

# MAXPRO®NVR 6.7

## Operator's Guide



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## User Guide

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**Honeywell**

# Revisions

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# ABOUT THIS GUIDE

## Introduction

This guide introduces and describes how to use the Honeywell MAXPRO<sup>®</sup> NVR application.

The MAXPRO NVR family is an unmatched suite of open, easy to use and scalable IP recording solutions that satisfy almost any application. The family includes Software and Turnkey Box NVR Solutions.

## Scope

This guide describes how to use MAXPRO NVR application and it also provides information on the features and functionalities common to all the variants of MAXPRO NVR. The technical aspects of MAXPRO NVR are beyond the scope of this guide.

## Intended Audience

This document is intended for the operators of MAXPRO NVR.

## Structure of this Guide

The following table describes the contents of each chapter in this guide.

| # | Chapter  | Description  |
|---|--|--|
| 1 | <a href="#">Introducing MAXPRO NVR</a>         | Introduces the MAXPRO NVR system and types of surveillance solutions.      |
| 2 | <a href="#">Logging On and Getting Started</a> | Describes the procedure to log on and gives an overview of the MAXPRO NVR. |

| # | Chapter  | Description   |
|---|--|---|
| 3 | <a href="#">Monitoring a Site</a>                      | Describes the procedures to view live and recorded video and the operations you can perform on them.                |
| 4 | <a href="#">Searching Recorded Video in MAXPRO NVR</a> | Describes the search options available in MAXPRO NVR.   |
| 5 | <a href="#">Generating Reports</a>                     | Describes the various reports that you can generate in MAXPRO NVR.  |
| 6 | <a href="#">MAXPRO NVR Web Client</a>                  | Describes the procedure to log on to MAXPRO NVR Web Client and how to use the web client to access the MAXPRO NVR.  |
| 7 | <a href="#">Using the MAXPRO NVR Mobile App</a>        | Describes the procedure to log on to MAXPRO NVR Mobile App, and how to use the mobile app to access the MAXPRO NVR. |

## Related Documents

This document listed in the table serves as a necessary prerequisite for installing and configuring MAXPRO NVR.

| Document title                                  | Part number | Description   |
|---|-------------|---|
| MAXPRO NVR Installation and Configuration Guide | 800-26013-C | This document is intended for field and commissioning engineers and describes the procedures and guidelines for installing, configuring and using the MAXPRO® NVR system. |

## Typographical Conventions

This document uses the following typographical conventions:

| Font                     | What it represents   | Example  |
|--------------------------|--|--|
| Honeywell Sans Medium    | Words or characters that you must type. The word “enter” is used if you must type text and then press the Enter or Return key. | Enter the <b>password</b> .  |
|                          | Menu titles and other items you select   | Double-click <b>Open</b> from the <b>File</b> menu.                    |
|                          | Buttons you click to perform actions   | Click <b>Exit</b> to close the program.                                |
| Honeywell Cond Extrabold | Heading  | Installation   |
| Honeywell Sans Extrabold | Cross-reference to external source   | Refer to the <b>MAXPRO® NVR Installation and Configuration Guide</b> . |
| Honeywell Sans (Italic)  | Cross-reference within the guide   | See <i>Installation</i> .  |

# INTRODUCING MAXPRO NVR

## Overview

Honeywell's MAXPRO NVR line includes turnkey solutions—NVR (XE, SE, PE) with 8 to 64 channels and NVR Hybrid (XE, SE, PE) with 16 to 64 channels— and software solutions that range from 4 to 64 and 128 channels. It supports ONVIF Profile S and PSIA interoperability standards, RTSP, native integration for third-party cameras—including 360° camera support—and encoders from Honeywell, Axis and other manufacturers, making it a truly open system.

MAXPRO NVR provides easy to use desktop clients, web clients and mobile apps. The advanced IP video capabilities make MAXPRO NVRs easy-to-install with 3-clicks\* to live video and easy-to-use with features such as Video Surround, Calendar Search, SMART VMD, SMART Motion Search, Multi Streaming, Status Monitoring and Auto Discovery for every day security users as well as advanced video surveillance users.

\* - With default settings and in a local area network for specific models.

## MAXPRO NVR Turnkey Boxed Solutions

Honeywell's MAXPRO NVRs offer ideal solutions from entry to enterprise IP video surveillance systems. Supporting Honeywell's high definition (HD) cameras and broad integration with third-party IP cameras and encoders. The MAXPRO family NVRs is a powerful HD IP recording and security monitoring system for a variety of applications. MAXPRO NVR comes pre-installed with the required software and pre-licensed with the required channels depending on the MAXPRO NVR model you purchase.

## MAXPRO NVR Software Only Solution

Honeywell's MAXPRO NVR Software solution is a flexible, scalable and open IP video surveillance system. Supporting Honeywell's high definition (HD) cameras and broad integration with third party IP cameras and encoders, the MAXPRO NVR family is a powerful, high definition IP recording and security monitoring system

for a variety of applications. MAXPRO NVR Software solution ensures flexibility for end-user IT departments when choosing the NVR hardware to deploy and end users will find it as easy as a simple DVR to configure and operate.

MAXPRO NVR Software is an open platform that supports broad third party device integrations with support for PSIA and ONVIF Profile S standards, real time streaming protocol (RTSP) standard and native device integrations. MAXPRO NVR provides easy-to- use desktop and web clients and mobile apps. MAXPRO NVR Software comes with all required software applications and a license for 4, 8, 16, 32, 64, 128 channels while allowing for up to 128 cameras as your system grows. Minimum hardware specifications for different levels of recording and monitoring performance are provided for IT departments to choose the appropriate hardware platform for their system. This, along with quick and easy commissioning wizards for discovery and system configuration, makes installing HD IP systems quick and efficient without requiring any IP expertise. Simple and logical configuration pages make setup a breeze even for the novice installer. The following table describes the software solutions available.

## Personal Data Storage

Please be aware that this product can store personal data.

Personal data is protected by the General Data Protection Regulation (2016/679) in Europe and therefore the owners of personal data have obtained certain rights thanks to this regulation.

We strongly advise you to be fully aware of these owner ("data subjects") rights as well as which limitations you have to obey regarding the use and distribution of this data.

Further details can be found on the GDPR website of the EU: [https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules\\_en](https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en)



# MAXPRO NVR Family

The following table describes the various MAXPRO NVR Hybrid and MAXPRO NVR offerings that are available.

|                                     |  |  |  |  |  |  |  |
|-------------------------------------|---|---|---|---|---|---|---|
|                                     | <b>MAXPRO NVR Hybrid XE (Xpress Edition)</b>                                      | <b>MAXPRO NVR Hybrid SE (Standard Edition)</b>                                    | <b>MAXPRO NVR Hybrid PE (Professional Edition)</b>                                | <b>MAXPRO NVR XE (Xpress Edition)</b>   | <b>MAXPRO NVR SE (Standard Edition)</b>   | <b>MAXPRO NVR PE (Professional Edition)</b>   | <b>MAXPRO NVR Software</b>  |
| <b>Description</b>                  | Simple, affordable NVR Hybrid   | Flexible, scalable NVR Hybrid   | Enterprise class NVR Hybrid   | Simple, affordable NVR  | Flexible, scalable NVR  | Enterprise class NVR  | Flexible, software only NVR   |
| <b>Channels</b>                     | 16 Analog or 16 IP  | 16 Analog and 48 IP or only 64 IP   | 16 Analog and 48 IP or only 64 IP   | 8 or 16   | Up to 64  | Up to 128   | 4, 8, 16, 32, 64 or 128   |
| <b>Maximum Frame Rate</b>           |   |   |   |   |   |   |   |
| <b>at 4CIF/ VGA IP</b>              | 480 fps (16 ch IP)  | 1920 fps (64 ch IP)   | 1920 fps (64 ch IP)   | 480 fps   | 1920 fps  | 1920 fps  | Server hardware dependent- Minimum hardware specs recommended for various fps       |
| <b>at 720p IP</b>                   | 480 fps (16 ch IP)  | 1920 fps (64 ch IP)   | 1920 fps (64 ch IP)   | 480 fps   | 1920 fps  | 1920 fps  |   |
| <b>at 1080p IP (4 Mbps bitrate)</b> | 480 fps (16 ch IP)  | 1280 fps (64 ch IP)   | 1920 fps (64 ch IP)   | 480 fps   | 1280 fps  | 1920 fps  |   |
| <b>at CIF or 4CIF/D1 Analog</b>     | 480 fps CIF or 120 fps 4CIF/D1 (16 ch Analog)                                     | 480 fps CIF or 120 fps 4CIF/D1 (16 ch Analog)                                     | 480 fps CIF or 120 fps 4CIF/D1 (16 ch Analog)                                     |   |   |   |   |
| <b>Storage</b>                      | 1 - 16 TB, internal fixed   | 1 - 24 TB removable bays  | Up to 68 TB RAID 5/6, removable bays  | 1 - 12 TB internal fixed  | 1 - 48 TB, removable bays   | Up to 68TB RAID 5/6, removable bays   | Server hardware dependent   |
| <b>Form Factor</b>                  | Desktop   | Workstation/Server  | Server  | Desktop   | Workstation/Server  | Server  | Server hardware dependent   |

**Note:** The product options available in your region may vary, please contact your local Honeywell representative for more information.

## MAXPRO NVR Features

MAXPRO NVR (Turnkey NVR/Hybrid boxes - XE, SE, PE and Software only solution) offers the following key features that differentiate it from other IP video surveillance systems.

### New Features in NVR 6.7

#### Mask Compliance Detection

Mask Compliance Detection feature detects the people who are with and without Masks in a given scene. This feature detects in a real time scenario and generates an event for People with/without mask. It helps in monitoring the people those who are violating the compliance of not wearing a mask in public places. This feature requires dedicated license to configure and use.

#### Social Distancing Violation Detection

Social Distancing Violation detection feature detects distance between two people and raises an alarm if the social distance norm is violated. This feature helps to ensure social distancing is followed in your premises. This feature requires dedicated license to configure and use.

#### Alarms for both Mask Detection and Social Distancing

Following are the list of alarms that are generated in NVR for Mask and Social Distancing detection features:

- Person Detected with Mask
- Person Detected without Mask
- Social Distancing Violation
- Non- Compliant Social Distancing Regions

#### Operating Conditions

There are various recommendation with respect to operating conditions for both Mask Detection and Social Distancing to give good results. It is recommended to refer these operating conditions before using these feature.

#### Analytic Alarms in NVR

The below screen displays the list of alarms that are generated in NVR for Mask Detection, Social Distancing violation and Non-Compliant Social Distancing Regions features.

| Alarm                                   |               |          |           |              |
|---|---------------|----------|-----------|--------------|
| Description                             | Event details | Device   | IO Status | Date Time    |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Non-Compliant Social Distancing Regions | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Acknowledge                             |               |          |           |              |
| Description                             | Event details | Device   | IO Status | Date Time    |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |

## Scalable Analytics Server

This feature is introduced to manage the load on a NVR box while rendering analytics based cameras. Earlier only one local analytics server was available for multiple cameras that support analytics. This results in high consumption of CPU and low rendering capability of live video in NVR cameras.

Scalability feature helps customer to share the analytics server load on different remote machines and utilize the analytic algorithms efficiently. User can map the required cameras to each remote server and view the alarms in VMS,

A new tab named Analytics Server is introduced under Configurator tab to add additional analytics server and to choose the one while configuring Social Distancing, Mask compliance and SVMF features. This provides flexibility and increases the processing time to manage the load over analytics server when configuring multiple features. See MAXPRO NVR Installation and Configuration Guide on how to configure.

- A maximum of 5 Analytics Remote boxes can be added under this tab.
- For each Analytics Remote box, 4 camera with 30 FPS and up to 8 cameras with 5 FPS can be assigned

## Bulk configurations of cameras from NVR

This feature allows you to perform Bulk camera configuration for main and sub stream's, to ease the effort of configuring multiple cameras at the customer site. This feature improves the productivity for dealers and system integrators while configuring many NVRs. The configuration of cameras from the NVR is done one by one today (either post discovery or manual addition). This leads to higher lead time to configure and setup customer sites. Refer to the MAXPRO NVR 6.7 Installation and Configuration Guide on how to configure and use this feature.

You can perform the following using Bulk configuration screen:

- General Settings
- Schedule Settings
- Preference Settings
- Stream Settings including child stream configurations specific to camera model
- SVMD Configuration

## Bi-Directional Audio Support for MAXPRO NVR

This feature helps an operator to send Bi-directional audio warnings/messages to any audio output of cameras from MAXPRO VMS machines. Currently Mic and speech is supported from VMS viewer only. Refer to the MAXPRO NVR 6.7 Installation and Configuration Guide on how to configure and use this feature.

This feature supports standard audio Codec format G.711 ulaw and only Honeywell ONVIF Camera model are supported.

*Only Honeywell ONVIF Camera models are supported.*

*Only fixed G.711 ulaw Codec format is supported.*

*Mutlistream is supported, but can be enabled in only one stream at a time.*

*It is recommended for the user to enable and speak for one camera at a time.*

*Windows 2016, 2019 windows server machines are not supported for this release.*

## Series 60 Camera Integration

MAXPRO VMS R670 supports Series 60 Camera integration with MAXPRO NVR 6.7 recorder. The following tables explain the list of supported camera models, and events/alarms supported.

| Type             | Camera Models | Firmware Details                                    |
|------------------|---------------|---|
| Premium Model    | HC60W35R2     | Honeywell_L60-Series_IPC_HC60WXXRX_V1.0.21.20200828 |
|                  | HC60W35R4     |   |
|                  | HC60W45R2     |   |
|                  | HC60W45R4     |   |
|                  | HC60WB5R2     |   |
|                  | HC60WB5R5     |   |
|                  | HC60WZ2E30    |   |
| Mainstream Model | HC60W34R2L    |   |
|                  | HC60W34R2     |   |
|                  | HC60W44R2L    |   |
|                  | HC60W44R2     |   |
|                  | HC60WB4R2L    |   |
|                  | HC60WB4R2     |   |
| Series60 IR PTZ  | HC60WZ5R30    |   |
| Series30         | HC30W25R3-12V |   |

## Support for Ex-Proof Camera models

MAXPRO NVR 6.7 supports Ex-Proof Camera integration. The following tables explain the list of supported camera models, Codec and Resolutions supported.

| Camera Models   | Codec & FPS Supported                                   | Resolutions Supported   |
|-----------------|---|---|
| HEIPTZ-2201W-IR | H264, H265, MPEG<br>FPS: 50 for PAL<br>FPS: 50 for NTSC | 1920 x 1080, 1280 x 960, 1280 x 720,<br>704 x 576, 640 x 480, 352 x 288 |
| HEICC-2301T     | H264, H265, MPEG<br>FPS: 50 for PAL<br>FPS: 60 for NTSC | 1920 x 1080, 1280 x 960, 1280 x 720,<br>704 x 480, 640 x 480, 352 x 240 |

## Enhancements in FishEye camera Dewarping Support

This enhancement for FishEye camera allows you to view/performance the following

- When one of the Quad-view column display 360° view then the user can select a designated location to display for the rest of the 3 columns.
- Allow PTZ function during live-view and playback.
- Enable PTZ operation on Quad-view setting & Dewarped image.
- Oncom GPU rendering support

This improvement is supported only to the following camera models:

- HC12-IEC1-O: C-12 Indoor Camera
- HC12-OPC1-O: C-12 Outdoor Plus Camera

## New Features in NVR 6.3

### Mask Compliance Detection

Mask Compliance Detection feature detects the people who are with and without Masks in a given scene. This feature detects in a real time scenario and generates an event for People with/without mask. It helps in monitoring the people those who are violating the compliance of not wearing a mask in public places. This feature requires dedicated license to configure and use. See [How to configure Mask Detection in NVR](#) section.

### Social Distancing Violation Detection

Social Distancing Violation detection feature detects distance between two people and raises an alarm if the social distance norm is violated. This feature helps to ensure social distancing is followed in your premises. This feature requires dedicated license to configure and use. See [How to configure Social Distancing in NVR](#) section.

## Alarms for both Mask Detection and Social Distancing

Following are the list of alarms that are generated in NVR for Mask and Social Distancing detection features:

- Person Detected with Mask
- Person Detected without Mask
- Social Distancing Violation

## Operating Conditions

There are various recommendation with respect to operating conditions for both Mask Detection and Social Distancing to give good results. It is recommended to refer these operating conditions before using these feature. See [Recommended Operating Conditions For Mask Detection](#) and [Recommended Operating Conditions For Distancing Violation detection](#) for information on this.

## Support for Remote Analytics Server

MAXPRO R670 release supports Remote analytics Server configuration for Mask, Social Distancing and SVMd on i8700 and 9700 Machines. This configuration is required if the existing systems are not capable to take up the load of Analytics and to avoid overshoot of system resources memory. Refer to the MAXPRO NVR 6.7 Installation and Configuration Guide on how to configure.

**Note:** Analytics server is supported only on Windows 10 OS platform.

## Series 60 Camera Integration

MAXPRO VMS R630 supports Series 60 Camera integration with MAXPRO NVR 6.7 recorder. The following tables explain the list of supported camera models, and events/alarms supported.

| Type             | Camera Models | Firmware Details                                    |
|------------------|---------------|---|
| Premium Model    | HC60W35R2     | Honeywell L60-Series_IPC_HC60WXXRX_V1.0.21.20200828 |
|                  | HC60W35R4     |   |
|                  | HC60W45R2     |   |
|                  | HC60W45R4     |   |
|                  | HC60WB5R2     |   |
|                  | HC60WB5R5     |   |
|                  | HC60WZ2E30    |   |
| Mainstream Model | HC60W34R2L    |   |
|                  | HC60W34R2     |   |
|                  | HC60W44R2L    |   |
|                  | HC60W44R2     |   |
|                  | HC60WB4R2L    |   |
|                  | HC60WB4R2     |   |

## Supported Events/Alarms

Series 60 Camera models support the following events/alarms:

| Event                       |
|-----------------------------|
| Tampering                   |
| Image too bright            |
| Image too dark              |
| Image too blur event        |
| Motion Detection            |
| Intrusion Detection         |
| Loitering Detection         |
| Line crossing Detection     |
| Unattended Object Detection |
| Missing Object Detection    |
| Face Detection              |

## Supported key Features

- HTTPS integration: The camera supports complete HTTPS protocol while integrating with NVR.
- Smart Stream III
  - Smart Codec
  - Smart FPS
  - Dynamic intra Frame Period (DIF)
- Alarms
- Profile S compliant
- Multicast
- Edge Sync Recording Support
- Full Encrypted Communication (including Encrypted Profile G communication)

## Thermal Camera Integration - HRCF-FD384H/HRCF-FD640H

MAXPRO R630 supports integration of Silent Sentinel and Thermal Cameras. Following are the cameras and firmware details:

| Type            | Camera Model | Firmware Details     |
|-----------------|--------------|----------------------|
| Silent Sentinel | HRCF-FD640H  | V4 : v1.0.1D20200603 |
|                 | HRCF-FD384H  |                      |
| Thermal Camera  | HVCT-B4010I  | V5.5.26 build 200514 |
|                 | HVCT-B4020I  |                      |
|                 | HVCT-D4010I  |                      |

Refer the MAXPRO integration with MODUM Technical Notes for detailed information on the how to integrate the HRCF-FD384H/HRCF-FD640H Thermal cameras with MAXPRO NVR.

## New Features in NVR 6.0

### SSA - Software Service Agreement for MAXPRO

Software Service Agreement (SSA) is a flexible version specific licensing process which allows a user to get the support on the MAXPRO VMS licenses across multiple versions. From 6.0 release user need to buy a valid license to upgrade or for fresh installation. In addition user can buy SSA support license for a specific duration which helps to get support from Honeywell.

Please contact Honeywell Customer support. See the back cover for the contact information in respective regions. Licensing changes for Software Service Agreement.

### NDAA Series 30 camera Integration in MAXPRO NVR & VMS

Series 30 Camera integration is supported in 6.0 release with MAXPRO NVR recorder. The following tables explain the list of supported camera models, firmware version and events.

**Note:** HC30WF5R1 model camera does not support HTTPS

| #  | Camera Models | Firmware Details   |
|----|---------------|--|
| 1  | HC30W42R3     | v1.0.18.20190523<br>Note: If a camera has older firmware, please upgrade to this version or above and perform factory default once |
| 2  | HC30W45R3     |  |
| 3  | HC30W45R2     |  |
| 4  | HC30WB2R1     |  |
| 5  | HC30WB5R1     |  |
| 6  | HC30WB5R2     |  |
| 7  | HC30WE2R3     |  |
| 8  | HC30WE5R3     |  |
| 9  | HC30WE5R2     |  |
| 10 | HC30WF5R1     |  |

### Supported Events

Series 30 Camera models support the following events:

| Event            |
|------------------|
| Motion Detection |



|                  |
|------------------|
| Tamper           |
| Image too blur   |
| Image too dark   |
| Image too bright |
| People Detection |
| Intrusion        |

## Supported key Features

- Smart Stream III
  - Smart Codec
  - Smart FPS
  - Dynamic intra Frame Period (DIF)
- HTTPS
- Alarms
- Profile S compliant
- Multicast

## Additional Cameras Support

In addition to above HC Series 30 cameras, NVR 6.0 supports the below camera models:

- H4W8GR4IN
- H4W8GR1IN

**Supported Codec Formats:** H.265, H.264, H.264H, H.264B, MJPEG.

## Additional Resolution Support

For HFD6GR1 model camera, following additional resolutions are supported:

- 2432 x 1216
- 1920 x 1080
- 960 x 480
- 640 x 320
- 512 x 256

## MPEG2 Encoder Support with MAXPRO NVR and VMS

NVR 6.0 supports legacy MPEG2 Encoders with Live and playback, Alarms and VMS in VMS functionalities. The following encoders are supported.

- ENC8M2
- VE8M2

## Video Guard service for SIRA compliance

MAXPRO NVR 6.0 release supports SIRA compliance with Video Guard Agent. This is to meet the specifications defined as part of the City wide Surveillance initiative by the Security Industry Regulatory Agency (SIRA) of Dubai, UAE, and being adopted across Middle-East countries.

## New Features in NVR 5.6

### Support for Equip series V2 Cameras

The following is the list of Equip Series V2 camera integration is supported in MAX-PRO VMS:

**Note:** Recommended to use NVR 5.6 and above to connect to the below camera firmware.

| #  | Camera Model | Type            |
|----|--------------|-----------------|
| 1  | H2W2GR1      | WDR cameras     |
| 2  | H3W2GR1V     |                 |
| 3  | H3W4GR1V     |                 |
| 4  | H4W2GR1V     |                 |
| 5  | H4W4GR1V     |                 |
| 6  | HBW2GR1V     |                 |
| 7  | HBW2GR3V     |                 |
| 8  | HBW4GR1V     |                 |
| 9  | HCW2GV       |                 |
| 10 | H4L2GR1V     | Ultra Low Light |
| 11 | HCL2GV       |                 |
| 12 | HBL2GR1V     |                 |

The below table details the Firmware version compatible with the NVR 5.6 Build 572:

| Camera Model                       | Firmware                            | Web Version   | Onvif Version | ISOM Version      | Xtralis Intrusion | Xtralis Loitering | Intrusion Detection | Loitering Detection | Trigger Line Detection |
|------------------------------------|-------------------------------------|---------------|---------------|-------------------|-------------------|-------------------|---------------------|---------------------|------------------------|
| Equip S Series V2 Firmware version |                                     |               |               |                   | VA Packages       |                   |                     |                     |                        |
| Ultra Low Light                    | 1.00000000.18, 2019-04-23 Or above. | 3.2.1.722 805 | 16.1.2        | 1.3.1, 2019-04-21 | 1.01.19           | 1.01.19           | 1.0.8, 2019-01-15   | 1.0.8, 2019-01-15   | 1.0.8 2019-01-15       |
| WDR cameras                        | 1.00000000.18, 2019-04-09 Or above. | 3.2.1.716 054 | 16.1.2        | 1.3.1, 2019-04-04 |                   |                   |                     |                     |                        |

The above Equip S Series V2 Firmware version supports the following features:

- New VA events added with Annotation support
  - Xtralis IntrusionTrace™
  - Xtralis LoiterTrace™
  - Intrusion Detection
  - Loitering Detection
  - Trigger Line Detection

**Note:** Annotation feature is supported only with Xtralis XO package.

- Profile -G Edge Sync recording
- Multicast

## Support for HRHQ104 DVR

NVR 5.6 supports HRHQ104/108/116 DVR (V1.00.00HW001.1.190422) as 4/8/16ch encoders

## Support for smooth Rendering at VMS

NVR 5.6 Build 570 installation is mandatory for smooth reverse playback in MAX-PRO VMS.

## New features in NVR 5.5

### Analytics Annotations Support

Camera built in Annotations feature helps to trace and locate the moving subjects in live/recorded video and generates an alarm if intrusion or loitering is detected. After this feature is enabled in NVR, subjects in video when found in Region Of Interest, is bounded by rectangle box and on alarm conditions, it will be signified with a change in color of bounding box.

Annotation support for Intrusion Trace and Loiter Trace in Live and Playback video is supported with only Equip-S Series specific cameras.

See [How to Enable Annotations in NVR](#) section on for more information.

Refer to the *MAXPRO® NVR Installation and Configuration Guide* for the complete details on how to configure Annotation feature.

### Enhancements in Video connection

Improvements in video connection from Viewer.

## New features in NVR 5.0

### Patches Merged in SP1

#### 5.0 T Patch

- Refer to the 800-22559V1-E\_MAXPRO NVR\_5.0\_T Patch\_Whats\_New\_Release\_Notes for complete information on new features in 5.0 T Patch.

### Windows Expiry Patch

This patch is to make MAXPRO VMS application not to apply password expiry option for windows users. Refer to the MAXPRO VMS\_ Windows Expiry\_Patch\_Release Notes for detailed information.

## Archival Improvements

### Include Archived Clips

This feature allows user to search Archived clips including the recording clips. User needs to select Include Archived Clips check box under Filter area while searching for recorded clips. Based on the search criteria the archived clips are displayed in

Grey color. When user drag and drop the archived clips in to the panel then camera name and clips status as REC is displayed. See [How to search for recorder video and events](#) for complete details on how to search for Archived clips.

**Note:** *If user selects Include archived clip check box and then search for archived clips, it displays only auto archived clips. It will not display the manually archived clips.*

## Primary and Archived Location

The Archived clips in the Result window also displays the location of Archived clip as explained below.

- Archived: The clip is available in Archived path
- Primary, Archived: The clips is available in both primary storage and Archived path

## Camera Name & Clip status

In Viewer screen following are the improvements:

- Under Snapshots/clips, the folder naming structure is changed to camera name.
- When a user drag and drops a archived clip into panel, the archival camera name with clip status Rec is displayed.
- If Archived clips are played in MAXPRO clip player then the camera name and clip status is also displayed.

## Archival Schedule Check box

Ensure Clip scheduled for archival are not deleted until archived check box is introduced in System tab > Archival Schedule to ensure that clips will not be deleted by the system until it is archived. The following are the benefits if user selects this check box. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for details

- If the clip deletion schedule is reached for a specific clip then this feature will retry and archive the clip.

This check box settings is applicable for the following:

- Integrity services
- Neo Deletion Scheduled
- Disk Space Full
- Distress deletion

## Archival Clip and Deletion Retry

This feature is introduced to allow user to configure the Archival and Deletion retry settings in the config file available in bin folder. For any reason if the archival drive disconnects then based on the config file settings the:

- Archival clip retry feature will help to get the pending archival clips.
- Deletion clip retry feature will retry the process and deletes the clips.

The default value for retry process is set to 4. User can set the required number for archival and deletion retry process.

Refer to the *MAXPRO® NVR Installation and Configuration Guide* for details on how to set the retry process.

## Validation Message For Network Credentials

If user adds a Network Drive for Archival without Domain, Username and Password then a validation message is displayed to provide the network credentials. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for details.

## Disabled Password Never Expires

In User tab, if IS Windows user check box is selected then the Password Never Expire check box is disabled and it cannot be cleared. This ensures that for a Windows user the password will never expire. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for details.

## Playing archived clips through Client machine

User was unable to access and play the archived clips from NVR server machine. If user drag and drops the archived clips into the viewer then an error message is displayed.

User needs to have the privileges to access the archived clips from remote NVR clients.

For complete details of the possible combinations to play the archived clips from client machine and for details about different scenarios to playback Archived clips, refer to the *MAXPRO® NVR Installation and Configuration Guide*.

## Improved GPU rendering

GPU Rendering capability is now enhanced to handle the camera video packets along with decompression technique. User can view smooth and clear live video through GPU rendering. User should modify the registry value in client or server machine to enable GPU rendering mode. Refer to the *MAXPRO® NVR Installation and Configuration Guide* on how to configure the Improved GPU rendering mode.

## GPU Rendering Combinations

The below table explains the combination settings between Enabling GPU Rendering option in Preference tab and Registry settings.

| IF   | And If                                  | Then   |
|--|---|--|
| User enables Enable GPU Rendering check box in Preferences > Rendering options tab         | user sets GPU_Rendering_Value flag to 1 | Both Decompression and Rendering will be processed through in GPU mode.                    |
| User enables Enable GPU Rendering check box in Preferences > Rendering options tab         | user sets GPU_Rendering_Value flag to 0 | Decompression process will happen through GPU and Rendering will be processed in CPU mode. |
| User does not select Enable GPU Rendering check box in Preferences > Rendering options tab | user sets GPU_Rendering_Value flag to 1 | Both decompression and Rendering will be processed through CPU.                            |

## 60FPS support for EQUIP-S 1080P cameras

EQUIP-S 1080 P Model cameras are now supported with 60FPS rendering through GPU Rendering Mode. The following are the list of cameras support 60 FPS.

**Note:** Cameras beyond 1080 resolution will not support 60 FPS rendering.

- H4L2GR1V
- HBL2GR1V
- HCL2GV
- H4W2GR1V
- HBW2GR1V
- HBW2GR3V
- H3W2GR1V
- HCW2GV
- H2W2GR1

## NAS Recording support

Network Attached Storage (NAS) external drive is now supported for recording video clips along with other drives in MAXPRO NVR. This helps user to extend the storage capacity to save the recordings. User needs to configure the directory and user permission in respective NAS web page to use this feature. Refer to the *MAX-PRO® NVR Installation and Configuration Guide* on how to configure the NAS for recording.

**Note:** If customer is using Infotrend NAS then they have to create the user inside the NAS box. The username could be NVR-Admin or Administrator.

## Video Anonymization

This feature allows user to configure or mask identifiable objects based on the scene environment. It provides flexibility to choose and configure the required camera based on the mounting position. User need to select the required Environment from the Stream Preferences Settings based on the camera mounting position. The following are the options supported. See [Video Anonymization](#) section on page 130 for more information on how to configure masking based on scene environment.

- Variable Scene: If the scene contains both stationary and moving people or objects then select this option to anonymize the objects in the scene.
- High Motion Scene: To anonymize the objects in high motion in the scene.
- Still Scene: To anonymize the objects in a scene where the scene predominantly contains stationary people and objects.

## Installation

- NVR 5.0 Installation is supported for Windows 2016 OS (Server).

Introduced the following new services

- TrinityIntegrity Service: A service that runs in background and ensures all the system data is synchronized. As part of 5.0 release it includes features such as Delete Orphan Data and Drive Feature. See Integrity Service Settings section for more information.
- Trinityupdate Service: A service introduced to scale recording capacity on demand and to enable necessary steps required for additional recording services.
- NeoStorageserver3 and NeoStorageserver4: These services are to support 128 channels in a system and starts automatically after a user crosses 64 and 96 channels respectively. These services will stop when user deletes the cameras and the count goes less than <64 and <97 respectively.

## Support for 128 Channel

Additional 64 channels are provided with the existing 64 channels, resulting in a total of 128 channels in NVR Software and PE RAID System. User needs to buy license for the additional channels. If only Encoders are added in the system then without additional license user can add up to 128 Channels. However, adding additional channels depends on the type of encoder.



## Privacy Protection Settings (GDPR Favored)

### Anonymization Support

Anonymization feature is to help the business owner to meet the EU GDPR compliance standards easily. The objective of this feature is to hide the identifiable personal data or personal identity in a video surveillance system using masking techniques. This feature is specific to European Union region and valid license is required to enable this feature.

Anonymization at NVR level can be set in Configurator > Systems tab and only an Administrator can use this feature and grant access in User tab. This feature can also be enabled at camera level under Stream > Preferences tab. EquiP Series cameras are supported by this feature.

To mask identifiable objects based on scene environment, see [How to Anonymize objects based on Environment](#) section on page 131 for more information.

The Anonymization feature supports two types of masking:

- Blur: Blurs the region
- Pixelize: Pixelizes the region

### Four Eye Authentication Support

This feature is also part of Privacy Protection setting and to meet the EU GDPR compliance standards easily. This feature is to restrict all users in a surveillance system to perform Playback operation. While performing playback operation at least two people from different roles should authenticate. For an Administrator, user authentication is not required and can do any playback operation. For an operator user, a popup is displayed and an Administrator user or any other User with different role needs to authenticate to perform playback operation.

In MAXPRO NVR, a check box is introduced to enable this feature in Systems tab. By default this check box is not selected. User need to obtain valid license to enable this feature.

The following table explains the Four Eye Authentication based on the user and roles.

| User     | Authenticating User                                 | Valid Authentication |
|----------|---|----------------------|
| Operator | Administrator Or any other user with different role | Yes                  |
| Operator | Operator  | No                   |
| Operator | Operator 2  | Yes                  |

Clip Export with Anonymization support: Anonymization feature is supported for both Playback and Clip Export operation.

**Note:** *If a user exports a clip with Anonymization using Clip Export option then only WMV format is supported.*

## Password Complexity and Expiry Enhancements

The following are the enhancements:

- Improved change of password security by introducing complexity requirements. The following are the password requirements.
  - The password should have a minimum length of 12 characters.
  - The password should consist of at least one number, one uppercase letter and one special character
- If user changes the password, it will expire for every 90 days. Earlier it was no expiry
- If user wants to set the password which should never expire then navigate to Configurator > Users tab. Select the Password Never Expire check box for the specific user.
- User is notified with the message Your Password will expire in no.of days on the top right corner of the screen.
- If Admin password is expired then the administrator can use the Change Password feature in NVR log in screen to create a new one.

**Note:** *Only administrator will have access to user screen and can change the password for operator. Operator should contact administrator for changing the password and settings.*

In Upgrade Scenario

If user upgrades to NVR 5.0 then the password complexity requirements will be applicable.

In Fresh Installation Scenario

In case of Fresh Installation, the following are the recommendations:

- Only default username is displayed and the password field will be blank
- User must create new password
- In Create New Password dialog box, leave the Old Password field blanks and proceed.

## UI Improvements

For better user experience and accessibility the following features are rearranged in Systems tab

- Archival Schedule

- In camera level added after 30 minutes (s) as a new entry.
- Edge Sync Settings
- Privacy Protection Settings

## Improvements in Status Monitor

- Additional status message Database Connection lost is included. This will help user to know the status of database connection.
- Color Indications:
  - Green: Everything is Fine
  - Blinking between Yellow and Green: Not Recording
  - Blinking between Yellow and Red: Database Connection Lost

## System and Performance Improvements

- There is no Metadata from 5.0 Release onwards
  - No separate drive is required for Metadata
  - New Recording file system with no Index files except PassIndex is introduced and it is for per camera and per drive
  - Plug-in a new recording drive which can have recordings of another 5.0 NVR, and play the same recordings by adding the same Unique Number of the camera.
  - Supports backward compatibility (5.0 version can play till 4.9 version recordings (With Metadata) including 5.0 recordings). No recording loss in user's perspective.
  - Recording, Retrieval and Recycle features will have no dependency on index files.
  - PassIndex only use as catalyst
  - New naming convention for Segment files (Num\_StartTime\_EndTime)
  - Access recordings directly from recording drive
  - Each recording drive is self sufficient
- XML Corruption recovery
  - Auto recovery of corrupted XMLs by NEO on the run
  - No functionality loss

## Integrity Service Settings

This is a new a service that runs in background and ensure all system data to be synchronized. Following are the features this service provides as part of 5.0 release.

1. Delete Orphan Data: In this feature, system will find and clean up orphan clips from file system or DB. Orphan data will be identified based on camera configured deletion settings.
2. Drive Feature: In this feature, Drive Full Scan is performed until a new fixed drive is detected in NVR system. Based on the scan result, data sync up or orphan data clean up process is initiated using the current camera configuration or if the camera is not found then, by default the data after 30 days will be deleted.

For Example: If NVR 1 is down due to some technical issues, then the hard disk of NVR 1 can be used in NVR2. NVR2 initiates the scan, detects the drives and displays the recordings of NVR 1.

- Running on schedule base is same as windows scheduler.
  - Has capability to process deleted camera's data for Orphan deletion.
3. Schedule of when to start the service can be configured.
  4. Allows Neo to recycle data first (since by default it deletes clips with retention period + 24 hours)

## New EquiP 1080p and 4MP Camera Integration

1. Configuration is done through Honeywell proprietary ISOM APIs
2. After integrating the new EquiP Camera, system will be able to perform the following
  - H.264, H.265 and MJPEG coded support
  - HTTPS support
3. New events supported: With the EquiP series camera integration the following events are generated.
  - Abandoned Object detection
  - Object Missing detected
  - Trigger Line detection

The following EquiP series Camera models are supported using ISOM API's

| # | Camera Model | Description               | Firmware Details  |
|---|--------------|---------------------------|---|
| 1 | H4L2GR1V     | 2MP Lowlight outdoor dome | Version: 1.000.0000.10, Build Date: 2018-05-29<br>ISOM Version 1.2.1_Build 20180529<br>VA Package<br>Version: 1.0.8_build20180529 |
| 2 | HBL2GR1V     | 2MP Lowlight IR bullet    |   |
| 3 | HCL2GV       | 2MP Lowlight box camera   |   |

| #  | Camera Model | Description                | Firmware Details  |
|----|--------------|----------------------------|---|
| 4  | H4W2GR1V     | 2MP WDR outdoor dome       | Version: 1.000.0000.9, Build Date: 2018-05-25<br>ISOM Version: V 1.2.1_Build 20180524 |
| 5  | H4W4GR1V     | 4MP WDR outdoor dome       |   |
| 6  | HBW2GR1V     | 2MP WDR bullet, 2.7-13.5mm |   |
| 7  | HBW2GR3V     | 2MP WDR bullet, 5-60mm     |   |
| 8  | H3W2GR1V     | 2MP WDR indoor dome        |   |
| 9  | H3W4GR1V     | 4MP WDR indoor dome        |   |
| 10 | HCW2GV       | 2MP WDR box camera         |   |
| 11 | H2W2GR1      | 2MP Pancake camera         |   |

## RTSP H.265 Support

- Any H.265 URL can be added and streamed with Generic-RTSP streamer name.

## Enhancements in MAXPRO Mobile APP

- Introduced new Mobile app versions
  - For Andriod: 1.3.0 (100030004)
  - For IOS: 1.3.0 (100030001)
- New Supported OS: minSDKVersion = 21:
- Finger Print Authentication is supported for Android version of MAXPRO Mobile app. However, this feature is available on Fingerprint supported devices.

Limitation with Privacy Protection Settings in MAXPRO Mobile App

- If Anonymization is enabled in NVR application, then user will not be able to see the video in MAXPRO mobile app/Web client. An error message is displayed.
- If Four Eye Authentication option is enabled in NVR application then user will not be able to view playback video in MAXPRO mobile app/Web client.

## Grand Eye New Evolution support

EVO18 0 and EVO12

## Industry Standards

MAXPRO NVR is an open platform and supports broad third party device integrations with support for PSIA and ONVIF Profile S standards, Real Time Streaming Protocol (RTSP) standard and native device integrations.

## Flexible Licensing

MAXPRO NVR comes with all required software applications and licenses.

## Role Based Operator Privileges

MAXPRO NVR offers role-based operator privileges supporting Windows and Local users. You can add up to 1024 users under the Users tab.

## Easy Configuration

A quick and easy 3-clicks\* wizard to set up the system with auto-configuration and auto-discovery of IP cameras, recording and monitoring configuration, makes installing HD IP systems quick and efficient without requiring any IP expertise. Simple and logical configuration pages make setup a breeze, even for the novice installer.

\* - With default settings and in a local area network for specific models.

## 64 channel Support

MAXPRO NVR (SE, PE), Hybrid NVR (SE, PE) and Software only solution now support 64 channels. You can connect up to 64 cameras based on your type of solution.

## Auto Discovery

Discovering the IP cameras in the network is now simpler with the enhanced auto discovery interface. You can define the IP range to search for the cameras in the network and also camera credentials can be set at once for the newly discovered cameras.

## MultiStream

MAXPRO NVR provides you with the flexibility to add multiple streams with different resolutions on a single camera. Depending on the type of camera, you can add and configure additional streams, define the Video Quality Settings, Recording Settings, and Stream Preference settings. Based on your requirements you can view or render different resolutions on a single camera. It also allows you to set various parameters for your recording, including audio.

## Third Party ONVIF Profile G supported cameras

Following new Third Party ONVIF compliance Profile-G cameras are now supported in NVR 4.7.

| Profile G Cameras | Camera Type  | Firmware Details |
|-------------------|--------------|------------------|
| Tyco              | ADCi350-B111 | V3.1.0.170215    |
| Samsung           | QNO-7010R    | 1.04_170224      |
| Panasonic         | WV-SFV631L   | 2.41             |

## MAXPRO Web Configurator

Enhanced the Web configurator user interface with new themes, for a better user experience while configuring the System, Server and Security configurations for Web client and mobile.

## New Deletion Schedule

Introduced new deletion schedule where user can now retrieve the recordings of the last 5 years.

## GPU Rendering Support

Cost-effective enhanced HD video rendering on remote desktop clients with support for monitoring of up to 18 1080p HD cameras in real time (30 fps) with no-time-lapse using the GPU capabilities of built-in processor graphics with Intel® 4th generation processors. This feature allows a user to render high resolution cameras while optimizing the CPU consumption. To know more about improvised GPU rendering technique, Refer to the *MAXPRO® NVR Installation and Configuration Guide* on how to configure the Improved GPU rendering mode.

## Analog Capture Card Support

MAXPRO NVR Hybrid supports an Analog Capture card through which you can manually add 16 analog cameras. Each capture card comes with 16-channel support and allows you to manage the analog cameras.

## User-Friendly and Feature-Rich User Interface

The MAXPRO NVR user interface is based on Honeywell's flagship MAXPRO® VMS user interface which offers a feature-rich user experience. Utilization of this familiar interface allows for the “Learn One, Know Them All” concept that ensures familiarity across a broad range of Honeywell products.

## MAXPRO Status Monitor

MAXPRO Status Monitor is a brand new application in the V4.0 release that helps you to search and monitor the NVR's (System or Recording Engine) in the current network. You can monitor a single system/recording engine or multiple systems/recording engines at once. This application is installed along with the NVR 4.0 software only solution and can be accessed on the desktop.

You can manually add or auto search for NVRs and then connect to a single or multiple NVRs (System or Recording Engine) to monitor the status of various parameters.

For a system you can monitor parameters such as CPU Consumption, Average Disk Queue Length, Disk Write/Read and so on, depending upon the NVR connected.

For a Recording engine you can monitor parameters such as Total FPS Received/Recorded, Total Bitrate Received/Recorded, Total Active Cameras and so on.

## Recording and Playback Operations

MAXPRO NVR supports simultaneous recording, live and playback viewing, search and system management of all supported IP cameras including HD formats in a single server instance.

## On Demand live Streaming

An on edge recording facility where you can configure and store recordings at camera level. Later the recordings at the camera level can be synchronized back to view in NVR viewer. This avoids persistent stream recording. MAXPRO NVR configured as On Demand Live Streamer streams video from camera, only when a client request a live stream for viewing. When all the clients close the particular camera, then streaming from the camera is stopped.

The NVR configured as On Demand streamer supports only Sync back edge recording. On Demand live streaming is compatible from MAXPRO NVR Viewer, MAXPRO NVR Web Clients and MAXPRO NVR Mobile app clients.

In your PC, by default On demand Live Streaming registry value is set to zero (disabled). User needs to change the value to 1 to use this feature. Refer *MAXPRO NVR Installation and Configuration Guide* for more information.

Recording support in On Demand video Streaming: It is also an add-on for the existing Edge Sync Recording feature. This feature helps user to enable recording during on demand video streaming. A check box is introduced in Configurator > System tab to enable this feature. Earlier only live video was supported.

## Profile-G or Edge Sync Support

Profile-G or Edge Sync feature allows you to synchronize the recordings from the camera SD card to NVR. Camera SD card contains recordings that are configured on demand. This feature enables the user to playback only those recording which are saved on demand in the SD card. User can enable the edge syn feature in Cam-



era page and configure the day and time for synchronizing in System window to get the recordings from the camera. Edge Sync feature is applicable only to the cameras with SD card. This feature is supported only for New EquiP Series model cameras.

Automatic Retry clips is an add-on for the existing Edge Sync Recording feature. This feature is meant to retry and download the failed clips. It allows user to configure various parameters in the config file to avoid clips download failure. If any clips fails to download then based on the user configuration auto retry feature downloads the clips to NVR.

Refer *MAXPRO NVR Installation and Configuration Guide* for more information on configuring Automatic Retry feature.

## Low bandwidth Stream Settings:

Use Low Resolution Stream: This feature is to view the low resolution video in any format of salvo layout. User needs to configure the low resolution (for any Primary or secondary stream) in MAXPRO NVR camera page. This feature is only supported for MAXPRO NVR.

Receive Only I Frame/Low Bandwidth Streaming: This feature is applicable only for the sites with Low bandwidth. It allows user to receive and view only I Frame considering the bandwidth at the site. This feature is only supported for MAXPRO NVR.

Use Extended time Outs: This helps in increasing the default time outs for NVR connections, stream connections and snapshots retrieval. This feature is only supported for MAXPRO NVR.

## Optimize Stream Usage Settings:

Enable Stream Switch: Enable stream switch automatically switches between low and high resolution streams in the salvo layout based on the users selection. User should have minimum two streams available to use this feature. By default camera will stream in high resolution video in single salvo layout and the same camera when it is drag and dropped in multiple salvo, it streams with low resolution video. This feature is only supported for MAXPRO NVR.

## Enriched Video Viewing Experience

MAXPRO NVR offers an enriched video viewing experience through the intuitive video rendering engine that optimizes CPU utilization by altering the video frame rate.

## Efficient Event and Alarm Viewing Capability

MAXPRO NVR provides the ability to investigate events and alarms by simultaneously viewing alarm videos at various stages. For every alarm, users can view the video captured during pre-alarm, on-alarm, and post-alarm, and also view live video from the camera which triggered the alarm.

## Simultaneous Video Recording and Video Viewing

MAXPRO NVR supports multiple simultaneous operations such as video recording and video viewing or alarm monitoring on the server unit without the need for an additional workstation. It also provides the option of remote monitoring clients. You can view live video while simultaneously performing searches.

## Video Motion Detection (VMD) Support

MAXPRO NVR supports both camera-based and server-based video motion detection (VMD). Camera-based VMD support depends on the integration method and the motion detection performance depends on camera analytics. Server-based VMD (SMART VMD) is supported for all video devices supported by NVR, and is based on Honeywell Active Alert analytics algorithms supporting object-based motion detection with reduced false alarms.

## SMART Motion Search

SMART Motion Search feature allows you to search for a missing object by searching on motion in recorded video within a short span of time. This feature overcomes the traditional way of searching an object in recorded videos. It also provides you with before and after recordings of a missing object.

## New EquiP Series Camera Models Support

Additional 8 new EquiP camera models are now supported (HFD6GR1, HSW2G1, HCD8G, HBD8GR1, H4D8GR1, HDZ302DE, HDZ302D, HDZ302DIN). In addition the following are the advanced features that are offered through these cameras:

- Intrusion trace (Need to purchase separate license to enable this feature in camera)
- Face Detection
- Audio Detection (For cameras with Built-in Microphone or External Microphone)
- SD Card Failure

## New high performance and specialty EquiP Camera Support

- HM4L8GR1: 8 MP IR Rugged Multi-Imager Dome
- HMBL8GR1: 8 MP IR Rugged Multi-Imager Bullet
- H4L6GR2: Low-Light 6 MP IR Rugged Dome
- HBL6GR2: Low-Light 6 MP IR Rugged Bullet
- HEPZ302W0: Ex-proof PTZ module
- HEPB302W01A04: 1080p 30x Explosion-Proof IP Camera, 4 m cable
- HEPB302W01A10: 1080p 30x Explosion-Proof IP Camera, 10 m cable

- HTMZ160T302W: Dual Sensor Thermal/Visual IP PTZ Camera

## 3D Positioning

3D Positioning feature enables you to view a specific object in a live video in 3-dimensional view. You need to draw a region on a live video to view a specific object in 3D mode. This feature is supported only with New EquiP PTZ (HDZ302DE, HDZ302D, HDZ302DIN) camera models.

## New EquiP Series Camera Dewarping

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.

## H.265 Codec Support

H265 codec type is now supported to optimize the storage requirements for higher resolution cameras. H265 is only supported for New EquiP model cameras (HFD6GR1, HSW2G1, HCD8G, HBD8GR1, H4D8GR1, HDZ302DE, HDZ302D and HDZ302DIN). H.265 cameras supports GPU based Rendering. You can render up to 23 H.265 cameras with 1080P Resolution at 30 FPS/30 GOP.

Limitations of H.265 Codec Type:

- H.265 is not supported in MAXPRO Mobile app
- H.265 is not supported in Web client

## Meta Data Conversion Utility

Meta data conversion utility allows you to replace or update the unique system ID number of the recorded clips and Meta data details for all or specific cameras. It helps you to retain your recorded clips and Meta data details during Failover /Fail-back operations. This allows a user to effectively playback the recorded clip without loss of video. Refer to the *MAXPRO® NVR Installation and Configuration Guide*.

## Search

MAXPRO NVR supports multiple search features: Timeline Search, Preview Search, Alarm/Events Search, Calendar Search and SMART Motion Search.

## 360 Immersive Experience (Dewarping) Support

MAXPRO NVR supports client side dewarping integration with Oncam Grandeye and Immervision 360 applications.

## Multi-language Support

MAXPRO NVR supports multiple languages such as English, French, Arabic, Russian, Spanish, Italian, Dutch, German, Czechoslovakian, Portuguese and Polish. English is the default language.

## Keyboard Support

MAXPRO NVR supports industry standard Honeywell keyboards connected over Ethernet such as UltraKey Plus and UltraKey Lite.

## Clip Export

MAXPRO NVR supports exporting clips with audio in - WMV, ASF and MPVC formats. It also supports exporting still images/snapshots in .BMP format. The clips can be signed with digital signatures to ensure authenticity.

## MAXPRO NVR Clip Player

MAXPRO NVR Clip Player is a Honeywell proprietary clip player designed to only playback exported MAXPRO Container format (MPVC) clips. This clip player is part of the NVR 4.0 package and can be accessed in the NVR installation folder.

## Email Notification

MAXPRO NVR supports email notification on camera, system and operator events.

## Video Surround Feature

MAXPRO NVR offers Video Surround, which provides the ability to track subjects of interest as they move between areas covered by adjacent cameras. Simply double-click on the panel where the subject is currently visible to track the subject.

## Profile Cameras

Multi-zoom views on HD video and support for Profile cameras to create virtual cameras by digitally zooming into the field of view. Example: Zoom in on a cash register in one view of the HD camera and at the same time monitor the cash operator in the zoom out view of the HD camera.

## Reports

Using the MAXPRO NVR, you can generate Event History and Operator Log reports, each of which has its own significance. These reports can be exported in PDF, Crystal Reports, Excel and Word formats.

## Integration Capability

Multiple MAXPRO NVRs can be deployed for system expansion using a distributed architecture and integrated with the MAXPRO Viewer multi-site software or MAXPRO VMS enterprise video management system. MAXPRO also integrates with WIN-PAK® and Pro-Watch® Access Control Systems.

## Audio

MAXPRO NVR supports 1-way audio (camera to NVR) for specific IP cameras. Refer to the MAXPRO NVR compatibility list at [www.security.honeywell.com/hota/compatibility/index.html](http://www.security.honeywell.com/hota/compatibility/index.html) for the models supported.

## Web Client

The MAXPRO NVR Web Client allows you to remotely access the MAXPRO NVR server using a web browser like Internet Explorer and perform video surveillance. It gives you the flexibility to view live video and perform basic video surveillance functions remotely over the web. MAXPRO NVR Web Client supports viewing the live video, viewing Recorded Video (Playback), taking a Snapshot and viewing Presets.

## Archival

This feature enables you to archive the recorded videos from the system manually or automatically to a NAS or SAN disk. You can define a specific schedule to archive the recordings periodically or you can manually archive whenever required. For both cases you should configure the disk in the Configurator > Disk tab. To configure NAS drive for recording, refer to the *MAXPRO® NVR Installation and Configuration Guide*.

## Mobile Apps

MAXPRO NVR supports mobile monitoring clients on iOS and Android with MAXPRO NVR Mobile apps. The apps can be used to perform common daily tasks such as viewing live video, zooming in for full screen viewing, playback or searching for video by date and time, perform PTZ control through presets, monitor & manage alarms and taking a snapshot of a video frame. Recent enhancements also include One configuration for both Local and Remote server connection, Fingerprint Authentication login is support (only for IOS devices), Digital Zoom (only for IOS devices), HIS Streaming and HTTPS support

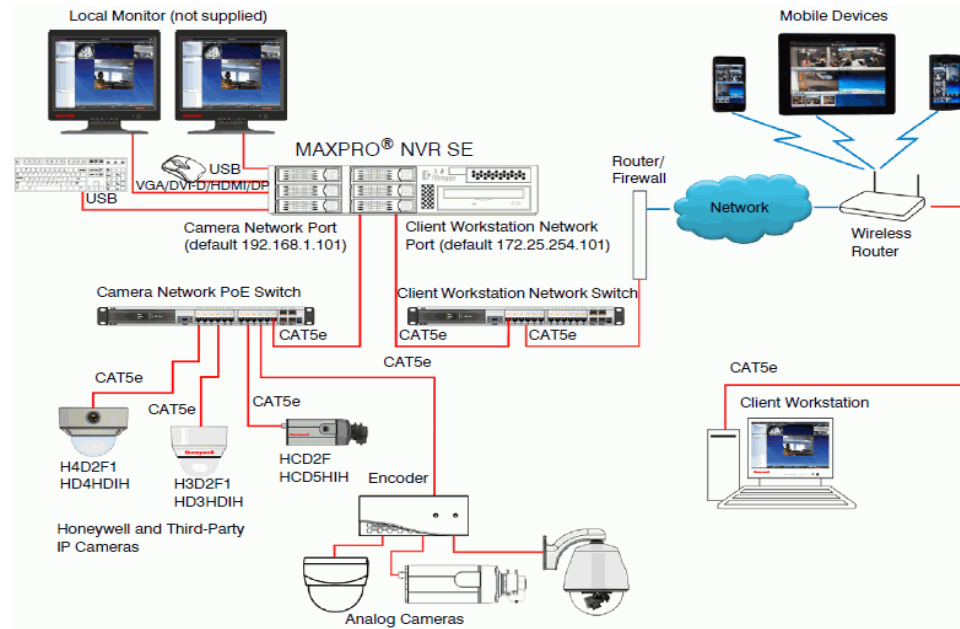
## Advanced Security

MAXPRO NVR supports advanced security features with encryption support for communication between desktop client to NVR and secure https login for the Web Client and Mobile App.

# MAXPRO NVR System Architecture

## MAXPRO NVR Standalone System Diagram

The following figure illustrates the MAXPRO NVR SE system architecture.

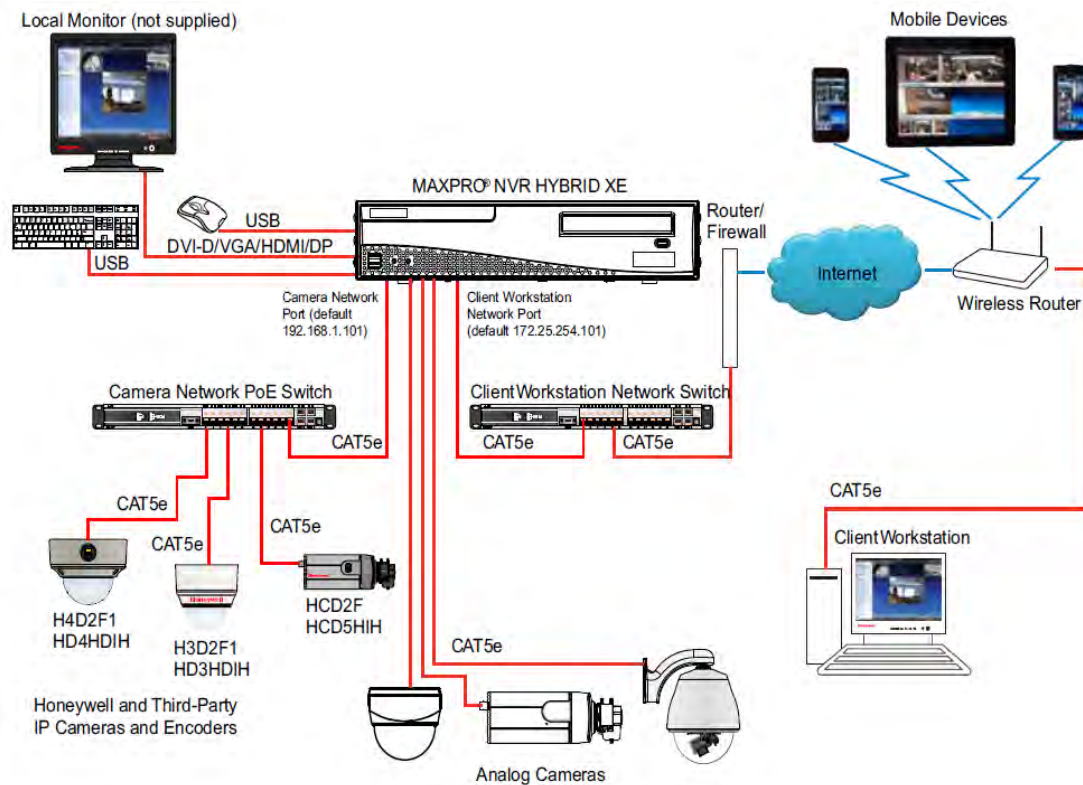


### MAXPRO NVR SE System Diagram

**Note:** The NVR SE box in the above system diagram is used as an example of a typical system. Other System diagrams for NVRs (XE, PE and Software only) look similar to the NVR SE and will only have minor differences.

# MAXPRO NVR Hybrid Standalone System Diagram

The following figure illustrates the MAXPRO NVR HYBRID XE Standalone system architecture.

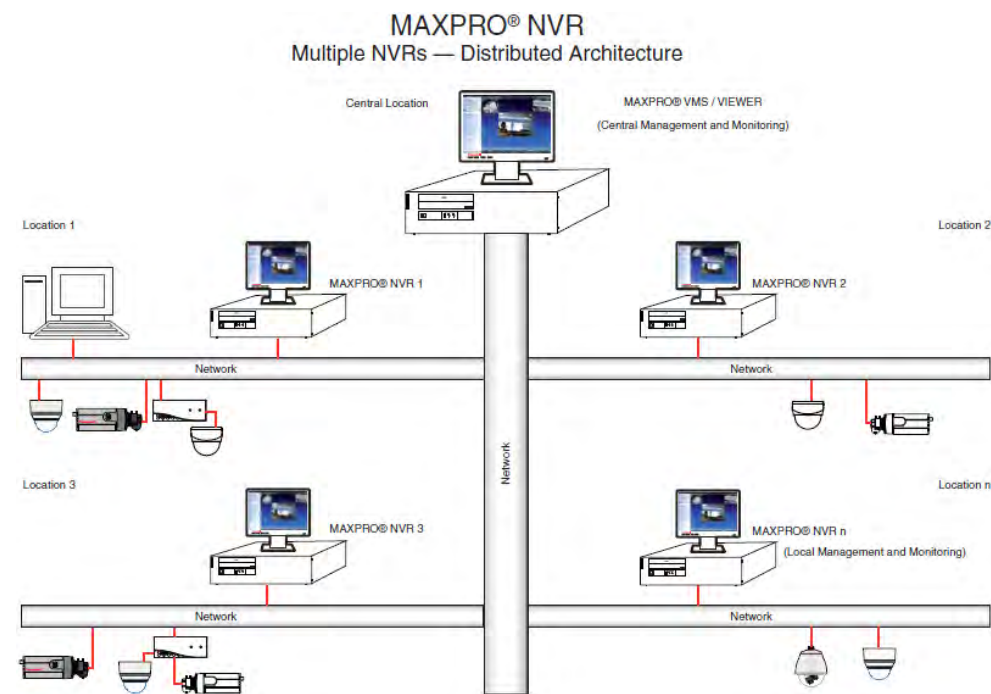


## MAXPRO NVR HYBRID XE Standalone System Architecture

**Note:** The Hybrid NVR XE box in the above system diagram is used as an example of a typical system. Other system diagrams for Hybrid NVRs (SE, PE) look similar to the Hybrid NVR XE and will only have minor differences.

# MAXPRO NVR Distributed System Architecture

The following figure illustrates the MAXPRO NVR distributed system architecture.



**MAXPRO NVR Distributed System Architecture**



# LOGGING ON AND GETTING STARTED

In this chapter...

| Section   | See page...             |
|---|-------------------------|
| <a href="#">Logging On Using Profiles</a>                     | <a href="#">page 49</a> |
| <a href="#">Getting to Know the MAXPRO NVR User Interface</a> | <a href="#">page 55</a> |

## Logging On Using Profiles

The MAXPRO NVR server addresses are saved in profiles. You need to select the profile before logging on. You can set a profile as the default profile. When a profile is set as the default, you do not need to select the profile each time you log on to MAXPRO NVR. You can also modify and delete profiles.



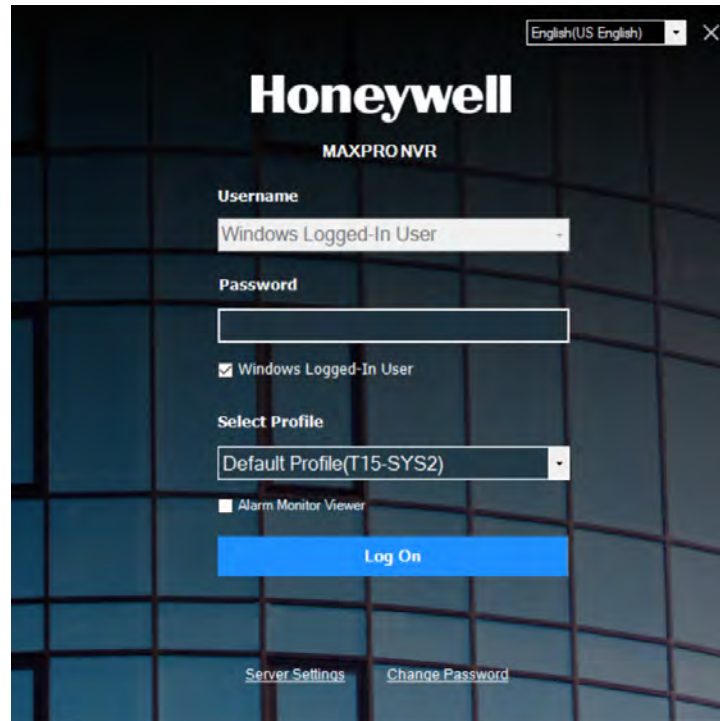
**Caution:** On Honeywell provided systems shipped with v4.0 or later version, a default Windows user: NVR-Admin and Password: Password\$123 is already configured and will automatically log you in. Honeywell recommends you to create and use a new Administrator account to install and logon MAXPRO NVR. Refer to the MAXPRO Security Guide for more information.

# Logging On to MAXPRO NVR

1. Double-click  on the desktop. The Log On dialog box appears.

Or

Click Start -> Programs -> Honeywell -> MAXPRO NVR. The Log On dialog box appears.



## MAXPRO NVR Log on dialog box

2. Click the Language option, and then select the required language from the drop-down list. The supported languages are Arabic, Czechoslovakian, Dutch, Polish, Portuguese, French, German, Russian, Italian, Spanish, and English. The default language is English (US English).
3. Clear the Windows Logged-In User check box and then enter your Username. The default user name is admin. Honeywell recommends to create a new NVR user in the Configurator tab and use the same to logon. Refer to the *MAXPRO® NVR Installation and Configuration Guide*. for more information on how to Add a user.

4. Type your Password. The default password is trinity.

**Note:** Select the Windows Logged-In User check box for logging on using the Windows authentication (uses current logged in Windows account credentials). If the Windows Logged-In User check box is cleared, the MAXPRO NVR user name and password is used for authentication. Ensure that you avoid using the @ character in your password. Honeywell recommends you to change the password before logging in. Refer MAXPRO® NVR Installation and Configuration Guide, [Changing the Default Password](#) section to change the password. Also refer Password Complexity and Expiry Enhancements section.

5. If there is no profile set as default, then select the Profile corresponding to the MAXPRO NVR server to which you want to connect.

**Note:** Set profiles if you have multiple MAXPRO NVRs and use the drop-down to choose which NVR you would like to connect to.

6. Click Login. The Viewer tab appears.




**Caution:** Logon as Administrator only when an administrative activity need to be performed, Operator is preferred for all other activity.

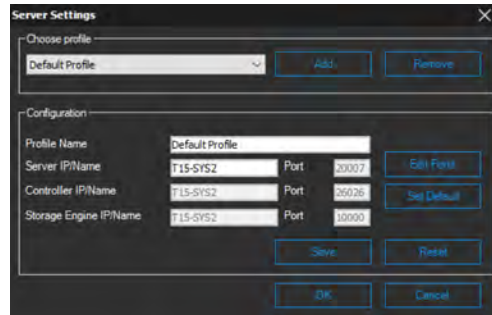
## Tips for Logging On

- Click the Language option, and then select the required language from the drop-down list. The supported languages are Arabic, Czechoslovakian, Dutch, Polish, Portuguese, French, German, Russian, Italian, Spanish, and English. The default language is English (US English).
- Select the Windows Logged-In User check box for logging on using the Windows authentication (uses current logged in Windows account credentials). If the Windows Logged-In User check box is cleared, the MAXPRO NVR user name and password is used for authentication.
- Ensure that you avoid using the @ character in your password.
- Set profiles if you have multiple MAXPRO NVRs and use the drop-down list to choose which NVR you would like to connect to.
- Select the Display Video on Alarm check box to display the viewer as an alarm monitor.

**Note:** Alarm monitor supports pop-up of camera associated to IO events only. Pop up on motion alarms is not currently supported.

## Server Settings - Saving a Server Address in a Profile

1. In the client workstation, double-click the  icon on the desktop to display the Log On dialog box.
2. Click Server Settings. The Server Settings dialog box appears.



### Server Settings dialog box

3. Click Add.
4. Type the Profile Name to identify the profile.
5. Type the Server IP/Name (numerical IP address or the network name of the MAXPRO NVR server).
6. Click Save.
7. Click OK. The server address is saved in the profile.

Tip: You can click Set Default in the server settings dialog box to set the profile as the default profile.

## Setting the Default Profile


1. Select the profile you want to set as default before logging on to the MAXPRO NVR.
2. In the User menu, select Profiles -> Set Default Profile. The current profile is now set as the default profile. The default profile will be selected in the Profile box of the Log On dialog box the next time you logon.




### Setting the Default Profile

## Modifying a Profile

You can modify the profile name and the server address saved in the profile:

1. In the client workstation, double-click the  icon on the desktop to display the Log On dialog box.
2. Click Server Settings. The Server Settings dialog box appears.
3. In the Choose Profile box, select the profile you want to modify. The profile details appear under Configuration in the Server Settings dialog box.
4. Change the Profile Name, as applicable.
5. Change the Server IP/Name, as applicable.
6. Click Save.
7. Click OK. The profile is modified.

## Deleting a Profile

1. In the client workstation, double-click the  icon on the desktop to display the Log On dialog box.
2. Click Server Settings. The Server Settings dialog box appears.
3. In the Choose Profile box, select the profile you want to delete.

4. Click Remove.
5. Click OK. The profile is deleted.

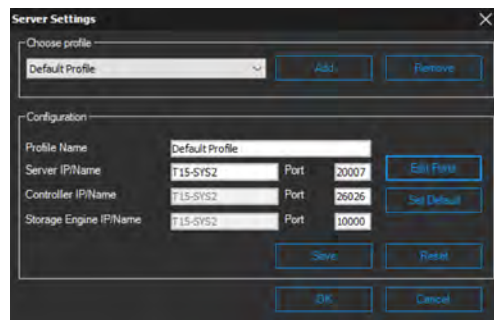
## Editing the Ports

The MAXPRO NVR user interface includes a provision to modify the port number associated to the following components:

- Trinity Server
- Trinity Controller
- NeoEngine Server

To edit the ports:

1. In the Server Settings dialog box, click Edit Ports. The port numbers associated to Server IP/Name, Controller IP/Name and Storage Engine IP/Name are enabled for editing.



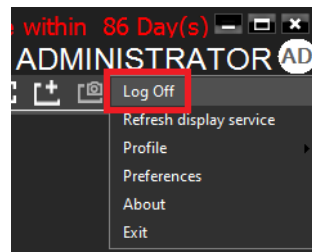
### Editing the Ports

2. Change the port numbers, as applicable.
3. Click Save.

## Logging Off

You can log off from MAXPRO NVR from the User menu. The name of the currently logged in user is displayed as the User menu on the top right of each screen.

1. Click the User menu. The user menu options appear.

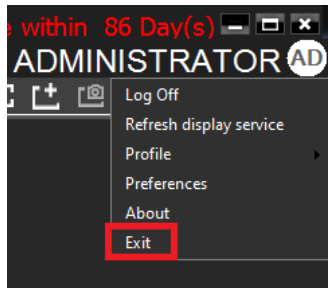


2. Click Log Off. The Logon dialog box appears after logging off from MAXPRO NVR.

## Closing the MAXPRO® NVR User Interface

You can close the MAXPRO NVR user interface from the User menu. The name of the currently logged in user is displayed as the User menu on the top right of each screen.

1. Click the User menu. The user menu options appear.



2. Click Exit. A dialog box appears prompting you to confirm the action.
3. Click Yes.

## Getting to Know the MAXPRO NVR User Interface

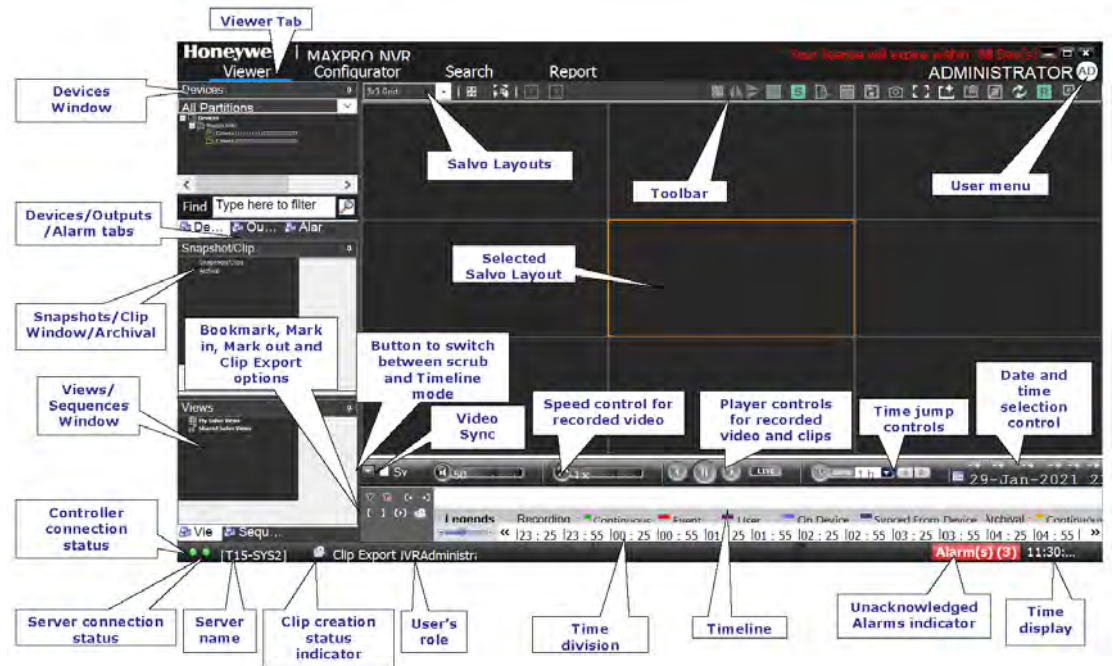
The user interface of MAXPRO NVR is easy-to-use with its intuitive icons and user-friendly features. You can configure the devices in the video surveillance network through the MAXPRO NVR user interface. The user interface consists of tabs, tree-structures, status bar, floating windows, and icons. On opening the user interface, you see the following four tabs: Viewer, Configurator, Search and Report. Based on the tab you select, windows, tree structures, and other settings relevant to the tab appear on the screen.

A status bar is displayed at the bottom of the user interface. The status bar displays the connection status with the MAXPRO NVR server and controller, the status of clip creation, the role of the user, the number of unacknowledged alarms, and the time.

**Note:** The tabs that are displayed in the MAXPRO NVR User Interface is dependent on the user's roles and privileges.

# Viewer Tab

The below figure illustrates the Viewer tab. See the following table for descriptions of the Viewer tab components.



## Viewer tab





The following components are displayed on the Viewer tab screen.

| Component           | Description   |
|---------------------|---|
| Devices/Site window | <p>A floating window that displays the recorders and cameras in a tree structure. You can select one or more devices from the <b>Devices</b> window to view its video in the Salvo Layout.</p> <p>The context menu options in the <b>Devices</b> window include:</p> <ul style="list-style-type: none"> <li>• Show Live - to view live video.</li> <li>• Preview - to preview the live video.</li> <li>• Refresh - to refresh the camera status.</li> <li>• Refresh from Device - to refresh the camera status from the device.</li> <li>• Show/Hide Device ID - to display or hide the device ID.</li> <li>• Sort By Name - to sort the list of devices by name. By default, names are sorted in ascending order.</li> </ul> |



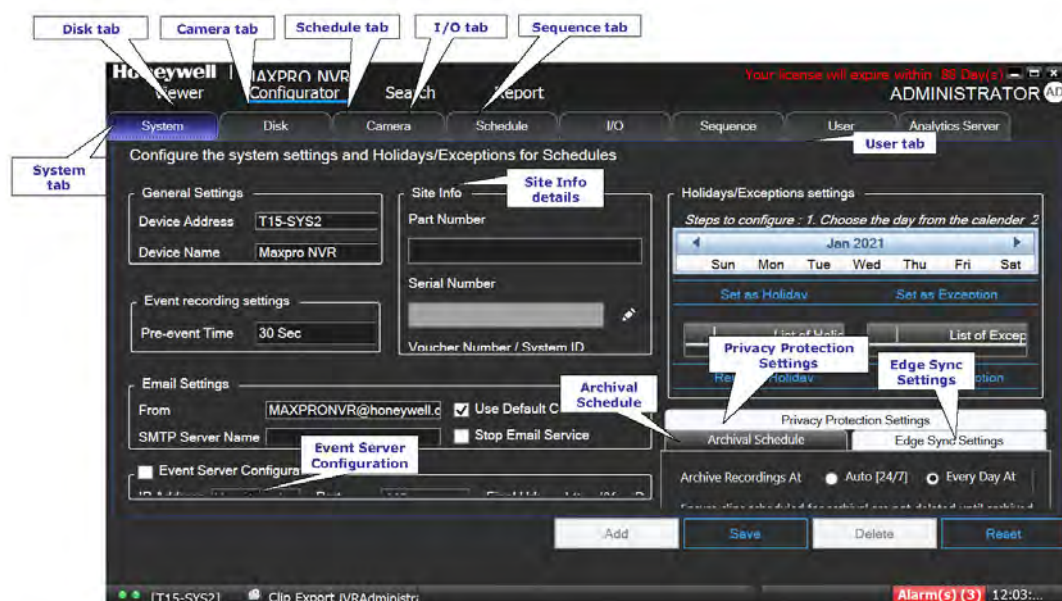
| Component                            | Description   |
|--------------------------------------|---|
| <b>Alarms/Output</b><br>window       | <p>Click to display a floating window that lists the alarms. You can acknowledge and clear the alarms from this window. See the <a href="#">Alarms</a> section on page 92 for more information.</p>   |
| <b>Snapshot/Clip/Archival</b> window | <p>Click to display a floating window that lists the snapshot/clips and Archival clips in a tree structure. You can select the images/clips and archival clips to view. The timeline window also displays the archival status as:</p> <div data-bbox="846 514 1235 558" data-label="Image"> </div> <p>You can right-click on the images folder or the images to display a context menu. The context menu options include:</p> <ul style="list-style-type: none"> <li>• Refresh - to refresh the images/clips in the respective folder.</li> <li>• Show Video - to show the video.</li> <li>• Delete - to delete an image.</li> <li>• Show In Folder - to view the folder in which the images are stored.</li> </ul> <p>See the <a href="#">Snapshots and Clips</a> section on page 85 for more information.</p> |
| <b>Sequences</b> window              | <p>Click to display a floating window that lists the sequences. You can play the sequence using the play sequence action. You can right-click on the devices to display a context menu. The context menu options include:</p> <ul style="list-style-type: none"> <li>• Play Sequence - to play any sequence.</li> <li>• Show Device ID - to display the device ID.</li> <li>• Sort By Name - to sort the list of sequences by name. By default, names are sorted in ascending order.</li> </ul> <p>Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on configuring a Sequence.</p>   |

| Component    | Description   |
|--------------|---|
| Views window | <p>A floating window that lists the salvo views. The <b>View</b> window consists of <b>My Salvo Views</b> and <b>Shared Salvo views</b>. Salvo views corresponding to the logged on user are listed under <b>My Salvo Views</b> in the <b>Views</b> window. You can copy a salvo view from <b>My Salvo Views</b> to <b>Shared Salvo Views</b> using the drag and drop option or right-clicking and selecting <b>Add to Shared Salvo Views</b>. Similarly, you can copy a salvo view from <b>Shared Salvo Views</b> to <b>My Salvo Views</b> using the drag and drop option. Devices grouped under <b>Shared Salvo Views</b> are displayed on all client workstations for any logged in user.</p> <p>To add a salvo view to <b>Shared Salvo Views</b>, right-click on a salvo view, and then click <b>Add to Shared Salvo Views</b>. You can copy a salvo view from <b>Shared Salvo Views</b> to <b>My Salvo Views</b> by dragging and dropping a salvo view. You can right-click on the salvo view to display a context menu. The context menu options include:</p> <ul style="list-style-type: none"> <li>• <b>Show</b> - to view the salvo view.</li> <li>• <b>Rename</b> - to rename a salvo view.</li> <li>• <b>Remove</b> - to remove a salvo view.</li> <li>• <b>Save</b> - to save a salvo view.</li> <li>• <b>Add to Shared Salvo Views</b> - to add a salvo view to the Shared Salvo views.</li> <li>• <b>Show/Hide Device ID</b> - to display or hide the device ID.</li> <li>• <b>Refresh</b> - to refresh the salvo views in the list.</li> <li>• <b>Sort By Name</b> - to sort the list of salvo views by name. By default, names are sorted in ascending order.</li> </ul> <p>See the <a href="#">Salvo View</a> section on page 65 for more information.</p> |
| Salvo Layout | <p>An arrangement of panels in which video is displayed. See the <a href="#">Salvo View</a> section on page 65 for more information.</p>  |

| Component       | Description   |
|-----------------|---|
| Timeline window | <p>A window that enables you to view video from a specified date and time. It also consists of other features such as mark in and mark out and selective viewing using bookmarks. You can also create clips from video recordings. You can select between the scrub mode or full</p> <p>timeline mode using the  button. The timeline window also displays the recording colors as:</p> <p>Recording :  Continuous  Event  User</p> <p>See the <a href="#">Viewing Recorded Video</a> section on page 72 for more information.</p> |

## Configurator Tab

The below figure illustrates the Configurator tab.



### Configurator tab

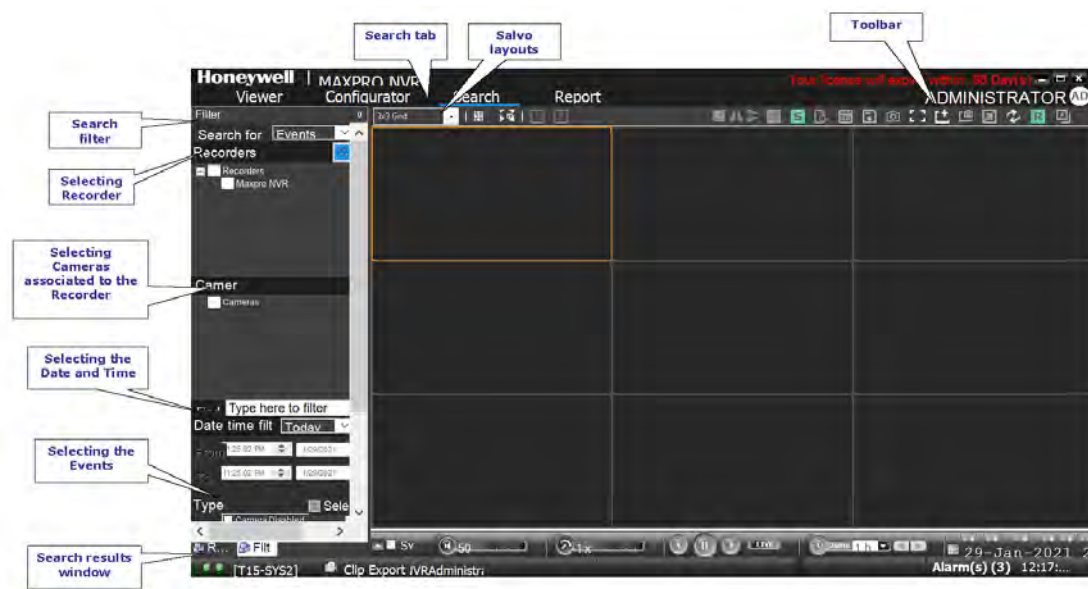
From the Configurator tab you can add and configure video devices and set up the MAXPRO NVR system. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information on configuring MAXPRO NVRs.

| Components | Description   |
|------------|---|
| System tab | Helps you to configure the system level settings, Site information, Archival Schedule, Holidays/Exceptions settings, Event Server Configuration and Edge Syn Settings for MAXPRO NVR. |

| Components    | Description   |
|---------------|---|
| Disk tab      | Helps you to configure the disk settings for video storage. |
| Camera tab    | Helps you to configure the camera settings.                 |
| Schedules tab | Helps you to configure the schedules for recording video.   |
| IO tab        | Helps you to configure the input and output for a camera.   |
| Sequence tab  | Helps you to select a sequence of cameras for live video.   |
| User tab      | Helps in user administration.                               |

## Search Tab

The below figure illustrates the Search tab.

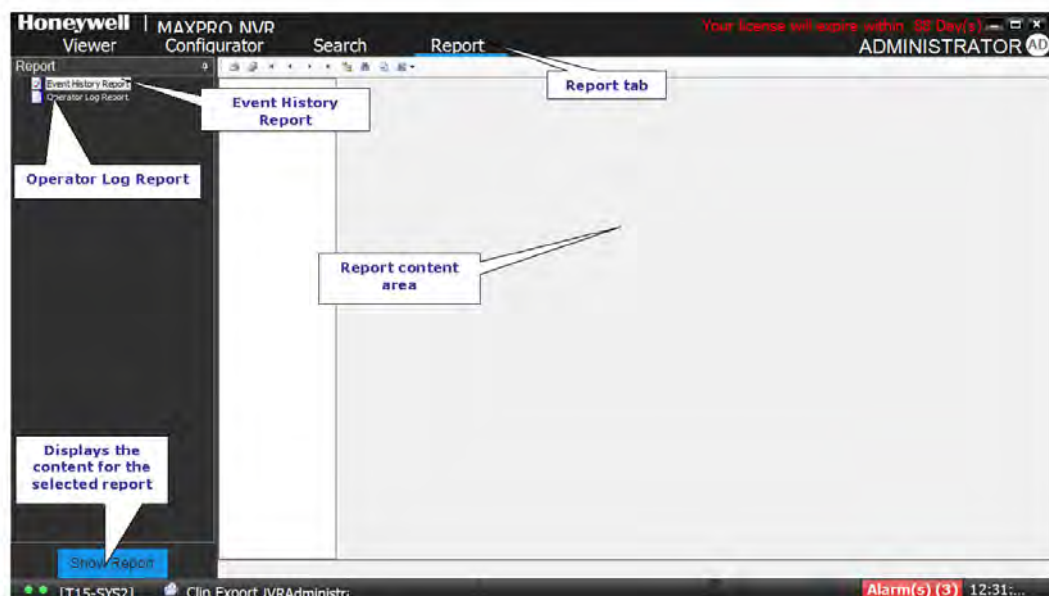


### Search tab

You can search for recorded video and events from the Search tab. See [Searching Recorded Video in MAXPRO NVR](#) beginning on page 165 for more information.

# Report Tab

The below illustrates the Report tab.



## Report tab

See [Generating Reports](#) beginning on page 187 for more information.

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## MONITORING A SITE

In this chapter...

| Section   | See page...              |
|---|--------------------------|
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| <a href="#">Salvo View</a>  | <a href="#">page 65</a>  |
| <a href="#">Context Menu Options</a>  | <a href="#">page 64</a>  |
| <a href="#">Viewing Recorded Video</a>  | <a href="#">page 72</a>  |
| <a href="#">Surrounding Cameras</a>   | <a href="#">page 77</a>  |
| <a href="#">Playing Recorded Video Using Mark In and Mark Out Points in the Timeline</a>    | <a href="#">page 78</a>  |
| <a href="#">Video Controls</a>  | <a href="#">page 81</a>  |
| <a href="#">Profile Cameras</a>   | <a href="#">page 84</a>  |
| <a href="#">Snapshots and Clips</a>   | <a href="#">page 85</a>  |
| <a href="#">Viewing Snapshots, Exported clips and Archival Recordings</a>                   | <a href="#">page 90</a>  |
| <a href="#">Alarms</a>  | <a href="#">page 92</a>  |
| <a href="#">Video Viewing Options from Immervision Enabled Cameras</a>                      | <a href="#">page 96</a>  |
| <a href="#">Video Viewing Options from Oncam Grandeye Cameras</a>                           | <a href="#">page 99</a>  |
| <a href="#">Video Viewing Options of Dewarped New EquiP Camera</a>                          | <a href="#">page 104</a> |
| <a href="#">MAXPRO Status Monitor</a>   | <a href="#">page 108</a> |
| <a href="#">Introduction to Profile-G or Edge Recording Sync</a>                            | <a href="#">page 113</a> |
| <a href="#">How to Enable Low Bandwidth Streaming from MAXPRO NVR cameras to MAXPRO VMS</a> | <a href="#">page 120</a> |
| <a href="#">Privacy Protection Settings (GDPR Favored)</a>                                  | <a href="#">page 123</a> |
| <a href="#">Annotations</a>   | <a href="#">page 133</a> |

| Section   | See page...              |
|---|--------------------------|
| <a href="#">Mask Compliance Detection</a>                   | <a href="#">page 148</a> |
| <a href="#">Social Distancing Violation Detection</a>       | <a href="#">page 148</a> |
| <a href="#">Mask Detection and Social Distancing in VMS</a> | <a href="#">page 163</a> |

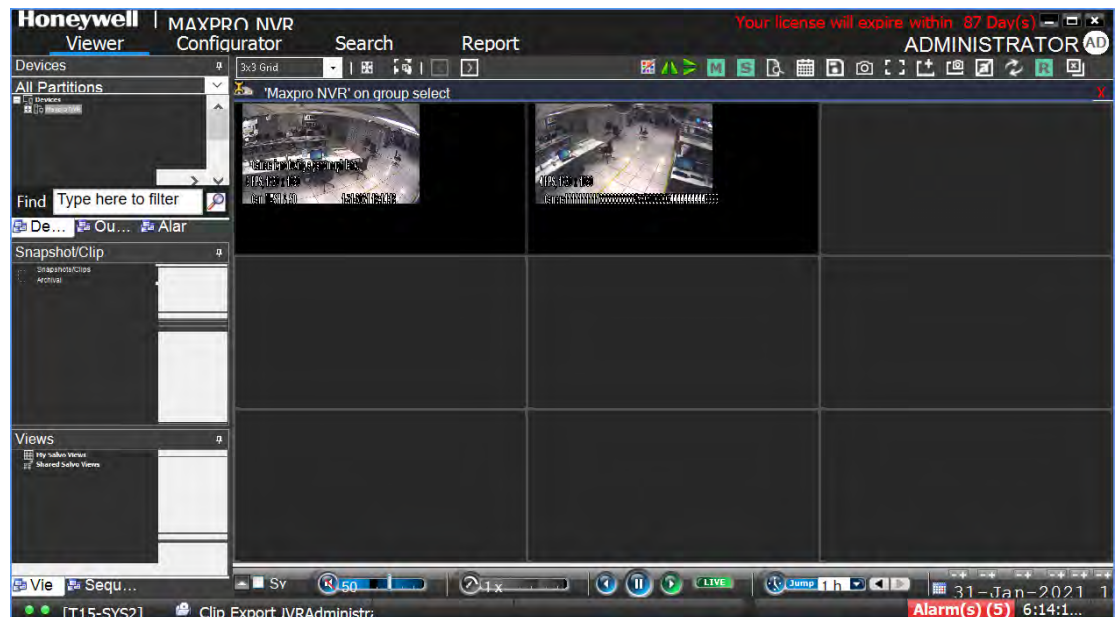
## Live Video

You can view live video and play any selected sequence using the options available in the MAXPRO NVR Viewer tab.

### Viewing Live Video

The panels in the salvo layout display video. You can select the video source to view, such as cameras or sequences, from the Devices/Site window.

1. Click the Viewer tab.
2. Double-click the video source in the Devices/Site window. You can also drag and drop the video source on a panel in the salvo layout. You can select multiple video sources and view live video in different panels of the salvo layout.






#### A panel displaying live video

When you hover the mouse over a video display, toolbars appear over the panel. The toolbars enable you to perform actions such as flipping the video display, applying color correction, and so on. See the [Video Control Options in the Panel Toolbars](#) section on page 81.



The following table depicts the various status of the camera in Viewer tab:

| Icons   | Status               | Description                          |
|---|----------------------|--------------------------------------|
|  | Live                 | Camera is recording Live             |
|  | Continuous Recording | Camera continuously recording.       |
|  | Disabled             | Camera is not recording and not live |

**Note:** For cameras configured with multi-streams, the stream selected as Preferred for Live in the camera configuration and used for live video display. Right click to view the context menu and then choose Switch Stream option to switch between streams specified as High resolution or Low resolution streams in camera configuration or select the stream name to switch to a specific stream.


## Salvo View

A salvo layout that is customized based on your preference is called a salvo view. You can select the cameras and scan sequences that you want to frequently view and save the layout as a salvo view. The salvo view is saved and appears as an option in the Views window. When you want to view the video from the preferred cameras and scan sequences, you can select the saved salvo view.

## Creating a Salvo View

1. Click the Viewer tab.

**Note:**

- Before you create a salvo view, select the salvo layout you want with your preferred cameras and scan sequences. Drag and drop cameras and sequences and adjust the salvo layout until it is ready to save as a Salvo View.
  - Salvo views can also be created with specific stream type for the cameras supporting multi-streams. Choose the stream type for each of the cameras in the salvo view before creating and saving a salvo view. For example: You can create and save a salvo view with all the low resolution streams, which can be used from remote clients with low bandwidth access to NVR.
2. Right-click on the toolbar, and then click Create Salvo view or click  on the toolbar on the top of the salvo layout. The Enter salvo view name text box appears.
  3. Type the salvo view name and then click OK. The newly created salvo view is listed under Views -> My Salvo Views.


## Salvo Bar

A salvo bar appears on top of a salvo view. The salvo bar indicates the name of the salvo view. You can save a salvo view after you realign the cameras using the Save option on the Salvo Bar. You can also use the Save As option to save an existing salvo view with a different name. The context menu options on the salvo bar include Create Salvo View, and FullScreen.

## Supported Salvo Views



The supported salvo views are 1-View, 4-View, 6-View, 9-View, 10-View, 13-View and 16-View. You can find all these view on the tool bar.



## Aspect Ratio

Aspect Ratio feature enables a salvo layout to display a view by maintaining same aspect ratio. This option is available on the tool bar and it supports three namely Default S - display stretch view, Aspect Ratio 16:9 - display 16:9 view and AspectRatio 4:3 - display 4:3 view. Click  to shuffle between aspect ratio display options.

## Context Menu Options

When you right-click on a panel that is displaying live video, a context menu appears. The following table lists the commands in the context menu.

| Command             | Click to...  |
|---------------------|--|
| Full Screen         | Maximize the salvo layout to full screen.<br>Alternatively, you can click  in the toolbar on the top of the salvo layout.   |
| Remove Text Overlay | Remove text overlay displayed on the video.<br>Alternatively, you can click  in the toolbar on the top of the salvo layout. |
| Digital PTZ         | Enable digital PTZ. See the <a href="#">Panning, Tilting, and Zooming</a> section on page 82 for information on digital PTZ.   |
| Add Bookmark        | Add a bookmark in the timeline. See the <a href="#">Adding a Bookmark</a> section on page 79.  |
| Mark In             | Add a mark in point in the timeline. See the <a href="#">Creating a Loop by Adding a Mark In and Mark Out Point in the Timeline</a> section on page 78.  |

| Command                  | Click to...   |
|--------------------------|---|
| Mark Out                 | Add a mark out point in the timeline. See the <a href="#">Creating a Loop by Adding a Mark In and Mark Out Point in the Timeline</a> section on page 78.  |
| Start Recording          | To start/stop the recording on a camera.  |
| Save Image               | Save the frame displayed in the panel as an image in BMP format. Alternatively, you can click  in the toolbar on the top of the salvo layout to save the image in BMP format.                              |
| Save Image As            | Save the frame displayed in the panel in different image formats such as JPG, PNG, and GIF. See the <a href="#">Saving Images</a> section on page 85 for more information.  |
| Preview                  | View the preview of the video at any given time. You can view a list of previewed videos with the corresponding date and time stamp. Select a previewed video, and click  to export the previewed clip.    |
| Show Surrounding Cameras | To view video from the associated cameras. See the <a href="#">Live Video</a> section on page 64 for more information.  |
| Calendar                 | To open the Calendar search view, which enables searching for the recorded video. See the <a href="#">Calendar Search</a> section on page 169.  |
| SMART Motion Search      | Display the SMART motion search dialog and to define and run the motion search on a recorded video. See the <a href="#">SMART Motion Search</a> section on page 180.  |
| 3D Mode                  | This feature is applicable only to New Equip PTZ model cameras. Select this option to enable the 3D view. You can also center the field of view by clicking on any object in the live video.<br>See <a href="#">How to Enable/Use 3D Mode View</a> section on page 68 for more information. |
| Reset 3D                 | This option is displayed when you enable 3D Mode. Click this option to reset the 3D view. See <a href="#">How to Reset 3D Mode view</a> section on page 71 for more information.<br><b>Note:</b> Rest 3D option resets the 3D view only at the first level.                                 |
| Trigger Output           | Set the camera control output ON/OFF.   |

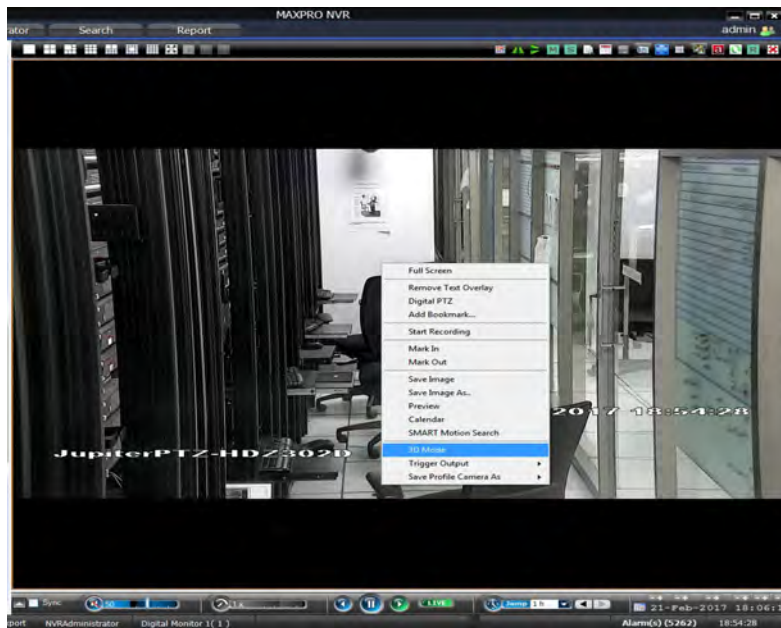
| Command                | Click to...   |
|------------------------|---|
| Save Profile Camera As | Save a camera for a required profile view. See <a href="#">Profile Cameras</a> section on page 84.                      |
| Goto Camera Settings   | Navigates to the specific camera settings window.   |
| Panorama Settings      | Change the Panorama settings depending on your camera.  |
| Switch Stream          | Switch between multi-streams from a camera. This option is only available for cameras configured with multiple streams. |

## How to Enable/Use 3D Mode View

This feature is supported only for New EquiP PTZ (HDZ302DE, HDZ302D, HDZ302DIN) camera models.

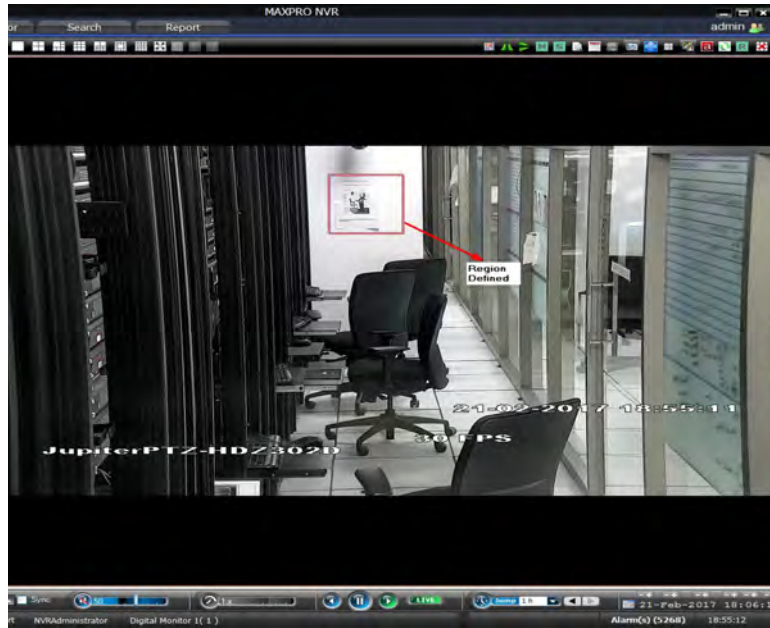
To enable 3D mode view:

1. Right-click on the live video, the context menu options are displayed as shown below.



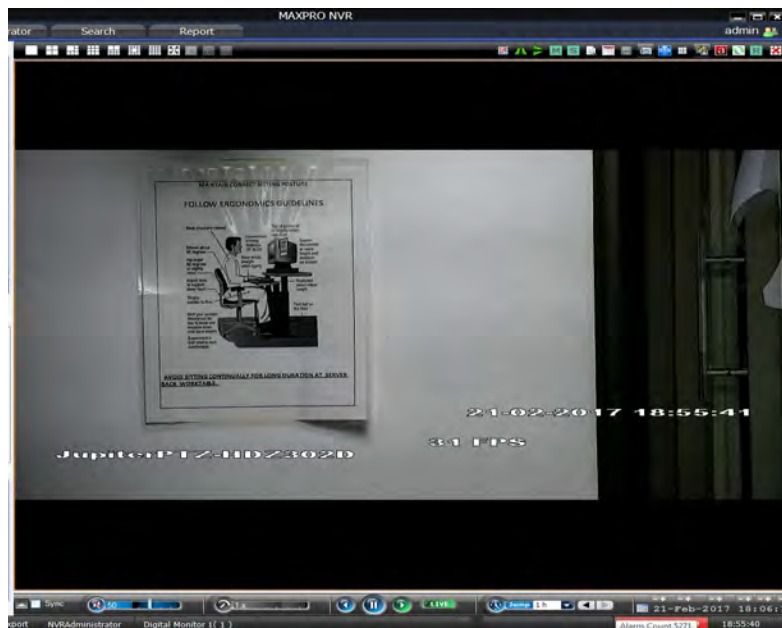
### 3D Mode option

2. Click the 3D Mode option. 3D positioning for that camera is enabled.
3. Use the mouse to draw a rectangular region on any object in live video as shown below.



### 3D Rectangle Region

4. Release the mouse control immediately after drawing a rectangle. Only the object in the rectangular region is zoomed and positioned to center as shown below. You can also draw more regions on top of existing one to have a better view.



### Region Positioned

## Positioning the Field of View

After enabling the 3D Mode option in live video, you can also center any object in the scene with a mouse click.

For example. In a live video, if you want to center an object which is located on top right corner then you can simply click on that object. The object will be positioned to center as shown below. Similarly you can center any corner objects.

To center the any object in the scene

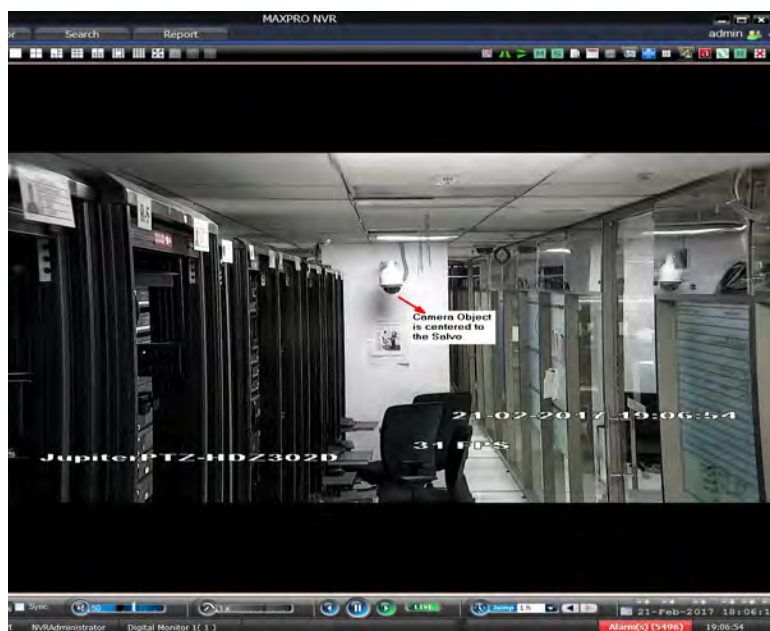
1. Click on any object in the scene. For example in this below image a Camera is highlights



### Camera Object Highlighted

2. Click on any object in the scene then the object is positioned to the center of the salvo pane as shown below.





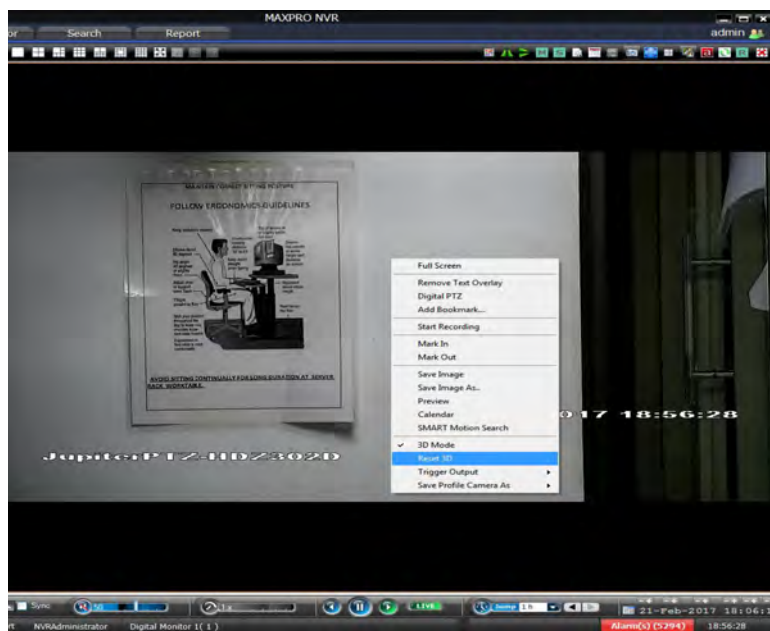
**Camera Object is Centered**

## How to Reset 3D Mode view

Reset 3D Mode option is displayed only when you enable 3D mode.

To reset the 3D mode view:

1. Right-click on the same live video onto which the 3D mode is enabled. A context menu options are displayed as shown below.



**Context Menu Options**

2. Click Reset 3D option.

**Note:** Reset 3D option resets only 1 level of previous view. For example if you had drawn a rectangular region twice to view the object closely, then this option resets only the view of second rectangle region.

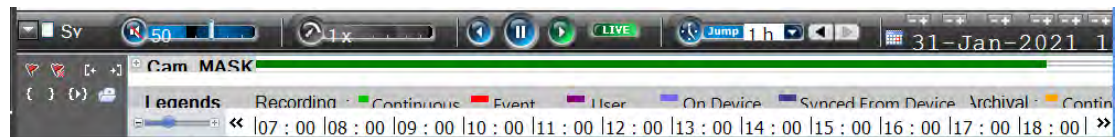
## Playing a Sequence

A sequence is a set of live video streamed one after the other from cameras for a specified time interval.

1. Click the Viewer tab.
2. Click the Sequences window.
3. Double-click the sequence you want to play or select the sequence, and then click Play Sequence. You can also drag and drop the sequence on a panel in the salvo layout.

## Viewing Recorded Video

You can use either the timeline or player controls to play recorded video.



### Timeline Window

## Timeline

### Playing Recorded Video using the Timeline

Timeline enables you to play recorded video from a particular date and time. You can easily retrieve and view recorded video using the timeline and the date and time controls in the Timeline window. A timescale is displayed in the lower part of the Timeline window. You can refer to the divisions in the timescale to locate a video recording in the timeline. Using the date and time calendar box in the timeline window, you can select a date and time from which you want to play recorded video. When you select a panel from the salvo view to view video, a timeline appears in the Timeline window (See [Timeline Window](#)). The name of the corresponding camera appears on the left of each timeline.


You can also add comments and mark points of interest in the timeline using the bookmark feature. The bookmarks are helpful for future review of recorded video. (See the [Marking Points of Interest in the Timeline using Bookmarks](#) section on page 79). This enables you to locate moments of interest when reviewing recorded video. You can also add mark in and mark out points in a timeline (See the [Playing Recorded Video Using](#)



[Mark In and Mark Out Points in the Timeline](#) section on page 78) to play a selected part of video repeatedly. Clips of the video recorded in MAXPRO NVR can be created from marked points in the timeline. This feature is referred to as loop playback of video.

You can view the frames from the recorded video as thumbnails in the timeline. You can also create clips from recorded video.

To play recorded video using the timeline

1. Click the Viewer tab.
2. Select the camera. To select the camera, double-click the video source in the Site window. You can also drag and drop the camera on a panel in the salvo layout to display the video. Alternatively, you can select a panel displaying video to select that camera from which you want to view video. A timeline appears in the Timeline window with the name of the camera on the left in full timeline mode.
3. Play the recorded video from a date and time in one of the following ways:
  - Click on the timeline from where you want to view video. You can refer to the divisions on the timescale that is displayed in the lower part of the timeline window to locate the date and time.  
You can set any timescale between seconds and days using the  slider. Move the slider left or right as required. This helps you to locate the video recording in the timeline. Click << to view the divisions on the left of the timescale. Click >> to view the divisions on the right of the timescale.

Or

- Select the date and time in the date and time calendar box



and then click OK. The video recording is played from the selected date and time.




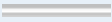
## Timeline Color Indicators

In the timeline, the time duration for which recording is available is indicated in green color. The time duration for which recording is not available is indicated in white color. This helps you to locate the video recording in the timeline.



The timeline shows the green color and gray color only for the cameras connected to MAXPRO NVR. You can click the timeline to play the recorded video. The following table lists the colors that appear in the timeline.

The color indication for the type of recording on the timeline can be identified using Legends. Legends in the timeline window represents the type of recording (Continuous, Event or User and the type of Archival (Continuous or Event) status with specific color. Based on your settings you can identify which type of recording or archival.

## For Recording

| Color   | Indicates...  |
|---|---|
|  | Continuous recording.   |
|  | Event based recording.  |
|  | User based recording.   |
|  | Recording is not available for the corresponding date and time. |

## For Archival

| Color   | Indicates...                      |
|---|-----------------------------------|
|    | Archival of Continuous recording  |
|  | Archival of Event based recording |

**Note:** Archival timeline colors are only visible if the Continuous/Event/User based recording does not exist for that timeframe.

## Viewing Snapshots

Expand the camera name to the left of the timeline and the snapshots frames will appear.











## Player Controls

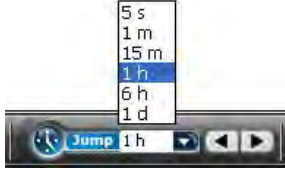




You can play recorded video at speeds ranging from 1/8X to 16X. You can also forward and reverse play the video. The frames from the recorded video can also be viewed one at a time in the panel.

Using the time jump feature, you can skip time intervals while viewing recorded video. This feature is helpful when viewing recorded video that spans across a long time interval.

See the [Playing Recorded Video using the Timeline](#) section for more information on timeline and player controls.

You can perform the following actions using the player controls:

| Player Control Name                         | Buttons  | Description  |
|---|--|--|
| Play the video                              | <br><br>   | <p>Click to <b>Play</b> video. The Play button changes to the <b>Pause</b> button when video is playing.</p> <p>Click to forward play video.</p>   |
| Pause                                       |   | <p>Click to <b>Pause</b> the playing of video. The Pause button changes to the <b>Play</b> button when video is paused.</p>  |
| View frames in the recorded video           | <p>Frame Forward</p> <br><br><p>Frame Reverse</p>  | <p>Click <b>Frames Forward</b> to view the next set of frames.</p> <p>Click <b>Frames Reverse</b> to view the previous set of frames.</p> <p><b>Note:</b> You can only view the frames when video is paused.</p>   |
| Live  |   | <p>Click to play the <b>Live</b> video anytime.</p>  |
| Adjust the volume for audio enabled cameras | <br><br>  | <p>Click to mute/unmute the audio.</p> <p>Hover the mouse over audio controls while video is playing and move the slider to adjust the volume.</p>   |
| Reverse Play                                |   | <p>Click to reverse play the video.</p>  |
| Change the playing speed                    |   | <p>Hover the mouse over the playing speed controls while video is playing and move the slider to change the playing speed.</p> <p><b>Note:</b> The mouse scroll wheel can be used to move the slider. Scrolling up increases the speed and scrolling down decreases the speed.</p> <p>The speed appears in the icon when you move the slider. For example, 1x in the icon indicates the playing speed.</p> |

| Player Control Name                             | Buttons   | Description  |
|---|---|--|
| Skip time intervals using the time jump control |   | <p>Skipping enables you to easily locate the portion of video you want to view in a recording. This is particularly useful when the video recording spans across a long time interval.</p> <p>Click the jump drop-down arrow while video is playing and select a time interval to skip.</p> <p>Click  to jump the selected time interval backward or click  to jump forward by that interval.</p>  |
| Enable Sync Playback video                      |    | <p>Enable Sync Playback video option allows you to synchronize the display of video from multiple cameras. Select the cameras in the salvo layout and then select the <b>Sync</b> check box on the timeline window or click the Enable Sync Playback video button on the tool bar above the salvo layout to enable sync playback mode. Any actions performed such as jump and forward will now be synched in the entire salvo layout. When a new camera is dragged and dropped, the video from that camera will also be synched.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The Enable Sync Playback video feature only consumes one playback session out of 32 playback sessions available in MAXPRO NVR.</li> <li>2. Using this feature, you can playback the selected camera's sync time with a camera in playback mode using a single playback session.</li> <li>3. Reverse playback mode is not supported. Use Jump to move in reverse.</li> <li>4. The maximum number of playback streams supported in sync mode is 9.</li> </ol> |
| Refresh Video                                   |  | Refreshes/Reloads the video in the salvo layout if it is stuck.  |

## Context Menu Options

A context menu appears when you right-click on a panel displaying recorded video. See the [Context Menu Options](#) section on page 66 for more information.



- **Playing Recorded Video for Multi-Stream Cameras:** By default Auto stream switch option is used during playback of recorded streams with preference for event based recordings. Auto stream switch ensures the streams configured as

preferred stream for continuous recording and during playback preferred stream for event recording switch automatically.


- Switch Stream option from the context menu can also be used to playback from individual streams.

## Surrounding Cameras


You can associate a camera to a group of cameras using the Surrounding Cameras feature. This feature enables you to view video from a group of related cameras at the same time (for example, when you want to view video from cameras located in the same area).

1. Click the Viewer tab.
2. Click  on the toolbar on the top of the salvo layout. The surrounding cameras salvo layout appears.
3. Select the camera for which you want to associate a group of cameras from the Devices window. You need to drag and drop the camera in the central panel of the salvo layout. The panel starts displaying video from the selected camera.
4. From the Site window, select the cameras you want to associate with the camera selected in step 3. The panel starts displaying video from the cameras.
5. Click  to save the surrounding cameras salvo layout after you have finished adjusting the salvo layout as required.

## Switching to the Surrounding Camera View for a Camera

- Click  on the toolbar. The surrounding cameras salvo layout appears. Select the camera from the Site window. The surrounding cameras salvo layout starts displaying video from the camera and the associated cameras.

Or

- Hover the mouse at the bottom of the panel displaying video from the camera. A panel toolbar appears. Click  in the panel toolbar. The surrounding cameras salvo layout starts displaying video from the camera and the associated cameras.

# Playing Recorded Video Using Mark In and Mark Out Points in the Timeline

The Mark in and Mark out feature is useful when you want to repeatedly play a portion of video. You can add a mark in point to mark the start date and time in the timeline and mark out point to mark the end date and time in the timeline. The portion of the timeline between a mark in and mark out point is referred to as a loop. User can also create a clip from this loop (see the [Creating Clips](#) section on page 85 for more information).

You can add bookmarks between a loop to identify moments of interest in the video. See the [Marking Points of Interest in the Timeline using Bookmarks](#) section on page 79 for more information.

## Creating a Loop by Adding a Mark In and Mark Out Point in the Timeline


1. Click to select the timeline in the Timeline window in which you want to add mark in and mark out points.

Or

Click a panel displaying video to select the corresponding timeline.


2. To set the start date and time of the loop, add a mark in.

To add a mark in

- Click the point in the timeline where you want to add a mark in and click .  
Or  
Right-click the point in the timeline where you want to add a mark in and click Add Mark In in the context menu.  
Or  
The mark in can also be added from a panel displaying video.  
Right-click the panel and click Add Mark In in the context menu. The mark in is added at the corresponding date and time in the timeline.

3. To set the end date and time of the loop, add a mark out.

To add a mark out

- Click the point in the timeline where you want to add a mark out and click .  
Or  
Right-click the point in the timeline where you want to add a mark out and click Add Mark Out in the context menu.  
Or  
The mark out can also be added from a panel displaying video.

Right-click the panel and click Add Mark Out in the context menu. The mark out is added at the corresponding date and time in the timeline.


**Note:** You can add multiple mark in and mark out points in the same timeline. However, you cannot add two mark in points in succession. A mark out point needs to be added after each mark in point.

Tip: You can now create a clip of this loop. See the [Creating Clips](#) section on page 85 for more information.

## Playing Video from the Loop

1. To select the loop, click anywhere between the mark in and mark out points.

**Note:** A tool tip appears when you hover the mouse over a loop. The tool tip indicates the start time and end time of the loop.


2. Click  to play the loop. You can also right-click on a loop to display a context menu and click Play Loop.

## Stopping a Video Loop

1. In the Timeline window, click to select the loop.

Or

Click the panel displaying video pertaining to the loop. The corresponding timeline is selected.


2. Click . Alternatively, you can right-click the loop to display a context menu and click Stop Loop.

## Marking Points of Interest in the Timeline using Bookmarks

You can add bookmarks in a timeline to mark points of interest in a video recording. For example, if you notice an event in the video and you want to review the portion later, you can add a bookmark. You can also add comments to the bookmarks and browse from one bookmark to the other in the timeline. In addition, you can cut and copy a bookmark and paste it at a different point in the timeline. The bookmark comments appear as tool tips in the timeline at marked points and are helpful while reviewing recorded video.

## Adding a Bookmark

You can add a bookmark in one of the following ways:

- Click the point in the timeline where you want to add a bookmark and click .
- Right-click the point in the timeline where you want to add a bookmark and select Add Bookmark in the context menu.

- Right-click on the panel displaying video and select Add Bookmark in the context menu. The bookmark is added at the corresponding point in the timeline.



## Adding Comments to a Bookmark

1. Right-click the bookmark in the timeline and select Add Comments in the context menu. A dialog box appears.
2. Type your comments in the dialog box and click OK. The comments are saved and appear as a ToolTip when you hover the mouse over the bookmark.

**Note:** To edit the comments, right-click the bookmark and select Edit Comments in the context menu. Modify the comments in the dialog box and click OK.

## Browsing from One Bookmark to the Other

Using this feature, you can skip the portions in the timeline that are not bookmarked. This enables you to selectively view video only from bookmarked portions in the timeline.


1. Select a timeline by clicking it in the Timeline window. You can also click on a panel displaying video to select the corresponding timeline.
2. Click  to view video from the next bookmarked point or click  to view video from the previous bookmarked point.  
Or  
Right-click a bookmark in the timeline to display a context menu. Click Next Bookmark to view video from the next bookmarked point or click Previous Bookmark to view video from the previous bookmarked point in the timeline.

## Cut, Copy, and Paste Bookmarks

1. Right-click a bookmark in the timeline to display the context menu. Click the Cut or Copy command in the context menu, as needed.
2. Right-click the point in the timeline where you want to paste the bookmark and select Paste in the context menu.

## Deleting a Bookmark

You can delete a bookmark in any of the following ways:



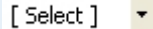




- Right-click the bookmark you want to delete and then select Remove Bookmark in the context menu that appears.
- Select the bookmark you want to delete in the timeline and then click the  button or press the DELETE key.






# Video Controls



## Video Control Options in the Panel Toolbars

The panel toolbars appear when you hover the mouse over the video displayed in a panel. The toolbar that appears on top of a panel enables you to view the name of the video source and to close the video display. The toolbar that appears on the bottom of a panel consists of icons that enable you to perform the following actions:

| Icon  | Click to...   |
|---|---|
|    | Reset the digital PTZ effects on the video display.   |
|    | Display the color correction window. Move the sliders to adjust the brightness, contrast, hue, and saturation settings. You can select the Blur check box to blur the video display and the Sharpness check box to increase the image sharpness or clarity. Alternatively, you can click this button in the toolbar.<br><b>Note:</b> Select the <b>Apply color changes</b> check box to save the settings. Clicking the <b>Reset</b> button sets the color correction settings to the default values.           |
|  | Displays a drop-down list of presets. You can select a preset for the camera.<br><b>Note:</b> The drop-down list is disabled when digital PTZ is enabled. You need to disable the digital PTZ feature to select a preset. See the <a href="#">Panning, Tilting, and Zooming</a> section on page 82 for information on enabling and disabling the digital PTZ feature.   |
|  | Move to a preset camera position.<br>To move to a preset position, select a preset number from the drop-down list and then click the button. The camera position (pan, tilt, and zoom) is moved to the selected preset.<br><b>Note:</b> The preset button is disabled when digital PTZ is enabled. You need to disable the digital PTZ feature to move to a preset. See the <a href="#">Panning, Tilting, and Zooming</a> section on page 82 for information on enabling and disabling the digital PTZ feature. |
|  | Store a preset camera position.<br>To store a preset position, select a preset number from the drop-down list and then click the button. The camera position (pan, tilt, and zoom) is saved to the selected preset.<br><b>Note:</b> The button is disabled when digital PTZ is enabled. You need to disable the digital PTZ feature to store a preset position. See the <a href="#">Panning, Tilting, and Zooming</a> section on page 82 for information on enabling and disabling the digital PTZ feature.     |
|  | Starts Recording on a camera  |
|  | View video from associated (surrounding) cameras. See the <a href="#">Live Video</a> section on page 64 section.  |

| Icon  | Click to...   |
|---|---|
|                  | Set the Output control ON   |
|                  | Set the output control OFF  |
|  Profile_Camera1 | Save the camera view as a profile and this profile camera will be displayed under the Devices tree. See the <a href="#">Profile Cameras</a> section on page 84. |

## Tool Bar options to view video

| Icon  | Click to...   |
|---|---|
|  | Flip the video display. Alternatively, you can click this button in the toolbar on the top of the salvo layout.                 |
|  | View the mirror image of the video display. Alternatively, you can click this button in the toolbar on top of the salvo layout. |

## Panning, Tilting, and Zooming

You can pan, tilt, and zoom (PTZ) the video displayed in a panel. Using the digital PTZ feature in MAXPRO NVR, you can perform panning and tilting on live and recorded video and clips. When enabled, the digital PTZ feature allows you to perform panning and tilting on the video display that is zoomed or enlarged.

### Zooming the Video Display

Use the mouse scroll wheel to enlarge (zoom in) or reduce (zoom out) the video displayed in the panel. Alternatively, hover the mouse over the video display. Click to zoom in or to zoom out the video display in the toolbar that appears.

### Panning and Tilting

1. Right-click on the video displayed in a panel. A context menu appears.
2. Select Digital PTZ. The digital PTZ feature is enabled for that panel's video.
3. Zoom in on the video display.
4. Center-click anywhere on the video panel. A point along with left, right, up, and down arrows appear.
5. Move the mouse in the required direction to pan and tilt.
6. Center-click again to stop panning and tilting.







# PTZ Panel Bar







The PTZ panel bar provides you with the additional options to view the live video. It can be accessible by hovering the mouse on live video as shown below.



## PTZ Panel Bar

The toolbar that appears on the right of a panel consists of icons that enable you to perform the following actions:

| Icon  | Click to...            |
|---|------------------------|
|  | Pan left               |
|  | Pan right              |
|  | Tilt up                |
|  | Tilt down              |
|  | Zoom in to the video.  |
|  | Zoom out of the video. |

| Icon  | Click to...                              |
|---|--|
|  | Iris open (Applies to PTZ cameras only)  |
|  | Auto iris (Applies to PTZ cameras only)  |
|  | Iris close (Applies to PTZ cameras only) |
|  | Focus near (Applies to PTZ cameras only) |
|  | Auto focus (Applies to PTZ cameras only) |
|  | Focus far (Applies to PTZ cameras only)  |

## Profile Cameras

With Profile Cameras, multi-zoom views on high resolution video can be used to create virtual cameras by digitally zooming into the field of view. Example: Zoom in on a cash register in one view of the HD camera and at the same time monitor the cash operator in the zoom out view of the HD camera. Right click on a camera view and click on Save Profile Camera As to save the virtual view as a camera in the device tree.

Profile cameras defined are local to given system. Profile cameras created in MAX-PRO NVR cannot be discovered in MAXPRO VMS. Profile cameras do not consume any camera channel license and are not considered for camera license count.

### **Note:**

- Profile Cameras created are listed in the Device Tree but displaying camera status is not supported for Profile Cameras.
- Maximum number of Profile Cameras that can be created per NVR system is unlimited.

# Snapshots and Clips

## Saving Images

While viewing video in the panel, you can save a frame of the video as an image. The image can be saved in Bitmapmed Graphics (BMP) format, Joint Photographic Experts Group format (JPG), Portable Graphics format (PNG), and Graphics Interchange Format (GIF).

1. Click the Viewer tab.
2. Right-click the panel with the required image to display the context menu.
3. Select Save Image to save the image in BMP format. Alternatively, you can click




on the toolbar on top of the salvo layout. The images are saved in the SnapshotsAndClips folder at the location in the hard drive in which MAXPRO NVR files are installed. For example, X:\Program Files\Honeywell\TrinityFramework\ImagesAndClips.

Or

Select Save Image As to open the Save As dialog box and save the image in other formats. You can select the format in the Save As Type drop-down list and enter the imageFile Name. You can also select a different folder for storing the image.

## Saving the Salvo Layout as an Image

Click  on the toolbar to capture salvo snapshot.

The salvo layout snapshot is saved as an image (BMP format) in the Snapshot-sAndClips folder. The images saved in the SnapshotsAndClips folder appear in the Snapshots/Clips window. See the [Viewing Snapshots, Exported clips and Archival Recordings](#) section on page 90 for information on how to view saved images.

## Creating Clips

You can create clips from recorded video. These clips can be saved with digital signatures. Digital signatures ensure the authenticity of clips. Digital signatures are primarily used to authenticate videos that are produced in courts as evidence. A digital signature generates a unique string for the clip using algorithms recommended by the W3C. The World Wide Web Consortium (W3C) is an international consortium where member organizations, a full-time staff, and the public work together to develop Web standards. If the video in the clip is modified, a verification


check for the unique string fails and indicates that the content is tampered. When a clip is saved with the digital signature, a package file with the PKG extension is created to save the clip.

**Note:** 1. MAXPRO NVR 3.1 SP1 or later version supports exporting video clips with audio on supported IP devices configured for audio recording along with video.

2. MAXPRO NVR 3.1 SP1 or later version exported clips (WMV/ASF), for Oncam Grandeye cameras supported by the NVR, can be dewarped using the Oncam Grandeye 360-degree Viewer application. For further details on Oncam Grandeye 360-degree Viewer, refer to the site: <http://www.oncamgrandeye.com/63-oncam-grandeye-360-degree-viewer.html>

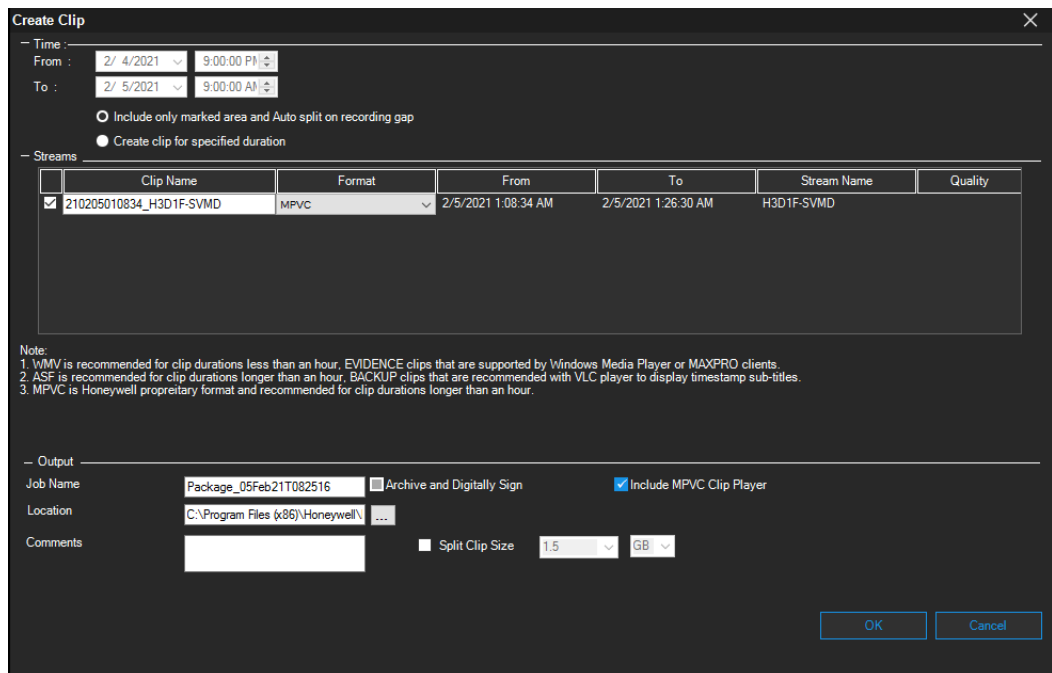
3. Anonymization feature is supported for Clip Export operation. However, If a user exports a clip with Anonymization then only WMV format is supported.

## Creating a Clip

1. Click the Viewer tab.
2. Specify the loop for which you want to create a clip.
3. Click  in the Timeline window. The Create Clip dialog box appears with the Stream Name of the camera from which video is displayed in the salvo layout.

Or

Right-click a loop in the Timeline window and select Export Clip in the context menu. A dialog box appears.



The 'Create Clip' dialog box is shown with the following fields and options:

- Time:**
  - From: 2/ 4/2021 9:00:00 PM
  - To: 2/ 5/2021 9:00:00 AM
- Options:**
  - ☐ Include only marked area and Auto split on recording gap
  - ☒ Create clip for specified duration
- Streams:**


|                                     | Clip Name               | Format | From                | To                  | Stream Name | Quality |
|-------------------------------------|-------------------------|--------|---------------------|---------------------|-------------|---------|
| <input checked="" type="checkbox"/> | 210205010834_H3D1F-SVMD | MPVC   | 2/5/2021 1:08:34 AM | 2/5/2021 1:26:30 AM | H3D1F-SVMD  |         |
- Note:**
  - 1. WMV is recommended for clip durations less than an hour. EVIDENCE clips that are supported by Windows Media Player or MAXPRO clients.
  - 2. ASF is recommended for clip durations longer than an hour. BACKUP clips that are recommended with VLC player to display timestamp sub-titles.
  - 3. MPVC is Honeywell proprietary format and recommended for clip durations longer than an hour.
- Output:**
  - Job Name: Package\_05Feb21T082516 ☐ Archive and Digitally Sign ☒ Include MPVC Clip Player
  - Location: C:\Program Files (x86)\Honeywell\ ...
  - Comments:
  - ☐ Split Clip Size: 1.5 GB
- Buttons:** OK, Cancel

4. Select one of the following options in the dialog box:

| Option   | Select to...  |
|--|---|
| Include only marked area and Auto split on recording gap | Save one or more loops in the time-lines as clips. This option is selected by default.  |
| Create clip for specified duration                       | Specify the time duration of video that you want to save in the clip. After selecting this option, the date and time (start and end) can be specified in the From and To boxes. |

5. Under Streams, select the camera stream to save. The video and the audio from the selected camera stream are saved as clips.

**Note:** Exported clips includes the video streams from the selected cameras and any recorded audio. Currently Clip export supports audio recordings.

6. Under Stream, select the required Format. You can export the clips in WMV or ASF or MPVC formats. See the [WMV, ASF and MPVC Formats](#) section on page 89 section for more information.
7. Enter a Job Name or retain the default name assigned by MAXPRO NVR.
8. Select the Location (folder in which you want to save the clip). You can click  to select a different folder location instead of the default location.

**Note:** Do not select the OS drive to save clips longer than 1 hour. If a OS drive is selected to save a clip the following message is displayed:

*The Selected C : drive for clip export has less than 10 GB free space. Select an alternate drive with sufficient space. Insufficient space in Windows OS partition (Less than 10 GB) can cause system instability. Do not save clips longer than 1 hour duration on OS partition.*

9. To archive the clip with the digital signature, select the Archive and Digital Signature check box. A package is created with all the exported clips and stored in the specified location. Digital signature is only supported for WMV format clips.
10. Enter any Comments for the job to be created.
11. Select the Include MPVC Clip Player check box to play the recordings of MPVC format files. This option is only supported for MPVC clip format exports.
12. Select the Split Clip Size check box and then select the required size and units from the corresponding drop down boxes.

**Note:**

- The Estimated the Clip Size box displays the total size of the clip that is being exported. Based on this you can split the clip to optimize the size of each clip to

match the storage media being used for saving clips. You can split the clip size upto 1.5 GB.

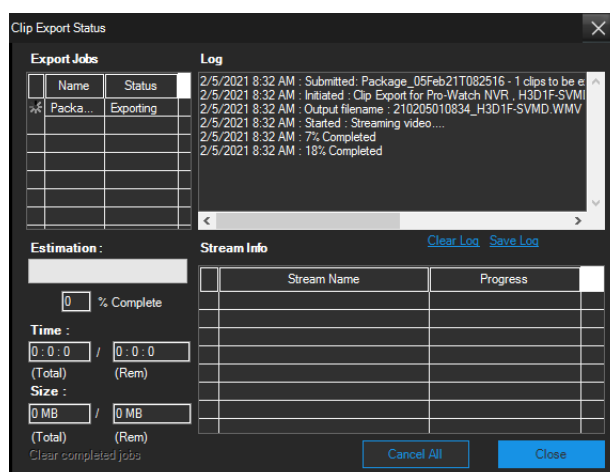
- Split Clip Size and Estimated Clip Size features are not support for WMV format exports.
- For ASF format clip export, recommended clip duration is less than 24 hour per clip. If user wants to perform clip export for multiple days then export the clips for each day individually.
- Anonymization feature is supported for Clip Export operation. However, If a user exports a clip with Anonymization then only WMV format is supported.

13. Click OK to create the clip. The clip creation status is indicated in the status bar. The clip is saved with an automatically generated name (unless a name was entered in step 7).

**Note:** The playback session is closed while creating a clip from the cameras connected to the recorder with playback limitation. You have to restore the playback session manually after the clip creation is complete.

## Canceling Clip Creation

1. Click the clip creation status indicator in the status bar. The Clip Export Status dialog box appears.



2. Right-click the job name that you want to cancel, and then select Cancel. To cancel all the jobs, select Cancel All.

## Naming Convention for Exported Clips

The following table explains the automatic naming convention for a clip using the example below:

- Example of a clip name with WMV format:  
080109125809\_CameraDoor\_(1).WMV.



- Example of a clip name with ASF format: 080109125809\_CameraDoor\_(1).ASF.

| Clip Name                           | Description   |
|-------------------------------------|---|
| 080109<br>(year, month, day)        | The first two digits indicate the year, the next two digits indicate the month, and the last two digits indicate the day of clip creation.  |
| 125809<br>(hours, minutes, seconds) | The first two digits indicate the hour, the next two digit indicate the minutes, and the last two digits indicate the seconds.  |
| CameraDoor                          | The name of the camera.   |
| (1)                                 | The file extension for the clip.  |
| WMV                                 | The file extension for the clip.  |
| ASF                                 | The file extension for the clip.<br><b>Note:</b> For ASF format clip export, recommended clip duration is less than 24 hour per clip. If user wants to perform clip export for multiple days then export the clips for each day individually. |
| MPVC                                | The file extension for the clip.  |

## WMV, ASF and MPVC Formats

Clips can be exported in either WMV, ASF or MPVC formats. When compared to WMV format, the ASF, MPVC formats are much faster and more reliable. The following table describes the difference between WMV, MPVC and ASF formats.

- Note:** 1. ASF format clips are supported in NVR version 3.1 SP1. This format is recommended for clip durations longer than an hour for exporting as backup clips.  
 2. WMV format clips are recommended for clip durations that are less than an hour for exporting as evidence clips.  
 3. Anonymization feature is supported for Clip Export operation. However, If a user exports a clip with Anonymization then only WMV format is supported.

| WMV Format                   | ASF Format  | MPVC Format   |
|------------------------------|---|---|
| WMV is traditional and slow. | ASF format is faster at exporting a clip. It takes 50 minutes to export a 24 hour clip without much difference in the size of the clip. | Its Honeywell Proprietary format. Archival recordings are also stored in MPVC format. |
|                              | Text overlay is not supported in the NVR viewer with ASF formats.   |   |

| WMV Format   | ASF Format   | MPVC Format  |
|--|--|--|
| WMV format converts the packets into MPEG formats and then displays the video. | ASF format takes the raw data from the packets and displays the video directly without conversion. This makes the ASF format faster in processing the video.   | MPVC format takes the raw data from the packets and displays the video directly without conversion. This makes the MPVC format faster and best quality in processing the recorded video. |
|  | ASF format does not display the Time Stamp on the clip. To view the Time stamp it is recommended to play the clip with the VLC Player. ( <a href="http://www.videolan.org/vlc/index.html">http://www.videolan.org/vlc/index.html</a> ) | You can playback the MPVC format using MAXPRO Clip player which is designed only for MPVC format clips.  |

## Viewing Snapshots, Exported clips and Archival Recordings

From the Snapshot/Clips window, you can view the images and clips saved in the Snapshots/Clips folder (at the location in the hard drive in which MAXPRO NVR files are installed). For Archival clips the camera name with model is displayed in the tree.

1. Click the Viewer tab, and then click the Snapshot/Clips tab.
2. In the Snapshot/Clips window, expand the Snapshots and Clips folder. Folders with names indicating the date in which the images and clips are created appears. The folder naming format is day/month/year also the camera name with model is displayed
3. Expand the folder with the date of the image or clip or camera name you are looking for. Inside the folder, the video clips are saved in the Clips sub-folder and images are saved in the Images sub-folder.
4. You can refresh the list of images and clips in the Snapshots/Clips window. Refreshing the list displays the latest images and clip names (such as a recently saved clip). To refresh, right-click in the Snapshots/Clips window to display a context menu and click Refresh.

## Viewing Images

Use the following method to view images:

- In the Snapshot/Clips window, right-click the image to display a context menu and then Show in Folder. The images saved in the Snapshots/Clips folder (at the location in the hard drive in which MAXPRO NVR files are installed) is displayed.

## Viewing Video Related to an Image

If a video recording is available, you can view video from the same date and time as the saved image.

In the Snapshots/Clips window, right-click the image to display a context menu and select Show Video. The video is played from the starting date and time of the saved image.

## Viewing Clips

Use any of the following methods to view a clip:

- In the Snapshots/Clips window, right-click the clip to display a context menu and select Show Video. The video is displayed in the salvo layout.

Or

- Double-click the clip.

Or

- Drag the clip onto a panel in the salvo layout.

Viewing the Clips Folder

- In the Snapshots/Clips window, right-click the Clips folder or any clip to display a context menu and select Show In Folder to view the folder in which the clips are saved.

## Deleting Images and Clips

In the Snapshot/Clips window, you can delete the images and clips that you do not need:

1. Click the Viewer tab.
2. Expand the folder(s) to find the image/clip you want to delete.
3. Right-click the image or clip which you want to delete. A context menu appears.
4. Click Delete.

## Viewing Archival Recordings

1. In the Snapshot/Clip window, right click on the Archival node and then click on Add Archival Location sub-menu item to choose the Archival storage. The system scans and the archival tree is displayed with folder, camera id and the archival recording folders by camera name and model.
2. Click on the camera folder, the archival MPVC format clips are displayed.
3. Double click or drag/drop any of the clips to play in the MAXPRO NVR client salvo view.

# Alarms

Alarms notify operators of the occurrence of events. You can configure alarms to be triggered for the following types of events: adding a camera, recorder disk space nearing full, motion detection, and so on. The events that trigger an alarm can be selected while configuring MAXPRO NVR.

Each alarm goes through the following states. Refer to the *MAXPRO® NVR Installation and Configuration Guide, Appendix B* for more information on various types of Alarm and Events.

- New or Unacknowledged
- Acknowledged
- Cleared
- Beep on alarm

## New or Unacknowledged

When an alarm is triggered it appears in the Alarm window. The state of the alarm after it is triggered is referred to as unacknowledged. You can view the list of all the unacknowledged alarms in a table in the Alarm window.

| Alarm                          |                         |                   |           |               |
|--------------------------------|-------------------------|-------------------|-----------|---------------|
| Description                    | Event details           | Device            | IO Status | Date Time     |
| Person detected with mask      | Confidence Score:53.38  | Mask              | NONE      | 2/5/2021 7:17 |
| Person detected with mask      | Confidence Score:58.79  | Mask              | NONE      | 2/5/2021 7:17 |
| Camera Event Recording Started | --                      | Mask              | NONE      | 2/5/2021 7:17 |
| Person detected without mask   | Confidence Score:86.62  | Mask              | NONE      | 2/5/2021 7:17 |
| Person detected with mask      | Confidence Score:60.72  | Mask              | NONE      | 2/5/2021 7:17 |
| Person detected with mask      | Confidence Score:95.26  | Mask              | NONE      | 2/5/2021 7:17 |
| Person detected with mask      | Confidence Score:61.05  | Mask              | NONE      | 2/5/2021 7:17 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:17 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:17 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:17 |
| Camera Disconnected            | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:17 |
| Acknowledge                    |                         |                   |           |               |
| Description                    | Event details           | Device            | IO Status | Date Time     |
| Person detected without mask   | Confidence Score:86.62% | Mask              | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:70.63% | Mask              | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:69.21% | Mask              | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:91.39% | Mask              | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:82.53% | Mask              | NONE      | 2/4/2021 8:17 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:17 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:17 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:61.80% | Mask              | NONE      | 2/4/2021 8:17 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:17 |
| Person detected without mask   | Confidence Score:56.64% | Mask              | NONE      | 2/4/2021 8:17 |
| Clear Clear All                |                         |                   |           |               |

## Alarms Window

For each unacknowledged alarm, the following details are listed:

| Column        | Indicates...   |
|---------------|--|
| Description   | Name of the event that triggered the alarm. For example: camera motion detected.   |
| Event Details | Name of the event attribute. Only the key event attribute is displayed in this column.   |
| Device        | Name of the device such as a recorder or camera associated with the event. For example: the name of the camera that detected motion. |

| Column             | Indicates...  |
|--------------------|---|
| IO Status          | Displays the input and output status.   |
| Date:Time          | Date and time when the alarm is triggered.  |
| Master Device Name | the device responsible to generate the specific alarm.  |
| Severity           | Severity of the alarm. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on configuring default Event and Alarm types and their severity levels for Camera, Recorder and Smart VMD. |
| Site               | Site name where the device is located.  |
| Global ID          | Global unique identification number of the event. Each camera will have one event id and it is used while playing back the recording. Global ID is used in MAXPRO VMS to search a recording.                                |

The number of unacknowledged alarms is displayed in a red blinking mode in the status bar (for example, Alarms (10) indicate that there are ten unacknowledged alarms).

#### Acknowledged

An acknowledged alarm indicates that the operator has taken the necessary action. After acknowledging the alarm, it is moved to the acknowledged alarms list in the Alarm window.

#### Cleared

After the response action is taken, you can remove or clear the alarms from the acknowledged list in the Alarm window.

#### Beep on alarm

The beep on alarm option can be selected if you want the beep sound to occur when there is an active alarm. The option is selected by default. To deselect the option, right-click the alarms indicator on the status bar, and then click to clear the Beep on Alarm check box.

## Acknowledging Alarms

You can acknowledge an alarm to accept that the necessary response action is being taken.

1. Click the Viewer tab, and then click the Alarm tab.
2. Select the alarm you want to acknowledge in the Alarm window. The unacknowledged alarms are listed in the first table in the Alarm window.

Tip: To select more than one unacknowledged alarm, hold the CTRL key down while you select alarms.

3. Click Acknowledge. The acknowledged alarm appears in the second table in the Alarm window. If you have selected multiple alarms, all the alarms are acknowledged and appear in the second table in the Alarm window.

## Unacknowledged Alarms Context Menu Options

When you right-click on the list of unacknowledged alarms in the first table, a context menu appears. The following table lists the commands in the context menu:

| Command                        | Click to....   |
|--------------------------------|--|
| Ack                            | Acknowledge the selected alarm.  |
| Clear on Ack                   | Automatically clear the alarms when they are acknowledged.   |
| Ack All                        | Acknowledge all the alarms.  |
| Show Video                     | View video from the time corresponding to the occurrence of the event that triggered the alarm. The video is played in the currently selected panel in the salvo layout.<br><b>Note:</b> The video is played only when the video recording is available.   |
| Show Preview Pane              | View video related to the alarm in a four panel salvo layout. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences.  |
| Show Details                   | View the details of the alarm. This feature lists the device from which the alarm was triggered, description, date time when the alarm was triggered, status of the alarm, global event ID, and the event attribute associated to the alarm. You can also use the previous and next buttons to view the details of the alarms listed in the alarms window. |
| Freeze                         | Stop receiving the new or unacknowledged alarms in the Alarm window. You can click this command again to start receiving the alarms. This feature is useful when the <b>Alarm</b> window contains many unacknowledged alarms and it becomes difficult to manage them. You can stop receiving the alarms momentarily and start receiving again when needed. |
| Receive Alarms Only            | List only the alarms in the <b>Alarm</b> window. Alarms are listed only when the severity level of the corresponding event that triggered the alarm is greater than or equal to the alarm severity threshold value. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences.                      |
| Receive Events Only            | List only the events in the <b>Alarm</b> window. Events whose severity level is greater than or equal to the alarm severity threshold value are listed. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences.  |
| Receive Both Alarms and Events | List both alarms and events in the <b>Alarm</b> window.  |

## Clearing Acknowledged Alarms

You can clear the acknowledged alarms after taking the necessary action.

1. Click the Viewer tab.
2. Select the alarm you want to clear in the Alarm window. The acknowledged alarms are listed in the second table in the Alarm window.

Tip: To select more than one unacknowledged alarm, hold the CTRL key down while you select alarms.

3. Click Clear. The alarm is removed from the list of acknowledged alarms. If you have selected multiple alarms, all of the selected alarms will be cleared..

#### Clearing All of the Acknowledged Alarms

Click Clear All. All of the acknowledged alarms are cleared and removed from the list of acknowledged alarms.

## Acknowledged Alarms Context Menu Options

When you right-click on the list of acknowledged alarms in the second table, a context menu appears. The following table lists the commands in the context menu:

| Command             | Click to....   |
|---------------------|--|
| <b>Clear</b>        | Clear the selected acknowledged alarm.   |
| Clear All           | Clear all of the acknowledged alarms.  |
| <b>Show Video</b>   | View video from the time corresponding to the occurrence of the event that triggered the alarm. The video is played in the currently selected panel in the salvo layout.<br><b>Note:</b> The video is played only when the video recording is available.   |
| Show Preview Pane   | View video related to the alarm in a four panel salvo layout. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences.  |
| <b>Show Details</b> | View the details of the alarm. This details lists the device from which the alarm was triggered, description, date/time when the alarm was triggered, status of the alarm, global event ID, and the event attribute associated to the alarm. You can also use the previous and next buttons to view the details of the alarms listed in the alarms window.       |
| <b>Freeze</b>       | Stop receiving the new or unacknowledged alarms in the <b>Alarm</b> window. You can click this command again to start receiving the alarms. This feature is useful when the Alarm window contains many unacknowledged alarms and it becomes difficult to manage them. You can stop receiving the alarms momentarily and start receiving them again, as required. |
| <b>Clear on Ack</b> | Automatically clear the alarms when they are acknowledged.   |

| Command                        | Click to....  |
|--------------------------------|---|
| Receive Alarms Only            | List only the alarms in the <b>Alarm</b> window. Alarms are listed only when the severity level of the corresponding event that triggered the alarm is greater than or equal to the alarm severity threshold value. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences. |
| Receive Events Only            | List only the events in the <b>Alarm</b> window. Events whose severity level is greater than or equal to the alarm severity threshold value are listed. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide</i> for more information on Setting Preferences.   |
| Receive Both Alarms and Events | List both alarms and events in the <b>Alarm</b> window.   |

## Video Viewing Options from Immervision Enabled Cameras

You can drag and drop Immervision enabled cameras onto the viewer, and view live video from them. These cameras support several different modes for viewing live video (see the following sections for more information).

### Perimeter Mode

Perimeter mode divides the video into two parts (see the below example).





## Perimeter Mode

# Quad Mode

In Quad mode, you can see four different fisheye views on a single salvo panel. In each of the views, you can Zoom in, Zoom out, Pan up, pan down, Tilt up, and Tilt down the video. See the below example of Quad mode.



Quad Mode

## PTZ Mode

In PTZ mode, you can see a single view, which enables you to use PTZ commands with the video (Zoom in/out, Pan up/down, Tilt left/right). See the below example of PTZ mode.



**PTZ Mode**

## Panomorph Settings in the Viewer

At any point of time, while viewing video in a particular mode with an Immervision camera, you can switch to a different mode using the Panomorph settings available in the Viewer.

Viewing video in Different Modes

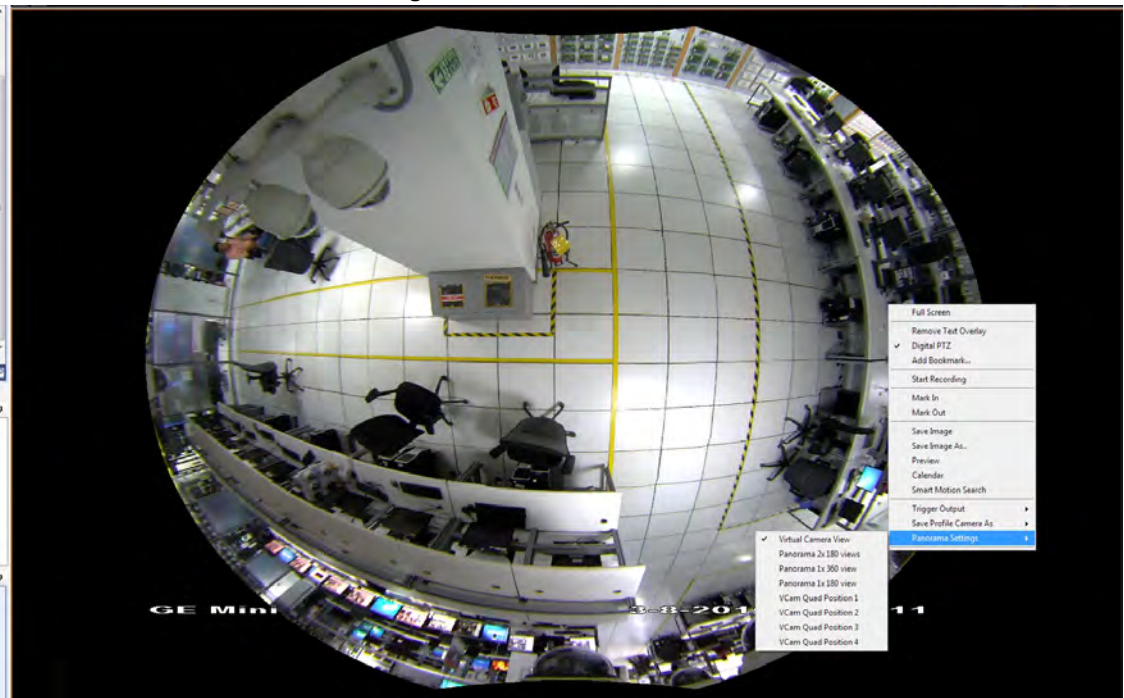
Right-click the panel displaying live video, select Panomorph Settings in the context menu, and then select one of the modes (PTZ Mode/Quad Mode/Perimeter Mode), as applicable (see the below example.).



**Panomorph Settings in the Viewer**

## Video Viewing Options from Oncam Grandeye Cameras

You can drag and drop Oncam Grandeye cameras onto the viewer, and view live video from them. Live video modes for some of the Halocam and Evolution cameras are shown in the following illustrations.



**Virtual Camera View**

Right-click the panel displaying live video (for a Evolution camera), select Panorama settings, and then select any mode to view live video in that mode.

The following figures display various views/modes:

- Virtual Camera View
- Panorama 2x 180 views
- Panorama 1x 360 views
- Panorama 1x 180 views
- VCam Quad Position 1
- VCam Quad Position 2
- VCam Quad Position 3
- VCam Quad Position 4

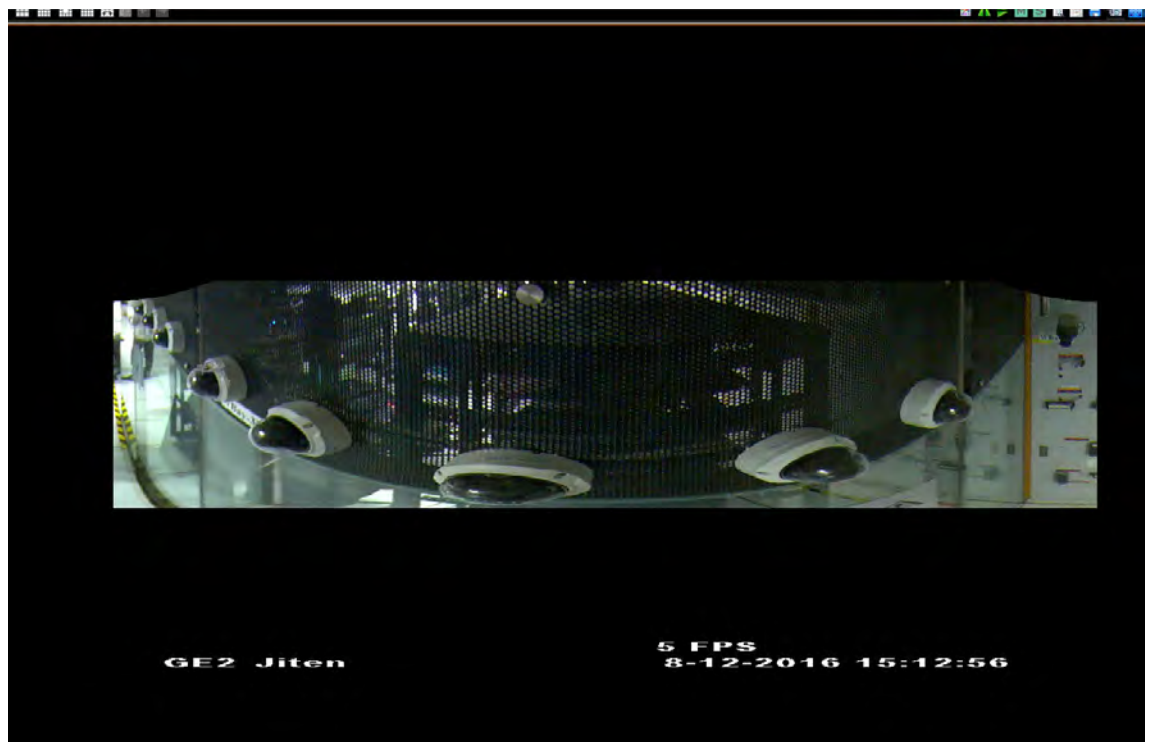


**Panorama 2x180 View**





Panorama 1x360 View



Panorama 1x 180 views



**VCam Quad Position 1**



**VCam Quad Position 2**



VCcam Quad Position 3



VCcam Quad Position 4



# Video Viewing Options of Dewarped New EquiP Camera

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. To Dewarp the video you need to configure the camera General > 360 Settings pane. Refer to *MAXPRO® NVR Installation and Configuration Guide* for more information on configuring the New EquiP model camera to support dewarping.

Right-click the panel displaying live video (for a New EquiP model camera) and then select Panorama settings. Select any mode to view live video in that mode.

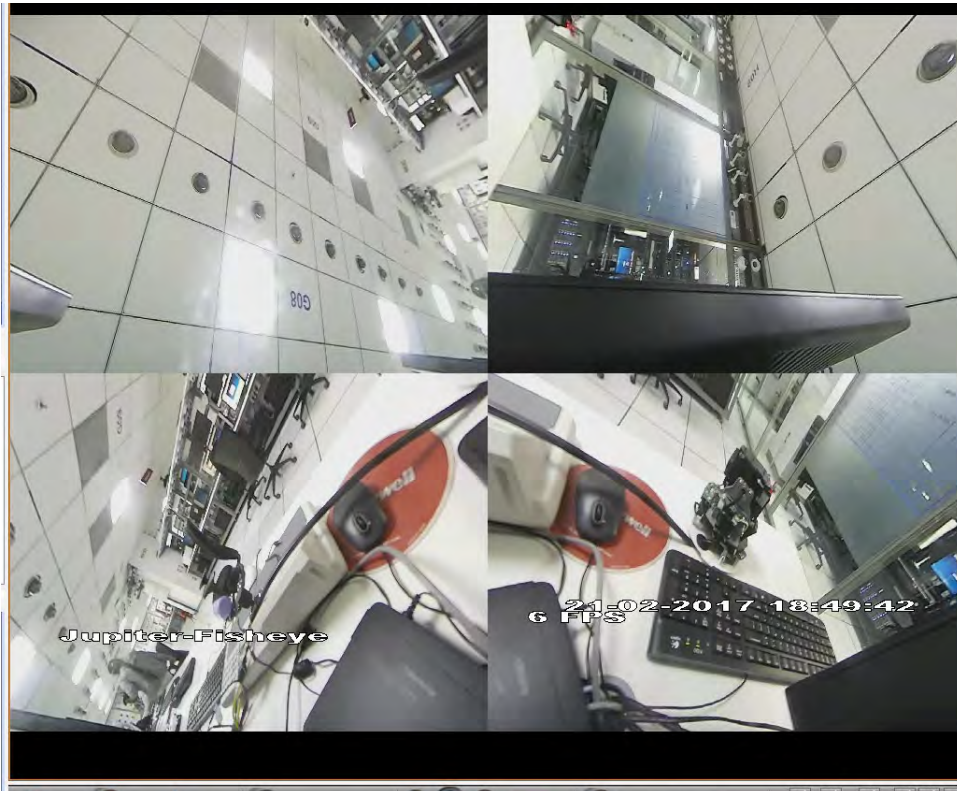
The following table and figures display various views of New EquiP model camera based on the mounting position:

|                   | Modes            | FishEye View<br>(see page 104) | Quad View<br>(see page 105) | 1 Panorama & 3 Quatro View<br>(see page 106) | Panorama 2x 180 Views<br>(see page 105) | 1 Fish Eye & 3 Quatro View<br>(see page 106) |
|-------------------|------------------|--------------------------------|-----------------------------|--|---|--|
| Mounting Position | Wall Mounting    | Supported                      | Supported                   | Supported                                    | Not Supported                           |  |
|                   | Ceiling Mounting | Supported                      | Supported                   | Not Supported                                | Supported                               | Supported                                    |
|                   | Ground Mounting  | Supported                      | Supported                   | Not Supported                                | Supported                               | Supported                                    |

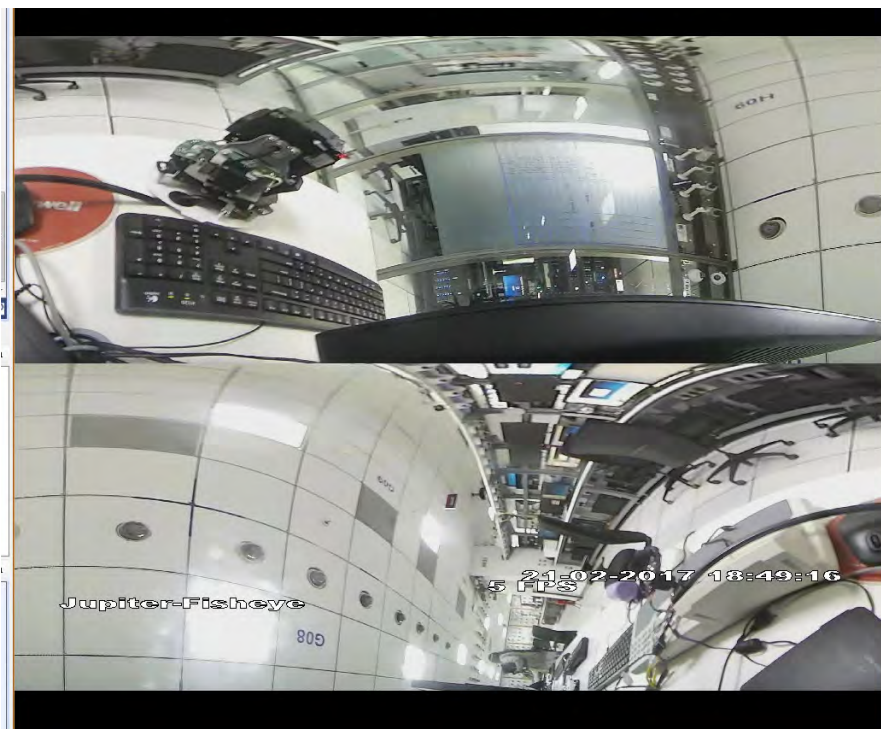


EQUIP-Fish Eye View

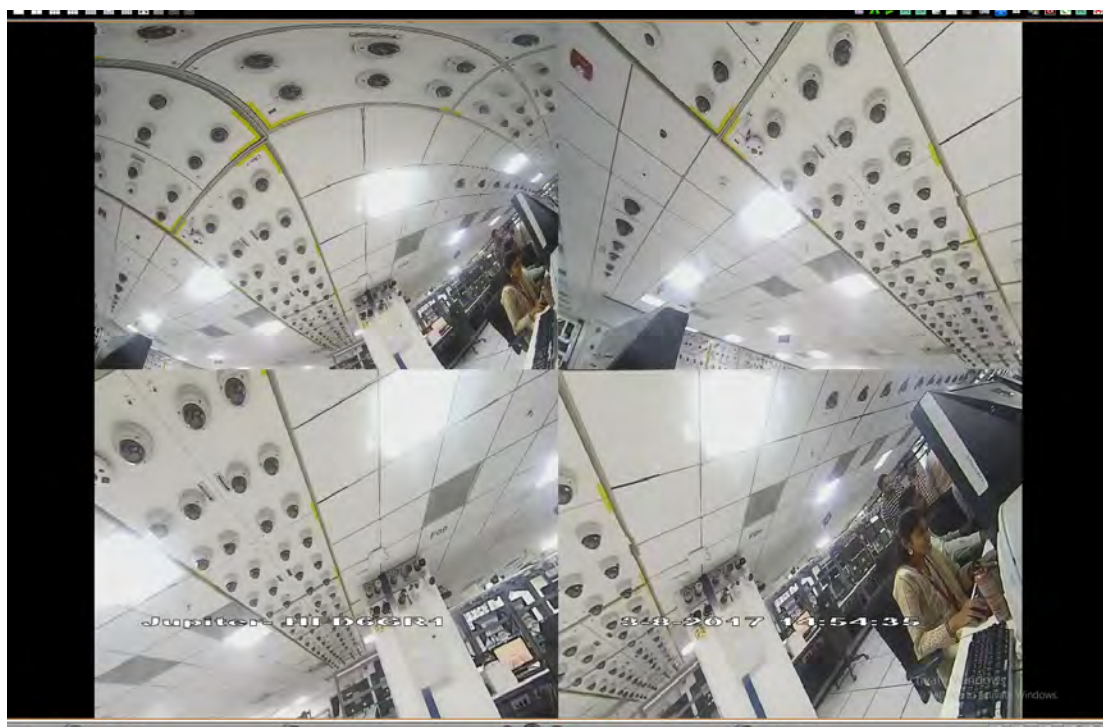




**EQUIP - Quad View**



**EQUIP - Panorama 2X180 View**



**Equip - 1 Panorama & 3 Quatro View**



**EQUIP - 1 Fish Eye 3 Quatro View**



# Video Viewing Options of Venus and Helios Equip Series Cameras

New Venus Equip series camera (HM4L8GR1: Multisensor Dome/Bullet) is capable of delivering stitched view.

New Helios Equip series camera (HTMZ160T302W: Dual Sensor Thermal/Visual IP PTZ Camera) is capable of delivering thermal view.

Refer to *MAXPRO® NVR Installation and Configuration Guide* for more information on configuring the High Performance Equip model (Venus/Helios) cameras.

Below sample images displays Venus Stitched view and Helios Thermal view



**Venus Stitched view**



**Helios Thermal View**


# MAXPRO Status Monitor

MAXPRO Status Monitor application allows you to monitor the status of system and Recording Engine in a network. You can manually add or auto search the required NVRs and then connect to a single or multiple NVRs (System or Recording Engine) to monitor the status of various parameters. In addition, color indications are also available to identify the status of the system. The colors of the status and the description are given below.

- Green: Everything is Fine
- Blinking between yellow and green: Not Recording
- Blinking between Yellow and red: Database Connection lost
- Status message Database Connection lost. Indicates the status of database connection.

## How to access the application





- MAXPRO Status Monitor is part of NVR 4.0 package. It is installed along with the NVR

4.0 software only solution. Double-click  on your desktop.

Or

Click Start > All Programs > Honeywell > Maxpro NVR Tools and then click MAXPRO Status Monitor. By default the status monitor starts searching the NVRs in you network.

## Tool bar options

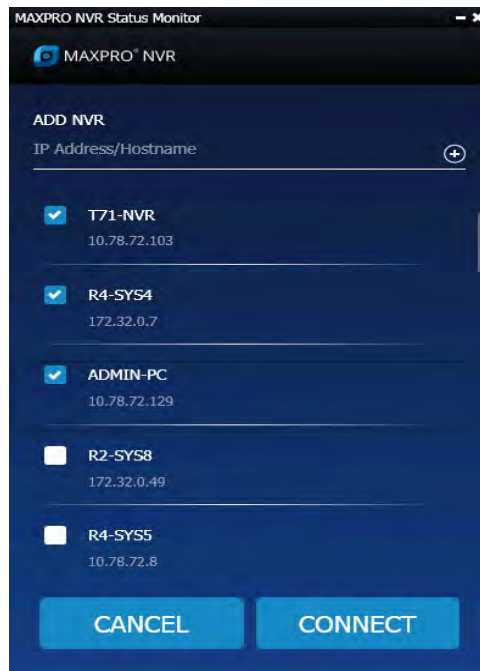
| Icon/<br>Option   | Description   |
|---|---|
|  | Remove: Removes the NVRs from the list.   |
|  | Interval: You can set time intervals under this option. It allows you to set the Refresh Intervals during which you want to monitor the status. The intervals vary from 1 second to 30 second. You can set the required time interval for the system to refresh the status. |
|  | Views: This option enables you to switch between views. Available options are list view and table view. Select the required one to view the data accordingly.   |
|  | Allows you to add new NVRs manually.  |

## Monitoring the status of a System

To monitor the system status:

1. Launch the MAXPRO Status Monitor as explained in [How to access the application](#). By default the status monitor starts searching and displays the available MAXPRO NVRs in your network. The application is displayed as shown in [MAXPRO Status Monitor Home screen](#) on page 110.

**Note:** By default the status monitor starts searching and displays the available MAXPRO NVRs in your network. If you want to manually search, under Add NVR, type the IP Address/Host name and then press Enter. See [Monitoring the status of a System Manually](#) section on page 111 section for more information.



#### MAXPRO Status Monitor Home screen

2. Select the required Or multiple NVR check boxes and then click the Connect button. The status of system is displayed as shown in [System status of NVR](#), page 110.

| NVR  | CPU  | Active cameras | FPS Recorded | Bitrate Recorded | FPS Received | BitRate Received | Disk Write | Disk Read | Avg. Disk Queue Length |
|--|------|----------------|--------------|------------------|--------------|------------------|------------|-----------|------------------------|
| <input checked="" type="checkbox"/> R5-SYS7<br>10.78.72.106  | 17 % | 63             | 676          | 87.34 Mbps       | 1316         | 163.79 Mbps      | 9.89 MB    | 222.08 KB | 1                      |
| <input checked="" type="checkbox"/> R4-SYS4<br>172.32.0.7    | 5 %  | 36             | 177          | 28.08 Mbps       | 180          | 28.09 Mbps       | 169.75 KB  | 0         | 0                      |
| <input checked="" type="checkbox"/> T71-NVR<br>10.78.72.103  | 4 %  | 19             | 82           | 11.74 Mbps       | 109          | 16.21 Mbps       | 2.50 MB    | 47.37 KB  | 0                      |
| <input checked="" type="checkbox"/> ADMIN-PC<br>10.78.72.129 | 8 %  | 0              | 0            | 0                | 0            | 0                | 104.90 KB  | 0         | 0                      |

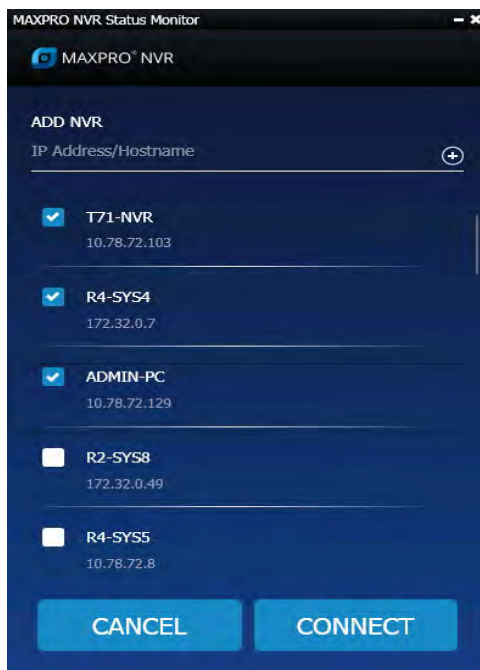
#### System status of NVR

**Note:** By default the System status is displayed.

## Monitoring the status of a System Manually

To monitor the status of a system manually:

1. Launch the MAXPRO Status Monitor as explained in [How to access the application](#). By default the status monitor starts searching the NVRs in your network as shown in [MAXPRO Status Monitor Home screen](#), page 110.



**MAXPRO Status Monitor Home screen**

2. Under Add NVR, type the IP Address/Hostname that you want to monitor and then press Enter. The status of specific NVR is displayed in list view as shown below.



#### Status of NVRs


3. Select the required NVR check boxes and then click Connect to view the status.

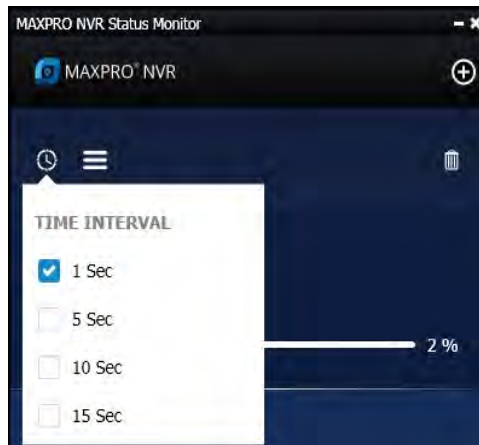
## How to set the Refresh Interval

Refresh intervals can be set while you are monitoring the status in List or Table view.

To set the refresh intervals:



1. On the tool bar, click  icon. The Refresh Interval options are displayed based on your selected view.



#### **Refresh Intervals**

2. Click on the required time interval check box on the scale of 1 to 15 seconds. The status is displayed accordingly.

## **Introduction to Profile-G or Edge Recording Sync**

Profile-G or Edge Recording Sync feature allows you to sync the recordings from the camera SD card to MAXPRO NVR. Camera SD card contains recordings that are configured on demand. This feature enables the user to playback only those recordings which are saved in the SD card after they are synced to MAXPRO NVR. User can enable the Edge Sync option in Camera page and then configure the day/time for Edge Sync in the System window to get the recordings from the camera. Edge Sync feature is applicable only to the cameras with SD card. This feature is supported only for Mercury model cameras for now.

Below table details the camera models and firmware details for Profile G supported cameras.

**Note:** Only the below Profile G compliant camera models with Firmware supports the Edge Syn feature.

Profile-G compliant camera time should be in sync with NVR time.

Ensure you configure the NTP server to avoid Time Sync related issues.

| Camera Models | Details                             | Firmware  |
|---------------|-------------------------------------|---|
| H4W2GR1       | Outdoor Dome 2MP 2.7-12mm           | V1.000.HW00.6, build: 2017-10-16  |
| H4W2GR2       | Outdoor Dome 2MP 7-22mm             |   |
| H4W4GR1       | Outdoor Dome 4MP 2.7-12mm           |   |
| H3W2GR1       | Indoor Dome 2MP 2.7-12mm            |   |
| H3W2GR2       | Indoor Dome 2MP 7-22mm              |   |
| H3W4GR1       | Indoor Dome 4MP 2.7-12mm            |   |
| HBW2GR1       | Bullet 2MP 2.7-12mm                 |   |
| HBW2GR3       | Bullet 2MP 4.7-47mm                 |   |
| HBW4GR1       | Bullet 4MP 2.7-12mm                 |   |
| HCW2G         | Box 2MP                             |   |
| HCW4G         | Box 4MP                             |   |
| HCL2G         | Box 2MP low light                   | V2.420.HW01.19, build: 2017-10-16   |
| H4L2GR1       | Outdoor Dome 2MP 2.7-12mm low light |   |
| HBL2GR1       | Bullet 2MP 2.7-12mm low light       |   |
| HDZ302LIW     | IR PTZ wiper, low light             | Base Firmware Version: V1.000.0024.0, build: 2017-10-17<br>PAN/TILT Firmware Version: V1.000.000.20170914<br>Module Version: 01.06.0A |

## How to Configure Profile-G or Edge Recording Sync Feature

To configure the Profile-G or Edge Sync feature, perform the following in the order mentioned:

1. Upgrade the Camera Firmware.
  - Enable SD card recording with required settings
2. Upgrade MAXPRO NVR to the latest version
3. Configure the Edge Sync Settings
  - Enable the Edge Sync feature

**Note:** *Profile-G compliant camera time should be in sync with NVR time.*

*Ensure you configure the NTP server to avoid Time Sync related issues.*

## Upgrade the Camera

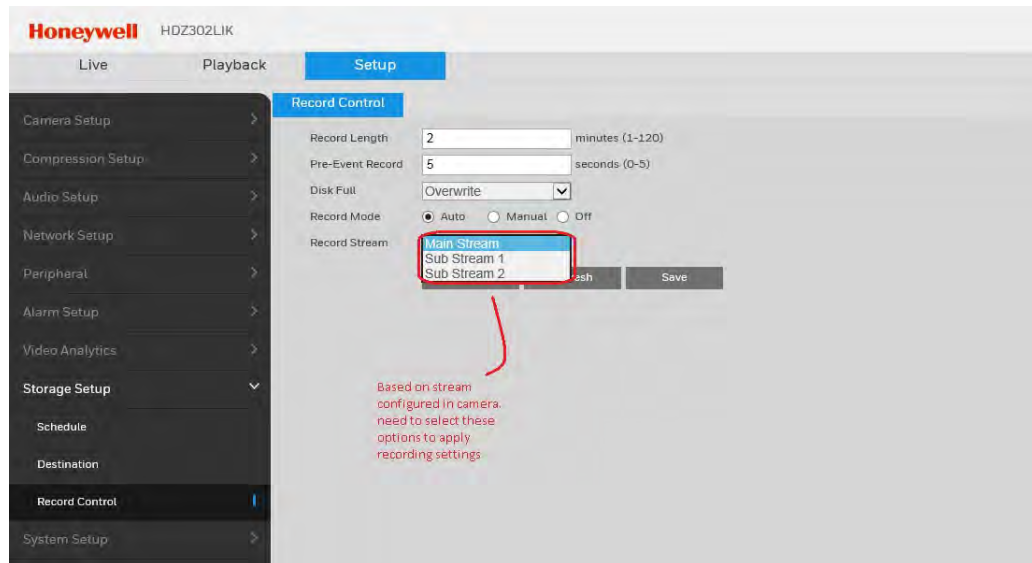
### Before Upgrading

- If there are critical recordings available in SD card, please take back up using camera web page before upgrading the firmware.
- Upgrade to the Camera Firmware versions to latest versions as mentioned in the above table.
- It is recommended to use IPC utility to upgrade the Camera Firmware.

**Note:** *Ensure that there is no Camera power fluctuations during the upgrade procedure. This is to ensure smooth camera firmware upgrade.*

### Post Upgrade (Camera Settings)

1. Before adding the Profile-G camera into NVR, delete all the existing recording available in SD card.
2. Configure the required SD card recording configuration in the camera Web page.



**Note:** Irrespective of the length/size of clips, maximum number of clips supported on SD card is 700 only.

If user want to use secondary channels resolution for SD card recording they have to set SD card recording settings as per the stream selected.

3. Ensure that the Camera Timezone is adjusted to match with the MAXPRONVR machines time zone.
4. Select the Synchronize with check box to sync the NTP time server with Camera time and MAXPRO NVR time.

## Upgrade MAXPRO NVR

- Install the MAXPRO NVR 4.5 Build 162 on top of NVR 4.1 Build 123. Refer *MAXPRO® NVR Installation and Configuration Guide* for more information on how to upgrade.

## Configure the Edge Sync Settings

Edge Sync settings enables you to set the schedule for synchronizing the recordings from the camera SD card. This feature is supported for Profile-G compliant cameras where the recordings are stored at the camera level.

**Note:** Profile-G compliant camera time should be in sync with NVR time.

Ensure you configure the NTP server to avoid Time Sync related issues.

To configure the Edge Sync Settings:

1. In MAXPRO NVR, navigate to Configurator > Systems tab. The Systems screen is displayed as shown below.

2. Under Edge Sync Settings:
  - Click Every option and then select the time in minutes or hours to edge sync the recordings.  
Or  
Click Every Day at option and then select the specific time in hours during which the edge sync should trigger.
  - Limit Past Sync: This option allows you to stop the synchronizing process at certain point of time. You can set time in minutes. The synchronizing process starts once it overshoots the limit time.

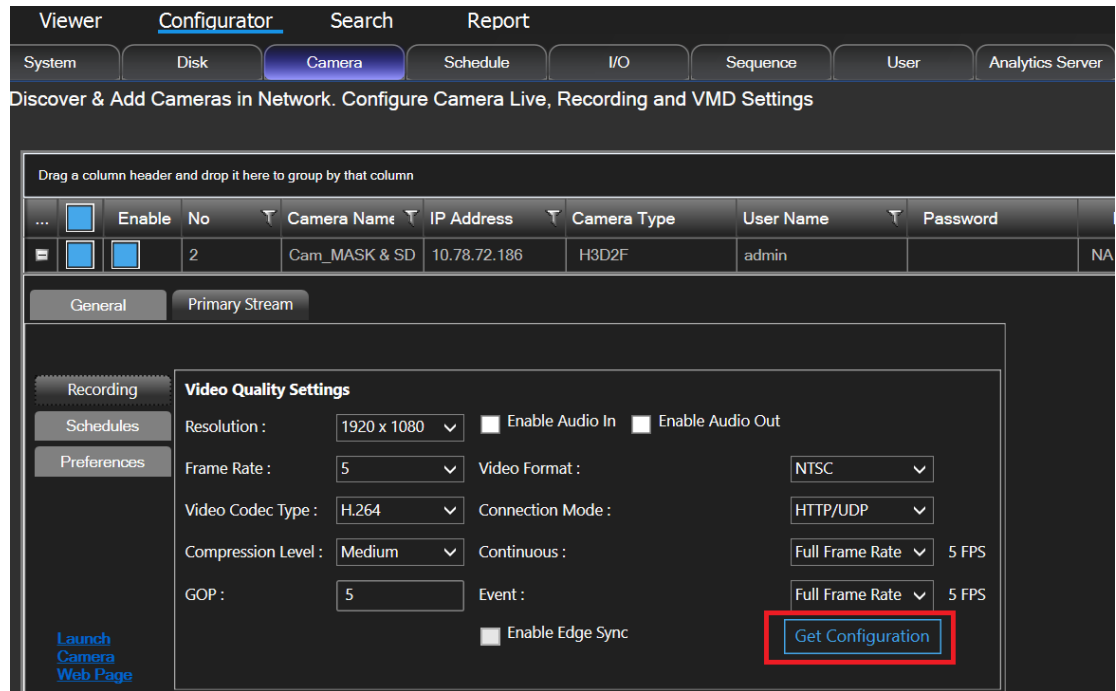
**Note:** The default Archival Schedule configured and recommended is Every Day at 12:00 AM. This is recommended versus the Auto [24/7] option for optimal performance and load on NVR.

## Enable the Edge Sync

This option is supported for Profile-G compliant cameras and used for checking whether the camera is really Profile-G compliant. Click the Get Configuration button, if the camera is a Profile-G compliant camera then the Get Configuration button disappears and Enable Edge Sync check box is enabled.

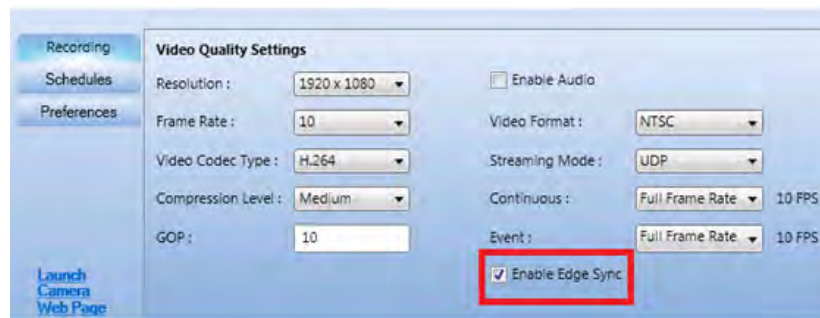
To enable the Edge sync option:

1. Navigate to Configurator > Camera tab. The Camera screen is displayed as shown below.

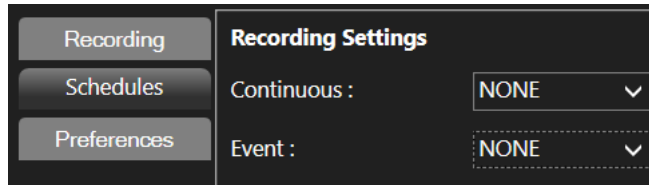


2. Click the Get Configuration button. If the camera is a Profile-G compliant camera then the Get Configuration button disappears and Enable Edge Sync check box is enabled as shown below.  
If the camera is not Profile-G compliant then NVR application displays Edge Sync not supported or enabled for this device message at the bottom of the screen.

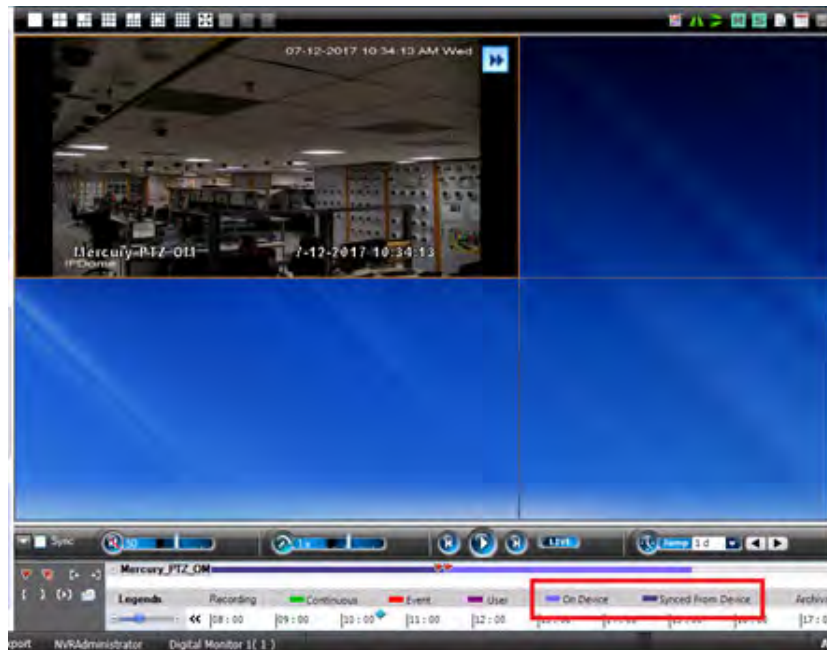
**Note:** For Profile-G compliant cameras the Streaming Mode is defaulted to UDP. If you want to switch from UDP to TCP mode then you need to update the .config file. After modifying the .config file for TCP mode you need to restart the Trinitybackfill service.



3. Select the Enable Edge Sync check box and then click Save.
4. Under Schedule tab > Recording Settings, select None from the drop-down list for both Continuous and Event based recording for the camera as shown below.



Once the Edge syncing is enabled you can see the recordings available in SD card and in MAXPRO NVR (after Edge syncing) as highlighted below:

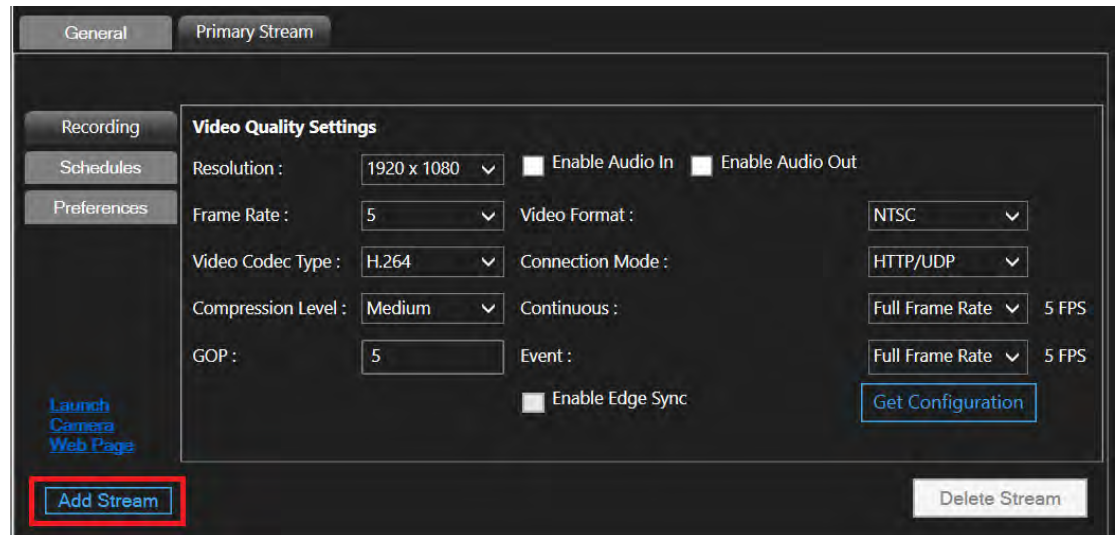


**Note:** You can Playback only the Edge synced clips (synced clips from camera SD card to MAXPRO NVR) from the MAXPRO NVR clients.

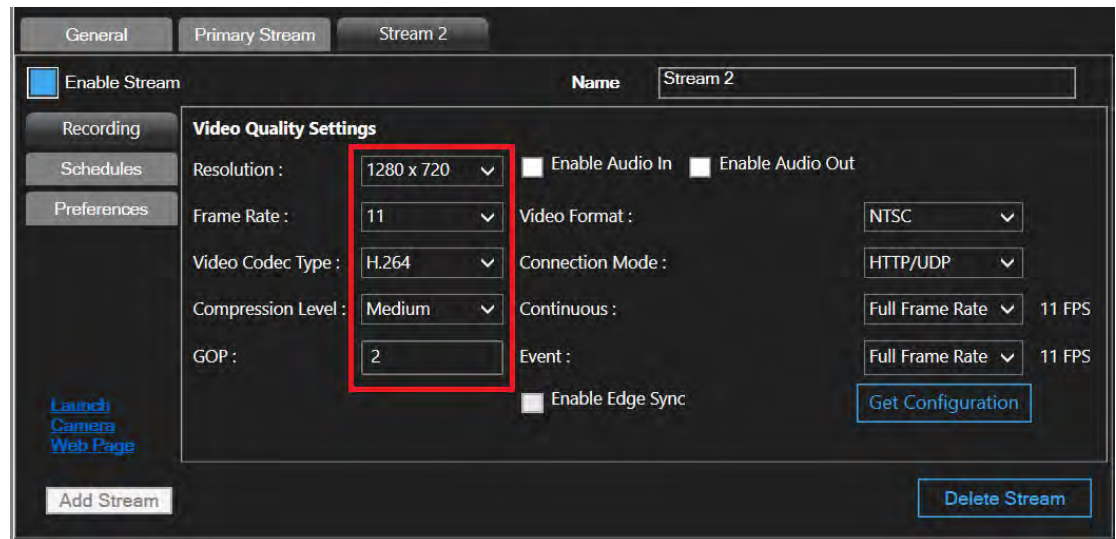


# How to Enable Low Bandwidth Streaming from MAXPRO NVR cameras to MAXPRO VMS

1. In MAXPRO NVR > Configurator > Camera > Primary Stream tab, click Add Stream to add a secondary stream for the camera as highlighted below. A new stream (Stream 2) is added.

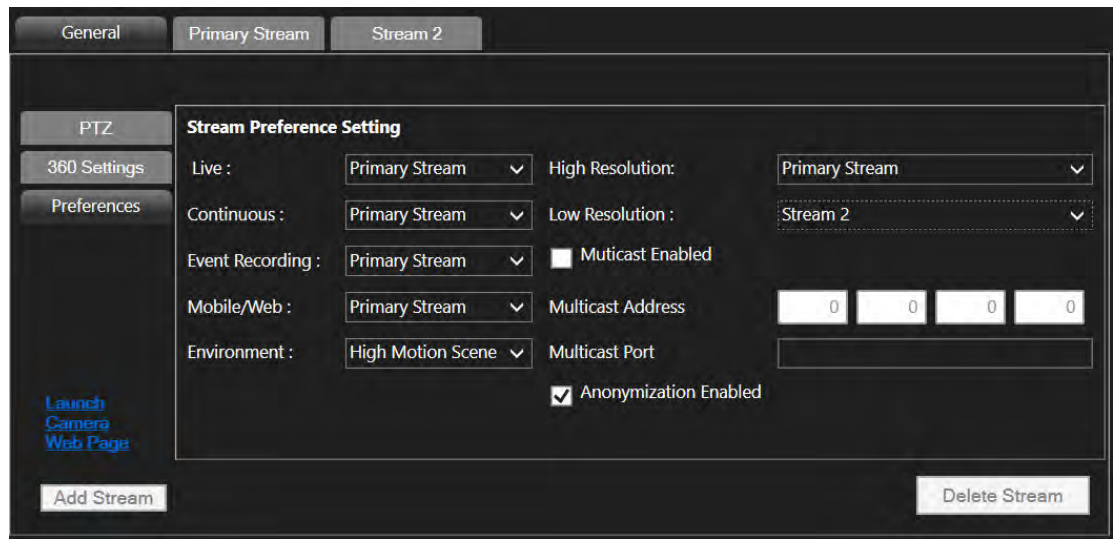


2. Under Stream2 > Recording > Video Quality Setting, select the low Resolution, FPS and GOP from the corresponding drop-down lists as highlighted below.

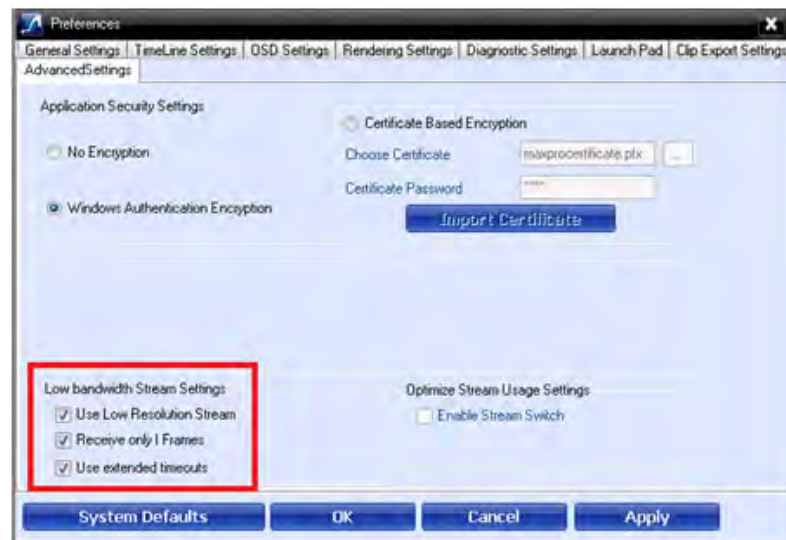




- Under General tab > Preferences > Stream Preference Settings, select Stream 2 from the Low Resolution drop-down list to set the Low Resolution configuration to use Secondary stream as shown below.



- Once you are done with the configuration in NVR, discover the same MAXPRO NVR recorder in the MAXPRO VMS Server.
- In MAXPRO VMS Client, click the Preferences Tab and navigate to Advanced settings tab. This tab allows you can configure to use necessary setting applicable for this client as highlighted below.



- Under Low bandwidth Stream Settings:
  - Select Low Resolution Stream check box - To enable and use only low resolution stream from MAXPRO NVR.
  - Select Receive only I Frames check box - It allows you to receive only I frames for the camera stream. (For example: If a Camera is configured with 5 FPS and 5

GOP and if you select this check box then this setting will pull only I frame for the camera stream. It excludes P frames for the camera stream. This setting can be used when the available bandwidth is too low for full frames rendering of Secondary streams.)

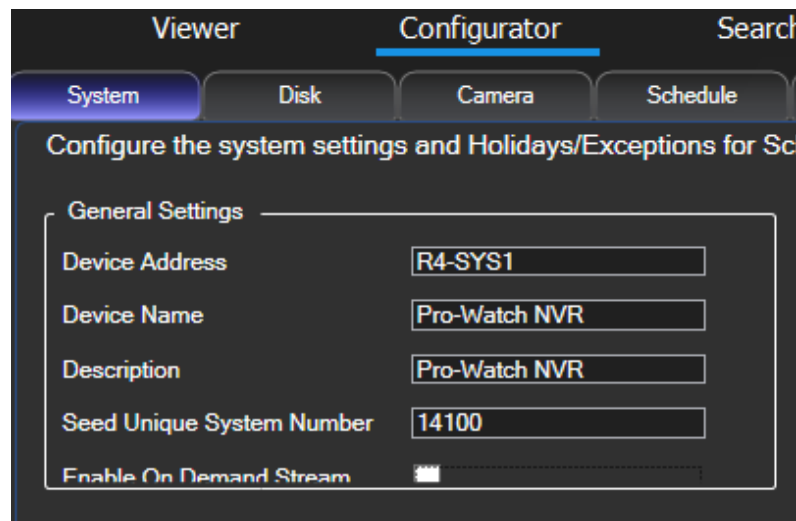
- Select the Use Extended Timeouts check box - This helps in increasing the default time outs for NVR connections, stream connections and snapshots retrieval.

**Note:** These settings can be enabled and used in Winmag machines where VMS clients are installed. After using these setting low streams can be pulled from Winmag viewer as well.

## Enable Recording During On Demand Streaming

This feature helps user to enable recording during on demand video streaming. Earlier only live video was supported.

1. Log on to MAXPRO NVR.
2. Navigate to Configurator > System tab.
3. Select Enable On Demand Stream check box as highlighted below.



4. Click Save. A message id displayed as shown below.



**Note:** If you enable On Demand Stream feature in Systems tab then it will be enabled for all the camera in NVR. If you want to disable On Demand Stream feature for the required camera then go to required camera settings > Preferences tab and then clear the On Demand Stream check box as shown below. Click Save once done.

The screenshot shows the 'Stream 2' configuration window. On the left, there are tabs for 'General', 'Primary Stream', and 'Stream 2'. The 'Stream 2' tab is active. Below the tabs, there is a sidebar with 'Enable Stream' (checked), 'Recording', 'Schedules', and 'Preferences'. The 'Stream Preference Setting' section contains the following fields:

- Live : Stream 2
- Continuous : Stream 2
- Event Recording : Stream 2
- Mobile/Web : Stream 2
- Environment : High Motion Scene
- High Resolution : Primary Stream
- Low Resolution : Primary Stream
- Muticast Enabled : ☐
- Multicast Address : 0 0 0 0
- Multicast Port :
- Anonymization Enabled : ☒
- Enable On Demand Stream : ☐ (highlighted with a red box)

At the bottom, there are 'Add Stream' and 'Delete Stream' buttons.

## Privacy Protection Settings (GDPR Favored)

### Anonymization

Anonymization feature is to help the business owner to meet the EU GDPR compliance standards easily. The objective of this feature is to hide the identifiable personal data or personal identity in a video surveillance system using masking techniques. This feature is specific to European union region and valid license is required to enable this feature. Only an Administrator can use this feature and grant access in User tab. EquiP Series cameras are supported for this feature. To mask identifiable objects based on scene environment, see [How to Anonymize objects based on Environment](#) section on page 131 for more information.

The following Camera association and type of masking is supported:

- Blur
- Pixelize

## Four Eye Authentication

This feature is also part of Privacy Protection setting and to meet the EU GDPR compliance standards easily. This feature is to restrict all users in a surveillance system to perform Playback operation. While performing playback operation at least two people from different roles should authenticate. For an Administrator, user authentication is not required and can do any playback operation.

For an operator user, a popup is displayed and an Administrator user or any other User with different role needs to authenticate to perform playback operation. By default this option is not selected. User need to obtain valid license to enable this feature.

The following table explains the Four eye authentication based on the user and roles:

| User     | Authenticating User                                 | Valid Authentication |
|----------|---|----------------------|
| Operator | Administrator Or any other user with different role | Yes                  |
| Operator | Operator  | No                   |
| Operator | Operator 2  | Yes                  |

## Clip Export Option

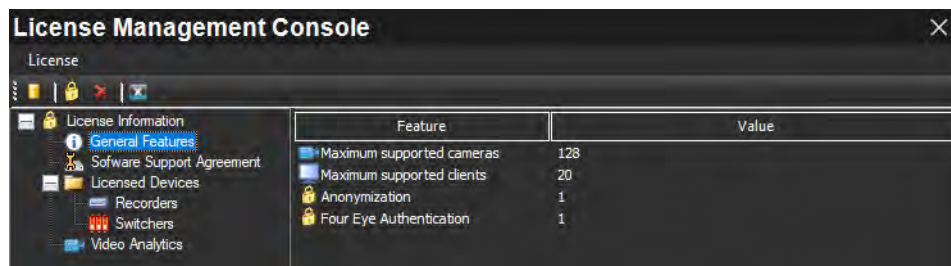
Clip export with Anonymization is supported: Anonymization feature is supported in both Playback and Clip Export operation. See [Creating Clips](#) section on page 85.

**Note:** If a user exports a Anonymized clip then only WMV format is supported.

## Licensing

Both Anonymization and Four Eye Authentication (GDPR Favored) features are license based. Contact Honeywell Tech support, see the back cover for contact information.

Once the license is enabled the entries for both the features are displayed in License Management Console > Privileges screen as shown below.



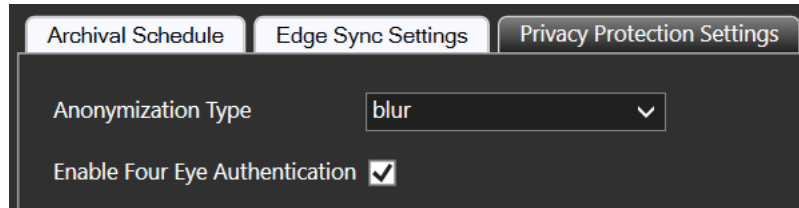
**License Privacy protection Settings**

# How to enable Anonymization

## At System Level

**Note:** Only Administrator can use this feature and provide access to an operator.

1. In Configurator > System tab, navigate to Privacy Protection Setting tab.
2. From the Anonymization type drop down, select the masking type. The available options are:
  - Blur: Blurs the Identifiable object
  - Pixelize: Pixelizes the Identifiable object

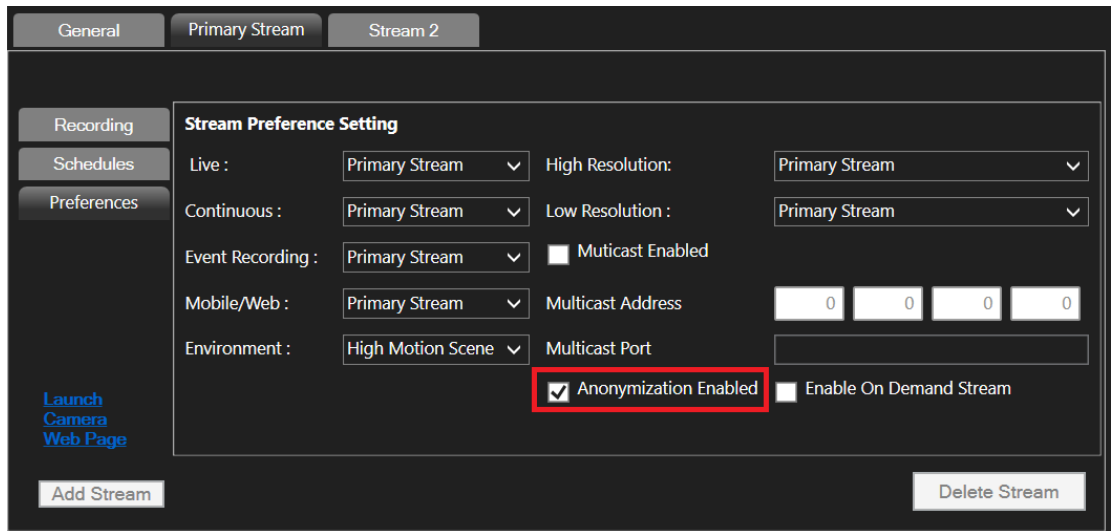


### Privacy protection Settings

## At Camera Level

At camera level user can enable or disable the Anonymization based on the requirement.

1. In Configurator > Camera tab, navigate to the camera properties for the specific camera.
2. Under Primary Stream > Preference tab, select the Anonymization Enabled check box as shown below. By default it is not selected.



## Anonymization Camera Level

### At User level

An Administrator can enable Anonymization for a specific user in Users tab. The corresponding user will be able to view only anonymized video.

1. Navigate to Configurator > User tab.
2. For the required User, select the Anonymization check box as shown below. By default it is Enabled for all the operators.



## Anonymization at User level

### How to view Anonymized video

- An Administrator should have grant permission to an operator to view the Anonymized video.
- After selecting the type of Anonymization from the drop down, drag and drop the required camera on to the video panel. Following images displays the types of anonymization.

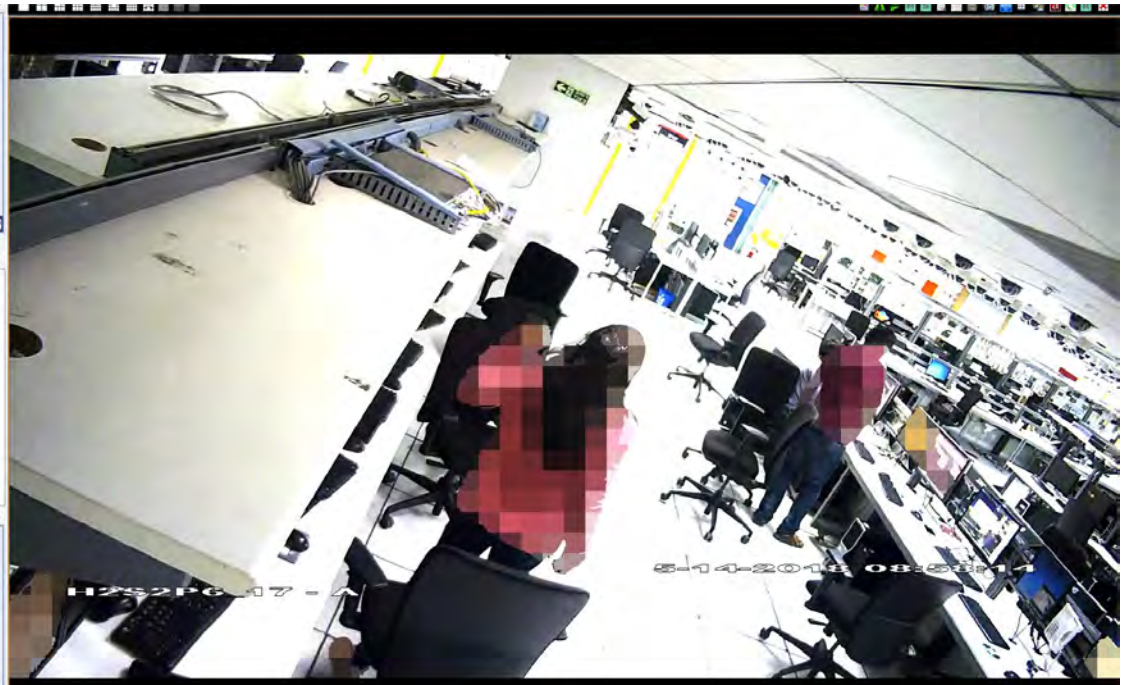
For Blur





**Blur View**

For Pixelize

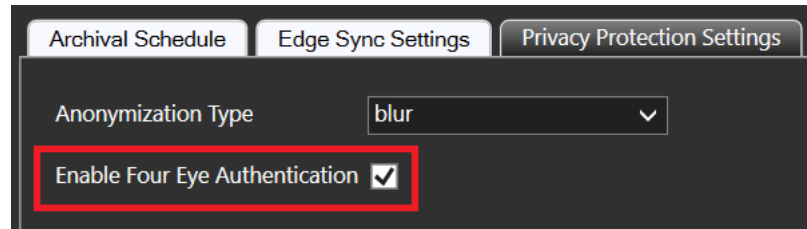


**Pixelize View**

## How to enable Four Eye Authentication

1. Under Configurator > System tab, navigate to Privacy Protection Setting tab.
2. Select the Enable Four Eye Authentication check box as show below.

**Note:** Once this option is enabled it will be applicable to entire NVR system. By default this check box is not selected. User need to obtain valid license to enable this feature

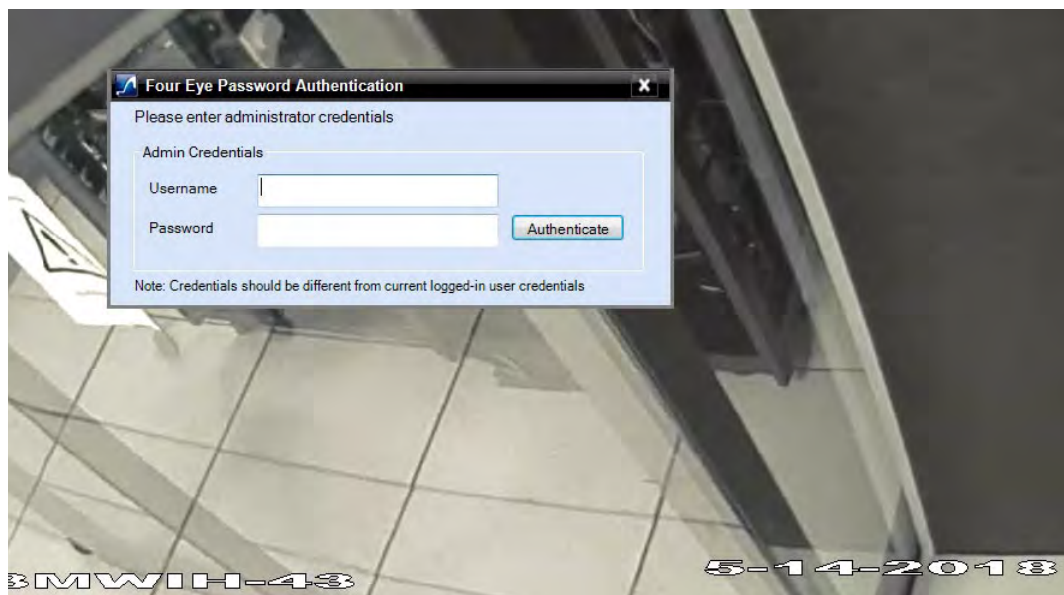


### Enable Four Eye

## How Four Eye Authentication feature Works

For an Non Administrator user

1. When an Non Administrator user tries to perform a playback operation then the following dialog box appears on th screen.



### Four Eye Authentication

2. Enter the credentials of Administrator user or a User from different role.

**Note:** For authentication, the logged in user and the Administrator user should not be of same role.



The following table explains the Four eye authentication based on the user and roles

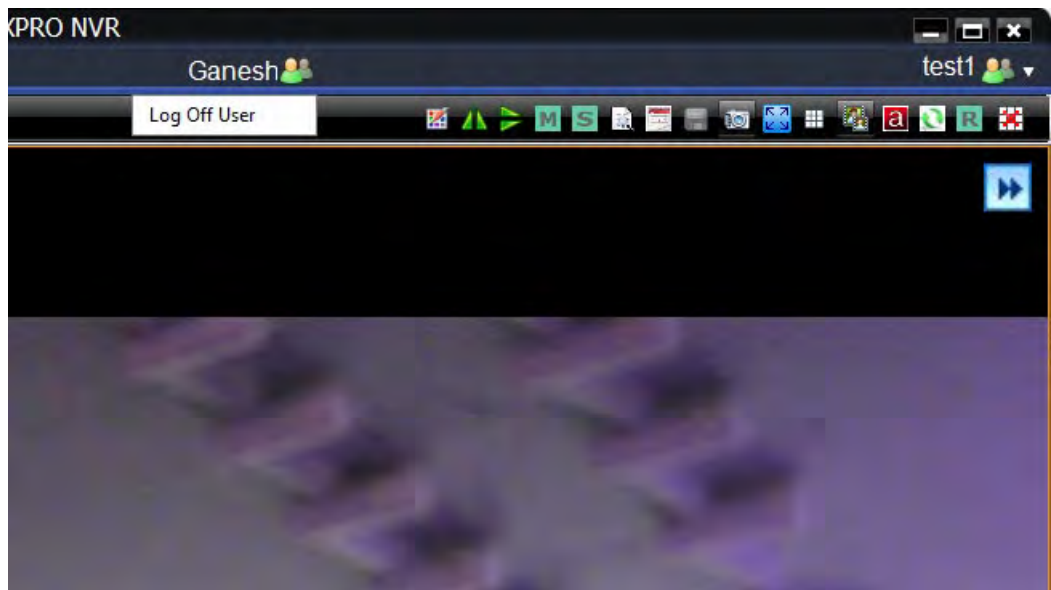
| User     | Authenticating User                                 | Valid Authentication |
|----------|---|----------------------|
| Operator | Administrator Or any other user with different role | Yes                  |
| Operator | Operator  | No                   |
| Operator | Operator 2  | Yes                  |

3. Click the Authenticate button to view the playback video. After authentication the Four eye authenticated user and logged in user icons are displayed on the top of the screen as highlighted below. For example: In the below image for a test1 user, an administrator authenticates and the corresponding users are created.
- Until the four eye authenticated user is logged in, the operator can perform any playback operation.



**Four Eye Authentication Success**

- If the four eye authenticated user logs off as highlighted below then again for any playback operation the Admin authentication is required.



**Authenticating User**

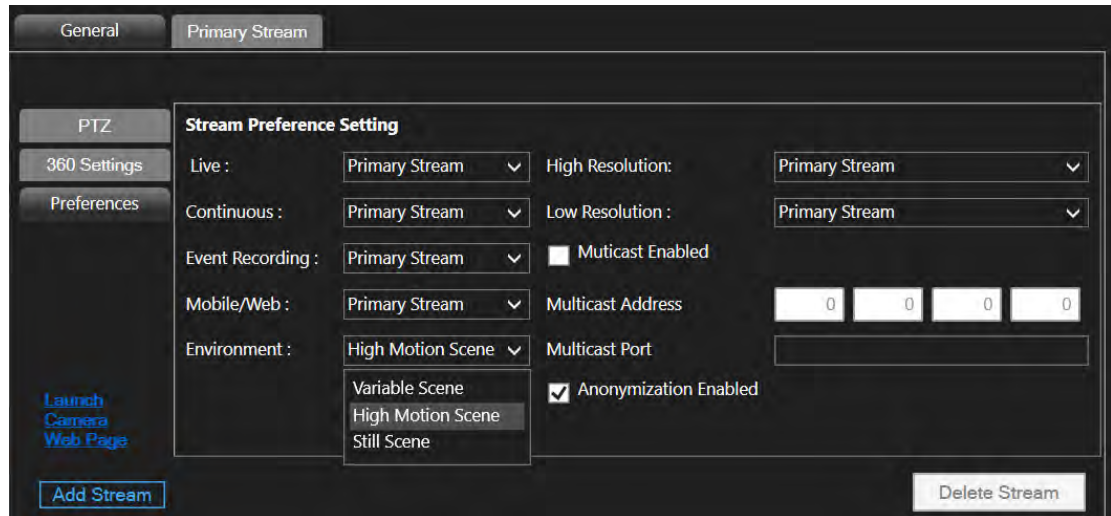
## Video Anonymization

This feature allows user to configure or mask identifiable objects based on the scene environment. It provides flexibility to choose and configure the required camera based on the mounting position. The following are the options supported.

- Variable Scene: If the scene contains both stationary and moving people or objects then select this option to anonymize the objects in the scene.
- High Motion Scene: To anonymize the objects in high motion in the scene.
- Still Scene: To anonymize the objects in a scene where the scene predominantly contains stationary people and objects.

## How to Anonymize objects based on Environment

1. For the required camera, click on the left corner to open the camera properties pane.
2. Click General > Preference > Stream Preference Settings as shown below.



3. Under Environment, select the preferred option. The available options are:

| Options           | Description  |
|-------------------|--|
| Variable Scene    | Select this option if the scene contains both stationary and moving people or objects.                           |
| High Motion Scene | Select if you want to anonymize the objects in high motion scene   |
| Still Scene       | Select to anonymize the objects in a scene where the scene predominantly contains stationary people and objects. |

4. Click Save.

Following images display the type of video anonymization scenes based on the environment selection in NVR.

For Variable Scene



For High Motion Scene





For Still Scene



## Annotations

Annotation feature helps to trace and locate the moving subjects in live/recorded video and generates an alarm if intrusion or loitering is detected. After this feature is enabled in NVR, subjects in video when found in Region Of Interest, is bounded by rectangle box and on alarm conditions, it will be signified with a change in color of bounding box. This helps the operator to quickly trace the direction of the moving subject.

Equip-S series camera supports Annotation feature along with Intrusion trace and Loitering Trace alarms. These alarms are in-built with Equip-S series camera and are made available by installing required analytics licenses.

**Annotation with Intrusion Trace alarm:** This feature helps in detecting a subject, if it enters a predefined restricted area. The system will annotate and detects the object with Green rectangular box. If the object is detected in the restricted area then the annotated Green rectangular box turns to Red and an alarm is generated.

**Annotation with Loitering Trace alarm:** This feature helps in detecting an object If loitering beyond the specified duration of time in a predefined region. The subjects is bounded by the box along with the duration (time in seconds) for which it is identified in the region of interest. If the subject is loitering in the region beyond a predefined time then the annotation boxes turns to Red and an alarm is generated.

**Note:** Currently Annotation feature works with only with old GPU rendering modes.

Annotation feature is supported with the following camera models and firmware version:

| S.No | Camera Model | Firmware                             | Loiter   | Intrusion |
|------|--------------|--------------------------------------|----------|-----------|
| 1    | H4D8GR1      | 2.420.HW00.9, Build Date: 2018-12-17 | V1.20.60 | V1.20.60  |
| 2    | HCD8G        |                                      |          |           |
| 3    | HBD8GR1      |                                      |          |           |
| 4    | HFD6GR1      | 1.000.HW00.9, Build Date: 2018-12-17 | V1.20.60 | V1.20.60  |
| 5    | HFD8GR1      |                                      |          |           |
| 6    | HDZ302DE     | 1.000.0043.3, Build Date: 2019-01-07 | V1.20.60 | V1.20.60  |
| 7    | HDZ302D      |                                      |          |           |
| 8    | HDZ302DIN    |                                      |          |           |

## How to Enable Annotations in NVR

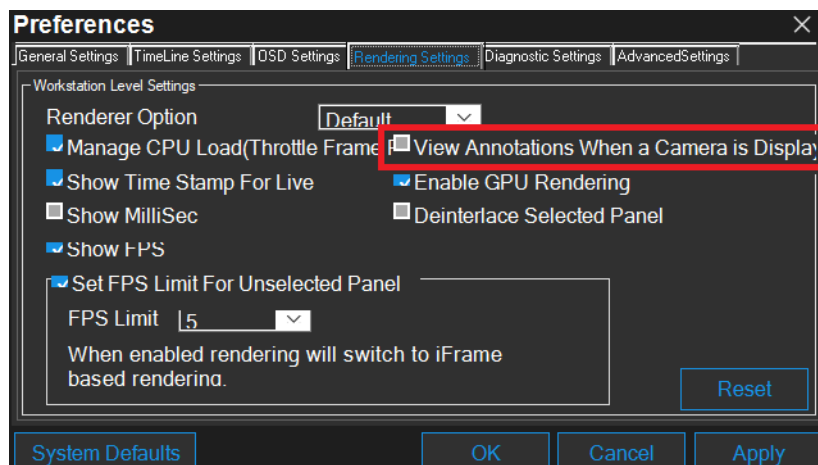
Prior enabling this feature in NVR ensure you have configured the Annotation feature at camera level. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for the complete details on how to configure Annotation feature.

### In Camera Web Page

1. Navigate to Video Analytics > Smart Plan. The Smart Plan page is displayed.
2. If the Extensional Smart function is off, click to turn ON.
3. Select the Intrusion Trace or Loitering Trace check box to enable Annotation.

### In Preference Box

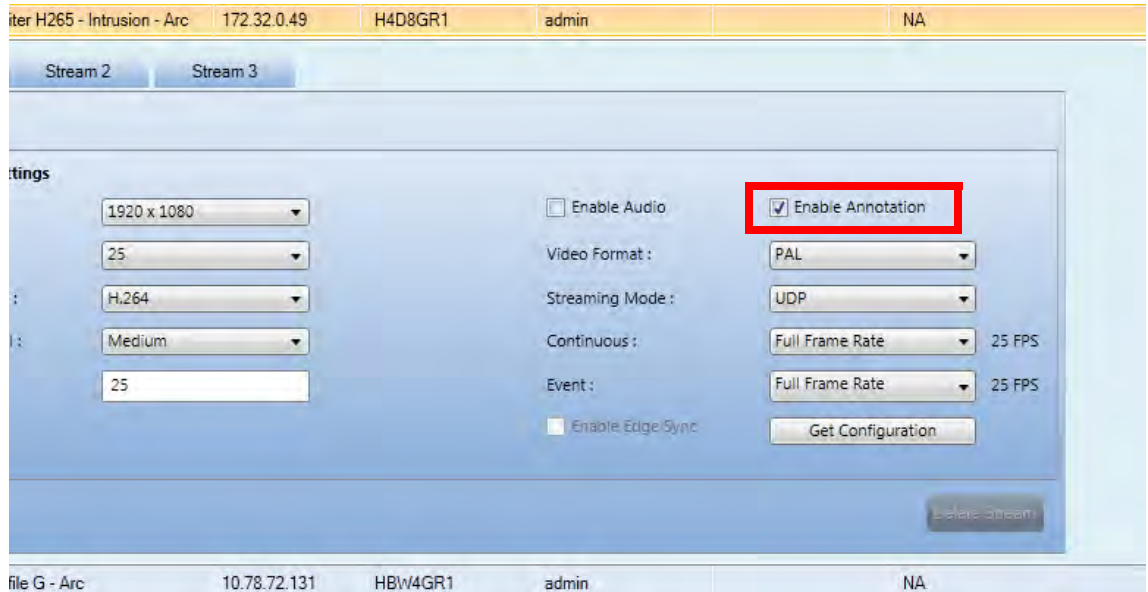
- In Preference > Rendering Setting tab, select the View Annotations when a camera is displayed check box to enable annotations for all the supported cameras (Equip-S Series)



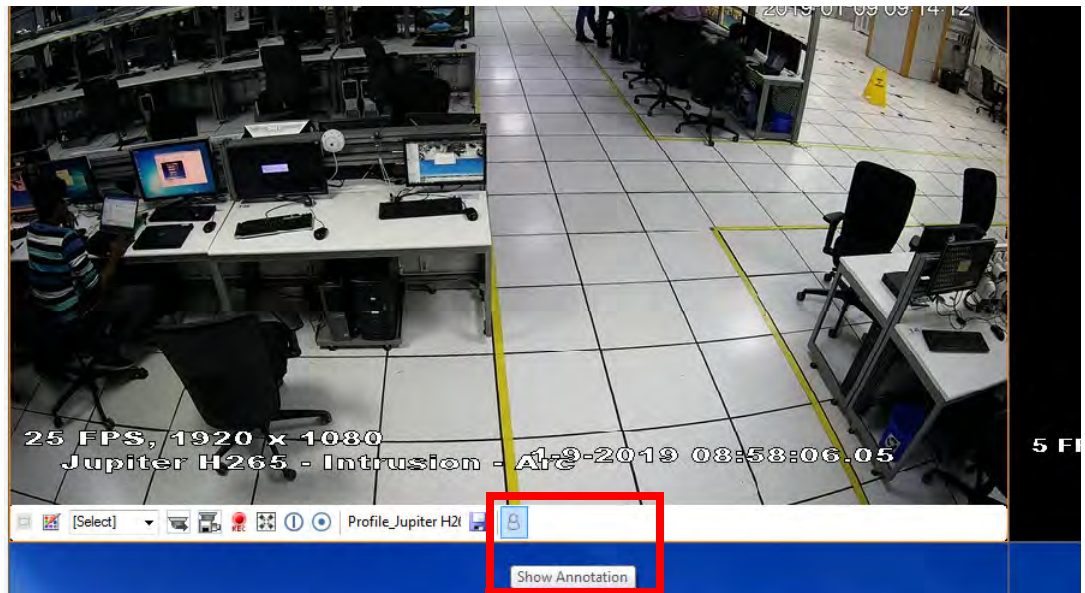
- In Camera Properties, navigate to any stream and then select the Enable Annotation check box for the particular stream.

**Note:** For Sub stream 2 Annotation will not work, if the resolution is taken from camera sub stream 2. This is a camera side limitation.

For PTZ camera based on the Preset selection, annotation will not work if there is a slight movement beyond the defined preset.



- In Video panel, hover the mouse in the bottom of the panel to view the options and then click on Show Annotations for that particular camera as shown below. You can also click the same icon to Hide annotations only for that camera.



### Annotation with Intrusion Trace in VMS/NVR (Live/playback)

After the Annotation feature is enabled for Intrusion trace, rectangular bounding boxes will be accompanied with any moving object in the scene. If any object is moving within the predefine area then the object is highlighted with Red rectangular box and an alarm is generated as shown below.

Annotation with Intrusion Trace (Live) with out alarm



Annotation with Intrusion Trace (Live) with alarm





Annotation with Intrusion Trace (Playback) Without alarm



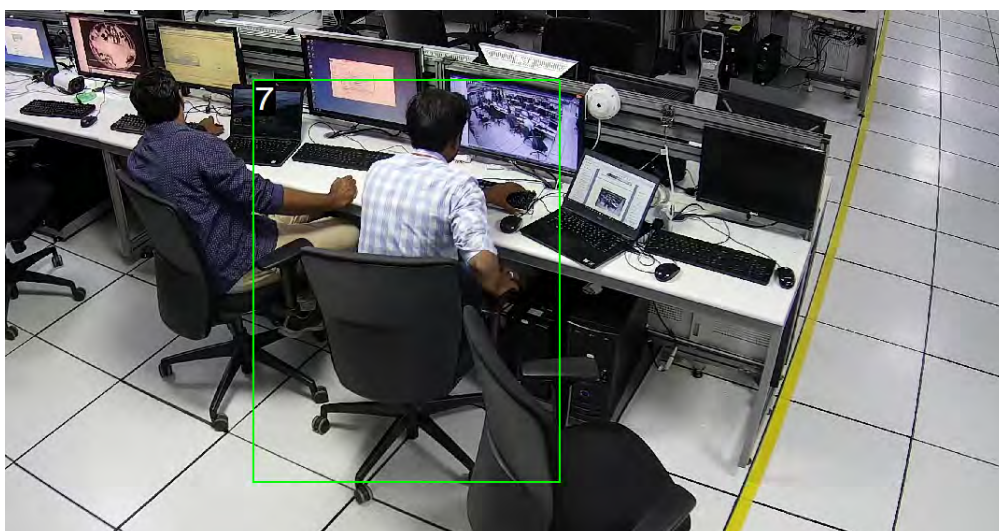
Annotation with Intrusion Trace (Playback) With alarm



### Annotation with Loitering Trace in VMS/NVR (Live/playback)

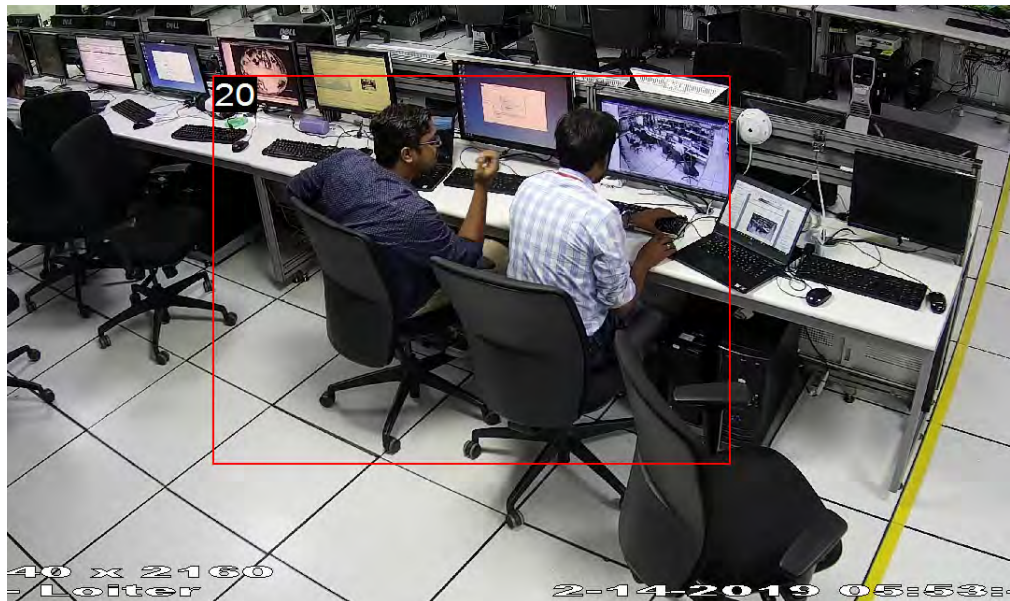
If an object loiters within the predefined zone then a Green colored rectangular bounding box is displayed. If the same object loiters beyond the Maximum Loitering Time, then the object will be highlighted with a Red Rectangular box as shown below.

Object within the Maximum Loitering Time (Live)

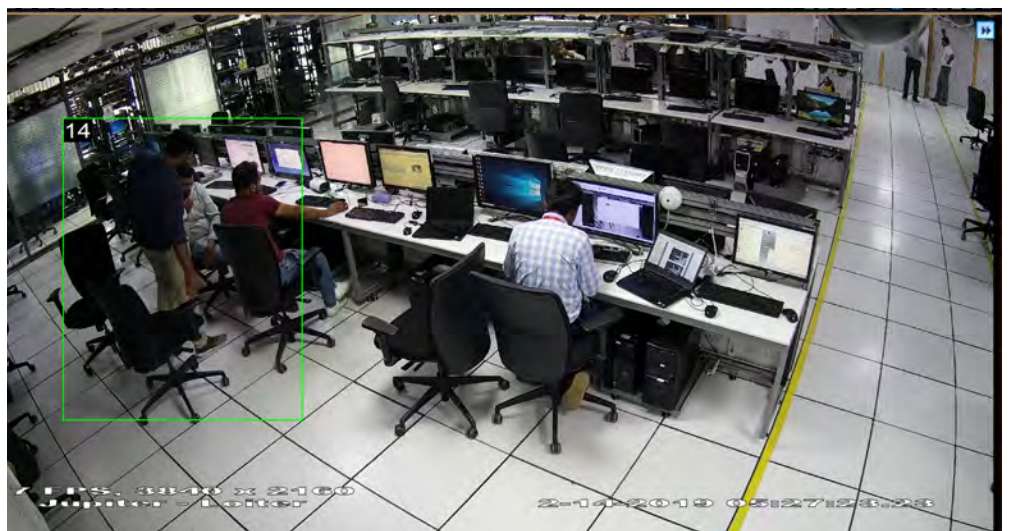


Object beyond the Maximum Loitering Time (Live) with alarm

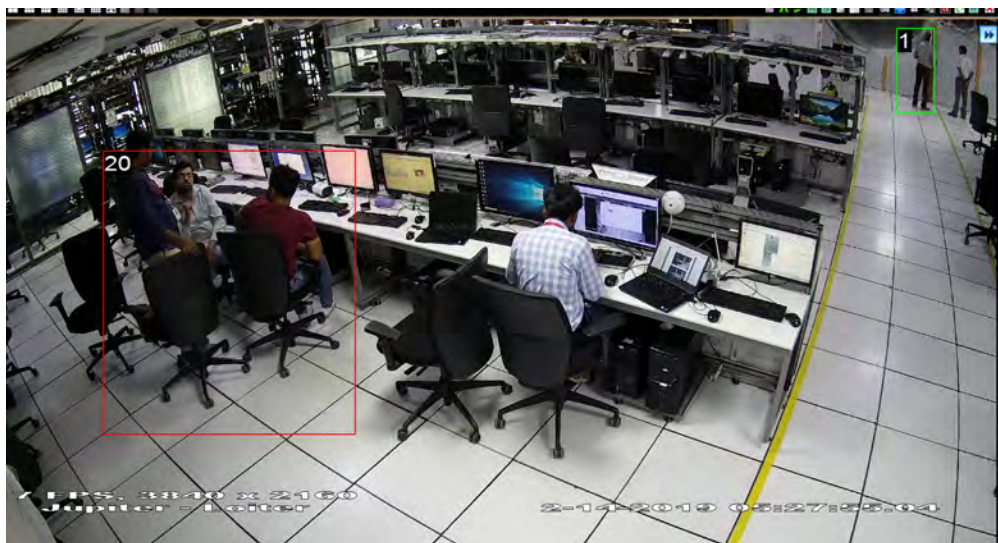




Loitering Trace in Playback without alarm



Loitering Trace in Playback with alarm



## Snapshots with Annotations

Capturing snapshots with Annotation bounding box in Live and Recorded video is supported. User can find the captured snapshots under Snapshots/Clips pane.

# Mask Compliance Detection

Mask Compliance Detection feature detects the people who are with and without Masks in a given scene. This feature detects in a real time scenario and generates an event for People with/without mask. It helps in monitoring the people those who are violating the compliance of not wearing a mask in public places. This feature requires dedicated license to configure and use.

## Recommended Operating Conditions For Mask Detection

Mask Detection algorithm is developed to detect people who are with and without Masks in live video.

This section provides recommended specifications that can provide good or better mask detection accuracies.

### Recommended Operating Conditions

| Parameter                                 | Specification  |
|---|--|
| Camera height from the ground             | 8 – 10 feet  |
| Camera field of view and orientation/tilt | Mounting should be suitable to obtain frontal face images. H-FOV should not more than 60 degrees. Ceiling mounted or overhead mounted cameras which have near vertical view of faces looking down is not recommended for the application. Bright light in the background or sunlight which results in poor image quality of face in not recommended. Wide angle camera with long field of view is not recommended. |
| Image quality                             | Full HD 2M pixel camera video streams with high bitrate (5 to 8 Mbps for 30fps) with no blur and good focus. For 3MP cameras the recommended bit rate 10 to 15 Mbps. Good quality video encoding should be used (H.264/H.265)  |
| Illumination                              | 100-150 lux (uniform illumination on both sides of face)   |
| Face pose for MD                          | Frontal pose can have +/-45 deg variation  |
| Detection Distances                       | Maximum distance from camera 15 feet along the ground. Highly preferred that people enter into the field of view from distances not more than 15 feet and there is no clutter or moving objects (prefer a static background such a wall so that false detections are avoided)  |

Configuration parameters:

| Parameter                            | Specification  |
|--------------------------------------|----------------|
| Minimum Size of the face with Mask   | 50 x 50 Pixels |
| Minimum Confidence level recommended | 50%            |

**Note:** To avoid false alarm please follow the operating condition and keep the confident level more the 80%.

Recommended field of view examples:

Following series of images represents the sample FOV with different resolution and FPS combinations.

Figure 1:



Figure 2: With 1920x1080

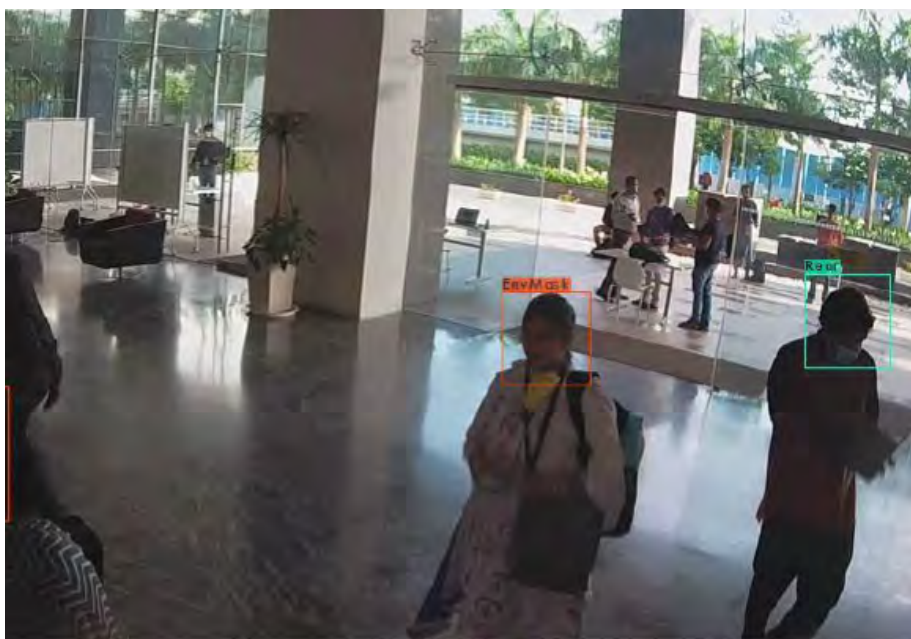




## Examples of Not Recommended Operating Conditions

Below series of figures explains the non recommending conditions for Mask detection.

**Condition 1:** Bright background with face is recognized as rear due to insufficient light on face. (Also people at distances won't be detected due to smaller size and this can be perceived as failures).



**Condition 2:** Generally poor lighting on face and one of the faces recognized as rear due to insufficient lighting.

**Condition 3:** Nearly overhead view causing missed detection

## Analytics License

In some scenario if user changes the Mask and Social Distancing camera license then there will not be any impact on Analytics service about the number of camera count.

For example: If you have 5 Mask /Social Distancing camera license and if you change it to 2 camera license then the alarms from the unlicensed 3 cameras will be generated in NVR for mask and social distancing until the configuration is modified.

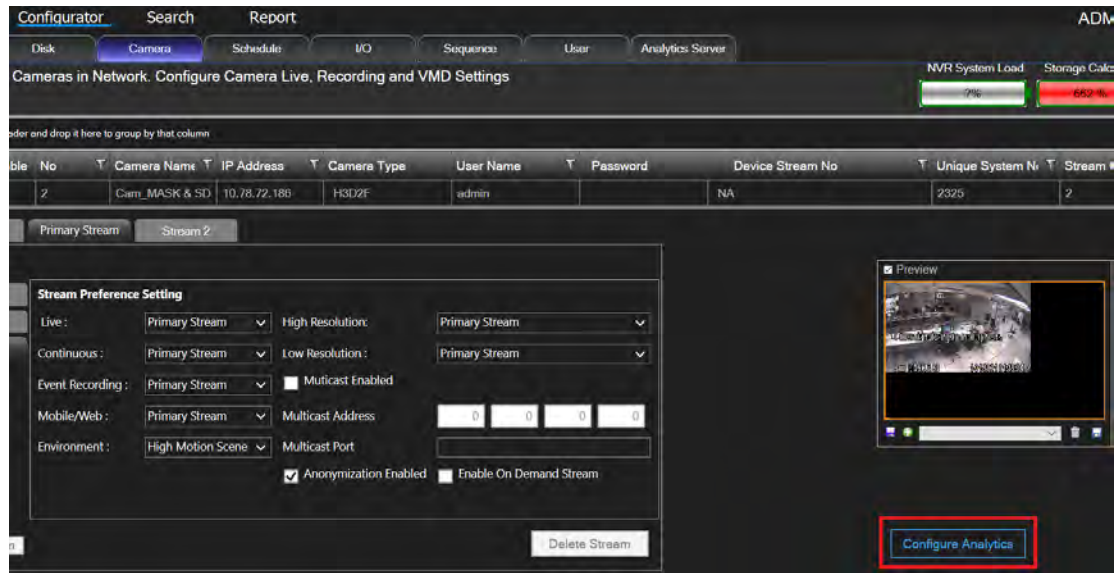
Once the camera configuration is changed then the unlicensed camera will not function as Analytics camera and Mask/social distancing alarms will not be generated.

## How to configure Mask Detection in NVR

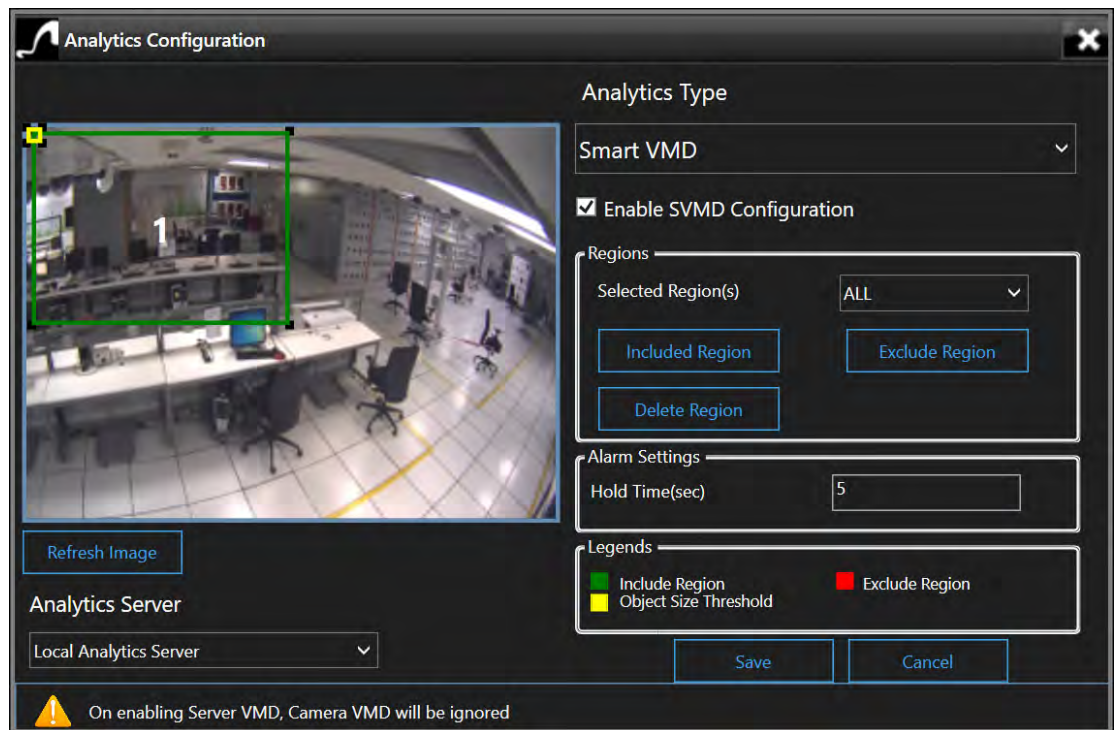
**Note:** For VM machines it is recommended to use XEON E5-v4, Bronze, Silver, Gold VM machines for better results.



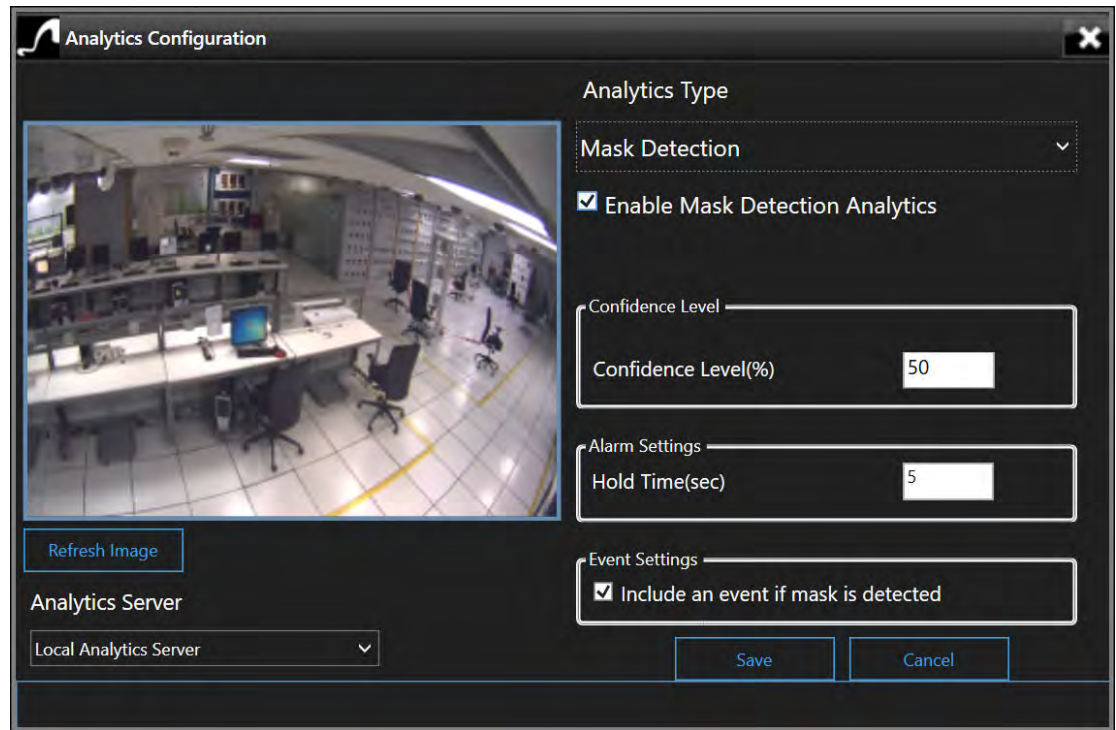
1. Navigate to the Camera tab > camera properties and then click the Configure Analytics button as highlighted below.



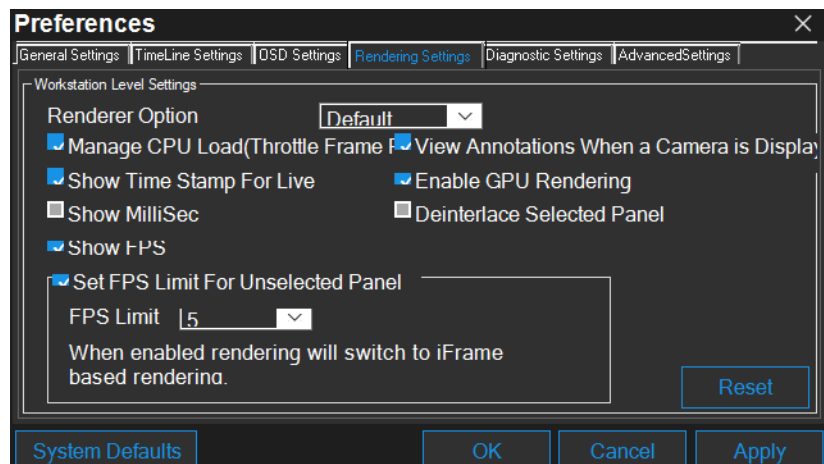
The Analytics Configuration dialog box is displayed as shown below:



2. From the Analytics Type drop-down list, select Mask Detection.



3. Select the Enable Mask Detection Analytics check box as shown below.
4. Type the Confidence Level in the box provided.
5. Type the Alarm Setting > Hold Time (Sec).
6. Under Event Settings, select the Include an event if mask is detected check box. By default this checkbox is not selected. User can select this check box if event is required only with mask.
7. Click Save.
8. Navigate to NVR Preferences > Rendering Setting tab and select the View Annotations When a Camera is displayed check box as shown below.



A sample configured Mask detection feature is shown below.



## Limitations and Recommendations

- Currently only one NVR to one Remote Analytics server configuration is supported
- License is required to configure Mask and Social Distance Violation detection analytics.
- Video will Render in CPU mode when bounding boxes are enabled for Mask and Social Distant Violation.
- Video will be rendered at 5 FPS when bounding box are enabled for Mask and Social Distant Violation
- Mask, Social Distance and SVMMD features are not recommend to enable for the same camera.
- Camera should meet operating condition to avoid false positive / Negative alarms
- High Confidence score will help to reduce false positive / negative alarms
- Social Distance video analytic stream should be configured with 5 FPS Maximum to avoid the impact on performance.
- User should restart Analytics service if Mask or Social Distancing camera parameters are changed.
- Bounding box supported on 64-bit rendering with CPU+CPU and GPU+CPU combination only.

# Social Distancing Violation Detection

Social Distancing Violation detection feature detects distance between two people and raises an alarm if the social distance norm is violated. This feature helps to ensure social distancing is followed in your premises. This feature requires dedicated license to configure and use.

## Recommended Operating Conditions For Distancing Violation detection

This section provides specifications of the conditions that can provide a good or better social distancing solution with respect to camera placement and operating conditions requirements.

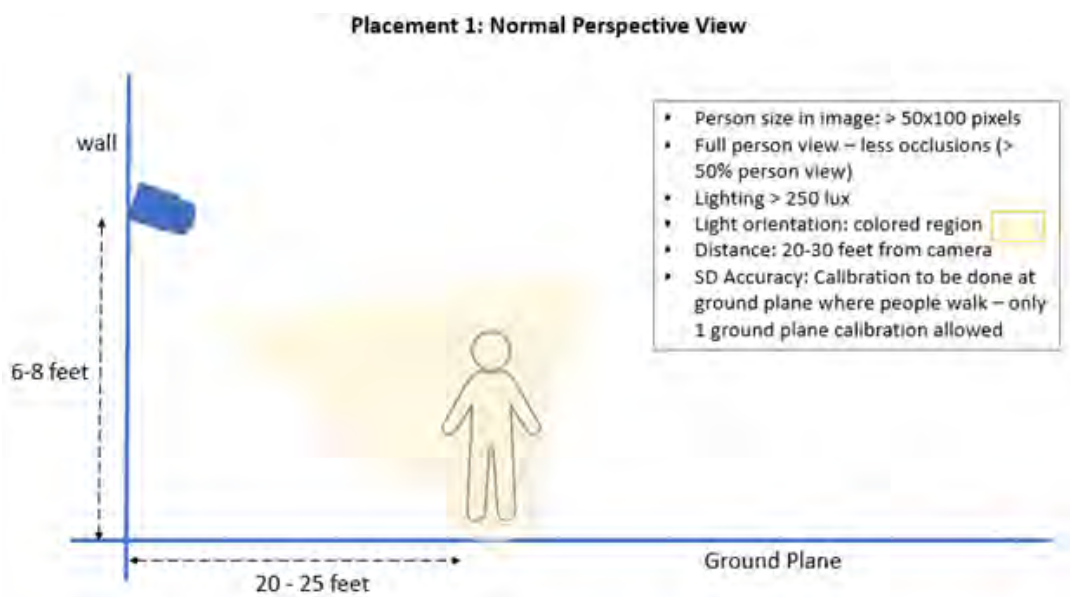
Required operating conditions can be divided in two sections as explained:

- Conditions for person detection
- Conditions for calibration selection of ground plane.

## Person Detection Conditions

Below figures explain different preferred camera placements and conditions for person detection. It is to be noted that the numbers given in the figures are approximate and can vary:

### Placement 1: Normal Perspective View

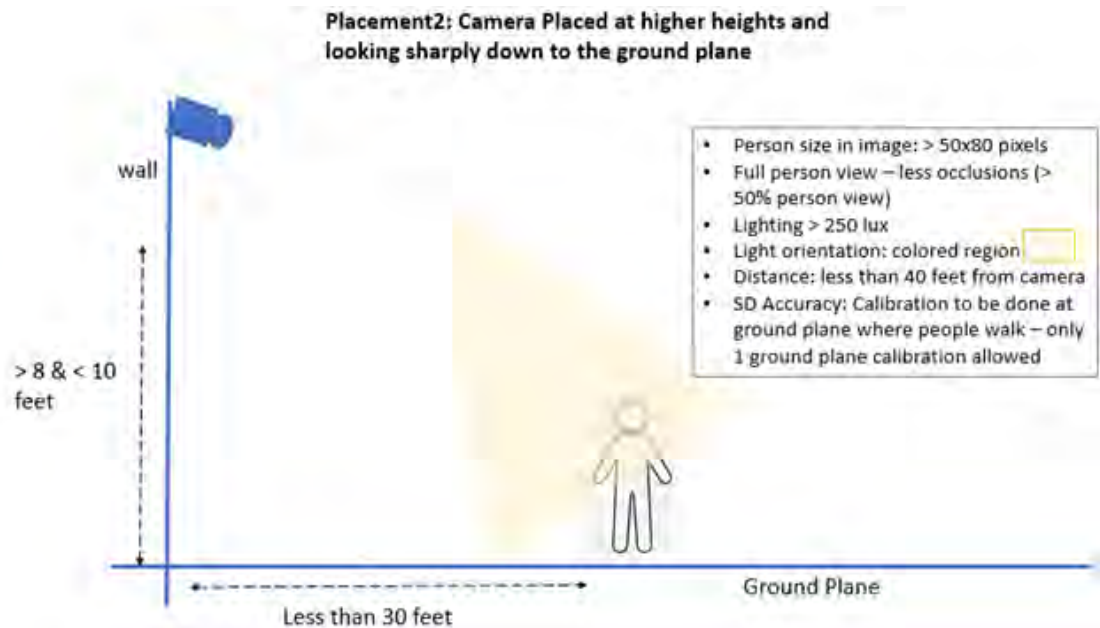


This placement explains that the person recognition can be good till around 30 feet, when the camera placement is < 8 feet (given that average height of person is between 5-6 feet), and when the person is at approximately 20-30 feet from the camera. Also, lighting should be > 250 lux and the light should be falling on the person with no back lighting for better accuracies.

### Placement 2: Camera at a higher height or ceiling height

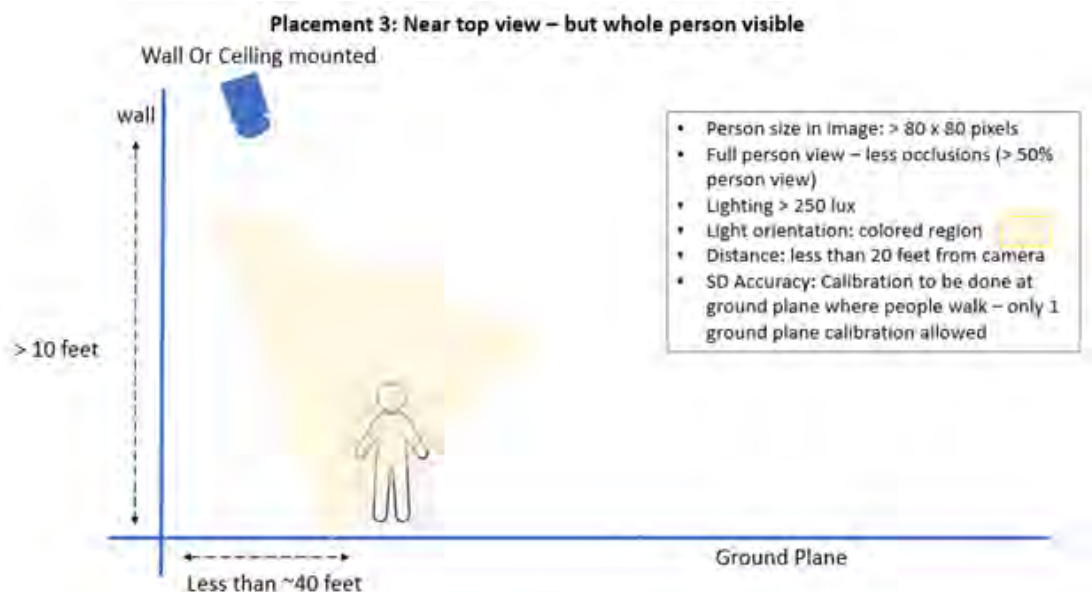
This placement explains the configuration wherein the camera is placed at a much higher height than the person.





If the camera height is as shown in the above figure, the FR accuracies can be reduced with distance. But at lesser distances from camera (<10-12 feet), FR can be accurate enough. Again, adequate amount of light falling on the face for good features is an important requirement.

### Placement 3: Camera at higher height from the ground



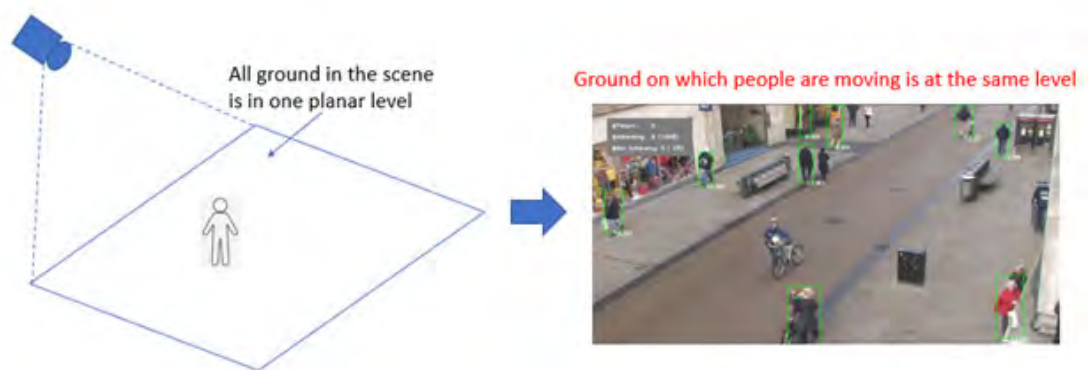
In this placement the camera height is nearly overhead, the person detection model is not tested when there is just head and shoulders view in the video stream. It is recommended that silhouette of the person is seen.

## Calibration Conditions

Calibration is the most important step for distance measurement between two people. The primary requirement of this step is that the ground plane on which distances between people are measured and the ground plane that is calibrated should be the same. Details of this statement in form of figures are given in this section.

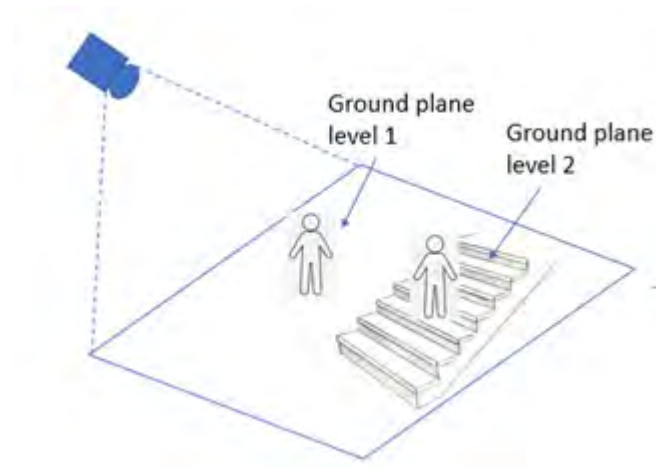
### Condition 1: Camera Perspective View with one ground plane

This condition details the meaning of ground plane being at the same level. The level of the ground where people are moving and the measurement for social distancing should be one planar level. This is the most important requirement for accuracies of calibration. The configuration is done on Ground Plane Level 1 and Social distancing output will be done on this plane only. Stairs are not counted for the solution.



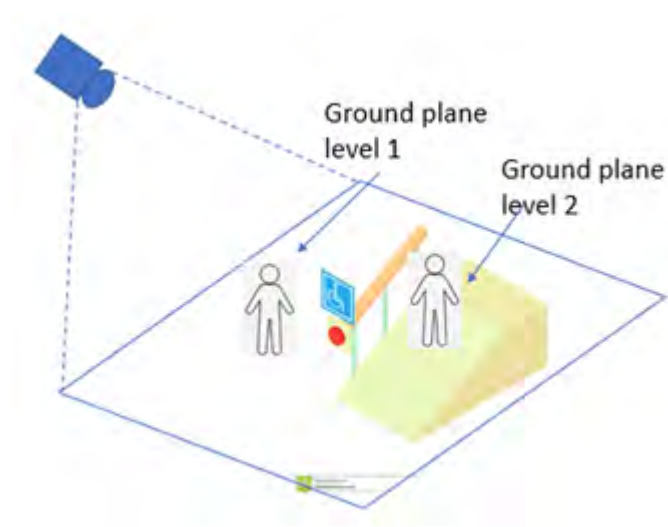
### Condition 2: Multiple ground planes

This condition gives the sketch wherein there are people moving on the pathway (one ground plane level) and a staircase too. The staircase is of different ground plane level when compared to the pathway ground nearby. Hence the current solution calibration can be done on the pathway and NOT on the stairs. Our solution will not address output for people on the stairs.



### Condition 3: Multiple Ground Planes with slope as the second plane

This condition explains a sketch wherein the stairs in Condition 2 is replaced by a slope. Even in this situation, our solution will not give correct results on the slope. The calibration needs to be done on Ground Plane 1 and results also will be for ground plane 1.



**Note:** In registry there is an option to change at what distance Social Distancing alarm should be generated. For example: 4 ft, 10 ft.

## Alarm Generation for Social Distancing

Below are the general operating conditions during which the social distancing alarms are triggered.

- SD Violation Alarm: This is the first instance where violations are found in camera view. This alarm will be raised after 5 seconds of continuous violations only.
- Context Alarm: This alarm includes 2 options for users based on a registry entry.
  - Value 0: Context change is observed when current frame has higher number of violations than the previous highest number of violations. It is recommend to keep 0 to avoid huge number of alarms.
  - Value 1: Context change is observed when current frame has higher number of violations than the previous frame
- . Hold time: This alarm is raised when violations have been stable for 'hold time' seconds. This can be configured from the NVR camera settings page.

**Note:** The above alarms are NOT different types of alarms but are configured as 'Social Distance Violation' alarm.  
Whenever context is modified in registry path then it is mandatory to restart the Trinity Analytics service.

## How to Configure Alarms

1. Navigate to "Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Honeywell\TrinityFramework\RenderingServer\contextChangeEveryNewViolation.
2. Locate and change the contextChangeEveryNewViolation registry entry as explained below. The default value is 0 for this registry.
  - Value 0: Context change is observed when current frame has higher number of violations than the previous highest number of violations.
  - Value 1: Context change is observed when current frame has higher number of violations than the previous frame

## Alarms for both Mask Detection and Social Distancing

Following are the list of alarms that are generated in NVR for Mask and Social Distancing detection features:

- Person Detected with Mask
- Person Detected without Mask
- Social Distancing Violation
- Non- Compliant Social Distancing Regions

In addition to above the below are supported:

Allows you to create specific alarms based on social distancing violations:

- You can create top 5 cameras/zones/sites/logical location where Social Distancing violations are repeatedly occurs (based on repeatability of cameras)
- Snapshots with events can also be generated

Allows you to include and generate snapshots of top 5 cameras/zones in the reports generated

## Recommended Specifications

Below table summarizes the different discussions in above sections. These conditions are important for deployment to get better recognition accuracies.



| Parameters   | Specifications   |
|--|--|
| Camera Height from the ground                                | 7 feet to 12 feet  |
| Illumination   | > 250 lux  |
| Sample Person Image  | Preferably full image to be seen   |
| Minimum Person size  | 50x80 pixels   |
| Person Pose and Orientation                                  | Person standing or sitting with occlusions < 40%. Person should not be lying on the floor                |
| Calibration Ground Plane                                     | Solution works with the ground plane that is configured. Configuration allowed for only one ground plane |
| Far end of distance of camera view                           | less than 40 feet  |
| Hardware   | Windows 10, 64 bit, 6th to 10th Generation Processor with Intel HD graphics                              |
| Minimum resolution of video stream for reasonable accuracies | 720p   |

## Analytics License

In some scenario if user changes the Mask and Social Distancing camera license then there will not be any impact on Analytics service about the number of camera count.

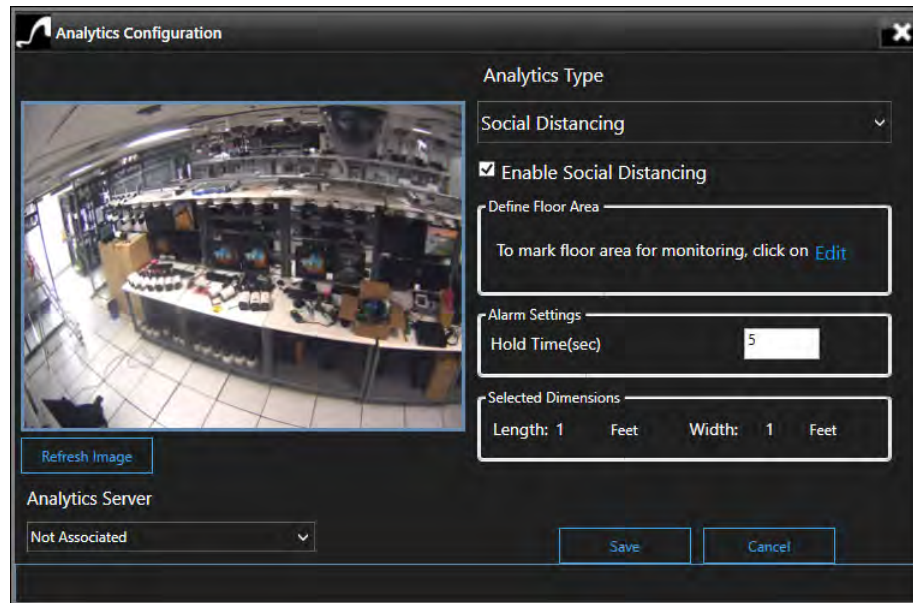
For example: If you have 5 Mask /Social Distancing camera license and if you change it to 2 camera license then the alarms from the unlicensed 3 cameras will be generated in NVR for mask and social distancing until the configuration is modified.

Once the camera configuration is changed then the unlicensed camera will not function as Analytics camera and Mask/social distancing alarms will not be generated.

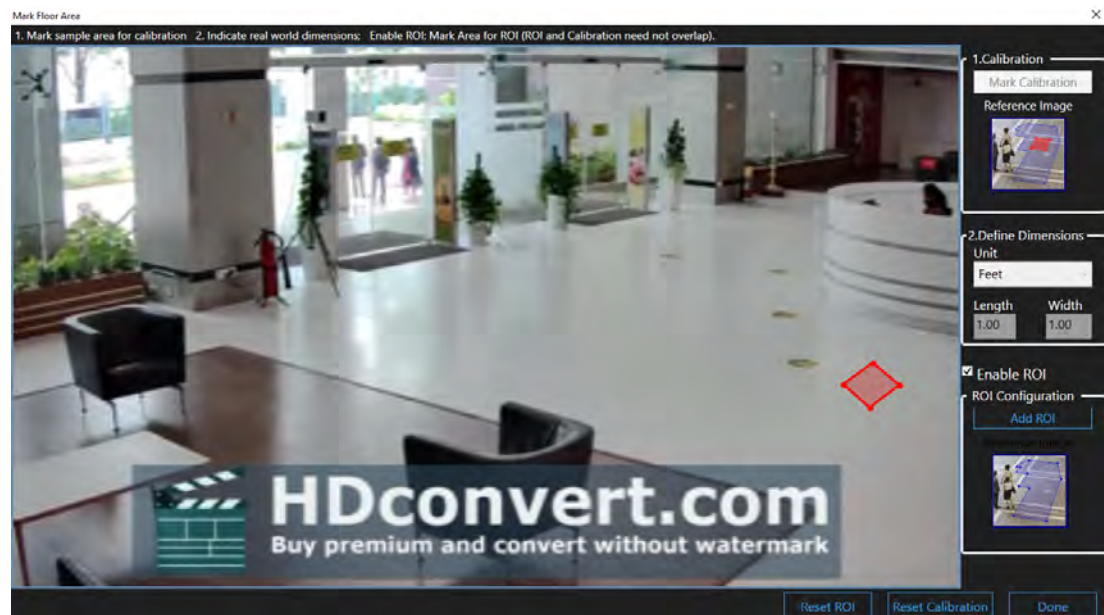
## How to configure Social Distancing in NVR

**Note:** For VM machines it is recommended to use Xeon E5-v3, E5-v4, Bronze, Silver, Gold VM machines for better results.

1. Navigate to the Camera tab > camera properties and then click the Configure Analytics button.
2. From the Analytics Type drop-down list, select Social Distancing as shown below.



3. Select the Social Distancing check box.
4. Under Define Floor Area, click Edit link to define Floor area. The Mark Floor Area screen is displayed.



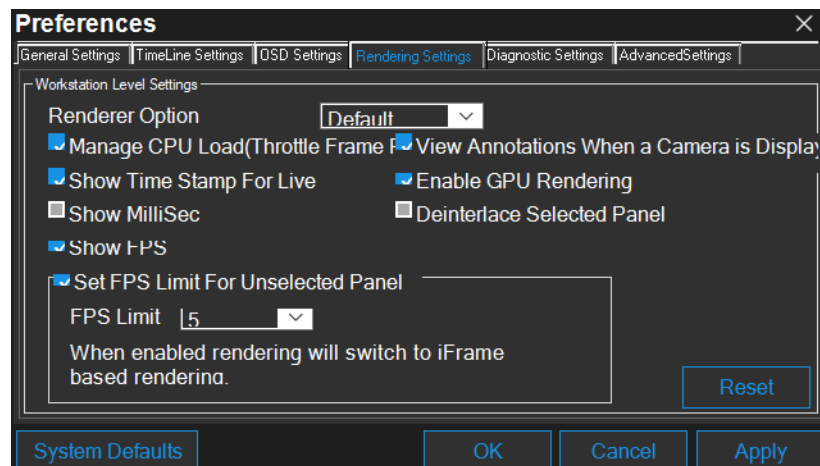
5. Select the Unit from the drop -down list.
6. Under Mark Floor area, mark the points on the screen to define the Width and Length as per your requirement. For example: Click four points on the screen to

mark an area using mouse. The selected area will be highlighted in Red borders as shown in the Reference Image.

**Note:** When you select the 4 points on the floor area, the distance between first two points (Point 1 and 2) should be always considered as Width. The other two points will be Length.

Distance measurements on ground plane to be measured accurately to get better results.

7. Similarly mark other areas based on the requirement and then click Done. The selected Dimensions (In Meter/Feet) are displayed in Analytics Configuration dialog box.
8. For creating Non-Compliant Social Distancing Regions in a region of interest (ROI), see [How to create Multiple ROI's in a camera View](#) section for more information.
9. Under Alarm Settings, set the Hold Time for alarms in seconds. This is the duration for which the alarms is displayed.
10. From the Analytics Server drop-down, select the required analytics server you have configured to fetch the alarms
11. Click Save.
12. Navigate to NVR Preferences > Rendering Setting tab and select the View Annotations When a Camera is displayed check box as shown below.



## Non-Compliant Social Distancing Regions

This feature helps user to identify the areas in which the sub regions/areas of camera views where the most number of Non-complaint social Distancing violations are happening.

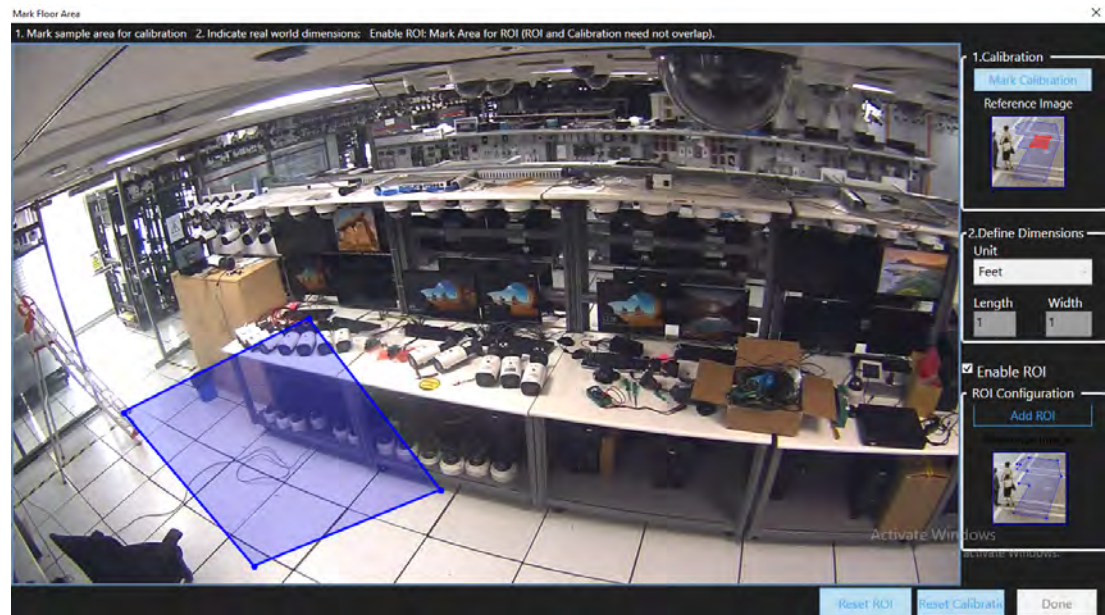
In order to generate this alarm, user need to create at least one region. The system monitors the Social distancing violations and then monitors in to each region how many social distancing violations are occurred. The algorithm calculates the most

violated regions and raises an alarm. This alarm is displayed in percentage of violation for a given time. This alarm is generated periodically every 5 hours (Configurable). A maximum of 6 ROI's can be created.

**Note:** User has to configure the Social Distancing first in order to configure this alarm.

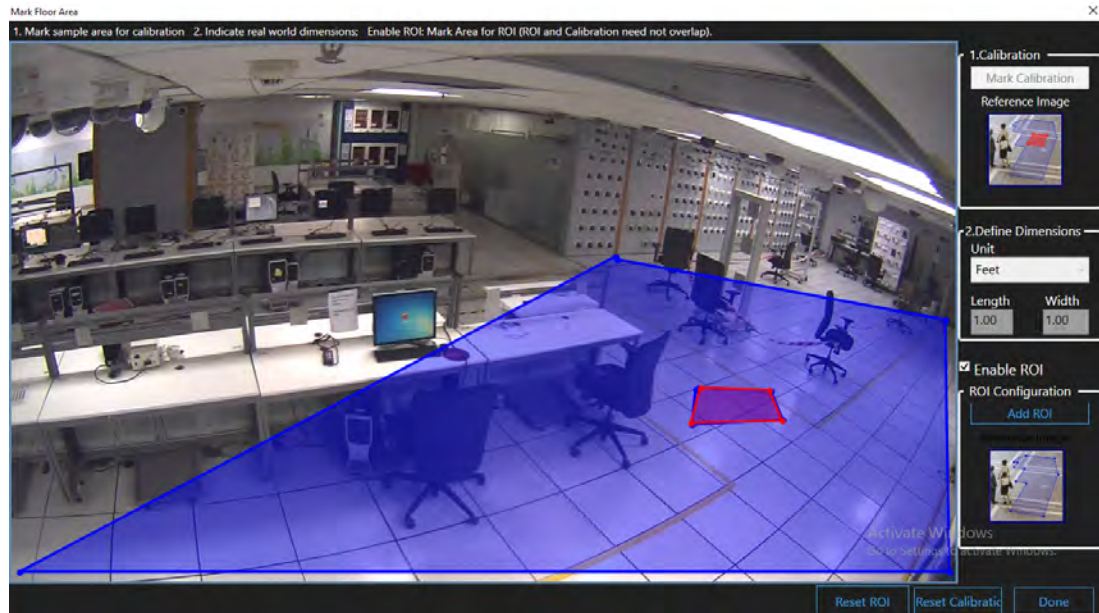
## How to create Multiple ROI's in a camera View

1. Select the Social Distancing check box.
2. Under Define Floor Area, click Edit link to define Floor area. The Mark Floor Area screen is displayed.



3. Select Enable ROI check box.
4. Click Add ROI and then mark the points on the screen to define the Width and Length as per your requirement. For example: Click four points on the screen to mark an area using Mouse. The selected area will be highlighted in Blue borders as shown in the Reference Image.

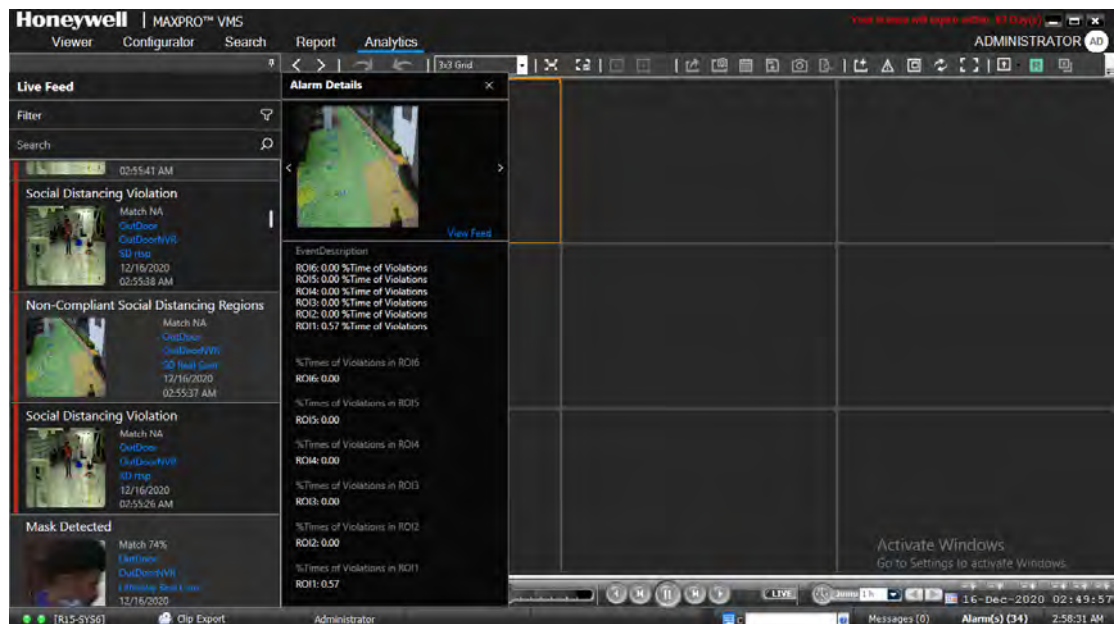




5. If any point of time to clear the ROI's then click the Reset ROI button.
6. Click Done to complete.

## Viewing Non Compliant Social Distancing Region alarms in VMS

In Analytics tab you can view the Non Compliant Social Distancing Regions alarms as shown below.



## Configuring Social Distancing ROI Duration and Show

User can configure the Registry entries to increase the duration of alarms generation for a specific time and highlight the same using color indication.

Following are the two parameters that are allowed to configure:

- **sdGraphicROIDuration** : The Non-complaint Social Distancing Regions alarm is generated for every 5 hours (By Default). The Value of this key is in Minutes (By Default 300 Mins (5 hours))
- **sdGraphicROIShow**: This key is used for displaying when alarm occurs then in live view user can see the regions in specific color coding based on number of violations occurred. For example
  - the highest violated region more than 80% is RED
  - 20 to 80 percent region violated is YELLOW
  - the succeeding less value (Less than 0) is displayed in GREEN

Perform the below steps to modify the values:

1. Navigate to Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432Node\Honeywell\TrinityFramework\RenderingServer
2. Locate sdGraphicROIDuration and then change the value (By Default 300 Mins (5 hours)).
3. Locate the sdGraphicROIShow and then change the color code value

A sample images of configured social distancing feature is shown below.











## Analytic Alarms In NVR

The below screen displays the list of alarms that are generated in NVR for Mask Detection, Social Distancing violation and Non-Compliant Social Distancing Regions features.

| Alarm                                   |               |          |           |              |
|---|---------------|----------|-----------|--------------|
| Description                             | Event details | Device   | IO Status | Date Time    |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Non-Compliant Social Distancing Regions | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask            | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation             | --            | SD       | NONE      | 12/16/2020 8 |

Acknowledge

| Description                  | Event details | Device   | IO Status | Date Time    |
|------------------------------|---------------|----------|-----------|--------------|
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |
| Person detected without mask | --            | Camera52 | NONE      | 12/16/2020 8 |
| Social Distancing Violation  | --            | SD       | NONE      | 12/16/2020 8 |

## Analytics Alarm Details and Attributes

- Right-click on the required alarm and then select Alarm Details option to view the details and attribute of an alarm.
  - For Social Distancing Violation alarm

Alarm Details

Alarm Details

Alarm description

Social Distancing Violation

Device name

SD

Date time

12/16/2020 9:16:10 AM

Alarm state

Active alarm

Global event ID

3283

↑

↓

Cancel

| Event attribute       | Description | Index |
|-----------------------|-------------|-------|
| # People Not Adhering | 7           | --    |
| # People Adhering     | 0           | --    |
| People Count          | 7           | --    |
|                       |             |       |
|                       |             |       |

- For Mask Detection

Alarm Details

Alarm Details

Alarm description

Person detected without mask

Device name

Camera52

Date time

12/16/2020 9:16:31 AM

Alarm state

Active alarm

Global event ID

3100

↑

↓

Cancel

| Event attribute  | Description | Index |
|------------------|-------------|-------|
| Confidence Score | 86.62       | --    |
|                  |             |       |
|                  |             |       |
|                  |             |       |

- For Non- Compliant Social Distancing Regions

Alarm Details

Alarm Details

Alarm description

Non-Compliant Social Distancing Regions

Device name

SD

Date time

12/16/2020 8:47:50 AM

Alarm state

Active alarm

Global event ID

3281

↑

↓

Cancel

| Event attribute     | Description | Index |
|---------------------|-------------|-------|
| %Time of Violations | ROI1: 97.75 | --    |
|                     |             |       |
|                     |             |       |
|                     |             |       |

## Alarms for both Mask Detection and Social Distancing

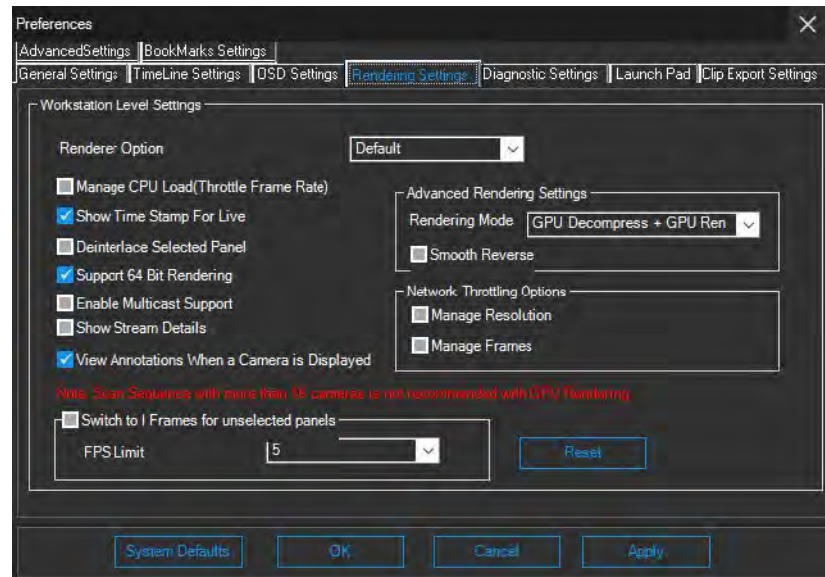
The below screen displays the list of alarms that are generated in NVR for Mask and Social Distancing detection features.

| Alarm                          |                         |                   |           |              |
|--------------------------------|-------------------------|-------------------|-----------|--------------|
| Description                    | Event details           | Device            | IO Status | Date Time    |
| Person detected with mask      | Confidence Score:53.38  | Mask              | NONE      | 2/5/2021 7:3 |
| Person detected with mask      | Confidence Score:58.79  | Mask              | NONE      | 2/5/2021 7:3 |
| Camera Event Recording Started | --                      | Mask              | NONE      | 2/5/2021 7:3 |
| Person detected without mask   | Confidence Score:86.62  | Mask              | NONE      | 2/5/2021 7:3 |
| Person detected with mask      | Confidence Score:60.72  | Mask              | NONE      | 2/5/2021 7:3 |
| Person detected with mask      | Confidence Score:95.26  | Mask              | NONE      | 2/5/2021 7:3 |
| Person detected with mask      | Confidence Score:61.05  | Mask              | NONE      | 2/5/2021 7:3 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:3 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:3 |
| Camera Connected               | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:3 |
| Camera Disconnected            | --                      | Inhouse-89-PG CON | NONE      | 2/5/2021 7:3 |
| Acknowledge                    |                         |                   |           |              |
| Description                    | Event details           | Device            | IO Status | Date Time    |
| Person detected without mask   | Confidence Score:86.62% | Mask              | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:70.63% | Mask              | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:69.21% | Mask              | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:91.30% | Mask              | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:82.53% | Mask              | NONE      | 2/4/2021 8:3 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:3 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:3 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:61.80% | Mask              | NONE      | 2/4/2021 8:3 |
| Social Distancing Violation    | # People Not Adhering:2 | SD                | NONE      | 2/4/2021 8:3 |
| Person detected without mask   | Confidence Score:56.64% | Mask              | NONE      | 2/4/2021 8:3 |
| Clear Clear All                |                         |                   |           |              |

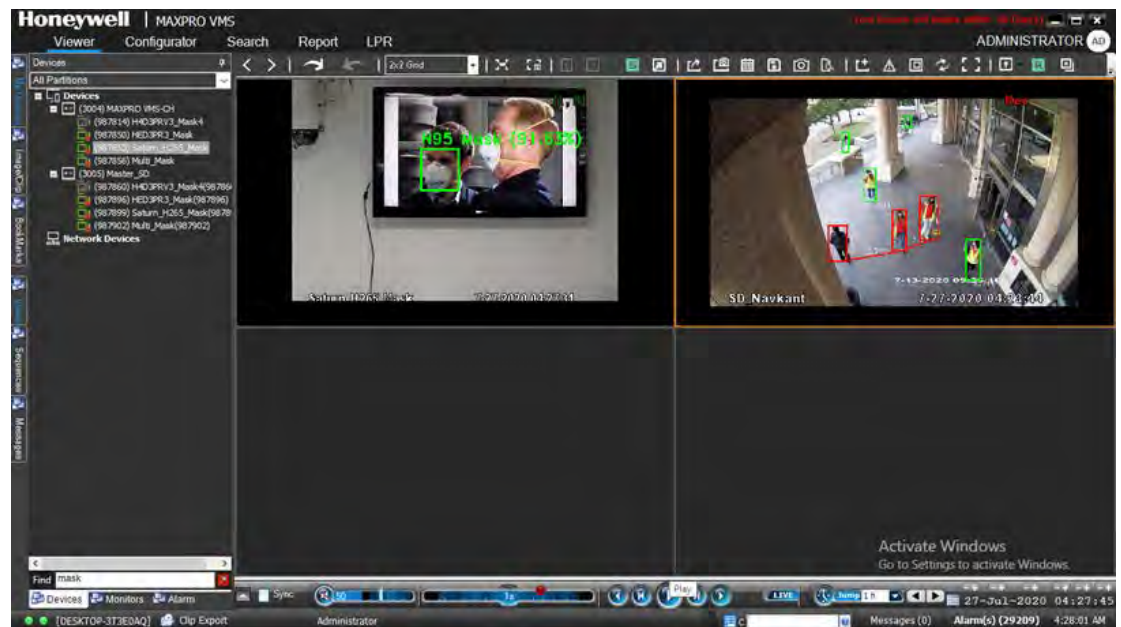
## Mask Detection and Social Distancing in VMS

To view the same camera Mask and Social Distancing detections in MAXPRO VMS.

1. Navigate to NVR Preferences > Rendering Setting tab and select the View Annotations When a Camera is Displayed check box as shown below.



Once the above check box is enabled the Mask and Social Distancing from NVR is displayed in VMS as shown below.



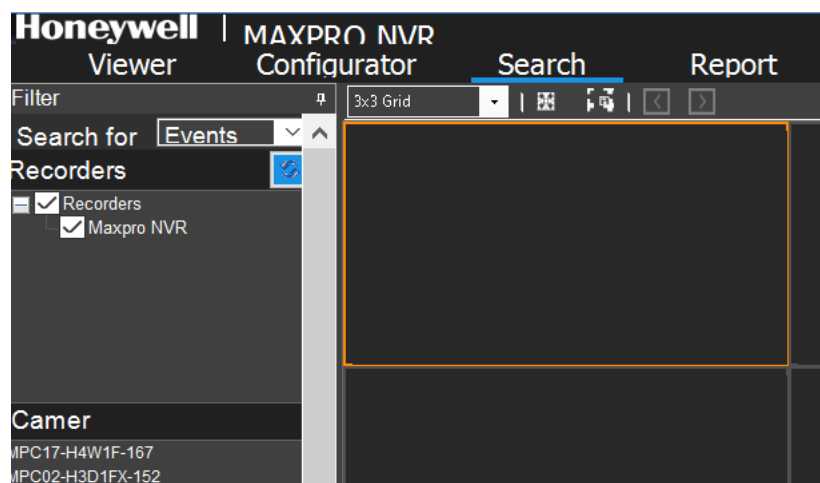
# SEARCHING RECORDED VIDEO IN MAXPRO NVR

## Overview

This chapter explain how a user can search for video recorded from cameras connected to MAXPRO NVR. User can filter the search for recorded video based on search conditions like video recorded today, yesterday, and others.

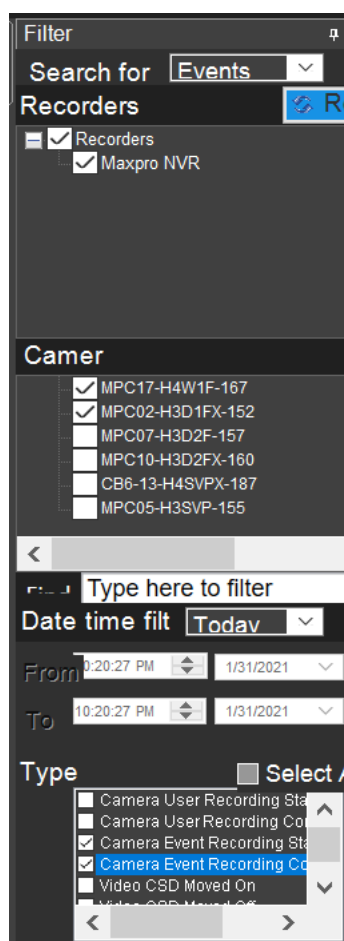
## How to search for recorder video and events

1. Click the Search tab. By default MAXPRO NVR is displayed under Recorders in the Filter window as shown below:



### Search tab

2. Select “Events” or “Recordings” from the Search for list. The list of cameras that are connected to MAXPRO NVR are displayed under the Cameras section (in the Filter window).
3. Select the check box next to the cameras from which the video is recorded. Or Select the Select all check box to select all the cameras (See [figure](#) ).




#### Search and Filter

4. Select one of the following search conditions corresponding to Date time filter.
  - Today - video recorded in MAXPRO NVR today.
  - Yesterday - video recorded in MAXPRO NVR yesterday.
  - Last 7 Days - video recorded in MAXPRO NVR in the last seven days.
  - Last 30 Days - video recorded in MAXPRO NVR in the last 30 days.
  - On - video recorded on a particular date in MAXPRO NVR. The From box to select the date is enabled when you select On.
  - On or Before - video recorded in the MAXPRO NVR up to a particular date. The From box to select the date is enabled when you select On or Before.
  - Between - video recorded in the MAXPRO NVR between a time duration. The From and To boxes are enabled when you select Between. You can select the start time and date in the From box. The end time and date can be selected in the To box.
5. In the Type list, select the check boxes for the events you want to include in the search result. Select the Select All check box to include all the events.



6. Select the Include Archival Clips check box to search for archival clips.

**Note:** Include archived clip feature displays only auto archived clips in the result window. It will not display the manually archived clips.

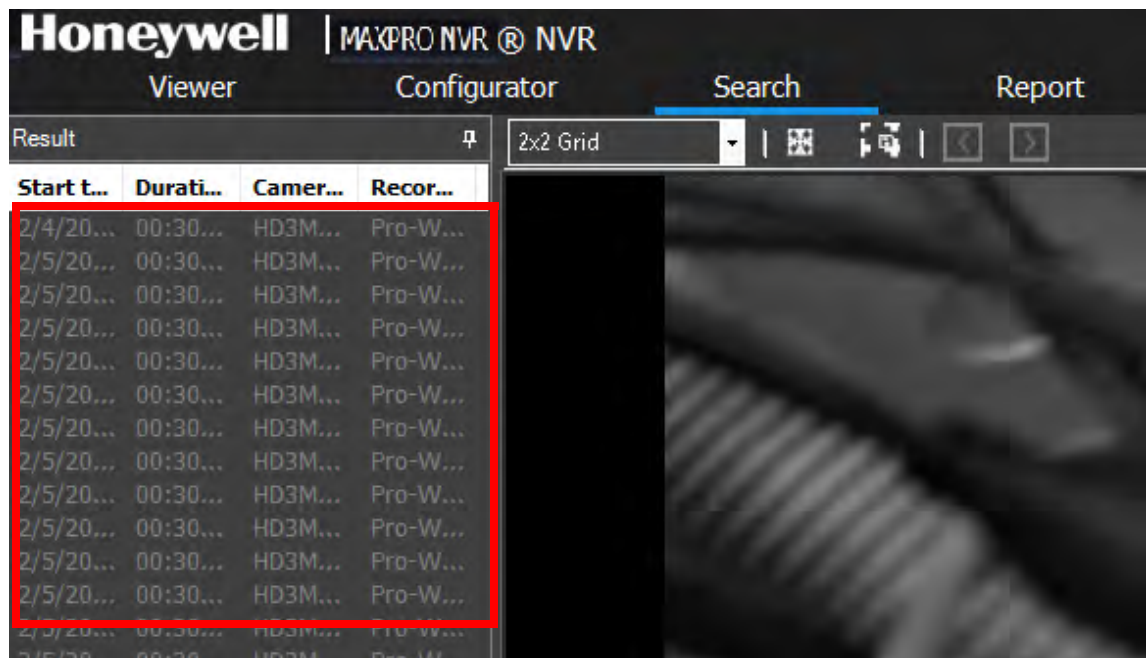
7. Click the  icon. The recorded video is searched based on the search conditions. The search results are listed in the Results window.

## How to search for Archived Clips

Pre-requisite:

To get the exact Archived clip count in the result window ensure that NVR server should also be upgraded to latest version.

- Perform the steps as explained in [How to search for recorder video and events](#) section. Based on the search criteria the archived clips are displayed in Grey color as shown below.



## Viewing Primary and Archived Location

The Archived clips in the Result windows also displays the location of Archived clip as highlighted below.

- Archived: The clip is available in Archived path
- Primary, Archived: The clips is available in both primary storage and Archived path.

Viewer

Configurator

Search

Report

Result

2x2 Grid

| Start t... | Durati...  | Camer... | Recor...  | Location          |
|------------|------------|----------|-----------|-------------------|
| 2/4/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | 00:30...   | HD3M...  | Contin... | Primary, Archived |
| 2/5/20...  | Still R... | HD3M...  | Contin... | Primary           |

## Playing Video after Searching

Drag and drop the search result from the Results window on the salvo layout. The panel starts displaying the recorded video.

Tip: To select more than one search result, press the CTRL key.

## Archival Camera Name & Clip status

- When a user drag and drops a archived clip into panel, the archival camera name with clip status Rec is displayed as shown below. For complete details of the possible combinations to play the archived clips from client machine and for details about different scenarios to playback Archived clips, refer to the *MAXPRO® NVR Installation and Configuration Guide*.




## Deleting the Recorded Video



**Caution:** Deleting the recorded video from the search result also deletes it from the MAXPRO NVR. The Search tab and the option to delete the recorded video is only accessible to NVR Administrator and Supervisor roles.

1. Select the recorded video from the list of search results.

Tip: To select more than one search result, press the CTRL key.

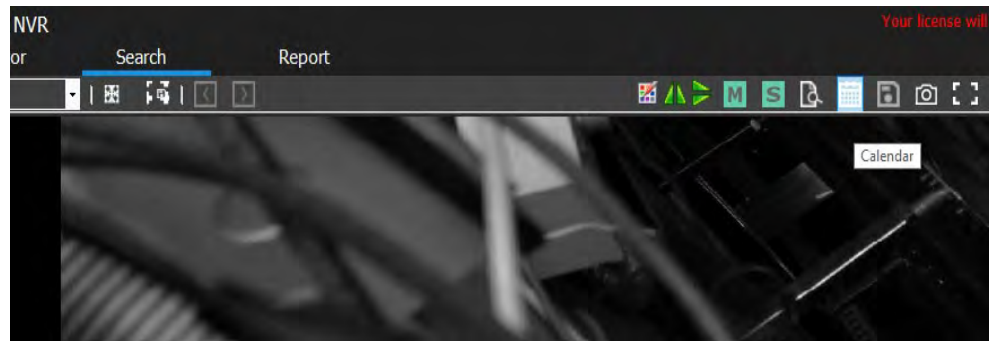
2. Click the  icon. The recorded video is deleted from MAXPRO NVR.

## Calendar Search

The Calendar Search feature helps you to search for recorded video from a particular camera. You can filter the search based on the month, day, hour, and minute. By default when you first select this feature, the recorded videos for the current month appear.

To use the Calendar Search feature

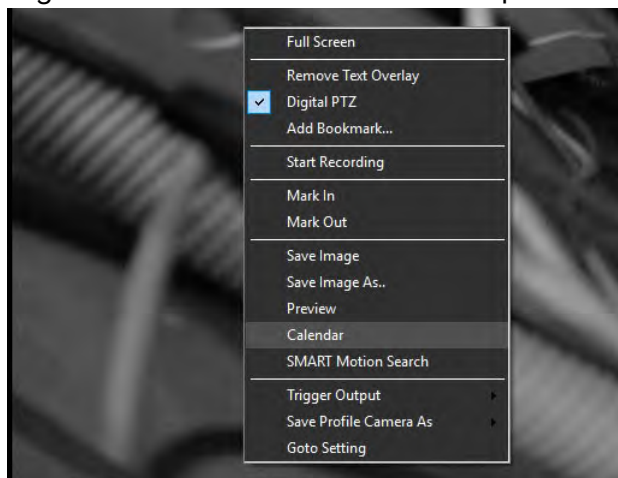
1. Click the Calendar icon on the toolbar as shown in [figure](#) .



#### Clicking the Calendar icon

Or

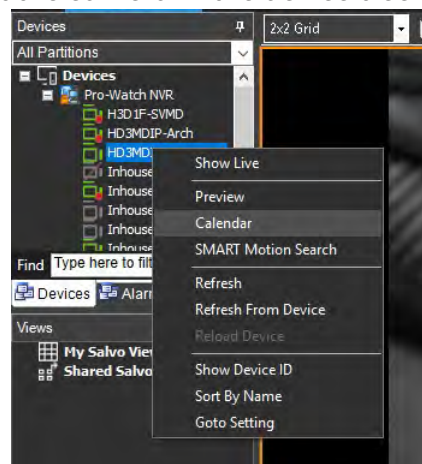
Right-click the camera on the salvo panel and click Calendar as shown below.



#### Right-clicking the camera in the salvo panel

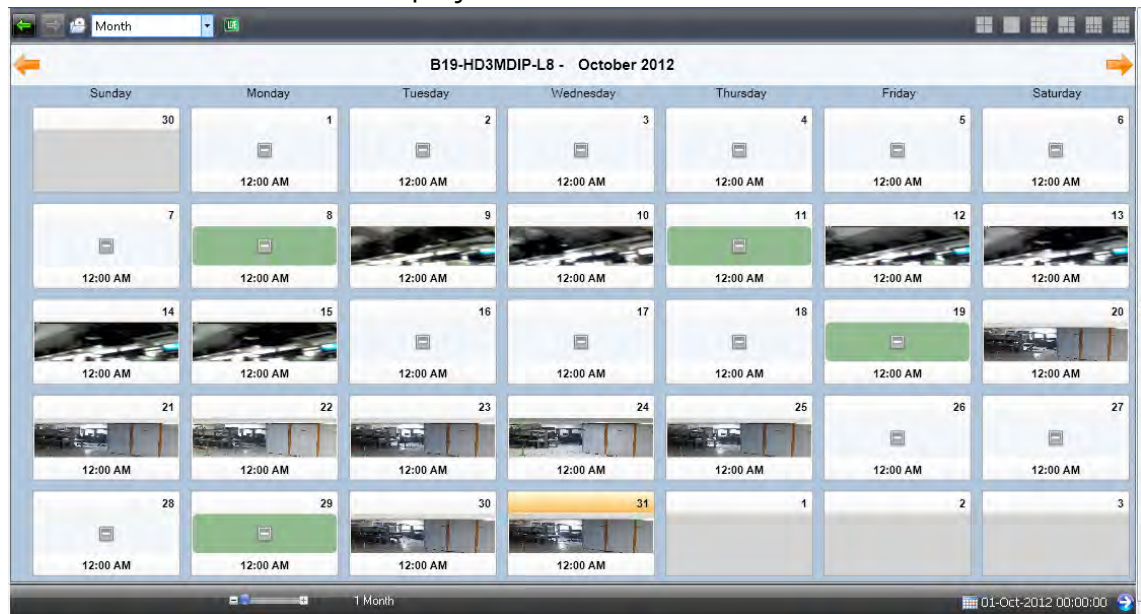
Or

Right the camera in the device tree and click Calendar as shown below.






#### Right-clicking the camera in the device tree

The Calendar Search view displays as shown below.



### Calendar Search view

#### Legends

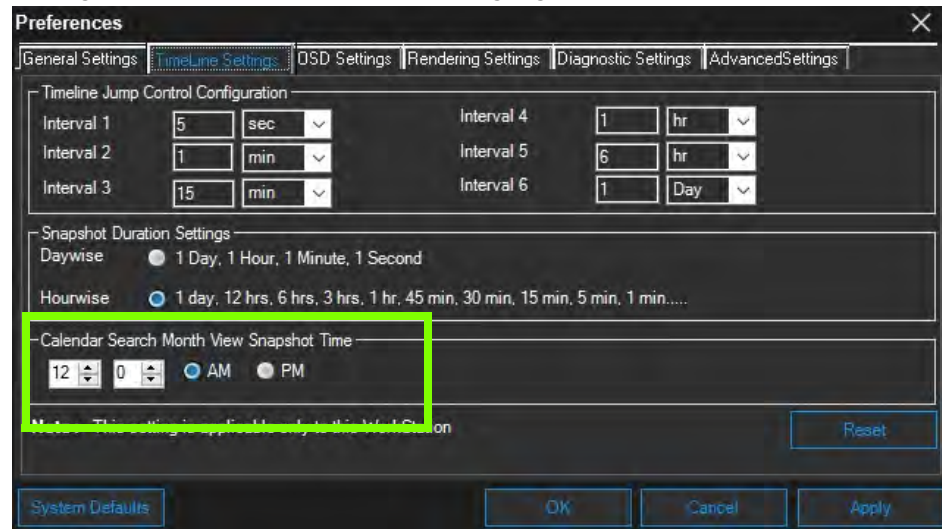
| Legend  | Description  |
|---|--|
|  | Indicates that there are no recordings available for the particular day/hour/minute.                             |
|  | Indicates that the recordings are available for the particular day/hour/minute.                                  |
|  | Indicates that there is recording for that particular time frame, and not exactly at that particular time stamp. |

#### Note:

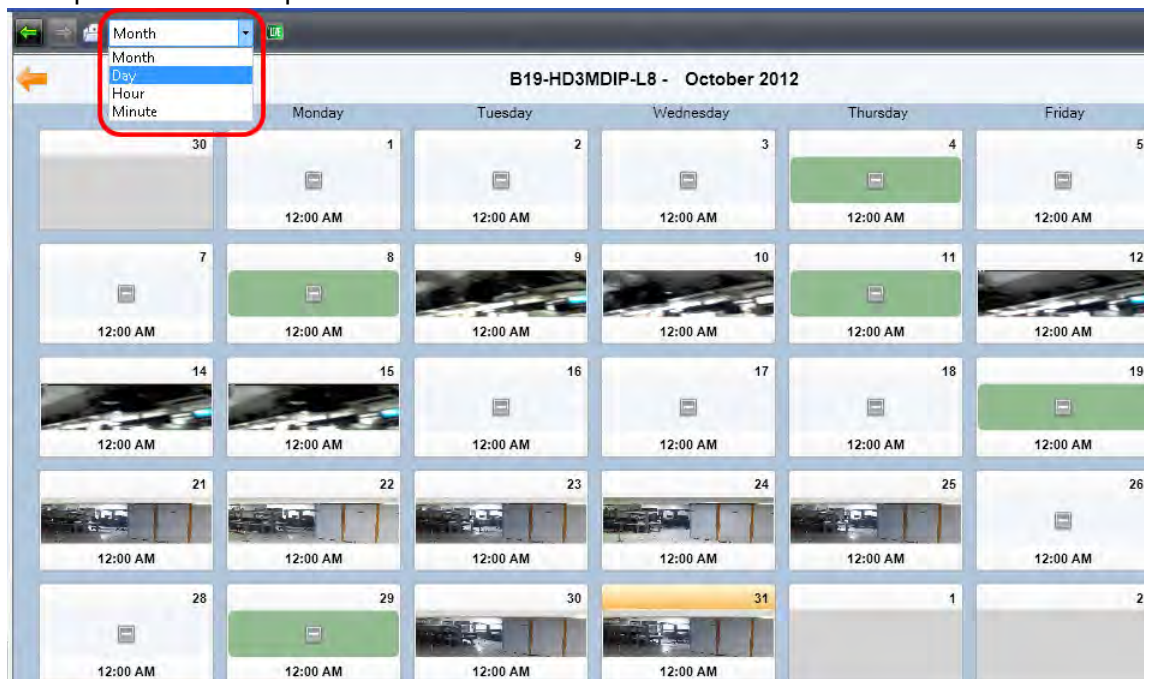
- By default, the monthly view of all the recordings for the current month appear. You can see a maximum of 31 recordings, each representing a day of the month.



- You can also change the Month view recording time in the Preferences dialog box as shown in the following figure.



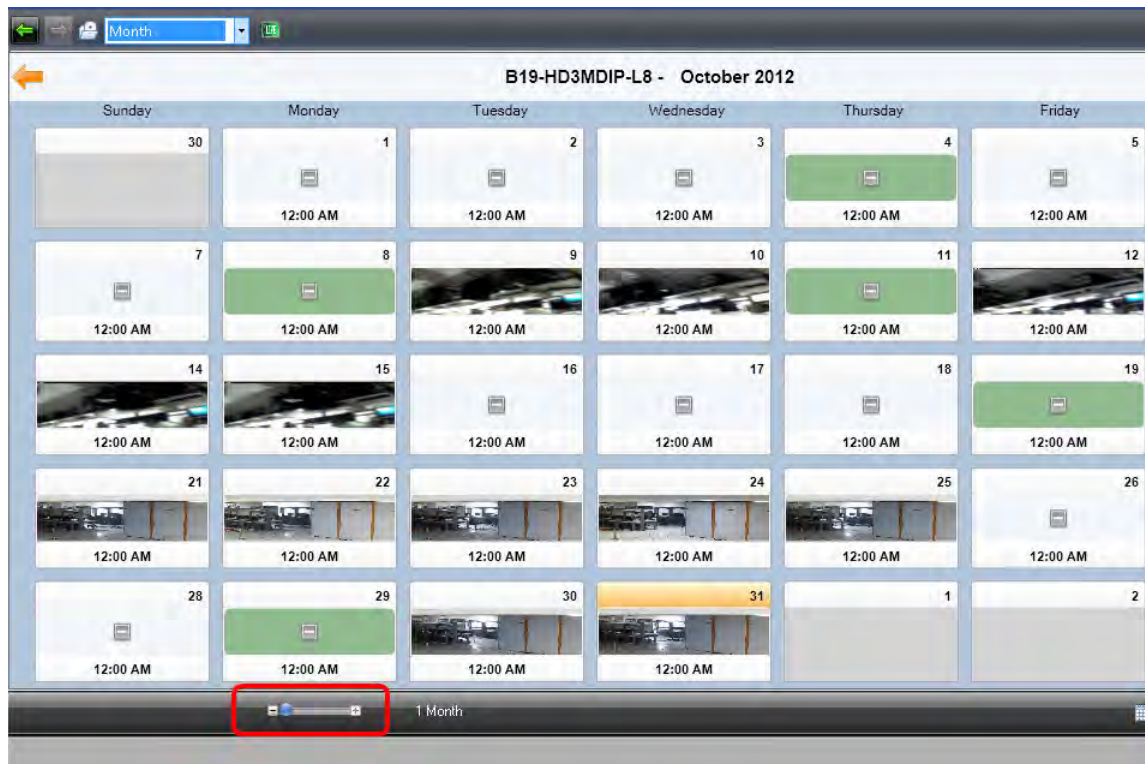
- You can switch to the Day, Hour and Minute views by clicking the respective option in the drop-down list as shown below.



**Switching to the day, hour, minute views by selecting from the drop-down list**

Or

Move the slider to the right as shown below to switch to the Day, Hour and Minute views.




**Switching to the day, hour, minute views by moving the slider**

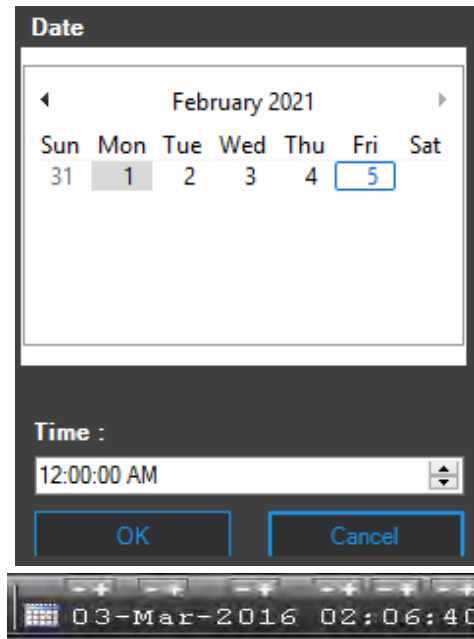
**Note:**

- If you select Day, a maximum of 24 recordings appear, each representing an hour.
- If you select Hour, a maximum of six recordings appear, each representing a 10 minute recording of the selected hour.
- If you select Minute, a maximum of 10 recordings appear, each representing a minute.

Or

Alternatively, click  bottom right calendar to switch to the Day, Hour and Minute views.





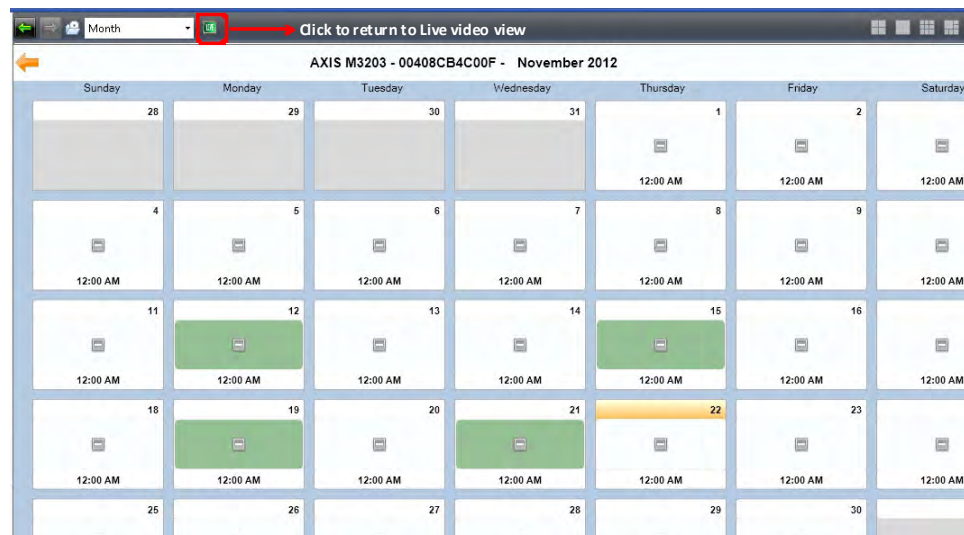
## Calendar

### Navigation Tips

- While viewing the month wise recordings, use the ← and → buttons to navigate to the next or previous month in sequence that you are viewing.

Tip: Follow the similar procedure to view day/hour/minute wise recordings.

- At any point of time, click the Live view icon as shown below to go back to the Live video view.



### Returning to Live Video View

## Options Available on the Panel

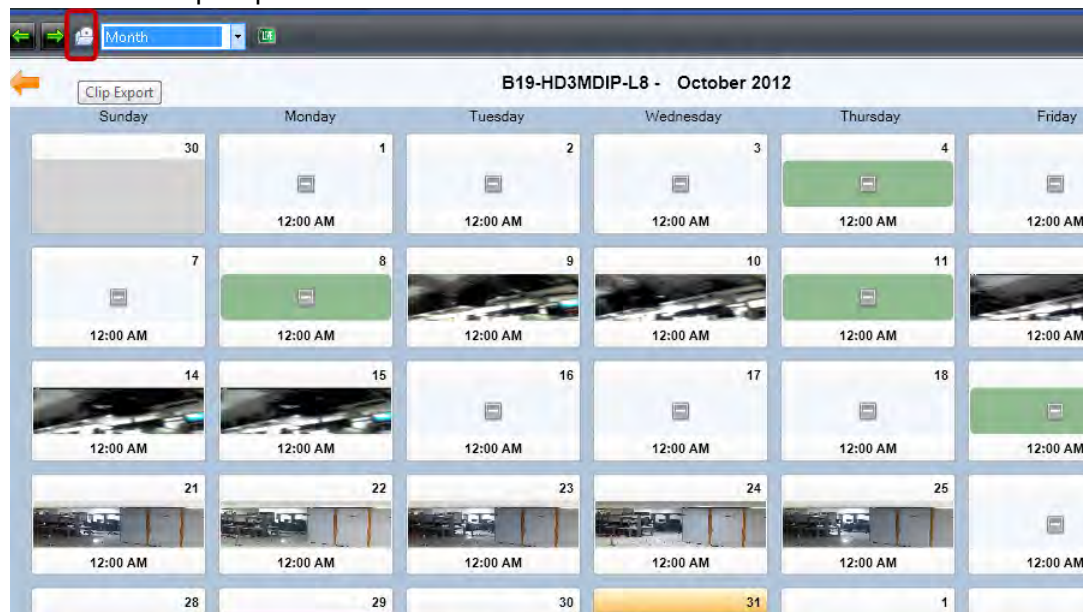
The following table lists the options available when you right click a panel in the Calendar Search view.

| Option        | Description   |
|---------------|---|
| Save Image    | Saves the frame displayed in the panel as an image in the BMP format.                                   |
| Save Image As | Saves the frame displayed in the panel as an image in the other formats such as JPG, GIF, PNG and soon. |
| Show Video    | Displays the video.   |

## Creating Clips

You can create clips for the recorded video.

- Click the Clip Export icon on the toolbar as shown below.



### Creating Clips

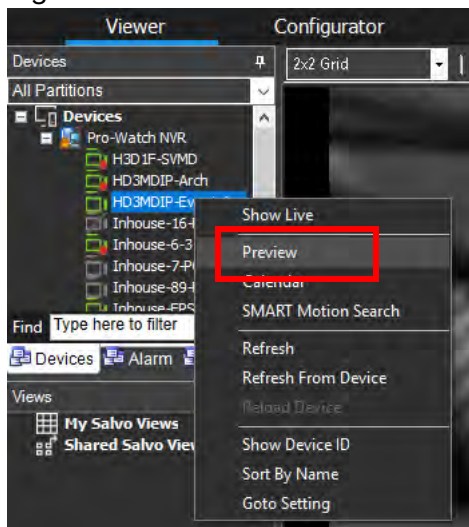
**Note:** See the [Creating Clips](#) section on page 175 for more information on creating clips for recorded video. Only WMV format (evidence clips) clip export option is supported when you create clips from Calendar Search.

## Preview Search

The Preview Search feature helps you to search for recorded video from a particular camera. Unlike Calendar search, you can only filter the search for a particular day. You also cannot drag and drop a camera on the preview pane.

To use the preview search

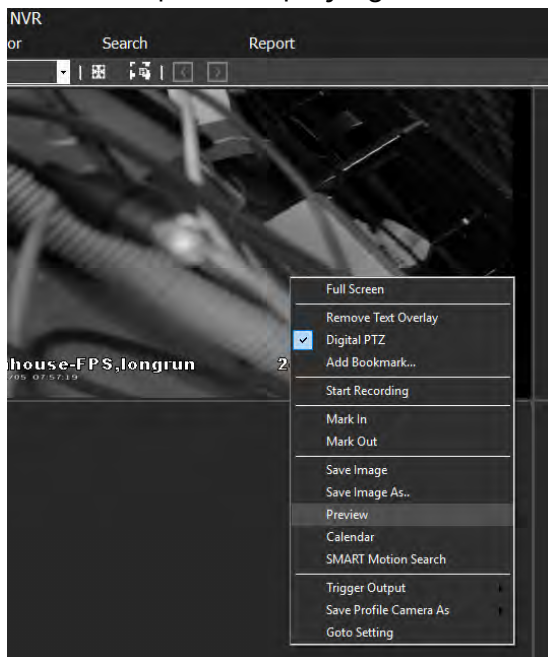
1. Right-click a camera in the device tree, and then click Preview.



**Preview Search - Right-clicking the camera from the Device tree**

Or

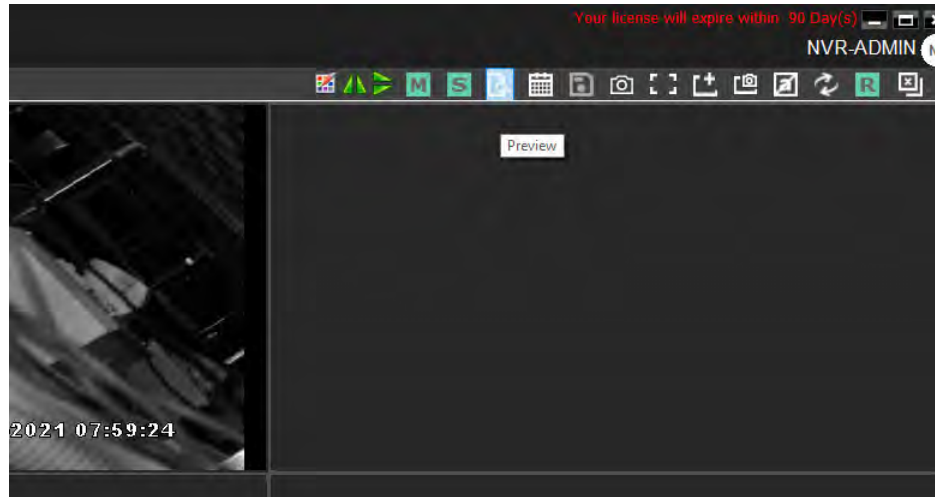
Right-click the panel displaying live video and click Preview.



**Preview Search- Right-clicking the Live Video pane**

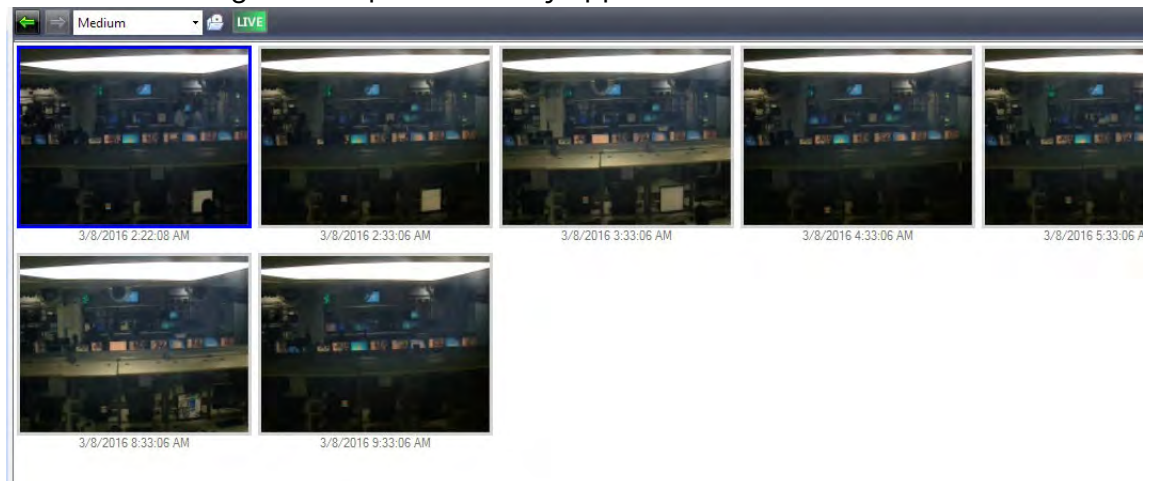
Or

Select the desired video panel and click the Preview icon on the toolbar as shown below.



#### Preview Search - Clicking the Preview icon

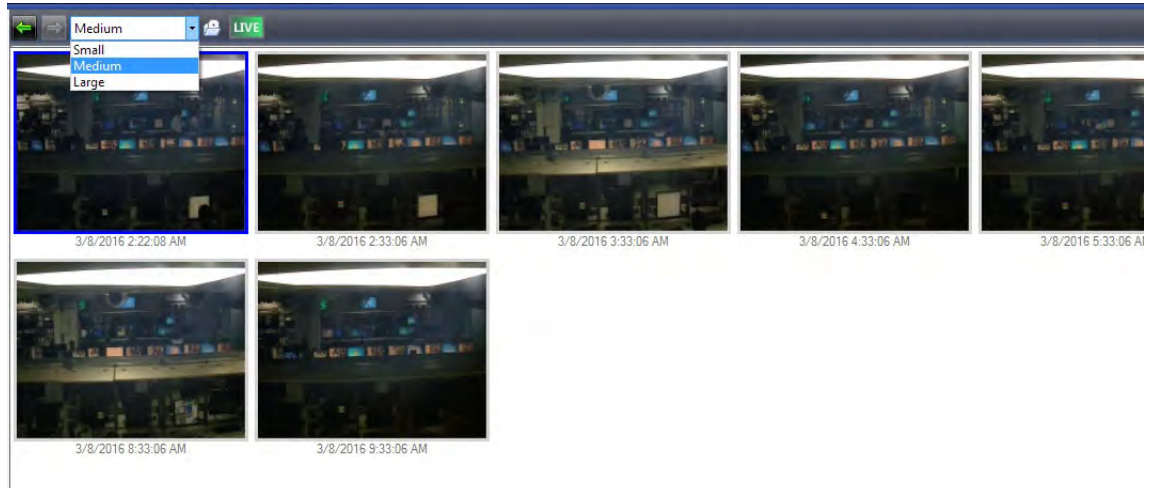
A list of recordings for the particular day appears.



#### Preview Search - Results

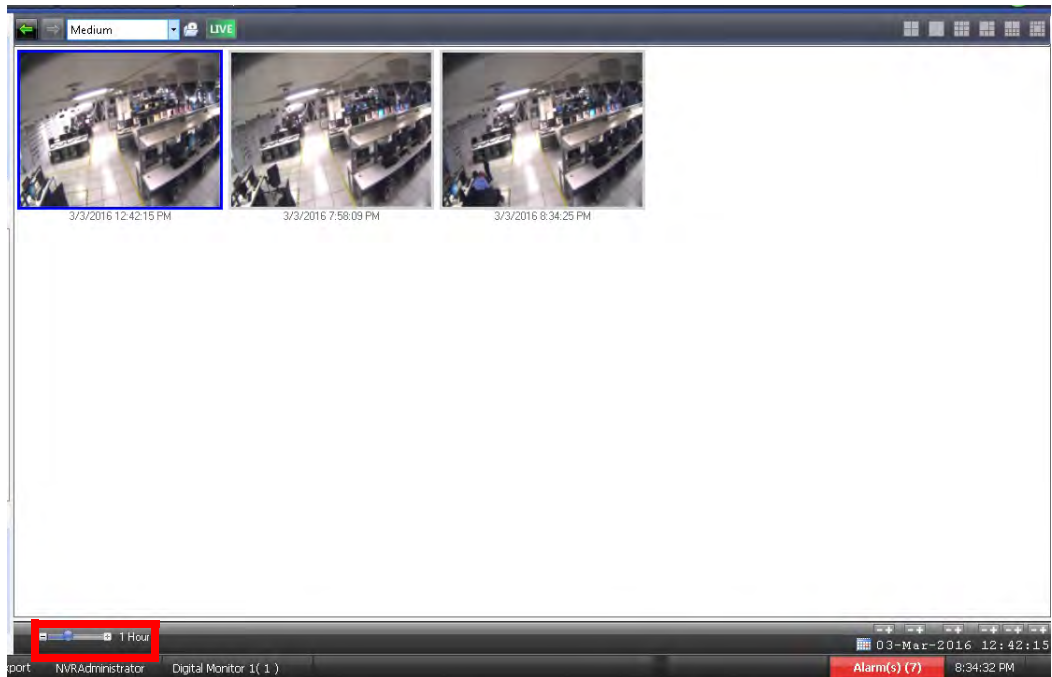
**Note:** By default, medium sized snapshots (recordings) are displayed.

2. To view small or large snapshots, select the appropriate option from the drop-down list as shown below.



#### Selecting the Large/Small options for the Snapshots

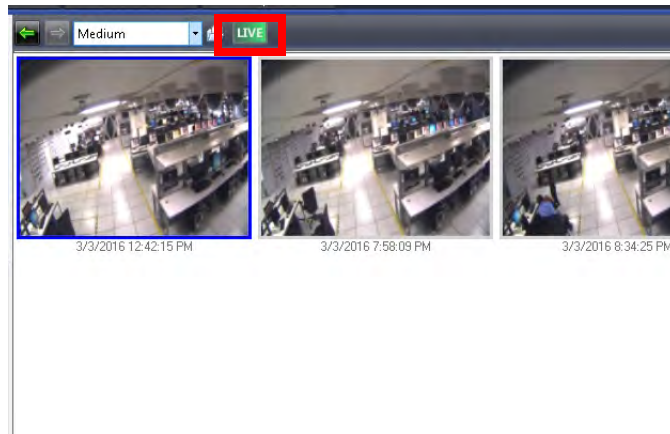
3. To change the snapshot duration, double-click it or move the slider as shown below.



#### Changing the Snapshot duration

### Navigation Tips

- At any point of time, click the Live view icon as shown below to go back to the Live video view.



**Returning to Live Video View**

## Options Available on the Panel

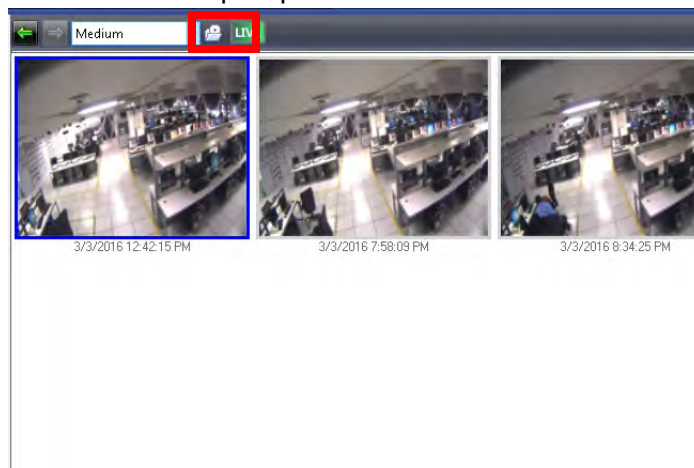
The following table lists the options available when you right click a panel in the Preview Search view.

| Option        | Description  |
|---------------|--|
| Save Image    | Saves the frame displayed in the panel as an image in the BMP format.                                    |
| Save Image As | Saves the frame displayed in the panel as an image in the other formats such as JPG, GIF, PNG and so on. |
| Show Video    | Displays the video.  |

## Creating Clips

You can create clips for the recorded video.

- Click the Clip Export icon on the toolbar as shown below.





### Creating Clips

**Note:** See the [Creating Clips](#) section on page 175 for more information on creating clips for recorded video. Only the WMV format (evidence clips) clip export option is supported when you create clips from a Preview Search.



## Intellisense Search

The Intellisense search option makes the search of cameras simpler and easier. When a part of the camera name is typed in the text box, the Intellisense search displays the list of cameras that are connected to various recorders in the Devices window. For example, if you are searching for Camera 2 connected to particular recorder, then type Ca in the text box, the list of camera names that contain 'ca' appears.

Intellisense search also supports wild characters while searching. For example,

- ca\* — camera names that begin with 'ca' are displayed.
- \*ca — camera names that end with 'ca' are displayed.
- \*ca\* — camera names that contain 'ca' are displayed.
- !ca — cameras that do not have 'ca' in their name are displayed.

Select the required filter string and click on the filter button. You can toggle between the

Filter On and Off mode using the  option or right-click , and select between Filter ON and Filter OFF. The hot key to activate Intellisense search is F4.

## SMART Motion Search

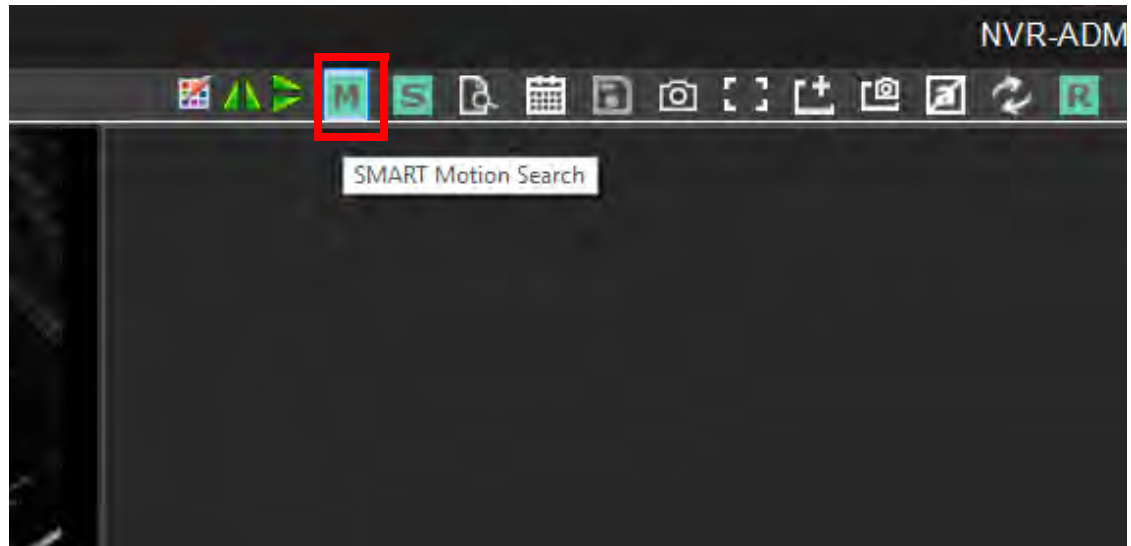
The SMART Motion Search feature allows you to search motion of an object in a recorded video. This feature overcomes the traditional way of searching for an object in recorded videos. It enables you to filter the search in recorded video based on Year, Month, Day, Hours, Minutes and Seconds. You can view the recordings of before and after the existence of motion of an object. You can perform the search on recorded video. This feature is not applicable for exported clips and archival recordings.

You need to configure a region of the object in the recorded video and then define the date and time range to search for the motion of the selected object.



## Configuring the Search criteria

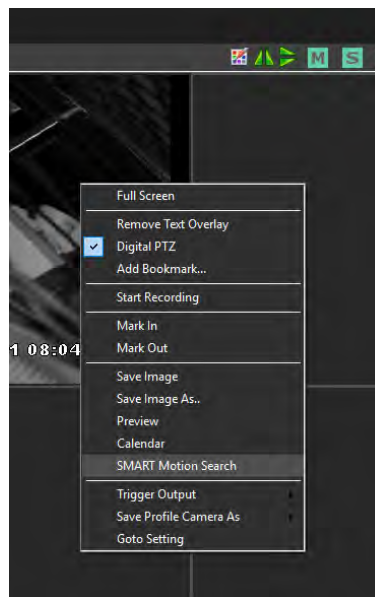
1. Select the required camera panel.
2. Click the SMART Motion Search icon on the toolbar as shown below.



**Clicking the SMART Motion Search icon**

Or

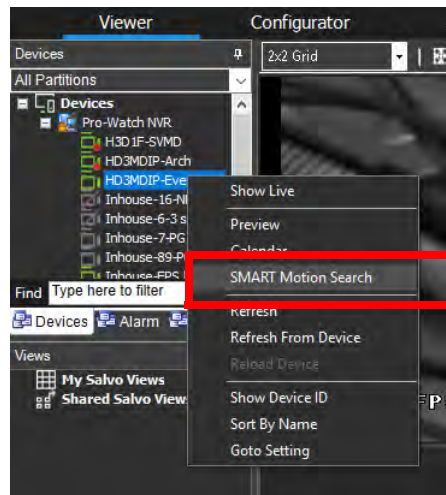
Right-click the camera on the salvo panel and then click SMART Motion Search as shown below.



**Right-clicking the camera in the salvo panel**

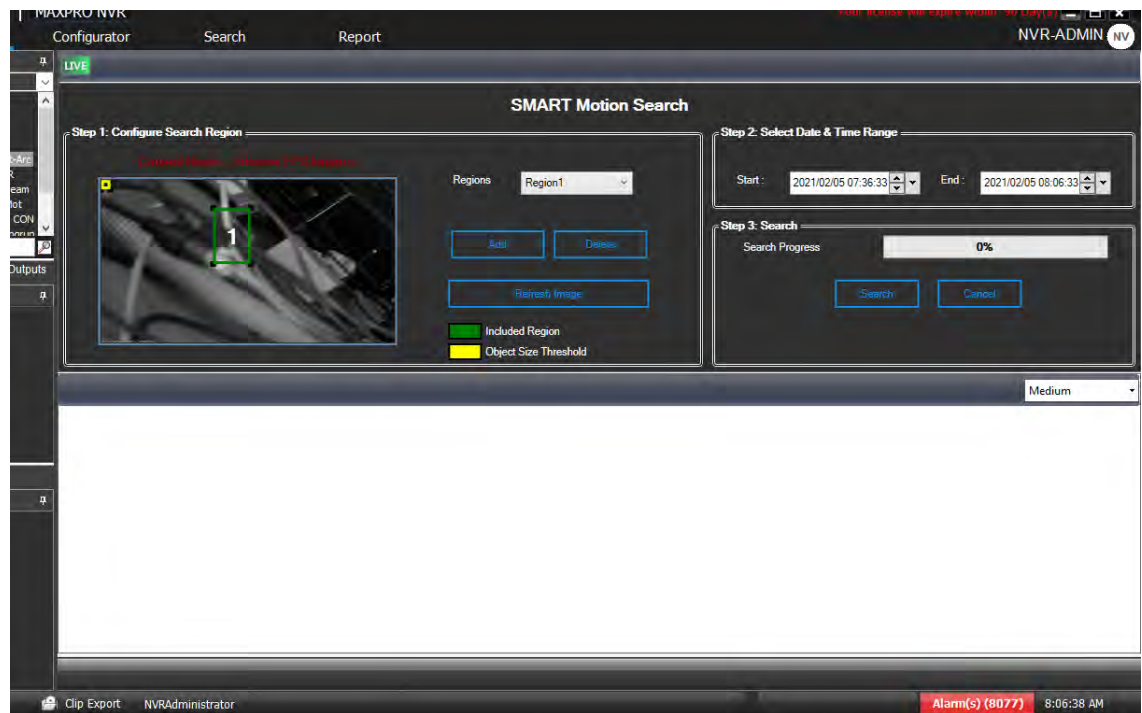
Or

Right-click the camera in the Device tree and click SMART Motion Search as shown below.



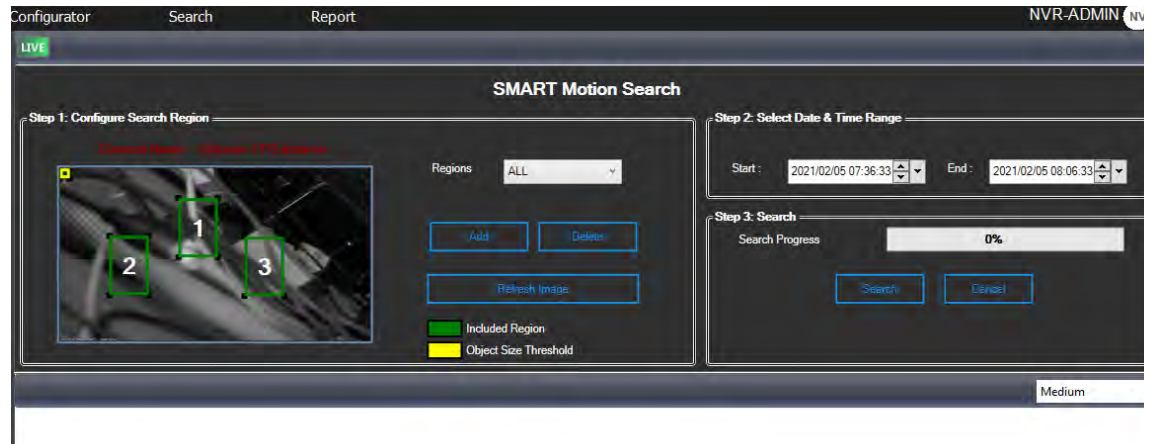
**Right-clicking the camera in the device tree**

The SMART Motion Search window is displayed as shown below.



**SMART Motion Search View**

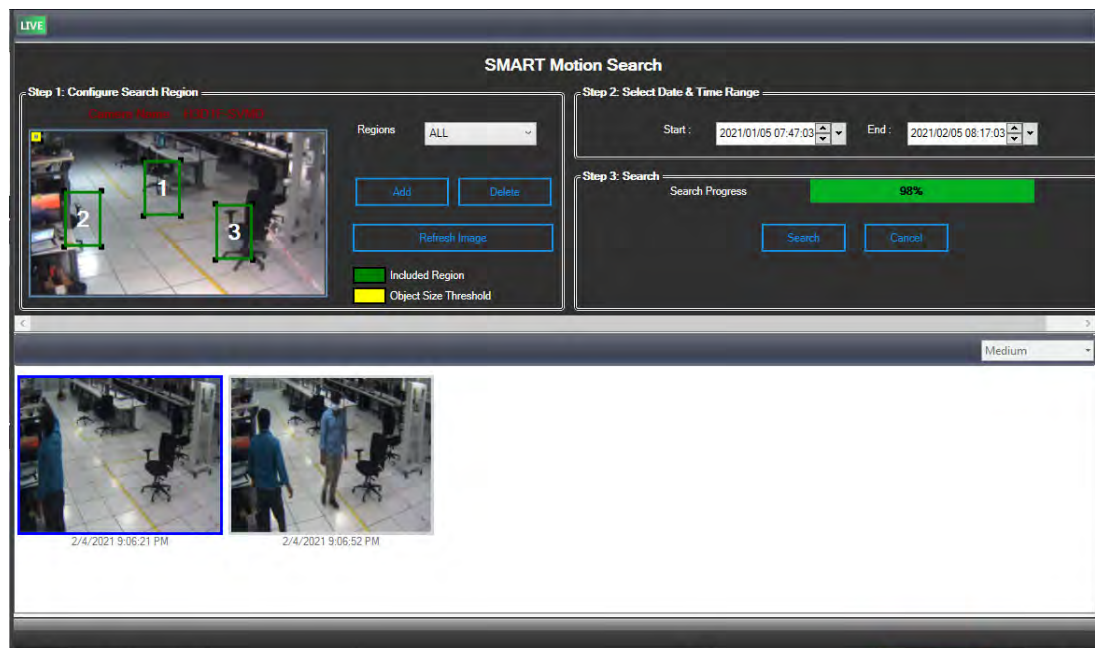
3. In the Step 1: Configure Search Region, click the Add button to create region(s) for search as shown below.



#### Regions Defined

4. Select the required region to display from the Region drop-down. Available options are All, None or (Region 1, 2, 3 and so on). Configure the Object size threshold if required.
5. In the Step 2: Select Date & Time Range, define the start and end date/time from the calendar.
6. In the Step 3: Search, click Search. The progress bar displays the progress of the search. A list of recordings for the particular date and time is displayed in the lower pane as shown below.

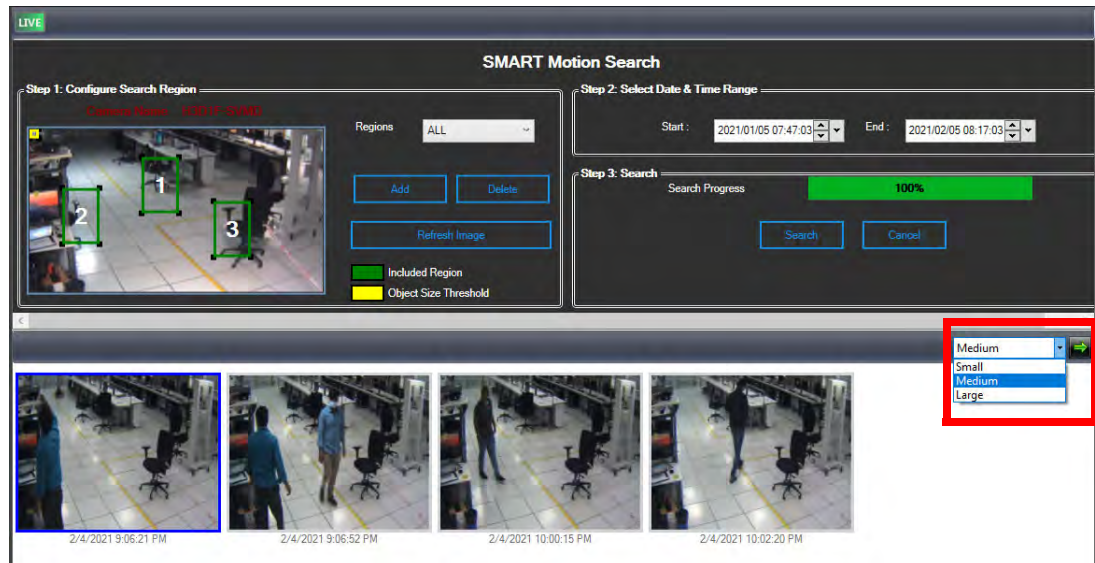
Tip: While the search is in progress you can cancel and modify your search criteria. Such as add one more region, select a different date and time. You can also refresh the image for a better results.



## Recordings for the date and time

**Note:** By default, medium sized recordings are displayed.

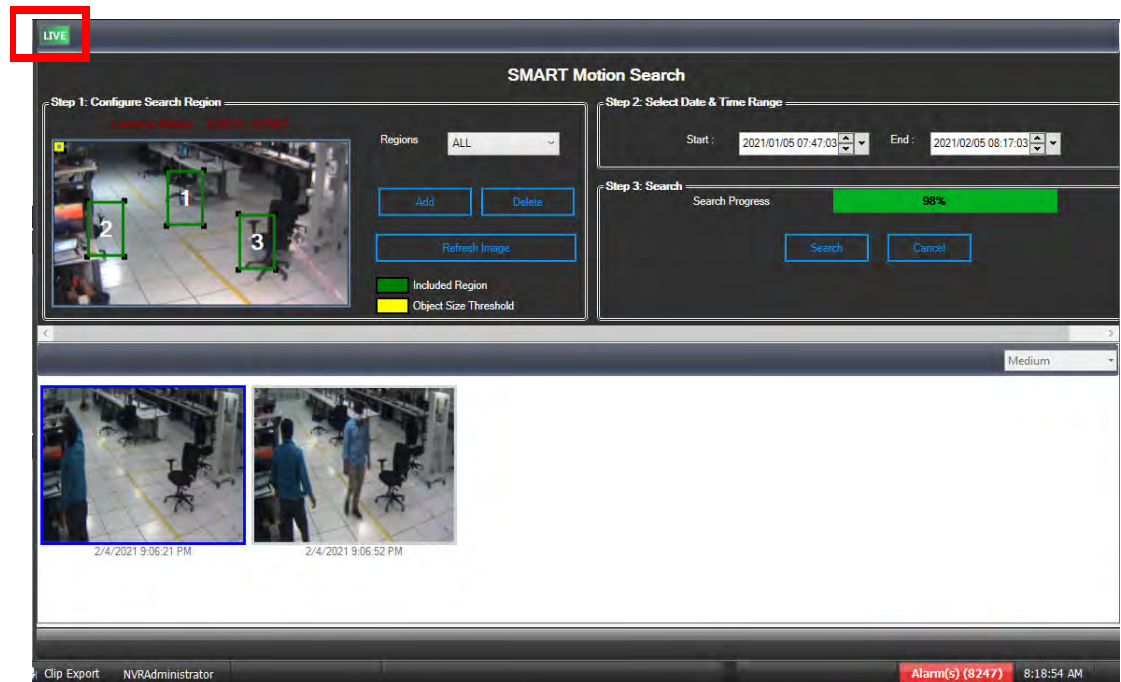
- To view small or large snapshots (recording), select the appropriate option from the drop-down list as shown below.



## Selecting the Large/Small options for the Recordings

## Navigation Tips

- At any point of time, click the Live view icon as shown below to go back to the Live video view.



## Returning to Live Video

## Options Available on the Panel

The following table lists the options available when you right click a panel in the Smart Motion Search view.

| Option        | Description  |
|---------------|--|
| Save Image    | Saves the frame displayed in the panel as an image in the BMP format.                                    |
| Save Image As | Saves the frame displayed in the panel as an image in the other formats such as JPG, GIF, PNG and so on. |
| Show Video    | Displays the video.  |

**Note:**

- This is a client side feature and has no impact on NVR server. Video is downloaded/streamed to the client and SMART Motion search algorithm is executed on the client.
- For 1 hour of 1080p video, it can take up to 10 minutes.
- Include regions are supported in ROI.
- Multiple clients can be used simultaneously for different camera search.

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# GENERATING REPORTS

In this chapter...

| Section  | See page...              |
|--|--------------------------|
| <a href="#">Overview</a>                                 | <a href="#">page 187</a> |
| <a href="#">Generating the Event History Report</a>      | <a href="#">page 188</a> |
| <a href="#">Generating the Operator Log Report</a>       | <a href="#">page 190</a> |
| <a href="#">Viewing, Printing, and Saving the Report</a> | <a href="#">page 191</a> |

## Overview

You can generate two types of reports: Event History report and Operator Log report.

### Event History Report

The event history report can be generated for cameras and recorders. The event history report lists the events related to a device during a time period. For example, for a camera, you can generate the event history report to know the occurrence of events like enabling of camera motion detection, starting of background recording, and others. You can select the device and list of events that you want to view while generating the report.

### Operator Log Report

The operator log report can be generated to view the activities performed by users. The operator log report lists the activities performed by users during a time period. For example, creating clips, adding bookmarks, and other actions performed by a user. You can select the users and the list of activities you want to view while generating the report.



# Generating the Event History Report

- 1. Click the Report tab.
- 2. In the Reports window, select the Event History Report.
- 3. Click Show Report. The Event History Report dialog box appears.

**Event History Report**



- 4. In the Date box, select the date for which you want to view the list of events. The following table lists the options in the Date box:

| Option            | Description  |
|-------------------|--|
| Today             | Event history report for today's events.   |
| Yesterday         | Event history report for yesterday's events.   |
| Last 7 days       | Event history report for the last seven day's events.  |
| Custom Date Range | Event history report between a start date and end date. The From and To boxes under Custom Date Range are enabled when you select this option. You can select the start date in the From box and the end date in the To box. |



- 5. Select the Site.

6. In the Device Types box, select the check box next to the type of device for which you want to generate the event history report. You can select more than one type of device. You can select the Select all check box to select all the device types. Based on the selection in the Device Type box, the list of devices appear in the Devices box. For example, if you have selected Video Inputs in the Device Types box, all the camera names appear in the Devices box.
7. Under Custom Events, select the IO Alarms check box to include the input and output alarms.
8. In the Devices box, select the device for which you want to generate the event history report. The selected devices appear in the Selected Devices box.

To select a device



Select the check box next to the device name and click . You can select more than one device. To select all the devices in the Devices box, click .

To remove a device



Select the check box next to the device name and click . You can select more than one device. To remove all the devices in the Selected Devices box, click .

9. In the Events box, select the events that you want to include in the event history report. The selected events appear in the Selected Events box.

To select a device

Select the check box next to the event name and click . You can select more than one event. To select all the events in the Events box, click .

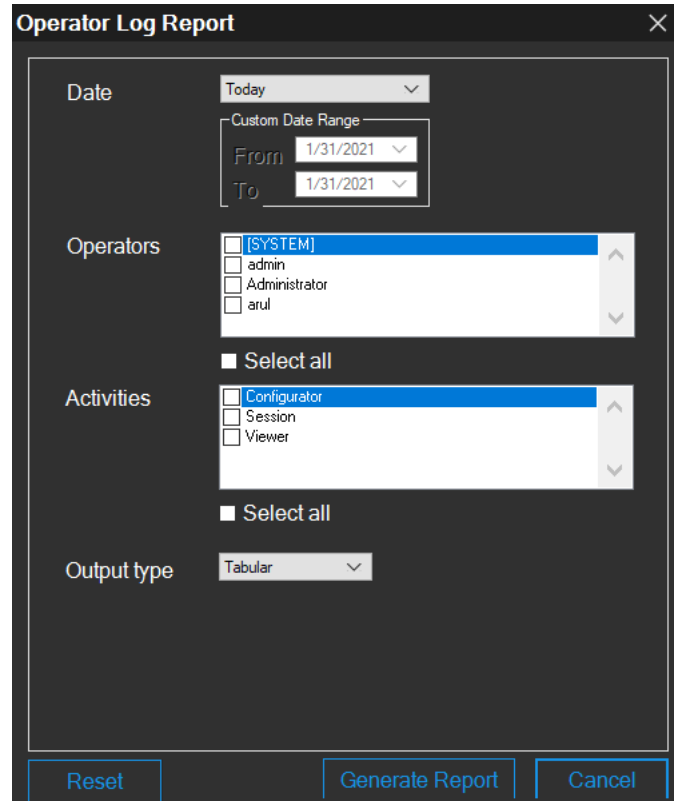
To select a device

Select the check box next to the event name and click . You can select more than one event. To select all the events in the Selected Events box, click .

10. In the Event Severity list, select the severity of the event.
11. Click Generate Report. The event history report is generated and appears in the display area.

# Generating the Operator Log Report

1. Click the Report tab.
2. In the Reports window, select the Operator Log Report.
3. Click Show Report. The Operator Log Report dialog box appears.

The image shows a software dialog box titled "Operator Log Report" with a close button (X) in the top right corner. The dialog is divided into several sections. The "Date" section has a dropdown menu currently set to "Today", and below it, a "Custom Date Range" section with "From" and "To" date pickers, both showing "1/31/2021". The "Operators" section contains a list box with checkboxes next to "[SYSTEM]", "admin", "Administrator", and "arul", with a "Select all" checkbox below. The "Activities" section has a list box with checkboxes next to "Configurator", "Session", and "Viewer", also with a "Select all" checkbox below. The "Output type" section has a dropdown menu set to "Tabular". At the bottom, there are three buttons: "Reset", "Generate Report", and "Cancel".

## Operator Log Report









4. In the Date box, select the date for which you want to view the list of events. The following table lists the options in the Date box:




| Option            | Description   |
|-------------------|---|
| Today             | Operator log report for today's events.   |
| Yesterday         | Operator log report for yesterday's events.   |
| Last 7 days       | Operator log report for the last seven day's events.  |
| Custom Date Range | Operator log report between a start date and end date. The From and To boxes under Custom Date Range are enabled when you select this option. You can select the start date in the From box and the end date in the To box. |

5. In the Operators box, select the check box next to the operators for which you want to generate the operator log report. You can select the Select All check box to select all the operators.
6. In the Activities box, select the check box next to the activities which you want to view in the operator log report. You can select the Select all check box to select all the activities.
7. In the Output type box, select the type of operator log report you want to generate. You can select Tabular to view the operator log report in a table or Graphical to view the operator log report in a graph.
8. Click Generate Report. The operator log report is generated and appears in the display area.

## Viewing, Printing, and Saving the Report

You can use the following options in the toolbar on top of the report:

| Icon  | Click to...   |
|---|---|
|    | Save the report. By default, the report is saved in Crystal Reports (.rpt) format. You can also save the report in Adobe Acrobat PDF (.pdf), Microsoft Excel (.xls), Microsoft Excel Data Only (.xls), Microsoft Word (.doc), and Rich Text (.rtf) formats. |
|  | Print the report.   |
|  | Toggle the display of report names on the left of the display area.   |
|  | View the first page.  |
|  | View the previous page.   |
|  | View the next page.   |
|  | View the last page.   |
|  | Go to a page number.  |

| Icon  | Click to...  |
|---|--|
|  | Search for text in the report.                           |
|  | Enlarge (zoom in) and reduce (zoom out) the report view. |
|  | Close the current view.                                  |

# MAXPRO NVR WEB CLIENT

In this chapter...

| Section  | See page...              |
|--|--------------------------|
| <a href="#">Introducing Web Client</a>               | <a href="#">page 193</a> |
| <a href="#">Logging on to MAXPRO NVR Web Client</a>  | <a href="#">page 195</a> |
| <a href="#">Getting to Know the Web Client Page</a>  | <a href="#">page 197</a> |
| <a href="#">Video Control Options</a>                | <a href="#">page 199</a> |
| <a href="#">Using MAXPRO NVR Web Client Features</a> | <a href="#">page 200</a> |

## Introducing Web Client

The MAXPRO NVR Web Client allows you to remotely access the MAXPRO NVR server and perform video surveillance using a web browser such as Internet Explorer. It gives you the flexibility to view live video and perform the basic video surveillance functions remotely over the web.

MAXPRO NVR Web client is available with MAXPRO NVR 3.1 build 65 or later version. By default MAXPRO NVR installs the Web client and MAXPRO Web Configurator along with the NVR full installation. You can use the web client once you have the NVR 3.1 build 65 or later version.

MAXPRO NVR Web Client functions involve the following tasks:

- Viewing the live video
- Viewing Recorded Video (Playback)
- Taking Snapshot
- Viewing Presets

## Prerequisites to access MAXPRO NVR Server through Web Client

The following are the prerequisites to access the MAXPRO NVR server through Web Client.

- Silverlight: Ensure that Silverlight version 5 and above is installed on your machine. If you don't have the Silverlight plug-in on your machine, you can download it from the following Microsoft link. <http://www.microsoft.com/getsilverlight/Get-Started/Install/Default.aspx>



**Caution:** For better security, close the browser upon logout.

**Note:** *Silverlight plug-in is not supported by Chrome version 42.x or above and Microsoft Edge browser. For better security, close the browser upon logout.*

- Web Browsers Supported on Windows Systems: Ensure that at least one of the following supported web browsers are installed on your PC:
  - Internet Explorer version 8 or above
  - Firefox version 15.0.1 or above
  - Chrome version 32.x to 41.x only.

**Note:** *MAXPRO NVR Web Client is only supported by below Web Browsers on Windows 10 with Silverlight plug-in installed*

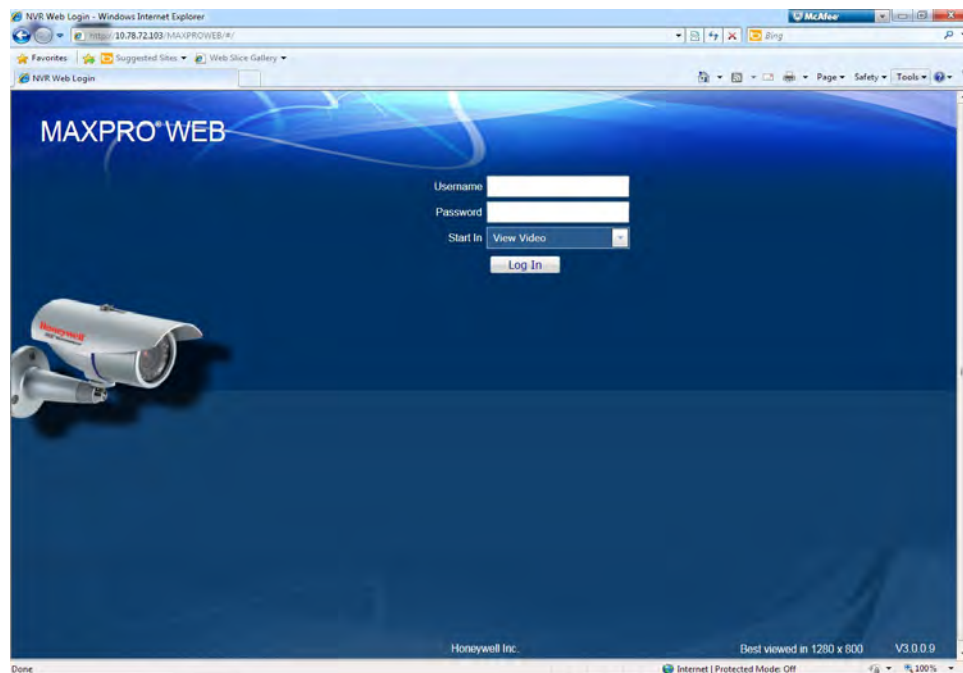
- Internet Explorer version 11 or above
- Firefox version 40 or above
- Web Browsers Supported on MAC systems: Not supported.



# Logging on to MAXPRO NVR Web Client

1. Double-click the MAXPRO NVR Web Client shortcut on the desktop of NVR Server/Client machine  
OR  
Type the URL `https://<MAXPRO NVR Server IP or Machine/Computer name>/MAXPROWEB/` in your web browser and then press Enter. The login page appears.

**Note:** *<MAXPRO NVR Server IP or Computer/Machine name> needs to be replaced by the IP address or computer/machine name (as applicable) of the MAXPRO NVR Server machine on which both the Web Server and NVR Server are installed by default.*



## MAXPRO NVR Login page

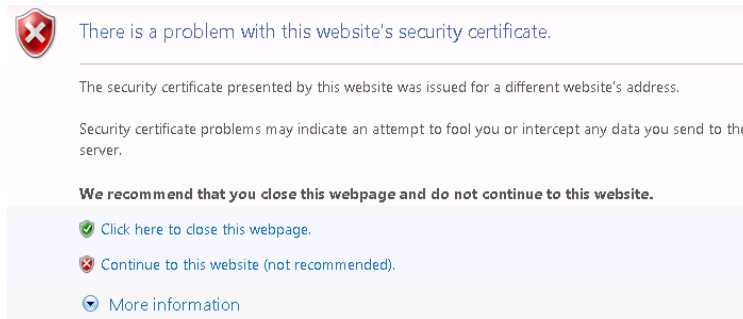
**Note:**

- If Silverlight is not installed on your machine then a message

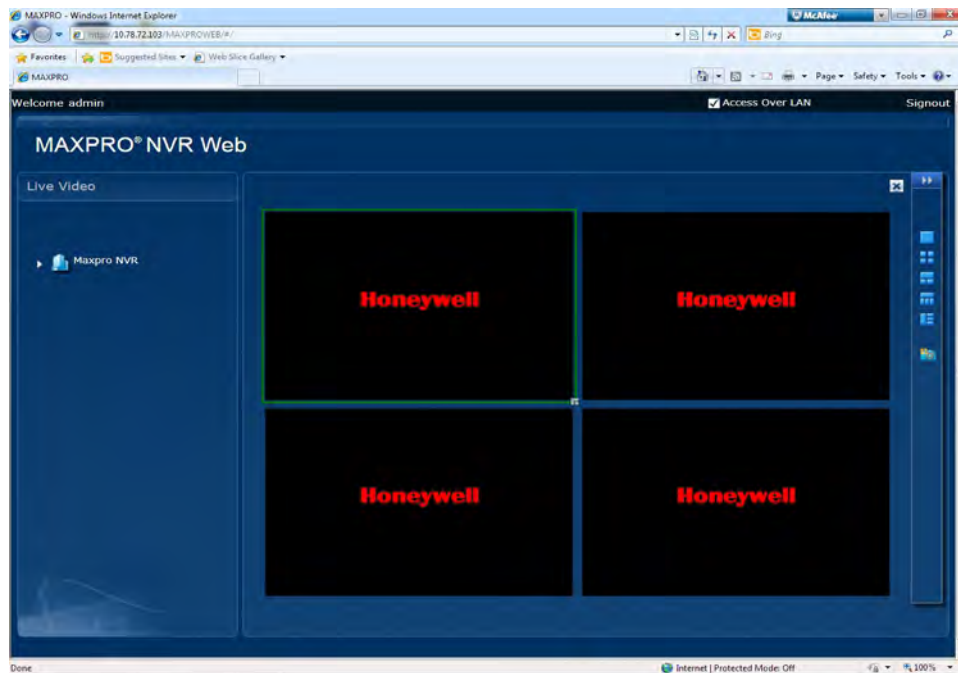


is displayed. If you are using Internet connection then you can click the link Get Microsoft Silverlight to download the Silverlight.

- When you access the MAXPRO NVR server using the URL `https://<MAXPRO NVR Server IP or Machine /Computername>/MAXPROWEB/` then the following message is displayed. Click Continue to this website to proceed. It is recommended to verify the certificate to check whether it is issued by a valid Certificate Authority.



- The above message appears by default when you access the NVR server for the first time. Honeywell recommends you to buy a Domain Name specific certificate, create it and then install it. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for detailed information. Or Refer to the 800-23557-E - *Securing MAXPRO VMS\_NVR Technical Notes* for security settings.
2. Type your Username. The default user name is admin.
  3. Type your Password. The default password is trinity. This is the credential of non-windows user configured in the NVR and the default administrator credentials (Username and Password) which are configured in MAXPRO NVR are, admin and trinity.  
Honeywell recommends to create a new NVR user in the Configurator tab and use the same to logon. Refer to the *MAXPRO® NVR Installation and Configuration Guide*. for more information on how to Add a user.  
By default the Start In drop-down list is selected with View Video option.
  4. Click Login. [MAXPRO NVR Web Page -Initial View](#) appears if your credentials are successfully validated. The name of the currently logged in user is displayed as admin on the top left of the page.



#### MAXPRO NVR Web Page -Initial View

5. Under Live Video pane, click the MAXPRO NVR node. The list of cameras configured in the MAXPRO NVR server is displayed.

**Note:** The list of cameras displayed is based on the user or operator permissions configured in the MAXPRO NVR Server.

## Logging Off

- Click Signout on the top right corner of the page.



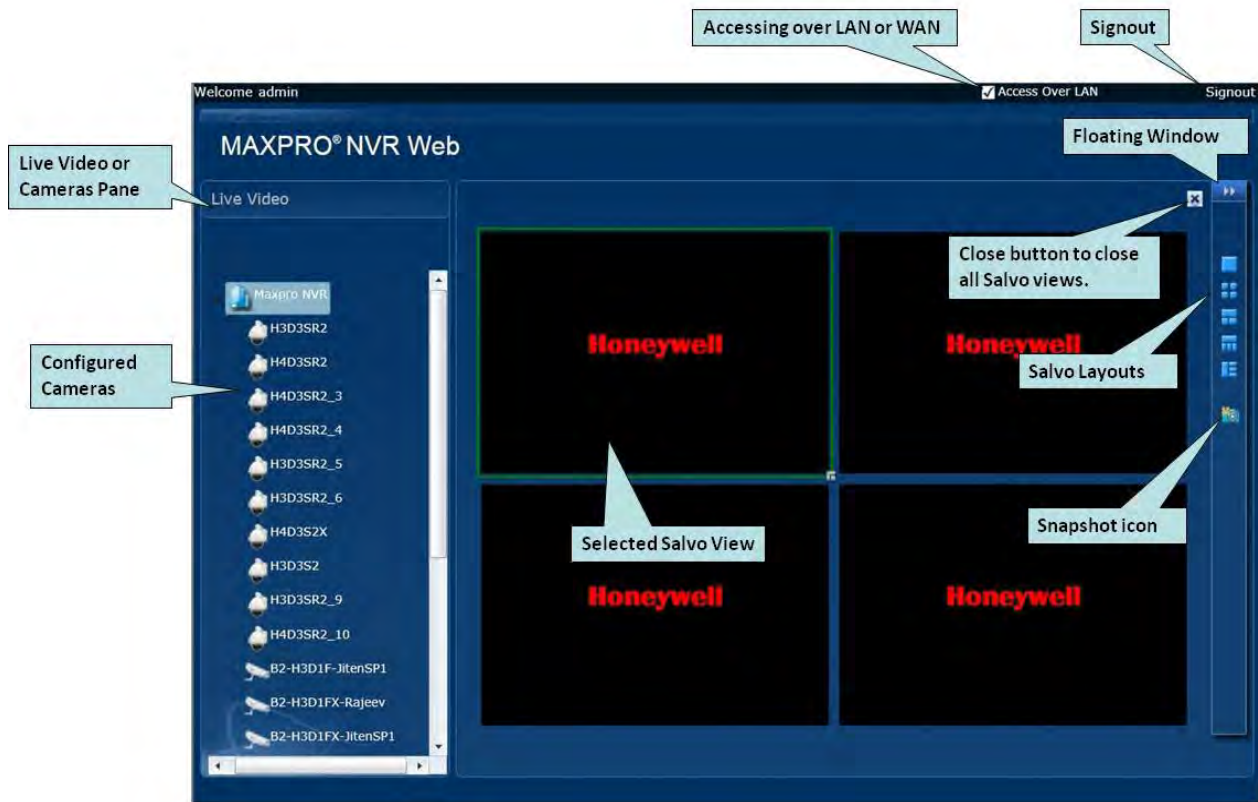
**Caution:** For better security, close the browser upon logout.

## Getting to Know the Web Client Page

The web page of MAXPRO NVR Web client consists of tree-structure, floating window, and icons. On opening the page, you see the following: Live Video Pane and default Salvo view.

# MAXPRO NVR Web Page

The below figure illustrates the MAXPRO NVR Web Page.



## MAXPRO NVR Web Client Page-Familiarization



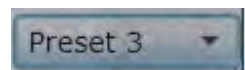




The following components are displayed on the screen.



| Component                 | Description  |
|---------------------------|--|
| Live Video or Camera Pane | Displays the list of cameras which are configured in MAXPRO NVR.   |
| Configured Cameras        | List of configured cameras which are available to render video.<br><b>Note:</b> To view the list of cameras in Live video pane, you should configure the cameras in MAXPRO NVR. Refer to the <i>MAXPRO® NVR Installation and Configuration Guide for Configuring the Cameras</i> . The list of cameras listed is based on the user or operator permissions configured in the MAXPRO NVR. |
| Accessing over LAN or WAN | Select this check box if you want to access web client using LAN connection.<br>Clear this check box if you want to access web client using WAN connection.<br><b>Note:</b> By default this check box is selected when you login the web client page.  |

| Component       | Description  |
|-----------------|--|
| Salvo Layout    | An arrangement of panels in which video is displayed. Select the required layouts to view the video. The Salvo views can be resized. See the <a href="#">Resizing the Salvo</a> section on page 202. |
| Snapshot Icon   | Click to take a snapshot of entire salvo layout.   |
| Floating Window | Click to display different salvo layouts and snapshot icon. You can select the required salvo view to view the video in the panel.   |
| Close Button    | Click to close all the panel at once.  |

## Video Control Options

The toolbar that appears on top of a panel enables you to view the name of the video source and take snapshot for a particular video panel. The toolbar that appears on the bottom and on the right of a panel consists of icons that enable you to perform the following actions:

| Icon  | Click to...   |
|---|---|
|    | Set the date and time for playback. See the <a href="#">Viewing Recorded Video</a> section on page 202.   |
|  | View the live video. See the <a href="#">Live Video</a> section on page 200.  |
|  | Displays a drop-down list of presets. You can select a preset for the camera. See the <a href="#">Viewing Presets</a> section on page 204.                                    |
|  | Display the playback settings. See the <a href="#">Viewing Recorded Video</a> section on page 202.  |
|  | View the live video while you are in playback. See the <a href="#">Viewing Recorded Video</a> section on page 202.  |
|  | Take a snapshot for the required panel. You can view this icon when you hover the mouse on the top of a panel. See the <a href="#">Taking a Snapshot</a> section on page 204. |
|  | Close the required panel. You can view this icon when you hover the mouse on the top of a panel   |

| Icon  | Click to...   |
|---|---|
|  | Select the required salvo view to arrange the panels.<br>See the <a href="#">Resizing the Salvo</a> section on page <a href="#">202</a> . |
|  | Close all the panels in a salvo layout.   |

## Using MAXPRO NVR Web Client Features

MAXPRO NVR Web Client features includes viewing live video, playback, taking snapshots and viewing presets.

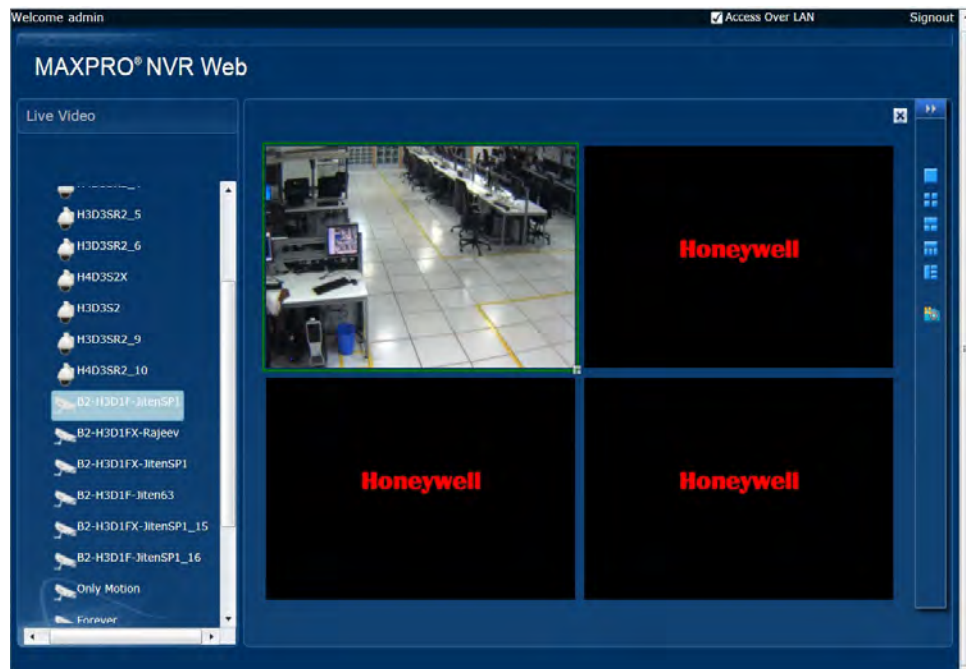
### Live Video

You can view live video using the option available in MAXPRO NVR web client. The panels in the salvo layout display video. You can select the video source from cameras on the Live Video pane.

To view the list of cameras in Live video pane, you should configure the cameras in MAXPRO NVR. Refer to the *MAXPRO® NVR Installation and Configuration Guide for Configuring the Cameras*. The list of cameras listed is based on the user or operator permissions configured in the MAXPRO NVR.

To view live video

- Drag and drop the required video source from the Live video pane on a panel in the salvo layout.



#### Web Client - Live Video

**Note:** Anonymization is not supported in Web. If user is tries to see Anonymized video and also camera Anonymized option is enabled then an error message “Trying to access Anonymized Stream” is displayed.

## Troubleshooting Tip

If the video is not streaming through web client then perform the below steps to reset Internet Explorer (browser) to default settings except user specific settings like favorites, bookmarks etc:

1. In Internet Explorer navigate to Tools -> Internet Options -> Advanced tab and then click the Reset button. The Reset Internet Explorer Settings dialog box appears.
2. Select 'Delete personal settings' check box and then click the Reset button.



3. Close and then open the Internet explorer.

**Note:** MAXPRO NVR Web Client supports streaming quality resolution up to 1080p. Cameras configured above 1080p resolution are not supported. If you drag and drop a camera configured with megapixel resolutions (above 1080p) then a message appears and video is not displayed as shown below.



You can view live video in different panels of the salvo layout. When you hover the mouse over a video display, a toolbar appear over the panel. The toolbar enables you to perform actions such as Playback, Live video, taking snapshots and viewing Presets.

**Note:** Each MAXPRO NVR box has a limit of 64 streams for live and a limit of 32 streams for playback feature. Even if the same camera is opened for live in multiple web clients then it consumes only 1 stream. Each playback function consumes 1 additional stream always.

## Resizing the Salvo

You can view the salvo layout when you select the available options on the floating window tab. At a time, you can select one of the salvo layout .For example: If you want to view video from two cameras, select a salvo layout with two or more panels.

- Click the required salvo layout options available on the floating window.

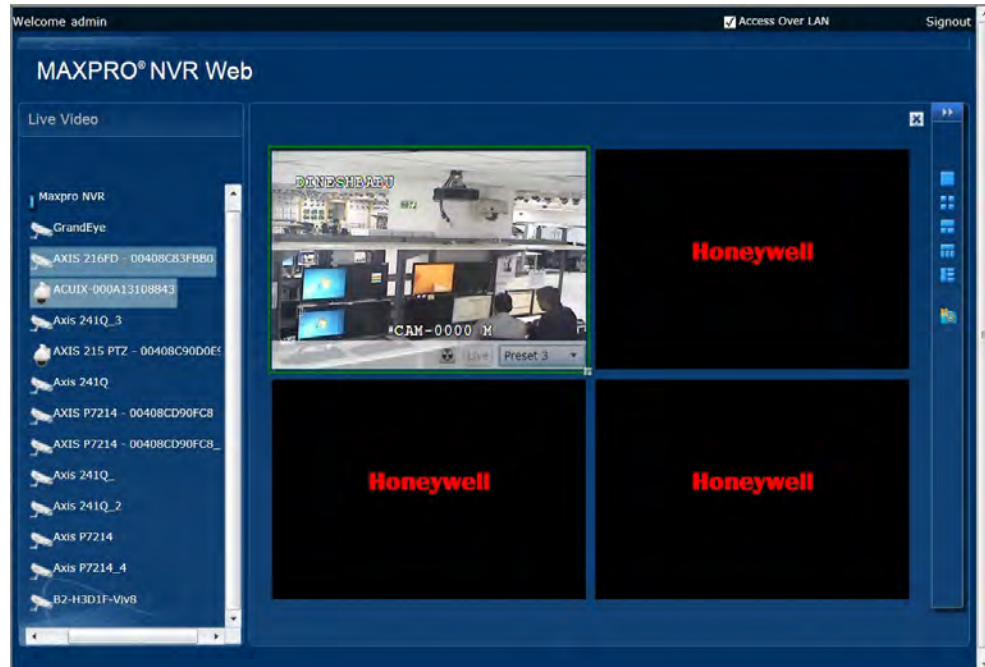
## Viewing Recorded Video

You can easily retrieve and view recorded video using the date and time controls in the panel toolbar. When you select a camera from the live video pane to view video, a toolbar appears.


**Note:** Each MAXPRO NVR box has a limit of 64 streams for live and a limit of 32 streams for playback feature. Even if the same camera is opened for live in multiple web clients then it consumes only 1 stream. Each playback function consumes 1 additional stream always.

To play recorded video

1. Drag and drop a camera from the Live video pane into the panel.
2. Hover the mouse at the bottom of a panel over live video. A tool bar appears.



#### Web Client - Playback

3. Click .
4. Select the date and time in the date and time calendar box



and then click . The video recording is played from the selected date and time.

**Note:** When an Operator (non-admin) logs into the Web Client and tries to view playback for any video then an error message “Four Eye authentication Privilege Failure” is displayed.

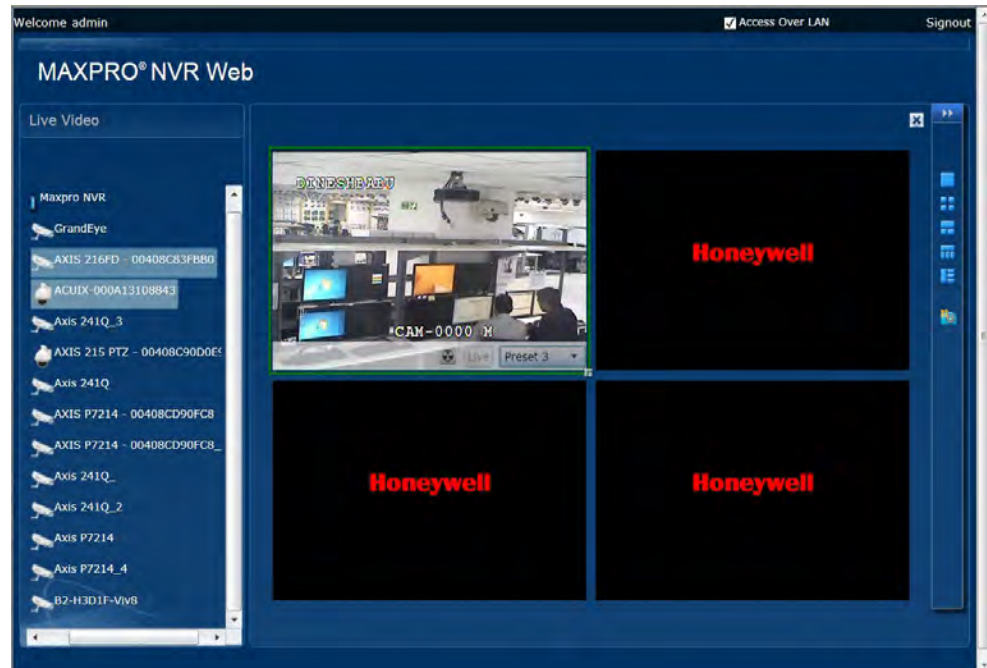
#### Navigation Tip

At any point of time, click  to go back to the Live video view.

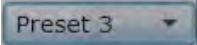
## Viewing Presets

Preset can be viewed in web client if the camera is a PTZ camera. To view Presets in web client you need to define the presets in MAXPRO NVR. To configure presets in MAXPRO NVR, Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information to configure the presets.

1. Hover the mouse at the bottom of a panel over live video. A tool bar appears.



### Web Client - Presets


2. Click  and then select the required preset from the drop-down list to view the configured preset.

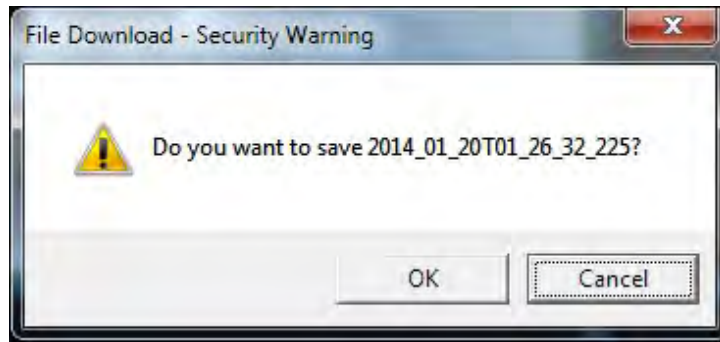
To view Presets in web client you need to define the presets in MAXPRO NVR. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information to configure the Sequence.

## Taking a Snapshot

You can take snapshot of the single video panel in a salvo and also all video panels in a salvo.

**Note:** Snapshot feature is not supported on Mac and print screen feature in Mac can be used alternatively.


1. Click  on the right most pane of the web page. A confirmation message appears.

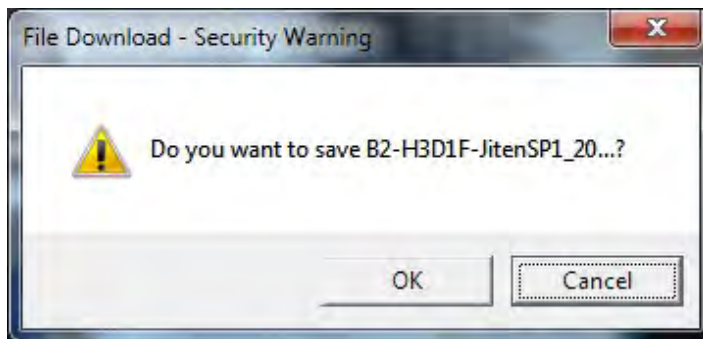


**Confirmation dialog - All Salvo Views**

2. Click OK to save the snapshot.

## To take snapshot of the single video panel

1. Hover the mouse at the top of a panel over a live a video. A tool bar appears.
2. Click . A confirmation message appears



**Confirmation dialog - Single Video Panel**

3. Click OK to save the snapshot.

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# USING THE MAXPRO NVR MOBILE APP

In this chapter...

| Section  | See page...              |
|--|--------------------------|
| <a href="#">Introduction</a>                                   | <a href="#">page 207</a> |
| <a href="#">Viewing Live Video</a>                             | <a href="#">page 215</a> |
| <a href="#">Creating and Viewing Salvo Views and Favorites</a> | <a href="#">page 221</a> |
| <a href="#">Viewing Live Video in Full Screen Mode</a>         | <a href="#">page 229</a> |
| <a href="#">Video Viewing options</a>                          | <a href="#">page 231</a> |
| <a href="#">Searching for Recorded Video and Playback</a>      | <a href="#">page 233</a> |
| <a href="#">Alarms</a>   | <a href="#">page 234</a> |
| <a href="#">Viewing the Alarms and Alarm Details</a>           | <a href="#">page 235</a> |
| <a href="#">Acknowledging or Removing Alarms</a>               | <a href="#">page 237</a> |
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## Introduction

The MAXPRO® NVR Mobile app allows you to connect to a MAXPRO NVR from a remote location. Use the app to perform common daily tasks such as:

- Configure and Logon using Touch ID (For Fingerprint recognition supported mobile device only). Fingerprint Authentication login is supported for both Android and IOS devices.
- HIS Streaming support where you can view live video if you have not installed valid/trusted certificate.
- One time configuration for both Local and Remote connection.
- Live video view to monitor your house, facility, customers or employees.

- Live video view to monitor your house, facility, customers or employees.
- Digital zoom in and zoom out for full screen view in landscape or portrait.
- Playback or search for recorded video by date and time.
- Take a snapshot of a live or recorded video frame and use as an image.
- Create favorite salvos (cameras up to 3x3 on tablets and 2x4 on phones per salvo).
- Perform PTZ control through Presets.
- Monitor & Manage Alarms.



## Enhancements in NVR 5.0 Release

- Support for New Mobile app versions
  - For Android: 1.3.0 (100030004)
  - For IOS: 1.3.0 (100030001)
- New Supported OS: minSDKVersion = 21

Download the FREE app at the Apple® iTunes® App Store or Google Play and search for MAXPRO NVR. For NVR 3.5 SP1 or older version search for: MAXPRO Mobile.

The following table explains the features available in MAXPRO NVR Apps and MAXPRO Mobile Apps:



| FEATURES   |  MAXPRO NVR APPS |  MAXPRO MOBILE APPS |
|--|---|--|
| Live View  | ✓   | ✓  |
| Supported MAXPRO NVR version                                 | v4.0 or later   | v3.5 SP1 or earlier  |
| Playback or search by date & time                            | ✓   | ✓  |
| Snapshot image   | ✓   | ✓  |
| PTZ Control  | Presets   | —  |
| Discover and list cameras                                    | ✓   | ✓  |
| Maximum cameras supported in salvo view                      | Phone: 2 x 4<br>Tablet: 3 x 3   | 2 x 2  |
| Full screen view   | ✓   | ✓  |
| User authentication and permissions integrated with recorder | ✓   | ✓  |
| Save Favorites/Salvos  | ✓   | —  |
| Alarms/Events  | ✓   | —  |
| Secure Login   | https   | http   |
| Mobile server deployment                                     | Included with NVR Server v4.0 or later  | Included with NVR Server v3.5 SP1 or earlier   |
| <b>SUPPORTED MOBILE DEVICES</b>                              |   |  |
| Apple® iPad®, iPhone® and iPod touch®                        | ✓   | ✓  |
| Android® Phone and Tablet                                    | ✓   | ✓  |

NOTE: For more details, please check the MAXPRO NVR product manuals.

Apple, iPhone, iPad, iPod touch and iTunes are trademarks of Apple Inc.  
Android® is a registered trademark of Google.

## Adding the MAXPRO NVR to the MAXPRO NVR Mobile app

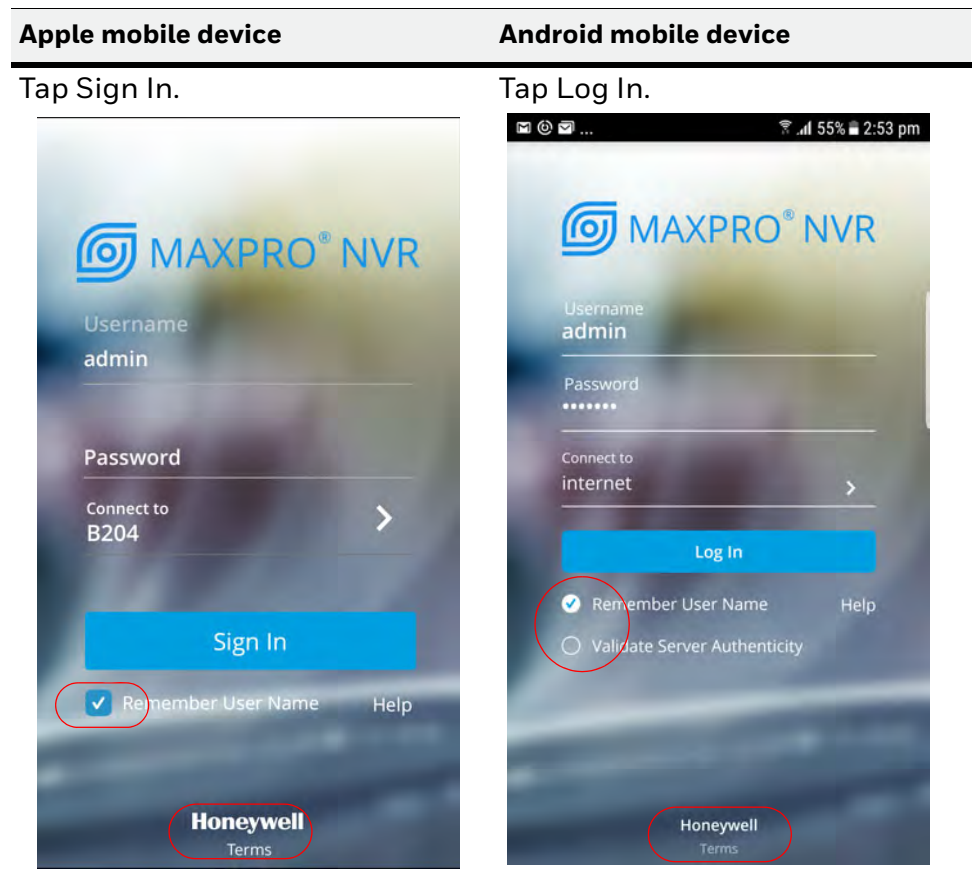
- Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information on How to Add MAXPRO NVR to the Mobile app.)

## Logging On

To Log on:

- You can Log on in two ways, Manual and Finger Print Touch ID. (Finger Print Touch ID logon is supported for both Android and IOS devices).
- For Manual Logon:
    - In the Username field enter the name that was created for the mobile device user in MAXPRO NVR. Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information on Creating Users for the MAXPRO NVR Mobile app.
    - In the Password field enter the appropriate password.

- Under Connect to, ensure that your Recorder is selected or tap > to connect to a different recorder.
- Select the Remember User Name check box If you want the app to remember the User Name for your future login.
- (Only for Android Devices): Select the Validate Server Authenticity check box If you want to validate the server.
- Tap on Terms at the bottom of the screen to read the EULA terms and conditions.



- For Touch ID logon, see [Logon using Touch ID \(Fingerprint Authenticated\)](#) for more information.

## Logon using Touch ID (Fingerprint Authenticated)

Touch ID logon (For Fingerprint recognition supported mobile device only): This feature is supported for fingerprint secured Android and IOS mobile devices. Maximum of 5 users fingerprints can be configured per mobile device. The first login should be manual login and you need to enter the credentials manually. After that the succeeding logins can be based on fingerprint authentication. The Fingerprint authentication logon option is displayed after the first manual login. You can see the fingerprint icon on the bottom left corner of the login screen. Touch ID logon feature is supported for both Android and IOS devices.

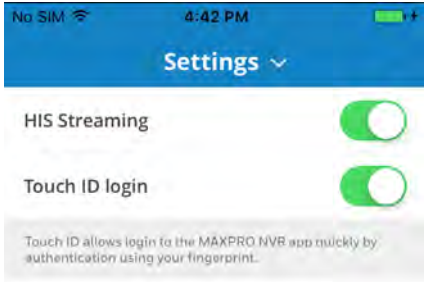

Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information on How to configure Logon using Touch ID.)

## Enable HIS Streaming

HIS Streaming feature allows you to view the live video even if you don't have a valid certificate installed on the server for secure connection. You can still view the live video frame by frame to ensure your surveillance process is smooth and continuous. By default, HIS Streaming feature is enabled in the app. This feature detects your trusted certificate status automatically and intimates if you are viewing live video through HIS Streaming. You can use HIS streaming in the following scenarios:

- if you have not installed a valid/trusted certificate on the Server.
- if your trusted certificate is expired.



By default, HIS Streaming is enabled in the Settings screen as shown below.


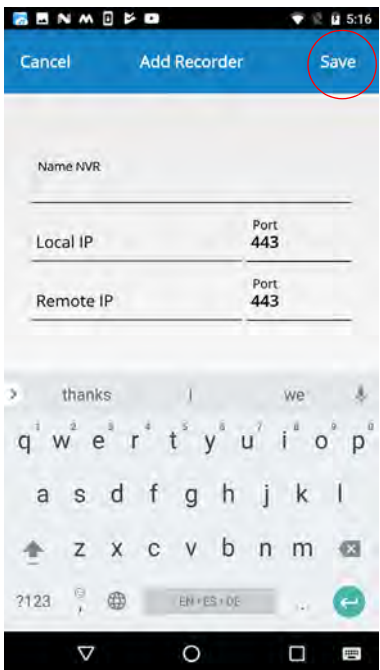
| Apple mobile device  | Android mobile device  |
|--|--|
|  |  |

## Adding Multiple NVR Servers

To add additional NVR on the mobile app:


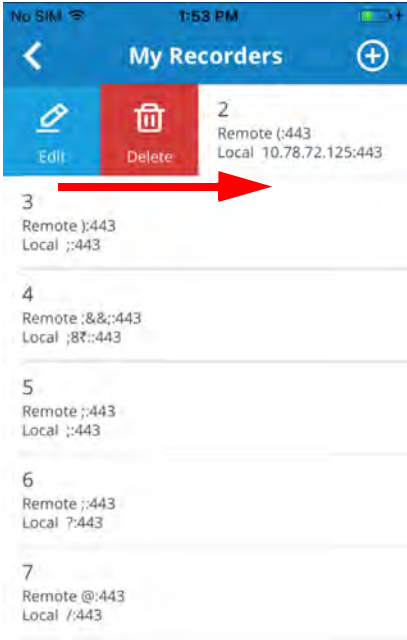

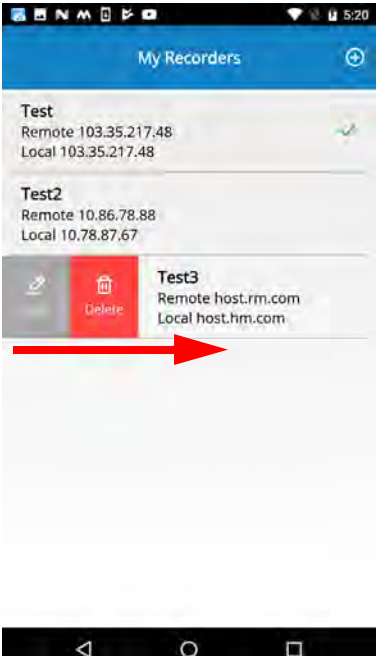
**Note:** Maximum 20 NVR configurations are allowed.

1. Tap  on the login screen. The list of already saved NVRs under My Recorders screen is displayed.
2. Tap . The Add Recorder screen is displayed.
3. Add the MAXPRO NVR Recorder as follows:
  - In the NVR Name field, type the name (For example Demo/Site name) for the NVR.
  - In the Local IP field, type the local IP address/Host name of the unit.
  - In the Remote IP field, type the remote IP address/Host name of the unit.
  - Type the Port number. The default port number is 443.
4. Repeat the step 1 through step 3 to add multiple NVR Recorders

| Apple mobile device   | Android mobile device   |
|---|---|
| Tap Save to complete adding NVR Recorder.   | Tap Save to complete adding NVR Recorder.   |
|  |  |

# Editing NVR Recorder Details

To edit the NVR Recorder details:

| Apple mobile device   | Android mobile device   |
|---|---|
| <p>Tap . The already saved NVRs are displayed.</p> <p>On the required NVR recorder, gently swipe to right-side. The <b>Edit</b> and <b>Delete</b> options are displayed as shown.</p>  | <p>Tap . The already saved NVRs are displayed.</p> <p>On the required NVR recorder, gently swipe to right-side. The <b>Edit</b> and <b>Delete</b> options are displayed as shown.</p>  |

## Apple mobile device

Tap on **Edit**. The **Edit Recorder** screen is displayed.  
Modify the required details.  
Tap **Save** once you modify the details.

Cancel Edit Recorder Save

NVR Name  
2

Local IP Port  
10.78.72.125 443

Remote IP Port  
19.18.17.16 443

## Android mobile device

Tap on **Edit**. The **Edit Recorder** screen is displayed.  
Modify the required details.  
Tap **Save** once you modify the details.

Cancel Edit Recorder Save


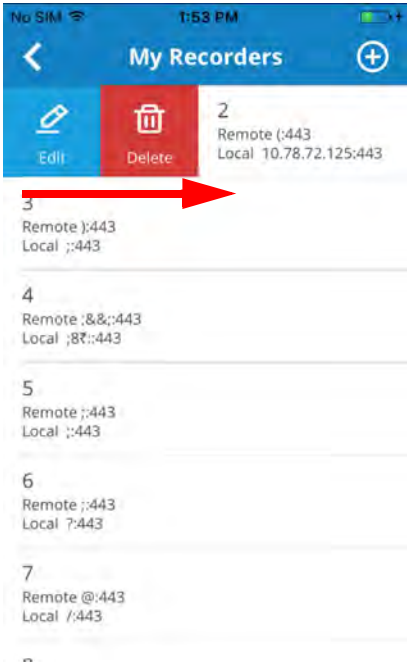

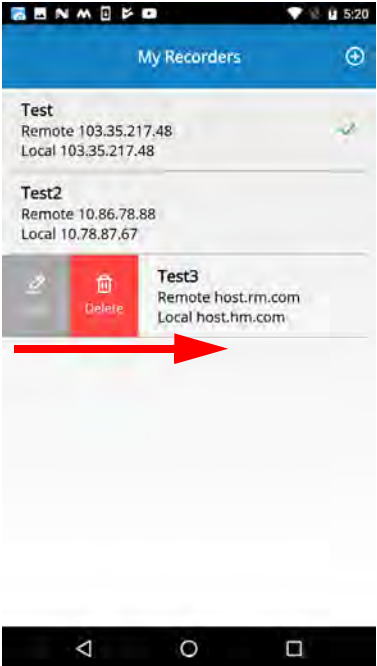
Name NVR  
Test3

Local IP Port  
host.hm.com 443

Remote IP Port  
host.rm.com 443

# Deleting the Saved NVR Servers

To delete the saved NVR servers:

| Apple mobile device   | Android mobile device   |
|---|---|
| <p>Tap . The already saved NVRs are displayed.</p> <p>On the required NVR recorder, gently swipe to right-side. The <b>Edit</b> and <b>Delete</b> options are displayed as shown.</p> <p>Tap <b>Delete</b> to delete the existing NVR server. A warning message is displayed.</p> <p>Tap <b>Yes</b> to delete Or Tap <b>Cancel</b> to retain.</p>  | <p>Tap . The already saved NVRs are displayed.</p> <p>On the required NVR recorder, gently swipe to right-side. The <b>Edit</b> and <b>Delete</b> options are displayed as shown.</p> <p>Tap <b>Delete</b> to delete the existing NVR server. A warning message is displayed.</p> <p>Tap <b>Yes</b> to delete Or Tap <b>Cancel</b> to retain.</p>  |

## Viewing Live Video

The MAXPRO® NVR Mobile app features a single camera or multiple camera view. When you login, the live view screen displays in the default salvo view as shown below. It may take a few seconds for the cameras to be discovered. The cameras that were associated with the mobile app user (Refer to the *MAXPRO® NVR Installation and Configuration Guide* for more information on Selecting the Cameras to be viewed Remotely or Local.) are listed at the bottom in the Camera List panel.

### Limitation with Privacy Protection Settings

- If Anonymization is enabled in NVR application, then user will not be able to see the video in MAXPRO Mobile App/Web client. An error message is displayed. Anonymization is not supported in Web. If user is tries to see Anonymized video

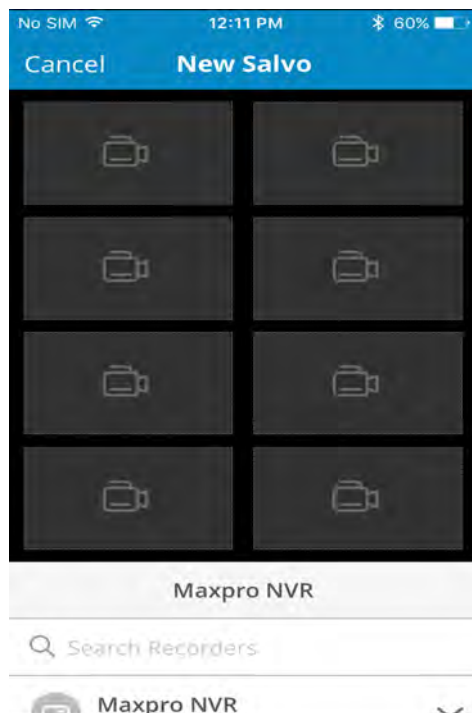


and also camera Anonymized option is enabled then an error message “Trying to access Anonymized Stream” is displayed.

- If Four Eye Authentication option is enabled in NVR application then user will not be able to view playback video in MAXPRO Mobile App/Web client. When an Operator (non-admin) logs into the Web Client and tries to view playback for any video then an error message “Four Eye authentication Privilege Failure” is displayed.

## Apple mobile device

## Android mobile device



If you have already configured the salvo layout then the viewing panel displays the videos as shown below.

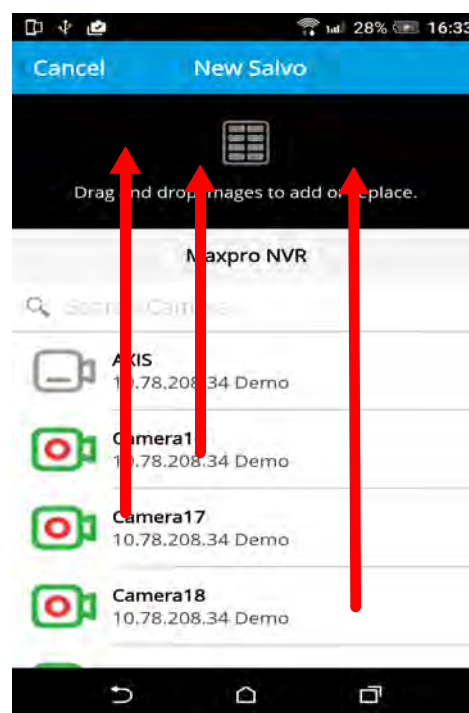
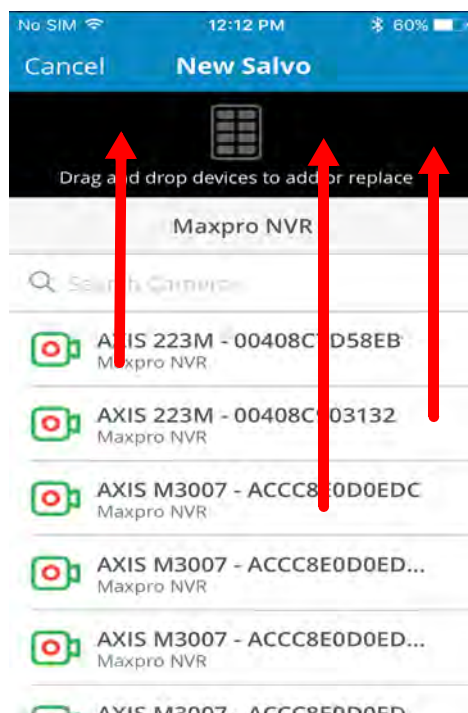


If you have already configured the salvo layout then the viewing panel displays the videos as shown below



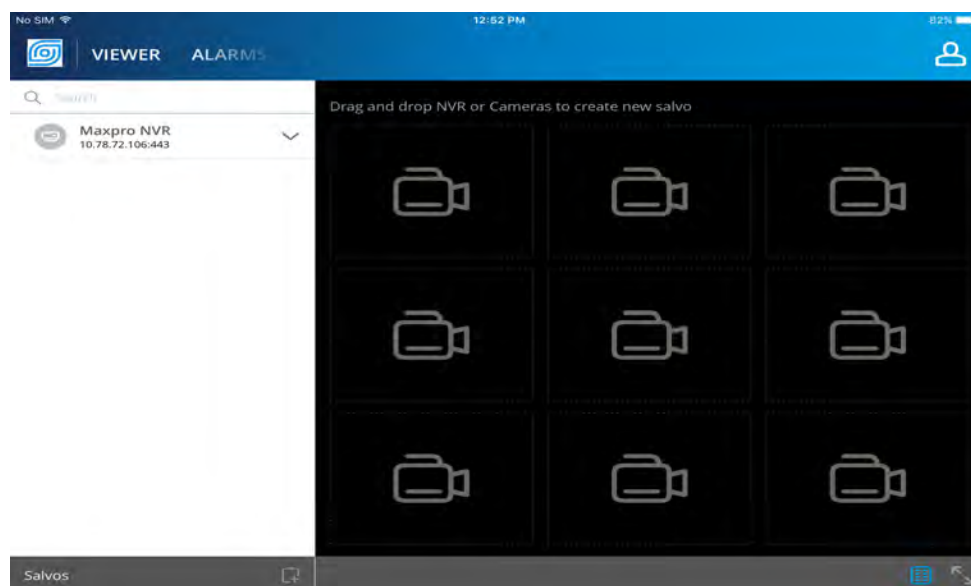
To view live video, tap on the list of cameras on the bottom of screen and then drag and drop a camera in to a viewing panel as shown below.

| Apple mobile device | Android mobile device |
|---------------------|-----------------------|
|---------------------|-----------------------|

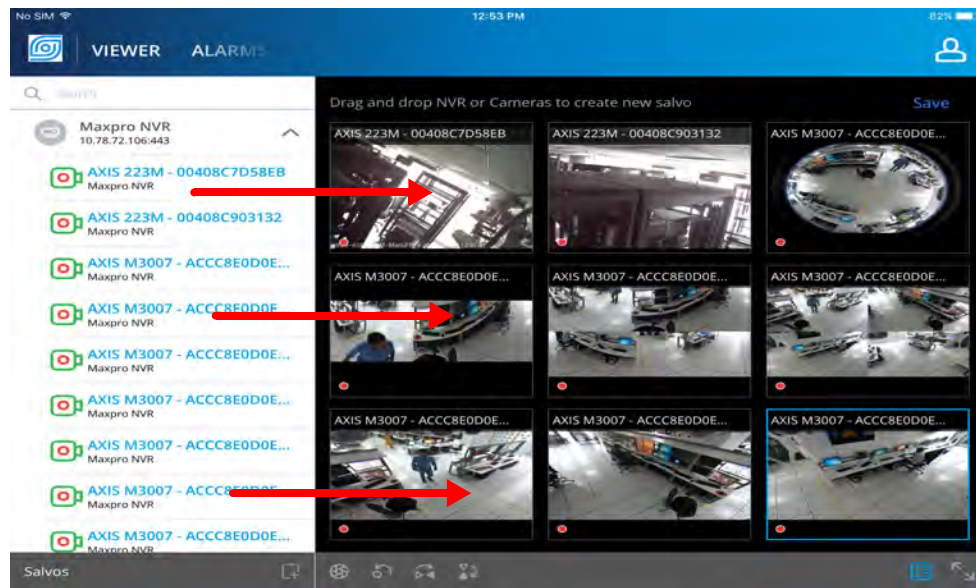


## Ipad Device

In Ipad you can view 3x3 salvo and allows you to add nine cameras as shown below.



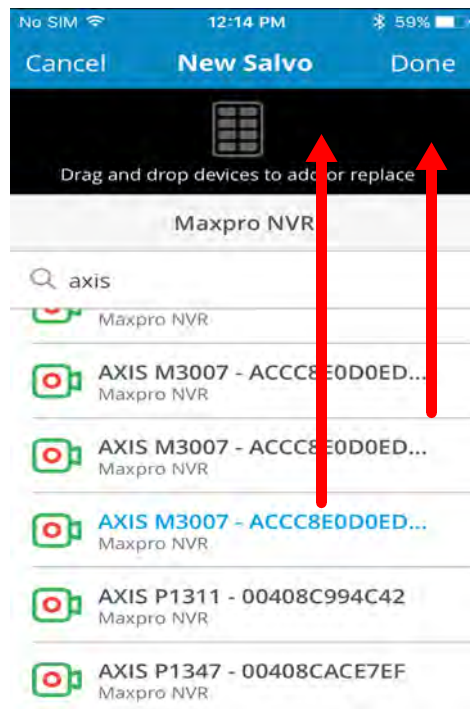
Drag and drop required cameras to view the live video.



To search and view the required camera, tap on the search area and then type the camera name. The corresponding camera list is displayed as shown below.

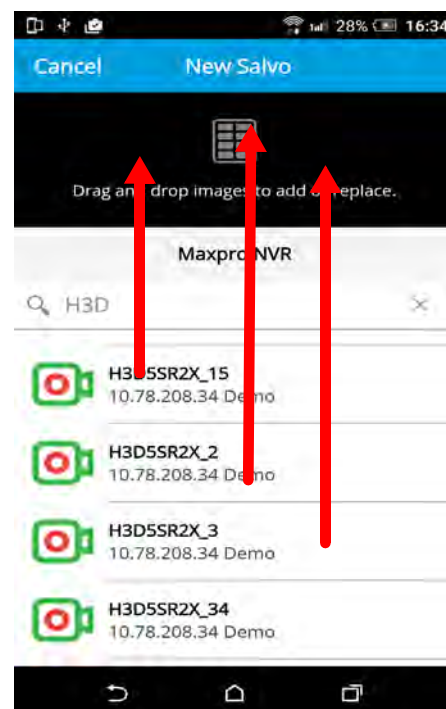
#### Apple mobile device

Drag and drop the camera and then tap **Done**.



#### Android mobile device

Drag and drop the camera and then tap **Done**.



Limitation in Viewing video with Privacy Protection Settings

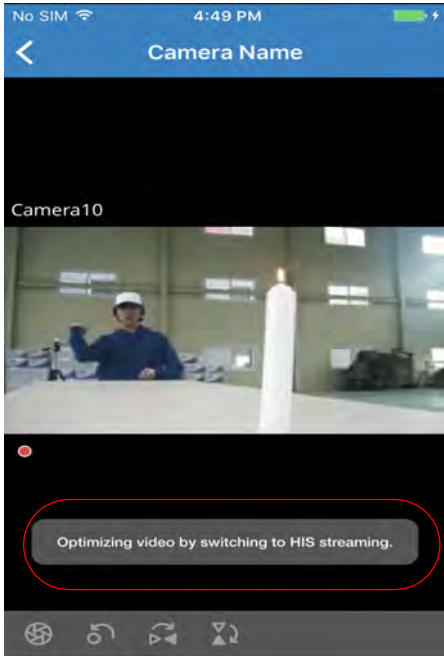
- If Anonymization is enabled in NVR application then user will not be able to see the video in MAXPRO mobile app/Web client and an error message is displayed.
- If Four eye authentication option is enabled in NVR application then user will not be able to view playback video in MAXPRO mobile app/Web client

Viewing HIS Stream

By default HIS Streaming feature is enabled in the app. This feature is applicable only to view live video in full screen or in 1x1 salvo layout. In a multiple salvo layout by default all the cameras are under HIS streaming mode. Based on your certificate validation this feature triggers and displays the live video with a message Optimizing video by switching to HIS Streaming as shown below.

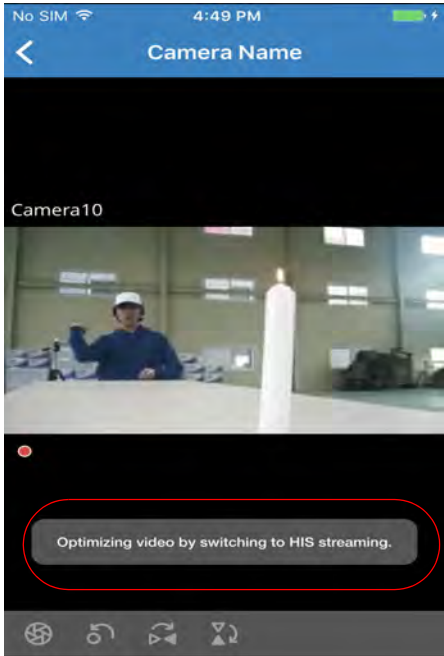
Apple mobile device

HIS Streaming Live video with a message as highlighted below.

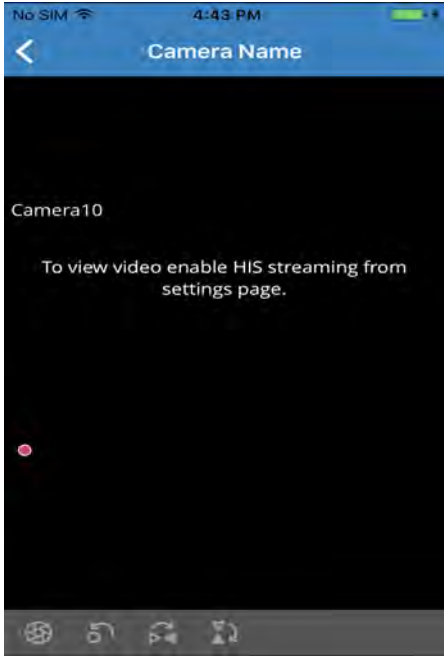
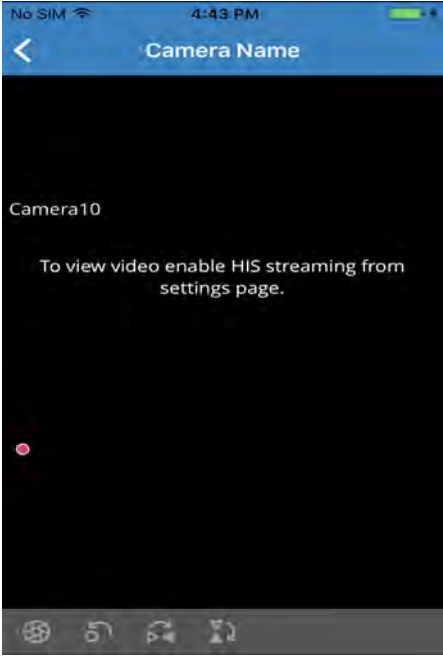


Android mobile device

Drag and drop the camera and then tap **Done**.



If the HIS Streaming is not enabled in the app then the following message is displayed when you drag and drop a camera or try to view video in full screen.


| Apple mobile device  | Android mobile device   |
|--|---|
| A message displays when HIS Streaming is not enabled.                              | Drag and drop the camera and then tap <b>Done</b> .                                 |
|  |  |

## Creating and Viewing Salvo Views and Favorites

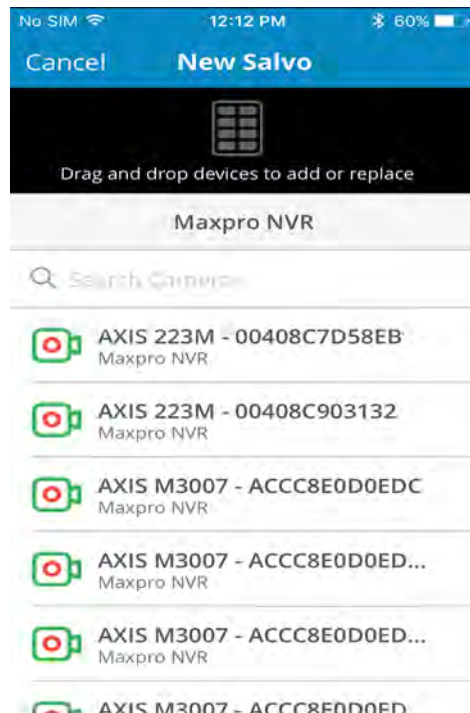
For a first time user, by default the New Salvo screen is displayed. Drag and drop the required cameras on to a viewing panel and then tap Done.

Or

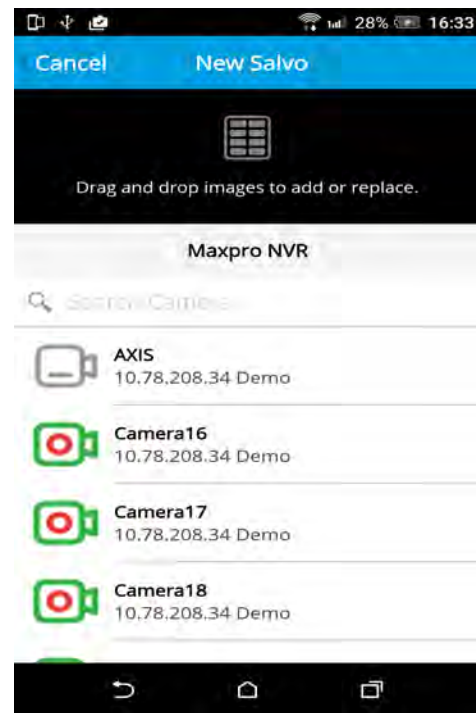


Tap  at the bottom of the screen to create a new salvo layout.

#### Apple mobile device



#### Android mobile device



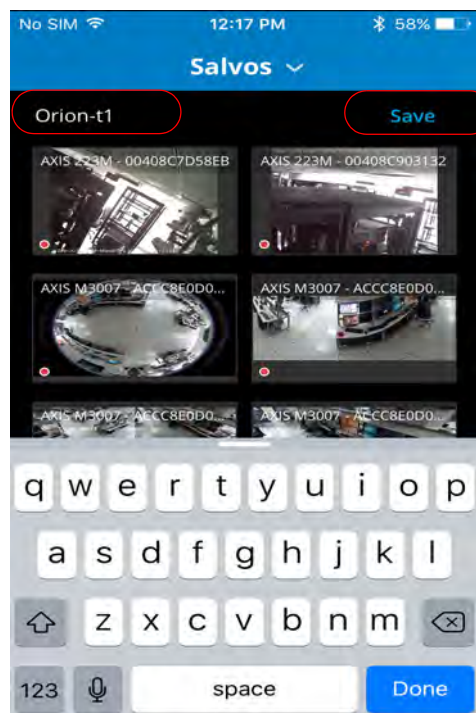
Enter the name of the Salvo view and then tap on Save as shown below.

**Note:**

- The salvo view is created based on the number cameras moved to viewing screen. For example if you drag and drop three cameras then the salvo is created as 2 by 2 view. But the fourth camera will be blank.
- Maximum 10 favorites can be saved.

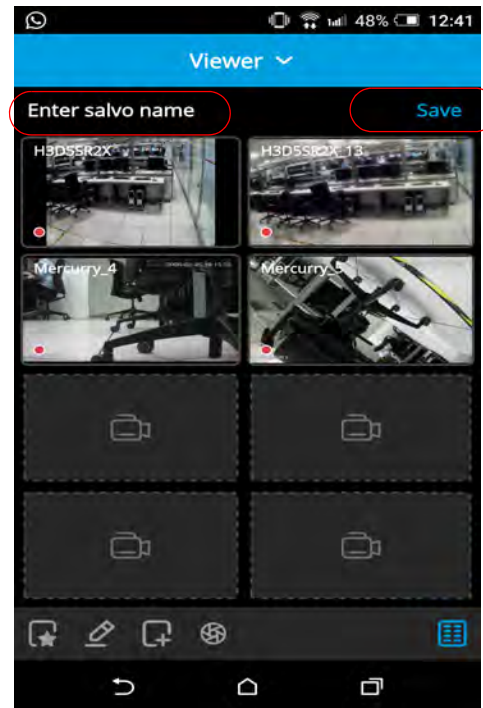


## Apple mobile device




## Android mobile device

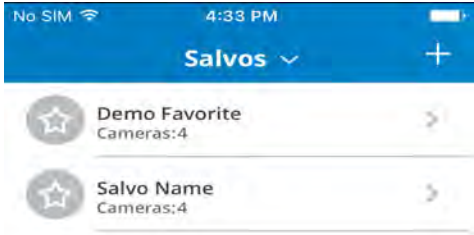
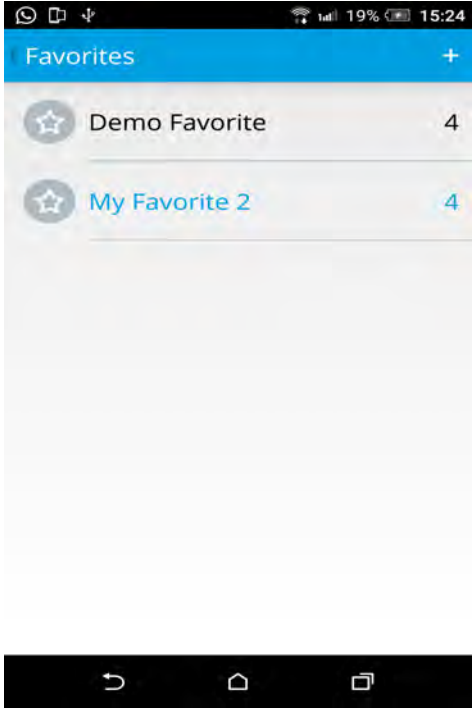
Double tap on the name field to enter the new







name.




A salvo layout is created and saved under Favorites.

To view the list of saved favorites, tap . The list of favorites are displayed as shown below.

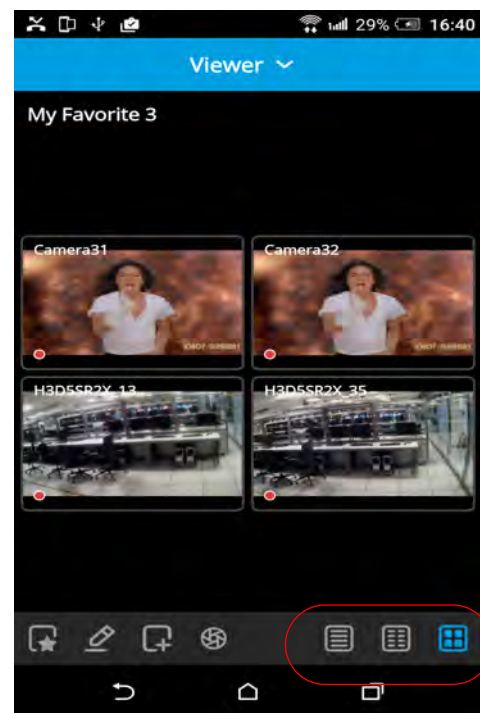
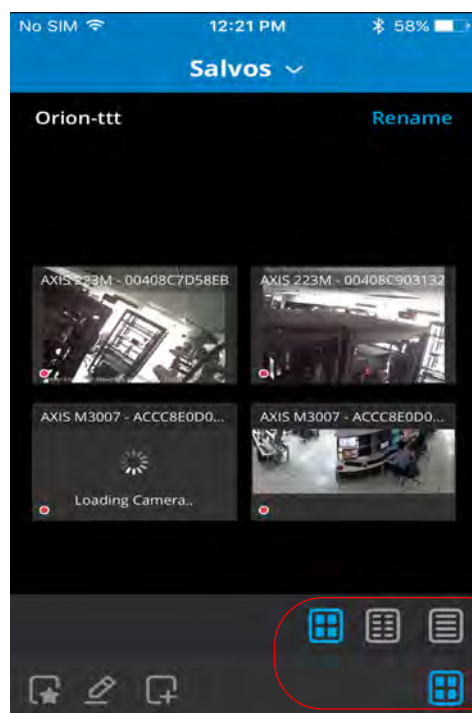
| Apple mobile device   | Android mobile device   |
|---|---|
|  |  |

The saved salvos are displayed at the bottom of the screen as shown below. To view the saved or available salvo view tap on the required icons as explained in the table.

| Task                   | Apple/Andriod mobile device   | Ipad Device   |
|------------------------|---|---|
| To view 2X2 Salvo view | Tap  | Tap  |
| To view 1X1 Salvo view | Tap  | Tap  |

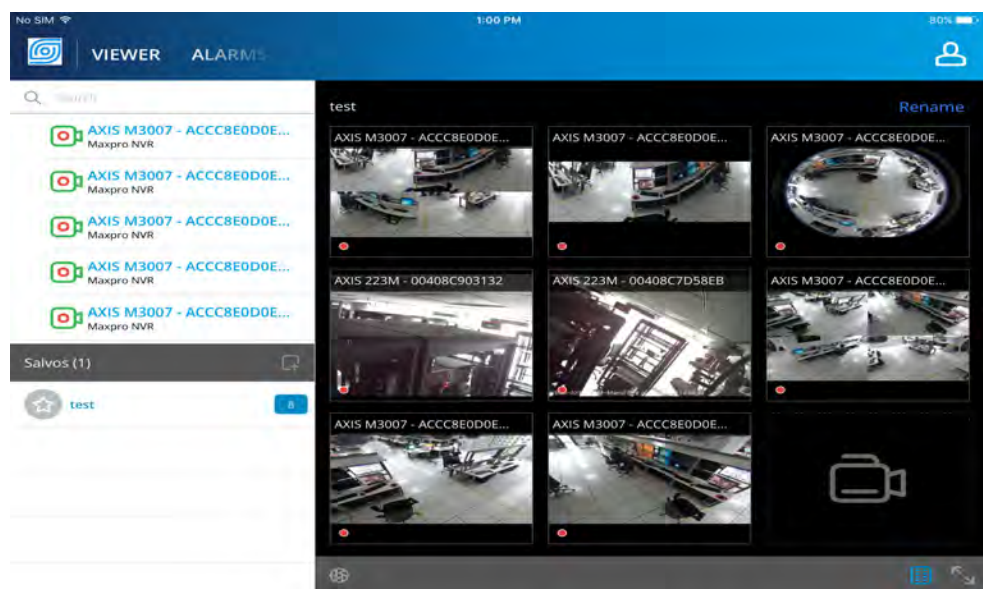
| Task                        | Apple/Andriod mobile device   | Ipad Device   |
|-----------------------------|---|---|
| To view 2x4 Salvo view      | Tap  |   |
| To view 3x3 Salvo View      |   | Tap  |
| To view in full screen mode |   | Tap  |

| Apple mobile device | Android mobile device |
|---------------------|-----------------------|
|---------------------|-----------------------|



## Ipad Device

You can view the saved salvo layouts on the left pane.



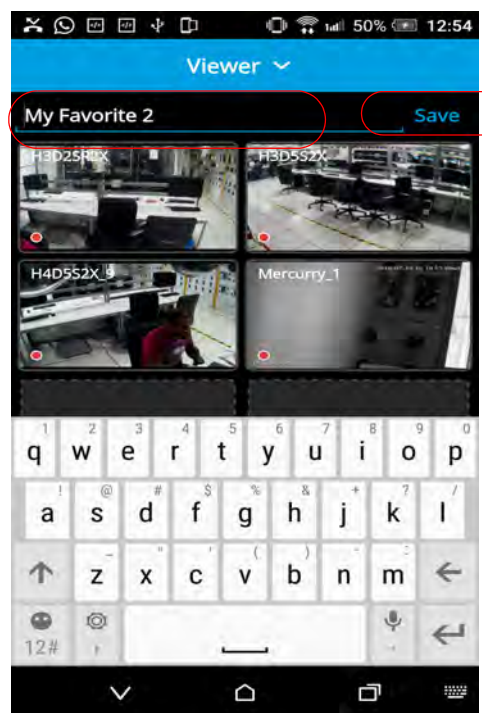
### Apple mobile device

Tap **Rename** on the top of the screen If you want to rename the Salvo name.



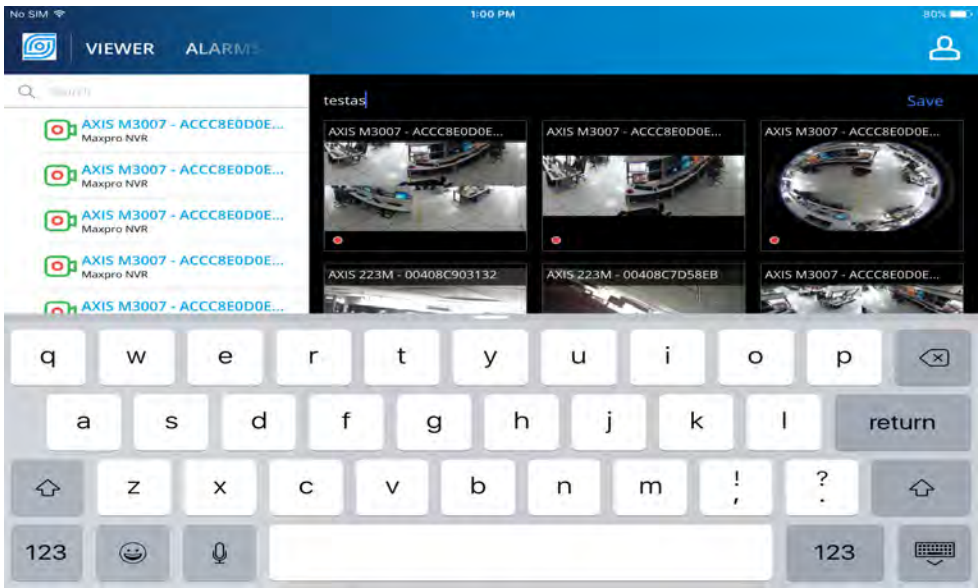
### Android mobile device

Double tap on the name field to rename the salvo name.

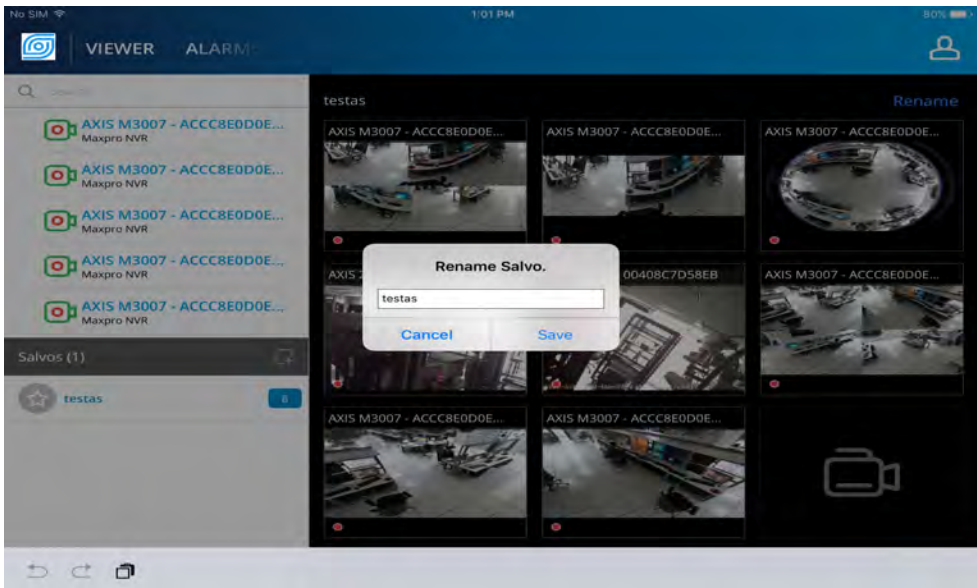


# Ipad Device

Tap Rename on the right hand side.



Edit the name and then tap Save.



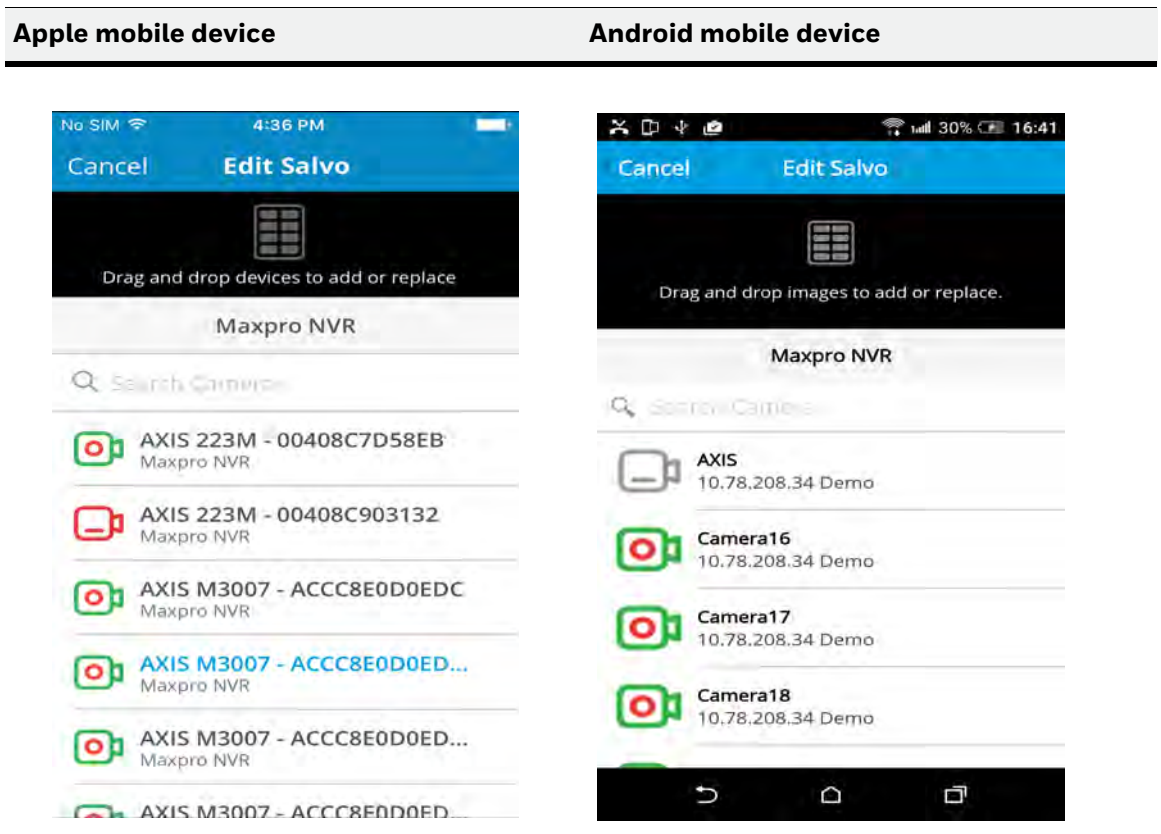
## Editing Salvo layout

To edit the existing salvo layout, tap  underneath the panel. The Edit Salvo screen is

displayed in editable format as shown below.



Drag and drop the required cameras and then tap Done.



## Viewing Live Video in Full Screen Mode

Double-tap on one panel in the viewing panel to view the video from that channel in full screen mode. To return to quad view, double-tap on the panel again.

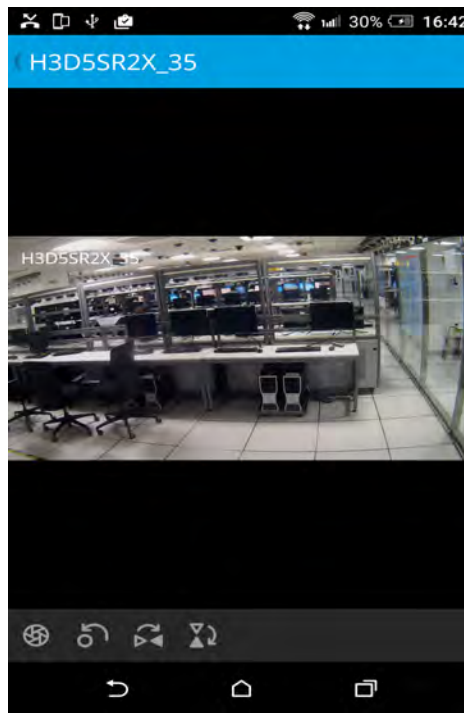
### Apple mobile device



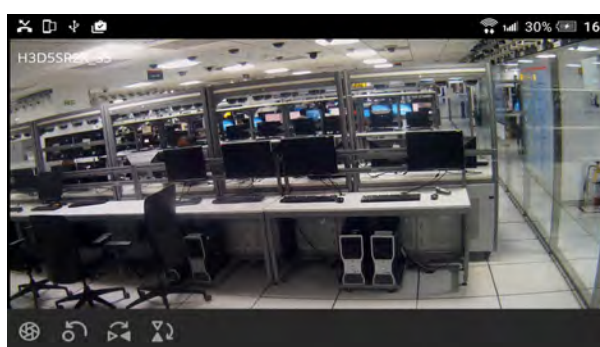
Rotate your Iphone mobile to view the Full Screen mode in Landscape view as shown below:



### Android mobile device



Rotate your Andriod mobile to view the Full Screen mode in Landscape view as shown below.



## Ipad Device

Double tap to view in full screen mode.






Or


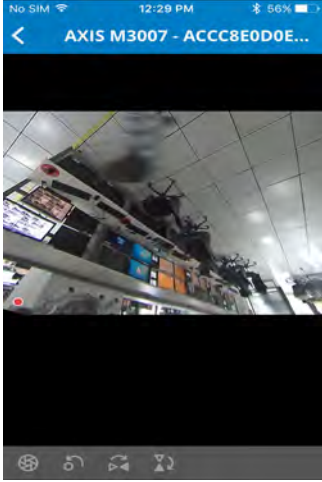





Select a camera and then tap  at the bottom of the salvo layout.






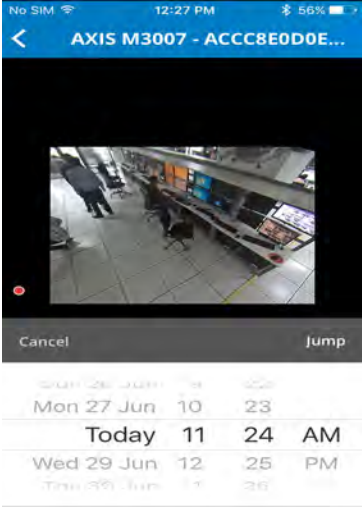

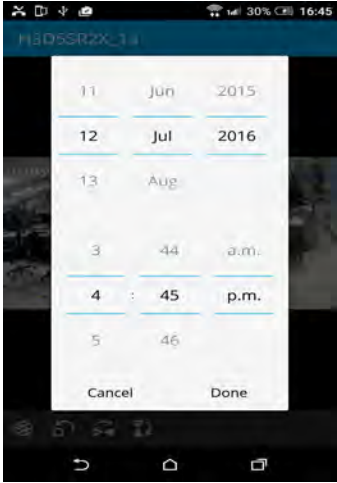

# Video Viewing options

| Task                                | Apple mobile device  | Android mobile device  | Ipad Device  |
|-------------------------------------|--|--|--|
| 1. To Flip the video left or Right. | <p>Tap  underneath that panel. The video flips to left/right.</p>  | <p>Tap  underneath that panel. The video flips to left/right.</p>  | <p>Tap  underneath that panel. The video flips to left/right.</p> |


| Task   | Apple mobile device   | Android mobile device   | Ipad Device   |
|--|---|---|---|
| 2. To Flip the video Up or Down:                                     | <p>Tap  underneath that panel. The video flips to Up/Down.</p>  | <p>Tap  underneath that panel. The video flips to Up/down.</p>  | <p>Tap  underneath that panel. The video flips to Up/Down.</p> |
| 3. To view the salvo layout in full screen mode without camera list. |   |   | <p>Tap  on the bottom right corner.</p>                        |
| 4. To view the salvo layout along with the camera list               |   |   | <p>Tap </p>  |

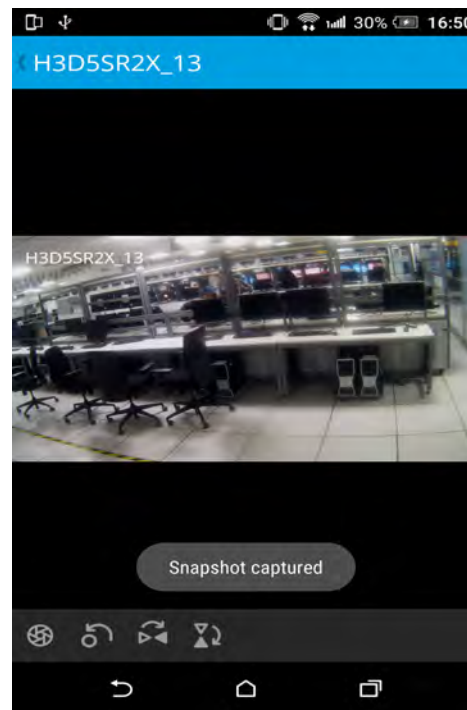
# Searching for Recorded Video and Playback

To search for recorded video from one channel on the video display:

| Task  | Apple mobile device  | Android mobile device   | Ipad Device   |
|---|--|---|---|
| 1. To set the search parameters:                                    | <p>Tap  underneath that panel. The date/time wheel is displayed.</p>  | <p>Tap  underneath that panel. The date/time wheel is displayed.</p>  | <p>Tap  underneath that panel. The date/time wheel is displayed.</p> |
| 2. To select a specific date:                                       | Swipe the date wheel downwards   | Swipe downwards on the area of date.  | Swipe the date wheel downwards.   |
| 3. To select a specific time:                                       | Swipe the hour and AM/PM wheels downwards.   | Swipe the hour, minute and AM/PM wheels downwards.  | Swipe the hour and AM/PM wheels downwards.  |
| 4. To play back the video starting from the date and time selected: | <p>a. Tap <b>Jump</b> under the wheel.</p> <p>b. Tap <b>Cancel</b> to turn off the date/time wheel.</p>  | Tap <b>Done</b> .   | <p>a. Tap <b>Jump</b> under the wheel.</p> <p>b. Tap <b>Cancel</b> to turn off the date/time wheel.</p>   |

## Taking a SnapShot

Tap  under that panel.This feature is available in all the modes.



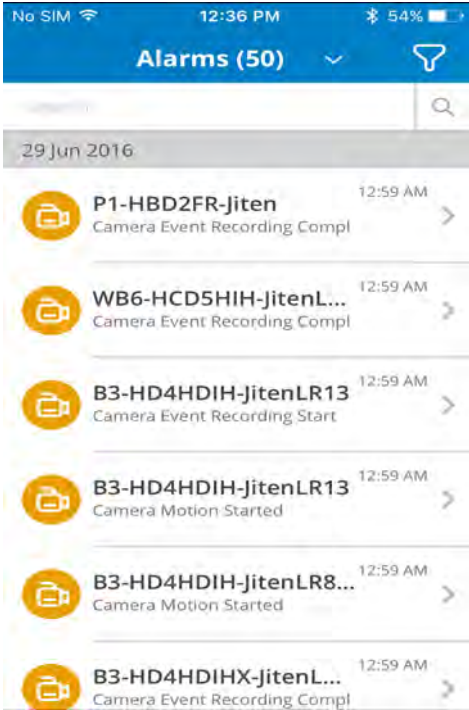
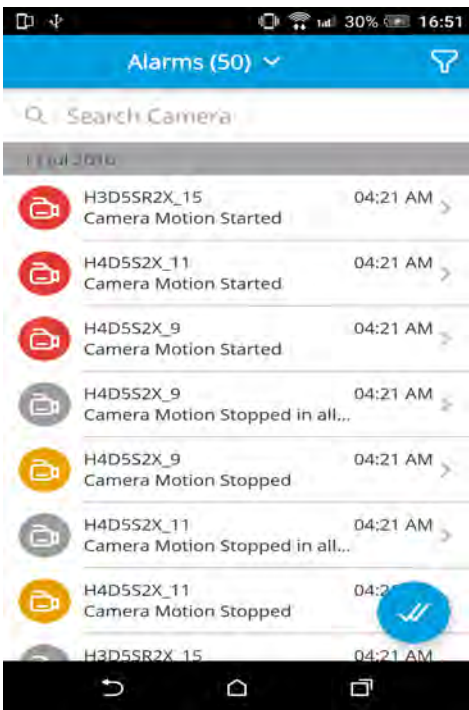
## Alarms

Alarms screen allows you to perform the following:

- View the Alarm and Alarm Details
- View Alarm Types
- Acknowledge Or Removing Alarms
- Acknowledge All the Alarms
- Search the Alarms
- Share Alarms

# Viewing the Alarms and Alarm Details

In any salvo view, tap on the Viewer menu. All the menu options are displayed. Tap Alarms. The Alarms screen displays. By default all the alarms of the configured cameras are displayed. Minimum of 50 alarms are displayed.


| Apple mobile device  | Android mobile device   |
|--|---|
|  |  |

Double tap on the required alarm. The Alarm Details screen is displayed with the details.

If you want to acknowledge then tap Acknowledge

Or

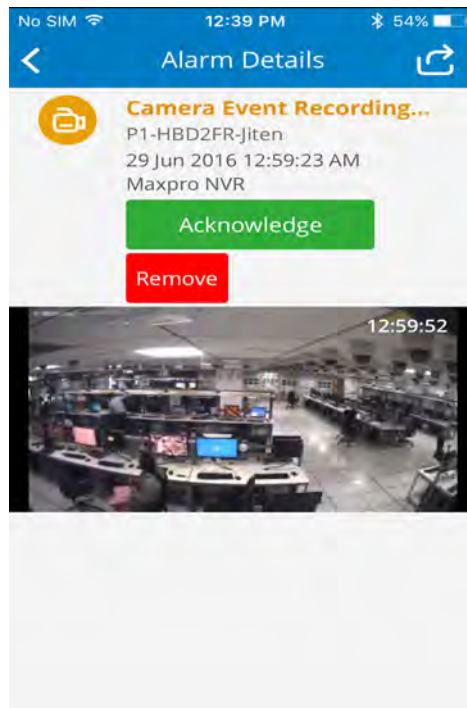
If you want to remove then, tap Remove to remove the alarm from the list.

To go back to the list of alarms screen, tap .

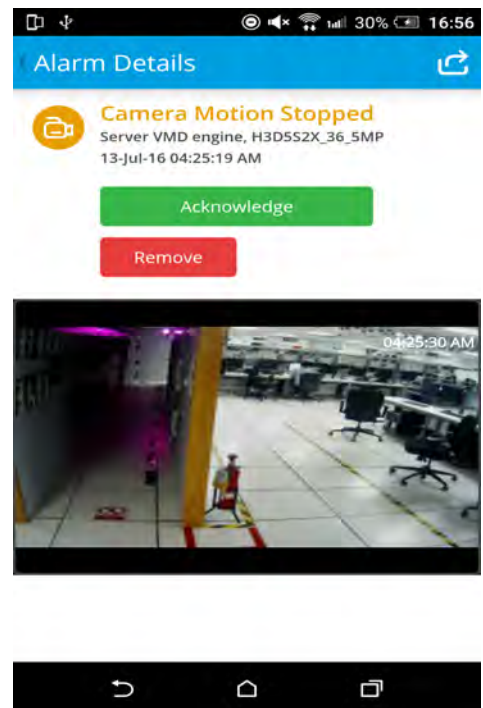
**Note:** Acknowledge alarm performs the same operation as acknowledging an alarm from desktop client. Remove alarm only removes the alarm from the list in the mobile app and does not clear the alarm from the desktop client.



## Apple mobile device

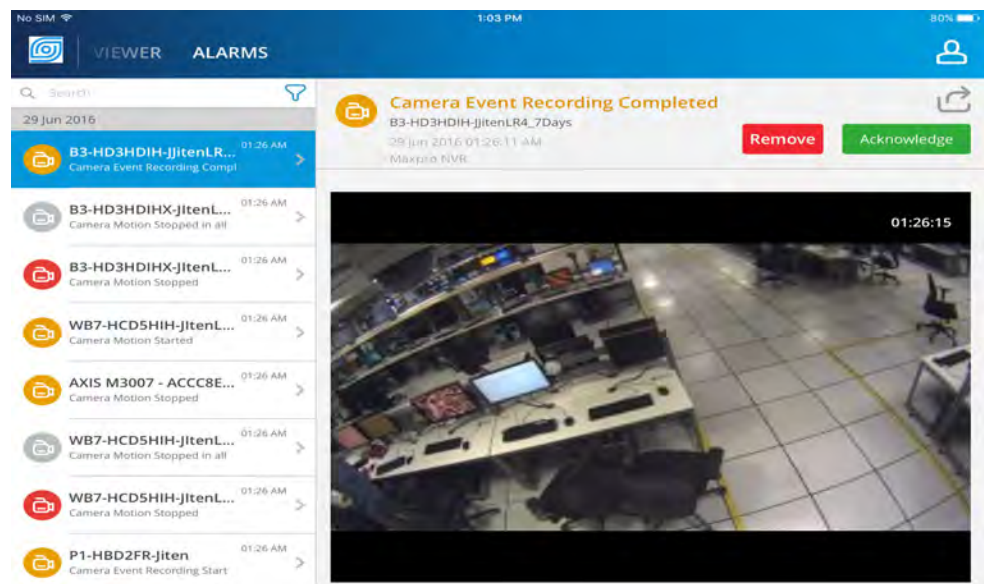


## Android mobile device



## Ipad Device

Tap on the required alarm to view the details in the right pane.



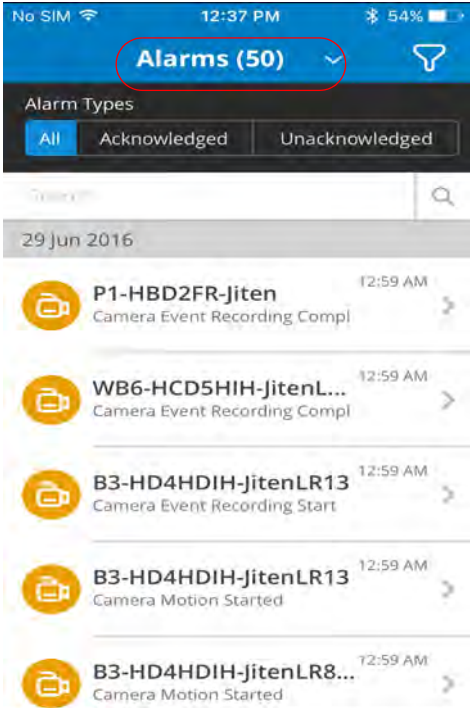
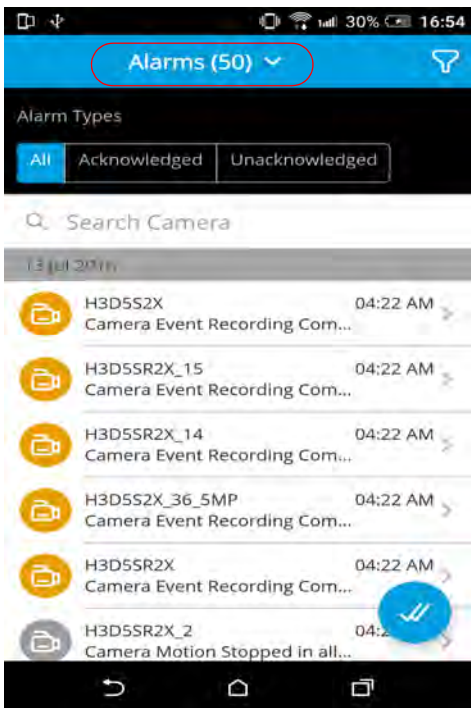


If you want to acknowledge then tap Acknowledge. A confirmation message appears. Tap Yes. OR  
If you want to remove then, tap Remove to remove the alarm from the list. A confirmation message appears. Tap Yes

## Filtering Alarm Types

Tap on the top most area of Alarms as highlighted below. The Alarm Types screen is displayed with All, Acknowledged and Unacknowledged alarms.

Tap on the required tab to view the specific alarms.

| Apple mobile device  | Android mobile device   |
|--|---|
|  |  |

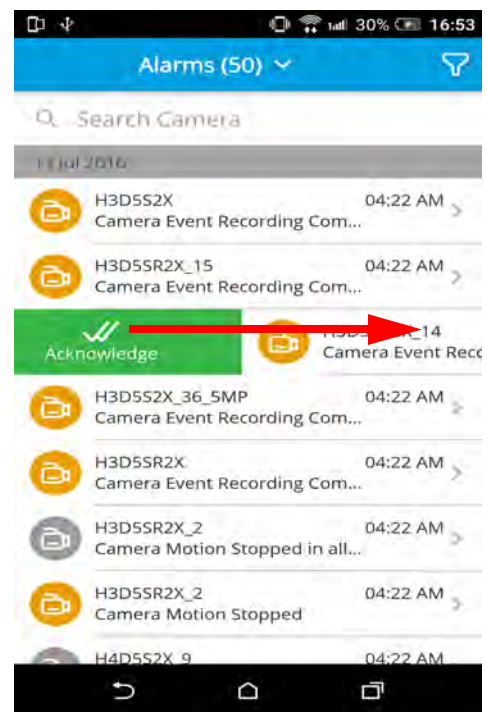
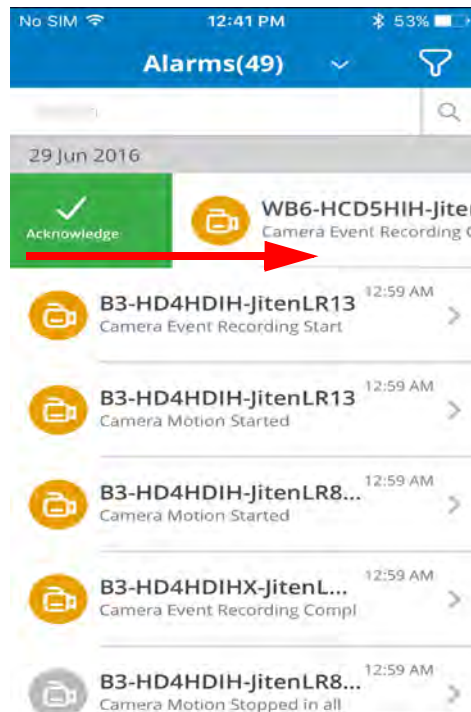
## Acknowledging or Removing Alarms

To acknowledge or remove the alarms:

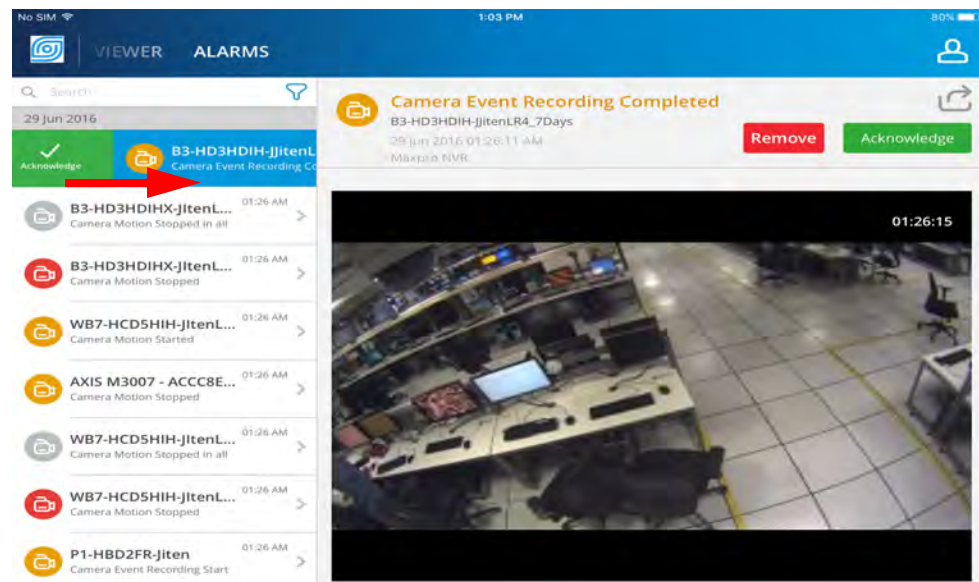
On a specific alarm, swipe to the right side gently until you see Acknowledge and then leave the control as shown below.

## Apple mobile device

## Android mobile device

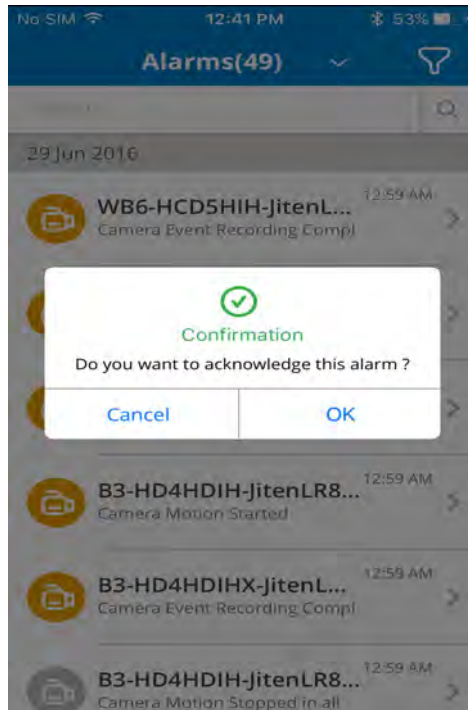


## Ipad Device



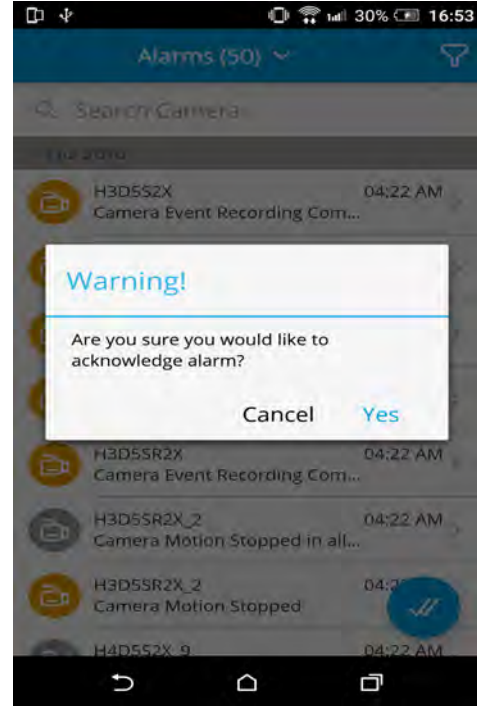
### Apple mobile device

A **Confirmation** message appears. Tap **OK** to acknowledge.



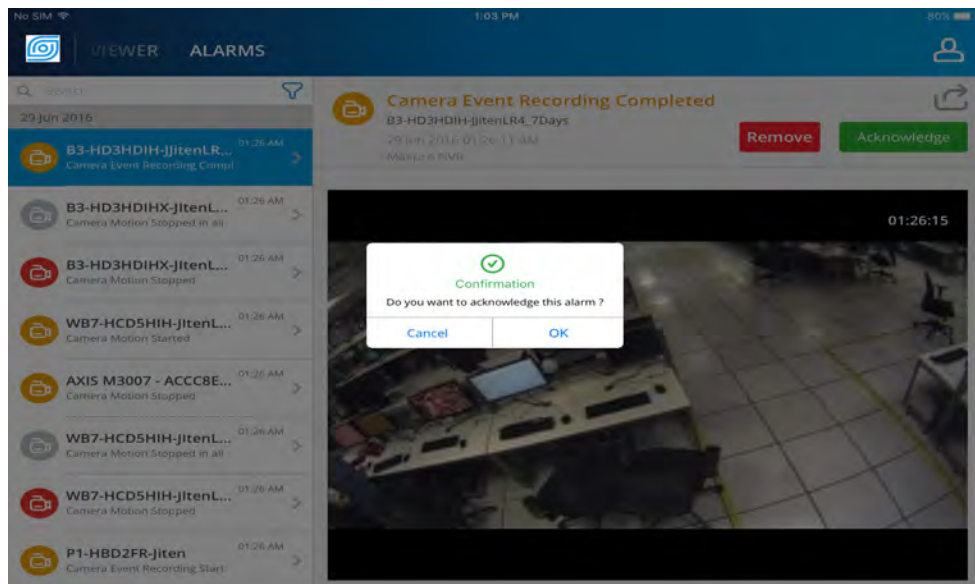
### Android mobile device

A **Warning** message appears. Tap **Yes** to acknowledge.



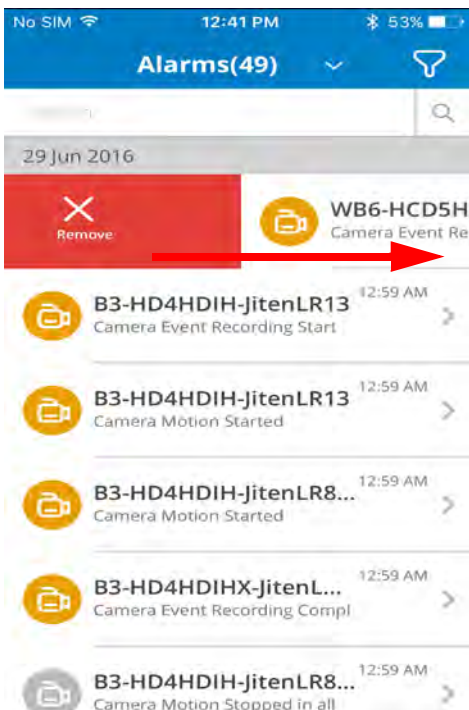
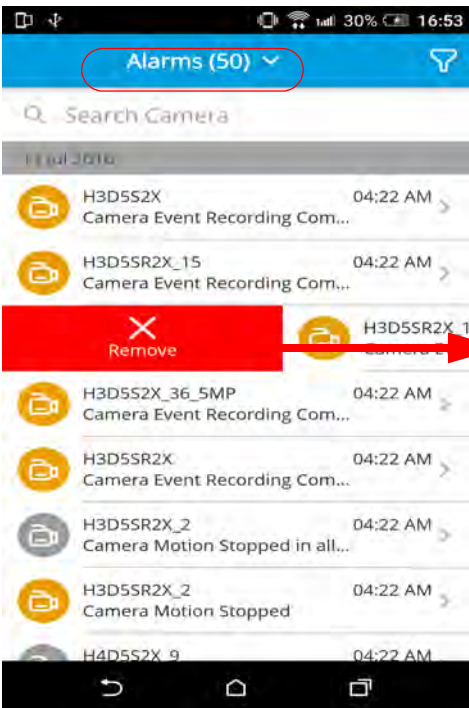
### Ipad Device

Tap **Ok** to acknowledge.



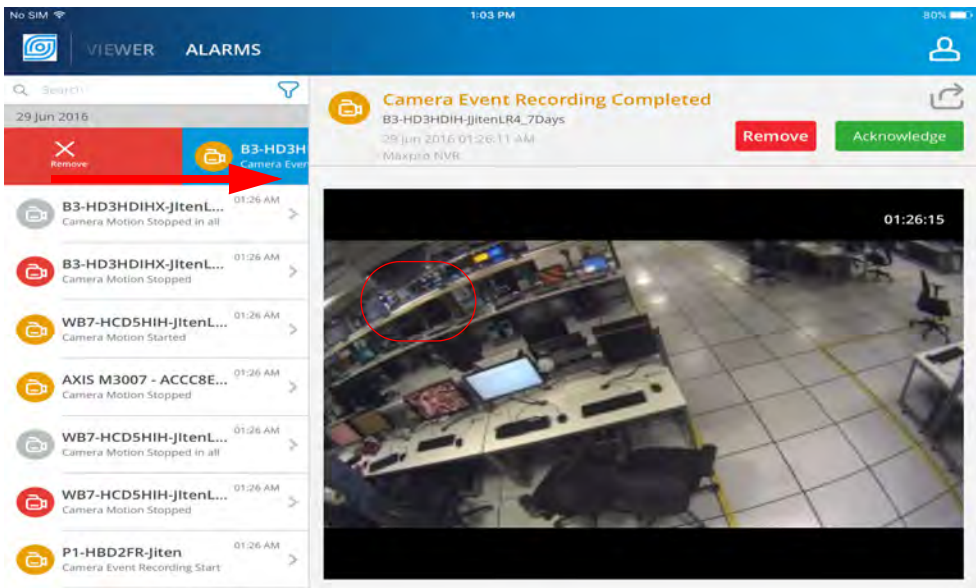
To remove an alarm:

On a specific alarm, swipe long to the right side gently until you see Remove and then leave the control as shown below.

| Apple mobile device  | Android mobile device   |
|--|---|
| Swipe long to right-side to remove.  | Swipe long to right-side to remove.   |
|  |  |

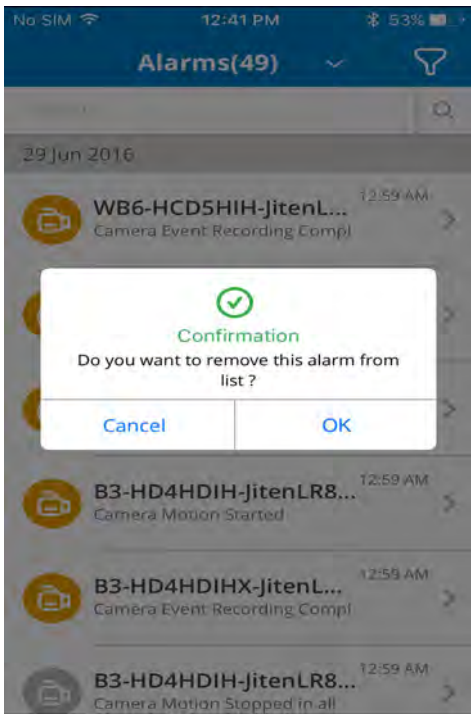


# Ipad Device



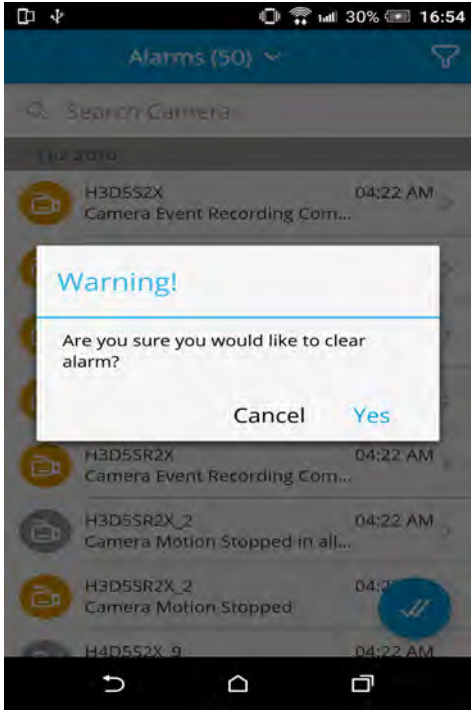
## Apple mobile device

A **Confirmation** message appears. Tap **OK** to remove.



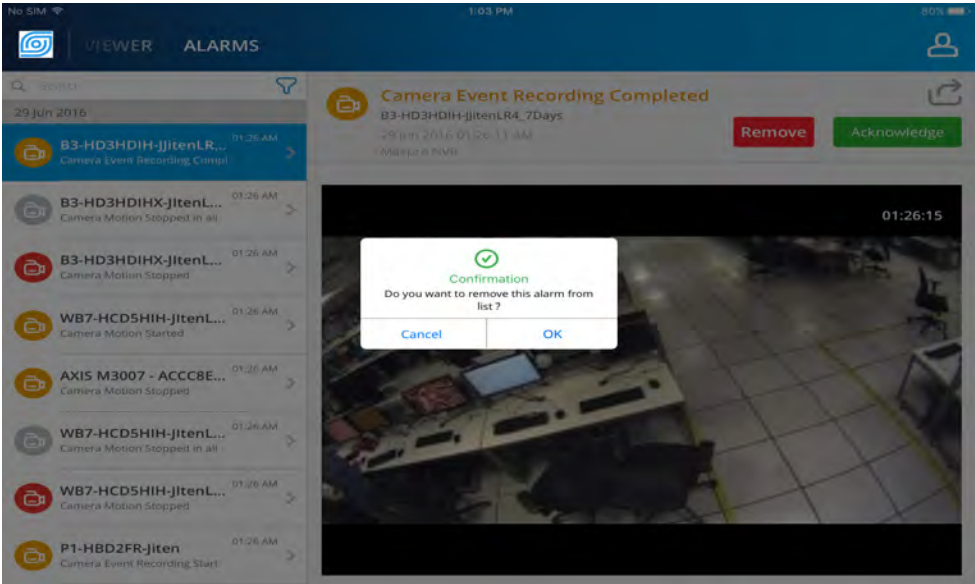
## Android mobile device

A Warning message appears. Tap **Yes** to remove.



# Ipad Device

Tap Ok to remove.




To acknowledge all the Alarms at once:

#### Apple mobile device

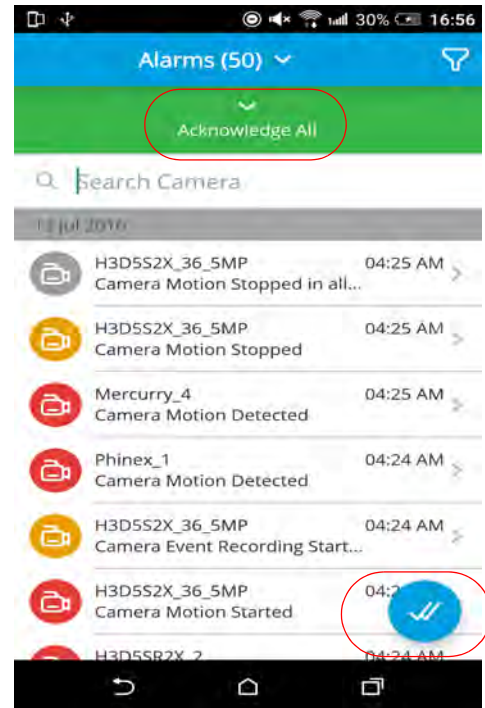
Drag down from the top of the list until you see **Release to acknowledge all the alarms** and then release the control.



#### Android mobile device

Tap . The **Acknowledge All** option is displayed. Tap **Acknowledge All**.

**Tip:** To refresh the alarm list, drag down and release the control from the top of the list. A refresh icon is displayed and new alarms are loaded.

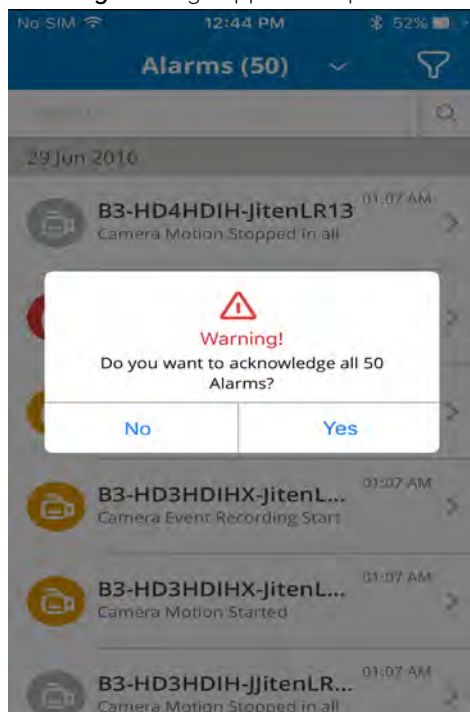


**Note:** By default only 50 alarms are displayed in the list and are appended based on the users interaction.



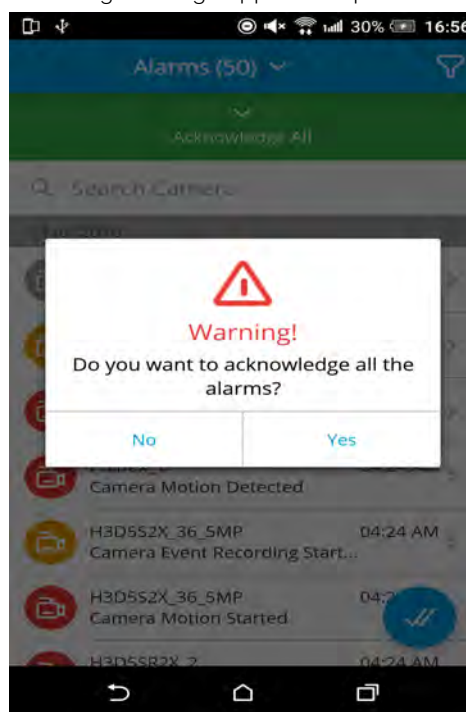
## Apple mobile device

A **Warning** message appears. Tap **Yes**.



## Android mobile device

A **Warning** message appears. Tap **Yes**.

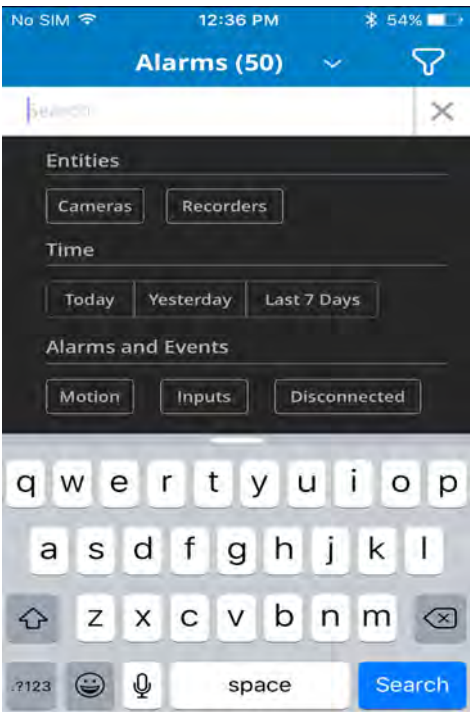


# Searching Alarms

To search the alarms:

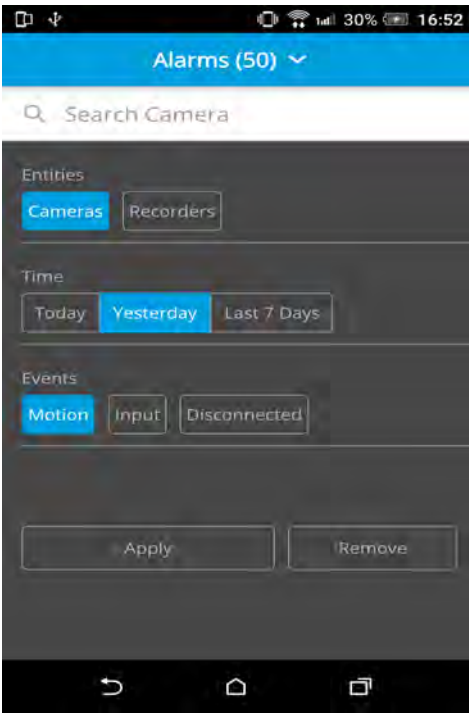
## Apple mobile device

Tap on the **Search** box and then type the alarm name.  
Or Define the search criteria as follows:  
Tap under the required **Entities** to select.  
Tap on the **Time** of the alarm.  
Tap and define the type of **Alarms** and **Events**.  
Tap **Apply** to view the alarms based on the above criteria.



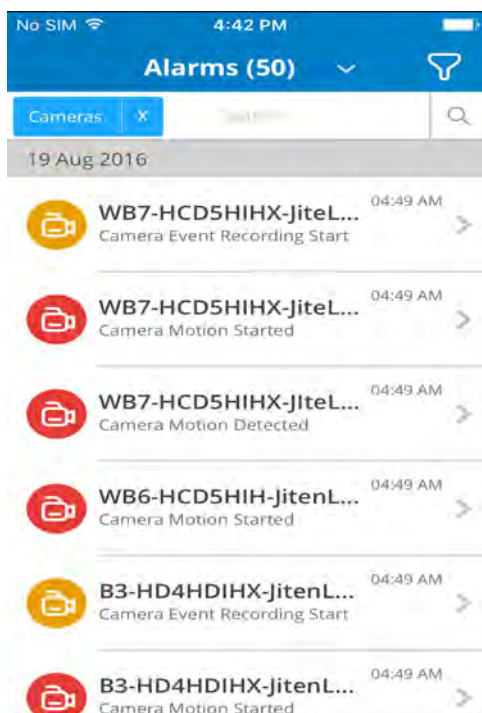
## Android mobile device

Tap on the **Search Camera** box and then type the alarm name.  
Or Define the search criteria as follows:  
Tap under the required **Entities** to select.  
Tap on the **Time** of the alarm.  
Tap and define the type of **Events**.  
Tap **Apply** to view the alarms based on the above criteria.



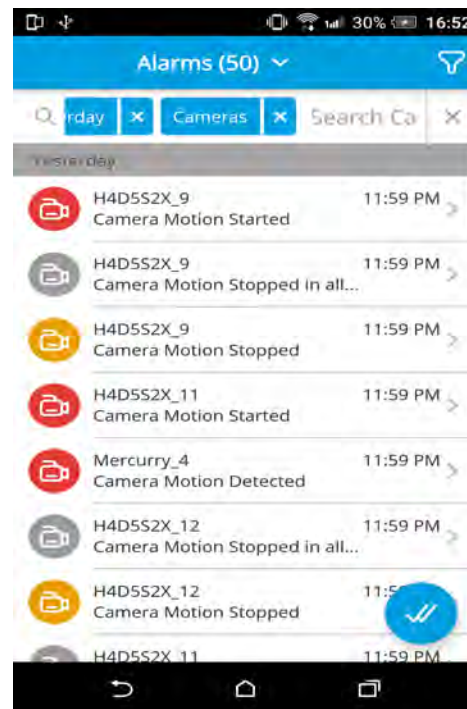
## Apple mobile device

The list of alarms based on the search is displayed.



## Android mobile device

The list of alarms based on the search criteria is displayed.



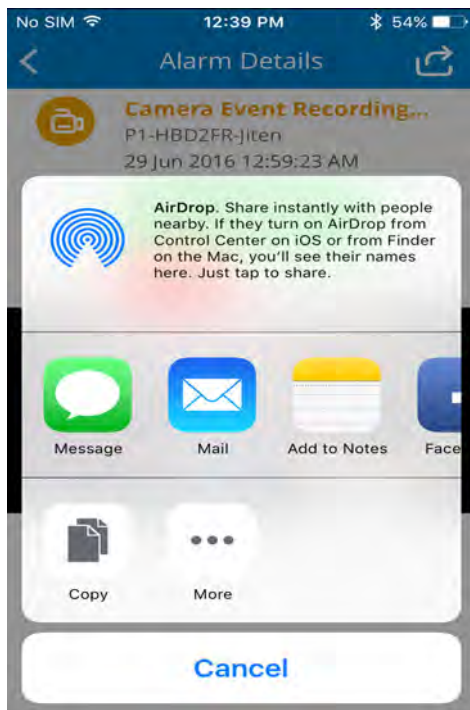
## Sharing Alarms

To share the alarm:

Tap on the required alarm to view the details and then tap  on top right corner.

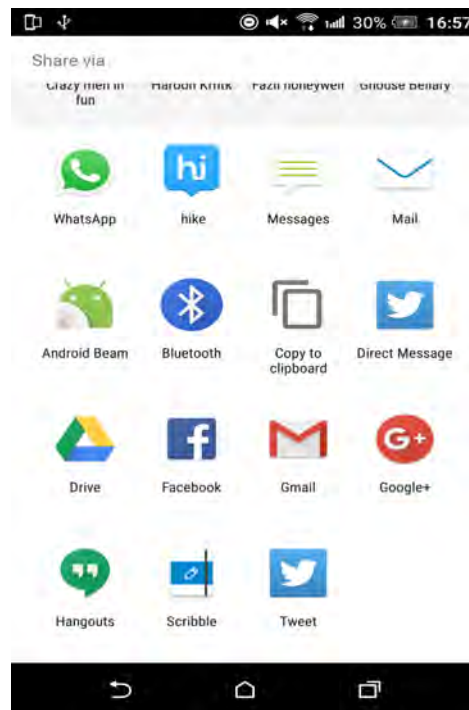
### Apple mobile device

The available options are displayed as shown. Choose any one option based on your requirement and then share.



### Android mobile device

available options are displayed as shown. Choose any one option based on your requirement and then share.



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