

BENEFITS OF DITTO ONLINE BACKUP SERVICES

Today nearly every business relies on computers to perform daily activities as well as mission critical functions. Computers are essential to maintaining a competitive edge in almost every marketplace.

Even small companies realize the benefits of computers for bookkeeping, customer databases, word processing, e-mail, scheduling, research and web sites. Businesses, large and small, rely on computers to automate and simplify tasks in order to reduce the costs of running the business. This makes any loss of data a significant business risk.

Research has shown that more than 80% of the businesses suffering from catastrophic data loss have gone out of business within 12 months. The need to have a backup copy of data is vital to business continuity.

The issue of data protection is not new. It has been a concern of large corporations for years. However, most smaller businesses have not had the resources for offsite storage and data protection systems used by large corporations.

Today, with the low cost of computers and easy access to the Internet, any business can protect its vital data—reliably, automatically, and at a price that makes sense—with DITTO, the online backup services of IBS.

The following text addresses the primary concerns related to backing up data and briefly highlights the benefits of DITTO.

ENCRYPTION

When reviewing the benefits of off-site data storage using the Internet as the communications channel, the number one concern is security. Whenever data security is an issue, some form of encryption must be employed to insure that the data can only be accessed by the appropriate user. Encryption allows a user to specify an access algorithm or password methodology which is used to make the data unreadable to anyone without the correct algorithm. There are hundreds of encryption algorithms available today, but a few stand out as industry leaders.

The DES algorithm is a popular password methodology that has been used extensively by the U.S. Government as their standard encryption tool. Another popular method is the Blowfish algorithm which allows a more powerful encryption and faster performance than DES. These encryption algorithms are currently both available in DITTO.

DES

Adopted in 1977, DES is based on a conventional or secret key system in which the sender and the receiver use a single key to encrypt and decrypt data. The sender uses the key to convert the data to a scrambled format according to a complex mathematical formula, and only users with the correct key can successfully decrypt the data.

Having a key length of 64 bits, 56 are used as the key, while the remaining eight are used to check for errors. The DES algorithm will encrypt data in the same amount of space used by the original data. The user selects which one of more than 72 quadrillion transformation functions are to be used by selecting a 56-bit key. The theory behind the security of DES is that, short of trying all 72 quadrillion combinations, there is no way to "break" the algorithm.

Triple DES

To increase the security of DES, some organizations use "triple DES" - or three operations of DES with two keys - to protect data. This method, however, requires more processing power which may affect performance.

Blowfish

Blowfish was designed in 1993 as a fast, free alternative to DES. Unlike DES, however, the Blowfish algorithm has a variable key length, which can be extended from 32 bits to 448 bits. Blowfish has been well received in the marketplace because it is faster and even more secure than DES.

THE BACKUP PROCESS

With DITTO there are several places that encryption is used to ensure that the user's data is secure.

Communications

Since the information is transmitted across the Internet, the communications between the user and the server must be encrypted to prevent unauthorized people (or computers) from intercepting the data. As part of the initial connection procedure, the DITTO client software negotiates a compatible set of encryption methods before sending any user information or data to the server. This ensures that all user communications during the entire backup and restore process are completely encrypted.

Storage on Server

When the encrypted backup data has been successfully received by the server, it is immediately stored on the disk in the encrypted format and the file names are further encrypted to make it more difficult for someone to identify the user data. Data must be encrypted while stored on the server to prevent unauthorized users from accessing your data files and to protect the data in the event of the physical storage devices being obtained by an unauthorized third party.

Storage on Client

Important information such as the user's password must be stored on the client computer in order to facilitate the logon process to the DITTO backup server. This password and other important information is stored on the client system in an encrypted format that can only be read by the DITTO application.

User Authentication

User authentication is performed immediately after the encrypted connection between the client and server has been made. The client software sends the username and password to the server to be validated against the Windows NT/2000/2003 user database. This method of user authentication provides a robust and secure method for managing users. It immediately validates users against a secure database of approved users.

SUMMARY

With today's encryption technology and accessibility to the Internet, smaller businesses can enjoy the same level of data protection that once could only be afforded by large companies. Online, offsite backup of data now provides a safe haven to protect small businesses from catastrophic data loss. The appropriate use of security measures, such as encryption, helps to ensure users that their data remains private throughout the entire backup and restore process.

DITTO, the online backup service from IBS, provides the encryption options, authentication process, and reliability to secure vital data for any business. All at a price that makes sense.



Innovative Business Solutions
546 Fifth Avenue, 6th Floor
New York, NY 10036
P 212.391.9455
F 212.921.4417
E DITTO@ibsnyc.com
www.ibsnyc.com