



Email Archiving & Records Management

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| | |
|---|-----------|
| Email Archiving & Records Management | 5 |
| Terminology..... | 5 |
| Business Problems | 6 |
| Email Backup is Broken | 6 |
| Improving Customer Service | 6 |
| Satisfying Regulatory Obligations | 7 |
| Reducing Discovery Costs | 7 |
| Defining and Protecting Corporate Intellectual Property | 7 |
| Industry Perspectives | 8 |
| Financial Services | 8 |
| Government Industries | 8 |
| Telecommunications | 8 |
| Pharmaceutical/Healthcare..... | 9 |
| Leading Solutions | 9 |
| Core Functionality..... | 9 |
| Leading Vendors | 10 |
| Microsoft's ARM Services | 11 |
| Future Trends | 11 |
| Greater Awareness of the Business Problems..... | 11 |
| New Sales Channels..... | 12 |
| Collaboration With Content Security Vendors | 12 |
| Vendor Consolidation | 12 |
| Heightened Awareness of Privacy Issues | 12 |
| Certification and Compliancy as a Prerequisite | 12 |
| Increase in Outsourcing Opportunities | 12 |
| Instant Messaging Support..... | 13 |
| Support for Handheld Devices | 13 |
| Emergence of New Standards | 13 |
| eManage Email Lifecycle Management..... | 15 |
| Capture and Classification | 15 |
| Email Auditing..... | 15 |
| Secure Access and Retrieval | 15 |
| Records Management..... | 15 |
| Email Archiving..... | 15 |
| Supported Environments..... | 15 |

Email Archiving & Records Management

As email usage continues to grow in volume and importance, users are building large message repositories. These repositories contain a lot of valuable information that is important to both the individual and the organization as a whole. As a result, *email archiving* technology is evolving to help manage message stores.

Email archiving can be compared to an established discipline, that of *records management*. Records management traditionally deals with paper-based records, managing them throughout their lifecycle, from creation through long-term storage and ultimately destruction. We believe that many records management concepts will be applied to email archiving, thus the focus of this paper is on email archiving and records management (*ARM*).

First we introduce basic ARM concepts. We follow with a review of the business problems that fuel the need for ARM and the specific industries whose needs are most acute. We then summarize the leading products and services. Microsoft Exchange is the dominant corporate email product, so we also review the ARM features built into Exchange. We finish with a look at key ARM trends.

Terminology

A *record* is any piece of data, in any form, created or received in connection with the transaction of an organization's business. Thus, an email is a record.

Records management is the discipline of managing records to meet operational business needs and accountability.

- An organization uses an *email retention policy* to define what records must be kept, how they should be stored and retrieved, and how long they should be preserved. These can be based on criteria defined by the organization or by regulatory requirements.

Content control is the ability to appraise, classify, index, and retrieve data based on business-defined criteria. An anti-virus solution is an example of such an application.

Email archiving is where messages are moved to a central repository for long-term storage, allowing access and search by authorized users.

An *email policy* is a set of guidelines defining use of an organization's email. Among other benefits, an effective email policy can reduce corporate threats and liabilities.

Lifecycle management describes the discipline of managing a record's lifecycle. The lifecycle of an electronic record is no different than that of a physical record. The management of a business record can be defined in three basic lifecycle stages:

- *Creation or Receipt* is when a record is initiated or received by an organization.
- *Maintenance and Use*. Once the record exists, it can be classified, routed, or retained, depending on how the content is analyzed and interpreted.
- *Disposition* actions are taken when the record is no longer needed for current business. Administrative, legislative or regulatory conditions or requirements determine when the record has reached this state. The record can be transferred, archived, or permanently destroyed.

Business Problems

Many organizations have implemented backup products and homegrown scripted solutions in order to save email and limit the size of messaging servers. However, these approaches fall significantly short of satisfying ARM requirements. We now discuss the shortcomings of today's backup systems in more detail.

Email Backup is Broken

Organizations typically limit the size of a user's message store because otherwise server backups and restores would take too long. So users either delete emails, or archive them to personal Outlook folders that are normally stored on individual desktops.

This means that central email backup processes don't work properly, because important emails are inaccessible. With ARM technology, a user can delete an email or archive it locally, but a central copy is still kept.

Improving Customer Service

Email is now heavily used for communications with customers. Within a given organization, it's likely that at least three systems are used to communicate with an individual customer: the main email package, such as Exchange or Notes; a customer relationship management (CRM) system; and a help desk system.

The problem is that there's no way for customer service representatives to review consolidated communications with a given client in a timely manner. Further, representatives spend a lot of time searching for records between systems, as well as for records that may not even exist. This obviously incurs significant costs, in addition to making the client wait, thereby reducing the quality of customer service.

ARM helps. Many products work with both mainstream email packages as well as the leading CRM and help desk solutions

Satisfying Regulatory Obligations

Regulated industries have strict record retention requirements that go beyond simple backups. For example, the Securities and Exchange Commission (SEC) in the US, the Financial Services Authority (FSA) in the UK and the Commission des Operations de Bourse (COB) in France all impose similar regulations on financial services business. Each requires secure, long-term archival and retrieval of email, including audit trails for retrieval and disposition.

Standards for applications have also emerged. In particular, the Department of Defense 5015.2 standard was developed by the US government to define the baseline requirements for records management.

Reducing Discovery Costs

In litigation, opposing parties may require each other to produce copies of past emails satisfying particular characteristics. For example, plaintiffs suing a cigarette firm might request all emails containing the words *illness* and *cancer*.

Responding to such "discovery" requests is extremely expensive and time-consuming when one has to manually sift through message store backups. For large organizations, costs of the order of \$1 million per request are not unusual. ARM systems significantly reduce the costs incurred and time taken to satisfy discovery requests.

Defining and Protecting Corporate Intellectual Property

Organizations must be able to define and retain important records and make them available for audit and other types of access. When users delete email to stay beneath a message store quota, then they, and not the organization, make the decisions as to what should be retained.

Administrators, not individuals, need to ensure that emails are analyzed, and that appropriate corporate assets are identified and retained for future use. ARM technology helps organizations decide what emails constitute intellectual property, and then ensures that the emails are correspondingly classified, stored, and made accessible.

Industry Perspectives

Certain industries are likely to be early ARM adopters because regulatory bodies mandate specific practices for them. The following four arenas stand out:

Financial Services

Financial services businesses increasingly communicate with clients via email. They also provide bulletin boards and chat rooms, and conduct trade transactions online. As a result, regulations have been created to ensure the preservation of the data that has been electronically exchanged. For example, the SEC requires that all US securities organizations retain all documents for a minimum of five years. These documents must be easily accessible by the SEC for the first two years.

In fact, the financial sector is so important that it's determining the development efforts of ARM vendors.

Government Industries

Government officials use email for internal and external communications. Internally they use it to communicate opinions, program, and budget information. Externally they use it to communicate with citizens and contractors.

Regulating bodies exist in many countries to monitor these communications. For example:

- In the US, the National Archives and Records Administration (NARA) is responsible for creating the General Record Schedule (GRS) and auditing compliance with laws and regulations for retention of electronic records outlined in the Code of Federal Regulations (CFR).
- In Australia, the National Archives of Australia (NAA) enforces policies to regulate email retention.

Telecommunications

Email is a critical customer service tool for the telecommunications industry. Customers can receive their account statements, service notifications, and other communication via email. In the US, federal regulations (CFR Title 47 Part 42) require the capture and retention of these records for federal auditing purposes.

Pharmaceutical/Healthcare

Pharmaceutical firms use email to exchange research data, submit applications, and file research reports. Physicians and healthcare institutions use email to communicate with their patients and colleagues. The increased use of email has entailed new legislation.

For example, in the US, the Food and Drug Administration's Title 21, Part 11 requires the preservation of all electronic records. Additionally, the Health Insurance Portability and Accountability Act of 1996 (HIPAA 1996, Public Law 104-191, Part 164 – Security and Privacy) defines the requirements to secure the privacy of individual health records.

Leading Solutions

Now that we've outlined the problems, we examine the core functionality of ARM solutions, and the leading vendors that provide products and services for this market.

Core Functionality

ARM products and services share three core features:

- *Centralized Administration.* Organizations can define policy-based retention rules and schedules to capture and store email records.
- *Selective Retention.* Based on their business requirements, organizations can specify criteria to filter out unnecessary or redundant email. For example, filters can identify and ignore spam and duplicate messages so only important business email is archived.
- *Real-Time Search and Retrieval.* Users can run full-text searches on any stored data or metadata, as well as retrieve the data in real-time with no latency.

ARM products and services tend to differentiate themselves along the following lines:

- *Content Interpretation and Analysis.* Here content interpretation technologies, typically keyword filtering, scan the body and attachments of an email. Based on rules or policies set up by the organization, certain actions are then automatically executed. For example, spam and personal email can be detected and removed from the ARM processes, and all email communications with specific customers can be archived. This is a highly complex area of R&D and many innovations will emerge in the future.

- *Archiving.* Email and attachments are migrated to an alternate repository, after which authorized users can search and retrieve specific messages. These solutions are typically automated, using policies and content control mechanisms to determine what and when to archive.
- *Email Records Management.* Email records can be captured at the time of creation, analyzed, stored in a secure location and ultimately destroyed. These solutions also provide advanced retention, disposition and auditing features. Email records can also have expiration dates so that they self-destruct automatically at a specified time.

Leading Vendors

The following table summarizes the leading vendors.

| Vendor | Web URL | Content Interp'n and Analysis | Archiving | Email Records Mgmt |
|----------------|--|--------------------------------------|------------------|---------------------------|
| Educom | www.educomts.com | | √ | |
| eManage | www.emanagecorp.com | √ | √ | √ |
| Iwitness | www.iwitness.com | √ | √ | √ |
| IXOS | www.ixos.com | | √ | |
| KVS | www.kvsplc.com | | √ | |
| OTG | www.otg.com | √ | √ | √ |
| SRA – Assentor | www.assentor.com | √ | √ | |
| Tower Software | www.ustrim.com | √ | √ | √ |
| TrueArc | www.truearc.com | √ | √ | √ |
| Tumbleweed | www.tumbleweed.com | √ | √ | |
| Veritas | www.veritas.com | | √ | |
| Zantaz | www.zantaz.com | √ | √ | |

Today's email archiving market is in its infancy. A wide variety of vendors compete, with no clear leader. Here we list the most important vendors.

Microsoft's ARM Services

By itself, Exchange has limited ARM functionality. On the server side, it has a mailbox management tool that can purge old records, as well as a message journaling service that keeps a copy of all email.

On the client side, Outlook allows users to archive their messages as well as search the message repository. When they archive, the messages are moved to personal folders that can be stored locally or on the network. However, this practice doesn't alleviate the overall storage problem. Personal folders are difficult to manage, and this circumvents an organization's centralized administrative functions for messaging. Regardless of where the messages are stored, users can run a full-text search for messages with specific data from the Outlook interface.

SharePoint Portal Server (SPS), Microsoft's intranet portal server, offers some classification, search-and-retrieval, and purging capabilities, although these apply only to live (as opposed to archived) data.

For the next two to three years, Microsoft has no plans to add advanced ARM functionality, leaving it to third-party vendors to do this.

Future Trends

We now describe the most important trends to expect over the next five years. We base these expectations in part on what we see happening in the market and from our discussions with a wide variety of senior technologists from ARM vendors.

Greater Awareness of the Business Problems

Most organizations have only a general understanding of the issues discussed earlier in the Business Problems section. As such, most ARM purchases so far have been reactive decisions, where the customer aims to solve a pressing problem rather than provide for its future needs.

This will change. Organizations will become far more conscious of the underlying issues affecting email archiving and plan for them in a systematic way. For example, more corporate assets will be identified in email, and discovery support systems will be implemented.

As organizations become aware of these business problems they will find the technology is already there to resolve them. Vendors have been targeting this market and will be able to meet the demand.

New Sales Channels

Today, vendors sell directly to large organizations. However, small and medium-size businesses also require ARM services. Sales to this sector will be primarily through channels such as systems integrators and mail order shops. Such channels will be put in place over the next few years.

Collaboration With Content Security Vendors

There is an established market for products and services that delve into emails, classify them, and then take corresponding action. For example, anti-virus products identify emails carrying viruses and then quarantine them; anti-spam services suppress unsolicited commercial emails; and keyword filtering products check for sexually offensive content or ensure that disclaimers are included.

Such content security solutions are highly complementary with ARM offerings. For example, they provide for email classification, and they can stop inappropriate traffic being archived. Expect to see much collaboration between ARM and content security vendors.

Vendor Consolidation

There are a lot of ARM vendors out there, and new ones are cropping up every day. They won't all survive. As the industry matures it will consolidate to a handful of vendors. For the foreseeable future, the leading messaging vendors like Microsoft and Lotus will leave this area to third parties.

Heightened Awareness of Privacy Issues

Privacy will come to the forefront. For example, employees will sue for breach of privacy; watchdog advocates will scrutinize how ARM solutions are applied; and vendors as well as multinationals will be aware of the different privacy regulations in effect in different countries.

Certification and Compliancy as a Prerequisite

Organizations will continue to push vendors for regulation-compliant solutions. They will only evaluate solutions that meet industry and regulation standards, forcing vendors to keep focused on certified and compliant solutions.

Increase in Outsourcing Opportunities

ARM outsourcing will become a natural complement for hosted email providers. ISPs and other service providers will offer it as a value-add service. Organizations considering outsourced services will use hosted archiving to “test the waters.”

Instant Messaging Support

Today, instant messages usually leave little trace. However, these conversations are often valuable and need to be retained, so ARM for instant messaging will soon become a requirement. Moreover, it is highly likely that regulatory bodies will demand such oversight.

Support for Handheld Devices

Users, increasingly, will access their email through handheld devices such as cell phones and wireless-connected personal digital assistants. So users will also need to be able to access archived data from these devices.

Emergence of New Standards

Various standards are being defined today that have bearing on ARM technology. Some of these—and it's hard to know which ones—are likely to have a real market impact.

The most relevant initiatives come from groups of the Internet Engineering Task Force, which are working on:

- Message tracking, to provide data on the path a message has taken, including its current routing status. (See: www.ietf.org/html.charters/msgtrk-charter.html.)
- Data compression, which will be valuable as more multimedia data is archived.
- Long-term storage to extend the shelf life of archived data.

Author: Gailene Nelson. Editor: David Ferris.

eManage Email Lifecycle Management

eManage (www.emanagecorp.com) provides enterprise-wide email lifecycle management for Microsoft Exchange. It captures email, and based on content analysis and interpretation, it classifies, retains, and carries out disposition actions on them. eManage is certified to the US DOD 5015.2 records management standard and complies with industry regulations (such as SEC 17a-4, HIPAA and FDA Rule 11.)

Capture and Classification

Email and attachments are captured from MS Exchange Server and stored together in secure Exchange Public Folders. This can be done manually, automatically, or in bulk.

A built-in auto classification engine categorizes email according to business rules defined by the organization. Captured records are then organized in a hierarchical file that acts as a knowledge map.

Email Auditing

All email content is analyzed and audited against corporate email policy. Based on the results of the audit, content that may violate legislation such as privacy acts or corporate security can be identified and quarantined.

Secure Access and Retrieval

Secure access is only provided to authorized users. Users can retrieve records via navigation of the file classification or by searching through record profiles and content.

Records Management

Advanced retention and disposition actions are applied to records based on how an organization defines its retention schedule. These actions include time, event, and project-based processes.

Email Archiving

Email and attachments are archived to magnetic and/or optical storage, maintaining their retention and disposition quality attributes, and remaining accessible through the file classification.

Supported Environments

eManage supports Windows 2000/NT/98/ME/XP, Exchange 2000/5.5; Outlook 2000/98, SharePoint Portal Server, ODBC-compliant databases, and Microsoft .NET.

Recent Reports from Ferris Research

Microsoft Exchange's Mobile Connectivity Strategy
Email Standards Update
Email Archiving Survey
Instant Messaging: Current Issues, Key Trends
MEC 2001: A Conference in Transition
Instant Messaging and Presence Standards
Email in Higher Education
Message Archiving: Leading Vendors, User Requirements, Pricing
Microsoft's .NET My Services ("Hailstorm"): Strengths, Weaknesses, Opportunities, & Threats
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Electronic Message Archiving
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Exposing Directories to the Outside World
Metadirectory Usage
Email Sales Newsletters: A Major New Marketing Opportunity
When Organizations Merge: Integrating Email and Collaboration
Quick WAP Tutorial
Document Management II: Evaluation, Implementation, Trends
Document Management I: Tutorial and Applications
Managing Email Overload
Exchange Server Capacities
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Active Directory Migration
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