



MIMOSA  
SYSTEMS

## White Paper

By Bob Spurzem  
Mimosa Systems, Inc.

September 2007

*Mimosa™ NearPoint™ for Microsoft®  
Exchange Server*

*Email Archiving 101*

## CONTENTS

Introduction.....	3
Email Storage Management.....	4
Offline Email Storage Management.....	5
Email Compliance Support.....	6
Legal Discovery.....	7
Retention and Disposition.....	8
Exchange Migration.....	9
Exchange Local Recovery.....	10
Exchange Disaster Recovery.....	10
Unified Messaging Management.....	11
Conclusion.....	12

## Introduction

*Email archiving* is emerging as a critical new IT application for managing email. For legal discovery, storage management, and regulatory compliance, email archiving provides important benefits that cannot be achieved with native email applications. The purpose of this “Email Archiving 101” paper is to provide a basic introduction to email archiving and explain how it benefits management of the email application server. The leading enterprise email application is Microsoft® Exchange Server, and this paper is geared toward this application; however, the principles discussed apply to all messaging applications.

In each section, we will address a key issue or problem regarding email and how email archiving addresses this problem. Beginning with basic issues surrounding email storage, we will go on to address other important issues that impact email recovery, legal discovery, and regulatory compliance. Because email touches every person in the organization and because email contains content that is often considered a record of business, careful management and archiving of email is critical. Email archiving is the application that extends and improves basic email application servers for the benefit of the organization.

Mimosa Systems, Inc. develops and markets an email archiving solution called Mimosa™ NearPoint™ for Microsoft Exchange Server. Mimosa NearPoint is a next-generation email archiving solution that delivers archiving, eDiscovery, recovery, disaster recovery, and storage management in a single integrated solution. For managing Exchange Server, NearPoint performs multiple important functions that improve the overall performance of Exchange. NearPoint:

- Reduces and manages online and offline email storage.
- Adds powerful tools for legal discovery and compliance.
- Extends native Exchange recovery capability.

This paper will enable you to gain a deep understanding of the many important benefits of email archiving and Mimosa NearPoint for Microsoft Exchange Server.

## Email Storage Management

Storage of email on the messaging server has been a critical issue ever since email applications were first deployed. When disk drives were 9GB and mailboxes were 5MB in size, storage was obviously very critical. Even with the new large-capacity disks available today, email storage space is still critical. Many users keep email for years, and it can consume many gigabytes of mailbox capacity.

Email archiving solutions reduce storage on the email server through a process called “stubbing” or “short-cutting.” The basic process involves making a copy of the email and the attachment in the archive, then deleting the email and the attachment from the email server and replacing it with a small stub file. The final step is to insert a small bit of code in the email client to enable it to detect when the user clicks the stub message, so the client can recall the email and the attachment from the archive. In other words, the user keeps access to his or her email and attachments; however, they are being stored in the archive, not the email server.

Mimosa NearPoint has a standard feature called Mailbox Extension that performs “stubbing” for Microsoft Exchange. Based on policies of age and size that are defined by the administrator, NearPoint removes attachments from the Exchange Server. When users double-click the message in Outlook, an Outlook Form recalls the attachment from the archive and displays it together with the original email. Users enjoy having access to all their emails and attachments, and administrators enjoy being able to cut Exchange storage by as much as 85 percent.

To summarize, email archiving solutions such as Mimosa NearPoint allow administrators to reduce email storage by policy while preserving user access. Without email archiving, the only alternatives are to let storage on the email server grow uncontrolled, delete email, or move email to offline storage files. In the next section, we will discuss the challenges created when too much email is moved to offline storage files.

## Offline Email Storage Management

For Microsoft Exchange, offline files for email storage are called Personal Store (PST) files. PST files are a very popular way for end users to store email locally on desktops and network file servers. PST files help reduce the amount of email managed on Exchange Server and are often necessary to enable Exchange Server to stay below quota limits. Users also enjoy being able to access email when they are not connected to Exchange Server. Exchange supports expanded storage capacity and will support gigabyte-size mailboxes, but users will continue to use PST files for the benefits of having local access to them.

PST files create a very difficult management challenge for administrators and they create risk to the organization. Because they exist as independent files, they are not tracked by Exchange and can be easily lost. In cases involving email discovery, PST files must be manually collected and searched individually—a very labor-intensive and costly exercise. The data contained in PST files is very critical for compliance and corporate intellectual property. If PST files are lost or stolen, the organization can be at enormous risk. The current best practice is to eliminate the use of PST files.

Before PST files can be eliminated, organizations need a way to manage existing PST files and store their contents in a central repository. Email archiving solutions perform multiple functions to help with improved PST management, as well as eventual PST elimination if this is the desired end result. First, email archiving solutions ingest data from existing PST files and store the PST contents in an indexed archive. Once archived, the PST information can be searched quickly for legal discovery. The archive centrally manages and protects the PST contents and reduces the risk of losing PST information.

The Mimosa NearPoint email archiving solution manages PST files with its PST Archiving Option. Using the NearPoint PST Archiving Option, PST files are automatically located across servers and laptops and are actively imported (or ingested) into the NearPoint archive. Once PST files are loaded into the NearPoint archive, the PST data can be searched by auditors for legal discovery. Using the NearPoint PST Archiving Option, administrators can eliminate the need for PST files altogether.

## Email Compliance Support

Laws and regulations exist in the United States and internationally that require long-term retention of email records. Depending on the industry in which you operate, your organization may be required to keep email records in an indexed repository, where they can be easily searched for regulatory audit or legal investigation. Email archiving is the application that meets these requirements.

Support for compliance is commonly misunderstood. Email applications that allow users to delete email do not meet regulatory requirements, and tape backups do not meet requirements for accessibility. To explain the shortcomings of Microsoft Exchange 2007 for compliance, we asked noted Exchange MVP Paul Robichaux to write this brief statement:

Microsoft Exchange 2007 does deliver some very useful and important new features that can help implement better archiving and compliance, but they may not be sufficient to completely implement an archiving and compliance solution.

- Exchange itself is not an archive. It can search, filter, retain, and expire content that's already in Exchange, but it doesn't have any tools for importing existing information from PST files or other sources.
- Exchange leaves retention decisions up to the user. Users are free to drag messages into managed folders, but they're equally free not to.
- Because Exchange isn't an archiving solution, it doesn't include tools to provide tamper detection for stored data (apart from the checksum mechanisms used to ensure integrity of the message databases), and it doesn't natively support non-rewritable storage.
- The journaling support in Exchange can capture messages at the time they're sent or received, but it doesn't capture context and it places an additional load on the mailbox servers that are responsible for the journaling operations.
- The greatly improved Exchange content indexer can index only Exchange data that's currently in a mailbox somewhere. It can't index historical data or data from other sources.

For Microsoft Exchange Server, Mimosa NearPoint stores all Exchange email and attachments in an indexed archive that meets all laws for regulatory compliance. One of the most important benefits of NearPoint is that it extends Exchange retention capability and provides enterprise-wide policy enforcement that is managed at the server level, thus preventing user intervention. The folder-level retention feature in Exchange is at the user's discretion, on the other hand, so there is no assurance that data will be managed according to policy.<sup>1</sup> Exchange by itself does not meet requirements for compliance.

<sup>1</sup> Folder-level retention is a new feature of Exchange 2007.

## Legal Discovery

One of the most critical (and costly) challenges facing every organization is email discovery for litigation support. As a result of the widespread use of email for business communication, email is commonly subpoenaed in court as evidence. Organizations, when required by the court, must produce old email, no matter how much time is needed for retrieval. If old email records are stored on backup tape, the cost to find the email in question can be extreme.

Email applications by themselves do not support legal discovery very well. Microsoft Exchange, for example, is a leading enterprise email application, but it has some critical shortcomings for legal discovery. First, users can delete email on Exchange or move email to offline PST files, so there is no way to ensure that a particular email exists for legal discovery. Second, the native Exchange search tools are very basic and make it more difficult to search email records quickly.

Email archiving solutions provide important functionality to support legal discovery. Primarily, they provide a reliable record of all email activity in the archive. The archived email is indexed and can be searched quickly for legal discovery. Mimoso NearPoint is an email archiving application that supports legal discovery for Microsoft Exchange. NearPoint manages a complete copy of all current *and* historical email so it can be accessed quickly and easily for discovery.

Mimoso NearPoint also provides powerful search tools that auditors can use to search across multiple mailboxes. The NearPoint search tool is a GUI that allows for easy search using wild cards, Boolean logic, proximity search, and specification of multiple email properties. NearPoint search results can be sorted and results can be exported in PST files for easy transport.

For legal workflow, the NearPoint eDiscovery Option is an add-on product for NearPoint that enables you to reconstruct complex events and understand user behavior for litigation support and investigations. The NearPoint eDiscovery Option offers efficient collaboration capabilities so you can search, share, hold, review, and tag results for export. It also exports search results in PST files, which can be given to internal or external parties.

## Retention and Disposition

Retention and disposition management of email is related to both compliance and legal discovery, but it is such an important issue that we will discuss it in its own section. Email applications are traditionally user driven and hence do not support policy-driven retention and disposition. Organizations that are required by regulatory laws or corporate policy to keep email for a certain period of time (e.g., years) require the assistance of an email archiving solution.

Email archiving solutions provide features that keep records securely in the archive and purge records after a specified period of time has expired. Retention rules are defined by the administrator and are automatically managed by the email archiving solution. Retention and disposition rules can be suspended, if needed. For example, it is a federal requirement in the United States to suspend any disposition of email when a lawsuit is pending.<sup>2</sup>

Microsoft Exchange 2007 supports email retention at the folder level. Administrators can configure retention settings for folders and messaging types, making disposition of message content automated. Exchange 2007 folder-level retention is user driven and is not a solution for compliance. Mimosa NearPoint, in combination with Exchange 2007 folder-level retention policies, however, does provide full compliance for the most stringent regulations.

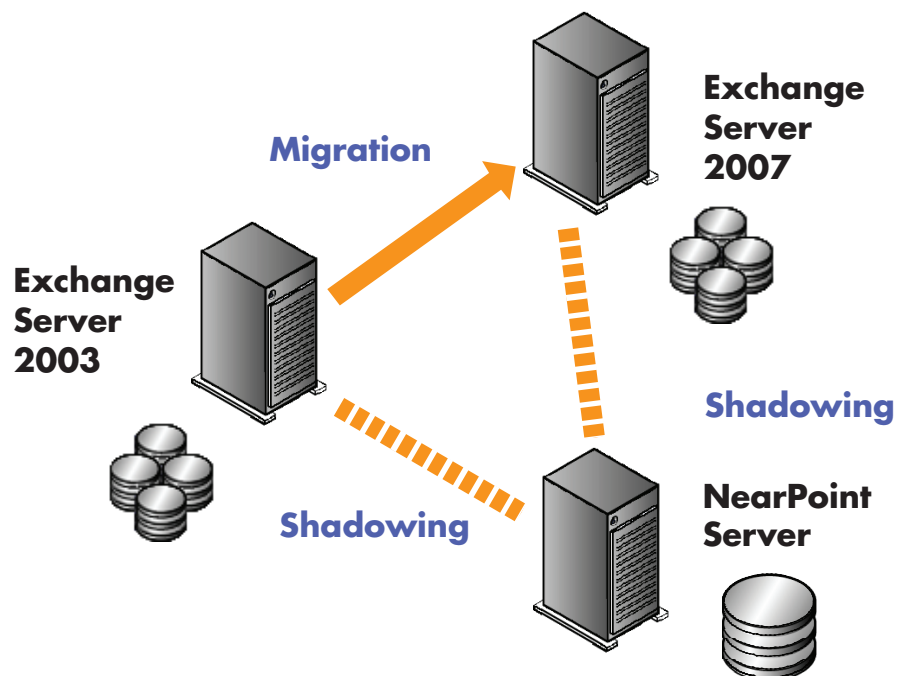
Mimosa NearPoint manages retention and disposition based on enterprise-wide, server-based policies that cannot be circumvented by users. Policies are defined at the mailbox level and can be further defined by folder and message class. NearPoint will enforce the folder retention policies and will not allow user intervention—an important requirement for compliance. Should litigation arise, NearPoint provides a Retention Hold policy that freezes all retention for a given user until released by the administrator.

<sup>2</sup>See Federal Rules of Civil Procedure. <http://www.law.cornell.edu/rules/frcp/>.

## Exchange Migration

When upgrading from one email application server to another, or whenever an email mailbox is moved from one server to another, the time it takes to move the email contents can be reduced if the amount of email is reduced. This basic principle allows email archiving solutions to improve email migration. Let's look at, for example, the upgrade from Microsoft Exchange 2003 to Exchange 2007. This upgrade requires that the contents of all existing mailboxes be moved to a new mailbox. The size of the existing mailbox determines the time required to make the complete migration.

Mimosa NearPoint supports Exchange migration by reducing mailbox size and by protecting mailbox data. To reduce the total migration time, mailbox information on the source Exchange can be reduced by NearPoint. In a typical Exchange 2003 environment with NearPoint deployed, for example, all Exchange 2003 mailbox information exists in the NearPoint archive. The administrator can reduce the mailbox size on Exchange Server using native Exchange tools to groom mailboxes to a fixed size (such as 100MB) or a fixed time period (such as 12 months). Should any problem occur during transition to the mailbox information, a full mailbox restore can be performed using NearPoint. Using NearPoint, administrators can enjoy a faster migration with smaller mailboxes and with no risk of losing mailbox information.



**Figure 1.** NearPoint with Exchange 2003 and 2007 Servers

## Exchange Local Recovery

Local recovery of email application servers is important to provide service continuity and to prevent loss of email. Microsoft Exchange 2007 has recently introduced two new methods of local recovery, which we will examine. For local Exchange recovery, Exchange 2007 supports two new features: Local Continuous Replication (LCR) and Standby Continuous Replication (SCR). LCR copies Exchange log files locally and provides on-host data redundancy, reduced backup requirements, and improved database recovery. LCR performs on-host and is restricted to a storage group containing a single database. LCR consumes local CPU and server resources and should be used with careful planning.

SCR operates by copying Exchange log files to a standby host and also improves database recovery for Exchange 2007. SCR performs off-host and, like LCR, is restricted to a storage group containing a single database. SCR requires that an additional server and storage be provisioned. Both LCR and SCR are used to restore a full Exchange database quickly from disk. They cannot perform mailbox-level recovery or message/folder-level restores. LCR and SCR are managed via the new command shell in Exchange 2007.

Email archiving solutions do not customarily provide data protection and recovery for the email application server. Uniquely, Mimosa NearPoint performs continuous data protection for Exchange based on the Exchange Transaction Log files. NearPoint improves Exchange recovery by supporting all versions of Exchange 2000, 2003, and 2007, and it has no restrictions on storage groups or mailbox stores. And very importantly, NearPoint performs entirely off-host and does not impede Exchange Server performance. NearPoint can restore a complete Exchange database, an individual mailbox, and individual messages and folders.

## Exchange Disaster Recovery

Email application servers should also be protected against disaster. For disaster protection of Microsoft Exchange, Exchange 2007 introduces a new feature called Cluster Continuous Replication (CCR). CCR performs on the Exchange Server and continuously replicates Exchange log files to a remote Exchange Server. Both Exchange Servers are under the management of Microsoft Cluster Services (MSCS).

Microsoft Exchange CCR has important requirements and certain limitations. CCR is enabled per storage group, and a storage group is restricted to a single database. Using MSCS, the two Exchange Servers and a file share witness make up the minimum disaster failover configuration. Strict requirements exist for the network bandwidth between the servers to manage the replication and heartbeat satisfactorily.

Again, it is not customary for email archiving solutions to offer disaster protection for email. Uniquely, Mimosa NearPoint protects Microsoft Exchange data against disasters and offers a less complex and less costly alternative to Exchange 2007 CCR with the NearPoint Disaster Recovery (DR) Option. The NearPoint DR Option replicates the Exchange database files managed on the NearPoint server to a standby Exchange Server without requiring complex (and expensive) clustering support. The NearPoint DR Option provides a built-in solution for protecting Exchange data in a cost-effective and easy-to-manage solution.

## Unified Messaging Management

Unified messaging refers to the application that integrates digital voicemail with the email application server. If enabled, users receive a voicemail in their inbox as an email plus an attachment. The attachment is an audio file (e.g., .wav or .wma) that can be opened and listened to in the same manner as using the telephone. The benefit of unified messaging is increased user productivity.

Unified messaging creates two major risks to email management. First, it increases email storage volume, and its growth and storage consumption must be managed carefully. Second, the voicemail may become evidence for legal discovery, unless specific email policies are defined. Microsoft Exchange is one example of an email application server that integrates with unified messaging.

Microsoft Exchange 2007 introduces a new unified messaging server role that integrates voicemail audio files with Exchange as email attachments. Users can access all voice, fax, and email data from one inbox. Administrators need to carefully plan for the impact that unified messaging data will have on Exchange mailbox capacity. Administrators also need to carefully plan how unified messaging might impact the archive.

To help manage unified messaging data in the email archive, Mimosa NearPoint provides multiple features. For organizations that want to exclude voicemail data from the NearPoint archive, NearPoint provides data exclusion policies that manage email data by excluding a particular message class or folder type, or by excluding entire mailboxes. For organizations that want to retain voicemail data in the archive and still control the archive's storage utilization, NearPoint Mailbox Extension can be configured to automatically manage storage limits by age and size. Using a combination of NearPoint features, administrators can control and manage archive storage levels and experience no impact from new data types such as unified messaging.

## Conclusion

Email archiving is a new IT application that provides multiple important benefits for managing your email application server. In this paper, our focus was on the popular Microsoft Exchange Server, but the principles we discussed apply to all email applications. We explained how email archiving not only helps manage online and offline email storage, it also manages a secure record of all email in an indexed repository. The repository can be searched easily for legal discovery, and it manages email for compliance.

Mimosa NearPoint is a next-generation email archiving solution that delivers all of the email archiving benefits we discussed for Microsoft Exchange. Mimosa NearPoint works with Microsoft Exchange Server to meet laws and regulations for compliance. Using the powerful search tools in NearPoint, legal discovery of historical email can be performed for a fraction of the cost of searching backup tapes. And NearPoint provides important features to reduce total Exchange storage and perform Exchange recovery at all levels (i.e., at the database, mailbox, and individual message levels).

Mimosa NearPoint is the essential tool to help you optimize Microsoft Exchange Server.

### Find Out More

For more information about Mimosa Systems and how NearPoint can help solve your archiving, eDiscovery, recovery, and storage management issues, contact Mimosa at 408.970.9070 or visit our web site at [www.MimosaSystems.com](http://www.MimosaSystems.com).

### About Mimosa Systems

Mimosa Systems, Inc. delivers next-generation information management solutions for information immediacy, discovery, and continuity. Mimosa™ NearPoint™ for Microsoft® Exchange Server is the industry's most comprehensive information management software solution for Microsoft Exchange, unifying email archiving, recovery, and storage management. With options for eDiscovery and disaster recovery, NearPoint ensures litigation readiness and email continuity, while leveraging cost-effective disk technologies to optimize email storage growth. Mimosa is a Microsoft Gold Certified Partner, recognized for its competencies in Networking Infrastructure Solutions, ISV/Software Solutions, and Advanced Infrastructure Solutions. Mimosa is a privately held company whose investors include August Capital, Clearstone Venture Partners, Dot Edu Ventures, JAFCO Ventures, and Mayfield Fund. Mimosa was founded in 2003 and is based in Santa Clara, California, with offices in Munich, Germany, and Pune, India. For more information, see [www.MimosaSystems.com](http://www.MimosaSystems.com).



© 2007 Mimosa Systems, Inc. All rights reserved worldwide. Mimosa, Mimosa Systems, and NearPoint are trademarks of Mimosa Systems Inc. in the United States and other countries. Other product names mentioned herein may be trademarks or registered trademarks of their respective owners