



## ▶ National Institutes of Health

### Healthy Storage:

Information is the lifeblood for most organizations these days, and nowhere is that more true than in the multiple entities comprising the National Institutes of Health (NIH). Massive data bases housing immense stores of information on clinical studies, grants and more are central to the operation of one of the world's foremost medical research establishments.

However, officials at one of the NIH's operational divisions recently became concerned that their vital data was at serious risk due to a fragmented storage infrastructure and the lack of reliable, centralized disaster recovery operations. They needed a network storage solution that could accommodate multiple platforms and protocols, provide resilient operation and high availability, and incorporate redundant and easily managed components, while also remaining within budget.

They looked to the storage experts at Emtec Federal to help diagnose their storage ailments.

*"Their most critical information was stored on Oracle databases that resided on Sun Solaris systems. But they were also a Windows shop, so we had to make sure whatever we proposed was capable of meeting the needs of both environments,"* said senior storage architect Bahare Chanady. *"Performance was also a huge issue. As they perform their research and testing, the Oracle databases are constantly flooded with data. So we definitely had to make sure the system could handle the quantity of data coming in."*

### Prescribing NetApp:

Bahare Chanady, Account Manager John Bruton, and the rest of the Emtec Federal team came up with just the right prescription — a fabric attached storage (FAS) system from NetApp.

With its unified infrastructure, the NetApp FAS combines Fibre Channel (FC) SAN, iSCSI IP SAN and network-attached storage (NAS) into a single package. It supports both FC and SATA disk drives in either homogeneous or mixed storage configurations, thus providing a spectrum of tiered storage options. By uniting disparate applications, operating systems and computing platforms in a single box, the NetApp solution also allows for rapid, reliable disaster recovery.

*"They were looking for a SAN solution, but the bigger picture was the need to implement disaster recovery in the event their primary site became unavailable,"* Chanady said. *"They didn't have anything in place. They backed up, but they didn't test their ability to restore from those backups very frequently."*

*Their backups were also very disparate. The UNIX and Windows groups were backing up their data separately, and there were multiple types of backup going on within the Windows group.*

*They knew that wasn't very reliable, and they weren't confident they could actually restore in the event of data loss. That's why they wanted to go with a centralized system."*

Initially, the client was exploring options through other vendors. Emtec Federal had only begun working with the client a few months earlier on a few smaller projects to replace commodity hardware. Emtec Federal Account Manager John Bruton recommended they consider NetApp.

*“During a joint meeting between the client, NetApp and our team, Bahare Chanady wowed them with her technical expertise on the NetApp platform,” said Bruton. “After the meeting, the client said they were so impressed with us and with NetApp that they were going to disengage from the other vendors they had been speaking with.”*

For all the benefits of the NetApp FAS system, getting to that point wasn't easy. The client knew very little about Fibre Channel and even less about NetApp.

*“Not only did we have to position the proper solution, we had to get the customer comfortable with NetApp as a company and their technology,” said Chanady.*

#### Multipurpose Solution:

A chief selling point was the FAS system's ability to handle Fibre Channel, iSCSI and NAS protocols in a single box. The client wanted to maintain its network attached storage for file sharing among Windows users, but was intrigued by the possibilities offered by a FC SAN. They also liked the idea that they could add the iSCSI protocol down the line to round out a fully tiered storage infrastructure.

*“They were comfortable with NAS, but we really educated them as to why they should go with a system that could do all three,” said Chanady. “We explained that Fibre Channel is much more reliable, it's faster and it's definitely more secure than NAS.”*

*“NAS resides on the actual network — it goes through the same switches as the rest of the traffic and is therefore prone to network outages. In the event of any kind of hacker or virus attack, NAS is going to be affected. Fibre Channel is on its own little island, using its own switches and its own cabling. It is completely separate and isolated, so it provides a much higher level of security.”*

Another important factor in the decision to go with NetApp was simplified management. A consolidated interface for managing all three protocols is included as part of NetApp's package.

The other vendors offered individual interfaces for each protocol, with the option of buying a very expensive consolidated interface separately.

The client eventually settled on a storage infrastructure comprising a pair of FAS3020HA chassis installed at two different locations to provide disaster recovery capabilities. Each cabinet also contains redundant controllers to ensure high availability and features a combination of serial ATA and Fibre Channel disks for tiered storage capabilities, with a combined capacity of roughly 11TB of storage.

#### Team Effort:

While the NetApp platform was just what the doctor ordered, it was Emtec Federal's focus on delivering the best possible solution for the client that made the difference.

*“It was really a team effort,” said Bruton.*

*“They became comfortable dealing with us because we showed them we were willing to take the time to educate them rather than just trying to talk them into buying a system they didn't understand. We now have an extremely happy client. They've been so pleased that they've agreed to let us use them as references for other NIH organizations.”*

**About Emtec:** Established in 1964, Emtec, Inc. is a systems integrator that provides IT services and products to the federal, state, local, education and commercial markets. Our market leading value-based management methods, coupled with best-in-class IT technology, consulting and development services, address a wide range of specific client needs, as well as support broader IT transformation initiatives. Emtec's service capabilities span the United States, Canada and countries around the globe.