New Storage Frontier for Space Tech Company

COM DEV makes space for more data with
Sentia-designed advanced storage system

In outer space, there is no parts and service department. That's why each and every component of a satellite or spacecraft must be built to exacting standards, ready to endure the harshest of conditions – extreme temperature fluctuations, pyrotechnic shock, vibration and cosmic radiation.

COM DEV International Ltd. has established itself as a leading designer and manufacturer of space technology, able to meet the precise quality and delivery requirements of its customers. Founded in 1974, the space engineering firm has evolved into a worldwide enterprise that employs over 1,000 people and serves commercial, civil and military markets.

During the design process, large amounts of data are generated and COM DEV's IT group is charged with managing it – some of which must be held for more than 20 years. It was becoming increasingly expensive to maintain their existing storage subsystem, which had been in operation for several years. With the lease term coming to an end, it was time to explore options that offered more advanced functionality and cost savings.

"We strive to ensure our IT plan supports the long term strategic intent of COM DEV. Our technology must be able to support the rigorous quality systems we have in place to keep our products up to spec," states Mr. Ron Service, Director MIS at COM DEV. "Managing rapid data growth is our biggest challenge."

Having previously worked on a data backup solution with Sentia Solutions Inc., a recognized provider of advanced intelligent IT solutions, COM DEV engaged Sentia to help with the assessment process.

"Sentia fully understood COM DEV's significant storage challenge. Their data was forecasted to double within 18 to 24 months and they needed a way to manage it without increasing their IT budget," explains Roger Osmond, President of Sentia. "We conducted a sophisticated assessment and analysis, ran modeling simulations, projected growth paths and response rates, then recommended an advanced storage solution."

Sentia's consultative approach, combined with IBM technologies, has provided COM DEV with a storage system that will scale along with its business needs.

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Ron Service,
Director MIS,
COM DEV International Ltd.

Space-age products are data dependent

In the space industry, COM DEV's name is synonymous with excellence. The enterprise produces space-qualified passive microwave equipment, specialized electronics and optical subsystems. It has supplied equipment to the Canadian Space Agency, the European Space Agency and NASA, and counts prominent space companies through the world as its customers. More than 800 spacecraft have COM DEV equipment on board, representing over 80 percent of all commercial communications satellites ever launched.

COM DEV relies heavily on its ERP system meet customer schedules and product specifications. In turn, the ERP system relies on data managed through COM DEV's storage infrastructure. While its HP EVA storage subsystem had done the job for the last several years, it was becoming costly to support and had limited functionality.

Mr. Service explains, "By putting strong ERP processes in place, we can leverage great things without having to rely on tribal knowledge. Our quality people use a lot of test data inside the ERP system to ensure our products measure up to the highest standards."

Stellar consultation and communication

Both HP (the incumbent) and IBM technologies were considered. The key to Sentia's success was its consultative approach.

Mr. Osmond states, "We conducted numerous demonstrations and presentations, a VSI Storage Study, a Disk Magic Study, and took COM DEV to an IBM Storage Conference."

"It's hard to say no to good vendors – both HP and IBM have long track records in data storage management. The Sentia team did an excellent job working with our senior people and clearly communicated the immediate and longer term business benefits of the IBM solution," adds Mr. Service.

Smooth launch

Sentia designed, installed and configured the IBM Storwize® V7000 to perform simple, real-time data migration from the existing HP EVA system.

Mr. Service explains, "The implementation with Sentia went superbly well. In fact, it was seamless to our users, which is the best thing to have happen. They didn't even know it was occurring."

The solution consists of a 100 terabyte IBM V7000 with FlashCopy. With the addition of real-time data compression, this will support COM DEV's data growth for the next four to five years. A new SAN switching infrastructure was also deployed to provide faster connections.

IBM's Visual Storage Intelligence® (VSI) was used to gather COM DEV's baseline information, then existing workloads and projected growth were modeled with the IBM Disk Magic tool. This ensured that data performance with their existing infrastructure would be sufficient throughout a multi-year lifecycle.

Thin provisioning improves efficiency

COM DEV can optimize the efficiency of their available storage space by utilizing thin provisioning, which allocates the precise amount of storage space at the time it is required. The amount of unused storage is reduced, which provides more available capacity.

Uninterrupted performance with FlashCopy Manager

COM DEV can create point-in-time, virtual copies of data with read or write access for backup purposes – without impacting users or applications. Available 24/7, IBM Tivoli® Storage FlashCopy® Manager is a simple, automated, timesaving feature.

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Ron Service, CIO, COM DEV International Ltd.

Cost savings with real-time compression

By using IBM Real-time Data Compression™, COM DEV will be able to compress data as much as 80 percent and store up to five times more data in the same physical disk space —with no performance degradation.

Compatibility with IBM Tivoli Storage Manager Backup System (TSM)

Sentia added value by integrating the new V7000 disk storage array with COM DEV's existing TSM environment.

On the horizon

Looking ahead, COM DEV is considering a virtual desktop implementation, cloud technologies for offsite storage, and is assessing the viability of a 10G network.

The possibilities are infinite.

Advanced Storage Solution by Sentia Solutions Inc.

- IBM Storwize ® V7000
- IBM Real-time Data Compression TM
- IBM Tivoli ® Storage FlashCopy Manager
- Sentia Architecture and Implementation Services