

VESK

Case Study

VESK Selects Nexenta to Deliver Storage Foundation for Range of Cloud Services

London, UK
www.vesk.com
Cloud Service Provider



Summary

Challenge: Deliver excellent IOPS levels to meet and exceed expectations of rapidly growing client base

Solution: NexentaStor High Availability (HA) Cluster

Platform: Citrix, OpenStor

Use Case: Server Virtualization/Hosting

Benefits:

- A VDI environment and the scalability and reliability to support expansion into IaaS, PaaS, and DaaS
- Excellent performance for high performing databases
- Support for hybrid storage pooling
- SANs with mixed 15k SAS and SSDs could be added when required

Business Overview

In 2009, after nine months of development, the founders of an already established IT support business set up VESK, one of the first companies to implement virtual desktops in the UK. Today, VESK is a privately held London based VDI specialist that owns its headquarters and the datacenter infrastructure from the ground up. VESK is the fastest-growing supplier of virtual desktops in the UK. Its customers range from local government organizations with more than 500 users to small businesses with as few as three users.

VESK has expanded into providing platform-as-a-service (PaaS) and infrastructure-as-a-service (IaaS) from its three data centers in London, one in Singapore, and another in the US.

“We had huge IOPS requirement for a range of I/O profiles and Nexenta enabled us to optimize and fulfill application and desktop needs from the storage layer upward. In addition, it gave us a strong storage foundation to expand into IaaS, PaaS, and DaaS.”

Richard De Napoli
Head of Infrastructure
VESK

Challenges

As it added more users, VESK needed a storage solution that could grow while delivering the required IOPS to support its client base. The solution also needed to provide performance levels suitable for high density applications, both in-house and for its clients.

The company progressed through three different storage solutions. It began with the Dell MD 3000is entry-level SAN, but performance began to suffer when it hit 150 users and VESK could not take advantage of any caching store even though it was 90 percent empty. The company then upgraded to an EqualLogic solution at a cost of £40,000. While the built-in SAN replication was an attractive feature, the product fell down because of its low caching ability and limited network speed.

While VESK had more than 70 servers running on Hypervisors, the issue was not the number of servers but the SAN. VESK realized it required bigger input/output operations per second (IOPS) and high performance all the time to make its system work for all users. Delivering a VDI required high performance and high availability to run a large number of applications, such as Outlook, Sage, and others.

VESK's business model could not support this underutilization of expensive storage. Management of the SANs threatened to swamp the system administrators and significantly increased the individual cost of each user to VESK.

System Configuration

- NexentaStor HA
- 15k SAS Pool drives
- STEC ZeusRAM mirrored ZIL drives
- HGST STEC striped L2ARC drives

Solution and Benefits

Solution

After a strong recommendation from a colleague, VESK looked at ZFS-based NexentaStor and then went with VA Technologies, a Nexenta Reseller and high performance system integrator based in Bedfordshire, UK. VESK selected a NexentaStor High Availability (HA) SAN solution, which provided VESK with more than 130TB of raw storage, as well as read and write SSD caching to present Network File System (NFS) shares to its Citrix XenServer Hypervisors. The storage arrays were configured to provide complete JBOD redundancy, both with the data drives and SSD caches, so in the event of a JBOD loss, the storage system would still be available to the hypervisors.

VESK's primary site is based in London. Disaster recovery locations at the three remaining data centers replicate the data over high speed interconnects every hour, to provide quick rollback of data and automatic failover should the primary site fail.

NexentaStor delivered the solution VESK needed to provide the required IOPS for a VDI environment. With other suppliers, VESK would have had to buy complete new solutions each time it approached limits on a SAN.

But with NexentaStor, it can order the same equipment and build another SAN, because NexentaStor allows it to cluster SANs and simply add more when needed.

Benefits

NexentaStor overcomes random IOPS issues associated with VDI and eradicates the difficulties associated with the very high percentage of writes in a VDI environment (as much as 80 percent) because it natively supports hybrid storage pooling, enabling customers to add SSDs to better manage the read and write cache.

Two OpenStor HA Head Nodes enable VESK to do a complete automatic failover within a minute of a head node failure, as well as to do maintenance or upgrades to a single head node, reducing the impact of such work. They also dramatically improve DR through hourly auto-sync SAN-based replication to multiple DR sites connected over 10Gbe dark fiber.

The scalability and reliability of NexentaStor means VESK has also been able to add PaaS, DaaS, and IaaS to its portfolio of services without any storage performance or I/O issues. In fact, in 2014, Citrix named VESK its leading CSP (Citrix Service Provider) based on its performance, support, and 100 percent uptime.



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