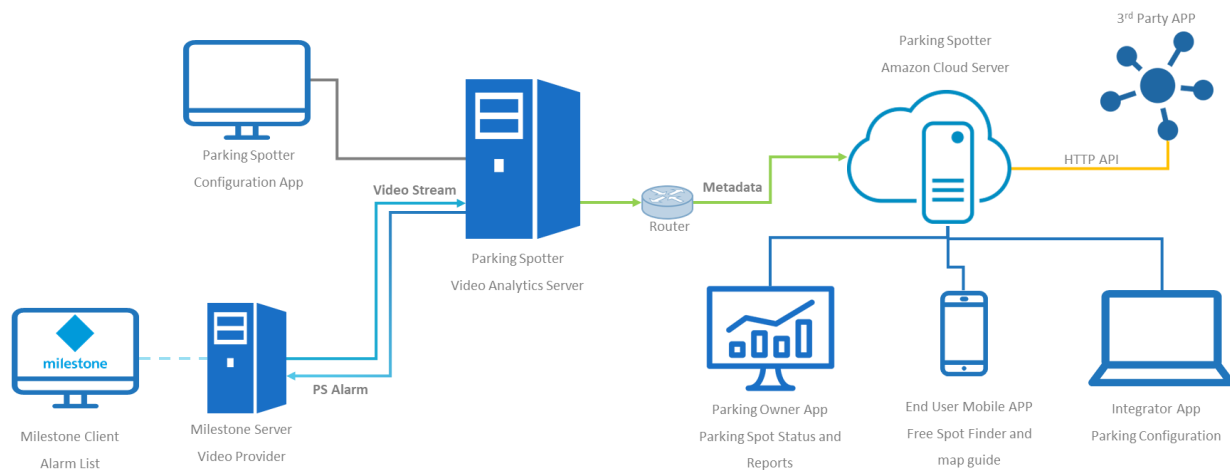parkingspotter

Milestone Integration

Contents

Solution Overview

Parking Spotter Solution offer 2 modules integrated with Milestone:

1. PS Basic. This option gives access to the basic features of Parking Spotter:
   - Image processing from configured cameras
   - Identification of spot status change
   - Access to Mobile App
   - Availability of spots in Mobile App (dedicated for End Users)
   - Identification of the closest parking spot
   - User guidance to selected spot
   - Availability of spots in PS Web Client (dedicated for Parking Owners)
   - BI reports for parking Owner: Parking Occupancy, Average Parking Duration, Arrival Peak time
2. PS Alarm. This is a complementary module for PS Basic and will give access to:
   - Integration with Milestone Alarm Management
   - Live availability of the alarms in Milestone Alarm Management
   - Configuration of Automated Alarms: parking in No Parking Zone, Parking In Bus Stations and so on.
   - Configuration of manual alarms: alarms raised by the Mobile users for: car accident, stolen car inside the parking lot
   - Reports regarding the evolution of the alarms, in Ps Cloud Platform

Parking Spotter is composed from different software modules:

- Video analytics software which is running o local server
- Reporting tool which is running o cloud server
- Mobile application which is running on end user devices

PS Video Analytic Services Installation

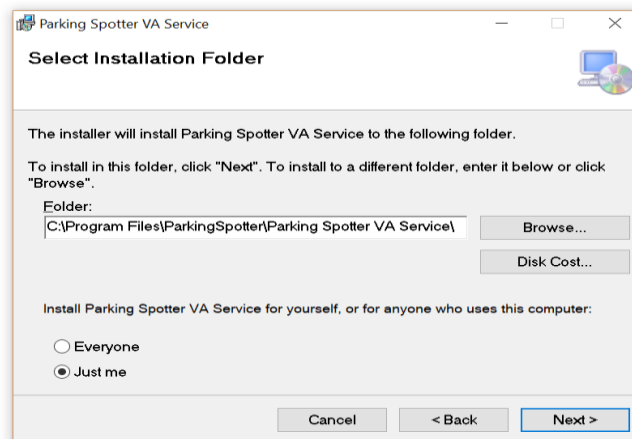For local server you will need the installation kits :

- Microsoft .NET Framework 4.5.2 or a later
- Microsoft SQL Server Compact 4.0
- Parking Spotter Services.msi
- Parking Spotter Setup.msi
- License generated by Parking Spotter Team
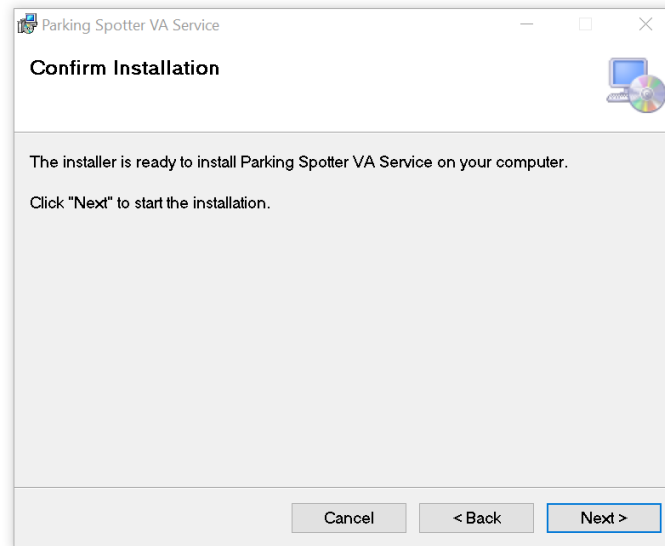
Installation Steps:

1. Run installation on your Parking Spotter Services
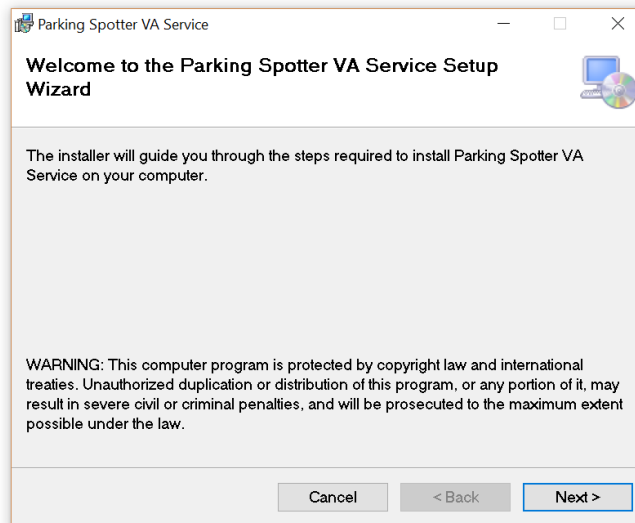
2. Select Installation Folder and click "Next"

3. **Final Step Confirm Installation**

4. **Install** "Parking Spotter Setup".

PS Module

Milestone User

The integrator will need access to the cameras from the parking area so the first thing is to create a windows user and assign those cameras to that user from Milestone.

Parking Spotter Configuration Tool

Step 1 Obtain PS license from your Parking Spotter Account Manage, by completing the "License request Form".

  - Open Parking Spotter Configuration Tool from C:\Program Files\ParkingSpotter\Parking Spotter Tools
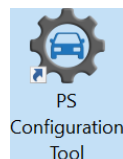
Step 2 – Login in Parking Spotter Configuration Tool by using your Integrator Credential provided by email by Parking Spotter Team.


Step 3 – Add the License file provided by Parking Spotter Team into the Parking Spotter Config Tool in order to be able to configure the Parking Lot and Parking Spots.
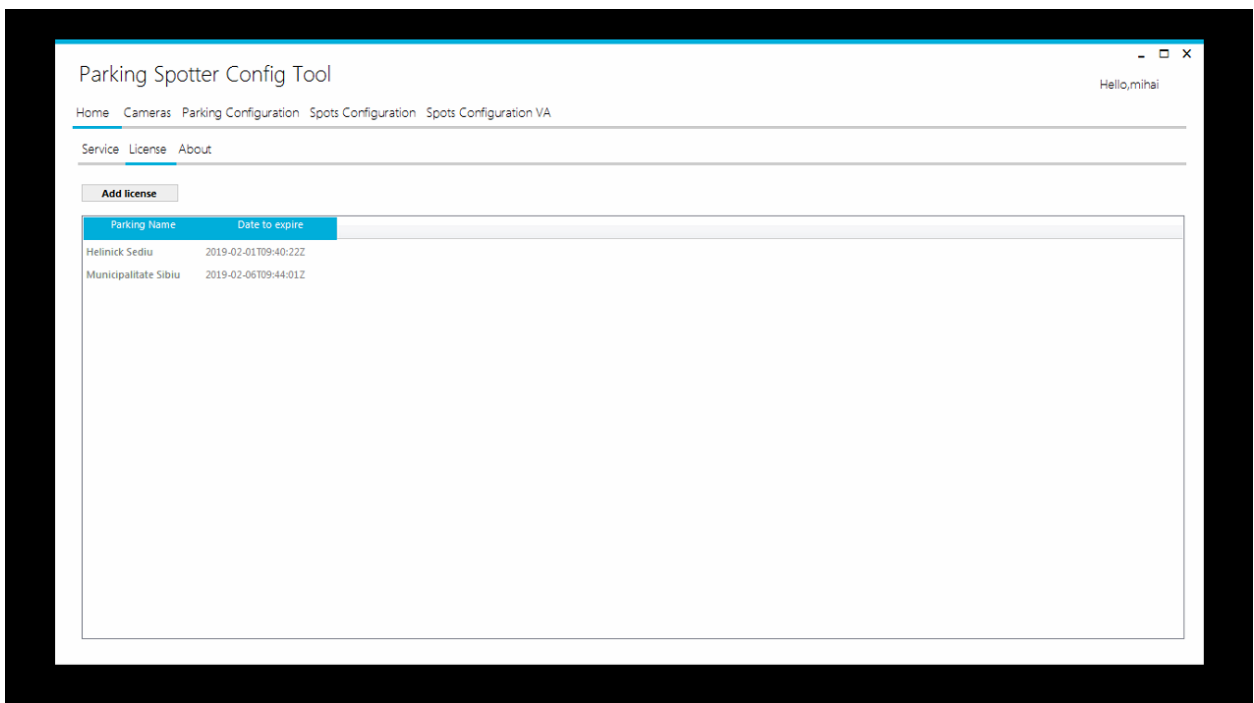
Step 4 – Add to Parking Spotter Config Tool a Milestone Server that is connected to cameras in the Parking lot:

- Press "+" button in the bottom right corner
- Enter Milestone Server IP Address and Milestone Credential and Click "Save"
- Select the added server from Milestone Server List and push "Connect" Button

Note: Please use a windows user from Milestone. eg "<<domain>>/<<user>>"
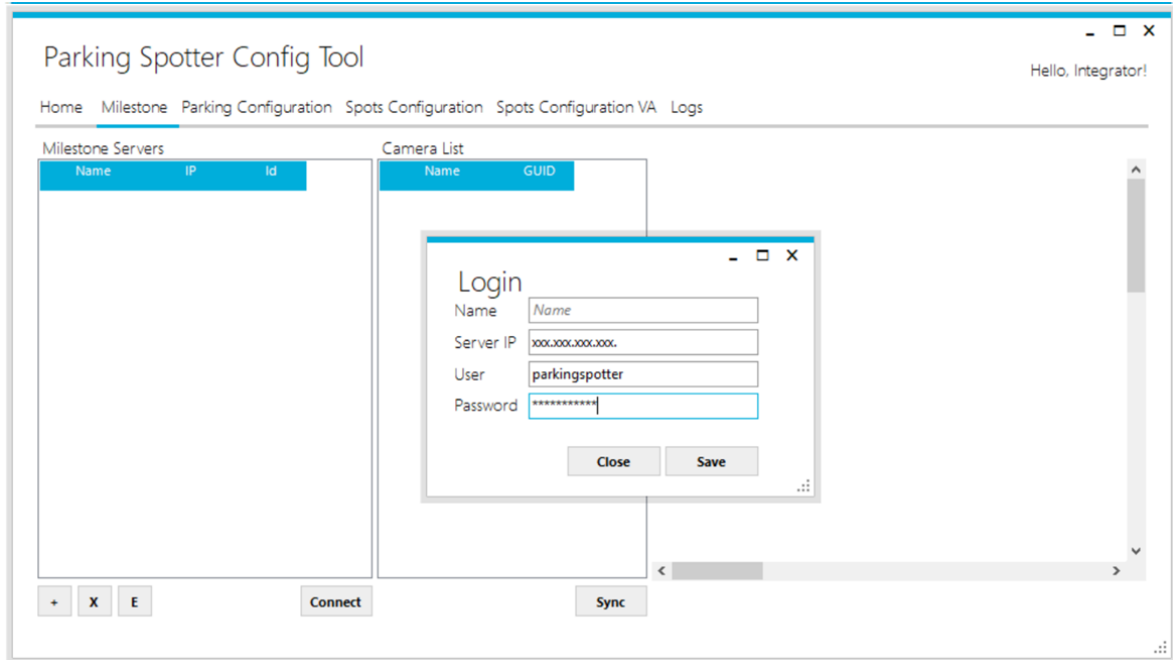
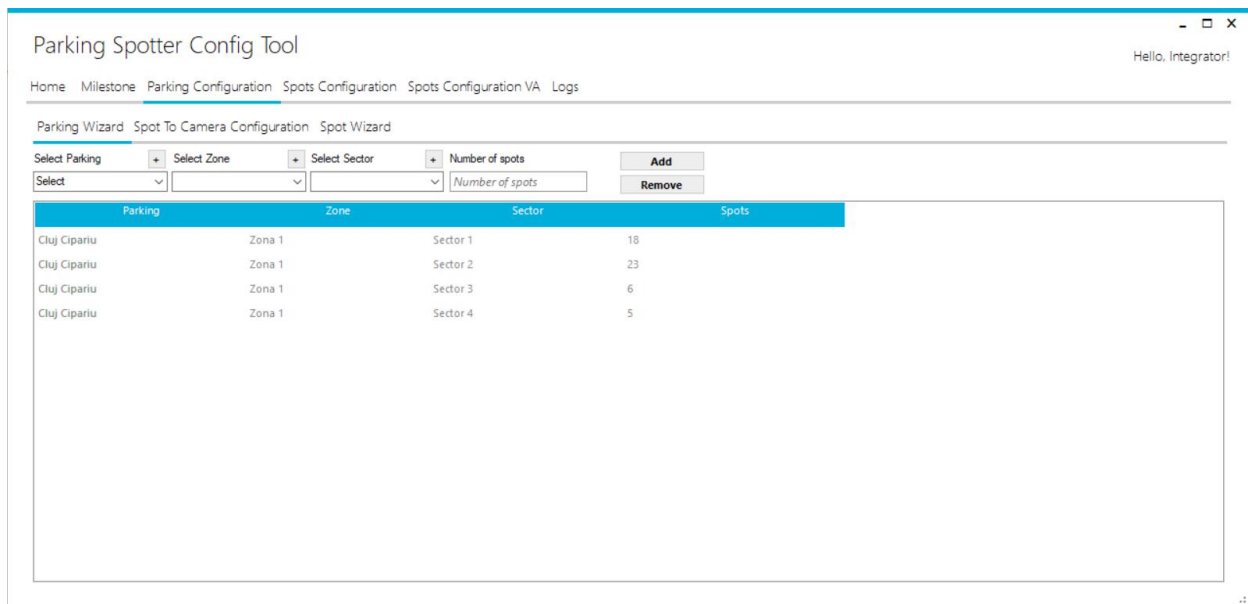Now you are able to see all the cameras connected to the Milestone Server in Camera List.
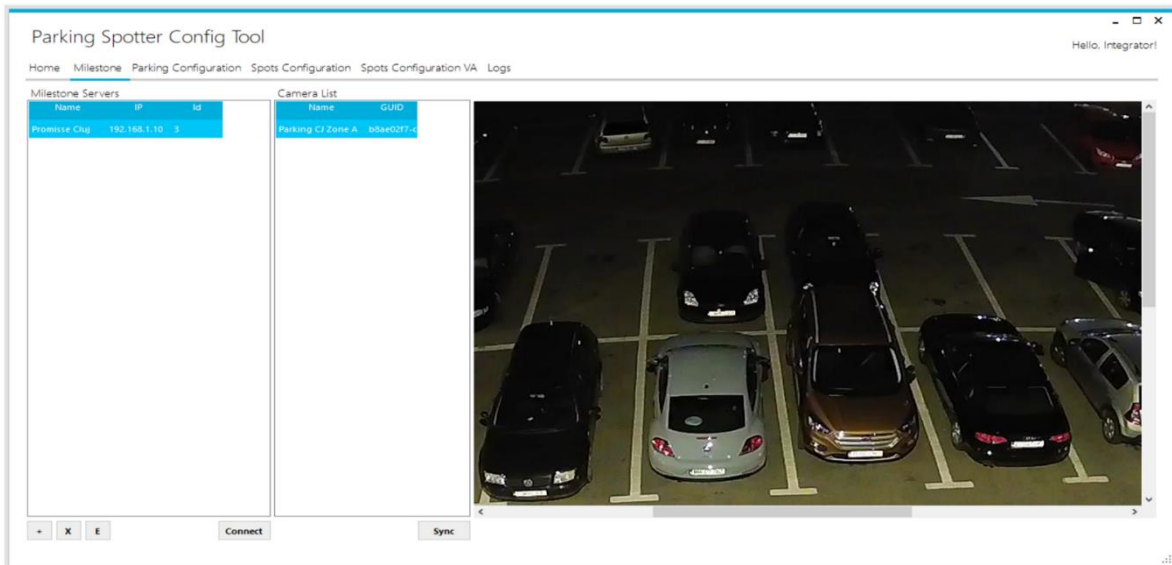
Step 5 . Parking Configuration.

In this Step you will configure the Parking Lot Structure: Parking, Zones, Sectors and Spots.

1. From the Main Menu select "Parking Configuration".
2. In the Submenu select "Parking Wizard".
3. Select parking you want to configure from the dropdown "Select Parking"
4. Create a new Parking Zone in the parking by pushing the "+" button near "Select Zone" and enter the zone name.
5. Create a new Parking Sector in the Parking Zone by pushing the "+" button near "Select Sector" and enter the Sector name.
6. Assign a number of parking spots for the new created Parking Sector in the "Number of Spots" textbox.
7. Click "Add" Button to save the created Parking Sector.
8. If you want to add more sectors to a Parking Zone select the desired Zone from "Select Zone" Dropdown and repeat steps 5- 7.
9. If you want to add more zones to a Parking Lot, select the desired Parking Lot from "Select Parking" dropdown and repeat steps 4-7.

In the end your Parking Lot should look something like the below picture.

Note: "Zone" and "Sector" are required fields.

Step 6. Parking Spot to Camera assignment.

In this step you will assign to a camera, all the parking spots that are in that camera's field of view:

1. Select the "Spot to camera configuration" Submenu
2. Select the Parking, the Zone and the Sector you want to configure from the dropdown lists.
3. In the Unassigned Spot list you will have all the spots that need to be configured, according to the above selection.
4. Select a camera to assign the spots to it, from "Select Camera" dropdown list.

5. Select which spots, from the Unassigned List you want to assign to selected camera and press "->" button between the lists.
6. Repeat Step 4-5 until you have assigned all the spots from selected Sector to cameras.
7. Select another Sector from the "Select Sector" dropdown list and repeat steps 4-6 until you have assigned all the spots to the corresponding cameras.
8. Select another Zone from the "Select Zone" dropdown list and repeat steps 4-7 until you have assigned all the spots to the corresponding cameras.
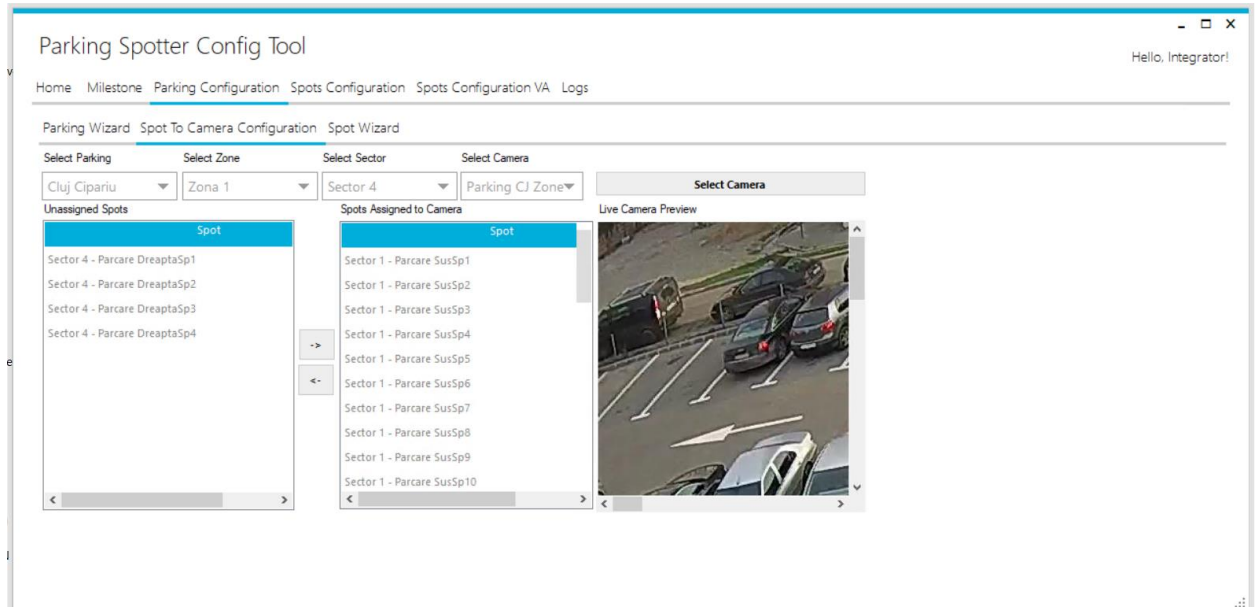
Step 7. Spot Configuration

In this section you will configure each spot by drawing a perimeter line of it, on the camera images:

1. Select "Spot Configuration" in the main menu.
2. Select the Milestone Server an click "Connect"
3. Select the camera you want to configure from "Select Camera" dropdown list.
4. In the list below you will have the spots assigned to that camera in the Step 7 of the present document.
5. Select the spot you want to configure from the list.
6. On the image in the right, draw a line in the lower side of the parking spot, like in the example below. The line will be drawn by clicking the end points. Please be careful that the line shouldn't be "cutting" the car, it should be below the car.
7. In the parking spots list, the spot should change the configuration status to "Yes".
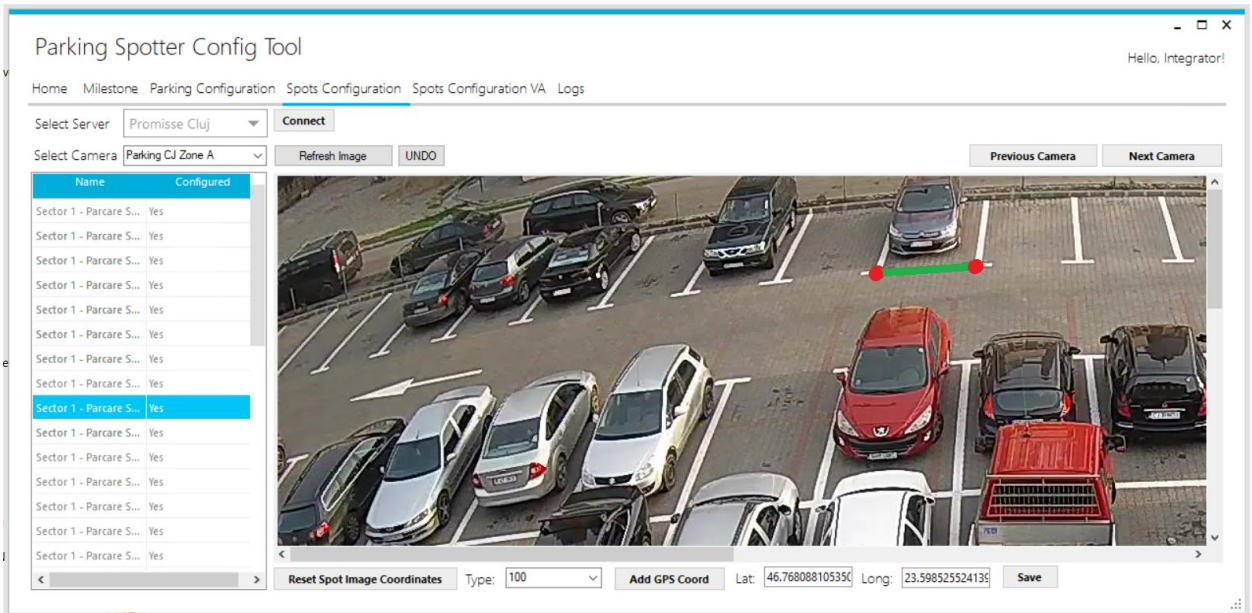
8. In the bottom of the image select the parking spot "Type" :
    a. Normal Spot
    b. Restricted Spot
    c. Fire Spot
9. For "Illegal Spot" and "Fire Spot" you can set up a time after which the spot is declared illegal and it will trigger an alarm. Like in the image below. If you leave the default time, 0 hours and 0 Minutes, the alarm will be triggered immediately.
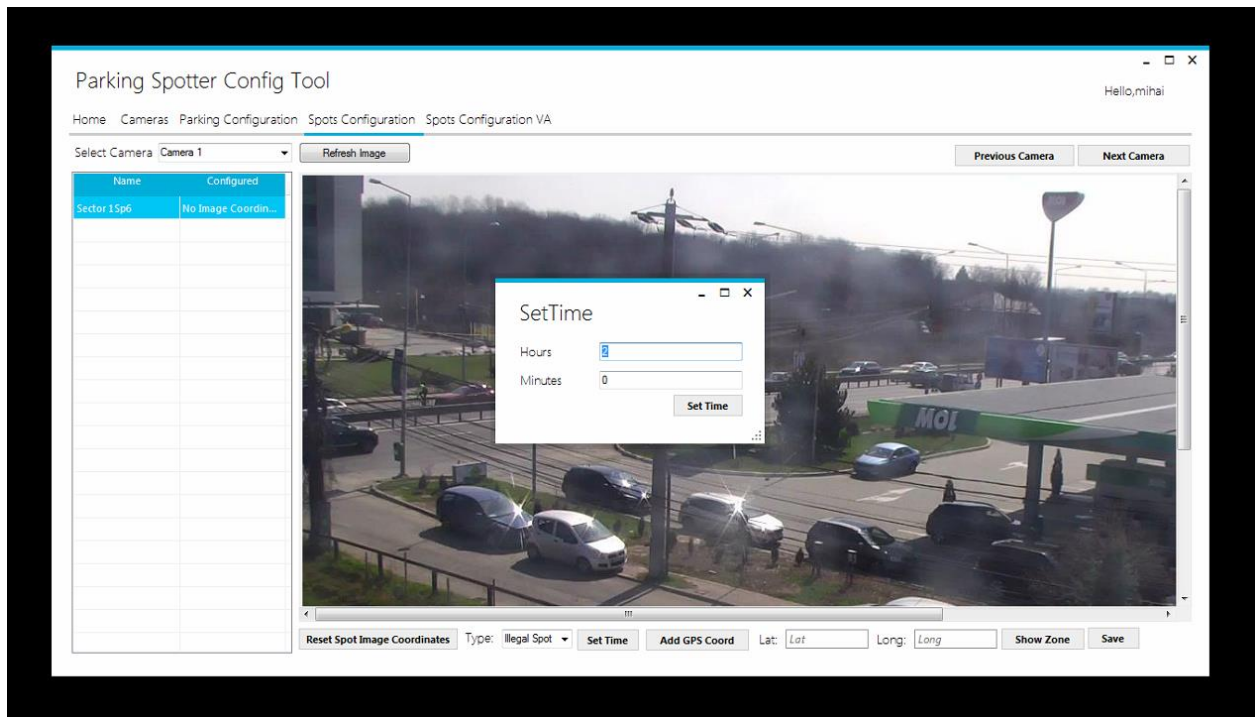
10. Add a GPS coordinate to the parking Spot by pressing "Add GPS Coord" button. For the first spot configuration you will be asked to enter manually the Latitude and Longitude of the spot, in order to calibrate the map in that area.
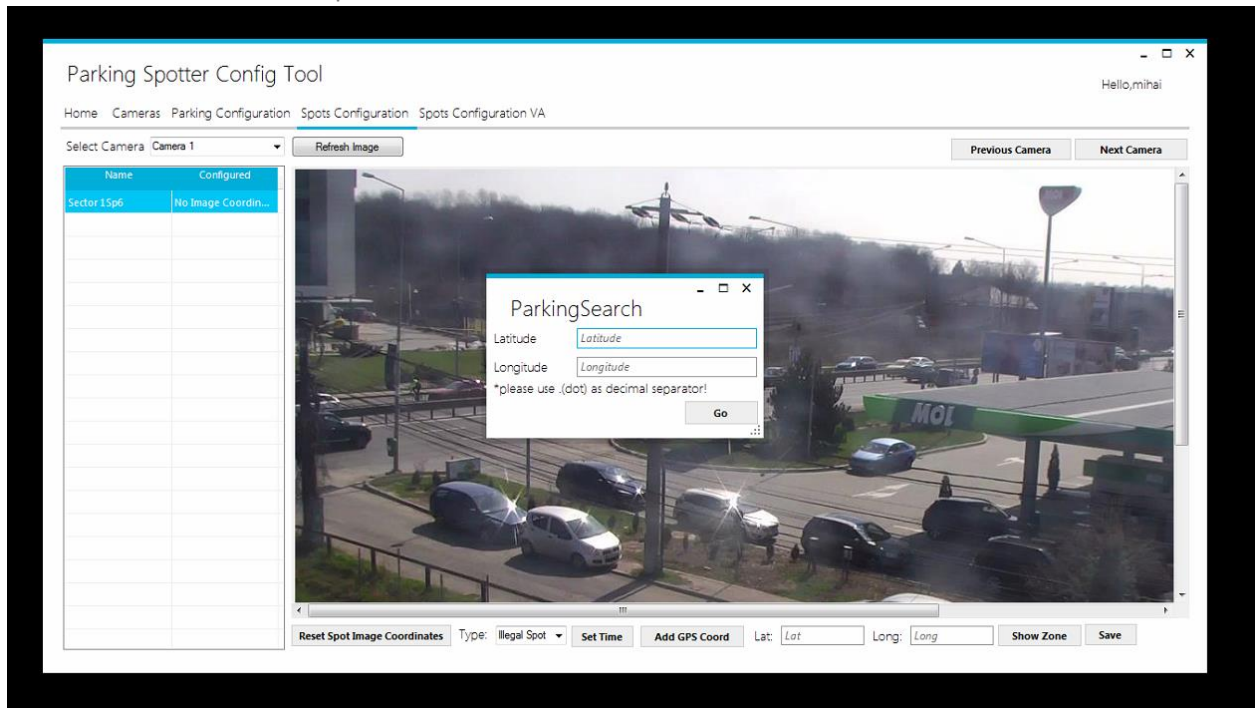
11. A Google Maps based floating window will open, where you need to find the parking spot you are configuring and double click on the map.
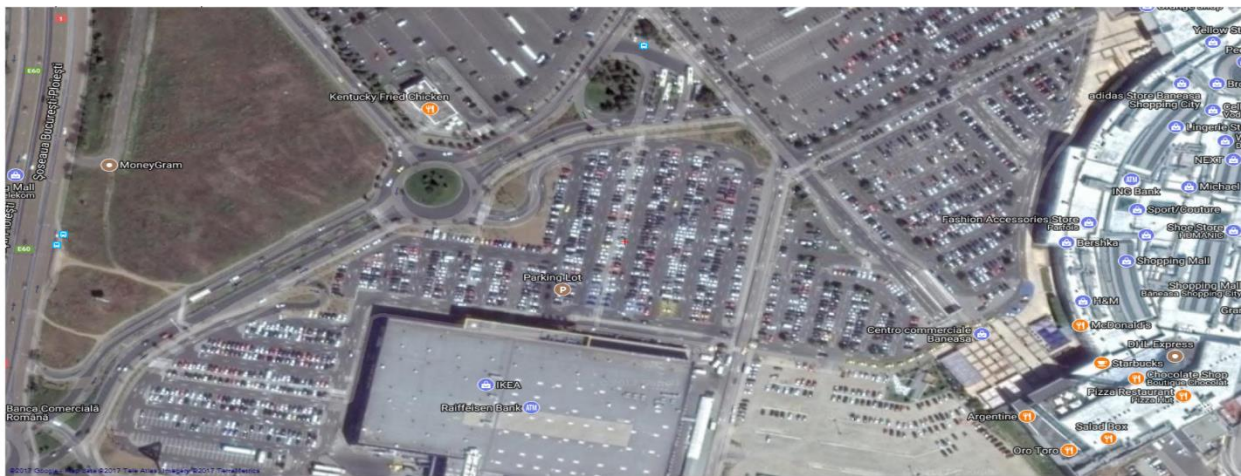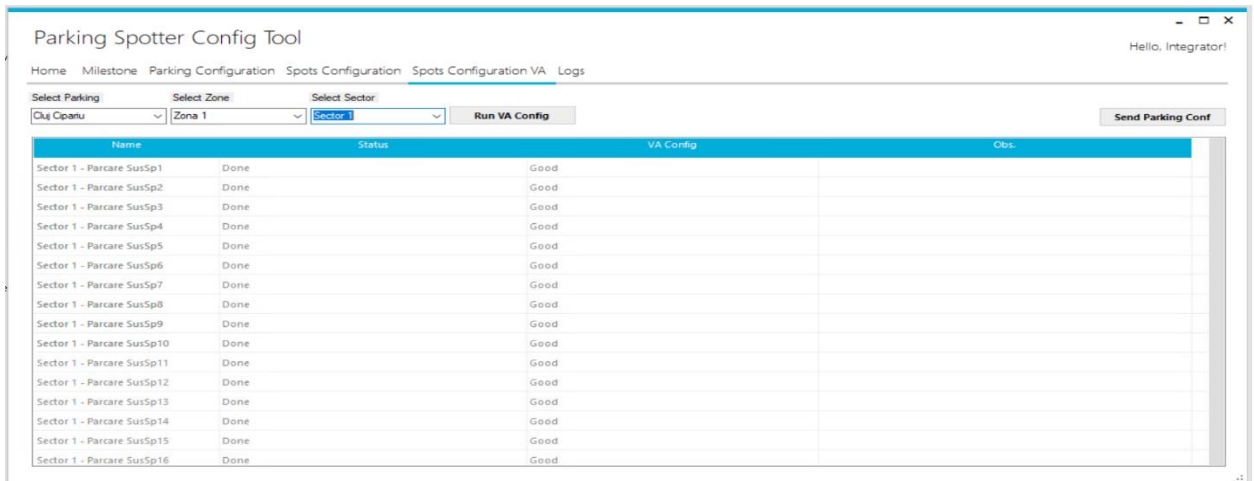
12. Return to configuration window and click "Save" button (bottom right corner).
13. Repeat steps 5-11 for each spot in the list.
14. Repeat steps 3-11 for each camera inside the parking lot.
15. If you have multiple Milestone Servers in the Parking Lot repeat steps 2-11 for each Milestone Server that has cameras from that parking lot, connected to it.

Step 8. Spot Configuration Validation & Upload to Parking Spotter Cloud Platform

In this step you will verify if the configured spots correspond to the minimum pixel requirements 20x20 pixels and will send the configured parking spots to Parking Spotter Cloud platform:

1. In the Main menu select "Spot Configuration VA"
2. Select the Parking, the Zone and the Sector you want to validate from corresponding dropdown lists.
3. Press "Run VA Config" button and wait for the validation.
4. If every spot is configured you will receive status "Done" in the "Status" column.
5. If every spot comply with the minimum pixel requirements you will receive status "Good" in the "Va Config" column, like in the picture below.

6. If all the parking spots are ok, press "Send Parking Conf" and the parking you configured will be sent to Parking Spotter Cloud app.

Step 9. Start Services

Go to „Home" menu, „Service" submenu and click „Start" on the „Analytics Service" and on the „Watchdog Service"

Click on "Refresh Status" to see the services running.
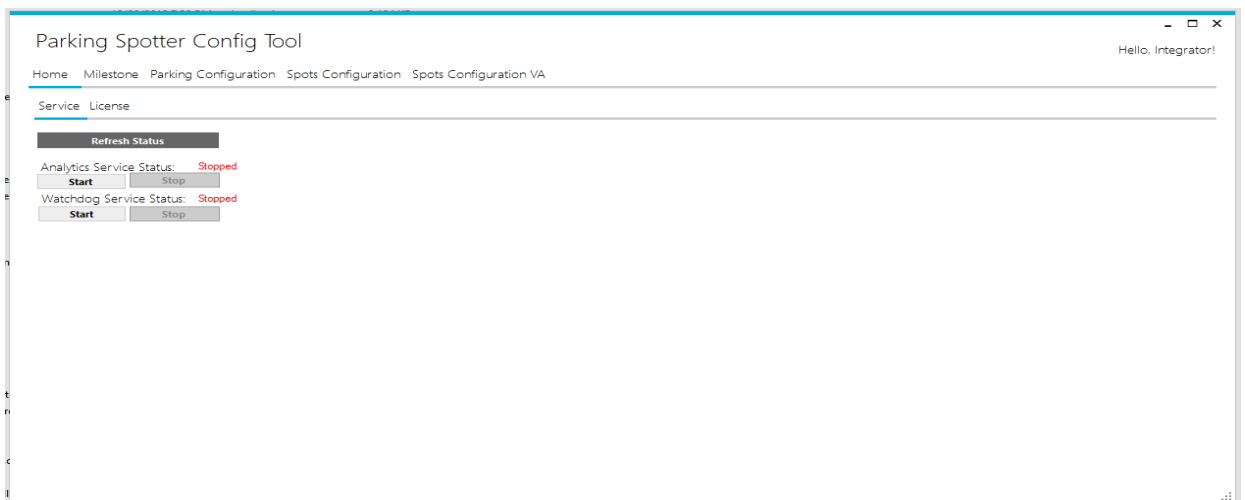
PS Alarm Module

1. **Mobile Alarms.** The alarms received from Mobile App: Accident, Burglary etc

    For the integration with Milestone's alarms, you have to create a new Analytic Event with the name "Parking Spotter Mobile App" in Milestone Management Application like this:
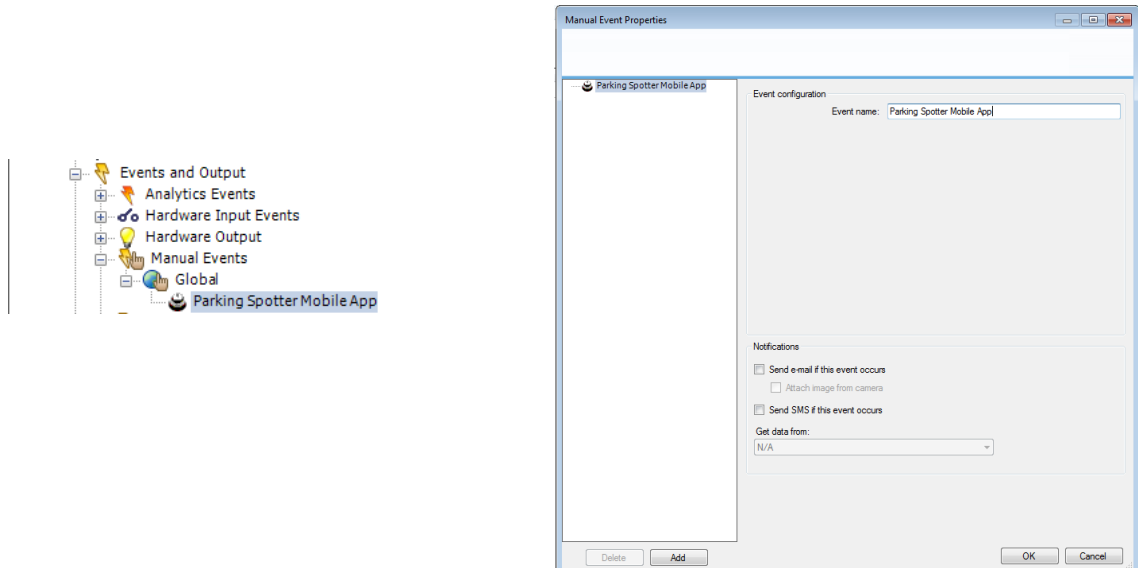

2. **Automatic analytic events.** The events generated from Parking Spotter Services for: car parked on Restricted Area or Fire reserved area.

    For the integration with Milestone's alarms, you have to create a new Analytic Event with the name "PS Fire Lane" for the Fire Spot and a new Analytics event with name "PS Illegal Parking" for Restricted Spot in Milestone Management Application like this:
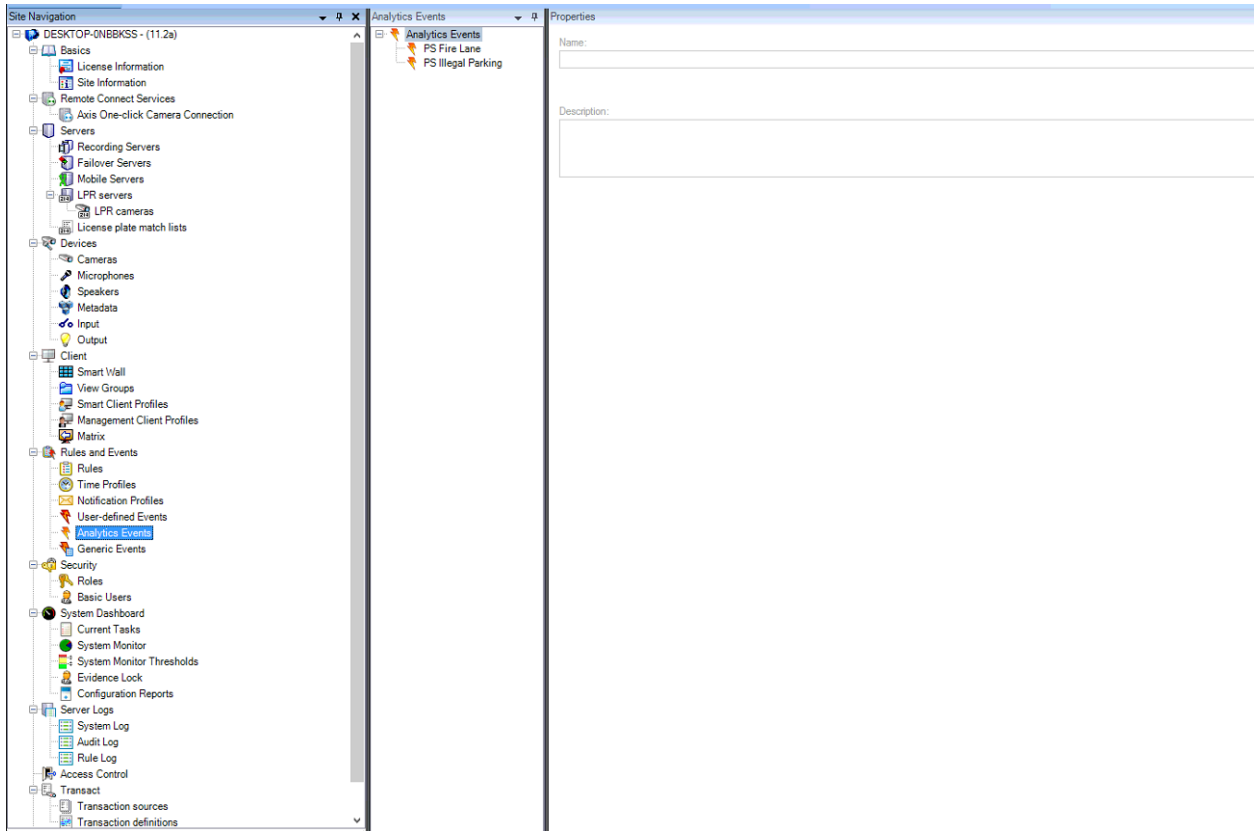
3. Milestone Alarms.

Create Milestone Alarms with the Analytics events and associated cameras as sources.
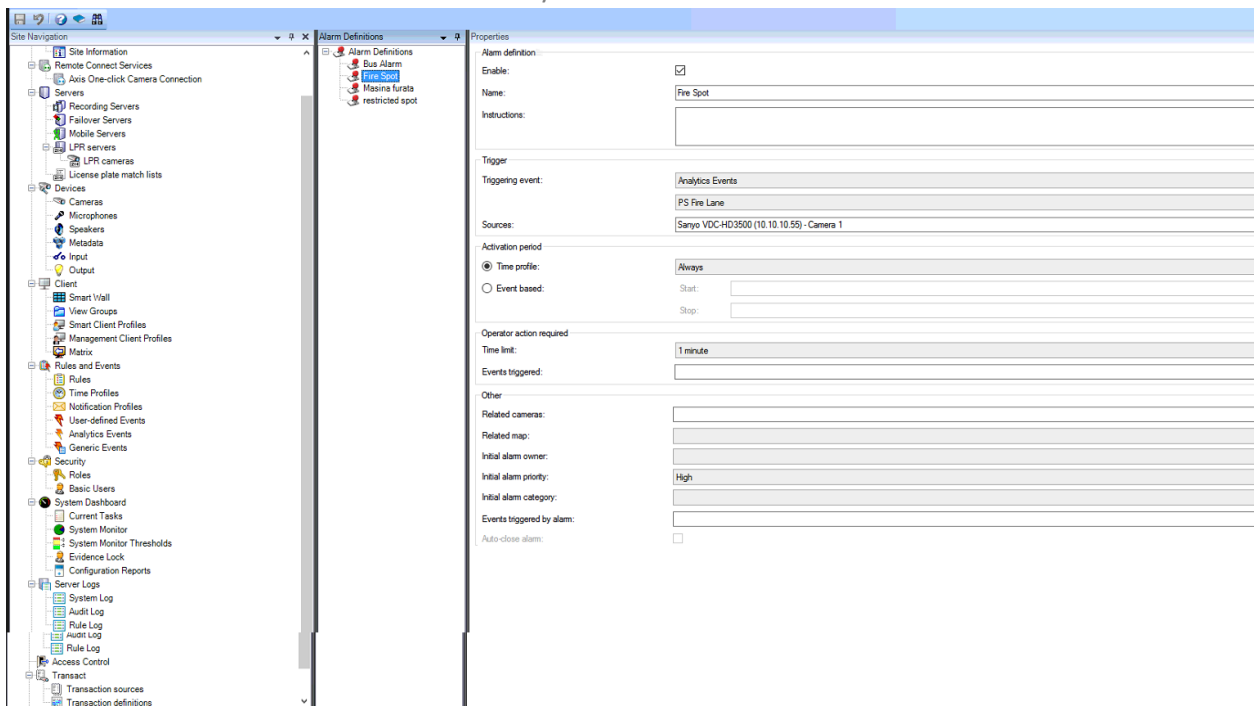
To view Parking Spotter Alarms in Milestone Alarm Manager go to Milestone Smart Client, Alarm Manager tab.

parkingspotter