

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 occur in the city to the Situation Center workers. Zaporizhzhia residents can apply for violations of city landscaping, thefts, and also administrative violations.

Customer Pain Points:

- No face recognition system.
- Difficulty of tracking the person appearance on the camera.
- No tracking of criminals and dangerous people, who can move around the city or town.
- Absence of worker's attendance control
- Absence of reports as such like personal data.
- No VMS System installed



Our Solution – VEZHA Face Recognition

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

- Many dangerous people through the city were captured and recognized .
- Many crimes were prevented in the city.
- Event and Lists analysis helps to find violators and prevent crimes.
- Ability to separate offenders by lists was obtained.
- The Situation Center is able now to generate statistical reports on events to simplify crimes analytics.

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)

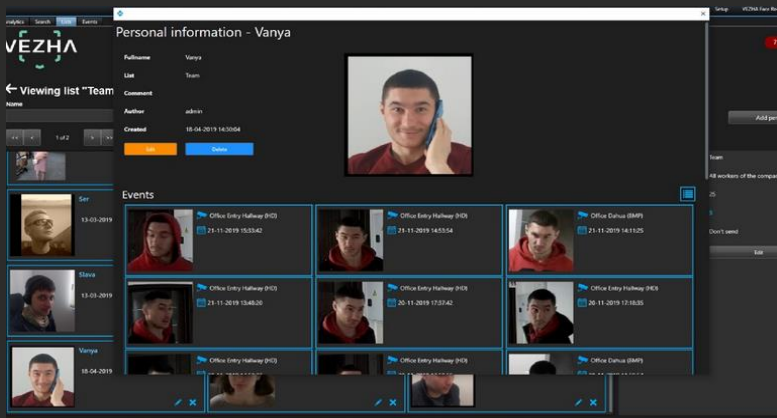
And one more server for storage: based on Dell EMC PowerScale.

User Rights

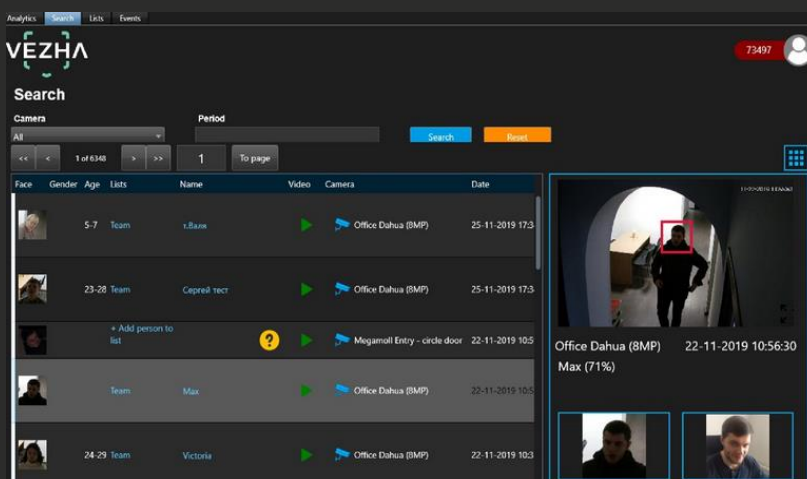
Since the situation center is a large structure, where each employee has access only to his own data and modules, the VEZHA system provides many roles for different employees. These are administrator, inspector, manager, user, view analytics roles.

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 overcrowded streets and roads. It works using neural networks, which automatically gives higher recognition accuracy.
- Using the Milestone Integration and Face Recognition Plugin all staff of the situational center can use the solution as VMS, also recognize people by lists, send events to special departments.
- While tracking the criminals, the situational center can divide the people into white and black lists of wanted persons.
- Using VMS, the staff can find not only the photo, time, and place where the person is fixed at the time of violation, but also give an example of video at the same. Milestone XProtect, VEZHA Face Recognition 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:

- Identification accuracy of up to 98.35%
- Unlimited quantity of the lists("white", "black", "VIP", etc) for individuals without any limitation.
- High-quality face recognition even with glasses, caps, mask, beard, and moderate facial rotation.
- Identification takes up to 0.1 seconds with a search base of 1 million people
- Determination of gender and age
- Restrict access to notifications for a specific group of users
- Simple integration without any special settings

Conclusion

Incoresoft has implemented an efficient search system for wanted people in a way to prevent crimes in the city.

According to the National Police of Ukraine, for the first half of 2019, the use of the Face Recognition module helped to prevent over 1000 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.

