

# Kyushu Sangyo University Builds Private Cloud on Nutanix to Improve Service Quality on Campus

Nutanix Cloud Platform Reduces IT Management Burden, Rack Reduction, Cloud Flexible Scalability, Improved Performance, and Enhanced Campus Services All at Once

## BENEFITS

- Enhanced quality of campus services
- Reduced management burden for IT operations staff
- Stable and continuous infrastructure operation and flexible scalability



“The high performance of the private cloud infrastructure we have installed has greatly reduced the workload of our SEs. The university’s systems are subjected to high-pressure loads at different times of the year, but Nutanix enables us to optimize performance according to the situation. As the load on the system increases with the promotion of DX, we have high expectations for Nutanix’s architecture, which allow us to respond flexibly.”

– Masatsugu Ishioka, Administrative Director,  
Computing and Networking Center, Kyushu Sangyo University



“Managing an increasingly complex 18 node blade server, network and SAN storage with a small team was increasingly challenging for the Information Infrastructure Center in the past years. We needed to deal with cumbersome on-premise operations and rolling power outages and even required specialized IT skillsets.”

– Hitoshi Fukuda, Administrative Manager,  
Computing and Networking Center, Kyushu Sangyo University

## CHALLENGES

Kyushu Sangyo University is founded on the ideal of “industry-university unity,” which states that industry and the university should work together like wheels of a car to meet the needs of the time. The school celebrated its 60th anniversary in FY2020, and has formulated a “mid-term plan” that outlines what the school should work on over the next 10 years. The ultimate goal of the plan is “to become a global university integrating arts, sciences, and technology,”

## INDUSTRY

Higher Education

## CHALLENGES

- Strengthen infrastructure to meet new needs such as remote learning
- Improve convenience for students using the Learning Management System (LMS)
- Improve IT services for engineering faculty and staff, including multi-purpose virtual machine disbursement

## SOLUTION

Nutanix Cloud Infrastructure (NCI)

- Nutanix AOS Storage
- Nutanix Prism

## Applications

- Learning Management System (LMS)
- Virtualized Environment for Engineering Faculty and Staff

and by 2030, the university aims to attract students with diverse qualities and to provide a diverse education that integrates arts, sciences, and technology in eight areas: education, research, internationalization, industry-university collaboration, social and community contributions, diversity, branding, and management infrastructure. The university aims to establish programs that, build quality assurance of “learning,” improve student support, and encourage lifelong education.

The university is about to consider digital transformation (DX) by replacing the ICT infrastructure required for the eight areas of the mid-term plan with an administrative system in two years, and a network in another year after that. The University urgently needed to resolve network and infrastructure issues for remote classes, improve the performance and the usability of the administrative system that forms the foundation of the university, and improve the learning management system (LMS) used by students and faculty.

Masatsugu Ishioka, Administrative Director of Computing and Networking Center at Kyushu Sangyo University, said, “DX is one of the key elements of our mid-term plan. Our management has high expectations and understanding of IT, which is the driving force behind DX. The Center for Integrated Information Infrastructure will lead and promote DX by utilizing Nutanix to improve the quality of education and operational efficiency with ICT”.

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## SOLUTION

Managing an increasingly complex 18-node blade server, network and SAN storage with a small team was increasingly challenging for the center in the past years. We needed to deal with cumbersome on-premise operations and rolling power outages and even required specialized IT skillsets. The number of hosted servers exceeded 250, and we were under pressure to increase the number of staff, yet the management man-hour load continued to grow,” said Hitoshi Fukuda, Administrative Manager of Computing and Networking Center at Kyushu Sangyo University.

To ensure efficient operations and reduce the burden on staff, Nutanix Elevate partner SCSK Corporation proposed migrate to a datacenter and build an infrastructure using the Nutanix Cloud Platform. The Center conducted a detailed study, including research of case studies, comparison with VMware vSAN, and operational evaluation with Nutanix Prism. As a result, the decision was made to deploy the Nutanix Cloud Platform, as it is expected to dramatically improve operational efficiency and scalability.

The Center also considered public cloud computing, but there were issues with cost performance, and the pay-as-you-go consumption style did not fit the university’s budgetary constraints. Public cloud computing is difficult to operate because its costs are difficult to predict and budget for. In comparison, Nutanix Cloud Platform met the university’s needs for a flexible, easy-to-operate, and scalable cloud computing platform with a consumption model that was easy to budget for. Thus, with the support of the school’s management team, the transition to a private cloud, where the servers would be moved from the university’s building to a highly robust data center, proceeded smoothly.

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## CUSTOMER OUTCOMES

During the datacenter migration, Nutanix’s Sizer tool was used to optimize resources by sizing virtual machine information, which reduced the number of datacenter racks and power consumption, leading to overall gains in total cost of ownership. In addition, faculty and staff services were greatly improved, as the virtual servers used by faculty and staff were also consolidated in the datacenter, and operating more efficiently with Nutanix Prism.

Fukuda said, “Compared to the old system, the hosting service by Nutanix Cloud Platform has reduced the man-hours of our resident system engineers because Prism simplifies the configuration itself and makes it very easy to set up virtual machines. The replacement of the servers in the Faculty of Science and Engineering, which was under consideration, has been confirmed to have no performance or capacity issues and will be consolidated into the same system. The flexibility of Nutanix is also an additional bonus”.

On the other hand, an LMS for students requires significantly high performance because thousands of people access it at the same time during lessons. Before the introduction of the LMS, there were some concerns for the site. But with the private cloud which uses HPE ProLiant DX with Nutanix, the site has been able to demonstrate stable performance in handling high demands without difficulty and is highly praised by the university.

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## NEXT STEPS

“We plan to update the system to improve issues in the enrollment which faces highly intensive workloads twice a year. We will consider expanding the system with careful consideration, focusing on the performance of the database, which can withstand simultaneous access by 10,000 students. We also plan to expand the hosting service to other departments and consolidate existing internal servers,” said Ishioka.



[info@nutanix.com](mailto:info@nutanix.com) | [www.nutanix.com](http://www.nutanix.com)

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