

Udens College switches to Wi-Fi 6



Channel overlap no longer a problem

On busy days, nearly three thousand pupils, teachers, and support staff at Udens College use the Wi-Fi network all at the same time. Together, they generate more data traffic than all of the businesses in the nearby industrial estate combined. So, it's no wonder that the secondary school places great importance on a stable and secure Wi-Fi network. Wi-Fi specialist Whyless from Breda in the Netherlands discovered the improvements that can be made over the old network and installed a complete Wi-Fi 6 network using access points from LANCOM Systems.

BYOD

Udens College has 2.800 students. Divided between two locations, they receive education at VMBO (pre-vocational), HAVO (general secondary), or VWO (pre-university) levels. The school uses eduroam (education roaming) and has a blended learning system with printed textbooks and digital-only workbooks. Eduroam offers pupils and staff the secure use of the Wi-Fi network and provides easy connections to all eduroam Wi-Fi networks worldwide. A Bring Your Own Device (BYOD) strategy is in place at Udens College, where students can either use their own laptops or ones rented from an external party working with the school. "We are completely dependent on our Wi-Fi network," says Marcel Spierings, Director of Operations at Udens College.



“At all times it has to be available and functioning. Previously we used equipment from a supplier, who has since been taken over. After that, the quality of the technical support just got worse and worse. We became quite nervous about continuing to use their equipment, because we were encountering problems on a regular basis.”

Network survey

When the need is greatest, salvation is at hand. During the first lockdown in 2020, Wi-Fi specialist Whyless offered to survey the Udens College network free of charge. Network administrator Joey Aben did not hesitate for a moment: the specialists from Whyless were more than welcome.

Among other things, Whyless discovered that the high number of access points (one per room is needed to provide sufficient capacity) was causing a lot of channel overlap. As the Wi-Fi 5 network only allows one client to send or receive on a channel at a time, delays sometimes occurred. This could be partially resolved by distributing the channels more intelligently. However, it would be even better to switch to Wi-Fi 6, allowing multiple devices can transmit and receive at the same time. At the end of September 2020, together with network supplier LANCOM Systems, Whyless talked to Udens College about replacing the existing network with one based on Wi-Fi 6. After a reference visit to a school group in Goes – a satisfied LANCOM customer for ten years – Udens College was convinced.

“The biggest advantage is the scalability and flexibility of Whyless and LANCOM.”

Joey Aben,
network administrator
at Udens College

Rollout

In the week the 19th October 2020, when the school was closed for the autumn holidays, Whyless and the system administrators of Udens College replaced all of the access points. Configuration work was also carried out.

It was agreed that Udens College would provide first and second level support themselves, while Whyless would take care of managing the network. Ferran Menning, owner of Whyless: “We perform all updates and security patches ourselves, and because we use LANCOM’s hyper-integrated management system – the LANCOM Management Cloud (LMC) – this can be done remotely. Thanks to the LMC, we can also see when an access point fails. In that case we call a system administrator to take a look. The advantage of this solution is that we seamlessly work together as one team.”

Challenges

On the first day after the autumn break when the network went live, Whyless staff were on-site at the school for support. “Some of the students were unable to access the network,” says Menning. “In all cases, this was due to a lack of updates. Some of the laptops had not been updated for three years. By being on-site when the network went live, we were able to react quickly and proactively to solve any problems.”

Network administrator Joey Aben is very satisfied with the Wi-Fi 6 network. “The biggest advantage is the scalability and flexibility of Whyless and LANCOM. For example, we can now limit the signal strength for each access point. Still, a good network also presents new challenges. We have seen an increase in multicast traffic, for example through Spotify, which automatically searches for external loudspeakers. In the latest firmware update, LANCOM has added the option to block multicast traffic. It is always a positive experience when your supplier listens to your needs.”



At a glance

The customer



Udens College

Schepenhoek 203
5403GB Uden
The Netherlands
+31 (0)413 283-000
info@udenscollege.nl
udenscollege.nl

Products and services:

Provider of secondary
education at VMBO/HAVO/
VWO levels

The partner



Whyless

Minervum 7238
4817ZJ Breda
The Netherlands
+31 (0)852 460-219
whyless.nl

Requirements

→ Stable, scalable and
secure Wi-Fi network for
2.800 students and 350 staff

Components deployed:

- A total of 212 indoor access
points LANCOM LX-6400
- In the second phase, the
network will be expanded to
include 15 outdoor access
points LANCOM OX-6400
- Management System
LANCOM Management Cloud
(LMC)

