

By Jeff Echols

STREAMLINING DATA MANAGEMENT WITH COMMVAULT SIMPANA AND DELL EQUALLOGIC PS5500E iSCSI SANs

Ongoing data growth can present major challenges for IT organizations. The combination of CommVault® Simpana® backup-to-disk software and Dell™ EqualLogic™ PS5500E Internet SCSI (iSCSI) storage area network (SAN) arrays can provide a simplified, scalable, cost-effective way to gain control over enterprise data and create a platform to support future growth.

Backup to tape used to be a simple, straightforward process—full backups on the weekend, followed by incremental backups throughout the week. Increasing data requirements combined with regulations such as the Sarbanes-Oxley Act and Federal Rules of Civil Procedure mean that many organizations must now retain huge amounts of information. However, many IT departments have found that managing this data growth with tape backup can be too cumbersome, too expensive, and too unreliable. And although disk-based appliances can help overcome some of these challenges, without an effective overall strategy, adding appliances can simply result in installing additional disks—disks that require increasing amounts of power and cooling to support while driving up management complexity and overall operational costs.

The combination of CommVault Simpana software and Dell EqualLogic PS5500E Internet SCSI (iSCSI) storage area network (SAN) arrays can help organizations meet their data management needs in a simplified, scalable, cost-effective way. Simpana backup-to-disk, archive, and de-duplication technologies provide a centralized way to help manage data growth, while EqualLogic PS5500E arrays are designed for high levels of efficiency and exceptional return on investment (ROI).

SIMPLIFYING DATA MANAGEMENT WITH COMMVAULT SIMPANA SOFTWARE

CommVault Simpana software uses plug-in modules to manage data—an approach that enables administrators to perform backup and recovery, archive, and replication operations through a single integrated interface. Because the modules share the same back-end engine, both the modules and storage devices can share one storage policy. For example, creating a storage policy to de-duplicate file data from virtualized servers to a Dell EqualLogic PS5500E array works for both the backup and archive modules—a useful feature when consolidating physical servers to virtual machines running on an EqualLogic SAN.

In many organizations, a majority of data stored on primary storage is infrequently used and no longer changes on a regular basis. Storing this data can slow application performance; clog backup, recovery, and archive jobs; and waste valuable primary storage space. To help overcome these challenges, organizations can deploy Simpana Archive software to clean out old or unwanted data, which can help significantly reduce primary storage space while helping increase application, backup, and archive performance.

CommVault next recommends transitioning from frequent full backup jobs to frequent incremental backup jobs. In addition to performing incremental

Related Categories:

CommVault

Data consolidation and management

Dell EqualLogic storage

Storage

Visit DELL.COM/PowerSolutions for the complete category index.

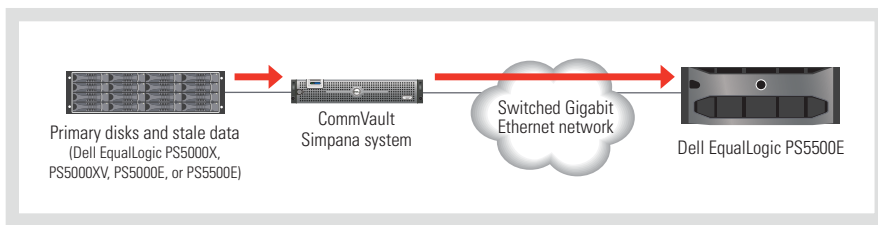


Figure 1. Simplified backups with CommVault Simpana software and Dell EqualLogic iSCSI SAN arrays

backups, Simpana software can use Smart Client agents that classify data to help eliminate file scans that may take hours to complete before an incremental backup job begins.

The final component is creating the full backup copy. Simpana software can create a *synthetic full* backup by using the previous full backup and adding the incremental backups. The full backup copy is created using a CommVault MediaAgent server, helping remove the load from the client servers.

REDUCING DATA FOOTPRINT WITH DE-DUPLICATION

Although archiving and incremental backups are not new, data de-duplication technology combined with CommVault backup and archive modules can greatly increase their value in enterprise environments while significantly increasing ROI.

Before the introduction of data de-duplication, archive operations could remove stale files and e-mail from a primary disk to a secondary disk. Although the secondary disk was typically less expensive and presumably slower in performance than the primary disk, the archived data required the same disk footprint as the primary data. Data de-duplication, however, can enable data archived to a secondary disk to achieve de-duplication ratios of as much as 15:1 or more, depending on the type of data—helping dramatically increase the effective capacity of existing storage resources.

The same holds true for backups. Prior to de-duplication, backing up to disk was primarily a caching mechanism to

expedite backups before sending them to tape. However, CommVault Simpana de-duplication software helps administrators keep many backup copies on the same amount of disk space, which can greatly accelerate data search and recovery.

DEPLOYING SCALABLE DELL EQUALLOGIC iSCSI SAN ARRAYS

Dell EqualLogic PS5500E iSCSI SAN arrays are designed to provide massively scalable storage that can allow organizations to simply and cost-effectively deploy high-capacity, highly consolidated SANs supporting primary data center, data protection and retention, archiving, and disaster recovery operations. Their scalability helps organizations begin with small- and medium-size storage requirements, and then grow to match their retention requirements over time—without performance degradation. Scalable performance enables EqualLogic arrays to support backup data copies as well as archive copies, which typically demand higher performance than backup copies because of usage patterns in which end users retrieve files and e-mail directly from secondary systems. Organizations can deploy EqualLogic PS5500E arrays in combination with CommVault Simpana software to help create a simplified, scalable, cost-effective backup-to-disk system (see Figure 1).

EqualLogic PS5500E arrays are also designed to address related issues in data center environments—including demands for improved energy efficiency, shrinking floor space availability, and lowered burden on administration teams. SANs built with EqualLogic PS5500E arrays can scale from

24 TB to 576 TB raw. All EqualLogic arrays can also maintain performance and scale capacity because of their virtualized architecture, and come with a comprehensive suite of advanced data management and protection software features at no additional cost. The form factor is designed for maximum space efficiency, provided as a 4U device that supports 48 drives in 500 GB or 1 TB sizes, while fully redundant hot-swappable controllers help ensure storage availability.¹

CONTROLLING DATA SPRAWL

The combination of CommVault Simpana software and Dell EqualLogic PS5500E iSCSI SAN arrays can help administrators back up and store data in a simplified, scalable, cost-effective way. By effectively managing backup and recovery, archive, and storage operations through a single interface and taking advantage of the flexibility and high performance of EqualLogic PS5500E arrays, organizations can gain control over data sprawl while helping create an efficient platform for future growth. [u](#)

Jeff Echols is a director of business development at CommVault. He has over eight years of storage marketing and business development experience. Jeff has a B.S. in Mechanical Engineering and an M.B.A. from the University of Texas at Austin.

MORE
ONLINE
DELL.COM/PowerSolutions

QUICK LINKS

Dell and CommVault:
DELL.COM/CommVault

Dell EqualLogic PS Series:
DELL.COM/EqualLogic
DELL.COM/PSeries

¹For more information, see "High-Density, Highly Scalable Storage: Dell EqualLogic PS5500E iSCSI SANs," by Dylan Locsin and Travis Vigil, in *Dell Power Solutions*, November 2008, DELL.COM/Downloads/Global/Power/ps4q08-20080396-Locsin.pdf.