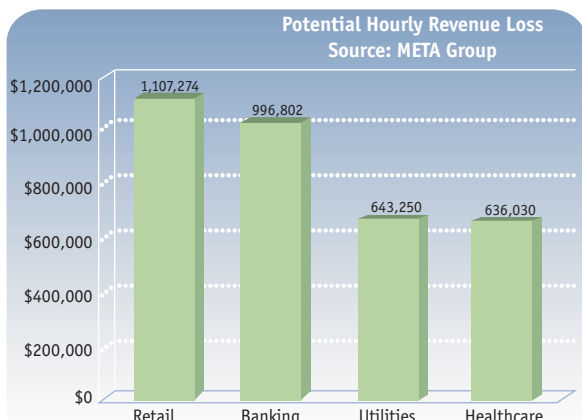## How much data can you afford to lose?

In recent months, companies like yours have become increasingly aware of threats to the security of their mission-critical data. As information is one of your most valuable assets, protecting it is essential for the financial health of your business.

Threats to Your Business

There are three categories of threats to your data: environmental, hardware and user/application. Environmental threats are foremost in the minds of many people. Fire, flood, building destruction and earthquakes are examples of devastating site disasters. More commonplace threats include power surges, water pipe breaks and virus attacks. Hardware failures include everyday computer and disk crashes ranging from random failures to accidentally unplugging a server. User errors and application faults may represent the most frequent threats of data loss. User errors encompass everything from employees failing to back up their data to mistakenly clearing a disk of essential information. While the causes of downtime are extremely diverse, 80% of mission-critical application service downtime is directly caused by people or process failures, according to Gartner Research.

The Impact

Regardless of the cause of the threat, two questions must be answered to adequately quantify the impact: How much data can I afford to lose? And, how long can I be down? The loss of data relates directly to data freshness. The length of downtime relates to data recovery.

Significant data loss and downtime occur when your system is not adequately protected. According to Gartner Group, of companies who experience significant data loss, 40% are out of business within five years. International Data Corporation reports that 59% of companies who have unscheduled downtime find they are incapable of conducting business during those times. What does this mean for your business? Dependent upon your industry, your hourly revenue loss can range from $600,000 to over $1,000,000. With downtimes stretching into hours and days, the impact to your business can be disastrous.

A Real World Implementation

A Midwestern utility company had a mission-critical application powered by a Pervasive.SQL™ database. To help ensure high availability, the database server contained two dual processor servers configured as a cluster. One of the servers was designated the primary and the other the backup. The company performed a tape backup each night.

Potential Hourly Revenue Loss
Source: META Group

Industry	Loss
Retail	1,107,274
Banking	996,802
Utilities	643,250
Healthcare	636,030

The company appeared to be well protected, with a cluster to handle hardware failures and a tape backup to restore data in the event of a site disaster. However, the company was not protected against user errors, which exposed the cluster as a single point of failure. In this case, the IT staff had incorrectly installed, configured and tested the complex cluster software and hardware. Consequently, when the cluster backup experienced a routine hardware failure, the operator was not alerted and the entire cluster crashed. Further, since the operating system of the server was not properly configured, the tape backup could not restore the data. It took four days of work by the IT staff before the system came back online.

As soon as the DataExchange™ Data Continuity Solution was installed, the company was securely protected against all threats including user error.

The Solution
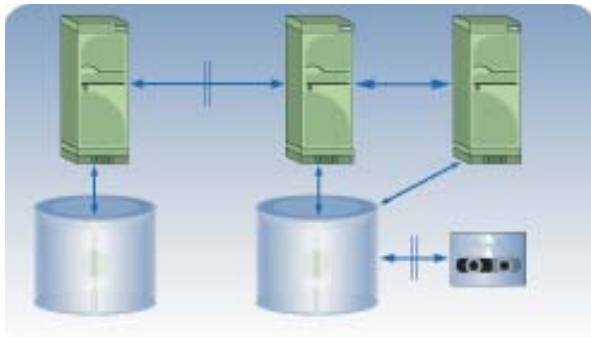
The DataExchange Data Continuity Solution protects you from both data loss and downtime. Rapidly transferring data from your mission-critical system to a backup device minimizes loss. A functional database on standby greatly reduces the amount of any downtime.

A three-part strategy is employed which incorporates an onsite hot backup, an offsite warm backup, and historical data archives.

- The onsite hot backup is implemented using server clustering technology and protects against hardware failures to the primary database server.
- The offsite warm backup is implemented using the DataExchange database replication technology to protect data accrued since the last tape backup. Coupled with a cluster, both data loss and recovery time are minimized in the event of a site disaster or user/application errors.
- Historical data archives are managed using tape backup technology allowing you to create permanent data snapshots.

Pervasive Software® delivers complete solutions by working with our service consultants or through one of our partners. The total solution is comprised of: a vulnerability assessment which will document the threats to your mission-critical data; implementation services where the solution is installed, customized and tested; and an operations guide which documents the best practices for continued disruption avoidance.

About Pervasive Software
Pervasive Software, a leading provider of embedded and Web database management solutions for small and medium-size enterprises, serves a channel of more than 10,000 independent software vendors, developers, value-added resellers and partners. Pervasive Software's flagship product, Pervasive.SQL, is a leading application development database, combining low-cost, reliable, resource-efficient operations with world-class performance and usability. Founded in 1994, Pervasive is based in Austin, Texas, and also has offices in Europe and distributors covering 100 countries.

For more information
If you would like to learn more about DataExchange, please visit our Web site at www.pervasive.com.
To reach the North American sales office, call 1.800.287.4383, extension 2. In Europe, for Belgium, France, Germany, Italy, Luxembourg, The Netherlands, Spain, Sweden, Switzerland and the United Kingdom, call +800.12.12.34.34. For any other European, Middle Eastern, African or Asian countries (excluding Japan), call +32.70.23.37.61.