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Winchester Systems Releases FlashDisk OpenSAN

Scalable Storage & Connectivity
Let Businesses "Pay-As-They-Grow"

by Stephen J. Bigelow

Network administrators are faced with the daunting task of identifying and quickly integrating increasingly complex storage solutions for the enterprise, yet maintain compatibility, ensure reliable operation, and achieve high performance. Meeting these goals with today's tight budgets makes SAN design and implementation a particularly difficult aspect of enterprise networking. Still, storage providers are responding with innovative new offerings.

Pay-As-You-Grow

FlashDisk OpenSAN storage products from Winchester Systems (www.winsys.com) are attractive options for mid-sized to enterprise-class network environments that require a high level of scalability, yet offer straightforward connectivity. The FX-400 is an 8-port (4-host) configuration supporting up to 16TB of storage using 112 disk drives, and the FX-600 is a 12-port (8-host) configuration providing as much as 32TB of storage using 224 disk drives. Both models connect to the network using dual 2Gb Fibre Channel interfaces compatible with switched fabric, point-to-point, and loop topologies with standard Windows, Unix, and (Red Hat Certified) Linux-based platforms. No proprietary software is needed to support OpenSAN systems. Stephen Dale, professional services consultant for Winchester Systems, says, "The FX series' modular design allows for easy pay-as-you-grow capacity and performance, to meet or

exceed today's dynamic application and storage requirements." The OpenSAN FX-400 starts at \$21,900, and the FX-600 starts at \$24,500. Actual pricing and delivery time will depend on your particular configuration.

Winchester Systems claims 160,000 I/O operations per second at 1.4GBps throughput for the FX-600 (80,000 I/O operations at 700MBps for the FX-400), making OpenSAN systems suitable for a range of disk-intensive tasks, including database, email, Web, and multimedia server applications. Still, storage scalability is the real selling point. Rather than a massive upfront investment, businesses can purchase a basic OpenSAN system, then purchase and install additional storage and connectivity as needed (and as budgets allow). You can upgrade and configure OpenSAN systems without down-



The FlashDisk
OpenSAN FX-600 is an
8-host SAN easily scalable to 32TB.

time. Even the FX-400 can be field-upgraded to an FX-600 as storage needs demand.

Unlike many competitors, FlashDisk systems can scale for performance as well as capacity. According to Dale, the FX series isn't simply a rack to accept disks. You can also scale by adding multiple write heads to improve SAN performance. Winchester Systems refers to this as a "third dimension" in scalability.

Reliability, Service & Support

Storage networks must provide superior reliability. OpenSAN systems use redundant drive side loops and intelligent load balancing to keep data flowing at peak efficiency. Hot spares are available with automatic drive rebuilding, so failed drives are quickly iso-

lated and spare drives are brought on automatically to maintain data redundancy. Multipathing and HBA (Host Bus Adapter) failover features are also supported to further minimize the impact of hardware faults. The use of hot-swappable components (controllers, power supplies, fans, host ports, drive ports, LAN ports, and so on) virtually eliminates system downtime when replacing failed devices.

When trouble strikes, FlashDisk OpenSAN systems automatically send an email message to the network administrator, as well as Winchester Systems (where a service ticket is generated). The system will detect and report any major component failure, allowing a technician to quickly replace the failed module without downtime. Winchester Systems offers a wide variety of service plans (including same day and next day onsite service), and pricing varies accordingly. However, Winchester Systems also provides telephone support and spare parts, so organizations with the staff and skill can easily maintain their own FlashDisk systems.

A Serious Contender

FlashDisk OpenSAN storage systems provide great expandability and performance for any high-volume storage application while maintaining high reliability and a level of redundancy that virtually eliminates downtime. An OpenSAN can be upgraded as business needs demand and is easily managed through the Web or a FlashConsole appliance. Winchester Systems can service any problems or assist onsite technicians as needed. Jan Sutton, marketing manager for Winchester Systems, says, "Customers are looking for an alternative to complex and expensive SAN architectures. FlashDisk OpenSAN fills that need. Our customers have responded positively to the 'SAN-In-A-Box' concept." [P.COM](http://www.processor.com)

(Image for this article courtesy of Winchester Systems)