

Cloud-based email archiving: A practical guide

How cloud-based email archiving solutions can meet the regulatory and business requirements of long-term message storage, while offering clear financial and operational advantages over in-house solutions.



Many companies are tackling the challenge of email archiving head-on with cloud-based solutions that scale to business growth, conform to regulatory mandates, and deliver low operational costs.

In this whitepaper, we detail the issues involved in email archiving, consider best practices, and present a solution that emphasizes scalable cloud-based storage, secure access to assets, and high availability.

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Executive Summary

Because email dominates communication in most organizations, the handling and storage of messages is a key concern for CIOs and IT professionals alike. For legal reasons, as well as to ensure efficient and cost-effective business processes, organizations need an archiving system that provides secure, verifiable storage. Fast retrieval of messages is equally important for a number of reasons. With several megabytes of messages per user typically flowing each day, archiving must not only be scaled to enterprise-class email volumes, but also be designed to ensure continuous availability so business activities are not interrupted. An effective solution needs to address storage, auditing, accessibility, security, and search issues. Analysts agree that more and more of the world's largest corporations are discovering that a cloud-based archiving solution represents a highly effective approach to the challenge. A monumental shift is taking place in the industry, as evidenced by market research indicating that by the end of 2015¹, 50 percent of large enterprises will no longer permit users to store email in local archives.

This paper considers the ways in which a cloud-based email archiving solution can meet the regulatory and business requirements of long-term message storage. As provided by a forward-looking vendor such as Mimecast, this type of cloud-based solution offers clear financial and operational advantages over in-house solutions.

¹Gartner Inc. Building an E-mail Retention Strategy, 2nd July 2010, Matthew W. Cain, Sheila Childs

Managing the flood: Email archiving and management

Over the last two decades, email has become a fundamental communication medium, its use escalating dramatically across all industries because of its convenience and low cost. As the flood of message-based information rises, many organizations have been scrambling to cope with the management realities of massive and growing volumes of email, including long-term storage, regulatory compliance, rapid message access and retrieval, and related issues.

Discrete point solutions that augment an existing messaging platform can help cope with increasing message volumes, but these solutions often create their own problems: security vulnerabilities, upgrade headaches, policy inconsistencies, and retrieval difficulties. The nature of the digital workplace and the evolution of today's business processes demand message storage that is cost-effective and readily available. Rapid search and retrieval to satisfy both business and regulatory needs has also become equally important.

Regulatory and compliance requirements also create mandates to ensure the privacy, integrity, and authenticity of messages. Compliance with these mandates can be difficult without a unified, end-to-end email archiving and management solution.

Given the infrastructure challenges and the regulatory hurdles, organizations can get started on the right path to meeting these challenges by following these guidelines.

Minimize complexity:

The IT requirements for archiving and managing email can rapidly get out of hand without a strategic plan and an overarching perspective on long-term organizational goals. Look for solutions that streamline processes and don't further complicate IT administration tasks.

Apply policies consistently:

Faced with steep fines for non-compliance and inflexible regulatory codes, organizations have strong incentives to apply consistent policies across the entire email management infrastructure. Evaluate the entire email system—from message origination to archiving—to ensure that policies are integral to the system and applied uniformly.

Use advanced retrieval techniques:

Archiving loses its value quickly if messages cannot be located and retrieved when needed. Metadata and search techniques should be refined to support precise, high-speed retrieval of messages when needed—whether as a part of an eDiscovery request or a routine business task.

“The dual drivers of cheaper disk storage and the increased size of email messages, thanks to attachments such as images and videos, is fueling the electronic content storage explosion. Messaging storage is growing at roughly 30% annually, which means that a terabyte of storage today will swell to nearly 2.5 terabytes in just three years.”

Osterman Research,
*Convincing Decision Makers of
the Critical Need for Archiving,*
2010

Four pillars of enterprise-class email archiving

Enterprise-class email archiving involves more than simply creating a historical repository of messages. To satisfy the requirements of today's organizations, an effective email archive should address:

- Mailbox and server management
- Compliance with regulatory mandates
- Support for eDiscovery processes
- Rich knowledge management features

Mailbox and server management

Whether your organization relies on a Microsoft Exchange server or other email system, a common problem is that a large volume of messages can reside outside of the server itself in a variety of repositories and locations. This creates challenges when enforcing data retention policies and executing searches across the span of message locations.

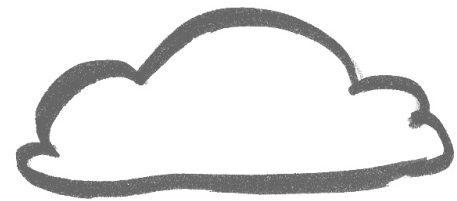
A unified email archiving system alleviates several problems:

- Stores copies of all messages in a secure central repository. Loss of the original message no longer means the complete loss of the information.
- Centrally stored data helps organizations to consistently enforce policies.
- Helps organizations enforce consistent email data retention policies by consolidating data centrally.
- Expedites and simplifies eDiscovery tasks by removing the need to search for data across multiple, and possibly inaccessible, repositories.
- Allows users to better manage the contents of their mailboxes. Archived messages can be deleted from local storage with assurance they can be accessed at a later date.
- Increases the performance of mail servers by reducing the size of individual mailboxes.



Organizations sometimes approach this situation by expanding their in-house infrastructure and performing periodic archiving operations from the primary email server. However, creating this type of archive increases IT costs considerably and adds an extra layer of complexity. In-house email archiving solutions can soon become overloaded and incapable of handling daily volumes of email because of design constraints.

In comparison, a well-designed cloud-based email archiving solution automates the process of storing and protecting information, ensuring that the decisions of individual users do not compromise the retention of data or violate corporate policy. Messages are systematically and efficiently archived and stored in a manner that simplifies later retrieval. Mailbox management for users becomes much easier and the corresponding work for IT professionals is streamlined as well, with the email archiving system performing key tasks transparently and handling storage expansion dynamically without intervention from IT.



Four pillars of enterprise-class email archiving

Compliance with regulatory mandates

To comply with regulatory mandates around the world, corporate officers bear direct responsibility for implementing measures that protect data throughout its lifecycle, from origination to transmission to storage. Some of the regulations that must be met, depending on location, are:

- Sarbanes-Oxley Act
- Security Exchange Commission rules
- GLBA
- HIPAA
- Companies Act Combined Code
- EuroSOX
- Financial Services and Markets Act 2000
- Data Protection Act
- Freedom of Information Act

Email messages frequently fall under the province of these regulations. In such a case, email archiving becomes an absolute necessity for organizations that want to avoid prosecution. Email archiving clearly makes good business sense; in the instance of a broad spectrum of regulations, it is also the law.

Establishing policy to comply with regulations can be a challenge in itself, since interpretation of rulings, changing regulations, case law, and new legislation can all affect policy-making decisions. In all cases, however, an email archiving system must be agile and scalable enough to map operations to current policy and adapt to changes in the regulatory climate. Compliance should not be compromised by having to shorten data retention mandates because of capacity issues.

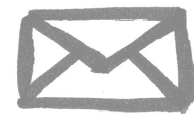
Patterns detected in the content of an archive can also reveal possible misuse of email communications, pointing out the need for policy changes or stricter governance. Violations of policy that result in data leaks or disclosure of sensitive information can be traced back to their source. Consistent policy implementation across the email management and archiving system provides a sound basis to take action when necessary against policy violators.

A strong, unified email archiving system provides the foundation for regulatory compliance, ensuring that email messages become part of an organization's historical record and that privacy, integrity, and accessibility considerations are met.

“Our old means of storage meant we were unable to search or select specific messages. Now [with Mimecast], we can archive all emails for up to seven years in a system that's as safe as a bank's vault but our audit group also has a simple means of quickly and easily retrieving any email.”

James Knapp

CTO of Butterfield Bank Cayman



Four pillars of enterprise-class email archiving

Support for eDiscovery processes

Regulatory compliance helped spur large-scale adoption of email archiving systems, but eDiscovery for litigation purposes has provided even greater incentive for the systematic use and storage of email. In many countries, email is considered a critical element of the legal process and message content is used to indicate timing, knowledge, motivation, intent, and other considerations in legal proceedings. Effective email archiving can assist in the eDiscovery process; poor email archiving can block or delay the retrieval of required message content as evidence.

Guidelines for Selecting an eDiscovery Solution

A number of factors come into play when evaluating the eDiscovery support capabilities of an email archiving solution.

Quality of an electronic document as evidence: To meet evidentiary standards, email messages must be identified as authentic with a clear chain of custody that can be tracked and validated. Email, constructed of multiple components—including headers, body, and attachments—presents difficulties in this area. Messages get distributed among users, modified, and altered during forwarding. The typical fragmented in-house email system provides no method to ensure authenticity or document the chain of custody. A cloud-based email archiving solution, however, can use metadata associated with a message, implement searches to rapidly identify multiple versions, and provide audit trails to verify authenticity. These factors all help to better support eDiscovery.

High-speed, precision searches: Locating and assessing relevant information within a collection of stored email messages in preparation for a trial can consume an enormous amount of time. Access to high-speed, precision search mechanisms—as provided by leading cloud-based solutions—drives down legal costs and enables potential evidence to be collected and evaluated quickly to build a case and meet trial deadlines. This also allows organizations to respond to changing circumstances as hearings or trials progress. One example might be presenting evidence to avoid litigation or settle a case out of court. Fragmented archiving systems can add a tremendous amount of time to even simple searches. Unified searches using metadata across a contiguous archive of messages yield faster results and can significantly enhance the process of compiling evidence based on email.

Access to deleted email: Email messages that have been deleted from a user's primary email system should still be accessible through the email archive to aid the eDiscovery process. Retrieval of these deleted messages from the archive should also include all metadata and attachments.

Cost of servicing requests: Searches conducted for compliance are quite different to those performed in support of eDiscovery processes. Compliance searches involve predictable search patterns over a set span of data, whereas eDiscovery is more a matter of mining the complete message archive for relevant details. In other words, storage for compliance purposes can be much more targeted (and limited in scope) than storage for eDiscovery, which by its nature requires a complete message history from which to draw. Fast, flexible searches are an important component of both compliance and eDiscovery, but storage capacity to satisfy eDiscovery requirements will be higher. For those using a cloud-based provider, avoid paying per megabyte for storage.

According to Gartner², by year's end 2014, 50 percent of eDiscovery projects will include a requirement for identification, preservation, and collection tools for public, web-based content.

²Gartner Inc. E-Discovery SaaS and On-Premises Software Converge at Vendors as They Mature, 29th July 2010, Whit Andrews, Debra Logan, John Bace, Sheila Childs

Four pillars of enterprise-class email archiving

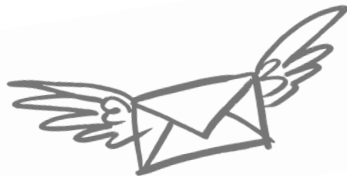
Rich knowledge management features

With so much business information being conveyed in email these days, organizations can benefit by giving employees an easy means to tap into the rich body of historical data that can be contained in an email archive.

While a content management system typically stores only completed documents, an email archive captures the full span of activities that constitute any project. The ideas and details presented in email threads can paint a picture of the genesis of a project, the decision making that influenced a marketing campaign, or the design evolution of a product during its lifecycle.

In many ways, an email archive represents much of the intellectual property of an organization. However, to maximize the value of this knowledge and information, organizations must have the ability to make it available to a wide range of staff members in a controlled manner. Support for metadata during searches, responsive search tools, and non-stop availability are important elements of any cloud-based archiving solution as these can increase the value and simplify access to the knowledge contained in an archive.

Archiving can also play a role in protecting intellectual property. For example, archiving can help avoid the deletion or loss of a message string involving a product design in a patent lawsuit. Quick access to the archived, authenticated email documenting the design idea could verify the date and origins to confirm the patent holding.



Top considerations for effective email archiving

In evaluating a prospective email archiving system for a corporation or government organization, consider these factors:

Scope of the archiving: Does the solution store and retrieve all email components, including copies, versions, attachments, and metadata?

Search capabilities: Storing email effectively is an important part of the equation, but how well does the solution execute searches to retrieve information from the archive? Performance, precision, and ease of use are all key elements of effective searches.

Ergonomics and design: How well does the archiving solution fit in with daily workflow and other applications that users rely on? Solutions that are well integrated with familiar tools—for tasks such as email access and retrieval—reduce the learning curve and are apt to gain quicker user acceptance. For example, if users exchange messages with Microsoft Outlook, they should be able to automatically archive messages and search for earlier messages directly from within Outlook.

Scalability: As noted previously, email messages are steadily increasing in size because of larger attachments and other use patterns. An email archiving solution must be able to scale dynamically to accommodate additional users, larger volumes of messages, new regulatory requirements, and changes in organizational policies.

Accessibility: Access to the contents of the archive should be available to all legitimate users from anywhere at any time. Equally important is built-in security to ensure that unauthorized users do not have access to corporate assets stored in the archive. Privacy must not be breached.

Simple management: An email archiving system that integrates with the existing mail platform will simplify the work of administrators dealing with such issues as resilience, message retention, data formats, and platform considerations. If management tools are well designed, administrative burdens will be diminished and the overall effectiveness of the archiving enhanced.

Archive security: Security provisions to protect the integrity and privacy of archived messages and information are vital. Access to the archive should be restricted using role-based access controls and discrete privilege levels. The physical archive should reside within secure data centers using best practices for safeguarding private information.

Encryption: Messages should be encrypted within the archive and also during transmission to ensure the highest levels of data security in transit and at rest.

Data integrity: For regulatory compliance and to preserve the chain of custody, data integrity must be visibly maintained during storage and transmission.

Message availability: The email archive should ensure continuous availability, ideally through the use of mirrored copies of the original messages across multiple geographical locations in case the primary system fails.

Cost effectiveness: When evaluating an email archiving solution, consider both the initial capital outlays and total cost of ownership (TCO). Storage and hardware costs can increase rapidly for in-house systems as conditions change or the user base grows. In general, cloud-based archiving provides more graceful, predictable scaling and cost controls as resources can be provisioned as needed.

Cloud-based versus in-house archiving solutions

The benefits of a cloud-based email archiving solution stem from a massively parallel architecture that traverses the web, creating economies of scale that are not cost-effective or practical for in-house email archiving solutions. This type of solution also relieves an organization's IT department from the deployment, maintenance, and provisioning responsibilities associated with an in-house system.

Factor	Cloud-based Email Archiving Solution	In-House Email Archiving Solution
Capital investment required	No up-front investments are typically required for a cloud-based solution. No additional hardware or software is needed.	Depending on the size of the organization, hardware and software for an in-house archiving solution can range from tens of thousands of (USD) dollars to hundreds of thousands.
Time to implement an archive	Cloud-based solutions can often be implemented in a few hours.	Large organizations often require 6 to 10 months to implement an email archive (not including budgeting and prioritization time).
Cost	Analysts, including Ferris ³ , and IDC ⁴ , identify lower costs and lower IT complexity as key benefits of SaaS	Cost analysis for an in-house solution is more difficult to determine because of the wide range of hardware and software options. As noted in the adjacent cell, however, these costs can be significantly higher than a cloud-based approach.
eDiscovery support	Fulfilling eDiscovery requests in a timely way requires high availability and fast search mechanisms. Solution providers with multiple data centers using grid computing technology deliver continuous availability, rapid search processes, and an auditable chain of custody for messages.	eDiscovery support can be problematic for in-house email archiving systems that lack a unified storage system spanning multiple geographies. Searches tend to be lengthier and in-house server downtime can impede eDiscovery request fulfillment.
Regulatory compliance	Cloud-based solutions that encrypt, aggregate, and track messages in an auditable manner provide a high degree of regulatory compliance in most locales.	Fragmented in-house email archiving systems maintained by organizations with a worldwide presence can complicate regulatory compliance efforts. Tracking and monitoring message histories and auditing across multiple systems creates a challenge in meeting regulations.
User acceptance	Some cloud-based solutions integrate tightly with email clients so that archiving and searches can be carried out from within the client itself. This approach tends to have a higher degree of user acceptance.	Well-designed in-house email archiving solutions provide extensions to the email client in use and make it easy for users to incorporate routine archiving and searches into their everyday workflow. These solutions vary, however, in how they integrate with the local archive, which can compromise chains-of-custody.
Management control	The best cloud-based solutions give IT a fine degree of control over policies, user features, automated operations, and retention timelines. Look for solutions that rival in-house solutions in terms of control flexibility.	The nature of typical in-house email archiving solutions gives administrators in-depth, fine-grained control over every aspect of the archiving and message retrieval process.
Message storage techniques	Ensure your selected solution encrypts all data at rest and look for solutions that store data in multiple geographical locations for maximum security and availability.	There are many options available to in-house archive storage design. Achieving a similar level of resilience typically offered by cloud vendors is often beyond the budget of many email archiving projects.
Availability of an overall unified framework for handling email	Both regulatory and business processes can be enhanced by a unified framework for email management, of which archiving is just one component. Mimecast's Unified Email Management solution fulfills this market need and brings the full range of email operations under a cloud-based infrastructure with a single point of control.	Most in-house solutions are unable to provide a unified email management approach as they are typically built from independent point solutions.

³Ferris Research, Report #798. 'Email Archiving Solutions: On-Premise vs. SaaS.' October 2008.

⁴IDC Vendor Spotlight. 'Using a Hosted Service for Holistic Email Management.' October 2008. (Sponsored by Mimecast.)

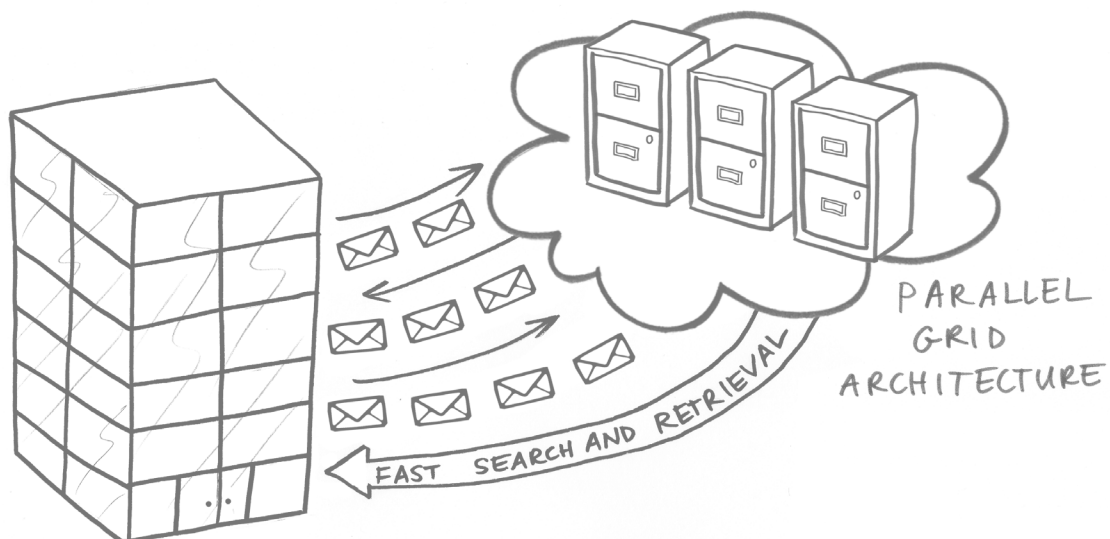
Capitalizing on the Mimecast solution

Technology solutions geared to more efficient and timely use of resources have won strong favor throughout the industry over the past few years. Just-in-time manufacturing and server virtualization techniques offer fitting examples of approaches where dynamically balancing supply and demand yields beneficial results: improved efficiency and reduced costs.

In a similar manner, the unique cloud-based solution from Mimecast lets companies scale to a level of service that meets their current needs—on a user-by-user basis. This model combines the benefits of scalable cloud-based archiving and storage with flexible support and integration with existing in-house email servers. Mimecast support for Microsoft Exchange also simplifies migration processes and helps leverage collaborative communication tools across the corporate infrastructure. Tight integration with Microsoft Outlook also helps strengthen the archiving process, an important factor for many companies given the widespread use of Outlook for email. An extensive survey⁶ of information workers in the U.S. indicated that in 2009 74 percent of all employees and 72 percent of employees in firms with more than 5,000 workers use Outlook for email.

Rather than investing in additional infrastructure or provisioning server resources on a frequent basis, cloud-based email archives and storage volumes are adjusted as necessary to meet service demands. The scalability of this approach—using the web-based Mimecast storage grid—meets the requirements of many large organizations and delivers a degree of efficiency that is difficult to obtain with in-house archiving solutions. For organizations looking for a low-risk, future-proof, affordable solution to handle email archiving, the Mimecast offering provides an approach that is easy to manage and quick to implement—with a predictable cost profile that helps keep IT budgets under control.

The entire archiving service is backed with a 100 percent service availability SLA, with all data archived in an industry standard format, demonstrating a strong commitment from Mimecast to protect and secure your archives and enable you to retrieve information at any time without interruption.



⁶Forrester Research, Inc. Four Giants Compete for your Cloud Email Business, August 13th 2010, Ted Schadler

Capitalizing on the Mimecast solution

Mimecast email archiving highlights

Among the differentiators and key benefits of the Mimecast email archiving solution, these highlights stand out:

Near real-time search and retrieval: Through innovative parallel grid architecture, thousands of machines can simultaneously service search requests, delivering results in near real-time. For eDiscovery in particular, this timesaving feature provides a significant and notable advantage over less capable methods of search.

No additional on-premise hardware required: Mimecast is provisioned solely from cloud-computing infrastructure, simplifying capacity planning with email storage that seamlessly scales. This also means that the service is immediately effective with zero capital outlay.

Built in high availability: With built-in mirroring and redundancy, reliability and availability are exceptional. The email archiving service is backed by 100% service availability (SLA).

Tight integration with Microsoft Outlook: Seamless integration with Outlook reduces the need for user training and provides easy access to archiving and retrieval features.

Strong security features: Every email message is encrypted and stored in triplicate across multiple, geographically dispersed, secure datacenters and held within a defined jurisdiction.

Comprehensive support for eDiscovery requirements: Centralized storage, strong chains of custody, comprehensive audit trails, and tracking features provide valuable support for eDiscovery processes and help respond rapidly to litigation and regulatory requests.

Unified message handling: Mimecast is the only archiving solution that is both the primary place of receipt of the email and the final resting place, recording all metadata from ingress to egress.

Long-term archiving: Mimecast email archiving stores email for up to 10 years by default and retains a full audit trail of searches and message access to support long-term email archive requirements across global geographies.

“The Mimecast system allows us to offload all the hassle of capacity planning for the next ten years of storage without sacrificing any of the control.”

Tim Hyman

Head of IT, Taylor Wessing, UK

Conclusion

With planning and forethought, a cloud-based email archiving solution can effectively meet the full range of an organization's business requirements and also satisfy regulatory mandates. Support for essential tasks, such as consistent enforcement of email retention policies and rapid eDiscovery searches, should be central features of any archiving solution. Properly deployed, an email archiving solution should work in tandem with an existing email system, supporting, rather than disrupting each user's workflow. The best solutions streamline administrative requirements with centralized management features that provide a unified view of operations and precise control over options, privileges, and user capabilities. Tightly integrating a cloud-based email archiving system with an organization's email platform offers further advantages. For example, extending Microsoft Exchange with the Mimecast email archiving solution brings the benefits of cloud-based archiving and management—including continuity, fast eDiscovery, and compliance—to an organization's IT infrastructure.

As a comprehensive solution, Mimecast's Unified Email Management system is the only email management service to offer a fully unified email security, continuity, and archiving service, uniquely satisfying the email archiving requirements of organizations.

Mimecast is a leading provider of essential cloud services for Microsoft Exchange. Mimecast delivers enterprise email management services that include security, continuity, and archiving. This suite of services provides total end-to-end control of business email, while minimizing risk and reducing cost and complexity. Founded in 2003, Mimecast serves thousands of customers worldwide and has offices in Europe, North America, and Africa.