Sun Counters Competition with Low-Cost SAS Array

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Facing heavy pressure from rivals HP and EMC, Sun combines standard hardware with open-source software and a spate of add-ons and services in an attempt to woo SMBs.

Sun Microsystems, struggling to keep up with powerhouses Hewlett-Packard, Network Appliance, EMC, IBM and others in an effort to gain share in the exploding SMB storage market, announced April 17 at Storage Networking World here that it is making available its first serial-attached SCSI array.

And it has put the product's largest value proposition right in the name: Sun is calling it the Sun StorageTek ST2500 Low Cost Array.

SAS controllers allow the use of SATA (Serial ATA) drives, but SATA controllers do not handle SAS. Serial-attached SCSI supports three transport protocols: SSP (Serial SCSI Protocol), STP (Serial ATA Tunneling Protocol) and SMP (Serial Management Protocol).

Sun also introduced some new data management capabilities for its portfolio that include the addition of partitioning capabilities to its StorageTek SL8500 enterprise tape library and secure encryption to its Sun StorageTek T10000 FICON (Fibre Connection) tape drive.

The Santa Clara, Calif., IT giant has been full of announcements lately, revealing the week of April 9 that it is turning over a package of valuable storage-oriented software and tools to the OpenSolaris community of

developers with the hope that users and developers will combine the mature, Unix-based open-source operating system with off-the-shelf hardware to create inexpensive commodity storage products for entry-level customers.

All roads lead to Solaris

Sun's whole motivation with the open-source donations is to get people to use Solaris and buy Sun's services, said storage analyst Henry Baltazar of The 451 Group.

"The ZFS - the speedy Zeta file system, recently released to the open-source community by Sun - is very interesting, and people are looking at it," Baltazar told eWEEK. "It's designed to run on Solaris now ... but it wouldn't take much reverse engineering to make it work on Linux. And how does that benefit Sun [financially]?" Baltazar asked rhetorically.

Sun executives said they believe the move will work in the long run for the company, because ultimately it will result in lower prices, higher performance and more services business for Sun.

"IT is being radically changed because of commodity-type hardware and free software," said Nigel Dessau, senior vice president of marketing at Sun. "Storage suppliers have been using general-purpose hardware and open software, but they've never really passed the economic benefits on to users. That's what we're doing at Sun."

Dessau said Sun is now embedding its storage-related open-source software in the Solaris operating system and giving it away as part of the package.

The free OpenSolaris 10 operating system currently includes applications such as DTrace (Solaris Dynamic Tracing), Solaris

Containers (for partitioning), Predictive Self Healing (autonomic computing), ZFS and so-called Trusted Extensions.

"The new ST2500 array line - prices for which start at $10,000 - provides an entry point for companies to use industry-standard platforms to support their growing businesses," Dessau said. "We're saying that our new storage array gives three times the performance at less than one-half the cost of HP storage - and of other competing array companies - ."

Key features

Product features in the ST2500 array, according to Sun, include application-oriented provisioning using Sun's StorageTek CAM (Common Array Manager); support for either Fibre Channel or SAS host interfaces; a small footprint, at six drives per rack unit; reliable data protection with a fully redundant RAID; and a remote connection to Sun Service.

The iSCSI version of ST2500 is expected to be available later in 2007, Dessau said. This Tier 2 storage product includes a common set of management tools that allows customers to simply scale their data requirements to Tier 1 (fast access) data devices - all under the same management module - and then scale to the ST6140 or ST6540.

Sun also announced the addition of the fourth generation of LTO drive technology in its tape portfolio, an open-standard LTO consortium that Sun has supported from the beginning. The LTO 4 FC Tape Drive delivers high capacity (800GB per cartridge native) and increased performance (120MB per second) for open-systems environments to improve storage density in new or existing libraries and allow for easy upgrades in the same automation footprint, a Sun spokesperson said.

LTO 4 FC drives will initially be available in Sun's tape automation

products, including the StorageTek SL8500, L1400 and SL500, later this quarter, and additional interfaces and support are expected to follow in the next quarter.

Other Sun storage product enhancements announced at Storage Networking World include:

-- SL8500 partitioning, a new feature of the SL8500 tape library designed to further enable secure data archiving;
-- A "crypto-ready" version of the T10000 FICON tape drive, which, when purchased in conjunction with Sun StorageTek Crypto Key Management Station, allows customers to implement Sun's encryption solution in the mainframe environment;
-- Sun StorageTek Storage Archive Manager 4.6 and Sun StorageTek QFS 4.6 software, saving customers money by providing automated storage tiering and archiving;
-- Sun VTL+ (Virtual Tape Library Plus), which bridges the gap between disk and tape;
-- Serial attached-SCSI HBAs (host bus adapters) that support the ST2500 array, including both PCI-X and PCI-E SAS HBAs.

Pricing and availability

The ST2500 LCA (Lost Cost Array) starts at less than $10,000 and is available immediately. The Sun T10000 FICON tape drive, available crypto-ready, starts at $44,000, and the Sun VTL+ begins at $135,000 highly configured.

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