



# TECHSHOW2018

## Movin' On Up: Migrating Exchange to Office 365

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## Author Bios

### *Ronny Loew*



In addition to over 20-years in sales, consulting, training and technology, Ronny Loew has worn hats from temporary office staff to business owner. This has helped him develop an in depth understanding into how professionals consume and interact with technology as well as how to get the most from an IT budget. When consulting with decision makers, he translates the complexities of technology into plain terms, educates and assists in making beneficial choices for the firm.

Ronny has been with ProCirrus since 2011. During that time, he has been instrumental in the establishment of ProCirrus' reputation as a leader in Cloud hosting for professional services firms with a focus on Law firms. ProCirrus has grown to support firms in 32 states and has also established working relationships with Affinity Consulting Group, Thomson Reuters, Lexis Nexis, Abacus Next, Needles, Worldox, Coyote Analytics, Orion and a growing list of others.

Ronny is also a professional saxophone player with worldwide touring experience and an avid scuba diver. He lives with his wife and two kids in Eagan, Minnesota.

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## ***Stanley Louissaint***



Stanley Louissaint is the Principal and Founder of Fluid Designs ([www.fluiddesigns.com](http://www.fluiddesigns.com)), a full service Managed Service Provider and IT support services firm that focuses on the computer, networking and application needs of law firms. His passion for technology led him to form the firm in 2001. Under his leadership, Fluid Designs has grown from serving a handful of small businesses into a premier IT services company. Fluid Designs provides additional full-service offerings to clients in the legal industry such as e-discovery, computer forensics, mobile forensics, cyber investigations and expert witness services.

Stanley also has a passion for writing about technology related issues. He is a contributing writer to a number of printed and digital technology magazines. His writing has been featured in the New Jersey Law Journal, Business Solutions Magazine, TechTarget SearchITChannel and TechTarget SearchCloudProvider. Stanley was the featured cover story in ChannelPro Magazine, where he was recognized as a leader in the legal vertical. Additionally, he has been featured as a 2016 ChannelPro Visionary by ChannelPro-SMB.

Stanley serves as a member of the Advisory Council for The ASCII Group. He also serves as an Executive Council member of the CompTIA Future Leaders Community.

Stanley earned his B.A. in Computer Science from the New Jersey Institute of Technology. Since the technology industry changes rapidly, his key to success lies in constantly re-educating himself on the latest innovations, trends and techniques.

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## 1. Business Case for 365

Let's face it! Email is a commodity and Microsoft Exchange, while the best, is a beast. Doing it yourself makes about as much sense as deciding to make your own sugar. Other than possibly the very largest of firms, there is no way for a firm to support their own Exchange on-premise with any comparable level of stability or effectiveness to Office 365.

When it comes to adding users, licensing, features and scalability there is no easier way. Office 365 offers disaster recovery, access to OneDrive, Skype for Business, SharePoint and other out of box add-ons like Data Loss Prevention, Multi Factor Authentication and Mobile Device Management. Tools, plugins and add-ons are universally developed. Rather than invest additional time and resources evaluating numerous options, vendors, compatibilities and pricing, a wide array of services and needs are simply there for the taking and already set up to work within the Office 365 suite.

Seasoned attorneys with decades of practice experience will often say that they feel more comfortable knowing that their data is within the walls of their office. They believe being able to see it, touch it and give it a hug makes it more secure. Given they are often the decision-makers, we need to be able to help them understand how on-site servers are in fact MORE risky. A disgruntled employee or cleaning crew can do irreparable damage with little effort. Office 365 utilizes [8 professionally managed and secured data centers](#) in North America alone. Simply stated, a firm doesn't stand a chance to provide itself and its clients with the same protection. Many would argue that communication is the most critical element to the stability of an organization. If you are using an on-premise Exchange server, anything from a power or internet outage to a server issue can bring your communication to a halt. From a disaster redundancy standpoint, using Office 365 Exchange allows communication to continue in the event something happens to the rest of your infrastructure, whether it is a temporary reboot or a catastrophic outage. From a cost standpoint, at around \$8/user/month (depending on the [version](#)) you can't even closely stand up a server, manage it and support it for that amount. That doesn't even take into account other requirements like audit, backup and multiple mail stores that are included with O365.



Frustrating as it may be for some, the overwhelming majority of firms are already using Windows, already using Office and already using Exchange. Alternatives exist, however they fall short in a great many ways. Office 365 saves money and removes unnecessary barriers to using the best and most up to date version of what we are all using anyway. Microsoft has won and [Resistance is Futile](#).

## 2. Strategizing for the move

The “powers that be” in our respective organizations vary greatly as does their willingness to participate in advanced planning. Some firms will be thinking well ahead and have the opportunity to strategize about next steps, migrations and improvements. Other firms wake up one morning to find their system has come to a grinding halt. Of course, there is also a full spectrum between the extremes.

Those with the time to strategize will first want to ascertain the remaining life on their Exchange server and the version of Exchange running. You will also want to consider the Server OS, Windows OS and Office Versions running in your environment. There is [compatibility that spans a few versions](#), but of course, it is best to stay current and consistent across all areas. Office 365 works best with Office 2013 and 2016. Older versions (2007 & 2010) may work with limited functionality. Microsoft Lifecycle Policies are available [here](#).

Evaluate the current functionality of any integrations with your other software and explore version issues. An upgrade to Office without updating integrated software may cause integration issues. Most software companies that integrate with Office will have compatibility information through their helpdesks. If you depend on integrations and you are using an older version of Practice Management, Document Management, Case Management, Time Billing & Accounting, Outlook plugins or any other software with no plans to update them, it may prohibit or dictate your ability to upgrade. If an update to Exchange is required, knowing these compatibility issues in advance will help you plan the project to include other necessary software upgrades.

If your firm is planning to change or upgrade your Practice Management, Document Management, Case Management, Time Billing & Accounting or any other software, you can safely assume you will be getting the newest version which will be compatible with the newest version of Office and Exchange. This may also contribute to the timing and planning of any conversions.



Those who have not had the luxury of advanced planning may be subject to an unstable server, which is dictating timelines. You have less time to plan, but all the questions will still need answers to avoid additional negative outcomes.

### 3. Migration Options

We have several deployment methods available through the Office 365 Exchange Admin center as well as third party tools. There are pros and cons to each deployment method. Our objective is to help you fully understand the different migration strategies that exist. There is no “one size fits all” scenario. We will look at these different options so you can ultimately determine which migration method is best for your organization if you are planning this move.

Migration options exist from Exchange 2003 through 2016. However, it is important to note that Microsoft has officially ceased support on Exchange versions 2003 and 2007. If your firm is running either of these versions migrating is no longer an option, but rather a requirement.

Four migration types are available through tools provided by Microsoft. They are the cutover, staged, hybrid and IMAP migration. We will not cover into the IMAP migration, as this is not feasible for firms that are migrating from an existing Exchange server. That method is directed for organizations that are coming from other mail platforms to Office 365.

#### 3.1 Cutover Migration

A cutover migration is when you migrate email accounts from your current in-house Exchange server to the Microsoft Office 365 system in one shot. Although Microsoft officially supports up to 2,000 mailboxes when utilizing this deployment method, it is advisable to limit it to 150 mailboxes.

This option is seen by most as the easiest of all migration types. The setup on your source server is limited. This option works without any Active Directory Synchronization and works with all Exchange versions from 2003 onward.

However, there are quite a few drawbacks to utilizing this method. All of your users must be migrated at once, thus resulting in downtime. Microsoft Outlook clients



and mobile devices must be reconfigured. There is also a delay in mail flow. Lastly, some items are not migrated. Items such as: hidden mailboxes/distribution lists/mail contacts/dynamic distribution groups and public folders.

During a cutover migration your users are created on the Office 365 system automatically. You cannot create users in Office 365 before this process begins. Additionally, AD Connect cannot be enabled before the migration is completed. AD Connect is used to synchronize users between your local Active Directory and Office 365 to enable things such as single sign on (SSO). If AD Connect is enabled and a sync occurs before migrating, the migration will inevitably fail. Now, let's get into the steps needed to actually migrate your mailboxes.

Your first preparatory step is to update the on-premises Exchange server with the latest cumulative update or update rollup for the deployed version.

Next, Outlook Anywhere must be enabled, as this is how Office 365 will connect to your on-premises server. You must have a Multiple Domain (UCC/SAN) Secure Socket Layer (SSL) certificate from a trusted Certificate Authority(CA). Both your Outlook Anywhere, as well as Autodiscover services addresses have to be secured with this certificate.

Office 365 will connect to your on-premises Exchange server utilizing Administrative credentials. This account needs to also have full access to all the mailboxes on your server. Through the Exchange PowerShell console this task can be accomplished by utilizing the following commands:

1. `Get-RoleGroup "Organization Management" | select members`
2. `Add-RoleGroupMember "Organization Management" -Member "account name"`
3. `Get-Mailbox -ResultSize unlimited -Filter {(RecipientTypeDetails -eq 'UserMailbox') -and (Alias -ne 'Admin')} | Add-MailboxPermission -User admin@yourdomain.com -AccessRights fullaccess -InheritanceType all -AutoMapping:$false`

If you've implemented Unified Messaging then it must be disabled prior to starting the migration.

Now we must move into the Office 365 Exchange Admin console where the rest of the work will begin.



Verify your domain with Office 365.

Office 365 will only migrate security groups if they are created prior to the migration.

Next, you have to create the Migration Endpoint. In here all the credentials necessary to connect to your on-premise Exchange server are stored. We also let the system know how many mailboxes to migrate concurrently. We will utilize the “Outlook Anywhere” method, which is why we had to have the proper SSL as mentioned above.

Start the migration batch that you just created. The time till completion will vary based on the amount of data that is being migrated.

After your cutover migration has been completed there are some post migration tasks that need to be completed.

Your first step is to convert all on-premises mailboxes to mail-enabled users. Next, install AD Connect on your local Active Directory server if you want synchronization between your on-premises Active Directory and Office 365. Your MX and Autodiscover records have to be updated to point right to Office 365’s mail servers. Lastly, delete your migration batch.

### **3.2 Staged Migration**

A staged migration is only available for those on Microsoft Exchange 2003 or 2007. This method allows you to migrate mailboxes in batches. Unlike the cutover migration, you can migrate more than 2,000 mailboxes utilizing a staged migration. AD Connect must be enabled to synchronize accounts. If AD Connect is not enabled the migration will inevitably fail. Let’s get into the steps needed to actually migrate your mailboxes.

Your first step to prepare for the migration is to update your on-premises Exchange server and install the latest cumulative update or update rollup for your version of Exchange.

Outlook Anywhere must be enabled, as this is how Office 365 will connect to your on-premises server. You must have a Multiple Domain (UCC/SAN) Secure Socket Layer(SSL) certificate from a trusted Certificate Authority(CA). Both your Outlook



Anywhere, as well as Autodiscover services addresses have to be secured with this certificate.

Office 365 will connect to your on-premises Exchange server utilizing one set of credentials, an administrative account. This account needs to have full access to all the mailboxes on your server.

If you've implemented Unified Messaging then it must be disabled prior to starting the migration.

Now we must move into the Office 365 Exchange Admin console where the rest of the work will begin.

Verify your domain with Office 365.

A CSV file has to be created with the users that you want to migrate.

Next, you have to create the Migration Endpoint, where all the credentials necessary to connect to your on-premises Exchange server are stored. We also let the system know how many mailboxes to migrate concurrently. We will utilize the "Outlook Anywhere" method, which is why we had to have a proper SSL certificate as mentioned above. Be sure to select Staged Migration under Migration Type.

Start the migration batch that you just created. The time for completion will vary based on the amount of data that is being migrated.

After your staged migration has been completed there are some post migration tasks. Your first step is to convert all on-premises mailboxes to mail-enabled users. Next, your MX and Autodiscover records have to be updated to point right to Office 365's mail servers. Lastly, delete your migration batch.

### **3.3 Hybrid Migration**

A hybrid migration allows you to manage and/or migrate both your on-site and Office 365 Exchange mailboxes from a single administrative console. You have the ability to move mailboxes from your on-premises Exchange server to Office 365 and vice versa.



The version of Microsoft Exchange that you are running is important for this migration strategy. You have to be running at least Microsoft Exchange Server 2010 to use it. If you are running Microsoft Exchange 2003 or 2007, you must migrate to at least 2010 prior to attempting this migration option. Additionally, you must be running the latest cumulative update or update rollup.

On your Exchange Server login to the Office 365 Admin console. Verify your domain with Office 365. Next go to "Setup -> Data Migration." Under "Select your data service" select "Exchange". This will then download the "HybridSetup" executable application which we will run on the server.

Follow the steps highlighted in the application. You will select your onsite Exchange server as well as the host of your Office 365 instance.

The Minimal Hybrid Configuration is the preferred method vs the Full Hybrid Configuration. The newest option is the Express migration option. It is a replacement for the cutover option. It is a one-time sync and cutover. Mail flow is never interrupted but we still have the single batch limitation.

You definitely want to synchronize your users and passwords, which will lead us to installing Azure AD Connect. This should be installed on another server in the organization besides your Exchange server, as you would still like it to function after you decommission the Exchange server.

You must license your users in Office 365 before the migration can take place. Next, you must create the Migration Endpoint, where all the credentials necessary to connect to your on-premise Exchange server are stored. We also let the system know how many mailboxes to migrate concurrently. We will utilize the "Outlook Anywhere" method, which is why we had to have the proper SSL certificate as mentioned above. Be sure to select "Remote move migration" under Migration Type.

Select the users that you want to move.

Your endpoint should automatically be discovered.

Start the migration batch that you just created. The time for completion will vary based on the amount of data that is being migrated.



After your staged migration has been completed there are some post migration tasks. Your first step is to convert all on-premise mailboxes to mail-enabled users. Next, your MX and Autodiscover records have to be updated to point right to Office 365's mail servers. Lastly, delete your migration batch(es).

#### 4. Outsourcing

As you see we have just outlined all the steps on handling a migration from an on-premises Exchange server to Office 365 on your own. There are a few reasons that may prompt you to not want to tackle this project yourself.

Resources and skillset. If you do not have an exchange administrator or someone who specializes in managing e-mail servers in-house that you want to outsource this project. We all know that everything goes well until it doesn't.

Time. If you do not have the time to dedicate to properly planning the migration it is sure to fail. If you and your team are stuck wearing many other hats it is best to have an outside party handle the migration for you.

Downtime. If you want to make sure that your downtime is minimized then do not embark on this journey. Microsoft's support is lackluster at best when it comes to this product. So if you get stuck in the middle of something do not expect to get a resource on the phone right away to help you with your issue. Ultimately you are at their mercy if you run into a problem.

A good budget when looking at an outside vendor is roughly \$125-\$200 per mailbox. Most vendors/consultants charge this way so it's easy for you to get a handle on what your migration will cost.

#### 5. Third Party Tools

Although Microsoft has provided methods for utilizing their tools to migrate there are a few third party tools available. A good portion of consultants in the IT community opt to use third party tools instead of the Microsoft tools.

BitTitan MigrationWiz. This tool allows you to migrate e-mails from any platform to any platform, including Microsoft Office 365. If security is a concern for you, this tool covers all the bases. Their data centers are compliant with ISO/IEC 27001/27002:2013, SOC 1 Type 2 and SOC 2 Type 2, PCI DSS Level 1, FISMA, HIPAA/HITECH, CJIS, CSA CCM, FERPA and others. They deploy a per user pricing model with a cost of approximately \$12 per user and flat rate pricing of \$114 for public folders.



Skykick. This tool is now owned by Microsoft as of late. The creators had a “one stop shop” solution in mind with this tool. Not only will it help you with your Exchange migration but also setting up Office 365 software on your user workstations if you opted for one of those packages. It is roughly \$50 per user to license and it is typically purchased through a reseller.

CodeTwo Office 365 Migration. This product boasts that no PowerShell knowledge is needed to utilize it during your migration. Additionally, there is an extensive list of reporting capabilities built into the product. A neat feature that is lacking from the other products is the ability to group mailboxes into smaller migration jobs. You need a minimum of 10 licenses at a cost of approximately \$12 per user.

## 6. Resources

### 6.1 User training

<https://support.office.com/office-training-center>

### 6.2 Outlook Web Access

<https://outlook.office365.com/owa/>

### 6.3 Android Default Mail Client Set Up

- Android - [https://support.office.com/en-us/article/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c#ID0EAACAAA=Gmail\\_app](https://support.office.com/en-us/article/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c#ID0EAACAAA=Gmail_app)
- iOS – <https://support.office.com/en-us/article/Set-up-email-using-the-iOS-Mail-app-7e5b180f-bc8f-45cc-8da1-5cefc1e633d1?ui=en-US&rs=en-US&ad=US>
- Other Mobile Devices - <https://support.office.com/en-ie/article/set-up-mobile-devices-for-microsoft-365-business-users-d868561b-d340-4c04-a973-e2575d7f09bc>

### 6.4 Native Client vs Outlook for Mobile

There are some mobile devices that will not pick up auto-discover through their native email clients. For those situations, Microsoft recommends downloading Outlook for Mobile. Many user forums also favor the Outlook app for functionality and consistency across devices and platforms.



## 7. Tips, warnings and other fine-tuning.

### 7.1 Scan to email

Update your multi-function copiers to scan to the new email server.

### 7.2 Voicemail to Email

If you have an on-site voicemail system that sends voicemails to email, you may need to create a user account for the system to send messages.

### 7.3 Outlook Add-Ins

If you are upgrading Outlook, ensure you have links and licensing to install any user required plugins/Add ins.

### 7.4 Current Software Sync/Integrations

During the upgrade, you may want to have a certified independent consultant or software company helpdesk available to assist in reconfiguring integrations.

### 7.5 Auto Launch

When software is integrated, be aware of which program should launch first (Outlook or your business software) and possibly trigger an auto launch of the other in order to ensure functionality.

### 7.6 3rd Party Scheduling

Configure and test that your 3<sup>rd</sup> party scheduling software is talking to Exchange or Outlook and confirm time zone settings are in line. Plan ahead so no duplicates are created.

### 7.7 Migrate Spam Filter Settings

Users will not want to start from scratch with their spam settings.

### 7.8 Mobile Device Management

There are optional MDM services available through Office 365 to evaluate and activate. This often requires a firm to roll out a cyberpolicy with specifics on mobile device access.

### 7.9 Public Folders



Microsoft has public folders set up with certain limits on size per folder. They are set up as mailboxes on the admin side and you have to make sure folders are spread out correctly @ 20 GB max per folder. If more than 20GB is required, then add more folders. This is all merged on the front end – seamless to the user. Migration of Public folders is regularly a special project that Microsoft will work on with you.

#### **7.10** Non-Exchange Items Manual Migration

- Profile preferences, views & settings
- Auto Completes
- Categories – colors are supposed to come over but not consistent. Depends on version they are coming from.
- Rules
- Signatures
- Spell check & libraries

#### **7.11** Version Conflicts

Possible version conflicts between O365 email and Outlook versions. Searching capabilities impacted – always best to upgrade to Outlook 2016

#### **7.12** AD Sync Software

Many things need to be hard set in AD. Blocks off a lot of admin interface in O365. Makes it a multi-step process. There are federation options.

#### **7.13** Custom Search Folders & ActiveSync

Custom search folders do not always sync. Users may need to manually click on properties and save for the client to update contents of the search folder.

