



«A hybrid WAN gives us
the best of both worlds.»

Florian Scholl
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The German company Marquardt GmbH, a manufacturer of electro-mechanical and electronic switches and switching systems, is boosting its flexibility and efficiency with a combination of MPLS network and broadband internet. That its costs are decreasing at the same time is a very welcome side effect.

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Mr. Scholl, Marquardt GmbH has grown fast around the world, which also had an impact on your IT. Can you describe the starting point?

→ Florian Scholl: For several years now, our company has maintained branches abroad that are connected to the head office in Rietheim via an MPLS network. Alongside a second location in Germany, we had branches in the United States, China, France, Tunisia, Romania and Switzerland.

Then as we added locations that were less developed, we quickly realized that our concept was not suitable for our global expansion plans.

Can you give us some details?

→ It all began in the summer of 2012 when we wanted to connect our new location in Mexico to the network. Instead of the customary 6 Mbit/s or higher, we had to make do with a 2 Mbit/s line. This was also considerably more expensive than what we were used to, compared with the other locations. What made things worse was that we had to wait a long time for those lines. We felt that the room for maneuver was rather limited.

And how did things continue?

→ The location in India was connected at the end of 2012. Once again we faced the same problem. The delivery period for one line out there was six to nine months. And as far as we were concerned, the costs were horrendously high. So we realized that we needed to find a way of connecting locations faster, more flexibly and more cost-effectively.

What happened next?

→ We looked at alternatives to our MPLS network, which brought us into discussion with Open Systems. The concept of the hybrid WAN appeared really interesting to us and the services were worth considering. Based on the talks with Open Systems, we then decided to go in this direction and evaluate various possible partners.

Open Systems evidently won you over?

→ Yes, the decision to go with Open Systems was pretty clear in the end. But the final choice was preceded by a very intensive phase during which we put the various companies «under the microscope», as far as was possible. Our electro-mechanical and electronic switches and switching systems are the key components in our customers' products. The automotive industry in particular, for which we develop and produce driver authorization systems, attaches great importance to reliability and discretion. This means that matters such as security and availability are extremely important to us and critical when it comes to collaborating with our external partners. So besides technical and operating competence, we had to look into one thing above all else: do we have confidence in the employees of Open Systems?

And how did you do that?

→ In addition to the references from existing customers, face-to-face meetings with the team from Open Systems were very important for us. In the reference sessions, we found it extremely helpful to be in a position to ask

companies from Germany that are similar to us in terms of size, global footprint and quality requirements about their experience in working with Mission Control.

What were the most important factors in your decision?

→ Apart from the confidence in the team, certainly the professionalism of the services, the promised speed of implementation and the reduction of complexity.

What complexity do you mean?

→ Both the technical and operating complexity. Technically, numerous mechanisms were in place between our users and the internet – firewalls, proxy servers and WAN optimization solutions – different devices from various manufacturers. Which makes troubleshooting extremely time-consuming. With Open Systems, we have the same functionality from a single source. On the operational side, we were able to delegate operations and 24x7 monitoring to Mission Control, allowing us to gradually free up capacity for the projects that came up short in the past.

Turning now to the cost: Does the whole thing pay off?

→ Absolutely. The hybrid WAN helps us reduce costs by a good 20 percent compared with a pure MPLS network. As a Swabian company in the automotive industry, we are very cost sensitive and are always trying to optimize. Every last penny is important to us in development and production. So the IT department also has to set standards here

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and make sensible use of its budgets. Even though cost cutting was not the main point of this project for us, the savings are, of course, a really positive factor.

From the financial viewpoint, the clear cost transparency of the services is just as valuable. This makes budgeting simple and binding. The annual fee for the selected services is fixed. There are no expensive surprises. I've even completely eliminated the technology risk by collaborating with Open Systems.

How did you actually calculate the potential savings?

→ We used conventional full cost accounting, which meant adding all expenses for operating, expanding and replacing the individual systems to the cost of hardware and software, and their maintenance at our locations. That yielded a tidy sum. Added to this were the savings that we achieved by reducing the MPLS lines.

So you decided against an MPLS network?

→ No, we opted for a hybrid WAN under which we combine MPLS with highly efficient yet cost-effective internet lines. The best of both worlds, you might say.

What advantages does this bring, in your opinion?

→ The internet lines give us more bandwidth at lower cost. What's more, we are very flexible in the choice of provider and much faster at connecting locations. The advantages of the MPLS lines remain the same: clearly defined bandwidths with clearly defined

availability. For instance, we'll certainly use SAP worldwide via MPLS in the future.

In the first phase we plan to define the internet line as the primary line and the MPLS network as a backup. But with the help of policy-based routing, for the next few years we will have complete freedom to decide over which medium we will route our traffic. This will enable us to deploy our hybrid network exactly in line with our needs.

How did you evaluate the internet providers at the various locations?

→ This know-how came from our local system administrators. They were involved in the project right from the start. They were tasked with selecting what they thought was the best partner with the right offering at the best price. By applying their experience, they helped make the project a success.

How has the cooperation with Open Systems evolved?

→ Right now, we're in the middle of implementing the new concept and are very satisfied with the cooperation. We've connected seven locations in nine months. There is absolutely no comparison with the time that would have been required if we had tried to do it with a different partner. The services are running very reliably and the ticket times are excellent. I really don't know what I could complain about ...

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Cutting-edge technology built on knowledge and inventive talent

The German family enterprise, Marquardt GmbH, based in Rietheim-Weilheim is a global manufacturer of electro-mechanical and electronic switches and switching systems for vehicles, power tools, household appliances and other industrial uses.



What started out with an apparently simple on/off switch at the end of the 1920s, the employees of Marquardt GmbH have turned into a globally active corporate group of today with a 600-strong workforce. A great deal of knowledge and inventive talent went into it, and just as much passion. These days, the still independent, family-run company has a presence where its customers are – in nine countries and at 12 locations on four continents.

Today, the mechatronic, electronic and electro-mechanical switches and systems by Marquardt GmbH can be found in a wide range of products and are popular in many markets around the world. As a supplier and system partner for a wide range of industries, the Marquardt Group maintains production plants in Europe, Africa, Asia and America. Alongside its own development facilities in Rietheim (Germany), Schaffhausen (Switzerland), Sibiu (Romania), Cazenovia and Rochester Hills (both USA), Mumbai (India) and Shanghai (China), Marquardt GmbH also cooperates closely with various international research institutions and universities. Over recent years, the company has primarily enjoyed growth in Eastern Europe, Asia and America. To keep pace with globalization in its key markets, the Marquardt Group intends to continue systematically down the path of international expansion.

At the cutting edge of automotive technology

Marquardt GmbH quickly made a name for itself in the automotive industry with the rollout of intelligent driver authorization systems that offer an unprecedented level of anti-theft protection. They are used in vehicles built by Mercedes, BMW, Volkswagen, Audi and Chrysler, as well as other prestigious brands. Well over ten million of these systems have been sold to date.

The company has placed itself at the cutting edge of automotive technology with the innovative keyless system that combines functionality with luxury. The electronic key, which the driver does not have to carry around, activates the system using various electronic fields and makes it possible to open and start the vehicle without having to press any buttons or insert the key in the ignition. The company also boasts a good position to exploit global market trends toward alternative drive technologies, including electric vehicles. The products from Rietheim-Weilheim are doing their bit in this segment with an impressive demonstration of innovation.

Specialist for mechatronic system solutions

Marquardt GmbH also enjoys global acclaim as a specialist for mechatronic system solutions that combine electrical and mechanical engineering to create intelligent systems. Over recent years, the company has entered new markets by developing a wide range of switches and sensors for household appliances such as washing machines, dishwashers and clothes dryers. Marquardt GmbH has already been the world market leader in power tool switches for many years. There is hardly a manufacturer of power tools today that does not employ a Marquardt GmbH switch in at least one of its series.

Innovation as a key success factor

The pioneering spirit and inventive talent together with the clear vision upon which the company founders, Johannes and Johannes Marquardt, laid the foundation for the company in 1925, are still part of the Marquardt GmbH tradition. In order to maintain its international competitiveness, Marquardt GmbH invests around ten percent of its revenues each year in research and development of new products. Some 60 percent of its offerings are less than five years old. This investment in innovation is paying off, as no other manufacturer can boast a product portfolio that is anywhere near as broad or deep – from device, snap-action and power tool switches through to complex operating controls and driver authorization systems.