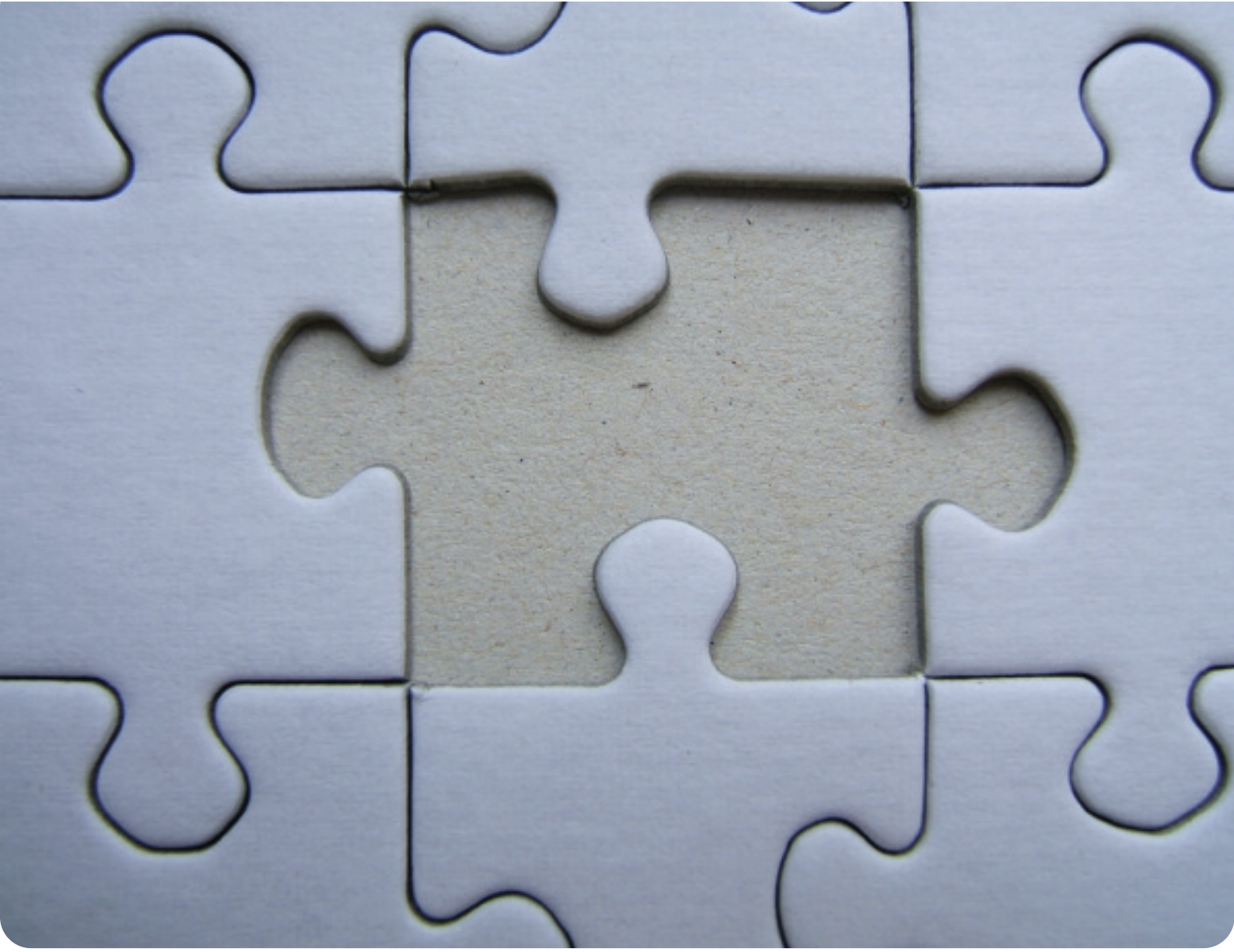


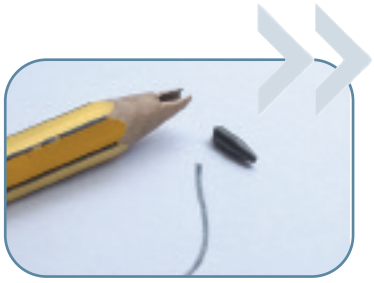
Best Practices For Preventing Data Loss

A Real Time Backup Implementation Manual

Executive Summary

Data backup and security are among the most important IT issues facing businesses today. However, many SMEs still underestimate these issues, leaving their data – and hence their entire business – exposed to the consequences of data loss.

This document explains step by step how SMEs can protect their mission-critical data by establishing a real time backup solution that suits their needs.



The Risks You Run

The data that resides in your applications is a high-value and time-sensitive corporate asset. Unfortunately, there are numerous threats to your data that occur more often then you might expect:

- **Hardware failures.** The most common are computer or disk crashes. Causes range from random failures to accidents like spilling water onto a server.
- **Site disasters.** These range from high-profile disasters like fire or earthquake to more mundane occurrences like power surges, water pipe breaks or virus attacks.
- **User and application errors.** These encompass everything from accidents like incorrectly upgrading the operating system to malicious acts like deleting files or introducing viruses

In addition to these data risks, SMEs are also facing other challenges that are inherent to the mid-market segment.

"The probability of a hard-disk crash increases with the number of days since the drive was last backed up."

Murphy's Law of Data Loss, The House of Murphy

SME Challenges

SMEs are one of the most cost-conscious business groups. Budgets are small and hence spent cautiously. Interlinked with the cost issue is the perception that real time backup solutions are expensive to buy and to maintain. This is one of the main reasons why a lot of SMEs continue to use outdated backup solutions rather then replacing them with newer and better technology. Many persevere with outdated equipment despite the constant growth in data volumes vastly exceeding the capacity of their outdated solution. This inability to backup thoroughly, greatly compromises the security of their data and as such the continuity of their business.

But there are other misconceptions about backup solutions that exist in the SME market space, i.e.: the perceptions that data backup solutions are complicated and not necessary. Neither of these misconceptions needs to be true when taking the time and effort of developing a (data) disaster recovery plan prior to choosing and implementing a backup solution.

Developing a Disaster Recovery Plan

When developing a disaster recovery plan, the following two questions are key in order to successfully implement a solution.

1. **Data freshness question – How much data can I afford to lose?**
   The first step in developing a solid disaster recovery plan is to develop an idea of what constitutes an acceptable loss for your organization. First, consider the impact of losing data stored in your database. Would you be able to recover from the loss of an hour's worth of data? If you're managing a human resources database, chances are that you could deal with this situation by instructing your personnel to reenter data entered during that period. If you're running the database supporting a financial institution, the loss of an hour's data could bring the instant wrath of clients and industry regulators along with significant monetary losses. Protection against these types of losses is provided by backups of the database and use of transaction logging.

2. **Data recovery question – How long can I afford to be down?**
   Secondly, consider the loss of access to the database itself. What would be the ultimate result if your end users were not able to access information for an extended period of time? The loss of access to our human resources database would likely result in frustration, but minimal loss to the business. On the other hand, if doctors at a hospital were unable to access test results and laboratory findings in a timely manner it could result in the loss of life or limb. If you find that these issues are a concern in your organization, you may want to consider the use of a real time backup solution to ensure the continuous availability of your database.

"80% of mission critical application downtime is directly caused by people or process failure."

Gartner, a leading provider of research and analysis to the global IT industry

Once you've determined the level of acceptable loss for your organization and received buy-in from the users you support and your management, it's time to begin developing a strategy to minimize the impact of a catastrophic event on your database. Establishing a real time backup of your mission-critical data should play a key role in any disaster recovery strategy.

Maintaining a Real Time Backup

Given the mission critical nature of your data, the business cost of data loss or data interruption is high. Having a functional database server on standby minimizes downtime.

Many companies use tape backup and/or server clustering as their backup strategy. Tape backup is low cost and reliable, but data on tape is only as fresh as the last backup, since it is impractical to backup a large in-service database.

Server clustering usually provides adequate protection against localized hardware failures, but leaves data exposed to site disasters since the only safe copy of data is the tape.

This is where a real time backup solution such as Pervasive DataExchange proves its value to the SME market as it contains everything you need to maintain a real-time backup of your mission-critical data.

"Pervasive's Real Time Backup solution is a big advantage for our application. We can easily demonstrate to our customers how we can completely fail-over from our production to our backup data center in real time. This real-time fail-over environment is light years ahead of the competition."

Stuart Sutton, President, GPSNet Technologies Inc.

Benefits of Pervasive DataExchange for the SME

- **Reduced costs**
  Making timely and automatic backups of your data dramatically reduces the man-hours required to restore your data – crucial for SMEs with few IT staff. Additionally, Pervasive DataExchange is an out-of-the-box real time backup solution that does not require any expensive training thus resulting in a low total cost of ownership (TCO).
- **Improved data availability**
  DataExchange drives data from a production server to a warm backup at an on or offsite location thus eliminating the consequences of a site disaster. This way you will always have an up to date and workable backup available that's ready to take over the moment disaster strikes.
- **Tailored backup solution**
  Setting up a data backup solution is about taking into account the customer's individual business requirements and offering them a tailored solution. With it's various user counts and administration setting Pervasive DataExchange allows you to do just that. You can schedule your backups in a timely fashion that best suits your needs and for those PSQL databases that you require.
- **Enhances data reporting**
  DataExchange loads the database of a reporting server (or Web site) with fresh content from a production server thus enabling you to run consolidated reports for enhanced data analysis.

Pervasive DataExchange answers your need for data availability. Whether it is for disaster recovery, reporting, or data synchronization, the sophisticated database replication technology of DataExchange will meet your needs.

For more information on the Pervasive Real Time Backup solution, visit
www.pervasive.com/dataexchange

For a more comprehensive data security solution, visit our security portal at
www.pervasive.com/security

Have a question? Contact us at info@pervasive.com or visit www.pervasive.com/company/contact