



Hyper-Converged VMware Solution with Open-E and Broadberry for a book publisher



Usborne Publishing Ltd is the UK's leading specialist children's book publisher, as well as an independent, family business which creates engaging, innovative, accessible books for readers of all ages. They have approached Broadberry, a long-lasting Open-E Partner, with a request to replace their internal VMware cluster and SAN with an enterprise-grade solution that will be cost-effective, faster than the existing one, and at the same time reliable and highly performant.

Usborne's existing system has encountered some issues with keeping up with current demands. This system turned out to be outdated, it was hard to manage and it was under-resourced. Usborne's previous infrastructure was based on a traditional compute structure with an HPE VMware host connecting to 2 storage arrays via iSCSI. Broadberry was asked to project and install a brand-new system which would solve all the existing hardware and network issues. Enterprise-grade redundancy, reliability and flexibility was also highly appreciated. In general, the publisher's key requirements were:

- **Low latency**
- **High IOPS**
- **Handling high storage throughput**
- **No single point of failure**
- **Simple disaster recovery**
- **Future-proof for latest technologies**
- **3-year 24/7 technical support**



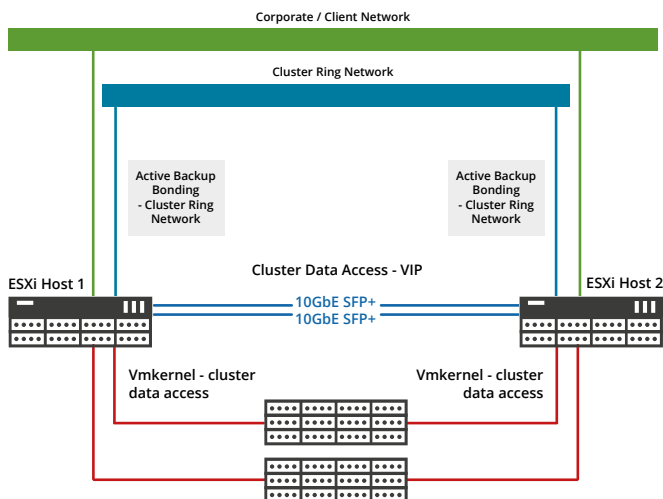
Solution

Hardware that used to power Usborne's IT infrastructure caused some serious latency issues between the VM host and iSCSI storage servers. Their previous solution did not include any built-in failover option which, in the event of hardware failure or storage corruption, left them vulnerable. Broadberry all-flash, hyper-converged infrastructure turned out to be the best solution as it consolidated their entire infrastructure to just 2 nodes and 2 dual-port SAS JBODs with no single points of failure. As for the software, they have decided for the ZFS- and Linux-based Open-E JovianDSS configured as High Availability cluster which enabled consistent provision of datastores even in case one node crashes. What is more, Due to the fact that Broadberry storage is fully compatible with VMware's API and thanks to the backup-focused On- & Off-site Data Protection feature in Open-E JovianDSS, Usborne IT administrators could easily revert to a previous state in a matter of minutes in the event of a ransomware attack or user error.

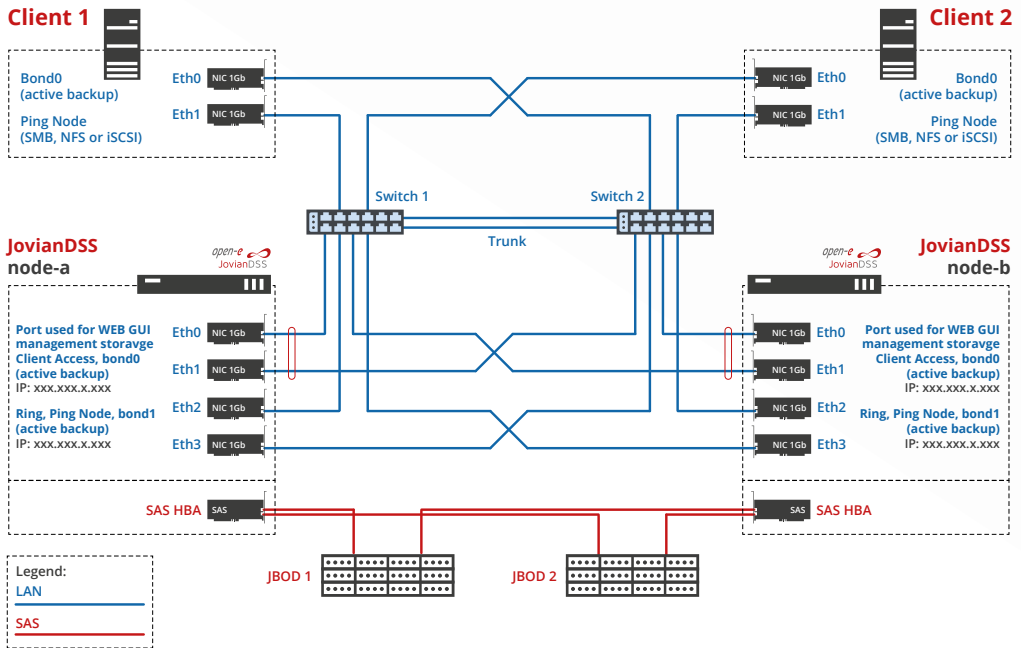
The On- & Off-site Data Protection feature allows users to back up and restore crucial company data in case of an unexpected disaster due to a combination of several technologies. This backup-focused feature enables creating consistent snapshots and asynchronous snapshot replication to local and/or remote destinations. The replication tasks can be set according to the specific user requirements thanks to advanced retention plans.

In order to solve Usborne's latency issues, nodes were configured with dual Intel Xeon Gold 5120 Processors and 320GB of 2666MHz DDR4 ECC Registered memory to ensure the system can handle heavy workload. NAS appliances were configured with enterprise-grade SSD's. At network level latency was omitted by using a dedicated point-to-point 10Gbe Interconnect between ESXi hosts, allowing more than enough throughput.

Hardware details



Hardware setup



Benefits of solution by Broadberry and Open-E

The existing iSCSI storage was replaced with VMware ready ZFS network attached storage, consolidated within the VM host. Storage nodes run as VM's eliminate the need for extra ones and the SSD-powered storage dramatically increased IOPS. Thanks to the ZFS- and Linux-based Open-E JovianDSS data storage software the customer could create consistent snapshots which could be stored locally. The software also provided full redundancy at both host and storage level, it was fully compatible with VMware API, plus, the thin-provisioned storage and compression by default enabled data reduction ration 2/1.

Moreover, the solution enabled online capacity expansion without need to initialize storage pool. Among the rest of benefits, it was worth to highlight also the automatic rebalancing option, read caching in RAM memory, 10GBe connectivity and also support for iSCSI, NFS, SMB and Fibre Channel. All in all, there's been a significant increase of performance.

About Usborne Publishing Ltd

Usborne is the UK's leading specialist children's book publisher: an independent, family business which creates engaging, innovative, accessible books for children of all ages. Our motto is 'do it better'. We always do our best to create books for children which contain accurate, reliable information, presented in an attractive and appealing way and produced in an ethical manner to the highest international standards. For more info visit: <https://usborne.com/>

About Broadberry

Established in 1989 Broadberry Data Systems is a leading manufacturer of high-end custom rackmount servers, NAS and iSCSI SAN storage servers and high-performance graphics workstations and has offices in both the United States and Europe. We supply a variety of products to suit all your business needs. Specializing in rackmount servers, high capacity storage servers, high performance workstations and bespoke rackmount server configurations, we can custom configure a system to fit your every business demand. Setting the standard for quality, reliability, and performance, Broadberry Data Systems provides the high-end computer user with the superiority and the dependability needed along with an affordable price. Every system is custom configured and built to order, ensuring customers only get the most up to date systems. Our goal is to develop and deliver the highest quality, proven, reliable and cost-effective solutions to our customers through continuous product development and system design. For more info about Broadberry visit: <https://www.broadberry.co.uk/>

About Open-E

Open-E, founded in 1998, is a well-established developer of IP-based storage management software. Its flagship product Open-E JovianDSS is a robust, award-winning storage application which offers excellent compatibility with industry standards, and is the easiest to use and manage. Additionally, it is of the most stable solutions on the market and undisputed price performance leader. Thanks to its reputation, experience and business reliability, Open-E has become the technology partner of choice for industry-leading IT companies. Open-E accounts for over 30,000 installations world-wide and has received numerous industry awards and recognition, also with its product Open-E DSS V7. For further information about Open-E, its products and partners, visit www.open-e.com

More information:

Usborne Publishing Ltd
+44 (0)1865 883731 | mail@usbornebooksathome.co.uk

Broadberry
020 8997 6000 | sales@broadberry.co.uk

Open-E GmbH
+49 (89) 800777 0 | info@open-e.com