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*David Hocking
 Senior Network Engineer
 Zen Internet*



Zen Internet

INDUSTRY Internet Technology: Services

SOLUTIONS **Virtualisation, Business Continuity, Hosting**
Hardware — Hitachi Adaptable Modular Storage 2100 (1), Hitachi Adaptable Modular Storage 2300 (3)
Software — Hitachi Tuning Manager, Hitachi Device Manager, Hitachi Replication Manager and Hitachi TrueCopy® Synchronous software; Hitachi Storage Navigator Modular program

Zen Internet Boosts System Performance with Modular Storage from Hitachi Data Systems

As one of the UK's leading independent ISPs, Zen Internet provides a range of Internet and IT services to consumer and corporate customers. In order to ensure system availability and cope with high volumes of data, it needed to upgrade its storage capabilities. It chose to deploy Hitachi Adaptable Modular Storage family systems to deliver a flexible, scalable storage platform for business critical development and production environments. The platform also supports a fleet of virtual machines and fits with Zen's disaster recovery strategy.

Staying connected to friends, families and colleagues is something many people take for granted. For independent Internet Service Provider (ISP), Zen Internet, though, it requires a bit more attention. As one of the UK's leading ISPs, it is responsible for delivering reliable and resilient Internet connections at consistent speeds to customers nationwide. The company's mission is to provide the best ISP service in the country and it is committed to investing in the latest technologies in order to achieve this goal.

The Challenge of High Volumes of Data

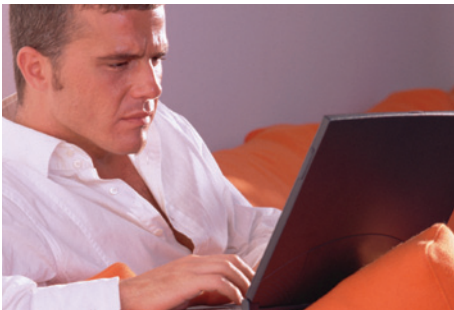
With a product and service portfolio ranging from home phone and business broadband packages to managed and dedicated hosting and IP VPN solutions, Zen must ensure its own IT infrastructure is able to keep

up. "We've not just got our own corporate information to handle," says Senior Systems Designer at Zen Internet, Graeme Hinchliffe. "We also need to ensure our customers' private data is kept safe while meeting stiff service level agreements for our managed IT services offerings around system availability and responsiveness."

The team managing Zen Internet's hosting environment needed to ensure that its storage platform was able to handle the high volumes of data being generated. With tens of thousands of paying clients relying on the effective operation of the system, time-outs and delays were not an option. "We needed a storage solution that could handle our requirements while offering good support if we ever did have issues," explains Hinchliffe.

At the same time, the company's internal systems required enhanced manageability of its internal storage infrastructure and better disaster recovery capabilities with support for its VMware ESX virtual environment.

Zen Internet's Internal Systems and Network & Infrastructure teams considered the various options available on the market, creating a shortlist of five vendors. After evaluating the features and capabilities of each one, they found that the only solution to meet all its criteria in terms of reliability, scalability, availability, performance and interoperability was that proposed by Hitachi Data Systems. "The technology was impressive, and much slicker than many of the other options we looked at. Combined with the knowledgeable, straight-forward approach of the Hitachi team, this made it an easy decision for us," Hinchliffe says.



"As the business grows, we'll certainly need to expand our SAN in the future, and we'll be coming to Hitachi for support."

*Graeme Hinchliffe
Senior Systems Designer
Zen Internet*

The Solution: Hitachi Modular Storage

The company chose to purchase three Hitachi Adaptable Modular Storage 2300 units and one Hitachi Adaptable Modular Storage 2100. Two of the 2300 units provide storage for hosting products such as managed servers, shared hosting (including web and email) and hosted backups. They also support Zen's internal backups of hosting servers.

The remaining models were deployed to support the company's VMware virtual environment. The Hitachi AMS 2300 supports the VMware base, and is backed up on a Hitachi AMS 2100 at the secondary site. Synchronous data replication between the two sites is enabled using Hitachi TrueCopy® Synchronous software. Senior Network Engineer at Zen Internet, David Hocking, who manages the Internal Systems SAN environment, says: "Being able to offer storage for such critical operations across a primary and secondary data centre was new for us, and gives much greater peace of mind. We're running 167 virtual machines on this platform at the moment and enabling a range of activities. The primary ESX cluster hosts some of our most business-critical systems. We currently use it to provide management, monitoring and operational assistance to our Networking team, through virtualised network management systems. We also run virtual firewalls and routers when physical hardware would be overkill. We run databases and even have network load balanced web servers running from the storage system, through a virtualisation layer."

As well as providing a business continuity resource in the event of an emergency, the secondary data centre servers are used during normal business as a production environment for updates, changes and developments to Zen's services. "This is

a great setup as it means we can benefit from the technology all the time, not just in an emergency," comments Hocking.

Complementary Software Supports Solution

To support the hardware deployment, Zen has also implemented a range of Hitachi software, including Hitachi Tuning Manager, Hitachi Device Manager and Hitachi Replication Manager. The software suite gives Zen's IT team detailed visibility of system performance and availability and enables them to manage their storage resources more effectively. For example, Hocking recalls, "The Hitachi Tuning Manager software tells us exactly how much of our system's capacity we're using."

Since implementing the new modular storage solution, Zen Internet has seen a ten-fold increase in system performance, which in turn has generated a massive speed improvement for all servers and programs. "The enhanced storage platform with virtualisation means we can consolidate our hardware at the same time as boosting its capabilities," says Hocking. "Having fewer servers to administer means lower data centre operating costs, so this project has enabled us to run our IT more economically over the long term. In addition to this, the new storage infrastructure is simple for us to manage internally, making life easier for the IT administration team. Even though we've not needed any support due to problems, Hitachi Data Systems has been proactive in offering consultancy to us, which gives us even greater peace of mind."

Seamless Scalability Now and into the Future

The team has also found the seamless scalability of the Hitachi Data Systems solutions a great benefit. "To run our VMware environment, it's essential we have a storage solution that scales well," Hocking explains. "The Hitachi Adaptable Modular Storage family does this better than any other platform we considered, so we know we're prepared for business growth over time."

With the new storage environment already showing results, Zen's IT team is thinking about the future. It is planning to make use of its virtual environment based on Hitachi modular storage to enable further data backup at its disaster recovery site as well as to support new virtual file servers. "As the business grows, we'll certainly need to expand our SAN in the future, and we'll be coming to Hitachi for support," concludes Hinchliffe.

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