

BUILDING THE DATA PROTECTION DREAM TEAM

BY ERIC LOMASCOLO



An NBA All-Star Game helps us appreciate the exceptional performance that is possible when you get the “best-of-the-best” all working together in a seamless and coordinated fashion. Wouldn’t it be great to do the same with Data Protection? How great would it be if you could somehow bring together the “Kobe Bryant” of deduplication, “Tim Duncan” of tape, “LeBron James” of cloud services and “Kevin Garnett” of SRM and orchestrate their collective capabilities into a bullet-proof, unbeatable data protection solution?

Such a dream is almost possible. The players are out there and available; there are a number of excellent storage vendors that fulfill a particular aspect of business continuity and disaster recovery (BC/DR) better than anyone else. But there remains an obstacle to the formation and successful deployment of this “dream team,” and that is the lack of a common management strategy to tie all of these devices from multiple vendors together. Without this common management strategy, multi-vendor solutions have to be cobbled together and managed from multiple screens, and even then, they lack the integration to realize their collective full potential.

The hassles and ineffectiveness of its management would be similar to coaching a team of all-star basketball players who all speak different languages. If the players can't communicate with one another, then how are they supposed to play together as a cohesive unit and win? What a shame it would be to have all of their talents go to waste.

Finding a Common Language

SMI-S (Storage Management Initiative) was the storage industry's most notable attempt at addressing multi-vendor storage management. Introduced in 2002, SMI-S seemed to be just what the dream team needed. But seven years after its inception, SMI-S still struggles to achieve a sufficient adoption rate to make it a meaningful common protocol among storage devices. There are likely many reasons why SMI-S never reached this critical mass, but perhaps the main reason is that it is a storage-only or storage-centric protocol, and that can limit its ability to interact with other devices and tools. As a result, SMI-S has limited relevance in applications that are outside the storage management domain because its model requires application developers to understand the complex storage ecosystem.

An emerging alternative to SMI-S is Web services, a common programmatic interface defined by the W3C as "a software system designed to support interoperable machine-to-machine interaction over a network." Web services, which utilizes XML and SOAP standards, has become a method of choice for applications to communicate with each other and has been adopted by operating systems such as VMware to enhance interoperability. Web services is showing up on more and more storage company roadmaps because the benefits extend well beyond the original SMI-S promise of storage interoperability to include interoperability, integration and automation across all constituencies – including servers, operating systems, network components and most importantly the applications. Web services can be everything that SMI-S promised to be and so much more.

Benefits of Web Services as a Unified Management Protocol

As more storage solution providers adopt Web services, and more applications can communicate directly with their storage, the initial benefits will be improved integration and management across vendor solutions, resulting in fewer management screens and less need for the manual processes that are now required with multi-vendor solutions. Administrators will be free to set policies for change and automate routine operations, so the time and effort it once took for IT administrators to

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manage their systems can be decreased dramatically. This both allows them to focus on other important organizational priorities and eliminates the risk of human error involved with manually performing this work.

Additionally, storage-based Web services abstracts the complexity of storage systems and provides application developers, IT managers, consultants and value-added resellers with a common set of tools to rapidly deploy solutions with much improved integration. This will simplify the process of tailoring customized data protection solutions to the specific needs of organizations, eliminating many of the manual processes that may otherwise be required and enabling the creation of purpose-built environments. Also, new BC/DR automated recovery tools can be added to the environment which tackle specific problems or challenges, manage all of the parts in the environment together as one unit and find ways to best utilize the tools in the environment for maximum ROI

and recovery efficiency. With a Web services-compatible management interface, administrators can eventually manage and make changes to their entire storage and data protection infrastructure from a single console.

The possibilities are incredible and endless. So how do we get to a place where Web services is the common programmatic interface for unified management of data replication solutions? It all starts with the establishment of Web services as an industry standard for storage systems and software interoperability. Once an entire community of Web services-compatible products is on the market, the potential will exist to tie them all together to create truly best-of-breed storage and replication products and solutions for organizations everywhere. An entire ecosystem can then be formed around specific data protection challenges, the data protection needs of different sizes of businesses, existing infrastructure and on and on.

All-star solutions begin with all-star players which are the best at what they do. Yet success depends on enabling those individual contributors to work well with one another, and the ability to orchestrate and manage all of these individual contributions as a collective, coordinated whole. Because it now is the method of choice for applications and management interfaces to communicate with one another, Web services will be vital to the realization of this "dream team" of BC/DR.

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