

January 5, 2009

Should Your Email Live In The Cloud? An Infrastructure And Operations Analysis

by Christopher Voce
for IT Infrastructure & Operations Professionals



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Should Your Email Live In The Cloud? An Infrastructure And Operations Analysis

Rethinking Where Your Email Lives And Who's Managing It

This is the second document in the "Email In The Cloud" series.

by **Christopher Voce**

with Ted Schadler, Ben Echols, and Sara Burnes

EXECUTIVE SUMMARY

There isn't much that hasn't already been said about the criticality of email in business today — but the cost of hosting and managing your own email infrastructure is probably reaching the breaking point. Google's \$50-per-user annual fee has set a new floor in email pricing and is driving organizations to look inward at their situation and then outside at the hosted and cloud offerings. Companies are looking at upcoming email migrations, consolidations, and upgrades as times to potentially make a change. Before making a service architecture change, you should examine the needs of your different user constituencies, profile the applications that either integrate or work in concert with email, and understand the real costs of keeping email in your data center and running it yourself.

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Forrester surveyed 53 user companies, interviewed 12 of those companies, and interviewed the following 14 vendors: Azaleos, Capgemini, Dell, EDS (HP), Google, HP, IBM, Intermedia.net, LiveOffice, Mailtrust (a division of Rackspace), Microland, Microsoft, Novell, and Symantec MessageLabs.

Related Research Documents

["Should Your Email Live In The Cloud? A Comparative Cost Analysis"](#)

January 5, 2009

["Trimming The Fat From Exchange"](#)

April 28, 2008

["SaaS Clients Face Growing Complexity"](#)

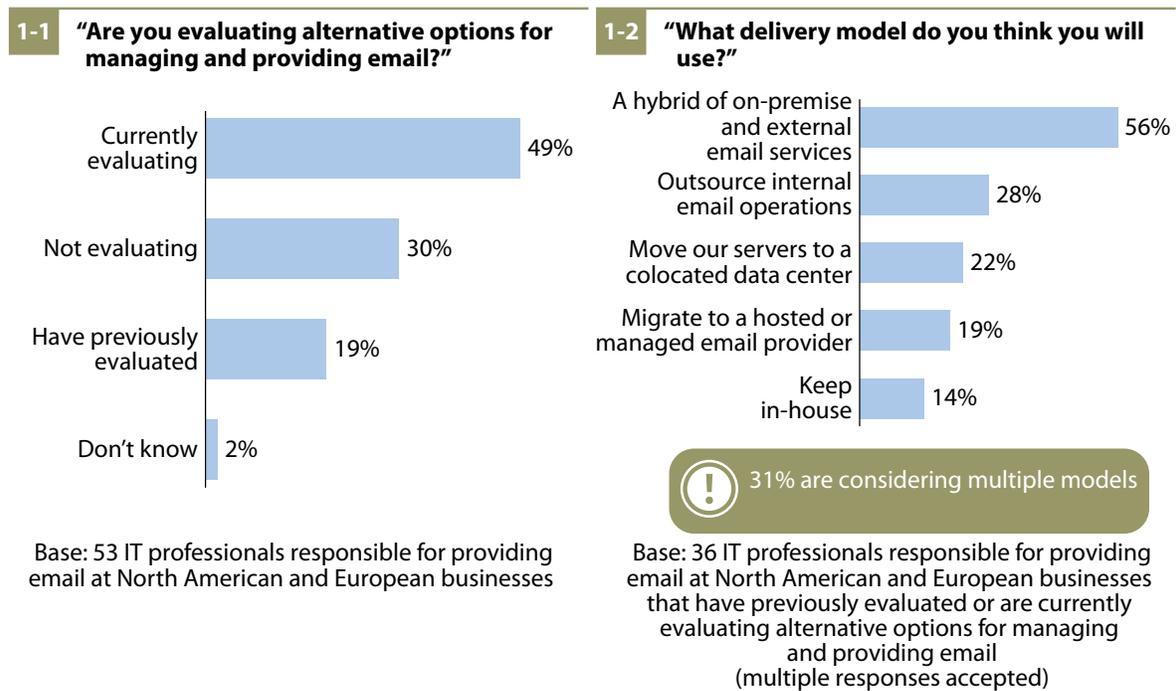
April 17, 2008

ON-PREMISE EMAIL IS GIVING IT OPS A MIGRAINE

Email is not new technology, but the way email is accessed, managed, and delivered is constantly evolving. Google’s cloud-hosted enterprise push along with Microsoft’s introduction of its hosted Exchange Online service have caused many infrastructure and operations (I&O) professionals to wonder whether they should continue to manage and run their entire email infrastructure in their own data centers.¹

Forrester recently spoke with 53 large enterprises to find out how they plan to provide email for their organizations and what barriers they see in shifting their email architecture. More than two-thirds of respondents said they have already evaluated or are in the process of evaluating their email systems, and many are considering different approaches (see Figure 1). In this report we’re examining the barriers and opportunities to move some or all parts of email to a hosted or cloud provider, and in a companion report titled “Should Your Email Live In The Cloud? A Comparative Cost Analysis,” we further explore the fully loaded costs of running email on-premise or in the cloud.

Figure 1 Many Enterprises Are Rethinking Their Email Architecture



Source: Q3 2008 North America And Europe Email Architecture Online Survey

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Source: Forrester Research, Inc.

Several Factors Trigger Organizations To Re-evaluate Email Architecture

You don't approach a decision to move something as critical and complex as email lightly. Typically, your organization has a sunk cost in email infrastructure, and its criticality makes you shy away from rocking the boat. It's hard to ignore the "if it ain't broke, don't fix it" mentality when a disruption to email can carry heavy consequences. One interviewee from an oil and gas company stated, "If a message doesn't go through, you may stop production," and another from a financial services company said, "And what happens when the link goes down — even if it's for half an hour, because the [trading] bell doesn't wait." However, there are certain trigger events that organizations have come across that cause them to rethink their email architectures. Our conversations with interviewees focused on:

- **Spiraling costs caused by email requirements.** Email doesn't exist in a vacuum — a variety of external business and technical pressures cause a ripple effect in costs associated with backup, archiving, eDiscovery, security, and high availability and disaster recovery that tie back to email.² A whopping 42% of firms cited costs associated with running email as the primary trigger to re-evaluate their approach (see Figure 2).³ Firms must adhere to external regulatory or legal requirements dictating how long they keep messages, which forces them to invest in pricey archiving and eDiscovery systems. For many organizations, email holds a business- or mission-critical role, so I&O professionals invest heavily in facilities like expensive SANs or alternate failover sites to insulate them from downtime and disasters.⁴

"The biggest driving force is reducing cost. A huge problem for us is storage because we have expensive SAN hardware dedicated to Exchange." (Healthcare organization)

"We're always examining how we deliver a technology from a cost and capabilities standpoint. Complexity is increasing, and cost along with it. Email antivirus and antispam changes so rapidly that insourcing email is a major distraction. It's not core to our business, and we'd rather focus on core activity rather than worrying about running email." (Telecommunications company)

- **Email consolidation projects.** Several factors have driven firms to put overweight email infrastructure on a diet. Whether it's legacy email systems that didn't scale well, causing more servers to be dedicated to email, or mergers and acquisitions that left organizations with multiple disparate email systems from different vendors and different versions that must be knit together, many organizations look to drive more efficiency into how they deliver email.

"Managing multiple platforms is an ordeal but it does 'work' and I put work in quotes." (Financial services firm)

- **Upgrades and migrations.** Another combined 16% of surveyed users cited major upgrades and platform migrations as triggers to re-evaluating their architecture. For some organizations, these

activities might also be tied to a consolidation, where different parts of the company are running different email systems or versions. Often, the goal is to create a shared service to serve email to the broader organization. Interviewees cited this as an ideal time to question whether or not this should still reside in their own facilities.

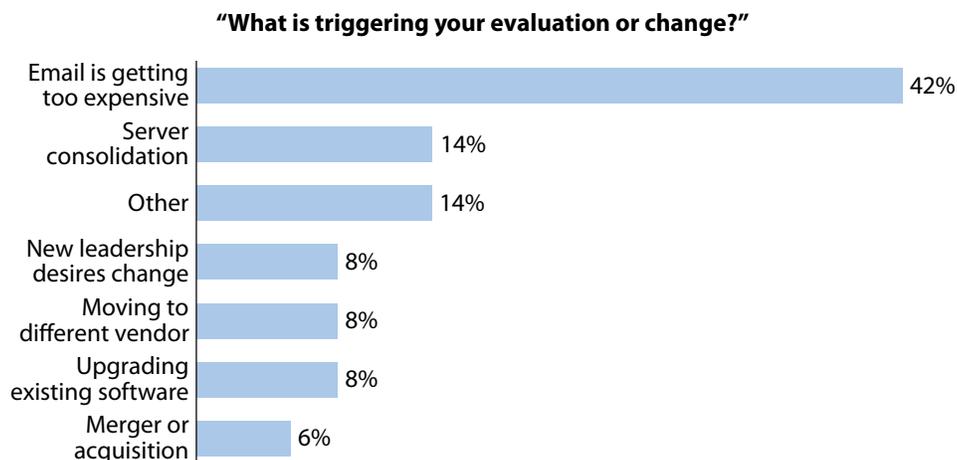
“We are looking at upgrading to Exchange 2007 across our organization, which is spread out around the world. Rather than keeping email in-house, we’re evaluating hosted providers to offload it altogether.” (Manufacturing company)

Email’s Reach And Legacy Complicate Architectural Changes

For I&O pros, supporting legacy infrastructure is always a primary barrier inhibiting innovation and flexibility. Forrester defines MOOSE as spending to maintain and operate the existing organization, systems, and equipment — and email can be the 800-pound MOOSE in the room.⁵ The cost of maintaining email internally extends beyond the email servers themselves, and organizations are often confronted with maintaining the sprawling legacy.

But trying to pry email infrastructure out of the data center raises many challenges. Interviewees listed several critical points of integration where hosted email would have to tie back into their company, with directories and applications topping the list (see Figure 3-1). Interviewees also questioned the security of entrusting email to a third party and are dubious that an external provider can ensure the availability of email (see Figure 3-2).

Figure 2 Rising Email Costs Drive Firms To Search For Answers



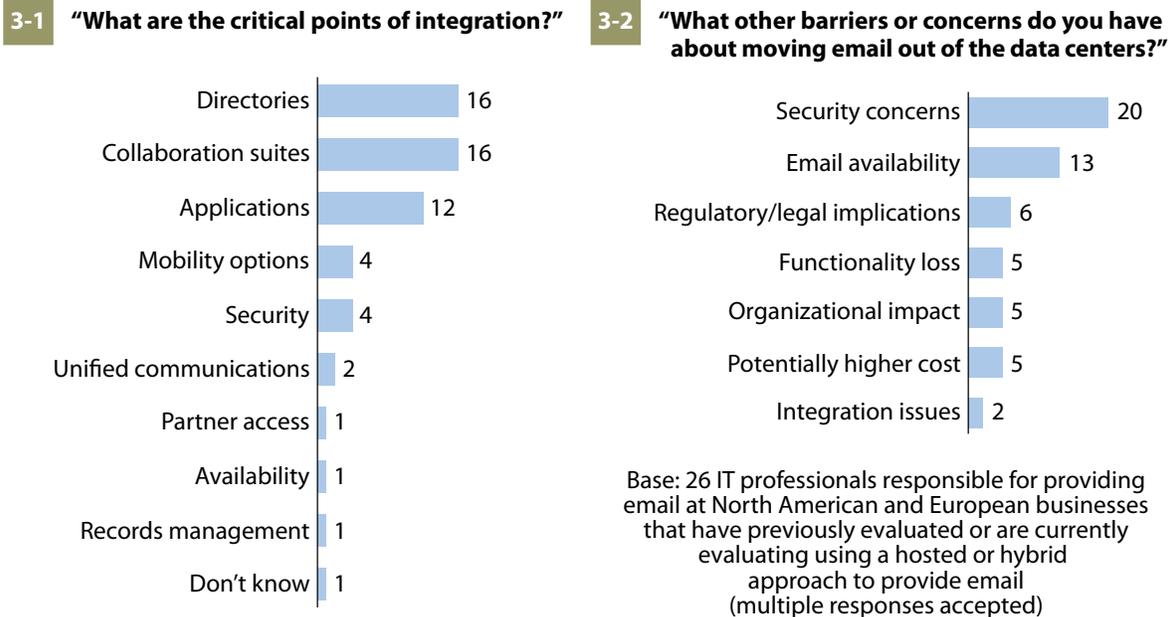
Base: 36 IT professionals responsible for providing email at North American and European businesses that have previously evaluated or are currently evaluating alternative options for managing and providing email

Source: Q3 2008 North America And Europe Email Architecture Online Survey

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Source: Forrester Research, Inc.

Figure 3 Businesses Face Many Hurdles When Making Changes To Email Architecture



Source: Q3 2008 North America And Europe Email Architecture Online Survey

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Source: Forrester Research, Inc.

Email Is Embedded Deeply In The Organization

Email does not sit near the surface in most organizations’ infrastructure. It’s tightly wrapped in business processes, services that support and extend email, and applications (see Figure 4). All of this makes it difficult to take advantage of architectural shifts that can drive down the cost and increase flexibility. The ties that bind email infrastructure into organizations include:

- **Supporting infrastructure required to support and extend email.** There is a piece of infrastructure supporting email that can complicate making an architectural change. A shift would affect systems like message archiving or disaster recovery — both the infrastructure itself and the process and people that support it. For instance, organizations are increasingly accountable for an accurate record of their documents and communications, whether it comes from regulatory, internal, or legal requirements. Broader corporate data archiving or eDiscovery strategies can complicate changes to email architecture. Mobility infrastructure like BlackBerry Enterprise Servers are very latency sensitive, so where the mail servers go, so must they.
- **A broader set of messaging and collaboration services.** Companies are deploying new tools to foster more effective collaboration among their employees, including instant messaging, Web conferencing, and team workspaces. These services are becoming more and more intertwined

as functionality like presence is integrated across collaboration tools. For example, you can integrate Microsoft Exchange mail information into SharePoint sites or relay reporting information. One interviewee remarked, “If it was just email, we’d make the jump right now — but there are strong links to our other collaboration tools. We’ll strongly consider this in the next few years, but it won’t be just for email.”

- **Affiliated applications and processes.** Many applications may require integration with email systems for their functionality, and they can vary in how deeply they’re tied into email. Your financial system may simply require SMTP to send email updates to employees, while your CRM package might use a platform-specific protocol like Microsoft Exchange’s MAPI to send customized newsletters to customers. It’s not just the applications, either — some disparate email environments that span an enterprise might integrate with different directories as well, further complicating integration. Email integration can be more subtle, too. For example, firms frequently use template-based emails to drive business processes like a new employee hire or facilities request.

THE SERVICE ARCHITECTURES TO SUPPORT EMAIL ARE EVOLVING

The options you have at your disposal for where to run email are evolving, but they address basically two questions: “Where does the email live?” and “Who’s managing it?” Answering these two questions paints a simple picture of different approaches to the email service architecture (see Figure 5). In addition to running everything on-premise, you can:

- **Outsource email operations.** Basic outsourcing implies you would typically be working with an external outsourcing provider to supplement or replace your staff running the infrastructure. This can address a very real pain you feel, as knowledgeable talent can be expensive and hard to find and retain. Traditional outsourcers have evolved as well and can bring your email infrastructure into their own data centers. Firms like Microland have a sophisticated remote management approach, lessening the costs associated with managing and maintaining an Exchange environment. Azaleos takes a different approach, remotely managing its customers’ Exchange environments from a central operations center.
- **Move infrastructure to a collocated facility.** The costs associated with building your own data center and worrying about reliable power, cooling, and adequate bandwidth are more than some firms should bear. Colocation helps save users the trouble of building their own data centers while benefiting from the efficiencies of a larger provider.⁶ Some firms use collocated facilities as secondary sites for disaster recovery purposes — and where possible, utilize the otherwise idle cycles for lower priority workloads.⁷
- **Use a hosted mailbox service.** A hosted mailbox service offloads both the hosting and management of email and encompasses three basic variations: multi-tenant hosted, single-

tenant hosted, and outsourcer hosted. The major architectural differentiator of these options is the level of integration possible — just how deeply can you integrate or modify the systems? What are the service windows and do you have inspection rights? Multi-tenant providers don't have to dedicate as much infrastructure to providing discrete email environments for customers, and you benefit in reduced costs from the economies of scale. Problems like server support, facilities costs, and capacity planning and sizing now belong to your provider.

- **Employ a hybrid approach.** The different alternatives to email architecture are not necessarily black and white, mutually exclusive options — there can be a mix of on-premise and externally hosted services that fall into two categories that we'll explore in depth later. First, you can peel off support services like message filtering, archiving, and continuity and use a hosted service provider while keeping the rest of the mail infrastructure on-premise. Second, you can use an inexpensive single- or multi-tenant hosted mailbox service for a large number of users while retaining others on an on-premise email system. This can shift the economics back in favor of providing email to those users that you don't currently serve. Some colleges and universities have already begun to adopt this model — keeping their staff's email on-premise while leveraging a service for the tens or hundreds of thousands of students. Firms with large numbers of affiliates and agencies, like insurance or mortgage companies, might be likely candidates for this model as well. There is the potential to have more control over — and drive down costs in — communications with them.

ORGANIZATIONS SHOULD LOOK TO THE SKY FOR HELP

There aren't many scenarios where an organization could not benefit from hosting some of its email services in the cloud. The cloud lets you shed burdens like email-driven capacity planning and free up IT resources so you can focus on your business. Certainly there are opportunities to contain costs, but the cloud can also enable new scenarios not possible with on-premise solutions, such as quickly integrating newly acquired businesses or spinning up new businesses.

Figure 4 Email Sits At The Center Of A Complex Ecosystem

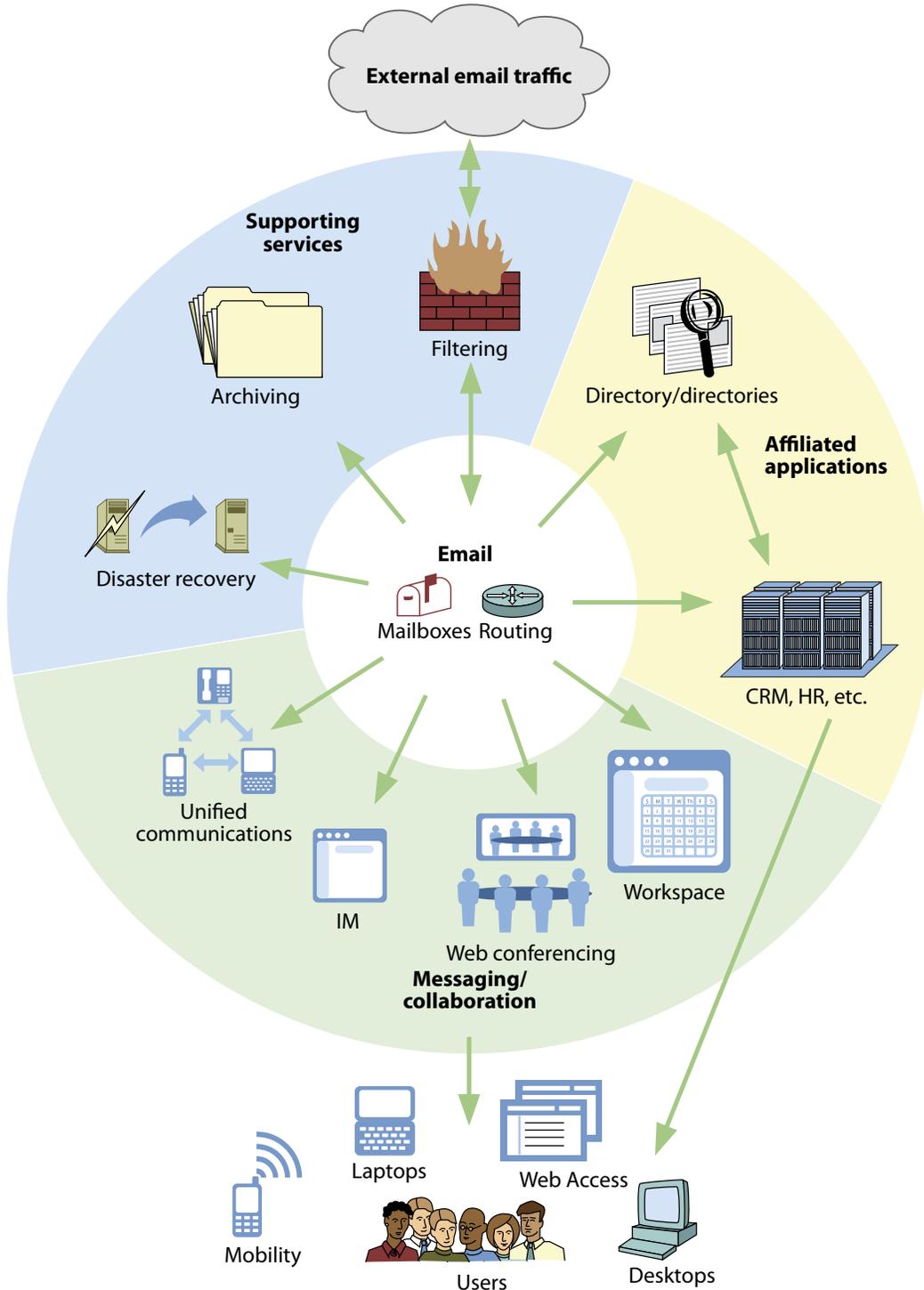
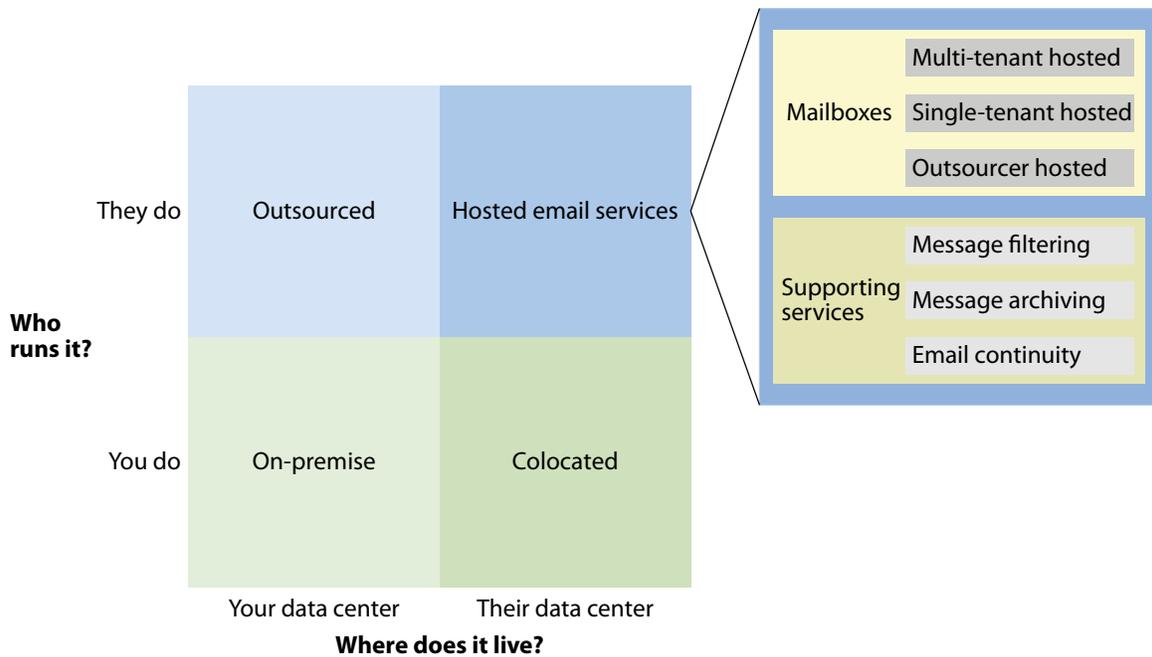


Figure 5 A Framework For Email Deployment Architectures



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Source: Forrester Research, Inc.

Cloud-Based Services Can Offload Costs And Responsibility While Increasing Flexibility

There are three opportunities to use providers outside the four walls of your data center either to replace or extend your on-premise email infrastructure (see Figure 6). Not all are true multi-tenant providers, as some of these, like hosted email solutions, have infrastructure dedicated to you. True multi-tenant SaaS offerings are cheaper for providers to operate, but the trade-off is in your ability to integrate with them. For services like a multi-tenant email filtering, this is a non-issue — but if you're looking to integrate your Siebel CRM system with Google Gmail, then this could be a problem. Based on your organization's environment and needs, there are three architectures to consider:

1. **Hosted email.** There is a range of options at your disposal here. On one hand, for simple environments, a multi-tenant or cloud solution can be an extremely cost-effective option. On the other hand, firms have the least amount of control over a cloud service. You're at the mercy of the provider's service windows as well as its upgrade cycle. Some Google Apps users were locked out after an upgrade to the system in October. Single-tenant email solutions don't match the price of cloud solutions, but they offer more control to organizations. Providers also offer more mobility options to include BlackBerry Enterprise Servers. Finally, outsourcing organizations like EDS bring infrastructure into their own data centers to leverage economies of scale to manage and maintain those environments.

2. **Hosted support services (hybrid).** If maintaining an on-premise email system is a necessity, there is still an opportunity to benefit from cloud services to streamline your environment. You don't have to tie up your own people and resources worrying about message filtering, archiving, and continuity — there are people who can do it better and cheaper than you can.
3. **Split-domain email (hybrid).** Split-domain routing enables you to segment users and leverage different architectures to serve those with more modest needs. This does introduce more complexity into the environment, as you now have to either replicate directory information to a provider or allow access to your internal directories.⁸ Perhaps tens of thousands of rotating users may come and go, not carrying the same requirements as the full-time staff at a staffing organization. Organizations may also look to extend email to employees in emerging markets where they might not have the resources or infrastructure to support on-premise email. Manufacturing firms may have many users who don't have email but who could benefit from electronic communication in place of bulletin boards or paper-based benefits enrollment.

“We have over 10,000 users on email, but can have over a hundred thousand contractors at any given time. We pulled back email a while ago from the contractors and have them use their own personal email. But a cloud service could be much more attractive to serve them from a branding and business perspective to manage communications with them.”
(Professional services firm)

Hosted Supporting Services Are Making More And More Sense

Supporting services can take up more space, power, and resources than they need to. Traditional on-premise software vendors like Trend Micro are taking their solutions and offering them as a service. While circumstances such as a broader corporate strategy involving an archiving service might limit options, there is a clear opportunity for many to offload the cost and responsibility associated with (see Figure 7):

- **Message filtering.** Because filtering is mostly well partitioned from your infrastructure, it's the easiest place to start. This includes in- and out-bound antivirus, antispam, encryption, and possibly data-loss prevention. In addition to merely offloading responsibility for maintaining and managing the service, moving your email filtering to a provider means email is consuming less bandwidth and your mail servers are processing fewer messages. External providers will also be able to back their services with more redundancy than you can, at a better price.
- **Message archiving.** As mentioned, archiving and eDiscovery for email can be trickier for some organizations. Broader archiving, corporate eDiscovery needs, or plans for data may limit options for you to make changes to those associated with email. Services range from basic journaling — where all incoming messages are sent and stored at an external provider with little granularity — to more detailed archiving. It's important to fully explore your organization's requirements for archiving and fully vet issues like, “Does the online service provide performance requirements for discovery?”⁹

- **Email continuity.** Email continuity, or disaster recovery, covers scenarios associated with the loss of your primary site and allows email to keep flowing. The costs associated with planning and building out your own data center or leveraging a colocation provider and purchasing the necessary hardware and software can be stifling. These hosted services range from providing basic send/receive functionality if the primary server fails to more sophisticated and expensive offerings that include access to an archive of the past week's or month's messages. When selecting a service, you want to think about how all of your users access their email. Some email continuity services include failover for mobile devices as well.

Figure 6 Architecture Options

Architecture	Description	Benefits	Challenges
On-premise email	All email services (mailboxes, filtering, etc.) run on company-owned servers.	<ul style="list-style-type: none"> • Traditional, hence comfortable • Easier integration with other applications and resources 	<ul style="list-style-type: none"> • Expensive to maintain • Consumes IT staff time and resources
Hosted email	All email services are delivered by a hosted mailbox service provider.	<ul style="list-style-type: none"> • Pay-as-you-go financing model • Always-current software and protection • Operated by someone else 	<ul style="list-style-type: none"> • Integration with directory and other business applications • Exposure to business failure by service provider
Hosted supporting services (hybrid)	Some supporting services, like filtering or archiving, are delivered by a cloud-based provider.	<ul style="list-style-type: none"> • Offload maintenance of specialty services • Often less expensive • Keeps core email on-premise 	<ul style="list-style-type: none"> • Loss of direct access • Potential for conflict in implementing archiving and eDiscovery processes
Split-domain email (hybrid)	Some employees use the on-premise email, and some use a hosted mailbox service.	<ul style="list-style-type: none"> • Move occasional users or new users to a hosted service • Easier to provision new users or acquired companies 	<ul style="list-style-type: none"> • Integration with directory and other business applications • Different experiences for workers using on-premise versus hosted email

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Source: Forrester Research, Inc.

Figure 7 Hosted Supporting Services Can Save On-Premise Email Infrastructure

Service	Ease of adoption	Best suited for	Potential barriers
Message filtering	Easy	Most organizations	<ul style="list-style-type: none"> • Some might need a highly configurable on-premise solution • Already have a sunk cost in filtering • Some filtering might require directory access
Message archiving	Medium to hard	Organizations that do not want the cost and complexity of an on-premise archiving strategy	<ul style="list-style-type: none"> • Broader data archiving strategy may dictate an on-premise offering • Larger corporations may do it in-house for less • May need a feature-rich, on-premise solution
Email continuity	Easy to medium	Organizations looking to add site-resiliency to their email environments but find the costs associated with a remote site and infrastructure prohibitive	<ul style="list-style-type: none"> • Possible conflict with broader corporate disaster recovery strategy • Failover is easier than failback • Interdependencies with applications can complicate failover and failback

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Source: Forrester Research, Inc.

Hosted Mailbox Services Can Provision Some — Or All — Of Your Users

The three categories of hosted mailbox services (all of which could be considered cloud providers, based on their pricing models) differ on cost, visibility, and your ability to integrate with them (see Figure 8). There is a difference in contract commitment as well with each of these. For example, relationships with outsourcing firms often involve agreements of at least three years, while a multi-tenant hosted solution requires little, if any time commitment, for basic email. Hosted mailbox services fall into three categories, which include:

- **Multi-tenant hosted solutions.** Hosted multi-tenant email vendors use a shared infrastructure to host customers' email. Because of the economies of scale in providing this, it's the lowest cost option — but it lags behind the other options in your ability to integrate with your other applications and services. This is an appealing option for companies with simpler environments who need basic integration for a fully hosted architecture or those looking to provide cheaper email for large subsets of users in a split-domain hybrid architecture. As time progresses, multi-tenant offerings will become more accessible to a broader audience as application vendors work with the providers to integrate with them. In time, this will be the de facto standard.
- **Single-tenant hosted solutions.** Hosted email vendors use single-tenant, or dedicated, servers for individual companies. This is best suited for organizations that need a higher level of integration than is possible with multi-tenant solutions but that still want to move email off-premise for all of their employees or for large subsets of the organization (e.g., a large contractor

population or newly acquired business). Single-tenant solutions allow you more access to the systems, easier integration with applications and mobility services, and more control over service windows and updates.

- **Outsourcer hosted solutions.** In this option, a traditional IT outsourcing provider uses its data centers to host your infrastructure. This is best suited for large organizations with complex environments and deep integration into their email infrastructure that want to reduce their facilities and labor costs with an outsourcer. Because of the high cost associated with this option, you would most likely only use this for hosting all of your users. Outsourcer hosted solutions also require a longer commitment than the other two options, more like a traditional outsourcing arrangement.

Figure 8 Hosted Mailbox Services Balance Cost And Capabilities

Option	Cost	Barriers	Sample vendors
Multi-tenant hosted	Lower	<ul style="list-style-type: none"> • Lags in features compared to single-tenant and on-premise solutions • Limited integration possible with affiliated applications and mobility solutions • Lack of visibility into service windows and upgrades 	Google, Microsoft, PostPath (Cisco), Zimbra (Yahoo!)
Dedicated hosted	Medium	<ul style="list-style-type: none"> • Add-on services like mobility options add up fast • Larger corporations can do it in-house for less • More integration possible than cloud, but not on par with on-premise • Lacks the massive scalability of the cloud 	AT&T Hosting & Application Services, BT, Intermedia.net, LiveOffice, Mailtrust (Rackspace), Mi8, Microsoft, USA.NET, Verio, Verizon Business
Outsourcer hosted	Higher	<ul style="list-style-type: none"> • Highest costs • Corporate resistance to outsourcing 	Capgemini, EDS (HP), IBM, Microland

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Source: Forrester Research, Inc.

ROLL UP YOUR SLEEVES — YOUR USERS, APPS, AND COSTS DICTATE THE BEST APPROACH

The process of choosing the right architecture for your organization starts with a discovery project to better understand the opportunities, risks, and implications of making a change. There is a large ecosystem of partners that can help (see Figure 9). But before you start, you have to roll up your sleeves to do a detailed risk and impact analysis lest you come across a surprise that blows up your migration effort. To proceed, you must understand:

- **How your workers use email.** It's important to profile how your employees or contractors use email. Do all of your users require full-blown email and collaboration? We've seen workers fall into three buckets: mobile executives, information workers, and occasional users.¹⁰ Cloud services could be an opportunity to serve employees who did not traditionally have email at all. Can email be a more effective and secure way of communicating with them? For example, if you could reduce paper communications with employees like direct-deposit statements and other corporate communications, could the savings more than justify the cost?
- **The applications affected by the change.** This task uncovers the depth of the integration with your email platform. When examining applications, ask yourself questions like: "What is their criticality? Are there alternatives? How deeply are they integrated?" Some applications may be targeted for sunseting, therefore minimizing their impact on the direction you take. There are some applications that might not be tightly integrated but that have proximity issues. Chatty applications like BlackBerry Enterprise Server require close proximity to the mail server.
- **Your real costs in running email — and the cost of change.** When we asked respondents about the costs associated with supporting email in their environments, their answers varied widely — and most didn't know. To see if it's more cost-effective to take a different approach, you have to know exactly what it costs you to keep on supporting your email infrastructure.¹¹ Don't be shy either: Look for the full burden email places on your budget, from the servers to the security, availability, and mobility services that surround it. One of the largest components to think about is the labor cost, which can far outweigh the others. Finally, if making a move, what's the cost of change? Will this require new licenses, development, implementation, or end user training?

Figure 9 Vendor List

Provider	Mailboxes	Message filtering	Message archiving	Email continuity
Accenture*	Both	Both	Both	Both
AppAssure Software				On-premise
Aptix	Hosted	Hosted	Hosted	Hosted
AT&T Hosting & Application Services	Hosted	Hosted	Hosted	Hosted
Autonomy ZANTAZ			Both	
Azaleos	Hosted [†]			
Barracuda Networks		On-premise	On-premise	Both
BT (formerly British Telecom)	Hosted	Hosted		
CA (formerly Computer Associates)		On-premise	On-premise	Both
Capgemini*	Both	Both	Both	Both
Cemaphore Systems				Both
Double-Take Software				On-premise
EDS (HP)*	Both	Both	Both	Both
EMC			Both	Both
Global Relay Communications	Hosted	Hosted	Hosted	Hosted
Google	Hosted	Hosted	Hosted	Hosted
HP Services*	Both	Both	Both	Both
IBM Global Services*	Both	Both	Both	Both
IBM Lotus	Both	Both	On-premise	On-premise
Intermedia.net	Hosted	Hosted	Hosted	Hosted
Iron Mountain			Hosted	
LiveOffice	Hosted	Hosted	Hosted	Hosted
Mailtrust (Rackspace)	Hosted	Hosted	Hosted	Hosted
MessageOne (Dell)		Hosted	Hosted	Hosted

*Outsourcer that can also host email infrastructure in its data center

[†]Provides hosted monitoring and management of Exchange

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Source: Forrester Research, Inc.

Figure 9 Vendor List (Cont.)

Provider	Mailboxes	Message filtering	Message archiving	Email continuity
Microland*	Both	Both	Both	Both
Microsoft	Both	Both	Both	Both
Mimosa Systems			On-premise	
NetApp				On-premise
Neverfail				On-premise
Novell	On-premise	On-premise		
Open Text			On-premise	
PostPath (Cisco)	Both			
Proofpoint		Both	Both	Both
Quest Software			On-premise	
Sophos		On-premise		
Symantec MessageLabs		Both	On-premise	Both
Teneros				On-premise
Trend Micro		Both		
USA.NET	Hosted	Hosted	Hosted	Hosted
Verio	Hosted	Hosted	Hosted	
Verizon Business	Hosted	Hosted	Hosted	Hosted
Zimbra (Yahoo!)	Both	Both	Hosted	Hosted

*Outsourcer that can also host email infrastructure in its data center

†Provides hosted monitoring and management of Exchange

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Source: Forrester Research, Inc.

RECOMMENDATIONS

READY YOUR ORGANIZATION TO TAKE ADVANTAGE OF THE CLOUD

Outsourcing email might seem familiar. You may have been here several years ago, and the questionable-at-best cost savings didn't make up for frustrated end users suffering from a reduced experience and hanging email clients. It would have left a bad taste in your mouth. But it's worth taking another look. Changes to email platforms have made them more service-provider friendly and have driven down the costs. Client applications like Microsoft Outlook are much more latency-friendly and abstract where their email actually sits from the users. And the services themselves have improved.

After performing an impact analysis, you may run into organizational resistance to moving off-premise. Google, IBM, Microsoft, and other vendors are rapidly improving their services to make them more digestible, but maybe your organization faces too many hurdles to make a shift within the next two years. Even if you're not ready to make an architectural shift now, you should:

- **Run a pilot program with a hosted service.** The beauty of these services is it can take very little effort to stand them up and test them. You can feel out a hosted or cloud email service much easier than an on-premise solution. By piloting a group of users, you can see how it affects their email experience and how applications behave.
- **Avoid deepening your dependence on an on-premise email platform.** Pause before diving into application deployments that have ties into your email. Explore alternative methods of integration and focus on standards-based methods like SMTP rather than tying into a proprietary protocol like MAPI — you'll ensure that you have more options available to you and have a much easier time making a transition down the road.
- **Think about more than just email.** Email sits in an ecosystem of broader collaboration tools and mobility options. Focusing your approach on just email threatens the shared functionality found in collaboration tools like presence. If you're beginning to adopt these tools or have already deployed them, you should certainly factor them in to your plans.

WHAT IT MEANS

EMAIL COULD OPEN THE DOOR TO BROADER CLOUD ADOPTION

Craig Mundie, Microsoft's chief research and strategy officer, recently said at a conference that people make decisions based on applications, not platforms, and that the cloud needs killer apps. Organizations face significant costs in simply providing resilient email in the face of external regulation and business changes involving M&A. All of this might be enough to push an organization to decide that it can no longer be in the business of running email. It's hard to make pivots in your business if your infrastructure can only change directions like a tanker. Success with email will start organizations thinking about where else they can benefit from the economies of scale that the cloud can buy them.

ALTERNATIVE VIEW

STORAGE TRENDS SHIFT THE COST EQUATION FOR MICROSOFT EXCHANGE USERS

In a Microsoft Exchange Server environment, the costs associated with storage can more than quadruple the investment in server hardware. SANs were once must-haves in order to provide Exchange with high availability in clustering scenarios. With Exchange 2007, Microsoft targeted performance issues impacting storage and has pulled the resiliency intelligence out of the storage and pushed it into Exchange itself — using multiple copy clusters, which means the use of direct-attached storage (DAS) is now a more realistic option. In fact, Microsoft published a white paper detailing its internal use of DAS for its entire Exchange environment. Many firms not only use expensive dedicated SAN hardware but have also deployed pricey archiving solutions to give their users larger mailboxes. The use of DAS in Exchange could mean large amounts of storage at a cheaper price point — eliminating the separate archiving and backup systems necessitated by tight mailbox size requirements — and that could be enough for some firms to put off the pain of ripping email out of their data centers and sending it to the cloud.

SUPPLEMENTAL MATERIAL

Companies Interviewed For This Document

Azaleos	Intermedia.net
Capgemini	LiveOffice
Dell	Mailtrust (a division of Rackspace)
EDS (HP)	Microland
Google	Microsoft
HP	Novell
IBM	Symantec MessageLabs

ENDNOTES

- ¹ A similar re-evaluation is happening in collaboration software: Software based in the cloud is potentially much less expensive, makes it easier to manage a single source of the truth, and is available anywhere, at any time. See the March 18, 2008, “[Get Ready For Collaboration In The Cloud](#)” report.
- ² High costs aren’t tied to just sending, receiving, and storing email — business requirements and external pressures demand firms surround Exchange with expensive services. See the April 28, 2008, “[Trimming The Fat From Exchange](#)” report.
- ³ When you factor in the costs of hardware, software, people, maintenance, storage, archiving, mobile email, and financing, the fully loaded cost of maintaining on-premise email can soar. So while the cost to an

- individual budget holder might look low, the fully loaded cost of email is surprisingly high. See the January 5, 2009, “[Should Your Email Live In The Cloud? A Comparative Cost Analysis](#)” report.
- ⁴ Exchange has become so inextricably linked to company productivity that any downtime can result in business screeching to a grinding halt. As a result, IT professionals are rushing to improve Exchange availability with dedicated, highly redundant storage, next-generation backup technologies, and clustering. See the October 9, 2007, “[Messaging Continuity: Ensuring High Availability For Microsoft Exchange](#)” report.
 - ⁵ Forrester has developed a checklist of 20 best practices to enable CIOs to score themselves on their ability to control their IT MOOSE costs (spending to maintain and operate the organization, systems, and equipment). See the September 20, 2007, “[IT MOOSE Management — 20 Best Practices](#)” report.
 - ⁶ Building a modern data center isn’t easy, and a collocated data center will have state-of-the-art security, power, cooling, fire suppression, and network bandwidth. Colocation facilities can also act as disaster recovery sites, provide overflow capacity, and host applications that need more bandwidth or closer proximity to users. See the October 21, 2008, “[Don’t Build Your Next Data Center, Colocate It](#)” report.
 - ⁷ The pursuit of IT consolidation and greater financial and operational benefits is driving US enterprises toward more active-active data centers — data centers that run production workloads but also serve as recovery sites. See the December 7, 2007, “[IT Consolidation Drives Active-Active Data Center Configurations](#)” report.
 - ⁸ Cloud vendors have secure ways of synchronizing directories, but it may take convincing your security team. If users on the hosted service still need their email integrated with other on-premise applications, then split-domain email might not be feasible.
 - ⁹ Smart companies use four key strategies to succeed with email archiving: They rightsize the infrastructure; walk through eDiscovery scenarios ahead of time; consider archiving other data types besides just email; and staff and manage the archive for the long term. See the October 17, 2008, “[Best Practices: Email Archiving](#)” report.
 - ¹⁰ These categories capture the needs of the user, answering questions like: Does this user need a BlackBerry? Is a Web client sufficient for their work? To analyze the costs of providing email in a way that reveals where costs can be controlled, it’s important to segment your employees based on what they actually need. See the January 5, 2009, “[Should Your Email Live In The Cloud? A Comparative Cost Analysis](#)” report.
 - ¹¹ Zeroing in on the real costs of hosting and managing your own email environment can be difficult, but in the companion report, Forrester provides guidance on exactly how to go about it. See the January 5, 2009 “[Should Your Email Live In The Cloud? A Comparative Cost Analysis](#)” report.

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