

To: DW® customers  
Date: May 3, 2021  
Re: DW Spectrum® IPVMS  
v4.2.0.32842 release notes

## DW Spectrum® IPVMS v4.2.0.32842 release notes

### NEW FEATURES:

#### OS Platform Support Changes

- Windows 7 compatibility support ended
- Windows 2008 R2 compatibility support ended
- Added support for macOS 11 in the desktop client

#### New Features and Changes

- Redesigned PTZ controls – PTZ controls have been redesigned for improved UX.
  - Advanced PTZ activates only when the Shift key is pressed.
- Intel® Quick Sync Video – Intel® Quick Sync Video uses the dedicated media processing capabilities of Intel® Graphics Technology to decode and encode fast, enabling the processor to complete other tasks and improving system responsiveness. Vastly improves the ability of low-power hardware (e.g. Intel Atom, Celeron) and the ability of the Desktop Client to decode very high resolution (e.g. 16 MP, 32MP) cameras and streams.
  - Go to Local Settings in the Desktop Client and check the “Use Hardware Video Decoding” checkbox to enable Intel Quick Sync Video.
  - “Use Hardware Video Decoding” is unchecked by default.
- Fisheye lens projection options – Improve fisheye dewarping precision by selecting the most suitable lens projection type:
  - Equisolid
  - Equidistant
  - Stereographic

#### New Device Support

- Added advanced PTZ support for Hikvision IPC6412LR-X5P, IPC6854SR-X38UP-VC, IPC6222E-X33UP, IPC6222EI-X22UP-C.

## FIXED ISSUES

### Bug Fixes

- Certain sections of the desktop client had incorrectly rendered UI text on Macs with the M1 SoC. Fixed.
- An issue caused the Server to not start on Raspberry Pi 3. Fixed.
- The lens position and zoom level of fisheye cameras were not saved in the layout. Fixed.
- Fixed an RTP error that occurred with H.265-encoded primary streams on DW cameras.
- Server did not use ONVIF to configure stream settings for Arecont Vision cameras from the Contera Panoramic series (AV08CPD-118, AV20CPD-118, AV8476DN, and AV20476DN) and DUO series (AV4856DN, AV10856DN, and AV16856DN). Fixed.
- VMS-21900, VMS-21905: In some cases, Cloud system tiles on the Welcome Screen would intermittently switch between an offline and online status. Fixed.
- VMS-21736: Live view in Web Admin did not work in Safari. Fixed.
- (24545) VMS-21683: CPU usage significantly increased on AWS EC2 instances with ELB enabled and TCP/UDP port 7001 configured as a listener. Fixed.
- Unable to view live camera streams or archived video on the Cloud client due to an “Internal Server Error 500”. Fixed.
- The “On Camera disconnected” Event Rule did not work if autodiscovery was turned off. Fixed.
- The start time of local files longer than 1 hour added to the layout would shift based on the UTC time zone. Fixed.
- PTZ tours would stop when activated on more than one camera at a time. Fixed.
- Fixed an issue where the Server’s storage became inaccessible after updating the Server to 4.1.
- Watermark validation failed when checking exported videos that contain a text overlay. Fixed.
- The Server had an issue initializing some Vivotek cameras due to their implementation of ONVIF media and media2 profiles. Fixed.
- The warning banner that alerts users of the potential audio/video desynchronization when exporting to AVI also showed up on AVI exports even if the camera does not support audio. Fixed.
- The Server failed to retransmit video from certain UDP streams as RTSP streams. Fixed.
- On some Linux-based Systems, the Server would automatically select a storage drive without the necessary permissions to store analytics data. Fixed.
- The Server did not close HTTP and RTSP streams if crucial user properties were modified. Fixed.
- Transcoding failed to occur when exporting footage that used more than one codec. Fixed.
- Events configured to send an email to multiple users would send the wrong number of emails when triggered. Fixed.
- The “Camera/Device Disconnected” email notification was mistakenly sent when LDAP users exited the Desktop client. Fixed.
- Stream jumped to the first frame when creating a zoom window on the exported video (nov and exe). Fixed.
- The Server could not discover Axis cameras with HTTPS enabled and HTTP. Fixed.

- Video export failed if the recorded archive was written on multiple servers in the System. Fixed.
- On Ubuntu systems, USB storage could be used to store the Analytics DB even if the Server did not have write permissions. Fixed.
- In some network environments, WebAdmin reported “No Networking” even if it was accessed from a different computer. Fixed.
- Failover did not work with cameras that were manually added to the System. Fixed.
- Under certain rare circumstances the client could not connect to the server after upgrading from 3.2 to 4.1. Fixed.
- Fixed a file handle leak on Windows servers.
- Failed to export a local file to MP4 format. Fixed.
- The Motion tab for ArecontVision 12186DN panoramic camera did not display a video stream on ARM servers. Fixed.
- Virtual cameras created using video recordings from Android devices have an inaccurate timeline due to differences in timestamp and file creation on Android. Fixed.
- The number of licenses in use would not display properly with French regional settings enabled in the Desktop Client. Fixed.
- Fixed an issue where some versions of the Desktop Client were unable to perform an in-client update to another 4.1 build.
- Fixed an issue where the URL format did not work properly when the timestamp parameter was used to access virtual cameras. The Desktop Client would open and play the archive from the beginning instead of the specified timestamp.
- The Desktop Client stability improved.
- Sometimes exported video would stutter during playback. Fixed.
- Sometimes the navigation menu on the WebAdmin page would appear twice. Fixed.
- The FPS of a live stream would drop if a third-party software used the RTSP API to pull the stream from the Server. Fixed.
- A fix for the error “Storage Issue: Analytics storage DB error. Insufficient permissions on the mount point” was made available. Enable the “forceAnalyticsDbStoragePermissions” advanced option from the WebAdmin interface to apply the fix.
- The Desktop Client would crash if a microphone was disconnected during a 2-way audio session. Fixed.
- There was no option to disable audio on a camera when “Allow System to optimize camera settings” was unchecked in System Administration. Fixed.
- Fixed the GUI glitch that occurred when creating a new role in the User Roles dialog.
- Adding a Virtual Camera and searching for a camera manually were not recorded in the Audit Trail. Fixed.
- On Ubuntu, the scheduled backup didn’t start as expected if the VMS time was configured manually. Fixed.
- Fixed an issue with WebAdmin and Cloud Portal availability for a system with 1000 cameras when accessed outside the network.
- The overlay settings for Axis cameras in the “Advanced” tab didn’t work without reopening the camera. Fixed.

- The Server returned an invalid thumbnail for the streams with B-frames. Fixed.
- In some rare instances the Server would freeze. Fixed.
- No motion was detected on multi-sensor panoramic cameras when “Force motion detection for stream” was enabled and set to Primary and “Disable secondary stream” was checked. Fixed.
- “Restore from backup” was redesigned to be more straight-forward for Cloud-merged Systems.
- The notification “Storage is not configured” disappeared when the Desktop Client was restarted. Fixed.
- Server did not destroy the DeviceAgent on camera disconnect
- Server improperly returned 500 for the correct ec2/analyticsLookupObjectTracks request. Fixed.
- I/O module license failover did not work. Fixed.
- Fixed an issue with the Chinese translation on the “Storage Management” and “Storage analysis” dialogs.
- Sometimes the desktop client would crash when opening local files. Fixed.
- The Server tried to get storage space information about a DVD drive. Fixed.
- Users without the appropriate permissions were able to access the Server Monitor. Fixed.
- Systems with “Allow only secure connections” enabled could not be merged. Fixed.
- Fixed several server and desktop client crashes.

## Analytic Bug Fixes

- Fixed an issue where analytic events did not show up in the Notification Panel for Hikvision DS-2CD3T56G2-4IS on firmware V5.5.150 build 200927.
- Instant analytic events stopped showing up in the Notification Panel after the first time they were triggered. Fixed.
- Camera profile names did not show up correctly when configuring event rules for the AXIS Fence Guard plugin. Fixed.
- AXIS LPR analytics plugin events were not triggered. Fixed.
- When an analytics plugin is enabled on a camera and its settings are saved, the changes/updated values are not reflected in the GUI after the plugin settings dialog is re-opened. Fixed.
- Detected objects had the wrong timestamps stored in the analytics DB.
- Under certain conditions some analytics settings would disappear from the GUI after saving changes. Fixed.
- Cropped thumbnails of analytics objects were shown in the Notification Panel if “Disable secondary stream” was enabled. Fixed.
- (24323, 24568, 24737, 24756) VMS-21540: Analytics events were not available for VIVOTEK cameras with firmware 2.2002.23.01. Fixed.

## Device Support Bug Fixes

- Hikvision fixes/improvements:
  - Hikvision DS-2CD7A26G0x now supports the signal input event.

- Fixed an input signal problem on Hikvision DS-2TD2617B-6/PA.
- Hikvision DS-2TD1217x incorrectly reported PTZ support. Fixed.
- Distorted audio on Hikvision DS-2CD4A26FWD-IZHS8/P when MPEG sampling rate was set to 44.1 kHz. Fixed.
- Only the first channel worked properly on Hikvision DS-7216HWI-SH/A after the discovery. Fixed.
- The last two channels (15 & 16) of a Hikvision 16CH DVR (DS-7216HWI-SH/A) were showing an error. Fixed.
- Server failed to fetch the stream from Hikvision DVR DS-7216HUHI-K2. Fixed.
- Hanwha XND-6080RV had the wrong stream settings while configuring via Onvif. Fixed.
- The initialization time for some cameras has been improved.
- Axis T8311 joystick would stop working after using 2Way audio on a PTZ camera. Fixed.
- The incorrect stream resolution was displayed for the MIT Professional 2MP camera. Fixed.
- Some camera models from Sony, Huawei, SMAX, Edimax, and A-MTK had configuration issues that caused the live stream to intermittently stop. Fixed.
- Signal output did not work on Hikvision DS-7732NI-I4. Fixed.
- Fixed an issue with 2-way audio for Uniview cameras.
- Fixed a streaming issue for HIKVISION DVR DS-9632NI-I8.
- Fixed an issue detecting the input signal for AMTK AH5583T.
- MP2L2 codec is now supported on Hikvision cameras.
- SNP-3120 failed to connect to the Server due to a resource initialization error. Fixed.
- Signal I/O support added for HIKVISION DS-2TD4237\*.
- The Server could not play the RTSP streams from the following Hanwha cameras: LND-6011R, LNV-6011R, and LNO-6011R. Fixed.
- New BCS Line cameras supported: BCS-TIP5201, BCS-V-TI236x
- INFRACHEN ZH-FS160 now supports signal input events.
- Edge recording for Lilin Z2R8022EX25 did not work correctly. Fixed.
- Honeywell HEW2PR(W)1 experienced stream signal loss issues. Fixed.
- D-Link DCS-8526LH had problems with its video stream in the VMS. Fixed.
- When listening to the archived footage on Axis speakers, the audio was played for 10-20 seconds and then switched to Live. Fixed.
- Arecont Vision AV08CPD-118 panoramic camera displayed the wrong sensor order in the desktop client. Fixed.
- Added I/O license support for AXIS A9188.
- Enabled zoom controls for ACTi A416, A418, A811, and A818 via ONVIF.
- Hanhwa LND-6010R, LNV-6010R, LNO-6010R, and XNO-6010R failed to initialize correctly via ONVIF. Fixed.
- VIVOTEK FD9189, FD9380\*, FD9388\*, IT9389-HT, IB9391\*, SD9362\*, SD9366\*, IB9387\*, FD8369\*, CC8370\*,

CC9381 failed to initialize correctly via ONVIF. Fixed.

- Added support for Axis C1410 Network Mini Speaker.
- Hikvision DS-2CD4A26FWD-IZHS8/P incorrectly showed support for Pan and Tilt, even though only Zoom is supported. Fixed.
- FPS limitation for Axis Q1645 was increased to 120 fps.

## API/SDK Changes/Fixes

- RTSP stream from Server taken via API could not be played back in VLC player. Fixed.
- Metadata SDK:
  - Performing a text search for object type in the Desktop Client led to analytics metadata not working properly during playback. Fixed.
  - Metadata was received from Stub Analytics Plugin only after Server restart. Fixed.
- API:
  - Fixed the API documentation for the getCamerasEx method. Removed the “cameraName” and “cameraId” fields.
- Stub Analytics Plugin: Analytics Events would sometimes not show a thumbnail in the Notifications Panel. Fixed.
- The wrong parameter type was used for the logLevel field on the WebAdmin’s API testing tool page. Fixed.
- RTSP Streaming parameters were missing from the Server API documentation. Fixed.
- Fixed errors that occurred when running the public node.js examples.
- The licenseUsed value from ec2/getCamerasEx was inaccurate for a recording camera on an active schedule. Fixed.
- Fixed a naming inconsistency in the Server API documentation regarding the duration parameter in /ec2/bookmarks and /ec2/bookmarks/add.

## IMPROVEMENTS

### Software Improvements

- Added Catalan language.
- Update packages are now validated before installing to prevent malware injection.
- The Camera name and export time can now be overlaid onto the footage in the Export Dialog.
- The Camera name can now be overlaid when capturing a screenshot.
- Archived video encoded with H.264 codec and exported to MP4 or AVI format can be played back in Windows Media Player.
- The Server will re-initialize cameras when packets are not received from the secondary stream for more than 10 seconds.
- The maximum value for pre-recording and post-recording actions in camera recording events can now be set up to 600 seconds.
- The limitations for pre- and post-recording are changed in Camera Settings: 90s for pre-recording and

300s for post-recording.

- Only administrators can see servers in the Desktop Client “About” dialog.
- Added the ability to playback audio from all devices on the scene in the Desktop Client.
  - To enable this feature, open Main Menu > Local Settings > General and select the checkbox next to “Play audio from all cameras on layout”.
- The Server could not store analytics data on some Ubuntu servers due to selecting partitions to which it didn’t have write access. If the Server does not have write access to a particular partition, it can no longer be selected to store analytics data.
- “Allow only secure connections” (HTTPS traffic only) is turned on by default.
- The in-client web browser now saves user credentials between browser sessions.
- Added TLS support for LDAP on Linux-based systems.
- Removed the limitation on Video Wall licenses that prevented more than one active direct control session at a time.
- Hotkeys changes:
  - [+] [-] keys are no longer used to zoom in or out on the Layout.
  - Shift + arrow keys are now used to select a camera on the Layout.

## Software Analytics Improvements

- The DW analytics plugin has been added to the Windows and Linux installers.
- Notifications generated by Start/Stop events are now labeled with either “Started” or “Stopped” to differentiate them from one another.
- The way that ROI data is overlaid on cameras was divided into two groups: “Show Region of Interest” and “Objects”. “Show Region of Interest” makes ROI objects visible on cameras without object tracking support if the “Display on Video” option is enabled in Camera Settings > Plugins. “Show objects” makes ROI objects and camera analytics objects visible only on cameras that support object tracking.

## Third-Party Analytics Improvements

The following models and analytics features should be supported but have not been exhaustively tested. Please test with your device(s) before implementing this patch:

- Dahua analytics plugin:
  - Models:
    - All models with supported analytics.
  - Analytics Features:
    - Added short object tracking for objects in events. The track duration is about 500ms.
    - Fast-moving
    - Parking detection
    - Loitering,
    - People gathering

- Abandoned object detection(Left object detection)
- Intrusion detection
- Missing object detection
- Tripwire detection (Cross line detection)
- Queue size detection
- In-area people counting
- People flow counting

- Bosch analytics plugin:

- Models:

- All models with supported analytics.

- Analytics Features:

- Excessive brightness
  - IVA: Intrusion (one field). Object in field
  - IVA: Intrusion (two fields). Left to right
  - IVA: Intrusion (two fields). Right to left
  - IVA: TrafficIncidents. Dropped object
  - IVA: TrafficIncidents. Pedestrian
  - IVA: TrafficIncidents. Slow vehicle
  - IVA: TrafficIncidents. Stopped vehicle
  - IVA: TrafficIncidents. Wrong way
  - Insufficient brightness
  - Motion detection
  - Object detection
  - Scene change

- Added analytics for Provision ISR cameras:

- Models:

- BX-341IPE
  - I4-340IPE-36, I4-340IPE-:VF, I6-340IPE-MVF
  - DAI-340IPE-28, DAI-340IPE-MVF
  - DI-340IPE-28, DI-340IPE-MVF
  - DMA-340IPE-28.

- Analytics Features:

- Motion Detection
  - Perimeter Intrusion
  - Line Crossing

- Scene Change
- Video Blur Detection
- Abnormal color detection
- Entering Object Detection
- Leaving Object Detection
- Line Crossing Object Counting
- Vivotek analytics plugin:
  - Models: See <https://www.vivotek.com/learning/feature-article/24/smart-vca>; as of this patch release, the available models consists of the following:
    - Fixed Dome Cameras: FD9165-HTx, FD9365-xHTVx, FD9391-EHTV, FD9187-Hx, FD9387-xHx, FD9189-Hx, FD9389-xHx, IT9389-Hx
    - Bullet Cameras: IB9365-xHTx, IB9391-EHT, IB9387-xHx, IB9389-xHx
    - 360° Cameras: FE9191, FE9391-EV, FE9382-EHV-v2
    - 180° Cameras: MS9321-EHV, MS9390-HV
    - Mobile Dome Cameras: MD9561-H, MD9581-H
  - Analytics Features:
    - Added ROI support and object tracking
    - Crowd detection
    - Intrusion detection
    - Line crossing
    - Loitering detection
    - Missing object
    - Running detection
    - Unattended object
    - Face detection (for some cameras, such as FD9165-HT)
  - Tested devices: FE9191, FD9165-HT
- Hikvision Thermal Analytics plugin:
  - Models:
    - Hikvision Thermal cameras
  - Analytics Features:
    - Object tracking
    - Thermal alarm
    - Thermal pre-alarm
    - Thermal regions group
    - Thermal alarm for region 1/2/3/4
    - Thermal pre-alarm for region 1/2/3/4

- Tested devices: DS-2TD1217B-6/PA (FW V5.5.24 build 200212), DS-2TD2117-3/V1 (FW V5.5.16 build 190429), DS-2TD1217-6/V1 (FW V5.5.18 build 191202).

## Device Support Improvements

- New Hikvision cameras supported: DS-2DE4425, DS-2DE4A320
- New Axis Cameras supported: AXISP3715, AXISD201-S, AXISD101-S
- New Arecont Vision Cameras supported: AV2756, AV12CPD
- Encoders added to the analog list:
  - Abus HDCC90011
  - Advidia VP-16-V3
  - Alibi ALI-HVR5016H
  - Alumia QSS301-08-P8
  - Amcrest NV4108E-HS, AMDV8M16-H5, AMDV10818-H5
  - Axis q7414x
  - Bolid RGI-1622P16
  - Bosch Videojet Multi4000
  - Bosch VIP X1 XF E, VIP X1 XF IVA
  - CBC Ganz ZN-AIBOX16
  - Cantek AR315-8
  - Dahua XVR5104x , DHI-NVR4208-8p-4ks2, DH-HCVR5216an-s3, x51a3e, dhi-nvr5208x, dhi-nvr2116x, dhi-nvr5224x, dh-nvr5432x, n41b1p2, DH-XVR5116HE-X, DH-NVR6064, X72A3A4, X51B1E, X51A3E2, C52A2N
  - Dcode DEN408-64R-B
  - Digital Watchdog DW-ENHD16, DW-EN4K16
  - Etrovision Technology EV3151A
  - EZ-IP EZIP-NVR2A08HS-8P
  - EPCOM EV-5008TURBOUS, EV-1016-TURBOX
  - Eneo XPM16
  - FLIR DNR716, DNR832
  - Grundig GRN-R2108P
  - Geovision GV-VS2800, GV-VS2420, GV-VS21600
  - Haitai X Mtum Co IPXM4
  - Hunt CCTV HAR526-32, HNR32P6-16, HAR326-4, HNR32P6-16, CCTV HWS-04AD
  - Hikvision DS-7104x, DS-7616NI-I2/16P, DS-7308HQHI-SH
  - Hikvision DS-7216HUHI-F2/N, DS-7216HWI, DS-7216HGHI
  - Hikvision DS-7216x

- Honeywell HEN161x4, HEN161x
- InVid UN1B-16X16
- Lorex LNR608, LNR616, N881A3
- LTS LTD8304K-ET, LTN8716K-P16, LTN8716T-HT, LTN8932H-P16
- LunalP L-IPR-5216-EP-4K, L-IPR-5216-EP-4K
- Luxon HYB163TB
- Nelly's Security NSDV-208UK
- Optio OPDVR04
- Osiris OS-NVR8M8P-4H1-4K
- Optio OPDVR04, OPDVR08, OPDVR16
- Panasonic K-NL416K, k-nl404k
- RVi 1HDR08K, RVi-R08MA
- Risco RVNVR080020A
- Provision ISR DVS-IP5-4
- SecurityTronix TVR-AR314-8
- SpecoTVI-16CH-720P-4TB-NSP, OS103T
- Siquira S-64 E
- Smartec STR-HD1625
- ToughDog Security TDHDX161-4K-2T
- Tyco TYCE4C
- Tecsar Lead 4ch1h4poe-5-sm
- Truen co., ltd. TCS-3000
- UniView NVR516-128, NVR304-32EP-B
- Visiotech XS-XVR6116-VS2
- Vicon VLR-ENC-16-A
- Winic AR326-4
- X2-CCTV-NVR-x
- Z3 Technology FSDI-DCK-10
- C2P cameras now require one analog encoder license per channel.
- Multi-sensor cameras:
  - Axis P3715PLVE
  - Avigilon 15C-H4A-3MH-270, 12W-H3-4MH-DP1-B
  - Digital Watchdog DWC-PVX16W\*, DWC-PV2M4T, DWC-PB6M4T, DWC-PZ21M69T, DWC-PB2M4TIR
  - Dahua ipc-pdbw82041-b360, IPC-PDBW8802-A180
  - Hikvision DS-2CD6D52GO-IHS

- I-View FE-6MIPS06-F01
- Pelco IMM12018, IMM12027, IMM12036 (or Optera IMM12036?)
- Secubest NVM2-A21
- Uniview IPC8542ER5-DUP
- Vivotek VC8201\*
- Hikvision DS-2PT5326IZ-DE, DS-2TD2617\*
- Digital Watchdog DWC-PVX16w2.
- Hikvision DS-2CD6944GO-IHS, DS-2PT5326x, DS-2PT3122x
- Mobotix S16A
- Secubest NVM5-520
- Safire SF-IPPAN362HA-2Y
- Sony SNC-WL862
- Advanced PTZ Support:
  - Axis Q740x
  - Milesight MS-C2971x, MS-C5361x
  - Avigilon 2.0C-H4IRPTZ-DP30x
  - Advanced ptz mapping for DS-2DE5425IW-AE
  - Hikvision DS-2DF8425IXx, DS-2DE5174, DS-2DE4A225x, DS-2DP1636ZIX-D/250
  - Hikvision DS-2DP3236ZIXS, DS-2DF9C435IH
  - Milesight MS-C2942-RB
  - Dahua SD59430U-HNI
  - Digital Watchdog DWC-MPTZ336x, DWC-MPTZ830x
  - Panasonic WV-S6130
  - Uniview IPC6252SL-X33UP

## API/SDK Support Improvements

- Added an option for users to change bounding box colors for some analytics objects in compatible Plugins.
- The “camerald” parameter is added to the documentation for `/ec2/analyticsTrackBestShot`.
- A new web browser session identifier will be generated every time before the session is established.
- Metadata SDK:
  - Added a method for plugins to get the Server’s built-in SDK version.
  - Stub Analytics Plugin: `throwPluginDiagnosticEventsFromDeviceAgent` setting was renamed to `throwPluginDiagnosticEventsFromEngine`.
- API:
  - `/api/getEvents` return codes updated.
  - Added new URL parameters to the `/media` method: `stream`, `duration`, and `mkv`.

- Stub Analytics Plugin: Added the method `serverSdkVersion()` to `IUtilityProvider`. `serverSdkVersion()` passes information about the Server's built-in SDK version to the plugin.
- Added `preciseBounds` parameter to `/ec2/recordedTimePeriods`. The time range bounds will match the start and end times of the requests.

## TESTED OPERATING SYSTEMS

- Windows 7, 8, 8.1, 10/Enterprise, 2008 R2, 2012, 2012 R2, 2016 v1607, 2019
- Ubuntu LTS: 16.04, 18.04, 20.04
- MacOS 10.14: "Mojave", 10.15 "Catalina", 11.0
- Raspberry PI 3 Model B V1.2 Kernel version 4.14 (Linux 9.4 (Stretch)).

## KNOWN LIMITATIONS

- Due to a firmware issue affecting Bosch cameras, sometimes events are triggered but not shown in the desktop client.
- Hardware decoding doesn't work on PC-based Ubuntu systems.
- Hardware decoding is disabled if there are 2 graphic adapters and the primary is not Intel®. In this case, users should set up a "primary display" to Intel® adapter to make hardware acceleration work.
- "Error 404. Cannot find the page. Check the URL and try again" shows up on the Web Page tab in Camera Settings for Hanwha NVRs. The web page will be correctly displayed after users click "OK".

## ADDITIONAL RESOURCES

### In-Client Upgrade Information

- **Build Number:** 32842
- **Password:** hkh1td

### Installation File Download

- [Ubuntu x64 Client Installer](#)
- [Ubuntu x64 Server Installer](#)
- [Windows x64 Client Installer](#)
- [Windows x64 Server Installer](#)
- [Windows x64 Client/Server Bundle Installer](#)
- [MacOS Client Installer](#)

## For more information or technical support

DW technical support

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