INPUT/OUTPUT, INC.

» **CHALLENGE** Deploy a streamlined, cost-effective, and robust hardware infrastructure to support a new global enterprise resource planning (ERP) system for a leading provider of seismic imaging technologies

» **SOLUTION** Replace the outdated, heterogeneous IT infrastructure with a Dell/EMC CX600 storage area network (SAN), Dell™ PowerEdge™ servers, Dell PowerVault™ 136T tape backup system, Dell OptiPlex™ desktops, and Dell Latitude™ notebooks

» **BENEFIT** A simplified system infrastructure designed to facilitate easy management and maintenance while minimizing costs, complemented by outstanding customer support

Customer Spotlight

Input/Output visualizes a simplified IT infrastructure

Input/Output, Inc., selects Dell servers, storage systems, desktops, and laptops to streamline operations, protect data, and minimize total cost of ownership

Input/Output, Inc. (I/O) is a leading provider of seismic imaging technologies for the oil and gas industry. The company's products and services enable oil and gas companies, as well as seismic contractors, to better visualize structures below the earth's surface. With nearly 1,000 employees in the U.S., Canada, Europe, China, Russia, and the Middle East, and customers using its technologies and services on land and sea around the world, I/O is a truly global company with a global IT network.

In 2002, I/O prepared to implement a new enterprise resource planning (ERP) system to support its global operations. But while the company is proud to deliver sophisticated technologies to its customers, its own IT infrastructure was in dire need of upgrades before the ERP implementation could begin. The IT system comprised a range of operating systems running on an unwieldy collection of servers, storage devices, and desktop local area networks (LANs) that made the system unreliable and difficult to manage. Even backing up data was problematic: The company's volume of data had outstripped its backup storage capabilities. As a result, I/O could not back up all of its data on a regular basis.

"Our IT infrastructure was facing technological obsolescence," says Albert Chidiac, director of information technology at I/O. Chidiac knew that rolling out a new ERP system with such a conglomeration of hardware components, network architectures, and operating environments could jeopardize the availability and security of data while also driving up support costs. Consequently, Chidiac and his team began to search for new hardware solutions to better match the company's current—and future—IT requirements.

I/O finds a global partner in Dell

Finding a vendor that could meet the company's global requirements was not easy. I/O demanded not only a broad array of products that could deliver excellent performance, but also the confidence that support would be available in nearly all of Input/Output's locations. Chidiac was impressed with the depth and breadth of the Dell product line as well as with the ease of purchasing Dell products and the company's commitment to support. "The more I met with Dell, the more it became clear that partnering with Dell would give us what we needed," says Chidiac.

Because I/O required a storage system that would be reliable, available, and able to grow with the company, it selected a Dell/EMC CX600 storage area network (SAN). The CX600 is a scalable, high-availability enterprise storage system that can be used in direct attach or large SAN configurations. The CX600 can be easily scaled to 58.4 TB by adding disk array enclosures. Equipped with 2 Gbps Fibre Channel interfaces, the CX600 is designed to deliver exceptional performance.

"I was pleased with the SAN and the relationship we were building with Dell," says Chidiac. "When it was time to select a server vendor, the choice again was clear."

I/O added approximately 50 Dell PowerEdge servers, including Dell PowerEdge 1650, 1750, and 2650 rack-dense models plus PowerEdge 2600 tower servers. The 1650 server includes dual Intel® Pentium® III processors at up to 1.4 GHz. It can be outfitted with up to 4 GB of RAM in its 1U enclosure. The 1750 server, also in a 1U enclosure, features dual Intel Xeon™ processors at up to 3.06 GHz, with as much as 8 GB of RAM. The 2650 server occupies a modest 2U space.

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The PowerEdge 2600 system is a tower unit that includes dual Intel Xeon processors. With a 533 MHz frontside bus and an embedded Gigabit[1] Ethernet network interface card (NIC), the 2600 server is designed for high performance.

To the growing collection of Dell products, I/O added Dell OptiPlex desktops and Dell Latitude notebooks for its geographically dispersed workforce. The company also chose a Dell PowerVault 136T tape backup system to help make the backup process more effective.

Dell products provide simplicity and low total cost of ownership

"By picking the Dell/EMC SAN and the Dell PowerEdge servers, we've definitely reduced the chaos of our IT infrastructure," says Chidiac. With a streamlined architecture and simplified management tools, maintaining the system is no longer the burden it once was.

"We've also tightened our exposure to data loss," Chidiac says. The Dell PowerEdge servers are built to provide exceptional system availability. With hot-pluggable hard drives; hot-pluggable, redundant power and cooling components; embedded battery-backed caches; and

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tool-less chassis, these servers are designed to withstand equipment failures and to allow technicians to make repairs and perform upgrades without causing system interruptions. The Dell/EMC SAN also provides mirrored caches and battery backup to protect data in the event of a failure or outage. And with a new PowerVault tape system, I/O can back up all of its data—not just what fits—without disrupting the system.

These benefits also translate into reduced technical support costs. "With our old system, we had to have professional services or consultants come in to help us whenever we needed something," says Chidiac. "With the Dell/EMC system, we were able to send my system administrator to Dell for a week of certification training. Now we can do almost everything in-house and support the system ourselves. That is a definite advantage."

Dell and I/O build a rock-solid relationship

I/O has been impressed with the Dell commitment to customer support, from pre-sales to post-sales service. The advantages of working with Dell were first apparent to Chidiac as he and his team used the Dell Premier Web site (Premier.Dell.com) to buy the new hardware. The Premier site is a customizable, secure procurement Web site designed to save organizations time and money at every phase of the purchasing process.

"The Premier site gives us the flexibility to customize workstations and servers. It also enables my technical support staff to register systems and get the latest updates and patches. We can also open support tickets easily."

Dell has also helped I/O forge relationships with other leading IT vendors. "We feel that we have established partnerships with many of Dell's partners," says Chidiac. "Dell has helped us make connections with big-name vendors, and it has served as a customer advocate for us. Not only is Dell a one-stop shop, it is also a one-stop coalition. Dell has really been an extension of our team."

For technical support, I/O selected Dell Gold Enterprise Services, which provides around-the-clock access to experts who work to resolve technical problems with minimal downtime.[2] "It's not uncommon to have someone from Dell come in at 2:00 A.M. with parts if that's when we need them," says Chidiac. "The Dell support team has even alerted us of issues before we knew about them, and they have worked very closely with my team to make sure that issues are resolved."

I/O charts a future with Dell

I/O's relationship with Dell continues to strengthen. The company has recently begun to install Dell PowerConnect™ switches to accelerate data center server connectivity with Gigabit Ethernet and Layer 3 (network layer) capabilities.

"We were waiting for the Layer 3 PowerConnect switches to come out," says Chidiac. "And then we started to read the positive reviews. Dell immediately brought us a few of the units to try, and we created a lab environment here to make sure the switches would give us the features, flexibility, and reliability we needed." The result? "We've been amazed at the performance and the value we are getting," says Chidiac.

Chidiac has also been adding Dell peripherals, including Dell 5200n and 5300n workgroup laser printers. "We decided to roll those out worldwide—looking at the total cost of ownership it just made perfect sense. As with all Dell products, the results have been truly excellent."

[1] This term does not connote an actual operating speed of 1 Gbps. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

[2] Service may be provided through a third party. Technician will be dispatched if necessary following phone-based troubleshooting. Subject to parts availability, geographical restrictions, and terms of service contract. Service timing dependent upon time of day call placed to Dell. U.S. only.