

# Building a Disaster-Ready Infrastructure

Prevent downtime, protect data and ensure continuous business operations

When Hurricane Ike slammed into the Gulf Coast in September 2008, it put business continuity and disaster recovery (BC/DR) programs to the ultimate test. Beyond the devastating impact of the storm itself, power outages extended across three states and lasted for several days, forcing many businesses to rely on backup systems for business-critical data and network connectivity—and shutting others down entirely.

But it's not just hurricanes, fire or other disasters that can bring a business to its knees. Everyday problems such as bad software, misconfigured networks, hardware failures or power outages are much more common. In fact, power failures accounted for nearly half of the declared disasters reported in a recent survey conducted by Forrester Research and Disaster Recovery Journal.<sup>1</sup> The key is to ensure that this type of unforeseeable minor event does not escalate into a disaster that results in business disruption and lost revenue.

Only companies with a disaster-ready infrastructure and solid business continuity plan can come through such events with minimal downtime and cost.

- **Planning for disaster:** Some might see BC/DR as an expensive insurance policy—why spend money you don't have to prepare for things you don't think will happen? But when a business disruption threatens your top line and bottom line as well as your brand reputation, no company can afford to take chances.
- **Minimizing recovery time and reducing costs:** Depending on your industry, location, number of employees and other considerations, the cost of downtime can range from tens of thousands to more than a million dollars an hour. A business impact

analysis and risk assessment will paint a clearer picture of what's at stake for your organization.

- **Data protection and disaster recovery:** In the event of a disaster, business-critical personnel need access to systems, data and other resources to keep the business operational. Fortunately, it's not necessary to double infrastructure and operational expenses in order to meet BC/DR requirements.
- **Protecting your network with redundant hardware and intelligent routing:** From redundant electronics and advanced routing protocols, to diverse network routes, business continuity is built into CenturyLink's wide area network services to ensure network connectivity is maintained in the event of an outage or natural disaster.
- **Ensuring continuous business operations:** In an already challenging business climate, uninterrupted business operations are crucial to success. CenturyLink's business continuity solutions enable customers and employees to experience business as usual, even in the event of disruption. These solutions give you the tools to execute against your business continuity plans to mitigate the effects of the disaster and return to normal operations as quickly as possible.
- **Bringing it all together:** Rush Enterprises CIO Scott Kressner was on the hot seat to provide a testable disaster recovery solution. In comparing vendors and evaluating solutions, Kressner zeroed in on CenturyLink, which also provides Rush's wide area network and understood the company's specific goals and needs.

<sup>1</sup> "The State of Disaster Recovery Preparedness," Forrester Research, Inc. and Disaster Recovery Journal, January 2011



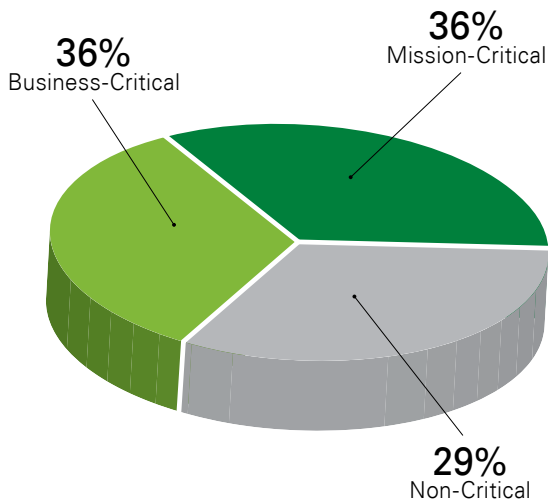
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## Planning for Disaster: The Importance of Risk Management

As pressure to cut costs remains intense, some might see BC/DR as an expensive insurance policy—why spend money you don't have to prepare for things you don't think will happen? But when a business disruption threatens your top line and bottom line as well as your brand reputation, no company can afford to take chances. Forrester Research found that improving BC/DR capabilities is a top technology priority for more than 70% of SMBs and more than 60% of large enterprises.<sup>2</sup>

From downtime costs to regulatory compliance, the need for strategic BC/DR planning is clear, but what does that mean for your organization? Mike Cybyske, a disaster preparedness specialist and crisis manager for CenturyLink Communications, says BC planning requires the ongoing assessment of risk to your organization.

Part of that assessment is determining which applications are critical to your business. In the recent Forrester Research-Disaster Recovery Journal survey of disaster recovery professionals, respondents classified 36% of applications as mission-critical and 36% as business-critical. They classified less than a third of applications as non-critical.<sup>3</sup>



“Recognize that you can’t protect everything,” Cybyske says. “Know what your critical functions, vendors and suppliers are and what you would stand to lose if they were unavailable for a few hours, days, and weeks. Then create continuity plans for those that you cannot afford to be without.”

<sup>2</sup> “Business Continuity and Disaster Recovery are top IT priorities for 2010 and 2011,” Forrester Research, Inc., Sept. 2010

<sup>3</sup> “The State of Disaster Recovery Preparedness,” Forrester Research, Inc and Disaster Recovery Journal, January 2011

<sup>4</sup> “Wake-Up Call: You Aren’t Ready for a Disaster,” Forrester Research, Inc., February 9, 2011

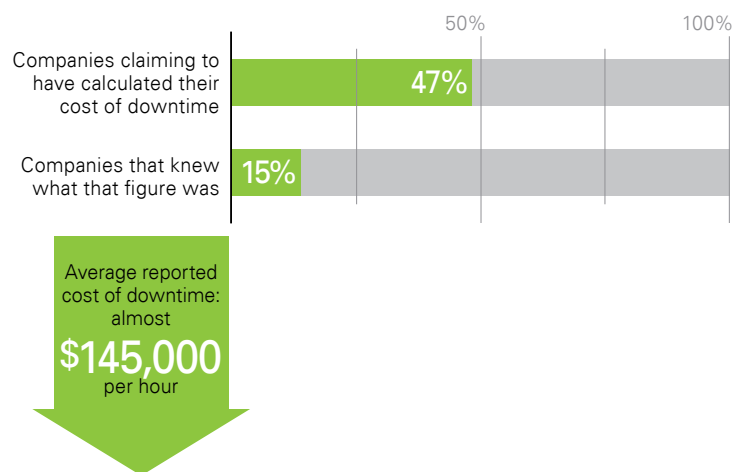
There is no “one size fits all” plan for every company or every system, but every organization should consider:

- **Recovery Time Objective (RTO):** How fast does backup kick in and how long will it take to get your organization up and running again?
- **Recovery Point Objective (RPO):** What point in time is reflected in the recovery application—how far back in time can you go to “reset”?

## Minimizing Recovery Time and Reducing Costs

The ability to keep business up and running in the face of unexpected disruptions—or even planned maintenance—has become increasingly important. According to Forrester, “Enterprises from all industries and of varying sizes now measure recovery time and recovery point requirements in hours, and in some cases, minutes. Due to increased competition and the cost of downtime, recovering in 48 to 72 hours and losing 8 hours or more of critical corporate information is no longer acceptable.”<sup>4</sup>

How much does an hour of downtime cost? There isn’t a simple answer. Estimates range from tens of thousands to more than a million dollars an hour. Although 47% of companies in the Forrester Research and Disaster Recovery Journal survey claim to have calculated their cost of downtime, the report says only 15% actually knew what that figure was, with the average reported cost of downtime hitting almost \$145,000 per hour.



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Forrester Analyst Stephanie Balaouras cautions against relying on industry averages, however, since costs vary with company size, location of critical sites, revenues and number of employees. "At the end of the day," she says, "You can't escape taking the time to conduct your own business impact analysis and risk assessment."<sup>5</sup>

Cost is a key driver for avoiding downtime, but it's not the only consideration, especially for industries such as financial services and healthcare, which bear heavy regulatory compliance burdens. "Being in the banking industry, it's extremely important that the banks have access to account balances in the event of an emergency," says BMA Corporation Vice President Tom Ure, who chose CenturyLink to meet his company's high-bandwidth networking and disaster recovery needs.

"The Federal Reserve changed their stance for most organizations that work with banks and became much stricter regarding how much preparation had been put into the business recovery," Ure says, adding that BMA no longer worries when bank examiners inspect their location every two years. "They look at an environment like this and they say 'Yes, you've done your due diligence; you've done a good job in protecting the bank's assets.'"

"Due to increased competition and the cost of downtime, recovering in 48 to 72 hours and losing 8 hours or more of critical corporate information is no longer acceptable."

~ Forrester Research<sup>4</sup>

## Data Protection and Disaster Recovery

With crucial business applications, financial data and trade secrets, your business relies heavily on keeping its data safe and secure. And in the event of a disaster, business-critical personnel need access to systems, data and other resources to keep the business operational. To help meet that need, the vast majority of U.S. enterprises rely on a backup data center<sup>6</sup>—either on premises or at an off-site facility such as a CenturyLink™ CyberCenter,<sup>®</sup> which provides a hardened environment for business data and applications and ensures access to critical data and applications in the event of an outage at the primary data center.

Fortunately, it's not necessary to double infrastructure and operational expenses in order to meet BC/DR requirements. For instance, although multiple servers may be required to support day-to-day operations, a smaller number of servers may be sufficient to support operations following a temporary disruption.

Outback Steakhouse chose CenturyLink's Tampa CyberCenter to house its data center and later added a redundant backup solution at the Chicago CyberCenter. Outback's Tampa headquarters is in the middle of hurricane alley, and CIO Dusty Williams was understandably concerned about power outages and loss of network connections. He was looking for greater security and reliability, but also wanted to streamline the company's operations.

"We wanted no interruptions—no reasons that they couldn't fully perform their functions," Williams said of the restaurant's employees. "They're a restaurant group, not a technology group. And we were looking for ways to make their jobs a lot simpler."

CenturyLink's BC services provide reliable backup solutions to ensure continuous business operations during an outage and enable you to execute business continuity plans when disaster strikes and normal business operations are not feasible. Network technologies and architecture with inherent BC/DR features and functionality enable you to cost-effectively maintain operations—and mitigate outage-related risks.

Multiple layers of protection, reliability and redundancy are built into voice and data communication solutions. This not only prevents downtime in a cost-effective manner, but also helps businesses to recover faster, maintain security and increase reliability.

"Business continuity and disaster recovery are part of our DNA," says Thuy Ha, CenturyLink Director of Product Management. "Customers that utilize our services will get to have the advantages of all of those components that we build into our infrastructure and not have to do that themselves."

<sup>5</sup> Stephanie Balaouras, Computer World UK, August 11, 2009. <http://bit.ly/gSGbgl>

<sup>6</sup> The State of Enterprise Disaster Recovery Preparedness, Forrester Research, Inc., November 2009



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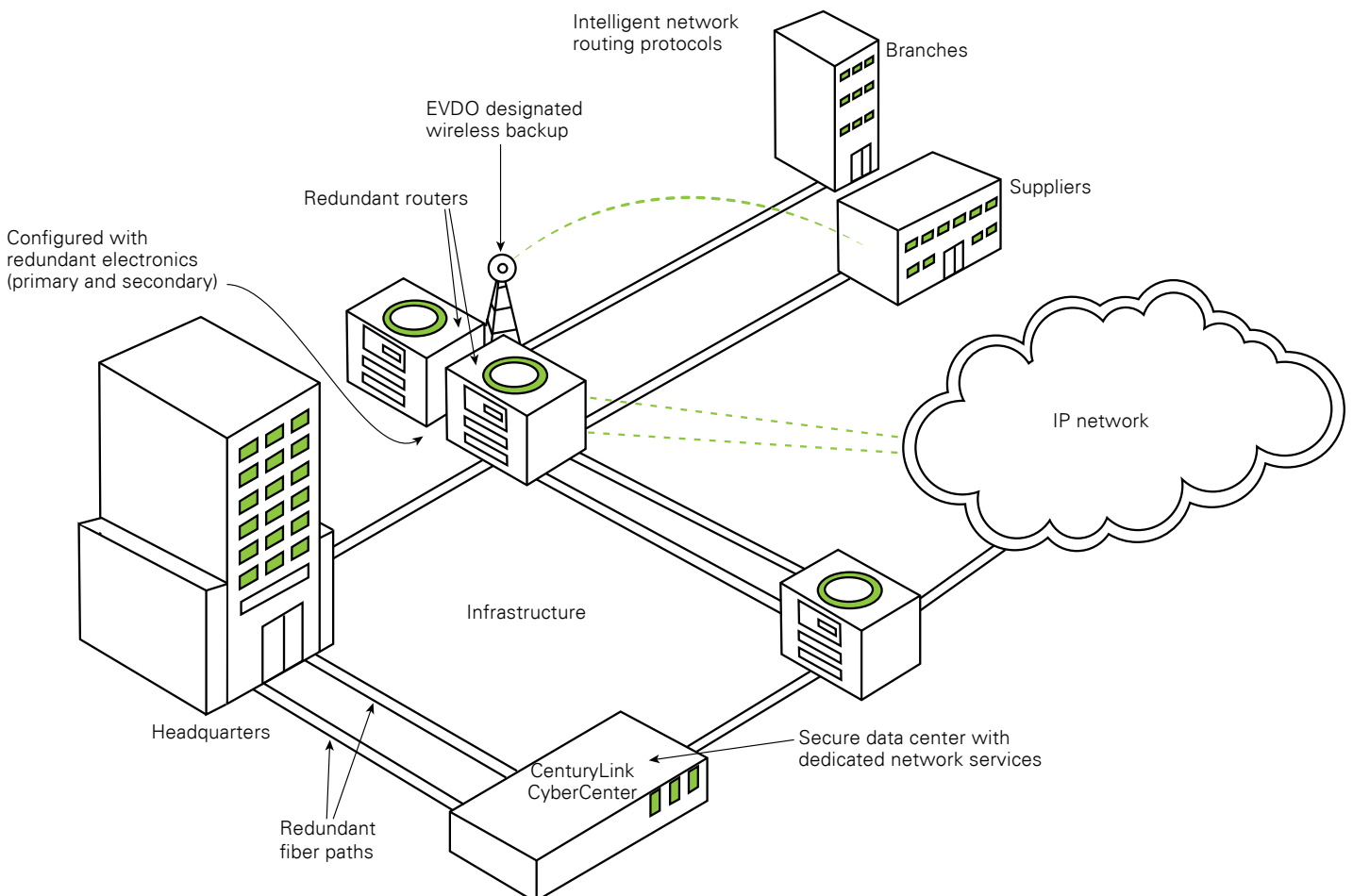
## Protecting Your Network with Redundant Hardware and Intelligent Routing

Your network is the nerve center for your company's critical activities—connectivity is essential to maintain business operations in the event of an outage or natural disaster. A multi-layered approach is needed to protect your network from all the potential points of failure.

From redundant electronics and advanced routing protocols to diverse network routes, business continuity is built into CenturyLink's wide area network services to ensure network connectivity is maintained in the event of an outage or natural disaster. For example:

- CenturyLink's MPLS fast reroute protocol enables it to reroute traffic in any event that leads to hardware failure in the network.
- Routers and switches are configured with redundant electronics to prevent network disruption due to hardware failure.
- Diverse, redundant fiber paths provide network protection in the event that the primary network route is disrupted due to fiber cut.

## Built-In BCDR



## Ensuring Continuous Business Operations

In an already challenging business climate, uninterrupted business operations are crucial to success. CenturyLink's business continuity solutions help you keep business running as usual, even in the event of a disruption. If disaster strikes, these solutions provide you with the tools to execute your business continuity plans to mitigate the effects of the disaster and return to normal operations as quickly as possible:

- Managed colocation services with managed hosting ensure that data is accessible in the event that operations are impacted in the primary data center.
- Real-time application recovery restores access to data and applications in less than a minute, so customers and employees experience "business as usual."
- Secure remote access provides an alternate mobile means to establish secure connectivity back to the customer's private network.
- Business continuation routing allows you to quickly and efficiently reroute incoming voice calls to a predetermined telephone number at an alternate site or to predetermine individual alternate telephone numbers at various locations.

## Bringing It All Together: Rush Enterprises

Rush Enterprises CIO Scott Kressner was on the hot seat to provide a testable disaster recovery solution. The legacy "pull-up-a-trailer" solution was insufficient to meet this need. Kressner says the key requirement for the solution was to ensure that critical business systems, which included the main ERP system, email, Internet services, etc., would be available in a very short period of time. "Some of the most critical systems, we wanted up in hours. Some of the less critical systems, we could wait as much as a day or so to bring those up online. But the idea was within about two business days to be completely up and on all the major business systems."

In comparing vendors and evaluating solutions, Kressner zeroed in on CenturyLink, which was a good fit not only for disaster recovery, but also for broader voice and data communications services. "They were already our wide area network provider, which would make the transition very smooth, clean and not very complex," Kressner said, praising the sales team for its understanding of Rush's business and the goals of the project. "I trusted the team that I had."

## CenturyLink Business Continuity and Disaster Recovery Solutions

CenturyLink's business continuity solutions help you ensure continued operations, and, in the event of a disaster, enable you to execute BC/DR plans to mitigate the effects of the disaster and return to normal operations as quickly as possible. To learn more or to get in touch with a CenturyLink representative who can help you assess your organization's business continuity needs, visit [CenturyLink.com/BCDR](http://CenturyLink.com/BCDR).

