

The Urgency of Digital Archiving for Broker-Dealers

Managing SEC e-Mail Compliance to Minimize Costs and Risks



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"...executives across the board are realizing that properly storing messages has become serious business as courts, government officials and industry regulators increasingly order expensive searches and issue stiff fines for lost or poorly stored e-mails."
– ComputerWorld. Jan.27, 2003.

Multi-million dollar fines levied on broker-dealer firms for poor e-mail retention. Corporate e-mails volumes continue to grow at an exponential rate. A better funded, more aggressive SEC. All of these add up to make IT and compliance officers wonder if they should be considering another line of work.

"The regulations are coming out, but they are not in tune with IT reality," says Gene Piatigorski, storage manager at New York Life Insurance. "At this point, I feel like going and opening a dry cleaners."
– Byte and Switch. Feb. 19 2003.

A Strengthened SEC Turning Up the Heat

With a new chairman, a dramatically increased budget and continued public pressure to do more to protect investors, the SEC is not about to become a kinder, gentler agency.

"(The new SEC Chairman) is under intense pressure from investors to clean-up Wall Street."

"He (William Donaldson) can't afford to look like Wall Streets's lap dog."

"Mr. Donaldson comes bearing gifts: A substantial budget increase for the cash-strapped agency..."

– Wall Street Journal, February 18, 2003.

To make matters worse, you should expect SEC inspection of e-mail to be high on their 2003 agenda.

"e-Mail Records could become a priority during SEC exams..."

"Lori Richards, director of the Securities and Exchange Commission's office of compliance inspections and examinations, suggested recently that inspection of e-mail records at firms under the SEC Books and Records rules is likely to become a priority in 2003. This follows recent enforcement actions involving Deutsche Bank, Goldman Sachs, Morgan Stanley, Salomon Smith Barney and US Bancorp Piper Jaffray for failure to archive e-mail in accordance with SEC regulations. Current inspections look at such records on a random basis but it seems likely that a review may become mandatory in light of high-profile actions related to analyst conflicts where e-mail records were pivotal."
– Complinet. Dec 31 2002.

Investigations are now a daily routine

"In the past we had to do 2-3 investigations per month. Now we are looking at one per day, 20 – 30 times the volume of a year ago." The compliance officer of a major broker-dealer firm.

The volume and intensity level of SEC investigations will only increase in 2003. If your organization has not experienced this yet, the odds are very good that it will soon. Have you done everything you can to minimize the risks and costs of these investigations? If not, do you have malpractice insurance?

"The regulations – some new and others reinterpretations of old statutes – are so mind-boggling many storage administrators are beginning to wonder whether some kind of malpractice insurance might be the order of the day."

– Byte and Switch. Feb. 19 2003.

Here, in plain English are the key provisions of the SEC rule that addresses e-mail retention:

The Securities and Exchange Commission's 1993 amendment of Rule 17a-4 sets forth specific, detailed parameters for broker-dealers' usage, retention, and destruction of electronic mail. If you don't fully understand these parameters you are not alone.

■ **VIRTUALLY ALL ELECTRONIC MAIL COVERED**

SEC 17a-4 covers all e-mail messages that relate to client communication, trade confirmations, statements, and internal e-mail dealing with client matters. Many broker-dealers have been slow to realize that the scope of e-mail archiving includes both internal and external e-mail.

■ **STORAGE MEDIA MUST BE NON-REWRITABLE, NON-ERASABLE**

To preserve and help verify the integrity of electronic records, broker-dealers must use non-rewritable, non-erasable storage media. Typically, this implies write once, read many (WORM) storage that prevents the alteration or deletion of electronic records after they have been written to the media.

■ **ALL ELECTRONIC RECORDS MUST BE DUPLICATED**

Broker-dealers must maintain a duplicate copy — on an acceptable medium and in a separate location — of their electronic records. Duplicates needn't be made until logically convenient, as long as another copy of the electronic record is available in a format sanctioned by the Rule.

■ **ORIGINAL AND DUPLICATE RECORDS MUST BE INDEXED**

Broker-dealers must organize and index all original and duplicate records written to sanctioned electronic storage media. This index is a crucial requirement and inherent to their ability to easily search large volumes of e-mail in order to provide access. Without index search capabilities the ability to find required records is incredibly daunting and cost prohibitive.

■ **ARCHIVING ENVIRONMENT MUST BE AUDITABLE**

The Rule calls for broker-dealers to implement a complete audit system that substantiates the integrity of the archival environment. This system must document any changes made to records and must keep a log of records archived. The results of this audit must be saved and kept for the life of the record. Additionally, the audit process must verify the "quality and accuracy of the storage recording process." The practical way to achieve this is to have a running audit log that documents all actions taken against archived records.

■ **MUST PROVIDE TIMELY ACCESS TO RECORDS**

Much of the spirit behind Rule 17a-4 concentrates on ensuring timely access – interpreted to mean within 24 hours — to a broker-dealer's records. Specifically, broker-dealers must:

- Download indexes and records to WORM upon request from the SEC or the broker-dealer's SRO

- Have facilities for the SEC/SRO to view records (including equipment)
- Ensure all indexes are ready for review
- Produce any facsimile enlargement required by the SEC/SRO
- Produce upon request all information needed to access records and indexes, or place in escrow a copy of the physical and logical file format of electronic storage media, the field format of all records written, and the source code

■ **BROKER-DEALERS MUST CONTRACT WITH A DESIGNATED THIRD PARTY**
 Rule 17a-4 requires that every broker-dealer utilizing electronic storage media have at least one independent and neutral Designated Third Party with access to and the ability to, download their records. The Designated Third Party must furnish the documents to the SEC, its designees, or representatives on demand.

IS Your Company
 SEC Compliant?
 (Maybe You Should
 Double-Check)

Take 2 minutes now, save time and money later...
 Can your organization say yes to the following questions?

1) Are your e-mail records backed-up to tape or optical platters without any additional indexing?

If you are investigated it will probably be very difficult to determine on which storage unit specific records reside. This makes complying with regulatory requests and litigation discovery a costly nightmare. Discovery searches can cost up to \$2000 per back-up tape. A single search can start at \$90,000 and quickly climb to seven figures. "Winston Krone, managing director in the San Francisco office of SafirRosetti, a security consulting, investigation and intelligence firm, has worked on cases where he had to sort through 150GB of information to find required e-mails. A midsize company with a couple of venues could spend up to \$500,000 combing through corporate e-mails to find one or two messages, he says." – ComputerWorld. Jan. 27, 2003.

2) Do you have a systematic audit tracking process?

Without a systematic recording of archiving activities, you will need to rely on a paper-based audit trail that documents when records were archived. If this paper audit trail is lost or destroyed you would be at risk for non-compliance. Additionally, archive media will need to be carefully stored in a secure place to help prove that records have not been removed or destroyed.

3) Do you have at least one third-party who has access to and the ability to download your e-mail records?

If you have not contracted with a designated third party downloader service you are non-compliant and at risk.

4) Are you archiving internal email as well as inbound/outbound e-mail?

If not, then you are non-compliant and at risk.

5) Can your archiving application (if you are currently using one), keep up the growing volume being processed into the system? Can you write two copies to WORM media in a timely fashion?

If not, then while you may have a compliant solution, it may not be able to ensure compliance over the long run. e-Mail is a high volume application and your archiving technology and procedures need to be able to scale to meet that need.

6) Could you easily identify and retrieve a given employee's e-mail for a fixed time period (or even all their archived e-mail) and could you provide that e-mail in an acceptable format within 24 hours?

If not you are at risk of not meeting expected regulatory demands for access to e-mail. Even customers who purchase and maintain an in-house archive should review their retrieval capabilities and determine whether or not their existing processes and Information Technology staff could fulfill large or frequent discovery requests.

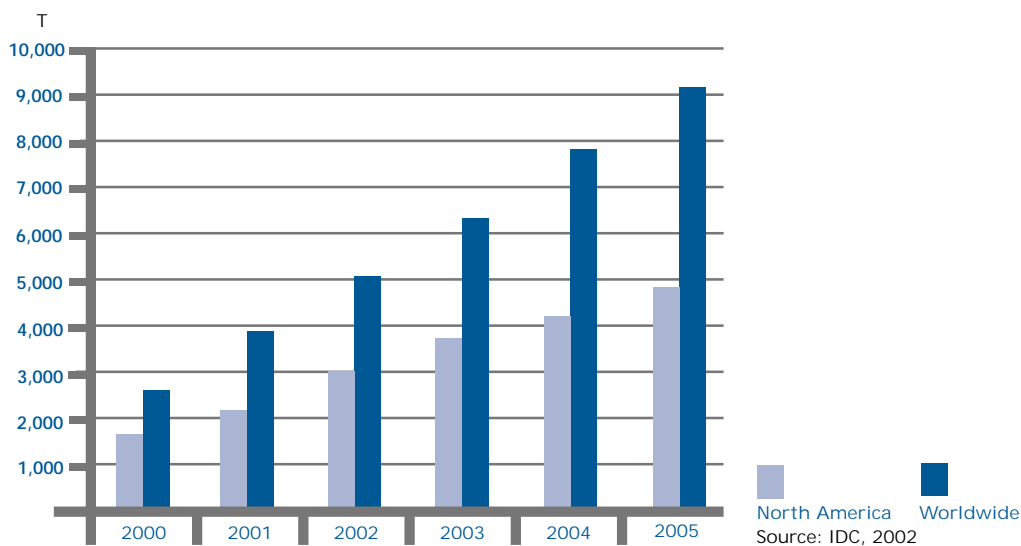
"It's a technology nightmare, and it's going to get worse as the years go on and the e-mails build up," says Mark E. Schreiber, a partner in the labor and employment department at Boston law firm Palmer & Dodge LLP.

- ComputerWorld. Jan. 27, 2003.

The SEC's requirements alone combine to create a daunting challenge for any broker-dealer. This challenge is multiplied by the urgency to get compliant, the boundless growth in e-mail volume and the inherent costs and maintenance headaches involved in trying to store e-mail. International Data Corp. estimates that the number of e-mail messages sent annually will top 9 trillion in 2005 - double the volume of e-mail in 2002.

IDC e-mail projected volumes

Worldwide and North America E-Mail Messages Sent Annually 2000 — 2005



Broker-dealers have three alternative strategies for managing SEC e-mail compliance:

- Do nothing – no longer a realistic option unless you have malpractice insurance
- Develop or upgrade an internal archiving solution and contract a designated third party service
- Outsource a complete solution from compliance and archiving experts

IN-HOUSE CONSIDERATIONS

For broker-dealers considering deploying or upgrading an SEC-compliant e-mail archiving infrastructure in-house, the barriers are significant:

■ IMPLEMENTATION TIMELINESS

Get compliant now, is the mantra. Designing systems architecture, ordering hardware and software and implementing an enterprise SEC-compliant archive is no small task. Building an in-house archive can take six to nine months of planning, internal capital requests and valuable IT resources – months that most securities firms don't have with the SEC knocking at the door.

■ EXPENSE

Depending on your firm's e-mail volume, capital investments in additional storage hardware and software can quickly run in to the millions of dollars. For example, a large broker-dealer generating 9.5 terabytes of e-mail per year, the in-house archiving costs for the SEC's required three years would be over \$2.8 million. A mid-sized firm storing an average of 1.8 terabytes of e-mail would spend about \$1.1 million over three years. Even a small firm storing just 12 gigabytes can easily spend more than \$270,000 over three years. Storage costs may be decreasing, but not nearly as fast as e-mail volumes are increasing – resulting in overall higher expenses.

■ EXPERTISE

Finding qualified IT staff with archiving experience and expertise is no easy task. The indexing of e-mail records typically requires a huge database – as much as 3 terabytes – that will require top-notch database administration expertise.

■ MAINTENANCE

For most firms, trying to store and manage the blistering volume growth of e-mail means an ongoing challenge of constantly adding more storage capacity and/or devoting an inordinate amount of resources to the daily backing of e-mail servers. The broker-dealers maintenance headaches are compounded by almost daily investigation inquiries, which usually require 24 hour turnaround time. Broker-dealers maintaining their own archiving system also need to worry about scalability and archiving media obsolescence.

The primary advantages of outsourcing SEC compliant e-mail archiving to Iron Mountain are:

■ **RAPID IMPLEMENTATION**

As an outsourced service, Iron Mountain offers broker-dealers off-the-shelf infrastructure to immediately deploy a comprehensive enterprise-caliber e-mail archiving solution. Our service enables you to implement a SEC compliant e-mail archive in a fraction of the time required by an in-house solution.

■ **RELIABILITY, TRUST & REPUTATION**

More companies trust Iron Mountain to manage and protect their important information than any other company in the world. Since 1951, Iron Mountain has stood alone as the global leader in records and information management, earning the trust of over 150,000 customer accounts around the world, and partnering with the most prestigious Fortune 500 companies.

Broker-dealers can trust us to implement a compliant solution.

Iron Mountain understands the needs of the securities market better than anyone else. Iron Mountain was the first Designated Third Party to ever register with the SEC. Our solution portfolio provides proven compliance. Today, we service the largest and the smallest broker-dealers – providing each with a scaleable, cost effective compliant solution.

Broker-dealers can trust our technology. Our archiving technology is second to none and we partner with some of the world's most trusted technology components (including companies like EMC, Oracle, Sun Microsystems and Storage Tek. Our system has been designed with the ultimate in scalability in mind. This scalability is proven today through use by some of the world's largest broker-dealers.

Broker-dealers can trust us to get the job done and to provide a quality service. We are a service company. That's what we do. And as a service company, our goal is to ensure the exceptional satisfaction of our customers. Only Iron Mountain has the resources and global footprint to get the job done, to get it done well, and to provide you the customer with the benefits of these great solutions – for your e-mail today but growing with you into other electronic records, hardcopy records, and data protection.

LOWER TCO

The total cost of ownership for outsourced archiving solutions is up to 30 percent lower than in-house archiving solutions. Iron Mountain is able to deliver these significant savings due to our shared, scalable infrastructure which allows for considerable cost efficiencies. Plus, our tiered availability service levels enable the right levels of service – while minimizing your costs.

ASSURED COMPLIANCE FROM ONE VENDOR

Iron Mountain is the one vendor that can provide e-records retention consulting, outsourced SEC compliant e-mail archiving and the industry’s leading designated third party service.

A CONSISTENT E-MAIL RETENTION PROGRAM

Iron Mountain consulting services experts can work with you to design and implement a consistent and compliant e-mail retention program. This program will help insure that you are keeping all e-mail records that are required – and deleting those that are just taking up storage space.

Iron Mountain's Complete Solution for SEC e-Mail Archiving Compliance

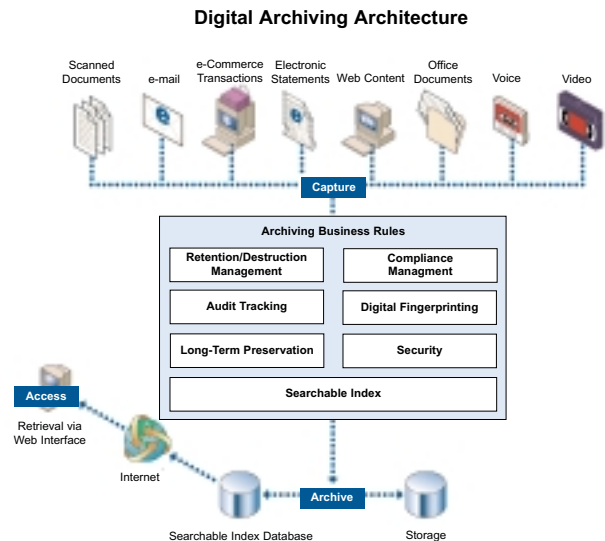
ELECTRONIC RECORDS MANAGEMENT CONSULTING

Iron Mountain’s consulting services experts have unmatched depth of experience. They offer consulting and services that can help your organization at every step.

- Electronic Records Management Strategy
- e-Mail Retention Program Development
- Implementation and Training
- Program Maintenance

DIGITAL ARCHIVES FOR BROKER-DEALERS

Iron Mountain Digital Archives has been designed from the ground up for the secure, low-cost, retention management and long-term archiving of important electronic records. Our web-based service consolidates electronic records, such as e-mail and electronic statements, from your various systems into an Internet-accessible archive, where they can be easily protected, authenticated, managed, searched, and retrieved.



INDUSTRY LEADING DESIGNATED THIRD PARTY SERVICE

Iron Mountain's Designated Third Party Service for SEC Compliance is the industry-leading Designated Third Party Service for SEC Rule 17a-4 compliance. Iron Mountain works with Broker-Dealers to implement a cost-effective operationally sound process, enabling them to satisfy the SEC's requirement for an impartial Designated Third Party downloader to provide access to their electronic storage media.

ASSURED COMPLIANCE

The Iron Mountain Digital Archives provides a cost-effective solution for meeting all applicable SEC Rule 17a-4 archiving requirements.

SEC COMPLIANCE REQUIREMENT	DIGITAL ARCHIVE FEATURES
<p>Records need to be written to non-rewritable, non-erasable media.</p>	<p>All records submitted to the Digital Archives are written to WORM tape.</p>
<p>Store separately from the original, a duplicate copy of the record stored on any medium acceptable under [the rule] for the time required.</p>	<p>As records are received by the archive, they are written to two different WORM devices.</p>
<p>Organize and index all original and duplicate copies of records.</p>	<p>The Iron Mountain Digital Archives creates a index of all records submitted to the archive</p>
<p>Must verify the quality and accuracy of the storage recording process.</p>	<p>The Digital Archives utilizes hardware that automatically verifies the accuracy of the recording process.</p>
<p>Must have in place an audit system providing for accountability regarding inputting of any changes made to every original and duplicate record maintained and preserved thereby.</p>	<p>The Digital Archives keeps an audit trail of all system actions to verify the integrity of archived records. This audit trail history is searchable and auditable.</p>
<p>Access Requirements:</p> <ol style="list-style-type: none"> 1) Must be able to download indexes and records to WORM upon request from SEC or SRO. 2) Have available facilities for SEC/SRO to view records (including equipment). 3) Have all indexes ready for review. 4) Be able to produce any facsimile enlargement required by SEC/SRO. 5) Have ready to produce upon request all info needed to access records and indexes OR Place in escrow a copy of the physical and logical file format of electronic storage media, the field format of all records written, and the source code 	<p>Our Search and Retrieval web interface allows broker-dealers to search for archived electronic records using structured queries. Once electronic records have been located, they can be printed or downloaded to local storage.</p> <p>As our service is completely web-based, access for authorized personnel is possible from any desktop connected to the Internet.</p> <p>Upon special need, Iron Mountain can write duplicate copies of specified records and indexes to WORM to comply with SEC requests.</p>
<p>Broker-dealers must have at least one third-party who has access to and the ability to download their records.</p>	<p>The Iron Mountain Digital Archives can serve as your "Designated Third Party." Optionally, should you contract with another external party to perform these services, that party can be configured on the system as an authorized user.</p>

An international investment bank broker-dealer with headquarters in New York and operations around the world turned to Iron Mountain for a complete SEC-compliant e-mail archiving solution. It was facing rapid growth in the volume of e-mail that it must archive – to the point of overwhelming its internal systems. The growth of e-mail that the company needed to store to comply with the SEC regulations was causing internal systems to failover. It was backing up its e-mail server to tape media on a nightly basis and storing the tapes for three years. The company understood its compliance vulnerabilities.

Rather than face uncertain expenses of purchasing in-house systems, the broker-dealer turned to Iron Mountain for a complete outsourced solution. Iron Mountain had been providing storage management for the company's hardcopy business records and had performed well. "Iron Mountain has served us very well for many years in the hardcopy world," said the company's compliance officer. "Moving to the digital world was the next logical step for them and for us." Of all the outsourced alternatives, only Iron Mountain could offer an off-site solution, which the customer found easier to manage. When an employee sends an e-mail, it's simultaneously transmitted to the Iron Mountain data center. "It goes out the door and Iron Mountain keeps it," the compliance officer said. "When we need it, we can easily log into the archive and retrieve it."

BENEFITS

■ MEETING REGULATORY COMPLIANCE REQUIREMENTS WITHOUT ADDING INTERNAL RESOURCES

The Iron Mountain solution will allow the company to comply with SEC requirements with considerably less internal resources. Iron Mountain supplied all the necessary representations to the SEC about the security of its solution, giving the broker-dealer the confidence of knowing their data is secure and in compliance with SEC regulations.

■ REDUCED LIABILITIES

Digital archiving will reduce the company's liabilities. SEC compliance regulations dictate that e-mails must be properly tracked. With Iron Mountain, the broker-dealer has a trusted partner and a simple retrieval process that makes transaction information easily accessible. In addition, audit tracking and archival reports provide detailed backup histories from a third party, enabling the company to reduce compliance liabilities.

■ INCREASED TRACKING AND RETRIEVAL CAPABILITIES

Instead of the eight hours needed to retrieve an e-mail from restoring and searching through optical media, the new e-mail archiving service retrieves e-mails immediately – via the Iron Mountain web interface. This helps the firm to streamline the investigation process.

■ REDUCED EXPENSES

The digital archiving solution will help the broker-dealer better manage costs, given its ever-expanding volume of e-mail. Prior to the digital archiving solution, the company had significant inadequacies with the archiving processes as well as uncertainty about what types of systems to put in place for the future. The

Iron Mountain Digital Archives solution is much more cost effective, and will eliminate the company's uncertainty about the types of systems to add, since it is scalable to their needs.

By selecting Iron Mountain's E-mail Archiving solution, this leading broker-dealer has a practical, SEC compliant solution for managing their huge, constantly growing volumes of e-mail. This outsource solution from a proven, trusted partner frees up IT resources to focus on more strategic initiatives.

Conclusion

The problems associated with an inadequate e-mail retention solution for SEC compliance are only getting worse:

- More aggressive SEC e-mail inspections expected in 2003
- Increased discovery costs from more frequent investigations
- Your firms' e-mail volume continuing to grow exponentially.

If you are not currently exploring a new line of work and you don't have malpractice insurance, there is a proven alternative to sweating out the next six to nine months developing a credible in-house solution.

Get Compliant with Iron Mountain's e-mail archiving service and take advantage of the following benefits:

- Faster implementation - weeks not months
- Lower costs - on average 30+% lower TCO than an in-house solution and dramatically less expensive for discovery
- Credible e-mail records retention program
- Using the industry's leader in Designated Third Party service.

All from the Company more firms trust to manage and protect their important information - Iron Mountain.