> "Fujitsu has proven once more that it is a trusted partner, with the reliability, performance, scalability, and affordability to allow us to enjoy enterprise-class solutions at a fraction of the cost."

John Hohn
IT Manager
Pete Lien & Sons

Pete Lien & Sons deployed a Fujitsu hyper-converged server/storage cluster, increasing performance by 50 percent, with scalability enabling future growth.

At a glance

Country: United States
Industry: Mining
Founded: 1944
Website: petelien.com

Challenge

Pete Lien & Sons' existing storage and server cluster had been in place for five years and was reaching end of life. Performance was suffering and it was prone to failure. The company wanted to find an affordable solution that could scale with the company.

Solution

Pete Lien & Sons worked with Fujitsu partner Golden West Technologies to configure four FUJITSU Server PRIMERGY RX2540 with hybrid 1TB SSD memory and ten additional 1.8TB disc drives as a four-node cluster. This runs Windows Server 2016 with Storage Spaces Direct, which provides reliable, scalable, software-defined resources.

Benefit

- Application performance has increased by 50 percent, enabling users to be more productive

- Less administration required, freeing up internal resources

- Significant reduction in the time needed to generate critical reports

- Future proofed solution can easily scale up by adding resources as and when required

- Zero incidents reported since installation

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Customer

Pete Lien & Sons engages in limestone mining, offering rock, concrete, lime and pulverized limestone, sandstone, gypsum, iron ore, sand, and gravel for constructing roads, dams, homes, schools, churches, grocery stores, and banks. The company also provides calcium limestone feed for animals, as well as lime to purify water, scrub sulfur, and mercury from stack gases as well as steel, block, and ready-mix products.

Products and Services

- FUJITSU Server PRIMERGY® RX2540
- FUJITSU Desktop ESPRIMO® Q556
- FUJITSU Notebook LIFEBOOK® U727
- FUJITSU Integrated System PRIMEFLEX for Microsoft Storage Spaces Direct

Upgrading a proven server/storage solution

Pete Lien & Sons' Fujitsu-based storage and server cluster had been in place for five years and was reaching end of life. Although the company considered simply extending its existing solution, it felt that a fresh start would help it better manage the ever-increasing demand for performance and capacity.

"The previous three node cluster, running Microsoft® Hyper-V®, had served us well, however, applications are becoming more and more demanding in terms of memory, processing power, and storage, so we decided to go to market for a new solution," explains John Hohn, IT Manager, Pete Lien & Sons. "When it came down to evaluation, Fujitsu was the most cost-effective. We were also familiar and comfortable with Fujitsu hardware, having used it for years."

The biggest challenge was how to configure the new solution. Following intensive research, Pete Lien & Sons had a choice to make: stick with the existing iSCSI approach or adopt a hyper-converged solution.

"We wanted a scalable and flexible platform so we decided to introduce hyper-convergence," adds Hohn. "It also gave an impressive price performance ratio and is well supported by Fujitsu."

Introducing hyper-convergence

Pete Lien & Sons worked with Fujitsu partner Golden West Technologies to configure four FUJITSU Server PRIMERGY RX2540 with hybrid 1TB SSD memory, as well as ten additional 1.8TB disc drives as a four-node cluster. The FUJITSU Server PRIMERGY RX2540 is the new 2U, dual-socket rack server offering high usability, scalability, and cost-efficiency. Its Intel® Xeon® Processor Scalable Family CPUs in conjunction with DDR4 memory technology, with up to 3TB available, increases performance to meet Pete Lien & Sons' requirements. This modular design offers excellent expandability of up to 28 disk drives, eight PCIe Gen3 expansion cards, and best-in-class energy efficiency.

"We designed the platform with Golden West but performed the installation and migration ourselves. This involved moving 60 virtual machines and 8TB of data during out of hours over the course of three weeks," continues Hohn. "Critical applications, including ERP, SQL servers, file and print, and specialized line of business applications were all successfully migrated without disrupting the business."

The new platform also supports Windows Server 2016 with Storage Spaces Direct. This uses Fujitsu industry-standard servers with local-attached drives to create reliable, scalable, software-defined storage at a fraction of the cost of traditional SAN and NAS arrays. The hyper-converged architecture simplifies deployment, while features such as caching, storage tiers, and erasure coding, ensure the best performance.

"Windows Server® 2016 with Storage Spaces Direct was critical in enabling hyper-convergence, which in turn makes for more efficient performance and storage," says Hohn. "It also helped balance performance with cost and the ability to scale, which is key to our future growth."

Improved performance, instant scalability

Pete Lien & Sons saw an instant increase in performance, courtesy of the expanded memory and improved processing power. Testing IOPs has shown that there has been a 50 percent increase, meaning applications run faster and reports can be generated much more quickly for 200 users across 15 locations.

"Reports, invoices, external vendor communications – all are substantially faster than previously. An invoice batch process which might have taken 15 minutes to create now appears in less than five minutes. That makes our users more productive," comments Hohn. "The new solution is also future proof because we can easily scale out and up by adding resources as and when required."

The new Fujitsu cluster also delivers on reliability – since deployment, there have been zero issues to address. In case of any failure, Fujitsu provides direct support. Given how much time and attention the old system demanded, this has freed up a considerable amount of resources for Hohn and his team.

"Previously, we couldn't allocate the requisite resources, and frequent system failure meant we spent too much time firefighting, whereas now it just sits in the corner and gets on with the job," remarks Hohn. "The build quality is phenomenal, and the Fujitsu support we received in the past was always fantastic, so we have complete peace of mind."

The new system is complemented by several standalone Fujitsu servers outside the head office, as well as FUJITSU Desktop ESPRIMO Q556 PCs and FUJITSU Notebook LIFEBOOK U727 laptops across the estate.

"A hyper-converged infrastructure was treading new ground for us, but we have been delighted by the result," concludes Hohn. "Fujitsu has proven once more that it is a trusted partner, with the reliability, performance, scalability, and affordability to allow us to enjoy enterprise-class solutions at a fraction of the cost."

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Contact a representative at: AskFujitsu@us.fujitsu.com
Phone: 1-800-831-3183

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