



Modernizing School Networks to Meet the Demands of Digital Learning

Overview

With the rapid advancement of digitalization in education, a reliable and high-performance WiFi infrastructure has become essential for enabling modern, media-rich teaching methods. The Muri School recognized this need early on and proactively sought a solution to support its growing number of mobile devices and cloud-based applications. The school partnered with ProtecData AG, a Zyxel Networks Gold Partner, to design and implement a robust network. In collaboration with Studerus AG, a thorough on-site WiFi survey was conducted to determine optimal access point placement. The result is a scalable, future-ready infrastructure that ensures seamless connectivity, simplifies IT management, and supports evolving educational demands across all school buildings.

Challenges

With six separate buildings, the Muri School faced the challenge of deploying a high-performance WiFi infrastructure to support a large number of mobile devices and ensure seamless use of Microsoft 365 cloud services for students and teachers. The solution needed to handle numerous simultaneous connections, especially in classrooms with high client density. It had to deliver reliable speed and consistent coverage to prevent disruptions in daily activities, while also being scalable to meet future data demands and simple enough for the school's in-house IT team to manage efficiently.

Solutions

Following a thorough evaluation, the school selected a solution from ProtecData AG, a company with extensive experience in developing information systems and offering comprehensive network installation and support services. Working with Studerus AG, an on-site WiFi survey was conducted to ensure optimal access point placement across the campus.

Customer

Muri School

Industry

Education

Location

Muri, Switzerland

Partner

ProtecData

Studerus

Customer Background

The Muri School comprises six buildings situated along the edge of a gently sloping hill. This unique terrain was once divided into separate zones on campus. A hillside tunnel now connects the buildings, unifying them into a cohesive whole. The design stands in contrast to the green landscape while blending naturally with the hillside, achieving harmony with the environment.



A total of 137 WAX650S WiFi access points were installed throughout the six school buildings. With support for data rates up to 3.5 Gbps, these access points deliver strong, reliable performance in high-density environments. Most were mounted centrally on classroom ceilings to maximize coverage.

25 Zyxel XS1930-12HP multi-gigabit switches were installed to support the wireless infrastructure. The PoE++ switches not only power the access points but also provide 5 Gbps connections for seamless data flow.

All school buildings' networks were safeguarded with four USG FLEX 500 firewalls for enhanced cybersecurity and manageability. With built-in content filtering and cloud-based control via the Nebula cloud networking solution, the system ensures robust protection and simplified administration. Nebula's centralized platform enables the IT team to monitor, manage, and adapt the network with ease.

Results

Through careful planning and collaboration with experienced partners, The Muri School successfully implemented a high-performance WiFi infrastructure built to meet both current and future needs. The new network delivers fast, stable connectivity for students and teachers while greatly easing management for the school's IT team. With the Nebula solution, the IT team has intuitive controls and monitoring features, enabling easy adaptation to evolving demands.

- Reliable performance and connectivity even in densely populated classrooms
- Scalable, future-ready setup meets growing bandwidth and data demands
- Easy network management with training support of the in-house IT team for efficient first-level support.

Product List



- WAX650S WiFi 6 Access Point



- XS1930-12HP Lite-L3 Smart Managed PoE Switch



- USG FLEX 500 Firewall

