Honeywell Camera
Installation Guide

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1. INTRODUCTION

This document is intended to provide a full installation guide of Honeywell Camera and its integration with Milestone XProtect.

For this purpose, Onvif Device Manager (ODM) is installed and used as a tool to read all the detected events from Honeywell camera, save them into SQL database, and in turn pushing these metadata into Milestone Smart Client.

Honeywell LPR Main Features

- On-board ANPR camera
- Fully integrated with all Milestone XProtect versions
- View Live Detection from the Camera
- Filter through LPR history based on various criteria
- One click data Excel/PDF Export
- Alarm Hotlist capabilities
- Auto data retention period handling

2. GETTING STARTED

2.1. System Requirements

• Windows OS 8 or above

• SQL Server 2012 or above

• Onvif Device Manager v2.2.250 or above

• Milestone XProtect Management Client (2016 or above)

• Milestone XProtect Smart Client (2016 or above)

2.2. System Introduction

The server part of the system consists of 2 main components: Management and LPR servers. Each LPR system contains only one Management server, and one or more LPR servers, depending on the project size and the system's distributed architecture. Both processes can be installed and ran on the same server, but each with its own configuration. The machine has to be licensed first before doing anything on the LPR system after the installation.

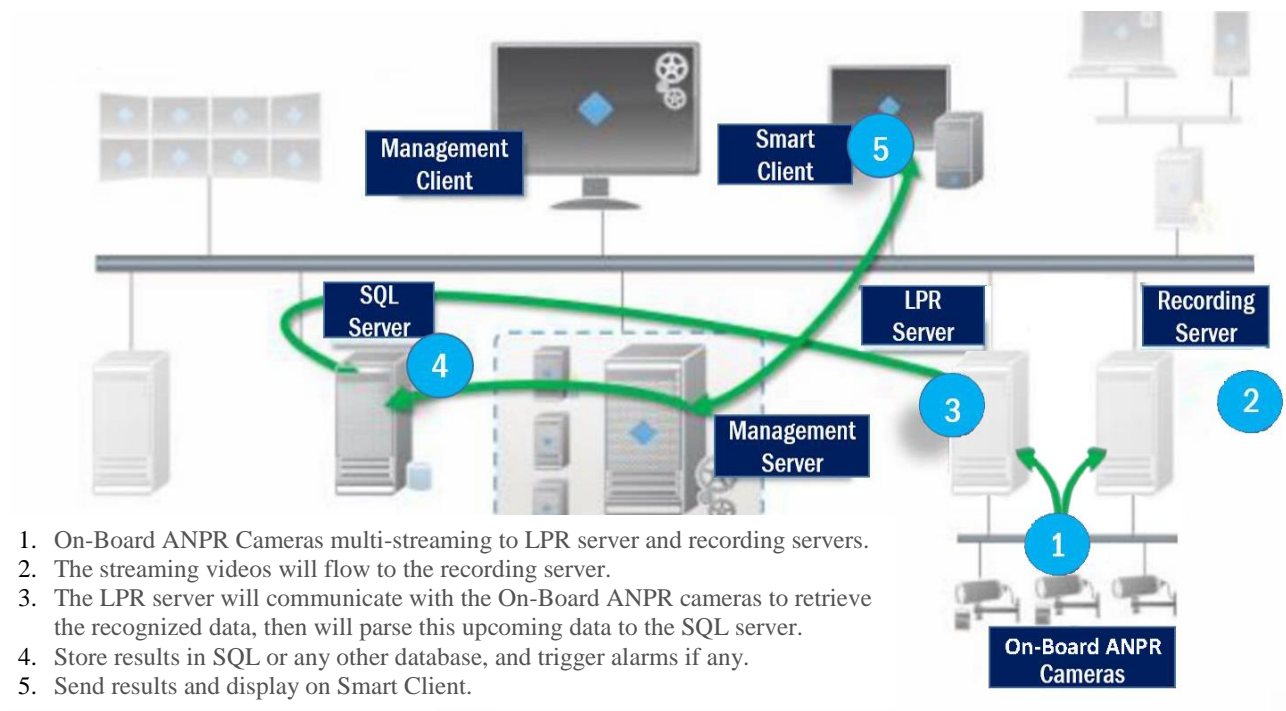Below is a figure describing the architecture of the system.

1. On-Board ANPR Cameras multi-streaming to LPR server and recording servers.
2. The streaming videos will flow to the recording server.
3. The LPR server will communicate with the On-Board ANPR cameras to retrieve the recognized data, then will parse this upcoming data to the SQL server.
4. Store results in SQL or any other database, and trigger alarms if any.
5. Send results and display on Smart Client.

FIGURE 1: 6SS LPR EDGE BASE ARCHITECTURE

3. INSTALLATION OF ONVIF DEVICE MANAGER

3.1. Onvif Device Manager Setup

Download onvifdm.msi setup-file using the following link (http://sourceforge.net/projects/onvifdm/).

Right-click odm-v2.2.250 → Click Install → Run onvifdm.msi.
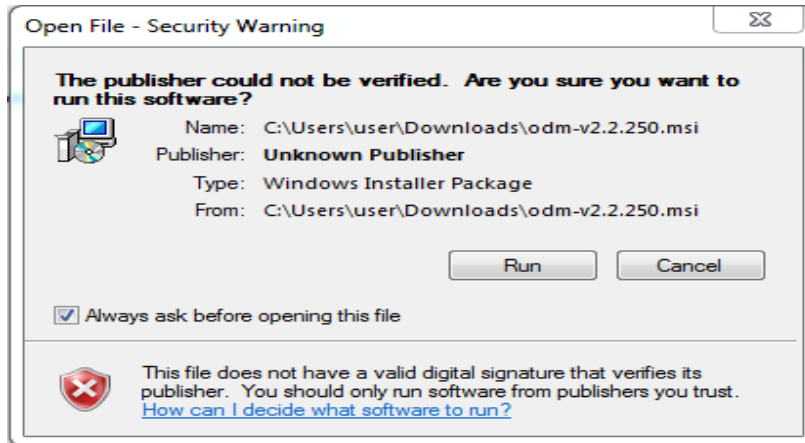

FIGURE 2: RUN WIZARD

Setup Wizard will check if Microsoft .NET Framework 4 is installed on the computer, if not click "Yes" to install it.
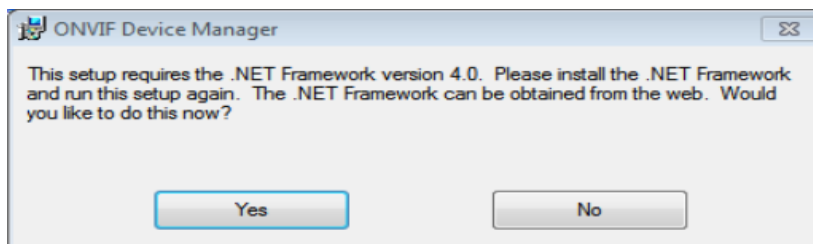

FIGURE 3: MISSING .NET FRAMEWORK

Windows User Account Control may ask for permission, click yes to continue with the installation.

FIGURE 4: ONVIF DEVICE MANAGER SETUP

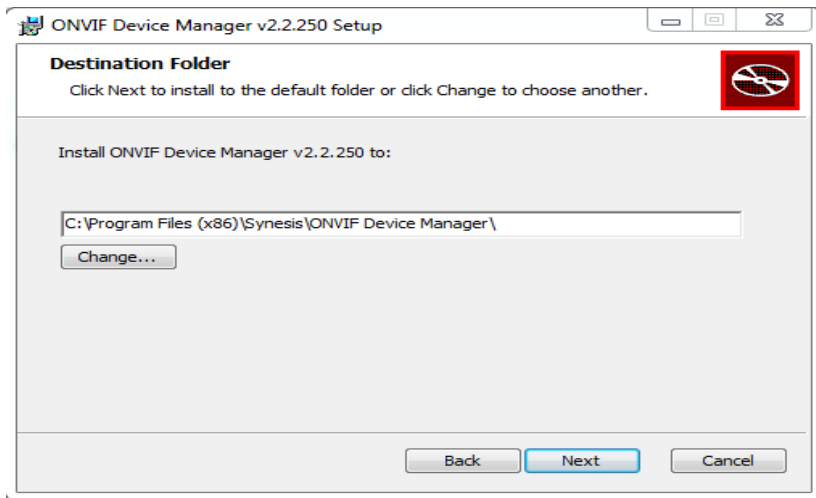Choose the destination folder and click Next, then choose Install to start the installation.
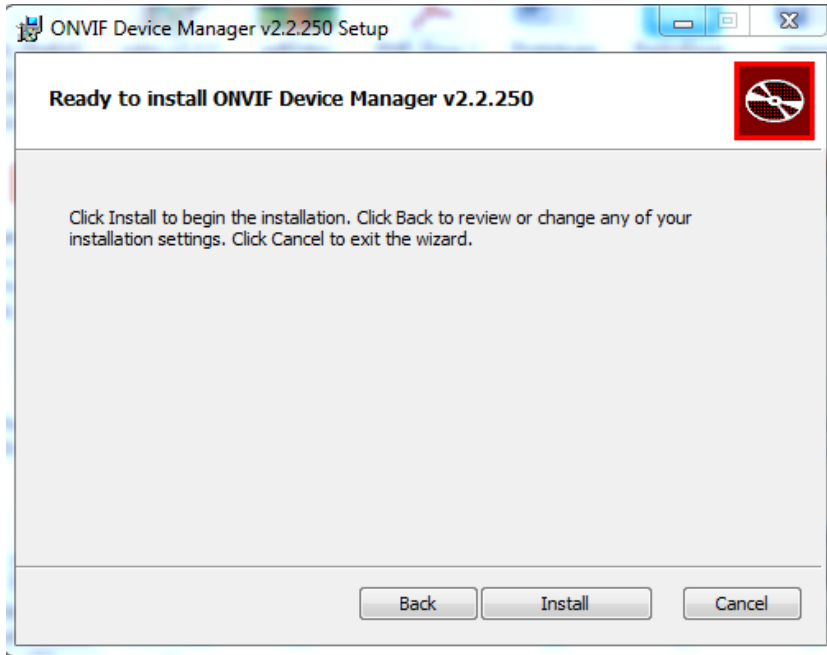

FIGURE 5: DESTINATION FOLDER

FIGURE 6: INSTALLATION BUTTON

To complete the ONVIF Device Manager Installation process,

3.2.   Starting Onvif Device Manager

Launch ONVIF Device Manager from the desktop or via the Start menu.

During the first launch, Windows Firewall may ask for permission to open access to the network for onvifdm.exe as shown in Figure 7, click "Allow access".
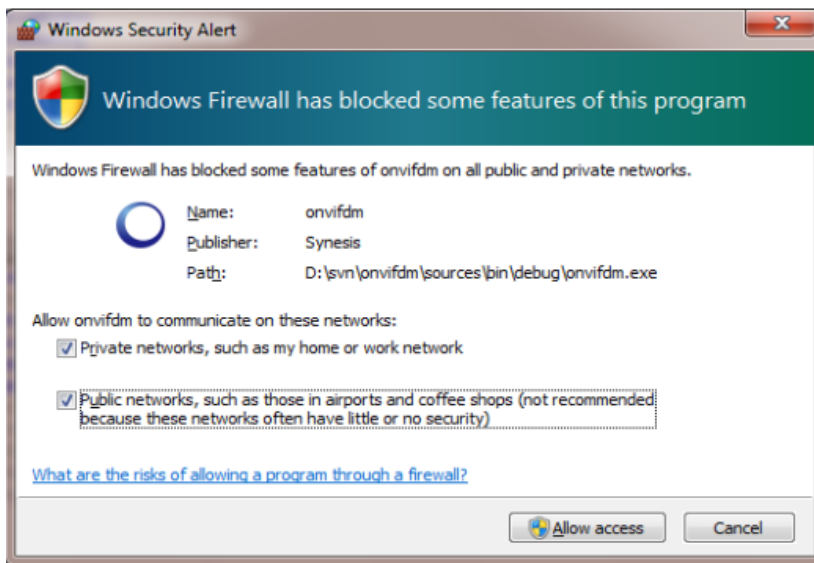

FIGURE 7: WINDOWS FIREWALL ALERT

After ONVIF Device Manager has been launched, the Honeywell camera is automatically detected and displayed in the device list on the left. If the device has not been detected automatically, check the connection and click Refresh as shown in Figure 8.

FIGURE 8: ONVIF DEVICE LIST

4. HONEYWELL INTEGRATION WITH MILESTONE

4.1. Setup Wizard

Unzip the Release folder and open to run the setup wizard for the LPR plugin.
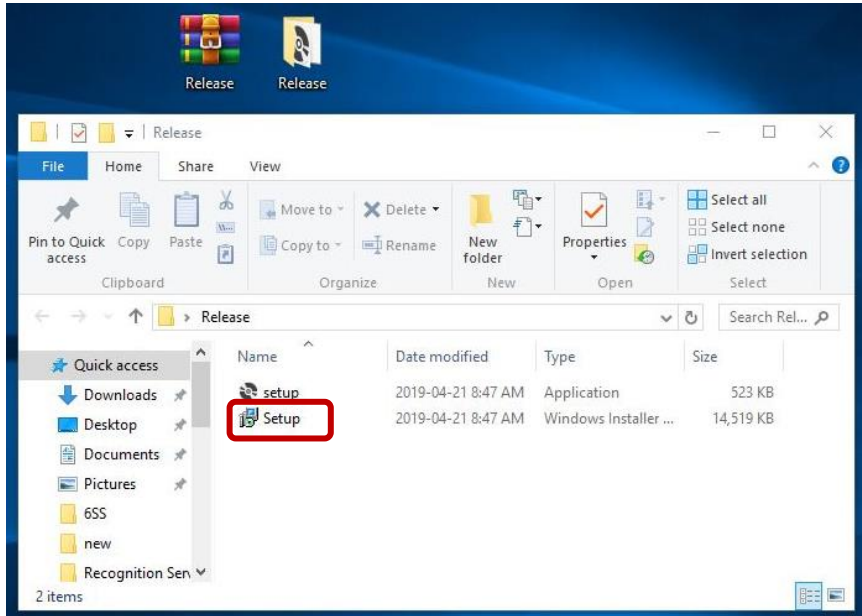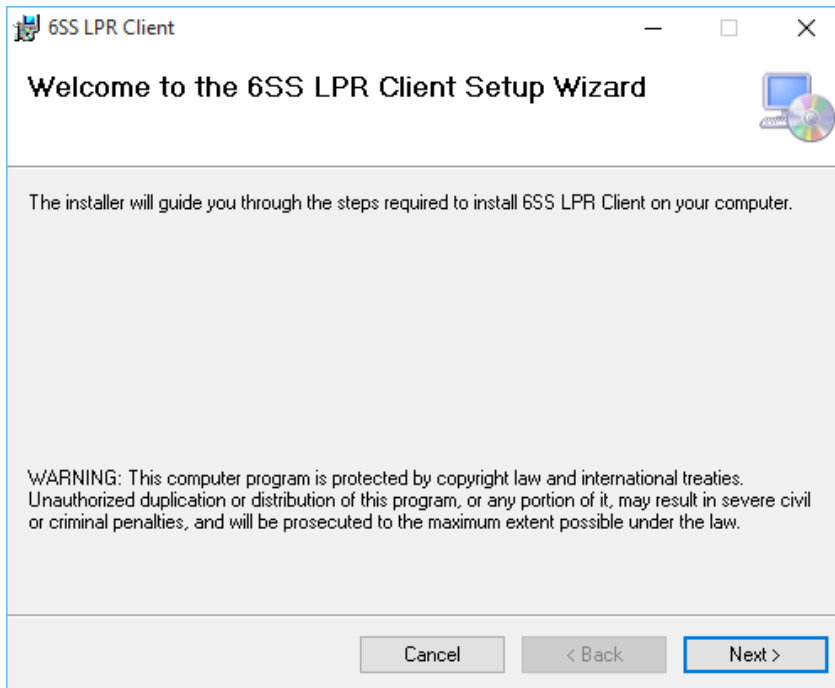

FIGURE 9: LPR PLUGIN SETUP FOLDER

FIGURE 10: LPR SETUP WIZARD

Choose the path to where the LPR plugin folder will be created as shown in **Figure 11**. Click next to continue and the setup will be installed as shown in **Figure 12**.
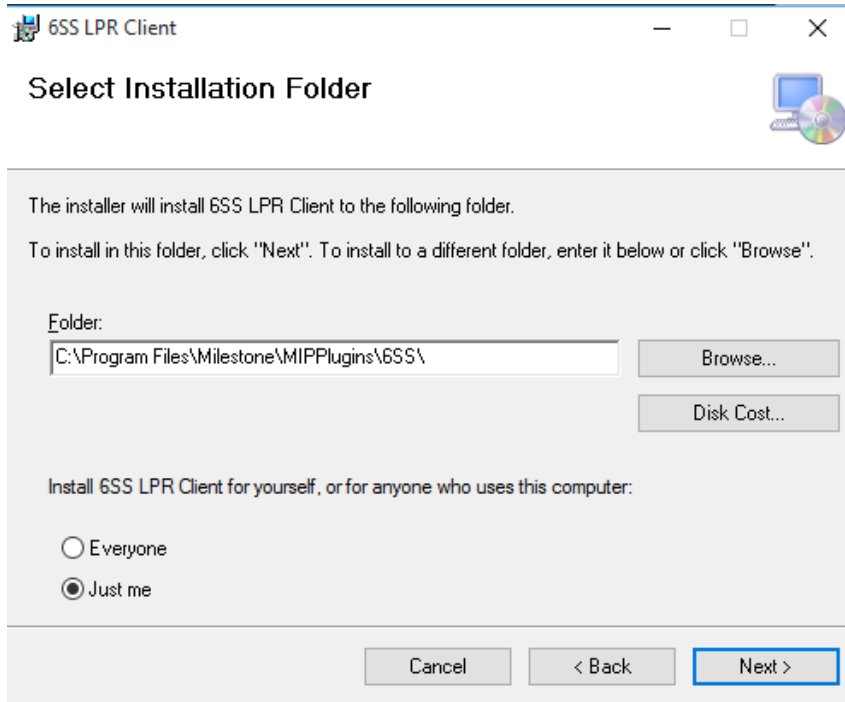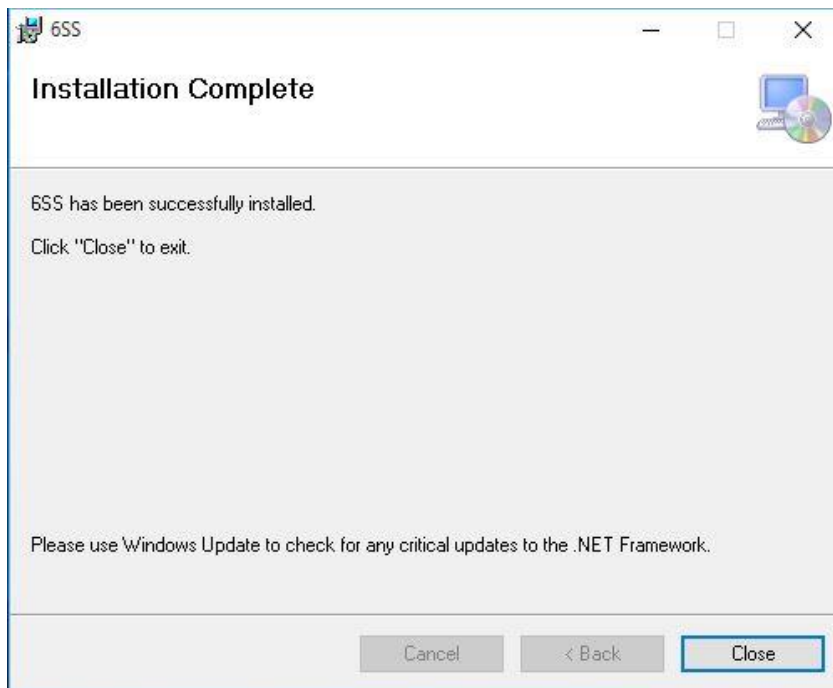

FIGURE 11: 6SS LPR CLIENT INSTALLATION FOLDER

FIGURE 12: 6SS LPR CLIENT INSTALLATION SETUP

4.2. Management Client Interface

Open Milestone XProtect Management Client then click "HONEYWELL LPR" under MIP Plugins as shown in Figure 13.**Error! Reference source not found.**

In the first tab enter the server name or IP address in case the SQL Server is installed on a different device otherwise you can keep it blank (local host).
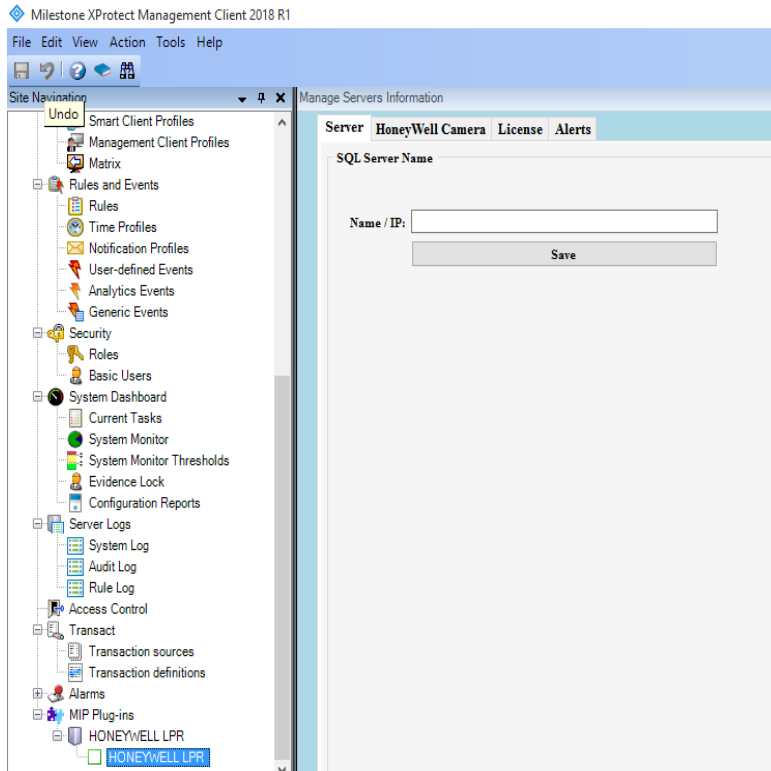

FIGURE 13: HONEYWELL LPR- SQL SERVER

Then, you need to specify Honeywell camera settings for first time use by entering the camera IP address and port number, click "Set Connection Info" to save your settings.
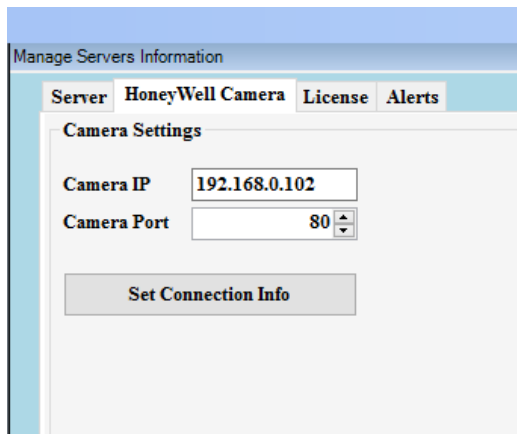

FIGURE 14: HONEYWELL LPR- CAMERA SETTINGS

As for the LPR license, click "Get Computer ID" button and send to info@6ss.co the issued product ID with the number of licenses needed to activate the LPR. Upon receiving the license file, click "Import License" button to import the latter.

Note that for each camera used a license is required. The license is paid once with no expired date, with a yearly optional upgrade (18 % of the license fee for each camera) for any additional features, maintenance, and enhanced versions.
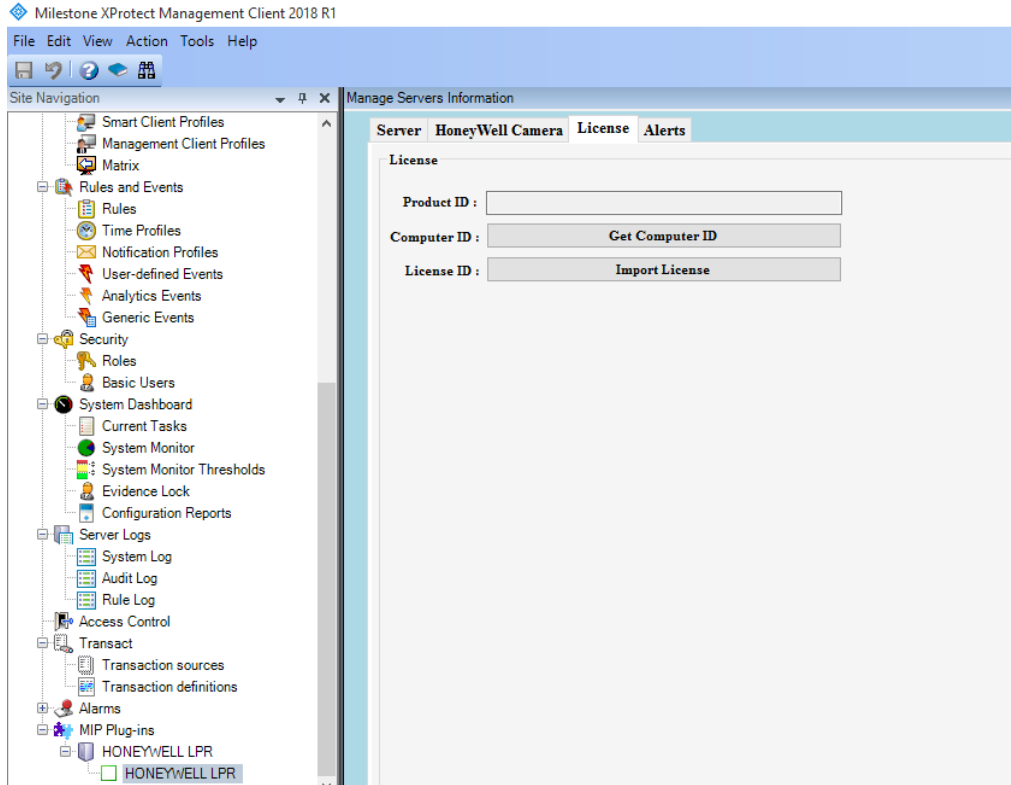

FIGURE 15: HONEYWELL LPR- LICENSE SETTINGS

The last tab is for alerts. Here you can specify the plate number you want to fire an alarm for when detected by the camera, either as a blacklisted or whitelisted. You can also attach an event for this alarm in order to trigger a certain action. Use the button "Add Alert" to activate the alarm.
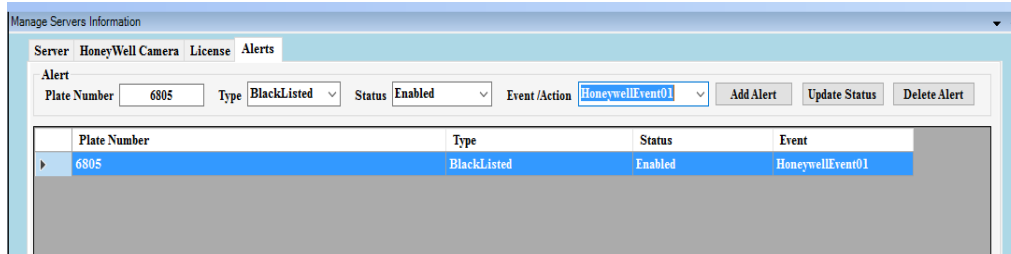

FIGURE 16: HONEYWELL LPR- ALERTS SETTINGS

4.3. Smart Client Interface

Open Milestone XProtect Smart Client. In the live tab select your intended camera as shown in the bottom right corner of Figure 17.

When the camera detects license plate number, the latter will be shown as a snapshot of the plate number in the right panel above the button "Select Camera".
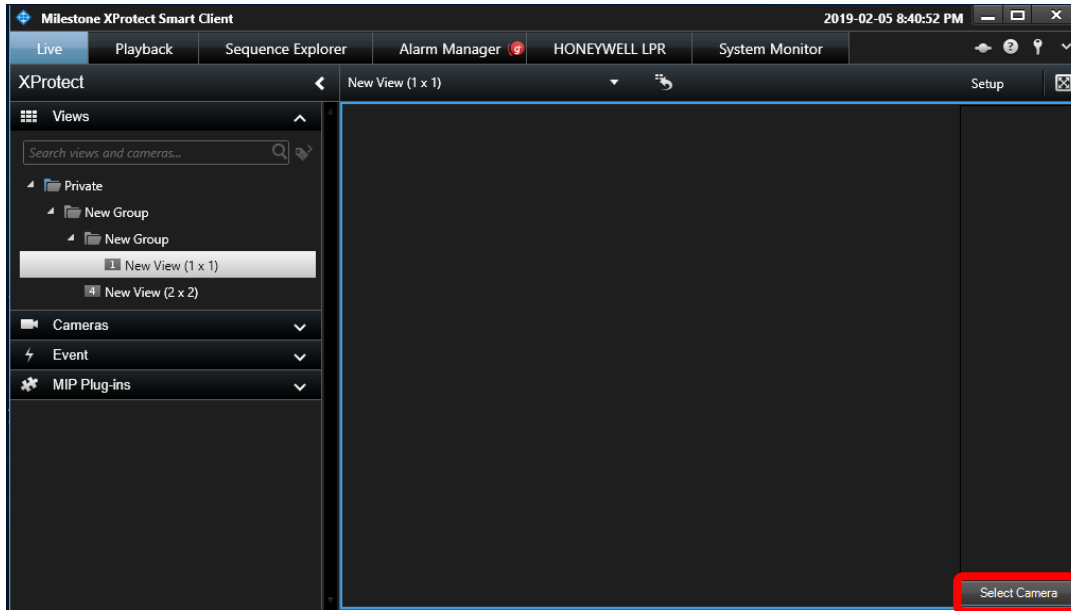

FIGURE 17: MILESTONE LIVE INTERFACE

All the alerts previously defined in the management client are shown in the "Alarm Manager" tab with a red flag indicating the number of alarms fired as shown in Figure 18. If you click on a certain alarm the live and recording videos will be shown along with the alarm's information.
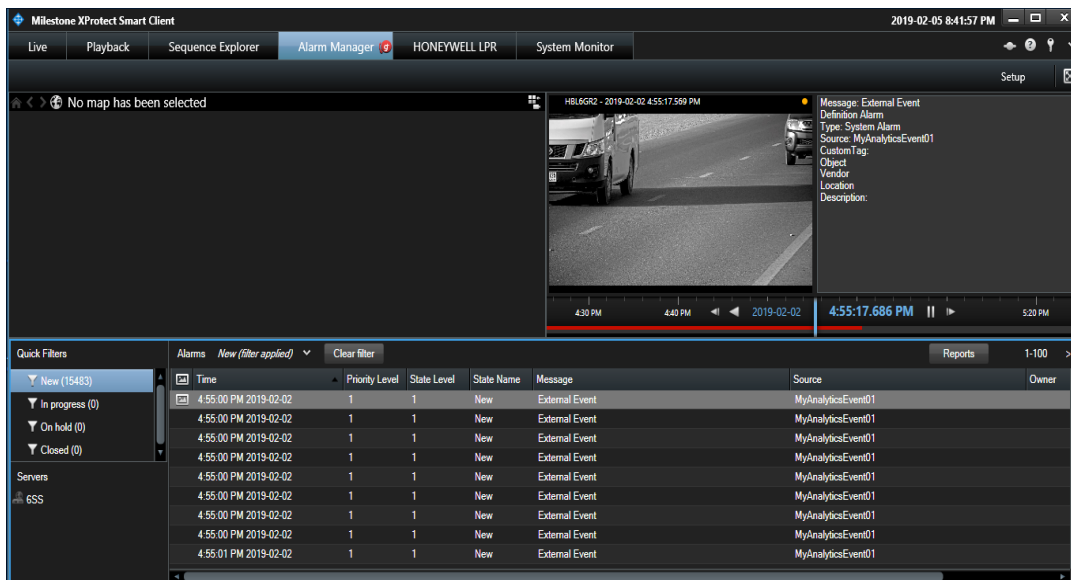

FIGURE 18: MILESTONE ALARM INTERFACE

In the "Honeywell LPR" tab you can check all the LPR events captured by which camera, in which category and country, at what confidence level detected at a certain date along with the plate number and its image. You can use the filters shown in the right panel of Figure 19 as well as to export the listed events to excel file.

When you click on an event line you can use the bottom right video to play back the video frame from the first moment the plate number is captured.
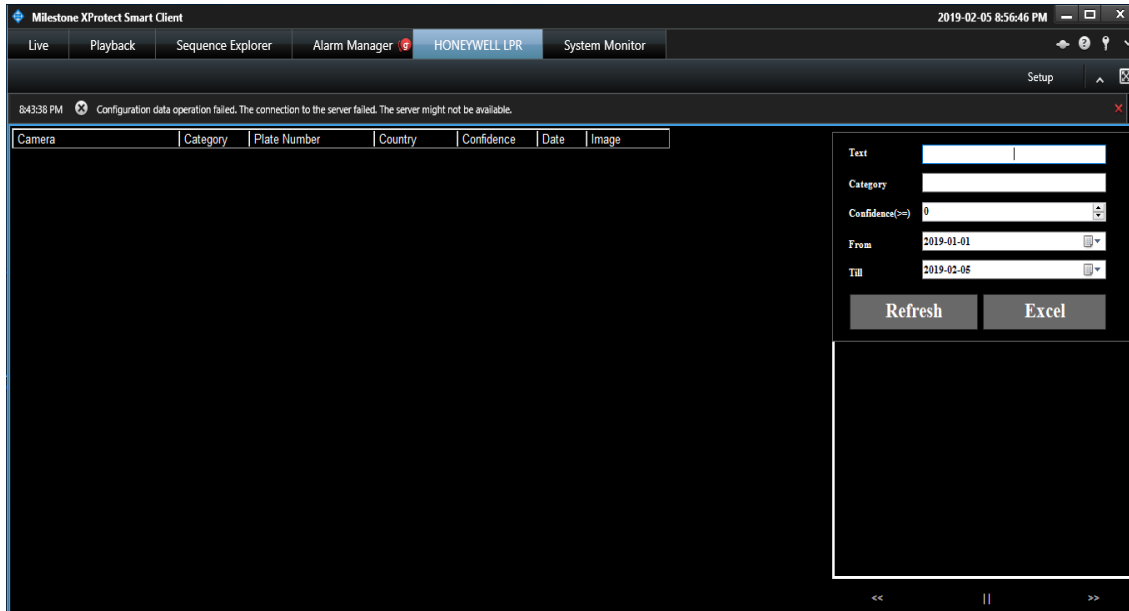

FIGURE 19: MILESTONE HONEYWELL LPR INTERFACE