



RMFA

For Dual Record (Active-Active) installations

Configuration and User Guide

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RMF Version information

Version #	Date	Changes
1.0	Feb 2017	
1.1	April 2017	
1.2	June 2017	
1.3.2	September 2017	Freeze frame, centralized switch time setting support, centralized info panel setting support.
1.3.3	October 2017	Toolbar Support.
1.3.5	December 2017	PTZ Presets Duplication
1.3.6	January 2018	Known issues addressed
1.3.7	March 2018	PTZ Presets Duplication in the Smart Client

RMFA Version Information

Version #	Date	Changes
1.0	August 2018	Based on RMF 1.3.7 + Federation, alarms and bookmarks support
1.1	November 2018	Know issues solved from Version 1.0



About this Document

This manual describes the configuration and use of the Redundancy Management Framework - Advanced (RMFA).

A white paper on Dual Recording is available here:

<https://app.box.com/s/csauwkqr44yxikqbfw20uopfq2fria5z>

First, please view the video posted at <https://youtu.be/QbQpJiTazYM>, for an animation of features supported by RMF. Then, view the video posted at <https://youtu.be/DyJzkdW9atA>, to see an animation of features supported by RMFA.

Please refer to the corresponding document on RMF - "RMF_Config_User_ManualV.1.3.7" for a description of basic RMF features, their configuration and use. All these are included in RMFA. For the sake of brevity, these are not repeated in this document.

RMFA - Introduction

RMFA provides advanced features on top of RMF: multisite RMF support through federation, unified alarms and bookmarks management. RMFA can be used for single sites too. In this case, it adds redundant alarm and bookmark management to RMF.

Every release of RMFA has the complete and up-to-date feature set of RMF.

Prerequisites for Multi-Site Support

For RMF to provide multi-site support, sites should be set up with federated architecture. Please refer to the latest XProtect manuals for instructions on set up of federated sites. At present (4/26/2018), the federation is supported by Milestone on XProtect Corporate and XProtect Expert lines.

Auto-Mapping Cameras

We start with auto-mapping. This figures out the mapping between cameras and recording servers across sites. We support all scenarios below:

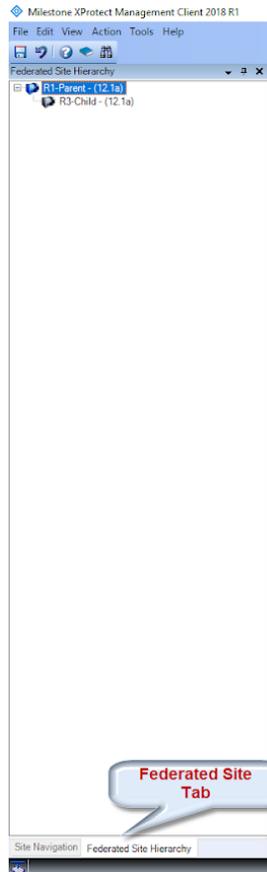
1. Cameras are dual recorded at the same site. (intra-site)
2. Cameras are recorded across sites. I.e. the same camera is recorded on Recording server 1, site1 and recording server 3, site2. (inter-site)

We first map cameras on each child site by connecting with each management server through federation support on the parent site. Then we map cameras on the parent site.

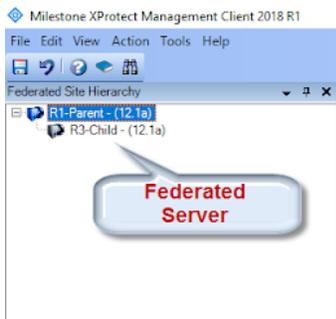
Child

We need to map cameras at each child site first.

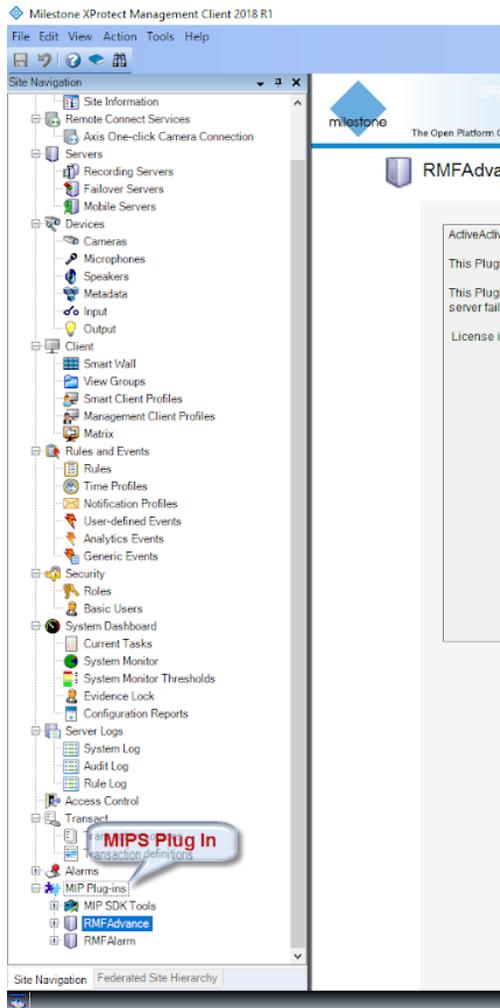
1. Open the "Management Client" application in the **Parent site**.
2. Click on "Federated Site Hierarchy" in the Parent Management Server.



3. Click on a "Child Server" from the list.

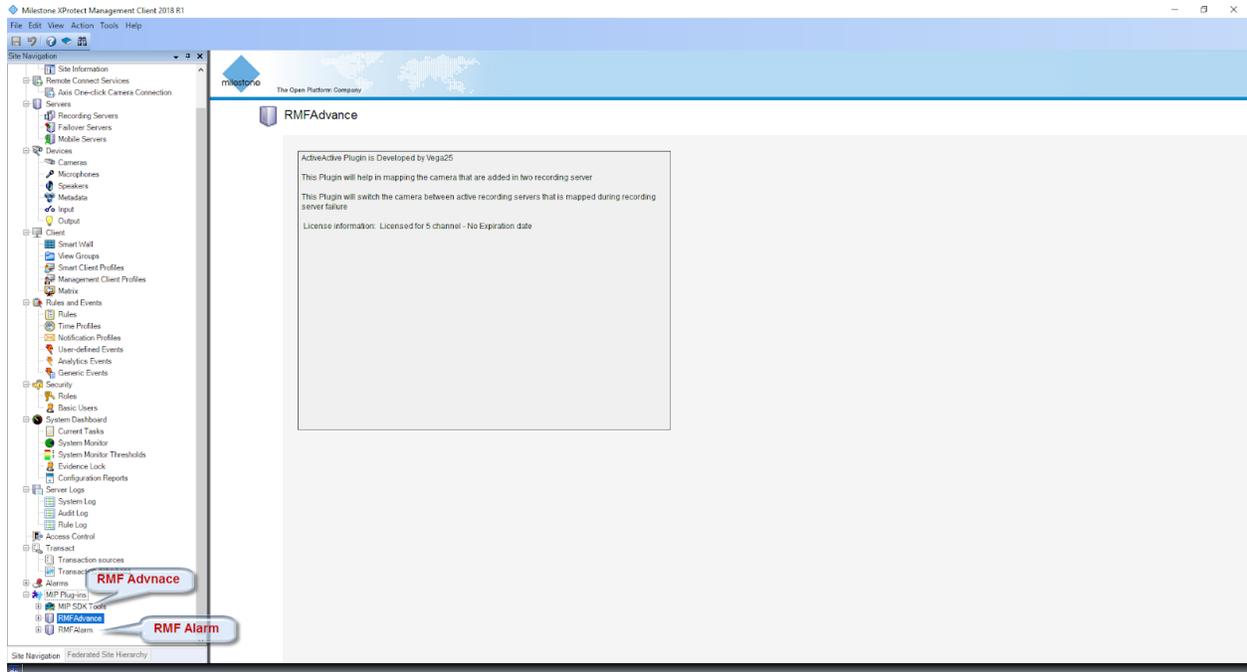


5. Right Click on an available server and "Log into Site".
6. Goto the "MIPS-Plugin" tree at this child site and expand the tree list.

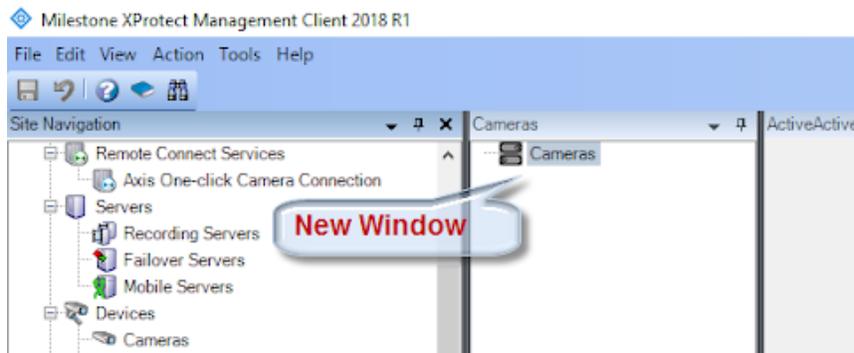


6. Two Plugins are visible

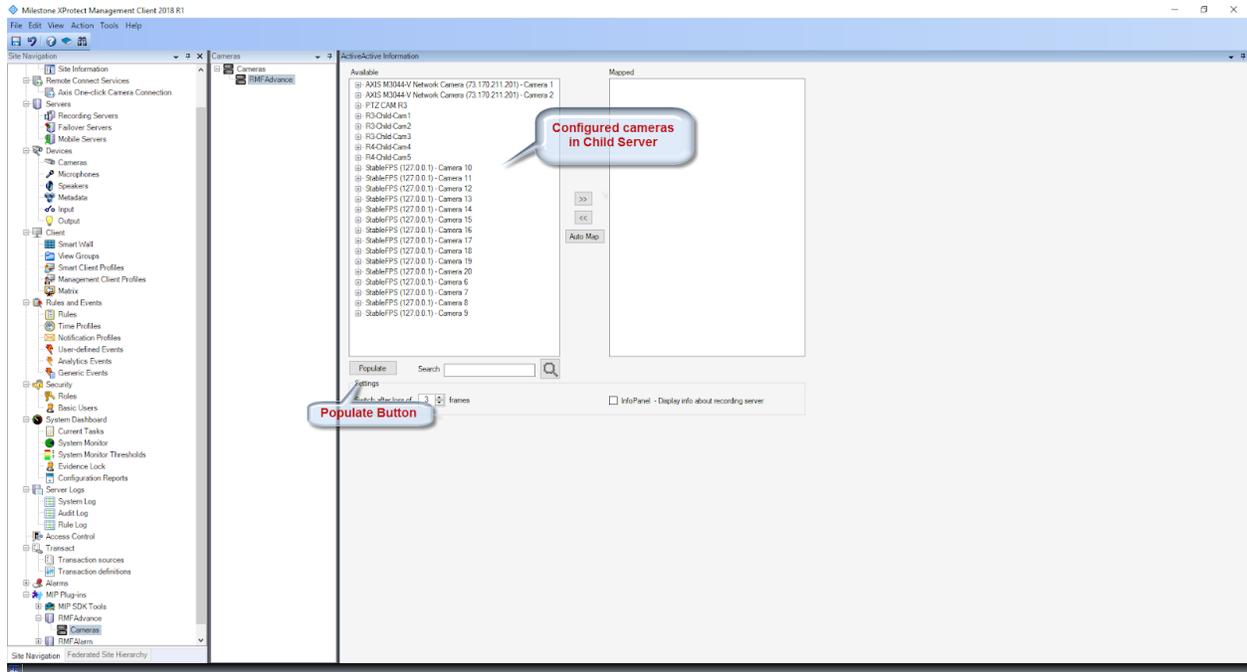
- a. *RMF Advanced* - Used for camera mapping.
- b. *RMF Alarms* - Used for Alarm configuration.



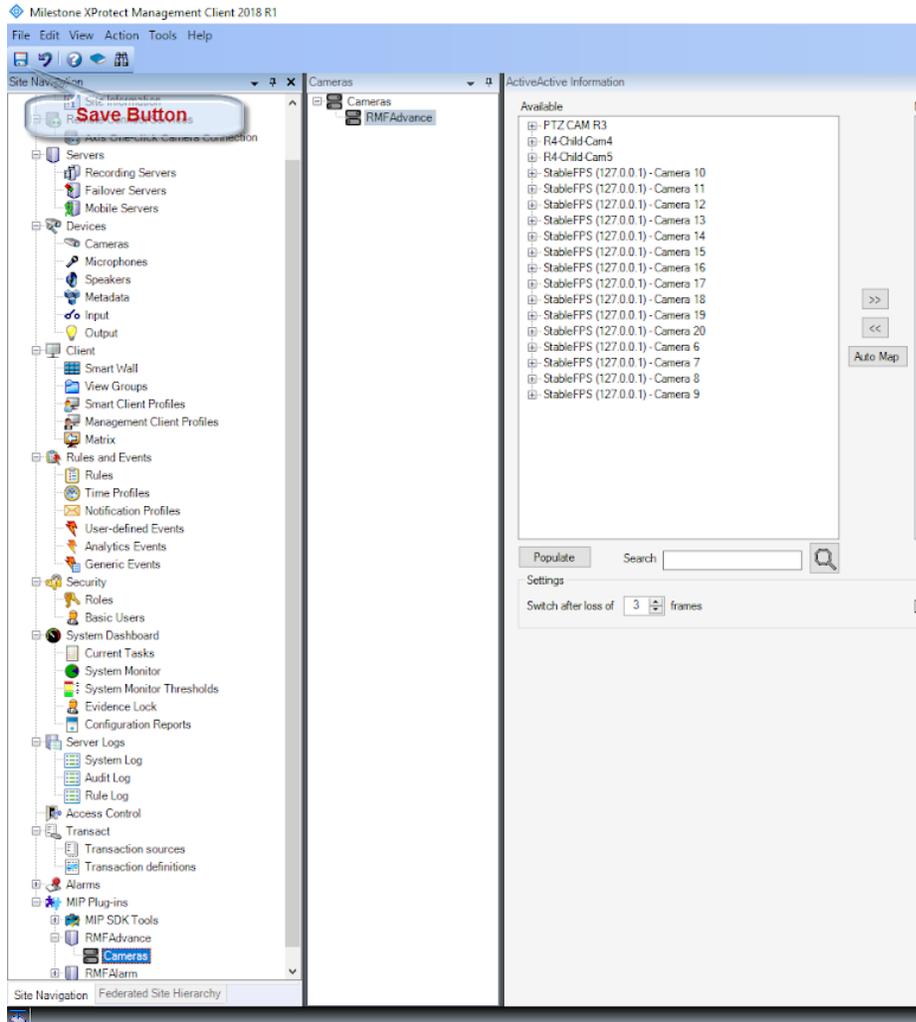
4. Click on “RMF Advanced” and Expand the tree.
5. Click on the “Cameras”.
6. A new window will get created on the right side.



7. Right click on the "Cameras" and click "Add New".
8. Upon clicking "Add new", one more window gets created on the right side, with two blank lists. The first one(left) is the "Available List" and the other one (right) is the "Mapped" list.
9. Click on “Populate”. The “Available” list shows all the cameras on all recording servers at the Child site. It identifies same cameras on different recording servers at this site and groups the list.



10. Click on the "Save" button and close the Management Client application in the Child Server.



11. Repeat Steps 3 - 10 until mapping is performed on all child servers.

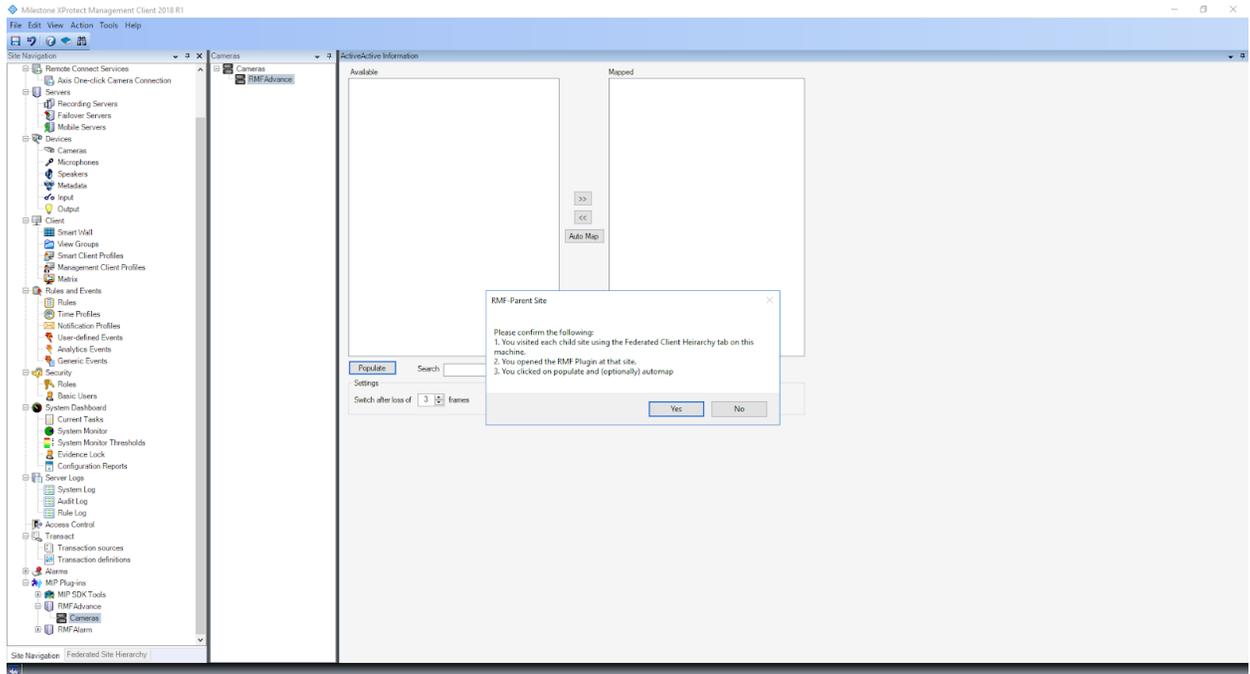
Parent Site auto-mapping

We now aggregate camera mapping information across child sites and the parent site. This combines intrasite and intersite maps. Intrasite → The same camera is recorded on two recording servers at the same site. Inter-site → The same camera is recorded on one recording server at the child site and one at the parent site.

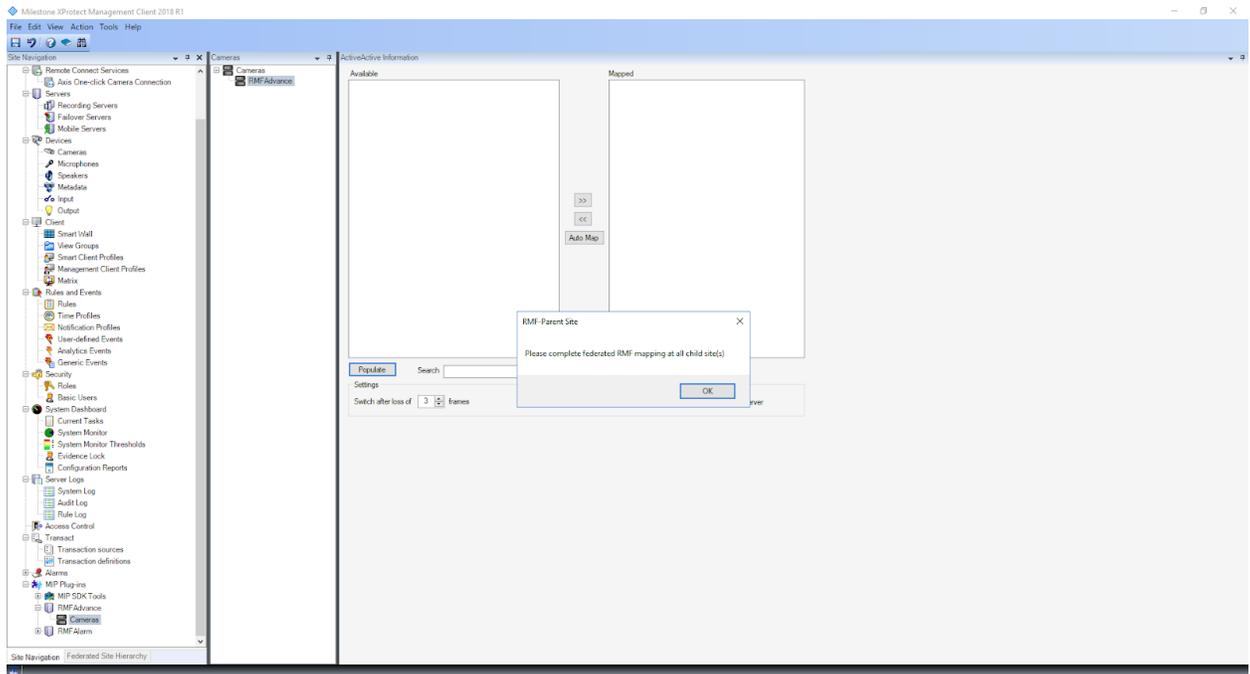
Steps:

1. Open the “RMF Advanced” plugin on the management client of the parent site. Click on “Cameras”, “Add New”. Go to the screen with two lists - Available list and mapped list.
2. Click on the "Populate" button at the bottom of Available list in Parent Server.
3. One more pop-up window appears and asks confirmation for auto mapping completion

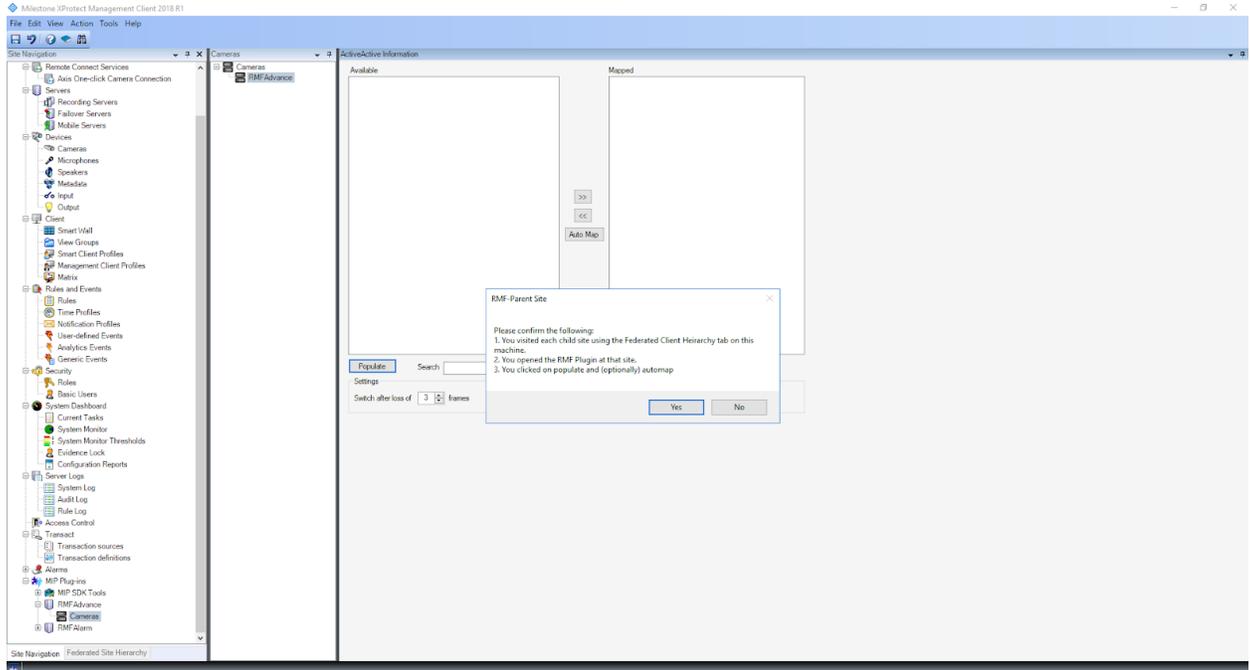
all child servers.



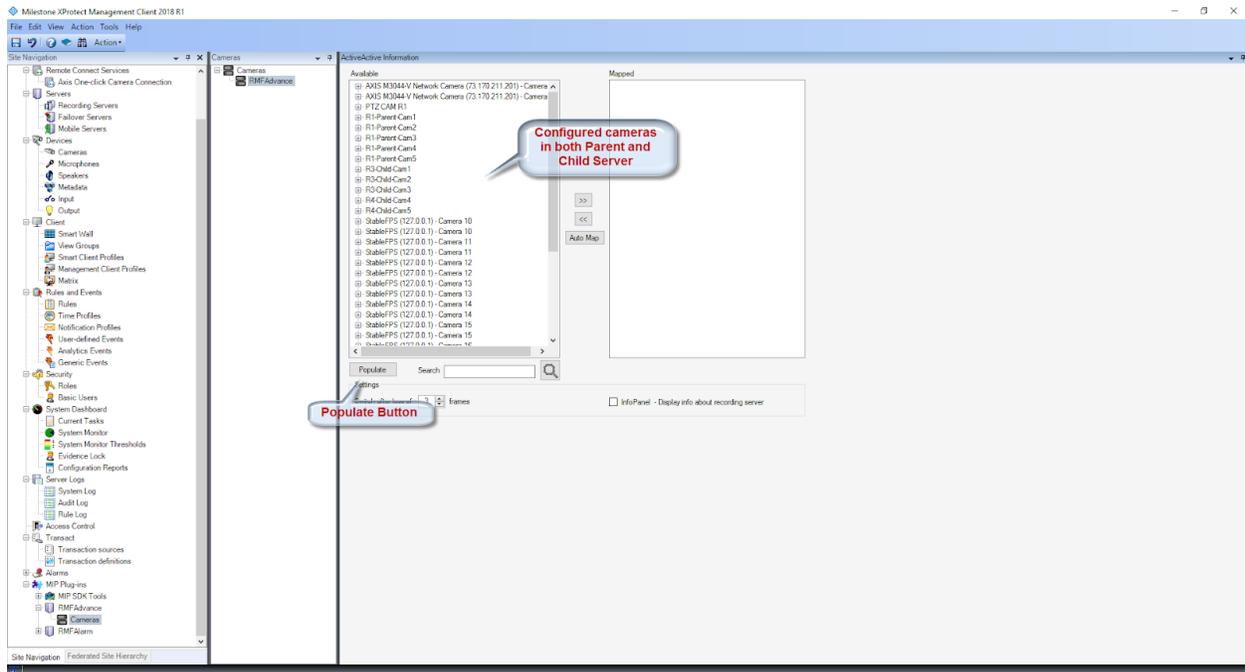
4. If all Child Sites are not configured, press “No” and finish mapping on all child sites.



19. Else, click “yes” below.



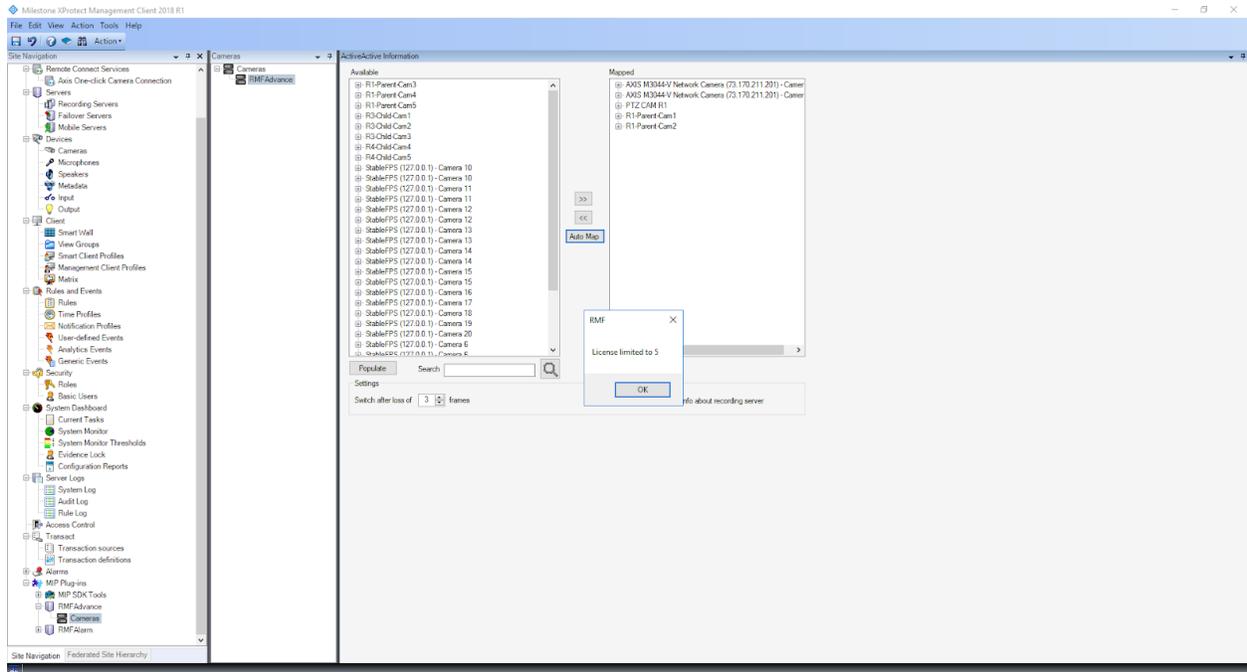
25. All the cameras mapped in the Parent server and all Child servers get displayed in "Available" list.



27. Click on "Auto Map Button"

28. Cameras will move from "Available" list to "Mapped" list based on no of licenses issued.

29. **Save**, by clicking on the save button.



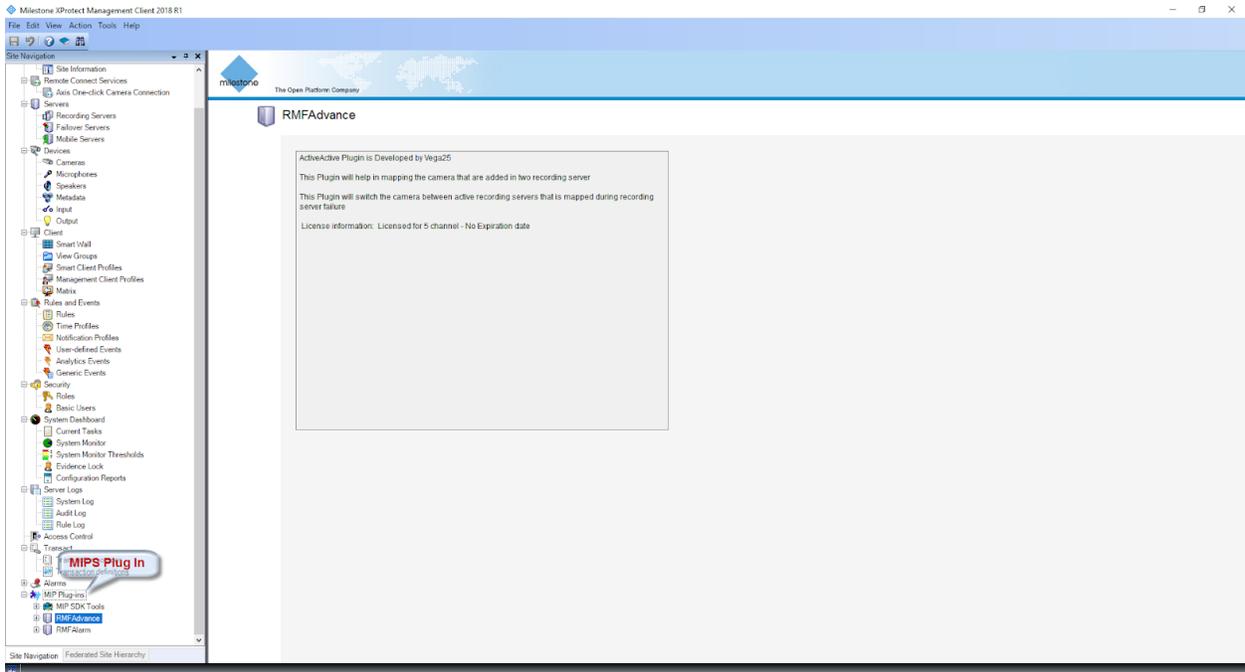
RMF Alarms

The management server machine at the parent site runs the RMFA alarm service. The alarm service signs up to receive events from all event servers - parent and child sites. Based on alarms set up, it filters duplicate events received on account of the same stream being recorded, and generates alarms for display in the Alarm manager.

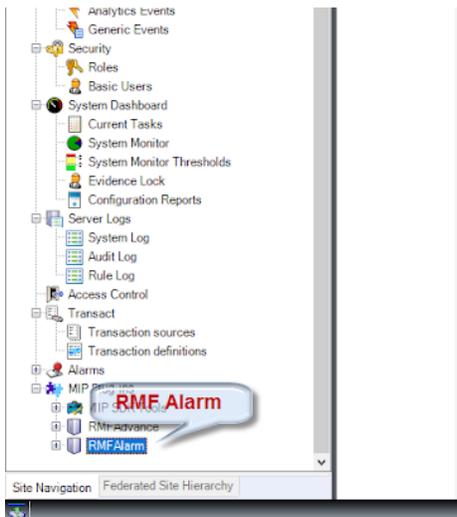
This section provides information about the setup of this service and set up of alarms for generated events.

Managing the alarm service

1. Open the "Management Client" application at the parent site.
2. Goto the "MIPS-Plugin" tree and expand the tree list.

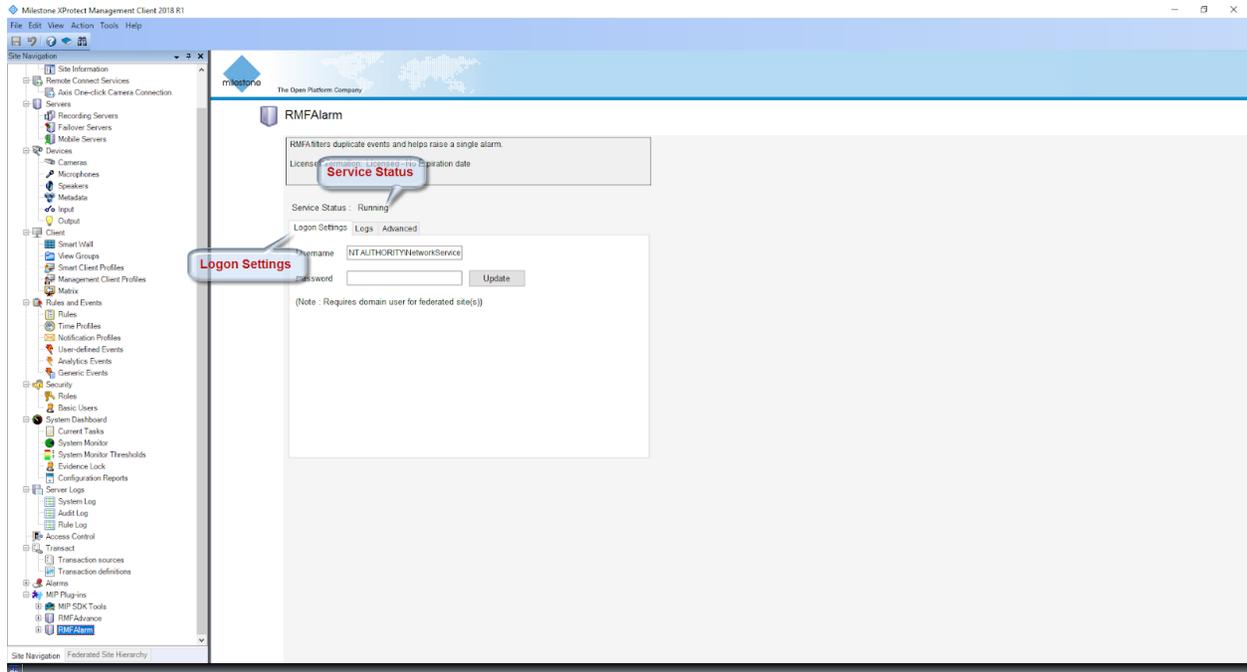


3. Click on "RMF Alarms".

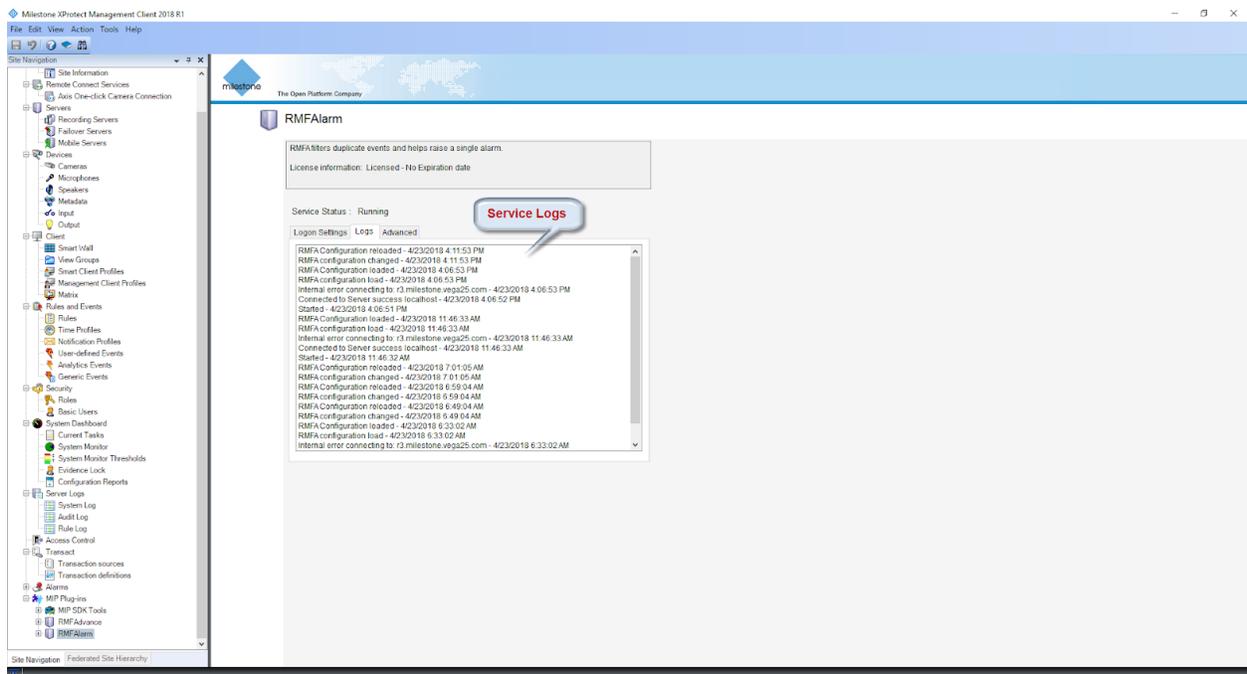


4. A new window opens. It has the below information:

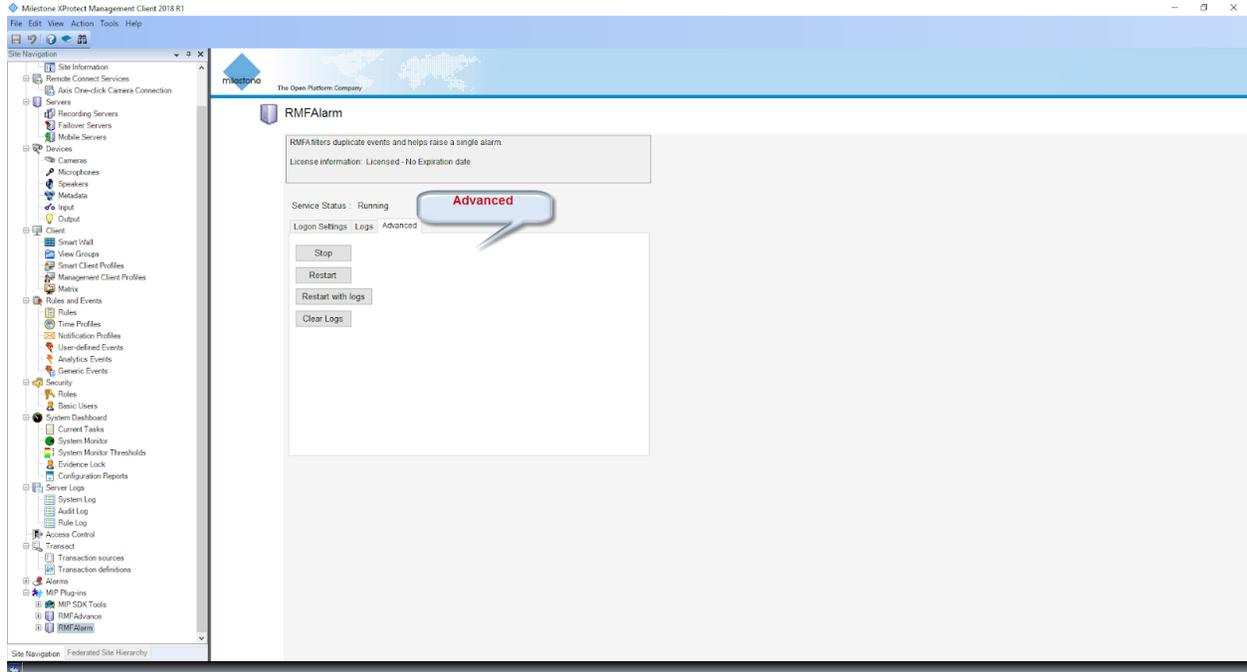
- Service Status - shows the status of the RMFA alarm service. This service gathers events from all event servers in the federation. MUST always be running.
- Tabs
 - Logon Settings - Domain username and password is needed to get events from Parent and Child Event Servers. One needs to provide these and click update.



ii. Logs - shows the logs of RMFA Alarm Service



iii. Advanced - Manage the RMFA Alarm Service. Stop/restart/restart with logs and clear logs



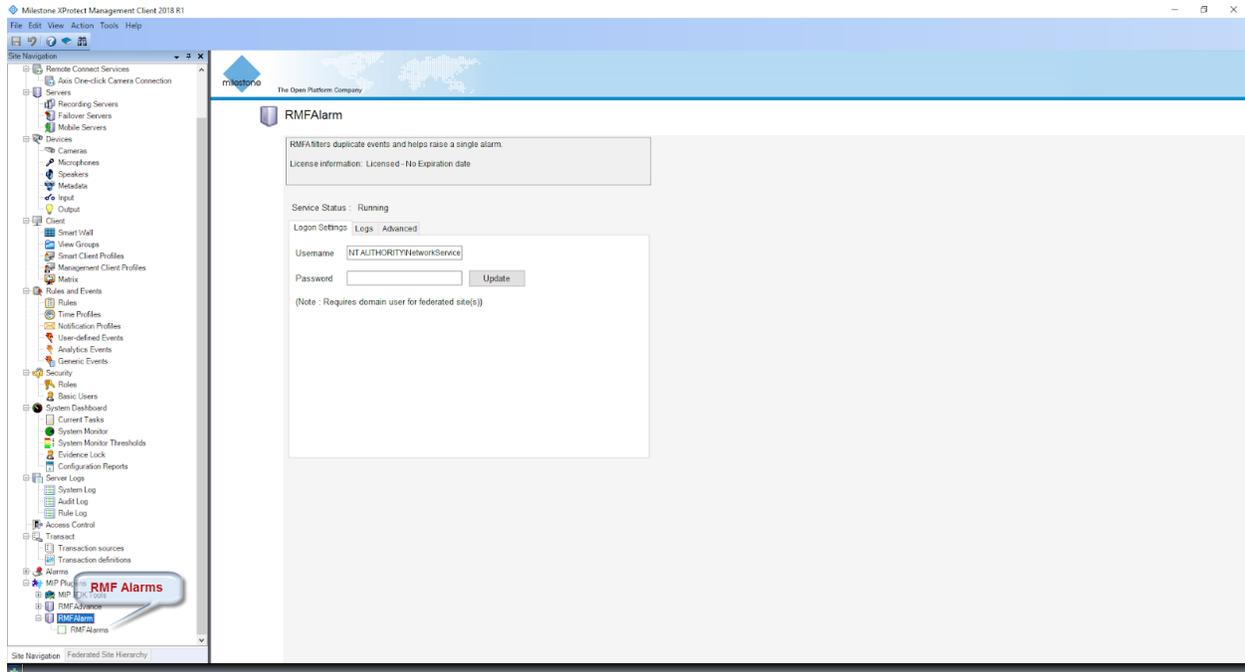
The screenshot displays the Milestone XProtect Management Client 2018 R1 interface. The left sidebar shows a tree view of the system configuration, with 'RMFAlarm' selected under the 'Alarms' category. The main window shows the 'RMFAlarm' configuration page. At the top, it states 'RMFAlarm filters duplicate events and helps raise a single alarm.' Below this, the license information is shown as 'Licensed - No Expiration date'. The service status is 'Running', and the 'Advanced' tab is selected. A red callout box with the word 'Advanced' points to the 'Advanced' tab. The configuration page includes buttons for 'Stop', 'Restart', 'Restart with logs', and 'Clear Logs'. The bottom status bar shows 'Site Navigation: Federated Site Hierarchy'.

Set up Alarms on specified events

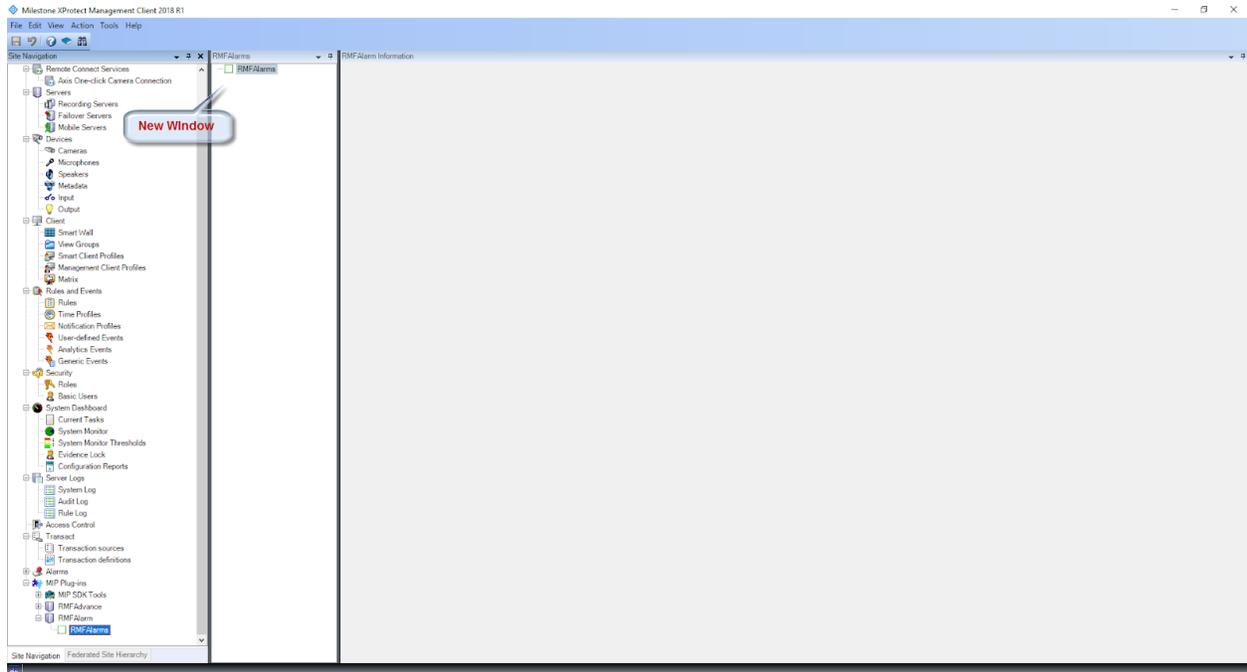
Next, we set up alarms for specified events. The service monitors these events and when they occur, it takes care to filter duplicate events and generates alarms.

To set it up, follow the instructions below.

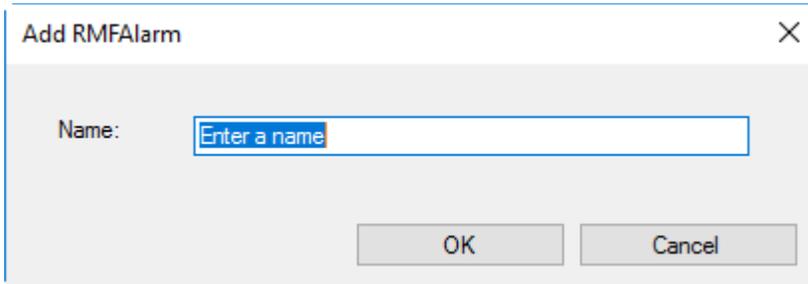
1. Expand the RMF Alarm tree and click on “RMF Alarms”.



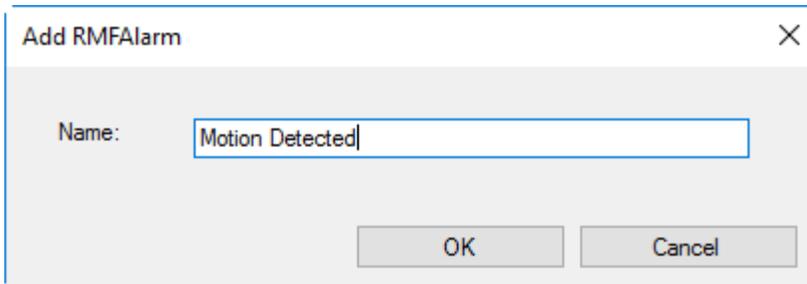
2. A new window gets created on the right.



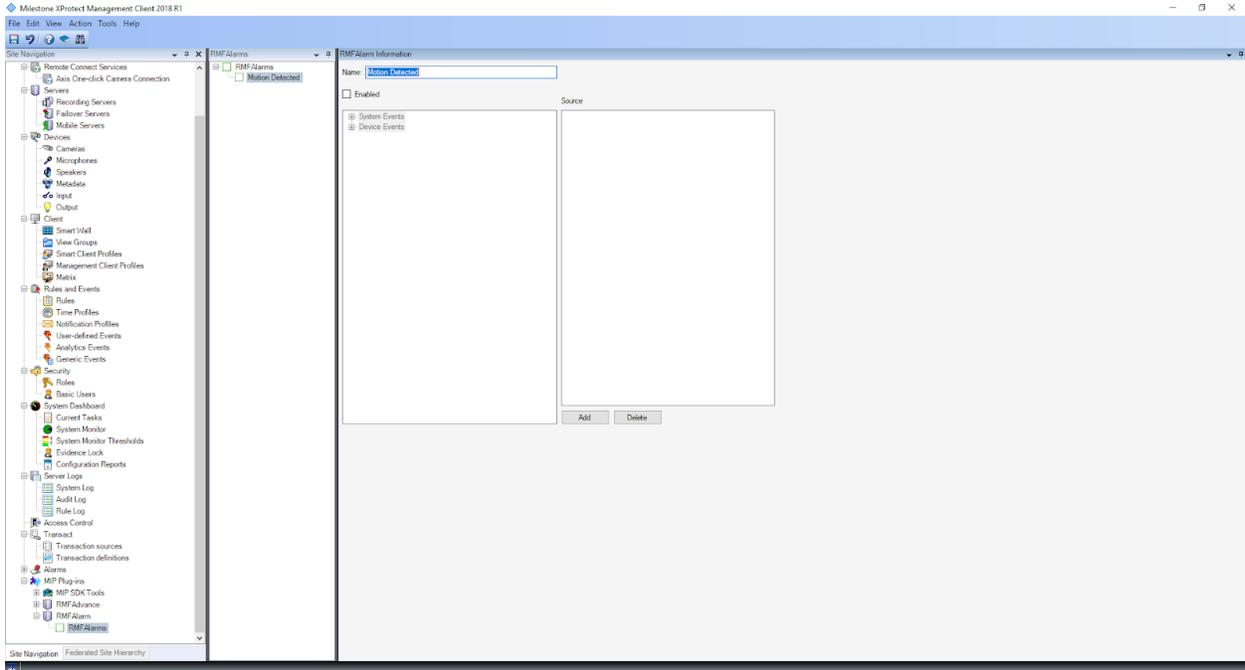
3. Right click on the "RMF Alarms" in this new pane and click "Add New".
4. Upon clicking on "Add New", we see:



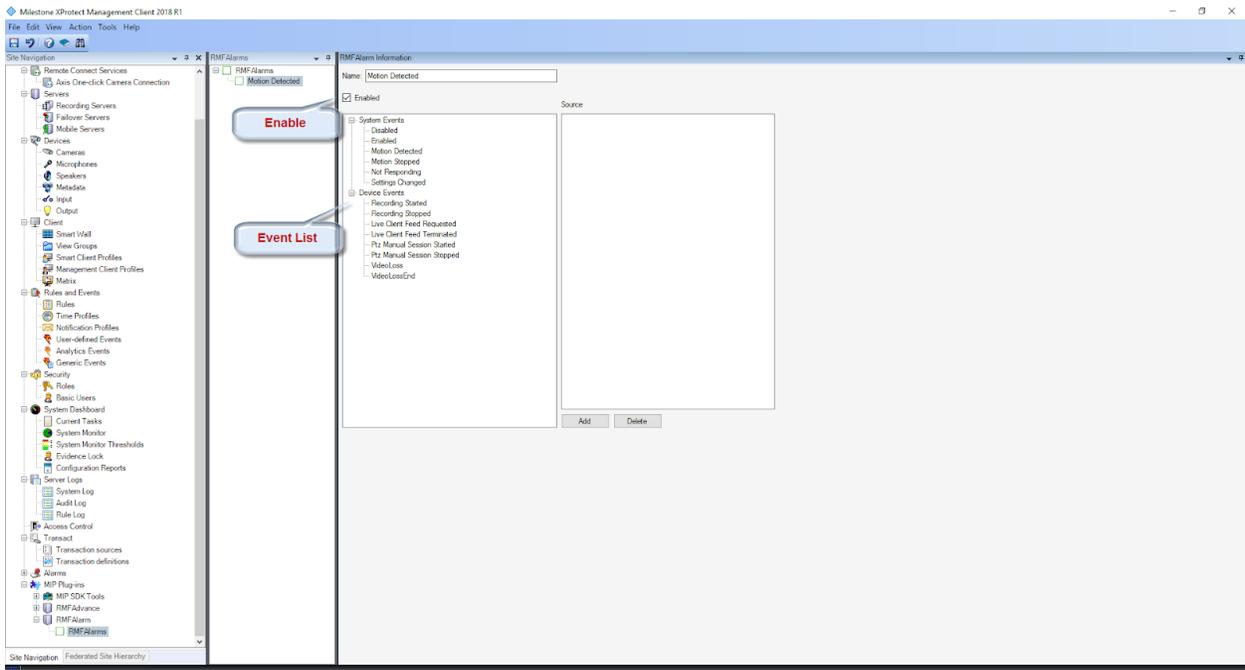
5. Please enter the Alarm Name and click "Ok".



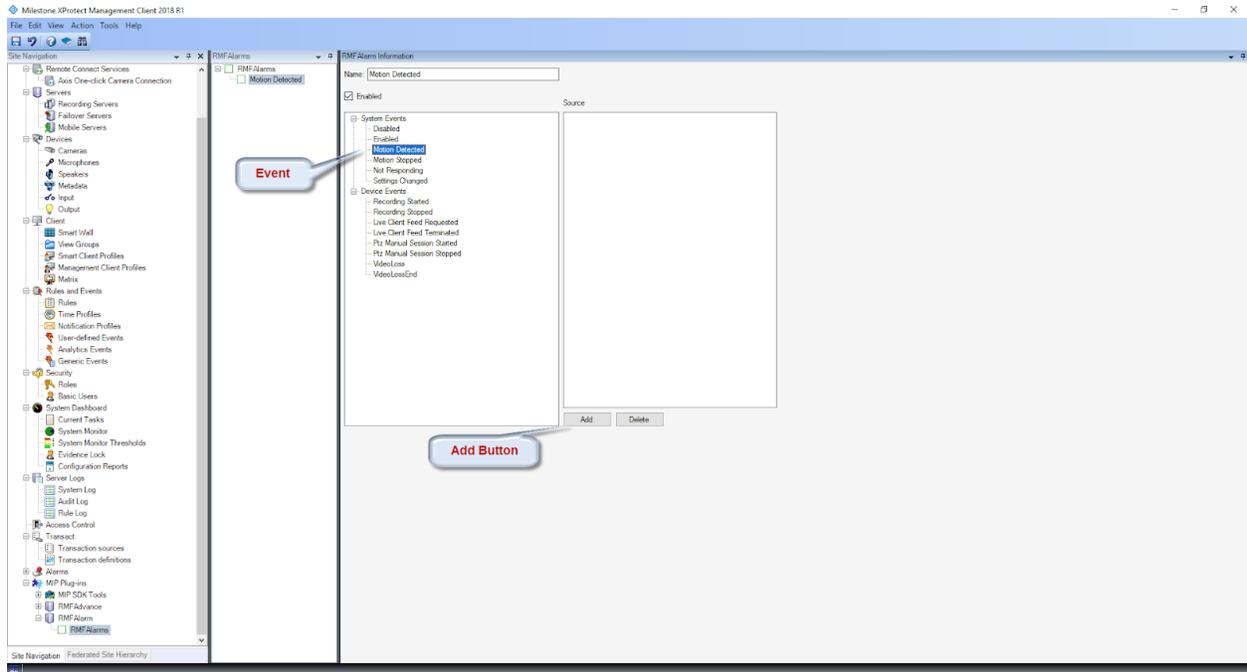
6. We then see:



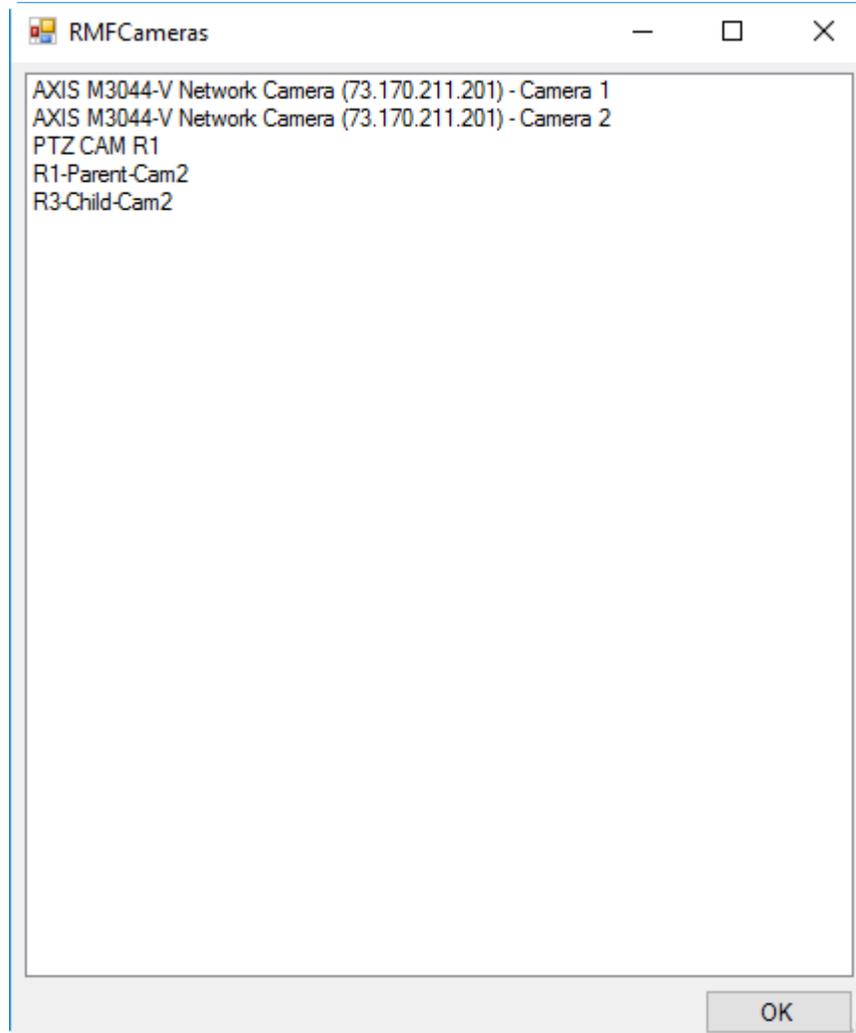
7. Click on the “Enabled” check box.



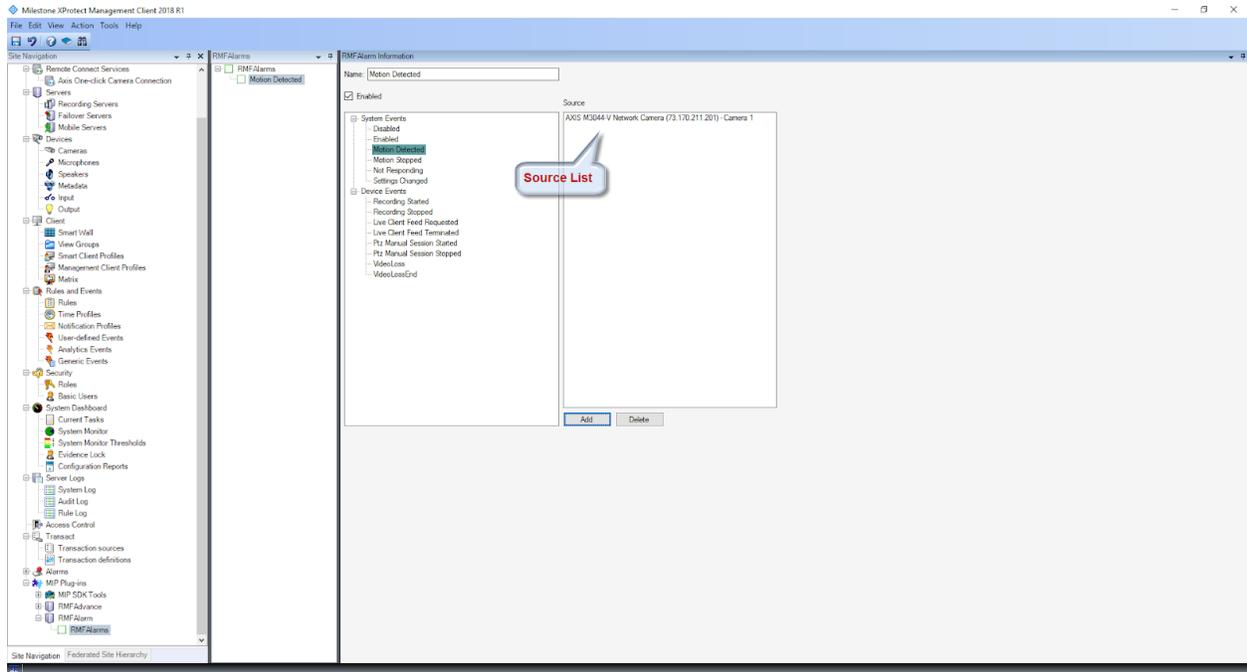
8. Select the event to be that needs to be monitored for this alarm, and click “Add”.



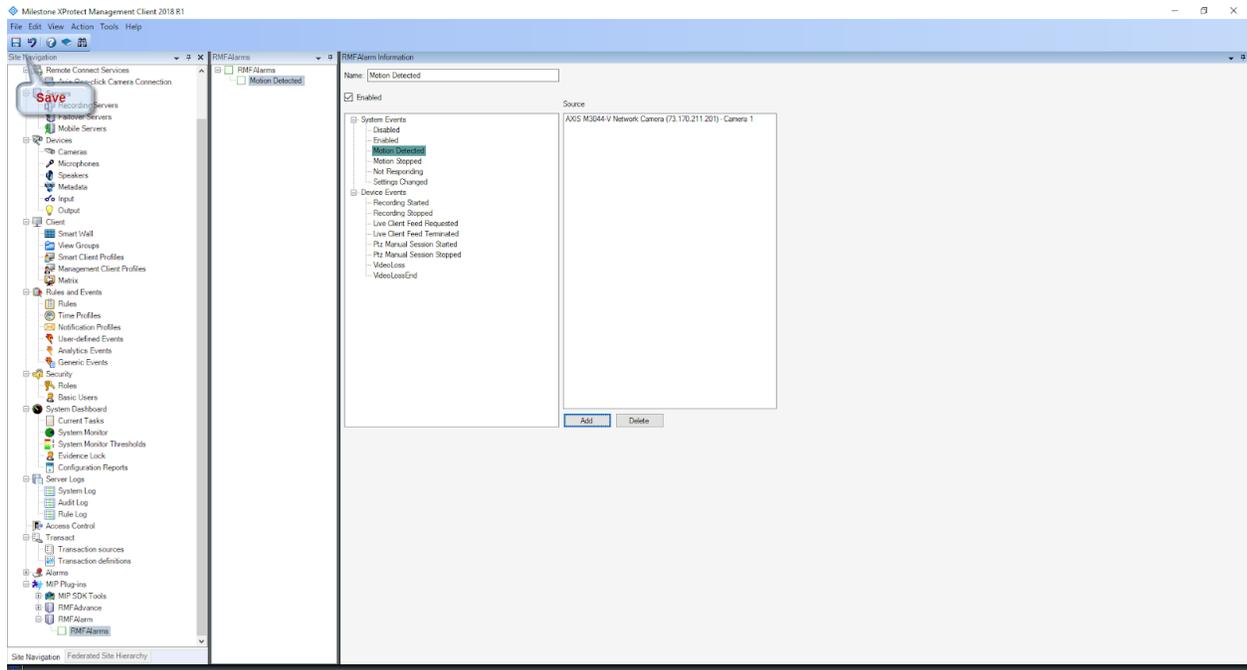
9. Then a camera source selection window will open with a list of mapped cameras. One or more sources need to be selected.



10. Select atleast one camera and click "Ok".
11. The selected cameras will be displayed in the "Source" list.



12. Once the configuration is completed, click on the “Save” button and close the Management Client.



13. Follow the steps from 3 to 12 to add multiple Alarms.

Viewing Alarms

Once alarms are set up, the RMFA Alarm service monitors events from all event servers.

It receives events, checks the alarm list, filters duplicate events and generates alarms, if they are set up for that event.

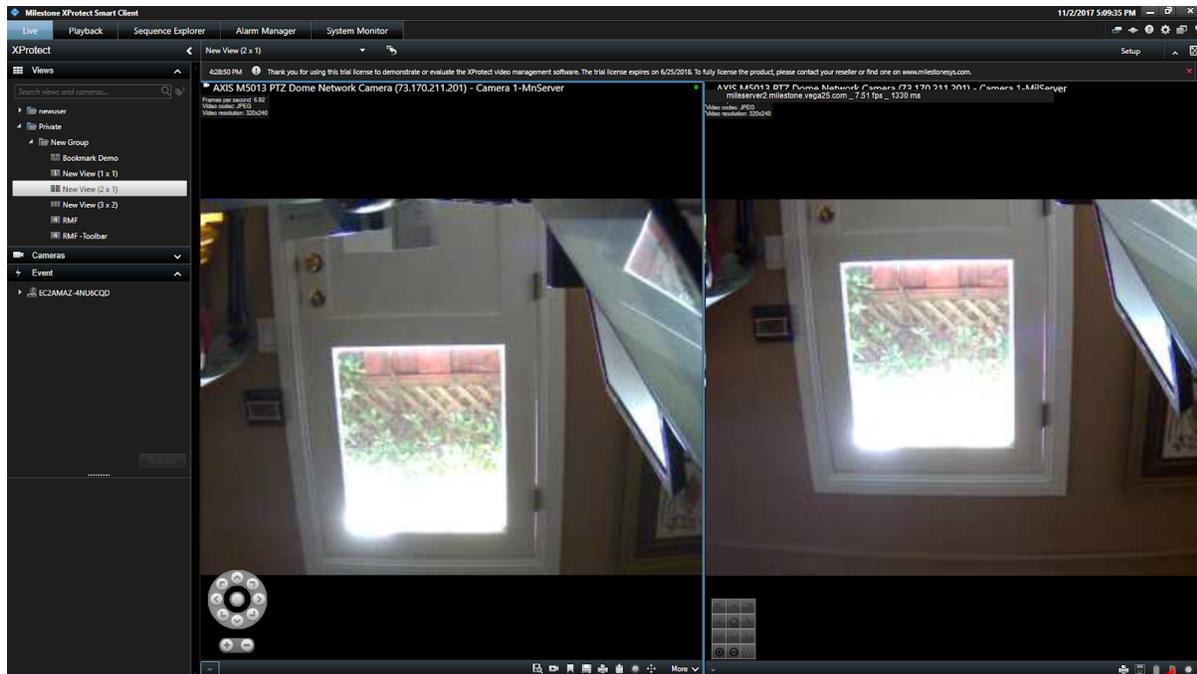
The alarms are visible in the Smart Client's alarm manager and work the same way as a native alarm.

RMFA Bookmarks

RMFA enables the user to set bookmarks on both recording servers in parallel. While searching for bookmarks, duplicate bookmarks are filtered and we see a single result being displayed.

Set

One uses the Bookmark set button in the RMF plugin window, (shown in the right window below) to set a RMF bookmark.

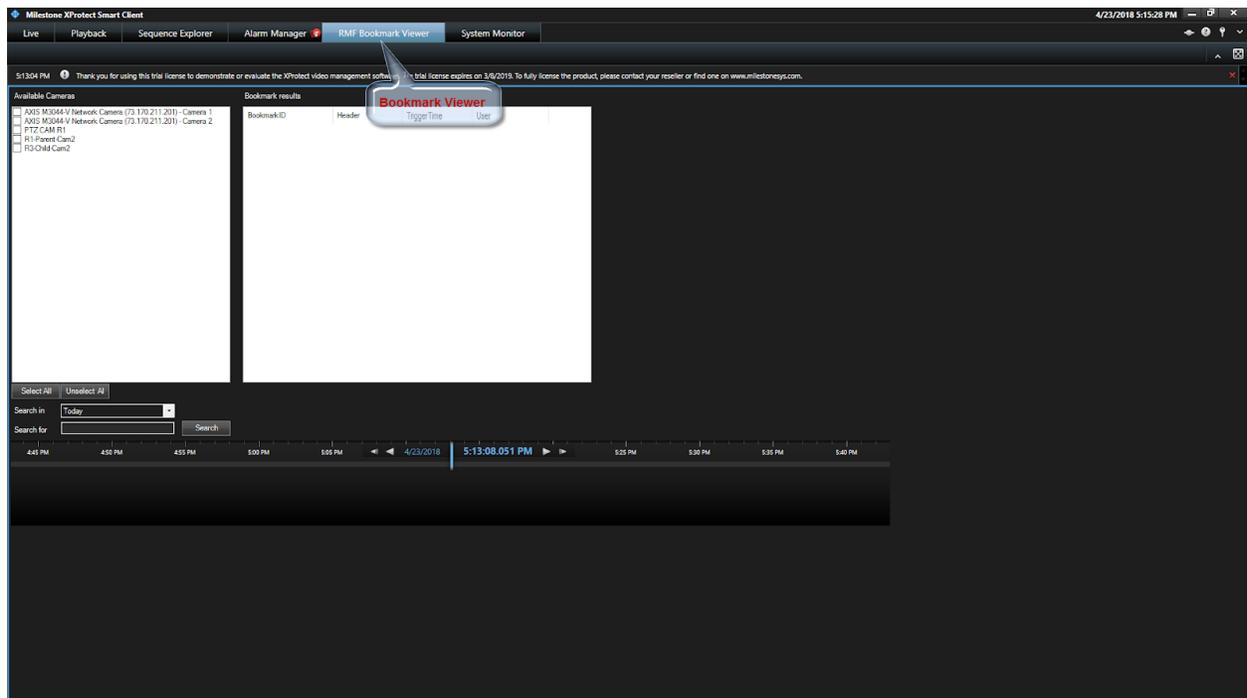


RMF Plugin
Bookmark Button

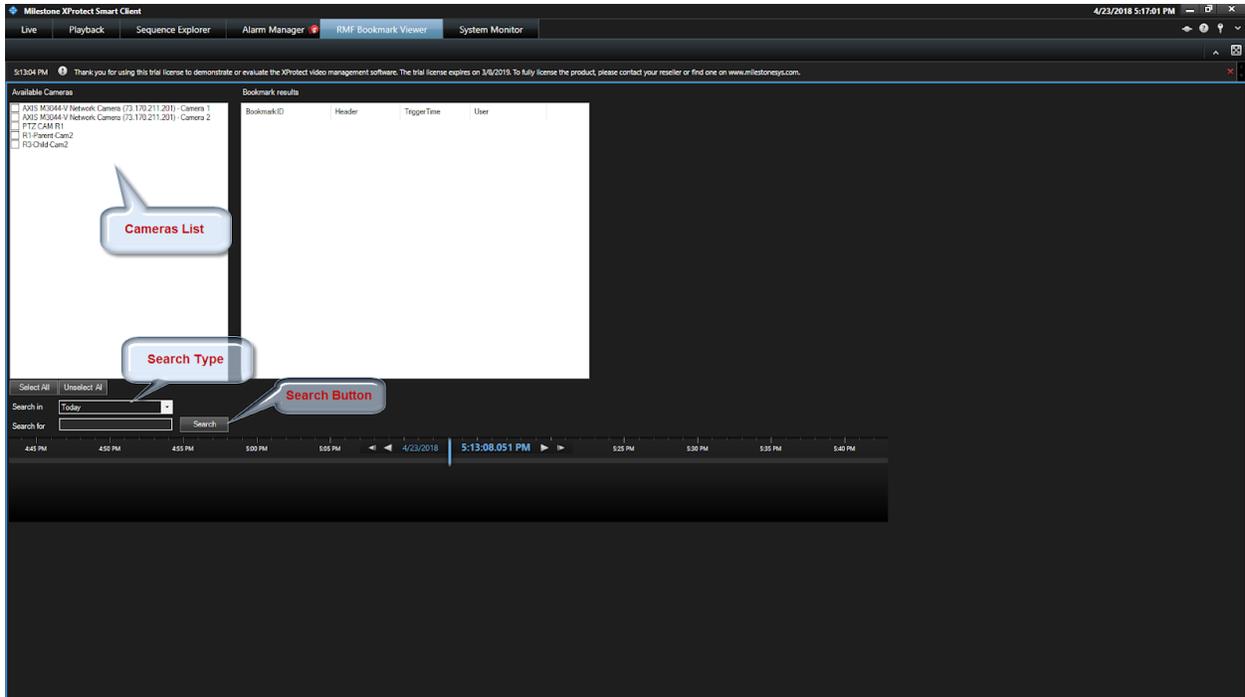
View

We use a new Bookmark viewer tab to search and retrieve bookmarks. Depicted below.

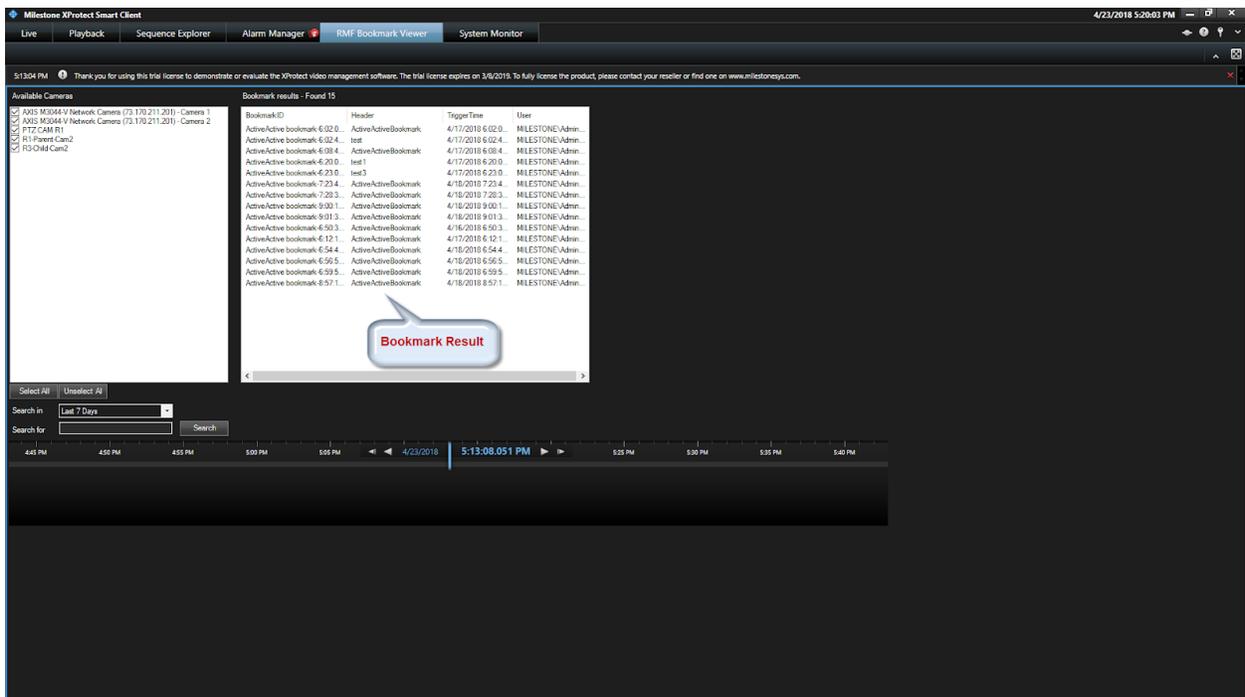
1. Open the "Smart Client" application.
2. Click on the "RMF Bookmark Viewer" tab.
3. We then see the below image



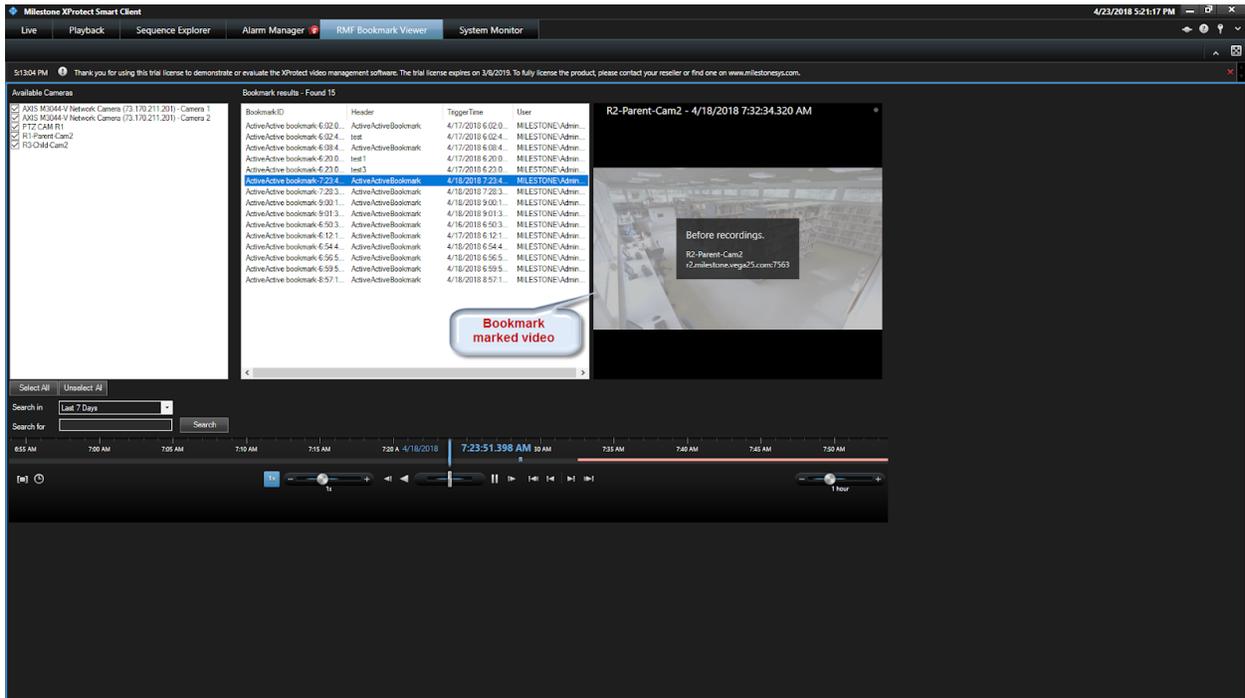
4. Select the required camera, set search options and click on "Search".



- Bookmark results are displayed on the right window. This is a list from all recording servers. The results are filtered to remove duplicates caused by dual recording. These filtered results are displayed.



6. Click on a result to play the video.



The screenshot displays the Milestone XProtect Smart Client interface. The top navigation bar includes 'Live', 'Playback', 'Sequence Explorer', 'Alarm Manager', 'RPM Bookmark Viewer', and 'System Monitor'. The main window is titled 'R2-Parent-Cam2 - 4/18/2018 7:32:34.320 AM'. On the left, a list of available cameras is shown, including 'AXIS M3044-V Network Camera (73.170.211.201) - Camera 1', 'AXIS M3044-V Network Camera (73.170.211.201) - Camera 2', 'PTZ-CAM-R1', 'R1-Parent-Cam2', and 'R3-Child-Cam2'. The central pane displays a table of bookmarked videos:

BookmarkID	Header	TriggerTime	User
ActiveActive bookmark-6:02:0...	ActiveActiveBookmark	4/17/2018 6:02:0...	MELESTONE\Admin...
ActiveActive bookmark-6:02:4...	test	4/17/2018 6:02:4...	MELESTONE\Admin...
ActiveActive bookmark-6:08:4...	ActiveActiveBookmark	4/17/2018 6:08:4...	MELESTONE\Admin...
ActiveActive bookmark-6:20:0...	test1	4/17/2018 6:20:0...	MELESTONE\Admin...
ActiveActive bookmark-6:23:0...	test2	4/17/2018 6:23:0...	MELESTONE\Admin...
ActiveActive bookmark-7:23:4...	ActiveActiveBookmark	4/18/2018 7:23:4...	MELESTONE\Admin...
ActiveActive bookmark-7:23:3...	ActiveActiveBookmark	4/18/2018 7:23:3...	MELESTONE\Admin...
ActiveActive bookmark-9:00:1...	ActiveActiveBookmark	4/18/2018 9:00:1...	MELESTONE\Admin...
ActiveActive bookmark-9:01:3...	ActiveActiveBookmark	4/18/2018 9:01:3...	MELESTONE\Admin...
ActiveActive bookmark-6:50:3...	ActiveActiveBookmark	4/18/2018 6:50:3...	MELESTONE\Admin...
ActiveActive bookmark-6:12:1...	ActiveActiveBookmark	4/17/2018 6:12:1...	MELESTONE\Admin...
ActiveActive bookmark-6:54:4...	ActiveActiveBookmark	4/18/2018 6:54:4...	MELESTONE\Admin...
ActiveActive bookmark-6:56:5...	ActiveActiveBookmark	4/18/2018 6:56:5...	MELESTONE\Admin...
ActiveActive bookmark-6:59:5...	ActiveActiveBookmark	4/18/2018 6:59:5...	MELESTONE\Admin...
ActiveActive bookmark-8:57:1...	ActiveActiveBookmark	4/18/2018 8:57:1...	MELESTONE\Admin...

The video player on the right shows a still image of a room with a text overlay: 'Before recordings. R2-Parent-Cam2 /2_milestone.vega25.com:7563'. A red callout box at the bottom of the table reads 'Bookmark marked video'. The bottom of the interface features a search bar and a timeline with a playhead at 7:23:51.398 AM on 4/18/2018.



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