Efficient, scalable video content storage with Dell EqualLogic virtualized iSCSI SANs

Benefits of the Dell™ EqualLogic™ PS Series video consolidation solution

Virtualized storage capabilities enabled by the PS Series' unique peer-storage architecture offer numerous benefits in video production, editing and management operations, including:

- Simplified video storage, file management, data protection and project collaboration

- Shared storage with flexibility, performance and scalability for large media files

- Flexible expansion of storage capacity, performance, and network bandwidth online, without downtime

- Improved sharing and collaboration across multiple OS environments

- Streamlined operations, through the application of a common set of management tools for video and associated analytics applications

The proliferation of standards and affordable equipment has led to an enterprise video boom. Numerous enterprise applications involve digital video, including:

- Surveillance and physical security
- Video editing workgroups
- Animation and 3D effects rendering
- Video on Demand (VOD) streaming
- Video analytics processing

While diverse in their applications, all video files tend to share two common characteristics. First, video files typically require a great deal more storage – orders of magnitude more, in some cases – than image, email, or other digital data. Second, because video operations usually require large-block, sequential streaming input and output (I/O), applications that ingest, edit and play back video can be extremely sensitive to performance constraints within server, network or storage segments.

Flexible configuration options suit specific video applications

Highly modular by design, Dell™ EqualLogic™ PS Series SANs offer broad flexibility to suit specific video operations. EqualLogic SANs intended to provide storage for video editing, animation and special-effects renderings, for example, can incorporate high-performance arrays that run low-latency 15,000 RPM SAS disks – or even lower-latency SSDs – along with high-throughput 10GB Ethernet. EqualLogic SANs designed to support surveillance, security, VOD, or other more capacity-intensive applications, on the other hand, often incorporate arrays running 10,000 RPM SAS or SATA disks, which typically offer the lowest cost per Gigabyte of storage capacity. The EqualLogic PS6010 and PS6510 offer the bandwidth and management advantages of 10GbE technology, which can improve performance for streaming workloads, editing applications, video analytics and high-volume data backup and data protection. The PS6000 and PS4000 series meet the needs of smaller-scale media applications.

Automated features benefit sophisticated, heterogeneous environments

With their automated load-balancing and tiering capabilities, EqualLogic SANs can also complement more sophisticated environments in which both performance-hungry and capacity-intensive applications run side by side. System administrators can manage multiple EqualLogic array types within a single, GUI-based interface, and align applications and processes with the arrays that best

suit them. In contrast to traditional frame-based, Fibre Channel SANs, EqualLogic SANs scale linearly; each array added to an EqualLogic SAN contributes processor power and I/O throughput, in addition to disk capacity. EqualLogic SANs also integrate with scalable shared file systems (e.g., Quantum StorNext for SAN and NAS), helping to provide enterprises with an easy-to-manage, capable and scalable upgrade or replacement path for Apple XSAN-based storage solutions.

Unique peer storage architecture offers scalability, ease-of-use and high ROI

While Dell EqualLogic PS Series storage arrays provide an extensive set of features and capabilities, the peer storage architecture underlying them brings simplicity, affordability and scalability to video environments. Peer storage technology virtualizes storage operations, enabling the management of a single pool of storage capacity, instead of individual disks, RAID groups or even arrays. EqualLogic users can perform upgrades and other operations without disrupting any associated applications. Peer storage also automates live, workload migration, volume workload balancing and tiering – the alignment of storage loads with the optimized resource. The robust implementation of the iSCSI standard in EqualLogic

firmware allows storage and IT administrators to leverage the ubiquitous base of TCP/IP knowledge, which largely takes storage administration out of the realm of storage specialists.

All-inclusive feature software package provides exceptional investment protection

Moreover, the all-inclusive feature software package that Dell bundles standard with every EqualLogic array gives video SAN users an exceptional level of investment protection. This all-inclusive package allows enterprises to start operations with a basic set of data protection, virtualization and management features, and then activate more advanced storage features as they grow and as their needs change over time, with no additional fees or licenses. EqualLogic users with valid support contracts can even download the latest software releases at any time, to take advantage of enhancements in features, capabilities and performance. This policy – which allows EqualLogic users to operate multiple generations of PS Series arrays in the same SAN, all running the latest release of firmware – represents a sea-change from the data-in-place migrations and "forklift upgrades" that users of older networked storage solutions have come to expect.
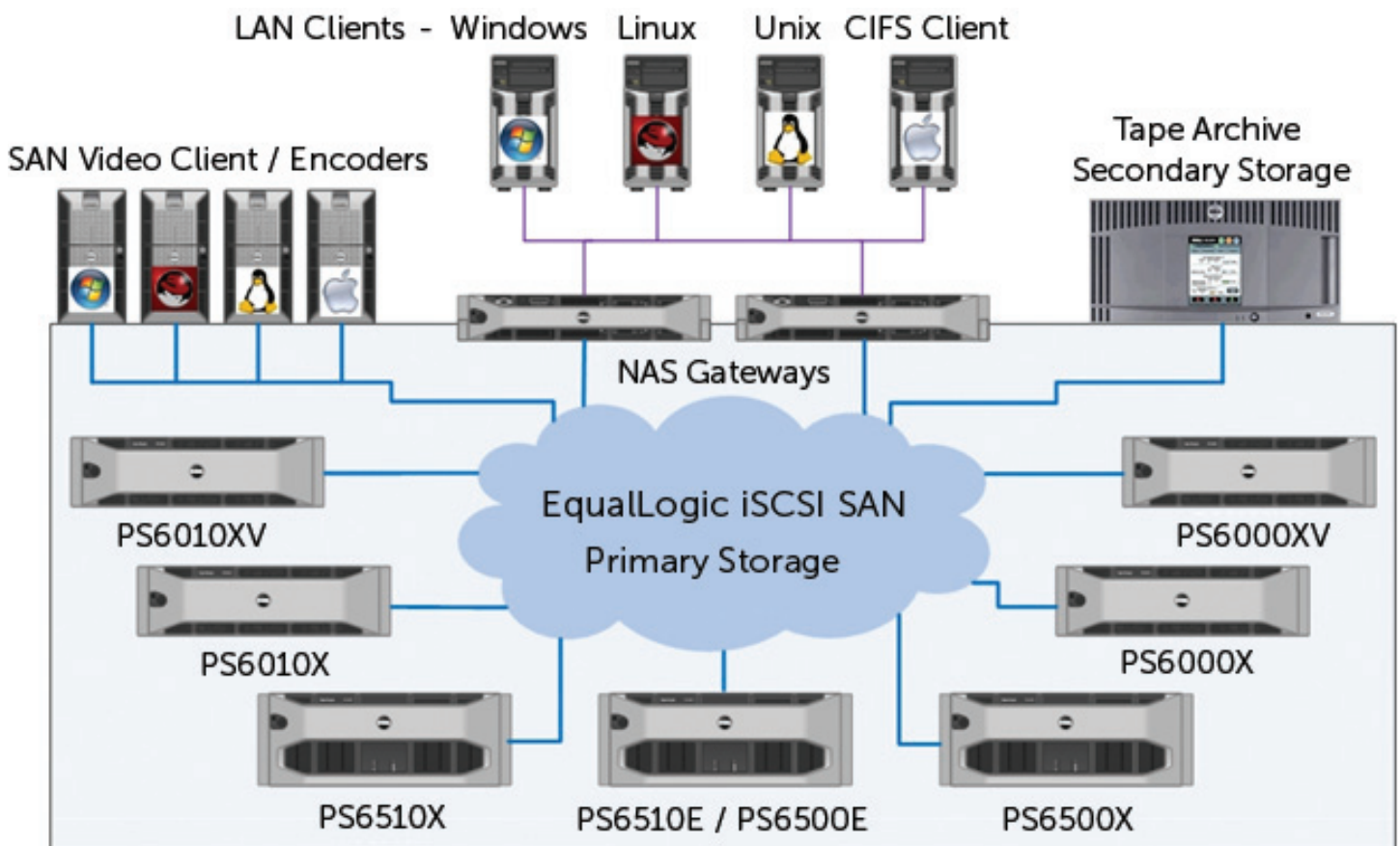

Figure 1. Dell EqualLogic PS Series SANs offer efficient, scalable, shared storage for a variety of video applications

Simplify your storage at equallogic.com/videostorage