

WHITEPAPER

Complete Lifecycle Management for Email Records with EAS and eManage

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This whitepaper focuses on the joint solution offering of EDUCOM and eManage, and is focused on providing complete lifecycle management for all of an organization's electronic (and paper) records. The combined solution delivers the necessary tools for the classification, management, retention and final disposition of the electronic records associated with the messaging portion of a complete records management solution. Executives, IT managers, administrators and records management professionals from both the government and private sector will benefit from reading this solution whitepaper. The eManage solution is DoD 5015.2 certified for records management.

Executive Summary

Companies today are challenged with managing their increasing volumes of electronic communications and documents. In addition many industries are faced with stringent records management and compliance policies from regulatory agencies such as HIPAA, NASD, SEC and the U.S. Department of Defense (DoD). EDUCOM and eManage have integrated their products to provide complete email and records management solution that includes regulatory compliance tools.

EDUCOM and eManage are both leaders in their respective field, and together they provide an unmatched business solution for electronic records & document management. The two companies are continuing to build upon their five-year technology alliance by leveraging the strengths of each product to provide the best value for customers who require both records management and email archiving functionality in Microsoft environments.

eManage is a developer of electronic records management products that enable organizations to manage corporate records at an enterprise level. eManage delivers a complete solution for the management of corporate records, from the capture of email and the authoring of documents, to the analysis and interpretation of their content, to their processing, records management, archiving and final disposition. eManage provides access to corporate records within a secure and collaborative environment.

EDUCOM is the developer of Exchange Archive Solution (EAS), a complete email archiving solution for Microsoft Exchange environments, with robust archiving, searching and storage management features that enable total lifecycle management of email records. EAS 3.0 is the only solution designed to handle the unique archiving requirements of globally distributed organizations.

The eManage and EAS products address the market's need for an integrated solution that includes intelligent content interpretation & processing, record management and archiving. They also enable organizations to improve productivity, reduce the total cost of ownership of their messaging infrastructure, mitigate legal costs and risks, ensure compliance with corporate policies, and enable regulatory compliance. eManage products are DoD 5015.2 certified and compliant with SEC 17a-4, HIPAA and FDA rule 11.

The integrated solution consisting of EAS 3.0 and eManage v4.5, provides the most powerful tool for customers desiring complete lifecycle management for their email records. With the DoD 5015.2 certification of eManage, and the technological enhancements of EAS 3.0 for globally distributed environments, the combined solution is the only product available with true enterprise email management and retention compliance capabilities.

The following discussion will provide a brief overview of records management, will introduce both the eManage and EAS products, and will describe the functionality and benefits of an integrated eManage and EAS solution.

An Overview of Records Management

Information is the most valuable asset of an organization. The ability of information workers to access all necessary and relevant information quickly can be the difference between an effective organization and an ineffective one. Of course “effectiveness” translates into monetary gains. Simply put, the longer it takes to find information, the more it costs. Lost information (intellectual property) can be quite costly to an organization. The larger an organization is the greater the quantity of information under management at one time. As this quantity of information grows, it becomes important to not only retain and locate this information, but also to expire the information (and dispose of it) as it loses its value to the organization. This will ensure that only relevant information is retained, making searches more efficient, and the returns of the searches more useful for the knowledge worker. For the purposes of this discussion we will talk about information in terms of “records” and the management of these records.

What is a record?

According to the U.S. Federal Records Act, a record is:

“... all books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received ... in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities...because of the informational value of the data in them”

(Source: U.S. National Records and Archives Administration, (NARA) (44 U.S.C. 3301) <http://www.archives.gov>, 2003)

While the above definition was designed primarily for federal agencies, this discussion is broader in scope, recognizing that records management has value both in the government and public sector. For our purposes, one of the most important items in the above definition includes the description that indicates that an item can be a record “regardless of physical form or characteristics”. This relates to the reader that we must definitely include items in electronic format specifically email records. Additionally, the wording of the above definition includes “appropriate for preservation” indicating that for some organizations only certain records must be kept, while others may have a requirement to retain everything. In either case the joint solution covered in this paper meets these requirements.

The Process Begins with Policy

Having established what a record is in general, it is necessary for each organization to more specifically define which records are “appropriate for preservation”. This is the beginning of the records management process, defining details such as which records the organization should keep, for how long, in what form, and the final disposition of the records at the end of their useful life. Each organization will set records management policy based on different factors. Perhaps the policy will be driven by regulations imposed on their industry or government agency. Maybe the organization is driven by its product life cycle or some other factor intrinsic to their particular industry or business. Whatever the motivation for records management or the parameters that define the need to retain the information, policy must be set to govern the records retention. This is the first and most important step in the process.

Establishing a Taxonomy for Records

Part of the process of defining records and how they will be stored is the development of taxonomy for the records. ‘Taxonomy’ is a term used to describe the classification of records into logical groupings that make sense for a particular organization, based on the organization’s established policies for records retention. To use the analogy of a library card catalog system, the records are the books, periodicals and other literary items stored in the library. The taxonomy is the classification under which the library organizes the materials in the card catalog for searching by the library patrons. The classifications might include groupings by subject, title, and author and would include higher-level organization such as research materials, periodicals, fiction and non-fiction for example. Each item stored in the library would be listed in the search indexes (card catalog) by these various classifications for easy location and retrieval by patrons. The next logical step is therefore to develop a plan for determining the physical location of each record in the system.

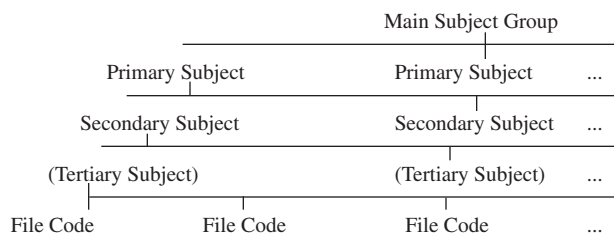
Establishing a File Plan

Once the important records have been identified, policies set and classifications determined, a system of filing the records for retention and retrieval is necessary. A system for filing the record objects is called a file plan and will determine the organizational structure of the records in their physical storage location. The Smithsonian Institution Archives defines file plan as:

“... a written procedure for organizing files based upon a specific system (e.g. alphabetic, numeric, subject, functional, etc.). It provides structure to unorganized or inadequately arranged records for better control, maintenance, and access. A plan provides a broad perspective of unit activities and reflects what and how a unit conducts its business. At the same time, the file plan should address the unique needs of an office, and should be clear and consistent”

(Source: Smithsonian Institution Archives, File Plans, <http://www.si.edu/archives/archives/2rmfileplan.html>, 2003)

Extending the analogy of the library system, the Dewey Decimal System provides the file plan for the management of library records. Each item in the library is assigned a decimal number that represents both the classification and will ultimately determine the physical location of the item within the library. The University of Toronto File Plan shows that a file plan “arranges file subjects in a logical, hierarchical manner, from the general to the specific (i.e. from main subject groups to specific file codes).” The following diagram clearly shows the highest level of their file plan and the hierarchy they describe:



(Source: University of Toronto, Archives and Records Management, University of Toronto File Plan, 1999)

Organizations should design a file plan that makes sense for the organization’s activities and ensures that records retained within the system will be easy to locate. Further, as indicated in the following definition of a file plan, the plan will include information as to the final disposition of the records at the end of their lifecycle.

“A file plan allows the rapid retrieval, use, and disposition of records and lays the groundwork for a successful records management program. A good file plan, one component of a filing system, should be simple and provide structure, flexibility, and uniformity.”

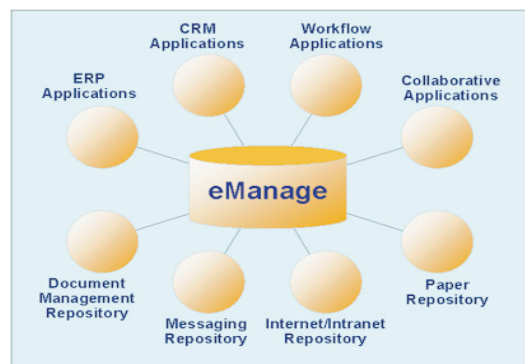
(Source: U. S. Environmental Protection Agency, File Plans, <http://www.epa.gov/records/tools/toolkits/filecode/>, 2003)

Once the policy and planning for a records management system has been accomplished, the actual system for the storage, search and retrieval of records must be constructed. For the purposes of this discussion we will focus on a system for electronic records management, and more narrowly on the management of electronic communications such as email. As we will see in the following section, the eManage records management solution provides all of the necessary functionality for an organization to manage all of their records and when paired with EAS and EAS-STORM from EDUCOM, the integrated systems provide unmatched capabilities for the management and long-term storage of electronic information.

eManage v4.5...Providing Digital Transparency in the Enterprise

Today’s pace and competitive nature of business requires that organizations create and maintain a method for their knowledge workers to search, access and retrieve all manner of records within the organization. This repository of information must include paper documents, electronic files or documents, internet/intranet documents, and records from various database systems like CRM or ERP systems. Any search of the overall system should yield appropriate information from all of these systems. In short, all information within the organization should be accessible from a single location, thus being digitally transparent to the user.

eManage v4.5 provides a complete solution for the management of corporate records, from the capture of email and the authoring of documents, to the analysis and interpretation of their content, to their processing, records management, archiving and final disposition. eManage provides access to corporate records within a secure and collaborative environment. It makes the most of an organization’s existing business system environment through its integration with line-of-business applications (such as CRM, ERP, etc.), and its support for existing information repositories for record storage. Examples of such repositories include Microsoft Exchange, SharePoint Portal Server, etc.



Some of the features of the eManage v4.5 solution include:

- **Document Capture**
Documents can be captured from various sources (document authoring tools, image scanners, Microsoft Exchange, etc.). Supports bulk import from high-volume image capture and third party applications.
- **File Classification**
Documents are organized in customizable hierarchical and visual business taxonomy. The auto-classification engine classifies documents based on corporate rules. The subject series, folders and documents of this taxonomy have extensive, customizable and searchable profiles.
- **Content Interpretation & Processing (optional)**
Captured documents and email are audited for questionable content with quarantining and/or notification actions for records that violate corporate rules for Privacy Act, spam, offensive, confidential and other types of content.
- **Versioning functionality**
Documents are subjected to extensive version control functionality.
- **Advanced Search and Retrieval**
Users can navigate the file classification, search the record profiles and contents, and retrieve them from their repositories. The Object Class feature allows the definition of different profiles to match the business nature of the documents and folders. Access to file classification and records is provided through a web interface and a Windows interface.
- **Security**
Extensive security is provided to the documents including access levels (100 levels), group and role security.
- **Scalability**
Supports large and distributed enterprises through its efficient design and integration with scalable information stores.
- **Seamless Integration with Repositories**
Seamlessly integrates with multiple repositories: Exchange Server, SharePoint Portal Server, Internet/Intranet, various document management systems, etc.
- **Lifecycle Management**
Features DoD 5015.2 certified records management functionality for all corporate records including email records. Advanced lifecycle management features time, event, time/event and cut-off-based retention, archiving, and disposition. Reports are provided.
- **Seamless Integration with Applications**
Seamlessly integrates with line-of-business applications (CRM, ERP, Workflow, etc.) using eManage folder-enabling API.

The eManage solution categorizes electronic records into a corporate taxonomy, retaining them, and identifying discrepancies when compared to the corporate policies. The latest release, eManage v4.5, adds significant web-based functionality, improved secure access to Microsoft Exchange and SharePoint environments, and maintains the records with strong security within their native repositories. The unique capability to simultaneously manage electronic records stored in multiple repositories provides significant advantages to enterprises. Customers using the integrated solution have the additional benefit of improving their retention compliance capabilities to satisfy requirements of the U.S. DoD 5015.2 standard, SEC 17a-4, HIPAA, FDA rule 11, Canadian PIPEDA/C6 and other international legislation and regulations.

EAS 3.0...The Evolution of Email Management

EAS 3.0 is leading the evolution of email management. One of the reasons for this leadership is the open architecture upon which the solution is based. Fast, efficient, and limitlessly scalable for any enterprise environment, EAS leverages the customer's existing information technology (IT) environment and accepted computing standards to deliver enterprise-class email management. An additional benefit of the open and modular architecture of EAS 3.0 is that customers can implement the entire solution, or just the parts that make sense for their business needs. Customers can also grow their EAS deployment along with the needs of the organization, or roll out the application for part of the users or geographic sites, and later expand the implementation to additional sites, users or groups.

EAS 3.0 Global Enterprise Edition provides customers with a scalable email management solution designed for globally distributed Microsoft Exchange environments. The latest version of EAS is the ideal solution for the geographically dispersed organization. It allows for centralized management of distributed email archives with added efficiencies for the searching and movement of email records across global networks.

EAS 3.0 provides significant value as an email management solution. With EAS 3.0 and EAS-Search the customer is able to archive, search, and retrieve Exchange message class data while greatly improving the performance and scalability of their Exchange environment.

Some of the technical benefits of an EAS environment include:

- Greatly reduce the size of the Exchange Information Store database
- Reduce the Exchange backup window due to reduced Information Store size
- Improve performance of Exchange Servers by offloading older message data to Document Store
- Support additional users with each Exchange Server or reduce the number of Exchange Servers required to support the existing users.
- Reduce the overall Exchange storage requirement through reduction of Information Store and up to 80% compression of data archived to Document Store

EAS 3.0 is the only email management application to truly provide the flexibility in deployment and scaling that is needed for a globally distributed enterprise. EDUCOM has developed a “Parent-Child” architecture within EAS 3.0, which allows for centrally managed and administered control of email policies while still allowing for regional dependencies and administration of messages. While there will be only one Parent Server in an EAS 3.0 environment, there can be any number of geographically dispersed EAS Child Servers, providing for limitless scalability. Users can access, retrieve and store email regardless of their geographic location. This open and distributed architecture reduces server load and bandwidth concerns.

Most mobile users will likely use a PST file or an OST file to retain their email, calendar, contacts and other message class data in order to maintain access to this information while they are on the road. As these users carry valuable corporate information, the enterprise will want to ensure that these users’ message data are archived even when they are connected to the corporate network. Additionally, the users will require that their personal folder structure is maintained, and that they can search and retrieve the archived items when needed. EAS 3.0 provides mobile user services in a number of ways including:

- Integration with Microsoft’s Outlook Web Access (OWA) Client
- Automated PST Gathering and Migration
- PST Archiving
- Off-line (OST) integration
- EAS Web Client

Archiving email data for networked and mobile users is only the beginning of the challenge involved with the retention of email. As a significant quantity of email enters the archive, new issues arise with regard to the management of the physical storage resources, interacting with the archives for compliance auditing activities, and the ongoing lifecycle management of the information contained in the archives. With EAS-STORM, the customer now has the ability to further manage the archives throughout their information lifecycle, including the very granular ability to manage the usage of physical storage resources. Additionally, EAS-STORM provides compliance tools, and provides for a host of other email archive management functionality.

Complete Lifecycle Management of Email Records

It is well understood that the use of email has become a primary means of communication in both corporate and government organizations. So pervasive is the use of email that organizations are sending and receiving millions of email messages each day, and accumulating terabytes of email data within their messaging systems! These mountains of data have a crippling effect on the performance of message systems and network infrastructures, and provide even greater challenges as an organization moves to implement a records management system that includes their electronic communications records.

Organizations desiring complete lifecycle management for their electronic records in a Microsoft Exchange environment are faced with two basic challenges. The first is obtaining a records

management solution that will provide access to all types of electronic records through a single interface. The second challenge is finding a system that will enable the organization to store, search, retrieve and manage the monolithic quantities of email data that will enter the system over the lifecycle of that data. Ideally, both challenges will be solved either by a single system or seamlessly integrated solution.

An integrated solution consisting of EAS 3.0 and eManage v4.5, provides the most powerful, integrated solution available for customers desiring complete lifecycle management for their email records. With the DoD 5015.2 certification of eManage, and the technological architecture of EAS 3.0 for globally distributed environments, the combined solution is the only product available with true enterprise email management and retention compliance capabilities.

EAS 3.0 essentially provides the heavy lifting of the archived email objects, the archiving and long-term storage management and retrieval, while eManage provides the content analysis, interpretation and records management capabilities to meet customers' retention compliance requirements. When the total solution includes the powerful backend EAS-Storage and Retention Manager (EAS-STORM), the customer has virtually unlimited scalability and the ability to utilize any spare capacity within the existing network infrastructure. The organization can further manage their email data through its storage and retention lifecycle, efficiently and cost-effectively utilizing their primary, secondary, tertiary and even off-line storage resources.

How the Integrated Solution Works

When an email comes into an organization through Microsoft Exchange, it is captured by the eManage application, logically classified according to the established taxonomy, and stored inside secure public folders in Exchange. The contents of these secure folders are not viewable by Outlook users, only by eManage and EAS users in an integrated environment. Once inside the integrated system, all email objects are protected in a secure method that prevents altering or removal that is not in accordance with the policies implemented through eManage.

On a scheduled basis determined by the EAS Administrator, the hidden public folder used by eManage is archived by EAS, and the eManage application is "notified" by EAS that these email objects have been archived and no longer are present in that folder. The email message objects (with their attachments) are removed from the Exchange Information Store database, compressed by as much as 80%, then stored in a designated Document Store location residing on network storage. This activity greatly reduces the size of the Exchange Information Store database, improving the performance of Exchange, and greatly reducing its backup time. The removal and compression of the email objects reduces the overall storage requirement for the message data, providing a significant cost savings for the organization.

Searches of email data can be made through eManage, EAS-Search, the EAS administration interface or by Outlook users. Emails remain accessible by users through their standard Outlook client, EAS Web Access Client or through Outlook Web Access. Users will still be able to view, reply or forward messages in a transparent fashion as if they were still present in the Exchange database.

eManage users will be able to use a single interface to search, locate and retrieve all records under management by the system. This includes all email that has been archived by EAS or further

managed by EAS-STORM. All of the records management functionality available in eManage will of course be valid for archived email objects as well. Users of eManage can seamlessly exercise functionality such as browsing by classification, reporting and batch exports to include all archived email. When an eManage user requests an email object, eManage checks its database to see if the item is still within the Exchange database or if it has been archived by EAS. If it has been archived by EAS, eManage hands a request to EAS for retrieval from the archives. eManage manages the lifecycle of records including their eventual purging from the system. When the life of an archived object ends, eManage notifies EAS of its end of life, and EAS completely expunges all existence of the record, one of the features that ensure compliance with regulations such as those of the DoD 5015.2.

Some important things to remember:

- Email messages are classified automatically according to the file plan implemented within eManage
- All email messages remain available to users through their Outlook email client
- All email messages can be utilized in the same fashion as other records within the eManage system
- The email and attachment are never separated, maintaining the integrity of the message object
- An email message can be completely expunged from the system at the end of their life (according to retention policy)
- Email messages are secured and preserved during their lifecycle even if a user attempts to delete the message.

Summary

This discussion has provided a brief overview of records management to set the stage for the solution being discussed. The eManage and EAS products were each introduced, followed by a description of the integrated solution. The integrated solution contains all of the benefits of the products discussed, and the additional benefits provide by their seamless integration. Two challenges were presented (1) implementing a records management system that allows the rapid, efficient retrieval of information from all records sources through a single interface, and (2) finding a system that provides a solution for managing the ever-increasing quantities of email at the same time. The eManage and EAS integration solves both of these challenges.

The combined capabilities of the integrated solution from EDUCOM and eManage provide the customer with a powerful lifecycle management solution for their electronic records. Additional benefits include efficient and cost-effective long-term storage; search and retrieval of documents and email records, seamless integration in Microsoft Exchange Server environments; improved retention compliance capabilities; global enterprise scalability and much more. Interested parties are invited to contact either EDUCOM or eManage using the contact information provide below.

About eManage Inc.

eManage is a developer of electronic records management and email lifecycle management products that enable organizations to manage corporate records at an enterprise level. These products address the market's need for a complete solution that includes intelligent content interpretation and processing, record management and archiving. eManage also enables an organization to improve productivity, reduce the total cost of ownership of their messaging infrastructure, mitigate legal costs and risks, ensure compliance with corporate policies, and enable regulatory compliance. eManage products are U.S. DoD 5015.2 certified and compliant with SEC 17a-4, HIPAA, FDA rule 11, Canadian PIPEDA/C6 and other international legislation and regulations. eManage, with offices located worldwide, and customers in Government, Securities, Healthcare, Utilities and Education, markets its products and solutions through a network of VARs, OEM partners, distributors and system integrators. For additional information visit the website at <http://www.emanagecorp.com>



About EDUCOM

EDUCOM TS Inc. is the industry leader in the development of software solutions focused on the mission-critical management of corporate email. Through our proven technology, our strategic relationships with partners and resellers, and our keen grasp of global regulatory issues, EDUCOM delivers a second-to-none solution in the international business market. The company's flexible products enable clients to efficiently meet various email retention requirements, protect their intellectual property, enhance user access to information, and reduce email server overload. Its flagship product, Exchange Archive Solution (EAS), offers intelligent management for Microsoft Exchange™ email stores. EDUCOM is located in Ottawa, Canada. For more information, visit www.educomts.com



About The Author

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Joseph currently assists EDUCOM's marketing team following his successful entry into marketing with almost three years in the data storage industry focused on enterprise solutions and strategic alliances. Before that Joseph was an independent network consultant and served with systems integrators as a network services manager and systems engineer. Joseph is a Microsoft Certified Systems Engineer (MCSE) with specializations in TCP/IP and Microsoft Exchange. He has also earned his Master Accredited Systems Engineer (MASE) from Compaq (now HP) with a concentration in Enterprise Systems Management. Joseph has a BS degree from the University of Houston and is presently working on an E-Commerce MBA.