SCADAfence

VESTEL

Case Study

Securing Europe's Largest Manufacturing Facility: Vestel Case Study

Vestel – Global Leader in Manufacturing of Consumer Electronics

Vestel operates the largest manufacturing facility in Europe – Vestel City – and produces more than 20 different products in one 1,100,000 m2 mega-factory. To ensure its position as a global leader in the manufacturing of consumer electronics, Vestel constantly adopts new Industry 4.0 technologies that increase productivity and cut production costs. The company invests in integration of advanced robotics equipment and has significantly increased the number of interfaces between their operational technology (OT) networks and external environments. For example, Vestel recently connected their ERP system with the production floor, dramatically increasing the level of automation, improving operational efficiency and shortening the production cycle. As a result of their digital transformation efforts, Vestel City is now one of the world's largest, most advanced, and most highly complex state-of-the-art manufacturing facilities.

Digital Transformation Introduces New Challenges

Vestel's most significant manufacturing achievements include the production of a new TV unit every 2.5 seconds, and an annual production capacity of 35 million devices. To support these tremendous capabilities, Vestel City now operates tens of thousands of OT devices that are interconnected among themselves, connected to IT systems and in some cases, connected directly to the Internet. As an exporter to 155 countries worldwide, and with products that have been rebranded by leading Japanese and European vendors such as Toshiba, Vestel cannot afford unnecessary downtime.

Given their constantly scaling OT infrastructure, Vestel's IT and OT teams have realized that their lack of accurate visibility and control tools is affecting the company's production availability, reliability and flexibility. In response, Vestel's security team searched for a solution that would provide them with the required control over their complex environment. The solution must support the unique characteristics of their OT equipment and protocols, their large number of devices, and high data traffic volume – without affecting their operational network performance. After examining a variety of solutions, Vestel determined that the SCADAfence Platform is the best solution, providing them with continuous visibility, risk management and threat detection, while supporting their large-scale, highly-complex OT network.

Executive Summary

Vestel - Leading Electronics Manufacturer:

- Vestel City – Europe's largest manufacturing facility
- Producing 20 major product categories
- 1,100,000 m² closed production area
- 35 million device production capacity

Vestel's Challenges

- New technologies for automation and increased productivity increase exposure to potential attacks
- Large-scale, complex and dynamic environment with limited network visibility
- IT/OT convergence and remote access
- Lack of forensics and incident response capabilities in OT

Why SCADAfence Was Chosen

- Immediate risk reduction from day 1 – detection of risks and threats
- Full support for large-scale and complex activities, featuring a responsive UI and actionable alerts
- Monitoring tens of thousands of OT devices at minimal TCO
- Seamless integration with existing IT security operations and tools

SCADAfence's performance in large-scale networks and detection capabilities are ***unlike any other platform in the industry***

Murat Akin, OT Network Engineer, Vestel

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Monitoring Europe's Largest Manufacturing Facility

Vestel City's OT network includes tens of thousands of devices that are divided into multiple production floors, and with dozens of switches on each production floor. To monitor the growing quantity of devices, sessions, connections, and bandwidth utilization in the network, a separate out-of-band monitoring network was set up to aggregate communications from the entire environment. Using the SCADAfence Platform and its ability to support large-scale throughput with best-in-class packet processing technology, SCADAfence was able to provide complete coverage for the entire facility, **deploying only two appliances in two data centers.** With this small-footprint architecture, Vestel was able to minimize total cost of ownership (TCO) and cut hardware and maintenance costs. SCADAfence's cost-effective and non-intrusive network monitoring infrastructure enabled Vestel to gain visibility into their complex production environment with minimal effort, costs, and resources.

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Benefit Highlights

Complete visibility into network architecture and day-to-day activities

Ongoing monitoring of exposure to risks, and predictive warnings

Continuous threat detection of malicious and other abnormal activities

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Immediate Risk Reduction from Day 1

Once the SCADAfence Platform was implemented in the production environment, it immediately discovered all the devices within the network. The result was a digital asset inventory and network map that replaced the manufacturer's outdated, manually obtained spreadsheets. In addition, the platform provided an interactive network map that allowed the security teams to explore the connections between the assets. Despite the tens of thousands of assets and high traffic volume, the platform's user interface was extremely responsive, and allowed quick and easy access to all processed data.

Following the discovery stage, the Vestel team was able to constantly monitor the network and to measure security level improvements. The SCADAfence Platform was able to detect numerous risks and threats such as rogue Internet connectivity, weak authentication, unauthorized and abnormal industrial commands, and showed the Vestel team the exact locations of potential malicious activities in their network. Finally, in order to effectively manage OT security, it was critical for Vestel to integrate SCADAfence with their existing security management systems and procedures. The integration between SCADAfence and existing solutions, together with dedicated playbooks, allowed the security team to adopt to the unique characteristics of OT networks, improve policy enforcement, and provide quick and effective incident response in OT.

Securing Large-Scale Complex OT Networks

Securing complex, large-scale OT networks – like the one in Vestel City – is a primary challenge of many manufacturers that are adopting Industrial IoT technologies in order to increase their automation and productivity. For large manufacturers, it is vital to adopt a solution that understands OT networks, delivers the required value proposition and support the required scalability. Such a solution is critical in helping manufacturers gain the visibility and control that ensures the future-proof security required by Industry 4.0.

> *By integrating SCADAfence into our environment, we were finally able to add **OT visibility and monitoring** to our ongoing security operations*
>
> *Halil Aydin, Service and Operations Director, Vestel*

About SCADAfence

SCADAfence is the global technology leader in OT cyber security. The SCADAfence platform enables organizations with complex OT networks to embrace the benefits of industrial IoT by reducing cyber risks and mitigating operational threats. The non-intrusive platform provides full coverage of large-scale networks, offering best-in-class detection accuracy, asset discovery and user experience with minimal false-positives. SCADAfence delivers proactive security and visibility to some of the world's most complex OT networks, including the largest manufacturing facility in Europe. SCADAfence enables organizations in manufacturing, building management and critical infrastructure industries to operate securely, reliably and efficiently. To learn more, go to www.scadafence.com