Transdev

Software-defined Storage Proves Cost-effective and Business-critical; Delivers Significant Storage Performance and Zero Downtime

In Australia and New Zealand, Transdev works with partners – local government, public authorities and private companies – to deliver over 120 million passenger journeys every year on over 1,800 vehicles and vessels.

Transdev’s IT operations depend on and heavily utilise the Microsoft Dynamics AX platform, which is backed by Microsoft’s SQL server. As the company relies on this platform to run its business, it is critical to have high-speed storage to cater to this business-critical database and other applications.

Mark Naidoo is the IT Infrastructure Manager at Transdev Australasia – with responsibility for all IT infrastructure, including the IT networks and overall IT security. Because software-defined storage was a new approach, it took a lot of convincing from Mr. Naidoo to get his peers to accept the idea and to acquiesce to doing a proof-of-concept. However, after the initial test environment was up and running, the results were so amazing that management at Transdev decided to actually embrace the concept and move forward with the fully deployed solution.

DataCore Delivers Resiliency and Performance

Three years ago, there were not many vendors that could solve the problem of allowing Transdev to combine solid state storage within a shared storage environment and provision the pool of storage as needed to multiple hosts – all in a powerful and simple to use virtualised platform. As Mr. Naidoo described it, “The guys from DataCore really helped us architect a great solution that would provide the performance we needed – with the resiliency we wanted.”

DataCore now provides Transdev with a software-defined storage solution that combines traditional storage including both SAS and SATA disk drives with newer Solid State technologies networked together over multiple fabric types – in this case fibre channel and iSCSI.
“DataCore has enabled the IT team at Transdev to combine Fusion-io cards with traditional SAS drives and present that to their ESX servers to allow a resilient, robust and very high performance storage solution,” stated Mr. Naidoo. “Moreover, the high-speed DataCore storage platform supports and accelerates Microsoft’s SQL server workloads, which run with the Microsoft Dynamics AX platform that the company relies on so heavily.”

The DataCore SANsymphony-V software-defined storage platform now empowers the existing installed HDS storage array solution and enables newer Fusion-io flash storage cards to be used as shared storage to support their base of Microsoft applications and multiple VMware ESXi hosts. With DataCore, Transdev is able to attain performance levels not achievable with traditional storage platforms. DataCore’s performance acceleration cache and its ability to utilise and combine solid state storage with existing storage investments – all of these factors have definitely helped IT at Transdev to increase performance drastically.

“DataCore enables us to combine Fusion-io cards, which were selected because of their performance benefits, and share those among all our ESX hosts,” explained Mr. Naidoo. “This has given the company amazing performance for our storage – in particular for the Microsoft SQL server. In fact, performance has improved by up to 6 times.”

Beyond Robust Shared Storage – Fail-safe Redundancy

“DataCore enables us to use direct-attached, solid state storage in a shared storage environment with multiple fabrics as a front-end and back-end – all while enabling us to continue using our existing HDS storage solution,” summarized Naidoo.

Distributing direct-attached storage (solid state – or otherwise) into a shared storage environment is part and parcel of what DataCore does – as is utilising existing devices and increasing performance. In addition, uptime is a business objective that all DataCore customers consider essential – and made a reality through DataCore.
DataCore SANsymphony-V now runs on multiple nodes at Transdev, which are mirrored to ensure high-availability and thereby – uptime. DataCore provides a robust, redundant platform at Transdev that virtually eliminates storage-related downtime. The high availability that DataCore affords enables uninterrupted business continuity. What’s more, disaster recovery (DR) is now in place – all done with the freedom of hardware independence.

As Mr Naidoo confirmed, “DataCore’s multi-node design has allowed us to achieve zero down-time over the last three years. We’ve had multiple software upgrades and hardware upgrades with no down-time at all. Software-defined storage from DataCore has definitely increased our availability substantially.”

Centralised Management

DataCore has combined existing storage platforms at Transdev under one centralised management solution. Providing a unified front-end for all the disparate storage platforms has decreased the time required to provision servers and perform daily maintenance tasks.

Mr. Naidoo also reported that the IT team has found the virtualised storage platform intuitive and easy to use compared to proprietary solutions. This has made daily maintenance tasks a lot easier and simpler – making the IT team a lot happier as a result.

“Administration and maintenance for routine tasks has become a lot simpler due to the unified front-end for all our storage platforms,” he noted. “And DataCore is one of my most worry-free platforms. My team spends a lot less time provisioning storage using DataCore than proprietary systems – due to the simplicity and intuitiveness with DataCore on the front-end.”

SUMMARY

High-performance Storage
Transdev has seen a six-fold improvement in performance for its storage with DataCore. DataCore supports new, high-speed, solid state storage that was required for a mission-critical Microsoft SQL database that serves Microsoft Dynamics AX.

Five Nines (99.99%) Reliability
Since putting DataCore in three years ago, Transdev has had zero downtime. Transdev not only increased availability – but also satisfied its DR requirements.

Reduced Storage Costs
The ability to choose best-of-breed storage and combine that using one platform has decreased costs significantly.

Resiliency and Flexibility
DataCore has enabled Transdev to combine its existing storage with new, flash-based storage very easily. Transdev’s IT infrastructure also consists primarily of HP hardware, a virtualised platform based on VMware & Citrix XenApp for application deployment.
Cost-Reduction, Fewer Hardware Headaches and a Future Built with DataCore

Storage costs at Transdev have gone down since implementing DataCore because using DataCore with flash storage has decreased the company’s hardware requirements needed to achieve the same performance.

According to Mr. Naidoo, “The performance levels that DataCore has allowed us to achieve with Solid State Drives would require a massive number of spindles to duplicate with traditional drives. And the best thing about DataCore is that it doesn’t lock you into a specific hardware vendor.”

DataCore is now a critical part of Transdev’s IT infrastructure and will definitely continue to play a part moving forward for many years.

“DataCore gives you a lot more flexibility and agility for your future plans,” summarised Mr. Naidoo. “And we have just committed to DataCore for another three years.”

Interest in software-defined storage is growing feverishly worldwide – with more and more vendors getting into the ring. Importantly, Mr. Naidoo views DataCore as a mature product and as a benchmark for the industry. In fact, he rates DataCore software-defined storage a “9” (out of ten) – because, he says, “there is always room for improvement.”

He is effusive, however, in his recommending DataCore to others. “I can definitely recommend DataCore to any IT managers out there looking to upgrade their storage solution. The cost-reduction and the open storage requirements will definitely benefit them. If you are looking for storage I would definitely investigate DataCore. The simplicity of integrating it into your environment is amazing.”

“Three years ago, Transdev was struggling to find the right storage platform to meet our needs,” noted Mr. Naidoo. “DataCore was selected because of its resilience, its stability and its performance capabilities – compared to traditional hardware vendors. I would definitely recommend DataCore to other IT managers out there if they are looking to update their storage environment. The reduction in costs, the increase in performance, the high availability, the unified storage platform – all these factors actually will make your life a lot easier.”

Images in this case study are supplied by Transdev

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