



IBM's TotalStorage DS6000 and DS8000 – Way Beyond JBOD

By Charles King

By nearly every measure, enterprise storage is experiencing commoditization tremors similar to those that have shaken and shifted the server market for the past decade. The primary reason for this is simple IT maturity. Storage hardware price/performance has blown past the confines of Moore's Law for years, to the point where storage technologies such as SATA, that were once considered anything but ready for enterprise prime time, have hit center stage in corporate datacenters at a dead run.

But if the traditional storage hardware market is becoming an increasingly level playing field, where is storage innovation coming from? Many would say that software is the major star here, and from the healthy look of sales figures, grooming sparkling storage application ingénues is well-worth the investment for many vendors. So does that mean that storage hardware is destined to a future of regular facelifts, dwindling character parts, and winsome contemplation of a storied past? Hardly. In fact, recent developments at IBM suggest that the company that once defined enterprise storage hardware is working to shift the course of what many regard as a largely predictable melodrama.

IBM's DS6000 and DS8000

IBM's recent announcement concerning the TotalStorage DS6000 and DS8000 storage servers are examples of how disparate technologies can serve a complementary, common purpose. The DS6000 is designed to deliver enterprise class storage capabilities in a flexible, mid-range package and ultra-small rack-mountable 3U footprint. The DS6000 scales from 292GB to 67.2 TB of raw capacity by simply adding storage expansion enclosures which support 73GB, 146GB, and 300GB HD drives in whatever combination best fits customer requirements. In addition, the DS6000 series is equipped with four paths to each HDD and redundant Fibre Channel switches for disk access. Perhaps most importantly, the DS6000 offers a range of automatic and management functions including Predictive Failure Analysis, Light Path Diagnostics and controls, as well as the IBM TotalStorage Productivity Center (TPC) which provides a single interface that can be used to monitor and manage multiple and different IBM DS family offerings including the DS8000, as well as non-IBM disk arrays.

At the higher end of the scale, the IBM TotalStorage DS8000 offers massive scalability from 1.1TB to 192TB of physical capacity, and has an architecture designed to support over 1 petabyte of physical storage. According to IBM, the DS8000 is as much as six times faster than the IBM TotalStorage Enterprise Storage Server Model 800 (Shark) and provides significant addressing enhancements, IBM TotalStorage FlashCopy, Global and Metro Mirror functions, along with streamlined configuration and management capabilities. In addition, the DS8000 leverages IBM POWER5 processor technology to deliver the first disk system use of the IBM Virtualization Engine, which is designed to bring to a disk storage system the logical partition flexibility usually reserved for server solutions.

Both the IBM TotalStorage DS6000 and DS8000 series support operating environments

including IBM's z/OS, i5/OS, and AIX, as well as Linux, UNIX, Microsoft Windows, HP-UX, and SUN Solaris, offering notable levels of system flexibility. According to IBM, the DS6000 is an enterprise class solution packaged and priced like a mid-range product, and is also the first mid-range storage solution to natively support IBM z/OS mainframe solutions, offering some especially intriguing options for customers utilizing the company's entry level eServer z890 systems. In addition, IBM says it is offering another industry first by providing a four year warranty for the DS6000 and DS8000, a feature that should enhance the TCO of both systems.

Leveraging the Unexpected

The IBM DS6000 and DS8000 cast an interesting light onto how systems vendors can leverage R&D efforts to benefit multiple products including storage. Over the past few years, as vendors including HP and Sun have pursued OEM relationships for their enterprise class storage solutions, most discussions of this issue have largely focused on opportunities provided by bundling product and service features, and package pricing.

The DS6000 and DS8000 take this discussion in a new direction. By leveraging Light Path Diagnostics, call home and remote management technologies originally developed for its BladeCenter solutions, IBM has cost-effectively improved overall manageability of its mid-range storage as well, an exercise that should also enhance system availability and price. The IBM DS8000 follows a significantly different path towards similar R&D leverage points by utilizing IBM's POWER5 processor technology to allow users to allocate system resources more flexibly and effectively, leading to better overall control of application quality of service. In addition, IBM's TPC is designed to seamlessly manage both systems when they are incorporated into back-up and business continuity solutions. By blending well-tested BladeCenter and POWER5 technologies into its storage offerings, and providing integrated management capabilities through TPC, IBM is helping customers achieve essential IT goals including storage consolidation through infrastructure simplification .

Mission Accomplished?

In a literal sense, the IBM TotalStorage DS6000 and DS8000 reflect the common realities of modern data storage. As commoditization pressures increase in the storage market, vendors will pursue innovation/differentiation wherever they can, and IBM's new systems offer specific insights on how creative systems vendors can get, quite literally, more bang for their R&D bucks. By imaginatively utilizing existing BladeCenter and POWER5 technologies, IBM has cost-effectively delivered unique storage features that allow the company's customers to embrace new IT capabilities and behaviors. While many storage vendors are focusing their efforts largely on new application and service offerings, IBM's innovative work in processor and server development may leave the company's competitors waiting in the wings. Overall, we believe that businesses thinking of purchasing new or upgraded storage products would do well to consider IBM's TotalStorage DS6000 and DS8000 solutions.

© 2005 Pund-IT Research. All rights reserved.

Contact:
Pund-IT Research
Phone: 510-909-0750
E-mail: charles@pund-it.com
Web: www.pund-it.com