PURESTORAGE®

Kuehne + Nagel Limited , one of the world's leading logistics companies, was experiencing what many large enterprises face today, the exponential growth of data and the need to modernize its IT infrastructure in order to keep pace with the data deluge. The foundation of an agile IT infrastructure to drive business sustainability and growth is a robust, high-performing storage system that can cope with high data volumes effectively, efficiently and securely. After detailed technical evaluations, Kuehne + Nagel decided on an all-flash storage solution by Pure Storage.

KUEHNE+NAGEL

BUSINESS TRANSFORMATION

Pure Storage has significantly improved the performance and reliability of Kuehne + Nagel's storage environment, freeing up valuable IT administration time and creating a more stable environment for their business applications.

GEO

Asia Pacific/ Hong Kong

INDUSTRY

Logistics

"We are truly impressed by the latency and reliability of Pure Storage's FlashArrays."

Clarence Chan, Senior Vice President Asia Pacific & Corporate Financial IT at Kuehne + Nagel Limited

GLOBAL LOGISTIC LEADER MEETS ALL-FLASH VANGUARD

Evolving from a traditional international freight forwarder to a leading global provider of innovative and fully integrated supply-chain solutions, Kuehne + Nagel today has more than 1,300 offices in over 100 countries with approximately 82,000 employees, some 8,500 of them in the Asia Pacific region. As a time-honored logistic company established in Bremen, Germany 130 years ago, Kuehne + Nagel's headquarters now sit in Schinedllegi, Switzerland. Its Asia Pacific headquarters are in Hong Kong, where they have been operating since 1965, offering comprehensive logistics services including sea freight, airfreight forwarding, contract logistics, warehouse management and distribution.

Kuehne + Nagel is committed to enhancing their services with cutting-edge technology so as to offer integrated logistics solutions with outstanding quality and operational excellence. Facing challenges associated with the rapid expanding business data flow, a storage system with high performance, reliability and low latency is critical to enable the company to stay at the forefront of the industry.

"We are responsible for the IT operations across the region and we make our best effort to take care of the heavily used storage network on which all users rely. With the ever-increasing system loads, Kuehne + Nagel conducted a study to upgrade its storage system to drive seamless and effortless operations of the business." said Clarence Chan, Senior Vice President IT Asia Pacific & Corporate Financial IT at Kuehne + Nagel Limited.

"In order to enhance the business operations, phasing out the aging legacy storage system became our top strategic IT priority. The legacy system was experiencing constant performance issues and fell well short of the requirements of our business applications. We needed to identify a storage provider who could offer extremely fast I/O while reducing latency. Upon the recommendation of our headquarters, we reached out to Pure Storage to find out if its all-flash storage technology could match our business requirements," said Chan.

COMPANY:

Kuehne + Nagel Limited
https://kuehne-nagel.com/

USE CASE:

- Database: MSFT - SQL Server; Oracle - Oracle DB

CHALLENGES:

- Aging storage system with lagging performance unable to support demands of the business
- Insufficient response times and slow performance for key applications causing issues with customer satisfaction
- High cost and time demands related to IT staffing

IT TRANSFORMATION:

- The project deployment from placing order to gear in production took only two weeks
- Average latencies are one-third compared to the legacy infrastructure
- The company achieves significantly lower capacity, energy and space requirements with a high data reduction rate of 4-5:1
- The productivity of software developers has increased by 30% through faster development and testing cycles
- Simplicity and effortless operation decrease administration resource demand by 40%
- Power consumption and footprint is 85% lower, leading to cost savings in data center
- VM Analytics Tools instantly spots the root cause of the performance issues rather than spending days on troubleshooting and trial-and-error (saving time for administrators to focus on more value-added projects).

"Its technology is much more up to date, which makes them stand out from our old data legacy storage solutions."

Clarence Chan, Senior Vice President Asia Pacific & Corporate Financial IT at Kuehne + Nagel Limited

As part of the evaluation process, the company conducted benchmark tests of Pure's offerings. In the in-depth review, Pure Storage's FlashArray consistently came up as top for performance, I/O throughput and latency. The market has become very competitive with irresistible prices offered by competing vendors. However, Kuehne + Nagel had the foresight to realize that the long-term benefits of Pure's solutions would overcome any short-term gains from lower-priced offerings.

"We are truly impressed by the latency and reliability of Pure Storage's FlashArrays. Their technology is much more up to date, which makes them stand out from our legacy storage solutions. Meanwhile, their capabilities in data compression and data reduction have also impressed us," Chan said.

DELIVER A BUSINESS OPERATION MAKEOVER

The migration to Pure Storage was fast and effortless. As soon as the decision was made, Kuehne + Nagel requested to have the deployment completed as quickly as possible. The solution comprised the FlashArray//X50, which delivers predictable I/O performance and superior bandwidth for a consolidated application under a virtualized database environment, with I/O latency at sub-milliseconds, over three times faster than the legacy system. With the entire deployment taking less than 2 weeks, the IT team at Kuehne + Nagel said it was the smoothest IT deployment they had ever done.

"We were impressed by the simplicity of the implementation. It was as easy as plugging the Pure Storage FlashArray into the fabric, connecting it to our existing server/virtualized farm in just a few clicks," said Chan.

The Pure Storage system, apart from its simplicity and reliability, also delivered fast, reliable performance with transparent administration information. Kuehne + Nagel was also in the process of developing a business application to streamline business workflows such as sea freight workflow. To ensure the servers could effectively manage the data, which is critical to the real-time success of such an application, several robust tests were conducted within a short timeframe.

The snapshot and cloning technology on the Pure arrays enabled the team to significantly reduce storage consumption on the development platform. Typically, legacy systems require one or two days to clone a database. The FlashArray//X50 finished the same process in two minutes. Overall, the team was able to improve their software development and testing productivity by over 30%.

ACHIEVE EFFORTLESS DATA REDUCTION TO SAVE SPECES AND COSTS

"The FlashArray has drastically streamlined our storage. Pure Storage exceeded our expectations for availability and furthermore, the data reduction through compression, deduplication and thin provisioning reached 4-5:1, which is much higher than expected," highlighted Chan.

A full rack of FlashArray//X50 can deliver 650TBs of effective capacity in 3U with total non-disruptive upgrade to //X90 with 3PB and adequate bandwidth to replace the entire Tier 1 footprint. The //X delivers FlashArray's proven reliability and effortless monitoring. After deploying the FlashArray, the power consumption for Kuehne + Nagel was nearly 85%, which promises cost efficiency in the data center in the long run.

REDUCE MANAGEMENT TIME AND TAKE PRESSURE OFF INTERNAL TEAMS

While the high-performance storage has improved the reliability of test and development environments, additional value lies in the time saved for the IT administration team. Instead of wasting hours on storage monitoring, the effortless operation of Pure Storage's FlashArray has dramatically reduced demand for administration. The team estimates that Pure's self-driving storage capability has saved around 40% of man-hours required for infrastructure administration, performance tuning, troubleshooting, monitoring and reporting, allowing IT team members to focus on more strategic and mission-critical tasks.

Furthermore, the reliability of the FlashArray has removed unnecessary stress and concerns. Although the team still operates a hectic schedule to respond to IT issues, they no longer need to worry about unpredictable storage problems. "The VM Analytics tools offer predictive analytics support to the IT infrastructure team before problems even occur and helps to instantly spot the root cause of the performance issue rather than spending days on troubleshooting and trial-and-error," Chan noted. "Once those performance issues are spotted and addressed by the AI and the machine learning technology at the backend, it continuously scans the telemetric data and uses predictive analytics to help troubleshoot potential issues and optimize workloads."

PREPARE FOR THE FUTURE BUSINESS NEED WITH EVERGREEN MODEL

The Kuehne + Nagel IT team is extremely satisfied with what Pure Storage has delivered so far. With Pure Storage's Evergreen™ Storage model, Kuehne + Nagel is confident that its storage infrastructure is ready to respond to any future business demand. With plans to extend and add some of the region's new business service applications such as additional disaster recovery capability, Pure Storage is seen as the sole storage vendor that can scale alongside a growing business and for new business applications. With Pure, Kuehne + Nagel will be able to add storage capacity and upgrade components with zero downtime and impact on performance.

"The capabilities of FlashArray in data compression and data reduction have also fascinated us"

Clarence Chan,Senior Vice President Asia Pacific & Corporate Financial IT at Kuehne + Nagel Limited

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info@purestorage.com
www.purestorage.com/customers