

# Business Continuity

## Using Optical Data Replication



### Improving Business Availability

Ribbon's Business Continuity solution offers safe, secure, flexible, and ultra-low-latency optical connectivity. With Business Continuity, business operations can remain viable, despite unanticipated outages or disruptions. These include non-disruptive data migration and replication, file syncing, Disaster Recovery (DR), and many others.

In today's networks, critical functions must be disaster proof. In case of a failure, downtime and data loss must be kept to a minimum. Therefore, you need fast, low-latency, and secured optical connectivity. Ribbon's Business Continuity solution provides this for your enterprise, cloud computing, storage area networks, and virtualized networks.

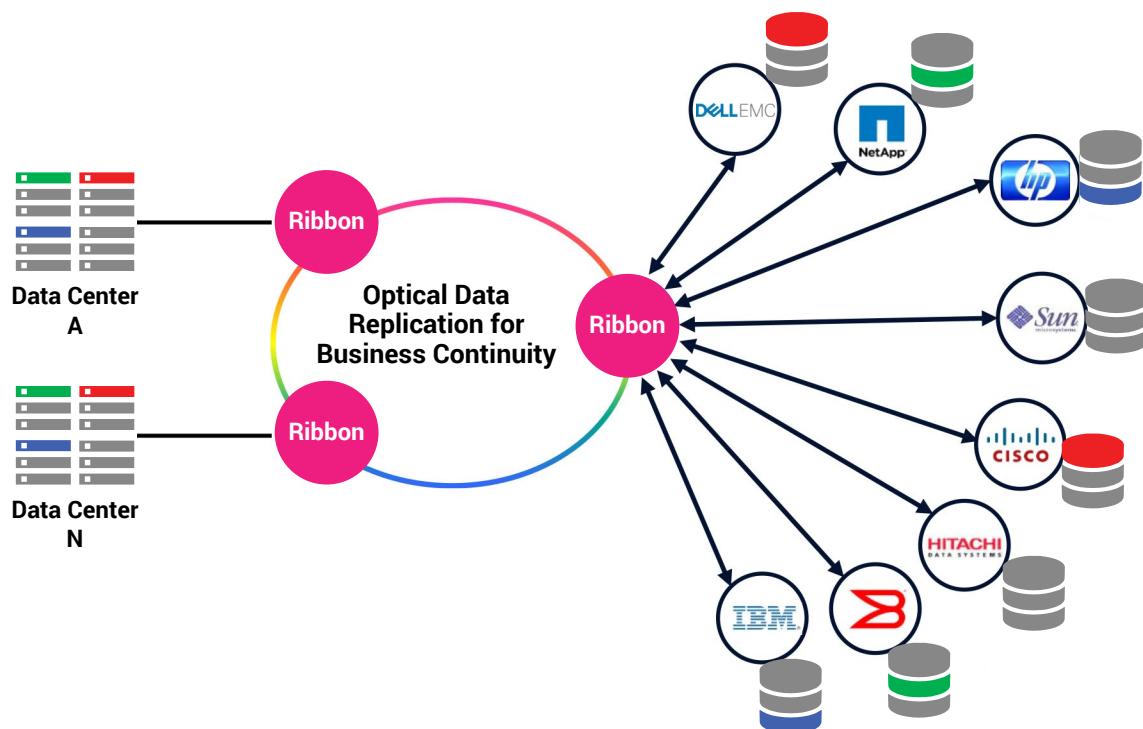
**Resilient  
SAN**  
interface support

**Data  
Survivability**  
by repeated backups

**Continuously  
Available**  
data centers

**Data Security  
by multilayer  
protocol protection**

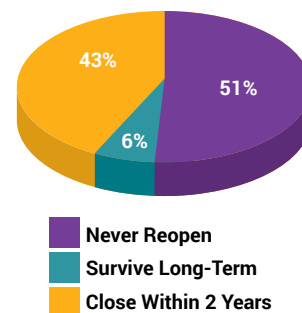
**Flexible  
Scheduling  
and automation**



### How Much Downtime and Data Loss Can You Afford?

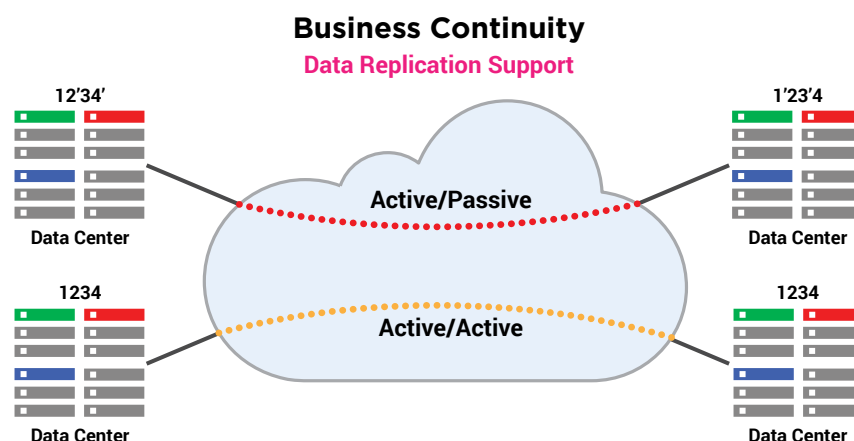
Whether your organization's data sits in a cloud or in a traditional perimeter system, it will inevitably experience downtime or data loss at some point, which adversely impacts revenue. The speed of your data recovery depends on your business continuity plan. The cost of downtime and data loss can be significant to business operations as shown.

What you can or cannot afford depends on your business. But one thing is clear. All businesses should protect and minimize downtime and data loss caused by unplanned business interruptions, including those caused by the network, cyber threats, human factors, and natural disasters.



### Business Continuity Challenges

For a resilient infrastructure, availability must be built into the core. However, many customers are reluctant to invest in protective measures because these solutions can be very costly. Installing and managing hardware infrastructure and software licenses have become exponentially expensive as availability requirements increase. Even connecting organizational data can be difficult because there are various certifications and packet interface types, including Ethernet and Fibre Channel (FC). So, business continuity can be quite complex to implement, manage, and execute.



Disaster recovery is also a critical aspect because when business continuity fails, disaster recovery is the safety net. Business customers have difficulty meeting specific regulatory requirements for storing and protecting data. Data replication technology can be used to create both local and remote copies, as shown.

Another need in the business continuity area is flexible solutions. Enterprises need to support:

- Bursty applications like VM migration
- Scheduled services like backups
- Service automation to execute automated maintenance procedures
- Automated programmable events in case of a failure.

A suitable business continuity solution must meet these flexible demands.

Security is another area of concern, since data is always vulnerable to hacking and other intrusive attacks. For a complete business continuity plan, security is an important part. Holistic L1 – L7 cyber security protection for both physical and virtual networks is essential and complementary. L1 encryption will certainly reduce risk, but suitable security policies are required for complete 24x7 operations at both the transport and application layers. This should be part of the business continuity plan. The challenge for business continuity security is to implement a comprehensive cyber security solution.

### Business Continuity Solutions

Optical data replication for business continuity lets you get back up and running quickly, should disaster strike. There is no such thing as 'timeouts' in business. Ribbon's business continuity solution assures the operation of mission-critical applications at all times because it:

- Connects high-performance computing and storage with a variety of high-speed data SAN interfaces across scalable network bandwidth (10GbE/100GbE/400GbE).
- Ensures continuous data availability by data mirroring, server clustering, or sync replication.
- Reduces the cost of energy with ultra-low, energy-efficient (less than 20W per 100G), dense packaging.
- Provides flexible solutions like bandwidth-on-demand, scheduling, and automation.
- Provides security while reducing latency with AES-256 GCM Layer 1 encryption.





Optical data replication for business continuity delivers small business and larger enterprise solutions to keep data safe and operations running. This ensures their ability to get back up and running if disaster strikes. Its features and benefits are summarized in the following table.

	<b>Centralized Management</b> Manage physical and virtualized networks on a single pane of glass. Monitor and manage complex spanning multiple domains with multiple protocol layers.
	<b>Certifications</b> Interoperability and certifications with major storage and switch vendors.
	<b>Disaster Recovery</b> Address resiliency by having both a physical and virtual disaster recovery plan that minimizes the duration of a service down. Ideally there should be no single point of failure, including geographical.
	<b>Flexibility</b> SDN applications provide flexible solutions like bandwidth-on-demand, bandwidth scheduling, and network automation.
	<b>High Availability</b> Ensure the highest level of availability and eliminates data loss for your business-critical applications and services. Use redundant hardware, software, and infrastructure paths to allow minimal disruption and independence for both physical and virtual networks.
	<b>High Speed Access</b> Business continuity and connectivity with various interfaces including 1GbE-100GbE, ESCON, FICON, InfiniBand, and 1GFC to 32GFC. Faster connections are possible when/where needed.
	<b>L1 Optical Encryption</b> Protects the optical from snooping via fiber tapping using ultra-secure optical encryption based on AES-256 GCM encoding, that adds no overhead or latency, and allows the end-users to administer the encryption keys.
	<b>Low Latency</b> Low latency and reliable connections across diversely routed paths for financial transactions, gaming, and many other applications. Latency is critical for successful performance and user experience.

## Business Continuity

Ultimately, when things fail, businesses should be capable of staying on course.

Ribbon's optical data replication for business continuity allows business customers to build the best network infrastructure possible; one that delivers a superior business continuity and disaster recovery solution that keeps the business operative. Business customers will benefit from Ribbon's unique values for performance, cost, flexibility, and security:

<b>Performance</b>  <ul style="list-style-type: none"><li>• Blazing fast 400G</li><li>• Interoperability</li><li>• E2E management</li></ul>	<b>Cost Effective</b>  <ul style="list-style-type: none"><li>• Lowest cost/bit</li><li>• Highest density</li><li>• Lowest power</li><li>• Easy installation</li></ul>	<b>Flexible</b>  <ul style="list-style-type: none"><li>• BWoD, BW scheduling</li><li>• Easy provisioning and scalability</li></ul>	<b>Secure</b>  <ul style="list-style-type: none"><li>• L1 Encryption</li></ul>
---	---	---	--

## About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon visit [rbbn.com](https://rbbn.com).

**Contact Us**

Contact us to learn more about Ribbon solutions.