VideoManager EX 16.0 Getting Started with ONStream and Milestone XProtect Guide

This document is intended to serve as a guide for enabling live streams, and configuring VideoManager EX to work with ONStream and the Milestone XProtect system.

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Intended purpose

This document is intended to serve as a guide for enabling live streams, and configuring VideoManager EX to work with ONStream and the Milestone XProtect system.

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Conventions

This document uses the following conventions:

Convention	Description
▶ For more information...	A cross-reference to a related or more detailed topic.
[ ]	Text enclosed in square brackets indicates optional qualifiers, arguments or data.
<>	Text enclosed in angle brackets indicates mandatory arguments or data.

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Safety notices

Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.

Additional information relating to the current section.

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1 Welcome to VideoManager EX

Thank you for choosing Motorola Solutions VideoManager EX as your aggregator of evidential-ready media. VideoManager EX is designed as an intuitive browser-based system, requiring minimal training. This document assumes administrative familiarity with VideoManager EX already. For more information, please see the Administrator Guide.

The administrator can connect XProtect to VideoManager EX, using VideoManager EX's ONVIF-compliant interface. This enables VideoManager EX to pass live streams and recordings from body-worn cameras straight to XProtect. To do so, the administrator must configure live streaming and ONStream on VideoManager EX, and then configure XProtect to accept the streams. This document will cover all three steps.

2 Configure Streaming

Body-worn cameras on VideoManager EX should be configured to live stream before users configure ONStream and the XProtect system. These live streams will be automatically passed on to the XProtect system once it has been connected to VideoManager EX. To configure live streams:

1. Configure firewalls.

   This step is only necessary if VideoManager EX is configured to use anything other than its default port **or** if VideoManager EX is set up on a public network.

   >> For more information, see Configure Firewalls on page 6

2. Configure VideoManager EX's public address.

   >> For more information, see Configure VideoManager EX's Public Address on page 8

3. Create a user-specific WiFi network, if the user will be live streaming over a personal hot-spot.

   >> For more information, see Create User-Specific WiFi Networks on page 9

4. Create a WiFi profile which can be used for streaming.

   >> For more information, see Create a WiFi Profile on page 11

5. Assign the body-worn camera to a user, and begin streaming media.

   >> For more information, see Assign a Body-Worn Camera for Streaming on page 13

6. View the live stream.

   Here, the administrator can check that their live streams are working before they enable and configure ONStream.

   >> For more information, see View Live Streams on page 15

2.1 Configure Firewalls

Sometimes, body-worn cameras will be unable to stream to VideoManager EX without prior firewall configuration. There are two reasons that firewall configuration might be necessary: the user has either changed VideoManager EX's default port, or has connected it to a public network. The steps below differ, depending on which situation applies to the user's instance of VideoManager EX.

If the user has changed VideoManager EX's default web server port, they must create a new inbound rule. This may also be necessary for the ONStream port that the XProtect system will connect to. To do so:

1. In the Windows menu, navigate to the ***Control Panel*** tab.
2. Select the ***System and Security*** pane.
3. Click the ***Windows Defender Firewall*** section.
4. In the left-hand menu pane, click ***Advanced Settings***.
5. Select ***Inbound Rules***.
6. In the right-hand menu pane, click ***New Rule...***.
7. Set the rule type to **Port**, and click ***Next***.
8. In the ***Specific Local Ports*** section, enter VideoManager EX's port, and click ***Next***.
   This can be found on VideoManager EX, in the ***Web Server*** section of the ***System*** pane, in the ***Admin*** tab.
9. Ensure that **Allow the connection** is checked, and click ***Next***.
10. Check the relevant profiles for this rule. If in doubt, leave all checked, and click ***Next***.
11. Enter a name for the rule and click ***Finish***.

Caution

If the user has other firewalls or NAT routers in the network between VideoManager EX and the WiFi network to which body-worn cameras will connect, they must also be configured to allow TCP connections between the body-worn camera and the VideoManager EX server.

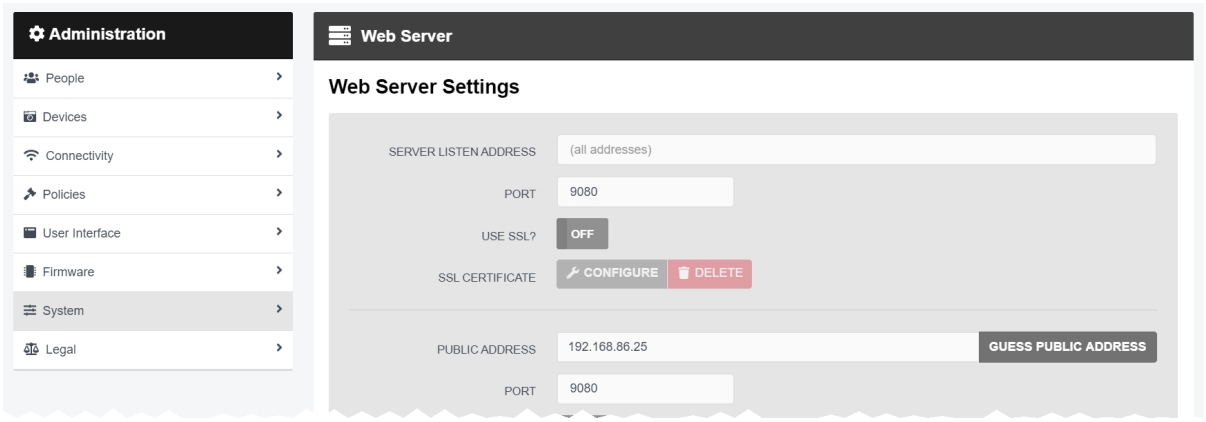
If the user has connected VideoManager EX to a public network:

1. In the Windows menu, navigate to the ***Control Panel*** tab.
2. Select the ***System and Security*** pane.
3. Click the ***Windows Defender Firewall*** section.
4. In the left-hand menu pane, click ***Advanced Settings***.
5. Select ***Inbound Rules***, and scroll down until the *VideoManager EX Web* rule is visible.

6. Double-click on the rule and in the ***Advanced*** section, ensure that **Public** is checked.
7. Click ***OK***.

2.2 Configure VideoManager EX's Public Address

When a body-worn camera connects to VideoManager EX, it does so using VideoManager EX's public address. If the body-worn cameras are connecting to the same IP network as VideoManager EX, users can utilise the same IP address as the VideoManager EX machine.



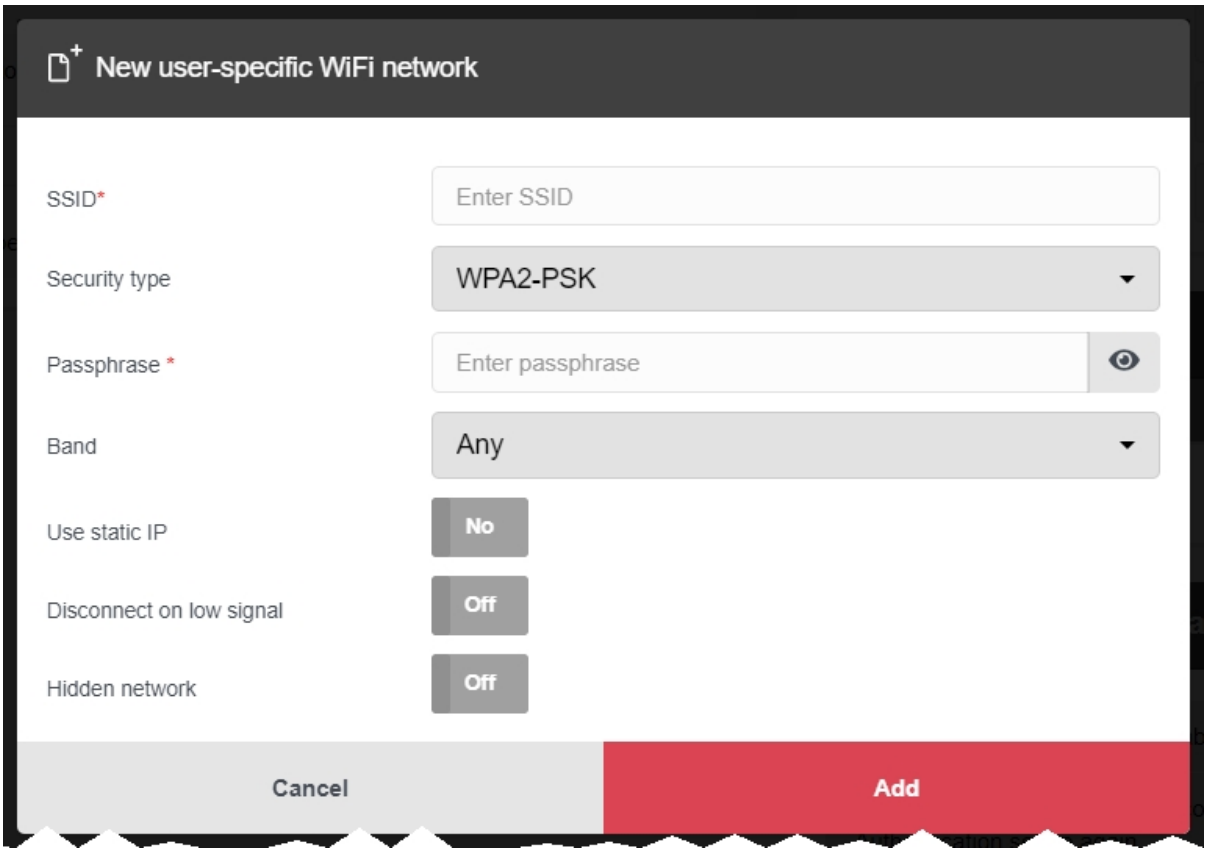
To configure a public address:

1. On VideoManager EX, navigate to the ***Admin*** tab.
2. Select the ***System*** pane.
3. Click the ***Web Server*** section.
4. In the ***Public address*** field, either enter the public address or click ***Guess public address*** to guess what this address should be.
5. Click ***Save settings***.

VideoManager EX should be configured to use fixed address LAN infrastucture, and operate on a **Private** or **Domain** network, wherever possible.

2.3 Create User-Specific WiFi Networks

It is possible for users to create user-specific WiFi networks which will only appear on their profile and cannot be viewed by other users on the system. These can be added to WiFi profiles later, but they will still be kept private. This is useful if the user has created a mobile phone hotspot for streaming.



The steps for creating a user-specific WiFi network differ, depending on whether the user is creating the network for **another user on VideoManager EX or for themselves**.

If the user is configuring a user-specific WiFi network for another user, the steps are as follows:

1. Navigate to the ***Admin*** tab.
2. Select the ***People*** pane.
3. Click the ***Users*** section.
4. Next to the user to be edited, click ***Go to user***.
5. In the ***WiFi networks*** pane, click ***Add network***.
6. In the ***Network name (SSID)*** field, enter the name of the WiFi network or hotspot.
   This cannot be changed later.
7. From the ***Security type*** dropdown, select which security configuration the user-specific WiFi network will use. The options are **WPA2-PSK**, **WPA-PSK**, **WEP**, or **Open**.

8. In the ***Passphrase*** field, enter the passphrase of the WiFi network or hotspot.
9. From the ***Band*** dropdown, select which frequencies the body-worn cameras will attempt to connect to. The options are as follows:
    - **Any** - this option is suitable for all body-worn cameras.
    - **2.4GHz only** - this option is suitable for all body-worn cameras.
    - **5GHz only** - this option is only suitable for VB400s.
10. If ***Use static IP*** is set to ***On***, the user must enter the corresponding static IP details.
11. If ***Disconnect on low signal*** is set to ***On***, body-worn cameras trying to stream over this network will disconnect from it if its signal is weak.

    Users will have the option to define the "weak" signal as a percentage, and the time in seconds that the body-worn camera must be connected to the specified signal level, after which the body-worn camera will disconnect.
12. Click ***Add*** to save the network.

If the user is creating the user-specific WiFi network for themselves:

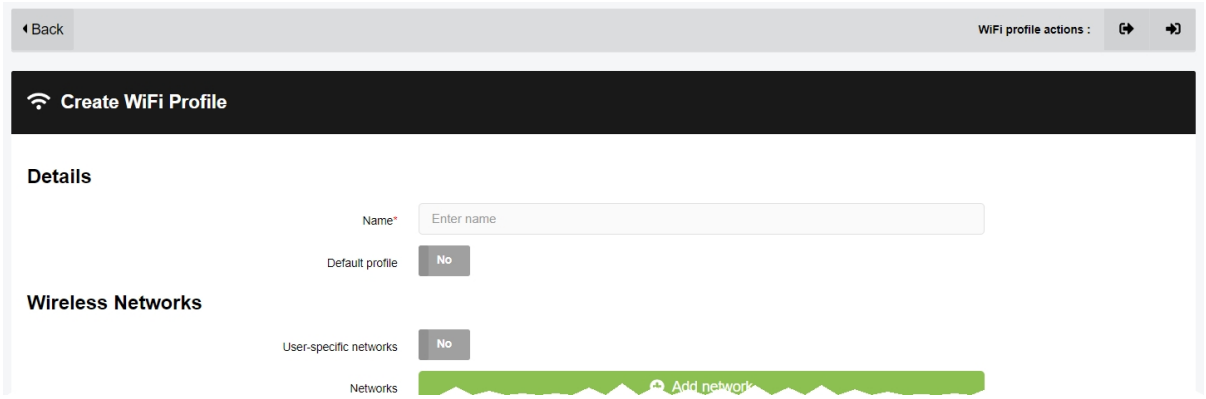
1. In the top right-hand corner of VideoManager EX, click the icon.
2. Select **Account Profile** from the dropdown.
3. In the ***User-specific WiFi networks*** pane, click ***Add network***.
4. In the ***Network name (SSID)*** field, enter the name of the WiFi network or hotspot.

   This cannot be changed later.
5. From the ***Security type*** dropdown, select which security configuration the user-specific WiFi network will use. The options are **WPA2-PSK**, **WPA-PSK**, **WEP**, or **Open**.
6. In the ***Passphrase*** field, enter the passphrase of the WiFi network or hotspot.
7. From the ***Band*** dropdown, select which frequencies the body-worn cameras will attempt to connect to. The options are as follows:
    - **Any** - this option is suitable for all body-worn cameras.
    - **2.4GHz only** - this option is suitable for all body-worn cameras.
    - **5GHz only** - this option is only suitable for VB400s.
8. If ***Use static IP*** is set to ***On***, the user must enter the corresponding static IP details.
9. If ***Disconnect on low signal*** is set to ***On***, body-worn cameras trying to stream over this network will disconnect from it if its signal is weak.

   Users will have the option to define the "weak" signal as a percentage, and the time in seconds that the body-worn camera must be connected to the specified signal level, after which the body-worn camera will disconnect.
10. Click ***Add*** to save the network.

2.4 Create a WiFi Profile

Administrators must create a WiFi profile which is suitable for live streams. A WiFi profile is a collection of WiFi networks, one of which a body-worn camera must connect to before it can live stream.



To create a WiFi profile:

1. Navigate to the ***Admin*** tab.
2. Select the ***Connectivity*** pane.
3. Click the ***WiFi Profiles*** section.
4. Click ***Create wifi profile*** in the top right-hand corner.
5. Enter the following information for the WiFi profile (this will apply to all body-worn cameras which use the profile in question):
   - In the ***Name*** field, enter a name for the WiFi profile.
   - Ensure that ***Default profile*** is set to ***On***.

   This ensures that, regardless of how body-worn cameras are assigned, they will always have access to this WiFi profile.

   - If the administrator has already created user-specific WiFi networks, they can be added to the WiFi profile by setting ***User-specific networks*** to ***On***.

   >> For more information, see Create User-Specific WiFi Networks on page 9

   - To add a new network to the WiFi profile, click ***Add network***.

   The administrator should enter the WiFi network's information. Unlike user-specific WiFi networks, this WiFi network will be used by all body-worn cameras in this WiFi profile, regardless of the users to which they have been assigned.

   - If VB100s, VB200s, VB300s, or VB400s will be streaming, scroll down to the ***VB300/VB400*** section set ***Enable streaming*** to ***On***.

- If VT-series cameras will be streaming, scroll down to the ★ ***VT50/VT100*** section and set ***Enable streaming*** to ***On***.

*VT-series camera streaming settings must be configured for **every network** within a WiFi profile.*

6. Click ***Save settings***.

2.5 Assign a Body-Worn Camera for Streaming

Users can now operate a body-worn camera and live stream the media back to VideoManager EX. The steps differ, depending on how the body-worn camera will be assigned.

To assign a VB400 to a user through **single issue and RFID**, the user should tap their RFID card against the RFID reader associated with VideoManager EX. In the pool, a VB400's LEDs will light up and it will emit a beep. The user can undock and operate this body-worn camera. For more information, please see the Administrator Guide.

To assign a VB400 to a user through **Single issue**, **Permanent issue**, or **Permanent allocation**:

1. Navigate to the ***Devices*** tab.
2. Select the ***Search Devices*** pane.
3. Filter the body-worn cameras as necessary, and click ***Find devices***.
4. Find the relevant VT100 or VB400, and click ***Assign Device*** next to it.

*This body-worn camera must be connected to VideoManager EX and unassigned. To unassign a body-worn camera, click **Return Device**.*

The ***Assign Device*** dialogue opens.

5. In the ***Operator name*** field, enter the name of the user who will be recording with this body-worn camera. This must be a valid username on VideoManager EX.
6. Select which ***Assignment mode*** the body-worn camera will use.
    - **Single issue** - the body-worn camera will be assigned to a user and when it is redocked, it will become unassigned and must be reassigned manually.
    - **Permanent issue** - the body-worn camera will be assigned to the user and when it is redocked, it will stay assigned to the same user.
    - **Permanent allocation** - the body-worn camera will be allocated to a user, who must then tap an RFID card before they can use it in the field. When it is redocked, it will stay allocated to the same user.

If **Permanent allocation** has been chosen, the user will **not** be able to select the relevant device profile and WiFi profile. However, this is not an issue - the default VideoManager EX device profile is suitable for streaming, and the WiFi profile should have already been set as the default.

*If the WiFi profile has not already been set as the default, navigate to the **Admin** tab, select the **Connectivity** pane, click the **WiFi Profiles** section, click **Go to profile** next to the newly created WiFi profile, and set **Default profile** to **On**.*

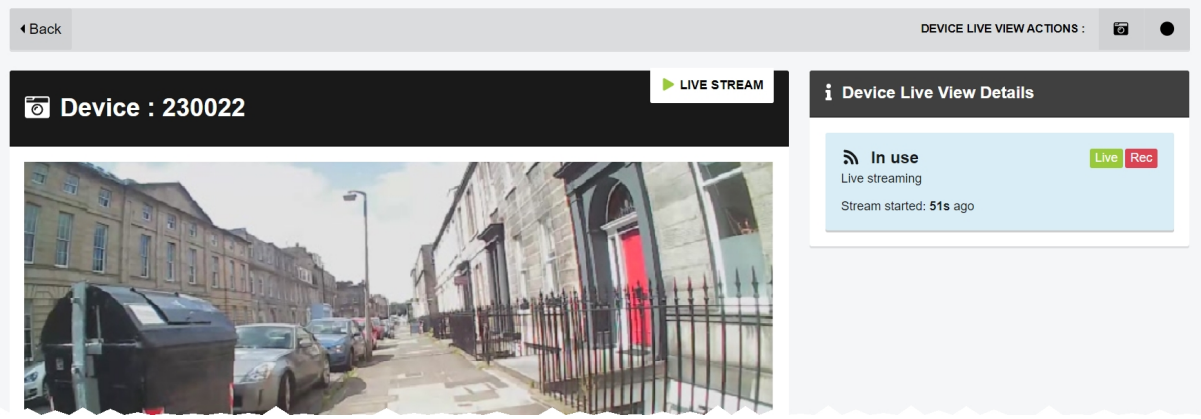
If **Single issue** or **Permanent issue** have been chosen, the user must do the following:

1. From the ***Device profile*** dropdown, select the default device profile.
2. From the ***WiFi profile*** dropdown, select the previously-created WiFi profile.
3. Click ***Assign Device***.

Wait until the body-worn camera's status changes to ***Ready***. At this point, the body-worn camera can be undocked and users can start streaming from their body-worn camera.

2.6 View Live Streams

Once streaming has been configured, a suitable body-worn camera has been assigned to a user, and the body-worn camera has started recording, the administrator should check that the live stream is working properly before enabling ONStream and connecting the XProtect system to VideoManager EX.



To view a body-worn camera's live stream:

1. Navigate to the ***Devices*** tab.
2. Next to the streaming body-worn camera, there will be two alerts - one will say ***Rec*** and one will say ***Live***. Click ***View live***.
3. This will take the user to a page where they can view the live stream.

Caution

Only users with the permission to view body-worn cameras live can see live streams. However, even with this permission, they can only see live streams from body-worn cameras they have permission to view (this could be body-worn cameras they own, body-worn cameras they supervise, or all body-worn cameras).

4. Once a live stream has stopped, the screen will go blue and there will be a message reading ***Device not streaming***.

3 Configure ONStream on VideoManager EX

Before the XProtect system can be configured, ONStream must be configured and enabled from VideoManager EX. To do so:

1. Enable ONStream on VideoManager EX, with a licence.

   This step is only necessary if the user is running VideoManager EX version 14.2 or earlier.

   >> For more information, see Enable ONStream on page 17

2. Configure ONStream settings - these dictate how the XProtect system will connect to VideoManager EX.

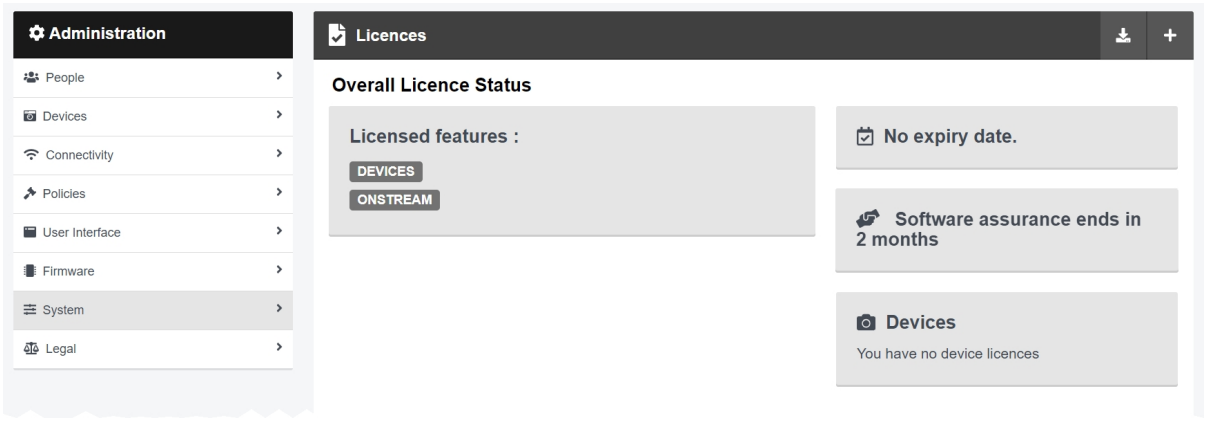
   >> For more information, see Configure ONStream Settings on page 18

3. Create outputs. These outputs determine how VideoManager EX users and body-worn cameras will be mapped onto the XProtect system.

   >> For more information, see Create and Reset Outputs on page 21

3.1 Enable ONStream

From version 14.3 onwards, VideoManager EX enables ONStream by default as long as the user has at least one body-worn camera associated with VideoManager EX. For instances of VideoManager EX which are running version 14.2 or earlier, ONStream must be manually enabled. Users can do this by importing a licence into VideoManager EX. This is done from the ***Licences*** section of the ***System*** pane, in the ***Admin*** tab.



To import an ONStream licence into VideoManager EX:

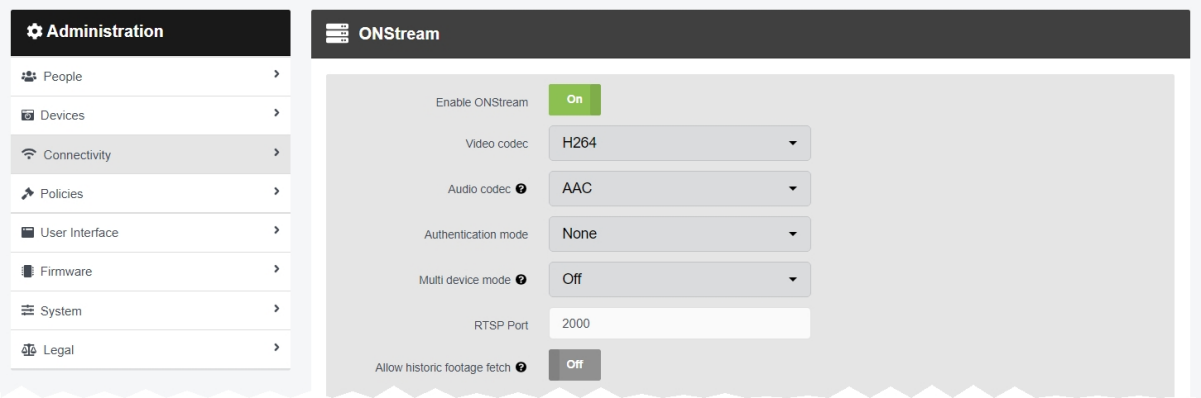
1. Navigate to the ***Admin*** tab.
2. Select the ***System*** pane.
3. Click the ***Licences*** section.
4. Click ***Import licence***.
   Users should select the ONStream licence provided to them by Motorola Solutions.
5. Click ***upload***.
6. In the ***Licensee name*** field, enter the name provided by Motorola Solutions.

> Caution: *If the name entered here does not match the name set by Motorola Solutions, the licence **will not work**.*

7. Click ***confirm***.
8. Users will be asked to confirm again, by clicking ***import***.
   If successful, the licence should appear in the ***Licences*** section as ***Valid***.

3.2 Configure ONStream Settings

When enabled, ONStream presents an ONVIF-compatible interface with both Profile S (live streaming) and Profile G (recording retrieval) capability. ONStream presents live streams from body-worn cameras as channels in one or more ONVIF compatible multi-channel encoders. The administrator must configure ONStream settings on VideoManager EX. This is done from the ***ONStream*** section of the ***Connectivity*** pane, in the ***Admin*** tab.



To configure ONStream:

1. Navigate to the ***Admin*** tab.
2. Select the ***Connectivity*** pane.
3. Click the ***ONStream*** section.
4. Set ***Enable ONStream*** to ***On***.
5. From the ***Video codec*** dropdown, select which codec will be used to compress the live streams between devices and the XProtect system. The options are **MPEG4** or **H264**.
6. From the ***Audio codec*** dropdown, select **AAC**.
7. From the ***Authentication mode*** dropdown, select whether users must enter additional credentials when connecting their instance of VideoManager EX to the XProtect system. The options are as follows:
   - **None** - if selected, no additional authentication will be required.
   - **Basic** - if selected, users will be prompted to create a ***Username*** and ***Password*** on VideoManager EX.

   These credentials must be entered in the XProtect system when it is being configured to connect to VideoManager EX.

Caution

If the administrator wishes to change either the video/audio codecs or authentication details after they have already been set, VideoManager EX must be deleted and re-added to XProtect, or no changes will be detected.

8. From the ***Multi device mode*** dropdown, the administrator can select whether VideoManager EX presents itself as a single multi-channel encoder, or multiple encoders. The options are as follows:

    - **Off** - this option should be selected if the XProtect system will be used with 16 devices **or fewer**.
    - **IP addresses** - this option should be selected if the XProtect system will be used with **more than** 16 devices.

    If selected, administrators must also configure multiple IP addresses on their PC.

    >> For more information, see Enable Multiple IP Addresses on page 20

9. In the ***RTSP Port*** field, the administrator can configure the port that VideoManager EX will use to pass streams to the XProtect system.

By default, this is 554. The administrator may need to change the default port if any software on the same machine as VideoManager EX is using port 554.

Caution *This will be the case if the administrator is running the XProtect system on the same machine as VideoManager EX. Motorola Solutions recommends choosing a port above 2000.*

10. If ***Allow historic footage fetch*** is set to ***On***, the XProtect system will be given access to **all** media on VideoManager EX and the ability to copy it.

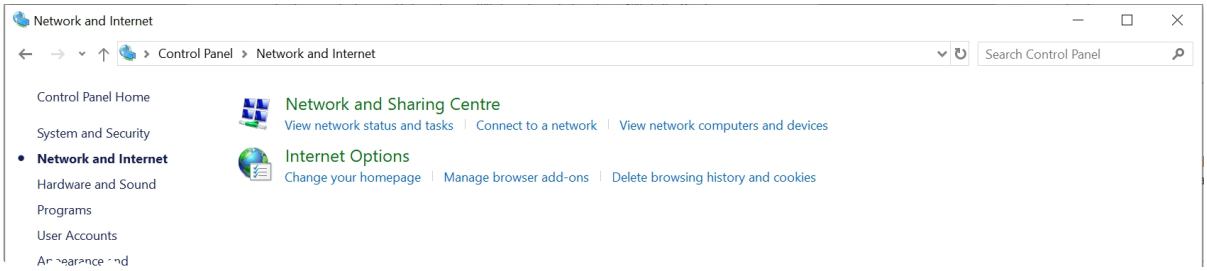
This process will not start until the administrator has also configured the XProtect system to retrieve historic media.

Caution *Enabling **Allow historic footage fetch** will permit the XProtect system to retrieve restricted media.*

11. Set ***Use Automatic Output Assignment*** to ***Off***.
12. Click ***Save settings***.

3.2.1 Enable Multiple IP Addresses

VideoManager EX can present an unlimited number of devices as channels on a multi-channel encoder - for example, it is possible to configure a 100-channel encoder by entering *100* into the ***Create ONStream outputs*** field. However, some XProtect configuration dialogues do not cope well with more than 16 channels. To solve this issue, VideoManager EX can be configured to present groups of 16 channels, each with its own IP address.



Once the administrator has enabled multiple IP addresses on VideoManager EX from the ***ONStream*** section, they must also do so on the PC running VideoManager EX. To do so:

1. Ensure that DCHP has been disabled, to ensure the PC has a manually assigned IP address.

   This is a complex procedure - Motorola Solutions reccommends that it is completed by a network administrator.

2. Click ***Start***.
3. Navigate to the ***Control Panel*** tab.
4. Select the ***Network and Internet*** pane.
5. Click the ***Network and Sharing Centre*** section.
6. In the left-hand menu pane, click ***Change Adapter Settings***.
7. Right-click on ***Local Area Connection***.
8. Select ***Properties***.

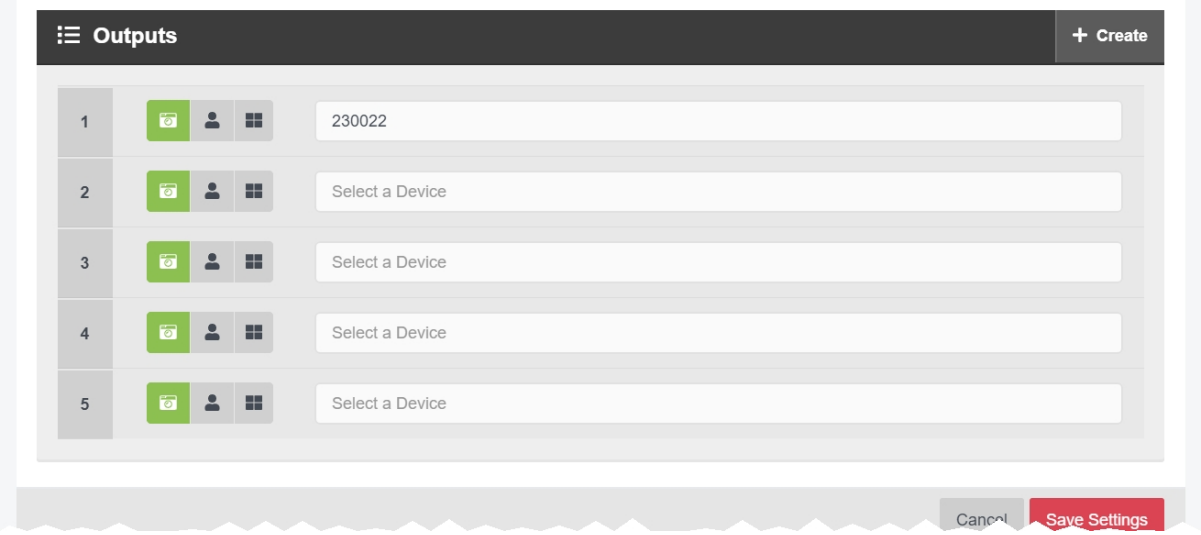
   The administrator may need to enter their password for the PC.

9. Select ***Internet Protocol Version 4 (TCP/IPv4)***.
10. Click ***Advanced...***
11. Click ***Add***.

Caution *If DCHP has not been disabled, this option will not be available to the administrator.*

3.3 Create and Reset Outputs

Outputs determine how streams from individual users and body-worn cameras on VideoManager EX are mapped onto channels in an ONVIF compatible multi-channel encoder. This is done from the ***ONStream*** section of the ***Connectivity*** pane, in the ***Admin*** tab.



There must be **one** output for every user OR body-worn camera which will be streaming to the XProtect system. To create an output:

1. Navigate to the ***Admin*** tab.
2. Select the ***Connectivity*** pane.
3. Click the ***ONStream*** section.
4. Scroll to the ***Outputs*** section.
5. To create outputs, click ***Create***.

The ***Create ONStream outputs*** window opens.

6. Enter the number of required outputs, and click ***confirm***.
7. Select the type of output to be created. The options are as follows:

   - ***Device*** - if selected, streams will correspond to the body-worn camera specified, regardless of the operator using the body-worn camera.

   The user should enter the body-worn camera's serial number. VideoManager EX will suggest serial numbers which match the one entered.

   - ***Operator*** - if selected, streams will correspond to the operator specified, regardless of the body-worn camera used to stream media.

   The user should enter the username of an operator on VideoManager EX.

8. Click ***Save settings***.

If the number of outputs should be raised or lowered after the outputs have been created, the outputs should be reset. Preexisting outputs will not be affected if the total number of outputs is raised. However, if the new number is lower than the previous number, a user's outputs will be deleted to match that number. To do so:

1. Navigate to the ***Admin*** tab.
2. Select the ***Connectivity*** pane.
3. Click the ***ONStream*** section.
4. Scroll to the ***Outputs*** section.
5. Click ***Reset***.
6. Enter the new number of required outputs.
7. Click ***confirm***.

4 Configure the XProtect System

Once ONStream has been configured, users can enable the XProtect system to connect to VideoManager EX.

To do so:

1. Add VideoManager EX to the XProtect system, which will enable users to view live streams from Motorola Solutions body-worn cameras on the XProtect sytem.

>> For more information, see Add VideoManager EX to the XProtect Management Client on page 24

2. **Optionally** create auto stop/start recording rules on the XProtect system, which will automatically record live streams in the XProtect Smart Client.

>> For more information, see Configure an Auto Stop/Start Recording Rule on page 26

3. **Optionally** create retrieval rules on the XProtect system, which will copy old media from VideoManager EX to the XProtect system.

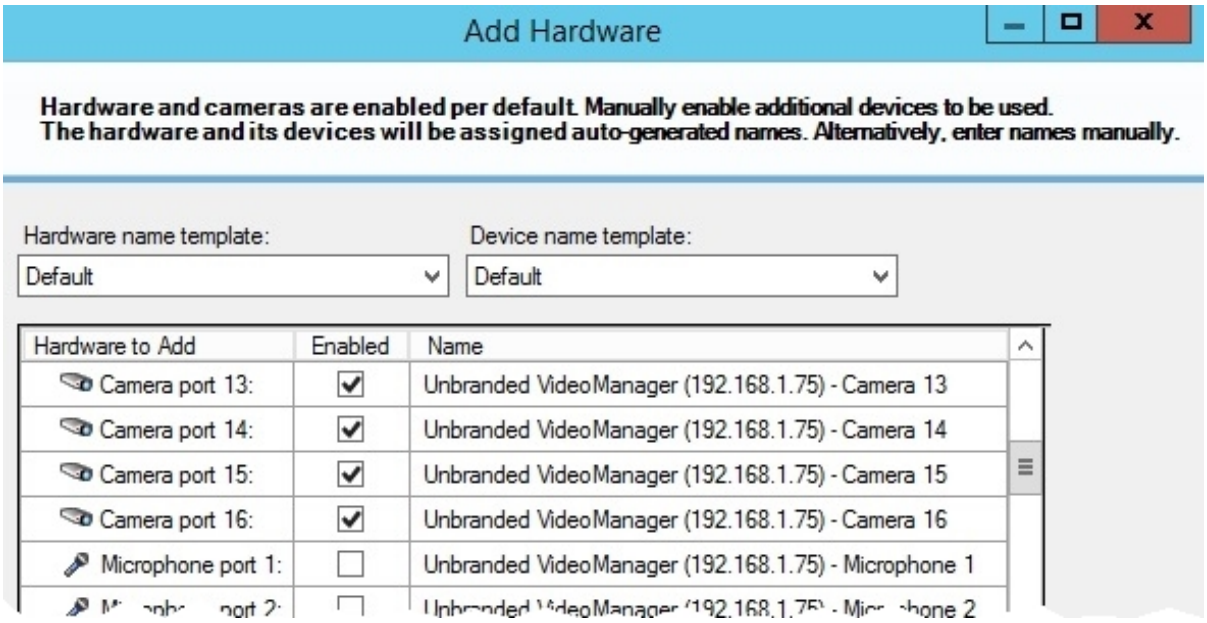
>> For more information, see Create a Retrieval Rule on page 30

4. View live streams on the XProtect system.

>> For more information, see View Live Streams on XProtect Smart Client on page 32

4.1 Add VideoManager EX to the XProtect Management Client

Once ONStream has been configured, users must manually add VideoManager EX to the XProtect Management Client. This ensures that live streams from the user's body-worn cameras are viewable in the XProtect Smart Client.



To add body-worn cameras to the XProtect Management Client:

1. Open the XProtect Management Client, enter the credentials, and click ***Connect***.
2. In the left-hand menu pane, click ***Recording Servers***.
3. Within the main panel, right-click the recording server and select ***Add Hardware...***.
4. Select one of the following options:
   - If VideoManager EX has 16 outputs or fewer, select ***Express Set Up*** and click ***Next***.
   - If VideoManager EX has more than 16 outputs, select ***Address Range Scanning***, and click ***Next***. In the ***Start IP address*** and ***End IP address*** fields, enter the range of IP addresses for the body-worn cameras, and the VideoManager EX port (the default is ***554***). Click ***Next***.

     >> For more information, see Enable Multiple IP Addresses on page 20

5. Select which body-worn cameras associated with VideoManager EX will show up in the XProtect Smart Client.

   Although all body-worn cameras are enabled by default, their microphones are not - these must be enabled individually. The number of the body-worn camera corresponds with the number of the microphone (e.g. body-worn camera port 10 has the microphone port 10).

6. Click ***Next***.

7. Users can now select the group to which their body-worn cameras will belong.

The default is *Default Camera Group*, but a new group can be created by clicking the ***Add Group*** button in the bottom left-hand corner.

8. Click ***Finish***

If a body-worn camera is currently live streaming, the user should see the live stream appear at the bottom of the screen.

4.2 Configure an Auto Stop/Start Recording Rule

It is possible to create an auto stop/start recording rule in the XProtect Management Client, which will automatically start recording a body-worn camera's live stream in the XProtect Smart Client.

To do so:

1. Create an auto start/stop recording rule.

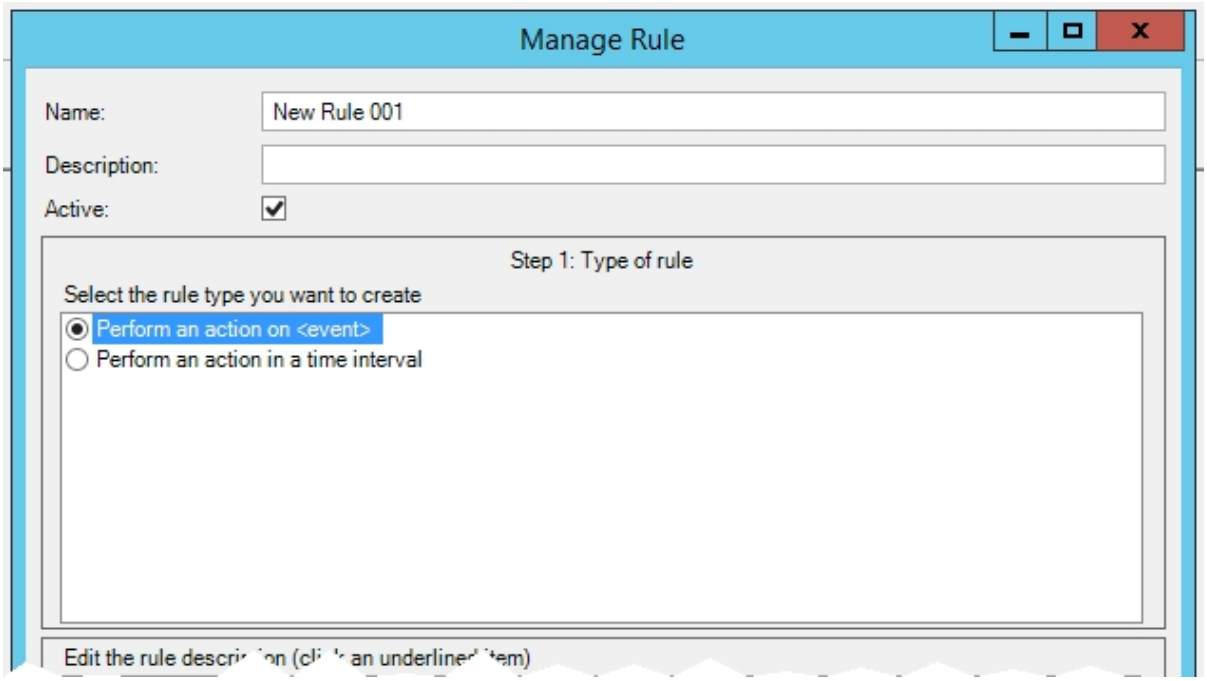
>> For more information, see Add an Auto Start/Stop Recording Rule on page 27

2. Configure devices to obey the rule.

>> For more information, see Configure Body-Worn Cameras for the Auto Start/Stop Recording Rule on page 29

4.2.1 Add an Auto Start/Stop Recording Rule

Auto start/stop recording rules control what happens when a body-worn camera starts or stops recording (an "event").



To add an auto start/stop recording rule:

1. In the left-hand menu pane, right-click ***Rules*** and select ***Add Rule...***.
2. In the ***Name*** field, enter a name for the rule.
3. Select ***Perform an action on (event)***.
4. In the bottom ***Edit the rule description (click an underlined item)*** panel, click event.
5. Select ***Devices***, then ***Configurable Events***, and scroll down to ***Motion Started (HW)***.
6. Click ***OK***.
7. To select which body-worn cameras will follow this rule, click devices/recording server-/management server in the bottom panel, select a body-worn camera, and click ***Add***.

   Repeat this for every relevant body-worn camera.
8. Click ***OK***.
9. Click ***Next***.
10. In the ***Select conditions to apply*** panel, select when this rule will apply.

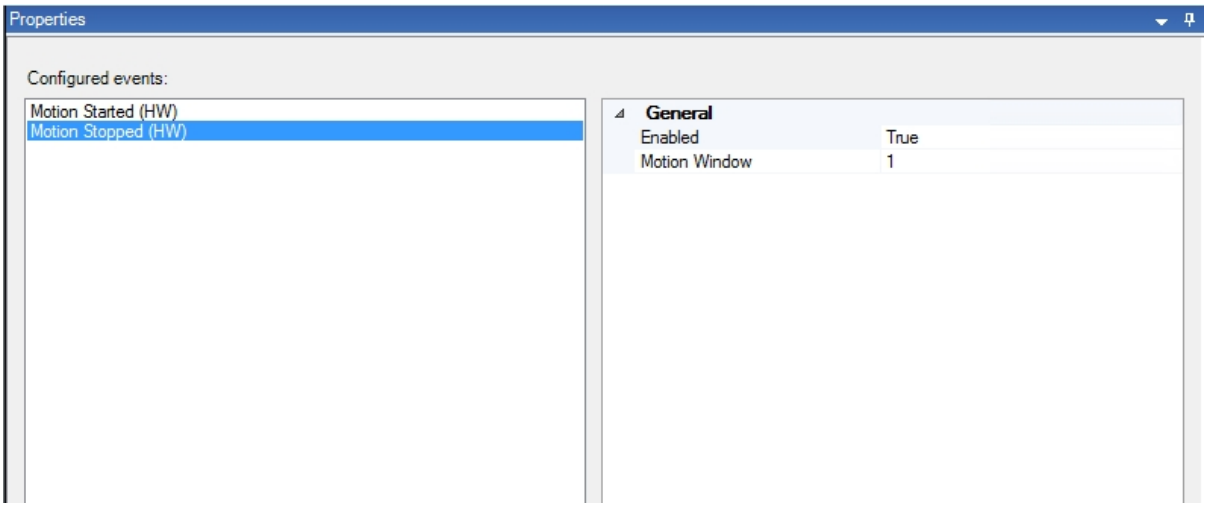
> *If the rule should apply all the time, click **Next**.*

11. In the top ***Select actions to perform*** panel, select ***Start recording on (devices)***. This will also add an option to configure when exactly the recording begins.
12. To configure when the recording begins exactly, in the bottom ***Edit the rule description (click an underlined item)*** panel, click immediately. Enter a value, and select the unit of time from the dropdown. Click ***OK***.
13. Click ***Next***.
14. In the bottom ***Edit the rule description (click an underlined item)*** panel, select which action will prompt XProtect Smart Client to stop recording the live stream.

    The default is Motion Stopped (HW), which applies to the same body-worn cameras as the Motion Started (HW) event.
15. Click ***Next***.
16. Click ***Finish*** to save the rule.

4.2.2 Configure Body-Worn Cameras for the Auto Start/Stop Recording Rule

Once the auto start/stop recording rules have been created, they must be applied to body-worn cameras manually. This ensures that when the body-worn cameras start and stop recording, those events match the previously-created rules.



To configure a body-worn camera for use with auto start/stop recording rules:

1. In the left-hand menu pane, click ***Recording Servers*** and select the body-worn camera which will perform the event.
2. In the ***Properties*** panel, select the ***Events*** tab.

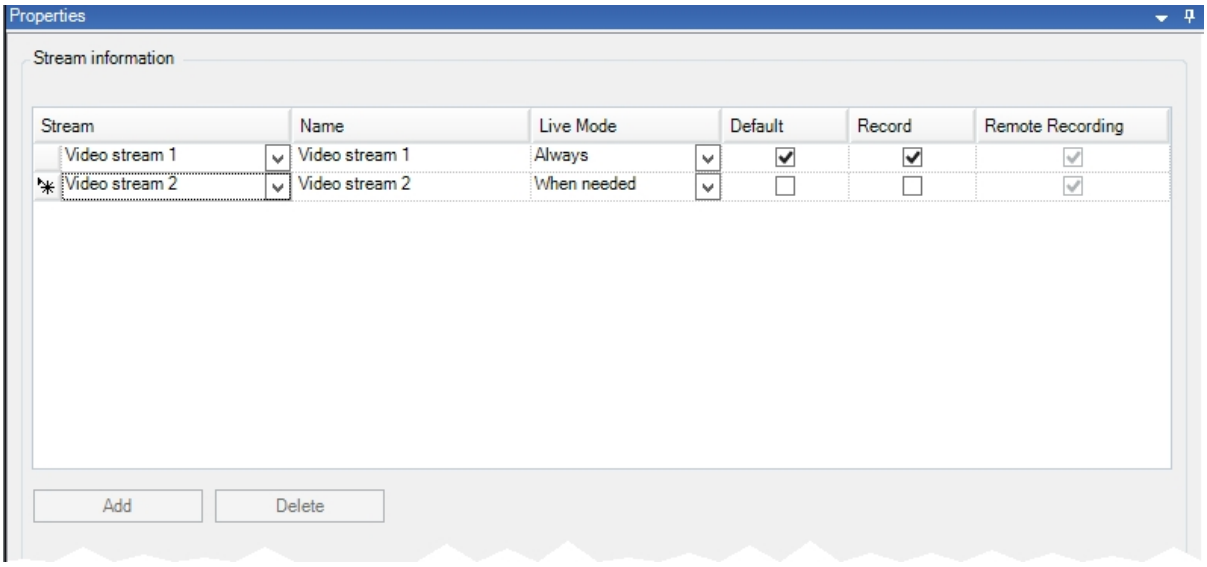
An empty ***Controlled Events*** list will appear.

3. Click ***Add***, and select ***Motion Started (HW)***.
4. Click ***OK***.
5. Click ***Add***, and choose ***Motion Stopped (HW)***.
6. Click ***OK***.
7. Click ***Save***.

Now, whenever the body-worn camera in question starts live streaming, XProtect Smart Client will automatically begin recording the live stream. When the body-worn camera stops live streaming, the recording will stop as well.

4.3 Create a Retrieval Rule

It is possible to configure XProtect Management Client to retrieve previously recorded media from VideoManager EX. This may be useful if a body-worn camera was previously unable to live stream to XProtect Smart Client in the field, because of network connectivity issues.



Ensure that on VideoManager EX, ***Allow historic footage fetch*** has been set to ***On***.

>> For more information, see Configure ONStream Settings on page 18

Before creating a retrieval rule, users should create a higher quality "replay" stream for every body-worn camera already configured in XProtect:

1. In the left-hand menu pane, click ***Recording Servers*** and select the body-worn camera for which historic media will be retrieved.
2. In the ***Properties*** panel, select the ***Streams*** tab.
3. Click ***Add***, and select *Video Stream 2* from the options presented in the dropdown. Set the values as follows:
    - *Live mode* - when needed
    - *Default* - off
    - *Record* - off
    - *Remote recording* - on
4. Click ***Save***.

Users can now create a retrieval rule. To do so:

1. In the left-hand menu pane, right-click ***Rules*** and select ***Add Rule...***.
2. In the ***Name*** field, enter a name for the rule.

3. Select ***Perform an action in a time interval***.
4. Click ***Next***.
5. In the top ***Select conditions to apply*** panel, select a time interval, within which the rule will run.

It is recommended that users select a time, during which their network is not otherwise utilised. This will minimise bandwidth load.

6. Click ***Next***.
7. In the top ***Select actions to perform*** panel, select ***Retrieve and store remote recordings from (devices)***.
8. In the bottom ***Edit the rule description (click an undefined item)*** panel, users can configure the rule further, by clicking the underlined sections.

    - Recording device - this gives users the ability to add body-worn cameras to this rule in groups or individually, by double-clicking.

    The rule will apply to all body-worn camera added here, and retrieve the media recorded on them.

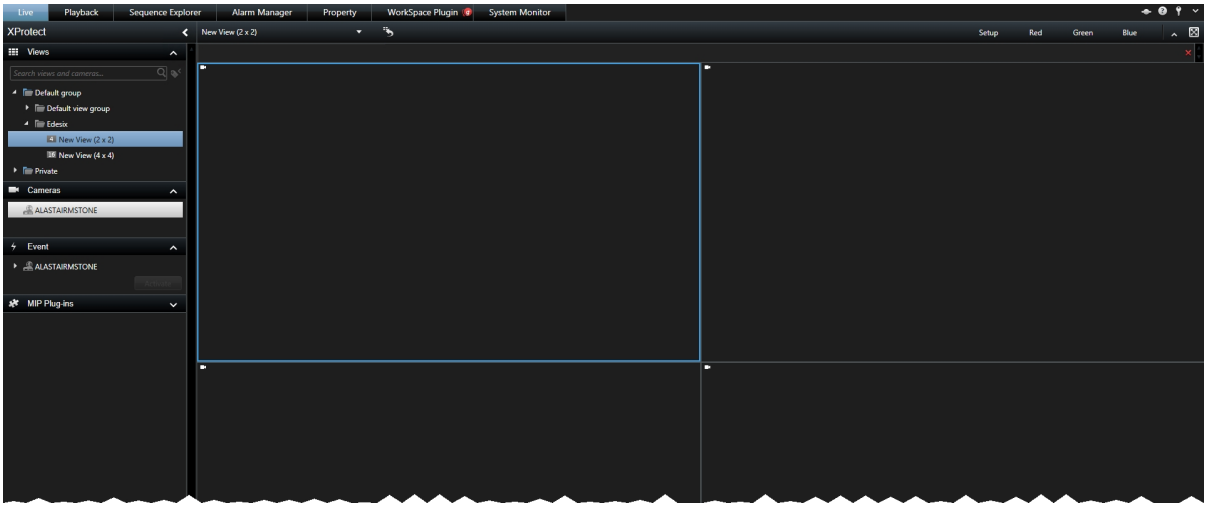
    - Relative time - by default, only media files recorded two minutes before the rule is triggered will be retrieved from VideoManager EX. It is possible to edit this variable, so that media files recorded up to 672 hours (four weeks) before the rule is triggered will be retrieved. To do so, change the variable to -(number). For example, one day before would be -24.

    The time can only be entered in hours, not days or weeks.

9. Click ***OK***.
10. Click ***Next***.
11. Leave the ***Stop Criteria*** section as its default setting.
12. Click ***Finish*** to save the rule.

4.4 View Live Streams on XProtect Smart Client

After both VideoManager EX and the XProtect Management Client have been configured, users can view the live streams from body-worn cameras on the XProtect Smart Client.



To view a VideoManager EX live stream on the XProtect Smart Client:

1. Open the XProtect Smart Client, enter the credentials, and click ***Connect***.
2. Expand the left-hand menu pane.
3. Select the ***Camera*** dropdown.

A list of connected cameras will appear.

4. Users can perform the following actions:

    - To view a camera's live stream, drag the relevant body-worn camera from the ***Camera*** dropdown to the central viewing area of XProtect Smart Client, and drop it into a free tile.
    - To replace one live stream with another, drag the new body-worn camera from the ***Camera*** dropdown to the central viewing area of XProtect Smart Client, and drop it over the tile of the body-worn camera which is already streaming.
    - To zoom in on or out of a live stream, use the **+** and **-** buttons in the bottom left-hand corner of a tile, respectively.
    - To maximise a live stream so it fills the entire screen, double-click the relevant tile. This will make it fullscreen.

    Double-clicking the relevant tile again will return the tile to its normal size.

    - To change the audio that users can hear, click the ***Audio*** dropdown in the left-hand menu pane, and select the relevant audio input.

    It is also possible to mute the audio entirely by ticking the ***Mute*** box.

5 Glossary

A

Assigned/Unassigned
If a body-worn camera has been assigned, it has been paired with a user and can record footage. An unassigned body-worn camera has not been paired with a user, and cannot record footage until it has been assigned.

D

Display Name
The name of a user that will be presented to others on the VideoManager system - this is not necessarily the same as a username.

L

Licence
Some features on VideoManager are not available unless a licence has been obtained from Motorola Solutions. Such features include assisted redaction, Tactical VideoManager, and ONStream.

O

ONStream
A licensed feature from Motorola Solutions which enables body-worn cameras to send a live stream to VideoManager over WiFi.

ONVIF
ONVIF is an open industry forum that provides and promotes standardized interfaces for effective interoperability of IP-based physical security products.

P

Permanent allocation
If a body-worn camera has been assigned to a user with permanent allocation, it will be assigned to the user permanently, even when it is redocked. It does not need to be reassigned every time the user wishes to use it. Unlike permanent issue, the user can only use the body-worn camera with RFID touch assign.

Permanent issue
If a body-worn camera has been assigned to a user with permanent issue, it will be assigned to the user permanently, even when it is redocked. It does not need to be reassigned every time the user wishes to use it.

Permission
An individual rule which determines the actions users can perform on VideoManager.

R

Recording
This is the complete footage recorded by a body-worn camera, from the moment it is prompted to start recording until the moment it is prompted to stop (including any pre- and post-record periods). A recording will be split into multiple videos if it reaches a certain length, as defined in the body-worn camera's device profile.

Role
Instead of applying permissions directly to users, they are applied to a role, which is then applied to a user. This means that multiple users can belong to the same role.

S

Single issue
If a body-worn camera has been assigned to a user with single issue, it will only be assigned to the user for one trip. Once the body-worn camera is redocked, it will return to the pool and can be assigned to a different user.

System Administrator
A role which cannot be edited or deleted. Any users with this role will be able to access any aspect of VideoManager.

U

User
Every individual on an instance of VideoManager must have their own user.

User-specific WiFi Network
A WiFi network that only appears on the dashboard of the user who configured it - for instance, a mobile phone hotspot for streaming that other users shouldn't be able to access.

V

VB400
A VB400 is a robust body-worn camera designed and sold by Motorola Solutions. It can record for up to 8 hours in full HD and has 32GB of recording storage. It also has GPS-tracking, Bluetooth functionality, and can livestream footage to VideoManager over a WiFi network.

VT100
A VT100 is a lightweight, discreet body-worn camera designed and sold by Motorola Solutions. It can record for up to 4 hours, and has the capacity to livestream footage to VideoManager if connected to WiFi. It is the first body-worn camera in Motorola Solutions' VideoTag range to have haptic feedback.

W

WiFi Profile
A collection of individual WiFi networks that is then applied to a body-worn camera. The body-worn camera in question will stream to VideoManager over these networks.

For more information, please visit: www.motorolasolutions.com.

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