These Release Notes cover the new features and enhancements in the latest MAXPRO NVR 4.1 Build 123 Rev B software releases and apply to all variants of MAXPRO NVR and NVR Hybrid.

If you have questions concerning this document, please contact Honeywell Technical Support. See the back cover for contact information.
Note For new features and enhancements supported by MAXPRO NVR 3.x versions, please refer to http://www.honeywellvideo.com/documents/MAXPRO_NVR_3.1_Whats_New_Software_Release_Notes.pdf.

Installation Notes

Upgrade Versions

MAXPRO NVR 4.1 Build 123 Rev B: Upgrade is supported from MAXPRO NVR v3.1 SP1 Build 70 C or v3.5 Build 74 Rev F, or v3.5 SP1 Build 81, v4.0 Build 87 Rev H and 4.0 SP1 to MAXPRO NVR v4.1 Build 123 Rev B. This update applies to the MAXPRO Family - Turnkey NVR and NVR Hybrid solutions (XE, SE, PE) and Software only.

Note - For unsupported lower versions, first upgrade to 4.0 and then apply the NVR v4.1 Build 123 Rev B patch.

Version Compatibility

MAXPRO NVR 4.1: This installation can be performed on a new system or an existing MAXPRO NVR/NVR Hybrid without removing older versions. Please refer to the MAXPRO NVR 4.1 Installation and Configuration Guide for further details.

Supported Operating Systems

Version 4.1 Build 123 Rev B is approved for the following operating systems.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Service Pack</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows® 7 Professional 32 bit / 64 bit</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>Windows® 7 Embedded Standard 32 bit / 64 bit</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>Windows® 8.1 Professional 32 bit / 64 bit</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Windows® 10 Professional 32 bit / 64 bit</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Windows® Server 2008 R2 Standard</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>Windows® Server 2012 R2 Standard</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Please refer to the document *Microsoft® Windows Patches Tested with MAXPRO® NVR* for further details on Windows updates that have been tested with the current software version shipping with MAXPRO NVR and NVR Hybrid.

**Virtualization Support**
Please refer to the document *MAXPRO® NVR Server VMware ESXi Specifications* for the minimum specifications required for the MAXPRO NVR Server Software virtualization with VMware.

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**Recording and Monitoring Performance**

Performance depends on the hardware specifications and operating system environment of NVR/NVR Hybrid Server and Workstations. Please refer to the respective MAXPRO NVR/NVR Hybrid data sheets for specifications and supported performance.

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**MAXPRO NVR / NVR Hybrid 4.1 Key Benefits and Features**

The following are the key benefits and features of MAXPRO NVR/NVR Hybrid 4.1:

**New EquiP Series Camera Models Support**

- **New EquiP Camera Models Supported**: Additional 8 New EquiP camera models are now supported. HFD6GR1, HSW2G1, HCD8G, HBD8GR1, H4D8GR1, HDZ302DE, HDZ302D, HDZ302DIN.
- **SkyLake Processor Support**: NVR 4.1/later versions supports I7-6700 SkyLake processors. This includes support for 23 cameras for both Live/Playback with 1080p Resolution and 690 Frames Per Second.
- **4K Resolution Support**: HCD8G, HBD8GR1, H4D8GR1 EquiP camera models support 4K Resolution.
- **3D Positioning**: Allows you to view a specific object in a live video in 3-dimensional view. This feature is available in the Context menu options and it is supported only in New EquiP PTZ (HDZ302DE, HDZ302D, HDZ302DIN) camera models. It includes the following:
  - Click based camera positioning
  - Rectangle selection 3D positioning
  - Restore to last PTZ position
- **Positioning the Field of View**: You can position any object in a live video to the center of pane. Just enable the 3D Mode option and then click on the required object in the live video.
- **H.265 Codec Type Support**: H265 Codec type is now supported to optimize the storage requirements for higher resolution cameras. Only New EquiP model cameras support H265 Codec type.
**Limitations of H.265 Codec Type:**
- H.265 is not supported in MAXPRO Mobile app
- H.265 is not supported in Web client
- H.265 cameras utilizes CPU based Rendering.

**Dewarping New EquiP Model Cameras:** New EquiP FishEye Camera (HFD6GR1) is capable of delivering FishEye view of the surrounding and which can also be dewarped to different view types depending on the mounting position.

The following table details the available views depending on the mounting position of the (HFD6GR1) camera:

<table>
<thead>
<tr>
<th>Mounting Position</th>
<th>Modes</th>
<th>FishEye View</th>
<th>Quad View</th>
<th>1 Panorama &amp; 3 Quatro View</th>
<th>Panorama 2x180 Views</th>
<th>1 Fish Eye &amp; 3 Quatro View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall Mounting</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Not Supported</td>
<td>Not Supported</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Ceiling Mounting</td>
<td>Supported</td>
<td>Supported</td>
<td>Not Supported</td>
<td>Supported</td>
<td>Supported</td>
<td></td>
</tr>
<tr>
<td>Ground Mounting</td>
<td>Supported</td>
<td>Supported</td>
<td>Not Supported</td>
<td>Supported</td>
<td>Supported</td>
<td></td>
</tr>
</tbody>
</table>

**Video Analytic Events Support:** Video Analytics is the capability to analyze the video automatically for detection and determining the events taking place in real time.

You can now view five Video Analytic events triggered from the New EquiP model cameras. You need to configure the following events in the camera web page to view in the Alarms window.
- Face Detected
- Tamper Detected
- Audio Detected
- Device SD Card Full
- Device SD Card Failure
The following table describes the feature/Video Analytic events supported based on the New EquiP camera models.

<table>
<thead>
<tr>
<th>New EquiP Camera Models</th>
<th>HFD6GR1</th>
<th>HSW2G1</th>
<th>HCD8G</th>
<th>HBD8GR1</th>
<th>H4D8GR1</th>
<th>HDZ302DE</th>
<th>HDZ302D</th>
<th>HDZ302DIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firmware Version</strong></td>
<td>V1.000.HW00.0.20161206</td>
<td>V2.460.HW00.0.20161206</td>
<td>V2.420.HW00.14.20161206</td>
<td>V1.000.0009.20161207</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Features Supported</strong></td>
<td>FishEye</td>
<td>Pinhole</td>
<td>4K-Resolution</td>
<td>4K-Resolution</td>
<td>4K-Resolution</td>
<td>PTZ</td>
<td>PTZ</td>
<td>PTZ</td>
</tr>
<tr>
<td>Face Detected</td>
<td>Not Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Tamper Detected</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Audio Detection</td>
<td>Supported</td>
<td>Not Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Device SD Card Full</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Device SD Card Failure</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
</tbody>
</table>

- **MetaData Conversion Utility**: A utility which can automatically/manually allows you to update the Unique ID number for the cameras in primary/redundant box. This allows a user to effectively playback the recorded clip without loss of video. Use this utility if you are opting for Redundancy feature in MAXPRO VMS. Before configuring the Redundancy feature in MAXPRO VMS, you need to run this utility in NVR Box. Ensure that all the Primary NVR boxes are updated with proper unique IDs for the cameras.

- **Offline Mode**: You can also use this utility to synchronize the Unique ID number in offline mode for specific cameras in redundant recorders.
MAXPRO NVR / NVR Hybrid 4.0 Key Benefits and Features

The following are the key benefits and features of MAXPRO NVR/NVR Hybrid 4.0:

**Higher Density Solution - 64 Channel Support**
- 64 channel capability upto full frame rate: NVR SE Rev B, PE Rev B; Hybrid SE, PE and Software only
- Improved scalability: More cameras per NVR 3.5/4.0 recorder and More recorders per VMS R310 server
- Less real estate, IT management

**Enhanced HD client rendering**
- 18 1080p HD @ 30 fps / 540 fps 1080p HD on remote workstation clients*
- Up to 4 1080p HD @ 30 fps / 120 fps 1080p HD on NVR local client*
- No time lapse in live monitoring
- No additional graphic card required (2 monitors) saves cost
- Less workstations reduces cost

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**Note**  
* - Systems with 4th generation Intel® Core™ Processors for client systems (Haswell) with in-built processor graphics (GPU).
  - Workstation Clients with NVR 4.0.
  - Refer to further details below on specifications and performance.

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**Performance Metrics - 64 channel support, Enhanced HD Client rendering**

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**Note**  
The NVR model options available in your region might vary. Please contact your local Honeywell representative for more information.
Performance Metrics for NVR Rev B - XE, SE, PE and NVR Hybrid XE, SE, PE

- The following table provides the details of recording and monitoring performance metrics including SMART VMD (SVMD):

<table>
<thead>
<tr>
<th>Haswell Model Configurations</th>
<th>NVR Model</th>
<th>Processor Memory (RAM)</th>
<th>VGA/4CIF FPS</th>
<th>720p HD FPS</th>
<th>1080p HD (4 Mbps bitrate) FPS</th>
<th>Mega-pixel Total Mega Pixels for SVMD</th>
<th>Analog (dCIF NTSC) FPS</th>
<th>Recording and Monitoring Throughput</th>
<th>Desktop Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NVR PE - Rev B</td>
<td>i7-4790/i7-4770* 8 GB RAM</td>
<td>1920</td>
<td>64</td>
<td>1920</td>
<td>64</td>
<td>128 MP</td>
<td>NA</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td>NVR SE - Rev B</td>
<td>i7-4790/i7-4770* 8 GB RAM</td>
<td>1920</td>
<td>64</td>
<td>1920</td>
<td>64</td>
<td>1280</td>
<td>50 #</td>
<td>100 MP</td>
</tr>
<tr>
<td></td>
<td>NVR XE - Rev B</td>
<td>i5-4460/i5-4440* 8 GB RAM</td>
<td>480</td>
<td>16</td>
<td>480</td>
<td>16</td>
<td>32 MP</td>
<td>NA</td>
<td>65</td>
</tr>
<tr>
<td>Hybrid PE*</td>
<td></td>
<td></td>
<td>1440</td>
<td>48</td>
<td>1440</td>
<td>48</td>
<td>128 MP</td>
<td>120</td>
<td>16</td>
</tr>
<tr>
<td>Hybrid SE*</td>
<td></td>
<td></td>
<td>1440</td>
<td>48</td>
<td>1440</td>
<td>48</td>
<td>100 MP</td>
<td>120</td>
<td>16</td>
</tr>
<tr>
<td>Hybrid XE*</td>
<td></td>
<td></td>
<td>1440</td>
<td>48</td>
<td>1440</td>
<td>48</td>
<td>32 MP</td>
<td>100</td>
<td>8</td>
</tr>
<tr>
<td>Ivybridge/ Sandybridge Model Configurations</td>
<td>NVR PE - Rev B*</td>
<td>i7-3770. 8 GB RAM</td>
<td>1920</td>
<td>64</td>
<td>1920</td>
<td>64</td>
<td>128 MP</td>
<td>NA</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>NVR SE - Rev B*</td>
<td>i7-3770. 8 GB RAM</td>
<td>1920</td>
<td>64</td>
<td>1280</td>
<td>64</td>
<td>100 MP</td>
<td>NA</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>NVR SE - Rev B*</td>
<td>i7-2600. 8 GB RAM</td>
<td>1920</td>
<td>64</td>
<td>1280</td>
<td>64</td>
<td>96 MP</td>
<td>NA</td>
<td>140</td>
</tr>
<tr>
<td>Hybrid SE*</td>
<td></td>
<td></td>
<td>1440</td>
<td>48</td>
<td>1280</td>
<td>48</td>
<td>96 MP</td>
<td>120</td>
<td>16</td>
</tr>
<tr>
<td>Hybrid XE*</td>
<td></td>
<td></td>
<td>1440</td>
<td>48</td>
<td>1280</td>
<td>48</td>
<td>32 MP</td>
<td>60</td>
<td>8</td>
</tr>
</tbody>
</table>

Legend:

NA - Not Applicable

# - For SE Rev B (i7-4790, 8 GB RAM) SVMD performance for All Channels at fps: 64 channel at 1920 fps @ 4CIF/VGA or 1920 fps @ 720p or 640 fps @ 1080p or total 100 Megapixel.

* - Clip export on local client is recommended with default rendering settings of Throttle Frame Rate enabled.

** - Oncam Grandeye 360 cameras are not supported with GPU rendering and use CPU rendering by default. Only applicable to H264 cameras and H265 does not use GPU rendering.
Note Currently shipping models of NVR/Hybrid SE, PE include i7-4790, 8 GB RAM and NVR/Hybrid XE include i5-4460, 8 GB RAM.

Performance Metrics for NVR Rev A - XE, SE, PE

- For the discontinued NVR Rev A models (XE - 16 channel, XE - 8 Channel, SE - 32 Channel, PE - 32 Channel) there is no change in the maximum no of channels and performance metrics supported with NVR 3.5/4.0.

MAXPRO NVR Desktop Client - Workstation Specifications and Performance Metrics

The following table depicts the MAXPRO NVR Desktop Client - Workstation Specifications and Performance Metrics.

<table>
<thead>
<tr>
<th>MAXPRO NVR Client Only Workstation—Specifications</th>
<th>With GPU Rendering Capability</th>
<th>Without GPU Rendering Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Configuration</td>
<td>Minimum</td>
<td>Recommended</td>
</tr>
<tr>
<td>Up to 13 1080p HD Cameras, 1 Monitor</td>
<td>1080p HD cameras, 2 Monitors</td>
<td>Up to 9 HD Cameras</td>
</tr>
<tr>
<td>390fps @1080p HD</td>
<td>(540fps @1080p HD)</td>
<td>(1 selected panel only, Throttle</td>
</tr>
<tr>
<td>Processor*</td>
<td>Intel® Core™ i5-4460 or</td>
<td>Frame Rate setting enabled)</td>
</tr>
<tr>
<td>Intel® Core™ i5-4460 or equivalent 4th</td>
<td>Intel® Core™ i7-4790 or</td>
<td>Intel® Core™ 2 Duo Processor</td>
</tr>
<tr>
<td>generation Intel® Core™ Processors for client</td>
<td>equivalent 4th generation</td>
<td>E6750 2.66 GHz or Quad Core</td>
</tr>
<tr>
<td>systems</td>
<td>Intel® Core™ Processors for</td>
<td>Intel® Xeon® E5405 2.0 GHz</td>
</tr>
<tr>
<td>Graphics Adapter</td>
<td>client systems</td>
<td></td>
</tr>
<tr>
<td>In-built Processor Graphics (GPU):Intel® HD</td>
<td>Intel® HD Graphics 4600 or</td>
<td>512 MB or higher Display Card</td>
</tr>
<tr>
<td>Graphics (GPU):Intel® HD Graphics 4600 or</td>
<td>equivalent</td>
<td>(Optional)</td>
</tr>
<tr>
<td>System Memory (RAM)</td>
<td>8 GB</td>
<td>4 GB</td>
</tr>
<tr>
<td>OS &amp; Application – Hard Disk Drive or Partition</td>
<td>Minimum 100 GB Partition drive</td>
<td></td>
</tr>
<tr>
<td>Network Interface</td>
<td>or separate hard drive</td>
<td></td>
</tr>
<tr>
<td>Operating System</td>
<td>Minimum – 1 Gigabit network</td>
<td></td>
</tr>
<tr>
<td>Microsoft® Windows 7 Professional SP1, Windows</td>
<td>Interface card</td>
<td></td>
</tr>
<tr>
<td>8.1 Professional, Windows 10 Professional—64 bit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optical Drive</td>
<td>DVD-RW</td>
<td></td>
</tr>
<tr>
<td>Monitor Resolution</td>
<td>Video resolution 1280x1024</td>
<td></td>
</tr>
<tr>
<td>Keyboard/Mouse</td>
<td>Video resolution 1280x1024</td>
<td></td>
</tr>
<tr>
<td>102-key keyboard and mouse</td>
<td>pixels, 32 bit</td>
<td></td>
</tr>
</tbody>
</table>
The performance specifications above are recommended for systems with fixed or PTZ cameras only. 360 Cameras - Oncam Grandeye 360 cameras and cameras displayed in Corridor format are not supported with GPU rendering and use CPU rendering by default. On Windows 7 workstations, GPU rendering is only supported through the motherboard monitor outputs and any additional graphics cards should be disabled in BIOS. On Windows 8.1 and Windows 10 workstations with Intel GPU and any additional graphics cards, at least one monitor should be connected to the motherboard monitor output.

* GPU rendering by the NVR client is not currently supported on 6th Generation Intel® Core™ processors (Skylake processors) and CPU rendering should be used by uninstalling the GPU driver.
### Other Features

The following other features or improvements are now supported in NVR 3.5:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-way Audio for up to 64 IP channels</td>
<td>Support for One-Way Audio (for specific IP cameras) with live, playback and clip export on desktop clients for up to 64 IP channels.</td>
</tr>
<tr>
<td>Web Client, Mobile app- support for 64 channels</td>
<td>Support for all channels configured in NVR 3.5 through web client and Mobile app. Features supported in the Web Client and Mobile app are same as in prior versions.</td>
</tr>
<tr>
<td>Reduce motion alarms displayed in desktop client</td>
<td>Default Event severity of Motion related events has been updated, to reduce displaying these events by default in the desktop client Alarms window with the default threshold. The Alarm Severity Threshold in Preferences can be updated if there is a need to display these events based on the application.</td>
</tr>
<tr>
<td>License corruption detection and repair on NVR Services restart</td>
<td>Any corrupted NVR license is detected and repaired automatically when NVR Services are restarted.</td>
</tr>
<tr>
<td>Audit Log and Event Log Improvements</td>
<td>NVR Database trigger improvements with Audit Log and Event log table limits has been updated to 50,000 entries. The oldest entries in the tables are purged when data passes the limit.</td>
</tr>
<tr>
<td>Documentation Improvements</td>
<td>NVR manuals have been re-designed in structure. Installation and Configuration guide mainly intended for system installers for configuring the system including camera and other system configuration. Operators Guide mainly intended for end users or operators using the system for video monitoring and forensic investigations.</td>
</tr>
</tbody>
</table>

### MAXPRO® NVR Compatibility - Supported IP Cameras and Encoders

For the complete list of supported devices with MAXPRO NVR, refer to the Honeywell Open Technology Alliance for updated compatibility list of all manufacturers and models with integration features supported in the MAXPRO® NVR Compatibility section at [http://www.security.honeywell.com/hota/compatibility/index.html](http://www.security.honeywell.com/hota/compatibility/index.html).
Interoperability Matrix —Honeywell Video and Access Control Systems

Refer to the Honeywell Open Technology Alliance (HOTA), Honeywell Interoperability section at http://www.security.honeywell.com/hota/compatibility/index.html for the latest:

- MAXPRO NVR and MAXPRO VMS/Viewer Compatibility Matrix
- MAXPRO VMS/Viewer and Pro-Watch Compatibility Matrix
- MAXPRO NVR and WIN-PAK Compatibility Matrix

Resolved Issues

Resolved Issues in 4.1

- Improvised the Metadata cleanup Mechanism.
- Fixed the Playback (With Gaps) not smooth issue, if only Event Based Recording is enabled.
- Last saved configuration will be persisted on Codec/any configuration change to camera.
- Fixed the Profile camera deletion issue (Playback not responding).
- If Profile camera is added then Switch Stream option is displayed despite the camera does not support Multi-stream.
- Video Playback is not smooth at 16x speed issue is fixed.
- Improved the Jitter video rendering performance.
- 1080p 30 FPS video frame skip issue in Web Client is fixed.

Resolved Issues in 4.0

The following issues were fixed in version 4.0:

- **TSS Improvements:**
  - Improved the Entity connection so it will always remain intact.
  - Improved Neo so it will always get the right callback.
- Playback issues with Neo.
- Encoder stream cleanup and reconnection issues.
- Restarting of SVMD. Previously, trigger user-based recording had a bug for camera IDs above 64.
- The number of sessions in Neo (number of sessions now confirmed to be 160).
- MMSHelm memory growth issues.
- Fine-tuned Neo’s recycling logic. The schedule deletion and recycling deletion fine-tuned if many failed clip deletions are present.
Resolved Issues in 3.5
The following issues were fixed in version 3.5:

- Possibility of any NVR Metadata corruption on abrupt power loss in the prior versions has been resolved with the following:
  - Modifications to Windows file handling method to address the root cause of file corruption.
  - Creation of backup files for any opened metadata files, which are recovered automatically in a faster and reliable manner in maximum 2-3 minutes on service restart to resume recording if any corruption is detected due to abrupt power loss.
- Reconnection failure to some channels of Arecont 360 from NVR after a network loss has been resolved.
- Oncam Grandeye 360 cameras - PTZ reverse behavior in dewarped mode has been resolved.
- In MAXPRO NVR Hybrid, for Pelco-P protocol with analog PTZ cameras, issue with performing zoom on combined pan, tilt has been resolved.
- Domain field has been added in NVR Users configuration to address a weakness in authenticating Windows users. It is recommended to input the Domain name as part of Users configuration for Windows users.

Resolved Issues in 3.1
The following issues were fixed in version 3.1:

- **NVR Viewer**: Black screen displayed in previous versions when:
  - Oncam Grandeye camera is used continuously in more than one sequence in a client.
  - A user continuously drags and drops the camera.
  - A user switches between live and playback operation continuously.
- **NVR Hybrid SE IOs**: For MAXPRO NVR Hybrid SE in v3.0, if an output had to be triggered on an input alarm, the analog channels had to be configured within the first 16 channel numbers. In 3.1, this limitation has been resolved on MAXPRO NVR Hybrid SE.

The following issues were fixed in version 3.1 Build 65 Rev C:

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Note: To apply the following issue fixes in version 3.1 Build 65 Rev C, you should upgrade 3.1 Build 65 Rev B systems to 3.1 SP1 Build 70 Rev C.

- **Web Client Date Format**: Playback from web client would not work if the date format used a hyphen or dot as a separator. The issue has been resolved in 3.1 Build 65 Rev C Web Client and it is recommended to use 3.1 Build 65 Rev C for the affected languages.
- **Upgrade**: Web Client components failed to install if the Web Server port (used for MAXPRO Mobile apps) on NVR was configured as any other port other than default port 80. The issue has been resolved in 3.1 Build 65 C Setup.
- The Clip Export operation failed because of fluctuations in resolution between the packets. Due to this there would be an export clip failure. This issue has been fixed in 3.1 Build 65 Rev C.
- **Playback of video fails for specific days due to Metadata Day index generation issue**: While recreating the day index file some of the entries were missing. This was because of faulty day sorting method. Accordingly the playback operation for those particular days were not occurring in 3.1 Build 65 Rev B. This issue has been resolved in 3.1 Build 65 Rev C by changing the day sort algorithm.

Resolved Issues in 3.1 SP1
The following issues were fixed in version 3.1 SP1 Build 70 Rev C:
• **Consolidation of 3.1 Updates / Patches:** 3.1 SP1 installation (run Setup.exe from 500-02167V1-B_MAXPRONVR_3.1SP1_V3.1.1.70C - zip/iso) includes the updates/patches released to resolve issues in 3.1, including Smart VMD update for configuration corruption, Smart VMD update for high memory utilization for ONVIF/PSIA devices and Web Client 32nd camera missing update.

• **Server VMD (Smart VMD) in MAXPRO NVR stops because of high memory utilization:** Server VMD (Smart VMD) based motion alarms are not generated on active cameras with motion. The failure can be identified by checking if the commit size for Trinity Smart VMD Service is greater than 1.4 GB (navigate to Task Manager > Performance > Resource Monitor > Memory tab and then check if the commit size for TrinityAnalyticService.exe is greater than 1.4 GB). The root cause of the failure is Intel IPP library used for video decompression fails to release memory over a long run, when there are different sizes of packet delivered from cameras over the network. This can depend on different lighting conditions and site specific camera configuration (bitrate, auto light adjustment).

  **How to resolve:** Upgrade to MAXPRO NVR 3.1 SP1 and associated updates by running Setup.exe from 500-02167V1-B_MAXPRONVR_3.1SP1_V3.1.1.70C (zip/iso) to resolve this issue for ONVIF, PSIA, AXIS and RTSP devices. 3.1 SP1 includes the 3.1 update/patch released for ONVIF/PSIA devices and additionally includes the fix for AXIS, RTSP devices. After successfully upgrading to MAXPRO NVR 3.1 SP1, the MAXPRO NVR version information (About MAXPRO NVR) will display 3.1.1 Build 70 Rev C. The successful installation of the patches (500-02137-T1, 500-02137-T2) on 3.1 SP1 is updated in the path C:\install\MAXPRONVR_Patch_Installed_Info.txt file.

• **Limitation for cameras with continuous motion for more than 30 minutes configured with Smart VMD and event only based recording in MAXPRO NVR:** When there is continuous motion in front of the camera, the NVR records for 30 minutes after the motion is reported and then stops recording. If the motion continues, then there is a recording gap in the case of motion only recording configuration. The system waits until the motion stops (which resets the state) and then it will record again, on the next motion alarm.

  **How to resolve:** The 30 minute limitation has been resolved in 3.1 SP1 and the system can now record the continuous motion up to 12 hours by default to cover the high motion scenarios. For any rare/special scenarios of continuous motion longer than 12 hours, the default 12 hours can be updated in the database by Honeywell technical support.

• **Playback of video fails for specific days due to Metadata Day index generation issue:** In 3.1 Build 65 Rev B while recreating the day index file some of the entries were missing. This was because of faulty day sorting method. Accordingly the playback operation for those particular days were not occurring. This issue has been resolved in 3.1 Build 65 Rev C by changing the day sort algorithm and the resolution is also included in 3.1 SP1. It is recommended to upgrade 3.1 Build 65 Rev B to 3.1 SP1 Build 70 Rev C.

• **Smart VMD stops triggering motion alarms after bulk disable and enable of cameras:** In 3.1 SP1 this issue has been resolved.

• **Some ONVIF cameras are unable to add in NVR due to time sync issue between the two systems:** In 3.1 SP1 during ONVIF discovery, a message has been added to enable the user to identify when the failure occurs due to time sync issue between the camera and the NVR.

• **Video stream in MAXPRO Mobile apps is distorted if the IP devices in NVR are enabled to record audio with video:** In 3.1 SP1 Mobile Web Server on NVR has been updated to fix the issue of distorted video. MAXPRO Mobile app supports only video streaming and audio live or playback is supported only in desktop clients.

• **In some NVR systems with OS/application drives configured with RAID, license cannot be applied due to a license error:** To resolve this issue, in 3.1 SP1 licensing module has been updated to manage RAID systems licensing using the network MAC address. There is no impact to the existing licensed systems and no special operations are required by the user in the licensing process for RAID systems.

• **Exported Clips from an NVR system had artifacts due to time sync issue (time shift in NVR):** In 3.1 SP1 this issue has been resolved with improved clip export.

• **AXIS encoder (AXIS 241Q):** In some cases where the encoder gets disconnected from NVR and connection is not restored back automatically; then, to stream into NVR, AXIS encoder requires a restart of the recording engine: In 3.1 SP1 this issue has been resolved and does not require restart of the recording engine.
• **Video freeze is noticed in some cameras from Rapid Eye configured with Rapid Eye as a streamer in NVR. This is because of slower network connections between Rapid Eye and the NVR:** In 3.1 SP1 for these devices this issue has been resolved by increasing the timeout to default 2 minutes and the timeout is configurable through registry by Honeywell Technical Support.

• **ONVIF adapter customizations:** 3.1 SP1 includes updates to support discovery and addition of some ONVIF camera models which use empty ONVIF tokens. A fix has been added to handle the DLINK encoder configuration token name.
Known Issues and Limitations

Known Issues and Limitations in 4.1
The following are known issues and limitations in Version 4.1:

- Minor irregular movement (Jitter) video noticed during Motion recording in live and playback video.
- H265, 3D Positioning and Video Analytic events and Dewarping is supported only for Jupiter series cameras.
- H265 camera will not stream in Web client and Mobile apps.
- SMART VMD Will not support H.265 Codec type stream.

Note: If you configure H.265 codec type for SMART VMD wrongly then Trinity Analytic service will stop responding.

- For FishEye model camera (Jupiter) EPTZ will not work for Dewarped views.
- All Video Analytic events are displayed in NVR if the camera triggers/detects.
- Dewarped cameras are not supported in Sync Playback mode. Slow motion in video is noticed if you perform Sync playback with Dewarped enabled cameras.

Known Issues and Limitations in 4.0
The following are known issues and limitations in Version 4.0:

- AXIS cameras with version 6.XX are not compatible with MAXPRO NVR 4.0.

  Workaround: A Service Pack 1 has been released for 4.0 that solves this issue.

- iOS iPhone app may crash when continuously acknowledging and clearing alarms by applying filters.

  Workaround: Use a remote workstation or other connection method to acknowledge and clear alarms. This will be resolved in the next build.

- The calendar search window’s drop-down menu for Month, Day, Hour, and Minute is only supported for English language OS.

  Workaround: Use an alternate search method than Calendar search, or switch the OS to English when a calendar search is necessary.

- The MAXPRO NVR Client application crashes when users click on the Available List select all check box in the Configurator User Camera Event Association tab.

  Workaround: Select each event on the Available List individually instead of using the select all check box.

- Android tab/phone not supported when using Mirror, Flip, and 8 salvo view features.

  Workaround: To be added in a future release.
• Android app users are not able to modify the salvo name when creating a salvo.

  **Workaround:** Create and save the salvo with the default name and then modify the name afterwards by editing the saved salvo.

• Grey video issue observed on CPU-based 32-bit machines when switching panels with New equiP IP cameras.

  **Workaround:** Suggest using a 64-bit OS client machine.

• The Save Image option does not work when saving an image found with the Smart Motion Search.

  **Workaround:** Save a short clip instead of a still image, or find the video using a different search method and then save the image.

• The digital zoom function is not supported when playing MPVC clips on the NVR client.

  **Workaround:** Suggest using the MPC Player if the digital zoom feature is required.

• In Web Client v3.0.0.9, in a 4x4 salvo with a PTZ-type camera selected, you cannot close the window using the X button.

  **Workaround:** Use other controls to close the window, such as right-clicking the window. Alternatively, select a non-PTZ camera before closing the window.

### Known Issues and Limitations in 3.5

The following are known issues and limitations in Version 3.5:

• For Honeywell PSIA IP cameras, video is not streamed on the camera web page due to non-loading of ActiveX after upgrade to NVR 3.5. There is no impact to video streaming or recording of these cameras in NVR.

  **Resolution:** Uninstall Honeywell PSIA ActiveX from Programs and Features in Windows. Refresh the camera web page and install the ActiveX on prompt to resolve the issue.

• In MAXPRO NVR Hybrid, Analog channels must have Number field value of 1 to 32.

  **Workaround:** Please add and configure all the analog channels required before adding other devices.

• In MAXPRO NVR client, a newly drag and dropped camera from NeoStorageServer2 (cameras 33-64 on NVR 3.5) will not sync with the actual time of theNeoStorageServer1 (cameras 1-32 on NVR 3.5) immediately.

  **Workaround:** Click on **Sync Time** link at the top right corner of the salvo view to resync all the cameras to same time.

• MAXPRO NVR Web Client is supported for Chrome v32.x to v41.x only. It is not supported on higher chrome versions since Silverlight is not supported by the browser.

• MAXPRO NVR Web Client is only supported by following web browsers on Windows 10 with Silverlight plug-in installed: Internet Explorer version 11 or above and Firefox version 40 or above. It is not supported on new Edge browser on Windows 10.

• On NVRs with multiple storage drive partitions, with v3.5 systems having cameras more than 32, Current Recording Drive disk status in Disk tab is not complete. It only shows the disk status for the 1-32 cameras recording partition as green, although the cameras 33-64 are recording in a different partition. There is no impact to recording or any other video retrieval functionality.

• If a Network drive is used with NVR 3.5, 2 shared folders have to be setup for NEOStorageServer1 and NEOStorageServer2 to be operational. For example, if the path configured in Disk tab in the NVR is \<network drive system IP>\Share, create sub-folders Share and Share_2 on the network drive.

• Oncam Grandeye 360 cameras are not supported with GPU rendering and use CPU rendering by default.

• On Windows 7 64-bit workstations, GPU rendering is only supported through the motherboard monitor outputs and any additional graphics cards should be disabled in BIOS.
On Windows 7 32-bit workstations, GPU rendering is not supported and CPU rendering is used by default.

On rare occasion, an increase in CPU consumption is noticed with NVR client using GPU rendering, in spite of less number of cameras streaming in Viewer (4 or 5, 1080P Cameras).

Workaround: This is caused due to network issue or corrupted packet from camera. The workaround is to Close the particular camera in salvo and drag and drop once again.

In very rare situations on Windows 2008 Server R2, after making multiple configuration changes to the system in Camera tab and saving, there is a mismatch seen in the data retrieved by recording engine from database which causes the NEOStorageServer services to restart continuously.

Workaround: Windows system reboot is required to resolve this issue.

On NTP time sync, recording engine is reset (by design on all NVR versions) whenever the time drift after NTP sync is found to be beyond 5 minutes backward. This will lead to a maximum of 2-3 minutes recording gap and should be considered in selecting an appropriate time sync mechanism or maintenance/service of hardware.

If a camera is replaced on existing system, camera status shows NOT AVAILABLE, but live and recording works fine for the replaced camera. Camera status is not updated on Client re-login also.

Workaround: Reload the device tree in the client to resolve this issue.

While user takes a snap shot from any camera rendering on client with GPU rendering support, then the resolution of the snap shot image will be based on the resolution of client monitor. If the user is seeing video on a low resolution monitor, the snap shot will be a low resolution image. If the snap shot is taken in 1x1 salvo full screen mode, the image will be of the max resolution supported by the monitor.

In MAXPRO NVR Hybrid, for Pelco-D protocol with analog PTZ cameras, issue is noticed with performing zoom on combined pan, tilt.

Workaround: use Pelco-P protocol.

Known Issues and Limitations in 3.1 SP1

The following are known issues and limitations in Version 3.1 SP1:

- **MAXPRO clients - timeline jump for WMV clips with audio:** In 3.1 SP1 MAXPRO clients, playback review of exported WMV clips with audio by performing a jump in Timeline search is not supported and the video freezes in the panel.
  
  Workaround: The time jump is supported from Windows media player and is recommended to be used.

- **MAXPRO clients - ASF clip playback with time stamp sub-titles is not supported:** In 3.1 SP1 the ASF clip playback through MAXPRO clients does not display the time stamp sub-titles and it is recommended to use VLC media player (http://www.videolan.org/vlc/index.html) to display the time stamp sub-titles.

- **FLIR and Samsung cameras sometimes stop streaming video:** In some scenarios, when there is a fluctuation in the network then the camera gets disconnected and reconnects but it does not stream the video in NVR.
  
  Workaround: To resolve this issue update the NVR 3.1 SP1 server system using 500-02137-T3-A_MAXPRONVR-3.1SP1_V3.1.1.70C.exe update available on the Honeywell Download Center.
  
  The successful installation of the patch (500-02137-T3) on 3.1 SP1 is updated in the path C:\install\MAXPRONVR_Patch_Installed_Info.txt file.

- **In v3.1 SP1/v3.1, Login to Web Client fails after changing Windows Password on NVR Server:** Updating the Windows password on Trinity Services and NEOStorageServer allows you to login only from desktop clients but not from Web Client.
  
  How to resolve: Requires updating the cache credentials for MAXPRO Web in IIS. Please refer to the appendix section Changing the default Windows Password on MAXPRO NVR in updated MAXPRO NVR 3.1 Commissioning and Installation Guide (800-16419V1 Rev E) for detailed steps.

- **VMS/Viewer Audio support:** MAXPRO VMS/Viewer R310 is required to support audio from NVR in VMS/Viewer.
Known Issues and Limitations in 3.1

The following are known issues and limitations in Version 3.1:

- **In v3.1 SP1/v3.1, Login to Web Client fails after changing Windows Password on NVR Server:** Updating the Windows password on Trinity Services and NEOStorageServer only allows login from desktop clients but not from Web Client.

  **How to resolve:** Requires updating the cache credentials for MAXPRO Web in IIS. Please refer to the appendix section - Changing the default Windows Password on MAXPRO NVR in updated MAXPRO NVR 3.1 Commissioning and Installation Guide (800-16419V1 Rev E) for detailed steps.

- **Web Client:** In v3.1, 32nd camera is not listed in the web client.

  **Resolution:** Upgrade to NVR 3.1 SP1 or Apply the 500-01336V9-T3-A_Web_Client-32nd_Camera_Missing_MAXPRO_NVR_V3.1.0.65 B_65C_T-patch.exe update available on the Honeywell Download Center on affected MAXPRO NVR/ Hybrid SE, PE or Software only NVR Server (v3.1 build 65B/v3.1 build 65C) systems supporting 32 channels only.

- **In v3.1/v2.5, Server VMD (Smart VMD) in MAXPRO NVR stops functioning after a reboot:** Server VMD (Smart VMD) based motion alarms are not generated on active cameras with motion after a reboot. The failure can be identified by TrinityAnalyticsService.exe consuming zero percent CPU and less memory after reboot. The root cause of the failure is, Server VMD uses isolated storage to store configuration regarding camera zone - information and other parameters which gets stored in the user’s app data. Over a long run isolated storage gets into a state where it is not accessible by any process.

  **How to resolve:**
  - Upgrade to 3.1 SP1 or Apply the 500-01336V9-T4-A-MAXPRONVR_3.1_SVMD_PATCH.exe on MAXPRO NVR Server (v3.1 build 65B/v3.1 build 65C) only.
  - Upgrade to 3.1 SP1 (requires upgrade from v2.5 to v3.1 before applying 3.1 SP1) or Apply the 500-01336V7-T2-A-MAXPRONVR_2.5_SP1_SVMD_PATCH.exe on MAXPRO NVR Server (v2.5 build 29/v2.5 SP1 build 35B) only.

**Note** This patch does not apply to MAXPRO NVR Analytics PE systems.

- **In v3.1/v2.5, Server VMD (Smart VMD) in MAXPRO NVR stops because of high memory utilization:** Server VMD (Smart VMD) based motion alarms are not generated on active cameras with motion. The failure can be identified by checking if the commit size for Trinity Smart VMD Service is greater than 1.4 GB (Navigate to Task Manager > Performance > Resource Monitor > Memory tab and then check if the commit size for TrinityAnalyticService.exe is greater than 1.4 GB). The root cause of the failure is Intel IPP library used for video decompression fails to release memory over a long run, when there are different sizes of packet delivered from cameras over the network. This can depend on different lighting conditions and site specific camera configuration (bitrate, auto light adjustment).

  **How to resolve:** To resolve this issue for ONVIF, PSIA, AXIS and RTSP devices, upgrade to MAXPRO NVR 3.1 SP1 by running Setup.exe from 500-02167V1-B_MAXPRONVR_3.1SP1_V3.1.1.70C (zip/iso). (for v2.5, requires upgrade from v2.5 to v3.1 before applying 3.1 SP1).

  After successfully upgrading to MAXPRO NVR 3.1 SP1, the MAXPRO NVR version information (About MAXPRO NVR) will display 3.1.1 Build 70 Rev C. The successful installation of the patches (500-02137-T1, 500-02137-T2) on 3.1 SP1 is updated in the path C:\install\MAXPRONVR_Patch_Installed_Info.txt file.
• In v3.1/v2.5, limitation for cameras with continuous motion for more than 30 minutes configured with Smart VMD and event only based recording in MAXPRO NVR: When there is continuous motion in front of the camera, the NVR records for 30 minutes after the motion is reported and then stops recording. If motion continues, there is a recording gap in case of motion only recording configuration. The system waits until the motion stops (which resets the state) and then it will record again, on next motion alarm.

  **Workaround:** For cameras with continuous motion for more than 30 minutes, it is recommended to use continuous recording. The 30 minute limit will be changed in 3.1 SP1.

  **How to resolve:** The 30 minute limitation has been resolved in 3.1 SP1 and the system can now manage continuous motion for up to 12 hours by default to cover the high motion scenarios. For any rare special scenarios of continuous motion longer than 12 hours, the default 12 hours can be updated in the database by Honeywell Technical Support.

• Some NVR/Hybrid systems with v3.1 or earlier fails to stream from ONVIF cameras: Analog or non-ONVIF devices stream without issues on the system but only ONVIF cameras fails to stream.

  **How to resolve:** Issue is noticed with decompression and it requires registering the decompression dll (HWAVDecompressModule.dll) from Honeywell ONVIF IP Adapter folder using `regsvr32` command prompt. Please contact Honeywell Technical Support to resolve the issue.

• Additional French translation updates: Apply the patch 500-01336V9-T2-A_MAXPRONVR_3.1_REVC_FRENCH_PATCH.exe available on the Honeywell Download Center on NVR 3.1 Build 65 Server and Clients.

• 3.1 Build 65 Rev B upgrade: Web Client components fail to install if the Web Server port (used for MAXPRO Mobile apps) on NVR is configured as any other port other than default port 80.

  **Workaround:** Set the port to default port 80 in Web Server on NVR before upgrading to 3.1 Build 65 Rev B OR the issue has been resolved in 3.1 Build 65 Rev C setup and it is recommended to use 3.1 Build 65 Rev C setup for upgrades.

• Internationalization support: 3.1 Build 65 Rev B is recommended on English OS. Build 65 Rev C with support for language packs is recommended for internationalization support.

• Web Client Snapshot: Camera/Salvo snapshot feature is not supported on a Mac with the Web Client.

  **Workaround:** Print screen on Mac can be used for taking screen capture of the Web Client displaying cameras/salvo.

• Web Client Date Format: Playback from 3.1 Build 65 B Web Client will not work if the date format uses a hyphen or dot as a separator. Only `/` is supported (DD/MM/YYYY).

  **Workaround:** Use `/` as a date separator which is the default for most languages OR the issue has been resolved in 3.1 Build 65 Rev C Web Client and it is recommended to use 3.1 Build 65 Rev C for the affected languages.

• VMS/Viewer Audio support: MAXPRO VMS/Viewer R310 is required to support audio from NVR in VMS/Viewer.

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**Known Issues and Limitations - Inherited**

The following are known issues and limitations inherited in v3.1 SP1 and v3.1 from the previous versions:

• **NVR Hybrid:** Video feeds in the Spot Monitor freezes if the user changes the video format of a camera from PAL to NTSC and then to PAL.

  **Workaround:** Disable and Enable the cameras in Configuration ➤ Camera tab if the video format is changed.
• **Discovery**: All cameras in the network are not discovered occasionally when there are large numbers of cameras in the network from various manufacturers and cameras are spread across multiple switches.

  **Workaround**: Rediscover the cameras with another attempt or add cameras manually.

• **Viewer**: When you use a combination of mouse and joystick controllers to perform a PTZ operation, then PTZ operation is not controllable in below scenario:

  Call a preset on the selected video panel using mouse. Use the Joystick to perform the PTZ operation on the same camera. For any Pan/Tilt/Zoom operations from Joystick, camera rotates to 180 degrees and then stops.

  **Workaround**: Using the Joystick, drag and drop the camera once again into the panel to perform PTZ normally.

• **AXIS 241Q - DHCP**: Axis 241Q encoder configured with DHCP IP address, stops streaming video in below scenario:

  Configure Axis 241Q encoder with DHCP IP address and then add it to the NVR. The video streams normally. Power recycle the encoder during which the encoder selects a new IP. Delete and then add the encoder in NVR with new IP. Drag and drop the camera. Video does not display.

  **Workaround**: It is recommended to configure all the cameras or encoders with static IP. In the above scenario to display the video from the encoder with changed DHCP IP address, restart the NEOStorageServer service from Control Panel.

• **Sequence**: For MAXPRO NVR XE and MAXPRO NVR Hybrid XE, it is recommended to run only one sequence at a time on a client (remote or local).

• **Viewer**: When you perform any PTZ operations using the mouse after inactivity over a long period of time (3-4 hours), PTZ cameras do not respond for the first two mouse button clicks.

  **Workaround**: Click the mouse button for the third time to resume PTZ operations.

• **Viewer**: When you play back an exported clip of a higher resolution (1080p or higher) camera with ImmerVision lens and if you try to save the image, then the Viewer terminates abruptly.

  **Workaround**: Close and relaunch the Viewer to save the image successfully.

• **Viewer**: For all the cameras reverse playback is not smooth as expected at 1X speed. When you jump backward by X minutes more than once successively and then click the reverse play button in timeline, reverse playback does not play at 1X speed; instead it plays at 16X speed.

  **Workaround**: Pause the video once and then click the Reverse Play button to continue the operation.

• **Viewer**: In Sync playback mode, Oncam Grandeye cameras do not support dewarping 360 view.

  **Workaround**: Drag and drop the cameras once again to get the dewarped 360 view.

• **Viewer**: NVR does not record the dewarped image of 360 degree view displayed on the client for Oncam Grandeye cameras. It only records the raw image from the camera.

  **Workaround**: Not applicable/Not supported.

• **Machine Name Change Utility**: In some cases when the user changes the machine name of a NVR through machine name change utility, then the utility stops processing as the Trinity Controller fails to stop.

  **Workaround**: Manually stop the Trinity Controller and re-run the utility again. It is recommended to manually stop the MAXPRO NVR services before changing the machine name through the utility and start the services manually after the machine name is changed successfully.

• **When the user attempts to logon to NVR Client, “Server Error” message is displayed.**

  **How to resolve**: Perform the following steps:

  1. Close the NVR Client application (MMShell.exe).
  2. Browse the NVR install path. The default path is C:\Program Files\Honeywell\MaxproNVR\TrinityFramework\bin.
  3. Locate the MMShell.exe.config file.
  4. Right click the MMShell.exe.config file and then choose Open with > Notepad.
5. Paste the following three XML code lines at the end of the file as shown below:

```xml
<runtime>
  <loadFromRemoteSources enabled="true" />
</runtime>
```

6. Click **File > Save** to save the file.

7. Repeat the steps 1 through step 6 for **TrinityRenderingServer.exe.config** file and paste the XML code lines as shown below.
• **Issues for NVR installed on Arabic OS:** Server VMD (Smart VMD) alarms does not trigger in NVR if installed on Arabic OS. The **Resolution** drop down in the camera tab will be empty for all cameras.

  **Workaround:** To resolve this issue, change the system date and time format settings to **English (India)** in **Control Panel > Region and Language > Format** drop-down.