Dell™ Compellent™ Remote Instant Replay

Right-size recovery costs

- Delivers enterprise disaster recovery without traditional cost or complexity
- Helps to ensure business continuity at a fraction of the cost of other replication solutions
- Cuts bandwidth and management requirements with intelligent optimization

Key benefits

- Only replicate changed blocks of data—consume less space and help lower hardware, bandwidth and management costs
- Quick set up reducing planning and deployment time
- Help reduce network costs and optimize network utilization with bandwidth simulation and shaping
- Granular recovery intervals and data protection that matches your environment
- Test replication without downtime
- Create powerful replication templates without complex scripting or additional software

Traditional replication adds cost and complexity

Remote replication is one of the most frequently required but least implemented technologies in storage environments today. With many operations running 24x7, companies understand the need for business continuance in the case of a disaster. But when it comes time to purchase and implement a solution, the cost and complexity of traditional remote replication offerings have prevented widespread use.

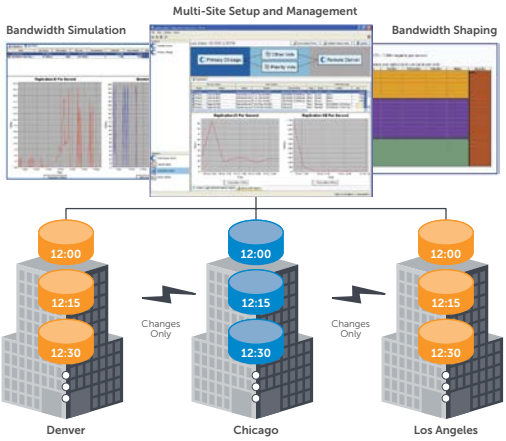
Cost-effective continuity

Dell Compellent Remote Instant Replay software efficiently replicates periodic snapshots—called "Replays,"—between local and remote sites, helping to ensure business continuity at a fraction of the cost of other replication solutions. Using a wizard-based setup, administrators are just clicks away from a replication solution. Additionally, disaster recovery can be verified online in just minutes while the replication is still in progress, without disruption. Supporting traditional Fibre Channel replication or cost-effective IP-based replication using existing infrastructure, Remote Instant Replay brings disaster recovery within reach of every budget.

More efficient replication

Remote Instant Replay leverages patented technology to intelligently optimize replication at the block level, resulting in a more efficient solution called thin replication. During the initial site synchronization process, thin replication sends only written data instead of the allocated but unused space often sent by other replication technologies.

For ongoing replication, thin replication transfers only blocks of data that have changed and does not require pre-allocation, consuming less space and helping to lower bandwidth costs. Space-efficient Replays can be created with granularity that suits the recovery objectives of your business and can be stored without the traditional snapshot impact to performance. You can then synchronously or asynchronously replicate volumes between local and remote sites. Replays can map to any server at any time, and once Replays reach user-defined expiration, Storage Center automatically returns the available space to the storage pool. Remote Instant Replay also provides Replay de-duplication technology to ensure that the same block of data is not sent twice.



Thin replication helps lower capacity, bandwidth and management costs.

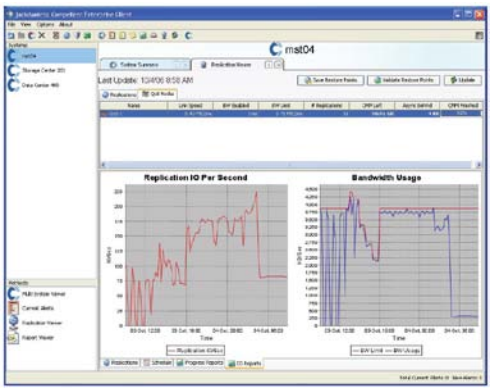
IP-based replication reduces costs

Remote Instant Replay allows replication over long distances using Ethernet networks. IP-based replication is easy to implement and manage, delivering business continuance without the traditional complexity and cost. To enable IP-based replication, simply connect an iSCSI IO Card directly into the controller for each system—no need for costly third-party protocol converters. IP-based replication is simple to set up, uses existing networks, infrastructure and staff and does not require specialized training or scripting. Remote Instant Replay also supports traditional Fibre Channel replication.

Bandwidth optimization increases performance

Remote Instant Replay offers bandwidth optimization to help you lower transmission costs while maintaining optimal replication performance. Using Dell Compellent Enterprise Manager, administrators can intelligently estimate bandwidth requirements upfront based on actual data, increasing the accuracy of the initial bandwidth purchase. Advanced bandwidth shaping ensures the most efficient use of available bandwidth on a daily basis without forcing you to compromise on performance. Using a simple drop-down menu, available bandwidth can be metered based on line speed and time of day, and comprehensive management and monitoring features help you understand how utilization is affecting performance. You can also prioritize replication on a per-volume basis, assigning critical volumes priority so they are given more bandwidth and are processed quickly.

To help further reduce replication costs while speeding initial synchronization, administrators can utilize Portable Volume, a replication jumpstart kit with a pair of 2TB external hard drives preconfigured for use with the Dell Compellent SAN. Portable Volume reduces initial synchronization time from weeks or months to days without the need for expensive high-speed connections or duplicate arrays.

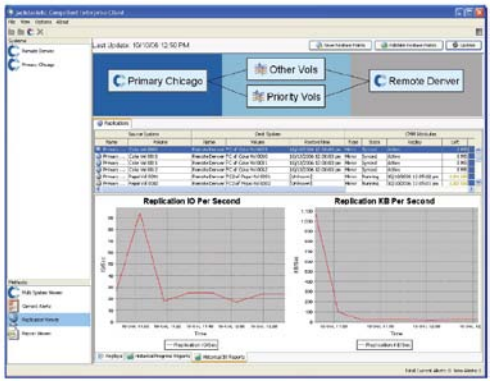


Manage bandwidth based on line speed and time of day to help avoid over-consumption during peak periods.

Intuitive interface and online verification

Remote Instant Replay, along with remote and local web-based monitoring, sets a new standard for ease of use. Wizard-based setup and recovery and PhoneHome status notification make replication management, scheduling and verification virtually effortless. Intuitive enough for most administrators to use without training, replication can be set up in just a few clicks. Test recovery on a daily or even hourly basis in just a few mouse clicks with no impact to your operation, even while replication is still in progress. Create replication templates without complex scripting using drag-and-drop icons.

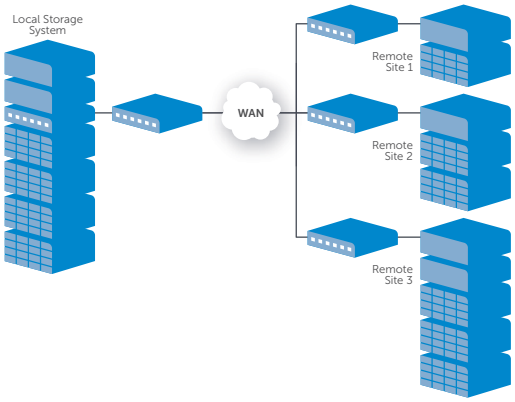
Dell Compellent Enterprise Manager takes replication management a step further by consolidating system information into a single console for a complete view of your Dell Compellent storage environment.



Easily manage and verify replication at multiple sites.

Multi-site replication for robust protection

Advanced replication with Remote Instant Replay allows you the flexibility to establish multiple locations as recovery points, reducing dependence on traditional tape backup strategies for recovery. Any number of locations can actively and simultaneously replicate to a single primary location or to each other, without the need and expense of a dedicated site or matching configurations. For example, the primary site could consist of high-performance Fibre Channel drives while a remote location is configured with lower-cost SATA drives. All sites remain active and available, reducing time to recovery. In bi-directional replication configurations, each location can have its own replay schedule.



Multi-site replication without the need for matching configurations.

About Dell™ Compellent™

Part of the Fluid Data architecture, Dell Compellent provides storage solutions that optimize efficiency, agility and resiliency for enterprises and the cloud. With built-in intelligence and automation, Dell Compellent helps organizations cut overall storage costs, secure data against downtime and disaster, and scale on a single platform in line with business needs. For more information, visit Dell.com/Compellent.

Remote Instant Replay software specifications

Architecture	
Pre-allocation required	No
Readable and writeable remote Replays	Yes
Copy-on-write technology	No, pointers to data only
Volume recovery using only written data	Yes
Volume clone required for recovery	No
Automated coalescence of expired remote Replays	Yes
Scaling	
Replication topology options	Point-to-point, point-to-multipoint, peer-to-peer
Performance	
Asynchronous replication support	Yes
Replication interface support	Fibre Channel, iSCSI
Replication link speed	T1 and above
Replication link bandwidth estimation	Yes
Replication link bandwidth optimization	Yes
Time required to mount a Replay	Less than 5 seconds
Replay de-duplication	Yes
Management	
Replay scheduling frequency	Once, minutes, hours, days, weeks, months
Independent schedules per location	Yes
Outlook-style scheduling	Yes
Validate volume recovery while links are operational	Yes
Number of clicks required to setup	As few as 6
Server environment	
Volume recovery to any host	Yes
Integration with Microsoft's VSS	Yes

Manage data differently at Dell.com/Compellent