



Solution Brief

Accelerated remote storage operations with Dell EqualLogic PS Series SANs and Blue Coat ProxySG

Dell™ EqualLogic™ PS Series SAN arrays and Blue Coat Systems ProxySG systems provide an end-to-end solution designed to enhance performance, minimize bandwidth usage and accelerate SAN-based replication operations between remote data centers. When deployed in enterprise WANs, the Dell-Blue Coat solution can offer:

- Reduced bandwidth usage
- Reduced server utilization
- Secure and easy deployment
- QoS and bandwidth management

Dell™ EqualLogic™ PS Series virtualized iSCSI storage area network (SAN) arrays incorporate a robust implementation of the iSCSI protocol that can provide numerous benefits. As a standard protocol, iSCSI offers low total cost of ownership (TCO). As a superset of TCP/IP, iSCSI is extremely accessible by IT generalists, and reduces the need for storage domain expertise. Additionally, iSCSI lends itself to shared storage solutions in both local area network (LAN) and wide area network (WAN) operations. To this point, Dell EqualLogic SAN replication features (which are bundled standard with all PS Series arrays) can leverage enterprise WANs for volume-data replication, whether full (for newly deployed arrays) or partial (for ongoing synchronization).

When leveraging this replication feature, enterprises depend upon ongoing access to data across WANs. Under certain conditions, unfortunately, WANs can sometimes suffer severe performance degradation, reducing available bandwidth and increasing latency, which may in turn constrain or disrupt business-critical operations. Enterprises that face these conditions may benefit from the ability to optimize WAN traffic through caching, compression, protocol optimization and policy-based bandwidth management.

Reduced bandwidth utilization for significant reductions in data transfer times

A WAN optimization solution offered by Dell and Blue Coat® can improve and accelerate iSCSI performance under adverse WAN conditions through a combination of byte caching and adaptive compression techniques. Deploying Blue Coat ProxySG – available as either an integrated appliance or a software-only virtual appliance – can reduce bandwidth utilization of SAN-based replication by as much as 95%*, thereby allowing data transfers to complete in a fraction of the time typically required under such suboptimal WAN conditions.

When integrated with Dell EqualLogic SAN Auto-Replication, Blue Coat ProxySG optimizes TCP window sizes to maximize data transmission rates and minimize transfer times. As a result, Blue Coat ProxySG can enhance full utilization of the link, and can apply bandwidth management and Quality of Service (QoS) policies to prioritize replication and other business-critical traffic.

In tests applying PS Series replication features in a simulated WAN environment, Blue Coat ProxySG provided significant improvement in data transfer times for both "cold" (i.e., using data not analyzed previously by ProxySG) and "warm" tests, as well as for both first-time replications and asynchronous updates.

Dell and Blue Coat improve server, storage and WAN efficiency

By deploying the integrated Dell EqualLogic and Blue Coat solution, enterprises can achieve the following:

- Reduced bandwidth usage
Byte caching and compression can significantly reduce the time required to complete replication processes under adverse WAN conditions.
- Secure and easy deployment
Byte caching and compression technologies combined with optional data encryption can add incremental levels of security to existing IT infrastructures.

- QoS and bandwidth management
Blue Coat ProxySG is designed to intelligently control and prioritize iSCSI and other business-critical traffic.

Improved performance, security and efficiency over the WAN

Blue Coat's WAN Optimization technology is a powerful yet flexible tool for improving application performance. When deployed at both remote branches and in the network core, these products can add transparency, security and fast application delivery to enterprise infrastructures in order to improve overall productivity and reduce bandwidth expense.

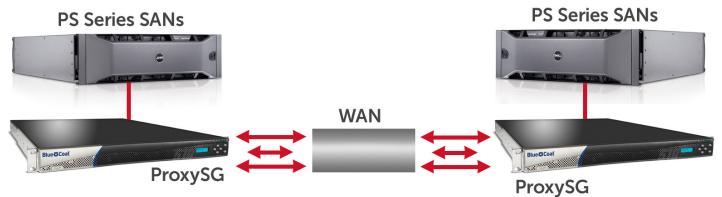


Figure 1: Accelerated remote storage with Dell EqualLogic PS Series SANs and Blue Coat ProxySG Appliances

* Application Performance Brief: iSCSI', Blue Coat Systems, Inc., 2009

Simplify your storage at www.dell.com/PSseries

