Success Story

Allied Telesis

Naruto University Students Seamlessly Access Campus from Connected Schools

Naruto University of Education, in Japan, gets a cutting-edge solution featuring AMF and AWC, to connect its affiliated schools and unify management.

Customer

The National University Corporation Naruto University of Education

Location: Naruto City, Tokushima Prefecture, Japan
Established: 1981
President: Kazuo Yamashita

"The school networks were old, and without effective segmentation or wireless LAN coverage. Network use was increasing, while the equipment was becoming obsolete. We needed an overhaul and redesign, to create new, centrally-managed and highly-functional information network systems.

Mr. Naoto Sone, Associate Professor, Health and Living Science Education, Graduate School, Naruto University of Education

Naruto University of Education is a national university with a campus in Naruto City, in Japan's Tokushima Prefecture. The University educates students to become new elementary and junior high school teachers, provides a post-graduate program for current teachers who wish to partake in advanced research and study, and also conducts theoretical and practical research about education.

The University develops highly-qualified and competent teachers, who possess outstanding professional skills in education, alongside practical teaching capabilities, individuality and personality. It has ranked first in Japan for seven consecutive years, out of 44 national universities and colleges for training teachers.

Affiliated with the University are a Kindergarten, Elementary School, Lower Secondary School, and a School for Special Needs Education, all located in nearby Tokushima city, about 20 kilometers away from the university's campus. The University and these connected schools work in collaboration to conduct scientific research about education theory and practices, and to implement planned teaching practices.

Challenge

Naruto University of Education had already begun to update Information and Communications Technology (ICT) in its affiliated schools. The schools had established networks, but they were becoming less reliable due to their age. The schools had also begun to increase ICT with the introduction of tablets and other wireless devices, but the old network wasn't capable of fully utilizing this new technology.

The University needed a new, streamlined network infrastructure. The goal was to unify the management and operation of all the various network systems from the Center for Information Technology Services, since operating them individually was inefficient and costly.

A major requirement for the network redesign was to implement an authentication system and strengthen security. "To provide a functional wireless LAN environment, we had to have reliable user authentication. Many of the University's students visit the schools and require network access onsite. We had to achieve safe and secure network access control," said Mr Sone.

Naruto University of Education considered proposals from several network vendors, and selected Allied Telesis thanks to a powerful feature set, which simplifies management, and provides high availability for always-on access to online resources.

> “ICT will grow exponentially. Soon, electronic textbooks will be the norm. We want to be at the forefront of this new wave of education. We expect our network use to increase significantly, and become more and more important. Allied Telesis will help us achieve our goals.
>
> **Mr Sone**

Solution

Allied Telesis x930 Series Gigabit Layer 3 Stackable Switches now provide a powerful network core at the university.

Two x930 series switches use Allied Telesis Virtual Chassis Stacking™ (VCStack), allowing them to function as a single chassis, and providing load balancing and redundancy. VCStack and link aggregation provide a solution where network resources are spread across the virtual chassis members, ensuring device and path resiliency. Virtualization of the network core ensures uninterrupted access to information when needed.

Allied Telesis x510 Series Gigabit switches are now installed as distribution switches, and also function as edge switches at the connected schools. Allied Telesis TQ4600 Wireless Access Points (APs) provide staff and students with easy access to digital information, from any connected device.

Unified management

Naruto University of Education and its connected schools are now all under central control, thanks to Allied Telesis Autonomous Management Framework™ (AMF) managing the switches, and Allied Telesis Autonomous Wireless Control (AWC) managing the wireless APs.

AMF provides centralized management of the entire network, as well as automation that simplifies day-to-day administration. Intelligent software reacts to changes within the network and automatically changes the topology. Network switches are automatically backed up, and can be recovered with zero-touch; while new devices can be added to the network with plug-and-play simplicity.

AWC provides management of all wireless APs, and enables automated optimization to minimize coverage gaps and reduce interference. This ensures ultimate performance for wireless users from all parts of the network, while user authentication controls online access.

Allied Telesis Vista Manager EX provides a single-pane-of-glass graphical interface for the AMF and AWC wired and wireless network, so all devices can be easily monitored and managed, and any issues quickly found and resolved.

The new network was constructed and installed mainly outside of school hours and during holidays, to minimize disruption. “Despite a short construction period, the new systems were introduced smoothly and completed as scheduled,” said Mr Sone.

Success

After a successful integration, the new network systems are running smoothly with no issues. Thanks to AMF and AWC, the University now has seamless and secure network access, with staff and visitors able to easily access online resources and applications.

Wireless connectivity is high-performing, and the network provides prompt recovery should a failure occur, while Vista Manager EX provides a window into the network, with a centralized view of all wired and wireless devices, and an overview of network health and performance.

The cost-effective new solution is already prepared for the future adoption of any new technologies, including Allied Telesis Secure Enterprise SDN (SES).

Future plans

Naruto University of Education will replace its computer infrastructure systems in 2018. It will be a large-scale replacement, including servers and clients. The use of the Cloud is planned as well. Further security reinforcement is also planned, and the University’s new network is already structured to support SES.

Naruto University of Education will continue to actively promote the utilization of ICT to benefit education research. Allied Telesis will support the University, both now and into the future, with cutting-edge network products and technologies.

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