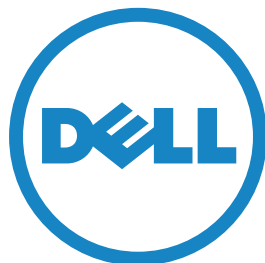




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## **Office 365 – Bringing Enterprise-Class Cloud Email Capabilities to the Masses**

By John Savill





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# Office 365 – Bringing Enterprise-Class Cloud Email Capabilities to the Masses

By John Savill

“Faster, better, cheaper.” Typically, when we see those words they’re part of some unbelievable sales pitch. However, those are the exact testimonials many customers give when they migrate from their current system to Microsoft’s Office 365 cloud-based messaging and collaboration solution. The growing cost of an email infrastructure, given its criticality to business, is an ongoing concern for any company. More and more organizations are finding that hosting email themselves while delivering the required levels of functionality and availability is becoming impossible. In this white paper, I’ll look at Office 365 and how you might benefit from a cloud-based or hybrid email solution in terms of functionality, availability, and cost savings.

## What Is Office 365?

### Overview

Office 365 is the evolution of Microsoft’s Business Productivity Online Suite (BPOS), which offered cloud-based solutions for messaging, communication, and collaboration. With the launch of Office 365, the offering utilizes the latest 2010 versions of Exchange, Lync, and SharePoint to give organizations access to all the latest advancements—plus the ability to run the Office 2010 applications.

This whitepaper doesn’t explain Office 365 in detail. Ample Microsoft product documents and walkthroughs provide that information. What’s important to understand about Office 365 is that it provides enterprise-class messaging, communication, and collaboration capabilities for any size organization based on its Office Web Apps, Exchange, Lync, and SharePoint products that run on Microsoft servers out in “the cloud,” protected with the ForeFront Online Protection services.

### Local Infrastructure

Organizations require no local infrastructure such as servers. Office 365 is a software-as-a-service (SaaS) solution; no management is required by an organization for the



service other than enabling users for the desired services—and even that can largely be automated. The only requirement to use the messaging and collaboration services is an Internet connection to Microsoft’s servers that host the services. One additional benefit of Office 365 is the right to run the full Office 2010 applications locally, if desired. In the current offering, the only local component you need to install is the Lync client, and a web version is expected in the future.

**Subscription Plans**

Office 365 offers numerous subscription plans, ranging from individual users to large multinational companies. The different plans support different types of users and access to different levels of functionality. You don’t have to use the same plan for every user in the organization; you could use different plans for different types of users, paying only for the features those users will use. Four primary subscription plans are available; some plans have different flavors that contain different levels of functionality. Table 1 highlights the plan details as of this writing.

**Why Migrate or Use a Cloud Solution?**

**Types of Email Solutions**

Typically, email solutions used by companies today fall into one of two buckets: those with Exchange hosted on premise and those using some kind of cloud email solution, which could be either a basic mail solution provided by their ISP or something like Gmail or any number of other web mail platforms. Although other types of on-premises solutions exist besides Exchange (e.g., Lotus Notes), they are in the minority. The decisions companies need to make around any on-premises solution, which I’ll discuss in this white paper, also apply to these other on-premises solutions.

**Options for New Companies**

If you’re starting a new company with no current messaging solution, you have a blank sheet of (virtual) paper onto which you can architect your dream messaging environment. One option is to

Plan	Description
<b>P Plan</b>	For individuals and small businesses up to 25 people. Each user gets a 25 GB mailbox; online Office Web App access; SharePoint Online for internal and public site; Lync online for communication, meetings, desktop sharing; and PC-to-PC audio and video calls. You can find more details at <a href="http://www.microsoft.com/en-us/office365/buy-small-business.aspx?WT.z_O365_ca=Buy_plans-small-business_en-us#fbid=T4E3xnmf2b">www.microsoft.com/en-us/office365/buy-small-business.aspx?WT.z_O365_ca=Buy_plans-small-business_en-us#fbid=T4E3xnmf2b</a> .
<b>E Plan</b>	For enterprise customers that need access to powerful, enterprise-level feature sets. Four plans are available with feature sets that include those in the P Plan, plus unlimited mail storage, access to use local versions of Office and Microsoft server services like Exchange, full enterprise voice capabilities, and more. You can find more details at <a href="http://www.microsoft.com/en-us/office365/enterprise-solutions/enterprise-plans.aspx#fbid=T4E3xnmf2b">www.microsoft.com/en-us/office365/enterprise-solutions/enterprise-plans.aspx#fbid=T4E3xnmf2b</a> .
<b>K Plan</b>	An enterprise solution for kiosk workers who are typically without a desk and require a smaller subset of functionality. Available are two plans, which vary only by the ability to either view documents only with Office Web Apps or to enable editing. Also included are a 500 MB mailbox, calendar, and contacts, plus access to SharePoint online but no Lync. You can find details at <a href="http://www.microsoft.com/en-us/office365/enterprise-solutions/enterprise-plans.aspx#fbid=T4E3xnmf2b">www.microsoft.com/en-us/office365/enterprise-solutions/enterprise-plans.aspx#fbid=T4E3xnmf2b</a> .
<b>Specialty Plan</b>	Available for educational institutions that provide features for both staff and students. Various options are available, including the Live@edu service, which is a free, limited Outlook Live, SkyDrive, and Office Web Apps solution for students. You can find more details at <a href="http://www.microsoft.com/en-us/office365/education/school-services.aspx#fbid=T4E3xnmf2b">www.microsoft.com/en-us/office365/education/school-services.aspx#fbid=T4E3xnmf2b</a> .

**Table 1: Office 365 Subscription Plans**



host something on-premises in your local datacenter, like Exchange, and plan for the initial implementation costs and subsequent management—a solution that might be the right choice, but it has a high initial implementation cost. As more users are added, the additional costs will be fairly small until new servers need to be added to handle additional load or to add functionality or redundancy. Another option is a cloud service like Office 365, which charges per-user and provides a consistent pricing model without high initial costs—a consideration that is critical for any startup. And even if you're a company of four people, you get all the power of the latest version of Exchange, Lync, and SharePoint plus great availability across locations.

### Options for Existing Companies

What about existing companies? You have email; it works most of the time but is it enabling your organization to grow and be more efficient? Is it considered an asset to your company? Most people expect more from email than just sending messages. People want to share calendars, book resources, organize contacts, archive information, and have a rich local client and web browser-based experience. And they want great interaction from their mobile device.

For small companies that use basic email provided by their ISP, a move to Office 365 represents a quantum leap both in functionality and accessibility. You also have the added benefit of Lync integration for corporate real-time communication and SharePoint for internal collaboration. And an externally facing website makes it that much sweeter.

What about medium and large companies that already have a more powerful messaging solution, either on-premises (e.g., Exchange) or something like Gmail? Why would these companies that already have a solution for mail in place consider Office 365?

#### On-premises Email Solution or Office 365?

Organizations with an on-premises solution face many challenges and costs associated with on-premises infrastructures, but there are also many benefits. Weighing the costs against the benefits will vary for every company but there are definitely tipping points. Think of an existing on-premises solution and consider some of the challenges:

- Backing up the data and maintaining procedures to ensure that not only can the backed up data be restored but that it can be restored in a timely fashion
- Accessibility to the solution from within the corporate network and from the Internet
- Securing the service, especially when used from the Internet
- Patching and upgrading the service
- Ensuring compliance with internal and regulatory requirements
- Maintaining sufficient resources to handle load and retention requirements, which can mean a lot of disk storage
- Keeping the service available during planned and unplanned events

Email is considered a tier 1 application in many organizations today, meaning it's among the most critical to the success of an organization. Was that the case when your company first installed its Exchange 5.5 server? As email becomes more important to an organization, and the use of email increases both in quantity and size, the capability, scalability, and availability of existing email systems becomes inadequate. Consider an organization that is growing and now needs messaging to be available, even if a site failure occurs. This can be a major undertaking. With newer versions of Exchange, particularly Exchange 2010 and its Database Availability Group (DAG) feature, the ability to have on-premises mail replicated between locations is possible without geo-clustering. However, an organization would still require a second datacenter and connectivity between them, which is a significant infrastructure.

Enter Office 365, which offers full enterprise messaging capability with multiple global datacenters and strict service level agreements backed by financial penalties. No more backups, no more updates or patching, no more security concerns or audits: Your data is replicated to multiple datacenters, a major draw for organizations that already have a messaging solution. You have all the capabilities and availability without any of the



infrastructure, location, or management overhead. When the Lync real-time communication capabilities and SharePoint collaboration are added to the picture, Office 365 can not only replace an on-premises messaging solution with one in the cloud that has a greater feature set and higher availability, but it also adds a whole new level of communication and collaboration.

### **Another Cloud Messaging Solution or Office 365?**

What about those companies using another cloud messaging solution? Why would they migrate to Office 365? Initially, other solutions seem cheaper than Office 365, but once companies sign a contract for other messaging related services, additional costs creep in. So price can be part of the reason to switch but it might not be the primary one. The primary drivers to switch mail services are usability, functionality, and availability. Users struggle with non-intuitive interfaces and with major areas of functionality that are missing or hard to use. And many mail systems have had major outages without any real accountability, offering only a few hours of extra free service rather than any kind of financial reparation.

### **A Hybrid Solution?**

There is a third scenario that goes beyond migrating from on-premises and migrating from another cloud messaging service: a hybrid architecture of on-premises Exchange and Office 365. A large organization might already have a well architected and highly available Exchange 2010 infrastructure in place for its users. However, parts of the company might have a different level of messaging needs or high turn-over of employees—for example, in certain types of retail business where the corporate IT team doesn't want to handle the work involved with the large volume of provisioning and deprovisioning. One option is to host portions of the company on Office 365 while other parts of the company use the on-premises Exchange solution. This hybrid solution is fully supported with Office 365 and Exchange 2003 and above (although you do need some Exchange 2010 infrastructure for the communication with Office 365).

### **Active Directory Integration and Single Sign-on**

For very small companies with no local infrastructure and no local Active Directory domain, there is no issue with duplicate identities: a user is created

in the Office 365 service for each employee, and the employee uses that Office 365 credential. But what about larger organizations that already have an on-premises directory service such as Active Directory? A number of solutions are available that don't require users to maintain multiple identities.

### **Active Directory Federated Services (ADFS)**

The most seamless option is to implement Active Directory Federated Services (ADFS) 2.0 between your organization and Office 365, along with the Office 365 Active Directory Synchronization tool that allows users to log on to Office 365 using their local Active Directory credentials. This makes it very easy for the users, and although it requires more setup for your organization, it will save a lot of user and identity management once you migrate to the Office 365 service.

### **Active Directory Synchronization Tool without Federation**

If federation via ADFS to Office 365 is not possible, you can still use the Active Directory Synchronization tool to populate the Global Address List in Office 365 and create users. However, the password from the users' local AD account will not be synchronized to Office 365; a separate password will need to be used when connecting to the Office 365 environment.

### **Bulk Export and Import**

Another option is to export users from the local environment to a CSV file, and then perform a bulk import into Office 365. Although this is a manual process, it might be suitable if users are not frequently provisioned and deprovisioned and you just need to perform an initial population of the Office 365 environment with your employees. Also, you can manually add and remove users via the Office 365 administration interface.

### **Microsoft Online Services Sign-In Assistant**

If your organization isn't using ADFS, which means users have a different identity for Office 365, you can deploy the Microsoft Online Services Sign-In Assistant to the user's desktops. This approach will handle the credentials to sign in to Office 365, avoiding the need for the users to maintain an additional identity and the resetting of passwords every three months. The tool also configures any local Office products for user with Office 365. You can find more details at



<http://onlinehelp.microsoft.com/en-us/office365-enterprises/ff637585.aspx>.

## The Path to Office 365

We have seen why organizations are likely to want to move from an existing messaging solution to Office 365. However, migrating the entire messaging operation for an any sizable organization is not accomplished by simply pushing a big red button; rather, it is a significant undertaking that requires careful planning—or you're setting yourself up for a huge failure. When considering a mail migration you must perform key stages to ensure a smooth process.

### Stage 1: Researching Office 365

First, before doing anything, go to [www.microsoft.com/office365](http://www.microsoft.com/office365) and read about the service, the different plans available, and the functionality that is included with them. Also, look at case studies of organizations that have already migrated to Office 365. This will help set expectations and help sell the migration to upper management, if needed. For case studies, go to [www.microsoft.com/casestudies/](http://www.microsoft.com/casestudies/) and search for Office 365.

### Stage 2: Understanding Your Current Environment and Requirements

Next you need to have a good understanding of what you're migrating from, so ask yourself these questions:

- Is your current platform on-premises Exchange 2007, Google, Lotus Notes, etc.?
- What features of that solution are you using? (The answer to this question will determine what needs to be migrated.)
- How many users do you have? Do those users all use the same features, or do different groups of users need different quotas and capabilities?
- Do users have local mail archive files that won't be compatible with Outlook?
- Is Office 2010 deployed to desktops? Is this required in the future or will you use the online web-based services?
- What services do you want to provide for employees?
- How will user machines be configured and will the online services sign-in assistance be required?

- How will identity management be handled (e.g., on-premises, single sign-on, or in the cloud only)?
- Do you want to move everyone or just part of the company in a hybrid model?
- How will you provision users?

Yes, there are a lot of questions, but performing a quality discovery will ensure you have a clear understanding of not only what you have today but what you want from the new solution, which will help in creating a plan for going from what you have today to where you want to be. This information will help you decide if you need to bring in a third party that has experience with Office 365 migrations or if you can handle it internally.

### Stage 3: User Training

User training is critical. If you're migrating from on-premises Exchange to Office 365, the users may not see any difference; they may still use local Outlook and the only user impact may be the sign-in assistant tool and some reconfiguration on their mobile devices. But if you're moving from a different mail platform and mail client, you need to prepare users for the new experience and the new capabilities. This will ensure they get the most from what is available and make the project a success instead of a confusing, helpdesk-swamping disaster.

### Stage 4: Migrating

The actual time to perform the migration will depend greatly on the number of users. It may be possible to perform a weekend cutover, if you have less than a couple hundred users. But any number greater than this will likely need a staged migration over a number of weeks. And as your number of users hits 5,000 and above you'll likely be looking at a much longer migration that would require a hybrid type solution. I'll discuss the technical options at the end of this paper.

### Stage 5: Deprovisioning the Source Environment

Once you've trained the users, provisioned them in Office 365, migrated the mail and services, configured end-user environments, and everything is working, the last step is to turn off the legacy platform or service and grab yourself a cold one.



## Dell's Office 365 Migration Solutions

When it comes to migration, Dell is a leader—it has successfully migrated more than 30 million global users to Microsoft® technologies. With Dell solutions for Office 365, you can perform pre-migration assessments to determine transition requirements and ensure coexistence to maintain business productivity. Your Office 365 migration will be safe, secure and on time—without breaking the budget.

### OnDemand Migration for Email

Migrates email, contacts and calendar data from Google Gmail or on-premises Exchange to Microsoft's Office365 or Live@edu environments.

### Migration Manager for Exchange

Migrates email, contacts and calendar data from on-premises Exchange to Office365. Provides advanced features and functionality for any enterprise migration.

### Notes Migrator for Exchange

Migrates from Lotus Notes to Office 365. Converts users' mail, calendar, tasks and personal address books, and stores them in the users' new Exchange mailboxes, either on-premises or in Office 365 environments.

### GroupWise Migrator for Exchange

Migrates GroupWise email, calendars, tasks, personal address books, frequent contacts and archives to on-premises Exchange or Office 365.

To learn more about Dell's Office 365 migration solutions, visit [www.quest.com/Office-365](http://www.quest.com/Office-365).

## How Do You Migrate?

### Choosing Tools and Migration Partners

You have your plan. You know what you want to do. Now, which tools will help you in the actual migration of email? You have a couple of options: you can use the native technology provided by Microsoft or you can choose a third-party migration tool. The tool you'll use will depend largely on the number of users in your organization and your technical expertise.

"*Temet nosce*" is a great Latin phrase which, loosely translated, means know thyself—and in this case, know the capabilities of your organization. Email is critical to your organization; any downtime is a major issue, and moving that service is a major operation. Microsoft does provide tools for migration from Exchange but that's not to say it's necessarily an easy process, especially for staged and hybrid migrations or for organizations with non-standard configurations. Many organizations choose to engage a partner that has

performed hundreds of these migrations, that has found the kinks and knows how to avoid them—and that may decide to use additional tools to ensure the best possible migration experience for the IT organization and the users.

### Migration Scenarios

#### On-premises Exchange Migrations – Small

On-premises Exchange installations with 1,000 or fewer users running Exchange 2003 or newer can be migrated over a single weekend using what is known as a cutover migration. No local migration infrastructure is required other than a trusted certificate that can be used by Office 365 to trust the ActiveSync service (Outlook Anywhere) running on the local infrastructure, which is used to pull over the messaging content. This is a full-fidelity migration, meaning not only mail is migrated but also calendar information, contacts, tasks, and much more.

When it is possible, the cutover method is the simplest. Because a cutover migration is done as a



“big bang” (that is, everyone is moving at the same time), there is no synchronization of the GAL or mail flow to worry about.

### On-premises Exchange Migrations – Medium

Larger Exchange installations (migrating up to 5,000 users over a period of weeks) usually use a staged migration, which includes synchronization of the Global Address List and enabling of mail flow between the local Exchange and the Office 365 environment. This is available only for organizations running Exchange 2003 and 2007, not Exchange 2010—organizations running Exchange 2010 on-premises should use the hybrid approach I’ll cover next. For the staged migration, directory synchronization is required and users are migrated in batches—and once again, this is a full-fidelity migration.

### On-premises Exchange Migrations – Complex

Installations with more than 5,000 users and those running Exchange 2010 on-premises need to use a hybrid approach, which is longer term. This approach includes Free/Busy synchronization and separating live and archive mail. It has the most complex requirements, but it provides the most co-existence functionality and flexibility, including the ability to have cross-premise calendaring (Free/Busy), which is key to any longer term migration or co-existence project. Hybrid mode also offers the following features that are not available in staged migrations:

- Cross-premise MailTips, message tracking, and mailbox search
- Exchange Online Archive while keeping primary mailbox on premise
- OWA redirection cross-premise, allowing a single OWA URL for both on-premises and Office 365 users
- Native mailbox move support, including no need to resync the local OST (cache) on clients
- Online mailbox moves so no user downtime
- Secure mail that ensures that cross-premise communication is encrypted and authentication headers are preserved, so even mails sent between on-premises and Office 365 still look “internal”
- Centralized mail flow control via the on-premise infrastructure

### Cloud Migrations

The tools provided by Microsoft for cloud migrations are not as sophisticated; they are essentially limited to an IMAP pull from the existing system, meaning mail messages are pulled from the existing service but nothing else (e.g., calendar, contacts, tasks). This may not be a problem if you’re running a very basic email service that doesn’t have additional functionality beyond email.

If you’re migrating from a service with more capabilities, you’ll likely need something more than just an IMAP pull. In this case, you would use a solution from a Microsoft partner such as Dell Software. Choose a tool that offers rich migration capabilities, including folder conversions, contact and calendar migration, filtering of data migrated, and an intuitive experience.

For help with migration planning and implementation, go to the Administration page of Office 365 and choose the option to create a custom plan. You’ll be asked a few questions about your current environment and your goals. First, you’ll be asked which services you want to include in the plan (e.g., Exchange). Then you’ll be asked about the existing primary email environment. Depending on your answer, other questions will be asked, such as number of users, the type of identity management, and the coexistence requirements. Once you answer the questions, the wizard will generate a recommended deployment plan and the actions required to complete the migration, including items such as informing users, adding domains, and actually performing the migration.

### Conclusion

Any migration of a critical service should never be undertaken lightly. But with the right planning and tool set selection, the move to Office 365 can be done in a controlled and painless way—and your organization will quickly be enjoying the benefits enabled through Office 365.

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