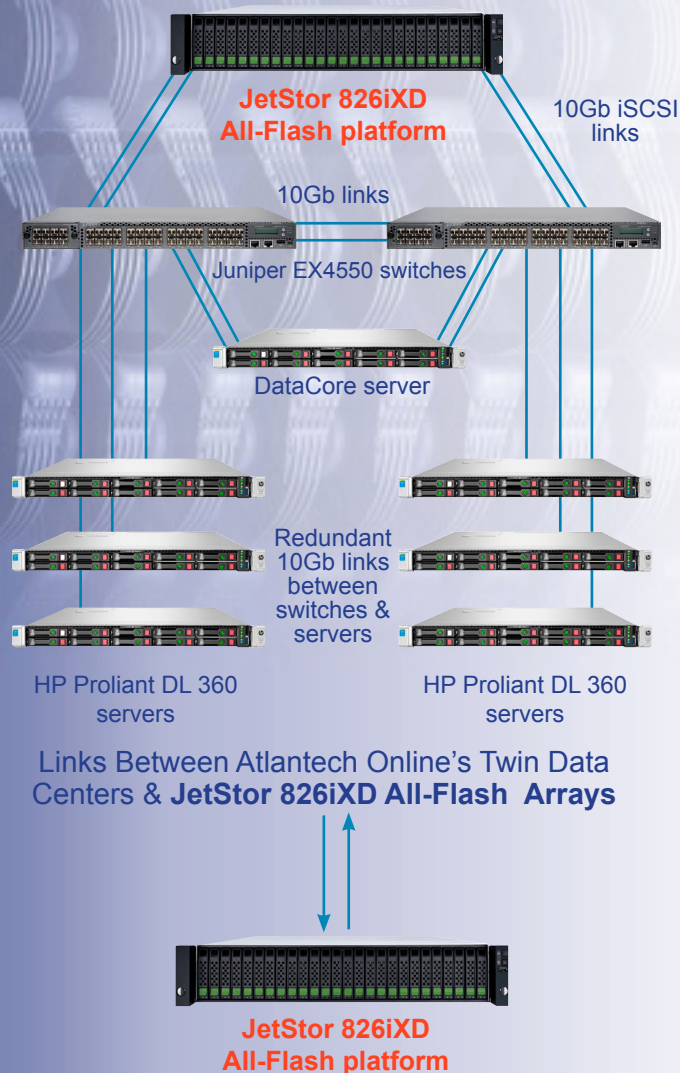




Data Protection with All-Flash Storage at Redundant Data Centers



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Phone and Data Services Provider Deploys All-Flash JetStor® Arrays for Availability and Analytics

THE ORGANIZATION

Atlantech Online enables businesses to communicate with their customers and each other, and local and states governments to serve citizens. Founded in 1995, the Silver Spring, MD-based public utility provides telephony, high-speed Internet and data connectivity services, website and managed server hosting, and collocation data-center services. Relying on an 4 terabit-per-second fiber backbone, the enterprise prides itself on the high-availability of its many services, achieving this goal, in part, by operating a redundant second datacenter in Rockville, MD.

THE CHALLENGE

Providing businesses and governments with critical functionality like voice and Internet services demands reliable, high-speed storage. Atlantech operates a variety of applications and databases like MS SQL server, MySQL, and Postscript databases in virtual machines (VMs) to store customer data records and track customer usage for billing. Moreover, Atlantech applies business intelligence to its data streams, furthering the need for fast storage. For example, it delivers intelligent call routing to determine the optimal paths for the best rates for local, long-distance, and international calls. The enterprise also applies sophisticated analytics to detect fraud and prevent costly hacking.

“Our systems scan thousands of calls daily to determine if there’s suspicious activity that could compromise our customers’ communications,” said H.F. Chou, Chief Information Officer for Atlantech Online. “We need storage with very high throughput to analyze torrents of data and look for patterns that indicate malicious behaviors.”

Atlantech, however, was relying on storage solutions with traditional spinning disks. “Our spindle-based SAN couldn’t deliver the in/out performance that we required going forward,” said Chou. “It was also at the end of its lifecycle when disks start to fail. We needed a robust storage upgrade at both of our datacenters.”

THE SOLUTION

Two JetStor 826iXD 26 bay All Flash Arrays from AC&NC

SYSTEM CONFIGURATION

- Two JetStor 826iXD 26 bay All Flash Arrays with 26 1.9TB SSDs

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- Four HP Proliant DL 360 gen nine servers
- Four Juniper EX4550 switches
- DataCore SANsymphony-V software

BENEFITS IMMEDIATELY REALIZED

Atlantech met its needs by deploying two **JetStor All-Flash 826iXD storage arrays**, one at each datacenter. The flash drives in the platforms provide greater throughput over the enterprise's legacy spinning disks, resulting in better and more consistent performance. Latency dropped from 18–20 milliseconds on average on the spindles to sub-five milliseconds on the **JetStor All-Flash platforms**.

"We now can handle large volumes of requests and data more consistently," said Chou. "Additionally, our applications are more responsive as wait times are much reduced. There's simply no comparison between our legacy spinning disks and our flash drives."

Atlantech protects its business information by replicating data between its two **JetStor All-Flash platforms**, and redundant links further ensure availability. The **JetStor chassis** also provide safeguards such as dual-active controllers, maximizing utilization of system resources. With multiple interfaces into the environment, each controller can seamlessly assume all services if the other fails.

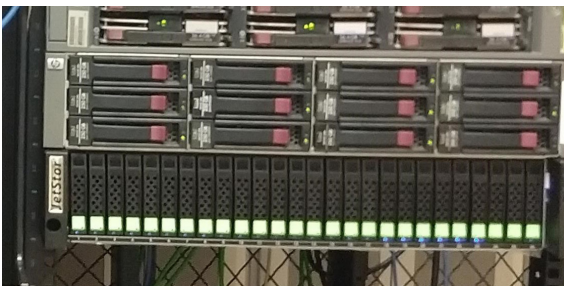
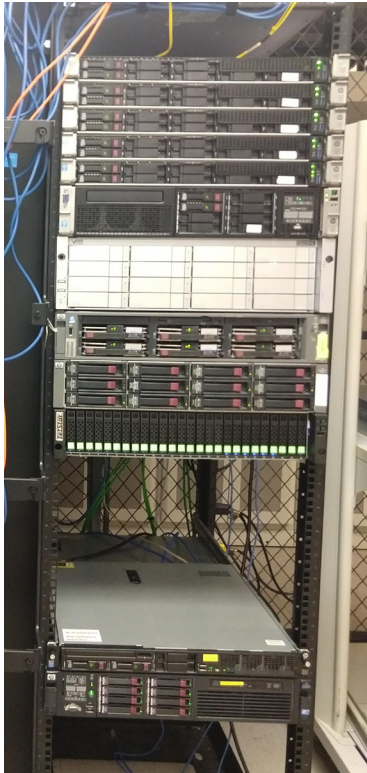
Atlantech takes data protection a step further by using RAID 5EE technology on its **JetStor systems**. RAID 5EE not only ensures the recovery of all data should one or even two disks fail, it also speeds rebuilds by writing to spare areas reserved on each disk. Writes are therefore to all the drives, eliminating a traditional RAID bottleneck.

As an added benefit, **JetStor All Flash arrays** reduce energy consumption and produce less heat than traditional storage systems, improving efficiencies and lowering costs.

"AC&NC made our enhanced storage architecture possible," explained Chou. "We always knew that we'd upgrade to all flash storage someday, and AC&NC made the economics feasible."

HOW WE DID IT

Atlantech installed a **JetStor All-Flash 826iXD array** into similar environments at its two datacenters. Each 2U device was initially provisioned with 12 1.9TB SSDs and then fully populated with 26 SSDs, providing 49TBs of capacity. Each **JetStor array** houses 22 terabytes of data. The **JetStor platforms** have redundant 10Gb iSCSI links to a pair of Juniper Ex4550 switches at the data centers. The switches at each site connect to HP Proliant DL 360 servers through 10Gb connections. Additionally, the switches each site connect to a server running the DataCore SANsymphony-V storage virtualization solution.



The **JetStor All-Flash 826iXD Storage Platform** from AC&NC at Atlantech Online's Silver Spring, MD data center

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“DataCore’s SANsymphony-V software allows us to virtualize and manage the data on our **JetStor 826iXD arrays**,” explained Chou. “DataCore allows us to create virtual machines on the **JetStor platforms** and provides our servers with the storage resources they require. With it, we control and optimize our flash storage infrastructures for performance and reliability.”

Data is generated locally at each datacenter, but are replicated to both sites. “In essence, we have bi-directional backup,” adds Chou. “Because both environments are fully redundant, there is no single point of failure. If one switch fails for any reason, for example, its counterpart immediately assumes all traffic. Moreover, with the redundancy within each **JetStor 826iXD chassis** and the greater performance of all-flash drives over spinning disks, we’ve achieved highly robust availability and data protection.”

CONCLUSION

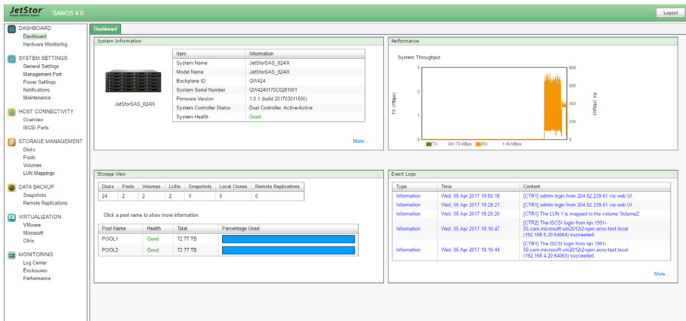
“AC&NC makes all-flash storage affordable, giving us the throughput for sophisticated applications like call optimization and fraud analytics,” said Chou. “Our **JetStor solutions** deliver the features, functionality, and dependability we demanded. Just as importantly, AC&NC stands behind its products.”

ABOUT ADVANCED COMPUTER & NETWORK CORPORATION (AC&NC)

AC&NC™ / JetStor meets the evolving needs for data storage, protection, and management. We leverage leading technologies to offer high-value solutions for NAS, SANs, clouds, and hyper-converged infrastructures (HCIs).

ABOUT ATLANTECH ONLINE, INC.

Atlantech Online, Inc. is a public utility in MD, VA and the District of Columbia that provides telephone, Internet and data center services to business and government organizations. The company’s services include high speed Internet connectivity, SD-WAN, MPLS and other data networking solutions, telephone service (SIP Trunking, Hosted PBX, UCaaS, PRI, Analog, call center and mobility), and hosting in its wholly owned and operated data centers, specializing in server colocation.



The Sanos 4.0 Web-based management interface from AC&NC



AC&NC JetStor All-Flash 826iXD Storage Array



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