ability to custom configure intervals and thresholds for health monitoring on Cameras, Servers, External Systems, and Drive Information</b>
<b>Database Health Status Email Alert Notification</b>	<b>Ability for the system to detect and report via email health status exceptions such as non-responsive services, cameras offline, or excessive database size growth.</b>
<b>External System Health Monitor Check Interval</b>	<b>Ability to custom configure intervals and thresholds for health monitoring on Cameras, Servers, External Systems, and Drive Information</b>

<b>Operating System Health Status Email Alert Notification</b>	Ability for the system to detect and report via email health status exceptions such as non-responsive services, cameras offline, or excessive database size growth.
<b>Server and Drive Info Health Monitor Check Interval</b>	Ability to custom configure intervals and thresholds for health monitoring on Cameras, Servers, External Systems, and Drive Information
<b>Server Health Status Email Alert Notification</b>	Ability for the system to detect and report via email health status exceptions such as non-responsive services, cameras offline, or excessive database size growth.
<b>System Health Status Email Alert Notification</b>	Ability for the system to detect and report via email health status exceptions such as non-responsive services, cameras offline, or excessive database size growth.
<b>User Default Map Selection</b>	Provides the user the capability to select their own default map when logging into the Perspective VMS.
<b>Windows Services Health Monitor Check Interval</b>	Ability to custom configure intervals and thresholds for health monitoring on Cameras, Servers, External Systems, and Drive Information
<b>Archive Playback</b>	Enhancement: For h.264 archive video playback increasing responsiveness to rewind.
<b>Mobile Streaming</b>	Enhancement: For Mobile streaming service enhancement for iOS and Android devices
<b>Mobotix Integration</b>	Bug-Fix: Corrected condition where Mobotix cameras would not archive

### 3.53. Perspective VMS Version 2.1.1

Product Feature Name	Description
<b>Camera Scan Sequence</b>	Adds a default Multi-view sequence of all cameras the user has access to, enabling the user to quickly scan cameras one after another in a one-up configuration.
<b>Controller Types</b>	Ability within the Integrations section of Administration for administering types of 3rd-party controllers and connectors.
<b>Devices Administration</b>	Ability within the Integrations section of Administration for naming and associating 3rd party security devices with cameras for use in alerts and workflows.
<b>S2 Enterprise Integration – Pull Events</b>	Integration of S-2 Enterprise PACS for association of Access Control events and managed video surveillance.
<b>Administration Interface Controls for Integrations</b>	Controller Types, Controllers, Event Controllers, Devices, and Event Levels have been added to administration for configuration of 3 <sup>rd</sup> -party devices and controllers.
<b>Live Streaming</b>	Enhancement:



<b>Image (Frame per Hour) Archiving</b>	Enhancement: Improves archiving utilization for time-lapse video storage.
<b>Streaming/Archiving for (Arecont)</b>	Enhancement: Improves performance handling of Arecont manufactured cameras.
<b>Extract handling from Global Controls</b>	Enhancement: Improves time association of extracts when launched from a global control interface.
<b>Camera Setup</b>	Enhancement: Allows for text fields (hostnames) on camera setup larger than 31 characters.
<b>Archive Timeline Control</b>	Enhancement: Added a refresh button to archive timeline for better forensic analysis.
<b>System Auditing</b>	Enhancement: Added Neighboring camera administration tasks to system audit log
<b>System Help Information</b>	Enhancement: Added Company Name as an editable field in Settings for display on System Help Menu.
<b>Multi-view Arrangements</b>	Enhancement: Added a 5x5 and 5x4 (4x5) layouts to the default multi-view arrangements
<b>Enhanced General User Interface</b>	Enhancement: Various tool-tip and layout enhancements to improve the usability of the general layout and graphical-user-interface (GUI).
<b>Fast-Archive Playback Control</b>	Bug-Fix: Improved responsiveness and synchronization of global controls during FF and REW actions.
<b>SSL</b>	Bug-Fix: Corrected implementation errors in SSL
<b>Mobile Streaming</b>	Bug-Fix: Improved and corrected live streaming on iOS and Android devices.
<b>Live Streaming</b>	Bug-Fix: Removes a condition that may have caused a camera flicker effect when live viewing Motion-JPG cameras.

### 3.54. Perspective VMS Version 2.1.0.1 (EBF Release)

Product Feature Name	Description
<b>Mobile Streaming (iOS)</b>	Bug-Fix: Corrected Streaming on iOS mobile devices

### 3.55. Perspective VMS Version 2.1.0

Product Feature Name	Description
<b>Archive Locking</b>	<b>Provides the user the ability to flag or mark sections of times (or entire days) for exemption from the normal archive deletion routines</b>
<b>Open API/SDK</b>	<b>Provides the ability to render live streaming or archive playback at a set date/time in a controlled browser window of Perspective VMS based on</b>



	<b>an application programmable interface (API) call. Typically associated with Access Control or Intrusion Detection software systems</b>
<b>Camera API Report</b>	<b>Provides a report showing all cameras with camera ID and description</b>
<b>Archive Playback</b>	Enhancement: Improves responsiveness of Rewind and Fast-Forward controls in archive playback
<b>Welcome Module</b>	Enhancement: Added navigation from the Welcome Screen to navigate to Reports
<b>System Help</b>	Enhancement: Added navigation to Training Tutorials from System Help
<b>Customized Support Information</b>	Enhancement: Now allows for custom company name on support tab along with phone number and hours of operation.
<b>Authorized Pass-Through Authentication</b>	Enhancement: Pass-through authentication for 3 <sup>rd</sup> -party integrations allow an administrative function to generate login strings for each user.
<b>Neighboring Cameras – Archive Module</b>	Enhancement: Enhances the users' ability to rewind from a live view camera and call-up associated cameras using the Neighboring feature at the same date/time of the camera being reviewed from Camera Viewer.
<b>Administration Module</b>	Enhancement: Allowing for sort of items such as Last Login and Name fields
<b>Camera Models Setup</b>	Enhancement: Various camera model enhancements for supported camera manufacturers.
<b>General User Interface</b>	Enhancement: Various tool-tip and layout enhancements to improve the usability of the general layout and graphical-user-interface (GUI).
<b>Multi-View Synchronization</b>	Bug-Fix: Improves upon a condition resulting in multi-view latency in Camera Viewer
<b>Multi-View Sequencing</b>	Bug-Fix: Improves upon long-duration play of the multi-view sequence
<b>Full-Screen in Mixed Aspect Ratio</b>	Bug-Fix: Improves the layout and functionality of running a full-screen view from a layout containing both 4:3 and 16:9 layouts
<b>Camera Dock</b>	Bug-Fix: Improves the camera streaming when pulling into and out of the camera dock

### 3.56. Perspective VMS Version 2.0.0

Product Feature Name	Description
<b>Configuration Reports</b>	<b>An area inside of the reports module for launching the administration print-views and configuration reports</b>
<b>EULA Report</b>	<b>Provides the ability to generate a report for all users who have agreed to the End User License Agreement.</b>
<b>User-defined Schedules</b>	<b>A schedule interface tool designed for event/action parameters but that will also customize further the times to record, archive, search for motion or other items.</b>

<b>Camera/Archive Location Reports</b>	<b>Adds a report that associates cameras with archiving location.</b>
<b>Active Directory Integration</b>	Enhancement: Adds the ability to incorporate group permissions from Active Directory into Perspective VMS during the synchronization process.
<b>H.264 Archiving (Axis)</b>	Enhancement: Adds the ability to record variable frame rates for Axis cameras using the H.264 codec.
<b>Install Shield</b>	Enhancement: Adds the ability to configure windows user settings and create application shortcuts during the installation.
<b>Enhanced camera model support</b>	Enhancement: Various camera model enhancements for supported camera manufacturers.
<b>Enhanced Error Management (Out-of-Browser, Neighboring Cameras, SQL Scheduling)</b>	Enhancement: Various enhanced error message corrections and dialog descriptions.
<b>Enhanced General User Interface</b>	Enhancement: Various tool-tip and layout enhancements to improve the usability of the general layout and graphical-user-interface (GUI).
<b>Administration Service</b>	Bug-Fix: Removes the risk for errant archive deletion upon a database connection failure while the administration service is running.
<b>Archive Module Timeline</b>	Bug-Fix: Corrects an error where not all archive days appear on the timeline.
<b>Direct Connection</b>	Bug-Fix: Corrects an error where PTZ cameras in Direct-mode may become inoperable upon edit.
<b>Out-of-Browser user management</b>	Bug-Fix: Corrects an error where a user logged into the Out-of-Browser application is not cleared from the Active Sessions.

### 3.57. Perspective VMS Version 1.5.1.2

Product Feature Name	Description
<b>Motion-JPEG Support - Playback</b>	Bug-Fix: Corrected Pause on target of video
<b>Administration Service</b>	Bug-Fix: Corrected error causing deletion of valid archives upon upgrade
<b>Real-Time Extraction</b>	Bug-Fix: Corrected a User-Interface error upon execution of RTE

### 3.58. Perspective VMS Version 1.5.1

Product Feature Name	Description
<b>Default Camera Resolutions List</b>	<b>Added default set of resolutions for cameras</b>
<b>MJPEG Client-Side Streaming (IQ)</b>	<b>Added ability for IQinVision cameras to operate in Direct Mode</b>

<b>Archive Playback</b>	Bug-Fix: Corrected Archived Audio not pausing on playback
<b>Streaming Service</b>	Bug-Fix: Corrected problem with External Audio source crashing the streaming service
<b>Global Search</b>	Bug-Fix: Corrected window being orphaned on Welcome Module

### 3.59. Perspective VMS Version 1.5.0

Product Feature Name	Description
<b>Automatic Event Purging</b>	The ability to schedule and purge image snapshots of past events from the database at a desired number of days.
<b>Fast-Find (Image)</b>	Ability to quickly search a camera field of view for motion events in a user-defined area by drawing a box and setting a sensitivity threshold.
<b>Line Crossing Report (Axis)</b>	Exportable reports for a line crossing analytic on Axis cameras.
<b>Multiple Aspect Ratio Viewing</b>	Ability for custom defined multiple live streaming camera view arrangements using 4:3 or 16:9 or 16:10 ratios with several pre-defined templates for easy and fast viewing configurations.
<b>Out of Service Identifier</b>	A capability within the User Interface to annotate cameras that are Out-of-Service for planned / remedy maintenance or pre-staging of future installation cameras to alert the user of a known out-of-service condition.
<b>Private Labeling</b>	Ability to modify the user-interface with private labeling options
<b>RFID Reports</b>	Ability to filter RFID data and run printable RFID transaction reports.
<b>SQL Server 2012 Express Integration</b>	Provides the ability to operate and run using Microsoft SQL Server 2012 R2 (Express).
<b>SQL Server 2012 Integration</b>	Provides the ability to operate and run using Microsoft SQL Server 2012.
<b>Windows 2012 Server - Client Support</b>	Ability for Perspective VMS to operate as a client on Windows 2012 Server
<b>Windows 2012 - Server Support</b>	Ability for Perspective VMS to operate as a server on Windows 2012
<b>Windows 8 - Server Support</b>	Ability for Perspective VMS Server application to operate on Windows 8

### 3.60. Perspective VMS Version 1.4.1

Product Feature Name	Description
<b>Live Streaming (Proxy) - H264</b>	Ability to proxy camera streams via the streaming server to workstations where direct connection is unavailable using selectable H264 parameters
<b>OnVIF Profile-S Integration</b>	An ONVIF device compliant to the Profile S is an ONVIF device that sends video data over an IP network to a client. The Profile S also includes support for PTZ, audio and metadata streaming, and relay outputs if

	those features are present on the device. For example, a device compliant to the Profile S may be an IP network camera or an encoder device.
User Default PTZ Control Settings	User profile options allow the user to select their default method of PTZ control (Joystick, Click-to-Center, or Click-to-Zoom)
Unlimited Archive Settings	Enhancement: Corrected exceptions in saving new archive settings and enhanced ability to save as Frames per “Hour” for time-lapse recording
Fast Archive Playback Control	Enhancement: Corrected fast-rewind and fast-forward features for Video archives (H264/MPEG)
External Audio Stitching	Enhancement: Corrected minor distortions in audio quality from external IP sources.
Downloadable Extracts	Enhancement: Lowered default compression to increase overall extracted video quality.
Snapshots Repository	Enhancement: Added a global snapshot repository path in Administration. This allows for easier upgrade migration for distributed systems.
Windows 2003 Server - Server Support	Enhancement: Added install shield support for Windows 2003 server.
Multi-view Presets	Enhancement: Allow for default alpha-numeric ordering of public and private preset lists.
Multi-Language Support (Russian)	Enhancement: Corrected an issue logging in with a Russian Language user.
H.264 Archiving	Bug-Fix: Corrected condition that could result in an extraction not stitching the full time period.
Fast Archive Playback Control	Bug-Fix: Fast-forward/fast-playback does not function smooth on MJPEG at 4X

### 3.61. Perspective VMS Version 1.4.0.1/2 (EBF Releases)

Product Feature Name	Description
Installation Package/Wizard	Enhancement: Disallow installation attempts on non-supported Operating Systems

### 3.62. Perspective VMS Version 1.4.0 (Minor Release)

Product Feature Name	Description
Audio streaming integration client-side/Direct (Axis)	Audio Integration for all general Axis camera models (Series: M, P, Q, 200) in direct-mode connections.

<b>Axis Cross Line Detection</b>	<b>Allows for the incorporation of Cross-Line Analytic behavior from Axis Communications to Perspective VMS.</b>
<b>EULA</b>	<b>A one-time acknowledgement of the End-User License Agreement</b>
<b>External Audio Stitching</b>	<b>Provides the ability to combine an external audio source (secondary IP source) with camera</b>
<b>H.264 Integration (Brickcom)</b>	<b>Basic streaming integration with IP cameras</b>
<b>MJPEG Server-Side Streaming (Brickcom)</b>	<b>Basic streaming integration with IP cameras</b>
<b>MJPEG Server-Side Streaming (Mobotix)</b>	<b>Basic streaming integration with Mobotix IP cameras</b>
<b>MxPEG Server-Side Streaming (Mobotix)</b>	<b>Basic streaming integration with Mobotix IP cameras</b>
<b>ONVIF Camera Discovery</b>	<b>Provides administrators and systems integrators the ability to add cameras directly from the network using a discovery tool. (Applicable to cameras that are ONVIF-Profile but S compliant).</b>
<b>PTZ Support (HIK Vision)</b>	<b>Basic streaming integration with HIK IP cameras</b>
<b>PVMS Favicon</b>	<b>The use of a browser icon shall be available to differentiate the application from other web/browser tabs.</b>
<b>PVMS Debugging webpage</b>	<b>A tool for monitoring active streaming connections within PVMS for troubleshooting and debug purposes.</b>
<b>Support Information Administration</b>	<b>An area within system settings for administering support information</b>
<b>Time-lapse Extractions</b>	<b>Provides the ability to record video in increments of Frames per Hour(s), thereby allowing for archive viewing or video extractions spanning multiple weeks, months, or even years.</b>
<b>Archive Timeline Control</b>	<b>Enhancement: Add Day Intervals for selection</b>
<b>Custom Video (Image) Archive Settings</b>	<b>Enhancement: Add ability to select Frames “per Hour”</b>
<b>Add Users</b>	<b>Enhancement: Add ability to note user’s mobile number to their user account</b>
<b>Display Active User Sessions</b>	<b>Enhancement: Add ability to display mobile users’ active session</b>
<b>PTZ Lock</b>	<b>Enhancement: Make PTZ lock more readily apparent to user</b>
<b>Camera List</b>	<b>Enhancement: Added ability to delete a camera from the list</b>
<b>Global Search</b>	<b>Enhancement: Modify close experience for users</b>
<b>Archive Management</b>	<b>Bug-Fix: Correct inconsistent behavior of Administration service cleaning expired archive files</b>
<b>Archiving Service</b>	<b>Bug-Fix: Addressed a potential memory leak in the archiving service</b>
<b>H.264 Support – Playback</b>	<b>Bug-Fix: Correct date/time stamp movement on h.264 playback</b>
<b>H.264 Support - Playback</b>	<b>Bug-Fix: Correct condition where no thumbnail image was presented</b>

<b>Live Audio Streaming</b>	Bug-Fix: Correct condition where proxy audio streaming interrupts live video
<b>Live Audio Streaming</b>	Bug-Fix: Correct condition where live audio could stop after 3+ minutes
<b>Custom Video (H.246/MPEG4) Archive Settings</b>	Bug-Fix: Correct video type archive setting
<b>Extraction detail view</b>	Bug-Fix: Correct where older extractions where “not found” in Perspective VMS Version 1.3.1
<b>Copy Administration Records</b>	Bug-Fix: Correct copy of groups access when copy of cameras. Error introduced in Perspective VMS Version 1.3.1
<b>Motion Event Pop-up (Preview) Window</b>	Bug-Fix: Correct System Memory Error
<b>Dynamic Camera Icons</b>	Bug-Fix: Correct where thumbnails may maintain on the map after Hover-off
<b>Dynamic Camera Icons</b>	Bug-Fix: Alphabetize list
<b>Dynamic Camera Icons</b>	Bug-Fix: Corrected highlighting of camera list
<b>Multi-View Monitoring</b>	Bug-Fix: Corrected where “View Arrangements” does not appear on first click
<b>Clip Length</b>	Bug-Fix: Corrected Tool-tip on Clip Length setting
<b>Open in Administration</b>	Bug-Fix: Corrected label on button from Camera Overlay
<b>Global Search</b>	Bug-Fix: Corrected where dialog box could cause system to become inoperable
<b>User Groups</b>	Bug-Fix: Corrected issue where permission checkboxes appear to be checked on initial load

### 3.63. Perspective VMS Version 1.3.1 (Maintenance Release)

Product Feature Name	Description
<b>Alert Annotations</b>	<b>Ability to track alert acknowledgement by user/date as well as modify event to mark as active for additional follow up. Marked active event transactions are also tracked by user and date.</b>
<b>H.264 Support (HIK Vision)</b>	<b>Basic streaming integration with HIK IP cameras</b>
<b>Neighboring Cameras - Archive</b>	<b>Provides the ability while in archive playback mode within the camera viewer module, to associate cameras together in custom multi-view arrangement of a logical group for quick display of "neighbor" cameras or devices.</b>
<b>MJPEG Support (HIK Vision)</b>	<b>Basic streaming integration with HIK IP cameras</b>
<b>Open (camera) in Administration</b>	<b>Ability to open the camera administration (based on permissions) from the camera overlay</b>



<b>Services Administration</b>	<b>A configuration area within Perspective VMS to monitor and administer actions performed on PVMS Services such as Start, Stop, and Restart</b>
<b>Acknowledge Response Report</b>	<b>Exportable reports for event acknowledgement / responses by users</b>
<b>Email Settings Configuration</b>	<b>Area within settings to administer default database email server settings</b>
<b>Default Motion Email Settings</b>	<b>Area in configuration xmls for establishing default motion email alerts.</b>
<b>HIK Integration (H.264)</b>	<b>Streaming/Archiving integration with HIK h.264 Codec</b>
<b>HIK Integration (MJPEG)</b>	<b>Streaming/Archiving integration with HIK Motion-JPEG Codec</b>
<b>Administration (User Groups)</b>	Enhancement: Added several default sample user groups with tiered permission sets to assist in rapid installation.
<b>Dynamic Camera View Selector</b>	Enhancement: Added the ability to load large number of cameras (10,000+)
<b>Downloadable Extracts</b>	Enhancement: Added ability to download extractions as standard .mp4 format
<b>Camera Setup</b>	Enhancement: Added the ability to hide the dialog box to restart services each time a camera modification is made in Camera Administration.
<b>Installation Wizard</b>	Enhancement: Simplified process of adding an admin password during the installation wizard.
<b>Map Layout Designer</b>	Enhancement: Added ability to show “inactive” cameras and place them onto a map.
<b>PTZ Control (Click to Zoom)</b>	Enhancement: Ability to Pan/Tilt/Zoom by using a “Click to Zoom” control
<b>PTZ Control (Click to Center)</b>	Enhancement: Ability to Pan/Tilt/Zoom by using a “Click to Center” control
<b>Alert annotations</b>	Enhancement: Ability to un-acknowledge alerts
<b>Print-ready Views</b>	Enhancement: Added the ability, by using a right-click in the administration table, for the user to define which columns should appear in the print-ready view as well as adding ability to sort each column.
<b>Login</b>	Bug-Fix: A correction was made to properly handle Caps Lock which had been incorrect in Version 1.3.0
<b>PTZ Full Screen</b>	Bug-Fix: An error occurred when navigating a PTZ camera out of full screen where the camera would zoom out incorrectly. This has been corrected.
<b>User Profile</b>	Bug-Fix: When launching the user profile widget from the top navigation bar a generic error appeared and has been corrected.
<b>User Account Permissions</b>	Bug-Fix: The multi-login permission was nested in an incorrect hierarchy and has been corrected.

### 3.64. Perspective VMS Version 1.3.0 (Minor Release)

Product Feature Name	Description
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<b>Audio Archiving</b>	<b>Ability to record/archive audio synchronized with video</b>
<b>Audio streaming integration (Axis)</b>	<b>Audio Integration for all general Axis camera models (Series: M, P, Q, 200)</b>
<b>NAS Support</b>	<b>Ability to support Network Area Storage</b>
<b>Windows 8/8.1 – Client Support</b>	<b>Ability to run Perspective VMS client on Windows 8 Operating Systems</b>
<b>Android Mobile App Support</b>	<b>Provides the ability to view Perspective VMS installations on an Android powered mobile device</b>
<b>iOS Mobile App Support</b>	<b>Provides the ability to view Perspective VMS installations on an iOS powered mobile device</b>
<b>Clip Length (Archive Settings)</b>	<b>Ability to set defined clip lengths for recorded video chunks (in minutes)</b>
<b>Door Alert Message</b>	<b>Ability to receive door-based events</b>
<b>Full-screen Archive Monitoring</b>	<b>Ability to monitor video in full screen mode</b>
<b>Panoramic Camera Support (Axis)</b>	<b>Panoramic camera support for Axis models with 360-degree FOV. Will display Overview, Panoramic, and Quad View support.</b>
<b>SSL Support</b>	<b>Ability to support SSL web services for enhanced browsing security.</b>
<b>Remote Software Updates</b>	Enhancement: Allowing for wizard-based updating of Software
<b>Updated Permissions Control and Support</b>	Enhancement: Introduction of a new Administration/Configuration permissions tool for distributed control of User Group permissions
<b>Global Search</b>	Enhancement: Added image extraction parameters to be included in Global Search feature
<b>Megapixel Support</b>	Enhancement: Increased functionality of megapixel support in live and archived viewing
<b>Multi-Monitor Support</b>	Enhancement: Increased functionality of multi-monitor support by allowing user to preserve full-screen in out-of-focus monitor
<b>PTZ Handler Support</b>	Enhancement: Increased use of PTZ handler controls to accommodate alternate PTZ types
<b>Browser Controls</b>	Enhancement: Introduction of controls for notification warnings if exiting the browser window and the ability to operate full screen browsers in multiple monitors regardless of application in use.
<b>IPv6 / Hostname Support</b>	Enhancement: Allow for support of IPv6 and Hostname addressing of Cameras and Servers.
<b>SQL Messaging</b>	Enhancement: Simplify error messaging when database connectivity is lost.
<b>Snapshot Repository</b>	Enhancement: Allow for defined capture of snapshot on fixed interval or on-demand.
<b>Multi-view Monitoring</b>	Enhancement: Allow for fitting video to fill screen
<b>Extractions Download</b>	<b>Bug-Fix: Correct permissions restriction for downloading extraction based on group permissions setting</b>

<b>Informational Camera Header</b>	Bug-Fix: Correct bug with live view status not changing on disconnect
<b>Multi-View Presets</b>	Bug-Fix: Correct condition where preset could errantly revert to another selection.

### 3.65. Perspective VMS Version 1.2.2.1 (EBF Release)

Product Feature Name	Description
<b>Custom Training URL</b>	<b>Offers users the ability to modify web-based training locations for end-users</b>
<b>User Groups</b>	Enhancement: Added ability allowing for deletion of a group with users assigned.
<b>Archive Video Extractions</b>	Enhancement: Add checkbox to open extractions list upon close of dialog box
<b>Cross-Browser Interoperability</b>	Enhancement: Add a limitation warning when clicking the "back" button in web-browsers
<b>Last-Login Report</b>	Bug-Fix: Corrected date format to US Standards
<b>Access Log Query Report</b>	Bug-Fix: Corrected .NET error upon certain selections and print function of report
<b>Access Log Query Report</b>	Bug-Fix: Corrected limitations of report not finishing before reaching end
<b>PTZ Support (Axis)</b>	Bug-Fix: Corrected condition when Axis PTZs would become unresponsive during direct mode configuration.
<b>Multi-Level Mapping</b>	Bug-Fix: Corrected condition where top-map association could become incorrect

### 3.66. Perspective VMS Version 1.2.2 (Maintenance Release)

Product Feature Name	Description
<b>Access Log Query Report</b>	Enhancement: Allow access log reports visible on default permissions groups
<b>Camera Models List</b>	Enhancement: Add camera part numbers to camera models list

### 3.67. Perspective VMS Version 1.2.1.1 (EBF Release)

Product Feature Name	Description
<b>Last Login Report</b>	<b>Provides administrators with at-a-glance "last-login" reporting and audit of users who have logged into Perspective.</b>
<b>PTZ Control (Bosch)</b>	<b>Added integration for Bosch PTZ Controls</b>
<b>MJPEG Support (Bosch)</b>	Enhancement: Added more default models to default database

### 3.68. Perspective VMS Version 1.2.1 (Maintenance Release)

Product Feature Name	Description
<b>MJPEG Support (Bosch)</b>	<b>Motion-JPEG Integration for all Bosch BVIP Cameras</b>
<b>Enhanced System Help</b>	<b>Added embedded administration help section</b>
<b>Update to Global Search</b>	Enhancement: allowing for quick Camera Call-ups from Global Search
<b>System Help</b>	Enhancement: Incorporate administration guide into Help links
<b>User Groups</b>	Enhancement: Allow for Events to be a permissioned item per group
<b>Custom Archive Stream Definitions</b>	Enhancement: Added more default choices for Global Archive Settings
<b>Camera Models Setup</b>	Enhancement: Edit category name and form to simplify setup
<b>Custom Icons</b>	Bug-Fix: Corrected an error that could appear when deleting an icon associated to a Site
<b>Global Search</b>	Bug-Fix: Corrected camera search results not populating in correct view
<b>Maps Module</b>	Bug-Fix: Corrected condition where map items could cluster together on-load
<b>Share View</b>	Bug-Fix: Corrected condition where cameras within dock were not populated on share

### 3.69. Perspective VMS Version 1.2.0.1 (EBF Release)

Product Feature Name	Description
<b>Sites</b>	Enhancement: Simplify nomenclature of sites within administration
<b>Multi-Level Mapping</b>	Bug-Fix: Correct hover-off behavior of map dialog search

### 3.70. Perspective VMS Version 1.2.0 (Minor Release)

Product Feature Name	Description
<b>Dynamic Resolution</b>	<b>Ability for selected cameras with multiple resolution attributes to stream at a size appropriate for larger and smaller container sizes, making streaming more efficient overall.</b>
<b>H.264 Support (Axis)</b>	<b>H.264 Integration for all general Axis camera models (Series: M, P, Q, 200)</b>
<b>Agent Vi Edge Analytic Integration</b>	<b>Integration with Agent Vi Video Analytics</b>
<b>DNA Fusion Integration - PACS Video Call-up</b>	<b>Integration Feature that calls up video within Open Options DNA Fusion (Access Control)</b>
<b>Custom Archive Stream Definitions</b>	<b>Allows for custom string handling of archive types</b>
<b>Printable Settings List</b>	<b>Ability to print the system settings parameters.</b>

<b>Camera Dock Camera Setting</b>	Enhancement: Allow for a custom “max” number of cameras in the dock
<b>Behavior Events</b>	Enhancement: Allow for associating devices (Cameras) to Behavior Events
<b>Motion Events</b>	Bug-Fix: Correct event navigation to beginning of clip
<b>System Help</b>	Bug-Fix: Correct errant link
<b>Extraction and Recording Settings</b>	Bug-Fix: Correct default path

### 3.71. Perspective VMS Version 1.1.1/2/3/4 (EBF Releases)

Product Feature Name	Sales Description
<b>Live Audio Streaming</b>	<b>Ability to stream live audio back to PVMS</b>
<b>Video Analytics</b>	<b>Ability to incorporate 3rd-party behavior-based video analytics within the Perspective VMS Events container</b>
<b>Map Locator</b>	The quick locate function allows the user to find the location of any camera on one (or multiple maps) from within the Camera Viewer. Any map the selected camera is associated with will be displayed in a quick preview window
<b>Fit Window Viewing</b>	Ability for the user to "Fill" or "Fit" the viewing area by not constraining video feeds to maintain defined aspect ratios.
<b>Dynamic Camera Icons</b>	Icons change state based on status (alarm/alert, service/no service)
<b>VMware Workstation Integration</b>	Ability for the application to be installed and maintained on a VMware instance
<b>Camera Viewer Overlay</b>	Enhancement: Re-arrange ordering of overlay icons
<b>Custom Archive Path</b>	Enhancement: Increased ability to bulk edit items with wildcard support
<b>Camera Model Administration - Advanced PTZ Controls</b>	Enhancement: Ability to define advanced custom PTZ controls within the administration of camera models
<b>Camera Security Authentication</b>	Enhancement: Support “show password” checkbox in camera administrative dialog, controlled via group permissions.
<b>Custom Archive Path</b>	Enhancement: Simplify configuration of Archive Path
<b>Camera Dock</b>	Enhancement: Allow for Camera Dock to persist between sessions
<b>Full Screen Monitoring</b>	Bug-Fix: Corrected loss of top navigation when navigating between modules in full-screen

### 3.72. Perspective VMS Version 1.1.0 (Minor Release)

Product Feature Name	Sales Description
<b>SIRIT RFID Integration</b>	<b>Transaction-based event integration with RFID readers and tags from SIRIT.</b>

<b>Behavior Events</b>	<b>Behavior-based event transactions and alerts. Most often used for Video Analytic alarms.</b>
<b>Authorized Pass-through Authentication</b>	<b>Ability to generate an authenticated pass-through login credential to access Perspective VMS from 3rd party software or resources without requiring an additional login.</b>
<b>Camera Setup</b>	Enhancement: Add the ability to capture installation information such as serial number, installation photography, installation date, etc.
<b>Image Snapshot</b>	Enhancement: Add Email button to Image Snapshot
<b>Motion Alerts</b>	Enhancement: Add drop-down list selection for sensitivity
<b>Neighboring Cameras Administration</b>	Enhancement: Add Delete function to administration of Neighboring cameras
<b>Informational Camera Header</b>	Enhancement: Add ability to remove by user
<b>User Profile</b>	Enhancement: Add ability to set custom camera default layouts
<b>PTZ Control</b>	Bug-fix: Adjust fluidity of PTZ Joystick
<b>Multi-level Mapping</b>	Bug-fix: Order maps in tree alphanumerically
<b>Administration Module</b>	Bug-fix: Re-order administration configuration containers

### 3.73. Perspective VMS Version 1.0.1 (Maintenance Release)

<b>Product Feature Name</b>	<b>Sales Description</b>
<b>Installation Wizard</b>	<b>A step-by-step guided process for installing Perspective VMS (Server) at your site.</b>
<b>Silverlight 5 Integration</b>	<b>Integration into Microsoft Silverlight Version 5</b>
<b>Print-ready views</b>	<b>Ability to print configuration views</b>
<b>Simplicity Integration (Intransa)</b>	<b>Integration with Intransa's Simplicity Line</b>
<b>Flexibility Integration (Intransa)</b>	<b>Integration with Intransa's Flexibility Line</b>
<b>Custom Icons</b>	<b>Offers users the ability to upload custom icons for use in the map layout design.</b>
<b>Area of Interest - Motion Detection</b>	<b>Provides the user the ability to define the area of interest for motion detection.</b>
<b>Audible Alert Notification</b>	<b>User-defined audible alert action upon event notification.</b>
<b>Neighboring Cameras</b>	Enhancement: Modification to move the icon to the camera container
<b>Camera Setup</b>	Enhancement: Ordering of camera lists by camera number
<b>Camera Setup</b>	Enhancement: Allow model list sorting
<b>User Account Administration</b>	Enhancement: Reorder and re-categorize settings
<b>Map Layout Designer</b>	Enhancement: Allow for search on map items
<b>Informational Camera Header</b>	Enhancement: Move of camera status icons

<b>User Settings</b>	Enhancement: Allow for setting of “Extended Tool Tips”
<b>PTZ Control</b>	Bug Fix: Corrected PTZ overly refresh rate
<b>Custom Maps</b>	Bug Fix: Corrected hang on uploading a custom map in Chrome

### 3.74. Perspective VMS Version 1.0.0 (Major Release)

Product Feature Name	Sales Description
<b>Camera Dock (Component)</b>	Allows the user to drag and drop cameras from one or more maps into one common area (the Camera Dock) for viewing.
<b>User-defined Schedules</b>	A schedule interface tool allowing for customizing times to record, archive, search for motion or other items.
<b>Video Extract Player</b>	Ability to play extracted video within Perspective VMS and download for external playback
<b>Fast-Find (Component)</b>	Ability to quickly search a camera field of view for motion events in a user-defined area by drawing a box and setting a sensitivity threshold.
<b>Custom Multi-view Sequence Editor</b>	Provides the ability to create user-defined multi-view sequences. The sequences can rotate on a schedule for automated display of unlimited camera arrangements.
<b>Informational Camera Header</b>	A header overlay with relevant information and real-time status about the camera.
<b>Dynamic Camera View Selector</b>	Allows user to select and switch camera view arrangements through the utilization of a dialogue window consisting of thumbnail icons, devices, lists, or map views.
<b>Image Snapshot</b>	Provides the ability to take and download a snapshot image from any one or multiple camera view(s).
<b>System-based Alerts</b>	Diagnostic alerts on system actions of a camera or service
<b>Motion detection based events</b>	Ability to archive on motion via a server-based motion analytic for cameras using the M-JPEG codec.
<b>Authorized User Logon</b>	User generated password protected login for secure and audit-able access to the platform.
<b>Display Active User Sessions</b>	Provides status of all users actively logged into Perspective VMS
<b>Tagging</b>	Ability to mark/flag video, cameras, or events for fast search and quantifiable look-up
<b>Private and Public Extracts</b>	Provides the ability to annotate whether an extract can be viewed by other system users or to be maintained as a private event by the owner and administrator.
<b>Custom Maps</b>	Provides the ability to upload custom generated map files of facilities, grounds, or regions.



<b>Multi-View Monitoring</b>	Ability for custom defined multiple live streaming camera view arrangements with several pre-defined templates for easy and fast viewing configurations.
<b>Browser interoperability and General GUI</b>	Provides the ability to run as a Rich Internet Application, smart-client, in HTML5 compliant browsers, included Microsoft Edge, Mozilla Firefox, Google Chrome and Apple Safari browsers.
<b>Multi-Floor Navigation</b>	Provides the ability to navigate to floors in a building or site location.
<b>Software License</b>	A software license key allows each site to be configured properly towards the scope of work. The license will determine the instance edition (Standard or Enterprise) as well as enable purchased add-on modules.
<b>PTZ Control Sphere (Component)</b>	Provides a unique interactive interface tool allowing the user to navigate the field of view of the PTZ camera using a sphere graph.
<b>Archive Timeline Control (Component)</b>	Dynamic timeline control for fast searching and visual historical search navigation
<b>Map Integration</b>	Ability to add custom or pre-defined map images into Perspective and add dynamic camera icons providing accurate situational awareness for a facility or site.
<b>Multi-view Presets</b>	Ability to save a selected camera configuration and view as a preset for quick retrieval.
<b>PTZ Sequence Editor (Tour)</b>	Ability to configure PTZ presets into a tour configuration
<b>PTZ Presets</b>	Ability to control PTZ cameras and set preset stopping coordinates.
<b>Virtual Pan/Zoom</b>	Ability to digitally pan and zoom on any image from any camera view, providing more analysis of an area of interest.
<b>Streaming Archive Player</b>	Ability to playback archived video.
<b>Motion-JPEG Recording</b>	Ability to record and archive video in Motion-JPEG format
<b>H.264 Recording</b>	Ability to record and archive in H.264 format.
<b>Share View</b>	A collaboration tool providing the ability to dynamically share any view the user is currently seeing with any other user.
<b>Send Message</b>	Allows users to send messages within the application
<b>Active Directory (Read)</b>	Active Directory Integration
<b>Maps Module (Module)</b>	An interface providing an at-a-glance geographic overview of the site or entire enterprise with the ability to interact with cameras and devices for relative field-of-view. Ideal for real-time situational awareness and to build visual familiarity of the...
<b>Camera Viewer Module (Module)</b>	The Camera Viewer module provides live video viewing, enabling you to monitor one or more live Views, create Sequences of Multi-Views, quickly initiate on-demand recording, manipulate Pan-Tilt-Zoom ("PTZ") cameras, and quickly review recently archived vi...



<b>Real-time Extraction (Component)</b>	Ability to live record and extract video with or without motion or external trigger by a simple one-click interface on any camera view.
<b>Welcome and Login (Module)</b>	Welcome area with navigation to components and modules within Perspective VMS
<b>Visual Camera Status Indication</b>	A visual alert within the events panel, annotating the camera status for quick reference.
<b>Send Messages</b>	Ability to send and receive messages between users.
<b>Downloadable Extracts</b>	Ability to download and view extracts in a standard video player
<b>Extraction List/View</b>	A customized and filter-ready list view of extracts made.
<b>Tutorial Videos</b>	Interactive tutorial videos showing brief functional instructions to common operating interfaces.
<b>SQL Server 2008 R2 Integration</b>	Provides the ability to operate and run using Microsoft SQL Server 2008 R2.
<b>Silverlight 4 Integration</b>	Perspective VMS operates and runs in a Microsoft Silverlight environment
<b>Archive Module (Module)</b>	Allows users to quickly locate and playback archived video, provides functionality for timeline based archive retrieval, event and archive integration, downloading and sharing archived video and tagging archived information.
<b>Out-of-browser</b>	Provides the ability to run as a desktop client without the need of any browser.
<b>Multi-Level Mapping</b>	Provides the ability to navigate multiple maps through an intuitive interface with dynamic pan-tilt and zoom on each graphic.
<b>Multi-Streaming Archive Player</b>	Ability to playback multiple archived video streams simultaneously.
<b>Neighboring Cameras</b>	Provides the ability to associate cameras together in custom multi-view arrangement of a logical group for quick display of "neighbor" cameras or devices.
<b>Custom Map Layers</b>	Ability to add definable layers to any map. These layers can be hidden or exposed depending on user configuration and preference.

## 4. Full Product Feature List

A full product feature list can be found online at ([Features List Link](#))



The Power of Perspective



Perspective**VMS**



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