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T.react CIP installation manual 10 - Configure Milestone XProtect Corporate

Record of Changes

ECO	Description	Rev	Date
	Released (Milestone XProtect Corporate 2014)	A	2016-04-07
	Editorial updates	B	2017-07-03
	Released for T.react CIP revision F	C	2019-09-06
	Released for T.react CIP revision J. Milestone XProtect Corporate 2020 R1	D	See frontpage

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1 Introduction

1.1 Purpose

This installation manual explains how to configure Milestone XProtect Corporate for T.react CIP installations.

1.2 Scope

This manual is part of the overall T.react CIP system installation flow described in the main installation manual (see [INMMAIN] or [INMENTR] depending on the T.react CIP system to install).

This document describes the basic configuration of Milestone XProtect Corporate 2020 R1 in a T.react CIP installation.

The procedures described in this document apply to both virtual and physical server installations.

It is assumed that the reader has a basic knowledge of Milestone XProtect Corporate and Windows operating systems.

Note: The steps in this manual are describing the configuration of Milestone XProtect Corporate 2017 R3 but apply also to Milestone XProtect Corporate 2020 R1.

1.3 Application

This document is intended for T.react CIP installation personnel.

2 References

Ref.	Doc. No.	Title
[INMMAIN]	751606-HI	T.react CIP Single-Server Installation Manual
[INMENTR]	1410438-HI	T.react CIP Entry-Level Installation Manual
[INM07]	1034668-HI	T.react CIP Installation Manual 07 - Milestone XProtect Corporate Management Server (Redundant)
[INM08]	1034669-HI	T.react CIP Installation Manual 08 - Milestone XProtect Corporate Recording Server (Redundant)
[INM09]	1086404-HI	T.react CIP Installation Manual 09 - Milestone XProtect Corporate Single Server
[MILESTONE]	768221-QD	MilestoneXProtectCorporate_Administrators_Manual_en-US

3 Definitions

Term	Definition
AD	Active Directory (Microsoft)
CIP	Critical Infrastructure Protection
CPU	Central Processing Unit



Term	Definition
fps	frame per second
VMS	Video Management System

4 Structures

All illustrations in this document are associated with the numbered bullet above the illustration.

The following writing styles are used in the document:

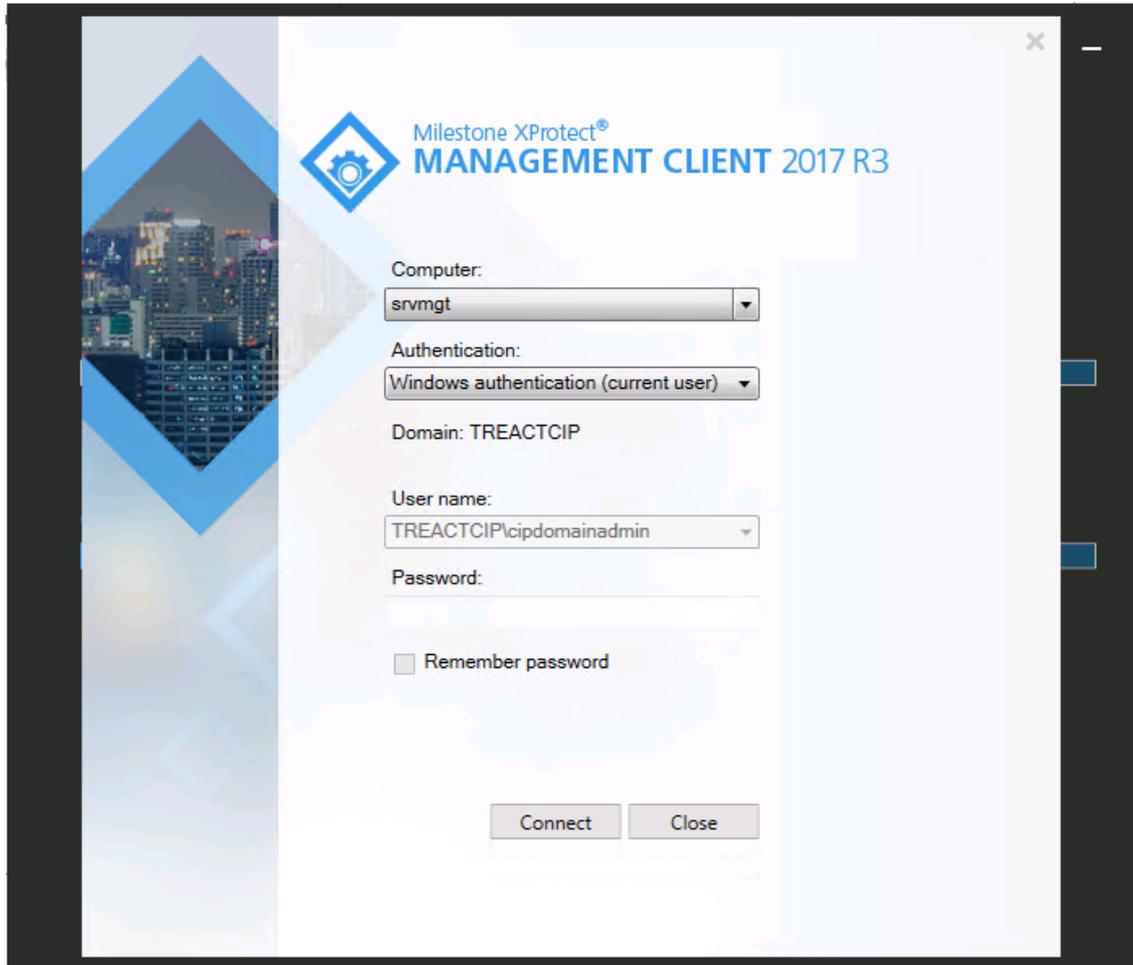
Text in program	Text found in program being described (typically shown on related illustration) – bold text
<i>Button</i>	Button in program being described (typically shown on related illustration) – bold + italic text
<i>Key</i>	Keyboard key to be entered – italic text
User entry	Text to entered by the operator – bold + Courier New text

5 Prerequisites

- Milestone XProtect Corporate Management Server(s) and Recording Server(s) installed on one or several Windows Servers (see [INM09] or [INM07] and [INM08]).
- Cameras added to the desired Recording Server(s) in Milestone XProtect VMS

6 Configuration of cameras in Milestone

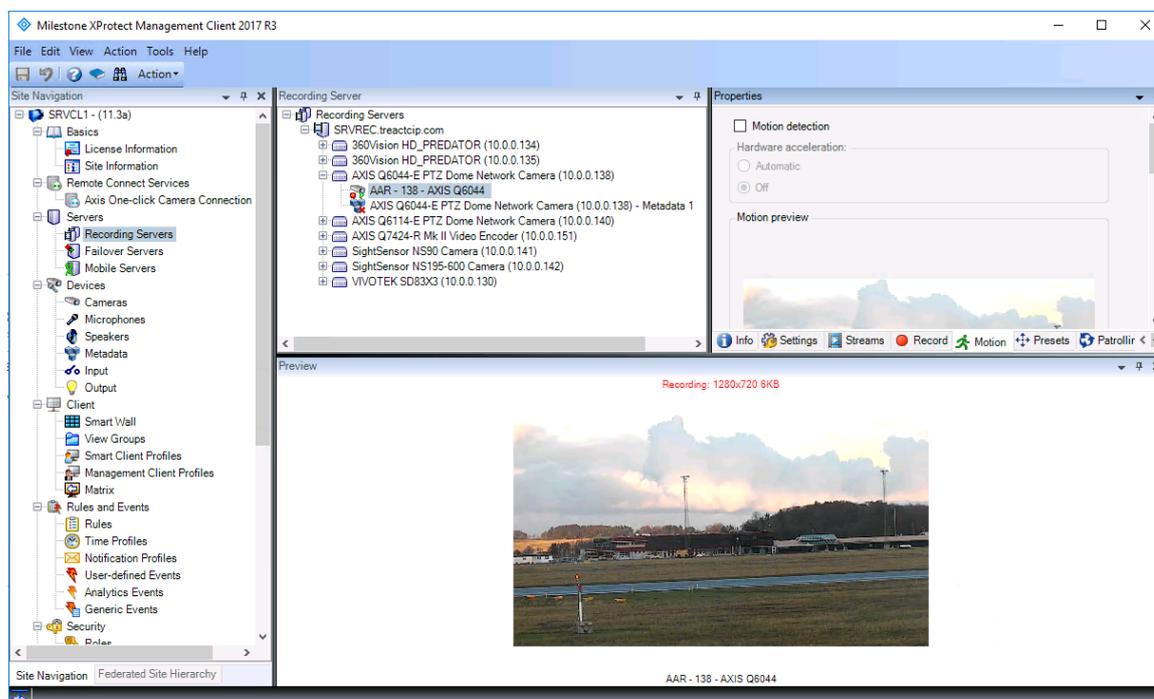
1. Open the Milestone Management Client and connect to the Milestone Management server (here **SRVMGT**)



6.1 Motion detection (optional)

Motion detection on the cameras is not relevant in Milestone since recording is controlled by events sent from T.react CIP to Milestone (see chapter 7), and to improve server (CPU) performance, motion detection should be disabled for all cameras.

2. Disable Motion detection. Select **Recording Servers** on left pane, expand Recording Server (here placed in a Windows Controller domain and called **SRVREC.treactcip.com**), expand camera on which motion detection should be disabled, select **Motion** tab on **Properties** pane (right) and uncheck **Motion detection**.



3. Repeat step 2 for all cameras

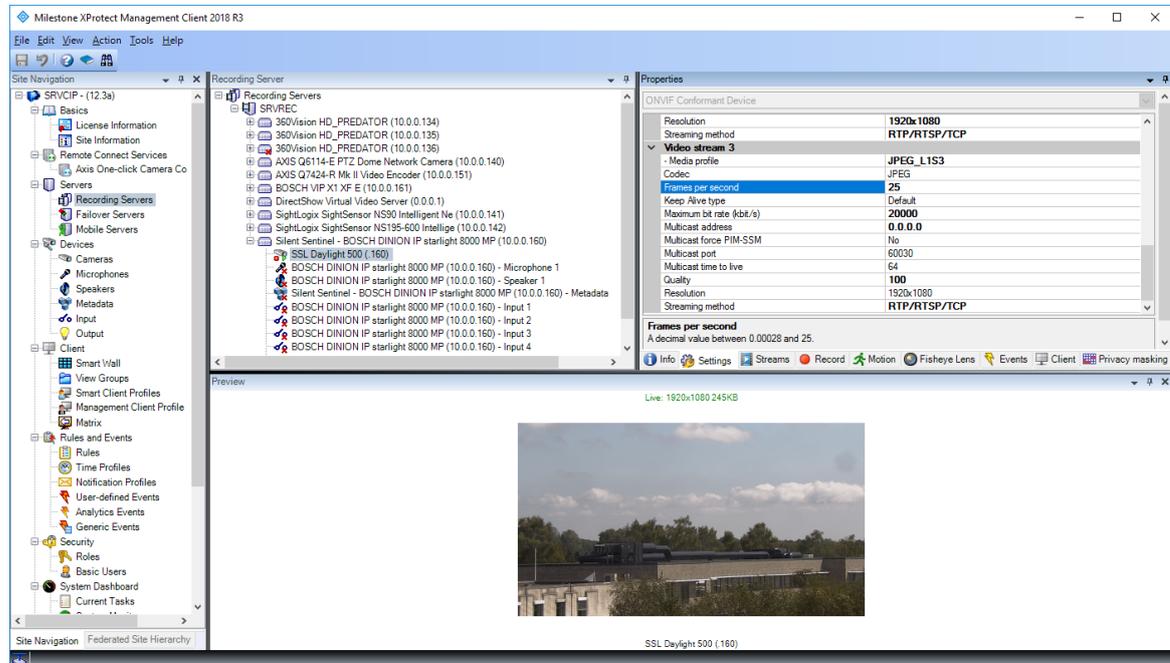
6.2 Recording framerate

The live framerate (as presented in the Milestone Smart Client) is the framerate provided by the camera. Changing framerate on the camera will change live framerate. Recording framerate differs from live framerate and depends on the stream format. For MJPEG streams, it is possible to set recording framerate to any value equal to or lower than the live framerate, while it for MPEG4/H.264/H.265 streams is only possible to set recording framerate to either live framerate or keyframes (typically 1 fps). Here it is important to observe the difference in MJPEG video streams and MPEG4/H.264/H.265 video streams. Where in general, an MJPEG camera will be able to initiate a new stream with a different frame rate very fast, this is not the case with MPEG4/H.264/H.265 cameras – a change in the live frame rate of a MPEG4/H.264/H.265 camera will result in a pause in live images and recording. I.e. for MJPEG cameras, recording framerate can be increased by increasing the live framerate, while this is not a viable option for MPEG4/H.264/H.265 cameras where recording framerate will be either the current live framerate or keyframes.

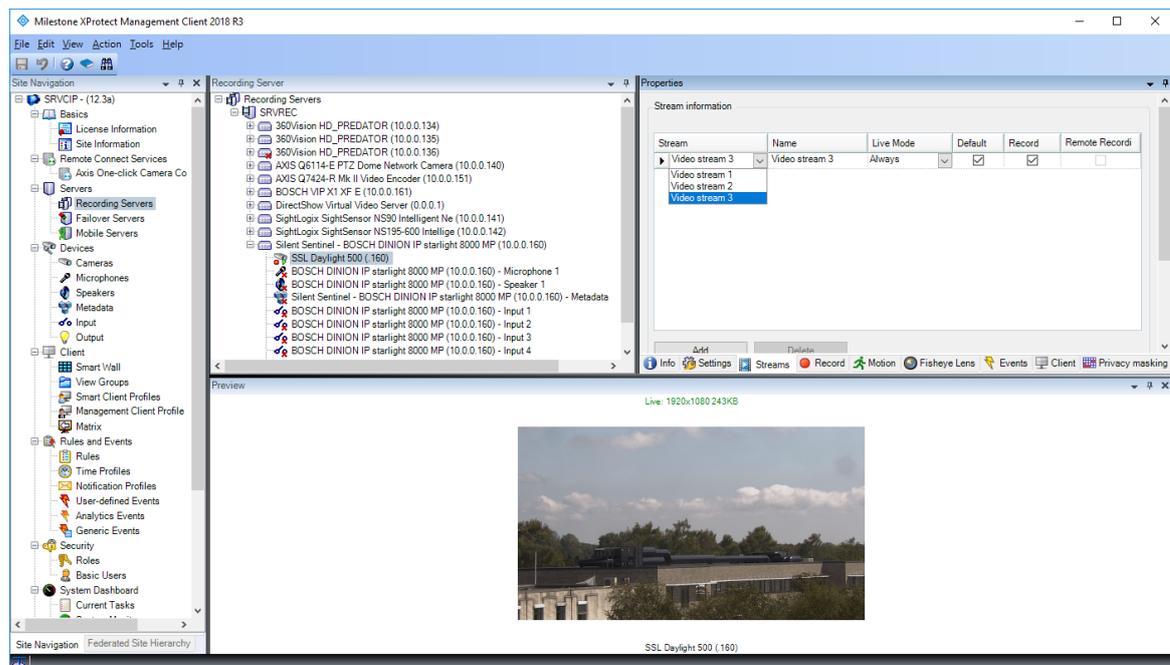
In the T.react CIP system, videos will always be presented at full framerate (as configured in Milestone), while recording framerate will be controlled by T.react CIP, by use of Milestone events. Default live and recording framerates are configured as described next, while change of framerate is configured as presented in Section 7.

6.2.1 JPEG video stream

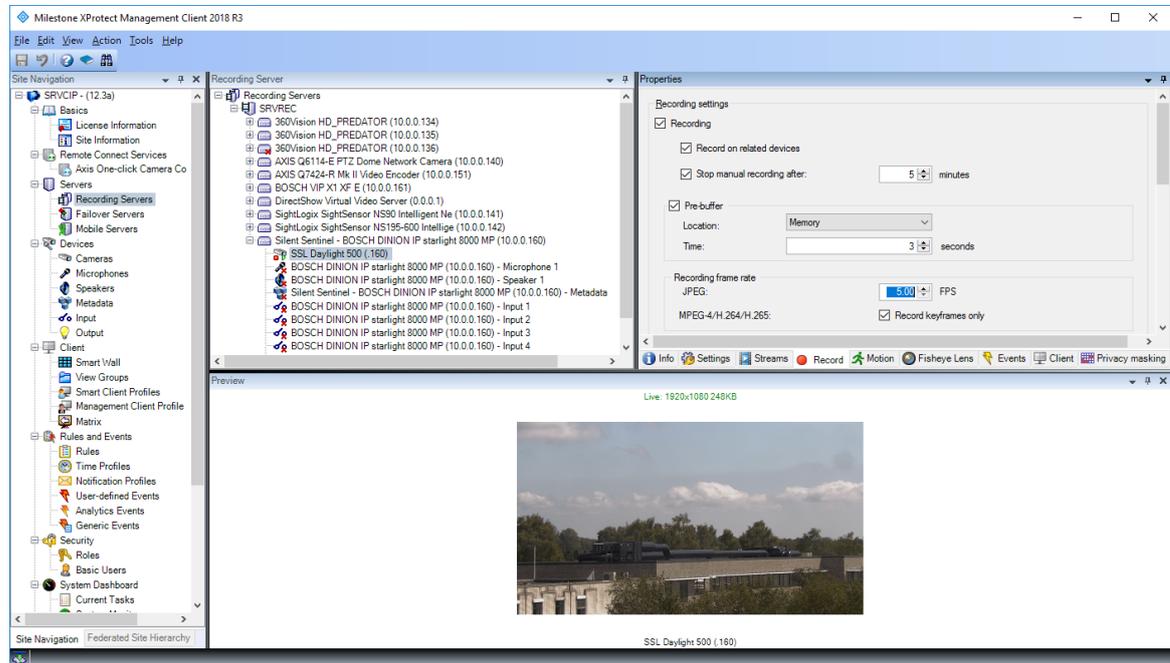
- Expand camera on which to set JPEG video stream, select **Settings** tab on **Properties** pane (right), find **JPEG Video Stream** and set default **Frames per second** (here 25). **Save**.



- Select **Streams** tab and set **Stream** to **JPEG Video Stream** from bullet 4. Ensure that **Live Mode** is set to **Always**, and **Default** and **Record** are checked. **Save**.

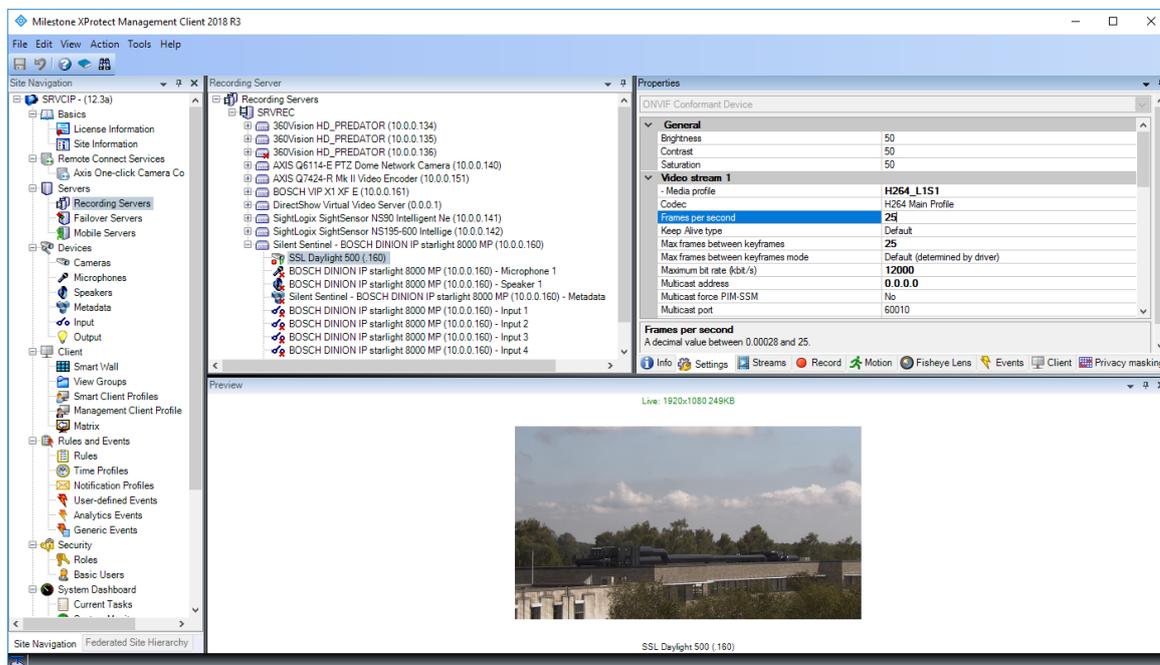


6. Select **Record** and set default JPEG recording framerate in **Recording frame rate | JPEG:** (here 5 FPS). **Save.**

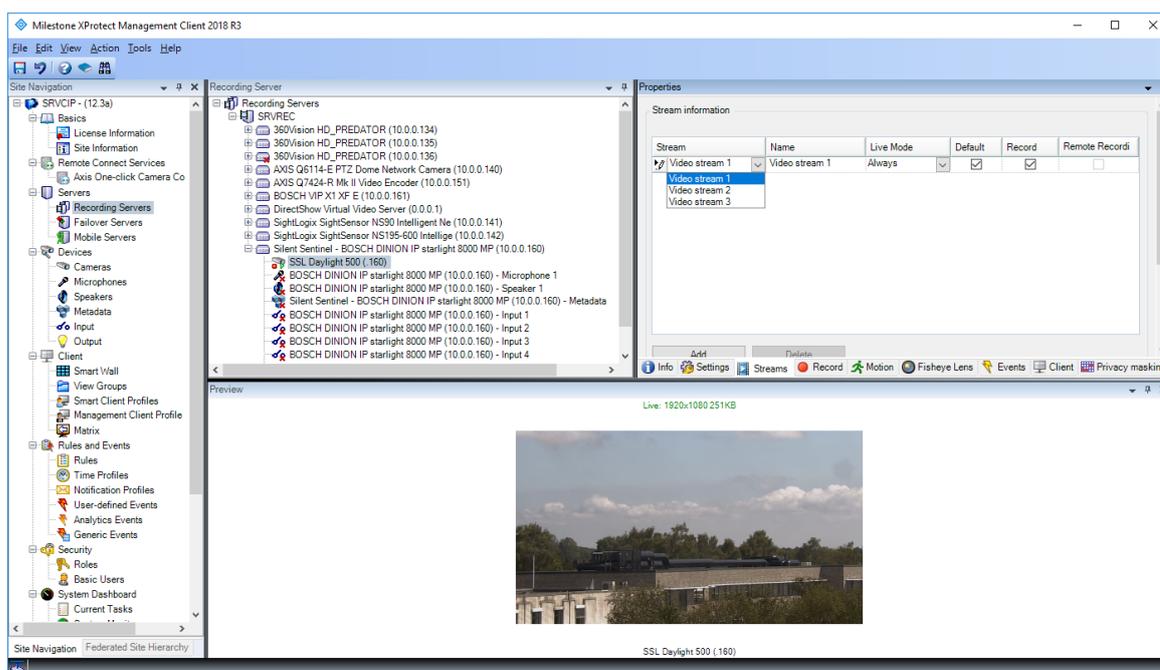


6.2.2 MPEG4/H.264/H.265 video stream

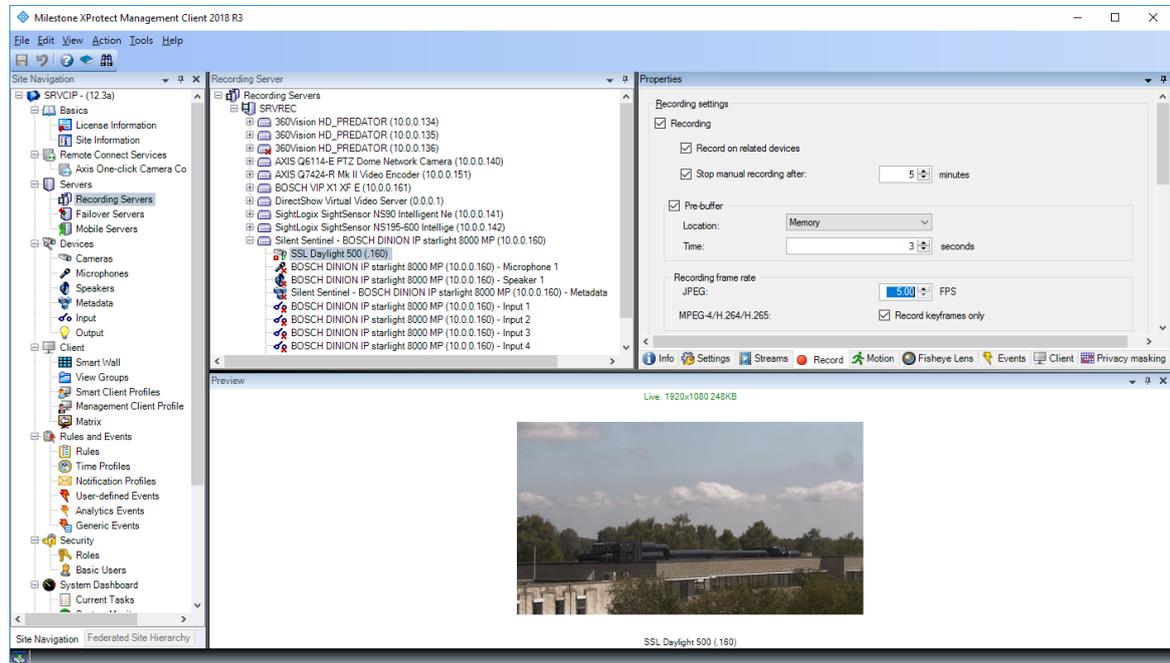
- Expand camera on which to set MPEG4/H.264/H.265 video stream, select **Settings** tab on **Properties** pane (right), find MPEG4/H.264/H.265 **Video Stream** and set default **Frames per second** (here 25). **Save**.



- Select **Streams** tab and set **Stream** to MPEG4/H.264/H.265 **Video Stream** from bullet 7. Ensure that **Live Mode** is set to **Always**, and **Default** and **Record** are checked. **Save**.



9. Select **Record** and check **Record Keyframes only** in **Recording frame rate | MPEG-4/H.264/H.265**. Save.



7 Milestone Rules and Events – Always Record configuration

NB. For a system with a large number of cameras or off-shore where it is unlikely the camera record anything of interest unless assigned to event, see chapter 8.

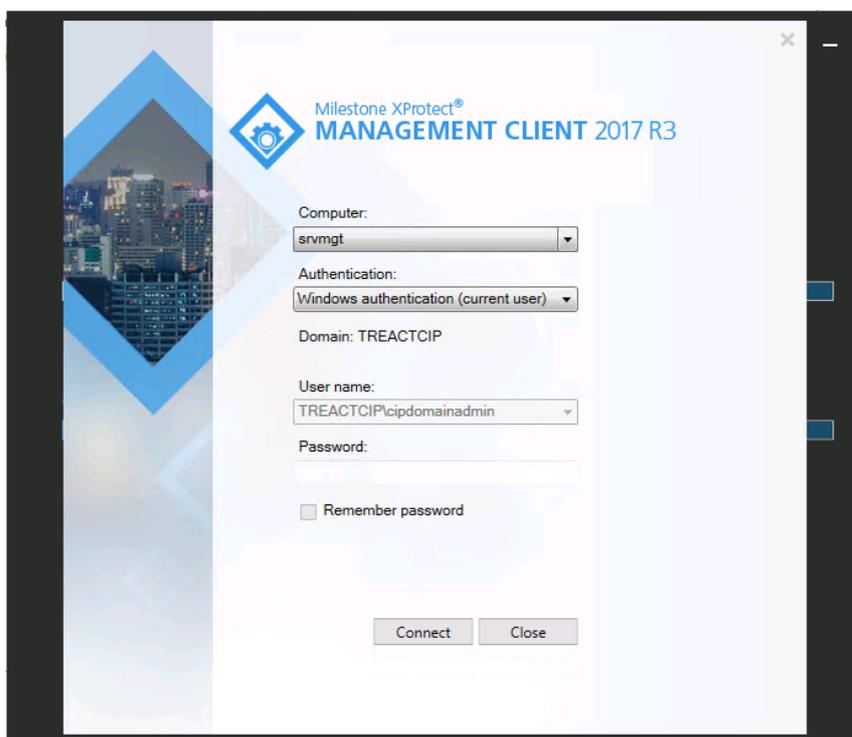
Milestone events and rules may be used to control Milestone recording settings from external software (e.g. the T.react CIP system).

In the following sections, Milestone XProtect VMS is set up to continuously record on all cameras at low framerate by default and to increase the framerate when an external event is received (from the T.react CIP system, when an offending object is detected and followed by a camera).

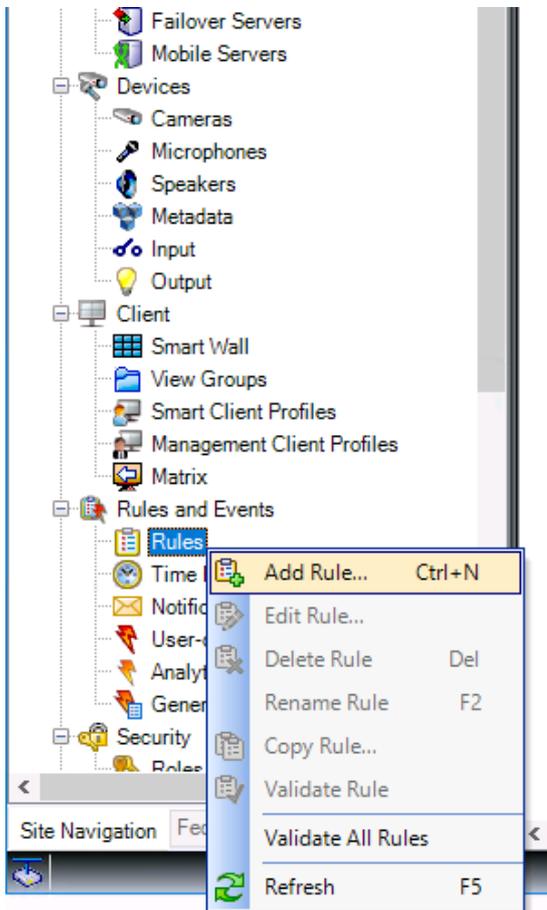
7.1 Always record rule

The Always Record rule will force all cameras to continuously record video.

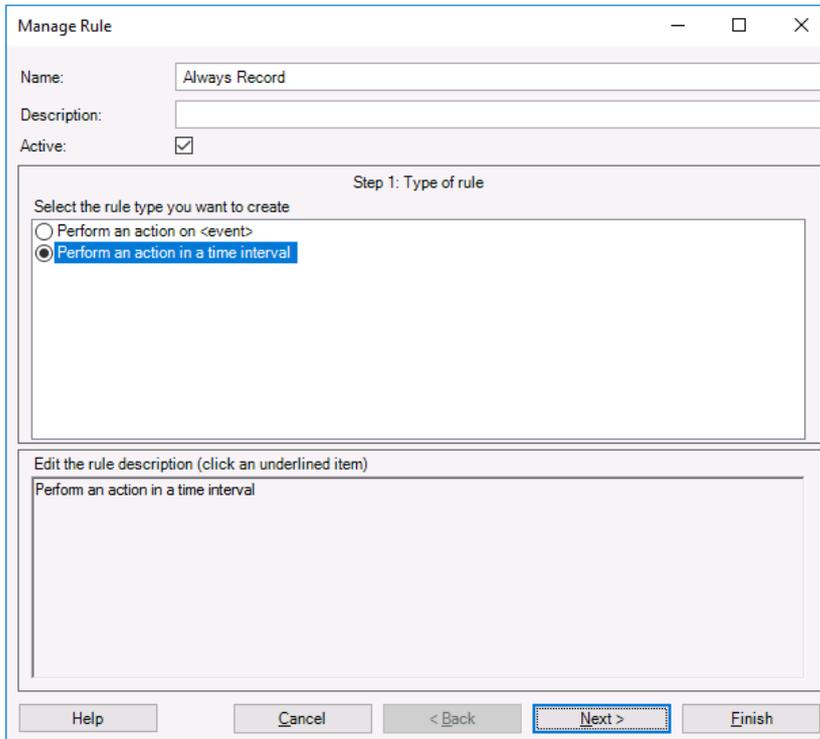
1. Open the Milestone Management Client and connect to the Milestone Management server (here **SRVMGT**)



2. Right-click **Rules** in **Site Navigation** pane and select **Add Rule ...**



3. Name the new rule **Always Record**, select **Perform an action in a time interval** and click **Next**



Manage Rule

Name:

Description:

Active:

Step 1: Type of rule

Select the rule type you want to create

Perform an action on <event>

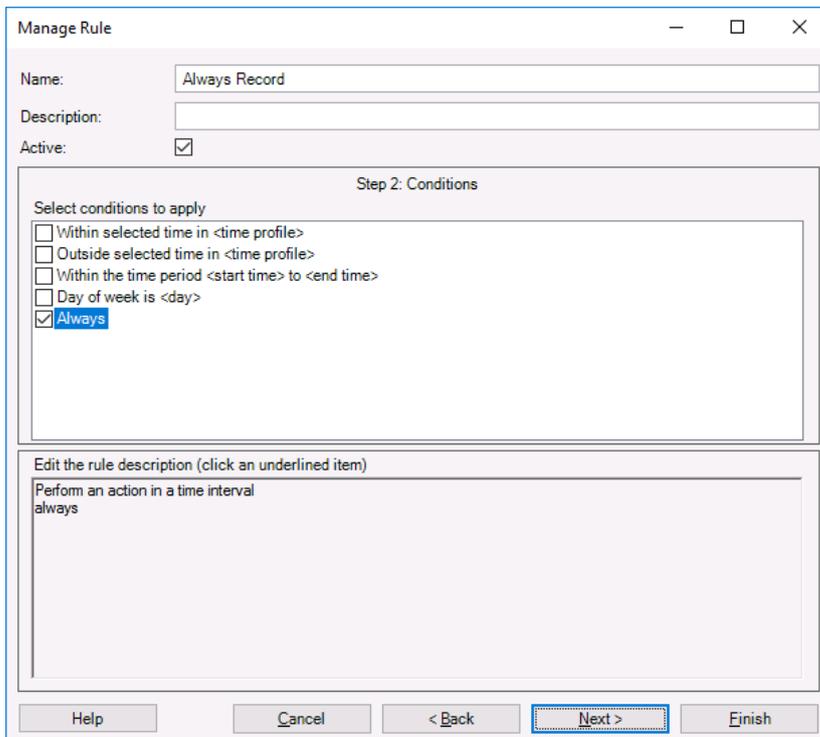
Perform an action in a time interval

Edit the rule description (click an underlined item)

Perform an action in a time interval

Help Cancel < Back **Next >** Finish

4. Select **Always** and click **Next**



Manage Rule

Name:

Description:

Active:

Step 2: Conditions

Select conditions to apply

Within selected time in <time profile>

Outside selected time in <time profile>

Within the time period <start time> to <end time>

Day of week is <day>

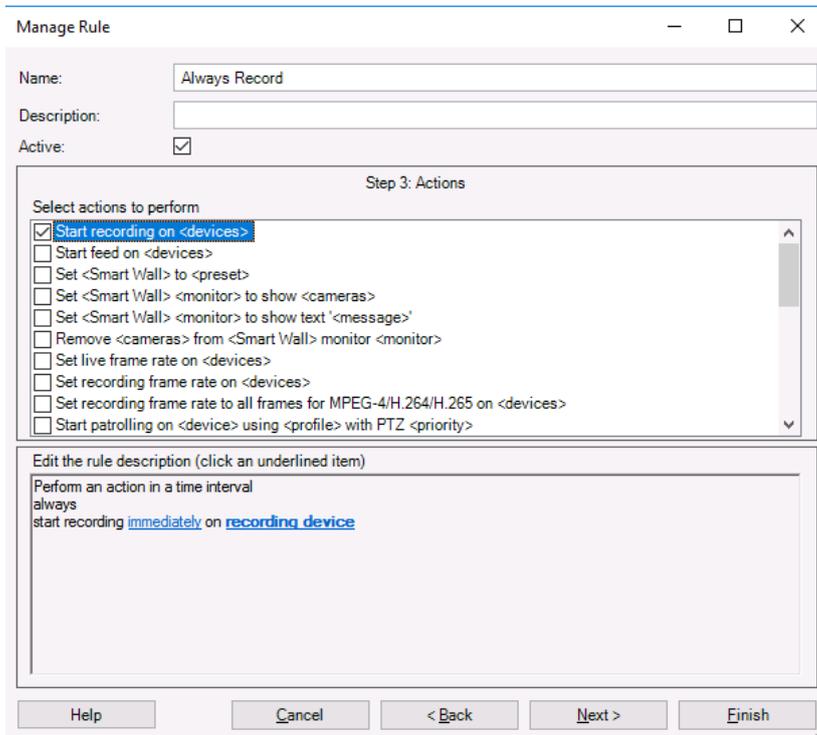
Always

Edit the rule description (click an underlined item)

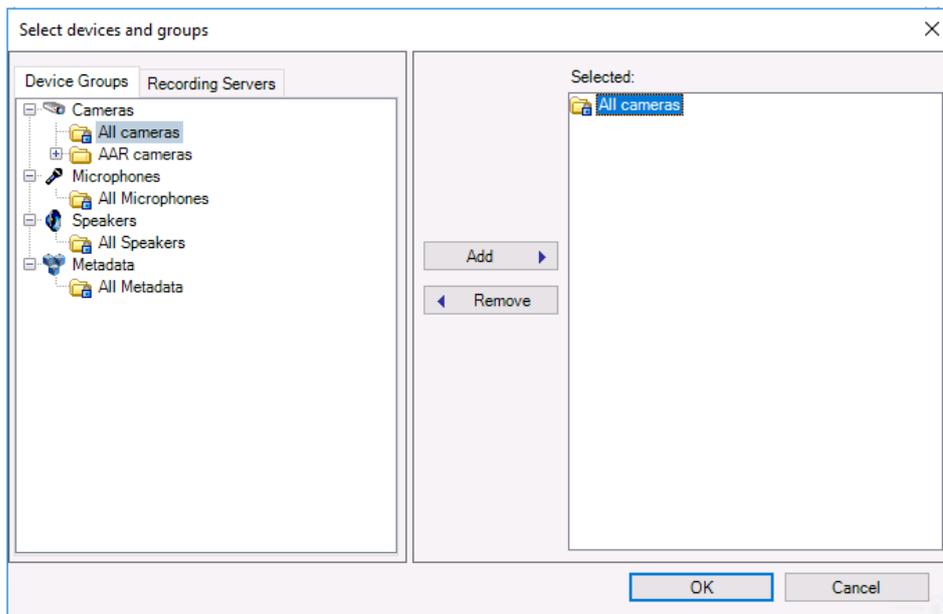
Perform an action in a time interval
always

Help Cancel < Back **Next >** Finish

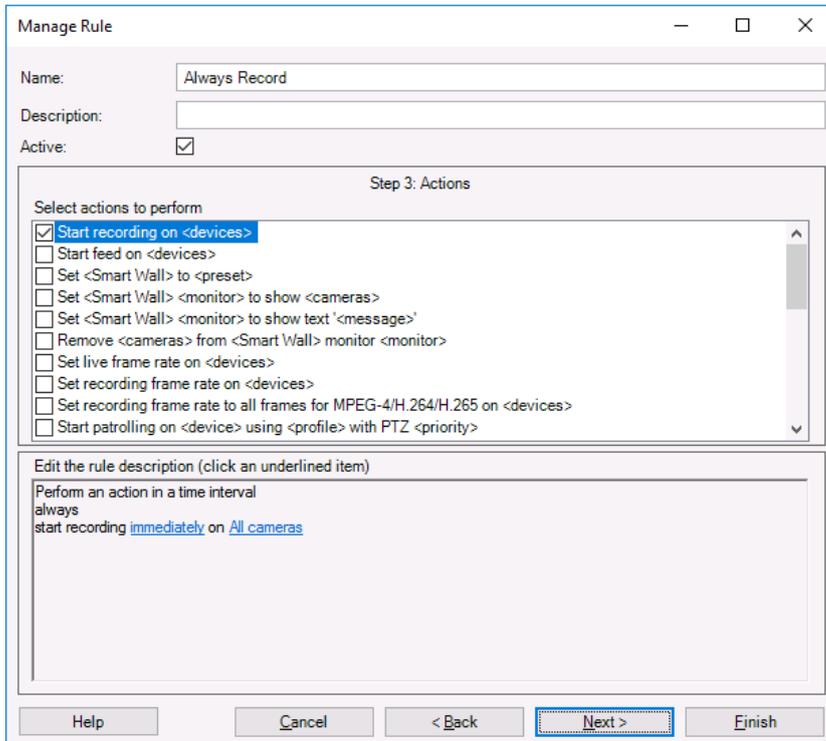
5. Select **Start recording on <devices>** and click **recording device**



6. Select all cameras, click **Add** and click **OK**



7. Click **Next**



Manage Rule

Name:

Description:

Active:

Step 3: Actions

Select actions to perform

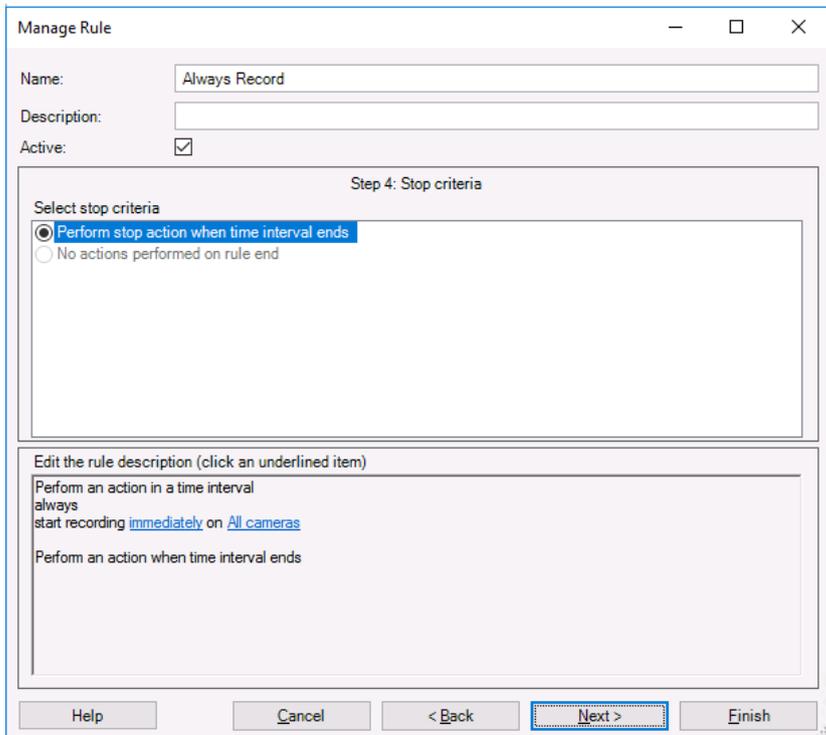
- Start recording on <devices>
- Start feed on <devices>
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Set live frame rate on <devices>
- Set recording frame rate on <devices>
- Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <devices>
- Start patrolling on <device> using <profile> with PTZ <priority>

Edit the rule description (click an underlined item)

Perform an action in a time interval
always
start recording immediately on All cameras

Help Cancel < Back **Next >** Finish

8. Click **Next**



Manage Rule

Name:

Description:

Active:

Step 4: Stop criteria

Select stop criteria

- Perform stop action when time interval ends
- No actions performed on rule end

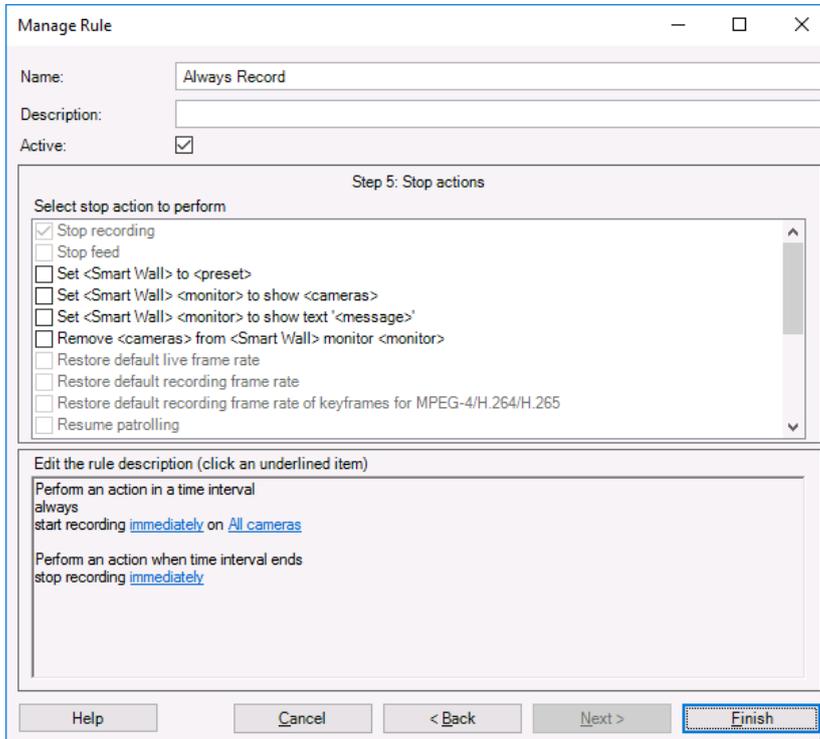
Edit the rule description (click an underlined item)

Perform an action in a time interval
always
start recording immediately on All cameras

Perform an action when time interval ends

Help Cancel < Back **Next >** Finish

9. Click **Finish** to create **Always Record** rule (recording should now start on all cameras)



Manage Rule

Name: Always Record

Description:

Active:

Step 5: Stop actions

Select stop action to perform

- Stop recording
- Stop feed
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text <message>
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Restore default live frame rate
- Restore default recording frame rate
- Restore default recording frame rate of keyframes for MPEG-4/H.264/H.265
- Resume patrolling

Edit the rule description (click an underlined item)

Perform an action in a time interval
always
start recording immediately on All cameras

Perform an action when time interval ends
stop recording immediately

Help Cancel < Back Next > Finish

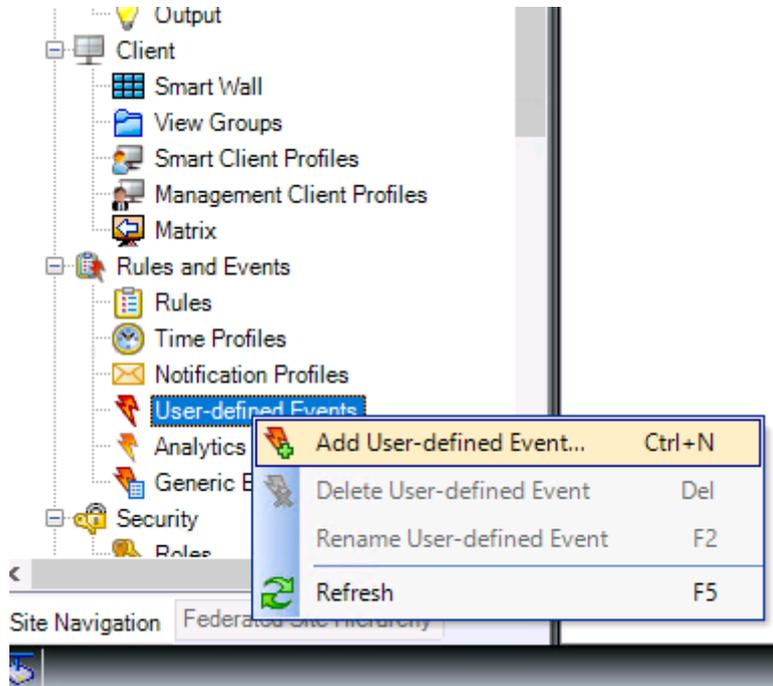
7.2 Create framerate change events and rule

This section is based on the assumption that video streams are configured at full/max frame rate for live viewing and a lower frame rate when recording (e.g. keyframes – typically 1 fps – for H.264/H.265). A rule (and corresponding events) is created to set the recording video framerate to full/max frame rate based on external input (from the T.react CIP system, when the camera is allocated to an event). It is important to spell the events correctly as described in this section.

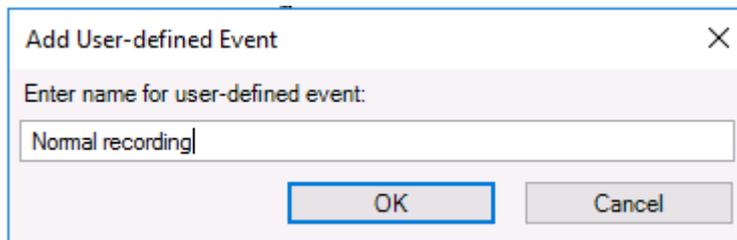
Note: If for some reason a change in recording framerate is not desired, it is possible to deactivate the corresponding rules(s) or simply not define these rules and events in Milestone.

7.2.1 Create events

1. To create new events, right-click **User-defined Events** in the **Site Navigation** pane and select **Add User-defined Event ...**

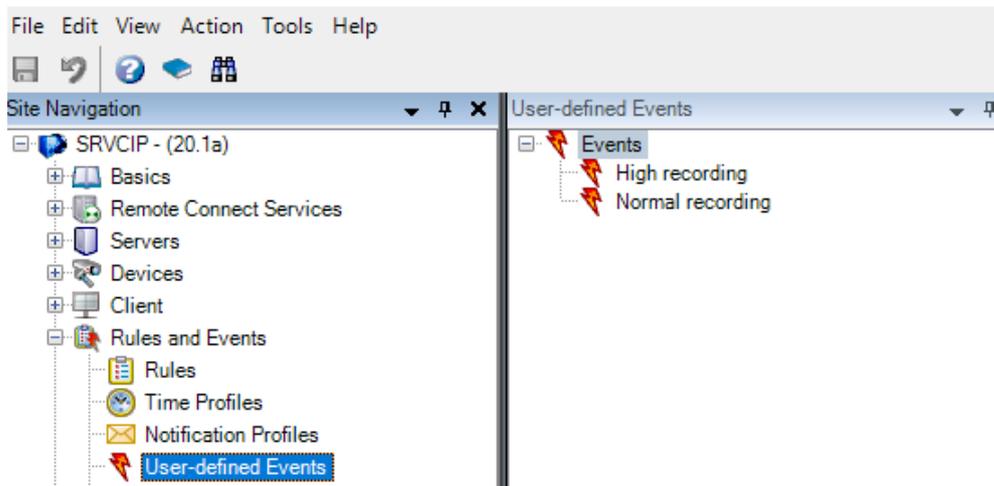


2. Enter the name (**Normal recording**) of this user-defined event and click **OK**



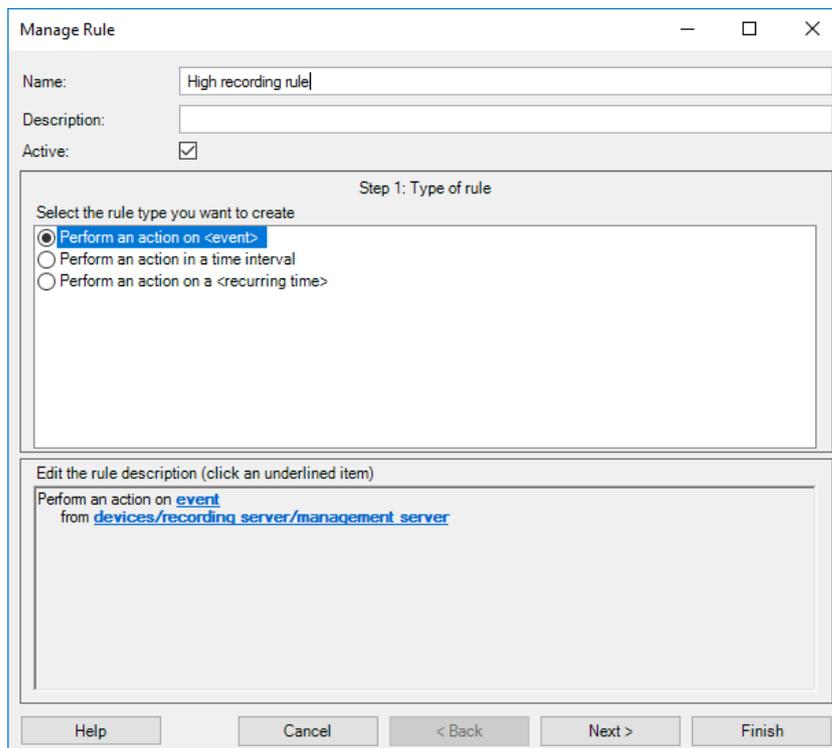
Create an additional event: **High recording**

 Milestone XProtect Management Client 2020 R1

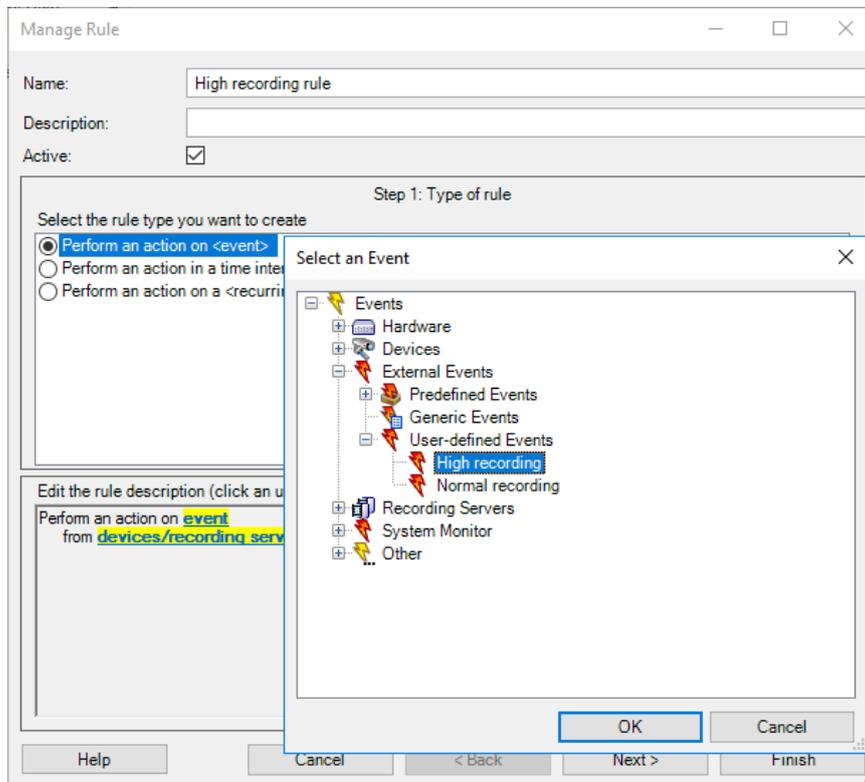


7.2.2 Create High recording rule and bind it to High recording event

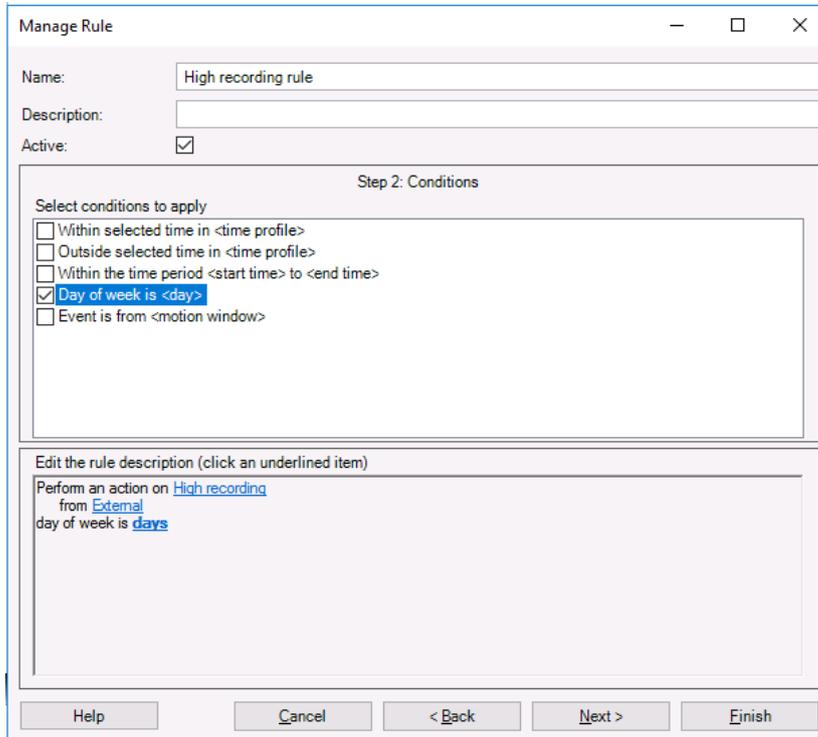
1. Create a new rule (see 7.1) called **High recording rule**



2. Select **Perform an action on <event>**, click **event** and select **High recording** user-defined event



3. Click **OK** and **Next** and select **Day of week is <day>**

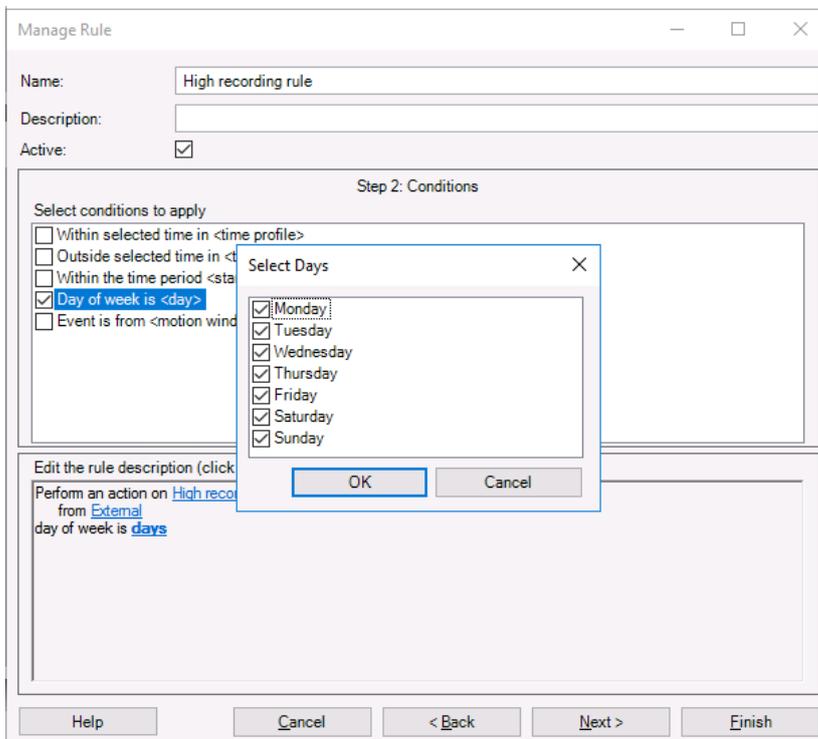


The screenshot shows the 'Manage Rule' dialog box with the following details:

- Name: High recording rule
- Description: (empty)
- Active:
- Step 2: Conditions
 - Select conditions to apply
 - Within selected time in <time profile>
 - Outside selected time in <time profile>
 - Within the time period <start time> to <end time>
 - Day of week is <day>
 - Event is from <motion window>
- Edit the rule description (click an underlined item)
 - Perform an action on [High recording](#)
 - from [External](#)
 - day of week is [days](#)

Buttons at the bottom: Help, Cancel, < Back, Next >, Finish

4. Click **days** and select all days

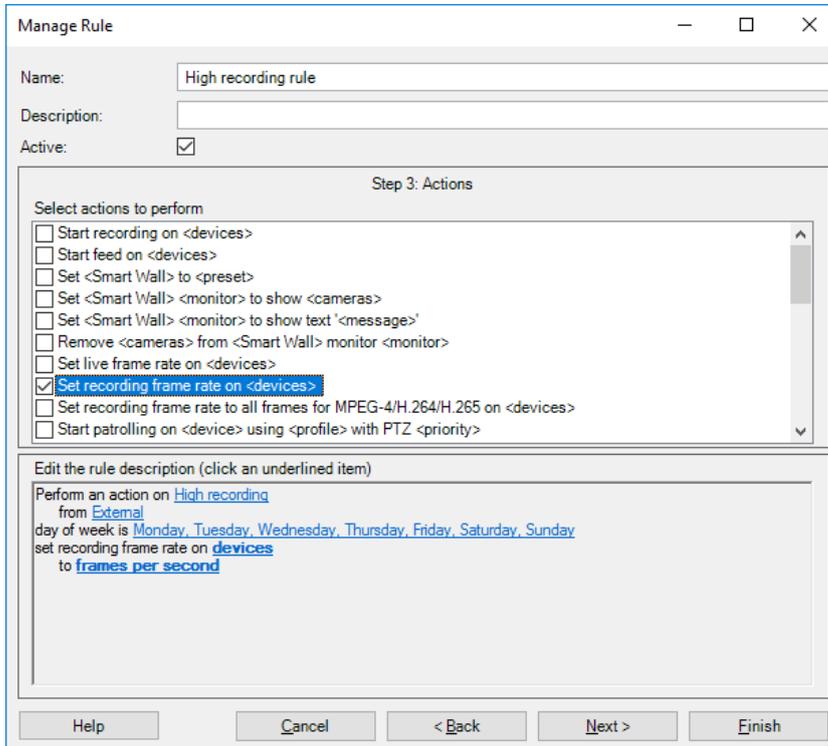


The screenshot shows the 'Manage Rule' dialog box with the 'Select Days' sub-dialog box open. The 'Select Days' dialog box contains the following details:

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Buttons at the bottom of the sub-dialog: OK, Cancel

The main 'Manage Rule' dialog box shows the 'Day of week is <day>' option selected, and the rule description is updated to 'day of week is days'.

5. Click **OK** and **Next** and select **Set recording frame rate on <devices>**

Manage Rule

Name: High recording rule

Description:

Active:

Step 3: Actions

Select actions to perform

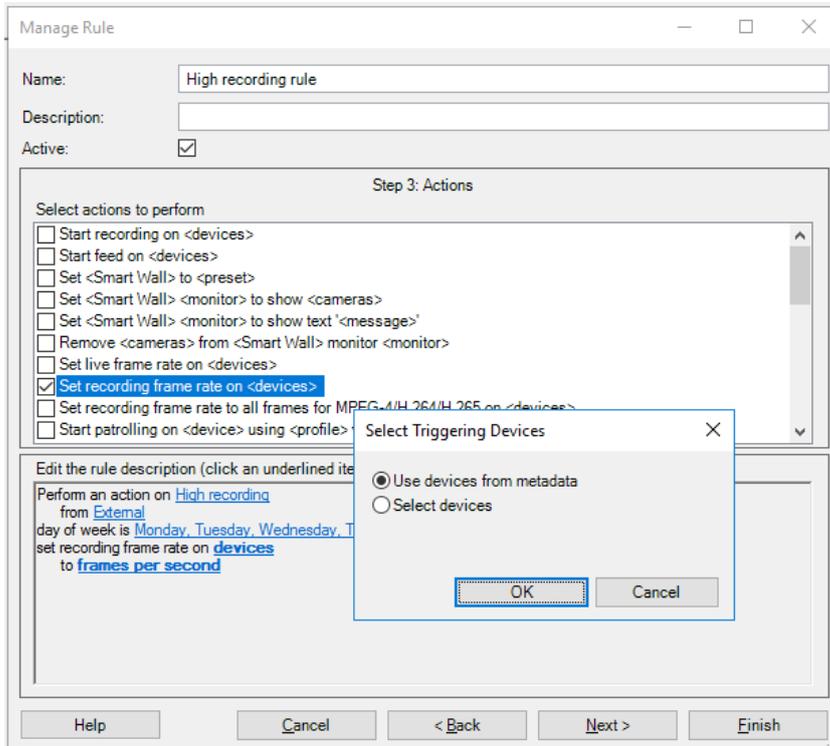
- Start recording on <devices>
- Start feed on <devices>
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Set live frame rate on <devices>
- Set recording frame rate on <devices>
- Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <devices>
- Start patrolling on <device> using <profile> with PTZ <priority>

Edit the rule description (click an underlined item)

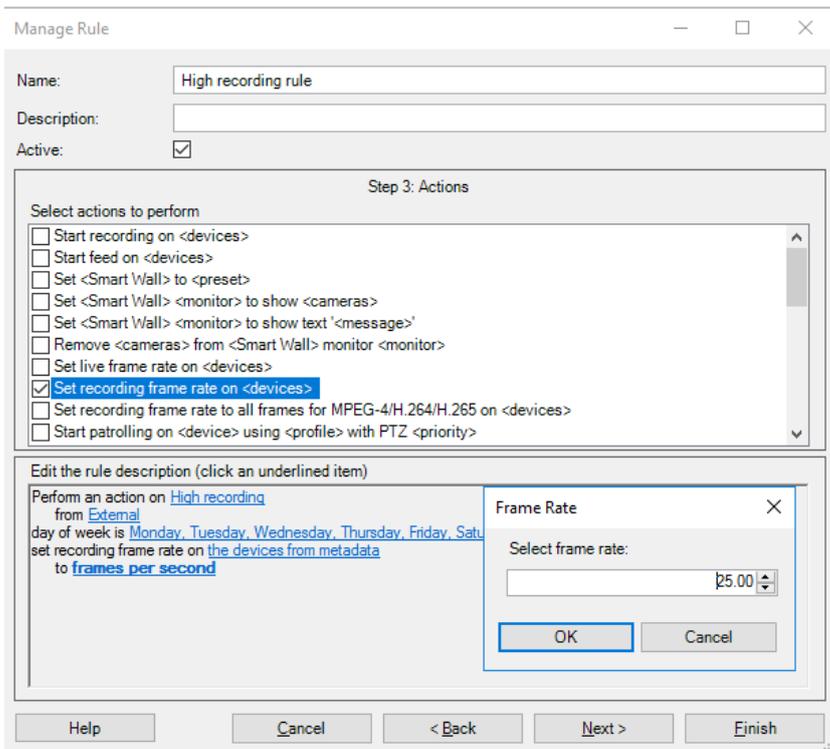
Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
set recording frame rate on devices
to frames per second

Help Cancel < Back Next > Finish

6. Click **devices**, select **Use devices from metadata** and click **OK**



7. Click **frames per second**, select recording framerate (here 25) and click **OK**



8. Select **Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <recording devices**

Manage Rule

Name: High recording rule

Description:

Active:

Step 3: Actions

Select actions to perform

- Start recording on <devices>
- Start feed on <devices>
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Set live frame rate on <devices>
- Set recording frame rate on <devices>
- Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <devices>
- Start patrolling on <device> using <profile> with PTZ <priority>

Edit the rule description (click an underlined item)

Perform an action on [High recording](#) from [External](#)
 day of week is [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday](#)
 set recording frame rate on [the devices from metadata](#) to [25 frames per second](#) and set recording frame rate to all frames for MPEG-4/H.264/H.265 on [recording device](#)

Help Cancel < Back Next > Finish

9. Click **recording device**, select **Use devices from metadata** and click **OK**

Manage Rule

Name: High recording rule

Description:

Active:

Step 3: Actions

Select actions to perform

- Start recording on <devices>
- Start feed on <devices>
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Set live frame rate on <devices>
- Set recording frame rate on <devices>
- Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <devices>
- Start patrolling on <device> using <profile> with PTZ <priority>

Select Triggering Devices

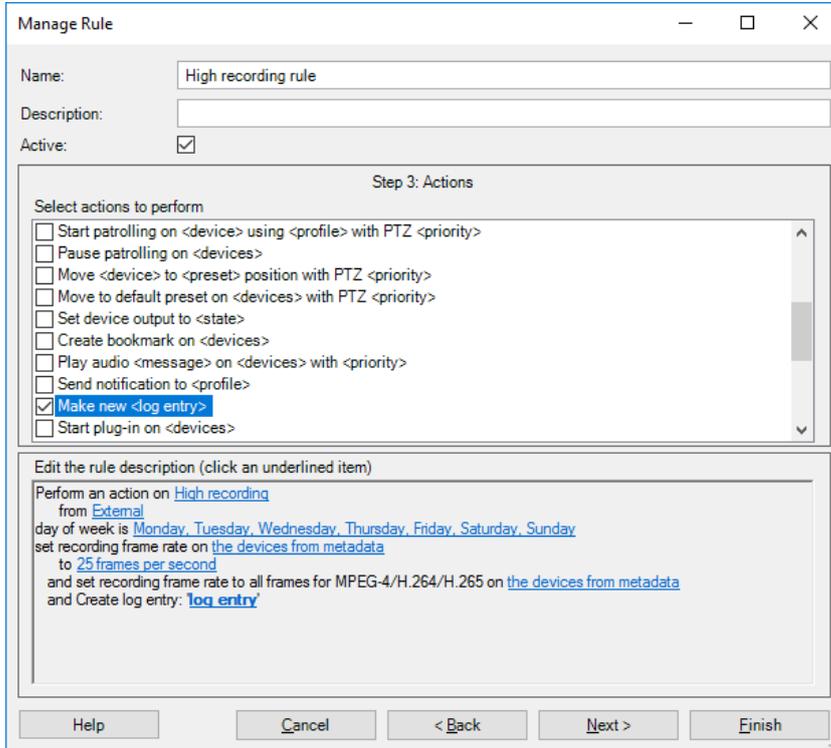
- Use devices from metadata
- Select devices

OK Cancel

Edit the rule description (click an underlined item)

Perform an action on [High recording](#) from [External](#)
 day of week is [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday](#)
 set recording frame rate on [the devices from metadata](#) to [25 frames per second](#) and set recording frame rate to all frames for MPEG-4/H.264/H.265 on [recording device](#)

Help Cancel < Back Next > Finish

10. Click **OK** and select **Make new <log entry>** (scroll down on action list)

Manage Rule

Name:

Description:

Active:

Step 3: Actions

Select actions to perform

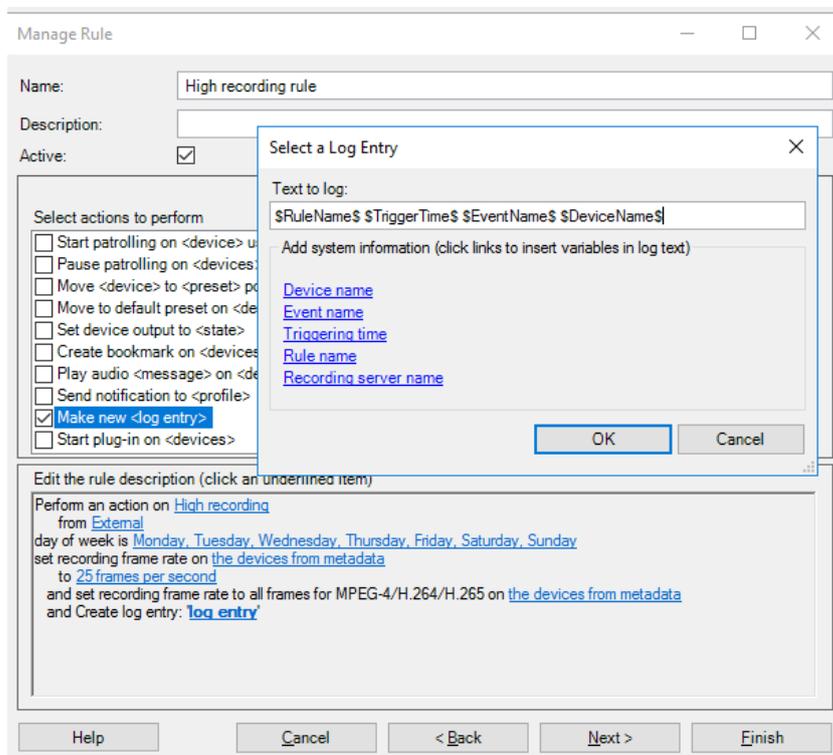
- Start patrolling on <device> using <profile> with PTZ <priority>
- Pause patrolling on <devices>
- Move <device> to <preset> position with PTZ <priority>
- Move to default preset on <devices> with PTZ <priority>
- Set device output to <state>
- Create bookmark on <devices>
- Play audio <message> on <devices> with <priority>
- Send notification to <profile>
- Make new <log entry>**
- Start plug-in on <devices>

Edit the rule description (click an underlined item)

Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
set recording frame rate on the devices from metadata
to 25 frames per second
and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
and Create log entry: log entry

Help Cancel < Back Next > Finish

11. Click **'log entry'** and create log entry using e.g. **Rule name** **Triggering time** **Event name** and **Device name** resulting in a **Text to log** entry looking like `$RuleName$ $TriggerTime$ $EventName$ $DeviceName$` (this log will be displayed in T.react CIP when the **High recording rule** is triggered in Milestone). Click **OK**.



Manage Rule

Name: High recording rule

Description:

Active:

Select actions to perform

- Start patrolling on <device> u
- Pause patrolling on <devices>
- Move <device> to <preset> po
- Move to default preset on <de
- Set device output to <state>
- Create bookmark on <devices
- Play audio <message> on <de
- Send notification to <profile>
- Make new <log entry>
- Start plug-in on <devices>

Select a Log Entry

Text to log:

`$RuleName$ $TriggerTime$ $EventName$ $DeviceName$`

Add system information (click links to insert variables in log text)

- [Device name](#)
- [Event name](#)
- [Triggering time](#)
- [Rule name](#)
- [Recording server name](#)

OK Cancel

Edit the rule description (click an underlined item)

Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
set recording frame rate on the devices from metadata
to 25 frames per second
and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
and Create log entry: log entry

Help Cancel < Back Next > Finish

12. Click **Next**, and select Perform stop action on <event>

Manage Rule

Name: High recording rule

Description:

Active:

Step 4: Stop criteria

Select stop criteria

Perform stop action on <event>

Perform stop action after <time>

No actions performed on rule end

Edit the rule description (click an underlined item)

Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
set recording frame rate on the devices from metadata
to 25 frames per second
and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
and Create log entry: '\$RuleName\$ \$TriggerTime\$ \$EventName\$ \$DeviceName\$'

Perform stop action on event
from devices/recording server/management server

Help Cancel < Back **Next >** Finish

13. Click **event**, expand **External Event**, expand **User-defined Events** and select **Normal recording**. Click **OK**.

Manage Rule

Name: High recording rule

Description:

Active:

Select stop criteria

Perform stop action on <event>

Perform stop action after <time>

No actions performed on rule end

Edit the rule description (click an underlined item)

Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
set recording frame rate on the devices from metadata
to 25 frames per second
and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
and Create log entry: '\$RuleName\$ \$TriggerTime\$ \$EventName\$ \$DeviceName\$'

Perform stop action on event
from devices/recording server/management server

Help Cancel < Back **Next >** Finish

Select an Event

- Events
 - Hardware
 - Devices
 - External Events
 - Predefined Events
 - Generic Events
 - User-defined Events
 - High recording
 - Normal recording**
- Recording Servers
- System Monitor
- Other

OK Cancel

14. Click **Next** and use default setting (**restore default recording frame rate immediately and restore default recording frame rate of keyframes for MPEG-4/H.264/H.265 immediately**)

Manage Rule

Name: High recording rule

Description:

Active:

Step 5: Stop actions

Select stop action to perform

- Stop recording
- Stop feed
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Restore default live frame rate
- Restore default recording frame rate
- Restore default recording frame rate of keyframes for MPEG-4/H.264/H.265
- Resume patrolling

Edit the rule description (click an underlined item)

day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
 set recording frame rate on the devices from metadata
 to 25 frames per second
 and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
 and Create log entry: '\$RuleName\$ \$TriggerTime\$ \$EventName\$ \$DeviceName\$'

Perform stop action on Normal recording
 from External
 restore default recording frame rate immediately
 and restore default recording frame rate of keyframes for MPEG-4/H.264/H.265 immediately

Help Cancel < Back Next > Finish

15. Click **Finish** to create the rule

Rules

- Always record - all cameras
- Default Goto Preset when PTZ is don
- Default Play Audio on Request Rule
- Default Record on Bookmark Rule
- Default Record on Motion Rule
- Default Record on Request Rule
- Default Start Audio Feed Rule
- Default Start Feed Rule
- Default Start Metadata Feed Rule
- Event1Trigger
- Event2Trigger
- Event3Trigger
- High live rule
- High recording rule**
- New Rule 001
- New Rule 002

Rule Information

Name: High recording rule

Description:

Active:

Definition:

Perform an action on High recording
 from External
 day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
 set recording frame rate on the devices from metadata
 to 25 frames per second
 and set recording frame rate to all frames for MPEG-4/H.264/H.265 on the devices from metadata
 and Create log entry: '\$RuleName\$ \$TriggerTime\$ \$EventName\$ \$DeviceName\$'

Perform stop action on Normal recording
 from External
 restore default recording frame rate immediately
 and restore default recording frame rate of keyframes for MPEG-4/H.264/H.265 immediately

8 Milestone Rules and Events – Record Event Only configuration (optional)

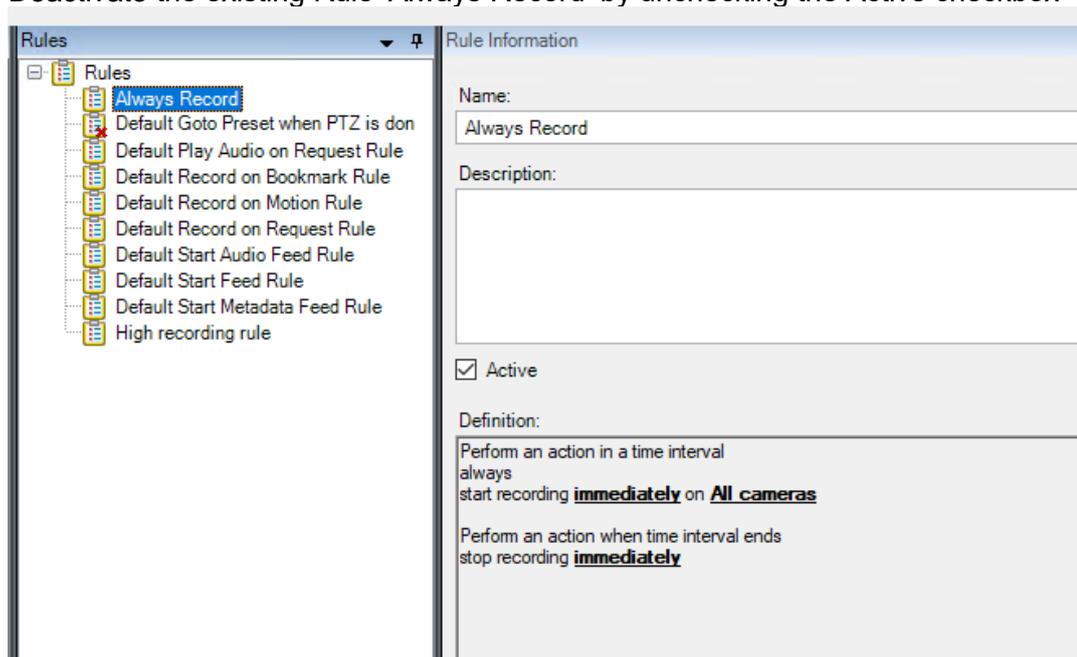
On some sites at which T.react CIP is deployed, it is preferable not to record video all the time, but instead limit recording to periods when a given camera is allocated to an event. Reasons for this limitation include:

- Large number of cameras in system, which implies that excessive storage space is required on the recording server
- Site is off-shore and therefore cameras are unlikely to record anything of interest unless allocated to an event

This section describes how to configure Milestone to only record during events. It is presumed that the standard 'Always Record' configuration, described in Section 7, has been configured and the present section only describes subsequent changes to the configuration required to limit recording to times when events are present.

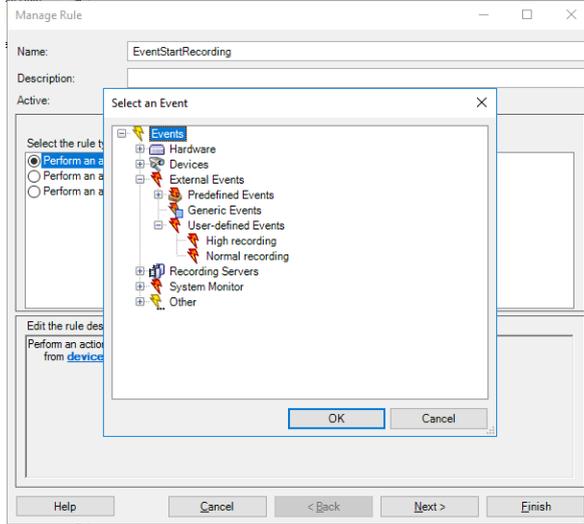
8.1 Add Rule 'EventStartRecording'

1. Deactivate the existing Rule 'Always Record' by unchecking the Active checkbox



2. Add Rule by right clicking on the Rules element under Rules an Events.
3. In the Name edit box, enter EventStartRecording
4. Click [event](#)

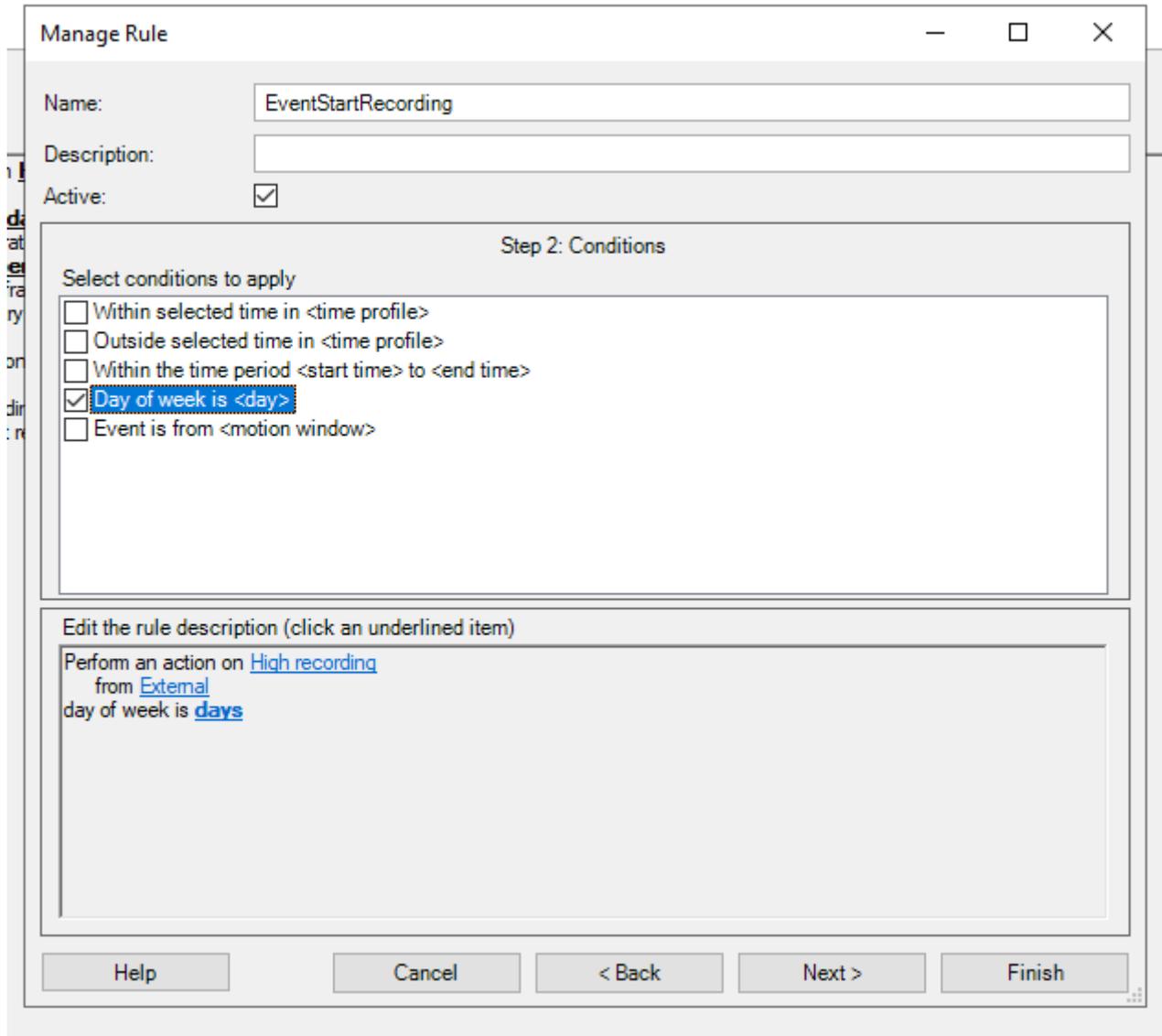
5. Navigate to 'External Events' / 'User Defined Events' and select 'High Recording'



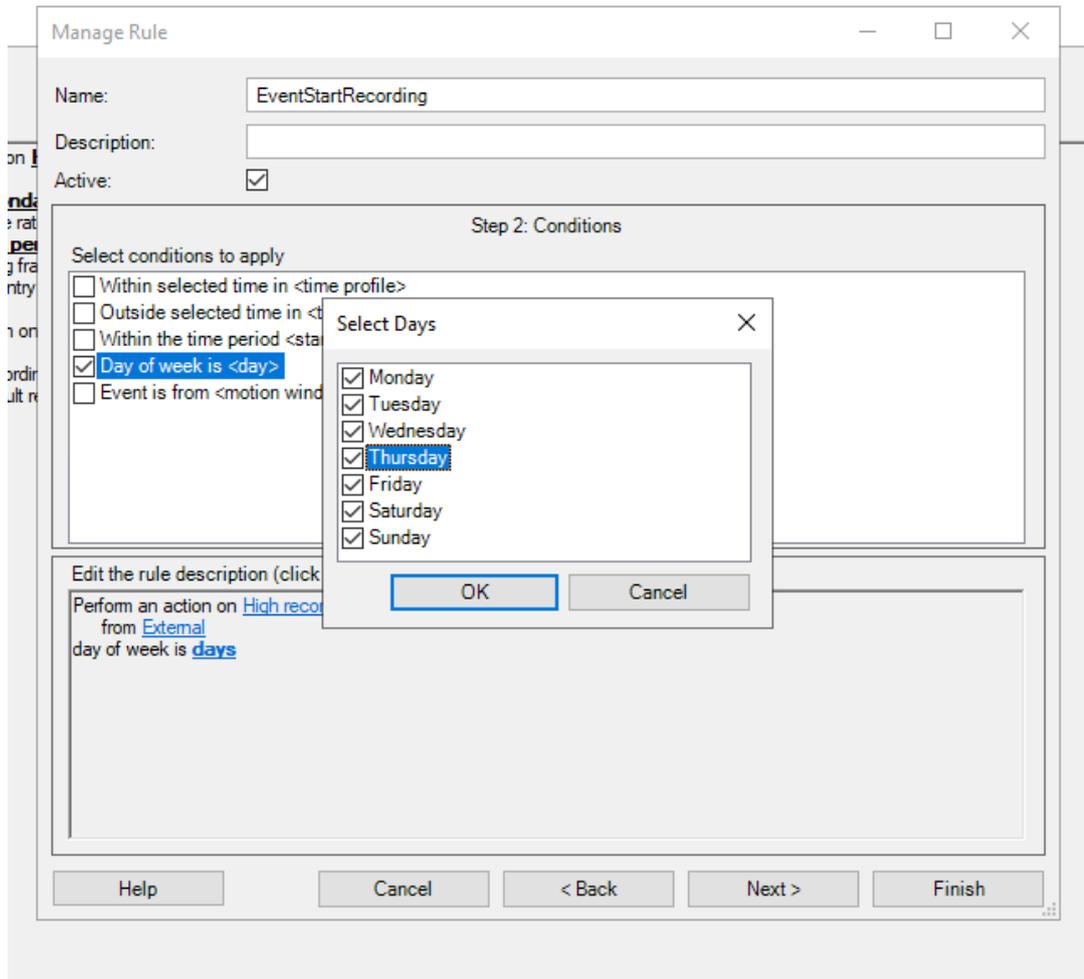
6. Click **Next**



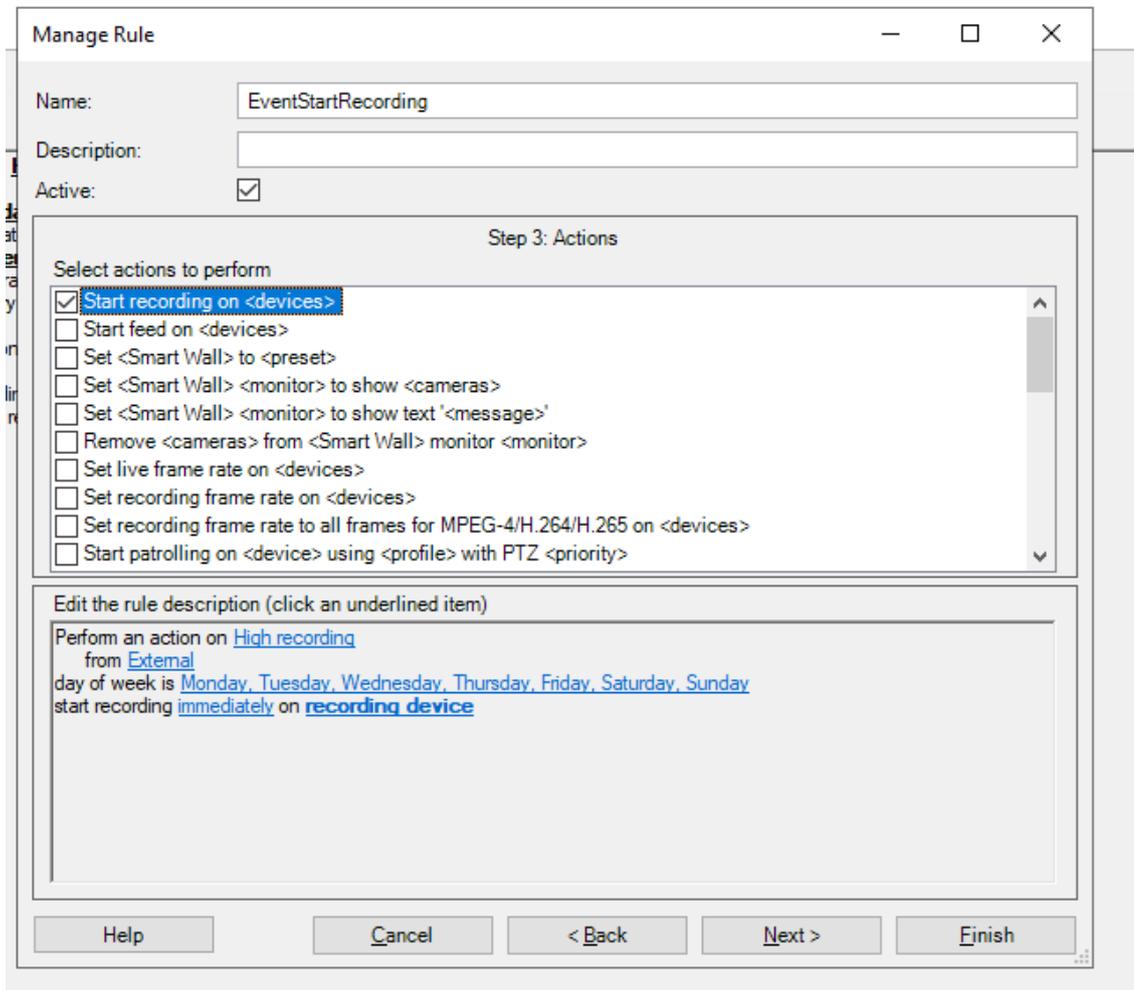
7. Select 'Day of week is <day>' and click on [days](#)



8. Select Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and click **OK**



9. Click **Next** and select "Start recording on <devices>"



Manage Rule

Name:

Description:

Active:

Step 3: Actions

Select actions to perform

- Start recording on <devices>
- Start feed on <devices>
- Set <Smart Wall> to <preset>
- Set <Smart Wall> <monitor> to show <cameras>
- Set <Smart Wall> <monitor> to show text '<message>'
- Remove <cameras> from <Smart Wall> monitor <monitor>
- Set live frame rate on <devices>
- Set recording frame rate on <devices>
- Set recording frame rate to all frames for MPEG-4/H.264/H.265 on <devices>
- Start patrolling on <device> using <profile> with PTZ <priority>

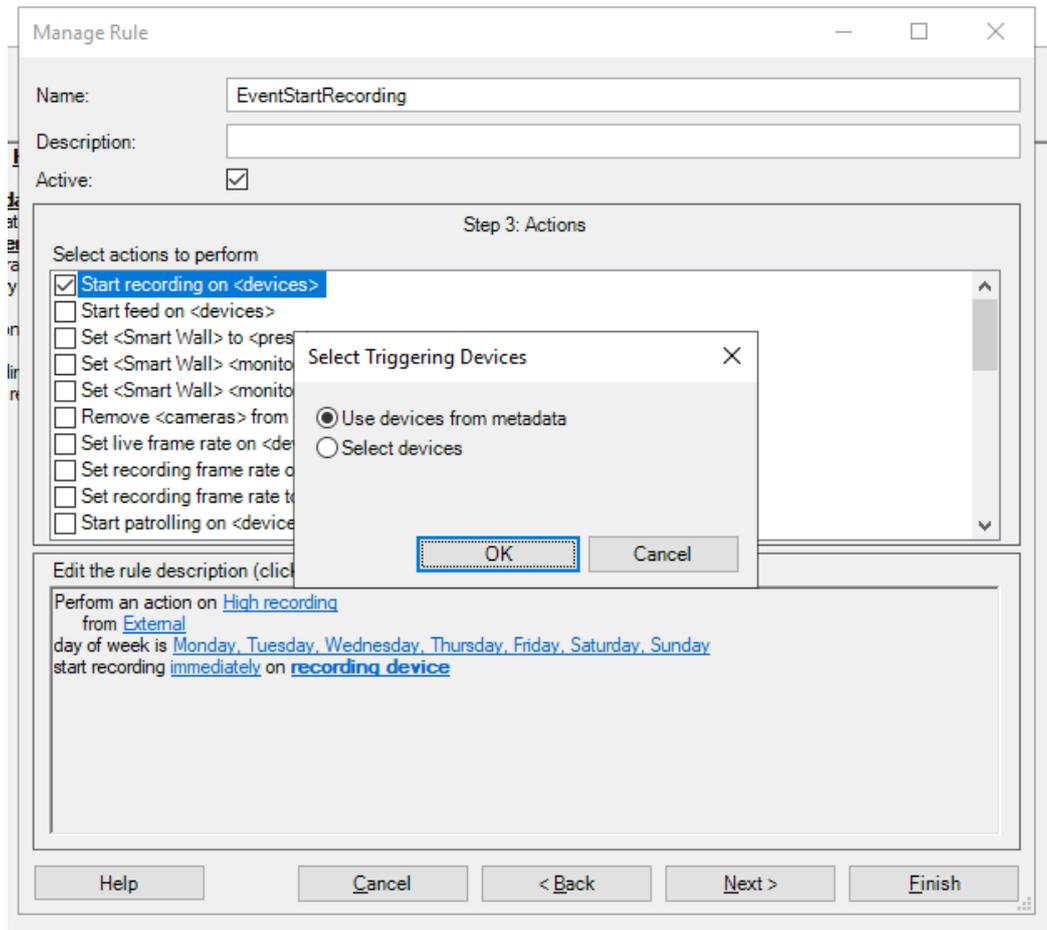
Edit the rule description (click an underlined item)

Perform an action on High recording
from External
day of week is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
start recording immediately on recording device

Help Cancel < Back Next > Finish

10. Select 'recording device'

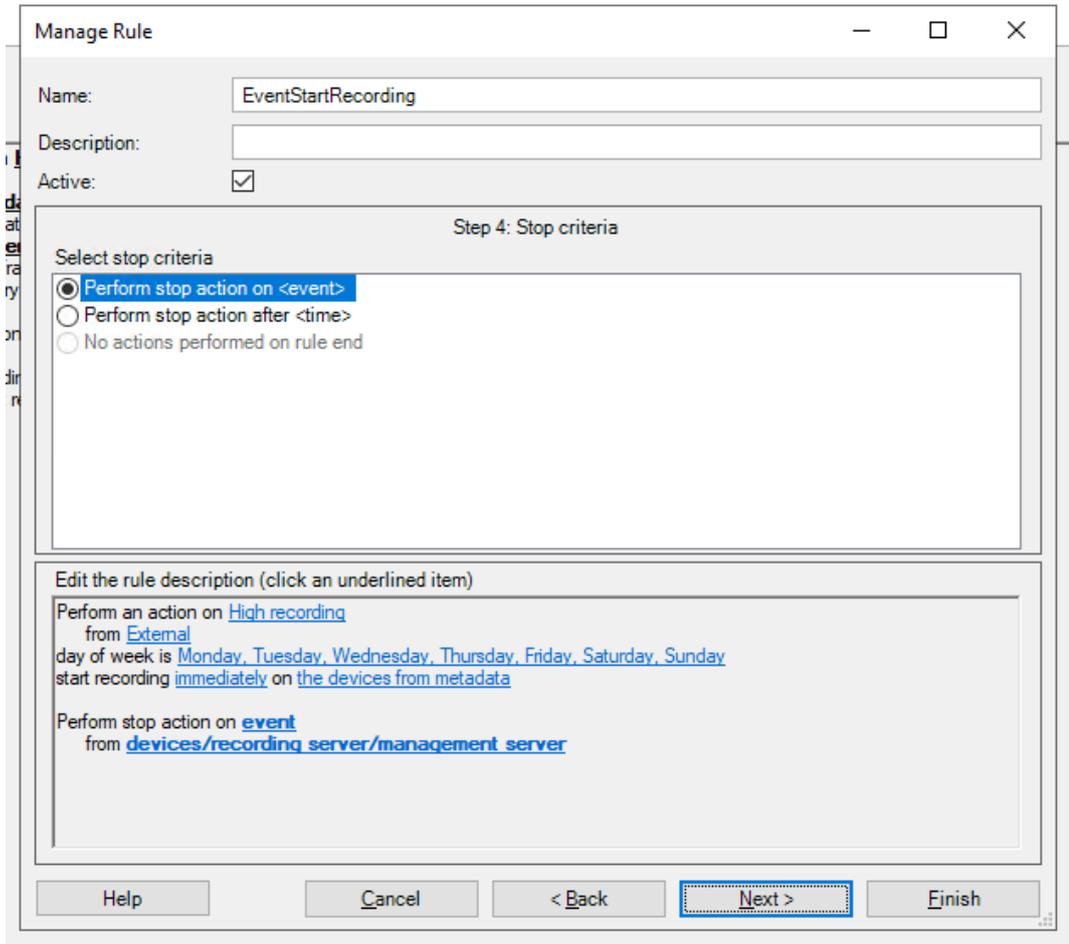
11. Select 'Use devices from metadata' and then click **OK**



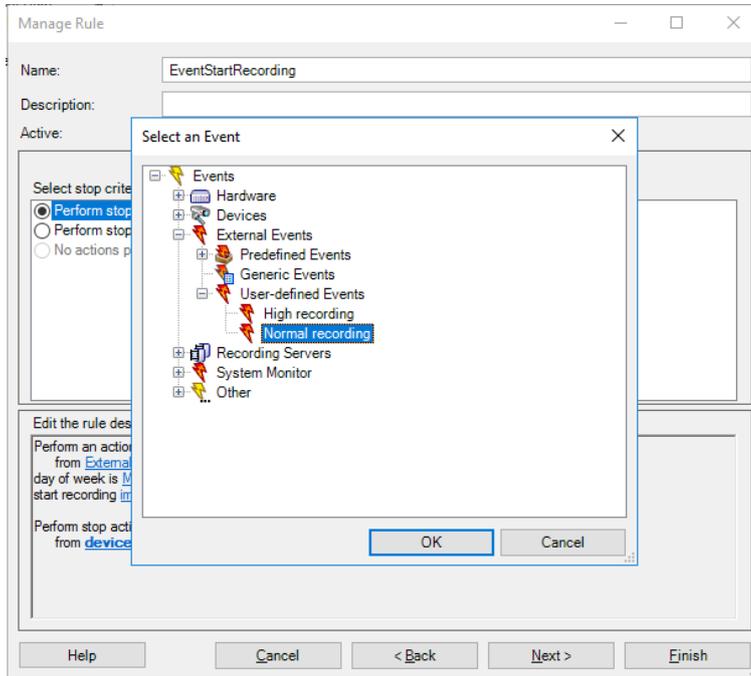
12. Click **Next**

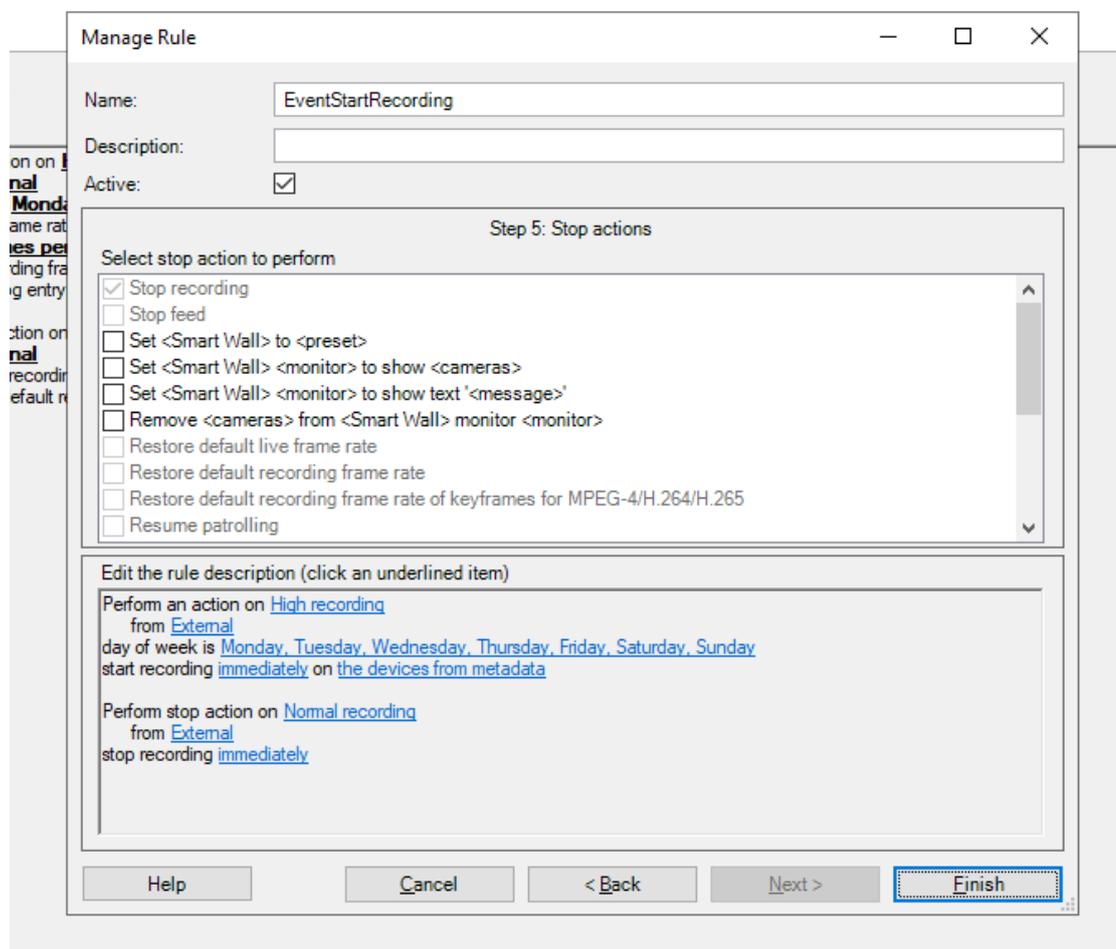


13. Select Perform stop action on event



14. Click [event](#) and select 'External Events' and then 'User-defined Events'



15. Select 'Normal recording' and click **OK**16. Click **Finish**

Finally, T.react CIP has to be configured to execute the High Recording event in Milestone for all values of event severity.

This is done by adding to the config.properties file, which is located in the “treact-cip\<...>\windows-x64\server” folder:

```
com.terma.treactcip.application.milestonemanagement.increasefps=1
```

(The default value required to execute the High Recording event is 10)

After the described configuration changes:

- High recording and High live Milestone events are sent to Milestone, when a camera is allocated to an event with severity ≥ 1 , i.e. when a camera is allocated to and event, then the High recording event is executed by Milestone.
- Normal recording and Normal live Milestone events are sent to Milestone when a camera is deallocated from an event, i.e. the recording stops.



9 Updating Milestone license

Licensing in Milestone relates to the cameras registered in the system. After changes in the camera composition, the license needs to be re-activated (there is a 30-day grace period when a camera is added to the system).

Depending on whether the Milestone XProtect Corporate Management Server has online access or not, the license can be activated online or offline.

See [MILESTONE] for details about how to import and activate a Milestone XProtect license.



10 Storage configuration

Before the Milestone storage configuration is performed, a storage plan should be defined (the storage plan is customer specific).

10.1 Default storage configuration plan

The default storage configuration plan is as follows:

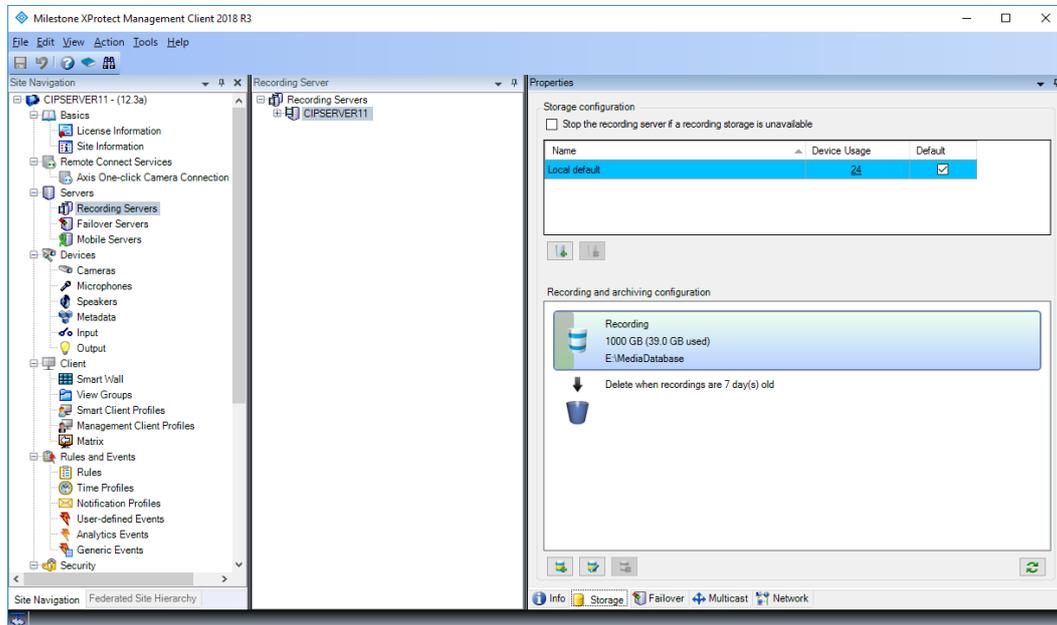
- a. Primary storage: recordings are stored at originally recorded framerate for 24 hours.
- b. First archive: after 24 hours recordings are moved from the Primary storage to the First archive, still at originally recorded framerate. It is stored here for 6 days (until recordings are 7 days old total).
- c. Second archive: after 6 days in the First archive, recordings are moved from the First archive to the Second archive down sampling the framerate to 1 fps. It is stored here for 83 days (until recordings are 90 days old total).
- d. When recordings are 90 days old, they are deleted from storage.

10.2 Setting up storage configuration

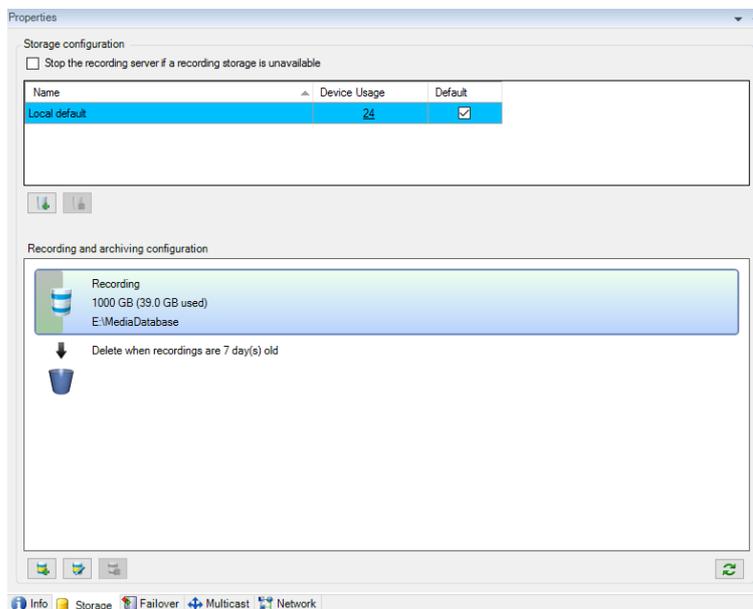
The following setting describes how storage is configured (here according to the default storage configuration plan as described in 10.1).

NB. the schedule for when moving recordings from one storage location to another, has not been considered here. All schedules are configured to be at 00:00. Generally archiving should be performed when load on the system is low – this will be installation site specific. See [MILESTONE] for details. Furthermore, storage sizes of primary and archive storages (see 10.1) will depend on factors specific to a given installation. E.g. the number of cameras (video streams) connected to Milestone, the resolution of the configured video streams, codecs used, the number of days to store the recordings in the storage, etc. I.e. schedule and storage sizes needs to be evaluated for each specific installation.

1. Select **Servers** on the **Site Navigation** pane, the relevant Recording Server on the **Recording Server** pane and finally the **Storage** tab on the **Properties** pane.

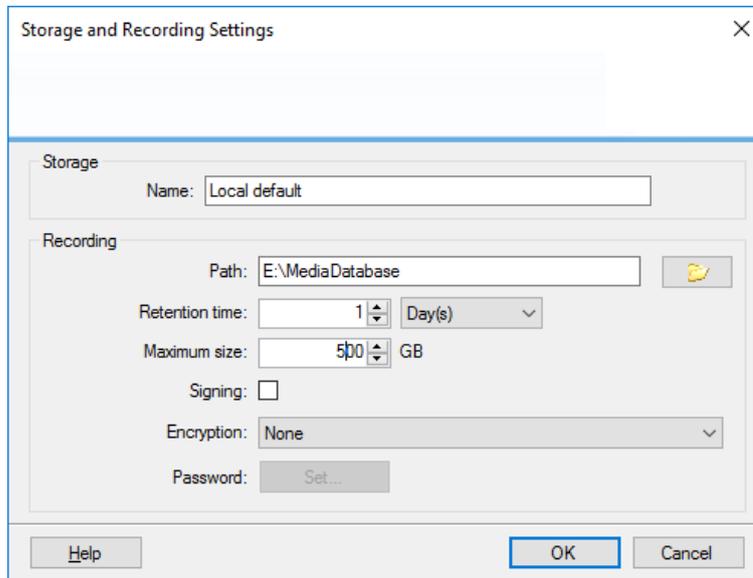


2. Select the default storage (here **Recording** configured to **E:MediaDatabase**) and click **Edit Recording Storage** button ()

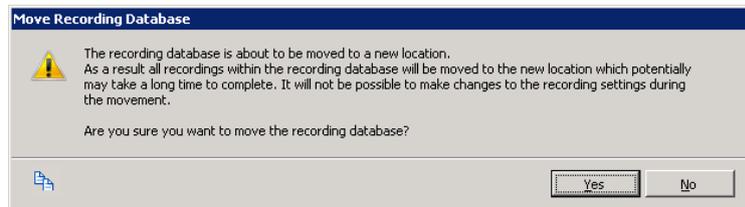


3. The **Storage and Recordings Settings** window is opened.

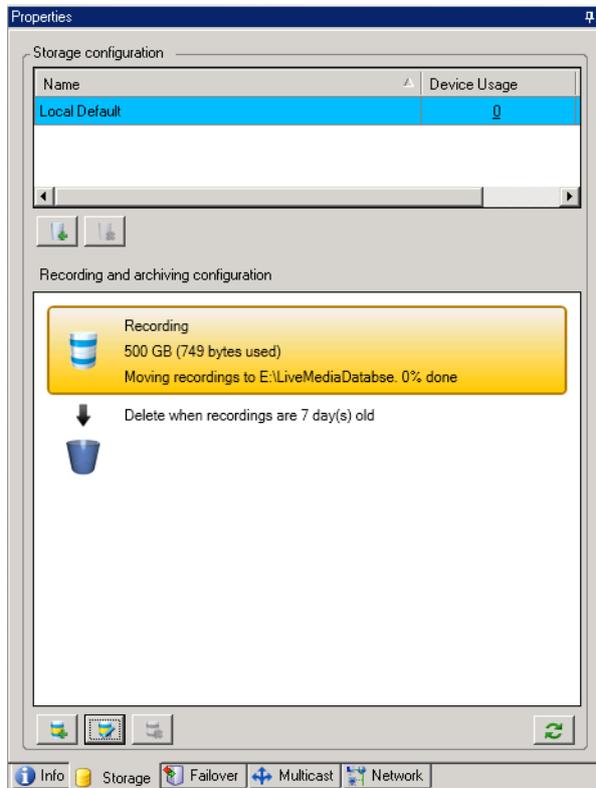
Select storage path and folder (here **E:\MediaDatabase** – create new folder if needed) and set retention time (**1 Day (s)**) according to 9.a) and maximum size (here **500 GB**) and click **OK**



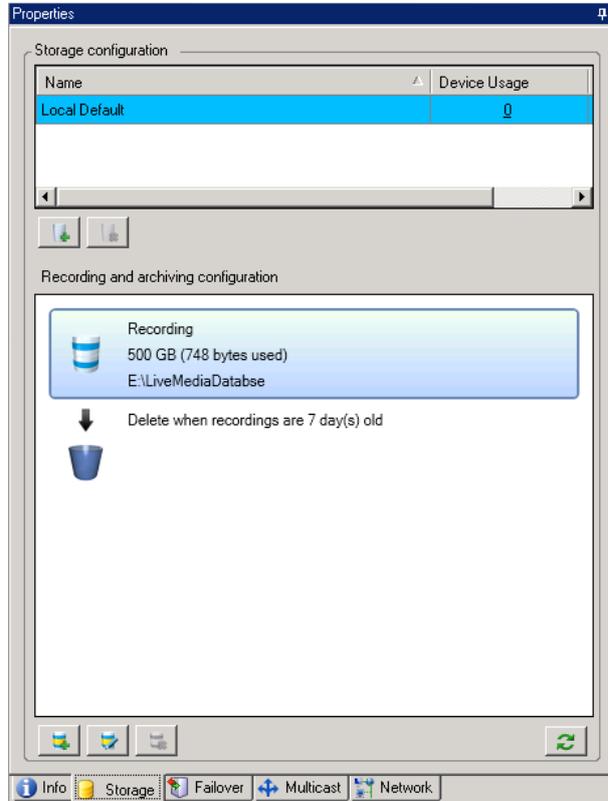
a. *If the recording server storage (database) is moved to a new location, a warning is displayed – click **Yes***



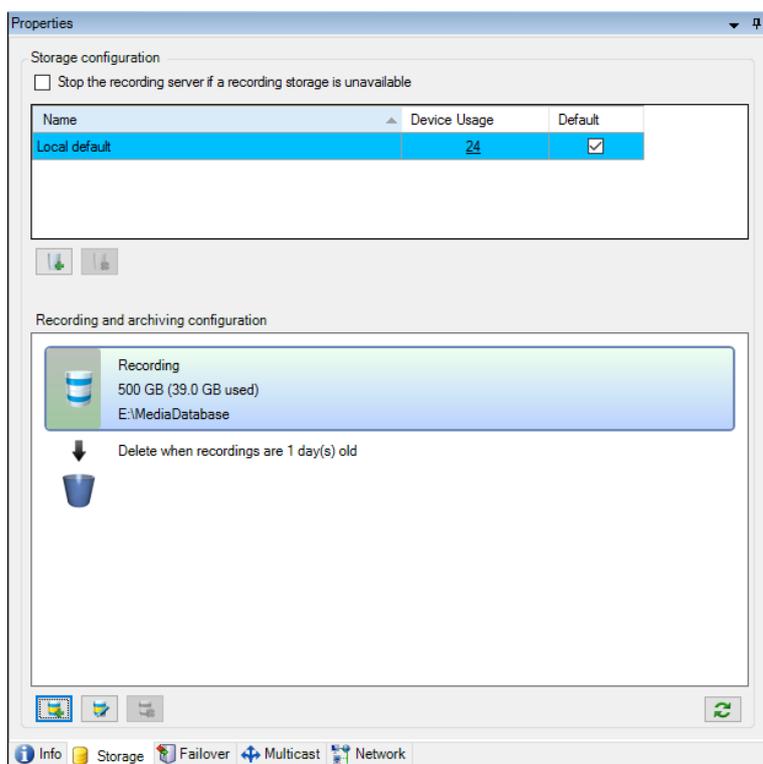
b. Moving of storage starts



- c. *If move status doesn't change try refreshing view (e.g. select the **Info** tab and then the **Storage** tab again)*

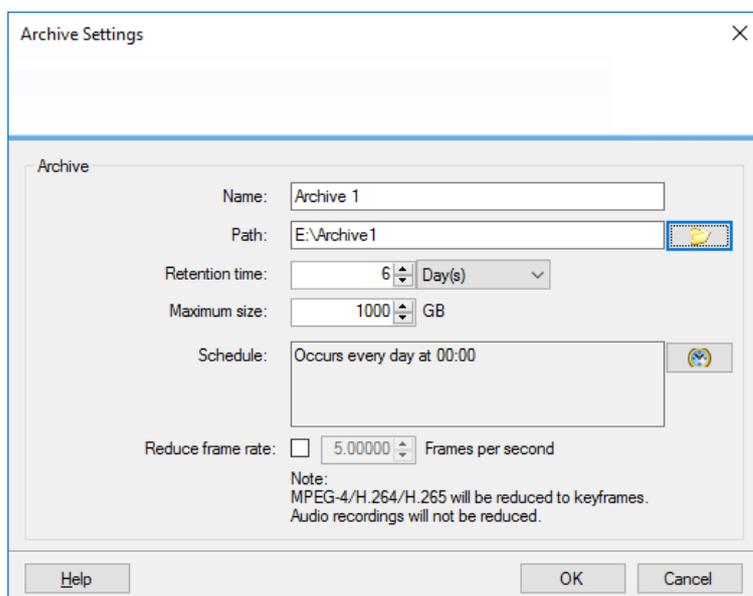


4. Add archive according to storage policy (see b) by clicking **Add Archive** button ()

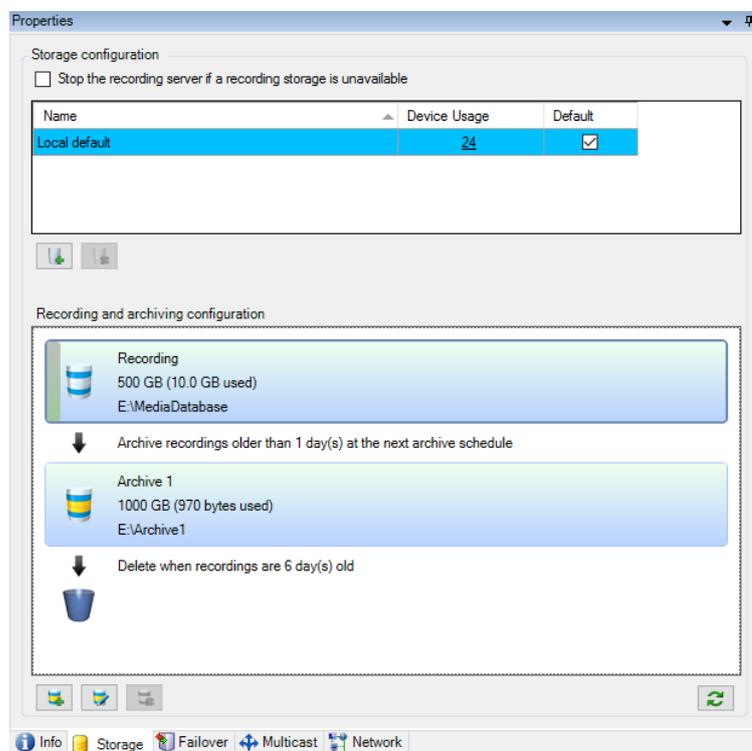


5. The **Archive Settings** window is opened.

Select storage path and select (or create) storage folder (here **E:\Archive1**), set retention time (**6 Day(s)**) according to 9.b) and maximum size (here **1000 GB**) and click **OK**

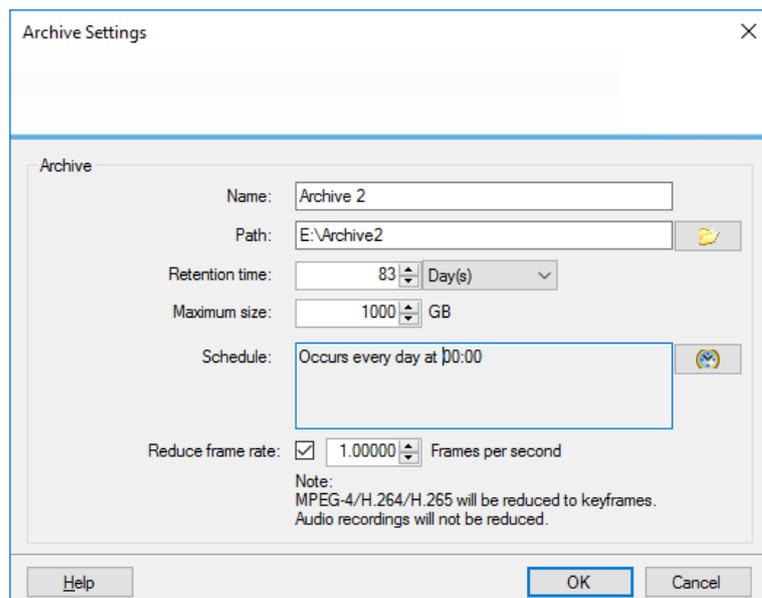


6. Add archive according to storage policy (see 9.c) by clicking **Add Archive** button ()

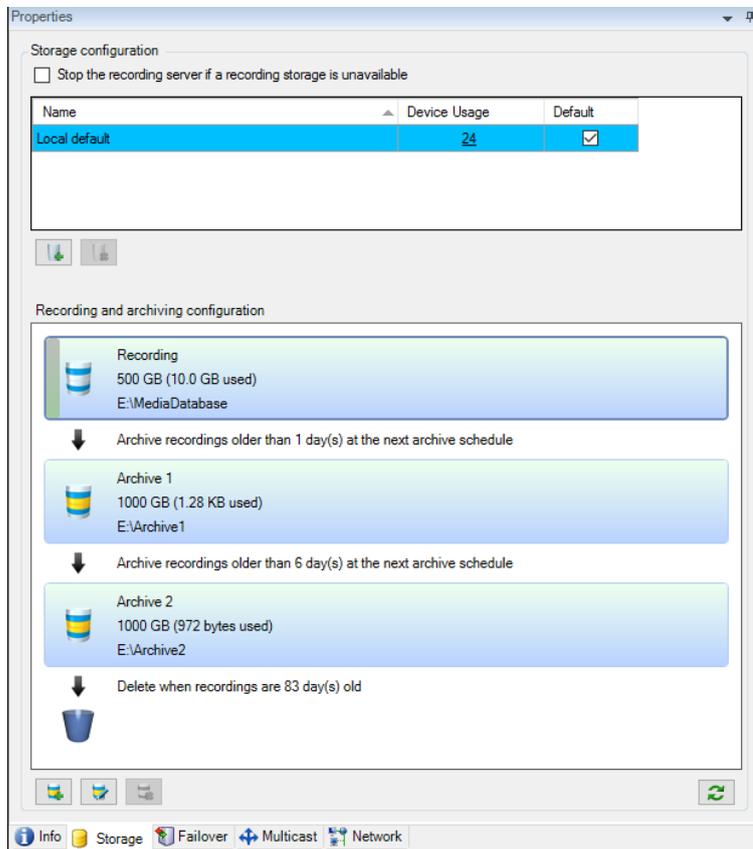


7. The **Archive Settings** window is opened.

Select storage path and select (or create) storage folder (here **E:\Archive2**), set retention time (**83 Day(s)**) according to 9.c), check **Reduce frame rate** checkbox and set **frames per second** to 1, and set maximum size (here **1000 GB**) and click **OK**



8. The final storage configuration will be as follows. Note that recordings are deleted after 83 days in Archive 2 – i.e. after a total of 90 days as stated in 9.d.





11 User configuration

The following must be configured in Milestone XProtect Corporate VMS according to the customer user policy:

- Smart Client profiles if the Milestone Smart Client is used in the T.react CIP installation.
- Management Client Profiles
- Milestone roles
- Milestone users

See [MILESTONE] for further details.