

The gatekeeper for the machine network

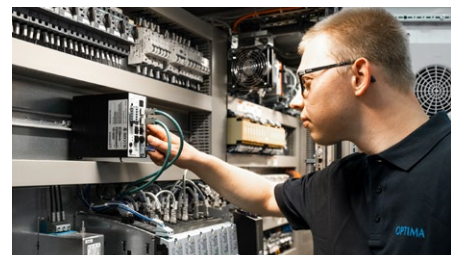


The Optima group of companies has chosen a security solution from LANCOM Systems to increase the level of security of their VPN remote maintenance, so providing even better protection of their customers' networks.

According to statistics, 46 percent of companies in Germany were affected by at least one cyberattack in 2021. In September 2020, the German packaging machine manufacturer Optima packaging group GmbH from Schwäbisch Hall Germany, was also the victim of a cyberattack. The attack was soon discovered and all systems were immediately shut down. Almost all Optima machines in the customer's production halls are maintained and monitored by service technicians using VPN remote maintenance. The fear was that the VPN tunnels could be used to spread the attack to customer networks. Fortunately, this was quickly ruled out. With the aim of further improving IT security in this area, a specialized VPN solution was developed.

Months of development work

The goal: To increase the security level of remote maintenance and improve the protection of the machine networks. The plant manufacturer developed the necessary solution in cooperation with the German network and security manufacturer



“What LANCOM has developed in cooperation with us is an overall solution that is unique on the market. This level of security for machines and systems is only available with Optima and LANCOM.”

Dr.-Ing. Benjamin Häfner, Group Leader of Industrial IT, Optima

LANCOM Systems from Aachen, Germany, a subsidiary of the Munich-based electronics group Rohde & Schwarz. Detailed and in-depth market research was carried out in advance. “We took a close look at the solutions from different security providers and had intensive discussions,” says Dr. Benjamin Häfner, Group Leader of Industrial IT at Optima. “Ultimately, we decided on LANCOM as the manufacturer.” This marked the start of an intensive cooperation, because the German security specialist had not yet developed an out-of-the-box solution for industrial machines. “The finished solution is the result of months of development work invested both by LANCOM and by us. It was a major challenge for everyone involved, but it was good fun working together,” says Häfner. The two companies were supported by the Communication Systems GmbH from Neu-Isenburg, Germany. The result is impressive.

Firewall as a gatekeeper

The firewalls are put into operation quickly and securely via the LANCOM Management Cloud. All the IT personnel need to do is specify some basic parameters in advance. The cloud automatically takes care of the rest of the rollout. “Zero-touch deployment is incredibly convenient,” says Häfner. “This is a major plus point—particularly for our customers—because implementing the solution in their company networks is fast and smooth.” A LANCOM R&S® Unified Firewall is operated at each of the customer’s sites. Service technicians use encrypted VPN tunnels supported by the firewalls for remote and yet direct, secure access to the Optima machines. Here they can alter configurations or check and analyze error messages.



Perfect cooperation: Dr.-Ing. Benjamin Häfner, Group Leader Industrial IT at Optima, (left) and Markus Irl, Vice President Firewall & Security at LANCOM Systems GmbH, are delighted with the new IT security solution.

However: Even encrypted VPN channels can be used to launch complex cyberattacks. The attackers use the VPN tunnel as an “undercover” entry point. The solution: SSL inspection and Deep Packet Inspection Pace allow even encrypted data packets to be scanned and filtered, applications detected, and security requirements successfully implemented. At the same time, detailed monitoring is provided by the LANCOM Management Cloud by logging all of the data traffic between Optima and the customer networks. This monitoring of the VPN remote maintenance is reliable and secure. On site, the firewall becomes the “gatekeeper” for the machine network. It controls and streamlines the communication with the machines. The machine network, which includes filling systems for vaccines, among others, is divided into several network segments. Each time an individual segment is accessed, the firewall checks the authorization. Like any outsider wanting to pass through a gateway, access to the inside is either approved or denied. This ensures that machine networks in the customer's production facilities are optimally protected against unauthorized access. Furthermore, the customer is able at any time to disconnect or connect the VPN tunnel using a physical key switch that controls external access.

Unique security solution

From now on, all new Optima machines will be equipped with the new VPN remote maintenance and firewall solution. “We will also be offering our existing customers an upgrade to an even more secure solution,” explains Häfner. Optima uses the security solution from award-winning manufacturer LANCOM Systems to offer its customers maximum security for their corporate networks. At the same time, the provisioning and servicing of the firewall via the cloud is quick and easy. This means that the solution integrates even into sensitive areas with minimal effort for the customer. “What LANCOM has developed in cooperation with us is an overall solution that is unique on the market,” says Häfner. “This level of security for machines and systems is only available with Optima and LANCOM.”



The customer

Optima supports companies worldwide with flexible and customer-specific filling and packaging machines in markets for pharmaceuticals, consumer goods, paper hygiene, and medical devices. As a provider of solutions and systems, Optima supports these companies from the product idea to its successful production, and also right through the entire machine life cycle. Over 2,650 experts around the globe contribute to Optima's success. 19 locations in Germany and abroad ensure the worldwide availability of services.

At a glance

The customer

Optima packaging group GmbH

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74523 Schwäbisch Hall,
Germany
+49 791 506-0
info@optima-packaging.com
www.optima-packaging.com

Products and services:

Conception and implementation of packaging machines, filling systems and manufacturing systems, life cycle management over the machine's entire lifespan, digital solutions for safe and efficient production.

The partner

COMMUNICATION SYSTEMS GMBH

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+49 6102 7840 0
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Requirements

- Secure access to the customer's machine networks via encrypted VPN tunnel
- Monitoring of VPN remote-maintenance communications
- Firewall controls and verifies access to the individual network segments

Components deployed:

LANCOM R&S®Unified Firewall UF-T60

