Quest

Binary Tree Migrator Pro for Exchange 20.11.0

User 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 Pro for Exchange 20.11.0 – User Guide
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1. Introduction to Migrator Pro for Exchange

About this Document

This document provides information about how to use Binary Tree Migrator Pro for Exchange to perform migrations from supported source versions of Microsoft Exchange to supported target versions of Exchange or to Microsoft Office 365 Exchange Online. See Supported Mailbox Migration Paths and Supported Public Folders Migration Paths below for checklists of supported scenarios.

A separate Migrator Pro for Exchange *Installation and Configuration Guide* describes how to install and configure the Migrator Pro for Exchange product.

This document assumes the reader brings some basic admin-level experience with Microsoft Exchange and Microsoft Outlook. If you are unfamiliar with some Outlook and Exchange terms or concepts that appear in this document, please refer to the Microsoft documentation.

Online Help

Migrator Pro for Exchange also offers context-sensitive browser-based help from the data-entry screens and tabs of the Admin Portal.

Getting more information

The Migrator Pro for Exchange *Fast Start Guide* and *Installation and Configuration Guide* provide an orientation to the product's intended uses and features, including the Migrator Pro for Exchange Admin Portal, with detailed instructions for installing and configuring the product for your environment.

For additional resources, refer to Support: https://support.quest.com

About Migrator Pro for Exchange

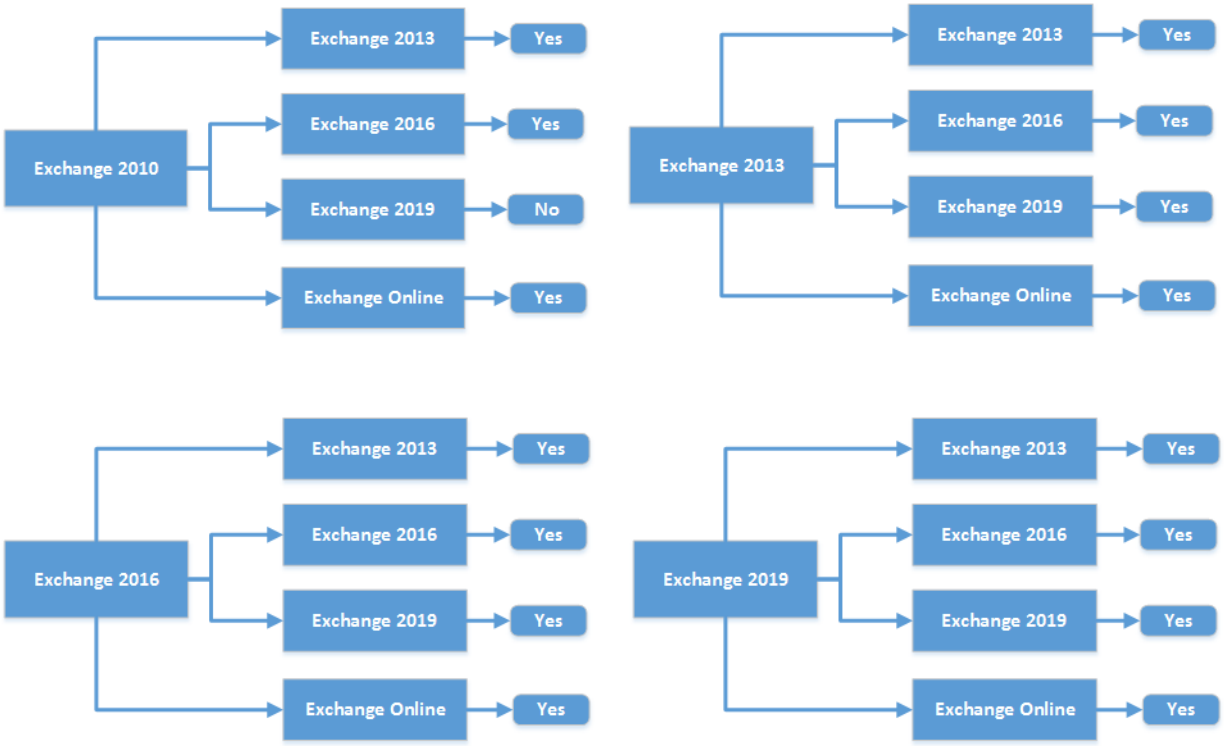
Migrator Pro for Exchange facilitates migration from one version of Microsoft Exchange to another. It combines a back-end policy engine with front-end management components, to provide project managers and administrators more control over Exchange upgrades.

Key features and functions include:

- Workflow engine lets administrators create migration tasks, select objects, schedule jobs, and provide user self-service.
- Unified console enables flexible filtering and selection of mailbox objects.
- Content included in the mailbox is moved in one transaction, so mailbox security and permissions (delegates) are retained.
- Reports on object and migration status feed into the console, reducing effort required to create tasks.
- Does not require server-hosted agents for any of its functionality.
- Public folder migration for Exchange and Microsoft Office 365.
- Migration to Microsoft Office 365 and resource forest migrations.

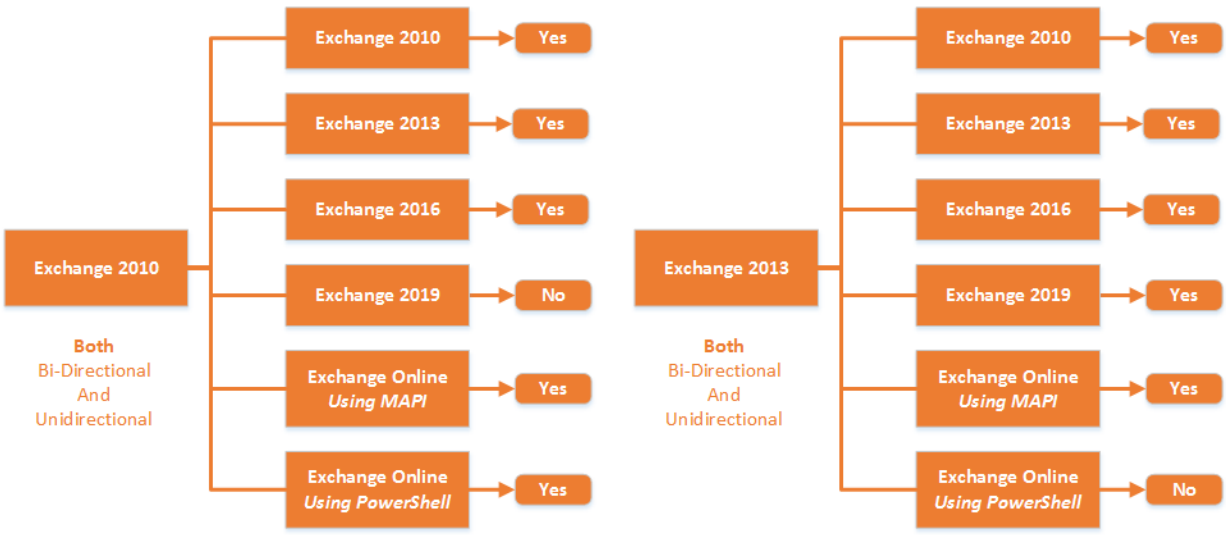
Supported Mailbox Migration Paths

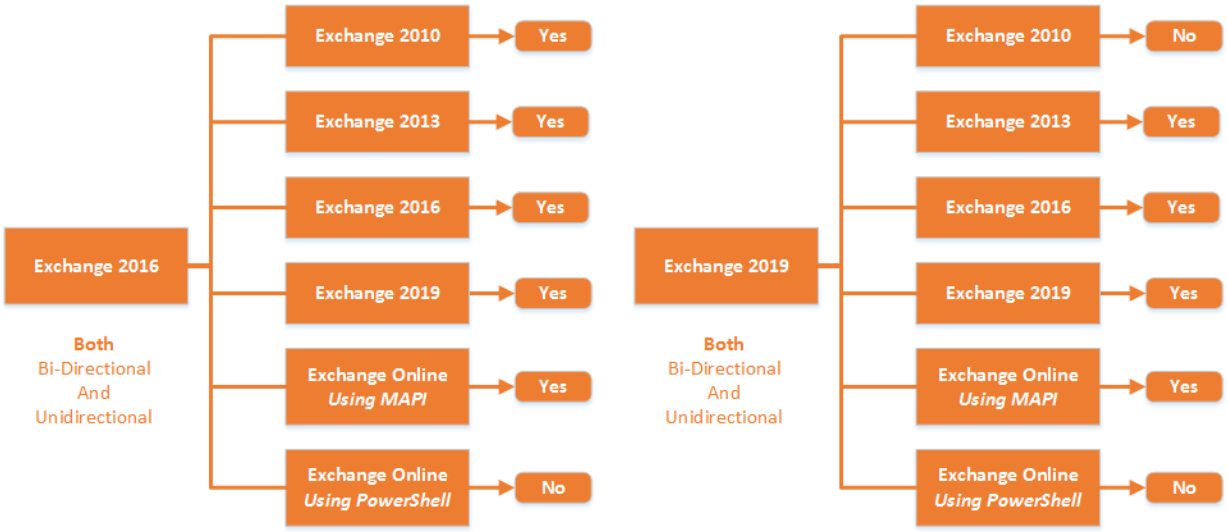
The current release of Migrator Pro for Exchange supports mailbox migration for these source/target scenarios:



Supported Public Folders Migration Paths

Migrator Pro for Exchange supports inter-org (only) public folders migration for these source/target scenarios:



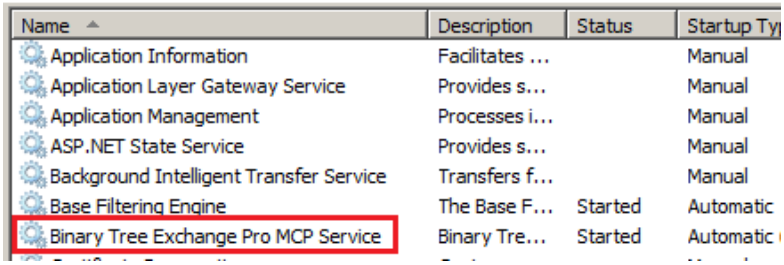


Components of Migrator Pro for Exchange

The main components of Migrator Pro for Exchange are: the MCP Windows Service, the Admin Portal and the User Portal.

MCP Windows Service

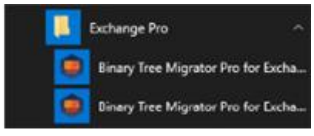
The MCP Windows Service (BinaryTree Migrator Pro for Exchange MCP Service) is the controlling service for all Migrator Pro for Exchange functions. This service should automatically start. Make sure that BinaryTree Migrator Pro for Exchange MCP Service is started in Windows Services.



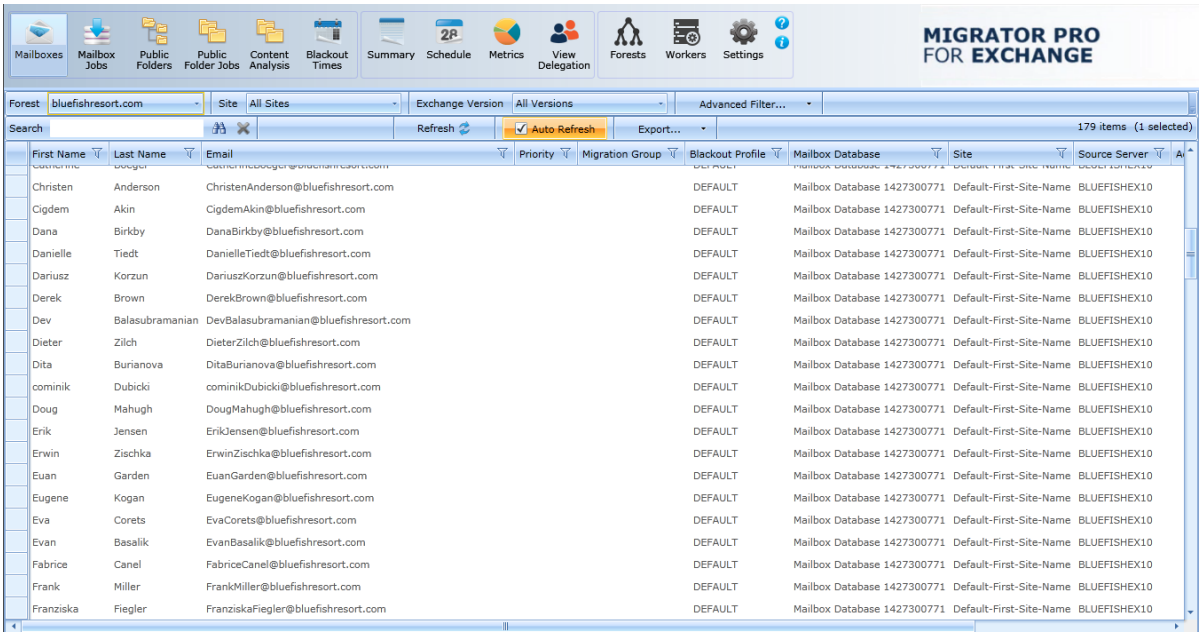
Admin Portal

Migrator Pro for Exchange's Admin Portal is a friendly user interface that lets you configure and execute most administrative tasks associated with a migration. The Admin Portal is a Microsoft Silverlight application that runs in a web browser.

To launch the Admin Portal, double-click the Migrator Pro for Exchange shortcut on your Windows desktop, or select Migrator Pro for Exchange from the Windows Start menu:



The Admin Portal opens in a browser window. Migrator Pro for Exchange supports Internet Explorer 8 or later, Firefox and Google Chrome.



For best results, maximize the browser window.

The Admin Portal launches with *http://localhost/exchangepro/admin/default.aspx*. You can use *localhost*, *<machinename>*, or the IP address to access the Admin Portal.

User Portal

The User Portal is available for users to postpone and schedule blackouts for their migrations and to provide alternative notification capabilities.

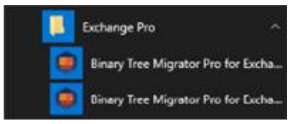
- The User Portal is located at: *http://<MachineName>/exchangepro/user/default.aspx*
- Windows Authentication is enabled for this virtual application. When performing cross-forest migrations, if the users in the source forest attempt to connect to the Migrator Pro for Exchange server in the target forest and a trust has not been established between the two forests, the users will be prompted for their target credentials.

About the Migrator Pro for Exchange Admin Portal

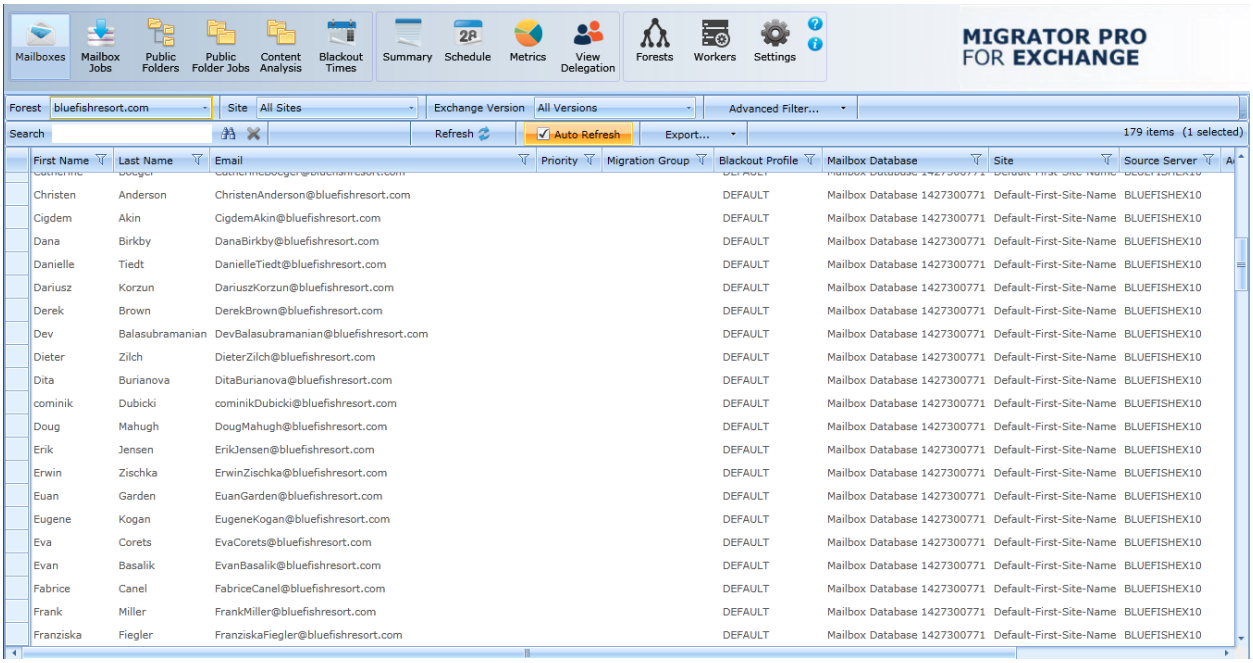
Migrator Pro for Exchange's Admin Portal is a friendly user interface that lets you control various administrative tasks related to Exchange mailbox migration.

The first time you run the Admin Portal after installing Migrator Pro for Exchange, the program leads you through a series of screens for you to enter your Migrator Pro for Exchange license key and configure Migrator Pro for Exchange communications with other programs and hardware. This process is documented in the Migrator Pro for Exchange *Installation and Configuration Guide*. After that initial configuration, the Admin Portal lets you update configuration data, define new forests, designate mailboxes and public folders for migration, schedule and execute migrations, pause and resume migrations, review migration statistics, and so forth.

To access the Admin Portal, double-click the Migrator Pro for Exchange shortcut on your Windows desktop, or select Migrator Pro for Exchange from the Windows Start menu:



The Admin Portal opens as a new tab in your browser called Migrator Pro for Exchange:



NOTE ! We recommend the browser hosting Migrator Pro for Exchange be set to clear temporary files and history upon exit.

Main Toolbar

Migrator Pro for Exchange's Admin Portal Main Toolbar appears across the top of the browser tab:

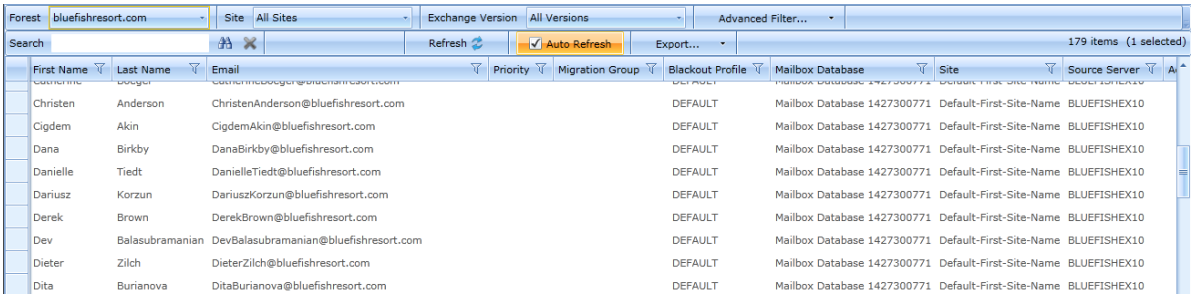
The toolbar buttons let you change the view of the Admin Portal, to show different types of information and different groups of available features below the Main Toolbar:

- **Mailboxes:** Lists mailboxes from all the sites in the specified forest. In addition, it allows you to sort, group, search, and select mailboxes to add to the migration queue.
- **Mailbox Jobs:** Manages the sequence of migration requests for the selected migration destination site.
- **Public Folders:** Displays the public folder tree from the selected Source and Target forest. In addition, it allows you to sort, group, search, and select public folders to add to the migration queue. Public folder migration is only enabled during on-premises cross forest migration projects.
- **Public Folder Jobs:** Manages the sequence of migration requests for the selected migration destination. Public folder migration is only enabled during on-premises cross forest migration projects.
- **Content Analysis:** Allows public folder content information collection and analysis in SQL for data remediation.

- **Blackout Times:** Allows the configuration of time periods when mailboxes cannot be migrated for the selected migration site.
- **Summary:** Displays high-level accounting of mailbox migrations, which allows you to view all status levels.
- **Schedule:** Displays estimated migration sequence for the selected migration site. It is a read-only view.
- **Metrics:** Provides historical data and throughput measurements of migrations in a graphical format.
- **View Delegation:** Lists mailboxes with one or more delegates, and their delegate mailboxes, so you can select delegation-linked pairs to add to a migration queue (to migrate them together, which preserves delegation rights after migration).
- **Forests:** Configure global forest settings, add new forest, etc.
- **Workers:** Administer public folder migration workers.
- **Settings:** Configure general settings, activities, mailboxes, public folders, workers, scripts, notification templates, and licenses.
- **Help:** Opens a browser window of context-sensitive Help: field notes and application notes for the currently open screen or tab. From the context-sensitive Help window, you can navigate to other Migrator Pro for Exchange topics using the navigation links and tools that appear across the top of the Help display.
- **About:** Displays version information about the Migrator Pro for Exchange product.

Data Panel

In addition to the Main Toolbar, the Admin Portal also contains a Data Panel that displays data depending on the button that is currently selected.



Version Information

To view version information: Click in the main toolbar to open the *About* window:

2. Creating and Managing Forests

Migrator Pro for Exchange migrates data from a source forest to a target forest. The source forest can be any forest in your local domain. The target forest can be another local forest, or can be a tenant forest in Office 365. Within Migrator Pro for Exchange we classify forests by three types:

- ***Source Forest:*** A forest in your local domain from which you will migrate.
- ***Target Forest:*** A forest in your local domain to which you will migrate. Generically speaking, a "target forest" can reside either in your local domain or in Office 365, but within Migrator Pro for Exchange we define and configure Office 365 forests separately (see below). Within Migrator Pro for Exchange you can designate only one forest of this Target Forest type. A local Exchange target forest is defined when migrating Intra-org (no other forests would be needed), or when migrating Inter-org (a source forest would be defined).
- ***Office 365 Forest:*** A forest in Microsoft's Office 365 to which you will migrate. Within Migrator Pro for Exchange you can designate only one forest of this target forest type.

The first time you run the Admin Portal after installing Migrator Pro for Exchange, the program leads you through a series of screens for you to enter your Migrator Pro for Exchange license key and configure Migrator Pro for Exchange communications with other programs and hardware. (This process is documented in the Migrator Pro for Exchange *Installation and Configuration Guide*.) These screens also prompt you to identify and characterize your Target Forest—to register it with Migrator Pro for Exchange so the program will know where the forest resides and how to connect to it. After this initial configuration, you can register and configure one or more Source Forests.

The subtopics below explain how the Forests view lets you define (register with Migrator Pro for Exchange) forests for cross-forest migrations, and how to update configuration settings for previously defined forests.

Adding a New Source Forest

To add a new Migrator Pro for Exchange source forest: Click **Forests** in the main Migrator Pro for Exchange toolbar, and then click **Add Forest**:

Migrator Pro for Exchange then opens the first of a series of screens to define and configure the new forest. The first in the series is the *Source Forest* screen.

Work your way through the screens, as described in the subtopics below. Migrator Pro for Exchange will register the new forest when you click the **Finish** button from the *Summary* screen (the last screen in the series).

Add Source Forest: Source Forest Screen

Enter the name of the **Source Forest** (top-level domain) you want to add to Migrator Pro for Exchange, and be sure to leave the **Office 365 Forest** checkbox *un*marked.

Or, if you are migrating to Office 365 and configured the local/on-premises forest during your initial Migrator Pro for Exchange Forest configuration, you can configure the O365 forest now, and Migrator Pro for Exchange will automatically switch the two. That is, Migrator Pro for Exchange will correctly configure the on-premises forest as the source and the O365 forest as the target. In that case, mark the **Office 365 Forest** checkbox and see Adding a New Office 365 Forest below.

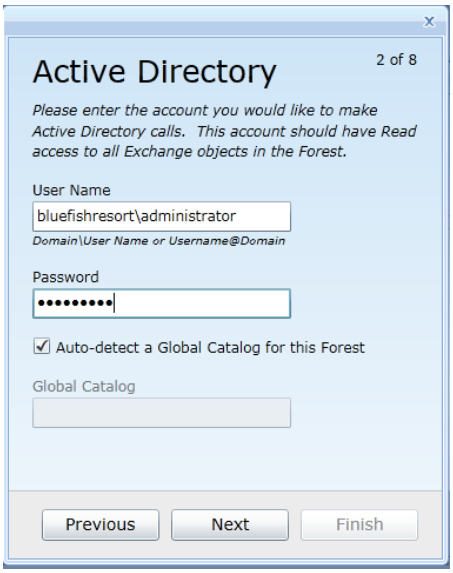
The Source Forest must be a fully qualified domain name (FQDN), and must be resolvable in DNS to a domain controller and global catalog server in the source forest.

When you have entered the **Source Forest** name:

- Click **Next** to advance to the next screen; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Source Forest: Active Directory Screen

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for Active Directory calls, and specify the Global Catalog for this forest. You can mark the **Auto-detect a Global Catalog** checkbox to have Migrator Pro for Exchange scan your environment and determine the Global Catalog for you, or manually enter the Global Catalog into the text box.



When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

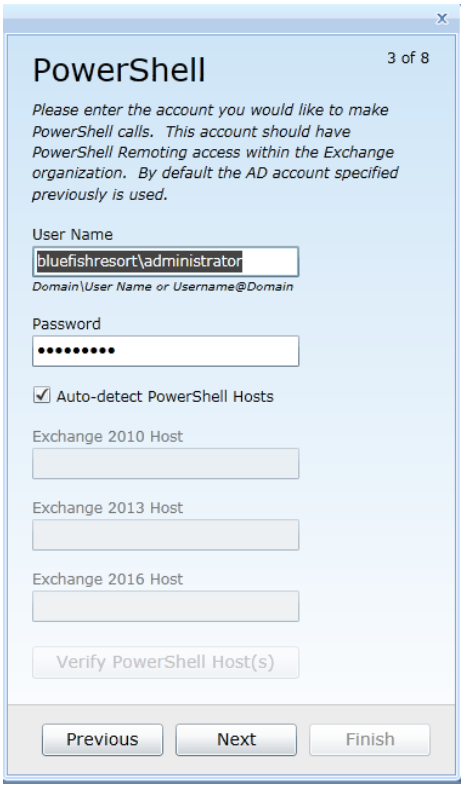
Add Source Forest: PowerShell Screen

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for PowerShell calls. This account should have PowerShell Remoting access with the Exchange organization.

Leave the **Auto-detect PowerShell Hosts** checkbox marked if you want Migrator Pro for Exchange to automatically find and specify the PowerShell hosts, or unmark the checkbox if you want to manually specify the hosts in the respective text boxes: **Exchange 2010 Host**, **Exchange 2013 Host** and **Exchange 2016 Host**.

NOTE ! A PowerShell host ***must*** be specified here as a Fully Qualified Domain Name (FQDN). An IP address will generate an SSL certificate error.

If you specify the hosts manually, be sure to click the **Verify PowerShell Host(s)** button to verify connectivity to the PowerShell host servers.



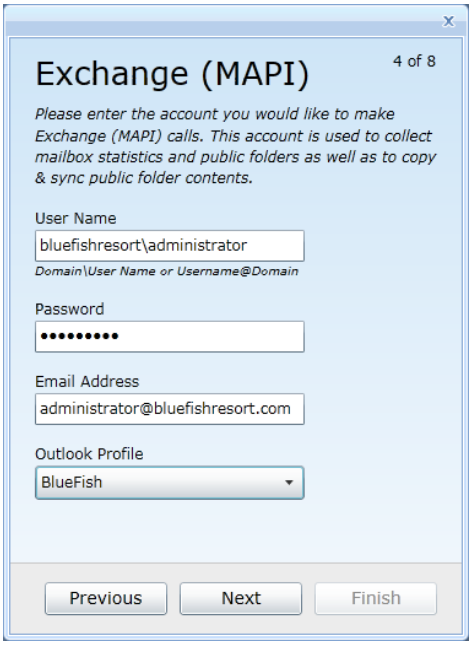
When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Source Forest: Exchange (MAPI) Screen

These settings are required only when migrating public folders in cross-forest migrations where no trusts exist.

Enter the **User Name**, **Password** and **Email Address** for the account Migrator Pro for Exchange should use for Exchange (MAPI) calls, and select the **Outlook Profile**.



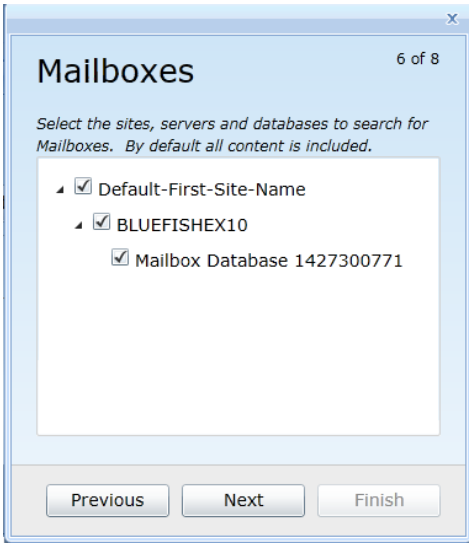
When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Source Forest: Mailboxes Screen

Select the sites, servers and databases you want Migrator Pro for Exchange to search for mailboxes to migrate. All content is selected by default.

You can right-click in the list area to select options to expand/collapse levels of the tree.



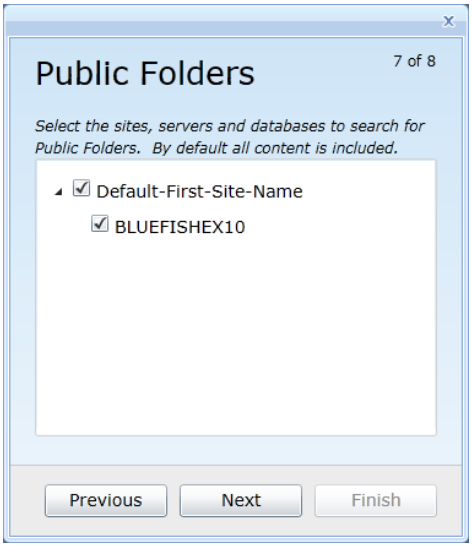
When the selections appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Source Forest: Public Folders Screen

Select the sites, servers, and databases you want Migrator Pro for Exchange to search for public folders to migrate. All content is selected by default.

You can right-click in the list area to select options to expand/collapse levels of the tree.



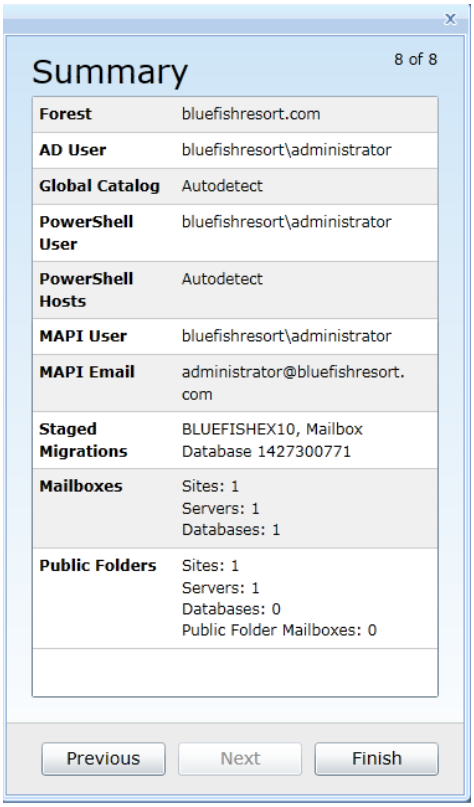
When the selections appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Source Forest: Summary Screen

Review the displayed summary of the new forest's configuration settings, and determine whether you want to change any settings before you save them into a new forest record.

If necessary, you can click **Previous** to return to any previous screen in the sequence to change the settings there.

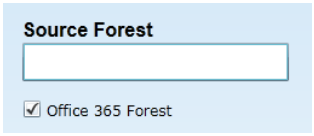


When this *Summary* shows all the configuration settings as you want them, click **Finish** to save all the settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Adding a New Office 365 Forest

To add a new Migrator Pro for Exchange Office 365 tenant forest: Click **Forests** in the main Migrator Pro for Exchange toolbar, and then click **Add Forest**:

Migrator Pro for Exchange then opens its *Source Forest* screen. This is actually the first screen in a series to define a new source forest, but a checkbox on this screen lets you shift the feature to the series for an Office 365 tenant forest:

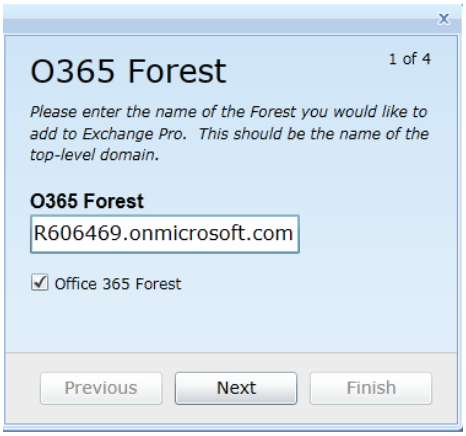


To shift the feature to define a new Office 365 tenant forest, mark the checkbox for **Office 365 Forest**. The screen title then changes to *Office 365 Forest*, and the text-box field name also changes to **Office 365 Forest** (as shown below).

Work your way through the screens, as described in the subtopics below. Migrator Pro for Exchange will register the new forest when you click the **Finish** button from the *Summary* screen (the last screen in the series).

Add Office 365 Forest: Office 365 Forest Screen

Enter the name of the **Office 365 Forest** (top-level domain) you want to add to Migrator Pro for Exchange, and be sure to leave the **Office 365 Forest** checkbox marked. (If you unmark the checkbox, the screen will shift back to its *Source Forest* mode and the entire screen sequence will change to the *Source Forest* configuration mode.)



When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Office 365 Forest: Exchange Online Screen

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for program calls to Exchange Online.

Then, if you will migrate public folders to Exchange Online, specify a **Public Folders Migration Mode** from the drop-down list. PowerShell and MAPI are the two available methods.

For **Msol Host Name**, enter the Office 365 endpoint URL. The default Msol Host Name value is ps.outlook.com.

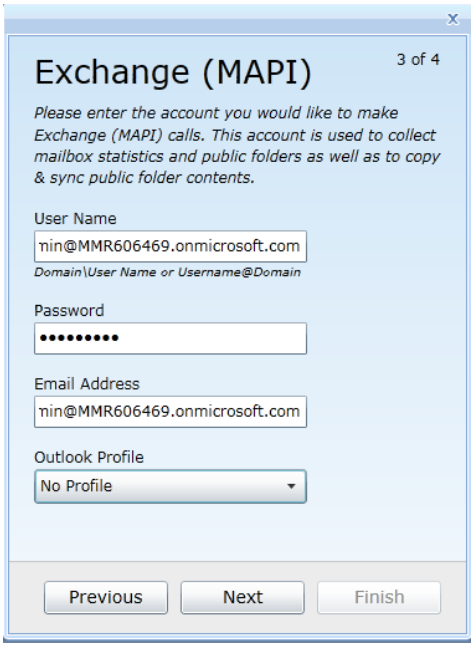
When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Office 365 Forest: Exchange (MAPI) Screen

These settings are required only when migrating public folders in cross-forest migrations where no trusts exist.

Enter the **User Name**, **Password** and **Email Address** for the account Migrator Pro for Exchange should use for program calls to Exchange (MAPI), and select the **Outlook Profile**.



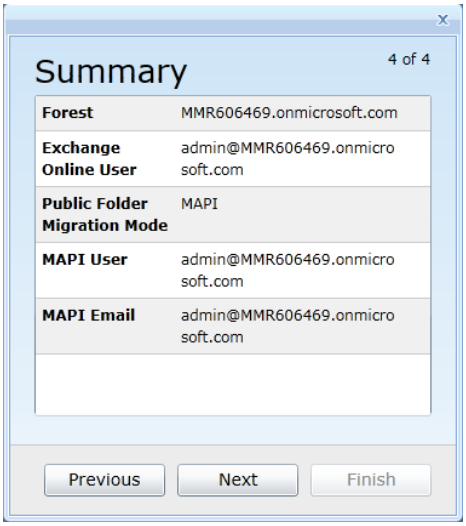
When these settings appear as you want them:

- Click **Next** to advance to the next screen; or
- Click **Previous** to return to the previous screen in the sequence; or
- Click **Finish** (if enabled) to save all your configuration settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

Add Office 365 Forest: Summary Screen

Review the displayed summary of the new forest's configuration, and determine whether you want to change any settings before you save them into a new forest record.

If necessary, you can click **Previous** to return to any previous screen in the sequence to change the settings there.



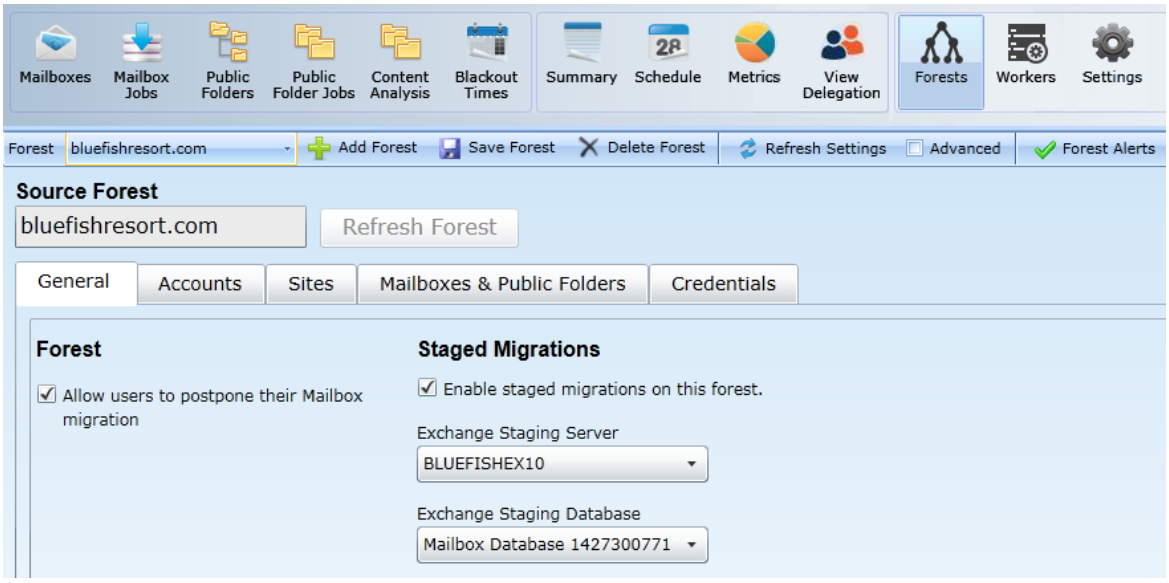
When this *Summary* shows all the configuration settings as you want them, click **Finish** to save all the settings (in all screens in this sequence) and return to the Forests view, with the newly defined forest opened into the multi-tabbed *Forest Configuration Settings* screen.

NOTE !

Before you can begin migrating to Office 365, you must select Office 365 license packs and related service plans for Migrator Pro for Exchange to use when auto-licensing Exchange Online mailbox migrations, adding mailboxes to the migration queue and scheduling mailbox migration to Office 365. Licensing information is specified in the *Licenses* tab in the Forest Configuration Settings screen.

Forest Configuration

Forests that have already been defined in Migrator Pro for Exchange can be configured and reconfigured in the multi-tabbed *Forest Configuration Settings* screen, which appears in the Forests view below the Forests toolbar. The three different Migrator Pro for Exchange forest types (Source, Target, and Office 365 Tenant forests) are configured differently, on different sets of tabs. This illustration shows the screen with the tabs to configure a source forest:

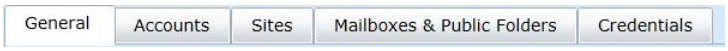


Configuration Tabs for a Source Forest

These tabs are documented under separate topic headings:

General Tab
Accounts Tab
Sites Tab
Mailboxes & Public Folders Tab
Credentials Tab

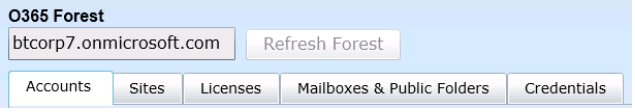
Configuration Tabs for the Target Forest



These tabs are documented under separate topic headings:

General Tab
Accounts Tab
Sites Tab
Mailboxes & Public Folders Tab
Credentials Tab

Configuration Tabs for an Office 365 Tenant Forest

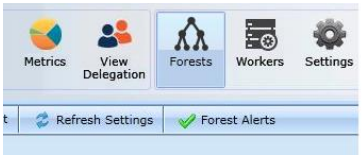


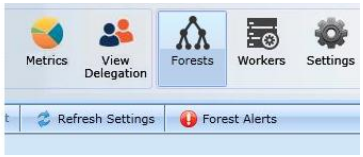
These tabs are documented under separate topic headings:

Accounts Tab
Sites Tab
Licenses Tab
Mailboxes & Public Folders Tab
Credentials Tab

Forest Alerts

The forest selection bar on the Forests view includes a Forest Alert indicator to show the accessibility status of required components for successful migration. A green checkmark indicates that no issues are detected. A red exclamation mark indicates that there may be issues that need to be resolved.

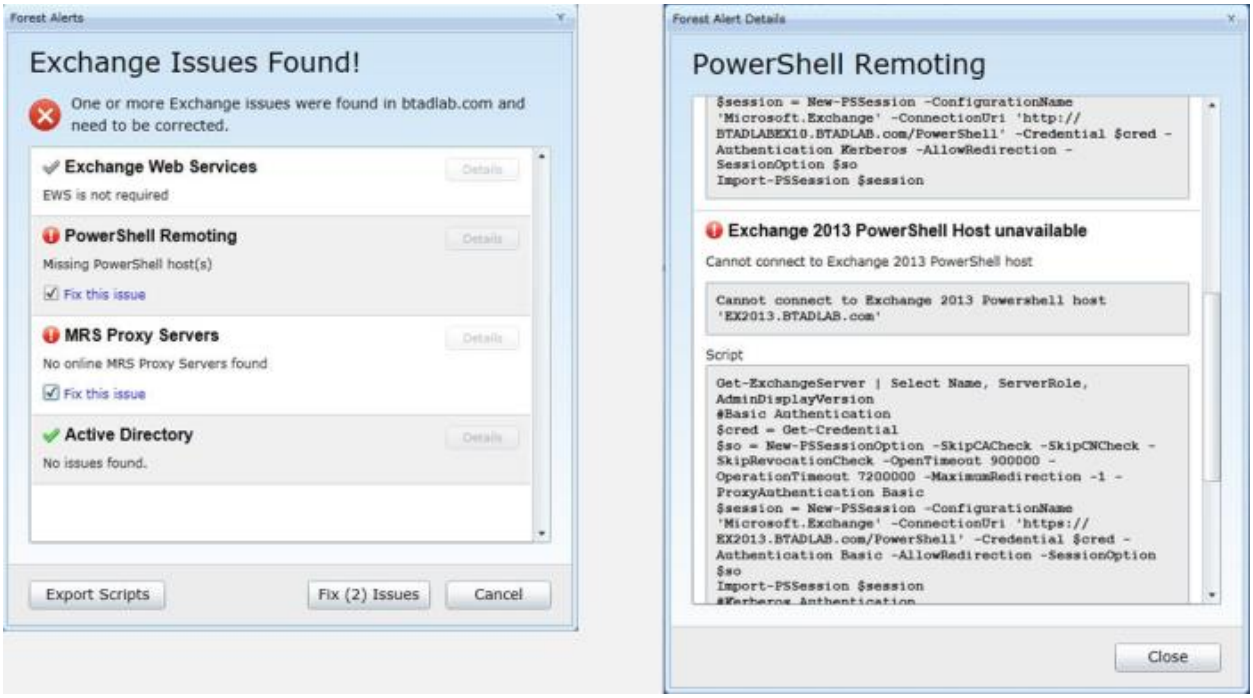




NOTE ! The Forest Alerts may not appear during the initial setup of the forest. It may take an hour or more for the first Alert indicators to display accurately.

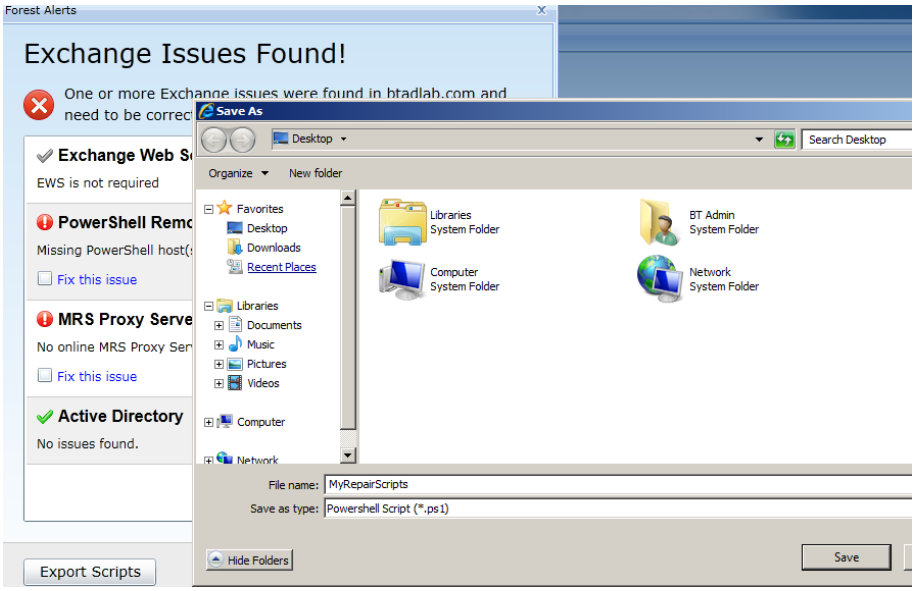
Also note that the Forest Alert indicator is not available for Tenant (Office365) Forests.

Clicking on the icon will bring up dialog boxes to help in troubleshooting. You can click the **Details** button for more information. This information also displays the relevant PowerShell script that is used to troubleshoot the issue.



Check the **[☐] Fix This Issue** checkbox to select the issues that you would like Migrator Pro for Exchange to attempt to repair for you. Then click the **Fix Issues** button at the bottom.

The **Export Scripts** button allows you to optionally export and save the scripts. You can then use them as a baseline to create custom scripts that meet your unique environmental needs.



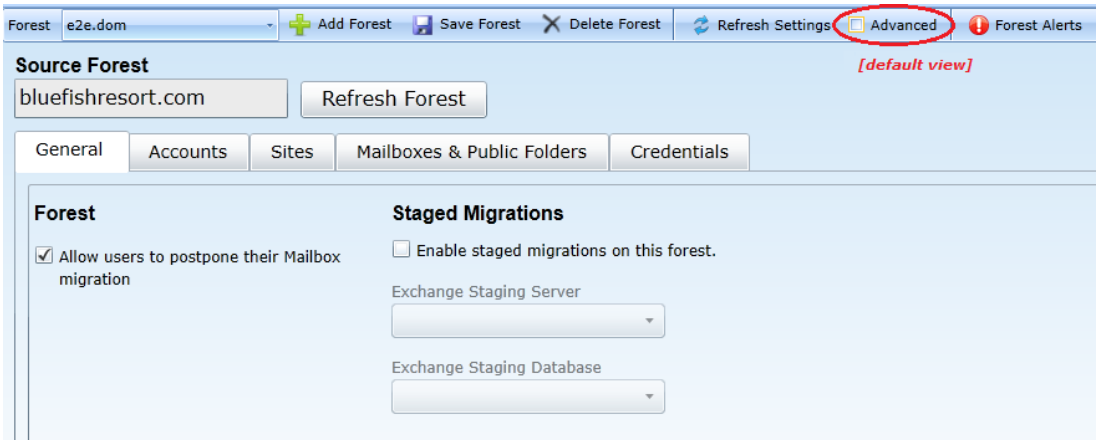
Deleting a Forest

The *Forests Configuration Settings* screen lets you delete additional (secondary or source) forests. When you delete a secondary forest, Migrator Pro for Exchange removes all its entries for the users and forest information, including any past migration history. Home (or target) forests cannot be deleted on the *Forests Configuration Settings* screen. A Home (or target) forest can be deleted only by a SQL query. Contact Support for assistance.

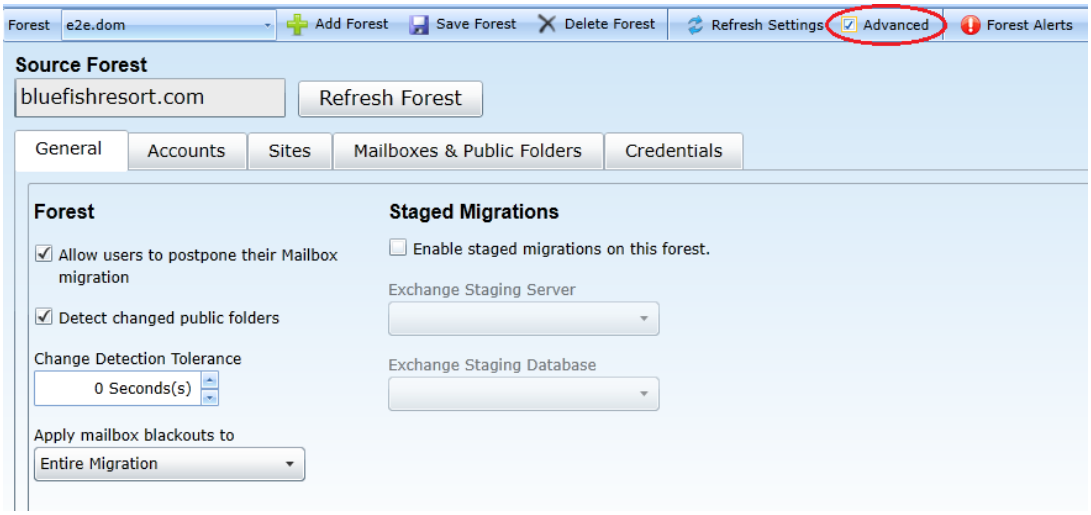
To delete a secondary forest: Click **Forests** in the main toolbar. Then select the secondary forest you want to delete (in the **Forest** drop-down list), and click **Delete Forest**.

Source Forest Configuration | General Tab

To view or edit the *General* tab for source forest configuration: From the Forest view toolbar, select a previously defined source **Forest** from the drop-down list, and then click the *General* tab. The *General* tab appears in its default view when the **Advanced** checkbox option is left unmarked:



Or, you can mark the **Advanced** checkbox to view additional options, although most admins simply accept the default values for these *Advanced* settings:



Forest Section

The default (non-*Advanced*) view of this tab contains only one setting for the selected forest:

- **Allow users to postpone their Mailbox migration:** Mark this checkbox if you want users to be able to set their own migration blackout periods in Migrator Pro for Exchange's User Portal.

The *E2E_Schedulers* group in Active Directory (if it exists) will override this user-postpone option.

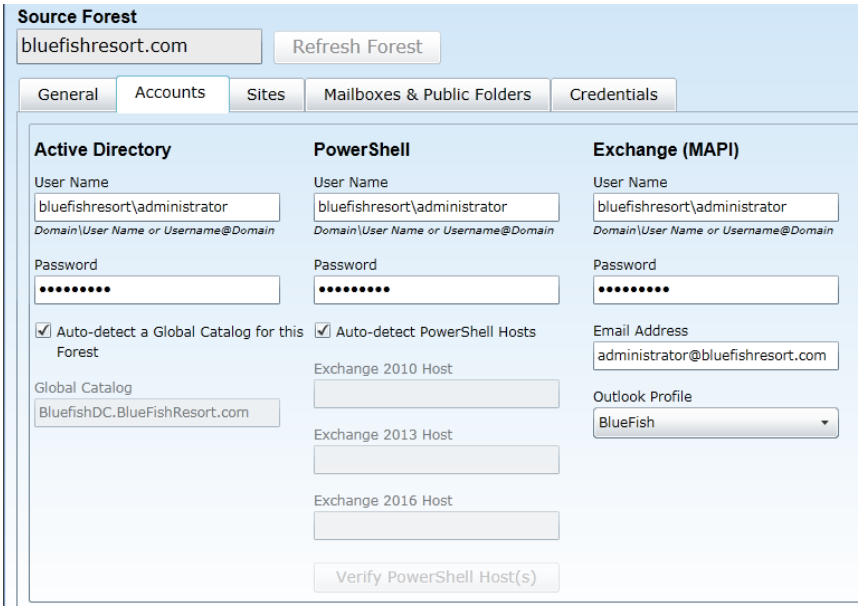
These settings, also in the *Forest* section, appear only in **Advanced** mode:

- **Detect changed public folders:** Mark this checkbox if you want Migrator Pro for Exchange to monitor public folders in the organization to detect forest-level additions, deletions and moves. The option is enabled by default, and we recommend you leave it enabled. If this feature is turned off, the admin and Migrator Pro for Exchange will not know when public folders have changed after the initial sync. This would be irrelevant if you do not intend to re-sync public folders after their initial sync, but would be necessary to permit future syncs.
- **Change Detection Tolerance:** The spinner control lets you set a wait period for Migrator Pro for Exchange's Detect feature (above, if enabled), specifying a number of seconds for Migrator Pro for Exchange to ignore changes to public folders after the time MAPI reports the most recent sync. For example, if set to 5 seconds, any changes detected within 5 seconds of the last sync are ignored. The default (and recommended) value is 2 seconds.
- **Apply mailbox blackouts to:** Blackout periods can be defined in Migrator Pro for Exchange's Blackout Times view (see the Blackout Times topic for more information). The drop-down list here lets you specify one of three options for applying blackout times to the forest:
  - *Entire Migration* (default, and recommended): All Mailbox jobs are affected by blackouts during the entire migration.
  - *Initial Migration:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts until the migration reaches 95% complete (pre-AutoSuspend). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want blackouts to be enforced during the pre-staging process, but not for the cutover process.

- *Final Migration\Cutover:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts after the migration reaches 95% complete (post-AutoSuspend, cutover). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want all mailbox jobs to be prevented from Cutover during the blackout period, but you want to allow “Suspend Until Ready to complete” jobs to continue working up to the 95% complete stage (pre-staging).

Source Forest Configuration | Accounts Tab

To view or edit the *Accounts* tab for source forest configuration: From the Forest view toolbar, select a previously defined source **Forest** from the drop-down list, and then click the *Accounts* tab. On this tab, all fields are displayed whether or not the **Advanced** checkbox is marked.



Active Directory Section

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for Active Directory calls, and specify the **Global Catalog** for this forest.

You can mark the **Auto-detect a Global Catalog** checkbox to have Migrator Pro for Exchange scan your environment and determine the **Global Catalog** for you, or manually enter the **Global Catalog** into the text box. Make sure that the designated GC is physically close to the Migrator Pro for Exchange server. (If you know of another GC that is physically closer than the one found by the **Auto-detect** feature, you may want to disable **Auto-detect** and manually specify the nearer option.)

PowerShell Section

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for PowerShell calls. This account should have PowerShell Remoting access within the Exchange organization.

Leave the **Auto-detect PowerShell Hosts** checkbox marked if you want Migrator Pro for Exchange to automatically find and specify the PowerShell hosts, or unmark the checkbox if you want to manually specify the hosts in the respective text boxes: **Exchange 2010 Host**, **Exchange 2013 Host** and **Exchange 2016 Host**. Make sure the designated PS hosts are physically close to the Migrator Pro for

Exchange server. (If another PS Host is physically closer than the one found by the **Auto-detect** feature, you may want to disable **Auto-detect** and manually specify the nearer option.)

NOTE ! A PowerShell host must be specified here as a Fully Qualified Domain Name (FQDN). An IP address will generate an SSL certificate error.

If you specify PowerShell hosts manually, be sure to click the **Verify PowerShell Host(s)** button to test connectivity to the PowerShell host servers.

Exchange (MAPI) Section

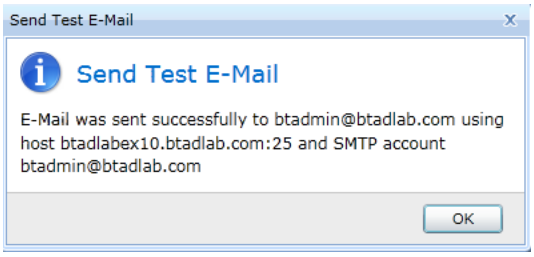
These settings are required only when migrating public folders in cross-forest migrations where no trusts exist.

Enter the **User Name**, **Password** and **Email Address** for the account Migrator Pro for Exchange should use for Exchange (MAPI) calls, and select the **Outlook Profile**.

SMTP Section

These settings are necessary for Migrator Pro for Exchange to use SMTP (Simple Mail Transfer Protocol), which is the Internet standard for electronic mail transmission across Internet Protocol (IP) networks.

Complete the fields here, and then click the **Send Test Email** button to verify connectivity. When you **Send Test Email**, Migrator Pro for Exchange posts a status response:

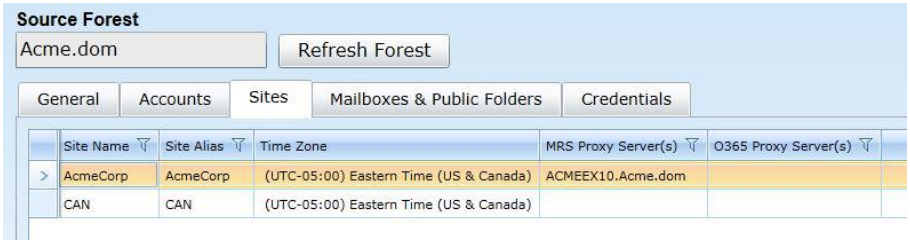


If the test succeeds, click **OK** to continue. If the test fails, modify the above SMTP settings and test again.

Source Forest Configuration | Sites Tab

To view or edit the *Sites* tab for source forest configuration: From the Forest view toolbar, select a previously defined source **Forest** from the drop-down list, and then click the *Sites* tab. On this tab, all fields are displayed whether or not the **Advanced** checkbox is marked.

The table in this view displays a list of the AD sites that were found in your environment for the selected forest:



Most of the settings in this table can be edited:

- **Site Name:** Displays the name of the migration site.
- **Site Alias:** Displays the user-defined name for the migration site. Actual Site Names are often cryptic or otherwise difficult to read, so Migrator Pro for Exchange lets you assign "friendlier" shorthand names ("aliases") to identify the sites within Migrator Pro for Exchange features. This is an optional but popular feature, which can also be useful to differentiate among duplicate or very similar Site Names—as sometimes occurs if you add external forests to your project. To edit the alias value, just click inside the cell and the value becomes editable.
- **Time Zone:** Displays the time zone of the migration, which Migrator Pro for Exchange uses to calculate configured blackout periods for a given site. An AD site may span several time zones, but Migrator Pro for Exchange associates each site with a single time zone. To change a time zone setting: Click inside the cell to make the value editable (a small triangle appears), then click the triangle to view a list of available options, and select the time zone you want to assign to this forest.
- **MRS Proxy Server(s):** Displays the Exchange Mailbox Replication Service (MRS) proxy servers that Migrator Pro for Exchange has discovered for the site. Server names are separated with commas. You can manually define the publicly addressable names of the MRS proxy servers for the site. Manually entered server names are not overwritten by scheduled or manual forest refreshes.

  To manually define **MRS Proxy Server(s)**: Click inside the cell to make the values editable, and enter publicly addressable names for the site's MRS proxy servers, separating multiple names with commas.

Remember to click **Save Forest** (in the Forest toolbar above the tabs) to save any changes you make to these settings.

Source Forest Configuration | Mailboxes & Public Folders Tab

To view or edit the *Mailboxes & Public Folders* tab for source forest configuration: From the Forest view toolbar, select a previously defined source **Forest** from the drop-down list, and then click the *Mailboxes & Public Folders* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

Mailboxes Section

Select the sites, servers and databases you want Migrator Pro for Exchange to search for mailboxes in this forest to migrate. All content is selected by default.

You can right-click in the list area to select options to expand/collapse levels of the tree.

Public Folders Section

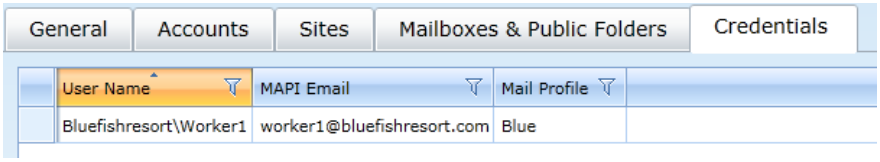
Select the sites, servers, and databases you want Migrator Pro for Exchange to search for public folders in this forest to migrate. All content is selected by default.

You can right-click in the list area to select options to expand/collapse levels of the tree.

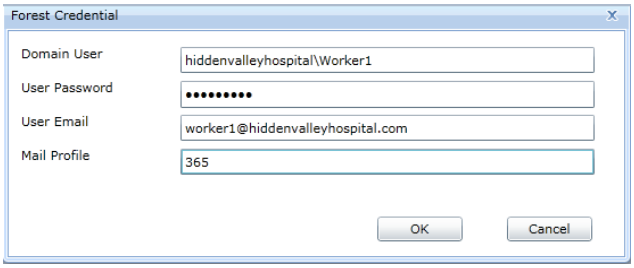
Source Forest Configuration | Credentials Tab

To view or edit the *Credentials* tab for source forest configuration: From the Forest view toolbar, select a previously defined source **Forest** from the drop-down list, and then click the *Credentials* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

The table in this tab shows the credentials that are available for Migrator Pro for Exchange to use for its public folder Workers in the selected forest. (Source and Target credentials are selected in the Worker's settings, and the credentials defined here make up the list of selectable credentials for the Workers.)



To define a credential for this forest: Click the **Add** button (below the table) to open the *Forest Credential* screen:



... and enter this information:

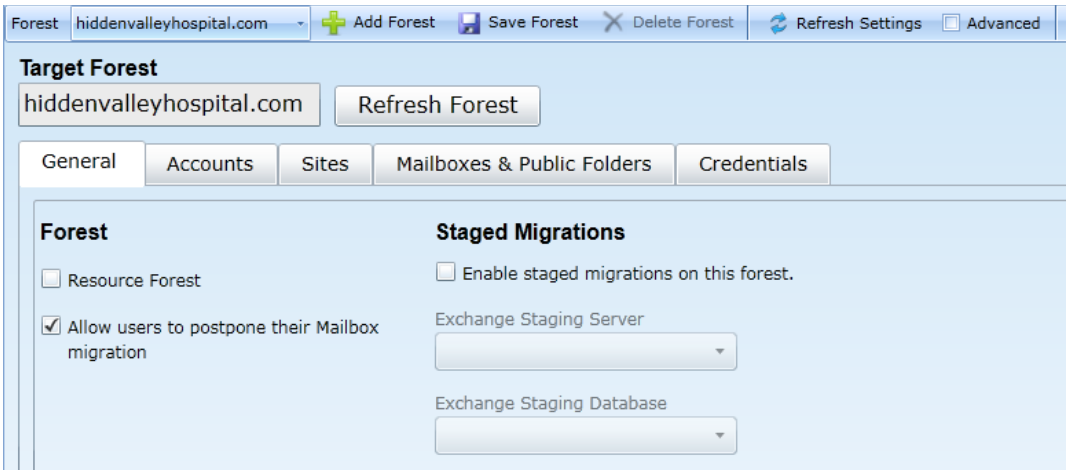
- **Domain User:** The Domain user (in *Domain\Username* format).
- **User Password:** The password for the user
- **User Email:** The email address of the user
- **Mail Profile:** The name of the Outlook Profile that has been preconfigured on the Worker machine. A Worker machine without Outlook installed cannot use credentials with Outlook Profiles. This field should remain blank to create a credential for Workers that do not have Outlook installed.

Then click **OK** to create a new credentials record and dismiss the *Forest Credential* screen.

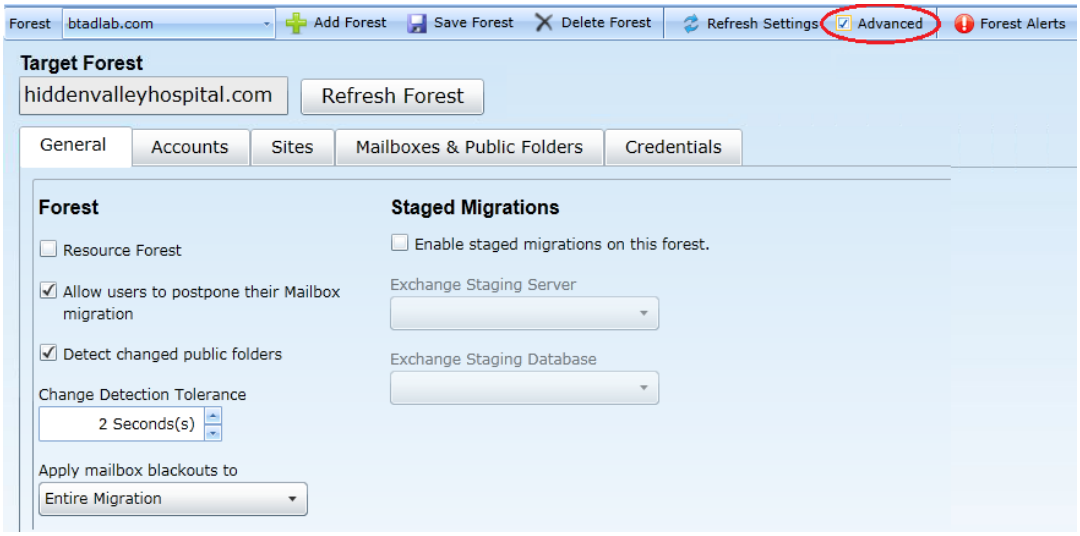
You can also **Edit** or **Delete** a previously defined credential.

Target Forest Configuration | General Tab

To view or edit the *General* tab for target forest configuration: From the Forest view toolbar, select the previously defined target **Forest** from the drop-down list, and then click the *General* tab. The *General* tab appears in its default view when the **Advanced** checkbox option is left unmarked:



Or you can mark the **Advanced** checkbox to view additional options, although most admins simply accept the default values for these *Advanced* settings:



Forest Section

In the default (non-*Advanced*) view of this tab, the *Forest* section contains these two settings for the selected forest:

- **Resource Forest:** If the target Exchange environment is configured as an Exchange Resource Forest environment, mark the **Resource Forest** checkbox to create a “Linked User” relationship between the source and target account. This option applies only for Inter-Org migrations; and this checkbox appears only when configuring the Home Forest. (For more information about resource forests, see Microsoft's article http://technet.microsoft.com/en-us/library/aa998031.aspx and other Microsoft resources.)

- **Allow users to postpone their Mailbox migration:** Mark this checkbox if you want users to be able to set their own migration blackout periods in Migrator Pro for Exchange's User Portal.

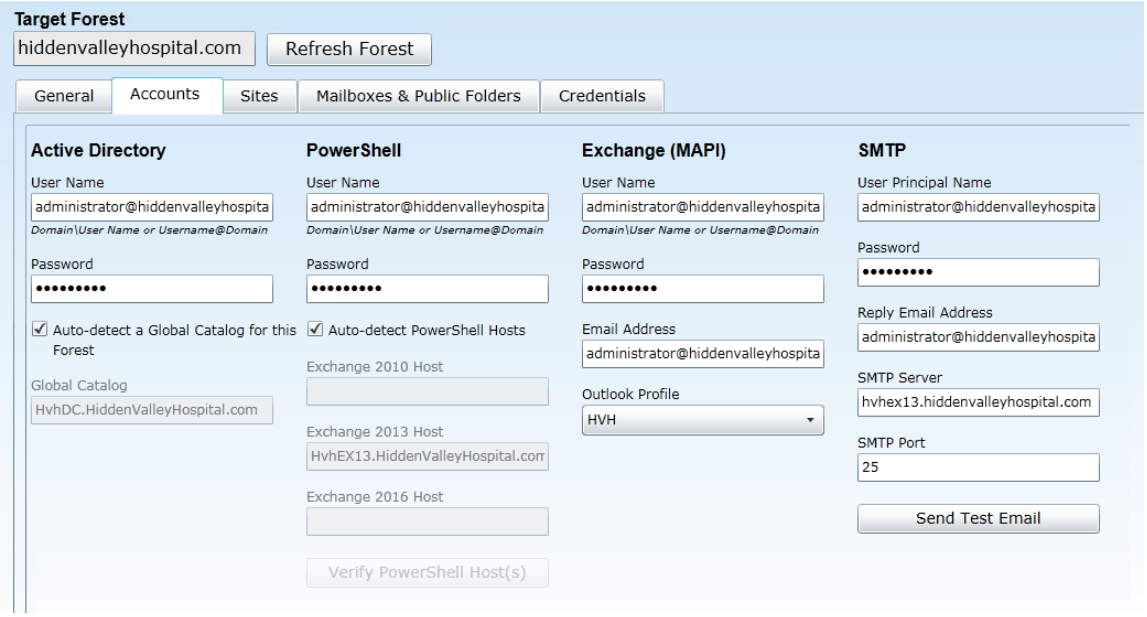
The *E2E_Schedulers* group in Active Directory (if it exists) will override this user-postpone option.

These settings, also in the *Forest* section, appear only in *Advanced* mode:

- **Detect changed public folders:** Mark this checkbox if you want Migrator Pro for Exchange to monitor public folders in the organization to detect forest-level additions, deletions and moves. The option is enabled by default, and we recommend you leave it enabled. If this feature is turned off, the admin and Migrator Pro for Exchange will not know when public folders have changed after the initial sync. This would be irrelevant if you do not intend to re-sync public folders after their initial sync, but would be necessary to permit future syncs.
- **Change Detection Tolerance:** The spinner control lets you set a wait period for Migrator Pro for Exchange's **Detect** feature (above, if enabled), specifying a number of seconds for Migrator Pro for Exchange to ignore changes to public folders after the time MAPI reports the most recent sync. For example, if set to 5 seconds, any changes detected within 5 seconds of the last sync are ignored. The default (and recommended) value is 2 seconds.
- **Apply mailbox blackouts to:** Blackout periods can be defined in Migrator Pro for Exchange's Blackout Times view (see the Blackout Times topic for more information). The drop-down list here lets you specify one of three options for applying blackout times to the forest:
    - *Entire Migration* (default, and recommended): All Mailbox jobs are affected by blackouts during the entire migration.
    - *Initial Migration:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts until the migration reaches 95% complete (pre-AutoSuspend). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want blackouts to be enforced during the pre-staging process, but not for the cutover process.
    - *Final Migration\Cutover:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts after the migration reaches 95% complete (post-AutoSuspend, cutover). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want all mailbox jobs to be prevented from Cutover during the blackout period, but you want to allow “Suspend Until Ready to complete” jobs to continue working up to the 95% complete stage (pre-staging).

Target Forest Configuration | Accounts Tab

To view or edit the *Accounts* tab for target forest configuration: From the Forest view toolbar, select the previously defined target **Forest** from the drop-down list, and then click the *Accounts* tab. On this tab, all fields are displayed whether or not the **Advanced** checkbox is marked.



Active Directory Section

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for Active Directory calls, and specify the **Global Catalog** for this forest.

You can mark the **Auto-detect a Global Catalog** checkbox to have Migrator Pro for Exchange scan your environment and determine the **Global Catalog** for you, or manually enter the **Global Catalog** into the text box. Make sure that the designated GC is physically close to the Migrator Pro for Exchange server. (If you know of another GC that is physically closer than the one found by the **Auto-detect** feature, you may want to disable **Auto-detect** and manually specify the nearer option.)

PowerShell Section

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use for PowerShell calls. This account should have PowerShell Remoting access within the Exchange organization.

Leave the **Auto-detect PowerShell Hosts** checkbox marked if you want Migrator Pro for Exchange to automatically find and specify the PowerShell hosts, or unmark the checkbox if you want to manually specify the hosts in the respective text boxes: **Exchange 2010 Host**, **Exchange 2013 Host** and **Exchange 2016 Host**. Make sure the designated PS hosts are physically close to the Migrator Pro for Exchange server. (If another PS Host is physically closer than the one found by the **Auto-detect** feature, you may want to disable **Auto-detect** and manually specify the nearer option.)

A PowerShell host must be specified here as a Fully Qualified Domain Name (FQDN). An IP address will generate an SSL certificate error.

If you specify PowerShell hosts manually, be sure to click the **Verify PowerShell Host(s)** button to test connectivity to the PowerShell host servers.

Exchange (MAPI) Section

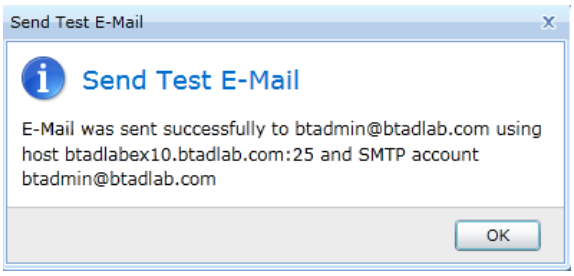
These settings are required only when migrating public folders in cross-forest migrations where no trusts exist.

Enter the **User Name**, **Password** and **Email Address** for the account Migrator Pro for Exchange should use for Exchange (MAPI) calls, and select the **Outlook Profile**.

SMTP Section

These settings are necessary for Migrator Pro for Exchange to use SMTP (Simple Mail Transfer Protocol), which is the Internet standard for electronic mail transmission across Internet Protocol (IP) networks.

Complete the fields here, and then click the **Send Test Email** button to verify connectivity. When you **Send Test Email**, Migrator Pro for Exchange posts a status response:

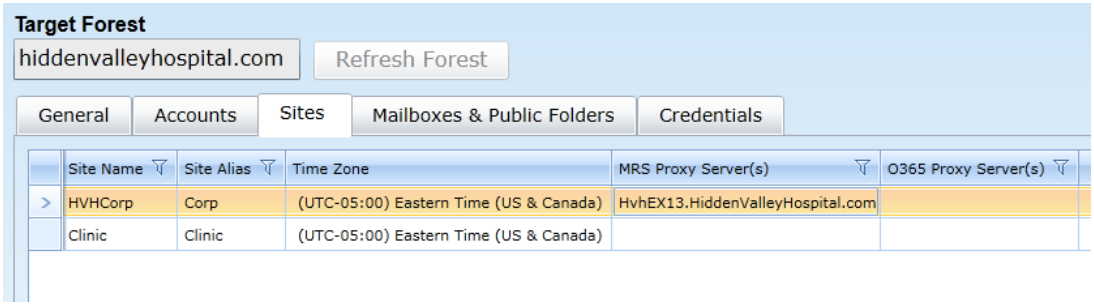


If the test succeeds, click **OK** to continue. If the test fails, modify the above SMTP settings and test again.

Target Forest Configuration | Sites Tab

To view or edit the *Sites* tab for target forest configuration: From the Forest view toolbar, select the previously defined target **Forest** from the drop-down list, and then click the *Sites* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

The table in this view displays a list of the AD sites that were found in your environment for the selected forest:



Most of the settings in this table can be edited:

- **Site Name:** Displays the name of the migration site.
- **Site Alias:** Displays the user-defined name for the migration site. Actual **Site Names** are often cryptic or otherwise difficult to read, so Migrator Pro for Exchange lets you assign "friendlier" shorthand names ("aliases") to identify the sites in Migrator Pro for Exchange features. This is an optional but popular feature, which can also be useful to differentiate among duplicate or very

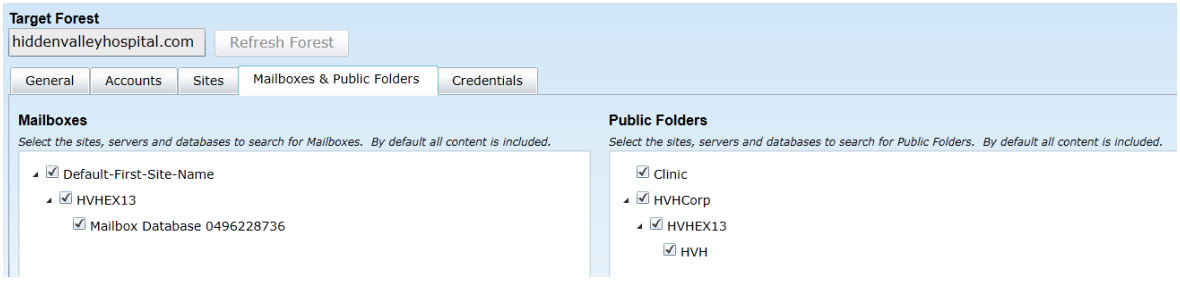
similar **Site Names**—as sometimes occurs if you add external forests to your project. To edit the alias value, click inside the cell and the value becomes editable.

- **Time Zone:** Displays the time zone of the migration, which Migrator Pro for Exchange uses to calculate configured blackout periods for a given site. An AD site may span several time zones, but Migrator Pro for Exchange associates each site with a single time zone. To change a time zone setting: Click inside the cell to make the value editable (a small triangle appears), then click the triangle to view a list of available options, and select the time zone you want to assign to this forest.
- **MRS Proxy Server(s):** Displays the Exchange Mailbox Replication Service (MRS) proxy servers that Migrator Pro for Exchange has discovered for the site. Server names are separated with commas. You can manually define the publicly addressable names of the MRS proxy servers for the site. Manually entered server names are not overwritten by scheduled or manual forest refreshes. To manually define **MRS Proxy Server(s)**: Click inside the cell to make the values editable, and enter publicly addressable names for the site's MRS proxy servers, separating multiple names with commas.

Remember to click **Save Forest** (in the Forest toolbar above the tabs) to save any changes you make to these settings.

Target Forest Configuration | Mailboxes & Public Folders Tab

To view or edit the *Mailboxes & Public Folders* tab for target forest configuration: From the Forest view toolbar, select the previously defined target **Forest** from the drop-down list, and then click the *Mailboxes & Public Folders* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.



Mailboxes Section

Select the sites, servers and databases in this forest you want to search for mailboxes to migrate. All content is selected by default. You can right-click in the list area to select options to expand/collapse levels of the tree.

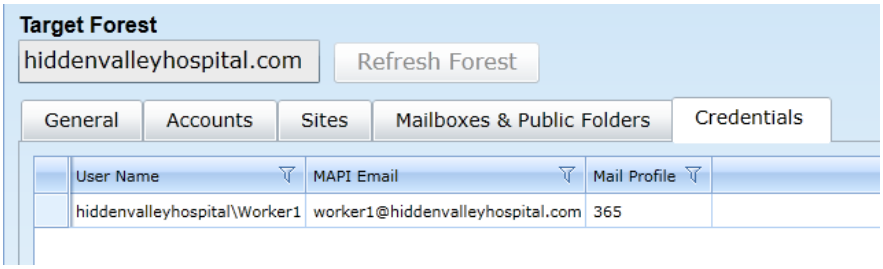
Public Folders Section

Select the sites, servers, and databases in this forest you want to search for public folders to migrate. All content is selected by default. You can right-click in the list area to select options to expand/collapse levels of the tree.

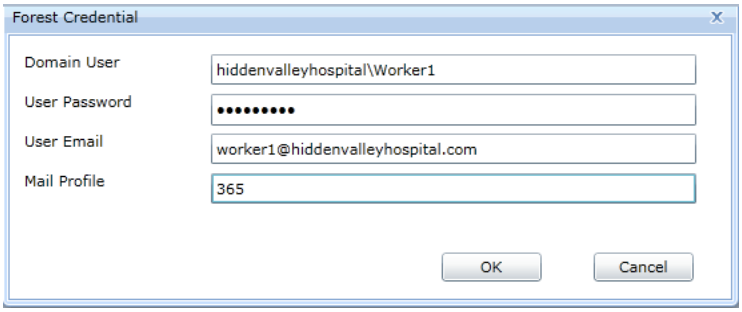
Target Forest Configuration | Credentials Tab

To view or edit the *Credentials* tab for target forest configuration: From the Forest view toolbar, select the previously defined target **Forest** from the drop-down list, and then click the *Credentials* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

The table in this tab shows the credentials that are available for Migrator Pro for Exchange to use for its public folder Workers in the selected forest. (Source and Target credentials are selected in the Worker's settings, and the credentials defined here make up the list of selectable credentials for the Workers.)



To define a credential for this forest: Click the **Add** button (below the table) to open the *Forest Credential* screen:



... and enter this information:

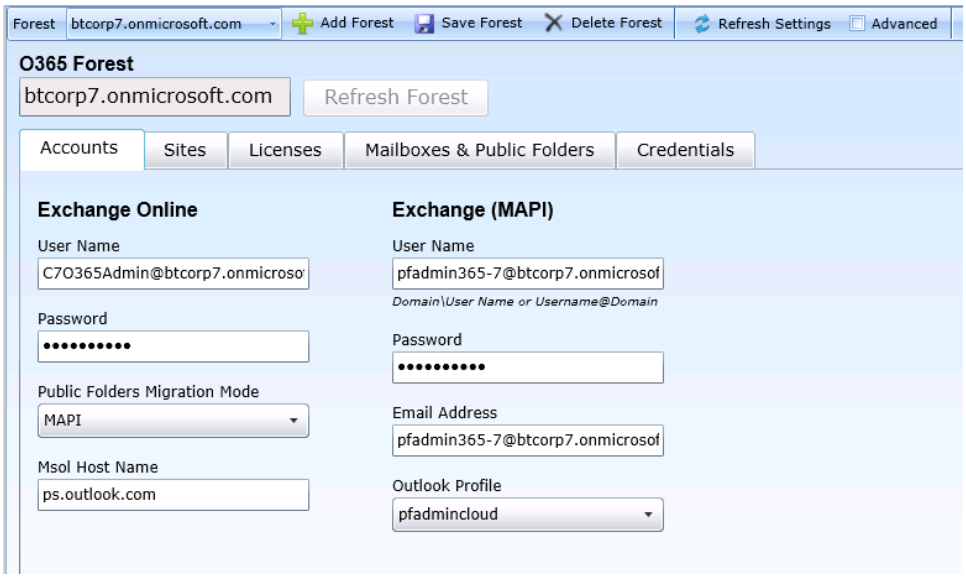
- **Domain User:** The Domain user (in *Domain\Username* format).
- **User Password:** The password for the user
- **User Email:** The email address of the user
- **Mail Profile:** The name of the Outlook profile that has been preconfigured on the Worker machine. A Worker machine without Outlook installed cannot use credentials with Outlook Profiles. This field should remain blank to create a credential for Workers that do not have Outlook installed.

Then click **OK** to create a new credentials record and dismiss the *Forest Credential* screen.

You can also **Edit** or **Delete** a previously defined credential.

Tenant Forest (Office 365) Configuration | Accounts Tab

To view or edit the Accounts tab for tenant forest configuration: From the Forest view toolbar, select a previously defined tenant Forest from the drop-down list, and then click the Accounts tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.



Exchange Online Section

These settings are required for Migrator Pro for Exchange program access to Office 365.

Enter the **User Name** and **Password** for the account Migrator Pro for Exchange should use to access Office 365.

Specify a **Public Folders Migration Mode** from the drop-down list. *PowerShell* and *MAPI* are the two available methods. If the **Migration Mode** is not specified here, Migrator Pro for Exchange will use the MAPI migration method by default.

For **Msol Host Name**, enter the Office 365 endpoint URL. The default Msol Host Name value is ps.outlook.com.

Exchange (MAPI) Section

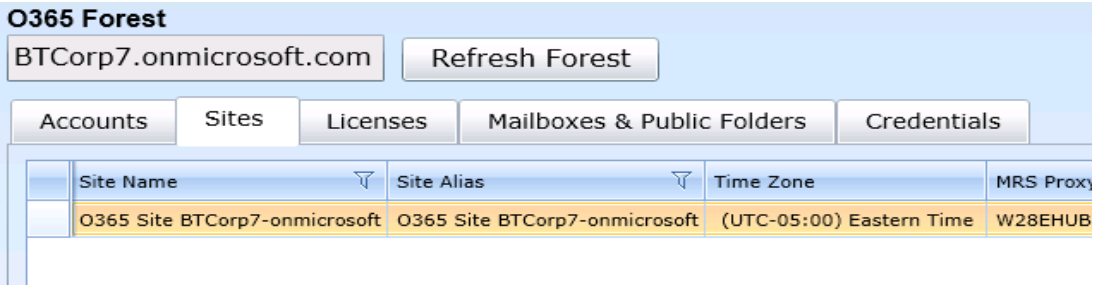
These settings are required only when migrating public folders in cross-forest migrations where no trusts exist.

Enter the **User Name**, **Password** and **Email Address** for the account Migrator Pro for Exchange should use for program calls to Exchange (MAPI), and select the **Outlook Profile**.

Tenant Forest (Office 365) Configuration | Sites Tab

To view or edit the *Sites* tab for tenant forest configuration: From the Forest view toolbar, select a previously defined tenant **Forest** from the drop-down list, and then click the *Sites* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

The table in this view displays a list of the AD sites that were found in your environment for the selected forest:



Most of the settings in this table can be edited:

- **Site Name:** Displays the name of the migration site.
- **Site Alias:** Displays the user-defined name for the migration site. Actual **Site Name**s are often cryptic or otherwise difficult to read, so Migrator Pro for Exchange lets you assign "friendlier" shorthand names ("aliases") to identify the sites within Migrator Pro for Exchange features. This is an optional but popular feature, which can also be useful to differentiate among duplicate or very similar **Site Name**s—as sometimes occurs if you add external forests to your project. To edit the alias value, just click inside the cell and the value becomes editable.
- **Time Zone:** Displays the time zone of the migration, which Migrator Pro for Exchange uses to calculate configured blackout periods for a given site. An AD site may span several time zones, but Migrator Pro for Exchange associates each site with a single time zone. To change a time zone setting: Click inside the cell to make the value editable (a small triangle appears), then click the triangle to view a list of available options, and select the time zone you want to assign to this forest.
- **MRS Proxy Server(s):** Displays the Exchange Mailbox Replication Service (MRS) proxy servers that Migrator Pro for Exchange has discovered for the site. Server names are separated with commas. You can manually define the publicly addressable names of the MRS proxy servers for the site. Manually entered server names are not overwritten by scheduled or manual forest refreshes. To manually define **MRS Proxy Server(s)**: Click inside the cell to make the values editable, and enter publicly addressable names for the site's MRS proxy servers, separating multiple names with commas.

Remember to click **Save Forest** (in the Forest toolbar above the tabs) to save any changes you make to these settings.

Tenant Forest (Office 365) Configuration | Licenses Tab

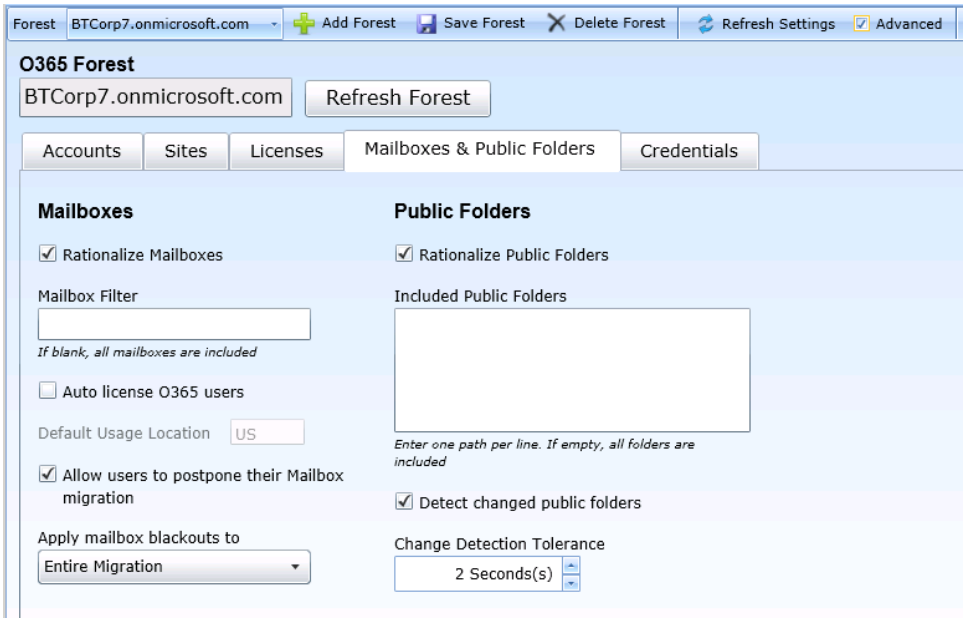
To view or edit the *Licenses* tab for tenant forest configuration: From the Forest view toolbar, select a previously defined tenant **Forest** from the drop-down list, and then click the *Licenses* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

This tab lets you select Office 365 license packs and related service plans for Migrator Pro for Exchange to use for auto-licensing Exchange Online mailbox migrations.

Tenant Forest (Office 365) Configuration | Mailboxes & Public Folders Tab

To view or edit the *Mailboxes & Public Folders* tab for tenant forest configuration: From the Forest view toolbar, select a previously defined tenant **Forest** from the drop-down list, and then click the *Mailboxes & Public Folders* tab.

Or you can mark the **Advanced** checkbox to view additional options, although most admins simply accept the default values for these Advanced settings.



Mailboxes Section

In the default (non-Advanced) view of this tab, the *Mailboxes* section contains these three settings for the selected forest:

- **Rationalize Mailboxes:** Mark this checkbox if you want Mailboxes rationalized.
- **Mailbox Filter:** Enter a PowerShell query used to select user mailboxes. This query is used as the [string] parameter in Get-Mailbox -Filter [string]. For example, CustomAttribute13 -like '*Wave1*'

  More information about using the Filter parameter can be found here.
- **Auto license O365 users:** Displays only for Office 365 Exchange Online. Set this feature to optionally activate a mailbox for an end user. Mailbox migration will fail if the user is not activated. You can also apply an existing SharePoint and Lync/Skype for Business license by reviewing the Office 365 License section on the Migrator Pro for Exchange *Settings* tab. Click on your license for options.
- **Default Usage Location:** The default usage location of the Auto-licensed O365 users.
- **Allow users to postpone their Mailbox migration:** Mark this checkbox if you want users to be able to set their own migration blackout periods in Migrator Pro for Exchange's User Portal.

The *E2E_Schedulers* group in Active Directory (if it exists) will override this user-postpone option.

This setting, also in the *Mailboxes* section, appears only in *Advanced* mode:

- **Apply mailbox blackouts to:** Blackout periods can be defined in Migrator Pro for Exchange's Blackout Times view (see the Blackout Times topic for more information). The drop-down list here lets you specify one of three options for applying blackout times to the forest:
  - *Entire Migration* (default, and recommended): All Mailbox jobs are affected by blackouts during the entire migration.
  - *Initial Migration:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts until the migration reaches 95% complete (pre-AutoSuspend). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want blackouts to be enforced during the pre-staging process, but not for the cutover process.

- *Final Migration\Cutover:* Mailbox jobs marked as "Suspend when ready to complete" are affected by blackouts after the migration reaches 95% complete (post-AutoSuspend, cutover). All other mailbox jobs are affected by blackouts during the entire migration. Choose this setting when you want all mailbox jobs to be prevented from Cutover during the blackout period, but you want to allow “Suspend Until Ready to complete” jobs to continue working up to the 95% complete stage (pre-staging).

Public Folders Section

In the default (non-Advanced) view of this tab, the *Public Folders* section contains these three settings for the selected forest:

- **Rationalize Public Folders:** Mark this checkbox if you want Public Folders rationalized.
- **Included Public Folders:** Included Public Folders can be further filtered by entering a list of full folder paths.

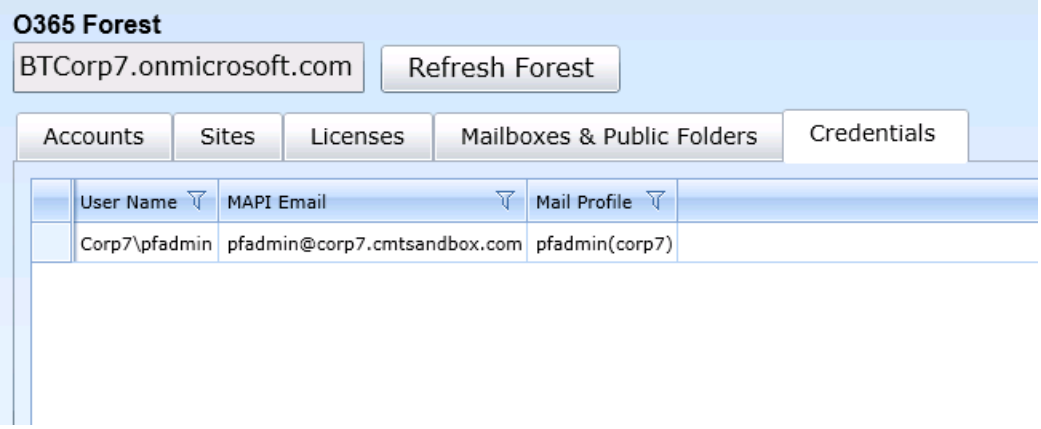
These settings, also in the *Public Folders* section, appear only in *Advanced* mode:

- **Detect changed public folders:** Mark this checkbox if you want Migrator Pro for Exchange to monitor public folders in the organization to detect forest-level additions, deletions and moves. The option is enabled by default, and we recommend you leave it enabled. If this feature is turned off, the admin and Migrator Pro for Exchange will not know when public folders have changed after the initial sync. This would be irrelevant if you do not intend to re-sync public folders after their initial sync, but would be necessary to permit future syncs.
- **Change Detection Tolerance:** The spinner control lets you set a wait period for Migrator Pro for Exchange's Detect feature (above, if enabled), specifying a number of seconds for Migrator Pro for Exchange to ignore changes to public folders after the time MAPI reports the most recent sync. For example, if set to 5 seconds, any changes detected within 5 seconds of the last sync are ignored. The default (and recommended) value is 2 seconds.

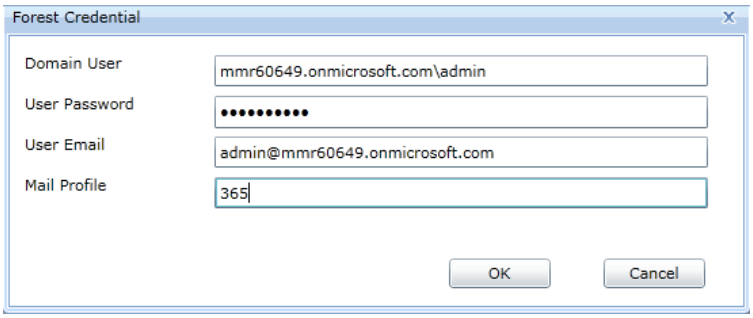
Tenant Forest (Office 365) Configuration | Credentials Tab

To view or edit the *Credentials* tab for tenant forest configuration: From the Forest view toolbar, select a previously defined tenant **Forest** from the drop-down list, and then click the *Credentials* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

The table in this tab shows the credentials that are available for Migrator Pro for Exchange to use for its public folder Workers in the selected forest. (Source and Target credentials are selected in the Worker's settings, and the credentials defined here make up the list of selectable credentials for the Workers.)



To define a credential for this forest: Click the **Add** button (below the table) to open the *Forest Credential* screen:



... and enter this information:

- **Domain User:** The Domain user (in *Domain\Username* format).
- **User Password:** The password for the user
- **User Email:** The email address of the user
- **Mail Profile:** The name of the Outlook Profile that has been preconfigured on the Worker machine. A Worker machine without Outlook installed cannot use credentials with Outlook Profiles. This field should remain blank to create a credential for Workers that do not have Outlook installed.

Then click **OK** to create a new credentials record and dismiss the *Forest Credential* screen.

You can also **Edit** or **Delete** a previously defined credential.

3. Managing Migrator Pro for Exchange Workers

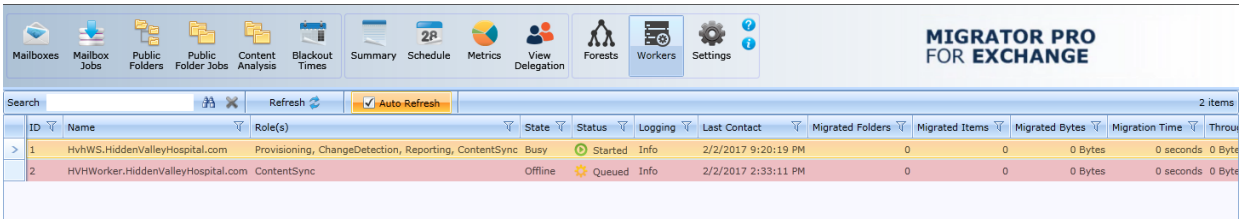
Migrator Pro for Exchange supports configuration of an AWD (Automated Workload Distribution) process for the migration of public folders. The AWD process uses multiple workers assigned different roles (multiple computers working in parallel) in the overall migration process, to scale public folder migration and improve throughput when migrating larger volumes of public folders. Migrator Pro for Exchange's Workers view lists all installed public folder Workers that are configured to point to the Migrator Pro for Exchange SQL database. The Migrator Pro for Exchange server automatically becomes the local master worker when Migrator Pro for Exchange is installed, but additional remote workers can be defined.

The Migrator Pro for Exchange *Installation and Configuration Guide* documents the installation of Migrator Pro for Exchange public folder Workers.

To open the Workers view in the Migrator Pro for Exchange Admin Portal:

- Click the **Workers** button in Migrator Pro for Exchange's main toolbar.

The Migrator Pro for Exchange Workers view features a table showing the current state and processing statistics of each worker, and this information can be sorted and filtered as needed:



Enabling/Disabling Workers

You can enable/disable the processing of public folder jobs by a worker. For example, you may want to temporarily disable a worker to isolate any errors when troubleshooting an issue. To enable/disable the processing of public folder jobs by a worker (beginning in the Workers view):

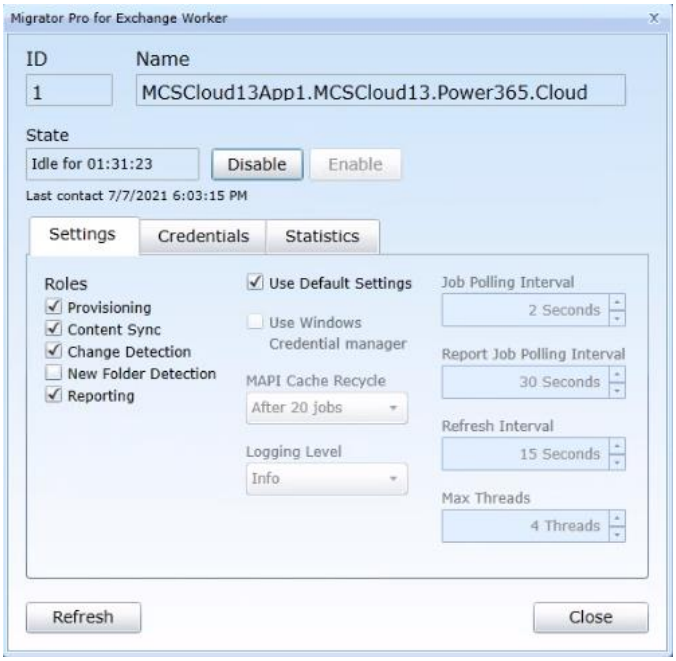
- Click on a worker in the table to highlight its row, and then click the **Enable** or **Disable** button.

A worker can also be enabled or disabled when viewing the Migrator Pro for Exchange Worker detail dialog.

Viewing and Editing Worker Settings

To edit (or just view) the configuration settings of any individual worker in the Workers table:

- Double-click on a Worker row in the table (or select a Worker in the table and then click the **Modify** button) to open the *Migrator Pro for Exchange Worker* dialog box for the selected Worker:



In the dialog box above the tabs, you can view and edit these settings:

- **ID:** The worker ID, an arbitrary index number for Migrator Pro for Exchange.
- **Name:** The worker name (also the worker's address).
- **State:** The current state of the worker.
- **Disable** or **Enable**: Click **Disable** to disable an enabled worker, or click **Enable** to enable a disabled worker.

In the *Settings* tab you can view and edit these settings:

- **Roles:** Select the role(s) you want the worker to perform by marking/unmarking these checkbox options:
  - *Provisioning:* If marked, this worker will create the needed public folders on the target. One or more workers can have this role. We recommend you leave this marked unless you are designating different workers to different tasks. (You may want to create multiple workers to assign different types of roles to different workers—for example, to designate a particular set of workers to handle only the content sync actions.)
  - *Content Sync:* If marked, this worker will copy public folder contents. There can be one or more workers with this role. We recommend you leave this marked unless you are designating different workers to different tasks. (You may want to create multiple workers to assign different types of roles to different workers—for example, to designate a particular set of workers to handle only the content sync actions.)

    - *Change Detection:* If marked, this worker will check for changes in public folders. One or more workers can have this role. We recommend you leave this marked unless you are designating different workers to different tasks. (You may want to create multiple workers to assign different types of roles to different workers—for example, to designate a particular set of workers to handle only the content sync actions.) Note that if *Change Detection* is not enabled on any workers, Public Folder Jobs that are created with Sync Interval will not sync again after the initial copy, since no changes will be detected.
    - *New Folder Detection:* If marked, this worker will check for new public folders. One or more workers can have this role.
    - *Reporting:* If marked, this worker will collect public folder data for reporting. One or more workers can have this role. Workers assigned this role are the workers that will run the PF Content Analysis job. We recommend you leave this marked unless you are designating different workers to different tasks. (You may want to create multiple workers to assign different types of roles to different workers—for example, to designate a particular set of workers to handle only the content sync actions.)
- **Use Default Settings:** If checked, the worker will use the default Worker settings (and General settings for Logging Level) configured in the Settings view instead of the settings on the worker detail dialog.
- **Use Windows Credential Manager:** If checked, Worker (MAPI) credentials are cached in Windows Credential Manager, removing the need to use the saved password that was configured for public folder migrations.
- **MAPI Cache Recycle:** Number of jobs after which the MAPI cache should be cleared. Larger numbers increase performance, but may cause instability if too large. The practical limit depends on your local environment. The default is *After 20 jobs*.
- **Logging Level:** Determines level of detail in program logging for public folder migrations. Options are:
    - *Off:* No public folder messages are logged
    - *Error:* Only public folder error messages are logged
    - *Warning:* Public folder warnings and error messages are logged
    - *Info:* Public folder informational, warnings, and error messages are logged
    - *Verbose:* All public folder messages are logged including debug and trace messages
- **Job Polling Interval:** How often the worker should poll for new jobs. We recommend you leave this at the default (every 2 seconds) unless this worker is configured for only the Reporting role (see next field below).
- **Report Job Polling Interval:** How often the worker should poll for report jobs. We recommend you leave this at the default (every 30 seconds) unless this worker is configured for only the Reporting role.
- **Refresh Interval:** How often the worker should look for any changes to its settings in the SQL Worker table. We recommend you leave this at its default (every 15 seconds).
- **Max Threads:** The number of items that are processed concurrently for a public folder job. The default is 4 threads. For best performance, this setting should not be lower than the number of cores in the Worker machine, unless the machine will share its resources with other (non-Worker) functions. The setting can be increased to match the number of cores in a dedicated Worker machine (if greater than the default 4).

In the *Credentials* tab you can view and edit these settings:

- **Exchange (MAPI)**
    - *Source Credentials:* The Exchange credentials to use for the source. Credentials are maintained in the *Forest Credentials* tab.
    - *Target Credentials:* The Exchange credentials to use for the target. Credentials are maintained in the *Forest Credentials* tab.

The selected credentials should ***not*** include a Mail Profile (defined in the *Forest Credentials* tab) if Outlook is not installed on the Worker.

- **PowerShell**
  - *Source Credentials:* The PowerShell credentials to use for the source. Credentials are maintained in the Forest Credentials tab.
  - *Target Credentials:* The PowerShell credentials to use for the target. Credentials are maintained in the Forest Credentials tab.

The *Statistics* tab is described in the next subtopic below.

Click the **Close** button to save any changes and close the *Migrator Pro for Exchange Worker* dialog box (and return to the *Workers* table).

Viewing Worker Processing Statistics

To view the processing statistics for an individual worker in the Workers table:

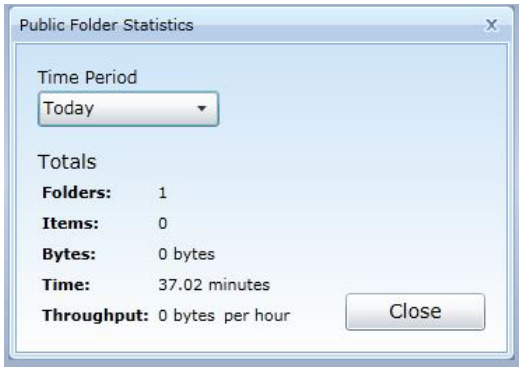
- Double-click on a Worker row in the table (or select a Worker in the table and then click the **Modify** button) to open the *Migrator Pro for Exchange Worker* dialog box for the selected Worker, and then click the *Statistics* tab in the *Migrator Pro for Exchange Worker* dialog box.

In the *Statistics* tab, select a **Time Period** from the drop-down list to define the scope of the statistics you want to see. The *Totals* will display the numbers of migrated folders, items, bytes and elapsed time for the selected time period, and the average throughput over the period.

To close the dialog box: Click the **Close** button.

To view aggregate statistics for all Migrator Pro for Exchange Workers:

- From the Workers table, click the **Statistics** button to open the *Public Folder Statistics* dialog box.



Select a **Time Period** from the drop-down list to define the scope of the statistics you want to see. The *Totals* will display the numbers of migrated folders, items, bytes and elapsed time for the selected time period, and the average throughput over the period.

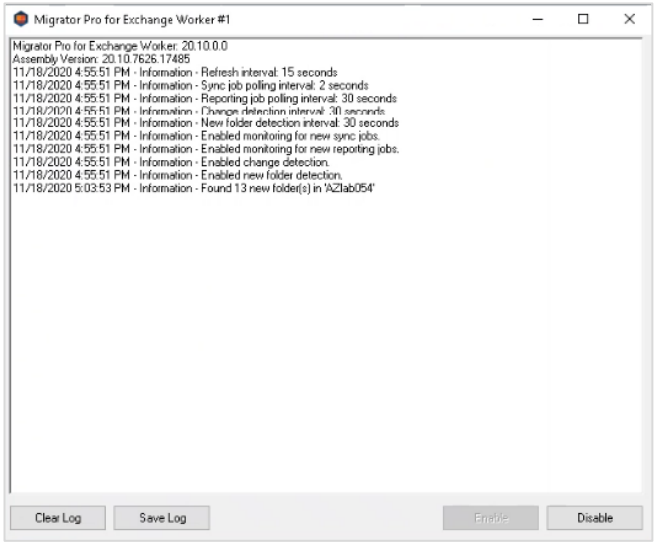
To close the dialog box: Click the **Close** button.

Viewing the Migrator Pro for Exchange Worker Application

The Migrator Pro for Exchange Worker application is installed on the worker machine and lets you enable/disable the worker and view its migration processing logs.

To open the Migrator Pro for Exchange Worker application:

- On the machine hosting the worker: Click the Migrator Pro for Exchange Worker desktop shortcut, or right-click on the Migrator Pro for Exchange icon in the system tray and click **Open**.



The Migrator Pro for Exchange Worker application then opens the log screen, with four buttons:

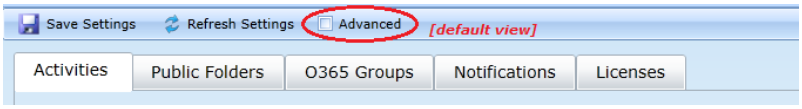
- **Clear Log:** The displayed log will be cleared.
- **Save Log:** A text file of the displayed log will appear and can be saved.
- **Enable:** Enables public folder processing for the worker (if disabled). This option is also available by right-clicking on the Migrator Pro for Exchange icon in the system tray and selecting Enable.
- **Disable:** Disables public folder processing for the worker (if enabled). This option is also available by right-clicking on the Migrator Pro for Exchange icon in the system tray and selecting Disable.

To view the worker's configuration settings: Right-click on the Migrator Pro for Exchange icon in the system tray, and select **Settings**.

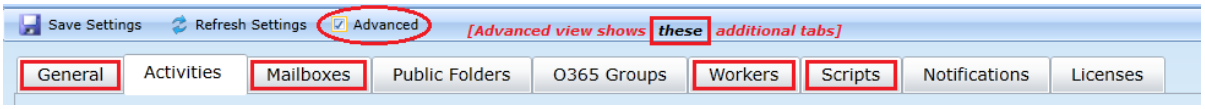
4. Managing Configuration Settings

Many Migrator Pro for Exchange configuration settings can be entered, viewed and edited in the tabbed panels of the *Configuration Settings* screen.

Click **Settings** from the main Admin Portal toolbar to open the Migrator Pro for Exchange *Configuration Settings* screen, which contains several tabs for different types of settings. The default view of the *Settings* screen shows only the tabs with settings that are commonly used in many environments:



The default view hides the tabs that contain settings changed by only a few users from their default values, but you can mark the **[X] Advanced** checkbox (in the toolbar) to show the tabs that contain these *Advanced* settings:



The settings on these tabs are documented separately under these topic headings:

General Tab (*Advanced* view only)
Activities Tab
Mailboxes Tab (*Advanced* view only)
Public Folders Tab
O365 Groups Tab
Workers Tab (*Advanced* view only)
Scripts Tab (*Advanced* view only)
Notifications Tab
Licenses Tab

Settings | General Tab

NOTE ! This tab is available only in *Advanced* mode. The tab appears only if the **Advanced** checkbox (in the *Settings* toolbar) is marked.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *General* configuration settings (from any other tab on the *Configuration Settings* screen): Make sure the **Advanced** checkbox is marked, and click the *General* tab.

These *General* settings let you configure options for logging and the user interface:

- **Logging Level:** Select one of the options for logging levels within the Migrator Pro for Exchange service for both mailbox and public folder migrations:
  - *Off:* No messages are logged.
  - *Error:* Only error messages are logged.
  - *Warning:* Warnings and error messages are logged.
  - *Info:* Informational, warnings, and error messages are logged.
  - *Verbose:* All messages are logged including debug and trace messages.
- **Log Mailbox Job Events:** If checked, mailbox job events are saved to *CMTEUP_JobEvents*.
- **Log Public Folder Job Events:** If checked, public folder job events are saved to *CMTEUP_PublicFolderJobEvents*.
- **Purge Job Events Older Than:** Number of days after which job event records should be purged from the logging database. We recommend you leave this at its default (30 days), to maintain a month's worth of records in the database but not take up too much space in SQL. A higher setting would generate bloated records in SQL, while a lower setting may leave too few records to be useful in the event you ever need them for troubleshooting.
- **O365 PowerShell Pool:** Sets the maximum number of Office 365 PowerShell sessions to establish. The default is 1. We recommend this value be set to match the number of available Office 365 sessions for your tenant.
- **O365 PowerShell Submit Pool:** Sets the number of Office 365 sessions to use for PowerShell queries during mailbox migrations. This feature improves overall migration rates by distributing the workload across multiple Office 365 sessions running in parallel. The valid range is 1 to 100, and the default is 1. We recommend a value based on number of available Office 365 sessions for your tenant.
- **User Portal Url:** The URL of the Migrator Pro for Exchange portal.

- **Show Legacy Source Public Folder Servers:** If checked, Exchange 2003/2007/2010 public folder servers are displayed in the Source folder hierarchy.
- **Show Legacy Target Public Folder Servers:** If checked, Exchange 2003/2007/2010 public folder servers are displayed in the Target folder hierarchy.

Exchange 2013/2016 public folders can be split across multiple servers and mailboxes and will not show in a hierarchy. The public folder server and mailbox information will be displayed in the “hover over” text. The above configuration options allow the Legacy public folders to be displayed in a hierarchy.

- **Show Suspend Before Starting Checkbox:** If checked, mailbox jobs can be suspended before they start.
- **Refresh Frequency:** How often to automatically refresh Migrator Pro for Exchange's UI. We recommend you leave this at its default (7 seconds). Changing this to a lower setting poses an increased burden on system resources, while a higher value diminishes the likelihood that any particular view is current. You can always manually refresh the screen whenever desired.
- **Data I/O Timeout:** How long Migrator Pro for Exchange should wait for web service calls to complete before timing out. We recommend the default setting of 15 minutes, although you may want to temporarily set this higher to overcome a high rate of timeout errors. A lower setting will unnecessarily generate more timeout errors.
- **PowerShell Query Timeout:** How long Migrator Pro for Exchange should wait for an on-premises only PowerShell reply to a query before concluding the query has failed, and giving up. We recommend you leave this at its default 120 minutes. A higher setting usually would not provide any benefit, since the HTTP request will have already timed out, while a lower setting may be too short for a PowerShell query to successfully complete, especially in a large distributed environment.
- **Resource Forest Permissions:** Specifies which trustees to use to apply permissions during a Resource Forest migration. The default Source Forest option stamps the permissions from the source environment onto the target mailboxes and public folders. The Target Forest option is typically used only in a non-resource forest scenario, so that trustees from the Target forest are used to apply permissions.

Migrator Pro for Exchange will always use the target AD user account for *GrantSendOnBehalf* permissions regardless of this setting for this **Resource Forest Permissions**. Therefore all user accounts that have been specifically provided the delegated *GrantSendOnBehalf* permission must be included within the scope of directory synchronization.

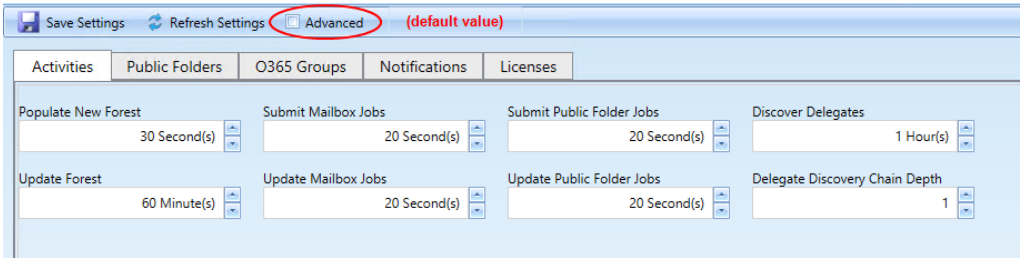
Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

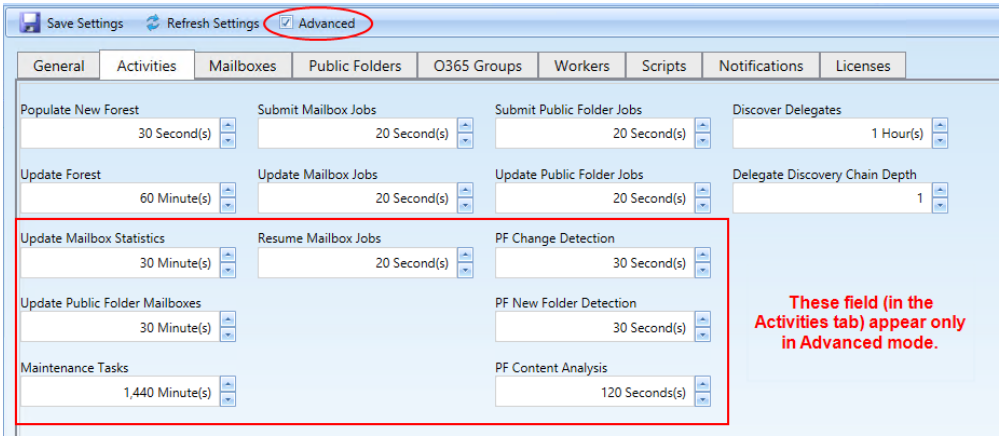
Settings | Activities Tab

NOTE ! This tab is available in both the default and *Advanced* modes. But some of the fields on this tab appear only if the **Advanced** checkbox (in the *Settings* toolbar) is marked. The field notes below indicate which fields appear only in the *Advanced* mode.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Activities* configuration settings (from any other tab on the *Configuration Settings* screen): Click the *Activities* tab.





- **Populate New Forest:** How often to populate new forests with sites, servers, databases, groups, mailboxes, and mailbox statistics. We recommend the default 30 seconds, which ensures that new forests are populated relatively quickly.
- **Update Forest:** How often to update existing forests with sites, servers, databases, groups, mailboxes, and mailbox statistics. This is an "expensive" task (in computing/network resources), since Migrator Pro for Exchange has to explicitly query AD and Exchange for much information. We therefore recommend the default 60 minutes. A lower setting (more frequent updates) will tax the GC specified in Forests | Accounts | Active Directory, probably to the detriment of performance, although the performance hits will likely be less pronounced in smaller environments (1000 or fewer users). A higher setting may be more appropriate in very large environments where existing GCs are already taxed and the admin does not require more frequent updates.
- **Update Mailbox Statistics** (appears only in *Advanced* mode): How often to update mailbox statistics. We recommend you leave this set at its default 30 minutes. A lower setting may be better suited to an organization that requires more frequent updates for Migrator Pro for Exchange to intelligently forecast migration times (based on mailbox size). A higher setting may be more appropriate in very large environments where existing GCs are already taxed and the admin does not require more frequent updates.

- **Update Public Folder Mailboxes** (appears only in *Advanced* mode): How often to update Public Folder mailboxes. We recommend you leave this set at its default 30 minutes. A lower setting may be better suited to an organization that requires more frequent updates. A higher setting may be more appropriate in large environments that do not require more frequent updates.
- **Maintenance Tasks** (appears only in *Advanced* mode): How often to run Migrator Pro for Exchange maintenance tasks in the job event tables, such as removing (from Migrator Pro for Exchange logs) records of migration events that are older than the **Purge Job Events** setting. We recommend you leave this set at the default 1440 minutes (one day), although a lower setting (more frequent maintenance) may be appropriate if you are writing hundreds of thousands of events per hour and want to have more control over a rolling purge window in the Migrator Pro for Exchange Log database.
- **Submit Mailbox Jobs:** How often to submit Mailbox Jobs. The default is 20 seconds, but a higher setting (less frequent submissions) may be better for an Exchange source environment that is older or otherwise shows performance issues, and the admin wants to stagger the number of jobs submitted.
- **Update Mailbox Jobs:** How often to update/refresh the running Mailbox Jobs view. The default is 20 seconds, but a higher setting (less frequent updates) may be better where larger numbers of jobs are running and the admin doesn't require frequent updates.
- **Resume Mailbox Jobs** (appears only in *Advanced* mode): How often the program should look for Mailbox Jobs that are ready to be resumed. The default is 20 seconds.
- **Submit Public Folder Jobs:** How often to submit new public folder Jobs. The default is 20 seconds, which ensures new mailbox migration jobs are picked up quickly, but a higher setting (less frequent submissions) may be better for an Exchange source environment that is older or otherwise shows performance issues, and the admin wants to stagger the number of jobs submitted.
- **Update Public Folder Jobs:** How often to update/refresh the running public folder jobs view. The default is 20 seconds, but a higher setting (less frequent updates) may be better where larger numbers of jobs are running and the admin doesn't require frequent updates.
- **PF Change Detection** (appears only in *Advanced* mode): How often to check for public folder changes. We recommend you accept the default 30 seconds, although a higher value (less frequent checks) may be more appropriate if the public folders environment does not have many changes and the data is relatively static (in the source).
- **PF New Folder Detection** (appears only in Advanced mode): How often to check for new public folders. We recommend you accept the default 30 seconds, although a higher value (less frequent checks) may be more appropriate if the public folders environment does not have many changes and the data is relatively static (in the source).
- **PF Content Analysis** (appears only in *Advanced* mode): Determines how often Migrator Pro for Exchange should check the queue of pending public folders content analysis jobs. We recommend you accept the default 120 seconds.
- **Discover Delegates:** The refresh interval, in hours, between Migrator Pro for Exchange's delegation discovery processes to update delegation data (only) for mailboxes within the scope of the subset filters that have been defined for the **View Delegation** lists (as described in Migrating Delegation Rights). The default is 1 hour.

  These delegation discovery processes are run separately for each defined filter, and this refresh interval applies to the processes for all Filters.

- **Delegate Discovery Chain Depth:** The number of delegation levels Migrator Pro for Exchange will trace in its delegation discovery process, relative to the highest-level mailbox in a delegation chain. For example, if A delegates to B, and B delegates to C, and C delegates to D, and so forth, this **Chain Depth** value sets a limit to the number of levels Migrator Pro for Exchange will trace in its delegation discovery process.

The default is 1 level (to show A delegating to B, but not any of B's delegates). The feature will accept a **Chain Depth** value as high as 10, but note that values higher than 2 or 3 will, in most environments, require longer discovery times while offering diminishing benefits.

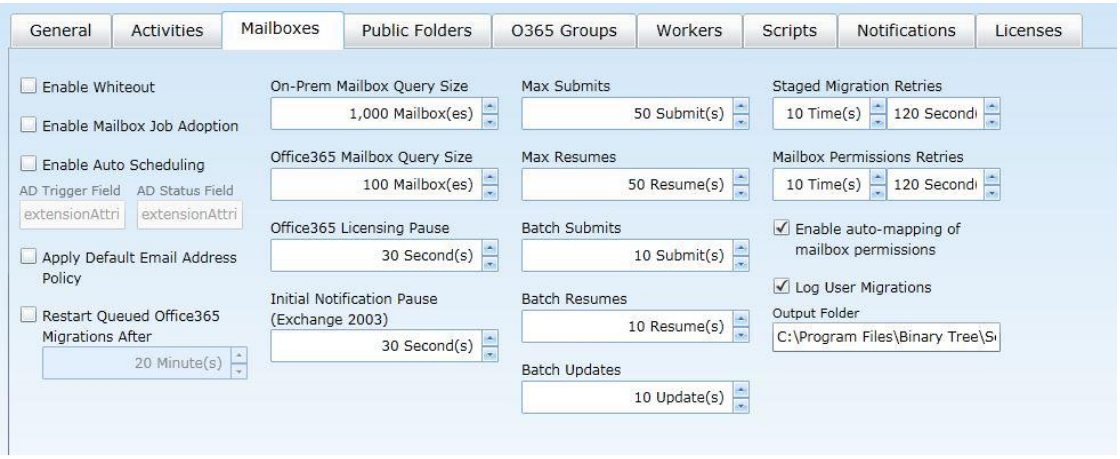
NOTE ! Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

Settings | Mailboxes Tab

NOTE ! This tab is available only in *Advanced* mode. The tab appears only if the **Advanced** checkbox (in the *Settings* toolbar) is marked.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Mailboxes* configuration settings (from any other tab on the *Configuration Settings* screen): Make sure the **Advanced** checkbox is marked, and click the *Mailboxes* tab.



- **Enable Whiteout:** If checked, all activities except for mailbox migrations activities are suppressed. This feature is intended for use during times when active migration is taking place in earnest. This can significantly improve performance of mailbox migrations during busy times, easing the burden of the installed Migrator Pro for Exchange machine as well as the Exchange servers.

  Be sure to disable this **Whiteout** option when the period of focused migrations ends, so that Migrator Pro for Exchange can resume its other background processing.

- **Enable Mailbox Job Adoption:** If checked, enables Migrator Pro for Exchange to find and show mailbox migrations started outside of Migrator Pro for Exchange. Select this only if migration processes may have been started outside of the Migrator Pro for Exchange environment.
- **Enable Auto Scheduling:** This checkbox enables/disables Migrator Pro for Exchange's auto-scheduling feature, which tells Migrator Pro for Exchange to schedule mailbox migration upon certain conditions being met, as specified by the **AD Trigger Field** and **AD Status Field**:
  - **AD Trigger Field:** The AD property used to submit mailboxes during auto-scheduling. For example, *extensionAttribute13*.
  - **AD Status Field:** The AD property used to store job status for auto-scheduled mailbox migrations.

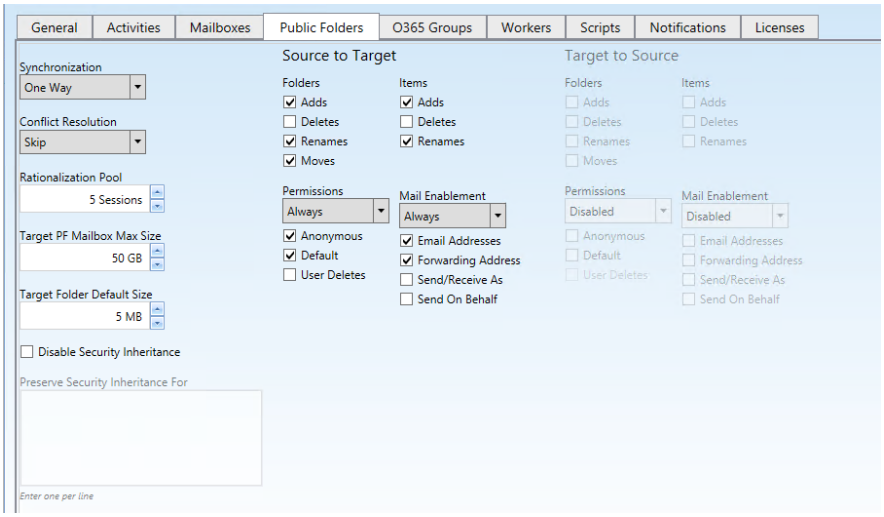
- **Apply Default Email Address Policy:** If checked, the default email address policy will be applied to the target mail users before the mailbox is submitted. This is the equivalent of the PowerShell cmdlet string: *Set-MailUser -EmailAddressPolicyEnabled:$true*
- **Restart Queued Office365 Migrations After:** If checked, Office 365 mailbox jobs that are stuck in a Queued state are automatically canceled and resubmitted. The default to restart jobs stuck in a Queued state is every 20 minutes.
- **On-Prem Mailbox Query Size:** The number of on-premises mailboxes to query at a time for statistics, etc. The default is 1,000 mailboxes.
- **Office365 Mailbox Query Size:** The number of Office 365 mailboxes to query at time for statistics, etc. The default is 100 mailboxes.
- **Office365 Licensing Pause:** How long to wait after licensing an Office 365 mailbox before submitting that mailbox for migration. The default is 30 seconds.
- **Max Submits:** The maximum number of requests (per Exchange database) to submit for migration. This includes jobs that resumed before reaching 95% complete. The default is 50 submissions.
- **Max Resumes:** The maximum number of requests (per Exchange database) to resume for completion. This only includes jobs that are resumed after reaching 95% complete. The default is 50 resumes.
- **Batch Submits:** The number of requests (per Exchange database) to submit for migration at a time. This includes jobs that resumed before reaching 95% complete. The default is 10 submissions.
- **Batch Resumes:** The number of requests (per Exchange database) to resume for completion at a time. This only includes jobs that are resumed after reaching 95% complete. The default is 10 resumes.
- **Batch Updates:** The number of requests (per Exchange database) to update (*Get-MoveRequestStatistics*) at a time. The default is 10 updates.
- **Staged Migration Retries:** How many times to re-submit a mailbox for staged migration and how long to wait before re-submitting. The default is 10 times re-submitted every 120 seconds.
- **Mailbox Permissions Retries:** How many times to retry migrating mailbox permissions and how long to wait before retrying. The default is 10 times retried every 120 seconds.
- **Log User Migrations:** If checked, logging user migrations is enabled and the Output Folder can be configured.
- **Output Folder:** The folder where the log user migration reports are saved.

Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

Settings | Public Folders Tab

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Public Folders* configuration settings (from any other tab on the *Configuration Settings* screen): Click the *Public Folders* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.



- **Synchronization:** Select one of the options from the drop-down list.
  - *One Way:* Synchronize public folders from source to target. Only the Source to Target options can be selected. This means that changes made in the target will not be made in the source. Choose this when you are pre-staging Public folders in your Source environment to your Target environment, and there is no expectation that there will be any production changes made in the Target that need to be copied back to the Source.
  - *Bi-Directional:* Synchronize public folders in both directions, from source to target and target to source. The Target to Source options are enabled to allow configuration synchronization in both directions. Choose this when you expect production changes to occur in both the Source AND the Target during the migration project. If you choose Bi-Directional, carefully choose your Conflict Resolution settings (below). This setting means that changes made in the target could potentially override items in the Source, as determined by the **Conflict Resolution** settings.
- **Conflict Resolution:** This setting tells Migrator Pro for Exchange how to resolve public folder migration conflicts (when a source public folder already exists in the target). These conflict-resolution rules are evaluated at the document level, per folder. We suggest the *Skip* option if you are unsure.
  - *Skip:* Migrator Pro for Exchange will just skip the public folder (PF), and do nothing. The source and target PFs will both remain unchanged.
  - *Overwrite:* The source PF contents will overwrite the corresponding target PF contents.
  - *Rename:* In a one-way migration, if a target document exists with the same name or subject that was not placed there by a migration, the target document is renamed by appending or prepending some string (the **Rename Label**) to the original target PF name, as specified below. If a target copy of the document exists from a previous migration, the documents follow the *LastModified* rule. If you select Rename as the Conflict Resolution method:

        - **Rename Format:** Valid options are *Append* or *Prepend*.
        - **Rename Label:** The string that Migrator Pro for Exchange should append or prepend to the original target PF name.
    - *Last Modified:* The source and target documents are evaluated and then migrated based on which document is more current.
- **Rationalization Pool Size:** The maximum number of PowerShell sessions to dedicate to public folder rationalization. The default is 5 sessions.
- **Target PF Mailbox Max Size:** The maximum size a Public Folder mailbox can be and still be considered for auto-select enabled jobs. Mailboxes above this amount will not be used unless they are explicitly selected on the job. The default is 50GB.
- **Target PF Mailbox Default Size:** The size used to assign folders without a job to a Public Folder mailbox (parent folders, recycle bin folders, and so on). In order to prevent auto-split of mailboxes, this number should be large enough to allow for any folders that may not initially have a job but may in the future. The default is 5MB.
- **Disable Security Inheritance:** If checked, Exchange Public Folder security inheritance is disabled.
    - *Preserve Security Inheritance For:* When security inheritance is disabled, enter one or more UPNs or DistinguishedNames (for users) and/or DistinguishedNames (for groups) to retain inherited permissions.

Source to Target Section

- **Folders:** Mark and unmark checkboxes to specify which items should be synchronized to the target:
    - *Adds:* If checked, new folders in the source are added to the target.
    - *Deletes:* If checked, deleted folders in the source will cause corresponding folders in the target to be deleted during the sync cycle. By default, this is unchecked, to prevent subsequent deletions in the source from deleting the corresponding folder(s) in the target during the next synchronization cycle.
    - *Renames:* If checked, renamed folders in the source are renamed in the target.
    - *Moves:* If checked, moved folders in the source are moved in the target.
- **Items:** Mark and unmark checkboxes to specify which items should be synchronized to the target:
    - *Adds:* If checked, new folder content in the source is added to the target.
    - *Deletes:* If checked, deleted folder content in the source is moved to the Recycle Bin in the target.
    - *Renames:* If checked, renamed items in the source are renamed in the target.
- **Permissions:** Select an option from the drop-down list, and mark/unmark checkboxes to specify how permissions should be copied to the target (if at all):
    - Drop-down list options:
        - *Disabled:* Folder permissions will never be copied.
        - *Once* (default): Folder Permissions will only be copied with the initial sync, any changes after that will not be copied.
        - *Always:* Folder permissions will be copied each time the folder is synchronized.
    - **Anonymous:** If checked, “anonymous” user folder permissions are migrated to the target folder.
    - **Default:** If checked, “default” user folder permissions are migrated to the target folder.

        - **User Deletes:** If checked, user folder permissions deleted from the source folder are deleted from the target folder. For Bi-Directional Synchronization, this option cannot be selected if the Target to Source *User Deletes* option is selected.
- **Mail Enablement:** Select an option from the drop-down list, and mark/unmark checkboxes to specify how mail-enablement should be copied to the target (if at all):
    - Drop-down list options:
        - *Disabled:* Mail-enabled folders in the source will not be mail-enabled in the target.
        - *Once:* Mail-enabled folders will be mail-enabled in the target during the initial sync, any changes after that will not be copied.
        - *Always* (default): Mail-enabled folders in the source will be mail-enabled each time the folder is synchronized.
    - **Email Addresses:** If checked, email addresses are copied to the target folder.
    - **Forwarding Address:** If checked, the source folder's forwarding address is copied to the target folder.
    - **Send/Receive As:** If checked, send-as folder permissions on the source are migrated to the target folder.
    - **Send On Behalf:** If checked, send-on-behalf folder permissions on the source are migrated to the target folder.

Target to Source Section

- **Folders:** Mark and unmark checkboxes to specify which items should be synchronized to the source:
    - *Adds:* If checked, new folders in the target are added to the source.
    - *Deletes:* If checked, deleted folders in the target are moved to the Recycle Bin in the source.
    - *Renames:* If checked, renamed folders in the target are renamed in the source.
    - *Moves:* If checked, moved folders in the target are moved in the source.
- **Items:** Mark and unmark checkboxes to specify which items should be synchronized to the source:
    - *Adds:* If checked, new folder content in the target is added to the source.
    - *Deletes:* If checked, deleted folder content in the target is moved to the Recycle Bin in the source.
    - *Renames:* If checked, renamed items in the target are renamed in the source.
- **Permissions:** Select an option from the drop-down list, and mark and unmark checkboxes to specify how permissions should be copied to the source (if at all):
    - Drop-down list options:
        - *Disabled:* Folder permissions will never be copied.
        - *Once* (default): Folder permissions will only be copied with the initial sync; any changes after that will not be copied.
        - *Always:* Folder permissions will be copied each time the folder is synchronized.
    - **Anonymous:** If checked, "anonymous" user folder permissions are migrated to the source folder.
    - Default: If checked, "default" user folder permissions are migrated to the source folder.
    - **User Deletes:** If checked, user folder permissions deleted from the target folder are deleted from the source folder. For Bi-Directional Synchronization, this option cannot be selected if the Source to Target *User Deletes* option is selected.

Enabling target-to-source synchronization of permissions may cause changes to your source environment or may have other unintended side effects.

- **Mail Enablement:** Select an option from the drop-down list, and mark and unmark checkboxes to specify how mail-enablement should be copied to the source (if at all):
  - Drop-down list options:
    - *Disabled:* Mail-enabled folders in the target will not be mail-enabled in the source.
    - *Once:* Mail-enabled folders will be mail-enabled in the source during the initial sync; any changes after that will not be copied.
    - *Always* (default): Mail-enabled folders in the target will be mail-enabled each time the folder is synchronized.
  - **Email Addresses:** If checked, email addresses are copied to the source folder.
  - **Forwarding Address:** If checked, the target folder's forwarding address is copied to the source folder.
  - **Send/Receive As:** If checked, send-as folder permissions on the target are migrated to the source folder.
  - **Send On Behalf:** If checked, send-on-behalf folder permissions on the target are migrated to the source folder.

Enabling target-to-source mail synchronization may cause changes to your source environment or may have other unintended side effects.

Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

Notes About Public Folder Permissions

Exchange Permissions:

- All roles and rights are supported, e.g. Owner, CreateItems, FolderVisible, etc.
- On-Prem and Office 365 are supported.

Send-As Permissions:

- Only applicable to mail-enabled folders.
- Allow\Deny is supported for On-Prem.
- Only Allow is supported for Office 365.

Receive-As Permissions:

- Only applicable to mail-enabled folders.
- Allow\Deny is supported for On-Prem.
- Not supported for Office 365.

Send-On Behalf Permissions:

- Only applicable to mail-enabled folders.
- On-Prem and Office 365 are supported.

Resource Forests:

- Target *RFPermissionAuthority* is supported for On-Prem and Office 365 for all folder permissions shown above.
- Source *RFPermissionAuthority* is supported for Send-As and Receive-As permissions but is not supported for Send-On-Behalf and Exchange permissions.

Trustee Cross-Reference: When locating a target trustee, the following properties from the source trustee are used as a cross-reference. These are the same properties used for mailbox permissions.

- Mailbox GUID
- E-Mail
- Primary SMTP
- Common Name
- SAM Account Name

Settings | O365 Groups Tab

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *O365 Groups* configuration settings (from any other tab on the *Configuration Settings* screen): Click the *O365 Groups* tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

- **Conflict Resolution:** This setting tells Migrator Pro for Exchange how to resolve Office 365 migration conflicts (when matching content already exists in the target). We suggest the Skip option if you are unsure.
    - *Skip:* Migrator Pro for Exchange will just skip the public folder (PF) and do nothing. The source and target will both remain unchanged.
    - *Overwrite:* The source PF contents will overwrite the corresponding target contents.
    - *Rename:* In a one-way migration, if a target document exists with the same name or subject that was not placed there by a migration, the target document is renamed by appending or prepending some string (the **Rename Label**) to the original target PF name, as specified below. If a target copy of the document exists from a previous migration, the documents follow the *LastModified* rule. If you select Rename as the Conflict Resolution method:
        - **Rename Format:** Valid options are *Append* or *Prepend*.
        - **Rename Label:** The string that Migrator Pro for Exchange should append or prepend to the original target PF name.
    - *Last Modified:* The source and target documents are evaluated and then migrated based on which document is more current.

Settings | Workers Tab

NOTE ! This tab is available only in *Advanced* mode. The tab appears only if the **Advanced** checkbox (in the *Settings* toolbar) is marked.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Workers* configuration settings (from any other tab on the *Configuration Settings* screen): Make sure the **Advanced** checkbox is marked, and click the *Workers* tab.

- **Use Windows Credential Manager:** If checked, Worker (MAPI) credentials are cached in Windows Credential Manager.
- **Sync Job Polling Interval:** How often Workers should poll for new sync jobs. Default is every 2 seconds.
- **Reporting Job Polling Interval:** How often Workers should poll for new reporting jobs. Default is 30 seconds.
- **Refresh Interval:** How often Workers should refresh their status. Default is every 15 seconds.
- **Max Threads:** Number of items that are processed concurrently for a public folder job. Default is 4 threads.
- **MAPI Cache Recycle:** After how many jobs should the MAPI cache be cleared. A larger number will increase performance, but may cause instability if too large. Default is After 20 jobs.
- **Status Text Limit:** Maximum number of status text displayed in the Worker UI. Default is 5,000 lines.
- **Max Sync Jobs:** Maximum number of sync jobs that should be assigned to each worker. Default is 5 jobs.
- **Max Reporting Jobs:** Maximum number of reporting jobs that should be assigned to each worker at a time. Default is 5 jobs.
- **Max Change Detection Jobs:** Maximum number of change detection jobs that should be assigned to each worker at a time. Default is 5 jobs.

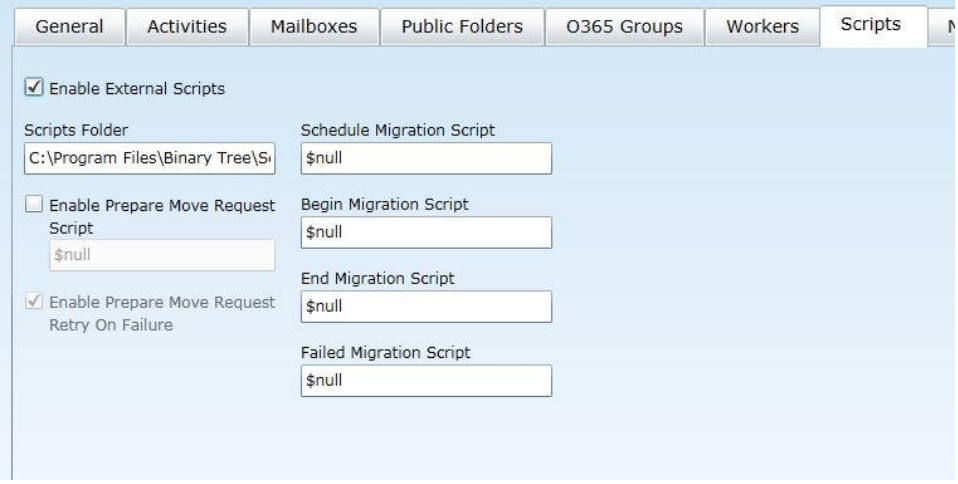
NOTE ! Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

Settings | Scripts Tab

NOTE ! This tab is available only in *Advanced* mode. The tab appears only if the **Advanced** checkbox (in the *Settings* toolbar) is marked.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Scripts* configuration settings (from any other tab on the *Configuration Settings* screen): Make sure the **Advanced** checkbox is marked, and click the *Scripts* tab.



- **Enable External Scripts:** If checked, external scripts are enabled and the following options are available:
- **Scripts Folder:** The scripts folder location (e.g. c:\contoso\scripts\ps\ )
- **Enable Prepare Move Request Script:** If checked, enables external *CrossForestPrep* (to execute *Prepare-MoveRequest.ps1*). The name of the prepare move request script can be configured (e.g., *Prepare-MoveRequest.ps1*).
- **Enable Prepare Move Request Retry On Failure:** If checked, enables retry behavior in cross-forest preparation, instead of failure.
- **Schedule Migration Script:** Name of the script for scheduled migrations, e.g., *Confirm-ScheduleMigration.ps1*.
- **Begin Migration Script:** Name of the script for started migrations, e.g., *Confirm-BeginMigration.ps1*.
- **End Migration Script:** Name of the script for completed migrations, e.g., *Confirm-EndMigration.ps1*.
- **Failed Migration Script:** Name of the script for failed migrations, e.g., *Confirm-FailedMigration.ps1*.

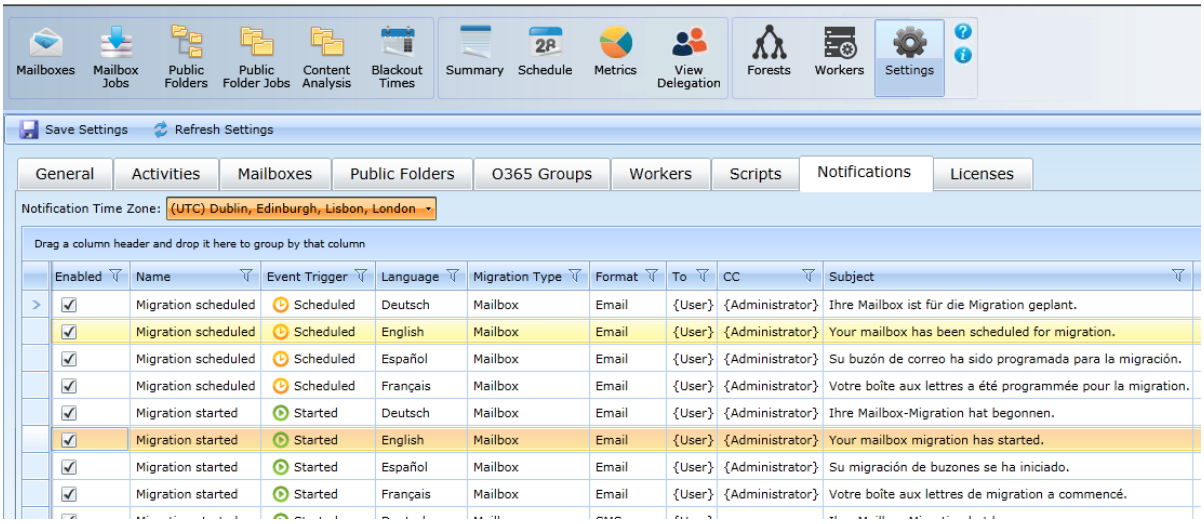
NOTE ! Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

Settings | Notifications Tab

Migrator Pro for Exchange helps facilitate sending notification emails to end users, to inform them of the status of their migration as it progresses through different stages. The program can use email notification templates to generate "form letters" to end users, with variables that Migrator Pro for Exchange will fill with information such as the recipient's email address, any cc recipients, the message *Subject*, and so forth. Other template attributes let you control the message format and event triggers and so forth. Notifications can be configured in four languages, English, French, German and Spanish, and any additional languages in the source Exchange environment. By default, the message sent to an end user is matched to the *Culture* value present on their mailbox object. If a value cannot be determined, English is used as the default language. Users can change their notification language by changing the preference on the End User Portal page.

The Notification templates are configured in this *Notifications* tab, and in a dialog box accessible from this tab. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

To view or edit the *Notifications* configuration settings (from any other tab on the *Configuration Settings* screen): Click the *Notifications* tab.



Select the **Notification Time Zone** from the drop-down list between the tabs and the table. This is the reporting time zone when date fields such as *ScheduledStart* are used in the notification message template body.

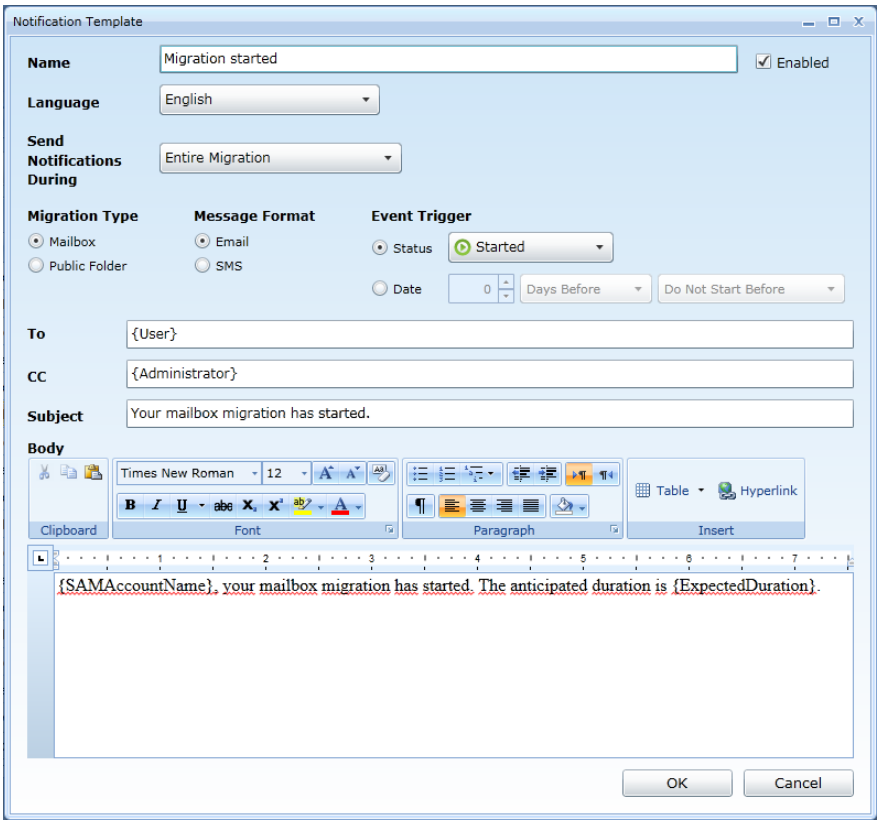
The table displays a list of available notification templates together with these attributes:

- **Enabled:** Displays whether the template is enabled or disabled by the administrator. By default, *Scheduled* notification templates are always enabled.
- **Name:** A descriptive identifying name to distinguish each template from the others in the list.
- **Event Trigger:** Displays the status of the template, such as *Scheduled* or *Completed*.
- **Language:** The language of the template. A full list of standard Language/Culture ID mappings is available in this Knowledge Base article.
- **Migration Type:** The migration type of the template.
- **Format:** Displays the type of media included in the template that goes out to users, such as Email or SMS.
- **To:** The recipient of the notification.
- **CC:** Any "carbon copy" (CC) recipient(s) of the notification.
- **Subject:** The message *Subject* of this notification.

Migrator Pro for Exchange ships with five standard notification templates (*Scheduled*, *Started*, *Completed*, *Error*, and *Migration automatically suspended*). You can customize these with the **Edit Template** feature.

For any selected template (selected row in the table), the buttons across the bottom of the table let you **Edit Template** or **Copy Template(s)** or **Delete Template(s)**. You can also **Add Template**.

The **Add Template** and **Edit Template** buttons open Migrator Pro for Exchange's *Notification Template* dialog box:



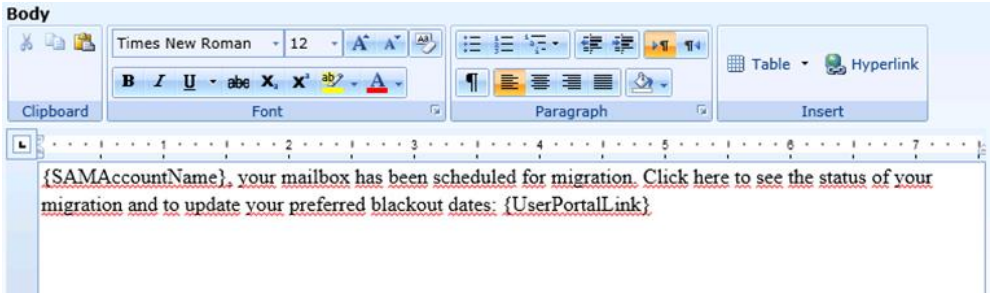
Enter or edit the settings in this dialog box:

- **Name:** The name of the template, as it will appear in the Notifications table and other Migrator Pro for Exchange features.
- **Enabled** (checkbox): Mark or unmark to make this template available (or unavailable) for Migrator Pro for Exchange to run.
- **Language** (drop-down list): Specify the language for this template. Options are: English, French, German, Spanish, and any additional languages collected from the source mailbox properties.
- **Send Notifications During:** Select an option from the drop-down list to specify the portion of the migration to which this notification applies. Options are: *Entire Migration*, *Initial Migration*, and *Final Migration\Cutover*.

  NOTE ! Migrations scheduled using the **Suspend when ready to complete** option can have notifications defined for the *Entire Migration*, the *Initial Migration* or the *Final Migration/Cutover*. If a migration is scheduled without the **Suspend when ready to complete** option, the notifications will apply to the *Entire Migration*.

- **Migration Type:** Specify whether this notification is for a Mailbox or Public Folder migration.

- **Message Format:** Specify whether this notification should be formatted as *Email* (sent as HTML messages) or *SMS* (sent as plain text messages). Switching from *Email* to *SMS* will erase any body text that may have already been entered.
- **Event Trigger:** Select one of the two options to specify when this notification will be sent:
    - *Status:* If you select *Status*, then also specify (from the drop-down list) the condition that will trigger this notification:
        - *Scheduled:* Notification is sent to the user when the mailbox's migration schedule is set.
        - *Started:* Notification is sent to the user when the migration begins.
        - *Completed:* Notification is sent to the user when the migration completes.
        - *Error:* Notification is sent to the user when the migration halts or errors.
    - *Date:* Use the controls here to specify a time condition that will trigger sending the emails generated from this template. You can specify a certain number of hours or days before the start or completion of the migration:
        - *[spinner control]:* The number (of hours or days).
        - *[drop-down list]:* Indicate whether the number specifies Days Before or Hours Before.
        - *[drop-down list]:* Indicate whether the trigger is relative to the start (*Do Not Start Before*) or end (*Do Not Complete Before*) of the migration.
- **To:** Specify the message recipient(s), either as an SMTP address, or as the variable *{User}* or *{Administrator}* (including the curly brackets). You can specify multiple values here, separated by commas or semicolons or spaces.
- **CC:** Specify anyone who should receive a copy of this notification, either as an SMTP address, or as the variable *{User}* or *{Administrator}* (including the curly brackets). You can specify multiple values here, separated by commas or semicolons or spaces.
- **Subject:** Type the *Subject* of the email.
- **Body:** The body contents of the email. This will be some combination of template text and one or more variables, as shown in the example below. If the **Message Format** (above) is set to *Email*, Migrator Pro for Exchange provides a rich-text editing bar (also shown in this example) that lets you further customize the appearance of the body text.



Within the template **Body** you can use these variables as you compose the text of your message:

Macro (Variable)	Description	Example
{FullName}	User's First and Last Name	Scott Pepper
{Title}	User's Title	Sergeant
{FirstName}	User's First Name	Scott
{LastName}	User's Last Name	Pepper
{UserPortalLink}	Link to user portal page	
{SAMAccountName}	User's Alias	scott.pepper
{ExpectedDuration}	Expected duration of migration	01:04:38.4379257
{ScheduledStart}	Scheduled time to start	Tuesday, April 12, 2016 3:30:44 PM (GMT)
{ScheduledEnd}	Scheduled time to end	Tuesday, April 12, 2016 4:35:48 PM (GMT)
{DoNotCompleteBefore}	Do not complete migration before time	Tuesday, April 12, 2016 3:30:44 PM (GMT)
{DoNotStartBefore}	Do not start migration before time	Tuesday, April 12, 2016 4:35:48 PM (GMT)
{ActualStart}	Time migration started	Tuesday, April 12, 2016 3:30:44 PM
{ActualEnd}	Time migration ended	Tuesday, April 12, 2016 4:35:48 PM
{ErrorCount}	Number of errors during migration	1
{ErrorMessage}	Error message during migration	Mailbox is full

If using any of the date variables in the template body, the time zone can be changed using the **Notification Time Zone** field on the *Notifications* tab.

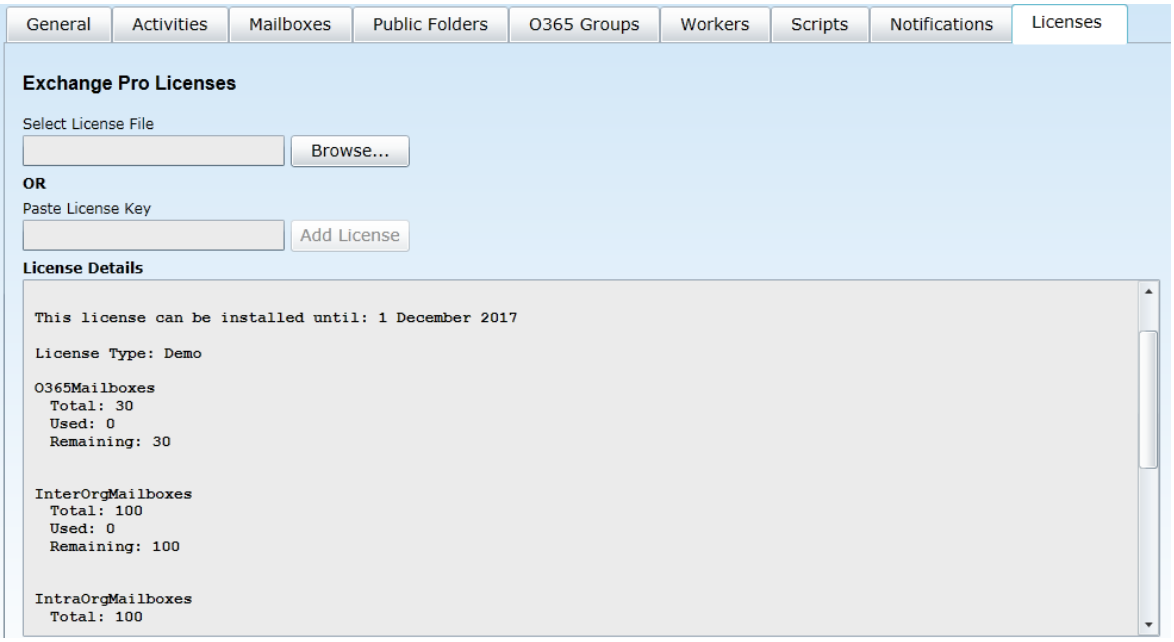
Remember to click the **OK** button at the bottom of this dialog box to save these notification template settings. And remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you have made to other settings in the *Notifications* tab.

Settings | Licenses Tab

The *Licenses* tab is where Migrator Pro for Exchange license keys are registered with the program. On this tab, all options are displayed whether or not the **Advanced** checkbox is marked.

To view or edit *Configuration Settings* (any tab): From the Admin Portal main toolbar, click **Settings** to open the *Configuration Settings* screen. Then click the tab for the settings you want to view or edit.

To view or edit the *Licenses* configuration settings (from any other tab on the *Configuration Settings* screen): Click the *Licenses* tab.



You can register a license by either of two methods:

- Use the **Browse...** button to find and select the license file from some location on your local computer; ***or***
- Copy and paste the license key into the **Paste License Key** text box, and then click the **Add License** button.

NOTE ! Remember to click **Save Settings** (in the toolbar above the tabs) to save any changes you make to these settings.

5. Mailboxes View

Working in the Mailboxes View

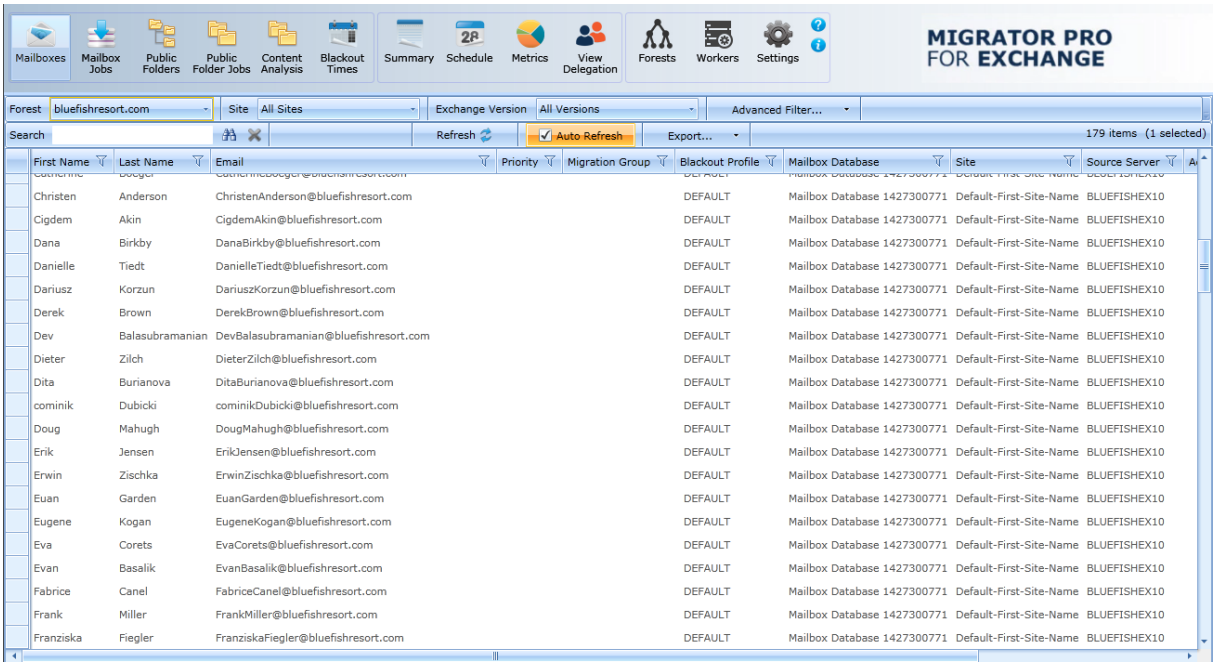
When you launch the Admin Portal for the first time, the *Mailboxes* view displays as the default view. This view consists of a list of mailboxes from various Exchange sites and servers. You may recall that while installing, you had specified the domain name and when the tool launched, it picked up all the mailboxes from all the Exchange server sites (2010, 2013, 2016, and 2019) in the specified forest.

This view is considered the most important view as this is where the administrators spend most of their time. From here, they can select mailboxes that can be added to the migration queue. This view also provides the administrator all the information that they need in order to select data for migration.

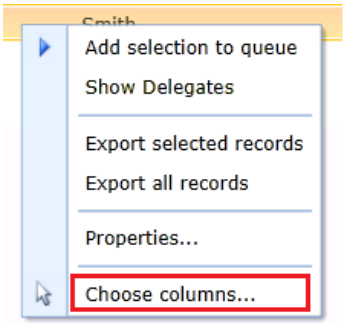
Before we begin to migrate mailboxes using Migrator Pro for Exchange, let's get familiar with the interface components and how they are used to view migration data. Please note that even though the Mailboxes view is being used to understand how to work within a view, the primary format of the data view remains the same for all the other buttons/tabs with few exceptions, as you will see as we proceed.

Adding and Removing Columns

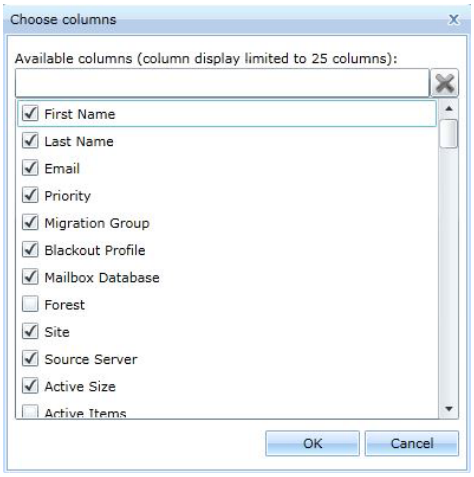
User data is stored in various attributes in AD. Some of the attributes are displayed by default, such as *Site* name, *Source Server*, *Mailbox Database*, and *Email* address as shown below. Additional attributes can be added to the list as desired.



To change the displayed attributes (columns), right-click in the list of user mailboxes:



... and then select **Choose columns**, to open this dialog box:



This dialog box shows a complete list of attributes. You can select attributes that are not currently displayed, or deselect attributes to hide them.

Rearranging Columns

You can also change the order in which the attributes are displayed in the view simply by clicking a column, dragging, and then dropping it where you wish to place it. For example, you can make the *First Name* column the first column by clicking it, dragging, and then dropping it in the space before the *Site Name* column or over the column.

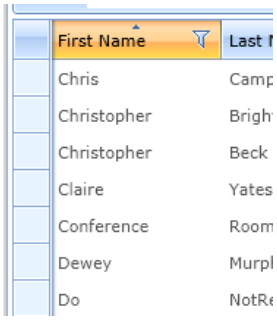
Group Membership

You can choose a group by selecting the *Group Membership* option under **Advanced Filter**. The list of available groups displays. You may quickly find a group by typing in the first few characters to filter the list. Selecting a group will limit the display to users possessing that membership.

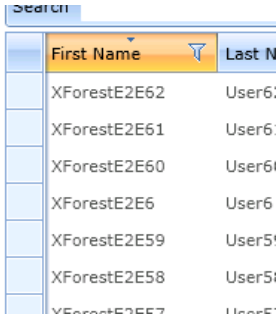
Sorting Data

By default, the mailboxes are not sorted on any specific column. However, you can sort them by any column that you want.

To sort data by their *First Name*, simply click the *First Name* column header. When the data is sorted, an inverted triangle appears above the column name. Please notice that the data is now sorted in ascending order in the Data Panel:



To reverse the sort order, just click the same column header again:



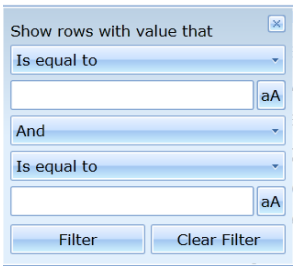
To sort by the values in some other column, click on the other column header.

To do a hierarchical sort, sort the data on one column, then hold down the **Shift** key and click the next column by which you want data sorted. To remove sorting from one of the columns, hold down the **Shift** key and click the triangle.

Filtering Data

The filter icon next to each column header lets you quickly filter any column in view. To select the filter criteria:

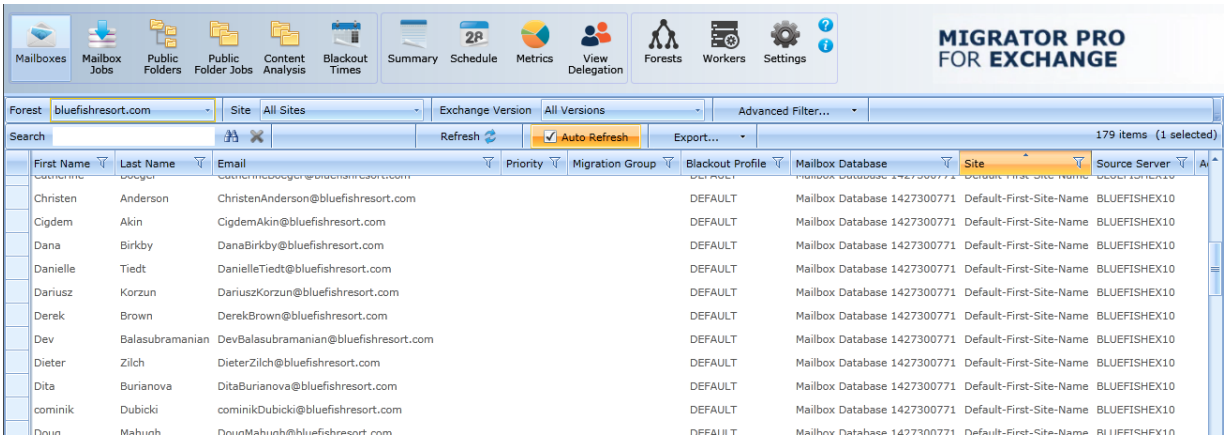
1. Click on the filter icon next to the column header. The filter window appears:



2. Click on the down arrows in each field to select the filter criteria.

3. Click Filter to begin filtering.
4. Click Clear Filter to clear the filter.

Data Panel



The **Quick Filters** and **Quick Search** fields display in the Data Panel section when you select the **Mailboxes** button. This panel remains the same for all the views, except in some views additional components are available.

Quick Filters options:

- **Forest:** The forest of the mailboxes you want migrated. This is also used to view user mailboxes residing on Exchange Online.
- **Site:** Displays the list of AD sites.
- **All Sites:** Displays the list of all AD sites.
- **Exchange Version:** The version of the mailboxes you want migrated.
- **All Versions:** Displays a list of all versions.
- **Advanced Filter** (a Forest must be selected before using an **Advanced Filter** on the Mailbox Jobs view):
    - **Group Membership:** Select a group to limit the display to users possessing that membership. Also provides the functionality to import from a text file to facilitate search for specific users within the environment.
    - **Accounts:** Provides the functionality to import users from a text file to facilitate search for specific users within the environment.

Quick Search options:

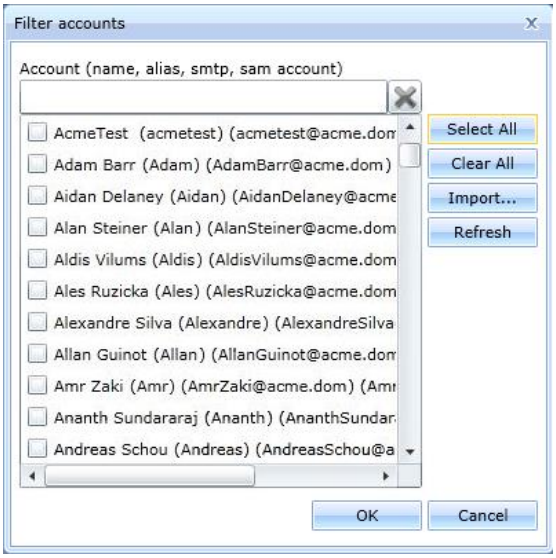
- **Search:** The search engine lets you perform a quick search against any of the mailboxes in the Mailboxes view or from the Mailbox Jobs view. Any columns displayed in the current view are valid search terms. This field will return partial matches of search terms.
- **Refresh:** Press **Refresh** to force a full refresh of the data.
- **Auto Refresh:** If the check box is selected, the data is automatically refreshed.
- **Export:** This function lets you export data to .csv, .html, .txt, and .xml files from either the Mailboxes view or from the Mailbox Jobs view.

Importing migrated users from a CSV text file

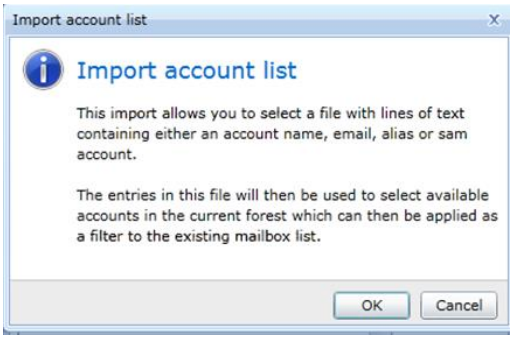
Migrator Pro for Exchange lets you import from a text file to facilitate searches for specific users within the environment. This CSV import feature is also available in the **Group Membership** feature under **Advanced Filter** from the Migrator Pro for Exchange Admin Portal Mailboxes view.

To import users from a text file:

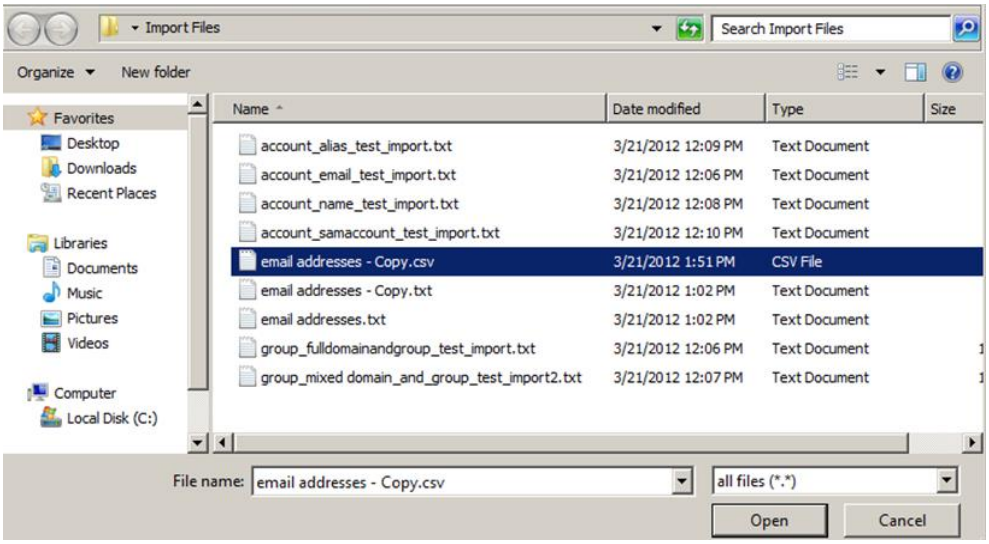
1. Click **Mailboxes** in the main toolbar.
2. Click the **Accounts** button to launch the *Filter accounts* window:



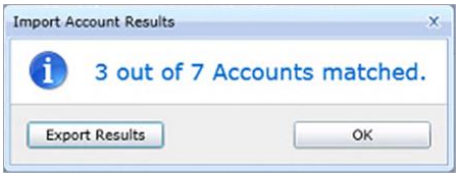
3. Select the users you want to search on and schedule for migration, and then click the Import button. The Import account list window displays.



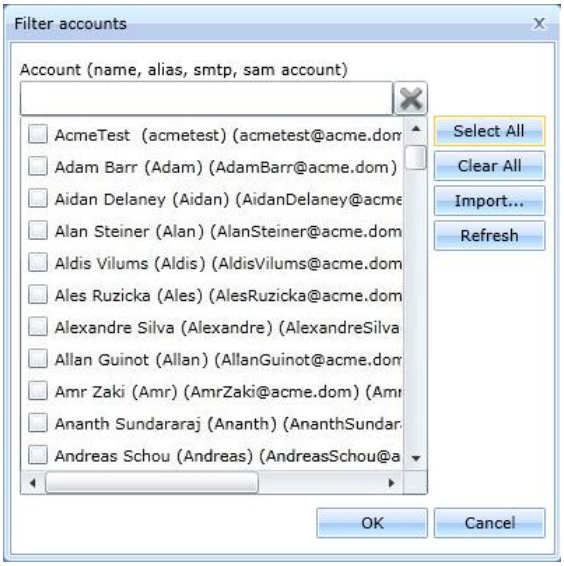
4. Read the content and click **OK**. The navigation window displays.



5. Select the user list file and click **Open**. The *Import Account Results* window will appear displaying how many users matched. Click **OK** to close the window. Click **Export Results** to save a CSV file of the match results.



6. The *Filter accounts* menu displays again so that you can select additional users.



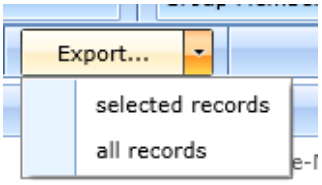
7. When you have completed the import process, click **OK**. The following is an example of the input text file format.

8. In the Mailboxes view, the selection of users has been filtered down to the specific users from the user list file and the manual additions selected in the filter accounts menu.

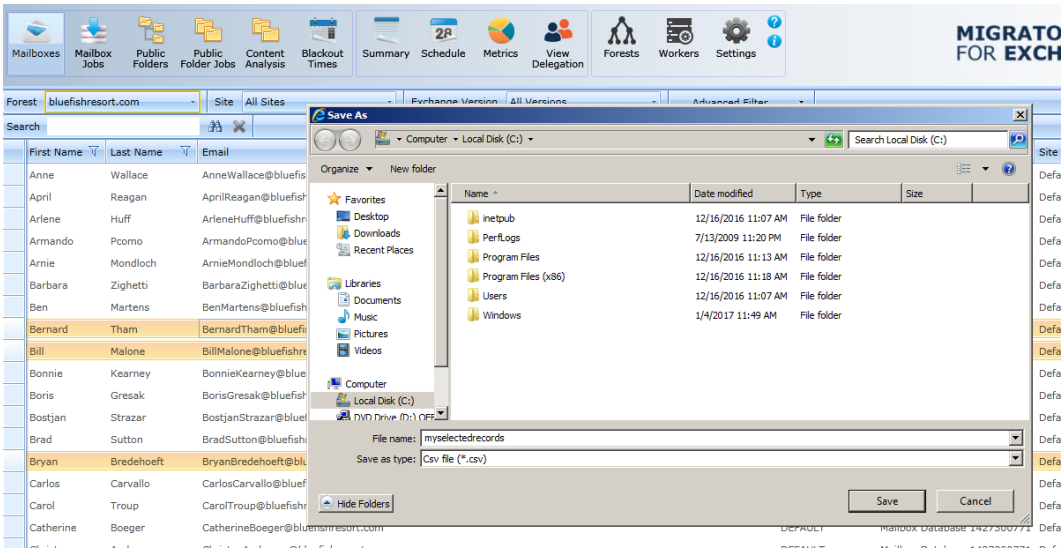
Exporting data to a CSV file

You can export data to a CSV file from either the Mailboxes view or from the Mailbox Jobs view. To export data to a CSV file:

1. Click either **Mailboxes** or **Mailbox Jobs** in the main toolbar.
2. Click the drop-down arrow next to the **Export** button.



3. If you only want to export certain records to the CSV file, highlight the records you want to export and then choose selected records from the drop-down list.
4. If you want to export all records to a CSV file, choose all records from the drop-down list.
5. Select a location for the file to be saved, and then click the **Save** button.



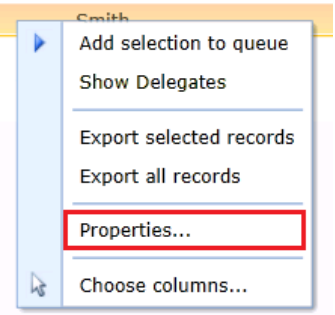
Here's an example of exported data from the *Mailboxes* view:

	A	B	C	D	E	F	G	H	I	J	K
1	First Name	Last Name	Email	Mailbox Database	Site	Source Ser	Size	Item Count	ou		
2	Judith	Ford	judith0@e2e.dom	Mailbox Store (E2E-EX03)	First Administrative Group	E2E-EX03	3 MB	32	OU=E2E-Users,DC=e2e,DC=dom		
3	Judith	Kaliyath	judith1@e2e.dom	Mailbox Store (E2E-EX03)	First Administrative Group	E2E-EX03	3 MB	32	OU=E2E-Users,DC=e2e,DC=dom		
4	Judy	Lesko	judy0@e2e.dom	Mailbox Store (E2E-EX03)	First Administrative Group	E2E-EX03	3 MB	32	OU=E2E-Users,DC=e2e,DC=dom		
5	Judy	Lucerne	judy1@e2e.dom	Mailbox Store (E2E-EX03)	First Administrative Group	E2E-EX03	3 MB	32	OU=E2E-Users,DC=e2e,DC=dom		
6	Judy	Stern	judy2@e2e.dom	Mailbox Store (E2E-EX03)	First Administrative Group	E2E-EX03	3 MB	32	OU=E2E-Users,DC=e2e,DC=dom		

Changing Mailbox Properties

You can change certain properties of mailboxes by using the right-click menu. To change the properties of mailboxes:

1. Click either **Mailboxes** or **Mailbox Jobs** in the main toolbar.
2. Select the mailboxes you wish to change.
3. Right-click on the selected mailboxes to open a context menu:



4. Click **Properties**. A dialog window appears allowing you to change the following properties:

Mailboxes:	Migration Group Blackout Profile Priority	**Mailbox Jobs:**	Migration Queue Blackout Profile Priority Do Not Start Before Do Not Complete Before Bad Item Limit Large Item Limit

5. Check the properties you want to change, change the values and click **OK**.

NOTE ! Only an existing Blackout Profile property can be added to a mailbox or mailbox job. The Blackout Profile must be created first (see *Blackout Times View* for information about this feature). The **Default** Blackout Profile is already applicable to all mailboxes and mailbox jobs.

Adding Mailboxes to the Mailbox Jobs

Once you have configured settings, and reviewed the data you need to migrate, you are ready to start the migration process. The first step is to add the mailboxes from the *Mailboxes* view to the *Mailbox Jobs*.

NOTE ! If your source mailboxes have delegate associations that you want to preserve after the migration (by migrating the mailboxes together), see the topic *Migrating Delegation Rights* for information about how to accomplish that. You may then either migrate the associated mailboxes by the **View Delegation** features (as described in that other topic), or return here to view delegation associations from this *Mailboxes* view and add them to *Mailbox Jobs* as described below.

Whether or not you will migrate mailboxes in delegation groups, before adding mailboxes to *Mailbox Jobs* you should run this command to verify the validity of the target:

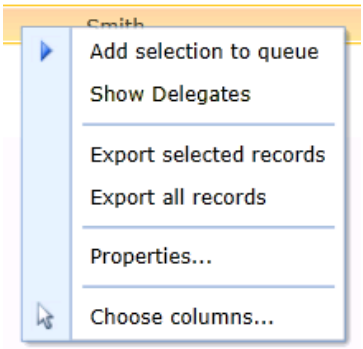
Get-MailboxDatabase | ft Name,IsExcludedFromProvisioning,IsSuspendedFromProvisioning

If either returns *True*, Migrator Pro for Exchange will be unable to use it as a target. In that case, run this command to enable the target:

Set-MailboxDatabase MDB01 -IsExcludedFromProvisioning $FALSE

When you have verified the target, this procedure will add mailboxes to the *Mailbox Jobs*:

1. Click on **Mailboxes** in the main toolbar.
2. Select the mailboxes from a site that you wish to migrate. You may consider using a view filter to limit the scope of the mailboxes in the list—to view mailboxes based on their **Mailboxes Database** name or the **Source Server** name, or you can use the **Show Filter** tool.
    - To select multiple mailboxes from non-adjacent regions, click the first item in the range; hold down the **Ctrl** key as you click other items in the range.
    - To select multiple mailboxes from adjacent regions, click the first desired item in the range; hold down the **Shift** key as you click the last item in the range.
3. Right-click on any of the selected mailboxes to view this pop-up context menu:

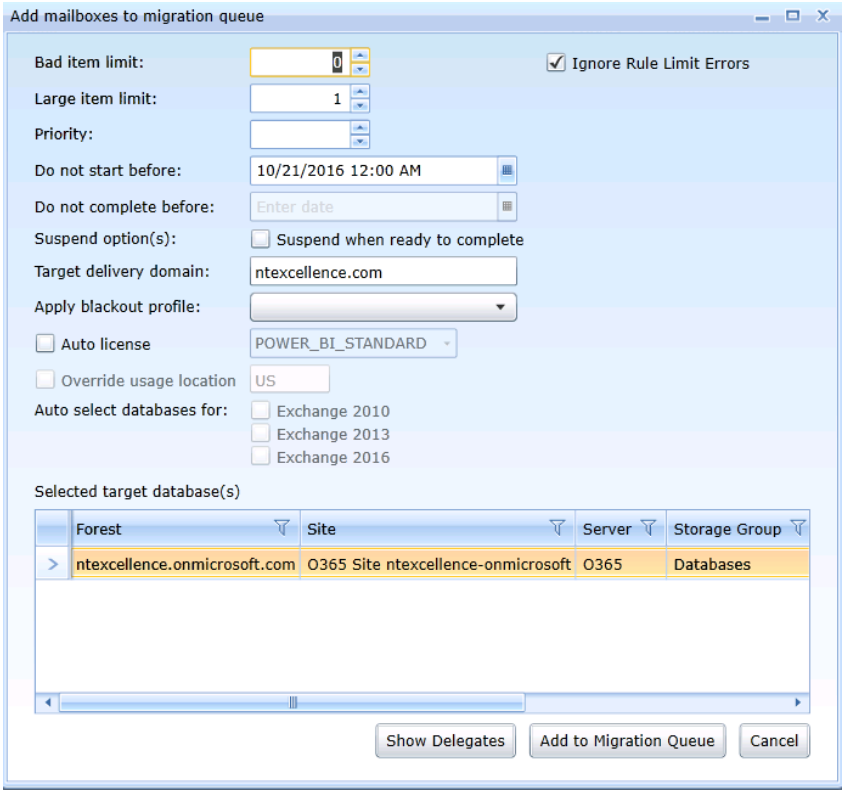


4. If you want to view any mailboxes that have been designated as delegates for the selected mailboxes, click the **Show Delegates** option, and then add to the selections any delegate mailboxes you want to migrate in the same migration job. Then right-click on a selected mailbox to view the context menu again.
5. Select the **Add selection to queue** option.

    If these mailboxes are scheduled to migrate at a future time, such as the start of a weekend, mailboxes will be migrated based on priority group when the future time begins. The smallest mailboxes within a priority group are migrated first.

    If these mailboxes are scheduled to migrate immediately, the migration will begin as soon as the mailboxes are the highest priority in the migration queue, unless another mailbox is already being migrated (in which case this new migration will begin when the in-progress migration completes).

The *Add mailboxes to migration queue* dialog box displays:



The options in the *Add mailboxes to migration queue* dialog box:

- **Bad item limit:** You can assign a limit to the number of bad items that are acceptable for the migration to keep running. A bad item is one that cannot be successfully migrated. The default number is zero and means no bad items will be skipped. The valid input range is from 0 through 2147483647. If a value above 50 is entered for the Bad Item Limit, Migrator Pro for Exchange will automatically pass a *True* value for the *AcceptLargeDataLoss* parameter for the *New-MoveRequest*.
- **Large item limit** (only displays when migrating to Office 365 or Exchange 2013 or 2016 on-premises): You can assign a limit to the number of large items that are acceptable for the migration to keep running. We recommend setting this limit to allow mail items larger than 25 MB to be migrated. If a value above 50 is entered for the Large Item Limit, Migrator Pro for Exchange will automatically pass a *True* value for the *AcceptLargeDataLoss* parameter for the *New-MoveRequest*.
- **Priority:** The priority of the migration. The lower the number, the higher the priority. The Priority setting is secondary to the **Do not start before** and **Do not complete before** values. Valid values are 1-100, with 10 as the default. **This setting does not apply to migrations to Office 365.**
- **Do not start before:** You can select date and time by clicking on the calendar icon. Setting this value instructs the migration engine to NOT submit mailboxes to the destination Exchange server until after the specified date and time. Use this to manage when a group of users will be migrated.
- **Do not complete before:** Setting this value instructs the migration engine to NOT complete the migration (cutover) before the specified date and time.

- **Suspend when ready to complete:** Check this box to suspend the item when ready to complete. This allows administrators to migrate mailboxes 95% of the way, and then complete the final cutover at a later time which can be set by the **Do not complete before** option or manually triggered by the administrator. This allows you to pre-stage the mailboxes, and then cut them over all at the same time. Note that if you override a blackout and scheduled mailbox migration with the **Migrate Now** option, the migration will complete without suspending the item.
- **Apply blackout profile:** Dropdown list lets you select a Blackout profile to apply to this migration job. The list of available profiles is drawn from the *CMTEUP_Blackout* table, and also offers a *None* option (the default). The selection here will supersede any existing blackout values set on the mailboxes subject to the migration action.

A Blackout Profile must be created before it can be applied (see the *Blackout Times View* section below for information about this feature). The **Default** Blackout Profile is already applicable to all mailboxes and mailbox jobs.

- **Target Delivery Domain:** Displays the name of the domain to which the mailboxes are being migrated. This option is enabled only in cross-forest (inter-org) migrations.
- **Auto License** (appears only for Office 365 Exchange Online): Set this feature to optionally activate a mailbox for an end user. Mailbox migration will fail if the user is not activated. You can also apply an existing SharePoint and Lync/Skype for Business license by reviewing the Office 365 License section on the Migrator Pro for Exchange Settings tab. Click on your license for options.
- **Override usage Location** (appears only for Office 365 Exchange Online): Check this box and enter a different location to override the default usage location set in the Tenant Forest General Settings.
- **Auto select databases for:** Check the boxes to automatically rotate among Exchange 2010, Exchange 2013, and Exchange 2016 databases. (If you want to exclude a specific database, use this PowerShell command: *Set-MailboxDatabase <NAME> -IsExcludedFromProvisioning $TRUE*)
- **Select target database(s):** Displays a list of destination sites, servers, databases, and Exchange servers. (Databases that are excluded from provisioning are grayed out and cannot be selected.)
- **Show Delegates** (button): This button lets you open the *Delegate Mailboxes* window for the selected mailboxes.

When the settings in this *Add mailboxes...* dialog box appear as you want them, click **Add to Migration Queue**.

Within a few seconds, the selected mailboxes disappear from the *Mailboxes* view as they are moved into the *Mailbox Jobs* view. If a large number of databases then display in the selection window, you can reduce the size by clicking on the appropriate filter icon.

Migrator Pro for Exchange utilizes the *New-MoveRequest* PowerShell command to migrate mailboxes. The Microsoft Exchange Mailbox GUID value is used as the identity parameter.

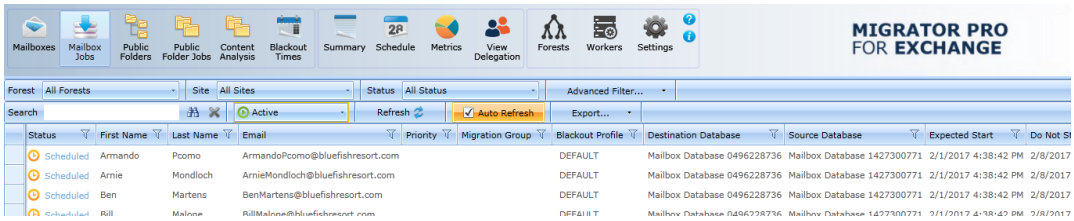
A CSV file of mailbox migration jobs can be imported from the command line. See Appendix E for more information.

Permissions that are inherited (set at the Exchange Org\Server level) are not read from the source or migrated to the target mailbox.

6. Mailbox Jobs View

To view the mailbox jobs, click the **Mailbox Jobs** button in the Main Toolbar.

1. In this view, the migration queue of the initial home forest displays. Regardless of the direction of migration, an Exchange Client Access Server in the home forest (where Migrator Pro for Exchange is installed) is responsible for processing the mailbox migration.
2. Select your site of choice (All Sites is the default) from the drop-down menu, and the migration queue from the destination server site displays:



NOTE ! Active migrations can be suspended when 95% complete by selecting Suspend when ready to complete option on the right-click menu. This option is not available for active migrations to Exchange 2013, Exchange 2016, Exchange 2019, or Microsoft Online (Office 365).

The menu options related to the mailboxes in the migration queue:

- **Cancel:** Removes the selected item(s) from the Active queue and places them into the History queue. The MCP Service cancels the job and the mailbox is returned to the Mailboxes list.
- **Resubmit:** Resubmits the item(s) that previously failed with an error with the originally selected migration options. This option appears only if a selected item failed with an error.
- **Suspend:** Suspends the selected items(s). In Progress item(s) can be suspended.
- **Migrate now:** Resumes previously suspended item(s)
- **Suspend when ready to complete:** Automatically suspends when 95% complete. This option is not available for in-progress migrations to Exchange 2013, Exchange 2016, Exchange 2019, or Microsoft Online (Office 365).

See Appendix H for information about how mailbox permissions are migrated.

Adding Mailboxes to the Mailbox Jobs

To check the validity of a mailbox database as a target, you can run this PowerShell cmdlet:

- *Get-MailboxDatabase | ft Name,IsExcludedFromProvisioning,IsSuspendedFromProvisioning*

If any return with a value of *True*, Migrator Pro for Exchange won't use it as a target.

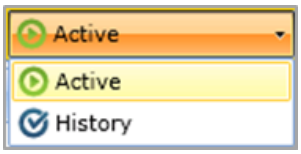
You can modify this with the PowerShell cmdlet:

- *Set-MailboxDatabase MDB01 -IsExcludedFromProvisioning $FALSE*

… replacing *MDBO1* with the name of your database.

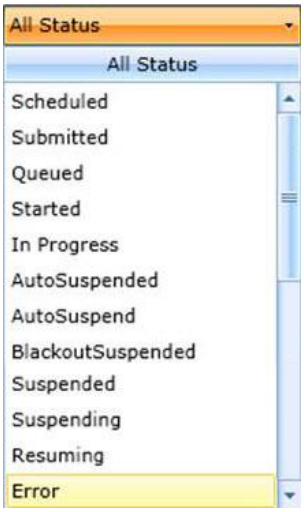
Mailbox Jobs History

The default view is set to Active; however, when you select the *History* tab on the *Mailbox Jobs* view, the data table displays different information as well as migrations that have already completed and are not *Submitted*, *Scheduled*, *In Progress* or *Suspended*.



Migration Status

As the migration proceeds, the status changes in the *Status* column from *Scheduled* to *Submitted* to *Queued* to *Started* to *In Progress* to *Completed*. If the migration job encounters an error, the status changes to *Error* or *Suspended*.



You can refer to the logs to understand the error and resolve it. A brief error message is displayed in the *Error* column.

Migration Status designations are:

- **Scheduled:** A migration time has been scheduled, but the job has not yet started.
- **Submitted:** When the migration request flows from the Migrator Pro for Exchange queue to the Exchange server.
- **Queued:** When the user mailbox is added to the migration queue.
- **Started:** When the user mailbox migration is waiting to be processed by Exchange.
- **In Progress:** When the user mailbox migration is in progress.
- **AutoSuspended:** When the user mailbox migration is suspended automatically at 95% because the Suspend when Ready to Complete option was selected.
- **AutoSuspend:** When the user mailbox migration is in the process of auto-suspending.
- **BlackoutSuspended:** When the user mailbox migration is suspended due to blackout period.
- **Suspended:** When the user mailbox migration is suspended.
- **Suspending:** When the user mailbox migration is in the process of suspending.
- **Resuming:** A previously suspended mailbox migration has been resumed. Mailboxes automatically suspended and resumed or suspended due to a blackout period and automatically resumed after the blackout period are migrated before new mailbox migrations.
- **Completed:** When the user mailbox migration is complete.
- **Error:** When the user mailbox migration halts or errors.

7. Blackout Times View

Blackout profiles can be created to include blackout periods during which no mailboxes assigned to the selected blackout profile will be migrated, even though scheduled. Typically, blackout periods are set to correspond to the users' working hours.

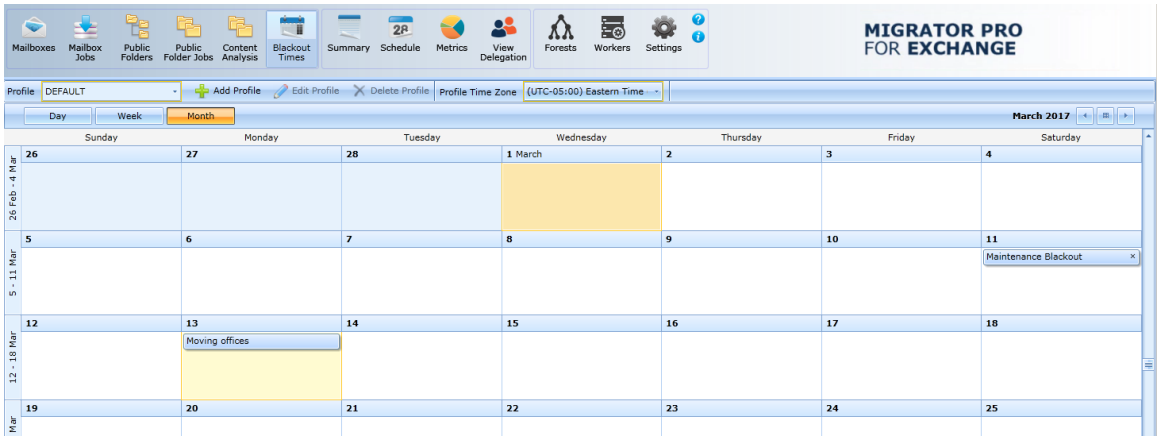
Setting up these blackout profiles gives the administrator the flexibility to keep scheduling migrations without disrupting users' workflow and affecting the production server performance.

For more information about how blackout times are applied to forests, see the field notes for the **Apply mailbox blackouts** setting, in the forest-configuration *General* tabs (for source, target and tenant forests).

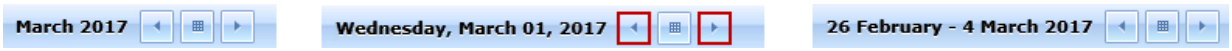
Applying Blackout Times to the Forest

To set blackout times with blackout profiles:

1. Click **Blackout Times** in the main toolbar.
2. Select a blackout profile from the **Profile** drop-down list. All user mailboxes are initially set to the default blackout profile. If needed, click **Add Profile** to create additional blackout profiles.
3. Select a time zone from the **Profile Time Zone** drop-down list. This setting helps you set blackout periods based on your local time. (All blackout time periods are stored in UTC.)
4. Select the calendar format. Click the **Day**, **Week**, or **Month** button to view a daily, weekly, or monthly calendar, respectively. If you click the **Month** button, the format will vary as it is displayed in a month format as shown below.



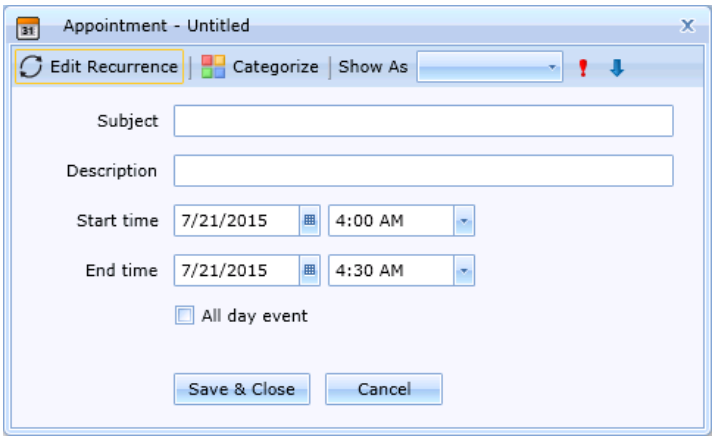
You can also navigate to different dates, months, or years using the time navigation tool located in the right corner of the UI. The behavior of the tool changes to reflect your current format.



The calendar icon in the middle of the navigator lets you view a calendar where you can select a different date or even a month.

To start adding a blackout period, double-click a time or a day in the calendar depending on whether you are viewing a daily, weekly, or monthly calendar. If you are in the Timeline format, double-click in the cell just below the date.

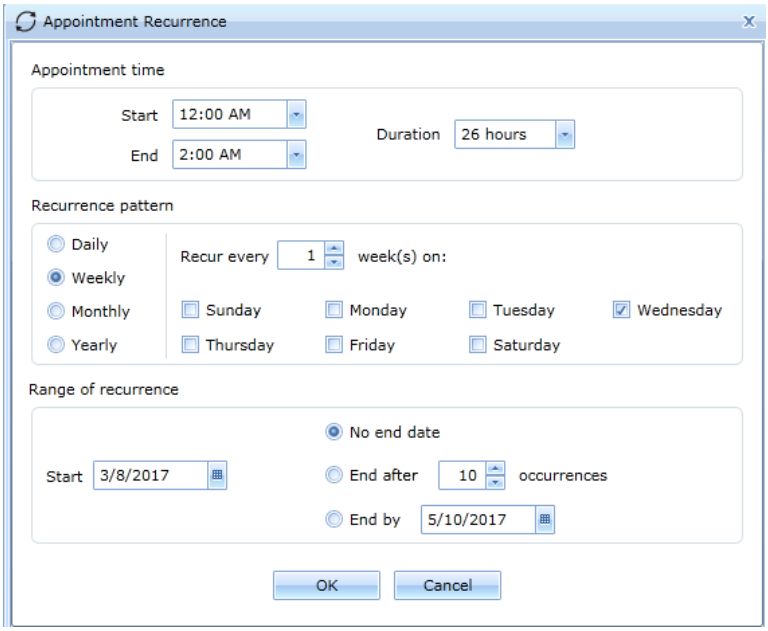
The *Appointment* dialog box appears. Setting a blackout period is like setting up a meeting appointment in Outlook. It is a detailed Appointment setting tool making it a full-fledged free/busy scheduler. You can also categorize, color code, and assign priorities as well.



In the *Appointment* dialog box, specify what you would like to call these blackout periods, and provide a description in the **Description** field.

Specify a **Start time** and **End time**, or you can select the **All day event** checkbox if blackout is to be exercised the entire day.

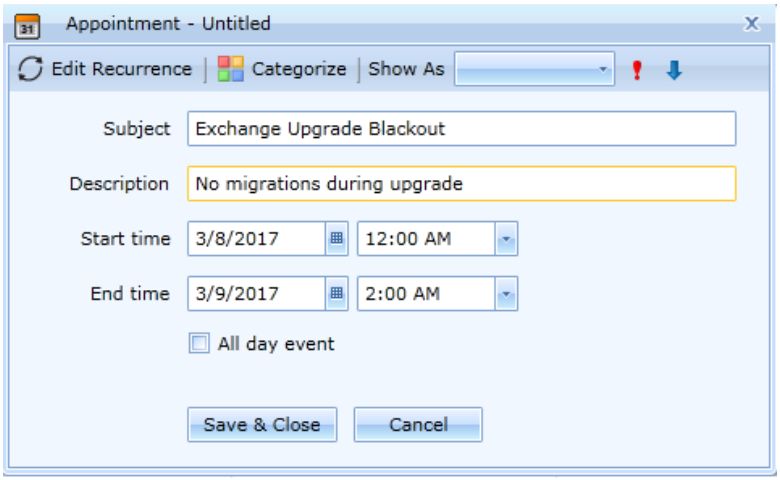
If you wish to repeat this setting for other days, click the *Edit recurrence* tab to open the **Appointment Recurrence** dialog box:



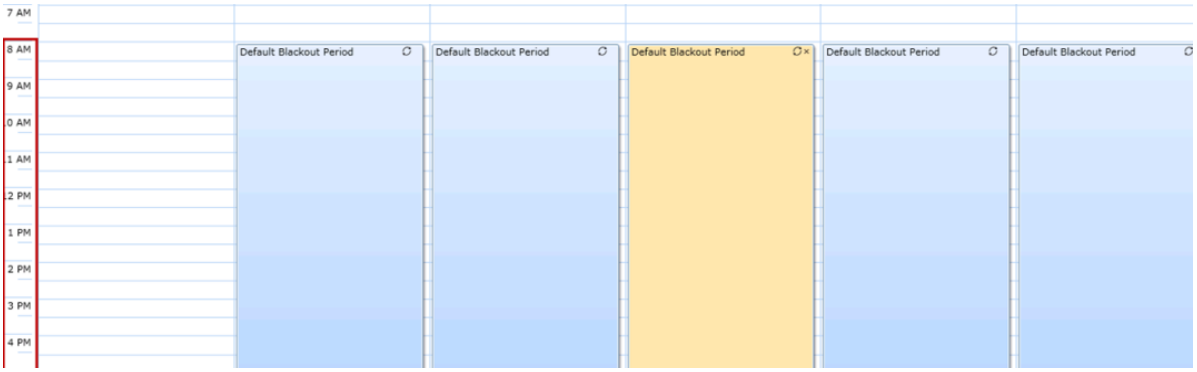
And specify the recurrence pattern:

- Specify whether the specified blackout period will recur daily, weekly, monthly, or yearly.
- For a Weekly recurrence, then also specify the frequency at which it will occur, and the day(s) of the week. For example, the blackout period will occur every week or every two weeks, on Tuesdays.
- Specify a Start date for the blackout recurrence periods.
- Specify an end date for the blackout recurrence periods.

Click **OK** to save your recurrence pattern, and the *Appointment* dialog box reappears. Click **Save & Close** to save all the settings:



The blackout periods are set in the calendar as shown below.

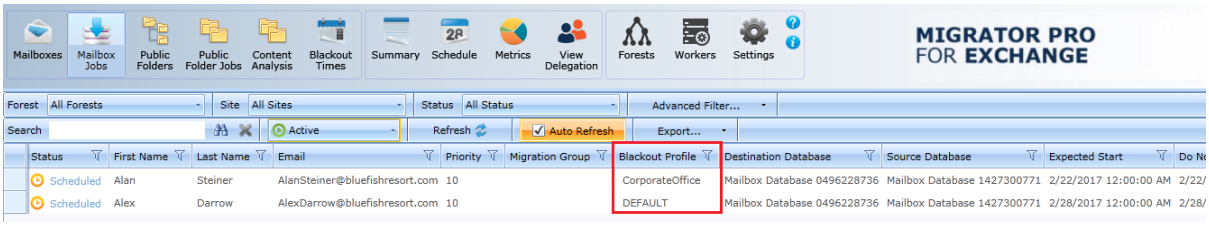


The default blackout profile is initially applied to all user mailboxes. To set user mailboxes to a different blackout profile, select one or more mailboxes in the *Mailboxes* or *Mailbox Jobs* view and edit the **Properties** in the right-click menu.

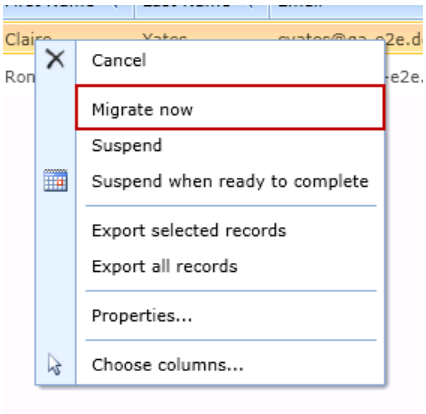
NOTE ! Manually suspended migrations ignore blackout periods if they are manually resumed, and will begin migrating immediately.

Overriding Blackouts or Scheduled Migrations

Migrator Pro for Exchange provides the functionality to override blackouts which are in place, or migrations that have been scheduled for a future time. Once you have scheduled a blackout, or have scheduled users for a migration, the following type of information displays in the Mailbox Jobs view of the Admin Portal:

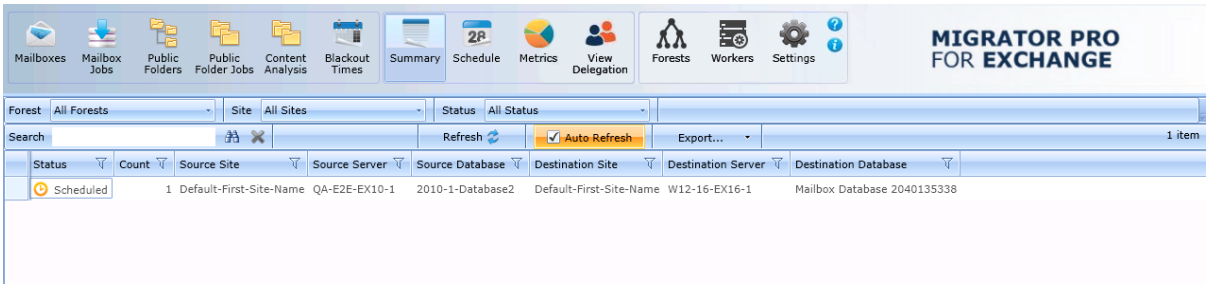


To override blackouts or future scheduled migrations: Select the user, then right-click and select **Migrate now**:



8. Migration Summary View

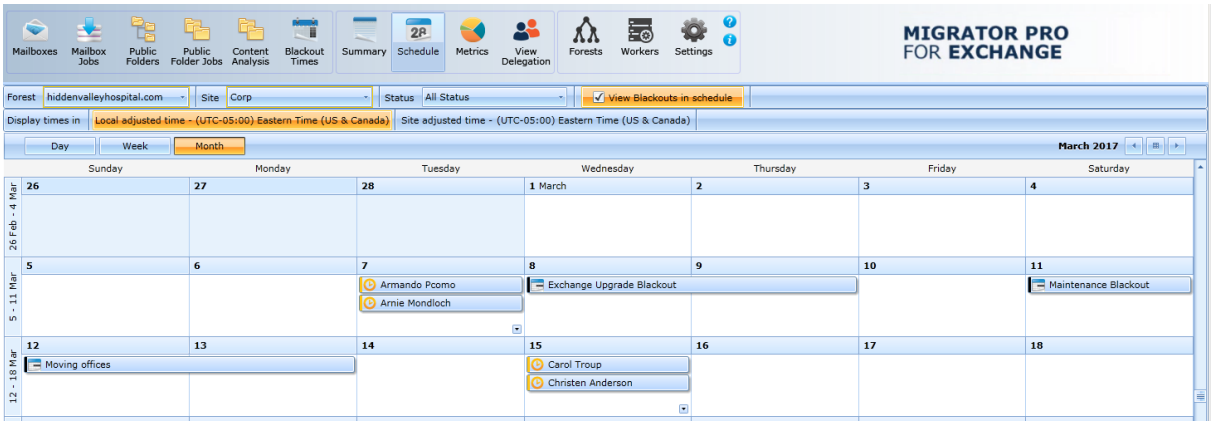
Use the *Summary* view when you want to find out the status of all migrations from all the sites:



You can sort and group these items based on the available attributes to create a view that will give you a clear picture of migration status on all the migration sites.

9. Migration Schedule View

The *Schedule* view is read-only and displays mailboxes in all statuses throughout a migration.



By default, it displays the user mailboxes from the migration site that is currently selected in the Site box. To review the schedule of user mailboxes from another migration site, you must select it in the Site box. Migrator Pro for Exchange uses the Destination site whenever it displays data.

If you hover over a user, it will display information, such as the status, data migrated in bytes, number of items migrated from a mailbox, time the migration started, and time when it ended.

Select the **View Blackouts in schedule** check box to display the appropriate blackout schedules listed in the Schedule view. Deselect this check box to remove the blackouts from the view.

If you change to the Week view, you can see the same information.

Based on the information you specified when adding mailboxes to the migration queue and the information from previously scheduled mailboxes, this view even anticipates when a user mailbox might be migrated.

10. Migration Metrics View

This view lets you depict the amount of data that has been migrated and number of mailboxes that have been migrated during a specific time graphically.

1. In the **Report** field, click the down-arrow select a report. Four reports are available:
    - Migration Totals

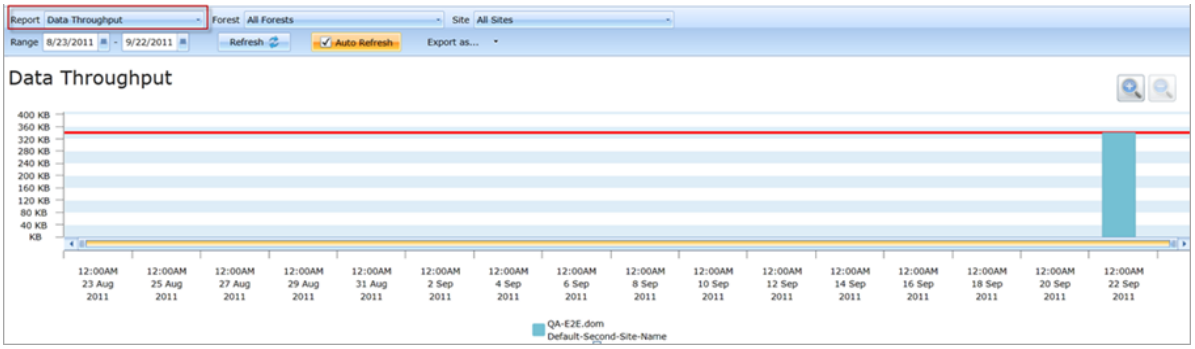
- Data Throughput
- Status Summary
- Mailbox Locations

2. Select a **Forest**. All forests are selected by default.
3. Select a **Site**. All sites are selected by default.
4. Select or enter a time range for the report in the **Range** date selector fields.
5. Once the graph is displayed, you can do the following:

    - Pause on (hover mouse over) a bar (or circle graph sector) to view statistics.
    - Use the zoom icons on bar graphs to increase or decrease the size of the graph.
    - Use the horizontal scroll bar and scroll arrows at the base of bar graphs to view the sections of the graph not visible on the screen.
    - Export the graph to a PNG, BMP, Xlsx, or Xps format file and use it in your report. After you have selected the format, it opens a Save As dialog box for you specify the location for saving the exported graph.

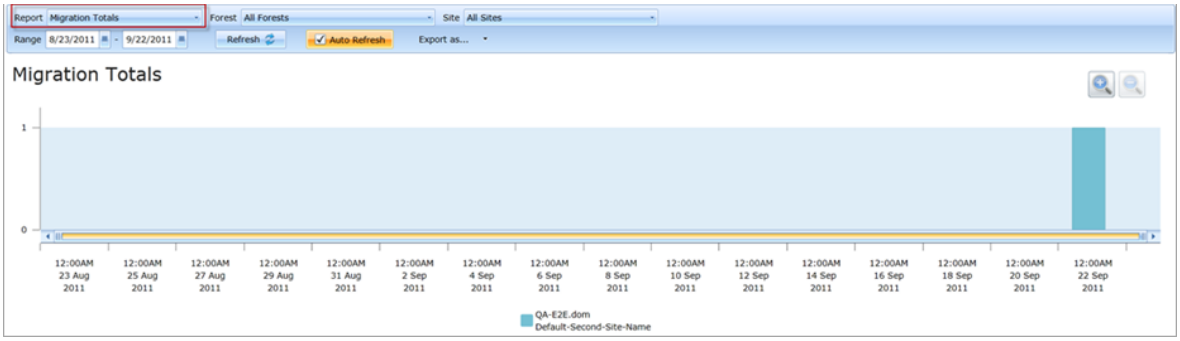
Data Throughput

In the **Report** field, select the *Data Throughput* option. *Data Throughput* is selected by default.



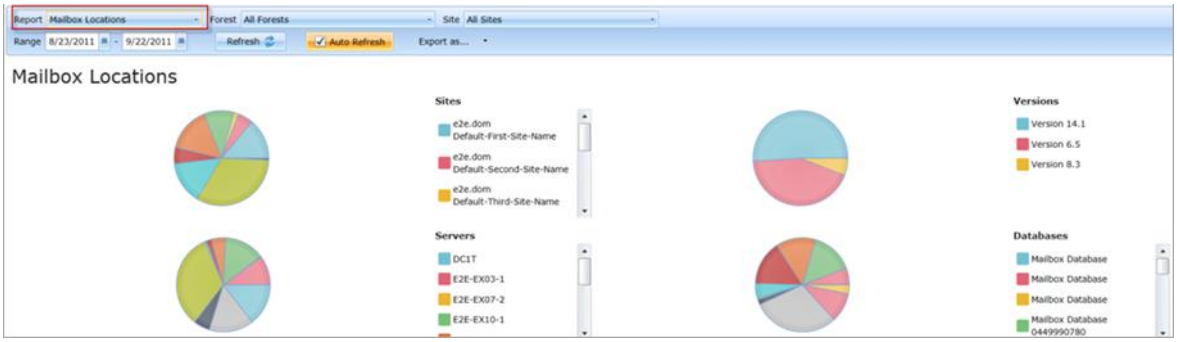
Migration Totals

In the **Report** field, select the *Migration Totals* option:



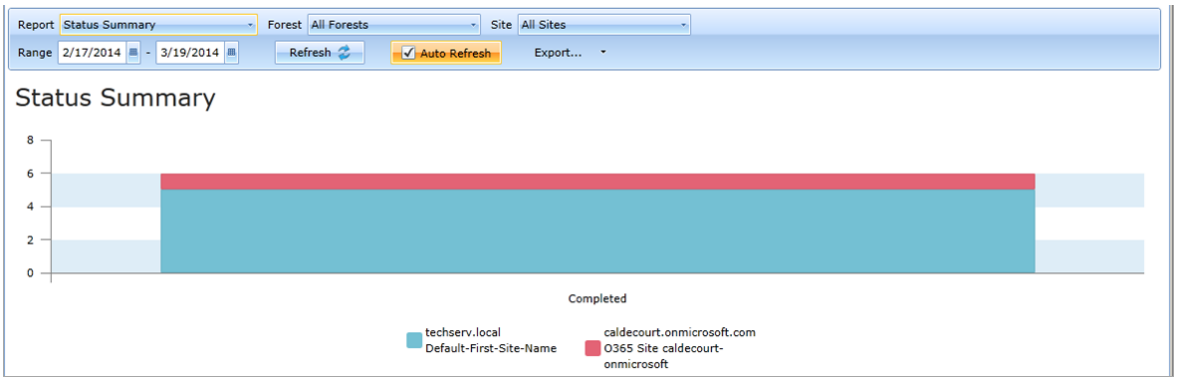
Mailbox Locations

In the **Report** field, select the *Mailbox Locations* option:



Status Summary

In the **Report** field, select the *Status Summary* option:



11. Migrating Delegation Rights

Delegation rights can be migrated intact only if the delegate mailbox is migrated at the same time (in the same migration queue) as the mailbox to which the delegate has been given access. If delegation-linked mailboxes aren't migrated together, delegation fails in the target since the associated delegate mailbox does not yet exist. Migrator Pro for Exchange identifies delegate relationships in the source as part of its forest-discovery process, so you can view delegate associations and choose to migrate delegates together with the mailbox(es) to which they have delegate access.

Migrator Pro for Exchange lets you view delegation associations in its **Mailboxes** view in the Admin Portal, so you can add associated mailboxes to the same migration job. An Admin Portal toolbar button, **View Delegation**, lets you review only mailboxes with delegates, and select which mailboxes to add to a migration queue, to be migrated together. Additionally, when adding selected mailboxes to the migration queue, there is a button **Show Delegates** that allows additional delegate mailboxes to be added to the migration queue. These features are described below.

Forest-Wide Discovery vs. Filtered Group Discovery

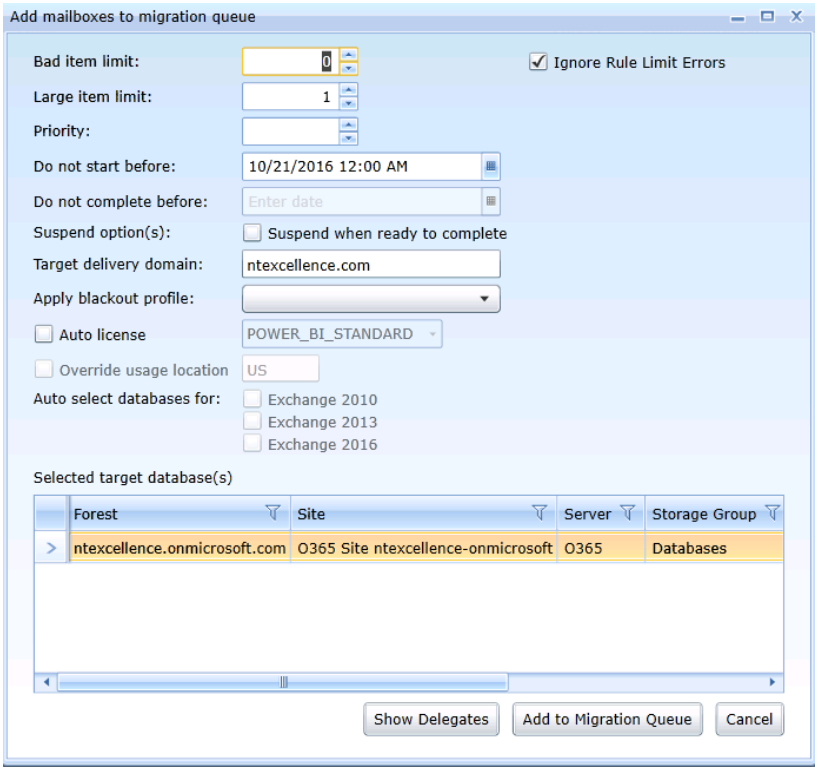
The complex interrelationships of delegate rights, crisscrossing from and to multiple users across multiple levels of delegation, is a very large data set for Migrator Pro for Exchange's forest discovery process to capture—in addition to all the other mailbox data that Migrator Pro for Exchange must collect for its other features and functions. The discovery process can run an hour or more in small and mid-sized organizations, or can run several hours, even a day or longer, in larger enterprises with thousands or tens of thousands of users.

Migrator Pro for Exchange therefore offers a list-filtering feature that lets you define (customize) and view subsets of a forest, to limit the scope of the view. But more than that, Migrator Pro for Exchange's filtering feature lets you refresh delegate data for mailboxes in these filtered subset groups by a separate discovery process whose scope is limited to only the mailboxes in the filtered groups, which is much faster than running another discovery process for the entire forest. This feature lets larger organizations view (and act on) the most up-to-date delegation information in a filtered list very quickly.

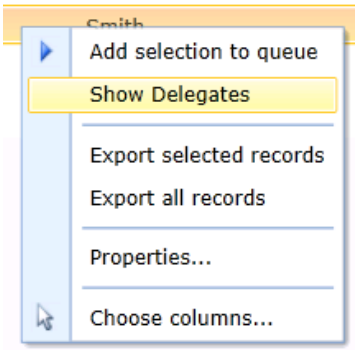
This filtering feature is described below, under *Viewing and Migrating Delegate-Related Mailboxes from the* **View Delegation** *view*. The refresh interval, and the number of delegation levels Migrator Pro for Exchange will trace, are configurable in the *Activities* tab in **Settings** (see the notes for that tab in the Settings topic).

Viewing and Migrating Delegate-Related Mailboxes from the Mailboxes View

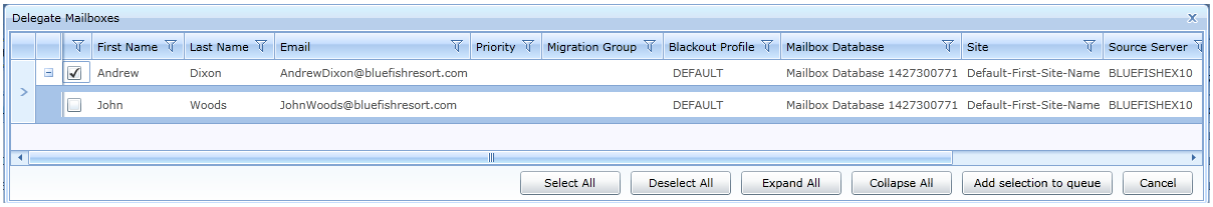
When adding a mailbox to a selection queue by right-clicking it from the *Mailboxes* view, the *Add mailboxes to migration queue* dialog box contains a **Show Delegates** button that lets you add delegate-related mailboxes to the same migration queue.



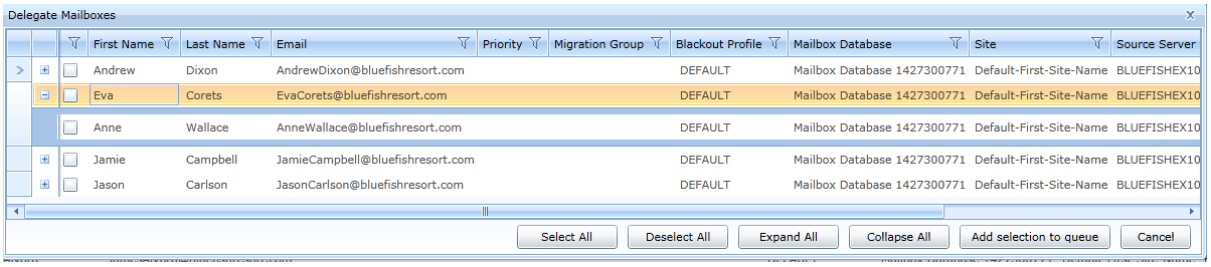
To view delegates for a particular mailbox, from the *Mailboxes* view: Click the **Mailboxes** button in the Admin Portal toolbar, then right-click on a mailbox and select **Show Delegates**:



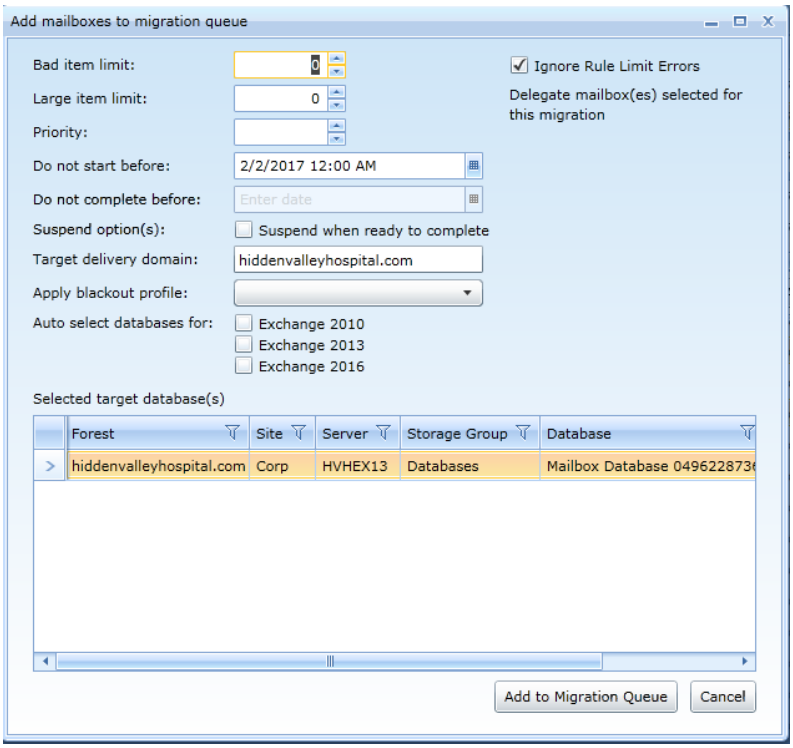
This opens a *Delegate Mailboxes* window, where the selected mailboxes appear in a new list:



You can also select multiple mailboxes (**Ctrl**+click) in the *Mailboxes* view, and then **Show Delegates**:



In this *Delegate Mailboxes* window you can click **[+]** on any row (or more than one) to expand the list to show that mailbox's delegates. Then select/deselect any mailbox, or **Select All**, or select more than one(**Ctrl**+click), and then **Add selection to queue**:

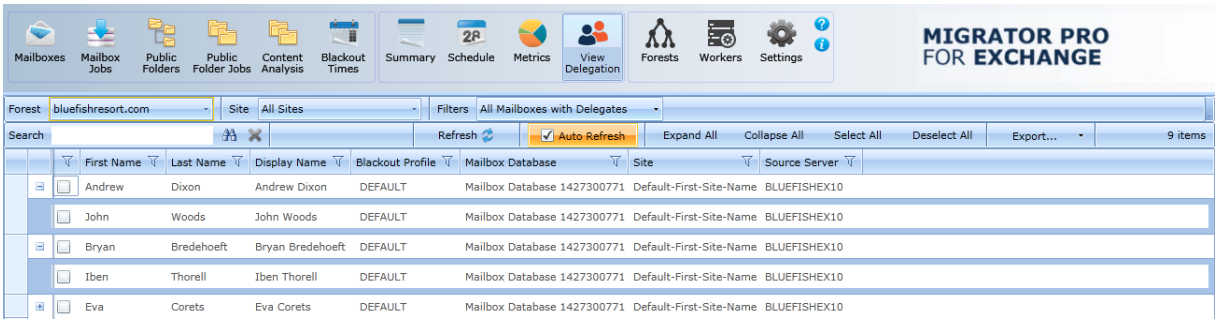


From the *Add mailboxes to migration queue* dialog box, the procedure is the same as for adding mailboxes to *Mailbox Jobs*. See *Adding Mailboxes to the Mailbox Jobs* in the *Mailboxes* topic for information about this process.

Viewing and Migrating Delegate-Related Mailboxes from the View Delegation View

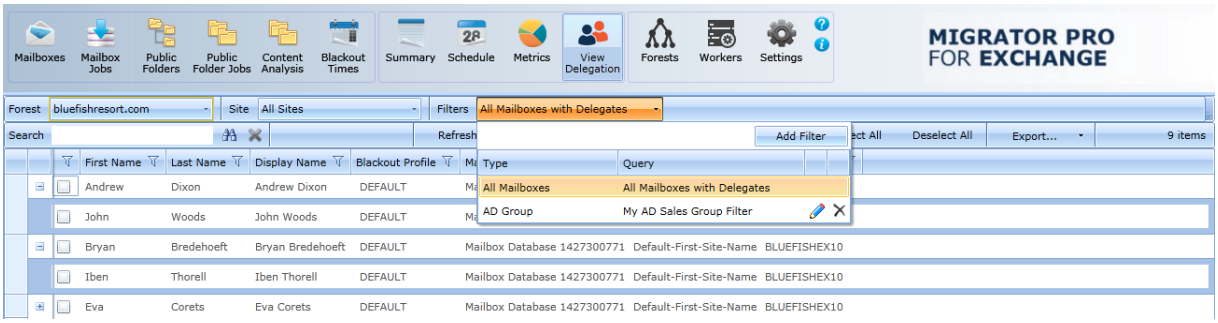
Migrator Pro for Exchange lets you view delegation associations in its *Mailboxes* view in the Admin Portal, as described above, so you can add delegate-related mailboxes to the same migration job. Another Admin Portal toolbar button, **View Delegation**, lets you review only mailboxes with delegates, so you can select which mailboxes to add to a migration queue, to be migrated together.

The **View Delegation** view shows every mailbox in the selected forest that has at least one delegate:



You can add these mailboxes to a migration job the same as you migrate mailboxes from the *Mailboxes* view: Select the mailbox(es) you want to migrate, then right-click for the context menu, and click **Add selection to queue**. If necessary, see *Adding Mailboxes to the Mailbox Jobs* in the *Mailboxes* topic for information about this process.

From this *View Delegation* view, you can filter the table by the **Filters** drop-down list:



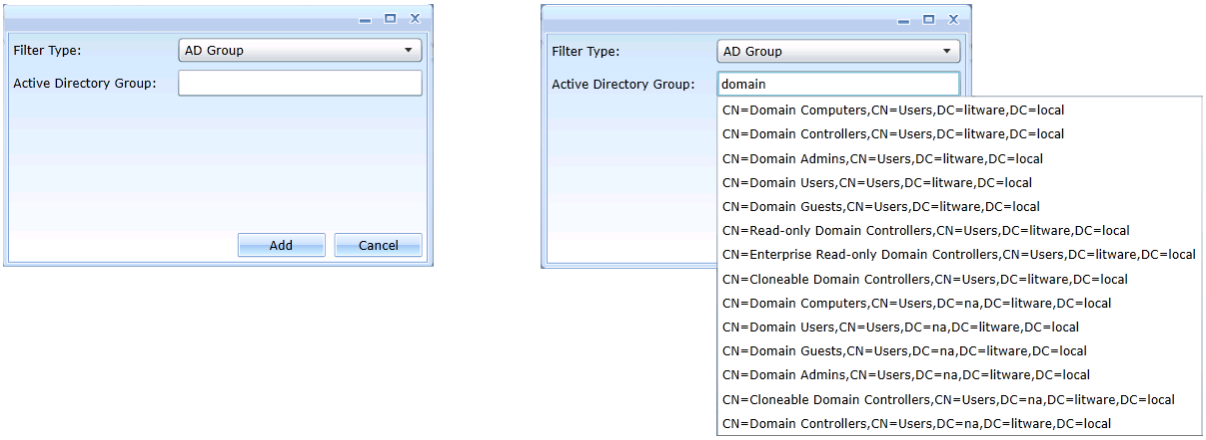
All Mailboxes is the default scope, showing every mailbox in the entire forest that has one or more delegates. But this filtering feature lets you define and view subsets of a forest, to limit the scope of the view. These filters also let you refresh delegate data for mailboxes in these filtered subset groups separately, which is much faster than running another discovery process for the entire forest.

When you apply a filter to this *View Delegation* view, the list shows only the mailboxes that are members of the selected filter group. Previously defined filters can be selected from the **Filters** drop-down list, and can be edited (by clicking the pencil icon) or deleted (click the [**X**]).

Remember that the delegation data refresh interval, and the number of delegation levels Migrator Pro for Exchange will trace, are configurable in the *Activities* tab in **Settings** (see the notes for that tab in the Settings topic).

To Define a New Filter

In the **Filters** drop-down, click the **Add Filter** button to open a dialog box to define the new filter:



Specify the **Filter Type**: *Custom LDAP Filter*, *AD Group* or *Migrator Pro for Exchange Group* (an Migrator Pro for Exchange migration group). Then select the query for the group you want from the drop-down list, as shown in the figure above. The new filter will limit the displayed list to contain only mailboxes that satisfy the selected query string.

Finally, click the **Add** button to add the new Filter to the **Filters** drop-down list.

12. Public Folders View

Note that migrating public folders to Exchange Online requires the use of a built-in wizard. Refer to the topic *Migrating Public Folders to Exchange Online* (in the *Public Folder Jobs View* section) for more information.

NOTE !

Public folder migration to Exchange 2013 requires Exchange 2013 CU5+.

Migrator Pro for Exchange may encounter issues when migrating public folders to Exchange 2013 using bi-directional synchronization if an Outlook Profile is not used. This problem can be resolved by configuring an Outlook Profile for the public folder migration to Exchange 2013.

The Global Catalog Server value should not be changed in the Forest Setting during public folder migration to ensure Email Address changes will be detected by Migrator Pro for Exchange

Adding Public Folders to the Public Folder Jobs

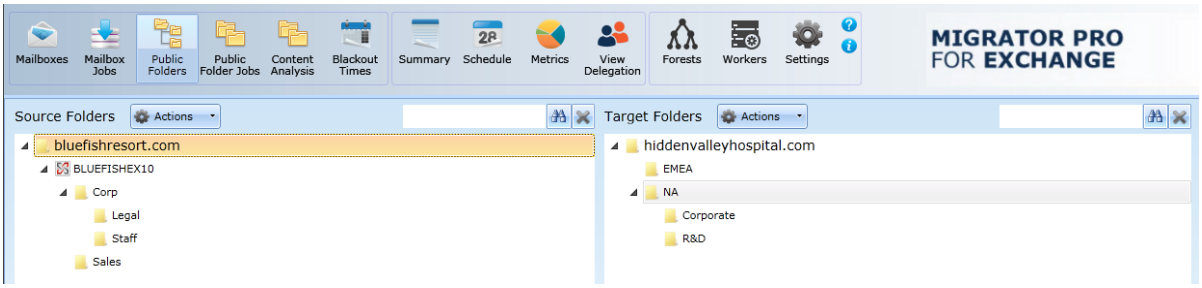
The Public Folders view lists public folders from all sites in the specified domain. In addition, it lets you search and select public folders to add to the *Public Folder Jobs*.

To add public folders to the *Public Folder Jobs*:

- Click **Public Folders** in the main toolbar. The screen displays *Source Folders* on the left side and *Target Folders* on the right. All items in the Source and Target Folders in this view are periodically refreshed automatically. However, you can manually refresh all items in the *Source* or *Target Folders* at any time by clicking **Refresh** under the **Actions** menu. Individual items are updated after migrations and can be updated at any time by right-clicking on an item and clicking **Refresh**.

NOTE !

Exchange 2013 and 2016 public folder hierarchies can be split across multiple servers and mailboxes so the public folders listed under Server and Mailbox are not displayed. For Exchange 2013 and 2016 public folders the Server and Mailbox information is displayed in the “hover over” tool tip.



NOTE !

Migrator Pro for Exchange will synchronize *Send-As* and *Receive-As* public folder permissions for non-mail-enabled groups. Note, however that *Receive-As* is not supported by Exchange Online (Office 365). Also, other public folder permissions (e.g. *Owner*, *FolderVisible*, and so on) are only supported by Exchange for mail-enabled groups.

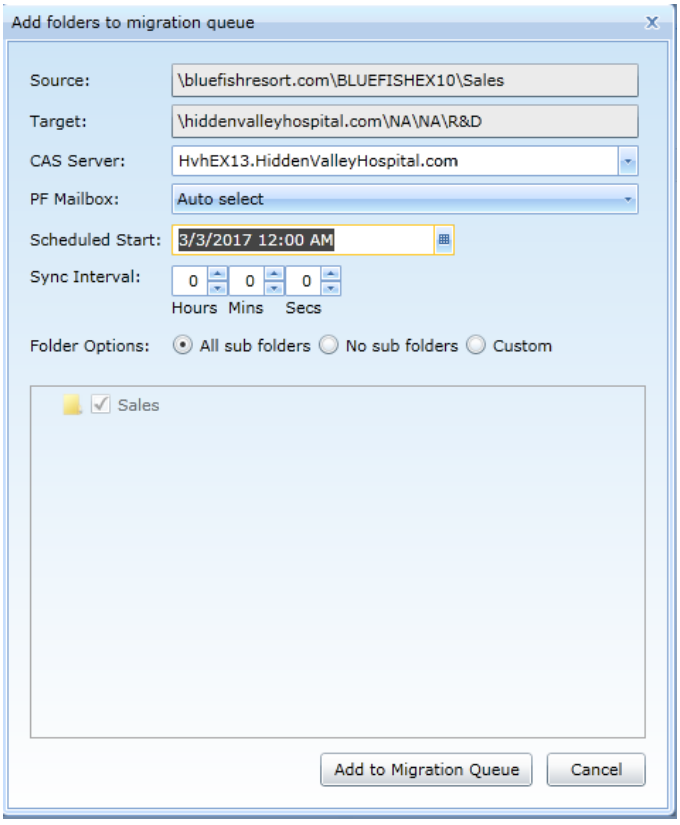
Anonymous and default permissions are migrated if enabled in the Public Folders settings.

To support environments that have a large number of folders:

- The page displays only the top two levels of the folders directory by default and then loads and displays subfolders as they are expanded in the view.
- The right-click Refresh option updates the displayed folder from the Migrator Pro for Exchange database. The Refresh option no longer rationalizes the folder.
- Source and Target folders can be searched for by using the search box above the folder lists. However, the Search feature only searches within folders that have been expanded in the view..

Click on the forest, server, and/or folders you want to send to the migration queue and drag them to the Target Folders pane.

The program then opens this *Add folders to migration queue* screen.



Indicate the settings you want to apply to the job by selecting the options on the screen:

- **Source:** The path to the location from which the folders are being migrated.
- **Target:** The path to the location to which the folders are being migrated.
- **CAS Server:** If the destination server does not include the "Client Access Server"(CAS) role, you must select a CAS that can access the target server. You can select a valid CAS server using the drop down list or type in the logical name of your CAS array. The specified CAS should be in the same Active Directory site as the target public folder server.

- **PF Mailbox** (appears for Exchange 2013 and higher targets): The public folder Mailbox to migrate to in the target. The drop-down list includes all public folder mailboxes available in the target. The default is *Auto select*, which will be the smallest target PF mailbox.

  If **PF Mailbox** is set to *Auto select*, and two or more PF mailboxes meet the criteria, Migrator Pro for Exchange selects the PF mailbox with the largest percentage of quota remaining.

- **Scheduled Start:** Select date and time by clicking on the calendar icon. Setting this value instructs the migration engine to NOT submit folders to the Target until after the set time condition is met. Use this to manage when a group of folders are being migrated.
- **Sync Interval:** Enter the interval at which you want Migrator Pro for Exchange to copy new or changed folders to the target folders. Valid values are any time interval from 0 seconds to 24 hours. Syncs will not continue if a migration error is encountered during a sync.
- **Folder options:** Select one of the following options: *All sub folders*, *No sub folders*, or *Custom*.

Then select the folders you want to copy to the migration queue, and click the **Add to Migration Queue** button to add the selected folders to the *Public Folder Jobs*.

When you click **Add to Migration Queue**, Migrator Pro for Exchange verifies the aggregate size of all public folders to be migrated from the source. The program also verifies that a public folder exists in the target that can accommodate the source folder(s) without exceeding 90% of the available quota configured for the PF mailbox.

If **PF Mailbox** is set to *Auto select*, and two or more PF mailboxes meet the criteria, Migrator Pro for Exchange selects the PF mailbox with the largest percentage of quota remaining.

How Rename Conflict Resolution Works

The following public folder migration rules apply when using the Rename Conflict Resolution option. These rules assume that before the initial migration (sync), there is an existing public folder on the Target with the same name as a Source public folder.

During an initial one-way sync:

- If there are document(s) on the Source and Target with the same name, the source document will be synced to the Target and renamed with the Rename Mask.
- When the one-way sync is completed, the Target will contain both the renamed source document and the original target document.

During continual one-way syncs after the initial sync:

- If a source document, that has a corresponding renamed document on the Target, is modified on the Source, the corresponding renamed document on the Target will be updated (overwritten).
- The renamed document on the Target is never evaluated again in a one-way sync. Any changes made to the target document will be overwritten if the original source document is modified.

New public folder jobs are always completed before re-synchronization jobs are started.

If the Domain Name and SMTP Namespace Are Different

Migrator Pro for Exchange copies Free Busy messages from the source to the target, and renames the subject header so that it matches the Legacy Exchange DN of the target object. In environments where

the domain name and the SMTP name space are different, Exchange must be directed to browse the Schedule+ Free Busy folder to discover this information. To do this:

- Open the Exchange Management Shell on Exchange and execute the following command where “ForestName” is set to the *PrimarySMTP* namespace of the contact objects residing in the target.

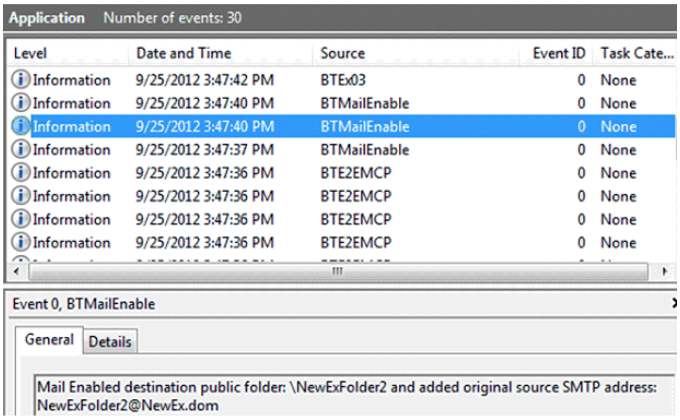
Add-AvailabilityAddressSpace –ForestName contoso.com –AccessMethod PublicFolder

As Exchange 2013 no longer supports Schedule+ Free/Busy, the functionality included in Migrator Pro for Exchange is not sufficient to provide cross-forest Free/Busy lookups during this type of migration. To achieve this, you will have to manually configure “Availability Service Sharing” within your environments. If needed, please contact your sales representative about engaging with our consulting services group.

How Public Folder Mail-Enablement Works

BTMailEnableService is a separate service that executes the sequence of calls necessary to mail-enable public folders. In complex Exchange environments, it can take a significant amount of time for information about a new public folder to propagate and for Exchange’s addressing policies to create the initial proxy address structure. The public folder engine offloads this process to the *BTMailEnableService* and continues with data migration.

BTMailEnableService is started the first time a Mail-Enabled public folder is migrated and writes output to the application log.



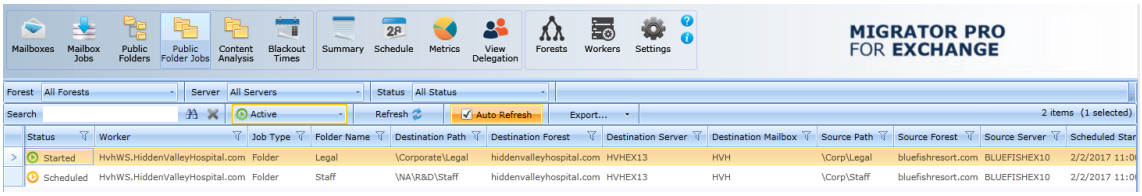
13. Public Folder Jobs View

The Public Folder Jobs view lets you manage the sequence of migration requests for the selected migration destination.

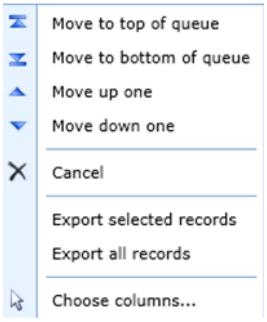
NOTE ! Migrator Pro for Exchange logs an error message if a source folder is moved to a new location and the associated target folder already exists. For example, if *\folderB* is moved to *\folderA\folderB* in the target, and a different *\folderA\folderB* already exists:

> Failed to move folder '\folderB' to '\folderA\folderB' on server 'MyTargetServer1'
>
> System.Runtime.InteropServices.COMException (0x80040604): Error in IMAPIFolder.CopyFolder(FOLDER_MOVE): MAPI_E_COLLISION

1. Click **Public Folder Jobs** in the main toolbar. The screen displays a list of folders ready for migration:

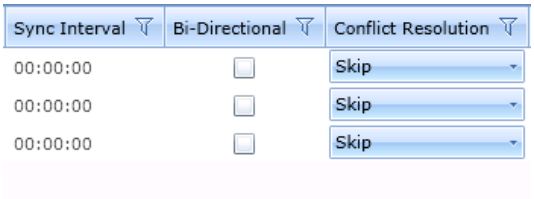


2. This view provides a number of details about the public folders being migrated.
3. If you want to move one of the public folder migration jobs to the top/bottom of the migration queue, right-click on the selected public folder migration job, then click the **Move to top of queue** or **Move to bottom of queue** option, as desired.
4. If you want to move one of the public folder migration jobs by one, click **Move up one** or **Move down one**, as needed.



NOTE ! The above options have no effect on *Active* or *In-Progress* migration jobs.

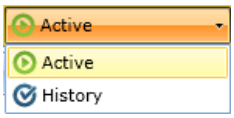
The *Sync Interval*, *Bi-Directional*, and *Conflict Resolution* settings for a job can be changed in the table:

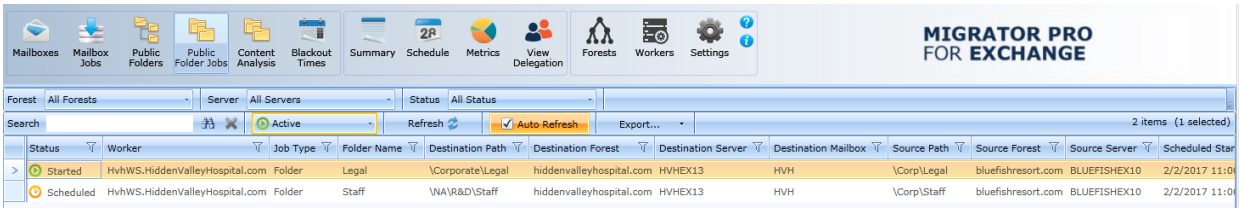


You can also choose to **Cancel** selected jobs, **Export** information about selected jobs to a CSV file and change the columns in the view.

Public Folder Jobs History

The default view is set to *Active*; however, when you select the History tab on the *Public Folder Jobs* screen, the view displays different information as well as migrations that have already completed and are not *Submitted*, *Scheduled* or *In Progress*.





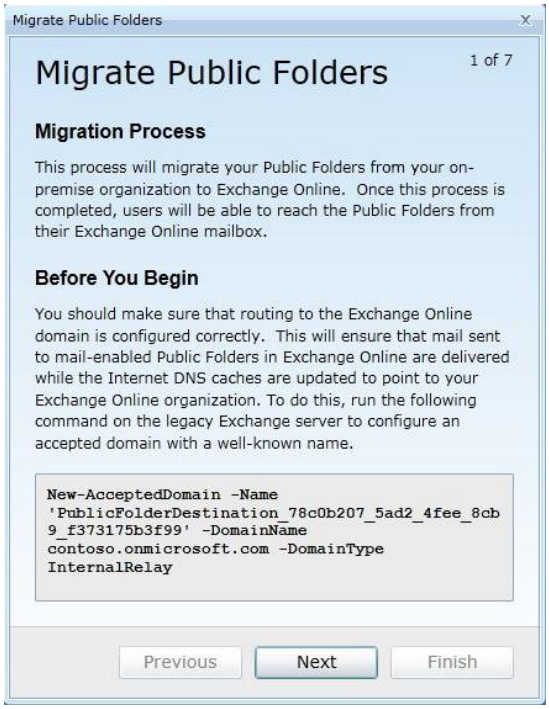
Migrating Public Folders to Exchange Online

Migrator Pro for Exchange can migrate public folders to Exchange Online using either PowerShell or MAPI. The PowerShell option or MAPI option is selected from the **Public Folders Migration Mode** drop-down list on the *General* tab of the *Office 365 Forest Configuration Settings* screen.

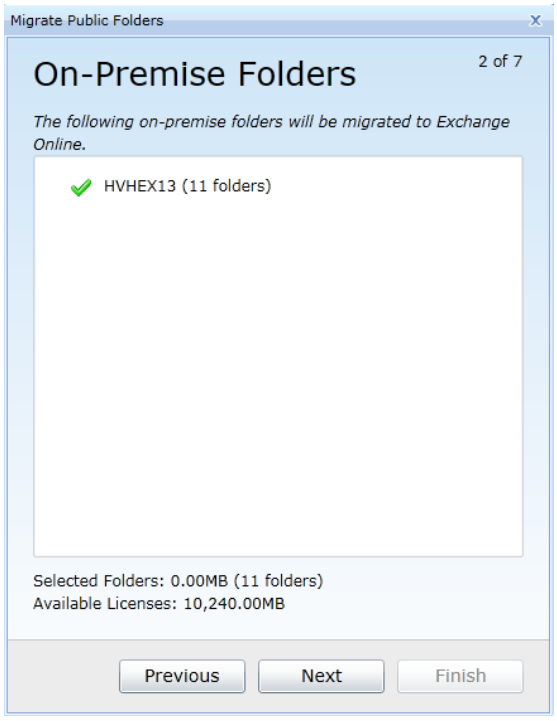
To Migrate Public Folders to Exchange Online Using PowerShell

1. Click **Public Folders** in the main toolbar. The screen displays *Source Folders* on the left side and *Target Folders* on the right.
2. Click on the folders you want to send to the migration queue and drag them to the *Target Folders* pane.

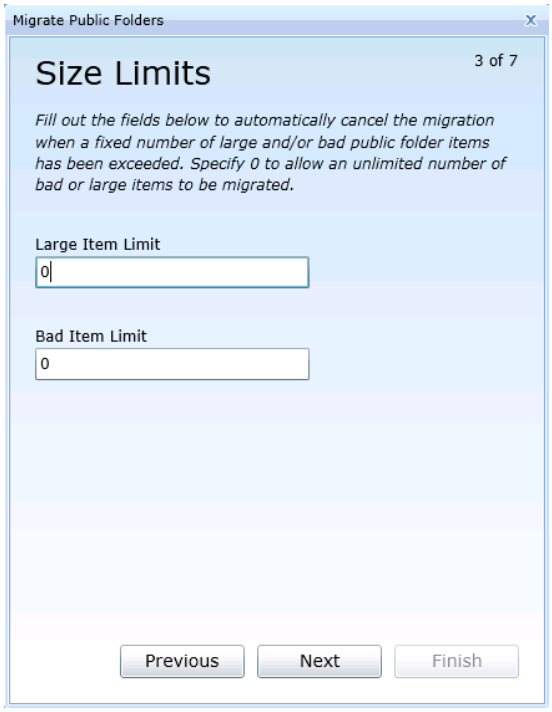
3. The *Migrate Public Folders* wizard appears. Follow the instructions on the first screen to ensure that routing to the Exchange Online domain is configured correctly. When finished, click **Next**.



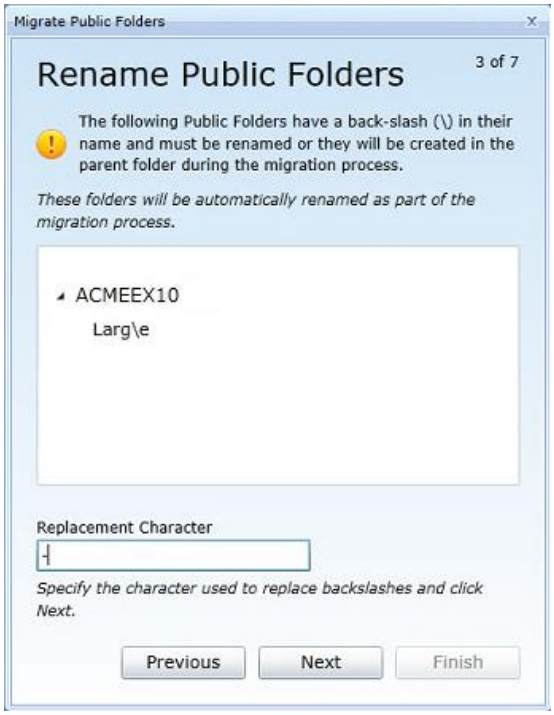
4. The *On-Premise Folders* screen appears. Select the folders to migrate and then click **Next**.



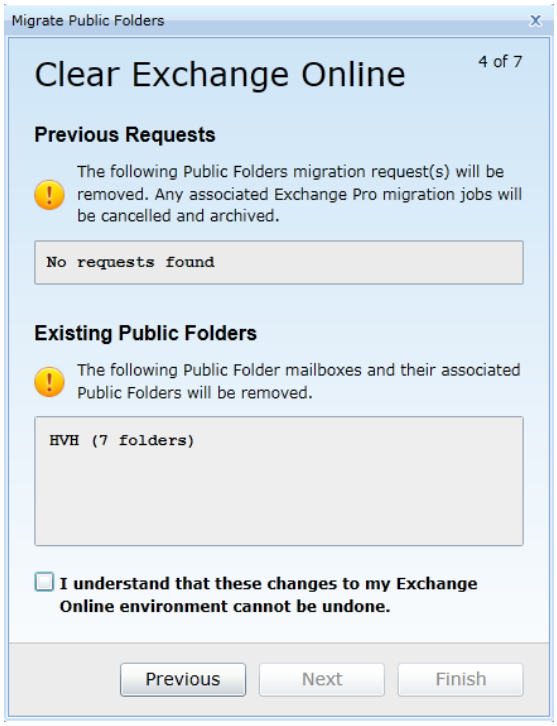
5. The *Size Limits* screen appears. Enter a **Large Item Limit** and **Bad Item Limit**. You may enter 0 to allow an unlimited number of large or bad items. Click **Next**.



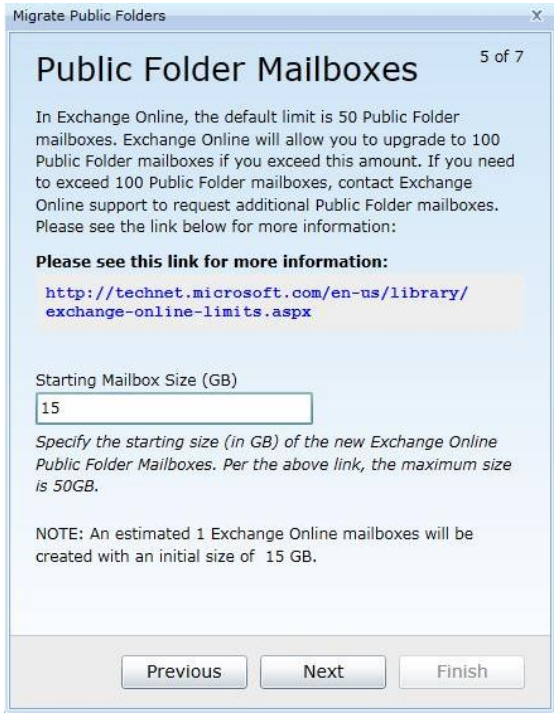
6. *[Conditional Step.]* If a backslash character occurs in the filename of any folder to be migrated, this *Rename Public Folders* screen appears so that the folder(s) can be renamed. Enter a character that Migrator Pro for Exchange should use to replace the backslash character when renaming the folder(s), and click **Next**.



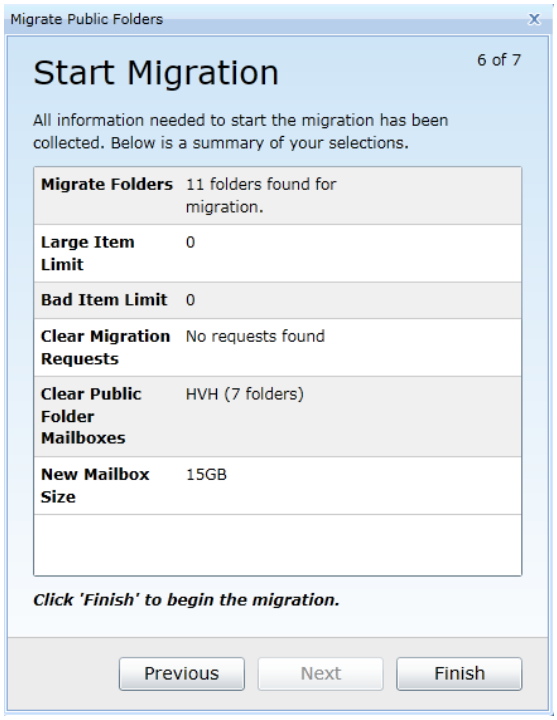
7. The *Clear Exchange Online* screen appears. Review the changes and select the **I understand** checkbox to confirm that you understand the changes to the Exchange Online environment cannot be undone. Click **Next**.



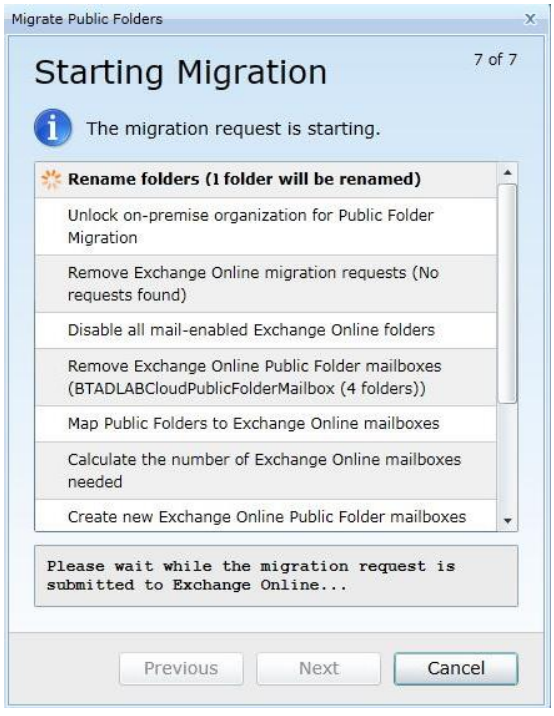
8. The *Public Folder Mailboxes* screen appears. Specify the **Starting Mailbox Size** for the public folder Mailboxes and click **Next**.



9. The *Start Migration* screen appears. Click **Finish** to begin migration.



10. The *Starting Migration* screen appears. The successful processes are marked with a green checkmark when complete. When complete, Click **Next**.



NOTE ! The migration will automatically be suspended at 95%. Once suspended, the migration can do the final cutover by resuming the migration.

When there is a PowerShell failure and less than 10% of the known public folders for a public folder server are returned, Migrator Pro for Exchange will not mark them all as deleted. A message stating the number of returned folders will appear in the log.

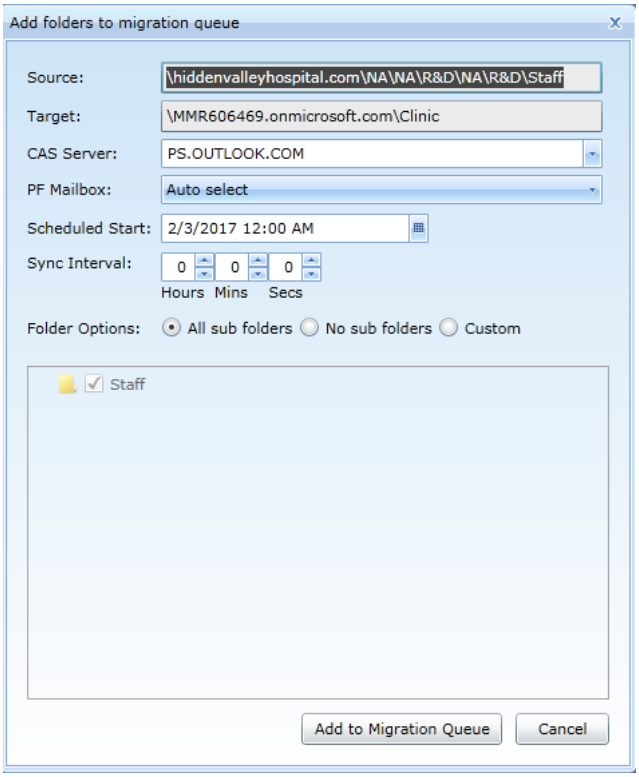
To Migrate Public Folders to Exchange Online Using MAPI

Click **Public Folders** in the main toolbar. The screen displays *Source Folders* on the left side and *Target Folders* on the right.

Click on the folders you want to send to the migration queue and drag them to the *Target Folders* pane. Unlike PowerShell, using MAPI allows for public folders to be migrated one at a time.

NOTE ! When using MAPI, public folders can only be migrated to a public folder Mailbox existing on the target Office 365 forest. The MAPI migration mode does not have the ability to create public folder Mailboxes on the target, so the PowerShell migration mode should be used in these scenarios.

Indicate the settings you want to apply to the job by selecting the options on the screen:



The settings on this screen:

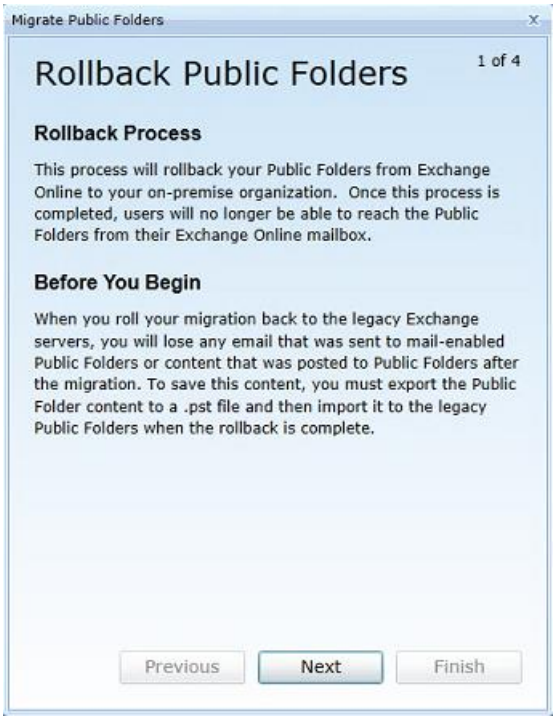
- **Source:** The name of the public folder that is being migrated.
- **Target:** The destination path of the Office 365 public folder mailbox.
- **CAS Server:** Since the destination is an Office 365 tenant, the CAS Server entry should be pointed to the Office 365 remote PowerShell host.
- **PF Mailbox:** The public folder mailbox to migrate to in the target. The drop-down list includes all public folder mailboxes available in the target. The default is *Auto select*, which will be the smallest target PF mailbox.
- **Scheduled Start:** Specify the date and time you want the job to start.
- **Sync Interval:** Select or enter the interval in minutes at which you want Migrator Pro for Exchange to copy new or changed folders to the target mailbox. Valid values are any value in the range from 0 to 24 hours. Syncs will not continue if a migration error is encountered during a sync. Note also that, while this Sync Interval sets up sync jobs, a sync job will not start to copy new items unless Change Detection is running.
- **Folder options:** *All sub folders*, or *No sub folders*, or *Custom*. Note that if *Custom* is selected, only folders that are selected in the UI will be migrated.

Then click **Add to Migration Queue** to add the selected folders to the Public Folder Jobs.

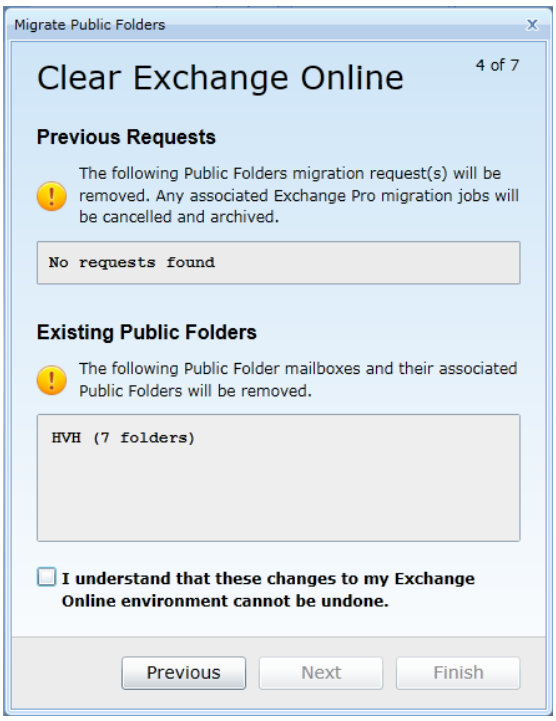
The folder will appear in the *Target Folders* pane.

To Rollback Exchange Online Folders

1. Click **Public Folders** in the main toolbar. The screen displays *Source Folders* on the left side and *Target Folders* on the right.
2. Click on the folders you want to rollback and drag them to the *Source Folders* pane.
3. The *Rollback Public Folders* wizard appears. Follow the instructions on the first screen to ensure that you do not lose any email and content received after migration. When finished, click **Next**.



4. The *Clear Exchange Online* screen appears. Review the changes and select the check box to confirm that you understand the changes to the Exchange Online environment cannot be undone. Click **Next**.



5. The *Start Rollback* screen appears. Click **Finish** to begin the rollback, and the *Rollback Complete!* screen appears when the rollback finishes. Click **Close** to close the window.

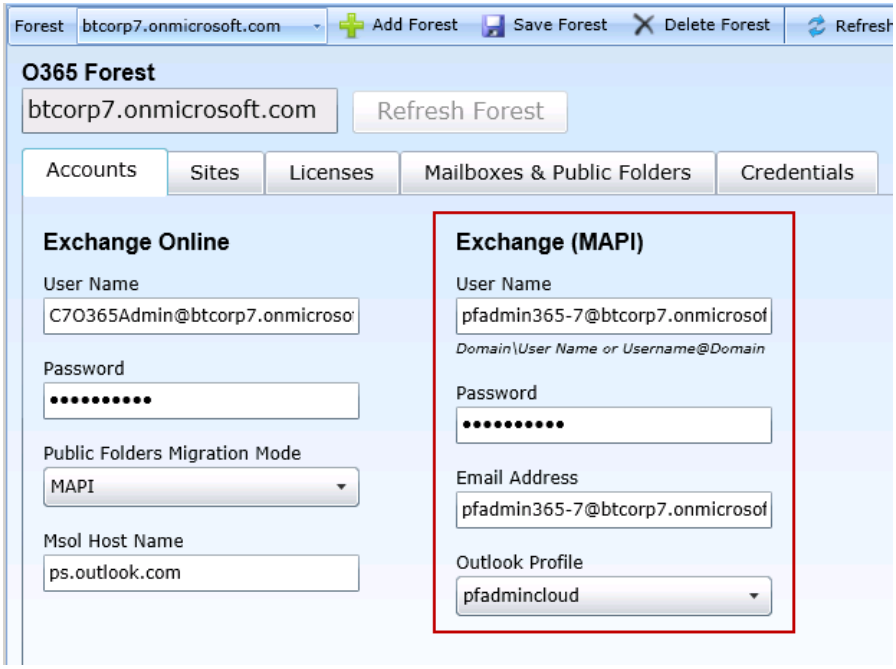
Migrating Public Folders to Office 365 Groups

Migrator Pro for Exchange can migrate public folders to Office 365 Groups using the MAPI protocol, but not by PowerShell. The MAPI option is selected from the **Public Folders Migration Mode** drop-down list on the *General* tab of the *Office 365 Forest Configuration Settings* screen.

NOTE !

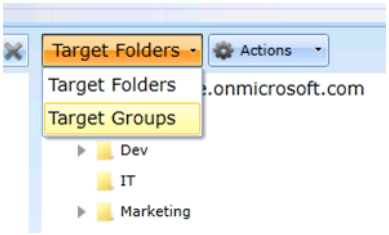
- Migration of public folders to Office 365 Groups requires the Migrator Pro for Exchange Worker be configured with the *Provisioning* role.
- Only Mail, Appointments, Posts and Documents (*IPM.Document* types) can be migrated to an Office 365 Group. An *IPM.Document* that is directly stored in a public folder is migrated to an Office 365 Group as a new conversation (*IPM.Note*).

You must use a cloud mailbox originally created in Office 365 (not a federated account or an account that was migrated) as your MAPI account. Migrator Pro for Exchange will be unable to open the Office 365 Group mailbox if a cloud mailbox is not used. The account must also be a Global Office 365 administrator. This account can be configured in the Exchange (MAPI) section of the *General* tab of Migrator Pro for Exchange's *Office 365 Forest Configuration Settings* screen.



To migrate public folders to Office 365 Groups using MAPI:

1. Click **Public Folders** in the main toolbar. The screen displays *Source Folders* on the left side and *Target Folders* on the right.
2. On the right (target) side, select the *Target Folders* drop-down and select **Target Groups**:



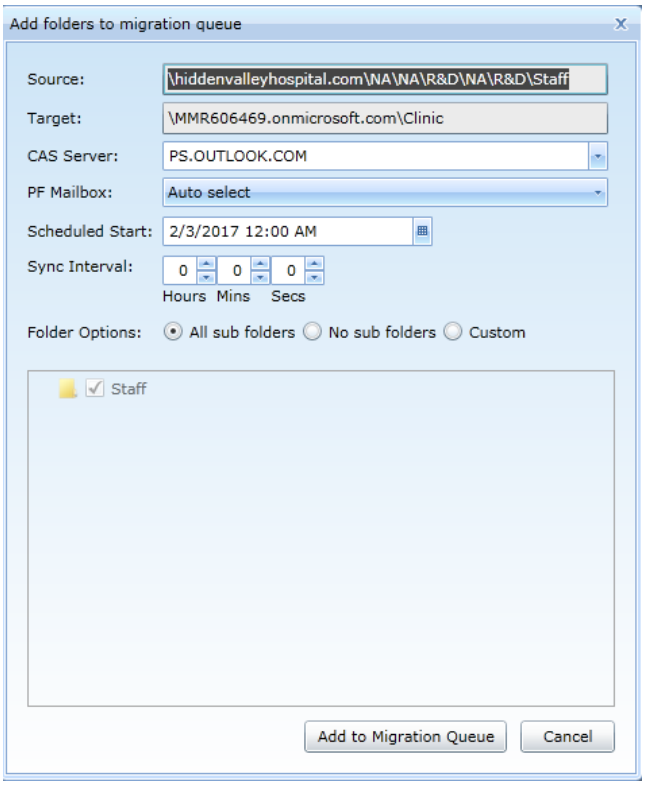
3. On the left (Source) side, click on the public folders you want to send to the migration queue, and (one at a time) drag them to the *Target Folders* pane. This approach lets you migrate source public folders one at a time to different Office 365 Groups.

NOTE !

You can choose to copy a top-level public folder and all subfolders to a single Office 365 Group. This means (for example) that if you have multiple calendars configured as subfolders, all items contained in the different calendars will be consolidated into the single calendar contained within the target Office 365 Group.

With MAPI, public folders can be migrated only to an existing Office 365 Group in the target Office 365 forest. The MAPI migration mode cannot create Office 365 Groups in the target.

4. Indicate the settings you want to apply to the job by specifying your choices on this screen:



- **Source:** The name of the public folder that is being migrated.
- **Target:** The name of the Office 365 Group that represents the desired migration endpoint.

- **CAS Server:** Since the destination is an Office 365 tenant, the CAS Server entry should be pointed to the Office 365 remote PowerShell host.
- **Scheduled Start:** Specify the date and time you want the job to start.
- **Sync Interval:** Select or enter the interval in minutes at which you want the program to copy new or changed folders to the target Groups. The valid range is 0 to 24 hours. Syncs will not continue if a migration error is encountered during a sync. Note also that, while this **Sync Interval** sets up sync jobs, a sync job will not start to copy new items unless **Change Detection** is running.
- **Folder options:** *All sub folders*, or *No sub folders*, or *Custom*. Note that if *Custom* is selected, only folders that are selected in the UI will be migrated.

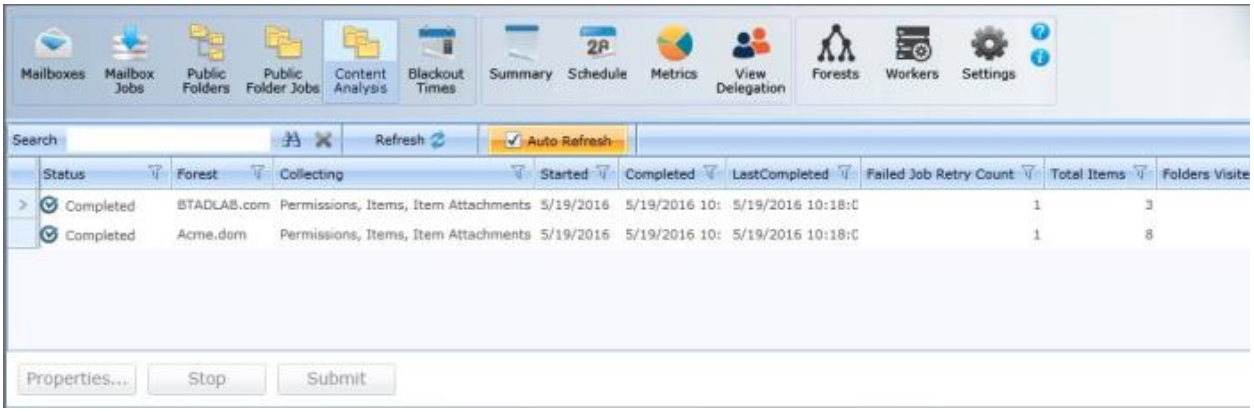
5. Click the **Add to Migration Queue** button to add the selected folders to the **Public Folder Jobs**.

14. Content Analysis View

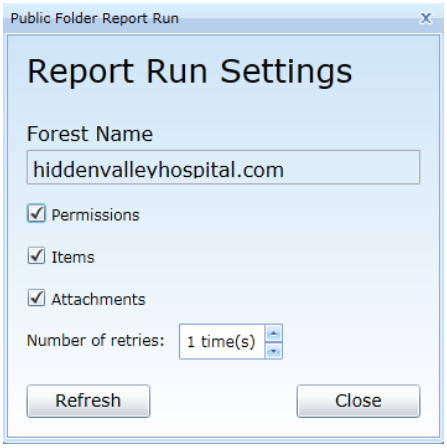
Content Analysis lets you collect information about the public folder environment and utilize SQL to analyze and remediate before migration. Review Appendix G for more information about content analysis.

At least one Worker must be assigned the *Reporting* role for this purpose.

To collect information for a forest, click **Content Analysis** in the main toolbar. Then select a *Forest* and click **Submit** (button at the bottom of the Data Table):



To change the information collected, select a *Forest* and click the **Properties** button. Then you can edit the properties on the *Report Run Settings* screen:



The options on this screen:

- **Forest Name:** The name of the forest for which you want to collect data.
- **Permissions:** Tells Migrator Pro for Exchange to collect public folder permissions.
- **Items:** Tells Migrator Pro for Exchange to collect information about items stored in public folders.
- **Attachments:** Tells Migrator Pro for Exchange to collect information about public folder item attachments. In order to collect attachment information, you must collect information about public folder items.
- **Number of retries:** How many times Migrator Pro for Exchange should attempt to collect information about a public folder if it initially fails. The default is 1 time.

Once **Submit** is clicked, Migrator Pro for Exchange assigns reporting jobs to any worker with the *Reporting* role. You can assign a worker to the *Reporting* role from the *Workers* tab.

15. The User Portal

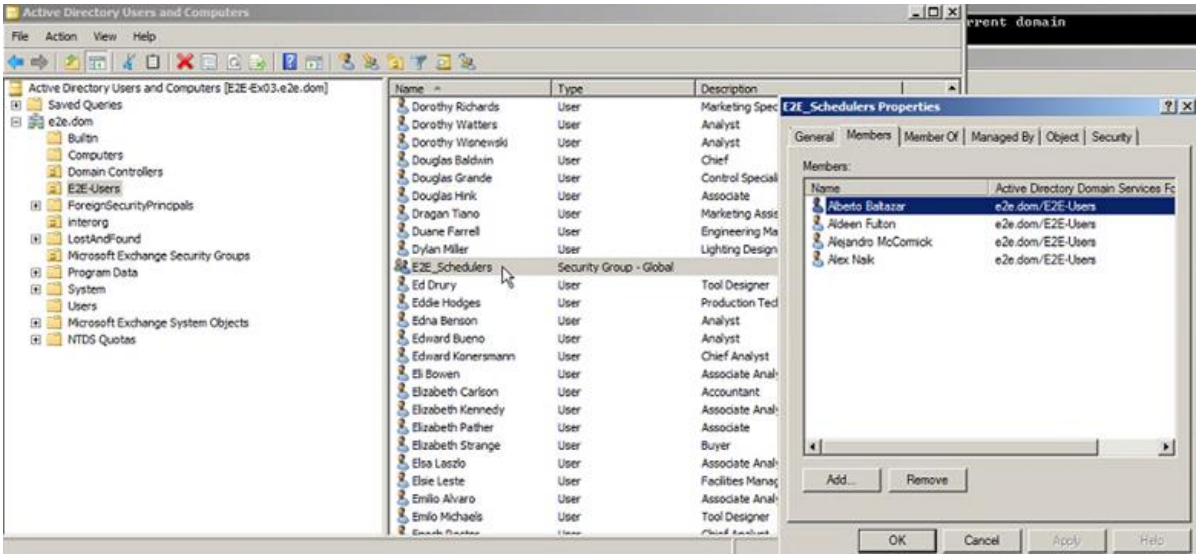
The User Portal can be accessed in two different ways. The first is by the Administrator selecting the **Mailbox Jobs** button, and then clicking on the job status for that user's mailbox. The second way is through the notification emails sent to the user. This is how users will always access the User Portal.

The purpose of this portal is to allow end users to participate in a migration project. Prior to migration, the user can set an external email address to receive notifications, an SMS mobile number, blackout dates, and notification options.

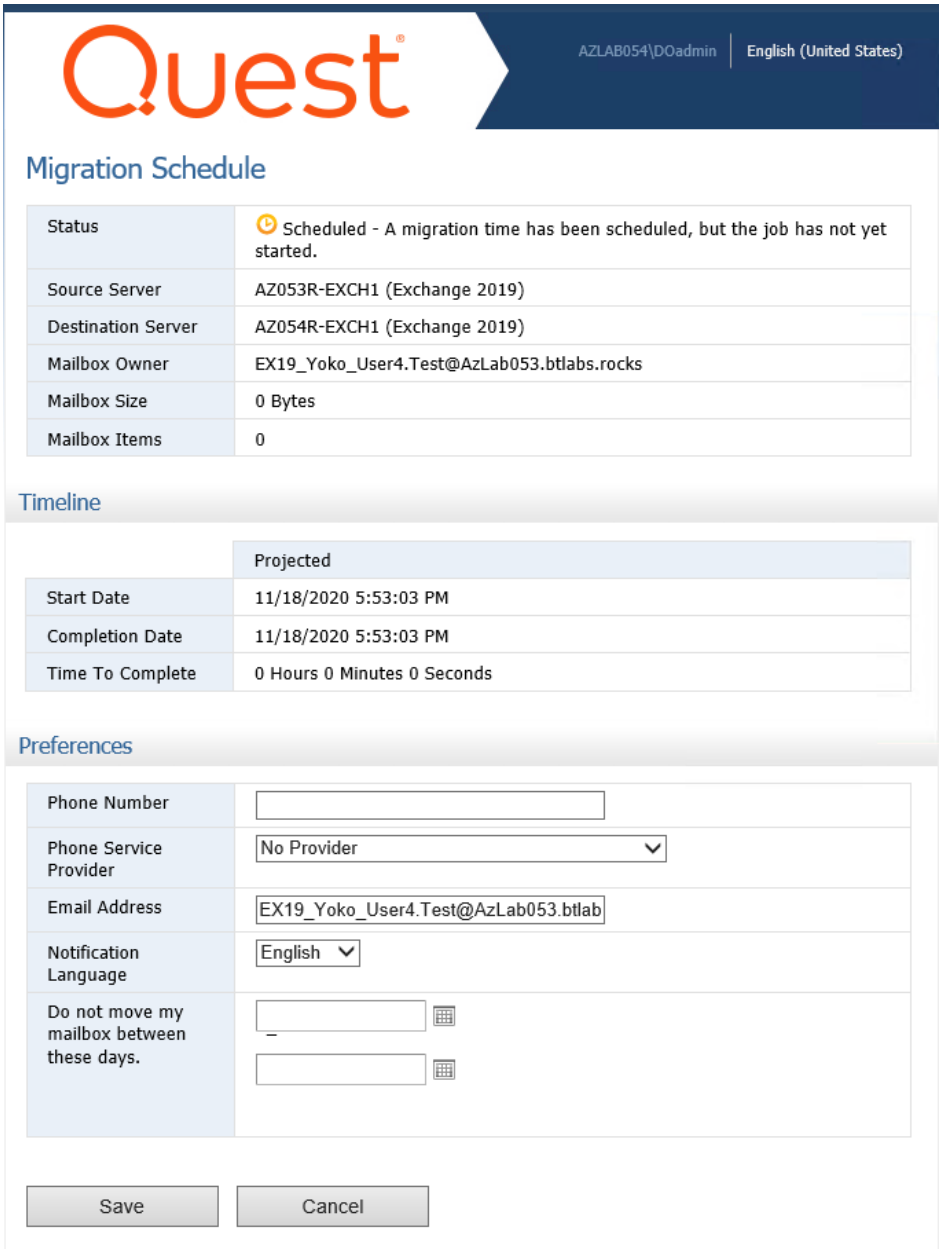
During migration, the User Portal indicates the migration status and the anticipated completion time to the user. After migration, it also indicates the results of the migration. From the Admin Portal, you can access the User Portal for the user by clicking on the link on *Scheduled* in the *Status* column.

Opt Out Option

By default, with Migrator Pro for Exchange you have the ability to turn on the **Opt Out** option or turn this off for all users. However, in some cases you may want to limit the scope of this functionality. Administrators can establish a security group to determine which users can see the **Opt Out** option and select alternative migration times. The User Portal will look for an AD group named *E2E_Schedulers* to determine whether the group exists and then check if the logged-in user is a member. If they are not a member, they will not be able to reschedule a migration. Note that the location of the *E2E_Schedulers* group is not critical and can be placed anywhere in AD that the configured administrator account can access.



The following is a display of a User Portal:



The fields on this screen:

- *Migration Schedule:*
  - **Status:** Status of the user mailbox.
  - **Source Server:** Name of the Exchange server from where the user mailbox is being migrated.
  - **Destination Server:** Name of the Exchange server to where the user mailbox is being migrated.
  - **Mailbox Owner:** Displays the email of the mailbox owner.
  - **Mailbox Size:** Displays the total size of the user mailbox.
  - **Mailbox Items:** Number of items in the user mailbox.

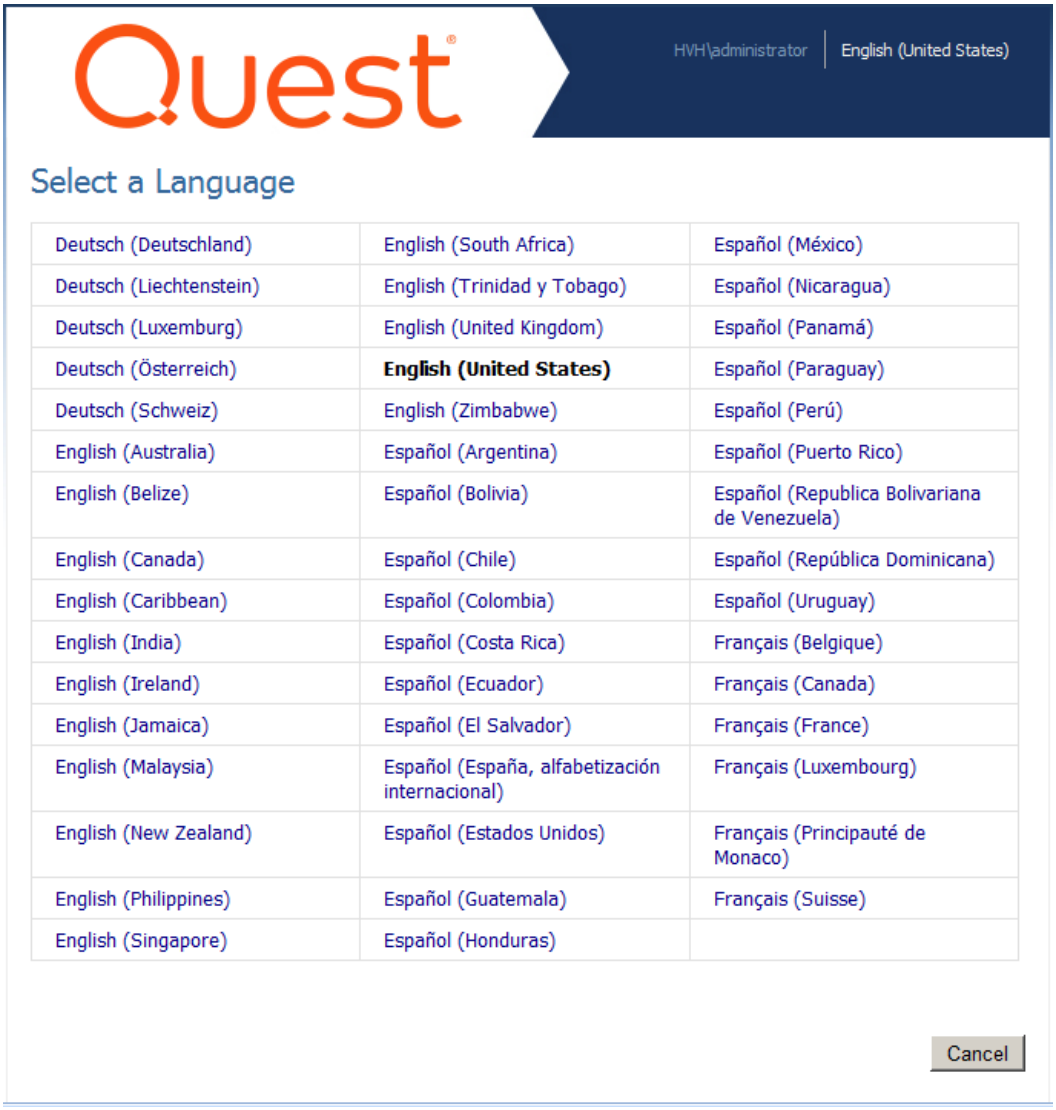
- *Timeline:*
  - **Start Date:** Date on which the user migration is expected to begin.
  - **Completion Date:** Projected date on which the user migration will complete.
  - **Time to Complete:** Estimated time (in hours and minutes) to complete the user migration.
- *Preferences:*
  - **Phone Number:** Allows user to specify the phone number to send SMS notifications.
  - **Phone Service Provider:** Allows the user to specify the phone service provider used by Migrator Pro for Exchange to send notifications to the user's phone. The AT&T, Sprint and Verizon providers are recommended for US customers. Many other providers are available, but they have not been tested.
  - **Email Address:** The alternate email that will be used while the mailbox is migrated.
  - **Notification Language:** Select the language in which you want to receive notifications.
  - **Do not move my mailboxes between these days:** Allows user to specify blackout dates. If the administrator has selected *Do not let users postpone their migration* (in *Migration Options*), then users will be unable to customize their migration by setting blackout periods.

After all the settings are specified, click the **Save** button located in the lower left of the form. Or you can click **Cancel** to cancel the settings.

Windows Authentication is enabled for this virtual application. When performing cross forest migrations, if the users in the source forest attempt to connect to the Migrator Pro for Exchange server in the target forest and a trust has not been established between the two forests, the users will be prompted for their target credentials.

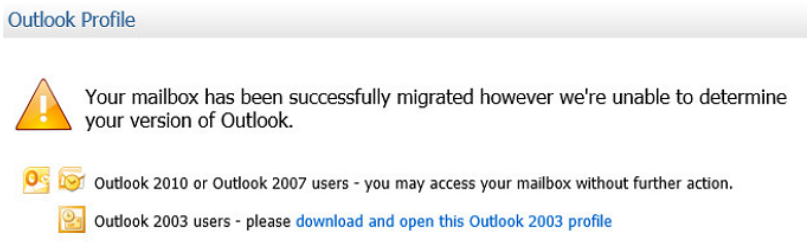
Multi-lingual Support

Click on **English (United States)** at the top right of the screen, and then select **More choices** to view a list of available languages. If a user changes their default language, all future End User notifications will be sent in this language.



Customizing the User Portal

The User Portal web page can be customized by modifying the *C:\Program Files\Exchange Pro\User\Default.aspx* configuration file that resides on the Migrator Pro for Exchange server. For example, an administrator may want to hide the *Outlook Profile* information that appears on the *User Portal* page after a migration has completed:



If you want to hide that information, you can comment out the *OutlookProfile ID* line in the *Default.aspx* file. The line appears like this (marked by the red arrow) by default:

To comment out this line, add the "%" character at the beginning and end of the line:

```
<%--<uc3:OutlookProfile ID="OutlookProfile1" runat="server" />--%>
```

16. Troubleshooting

Browser-Based Help Fails to Load

If the online browser-based Help doesn't load correctly after an Migrator Pro for Exchange upgrade, clear the temporary files in the browser. We recommend you set your browser to clear temporary files and history upon exit.

Public Folder Migration Error

Problem:

When migrating public folders, the following error message is received:

Error: MapiExceptionNetworkError: Unable to make connection to the server. (hr=0x80004005, ec=2423)

There are a number of steps to correct this issue below. Necessary steps are marked as required. The other steps may or may not be necessary to resolve this issue.

Resolution:

1. Configure Outlook Anywhere (required).
2. Open RPC ports 6001, 6002, 6004 (required).
3. Start RPC Locator service.
4. Update SSL certificate to include autodiscover.domain.com in the subject.
5. Open MRS ports 808, 135.

Problem with Production Licenses After Upgrading from Trial Licenses

Problem:

There's an issue with Migrator Pro for Exchange when you try to implement a new production license key after running Migrator Pro for Exchange with free trial licenses.

The system doesn't let you mix license key domains. If you implement the solution with the trial keys, you will not be able to easily upgrade to a production license.

You would be required to uninstall and re-install the product which removes all their metrics from running the pilot migrations.

Workaround:

1. Open the Migrator Pro for Exchange SQL database.
2. Go to the *CMTEUP_Checksum* table.
3. Delete the current row listed in this table.
4. Now you can apply a new license from within the Migrator Pro for Exchange UI.

Mail Delivery Getting Stuck in a Loop

Problem:

When migrating a Resource Forest mailbox to an Exchange server in a different domain than where the Global Catalog and PowerShell host reside, Exchange may periodically fail to clear the *targetAddress.* This results in mail delivery getting stuck in a loop.

Resolution:

Clear the *targetAddress* for any target mailbox when this occurs.

Conflict Resolution Issues with Bi-Directional Public Folder Synchronization

Problem:

If a public folder is initially migrated using a one direction synchronization, and a customer then decides that they want to setup a scheduled bi-directional synchronization job, conflict resolution does not work properly.

Resolution:

The original records of the one direction synchronization should be deleted. This will ensure that conflict resolution works properly in the bi-directional synchronization.

This is done by clearing the *BT_TracDoc* table in the Migrator Pro for Exchange SQL database and can be done with the following query:

delete FROM [ ].[dbo].[BT_TracDoc]

Appendix A: About Inter-Org Migrations

Migrator Pro for Exchange has the ability to migrate mailboxes between two or more Exchange organizations. From the Migrator Pro for Exchange Settings page, you can easily add additional organizations whose mailboxes you want migrated to your target. However, for this function to work there must be a *mail-enabled* (not mail*box*-enabled) account in the target forest to receive the migrated mail content. In addition, this target account must have the *msExchMailboxGuid* attribute copied from the Source to the Target account. Migrator Pro for Exchange and Microsoft PowerShell use this attribute to authoritatively identify the relationship between the source and target objects.

Migrator Pro for Exchange has no particular preference on how this relationship is established. To perform this association, you can use the Binary Tree Directory Sync Pro product, the *Prepare-MoveRequest.ps1* script located on your Exchange 2010/2013 server, Forefront Identity Manager, or any other product capable of creating a Mail-Enabled user object and stamping the correct *msExchMailboxGuid* value. This flexibility makes for an easier implementation as you develop your migration project plan.

Getting Mailbox Statistics

When performing Inter-org (cross forest) migrations, mailboxes housed on source forest, Exchange 2010 and Exchange 2013 servers do not display mailbox sizes and item counts within the Migrator Pro for Exchange Administrative and User portals.

Migrator Pro for Exchange uses native Exchange protocols to query mailbox sizes and item counts. Exchange 2013 does not support Windows Management Instrumentation (WMI) as a method for gathering this information. Instead, either Exchange Web Services (EWS) or Remote PowerShell must be utilized to gather this information.

Perform *either* of the following two procedures to gather mailbox size and item count information from these platforms.

Option 1:

Open the Exchange Management Shell on either Exchange 2010 or Exchange 2013 and execute the following command. This must be executed only once for each messaging server version, to allow Migrator Pro for Exchange to query mailbox size information from these systems.

For Exchange 2010/2013, type the following command:

```
New-ManagementRoleAssignment -Name:ImpersonationAssignmentName -
Role:ApplicationImpersonation -User:Domain\Administrator
```

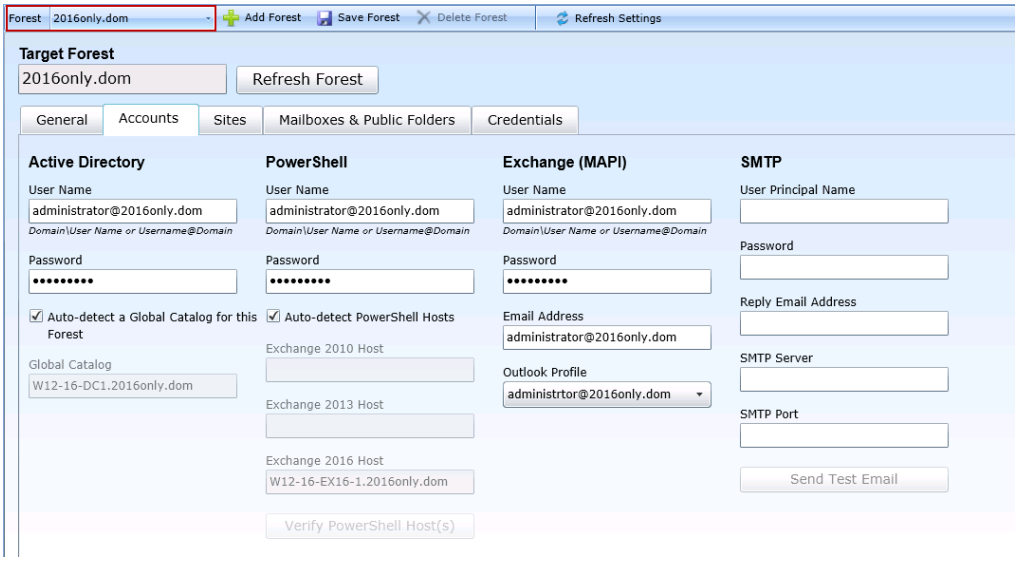
Option 2:

Identify an Exchange 2010/2013 Server with a valid (non self-signed) trusted SSL certificate that has the IIS service assigned to it. Open the Exchange Management Shell on this Exchange 2010/2013 server and type these two commands:

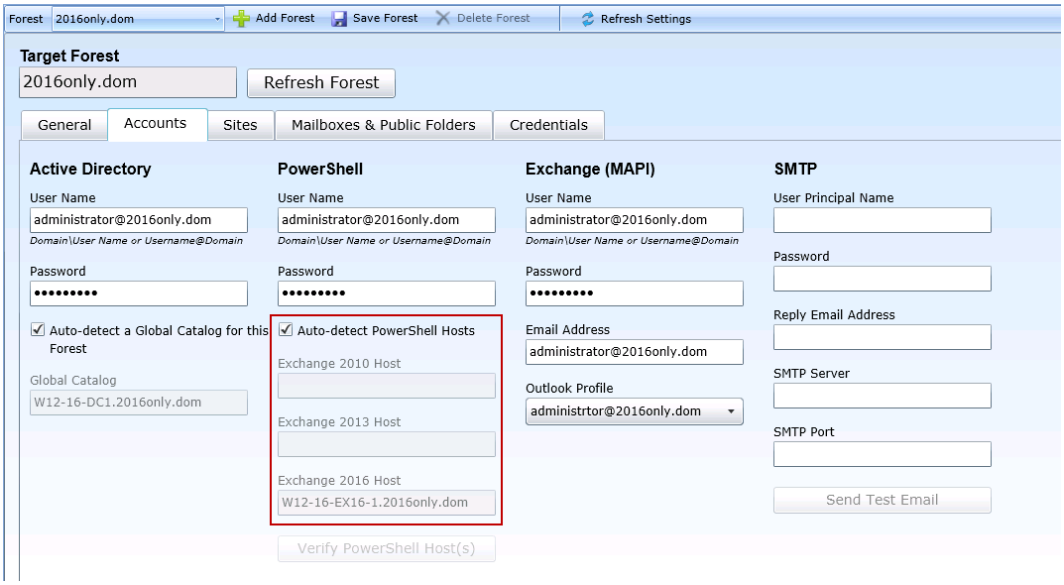
```
Enable-PSRemoting
Set-PowerShellVirtualDirectory "$env:COMPUTERNAME\PowerShell (Default Web Site)" -
BasicAuthentication $true
```

Once completed, open the Migrator Pro for Exchange Admin Portal and click **Forests**:

... and select the desired source forest in the **Forest** drop-down list (shown here in the red box):



Then, on the *Accounts* tab, clear the checkbox for **Auto-detect the PowerShell Hosts for this Forest**, and type the appropriate value into the appropriate **PowerShell Host** field (Exchange 2010, 2013 or 2016):



And then click **Save Forest** (in the toolbar above the tabs).

Appendix B: Migrating Mailboxes to Office 365

Mailbox migrations to Office 365 are processed the way that Intra-Org and Inter-Org migrations are executed, by using the *New-MoveRequest* PowerShell cmdlet. This enables us to use the same Project Management and Workflow features of the Migrator Pro for Exchange application available to Intra-Org and Inter-Org migration projects.

For these commands to function, your source environment must meet certain requirements. While this document does not seek to provide guidance on how to successfully enable a hybrid coexistence strategy, Migrator Pro for Exchange requires the following two conditions to be true.

- There must be an internet facing Exchange 2010 Client Access Server (CAS) running the Mailbox Replication Service (MRS) Proxy service. The CAS is used to upload data from your Exchange 2010 mailboxes.
- The environment must be synchronizing its users with Office 365 by way of the Microsoft Online Services Directory Synchronization tool. The Microsoft Online Services Directory Synchronization tool is used to create accounts with the proper *msExchMailboxGuid* values.

For cross-forest migrations with Migrator Pro for Exchange, the home forest where you configure Migrator Pro for Exchange usually is also the Target forest. However, in the case of Office 365 migrations, it becomes your source.

The AD groups that are in the Office 365 target environment will be rationalized in Migrator Pro for Exchange when the Office 365 forest is added, but the members of those groups will not be rationalized in Migrator Pro for Exchange until the second rationalization pass has occurred. By default, rationalization updates occur every 60 minutes. The **Update Forest** setting in the *Activities* settings can be set for shorter time periods (fewer minutes) between updates. However, it is not recommended to set for less than 10 minutes depending on the size of your Exchange environment.

On-premises Exchange mailboxes and archives migrate to Office 365 with no issues. There is no need to enable the archive feature in Office 365. If the on-premises mailbox has a server-based archive associated with it, the *New-MoveRequest* will enable the archive feature in Office 365 and migrate the on-premises archive to the Office 365 archive.

Migrations of on-premises Exchange mailboxes to Office 365 will fail and log an error if the source site's Office 365 proxy servers are not set.

Migrator Pro for Exchange Office 365 Migration License Options

You can either manually license users in the Microsoft Online Services portal before selecting them for migration in Migrator Pro for Exchange, or allow Migrator Pro for Exchange to auto-license them automatically.

To allow Migrator Pro for Exchange to auto-license users:

1. Within the Admin Portal, go to the **Settings** view.
2. Click the *Licenses* tab to select Office 365 license packs and related service plans to use for auto-licensing Exchange Online mailbox migrations.

Appendix C: Diagnostic and Operational Report Scripts

Migrator Pro for Exchange uses PowerShell as a platform to extend the product and provide external functionality that can be integrated with other applications and services. Migrator Pro for Exchange's PowerShell scripts let you:

- Diagnose connection and configuration problems
- Extract operational reports in .csv format
- Customize and extend the migration pipeline functionality
- Trigger auto-migrations outside of the Migrator Pro for Exchange Admin Portal
- Export and import group information between disconnected forests

The Migrator Pro for Exchange Diagnostic scripts are installed in *C:\Program Files\Binary Tree\Scripts\E2E\Diagnostic*, and include:

- Get-BTForest.ps1
- Test-ExchangePowerShellHost.ps1

The Migrator Pro for Exchange Operational Report scripts are installed in *C:\Program Files\Binary Tree\Scripts\E2E\Report*), and include:

- Get-BTMigrationReport.ps1
- Get-BTBlackoutReport.ps1
- Get-BTThroughputReport.ps1

Diagnostic Report Scripts

- **Get-BTForest.ps1** : Used to quickly scan a forest, validate credentials and access via Active Directory.

  PowerShell Command:
  .\get-btforest.ps1 –<parameter>

- **Test-ExchangePowerShellHost.ps1** : Used to validate the PowerShell host connection in the forest using specified credentials. This is a thorough diagnostic tool to aid in configuring the environment for initial Exchange / PowerShell / Migrator Pro for Exchange usage.

  PowerShell Command:
  .\test-exchangepowershellhost.ps1 –<parameter>

Operational Report Scripts

- **Get-BTMigrationReport.ps1** : Provides reports on the Mailbox Jobs, and the migrations which have been completed. These reports can be displayed on the screen or output to a CSV file.

  PowerShell Command:
  .\get-btmigrationreport.ps1 –<parameter>

- **Get-BTBlackoutReport.ps1** : Provides reports on the blackouts which have been defined in Migrator Pro for Exchange. These reports can be displayed on the screen or output to a CSV file.

PowerShell Command:
.\get-btblackoutreport.ps1 –<parameter>

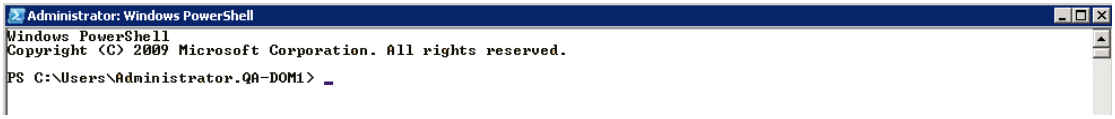
- **Get-BTThroughputReport.ps1** : Provides reports on the Throughput results for completed migrations. These reports can be displayed on the screen or output to a CSV file.

  PowerShell Command:
  .\get-btthroughputreport.ps1 –<parameter>

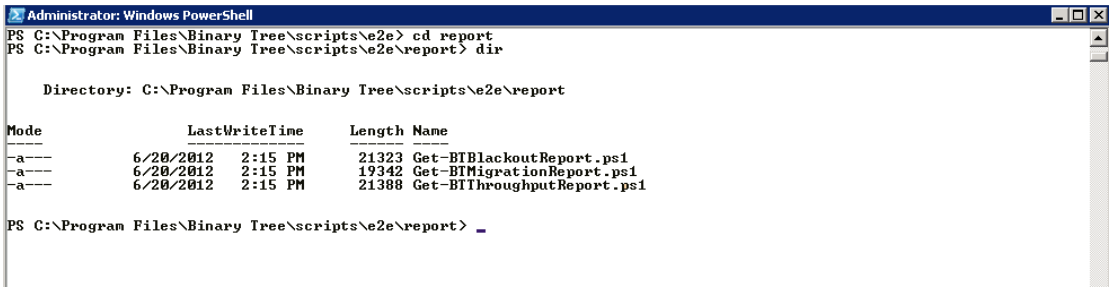
Executing Diagnostic and Operational Report Scripts

To execute a script:

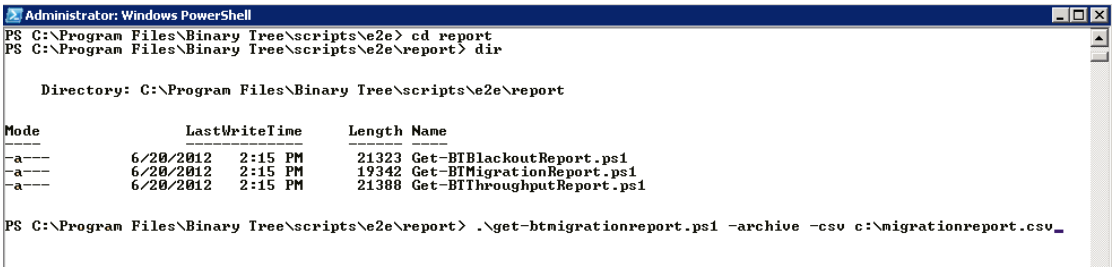
1. Open the Windows PowerShell command prompt.



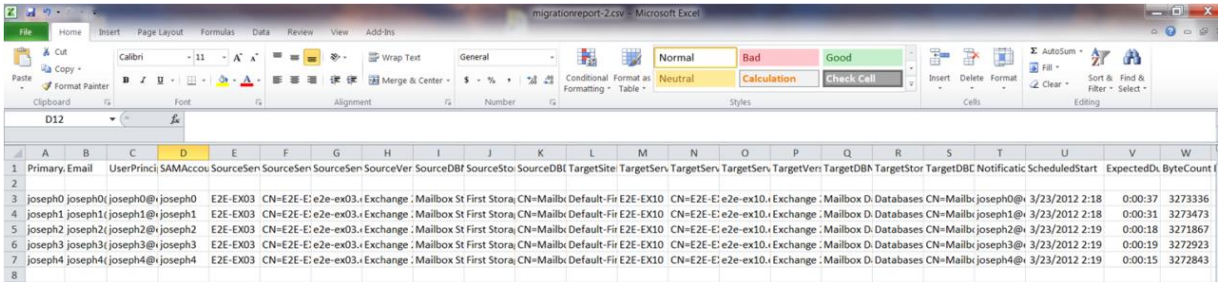
2. Navigate to the location of the scripts.



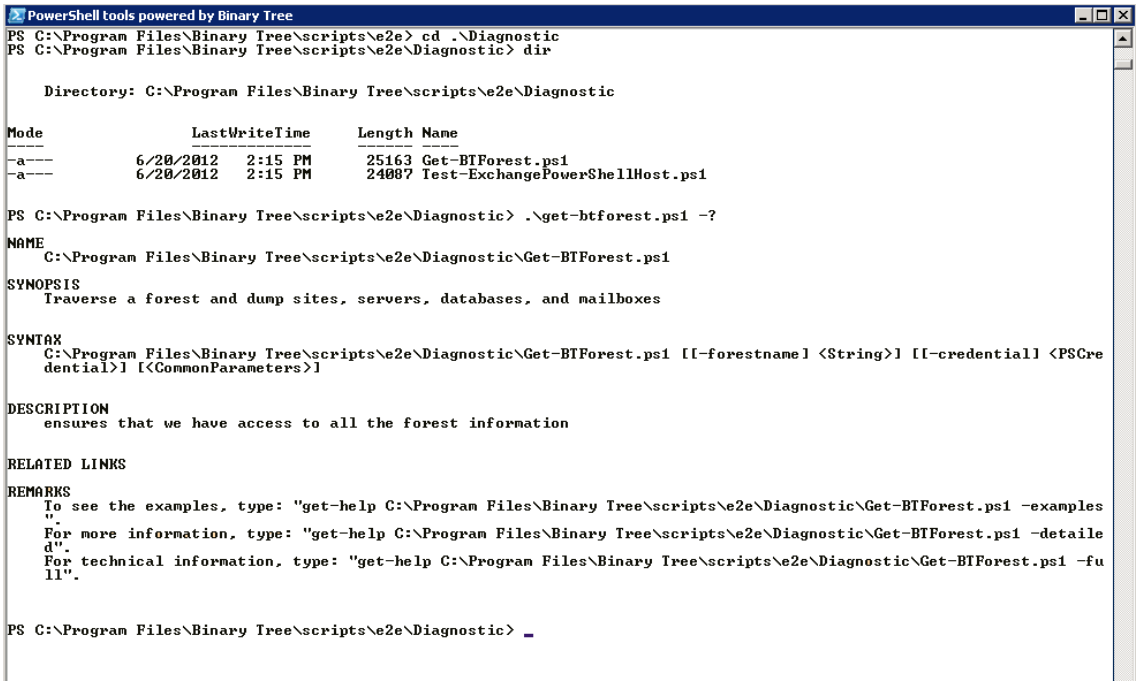
3. Enter the name of the script and provide any additional parameters. For example: *.\Get-BTMigrationReport.ps1 –archive –csv c:\migrationreport.csv*



The ***–csv*** parameter lets you output a report to a new .csv file on the local drive:



You can use the ***-?*** parameter to get additional information on the script and available parameters:



Appendix D: Migration Processing Scripts

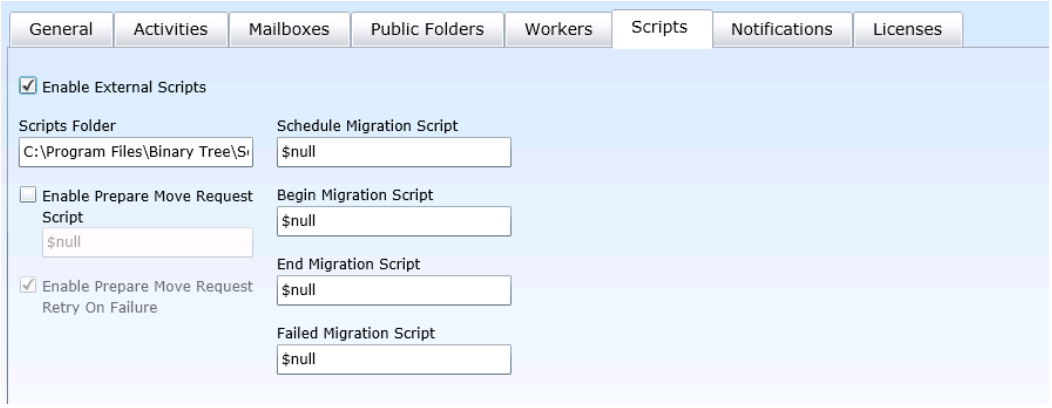
The Migration Processing Scripts include these MCP scripts:

- Confirm-ScheduleMigration.ps1
- Confirm-BeginMigration.ps1
- Confirm-EndMigration.ps1

Enabling Migration Customization Scripts

Perform the following steps to enable the migration scripts to be called from Migrator Pro for Exchange.

1. Click **Settings** in the main toolbar.
2. Click the *Scripts* tab. The script settings are displayed.



3. Check **Enable External Scripts**.
4. Set the **Scripts Folder** location. For example, *c:\contoso\scripts\ps*
5. Enter the script file name for the **Migration Script** you want to be called. For example: In the **End Migration Script** field, enter *Confirm-EndMigration.ps1*

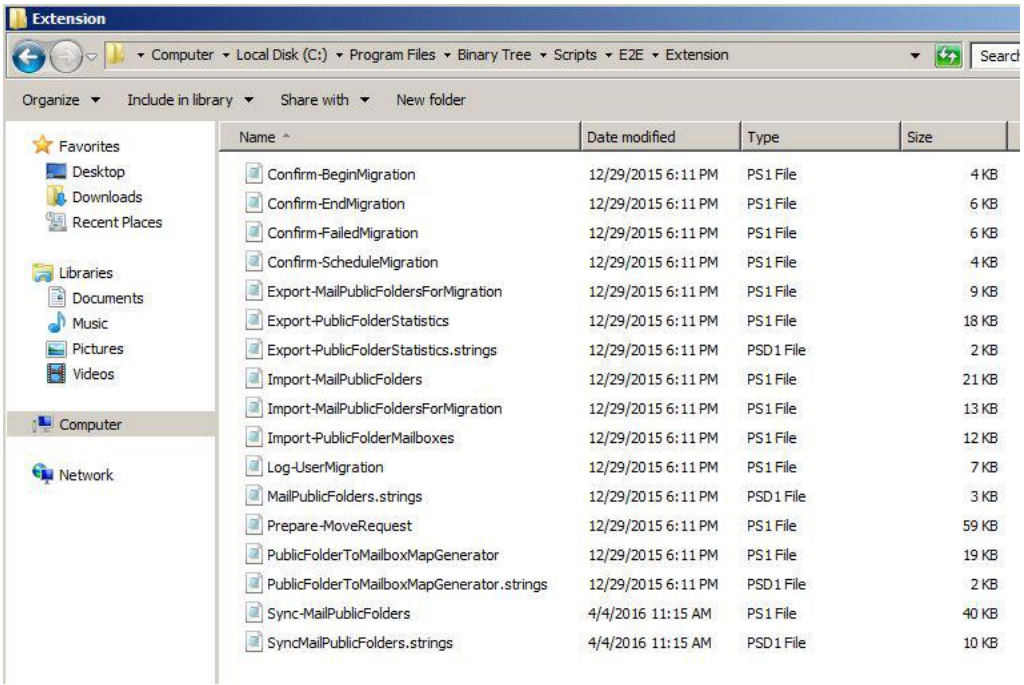
NOTE !

Failures designed to halt the migration can be expressed as thrown exceptions or as calls to *Write-Error* in the confirmation scripts. Both the **Schedule** and **Begin** confirmations can halt the migration by failing in this manner. The **End** confirmation cannot cause the migration to fail if the mailbox is already complete, but it can cause a warning to be reported.

Because the confirmation script runs in a non UI environment, calls in PowerShell such as *Write-Host* will cause faults and should not be used. *Write-Error*, *Write-Warning*, and *Write-Verbose* are acceptable to use, since they write to specific pipelines which are redirected in PowerShell.

Migration Customization Scripts

If enabled, the Migration Customization scripts are called by the MCP during mailbox migrations. These scripts are installed to *C:\Program Files\Binary Tree\Scripts\E2E\Extension*; however, they are not usually run manually from the PowerShell console. The files in the Extension folder are not removed during an uninstall.



Confirm-ScheduleMigration.ps1

This script is called when a mailbox has been scheduled for migration, and can be used to perform any custom actions prior to submitting the mailbox to Exchange.

```
<add key="Confirm-ScheduleMigration" value="$null"/>
```

The MCP will not execute any custom scripts for the Schedule Migration step of a mailbox. This is the default entry in the MCP configuration file.

```
<add key="Confirm-ScheduleMigration" value="Confirm-ScheduleMigration.ps1"/>
```

The MCP will execute the *Confirm-ScheduleMigration.ps1* script located in the defined script folder for the *Schedule Migration* step of a mailbox.

```
<add key="Confirm-ScheduleMigration" value=""/>
```

The MCP will execute the default script (named *Confirm-ScheduleMigration.ps1* in this example) located in the defined script folder during the *Schedule Migration* step of a mailbox.

```
<add key="Confirm-ScheduleMigration" value="MyCmdlet"/>
```

The MCP will execute the specified cmdlet during the *Schedule Migration* step of a mailbox.

Confirm-BeginMigration.ps1

This script is called before a mailbox is migrated, and can be used to perform any prep-work necessary prior to the submission of the mailbox to Exchange.

```
<add key="Confirm-BeginMigration" value="Confirm-BeginMigration.ps1"/>
```

The same values listed above for the *Confirm-ScheduleMigration* script can be used for the *Confirm-BeginMigration* script.

Confirm-EndMigration.ps1

This script is called after a mailbox is migrated, and can be used to perform any post-processing work necessary after the mailbox has been migrated by Exchange. Note however that this script is only called if the migration job is *Completed* or *CompletedWithWarning*.

```
<add key="Confirm-EndMigration" value="Confirm-EndMigration.ps1"/>
```

The same values listed above for the *Confirm-ScheduleMigration* script can be used for the *Confirm-EndMigration* script.

Script Parameters

All scripts include the following parameters:

- **$SourceCredential**: The source forest PS credentials defined in Migrator Pro for Exchange settings
- **$SourceForest**: Source forest name
- **$SourceServer**: Source server FQDN
- **$SourceDatabase**: Source database DN
- **$SourceMailbox**: Source mailbox DN
- **$TargetCredential**: The target forest PS credentials defined in Migrator Pro for Exchange settings
- **$TargetForest**: Target forest name
- **$TargetServer**: Target server FQDN
- **$TargetDatabase**: Target database DN
- **$TargetMailbox**: Target mailbox DN (not mandatory for the Confirm-BeginMigration.ps1 script)
- **$Status**: Current job status string
- **$ControllingForest**: optional, not used

Appendix E: Migrator Pro for Exchange Mailbox Job Importer

The Binary Tree Migrator Pro for Exchange Mailbox Job Importer utility is installed as part of Migrator Pro for Exchange. The Binary Tree Migrator Pro for Exchange Job Importer allows you import a CSV schedule file of mailbox migration jobs from a command line. A CSV file can also be used to update existing mailbox migration job values. A CSV cancel file can be used to cancel mailbox migration jobs.

Migration jobs that are in *AutoSuspended* or *BlackoutSuspended* state (only if *Suspend When Ready to Complete* flag was set) can be modified. For these jobs, only the *Do Not Complete Before Date*, *Do Not Start Before Date*, *Migration Group*, and *Priority* fields will be updated.

The **Auto license 0365 users** and **Default Usage Location** settings in the Tenant Forest *General* Settings are used by the Migrator Pro for Exchange Job Importer when scheduling mailbox migration to Office 365.

CSV Schedule File Format

The CSV schedule file of mailbox migration jobs must meet the following requirements:

- The file should not contain headers.
- No values can be blank except for the *Do Not Start Before Date*, *Do Not Complete Before Date*, *Communication Language*, *Migration Group* and *Blackout Profile*.
- All columns must be included.

The CSV schedule file must include these columns:

Col	Field	Example	Req'd?	Description
1	User Principal Name (UPN)	eprouser@contoso.com	Yes	User Principal Name of desired mailbox.
	Matched Against: CMTEUP_PersonADData.userPrincipalName			
2	Target Forest Name	contoso.com	Yes	Name of target forest.
	Matched Against: CMTEUP_Forests.ForestName			
3	Target delivery domain	root1.contoso.com	Yes	Name of target domain for mailbox.
	Saved To: CMTEUP_Job.param_TargetDeliveryDomain			
4	Target Mailbox Database Name	primarymailbox1	No	Name of target mailbox database. Leave blank if target is an O365 forest.
	Matched Against: CMTEUP_ServerDatabase.ServerDatabaseName			
5	Do not start before date	10/15/2016 09:00AM	No	The time to start the migration, if not immediately. If specified, must be a valid date/time string.

Col	Field	Example	Req'd?	Description
	Saved To: CMTEUP_Job.DoNotStartBefore			
6	Suspend when ready to complete	"true" or "false"	Yes	Whether migration should be suspended before cutover.
	Saved To: CMTEUP_Job.param_SuspendWhenReadyToComplete			
7	Bad Item Limit	10	No	Number of bad mailbox items to allow before migration is failed. Must be a valid number >= 0.
	Saved To: CMTEUP_Job.param_BadItemLimit			
8	Large Item Limit	75	No	Number of large mailbox items to allow before migration is failed. Must be a valid number >= 0.
	Saved To: CMTEUP_Job.param_LargeItemLimit			
9	Ignore Rule Limit Errors	"true" or "false"	Yes	Whether mailbox rules should be moved to target.
	Saved To: CMTEUP_Job.param_IgnoreRuleLimitErrors			
10	Do not complete before date	10/15/2016 09:00AM	No	When to complete the migration. If specified, must be a valid date/time string AND Suspend when ready to complete must be "true."
	Saved To: CMTEUP_Job.param_SuspendWhenReadyToComplete			
11	Communication Language	0 or "en" or "English"	No	Number or name of a valid culture. Must match a culture using CMTEUP_Culture. CultureName, CMTEUP_Cuture.Culture-Display Name or CMTEUP_Culture.CultureID. Also, when specified, CMTEUP_UserMailbox.CultureIDLocked=1 is set to prevent updates to this value from the Migrator Pro for Exchange rationalization process.
	Saved To: CMTEUP_UserMailbox.CultureID			
12	Migration Group	MyMigrationGroup1	No	Name of a migration group. Will either match an existing group on CMTEUP_MigrationGroups.MigrationGroupName, or create a new group if no match can be found.
	Saved To: CMTEUP_UserMailbox.MigrationGroupID			

Col	Field	Example	Req'd?	Description
13	Priority	5	No	Relative priority used to schedule the mailbox migration. Must be a number between 1 and 100. If not specified, a default priority of 10 is used. This setting does not apply to migrations to Office 365.
	Saved To: CMTEUP_UserMailbox.Priority			
14	Blackout Profile	MyBlackoutProfile1	No	The name of a Blackout profile to use. This will either match an existing profile on CMTEUP_Blackout Profiles.BlackoutProfileName or create a new profile if no match can be found. If not specified, the default blackout profile will be assigned.
	Saved To: CMTEUP_UserMailbox.BlackoutProfileID			

An example of a valid row in the CSV schedule file looks like:

Test03102@dom1.epro.dom,targetForest.dom,TargetDeliveryDomain.dom,Mailbox Database 12345678,03-25-2014 04:12 pm,true,0,0,true,04-01-2014 05:52 pm,en-US,Group1,10,Profile 1

CSV Cancel File Format

The CSV cancel file used to cancel mailbox migration jobs must meet the following requirements:

- The file should not contain headers.
- The file must include column 1: *User Principal Name (UPN)*.

An example of a valid row in the CSV cancel file looks like:

Test03102@dom1.epro.dom

To convert an Excel document to a CSV text file:

1. Open your Excel file.
2. Remove any existing header rows.
3. Format all cells as text by selecting all columns and then right-click > Format Cells > Text.
4. Save the document as a CSV.

Importing the CSV Schedule File of Mailbox Migration Jobs

To schedule or reschedule mailbox migration jobs by importing the CSV schedule file in the command prompt:

1. Open a command prompt.
2. Run *C:\Program Files\Binary Tree\Exchange Pro\bin>BinaryTree.E2E.JobImporter /s [CSV schedule file]*.

```
C:\Program Files\Binary Tree\E2E\bin>BinaryTree.E2E.JobImporter  /s Jobs.csv
10/8/2014 10:58:57 AM: Information: Scheduling (or rescheduling) mailbox migrations using file 'Jobs.csv'...
10/8/2014 10:58:57 AM: Information: Validating data...
10/8/2014 10:58:59 AM: Information: Saving to database...
10/8/2014 10:58:59 AM: Information: *** Summary ***
10/8/2014 10:58:59 AM: Information: Processed 4 rows in 00:00:02.4325510
10/8/2014 10:58:59 AM: Information: 4 row(s) are valid. 0 row(s) have errors.
```

3. The schedule file is validated and saved to the database. If an error is encountered, no jobs are saved.

To review and correct import errors:

1. Errors will be displayed below the import command in the command prompt window.

```
C:\Program Files\Binary Tree\E2E\bin>BinaryTree.E2E.JobImporter  /s Jobs.csv
10/8/2014 11:26:08 AM: Information: Scheduling (or rescheduling) mailbox migrations using file 'Jobs.csv'...
10/8/2014 11:26:08 AM: Information: Validating data...
10/8/2014 11:26:09 AM: Information: *** Summary ***
10/8/2014 11:26:09 AM: Information: Processed 7 rows in 00:00:00.9502206
10/8/2014 11:26:09 AM: Information: 4 row(s) are valid. 3 row(s) have errors.
10/8/2014 11:26:09 AM: Warning: No jobs were saved to the database.
10/8/2014 11:26:09 AM: Error: Row 5: tuckerdemo-9@e2e.dom, qa-e2e.dom, qa-e2e.dom, Mailbox Database, , false, 0, 0, fals
e, 1/1/2015
10/8/2014 11:26:09 AM: Error: Row 5: The Do Not Start Before Date format is invalid.
10/8/2014 11:26:09 AM: Error: Row 6: tuckerdemo-7@e2e.dom, qa-e2e.dom, qa-e2e.dom, Mailbox Database, 1/1/2015, false, 0,
 0, false,
10/8/2014 11:26:09 AM: Error: Row 6: UPN tuckerdemo-7@e2e.dom has a duplicate job defined in row 3 in file 'Jobs.csv'.
10/8/2014 11:26:09 AM: Error: Row 7: tuckerdemo-6@e2e.dom, , qa-e2e.dom, Mailbox Database, 1/1/2015, false, 0, 0, false,
 1/1/2015
10/8/2014 11:26:09 AM: Error: Row 7: Forest '' could not be found.
```

2. Optionally, you can run *C:\Program Files\Binary Tree\Exchange Pro\bin>BinaryTree.E2E.JobImporter [CSV schedule file] > OutputReport.txt* to generate a text file containing the errors.
3. Correct the errors in the CSV schedule file and attempt the import again. Optionally, you can validate the CSV schedule file without importing (see steps below).

To validate the CSV schedule file without importing:

1. In the command prompt, run *C:\Program Files\Binary Tree\Exchange Pro\bin>BinaryTree.E2E.JobImporter /v [CSV schedule file]*
2. The number of valid rows and rows with errors are displayed. The CSV schedule file is not imported.

To view the Help file:

1. In the command prompt, run *C:\Program Files\Binary Tree\Exchange Pro\bin>BinaryTree.E2E.JobImporter /?* or */help*
2. The help message is displayed.

Cancelling Mailbox Migration Jobs using the CSV Cancel File

Mailbox migrations jobs can be cancelled using a CSV cancel file that contains a list of UPNs associated with migration jobs.

To cancel mailbox migration jobs by importing the CSV cancel file in the command prompt:

1. Open a command prompt.
2. Run *C:\Program Files\Binary Tree\Exchange Pro\bin>BinaryTree.E2E.JobImporter /c [CSV cancel file]*.
3. The migration jobs for the UPNs are cancelled.

Usage Summary

BinaryTree.E2E.JobImporter [[/s <schedule file>] | [/v <schedule file>] | [/c <cancel file>]] [/?] or *[/help]*

/s <*file*> : Schedule (or re-schedule) mailboxes for migration. See JobImporter-ReadMe.txt for details on the format of <schedule file>.

/v <*file*> : Validate the contents of <schedule file>. Any errors found are reported, but no migration jobs are scheduled.

/c <*file*> : Cancel mailbox migrations for the list of UPNS found in <cancel file>.

/? or */help* : Display this help message.

Appendix F: Migrator Pro for Exchange Public Folder Job Importer

The Binary Tree Migrator Pro for Exchange Public Folder Job Importer utility is installed as part of Migrator Pro for Exchange. The utility will create a job for each row of the input file. If a job already exists with the same source server name and folder path and same target server name and folder path, the information from the input file will update the existing job instead of creating a new one.

If the user elects to add subfolders for a given row, only subfolders that do *not* have a job will be added. The utility will not update subfolder job settings based on a parent job.

When the utility creates a job and the user does not specify a value for an optional field, the utility will use the same default as the *Add folders to migration queue* dialog.

CSV File Format (Scheduling New Jobs and Rescheduling Existing Jobs)

Col	Field	Example	Req'd?	Description
1	Source folder path	\TestFolder	Yes	Path of job's source folder.
	Matched Against: CMTEUP_PublicFolder.FolderPath			
2	Source folder server name	ExchgPro-EX10-1	Yes	Server name where job's source folder resides.
	Matched Against: CMTEUP_Server.ServerName			
3	Target folder parent path	\	No	Path of target's parent folder.
	Matched Against: CMTEUP_PublicFolder.FolderPath			
4	Target folder server name	QA-ExchgPro-EX10-1	Yes	Server name where job's target folder resides.
	Matched Against: CMTEUP_Server.ServerName			
5	Target public folder mailbox UPN	pfmbx@qa-epro.dom	Only for Exchg 2013+	UPN of mailbox where target public folder will reside.
	Matched Against: CMTEUP_PersonADData.userPrincipalName			
6	Add or Modify subfolder jobs	True / False	No	Specifies if importer should add or modify jobs for subfolders. Defaults to "true."
7	Sync Seconds	30	No	Sets interval for sync job. If value is 0 or omitted, job will run only once.
	Saved To: CMTEUP_PublicFolderJob.SyncSeconds			

Col	Field	Example	Req'd?	Description
8	Scheduled Start Date	10-25-2016 4:12 pm	No	Scheduled start date for the job. If omitted, then defaults to current time.
	Saved To: CMTEUP_PublicFolderJob.ScheduledStart			

Example valid lines:

\TestFolder,ExchgPro-EX10-1,\,QA-ExchgPro-EX10-1,,true,0,3-25-2015 04:12 pm

\TestFolder,ExchgPro-EX10-1,\,QA-ExchgPro-EX13-1,pfmailbox@qa-epro.dom,true,0,3-25-2015 04:12 pm

If the folder name has a quote character (") at the beginning and/or end, you must place quotes (") around the entire folder path. Example: "\Root\Directory\"Example Folder Name""

If the folder name has a quote character (") in the middle of the name, do not place quotes (") around the entire folder path. Example: \Root\Directory\Example "Folder" Name

CSV File Format (Cancelling existing jobs)

Col	Field	Example	Req'd?	Description
1	Source folder path	\TestFolder	Yes	Path of job's source folder.
	Matched Against: CMTEUP_PublicFolder.FolderPath			
2	Source folder server name	ExchgPro-EX10-1	Yes	Name of server where job's source folder resides.
	Matched Against: CMTEUP_Server.ServerName			
3	Target folder parent path	\	No	Path of target's parent folder.
	Matched Against: CMTEUP_PublicFolder.FolderPath			
4	Target folder server name	QA-ExchgPro-EX10-1	Yes	Name of server where job's target folder resides.
	Matched Against: CMTEUP_Server.ServerName			
5	Target public folder mailbox UPN	pfmailbox@ExchgPro.dom	Only for Exchg 2013+	UPN of mailbox where target public folder will reside.
	Matched Against: CMTEUP_PersonADData.userPrincipalNam			
6	Cancel subfolder jobs	True / False	No	Specifies if importer should cancel jobs for subfolders. Defaults to "true."

Example valid lines:

\TestFolder,ExchgPro-EX10-1,\,QA-ExchgPro-EX10-1,,true
\TestFolder,ExchgPro-EX10-1,\,QA-ExchgPro-EX13-1,pfmailbox@ExchgPro.dom,true

Command Line

Available command line switches:

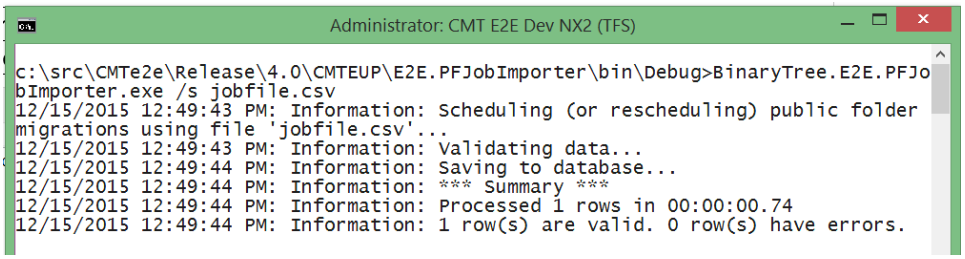
BinaryTree.E2E.PFJobImporter [[/s <schedule file>] | [/v <schedule file>] | [/c <cancel file>]] [/? or /help]

- */s* <file>: Schedule (or re-schedule) public folders for migration.
- */v* <file>: Validate the contents of <schedule file>. Any errors found are reported, but no migration jobs are scheduled.
- */c* <file>: Cancel public folder migrations for the list of folders found in <cancel file>.
- */?* or */help*: Display this help message.

Example command line for scheduling (or re-scheduling) a set of public folder jobs:

BinaryTree.E2E.PFJobImporter.exe /s jobfile.csv

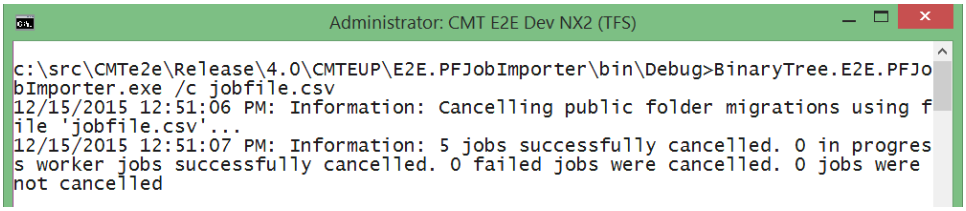
Sample output:



Example command line for cancelling a set of public folder jobs:

BinaryTree.E2E.PFJobImporter.exe /c jobfile.csv

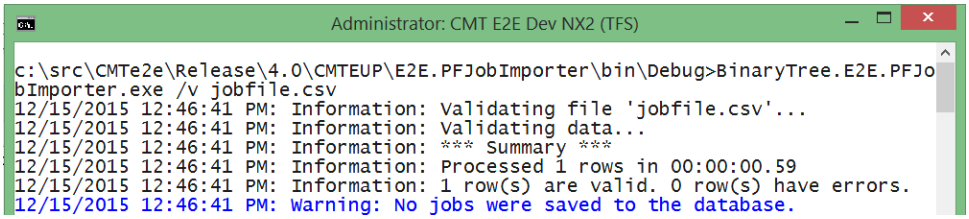
Sample output:



Example command line for validating a set of public folder jobs:

BinaryTree.E2E.PFJobImporter.exe /v jobfile.csv

Sample output:



Appendix G: Public Folder Analysis and Job Administration

This appendix provides scripts and information for managing public folder migrations and querying collected data about public folders in Migrator Pro for Exchange.

NOTE !

To run the SQL scripts in this file, open SQL Server Management Studio and connect to your Migrator Pro for Exchange database. Right-click on the Migrator Pro for Exchange database and select **New Query** to open the *New Query* window. Then paste the SQL script into the query window, update the parameter values (if any), and execute the SQL script.

Public Folder Analysis Scripts

NOTE !

For many of the public folder analysis scripts to function correctly, you must perform a public folder content analysis on a forest at least once.

Below is a list of SQL scripts that can be used to query data collected about public folders. The SQL scripts can be downloaded from the FTP folder where the GA Migrator Pro for Exchange install files and documentation are located. Download the file SQL Queries.zip and extract the files to the SQL server being used for Migrator Pro for Exchange public folder migrations. The following scripts are also available in the file *PF Analysis Queries.sql*. You can either open this file in SQL Server Management Studio or copy and paste the query text below into a query in SQL. Some of these queries need to be modified before executing. A good understanding of SQL is recommended before proceeding.

Find the 10 largest public folders by folder size

To find the 10 largest public folders by folder size, run this SQL command:

```
SELECT TOP 10
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    f.[MaxPFSizeBytes]
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
ORDER BY f.MaxPFSizeBytes DESC;
```

Find the 10 largest public folders by item count

To find the 10 largest public folders by item count, run this SQL command:

```
SELECT TOP 10
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    i.ItemCount
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN (SELECT PublicFolderID, COUNT(*) AS ItemCount FROM
CMTEUP_PublicFolderItem
GROUP BY PublicFolderID) i ON f.PublicFolderID = i.PublicFolderID
ORDER BY i.ItemCount DESC;
```

Find public folders with more than x items

To find all the public folders with more than x items, run this SQL command (change "10000" to your own limit number):

```
DECLARE @numItems INT
SET @numItems = 10000
SELECT f.PublicFolderID,
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    i.ItemCount
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN (SELECT PublicFolderID, COUNT(*) AS ItemCount
        FROM CMTEUP_PublicFolderItem
        GROUP BY PublicFolderID) i ON f.PublicFolderID = i.PublicFolderID
WHERE i.ItemCount > @numItems
ORDER BY ItemCount DESC;
```

Find public folders where content has not changed in the last x days

To find all the public folders where content has not changed in the last x days, run this SQL command (change "90" to your own value for "x"):

```
DECLARE @daysSinceLastContentChange INT
SET @daysSinceLastContentChange = 90
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    f.[ContentChangeDate]
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
WHERE f.ContentChangeDate <= GETUTCDATE()-@daysSinceLastContentChange;
```

Find public folders where attributes have not changed in the last x days

To find all the public folders where attributes (e.g., permissions) have not changed in the last x days, run this SQL command (change "90" to your own value for "x"):

```
DECLARE @daysSinceLastAttributeChange INT
SET @daysSinceLastAttributeChange = 90
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    f.[AttributeChangeDate]
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
WHERE f.ContentChangeDate <= GETUTCDATE()-@daysSinceLastAttributeChange;
```

Find public folders where a specific user has any permission

To find all the public folders where a specific user has any permission, run this SQL command (change "'2013Throughput@ExchgPro.dom" to the user's UPN):

```
DECLARE @userAnyPermission NVARCHAR(2000)
SET @userAnyPermission = '2013Throughput@ExchgPro.dom'
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    p.AccessRight
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN [dbo].[CMTEUP_PublicFolderPermission] p ON f.PublicFolderID = p.PublicFolderID
WHERE p.TrusteeIdentity = @userAnyPermission;
```

Find public folders where a specific user has a specific permission

To find all the public folders where a specific user has a specific permission or role, run this SQL command (change “2013Throughput@ExchgPro.dom” and “Contributor” to the user's UPN and the permission or role you want to find):

```
DECLARE @user NVARCHAR(2000)
SET @user = '2013Throughput@ExchgPro.dom'
DECLARE @permission NVARCHAR(100)
SET @permission = 'Contributor'
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    p.AccessRight
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN [dbo].[CMTEUP_PublicFolderPermission] p ON f.PublicFolderID = p.PublicFolderID
WHERE p.TrusteeIdentity = @user AND p.AccessRight = @permission;
```

Find Public Folders by email address

To retrieve a list of public folders by Email Address, run the following SQL command.

```
SELECT TOP 10
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    f.[Email]
    f.[MaxPFSizeBytes]
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
ORDER BY f.MaxPFSizeBytes DESC;
```

Find Public Folders that have been processed by Content Analysis

To see a list of public folders that have been processed by Content Analysis, run the following SQL command.

```
Select f.folderpath,f.email,f.targetaddress, j.starttime as ReportingJobStarted, j.endtime as
ReportingJobFinished
FROM cmteup_publicfolderreportjob j
INNER JOIN cmteup_publicfolder f
ON j.publicfolderid = f.publicfolderid
```

Find the 10 largest public folder items by item size

To the find the 10 largest public folder items by item size, run this SQL command:

```
SELECT TOP 10
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    i.ItemName,
    i.ItemType,
    i.ItemSize AS ItemSizeInBytes
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN [dbo].[CMTEUP_PublicFolderItem] i ON f.PublicFolderID = i.PublicFolderID
ORDER BY i.ItemSize DESC;
```

Find public folder items larger than x MB

To find all the public folder items larger than x MB, run this SQL command (change "10" to the limit size, in MB):

```
DECLARE @sizeInMB INT
SET @sizeInMB = 10
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    i.ItemName,
    i.ItemType,
CONVERT(decimal(10, 3), (i.ItemSize / 1048576.0)) AS ItemSizeInMB
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN [dbo].[CMTEUP_PublicFolderItem] i ON f.PublicFolderID = i.PublicFolderID
WHERE (i.ItemSize / 1048576.0) > @sizeInMB
ORDER BY i.ItemSize DESC;
```

Find total number of public folder items by item type

To find the total number of public folder items by item type, run this SQL command:

```
SELECT
    [ItemType],
    COUNT(*) As NumberOfItems
FROM [dbo].CMTEUP_PublicFolderItem
GROUP BY [ItemType]
ORDER BY [ItemType];
```

Find total number of public folder item attachments by type

To find the total number of public folder item attachments by type (extension), run this SQL command:

```
SELECT
    [AttachmentExtension],
    COUNT(*) AS NumberOfAttachments
FROM [dbo].CMTEUP_PublicFolderAttachment
GROUP BY [AttachmentExtension]
ORDER BY [AttachmentExtension];
```

Find total size of public folder item attachments by type

To find the total size of public folder item attachments by type (extension), run this SQL command:

```
SELECT
    [AttachmentExtension],
    SUM(AttachmentSize) AS TotalSizeInBytes
FROM [dbo].CMTEUP_PublicFolderAttachment
GROUP BY [AttachmentExtension]
ORDER BY [AttachmentExtension];
```

Find public folder item attachments larger than x MB

To find all the public folder item attachments larger than x MB, run this SQL command (change "10" to your limit size, in MB):

```
DECLARE @attachmentSizeInMB INT
SET @attachmentSizeInMB = 10
SELECT
    s.[ServerName],
    f.[Name],
    f.[EntryID],
    f.[FolderPath],
    a.AttachmentName,
    a.AttachmentExtension,
CONVERT(decimal(10, 3),(a.AttachmentSize / 1048576.0)) AS ItemSizeInMB
FROM [dbo].[CMTEUP_PublicFolder] f
INNER JOIN [dbo].[CMTEUP_Server] s ON f.ServerID = s.ServerID
INNER JOIN [dbo].[CMTEUP_PublicFolderAttachment] a ON f.PublicFolderID = a.PublicFolderID
WHERE (a.AttachmentSize / 1048576.0) > @attachmentSizeInMB
ORDER BY a.AttachmentSize DESC;
```

Public Folder Job Administration Scripts

These PowerShell and SQL scripts can be used to manage public folder migrations. The SQL scripts can be downloaded from the FTP folder where the Migrator Pro for Exchange install files and documentation are located. Download the file *SQL Queries.zip* and extract the files to the SQL server being used for Migrator Pro for Exchange public folder migrations. The following scripts are also available in the file *PF Job Administration Queries.sql*. You can either open this file in SQL Server Management Studio or copy and paste the query text below into a query in SQL. Some of these queries must be modified before executing. A good understanding of SQL is recommended before proceeding.

Count folders in Exchange

To count the total number of folders in Exchange for a subtree (e.g. *RootFolder1*), run this PowerShell command from the Exchange server (change "\RootFolder1" to your root folder):

```
Get-PublicFolder –Recurse "\RootFolder1" | Select Name | Measure-Object
```

Count folders in Migrator Pro for Exchange

To count the number of folders in Migrator Pro for Exchange for a subtree (e.g. “\RootFolder1”), run the following SQL command (change "\RootFolder1" to the desired root folder, and change "ServerID = 1" to the ID of the desired source server as found in CMTEUP_Server):

```
SELECT COUNT(*) from CMTEUP_PublicFolder
WHERE (FolderPath like '\RootFolders\%' or FolderPath = '\RootFolders')
AND ServerID = 1
```

Find folder in Exchange

To look up a folder subtree in Exchange, run the following PowerShell command from the Exchange server (change "\RootFolder1" to the desired root folder, and change "Server1" to the desired Exchange Public Folder server name):

```
Get-PublicFolder –Recurse "\RootFolder1" –Server "Server1"
```

Compare jobs and folders

To compare the number of folders in a subtree to the number of jobs created, run the following SQL command (change "\2007Folders" to the desired root folder):

```
SELECT count(1)
FROM CMTEUP_PublicFolder
WHERE FolderPath like '\2007Folders%'

SELECT count(1)
FROM CMTEUP_PublicFolder fs
inner join CMTEUP_PublicFolderjob jt on jt.SourcePublicFolderID = fs.PublicFolderID
WHERE fs.FolderPath like '\2007Folders%'
```

Find all folders in source forest without Jobs

Change “airbus.corp” to the desired forest name:

```
SELECT f.FolderPath, *
FROM CMTEUP_PublicFolder f
inner join CMTEUP_Server s on s.ServerID = f.ServerID
inner join CMTEUP_Site i on i.SiteID = s.SiteID
inner join CMTEUP_Forest o on o.ForestID = i.ForestID
where o.ForestName = 'airbus.corp'
and f.FolderPath not in
(
    SELECT DISTINCT(f.FolderPath)
    FROM CMTEUP_PublicFolder f
    inner join CMTEUP_PublicFolderJob j on j.SourcePublicFolderID = f.PublicFolderID
    inner join CMTEUP_Server s on s.ServerID = f.ServerID
    inner join CMTEUP_Site i on i.SiteID = s.SiteID
    inner join CMTEUP_Forest o on o.ForestID = i.ForestID
    where o.ForestName = 'airbus.corp'
)
```

Check folder provisioning progress

To check the folder provisioning progress for all jobs, run the following SQL command. See Appendix B for more information on job states.

```
SELECT count(1) as JobCount, s.JobStatus, j.SyncCount
FROM CMTEUP_PublicFolderJob j
inner join CMTEUP_JobStatus s on j.JobStatusID = s.JobStatusID
WHERE j.SyncCount = 0
GROUP BY s.JobStatus, SyncCount
```

Sample Output

	JobCount	JobStatus	SyncCount
1	8	Scheduled	0
2	1	Started	0

... which tells us that 8 jobs have been scheduled, but are not yet started, and 1 folder sync job has started (folder creation and attribute sync).

Find empty folders

To find folders (with or without jobs) that don’t have any items, run the following SQL command.

```
SELECT f.FolderPath, f.ItemCount, f.ByteCount, f.PublicFolderID
from CMTEUP_PublicFolder f
where f.ItemCount = 0
order by f.ItemCount desc
```

Sample Output

	FolderPath	ItemCount	ByteCount	PublicFolderID
1	\20150218-Airbus\ParentFolder105\ChildFolder6	0	0	7338
2	\20150218-Airbus\ParentFolder106\ChildFolder9\Gr...	0	0	7446
3	\20150218-Airbus\ParentFolder107\ChildFolder1	0	0	7447
4	\20150218-Airbus\ParentFolder107\ChildFolder10	0	0	7448
5	\20150218-Airbus\ParentFolder107\ChildFolder2	0	0	7449
6	\20150218-Airbus\ParentFolder107\ChildFolder8	0	0	7450
7	\20150218-Airbus\ParentFolder107\ChildFolder1\Gr...	0	0	7451
8	\20150218-Airbus\ParentFolder107\ChildFolder1\Gr...	0	0	7452

Find empty folders with jobs

To find folders (with jobs) that don't have any items, run the following SQL command.

```
SELECT f.FolderPath, s.JobStatus, f.ItemCount, f.ByteCount, f.PublicFolderID,
j.PublicFolderJobID
from CMTEUP_PublicFolderJob j
inner join CMTEUP_JobStatus s on j.JobStatusID = s.JobStatusID
inner join CMTEUP_PublicFolder f on j.SourcePublicFolderID = f.PublicFolderID
where f.ItemCount = 0
order by f.ItemCount desc
```

Sample Output

	FolderPath	JobStatus	ItemCount	ByteCount	PublicFolderID	PublicFolderJobID
1	\Company ABC Root	Scheduled	0	0	98	1
2	\Company ABC Root\Northeast Region	InProgress	0	0	99	2
3	\Company ABC Root\Northeast Region\Marketing	Scheduled	0	0	103	3
4	\Company ABC Root\Northeast Region\Marketing\Pro...	Scheduled	0	0	105	4
5	\Company ABC Root\Northeast Region\Sales	Scheduled	0	0	104	5
6	\Company ABC Root\Northeast Region\Sales\Clients	Scheduled	0	0	106	6
7	\Company ABC Root\Northwest Region	Scheduled	0	0	100	7
8	\Company ABC Root\Southeast Region	Scheduled	0	0	101	8
9	\Company ABC Root\Southwest Region	Scheduled	0	0	102	9

Find Large Folders

To find folders (with or without jobs) that contain a large number of items, run the following SQL command.

```
-- The max number of folder items
declare @maxItems int = 500

SELECT f.FolderPath, f.ItemCount, f.ByteCount, f.PublicFolderID
from CMTEUP_PublicFolder f
where f.ItemCount > @maxItems
order by f.ItemCount desc
```

Sample Output

	FolderPath	ItemCount	ByteCount	PublicFolderID
1	\EX07-Performance\220k Root Folder\ParentFolder1...	15	2940	193442
2	\EX07-Performance\220k Root Folder\ParentFolder1...	15	2940	194902
3	\EX07-Performance\220k Root Folder\ParentFolder1...	15	2940	194903
4	\EX07-Performance\220k Root Folder\ParentFolder1...	15	3780	194904
5	\EX07-Performance\220k Root Folder\ParentFolder1...	15	2940	194905
6	\EX07-Performance\220k Root Folder\ParentFolder1...	15	2940	194906
7	\EX07-Performance\220k Root Folder\ParentFolder1	15	3850	194907

Find large folders with jobs

To find folders (with jobs) that contain a large number of items, run this SQL command:

```
-- The max number of folder items
declare @maxItems int = 500

SELECT f.FolderPath, s.JobStatus, f.ItemCount, f.ByteCount, f.PublicFolderID,
j.PublicFolderJobID
from CMTEUP_PublicFolderJob j
inner join CMTEUP_JobStatus s on j.JobStatusID = s.JobStatusID
inner join CMTEUP_PublicFolder f on j.SourcePublicFolderID = f.PublicFolderID
where f.ItemCount > @maxItems
order by f.ItemCount desc
```

Sample Output

	FolderPath	JobStatus	ItemCount	ByteCount	PublicFolderID	PublicFolderJobID
1	\Company ABC Root	Scheduled	100	1960	98	1
2	\Company ABC Root\Northeast Region	InProgress	100	1960	99	2
3	\Company ABC Root\Northeast Region\Marketing	Scheduled	100	1960	103	3
4	\Company ABC Root\Northeast Region\Marketing\Pro...	Scheduled	100	1960	105	4
5	\Company ABC Root\Northeast Region\Sales	Scheduled	100	1960	104	5
6	\Company ABC Root\Northeast Region\Sales\Clients	Scheduled	100	1960	106	6
7	\Company ABC Root\Northwest Region	Scheduled	100	1960	100	7
8	\Company ABC Root\Southeast Region	Scheduled	100	1960	101	8
9	\Company ABC Root\Southwest Region	Scheduled	100	1960	102	9

Reschedule Large Folders

To postpone the processing of large folders, run the following SQL command.

NOTE: if this is run for jobs that have not yet finished provisioning, the provisioning process will also be postponed. See *Check Folder Provisioning Progress* to determine the state of the desired folders (change "2015-06-22" to the rescheduled date and time):

```
-- The max number of folder items
declare @maxItems int = 500

-- The desired reschedule date
declare @rescheduleDate datetime2(7) = '2015-06-22'

update CMTEUP_PublicFolderJob
set ScheduledStart = @rescheduleDate
where PublicFolderJobID in
(
	SELECT j.PublicFolderJobID
	from CMTEUP_PublicFolderJob j
	inner join CMTEUP_PublicFolder f on j.SourcePublicFolderID = f.PublicFolderID
	where f.ItemCount > @maxItems
)
```

Find Source Folders with Jobs Not Yet Processed by Change Detection

To find source folders not yet processed by change detection, run the following SQL command:

```
select j.PublicFolderJobID, j.SourcePublicFolderID, sfs.ServerName AS SourceServerName,
sf.Name AS SourceName, sf.FolderPath AS SourceFolderPath, j.LastChangeDetectionDate,
sf.ContentChangeDate AS SourceContentChangeDate
FROM CMTEUP_PublicFolderJob j
INNER JOIN CMTEUP_PublicFolder sf
ON j.SourcePublicFolderID = sf.PublicFolderID
INNER JOIN CMTEUP_Server sfs
ON j.SourceServerID = sfs.ServerID
WHERE j.LastChangeDetectionDate IS NULL
```

Sample Output

	PublicFolderJobID	SourcePublicFolderID	SourceServerName	SourceName	SourceFolderPath	LastChangeDetectionDate	SourceContentChangeDate
1	1	98	W28-BG-EX07-1	Company ABC Root	\Company ABC Root	NULL	NULL
2	2	99	W28-BG-EX07-1	Northeast Region	\Company ABC Root\Northeast Region	NULL	NULL
3	3	103	W28-BG-EX07-1	Marketing	\Company ABC Root\Northeast Region\Marketing	NULL	NULL
4	4	105	W28-BG-EX07-1	Projects	\Company ABC Root\Northeast Region\Marketing\Pro...	NULL	NULL
5	5	104	W28-BG-EX07-1	Sales	\Company ABC Root\Northeast Region\Sales	NULL	NULL
6	6	106	W28-BG-EX07-1	Clients	\Company ABC Root\Northeast Region\Sales\Clients	NULL	NULL
7	7	100	W28-BG-EX07-1	Northwest Region	\Company ABC Root\Northwest Region	NULL	NULL
8	8	101	W28-BG-EX07-1	Southeast Region	\Company ABC Root\Southeast Region	NULL	NULL
9	9	102	W28-BG-EX07-1	Southwest Region	\Company ABC Root\Southwest Region	NULL	NULL

Find Target Folders with Jobs Not Yet Processed by Change Detection

To find target folders not yet processed by change detection, run the following SQL command.

Change detection only checks target folders if bi-directional syncing is enabled.

```
-- Change detection only checks target folders if bi-directional syncing is enabled
declare @bidi INT
set @bidi = (select PFCoexistenceMode from CMTEUP_Settings)
select j.PublicFolderJobID, j.TargetPublicFolderID, tfs.ServerName AS TargetServerName,
tf.Name AS TargetName, tf.FolderPath AS TargetFolderPath, j.LastChangeDetectionDate,
tf.ContentChangeDate AS TargetContentChangeDate
from CMTEUP_PublicFolderJob j
INNER JOIN CMTEUP_PublicFolder tf
ON j.TargetPublicFolderID = tf.PublicFolderID
INNER JOIN CMTEUP_Server tfs
ON j.TargetServerID = tfs.ServerID
where j.LastChangeDetectionDate IS NULL AND @bidi = 1
```

Table Definitions

Below is a description of the noteworthy columns for the Public Folder and Public Folder Job tables.

CMTEUP_PublicFolder

This table includes all Rationalized public folders from the Source and Target forests:

- **PublicFolderID:** Unique public folder ID
- **Name:** Name of the public folder
- **FolderPath:** Full Folder Path
- **ParentFolderID/ParentPath:** These two columns will reference the Parent Folder. If this reference is out of sync, Child folder will not be visible in the UI.
- **AttributeChangeDate/AttributeChanged:** Indicate when a folder attribute (proxy address, permissions) has changed.
- **ContentChangeDate/ContentChanged:** Indicate when new contents were added to the folder.
- **IsDeleted:** This will be set to 1 if the folder was deleted.

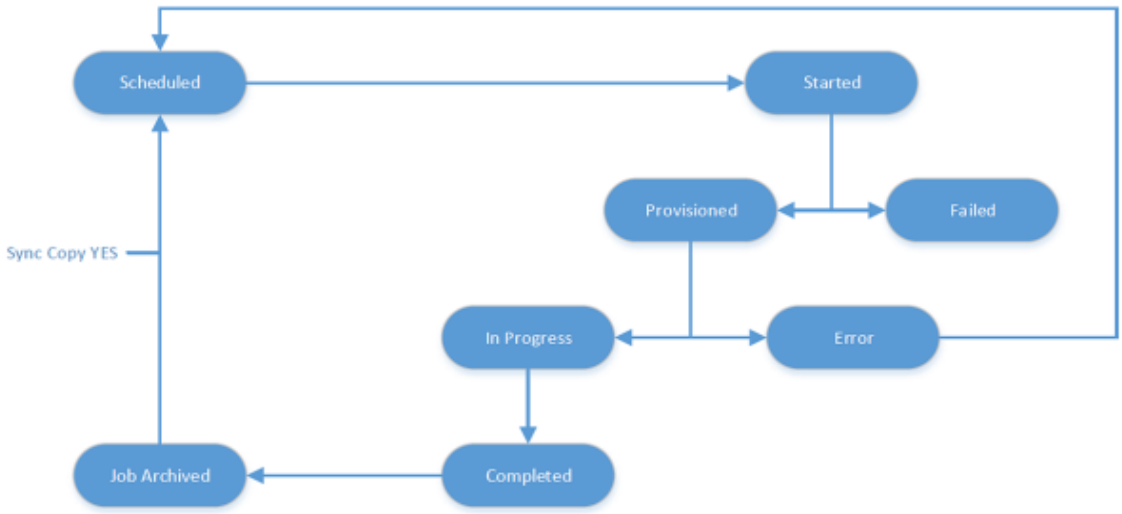
CMTEUP_PublicFolderJob

This table includes all the Active public folder jobs. See CMTEUP_PublicFolderJobArchive for all Completed public folder jobs.

- **PublicFolderJobID:** Unique Job ID for each job
- **ScheduleStart:** This column determines when the job will be submitted by MCP service.
- **SourceServerID/TargetServerID:** Identify the source and target Exchange Server
- **SourcePublicFolderID/TargetPublicFolderID:** These two columns will reference the respective public folder ID in the CMTEUP_PublicFolder table.
- **BiDirectional:** Bi-Directional Setting
- **SyncCopy:** True/false flag.
- **SyncCount:** Number of times a Sync Copy has completed.
- **Result_ErrorMessage:** Last Error message will be recorded here.
- **Result_ErrorCount:** Number of Errors observed.
- **JobStatusID:** Job Status description can be found in CMTEUP_JobStatus table.
- **LastChangeDetectionDate:** The last time the change detection worker processed this job.

Job States

Public Folder Job Status



Public Folder Migration Job flow

- **Scheduled:** Job has been scheduled, but not yet started.
- **Started:** Folder sync (if necessary, create folder and sync folder attributes and permissions) has started.
- **Provisioned:** Folder sync has completed and content sync is ready to start.
- **In Progress:** Folder item copy has started.
- **Completed:** Folder item copy is done.

Public Folder Migration Engine Folder Handling Notes

If the public folder does not contain any items, the public folder migration engine will skip the folder except when Source to Target Content Deletes are selected to be synced in the Migrator Pro for Exchange Public Folder Settings. If Source to Target Content Deletes are checked then the engine will check for deleted items in source and delete them in target accordingly.

Migrator Pro for Exchange Public Folder Migration Child Job Management

When an administrator creates a public folder migration job using the Migrator Pro for Exchange Admin Portal or the public folder Job Importer utility, Migrator Pro for Exchange will check if a job already exists for the source folder or any child of the source folder. A child folder will belong to the same forest as its parent and reside on the same server (or mailbox in the case of Exchange 2013). If a child folder with an existing migration job is detected (in the case of a drag and drop in the UI, Migrator Pro for Exchange will display a warning dialog asking the user if they want to modify the child jobs) Migrator Pro for Exchange will update the job's target folder and target server as well as the job's sync interval and scheduled start fields. Finally, Migrator Pro for Exchange will reset the modified job's status to Scheduled and its sync count to zero (0).

Appendix H: Mailbox Permissions Migrated

When a mailbox is submitted for migration, the Submit Pending Jobs activity will read the following mailbox permissions:

Exchange Permissions:

ChangePermission
DeleteItem
ReadPermission
ChangeOwner
FullAccess
Send On Behalf

NT Permissions:

Send-As
Receive-As

Mailbox Folder Permissions:

All mailbox folders

All trustees, except *Default* and *Anonymous*

All rights including: *Owner*, *PublishingEditor*, *PublishingAuthor*, *Editor*, *Author*, *NoneditingAuthor*, *Contributor*, *Reviewer*, *CreateItems*, *DeleteAllItems*, *DeleteOwnedItems*, *EditAllItems*, *EditOwnedItems*, *FolderContact*, *FolderOwner*, *FolderVisible* and *ReadItems*

Mailbox folder permissions are automatically migrated by Exchange. However, to enable Exchange to do so successfully, the following must be done prior to moving the mailbox:

- For Resource Folder migrations the *msExchMasterAccountSID* must be set on each target trustee before moving the user.
- For non-Resource Forest migrations an X500 address must be added to each source trustee that points to the target trustee before moving the user.

Once the mailbox migration has completed, the permissions found in the *CMTEUP_UserMailboxPermissions* table are processed. For each permission, the trustee is opened in the Source AD and a matching Target trustee is located using:

Mailbox GUID
E-Mail
Primary SMTP
Common Name
SAM Account Name

If no match is found, the MCP waits and retries applying the permission. This retry process can be configured in the Mailbox Settings with the Mailbox Permissions Retries setting.

Appendix I: How to Process GDPR Requests

What is a GDPR Request?

The General Data Protection Regulations (GDPR) is the new European Union (EU) data protection regulations which go into effect May 25th, 2018. Under the GDPR individuals have certain rights to their personal data. They can make requests to exercise those rights to the data controller, and the controller must respond within 1 month. It is expected that the controller will verify the identity of the requestor.

There are four primary types of GDPR requests:

- **Export** – Request for a copy of all personal data about an individual held by this controller and any related processors. Must be in a commonly accepted portable data format.
- **Update** – Request to rectify inaccurate personal data.
- **Delete** – Request to remove all personal data about an individual from our systems. Can be initiated by an individual or by a revocation of consent process. Includes burden of proof. (Ideally follow a delete with an export to show no remaining data)
- **Hold** – Request to halt processing of personal data but not delete that data.

How to handle GDPR Requests for Migrator Pro for Exchange

When Migrator Pro for Exchange is installed, the data associated with the application is hosted locally within the client's environment. The client has full control over this data. By default, the user and configuration data is stored in the SQL database called, "ExchangePro_<*date*>". It is assumed the operator has the proper administrative SQL Permissions to execute the following methods outlined.

SQL Tables containing User data:

- [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]

  Unique Key Look-up Columns:

  [sAMAccountName]

  [userPrincipalName]
- [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]

  Unique Key Look-up Columns:

  [DistinguishedName]

  [Email]

Where does the Migrator Pro for Exchange get its user data?

All user data within Migrator Pro for Exchange is derived from the source Active Directory Forest configured in the product. Therefore, the authoritative source of any user related data stored in Migrator Pro for Exchange is Active Directory. Any remediation required from a GDPR request should first be

remediated in Active Directory or the source feeding Active Directory. Once that user data is updated in the source directory, running a new discovery within the product will update those values as well.

The following sections will provide guidance on fulfilling the 4 primary GDPR request types.

1. **Exports –** Request for a copy of all personal data about an individual held by this controller and any related processors. Must be in a commonly accepted portable data format.

Migrator Pro for Exchange user data can be exported in many ways. The product interface provides export options for any discovered mailbox user. For more information, search the product help for "Exporting data to a CSV file". There are also methods of exporting data using SQL Server Management Studio wizard.

For the purposes of this document, using PowerShell with the SQLPS Module is the recommended method to refine the results of the output. One may export any SQL Query result to a CSV file. Below is an example script to do so. Replace the variables to conform to your environment.

```
Import-Module sqlps
$SQLquery='SELECT * FROM [ExchangePro_<Date>].[dbo].[CMTEUP_Person]'
$result=invoke-sqlcmd -query $SQLquery -serverinstance <servername> -database <dbname>
$result |export-csv c:\temp\ExportQueryResults.csv -notypeinformation
```

2. **Updates –** Request to rectify inaccurate personal data.

As previously stated, all user data within Migrator Pro for Exchange is derived from the source Active Directory Forest configured in the product. Therefore, the authoritative source of user data is Active Directory. Any remediation required from a GDPR request should first be remediated in Active Directory or the source feeding Active Directory.

If editing the user data within SQL is still required, using any SQL editor such as SQL Server Management Studio, run an update command against one or more columns for one or more records. Below are examples to accomplish this. Note however, that any new discovery will update the values based on the source Active Directory.

Update multiple columns for a single record:

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE userPrincipalName='<Unique ID>'

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE userPrincipalName='<Unique ID>'

Update multiple columns for multiple records:

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE DistinguishedName='<Unique ID>' OR DistinguishedName='<Unique ID>'

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE userPrincipalName='<Unique ID>' OR userPrincipalName='<Unique ID>'

Update multiple columns for multiple records using a list:

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE DistinguishedName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

UPDATE [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]

SET <*Column1 Name*> = <*New Value1*>, <*Column2 Name*> = <*New Value2*>

WHERE userPrincipalName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

3. **Deletes –** Request to remove all personal data about an individual from our systems. Can be initiated by an individual or by a revocation of consent process. Includes burden of proof. (Ideally follow a delete with an export to show no remaining data.)

Using any SQL editor such as SQL Server Management Studio, run a Delete command against one or more records. Below are examples to accomplish this. However, as previously stated, if the user is not deleted in the source Active Directory during any subsequent new discovery the user will be re-populated into SQL. The only way to truly remove the data is to delete the source user or delete the entire SQL database when it is no longer required.

Delete a single record then verify:

DELETE FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName='<*Unique ID1*>'

SELECT * FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName='<*Unique ID1*>'

DELETE FROM [ExchangePro_<Date>].[dbo].[CMTEUP_PersonADData]
WHERE userPrincipalName='<Unique ID1>'

SELECT * FROM [ExchangePro_<Date>].[dbo].[CMTEUP_PersonADData]
WHERE userPrincipalName='<Unique ID1>'

Delete multiple records then verify:

DELETE FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName='<*Unique ID1*>' OR DistinguishedName='<*Unique ID2*>'

SELECT * FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName='<*Unique ID1*>' OR DistinguishedName='<*Unique ID2*>'

DELETE FROM [ExchangePro_<Date>].[dbo].[CMTEUP_PersonADData]
WHERE userPrincipalName='<Unique ID1>' OR userPrincipalName='<Unique ID2>'

SELECT * FROM [ExchangePro_<Date>].[dbo].[CMTEUP_PersonADData]
WHERE userPrincipalName='<Unique ID1>' OR userPrincipalName='<Unique ID2>'

Delete multiple records then verify:

DELETE FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

SELECT * FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_Person]
WHERE DistinguishedName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

DELETE FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]
WHERE userPrincipalName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

SELECT * FROM [ExchangePro_<*Date*>].[dbo].[CMTEUP_PersonADData]

WHERE userPrincipalName IN ('<*Unique ID1*>', '<*Unique ID2*>', '<*Unique ID3*>')

4. **Holds –** Request to halt processing of personal data but not delete that data.

As with exporting user data, this can also be accomplished using the product interface. Halting a user from processing within Migrator Pro for Exchange can be achieved using the Blackout Times feature. The process has two steps.

1. Create a New Blackout Profile
2. Assign the Profile to the User(s)

Create a New Blackout Profile

To set blackout times spanning every day, all day:

1. Launch Migrator Pro for Exchange.
2. Click Blackout Times in the main toolbar.
3. Click Add Profile to create additional blackout profiles.
4. Name the Profile “User GDPR Hold” or equivalent. Click OK.
5. Within the Calendar view, double-click on today.
6. An appointment will open. Click the “All day event” checkbox.
7. Populate the Subject and Description Fields.
8. Click the “Edit Recurrence” button.
9. Select the “Daily” recurrence pattern.
10. Select the “No End Date” range of recurrence.
11. Click OK.
12. Click Save & Close.

Assign the Profile to the User(s)

The “default” blackout profile is initially applied to all user mailboxes. To set user mailboxes to a different blackout profile, select one or more mailboxes in the Mailboxes or Mailbox Jobs view and edit the “Properties” in the right-click menu.

To assign the new blackout profile to the desired user, follow these steps.

1. Launch Migrator Pro for Exchange.
2. Select the Forest where the user is located.
3. Locate the user(s).
4. Right-Click on the selected user(s).
5. Select Properties.
6. Place a check in the Blackout Times checkbox.
7. From the drop-down menu, select the new Blackout Profile created previously. The instructions above called it, “User GDPR Hold”.
8. Click OK.
9. The User record will update to display the new Blackout profile assigned.

Please note, manually suspended migrations ignore blackout periods if they are manually resumed, and will begin migrating immediately. For more information, search the product help for “Applying Blackout Times to the Forest”.