



## **THE INTERNET DATA VAULT**

From enterprise-sized corporations, to simple home-based businesses, all companies have information that is important to their success and that needs to be protected. Data storage and protection is a necessary part of doing business today. That is why Info Exchange offers you the leading technology available in online data backup: The Internet Data Vault.

The Internet Data Vault is a “next-generation” online data backup and recovery service that is now available to all segments of the business community. Our online backup service eliminates the need for any equipment purchases or license fees. You simply pay for the space used to store your data.

The Internet Data Vault has proven to be the most reliable and simple way to protect your data. You determine the schedule and the software will automatically perform the backup. The company data is stored safely offsite (and off-shore) and is easily retrievable in the event of a loss or total disaster.

Info Exchange is committed to delivering superior backup & restore services with the highest levels of security and encryption. In addition, our secure data vaults are housed in premier collocation facilities in the United States and Canada which maintain 99.999% power and internet bandwidth availability. By eliminating your risk, Info Exchange guarantees you the best online backup service available.



<b>THE INTERNET DATA VAULT .....</b>	<b>1</b>
<b>I. Introduction.....</b>	<b>3</b>
<b>II. Service Overview .....</b>	<b>5</b>
How Our Service Works .....	5
<b>III. Internet Data Vault Features.....</b>	<b>8</b>
<b>IV. Data Restoration.....</b>	<b>9</b>
<b>V. Software Overview.....</b>	<b>10</b>
Client Software – The IV-Client .....	10
The IV-Client System Requirements.....	10
Platforms Supported.....	11
Reporting.....	11
<b>VI. Technical Overview .....</b>	<b>12</b>
Network Overview.....	12
Security.....	13
Customer Location.....	13
Data Transmission.....	13
Info Exchange Data Center .....	14
<b>VII. Summary .....</b>	<b>14</b>



## **I. Introduction**

Any document, spreadsheet, or other type of file is at risk if it exists in only one location. Hard drive malfunction and computer viruses, as well as things like fire and human error can and do happen to computer systems. When these problems occur, some or all of your data can be lost forever – weeks or months of work can disappear in an instant. The best protection from such a disaster is to have multiple versions of the data, including at least one copy stored in an alternate location. This is the basic principle behind all backup strategies.

Many businesses have a backup procedure already in place. However, they may not be aware of the alternatives to their current expensive, manual, archaic tape-based backup processes. With business operations so reliant on information technology, it is vitally important to identify alternatives that can eliminate vulnerabilities. In addition, it is important to utilize an effective data protection service that will allow you to quickly restore business operations.

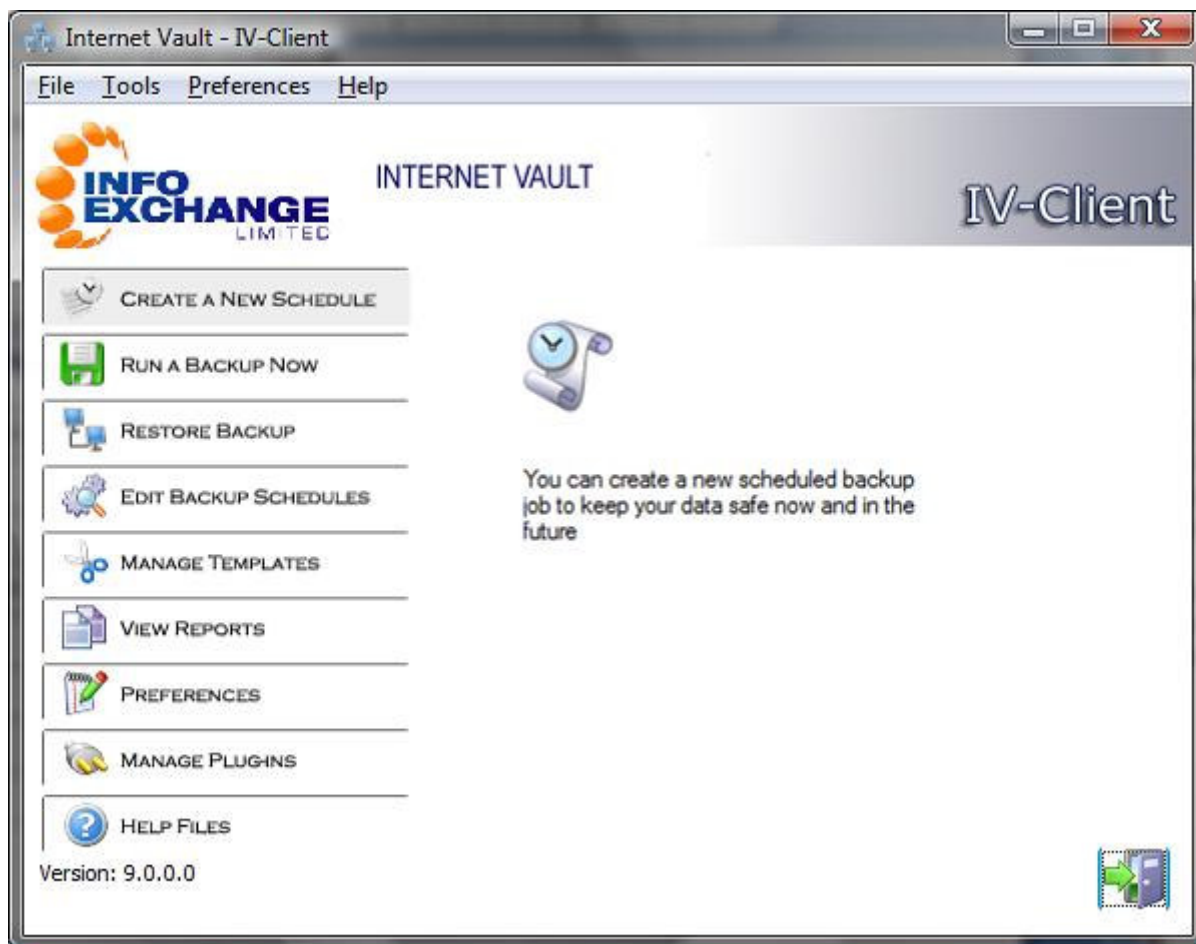
Info Exchange offers a unique online data backup solution within client/server architecture. The Info Exchange online data backup service, The Internet Data Vault, allows users to back up data to a remote, offsite location over existing internet bandwidth.



## Online Data Backup & Recovery Service

The following are some key points to consider when evaluating your company's data protection procedures:

- Data loss prevention
- Infrastructure scalability
- Comprehensive data security
- Fast data restoration
- Total Cost of Ownership
- Solution for critical application and distributed data
- Ease of use
- Restore Time Objectives (RTO)
- Simple graphical user interface.

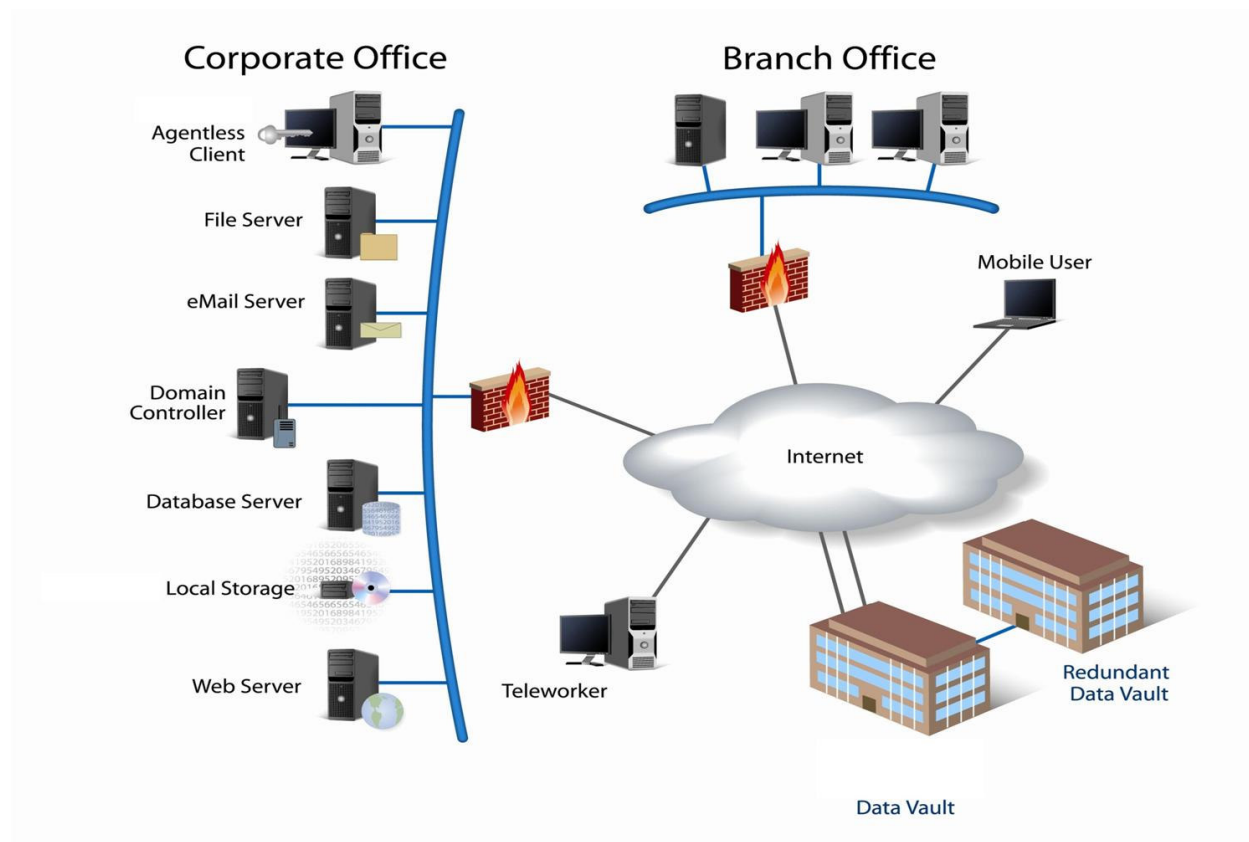




## II. Service Overview

Info Exchange's Internet Data Vault is a powerful and easy-to-use solution designed to provide data protection to all businesses. The automated service is built around a client software program, the IV-Client, which runs on a schedule, typically once a day. This program identifies new or changed data for backup, and then compresses, encrypts, and transfers the data to the Info Exchange data vault.

### *How Our Service Works*





## Online Data Backup & Recovery Service

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### **Software is installed:**

We install our agentless software solution onto **one computer** (server or desktop) on your LAN. Regardless of how many servers you have, it will only need to be loaded once. In a typical situation of one server, an installation will take an average of 30 to 40 minutes.

### **Automated schedule and retention:**

During the installation process, you will decide the start time, frequency and time limit of your automated backup. You will also establish the number of versions you want stored in your vault. Each version represents the status of the data at the point in time of the backup, capturing any changes since the last backup. Once the maximum number of versions has been reached, the next backup will force a merger of version #1 in to the main body of data, making that the new version of the Initial Backup.

### **Initial backup (Seed)**

The initial backup is the process of sending all client selected data to the data vault in its encrypted and compressed format.

### **Delta block processing:**

After completion of the initial backup, the IV-Client will then only process the actual changes to your data using our delta blocking technology. Delta blocking technology reviews the existing data in variable sized smaller blocks, searching for changes in the data since the last backup. Once found, only the unique block level changes are processed for offsite storage.

Once the software activates itself, it will scan your data for any and all changes that have been made since the last transfer. It will break the data down into blocks and each scheduled backup will scan the blocks for changes or the addition of new data.

Upon the discovery of new delta blocks the data is automatically processed. These changes are held as different point in time copies called versions. An unlimited number of versions can be retained on the data vaults.

### **Encryption and compression:**

Once new data has been found for backup processing the client software will compress and encrypt the data and transfer that information to be established as a generation. Our encryption setting is defaulted to **ON** and **cannot** be turned off. The client administrator however can choose between two different encryption types: Blowfish or AES.

### **Data transfer:**

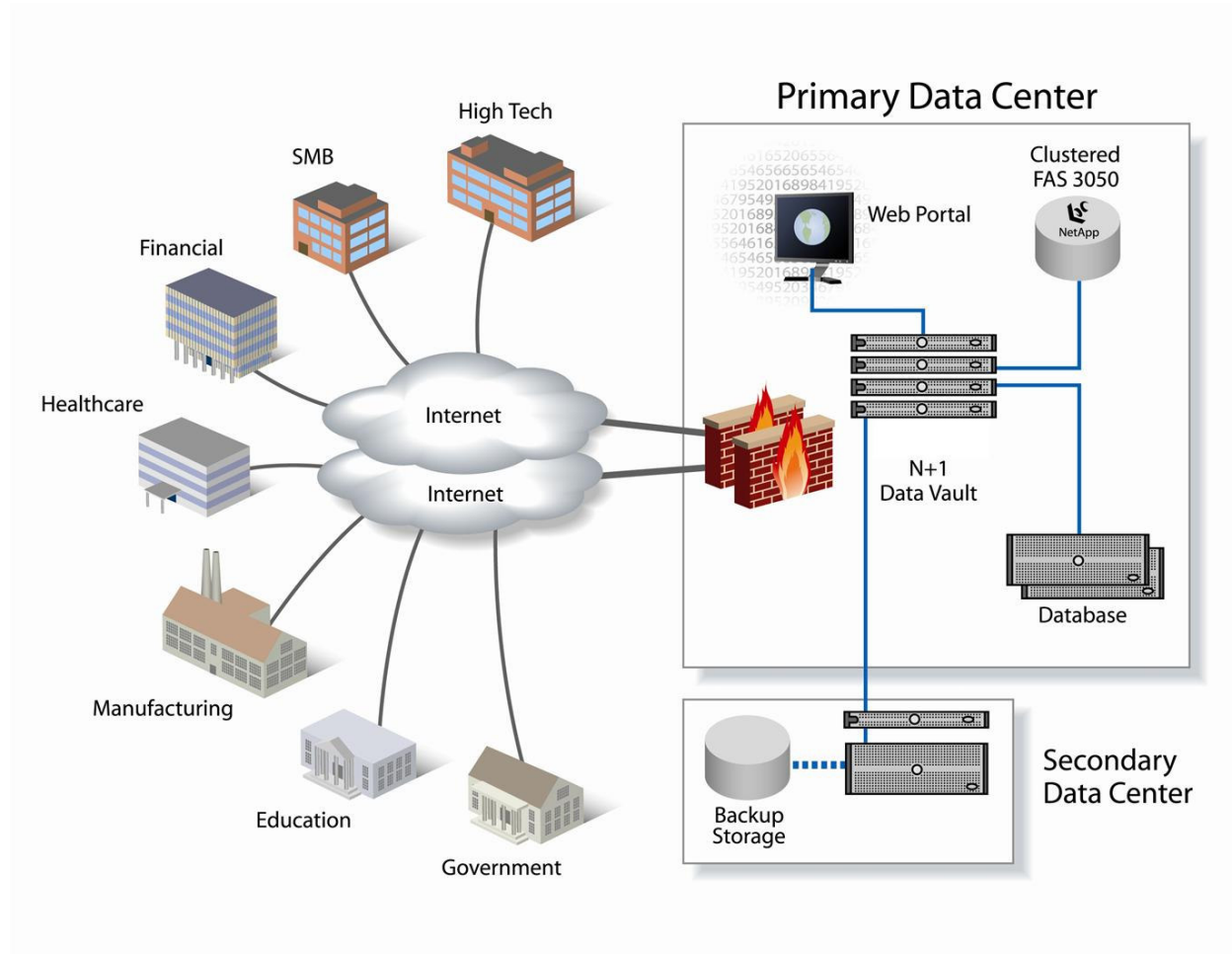
Only encrypted data is transferred over your existing Internet connection to our secure Data Vault. In order for the transfer to take place, your Internet connection must be active at the time of the scheduled backup.



# Online Data Backup & Recovery Service

## Data vault replication:

Our goal is to provide our clients with a very simple and reliable backup and recovery solution. Info Exchange guarantees that your data will be there for you if you ever need it. To ensure that our guarantee is more than just words, we duplicate your copy for an additional backup within our Network.





## III. Internet Data Vault Features

Designed for high performance backup and recovery, The Internet Data Vault protects your critical business data automatically at a secure off-shore data center. Whether you are managing a small office or many servers, The Internet Data Vault provides the same ease-of-use and efficiency.

### **Agentless**

The Internet Data Vault does not require installation of software 'agents' or 'clients' on all of the Servers/PCs targeted for backup. In addition, the IV-Client does not have to install 'plugins' or other software programs to protect databases or email servers. While some of our competitors require multiple installations per machine, we use the existing protocols (SSH) and functionality which the operating system, email and database application vendors utilize within their own programs.

### **In-file Deduplication**

In-file de-duplication is the data vault's ability to keep one copy of content that multiple users or computers may share. It is a means to eliminate data duplication and to increase efficiency. When the in-file deduplication process finds identical files, it saves one copy of the file to a central repository called the Library. Each backup set where the common information resides will have a pointer to the stored versions.

### **Open File Management**

Our open file management backup process enables the backup of almost any file utilizing the Open Document Manager (ODM) application technology. This technology allows our IV-Client application read-level access below the operating system where the application level locks reside.

### **Microsoft Exchange Mailbox Level Backup & Restore**

Email has quickly become the single most widely used feature of the Internet, and many companies consider it a critical communication tool. Lost or corrupted emails can cause significant damage, including irretrievable business loss. For customers utilizing Microsoft Exchange, the *Mailbox Level Backup & Restore* tool facilitates and enables predetermined levels of email backups and restores, ranging from an entire Exchange info store, to a single user's email box.



## **LAN-Based Local Data Vault**

Local disk backup is ideal for customers with available storage capacity on their local LAN who require rapid, seamless business continuity. The Local Data Vault enables you to save data processed by the IV-Client locally, thereby ensuring that relevant backup sets are always available for immediate restoration at LAN speed. The Local Data Vault feature is unique within the online backup industry since data saved locally does not also have to be stored offsite.

## **Laptop / Standalone PC**

Info Exchange's Internet Data Vault is flexible enough to accommodate portable or single PC users, whose requirements are limited to fast, simple, single PC backups / restores, due to its extremely small footprint and low machine resource overhead.

## **Microsoft SQL & Microsoft Exchange Backup**

Info Exchange provides the "hot" backup of a Microsoft SQL 2000/2005 database or MS Exchange 2000/2003/2007 Information Store without installing software or 'plug-ins' on the server where the application resides.

In addition, the "hot" backup functionality allows a backup of the application without having to be taken offline to get a complete backup (including transaction logs) of a chosen database or information store. To complete this process we have embedded Microsoft certified API calls into the IV-Client that allows the software to interact directly with the application data engine and request a duplicate data stream of the application data. This duplicate stream contains the necessary information for a full backup without having to stop the application or 'dump' the application data.

## **IV. Data Restoration**

If there is a loss of data, be it a single lost file or a complete loss of all data, the process to restore the information is simple and fast. The end user is instructed by the software to access the data and how to quickly place it back into the system.

The following scenarios allow for different procedures of data restoration:

Individual Files – By logging in to the IV-Client you can select a version of individual files for data restoration. In addition, the IV-Client provides the ability to search within backup sets for the location of individual files, directories or file extension.

Loss of Customer Server/PC – In the event of data loss on a non-CS Client machine you can quickly restore all lost data within a backup set to an alternate location on the network. The restore may be completed using the offsite Internet Data Vault or the Local Data Vault for faster downloads.



*Loss of Customer Location* – If the location in which the data resides becomes inaccessible Info Exchange can send the data to an alternate location. Upon request, Info Exchange can process the data on to a portable data vault (USB Storage Device) and ship the device to an alternate location. The data will be shipped within its encrypted format and the encryption key will be required for the data restore process.

## V. Software Overview

### *Client Software – The IV-Client*

This is the proprietary client software used by our service and designed to perform unattended and on-demand backups and selective restoration of a user's specified files.

The IV-Client software runs as a service on a Windows (XP Pro, SBS, 2000, 2003 or Vista) based server, or standalone PC, at your location. It serves as a gateway to our secure data vaults.

User data is tagged for backup within a Backup Set and flows through the IV-Client, where it is compressed, encrypted and sent to our Data Vaults for storage.

### *The IV-Client System Requirements*

The Info Exchange Internet Data Vault service requires minimal hardware resources within the customer's premises to operate:

#### **IV-CLIENT MACHINE - MINIMUM REQUIREMENTS**

- PIII 500 or higher
  - 512MB RAM
  - 1GB available disk space
- Connected to LAN via Ethernet
- Domain/Workgroup connectivity to all machines
- Access to Internet
- Windows 2000 SP3 / 2003 / Windows XP Pro SP1 (*or higher*) / Vista



## ***Platforms Supported***

The following table describes The Internet Data Vault functionality on various operating systems:

APPLICATION	OPERATING SYSTEM	VERSION
Windows Filesystem	XP Pro / 2000 / 2003 / Vista Server 2003/2008	NTFS/FAT
Microsoft Exchange	2000 / 2003/2008	2000 / 2003 / 2007
Microsoft SQL Server	2000 / 2003/2008	2000 / 2005

\* *Novell Filesystem – All versions via Novell Client.*

\*\* *Unix, Linux and AS400 (iSeries) – All versions via FTP, SFTP and FTPS.*

\*\*\* *Please contact Info Exchange for support of unlisted applications.*

## ***Reporting***

All reports are held locally on the IV-Client machine for fast and free access to important account information. Some sample reports include:

- **Backup Sessions:** This summary provides a detailed breakdown of the backup activities including files backed up and files that were backed up and transferred to the data vault. A summary total is provided for the selected time period at the bottom of the user's section. Grand totals are provided for the entire period at the bottom of the report:

Version number: 1.14.12.0

The number of files backed up: 92346 file(s).

The number of files transferred to the server: 72 file(s).

The total number of bytes that were transferred to the server: 21MBs 511KBs.

The total number of bytes that were backed up: 16GBs 493MBs 847KBs.

- **Restore Sessions:** The Restore Session summary is a detailed breakdown of the restore activities including data restored and also data transferred from the data vault.

Version Number: 1.14.12.0

Restore information: **The restore version number 1 completed successful. Restored 17 file(s)**

Started at: 3/6/2008, 2:11:26 PM



## Online Data Backup & Recovery Service

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Ended at: 3/6/2008, 2:24:28 PM  
Backup job path: DV-System Grid Server  
Restored to directory:

**Files restored:**

Restored: C:\DELL\ICARUS\FileDrawer\Charles\MS Money\~of3E7.tmp Size: 0Bs  
Restored: C:\DELL\ICARUS\FileDrawer\Charles\MS Money\~of413.tmp Size: 0Bs  
Restored: C:\DELL\ICARUS\FileDrawer\Charles\MS Money\My MoneyCRH Backup.mbf  
Size: 294KBs  
Restored: C:\DELL\ICARUS\FileDrawer\Charles\MS Money\My MoneyCRH  
Backup\_2008-02-12\_164229.mbf Size: 292KBs  
Restored: C:\DELL\ICARUS\FileDrawer\Charles\MS Money\My MoneyCRH  
Backup\_2008-02-15\_160441.mbf Size: 292KBs

## VI. Technical Overview

### *Network Overview*

<b>Fiber Route:</b>	Diverse Fiber Optic facility entrances
<b>Power:</b>	5000 Amp 480v AC Main Paralleling switchgear Up to 10,000 Amp DC power plant. Back up power provided by up to four – 1,000 kW diesel generators with a 48-hour fuel supply
<b>Fire Suppression:</b>	Ready conversion from wet system to a dry pipe system Pre-action system linked to smoke and heat detectors
<b>Grounding:</b>	A PVC conduit is provided from the main facility Ground
<b>HVAC:</b>	Conditioned space with temperatures maintained between 65 and 75 degrees F and relative humidity between 40 and 60%
<b>General:</b>	All space conditioning is monitored through a building automatic controls system
<b>Internet Bandwidth:</b>	2,000+ Mbps capacity
<b>Storage:</b>	Data is stored 'hot' online at all times on redundant RAID 5 disk arrays.



## ***Security***

We review all aspects of our processes to ensure the integrity and security of our client's data. We review security within three separate segments of the service.

### **Customer Location**

#### **Username and passwords**

Our software can be configured post-install with a username and password. This username and password must be entered each time to gain access to our software.

### **Data Transmission**

#### **Proprietary software format**

All client data is transmitted in the proprietary Info Exchange software format, as well as being compressed and encrypted. Without a properly authorized IV-Client installation, the data is unreadable.

### **Encryption**

To insure the security of our client's data, our software automatically encrypts every file it sends over the internet with an encryption key provided by the client during the installation process. Info Exchange utilizes US Government approved encryption algorithms to generate its public and private key pairs and supports an industry leading key size up to 256 bits.

All of the client's files are stored and remain encrypted on our secure data vaults at all times. The decryption process occurs automatically during the restore operation by our software at the client site.

All client data therefore is encrypted before it leaves the client site and not decrypted until it is back at the client site. This ensures that all backup data transferred and stored outside the client's location is always protected.

***Note: Info Exchange cannot reset encryption keys nor do we retain encryption keys for end-users.***

### **Block level changes**

After the initial seed backup Info Exchange creates a customer specified number of versions based upon block level changes. The software completes a review process during each backup set which recognizes and captures block level changes to files since the last backup. Only the changed blocks are processed offsite for retention.



Block level changes enhance security by only sending bits and pieces of data to complete a daily full backup. Complete files are not sent, only fragments of files which would be unusable without the seed data.

### **Info Exchange Data Center**

#### **Physical security**

All client data resides in its encrypted format behind the firewall. In addition, our Data Vaults reside in a secure state-of-the-art co-location facility with redundant internet bandwidth, power, and backup generators. Physical access to our system is guarded by three separate pass key entrances and each Data Vault is within a locked cabinet.

#### **Facility redundancy**

Complete redundancy for bandwidth and power are a mandatory requirement for all facilities in which our Data Vaults are located. For example: The Marlboro, Massachusetts Data Vault maintains 2 separate bandwidth providers for constant internet availability and capacity. In addition, dual conduits in to the building for both power and bandwidth are utilized. Power is support by UPS, battery backup and diesel generators and utilizes an automatic transfer switch to transfer power in the event of an emergency.

## **VII. Summary**

Info Exchange offers a comprehensive and reliable data backup service.

We provide state-of-the-art offsite data protection at an affordable price. The focus of our Internet Data Vault service is to guarantee an automated, reliable and secure backup solution that enables 24x7x365 access to your data for simple and immediate restoration.

The Internet Data Vault has proven itself to be far more reliable and efficient than the first generation of online backup technology (i.e. tape backup environments). The Internet Data Vault has been thoroughly tested and certified by leading technology infrastructure providers. By eliminating the need for upfront costs, we are now able to offer it as a cost effective solution to the small and medium sized businesses as well.

Info Exchange offers fast and reliable data recovery service.

In the case of data loss or disaster, it is imperative that you have a speedy and guaranteed method to recover your data. Whether you are restoring a single file, or your entire system, The Internet Data Vault is the best solution available.