



CLIENT CASE

A future proof IT infrastructure for Rotterdam University of Applied Sciences



Modernizing the infrastructure to meet security and operational standards.

Entek IT believes that a network infrastructure should strengthen an organization, not hinder it. We delve into how an organization works and translate that knowledge into well-thought-out solutions. We create a strategic blueprint for a secure, stable, and logical network.

The challenge

The Rotterdam University of Applied Sciences is one of Netherlands leading institutions in the field of education. With thousands of students and staff relying daily on digital systems, a robust IT network is one of the backbones of the organisation.

Over the years the network had grown organically. New locations, systems, departments and other use cases had been added, each with their own requirements and levels of access. As a result, the network became complex, difficult to manage and increasingly vulnerable to security risks.

The university needed a network that could support intensive research, data sharing and remote collaboration without compromising on security or performance. At the same time, they wanted a structure that could scale easily to meet future technological demands.

About the client

Industry	Education
Locations	14 locations, Rotterdam
Employees	4.000
Students	39.000

Solutions & Technologies

- The infrastructure components consist of Cisco Catalyst 9000 wired and wireless, managed by Catalyst Center and secured and automated using Cisco SD-Access and Cisco ISE.
- Campus wide network segmentation using SGT and Identity, enhanced by 802.1x and profiling for secure network access.
- Fully automated network provisioning using Zero Touch Provisioning.

“The network was lagging behind current standards. We wanted to get back on track and therefore we needed to move towards zero trust with the simplest possible management and with a more scalable network design.”

Ferenc Vissers
Senior Network Engineer

Our approach

Entek IT was asked to redesign the network architecture from the ground up. Through workshops with key stakeholders we gathered information, requirements, current pain points, and desired outcomes. This information was then used as the foundation for the new network design, which was written with the technical and functional end goal in mind.

Key parts of this project were bringing the infrastructure to modern standards from a management and security perspective, while enabling the small local infrastructure team with knowledge and confidence to adopt the new standards and technologies that were embedded in the new network infrastructure design.

Entek IT implemented the new design together with the infrastructure team. Using a solid migration strategy aimed at business continuity, we managed to migrate the 14 locations to the new infrastructure in only 8 migration windows with no impact to network infrastructure services. In all decisions, choices, and implementations, the local team was involved to enable knowledge sharing.



The solution

The new network infrastructure design was based on Cisco’s Software Defined Access (SD-Access) solution, implementing network wide segmentation. The solution uses Cisco Catalyst Center to automate network onboarding and network management, while extensively increasing network visibility with the

Assurance feature. The Cisco ISE platform was used to enable network wide authentication and profiling using 802.1x. The infrastructure was seamlessly connected to the firewall environment with the future possibility to use end-to-end Identity management from the point of connection to leaving the campus infrastructure.

Results

Since the delivery of this project, we have achieved impressive results together with Hogeschool Rotterdam:

Increased Security Maturity

The new network infrastructure uses the latest security feature and standards, enabling the infrastructure to fit in the zero trust framework.

Increased Team Confidence and Knowledge

During the project, the network engineers involved gained knowledge and confidence in the new methodologies, technologies and features of their network. From looking over Entek IT’s shoulder to self deploying and managing the network.

Low Impact on Business Continuity

Using Entek IT’s proved migration approach, the migration of the entire campus was executed during off-business hours with no additional impact on business continuity.

Future Readiness

The modular design supports network flexibility and new technologies, while maintaining operational and management efficiency.

Conclusion

The collaboration between [Entek IT](#) and [Hogeschool Rotterdam](#) demonstrates how a well scoped project can deliver real (technical) results. By combining technical expertise, structured thinking and a focus on security, Entek IT has built more than just a network. It has created a foundation for innovation, connection and growth. The campus infrastructure of Hogeschool Rotterdam is ready for future developments within the field of Education.