



## WAN SERIES SOLUTION BRIEF

# Dell Storage Replication

## WAN Series: Accelerating Dell EqualLogic PS Series and Compellent Series iSCSI SAN-to-SAN Replication

### The WAN Impact on Data Protection and Business Continuity

For enterprises, frequent data replications during the business day can reduce the data loss window. However, if the size of the replication becomes large, this traffic can consume a large portion of WAN bandwidth, interfering with other business traffic. The result can be that the number of replications are reduced during the business day, or even postponed to after hours – thus increasing the data loss risk window.

The impacts on the WAN of low bandwidth, high latency, network contention and packet loss can interfere with an enterprise's ability to achieve recovery time objective (RTO) and recovery point objective (RPO) goals.

## WAN Series for Data Throughput

Array Networks WAN Series WAN optimization controllers, in conjunction with Dell EqualLogic or Compellent SANs, enable more efficient data replication and backup over the WAN. WAN Series can be deployed in WAN Series physical appliances, as virtual appliances or as Windows software.

WAN Series mitigates the effect of chatty protocols that are often associated with long backup windows by reducing the amount of traffic and round trips going over the WAN. Specifically, it optimizes and compresses TCP traffic so that TCP inefficiencies do not slow down data transfers. WAN Series also includes an iSCSI blueprint that improves performance beyond that provided by TCP acceleration. These features optimize iSCSI transport over the WAN and improve the history store characteristics for more efficient traffic processing.

WAN Series utilizes disk-based compression that allows storage of gigabits (scalable to a terabyte or more) of data patterns on disk, allowing cache-based delivery of data to reduce server load and further improve WAN performance. WAN Series's disk-based de-duplication is far more granular than typical block- or file-level de-duplication utilized by backup and replication products, resulting in further reduction of replication times.

WAN Series also implements more efficient byte-level data differencing and reduction over the WAN. In addition, data is written to disk in a manner that will not fragment: Single Instance Store caches only a single copy of data across multiple peers; and cross-protocol caching stores only a single copy of data even if it is transmitted using different protocols.

With WAN Series, enterprises can now deploy multiple Dell SAN solutions for disaster recovery and deliver cost-efficient, real-time replication, backup and recovery performance without adding expensive network bandwidth.

WAN Series helps enterprises recover their most valuable asset – their company data – in record time while reducing business continuity costs, and reducing backup window times and network bandwidth consumption. Through WAN Series and Dell SAN solutions, distributed enterprises can deploy industry-leading data protection solutions and deliver cost-effective, real-time performance to critical remote backup sites.

## High-Performance and Bandwidth Conservation

WAN Series reduces the total amount of data traffic going over the WAN. Less traffic means less congestion, resulting in faster backup and replication times, allowing for more frequent backup and replication. In performance tests in conjunction with Dell EqualLogic PS Series SANs over a WAN, WAN Series reduced data replication and backup times by up to 90%\*, and bandwidth utilization decreased by 86 to 92%\*, resulting in savings on bandwidth costs.

## Deploying WAN Series for Business Continuity

WAN Series high-performance physical appliances, or software for remote, cloud and virtualized environments, are symmetrically deployed at the data center, remote and branch offices, and mirrored sites. All WAN Series solutions can be configured to support high-availability (HA) environments commonly found in business continuity infrastructures.

## WAN Series Configuration Management System

The optional WAN Series configuration management system enables global configuration and deployment of physical and virtual WAN Series appliances. CMS uses templates, so that settings that are common between appliances can be easily managed from one configuration. Changes only need to be made once and will propagate throughout the system, simplifying operations and eliminating errors.

CMS provides IT administrators with an easy-to-use solution for centralized provisioning, drag-and-drop configuring, appliance management and a centralized view of entire WAN Series deployments. CMS was designed with the needs of the CIO and IT administrator in mind, optimizing operational efficiency for branch acceleration management and thereby lowering TCO for the enterprise.

## WAN Series Benefits

- > "Designed for Dell" performance optimizations
- > Dramatically improve RTO and RPO
- > Reduce replication, backup and recovery times by up to 90%\*
- > Increase backup frequency to reduce data-loss risk
- > Decrease WAN bandwidth requirements
- > Reduce IT capital, network bandwidth and operations costs
- > No defrag – reduces seek times for data
- > Single Instance Store – only a single copy of data is retained, across multiple peers or transmission protocols
- > Reduce time-consuming incremental backups
- > Guard against large data-loss risk windows
- > Reduce competition from other WAN traffic for replication

\*Acceleration results may vary based upon traffic type, network contention and network configuration.

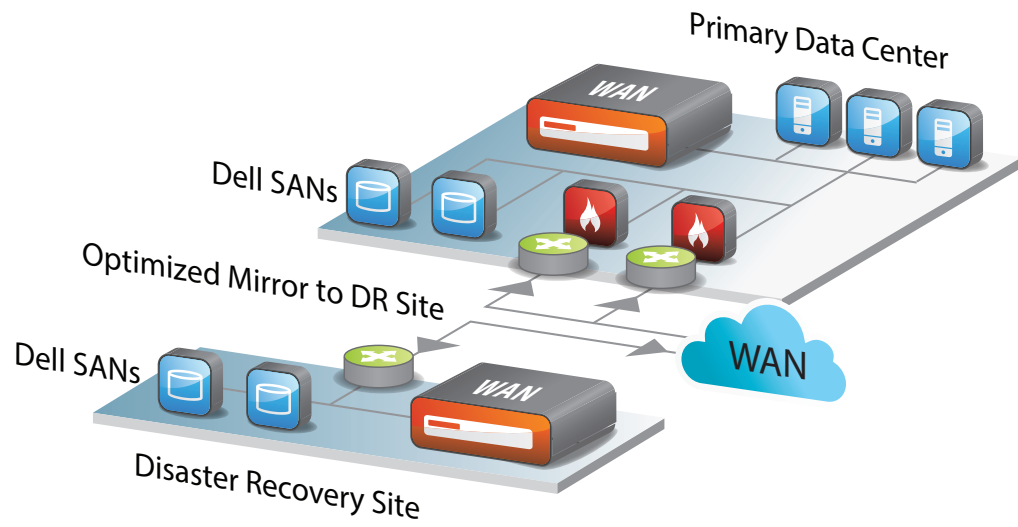


Figure 1: WAN Series Business Continuity Environment Supporting Dell EqualLogic Replication, Backup and Recovery Acceleration

For more information about how Array Networks can help you accelerate Dell EqualLogic PS Series and Compellent Series iSCSI SAN-to-SAN replication, visit us at [www.array-networks.co.in](http://www.array-networks.co.in) or send us an email at [sales-info@arraynetworks.com](mailto:sales-info@arraynetworks.com).

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