



Solution Brief

Riverbed Steelhead and Dell EqualLogic Help Optimize WAN-based iSCSI Data Replication

Dell™ EqualLogic™ PS Series SANs and Riverbed® Steelhead appliances integrate to provide cost-effective simplification and optimization of WAN-based data migration and backup operations. The Dell-Riverbed WAN replication solution is designed to deliver the following benefits:

- Simplified, affordable disaster recovery for organizations of all sizes
- Economical consolidation of data onto a virtualized iSCSI SAN
- Centralized, disk-to-disk backup strategies that simplify backup replication.
- Reduced backup windows and transfer times to maximize application availability
- Accelerated TCP performance to provide more efficient use of WAN resources
- Simplified deployment and management

Two business-critical operations – disaster recovery and centralized backup – depend upon high performance in two critical segments: the storage infrastructure that resides at each site, and the wide area network (WAN) over which these operations are executed. Bandwidth limitations and network latency can significantly impede backup times, reducing efficiency and increasing cost. At the same time, many storage solutions – particularly those based upon legacy Fibre Channel storage area network (SAN) technologies – often come with steep licensing or activation costs.

Riverbed® Steelhead appliances and Dell™ EqualLogic™ PS Series iSCSI Storage Area Network (SAN) arrays can help overcome these challenges, by:

- Enabling centralized backup and recovery of servers among distributed sites
- Automating replication of centralized data repositories between data centers
- Optimizing the WAN for fast backup, replication, and recovery, and
- Reducing the cost and complexity of disaster recovery and centralized backup operations

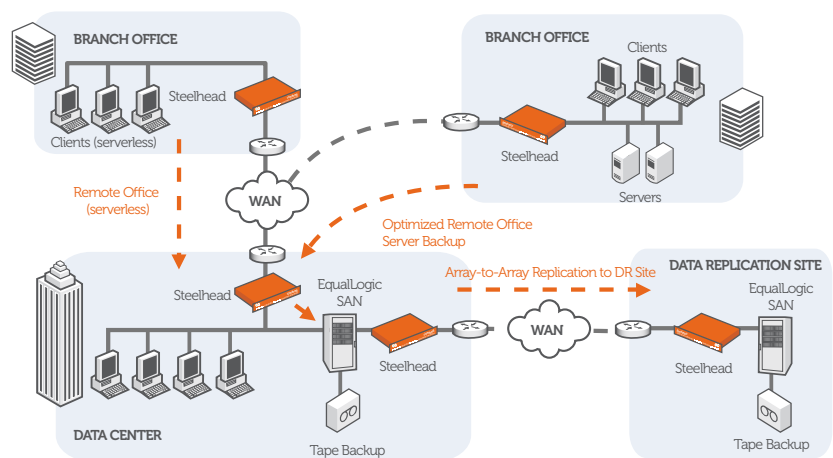


Figure 1. WAN-based Data Replication with Dell™ EqualLogic™ PS Series SANs and Riverbed® Steelhead appliances

Simplified disaster recovery

When disasters put primary data at risk, replicated data maintained at secondary sites can be instrumental to resuming operations with minimal loss. Such strategies can help ensure corporate data against such cataclysmic events as natural disasters, infrastructure failures or criminal malice.

Riverbed Steelhead appliances interoperate with Dell EqualLogic PS Series SAN arrays to help optimize data center replication across the WAN. Auto-Replication – a SAN-based replication feature provided standard on Dell EqualLogic arrays with no additional license costs or activation fees – periodically replicates data from the production data center to a disaster recovery site for fast recovery in case of a production site failure. IT managers can leverage Riverbed Steelhead to minimize data redundancy and optimize protocol-based transactions.

Simplified management for multi-site backup

A growing number of enterprises must support employees and IT resources that are distributed around the world to meet demands of the global marketplace. When business-critical data is no longer hosted at just one physical location, the challenge of backing up and securing data is magnified. Traditional approaches involve deploying tape backup equipment and processes to each data site, and hiring or contracting local resources to manage these resources. Despite the need to protect critical corporate data, this approach can be cost-prohibitive, resource-intensive or otherwise infeasible for many enterprises.

Dell EqualLogic PS Series Arrays allow for consolidation of data into a primary data center, where it can be maintained on a virtualized iSCSI SAN. Riverbed's approach can help minimize data redundancy across applications and servers, while its Transport Streamlining and Application Streamlining mechanisms reduce the impact of "chatty" protocols usually associated with long backup windows. Riverbed's powerful QoS capabilities can also control which traffic gets priority between data protection and other business applications.

Dell and Riverbed help optimize WAN-based data replication to maximize business continuity

Both disaster recovery and centralized backup require that critical data be stored redundantly across geographical boundaries. A WAN-based backup solution based on Riverbed Steelhead appliances and Dell EqualLogic PS Series virtualized iSCSI arrays can enable fast, economical, and centrally managed backup across multiple sites, often without the need to upgrade bandwidth on existing WAN links.

Simplify your Storage at www.dell.com/PSseries

