Jade University Meets Highest Network Control Requirements Thanks to Infoblox

THE CUSTOMER - JADE UNIVERSITY WILHELMSHAVEN | OLDENBURG | ELSFLETH

The German, Lower Saxony-based Jade Hochschule (Jade University) is proud of its innovative culture, which is characterized by interdisciplinary thinking and cooperation.

Founded in 2009, the Jade University of Applied Sciences is a technology leader that offers students, professors, employees, and guests an optimal digital working environment. In order to equip the university's network, the IT department relies on Infoblox for the operation of DDI services (DNS, DHCP, IPAM).

THE CHALLENGE

Offering a Reliable and Secure Network for an Increasingly Digital University

Jade University needed to securely and reliably control its DNS and DHCP. In the university environment, the demands on the network are increasing due to rising numbers of digital workplaces, devices, and students accessing the campus network remotely.

Jade University's three campuses combined have approximately 500 employees and about 7,600 students. Each semester, a new wave of users is added to the network. This large number of individuals in different locations creates unique challenges for the university's network infrastructure. For example, the IT infrastructure is a unit across all three of the university's branches. The central university data center serves basic services, such as WLAN and telephony. Basic components, such as the Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) ensure that the entire network works reliably.

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> **Henning Bohlken**
> **Network Administrator**
> **Jade University**

JADE HOCHSCHULE
Wilhelmshaven Oldenburg Elsfleth

THE SOLUTION

Optimal Compatibility with the Cisco DNA Network Environment

Jade University examined various offerings, but ultimately, chose Infoblox. Henning Bohlken, network administrator at Jade University, found the ideal solution with Infoblox: "The Infoblox solution was the first that provided integration with the Cisco network system, which was the crucial factor for us. Furthermore, Infoblox offers security solutions, such as DNS protection, DNS firewall, and threat intelligence, that go far beyond DNS and DHCP operation."

Jade University was looking to increase control, visibility, and security of the entire network. "We do not want to transport a DNS or DHCP packet over the network that is not managed by us via a central solution," says Bohlken. In parallel with this aspect, the university paid particular attention to ensuring that the solution was compatible with the university's Cisco Digital Network Architecture (DNA) network environment. The solution needed to provide basic services, such as DNS and DHCP, as well as the ability to offer security features that address the growing landscape of network-based cyber threats.

Furthermore, Jade University uses dynamic DNS for certain address ranges. "We let the DHCP server write the information into our DNS. This is useful because all our client devices are requesting our DNS infrastructure. We do not use the DNS on the Infoblox machine, but we use our standard DNS servers and always have them updated automatically by the Infoblox DHCP server. Over time, all the services of our DNS servers are moving to Infoblox," says Bohlken.

Jade University understands the importance of transparency in network activities for any organization. "At peak times every day, we have up to 4,000 students in the university's WLAN, all with their own devices," explains Bohlken. Without contemporary network protection and the advanced features Infoblox offers, it would be difficult to monitor network traffic. "Activities, such as bot traffic, which could be identified via DNS, easily fly under the radar without appropriate monitoring software," added Bohlken.

Among other things, Jade University needed to ensure that all students and staff have appropriate network access from anywhere. By interacting with Cisco DNA and Infoblox, Jade University is able to determine access privileges depending on whether the user is an employee, guest, or student by assigning addresses from configured IP circles. Increased visibility allows IT administrators to grant or deny access to individual users on the network.

Customer: Jade University
Industry: Education
Location: Wilhelmshaven, Germany

OBJECTIVES

- Meet the growing demands of a campus network increasingly accessed remotely
- Integrate with the pre-existing Cisco network system
- Increase control, visibility, and security

RESULTS

- Role-based access privileges
- Optionality to extend to security offerings
- Transparency in network activities

PRODUCTS

- NIOS DDI

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THE RESULT

Campus-Wide Access with Digital Network Services

The Jade IT team can now effectively monitor network traffic and users despite not having direct access to students' devices. "It is becoming increasingly important for organizations to look at network traffic in order to operate IT infrastructures in a stable and secure manner," says Bohlken. "We wanted to give all students, staff, and guests of the campus network safe access to the university network with their own devices."

Jade University has successfully established a solid foundation for adding additional Infoblox solutions in order to fully benefit from its implementation. Bohlken and his team are already thinking of future, network-based threat scenarios that should be addressed over time with Infoblox security solutions in order to better arm itself against network-based cybercrime, data theft, cache poisoning, and DDoS attacks.

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