



Modern WLAN for 80 schools in Münster

Alcatel-Lucent Enterprise WLAN technology
delivers mobile connectivity for digital schools

Case Study

STADT MÜNSTER

MARKET: GOVERNMENT/EDUCATION
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COUNTRY: GERMANY

COMPANY:
STADT MÜNSTER

Alcatel·Lucent 
Enterprise

All 80 general-education schools in Münster will be equipped with wide-area WLAN. The wireless network complements existing broadband cabling with mobile connectivity and is a step closer to digitalization of the schools. The technical concept was developed by citeq, the municipal IT service provider for the city of Münster, in coordination with the local school administration.

Nachrichtentechnik Bielefeld GmbH, a long-standing Alcatel-Lucent Enterprise business partner, will supply 1600 WLAN access points, parts of the network management system and accompanying services. The roll-out is scheduled to be completed by the end of 2019.

City of Münster

The city of Münster in North Rhine-Westphalia has more than 300,000 inhabitants and 50,000 students, ranking among the twenty largest German cities and the ten largest university cities. 7000 employees work for the municipal authorities in Münster. All projects involving IT equipment for public administration and their facilities are supported by citeq.

citeq is responsible for implementing the media development plan for the city's 80 general-education schools. A few years ago, citeq started a project to connect all schools to fibre-optic in-house cabling, which is laying the foundation for the schools' digital connectivity.

WLAN for today's digital schools

The next project stage expands local school networks with a comprehensive, unified WLAN. citeq's experts will implement the project along with the Office for Schools and Continuing Education. The process is supported by a municipal steering group comprised of representatives from all school types involved. Based on the results of these consultations, citeq developed the overall technical concept for a unified WLAN covering all 80 schools.

The next step was a public tender for delivery of 1600 WLAN access points, a management system for the configuration and administration of these access points, and the configuration of four sample sites for test operation. The tender also included on-site training, hotline, update and back-up services for the access points and the network management system.

The contract was awarded to Nachrichtentechnik Bielefeld GmbH (NTB) based on the strength of their proposal. The long-standing Alcatel-Lucent Enterprise business partner offered Alcatel-Lucent OmniAccess® Stellar series WLAN access points – model AP1221 for indoor use and AP1251 for outdoor use. For network management, NTB recommended the Alcatel-Lucent OmniVista® 2500 Network Management System. The city of Münster, represented by citeq, became an official customer of Nachrichtentechnik Bielefeld following the signing of the contract in December 2018.

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ABOUT CITEQ

citeq is Münster's municipal IT service provider for communities, public administration and their organizations. Around 180 employees advise, design and operate IT systems, develop and integrate applications.

citeq supports all IT processes and PC workstations in the city of Münster and equips 80 schools with computer technology. With the cities of Münster and Hamm as well as the city, district and municipal administrations of the districts of Coesfeld and Warendorf, a total of 28 cooperation partners have access to IT procedures, which citeq has developed within the framework of a public-law agreement.

For more information, visit: <https://www.citeq.de>

ABOUT NACHRICHTENTECHNIK BIELEFELD

Nachrichtentechnik Bielefeld GmbH was founded in 1991.

The ICT system house boasts 35 dedicated employees and implements solutions spanning telecommunications, network technology, hardware and software and video surveillance.

NTB serves small and medium-sized customers and public administrations in the Ostwestfalen-Lippe region and nationwide corporations.

For more information, visit: www.ntb.de



Successful test operation and fast roll-out

NTB immediately delivered 85 WLAN access points in December 2018 for a two-week test operation and held the administrator training in January 2019. The test operation was successfully completed without technical problems or restrictions, leading to delivery of the next 615 access points. The remaining access points will follow gradually throughout 2019.

The full roll-out began in May 2019 and is expected to be completed by the end of the year. Once the access points were installed by an electrical company, citeq put the wireless network into operation. citeq has also assumed responsibility for the entire WLAN management, including the assignment of permissions and access rights.

NTB, who will provide technical support services for at least five years, has set up a web-based ticketing system where citeq can report malfunctions.

The new WLAN: Flexible, safe and highly available

Unlike the isolated solutions previously installed in some individual schools, the new solution offers a comprehensive, unified WLAN infrastructure with central management across all locations.

«The ability to centrally configure and manage the entire network has significantly simplified operations,» says Stefan Schoenfelder, Operations Manager at citeq. «Permanent WLAN connectivity of the schools is becoming increasingly important, and the central network management enables us to continuously monitor whether all systems are functioning properly and to quickly identify and correct any malfunctions.»

The OmniVista Network Management System easily supports the 1600 access points needed to connect all the schools and is scalable by at least 1000 additional access points if required. It provides flexibility for future expansion and ensures very high network security for several thousand students.

The network management system runs as a high-availability solution on two servers, installed at different citeq computer centers, under optimal conditions for air conditioning and uninterrupted power. Together, these two servers offer maximum reliability.

For the first time BYOD (bring your own device) is possible. The new solution offers teachers and students the option to access the WLAN with their own mobile devices in a separate network. Another new feature is the interface to the «TIME for kids» portal, which enhances Internet use in the classroom by making learning content and learning aids available online.

CHALLENGES

- Isolated WLAN solutions at individual schools
- No existing WLAN at most schools
- No unified administration or central support

PRODUCTS AND SERVICES

- Alcatel-Lucent OmniAccess® Stellar Access Points
- Alcatel-Lucent OmniVista® 2500 Network Management System
- Training, hotline, update and back-up services

BENEFITS

- Unified network solution for all schools simplifying management
- Central management of 1600 access points
- Reliability due to high-availability concept

