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Section 1: Introduction

This Technical Reference Guide provides an in-depth overview of features used to alter the default behavior of Transend Migrator when converting data from Lotus Domino/Notes to Office 365.

For basic step-by-step instruction on how to perform a Domino/Notes to Office 365 migration using the default settings, refer to the Migration Guide: Single User Mailbox or the Batch Migration Guide for your migration scenario. This Technical Reference Guide provides more in-depth information than those Migration Guides and is focused more on Custom Options, Folders, Command Line Processing and other features used to alter the default behavior of Transend Migrator.

If the information you seek is not addressed in this Technical Reference Guide, please view the Help File or contact Technical Support.

Section 2: Folders

By default, all available folders will migrate during email conversion. You can change this behavior by individually selecting the folders you want to migrate.
Section 3: Folder Convert List

The *Folder Convert* List is blank by default. When the list is blank this means that all folders available in the source account will be migrated. You may want to press the *Load from E-Mail Source* button to review the available folders so that you can manually choose which folders to migrate. Remove a checkmark if you do not want that folder to migrate.

You may also want to load the list of folders into the *Folder Convert List* so that you can create a list of folders you do not want to migrate. For example, maybe you do not want to migrate the Junk Mail folder for this one account, or for all accounts. Right click on the folder you do not want to migrate, add it to the *Folder Exclude List*, and then press the *Clear Data* button to remove all entries from the *Folder Convert List*. When the *Folder Convert List* is empty, this tells Transend Migrator to convert all folders except what is listed in the *Folder Exclude List*.

**Helpful Hint**

Enter the account information for a specific user on the E-Mail tab located on the main form. Press the *Load from E-mail Source* button and load the available folders. If the folders load into the list then your settings are correct. If they do not load into the Folder Convert List then that means something is wrong with your account information, or that there is something preventing you from going any further.
1. Press the *Load from E-Mail* button to retrieve a list of available folders. Transend Migrator uses the logon information provided on the default E-mail screen to gain access to these folders.
2. Choose each folder to be migrated by checking the box next to the folder name.
3. Right click on a specific folder for other choices, which are:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select All:</strong></td>
<td>Select all folders shown within the Folder Convert List. Each folder will be selected and a checkbox will be placed next to the folder name.</td>
</tr>
<tr>
<td><strong>Un-Select All:</strong></td>
<td>This clears the checkbox from next to the folder name, and these folders will not migrate.</td>
</tr>
<tr>
<td><strong>Clear:</strong></td>
<td>This option clears all folders from being displayed on the Folder Convert List. Transend Migrator will then go to its default behavior and convert all available folders.</td>
</tr>
<tr>
<td><strong>To Exclude List:</strong></td>
<td>You may want to exclude certain folders from being migrated. Select a specific folder you wish to exclude, and then choose the To Exclude List option to copy the folder name to the Exclude List. This is commonly used in Batch Mode so that a specific folder will be excluded for all accounts. This is helpful for when you want to migrate all available folders except for a select list.</td>
</tr>
<tr>
<td><strong>To Folder Map:</strong></td>
<td>Select a folder you want to map, right click on the folder name, and send it to the Folder Map. The mapping feature is helpful for when a specific folder has a different name then the target email application but the folder has the same function. For example, the Novell GroupWise inbox is called Mailbox. In Microsoft Outlook the folder is called Inbox. You can map a folder name to its associated folder name in the target email application by using the Folder Map feature. Likewise, you can map source folder names to a new name regardless if that new name already exists in the target email application.</td>
</tr>
<tr>
<td><strong>Manual Edit:</strong></td>
<td>You may manually type in the folder names by enabling Manual Edit.</td>
</tr>
</tbody>
</table>

**Using Wildcards**

When the Folder *Convert List* is blank this means that all folders will migrate. In most cases, you will leave the Folder *Convert List* blank.

In certain scenarios you may only want to convert folders matching a specific criteria. For example, a folder may contain subfolders with a specific name you want to migrate. You may not know where that folder is, and that location could be different for other users. If you want to migrate this subfolder for all users, clear the folder list, right-click within the list, and select *Manual Edit*. Review the following examples to continue.
Right Click Example

The following image shows two examples on how to use a wildcard (*) in the Folder Convert List. A wildcard can be used at the beginning or the end of a line, depending on where you expect to find that specific folder.

Wildcard Examples

The following image shows two examples on how to use a wildcard (*) in the Folder Convert List. A wildcard can be used at the beginning or the end of a line, depending on where you expect to find that specific folder.
If you want to convert all subfolders of “Personal Folders/2009/” then enter a wildcard at the end of the line e.g. “Personal Folders/2009/\*”. Only subfolders with a match in the first two folders will migrate.

You may also use two wildcards in a folder entry. For example, if you want to migrate any folder named Finance no matter what its location, enter a wildcard before and after the word Finance e.g. “\*Finance\*”.

Why use wildcards when you can just migrate all folders? You could be migrating a batch of user accounts, and only want to migrate folders matching a specific criteria. That folder could be located anywhere within these accounts and it will be difficult to locate those folders manually. Therefore, using one or more wildcards helps you migrate a folder with a specific name wherever it is located.

**Section 4: Folder Exclude List**

You may want to exclude certain folders from being migrated. Select a specific folder you wish to exclude, right-click, and then choose the To Exclude List option to copy the folder name to the Exclude List. This is commonly used in Batch Mode so that a specific folder will be excluded for all accounts. This is helpful for when you want to migrate all available folders except for a select list. After adding folders to the Folder Exclude List, remember to clear the list of folders in the Folder Convert List.
1. Enter the names of the folders you wish to exclude.
2. Optionally, if you have a text file containing folder names to exclude you may load that list by pressing the Load From File button.
3. Right Click in this window for other options on these entries. These Unicode features are helpful when migrating non-English character sets.

**Additional Information**
If you manually specify a folder in the Folder Exclude List and if this folder has a slash character in it (besides the hierarchy delimiter) you need to enter two slashes. If the actual folder is “Reports/July” enter it as “Reports//July”.

**Section 5: 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.
Suggestion

An easy way to load the Original Folder Name is to load the folder list on the **Folder Convert List** tab, right click on the folder to be mapped, and then choose the Add to Folder Map menu option. This feature will copy the folder name into the Original Folder Name textbox on the Folder Mapping tab. Since the folder names must be exact, adding the Original Folder Name from the Folder Convert List will ensure it is entered in correctly.

Load From File

You may also create a comma separated value (CSV) file containing a list of Original Folder Names and the New Folder Name. Save this file as a text file. Load the text file into the Folder Mapping table and the entries will fill into the Original Folder Name and New Folder Name fields.

Example Map File

```plaintext
Mailbox, Inbox
Sent, Sent Items
Trash, Deleted Items
```
The CSV file is a text file with these two values. Each line contains the exact name of the Original and Target folder name separated by a comma.

Additional Information
If you need to map a folder that has a slash character in it (besides the hierarchy delimiter) you need to enter two slashes. If the actual folder is “Reports/July” to specify it you would enter it “Reports//July”.

Note
If you do not want to map any folders but want to place all folders into a Group Folder, use the Group Folder switch found in Migration Options | Custom Options. The switch is /GN <value> where value is the name of the group folder. See General Custom Options for more details.

Section 6: 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 your csv text file containing address translation data into the Address Translation interface.

Enter your information 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.

Load From File

You may also create a comma separated value (CSV) file containing a list of Old Address names and the New Address names. Save this file as a text file. Load the text file into the Address Translation Table and the entries will fill into the Old Address and New Address fields. There must be a comma between the old address and the new address. This tells the Load From File import button which column to place the data into.

Example Address Translation Table Text File
The CSV file is a text file with the *Old Address* and *New Address* values. Each line contains the *Old Address* name and the *New Address* name values separated by a comma. The example above shows that the X.400 address and the SMTP email address is departed by a comma, which is between the Organization Name, and the new SMTP email address.

Common elements of the X.400 address are as follows, but not all elements are required.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMD</td>
<td>Administration Management Domain</td>
</tr>
<tr>
<td>C</td>
<td>Country</td>
</tr>
<tr>
<td>CN</td>
<td>Common Name</td>
</tr>
<tr>
<td>G</td>
<td>Given Name</td>
</tr>
<tr>
<td>I</td>
<td>Initials</td>
</tr>
<tr>
<td>O</td>
<td>Organization Name</td>
</tr>
<tr>
<td>OU</td>
<td>Organizational Unit Name</td>
</tr>
<tr>
<td>PRMD</td>
<td>Private Management Domain</td>
</tr>
<tr>
<td>S</td>
<td>Surname</td>
</tr>
</tbody>
</table>

In many cases, only the CN and O need to be declared for a match in translation. See the example Address Translation Table Text file as displayed, above.

**Section 7: Custom Options: Lotus Domino/Notes**

Transend Migrator contains hundreds of *Custom Options* that alter the default behavior of Transend Migrator. Select *Migration Options | Custom Options* from the main menu in order to configure available options.

To view general Custom Options that are not specific to any messaging system, refer to the *Custom Options | General* section of the Help File.

The following *Custom Options* alter the behavior of *Lotus Domino/Notes* data:

**Email Messages**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/COMMA</td>
<td>Dlist Delimiter is Comma</td>
<td>Use comma instead of a semicolon to delimit distribution list names</td>
</tr>
<tr>
<td></td>
<td>Universal ID Logging</td>
<td>Use this switch to record the Universal ID of the Lotus Notes item into the log file</td>
</tr>
</tbody>
</table>
### /D113 Error Prevention
Tells Transend Migrator not to perform certain operations on the UnReadNoteTable property to prevent Access Violations in random cases.

### /D143 Messages
This is an alternative method of importing HTML, which may work better with older versions of Lotus Notes, however embedded images will not be supported.

### /D27 Message ID
When migrating from Notes to Outlook, this switch retrieves the $MessageID (if present) and places it into the Outlook property.

### /D37 EnterSendTo
Use EnterSendTo as “From” field. Use this to get “who” value, but you lose the sender.

### /D43 Use Posted Date
Some Lotus Notes NSF templates will display the posted date instead of the delivered date, which is checked first. Use this switch to reverse this behavior.

### /D65 No HTML Import
Disallow the HTML import into Notes messages, This switch may be needed if you will be viewing messages in the web application called iNotes. This switch can be used in conjunction with /HTMLATTACH to preserve HTML messages.

### /D73 Remove Doc Link
Used when converting from Lotus Notes to another email application. This will remove the “doc link” attachment that sometimes appears.

### /INOTES Messages
When exporting messages from databases that were used with iNotes (web client) this switch is needed to export message text correctly, and also to locate address book data stored in the message database.

### /UNID Export Universal ID
When migrating from Notes to Outlook, this switch places the message UniversalID into the Outlook PR_RCVD_REPRESENTING_NAME property.

### Folders and Views

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/EXALL</td>
<td>Except All</td>
<td>Ignore the “All Documents” folder and “Discussion Threads” when exporting folders. Useful in batch mode when you specify Convert = *</td>
</tr>
<tr>
<td>/D49 &lt;n&gt;</td>
<td>Suppress Folder Level</td>
<td>Used to suppress &lt;n&gt; levels of the folder name. For example, this switch can be used to remove “Exchange Folders/Local Folders” when adding messages to Lotus Notes</td>
</tr>
</tbody>
</table>
### Address Books

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ INCLUDED DBNAME</td>
<td>Database Name Appended to Folder Name</td>
<td>Appends the name of mail database to “Notes Folders”</td>
</tr>
<tr>
<td>/ SHOW VIEWS</td>
<td>Show Views during folder selection</td>
<td>Normally, the All Documents, Message Threads, and any other view will not be displayed or converted. This switch allows Views to be displayed, during folder selection, and converted</td>
</tr>
</tbody>
</table>

### Address Format

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ D25</td>
<td>No Filter</td>
<td>Do not do a filter to remove “CN=” designator from addresses</td>
</tr>
</tbody>
</table>
### /USEADDR

**Use Email Address in Dlist List**  
When importing into Notes, set dlist and sender address in the form "Display Name <email address> instead of just the display name.

### /USEADDR2

**Use Only Email Address in Dlist**  
When importing into Notes, this switch will only insert the email address.

### Calendars

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/D118</td>
<td>Repeating Entries</td>
<td>When exporting the calendar and if the entry is repeating then only convert the first one</td>
</tr>
<tr>
<td>/D127</td>
<td>Repeating Entries</td>
<td>Limited support for converting Notes repeating entries to true Outlook repeating entries</td>
</tr>
<tr>
<td>/D138</td>
<td>Appointments</td>
<td>Allow appointments to be migrated when exporting email. The default behavior is to skip appointments if they are found during email migration.</td>
</tr>
<tr>
<td>/D40</td>
<td>Location in Cal</td>
<td>Add &quot;Location&quot; if present to top of calendar body text</td>
</tr>
<tr>
<td>/D9</td>
<td>Cal Subject</td>
<td>When exporting Calendar, get the message body from the “Subject” field</td>
</tr>
<tr>
<td>/PUBLICAL</td>
<td>Calendar is Public</td>
<td>When writing Notes calendar, make it publically available</td>
</tr>
</tbody>
</table>

### Embedded Objects

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/D97 &lt;n&gt;</td>
<td>Image quality</td>
<td>By default Transend Migrator will export Lotus Notes bitmap images as GIF files. If you prefer images exported as JPEG, use the /D97 &lt;n&gt; switch option where &lt;n&gt; is the number 1 through 12. This number represents the quality of the JPEG image (12 is the best). A higher number will result in a larger image attachment. If you use the /D97 switch but do not specify &lt;n&gt;, the default value is 6.</td>
</tr>
<tr>
<td>/EXRTF</td>
<td>Export RTF</td>
<td>Exports message text as a Rich Text File (RTF) document attachment. This will preserve formatting, but in general, you will have to select the attachment in the target system to view the message. The exception is Microsoft Outlook, which will display the RTF in the...</td>
</tr>
</tbody>
</table>
message text. In Lotus Notes 7.0 and below, the /EXRTF switch exports most graphics as black and white images, and they are not savable.

### Startup

If you want to convert from a Lotus Notes account and that account requires a custom notes.ini file then you must tell Transend Migrator which notes.ini file to use. Otherwise, the default notes.ini file, if it exists, will be used.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/NOTESINI &quot;&lt;full path to notes.ini&gt;&quot;</td>
<td>Alternate notes.ini location</td>
<td>Use this switch to specify the full path to the notes.ini file.</td>
</tr>
</tbody>
</table>

### Template

Transend Migrator will automatically create a Lotus Notes NSF file when Lotus Notes is the output choice, and when a “template” NSF file is provided. This is useful when migrating to NSF file rather than directly to Domino Server.

The template is an NSF file database created by the Lotus Notes email client. Transend Migrator supports either the Personal Address Book or Mail type template. To create a Mail or Personal Address Book template complete the following steps:

1. Start Lotus Notes
2. Select File from the menu
3. Select Database
4. Select New
5. Select either the Personal Address Book or Mail template type
6. Enter the Title information
7. Enter the path and filename for the new template
8. Select OK to create the new NSF file

Once the NSF file template is created then the database is referenced through one of the following switch options:

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| /D91 <file> | Specify MAIL | Used to specify a “Mail” template when automatically creating NSF files. The template to create is a user created NSF file, which Transend Migrator will use to
NSF automatically create NSF files when the NSF file is the output choice. The NSF file must be of the "Mail" type.

/D92 <file> Specify ADDRESS BOOK template to create NSF

Used to specify an “Address Book” template when automatically creating NSF files. The template is a user created NSF file, which Transend Migrator will use to automatically create NSF files when the NSF file is the output choice. The NSF file must be of the “Address Book” type.

Section 8: Custom Options: Office 365

Transend Migrator contains hundreds of Custom Options that alter the default behavior of Transend Migrator. Select Migration Options / Custom Options from the main menu in order to configure available options.

To view general Custom Options that are not specific to any messaging system, refer to the Custom Options / General section of the Help File.

The following Custom Options alter the behavior of Transend Migrator when migrating into Office 365:

**Email Messages**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/EWSARCHS</td>
<td>Archive Mailbox - Source</td>
<td>When Office 365 or EWS is the source email application, this switch tells Transend Migrator to migrate items from the user’s Archive Mailbox instead of the main user mailbox.</td>
</tr>
<tr>
<td>/EWSARCHT</td>
<td>Archive Mailbox - Target</td>
<td>When Office 365 or EWS is the target email application, this switch tells Transend Migrator to migrate items into the user’s target Archive Mailbox instead of the main user mailbox.</td>
</tr>
<tr>
<td>/AUTHHTTP</td>
<td>Parameter</td>
<td>Determines the type of http authentication used: 1=Basic, 2=Digest, 4=GSS, and 8 =NTLM.</td>
</tr>
<tr>
<td>/AUTHEWSI</td>
<td>Parameter</td>
<td>Use this switch to specify the credentials of an administrator performing a batch conversion via Impersonation. The required values are the address and password (syntax: admin</td>
</tr>
</tbody>
</table>
**/AUTHEWSD Parameter**  
Use this switch to specify the credentials of an administrator performing a batch conversion via delegation. The required values are the address and password (syntax: admin|password).

**/D198 Enable/Disable**  
Do not generate the “Expect: 100-continue” http header, which will not work with some EWS servers.

**/D1 Insert email address into display name.**

### Address Books

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/CF</td>
<td>Parameter</td>
<td>Change default name of Contacts folder. This is useful when contacts folder names are not English.</td>
</tr>
</tbody>
</table>

### Calendars

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/CAF</td>
<td>Parameter</td>
<td>Change default name of Calendar folder. This is useful when contacts folder names are not English.</td>
</tr>
</tbody>
</table>

### Tasks

<table>
<thead>
<tr>
<th>Switch</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/CAT</td>
<td>Parameter</td>
<td>Change default name of Contacts folder. This is useful when contacts folder names are not English.</td>
</tr>
</tbody>
</table>

### Section 9: Command Line Batch Processing

An alternate way of starting a batch migration is through the command line or with a batch file. Once all Email, or Address Book, or Calendar, or Tasks sections have been set you normally begin the migration by pressing the Start Single Migration or the 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 choice.
1. Setup a migration project for one user or for a batch of accounts.
2. Load the user list if you are migrating in batch mode.
3. Save your configuration by selecting File / Save Configuration As... from the main Transend Migrator screen. Name the configuration file and keep it short. Once have saved your settings into a configuration file you can then run a batch migration from the command line. Review the Command Line Syntax & Example section for the command line detail.

**Command Line Syntax & Example**

**Syntax**

```
TM10.EXE /CMDL /F <path and filename>
```

**Example**

```
TM10.EXE /CMDL /F C:\ProgramData\Transend\Project.tmd
```

**TM10.EXE**

This is the Transend Migrator executable. If you run this command all by itself then the Transend Migrator program will start in regular mode.

**/CMDL**

This switch tells Transend Migrator to run in command line mode. It expects the /F <filename> switch.

**/F <filename>**

The /F switch tells Transend Migrator to perform a migration based upon the settings saved inside the TMD filename specified.

**Additional Options**

```
/CONCURRENT <n>
```

Allows # of concurrent migrations to be set through the command line rather than using the Migration Monitor interface.

**Note**

The command line must be executed from the Transend Migrator installation directory. It will be easier to create a batch file using Notepad rather than manually running it from the command line. Here is an example of a simple batch file.

1. Start Transend Migrator and enter all the settings for one or more accounts.
2. Save your configuration by selecting File / Save Configuration from the main Transend Migrator screen. For this example, save your configuration file into C:\Migrate\project.tmd
3. Create a batch file and use the Batch File Example as a guide.
Batch File Example

```batch
@Echo off
Color 1F
:START
TM10.EXE /CMDL /F C:\Migrate\project.tmd
Goto End
:End
Exit
```

Run the Batch File

Double-click on the batch file using Windows Explorer. Once the batch file starts it will load the Migration Monitor and begin migration. When the migration completes the Migration Monitor will exit.

Section 10: 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: \((\text{Gigabytes}/\text{Rate})/\text{PC's}\).

In Microsoft Excel, your formula would look similar to: 
\[ \text{=(E14/E16)/E15} \]

**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**

**Number of Days** 116.67

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**

**Number of Days** 23.33

In the spreadsheet example above, it will take 0.97 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.
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 11: Entity Matching

Entity Matching is a feature whereby Transend Migrator will load lists of users from selected source and target systems, and attempt to match source users to target users. The results are then imported into the Batch Mode Data screen for use in automating a batch migration. The match is done based primarily on the email address, and secondarily on the display name. Only the prefix of the email address is used (the part before the '@' character).

Once a match is made, the data imported into the data table consists of whatever is needed to connect to the systems in question. It may be necessary to add additional data (via batch mode substitution). For example, when importing users from Active Directory (Microsoft Exchange), Transend Migrator will retrieve the short user name, e.g. "jsmith". In the "Profile or PST" field of the E-mail Configuration screen, you would enter "servername!!$var1" (or $var2).

For some systems, Transend Migrator will require you to supply the name of an address list extract file, or a global directory file. Those cases are discussed in the sections below.

1. Select Batch Mode Setup from the Batch Migration menu.
2. Press the Entity Match button.
3. Choose your source and target system for entity matching.
**Office 365**

Transend Migrator requires you supply an "Office 365 User List" file. This file is obtained using Microsoft's PowerShell utility. See the help section [Office 365 (EWS)](#) for information about how to run PowerShell and connect it to your remote server.

Once that is done, enter the following command:

```
get-Mailbox -ResultSize Unlimited | Format-List Displayname, PrimarySmtpAddress > c:\migrate\userlist.txt
```

**Note**

Property names are case-sensitive. You may use any filename/directory.

**Lotus Notes**

Transend Migrator will require you to supply the name of the Lotus Notes global address database, usually called "names.nsf" and stored in the Domino data directory.

**Comments**

Once you have selected your systems and supplied the necessary information, press the "Match" button. Assuming there are no issues with data access, Transend Migrator will display the number of users found for each system, and the number of matches that were made. At this point, you will have the option of importing the results into the data table. All users in the source system will be imported, whether or not there was a match found for each user. In the case where no match was made, the corresponding row in column $var2 will be blank. These entries will need to be updated or deleted.

**Note**

The original data (if any) in the data table can be recovered, if you don't like the results, by exiting Transend Migrator without saving the configuration file. If you don't want to perform matching, but want to retrieve a user list from one of the supported systems, you can leave the target system as "Please Select", in which case, only column $var1 is populated.
Section 12: Validate Batch Setup

Use this feature to test your batch settings before beginning your batch migration. This feature will test the logon for each section you specify, and for each user listed in the Batch Mode Data table.

**Batch Migration Setup Test**

1. Select the source and target types you want to test the logon for.
2. Press the Start Test button.
3. Review your results.

**Batch Migration Setup Report**

Review the Batch Migration Setup Report results. If there are any connection failures, press the View Log button to review the log file generated during the test.
1. Press the View Report button to view the test results. The report is in XML format, and viewable with Microsoft Excel. It will list each section tested (email, address book, calendar, and task), and it will report the success or failure of the source and target connection test.

2. Press the View Log button to view the master log file generated during the test. The log file is the master log file, and it will show the results of your validation test. Review this log file if you have a connection test failure, and look at the end of the log file for your latest test. Failures are recorded in the color red.

3. Press the OK button to exit the test.

**Section 13: 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.

**Caution**

Once the schedule has been set it will become effective and begin only after pressing one of the Start Migration Buttons. Migration will not happen if you close Transend Migrator.

You do not have to set all options in the Migration Schedule. Only the values with an enabled checkbox will take effect after pressing the Start Migration Button.
### Description of Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>This is the time Transend Migrator will begin the pre-configured migration. Remember, after setting the Start Time press the OK button. Then, when you get back to the main screen press one of the Start Migration buttons in order for the migration to begin at the designated time. Transend Migrator must be running in order for the Migration Schedule to work.</td>
</tr>
<tr>
<td>Pause Time</td>
<td>Set this time only if you need Transend Migrator to stop processing at a given time. Transend Migrator will complete the open migrations before entering into pause. Therefore, set the pause time to happen far in advance so that it can complete and not interfere with the reason you required a pause.</td>
</tr>
<tr>
<td>Resume Time</td>
<td>Set this time to resume a paused migration.</td>
</tr>
<tr>
<td>Stop Time</td>
<td>If you must stop a migration at a specific time then set the Stop Time value. Transend Migrator will complete any process it is currently working on and it will not start another process after the stop time. If you stop a migration before all accounts are migrated then you will have to restart those jobs.</td>
</tr>
</tbody>
</table>

### Helpful Hints
1. Test the Migration Schedule feature first.
2. Turn off Windows Updates so that your Migration Computer will not update itself while the migration is running.
3. Turn off Anti-Virus and spam filters so that they do not intercept messages or delay performance.
4. Turn off any automated updates or disk optimization utilities for the computer performing the migration.
5. Turn off any graphical screen savers, and use only a blank screen if you need to use a screen saver.
6. If you are migrating into an attached drive, ensure that it does not go to sleep while the system is waiting to begin migration.
Section 14: Reporting / Logging

Reporting

Migration reports in XML format will be created after each successful run, and they can be opened up with Microsoft Excel. Those 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>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>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>User ID</td>
<td>Status</td>
<td>Database / User</td>
<td>Time Started</td>
<td>Time Ended</td>
<td>Elapsed Time</td>
<td>Folder Count</td>
<td>Email Count</td>
<td>Address Count</td>
<td>Calendar Count</td>
<td>Task Count</td>
</tr>
<tr>
<td>1</td>
<td>Completed</td>
<td>picedall jeniffer jones 1/2/2011 10:26:56</td>
<td>1/2/2011 10:26:56</td>
<td>00:01:40</td>
<td>23</td>
<td>176</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Completed</td>
<td>picedall jeniffer jones 1/2/2011 10:27:39</td>
<td>1/2/2011 10:27:39</td>
<td>00:01:19</td>
<td>33</td>
<td>589</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Completed</td>
<td>picedall john smith 1/2/2011 10:28:39</td>
<td>1/2/2011 10:28:39</td>
<td>00:01:20</td>
<td>16</td>
<td>605</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Completed</td>
<td>picedall beverly johnson 1/2/2011 10:29:37</td>
<td>1/2/2011 10:29:37</td>
<td>00:01:20</td>
<td>59</td>
<td>92</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The default detail contained within the XML Report contains the following information:

- User ID
- Database / User
- Time Started
- Time Ended
- Folder Count
- Address Count
- Task Count
- Skipped Entries
- Status
- Time Started
- Elapsed Time
- Email Count
- Calendar Count
- Attachment Count
- Data Rate (megabytes per hour)

The following option is available to change the XML report detail. Use the following switch and value to increase or decrease the level of detail.

**Switch** | **Value** | **Description**
--- | --- | ---
/NOXMLREPORT |  | Use this switch to disable XML reporting. No XML report will be produced when this switch is used.
/XMLREPORTLEVEL | <n> | Use this switch and value to determine the level of detail recorded into the XML report. The default value is 1. Increase the value to 2 if you want to record Folder Names and Entry Counts for those folders.

**Note**
Transend Migrator reports the number of attachments converted with each message; however please be aware that this number may include graphic images embedded within HTML documents. Therefore, the number of actual attachments visible in your email client, such as Word or Excel files, may be different than reported.
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:

<table>
<thead>
<tr>
<th>Windows XP</th>
<th>C:\Documents and Settings\All Users\Application Data\Transend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Vista</td>
<td></td>
</tr>
<tr>
<td>Windows 7</td>
<td>C:\ProgramData\Transend</td>
</tr>
</tbody>
</table>

Each time you migrate an account, Transend Migrator will create a user specific log file inside a subdirectory from one of the two system folders listed in the above table. This subdirectory will be called default, which is the same name as the default configuration TMD file containing all of the settings and options used in the user interface. If you create custom configuration files the subdirectory containing user log files will be given the custom configuration’s name rather than default.

The following switches are available to change the way Transend Migrator records information inside the user specific log files.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/LAP</td>
<td>This switch tells Transend Migrator to append to the existing log file instead of creating a new one on each run.</td>
</tr>
<tr>
<td>/LL</td>
<td>Use this to create a Summarylog.txt file.</td>
</tr>
<tr>
<td>/LNO</td>
<td>Use this switch to disable logging. Creating a log is enabled by default.</td>
</tr>
<tr>
<td>/LSUB</td>
<td>If enabled, each message converted will have its subject added to the log file.</td>
</tr>
<tr>
<td>/LTEXT</td>
<td>Use this switch to create text log files instead of HTML log files.</td>
</tr>
<tr>
<td>/LTS</td>
<td>Adds a timestamp value to each line in the log file.</td>
</tr>
</tbody>
</table>
Section 15: 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.

Lotus Notes
If your Notes/Domino accounts require a password then you need to provide the ID file and password for the NSF file being migrated. Often, you can use the Admin ID file and password for most Domino NSF files; however, if messages are encrypted then use the ID file and password required for the encrypted messages.

1. If you are prompted twice for the Notes password then see the Installation section of this help file for information on how to correct this.
2. If you enter a password for the alternate NSF file but the password does not work then Lotus Notes could be using the default ID file for the Lotus Notes email client. Close Transend Migrator, open up the Lotus Notes email client, change ID files, and then close Lotus Notes. Now, Lotus Notes is set to use the ID file. Begin your migration again and enter the password.
3. Alternately, you can enter special syntax in the password box for the Lotus Notes NSF file. The alternate syntax will be masked. Therefore, type in the required values in Notepad, copy the data, and then paste it into the password box. The alternate syntax allows you to specify a password and the ID file to be used. The syntax is <password>;<path&idfile>. For example, if the password is secret and the ID file is found inside C:\Migrate, and the ID file is named jsmith.id you would type: secret;c:\migrate\jsmith.id.
Section 16: 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

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