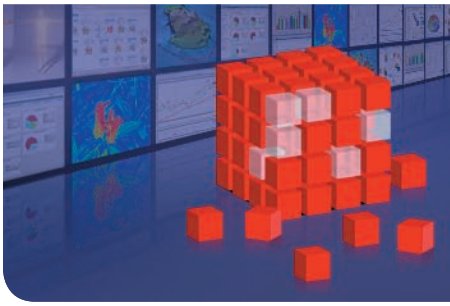


Impulse Advanced Communications

eliminates a single-point of failure to voice and data services at the renewal price of its legacy HA cluster SAN solution

Overview

Since 1996, Impulse Advanced Communications (www.impulse.net) has designed, implemented and managed advanced voice and data networks. With services that include FailSafe Internet Access, hosted VoIP, managed hosting and network design, the B2B communications provider helps businesses solve complex communication problems. However, the company's IT department faced challenges of its own to meet data and application availability without breaking the IT bank.

As an IT director, Jessie Bryan is responsible for all aspects of system and application engineering at Impulse's Santa Barbara, Calif. data center – one of the company's three data centers – overseeing an IBM BladeCenter server environment that includes over 250 physical and virtual servers running VMware ESXi. Specialized in business-critical services, it's imperative that their technology infrastructure – 20 Zimbra e-mail and web server clusters supporting 10,000 mailboxes, 5,000 website and calendar services – always be accessible.

The Challenge

Like most hosted service providers, Impulse was an enterprise storage vendor customer. Early in the company's history, the IT management team deployed a NetApp® Filer as a backend SAN to manage a 24x7 data and application environment. As the NetApp® solution reached capacity, it was unable to keep up with I/O load, resulting in poor network performance. Additionally, when the time came to scale-up storage capacity, Bryan discovered that it would be more expensive to expand than replace the entire NetApp® solution.

Calculating the cost to max out the NetApp® solution, Impulse next tried an EMC® Celerra. Unfortunately, after deploying the EMC® solution, Bryan soon found it had its own technological short-comings. For example, the EMC® Celerra maxed out at 2 Gb/sec through put, resulting in low network bandwidth. Additionally, like the legacy solution, the EMC® Celerra would eventually become cost-prohibitive to keep pace with current and future storage needs.

Evaluating his experience with the legacy technologies offered by NetApp® and EMC®, Bryan decided to explore alternative storage platforms that would be less expensive to scale-out and maintain without overspending on proprietary hardware and software. At the same time, the company didn't want to sacrifice enterprise features, like high-availability or unlimited snapshots for nightly Zimbra cluster backups.

Solution Overview

Faced with a hefty price-tag to improve network performance and scale-out their legacy SAN, Jessie Bryan, director of system engineering at Impulse, sought an open source solution. An evangelist of open-source technology adoption, like Postgres, MySQL and Zimbra, Bryan selected the StorageDirector Z2 HA Cluster SAN – powered by NexentaStor™ Enterprise, the leading open storage platform from Nexenta™ – after consulting with Pogo Storage.

By understanding Impulse's storage requirements, Pogo Storage – a Nexenta™ certified technology partner – was able to suggest a complete hardware and software solution that allowed Impulse's IT management team to maintain around the clock voice and data services for customers and internal operations while lowering their storage acquisition cost.

"We replaced EMC with Nexenta, which was superior and provided best-in-class features. The license and support cost of the NexentaStor™ solution was actually less than the support cost renewal of the EMC storage appliance."

– Jessie Bryan, Dir. of Systems Engineering at Impulse

Business Impact

- High-availability to ensure data access around the clock
- Rich enterprise feature-set that tops legacy storage solutions
- Minimize data loss or achieve maximum uptime
- Cost-effective scalability

Solution Highlights

- Establish Active/Active failover cluster groups of business-critical data and application services
- Dual-head (or dual-node) systems mirrored to a standby system
- Scale-out as business needs grow – up to 576TB

NexentaStor™ Enterprise

As a communication provider, it's important for Impulse to deliver uninterrupted, always-on access to hosted voice and data services to its customers. Below are some of the product benefits which apply to the high-availability cluster deployment at Impulse.

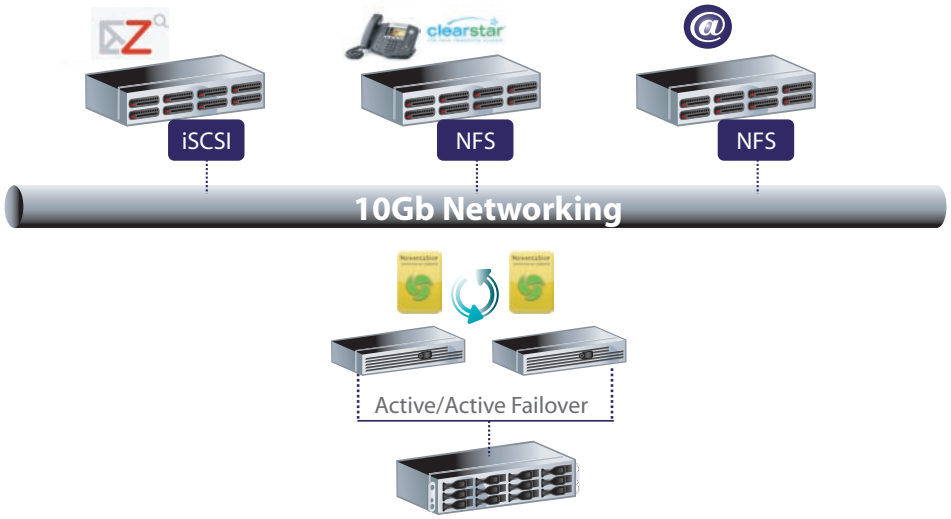
Feature Complete – NexentaStor™ helps customers implement an all-inclusive HA cluster SAN solution with enterprise features, including in-line data deduplication, unlimited snapshots, thin provisioning, and support for virtualization.

Nexenta Certified Solution – The StorageDirector Z2 HA Cluster is a complete hardware and software solution that's been pre-validated for a high availability workloads. The pre-configured hardware architecture has been tested by Nexenta™ engineers for NexentaStor™ Enterprise system tuning and optimization to minimize the risk associated with deploying a high-availability SAN.

Fast Deployment Time – By selecting the Nexenta™ certified StorageDirector Z2 HA Cluster solution, Impulse was able to reduce deployment time by ensuring the solution was ready to be deployed in hours – instead of months.

High-Availability Infrastructure

From hardware to software, the Impulse technology infrastructure needs to have multiple redundancy, in controllers, cables and servers. The system architecture of the StorageDirector Z2 HA Cluster SAN deployed by Impulse, incorporates two head systems connected to a single JBOD. Additionally, the solution is configured for Active/Active failover – instead of Active/Passive, where only one service node is running. As a result, Impulse can plan preventative maintenance on production servers without experiencing service downtime.



Conclusion

Around the clock availability to voice and data services without overspending on proprietary hardware and software was an important element of to the HA cluster SAN solution put forth by Impulse. By taking advantage of NexentaStor™ Enterprise's open storage platform and exceptional ability to handle highly-available workloads, Impulse's IT management team was able to ensure 24x7 delivery to its services.

"We replaced EMC with Nexenta™, which was superior and provided best-in-class features. The license and support cost of the NexentaStor™ solution was actually less than the support cost renewal of the EMC storage appliance," said Jessie Bryan, Dir. of Systems Engineering at Impulse. As its on-going network storage advisor, Pogo Storage will continue to support Impulse's storage needs into the future.

Benefits

- Cost-effective high-availability at a reasonable price
- Eliminate a single point of failure to reduce data loss and down time with half the complexity
- Feature-complete HA SAN that's up to 40% less than legacy storage technologies
- Turnkey solution ready to be deployed in hours, not months

System Configuration

Pogo StorageDirector Z2 HA Cluster SAN, a pre-tested and pre-configured Nexenta certified high-availability storage solution.

- **Dual Head Systems powered by Intel Xeon Servers**
- **24GB DDR ECC Registered Memory**
- **Operating System – (2) 73GB 10k SAS Drives**
- **NexentaStor Enterprise with HA Cluster Plug-in**
- **4x 4-Port Copper Gigabit Adapters**
- **JBOD Expansion with (12) 600GB 15k SAS Drives and (7) 1TB SAS Drives**

About Pogo Linux

From digital archive for a large video collection, to a highly-available SAN, Pogo Storage helps IT departments at small- & midsized organizations dramatically reduce storage costs with a hybrid storage approach and breakout technologies.

For more information

Please visit www.pogostorage.com or call (888) 828-7646 (POGO) to speak with a trusted storage advisor. For more info about NexentaStor, please visit www.nexenta.com