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>> White paper

The benefits of the cloud vs on-premise email archiving

February 2011

The benefits of moving email archiving to the cloud.

computing

Contents

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Executive summary

Email is arguably the most important of all applications used in business. It is certainly difficult nowadays to imagine any business functioning for more than a very short time without it. However, the management of corporate email systems is notoriously complex, and in-house IT heads are increasingly looking to cloud vendors to take on some of the ancillary email management functions, such as anti-spam / anti-virus filtering, and the provision of robust email continuity.

The archiving of email data, though, is a more complex matter. Many organisations have built up large volumes of on-premise storage, and as the demand for more capacity increases, they find themselves in a never-ending cycle of purchasing more hardware and software, and expanding their IT footprint at a time when they are under pressure to decrease it.

A new breed of cloud-based archiving solutions offer a wide range of capabilities. These include bottomless archiving, seamless integration with existing systems and improved transparency and regulatory compliance, often offering an alternative or a solution to the problem of vendor lock-in.

However, IT heads who are already archiving email using on-premise technology may find the idea of moving their archive to the cloud quite daunting because of the complexities involved in migrating data, potential loss of control over the systems involved and having to trust an outside party to keep their data as secure as they would do in-house.

These concerns are perfectly valid and IT managers must be prepared to exercise due diligence to assure themselves that the realities of specific cloud offerings really live up to their promise.

The aim of this paper is to help IT managers decide whether archiving emails on-premise is the best solution, or if one of the new breed of cloud-based solutions might be a preferable solution.

Server room sprawl

Many firms are finding that their own archiving system has become overburdened. By necessity email space has always been restricted, and thanks to restructuring and expansion, as well as mergers and acquisitions, organisations can be left with a confusing array of legacy clients, systems and servers, all supporting the mission-critical application that is email. These pieced-together systems may perform satisfactorily on a day-to-day basis, but they certainly do not equip firms to face the future.

Furthermore, policy control, access and messaging intelligence can often be compromised when email databases are spread across diverse infrastructures. And the more complex the system, the less appealing changing it becomes.

Migrating terabytes of data in a variety of proprietary formats to a new system is no easy task. As a result there is a tendency for the data to become locked into the infrastructure and the organisation is effectively locked into its relationships with the hardware and software vendors. As well as decreasing agility, such systems put organisations at risk of unnecessary and unwanted legislative attention. Should emails be lost, firms could find themselves in breach of their compliance requirements and at risk of fines and censure, damaging reputations as well as balance sheets.

Organisations that continue to archive emails on-premise, adding servers and storage hardware to their estates to do so, may find that while provisioning hardware solves the capacity issue in the short term it can often create its own problems. eDiscovery and compliance requests become harder to resolve the larger and more complicated an email database becomes. In addition, email security may be compromised by hardware failure and search capabilities impeded by database sprawl.

But what of the cloud alternative? Concerns over the security of sensitive data held by a third party and worries about loss of control have led IT decision makers to play the waiting game, reluctant to change until their fears have been allayed.

Cloud computing enters the mainstream

UK Minister for Culture, Communications and Creative Industries Ed Vaizey recently extolled the virtues of the cloud, explaining (as many in the industry already know) that it can clear a path to better business, lower costs and rapid enterprise transformation.

He said, "Access to the networked resources provided by 'clouds' enables companies to enter markets without having to meet the capital costs of building their own computer infrastructure... What they get instead is a sort of 'pay-as-you-go' service tailored to their specific requirements. This is especially significant today".

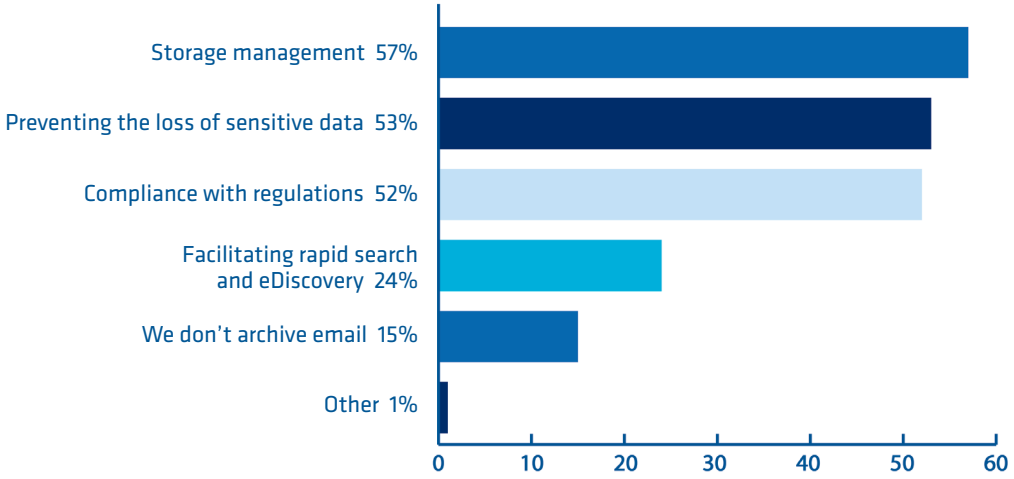
The cloud is touching all areas of social life and business, and as email volumes increase and legislation comes into force demanding the retention and rapid recovery of archived messages, email archiving is no exception.

Storing up trouble

To reveal the current practice and thinking on this issue of organisations in the UK, *Computing* surveyed 140 IT decision makers at UK firms of all types with the following results.

Fifty-seven percent of survey respondents archive emails in order to free up storage space; 52 percent said that compliance is a key driver for archiving email, and 53 percent stated that it is to prevent the loss of corporate data. A worrying 15 percent are not archiving their emails at all (Fig. 1).

Fig. 1 : "What are your organisation's main reasons for archiving email?"



*Respondents could select more than one answer

Only 13 percent of responding firms said that they are currently working with a hosted solution and five percent with a cloud or software-as-a-service provider, a surprisingly low figure given the current level of interest in cloud services (Fig. 2).

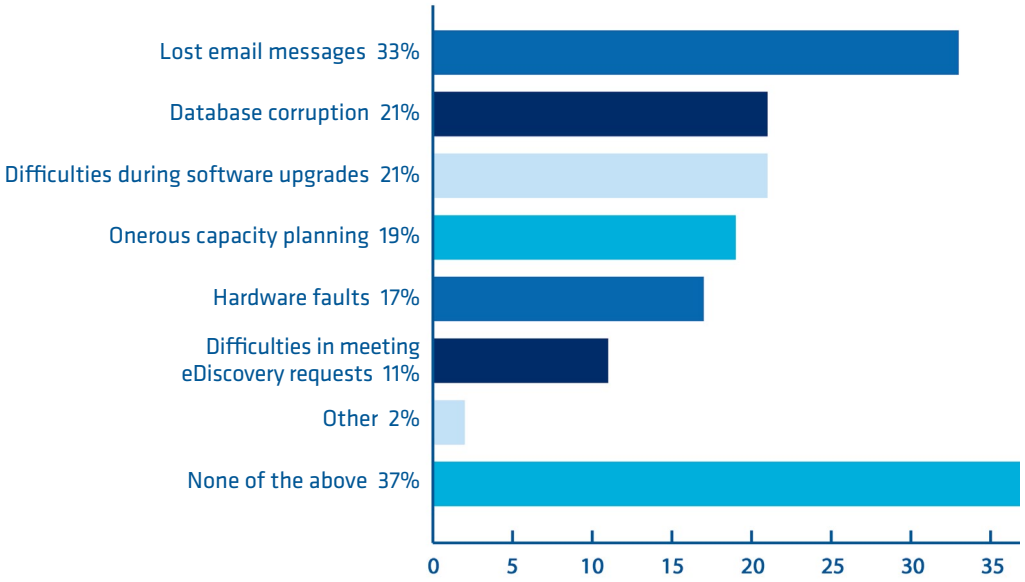
Fig. 2 : "How are you currently archiving your email data?"

An on-premise solution	**33%**
Employees store and retrieve their own email (PSTs etc)	**20%**
Backup to disk	**19%**
A hosted solution in which the archive is maintained at a third party's data centre	**13%**
No email archiving solution in place	**7%**
A SaaS / cloud solution	**5%**
Other	**3%**

One-fifth of firms (20%) said that they rely on their employees to archive and backup their own emails. While on the surface placing the burden on the user may appear to be an attractive solution to a busy IT department, too heavy a reliance on self-service is likely to store up problems in the long run as it lacks granularity of control over where and for how long different categories of message are stored.

One-third of respondents admitted that they have lost email messages while using their existing systems. This is a significant figure when you consider the wall of legislation that surrounds communications (Fig. 3).

Fig. 3 : "Have you experienced any of the following scenarios with your current email archiving solution?"



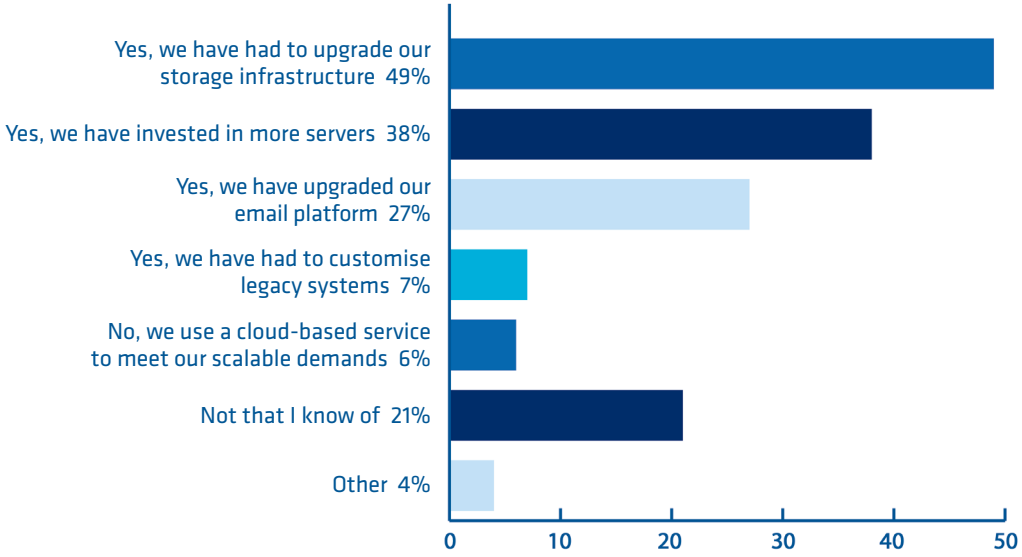
*Respondents could select more than one answer

Heaping more misery on compliance officers is the fact that 17 percent of firms have suffered hardware failures, and 21 percent database corruption issues. Eleven percent of survey respondents said that they have had issues when meeting compliance requests and 21 percent reported problems when upgrading their software and systems.

A wise investment?

Ensuring that email systems remain operational has required investment in new infrastructure for four-fifths of the respondents, with 38 percent provisioning new servers and 49 percent new storage hardware to cope with the volume of messages (Fig. 4). Twenty-eight percent have upgraded their entire email platform.

Fig. 4 : "Have you had to invest in new hardware or software to meet growing email demands?"

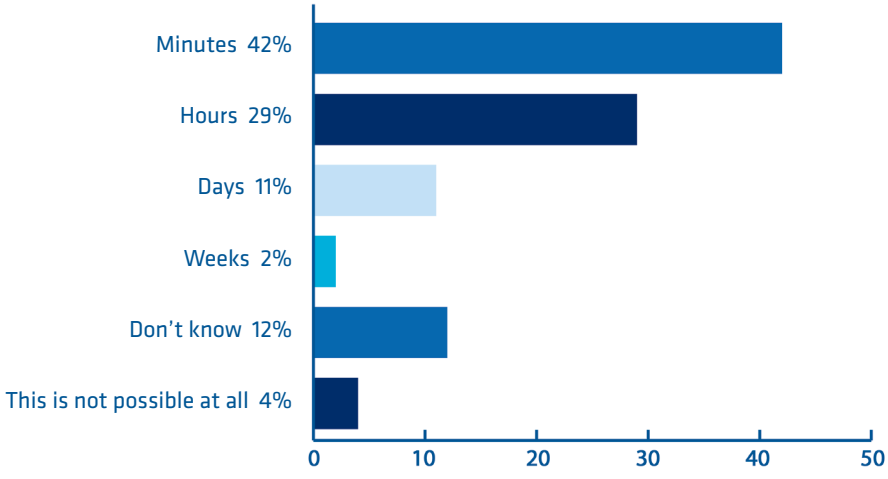


*Respondents could select more than one answer

While it may not be a big consumer of IT time, managing email archiving nevertheless takes up between 1 and 4 hours each week for the majority of respondents. The fact that it is considered a minor task means that there are unlikely to be email archiving specialists employed in the average in-house team.

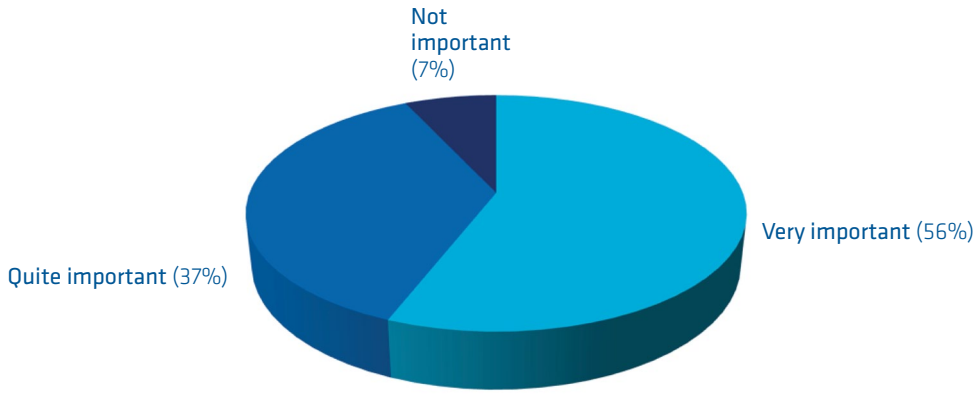
The amount of time that it takes to recover emails also varies, and while the majority claimed to be able to accomplish the task in minutes, 29 percent said that it would take them hours, ten percent said days and two percent, weeks (Fig. 5).

Fig. 5 : "How long does it take you to retrieve emails that users have lost or deleted using your current system?"



The survey respondents put a high degree of importance on storing and retrieving emails, with just seven percent regarding it as unimportant (Fig. 6). Odd then that some choose not to archive emails, or rely on systems that are not up to the task.

Fig. 6 : "How important do you consider the ability to retain and access your company's archived email information?"



The picture so far looks like this. Most companies retain their email archiving infrastructure on-premise, while about one-fifth has moved to cloud or hosted options. A significant number of those maintaining capacity in-house has experienced failures in hardware and software implementations, and one third has lost emails – possibly as a result. Relying on users to archive their own emails, as one-fifth of firms do, can compromise the security, integrity and resilience of those archived messages. The majority of firms has bolted new hardware onto existing systems as a way of coping with expanding email volumes.

The ability to retain and access email archives is deemed important, unsurprisingly, but some report significant delays in locating and restoring lost emails and many have lost messages entirely.

The cloud's silver lining

Cloud-based email archiving promises to remove much of the managerial, technical and infrastructural burden from firms. As well as the familiar arguments in its favour – scalability to suit demand, predictable expenditure and reduced maintenance duties – the cloud model frees up data centre space for other business-critical applications and reduces load on the servers.

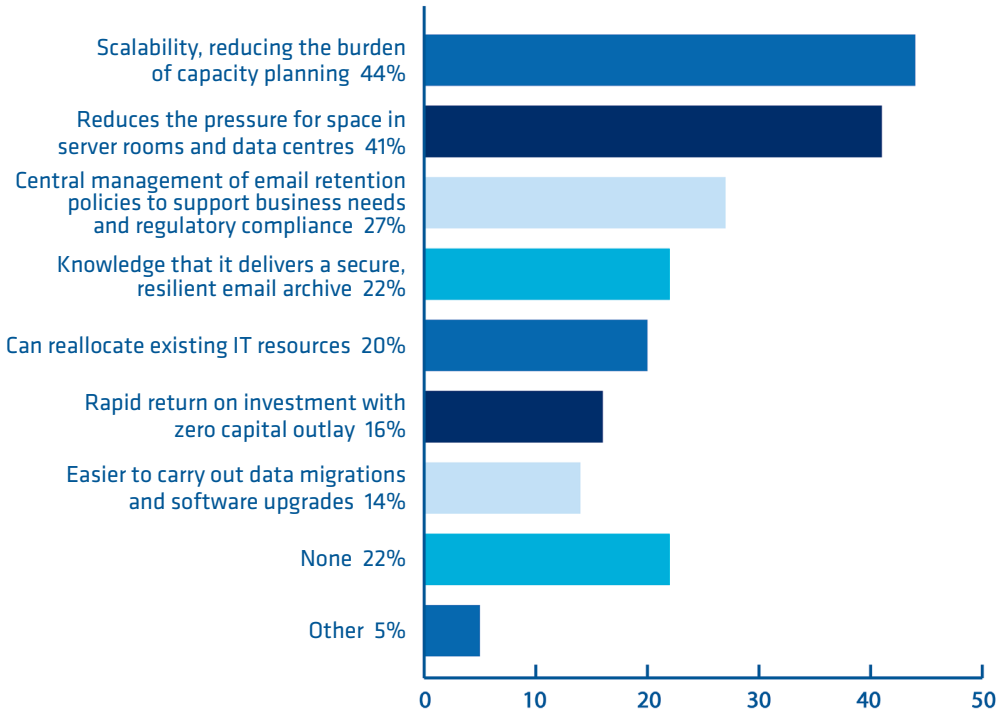
Some specialist cloud providers offer enhanced security services, business continuity and compliance assurances, and can also distance organisations from the risk of vendor lock-in, a factor that becomes increasingly important in financially constrained times.

When *Computing* asked about the perceived benefits of the cloud model for email archiving the most popular factor was the scalability it offers, which is not surprising given the cost of adding more hardware to the server estate. The notion of service-on-demand is one of the best understood benefits of the cloud computing model (Fig. 7).

Related to this is the second most popular response: off-premise options relieve capacity and managerial pressures within the server room or data centre.

Central management of email retention policies to support business needs and regulatory compliance was third – especially important for companies with multiple premises – and 22 percent trust the cloud model to provide a secure and resilient email archive.

Fig. 7 : "What do you consider to be the main benefits of using a cloud archiving solution?"



*Respondents could select more than one answer

Fourteen percent of survey respondents look forward to a reduction in time spent on software upgrades and patches, while 16 percent perceive financial advantages - the on-demand model moves capital expenditure on to the operational budget line.

However, 22 percent see no advantages to the cloud model. Certainly companies that have already invested substantially in on-premise data centres might look to virtualisation technologies to increase efficiencies, rather than moving wholesale to a new model. Managers may also experience internal resistance from the IT department, the staff of which may harbour fears of job losses and lowered status. Public sector bodies sharing services with others may have their hands tied by internal bureaucracy, while others may simply distrust the security and continuity assurances provided by the hosted service companies, preferring to keep their data and applications in house.

The waiting game

Many IT departments will have experienced the high cost in both time and budget of migrating archives and other content from one system to another, and will be reluctant to do so again unless it is absolutely necessary. Often it seems easier to patch and extend existing systems (in which there may have already been considerable investment) rather than take what might seem to be an unnecessary risk.

The great advantage of the cloud, however, is that new archives can be added in hours rather than the months it typically takes to provision new servers and storage hardware. Best-of-breed cloud-based solutions, such as Mimecast, integrate closely with email servers such as Microsoft Exchange removing the need to integrate the new hardware and middleware with the existing on-premise server estate.

Archiving messages in the cloud allows companies to decouple their storage needs from their email platform. In this way changing their email service need not mean expensive and time-consuming data migrations. By storing data in such a way that it can be quickly and easily exported to a standard format, customers have choice and flexibility, safe in the knowledge that there is a clear exit strategy if required.

Dashboards mean that IT managers enjoy more control and visibility into systems than they generally do when using in-house systems. Email retention policies may be managed centrally for any number of locations. Should issues arise, the cloud provider employs a network of specialist support engineers with specific expertise in email archiving and 24x7 availability. Few in-house IT departments could say the same.

Cloud providers employ highly efficient and scalable storage techniques with no need for customers to ever manage storage – although policy-based deletion can be implemented for records management. Data that needs to be retained can be held for long periods of time without firms having to constantly upscale their own hardware. The cloud facility scales with them, growing as they grow, providing a 'bottomless' archive for their messages.

Given the central importance of email, it is crucial that IT directors exercise due diligence in seeking a provider that can integrate their offerings directly into popular

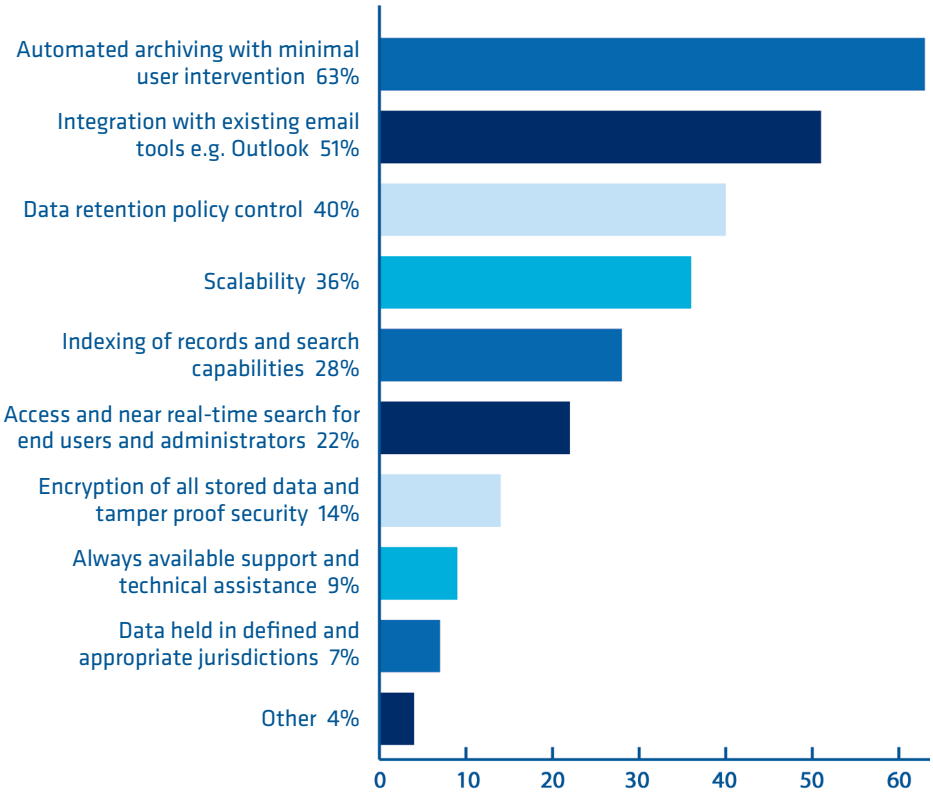
client email software such as Outlook. Users should be able to perform tasks such as finding and restoring messages intuitively using simple drag and drop commands. Some providers also boast improved email searching and granular control over emails and their content.

Email archiving should be automated, integrated and scalable

Respondents were asked which features they saw as the most beneficial and desirable in an email archiving solution. Regardless of which type of system they are currently using, it was clear that ease of use, interoperability with existing tools and data retention are the primary features they look for (Fig. 8).

Automated archiving was cited as the most important feature by two thirds. Roughly one third opted for scalability as their main driver and around 40 percent saw control over data retention policy as a serious need.

Fig. 8 : "When considering an email archiving solution, which of the following features are most desirable?"



*Respondents could select more than one answer

Tackling the compliance and security concerns

Some organisations worry whether data stored in the cloud is held securely, away from prying eyes, while others will be unsure about how resilient or consistent the service is, or where geographically their archives will be maintained.

Again, there is no evidence that the cloud is a less secure home for archives than on-premise infrastructure. Indeed, the contrary is likely to be true. As it is their area of expertise, email archiving providers have the skills and experience to ensure that 'common' problems do not persist; they are staffed by well-trained engineers and experts and more often than not they are available 24x7.

Provided organisations choose their cloud provider wisely, there is no reason why even the largest firms should not enjoy levels of security and resilience over and above that provided by their in-house systems. As a matter of course, a good archiving provider will store every email in its original format mirrored to multiple locations. Written into their SLA should be a guarantee that the customer's data will only be stored within appropriate jurisdictions, in order to ensure compliance with the regulations imposed on some sectors.

Conclusion

Email volumes are increasing at the same time that legislation and best practice demand transparency and rapid search and recovery.

The *Computing* survey found that the most desirable features of email archiving systems are automated archiving, integration with existing systems and scalability. These are all features to look for in the new breed of cloud archiving providers.

While most organisations retain their email archives in house, simply adding new hardware to cope with the rising volumes is likely to increase complexity and hinder the needs of eDiscovery, particularly if the organisation has multiple locations. This is not a sustainable solution.

For these companies in particular investigating the cloud alternative should be made a matter of priority. The cloud can reduce the burden of capacity planning, allowing for rapid deployment of additional archiving space as and when the need arises. Cloud services by their nature are more scalable than on-premise alternatives and will bend, flex and grow to meet the requirements of their customers.

Dashboards enable IT managers to automate the archiving of emails, giving them granular control over when, how and where different categories of messages are stored.

Outsourcing the responsibility for email archiving also hands over the burden of administration to an expert in the area, one who is always available. Data is not surrendered, you stay in control. It is stored in secure manageable folders.

Rather than rely on staff to arbitrarily delete emails, a cloud system allows for routine, planned and careful deletion.

Close integration with popular email clients such as Microsoft Outlook mean that users can access their archived data directly from their desktop, reducing the staff learning curve to a minimum.

Data security is vital. Too many organisations report problems with their in-house email archiving and retention, with many having to admit to losing emails and failing to meet compliance requests. These are two potentially dangerous areas in these increasingly litigious times.

The new breed of cloud services can securely store emails, with all their original content in place, in a non-proprietary format. They add eDiscovery and search and give users the confidence that they can always find the content they need and, should they want to, migrate it to another provider with ease.

Provided care is taken in selecting a suitable provider, the overall financial burden associated with cloud-based email archiving is likely to be reduced in comparison with on-premise alternatives. Moreover, managing archives in the cloud avoids vendor lock-in and the usual hardware arms race. The cost of migrating between alternative in-house systems can easily outweigh the cost of moving to a cloud provider, yet many firms still need to take advantage of this.

While cloud-based email archiving might not be suitable for every organisation, most organisations with an eye to the future would benefit by giving serious consideration to the new breed of specialist cloud provider.

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About mimecast

Mimecast is a leading provider of essential cloud services for Microsoft Exchange. Mimecast provides a leading cloud-based email archiving service that is tightly integrated with either on-premise or cloud-based Microsoft Exchange servers. End users can interact with Mimecast through their Microsoft Outlook mail client or alternatively through a Mimecast webmail interface. Mimecast specialises in enterprise email management services that include security, continuity and archiving. This suite of services provides total end-to-end control of business email, while minimising risk and reducing both cost and complexity. Founded in 2003, Mimecast serves thousands of customers worldwide and has offices in Europe, North America and Africa.

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