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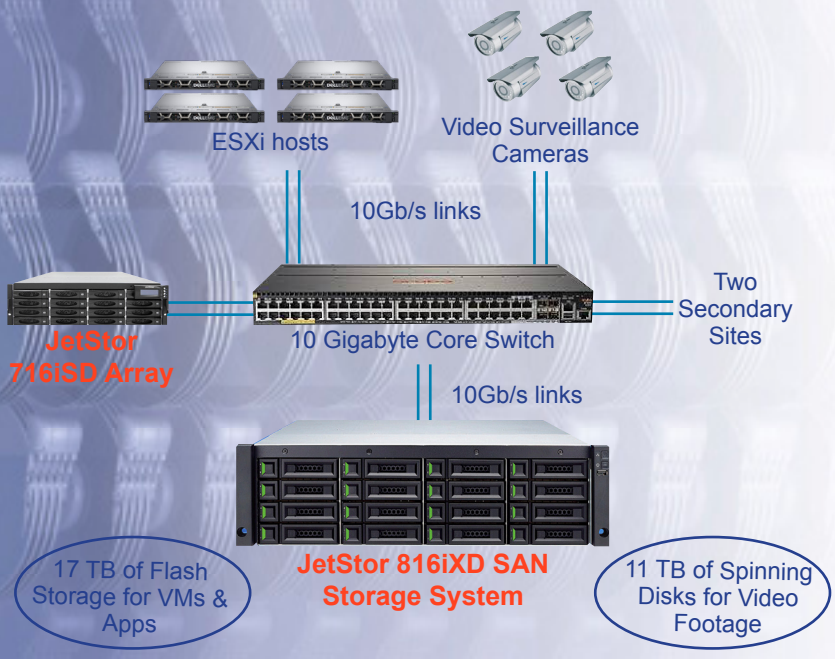
Securing Governments & Companies with Versatile JetStor® Platforms

ENTERPRISE SECURITY, INC.

Supporting Virtual Machines & Video Surveillance with High-Speed **JetStor** Storage



THE ORGANIZATION

Enterprise Security, Inc. (ESI) knows that safeguarding governments and enterprises starts with securing their physical facilities. Since its founding in 2000, ESI, headquartered in Yorba Linda, CA with sites in Tempe and Tucson, AZ, specializes in physical security by locking down buildings and restricting access to authorized users. With over 80 employees, the high-reliability security firm deploys critical solutions for federal, state, and local governments, from national agencies to counties and municipalities down to their police stations. It also serves private sector firms in all major verticals.

THE CHALLENGE

Physical security has evolved over the years, going from traditional locks and keys to such sophisticated systems as biometrics and facial recognition. Video surveillance, for example, went from analog, coaxial systems that recorded to tape to network-based video recorders that digitally store surveillance footage for extended periods.

"Today, physical security demands integration with IT systems," said Casimir Blonski, Director of Technology for Enterprise Security, Inc. "Whereas maintenance departments used to be responsible for physical security, there are more IT-centric solutions operated by IT staff."

As a result, ESI's success depends on developing, testing, and integrating software for its customers. Federal agencies, for example, want their users to deploy the same physical credentials to access both buildings and their computers. ESI thus needs to consolidate the interfaces for disparate video systems, access control systems, and alarm systems. To this end, it maintains a VMware production environment with the storage performance to support over 100 virtual machines (VMs). Moreover, it needs to store video surveillance of its own facilities.

ESI long relied on a **JetStor 716iSD storage array** to meet its production needs, but the solution was nearing its end-of-life. Moreover, while it was fine for storing video footage, the growing need for VMs required additional performance. ESI met its requirements with a **JetStor 816iXD storage system**.

THE SOLUTION

- **JetStor 816iXD iSCSI SAN storage system** from AC&NC
- **JetStor 716iSD array** from AC&NC

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The headquarters of Enterprise Security, Inc. in Yorba Linda, CA

JetStor 816iXD iSCSI SAN storage system (top) and **JetStor 716iSD storage array** (bottom)

SYSTEM CONFIGURATION

• One **JetStor 816iXD iSCSI-SAN storage system** with 12 1.9 terabyte SAS solid-state drives and four 4 TB SAS spinning disks
• One **JetStor 716iSD array** with 2TB of solid-state drives and 5TB of spinning disk drives

BENEFITS IMMEDIATELY REALIZED

Turning to another **JetStor solution** from AC&NC for its business-critical needs made sense for ESI. The firm has relied on **JetStor platforms** since 2009 after a RAID controller on an EMC/Dell solution failed at a critical site. It used **JetStor devices** initially for video surveillance and then for all of its production needs.

"**JetStor devices** were an order of magnitude less costly than EMC storage and are very reliable, which is essential for corporate headquarters, city halls, and police departments with their jail cells," said Blonski. "Whether it's for the high I/O capability needed to support VMware storage or long-term retention of video footage, we recommend to our customers the same **JetStor solutions** that we use. AC&NC hasn't let us down for over a decade and it hasn't let down any of our clients."

For example, thanks to recommendations from ESI, one of its customers, the U.S. Department of Energy, has deployed a raft of **JetStor platforms**. The agency has nearly a mirror environment of ESI's deployment and recently ordered additional **JetStor systems**.

The flexible 3U, 16-bay **JetStor 816iXD storage system** enabled ESI to use a faster pool of flash drives to support its VMs as well as a slower pool of spinning disks for video surveillance footage. Thanks to the high-speed, solid-state drives, ESI improved throughput and eliminated bottlenecks, enabling more servers to be supported.

"Our developers appreciate the much greater performance of the **JetStor 816iXD platform** and we're also leveraging the lowest cost per gigabyte on the market," said Blonski. "The **JetStor solution** delivers the best ratio between price and performance."

HOW WE DID IT

ESI replaced its **JetStor 716iSD array** with a **JetStor 816iXD system**, gaining 10 gigabyte ports over one gigabyte ports and support for flash drives. It installed 12 1.9 terabyte SAS disks for 17 terabytes of fast flash storage that are configured for RAID 5EE, allowing good data protection and faster rebuilding of drives should one fail.

The JetStor 816iXD is designed to withstand multiple component failures and achieve 99.999% availability. It features Dual-Active controllers that double the available host bandwidth and cache

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hit ratio, ensuring maximum throughput and utilization of system resources.

On its flash drives, the **JetStor 816iXD** supports 116 VMs, business apps like Exchange email, file servers, SQL servers, and the exacqVision Video Management System. Video surveillance is centrally stored on eleven terabytes of spinning disks on the **JetStor device**. The footage is from over 30 cameras at ESI's headquarters as well as surveillance from the firm's other sites that arrive via VPNs.

The **JetStor 816iXD** system connects to a 10 gigabyte core switch via dual 10 gigabyte copper links. The switch, in turn, links to VMware ESXI hosts via 10 gigabyte connections. "Our **JetStor 816iXD** has been easy to install, configure, and maintain," added Blonski.

The AC&NC JetStor 816iXD high-performance iSCSI-SAN storage system

ESI still uses its legacy **JetStor 716iSD solution** for development testing, and thanks to its storage capacity and performance, it will be used to back up critical production servers and development and testing machines.

CONCLUSION

"Our relationship with AC&NC will continue well beyond the foreseeable future," concluded Blonski. "It adopts the latest proven technologies to deliver high-performance, cost-effective storage solutions that work year in and year out. **JetStor solutions** not only continue to bolster our productivity, but they also meet the needs of our customers' most demanding environments. **JetStor products** are a win-win for everybody."

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). Since 1994, our customers have spanned virtually every industry, and range from Fortune 500 enterprises to small and medium-sized firms. We support environments from data centers and clouds to branch offices and remote sites.

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