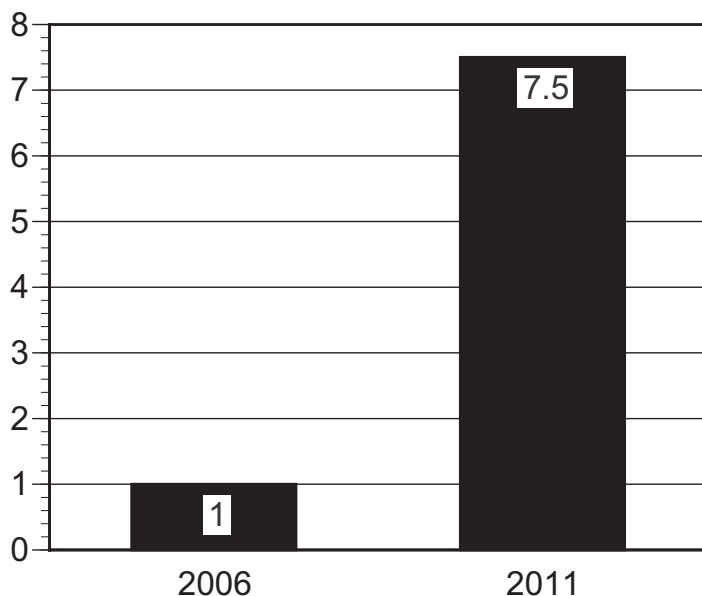# SAN/LAN

Local Area and Storage Area Networks Newsletter Covering Worldwide Technology Trends, Applications, and Market Opportunities

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**NAS-on-chip market
(millions of units)**

	2006	2011
	1	7.5

Source: ABI Research

CONTRACTS

Garanti Bank selects Cisco Systems for new Turkish datacenter backbone

Cisco Systems announced that Garanti Bank, the leading Turkish retail, commercial, and corporate bank, has

selected Cisco to provide a new backbone network infrastructure for its datacenter operations comprising storage area networking, datacenter switching, and integrated security. The new datacenter infrastructure will help the bank support the data security requirements of its mainframe applications.

Garanti Bank's datacenter houses all its banking data. The new datacenter network infrastructure will also help allow the company to take advantage of improved capacity to handle expanding requirements stemming from areas such as multichannel banking and the need to comply with banking regulations.

"We have been very impressed by Cisco's Data Centre Network Architecture and the integrated systems approach to providing interoperability between data centre components," said Mrs. Eser Unal, business unit manager, network services for Garanti Teknoloji. "As we develop our strategy, we are looking to achieve further cost efficiencies by deploying Cisco SAN technologies and Cisco's virtualized Firewall Services Modules (FWSM) to help support high levels of reliability and security within our data centre environment.

One key advantage of the Cisco technology is that there is a consistent integrated networking approach across its data centre switching and storage networking portfolios."

The new storage area network infrastructure is based around Cisco MDS 9509 Multilayer SAN directors, with Cisco MDS Multi-Protocol Services Modules. In addition to redundant Cisco Catalyst 6500 Series switches with the Cisco Supervisor Engine 720, Garanti Bank's network upgrade features a number of other Cisco network components, including integrated security with Cisco Firewall Services Modules.

The Catalyst 6500 Series switches will also help allow Garanti Bank to boost switching rates in the datacenter from 140Gbps to 720Gbps, and interconnect to Cisco Catalyst 4510R series switches at the network edge.

"The Cisco Data Centre Network Architecture represents the practical realization of our intelligent networking vision for the data centre.

An important benefit of Cisco's data centre strategy lies in helping enterprises to plan for future growth through a tight integration of intelligent architectures including switching, optical, storage area networking, integrated security and server load balancing," commented Kaan Terzioglu, VP for Central and Eastern Europe for Cisco Systems.

"We are working to provide the building blocks for a phased evolution of our data centre strategy as organizations move to consolidate, virtualize and ultimately build automation into their data centre environments."

The approach to using Firewall Service Modules in the datacenter is to help give fully controlled access to host systems from different regions on the Garanti Bank network. FWSM modules operate in multiple context modes using a stateful failover approach. Using different contexts for each segment, the traffic from all parties can also be isolated.

Contexts can be used either in routed or transparent mode; by using a context in transparent mode, Garanti Bank is able to pass Open Shortest Path First (OSPF) traffic through the context, eliminating the need for static routes. The advantage is that this approach is more reliable, more secure, and more practical.

Data393 to provide dedicated server hosting for LeftHand Networks

Data393, a managed IT infrastructure provider, announced an agreement to provide dedicated server hosting to Boulder, Colorado-based LeftHand Networks, a provider of clustered open iSCSI storage area networks (SAN). Under this agreement, Data393 will provide dedicated server services to LeftHand Networks to support their Web site and other Web-based products. "Data393 offers an ideal hosting environment — high-performance

servers, quick deployment and outstanding network connectivity — that allows us to focus on the growth of our storage systems featuring our flagship storage software, SAN/iQ," said Chris Lewicki, director of IT for LeftHand Networks. "By concentrating our efforts on SAN/iQ, LeftHand is able to provide its customers with the only iSCSI SAN solution that leverages industry-standard servers such as the HP ProLiant DL380." Data393 offers dedicated servers featuring Intel Xeon processors, Windows or Linux operating systems, quality multicarrier bandwidth, and 24/7 support from a SAS 70 certified datacenter. "Data393 has worked hard to ensure that our dedicated server solution offers LeftHand Networks the flexibility and reliability they need as they continue to grow," said Erik Porter, Data393 cofounder and vice president of sales. "Data393 has invested more than $30 million into a state-of-the-art facility that provides IT managers the answer to high hardware prices and server room build-outs."

First Industrial Realty Trust Inc. selects Compellent SAN for increased performance and cost-effective data storage expansion

Compellent Technologies, a provider of affordable and modular enterprise storage solutions, announced First Industrial Realty Trust Inc., the nation's largest provider of diversified industrial real estate, has selected Compellent's Storage Center storage area network (SAN) to deliver an automated tiered storage environment that increases storage performance and reduces ongoing expansion costs. First Industrial owns and operates more than 100 million square feet of industrial real estate in markets throughout the United States, serving more than 3,000 tenants across its portfolio. Prior to installing Compellent, First Industrial's IT administrators were regularly adding disk space and manually moving data between silos in an effort to keep up with increasing capacity and performance requirements driven by the company's growth. Storing historic customer data and archived email files alongside active financial analysis was expensive and was impacting performance for I/O-intensive applications.

"Considering the cost, performance and time savings, the Compellent system provides unmatched value," said Nick Colakovic, director of information technology for First Industrial. "With Storage Center's Automated Tiered Storage, we have cut our tier one disk purchases by 45 percent while doubling the performance of our primary business applications, including Exchange and Oracle." Compellent's SAN provides First Industrial with an automated tiered storage environment. For example, individual blocks of large Microsoft Exchange .pst files are now automatically classified and migrated to the optimum tier of storage based on usage. With First Industrial's Oracle databases, the SAN automatically migrated 70 percent of the data — all inactive — to a lower-cost tier of storage, freeing up the Fibre Channel tray for more intensive I/O and delaying additional Fibre Channel disk requirements. Compellent distributes exclusively through a select national network of business partners that are trusted advisors on their client's technology decisions. StorCOM, a regional data storage consulting firm, worked closely with First Industrial to understand their requirements and design a tiered storage solution that delivers performance and functionality an affordable price. "By automatically moving inactive data off Fibre Channel drives, Storage Center increases performance and saves First Industrial time and money," said StorCOM's president, Jeff James.

NEW PRODUCTS

Mirapoint integrates NetApp storage solutions to fortify backup and recovery of business-critical email

Mirapoint, the secure messaging experts, announced the integration of its Mirapoint

Message Server with Network Appliance FAS storage systems. The joint solution, preconfigured and optimized specifically for enterprise messaging environments, provides customers with an integrated disaster recovery solution designed to protect business-critical messaging. The integrated SAN solution addresses the challenge of exponentially increasing volumes of email due to longer retention periods, greater reliance on email in the enterprise, and the escalating costs associated with the management of email infrastructure.

"Email continues to be the most critical business communications tool used today and organizations are still grappling with how to deal with the growth in volume of email that must be retained due to regulatory and corporate governance purposes. Critical to any solution are highly available and reliable storage mechanisms for effective archiving of emails and attachments," according to Mark Levitt, vice president for Collaborative Computing and the Enterprise Workplace at IDC.

Protecting business-critical data is essential for enterprises today. A natural disaster such as a flood, hurricane, or fire, or even human error can be challenging for businesses, resulting in loss of intellectual property and revenue. Now, businesses gain a secure messaging infrastructure with the added protection of ensuring the integrity of their email and maintaining business continuity. Additionally, there are mounting legal and regulatory requirements for public businesses to archive and store email.

Unlike today's existing storage area networks, which are typically generically configured for a multitude of storage requirements such as enterprise applications, data from databases, and email, the Mirapoint and NetApp joint solution is specifically optimized for the storage and retrieval of millions of emails, simplifying the life of storage and messaging administrators. The solution's N+1

high-availability configuration option allows businesses to rest easier knowing that they have 99.999 percent availability and continuous data protection.

"We are seeing a shift from one-size-fits-all storage to the storage of different types of data based on their business need, making it faster and more cost-effective for users to access this information," said Bethany Mayer, chief marketing officer for Mirapoint. "The Mirapoint and NetApp solution provides customers with a more complete messaging solution that includes messaging, security, archiving, reporting, and now backup and recovery via an integrated storage area network solution."

"The combination of Mirapoint and NetApp was a natural one, considering the explosive growth of email in businesses today, coupled with compliance regulations driving expanded data retention periods," said Stanley Jaworski, vice president of Worldwide Channel Marketing at Network Appliance. "The Mirapoint and NetApp solution offers customers an integrated email and storage solution to meet their growing email storage needs cost-effectively."

Network Equipment Technologies announces general availability of its multi-service, high-speed switching platform

Telecommunications equipment maker Network Equipment Technologies Inc., a global provider of multiservice network exchange solutions for government and enterprise customers, announced that its NX5010 platform, a next-generation, high-speed multiservice aggregation and switching platform, was released for general availability on November 30. The NX5010 enables customers with geographically dispersed datacenters to connect and makes it possible to collapse into a single integrated system the multiple switches currently required to perform SAN-to-WAN communications.

"We are pleased to have completed development, validation testing and general release of this powerful solution for mission-critical communications. The NX5010 significantly improves our customer's ability to transfer large amounts of data throughout disparate networks on a single switch. Initially targeted at government and financial customers, the NX5010 also addresses our customers' increasing need for secure, high speed, versatile networking," said John Sandschulte, VP of engineering at NET. "In lab trials, the NX5010 successfully demonstrated its ability to transfer up to 60 terabytes of InfiniBand data over a distance of 4500 km in only 32 hours — the largest amount of InfiniBand data ever transferred per unit time over a wide area network. No other product available today has the ability to transfer this amount of InfiniBand data over a wide area network."

Jointly developed by NET and Bay Microsystems — the leader in high-performance packet processing solutions — the NX5010 is compact and scalable, with the ability to convert 10Gbps to a wide area connection on a very small footprint (2RU). The NX5010 was tested extensively by the US Naval Research Laboratory (NRL). Following the trials, NRL awarded NET and Bay an initial order for multiple units, which are targeted for use within NRL's testbed for Advanced Network and Advanced Terabit Storage Area Networking trials.

Dell expands disk storage line with first-to-market product

Dell introduced the PowerVault MD3000, a versatile, direct-attached storage array delivering high performance and high availability for critical applications. The PowerVault MD3000 is the first external RAID SAS array from a Tier 1 storage system company.

"Direct attach storage is incredibly important to a large number of customers. With its performance and advanced software capabilities, the MD3000 will redefine how customers look at DAS," said Darren Thomas, vice president and general manager of Dell storage and services. "At Dell, we want to change the economics of storage by providing easy-to-use, highly capable storage at new levels of affordability."

The expandability, availability, advanced snapshot, and virtual disk copy functionality of the PowerVault MD3000 make it an ideal platform for clustered applications such as Microsoft SQL Server 2005 and Microsoft Exchange Server 2007. In addition, these applications are including more advanced replication capability in the software itself. The MD3000 complements this by providing easy-to-use and highly capable storage at a fraction of the price of storage area networks.

Added to this, the PowerVault MD3000 uses dual active/active RAID controllers to enhance performance and availability — producing up to 1,400Mbps of throughput and approximately 90,000 input/output operations per second (IOP/s). The throughput performance aids applications such as video services and file serving, while the high IOP/s make it ideal for applications with high transactional performance requirements — such as databases and email applications.

The PowerVault MD3000 is Dell's second storage product to comply with the Storage Bridge Bay 1.0 specification. Dell is a founding member of the Storage Bridge Bay (SBB) Working Group that is dedicated to developing industry standards that help accelerate the adoption of new storage technologies and deliver enhanced quality and affordability. Additional information on SBB can be found at www.sbbwg.org.

PowerVault MD3000 features
- Capacity — Up to 4.5TB per system
- Expansion — Ability to expand with up to two MD1000 arrays for a total of 13.5TB
- Two Node Clustering — This is the first PowerVault MD product to support two-node

clustering providing high availability and fault tolerance for applications or services.

- Multi-host Capability — Attach up to four Dell PowerEdge servers

- Performance — Active/active RAID controllers can produce up to 1,400Mbps of throughput and approximately 90,000 IOP/s from cache. This is nearly twice the throughput of the PowerVault MD1000.

- Redundant Architecture — The direct-attached storage array uses two active/active RAID controllers with mirrored cache and I/O multipathing capabilities to help ensure processing continues without interruption. Also includes hot-pluggable, redundant power supplies, cooling modules and disk drives, active disk scrubbing, and non-disruptive firmware upgrades

- Manageable — Delivers a suite of easy-to-use, intelligent storage management features for configuration and administration, partitioning, and dynamic disk expansion. Optional management features provide enhanced data availability via snapshots and virtual disk copies.

Ideal customer scenarios

- Applications typically configured in two-node clusters — such as Microsoft Exchange Server and Microsoft SQL Server

- IT environments that require affordable, high performance and high availability for one or two servers

- Mainstream technology buyers who buy SCSI disk drives today

The PowerVault MD3000 is available immediately worldwide with pricing beginning around $6,499. For more information on Dell storage, visit http://www.dell.com/storage.

ServePath unveils High Availability Server Network offerings for businesses that run mission-critical internet applications

ServePath, a dedicated server provider and hosting specialist, announced its new High Availability Server Network offerings. These customized network solutions give companies with mission-critical Web applications the opportunity to have a highly available server hosting environment built to meet their needs at an affordable cost.

"ServePath's new High Availability Server Network offerings set us apart from the pack," said John Keagy, president, ServePath.

"No other hosting provider can offer a highly customized package at such a reasonable price point.

We have the staff and systems in place to provide this advanced level of service. ServePath doesn't believe in selling prepackaged solutions, which is why we specialize in providing such a high degree of server network customization."

ServePath's High Availability Server Network offerings leverage the company's dedicated server products and sophisticated network architecture, enabling them to be available at a lower cost, yet be individually customized.

Featuring rapid setup by a specialized staff, ServePath can provide two or more servers with load balancing and many managed services not offered by competitors, such as Gigabit Port Upgrades and Storage Area Network (SAN) connections.

Each network configuration is built to exact customer specifications, with a variety of hardware and OS options.

ServePath takes care of the infrastructure management so customers can focus on managing their applications.

"Our site needs to be up all the time," said Jon Boutelle, chief technical officer of Slideshare, a site for sharing PowerPoint slides. "If our site went down, it would have a huge impact on our brand.

That's why we rely on ServePath's High Availability Server Network solution, which is customized for our needs.

One of the best things about ServePath is that they're available 24 hours a day. 24-hour

access is critical when running a site like ours that customers around the world count on to be there when they need it."

"Any business with an online presence can tell you that it is absolutely critical for their site to be up and available, 24/7," Keagy continued. "It's even more significant during seasonal times of the year like the upcoming holidays, where even just a few minutes of a site being down can mean substantial losses to your business not only in terms of sales, but also in the brand experience. To address these concerns, ServePath offers a 10,000 percent guarantee with our service level agreement (SLA). This testament to our network reliability is significant in the industry because it shows that we stand behind our 100 percent uptime guarantee."

ServePath's dedicated hosting solutions, High Availability Server Network solutions, and managed services are immediately available. For more information, please visit www.ServePath.com or call 866-321-7284.

NetApp SnapManager 4.0 for Exchange Server 2007 now available

Network Appliance Inc. announced general availability of two software products in support of Microsoft Exchange Server 2007.

The availability of NetApp SnapManager 4.0 for Exchange Server and NetApp Single Mailbox Recovery 4.2, a near-instantaneous backup and recovery software solution for Exchange Server 2007, provides customers with enterprise-class backup, recovery, and restoration solutions. NetApp SnapManager 4.0 for Exchange, which supports both NetApp Fibre Channel (FC) and iSCSI-based IP SAN (storage area network) solutions, helps customers dramatically reduce the administrative overhead of backing up Exchange Server databases.

With the availability of these products, NetApp is helping Exchange Server 2007 customers achieve near-instantaneous, granular recovery of Exchange Server data

without a prohibitive — and expensive — increase in storage capacity needs.

Located in Galveston, Texas, the University of Texas Medical Branch (UTMB) is a major academic health center with six state-of-the-art hospitals and is dedicated to health science education, patient care, research, and community service.

To support its 12,300 Exchange Server users, UTMB uses NetApp SnapManager for Exchange on an enterprise-intensive NetApp Fibre Channel SAN solution.

"It's critical to our business that we protect valuable medical and research data captured in Exchange Server," said Brian Grimm, software system staff specialist at UTMB. "Our NetApp SnapManager for Exchange solution, which integrates NetApp SnapMirror for disaster recovery, helps reduce costs, simplify our data management, and increase data availability within our Exchange Server environment — with no negative performance impact."

NetApp SnapManager 4.0 for Exchange and Single Mailbox Recovery 4.2 software dramatically boost the productivity of both administrators and physical storage assets in the following ways:

- Maximized data availability: NetApp provides near-instantaneous backups and rapid Exchange Server recovery, with minimal capacity overhead. In addition, NetApp SnapMirror software provides simple, flexible, and cost-effective snapshot replication and mirroring for easy-to-use disaster recovery of Exchange Server data.

- Simplified data management: NetApp addresses the storage management productivity challenge with automated data management, rapid storage provisioning, and the ability to back up and restore hundreds of databases residing on a single Exchange Server installation.

- Rapid Exchange Item-Level Recovery: NetApp Single Mailbox Recovery software provides rapid recovery of mailbox data from any existing snapshot backups using

administrator-specified criteria, up to and including individual emails and attachments.

- Reduced costs: NetApp helps consolidate Exchange Server data and maximize storage resource utilization with its unique FlexVol technology, available through NetApp Data ONTAP 7G software.

Additionally, NetApp Global Services (NGS) offers professional and support services that complement these NetApp software offerings by minimizing disruption, augmenting or offloading IT staff, and rapidly designing and implementing a NetApp-enabled Exchange Server environment.

NGS offers solutions for Exchange Server environments that scale from installation to turnkey enterprise deployments depending on customer needs. NGS resources are Microsoft certified and have experience in industry verticals such as financial services and government sectors.

The service offerings are organized as components and include Exchange Server consolidation, migration, backup/recovery, and disaster recovery. The consolidation and migration services assist customers in moving to current versions of Exchange Server. The backup and recovery services leverage tiered-storage best practices to implement high-availability solutions for safeguarding data and enabling near real-time data restoration. NGS disaster recovery services feature highly robust clustering and replication solutions that protect data assets within and across datacenters. All of the Exchange Server service components share a structured implementation methodology that follow proven project management concepts and emphasize knowledge transfer to IT operations staff. For more information on NetApp services and support, visit www.netapp.com/support.

"Email is a mission-critical application, and organizations demand a highly available and reliable solution," said Kim Akers, general manager, Unified Communications, Microsoft.

"We are pleased that companies like NetApp are providing solutions that will complement the enhancements delivered in Exchange Server 2007, which will help IT administrators get more out of their hardware and networking investments, make deployment easier and more flexible, while giving administrators more time for value-added work."

NetApp is a member of the Microsoft Technology Adoption Program (TAP) for Exchange Server 2007, helping customers leverage the capabilities of Exchange Server 2007 and NetApp storage solutions. NetApp SnapManager 4.0 for Exchange supports Microsoft Cluster Server (MSCS) for high availability and Microsoft Multipath I/O for resiliency in FC and IP SAN environments. NetApp storage arrays are listed in the Windows Server Catalog, demonstrating their compatibility with Microsoft products. For more details on NetApp SnapManager software, visit www.netapp.com/products/software/snapmanager.html.

NetApp StoreVault extends comprehensive, enterprise-class replication and Fibre Channel support to SMBs

StoreVault, a NetApp division, announced new features to its StoreVault S500 for improved simplicity, scalability, and data management for small and medium-sized businesses (SMBs). With this news, StoreVault is delivering on its promise to make the best of enterprise-proven storage technology from NetApp available to the SMB market through an easy-to-use and flexible network storage solution at a price point that fits SMB budgets. StoreVault has added the following new features to Data ONTAP StoreVault Edition and StoreVault Manager to further extend enterprise-class functionality to the SMB masses:

- StoreVault Replication — Based on NetApp enterprise technology, StoreVault Replication is the first SMB storage software that can copy both file and block data between

locations. StoreVault Replication is easily enabled with a software license key and designed to simply manage replication between multiple StoreVault S500s using the new StoreVault Manager 2.0 interface. Instead of third-party software loaded on various servers, StoreVault Replication provides comprehensive replication at an affordable price that is integrated in the StoreVault S500 to address all types of data on the system.

- Fibre Channel (FC) Support — StoreVault is teaming with QLogic Corporation to provide the StoreVault FC Starter Kit, which includes a factory-installed host bus adapter (HBA), a 10-port 4Gbit Fibre Channel switch, and QLogic SANsurfer Express software. Additional FC HBAs are available for a simple, customized solution. The FC Starter Kit is ideal for first-time FC installations, bringing simplicity to FC storage area networks (SANs) by enabling StoreVault customers to start with NAS or iSCSI SAN and scale to Fibre Channel as their data requirements evolve, without buying a separate network storage system.

The StoreVault S500 provides seamless technology functionality without the need for new hardware, resources, cycles, or training investment. For example, StoreVault Replication is built into StoreVault Manager 2.0, and the software is an embedded application in Data ONTAP StoreVault Edition. Other replication products depend on third-party servers or operate separately from the storage system, forcing unnecessary network traffic and deployment complexity. The StoreVault S500 provides one centralized network storage solution for efficient data movement, disaster recovery, and off-site backup services, eliminating the need to purchase, install, or learn new hardware or additional software.

Gartner Dataquest recently conducted a global SMB user survey in 11 major countries: the United States, three European countries (the United Kingdom, Germany, and France), Japan, and six countries in Asia/Pacific (Australia,

China, India, South Korea, Singapore, and Taiwan). The October 2006 survey, "User Survey Analysis: Top Storage Demands from Global Small and Midsize Businesses," was completed with 1,138 respondents, with each country evenly represented by 100 or slightly more than 100 respondents. According to the survey, two of the top five problems IT personnel are facing when managing storage are lack of reliable backup/recovery solutions and lack of storage management tools. In addition, among the top storage software solutions that will receive the greatest amount of new budget dollars during the next one to three years are backup and replication software and storage resource management (SRM)/SAN management software.

"My SMB customers have multiple locations where StoreVault Replication delivers an attractive solution for their disaster recovery needs," said Greg Knieriemen, vice president, marketing, Chi Corporation. "Unlike the piecemeal offerings of other network storage manufacturers, StoreVault Replication is smoothly integrated into the S500, making it the logical choice for replication."

"StoreVault Replication ensures that our customers have access to their data," said Chuck Edwards, principal, Blue Gecko, a managed service provider. "StoreVault Replication is more flexible, easier to implement, and faster than any tape or disk-based copy with third-party software. We now have disaster recovery abilities that would have cost thousands more with another solution and, best of all, it is from a reputable company that we absolutely trust with our data."

In addition to StoreVault Replication, StoreVault Manager 2.0 improves ease of use and simplifies advanced features by providing multiple views of storage volumes and improving CIFS setup and management of NFS exports. Additionally, StoreVault Manager 2.0 adds the ability to make Snapshot copies of iSCSI and FC LUNs at no additional charge.

The availability of Fibre Channel support makes the StoreVault S500 the industry's first and only full-featured, scalable, all-in-one network storage system for the SMB market that supports NAS, iSCSI SAN, and Fibre Channel SAN. StoreVault eliminates the need for customers to purchase multiple products for SAN and NAS or make an up-front technology choice between iSCSI and Fibre Channel, better enabling SMB customers to address their growing storage needs without forcing difficult and expensive up-front technology decisions.

According to the survey, when Gartner Dataquest questioned SMBs about the major storage issues they face today, 55 percent of respondents mentioned managing growing capacity demands.

Gartner Dataquest also asked how fast SMBs expect their capacity needs to grow in the next one to two years, and the average response was 25 percent capacity growth in one year and 41 percent growth in two years.

StoreVault provides SMB customers the scalability that is missing in today's network storage solutions for SMBs.

The StoreVault S500 delivers the same enterprise-proven storage technology from NetApp that had previously only been affordable for large enterprises.

Customers can easily deploy Fibre Channel with the StoreVault S500 and still have the flexibility to leverage the StoreVault S500 for NAS or iSCSI SAN in the future. Most importantly, SMBs will not need to invest in more storage as their businesses grow, and they will make their storage budgets go further with the StoreVault S500.

"We continue to deliver greater value to our SMB customers and distinguish StoreVault from other competitive offerings," said Sajai Krishnan, general manager of StoreVault. "The StoreVault S500 gives SMBs the first complete platform for all their network storage needs combined with the first enterprise-class replication software. It's all about giving customers what they're looking for — a 'Swiss army knife' storage solution with easy replication and simplicity in data management, all from a trusted storage vendor."

StoreVault Replication and the StoreVault FC Starter Kit from QLogic are available immediately in the United States. StoreVault Replication pricing starts at $1,500 for each StoreVault S500 system.

Licenses for an existing StoreVault S500 may be purchased directly from qualified StoreVault VARs, with specific pricing available through the channel. Pricing for the StoreVault FC Starter Kit from QLogic starts at $4,000 and includes a factory-installed HBA, cabling, and switch. Additional HBAs are priced at $650 each. StoreVault Replication and the FC Starter Kit are expected to be available in January 2007 in the United Kingdom and Australia.

Resellers can access the StoreVault Web portal at http://partners.storevault.com, where they can easily begin the authorization process, purchase preconfigured or customized solutions, research product information, access valuable training and on-demand marketing tools, and review any program or promotional opportunities.

BUSINESS

NEC Corporation of America garners Brocade Fabric Aware Status for storage networking compatibility

NEC Corporation of America, a provider of IT, network, and telephony solutions, announced that their S-Series Storage Systems have been verified by Brocade Communications Systems Inc. as compatible with Brocade-based Storage Area Networking (SAN) infrastructure, according to the testing requirements of the Brocade Fabric Aware Program.

This program is a comprehensive testing and configuration initiative designed to foster SAN interoperability in multivendor Brocade-based SAN environments.

Testing was conducted at the Brocade Fabric Aware labs, which are state-of-the-art facilities supporting end-to-end interoperability and performance testing of SAN products in multivendor and large fabric SAN environments. The Brocade Fabric Aware Program boasts an impressive collection of members since its launch in 2000.

"NEC has 42 years of experience in serving our storage customers, and have a deep understanding of the vast importance of compatibility with Brocade switches to accelerate SAN implementations," said Matthew Wolken, vice president, Fault Tolerant Server and Data Storage of NEC Corporation of America. "We are working to ensure interoperability of NEC's complete storage product line, as part of our continuous effort to provide the marketplace with quality storage solutions and value-added services."

Available in North America, the NEC S-Series of storage systems includes the S1500, S2500, and the S2900, which offer high-performance, full data availability as well as a comprehensive suite of business continuity and disaster recovery capabilities.

"We are pleased that NEC has successfully completed the Fabric Aware testing with Brocade fabric switches in multi-vendor SAN environments," said Dan Crain, chief technology officer for Brocade Communications Systems Inc. "Storage area networks are being deployed worldwide at a rapid rate as a scalable, high-performance networking foundation for storage environments. The Fabric Aware program is an example of our continued commitment to our SAN customers."

The Brocade Fabric Aware program is a comprehensive testing and configuration initiative designed to foster end-to-end SAN interoperability. As part of the program, testing is conducted in SAN configurations that comprise a heterogeneous mix of servers, storage subsystems, Brocade fabric switches, SAN management and enterprise applications,

and other SAN technologies. Brocade has created a dedicated lab comprising a heterogeneous SAN fabric, in which the company tests and validates partner equipment in specific configurations. Vendors receive Brocade Fabric Aware Certification after successfully completing tests to confirm that vendors' products meet compatibility guidelines.

For more information, visit http://www.brocade.com/partners/fabric_aware_program.jsp.

RELDATA dramatically increases worldwide headquarters to meet workforce and facilities growth

RELDATA, a provider of a new generation of universal IP storage virtualization appliances, announced that it has dramatically expanded its worldwide headquarters, tripling the size of its Parsippany, New Jersey, facility to accommodate its growing workforce and to provide additional space for further development of its universal IP storage solutions. The larger facilities at RELDATA's headquarters will enable the company to meet the demand for its expanding sales, technical, and executive staff; improve and expand lab facilities for testing, quality assurance, and certification; and upgrade its internal infrastructure.

"Our continued success has prompted us to triple our worldwide headquarters in New Jersey and to establish it as a center of innovation for our family of universal IP storage solutions," said Boris Anderer, president and CEO of RELDATA. "The capital expenditure we are making in increasing our physical infrastructure and human resources is an investment in the future of our company and a firm commitment behind our industry-leading universal IP storage solutions."

The company recently announced that the RELDATA IP Storage Gateway 9240 incorporates six 1GbE ports and two Ultra SCSI ports in addition to the dual 4Gbps FC ports, which provides flexible connectivity so

enterprises can easily, cost-effectively extend or expand existing Fibre Channel, SCSI, and iSCSI storage investments.

Universal IP storage solutions based on RELDATA 9240 reduce capital expenditures to meet growth and mitigate future storage spending by maximizing utilization and lowering administration costs through centralized universal IP storage management.

As a result, RELDATA-based IP storage solutions let enterprises face the challenges brought on by rapidly growing mixed file and block storage volumes, short recovery time or recovery point objectives, or data protection of multisite locations.

MARKET INTELLIGENCE

Compellent placed in Visionaries Quadrant in leading analyst firm's Magic Quadrant

Compellent Technologies, a provider of affordable and modular enterprise storage solutions, announced that Gartner positioned the company in the Visionaries Quadrant of the "Gartner Magic Quadrant for Midrange Enterprise Disk Arrays, 2H06," released on December 13, 2006, and authored by Stanley Zaffos, Roger W. Cox, and April Adams.

The Gartner Magic Quadrant measures the completeness of vision and ability to execute of midrange enterprise disk array vendors worldwide.

Several factors contribute to the vendors' ratings, including market understanding and the ability to demonstrate innovation in meeting customer needs. According to Gartner, "a midrange enterprise disk array storage vendor in the Visionaries Quadrant delivers uniquely innovative products that address operationally or financially important end-user problems, but has not demonstrated the ability to capture market share or sustainable profitability.

Visionary vendors are frequently privately held companies and acquisition targets for larger established companies.

The likelihood of acquisition often reduces the risks associated with installing their systems."

"We set out less than three years ago to remove the traditional cost and complexity from enterprise storage," said Phil Soran, president and chief executive officer of Compellent.

"We think being positioned in the Visionaries Quadrant on the Gartner Magic Quadrant demonstrates that we have listened to end users and delivered innovative capabilities that significantly lower costs for our customers."

Since its introduction in early 2004, Compellent's storage area network (SAN) has attracted more than 400 customers, an international network of channel partners, and widespread industry acclaim for the product's powerful capabilities and ease of use.

Demand for Compellent's award-winning midrange storage area network and the operating efficiency of the company's business model will more than double revenue in 2006 and ensure consistent profitability in 2007.

Compellent's SAN represents a major leap forward in storage innovation, radically reducing the total cost of storage acquisition and management.

Companies using the SAN have reduced storage costs up to 74 percent, cut storage administration time in half, and ensured continuous data availability.

Among its many innovative features that resulted in its debut in the visionary quadrant, Compellent's Storage Center is the industry's only SAN with Automated Tiered Storage, which automatically moves data to the optimum tier of storage based on usage. Additional pioneering features of Compellent's SAN include the following:

- Thin Provisioning — Reduces storage expenditures, automates capacity planning, and lowers power and cooling requirements by only consuming physical disk when data is written

- Continuous Snapshots — Provides recovery from any point in time in less than 10 seconds by creating an unlimited number of space-efficient snapshots

- Thin Replication — Lowers capacity, bandwidth, and management requirements by up to 50 percent to deliver affordable, multisite replication without the cost or complexity

- Advanced Virtualization — Intelligently allocates data across all disk drives in a virtualized environment to increase performance

- Intuitive Interface — Cuts management time in half with wizards that eliminate repetitive, time-consuming tasks and simplify advanced storage processes

Acopia Networks file virtualization solutions score high with Fortune 1000 customers

Acopia Networks Inc., a provider of high-performance intelligent file virtualization, announced that independent research firm TheInfoPro (TIP) has reported that Acopia is "edging out" its competition — including Network Appliance, Microsoft, Cisco, Brocade, and others — in the file virtualization space.

The findings, based on 154 hour-long interviews with TheInfoPro's peer network of prescreened Fortune 1000 storage professionals, showed that file virtualization has now moved into the top position on TheInfoPro's Storage Technology Heat Index, a measure of users' spending and implementation plans.

"With installed NAS growing rapidly in the data center and the long project timelines needed for block virtualization, storage professionals have been focusing their near-term energies and budgets on improving file content," stated Robert Stevenson, managing director of TheInfoPro's Storage Sector.

"In fact, two of the more salient findings of the research were that information lifecycle management (ILM), tiering, and migration are all prominent management technologies now being considered for short term implementation,

as well as the substantiation that there is in fact no such thing as a 'one-off' data migration in today's enterprise."

"We are delighted that results of the TheInfoPro Wave 8 Study reinforce Acopia's growing market presence in intelligent file virtualization," said Kirby Wadsworth, senior vice president of marketing and business development. "More importantly, TheInfoPro results provide quantifiable proof that F1000 companies are investing in file virtualization solutions today and intend to invest even more in the near future. As a technology and market leader, Acopia is uniquely positioned to address the data management needs of these F1000 enterprises."

To view a rich media presentation of TheInfoPro's Wave 8 Storage Management Fortune 1000 Study, please visit http://www.brainshark.com/theinfopro/storw8_smr_f1000_pr.

Market research shows NetApp SAN momentum

Network Appliance Inc. announced that it continued to gain momentum in the storage area network (SAN) market, while maintaining strong leadership in both the network-attached storage (NAS) and iSCSI markets, in the third calendar quarter of 2006.

According to IDC's Worldwide Quarterly Disk Storage Systems Tracker Q3 2006, NetApp gained share in both capacity shipped and revenue for the Fibre Channel (FC) SAN market. NetApp continued to grow faster than the market in FC SAN in both revenue and capacity, year over year. For capacity shipped, NetApp grew at 210.2 percent, while the market grew at 46.3 percent. In terms of revenue, NetApp grew faster than the market for the 11th consecutive quarter at 62.1 percent, while the market grew at 14.1 percent. Sequentially, NetApp grew at 16.0 percent, while the market grew at 6.4 percent.

NetApp also demonstrated continued leadership in the NAS and iSCSI storage

markets in the third quarter. NetApp maintained the No. 1 market share positions in capacity shipped for NAS (42.0 percent), and in iSCSI for both capacity shipped (32.6 percent) and revenue (21.5 percent).

In the network storage market (which includes SAN, NAS, and iSCSI), NetApp grew faster than the market, year over year, in both capacity shipped and revenue. For capacity shipped, NetApp grew at 106.8 percent, while the market grew at 62.6 percent. In terms of revenue, NetApp grew 18.9 percent, while the market grew at 17.2 percent.

"Every quarter, IDC's market research continues to show NetApp gaining momentum in SAN faster than the market, while continuously maintaining strong leadership positions in both NAS and iSCSI," said Elisa Steele, vice president of Worldwide Integrated Marketing at Network Appliance. "Our overall leadership and momentum in the market demonstrate the value NetApp is delivering to customers across all segments of our business."

EqualLogic strengthens position as leading midrange iSCSI SAN provider for retail market

EqualLogic, a provider of enterprise-class iSCSI storage area network (SAN) solutions, announced growing momentum in the retail industry with several new customers. EqualLogic's affordable and easy-to-use PS Series storage arrays support retailers' demanding environments that include the challenges of automated inventory tracking, supporting dispersed users, and an increasing volume of customer-related data. A few of EqualLogic's newest retail customers include Party America, Patagonia, ZOOTS Inc., Chicago Office Technology Group, and Office Environments of New England.

Retailers have found EqualLogic's flexible PS Series SANs to be an ideal fit for their traditional or virtualized IT environments. The company's technology gives retailers uninterrupted data access in a self-managing, all-inclusive storage solution, allowing these organizations to concentrate on their customers and not their day-to-day storage management. Additionally, the high transaction rates that retailers support on their databases and SANs require the performance and reliability that the PS Series delivers. Included in all EqualLogic SANs are 24/7 backup and disaster recovery capabilities via snapshots and Auto-Replication to enable business continuity that is vital to retailers.

Patagonia, a leading manufacturer of outdoor clothing and technical apparel, migrated to an EqualLogic iSCSI SAN to consolidate a disparate set of direct attached storage (DAS) and simplify management and backup of the storage supporting its critical business services, including supply chain and product lifecycle management. Since implementing the EqualLogic SAN, Patagonia has transitioned from tape backup to a disk-based backup method, cutting administration times. "Our deployment of EqualLogic has been what was promised: short configuration times, up and running in minutes and exceptional ease-of-use and management capabilities that help us grow our storage networks as needed," said Tammy Barrett, network engineer at Patagonia. "The EqualLogic solution provides our IT team with a level of storage network flexibility and management that we never experienced with DAS. We can now implement IT initiatives that were previously impossible due to complexity and cost issues."

Founded in 1998, ZOOTS is the largest dry cleaner on the East Coast, with 75 locations spanning nine states. The company's rapid growth — in stores and customers — pushed the ZOOTS IT staff to seek replacements for its hard-to-manage Fiber-Channel SAN. ZOOTS selected EqualLogic's storage arrays so it could more easily grow its storage to keep pace with the business expansion, and so staff could spend less time managing their SAN and more

time supporting their more than 300,000 customers. "We are dedicated to providing the highest levels of quality and convenience for our 300,000 active customers. We needed to implement a solution that would grow with our company, meet IT budgets and increase availability of data for our users," said Dean Patterson, vice president of IT for ZOOTS Inc. "EqualLogic's cost-effective, plug-and-play storage solution met our scalability and cost requirements, and continues to protect our mission-critical operations as we multiply in size."

Nationwide party supplies provider Party America selected EqualLogic to overcome I/O bottleneck limitations it encountered with its previous Fibre Channel SAN. In performance benchmarking, Party America discovered EqualLogic's iSCSI storage array delivered at least a 3x improvement in performance over the Fibre Channel predecessor for its Oracle systems. Party America's PS Series implementation exceeds the company's support needs for its bicoastal, 1,000-plus concurrent user IT environment. "Party America has gone from the smallest party supply retailer to the second largest in the country, operating in 45 states across the U.S.," said Chris Fairbourne, director of IT operations at Party America. "As a large retailer, we have a substantial Oracle database that supports a real-time point of sale system, hosted via broadband links. We needed a SAN for this environment that could scale at a price point we desired. There's nothing else out there like EqualLogic. It's bullet proof. The fault-tolerance, flexibility and performance combined are unmatched. The box integrates flawlessly at all layers-better than anything I've seen."

"IT departments at retailers want to focus on ensuring optimal services for their customers, but are frequently distracted from this priority by storage management challenges," said John Joseph, vice president of marketing at EqualLogic. "Retailers' database-intensive applications are mission-critical for processing customer transactions and demand high-performance, while their data storage requirements often grow rapidly. EqualLogic is uniquely able to deliver a high-performance, self-managing and scalable SAN that helps retailers free up IT staff, time and money for customer-service oriented priorities."

Success stories on more EqualLogic customers can be found at http://www.equallogic.com/customers.