APPLICATION NOTE

USING VIVOTEK SMART VCA CAMERAS WITH MILESTONE® XPROTECT

Version 1.0
2020/05/13

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Revision History

Version	Issue date	Editor	Comment
V1.0		Sandra	Initial draft

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1. For Milestone® XProtect Users

A proprietary plug-in is available for users who install VIVOTEK cameras with video content analysis (VCA) suite in a deployment managed by Milestone XPortect Corporate or Enterprise IP solutions. This plug-in enables VIVOTEK Smart VCA rules and analytics events overlay on cameras displayed in the Smart Client in both live and playback mode. The on-board Smart VCA suite includes Intrusion Detection, Loitering Detection, Line Crossing Detection, Unattended Object Detection, Missing Object Detection, and Face Detection.

NOTE:

The plug-in applies to:

XProtect Professional/ XProtect Professional +/ XProtect Expert/ XProtect Corporate / XProtect Express/ XProtect Express+/ XProtect Essential+

The plug-in does not apply to:

XProtect Go/ XProtect Essential

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2. Getting Start

Complete the following procedure as the prerequisites for installing Milestone's SmartClient and the plug-in:

(1) Download VIVOTEK's VCA plug-in from VIVOTEK's Camera's download page for appropriate plug-ins (for x64 or x86 versions[1]).

(2) Install the **.NET framework 4.7** Runtime[2]. The .NET framework is essential for installing SmartClient.

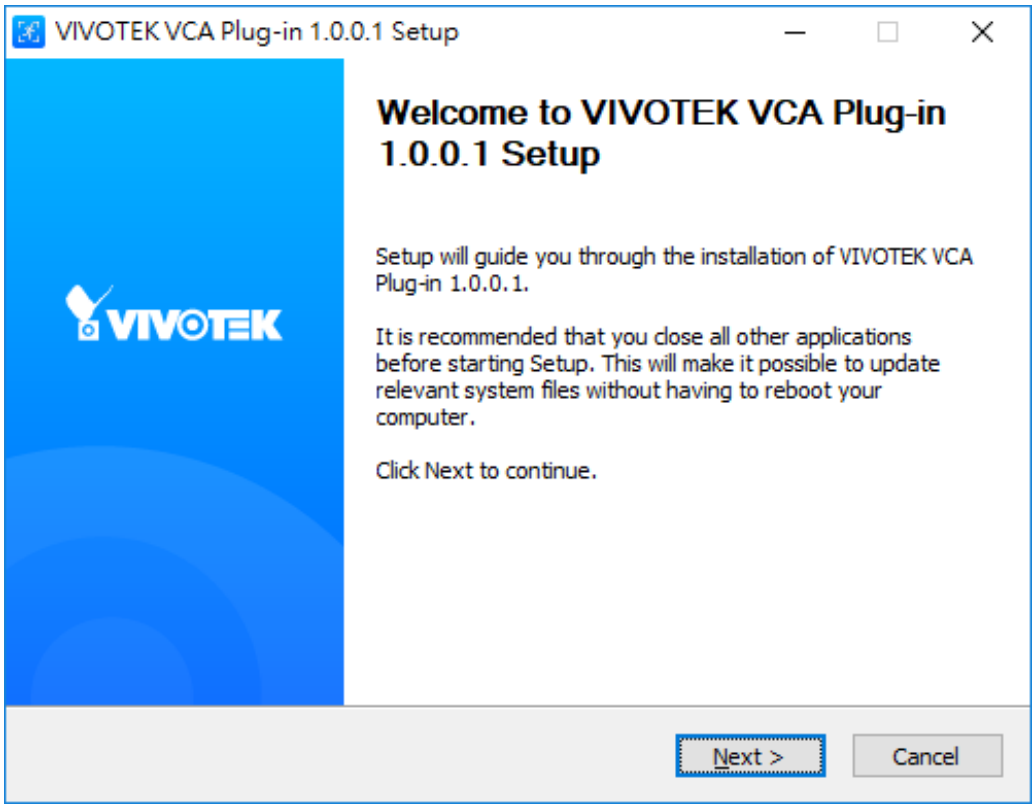
(3) Install the **DirectX runtime (9.29.1974)**[3] and above. The DirectX runtime is also necessary to the plug-in for managing DirectX components especially for older Windows XP Systems.

(4) Install the Milestone XProtect SmartClient 2020 R1 (20.1b) or above.

(5) Execute the VIVOTEK VCA Plug-in installer file:

a. By default, a sub-folder named **MIPPlugins** is available under the Milestone Smart Client installation path. The default file path should look like the following:
C:\Program Files\Milestone\MIPPlugins\VIVOTEK VCA Plug-in

b. Click Install to proceed with installation.



[1] OS supports extends from Windows 8.1 to Windows 10.
[2] .Net Framework: https://dotnet.microsoft.com/download/dotnet-framework/net47
[3] DirectX: http://www.microsoft.com/en-us/download/details.aspx?id=8109

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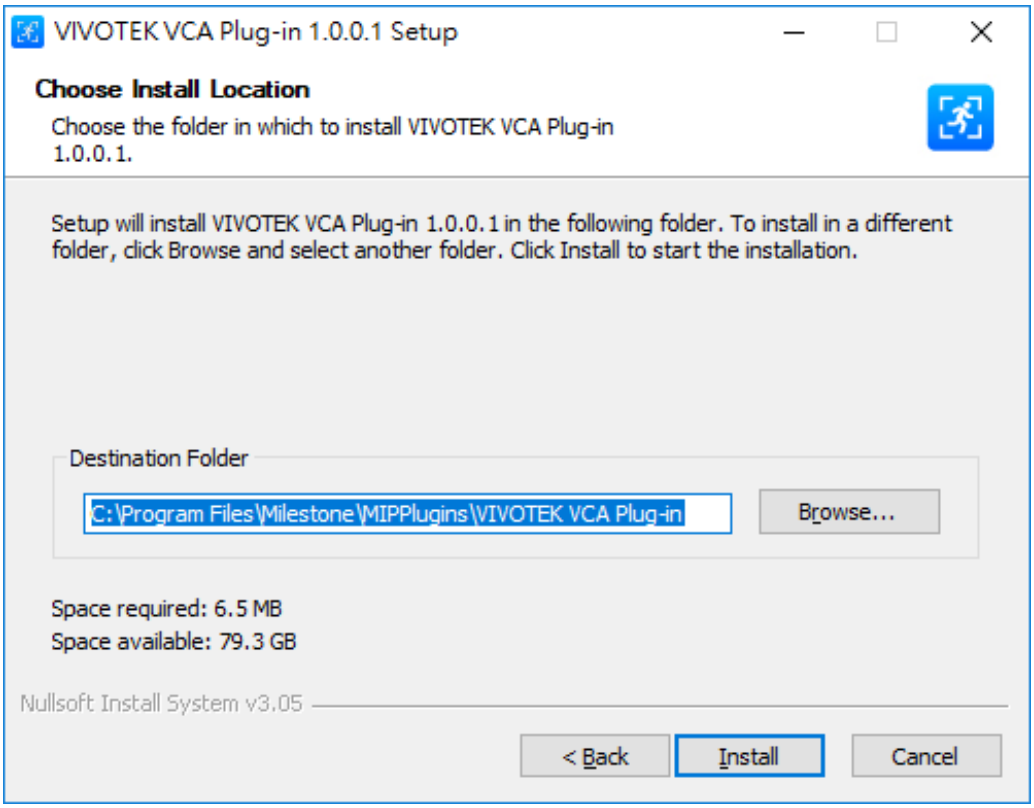

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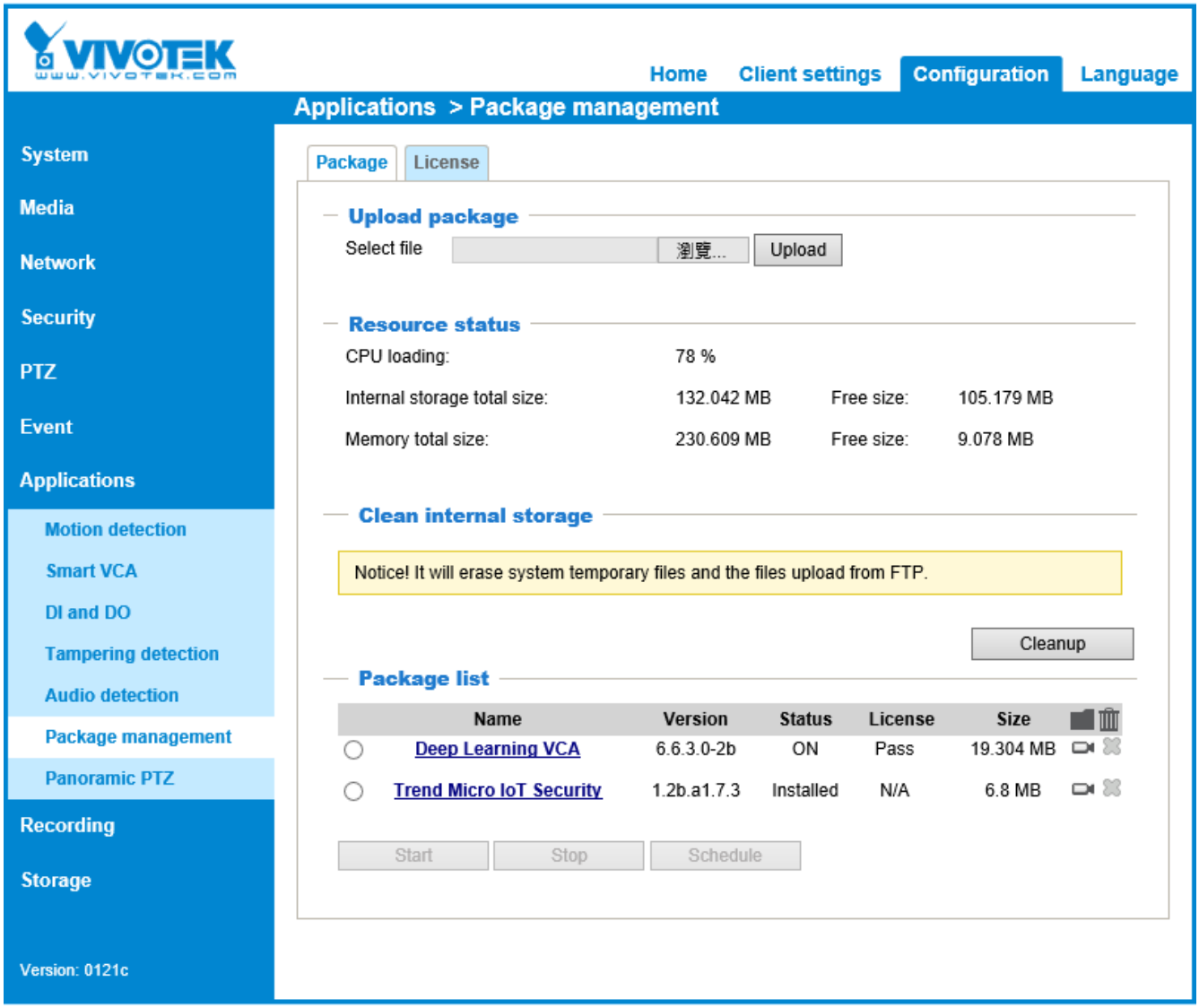
3. Prerequisites for Smart VCA cameras

(1) Install Smart VCA Package with version 6.6.3.0 or above.



(2) Click on VCA package to open the monitoring and configuration page.
You can follow this manual to setup Smart VCA rules and events:
http://download.vivotek.com/downloadfile/solutions/vadp/smart-vca-manual_en.pdf

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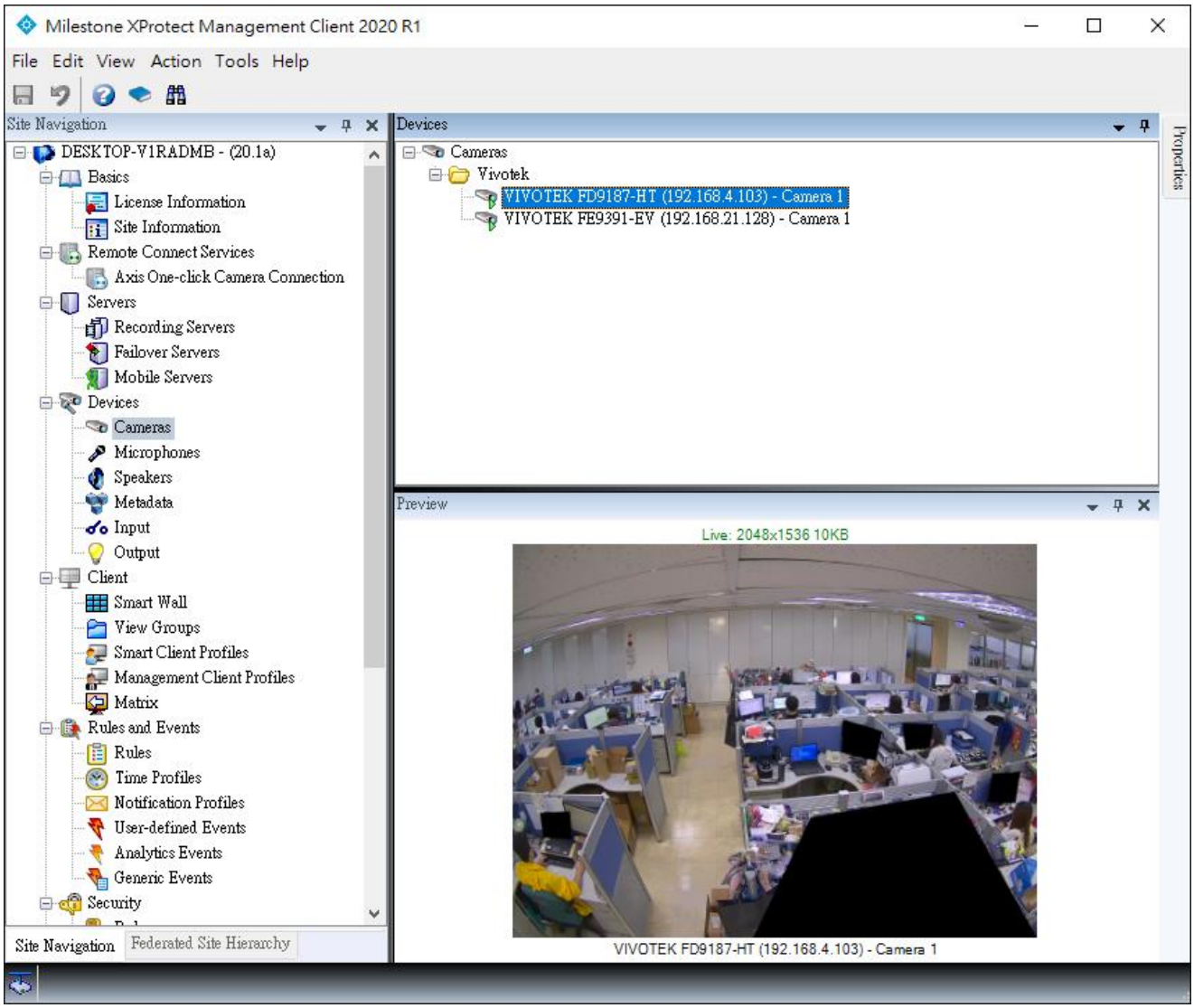
4. To Enable the Plug-in & Operation

Server Side

(1) Make sure your Smart VCA cameras have already been added as "**Hardware Devices**" in the Recording Server of XProtect Enterprise / Corporate Management Application.



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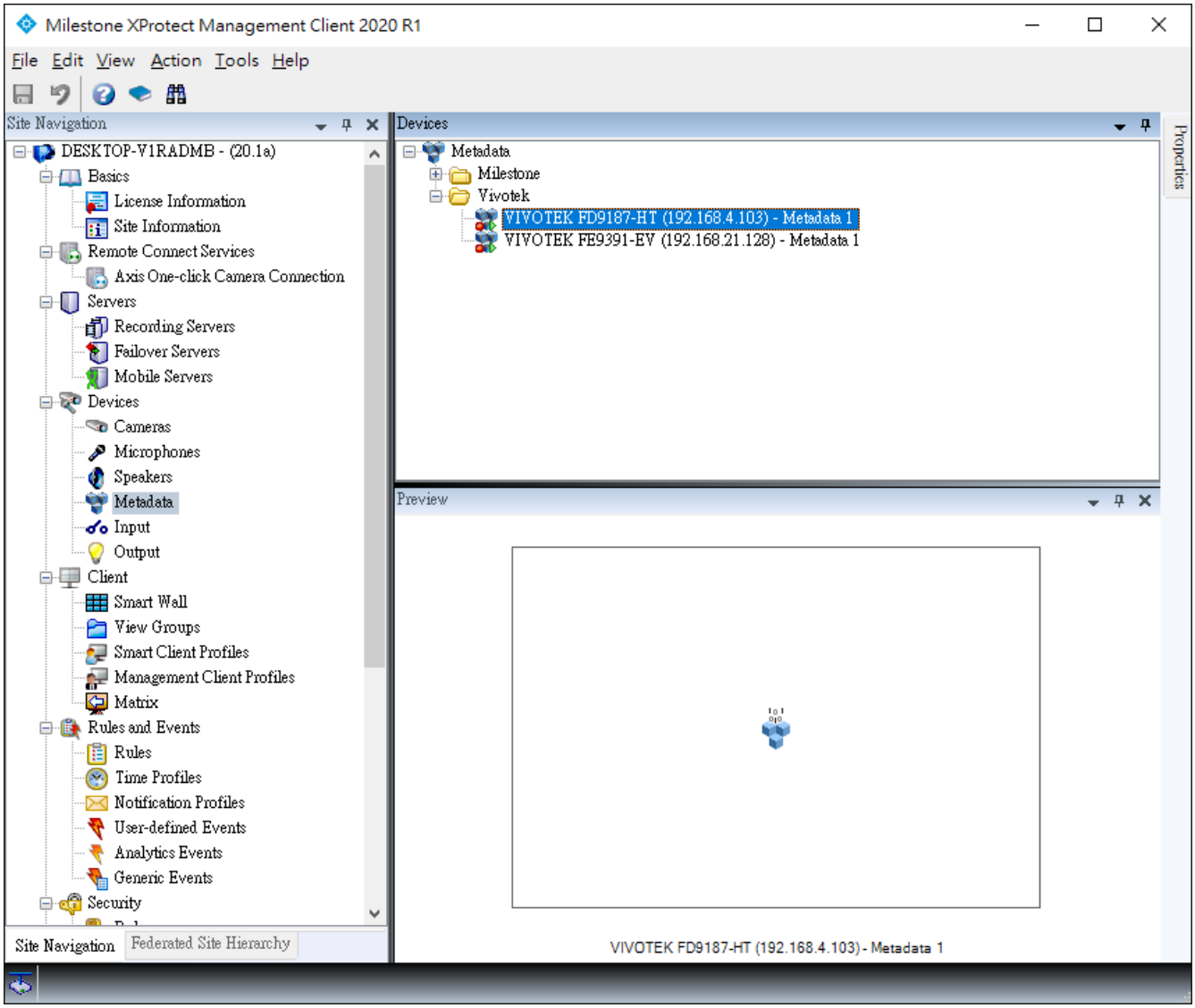
(2) Make sure your Smart VCA cameras have relative metadata stream.



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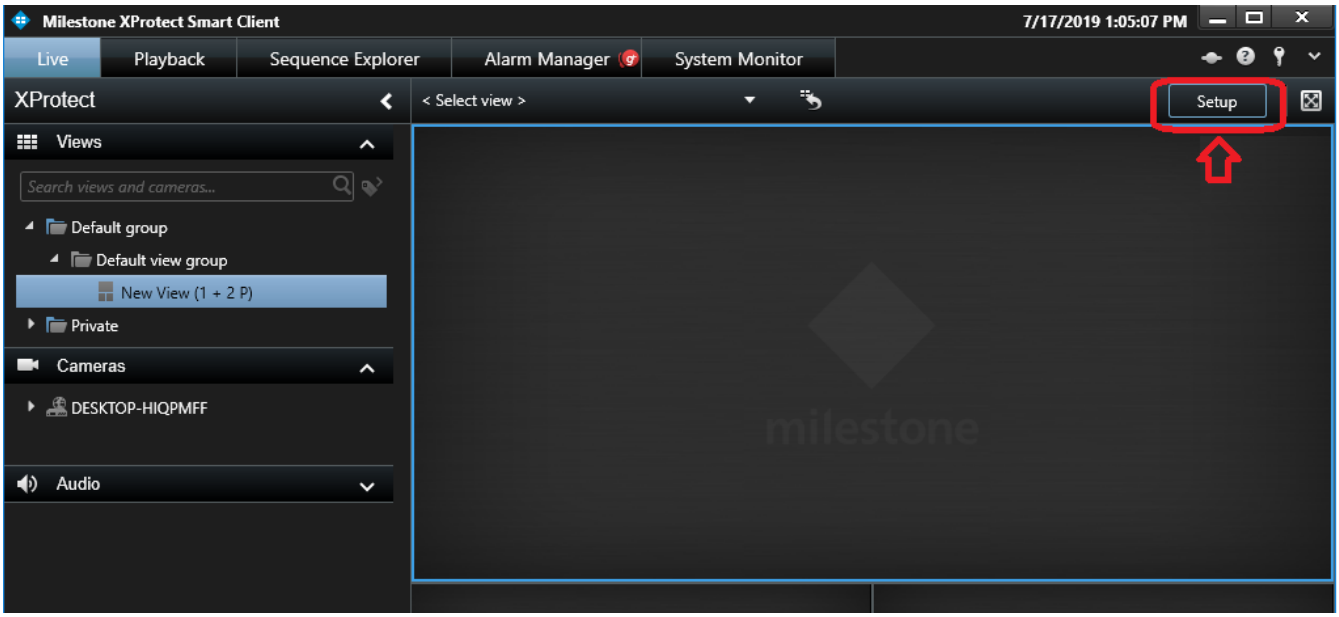
Client Side

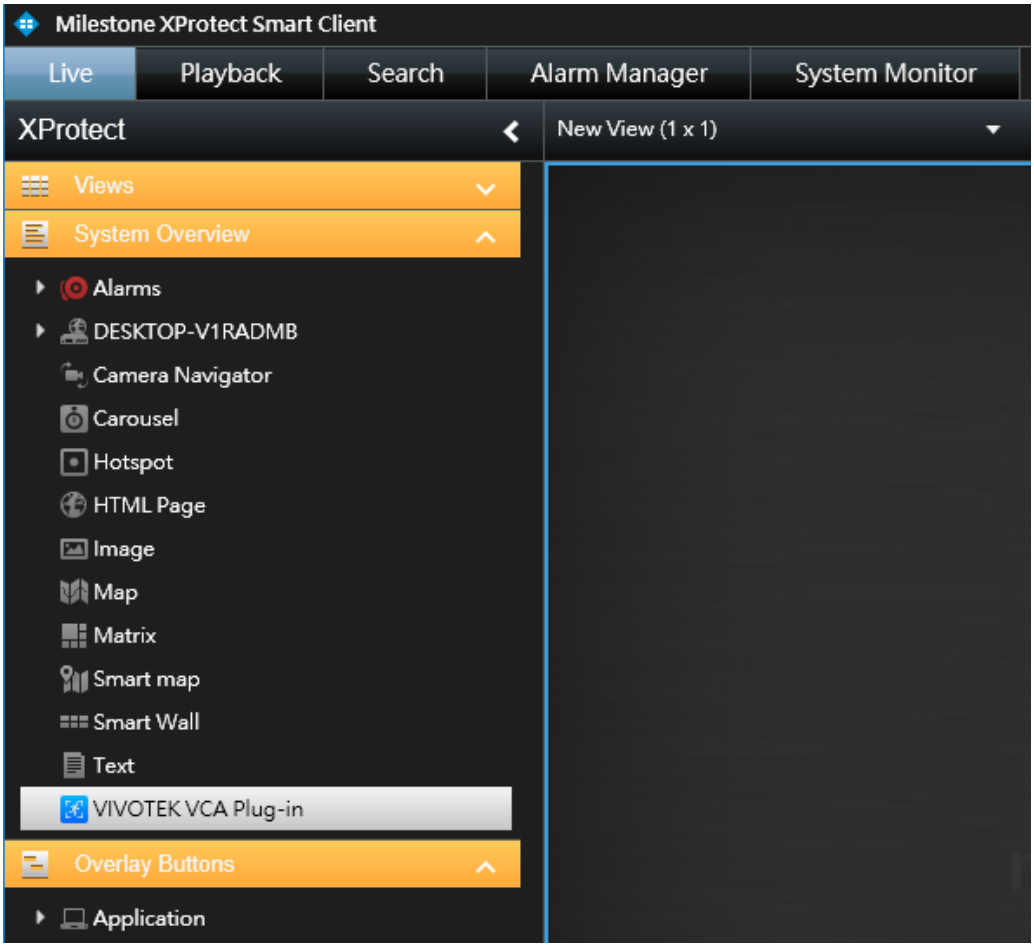
(1) Start the XProtect Smart Client.

(2) On the Live View window, click on "**Setup**".



(3) On the Seup Window, search for the "**VIVOTEK VCA Plug-in**" by dragging the pull-down menu on the "**System Overview**" pane to the bottom.

Please note, if you install the plug-in when your SmartClient is startd, re-start the SmartClient utility.



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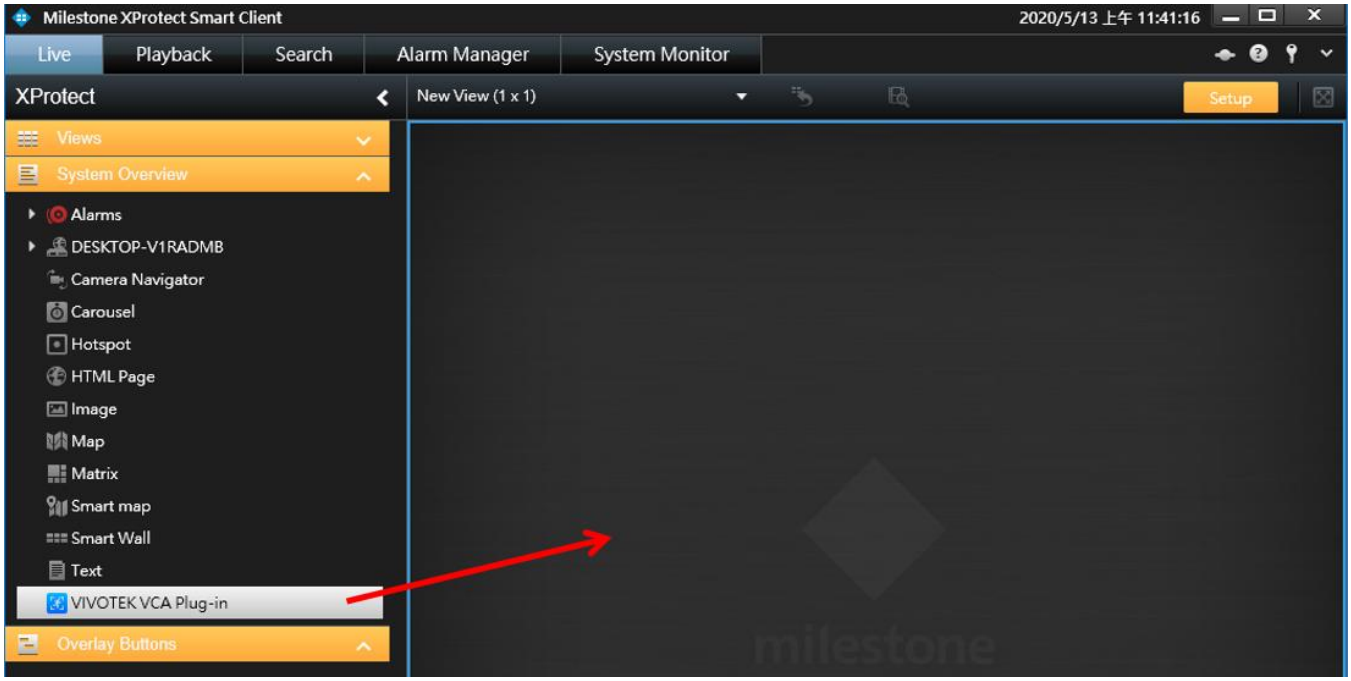
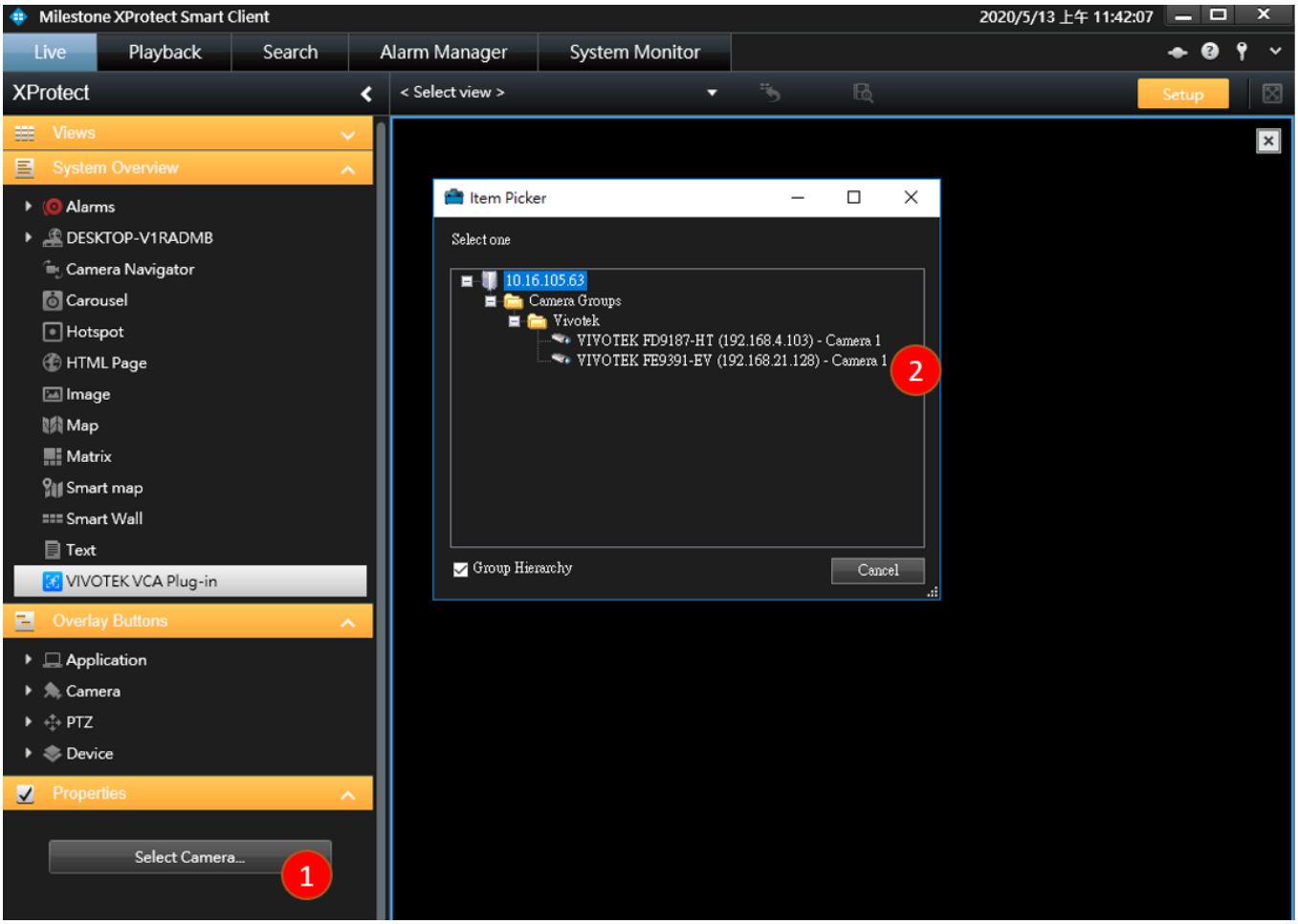
(4) Click and drag the "**VIVOTEK VCA Plug-in**" to a view cell. When done, the view cell will be highlighted by a light blue out frame.



(5) Locate the Properties panel and click on the Item Picker pane. An Item Picker window will prompt. Unfold the device tree and select a VIVOTEK Camera.

A camera snapshot will be shown on the viewcell after a few seconds for connecting to server.



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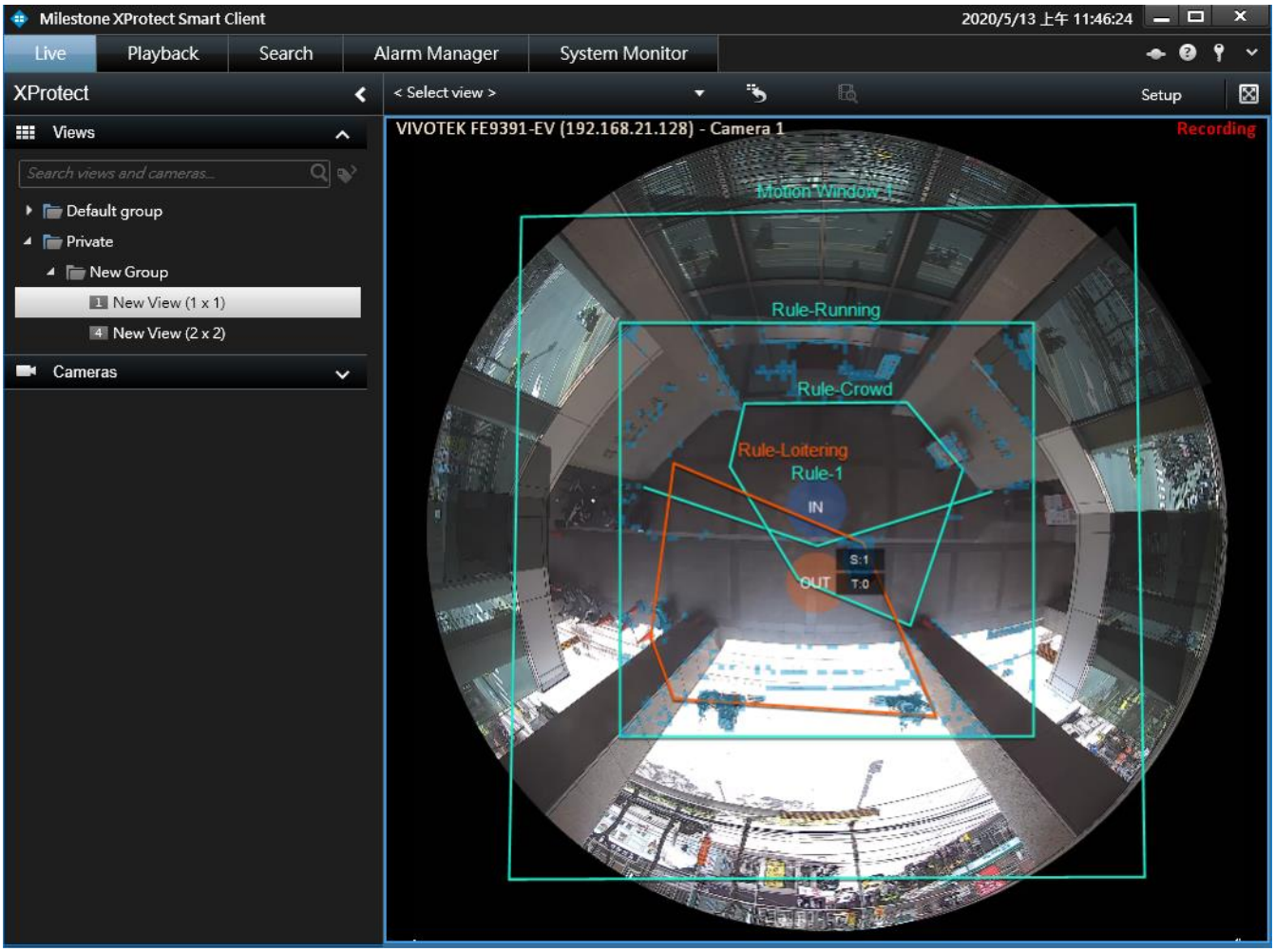
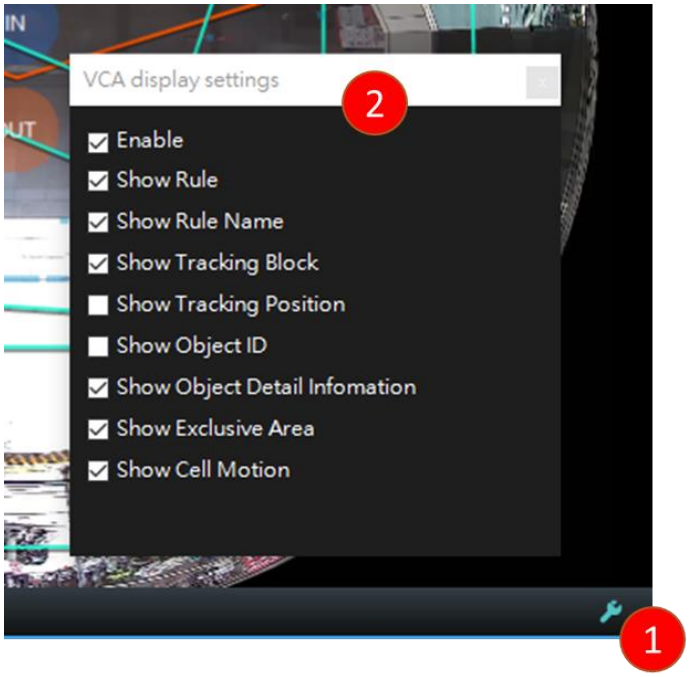
(6) You can now click on the "**Setup**" button and return to the "**Live**" view or "**Playback**" window. VIVOTEK Smart VCA rules and analytics events overlay on top of video as shown in the picture below.



(7) When mouse hovers over the view cell, the toolbar will be shown. Click the "**Tool**" button and the VCA display settings window will pop up. This window also can pop up when user clicks right mouse button.



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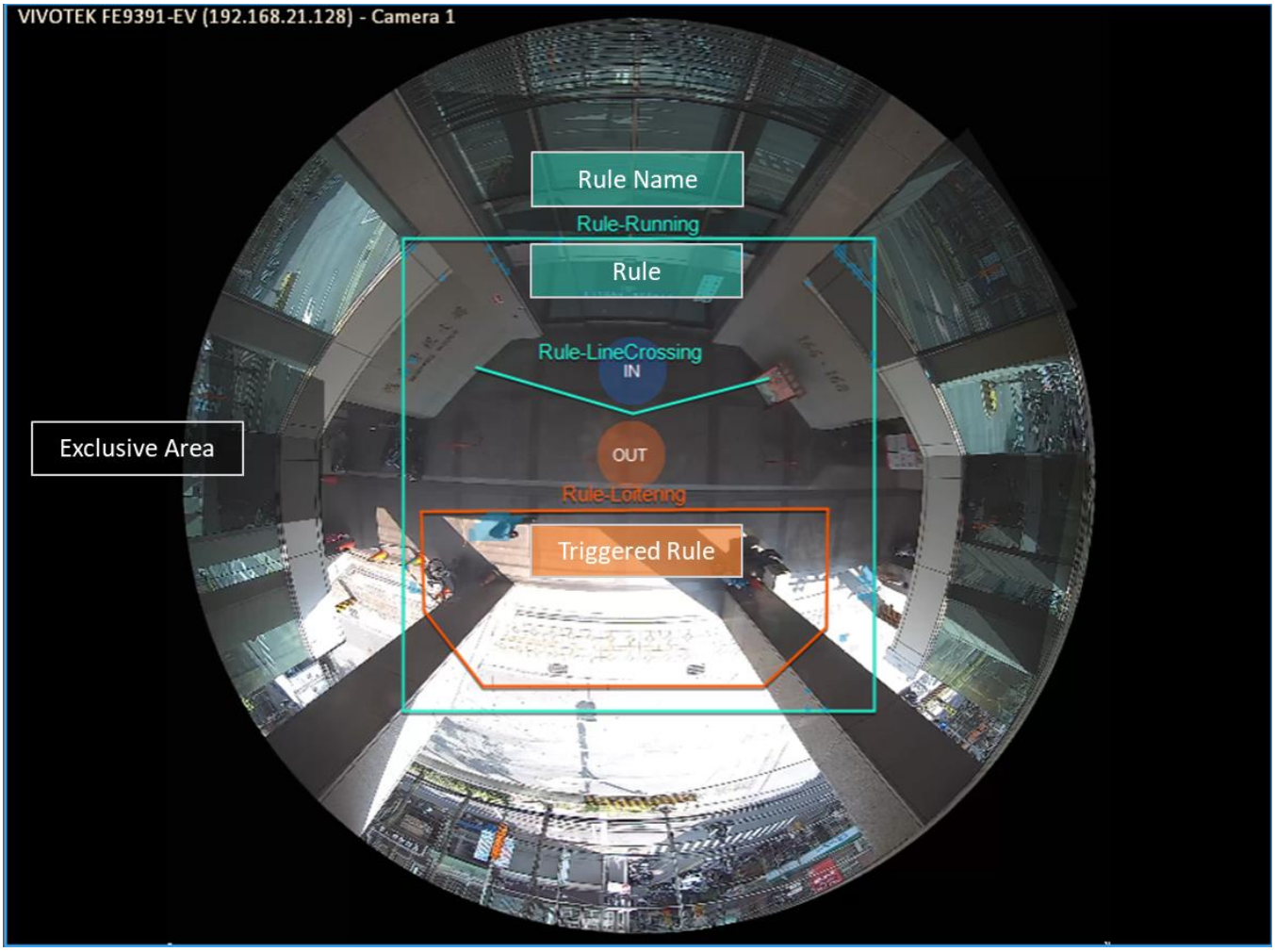
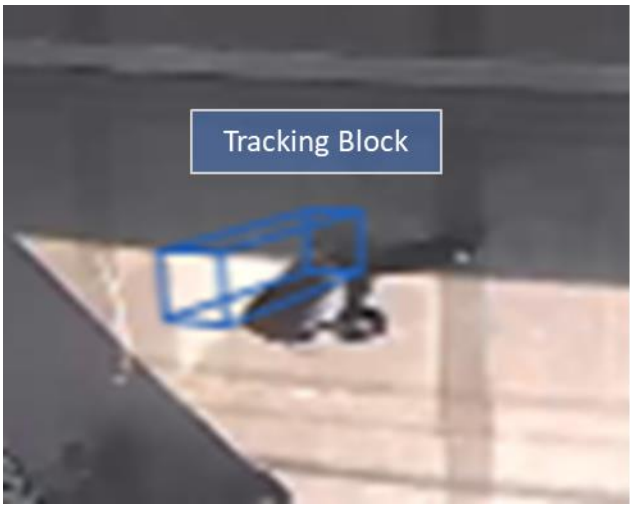
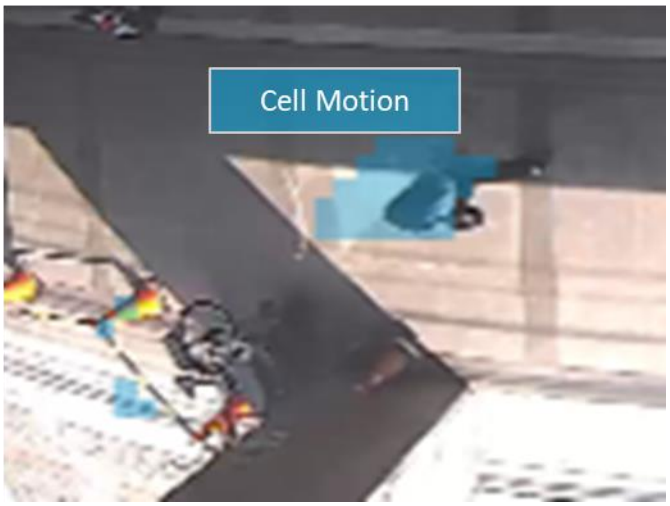
The following display settings can be configured in the “VCA display settings” window:

- **Enable:** It is a main switch to show or hide the whole VCA information.
- **Rule:** The VCA rules you created in the Camera Settings page. If an analytics event is triggered, the color of rule will turn into orange.
- **Rule Name:** The name of the VCA rule. It is available only if “Show Rule” is enabled.
- **Tracking Block:** The vertical bounding box surrounding a standing or walking human form.
- **Tracking Position:** The begin and current positions of a tracked standing or walking human.
- **Object ID:** The ID number of a detected objects(people). It is available only if “Show Tracking Position” is enabled.
- **Object Detail Information:** It is available only if “Show Tracking Position” is enabled.
  The detail information includes
  1) **Speed Level**: speed threshold for detecting running objects.
  2) **Time Duration of Stay**: calculated duration of stay of the detected objects(people) in scene.
- **Exclusive Area:** The Exclusive areas you created in the Camera Settings page.
- **Cell Motion:** Displays the motion cells around a moving object.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