

Nutanix Helps South China Normal University Pursue Talent Strategy Despite a Pandemic

South China Normal University (SCNU) builds an online teaching platform using the Nutanix Enterprise Cloud, becoming a pioneer in China at a time when home learning becomes the new normal

BUSINESS BENEFIT

The Nutanix Enterprise Cloud is supporting the Liru Online Courses platform at the South China Normal University (SCNU) as part of its “Internet+ Innovative Talent Cultivation Plan.” The platform assists nearly 50,000 teachers and students, and when COVID-19 struck, SCNU was able to quickly scale the platform’s infrastructure for more users.

The Network Center of SCNU finds the platform flexible, scalable, easy to manage, and secure. There have been no outages on the Nutanix solution since it went live three years ago. Plus, one-click manageability

“With its proven advantages in the manageability, scalability, disaster recovery, and simplified backups, Nutanix has played a vital role in helping us implement our ‘Internet + Innovative Talent Cultivation Plan.’ The highly efficient solution has ensured the stable operation of our smart teaching platform at a time when COVID-19 has made online teaching the new normal.”

– Lin Nanhui, Director of the Network Center at South China Normal University

INDUSTRY

Education

BENEFITS

- Enables “Internet+ Innovative Talents” strategy and overcomes disruption from COVID-19
- Ensures ease of management for administrators and saves time on upgrades
- Delivers rapid scaling for billions of files while enhancing network security
- Improves disaster recovery capabilities while lowering cost

SOLUTIONS

- Nutanix Enterprise Cloud OS
- Nutanix AHV
- Nutanix Prism management software
- Nutanix Files
- Nutanix Flow
- Lenovo ThinkAgile HX

APPLICATIONS

- Liru Online Courses platform
- Campus management for educational affairs, assets, personnel, etc.
- Library, website, and campus office system

and rapid disaster recovery capabilities ensure the Network Center is both efficient and secure. The Network Center manages the Nutanix Enterprise Cloud, which supports both SCNU campuses, through a single interface, gaining real-time insight on application and the network to make adjustments on-the-fly so platform performance stays optimal day in and day out.

CHALLENGE

South China Normal University (SCNU) published the “Internet+ Innovative Talent Cultivation Plan” at the end of November 2015. The plan described using innovation and the internet to support teaching and to cultivate talent as part of China’s 13th five-year plan. Included in the plan was Liru Online Courses, a new smart teaching platform to improve academic achievement.

Based on the open-source online learning platform Moodle, Liru Online Courses is one of the largest education solutions of its kind in China. It provides one-stop services including teaching, learning, and teaching management for greater efficiency and quality.

Before SCNU built the Liru Online Courses platform, the university’s teaching resources were decentralized. Storage lacked performance and was difficult to scale. Plus, disaster recovery (DR) costs were high. The university wanted to update the infrastructure to support the new platform and better enable the Internet+ Innovative Talent Cultivation Plan going forward.

SCNU tasked the Network Center of SCNU to update the infrastructure and move to a cloud-enabled hyperconverged infrastructure for centralizing storage, networking, and computing management. The solution needed to deliver applications and databases for lesson preparation and online teaching across campuses. Plus, it had to provide data storage for coursework, and videos.

SOLUTION

The Network Center chose the Nutanix Enterprise Cloud, making SCNU the first university in China to adopt the industry-leading software. The Network Center deployed the Nutanix Enterprise Cloud on 16 Lenovo ThinkAgile HX hyperconverged nodes at the data center in the University City campus. It also deployed Nutanix on 17 Lenovo ThinkAgile HX hyperconverged nodes at the data center in the Shibe campus and replicated data between the two data centers for DR. The Lenovo ThinkAgile HX nodes run Nutanix AHV for server virtualization software and DR capabilities. The nodes also feature Nutanix Files enterprise file storage to build cloud storage and Nutanix Flow network micro-segmentation scheme to achieve network traffic visualization and application security protection of the virtualization platform.

CUSTOMER OUTCOME

Enables “Internet + Innovative Talents” strategy and overcomes disruption of Covid-19

The Network Center is helping the SCNU deliver its “Internet+ Innovative Talent Cultivation Plan” and Liru Online Courses. Nearly 50,000 teachers and students are using the smart teaching platform. When COVID-19 struck, the Nutanix solution played a vital role, enabling SCNU to implement a plan to help teachers and students remotely, so they could study safely from home. Furthermore, using the Nutanix solution, the Network Center can support high numbers of concurrent users, large amounts of video and audio resources, and multiple data-file types. Plus, the infrastructure is highly stable and secure.

Ensures ease of management for administrators and saves time on upgrades

In just a few weeks, SCNU deployed the Nutanix infrastructure and migrated applications. By doing so, the Network Center simplified management of computing, storage, and networking. The team uses Nutanix Prism for daily operations and doesn't have to spend time dealing with complicated configurations and management. Network connectivity for the nodes is as simple as connecting an ordinary server to the network, and increasing capacity takes no more than connecting an additional node to a 10-gigabyte network switch with a single click.

The Network Center also spends less time on upgrades compared with the previous infrastructure, with work completed in a single click. What's more, services are not disrupted during upgrades and there is no management overhead, because the Nutanix system dynamically migrates workloads to other nodes. To date, the Nutanix Enterprise Cloud has been running for nearly three years without any outages on the hardware or software.

Rapid scaling for billions of files and network security made easy

Using Nutanix Files, the Network Center solved challenges around the frequent access to small files of less than 10MB and micro videos. At one point, the Network Center had considered network attached-storage for files, but it wasn't suited to the teaching platform's small-file sizes and need for rapid scalability. Nutanix Files helped overcome this challenge because of its design to deal with billions of files and tens of thousands of user sessions. Plus, as the environment expands, the Network Center team can add compute and memory to the Nutanix Files cluster or attach an additional Nutanix Files virtual machine using a simple interface. Furthermore, combined with the Nutanix Files analysis component, the Network Center has file access for auditing and reporting.

Nutanix Flow has helped the Network Center improve security and better manage network bandwidth. Because the Network Center team can observe application performance and traffic loads, it can fine tune the network on the fly. The risk of unexpected network changes leading to data bottlenecks is avoided thanks to centralizing network security policies. All this ensures the SCNU can pursue its online strategy without concerns over application security.

The low-cost disaster recovery plan guarantees data security

Using Nutanix Enterprise Cloud's native DR and backup functions, the Network Center has greatly reduced DR and backup costs for the campus cloud. The high-speed data replication capability built into the Nutanix system adjusts the levels of data protection to the needs of each virtual machine. The Network Center runs DR drills on a regular basis and simulates failure scenarios in case of outages striking one of its data centers.

NEXT STEPS

Looking to the future, SCNU will deepen its relationship with Nutanix. It plans to look at expanding the Nutanix solution to improve educational services and network security protection for other university platforms.



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