

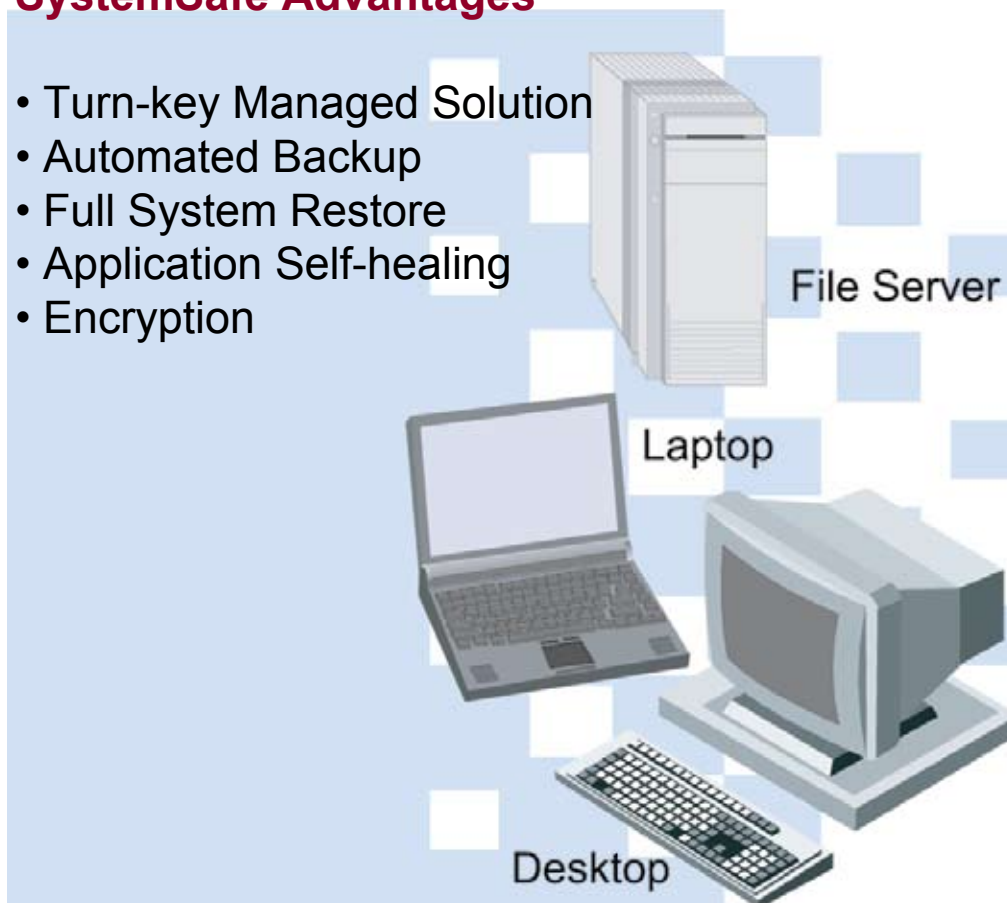
SystemSafe Online Backup

for business and corporate deployment

Simple. Reliable. Secure.

SystemSafe Advantages

- Turn-key Managed Solution
- Automated Backup
- Full System Restore
- Application Self-healing
- Encryption



NetMass Managed Backup Solutions

Powered by **SystemSafe** w/SystemRestore Technology

SystemSafe for Company-Wide Deployment

Businesses can no longer operate without their computers. Or more specifically, *the data on their computers*. But the PC is increasingly vulnerable to a host of problems: lost data, viruses, system or application failures, file corruption, hard drive crashes, the list goes on and on.

Because most data protection strategies require action by busy end users, backup policies are difficult to enforce resulting in security lapses that expose businesses to the risks and costs of data loss. That is where SystemSafe from NetMass comes in.

SystemSafe PC Data Protection from NetMass is a managed service where SystemSafe does the work for you by allowing you to enforce data protection policies automatically.

With SystemSafe data protection from NetMass, your organization can extend the reach of current data protection policies to effectively protect data stored on PCs. SystemSafe makes it possible to:

- Backup PC data automatically, consistently and securely
- Automatically encrypt sensitive files to thwart unauthorized access
- Enable users to quickly restore lost or damaged files following a disaster
- Support compliance requirements for data privacy and protection

SystemSafe enables a smooth-running IT department:

- Real cost reduction
- Reduction in IT staff tasks & help desk tasks
- Maximum user productivity and satisfaction
- Corporate data and asset protection

SystemSafe Managed Backup is a complete Internet-based system that provides real-time self-healing, backup, migration, archiving, and more for all PCs in any size organization. A single architecture ensures that all system information, applications, settings, and data are regularly captured -- silently and efficiently -- over any IP network. All is done in just a few seconds or minutes. It is available both as an Internet service using the existing NetMass secure backup data center, or as a managed on-site solution where NetMass deploys and maintains backup server systems in-house.

In real-time, any time and anywhere, any problem is corrected on-line. Configuration problems, virus damage, software applications, and lost or damaged files can be healed and/or recovered instantaneously by either users or the Help Desk staff. Users whose hard drives crash, or whose PC is lost or stolen can restore their systems with an exact copy (applications, registry settings, toolbars, data, look-and-feel). Restoration is performed with a few clicks on an easy-to-use interface. The eSupport software is widely used by many of the largest companies in the world, such as Cisco, Hewlett Packard, Compaq, GE, and Fidelity.



Automated Data Protection Policies

Key Features

SystemSafe w/SystemRestore Technology

What is it?

SystemSafe Managed Backup establishes an internet-based efficient, effective, and secure infrastructure for system repair, data backup, and rapid recovery of individual PCs.

SystemSafe Key Features

- SystemSafe Managed Backup solutions include all design, hardware, software, network facilities, co-location and management necessary to deploy your service
- SystemRestore self-healing eliminates configuration problems by giving users online ability to repair damaged system configurations
- Monitored Online Backup automatically detects anomalous behavior and notifies support staff to ensure consistent backups
- Data is centrally stored, using any Intranet or Internet connection. Ownership of corporate data is ensured.
- PC cloning covers lost or stolen systems and drive crashes. Cloning gives an exact copy of data, applications, and look-and-feel.
- File Migration for end-of-life PC upgrades is simplified by easy transfer of user data to new PCs.

SystemSafe Highlights

- Hassle-Free Backup automatically snapshots PCs whenever an Intranet or Internet network connection is detected, removing the burden of responsibility from end-users. Backups can run silently, in the background, while users connect to check email
- EZ Install enables admins to install large numbers of client agents without user intervention. EZ Install works independently or with software distribution tools from vendors such as Tivoli, CA and Microsoft
- Common File Technology increases the speed of operation and reduces network load by storing only one single copy of common files (e.g., operating system, application, and data files)
- Real-Time Recovery allows users and/or IT staff to and restore their systems and configurations online to a point in the past when they worked properly
- Automated Tape Library Management provides a hands-free, low-cost storage medium
- Block Differential file comparison technology backs up only the changed portions of each file (not the whole file) effectively reducing backup times to seconds or minutes
- CD-ROM Archiving (optional) offers data backup sets on the widely readable CD-ROM format. This enables repair and recovery to remote employees via CD-ROM. CD-ROMs may also be stored locally for historical record keeping
- Backup Restart Technology protects against network connection failure by restarting backup sessions from where they left off
- 24x7 system availability reduces IT staff workload

Benefits

Realize significant benefits by using SystemSafe Managed Backup as your managed data asset protection mechanism and corporate recovery solution.

1. Users are ensured continuous availability of their PCs with Real-Time Recovery. Help Desk calls are eliminated. Any reported problem can be fixed.
2. SystemSafe minimizes user downtime in case of loss, damage, or theft of PCs because it makes machine replacement -- with original data applications, and look-and-feel-- a snap.
3. Administrators have flexible control over what, when, and how backups are made. PC users do not have to initiate sessions, so they cannot be forgotten.
4. Users can recover the old version of any file online without interaction on the part of the IT staff.
5. Organizations can upgrade to the latest PC technologies and give users their data without requiring remote users to ship their machines to the IT department.
6. All this is available in a managed solution that ensures there will be no ramp-up time for design, deployment, or training. This alleviates a considerable burden on resource-constrained IT departments.

SystemSafe w/SystemRestore Technology

Managed Backup Components

- The SystemSafe agent is a small program that is installed on every PC to be managed. It provides automatic scheduling, encryption, and advanced data compression to ensure that the transfers happen reliably, securely, and quickly.
- The SystemSafe Server software runs at the Managed Data Center and exchanges data with the SystemSafe agent. It provides high availability via replication to redundant servers and can scale to many thousands of clients.
- AOK is a browser-based management console that allows administrators to manage user accounts and view reports.
- The configuration tool, part of the Agent Deployment Kit, permits creation of custom configurations of the SystemSafe agent.
- The Hierarchical Storage Manager (HSM) option migrates archive sets between the disk and tape library. HSM provides scalability with minimal capital investment.

How it Works

Data is sent from your company's PCs to the server, optionally implemented in a mirrored configuration for high availability (You can have your own on-site managed server(s), or you can use the NetMass Secure Data Center servers). The SystemSafe PC agent sends PC files to the server(s) automatically. Users can recover files without operator intervention, quickly and easily.

When the PC agent is launched, it performs the following sequence of operations:

1. The agent scans the hard disk to identify the files to be captured
2. Common File Technology is invoked for redundant file elimination
3. Block Differential Technology is employed to reduce the amount of data that must be transferred to and stored onto the server(s)
4. Compression, applied to the block differential data, further reduces and optimizes transmission time and storage
5. Encryption ensures that all data are secure
6. Finally, the agent connects and sends the data to the server(s) over the Internet via a LAN, WAN, or dial-up modem connection.

Fully Automatic: On Schedule or on IP Activation

The Hassle-Free feature launches the agent upon the detection of a network connection. The process runs automatically in the background, without prompting for user intervention.

Restore in 3 Mouse Clicks

The process is reversed to solve a problem, online in real time. The agent receives archived files from the server. It decrypts and decompresses the data. The recovery process is automatic and unattended, requiring no phone calls to the Help Desk.

From the main menu:

- (1) click "Restore"
- (2) click on the desired files
- (3) click "Restore Now." It couldn't be easier!



SystemSafe w/SystemRestore Technology

Automatic System Repair

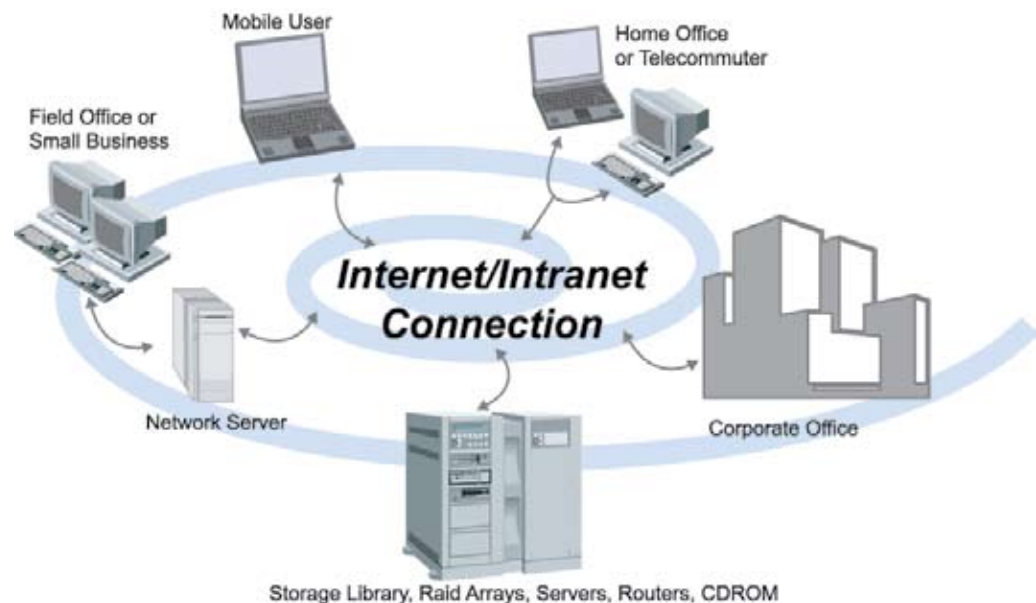
SystemRestore™ self-healing is a powerful capability that repairs damaged systems, configurations and applications quickly and easily. It corrects software problems by rolling back to the “last known good configuration,” with no need to diagnose the cause of the failure.

SystemRestore™ works by transparently comparing the current incorrect system state against an earlier correct state. It restores all files and folders to their prior state, including operating system files, applications, DLLs, .ini files, device drivers, templates, and (optional) data files. It also restores the Windows registry. This is a quick procedure because only the files that have changed must be restored.

Rock-Solid Architecture

SystemSafe Managed Backup is designed to be both scalable and manageable. To ensure users' full and complete system protection around the clock, and to protect all information even in the event of hardware failure, the server can be mirrored at physically separate sites. The agents work with either of the mirrored servers. If one goes down, the agents will automatically fail-over to the other server. Each site also contains fault-tolerant RAID arrays and redundant tape devices. SystemSafe Managed Backup delivers the most advanced, secure, dependable, and convenient eSupport solution with:

- Fully automated and transparent operation
- A solution optimized for remote dial line speeds
- State-of-the-art security
- Unmatched reliability and availability
- Completely managed Internet based or in-house solutions



NetMass Secure Data Centers

SystemSafe w/SystemRestore Technology

How does managed backup eliminate Help Desk and IT department burdens?

Help Desk

Full system recovery is an easy point-and-click operation for the user, and requires no Help Desk intervention.

PC Upgrade

With managed backup, upgrading users to new PCs is easy. With a single mouse click all user data is automatically found and transferred to the new PC. Upgrade hundreds of users at a time.

Data Restore

Hardware failure isn't the only cause of system failure or data loss. In many cases, users delete or overwrite important data accidentally. They may also need to retrieve older files that may not have been present on their PC for weeks or months. SystemSafe Managed Backup restores any version of any file automatically.

Virus Damage

All companies are hit with viruses. New viruses can infect PCs before anti-virus updates become available. With NMB, one click fixes all damage and data loss.

Automatic Operation

The Hierarchical Storage Manager (HSM) is an integral component of the NetMass system. Data transferred to the server(s) are initially stored on disk. When it becomes necessary to free disk space for subsequent data, HSM migrates some previous backups to the Tape Library. When users request files to be restored to their PCs, the HSM manages the transfer of the appropriate data from the Tape Library to the requesting PC. All without any IT intervention.

Deployment Kit

Our client deployment kit, with its configuration tool, is designed to make it easy to:

- Custom-configure options that enforce your corporate data protection policy
- Allocate accounts to PCs for which eSupport is to be provided
- Automatically generate data encryption keys for each account and store the keys in escrow in case they are needed for emergency data access
- Configure each PC or group of PCs with a different profile and setting

SystemSafe w/SystemRestore Technology

Does it work for remote users?

Using traditional technology, a modem is slow and impractical. That's why NetMass introduced innovative technologies to make it practical for remote PCs to obtain the same level of protection available to users of LAN-connected PCs. The system incrementally backs-up 100MB files (i.e., email), in 45 seconds over a 28.8 kbps modem. With traditional solutions, the same file backup could take five hours.

Common File Technology Optimizes Transmission

Using Common File technology, the first PC on the network to send a file will transmit it to the server, but every other PC that has the same file need not transmit it at all. Common File looks at file size and contents to determine whether or not files are the "same," thereby ensuring complete protection even in cases where files have the same name, but different content.

The **Full System** feature, backs up application and operating system files in addition to data files. Most files are common across machines and the Common File optimizations are powerful.

Block Differential Technology: Backup only pieces of files actually changed

When a file changes, there is often no need to capture the entire file. Gartner Group recommends block-level incremental backups, in which only those blocks of a file that have changed are captured. NetMass incorporates and surpasses this recommendation, with its Block Differential Technology, which sends only those portions of files that have changed. Block Differential uses sophisticated mathematical analysis to identify and capture changed portions of files without the need to store previously backed-up files on the disk. Block Differential analysis is performed in a fraction of the time and eliminates all wasted storage space.

Automated, Backup Restarts

For remote users, it is common for dial-up networking sessions to be unstable. Real-world applications experience network failure as an ordinary circumstance. For this reason, SystemSafe Managed Backup is designed to automatically reconnect and resume transmission, without restarting the session and without human intervention. The application picks up precisely where it left off – even in mid-file backup.

Monitored Online Backup

NetMass has invested considerably to provide custom solutions that ensure the integrity of the backup operation. If anomalies are detected, the Monitored Online Backup service (a NetMass exclusive) automatically notifies both the NetMass Data Center support staff and the customer. This helps ensure routine backups operate correctly.



SystemSafe w/SystemRestore Technology

How does SystemSafe secure data?

SystemSafe provides security that far exceeds the capability of removable-storage media. SystemSafe is far better than paper-based archives of company data.

Information must be protected in transit.

All data is encrypted before it leaves the PC. Encryption is performed using 128-bit AES technology.

Information must be protected on the server(s).

All data are stored encrypted on the server(s), so even if the server is accessed by unauthorized personnel, no intelligible data can be retrieved.

Information must be protected against encryption-key guessing.

Encryption is only as good as the encryption key that has been selected. If users choose an easily guessed encryption key, data are less secure. Administration tools allow you to assign a randomly generated unique encryption key for each PC. Users do not need to type or remember these encryption keys.

Information must be protected against any unauthorized access to a PC.

Whether a laptop is stolen or a desktop PC is left unattended, you don't want anyone with physical access to a PC to be able to restore data. You can require that all your users select a private account password (distinct from the encryption key) that must be entered to restore data. You also can shut down accounts and change passwords.

NetMass Data Centers

WORLD-CLASS DATA CENTERS. NetMass uses the leading global provider of network-neutral data centers and internet exchange services for enterprises and network services providers. With direct access to more than 100 networks, including all the top global networks, Equinix's IBX data centers and services surpass the limitations of typical data centers and network and internet operations through direct interconnection to the largest aggregation of networks for unmatched service diversity, flexibility and reliability.

SECURITY. Every data center is staffed with 24-hour security officers to augment the physical security features. Visitors are screened upon entry to verify their identity and escorted to their destinations by security staff. A fully monitored and secure welcome lobby area is separate.

- All doors, including cages, are secured with biometric hand geometry readers.
- Exteriors are fully anonymous and have no windows.
- CCTV digital camera coverage of entire center, including cages, with archival system.
- All exterior walls are bullet resistant.
- Entire perimeter bounded by concrete bollards/planters.
- A silent alarm and automatic notification protect all exterior entrances.
- CCTV integrated with access control and alarm system.
- Motion-detection for lighting and CCTV coverage.

UNSTOPPABLE POWER. With Uninterruptible Power Supply (UPS) systems and emergency backup diesel generators, the electrical distribution system is designed to power your systems, even during a total power out. UPS systems prevent power spikes, surges and brownouts while redundant backup diesel generators provide additional fuel to keep the data center powered up in the event that public utility fails. The entire electrical system has built-in redundancy to guarantee continuous operation. The overall system is N+1 redundant, including each component within the parallel electrical systems.

SystemSafe w/SystemRestore Technology

Management Portal: eSupport Central

The eSupport Management Portal provides rich management and reporting functionality to corporate IT administrators and Help Desks. It is Web-based and fully secure to ensure that only users with authorization can access account information. The Management Portal contains three components. Add and change users, perform billing, secure corporate data, from any browser. View and report details of any account usage and history.

Account Manager

Account Manager provides tools for your Help Desk, such as account activation and suspension, client PC information and password management, and account information to help with troubleshooting.

Organization Manager

Account Manager provides tools for your Help Desk, such as account activation and suspension, client PC information and password management, and account information to help with troubleshooting.

Knowledge Base

Account Manager provides tools for your Help Desk, such as account activation and suspension, client PC information and password management, and account information to help with troubleshooting.

Account	Account Name	Total File Size (MB)	Delta Block™ MB Backed Up	Compressed MB Backed Up	# of Files Backed Up
0000-0000	Admin, Joe	93.83	1.25	1.26	1,033.00
0000-0000	Admin, Mary	24	46	46	4.00
0000-0000	Admin, J. J. Brown	93.83	1.25	1.26	1,033.00

View and report detail of any account usage and history

Add and change users and secure corporate data, from any browser

SystemSafe Managed Backup by NetMass offers a best-practices data protection solution that installs easily and cleanly. And it works automatically.

Ensuring Data Is Available When It's Needed

- You set user policies. Administrative tools allow you to custom-configure operational parameters. You'll choose, for example, frequency of backup and designate which kinds of files should be captured. The policy you choose is automatically enforced. Features allow you to specify different policies for different user classes
- Operation is automatic. Company PCs are always protected
- Tools let you store encryption keys in escrow and reset passwords, so you'll always be able to access the company's data

Although scheduled data backups and disaster recovery plans are routine IT functions, they largely ignore important end-user data files residing on distributed PCs and laptops. Traditional backup technology does not work well for desktops and laptops because of high bandwidth and storage requirements. SystemSafe addresses these issues through bandwidth and storage reduction technologies and extends the advantages of desktop management to end users whose competency and productivity is not only linked to stored enterprise data, but also to the files and data stored on their PCs.

Contact Us Today

NetMass Incorporated was founded with one simple goal in mind: enable easy, cost-effective data protection with the efficiencies of the Internet. SystemSafe™ Managed Backup with its SystemRestore™ technology provides an inexpensive, reliable, secure, and easy-to-use, Internet-based backup and restoration service.

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