



CASE STUDY CAMPUS-MONITORING

aduno® Campus Monitoring 2.0 for the Chemical Industry

Since 2024, ituma’s aduno® campus has been in use as a monitoring system at a major chemical company in North Rhine-Westphalia. The system stands out for its ability to measure network traffic, provide a user-friendly overview of the entire infrastructure, and automatically analyze system utilization with integrated notification and alert functions. It enables global monitoring and centralized control of all relevant network services across multiple locations and various end customers.

The network is divided into several security zones separated by firewalls and is operated in two data centers at different locations. An aduno® system instance consists of several components that are functionally separated and installed in virtual machines.

The project focuses in particular on resilience, transparency, and an overview of the entire network infrastructure and server landscape. With aduno® Campus Monitoring, not only individual devices but entire communication, infrastructure, and service chains are recorded and evaluated across all locations. The customer’s end users on campus are also integrated into the central monitoring system. Additionally, the fiber-optic internet connection is monitored both between locations and

within individual locations, while specialized sensors handle the analysis of 5G networks. Network components and systems from various manufacturers, such as Nokia (including 7750 and XWDM), Cisco, Aruba, Kerlink, and Mikrotik, are centrally integrated and clearly displayed, allowing the customer to track utilization and service quality live at any time. In addition, virtualized environments based on ESXi hypervisors and Azure cloud servers can be integrated, ensuring that hybrid infrastructures are transparently and reliably protected.

In the future, LoRaWAN networks and private 5G networks are to be integrated. To this end, new use cases are continuously being evaluated to ensure the system can be flexibly adapted to future requirements.