

Archiving Strategies for E-mail in the Enterprise

A White Paper By

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Introduction

E-mail has become a ubiquitous form of electronic communication. For most businesses, e-mail is the standard mode of communication. According to a 2003 Meta Group survey, 74 percent of the executives surveyed believe that being without e-mail would present more of a hardship than being without phone service (1). Yet for most organizations, their e-mail system infrastructure is probably not as reliable as their phone system.

As e-mail has become more important to enterprises, so too has the need to archive electronic communication. There are several factors driving businesses to consider e-mail and message archiving:

- E-mail is a mission-critical application. Organizations and their employees are understandably intolerant of an inoperative e-mail system. In case of e-mail system failure, archiving provides important insurance and is a needed business continuity measure for an organization's e-mail lifeline.
- Organizations are facing the need to comply with regulations from regulatory bodies such as the Securities and Exchange Commission (SEC), the National Association of Securities Dealers (NASD), the Health Insurance Portability and Accountability Act (HIPAA) and Sarbanes-Oxley, which impose retention standards for archiving electronic communication, including e-mail and instant messages (IM).
- Finally, organizations must now take a more proactive position in the management of their electronic communications because of their potential use in legal discovery and dispute resolution. An organization must consider the possibility of electronic communications used in internal disputes as well as legal discovery requirements from a lawsuit.

This paper explores the business drivers and needs for archiving electronic messages - including e-mail and instant messages (IM) - while highlighting common problems and misperceptions encountered by enterprises in this area. The paper concludes with an overview of requirements for effective archiving and a review of how NEC Message Archiving meets these needs.

Current Archiving Practices and Common Shortcomings

Most IT departments are discovering that e-mail servers have become de facto data storage vehicles for users within the organization. Employees commonly use the e-mail system as their default "filing cabinet" for retention of their business communication, contacts, calendar and tasks. Use of the e-mail system as storage coupled with the high volume of e-mail has forced some organizations to impose mailbox size quotas to prevent users from keeping everything in their e-mail system. Size restrictions force employees to spend valuable company time cleaning out and filing old messages and attachments.

This escalating problem also creates significant challenges for the IT departments that manage these systems.

Legal Discovery Repercussions

Some organizations believe minimizing the retention time of historical e-mail reduces their business risk. They delete old electronic communications assuming that the messages will not be needed. As a result, organizations are surprised when they discover their employees have copied or moved their e-mail to a location where it can be retrieved. This is noteworthy as it leaves an organization at risk under legal discovery. If an organization is asked to produce e-mail in discovery for a lawsuit, it must assess all locations where messages might exist; without a central repository, a firm is left to sift through backup tapes, file cabinets, desktop and laptop computers and other offline media where e-mail might be stored. Such a task can be enormously expensive and time consuming.

Organizations also face the possibility of spoofed or forged e-mail messages from employees or other individuals who interact with the organization. For example, a disgruntled employee or an embittered partner could use their creative talents to "doctor" a message to read favorably in a lawsuit or dispute against the organization. Without a verified and complete archive, the organization is unable to dispute the doctored message.

Many organizations do not yet have a viable archiving process or enterprise-wide solution to aid in the defense of these significant concerns surrounding e-mail. In many cases an archive may exist, but may still be combined with offline tapes or other media, while being neither centralized and complete, nor online and available. In these situations, management and retrieval of archived messages can be difficult and very costly.

Regulatory Challenges for Archiving

Regulatory compliance challenges organizations to modify current business processes surrounding electronic communications. Regulations such as those coming from the NASD and SEC create additional workflow requirements for organizations. Furthermore, clarity in understanding the implications of HIPAA and Sarbanes-Oxley complicate issues of compliance even further. One thing is certain: The regulatory environment will continue to change and so must an organization's electronic message archiving system.

Bottom Line IT Considerations

With significant attention given to the bottom line, organizations are operating their IT departments with lean staffing. In many cases, IT

staffs are overburdened with day-to-day support and maintenance activities with little time available to research and address message archiving concerns. When an employee needs to recover a past message, restoration puts additional stress on e-mail administrators, help desk staff and employees. Frequently, e-mail administrators must search through backup tapes to find messages to be restored, sometimes taking days or weeks to complete the task. Foreseeing the delay in restoring messages, employees resort to backing up their e-mail on CDs or local hard drives. The proliferation of backup copies creates an error-prone environment of inconsistent and incomplete archives.

A capable message archiving solution could resolve many of the e-mail storage, archiving and restoration issues faced by organizations today. However, many message archiving solutions require a significant investment in both hardware and software. In many cases, the entry point for these resources is substantially beyond of the reach of small-to-medium-sized organizations.

Requirements for Effective Message Archiving

An effective e-mail archiving solution requires permanently organized storage with interactive capabilities. Many organizations mistakenly believe that copies of e-mail stored on backup tapes represent an archive. Unfortunately, this is not the case. While it is true that another copy of e-mail might then exist within the organization, a true e-mail archive solution must have the following characteristics:

"Products need to include archiving, indexing, hierarchical storage management and records retention management, as well as special applications for meeting the needs of compliance officers and those tasked with producing records for legal discovery requests. Leading solutions bring together all of these components to address the retention requirements around e-mail while providing the opportunity to more efficiently and cost effectively manage the impact of growing e-mail data stores." (2)

There are a number of business elements required for a message archiving solution to provide good value to an organization. They include:

- **Cost-Appropriate** - The solution should be priced to scale with the size of the organization and offer the lowest total cost of ownership (TCO).
- **E-mail System Compatibility** - The solution should be compatible with e-mail systems from leading vendors such as Microsoft, Lotus and Novell. It should also provide interoperability with popular Instant Messaging (IM) networks.
- **Ease of Use** - The solution should be effortless to use while also offering security and accessibility to users from dispersed geographic locations.
- **Data Store for Enterprise Applications** - The solution should provide additional value to the organization as an important data store for other applications. This central repository of messages

could be integrated and leveraged for use with other applications such as Customer Relationship Management (CRM), Human Resources, Legal or Sales systems.

- **Business Continuity** - The solution should ensure that electronic communications continue uninterrupted if e-mail system outages occur.
- **User Empowerment** - The solution should empower end users within an organization to easily search, locate and retrieve their information in the archive.

Organizations must consider the growing need to comply with an increasing number of regulatory requirements. While sectors such as financial services, pharmaceutical and healthcare lead the way and carry the greatest regulatory burden, many other industries are starting to feel the effects of regulatory compliance and the changes required to sustain them.

Current regulatory drivers require a message archiving solution to include:

- **Retention Policies** - The solution should allow organizations to enforce retention rules for all electronic communications.
- **Accessible Archive in Redundant Systems** - The solution should allow organizations to keep archived messages online and in fully redundant systems.
- **Complete and Tamper-Proof Archive** - The solution should commit all electronic messages to verifiably tamper-proof media and preserved.
- **Supervisory System** - The solution should enable organizations to establish and maintain a supervisory system that include regular review of incoming and outgoing electronic correspondence based on statistical sampling, as well as predictive and ad hoc surveillance capabilities.

NEC Secure™ Message Archiving

Message archiving solutions exist on the market today. Two basic approaches dictate the way in which the message archiving system is delivered. The traditional method uses a client-server architecture where the application is installed on-site on both a server and each user's desktop. Typically, this involves an investment in hardware and software as well as engaging the IT staff to install, operate and maintain the system.

Service-Based Solution

NEC Secure Message Archiving uses an alternative approach, delivering the message archiving solution as a service. The NEC solution is delivered with no additional hardware and software expenses for the customer. Additionally, the service-based solution transfers the burden of application support to NEC rather than the IT staff, resulting in lower costs to the organization and better use of IT resources.

Message Interception

Nearly all solutions tackle message archiving "after the fact." Specifically, this means that message archiving options are addressed after the message is received by the organization. Unlike the solutions that use this method, NEC Message Archiving intercepts and makes copies of each message without any latency, such that they can be immediately indexed and archived. This is a critical point as it opens up significant archiving opportunities that resolve many of the requirements for an effective message archiving solution. An important benefit of this approach is the ability to offer business continuity and full disaster recovery should there be an outage within an organization's e-mail system. Furthermore, NEC can perform other real-time message services, such as spam filtering, virus scanning and content blocking, ensuring that only legitimate and clean messages are stored in the archive and delivered to the organization's e-mail system.

The following diagram shows how Message Archiving works in conjunction with the NEC Message Protection Suite to intercept and archive messages after they have passed through the NEC spam, virus, content, and policy filters:

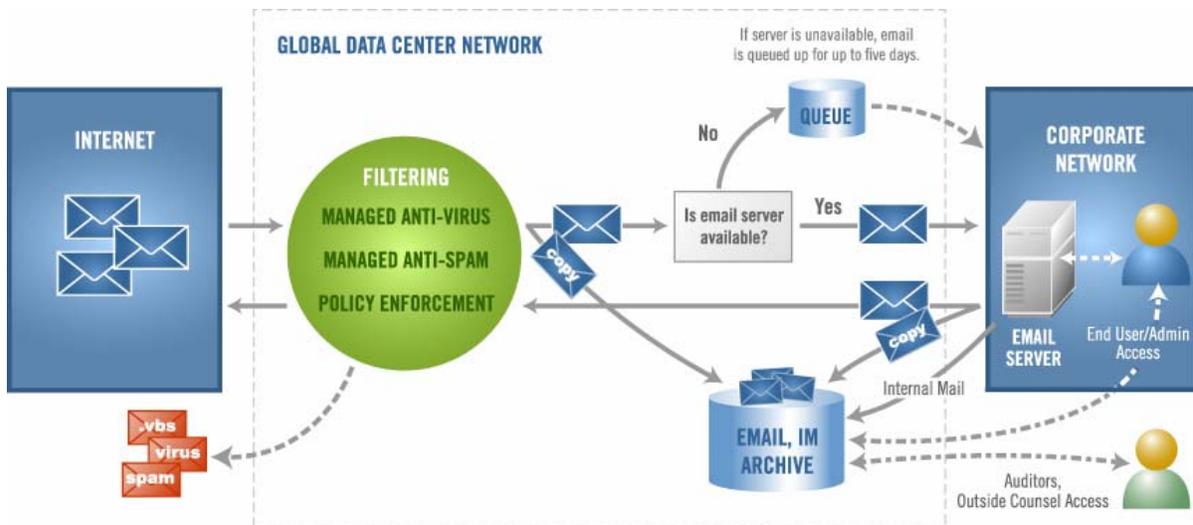


Fig. 1 NEC Message Archiving intercepts messages "in stream," which allows message filtering – such as spam filtering, virus scanning and policy enforcement – to be performed prior to archiving, improving the efficiency of archiving operations and eliminating unwanted content from the archive.

NEC Message Archiving meets, and in many cases, exceeds the business requirements of an electronic message archiving system. Organizations will find that Message Archiving is strategically vendor agnostic when integrated with existing e-mail systems. Acting as a gateway to an organization's e-mail server, Message Archiving is positioned to work with all e-mail systems including Microsoft Exchange, Lotus Notes and Novell GroupWise. The NEC solution also supports an organization's IM users. Messages created through commonly used IM networks such as Yahoo!, MSN and AOL are intercepted, parsed and copied to the archive. This allows supervisors and compliance managers to see instant messages just like e-mail within Message Archiving, dramatically simplifying the supervision and review processes.

Easy to Use

NEC's solution is a secure and easy-to-use archiving application. From the end user trying to recover an archived message to the e-mail administrator configuring an archiving policy, Message Archiving provides a clear, intuitive interface that minimizes the need for formal training. Users interact with Message Archiving through a Web-based interface. The user interface is designed with the "look and feel" of popular e-mail clients, making it familiar to many and intuitively easy to use for others. Secure communication with Message Archiving is achieved through encryption techniques embedded within the desktop browser. The following illustration shows the Message Archiving interface:

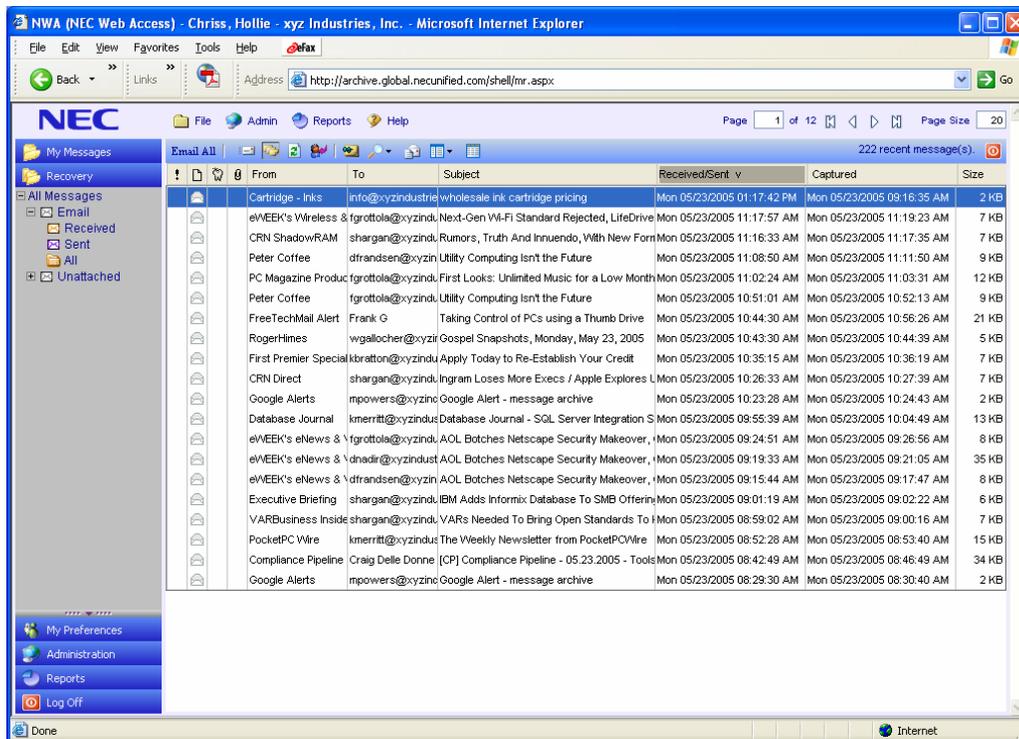


Fig. 2 All NEC Message Archiving functionality is delivered through a unified Web-based interface, including end-user, administrative and supervisory tools.

IT departments will appreciate Message Archiving's ability to define and facilitate archiving policies for a user's role within the organization. Pre-defined policies simplify the initial process of establishing access levels for each user while customized policies provide organizations with the flexibility to define appropriate levels of access and system usage.

Accessible, Managed Solution

Organizations reap the benefits Message Archiving delivers as a managed solution. NEC's solution delivers the advantages of no upfront capital costs, low recurring monthly service fees and a quick and painless implementation process. The significantly reduced initial investment makes the solution palatable for small and large organizations alike. Unlike client-server solutions, Message Archiving requires no additional hardware or software for IT staff to install and maintain. Moreover, a managed solution guarantees that the organization has the latest version of the Message Archiving application without burdening the user or IT department with updates to apply. Collectively, these benefits allow an organization to start addressing business continuity and regulatory compliance within hours of Message Archiving's installation.

Message Archiving's central repository ensures that the organization's messaging data is accessible to all users including those in other geographic locations. This sets the stage in empowering end users to find and retrieve historical e-mail (IMs and other electronic communication included) on their own. The familiar, easy-to-use interface and powerful search capabilities make this all possible. Organizations benefit from improved employee productivity and the reduced reliance on IT staff.

Regulatory Compliance

Regulatory bodies such as the SEC, FDA and other federal, state and local government agencies have imposed requirements for documentation, retention and transparency of an organization's electronic communication. Although many organizations find the broad range of recent regulations onerous and burdensome, in many cases the regulatory requirements push companies to adopt better business practices. Message Archiving helps organizations comply with many of these regulations.

Message Archiving allows an organization's electronic communication to be retained online as far back as the company has historical electronic communications. This directly supports many regulatory rules where electronic communication records must be retained for a specified duration.

Monitor, Filter and Search on Electronic Messages

Another set of NEC features helps organizations monitor, filter, search and report on multiple types of electronic messages including e-mail, instant messaging, Bloomberg and other forms of electronic communication. This is a key consideration for organizations facing regulatory compliance. For example, NASD requires broker-dealers to maintain a system to supervise transactions and correspondence between their brokers and clients. Using Message Archiving, supervisors can quickly and efficiently perform supervision of electronic messages sent and received by their staff.

Message Archiving makes it easy for managers to configure and filter messages for review. Messages are flagged and queued in a review module based on keyword or key phrase matches and/or random percentage sampling. Designated management can configure the sampling rate as well as maintain the dictionary of keywords and key phrases. Random sampling rates can be set on a person-by-person and/or employee-class basis (i.e., all "investment bankers" should have n% of their messages reviewed when speaking with "research"). In addition, sampling rates can be configured based on the type of electronic communication: external e-mail, internal e-mail, external instant messages or internal instant messages. Supervisors can then highlight a range of messages and traverse through each message, marking each as "reviewed" or "of concern."

Search capabilities within Message Archiving are superior to those found in many desktop applications. NEC's ad hoc search tools and rules-based supervisory tools allow for keyword and phrase matching in the message subject, body and attachments. Message Archiving indexes the content of more than 200 attachments, including popular document formats such as Word, Excel, PowerPoint and Adobe Acrobat. Message Archiving's keyword and key phrase matching allows the use of a "super wildcard" character that performs word stem matching. By comparison with other search applications that perform word completion, Message Archiving can find all variations of a word. For example, in a typical application, "promise" would match on "promise" or "promised." In Message Archiving, promise will match "promise" and "promised," but also "promissory" because all stems of the root of each word are found.

Audits and Reviews

Conducting audits and reviews are necessary steps in the regulatory compliance process. Message Archiving delivers a set of pre-defined reports along with the ability to create customized reports in support of supervisory responsibilities. For example, NEC includes a NASD 3010 evidentiary report to allow supervisors and compliance managers to document and monitor compliance and attest to their adherence to the regulation. Following is a sample of a NASD 3010 evidentiary report:

Bogus Financial												
Email Supervision Report												
NASD 3010 Evidentiary Report												
Date Range: September 1, 2003 to September 30, 2003												
Supervisor: Blodget, Henry												
Direct Reports: 7												
Last Sample: 10/07/2003												
Subordinate	Messages Sent	Messages Received	Total Messages	Messages KW Matched	Matched Rate	Messages Sampled	Sampled Rate	Target Rate	Review Rate	Messages Reviewed	Being Researched	To be Reviewed
Adams, Cliff	0	0	0	0	0.00%	0	0.00%	10.00%	0.00%	0	0	0
Aikman, Seth	1	1	2	1	50.00%	1	100.00%	12.50%	100.00%	2	0	0
Doe, John	0	0	0	0	0.00%	0	0.00%	10.00%	0.00%	0	0	0
Meeker, Mary	1	102	103	13	12.62%	9	10.00%	37.50%	21.36%	17	0	6
Smith, Mike	0	0	0	0	0.00%	0	0.00%	37.50%	0.00%	0	0	0
Stevens, Sam	0	0	0	0	0.00%	0	0.00%	37.50%	0.00%	0	0	0
Wilson, Mary	0	0	0	0	0.00%	0	0.00%	10.00%	0.00%	0	0	0

Fig. 3 The NASD 3010 Evidentiary Report is one of several pre-defined reports available from NEC Message Archiving.

Business Continuity

The dependence many users have on their e-mail systems has made it a mission-critical application to the organization. For this reason, business continuity and disaster recovery are critical topics when addressing messaging systems. NEC helps organizations plan for and resolve business continuity issues with Message Archiving. When the organization's e-mail system is down, Message Archiving acts as a backup e-mail system so that business communications can continue without interruption. All inbound e-mail continues to be archived, even when the e-mail server is down. Further, e-mail can be composed, read, replied to and forwarded using the Message Archiving interface until the primary e-mail system is restored. When the e-mail service is restored, all messages sent and received during the outage, can be easily restored to the organization's primary e-mail system.

Summary

There is no doubt electronic messaging plays a vital role in the success of an organization today. The pervasive use of e-mail as a critical business tool has upgraded the stature of e-mail systems to that of a true mission critical application. As a result, organizations are driven to consider message archiving solutions for the appropriate backup and protection of mission critical systems. Key requirements for an effective message archiving system include its ability to archive, index, retain, retrieve and restore electronic communications as well as assist in legal discovery and regulatory compliance.

When considering message archiving solutions, NEC Message Archiving delivers exceptional value in several key areas:

- **Managed Service Convenience** - Delivered as a managed service, NEC Message Archiving delivers complete message

archiving for the entire enterprise with the lowest total cost of ownership (TCO), including no capital investment in hardware and software.

- **Regulatory Compliance** - All NEC Message Archiving functionality is delivered in compliance with SEC Rule 17a-4, NASD Rules 3010 and 3110. Message Archiving also addresses issues posed by Sarbanes-Oxley, HIPAA, and other regulations. Workflow tools for compliance supervision and reporting are fully integrated into the system.
- **Integrated Message Retrieval** - NEC Message Archiving includes tools to allow all users to search, retrieve, restore, and extract any message. All messages are fully text indexed so they can be retrieved, restored or extracted when needed, including for legal and compliance needs.
- **Intuitive Web-based User Interface** - All aspects of the system from end-user interaction to administrative and supervisory tasks are handled via a comprehensive, easy-to-use Web interface.
- **E-mail Continuity and Disaster Recovery** - Unique to NEC Message Archiving, your organization continues to receive and have full access to e-mail, even if your corporate e-mail system is down.

NEC Message Archiving delivers a comprehensive electronic message archiving solution to meet the vital needs of today's business enterprise.

About NEC Unified Solutions

NEC Unified Solutions Inc., a leader in integrated communications solutions for the enterprise, delivers the industry's most innovative suite of products, applications and services that help customers achieve their business goals. With more than a century of communications and networking expertise, NEC Unified Solutions, Inc., a subsidiary of NEC America and affiliate of NEC Corporation (NASDAQ: NIPNY), offers the broadest range of communications services and solution choices, flexible product platforms and applications, and an open migration path to protect investments. NEC Unified Solutions, Inc. serves the Fortune 1000 and customers across the globe in vertical markets such as hospitality, education, government and healthcare. For more information, visit www.necunifiedsolutions.com.

Document Information

This document is intended to provide outline information only and can change without prior notice.

Additional Resources

1. META Group, Inc., Senior Executive Panel Survey Representing 387 Corporations, April 22, 2003.
2. Gartner, Inc., What is E-mail Archiving?, November 24, 2003