

Protecting the Edge



Integrating best-in-class Continuous Data Protection (CDP) software to provide a simple, automatic, and complete data backup solution for the entire enterprise, including laptop and remote users, and quicker recovery times.

The Problem

Ninety-three percent of corporate data currently resides on “the edge”—desktop and laptop computers that are not part of traditional backup routines. As corporate data and storage requirements grow at an exponential rate, traditional daily or weekly backup systems no longer offer adequate protection or acceptable restoration times.

The Solution

Rover Echo™ offers a complete edge-to-edge backup solution for the entire enterprise, including remote users, with a clear path for the continued protection, integrity, and archiving growth requirements of corporate data. Utilizing proven IBM Tivoli Continuous Data Protection (CDP) for Files software, Rover Echo safeguards digital assets automatically and in real time.



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Executive Summary

The more data businesses store on the edge—laptop and desktop computers not part of routine backup practices—the greater the risk.

A successful data protection strategy requires automatic, real-time backup saved to multiple targets that all work together, as well as effortless restoration.

Rover Technology Fusions (RTF) introduces Rover Echo™, a flexible, scalable, edge-to-edge backup solution for the entire enterprise including mobile users. Incorporating IBM Tivoli Continuous Data Protection (CDP) for Files software inside, Rover Echo delivers real-time and automatic data protection and provides a clear path for continued growth.

IBM's award-winning CDP software captures byte-level changes continuously and stores them to one or more target devices. In the event of an interruption, a system failure, or even a catastrophic disaster, a company can recover its data in seconds. Automatically archived by date and time, files are retrievable from the local hard drive, a USB Flash card, one or more target servers, or RTF's secure offsite data storage center.

The CDP software operates transparently in the background, so end users don't need training and aren't interrupted during the backup process. CDP replicates only the bytes that change, so it minimizes required bandwidth.

Rover Echo delivers easy, affordable peace of mind.

"The greatest weakness in our system is notebooks and PDAs in the field -- it's not uncommon for someone's system to be stolen or broken without being backed up."

- Chuck Broes,
CEO of VitalTrust
Business
Development
Corp.



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Business Challenge: The Growing Problem of Unprotected Data

The single most important factor for driving today's enterprise forward is the ability to access, manage, and protect large amounts of electronic information. Considering that the cost for recreating just 1 MB of data is estimated at \$2000 to \$8000, daily or weekly backup schedules are no longer feasible. Like virus and firewall protection, digital asset backup protection is a 24/7 mandate.

Information lost due to file corruption, accidental deletion, unwanted alterations, system loss, theft, viruses, and natural disasters can lead to delays, diverted resources, lowered productivity, decreased customer confidence, and ultimately lost revenue.

In spite of these dangers, 93% of corporate data is stored on desktops, laptops, and mobile workstations, which are rarely backed up or not backed up at all. Almost half of small to medium-size businesses have no formal data protection procedure, and while every computer runs anti-virus and firewall software, less than 1% run routine backup.

The History of Backup Solutions

Ten years ago, workstations seldom left the office and were tethered to file servers that stored important data. From there, files were backed up on tape.



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Traditional backup routines typically run once a day, usually at night, and the larger the volume of data, the longer the backup process. They do not protect the data being generated throughout the workday, are dependent on network availability, and require that computers be left running overnight. Improper tape archival can result in slow recovery times at best and lost data at worst.

Today, laptops account for more than 65% of all the PCs sold in stores, and the falling cost of hard drives combined with increased storage capacity has resulted in more data being stored on the edge unprotected. For a mobile workforce, backing up files on laptop hard drives can prove complicated and time-consuming, and it does not allow for backup to a company's internal servers or to an offsite data vault.

A truly comprehensive, end-to-end backup solution must be able to reach the edge (remote-user workstations and laptops) and provide the entire enterprise with constant, automatic, real-time backup that both reduces the window of data loss to practically zero and allows for multiple recovery points.

The Time-Value-of-Data

Traditional backup and recovery solutions miss the most valuable data—the files being worked on right now. The value of any piece of data degrades rapidly over time, and the highest value of most data is within minutes or hours of its first creation or most recent update. Only continuous backup protects these assets.



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The Importance of Continuous Data Protection

“Complex issues like backup windows, protection of open files and databases, and heavy impact to production systems during the backup operation have all arisen from the outdated scheduled backup paradigm. Continuous Data Protection (CDP) represents a major breakthrough in data protection.

CDP shifts the focus from backup to recovery. When disaster strikes, CDP-based solutions offer rapid recovery of any historical version of the desired data.

Traditional backup solutions were designed to create, manage, and store single-point-in-time copies of data. CDP, on the other hand, captures and protects all data changes, not just at select, pre-determined points. This provides access to data at any point-in-time, reducing data loss and eliminating costly downtime trying to restore files or recreating files.”

--CDP Buyer's Guide, Storage Network Industry Association,
June 2005

Recent Statistics

- 2 out of 3 computers are laptops.
- 93% of corporate data lives unprotected on the edge.
- 2,000 laptops are stolen or lost every day.
- 1 in 10 laptops will eventually be stolen according to the FBI.
- A hard drive crashes every 15 seconds.
- Disk failures account for 50% of laptop failures.
- 15% of laptops will fail in their first year.
- 25% of laptops will fail by their fourth year.



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The Solution: Rover Echo™ with CDP software

Rover Echo—available in both client software and server software versions—offers an automatic CDP backup solution that protects a business 24/7 all the way to the edge, including mobile laptop users.

Designed with IBM Tivoli Continuous Data Protection (CDP) for Files software inside, Echo installs and configures in minutes, operates transparently in the background, and provides versioning of files for a choice of point-in-time recovery options. Important documents, financials, and email can be backed up securely to multiple targets, updated automatically, and restored quickly, from the latest version to any historical version.

Rover Echo offers multiple targets including USB Flash cards, larger “thumb drives,” portable hard drives, file servers, SANs, the Rover Depot™ specialized backup server, and offsite customer or RTF facilities. These devices work together to protect both internal desktop computers and mobile users.

Echo Card™ / Echo Drive™

The Echo Card is a credit card-size USB Flash card available in 2 GB, 4GB, or 8 GB versions.

The Echo Drive comes in two versions: a travel-size hard drive with a capacity up to 160 GB or a removable hard drive with 250 GB of storage space.

Rover Echo provides multiple levels of protection for files:

- First level: separate file location on the hard drive
- Second level: Rover Echo device or file server
- Third level: storage offsite at RTF secure data center



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Desktop, laptop, and mobile users can use the Echo Card or Echo Drive to back up their documents, financial files, and emails. For larger files such as high-resolution images and music libraries, the Echo Drive is ideal.

Rover Echo automatically copies saved files to a computer's hard drive (the first target) and then to the Echo Card or Echo Drive (the second target). If the Echo Card or Echo Drive is not attached, Rover Echo will pool all changed files into a queue and transfer the files once the device is reconnected. For added protection, file transfer to the Echo Card and Echo Drive can be encrypted.

Echo
Mobile

Echo Mobile allows Windows Mobile 5 device users to back up and quickly recover valuable contact lists if the device is lost, stolen, or damaged.

Example 1



Example 2



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Echo Depot™

Echo Depot is a 250 GB onsite company server.

Rover Echo automatically copies saved files to a computer's hard drive (the first target) and then to the Echo Depot (the second target), housed onsite at a company's office. If individual PC/laptop computers are not connected to the office network, Rover Echo pools the files locally and then transfers the data when a network connection is reestablished. Users can quickly restore files from their local hard drives or from the Echo Depot by navigating a standard Windows directory tree structure.

For added security, Echo Depot can automatically transfer files offsite to a RTF data facility throughout the day or at predetermined intervals.

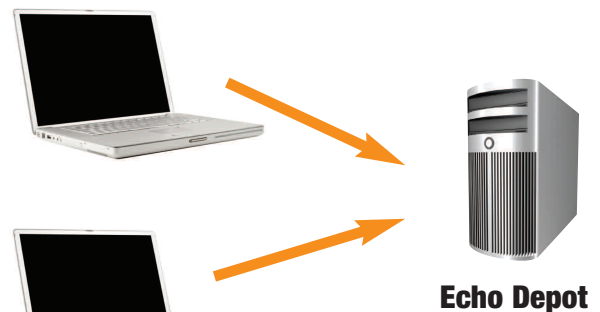
Companies can issue Echo Cards or Echo Drives to remote users and then have that same data transfer to the Echo Depot every time the user connects to the network. Data is protected until companies can create copies onsite.

Files can be encrypted and compressed for transfer from the Echo Depot to an RTF or company data center. The Echo Depot comes standard with a 250 GB hard drive, but higher disc capacity servers are available.

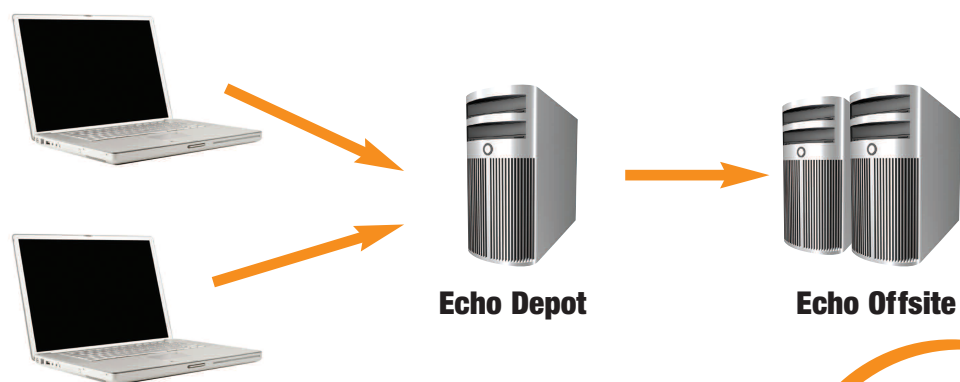
echo
DEPOT™



Example 1



Example 2



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Echo Offsite™

All Rover Echo devices can transfer files offsite to a secure RTF data facility if customers do not have access to their own remote data center. This option provides another layer of protection and offers the additional benefit of remote access to files.

Individual computers or even internal file servers that capture data from many workstations can back up files to the secure Echo Offsite facility. This option provides the ultimate in secure data storage, as well as remote access to files through a mapped drive.

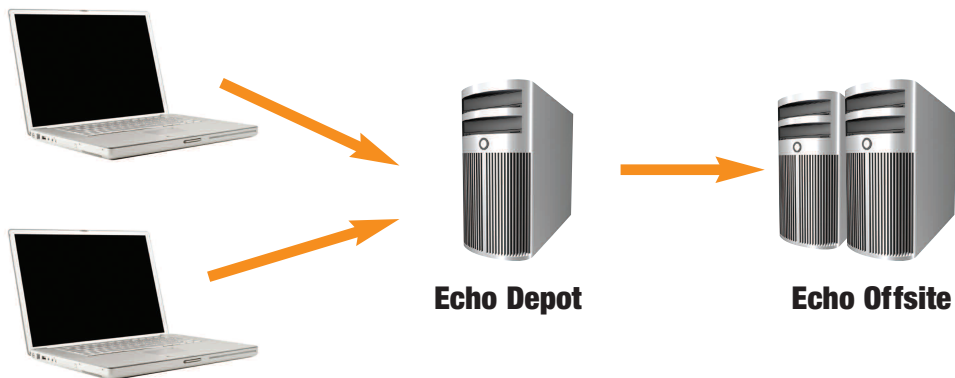
The RTF staff monitors and manages backups and sends customers regular updates. Users can restore files from the offsite facility through a secure web connection.



Example 1



Example 2

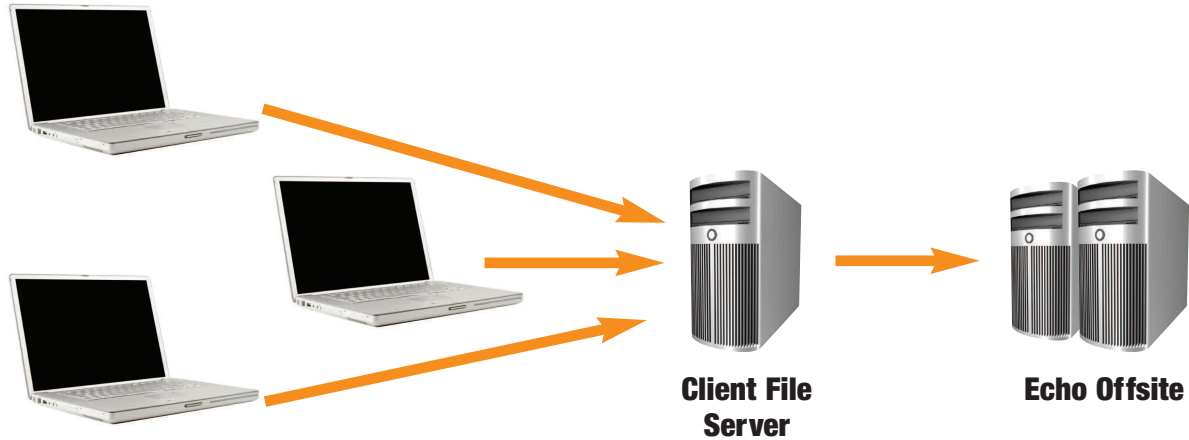


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Example 3

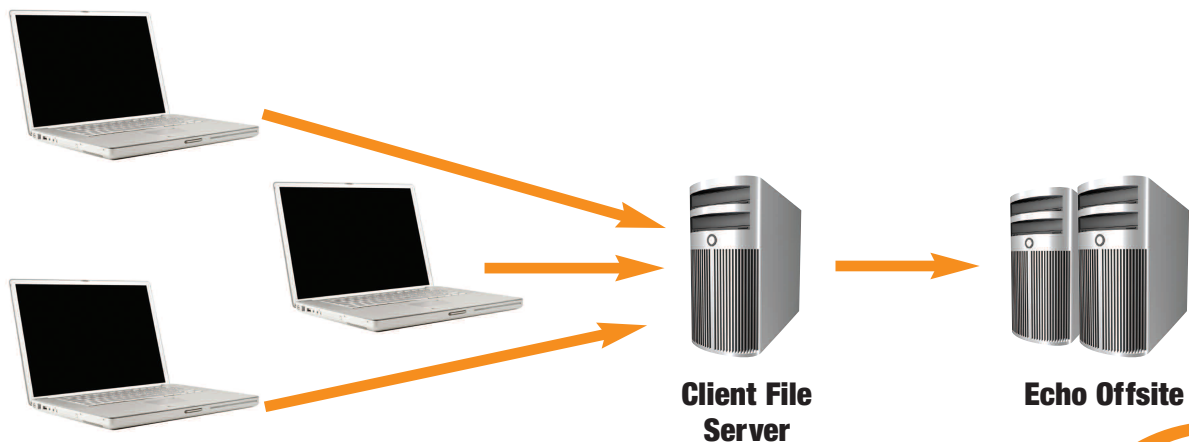


Echo Enterprise™

Echo Enterprise is intended for large companies with desktop users, laptop users, and corporate servers. An ideal solution for companies that already have a backup routine but need to cover unprotected critical data that resides on “the edge.”

Echo Enterprise installs on each desktop and laptop computer, then automatically copies files to the corporate file or backup server. Echo Enterprise can be configured for additional backup to a second internal server.

Example 1



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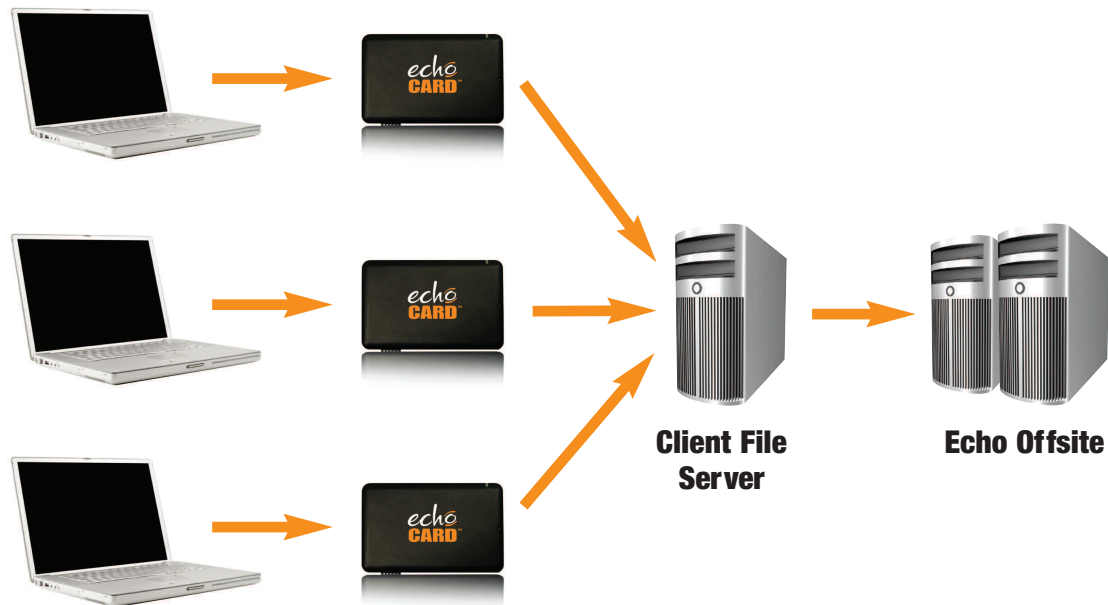


Echo Central™

Available exclusively through Echo Enterprise, Echo Central server software includes an administrative console that allows network administrators to control configuration settings for individual users or predetermined groups of users. Settings include enforcing backups, locking down configurations, automating installations, updating software versions, and monitoring all Rover Echo activity through a simple reporting module.

Echo Central includes a single Echo Enterprise server license. Echo Central can be easily configured to include any combination of protection options: continuous or scheduled, local or remote.

Example 1

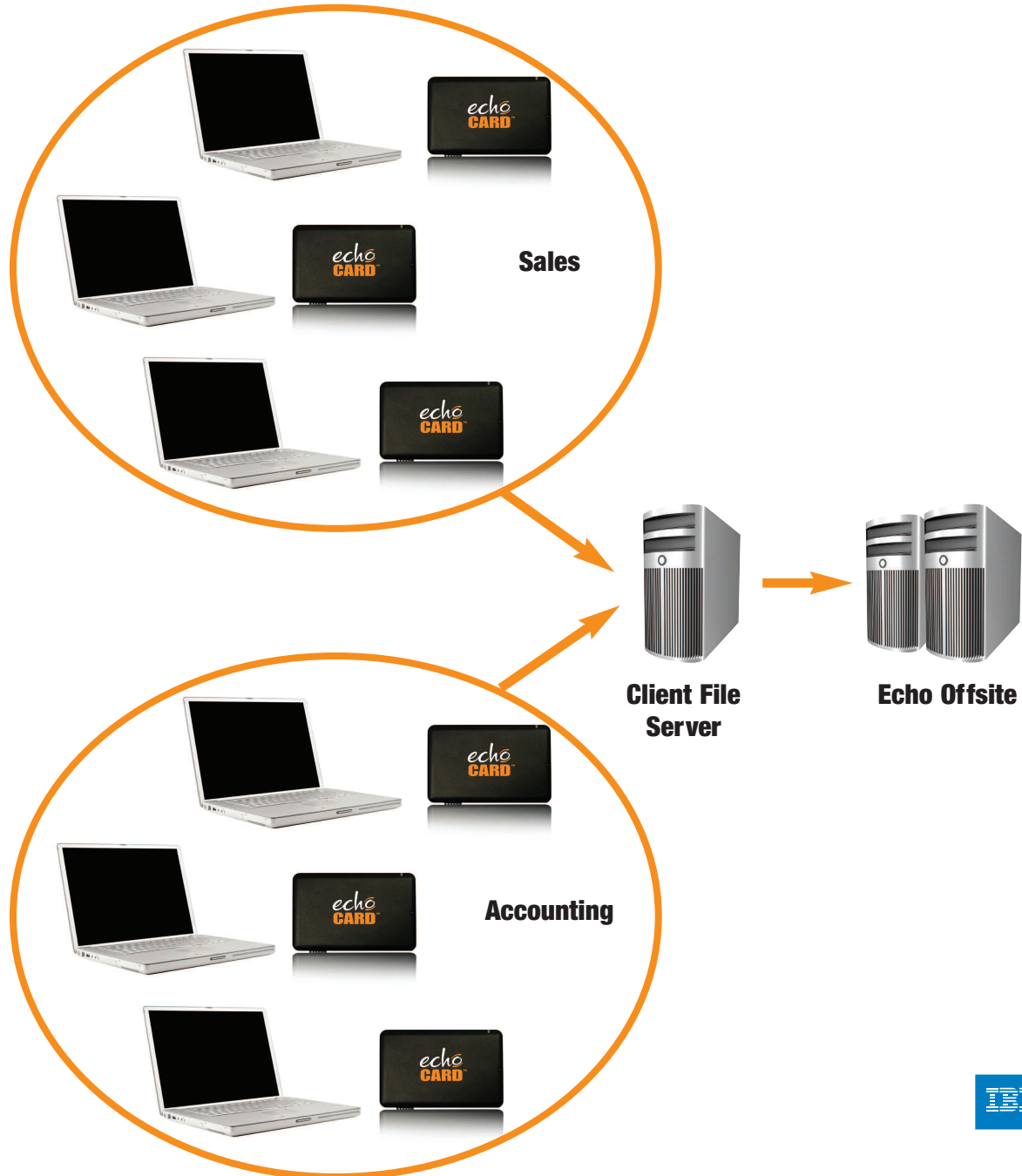


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Example 2



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How Rover Echo™ Works

CDP protects critical files

Every time a file is saved, Rover Echo automatically detects the change. If the file is designated as a high-priority continuous type, an immediate versioned copy is made into a separate directory tree that mirrors its original location on the local computer's hard drive.

By default, Rover Echo stores five versions of each file. Echo Central™ enterprise users have the ability to configure the system to store additional copies. The oldest versions are removed to make room for newer ones.

The same file also automatically copies to a secondary remote target area, such as a file server or external Rover Echo device. If the target device or file server is not available, Echo will save the changes made to critical files locally, then transfer the latest version of the data once the network connection restores.

Rover Echo can protect your non-critical files too

Rover Echo can be configured to back up all files (critical and non-critical) on a schedule. All changes to non-critical files are queued for transmission to the backup target device on a selected interval.

Rover Echo then copies all the changed files to the remote file server, device, and/or offsite facility. If the file server is not available, Echo will wait for a network connection. Once detected, Echo automatically sends the most current version of the files to the server.

Rover Echo

- Automatically backs up files from the network, workstations, and remote computers to central locations internally and offsite.
- Maintains copies of files in a local cache so that employees can restore documents quickly without IT support.
- Retains multiple versions of files allowing employees to recall documents from a specific point-in-time.
- Minimizes network transfers by backing up only changed files.



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Fast, secure backup for the backup

For a third level of protection, Rover Echo offers the option of transferring compressed, encrypted file copies offsite to a secure RTF data facility.

Benefits of Rover Echo™

Simple, Easy-to-Use, Scalable

Rover Echo provides an entire enterprise and its workforce with transparent, continuous backup protection. Rover Echo is easily scalable for single users, a small office or department, or across a huge enterprise. The IBM Tivoli CDP for Files software can be installed by an end-user in a few minutes as a single back-end solution. And for the enterprise, Rover Central, a simplified management / central administration interface, allows the end-user to restore files quickly and easily without a network connection or IT support.

Transparency

Rover Echo runs quietly in the background like anti-virus software. It performs invisible, real-time file replication with no user intervention required.

Real-time Protection

Rover Echo continuously backs up data, and the moment a critical file changes, it stores the version for specific recovery.



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Flexibility

Rover Echo supports backup targets including: disk, USB, server, and offsite data vaulting, providing multiple locations for maximum protection.

Locality

With Rover Echo, one of the target locations is the computer itself. A local on-machine cache is the fastest and most available recovery possible, and it can restore files without access to a secondary backup target or network.

Tenacity

Backup is not dependent on network or target availability. Rover Echo tolerates intermittent network connections, waits, and resumes the transfer of files whenever possible, so that backups never fail.

Comprehensive and Efficient Email Backup Protection

Email pst/nsf files are notoriously large and constantly changing. High volume backups slow down network operations and can even cause network interruptions.

Rover Echo only moves the changed bytes, a statistically small percentage of the overall operation, which preserves bandwidth.



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Target Market

Rover Echo™ with IBM Tivoli Continuous Data Protection (CDP) for Files software easily scales from an individual or small work group up to an enterprise of 100,000 end-users.

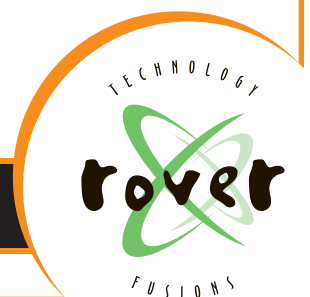
Rover Echo is especially effective for systems with remote and mobile users. It has the unique ability to cache versions locally while working off-network and automatically transfer the data to a file server or device when reconnected.

Rover Echo is also well suited for remote office servers, as it versions and protects critical files locally, then migrates the data to corporate servers—even while tolerating network spottiness.



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Summary

Critical information is no longer consolidated on just a few key servers. Incorporating proven IBM Tivoli Continuous Data Protection (CDP) for Files software inside, Rover Echo™ delivers automatic real-time data backup that protects a business all the way to its remote and mobile edge. An easily scalable end-to-end backup solution for the entire enterprise with a clear migration path for the continued growth of corporate data, Rover Echo with CDP software:

- Offers a single, end-point architecture, with no need for additional components, and requires only installation on the computer with files to protect.
- Maintains files in their native format so they are directly accessible and available through any application.
- Creates up to three separate copies of files: on the local disk, for protection even when not connected to a network; on a network file system for remote protection; and offsite at Rover's secure data storage center.
- Operates in the background, as transparent to the end-user as anti-virus software.
- Works inside and outside the building, and whenever you work, not at some fixed time interval.

Providing effective continuous data protection, Rover Echo ensures business continuity, employee productivity, and the integrity of information assets.

Rover Echo

- Accommodates Any Size Business
- Features Open Architecture
- Requires No Additional Components or IT Intervention
- Optimizes Bandwidth
- Easily Supplements Traditional Backup Solutions
- Reduces or Eliminates the Backup Window



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About Rover Technology Fusions

Rover Technology Fusions (RTF) is a full-service technology solutions provider offering a robust portfolio of products and services to both small and large businesses. RTF develops and integrates affordable enterprise technologies that connect business partners and protect their valuable business data. With a strong focus on workflow processes, security, and confidentiality of customer data, RTF web-based solutions deliver “on the edge” communication with quick to implement backup and remote access systems. RTF also provides web site design and development services, web hosting, co-location, and disaster recovery services, and it operates a state-of-the-art data center.

Web Sites:

www.RoverTechFusions.com

www.RoverEcho.com

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