

# **BUSINESS CONTINUITY: THE PROFIT SCENARIO**

## **THE BENEFITS OF A COMPREHENSIVE BUSINESS CONTINUITY STRATEGY FOR INCREASED OPPORTUNITY**

Organizational data is the DNA of a business—it makes your operation unique; therefore, protecting company data is vital to your business' success and survival. More importantly, ensuring continuous data availability goes beyond responsive actions to unplanned failures. It encompasses a proactive approach that leads to competitive advantage. This advantage is built when your customers are not only loyal; they become promoters of your product or service because they know they can depend on you to deliver—all the time.

Business continuity is a comprehensive business solution that outlines the strategies, plans and actions a business must implement to ensure persistent operations. A complete business continuity solution includes strategies for physical location, equipment, and personnel, as well as business and IT systems. Dell provides comprehensive solutions to help organizations protect their IT systems and the valuable data that resides on them. The Dell™ EqualLogic™ PS Series family of storage arrays features highly available storage arrays combined with integrated software solutions for data protection and data recovery, giving businesses of all sizes the tools to protect, manage and recover critical organizational data in the event of a disaster or other data destruction occurrence.

### **THE STAGGERING COSTS OF DOWNTIME**

In today's highly competitive business environment, business interruptions due to system outages can be devastating. Regardless of the cause—hurricane, fire, accident, computer virus, or even user error—downtime can not only be costly, but in some cases catastrophic. With a mobile workforce, global customers wanting to do business around the clock, and continually greater dependence on technology, companies need to not only protect data, but continue business operations virtually uninterrupted. The cost of downtime, depending on the industry, can be from thousands to millions of dollars per hour—due not only to disaster recovery expenses, but also to lost sales, customer defection, financial penalties from violation of legal requirements, and lack of productivity. Add to that a damaged reputation in the marketplace and diminished shareholder confidence, and the cost of downtime can be staggering.



Failure to recover from a disaster has led to the demise of many organizations and threatened the existence of others. However, organizations that can continue business operations through any outage, large or small, can retain customer confidence—and sometimes even take market share from competitors.

### **PRESCRIPTIONS FOR RECOVERY**

Data recovery and business restart depend on development and implementation of a comprehensive plan prior to a disaster or unplanned outage. Business owners must ensure their IT departments have the proper plans and process in place to speed recovery. Some questions that need review in light of your business priorities are:

- Do we have the right technologies to deliver the results we have defined?
- How long can we afford to be down?
- What is an acceptable amount of data loss?
- What are the costs associated with doing nothing?

The answers to these and other questions will help define your unique disaster plan. Take a look at a simplified continuum of backup and recovery methods, along with their advantages and disadvantages.

### **DO IT OVER**

On the very low end, if your organization has no backup capability, recovering from a failure means simply doing the work over. Lost files, databases, and transaction records will need to be re-created. Without data protection “insurance,” no costs are incurred prior to the loss—but you get what you paid for! It may be weeks or even months before the business is up and running again and much of your valuable business data will be

lost forever. In essence, there is no payment upfront—but there is an enormous payment after a failure. This is an unacceptable situation for business today.

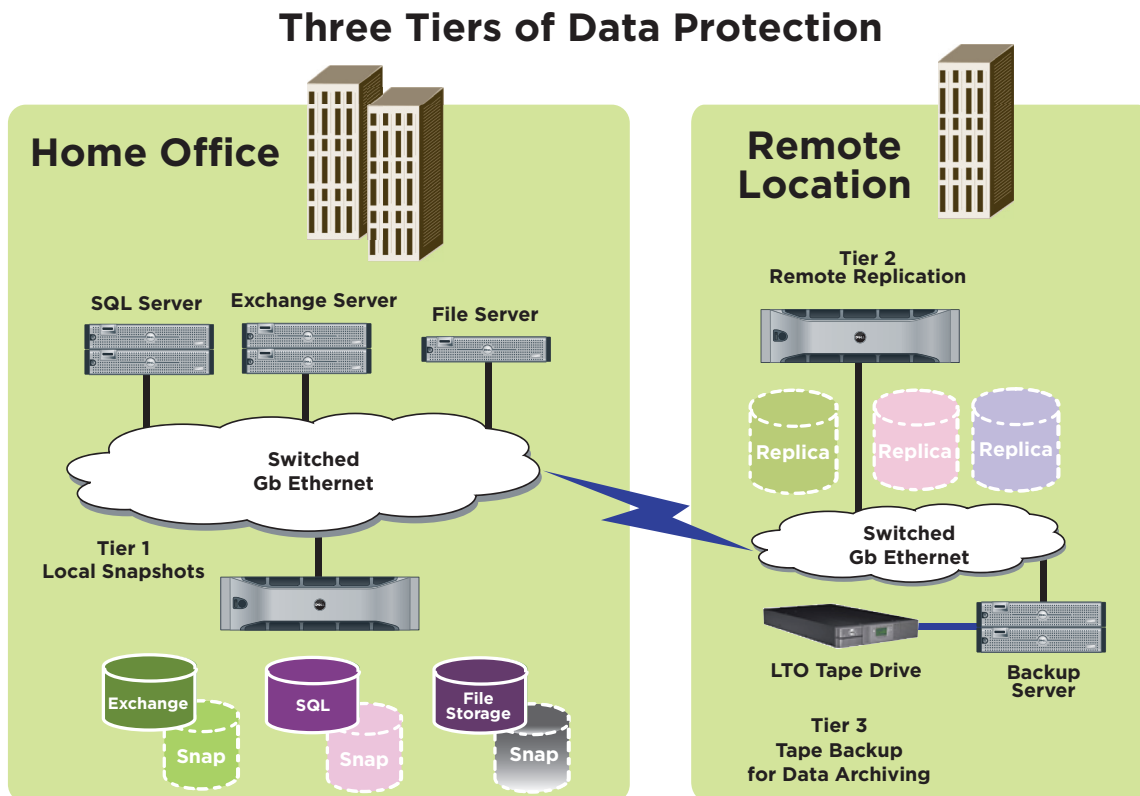
### **REMOVABLE MEDIA BACKUP/RESTORE**

The most basic approach to business continuity is backup and restore. In this method the IT staff develops procedures for creating additional copies of organizational data and saves these copies to some form of removable media, traditionally tape. Tape backup remains a good long-term archiving method for most large and small organizations; however, numerous problems limit its usefulness for time sensitive data. First, backup windows (the time scheduled for coping data to tape) are shrinking—due to exponential growth in data volumes, and round the clock availability requirements of IT systems. Second, because backup is not easy or quick, many organizations cannot backup with enough frequency to adequately protect themselves—backing up once a week leaves a lot of data vulnerable.

When compared to the “do it over” method, basic back-up and recovery can dramatically reduce lost work; and operations can be restored quickly—typically in hours to days, depending on pre-defined procedures. However, the basic back-up and recovery method is still too slow for the current business climate that requires 24x7 availability and instantaneous access to large, growing volumes of data. Organizations receive the most value for their investment when they develop a continuum of protection leveraging snapshots and replication (in addition to tape) for backup and restore.

### SNAPSHOT BASED BACKUP/RESTORE

Snapshot based back-up to disk is a big improvement over tape based procedures. This method involves making snapshots (space-efficient copies) of data at shorter intervals. Snapshots are created quickly and easily without disrupting operations, and can provide multiple, local restore points to minimize lost work. Local snapshots can be used to quickly restore data after outages caused by application errors; however for data protection after a physical loss of property or equipment, complete backups must be kept either on tape or through replication. Replication is the process of creating exact copies of all the data on your storage array in a remote location. Replicas can be created automatically using built-in scheduling tools and can be used to perform backups to tape for long-term retention. Remote replication keeps data more available by virtually eliminating backup windows, speeding restore, and minimizing errors.



The methods above define processes for protecting data in the event of a disaster or outage but business continuity encompasses more than data protection and recovery. Business continuity is also a strategy that makes recovery speed less important. With business continuity, it's not about how long it takes to get back in operation—it's about staying in operation regardless of the failure, outage, attack, or corruption.

## BUSINESS CONTINUITY WITH EQUALLOGIC

The first line of defense is to protect data where it is stored, and that means keeping storage units running as well as providing safety features. Dell's EqualLogic PS Series arrays are fundamentally built to protect data with five nines (99.999%) availability. Redundant, hot swappable components—including disk drives, controllers, network interfaces, power supplies, and cooling fans—mean that component failure does not result in downtime or data loss. An integrated system monitors disk drives in the background to detect and correct problems before they occur; in addition, should a drive become unavailable, a spare is automatically placed into service and configured. Disks and arrays “learn” the configuration from those already installed, so minimal administrator intervention is necessary. Controller caches are mirrored and battery backed, and various RAID levels are supported.

In addition to the reliability built into each PS Series array, there are a host of features that deliver outstanding data protection services. Auto-replication is included with every PS Series and can drastically reduce the time required for back-up and recovery. Remote replication can be done

over the WAN without expensive add-on components like channel extenders and organizations can replicate between PS Series arrays over long distances using a high speed connection to the Internet without buying additional software and licenses. Equally important to business continuity, load balancing and other management tasks are handled by the array, not by administrators. Continuously monitoring itself, PS Series arrays allocate disk space—along with connectivity, security, and performance—dynamically for each host as needed. This proactive management helps to prevent downtime and keeps business applications running.

Features such as these make business continuity a reality for organization of all sizes, with pools of storage, server power, and network bandwidth operating almost like an integrated business utility. A business continuity infrastructure built on Dell's EqualLogic family will help your business achieve the “always on” expectation of your clients, which helps drive customer retention and profitability. Business continuity is more than a business imperative. It's an investment in profitability; and isn't that what business is all about?

### What Does Recovery Involve?

The overall goal of business continuity solutions is to keep the business running without interruption if possible, and with minimal interruption if not. But what actually happens when a disaster occurs?

#### Step 1: Identify that a disaster has occurred

A physical disaster is likely to be noticed immediately, but the more common corruptions and failures may not be noticed until some time has passed.

#### Step 2: Decision to Implement Recovery

Once a problem is discovered, management must be alerted and decisions made about how to react to the disaster. The recovery plan must be reviewed and initiated.

#### Step 3: Set Up Infrastructure.

Systems may need to be shut down, data backups located (tape or replicas), alterations made to networking schemes, and changes made to how employees work.

#### Step 4: Restart Servers.

Once alterations have been made, the servers must be restarted.

#### Step 5: Restart Applications.

Since applications were not shut down cleanly due to the disaster, restarting applications can require some work. Large databases may experience longer delays until return to normal business operations but companies leveraging replication for data protection have more options and can restart more efficiently.

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