To: DW® customers
Date: October 10, 2019
Re: DW Spectrum® IPVMS
v4.0.0.29787 software update

DW Spectrum® IPVMS v4.0.0.29787 software update

New Software Version: v4.0.0.29990
Previous Software Version: v3.2.0.28749
Release Date: 11/4/2019

NEW FEATURES

- H.265 for ONVIF devices - the H.265 codec is now supported for cameras detected and managed via ONVIF.
- Layout-as-an-action - a predefined layout can be opened when an event occurs.
- Failover on storage failure - failover now also occurs when all designated storage drives fail on a server.
- Encrypted video and HTTPS communications - added the ability to force the system to use HTTPS and to encrypt video traffic.
- Cloud system merge - cloud connected systems can now be merged together. In order to merge the same user must have the owner role in both systems.
- Secure export - .exe, .nov exported files can be protected by a password (option is only available from the multi-video export tab on the export dialog).
- Username on watermark - when "Display watermark with username over video" option is checked the username of the operator who exported the video is displayed on exported video and while viewing.
- Import offline video to archive - users can now import offline video files (from wearable cameras, action cams, drones, etc) into archive and associate with a virtual camera which can be used like any other camera in a system.
- RTSP / HTTP dual stream support - users can now add two streams when creating an RTSP/HTTP camera which enables dual streaming and adaptive scaling. When a secondary stream is added the primary stream also becomes modifiable.
- Webcam support - webcams (built-In and USB) are now supported on Windows®, and Ubuntu® Linux® operating systems with dual-streaming and audio support. Great for demos, operator response recording, and more.
- Metadata SDK and Plugins - A software development kit (SDK) for rapid integration of intelligent 3rd party systems and devices. Includes a comprehensive feature set designed for AI and deep-learning driven computer vision applications focused on object recognition and automation. Using the metadata SDK developers can create plugins for the server application that take advantage of key new features, including:
    - Metadata search by attributes, time interval or region of interest on camera.
    - Object overlays on live video and playback.
    - Camera-specific video analytics settings.
    - Programmatic creation of custom events in the rules engine.
    - Plugin configuration in a new tab in system administration dialog.

NEW FEATURES (CONT.):

- C2P integration - Integration with Convergence to Pixels (aka C2P), a product that integrates a wide variety of 3rd party solutions including:
  - Access control: Axis A1001, Blue Access Cobalt X1, DMP XR550, Identicard PremiSys, Isonas Pure Access, Keri Systems NXT, RBH AximonV, DSX WinDXS.
  - Asset tracking: iWeigh, DHL, SEUR, Barcode Readers (Generic).
  - Audio analytics: Shotspotter.
  - Automation: AVEVA Wonderware, Advantec ADAM 5000 series.
  - Banking: Diebold Nixdorf Opteva ATMs, Fiserv, Biometrics (IMID Access).
  - LPR: Elsag MPH900, HTS C50, Q-Free Intrada, Mango DSP Viper, Neural Labs VPAR, Platesmart ARES, Vigilant Solutions, Inex Tech IZ ALPR Cameras.
  - Point-of-Sale: Agilisys InfoGenesis POS, Oracle Micros Simphony/VSS, NCR Radiant 1500 Series, NCR Retalix StorePoint, POSitouch, Heartland Xpient IRIS Restaurant POS, LOC SMS, IBM-RMS.
  - Video analytics: iRONYUN.
- Redesigned system update:
  - Improved update for systems with multiple servers.
  - Improved update when bandwidth between servers is low. Update does not fail if a single server drops the connection. Operators can now initiate a manual update for a specific server.
  - Upgrade for unsupported operating systems can be blocked. If a new version does not support the current operating system for a blocked server the update process will not start.
  - Now it is possible to add custom description for any build.
- Updates to the desktop client user interface - comprehensive revamp of UI / UX for improved usability:
  - Notifications panel - now includes quick tabs for notifications, motion detection, bookmarks, events and objects as well as the ability to search and filter each respective tab.
  - Resource panel - keyword search has been moved to the top of the resource panel and operators can now search for servers, cameras, layouts, layout tours, video walls, web pages, users and local files.
  - Add device dialog - added the ability to assign devices to specific servers in a multi-server system
  - Camera settings dialog - redesigned for enhanced readability and usability.
  - Device selection dialog - redesigned for enhanced usability.
  - Time synchronization Dialog - redesigned for enhanced readability.
  - Storage Analytics Dialog - redesigned for enhanced readability and usability.
- Desktop client CLI launch - desktop client can be launched with a command line parameter to define initial layout. This allows programming pop-up like behavior.
  - Desktop client can be resized with a command line parameter.
- Action parameters substitution for the "Do HTTP request" action - source, caption or description placeholders can be added to HTTP POST request body to be automatically replaced by the corresponding values from Generic Event query params. Placeholders syntax:
  - {event.source}
  - {event.caption}
  - {event.description}

IMPROVEMENTS
- Added web-page to media server settings documentation.
- Default period of scheduled database backup was changed to 1 week (maximum 6 weeks).
- System scalability - The maximum number of recommended servers, resources, and users in single System has been increased significantly. If approaching recommended System size please consult with Support for scalability planning. The maximums below are based on lab testing results and could vary significantly based on project's real-world environment.
  - Maximum recommended servers in a system: 100.
  - Maximum recommended resources in a system: 10,000.
  - Maximum recommended users in a system: 1,000.
  - Maximum CaaS™ in a system: 30 (all in same local network and with CaaS™ only).
  - Maximum BJMINI in a system: 5 (all in same local network and with BJMINI only).
- Paxton access control integration support re-implemented.
- Update RTSP port - introduced the ability to modify camera RTSP port from the advanced tab.
- Overall system security improved with known vulnerabilities addressed.
- Improved firewall support for improved client-server connections.
- "Add Device..." option is now available in the main menu.
- Added the ability to export several bookmarks in .nov and .exe file from the bookmark log dialog.
- Added server settings documentation (see "For Developers" tab in server web page).
- API improvements:
  - Audio export in HLS tracks is supported.
  - Video Wall advanced API. Improved rest API methods for working with layouts (getLayout, saveLayout). It is now also possible to display a camera on a specific monitor.
  - Server API improvements and fixes.
- New hotkeys for Item actions (top icons):
  - i = show / hide item Info.
  - a = enter / exit smart motion search.
  - p = enter / exit PTZ.
  - d = enter / exit fisheye dewarping.
  - w = create zoom window.
  - e = enter / exit image enhancement.
  - Esc = Exit item fullscreen.
- New hotkeys for layout actions:
  - Ctrl + Shift + S = save layout as...
  - →, ↓ PgDn, space, enter = next layout in layout tour
  - ↑, ← PgUp, backspace = last layout in layout tour
- Minimum grid size for layout - users have the option to set a minimum viewing grid size (initial number of viewing grid items) in layout settings (works in both desktop client and in video wall).
- Video wall improvements:
  - It is now possible to add backgrounds to layouts on video wall screen.
  - It is now possible to enable/disable the timeline on video wall.
- Minimum size for zoom window can be disabled.
- The bookmark button was replaced with the thumbnails button on the timeline.
- Added the ability to share cameras between users via drag-and-drop in resource tree.

IMPROVEMENTS (CONT.):

Licenses:

- Edge license can be now be deactivated.
- More than one EDGE/ARM license can now be activated per server.
- I/O and encoder licenses can also now be activated on ARM devices.

● Minor context-sensitive help improvements.

● Optimized processing of large bookmark databases (500+ MB).

● The local files list in resource panel now updates when a source folder is changed or a file in the folder is removed or added.

● Time format is now unified through the whole VMS and is taken from the operating system.

● Rules engine updates (Events & Actions):

- "Set to full screen" and "Exit full screen" actions added to event rules engine allowing video items to be displayed in full screen mode based on events.
- Checkbox "Omit logging" added to generic event. When checked, a generic event will not be added to the event log. This allows operators to program display values as a text overlay from generic events without making database calls.
- "Storage failure" has been renamed to "Storage issue" in the event log/rules.
- Added "pre-recording" option to "Device recording" action.
- Added "System is updated" event logging to the audit trail.
- "Do HTTP request" action now supports HTTPS URLs.
- Added a new event "System time was tuned at Server". Event shows only if server time was changed for more than 5 seconds after synchronization.
- Added notification if all servers in the system are not connected to the Internet and time cannot be synchronized with the Internet time.

● If aspect ratio is set to auto in the camera settings dialog, the aspect ratio of the second stream will be modified to match the first stream.

● Added Brazilian-Portuguese languages support.

● Added support for IP address in LDAP URL.

● Smart search is now supported on ARM platforms for H.265 codec streams.

● Soft triggers are now sorted alphabetically.

● Added the ability to backup database automatically once per month.

● I/O port name shows in related email notifications now.

● Minimal buffer size on desktop client for LIVE mode reduced.

● Added server API link for generic event.

● Added LDAP search timeout setting.

● Added event "Plugin event"- plugins can generate events which can be used to create rules in the rules engine.

● Cloud connectivity (firewalls and proxy servers) improved.

● "Admin DN" was renamed to "Admin DN or CN" in LDAP settings.

● Added video traffic delivery method indicator on item: direct connect, NAT traversal (N) and Proxy (P)

● Server was sending requests to manually added cameras/streams even when the auto-discovery option was disabled. Now it keeps sending requests only if failover is enabled.

● Links are supported now in custom text on update notification.

● Welcome screen tiles sorting was changed:

- If system is hidden it is now removed from the list of tiles.

- The following operator actions are no longer allowed on locked layouts: item rotation, cell spacing, aspect ratio changes, interactions with zoom window.
- Added watermark for video files exported via HTTP progressive downloading API call.
- Added mp4 export support for HTTP progressive downloading API call.
- Added plugins information on the "Server settings" dialog.

RECOMMENDED UPGRADE PATH

- From 3.x: Upgrade directly to 4.0.
- From 2.5 or 2.6: Upgrade to 3.0 then upgrade to 4.0.

* Always backup the database and license key information before upgrading to newer build or version.

** Important: Re-index the storage after upgrading to 4.0.

IN-CLIENT UPGRADE INFORMATION

o   Build Number: 29990

o   Password: h8i7ec

INSTALLATION FILE DOWNLOAD:

Click https://digital-watchdog.com/productdetail/DW-Spectrum-IPVMS/ to download all files from the website.

OS SUPPORTED – MEDIASERVER

- Tested operating systems:
    - Windows® 7, 8, 8.1, 10/Enterprise.
    - Windows® Server 2008 R2, 2012, 2012 R2, 2016 v1607.
    - Ubuntu® LTS: 16.04, 18.04.
- Operating systems no longer supported:
    - 32-bit operating system (both Windows® and Ubuntu® Linux®).
    - Ubuntu® 14.04 is no longer supported. (Refer to the reference for upgrade).
    - Windows® Server 2008 no longer supported (Only 2008 R2 is supported).

OS SUPPORTED – CLIENT

- Tested operating systems:
    - Windows®: 7 Home, 7 Standard, 7 Pro, 7 Ultimate, 8/8.1 Standard, 8/8.1 Pro, 8.1 Enterprise, 10 Home/ Pro/Enterprise[1] .
    - Windows® Server 2008 R2, 2012, 2012 R2, 2016 v1607.
    - Ubuntu® LTS: 16.04, 18.04.
    - OS X 10.13: "High Sierra," 10.14: "Mojave," 10.15: "Catalina."

    [1] For Windows® 10, recommend i5/i7 processors with 16GB RAM and video card with 2GB or higher RAM.
- Operating systems no longer supported:
    - 32-bit operating system (both Windows® and Ubuntu® Linux®).

- Ubuntu® 14.04 is no longer supported. (Refer to the reference for upgrade instructions).
- Windows® Server 2008 no longer supported (Only 2008 R2 is supported).

MOBILE APP

- DW Mobile Plus™
- DW Spectrum™ App 19.x.x
- DW Site Viewer™ App for Apple TV

SUPPORTED BLACKJACK® AND CᴀᴀS™ MODELS

- Blackjack® MINI (FW version 1.0.0_2019.09.27 and higher)
- Blackjack® BOLT™
- Blackjack® CUBE™ / CUBE-DL™
- Blackjack® P-RACK™
- Blackjack® E-RACK™
- Blackjack® X-RACK™
  - DWC-MV84WiAC6 / DWC-MV84WiAC1
  - DWC-PVF5M1TIRC6 / DWC-PVF5M1TIRC1
  - DWC-MB44LPRC6 / DWC-MB44LPRC1
  - DWC-MF4Wi4C6 / DWC-MF4Wi4C1
  - DWC-MF4Wi6C6 / DWC-MF4Wi6C1

KNOWN LIMITATIONS

- USB webcams will only be discovered if they are recognized by the operating system they are installed upon. Windows® often automatically installs the driver for USB webcams. Ubuntu® Linux® typically requires driver / 3rd party software installation in order for a USB webcam to be recognized. (Including built in camera on the notebook and all-in-one PC).

REFERENCE

- Upgrading Ubuntu® 14.04 LTS to 16.04 LTS instructions (https://digitalwatchdog.happyfox.com/kb/article/204-upgrading-ubuntu-14-04-lts-to-ubuntu-16-04-lts-on-blackjack-nvr/).
- Blackjack® MINI™ firmware (https://digital-watchdog.com/productdetail/DW-BJMINIxT_DW-BJMINIxTR/).

For more information or technical support

DW technical support
Toll free: 866.446.3595
digital-watchdog.com/contact-tech-support/

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