Quest

Binary Tree® Migrator for Notes 20.14.1

Installation and Configuration Guide

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Legend

CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

IMPORTANT, **NOTE**, **TIP**, **MOBILE**, or **VIDEO:** An information icon indicates supporting information.

Binary Tree Migrator for Notes – Installation and Configuration Guide
Updated – March 2023
Version – 20.14.1

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Section 1. Introduction

1.1. Purpose & Audience

The purpose of this document is to provide information on how to install and configure Migrator for Notes to perform a migration from HCL Lotus Domino and Notes to Microsoft Exchange and Outlook.

This document assumes the reader has a minimum of one-year experience using a Notes Client and some basic Domino Administration skills, as well as Exchange or Office 365 (also known as Microsoft 365) and PowerShell for mailbox provisioning. If Domino/Notes Administration topics mentioned in this document are not understood, please reference the HCL Notes or HCL Domino System Administration documentation.

1.2. About Binary Tree Migrator for Notes

Migrator for Notes is the most comprehensive software available for migrating from HCL Domino to Microsoft Exchange or Office 365.

Migrator for Notes not only supports migrations to on-premises Microsoft Outlook and Exchange, but also to online versions of Microsoft Outlook and hosted Exchange, including Office 365. Please note that Active Directory requires the Exchange schema update or extension to have the mail attributes in on-premise Active Directory. Refer to Microsoft documentation for more information.

Migrator for Notes, which is a part of Quest's Binary Tree CMT suite of migration solutions, offers unmatched data fidelity, migration management, and migration throughput.

Data Fidelity

Migrator for Notes migrates HCL Notes email messages, calendar entries, contacts, to-do lists, personal journal entries (notebook entries) and more to Microsoft Outlook and Exchange while retaining the original text formatting, images, attachments, and links. Migrator for Notes also ensures that custom recurring meetings are properly migrated so that any subsequent changes, reschedules, or cancellations can be entered for all instances of the meeting. The data fidelity of Migrator for Notes significantly reduces the risk that your users will experience business process disruptions, data loss, or corruption.

Migration Management

Migrator for Notes allows you to manage the entire migration project. Migrator for Notes enables you to schedule users for migration, monitor the status of their migration, and to configure pre- and post-processing actions, such as decrypting encrypted email items, collecting rules and Access Control Lists. Migrator for Notes also enables you to control the data being migrated by enabling you to filter it by data type and to set quotas on the amount of data migrated per mailbox. Acting as a centralized migration management system, Migrator for Notes reduces the risk of forgotten tasks and provides an audit trail of tasks both completed as well as pending.

Migration Throughput

Migrator for Notes can scale to meet the migration requirements of any organization. Under optimal conditions, a single Migrator for Notes migration workstation can migrate up to 8 GB of data per hour. For smaller organizations, one Migrator for Notes workstation may be appropriate. For larger migrations, multiple Migrator for Notes workstations, whether on virtual machines or individual workstations, will coordinate the work effortlessly. Adding additional workstations is a simple and painless process. These additional workstations use a technology **called** Automated Workload Distribution (AWD) to ensure that each workstation is kept busy continuously.

Quest has performed multiple laboratory tests to evaluate Migrator for Notes migration throughput. We have

observed migration speeds of up to 8 GB of data per hour. Migration throughput will vary widely depending upon the source system, migration environment and target system. Review the list of testing details below.

For testing the throughput of the migration system, we recommend that you migrate to .pst for a baseline of migration worker performance.

Review any data throughput or throttling restrictions on the target messaging system. These are typically applied through Exchange system throttling policies, restricting items such as burst allowances and maximum allowed user and MAPI connections. Additional information on Exchange throttling can be requested from Microsoft support.

Migrator for Notes does allow for multiple Outlook migration accounts to be used and spread over multiple migration workers to prevent throttling on a single Outlook account from impacting all migrations. Quest recommends configuring one Outlook migration account for every five migration workers with Exchange on-premise or for every two migration workers with Office 365 if AWD is used.

Lab Throughput Testing Details:

- Lab migrations are performed over a high-speed LAN (1000 mbps)
- Lab Domino and Exchange Servers support very few active users
- Lab Migration workstation(s) normally have 2 GB of RAM or higher (often 4 GB). Although Binary Tree specifies a minimum acceptable amount of RAM as 4 GB is strongly recommended. Also, processor speeds and number of processors increase migration throughput.
- Higher migration speeds have been observed on physical workstations versus virtual ones
- Migration throughput is higher when migrating smaller number of messages with larger attachments than larger number of messages with smaller attachments. Additionally, disk I/O speeds greatly impact the throughput when migrating messages with attachments.
- Migration throughput is lower when migrating calendar data, especially repeating calendar events. Large number of reschedules of repeating calendar events dramatically decreases migration throughput as all meeting updates must be processed prior to the data being migrated.
- Large number of entries in the name translation table used to resolve source recipient lists decreases migration throughput
- Large numbers of personal contact distribution lists, and especially distribution lists with many members, dramatically decreases migration throughput. Lab migration performance does not necessarily provide accurate estimates for production migration performance. The only way of determining the throughput you may achieve in your own environment is to set up and run a proof-of-concept project.

Key Features and Functions

Migrated Data

- Mail Messages
- Subject, Date, Body, Recipients
- Mail Archives (server & local)
- Mail-in Databases
- Follow-up Flags
- File Attachments
- Doc Links, View Links and Database Links

- Folders and Nested Folders
- Calendar Entries
- Personal Contacts
- Personal Distribution Lists
- Private Distribution Lists
- To-do Lists
- Personal Journal Data (also known as Notebooks)

Data Fidelity

- Names Resolution
- Name Translation
- All Messages Reply-able in Outlook
- Migrates Embedded Images
- Migrates Encrypted Emails (after decrypting them or migrated the encrypted content attached in an .nsf)
- Migrates Attachments
- Retains Formatting of Tables
- Retains Original HTML Formatting

Calendar Fidelity

- Migrates Single and Recurring Meetings
- Migrates Custom and Complex Recurring Meetings
- Migrates all Past and Present Calendar Entries
- Migrates all Rescheduled Calendar Entries

Data Filtering Options

- Filter by Document Type (Mail, Contact, Calendar, Task)
- Filter by Absolute/Relative Dates or Ranges
- Select to Skip a List of Folders (excluding system folders)
- Select to Skip Notes Links
- Filter by Data Quota Limits

Migration Management

- Advanced User Management
- Selective User Migration
- Migration-related Communications
- Scheduled Migrations
- Email Archive Migration Options
- Migration Destination Options
- Room and Resource Migration Options
- Mail File Access and Size Verification
- Migration Pre-processing

- Migration Post-Processing
- Automated or Manual User Provisioning
- Detailed Activity Logging

Migration Throughput

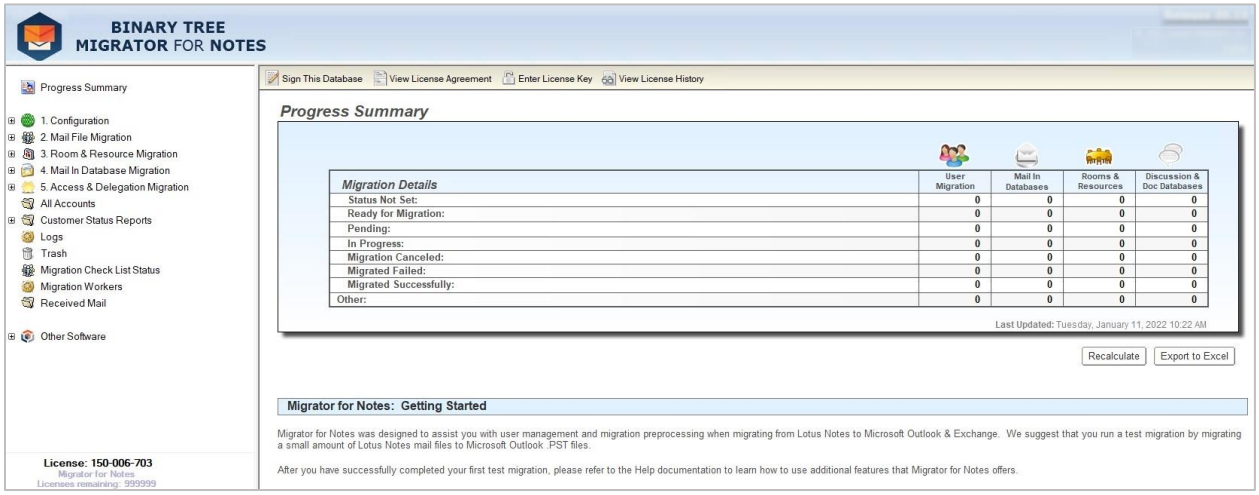
- Built-in Automated Workload Distribution (AWD) Functionality
- Up to 8 GB/hour Migration Throughput per Migration Workstation (actual throughput may vary depending on the environment and target system).

1.3. Product Overview

Migrator for Notes is an application that migrates HCL Lotus Domino/Notes mail, calendar, contacts, and other databases, such as Rooms & Resources, to Microsoft Exchange. There are two major activities involved in a migration:

- Pre-migration activities
- Actual data conversion

The Migrator for Notes application contains all the required tools to give you complete control of these two activities.



Pre-Migration

The Migrator for Notes database provides centralized control and management of all pre-migration activities.

The database provides all the steps necessary to manage the migration of the following data contained within a user mail file:

- Mail Messages
- Message Attachments
- Encrypted Messages
- Folders and Sub-Folders
- Single and Recurring Calendar Entries
- Personal Contacts
- Journal Entries (Notebook Entries)
- To Do Entries

In addition, Migrator for Notes can also migrate the following items:

- Local Mail Archives (using Archive Migrator for Notes)
- Personal groups (in the user's mail file)
- Mail-In Databases
- Rooms and Resources

Migration

Once pre-migration activities are complete, migration can be queued for the selected databases from Migrator for Notes. The migration destination can be either an Exchange Server, Office 365 or .pst files.

Section 2. Installing Binary Tree Migrator for Notes

Migrator for Notes consists of a frontend HCL Notes database also known as an application. This and other software components of Migrator for Notes are provided in an InstallShield installation package.

Migrator for Notes should be completely installed and configured on one migration workstation first. If more than one workstation is needed, you must then deploy Migrator for Notes to all other migration workstations, and each migration workstation should use one (same) Domino server-based database called Notes Migrator (EMM) instead of a local copy. Reference the Automated Workload Distribution section of this guide for more information.

Quest recommends testing and verifying the migration system using test accounts and Notes data to confirm the expected migration processing prior to completing production migrations.

2.1. Before Installation

Before Migrator for Notes is installed, all hardware and software requirements must be completed. Refer to the *Migrator for Notes Requirements* document for the complete list of hardware and software requirements.

During installation, several of the software requirements are verified. In some cases, the InstallShield installation package helps install missing software. However, it is recommended that the required software is installed prior to the product installation and to not to rely upon the aid of the InstallShield installation package.

The installer does not replace the Notes Migrator.nsf database in the local notes data directory on the Migration Control Center when doing an upgrade from a previous release of Migrator for Notes. When upgrading from a previous version of Migrator for Notes, you must complete one of the following tasks:

- Manually rename the file name of the existing “Notes Migrator.nsf” database to something other than this reserved name. After the upgrade, the newly installed Notes Migrator.nsf database is located in the notes data directory so you can configure it from the settings of the renamed database.

Or

- Copy the newly installed database from the C:\Program Files\Binary Tree\CMT for Exchange\Notes Tools directory on the Migration Control Center to the Notes client data directory, renaming the file to a Notes database template “Notes Migrator.ntf”. Remember to sign the template if required. Replace the design of your existing Notes Migrator.nsf database from the new template “Notes Migrator.ntf” to get any updated design changes.

2.2. Downloading Migrator for Notes

Quest maintains the latest release of the Migrator for Notes Installation Package on a web site. The address to the site is http://support.quest.com. To download a copy, Log into the Quest support site and enter your product as Binary Tree Migrator for Notes. If you are installing on more than one workstation and plan to use a software management or GPO to deploy, download the Migrator for Notes msi.

2.3. Installing Software on the Migration Control Center

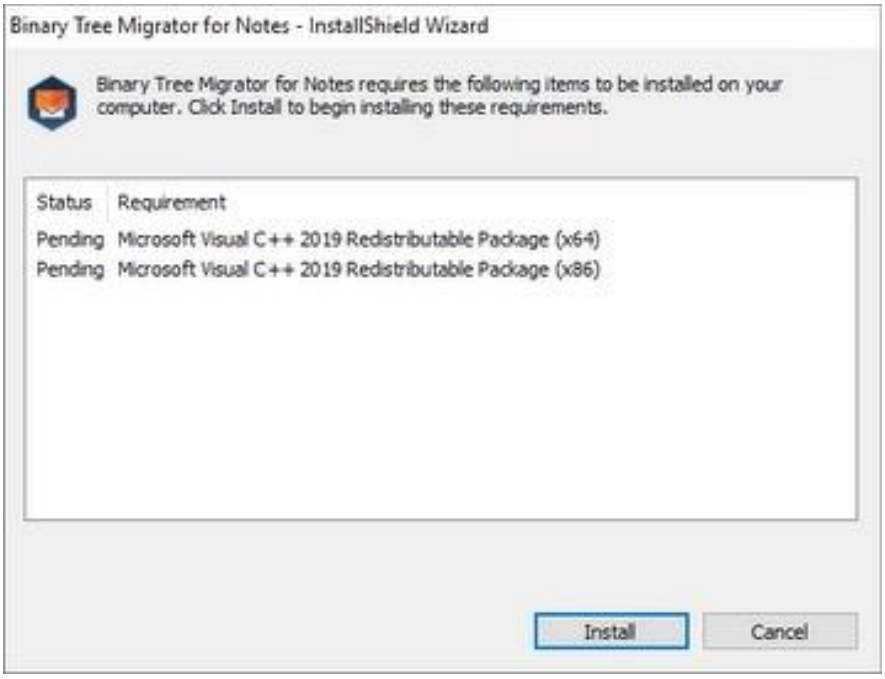
1. To launch the InstallShield install kit, double-click the **Migrator for Notes Setup.exe** file from the download location:
2. Click **Run** to start the wizard
3. If required software is not installed, a dialog box shown below will be displayed. To allow the wizard to install the required software, click **Install**.

NOTE ! The installation of the prerequisite software through the installer requires the workstation to have Internet access. This software can be installed prior to running the setup if Internet access is not available.

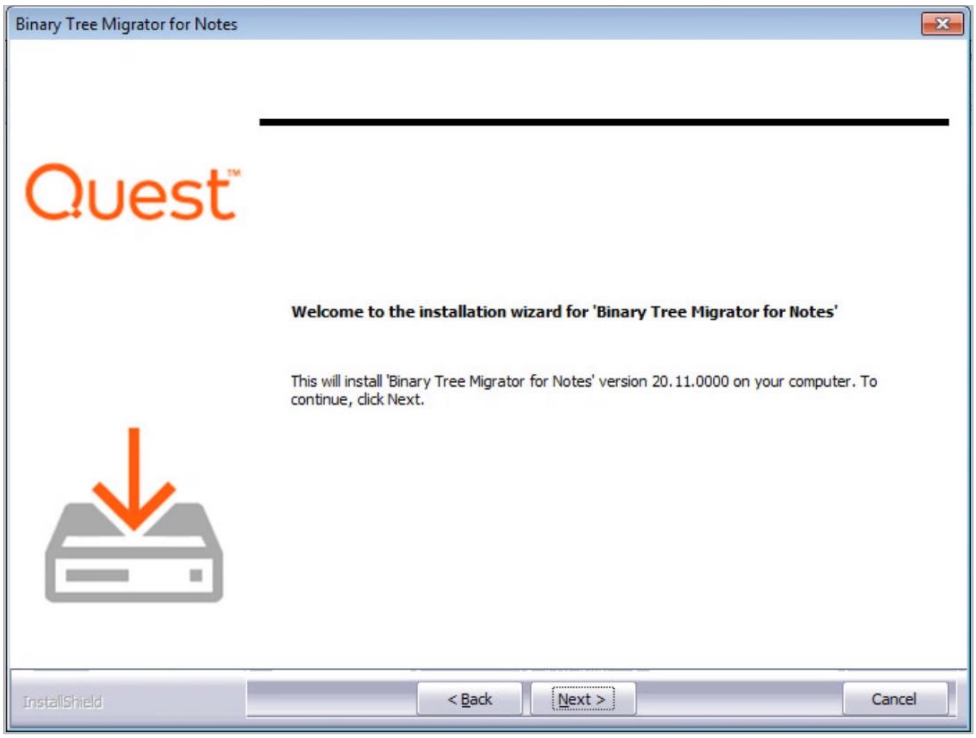
NOTE ! The installer does require TLS 1.0 to be enabled on the Migration Controller in order to configure the SQL database.

NOTE ! The installer will not add a local worker on the controller machine. A worker can be installed using the worker installation process in the Installing A Migration Worker section of Appendix C.

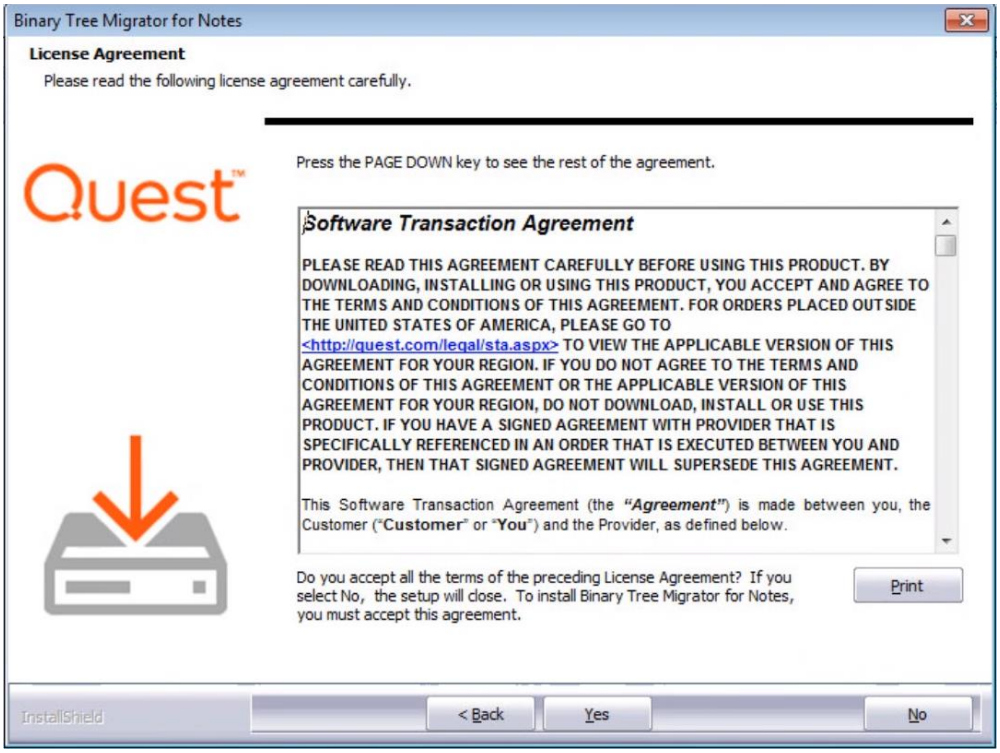
Several dialog boxes, similar to the ones shown below, are displayed during requirement downloading and installation:



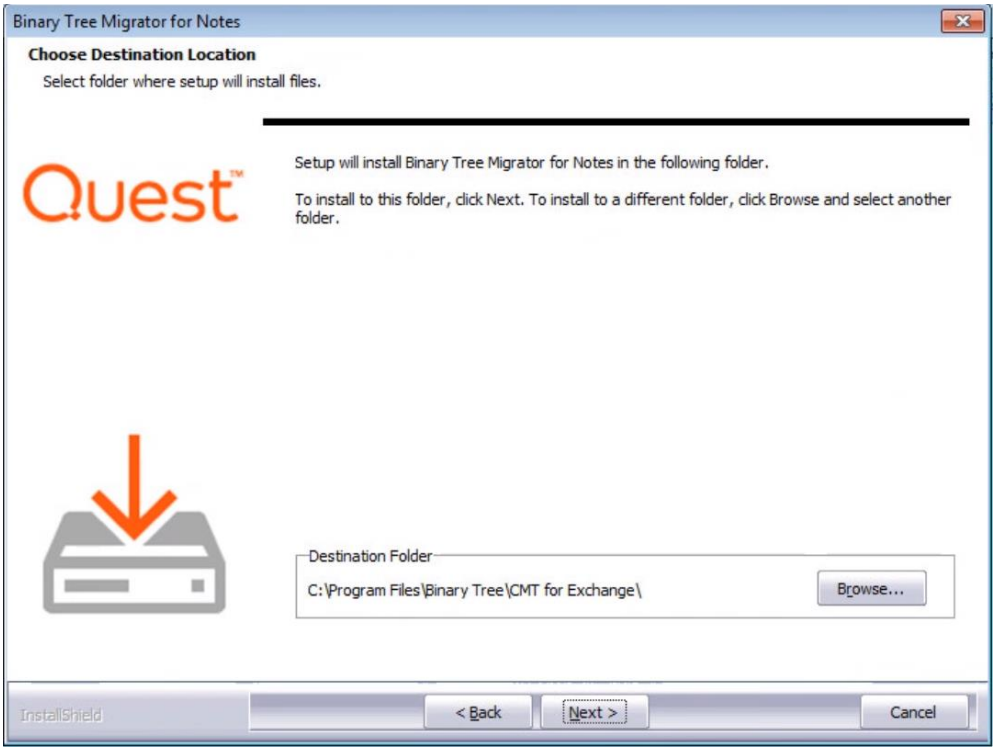
4. When completed, the wizard displays the **Welcome** screen; click **Next**:



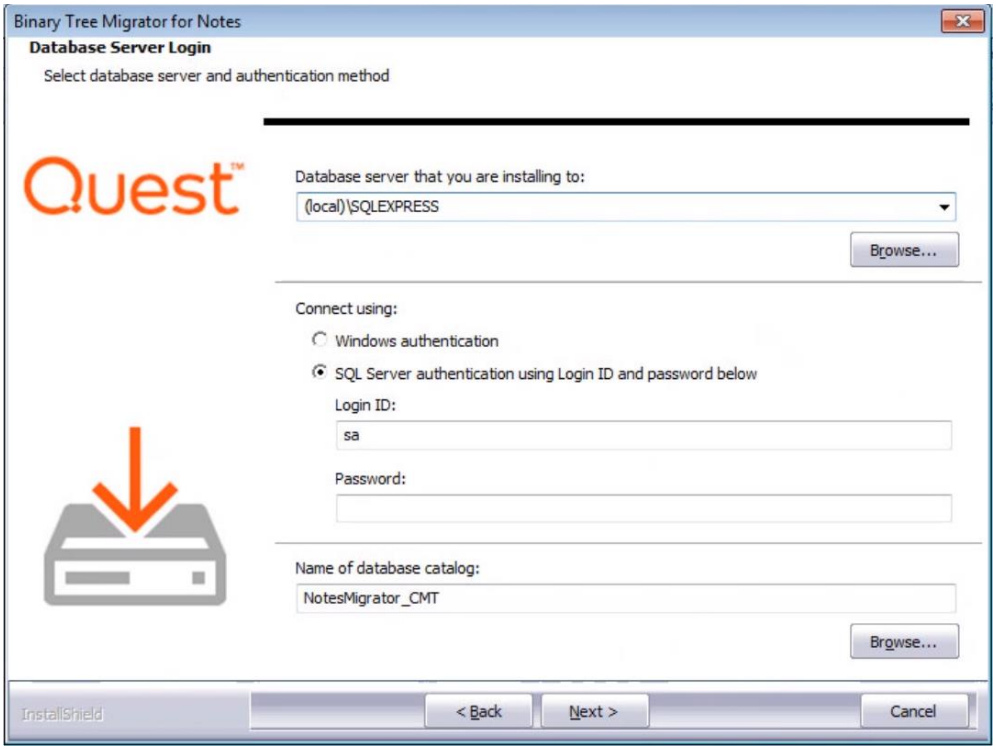
The wizard displays the **License Agreement** screen. Review the License Agreement and accept it; click **Yes**:



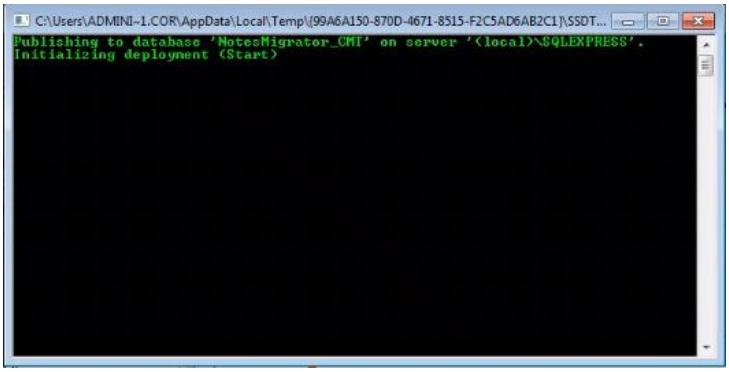
5. Select the destination path for installing Migrator for Notes in the **Choose Destination Location** screen. It is strongly recommended that you keep the default destination folder; click **Next**:



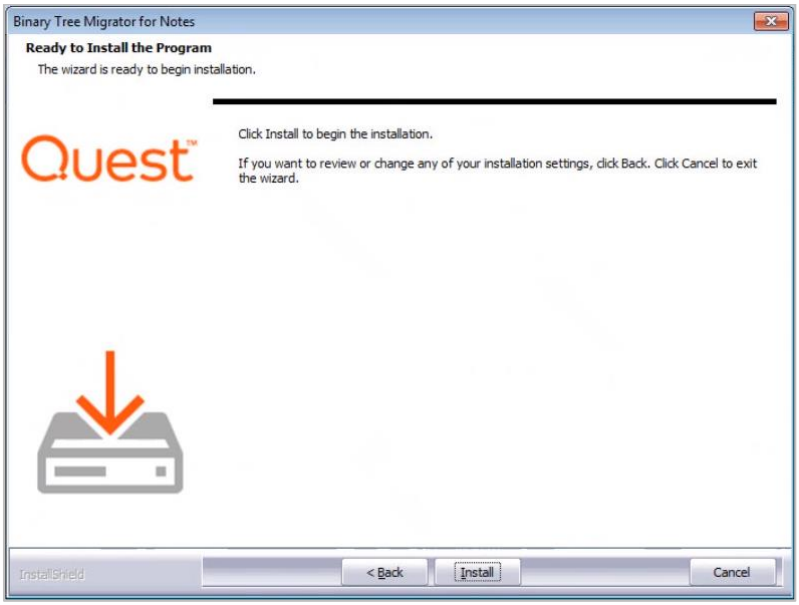
6. Enter the database server location and the credential information, and then click **Next** to continue. When SQL Server Express is installed by the installer, the password is set to "Password1" by default:



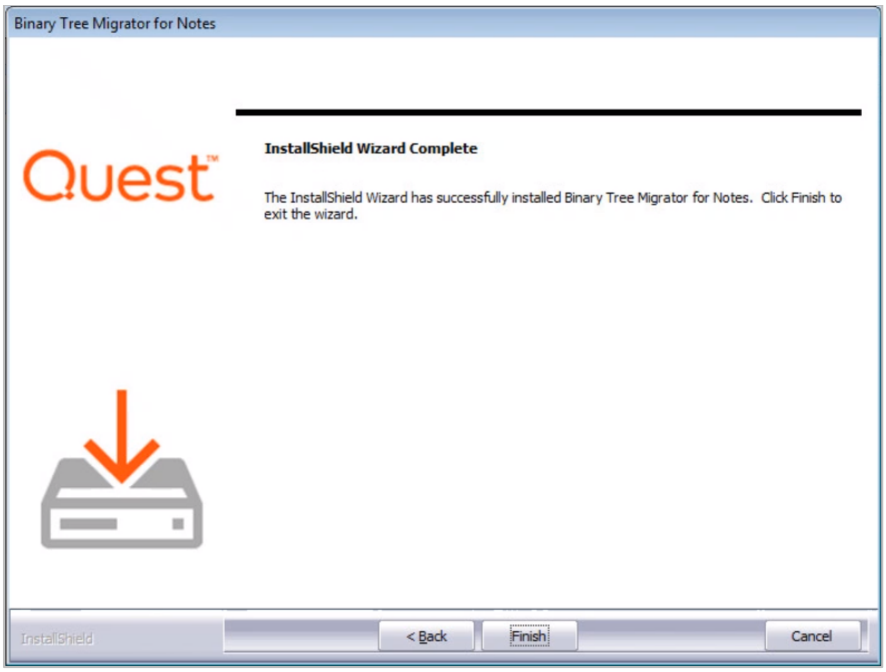
7. Several screens similar to the one below appear while the database and IIS is installed and configured:



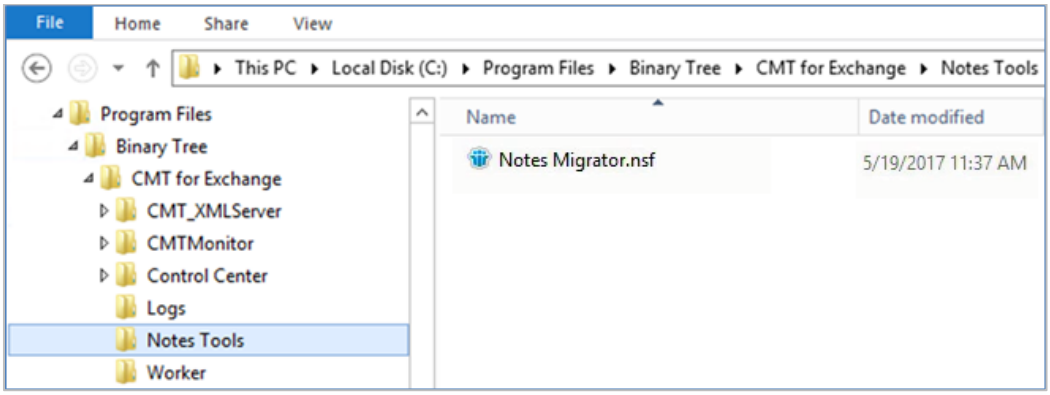
8. The Ready to Install Screen appears; click **Install** to begin the installation:



9. The wizard notifies when the software is successfully installed and configured on your system; click **Finish** to close the wizard:



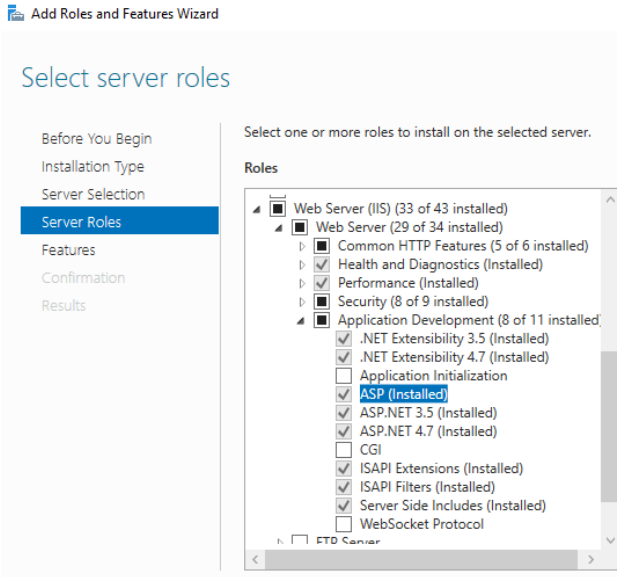
10. The wizard creates the **CMT for Exchange** subfolder in the **Program Files** folder. Within this folder is another subfolder **Notes Tools** that also contains a copy of the Migrator for Notes Domino database. This copy can be used as a backup if needed.

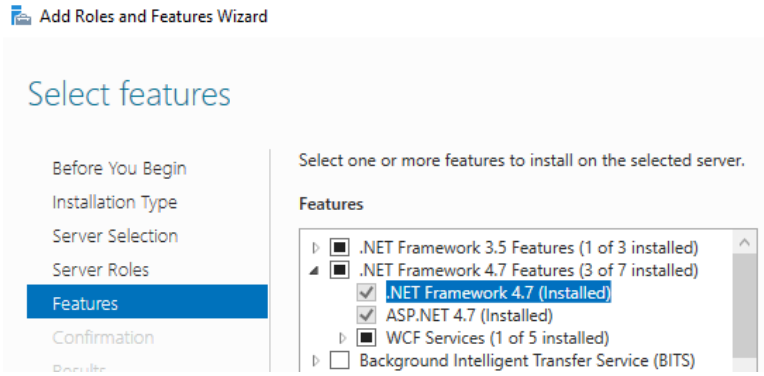


In addition, a shortcut is added to the **All Programs** menu; click **Start -> All Programs -> Binary Tree -> Notes Migrator**.

2.4. Verify .NET Framework Features

1. After the installation, open the Windows Server Manager and navigate to Configure this local server | Add Roles and Features | Features.
2. Ensure that . ASP.NET and .NET Framework are enabled (installed).
3. In the event that these are not enabled, select the Frameworks and ASP.NET and add the features.





.

NOTE ! The .NET Framework can be different depending on Windows Server version with .NET Framework 4.8 being used in some cases.

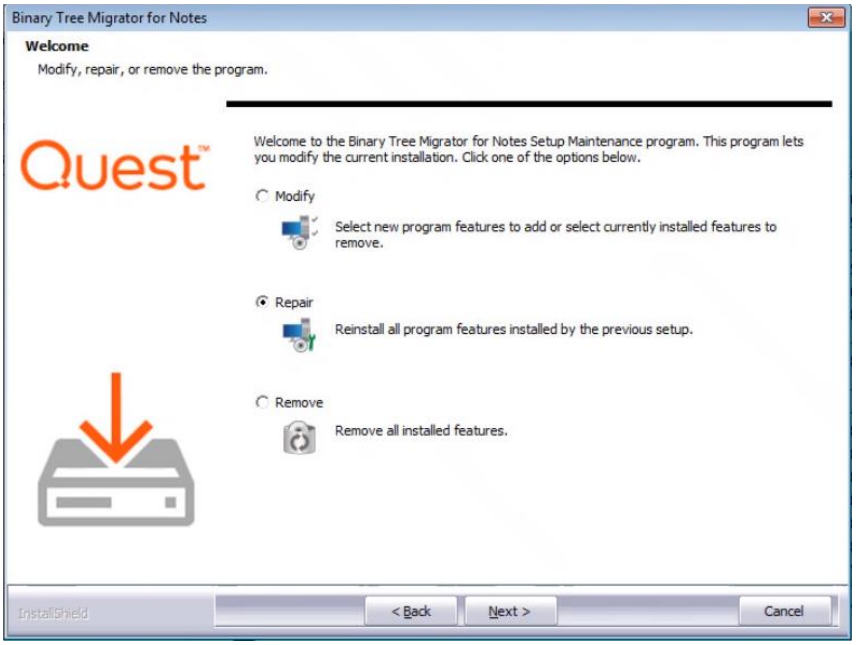
2.5. Setting the CMTE App Pool to Enable 32-bit Applications

1. After the installation, open the IIS Manager and navigate to **Application Pools**
2. Right-click on **.NET v4.5** in the Application Pools list and select **Advanced Settings**
3. Set the **Enable 32-bit Applications** setting to **True**
4. Restart the IIS Services

2.6. Repairing, or Uninstalling Migrator for Notes

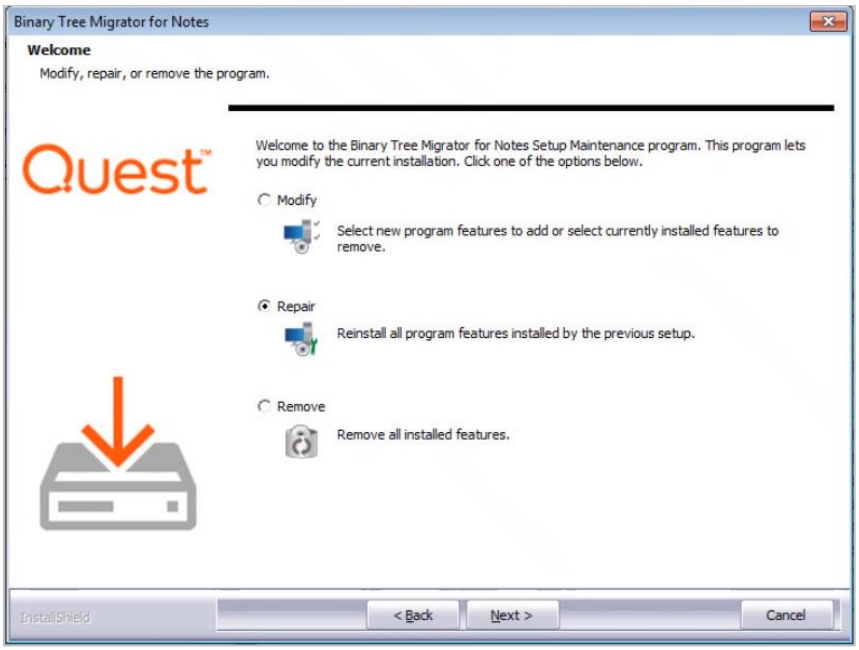
The Migrator for Notes software can be modified, repaired, or removed after it has been installed by executing CMT Exchange Setup from the Control Panel.

1. In the Add or Remove Programs applet, locate the **Binary Tree Migrator for Notes** icon in the Control Panel and select it. To repair the application, select **Repair**; if you wish to remove the application, select **Remove**:

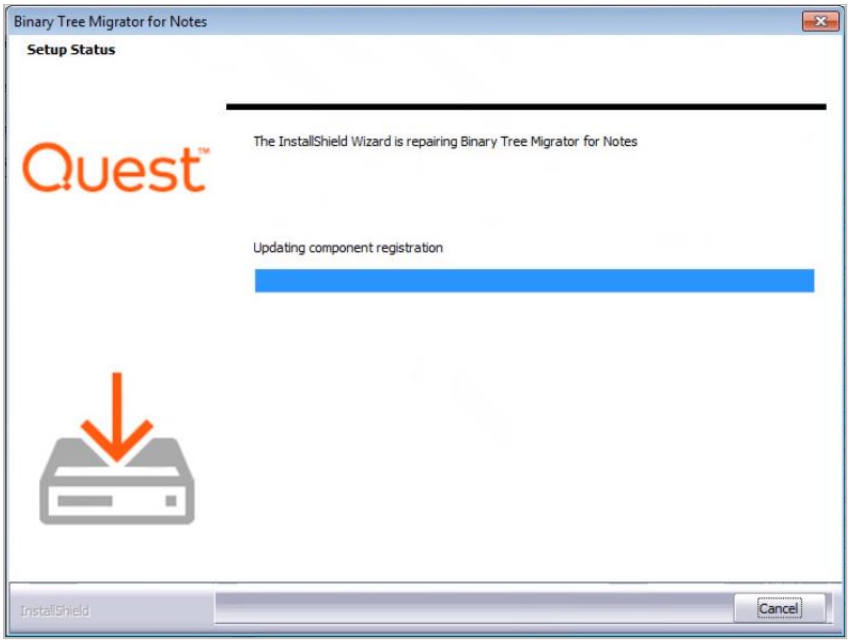


2.6.1 Repairing Migrator for Notes

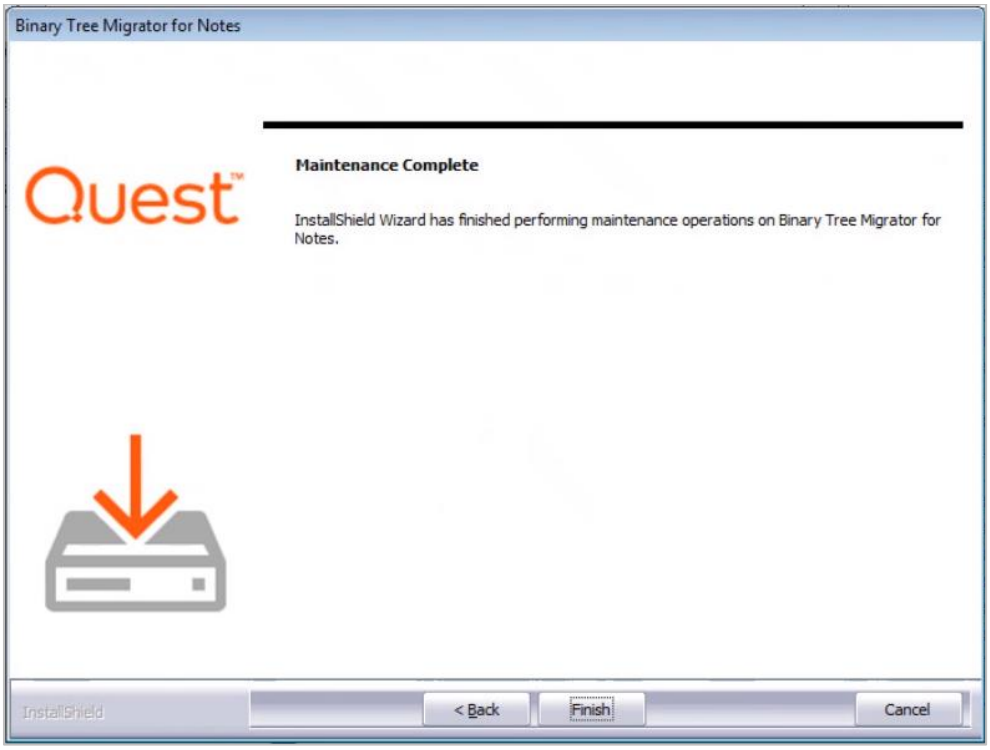
1. To repair the currently installed software, select **Repair** and then click **Next**:



2. Several **Setup Status** screens display:

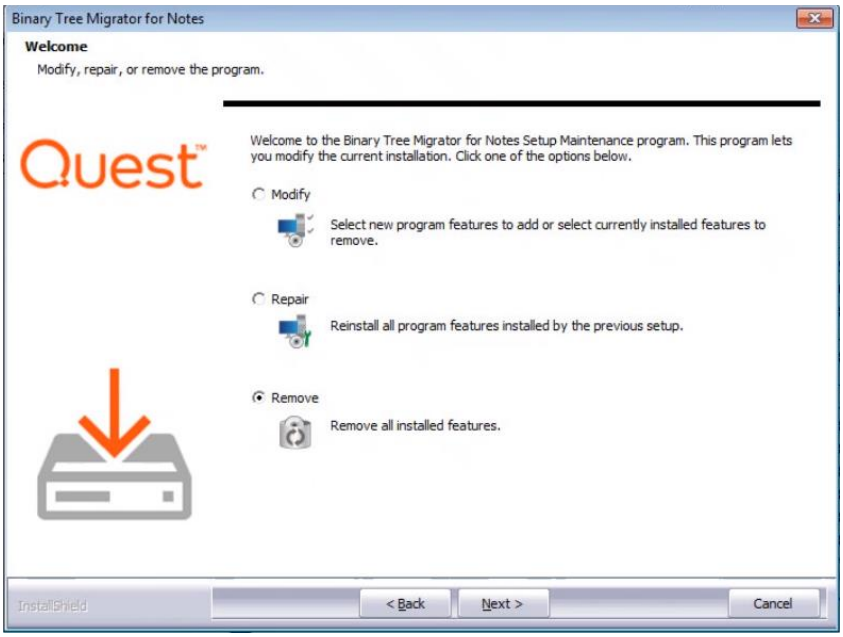


3. The **Maintenance Complete** screen displays when the restore is complete; click **Finish**:

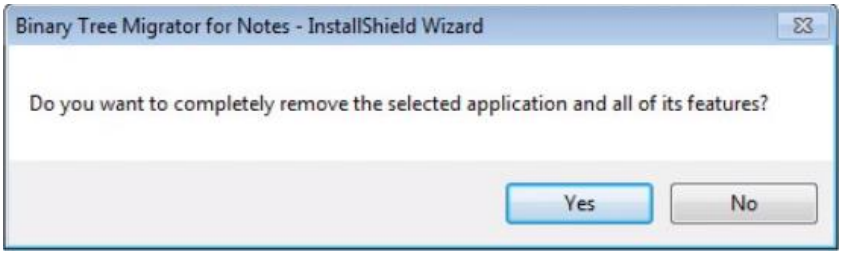


2.6.2 Uninstalling Migrator for Notes

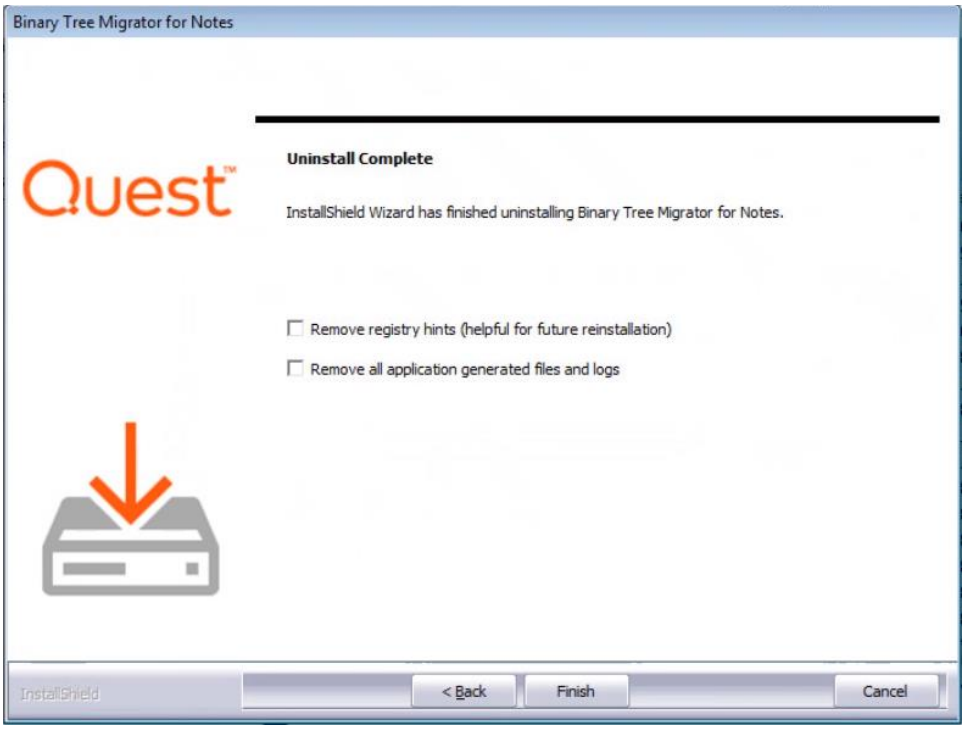
1. To remove or uninstall the software, select **Remove** and then click **Next**:



2. To remove the Migrator for Notes application, click **Yes**:



3. When the uninstall process is complete, the **Uninstall Complete** screen displays; click **Finish**. The Migrator for Notes application is removed:



NOTE ! For AWD configurations, migration workers should be un-installed prior to removing the Migration Controller installation.

Section 3. Setting Up the Migrator for Notes Domino Database

3.1. Opening the Migrator for Notes Domino Database

During the Migrator for Notes product installation on the first migration workstation, the Migrator for Notes Domino database is automatically copied to the local Notes client Data directory. To set up the Notes database, you need to create a copy of the database on the Domino server, which has access to the user mail files or any other databases that needs to be migrated.

If you are setting up the first workstation for deployment, it is recommended that you make a copy of the Notes database on the server instead of a replica. However, if you go on to deploy more migration workstations; you can create database replicas subsequently. Before copying the database, you need to first open the database.

For a more convenient access to the database, it is recommended that you add the database icon to the Notes client Workspace or bookmark it.

Newer versions of Notes refer to Databases as Applications.

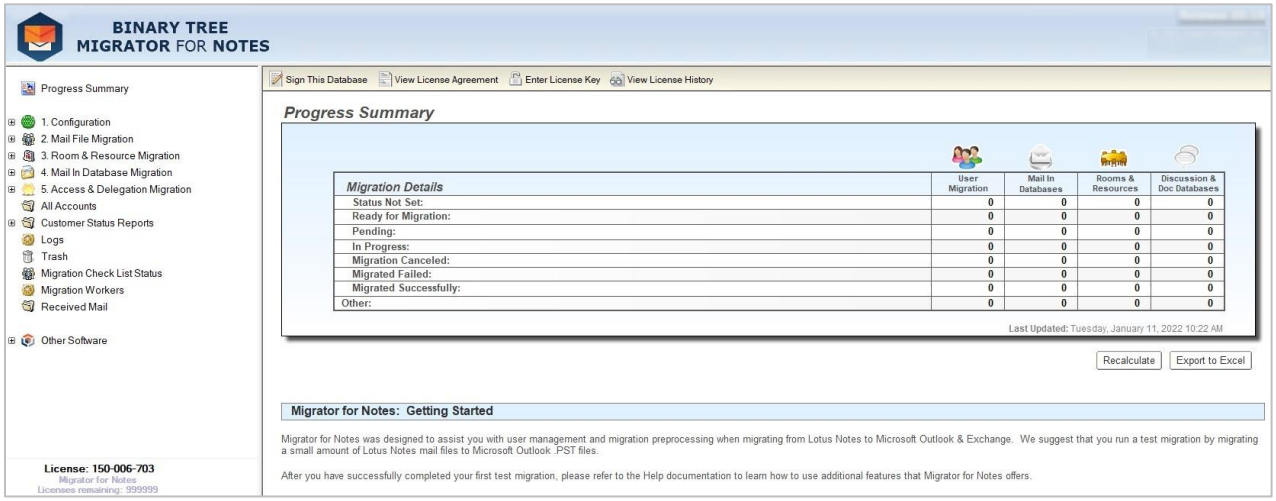
1. Launch the Lotus Notes client.
2. Open the Migrator for Notes Domino database from the Notes client menu by clicking **File > Database > Open**.
3. The **Open Database** dialog box appears. Select **Migrator for Notes**, and then click **Open**.
4. The **Migrator for Notes** database icon is created on the Notes workspace and the database opens:

5. Once you have added the Migrator for Notes database to the Notes Workspace, double-click the database icon.

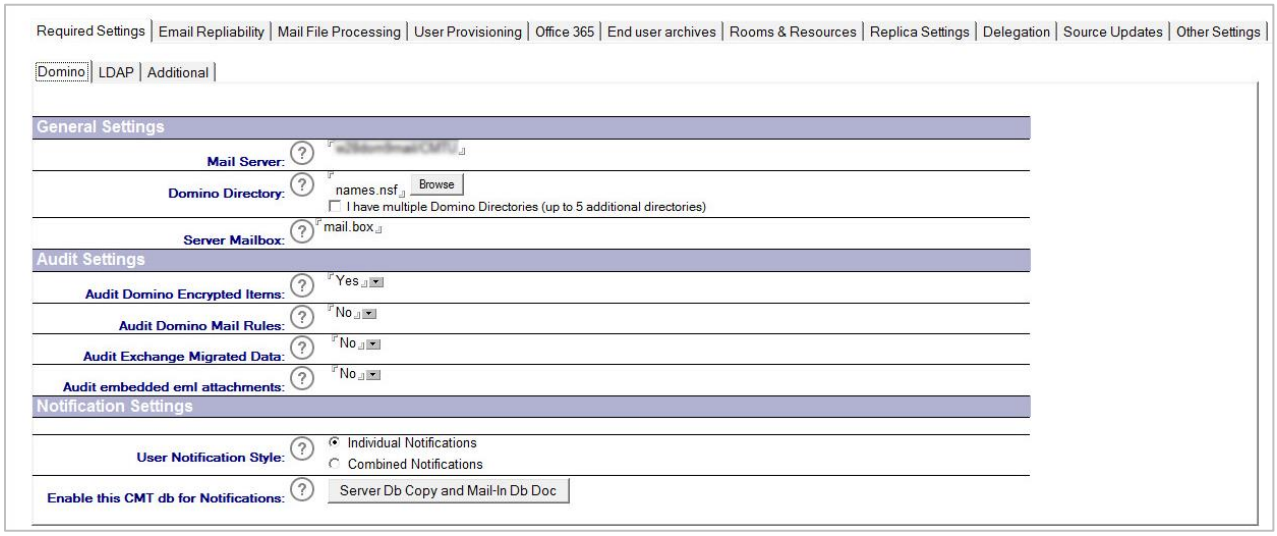
3.2. Navigating through Migrator for Notes Domino Database

The Migrator for Notes Domino database interface is divided into two panes. The left pane is the **Navigation Pane** and the right one is the **Data Pane**.

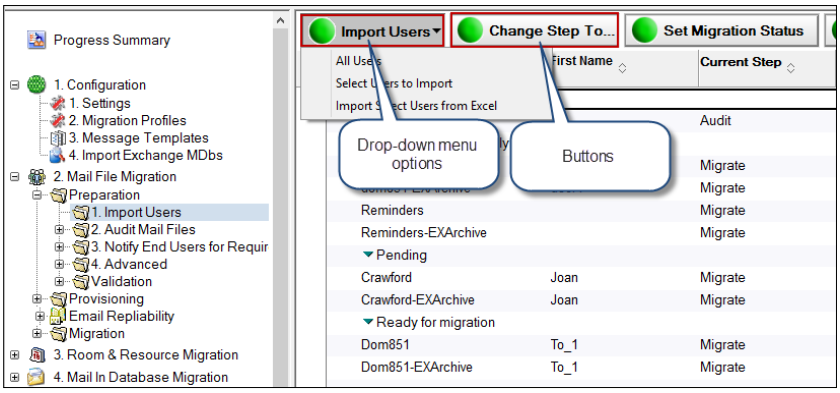
The Navigation Pane is used to control what information is displayed in the Data Pane. The Data Pane usually contains one or more buttons across the top of the pane. These buttons are used to perform specific migration tasks or provide online help.



In the guide, items listed in the Navigation Pane are either referred to as documents, views, or sections. For example, click the **Settings** document to open the Settings Document in a new tab.



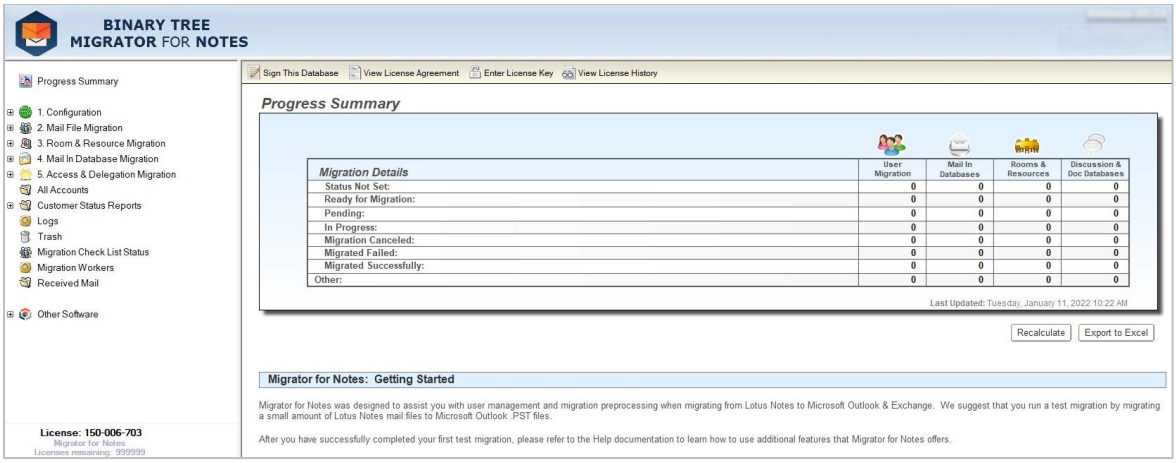
Click subsequent documents or sections to expand or change the view in the Data Pane. The Data Pane consists of data pertaining to the selected document along with a set of tools that need to be run on that data. These tools can either be buttons or drop-down menu options. An example of each displays below.



3.3. Progress Summary

The database provides a very useful feature that allows you to analyze the status of migration and display it in a table.

1. Click **Progress Summary**.
2. Click **Recalculate** to update the Progress Summary table. This updates with the status of the ongoing migration, such as number of completed user migrations or number of pending mail in databases migration.



3. Click **Export to Excel** to create a Microsoft Excel spreadsheet of the information contained in the Progress Summary.

NOTE ! The Progress Summary is an overview of accounts in the Migrator for Notes nsf application, this is not used for migration license tracking.

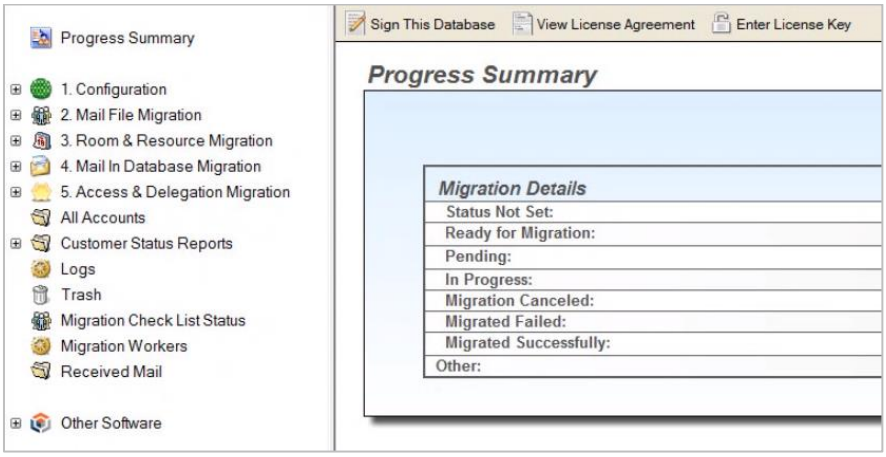
3.4. Signing a New Notes Database

Migrator for Notes needs proper rights to access various Domino servers, directories, user mail files, and other databases that need to be migrated. Therefore, the database must be signed with a Notes ID with the required access rights before performing any action on the database.

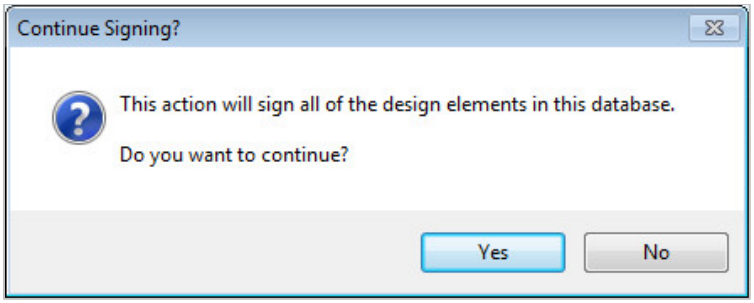
If you do not know how or do not have the authority to set up these access rights, request assistance from the

onsite Domino administrator.

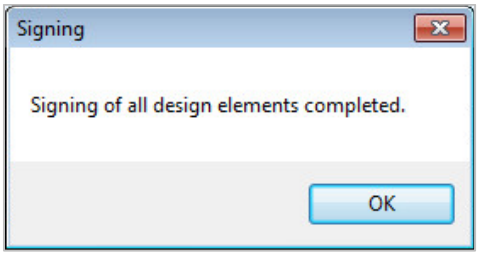
1. Click **Progress Summary**
2. The Migrator for Notes Domino database displays; click **Sign This Database:**



3. The **Continue Signing?** dialog box displays. Click **Yes**.



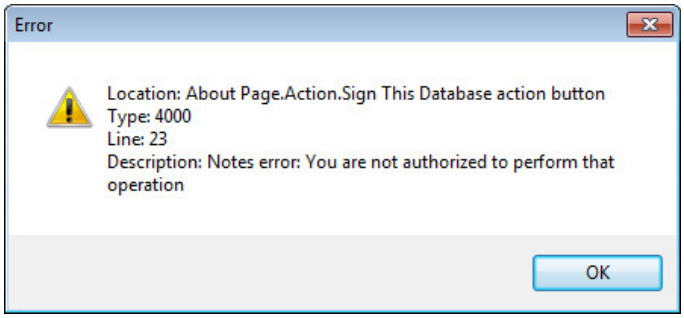
4. If an Execution Security Alert appears, select **Start trusting the signer to execute this action** and click **OK**. The database and all the related documents are successfully signed. Click **OK** to continue.



NOTE !

After you get past the Execution Security Alert, you may get the following error. This error generates if the Notes ID you have used to sign the database does not have proper rights to access the Domino servers, user mail files, and other databases to be migrated.

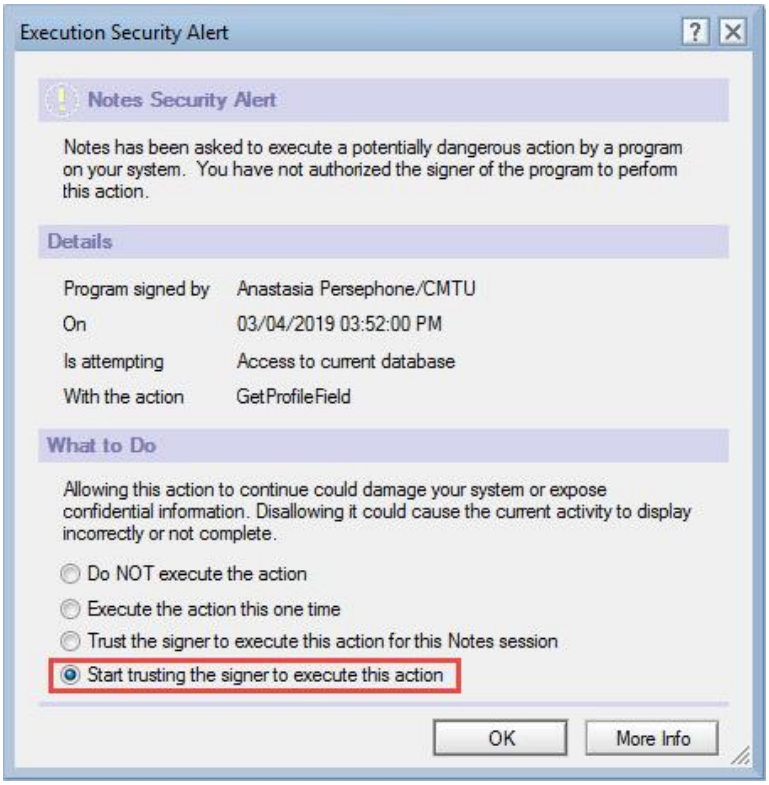
To avoid this error, ensure that the Notes ID used has proper rights. Contact your Notes System Administrator for assistance or review HCL Domino documentation. Check the ACL for this database and add LocalDomainAdmin and <Domino server> with Manager-level access



3.5. Preventing Execution Security Alerts

When specific actions are executed for the first time on a Notes database, one or more Execution Security Alerts may display.

Notes protects against any potentially dangerous code executing by informing the user and asking for authorization. Therefore, when Migrator for Notes performs an action, Notes perceives it as a danger and displays a security alert. However, actions performed by Migrator for Notes are safe and should be allowed to execute. There are two ways by which you can prevent security alerts from reappearing. The first method is to authorize the Notes ID that was used to sign the database. To do this, select the **Start trusting the signer to execute this action** option in the Execution Security Alert, and click **OK**.



For any action signed by Binary Tree, select the **Start trusting the signer to execute this action** option and click **OK** to continue.

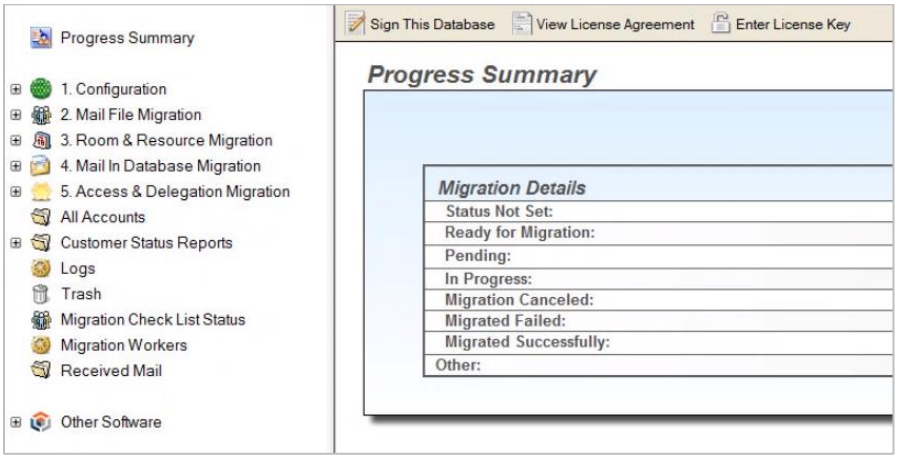
Alternately, all Execution Security Alerts can be prevented from reappearing by signing the database. Prior to opening the database, ensure that the Notes ID used to sign the database is trusted by every Notes client and

Notes server throughout the organization.

NOTE ! The Execution Security Alert settings are unique for each installation of a Notes client. If the Migrator for Notes Domino database is deployed to multi-workstations, the Execution Security Alerts may display when the database is opened for the first time on each migration workstation.

3.6. Viewing Licensing Agreement

1. Click **View License Agreement** from the Data Pane.



2. The license agreement information displays in a new tab; review the license agreement
3. Click **Accept Terms of License Agreement**:

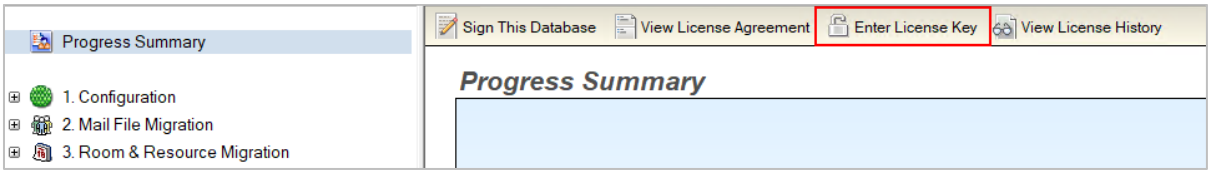
4. If you do not want to accept the license, click **Close** and discontinue using the product

3.7. Entering License Key

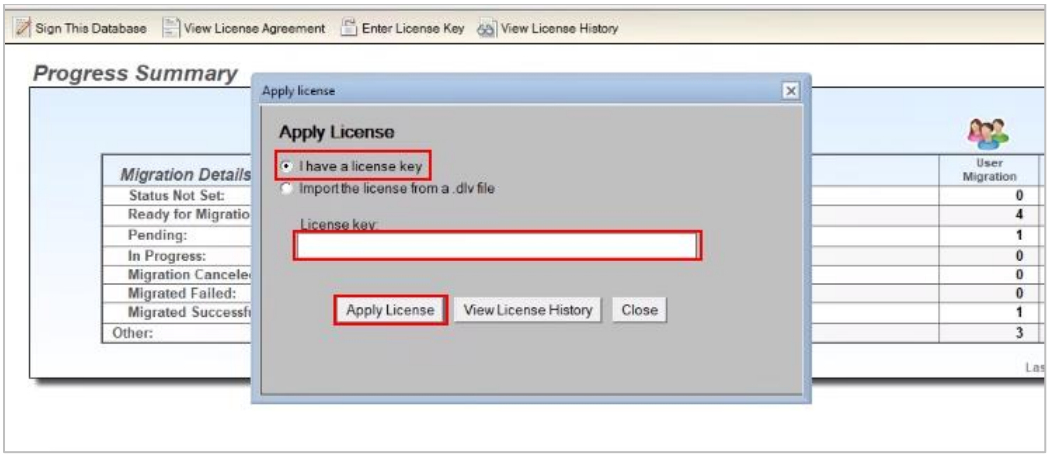
Quest recommends that you do not apply the license prior to the Domino Server Installation procedure. This may corrupt the license.

Migrator for Notes requires a license to be applied prior to performing migrations. This license can be a trial license that will perform full migrations for a limited number of accounts and a limited time or a purchased full production license.

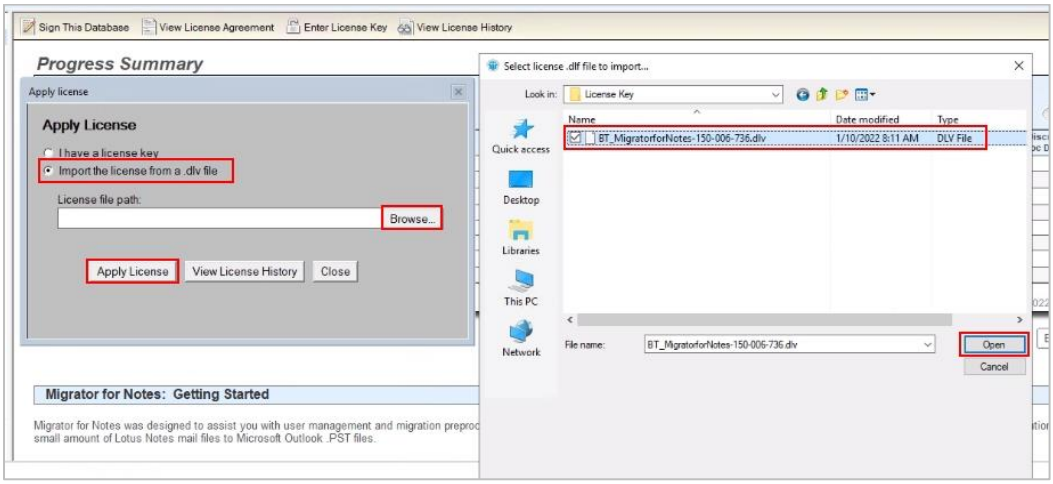
1. Click **Enter License Key**.



2. The Apply License dialog displays two options for applying a license:
   - **I have a license key** – If you have a legacy license key originally supplied to you in text without a .dlv file, choose the **I have a license key** option, enter the license key, and click **Apply License**.



   - **Import the license from a .dlv file** – If you have a .dlv license file provided by Quest, copy the file to the Controller Server and choose the **Import the license from a .dlv file** option. Click **Browse** to select the .dlv file you copied to import the license, and click **Apply License**.

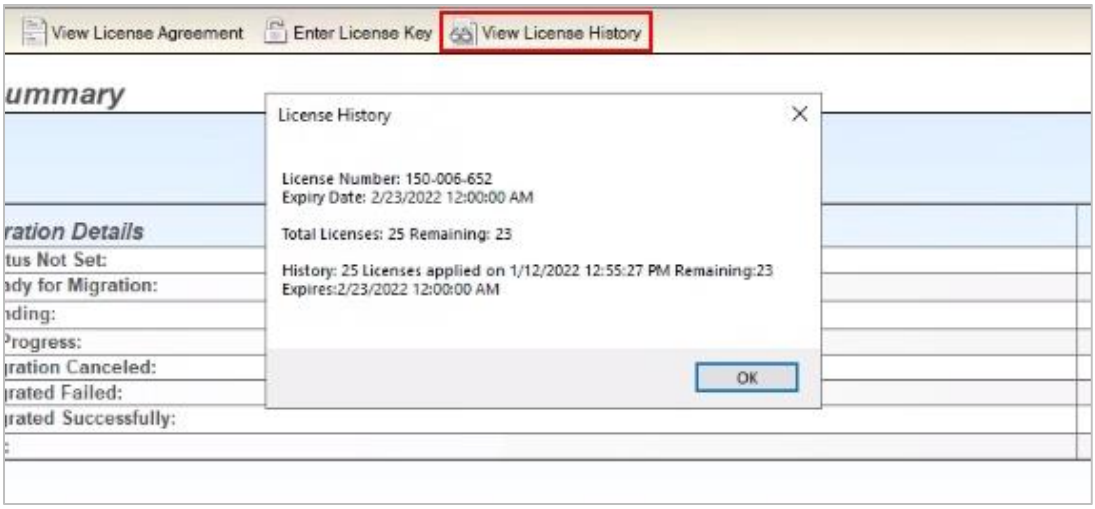


3.7.1 Viewing License Details

All licenses that have been applied to the migration system can be viewed within the Notes Migrator.nsf. This will display the license key number that was imported along with the number of license keys purchased, licenses remaining for migration and an expiration date for the license if there is one.

Note: Trial license keys will have an expiration date and will be replaced by a full production license when that is imported.

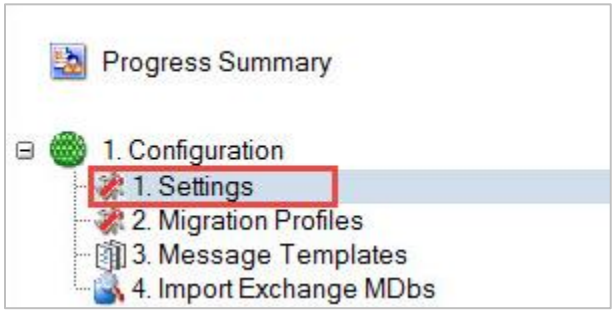
1. Click **View License History**.



2. Click **OK** to close the license details.

Section 4. Configuring Settings in Migrator for Notes

Migrator for Notes collects and manages the settings essential in performing a successful migration. These settings are located under Configuration in the Navigation Pane.

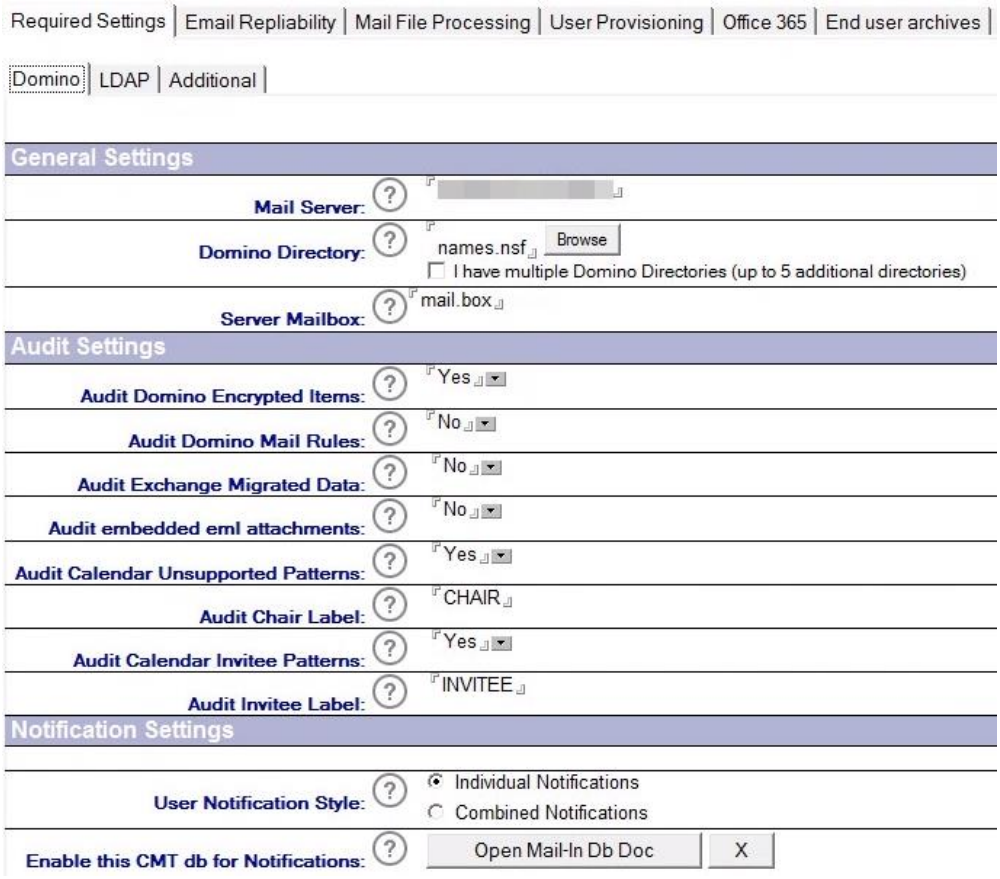


NOTE ! If you are planning to migrate to Office 365, you should first enable Office 365 migrations on the Office 365 tab. Doing this will display additional settings for Office 365 migrations in various tabs. Refer to the Migrator for Notes User Guide for Office 365 Migrations for additional information.

4.1. Configuring Required Settings

Domino Settings

The **Migrator for Notes Settings** document displays. In the **Settings** document, the **Required Settings -> Domino** tab displays by default.



NOTE ! You can view the description of each field in each tab by clicking its corresponding question mark icon. For example, click and hold the mouse pointer on the question mark icon next to the Mail Server field to read its description.

Before any migration can be performed, the **Required Settings** tab must be completed. Two of the most important entries in this tab are the **Mail Server** and the **Domino Directory**. The specified Mail Server name is used to access the Domino Directory. The Domino Directory is used to retrieve the information required to import and create the User Mail, Rooms & Resources Databases, Mail-in Databases, and Discussion & Document Library Databases control documents.

These control documents are critical to the migration process and in their absence, migration information cannot be collected for a given item, and therefore, the item cannot be migrated. The control documents are used extensively during the remaining migration processes.

The following table describes the values for each setting.

Settings	Description
Mail Server	The Domino server that Migrator for Notes will use for importing users and for sending Migration Messages.
Domino Directory	The Domino Directory name that Migrator for Notes will use for importing users, as found on the Domino server. Up to five additional Domino directories can be set by checking the box.

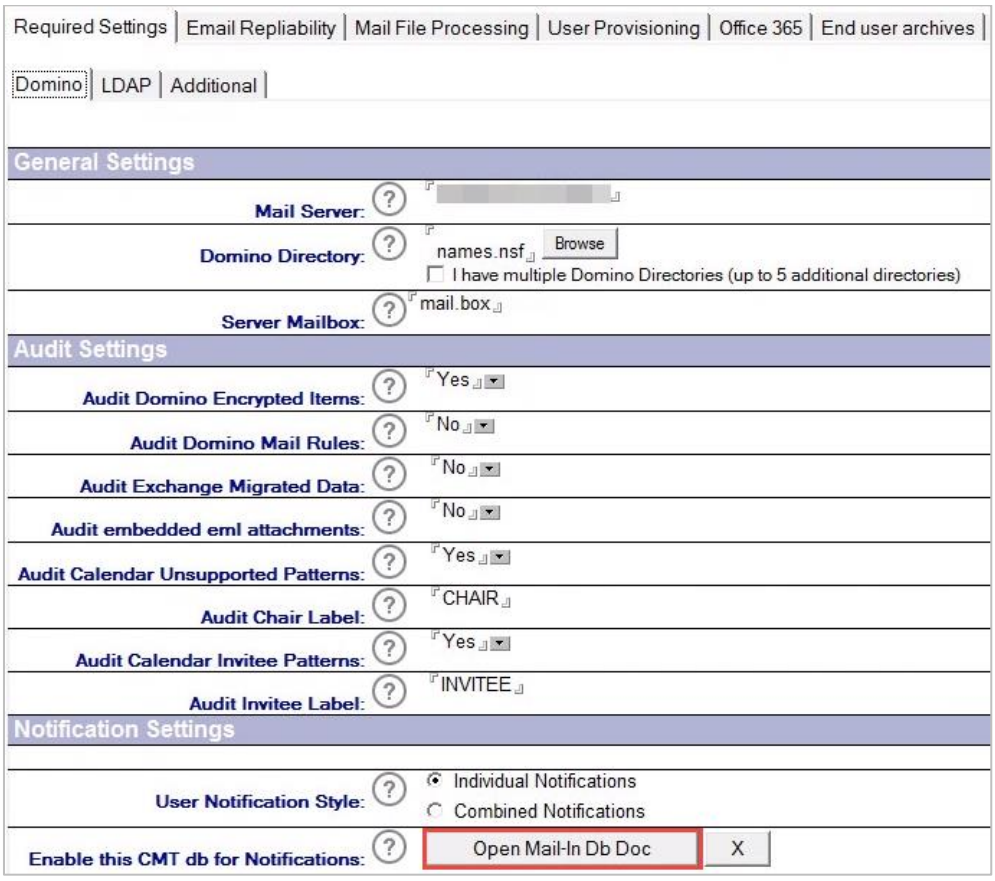
Server Mailbox	The mailbox filename that Migrator for Notes uses for sending Migration-related messages to selected users (for example, mail.box).
Audit Domino Encrypted Items	When running Audit on user mail file, specifying Yes will check for encrypted items in the mail file. If encrypted items are found, you can either send the user an email message with a button that decrypts encrypted items so that they can be migrated, or you can send the user a message with document links to the encrypted items so that they can print them prior to migration. You can even do both if you have some reason to want a list of messages that had been encrypted before the decryption agent was run.
Audit Domino Mail Rules	When running Audit on user mail file, specifying Yes will check for the number of rules in the mail file. If rules are found, you can send users a list of their Rules that will help them in creating the rules in Outlook after migration.
Audit Exchange Migrated Data	Enables auditing of migrated data in Exchange. Exchange Auditing should be enabled before data is migrated. Audit reports can be found the \logs directory on the migration workstation(s). This is a post-migration validation process that indicates the state of documents which have been migrated by Migrator for Notes. This feature can be useful in environments as a validation check for data integrity. In addition, this can be used to audit results to reduce the size of user Domino mail files or archive databases after the migration phase on the Domino servers and user's workstation replicas. For example, removing documents with a Migration Status of 1 would leave only non-migrated data or documents that could not be migrated completely due to malformation or size restrictions in Exchange from a source database. *Important: Consult your organizations data retention policies and regulatory compliance requirements before modifying source data. Full backups of the original source data may be required (and maintained post migration) before modifying working replicas to ensure regulatory compliance.*
Audit embedded eml attachments	Enables auditing of eml attachments inside the message bodies to assist with migration troubleshooting. Results will be reported on the user document in EMM. This is not required for migration processing unless directed to enable this by Binary Tree's Product Support. Additionally, a flag can be enabled and adds the field BTFoundEML to documents in source mail files where auditing finds eml attachments inside the message bodies.
Audit calendar unsupported patterns	Enables auditing of calendar items where the user is the Chair for Notes custom repeating meetings and generates document links for meetings that are not supported by Outlook. This will use the Migration Date if set or the current date and include meetings from the date specified and future meetings. The audit adds the reported data to the Calendar audit RTF report for the account and can be sent to end users with the Remediation Summary Message Template. If enabled the audit can be specified to verify meetings where the user is the Chair, an Invitee or both. Additionally, label text can be added to the reported data to specify if the user is the Chair or the Invitee.
User Notification Style	Individual Notifications: Select if you want to send individual notification to each user and each mail/form will only have script for one action. Combined Notifications: Select if you want to send one migration notification to each user and the notification/message to contain multiple selected forms, such as decrypting encrypted messages and synchronizing contacts and journals (notebooks) with mail file.

Enable this CMT db for Notifications	Click this button to create a Mail-In database document on the Domino Server for the Migrator for Notes database, and enable the database to receive User Notification responses. This database must be hosted on a Domino server.

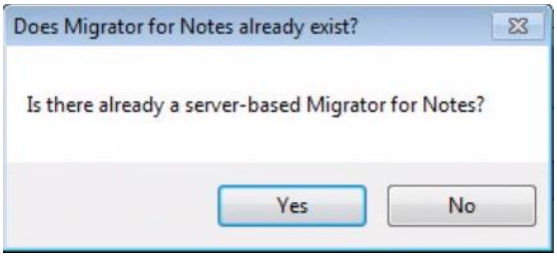
Mail-enabling Migrator for Notes Database

A Mail-in Database Document is required for mail to be delivered to the newly created server copy of the Migrator for Notes database. The procedure copies the database to the server and creates a Mail-In database document for the Migrator for Notes database.

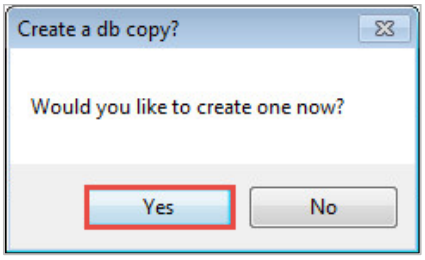
1. Create a mail-in database for Migrator for Notes database. Click on the **Server Db Copy and Mail-In Db Doc** button to create a copy of the Migrator for Notes database on the Domino server and configure the Mail in Database document



2. The **Does Migrator for Notes already exist?** dialog box opens; click **Yes** (and skip to step 5):



3. If you are working with a local copy of the Migrator for Notes database, then click **No**. The **Create a db copy?** dialog box opens.
4. Click **Yes** to create a copy of the local Migrator for Notes database on the server:

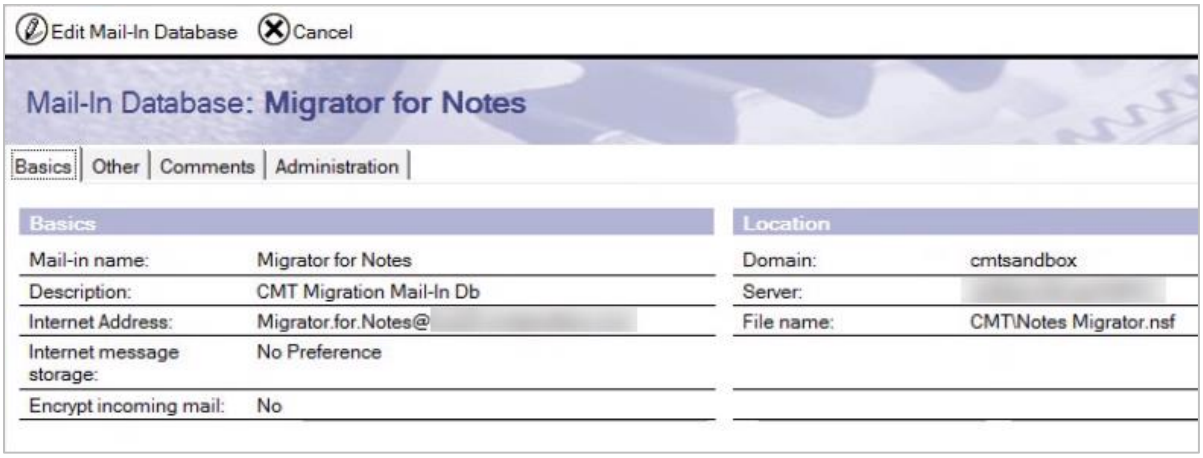


5. If you clicked **Yes** in the **Does Migrator for Notes CMT already exist?** dialog box, the **Choose Application** dialog box opens. Locate the Migrator for Notes database in the *CMT* folder on the server, and then click **Open**.
6. The process will ask if there is already a mail-in db document in the Domino directory. If this has been created already then click **Yes** to run a search for the entry in the directory. This is case sensitive for the Migrator for Notes application name on the Notes Migrator.nsf file. Click **No** to create a mail-in db document.

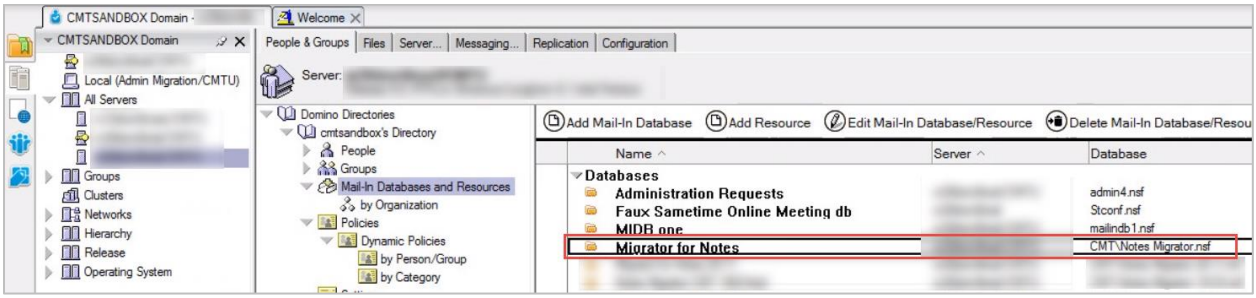
The **Fullname for the mail-in db doc** dialog box confirms that the mail-in database for the selected server-based Migrator for Notes database does not exist, and prompts you to specify a name for the mail-in database. After specifying the name, click **OK**.

7. In the Open the new mail-in doc? dialog box, click Yes to open the mail-in database.

   The mail-in database document for Migrator for Notes opens.

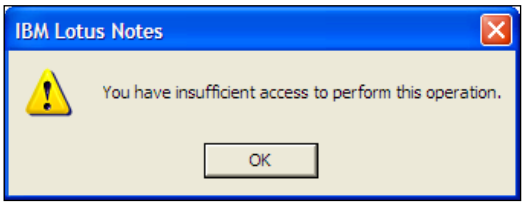


8. To verify the creation of the mail-in database, you can also launch Domino Administrator, open the Domino server, and access the **Mail-In Databases and Resources** folder under the **People & Groups** tab:



9. Double-click the document to open and review
10. Once the mail-in database is successfully created, the **Open Mail-In Db Doc** button replaces the **Server Db Copy and Mail-In Db** Doc button. Clicking it opens the database document for a review. Clicking the button with the X sign on it will remove all pointers to the location of the mail-in database.

NOTE ! The Notes ID that is used to sign the Migrator for Notes database must have rights to add a new Mail-In Database Document to the server Domino directory. If the following error message is displayed, the Notes ID does not have appropriate rights.



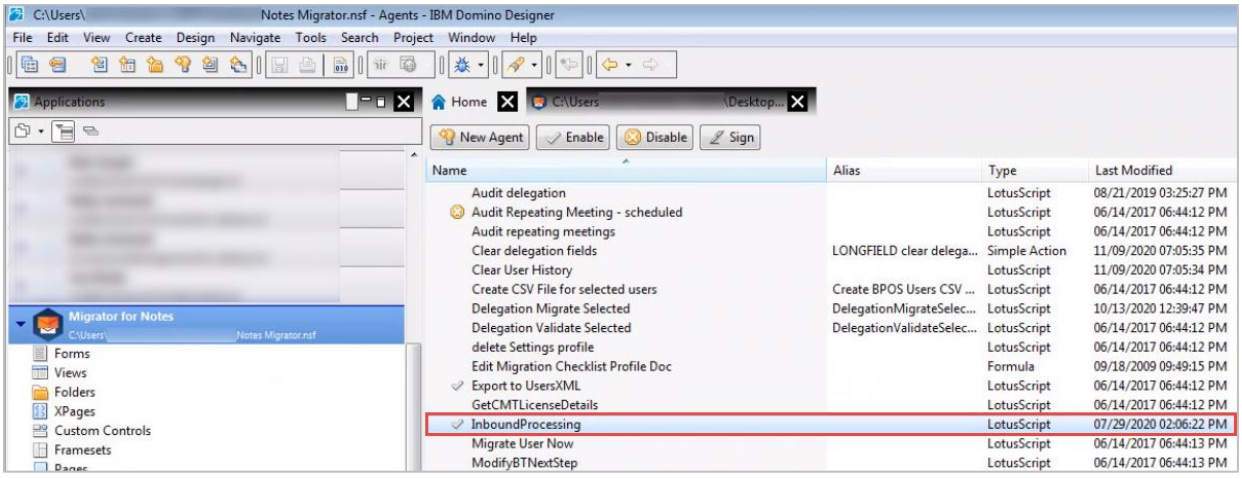
If you do not have the appropriate access rights to perform this action, see the onsite Domino System Administrator for help.

11. It is recommended that after copying the database to the server, you delete the database from the local client folder. To remove it, right-click on Migrator for Notes on Local. Select Database, and then Delete. The Lotus Notes client prompts that the database and related documents will be permanently deleted. Click Yes to delete the local database.

Modifying the Inbound Processing Agent

Once you have mail-enabled the database, you need to modify the Inbound Processing agent to view the updates. Perform the following steps to run the agent.

1. Install Domino Designer on the workstation where Migrator for Notes Domino database is located
2. Launch Migrator for Notes Domino database in Domino Designer
3. Expand **Shared Code** and select **Agents**
4. Select the **InboundProcessing** agent as shown below:



5. Double-click **InboundProcessing** to open the **InboundProcessing Agent Properties**
6. Click the **Security** tab
7. The **Administrator** should be listed in the **Run on behalf of** section
8. In the **Set Runtime security level:** field, select **Allow Restricted Operations with full administration rights**
9. Once you've edited the agent, close the **Properties** box
10. Close the **Inbound Processing – Agent** tab
11. Save the changes
12. Click **Sign**

NOTE ! This agent runs before new mail arrives and the Domino router must be set to allow these types of agents to run. To enable this option, go to Router/SMTP -> Restrictions and Controls -> Delivery Controls tab and set the Pre-delivery agents option to Enabled.

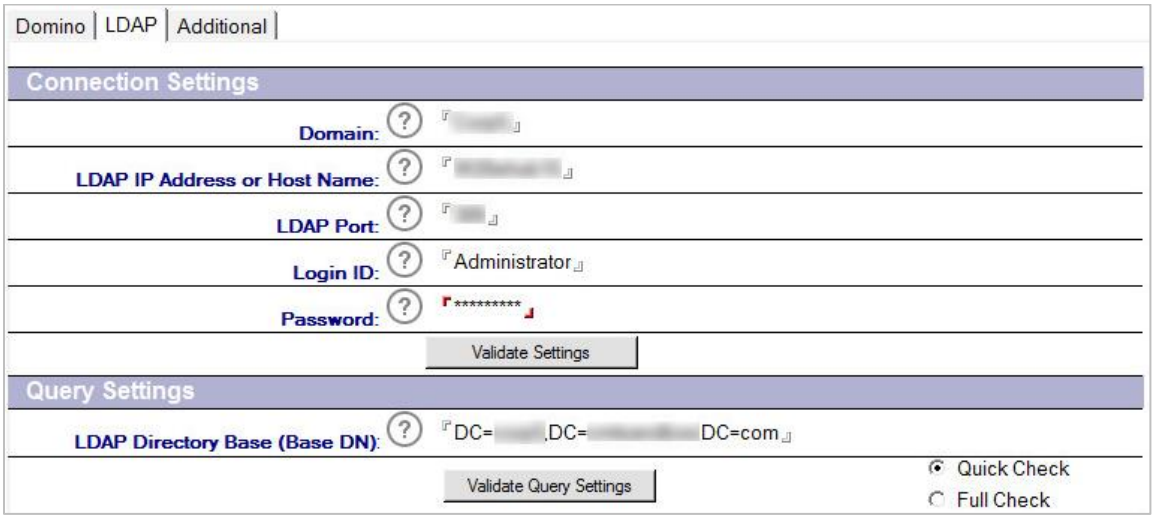
NOTE ! The Notes ID that signs this agent does require security rights on the Domino server to run agents.

LDAP Settings

1. Click **LDAP** under the **Required Settings** tab:

   In this tab, specify the Active Directory information to resolve users by matching them between source and destination platforms via Lightweight Directory Access Protocol (LDAP). To use this option, specify the required details.

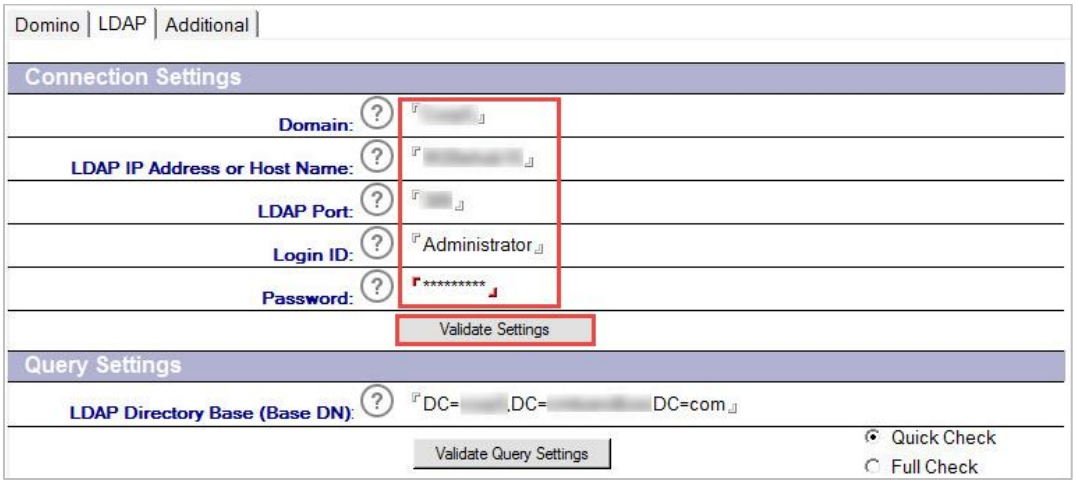
NOTE ! LDAP configuration is not specifically required for Office 365 only migrations.



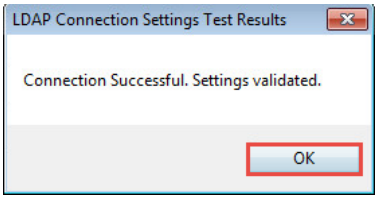
Use the following table to enter the correct values for each field:

Settings	Description
Domain	The common name of the Active Directory domain. For example, binarytree rather than binarytree.com.
LDAP IP Address or Host Name	The fully qualified LDAP server name, IP Address, or resolvable DNS name of the Active Directory server. (e.g. PC-XP-01. binarytree.com or 192.163.15.12).
LDAP Port	Specify the LDAP port. The default port for LDAP is 389. The default port for SSL LDAP is 636.
Login ID	The AD domain account that has read rights to the target AD domain. For example: administrator and not <domain>\administrator
Password	The password associated with the ID specified in Login ID.
Validate Settings	Click to validate the specified values to ensure that you are able to connect to the domain in Exchange where the end users will be eventually migrated.
LDAP Directory Base (Base DN)	If LDAP settings result in a successful connection, then this field is automatically updated. Specify the directory base for all LDAP queries. The query settings will enable the search in AD to ensure that users are getting resolved against the right container 'directory' within AD. Example: DC=btexchange2k7,DC=com
Quick Check Full Check	If you want to search only the first ten users, select Quick Check; and if you want to search all the users, select Full Check.
Validate Query Settings	Click to validate the values specified in LDAP Directory Base to ensure that query string is resolving users and returning the number of resolved users.

2. Specify the connection settings and then validate them by clicking the **Validate Settings** button:

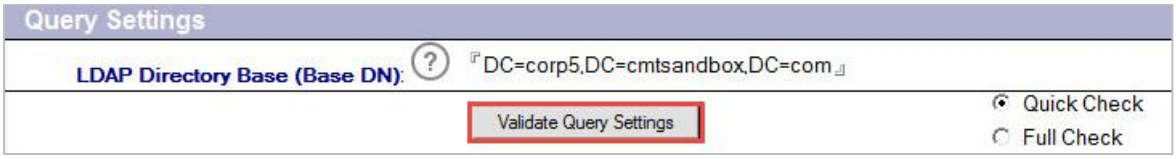


3. The **LDAP Connection Settings Test Results** message box displays indicating that the settings were validated and the connection was successful; click **OK**:

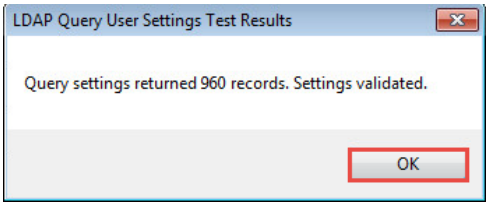


4. Notice that the **LDAP Directory Base (Base DN)** field is automatically populated

   To ensure that the specified directory base, where all LDAP searches will be conducted, is correct; you should validate this setting as well; click the **Validate Query Settings** button:



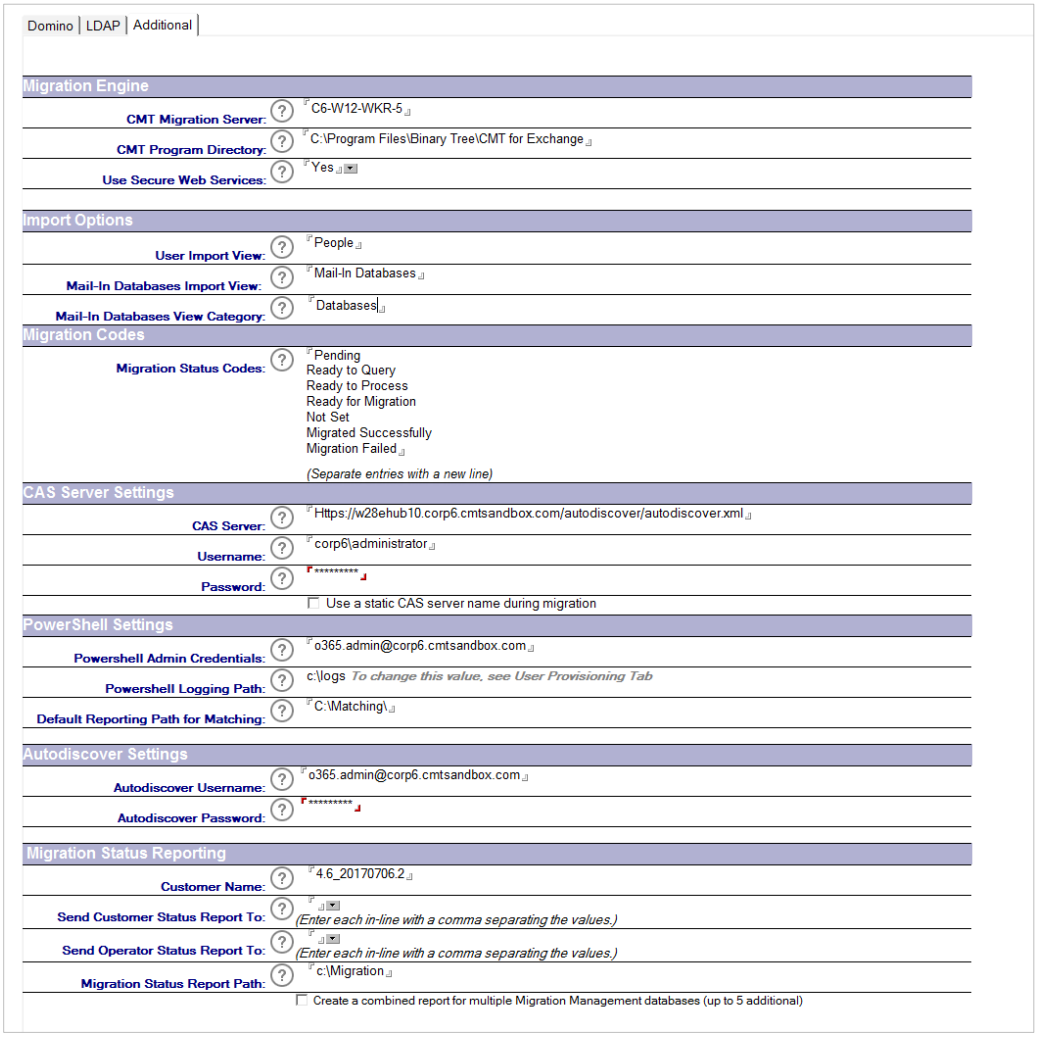
5. The **LDAP Query User Settings Test Results** message box displays; the query setting is validated and some records are returned; in a production environment, ten records should be returned always; click **OK**:



Additional Settings

1. Click the **Additional** tab under **Required Settings**

2. Configure these settings with the names of the views to locate and import User and Mail-in Databases information. Also, specify the Migration Status Codes that can be assigned to users' mail and databases control documents. You can assign a code to a user to update its status and view users based on their status codes. This helps in providing a better picture of the migration progress.



The following table describes the values for each setting:

Settings	Description
CMT Migration Server	Specify the network hostname or IP address of the machine that is running the migration server.
CMT Program Directory	Specify the complete program directory path to Migrator for Notes installation. This location will be used to launch the migration engine when the migration is triggered off. Note: During the installation of Migrator for Notes, if you had specified a destination folder path other than the default (C:\Program Files\Binary Tree\CMT Exchange), then you must replace the default path specified in the CMT Program Directory field with the modified path. In failing to do so, the migration engine will not launch when the migrations are set to go off.

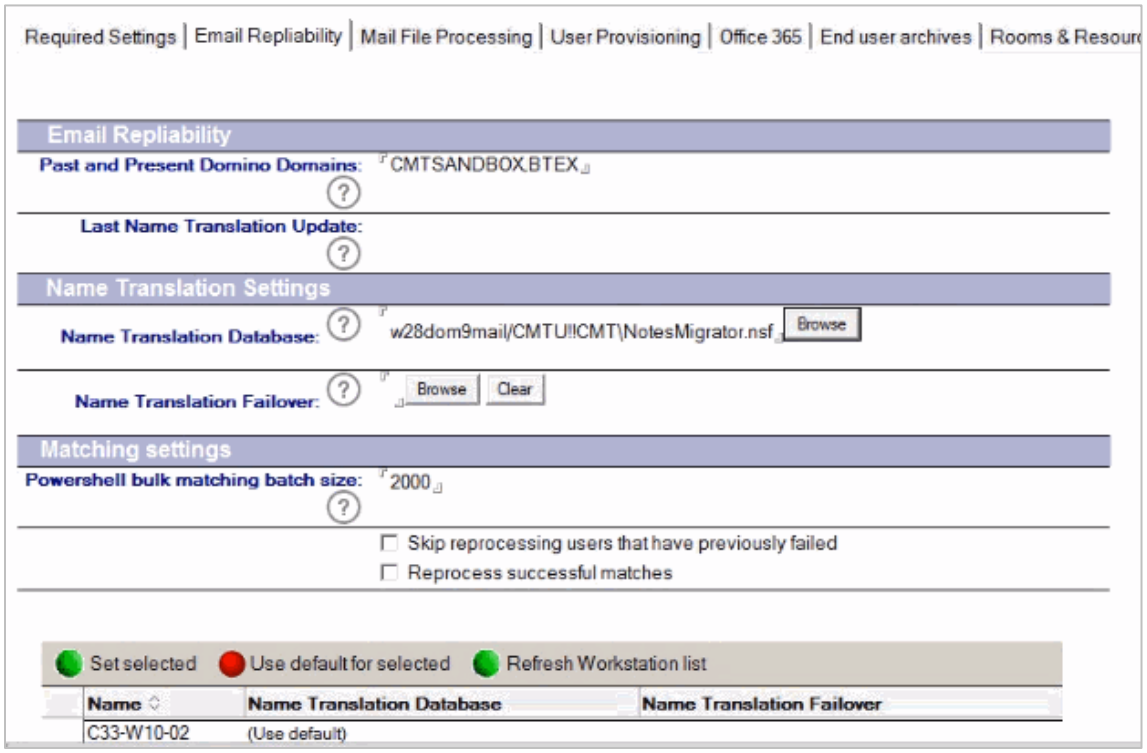
Settings	Description
Use Secure Web Services	Specify whether the web service calls are made to an XML server configured for secure access. Note that additional steps are required to secure the web services. The default selection is “Yes” which uses the CMT eService COM object to access the XML server. Refer to Appendix D: Securing Migrator for Notes Web Services with Windows Authentication for additional steps if you select Yes.
I have multiple control Centers	This option appears if the multiple Migration Control Center advanced feature is enabled on the Other Setting tab. Check this option to define the IP addresses of the Control Centers. When enabled, the Set Migration Status options include Set Migration MCC and Clear Migration MCC options.
Migration Server Control Center IPs	Appears if “I have multiple control Centers” is checked. This field is used by the Set Migration Status agent. Values must be entered as follows: Workstation#=IP address of Migrator for Notes Control Center For example: 1=192.168.1.0 2=192.168.1.1 3=192.168.1.2
User Import View	Specify the view in the Domino directory that Migrator for Notes database will use for importing users. Use the People view unless there is a custom view that you have created.
Mail-In Databases Import View	Specify the view in the Domino directory that Migrator for Notes database will use for importing mail-in databases and resources. Use the Mail-In Databases view unless there is a custom view that you have created.
Mail-In Databases View Category	This is the NAB Mail-In database view category used for importing Mail-in Databases and Resources. Use the “Databases” default unless Domino is using a language other than English. Change this value to what is displayed in the NAB Mail-in Databases view.
Migration Status Codes	Specify a personalized list of status codes that will be used during the migration project. These codes can be assigned to users’ mail and databases control documents. If these status codes are assigned during the different phases of the migration process, timely status reports can be produced. These status reports will help provide a better picture of the migration progress. With this type of information, you have more control over the migration project and can react quickly to any identified issue. Adjustments can be made to help fine tune the migration schedule by adding more or different resources. Status codes must be separated by a new line. A list of status codes has been specified for you. You can either retain or change these status codes depending on your need.
CAS Server	Specify the Exchange Client Access Server (CAS) name. If a name is specified, then the matching process will use the following URL to resolve users. https://[servername]/autodiscover/autodiscover.xml

Settings	Description
	However, if you have specified the full URL to the Autodiscover service, then the URL will be used to resolve users. This field is required for delegation migrations.
Username	If only the CAS Server name or IP address is specified in the CAS Server field, then you must specify a valid username for the authentication process that takes place on the CAS server. Note that the username should be in the following format for on-premises Exchange: <domain>\<username>. For Office 365 the format should be username@domain.com. If you have specified a full URL (with https://) in the CAS Server field, then you can leave this field blank for on-premise migrations.
Password	Specify the password associated with the username provided in the previous field. If you specified a full URL (with https://), then you can leave this field blank for on-premise migrations.
Powershell Admin Credentials	For on-premise Exchange servers, the credentials are of the form [Domain]\[Username]. For Office 365, the credentials are the SMTP address used to pass credentials to Office365 for remote access, for example o365Admin@tenant.onmicrosoft.com
Powershell Admin Password	Appears if Office 365 is in use Use the Set PowerShell Password button to update this field. This will request the password and record it using the AsSecure PowerShell method. This is not required for clicking the Migrator for Notes PowerShell buttons, if this is not entered the buttons (such as Set Full Acccess) will ask for the password when processed.
PowerShell Logging Path	The MS PowerShell used when generating, executing, and logging PS1 script. This path can be edited on User Provisioning tab.
Default Reporting Path for Matching	Specify the reporting path used by the matching process. The default path is C:\Matching\.
Enable PowerShell Modern Auth	Appears if Office 365 is in use Set to Yes to enable the use of the Microsoft Graph and Exchange Online modules for PowerShell processing. This will use Modern Auth connectivity to Microsoft Online services, removing the Basic Auth connection processing. Review Appendix E Microsoft Graph Application ID for additional configuration that is required to use Modern Authentication with an Azure AD Application ID.
Enable Modern Auth for Migration	Appears if Office 365 is in use Set to Yes to enable the use of Modern Authentication for Migrations. The Office 365 tenant must be configured to use Modern Authentication. Note: PowerShell matching using Modern Auth must be enabled for Modern Auth migrations to online mailboxes or archives.

Settings	Description
Autodiscover Username	Autodiscover credentials to be used during creation of the profile used by the migration engine. For on-premise Exchange servers, the credentials entered should be the UPN (User Principal Name), for example: *UserName@Example.Microsoft.com* For Office 365, the credentials are the SMTP address of an account in the Office 365 domain, for example: *o365Admin@tenant.onmicrosoft.com.* Note: This is used if a migration worker does not have an account specified and is a fall back option. This is not required if a migration farm is being built using AWD.
Autodiscover Password	Enter the password associated with the Autodiscover account entered above.
Customer Name	Specify the Customer name that you would like in the status report.
Send Customer Status Report To	Specify the Group Name or SMTP addresses of the persons that should receive the status report.
Send Operator Status Report To	Specify the Group Name or SMTP addresses of the persons that should receive the full status report.
Migration Status Report Path	Specify the working path for migration status reports.
Create a combined report for multiple Migration Management databases (up to 5 additional)	Check this option to specify up to five additional migration management databases to include in a combined report.

4.2. Configuring Email Repliability

Click the **Email Repliability** tab to specify the appropriate values for the Domino environment:



Refer to the table given below for a brief description of all the settings in the **Email Repliability** tab.

Settings	Description
Past and Present Domino Domains	The Domino domain names that are stripped from the email addresses and result in a valid and reply-able address regardless of domain name changes over the years. Enter a comma-separated list of all domain names in Domino, including the Notes Integration domain – no @ character is necessary. Note: These are Domino domains, not SMTP or Internet domains, so it would more likely be ACME or ACME-NOTES, rather than acme.com.
Last Name Translation Update	This field is automatically populated during the Name Translation Update Process. This value will indicate the last time the Domino Directory was searched for updates.
Name Translation Database	The Name Translation Database field allows you to browse for the primary database to use for Name Translation lookups. This would typically be the current Notes Migrator.nsf. A warning will appear if you attempt to save the configuration without defining the Name Translation Database.

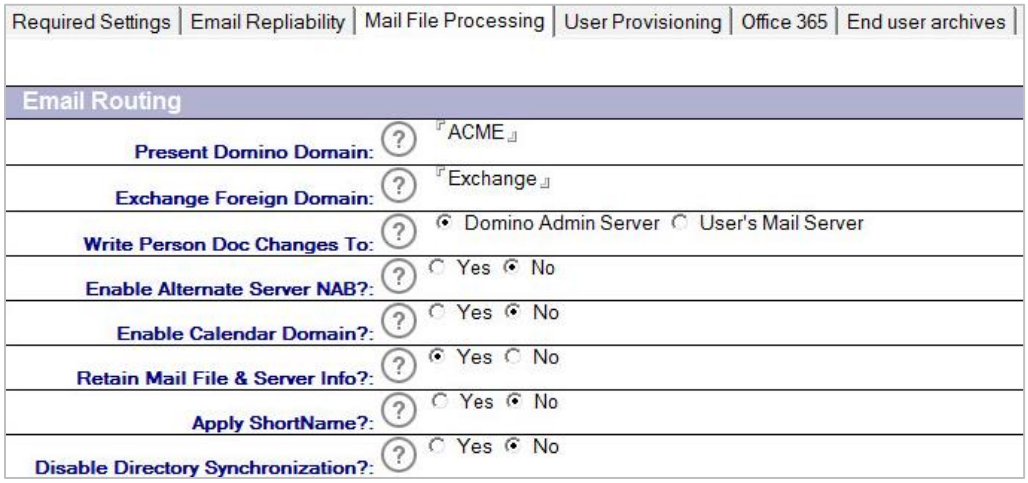
Name Translation Failover	The Name Translation Failover field allows you to optionally set the path to the primary failover database used for Name Translation lookups. The failover database is used if the primary database is inaccessible. This database should reside on the Domino server. If a local (workspace) path is used, the EMM database must be replicated to the same relative path on all workstations.
Powershell bulk matching batch size	When using the two-step bulk PowerShell matching process for address translation entries, this is the number of records that will be presented in each matching .csv file. The default value is “2000”. Note: this option is only available to Exchange on-premise migrations.
Skip reprocessing users that have previously failed, Reprocess successful matches	These options can be enabled to skip reprocessing previously failed users and/or reprocess successful matches. These options are disabled by default.
Table	The Name Translation Database table allows you to set the Name Translation Databases and Name Translation Failover Databases on multiple workstations. Click **Set selected** to define a Name Translation Database and Name Translation Failover for the selected workstation to use instead of the primary (default) databases defined above.

4.3. Configuring Mail File Processing

Click the **Mail File Processing** tab to specify the appropriate values for the Domino environment.

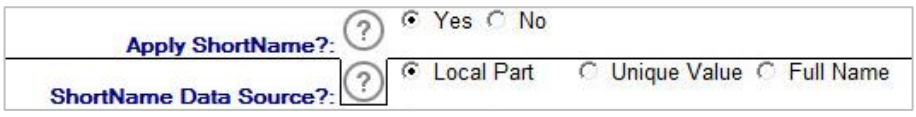
Mail File Processing works with the assumption that Integration for Notes is configured between Domino and Exchange. The Email Forwarding Only option can be used if Integration for Notes is not deployed. This allows for standard Domino email forwarding functions.

You must configure this section prior to using the Maintain Transitional Calendar Workflow (MTCW) agent. This agent gathers recurrence pattern information for meetings and copies that information into the BTCache.nsf, which allows calendar workflow to behave as expected regardless of migration status of the chairperson or attendees.



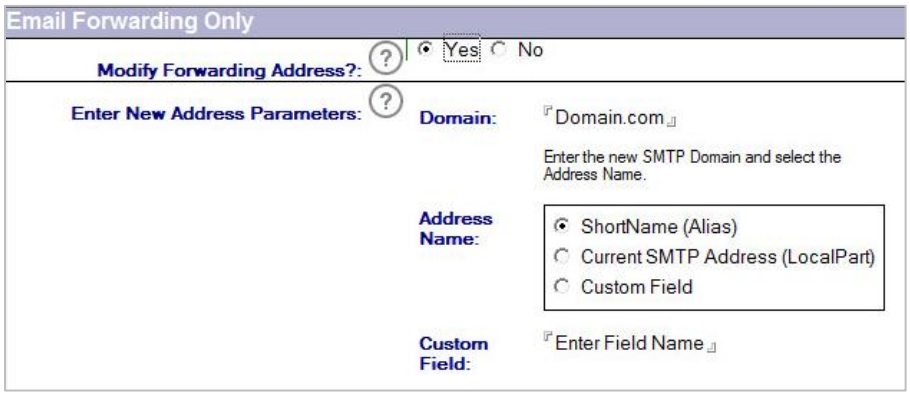
Refer to the table given below for a brief description of all the settings in the **Mail File Processing** tab:

Email Routing

Settings	Description
Present Domino Domain	Specify the existing Domino domain.
Exchange Foreign Domain	Appears if Notes Integration is in use This is the name of the Lotus Notes foreign domain that was configured to route mail from the Domino infrastructure to Exchange.
Write Person Doc Changes to	Select which server you want to use when writing changes after a user is created in Exchange. Whether you choose the Domino Admin Server or the Home Mail Server depends on the existing infrastructure and replication frequency.
Enable alternate server NAB	If the filename of the Name and Address Book (NAB) listed on the **Required Settings** tab is different, enter the alternate filename in this field. If enabled, this value will be used for all mail routing change operations. This is common when an organization is using a global directory from multiple domains and address books. In these cases, the global directory's filename may not be names.nsf.
Enabled Calendar Domain?	Appears if Notes Integration is in use Select Yes to update the CalendarDomain field in the selected Person document. A selection of No will result in no change occurring to that field.
Retain Mail File & Server Info?	Appears if Notes Integration is in use When running Routing Update functions, the Mail File Name and Mail Server information is removed from the Person Documents for the selected users. If you wish to retain this information, select Yes. If you select No, if Mail Routing is reverted back to Notes then the data will be restored from the values recorded in the Migrator for Notes Person document. Otherwise, the Mail File and Mail Server will not be updated assuming the values already exist in the NAB Person document.
Apply ShortName?	Default is 'No.' When running Routing Update functions, the ShortName maybe used for mail forwarding in Coexistence. The Person, Mail-In and Resource Documents can be checked for this field and updated if this is not set. If you wish to have the ShortName check please select Yes. If you select No this will be checked assuming the values already exist in the NAB documents or are not used for Coexistence. Not: this will not alter the ShortName in any cases if the field is present and has an existing value.
ShortName Data Source?	When 'Apply ShortName?' is set to 'Yes,' this field will appear. When checking the ShortName and applying a value, if that is not set on the Domino Directory Documents, choose the method to create a ShortName. This can be automatically generated as a unique value using (@Unique), taken from the Internet Address Local Part (left of the @ sign) or set to the Full Name.
	
Disable Directory Synchronization?	When running Routing Update functions, the Directory Synchronization is disabled. If you wish this to remain enabled, select No. By selecting

Settings	Description
	Yes, the person document will be disabled from directory synchronization operations.

Email Forwarding Only



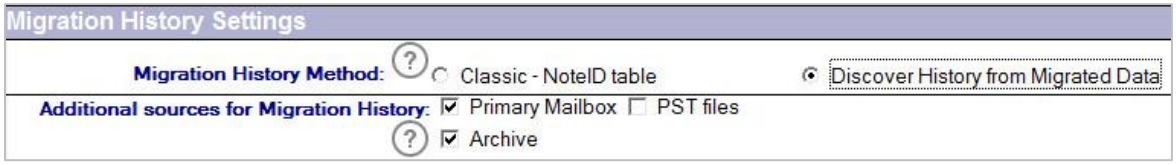
Settings	Description
Modify Forwarding Address?	If using mail forwarding for mail routing to Office 365 or Exchange during the coexistence period without Integration, then select this option. This option will only update the Mail Forwarding Address in the selected Person document(s) rather than the Domain and Mail Type as the above operation performs. If No is selected then no changes will occur and the normal operations will be executed.
Enter New Address Parameters	Appears if Modify Forwarding Address is set to Yes If using mail forwarding for mail routing to Office 365 or Exchange during the coexistence period the address will need to be built correctly. Enter the new domain and select the correct address name part. If selecting custom field then the forwarding address will be built based on the value of this custom field in the Domino Directory. If the field value contains a valid RFC 821 Internet address then that address will be used otherwise it will use whatever value plus the configured domain.

Domino Directory Replication Options

Settings	Description
Enable Replication	Appears if Office 365 migration is enabled If you wish replication to be executed after the changes are made to the Domino Directory select Yes. By selecting No, updates will occur on the selected Domino Directory but replication of these changes will happen during normal scheduled replication between servers.
Replication Type	Appears if Office 365 migration is enabled If you select to enable replication, select One Way Sync or Two Way Sync.

Enable Replication default is 'No.' When set to 'Yes,' options will expand:

Migration History Settings



Settings	Description
Migration History Method	Select the method for determining migration history. The Classic – NoteID option uses Migrator for Notes migration history table, stored on the XML server. The Discover History from Migrated Data option scans the migrated data (mailbox, archives, etc.) to find messages previously migrated from Notes. The default selection is 'Discover History from Migrated Data'.
Additional sources for Migration History	Appears if **Discover History from Migrated Data** is clicked; choose the checkboxes of the data courses to be scanned when the migration history is discovered from previously migrated data: Mailbox – user's main mailbox Archive – archive message store PSTs – filenames or path to PST files The target will always be searched for migration history. Note: When migrating archives ensure that the Archive option is enabled. Note: If Modern Authentication is enabled for the data migration then the discovered history will only use the target mailbox, archive or PST for migration history. This will not display the options for which mailbox should be scanned as it will only check the target that the data is being migrated into. For accounts that are re-migrated any previously migrated Notes items that were deleted in Outlook and removed from the Outlook Trash will be migrated again.

Notes Archive Database Processing

Settings	Description
Create Migration Docs in this Stage	Specify whether you want to create migration documents during the Audit, Match, Notify, or Migration stage.

Exchange Archive Migration

Settings	Description
Create Exchange Archive Documents	Select Yes to create Exchange Archive Migration documents during the matching phase if you will be migrating data to Exchange Archives. Exchange Archive Migration documents will only be created if the user has an archive in Exchange or Office 365.

Lotus Notes Migration ID

Settings	Description
Notes ID used to access mail files	Specify the Notes ID file to use during the migration process. This is the ID configured for all migration workstations.

4.4. Configuring User Provisioning

Click the User Provisioning tab to define how Exchange accounts are created and matched to the original Domino accounts.

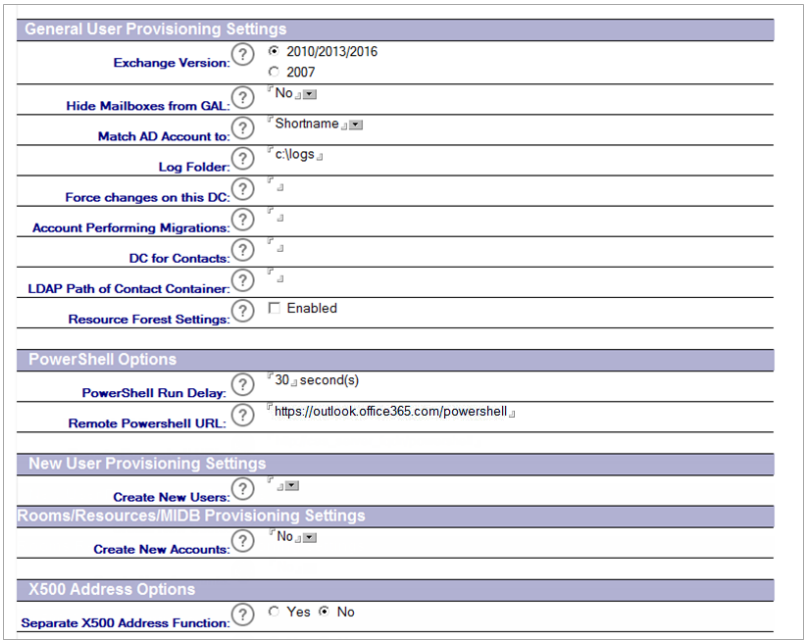


Figure A: User Provisioning Settings with Office 365 migration disabled.

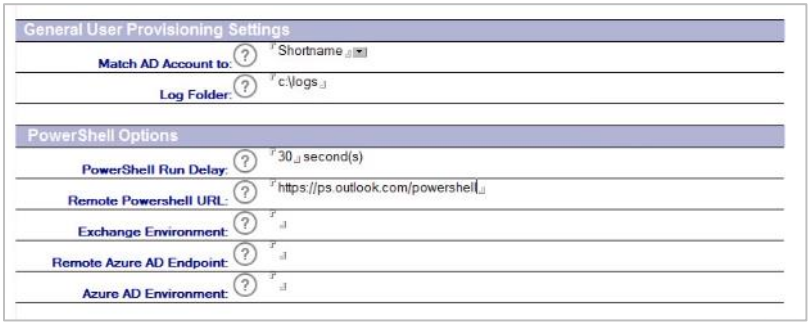


Figure B: User Provisioning Settings with Office 365 migration enabled.

Refer to the table below for a brief description of all the settings in the **User Provisioning** tab.

Settings	Description
Exchange Version	Specify the version of Exchange to which you are migrating.
Hide Mailboxes from GAL	After a new Exchange user is created, you have the option to hide that account from displaying in the GAL. Select Yes if you want to hide the new mail users.

Settings	Description
Match AD Account to	This option allows you to select the field used to map with the AD user's sAMAccountName There are four options: • Shortname – This will match the Domino short name to the AD logon field. • Local Part of Internet address – This matches the first part of a user's Internet address between Domino in AD. • Other Domino field – This allows you to choose a specific Domino field from the Domino directory to match with the AD SAMAccount name entry. • Custom Match – This allows you to define the field in Notes and AD that you wish to use to complete the match. When using Other or Custom match, you will be asked for the field names you wish to use in this section of the configuration; for example, Notes InternetAddress to AD mail attribute.
Log Folder	Specify the path where the scripts and processes should create their log files.
Force Changes on this DC	This is the domain controller (DC) on which Migrator for Notes will write its changes.
Account Performing Migrations	Specify the Windows account name that will be logged in on the Migration farm.
DC For Contacts	Specify the name of the domain controller that hosts the Domino contacts.
LDAP Path of Contact Container	If Contact objects were created for Domino user, specify the LDAP path to the container housing those contacts.
Resource Forest Settings	On occasion, the Exchange environment will be hosted in a different forest than its users'. To accommodate for this type of configuration, you can enable the Resource Forest Settings feature. When enabled, you will need to specify the following information: • Linked Master DC – Specify the name of the domain controller that is the master DC for the user forests. • Linked Master Domain – Specify the linked master domain name in common format (for example, myLinkedDomain).
PowerShell Run Delay	The delay before executing PowerShell functions. This allows for LDAP operations to replicate in AD prior to cmd-lets running.
Remote PowerShell URL	Enter the URL of the remote PowerShell host (i.e. http://ExchangeHost/powershell). Set to "https://outlook.office365.com/powershell" to return the username@domain.onMicrosoft.com address when configuring to match against an Office 365 or hybrid domain. The matching agent will return username@mydomain.com in on-premise installations where the remote PowerShell URL is an on-premise server. Remote PowerShell access must be granted to the logged on user and Enable-PSRemoting must have been run on the remote host.
Exchange Environment	Specify the Exchange environment name. This is only required for Microsoft national and secure tenants (for example, O365GermantCLoud, O365USGovGCCHigh). This setting corresponds to

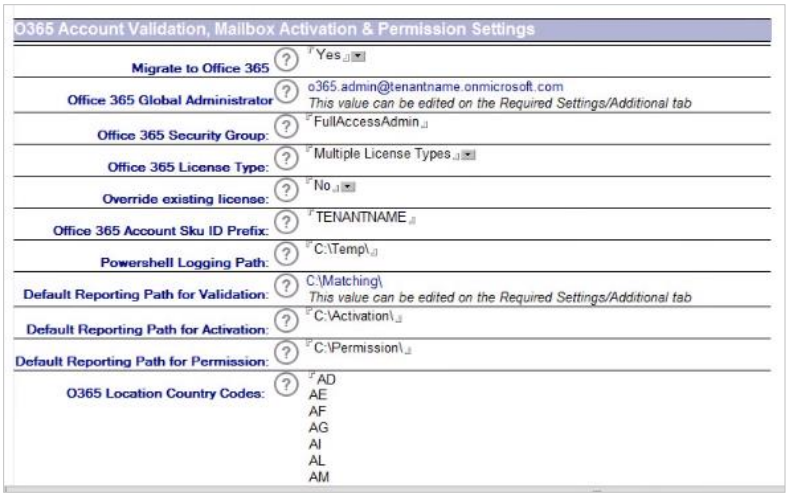
Settings	Description
	the Connect-ExchangeOnline -ExchangeEnvironmentName parameter. This setting can be left blank for standard tenants.
Remote Azure AD Endpoint	Enter the URL of the remote Azure AD authentication endpoint if required. This is only required for Microsoft national and secure tenants that would not use the default connection such as Germany or China (21Vianet) tenants (for example, https://login.chinacloudapi.cn or https://login.microsoftonline.us)
Azure AD Environment	Enter the tenant Azure AD environment name if required. This is only required for Microsoft national tenants that would not use the default Azure authentication environment such as Germany or China (21Vianet) tenants (for example, AzureGermanyCloud, USGovernment).
Create New Users	Select Yes to create users that do not already exist in Active Directory.
Active Directory Domain	Appears if Create New Users is set to Yes. Active Directory Domain name in domain.com format.
OU for new users	Appears if Create New Users is set to Yes. Organizational Unit to create new users in. Leave blank for the default OU.
Default Password	Appears if Create New Users is set to Yes. This will be the default password assigned to any newly created users.
Force Password Change	Appears if Create New Users is set to Yes. Force newly created users to change their password on first login.
Create New Accounts	Select Yes to create rooms/resource/MIDB accounts that do not already exist in Active Directory.
Active Directory Domain	Appears if Create New Accounts is set to Yes. Active Directory Domain name in domain.com format. Used to create the UPN.
OU for Rooms	Appears if Create New Accounts is set to Yes. Organizational Unit to create new Room objects. This must be DN format. Leave blank for the default user container defined in Exchange.
OU for Resources/Equipment	Appears if Create New Accounts is set to Yes. Organizational Unit to create new Equipment objects. This must be DN format. Leave blank for the default user container defined in Exchange.
OU for MIDB/Shared Mailbox	Appears if Create New Accounts is set to Yes. Organizational Unit to create new Shared Mailbox objects. This must be DN format. Leave blank for the default user container defined in Exchange.
Separate X500 Address Function	In very large or highly latent Active Directories, the time between creating an Exchange mailbox and setting the X500 address within the (EnableMailbox) agent can be too short. This results in the code trying to set the X500 address on a mailbox that has not been fully initialized within the environment, and subsequently a failure to set the X500 address. Selecting Yes splits the X500 address into a separate button.

4.5. Configuring Office 365 Settings

NOTE ! If you are planning to migrate to Office 365, you should first enable Office 365 migrations on the Office 365 tab. Doing this will display additional settings for Office 365 migrations in various tabs. Refer to the Migrator for Notes User Guide for Office 365 Migrations for additional information.

Office 365 migrations will require a Modern Authentication configuration and an Azure Application ID for Microsoft Graph. Refer to Appendix E: Microsoft Graph Application ID for this additional set up.

1. Click the **Office 365** tab; configure these settings when migrating to Office 365:



2. Configure these settings if you want to migrate to Office 365

Use the following table to help enter the correct values for each setting:

Settings	Description
Migrate to Office 365	Select Yes to enable migration to Office 365 and display the Office 365 settings below.
Office 365 Global Administrator	Appears if Office 365 migration is enabled Specify the Office 365 Admin SMTP address used to pass credentials to Office 365 for remote access.
Office 365 Security Group	Appears if Office 365 migration is enabled Specify the Office 365 Security Group Name used to set mailbox permission for migration purposes.
Office 365 License Type	Appears if Office 365 migration is enabled Select the license type. All accounts will be activated under the selected license. Select “Multiple License Types” if you have multiple types to choose from.
Override existing license	Appears if Office 365 migration is enabled If the user already has an applied license, the provisioning process can override it with the specified type. Yes – change the existing license to the selected type No – leave license type unchanged.

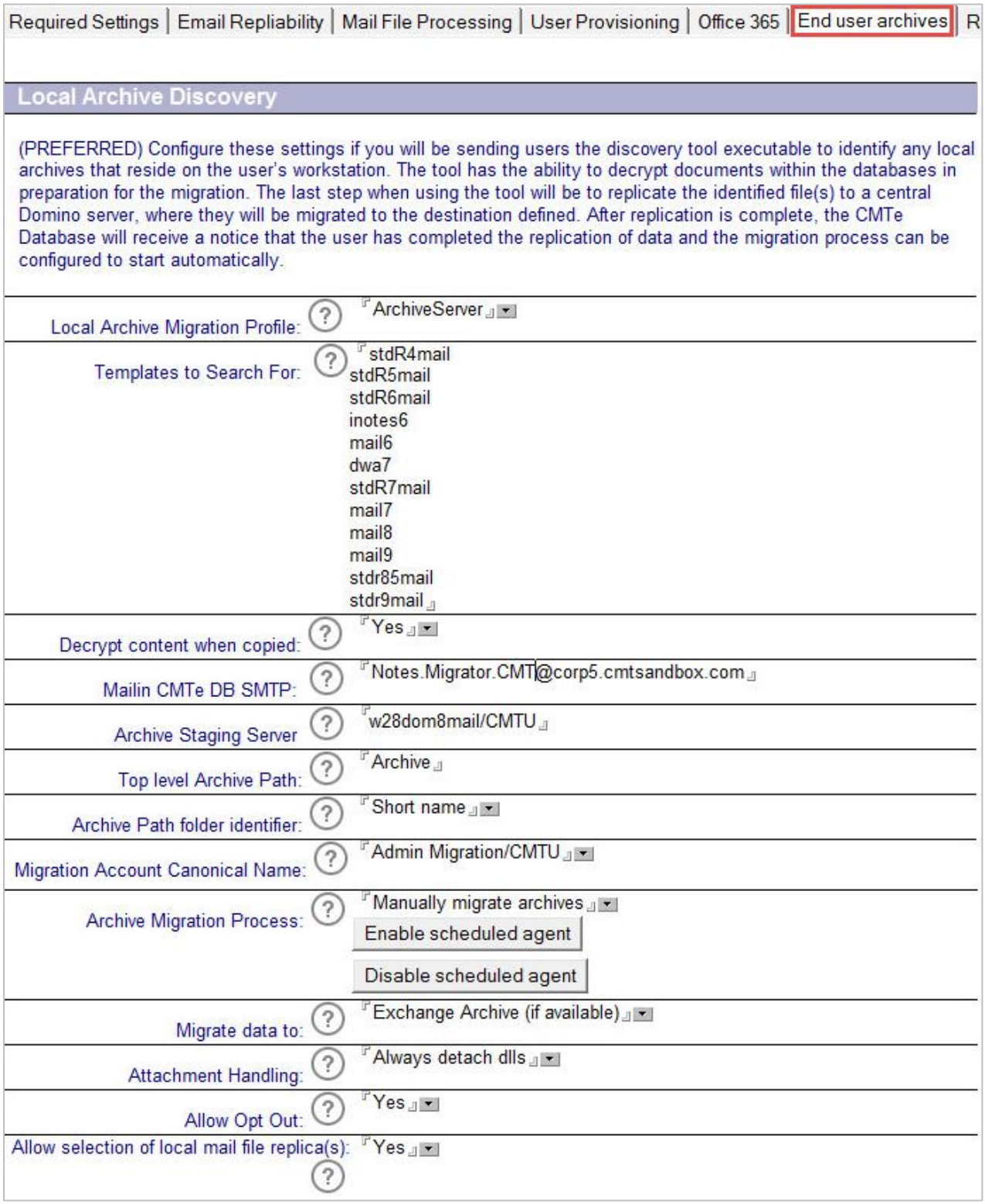
Settings	Description
Office 365 Account Sku ID Prefix	Appears if Office 365 migration is enabled Specify the tenant name of the client which is used to build the folder structure for reporting and activation. The required naming convention is to duplicate the given tenant name. For example, @contoso.onmicrosoft.com would have an Account Sku ID of “contoso”.
PowerShell Logging Path	Appears if Office 365 migration is enabled Specify the PowerShell logging path used when generating, executing, and logging PowerShell scripts.
Default Reporting Path for Validation	Appears if Office 365 migration is enabled Specify the reporting path used by the validation process.
Default Reporting Path for Activation	Appears if Office 365 migration is enabled Specify the reporting path used by the activation process.
Default Reporting Path for Permission	Appears if Office 365 migration is enabled Specify the reporting path used by the permission process.
O365 Location Country Codes	Appears if Office 365 migration is enabled Specify the ISO Country Codes that will be assigned to the account in Office 365. These values will be used during the activation process.

4.6. Configuring Archive Settings

Local Archive Discovery

The preferred method of migrating end user archives is to configure the Local Archive Discovery settings and sending the Local Archive Discovery application to users to identify the local archives on the user's workstation. Detailed information for configuring and using the Local Archive Discovery application is available in the Archive Migrator for Notes User Guide.

The method using Archive Migrator for Notes requires PowerShell matching. For migrating to Office 365 online archives with Modern Authentication enabled, the PowerShell processing should also use the Modern Auth configuration.

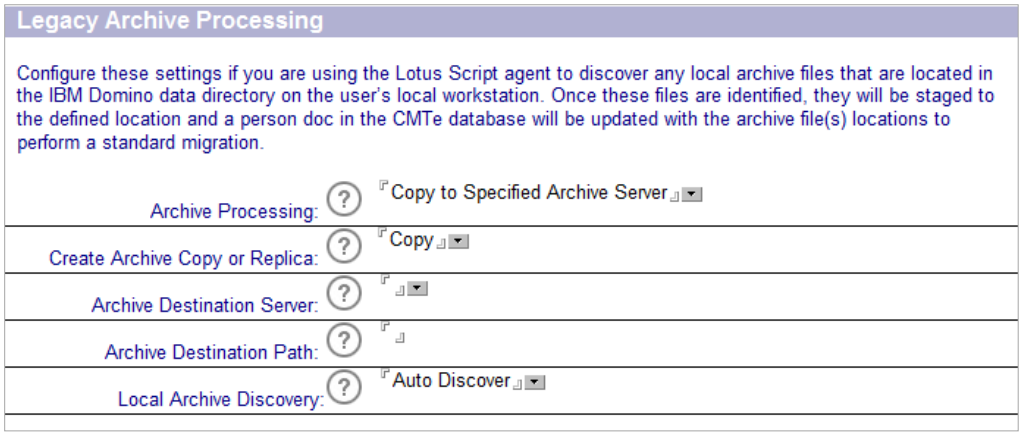


Legacy Archive Processing

If you are using the Lotus Script agent instead of the Local Archive Discovery application (Archive Migrator for Notes), configure the settings in the Legacy Archive Processing section.

1. On the **End user archives** tab, configure the following settings to copy local Notes archives to a

server for centralized migration:

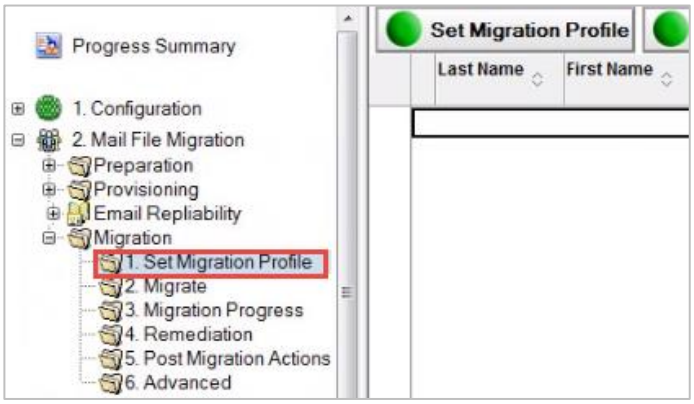


Use the following table to help enter the correct values for each setting:

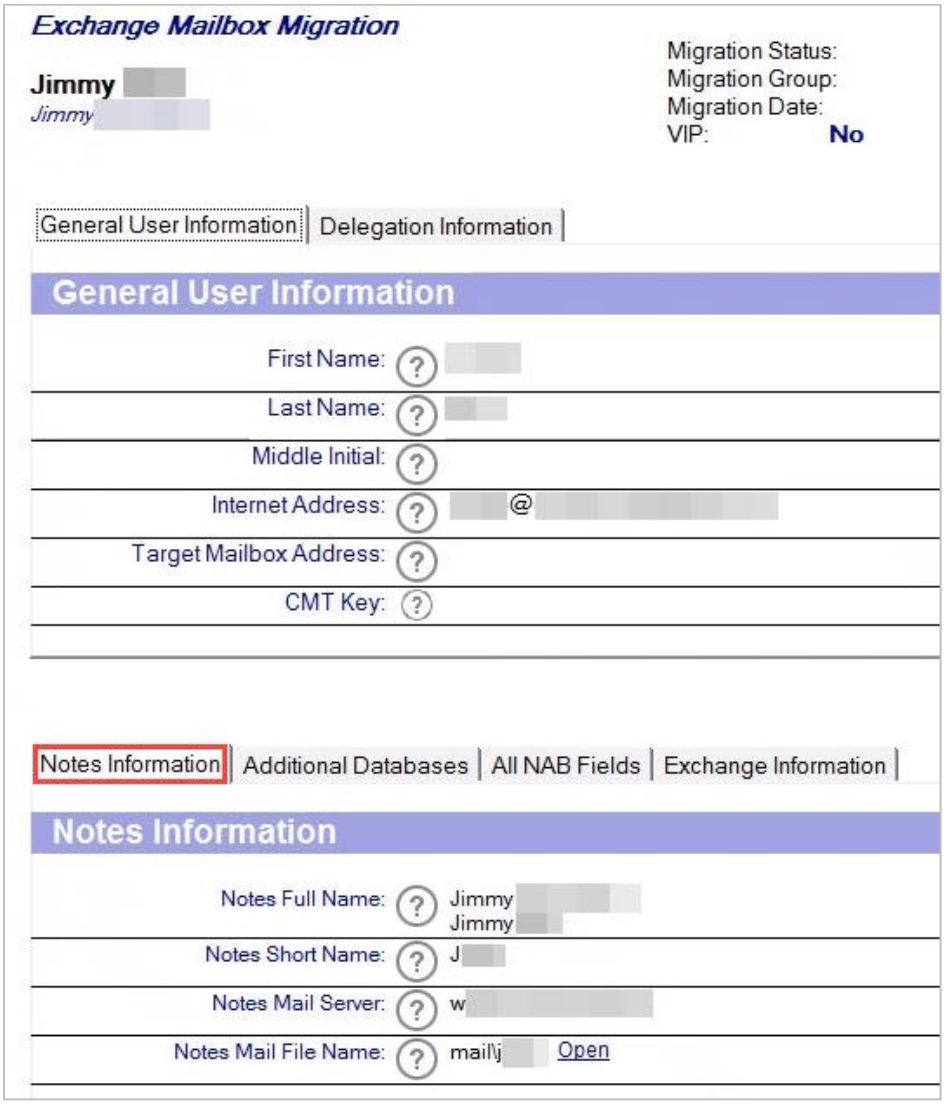
Settings	Description
Archive Processing	Specify where Archive data will be copied; to a specified Archive server OR into user's existing Domino mail file.
Create Archive Copy or Replica	Specify whether you want to create a copy or replica of the Archive database. It is recommended that you create a replica. This will ensure that your archives will remain updated even if there is a time lapse between the preprocessing phase and actual migration.
Archive Destination Server	Specify the destination Domino server where the copy/replica of the Archive Database will be stored. Leave it blank if you are copying them to a file server or a local workstation.
Archive Destination Path	Specify the destination path where the copy/replica of the Archive database will be stored. Ensure that the path is relative if destination is a Domino server. However, if destination is a file server, full path must be specified
Local Archive Discovery	Specify how Migrator for Notes will look for Archive databases on the end user machine. You can either select Auto Discover or Prompt User.

Configure these settings if you want to send an email to end users that will contain instructions and a button, which when clicked will copy their Archive database to the Domino server. Once on the server, the Archive databases can be migrated either to .pst files or to Microsoft Exchange.

a. Once you click on the button to perform the copy/replicate your local archives to the Domino server, a new archive Person Document is created for each archive database copied to the server. The archive Person Documents are then listed in the **Set Migration Profile** view.

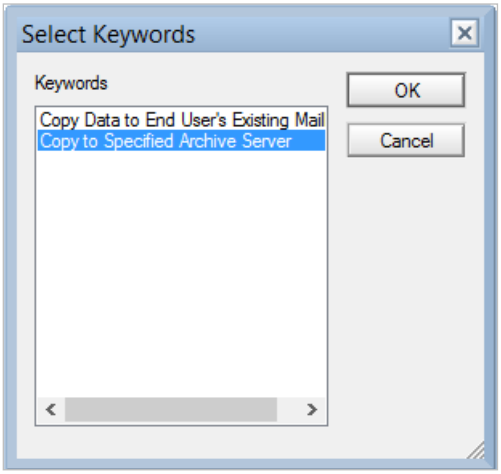


b. To view which archive database will be migrated, double-click and open the username archive Person document:

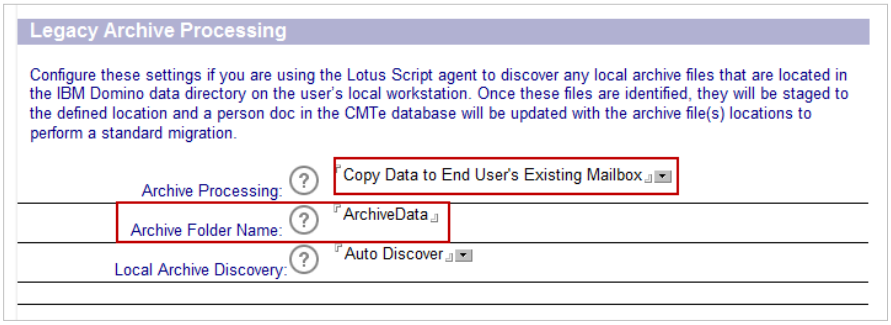


c. Assign a migration profile and the user will be promoted to the Migrate view to perform the migration.

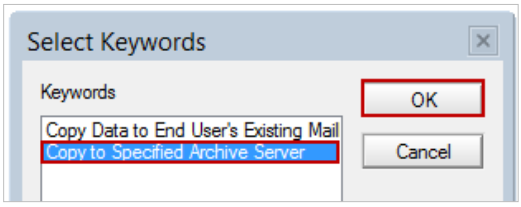
2. The **Archive Processing** field can copy the archive data to either the end user's existing mailbox or a specified archive server:



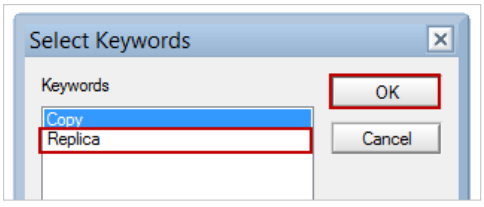
3. If you select **Copy Data to End User's Existing Mail**, the form changes to display the **Archive Folder Name** field and remove the following three fields (Create Archive Copy or Replica, Archive Destination Server and Archive Destination Path). The added field specifies the folder name where all the archived data will be copied in users' mailbox. You can specify any name in this field:



4. Retain the default selection of **Copy to Specified Archive Server** in the **Archive Processing** field and click OK:



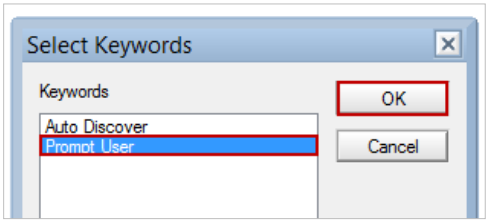
5. Click the down-arrow next to the **Create Archive Copy or Replica** field. Select **Replica** and click **OK**:



6. In the **Archive Destination Server** field, specify the IP address of the server where either copies or replicas of end users' Archive databases will be stored. Leave the field blank since you are copying archives to a local workstation.
7. Specify the destination path where end user .pst files will be stored in the **Archive Destination**

Path field. In the field, specify **Archives**.

8. Click the down-arrow next to the **Local Archive Discovery** field. You can either auto discover or prompt the user; click **OK**:

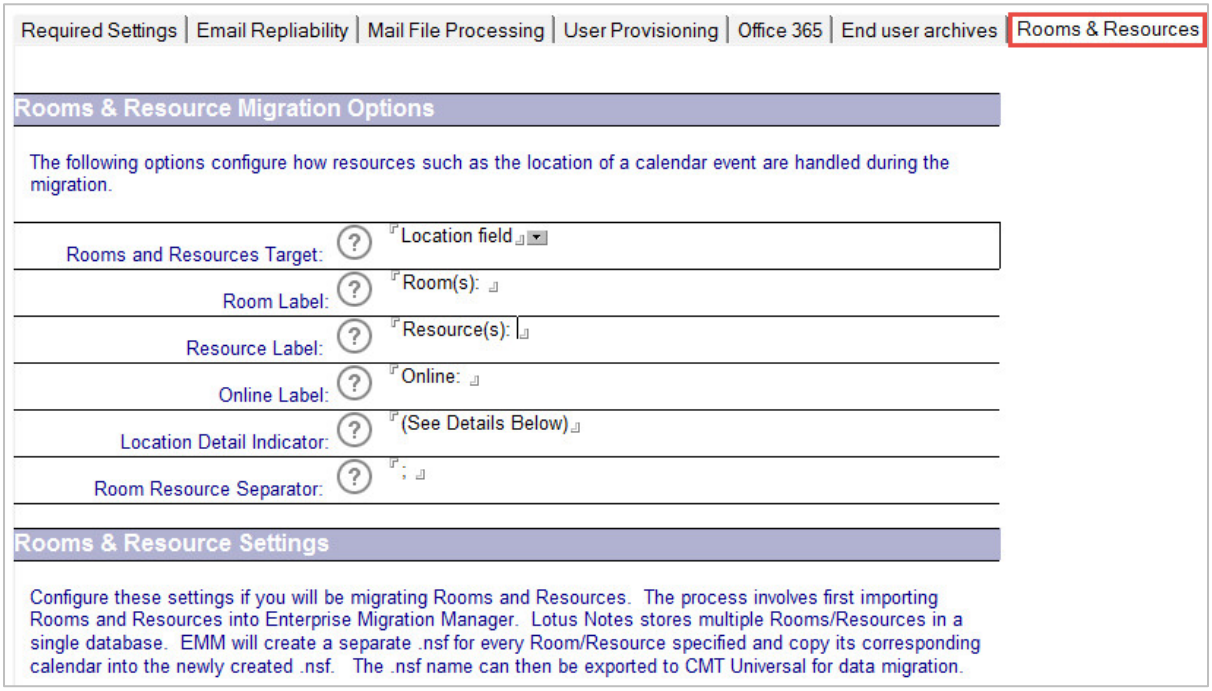


4.7. Configuring Rooms & Resources Settings

1. Click **Rooms & Resources**; this tab has two sections. Review the general description provided for both the sections.

Rooms & Resource Migration Options

The **Rooms & Resource Migration Options** section enables you to configure settings to determine how resources are handled during a migration:



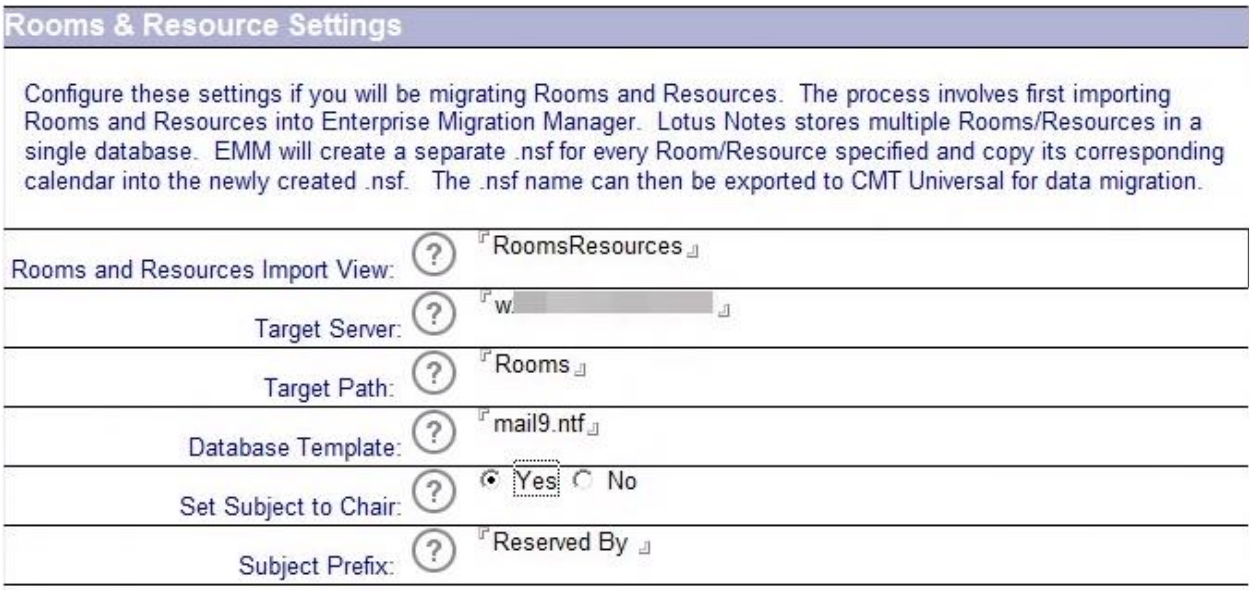
The following table describes the values for each setting:

Settings	Description
Rooms and Resources Target	Specify if you want the room or the resource to be migrated to a Location field, or be appended to the message body, both, or none.
Room Label	Specify the label you wish to be prefixed to the migrated room text.
Resource Label	Specify the label you wish to be prefixed to the migrated resource text.

Settings	Description
Online Label	Specify the label you wish to be prefixed to the migrated online text.
Location Detail Indicator	Specify the text you wish to appear when room or resource text is not included in the Location field.
Room Resource Separator	Specify a string that separates the location, room, resource, or online values that are included on the Location field.

Rooms & Resource Settings

Configure these settings if you want to migrate Rooms and Resources. The first step of the process involves importing Rooms and Resources into the Migrator for Notes database. Lotus Notes stores multiple Rooms/Resources in a single database. Migrator for Notes allows you to import and create a separate .nsf for selected Room/Resource and copy its corresponding calendar into the newly created .nsf. Once all the Rooms/Resources that you want to migrate have been separately imported, you can export them to Migrator for Notes migration engine and migrate them.



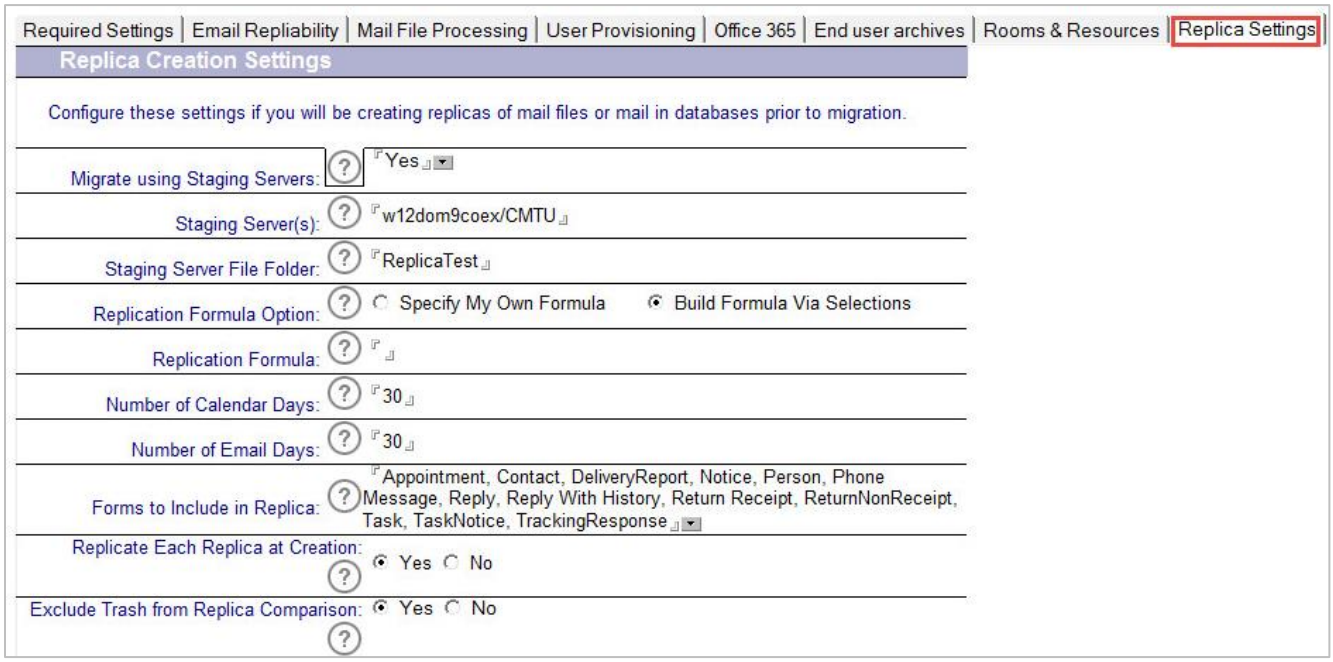
The following table describes the correct values for each setting.

Settings	Description
Rooms and Resources Import View	Specify the view in the Domino directory that Migrator for Notes will use for importing the different Rooms and Resources. Use the Rooms Resources view unless there is a custom view that you have created.
Target Server	Specify the Domino server that Migrator for Notes will use when creating separate .nsfs for each Room/Resource. This must not be blank.

Settings	Description
Target Path	Specify the destination path where separate .nsfs will be created for selected Rooms/Resources. The path is relative if the destination is a Domino server. If the destination is a file server, full path must be specified.
Database Template	Specify the template that will be used to create the new room or resource database to migrate. This should be a valid mail file template name for the Domino version in use and included in the supported template types.
Set Subject to Chair	Set this to 'Yes' to enable overwriting the booking subject when importing rooms and resources. This will set the subject to the booking Chair for migration to Outlook (removing the booking subject entirely). This does not impact the existing Notes room and resource bookings. Selecting 'No' will retain the original booking subject for migration.
Subject Prefix	This is used if the subject for imported booking will be overwritten with the booking Chair name. The text used will be prefixed in the imported booking subject.

4.8. Configuring Replica Settings

The Replica Settings are used when using a Domino staging server. A staging server is often used when the Domino mail servers are not on the same LAN as Exchange and/or the migration environment to mitigate migration throughput degradation due to the network. Staging servers are also used if you will be using replication formulas to filter the data intended for migration.



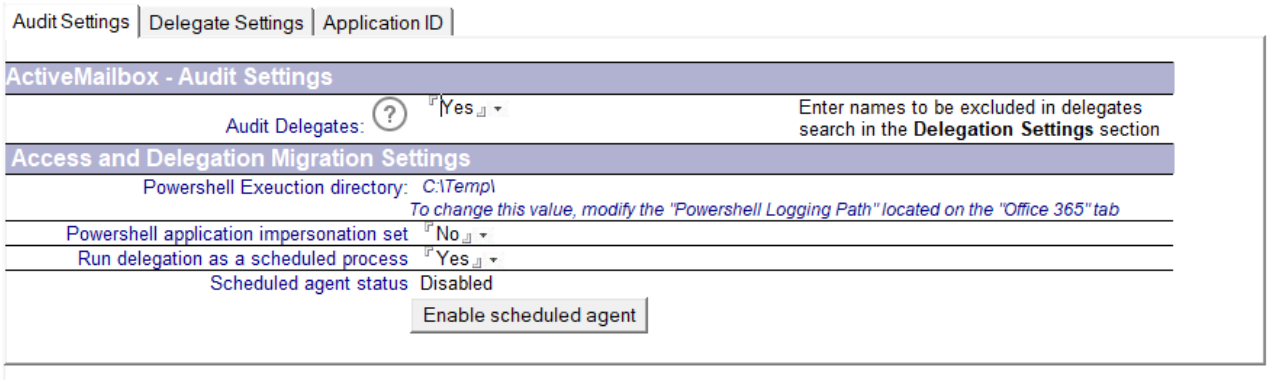
The following table describes the values for each setting:

Settings	Description
Staging Server(s)	The Name of each of the staging servers to be used for creating replicas separated by a new line or a comma. For Example: Stage01/Contoso
Staging Server File Folder	The folder name in which to place the newly created replicas.
Replication Formula Option	Specify My Own Formula: Use the field below to specify your own selection formula. Be sure to enter the ENTIRE formula, starting with SELECT (e.g. SELECT @All to replicate all Notes items). Build Formula Via Selections: The number of calendar and email days and select the forms to include in the replica and a replication formula will be built for you.
Replication Formula	If you are specifying your own replication formula, enter it here. *Note: You must be familiar with Notes formula language.
Number of Calendar Days	If you selected Build Formula Via Selections enter the number of calendar days to include in the replica. You will be prompted for a date upon replica creation and it will use this date and the number you specify to calculate the number of calendar days to include.

Settings	Description
Number of Email Days	If you selected Build Formula Via Selections enter the number of email days to include in the replica. You will be prompted for a date upon replica creation and it will use this date and the number you specify to calculate the number of email days to include.
Forms to include in Replica	Select or enter all of the different forms to be included in the replication formula. If the form name is not listed here, it will NOT be included in the replication formula and will not be in the replica.
Replicate Each Replica at Creation	Selecting “Yes” will replicate each newly created replica as it is created. It will also cause the agent to run very slowly depending on the replica settings. It is recommended to use this as a one-off replica creation rather than for the entire list of users/mail-in databases.
Exclude Trash from Replica Comparison	Set to Yes to exclude Trash (Soft Deletion) document counts from the replica comparison total document counts. Set to No for default processing to count all documents.

4.9. Configuring Delegation

1. Click the **Delegation** tab.
2. Validate **Yes** is selected for the **Audit Delegates** option. If set to **No**, set to **Yes** and save and close the document, then reopen the document to view the other configuration settings.



NOTE ! The Application ID tab appears only for Office 365 migrations.

3. The **PowerShell application impersonation set** option is a prompt to set application impersonation. Set application impersonation using the steps below and then set this option to **Yes**.
    1. Open the Exchange Management Shell or configure a PowerShell session to connect to either an on-premise or the appropriate Office365 server.
    2. In the shell, enter the following command to configure application impersonation:

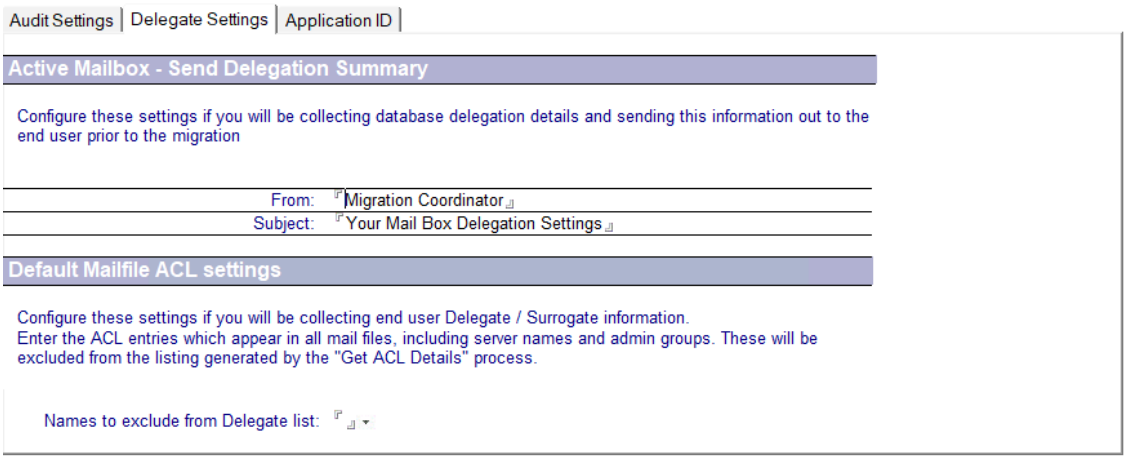
       New-ManagementRoleAssignment –Name:impersonationAssignmentName –Role:ApplicationImpersonation –User:CMTMigrationAdmin@myDomain.org

       Where **CMTMigrationAdmin@myDomain.org** is the SMTP or login name of the migration account, or the name of security-enabled group used for migration.
4. To run delegation migrations as a scheduled process, set **Run delegation as a scheduled** process to **Yes** (default).
5. Click the **Enable scheduled agent** button and select the Domino server as Local to perform the migration. The agent will run in the background of the local Notesclientand and a replica of the Notes Migrator.nsf should be present on the server or workstation running the migration.

Scheduled delegation migration runs in the background on a workstation or server. Notes must be running and background agents must be enabled on the client. To enable local agents in Notes access the preferences through File | Preferences | Basic Notes Client Configuration and select Enable Scheduled Local Agents.

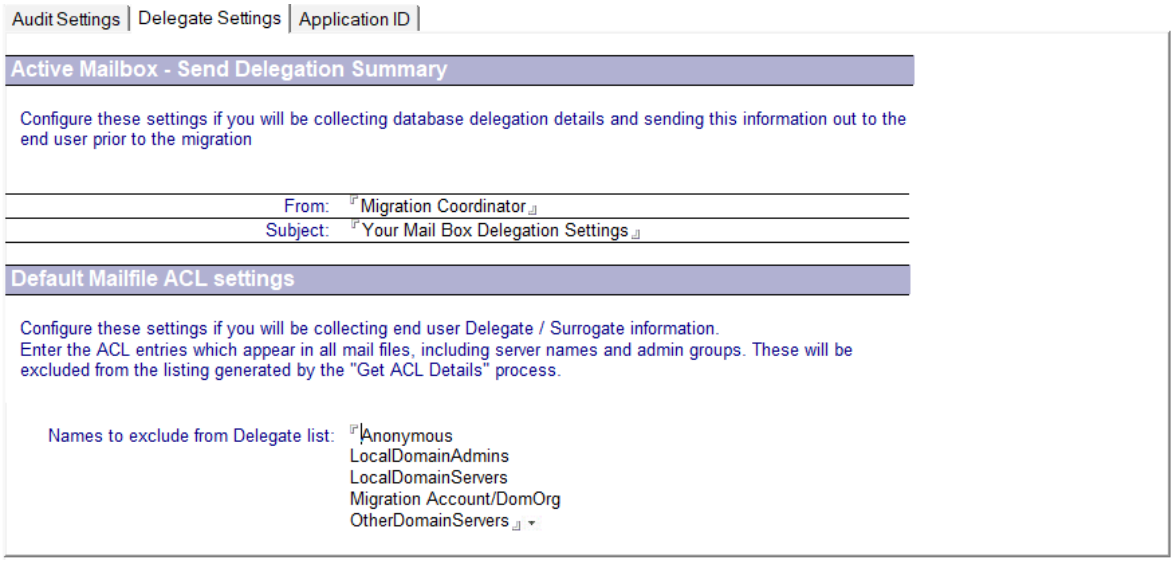
The scheduled delegation migration agent runs once a day at 3:00 AM. Note that if the agent is changed to run at a time interval that is too short, the PowerShell tasks may not have time to complete.

6. Click the **Delegate Settings** tab:



7. After auditing the user's mail files with Active Delegation enabled, you are able to send an email that displays the user's current delegation settings, so they can decide whether they are still valid for migration to Outlook. You should allow the users a period of time to review before rerunning the mail file audit to collect any updated settings.

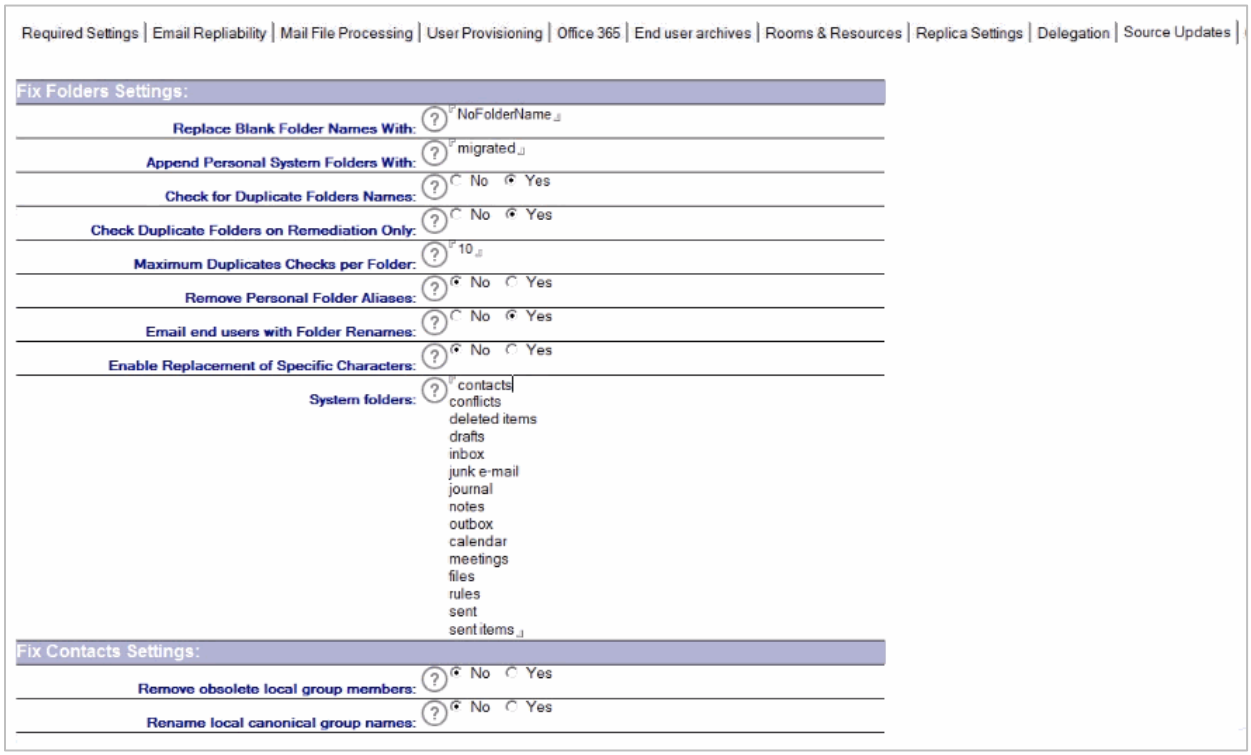
   The options below allow you to customize the message to exclude certain users and groups that delegation does not need to be reported to the users about. Typical exclusions are standard Administrative groups or administrative IDs that are by default listed in the HCL Domino Mail files within the environment.



Additional settings must be configured if you will be using Modern Authentication for access to the target tenant for delegation migrations. An Application ID in the tenant with access to Exchange Web Services is required. See Appendix F: Modern Authentication Delegation Migration for further information.

4.10. Configuring Source Updates

The Source Updates Settings are used to configure the Fix Folders agent.



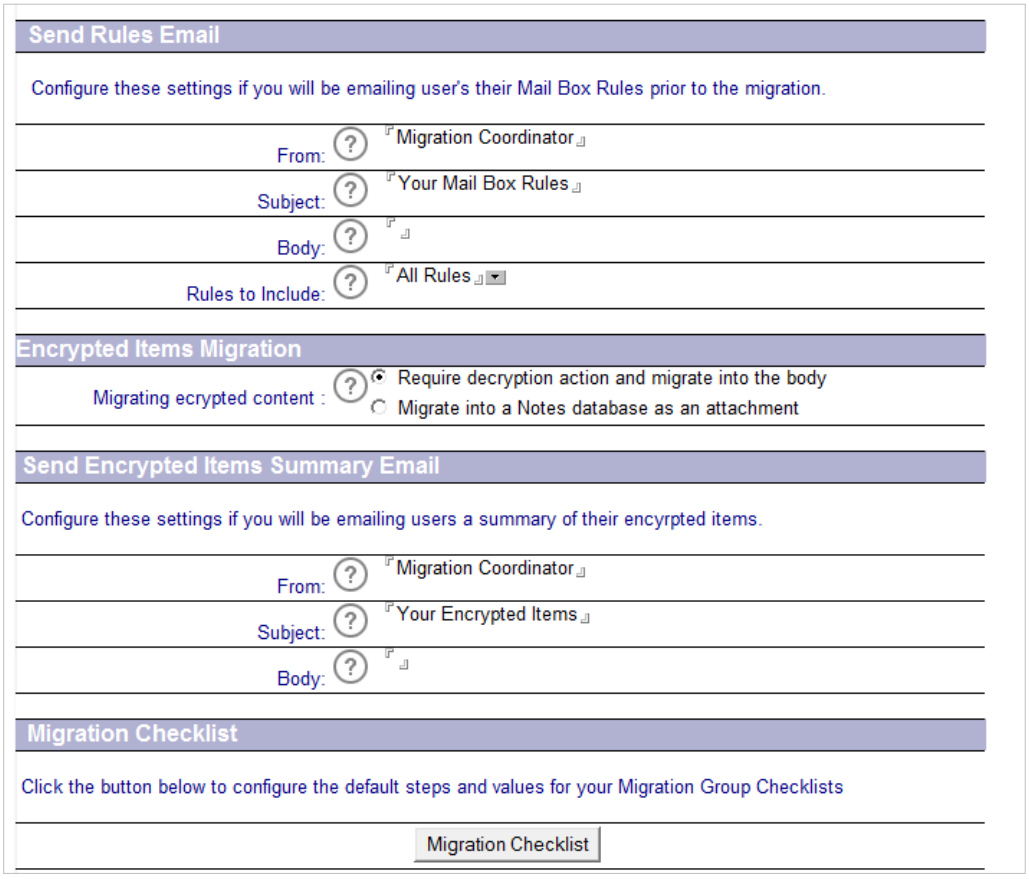
The following table describes the values for each setting.

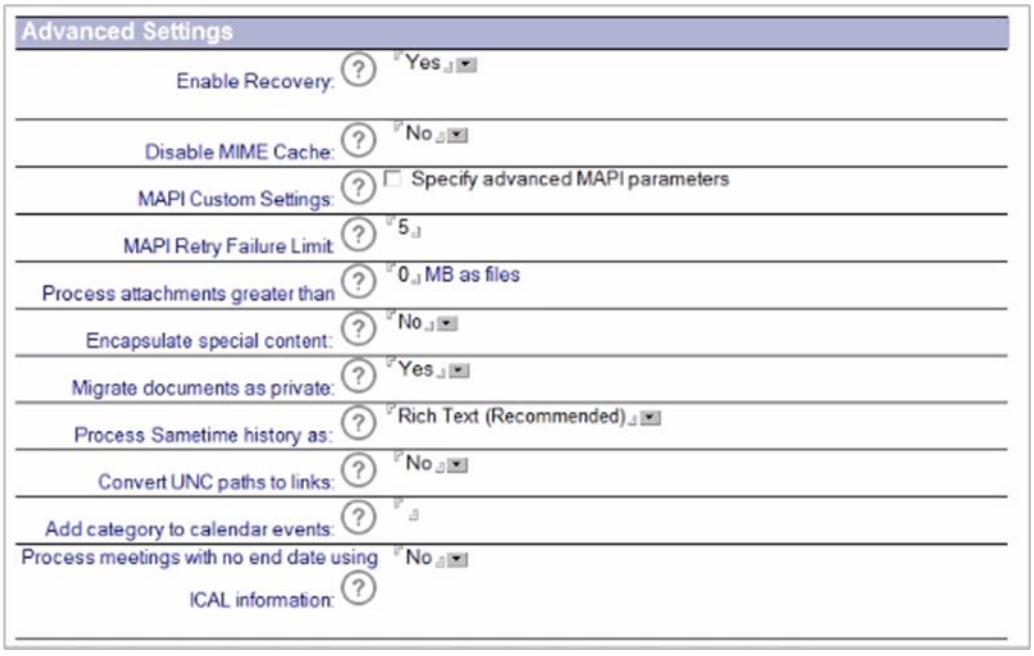
Settings	Description
Replace Blank Folder Names With	The folder name to be used when updating Blank folder names. This will update blank (Null) folders at the folder root, blank folders within the folder hierarchy and blank folders at the end of the folder hierarchy. This will numerically increment (1, 2, 3, etc.) if more than one blank folder exists. Replacements will be done for: "", " ", " \", "\ \","\\" "\ "
Append Personal System Folders With	The folder name to be appended to Outlook system folders that have been created at the folder root of the Notes personal folders. This will not update the Notes system folders. The folder names will be appended with a hyphen "-" and then the name to be used.
Check for Duplicate Folders Names	Option to check for duplicate personal folder names. If enabled, the agent will check each folder to determine if there is a duplicate and then append "-" and an incremented number to make the name unique.
Check Duplicate Folders on Remediation Only	Option to have the duplicate checks be performed on the first Fix Folders processing or only on second processing runs. This requires the option for duplicate checking to be enabled. Set to "No" to disable this and have the Fix Folders agent always check on the first pass for duplicates or set to "Yes" to have the duplicate checking skipped on the first pass and only be run on subsequent updates. This is enabled as the default configuration.
Maximum Duplicates Checks per Folder	Numeric setting for the number of duplicates to be checked on a single personal folder. If there are more duplicates of a single folder name than the number specified, the duplicate checking for that folder will be skipped. Requires duplicate checking to be enabled.

Settings	Description
Remove Personal Folder Aliases	Option to remove hidden Alias from Notes Personal folders. This will remove all aliases in the Notes folders except for the system folders. This should only be used if an issue with an alias is found to cause a problem with migrations.
Email end users with Folder Renames	Option to send an email to the end users with a list of the folder names that were changed. The email will include the original folder names and the new folder names.
Enable Replacement of Specific Characters	If enabled, this will allow for a defined set of characters to be removed from all personal folder names and to have those replaced with a different character. This will not update system folders and should only be used if a specific character is found to cause an issue with migrations.
System Folders	The list of folder names corresponding to system folders in Notes. These folders will not be altered by the Fix Folders process unless the user has created a personal folder with the same name.
Replacement characters in Personal Folders	This is a text list of characters to be replaced and should be a comma separated list if more than one character should be replaced. This requires the character replacement to be enabled and should not contain a backslash "\" as that will replace the Notes folder hierarchy or be Null (blank).
Character to be used for replacements	This should be a valid character that is not known to cause migration issues and should not be Null (blank). Typically, a hyphen "-" is recommended.
Remove obsolete local group members	This can be enabled to verify any local personal group membership (not system groups membership) and remove notes formatted (Canonical) membership addresses that are no longer in Domino (e.g. user accounts for leavers that were removed from Domino). The Email Repliability in Migrator for Notes is used for these checks and should be populated prior to running the processing, if enabled. Note that these members cannot be automatically replaced once they are removed.
Rename local canonical group names	This can be enabled to validate local personal group names created by end users to check if these have a canonical (Domino) format (e.g. Personal Group/Local). If enabled, the processing will rename these by replacing the “/” with a “-“ to prevent Notes treating the local group name as canonical for migration.

4.11. Configuring Other Settings

Click the **Other Settings** tab to configure settings to control how encrypted items are handled or mail rules found in the user mail file. In this tab, the Migration Checklist and Advanced settings can also be configured:


Send Rules Email
Configure these settings if you will be emailing user's their Mail Box Rules prior to the migration.
From:
Migration Coordinator
Subject:
Your Mail Box Rules
Body:
Rules to Include:
All Rules
Encrypted Items Migration
Migrating ecrypted content :
Require decryption action and migrate into the body
Migrate into a Notes database as an attachment
Send Encrypted Items Summary Email
Configure these settings if you will be emailing users a summary of their encyrpted items.
From:
Migration Coordinator
Subject:
Your Encrypted Items
Body:
Migration Checklist
Click the button below to configure the default steps and values for your Migration Group Checklists
Migration Checklist


Advanced Settings
Enable Recovery:
Yes
Disable MIME Cache:
No
MAPI Custom Settings:
Specify advanced MAPI parameters
MAPI Retry Failure Limit:
5
Process attachments greater than
0 MB as files
Encapsulate special content:
No
Migrate documents as private:
Yes
Process Sametime history as:
Rich Text (Recommended)
Convert UNC paths to links:
No
Add category to calendar events:
Process meetings with no end date using ICAL information:
No

The following table describes the values for each setting:

Settings	Description
Send Rules Email	Configure these settings if you will be sending users their mailbox rules before migration.
From	Contains the profile name that will send the mail regarding mailbox rules to users. Migration Coordinator is specified as default.
Subject	Contains a subject that briefly describes the purpose of the mail. Your Mail Box Rules is specified as the subject by default.
Body	Can contain any information that you may want to share with the end user about this procedure.
Rules to Include	Includes all rules or only the rules that are enabled. Select All Rules.
Encrypted Items Migration	Choose how to migrate encrypted messages. Valid options are: • Require decryption action and migrate into the body • Migrate into a Notes database as an attachment Note: Enabling the Migrate into a Notes database as an attachment option will increase the size of each migrated item containing encrypted content. The Lotus Notes client, original Notes ID, and decryption keys are required on the workstation used to view the encrypted content of the migrated items.
Send Encrypted Items Summary Email	Configure these settings if you will be emailing users a summary of their encrypted items. The fields in this section display only when Require decryption action and migrate into the body option is selected.
From	Contains the profile name that will send users the mail with a summary of encrypted items. Migration Coordinator is specified as default.
Subject	Contains a subject that briefly describes the purpose of the mail. Your Encrypted Items is specified as the subject by default.
Body	Can contain any information that you may want to share with the end user about this procedure.
Template Name (.ntf)	This appears if you have selected Migrate into a Notes database as an attachment. Specify the template name in this format: filename.ntf EncryptedContent.ntf is the default template that ships with Migrator for Notes. This template will be installed on every migration workstation during the product installation. This template will need to be signed with the appropriate Lotus Notes Administrative ID on all workstations. You can use any database template; however, you will need to manually distribute the template to all migration workstations. Binary Tree recommends that use of an alternative template or any changes to EncryptedContent.ntf be thoroughly validated prior to production use.

Settings	Description
Attachment name in Exchange	This field displays only when the **Migrate into a Notes database as an attachment** option is selected. Specify the database name in this format: filename.nsf
Text included with attachment	This field displays only when the Migrate into a Notes database as an attachment option is selected. Customized text can be added to the migrated item to provide end-user instructions or information. The default text is as follows: Portions of this document were encrypted with Lotus Notes encryption. This content has been stored in the attached Lotus Notes database during migration to preserve security. You may view this content by opening the attached file on a workstation that has a Lotus Notes Client and the recipient's Notes ID.
Migration Checklist	The Migration Checklist is a personalized list of tasks which can be used to help manage the migration project. Determine, then classify or group the major steps you consider necessary to manage your migration project. Determine the sequence, timeline, and description for each migration task and enter them into the Migration Checklist.
Enable Recovery	This setting defines the default value for the Enable Recovery setting in the migration profiles' Advanced tab. If the Enable Recovery setting is set to Yes in the Advanced tab of a migration profile, it enables tracking of processed messages during migration. So, if the migration process terminates unexpectedly, this feature prevents the application from reprocessing messages that were migrated during the initial run of the migration. Click here to learn more about configuring the Enable Recovery setting.
Disable MIME Cache	Specify Yes to disable the local cache database when processing messages using MIME. Disabling this feature significantly impacts throughput when migrating MIME content from a Domino server.

Settings	Description
MAPI Custom Settings	Select Specify advanced MAPI parameters to override the default values for MAPI retry count and MAPI retry delay. When configured, retries are attempted when the MAPI_E_NETWORK_ERROR (0x80040115) result code is encountered during any of the following MAPI calls: • Create attachment • Create folder • Create message • Modify recipients • Save folder changes • Save message changes • Save attachment changes If the configured retry limit is exceeded, the migration is cancelled and Migrator for Notes will begin the migration of the next user. If the migration is canceled in the middle of writing a document, the document will be partially written to Exchange. The default retry limit is set to 30 seconds. Specify the Number of retries that will be attempted when the MAPI_E_NETWORK_ERROR (0x80040115) result code is encountered. Values ranging from 1 to 999 can be entered. The default number of retries is “9”. Note that entering “0” results in the default “9” retries being used. Specify the Delay between retries in seconds between MAPI calls. The time is progressive. The number of seconds delay for a call is (retry # * delay). For example, if the retry delay is set to 1 second, and the retry count is 5, the delays between calls will be 1, 2, 3, 4, and 5 (progressively longer). If the retry delay is 1.5 seconds, the times will be 1.5, 3.0, 4.5, 6, and 7.5. Values ranging from 1 to 999 can be entered. The default delay is “1” second. Note that entering “0” results in the default delay “1” second being used.
MAPI Retry Failure Limit	When enabled, Migrator for Notes tracks documents where one or more MAPI calls could not be completed successfully. If the number of documents where one or more MAPI calls cannot be committed to Exchange, the migration will exit with ‘migration failed’ status. The document retry failure limit feature can be disabled by setting the value to ‘0’ or leaving it blank. **MAPI Retry** Migrator for Notes makes multiple MAPI calls when migrating a document, such as creating the message header, writing the body, adding attachments, etc. When processing messages, the remote Exchange server may become unresponsive in such a way that MAPI calls to write data do not complete. The call is retried a number of times (using the preexisting feature known as MAPI Retry: the maximum number and delay between retries can be set in EMM) to fully migrate data to Exchange. If any of the MAPI calls cannot be completed, the document will be considered as failed due to MAPI retries, and added to the total of failed documents. Document information is logged, the NoteID is removed from both the in-

Settings	Description
	memory migration history, and the CMTProcessedNoteID-[shortname].txt crash recovery file. Note that other types of failures, such as a corrupt message body which results in a failure, are not counted toward the MAPI retry failure total. These other types of failures are specific to the source data, whereas the MAPI retry failures are related to the ability to write to exchange. If the number of documents with MAPI retry errors exceeds the failure limit, the migration will exit, and return 'Migration failed' status. This migration will not automatically requeue and must be requeued by the migration administrator to fully migrate the mailbox. When a migration is requeued, it may be migrated by any workstation. Any documents containing MAPI retry errors on the failed migration will be remigrated during subsequent migrations. If the migration terminates abnormally (crashes), the document being migrated when the crash occurs will not be retried, which is standard procedure for crash recovery in Migrator for Notes. Any other documents containing MAPI Retry Exceeded will be remigrated. In this case, Migrator for Notes will automatically restart the migration on the same workstation.
Process attachments greater than	The limit for the size attachments, in MB, that will be detached and processed as file attachment objects. A value of -1 disables this feature, and processes all attachments as MIME streams, similar to Migrator for Notes versions 4.6 and earlier. A value of 0 will process all attachments as file attachments. The default value is 0 MB to process all attachments outside the MIME Stream.
Encapsulate special content	When enabled, documents containing special notes functionality or items such as button or stored forms will be migrated as an attachment in addition to being rendered in the message body. End users can then open the NotesMessage.nsf attachment to use the native functionality of the form.
Migrate documents as private	When set to 'Yes', the migration will migrate documents designated as private in Notes as Private in Exchange. This will also include messages decrypted in Notes prior to migration.
Process Sametime history as	Controls how Sametime message transcripts will be processed. Rich Text (Recommended) – Content will be processed as Rich Text Format and does not require preprocessing. MIME (requires preprocessing) – Content will be processed as MIME. This results in a better representation after migration, but requires processing each file before migration.
Convert UNC paths to links	Specify No if you do not wish the body of the documents searched for UNC (Exchange Naming Convention) links during migration. If you specify Yes, CMT attempts to convert UNC links into actionable links.
Add category to calendar events	Field in Exchange. For example, if you specify Migrated with Migrator for Notes in the field, then all the calendar events, such as meetings and appointments, will display this phrase in the categories field after they are migrated. It enables you to visually differentiate calendar events that were migrated into Outlook from those created natively in Outlook before or after the migration. This setting is optional.

Settings	Description
	Note: Any categories that are in the original Notes calendar event will also display in the categories field.
Process meeting with no end date using ICAL information	Specify Yes to use the ICAL recurrence information to determine the repeat pattern when processing repeat calendar meetings with no end date. Specify No to process repeat meetings with no end date without using ICAL recurrence information. Note: When migrating a meeting with No End Date and this option is set to No, the meeting is migrated but limited to 250 occurrences.
Enable Advanced features	Select Yes to enable features used when migrating large environments or to cloud based services.
Enable Hosted features	Appears if Advanced features are enabled. Select Yes to enable features used when migrating hosted environments. This setting should only be enabled under the direction of Advanced Support.
Enable multiple Control Centers	Appears if Advanced features are enabled. Select Yes to enable features used when migrating with multiple Migration Control Center (MCCs). This setting should only be enabled under the direction of Advanced Support.

Sending Mail Box Rules

Migrator for Notes allows you to send users their Mail Box Rules before migration occurs. You can define the From, Subject, text in the body, and which rules to include in the email sent to users.

Migrating Encrypted Items

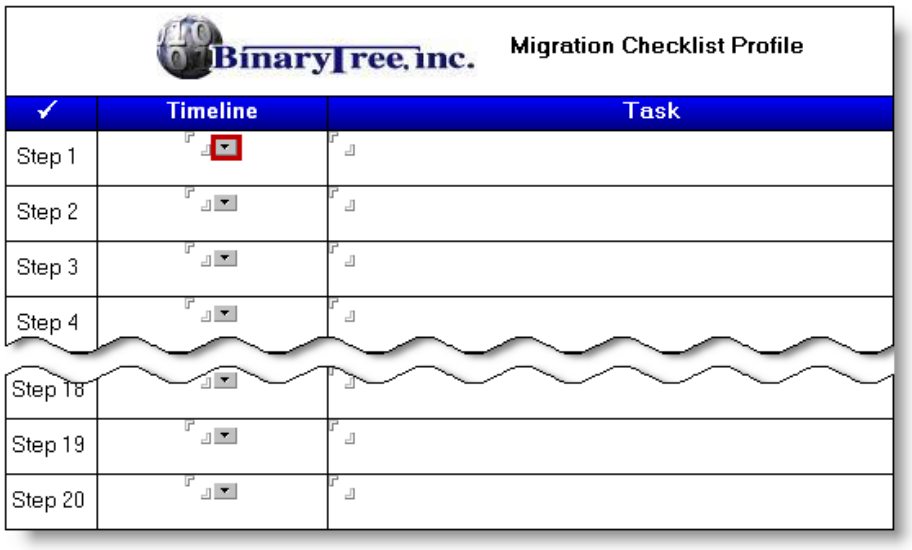
Migrator for Notes offers two solutions for migrated items that have been encrypted via Lotus Notes. The data may be decrypted as part of the pre-migration process, or the encrypted content may be attached to the migrated message in a Lotus Notes database during migration.

When the **Require decryption action and migrate into the body** option is selected, additional fields will be visible in the **Send Encrypted Items Summary Email** section to configure the From, Subject and text in the body of the summary email sent to end users. If you select **Migrate into a Notes database as an attachment option is selected**, you will see new fields for the **Template name**, the **Attachment name in Exchange** and **Text included with attachment**.

Creating a Migration Checklist

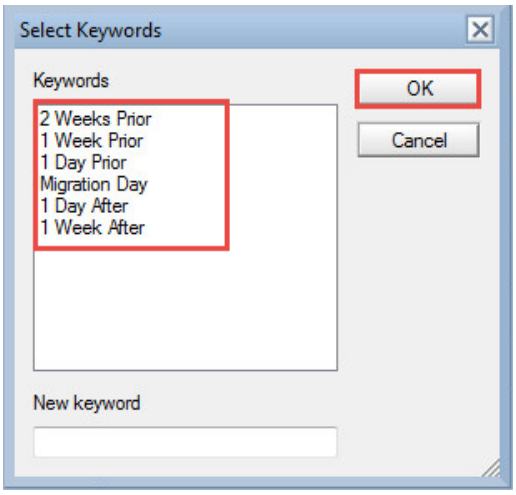
1. Click the **Migration Checklist** button to enter the steps, timelines, and tasks in the Migration Checklist Profile to use for your customized Migration Checklists:

2. Starting with Step 1, click the down arrow button in the **Timeline** column.



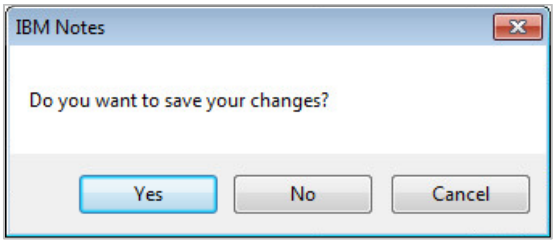
3. The **Select Keywords** dialog box is displayed. Select one of the provided keywords or enter a new one in the **New Keyword** field at the bottom of the dialog box and click **OK** to continue:

NOTE ! If the predefined keywords do not appropriately describe your timeline, you can specify a new keyword in the New Keyword field.

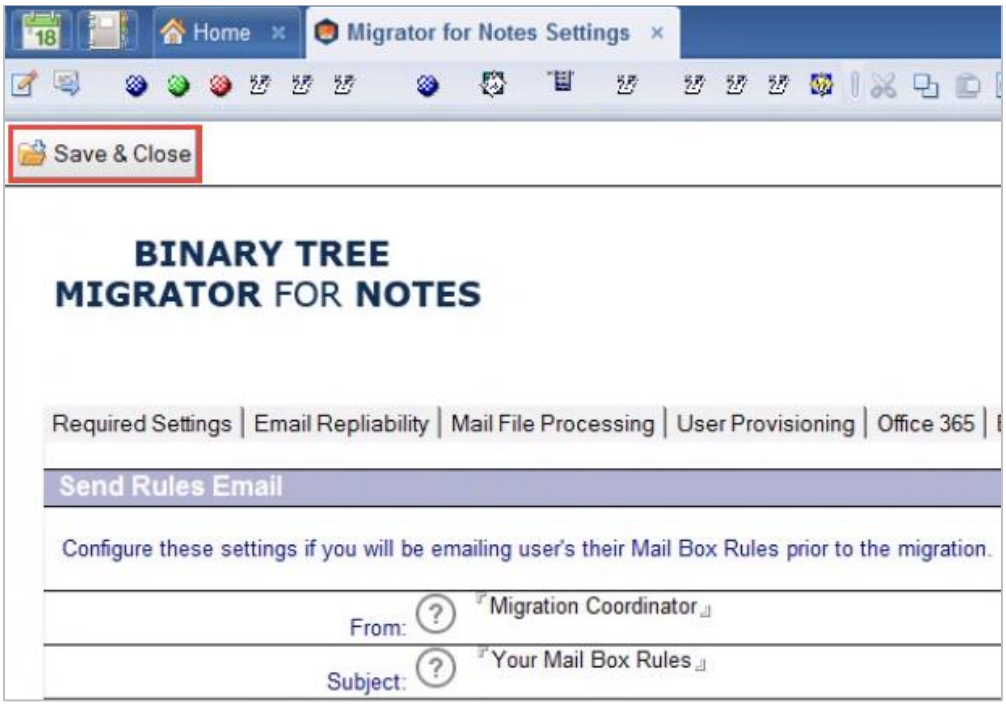


4. Enter a description in the **Task** column and click **Save & Close** to complete:

5. If you exit the document without saving, the following dialog box is displayed. Select **Yes** to save the Migration Checklist. If No is selected all new entries are discarded:



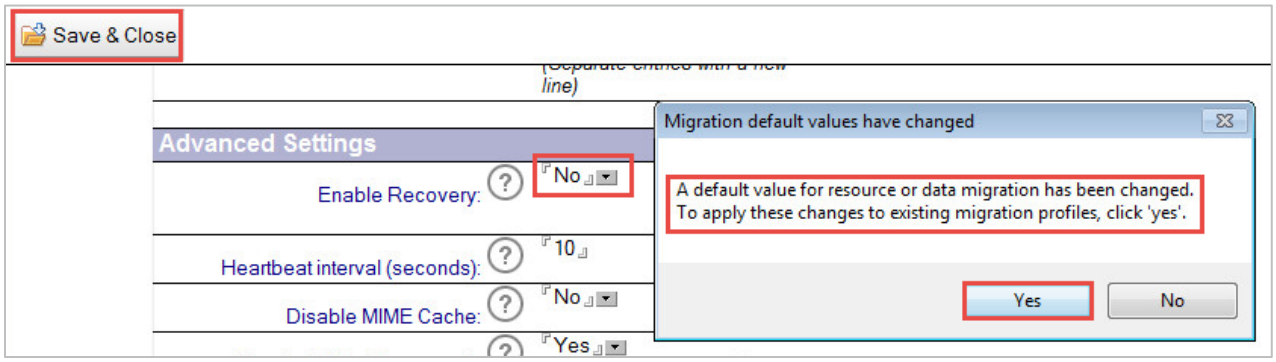
6. After all the settings have been configured, click **Save & Close** to save all the configuration settings.



Enabling Recovery

As stated earlier, the **Enable Recovery** setting in the **Other Settings** tab defines the default value for the *Enable Recovery* setting (found under the *Advanced* tab) in the existing migration profiles as well as the new profiles you may create.

By default, it is set to **Yes**, so in all the existing migration profiles and the new ones you create, the *Enable Recovery* setting will also be set to *Yes*. However, if you were to change this setting to No in the *Other Settings* tab, and save the changed configuration settings, the following prompt will display.



If you click **Yes** in this dialog box, the *Enable Recovery* setting in all the existing migration profiles will change to *No*, and any new migration profile created will also have *No* as the default value in this field.

But if you click *No* in this dialog box, the *Enable Recovery* setting in all the existing migration profiles will remain *Yes* (the prior setting), however, when you create a new migration profile now, the *Enable Recovery* setting will be set to a default *No*.

NOTE ! It is recommended that you review the description provided for the Enable Recovery setting in the Advanced tab of migration profiles (Section 6.6) for a complete understanding of how this setting works.

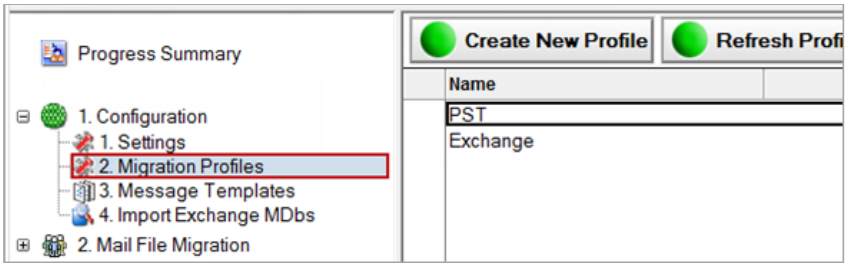
4.11. Creating Migration Profiles

Migration Profiles define settings for certain groups of users. For instance, it may be desirable to have a profile where all executives have a filter that only migrates the last four years of mail and calendar to Exchange. Every user must have a Migration Profile set before migration can proceed.

Before you create a migration profile that contains filters to migrate specific user data, you must create a default migration profile. After the default profile has been saved, create migration profiles that will be used to migrate users. These profiles should have descriptive names, such as 90DayMailOnly or 4Years-Calendar-Mail.

Important! – The default migration profile does not have all values and should not be used for migrations. A new profile should be created to prevent problems with corrupting the backend database. This will help avoid problems during production migration.

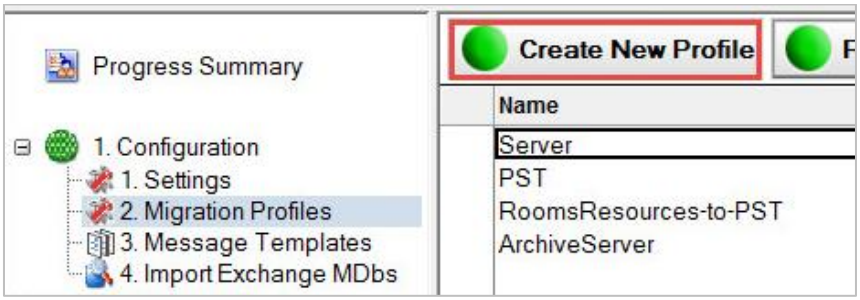
1. Click **Migrate Profiles** in the Navigation Pane:



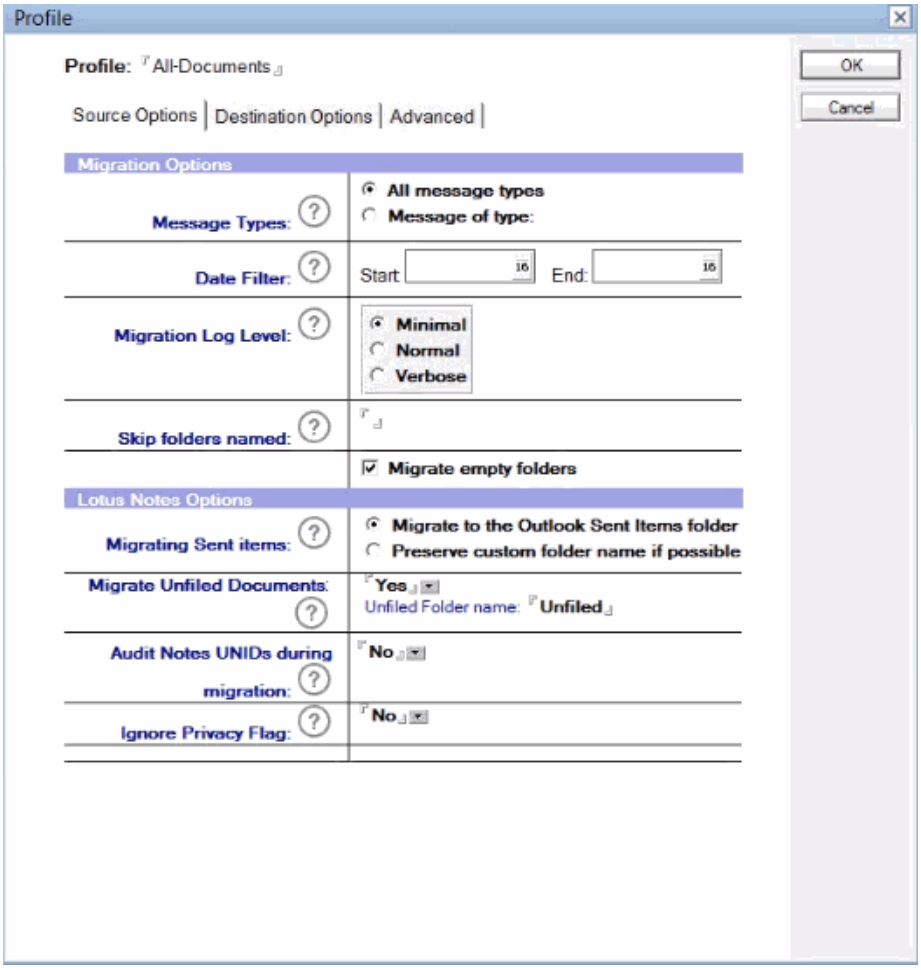
2. Click the **Create New Profile** button:

   Each migration profile contains a source and destination setting that determines which mail items are migrated and if the migration is to a Microsoft Exchange server (including Office 365) or to a .pst file.

   When a migration is carried out, a migration profile must be assigned to specify how the migration should be performed. You can create as many migration profiles as desired.


Progress Summary
1. Configuration
1. Settings
2. Migration Profiles
3. Message Templates
4. Import Exchange MDbs
Create New Profile
Name
Server
PST
RoomsResources-to-PST
ArchiveServer

3. The **Profile** dialog box displays; the **Source Options** tab opens by default:

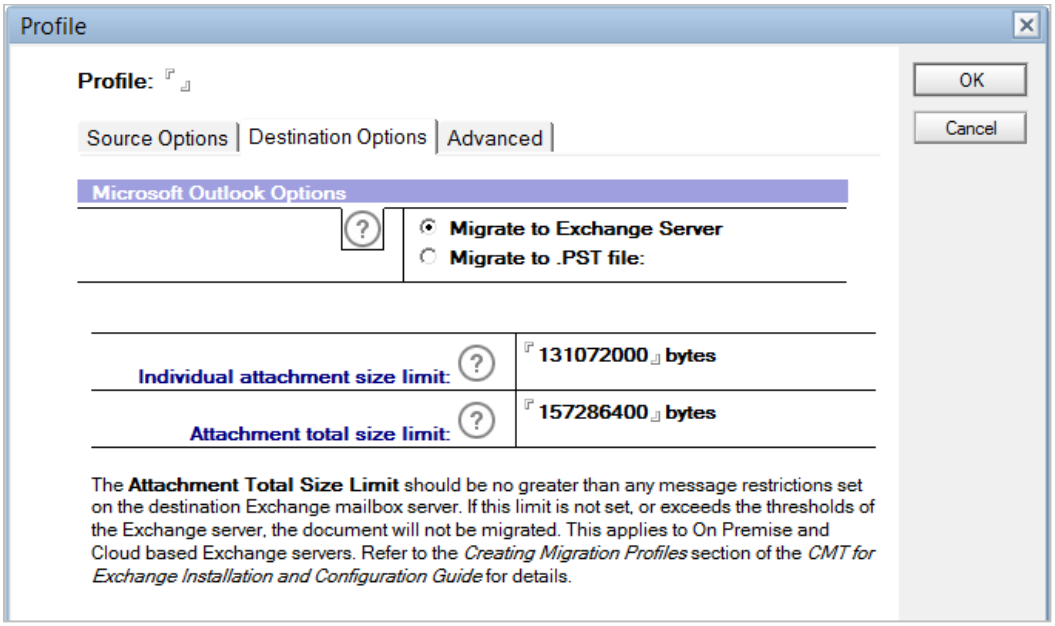


The following table describes the values for each setting:

Settings	Description
Message Types	Specify the Migration Options. You can either select all message types or specify the types that you wish to be included in the migration (Mail, Calendar, Task, and Contact).
Date Filter	Specify a range of dates that will ensure that only the data that falls within the specified range is migrated. The Date Filter will apply to all the selected message types. For example, if you select All message types, the specified date filter will apply to Mail, Calendar, Tasks, and Contacts.
Migration Log Level	By default, Migrator for Notes creates a log file for every user that is migrated. In this field, you specify the level of detail you want in the logs. There are three levels provided. • Minimal • Normal (Recommended) • Verbose

Settings	Description
	Selecting Verbose significantly increases the size of the log files that are created. This is only recommended for troubleshooting purposes. Log files are located in the Logs subdirectory where CMT Exchange is installed, usually C:\Program Files\Binary Tree\CMT for Exchange\Logs.
Skip folders named	Specify a list of folder names from your Domino mail files that you would like Migrator for Notes to bypass during the migration. This feature is useful if you have a customized mail template that may contain folders with non-messaging data. Specify folder names in the Skip folders named field. Separate entries by commas.
Migrate empty folders	Select to migrate empty folders in users' mailboxes to Outlook.
Migrating Sent Items	In Lotus Notes, a mail message can exist in the Sent Items folder or in the Sent Items folder and a user-defined folder(s). In Outlook, a mail message can only exist in one or the other. This field provides two options. • Select Migrate to the Outlook Sent Items Folder, if you prefer the items to be stored in the Sent Items folder in Outlook after migration regardless of what other user-defined folder(s) it may have been stored in Lotus Notes. • Select Preserve custom folder name, if possible, if you prefer the items that exist in two locations to be stored in the user-defined folder after the migration.
Migrate Unfiled Documents	This option determines if "unfiled" documents will be migrated. "Unfiled" documents are those documents in Notes which do not appear in any folder and can only be accessed from the 'All Documents' view within the mail file. Documents may be unfiled if a user deletes a folder without deleting the documents or removes a document from the only folder it resided within.
Audit Notes UNIDs During Migration	The migration worker will record an audit of the Notes source document UNID [unique identifier] for all items processed in a .csv file. This will be uploaded to the migration controller in the logs folder.
Ignore Privacy Flag	If set to 'Yes', this will not migrate any documents as private in Outlook. This will override the Settings | Other Settings option if that is set to 'Yes'. This is typically useful for shared mailbox migrations.

4. Click **Destination Options**:

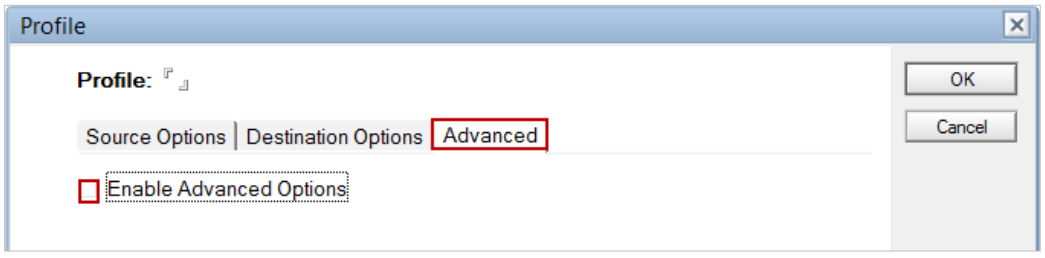

Profile
Profile:
OK
Cancel
Source Options
Destination Options
Advanced
Microsoft Outlook Options
Migrate to Exchange Server
Migrate to .PST file:
Individual attachment size limit:
131072000 bytes
Attachment total size limit:
157286400 bytes
The Attachment Total Size Limit should be no greater than any message restrictions set on the destination Exchange mailbox server. If this limit is not set, or exceeds the thresholds of the Exchange server, the document will not be migrated. This applies to On Premise and Cloud based Exchange servers. Refer to the Creating Migration Profiles section of the CMT for Exchange Installation and Configuration Guide for details.

The following table describes the values for each setting:

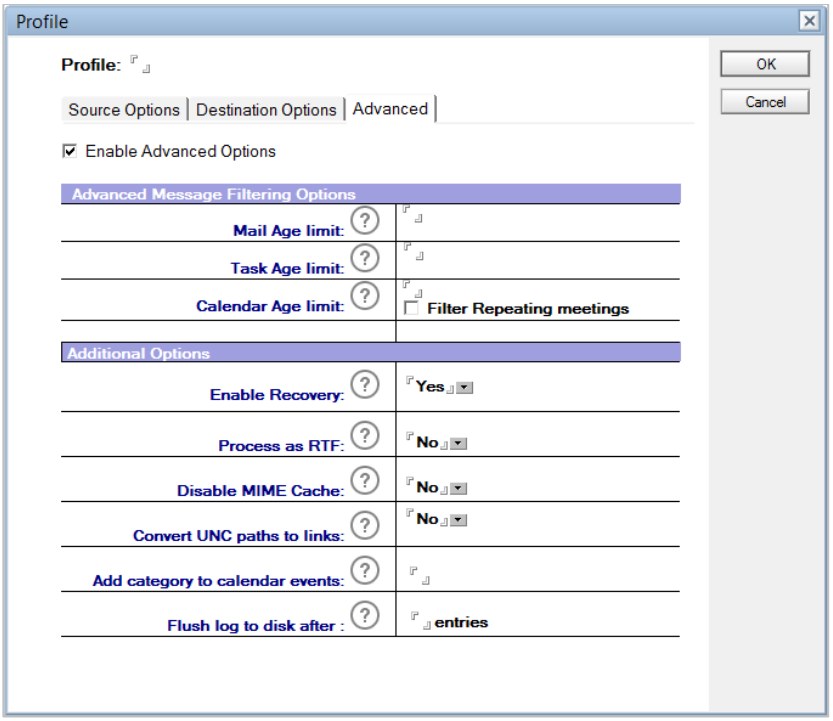
Settings	Description
Migrate to Exchange Server	Select if you want the migrated data to go directly to the Exchange server or Office 365.
Migrate to .PST file	Select if you want the migrated data to go to a .pst file. The PST Folder Path field is added to the form when this option is selected.
PST Folder Path	Specify the path where you want the .pst file(s) to be stored. This must be a Windows drive and folder or mapped drive on the migration workers. A Windows UNC path should not be used. When migrating to a PST file, the file name format will be "<User's SMTP Address>-Notes Database ID.pst".
Individual attachment size limit	Specify a size limit in bytes to filter individual attachments. For example, if you specify 1000, each individual attachment that is greater than 1000 bytes in size will be filtered out during migration. Maximum message size cannot exceed 125 MB. This field should be set to 131072000 to avoid memory errors during the migration.
Attachment total size limit	Specify the total size limit of all attachments in a document in bytes. For example, a value of 10000 would allow only a total of 10000 bytes for attachments migrated per message. Maximum message size cannot exceed 150 MB. This field should be set to 157286400 to avoid memory errors during the migration.

The default size limits for the attachment size limit fields are the maximum size we support. This limit may differ in your environment. We recommend testing your migration environment to confirm it supports our product limitations. If you experience memory errors with lower attachment sizes, we recommend lowering the default size limits in the attachment size limit fields until a memory error is not encountered.

5. Next, click the **Advanced** tab
6. Check the **Enable Advanced Options** box:



Advanced options are now displayed in the dialog box; configure these settings:



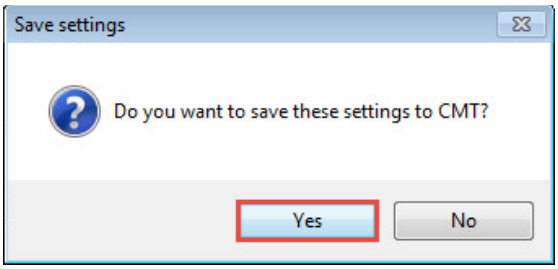
The following table describes the values for each setting:

Settings	Description
Advanced Message Filtering Options	Configure these settings if you wish to filter the messages based on their various age limits.
Mail Age limit	Specify the number of days from the migration date to filter the mail messages. For example, if you specify 30, the application will only migrate messages that were created 30 days prior to the migration date.
Task Age limit	Specify the number of days from the migration date to filter the tasks (To Do Lists). For example, if you specify 30, the application will only migrate tasks that were created 30 days prior to the migration date.
Calendar Age limit	Specify the number of days from the migration date to filter the calendar events. For example, if you specify 30, the application will only migrate calendar events that will occur in the 30 days prior to the migration date.
Filter Repeating meetings	By default, all repeating meetings are migrated. Repeating meetings are filtered based on the specified age limit criteria only when you check the Filter Repeating meetings checkbox. It should be noted that in case of repeating meetings, the filter applies to the date of the parent-meeting document and does not filter the series. This means that if the parent meeting falls within the specified date range, the entire series is migrated and if the parent meeting falls outside the date range, the entire series is skipped. The dates of the meeting recurrences do not matter.

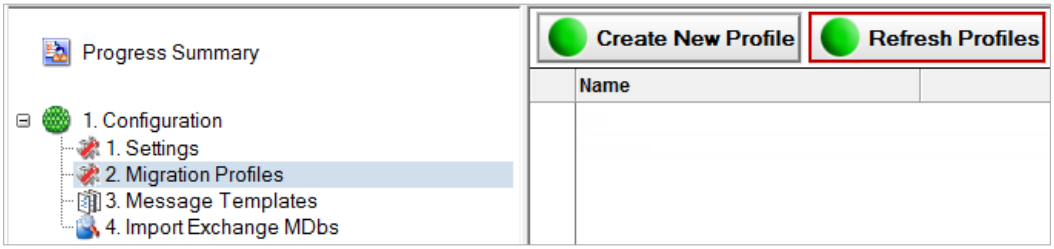
Settings	Description
Additional Options	Configure these settings to improve the migration throughput.
Enable Recovery	Specify Yes to enable the setting to track processed messages during migration. So, if the migration process terminates unexpectedly, this feature will prevent the application from reprocessing messages that were migrated during the initial run of the migration. To disable this setting, specify No. Refer to the Enable Recovery setting in the Configuring Other Settings section to understand how the default value for the Enable Recovery setting in the Advanced tab is determined.
Process as RTF	Specify Yes to override the default MIME processing and to process native Notes documents as Rich Text. Note: Enabling this feature is not recommended.
Disable MIME Cache	Specify Yes to disable the local cache database when processing messages using MIME. Disabling this feature significantly impacts throughput when migrating MIME content from a Domino server.
Convert UNC paths to links	Specify No if you do not wish the body of the documents searched for UNC (Exchange Naming Convention) links during migration. If you specify **Yes**, CMT attempts to convert UNC links into actionable links.
Add category to calendar events	Specify a word or phrase in the field to add to the category field in Exchange. For example, if you specify Migrated with Migrator for Notes in the field, then all the calendar events, such as meetings and appointments, will display this phrase in the categories field after they are migrated. It enables you to visually differentiate calendar events that were migrated into Outlook from those created natively in Outlook before or after the migration. This setting is optional.
Flush log to disk after	Specify the number of log events (entries) after which you want CMT to close the log file and flush it to the disk. Leave the field blank or specify 0 or 1 to log continuously until the migration completes. Please note that all the logs are flushed to the disk after they close irrespective of the value specified in this field. Note: The specified value in the field only forces CMT to update the log file after a specified number of entries (events). It may improve processing in certain environments but if CMTProxy terminates during a migration, you also run the risk of missing complete information in the log file.

NOTE ! All the settings in the Advanced tab are pushed to the migration workstation performing the migration through the AdditionalSettings.xml file. If you haven't changed the default Advanced settings, the .xml file is not used during a migration.

7. A default name is specified in the **Profile** field. You must specify a descriptive name for the migration profile and do not use Default as the name.
8. Click **OK** to save the migration profile settings.
9. A confirmation box appears; click **Yes** to save these settings to the Migrator for Notes database:



10. A new profile by the name you specified in the **Profile** field is created. If you do not see it listed in the Data Pane immediately, you can refresh the Data Pane. Click the **Refresh Profiles** button.



To delete unused profiles, click the Delete Settings from migration server button. A profile cannot be removed if the profile has been used for end user migration.

4.12. Creating a Message Template

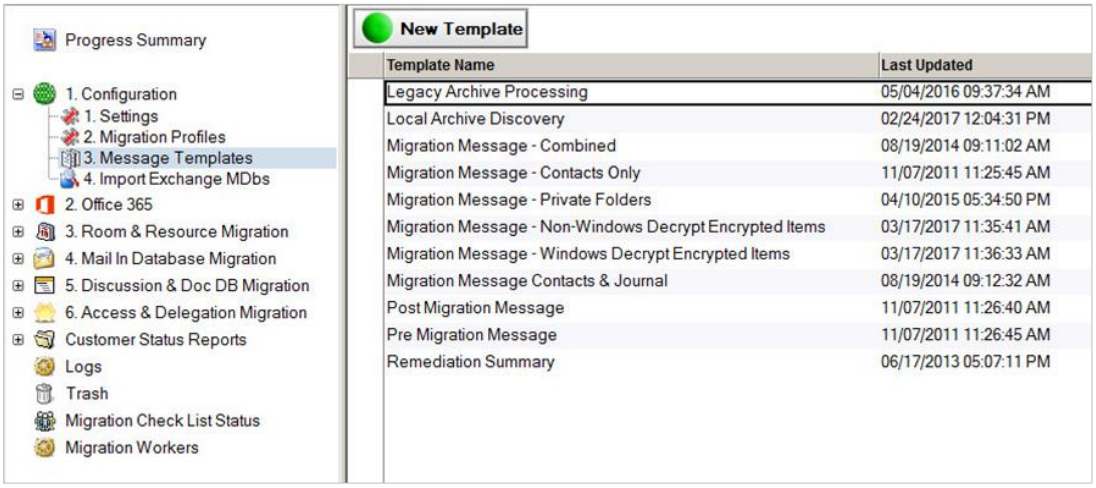
Migrator for Notes manages communication with the end users to be migrated via Notes mail messages. These messages can be used for informational purposes only or they may contain action buttons with associated code designed to perform specific pre-migration tasks.

These migration messages are created using the Message Templates. For Message Templates with action included, there are additional settings used to control a workflow process. When an end user executes the action, a status message known as an End User Processed Migration Message is generated and returned to the Migrator for Notes database via Notes mail. Once received, the message is used to update the status of the corresponding end user's Person document. If the status indicates the action was successful, the user can be re-verified and be ready for migration.

For this process to work correctly the Migrator for Notes database must be located on a Domino server and a Mail-In Database Document pointing to it should be created.

Migrator for Notes comes with several predefined Message Templates designed to perform specific migration tasks. You can use these predefined Message Templates to create custom templates that may better suit your need.

1. Click **Message Templates** in the Navigation Pane; the Data Pane displays a list of predefined message templates:

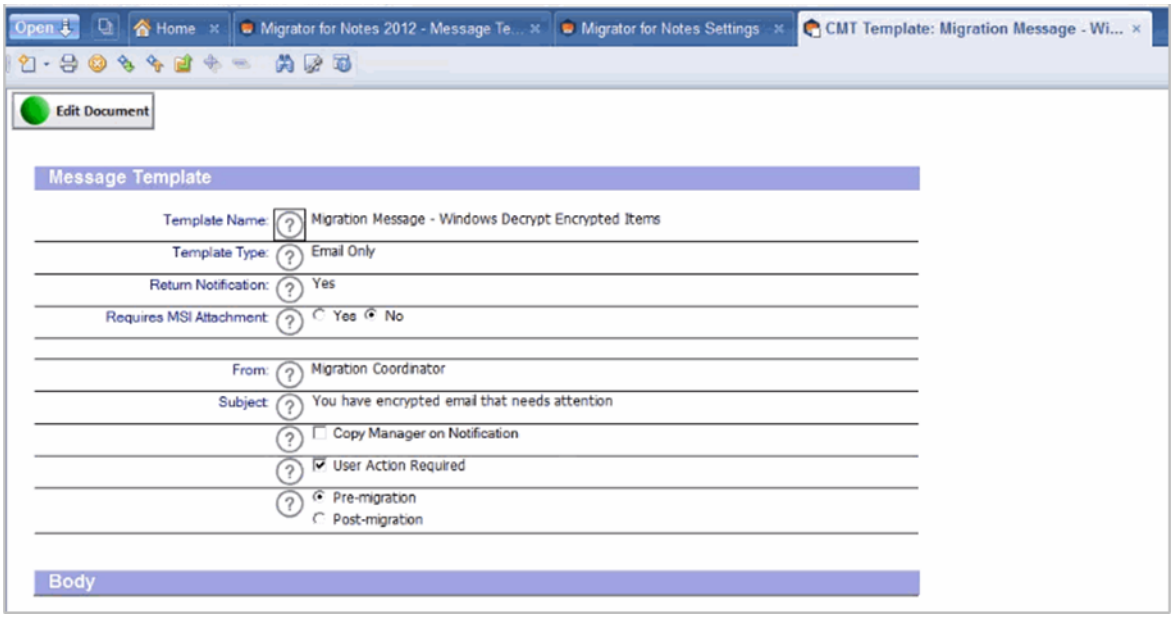


NOTE ! Each predefined Message template has a specific purpose. If you wished to create a custom template based on a predefined template, you need to select the predefined template before clicking the New Template button. For example, if you wished to create a custom template based on the Migration Message – Decrypt Encrypted Item template, then you must select the template prior to creating a new template.

2. Select a predefined template and click the **New Template** button in the Data Pane.

NOTE ! Encrypted Sent Items may contain an encrypted flag but possess no encrypted fields. This means that even though they display as encrypted, they actually aren't and will migrate without decryption. Encrypted mail fields (including Sent folder) will not be migrated to MS Exchange if they are not decrypted using the decryption tool.

3. A new tab, **CMT Template: Migration Message – Decrypt Encrypted Items**, opens and displays a form where you can specify the details of the new Message Template. Notice that the tab clearly specifies that the new CMT template is based on the *Migration Message – Decrypt Encrypted Items* predefined template. However, when you save this template with a new name, the tab will reflect its new name.
4. Customize the CMT new template. Refer to the table below for details on settings.
5. Once all the details have been specified, click **Spell Check** to ensure there are no spelling errors in the message.
6. A message box appears to confirm that no misspellings were found. Click **OK** to close the message box. Next, save the new template. Click **Save & Close**.

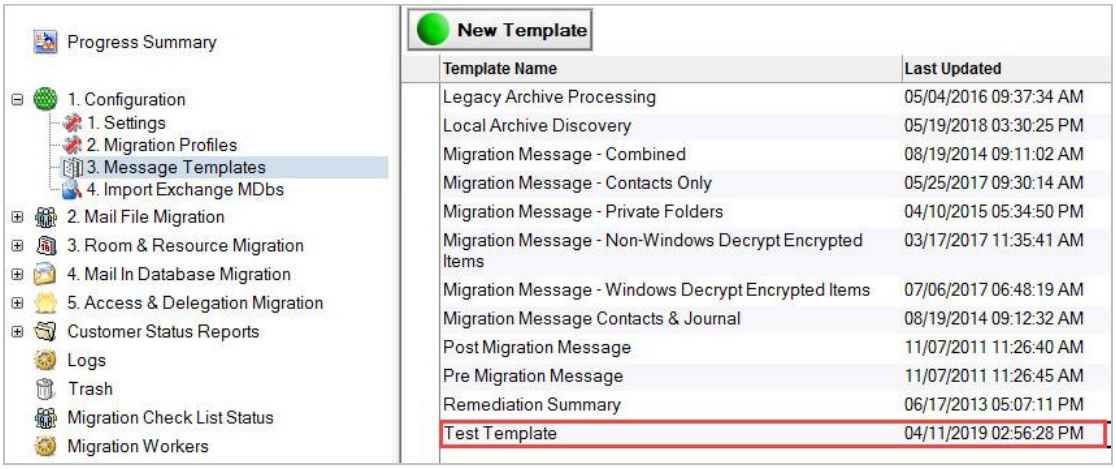


The following table describes the values for each setting.

Settings	Description
Template Name	Specify a name for the template that best describes the purpose of the new message template.
Template Type	Specify the type of the new message template, such as Email Only or Contact Synchronization. Refer to the Predefined Message Template Types section below.
Return Notification	Specify if you want a return notice to Migrator for Notes from the end user when the message is received and the required action is performed.
Requires MSI Attachment	Specify whether the .MSI file is required to be attached prior to sending.
From	Specify the name of the entity sending this migration message to end users (for example, Migration Coordinator).
Subject	Specify a brief description of the purpose of the new template.
Copy Manager on Notification	Check this box to send a copy of the message to the user's manager. This setting is available only when Other Settings - Advanced features is enabled.
User Action Required	Check this box if migration for this user cannot proceed until the user performs the embedded action within the message. This check box also indicates that the user will remain in the Pending Reponses view until they perform the end user action in a particular message template.

Settings	Description
Pre-migration	Select this if the new message is sent to the user, and requires the user to perform an action that will prepare user data for migration.
Post-migration	Select this if the new message is for use after a user's migration has taken place, and is typically informative, no User-Action Required.
Body	Specify a customized message *Note that any buttons in the message template must be edited and saved to sign these with a Notes ID that is part of the Domino system ECL.

The new template is saved and it appears in the list of existing templates.



4.13. Types of Predefined Message Templates

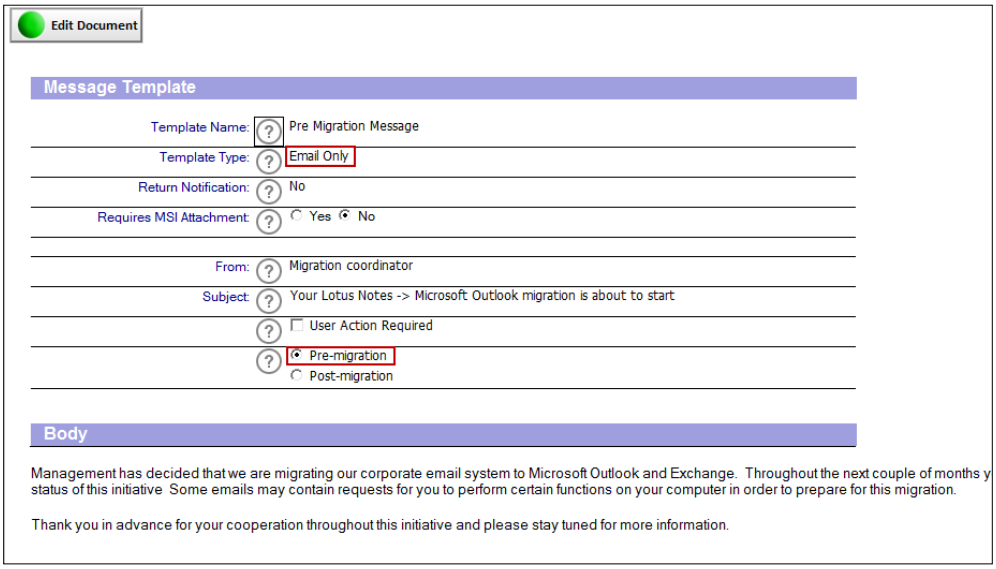
Migrator for Notes comes with several predefined Message Templates which are designed to perform specific migration tasks. The information contained within these predefined templates can be modified to tailor them to a client's needs. Predefined Message Templates can be of the following types depending on the actions they perform:

- Email Only
- Contact Synchronization
- Decrypt Encrypted Items
- Archive Discovery
- Archive Processing

Email Only

As the name implies, Email Only is designed for informational purposes only and does not include any action buttons. Email Only templates can be used to keep the end users informed on the progress of the migration project. For example, end users can be sent an email with the migration schedule for their department. This can help them plan for when their email will be migrated.

The fields within each predefined message template should be modified to make it specific to the client. An example is shown below.



For a template to be information-only, its **Template Type** field should contain the value Email-only and Pre-migration option should be selected. Although, if you are sending a message to end users informing them about the successful migration, then you can also use Email Only Template Type and select Post-migration.

Contact Synchronization

When a Contact Synchronization migration message is sent to an end user, the user simply clicks the button in the message. This launches the iNotes_DoSync() agent that ships with Lotus Notes, and pushes/resyncs all contacts in the Personal Name & Address Book (pNAB) to the hidden $PeopleGroupsFlat view. Now that these contacts are in the mail file, they can be migrated.

Decrypt Encrypted Items

When a Decrypt Encrypted Items migration message is sent to an end user, the user simply clicks the button in the message. This initiates an agent that will decrypt any encrypted items in the mail file, so they will migrate as clear text.

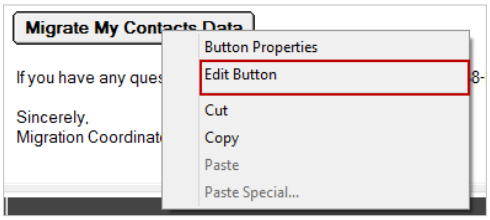
Archive Processing

When an Archive Processing migration message is sent to an end user, the user clicks the button in the message and this allows the script to search for the Archive Database Templates locally on the end user machine, find it, and copy/replicate it to a specified location on the Domino server or file server or copy into end user's existing Domino mail file.

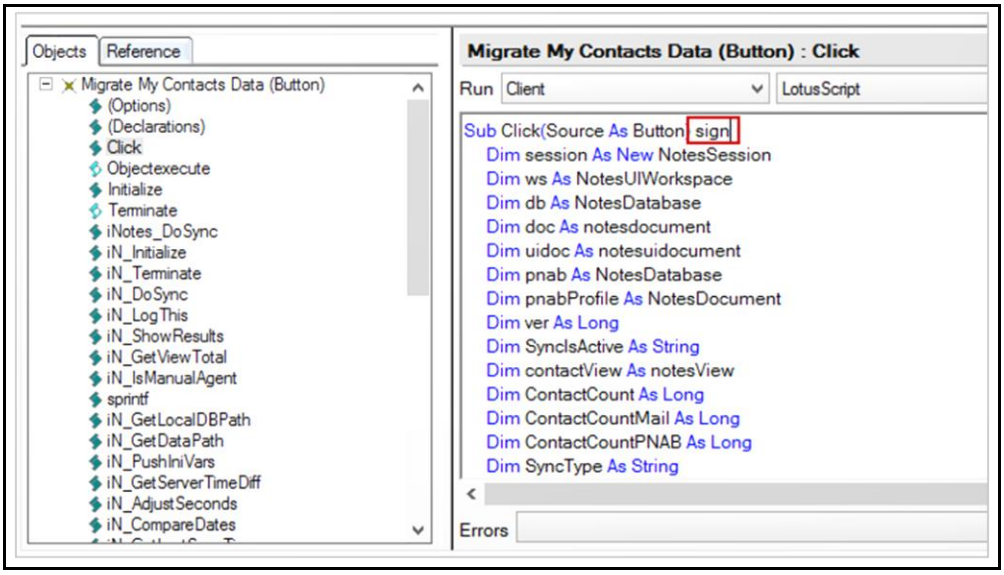
The location to copy is specified in the *Migrator for Notes Settings* document. The script will only search for templates that are specified in the *Migrator for Notes Settings* document. Refer to the End User Migration Settings configured in the *Migrator for Notes Settings* document.

4.14. Signing a Button in a Message Template

1. Open a Message Template
2. Click on **Edit Document**
3. Right-click on the button and select Edit Button:



4. A code window will appear, type the word sign, and then delete the text:



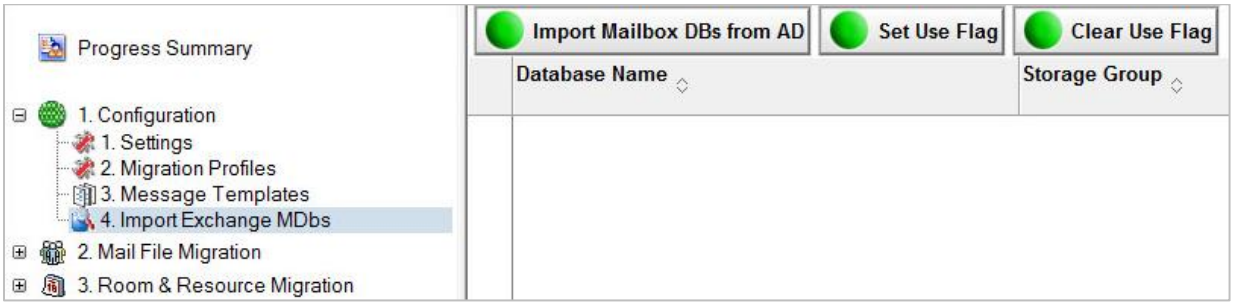
5. Click **Save and Close**.

   The button will now be signed with the appropriate administration ID, and end users will not receive execution security (ECL) alerts when they click the button within the message template.

4.15. Importing Exchange MDb's

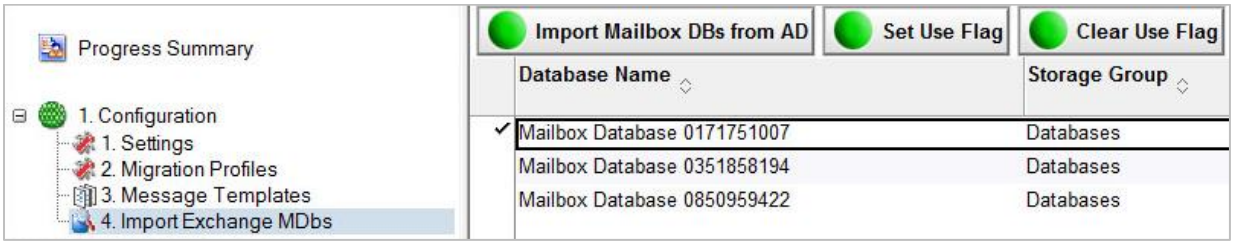
Migrator for Notes will need to have a reference to the Exchange MDbs that are available to be migrated to. To import these, follow the below steps.

1. Select **5. Import Exchange MDbs** in the Navigation Pane
2. The Data Pane will display an empty view of Exchange MDbs:



3. Click the **Import Mailbox DBs from AD** button to import the available Exchange MDbs

4. Select the appropriate Mailbox Databases from the list to be used and click the **Set Use Flag** button.



NOTE ! This is not required for Office 365 Migrations.

About us

Quest creates software solutions that make the benefits of new technology real in an increasingly complex IT landscape. From database and systems management, to Active Directory and Office 365 management, and cyber security resilience, Quest helps customers solve their next IT challenge now. Around the globe, more than 130,000 companies and 95% of the Fortune 500 count on Quest to deliver proactive management and monitoring for the next enterprise initiative, find the next solution for complex Microsoft challenges and stay ahead of the next threat. Quest Software. Where next meets now. For more information, visit www.quest.com.

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- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product.

Appendix A: Preparing for Office 365 Migrations

The following additional requirements and procedures are required when preparing for migrations where the target location is Office 365.

Additional Requirements

Software:

- Azure Active Directory Module for Windows PowerShell (64-bit version)
-

Accounts:

- 1 or 2 (recommended) Global Administration Tenant-only Accounts in Office 365
- 1 Standard Tenant-only Mailbox Enabled Account for every two workstations. These accounts are configured through the Connectivity Tester for use in Outlook by the migration worker or in an Outlook profile named 'Migrate' for Modern Authentication (OAuth) enabled tenants. These accounts have to be in an Office 365 Mail Enabled Security group for Full Access permissions access to the target mailboxes.
- The migration workstation needs a Windows local admin account to login.

Additional Procedures

In addition to the typical procedures to prepare for migrations, the following steps are needed for migrations to Office 365:

1. Create Full Access Security Groups in Office 365 - this is used for the Set Full Access process which should be run just after an account is activated and enables permission access for the migration worker Outlook account to the user's Exchange online mailbox. The system default name for this group is FullAcessAdmin but can be changed on the Settings | Office 365 tab.

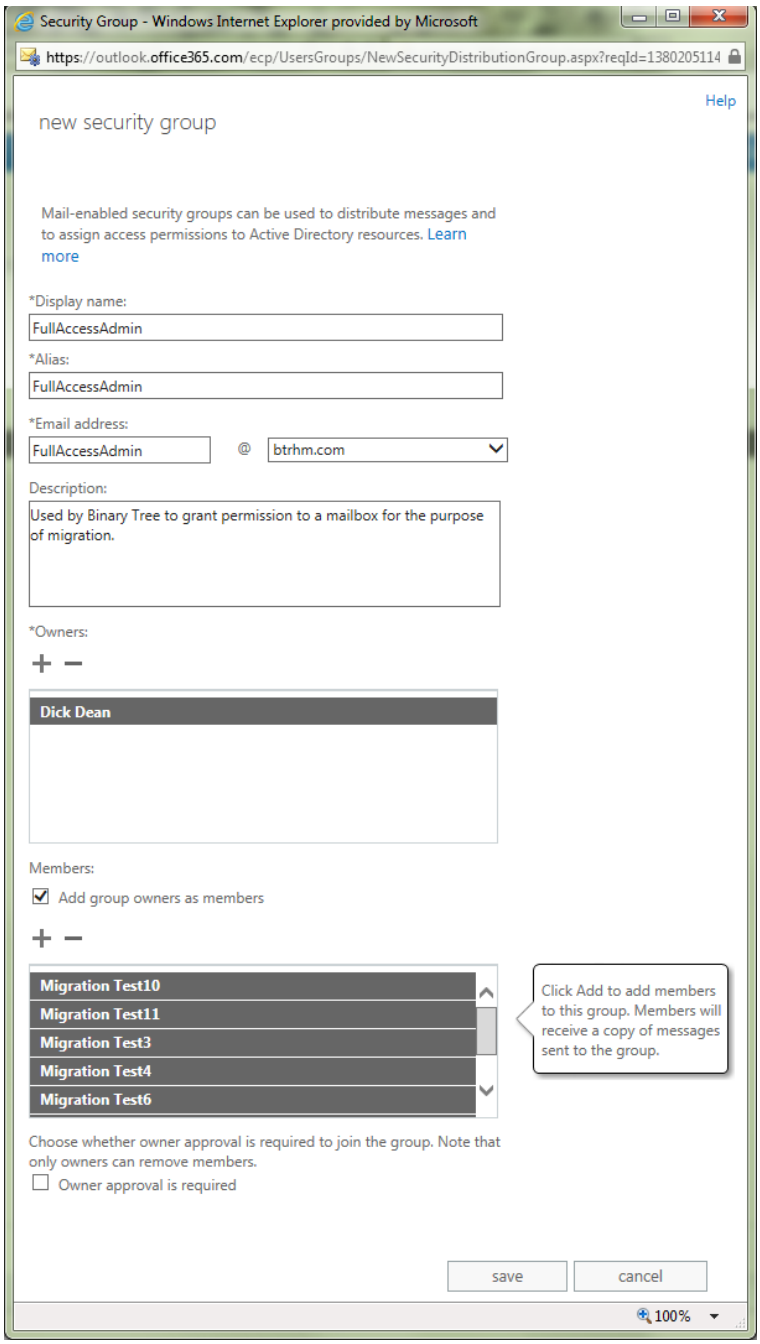
   To create a security group in Office 365:

   a. Log into the Office 365 portal at https://portal.microsoftonline.com/ after and then click the "Admin" drop down menu and select "Exchange".

   b. Click on the "Groups" link to refresh the page.

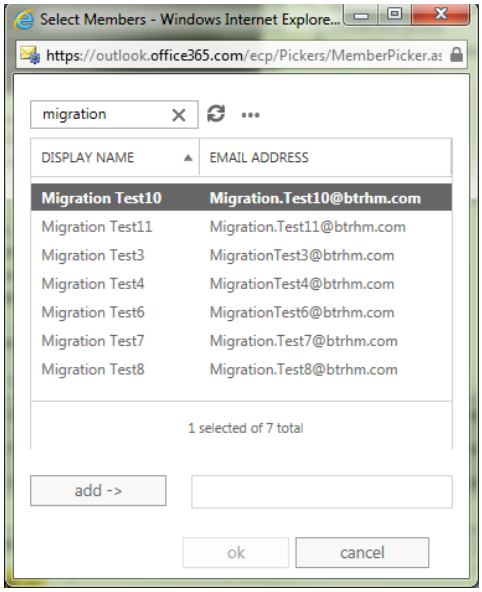
   c. To create a security group, click the "New" (Plus Sign) action.

d. The new security group form will open to be populated. The image below is an example group form and the default values that should be used:



e. To populate the membership list with all the proper accounts, click the “Add” action under the “Members” section.

f. An Address List will appear. Perform a broad search term for all the accounts you require and then elect all the accounts you would like to add.



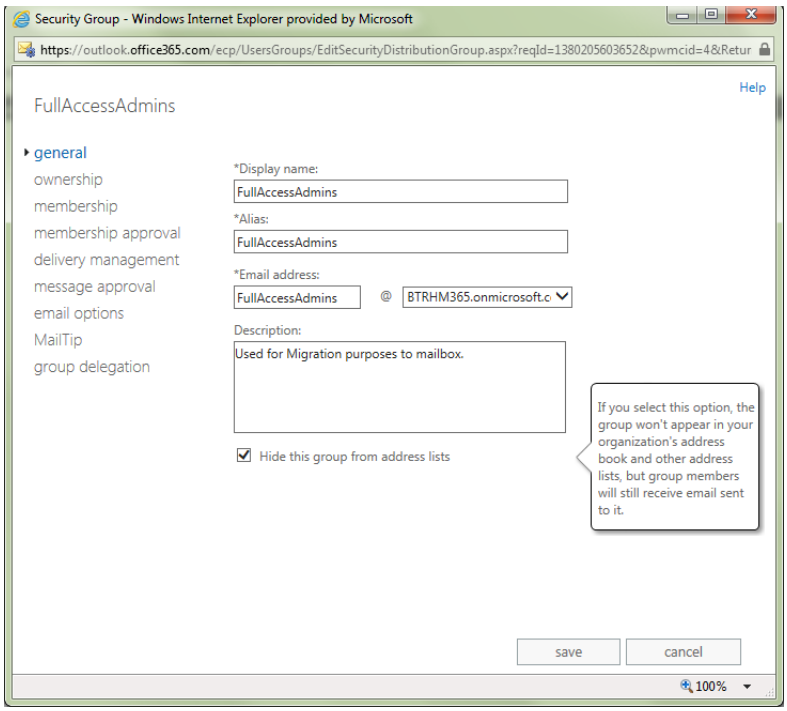
g. Click the “Add” action to populate the field.

h. Click the “OK” action to populate the form.

i. Once the add list closed, select the “Save” action at the bottom of the New Group form.

j. Once the form is saved and closed, select the group you just created from the Distribution List view.

k. Double click the entry to display the group’s properties.



l. Place a check mark in the “Hide this group from the shared address book” option in order to prevent end-users from using the group for email purposes.

m. Click the “Save” action to complete the process.

n. If you have additional members to add in the future follow this process but now expand the membership list to add or remove certain accounts from the group.

2. Set up remote PowerShell - To run any cmdlets in Office 365, an account that has the "Global Administrator" role assigned to it is required.

   To setup a workstation to access everything via PowerShell:

   a. Launch PowerShell as an administrator. At the prompt, type:

      Set-ExecutionPolicy Unrestricted

   b. To authenticate using Remote PowerShell of O365-MT:

      $Cred = Get-Credential "accountname@yourdomain.onmicrosoft.com"

      $Session = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri https://ps.outlook.com/powershell/ -Credential $Cred -Authentication Basic –AllowRedirection

      Import-PSSession $Session

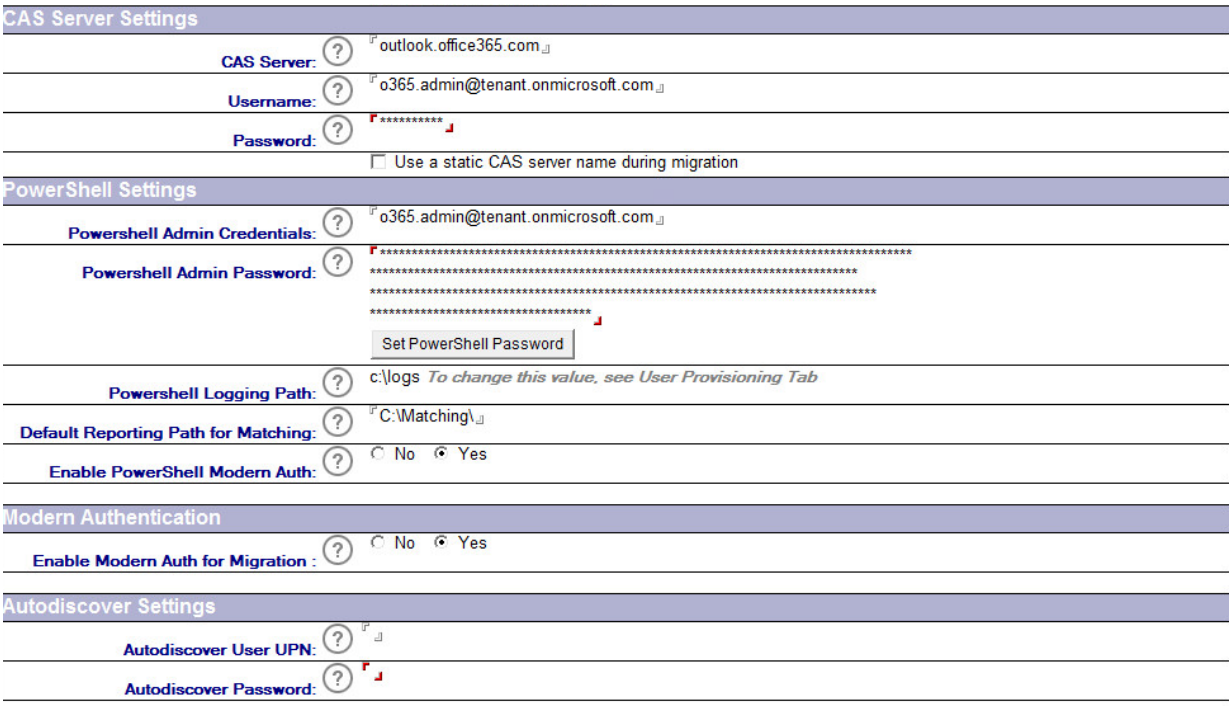
Appendix B: Preparing for Office 365 Modern Authentication

The following additional configurations and procedures are required when preparing for migrations where the target location is Office 365 and Modern Authentication (OAuth) will be used. These do require the option to migrate to Office 365 to be enabled.

Settings Updates

The Migrator for Notes Settings will require the below to be configured on the Required Settings | Additional tab:

- Enable PowerShell Modern Auth set to Yes
    - This will configure the PowerShell functions to use Modern Authentication processing for account validation, provisioning, setting full access and matching. This enables the use of the Microsoft Graph and ExchangeOnlineManagement modules.
- Enable Modern Auth for Migration set to Yes
    - This will update the Migration Profile to instruct the Migration Worker to use Modern Authentication for its Outlook connection to Office 365. This will use an Outlook profile on the Migration Worker that is configured for Modern Authentication.



NOTE ! The PowerShell Admin account password can be entered using the Set PowerShell Password button. This will prompt for the password in PowerShell and enter a hash of the password using the PowerShell As Secure method. This is not required and if left blank the PowerShell processing will ask for the password when the functions are performed.

NOTE ! For Delegation migrations an Azure App ID will be required and added to the Delegation tab. Details for this configuration can be found in Appendix F: Modern Authentication Delegation Migration.

Additional Procedures

Migration Controller

The use of Modern Authentication with PowerShell requires the ExchangeOnlineManagement module V3 to be installed. This also requires TLS 1.2 to be enabled on the Migration Controller for PowerShell connectivity. These may require the installation of the PowerShellGet module, steps for completing the updates are below.

If prompted for updates to be completed these should be accepted.

Set up PowerShell for remote access on the Migration Controller:

- Launch PowerShell as an administrator. At the prompt, type:
    - Set-ExecutionPolicy Unrestricted
- Install PowerShell Modules and enable TLS 1.2:
    - Set-ItemProperty -Path 'HKLM:\SOFTWARE\Wow6432Node\Microsoft\.NetFramework\v4.0.30319' -Name 'SchUseStrongCrypto' -Value '1' -Type DWord
    - Set-ItemProperty -Path 'HKLM:\SOFTWARE\Microsoft\.NetFramework\v4.0.30319' -Name 'SchUseStrongCrypto' -Value '1' -Type DWord
    - Install-PackageProvider -Name NuGet -Force
    - Install-Module -Name PowerShellGet -Force
    - Install-Module Microsoft.Identity.Client
    - Install-Module MSAL.ps
    - Install-Module Microsoft.Graph
    - Install-Module –Name ExchangeOnlineManagement
    -

Migration Worker

The use of Modern Authentication with the Migrator for Notes worker application requires an Outlook profile to be configured on the worker machine. This would be configured for an Outlook profile named Migrate and would use the Office 365 account designated for the worker migration access to the target mailboxes.

The Outlook profile created will generate the required access token for Office 365 access to the migration account mailbox and the target account mailboxes. Migrator for Notes will then use this token and the refresh token for migrations. Migrator for Notes does not generate the token itself.

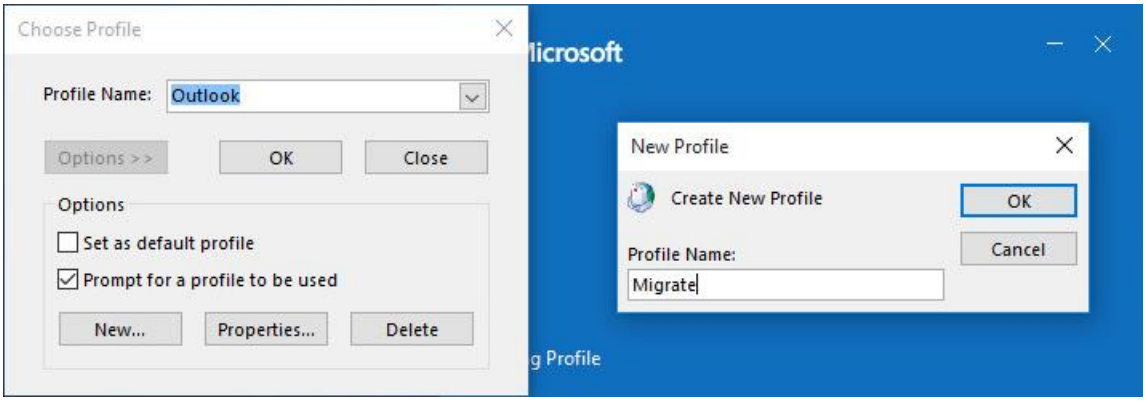
The below steps show the configuration of an Outlook profile through the process of opening Outlook for the first time. This can also be completed through Control Panel | Mail (Microsoft Outlook Version) (32 Bit) | Show Profiles.

NOTE ! This will no longer use the Connectivity Tester account on the migration worker for the Modern Authentication configuration.. The autodiscover location for a mailbox or archive is processed by the PowerShell matching in the Migrator for Notes.nsf and is required for Modern Authentication configurations. The Connectivity Tester account is still used if Modern Authentication is not enabled.

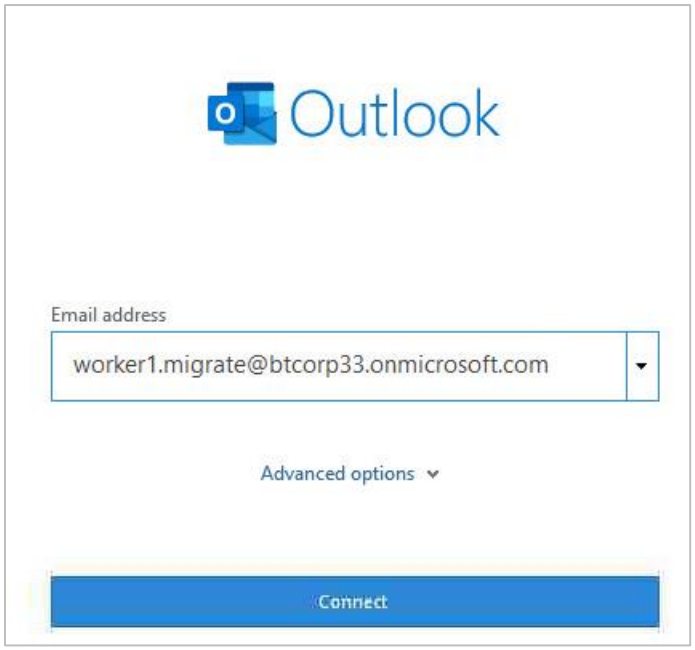
To create the Outlook profile for a migration worker:

Open Outlook on the migration worker and choose Options | New

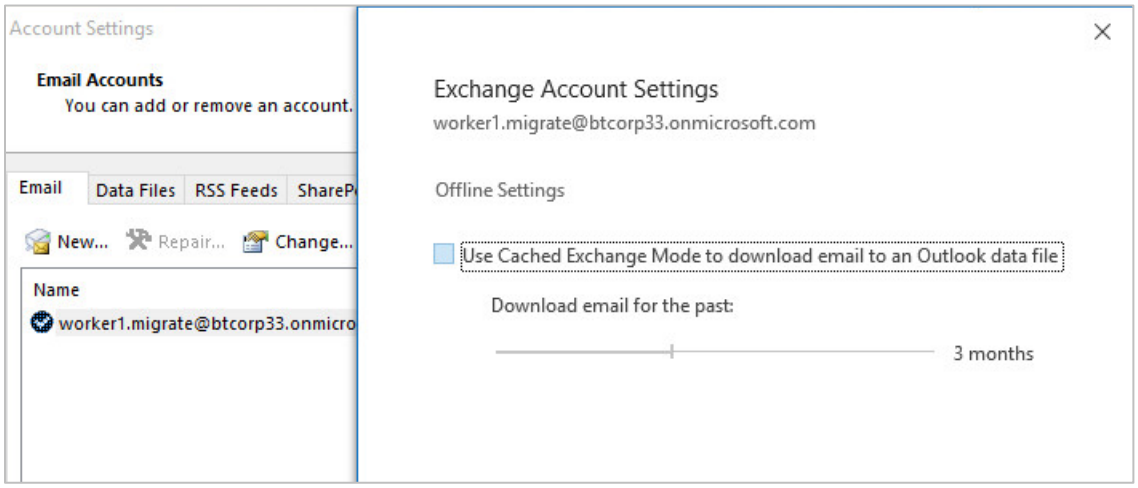
Set the name of the profile to Migrate



Enter the address of the account the would be used for the worker migrations and connect to Office 365



After the profile is configured click on the Properties, select the account used and select Change. Disable Cache Exchange Mode.



Open Outlook with the Migrate profile to validate that it is connected and to ensure that the token is created.

Appendix C: Creating a Migration Farm

Why do I need to create a Migration Farm?

In a large enterprise where thousands of users need to be migrated, using a single Migration Workstation can't serve the purpose. Migrator for Notes provides a feature that allows you to migrate many users using parallel processing.

Parallel processing is defined as the ability to execute multiple simultaneous migrations using multiple Migration Workstations.

To achieve true parallel processing, the first step is to create a migration farm. Migrator for Notes can be easily configured to create a migration farm by configuring a Migration Control Center and multiple Migration Workstations. These workstations can be located, provisioned, managed, and monitored anywhere in the world.

Manual versus Automated Workload Distribution

In a typical set up, Migrator for Notes distributes migration load among multiple Migration Workstations that are located at multiple location and communicating with the one Migration Control Center. But if the large enterprise is spread over multiple regions/sites, Migrator for Notes can also be configured such that you can run migrations independently at each site to keep migration localized.

Workload can be distributed from the Migration Control Center to Migration Workstations in two ways:

Manual

This type of workload distribution enables migration administrators to fully control time and workstation for each user's migration.

Automated (Automated Workload Distribution (AWD))

This type of workload distribution ensures continuous migration execution among a group of workstations.

How many migration workstations can be added to a farm?

Up to 140 workstations can be added to a farm before an additional farm must be created.

What are the prerequisites for migration workstations?

The most critical prerequisite is that Migrator for Notes, the Lotus Notes Client, and the Microsoft Outlook client must already be installed on each migration workstation. Refer to the Migrator for Notes Requirements document form more details.

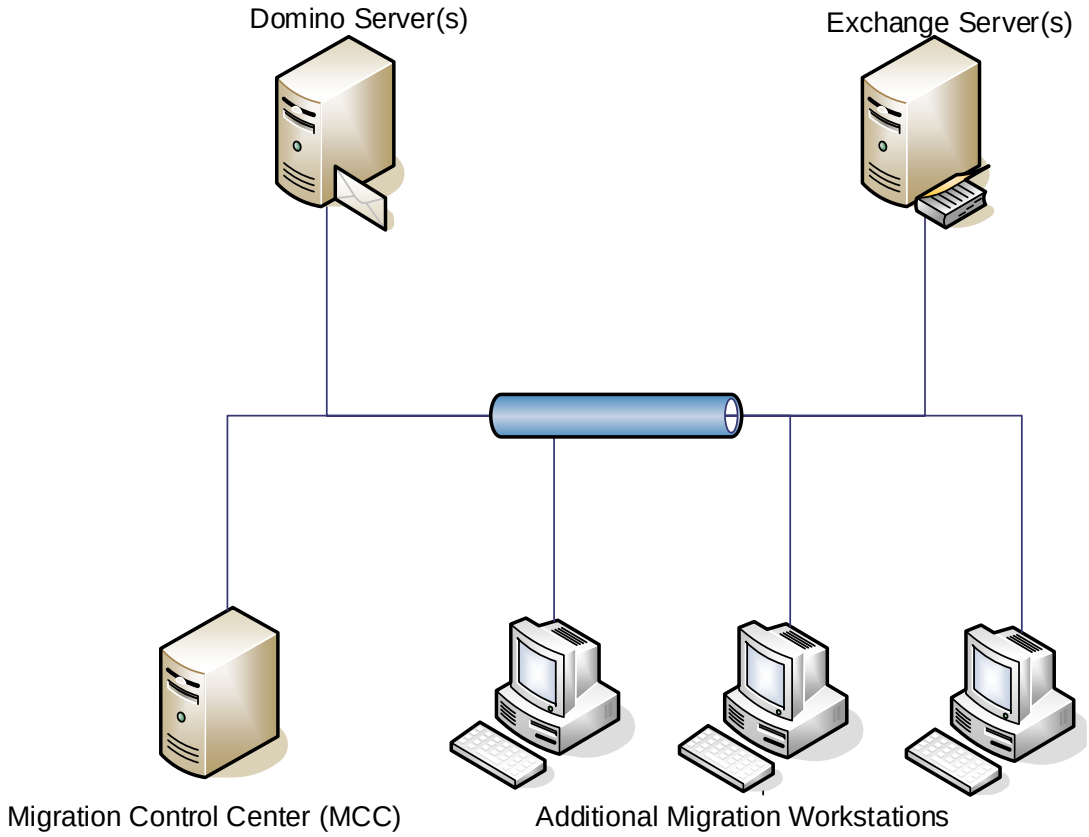
Additional migration workstations should be configured as recommended for Migrator for Notes. The workstation must have the following:

- Notes client installed. You will also need a Notes user ID that has permission to access the servers and mailboxes you want to migrate. Open a database on each server you will be accessing and verify that you have a valid certificate for the server.
- Outlook client installed.
- Requirements software for .NET and Visual C++ installed.
- ALL updates and service packs for Windows and Office.

Coordinated Universal Time (UTC) is not supported as a time zone for the migration controller and workstations. The time zone should be configured to include an offset such as

(UTC+00:00) or (UTC-05:00) with the relevant location.

How do I create a migration farm?



Installing a Migration Workstation

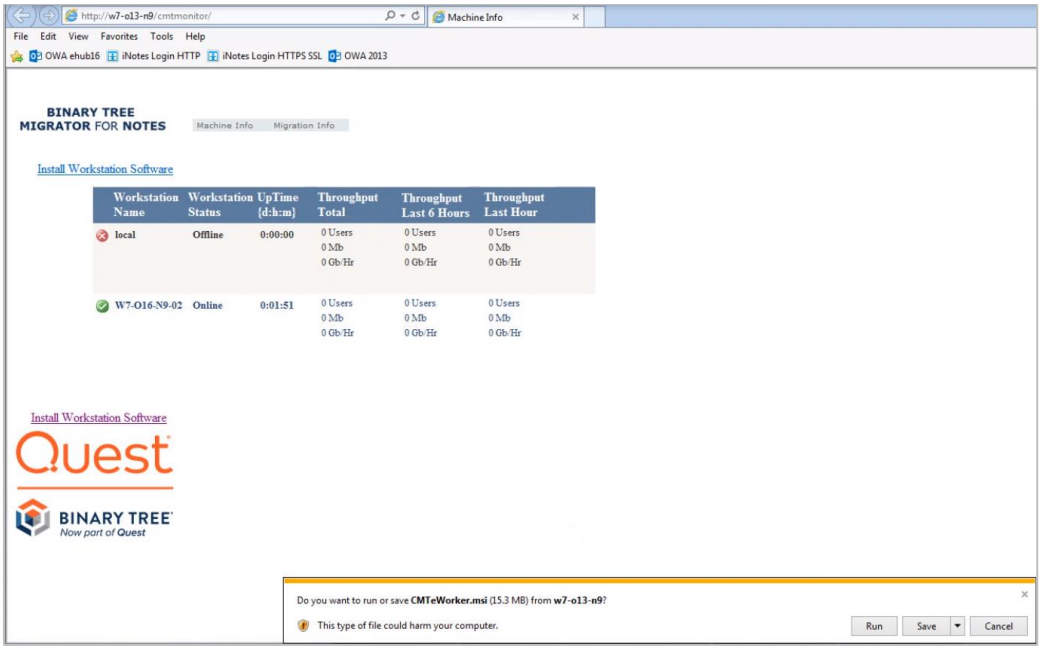
Installation of the migration worker can be done via two methods, via GPO MSI installer or through the CMTMonitor web page.

The migration worker installation will not install the requirements software, these should be installed separately prior to completing the migration worker install.

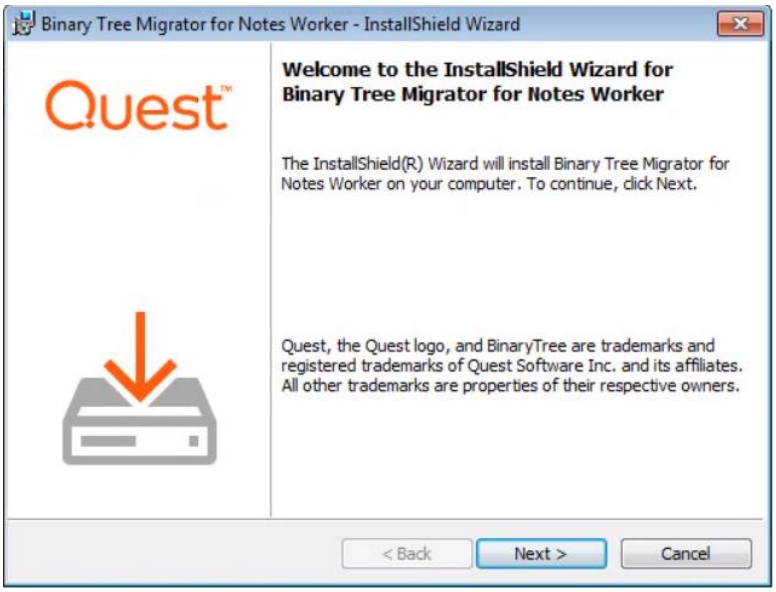
Installing via the CMTMonitor

1. On one of designated Migration Workstations, (**not** the Migration Control Center), launch Internet Explorer and go to the Migration Control Center/CMTMonitor website.

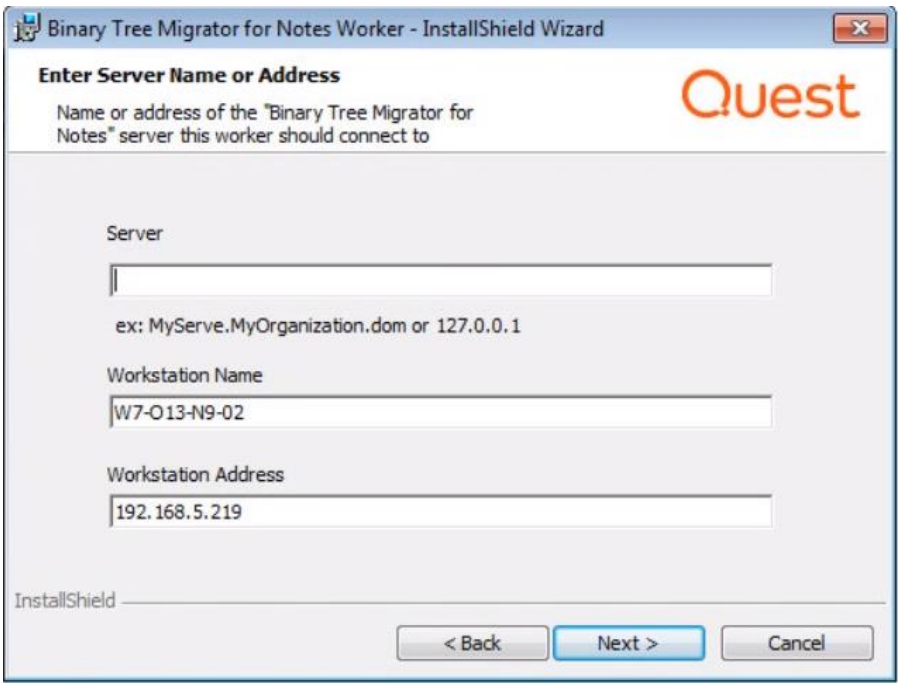
2. Click the **Install Workstation Software** link and then **Run**



3. Click **Next** on the Welcome screen

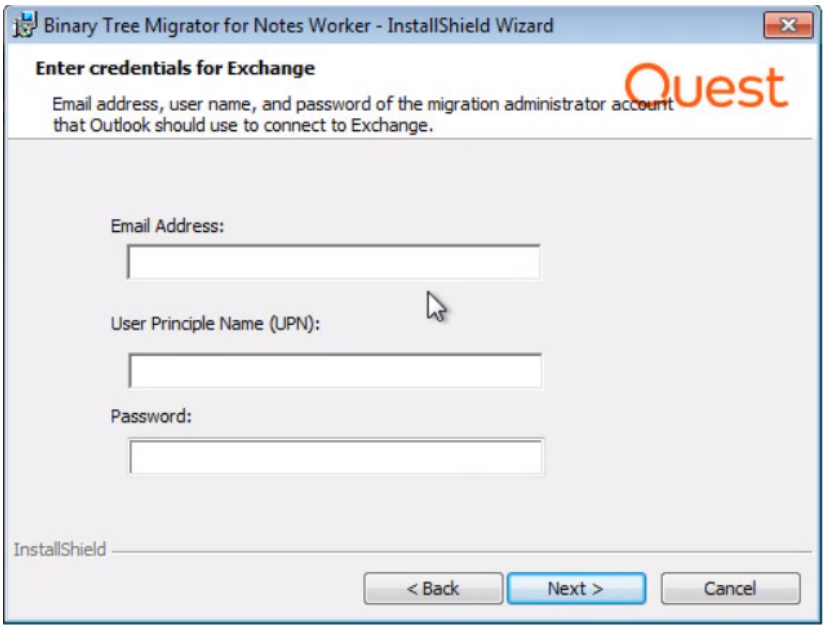


4. Enter the Migrator for Notes server name, workstation name, and workstation address and click **Next**.



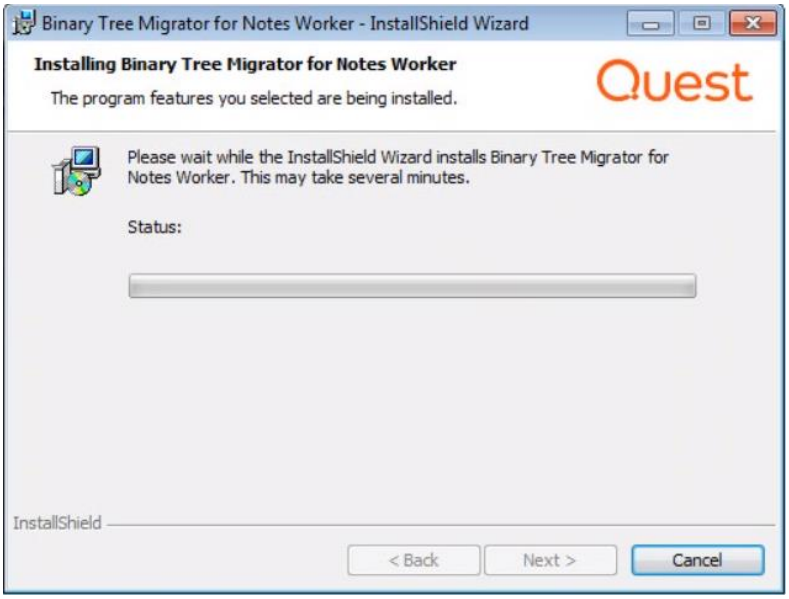
5. Entering user account information is optional on this screen. In smaller farm scenarios, you can continue to use the Migration Administrator account distributed by the MCC. If you wish to use another Migration Administrator account, enter the information in this screen.

   This information is encrypted and cached on the Worker.

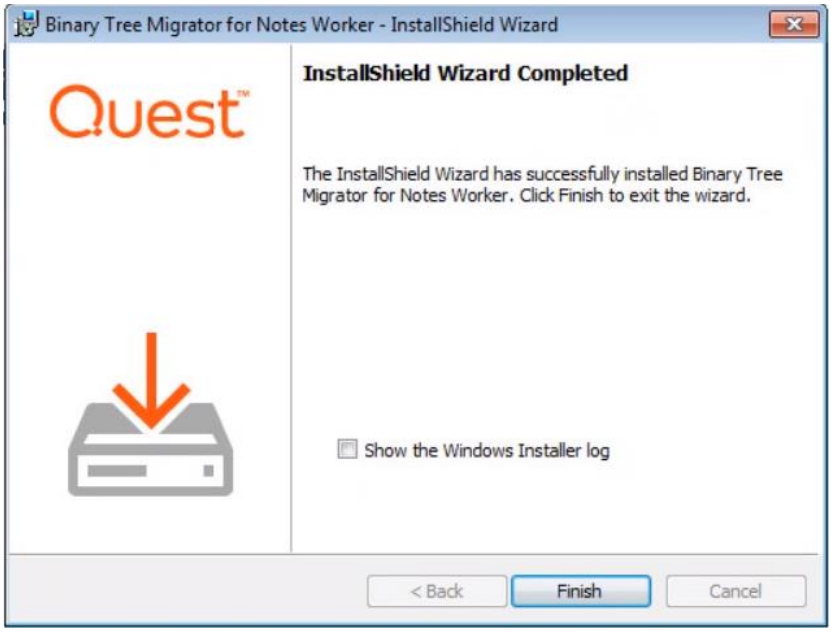


NOTE ! This account can be changed on the Migration Workstation through the Connectivity Tester application. This can be skipped for migrations that will use a Modern Authentication configuration.

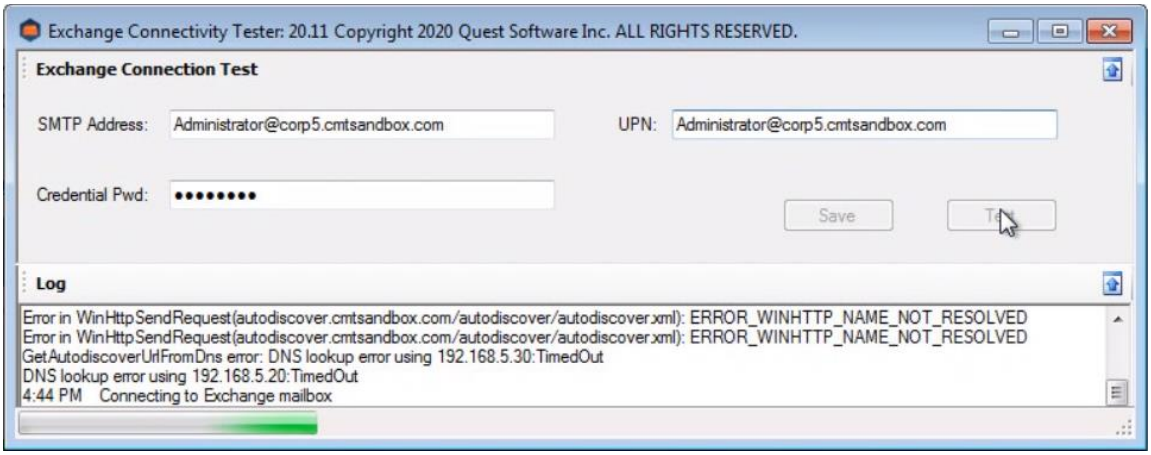
6. Click **Install**



7. Click **Finish**

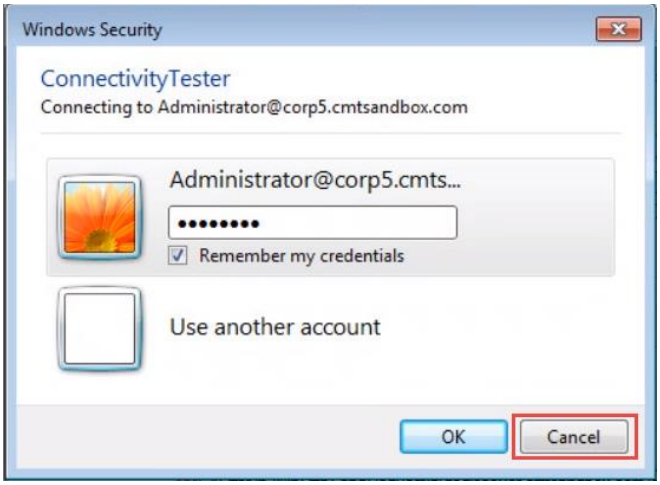


8. The Exchange Connectivity Tester will launch with the information you entered in the installer. Press the **Test** button to verify the account credentials can connect to Exchange.

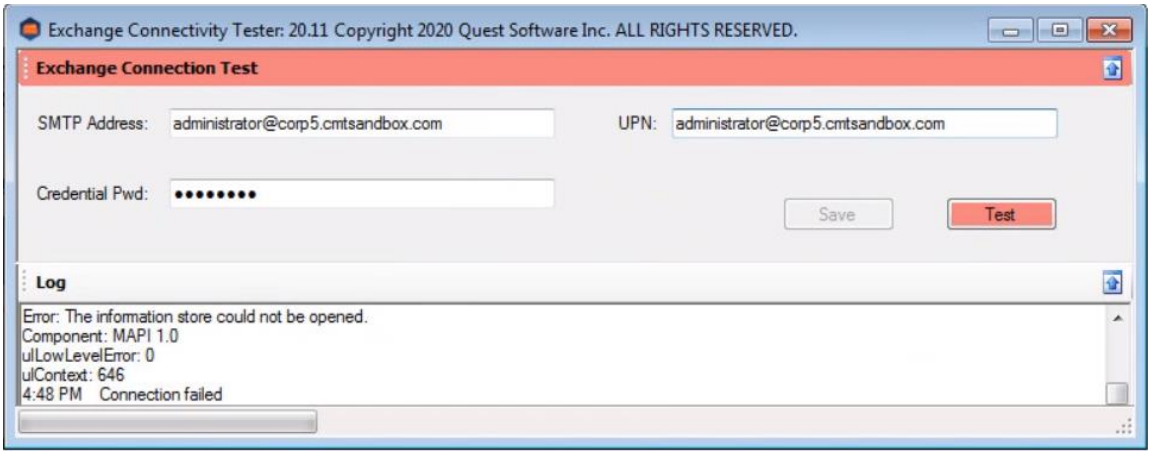


IMPORTANT: If the cached password is incorrect, a Windows Security dialog will be displayed. It is critical that you press **Cancel** and allow the test to fail. Entering the correct password in the Windows Security popup will allow the test to pass but will not change the cached credential information.

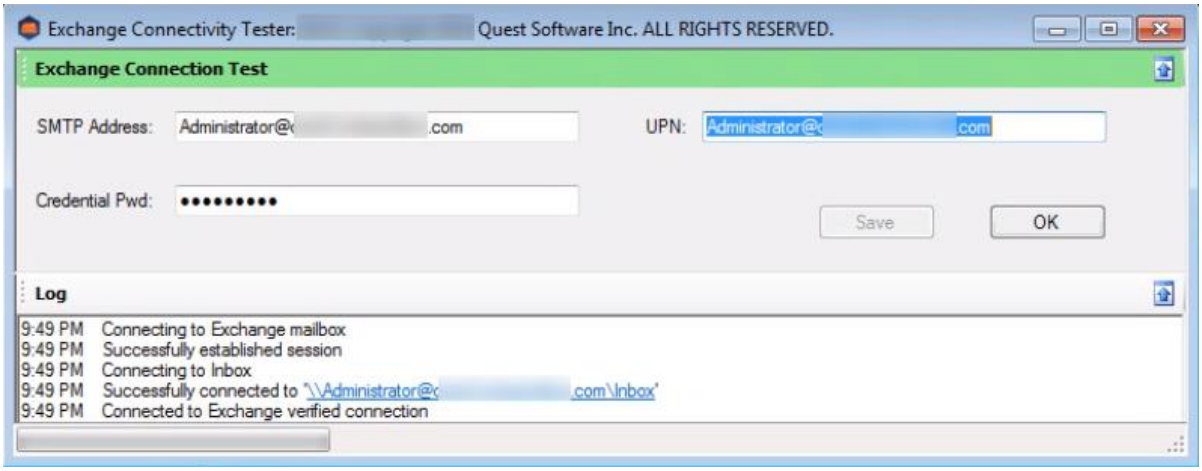
NOTE ! This is not required if Modern Authentication is used for the migration worker connections and the Migrate Outlook profile has been configured.



Enter a new password and press **Test** again.



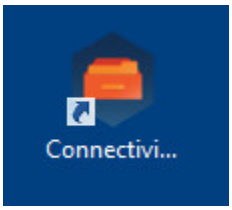
When the account information is correct and verified, the **Save** button will be enabled to allow you to update the information cached on this Worker.

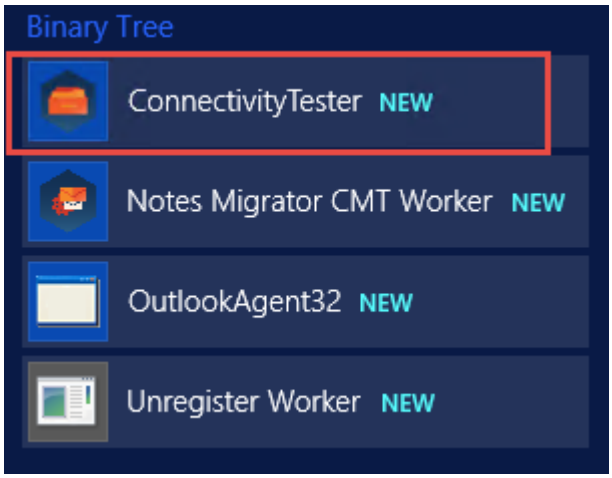


9. Press **OK** to exit the application.

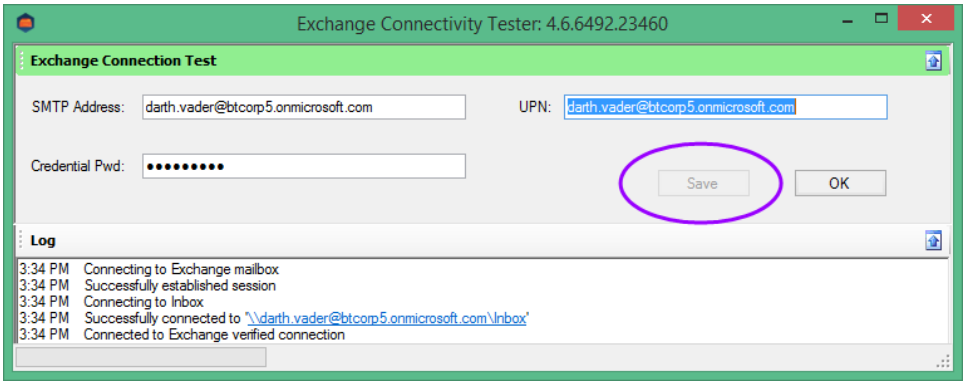
Changing the Cached Account

The Exchange Connectivity Tester is added as a desktop shortcut and to the Start menu on the Worker. You can launch the application to change the cached account information in the Worker.





Note that the Save button will only be enabled after a successful test, and the credential information is different than the credentials that are cached in the Worker. Testing the existing cached account will not enable the Save button.



Deploying via MSI file

For automated deployment, send a command line with the following arguments:

- SERVICEURL The FQDN or IP Address of the CMT_XMLServer. Normally, this is the same machine where the MCC is installed.
- EXCREDDIALOG_EMAIL: The SMTP address of a MAPI Migration Administrator account.
- EXCREDDIALOG_UPN: The “User Principal Name” of the MAPI Migration Administrator account. NETBIOS format (domain\user) is not supported.
- EXCREDDIALOG_PASSWORD: The password for the MAPI Migration Administrator account.

Example:

```
msiexec /i “CMTeWorker.msi” SERVICEURL=”mcchost.org.dom”
EXCREDDIALOG_EMAIL=migadmin@org.dom EXCREDDIALOG_UPN=migadmin@org.dom
EXCREDDIALOG_PASSWORD=”Migration admin password” /qn
```

The “EXCREDDIALOG_xxx” arguments are not needed if you wish to continue using the account distributed by the MCC.

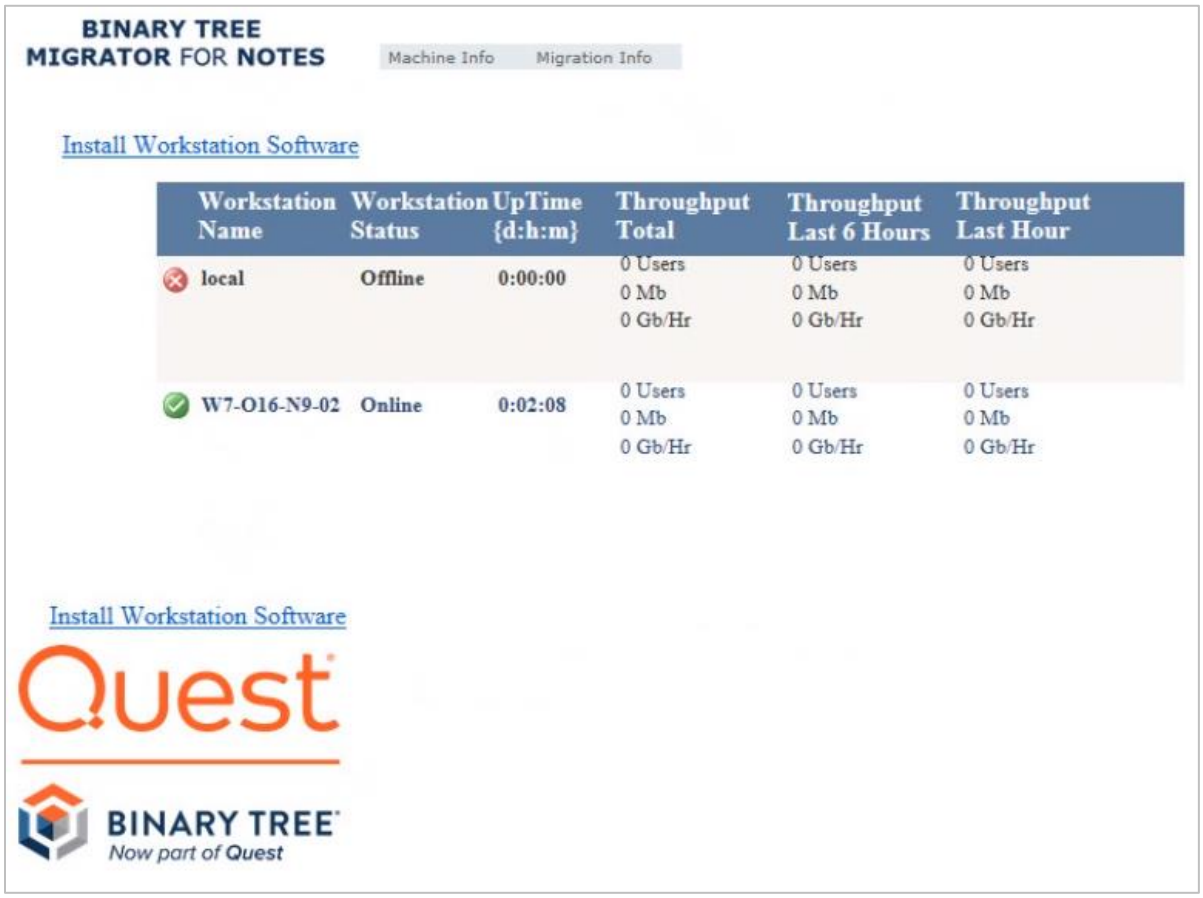
The .MSI installer does not check the workstation environment meets the minimum requirements, and does not install the missing components needed for a successful migration.

Monitoring the Website

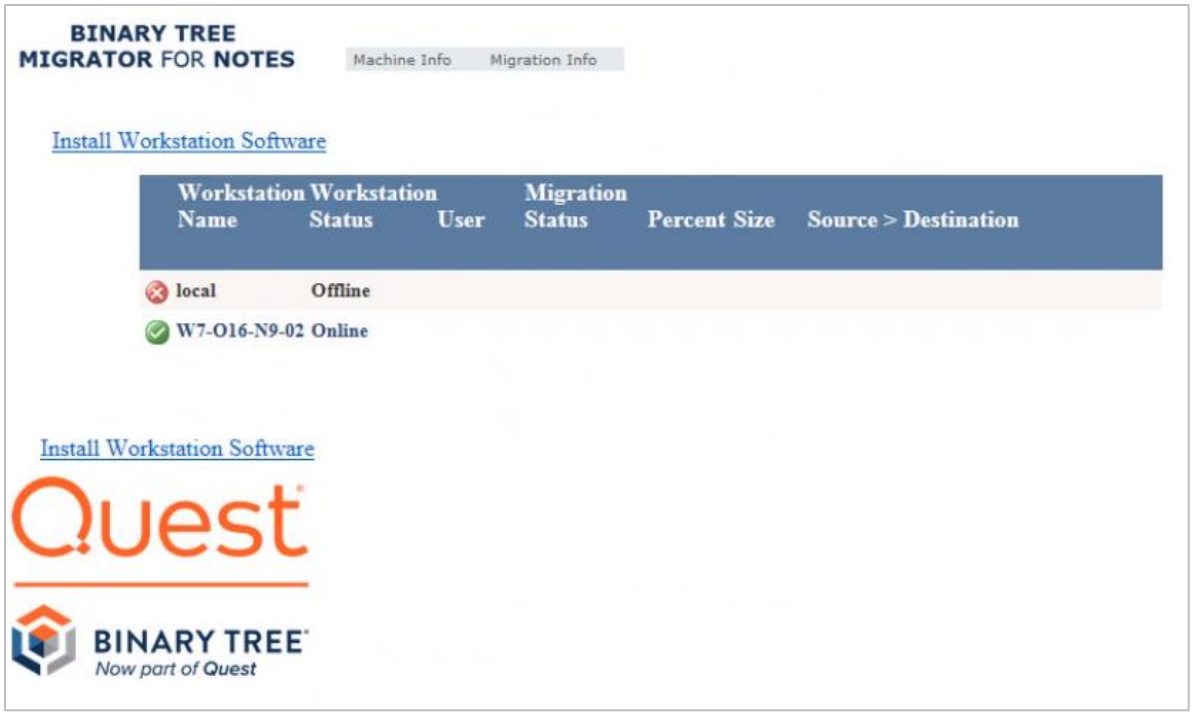
The monitor can be accessed from any machine on the LAN to observe the status of the workstations. The workstation named **local** is the migration engine installed on the Migration Control Center machine. This should not be used for AWD migrations and should be left as Offline.

The Internet Information Server (IIS) included with Windows Client Operating Systems has a 10-connection limit. The additional workstations periodically connect to the master machines IIS to get work and report status, effectively tying up one connection per workstation. Connecting to the monitor website also consumes one connection. If you exceed 10 connections, then the extra workstations may not work correctly. Install the Migrator for Notes software on Windows Server operating system if you need more than 10 simultaneous connections.

The **Machine info** page displays an overview of the migration workstations status and performance.



The **Migration info** page displays what each workstation is currently doing



The Monitor website is refreshed approximately every 30 seconds. Throughput figures are calculated after a migration is completed.

To manage the worker application on any machine, right-click the respective icon in the system tray. If the workstation is currently running a migration, the **Finish and Exit** selection allows the migration to complete and report its status before shutting down the worker application. The **Exit Now** option disconnects the worker application. If a migration is in progress, the status is not updated on the server.

Mapping System Folder Names

The migration worker does allow for a mapping of mailbox system folder names based on the language type used in the source mail file. This is not required in general but is available if there are language conflicts between the source Notes mail file and the target Mailbox folder names.

The mapping is stored in the NMFolderNames.xml on the migration worker and can be updated as required for language mappings. The language is specified by a two character language code, for example. fr for French or de for German.

The migration system defaults to English (en) and does not require changes for most migration systems. It is recommended to test a migration system to determine if any mappings would be required prior to performing production migrations.

This does not impact on personal folders in the source or target systems, these folders will be mapped based on the folder name regardless of the language used.

Upgrading a Migration Farm

Perform the following steps to upgrade your existing farm.

Upgrades are tested and verified for two versions prior to the current GA release. Older releases will generally complete an upgrade but are not tested and are not covered by product support for direct upgrades, these may require interim upgrade versions to be performed.

1. Run an in-place upgrade on the controller by clicking the "Migrator for Notes Setup XX.XX. This will upgrade the controller machine. Ensure that there are no migrations running or pending during this process. After the upgrade completes, restart the controller server.

Make sure to make a backup copy of your Migrator for Notes SQL database. This can be done through the SQL Management Studio by right clicking the database and selecting Tasks | Backup.

2. Make a design template of the "Notes Migrator.nsf" which will be located in C:\Program Files\Binary Tree\CMT for Exchange\Notes Tools after the upgrade. This can be accomplished by:
    a. Double clicking on the Notes Migrator.nsf file located in the C:\Program Files\Binary Tree\CMT for Exchange\Notes Tools on the controller machine.
    b. This will load the notes client and open the database on the controller. From the Notes client menu choose File/Application/New copy. The file copy dialog window will open. Make a copy of the database giving it a "NTF" extension instead of a "NSF" extension.
    c. Open your Migrator for Notes database on your domino server. With the file open, choose from the Notes client menu, File/Application/Design Replace. The design template dialog will open, choose your newly created template from the list of templates and hit ok.
    d. Sign the Migrator for Notes database with your current Notes ID, this on the Progress Summary page.

Make sure to make a backup copy of your Notes Migrator.nsf database on the domino server for safety purposes. This can be a Notes copy of the .nsf database to the Local Notes workstation.

3. The workers will automatically upgrade. The workers check in with the controller and when the worker finds it's at a lower release then the controller, it will automatically upgrade itself by automatically running the Migrator for Notes Worker XX.XX MSI.

The existing status for all migration accounts will be retained including the migration system licensing.

The local worker on the Controller has been removed as of 20.14 due to compatibility issues with Modern Auth. For upgrades, the worker will not be specifically removed but should not be used. A worker can be installed on the controller using the worker installation process if absolutely required but is not recommended.

Upgrading from 20.13.x

Additional steps for upgrading from previous versions for specific configurations include:

1. For Office 365 migrations an Azure AD Application ID will be required for the use of Microsoft Graph. This must be created and added to the Migrator for Notes Settings | Required Settings | Additional tab following the steps in Appendix E: Microsoft Graph Application ID.

2. For Office 365 deployments that are using a Basic Auth configuration this will require updating to use a Modern Auth configuration following the Requirements guide and this Installation and Configuration guide for those steps.

3. The PowerShell requirements for modules used on the controller will have to be added to include the new Microsoft Graph, Microsoft Identity Client and MSAL. Additionally, the ExchangeOnlineManagement module can be updated to use the V3 version in cases where this was installed prior to this version release by Microsoft in October 2023. This will allow for changing the WinRM Basic option from 'True' to 'False' if required.

   Steps to update PowerShell Modules:

   a. Launch PowerShell as an administrator. At the prompt, type:

   b. Set-ExecutionPolicy Unrestricted

   c. Install-PackageProvider -Name NuGet -Force

   d. Install-Module -Name PowerShellGet -Force

   e. Uninstall-Module MSOnline

   f. Uninstall-Module ExchangeOnlineManagement

   g. Install-Module Microsoft.Identity.Client

   h. Install-Module MSAL.ps

   i. Install-Module Microsoft.Graph

   j. Install-Module –Name ExchangeOnlineManagement

Upgrading from 5.x, 19.03.x, 19.09.x, 20.11.x, 20.12.x.

For upgrades of versions prior to 20.13 the steps for upgrading are the same as the above but will require some additional steps.

1. The requirements software on the migration workers will have to be updated to include the new .Net 4.8 and Visual C++ 2019 with a workstation restart after these are updated. This will not be automatically done by the installer and must be completed before performing the upgrade on the controller

2. For Office 365 migrations any accounts that are already imported into the migration system and matched will require re-matching using the PowerShell processing in the Match step. The accounts can be changed to the Match step by using the 'Change Step To' button on the Import or Migration | Advanced views.

3. For Office 365 migrations for delegation permissions processing that are using a Modern Auth configuration an Azure Application ID will be required. These steps are detailed in Appendix F: Modern Authentication Delegation Migration.

Upgrading from 4.6.X

The process is the same as above except for the automatic worker upgrade above. You must manually run the Migrator for Notes Worker XX.XX.msi on all workers to upgrade to the latest software.

Upgrading from 3.8x, 4.0, 4.5

For these releases, the worker software will need to be completely removed first, along with uninstalling the controller as well.

1. Uninstall all the workers by going to each worker and running the uninstall program from the control panel. This will remove the worker installation and unregister the workers from the controller.

2. Uninstall the Migrator for Notes program the control panel on the controller. This will remove all the software from the controller machine. Run the Migrator for Notes Setup XX.XX on the controller machine.

Appendix D: Securing Migrator for Notes Web Services with Windows Authentication

During a default install of Migrator for Notes, the web services are configured such that they are accessible via browser by anonymous users. In situations that require web services to be secured, you can configure the web services to use Windows authentication.

The process for securing Migrator for Notes web services includes:

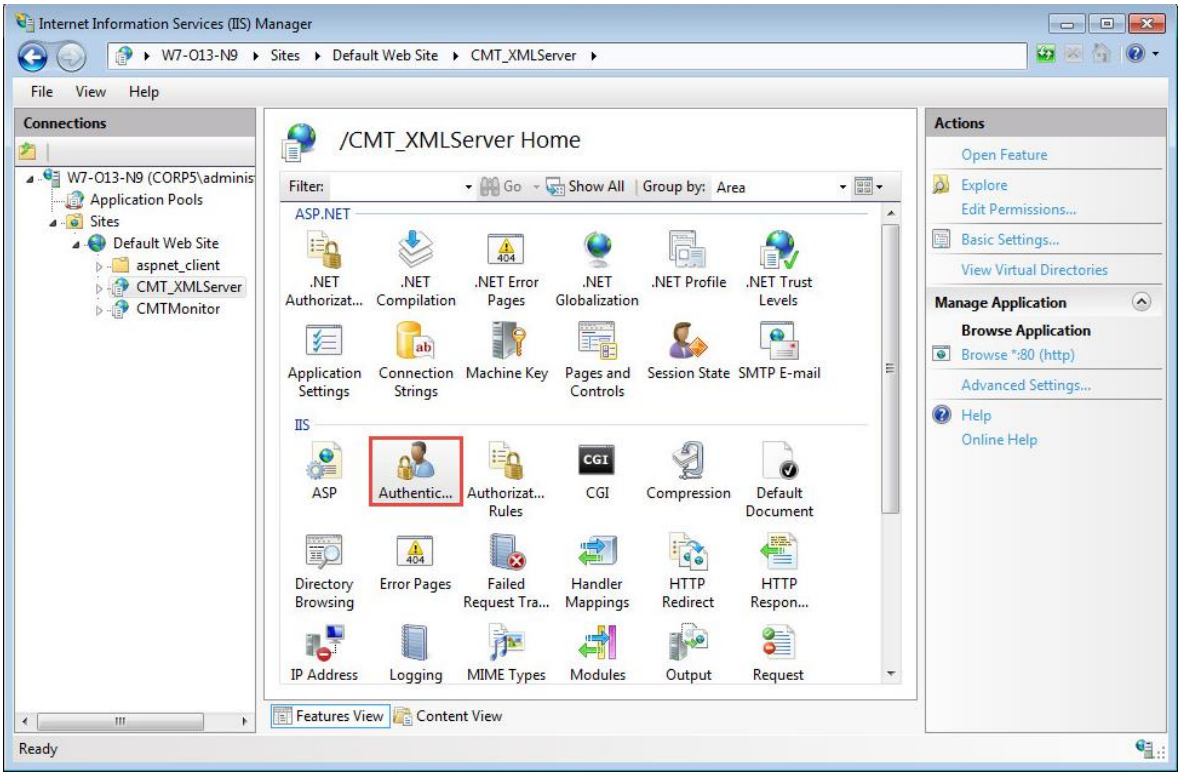
- Installing Migrator for Notes (following the steps found in this guide).
- Securing the CMT_XMLServer and CMTMonitor web sites in IIS.
- Verifying the CMT_XMLServer and CMTMonitor sites are secured.

It is recommended that a secondary computer that is not part of the Active Directory domain or a user that is not part of the group being granted access to the web services be used to verify security is working correctly.

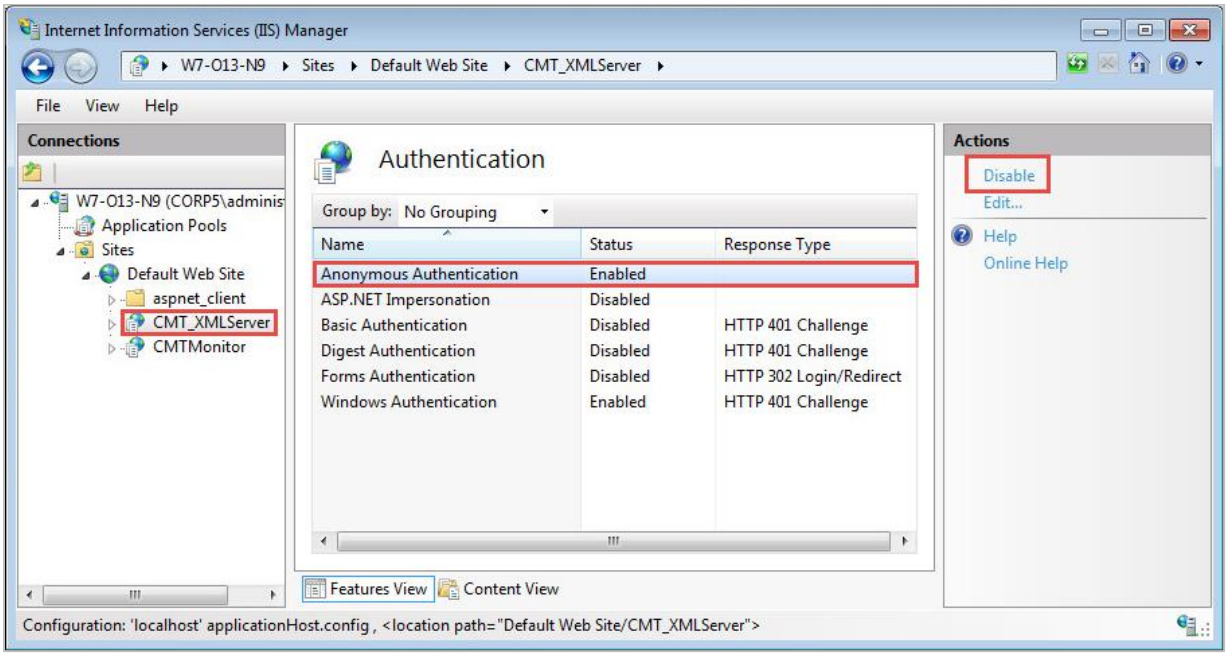
NOTE ! Any workstation that will manage the data migration using the Notes Migrator.nsf Notes database must have CMTeService component installed, and must be logged in to an account that has access to the CMT XML server in IIS.

Enable Windows Authentication on CMT_XMLServer

- Expand **Web services** in the Internet Information Services (IIS) management console, and select the **CMT_XMLServer** site; open the **Authentication** options:



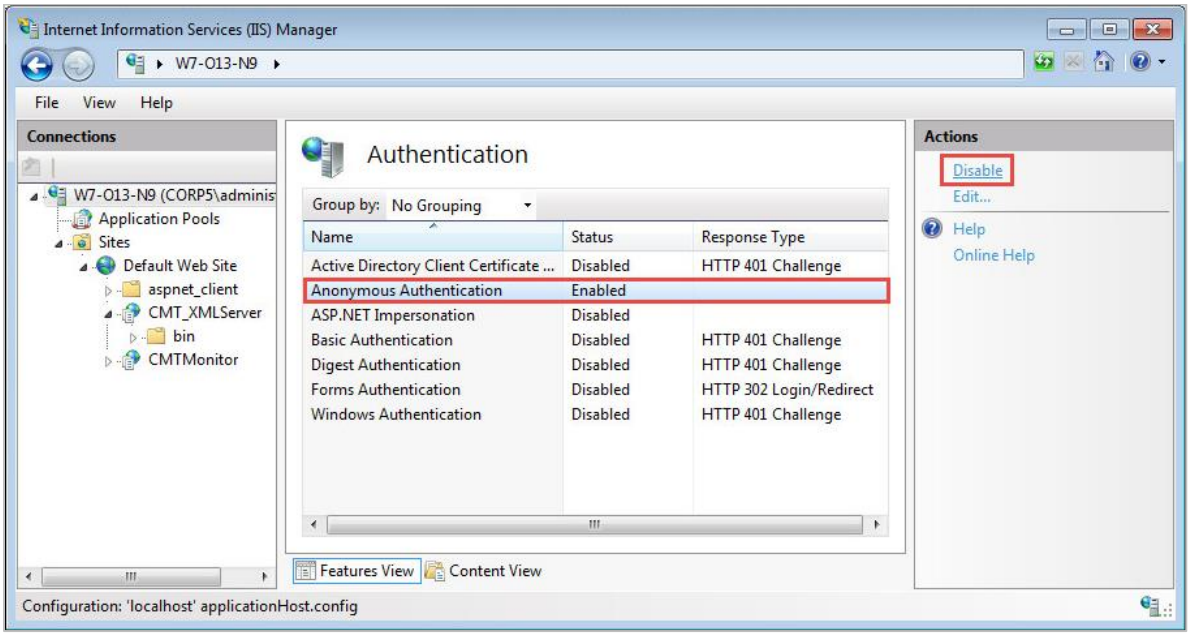
- Select **Anonymous Authentication**, and click **Disable**:



- In the Authentication options, select **Windows Authentication**, and click **Enable**:

(Optional) Disable Anonymous Access to the Root of the Web Server

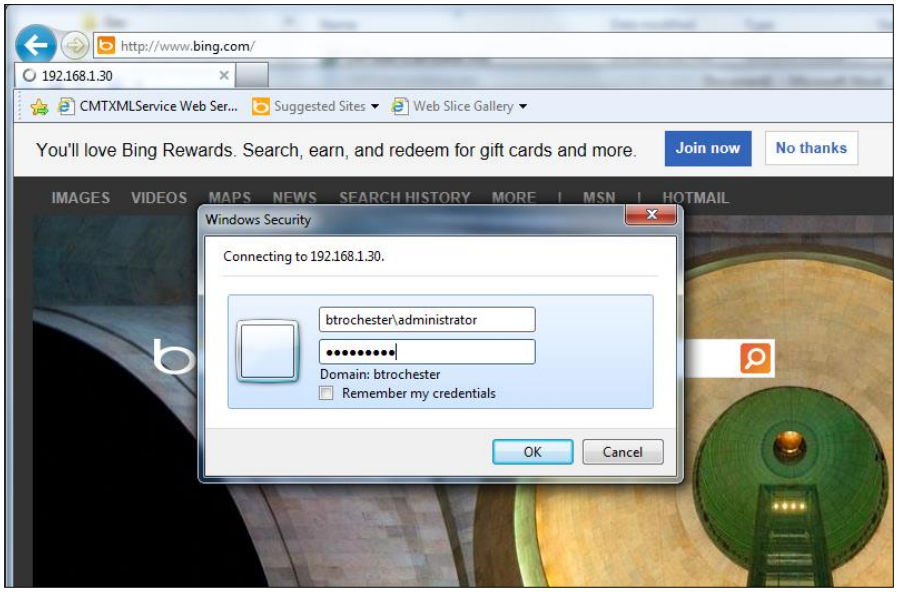
- In the Authentication window, you can disable Anonymous access to the web server at this point. Highlight **Anonymous Authentication**, and click **Disable**:



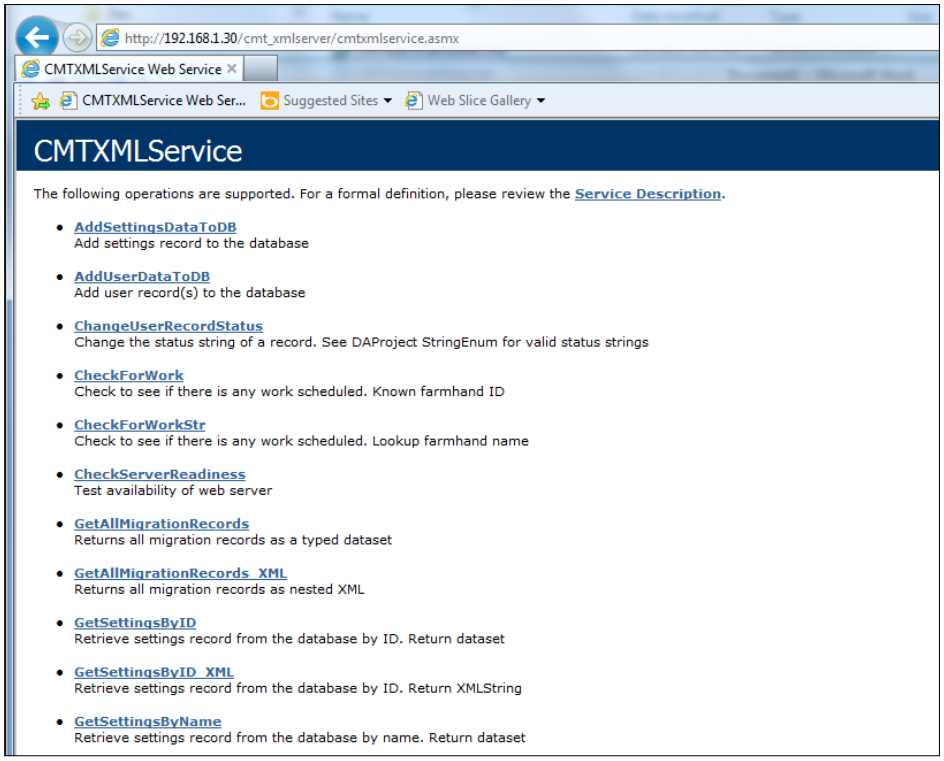
Verifying the Migrator for Notes xml Server is Secured

- Open a web browser, and access the web services page at http://servername/cmt_xmlserver/cmtxmlservice.asmx, where servername is the IP address or name of the system hosting the CMT XML server. You should be prompted for credentials to use when accessing the site. Enter the user credentials in the form of “MyDomain\Username”.

NOTE ! Do not use a browser session on the MCC or localhost addresses when verifying security of the web services. IIS treats localhost requests differently than pages containing an IP address or domain name. In addition localhost is added to the ‘Trusted Sites’ section of Internet Explorer (IE) by default, so in typical configurations IE will automatically pass credentials to the web server.

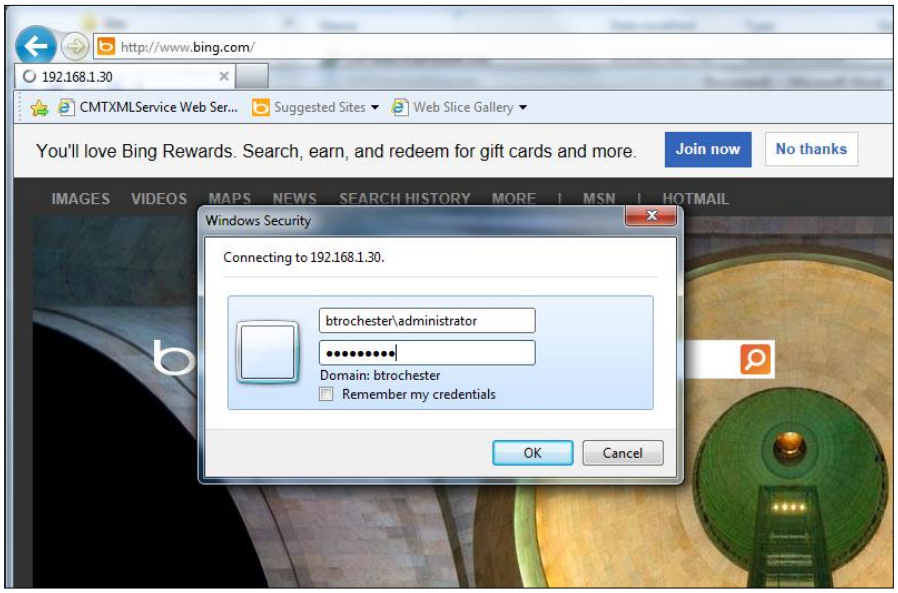


- You should see the XML service page:

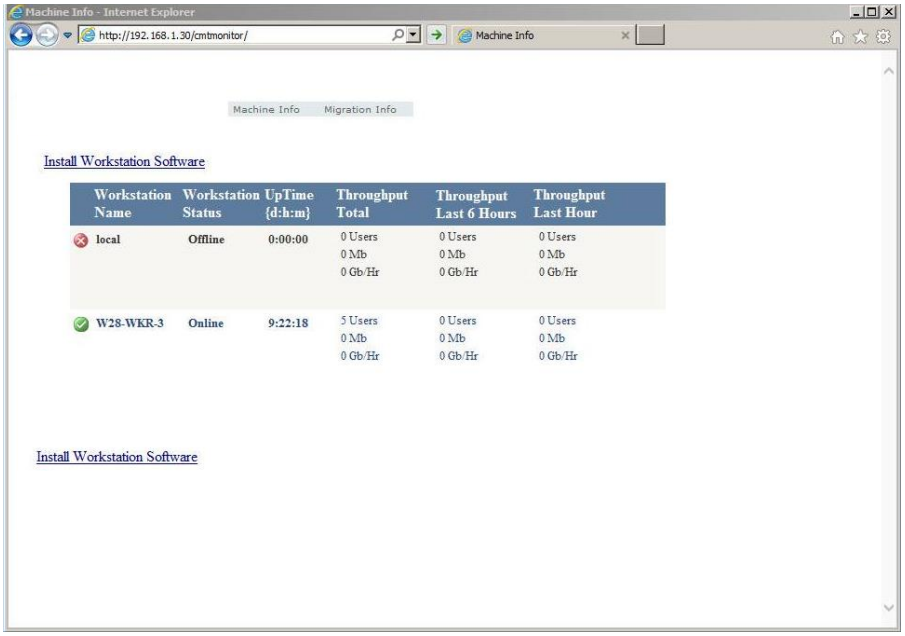


If you are logged in to the domain, and have your site listed as a 'trusted site' in Internet Explorer, you will see the web page without prompting for username and password. It is recommended that testing the security of the server be done without the xml server added as a trusted site. To check your configuration, open "Options" in internet explorer, click "Security", highlight "Trusted sites", and click on the "Sites" button.

- Open a web browser, and access the monitor page at http://servername/cmtmonitor, where servername is the IP address or name of the system hosting the CMT XML server. You should be prompted for credentials to use when accessing the site. Enter the user credentials in the form of "MyDomain\Username".



- You should see the Migrator for Notes Monitor page.

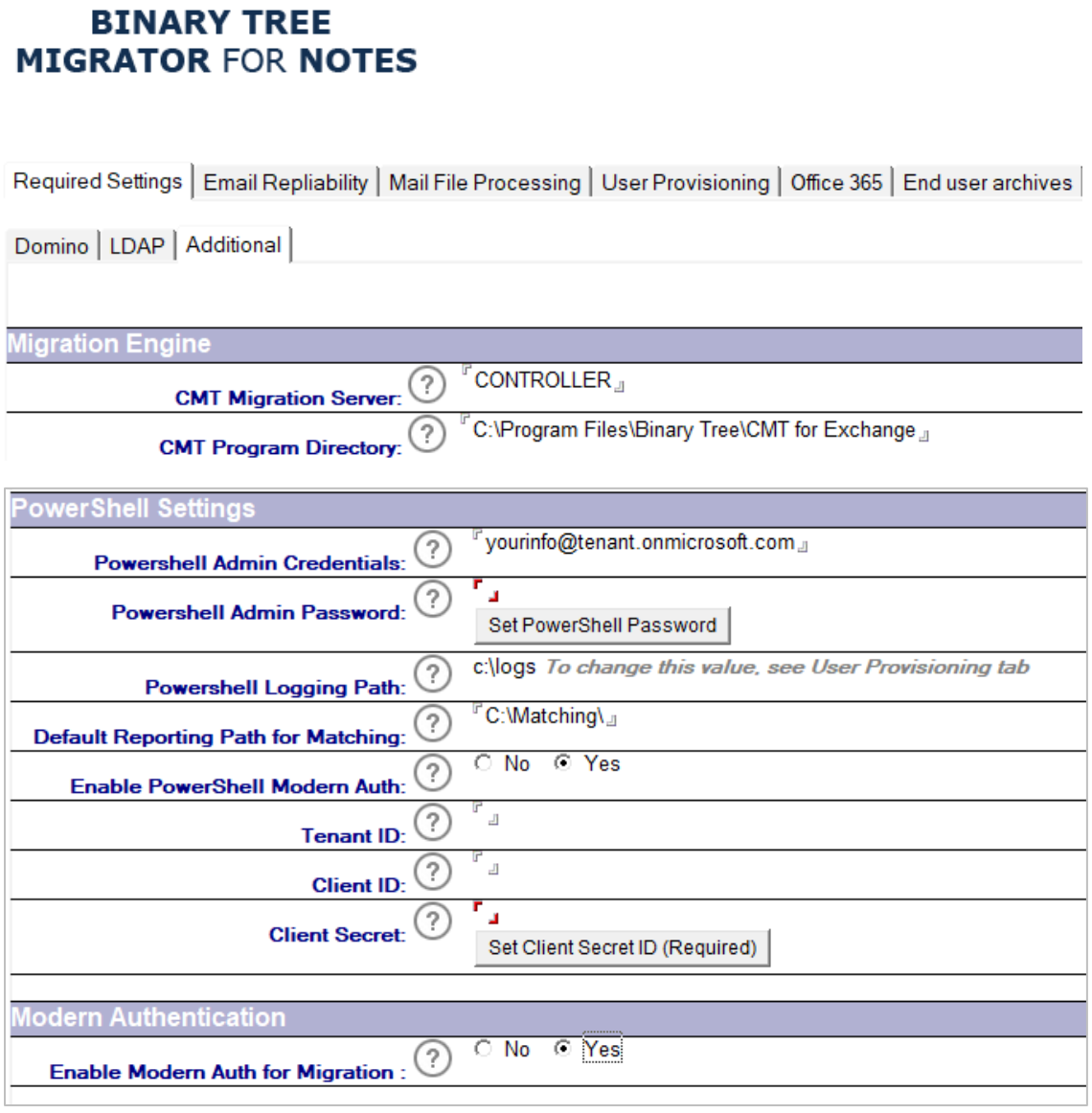


Appendix E: Microsoft Graph Application ID

The PowerShell Connectivity to Microsoft 365 does require an Application (Client) ID to be created in the tenant to process the updates for accounts and permissions application for migrations to be completed.

The process to set up an Application ID can be found in the Configuring an Azure AD Application Registration for Microsoft Graph section. The steps are based on Microsoft configuration at the time of release, refer to Microsoft documentation if these are changed.

The details for the Application ID are applied to the Migrator for Notes Settings | Required Settings | Additional tab under the PowerShell Settings section. This does require the Settings to be configured for an Office 365 (Microsoft 365) migration.



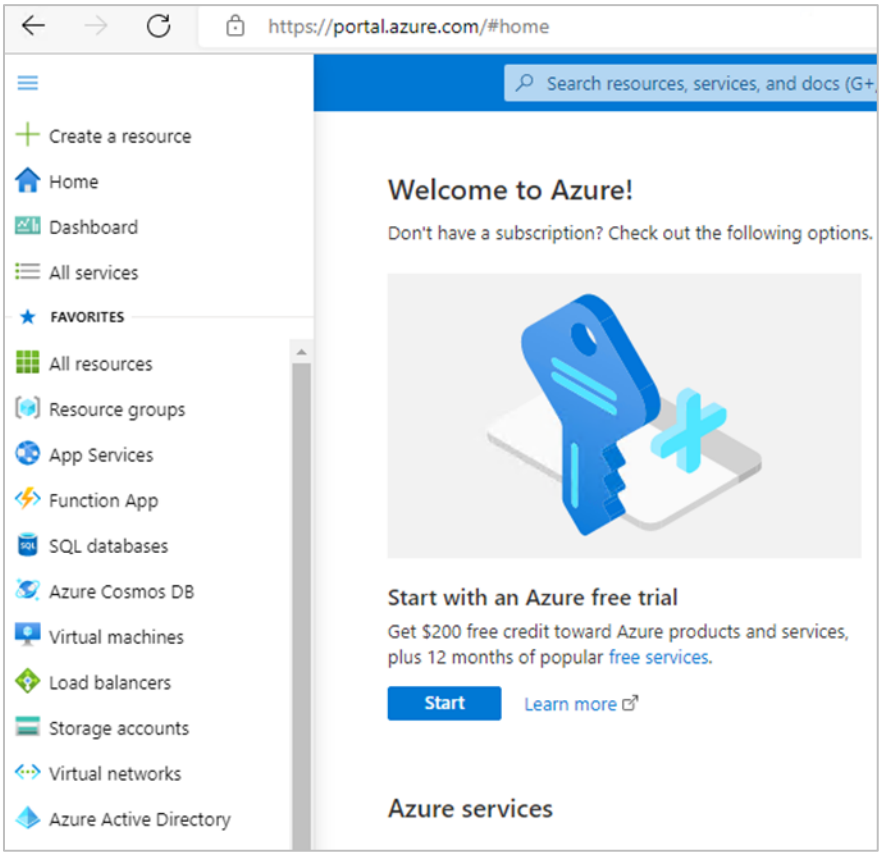
The following table describes the values for each setting.

Settings	Description
Enable PowerShell Modern Auth	A Modern Auth configuration is required and should be set to 'Yes'
Tenant ID	Target Tenant ID, this is displayed with the Application ID setup as the Directory (Tenant) ID
Client ID	Application ID created in the target tenant; this is displayed as the Application (Client) ID during the setup. Review the configuration guide for Configuring an Azure AD Application Registration for Microsoft Graph to create this.
Client Secret	Application ID secret. Review the configuration guide for Configuring an Azure AD Application Registration for Microsoft Graph to create this. Use the button to input this value to ensure that it is hashed when it is stored using the AsSecure PowerShell method.
Enable Modern Auth for Migration	A Modern Auth configuration is required and should be set to 'Yes'

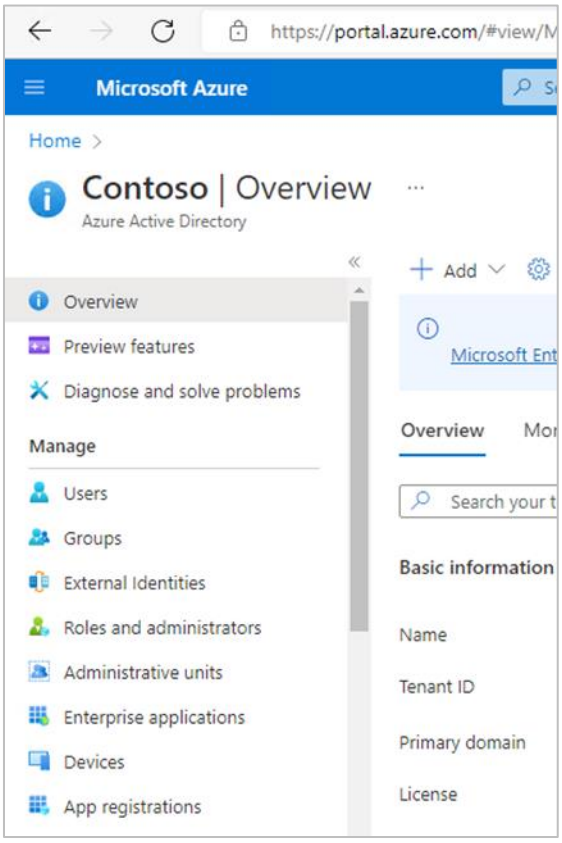
Configuring an Azure AD Application Registration for Microsoft Graph

1. Navigate to the Azure administration portal at https://portal.azure.com and sign in with an admin account.

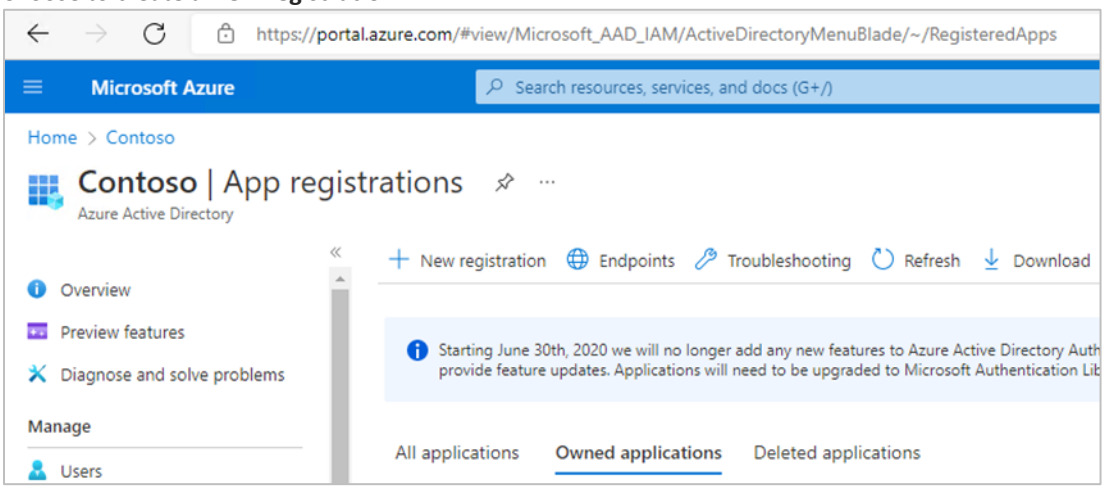
2. Use the navigator to access Azure Active Directory.



3. Select **App registrations** to begin the process of creating an Application ID for use with the Migrator for Notes Delegation migrations.

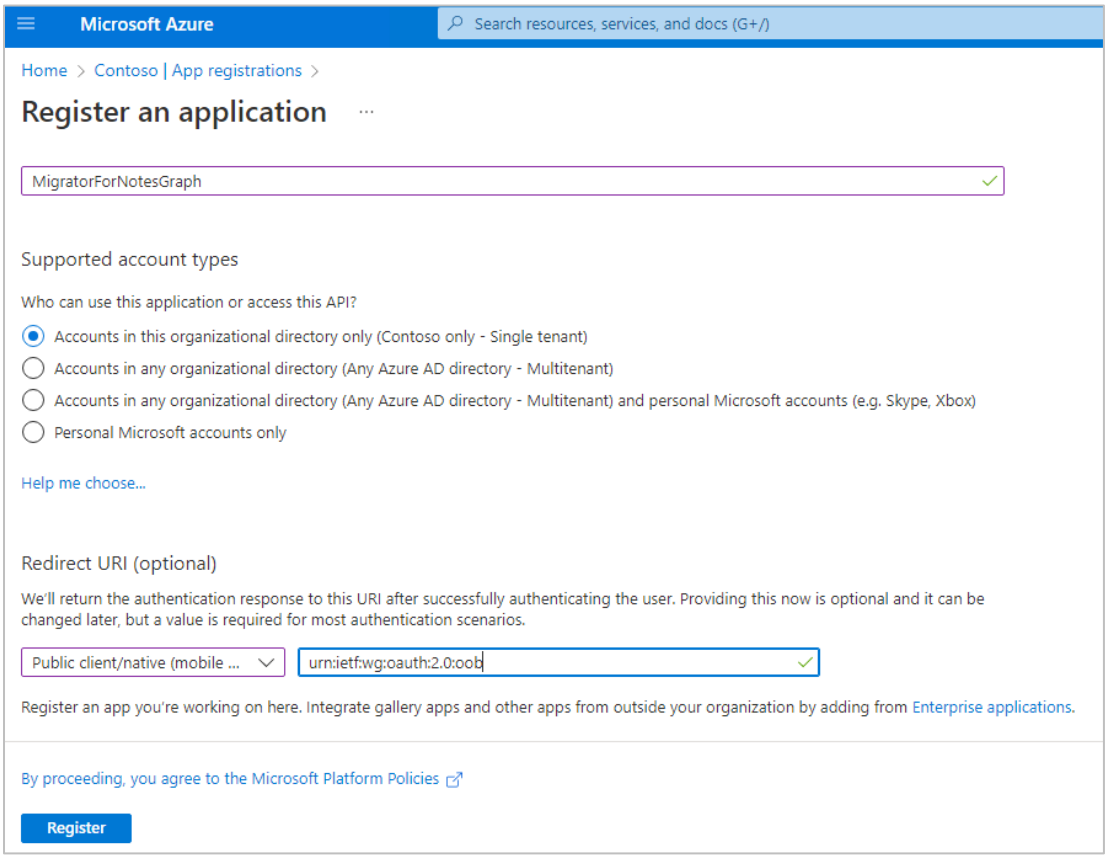


4. Choose to create a **New registration**.

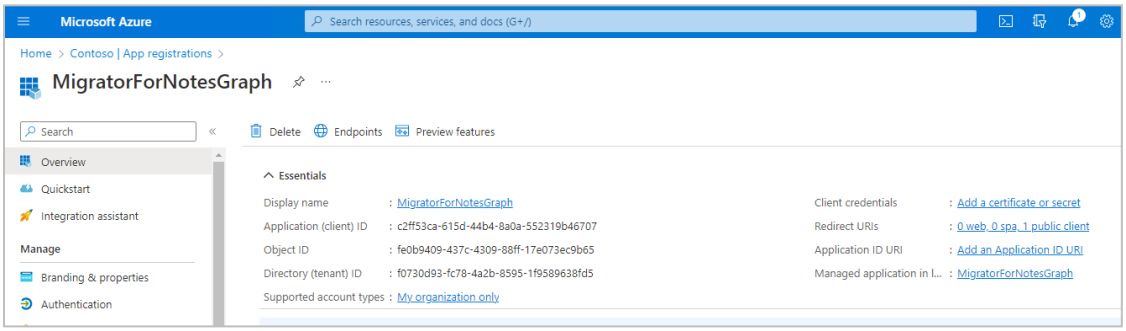


5. Provide a name for the App registration and use the default ‘Accounts in this organizational directory only’ for the supported account types.

6. In the Redirect URI section, select **Public client/native (mobile & desktop)** and set the URI to: urn:ietf:wg:oauth:2.0:oob



7. Click the **Register** button. Notice two of the four items needed for configuration, the Application (client) ID and the Directory (tenant) ID.

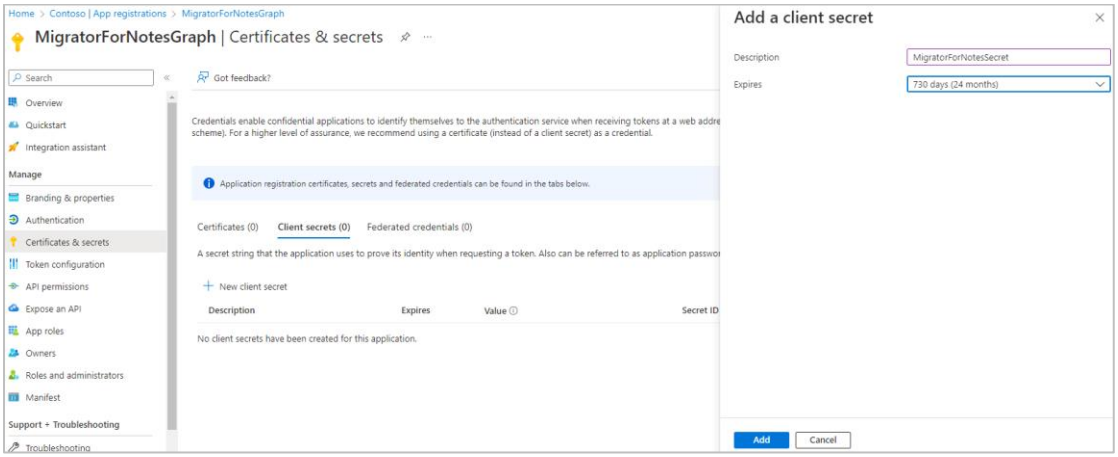


8. Notice when hovering over these two values, a Copy icon will appear to copy the values with a single click.

9. Click the Copy icon to copy the values before continuing. These will be required for the Migrator for Notes Settings so ensure that these values are retained. The values can be viewed later in the process if they are missed.

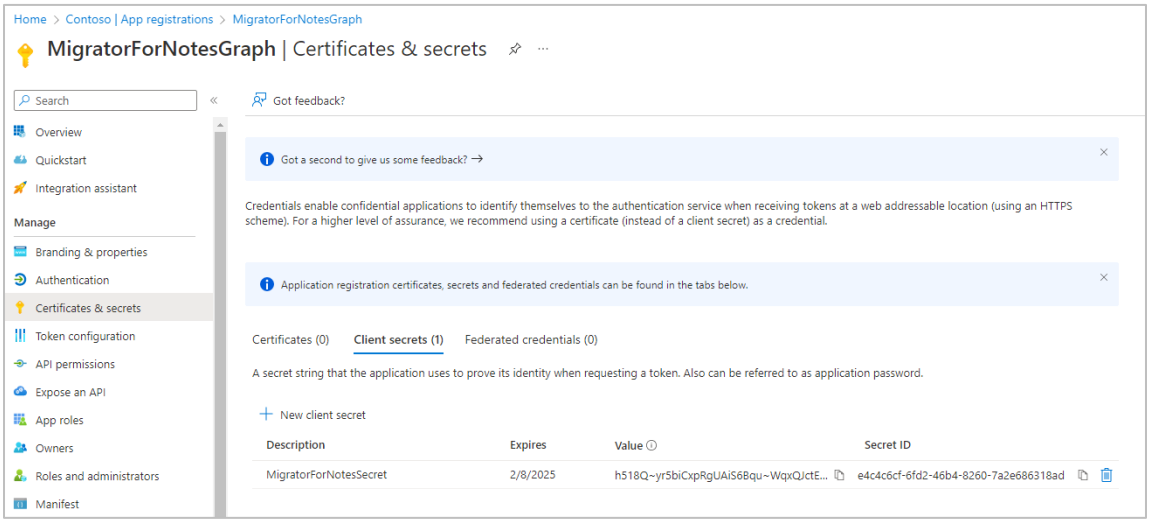
10. Use the navigator to click on **Certificates & Secrets**. Use the **New client secret** to Add a client secret.

    Provide a name for the new secret and then select the length of time that the secret will be valid for.



NOTE ! This secret will be used throughout the migration process. New secrets can be created and updated on the Migrator for Notes Settings but if a secret expires during a migration project this can cause disruption until a new secret is applied.

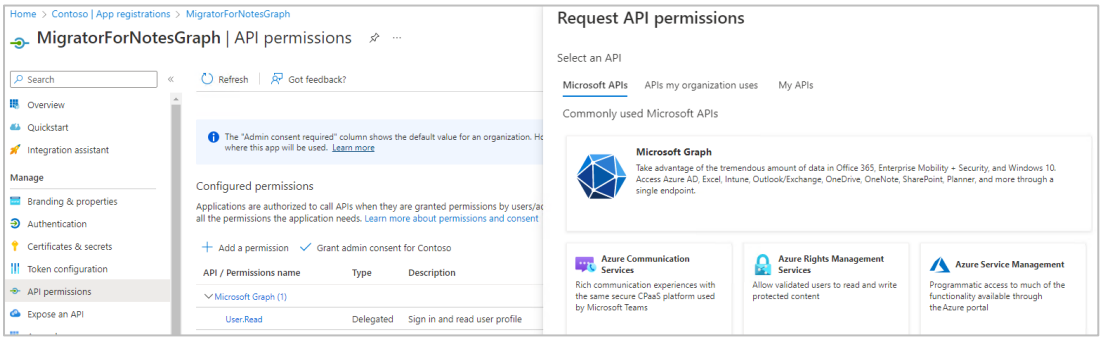
11. After adding the secret, the **Value** for the secret will be displayed. Click the copy icon and save the client secret wherever you saved the application ID and directory ID or apply it directly to the Migrator for Notes Settings.



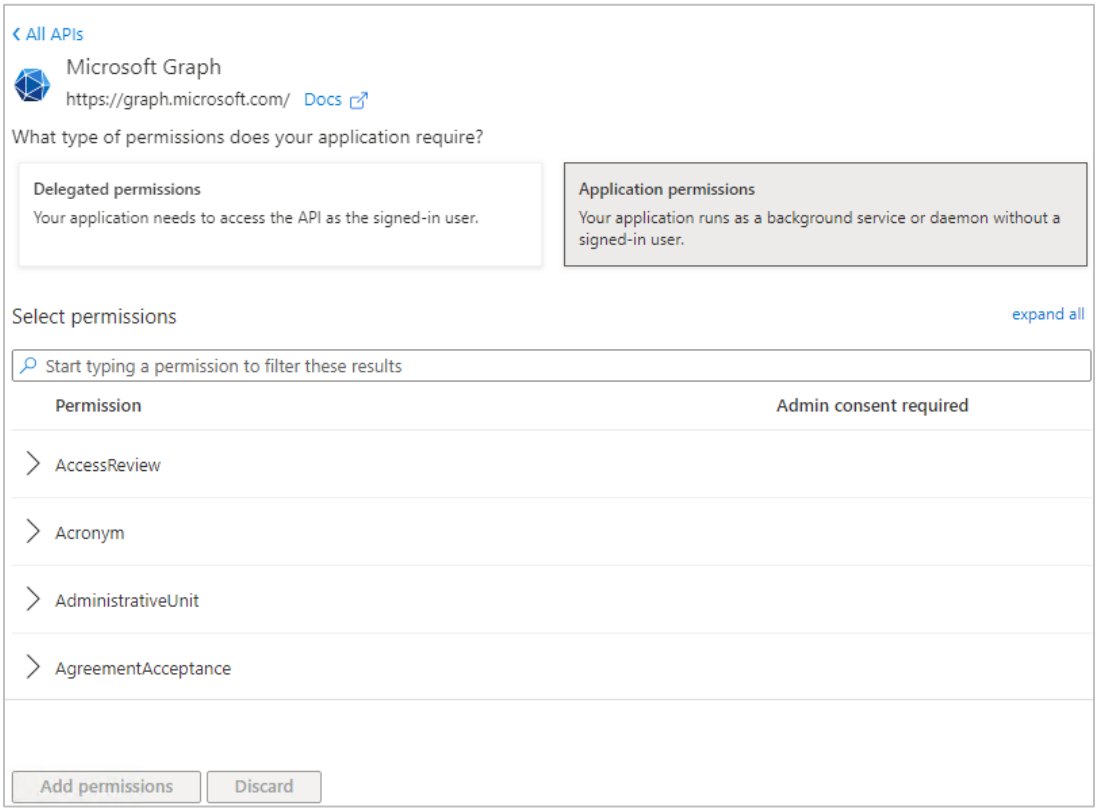
NOTE ! The Client Secret must be copied when it is created. This cannot be accessed after creation. If the secret is not copied, then it would need to be deleted and recreated.

12. Next the permissions for the application need to be set. To do this, use the navigator to select **API permissions**.

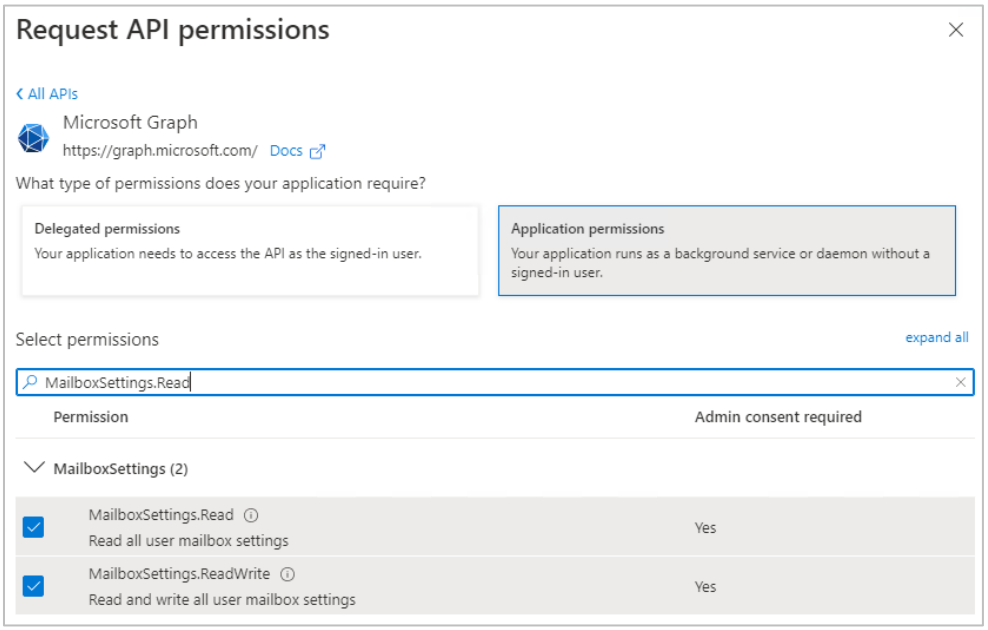
13. Use the **Add a permission** button to select the permissions that will be used for Graph. For the permissions select **Microsoft APIs** and then select **Microsoft Graph**.



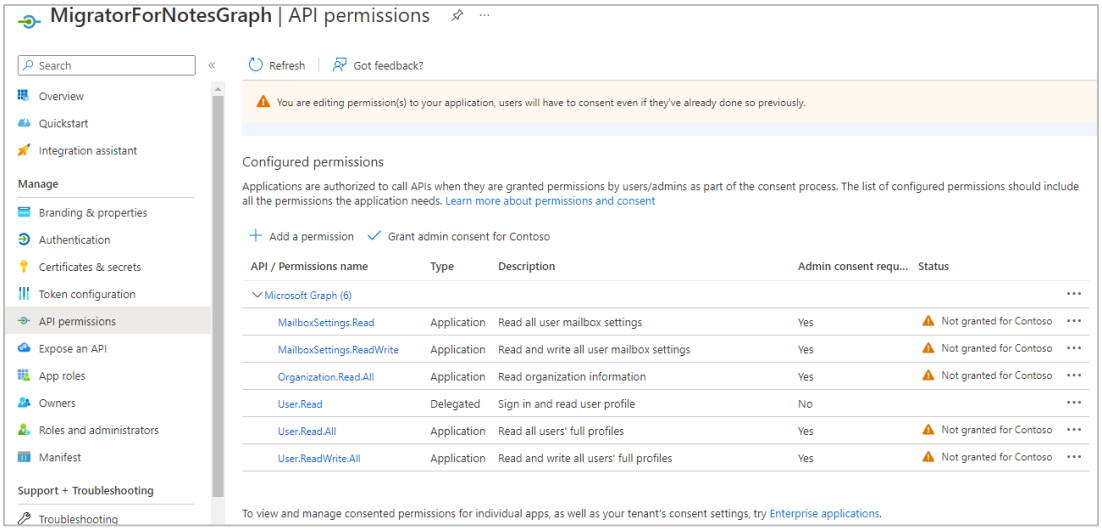
14. For the API permissions select **Application permissions**.



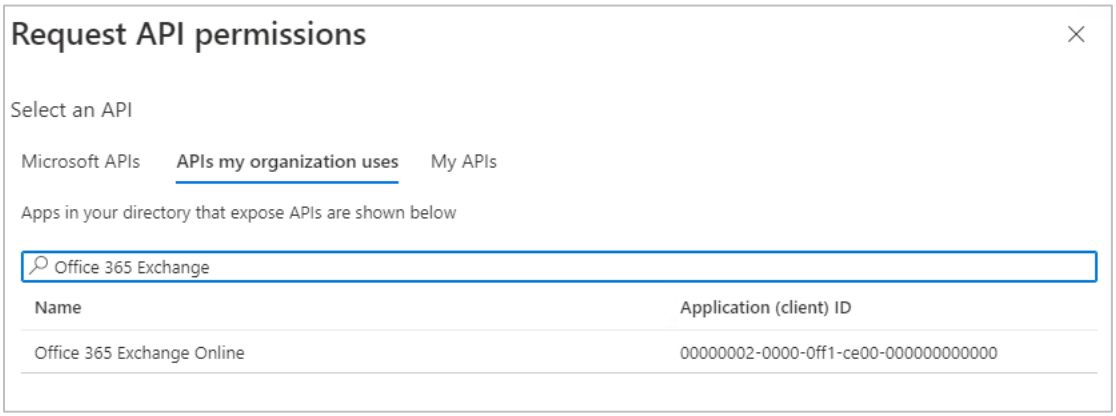
15. Then enable the below permissions from the options available and **Add permissions**. The permissions items can be entered into the Search bar to locate each one directly.



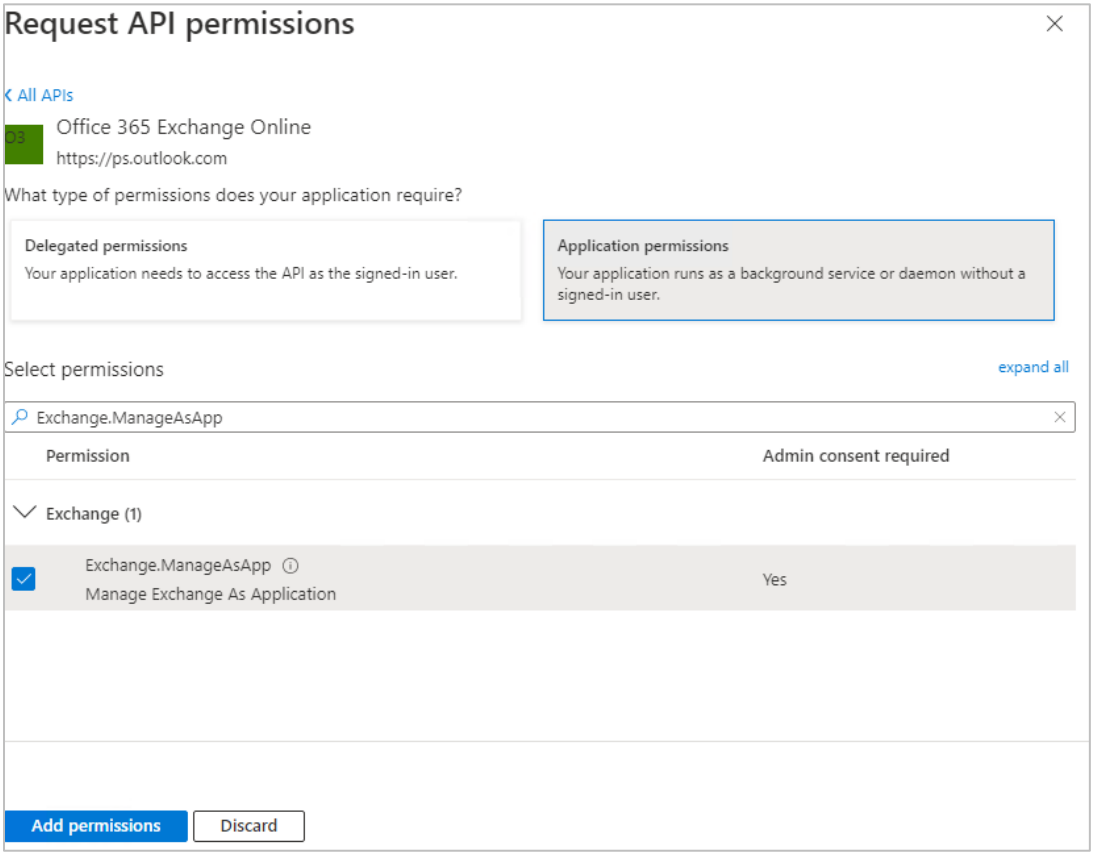
Permissions to add: MailboxSettings.Read , MailboxSettings.ReadWrite , Organization.Read.All , User.Read.All , User.ReadWrite.All



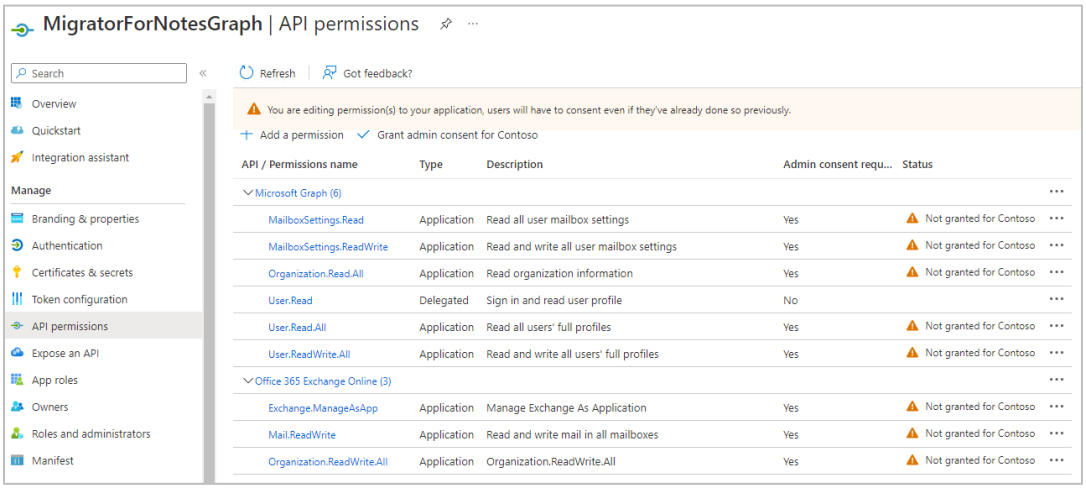
16. Use the **Add a permission** button again and for the permissions select **APIs my organization uses** and then locate and select **Office 365 Exchange Online**.



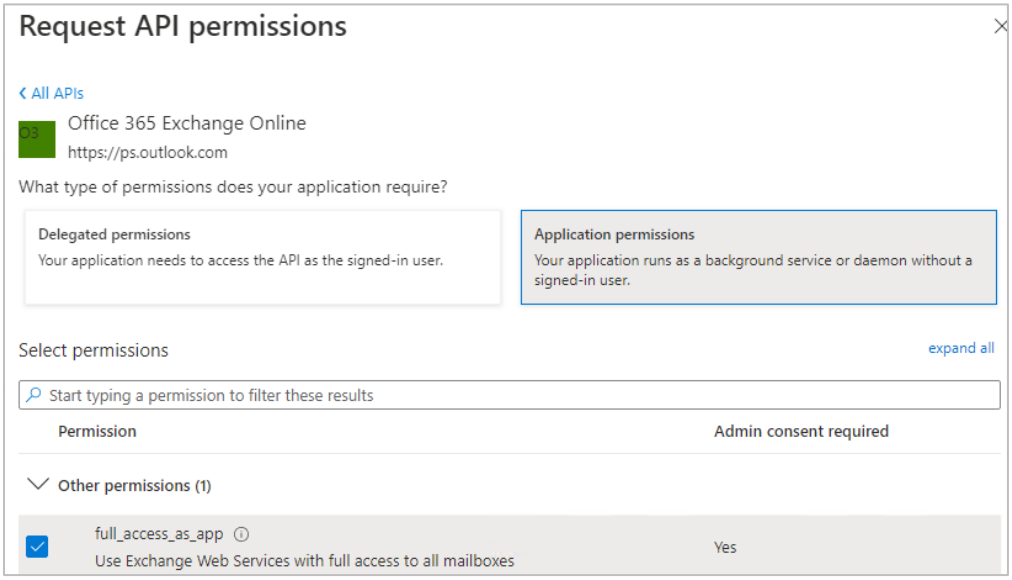
17. Then enable the below permissions from the options available and **Add permissions**. The permissions items can be entered into the Search bar to locate each one directly.



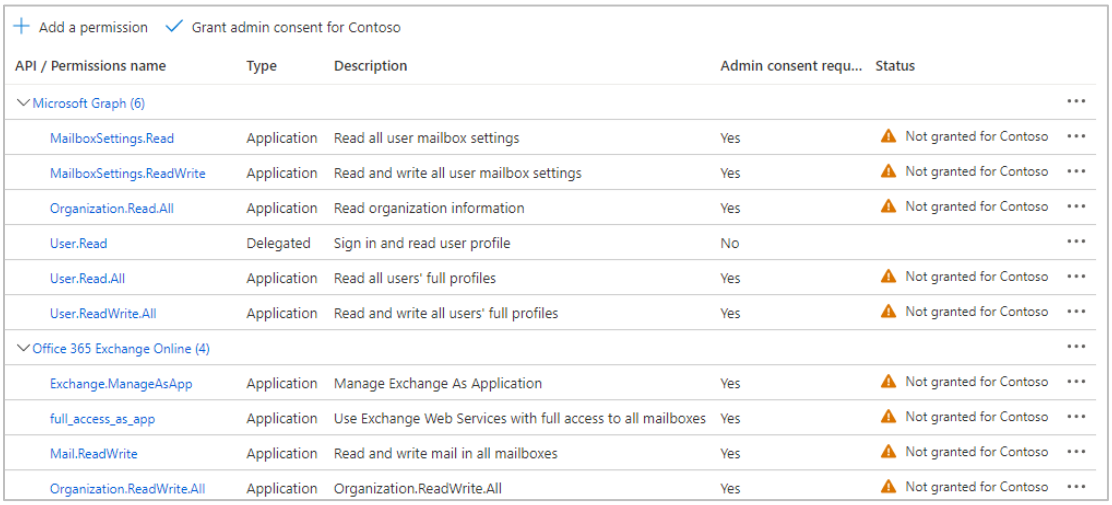
Permissions to add: Exchange.ManageAsApp , Mail.ReadWrite , Organization.ReadWrite.All.



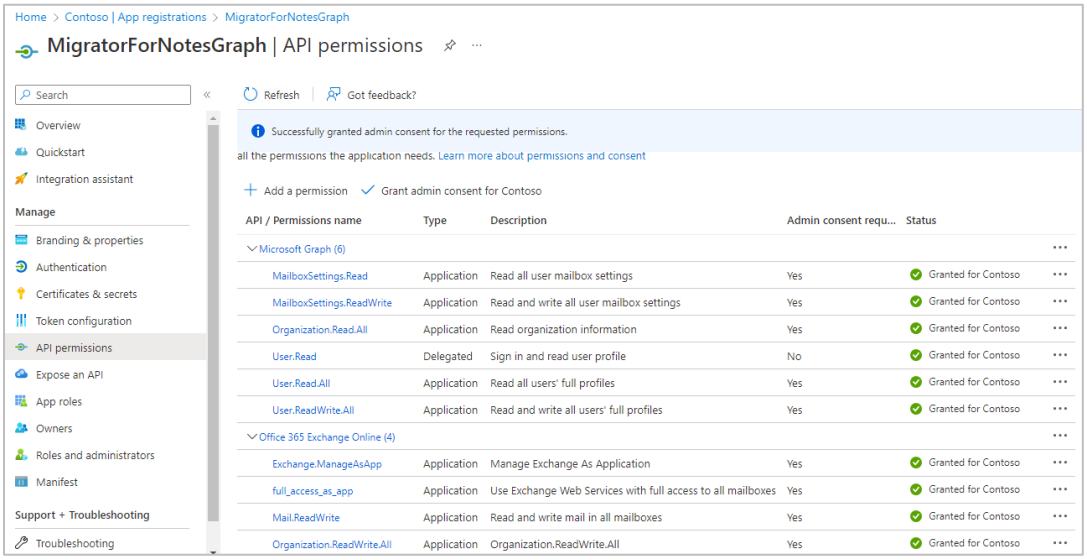
NOTE ! If delegation migration for permissions will be used for the migration process then Other Permissions | full_access_as_app can also be added. This will allow the Application ID to be used for the delegation migration and replace the configuration for a second Application ID in Appendix F.



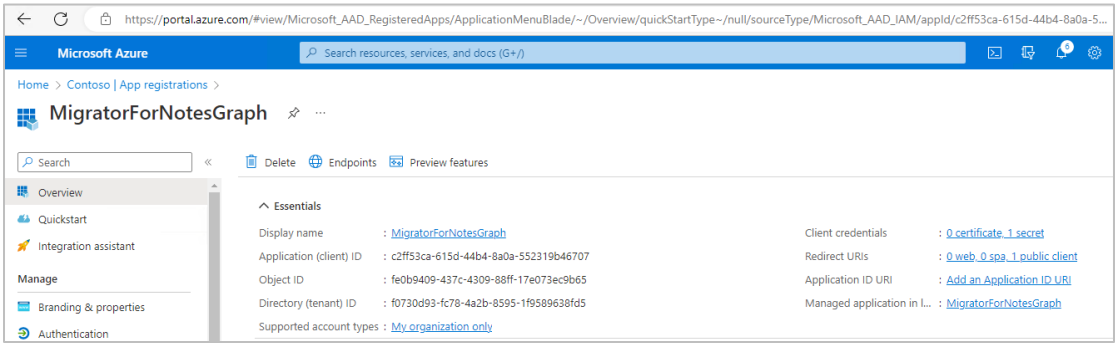
18. This will then require consent to be granted by a tenant admin account.



19. Use the **Grant admin consent for <tenant>** button to complete the process.



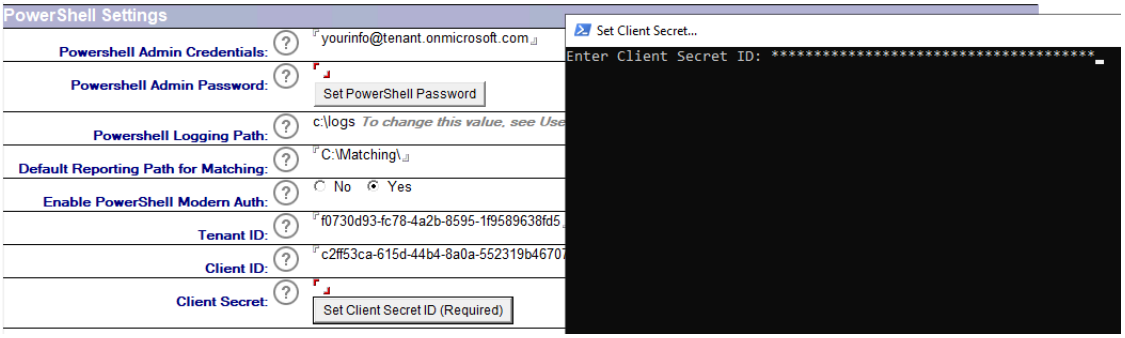
20. This concludes the Application ID setup in the tenant. Details for the application can be viewed on the Overview page.



Updating Migrator for Notes to Use an App Registration for Microsoft Graph

1. The Directory (tenant) ID and Application (client) ID copied from the Application registration process can be pasted in the Settings | Required Settings | Additional tab.

2. The client secret copied from the Application registration set up for the secret can be entered onto the Settings. This should be entered using the Set Client Secret ID (Required) button to store an AsSecure hash of the secret.

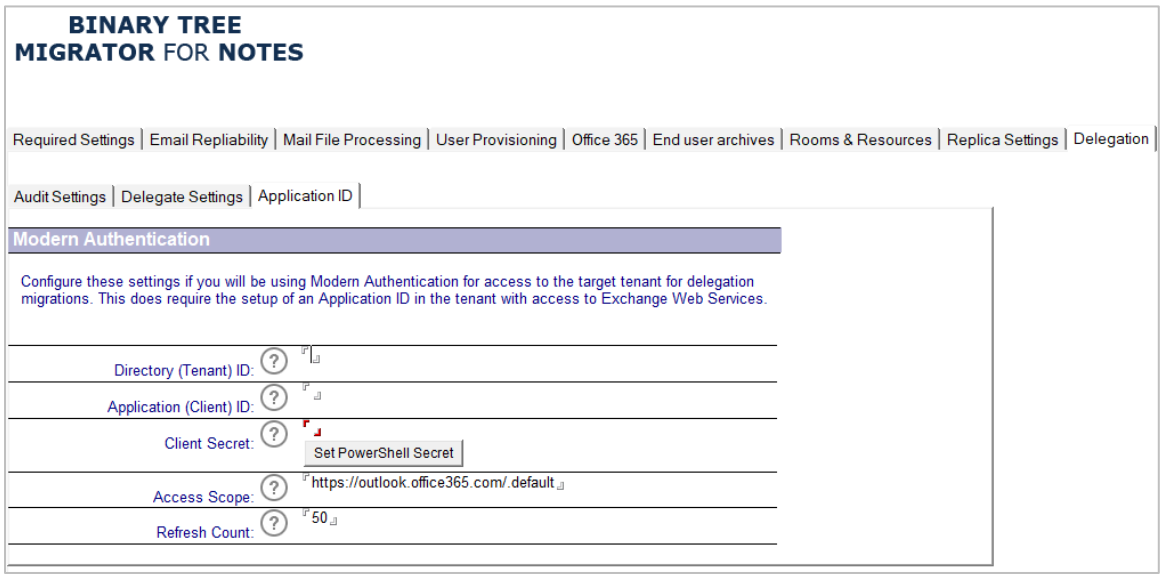


Appendix F: Modern Authentication Delegation Migration

The delegation migration does require an Application (client) ID to be created in the tenant to process mailbox folder level permissions. The process to set up an Application ID can be found in the Configuring an Azure AD Application Registration section. The steps are based on Microsoft configuration at the time of release, refer to Microsoft documentation if these are changed.

The details for the Application ID are applied to the Migrator for Notes Settings | Delegation | Application ID tab.

NOTE ! This is an additional step that must be completed for the delegation migration. The account setup must still be completed and the general Modern Authentication requirements and configuration followed.



The following table describes the values for each setting.

Settings	Description
Directory (Tenant) ID	Target Tenant ID, this is displayed with the Application ID setup.
Application (Client) ID	Exchange Online EWS Application ID created in the target tenant. Review the configuration guide for Modern Authentication to create this.
Client Secret	EWS Application ID secret. Review the configuration guide for Modern Authentication to create this. Use the button to input this value to ensure that it is hashed when it is stored using the AsSecure PowerShell method.
Access Scope	MSAL Token Access Scopes for the Application ID. This is the App ID URI for accessing EWS and the permissions scope for the token used to access Exchange Online. The default scope can be used for the Application ID that is created unless Microsoft documentation advises changing the scope in cases of tenants that have differing configurations.
Refresh Count	The number of minutes to process for delegation updates before the PowerShell will request a refresh token for the Modern Authentication access to the tenant. This can

be adjusted if there are authentication failures during the processing which can occur if there are a large number of delegates for each account.

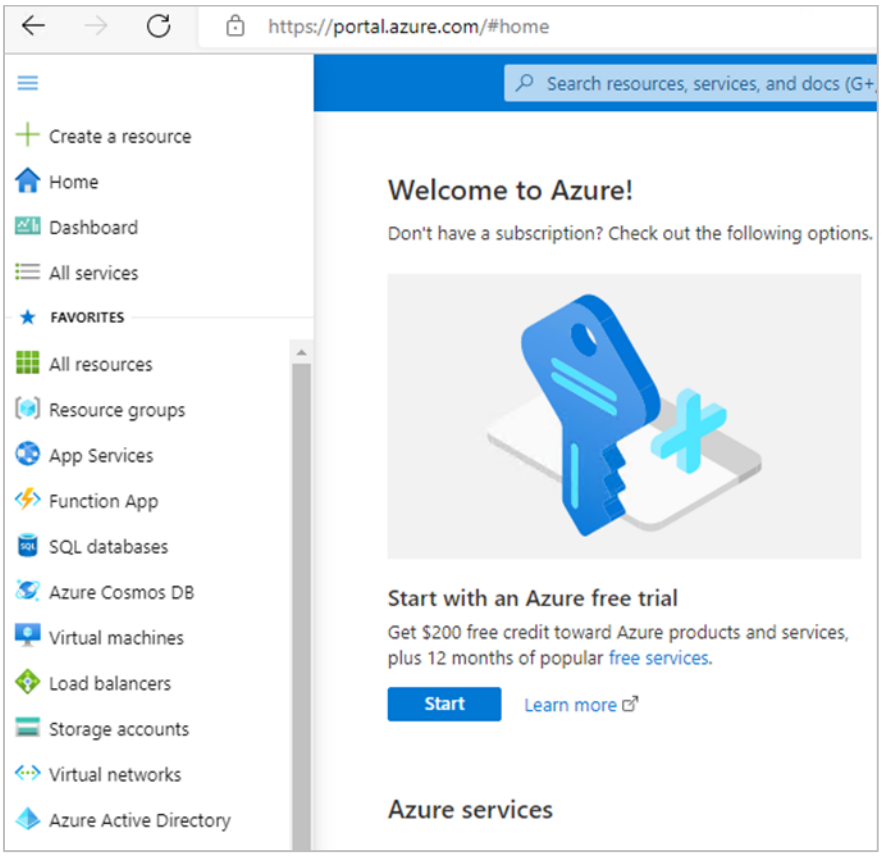
Install MSAL PowerShell Authentication Module

- On the server that will be performing the PowerShell processing for the delegation migration the MSAL PowerShell module will be required, this can be added through PowerShell using the Run As Administrator option.

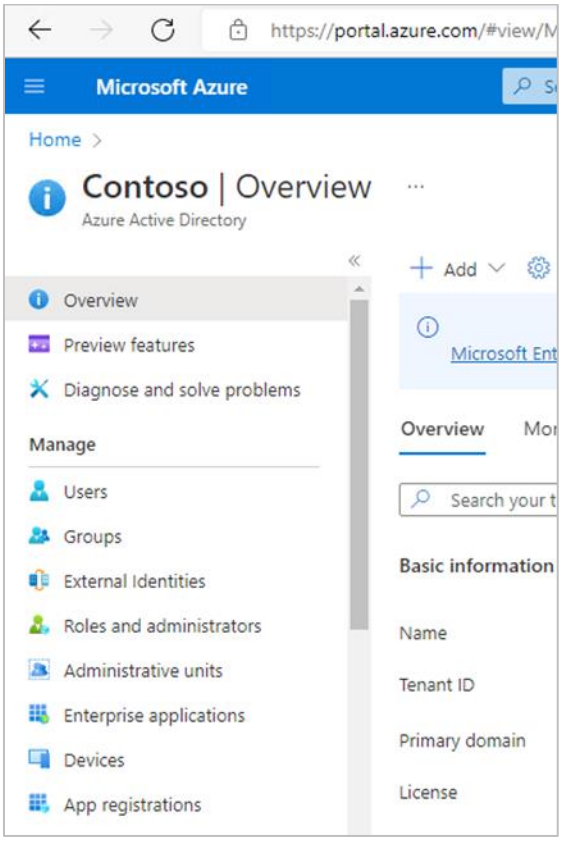
  Install-Module MSAL.ps

Configuring an Azure AD App Registration

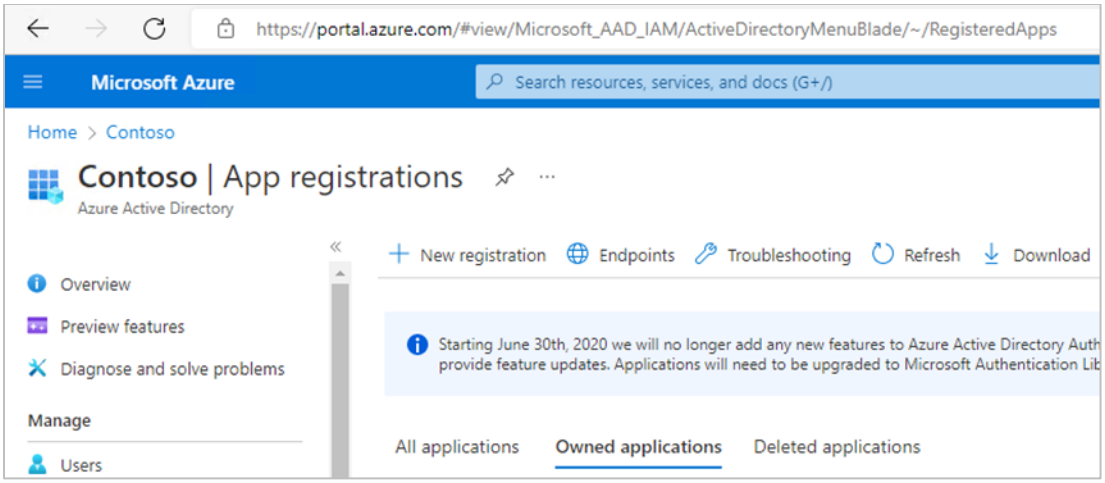
1. Navigate to the Azure administration portal at https://portal.azure.com and sign in with an admin account.
2. Use the navigator to access **Azure Active Directory**.



3. Select **App registrations** to begin the process of creating an Application ID for use with the Migrator for Notes Delegation migrations.

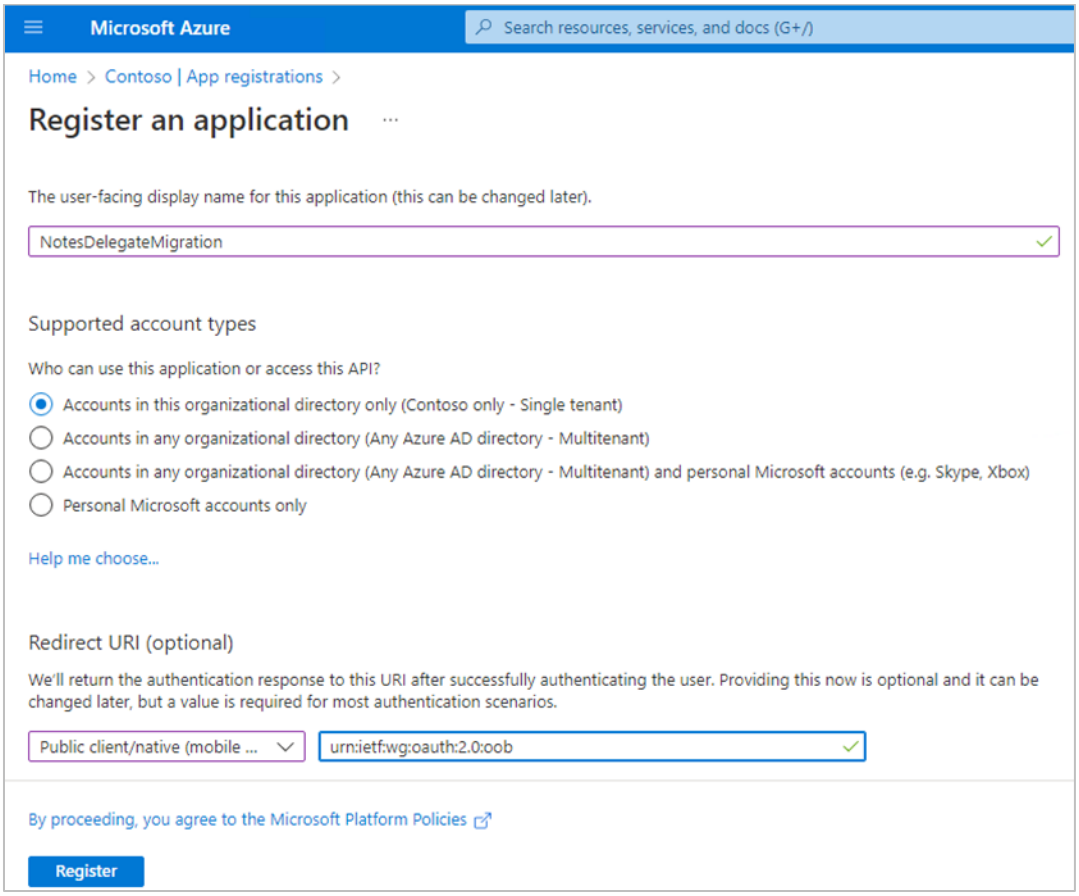


4. Choose to create a **New registration**.

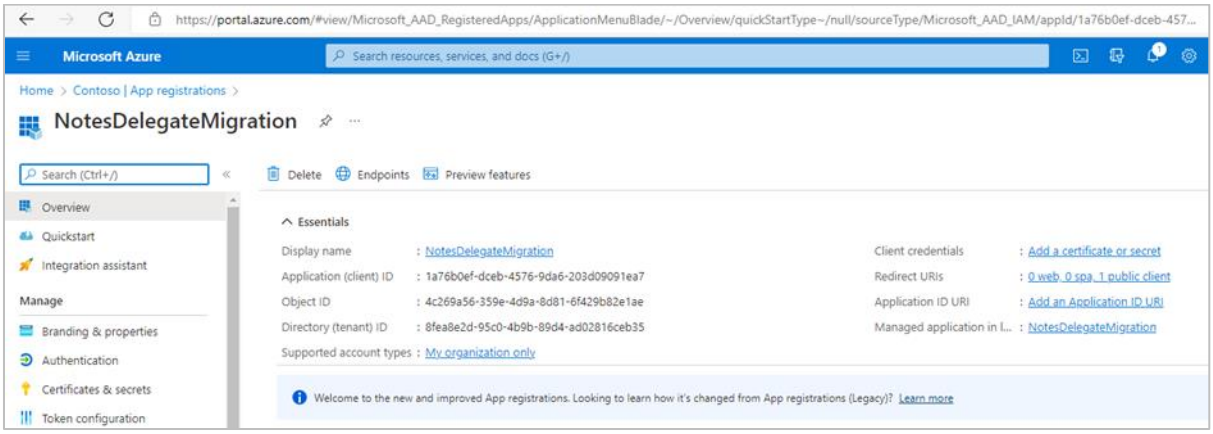


5. Provide a name for the App registration and use the default ‘Accounts in this organizational directory only’ for the supported account types.

   In the Redirect URI section, select **Public client/native (mobile & desktop)** and set the URI to: urn:ietf:wg:oauth:2.0:oob



6. Click the **Register** button. Notice two of the four items needed for configuration, the Application (client) ID and the Directory (tenant) ID.



7. Notice when hovering over these two values, a copy icon will appear to copy the values with a single click.

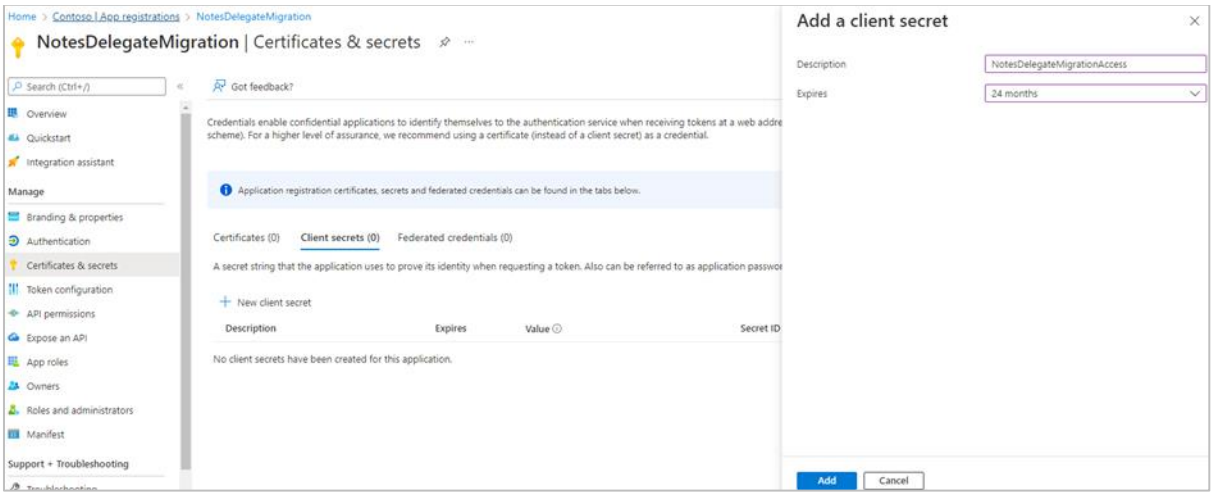
Click this icon to copy the values before continuing. These will be required for the Migrator for Notes Settings so ensure that these values are retained. The values can be viewed later in the process if they are missed.

8. Use the navigator to click on **Certificates & Secrets**. Use the **New client secret** to Add a client secret.

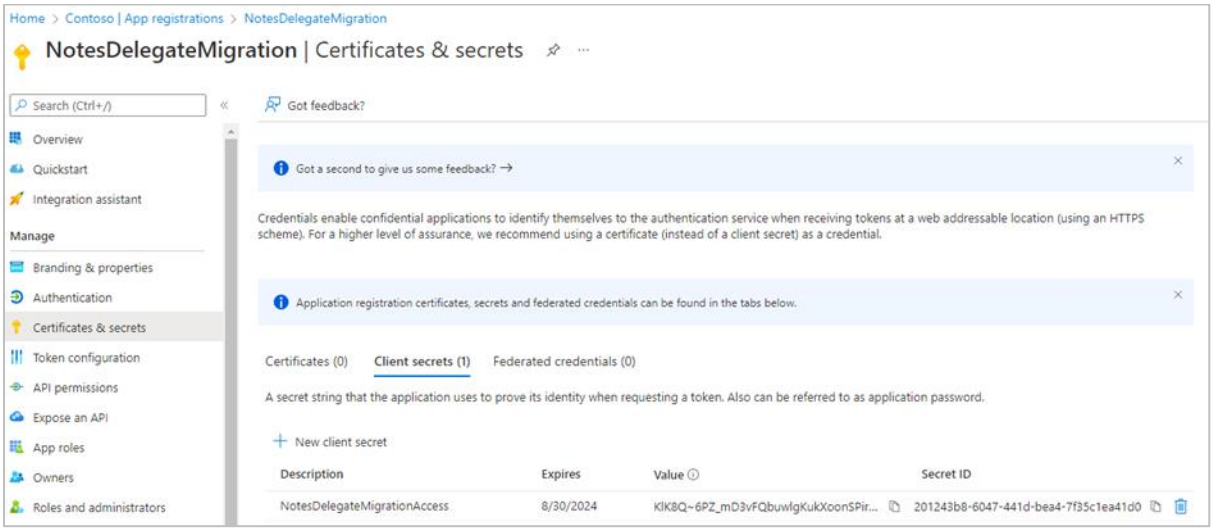
   Provide a name for the new secret and then select the length of time that the secret will be valid

for.

NOTE ! This secret will be used throughout the migration process. New secrets can be created and updated on the Migrator for Notes Settings but if a secret expires during a migration project this can cause disruption until a new secret is applied.

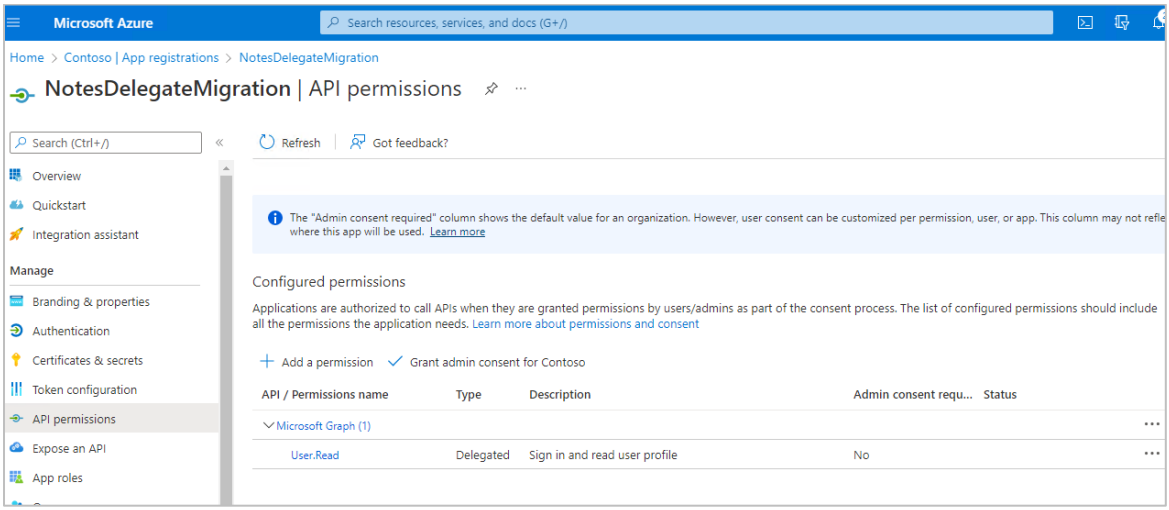


9. After adding the secret, the Value for the secret will be displayed. Click the copy icon and save the client secret wherever you saved the application ID and directory ID or apply it directly to the Migrator for Notes Settings.

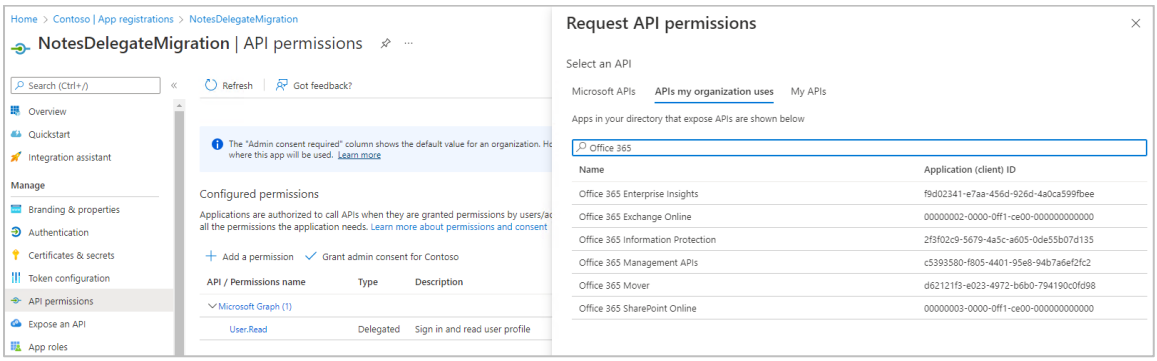


NOTE ! The Client Secret must be copied when it is created. This cannot be accessed after creation. If the secret is not copied, then it would need to be deleted and recreated.

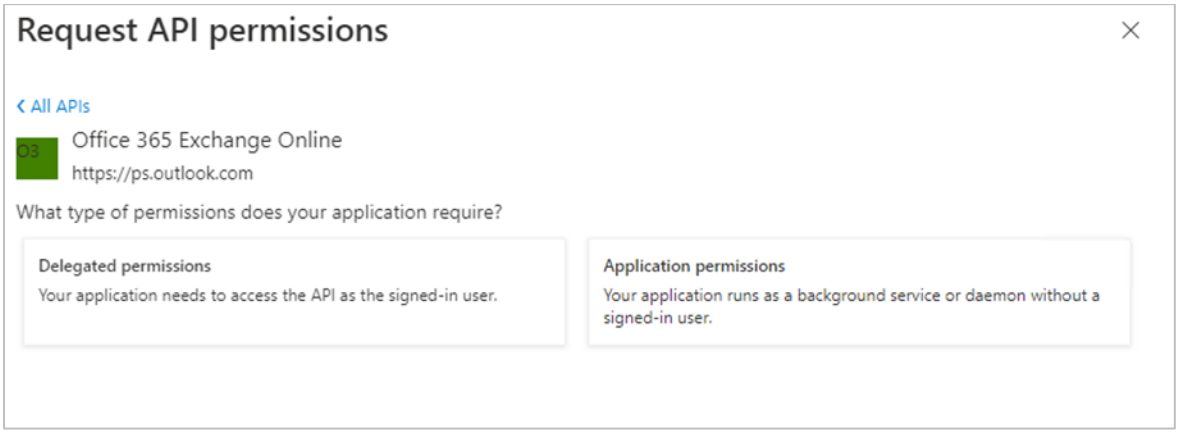
10. Next the permissions for the application need to be set. To do this, use the navigator to select **API permissions**.



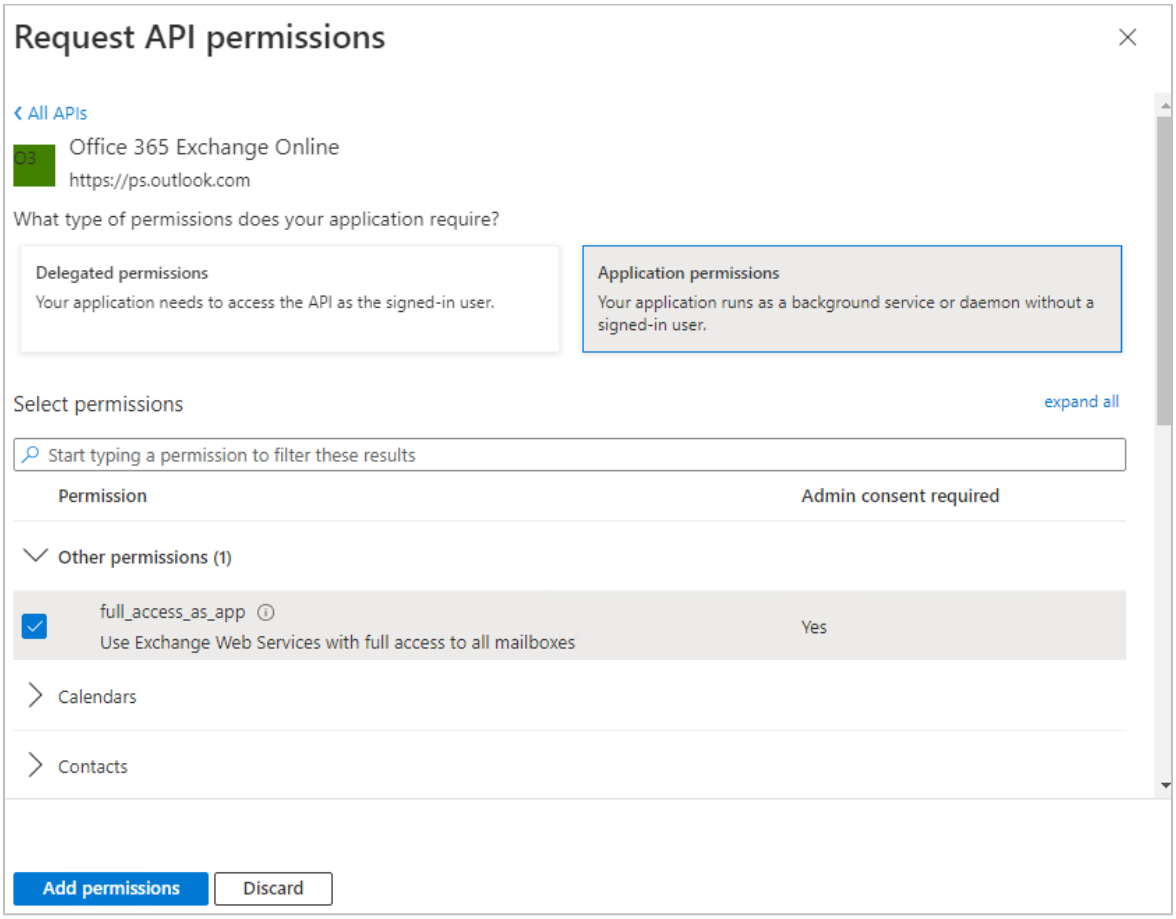
11. Use the **Add a permission** button to select the permissions that will be used. For the permissions select **APIs my organization uses** and then locate **Office 365 Exchange Online**.



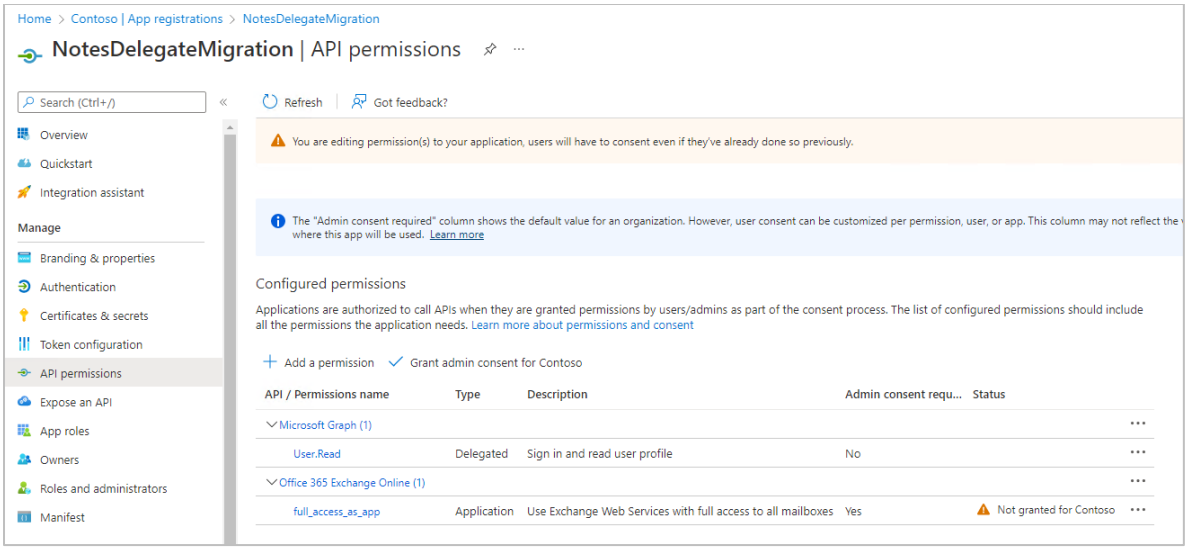
12. For the API permissions select **Application permissions**.



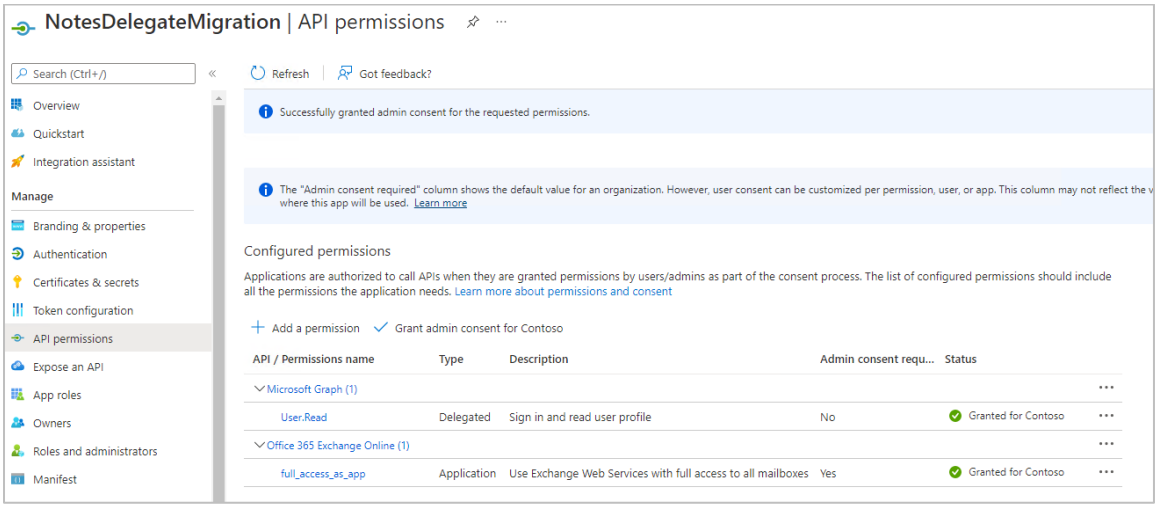
13. Then select **Other permissions** | **full_access_as_app** from the options available and **Add permissions**.



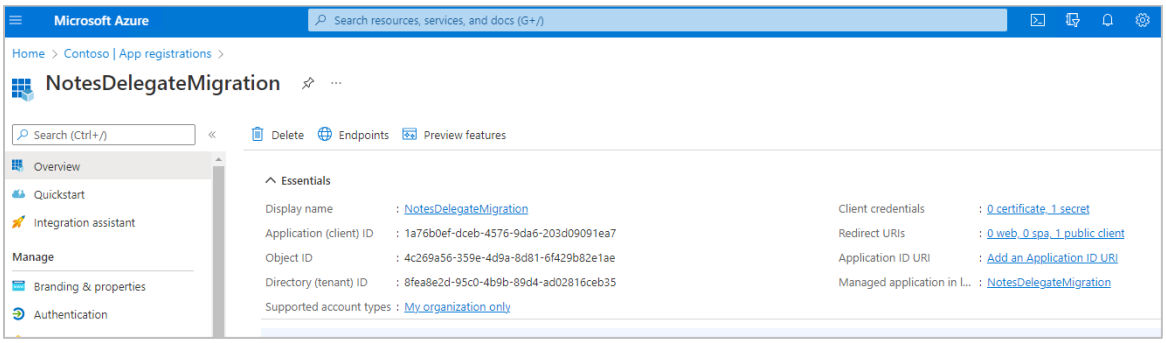
14. This will then require consent to be granted by a tenant admin account.



15. Use the **Grant admin consent for <tenant>** button to complete the process.



16. This concludes the Application ID setup in the tenant. Details for the application can be viewed on the Overview page.

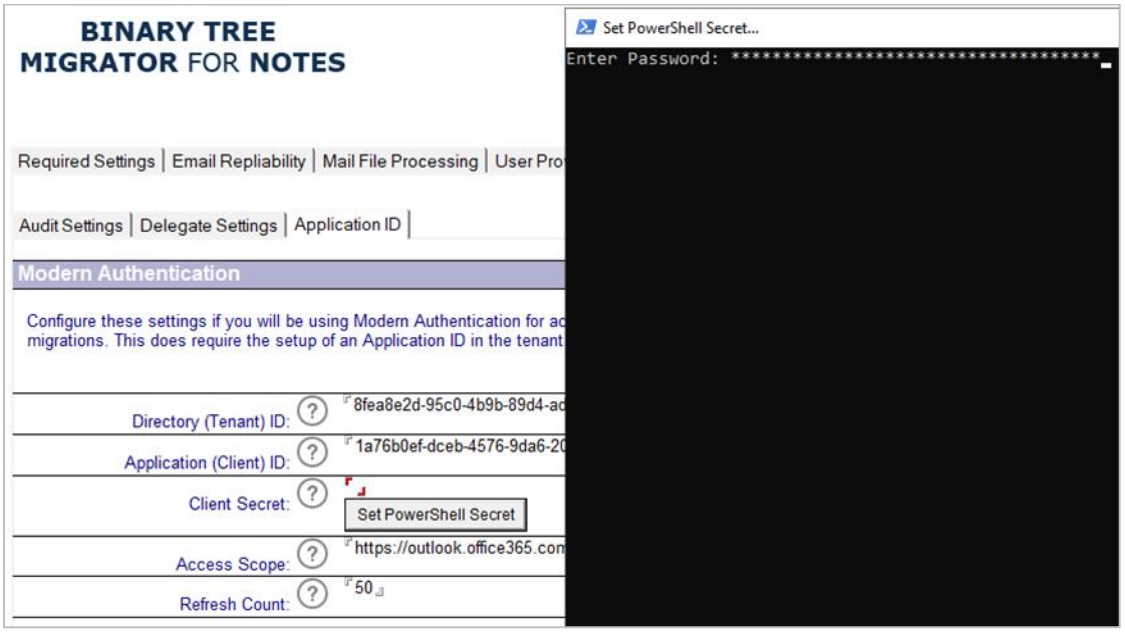


Updating Migrator for Notes to Use an App Registration

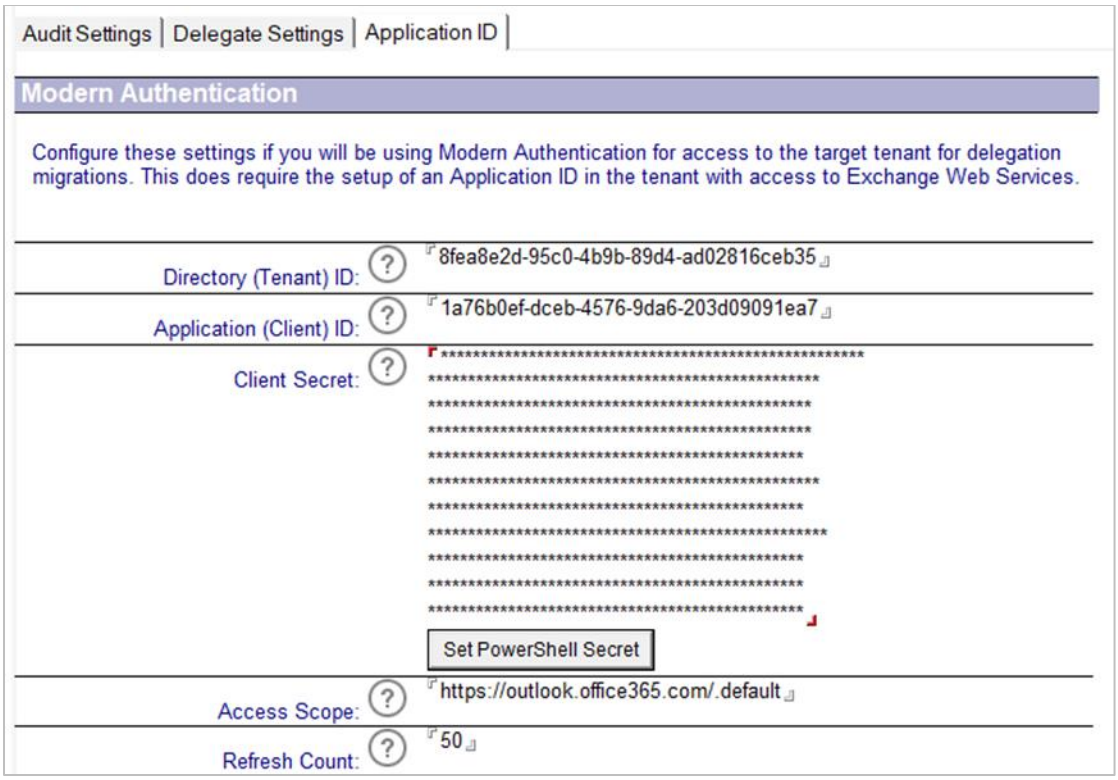
1. The Directory (tenant) ID and Application (client) ID copied from the Application registration process can be pasted in the Settings | Delegation | Application ID tab.

   The client secret copied from the Application registration set up for the secret can be entered onto the Settings. This should be entered using the Set PowerShell Secret button to store an AsSecure hash of the secret.

   The Refresh Count can be left at the default ‘50’ unless there are delays during the delegation migration and there are authentication errors. If this does occur, then the number can be reduced. This should not exceed ‘60’ as this is the maximum time that an MSAL token is valid for.



2. After entering the three items from the Application ID the Settings can be saved.



Following the configuration, it is recommended to test the configuration with test Notes accounts and corresponding test MS 365 accounts prior to performing production migrations.

Third-party Contributions

This product contains the following third-party components. For third-party license information, go to https://www.quest.com/legal/license-agreements.aspx. Source code for components marked with an asterisk (*) is available at https://opensource.quest.com.

List of third-party contributions

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pugixml 1.8	MIT N/A
redemption 5.25	dimastr n/a
Windows Installer XML toolset (aka WIX) 3.6.3303.0	Microsoft Reciprocal License (MS-RL) N/A