Wintics Cityvision manual

Integration of Wintics Cityvision software with Milestone XProtect

Document

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Wintics

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I. Version control

Version	Issue Date	Author(s)	Reviewer(s)	Remarks
v1	21 July 2021	Anton DOROZHKO Quentin BARENNE	Matthias HOULLIER	

II. Introduction

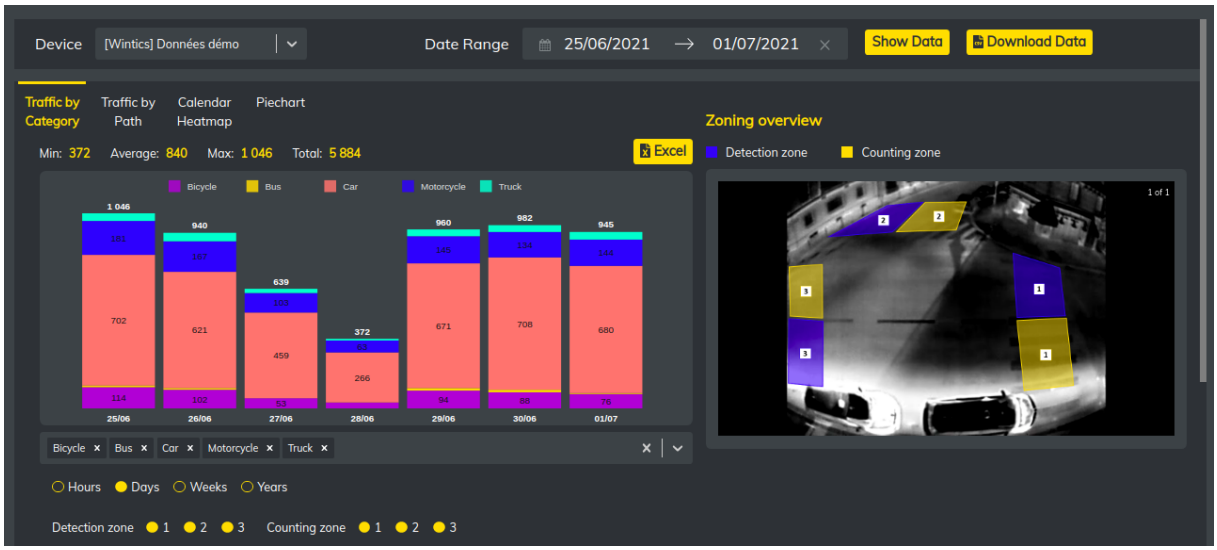
This document is a synthetic manual describing the different functionalities of Wintics Cityvision software and its integration capabilities with Milestone XProtect.

The document covers the following versions:

- Cityvision version: 1.1.0
- XProtect version: XProtect Professional+ 2020 R2 Test

III. Product description

Cityvision is software that provides intelligent video processing capabilities for your cameras. In practice, Cityvision can turn any urban camera into intelligent sensors which generates real-time statistics and alerts. It therefore helps city operators better understand what is happening in streets and, therefore, better manage cities.



- Figure 1 -
Screenshot of Cityvision statistics dashboard panel

Cityvision retrieves camera stream from the VMS (option 1 – see below) or directly from the camera (option 2 – see below) and performs detection and tracking for a large range of objects to generate statistics and alarms. The eligible categories are listed below:

- Person
- Bicycle
- Scooter
- Motorbike
- Car
- Van
- Bus
- Truck

For each of the 8 categories, Cityvision covers numerous applications which (i) can all be visible on Cityvision statistical dashboards and (ii) can all generate alarm messages in Milestone XProtect.

- Traffic analysis: counting by categories and by trajectories (including at cross-roads)
- Crowd analysis (pedestrian flow management, crowdedness analysis)
- Detection of certain types of vehicles inside forbidden zones (e.g. motorbikes on sidewalks)
- Wrong ways
- Respect of traffic lights
- Parking slots monitoring

IV. Installation

There are two possible integrations between Wintics Cityvision and Milestone XProtect which requires different installation setup.

1. Integration method 1: retrieving streams from XProtect and sending alerts to XProtect

In this first integration method, data is exchanged between Milestone XProtect and Wintics Cityvision in both directions:

- **Video streams** are flowing from the XProtect server into the Cityvision server
- **Alarm messages** are flowing from the Cityvision server into the XProtect server

Milestone XProtect installation should have ONVIF bridge configured to provide RTSP stream for Cityvision.

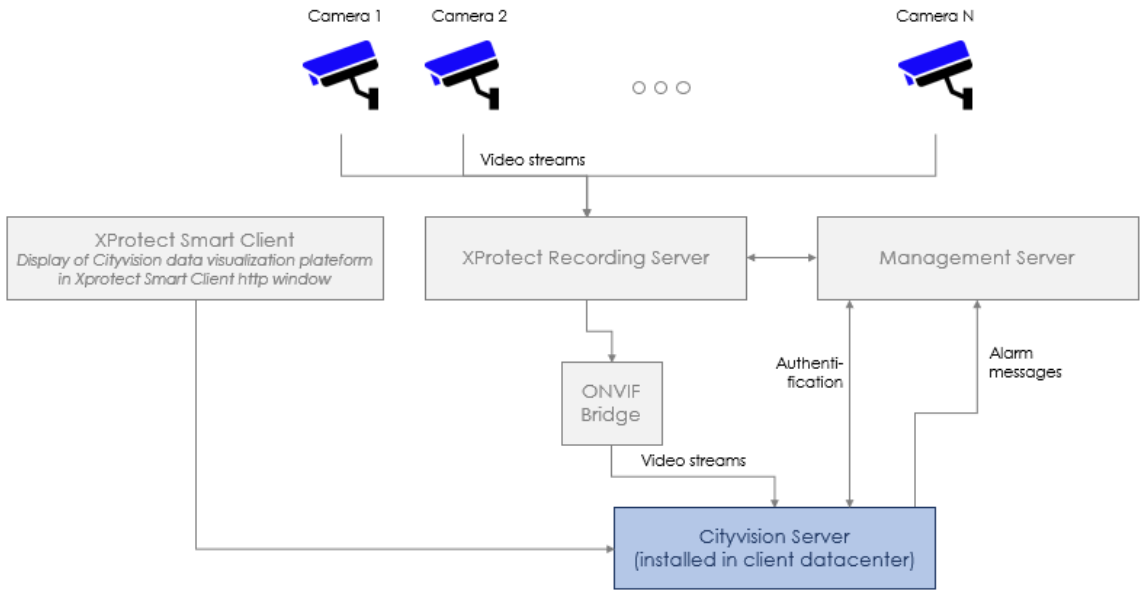
To be able to create Cityvision analysis on its video stream, the administrator of the client's XProtect server should create an account for the Wintics Cityvision server. This account should have the permission to access the following services:

- Management service
- Alarm service
- Event service
- ONVIF (access to recording server)

Once this configuration is completed, the client can autonomously retrieve the video stream of its different cameras in Cityvision and is then able to create his analysis (which will generate statistics and alarms). To do so, he will;

- Draw the zones of interest and (optionally) choose the relevant trajectories between the zones
- Choose the events whose occurrence will trigger an alarm (e.g. counting of a certain type of mobility in a zone)

The synoptic of Cityvision vs XProtect integration is presented below.



- Figure 2 -
Integration synoptic (method 1)

2. Integration method 2: sending alerts to XProtect only (not retrieving streams from XProtect)

In this second integration method, Wintics Cityvision retrieves video streams directly from the cameras (via RTSP protocol). This option is relevant in the case of on-edge deployment of Cityvision when our software is hosted in a micro-PC directly connected to the camera via Ethernet cable (i.e. deployment at street level and not within a server located in city datacenter).

This micro-PC hosting Cityvision can then send alarm messages to Milestone XProtect.

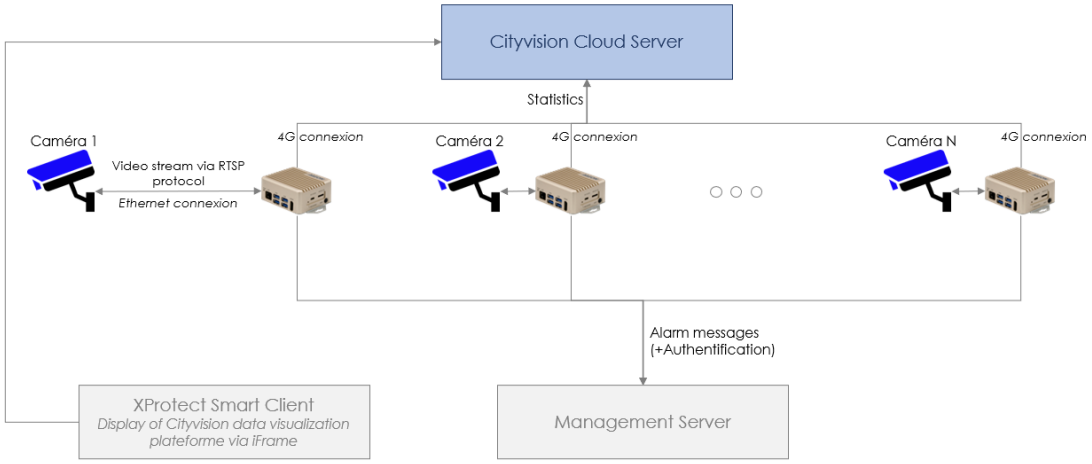
In this case, the analysis produced by Cityvision is generally created by Wintics operators for our clients. Those analysis can both generate:

- Statistics (sent to Wintics' servers which are hosted in the cloud) and then visible on our data visualization platform vision.wintics.com (which can be included in XProtect Smart Client via iFrame objects)
- Alarms sent to Milestone XProtect

In this method, the administrator of XProtect server should create an account for the Wintics Cityvision micro-PCs so that they can send the alarms to XProtect. This account should have the permissions to access the following services:

- Management service
- Alarm service
- Event service

The synoptic of Cityvision vs XProtect integration is presented below.



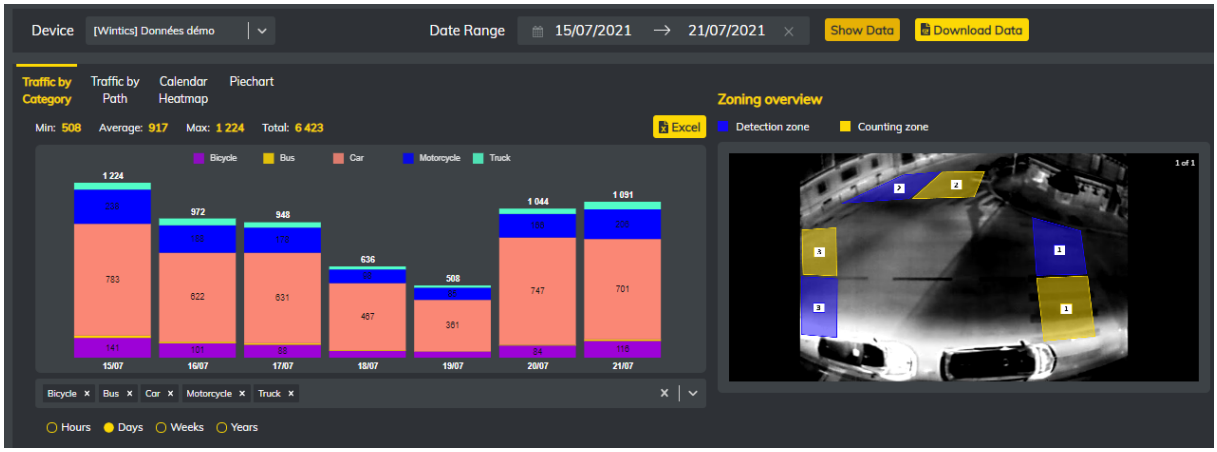
- Figure 3 -
Integration synoptic (method 2)

V. Daily use of the integrated solution

1. Visualizing statistics generated with Cityvision

In the XProtect Smart Client interface user can configure HTTP window (iFrame) to connect to the CityVision platform (https://vision.wintics.com) and to see detailed statistics about detections and counts.

A screenshot of Wintics Cityvision platform is presented below. The user can filter statistics based on different parameters: vehicles categories, time frame, trajectories, etc.

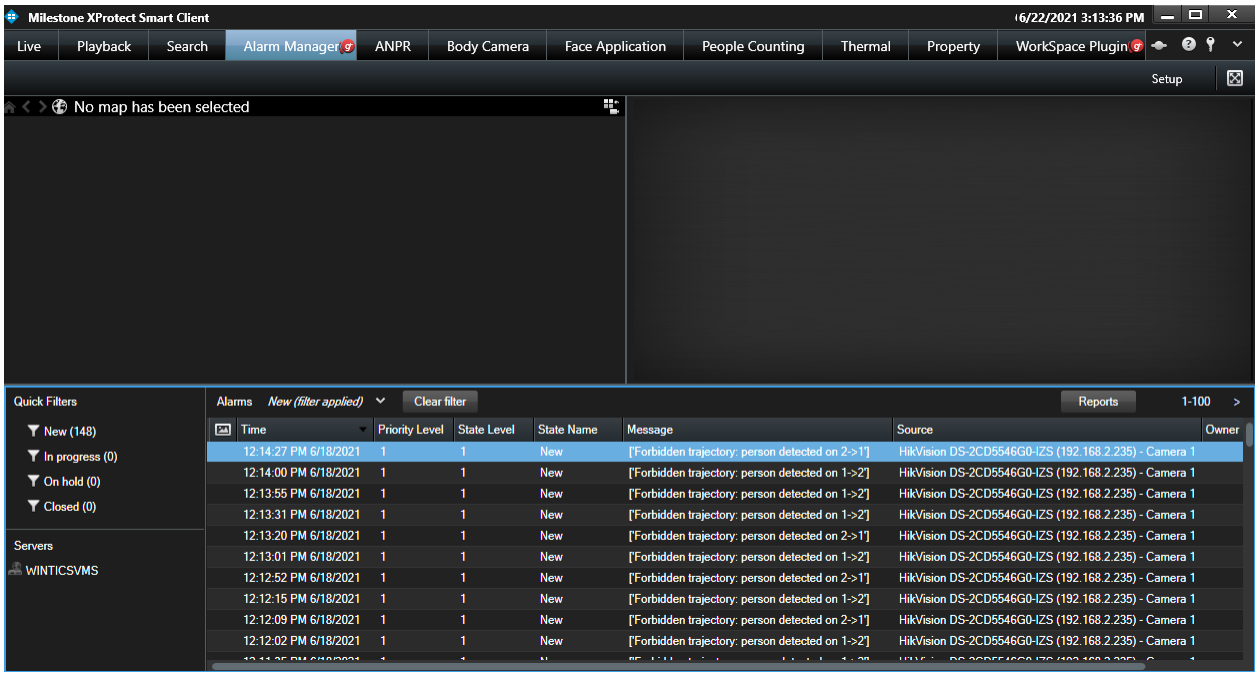


- Figure 4 -
Screenshot of Cityvision statistics dashboard panel

2. Visualize alarm messages triggered from Cityvision

User can see all the alarm messages in the Alarm Manager section of Milestone XProtect:

- The Message field describes the reason behind the alarm.
- The Source field leads to the analyzed camera stream where the trigger event was detected.



- Figure 5 -
Screenshot of Milestone XProtect fed with alarms triggered by Cityvision