

Migrating Exchange To Collaboration



Setting the Stage

There isn't a single Exchange Administrator who doesn't cringe at the thought of yet another migration to Microsoft's Exchange. No one wants to be the first and, it could be argued, no one is afraid of being the last. In a survey conducted by Michael Osterman in March of 2007 it was discovered that:

- 67 % of companies surveyed indicated that an investment would be allocated to e-mail servers.
- 70% have concerns with the complexities and efforts associated with Microsoft Exchange
- 69% are concerned with the amount of time the migration will take.
- 59% of the organizations surveyed indicated that storage growth is a serious problem
- 44% had not allocated a budget to meet e-discovery and/or compliance requirements

Mr. Osterman continues his analysis by indicating that according to his calculations for a 5,000 seat organization, the cost of migration could be as high as \$244 per user. Further, according to Mr. Osterman, when amortized over a three year period, the cost of an Exchange 2007 migration for that size company could be \$6.79 per seat per month.

Let's look at what is driving migration. Rather than go through the long list of attributes of messaging systems the bottom line is that they were never meant to be a repository for corporate intellectual property. Yet it has long been accepted that 70 to 80 percent of all corporate intellectual property flows through E-mail systems. Messaging systems have now become the unwanted, unified filing system of most corporations. They're unwanted because messaging systems have no structure. Microsoft has two initiatives to address this area: First is unified information, (e.g. Microsoft Office), Second is unified collaboration, (e.g. SharePoint). The migration of these two architectures requires that information be brought to the same level of interchange. Exchange 2007 lends itself to better communication. SharePoint lends itself to better collaboration between departments. All of that said, two immediate problems arise: First, the efforts required migrating to newer technology in the areas of communication and collaboration; and Second, controlling the exponential growth demands for storage.

Most individuals or groups maintain a philosophy of the issues are the problem as opposed to understanding that perhaps the problem is the solution that has been devised. This is fully described in treating each problem as an island without understanding that the problems described above are all interrelated and can be addressed with a common solution. I once asked Microsoft why two separate departments (Communication and Collaboration)? Aren't they the same? The conversation quickly moved on to the next item on the agenda.



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So are they the same? By not treating them as the same we create two issues which must be addressed independently. Treating them as the same creates a single solution. Example, the high demand of storage obviously being driven by the exponential growth of communication is also driven by the duplication of communications to the desktop. Collaboration, while attempting to consolidate information into a single repository duplicates information that already exists in Exchange and on the desktop. Folders were created to store documents into some type of meaningful structure. Often they are established by the end-user or, in the case of SharePoint, by an administrator. Think back to our earlier days of learning filing systems. 'Bank' was easy. Then it became more complex. 'Bank of America' had more alternatives. Some filed the document under 'America'. Some filed it under 'Bank'. Some filed it under 'Checking' or 'Finance'. And some filed the document under 'Of'. Filing systems, which have predefined filing structures or categorizations, also have predefined limitations.

The solution: Have a Single Interactive Repository (SIR) with a common interface to both Exchange and SharePoint. Having a single point of archive consolidates all information flowing inside, leaving, or coming from outside the company. If this were possible it would mean that technology would now be detached from the information. This would make 'migration' a thing of the past. Technology would 'revolve' around the archive. Technology upgrades would now be independent of the data greatly reducing exposure and risk. Collaboration would be simplified. Filing, as we know it today would become obsolete. All categorizations of documents become virtualized. This means that a single document could reside in multiple locations while the integrity of the document is protected from a single store. Filing structures, as we know them today, become archaic. Placing documents in predefined folders begs for the occurrence of duplication. Eliminating this need greatly reduces the demand for storage growth. Eliminating this need greatly improves the ability, speed, and the integrity of collaboration. Furthermore, establishing new Virtual Categories could be done instantaneously with now data movement whatsoever.

The requirements of SIR, while appearing on the surface as somewhat complex are relatively straight forward. Not only does the solution need to operate in real-time, it must also have the capabilities to go 'back in time' from PST files to standalone EDB backup tapes. The underlining requirement for SIR is that each component work seamlessly with the others. Current architecture is inadequate. While it addresses a specific problem it does not address the solution. Acquisitions do not necessarily provide seamless integration due to the lack of a consistent architecture.



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So what are the **basic** architectural requirements of SIR? They are as follows:

Archive - Single Instance Store (SIS)

This is defined by assigning hashing (a key if you will) to each document or communication that flows through the system such that each piece of communications including attachments has a unique 'finger print'. If a document follows through the system it is identified by its 'finger print' and determined if the document exists. If it does not, a new hash is calibrated, a copy is stored, and the flow continues.

Database - Spherical Indexing Engine (SIE)

In order to track the flow of documents, a unique database must be designed that not only indexes every word, character string, and/or piece of metadata, but also has the ability to indicate the origin and movement of the document throughout its life time. The index must be able to associate and disassociate the message and attachment while at the same time preserve the integrity of the document. Spherical Indexing is somewhat complex in nature and will be explained in more detail external to this whitepaper. Bottom line – SIE eliminates the need to search for messages or attachments. SIE knows immediately if the requested document exists and retrieves the document directly from SIS.

Real-Time - Active Capture and Analysis (ACA)

Active Capture Analysis requires a minimum impact to the environment. This means that traditional methods of capture or duplication must be reexamined. Conventional methods such as Journaling and/or Logging are cumbersome, require administrative overhead, and drain resources from already taxed servers. Each method of capture has its pluses and minuses. The most efficient method to obtain this objective is at the closest point(s) of entry that captures all flow of message communication. This concept rules out SMTP intercept because SMTP ignores internal E-mail flow.

The Analysis component of ACA is critical. The ability to do real-time analysis of message flow allows for the automated 'redirection' of documents based on requirements. For example, the CEO of company XYZ needs to follow all communication between the company and its employees going to or from the Security Exchange Commission (SEC). These types of requests need to be accomplished in real-time, not after the fact.

Client - End User Interface (EUF)

The End User Interface has a number of requirements: The first is simplicity; another is ease of deployment and maintenance. The first step towards these requirements is a web enabled interface. The second step is to allow the client full control, based on security levels, to retrieve messages and attachments by 'point-and-click' technology. Complex issues of Boolean logic are eliminated. No longer will the end user be concerned with complex logic



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structures of 'less than, greater than, not equal to, similar, word relative location, etc. The reason for this requirement is that the end user must interact with SAR to be effective. Additionally, the interaction should require a minimal impact and learning curve. It must be as transparent to the end user as possible while at the same time expanding the horizons and focus to which clients may accomplish.

The client, with an effective EUF, should be able to instantly redirect documents. The redirection could be to Legal, Compliance, Audits, Human Resources, Security. Redirection could be made for discovery, compliance policy or general collaboration. This would all be done in seconds, from start to finish, all from a single interface.

Summary

So how does this specifically relate to Exchange migration? By consolidating all email and attachments into a Single Interactive Repository users are allowed to be independent of the architecture. Having the ability to move from one technology to another is transparent to the data. This gives the administrator confidence that all may be recovered quickly and effortlessly without the fear of losing E-mail content while preserving data integrity. The concerns of time involved would be greatly reduced because all data would be recoverable with a 'point-and click' implementation. The amount of data residing on the Exchange server would be greatly reduced saving countless hours of backup and storage. Users would have the ability to search and retrieve all email and/or attachments with ease and without the requirement to involve IT.

An integrated solution would address these concerns of Administrators:

- Active archive transparent to environment
- Real-time capture of information as it flows through the system
- Ability to quickly discover and collaborate from a single repository
- Provide transaction flow of documents back to the requesting user
- Protect data integrity and the chain of custody

The goal of one integrated, single solution would be achieved through combining the above requirements. The advantages of doing so are simple:

- time, money, and effort saved
- compliance, security and risk avoidance achieved

The ability to provide a third generation solution enabling convergence of the challenges associated with unified information and collaboration will drive the horizon that distinguishes vendors.



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