



## Success Story

### Zyxel Nebula Solution Spurs Education Revolution at Belgian School



Education



CVO  
Technicum North  
Antwerp  
(CVO TNA)



Belgium



Zyxel  
Nebula  
Solution

## Overview

### Challenges

- Deliver complete wireless coverage to multiple, barrier-laden buildings
- Replace outdated network with new technologies to meet BYOD demands
- Quick, reliable access to documents from any location
- Simplified setup, troubleshooting by working with one provider
- Separate networks for students and teachers

### Results

- Teachers, students use cloud service to store, share files
- Upgraded WiFi easily handles heavy-duty classroom data usage
- Network solution easy to set up, easier to troubleshoot
- Restricted user groups to control network access

### Solutions

- Zyxel Nebula Solution

“When we needed to deal with a technical issue, Zyxel was able to solve it within two weeks by releasing new firmware. This indicates how far Zyxel goes when it comes to service. An additional advantage is that they don't sell Nebula Cloud on a licensed basis, but make it freely available to everyone. As a result, it is now possible for schools with a lower budget to switch to cloud-based network management.”

Paul Broothaers  
IT Coordinator, CVO TNA

## Background

The Technicum North Antwerp's Center for Adult Education (CVO TNA) is a vocational institute in the historic Belgian port city. Serving under the Catholic Education Diocese of Antwerp, the school consists of three buildings where more than 300 staff members meet the educational needs of 2,500 students. Its primary goal is to provide comprehensive and practical social, industrial, creative, and trade instruction. To this end, CVO TNA cultivates fruitful partnerships with companies in numerous professional fields, espouses and facilitates hands-on learning, and designs customized curricula to allow students to discover and develop their unique talents. In the digital era, the school has begun using e-learning platforms to set up learners for success in a rapidly evolving labor market.



## Challenges

Although the school is able to provide its students and staff with temporary laptop computers, many prefer to use their own personal devices. This bring-your-own-device (BYOD) environment offers convenience to users and savings to the school's tech department, but it can put a strain on outmoded, unprepared networks. Such was the case with CVO TNA, whose old hardware had experienced difficulty processing all the data from

countless computers, tablets, and smartphones. In addition to resolving this wireless issue, the school was intent on finding a complete, cloud-based network solution from a single provider. Since it would soon be partnering with four other CVO locations, having the flexibility and shareability of cloud service was a must. Lastly, it would be essential to create separate networks for different users—like students, instructors, and tech administrators.

## Solutions and Benefits

Paul Broothaers, CVO TNA's IT coordinator, was tasked with finding a suitable distributor to manage the overhaul. Impressed with the proposal submitted by Educorner, a Zyxel partner, he gave the go-ahead for the network company to implement a cost-effective, high-quality Zyxel Nebula Solution.

The **Nebula Cloud Managed Security Gateway** helps TNA's teachers store and access all their files—anytime, anywhere, from any device they happen to be using. This is a critical post-merger upgrade, according to Broothaers. "If instructors have to teach at a different location," he said, "they can now quickly and easily access their documents via any device." To address potential security issues, the network as a whole is partitioned into user-based VLANs, meaning students don't have access to administrative or instructor data.

Additionally, the latest **Zyxel Nebula switches and access**

**points** were deployed, ensuring that the revitalized network would be more than able to deal with the blizzard of data traffic from teachers and students. And with the **Nebula Control Center's** real-time monitoring and array of management tools, it's easy for IT specialists like Broothaers to spot and stop network problems before they start.

The deployment took about six months to complete, which is rapid for such a complex project. While the solution posed minor challenges in its early stages, Zyxel solved these problems in an effective and timely manner without incurring extra costs. CVO TNA now has a cutting-edge cloud network that empowers both students and teachers. And this is just the beginning. Broothaers anticipates that after the merger, other CVO schools will be clamoring for the high quality products and services that have made Zyxel an internationally renowned network leader.

## Products Used

### NSG200 • Nebula Cloud Managed Security Gateway



- Complete network, security, and application control from anywhere via the cloud
- Zero-touch site-to-site VPN
- Secure networks with IDP and Application Patrol, content filtering, and anti-virus
- Built-in DHCP, NAT, QoS, and VLAN management
- Static route and dynamic DNS support
- Identity-based security policies and application management
- Cloud management and cloud statistics

### NSW100 Serie • 8/24-port Gigabit Nebula Cloud Managed PoE Switch



- Essential L2 features with user-friendly ACL and VLAN configuration
- Optimized for quality voice and video traffic with high 375(28P)/180(10P) watt power budget PoE technology
- Supports port mirroring for network traffic monitoring
- Supports DHCP server guard and IGMP snooping
- RADIUS, static MAC forwarding, and 802.1X authentication

### NAP303 • 802.11ac Dual-Radio Smart Antenna 3x3 Nebula Cloud Managed Access Point



- Cloud-managed, dual-radio, 3x3 MIMO, 802.11ac
- Supports combined data rates of up to 1.75 Gbps
- Smart antenna provides breakthrough performance
- Self-configuration and zero-touch deployment
- Enterprise-class security and RF optimization
- Dynamic channel selection, load balancing, and smart client steering

## NWA1123ACv2 • 802.11ac Dual-Radio Ceiling Mount PoE Access Point



- NebulaFlex™ gives you the flexibility to switch between standalone and license-free Nebula cloud management
- Nebula cloud management allows easy deployment, real-time configurations, and access to all your APs at any time
- 802.11ac 2x2 support for combined data rates of up to 1.2 Gbps
- Compact ceiling-mount design with optimized RF performance
- Robust build quality, including solid-state capacitors, to ensure long life and operational reliability

## Nebula Control Center (NCC)



- Responsive web design and intuitive user interface
- Multi-tenant and multi-site views
- Role-based administrative privileges
- Real-time, historical monitoring and reporting
- Site-based auto and smart configuration tools
- Misconfiguration protection to prevent NCC disconnections
- Rich, site-wide management tools (dashboard, map, and floor plan)

### About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.

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