



MANAGED SERVICES:

Information Protection:

Providing State-of-the-Art Data Backup and Disaster Recovery to Small Business Clients

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Table of Contents

Overview: Small Business Information Protection	1
Information Protection Solution Goals	1
Detailed Components of the Information Protection Solution	2

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Overview: Small Business Information Protection

Business Continuity, Data Backup, and Disaster Recovery represent the IT jargon commonly used to define the specific services associated with protection of a businesses' most important resource...its information. Information cuts across all lines of business; critical email and customer documentation, accounting data, client or patient files and records, and so much more.

In a 2003 study, published by McGraw Hill, cites that among companies experiencing a "major loss" of computer records, 43 percent never reopened, 51 percent closed within two years of the loss, and a mere 6 percent survived over the long-term. Small companies cannot typically afford the best internally managed information protection strategies and are subsequently at higher risk of such losses.

An Information Protection solution incorporates industry best practices for backing up and recovering data. It can be a complex undertaking to do it right. SBT Partners will create a viable plan tailored to meet the client's needs without compromising their budget. In collaboration with trusted and established managed services providers, as with any client solution deemed important to the small business community, we have identified an Information Protection solution that in our judgement best meets the need of the majority of small businesses. This document describes the goals and components of the Information Protection solution.

Information Protection Solution Goals

Small businesses very often lack the in-house IT resources to achieve the demanding planning, technical, and process requirements associated with a comprehensive Information Protection solution. They either neglect to implement a business continuity plan or else approach data backup and recovery in a sporadic, rudimentary fashion that fails to conform to industry best practices.

Using its engagement methodology, SBT Partners will assess the small business client's current data backup and disaster recovery processes against established industry guidelines for an efficient and cost effective managed services information protection solution. Goals for such a solution are:

- A comprehensive solutions approach that is designed to reduce any server down time.
- Near real-time backups-as frequent as every 15 minutes.
- Offsite storage at an affordable cost
- A low cost, speedy disaster recovery process.
- Utilization of the lowest-cost, highest-performance data backup medium based on emerging industry trends on storage cost and efficiency. *Small businesses will likely benefit from the shift to disk storage, versus tape storage, as recent advances in design and manufacturing lower the total cost of disk-based storage in terms of storage cost per bit.*
- Encryption to ensure no data, whether located on local disk storage, in support centers that monitor servers or at remote storage facilities, is accessible to anyone without a passkey.
- Elimination of the cost and time of managing on-site tape backup to include monitoring and managing the entire logistics process.
- A single cost structure comparable to the cost of buying and managing tape backup but also ensuring predictable backup via an on site virtual server, remote storage capability, timely disaster recovery, and 24x7 management of the entire process.

Detailed Components of the Information Protection Solution

The following provides a detailed description of a small business Information Protection solution that SBT Partners believes is among the best in class within the industry. Each of the components matches up with broad goals defined above.

Near Real-Time Backups: capture all changes to the initial image in increments of 15 minutes backing up recent datasets while allowing reconstruction of the state of the data as it stood at the end of various 15-minute restoration points. This level of forensic and auditable data recovery may satisfy various regulatory requirements (such as HIPAA and GLBA) for data retention and data record reconstruction, and also serves stakeholders such as supply chain planners, warehouse analysts, auditors, and legal counsel.

On-site Virtual Server: If servers fail, server virtualization technology embedded in an onsite Network Attached Storage (NAS) allows small business client servers and applications to be restored and rebooted in less than 30 minutes in most cases. *Small businesses often endure a wait of several days in order to receive replacement servers from vendors.* The NAS can have business up and running through multitasking functions: even while functioning as a virtual server, it can continue to back up data from other devices plugged into the NAS allowing continued business without any significant loss of data backup, server functionality, or application downtime.

A Complete Image: An image of all hard drive partitions is created via an agent, which is warehoused on the NAS device physically located at the client location. The data is stored using AES-256 bit encryption and compressed employing a block-level, not file-level, backup. This means that data is captured at the binary level. Block level data is raw data which does not have a file structure imposed on it. Database applications such as Microsoft SQL Server and Microsoft Exchange Server transfer data in blocks. Block transfer is the most efficient way to write to disk and is much less prone to errors such as those that result from file-level backups. Additionally, block level backups are not affected by open files or open databases. The block-level image is an exact digital duplicate of the on-site server

Intuitive and Flexible Restoration: The backup system allows for quick and flexible restores including solution recovery of files, folders, partitions, mailboxes/messages, databases/tables using a quick and intuitive process. In case of a complete server failure the solution will support a bare metal restore to new hardware which has a different configuration, hardware and drivers as compared to the failed server. The 15-minute incremental based backup allows restores to be done from any point in time, allowing for multiple versions of files, folders, messages/mailboxes, database/tables to be restored.

Secure Remote Storage: After imaging the servers to which it is attached, the NAS device then creates an independent 256-bit encrypted tunnel and transmits the imaged data to a secure offsite location where it resides in an encrypted, compressed format. That remote site then replicates again to an alternate data center, creating a total of three copies of the data in three geographically distinct regions. Since the data is encrypted and only the small business client has the key, no one has access at any of the remote storage facilities.

Transmitting data to a remote site is a key component of the Information Protection solution. It guarantees that, in case of physical damage to the client's network or NAS, or even regional disaster, the data is safe in uncompromised locations. Encryption is an important step in the process of transmitting data between the NAS and the remote sites, because it greatly reduces the risk of data loss incidents that plague magnetic tape and prevents man-in-the-middle attacks during

transmission. The solution employs the 256-bit Advanced Encryption Standard (AES) algorithm because it has never been broken and is currently considered the gold standard of encryption techniques and render transmitted data immune to theft.

Secure, Bandwidth Throttling Transfer: Transmission itself occurs over the small business client's Internet connection and can easily be configured to minimize bandwidth consumption. The NAS leverages Adaptive Bandwidth Throttling, which only utilizes unused bandwidth or allows setting an outbound limit. A UDP based smart transfer technology utilizes a host of innovative algorithms to speed up data transport and resume from failure therefore exercising fine control over the data imaging and transmission processes.

24x7 Completely Managed Solution: The Information Protection solution provides access to a reliable, established Network Operations Center (NOC) that monitors the NAS units and the attached servers 24/7. Failed processes generate immediate alerts that often remotely correct errors within minutes of receiving notification. In case of more serious NAS issues, SBT Partners will dispatch a qualified technical resource to conduct repairs at the client site. If any NAS units are irreparably damaged or destroyed, at an additional cost, overnight replacements will be shipped, pre-loaded with all stored data, to your location.

Affordable Cost: The price associated with the comprehensive service packaged is inclusive of the complete Information Protection solution with no hidden costs. All client costs are bundled and include the NAS, the operating methodology described in the document, file restorations, file integrity checks, secure data transmission and remote storage.

SBT Partners recognizes that the Information Protection solution described in this paper is highly technical and will require thorough discussion and planning if it is deployed. Through our engagement methodology and our association with leading managed service providers, SBT partners will serve as your planning and implementation partner. We will support our clients throughout each phase of the engagement process with straight talk and straightforward solutions.