End-to-End Security for Energy Giant

A case study in the evolution of network security

June 2008

BACKGROUND

E.ON is Europe's largest privately-owned energy company, servicing 35 million customers in Europe. The company supplies power, natural gas, and heating in Denmark. The E.ON Group has around 50 sub-groups and subsidiaries in Europe and the USA. Its head office is in Düsseldorf, Germany. The Group has 70,000 employees, and generates annual sales of approximately 420 billion Danish kroner.

CHALLENGE

In 2005, the Danish division of the European energy giant E.ON was faced with a challenge: it had just acquired Nesa's district heating department, along with 75 district heating plants throughout Zealand, and it needed to be able to efficiently monitor and manage operations, consumption, and maintenance from a central location. As a result, the company started to look for a network solution that would guarantee and optimize communications between the head office in Herlev near Copenhagen and each of the individual plants.

Farewell to analogue

In addition to the 75 district heating plants, E.ON also took over an existing network solution which enabled centralized monitoring from the head office in Herlev. However, the solution was very outdated. Each heating plant was connected to the head office via an analogue telephone network and

obsolete ISDN technology. The head office had to dial in daily to collect the necessary operational and consumption data and error messages from the plants.

This legacy solution was struggling to monitor so many district heating plants, and the situation was resulting in higher costs for consumers. E.ON therefore decided to invest in a new network solution based on IP technology with enhanced security. It now has an Internet-based communications solution, which allows it to collect data from all of its district heating plants in real time, whether they are located in Hvidovre or Vordingborg.

E.ON teamed up with consultancy company Klestrup | partners to create a new network with WatchGuard as the central control unit.

“Companies in E.ON’s position often choose to establish a closed network solution with MPLS technology. However, E.ON wanted to be free of the restrictions that come with MPLS solutions, without compromising on security. That’s why we introduced WatchGuard’s technology and solutions,” explained Jeppe Andersen, CEO of Klestrup | partners.

WATCHGUARD® SOLUTION

E.ON’s security solution from WatchGuard is based on a number of standard ADSL connections. These form the basis of the WatchGuard VPN network that connects the head office with the Zealand plants. This approach was chosen to guarantee the system is not dependent on any one ISP.

“We started out with a WatchGuard X750e firewall as the center of E.ON’s IP network. This allows them to monitor operations and production at the plants, even if they’re 100 kilometers away. We use the Internet solely to transmit data between two points,” explained Andersen.

He goes on to say that they have already updated and extended WatchGuard’s original security solution since E.ON’s new data communication network went live.

“E.ON now has two WatchGuard X750e firewalls, one of which is redundant. If one of them fails, the other takes over seamlessly. This is called high availability mode. It provides the best possible guarantee that the connection to the plants is always up and running,” said Andersen.

Mobile User VPN

As part of this project, Klestrup | partners have helped E.ON establish a smaller network safeguarded by the WatchGuard solution. This smaller network is designed for mobile users, such as installers and engineers in the field.

With the updated solution from WatchGuard, service engineers who are on the road every day can monitor operations at the different plants. They can easily log onto the system as mobile users and get status and error messages wherever they are.

WatchGuard Mobile User VPN gives E.ON this innovative new functionality via GPRS.
“E.ON also uses WatchGuard LiveSecurity®. This provides them with ongoing support for the installation and maintenance of firewalls and VPN. It also allows them to proactively manage ongoing development of the risk profile, and they receive core information and updates for their solutions directly from WatchGuard,” explained Andersen.

He added that the proactivity of WatchGuard's solutions is one of the factors that makes them ideal for medium-sized enterprises.

"WatchGuard is normally the best choice for enterprises that want to optimize network control and security without having to invest over 10 million Danish kroner," he said.

Clearly the Right Choice

A comparison also revealed that WatchGuard's solution for E.ON is much cheaper than equivalent solutions, such as those offered by Cisco Systems.

"WatchGuard was clearly the most economical choice. On the main site alone, I estimate that E.ON saved 150,000 Danish kroner without compromising on functionality or security," said Andersen.

At the same time, operating with a standard product via well-known IP technology is both reassuring and offers a high level of flexibility. Unlike proprietary solutions, E.ON is free to change its infrastructure supplier quickly and easily. It requires nothing more than a new contract with an Internet provider and one hour's configuration. If E.ON had chosen an MPLS solution, they would have been tied to one provider instead," he concluded.

For more information about WatchGuard security solutions, visit us at www.watchguard.com, or contact your reseller.

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ABOUT WATCHGUARD
Since 1996, WatchGuard Technologies has provided reliable, easy to manage security appliances to hundreds of thousands of businesses worldwide. Our Firebox X family of unified threat management (UTM) solutions provides the best combination of strong, reliable, multi-layered security with the best ease of use in its class. Our newest product line – the WatchGuard SSL – makes secure remote access easy and affordable, regardless of the size of your network. All products are backed by LiveSecurity® Service, a ground-breaking support and maintenance program. WatchGuard is a privately owned company, headquartered in Seattle, Washington, with offices throughout North America, Europe, Asia Pacific, and Latin America. For more information, please visit www.watchguard.com.