

Case study



Extrinsica

ISE storage enables Extrinsica Global to provide cutting edge cloud services with confidence

business benefits

- Recovery time objective (RTO) using the X-IO solution has gone from 24 hours to 15 minutes benefiting the organizations business continuity
- Extrinsica is now consuming around half the power for the same usable space, reducing the cost of hosting in the company's data centers, reducing the cost of power and lowering customer costs
- Gained 600% performance improvement from previous solution giving Extrinsica stronger overall performance
- The X-IO solution is less time-consuming to manage allowing Extrinsica to focus on other areas of the business
- Deployment of the X-IO solution did not disrupt Extrinsica's day to day business dealings
- The ISE solution deployed enables 100% capacity utilization with no loss of performance and low-touch maintenance through self-healing, backed by a 5-year warranty

solution

Servers

- Cisco UCS Blade Servers

Hypervisor

- Microsoft Windows Server 2012 R2 Hyper-V

Storage

- ISE 700 Series Hybrid
- ISE Manager version 4.1



"We turned to X-IO for a storage solution that could deliver next generation levels of performance and meet the demands of our customers. X-IO has also allowed us to move to a full software defined storage strategy underpinned by superfast physical storage."

Nick Smith, CTO, Extrinsica Global

introduction

Founded in 2005 by technical specialists from UK military and secure central government backgrounds, Extrinsica Global provides mission-critical cloud solutions and an end-to-end service. The company's customers operate in the most demanding industries including maritime security, motorsport and financial services. They require the best possible levels of performance from their IT systems, any delays or downtime can cause significant damage to their business and operations.

The company's Cloud Infrastructure, EV3, offers N+1 resilience of all hardware components, including networking, compute and storage. This enables Extrinsica to design and provision almost any cloud solution, even complex hybrid cloud solutions that require seamless integration of EV3 with Microsoft's global cloud resources. Extrinsica also provides disaster recovery (DR) and business continuity (BC) as fully managed cloud services to customers.

the challenge

Extrinsica's existing storage was not delivering the speed and performance required to provide cutting-edge cloud services to its customers. It was also "insanely expensive and did not deliver the IOPS required," said Nick Smith, CTO, Extrinsica Global. The company's existing solution didn't have the ability to utilize its entire available storage capacity, only ever managing to utilize 75% of its storage capacity before becoming unusable. The management tools required for a service provider delivering services from a multi-tenant, multi-domain cloud infrastructure were non-existent.

"Our existing storage was simply not delivering the speed and performance required to deliver cutting-edge cloud services to our customers. We needed a completely new approach to storage that would align with the converged and virtualized world of the 21st century and meet the demands of delivering today's modern applications at scale" said Nick Smith, CTO, Extrinsica Global.

The company's IT team spent a lot of time determining where the performance issues were occurring. Ultimately, they tracked them down to the existing storage arrays, pinning the blame on a lack of input. The previous solution provided Extrinsica with around 10,000 IOPS but the storage system hit a cliff when it was the victim of a perfect storm of overrunning backups, deduplication and high customer usage, rendering the company's primary cloud-based services almost unusable. The incident was enough to convince the company to look at a new storage strategy.

With two enterprise-grade tier four data centers located in London and Manchester, Extrinsica looked for a scalable, resilient and supportive solution.

the solution

In 2014, Extrinsica considered several storage vendors as part of an extended proof of concept test that included full SSD and virtual SAN with on-board storage. The company also approached its existing storage vendor, which merely recommended purchasing additional hard disk trays and hard disk spindles.

OS

- Windows Server 2012 R2, Linux (Multi Distro)

Applications

- Microsoft SQL Server 2014
- Microsoft Office 2013
- Exchange 2013, SharePoint 2013
- Microsoft CRM 2015, Sage, SAP
- Autonomy Worksite

business challenges

- Extrinsica's existing solution was only capable of 75% capacity utilization without dramatic performance loss
- Extrinsica needed stronger recovery time objective (RTO) to avoid any downtime
- Backup and post process deduplication would overrun and user experience was adversely affected by Input and output (I/O) constraints
- Extrinsica's existing solution required very expensive storage to accommodate the company's data growth forecasts

At the beginning of 2015, Extrinsica turned to X-IO's Intelligent Storage Element (ISE) 700 hybrid array for a storage solution that could deliver next generation levels of performance to meet the stringent demands of its customers. When tested against other vendors, the Extrinsica team found that ISE provided a great balance of performance, cost effectiveness, scalability, support and resilience.

Working closely with X-IO and its reseller ComStor, Extrinsica deployed the solution over two days. The simplicity of X-IO's ISE Manager solution meant the cloud service provider could go live the day after installation. Extrinsica deployed new Hyper-V clusters and migrated its virtual servers to the new storage. The migration process was seamless and required no downtime to their customers.

Per storage array, the X-IO storage solution is five times faster than the previous storage solution for the same amount of usable storage. The ISE 700 consumes around 4U per array while the previous solution consumed 12U. Additionally, the power consumption of the X-IO array is about half that of the previous system.

Extrinsica's move to a virtualized storage platform has significantly simplified the management of storage. Instead of having to manage a complex and cumbersome physical LUN architecture, which is difficult when hosting hundreds of databases that each require their own LUN on the physical storage, Extrinsica uses virtual disks managed through the hypervisor. A significant time saving has been seen since the deployment of the X-IO solution, helping Extrinsica to make a large reduction in management overheads.

Nick Smith, CTO, Extrinsica Global commented: "X-IO's ability to fill its storage solution to full capacity while still delivering the high performance and speed we required was certainly a strong selling point for us. An added bonus is the company's five-year warranty, which made us have full trust in the solution."

the result

X-IO's ISE 700 met all the requirement criteria Extrinsica set out to achieve including high performance, cost effectiveness, scalability, strong support and resilience. With ISE, the live migration of Hyper-V virtual servers is about five times quicker than any other solution. Overall, performance of the company's cloud services have significantly improved since the deployment of the ISE 700. In addition, deployment of the ISE solution was achieved in two days compared to three weeks for the previous solution.

By implementing the ISE 700 series, Extrinsica Global has enjoyed the security of a five-year warranty. X-IO has also allowed Extrinsica Global to move to a full software defined storage strategy underpinned by physical storage. Each ISE array has provided a significant increase in available IOPS from 10,000 to 60,000, as well as improvements in throughput and general performance.

The support from X-IO's sales team and the strength of the storage solution was another significant factor in its favor. Nick Smith said: "By having a self-healing and low-touch solution, we could enjoy the peace of mind that the ISE 700 could work without the IT team having to constantly monitor it. It also ensured our data centers could avoid any downtime caused by human error."

"The honesty of the X-IO sales team is second to none, we have utmost faith in the company and the solution, which is making my job that bit easier"

"We needed a completely new approach to storage that would align with the converged and virtualized world of the 21st century and meet the modern demands of today's applications. For this reason, we turned to X-IO for a storage solution that could deliver next generation levels of performance and meet the demands of our customers. X-IO has also allowed us to move to a full software defined storage strategy underpinned by superfast physical storage."

Nick Smith, CTO, Extrinsica

