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Handbook

Understanding Hosted Exchange Options

Running Exchange on-premises provides complete control over your organization's email infrastructure, but owning and maintaining the necessary hardware and software isn't cheap and requires expertise. Is it worth considering a hosted Exchange arrangement?

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Letting Go of Exchange

THERE ARE PERFECTLY valid reasons for an organization to own and administer its Exchange server, even in this era of the cloud. Compliance and security are among the biggest of those factors, and there's nothing like a well-managed on-premises Exchange deployment to provide a sense of security.

With that, of course, goes the burden of spending time and money to maintain that mail infrastructure. This is where the allure of a cloud-based (or hosted) Exchange becomes appealing. Having a service provider do the heavy lifting with maintenance might be enough to sway an organization's decision makers. Others will look for cost savings, which can be compelling in certain cases.

So what are the options for your Exchange infrastructure, and what are the benefits and liabilities? For those answers, we turn to Andy Grogan, an Exchange Most Valuable Professional. He breaks down the pros and cons of both on- and off-premises Exchange. He also offers some thoughts on hybrid scenarios.

IT security specialist Kevin Beaver, meanwhile, contributes some practical advice for those opting for a hosted Exchange service provider. Knowing what to expect—and what to ask about—will go a long way toward ensuring the security of your mail infrastructure when you no longer completely control it.

Rounding out our discussion is a piece by TechTarget editors Ed Scannell and Matt Gervais. They break down the new subscription models Microsoft is putting forth for Office 365, which is the path that many businesses will consider taking toward to hosted Exchange. ■

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Understanding Hosted Exchange Options

UNTIL EXCHANGE 2010 arrived, many organizations viewed hosted or cloud-based Exchange deployments with skepticism. They had concerns about security, stability and ultimately the scalability of hosted solutions in comparison with on-premises infrastructures. For many, there were serious doubts about whether moving mail infrastructures to an outside service provider would ultimately prove less costly than an existing Exchange deployment. Intermedia, Rackspace and others offered a number of plans for hosting Exchange, but IT pros' uneasiness remained.

Resistance, though, is softening. Over the past two years, Microsoft's own Office 365 has rapidly matured, not just as a mail platform but also as a true enterprise solution. Office 365 offers much closer integration among applications such as SharePoint, Lync, Office and Exchange, with federation between on-premises Exchange 2010 and 2013. Many IT professionals who were previously unsure about hosting are now re-evaluating, especially in light of Office 365 rolling out WAVE 15 products as the back end. WAVE 15 includes Exchange, Lync, SharePoint and Office 2013, which are much more tightly integrated together than their predecessors. For example, from within Exchange 2013 you can now use compliance searches

that will return data from both Lync IM conversations and any relevant document reference from within SharePoint meeting the search criteria.

Microsoft's Office 365 has developed to where it is one of the best hosted offerings available. Its integrated platform is complemented by the company's Better Together strategy, which ostensibly means better integration in Microsoft's suite of products (Exchange, Lync, SharePoint and Office).

Other third-party hosting providers are struggling to offer the same level of integration and a consistent cost model. Of course, there may be cheaper options than Microsoft, but you might not get the all-encompassing experience that Office 365 boasts.

ON-PREMISES VS. OFF-PREMISES

Broadly speaking, both Exchange 2010 and 2013 can be deployed in the following configurations:

■ *On-premises.* In this conventional model of deployment, your organization hosts all its own Exchange Servers and provides the related technical support, including disaster recovery, in-house.

■ *In the cloud.* This arrangement allows an organization to avoid the overhead of

managing an Exchange environment, reducing the resources required to administer and support the platform.

■ *Hybrid.* As a mix of on-premises and cloud, this configuration provides a modicum of control in certain areas of the mail infrastructure but outsources other areas, therefore splitting risk and cost; it could enhance performance of the overall mail infrastructure.

For larger organizations, fully cloud-based infrastructures are usually achieved in a step transition via a hybrid model, in which some mailboxes reside within an Exchange environment maintained locally while other mailboxes live off-premises. The authentication is usually handled via federation between the two environments. Mailboxes are then gradually moved over until the local infrastructure can be decommissioned.

While large organizations are shying away from having their entire email or applications infrastructures run at a cloud-based provider, some are adopting hybrid models. In this scenario, some parts of the company are placed out on Office 365 and make use of Exchange, Lync and SharePoint.

This approach seems most popular in situations where employees are based in offices with limited connectivity and where implementing a company phone system at those sites is not cost-effective. Instead, larger organizations may employ Lync.

Smaller organizations (those with between 10 and 50 users) can usually avoid the complexities of hybrid existence and move straight to a hosted platform via full migrations outside office hours—depending on the amount of mail data to be shifted.

PRICING OPTIONS

When evaluating a migration to a hosted Exchange model, organizations should consider several driving factors, including cost. An organization needs to understand its existing on-premises costs for email before comparing them with a hosted alternative. Otherwise, it is difficult to make a sound business case for making the change.

Sometimes it is difficult to determine how much an on-premises infrastructure costs. A good rule of thumb is to derive cost per user over a given period of time, typically five years.

When building an on-premises cost model, consider these factors:

■ Annual hardware expenditures (including ancillary hardware, such as load balancers or email message hygiene, as well as maintenance costs);

■ Data center costs such as power and cooling, etc. (since this is an environment-based cost, not a per-user one);

■ Annual licensing costs (including Exchange, but also third-party tools that you use and their associated maintenance costs);

■ Annual cost of backup and disaster recovery efforts;

■ Annual storage costs per user; and

■ Annual staff costs.

These considerations aren't an exhaustive framework to construct a baseline. Each organization has to adjust for its own requirements. Once you have determined your baseline, compare the costs of hosting Exchange with your on-premises model. Consider these costs over the entire period of time you would anticipate being in a contract with a hosting provider.

Of course, a business may consider cloud-based email services for reasons other than cost. It may determine that it lacks the in-house resources to properly support Exchange, or it may want to free those technical resources for other projects. A company may view Exchange as increasingly complex and more demanding on personnel without providing the corresponding return on investment. Most critically, moving from on-premises to off-premises Exchange should be a consideration only after careful study of the business case.

Once you have determined your baseline, compare the costs of hosting Exchange with your on-premises model.

THE PROS AND CONS OF DEPLOYMENT MODELS

The hardest questions to answer about adopting a hosted or hybrid model require a close look at the pros and cons of each format and how they relate to each organization's unique requirements and governance standards. Let's work through some of those questions.

■ *On-premises deployment.* This scenario offers advantages in that you maintain complete control of your environment, including the hardware, software, backups and recovery. You also control the allocation of mailbox and the transport limits (the mailbox sizes for each user and the size of the messages that can be sent and received).

An on-premises arrangement also allows you to control which third-party tools you integrate with your mail environment. Also, your email data is fully within sight, which enables you to always know where it is, who is accessing it and which security controls are in place.

A further benefit to an on-premises Exchange model is the freedom to schedule maintenance and upgrades when they are most convenient for your organization. This keeps uptime within your sphere of influence.

As for disadvantages, on-premises Exchange can be more costly than cloud-based alternatives. This is largely because you own and maintain all the hardware and software. In addition, you need to maintain a high level of in-house skill,

especially if you have a high-availability (HA) environment spread across several data centers.

An HA-based infrastructure requires a deep understanding of networking, clustering, database log replay, and resilient client access and transport servers. Running multiple Exchange servers in-house also contributes to your organization's overall carbon footprint, because you need to power and cool all the servers and associated networking equipment.

Another factor to consider is that running Exchange on-premises means you need to maintain the environment and perform all the planning required to move between rollups and service packs.

■ *Off-premises deployment (with Office 365).* The primary advantage of an off-premises Exchange deployment is that you can reduce overall capital and revenue costs on hardware and software. You can also reduce staff and administration costs. As for availability, a cloud-based provider can often guarantee 99.9% uptime. In addition, off-premises Exchange lets you connect from almost anywhere, which promotes mobile working and business continuity.

Other benefits include having hygiene and other third-party services integrated into the overall subscription cost of the service. Organizations can also take advantage of other Office applications (SharePoint, Lync and Office) with high degrees of integration from a single provider, based on cost-effective subscription plans.

As for disadvantages, cloud-based Exchange means you no longer have full control of your data. This becomes paramount if your organization has strict data-protection rules, such as those governing how certain email messages must be routed and stored.

If you migrate to Office 365, you may be unable to guarantee that these compliance requirements are met, since your data could reside in any number of data centers around the world.

When you need to integrate other business systems into your environment, you may be limited in what you can achieve if you don't run Exchange on-premises. Certain customer relationship management applications, for example, require integration with a mail system via an application programming interface or a physically installed software component.

Hosted Exchange has other limitations, including a potential loss of control over subscription costs as a business grows, a lack of clarity on how to integrate data back into an organization if you terminate a contract, and the need to invest in a more robust networking infrastructure to ensure fault tolerance should your primary link to the Internet fail.

■ *Hybrid deployment.* A hybrid Exchange model potentially offers the best of both worlds. You can maintain some control over security, integration and data. This type of deployment allows for a staged migration of a large environment at a

controllable pace, letting you scale to a utility model (where your monthly or yearly expenditure is proportionate to the number of mailboxes in use). It also lets you evaluate a hosted model without committing your entire user base.

The downsides to the hybrid approach include the complexity to set up and manage the infrastructure; the fact that the hybrid model doesn't create short-term savings in terms of staff, software and hardware costs; and the chance that you'll end up paying for in-house and off-site infrastructure.

COMMON HOSTING MYTHS

So what about those perceptions about cloud/hosting scenarios? Some are more fiction than fact.

■ *Hosting means that you lose sight of your data.* This is not exactly true. You can see your data day to day, and if you adopt a hybrid model, you can move data back and forth between local Exchange servers and the cloud. You never lose ownership of your information; it's just not where you're used to accessing the data.

■ *Hosting is less secure.* This is not really true. Most hosting providers have greater control over the security of their systems than those a business can provide locally. The concern is how to secure the communication between your hosting company

and the client endpoint. In many cases, this is via Secure Sockets Layer (SSL), which is no less secure than providing Outlook Web Access externally.

■ *Hosting is not reliable.* No computer system is 100% reliable, and when you move to the cloud, your own focus will change from HA for your own mail servers to redundant network links. Providers have made extensive investments in uptime, since their business viability depends on being able to deliver on their promises to provide services. These investments will likely be more extensive than what most organizations can afford on their own. This means that problems with reliability are infrequent and usually solved in no more than an hour.

■ *Hosting means all my problems go away.* This is not entirely true. Businesses wanting to reduce administrative overhead and costs should remember that even a hosted solution requires a small degree of administration for account management and maintenance of the organization's cloud environment. These demands are much less than in an on-premises setup, but it is a continued requirement.

A decision about how to run Exchange should be built on a solid business case. Look at your options, and run the numbers. See which alternative makes sense for your business now—and five years from now. —*Andy Grogan*

Security Considerations with Hosted Exchange

HOSTED EXCHANGE SERVER providers seemingly multiply by the day, and the benefits of moving Exchange to the cloud are real. Still, cloud security is frequently mismanaged and too often ignored.

If you're shopping for a high-quality hosted Exchange provider, ask these pertinent security questions:

1. **Do you fully understand information security?** Remember, security is a lot more than just passwords and Secure Sockets Layer. It includes everything from network hosts to Outlook Web App (OWA) to the actual physical security of the company's data centers.

2. **What security frameworks do you follow?** Generating an SSAE 16 report is one thing, but what else is the hosted Exchange provider doing? The U.S. Commerce Department's National Institute of Standards and Technology has a special publication on public cloud security and privacy, and the Cloud Security Alliance's Cloud Controls Matrix is a good resource. Also, check to see which providers are listed on the Cloud Security Alliance's Star Registry.

3. **What do you offer for content filtering and data leakage prevention?** Does the provider rely on tools built into Exchange Server, or does it allow its customers to add third-party security controls?

4. **Do you offer additional managed security services?** The provider should offer security services that track and record security anomalies in an Exchange messaging environment. Also, scrutinize the provider's policy on patching and data backups.

5. **Where are your data centers?** Cloud providers that cross state or international boundaries can create legal complexities a customer may be unwilling or unable to take on. This is especially relevant to information ownership, security incidents, forensics investigations and e-discovery requests.

6. **How do you handle compliance?** Run from any company that claims its managed service will magically make a messaging system compliant with state and federal privacy and security regulations. It's not that simple. Regulatory compliance does not come in a box or magically from a cloud.

One of the biggest misconceptions surrounding the cloud is that you can simply "set it and forget it." Even with hosted Exchange, you'll have compliance

and client-side issues to worry about. The best way to approach cloud services—whether for Exchange or something else—is to make sure that your hosted provider is trustworthy and verify everything it is doing. Each hosted Exchange vendor handles things differently. Make sure to ask the tough questions, hold people accountable and stay involved. —*Kevin Beaver*

New Office 365 Versions Emphasize Subscriptions

EARLY IN 2013, Microsoft continued an aggressive push into the services market. It has released three new Office 365 offerings that target business users through annual subscriptions.

Microsoft is pushing the subscription-based approach to Office 365 as an attempt to move customers away from traditional, perpetual licenses. In contrast to traditional licenses—much like buying a shrink-wrapped application at retail—the subscription-based license is a more cloud-friendly model. By transferring its vast, on-premises installed customer base to the subscription model, Microsoft hopes to become more competitive with its new-age cloud competitors, thus maintaining its revenue stream.

Known as Office 365 ProPlus, the new subscription approach targets large enterprises, can be streamed from a server to user desktops and live side by side with existing versions of Office. This model can cut the expense and time needed to upgrade hundreds of users to the new version. It also allows users more time to gradually adapt to new functionality, Microsoft said.

Many analysts and users believe that Microsoft's attempts to switch its largest customers to a subscription-based model may prove daunting. Still, if successful,

the move would give Microsoft a regular revenue stream at a time when there is a high penetration of corporate Office users, said Carl Brooks, an analyst at New York-based 451 Research.

"Desktop sales have been saturated for a while now, and Microsoft needs ways to keep the gravy train rolling," Brooks said.

Office 365 ProPlus, which includes Word, Excel, PowerPoint, OneNote, Outlook, Publisher, InfoPath and Access, can be licensed on up to five devices—including Macs. A significant change, however, is that the license is tied to the user, not the device.

In concert with the new desktop offerings, Microsoft has released updated, online server-based versions of Office 365, which include Exchange, SharePoint and Lync. Each of the new offerings includes capabilities designed to exploit features in the updated Office 365 desktop suite. These capabilities enhance collaboration and communication among users, the company said.

Julia White, the general manager of Microsoft's Office Division, said some of the new capabilities in SharePoint 2013, Lync 2013 and Exchange 2013—together with the new Office clients—will bring new functionality to all Office business offerings.

Some users have expressed reservations about switching to a subscription-based model.

"It is an interesting model and innovative. But at the same time, it is such a

change of mind-set for people," said Mike Drips, an information architect at CSC in Houston. "I think it will take people quite a while to run down the cost benefits of this—if there turn out to be any."

Microsoft's argument for this model is that the convenience and longer-term cost savings of not having to manually install both servers and desktop software, along with improved user productivity, should win over the reluctant.

"To get the whole productivity experience before, you had to stand up a Share-Point server, then an Exchange server and then the latest client offerings," White said. "Now all you do is pay a single subscription and have that experience, and everything is integrated."

Some third-party companies said they like the improvements available in the new online offerings, including enhanced document sharing, thanks to the tighter integration Office 365 now offers.

> *"Previously, on Office 365, it was tough to share documents."*
> —*PETER SENESCU,*
> *president and co-founder,*
> *MetaVis Technologies Inc.*

Based on feedback from users, Microsoft has attempted to make the new Office "social at its core," by building in tight connections with its Yammer, Skype and SharePoint products, said Kurt DelBene, president of Microsoft's Office division.

"Previously, on Office 365, it was tough to share documents," said Peter Senescu, president and co-founder of MetaVis Technologies Inc. "You can now share

documents much more easily, and with users in other organizations, as long as your governance policies are set up," he said.

Lync has also profited from new integration capabilities. Users can see if a colleague is in a meeting, in the office or working on a document. This should improve communication and collaboration, according to the company.

Office 365 has improved "elasticity," according to some observers. For instance, companies can more easily add or subtract new applications, such as Lync, as well as users, thereby sidestepping often lengthy discussions on such matters.

"Before [this Office 365 rollout], if you wanted to add Lync, it was a multi-month discussion" said Senescu. "Now, if you want to try it out, you can do a trial and give it a shot. It pops right up for you."

Senescu said Office 365 users should also appreciate the data loss prevention (DLP) feature available via Exchange Online. With DLP, companies can configure pre-existing or custom message policies to control message flow.

Another Exchange integration feature that could win over customers is the ability to email links to documents and files that reside in a SkyDrive folder. This should help companies save valuable storage space that would be used when sending a file. —*Ed Scannell and Matt Gervais*

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