Batch Migration Guide

Novell GroupWise → Microsoft Office 365

Copyright December 2012 by Transend Corporation
# Table of Contents

**Section 1: Introduction** ......................................................................................................................... 1

**Section 2: Preparation** .......................................................................................................................... 1

  - Inventory Source Data ......................................................................................................................... 1

**Section 3: User Interface Overview** ....................................................................................................... 2

**Section 4: Batch Migration Setup** ........................................................................................................ 4

  - Assigning Batch Variables .................................................................................................................. 4
  - Batch Mode Data Table ....................................................................................................................... 4
  - Migrated Checkboxes ........................................................................................................................... 5
  - Load Buttons ........................................................................................................................................ 6
  - Load Column From Directory .............................................................................................................. 6
  - Copy Configuration ............................................................................................................................... 8

**Section 5: Folders** ................................................................................................................................. 10

**Section 6: Folder Mapping** ................................................................................................................... 11

**Section 7: Address Translation** .......................................................................................................... 12

**Section 8: Migrating Messages/Folders** ............................................................................................... 13

  - Important Novell GroupWise (Source) Information ............................................................................ 14

**Section 9: Migrating Address Books** ................................................................................................... 14

**Section 10: Migrating Calendar Entries** ............................................................................................... 16

**Section 11: Migrating Tasks & To-do Items** ......................................................................................... 17

**Section 12: Custom Options** ............................................................................................................... 18

  - Search Information .............................................................................................................................. 18

**Section 13: Command Line Processing** ............................................................................................... 19

**Section 14: Migration Monitor** ............................................................................................................ 19

**Section 15: Concurrent Migrations** ..................................................................................................... 20

  - Performance ........................................................................................................................................ 20
  - Adding Migration Workstations .......................................................................................................... 20
  - Calculating Migration Time .................................................................................................................. 21

**Section 16: Schedule Migration** ........................................................................................................... 22

**Section 17: Reporting / Logging** .......................................................................................................... 22

  - Reporting ............................................................................................................................................ 22
  - Logging .............................................................................................................................................. 22

**Section 18: Troubleshooting** ................................................................................................................ 23

**Section 19: Technical Support** ............................................................................................................. 25
Section 1: Introduction

This Batch Migration Guide demonstrates how to perform a batch migration of the below data types from Novell GroupWise to Microsoft Office 365 using Transend Migrator:

- Email Messages/Folders
- Address Books
- Calendar Entries
- Tasks/To Do

For more detailed information about your specific application, security requirements, and additional migration options, please review the Help File or the Technical Reference Guide that relates to your specific migration scenario.

The Transend Migrator Help File is context sensitive. Selecting a help button will take you to the specific section in the Help File related to the screen you are in.

The Technical Reference Guide gives a more in-depth overview of features that are used to alter the default behavior of Transend Migrator. Specifically, it provides detailed information on the different Custom Options, selecting specific Folders for migration, excluding specific Folders from the migration, Folder Mapping, Address Translation, Command Line Processing, Entity Matching and Scheduling a Migration.

Source Messaging Platforms supported:
- Novell GroupWise v5 and above

Target Messaging Platform’s supported:
- Microsoft Office 365 using Exchange Web Services (EWS)

Section 2: Preparation

Ensuring that you are properly prepared for migration is essential to a successful migration experience. Prior to performing any migration, we highly recommend you first review Preparation Guides that detail setting up your Source and Target environments.

Inventory Source Data

Prior to migration, get a snapshot of your source data by creating a report of the source account. This report will list the folder, email, and attachment totals. You may also customize the report to include each folder name and subtotals by folder.

- Requirements. Microsoft Excel is required to view the report.
- Data File. The report is saved in XML format, and it is found inside the log file directory.
Report Level
Change the level of detail in the report by enabling the /XMLREPORT <n> custom option. Level 1 reporting is the default setting and it gives you a summary count of the entire mailbox. Level 2 reporting will give you the counts per folder and the summary.

Note
The Migration Report Only choice will scan through each mail folder to count the number of messages and attachments. Creating this report may take a considerable amount of time depending on the quantity of messages and the performance of your computer system.

The following steps demonstrate how to create a Migration Report prior to migrating email data:

1. Start Transend Migrator
2. Press the Email Button.
3. From the Migration Options menu, choose Custom Options if you want to adjust your migration report level from the default settings. The /XMLREPORT <n> switch is found under the General Options | Logging/Reporting subsection.
4. Select the source email application from the Convert From: drop down selection box.
5. Enter the information required for the source email application.
6. Select the target email program from the Convert To: drop down selection box.
7. Select Migration Report Only from the Convert To: drop down selection box.
8. Place a checkmark in the Enable Migration Checkbox to enable this migration choice.
9. Press the Start Batch Migration button to generate the report. The Migration Monitor will start and show you the progress.
10. Once complete, press the Return button to go back to the main screen.
11. Review the report by choosing Migration Reports from the View menu.

Section 3: User Interface Overview

Transend Migrator contains an easy to use interface, designed to simplify the migration experience while allowing for maximum flexibility. Setting up your project to convert E-mail, Address Books, Calendars, and Tasks is accomplished within one user interface allowing you to quickly complete your migration in one run. The Menu Bar is where you will make these data type selections. The top level Menu is where you will find additional commands for saving configurations, setting various migration options, setting and viewing logging and reporting options, and setting up batch migrations for multiple users.

Menu Bar
**User Interface**

The following screen is an example of the Transend Migrator user interface. The same interface is used whether you are migrating a single user mailbox or multiple user mailboxes at once (via Batch Mode). Each screen for E-mail, Address Book, Calendar, or Task/To Do items is similar. Differences relate to the specific item types. Please review all data type configurations before starting your migration project.

![User Interface Screen](image)

The **Email Configuration** screen is shown above. Each data type must be configured and enabled prior to beginning a migration. You can migrate one data type at a time or all data types together.

Below is a brief summary of the Interface. The item numbers on the above screen shot correspond to the item numbers listed below:

1. The *Top Level Menu* is where you set Migration Options, review log files, and configure batch migration data.
2. The *Buttons* represent each data type available for migration: E-mail, Address Book, Calendar, and Task/To Do. You can migrate one or more data types at a time. Each data type needs to be configured individually and enabled individually. A green checkmark will appear on the button when it is enabled for migration.
3. The *Source drop-down menu* displays a list of all the available messaging systems you can migrate from.
4. After the Source system is chosen, data entry text boxes will display. Fill out the information required for your source system.
5. The *Folders* button allows you to specifically choose or exclude individual email folders. By default, all folders will migrate. Therefore, you do not have to configure the source Folders list. This is optional.

6. The *Copy Configuration* button allows you to copy configuration information from the first screen into all other data type configuration screens. By default, Transend Migrator will fill in the information it can for you. Once you make changes, this button allows you to update the other data type screens with those changes. Only similar or like-fields will be updated. When you use the *Copy Configuration* button, you must re-enable the other data types for migration.

7. The *Target drop-down menu* displays a list of all the available systems you can migrate into.

8. After the Target system is chosen, data entry text boxes will display. Fill out the information required for your target system.

9. Enable the migration after you have configured both the source and target system by checking the *Enable Migration* checkbox. Once a data type is enabled a green checkmark will appear on that section’s button. Only the Enabled data types will migrate.

10. Select the *Start Batch Migration* button when you are ready to proceed with the migration.

**Section 4: Batch Migration Setup**

Transend Migrator allows you to convert one account at a time or multiple accounts at a time using the same graphical user interface. Setting up a batch process is nearly as easy as setting up a migration for a single user account. All batch data is stored in a Transend Migrator Data (TMD) file which contains all of the settings and options you have configured in the user interface. Select File → Save Configuration under the main menu to save all the current configurations to the default .tmd or custom TMD file.

Before configuring and processing a batch migration, we recommend you first test the conversion of one user mailbox to become familiar with how Transend Migrator is designed. For a detailed step-by-step guide on how to migrate a single user mailbox, please refer to the Migration Guide: Single User Mailbox for your particular migration scenario.

**Assigning Batch Variables**

Once you have configured and tested a single user mailbox migration, you are now ready to turn your project into a batch migration by assigning variables to values that can change (usually the mail database or source user name, password, and target accounts). You assign these variables to values by populating the *Batch Mode Data* table.

**Batch Mode Data Table**

The *Batch Mode Data* table is located at Batch Migration → Batch Migration Setup from the main menu. To perform a batch migration, the *Batch Mode Data* table needs to be populated with all the account information required for the migration. You provide this information by entering it into each row and column cell, or by importing a comma delimited text file you have already created. The information required will vary depending on the email system you use.
Notice in the above example, each column is associated with a variable, and those variables are $var1$ through $var8$. The user data is populated into the table, and one row represents one user’s data, and those are the values for the variables. Once all the data is entered, select the OK button to return back to the main interface and the data type you are working on (E-Mail, Address Book, Calendar or Task/To Do). Next, substitute the user account information with the variables found on each column header.

**Migrated Checkboxes**

The first column in each row has a checkbox that tracks which accounts have been successfully migrated thus far. If the box is checked it means that user successfully migrated. You can then restart your migration and only migrate users who do not have a checkmark in the Migrated column.

After a migration is run, all users who were successfully migrated will have their Migrated checkbox checked. This checkbox information is stored along with the other migration data within the TMD file. Therefore, it is very important to save the TMD file before and after a migration. When you exit Transend Migrator after a migration you will receive a warning if you have updated checkboxes and are attempting to exit without saving.

When you run the same migration again by pressing the Start Batch Migration button, Transend Migrator will give you the option of converting just the unchecked entries, or to convert them all.

**Note**

The checkboxes are in read-only mode; however, you may right-click on the checkbox and select the appropriate option. You may also move your cursor to the checkbox field and press the space bar to set or clear the checkbox.
Load Buttons

Load From File: The Load From File button allows you to load a text file, which is a comma separated value file, of the values you want to fill into the variables columns. In large migrations, you may want to collect user data into a spreadsheet and then organize the user data by columns and rows. Common information to include are user accounts, passwords, email servers, and file paths.

Comma Separated Value File

![Comma Separated Value File](image)

Load Column From Directory

The Load Column From Directory button allows you to load file or directory information into the column of your choice. This feature is helpful when you have migrations based upon files or directories rather than from direct connections, such as with Exchange/Outlook, Lotus Notes, and Novell GroupWise.

![Load Column From Directory](image)

Clear Data: This button clears all the data located within the Batch Mode Data table. Pressing this button will not clear data located within the other tables.

Compare the following two screenshots to see how the variables can be used. The first screen shot shows how a single email conversion can be setup. The second screenshot shows how variables can be inserted into the configuration screen to turn a single migration into a batch migration.
**Default Screen: Single User Migration**

- **Source:**
  - Name: GroupWise
  - User: jposey
  - Password: jpass
  - Use Archive (GW client 5.5 or greater)
  - Folders...

- **Target:**
  - Name: Office 365
  - Server: pod1008.outlook.com
  - User Email: jposey@sfgiants.com
  - Password: jpass

**Start Single Migration...**
**Start Batch Migration...**

**Default Screen with Variables: Batch Migration**

- **Source:**
  - Name: GroupWise
  - User: jvart1
  - Password: jpass
  - Use Archive (GW client 5.5 or greater)
  - Folders...

- **Target:**
  - Name: Office 365
  - Server: pod1008.outlook.com
  - User Email: jvart1@sfgiants.com
  - Password: jpass

**Start Single Migration...**
**Start Batch Migration...**

Licensed To: Buster Posey/SF Giants for 500 users
The objective is to look for user data that will remain constant, and user data that needs to change. In the screenshot displayed above, the Source User name and the target account need to change to successfully configure a batch migration. The other user data will stay the same because they are applicable to all accounts.

Review your data as it is entered in the Batch Mode Data table, and then substitute what needs to change with the appropriate variable (e.g. $var1, $var2, etc.).

**Enable Migration**

When you are finished inserting the different variables in the appropriate locations, enable the migration by checking the Enable Migration Checkbox. Notice, the green checkmark will appear on the appropriate tab after fully configuring and enabling a migration section.

**Copy Configuration**

If your migration will include Address Books, Calendars, or Task/To Do items, and those data types will use the same account information as Email, select the Copy Configuration button to copy your changes to the other data type sections. The Copy Configuration button is located to the right of the Enable Migration checkbox.

It is important that you review each of the other data type sections prior to performing the migration. You also must enable the migration for each section by placing a checkmark in the Enable Migration checkbox.
As shown above, because the variables have updated by pressing the **Copy Configuration** button on the **E-Mail** tab, those same settings are copied into the **Address Book** section.

Once you are finished configuring a section, enable the migration by checking the **Enable Migration** checkbox. The green checkmark will appear on the **Address Book** button after configuring and enabling the section.

Continue on with the **Calendar** and **Task/To Do** sections if you want to migrate those data types at the same time as the other data types.

**Helpful Hint**

It is possible you will want to migrate data that is in a different format as the email system data you are migrating. For example, you could be migrating email from an IMAP system, but your Address Books are LDIF files and your Calendar items are VCS files. Transend Migrator is very flexible and configurable to your unique environment. However, in this situation you would need to manually edit the Source data because you are migrating from different E-Mail and Address Book sources.

Press the **Start Batch Migration** Button when you are ready to process your selections.
Note
Remember to save your configuration often. Transend Migrator allows you to save multiple configurations. These configuration files allow you to quickly and easily setup multiple migration workstations. Once you have a configuration set you just need to import your batch list into the Batch Mode Data table.

Section 5: Folders

By default, all available folders will migrate during email conversion. You can change this behavior by selecting the specific folders you want to migrate or selecting specific folders you want to exclude. For more information about the Folder Convert List, Folder Exclude List or Folder Mapping refer to the Technical Reference Guide for your particular migration scenario.
Section 6: Folder Mapping

Folder Mapping allows you to migrate folders with a certain name in the Source system into folders with a different name in the target system. In many email systems, folders have similar functions yet have different names. For example, new messages received into Microsoft Exchange/Outlook are placed inside the Inbox folder. In Lotus Notes, new messages received are placed inside the Notes Inbox folder. If you want the messages migrated from the Exchange/Outlook Inbox into the Notes Inbox you will need to create a Folder Map.

You may also map a folder into a new folder on the target email system. Enter the new name into the New Folder Name field and messages specified within the Original Folder Name field will migrate into that folder.

Enter the folder names by putting your cursor into the text box and then begin typing. Press the Tab key to get to the next textbox on the list. Press Shift-Tab to go to the previous textbox on the list.

For more detail about Folder Mapping refer to the Technical Reference Guide for your particular migration scenario.
Section 7: Address Translation

Transend Migrator supports address translation through the Address Translation Table. You can access the Translation Table under Batch Migration | Batch Migration Setup | Address Translation from the main menu.

The Translation Table allows you to create Internet Style addresses based upon the criteria you provide. For example, if your addresses are displayed in the X.400 format the translation table will convert it to a useable SMTP email address.

You may also use the Translation Table if you are migrating to a new email system and are changing the user addresses. For example, if you change company names, user email addresses in the new server with the old addresses might not work anymore because the email addresses are no longer valid. In this case you would use the Translation Table to migrate messages and have them repliable by translating their old addresses into their new addresses.

Transend Migrator expects to find a match within the Address Translation Table. Changes will only be made to matches found.

The Address Translation Table is divided into two sections. The first section is the Old Address format, and the second section is the New Address format you want it to be. The Old Address section of the Address Translation Table must be in the exact format the source application stores it.

Translation Table Example

Enter the Address Translation Table data into the fields provided on the Address Translation tab. You may also import a csv text file containing address translation data into the Address Translation interface.

For more detail about Address Translation refer to the Technical Reference Guide for your particular migration scenario.
Section 8: Migrating Messages/Folders

The following example provides a step-by-step guide of how to migrate E-Mail from Novell GroupWise to Office 365:

1. Select the Email Button to configure the email choices.
2. Select GroupWise from the From drop down selection box on the Source Pane on the left side of the screen.
3. Enter the GroupWise user name, and the password for the GroupWise account to be migrated.
4. Select the Folders button to choose specific folders to migrate. Otherwise, all folders will migrate by default.
5. Select Office 365 from the To drop down selection box in the Target pane on the right side of the screen.
6. Enter the Server Name.
7. Enter the User Email Address.
8. Insert the different batch variables in the appropriate source and target locations, as described in Section 4 above.
9. Place a checkmark in the Enable Migration Checkbox to enable Email for migration. Notice, the green checkmark appears on the Email button after you check the Enable Migration checkbox.
10. Optionally, configure and enable the other migration choices (Address Book, Calendar, and Task), as described below, if they are to be included with this batch migration.
11. Select the Start Batch Migration button to complete the migration. The Migration Monitor will start and display the real-time migration progress.
12. Once complete, select the OK button to go back to the main screen.

Important Novell GroupWise (Source) Information:

There are two migration methods when migrating email from GroupWise. The first method is the GroupWise Object API, which requires the GroupWise email client installed. It contains a set of Dynamic Link Libraries (DLL), or application files that are included with the Novell GroupWise Client software.

The second method is the IMAP4 protocol method. Rather than migrating from GroupWise using the GroupWise API, enable IMAP4 support and then migrate from GroupWise using the IMAP4 Server choice. This choice is often more reliable and faster than using the GroupWise API method, and is the preferred choice when migrating between GroupWise and Microsoft Outlook.

- **Requirements.** The GroupWise client software is required when migrating via the GroupWise API. The IMAP4 protocol must be enabled on the GroupWise server if using the IMAP4 method. An active or live GroupWise email account must exist. The logon and password is required. Optionally, you can migrate another account if you have proxy access to that account or by using Trusted Mode.

  **Note**
  Ensure you are running a stable release of GroupWise, and use the recommended patches or updates required by Novell. If you are running GroupWise versions 6 we recommend you patch to version 6.5.7. If you are running version 7 we recommend you patch your version to 7.0.3 or greater. Similarly, if you are running GroupWise version 8 we recommend you patch to version 8.0.1 or greater.

- **Data File.** The GroupWise data is stored within a GroupWise email server. Therefore, the GroupWise server must be running. Since GroupWise email data is located on a live GroupWise server there aren’t any source files; however, GroupWise archives can be stored on a local workstation or on a network share. Transend Migrator can convert from the archives. The GroupWise API is required in order to migrate GroupWise archives unless those archives are unarchived back into the live account. In that case, you will also be able to use the IMAP4 protocol.

**Section 9: Migrating Address Books**

Transend Migrator can read address information directly from a GroupWise 5.5+ address book. You must be running Transend Migrator on a PC that has the GroupWise client installed. (Note: 5.5 or greater is required). If you have an earlier version of GroupWise, please use the Novell NAB format instead.

If there are connection problems when migrating from a Novell GroupWise address book, verify the account connection by opening the GroupWise account with the GroupWise client software. Next, open up the address books and note the name of the personal address book. Some versions of GroupWise
name the address book "Personal Address Book" while some installations name the address book with the username. When migrating from GroupWise address books, use the asterisk * to tell Transend Migrator to migrate all personal address books.

- **Requirements.** The GroupWise client software is required and a live connection to a GroupWise server is required. Ensure you are running a stable release of GroupWise, and use the recommended patches or updates required by Novell. If you are running GroupWise versions 6 we recommend you patch to version 6.5.7. If you are running version 7 we recommend you patch your version to 7.0.3 or greater. Similarly, if you are running GroupWise version 8 we recommend you patch to version 8.0.1 or greater.

- **Data File.** The GroupWise address books are located inside the GroupWise account. A MAPI connection is required. Address books must be specified by name, or an asterisk can be specified to migrate all user address books to a different system.

The following example provides a step-by-step guide of how to migrate Address Books from Novell GroupWise to Office 365:

1. Select the *Address Book* Button to configure the Address Book choices.
2. Select *GroupWise Address Book* from the *From* drop down selection box on the *Source* pane on the left side of the screen.
3. Enter the address book name. Use an asterisk * to migrate all address books.
4. Enter the GroupWise user name and password.
5. Select Office 365 Contacts from the To drop down selection box in the Target pane on the right side of the screen.
6. Enter the required information for the target application.
7. Insert the different batch variables in the appropriate source and target locations, as described in Section 4 above.
8. Place a checkmark in the Enable Migration Checkbox to enable Address Books for migration. Notice, the green checkmark appears on the Address Book button after you check the Enable Migration checkbox.
9. Optionally, configure and enable the other migration choices (Email, Calendar, and Task) if they are to be included with this batch migration.
10. Select the Start Batch Migration button to complete the migration. The Migration Monitor will start and show you the migration progress.
11. Once complete, select the OK button to go back to the main screen.

Section 10: Migrating Calendar Entries

Transend Migrator converts from GroupWise Calendar items.

- **Requirements.** The GroupWise client software is required and a live connection to a GroupWise server is required. Ensure you are running a stable release of GroupWise, and use the recommended patches or updates required by Novell. If you are running GroupWise versions 6 we recommend you patch to version 6.5.7. If you are running version 7 we recommend you patch to 7.0.3 or greater. Similarly, if you are running GroupWise version 8 we recommend you patch to version 8.0.1 or greater.
- **Data File.** The GroupWise calendars are located inside the active GroupWise account. Transend Migrator uses MAPI to connect to GroupWise. Therefore, no local files are involved with the migration. You will need the logon credentials for the GroupWise user being migrated.

The following example provides a step-by-step guide of how to migrate calendar entries from Novell GroupWise to Office 365:

1. Select the Calendar button to configure the calendar choices.
2. Select GroupWise Calendar from the From drop down selection box on the Source pane on the left side of the screen.
3. Enter the GroupWise user account and password.
4. Optionally, check the Upcoming events only checkbox to convert future items. Enabling this checkbox migrates only items originally created for future dates.
5. Select Office 365 Calendar from the To drop down selection box in the Target pane on the right side of the screen.
6. Enter the required information for the target application.
7. Insert the different batch variables in the appropriate source and target locations, as described in Section 4 above.
8. Once the required information is entered check the *Enable Migration* checkbox. Notice, the green checkmark appears on the *Calendar* button after you check the *Enable Migration* checkbox.

9. Optionally, configure and enable the other migration choices (Email, Address Book, and Task) if they are to be included with this batch migration.

10. Select the *Start Batch Migration* button to complete the migration. The *Migration Monitor* will start and show you the migration progress.

11. Once complete, select the *OK* button to go back to the main screen.

**Section 11: Migrating Tasks & To-do Items**

Transend Migrator migrates Task/To Do items from Novell GroupWise to Office 365.

- **Requirements.** The GroupWise client software is required and a live connection to a GroupWise server is required. Ensure you are running a stable release of GroupWise, and use the recommended patches or updates required by Novell. If you are running GroupWise versions 6 we recommend you patch to version 6.5.7. If you are running version 7 we recommend you patch to 7.0.3 or greater. Similarly, if you are running GroupWise version 8 we recommend you patch to version 8.0.1 or greater.

- **Data File.** The GroupWise Tasks are located inside the active GroupWise account. Transend Migrator uses MAPI to connect to GroupWise. Therefore, no local files are involved with the migration. You will need the logon credentials for the GroupWise user being migrated.

The following example provides a step-by-step guide of how to migrate *Task/To Do Items* from *GroupWise* to *Office 365*:

1. Select the *Task/To Do* button to configure the task choices.
2. Select *GroupWise Tasks* from the *From* drop down selection box in the *Source* pane located on the left side of the screen.
3. Enter the GroupWise user account and password.
4. Select *Use Archive* if you are migrating Tasks from the Archives instead of the live GroupWise account.
5. Choose *Office 365 Tasks* from the *To* drop down selection box in the *Target* pane located on the right side of the screen, and then enter the required information for your target task application.
6. Insert the different *batch variables* in the appropriate source and target locations, as described in Section 4 above.
7. Once the required information is entered check the *Enable Migration* checkbox. Notice, the green checkmark appears on the *Task/To Do* button after you check the *Enable Migration* checkbox.
8. Select the *Start Batch Migration* button to begin the task migration. The *Migration Monitor* will start and show you the migration progress.
9. Once complete, select the *Return* button to go back to the main screen.
Section 12: Custom Options

Custom Options are additional settings that allow you to alter the default behavior of Transend Migrator. There are hundreds of custom options to choose from. You do not have to enable custom options, but you can use these options if you want to alter the default settings. All Custom Options are detailed in the Help File.

Custom Options that apply specifically to Lotus Notes to Exchange/Outlook can be found in the appropriate Technical Reference Guide.

Select Migration Options | Custom Options from the main menu in order to configure available options.

Search Information

If you want to enable an option but do not know where to find it, enter a keyword inside the search text box to search for the option. Transend Migrator will search for that keyword inside the entire Custom Options section and display how many times it was found.

Select the Next button to review all the sections where your keyword was found. Enable the correct option. You may also search by a specific option switch (e.g. /D140). Sometimes an option can be found in two or more locations. Review the correct location for the option and then enable it in the source or target section related to your specific project.
Review enabled Options by selecting the View Enabled Options button on the Custom Options screen or by selecting Enabled Migration Options from the View menu. These choices will display all enabled options by category.

Section 13: Command Line Processing

An alternate way of starting a batch migration is through the command line. Once all your Email, Address Book, Calendar or Task/To Do data has been configured you normally begin the migration by pressing the Start Single Migration or Start Batch Migration button. You may also start a migration through a command line after saving your configuration using the File | Save Configuration As menu option.

More detailed information relating to Command Line Batch Processing can be found in the Help File or the Technical Reference Guide.

Section 14: Migration Monitor

The Migration Monitor displays the real-time status of all user mailboxes as they are migrated. The Migration Monitor is a multi-threaded process, which means that multiple accounts can be migrated at the same time if the email systems support concurrent migrations, and if your license permits.
Section 15: Concurrent Migrations

Transend Migrator has the ability to migrate more than one account at a time, and this is called Concurrent Migrations. During a batch process, Transend Migrator will migrate each account in entry order, which is defined in the Batch Mode Data table. It starts at the top and works through the list until the list is complete. If your license allows, you may migrate more than one account at a time. This allows you to complete your project more quickly.

Adjust the number of concurrent migrations when you begin a migration, and when the Migration Monitor appears. Transend Migrator will default to 1 concurrent migration. Press the up or down arrow next to Concurrent Migrations to adjust the number up or down.

Performance

Increase the number of concurrent migrations to attain the best possible speed your system will allow. Each computer system is different, and each email system is different. Migrating data on a local machine gives you one rate of speed, while migrating across a local area network will give you a different rate of speed. The number of email messages and attachments will also affect your migration rate.

The best way to determine how fast you can perform a migration is by setting up a few test accounts and giving each account 1 Gigabyte of normal email data. Migrate one account at a time and review the rate of speed. Then, migrate the same test accounts and increase the number of concurrent migrations to 2, and so on. Evaluate the rate of speed and the combined rate of speed. Lower the number of concurrent migrations when you see a decrease in migration rate.

Adding Migration Workstations

At some point, you will reach the maximum capability of your migration workstation, and you may want to add more workstations to decrease the amount of time it takes to migrate your accounts. Review how long it takes to migrate 1 GB of data on a single workstation, determine the number of concurrent migrations your workstation will allow, and then calculate how much faster your project will complete by adding workstations.
Calculating Migration Time

Below are examples of an easy way to calculate how long it will take to complete a migration. Create a simple spreadsheet that lists the total number of gigabytes to migrate, the quantity of workstations you will use, and then the rate of speed your system will migrate. Then, enter a simple formula to calculate how long your migration will complete with one workstation. In these screenshot examples, your formula would be: ((Gigabytes/Rate)/PC's).

In Microsoft Excel, your formula would look similar to: =(E14/E16)/E15

Spreadsheet Example 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E14</td>
<td>Total Quantity of Data to Migrate in Gigabytes</td>
<td>350</td>
</tr>
<tr>
<td>E15</td>
<td>Quantity of PC’s to Process the data</td>
<td>1</td>
</tr>
<tr>
<td>E16</td>
<td>Gigabytes per Hour</td>
<td>3</td>
</tr>
</tbody>
</table>

Processing Time For Completion In Hours: 116.67
Number of Days: 4.86

In the spreadsheet example above, it will take 4.86 days to migrate 350 gigabytes of data at the rate of 3 gigabytes per hour. Therefore, you may want to add more machines to complete your project in a shorter amount of time.

Spreadsheet Example 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Total Quantity of Data to Migrate in Gigabytes</td>
<td>350</td>
</tr>
<tr>
<td>4</td>
<td>Quantity of PC’s to Process the data</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Gigabytes per Hour</td>
<td>3</td>
</tr>
</tbody>
</table>

Processing Time For Completion In Hours: 23.33
Number of Days: 0.97

If you are using a simple formula, add more workstations to your spreadsheet to determine how much faster your project will complete. In Spreadsheet Example 2, the same migration will complete in 23 hours if 5 workstations are used at the same time. Be careful when adding computers to your project, and verify your source/target servers and network can handle the workload. In you are migrating into Microsoft Exchange, we recommend you turn off Transaction Logging so that your Exchange Server will not become overloaded and use up too much disk space. Turn Transaction Logging back on when your migration project is complete.
Section 16: Schedule Migration

You may schedule a migration to begin at a later time by setting the start time on the Migration Schedule screen. Start later in the evening when you can receive optimal performance, bandwidth, and no interruption. If there are other processes that must begin while the migration is running then you may also pause the migration, and continue after the processes are complete.

You must configure your migration before you can schedule it. Pre-configure the E-Mail, Address Book, Calendar, and Tasks as they need to be set. Import your list of users if performing a batch migration, and then save this configuration by selecting File | Save Configuration from the Transend Migrator main menu.

For more information about scheduling a migration, please see the Help File or the appropriate Technical Reference Guide.

Section 17: Reporting / Logging

Reporting

Migration reports in XML format will be created after each successful run, and can be viewed with Microsoft Excel. XML reports can be found inside the default subfolder or in a folder containing the name of the custom configuration. Each time a migration is run a new Migration Report will be created, and it will be assigned an incremental number beginning with the number 1.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Logging

Transend Migrator will create a master log file named tmlog.html inside the default system directory. This log file contains detailed information about the migration session. User specific log files will be called Tmlog-#.html. The number # will correspond with the specific job number for that user as found in the Migration Monitor. This file contains detailed information about a specific user. Since the log files are HTML they are viewable by using your Internet browser. If you want text based log files then use the /LTEXT switch option located inside the Log File section in Custom Options.
You can find the log files inside one of the following system directories:

Windows XP  
C:\Documents and Settings\All Users\Application Data\Transend

Windows Vista
Windows 7  
C:\ProgramData\Transend

Section 18: Troubleshooting

General Logon Errors
There are four possible error messages you may receive when attempting to log on to your email system.

1. **Invalid user name or ID**: This error generally appears only for IMAP, Outlook, and GroupWise. Check that you have entered the correct user name, including case and spelling.
2. **Invalid password**: As above, generally this will occur only with IMAP, Outlook or GroupWise. Check the spelling, punctuation, and case.
3. **Invalid database or directory**: This error can occur for systems where it is necessary to identify a directory where email files may be found. This would include Netscape, Eudora, cc:Mail archives, EML, and Web. It can also occur for systems where you have to identify a specific database file, such as a Lotus Notes .nsf file. For Notes, the file must exist in a readable directory. For the other systems mentioned, assuming that the directory itself exists, the program is checking for the presence of specific files. For example, the Netscape directory must have at least one .snm or .msf file. The Eudora directory must have a .mbx file, and the Pegasus directory must have a .pmm file.
4. **Unable to connect with mail system**: This is a generic error that can indicate a variety of problems. Close Transend Migrator and verify the connection with your email client. Use those same settings when migrating email data with Transend Migrator.

Usually more information is available about a logon problem in the log file. If the error message in the log file is not helpful, please send a copy to our technical support for further analysis.

Antivirus and Spam Filters
If you have viruses in your email then your antivirus or spam filter might intercept those viruses during migration. Therefore, it is best to clean your email before or after performing a migration. If the message is intercepted during migration it could interfere with a successful migration.

If you have antivirus and spam prevention software running on your source or target server, and even the workstation performing the migration, you will slow down the amount of time it takes to migrate your data. To improve performance and to decrease the amount of time it takes to migrate your data
turn off antivirus or spam filtering software. Any software designed to intercept email traffic will impede performance.

Application Violations
These errors can be difficult to troubleshoot but are mostly related to corrupted email messages, or files that are not email messages but you tried to convert them. If the latter is the case then remove the offending file.

1. If an application violation (AV) happens then make note of the folder the problem happened in.
2. Enable the /LSUB switch option for logging. The /LSUB switch option will log each message subject converted (or attempted) into the log file.
3. Attempt an isolated conversion of that specific folder. When the AV happens close Transend Migrator.
4. Open the Log File with Notepad or alternate text editor.
5. Make note of the last message converted. This will tell you where to look for the problem.
6. Open the source message account and search for the message subject causing the AV.
7. Move that message into a TEMP or SAVE message folder.
8. Optionally, move the next message into the same TEMP or SAVE folder. Quite often, it was not the last message converted that caused the AV. It could be the next one in line. Therefore, this is why you need to move the next one into the TEMP or SAVE message folder.
9. Begin another migration, but this time skip the TEMP or SAVE message folder. When the migration is successful you can continue on. You will have successfully identified the corrupted or problem messages.

Novell GroupWise
If you are migrating between Novell GroupWise and Microsoft Outlook you may receive an Access Violation. If this happens it is often a conflict between the GroupWise email client and the Outlook email client.

1. Upgrade your email clients to the latest versions and/or upgrade your Windows service packs to the latest versions.
2. Make sure the “Novell GroupWise” Outlook profile is the default email profile for Outlook.
3. Consider using IMAP4 as the conversion method for GroupWise email. This will eliminate the MAPI32 conflict.
4. Consider performing your email migration in two steps. Migrate from GroupWise mail into a Transport File, and then migrate the Transport File to Outlook/Exchange.
5. In some cases, Access Violations can be avoided by migrating directly to ANSI style Outlook PST files. Use the /OLDPST switch option to create the old style (pre-2003) of PST file.

IMAP4 Connections
Make sure you have the correct username, server address, and password for the account to be migrated. Some servers require the entire user email address rather than just the username. For example, you may need to enter jsmith@acme.com instead of jsmith. If your IMAP server uses SSL security then enable the /SSL option.
Section 19: Technical Support

Technical support is available to help you understand how to use Transend Migrator with your migration project. Please review the Help File and online resources before contacting technical support.

Technical support is available Monday through Friday, 9:00AM - 5:00PM (Pacific Time).

You are encouraged to submit questions through email. This will allow us time to properly research your situation and make appropriate recommendations.

Email: tech.support@transend.com
Phone: (650) 324-5370

Transend Corporation
225 Emerson Street
Palo Alto, CA 94301
www.transend.com