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Campus Network: Powerful, Affordable and Solid

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A high-availability IT infrastructure with sufficient performance is essential for modern teaching. The Kantonsschule Zug relies on Juniper Networks to renew its aging network infrastructure and build a high-performance network at a unique price-performance ratio that meets the school's current and future needs.

CHALLENGES

The Kantonsschule Zug places high demands not only on the students but also on themselves and therefore relies on a high-performance, always available and simple network infrastructure. "Teachers are extremely demanding, very individualistic and typically not particularly close to IT. The IT infrastructure has to be fast, easy to work with and can not cause any problems – if it does not, the education is in danger, "says Christian Wittenhorst, who is responsible for the infrastructure and network of the Kantonsschule Zug.

However, with network traffic having increased massively over the past few years, the existing solution has reached its limits and has simply been unable to cope with growing bandwidth needs. For this reason, the Kantonsschule Zug decided to modernize its IT infrastructure. "To create the best possible conditions for up-to-date teaching and to meet today's educational approaches, it was time to replace our outdated IT infrastructure with a new, efficient campus network," explains Wittenhorst. "As a public body, the project will be tendered and then, in principle, anyone could apply."

The school environment is very special and involves demands that are otherwise found with service providers. At the same time, the price played an important role in the tender. "We face the same challenges as many other industries and companies. On the one hand, we have high standards; in Switzerland, for example, STEM promotion is a big topic. On the other hand, we have a high-cost pressure. So there is a certain discrepancy between budget and requirements, "reveals the IT

manager. "Our goal was to find the optimal solution at the best price."

SOLUTIONS

After a careful evaluation of the offer, the Kantonsschule Zug opted for the efficient network concept of the local Juniper Networks Elite Partner ngworx, thereby implementing a new campus network based on a Juniper Networks infrastructure. Powered by the Junos OS's advanced end-to-end network operating system, the EX Series Ethernet switches are high-performance, low-cost, carrier-class switches that combine high availability and reliability with the flexibility, enable high data rates, and provide simplified network management.

Even before the modernization of their network, the Kantonsschule Zug had deployed solutions from Juniper Networks and had been working together with ngworx for a long time. "We have consistently gained positive experience with Juniper products and got to know ngworx as a technically experienced and reliable partner, with whom we also maintain an open exchange away from commercial projects." Christian Wittenhorst looks back: "It started with services Gateways of the SRX series, then followed Universal edge routers of the MX 3D series for the peering area and additional switches of the QFX series, because, in order to create synergies, we run the Internet for other schools in the canton. Together with the EX Series campus switches, I would say that we now have a significant part of the Juniper range."

The decision by the IT manager to justify re-choosing Juniper Networks as part of the latest bidding process: "The concept tailored to our technical as well as budgetary needs and elaborated by ngworx convinced us. At the same time, no other competitor could match the offered price-performance ratio. The offered feature set in relation to the price was decisive. We just decided on the best offer."

The support works great, problems are quickly and vigorously pursued until they are resolved. Christian Wittenhorst IT Manager, Kantonsschule Zug

The solution was implemented in cooperation with the experienced network specialists of ngworx. "Of course there were a few small challenges to overcome, but that was not unusual, we expected

that. Above all, since we had to deal with a heterogeneous environment and the hardware purchased was tight due to the financial constraints and had to be exhausted to the limit, "Wittenhorst speaks his mind. The project was started on schedule and the initial difficulties were soon solved with the support of ngworx. After the migration, everything went according to plan, namely without failure. "All in all, the migration worked much better than expected. And what pleases us in particular: our users didn't notice practically anything about it. Maybe we annoyed the users for an hour over three months, so everything was well within the framework. "The IT manager is not the least able to trace the positive course of the project to the expertise and competent work of ngworx. "The use of ngworx in this project was extraordinary, we did not have that before."

RESULTS

By switching to Juniper Networks products, the Kantonsschule Zug has built a high-performance, reliable, robust and future-proof campus network with the qualities of a service provider network that can also serve as a reference model for many small providers. Thus, many services that are normally provided by service providers can be mapped by the school itself.

Christian Wittenhorst draws attention to further advantages of the modernized infrastructure: "The performance has improved considerably. In the past we had 1 GbE, occasionally 10 GbE, meanwhile we are consistently at multiple 10 GbE up to 40 GbE. We also particularly like Junos OS as the only interface for our routing, switching and security platforms from Juniper Networks and the many implemented features that invite you to try and test."

The unified operating system and automation features facilitate network operation and enable operational and economic efficiency that accommodates the school's lean structures and scarce resources. "For us, it is important that we can operate the infrastructure as independently as possible and have in-house know-how – for cost reasons alone", argues the IT manager. "However, it is a good feeling to know that we can rely 100% on ngworx if we can not go any further. The support works great, problems are quickly and energetically pursued until they are resolved."