

Client: Intransa
Source: Storage (Main)
Date: 01 February 2005
Page: 34
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PRODUCT *review*

INTRANSA IP5500 STORAGE SOLUTION

Fibre channel (FC) SANs have traditionally offered the best combination of storage performance, capacity and fault tolerance, but this commanding lead is now being seriously challenged by iSCSI. The latest IP5500 Storage Solution from Intransa brings together all these business-critical features, but also hits FC hard in its weakest area - as it delivers them at a far lower price.

The system supplied for review included a pair of IP5500 storage controller modules (SCMs) and a single 16-bay disk enclosure with 2TB of ATA storage. The SCMs each have four Gigabit Ethernet ports, whilst the disk enclosures come with dual redundant power supplies, plus two dual-port Gigabit Ethernet controllers; and there's room for two more controller cards as well.

An important features of the IP5500 is that it is capable of presenting an IP SAN to the network with no single point of failure. IP SANs are created by linking the network ports on the disk array, and two ports on each SCM, to a separate Ethernet switch.

That leaves two ports on each controller, with one used to present the SAN to the world as iSCSI targets, and these are connected to a switch on the LAN. The other port is for administrative access and allows management traffic to be separated out as an extra security measure.

For testing, we used a pair of HP ProCurve Gigabit Ethernet switches and

a management station connected to the same switch as the target ports and test clients, but configured in a different IP subnet. After a quick visit to the CLI to assign IP addresses to the various ports, you then move over to Intransa's Java-based StorControl management utility, which we found very well designed.

Each hard disk's physical location in the enclosure is irrelevant, as StorControl views them as global devices, allowing drives in different enclosures to be used in the same RAID array and new enclosures to be added on the fly. The disk enclosures communicate directly with the SCMs, so as soon as a new chassis or hard disk is added, it immediately becomes available.

Realms are used to group together SCMs, disk enclosures and network connections into a single management domain. After connecting to a storage controller, StorControl displays all devices within the realm, and a system view shows the physical location of each drive, all virtual volumes, used and available storage in the realm and assigned iSCSI hosts.

Creating virtual volumes is a swift affair, as Intransa's default policies automatically assign them to available physical disks, and you can select striped and mirrored arrays or a combination of both. With mirrored arrays, both drives are visible and you can break the mirror and present both drives as new iSCSI targets. Snapshots provide real-time backup facilities and these are also visible and can be presented as a new target.

Host systems only see those targets they are allowed to; when a client logs on to the storage controller, their initiator automatically appears in StorControl and can be assigned to specific targets with appropriate access permissions.

With the SCMs performing load balancing in the background, performance over Gigabit Ethernet is excellent. Using Microsoft's iSCSI initiator software v1.05 and the open source Iometer utility, we saw raw transfer rates of 109MB/sec with a single host and a cumulative total of 195MB/sec with two clients logged in to separate virtual volumes.

The IP5500 Storage Solution takes iSCSI firmly into the enterprise as, along with the high levels of fault tolerance, it delivers excellent storage capacity and expansion, comprehensive management tools and the best performance we've yet seen from an iSCSI target device. **ST**

Product: IP5500 Storage Solution

Supplier: Intransa

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Web site: www.intransa.com

Price: As reviewed: £36,417



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