

Electronic Message Archiving

Postini's Managed Service Approach to Archiving

EXECUTIVE SUMMARY

Email dominates business communications today, and government and regulatory agencies have been quick to recognize its importance as a category of business records and have taken steps to safeguard its content and regulate its use. Yet business organizations have been slower to recognize both the value of electronic communications as an information asset and the substantial risks posed by poor management and protection.

This paper explains the importance of archiving electronic communications such as email and instant messaging (IM) and describes how an organization's Legal, Human Resources (HR) and Information Technology (IT) departments can work together to create, uphold, and maintain electronic record retention best practices. The paper explains why organizations must carefully evaluate in-house and managed service archiving solution options. It concludes by explaining why Postini is uniquely positioned to serve as your company's electronic communications retention arm, offering key benefits such as operational archiving among its many managed service advantages.

WHY YOU NEED TO ARCHIVE EMAIL AND IM

As email and IM have grown into the preferred method of business communications, messaging servers and user inboxes have become the de-facto means of information storage within organizations. However, unlike database systems, messaging systems do not have sophisticated capabilities for longterm storage or rapid retrieval. In most organizations, "storage management" doesn't extend much beyond basic server tape backup and restore for limited time periods. When old messages and IM conversations must be found, retrieving the data consists of time-consuming, offline hunt-and-peck searches through multiple backup tapes. With long-term messaging retrieval so painful, it's no wonder employees keep months or even years-worth of important messages on their PC hard drives or in their server inboxes until hounded to clean out their allotted storage space. The result is terabytes of duplicate, scattered, isolated or virtually irretrievable but valuable company information.

But things are beginning to change. Four main factors are driving the adoption of effective, efficient email and IM archival and retrieval:

- Regulatory compliance
- Legal readiness for e-discovery
- Records retention for business continuance
- Message server storage and management

Regulatory Compliance

Government agencies and industry watchdogs such as the Security and Exchange Commission (SEC) have developed strict regulations governing the treatment, storage and retrieval of electronic communications. In fact, IM conversations are now subject to the same regulatory requirements as email.

These regulatory bodies can and do impose substantial penalties if organizations cannot demonstrate compliance during an audit.

In one sobering example, the SEC pursued major financial institution, J.P. Morgan, for its illegal manipulation of financial records and lack of supporting documents. J.P. Morgan was fined for non-compliance of Section 308, of the Sarbanes-Oxley Act 2002 and was ordered to pay \$135 million in disgorgement, penalty and interest.¹

As the respected telecommunications market research firm, The Radicati Group notes, "For many companies today, compliance is no longer a choice, but rather an unavoidable responsibility. If a company is not retaining and managing its electronic records promptly, its top executives can be put behind bars for up to 10 years."²

Freedom of Information legislation dictates that public agencies make requested information available within a given period of time. This service is impractical with simple system backup tapes.

Legal Readiness for e-Discovery

In the course of any company's lifespan, disagreements, disputes, and even lawsuits are going to arise with customers, employees, ex-employees, vendors, or stockholders. Regardless of who instigates the action, both parties are required to provide evidence proving their claims, and increasingly that body of evidence is found in external and internal email trails collected or obtained by either side.

Legal bodies across the world recognize that electronic documents hold key information that can be relevant to any case. In the U.S., the federal judiciary has distributed guidelines governing "e-discovery", the exchange of electronic information in litigation proceedings. In response, the American Bar Association e-Discovery Task Force has warned lawyers that databases, networks, computer systems, servers, archives, backup and disaster recovery systems, laptops, personal digital assistants, mobile phones and pagers can all be considered possible e-discovery sources. In the

U.K., court rules (CPR31) have been revised to expand the definition of a "document" to cover electronic records.

Companies must be prepared to produce email records that either back their arguments or refute the opposing side's arguments. Since email messages can be doctored, companies must also be prepared to verify the integrity of their email files and retrieval process or risk the chance they will be deemed inadmissible evidence in court proceedings. Companies must also be able to provide evidence if they contend that their opponents tampered with email content.

Digging through records stored in PC hard drives, email servers and backup tapes to produce the needed evidence can take considerable time and effort, whether performed by in-house staff or by expensive third-party document retrieval experts.

Records Retention for Business Continuance

Because of its constant, pervasive use, much of an organization's body of knowledge, historical record, and intellectual property reside in email message stores, and to a lesser extent, on employee computers.

An extended email system failure can seriously impact the operation of any organization, and companies must develop and implement programs and procedures to proactively guard against the risks due to a catastrophic loss or system failure. An efficient system for offsite electronic communications archive and retrieval can effectively counteract these risks.

Message Server Storage Management

As the volume of stored messages increases, IT organizations grapple with spiraling data storage costs, server performance degradation and reduced staff efficiency. But the most serious problem they face is the inherent unmanageability of message servers.

Internal message storage systems do not have effective or efficient backup and restore mechanisms and, as a result, make poor archival

systems. When problems arise that require a system restore, the message servers must be brought down, and users' key link to external and internal communications is unavailable.

Many IT departments respond to the problem of burgeoning message storage by attempting to limit the size of users' inboxes. However, these attempts create a whole new set of problems:

- Users resort to saving messages on their desktop computers, making backups less reliable and search and retrieval more complex
- The inconvenience annoys users and reduces their efficiency
- The storage transfer masks the true scale of the problem
- To comply with message search and retrieval court directives for compliance or legal discovery, administrators are forced to undertake the nightmarish task of searching through computer hard disks and backup tapes

BEST PRACTICES FOR ELECTRONIC COMMUNICATIONS ARCHIVING

Once executive management understands the importance of archiving electronic communications and is ready to support and fund any mandates, three key functional business units—Legal, HR, and IT—need to work together to design and implement a system that meets compliance, e-discovery preparedness and business continuance efficiency needs.

- It is the Legal department's responsibility to draft policies for record archival based on compliance regulations and legislation, and to define search and discovery policies and procedures in the event of an audit or lawsuit. Legal should also schedule periodic internal audits to ensure that policies are being adhered to and compliance obligations are being met
- It is the HR department's responsibility to assist Legal in developing record retention policies and

enforcing them. HR also needs to educate employees on the importance of comprehensive record retention and the liabilities associated with failure to comply. Finally, HR should provide clear instructions for carrying out company-wide record retention policies

- It is the IT department's responsibility to set up an infrastructure that will support its organization's electronic communications retention policies. IT also needs to ensure that the system is protected with granular security controls and authentication procedures to meet compliance, e-discovery and best practices standards.

WHAT TO LOOK FOR IN AN EMAIL AND IM ARCHIVING SOLUTION

Developing a really effective electronic communication archival system is impractical for most mid-sized organizations. Why? Consider the critical components.

Scalability

For sheer volume, it's hard to think of anything that beats email generation. Based on years of experience, Postini estimates that an organization of 500 email users typically generates an average of 50 sent and received messages per user, per day—approximately 25,000 messages daily in total. It's easy to see why an archival system must be able to store a vast amount of data for extended periods of time. Incoming, outgoing and internal email and IM messages plus indexes and attachments all must be captured and stored. Since spam now comprises up to 88 percent of email messages, the system must be able to quickly and accurately siphon out junk mail before the data is archived to limit the significant storage costs. In the meantime, IM grows ever more popular as a business productivity tool—analysts estimate more than 200 million employees currently use it—and businesses face the growing challenge of IM security and management.

Security

To meet strict legal evidence handling and industry watchdog regulations, an archival system must build in rock-solid defenses against tampering and access by unauthorized users. Audit and surveillance mechanisms that document access request and retrieval activity must also be in place to safeguard or authenticate the integrity of the entire system.

Powerful Search Engine

The key capability of an archival system is its ability to retrieve specific threads of information rapidly and accurately. Email messages must be thoroughly indexed by date, recipient, sender, subject line, and content so users can quickly and efficiently search for the information they need.

Flexible Organizational Archiving with Personal Access

The archive system must be able to support Legal and HR archive policies that can vary with the nature of the information and by the functional group. Policy compliance should not be left to individual discretion, so the archival system must be run automatically and be enforced at the organizational level. In addition, search capabilities must be flexible enough so authorized users can search stored data based on key words, subject, date, and industry-standard fields.

Just as important, to address the serious problem of message server backup and restore inefficiency, the archival system should be able to offload inactive messages onto a completely separate offline, centralized storage platform that allows individual users to access and retrieve archived messages as needed.

High Availability

Given the business-critical nature of electronic communications, the archival system must be able to continue to operate uninterrupted during an email system failure. This capability requires a highly redundant, distributed infrastructure that is far too costly for many organizations to create and maintain.

Affordability

To implement an archival system, companies must consider the total cost of ownership—upfront implementation costs as well as ongoing support and maintenance costs. An average project can run to hundreds of thousands, if not millions of dollars, depending on the robustness of the archival system. This amount does not include professional services, administration and maintenance costs, all of which can drastically increase the total cost of ownership.

POSTINI'S MANAGED SERVICE APPROACH

Postini is a recognized global leader in Integrated Message Management, with years of experience in the industry. Postini products have consistently won awards from leading research firms and publications such as Frost & Sullivan, PC Magazine and NetworkWorld. Founded in 1999, Postini protects and manages electronic communications for more than 35,000 businesses worldwide.³

Postini understands the growing regulatory compliance, e-discovery and business continuity and efficiency challenges organizations face, and has developed a powerful yet cost-effective managed service for archiving electronic communications. Postini Archive Manager™ is another component of the Postini Integrated Message Management architecture.

With this managed service, Postini is delivering on its promise to provide a complete solution within its Integrated Message Management system. The company has already demonstrated proven performance in spam and virus blocking and email system continuity support during disasters or outages, so it's a natural progression to extend infrastructure, expertise, and capabilities to support electronic message archiving.

HOW POSTINI ARCHIVE MANAGER WORKS

Building on established technology, Postini's multi-layer virus and spam filtering engines filter inbound email and IM. Filtering significantly reduces the

POSTINI ARCHIVE MANAGER

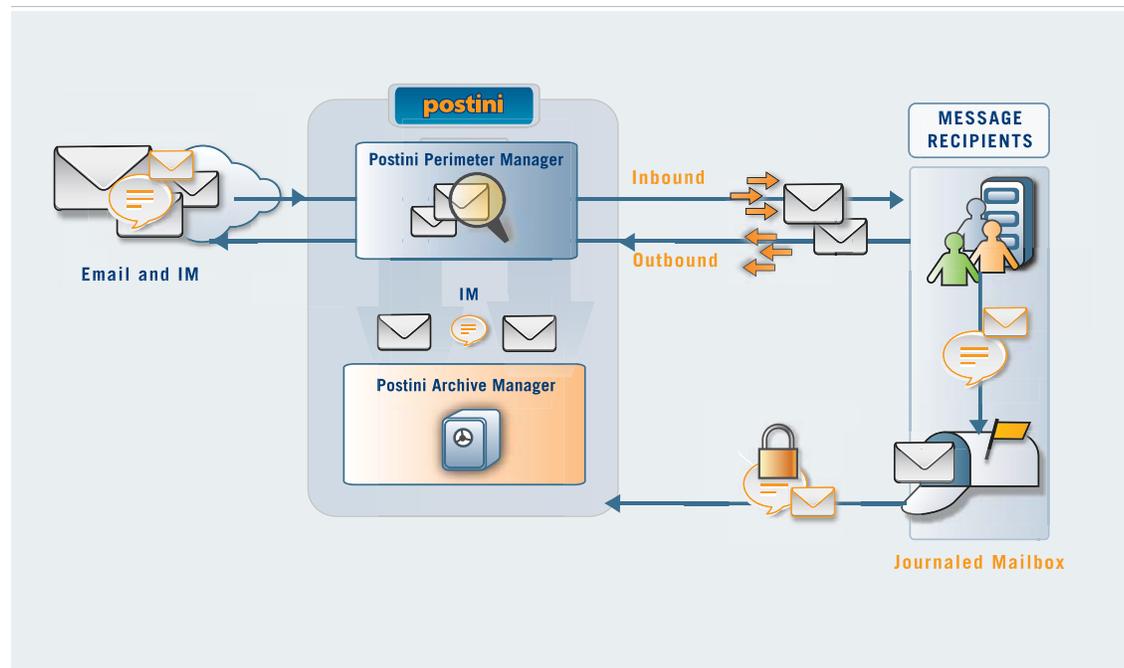


Figure 1: Postini Archive Manager Architecture

message bulk for faster search and discovery. Postini Archive Manager also captures outbound and intradomain (journalled) messages, as shown in Figure 1.

Inbound Messages

Before reaching a customer's network, all inbound messages pass through Postini's Sender Behavior Analysis™ and Security Suite. This multi-layer virus and spam filtering technology isolates and disposes of unwanted and malicious content according to customer preferences. The software suite then analyzes valid messages for content and attachment rules and notifies the customer's IT staff of any violations. Valid messages and attachments are analyzed using specific content and attachment policies, and the scrubbed message is indexed and stored in the Postini archive.

Outbound Messages

As messages flow out from a customer's network, Postini's outbound service scans them for viruses, content and attachment policies. Postini Archive

Manager then copies the messages that were delivered, indexes them, and stores them in the archive.

Intra-domain Messages

Postini Archive Manager can also capture and index all intra-domain messages, messages that users end within the company that never leave the corporate network. The IT staff simply sets up the journaling option on their email servers, which creates a copy of all messages and automatically forwards the journalled messages to their Postini data archive.

Storage

The Postini Archive Manager captures incoming, outgoing, and intradomain email messages and attachments and IM sessions and archives them in redundant, immutable (unchangeable) data storage facilities. As these messages flow into the archive, Postini Archive Manager applies comprehensive content indexing to enable simple, dynamic searching and data export. Business-critical data is protected with storage technology

to ensure that files cannot be rewritten or erased during the retention period. Customers can select data retention periods in accordance with specific regulations or internal policies.

Postini Archive Manager automatically deletes messages when their retention period expires. However, in the event that customers need to retain messages after their expiration date, they can easily apply a records hold to temporarily prevent deletion.

Discovery

Postini Archive Manager has flexible authorization and access options at both the user and group level. Customers can specify which users are authorized to perform search and discovery tasks and which users can make modifications to the Postini Archive Manager parameters. Authorized users have access to powerful search options that support industry standard search fields. They can retrieve messages based on a date range, sender, recipients, subject, or content in both the message body and in all attachments.

Authorized users can also export all retrieved messages — or just a subset of retrieved messages — to an industry standard mailbox format.

To make data retrieval even easier, authorized users can take advantage of advanced search features such as the ability to find similar messages or display all exchanged communications. Users can also choose to resend messages, if necessary, for auditing or other purposes.

POSTINI ARCHIVE MANAGER FEATURING PERSONAL ARCHIVE

As a managed service, Postini Personal Archive offers several advantages over in-house solutions in meeting critical requirements for an effective electronic communication archival system.

Operational Archiving with Personal Access

The Postini Personal Archive feature eliminates the management burden of disparate message storage systems by offering an independent, secure, offsite,

accessible, message archive service. Because Postini Archive Manager centralizes message storage, administrators can implement policies that limit the volume of stored message on their internal production servers. Flexible archiving options allow IT staff to capture email and IM from selected organizations or individuals. As a result, server backup and restore tasks take significantly less time and the arduous searches through hard disk and backup tapes become a thing of the past.

But the beauty of Postini's archiving solution lies in its powerful, convenient personal archive user access and restore capabilities. Users can easily hunt for any sent or delivered message from thousands of stored messages using the familiar Postini Message Center user interface. Users can pinpoint their efforts by searching by key phrases, date, subject line, or recipient. Once the correct messages are identified, retrieval is practically instantaneous. And since Postini removes all unwanted mail first before archiving, no one wastes time and money sorting through worthless email records. The entire process takes minutes instead of hours or days.

ADVANTAGE OF POSTINI'S MANAGED SERVICE APPROACH TO ARCHIVING

Secure and Private Storage

Postini understands that the security and privacy of sensitive corporate information is of paramount concern to its customers. Advanced storage technology preserves data in an immutable (non-rewritable, non-erasable) format. Once messages are sent or received, they cannot be altered at any point in the process; the original message residing in the Postini archive remains unchanged, preserving the integrity of their customer's archiving systems.

Postini's storage systems also continue to verify the quality of the data once it has been archived. Software probes continuously check to see if disk drives are operating properly and stored data is intact. The technology also serializes the original

archival data and any duplicates of the data with time-date stamps. Once the original archive date is recorded, data life spans can be set to prevent data from being before erased before its time limit. The system also logs each data search and access message request.

To ensure privacy, access controls are only set by Postini engineers at the Postini data center at the specific request of authorized, authenticated company employees.

Powerful Indexing, Management and Search Tools

Because the key capability of an archival system is its ability to retrieve specific threads of information rapidly and accurately, Postini has developed powerful yet easy-to-use data search and retrieval capabilities. Authorized employees and third-party

personnel can search through archived records rapidly and efficiently.

With Postini Personal Archive, all email and IM can be indexed, archived, and retrieved based on message content or by specific accounts or users. Messages and attachments are indexed by date, range, sender, recipient, subject, content, and metadata, which is essential to both individual and forensic discovery.

Disaster-Proof System

Postini has built a highly redundant and available message archive system. To guard against any single point of failure, all archived electronic communications are archived and mirrored on RAID protected disks in one Postini data center and replicated at two separate remotely located data

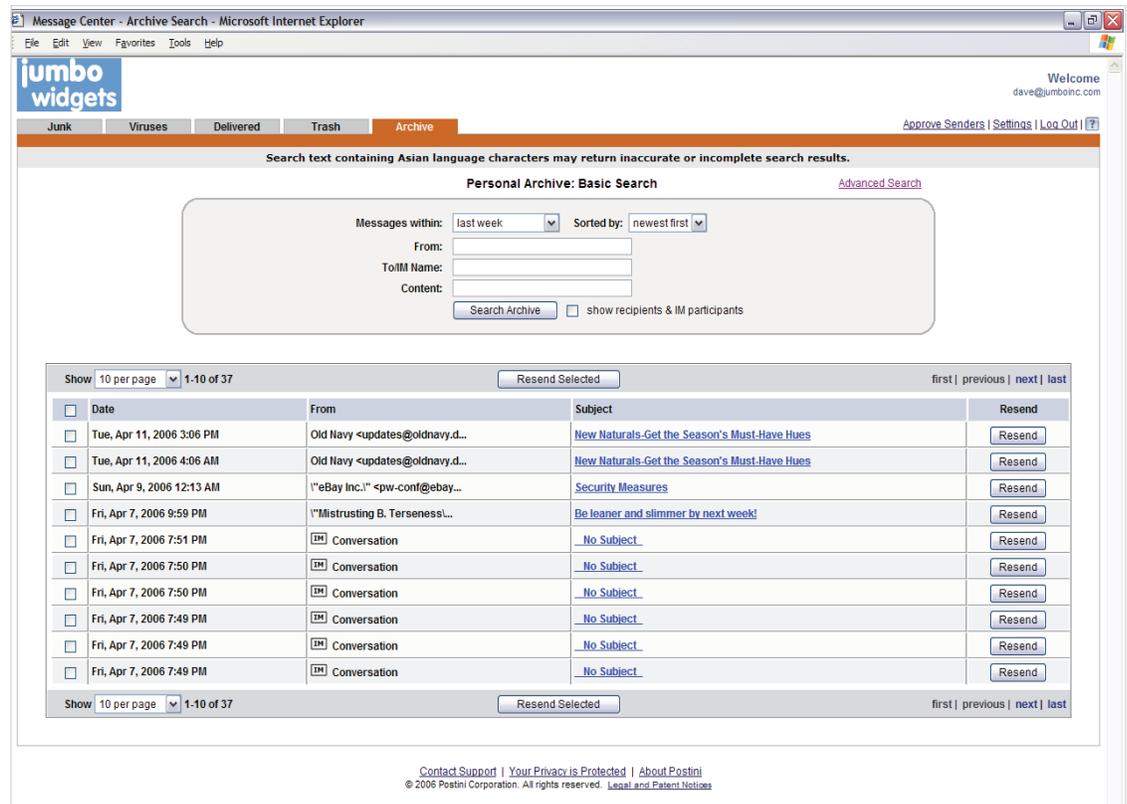


Figure 2: Postini Archive Manager with Personal Archive

centers. Archiving occurs during in-stream message processing, so there is no delay in message storage and no potential for loss. Messages are indexed and archived for immediate search access.

Affordable Solution

With Postini's managed service, there is no need to plan for or purchase additional storage hardware or software to create the system, or devote additional IT resources and equipment budget to continually maintain, upgrade, and expand archival system components.

The Postini Personal Archive works with all existing message and storage systems, so no additional resources are required to devote time and effort integrating yet another system. The Postini managed service takes care of everything all for a predictable monthly fee based on number of users, not data volume, and offers flexible payment options.

CONCLUSION

Increasing regulatory compliance, e-discovery legal readiness, business continuance, and efficiency concerns are forcing organizations to seriously evaluate their outdated records retention storage processes. Organizations are then faced with selecting an effective, efficient message archival solution among the many in-house and outsourcing

options available to them.

As one of the most respected names in the message management arena, Postini brings considerable knowledge and expertise to creating an efficient, cost-effective message archive and retrieval solution. Postini Personal Archive helps companies offload the significant burdens associated with creating, maintaining, and managing an inhouse message archival system.

Postini's managed service approach replaces potential staffing and training increases with an experienced, highly focused staff trained on best-practice processes created by experts in the field. It replaces potentially escalating capital and capacity planning costs with a predictable monthly operation expense. And finally, it replaces continual work interruptions with better in-house manpower utilization and reduced management complexity.

References:

- (1) *U.S. Security and Exchange Commission, June 2003, SEC Settles Enforcement Proceedings against J.P. Morgan Chase and Citigroup.*
- (2) *The Radicati Group, Inc., Compliance and Policy Management, 2005-2009*
- (3) *Postini website, www.postini.com*



ABOUT POSTINI

As the leader in Integrated Message Management, Postini managed services protect businesses from a wide range of IM and email threats, provide message archiving and encryption, and enable the management and enforcement of enterprise policies to meet regulatory compliance requirements.

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