CLOUDIWAY
Your smart ally in the Cloud

www.cloudiway.com

Mail migration

Admin guide for Lotus Notes email migrations

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1 Mail migration with Cloudiway

Cloudiway's mail migration solution helps businesses perform elaborate technical migrations through a simple SaaS interface. As a result, mail migrations require no additional software installation or overhead, and migrations can be performed securely and quickly.

The Cloudiway platform is flexible enough to support all types of migration paths. Your migration strategy will depend on your business setup, type and size. Whichever migration path you choose, Cloudiway provides all the essential features including automatic account provisioning, license assignment, archive migration, mail routing and calendar coexistence (free/busy scheduling).

Two of the most common migration strategies are cutover and staged migrations. Cutover strategies involve migrating all mailboxes over a weekend, ready for your users on Monday morning. Staged strategies provide more flexible migration options, as discussed below.

1.1 Cutover migration

You migrate everybody over a weekend and perform a single migration pass. This strategy is the simplest to implement. After you have switched your MX records to point to the new system, you start mailbox migration.

Cutover migration is therefore a strategy where the entire company is switched at the same time.

1.1.1 Cutover migration benefits

- Fastest, simplest form of migration.
- Your users can start using the new mail system immediately.
- New mails are received in the target messaging system.
- Old mails are migrated in a single pass.

1.1.2 Cutover migration considerations

You can combine your cutover migration with pre-staging, if required. In this case, during the days or weeks leading up to your cutover, you would migrate all mails up to a week or so ago along with calendars and contacts, then on the day of your cutover, you would run a quick delta pass to migrate the remaining items.

1.2 Staged migration

A staged migration allows you to migrate batches of mailboxes over the course of a few weeks or months. This strategy is useful for migrations with large volumes of data (very full mailboxes or many mailboxes) and you estimate that you won't be able to do your migration over a single weekend.

Cloudiway offers you additional flexibility in your approach to a staged migration. For example, you could migrate the last six months of emails over a weekend and leave older emails and email archives to be migrated after cutover, explaining to users that their older emails will appear soon.

Prestaging is also an option on the Cloudiway platform. For example, you could perform a multi-pass migration where you migrate most mailbox items before performing the final cutover. During the days or weeks leading up to your cut-over, you would migrate all the mails up to a week or so ago along with calendars and contacts, then on the day of your cutover, you would run a quick delta pass to migrate the remaining items.

Cloudiway provides a number of options to help you find the best strategy for a staged mail migration. We provide coexistence services, plus mail routing, and batch migration of users, which you can define in any way you like. Basically, you can choose who, when and what gets migrated during each pass.

1.2.1 Staged migration benefits

- Many flexible migration strategies when using the Cloudiway platform.
- Allows more time before final cutover, avoiding tight deadlines.
- Complex migrations can be completed without disrupting end users.
- Can be performed in batches according to your needs.

1.2.2 Staged migration considerations

Staged migrations tend to be more complicated than single cutover migrations. Therefore, it's important that you have planned your approach thoroughly prior to starting any migration.

1.3 Supplementary tools

Cloudiway has developed a number of tools to enable seamless migration for the most intricate migrations. Our supplementary tools include:

- automatic account provisioning (users, distribution lists, shared contacts); and,

These tools are available as additional modules, and therefore incur an extra cost. Please contact us for more information on presales@cloudiway.com.

1.3.1 Automatic provisioning

Automatic account provisioning is handled by the IAM module. It synchronizes your Active Directory infrastructure with Office 365 and lets you manage your cloud users from your local Active Directory. It synchronizes users, groups and contacts, and also provides real time password synchronization. It supports multi-domain and multi-forest environments and avoids costly directory consolidation projects. Visit www.cloudiway.com for more information, or contact us.

2 Security

We take your privacy and security seriously at Cloudiway, and we have invested significant effort into making our platform and your data secure. Cloudiway provides a cloud-based application hosted in Windows Azure. It means that the software and data are centrally hosted and accessed by clients using a web browser and internet connection. In addition, Cloudiway's SaaS benefits from Windows Azure's certifications, ensuring security of the infrastructure, network and physical security layers of the Cloudiway cloud.

For total assurance, Cloudiway provides auditing tools, secure, authenticated data connections and a logging system. More specifically:

- Cloudiway doesn’t store your mail, files or site data
- the migration takes place in memory only: the migration engine connects to the source, pulls data and pushes it in real time;
- connections to the source and the target are done using HTTPS so no data is transferred unencrypted over the internet; and,
- nothing is stored internally: no data persists in the platform.*

*For the delta pass mechanism, the messageID of each email is used. This ensures that no data is duplicated, and for efficiency, only the changes are propagated. We automatically delete inactive records after 90 days, or upon request.

In addition, because the Cloudiway platform needs credentials to connect to the source and the target, you define connectors to connect to them and enter credentials that will be used for the connection. These credentials are stored encrypted using AES 256.

For complete peace of mind, we recommend that you create a temporary migration account during your migration which you can delete at the completion of your project.

3 Performance

The Cloudiway platform uses all available resources to provide the fastest migration possible and can support both small and large migrations. The on-demand migration engine allocates the capacity that you need to migrate the volume of data of your choice in the time slot you have allocated.

However, there are limitations. Many mail systems can heavily throttle users. When you perform too many API calls, the remote server will begin throttling and decrease the number of calls that can be performed each minute, thus reducing the migration throughput. Cloudiway continuously attempts to migrate email at the maximum capacity allowed to achieve the highest throughput.

Lotus Notes limitations

Although mail migration from Lotus Notes is entirely monitored and triggered from the Cloudiway SaaS platform, a local agent must be downloaded and executed on a local Lotus Notes workstation (using a notes.id with access to all mailboxes). The agent is multi-threaded and can concurrently run 10 migrations by default. You can run the agent simultaneously on different Notes clients to increase throughput. To preserve bandwidth, you can limit the number of concurrent migrations.

Office 365 limitations

Office 365 uses throttling policies to limit the resources consumed by a single account. To maximize throughput and limit throttling, Cloudiway follows Microsoft best practice and uses impersonation.

An account that has impersonation privileges can impersonate 100 users concurrently to migrate 100 vaults in parallel. The platform uses EWS (Exchange Web services) protocol; Microsoft theoretically allows throughput of around 300 MB per user per hour. The Cloudiway platform typically sees throughput between 200 MB and 300 MB per vault per hour. This gives an average throughput of around 500 GB per day with a constant migration of 100 concurrent vaults.

For more speed, you can create distinct migration accounts and additional connectors . For example, if you create two target Office 365 connectors (each with its own distinct migration account), you can migrate 200 archives concurrently and reach a throughput of around 1 TB per day.

Mailbox item count is also a factor: because Office 365 throttling policies limit migration to 1500 to 1800 mails per user per hour. Therefore, a vault with 1,000,000 small emails will be slower to migrate than a mailbox with 1,000 large mails containing attachments.

Exchange On-Premises limitations

A major benefit of Exchange On-Premises is that you're in control of all settings. If you're migrating to Exchange, make sure your server(s) and network are optimized for maximum throughput.

Google Limitations

Google limits migration to 2.5 GB per user per day. Usually, some extra data migration is possible before throttling begins. When it does begin, the Cloudiway platform will attempt to migrate 10 GB of data per user, then sleep for 6 hours and automatically restart the migration where it left off.

Amazon WorkMail limitations

Throttling may slow down migration, although exact measurements are not currently available.

4 Mail migration scope

4.1 What can be migrated

When migrating from Lotus Notes, the following mail-related items can be migrated:

- Emails
- Contacts
- Calendars
- Folders
- Shared mailboxes
- Archives (each mailbox requires one separate archive license)

Please note that migration has only been tested on Lotus Notes client version 8.0 and later, using .Net framework 4.0 with at least 4 GB RAM and 50 GB hard drive space.

4.2 Migration limitations

During migration, Outlook profiles are not recreated by default. Although this is the responsibility of the system administrators performing the migration, Cloudiway provides a free tool to perform this task. Please contact Cloudiway for more information.

It's currently not possible to migrate delegations from Lotus Notes. Users will need to manually add any delegations after migration.

4.3 Considerations

There are several important factors that you should be aware of before starting a mail migration.

Firstly, migration takes place between existing mailboxes. This means that mailboxes must exist in the target at the time of migration. Please ensure that all mailboxes to be migrated have had their target mailbox created in the target domain.

Secondly, to migrate a user, you must provide the primary source SMTP address and the primary target SMTP address. If you specify an alias, the mailbox migration will fail.

Personal contacts are stored in the personal address book of the users and reside in the desktops of each user. However, it’s possible to enable an option that will replicate the contacts to the mail databases of the users and personal contacts will become available on server side and Cloudiway will be able to migrate them.

Cloudiway migrates the archives of users hosted on the servers. It uses the default path defined in the address book (eg, archive\username). If archives are stored in a different location, you can use a specify this during configuration, and these steps are covered later in this guide.

4.4 Audience

This guide is aimed at experienced system administrators who are capable of connecting to remote systems and using a variety of administration tools.

Although we provide support for our own products, we do not provide support for third party products such as PowerShell or server administration of Lotus Notes or Exchange.

If you are concerned you might have any difficulty completing these steps, please consider a solution with our consulting team, contactable via presales@cloudiway.com. This will ensure a fast, cost-effective and stress-free implementation.

5 Pre-migration configuration

5.1 Before you start

The following table contains a list of target mail migration prerequisites. You will only need the items associated with your chosen target. The sections below the table only need to be followed if they relate to your target. After the table, we provide steps to set up each prerequisite.

Name	Description	Location
Target: Office 365 Office 365 account with impersonation privileges	Used for impersonation to access mailboxes. This doesn't have to be the tenant's admin account. However, it must be an admin account if you wish to migrate permissions. The account must be able to bypass SSO and authenticate using username/password credentials with the format: user@tenant.onmicrosoft.com (with a password set to never expire).	Exchange Admin Center. We recommend you create an account especially for migration. After migration, simply delete this account.
Target: Exchange On-Premises Exchange account and secure port	Used for impersonation to access mailboxes. This doesn't have to be the main admin account. However, it must be an admin account if you wish to migrate permissions. The account must be able to bypass SSO and authenticate using username/password credentials (with a password set to never expire). This is not required if self-migration is used. The Cloudiway platform needs to connect to Exchange securely. Use SSL port 443.	Your Exchange server. We recommend you create an account especially for migration. After migration, simply delete this account.
Target: G Suite G Suite service account, API console and Admin console	Required to enable APIs and to download the G Suite private (p12) key. This can be accessed via your Google Admin account. The Admin console is where administrators manage Google services for people in an organization.	https://console.developers.google.com https://admin.google.com
Target: Amazon WorkMail Migration account	Used for impersonation to access mailboxes. It can be any user. A migration account is a standard WorkMail user who has been given mailbox permissions for migration (details provided in this section).	Amazon WorkMail Console. We recommend you create a migration account especially for migration. After migration, simply delete this account.

5.2 Google Apps — Create and set up a service account

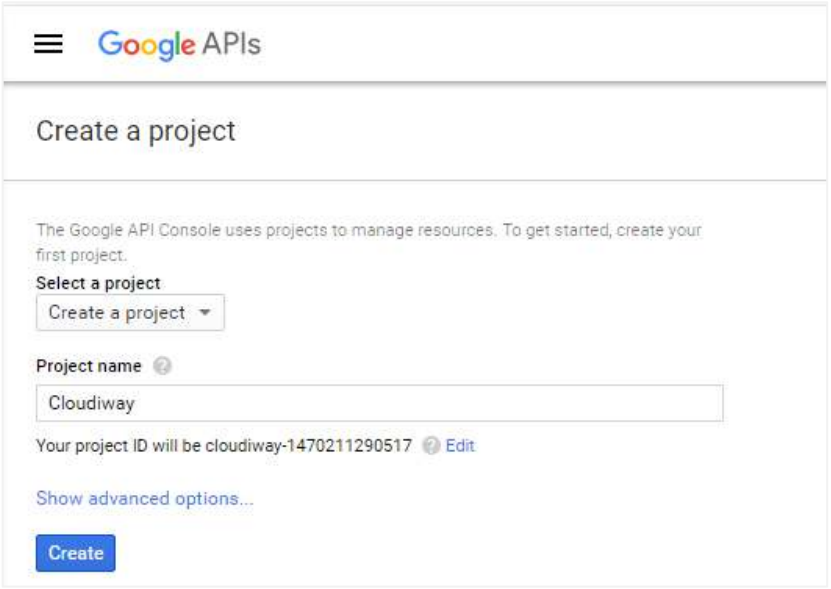
NOTE: Only follow the instructions below if your target is Google Apps.

You can create a project in your Google Apps service account, where you can enable APIs and create a project key. Cloudiway needs this key to open communication with Google Apps.

1. In your browser, go to http://console.developers.google.com to launch the **Google API manager**

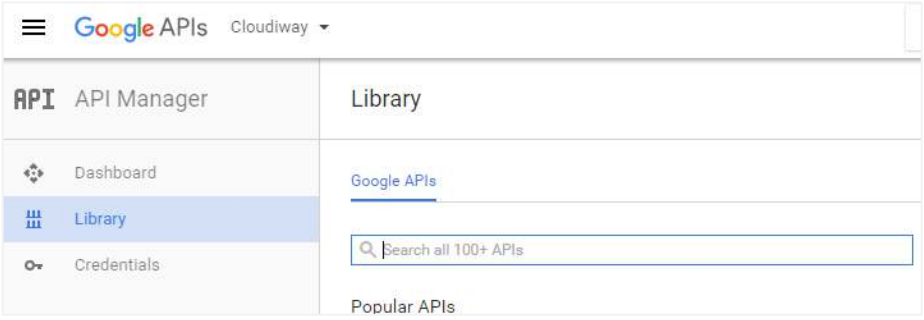
2. Click on **Credentials** on the left. If you already have a project, you can jump to step 4. If you don't have any projects set up, you will need to create one before you continue.

3. Click on the **Create a project** button, and add a meaningful name to **Project name** (such as 'Cloudiway') and click the **Create** button



A message might appear prompting you to create credentials. If it does, you can simply ignore it for now (we'll create them later).

4. Click on **Library** on the left to display a search bar for Google APIs

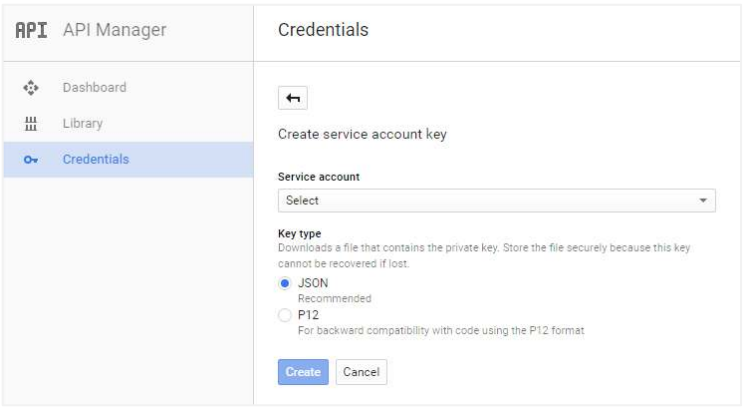


5. Type `Google Calendar API` and search for it (information about the API will be shown)

6. Click on the **ENABLE API** link
Once the API has been enabled (the link will change to display **DISABLE**): some other APIs might be automatically enabled (but only Google Calendar API is required for coexistence). You can check which APIs are activated by clicking on **Dashboard** on the left.

7. Search for the following APIs and enable them:
CalDAV API
Contacts API
Gmail API
Tasks API

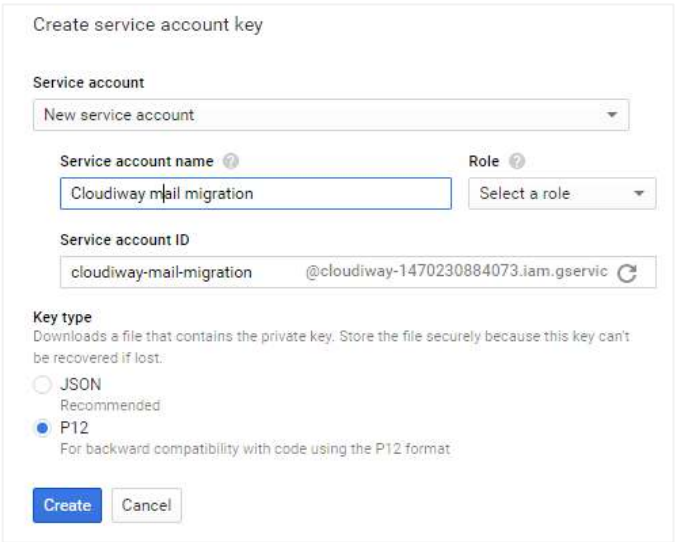
8. Click on **Credentials** on the left and from the **Create credentials** button, click on **Service account key**. The following screen will appear:



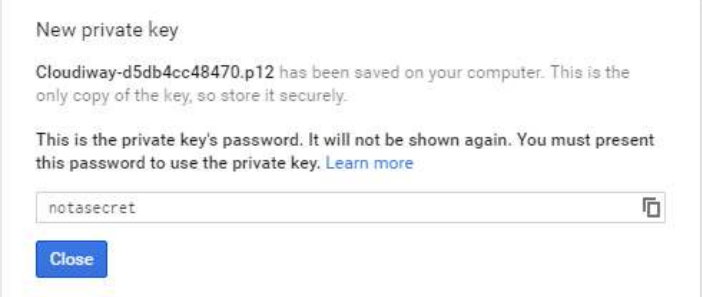
9. Click on **New service account** from the dropdown menu

10. Give the service account a recognizable name in **Service account name** (such as 'Cloudiway mail migration'); you can leave the **Role** field unselected as it's not used by Cloudiway

11. Click on the **P12** radio button



12. Click on the **Create** button
The following message will appear:

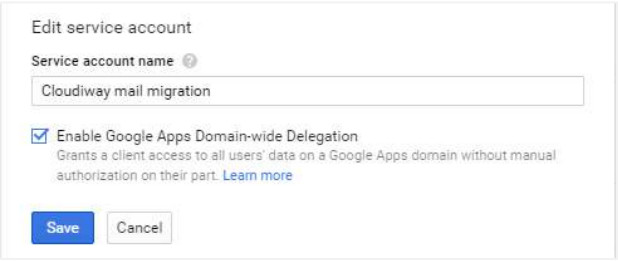


13. Once you have read and understood the message (and take note of where the downloaded key is: you will need to upload it to Cloudiway later), click on the **Close** button

14. At the far right of the screen, click on the link for **Manage service accounts**

15. A list of service accounts will appear. Find the one with the name you just created, and click on the option dots (⋮) on the far right, then select **Edit**

16. Tick the checkbox for **Enable Google Apps Domain-wide Delegation** and type a product name into **Product name for the consent screen**, if prompted:



17. Click on the **Save** button

5.3 Google Apps — Set permissions for the service account

NOTE: Only follow the instructions below if your target is Google Apps.

After you've created a service, you can use the Google Admin console to manage the service and its API calls. The following steps show you how to grant access permissions for the service account you created in the previous steps.

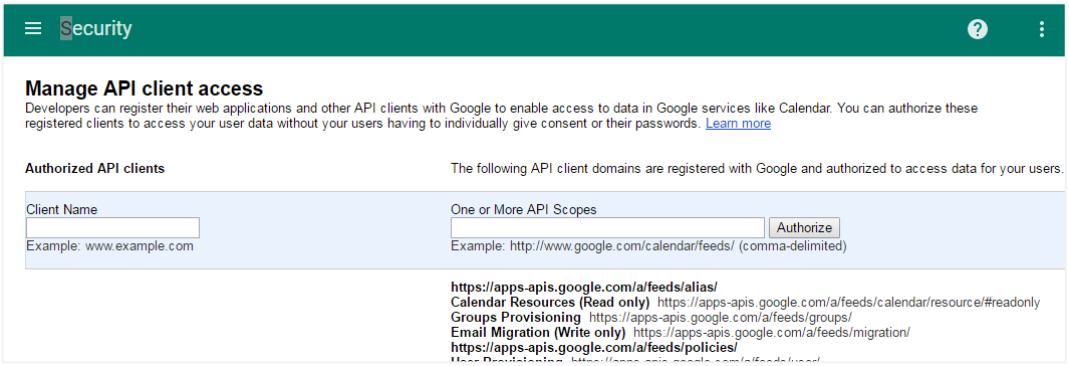
1. Ensure that you are still logged in to http://console.developers.google.com and from **Service Accounts** on the left, locate the Cloudiway mail migration service account

2. Click on View Client ID on the far right, and copy the number displayed in **Client ID**

3. In a new browser tab, go to https://admin.google.com and login with your Admin console credentials

4. Click on **Security**, then **Advanced settings** (you might need to click on **Show more** to see this)

5. Click on **Manage API client access**

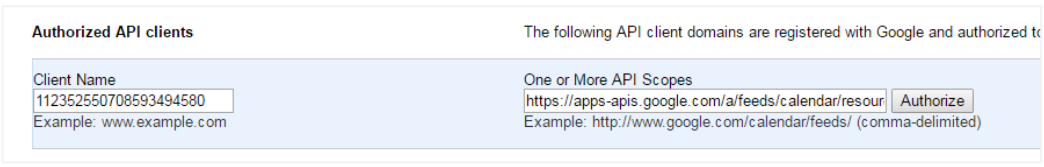


6. Paste the number you copied into **Client Name**

7. Click in the **One Or More API Scopes** field and add the following scopes:

```
https://apps-apis.google.com/a/feeds/calendar/resource/#readonly,
https://apps-apis.google.com/a/feeds/user/#readonly,
https://mail.google.com/,
https://www.google.com/calendar/feeds/,
https://www.googleapis.com/auth/calendar,
https://www.googleapis.com/auth/drive,
https://www.google.com/m8/feeds/,
https://www.googleapis.com/auth/tasks,
https://www.googleapis.com/auth/gmail.labels,
https://www.googleapis.com/auth/gmail.insert,
https://apps-apis.google.com/a/feeds/migration/,
https://www.googleapis.com/auth/gmail.labels,
https://www.googleapis.com/auth/gmail.insert,
```

NOTE: 1. Each scope must be separated by a comma.
2. Some scopes require slashes (**/**) at the end and others don't: please use the above strings.
3. If you add another scope later, existing scopes will be removed: you need to add the whole list at the same time.



8. Click on the **Authorize** button (successfully registered scopes will be listed).

5.4 Office 365/Exchange — Set up account with impersonation privileges

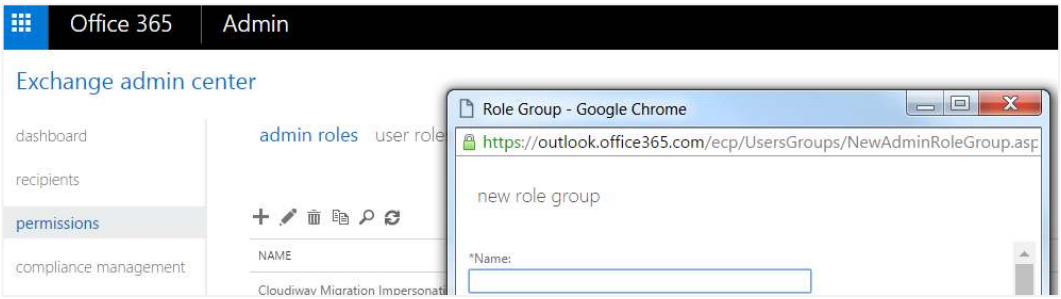
NOTE: Only follow the instructions below if your target is Office 365 (including Exchange servers).

An Office 365 account with impersonation can access up to 100 mailboxes concurrently. Therefore, Cloudiway allows you to migrate 100 concurrent users in an Office connector. If you wish to speed up migration, you should set up additional Office 365 target connectors on the Cloudiway platform and associate different accounts with admin access to each one. These can be connected to a single Lotus Notes source connector. If you don't already have impersonation set up, follow these steps.

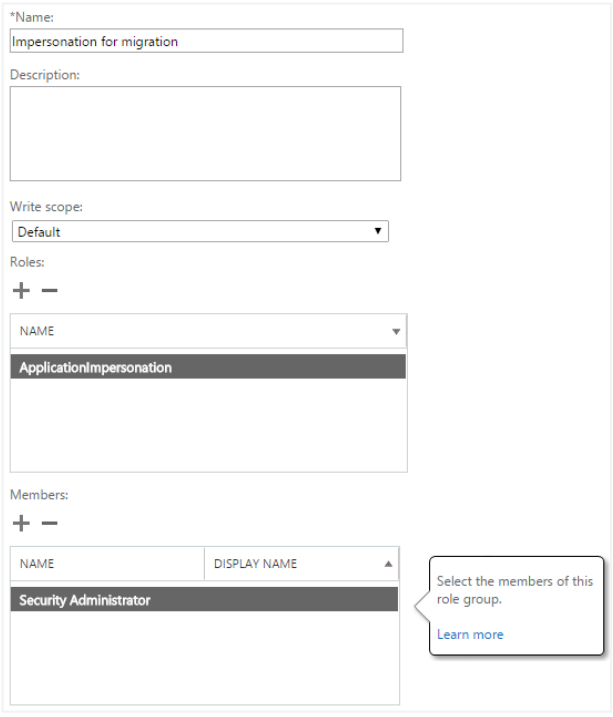
1. Login with your administrator account to the Office 365 portal

2. Go to the **Exchange admin center**, then click on **permissions** and the **admin roles**

3. Click on the plus sign (**+**) to create a new role



4. Give your group a name and assign it the role of **ApplicationImpersonation**, then add a user to the group:



5. Click on the **Save** button to save your group

5.5 Set up an Exchange On-Premises account via PowerShell

NOTE: Only follow the instructions below if your target is Exchange On-Premises.

If you're migrating from Exchange On-Premises, you can create a migration account with admin and impersonation permissions using your existing Exchange server interface or using the command line instructions shown in the steps below.

1. Launch Exchange Management Shell to connect to your Exchange server

2. Copy the commands below:

```
New-ManagementRoleAssignment –Name "Impersonation for migration
" –Role "ApplicationImpersonation" –User
"mailmigration@drypizza.com"
```

3. Paste the command into the command prompt, ensuring you have updated `"mailmigration@drypizza.com"` with your own mail migration account

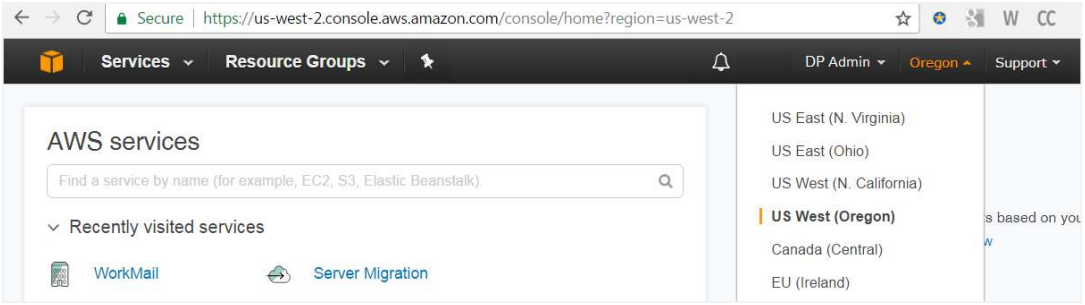
5.6 Set up an Amazon WorkMail account with mailbox permissions

NOTE: Only follow the instructions below if your target is Amazon WorkMail.

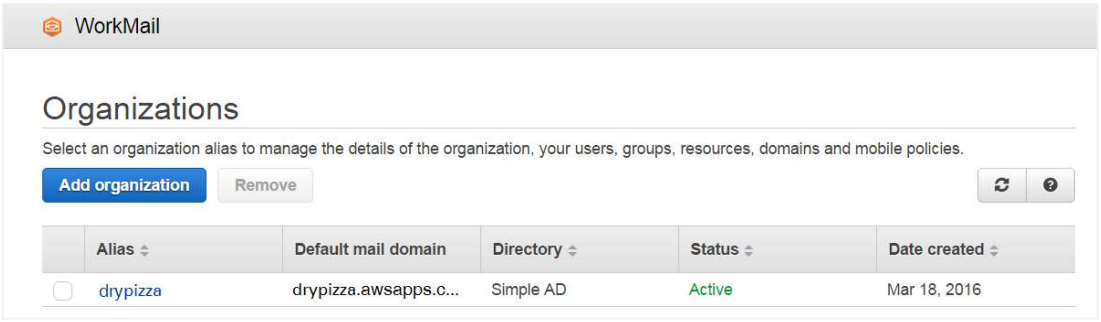
Below are the steps to show you how to set up impersonation using the Amazon WorkMail Console. We recommend that you create a user especially for mail migration at both your source and target.

1. Login with your administrator account to the Amazon WorkMail Console

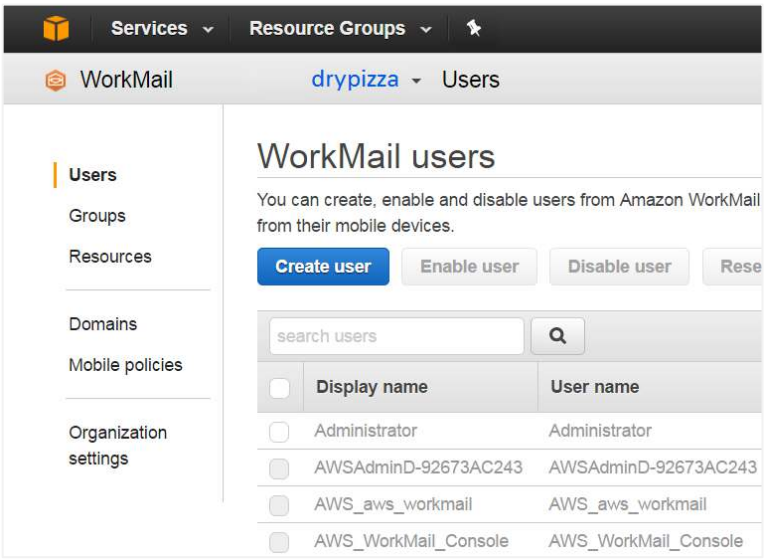
2. Ensure that the region shown in the top right corner matches the region you set up for the Amazon WorkMail server (for example, **US West (Oregon)** is selected below):



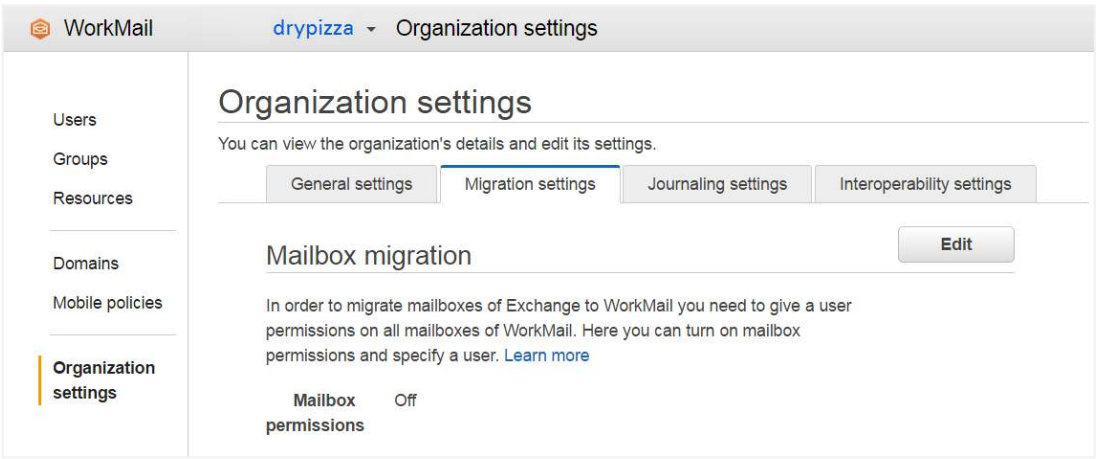
3. Scroll down to the **Business Productivity** and click on **WorkMail** to see a list of your WorkMail servers:



4. Click on the target migration server to produce a list of all existing users:

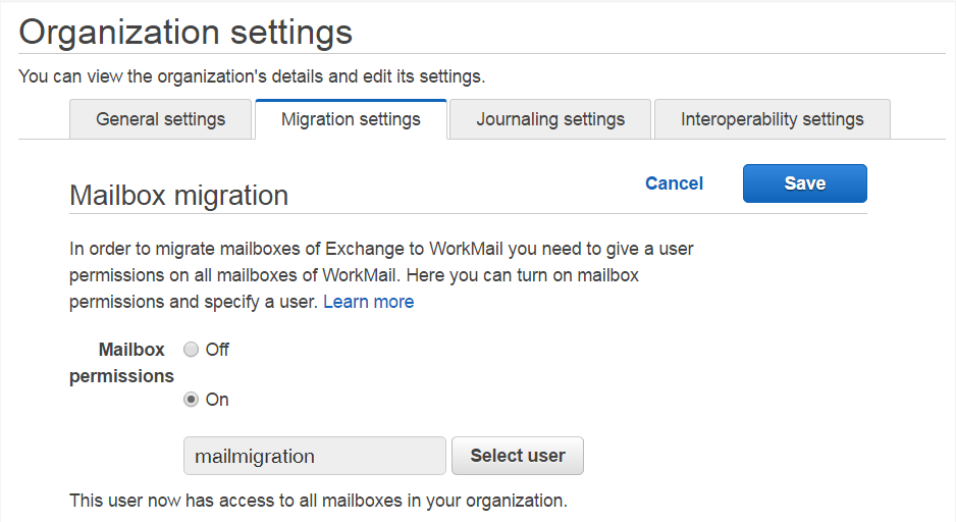


5. Click on **Organization settings** on the left, then the **Migration settings** tab:



6. Click on the **Edit** button and turn **Mailbox permissions** on

7. Use the **Select user** button to add your mail migration account



8. Click on the **Save** button to save your changes

Remember to make sure that all users, groups and resources are created on Amazon WorkMail prior to getting started with the Cloudiway migration platform. Mail migration can only begin if mail has a target inbox to be copied to.

6 Use the Cloudiway platform to migrate your mail

6.1 Before you start

Before you start, you will need to ensure you have the details outlined in the following table.

Name	Description	Location
Cloudiway login	Stores details and provides communication between the systems you already use.	https://apps.cloudiway.com
Knowledge base access	Our extensive knowledge base is always accessible, with videos, troubleshooting tools, samples and more.	http://kb.cloudiway.com
A notes.id with access to all mailboxes	This ID will be used with the Cloudiway agent (downloadable in the steps below) to communicate with your Lotus Notes server.	Local PC with Lotus Notes client installed. Make sure your notes.ini file refers to this notes.id. We recommend you create a migration account and use its notes.id, then delete it after migration.

6.2 Create your Lotus Notes source connector

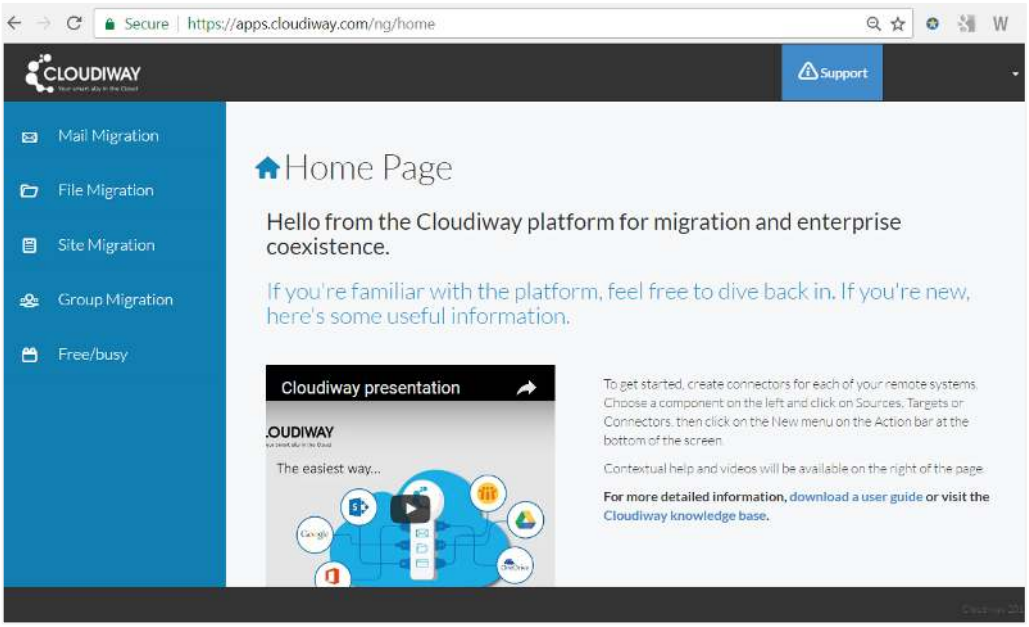
Very little preparation is required on the Lotus Notes side. Before you start configuring the Cloudiway platform for mail migration, make sure you have:

- listed the notes.id (that has access to all mailboxes) in the notes.ini file of the local client;
- chosen to enable or disable the option to replicate contacts to the mail databases of the users (this ensures users' personal contacts are included in migration);
- ensured that any locally-stored mail archives to be migrated have been identified and moved to your Domino server, preferably in the default location (archive\username); and,
- verified that there is at least 50 GB free on your Lotus Notes server.

To facilitate mail migration, the Cloudiway platform needs to be able to communicate with both your source and target domains. To do this, Cloudiway uses connectors, which are configured on apps.cloudiway.com. You will need to set up a connector for each source you wish to migrate and each target that mail should be migrated to.

As already discussed, a small agent must be downloaded for the connector to communicate with your Notes server, and this is also covered in the steps below which show how to configure a Lotus Notes source connector.

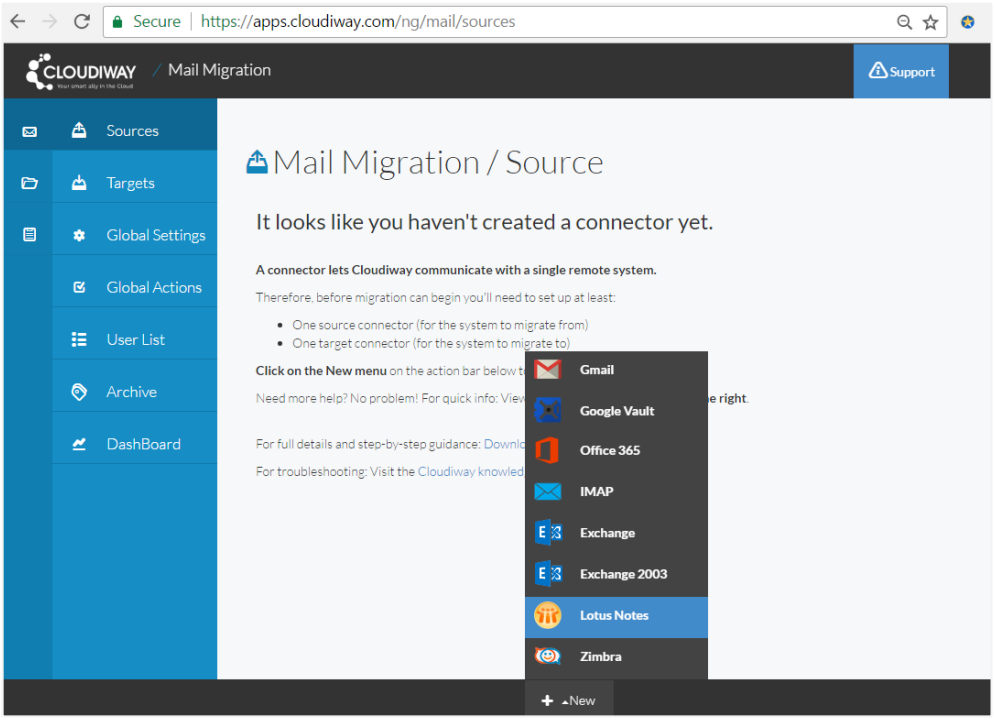
1. From the PC with your Lotus Notes client installed and the migration notes.id file installed (and listed in your notes.ini file), go to https://apps.cloudiway.com and login



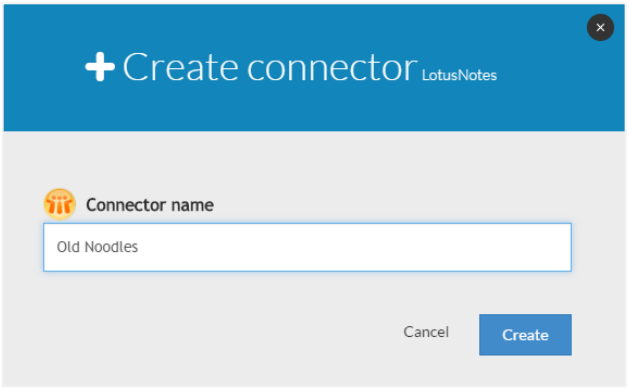
You can choose to manually set up your connectors, or you can use the simpler process of the wizard. The steps below will walk you through the manual process.

2. Click on **Mail Migration** on the left, then **Sources**

3. Click on the **+ New** option on the action bar at the bottom of the screen



4. Click on **Lotus Notes** and type a meaningful name in **Connector name**

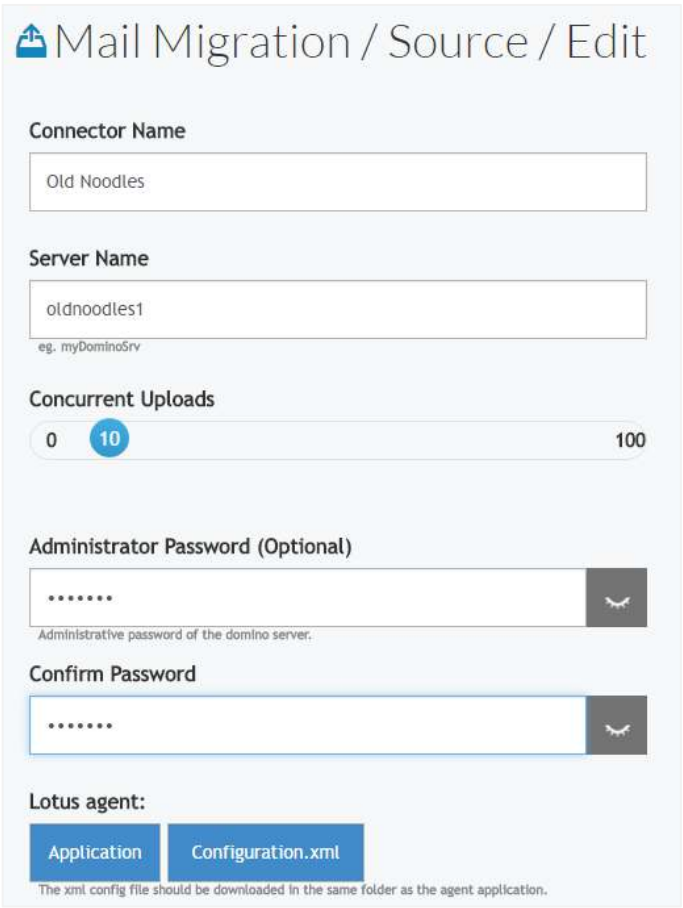


5. Click on the **Create** button

6. Type your Domino server name in **Server Name** (it isn't case sensitive)

7. We recommend you leave **Concurrent Uploads** set to the default of 10, but you can increase the default (which will reduce bandwidth and speed up migration) or reduce the default (which will preserve bandwidth and slow down migration)

8. Enter the password for the **notes.id** that has access to all mailboxes (leave blank if the ID has no password associated with it, although we recommend you use one)



9. Click on the **Application** button (the local agent) and the **Configuration.xml** button to download both files

10. On the Cloudiway platform, click on the **Save** button at the bottom of the screen to complete creation of your source connector

11. Unzip the downloaded application to a secure location on your hard drive (a folder called MAASAgent will be created)

12. Locate the **Configuration.xml** file and move it into the new MAASAgent folder

13. Launch cmd.exe on the same computer as the unzipped folder

14. In cmd.exe, change directories to the unzipped folder location

15. In cmd.exe, type `Run CIW.Mails.Agent.exe`

    The command line console will launch and create a connection between the Lotus Notes server and the Cloudiway migration platform. It will zip up the contents of each Notes mailbox and migrate them to their target destination. The progress of your migration will be displayed in the console, as well as in the user logs on the Cloudiway platform.

16. Click on the **Save** button at the bottom of the screen

The source connector has now been set up. Next up is the target connector.

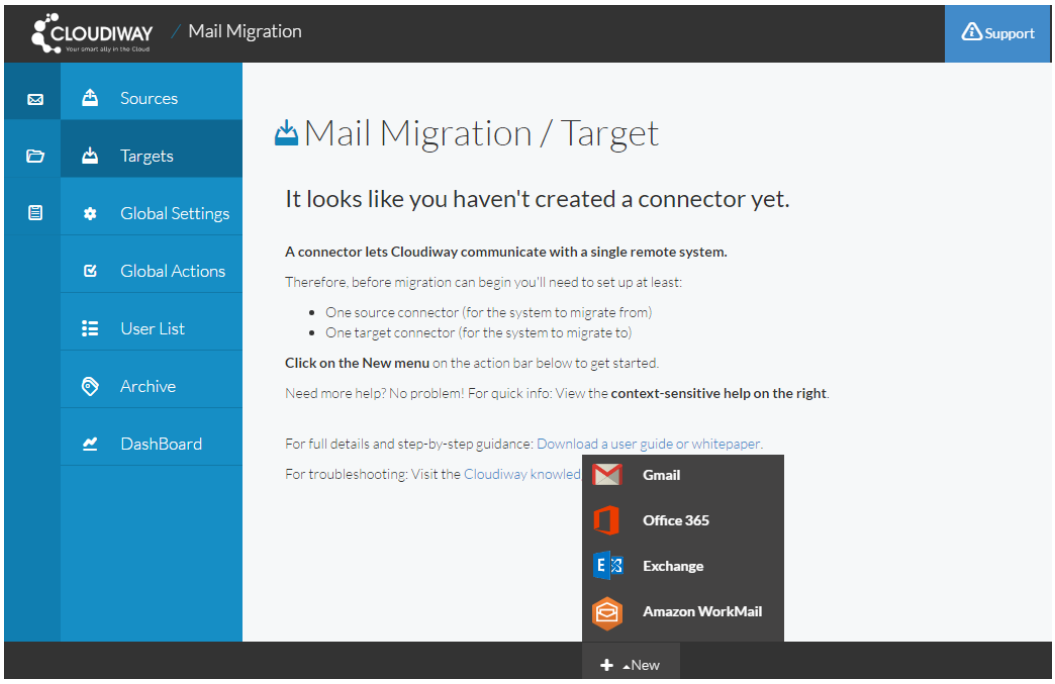
6.3 Create your target connector

With the source connector now configured on the Cloudiway platform, it's time to create and configure the target connector. Follow the steps below to configure your connector.

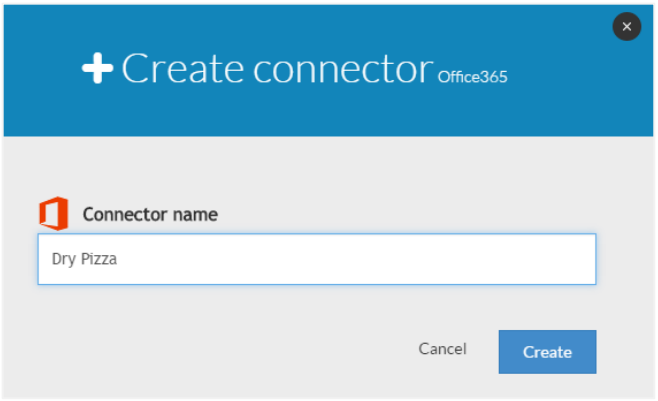
Remember that some targets have throttling limitations, as discussed in section 3.

1. From the same Mail Migration area of https://apps.cloudiway.com, click on **Targets**

2. Click on the **+ New** option at the bottom of the screen

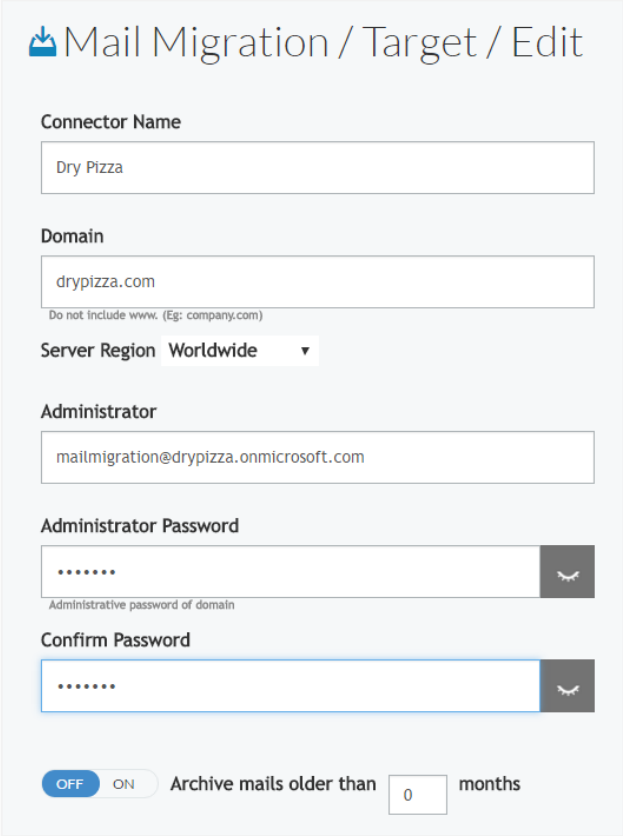


3. Click on your target mail system (we've chosen Office 365 for this example) and type a meaningful name in **Connector name**

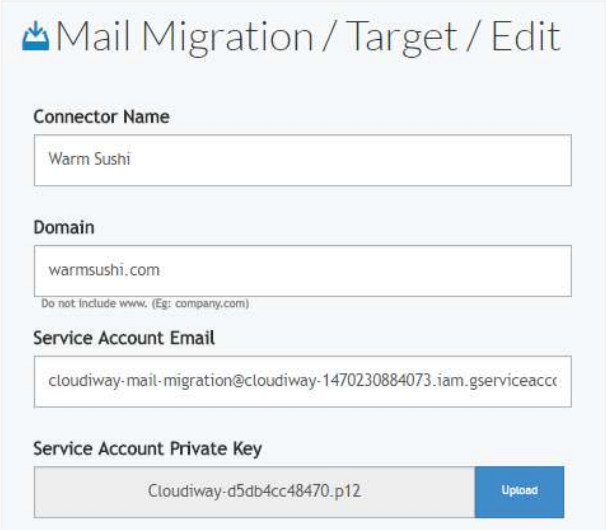


4. Click on the **Create** button

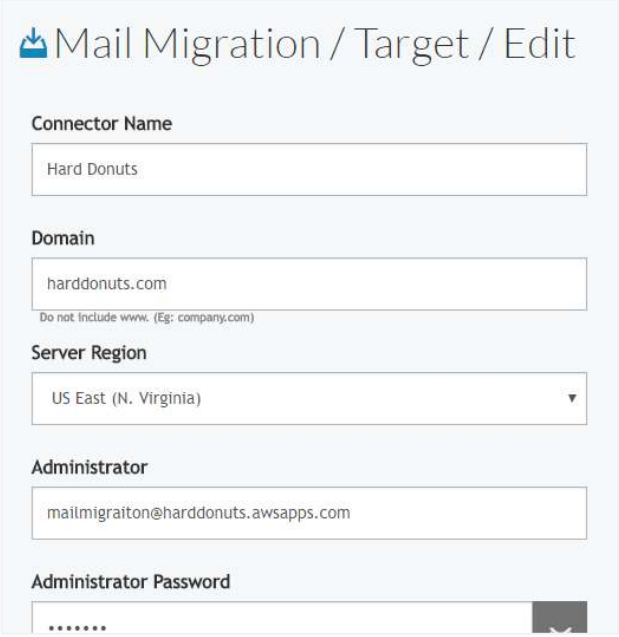
5. For an Office 365 target, type your target domain name in **Domain**, check that **Server Region** is correct, and type and your Office 365 account credentials (with administration and impersonation rights) in the remaining fields, then click on the **Save** button (we'll cover the archiving option in the next section, where you can now go)



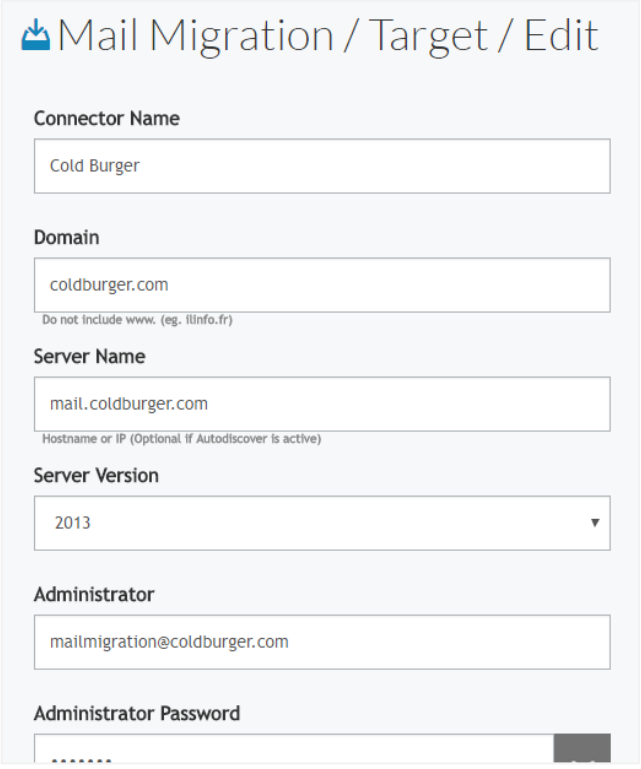
6. For a Gmail target, type your domain name in **Domain** then paste your **Service Account Email** (you can copy it from the **Manage service accounts** screen from the project you created in http://console.developers.google.com), then upload the file that you downloaded earlier (it ends in **.p12**) to the **Service Account Private Key** field and click on the **Save** button



7. For an Amazon WorkMail target, change the server region if required, type the domain and email address of the account you set up with admin access in **Administrator**, then fill in the password fields



8. For an Exchange On-Premises server target, ensure you use the **Server Name** field if autodiscover isn't active, and add the domain name, server version and login credentials (UPN format) of the admin user with impersonation rights



6.4 Office 365 — Create a partial archive from a normal inbox

If you're migrating to Office 365, you might wish to consider archiving.

Creating a partial archive of emails provides a number of benefits. From a migration perspective, the biggest benefit is reduced bandwidth. End-users who access mail via Outlook have their mailbox locally cached (in .ost file format). After a mail migration, Outlook will download all migrated mailboxes the first time users access their mailboxes. Therefore, if many users are likely to access Outlook at around the same time after migration (for example, if you've completed a cutover migration one weekend before staff arrive at 9am Monday morning), your bandwidth might slow down due to a glut of downloads.

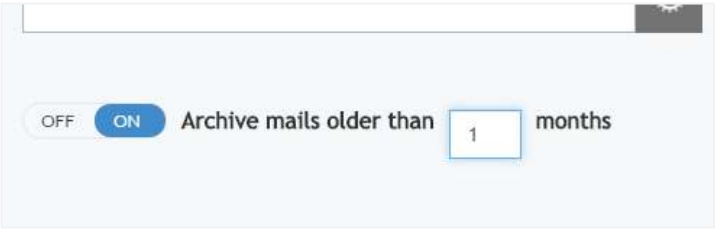
This can be avoided by partially migrating data to the online archive. For example, you could choose to migrate all items older than 30 days to a mail archive, which would be performed prior to the final cutover. The data will remain online and accessible from each user's inbox as an In-Place Archive folder. The most recent 30 days of emails will be migrated and downloaded when each user first logs in, reducing overall bandwidth usage due to smaller mailbox sizes.

Note: you must ensure that In-Place archiving is switched on within your Exchange Admin center (you can bulk-activate using the instructions on TechNet as https://technet.microsoft.com/en-us/library/jj984357(v=exchg.150).aspx).

1. With your target connector selected, click on the **Edit** button on the action bar at the bottom of the screen

2. Click on the **ON** button to activate the **Archive mails old than x months** option

3. Enter a number in the field to indicate the minimum age (in months) of mails to be archived



4. Click on the **Save** button at the bottom of the screen

Now, when your migration starts, any emails older than the number of months you specified will be migrated to an In-Place archive. Younger items will be migrated to the target mailbox. The user can continue to use the source mailbox until final cutover, whether it be the following day or in a month's time.

During final cutover, all new and remaining emails will be migrated. Note that migrated items are never re-migrated, so the In-Place archive will contain items older than the months you specified from the date of the first migration pass.

6.5 Configure the global settings for migration

Now that you have set up at least one source and target connector, you're ready to configure your global settings. Using the Cloudiway platform, this is simply a matter of selecting what you want to migrate.

By default, the global migration settings are configured to migrate everything but the Trash folder. You can toggle these and change the date and time settings from the Global Settings option on the Cloudiway platform.

Most of the options are self-explanatory. The **Convert Email Address** option needs further explanation. When activated, this option rewrites email addresses found in the header and replaces source email addresses with their corresponding target email addresses.

For example, if Bob sends an email to his colleague to Chloe from his source address bob@source.com to chloe@source.com and a week later, after migration, chloe@target.com replies to Bob, the Cloudiway platform has already updated SMTP header in Bob's original email in her inbox, so her reply will be sent to bob@target.com.

For migrations where the only email address change is the domain name (such as Bob's email address above), the Cloudiway platform uses the domain name defined in the target connector to convert source email addresses.

For migrations where both the domain name and the username change (for example, bob@source.com becomes newbob@target.com), the Cloudiway platform already uses a mapping table to link each user. This mapping table is also used by the Convert Email Addresses option in this situation. *Therefore, it's important that all users exist in the mapping table before migration begins* (this guide contains instructions).

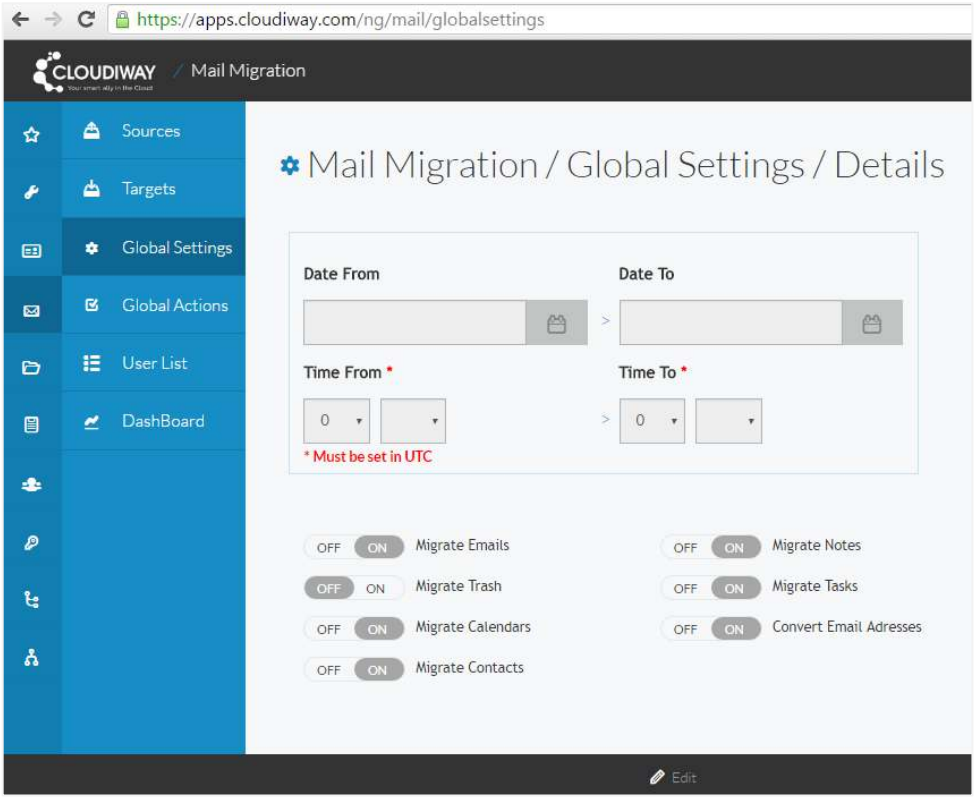
Note that users in the mapping table do not require a license until you're ready to migrate them. Therefore, you can assign the free 'No license' option to all your users prior to migration. Having a complete mapping table is also required if you plan to use Cloudiway's free/busy calendar tool in conjunction with mail migration.

The Convert Email Address option is switched on by default (and is best left on). Make sure your user list is up to date to benefit from this functionality.

X.500 address migration

For X.500 email addresses (typically used in Exchange), SMTP email address translation can be enabled or disabled. However, X.500 email conversion is automatic between Exchange and Office 365 servers. During the migration of a mail, if an X.500 address is found, it is automatically converted to the SMTP address.

1. From the same Mail Migration area of https://apps.cloudiway.com, click on **Global Settings**



By default, the global migration settings are configured to migrate everything but the Trash folder. You can toggle these and change the date and time settings in Edit mode. Please refer to the text above these steps for more information on the Convert Email Addresses option.

2. Click on the **Edit** button at the bottom of the screen
The grey buttons will turn blue, indicating you can now edit these to your preferred global migration plan.

3. Update any settings you wish to alter, remembering that time and dates are set to the UTC time zone

4. Click on the **Save** button at the bottom of the screen to update your global settings

6.6 Import or create your users

There are two ways to add users that you wish to migrate. These include:

- CSV file upload; and
- creation of single users.

Regardless, each user will need to be assigned a license type — Trial (limited to 100 MB), Education, Standard, Archive, or No License (used for adding users to your mapping table regardless of migration plans). Shared mailboxes should also be added as standard users and assigned a license.

6.6.1 Option 1: CSV import

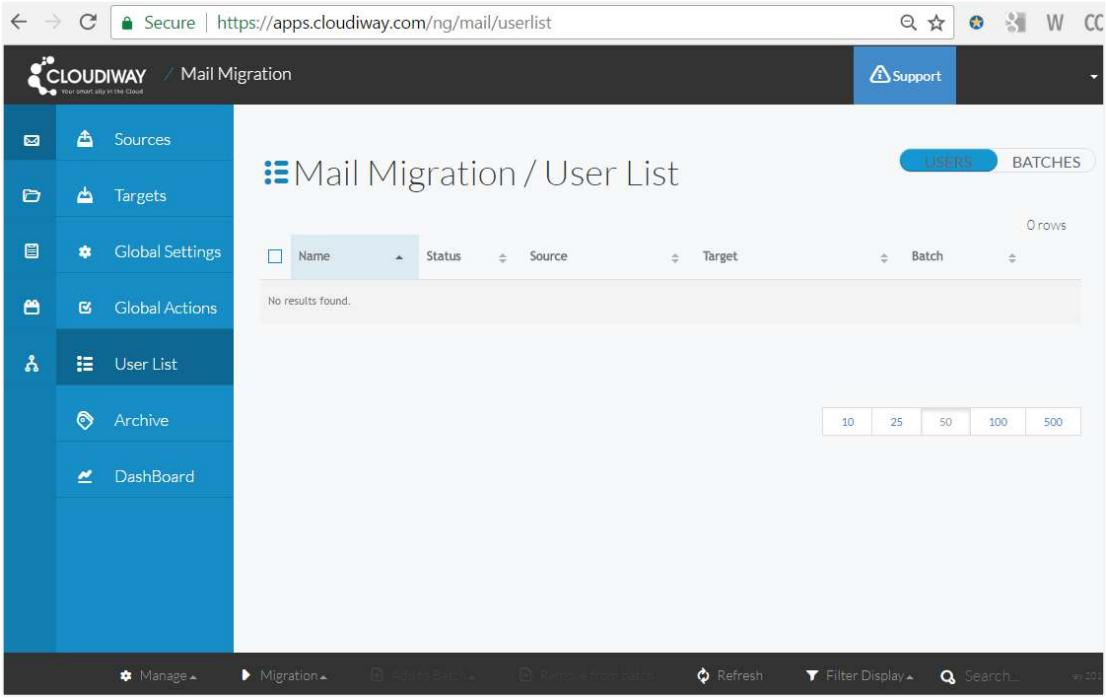
If you have a CSV file of all your users, you can upload the file to Cloudiway. The file must have the following fields in the header row:

```
FirstName;LastName;SourceEmail;TargetEmail;BatchName
```

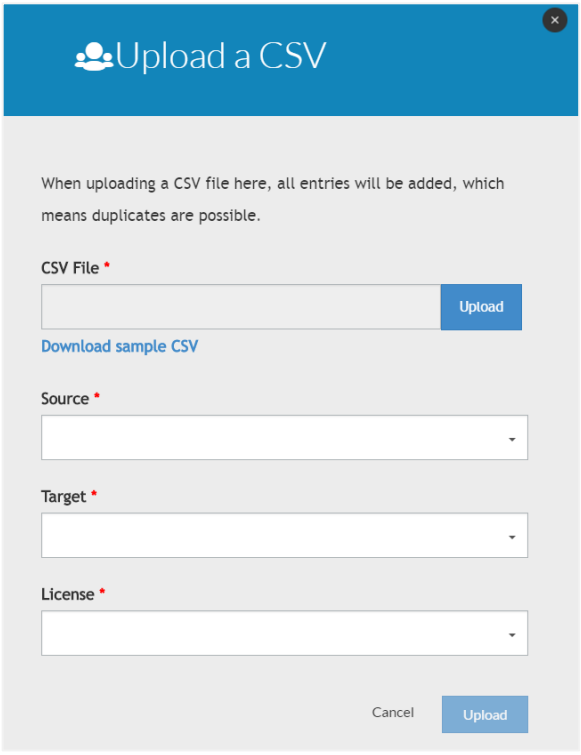
Note that many browsers limit CSV file uploads to 5000 lines, so files larger than that should be split up and uploaded separately. Data already uploaded will not be overwritten, so you can upload as many files as required.

The **BatchName** field can be left blank. If required, you can use this field to name different batches so they can be run in a certain order. A sample CSV file is available for download during the steps outlined below.

1. Ensure you're still in the Mail Migration area of apps.cloudiway.com and go to **User List**



2. Click on **Manage** in the bottom left corner and select **Upload CSV**

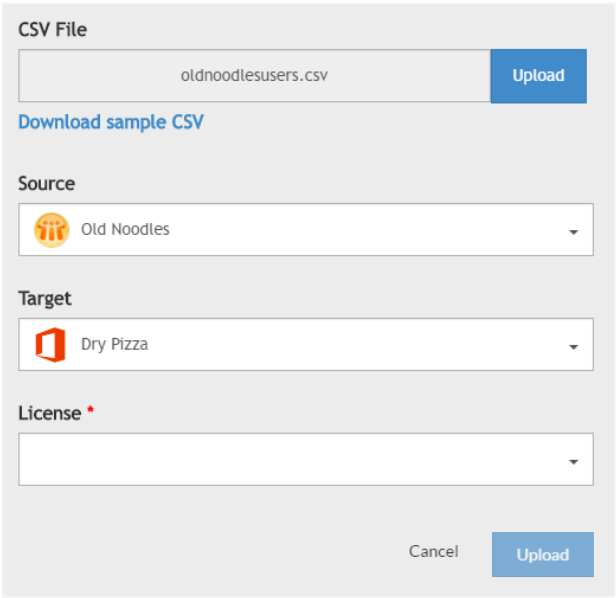


3. If required, click on **Download sample CSV** and add your users to the CSV file using the sample headers (FirstName;LastName;SourceEmail;TargetEmail;BatchName)

4. When you have a complete CSV file with the correct headers, click on the **Upload** button

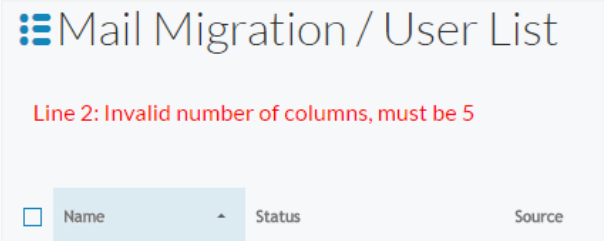
5. Locate your CSV file within your own file system, and double-click on it to select it

6. Select the appropriate connectors in the **Source** and **Target** fields



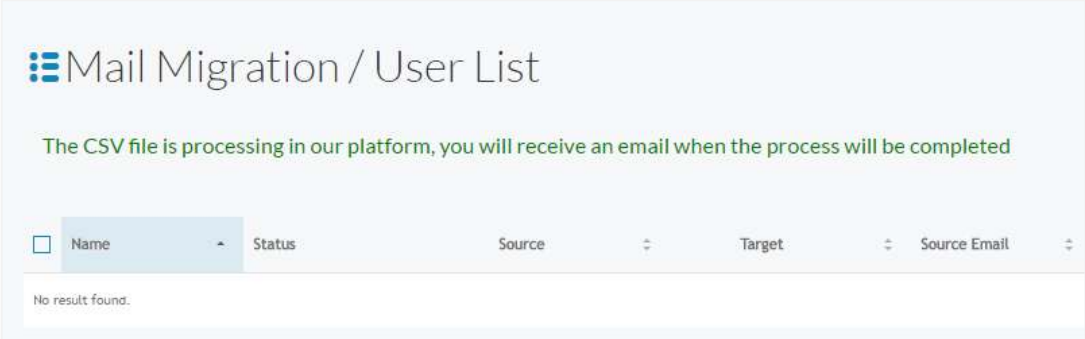
7. Select the license type from the **License** drop-down list

8. Click on the **Upload** button.
If the CSV file format is not correct, you will see an error message on your screen:



9. If you see any error messages, check your CSV file to ensure it has five columns, each with a separator (including the last) and try uploading again

10. Once the CSV file format is correct, you will see a confirmation message at the top of your screen:

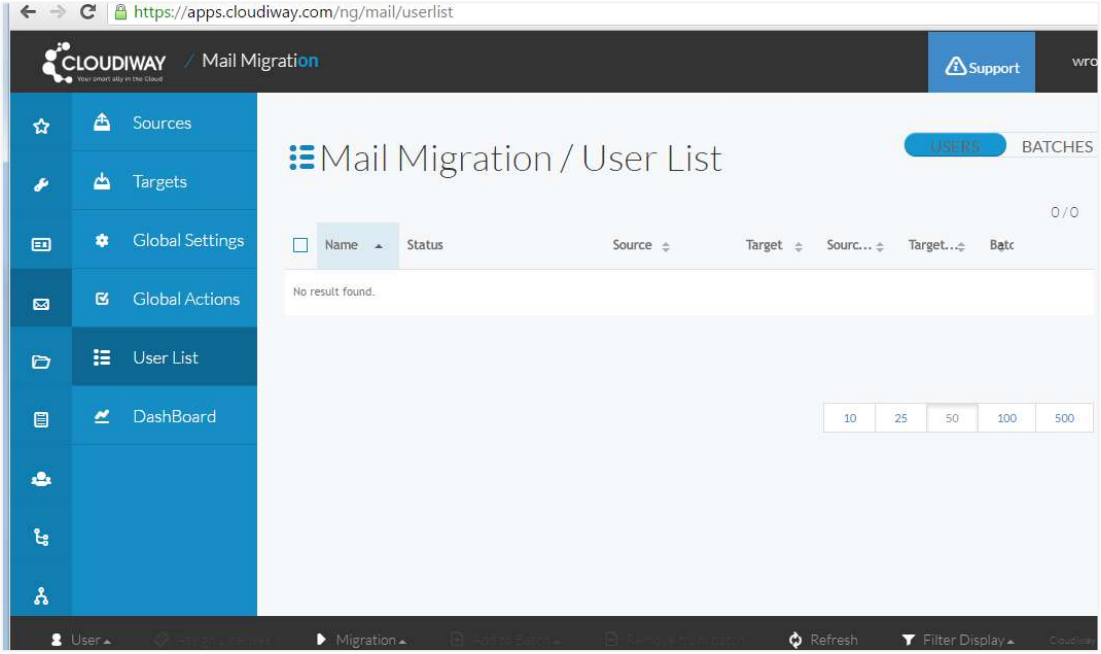


11. Check your email. When you have received confirmation that the upload has been completed, you can refresh the Cloudiway platform to display your imported users

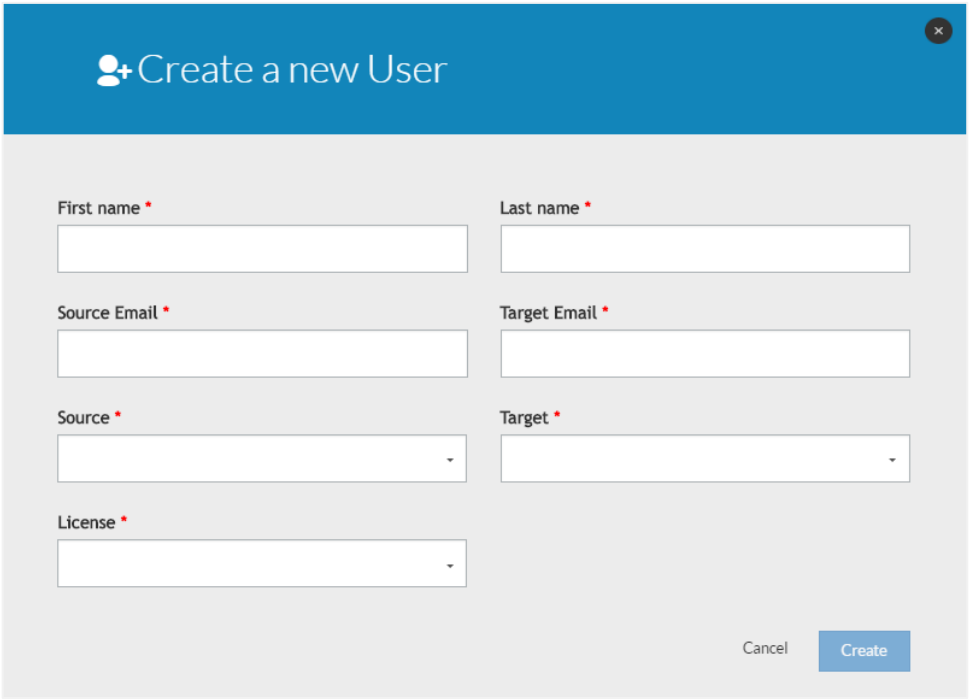
6.6.2 Option 2: Single user creation details

Many of our first-time customers create a single user for testing purposes. This provides a means of watching the migration process without affecting all users. Single users can also be created for migrations affecting just a few users.

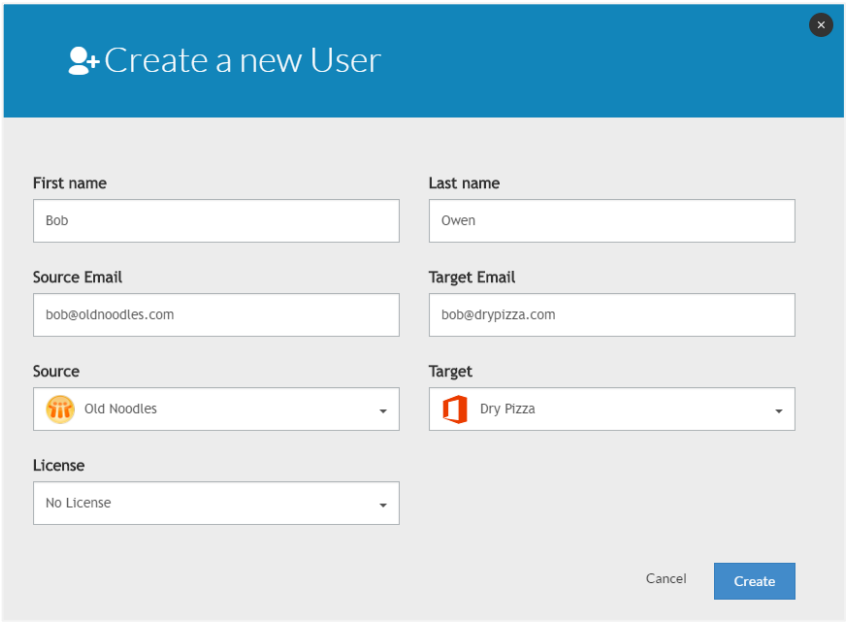
1. Go to the **User List** of the **Mail Migration** menu



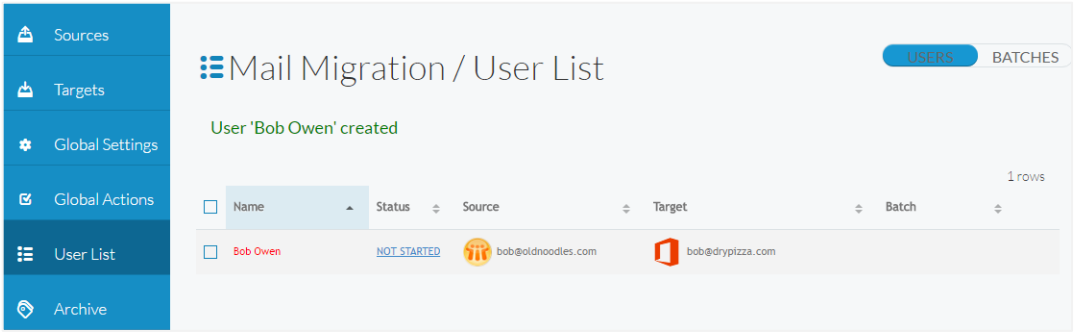
2. Click on **Manage** in the bottom left corner and select **Create Single** to display the following screen:



3. Fill in all details for a new user



4. Click on the **Create** button
The new user will be added to the Mail Migration / User List screen:



5. Repeat steps 1 to 4 for any more users you'd like to create

6.7 Add a list of any shared mailboxes

Shared mailboxes can be migrated from Lotus Notes to any target that supports shared mailboxes. As well as adding them as standard users and assigning them a standard mail license on the Cloudiway platform, you must also create a CSV file that tells Cloudiway where to find the shared mail files.

The CSV file must contain a header row with the following data:

```
Email,DominoServer,NSFFilePath
```

where:

- `Email` is the email address associated with the shared mailbox;
- `DominoServer` is the Domino server name, and only required if the files are stored on a different server; and.
- `NSFFilePath` is the folder location on the server where the NSF file can be found.

The steps below cover explain this procedure in more detail.

1. In the Cloudiway migration folder (**MAASAgent**), create a file called **LotusSharedMB.csv** and give it the following header row:

   ```
   Email;DominoServer;NSFFilePath
   ```

4. Add each shared mailbox to be migrated as a single row, and remember to use a semi-colon (**;**) to separate each field

   For example:
   `sales@oldnoodles.com;oldnoodles01;sharedmail\sales.nsf`

5. Save the CSV file when all shared mailbxoes have been added.

6.8 Activate and monitor your migration

Now that you have performed all the pre-migration steps within your tenants and within Cloudiway, you're ready to migrate. We recommend you run a test migration on a single user first to check that your configuration produces the outcome you expect.

To start your migration, select the users or batch you wish to migrate and click on the **Start** button. Your batch will be scheduled and will begin as soon as resources are available. By default, a hundred migrations can be run concurrently per connector.

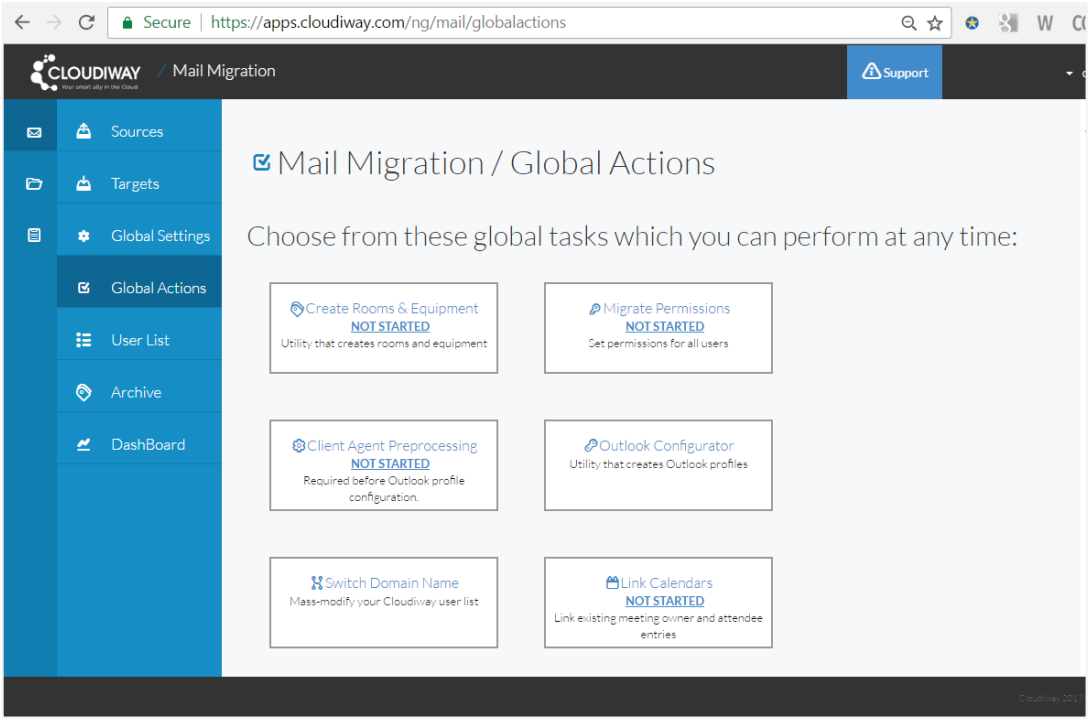
The Cloudiway migration platform supports delta passes and that migrations are therefore incremental; every time you restart the migration of a mailbox, only items that haven't already been copied to the target will be migrated. The platform does not duplicate items in the target.

7 Post-migration options

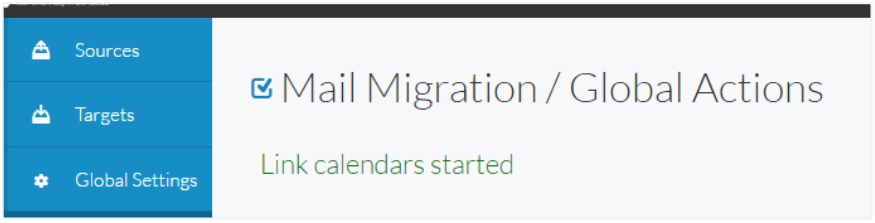
7.1 Link calendar meeting entries

This task runs on all mailboxes defined in the user list, and tries to link meeting entries for owners and attendees. When completed, attendees and owners can send and receive updates on appointments.

1. Ensure you're still in the Mail Migration area of apps.cloudiway.com and go to **Global Actions**



2. Click on **Link Calendars**, and from the pop-up dialog box, click on the **Link** button
A message will appear on the Mail Migration / Global Actions screen confirming that the process has started:



NOTE: Remember, you can always check progress on the Mail Migration Dashboard

7.2 Migrate existing archive mailboxes

Archives can be entirely migrated to inboxes at any target as well as to the In-Place Archives folder within an Office 365 inbox (or a mix of inbox and In-Place Archives folder).

Before archive migration can be configured on the Cloudiway platform, you must ensure all archives are stored on your Domino server. The default path is archive\archivename.nsf but you can specify other server paths in a CSV file containing the list of archives. This list is needed by the Cloudiway platform to locate al archives due for migration.

The CSV file must contain a header row with the following data:

```
email;servername;archive path
```

where:

- `email` is the user email address associated with the archive;
- `servername` is the Domino server name, and only required if the files are stored on a different server; and.
- `path` is the folder location on the server that stores the archive.

Users with more than one archive will be listed multiple times. Some examples could therefore be:

```
bob@oldnoodles.com;;archive\2016_bobowen.nsf

bob@oldnoodles.com;;archive\2015_bobowen.nsf

bob@oldnoodles.com;oldnoodles01;2014_bobowen.nsf
```

One other small configuration tweak is needed in the **configuration.xml** file that you downloaded earlier so that the archives are included in mail migration.

The steps below cover both the configuration change and the CSV file details needed to perform any mail archive migrations from Domino.

Once you've completed the steps, please contact Cloudiway who will complete the configuration and confirm when everything is ready for you to begin migration.

1. In the Cloudiway migration folder (**MAASAgent**) that you unzipped in section 6.2, open the file called **configuration.xml** to edit

2. Add a node before the last line:

```
<MigrateArchives>1</MigrateArchives>
```

Here is a sample of how your xml file should now look:

```
<LotusAgentConfiguration
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
 <Type>LotusNote</Type>
 <CustomerID>7976</CustomerID>
 <AgentName>Old Noodles</AgentName>
 <ServerName>oldnoodles01</ServerName>
 <Password>3gU6c3mTPKW/gR17ESO89w==</Password>
 <Environment>USA</Environment>
 <MigrateArchives>1</MigrateArchives>
</LotusAgentConfiguration>
```

3. Create a file called **LotusArchive.csv** in the same folder as the agent and give it the following header row:

   ```
   email;servername;archive path
   ```

4. Add each archive to be migrated on a single row (if a user has two archives, they will have two separate rows), and remember to use a semi-colon (**;**) separator between each field

   For example:

   ```
   bob@oldnoodles.com;;archive\2016_bobowen.nsf
   bob@oldnoodles.com;;archive\2015_bobowen.nsf
   ```

5. Save the CSV file when all archives have been added

6. Get in touch with Cloudiway to confirm that these tasks are complete.

8 Troubleshooting

Cloudiway provides an extensive knowledge base with many resources, including common error messages, video guides and downloads.

Please visit the mail migration knowledge base area here:

http://kb.cloudiway.com/category/faq-cloudiway/cloudiway-migration-products/mail-migration-faq-cloudiway/

Please visit the entire knowledge base here (where you can search for keywords or read through topics): http://kb.cloudiway.com/

The knowledge base also contains information on how you can ask for further support, should you require it.