## Zaporizhzhia Situation Center



**Country:** Ukraine

**City:** Zaporizhzhia

**Areas:** Government,
City Safety,
Police, Violations, Monitoring Rooms

The Zaporizhzhia Situation Center is a control organization, where online monitoring of the situation in the city is carried out using a video surveillance system. Center employees monitor the places of the greatest concentration of people, and objects requiring increased attention from the public safety aspect. Recently, Zaporizhzhia residents had the opportunity to report violations that occur in the city to the Situation Center workers. Zaporizhzhia residents can apply for violations of city landscaping, thefts, and administrative violations.

## Customer Pain Points:

- No crowd's detection system.
- The difficulty of tracking the crowd's movement.
- No tracking of criminal crowds which can move around the city or town.
- Absence of crowd's fixation
- Absence of reports about the crowds
- NO VMS Systems

## Our Solution – VEZHA Crowd Detection

The Crowds module was chosen and improves the following to update the work quality :

- Many crowds through the city were captured and detected.
- Many reports about the crowds were analyzed.
- Crowd detection helps to find violators and prevent crimes.
- Ability to send notifications helps to inform about the dangerous crowd.
- The Situation Center is able now to generate statistical reports on crowds

## Hardware  Requirements:

In way to  organize the hardware for different analytics,  1 server was assembled with the following characteristics for analytics and virtual machine:

| Middleware |
| --- |
| Middleware core |
| Database |
| MQ Server |

| CPU | Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz |
| --- | --- |
| RAM | 16 GB |
| Operating system | Ubuntu 18.04.3 LTS (Bionic Beaver) |

2 analytical servers with the following characteristics:

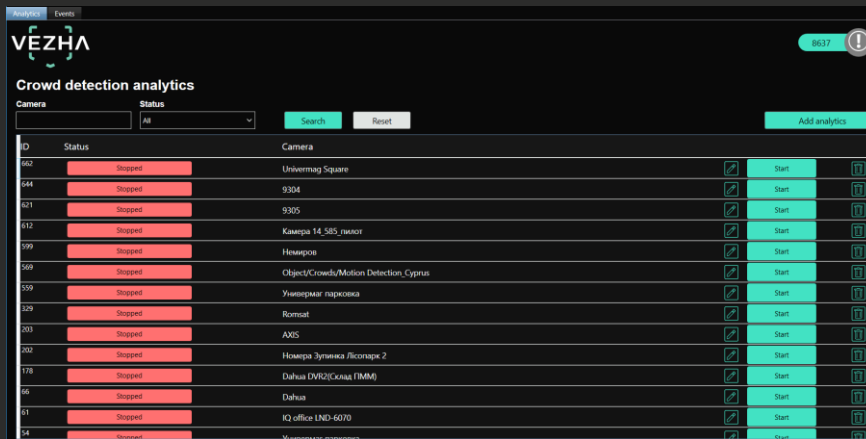| CPU | Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz  (2) |
| --- | --- |
| RAM | 126 GB |
| GPU | nVidia RTX 2080 ti 11GB |
| Operating system | Ubuntu 18.04.3 LTS (Bionic Beaver) |

And one more server for storage: based on Dell EMC PowerScale.

## User Rights

Since the situation center is a large structure, where each employee has access only to his data and modules, the VEZHA system provides many roles for different employees. These are administrator, inspector, manager, user, view analytics roles. Each role is a set of access rights enabled for a specific user.
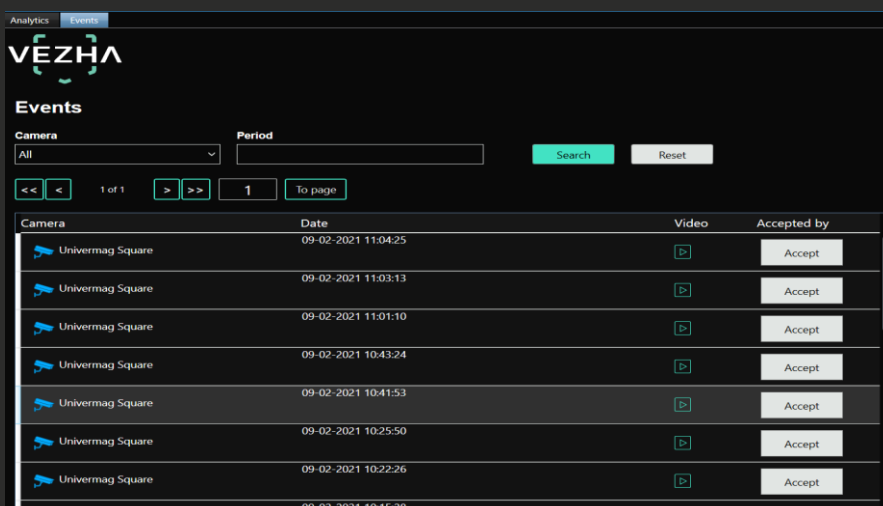
## Milestone Integrations



- Incoresoft VEZHA works in security systems of safe and smart cities with a big flow of people on streets and roads.
- Using the Milestone Integration and Crowds Plugin all staff of the situational center can use the solution as VMS, also detect crowds of different sizes.
- While tracking the criminals, the situational center can find them using the crowd's module.
- Using VMS, the staff can find not only the photo, time, and place where the crowd is fixed at the time of the violation, but also give an example of video at the same. Milestone XProtect, VEZHA Crowds Plugin for Milestone XProtect, and directly added video streams are installed on every computer.
- The plugin has a direct connection with the server, updates are made weekly thanks to the VEZHA specialists, which allows to always have a new updated version of the software.

## Our Solution Advantages:

- Immediately notifying about the crowd situation/location
- Flexibility to set a minimum number of peoples in crowd detection.
- Unlimited lists quantity with different rules
- Crowd detection in bad weather conditions
- Simple integration without any special settings
- Simple settings and interface
- User rights for specific user group
- Full team support and updates

## Conclusion

Incoresoft has implemented an efficient search system for crowd detection in a way to prevent crimes on the road.

According to the National Police of Ukraine, for the first half of 2019, the use of the Crowds module helped more then 500 crimes in a city with a population of 740,000 inhabitants. At the moment, we are talking about expanding the number of licenses for the entire city.