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# Disaster Recovery and Business Continuity

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Businesses are faced with conflicting pressures: increasing volumes of data to protect and increasing importance of maintaining stringent business continuity.

Legacy storage approaches such as tape backup are becoming costly and unreliable, pushing customers to consider new approaches including WAN-based backup of branch offices, replication between data centers, and backup to the cloud. Riverbed disaster recovery solutions enable them to realize and maximize the promised benefits by optimizing their existing infrastructure and processes. This improves DR capabilities, reduce costs and securely protect more data, more often, and recover faster.

## Business Challenge

Analysts see a 45x growth of storage by 2022, 73% of IT decision makers identified DR as their top priority, and businesses are becoming increasingly dependent on 24x7x365 uninterrupted operations but are challenged in meeting this goal. Against this backdrop, neither budgets nor backup windows are growing, forcing a re-think on new scalable data protection architectures and site recovery approaches. Traditional capacity-based approaches such as tape backup, duplication, and vaulting, tiering storage SLAs, or purchasing incremental WAN bandwidth for replication increase cost, complexity, and risk, and don't efficiently scale across a distributed enterprise.

Companies find they have too much data to protect with their current approaches, but it's becoming too important to neglect disaster recovery. In addition, increasingly more stringent regulatory reporting requirements only add to these challenges for IT leaders. One need only look at the newspaper headlines or twitter feeds to see regional disasters and technical difficulties frequent cause significant and sustained unplanned downtime and outages.

## Emerging Trend

IT industry trends such as consolidation and virtualization are further driving change in DR, as servers and storage are abstracted from the physical hardware, enabling more flexibility and portability in delivery of enterprise services. Many customers are increasingly moving toward private cloud computing models. Others are evaluating the tradeoff of direct control versus economics in various public cloud service offerings or a hybrid approach of both.

Ultimately, they are trying to simplify and centralize their infrastructure for easier administration and economies of scale. The challenge here is that as data and systems become concentrated into a few central data centers, a disaster hitting one of those facilities will have a much wider impact across the enterprise. So, companies are forced to think beyond just delivering local backup and high availability and look further into large-scale disaster recovery strategies.

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## Riverbed Concept

Riverbed® helps customers overcome physical and architectural constraints to realize the full benefits of re-organizing their data protection and disaster recovery strategies. Customers can seamlessly integrate Riverbed solutions into their existing infrastructure to maximize their DR capabilities and reduce costs, delivering huge improvements to their RPO and RTO and storage operations.

## Solution Offering

Riverbed offers a comprehensive approach to enhancing data protection and disaster recovery, alongside strategic technology alliances for added benefit and assurance. Riverbed DR solutions enable customers to protect more data, more often and recover faster. Through advanced optimization, acceleration and prioritization of WAN traffic, recovery point objectives (RPO) and recovery time

objectives (RTO) can be improved and met with greater reliability. Additionally, Riverbed network performance management (NPM) solutions help discover systems to be protected, identify interdependencies between business critical services, monitor data protection processes, identify outages and diagnose root problems for quicker recovery.

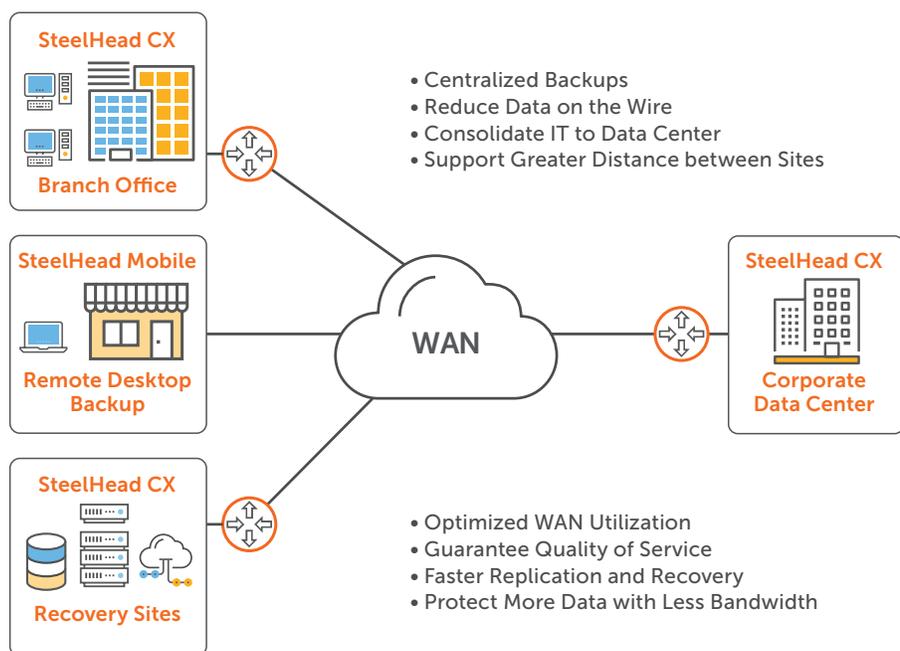


Figure 1

WAN-Optimized Disaster Recovery Reference Architecture (based on Riverbed® SteelHead™ family). Appliances are deployed at branch offices, remote desktops, disaster recovery sites, and in the primary data center, working transparently over the existing WAN to accelerate performance and maximize throughput.

## Key Considerations:

### Streamlined Business Continuity/Disaster Recovery

By eliminating the performance bottlenecks inherent with wide area networks (high latency, limited bandwidth, congestion and/or packet loss), Riverbed technologies enable IT professionals to re-think and streamline their BC/DR strategies. Data center consolidation, centralized backups, and data center

to data center replication, all become possible with Riverbed WAN optimization technologies. These streamlined approaches to BC/DR eliminate risk and lower the costs associated implementing, maintaining and scaling the solution over time.

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## Improved RPO and RTO

The wide area network plays a major role in protecting and accessing data across multiple locations. However, the negative effects of high latency, limited bandwidth, congestion and/or packet loss inherent with wide area networks can prevent businesses from meeting their RPO/RTO objectives. Riverbed technologies remove these performance bottlenecks inherent in wide area networks, allowing IT professional to meet or beat RPO/RTO goals, all while minimizing recurring costs for WAN infrastructure.

## Limited Bandwidth for Data Protection

Insatiable demand for bandwidth driven by the rise of Internet traffic, video, rich media and real-time collaboration can constrain your ability to backup or replicate data across the WAN.

Riverbed SteelHead enables you to defer costly WAN upgrades, by dramatically expanding the capacity of circuits in branch offices and data centers. Remove up to 60-95% of the traffic through advanced data deduplication and compression. Data deduplication recognizes and eliminates data that's been sent previously across the WAN.

You're able to fully leverage the WAN for data backup and replication, instead of relying on physical tapes. And if you're already doing WAN-based backup or replication, you can protect more data, more often (for a better RPO) and recover faster (for a better RTO).

## Data Center to Data Center Replication

A different problem can occur in some environments, typically between data centers, where you may have enough rated bandwidth capacity to keep up with the changing data, but due to high latency and/or packet

loss and retransmission, you aren't able to effectively use the capacity. The further apart your primary and secondary data centers, the slower replication becomes.

Riverbed solves the issue with advanced Transport Streamlining maximizes throughput across WANs with high latency or packet loss, accelerating replication flows by up to 50X or more making mission critical replication jobs faster and more reliable.

## More Efficient Balance of Network Resources between DR vs. Applications

Another common issue is that few companies can afford the luxury of a dedicated network for DR purposes, and usually need to run business applications in the same pipe with DR traffic. Shrinking or non-existent backup windows caused by 7x24 business means you need to find a way for both types of connections to co-exist or you'll face unhappy end users and potentially fail to meet your data protection service level agreements (SLAs) at the same time.

Riverbed SteelHead provides powerful network QoS (Quality of Service) capabilities to help you prioritize traffic on shared pipes, protecting the flow of backup and replication traffic when needed to meet RPO/RTO objectives.

## Partnership with Storage Industry Leaders

Riverbed has proven success with customers' storage environments, and (where available) completed certification and qualification processes to ensure compatibility with enterprise-class storage and data protection products from such storage vendors.

Riverbed's unique combination of technologies can facilitate customer's current network-based backup and data replication strategy or ease their transition to a cloud-based data protection strategy.

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### About Riverbed

Riverbed enables organizations to maximize performance and visibility for networks and applications, so they can overcome complexity and fully capitalize on their digital and cloud investments. The Riverbed Network and Application Performance Platform enables organizations to visualize, optimize, remediate and accelerate the performance of any network for any application. The platform addresses performance and visibility holistically with best-in-class WAN optimization, network performance management (NPM), application acceleration (including Office 365, SaaS, client and cloud acceleration), and enterprise-grade SD-WAN. Riverbed's 30,000+ customers include 99% of the *Fortune* 100. Learn more at [riverbed.com](https://riverbed.com).

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