

CASE STUDY

# Leading Dutch University for Environmental Research Harnesses the Cloud With FortiGate Virtual Appliances and Migration Automation

Wageningen University & Research, located in the town of Wageningen in the Netherlands, is one of the world's highest-ranking universities in disciplines spanning environmental science, agriculture, forestry, and ecology.

In addition to its renown in education and fundamental research, the establishment has a strong global position as a supplier of application-oriented and field-based research, collaborating with other educational and research institutes, as well as governments, non-governmental organizations, and businesses from around the world.

Wageningen University & Research employs over 6,500 staff and currently serves around 12,500 students from over 100 countries.

## Securely Harnessing the Potential of Dynamic Cloud Services

A Fortinet customer since 2014, the university had long leveraged FortiGate next-generation firewalls (NGFWs) to protect applications and data within the perimeters of its two centrally located data centers.

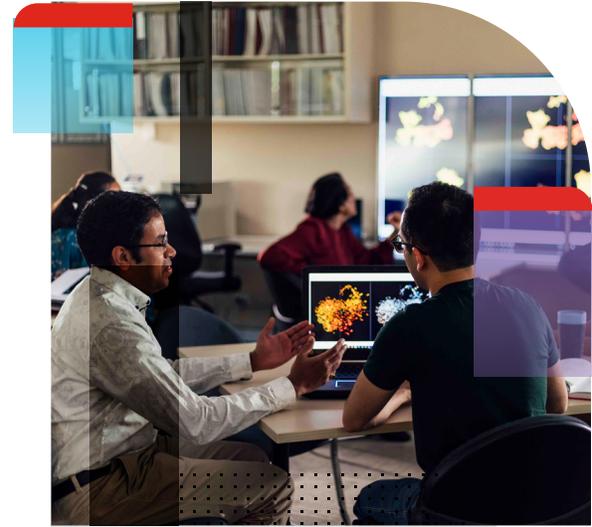
FortiGate NGFWs combine dedicated, purpose-built security processors with threat-intelligence services from FortiGuard Labs to deliver top-rated security and high-performance threat protection.

With the addition of FortiManager centralized network management and FortiAnalyzer analytics and automation (collectively known as the Fabric Management Center), network administrators gain powerful network management, automation, and response, with broad visibility and granular device and role-based administration across the entire infrastructure.

In early 2020, with increasing research collaboration on projects requiring a more flexible and dynamic infrastructure, the university's IT team realized that it would need to start moving some of these workloads to the cloud.

The team chose Azure Cloud Services from Microsoft as its cloud provider. The Azure Infrastructure-as-a-Service (IaaS) environment provided the agility, scalability, and control the team needed, but the move to the cloud complicated the process of maintaining security. Having witnessed a recent high-profile breach at another university in the Netherlands, Wageningen University & Research was taking no chances.

"We needed a solution that would allow us to extend our existing security framework into the cloud, while maintaining full control and visibility across the entire infrastructure," explains Marc Verstraaten, cloud architect at Wageningen University & Research. "Using the Fortinet Fabric Connector for Azure Cloud Services, together with virtual instances of the FortiGate NGFW, gave us single-pane-of-glass control and visibility over everything."



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– Marc Verstraaten, Cloud Architect, Wageningen University & Research

## Details

**Customer:** Wageningen University & Research

**Industry:** Education

**Location:** The Netherlands

## Business Impact

- Improved flexibility, scalability, and management of IT resources
- Enhanced security
- Greater control and visibility of global research applications and data

The Fortinet Security Fabric is an architectural approach that enables the multiple security elements of a network to act together as a single, intelligent, responsive entity.

Since FortiGate virtual appliances are built on the same FortiOS operating system as their physical counterparts, they enable customers to create the optimal architecture for their specific environment, balancing the unparalleled performance of the physical form factor with the flexibility and scalability of the virtual, to provide seamless visibility and control from the network core right out to the edge.

Through FortiManager and the Fortinet Security Fabric, configuration and policy management can then be consolidated across both physical and virtual environments through a single pane of glass, simplifying management and reducing the potential for service degradation or bottlenecks.

Non-Fortinet components, such as those within the Azure Cloud Services environment, can then be brought under the protective umbrella of the Fortinet Security Fabric through prebuilt application programming interfaces (APIs) known as Fabric Connectors.

For complex application development operations such as those of Wageningen University & Research, one of the key risks associated with moving workloads into the cloud is the potential introduction of vulnerabilities resulting from configuration errors and manual data compilation.

“The ability to integrate automated cloud deployment scripts into the already-familiar management interface of FortiManager and FortiAnalyzer was another key advantage for us,” adds Verstraaten. “Our team was well-versed in the implementation of on-premises security policies but lacked experience with the cloud environment.”

## Ready for the Future

Having completed the first phase of their new cloud migration, the university is now looking to optimize service delivery through the built-in load-balancing capabilities of the FortiGate virtual appliances.

“One of the things we particularly like about the Fortinet solution is the range of functionality you get right out of the box,” comments Verstraaten. “It means we can move at a pace that suits us, deploying additional capabilities as and when we need them.”

The university’s stated mission, “To explore the potential of nature to improve the quality of life” is undoubtedly one of increasing significance in the face of globally accelerating technological and environmental change. Through the Fortinet Security Fabric and the continued efforts of Marc Verstraaten and his team, Wageningen University & Research is now able to pursue that mission with a greatly reduced risk of disruption from the ever-evolving specter of cyberattack.

## Solutions

- FortiGate VM
- FortiGate
- FortiManager
- FortiAnalyzer

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