



Cartrefi Cymunedol Gwynedd (CCG) is a housing association set up in 2010. As North Wales' largest housing association with over 6,300 homes, it provides quality, affordable homes and services to people in housing need while seeking to protect and develop the culture and heritage of the communities it serves. As an independent, not-for-profit organization registered and regulated by the Welsh government, any surplus income is reinvested to continue providing homes and services and to expand its services and the regions covered.

CCG is committed to actively growing, branching across the east coast of Wales into other counties, and continually hiring new employees. Ensuring the highest levels of data security and protection is a key corporate goal.

The Challenge: Performance

The IT team at CCG was stymied by an ongoing struggle with infrastructure performance from its legacy storage array, which was unable to support the existing, let alone growing demands of the association's VDI infrastructure. The four-member infrastructure team was increasingly forced to come up with imaginative ways to achieve low latency and maximize performance. Regular recomposition jobs such as software updates had to be run off hours as the existing solution could not support regular operations and the additional demands of the recomposition jobs during working hours.

As security and data protection are of the utmost importance to CCG, the association invested heavily in a brand-new solution from a reputable provider to ensure staff and stakeholders remained fully protected while using IT systems. The incumbent storage solution strained to accommodate even the basic protection features and was clearly incapable of delivering the requisite performance for CCG to take full advantage of the AV system's advanced security features.

It was imperative that the new storage system eliminated these legacy challenges and aligned fully in support of CCG's growth and development, both in terms of capacity and performance.

The Solution: Tintri IntelliFlash T-Series

Reseller Blue Coffee Network (BCN) supported CCG's IT team throughout the decision-making process and implementation of the new solution. The extensive evaluation process involved many storage vendors, each offering greater performance than the legacy unit at CCG. However, the technical specifications of IntelliFlash stood out in terms of price and performance and was backed up by conversations with other customers with similar requirements.

The solution selected was an IntelliFlash T4200 hybrid system with 21.8TB raw storage. CCG is currently storing approximately 5.2TB of data on the IntelliFlash system (before deduplication and compression) supporting 250 desktops, and 20 associated servers.

IntelliFlash systems are fully redundant with no single point of failure. All media are dual-ported and accessible through a pair of active/active controllers. Users can also take instantaneous, space-efficient snapshots that can be replicated for disaster recovery purposes locally, remotely or to the public cloud or any S3-compliant Object Storage through the IntelliFlash S3 Cloud Connector. In addition, real-time compression and deduplication of both SSDs and HDDs throughout the system help significantly reduce storage acquisition and operational costs. Redundant virtual server operating system images as well as hundreds or thousands of persistent VDI instances are reduced to a single flash-based storage instance that can launch in seconds.

Challenges

- The infrastructure team struggling with a legacy storage solution that was costly, underperforming, and extremely over utilized
- Adverse performance and latency issues challenged the growth of the business
- Limited value derived from advanced security solution features due to storage shortcomings
- Unable to meet capacity needs of ~5.2TB to support the business growth

Solution

Tintri IntelliFlash T4200 hybrid storage system

Results

- Boot time is now 15 seconds instead of 45 seconds to 2 minutes
- High performance with low latency of 200 to 300 µseconds across all storage pools
- Recomposition time for jobs reduced 2.5 hours to 20 minutes
- Overall reduction in needed storage capacity of 56%

The Results: Optimal Performance and Unexpected Resource Savings

BCN arranged the delivery and installation, ensuring an expert was involved in each part of the connection and configuration. "As a customer, I felt that we were receiving the absolute best service and that we were going to see every last drop of performance for each pound spent," said Richard Nightingale, ICT infrastructure and operations manager at CCG. "In my 25 years working in IT infrastructure, I had never felt that we were receiving 100% optimal performance from the storage systems - this was a key differentiator between the BCN/Tegile [now Tintri] collaboration and other firms I've been involved with."

CCG is storing approximately 5.2TB on the IntelliFlash T4200, which reduced to 2.3TB after inline deduplication and compression, resulting in a reduction of 56%. The IntelliFlash system will support the company's growth and expansion, with significant leeway for performance and capacity. "We do not need to think about storage for at least the next five years - this is a massive weight off our minds and means we can channel our energy into other areas of the organization," said Nightingale.

When it comes to performance, IntelliFlash shines. CCG is able to implement the full range of AV capabilities that it invested in, including on-access scanning, ransomware, and data loss protection. As well as ensuring the highest levels of security, end users also benefit from more freedom when going about their everyday tasks. Previously, the IT team had to carry out an AV scan before the user could access a certain file - with IntelliFlash, AV scans take place automatically and instantaneously.

The IntelliFlash system is delivering latency of 200 to 300 microseconds across all storage pools, which can reach only 500 microseconds during boot storms. In contrast, the IT team struggled with latencies of 1.5 milliseconds (ms) on its legacy unit, which would spike to between 5ms and 15ms, during boot storms. With IntelliFlash, boot times are now 15 seconds instead of 45 seconds to 2 minutes.

Furthermore, an unexpected bonus for the IT team was that they are now able to carry out repositioning jobs during the working day. These jobs previously took up to 2.5 hours on the legacy storage and required one member of the team to stay behind out of working hours now take just 20 minutes on the IntelliFlash T4200 and have minimal impact on daily operations.

"The incredible performance afforded by the IntelliFlash array not only makes our lives as IT administrators so much easier, but the business also benefits as we can react quicker and offer much faster turnarounds. We can carry out updates on the fly and instantly provision desktops," explains Nightingale. "The end users have zippier machines and high levels of protection while they are working, increasing their productivity levels. On top of this, we have met our corporate goal of ensuring high-quality security and data protection."

Experience different! For more information on how IntelliFlash can turbo-charge your business success through a simple, intelligent infrastructure, visit tintri.com/intelliflash

"The incredible performance afforded by IntelliFlash not only makes our lives as IT administrators so much easier, but the business also benefits as we can react quicker and offer much faster turnarounds."

Richard Nightingale, ICT Infrastructure & Operations Manager at CCG

