國票綜合證券
WATERLAND SECURITIES

Waterland Securities Partners with Nutanix to Compete in the Fintech Era.

Waterland Securities, a Taiwanese financial securities trading company, aims to provide customers with frictionless and uninterrupted services.

BUSINESS BENEFIT

In the fiercely competitive digital era, IT must meet the heightened expectations of customers while also implementing the enterprise's digital transformation strategy to create higher value for the organization.

> **"The Nutanix Enterprise Cloud Platform provides us with the freedom to build highly flexible and efficient infrastructure for deploying our mission critical applications and enterprise workloads. We improved the stability of multiple trading systems, solved the problem of insufficient datacenter space, and simplified IT operations and management. Nutanix has really given us the confidence to easily expand the computing and storage modules at a lower cost over the next three to five years, providing a solid foundation for the company's long-term development."**
>
> – Mike Liao, Head of IT, Waterland Securities

INDUSTRY

Financial services

BENEFITS

- Negligible effects on trading operations during failover recovery
- 95% reduction in datacenter footprint opens more space for future growth
- IT redeployed to more business-critical tasks
- Accelerated decision-making thanks to single plane of glass management

SOLUTION

Nutanix Enterprise Cloud OS

- Nutanix AOS
- Nutanix Prism

Applications

- Financial trading system
  - Mobile platform
  - Purchase order system
  - Verification of orders
  - Website purchase order system
- Corporate and internal websites
- Form system

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Since deploying the Nutanix Enterprise Cloud, Waterland Securities achieve two milestones in their customer-centric transformation.

- Customers have full-time access to their trading applications at any time of the day, without any interruptions, even during failover recovery scenarios.
- IT headcount and workload have been redeployed from laborious operations and management into business-critical tasks. The IT team is now focused on using the power of social apps to acquire new customers. Their recent project of an in-app trading platform inside LINE (Asia-focused mobile chat app) achieved a breakthrough of 30,000 subscribers in just three days. More work will be done in analytics to help make marketing and product development more effective.

CHALLENGE

Founded in 1990, Waterland Securities has recently committed to expanding business revenue through diversifying financial operations and the influence of single market risk variables. In response to market changes, the company continued to strengthen the integration of resources in its financial holdings to provide more valuable investment and wealth management services to meet the varying financial needs of retail investors.

Several years ago, Waterland Securities introduced host virtualization equipment and distributed information architecture for the securities trading service system. However, this legacy architecture had great shortcomings. When an unexpected failure occurs in a hardware device, it takes several minutes to recover and start up.

"Our stock exchanges are measured in milliseconds and microseconds, and to wait for a few minutes of system recovery time is unacceptable to the business," said Mike Liao, Head of IT, Waterland Securities. "So we started thinking about this. If we continue to expand the virtualized environment, the hardware must have redundancy, so business operations are not interrupted, and infrastructure downtime is minimized during failover scenarios."

Moreover, Taiwan's Financial Supervisory Commission (FCC) will officially implement continuous trading in March 2020 so as to improve efficiency, transparency, greater order types, and more. Waterland Securities aims to move the virtualization host system responsible for securities transactions to Chunghwa Telecom Internet Data Center (IDC), which is located right next to the Taiwan Stock Exchange Corporation in Banqiao. The Banqiao Information Center lease space to companies seeking to gain a competitive advantage in the securities market, especially those in pursuit of millisecond trading, but its rent is quite expensive. To reduce operating costs and avoid the failure of hardware equipment, and a decline in customer satisfaction, the company began to look for the best solution for building a next-generation datacenter.

SOLUTION

Waterland Securities originally considered upgrading its legacy architecture, but expensive implementation and on-going maintenance costs ruled out this approach, especially in light of the company's anticipated growth. After comparing different solutions, Liao decided to test the Nutanix NX series of hyperconverged appliances. He saw that the Nutanix Enterprise Cloud Platform offered the most complete solution and was especially impressed with its ability to keep application services in operation even after node failure.

With the assistance of Nutanix specialists in Taiwan, Waterland Securities began a proof of concept (POC) test in September 2017 to verify the solution's failover recovery capabilities.

"When we introduced Nutanix Enterprise Cloud with an all-flash architecture, we were initially concerned about the potential lack of storage capacity. We originally thought we may have to purchase additional storage modules," Liao pointed out. "But after the application system was transferred to the Nutanix Enterprise Cloud Platform, we found that Nutanix's built-in software deduplication and compression technology was extremely efficient, saving us about 65% of the storage capacity, improving the stability of the application service, and maximizing efficiency."

CUSTOMER OUTCOME

To fully maximize the benefits of this investment, Waterland placed most of their customer-facing retail trading applications on Nutanix, such as the mobile phone platform, action orders, voucher system, web ordering system, trading system, official website, internal website, and form system. Hosting these on Nutanix enables customers to enjoy faster trading services and strengthen the company's competitiveness in the financial securities market.

Negligible effects on trading operations during failover recovery

When hardware devices failed in the past, the virtualized three-tier architecture failover process would take several minutes for a single virtual host to resume operations. Now, thanks to the characteristics of Nutanix's hyperconverged architecture with integrated disaster recovery and business continuity features, node failures are automatically managed by transferring the workloads to other nodes, and the application service is not affected.

IT redeployed to more business-critical tasks

Previously, the IT department had to hire IT specialists to manage and operate the three-tier architecture and field equipment. Even the SAN storage equipment required dedicated management personnel, an example of how burdensome infrastructure management for the IT department can be. Now that Waterland Securities is using Nutanix hyperconverged infrastructure, the IT department no longer needs to monitor storage device I/O, the network transmission, or even server operations. Instead, it can redeploy valuable human resources to developing business-critical tasks that help meet the diverse needs of customers.

95% reduction in datacenter footprint means more space for future growth

When Waterland rented the datacenter space of Chunghwa Telecom IDC, it had to factor in the company's planned growth over the next three to five years, which meant that hyperconverged infrastructure was playing a strategic role. "This project allows us to replace the original 60 servers and 2 storage devices with 7 Nutanix hyperconverged appliance nodes, with a total height of 8U in four chassis, saving about 95% of the rack space. This not only freed-up costly rack space, but also meant we can fully expand our services and IT equipment into the space capacity during the next three to five years without worrying about rack space shortages."

Nutanix Prism – a holistic view for quicker decision-making

"In the past, when the IT department needed to deploy a new virtual host in response to the needs of the business and marketing departments, it was often necessary to confirm the available resources on each individual server," said Liao. "Now, using Nutanix Prism for managing our Enterprise Cloud enables us to capture system hardware resource usage, such as storage space, processors, and memory, in a single interface, which naturally speeds up our ability to meet new IT demands."

NEXT STEPS

The Nutanix Enterprise Cloud has brought about significant benefits to the company. Waterland is reviewing the possibility of transferring other business-critical application services to the platform to expand the synergy of the hyperconverged architecture. Furthermore, given that commercial host virtualization software incurs expensive licensing costs, Waterland has decided that new projects will also begin testing the availability, compatibility, and future range of application-support of the Nutanix AHV virtualization platform to help mitigate these costs.

Finally, the IT department is also considering transferring the head office's application service system to an idle, unused rack in the Chunghwa Telecom IDC machine room, thereby reducing operation costs, and improving the connectivity between applications while also reducing network latency. The speed of data exchange has strengthened the competitive advantage in the era of financial technology.

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