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Energy Operator Protects Critical Infrastructure Using High Speed Encryptors from Thales

This prominent energy distribution system operator requires an encryption solution that enables secure communications between the organization’s control center and their SCADA system. Today they use several High Speed Encryptors to protect data in motion.

The organization

In one of Europe’s largest cities, this energy distribution company supplies electricity and gas through a combined system operator in the city proper and the surrounding region. Since the company's facilities are considered "critical infrastructure," factors such as safety, traceability, and transparency to business operations play an important role in its operations. It is essential that the company is able to supply the city and its suburbs with reliable electricity and gas every day, around the clock.

Challenge

The company needed to protect its critical infrastructure communications, ensuring hackers were unable to physically tap into lines and steal or manipulate utility information.

Solution

By encrypting communications regarding electricity and gas using the High Speed Encryptors, data within the SCADA network cannot be stolen or manipulated.

Benefit

The company ensures that the city’s gas and electric supply has maximum protection from hacker attacks with Thales’s High Speed Encryptors.

The business need

The supplier operates throughout the city and surrounding area to connecting several outdoor locations where natural gas is fed into the supply grid. To track and manage the operation, the company’s SCADA system generates a lot of data and communicates with the control center via its own network, which, for safety reasons, is not connected to the Internet. However, the danger exists that the proprietary lines could be physically tapped and the data stolen or manipulated.

Protecting their infrastructure has always been a major concern, and the company wanted to ensure such an attack could not occur. The company is one of the pioneers for data security, and already meets the stringent requirements of current and upcoming safety standards and recommendations, such as the Cyber Security Act.

The Cyber Security Act is an initiative of the European Union to enhance industrial systems network security. "The protection of industrial plants has seen an increasing emphasis in recent years in the IT world," said the Head of Systems Support at the company. He suspects that the Stuxnet case has led the industry to rethink their security measures. "Stuxnet has shown how easily malicious software can be introduced. This has also led the Industrial IT world to look beyond perimeter security to the core of what must be protected. "

> “ With the help of High Speed Encryptors from Thales, we can ensure our SCADA network has premium protection against data tampering. The solution is reliable and was easy to implement with little effort. The Thales team gave us the best possible assistance during the pilot phase. Their flexible licensing model means that we are optimally prepared for future extensions when needed.”
>
> – Head of Systems Support, Energy Distribution Company

The solution

The energy supplier decided to use multiple network encryption appliances from the Thales portfolio. To address the devices within the SCADA system, they needed a solution to secure data on Layer 2. Layer 3 solutions such as VPN or IPsec were therefore not suitable, and did not meet their performance requirements. The company’s solution partner recommended Thales solutions, and the company began testing Thales network encryption solutions.

"From the start, we were convinced of the products and Thales as a vendor," reports the Head of Systems Support. "The price to performance ratio matched, the test implementation went smoothly, and the support was very professional."

The team chose two Ethernet encryptors from the CN portfolio: a network encryptor suitable for larger installations, and a different encryptor for smaller branches of the network. Thales offers centralized management and simple administration and easy audit reporting over multiple circuits and network protocols at any time. The network encryptors provide near zero-latency encryption and ensure FIPS, Common Criteria and CAPs-certified safety. "We opted for Thales solutions because we know we will be well prepared when we need to expand our infrastructure to support higher bandwidths,” the Head of Systems Support explained.

The benefits

Using the encryption appliances for communications throughout the network provides optimal security, and also the flexibility for the future.

Security. Because the data is encrypted, any hacker attempting to tap the traffic would get only useless material, and would therefore have no chance of being able to manipulate the data for their own purposes. Furthermore, Thales Network Encryptors can immediately detect manipulated data packets and the devices would then shut down the compromised transmission. At the same time, the devices would switch traffic to a second secure network connection so the traffic can be delivered to the destination via a different route.

Room for Growth. The company is also well equipped for future expansion. "With the flexible licensing model, we don’t need to buy new hardware as we expand. Instead we can increase the capacity for more bandwidth as needed. This proves once again that Thales's Network Encryption is the ideal solution to maintain the network security required for a municipal utility infrastructure."

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.

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