STORMSHIELD

BUSINESS CASE

Urban mobility: a large-scale, fully interconnected and secure network

PUBLIC ADMINISTRATION

How is it possible to deliver an ultra-connected and high-performing urban mobility network that both streamlines traffic and provides new services without introducing a host of security flaws that could encourage malicious practices and potentially endanger communities as a whole?

This was the challenge successfully met by one of France's major cities, which was able to create a powerful threefold partnership between its teams, its trusted integrator and Stormshield to bring this large-scale project to a successful conclusion

A complete overhaul of the distributed urban mobility network of one of France's largest cities would have been inconceivable if it could not at the same time provide all the guarantees of perimeter security that are essential to its smooth operation and user safety.

Given that it encompasses all traffic light junctions, variable message signs, traffic cameras, retractable bollards, road metering equipment, etc., several thousand pieces of equipment are now interoperable and connected citywide, providing numerous entry points for cyber-hijackers.

To ensure a high level of security, the IT department of this major city chose to work with a multi-skilled integrator specialising in both the implementation of urban mobility infrastructure and the IT/OT security for that infrastructure.

This integrator – one of Stormshield's longstanding certified partners – chose Stormshield Network Security solutions for the entire project.

"It is important to note the significance of network segmentation in this type of critical and complex infrastructure, ensured here by fine-grained segmentation into different VLANs, for administration purposes and by business function."

Vincent Nicaise
Team Leader Industry at Stormshield

Mobility network & IoT: delivering flawless cybersecurity

In addition to the equipment itself, the urban mobility network extends over several thousand kilometres, in the city and on the outskirts throughout the metropolis. Segmentation was carried out on a district-by-district basis, with eight backbones deployed in the city's various technical premises. Each backbone naturally includes the connection with all the connected equipment within the relevant perimeter.



The integrator – one of Stormshield's longstanding certified partners – chose Stormshield Network Security solutions for the entire project

A relationship of trust

The city was also already using Stormshield as a trusted partner to provide security for its information system via a number of installations. The deployment of French security equipment, certified and qualified to the highest level, was a key factor in developing this trust.

At the exit points, clusters of SN510 firewalls were positioned to secure bidirectional data links and transmissions between the connected equipment and the various web and FTP servers for the business applications, as well as to secure interconnections – via SSL and IPSec VPN tunnels – with all the facility maintenance service providers (road management), operators (road/tramway traffic) and various local authorities comprising the metropolis (creation of equipment access cards, etc.).

Meanwhile, a cluster of SN2100 firewalls provides security for all the video streams sent to the various backbones and transmitted to all operators of active mobility, road and parking networks, both within the city and on the outskirts (car parks, motorways, tunnels, ring roads, dual carriageways, etc.).

Additionally, it is important to note the significance of network segmentation in this type of critical and complex infrastructure, ensured here by fine-grained segmentation into different VLANs, for administration purposes and by business function.

Lastly, IT/OT convergence has been an essential component throughout this project to provide protection at the perimeter of the urban mobility network. This includes the use of purely industrial data, gathered by sensors placed on the road to count vehicles and made available to the general public via an application that provides real-time traffic information.

SOLUTIONS USED

→ SN2100

→ SN510

A relationship of trust, built up over a series of projects

For many years, this major metropolis has placed its trust in one of France's leading players in the design, implementation, maintenance and operation of energy networks and city services. In addition to its in-depth knowledge of business needs, this multi-skilled partner also has a specialist unit for rolling out new IT networks and securing information systems.

This win-win situation delivers the added reassurance of an ability to implement a project on such a large scale in this metropolis, and comprehensive support throughout this major project.

The city was also already using Stormshield as a trusted partner to provide security for its information system via a number of installations. The deployment of French security equipment, certified and qualified to the highest level, was a key factor in developing this trust, as was the quality of the products and services offered by the vendor, which fully satisfy the client's IT teams.

Additional projects to further refine the micro-segmentation of the urban mobility network and further strengthen its perimeter security are still in the pipeline.

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