# Quesť

# Quest<sup>®</sup> Migrator for Notes to Exchange 4.15.2

### **Release Notes**

### November 2018

These release notes provide information about the Quest<sup>®</sup> Migrator for Notes to Exchange release.

Topics:

- About Migrator for Notes to Exchange
- New Features
- Enhancements
- Resolved issues
- Known issues
- System requirements
- Upgrade and compatibility
- Product licensing
- Getting started with MNE
- More resources
- Globalization
- About us

# About Migrator for Notes to Exchange

Migrator for Notes to Exchange (MNE) is a set of coordinated software applications designed to facilitate a variety of migration strategies for organizations moving from a Lotus Domino server, with Lotus Notes clients, to a Microsoft Exchange environment with Outlook clients. MNE can migrate either to a proprietary Exchange environment, or to a hosted Exchange service like Microsoft's Office 365.

MNE 4.15.2 is a minor release, with enhanced features and functionality. See the Enhancements and Resolved issues sections below.

# **New Features**

### Support for modern authentication

The SSDM now supports modern authentication. You can configure the SSDM to use Azure Active Directory Authentication libraries when connecting to Office 365 by enabling the Exchange Server setting **Use Modern Authentication for SSDM**. For more information on modern authentication, see this Microsoft page.

New INI parameters have been added to support modern authentication.

The following parameters have been added for the administration components:

- [MsOnlineAuthorityUrls] section
- [OutlookRestApiUrls] section

The following parameters have been added for the SSDM:

- [Exchange] EnableModernAuthentication
- [Exchange] 0365AuthenticationUrl
- [Exchange] 0365Tenant

See the MNE Program Parameters Reference Guide for details.

### **MAPI Retry**

MAPI retry is a feature of MNE that attempts to recover from intermittent or brief network connectivity issues. Starting with 14.5.1 Hotfix 4, MNE includes the following new MAPI retry feature.

• MNE now performs additional MAPI reconnect attempts if the first MAPI reconnect attempt fails.

MNE performs MAPI reconnects when an error from the MAPIErrorsToRetry list is encountered while storing migrated items to the Exchange mailbox. The maximum number of reconnect attempts is configured with the new parameter [Exchange] MaxSessionReconnectCount, which has a default value of 20.

• The MAPI retry logic has been enabled for the SSDM.

The following is a list of the MAPI retry parameters.

- MAPIErrorsToRetry
- MAPIRetryCount
- MessageRetryCount
- MessageRetryWait
- MaxSessionReconnectCount=20

For a description of the parameters, see the MNE Program Parameters Reference Guide.

### **Set Password**

Setting passwords is a feature of MNE that attempts to set AD passwords for newly created users during provisioning and provides them in the 'migration notification message' during migration. Starting with 14.5.1 Hotfix 9, MNE includes the following new set password feature.

MNE now generates a random password, which complies with the AD Global Password Policy, and applies it to a newly created AD user object. There are four options that help to specify the related attributes of newly created AD user object during provisioning:

User must change password at next logon

- User cannot change password
- Password never expires
- Account is disabled

If the target Exchange Server is On-Premises Exchange, a password is set during provisioning. AD account and password information is provided in a notification message through the template file ada template.html.

If the target Exchange Server is Office 365 with **Use Azure Active Directory Synchronization**, then the password is already set during provisioning. The GUI option **Reset user passwords** on the *Select Office 365 Administrative Operations* wizard page is disabled during migration. AD account and password information is provided in a notification message through the template file ada\_template.html.

For this feature, the following parameters have been updated:

- [ActiveDirectory] EnableUsers
- [ActiveDirectory] ProvisionUsers

The following new parameters have been introduced:

- [ActiveDirectory] UserCannotChangePassword
- [ActiveDirectory] UserChangePasswordAtNextLogon
- [ActiveDirectory] UserPasswordNeverExpires

For a description of the parameters, see the MNE Program Parameters Reference Guide.

# Enhancements

The following is a list of enhancements implemented in Migrator for Notes to Exchange 4.15.2.

Table 1. Enhancements

Enhancement	Issue ID
The parameter [Notes] DocLinksPreferCNForNotesUrl has been added.	782828
When [General] HTMLdoclinks=3, migrate DocLinks to Exchange as Notes links (the default) and DocLinksPreferCNForNotesURL is set to (1), the Domino Server CN name is used.	
The new parameter [Notes] ReplaceForwardAddressInUserName has been added to MNE. When set to 0, MNE adds the Forward address to the <b>User Name</b> field without removing the existing address.	782722
The new parameter [ActiveDirectory] UseInternetAddressForUPN has been added to MNE. When set to 1, it tells the program to set the UPN to an internet address for the user when the object is provisioned.	778638
The parameter [Notes] PrependSmtpAddressToUsername has been updated and now applies when the coexistence method is <b>SMTP</b> .	776215
A new option has been added to the [Exchange] RemigrateMode parameter. When set to 2, it tells the program that if the source item in Notes was modified after a previous migration, delete the Exchange copy of the item and then remigrate it from Notes. If the source item in Notes has not been modified, leave the previously migrated copy in Exchange.	
When executing the "Prepare local Active Directory accounts for MS AD Sync" operation, allow user objects to retain their current mailNickname attribute value by configuring the optional [ActiveDirectory] AlwaysUseOldAlias parameter.	759845
If AD accounts have been created during the User Provisioning task, MNE is now able to provide the passwords of the newly created AD accounts to end users in the "You've Been Migrated" notification email that is sent when the data migration is complete.	774745

Table 1. Enhancements

Enhancement	Issue ID
When MNE migrates MIME messages, it ignores message headers that do not use the standard RFC 822 format. With this enhancement, all message header information is migrated regardless of he format.	774239 725165
Vhen MNE migrates MIME messages, some message body parts are extracted and added as ttachments. With this enhancement, the message header information (From, To, Date, etc.) is dded to the attachment.	773346
Vhen migrating to Office 365, the attachment size filter can no longer be set to <b>None</b> .	767514
he <b>Attachment size</b> defaults to 24.5 MB, which is the maximum message size allowed by Office 65.	
ew INI parameters have been added to support modern authentication. See Support for modern uthentication.	766489
y default, when the SSDM migrates an archive to a PST file, the SSDM registers the PST file in ne Outlook profile. You can now prevent the PST file from being registered by setting the new SDM parameter [Exchange] AddPstFilesToProfile to 0.	764575
dministrators can now disable the SSDM option to migrate encrypted messages. When the new arameter [General] AppDoesEncrypted=0, the Include Encrypted Messages option is not isplayed on the Specify Data for Migration screen.	761854
INE now supports TLS 1.2. The following requirements for Office 365 targets have been added nder System Requirements for MNE admin migration servers:	757722
.Net Framework 4.5	
<ul> <li>For systems running Windows 2008 R2, TLS 1.2 must be enabled as the default secure protocol. See this Microsoft support page.</li> </ul>	
he Data Migration Wizard <b>Task Progress</b> and <b>Task Completed</b> pages now display the onfiguration template name and user collection name to help Administrators identify the current nigration.	749249
INE now supports Microsoft's Azure Active Directory PowerShell for Graph - General Availability ersion. This version is required for Office 365 targets.	747782
zure AD Module for Windows PowerShell x64 edition (PowerShell V1) has been deprecated. INE will remove support for this module in a future release.	
ne URI used for the Microsoft global Office 365 cloud has been updated to	746458
ttps://outlook.office365.com/powershell-liveid/.	744500
NE supports the import of TSV files stored as Unicode or UTF-8. When importing TSV files, MNE ow indicates that the file must be stored as Unicode or UTF-8.	
ou can elevate the Notes' Manager, Designer, and Editor access levels for the Mail-In database hich have "Delete documents" rights to Full Access permission in the Exchange Shared mailbox y setting the new parameter ElevateMailInDBEditorAclToFullAccess=1.	741973
nproved the error message that is returned when the Add-MNEUserCollection PowerShell ndlet is used to add a user collection whose name conflicts with an existing collection.	735982
NE now supports Outlook 2016. The requirements for Outlook 2016 have been added to this elease Notes document.	735924
ne parameter [Exchange] AutodiscoverDisableMapiHttp has been updated. You can ow configure MNE to use RPC over HTTP when migrating to Office 365.	734687
y default, the AD Provisioning wizard includes disabled users in AD groups. You can now skip sabled users by setting the parameter SkipDisabledGroupMembers=1.	734440
/hen launching migrations using PowerShell, the user can choose to display and control the Data ligration Wizard progress window using the following new parameters:	733088

- ShowProgressDialog
- ProgressDialogIsTopmost
- ManuallyCloseProgressDialog

Table 1. Enhancements

Enhancement	Issue ID
When migrating to on premises targets, Notes ACL rights are mapped to Exchange permission levels and applied recursively to migrated folders. This behavior can now be duplicated for Office 365 targets using the new parameter [Exchange] MigrateWellKnownFolderAclOnly.	732506
When executing Invoke-MNE PowerShell cmdlets that may take some time, a progress indicator is displayed.	732448
The owner "Editor" permission level is no longer added to the folder permissions in Exchange. The mailbox owner already has full access to the mailbox and all folders and messages in the mailbox.	728107
The pre-requisite checker now supports German and Chinese Office 365 tenants.	726210
The new INI setting [FolderTreeFilters] allows you to filter out an entire folder hierarchy. When a folder is specified using this setting, the specified folder and all its sub folders are excluded from the migration.	723720
The [Exchange] MaxExtractedImageArea INI parameter has been added to allow	738504
specification of a maximum size for images stored as attachments when [Exchange] ExtractEmbeddedImages=1. This feature was implemented to reduce the impact to migrated	610913
Exchange mailbox sizes when the migrated messages contain a significant number of large images.	438569
Improved the migration of recurring meeting update messages and cancellation messages. These improvements include:	683864
• Recurring meeting update messages and cancellation messages that are applicable to multiple meeting instances are now supported. These messages are generated when the user selects the <b>This instance and all previous/future instances</b> option when updating or canceling a meeting instance. Multiple copies of each message are created in the Exchange Inbox, with one message for each instance being updated or canceled.	
• Cancellation messages that cancel <b>All</b> Instances of a recurring meeting are now supported. Messages that cancel <b>All</b> Instances are migrated to Exchange as a meeting series cancellation message. This type of message cancels the entire meeting series, rather than canceling individual instances of the recurring meeting.	
On the Data Migration wizard <b>Personal Archive Location</b> page, there are now additional configuration options for generated PST file names.	683852
The migration log file now contains additional information regarding skipped messages.	651571
During data migration, you can now open the new <b>User Migration Status</b> window from the Data Migration Wizard <b>Task Progress</b> and <b>Task Completed</b> pages by clicking the <b>User Status</b> button. The <b>User Migration Status</b> window displays detailed per-user migration status in real time during the migration.	456413
By default, the migration status information is updated every 15 seconds. You can adjust the update interval with the new parameter [General] DetailedMigrationUserStatsUpdateInterval.	
Users can respond to a meeting request with a counter proposal. MNE now supports the migration of meeting counter proposals.	383276 227303

#### Table 1. Enhancements

Enhancement	Issue ID
MNE now supports all Office 365 license plans that include an Exchange mailbox and permit connecting to that mailbox with Outlook and the Exchange Web Service (EWS).	321041

#### **Office 365 Administrative Operations**

MNE now supports multiple Office 365 SKUs.

When setting options in the **Office 365 Administrative Operations** screen in the Data Migration Wizard, MNE remembers the last selected Office 365 license plan and the disabled services, if any. However, this is not the case for users that have manually set licensing options in global settings using the parameters [Exchange]0365AccountSkuId and [Exchange]0365DisabledServicePlans. These settings were previously used support users

[Exchange]0365DisabledServicePlans. These settings were previously used support users with multiple Office 365 SKUs.

If they have been manually set, it is recommended that you remove these two parameters from global settings since they are no longer required.

The ErrorsToIgnore INIs now work for provisioning and Directory Exporter.	237295
Migrated meeting invitations now appear in the calendar without first having to open the invitation in Outlook.	211841
A Notes distribution list has two owners but when migrated to Exchange, only one owner is provisioned. Both owners are now provisioned as Exchange distribution list managers.	199532
In the <i>MNE Pre-Migration Planning Guide</i> , the roles and permission setting for the SQL server have been reviewed and updated.	174073

# **Resolved** issues

The following is a list of issues addressed in this release.

Table 2. Resolved Issues

Resolved issue	Issue ID
Resolved an issue where migration statistics are not uploaded to the MNE console when the worker process crashes or is killed or, the migration is canceled.	786393
Resolved an issue where [Exchange] MigrateMeetingFYIAsResource=0 but FYI attendees are migrated as a Resource instead of an Optional Attendee.	785879
Resolved an issue where AD provisioning fails due to the settings used to <b>Specify Method for</b> <b>Finding Objects in AD</b> . In this scenario, provisioning fails when <b>Choose a database column</b> <b>from the following</b> is set to <b>TargetAddress</b> and <b>Specify the Active Directory Attribute that</b> <b>matches</b> is also set to <b>TargetAddress</b> .	784266
Resolved an issue where the Task Completion screen shows no real migration statistics when the worker processes are dead or the migration is canceled.	783506
Resolved an issue with a time delay during group provisioning. When the target is Office 365 and Active Directory Dir Sync is enabled, MNE must not try to call 'Disable-MailContact'.	783236
Resolved an issue with the latest Windows Server 2016 update KB4343887. When this update is installed, errors occur when opening the Admin Account Pool management utility.	782747
Resolved an issue that occurs when the DC is configured to prevent resource forest accounts from being enabled. In this scenario, MNE fails to create a mailbox for a user or resource and displays the error message "Unable to enable logon for"	782707
Resolved an issue where the wrong start time is displayed in the Schedule Summary window when running scheduled tasks.	781734

Table 2. Resolved Issues

Resolved issue	Issue ID
Resolved an issue where if a recurring calendar item has any instance changed after a previous nigration, duplicate calendar items can occur when remigrating.	780858
Resolved an issue where in a number of scenarios, embedded graphic elements such as images and document links are rendered incorrectly at the end of the message's body after migration. When [Exchange] RewriteRTF is enabled (set to an integer other than 0), the graphic elements' render positions in an RTF message body are impaired and cause this issue.	778656
Resolved an issue where the User Collection wizard crashes when exporting the collection to a SV file.	778400
Resolved an issue where MNE migrates to the primary mailbox instead of the archive mailbox in one specific scenario. When migrating to an in-place archive mailbox with a shared MAPI profile using Outlook 2016, the primary mailbox is opened instead of the in-place archive mailbox.	776610
The MNE HTML parser has been updated to allow HTML5 syntax in cases where an HTML5 acdoctype> declaration is not present.	776467
Resolved an issue where user details, such as the Microsoft Online account and password values and migration statistic values, are not written to notification emails.	775742
Resolved an issue where private contacts in Notes are not marked as private in Outlook after nigration.	775228
Resolved an issue where Activemail processing moves data around outside of table columns.	774820
Resolved an issue where body text is not visible in Outlook after migration due to a missing RTF ag in the RewriteDocLink process.	774659
Aigrated MIME encoded HTML emails with UTF-16 character encoding declared in the HEAD element of the message can appear in Outlook as garbled text.	774144
This issue can be resolved using the new parameter [Exchange] JpdateHtmlWithMismatchedCharset. When the parameter is enabled, MNE checks for the character set in the HTML HEAD element and when found, the character set is replaced with the MIME header character set.	
Resolved an issue where TargetAlias values in the TSV file are truncated to 255 characters when mported using <b>Import objects from TSV</b> .	772684
Resolved an issue where the Locate Notes Store is not working as expected when multiple search olders are specified.	772376
Resolved an issue where MNE is unable to send notification messages to Office 365. In this scenario, when the target is Office 365 and no data is migrated, a user profile is not created and notification messages cannot be sent.	770714
Resolved an issue where Notes hyperlinks with HotspotBegin are not migrated.	769728
oresolve an issue where tasks are migrated with the wrong reminder time, the new parameter [Exchange] AdjustTaskReminderToMidnight has been added.	767035
n Notes and iNotes, when users set a task reminder to X days, hours, minutes before or after the ask start date, the alarm notification is triggered X days, hours, minutes before or after 12:01 PM of the task start date. When this parameter is set to the default value (1), after migration the alarm notification is triggered X days, hours, minutes before or after 12:01 PM.	
Resolved an issue where running the Locate Data Store task results in duplicate stores.	764911
Resolved an issue where the Office 365 Admin Account Pool is not fully utilized during migration.	764145
Resolved an issue where migrated tasks display the wrong date in the Outlook Web App (OWA).	763557
Resolved an issue where meeting invitations are migrated without reminders set.	758876
Resolved an issue where the user is unable to select multiple address books to migrate with the SSDM.	747389
Resolved an issue where MNE may crash when the remote PowerShell connection to Office 365 loes not open.	746495
Resolved an issue where recurring appointments in the Notes calendar that contain poorly	743714

Table 2. Resolved Issues

Resolved issue	Issue ID
Resolved an issue where the Migration Statistics Data is not updated to the Migration console tatistic when the worker process restarts because the MAPI retry limit is exceeded.	739571
Resolved an issue where setting the PowerShell Throttle Settings to 11 or greater results in a ailure to retrieve the configuration.	736624
Bitmap images embedded within emails are now extracted and stored to Exchange as attachments when ExtractEmbeddedImages=1.	734528
Resolved an issue where the progress window briefly shows incorrect numbers at certain points luring the migration.	729775
The online help for MNE PowerShell cmdlets has been updated to correct syntax errors. The MNE Administration Guide has also been updated.	728756
Resolved an issue where the MNE Migration Console may crash if the <b>Apply</b> button on the Exchange Server page is clicked a second time.	724721
he SSDM may crash when installed on a non-English operating system with Outlook 2016 and [Notes] RewriteDocLinks=1.	709742
o resolve the issue, set [Exchange]RewriteRTF=7. An entry has been added under SSDM Known Issues below.	
Resolved an issue where the Locate Notes Data Store makes incorrect matches when a data store s found whose owner no longer exists in the Notes Directory.	694597
Resolved an issue where updates to TSV-Imported values are not applied.	691800
Resolved an issue where email is migrated with the wrong Exchange recipient when:	691308
<ul> <li>the correct recipient no longer has an SMTP address</li> </ul>	
<ul> <li>another Notes user has the same display name</li> </ul>	
Resolved an issue where running the user collection provisioning process without a template when the settings for <b>Specify Container for User Objects</b> in a saved template.	653563
Resolved an issue where Active Directory objects are opened using the credentials of the currently ogged in user instead of the credentials provided in the Active Directory section of the configuration.	649327
Resolved an issue where the SSDM does not apply folder permissions properly for some users in he access control list.	605375
Resolved an issue where the -WorkStation parameter is ignored when used with Invoke-MNE PowerShell cmdlets.	579079
he following cmdlets have been removed from the Quest.MNE.Powershell module:	576959
• New-MNESchedule	
• New-MNETask	
• Remove-MNETask	
• Set-MNETask	
<ul><li>Set-MNETask</li><li>Set-MNETaskSchedule</li></ul>	

Resolved an issue where multiple archive migrations with different date ranges results in duplicate 574099 archive folders in Exchange.

Resolved an issue where AdObjMerge throws OutOfMemoryException on provisioning. 501741

# **Known issues**

Most of the known issues and limitations of any migration process are due to feature inconsistencies between the source and target environments. That is, features that are available in the Notes environment simply cannot be

migrated to a target environment that does not offer the same or comparable features. Other limitations are due to feature incompatibilities, where similar features are available in both the source and target environments, but their implementations are so different that the migration may be impractical. In any case, most administrators regard these sorts of limitations as trivial or incidental to an overall migration project.

Quest distinguishes between known "issues" (listed here), which are believed to be temporary and likely to be resolved in a future release, and known "limitations," which are believed to be inherent to the process and environmental architectures, and are likely permanent. Appendix A of the MNE *Pre-Migration Planning Guide* provides a list of all such known limitations of the migration process as facilitated by the current version of Migrator for Notes to Exchange.

The following is a list of issues, including those attributed to third-party products, known to exist at the time of this release.

#### Table 3. General known issues

Known issue	Issue ID
Draft calendar items are migrated to Exchange, but after migration they are not fully functional.	100000
MNE truncates a Notes user's name if the Domino name exceeds the maximum name length in Exchange, but any subsequent run of the Directory Export Wizard will generate a duplicate object record, since the Wizard will not recognize the truncated name compared to the Notes original.	100071
When the Data Migration Wizard removes forwarding from an Office 365 user, and there is no local AD, the Wizard successfully completes its run, but generates three errors-two of which are failed attempts to locate the user in AD.	100088
When a recurrence pattern for a series of meetings is supported in Notes but not supported in Outlook, and when the organizer OR attendee, but not both, has been migrated, some updates/cancelations/responses for single occurrences will not work.	227308
A migrated recurring meeting may not correctly show the accept/decline status of a Notes user to whom a meeting invitee delegated the invitation, when the delegation and the delegee's acceptance or decline occurred prior to migration.	242781
Exchange does not let other applications (including Notes Migrator for Exchange) set the owner property of items migrated to resource mailboxes.	57381
When migrating only iNotes contacts, the Notes Mail Files screen does not appear, so you cannot choose to migrate via the server or the file system. The program will run via file system if that's what you chose for your last migration, unless you go into the Task Parameters or INI file and change it.	57447
The MNE Migration Worker process may crash when configured to share a single MAPI profile across all worker processes. This issue only occurs when the MAPI/HTTP protocol is enabled. The product's default configuration settings have been chosen to avoid this issue, but you may encounter this issue if the following combination of INI settings are used:	727841
[Exchange]	
AutodiscoverDisableMapiHttp=0	
MapiUseSharedProfile=1	
If migrating to Exchange 2013 or 2010: When merging contacts or mailbox-enabling in a migration to an Exchange 2013 or 2010 environment configured for one forest and multiple domains, the Global Catalog and Domain Controller settings (on the Active Directory Configuration screen of the Notes Migration Manager) must be set to a server in the domain that contains the Active Directory	75388

user objects to be merged or mailbox-enabled.

#### Table 4. SSDM known issues

Issue ID
790039
790015
787934
709742

#### Table 5. Offline Migration known issues

Known issue	Issue ID
When migrating off-line, the <i>HTMLdoclinks</i> program parameter, in the [General] section of the Data Migration Wizard's task parameters, must be set to 0 (zero). The <i>HTMLdoclinks=0</i> setting tells the Wizard to migrate Notes doclinks as Notes-style doclinks, which can be opened in Exchange only if a Notes client is installed on the client workstation. By default ( <i>HTMLdoclinks=1</i> ), Notes doclinks would migrate to Exchange as HTML-style links, which can be opened in a web browser if the user is able to use iNotes, but that default setting will cause errors in an offline migration.	30886

#### Table 6. Outlook known issues

Known issue	Issue ID
because Outlook determines message age by Last Modified time, which it updates to the migration date/time upon migration. Since all migrated messages become zero days old as soon as they are migrated, and Outlook won't let the Data Migration Wizard reset that property to its true pre- migration date/time, the Outlook archiving feature skips the messages until they have "re-aged" to the archive age (typically 30 days) following migration, at which time all of the migrated messages	58004
migration date/time, the Outlook archiving feature skips the messages until they have "re-aged" to	

# **System requirements**

- Lotus Domino servers
- Microsoft Exchange servers
- SQL server
- MNE admin migration servers

- End-user desktops (if running the SSDM)
- Server hosting the SSDM scheduling utility web service
- **i IMPORTANT:** The requirements listed here document the basic hardware and software requirements for Migrator for Notes to Exchange. MNE also requires certain configuration considerations and account permissions. Be sure to see these additional requirements in the MNE *Pre-Migration Planning Guide*, in chapter 1 under *Configuration requirements and account permissions*.

Before installing MNE, make sure your environment meets (or will meet) these minimum hardware and software requirements.

### **Lotus Domino servers**

Supported Domino source environments (all ranges inclusive):

- Notes/Domino 9.0.0 and 9.0.1
- Notes/Domino 8.5.0-8.5.3, and 8.0.0-8.0.2
- Notes/Domino 7.0.0-7.0.4
- Notes/Domino 6.x
- Lotus Live support: MNE provides partial support for migrations from Lotus Live, via the SSDM, for Lotus Notes client versions 8.5.3 or newer. This feature also requires you configure your local Notes client for Lotus Live, as described in the MNE *Pre-Migration Planning Guide*, in chapter 1 under "Configuration requirements and account permissions".

### **Microsoft Exchange servers**

**NOTE:** Migrator for Notes to Exchange supports Cumulative Update (CU) releases for all supported versions of Exchange. If you encounter an incompatibility with a newly released CU, contact Quest Support for a resolution.

#### Supported Exchange target environments:

- Exchange 2016: RTM
- Exchange 2013: RTM and SP1
- Exchange 2010: RTM, SP1, SP2 and SP3
- Microsoft Office 365:
  - All Office 365 license plans that include an Exchange mailbox and permit connecting to that mailbox with Outlook and the Exchange Web Service (EWS).
  - Office 365 environments:
    - Office 365 Global
    - Office 365 Germany
    - Office 365 operated by 21Vianet

### SQL server

MNE requires access to a Microsoft SQL Server. The following versions are supported:

- SQL Server 2008
- SQL Server 2008 Express Edition
- SQL Server 2008 R2
- SQL Server 2008 R2 Express Edition
- SQL Server 2012
- SQL Server 2012 Express Edition
- SQL Server 2014
- SQL Server 2014 Express Edition
- SQL Server 2016
- SQL Server 2016 Express Edition

Note the following:

- SQL must be installed either on the admin's migration server or on a separate server, with a minimum of 20GB free disk space.
- You may use an existing (installed) MS SQL Server, or install a new instance of SQL Server using one of the supported versions listed above.
- Quest recommends a full-featured (non-Express) edition of SQL Server for best performance of MNE's Directory Export Wizard, particularly for sites with a large number of groups or domains.

### **MNE** admin migration servers

Operating systems supported for migration to		Exchange 2016/2013/2010	Office 365
Windows Server 2016	64-bit	•	•
Windows Server 2012 or 2012 R2	64-bit	•	•
Windows 8	32-bit	•	
	64-bit	•	•
Windows Server 2008 SP2	32-bit	•	
	64-bit	•	
Windows Server 2008 R2	64-bit	•	•
Windows 7	32-bit	•	
	64-bit	•	•

Requirement	Description
Workstation hardware	<ul> <li>Must be a separate machine from the Exchange server, but a member of the same domain as AD and Exchange.</li> </ul>
	Minimum hardware requirements:
	<ul> <li>2 GHz dual-core processor, 4GB memory, 20GB free disk space.</li> </ul>
	• Recommended for improved performance, especially for high-volume migrations:
	2 GHz quad-core processor, 8GB memory.
	<ul> <li>1 Gbps NIC, and 1 Gbps or faster network connections among all migration servers and the Exchange and Domino servers.</li> </ul>
Required for all	.Net Framework 4.0 (Office 365 targets require .Net Framework 4.5)
Exchange target types, including Office 365	Microsoft SQL 2012 Native Client.
	Microsoft SQL Server 2012 Command Line Utilities (a free download from the link provided in the MNE Autorun).
	• Windows PowerShell 3.0, which is part of Windows Management Framework 3.0 (included with any MNE-supported OS except pre-SP1 editions of Windows Server 2008 R2 and Windows 7). If PowerShell 3.0 does not come with your OS, you can download Windows Management Framework 3.0 at this Microsoft link.
	<ul> <li>Lotus Notes must be installed in single-user mode and configured. The Notes client version must be one of 9.0.0–9.0.1, 8.5.0–8.5.3 or 8.0.0–8.0.2 or 6.0.0–7.0.4 (all ranges inclusive), and should match or be higher than the Domino server version.</li> </ul>
	• Default mail client must be a 32-bit edition (only) of Outlook. If migrating to an on- premises Exchange server, Outlook versions 2016, 2013 or 2010 are supported. If migrating to Office 365, Outlook versions 2016 and 2013 are supported. The Outlook client must also conform to Microsoft's version requirements for the applicable Exchange target version (see Exchange 2016 or Exchange 2013 or Office 365). Additional version requirements are listed under <i>Required for the</i> <i>MAPI over HTTP protocol</i> section below.
	<b>NOTE:</b> The minimum version for Outlook 2016 is 16.0.8420.1000. Only the Click-to-Run version is supported.
	<ul> <li>The MAPI DLLs required to perform a migration must be those that are part of Outlook, not the downloadable Exchange "server" MAPI.</li> </ul>
	<ul> <li>Update for Universal C Runtime in Windows. See the Microsoft knowledge base article KB2999226.</li> </ul>

<ul> <li>Net Framework 4.5</li> <li>Microsoft's MSOL Sign-in Assistant x64 edition (available at this Microsoft link).</li> <li>Microsoft's Azure Active Directory PowerShell for Graph - General Availability</li> </ul>
-
version (available at this Microsoft link).
<b>NOTE:</b> For Chinese and German Office 365 tenants, the minimum PowerShell module version is 1.1.166.0.
<b>NOTE:</b> Azure AD Module for Windows PowerShell x64 edition (PowerShell V1) has been deprecated. MNE will remove support for this module in a future release.
When migrating with Outlook 2016, the following registry values must be set. If not set, MNE automatically sets it before starting the migration:
[HKEY_CURRENT_USER\Software\Microsoft\Office\16.0\Common\ Identity] "EnableADAL"=dword:0000000
<ul> <li>As of October 31, 2017, MAPI over HTTP is the only MAPI protocol supported by Office 365. Therefore, the requirements for the MAPI over HTTP protocol listed below are also requirements for migrating to Office 365.</li> </ul>
• For systems running Windows 2008 R2, TLS 1.2 must be enabled as the default secure protocol. See this Microsoft support page.
<ul> <li>MAPI over HTTP is the latest protocol developed by Microsoft for transmitting mail data between mail client applications and Exchange servers. The MAPI over HTTP protocol is supported by the following Exchange targets:</li> <li>Exchange 2013 SP1</li> <li>Exchange 2016</li> <li>Office 365</li> </ul>
<b>NOTE:</b> The minimum version for Outlook 2016 is 16.0.8420.1000. Only the Click-to-Run version is supported.
Migrations using the MAPI over HTTP protocol are supported by Migrator for Notes to Exchange when the following prerequisites are met.
Outlook 2013 version 15.0.4815.1000 or later
This version number represents the <b>File Version</b> of the Outlook.exe executable, not the version number that is reported in the Outlook About dialog.
• When migrating with Outlook 2013, the following registry value must be set. If not set, MNE automatically sets it before starting the migration:
[HKEY_CURRENT_USER\Software\Microsoft\Office\15.0\Outlook \Cached Mode]
"AllowAutoDiscoverForNonOutlook"=dword:0000001
If a registry value has previously been added to disable the MAPI over HTTP protocol, this registry value must be removed or modified. If this value exists, and it is not set to 0, MNE automatically sets it before starting the migration:
[HKEY_CURRENT_USER\Software\Microsoft\Exchange]
"MapiHttpDisabled"=dword:0000000
b

# End-user desktops (if running the SSDM)

An SSDM end-user workstation *may* be a virtual machine, but a dedicated "actual" machine will likely yield better migration performance.

Requirement	Description
Supported operating systems	<ul> <li>Windows 10, Windows 8.1, Windows 8 or Windows 7: 32-bit or 64-bit edition.</li> <li>Windows Server 2016: 64-bit edition.</li> <li>Windows Server 2012 or 2012 R2: 32-bit or 64-bit edition.</li> <li>Windows Server 2008 SP2 or 2008 R2: 32-bit or 64-bit edition.</li> <li>Windows Vista (Business, Enterprise or Ultimate): 32-bit or 64-bit edition.</li> </ul>
Required Outlook client	Outlook 2016, 2013, or 2010: 32-bit or 64-bit edition. If migrating to Exchange 2016 or Exchange 2013 or Office 365, the required Outlook client must conform to Microsoft's requirements for Exchange 2016 or Exchange 2013 or Office 365, respectively.
On each end user's SSDM desktop	<ul> <li>Microsoft .Net Framework version 2.0 or later must be installed.</li> <li>If end users will run the SSDM application from a network share (rather than from each user's own local copy): Each workstation must also have either .Net 3.5 SP1 (or later) installed, or a Code Access Security (CAS) policy granting full trust to SSDM in the network share. (See "Before Running the SSDM" in chapter 4 of the MNE Scenarios Guide for instructions to set the required CAS policy.)</li> <li>If migrating with Modern Authentication enabled, .Net 4.5 or later must be installed. If .Net 4.5 or later is not installed, the SSDM falls back to migrating without Modern Authentication.</li> <li>The MAPI DLLs required to perform a migration <b>must</b> be those that are part of Outlook, not the downloadable Exchange "server" MAPI.</li> </ul>
Required Lotus Notes client	<ul> <li>9.0.0 or 9.0.1</li> <li>8.5.0-8.5.3 (inclusive)</li> <li>8.0.0-8.0.2 (inclusive)</li> <li>6.0.0-7.0.4 (inclusive)</li> </ul>
Lotus Live support	MNE provides partial support for migrations from Lotus Live, via the SSDM, for Lotus Notes client versions 8.5.3 or newer. This feature also requires that you configure your local Notes client for Lotus Live, as described in the MNE <i>Pre-Migration Planning Guide</i> , in chapter 1 under "Configuration requirements and account permissions".

# Server hosting the SSDM scheduling utility web service

ASP.net version 4.0 must be installed. If the SSDM Scheduling Web Service is running, you must change the .NET Framework version of the Application Pool used by the SSDM Scheduling Web Service to .NET 4.0.

# **Upgrade and compatibility**

There is no need to uninstall a previous version before installing a new version. The upgrade installation and **s**etup are fully automated, and will preserve any data already migrated by an earlier version, so you may simply resume the migration process from wherever you left off with the previous version.

- **IMPORTANT:** If upgrading from 4.14.1 or earlier, before upgrading to 4.15.1, you must back up the SSDM Scheduling Administration utility configuration files. See the section below for information on backing up the files.
- **i IMPORTANT:** The upgrade process will back up your existing pabreplicator.nsf, attrs.tsv, msgtypes.tsv, NMEPSErrorFile.xml, wte\_template.htm, ybm\_template.htm and ynma\_template.html files and copy them to the target installation folder.
- **i IMPORTANT:** The enhancement 674823 contains a breaking change to the [TimeZoneInfo] Program Parameter. If your installation currently contains configuration data in the [TimeZoneInfo] section, this configuration data must be updated. See the [TimeZoneInfo] section in the NME Program Parameters Reference for details.

#### Backing up the SSDM Scheduling Administration utility configuration files

The following locally saved configuration files are overwritten as part of the upgrade to release 4.15.1. Make a back up copy of these files before performing the upgrade.

C:\Program Files (x86)\Dell\Migrator for Notes to Exchange\SSDM Scheduling Web Service\Bin\SchedulingGlobals.config

C:\Program Files (x86)\Dell\Migrator for Notes to Exchange\SSDM Scheduling Administration\AdminConfigPaths.xml

The upgrade procedure contains a step for restoring the files.

# **Product licensing**

Migrator for Notes to Exchange is a metered-use product that requires the application of a valid license key. An MNE license key is installed MNE's Notes Migration Manager component.

Quest sells license keys for particular numbers of users to be migrated. When the limit is reached the software continues to function nominally for users that have already been migrated, but will not migrate additional users. The same license is used for all functions of a particular user (provisioning, forwarding, migration, etc.), and the user license count increments the first time any program function is applied to each user. That is, when any feature of any MNE component is applied to a particular user, then all features of all components can be applied to the same user under the same license. Moreover, users can be re-migrated (if necessary) using the original licenses; re-migration does not require an additional license.

A trial license is intended to let you try the MNE software in your own environment, with your own data, to help you determine whether MNE's capabilities are suitable to your needs. Under a trial license, therefore, the program stamps a "*MIGRATION EVALUATION*" prefix into the *Subject* of every migrated message, and also imposes these limitations:

- · Calendar items more than two weeks into the future are not migrated.
- When migrating personal address books, only five contacts and five groups are migrated per PAB.

You can obtain your first or a subsequent license key by contacting a Quest Software sales representative. For either a trial or perpetual license, the key uses one of the following formats

MigratorNotesEX-###-#####.dlv

MigratorNotesEX-###-###.dlv

where ###-####-### or ###-### represents your unique license number. The file is sent to you from Quest Licensing as an email file attachment. Copy the license key file to your Desktop, or to some other convenient location.

The product will install without a license key, but will prompt you to apply a license key the first time you try to run the software. You will be prompted to find and specify the license key file that Quest provided. Use the **Browse** feature to locate and specify the .dlv license file.

If you are upgrading from an earlier version, the automated upgrade process will transfer the existing license key into the new version, so you do not need to re-install it. For new installations, the license installer will only install the new format license files (.dlv). The older format (.asc) is no longer supported.

**IMPORTANT:** Many environments require disabling User Account Control to install the Quest license into MNE.

## **Getting started with MNE**

- Upgrade and installation instructions
- More resources

# **Upgrade and installation instructions**

To install Migrator for Notes to Exchange:

1 Download the Migrator for Notes to Exchange zip folder from the Quest.com website, and extract all files into an installation folder. Then run Autorun.exe from the installation folder.

If you are installing from an MNE product CD, the Autorun utility runs automatically.

Windows then launches the *Autorun* utility, where you can browse product information including the **Prerequisites** and all MNE **Documentation** before installing the product.

Verify that your environment conforms to the System requirements specified above in this document, and to the requirements specified in "Configuration requirements and account permissions" in the *Pre-Migration Planning Guide*. Several of the required third-party components may be downloaded from links on the *Autorun* **Prerequisites** tab.

- 2 When you are ready to install, select the Autorun Install tab.
- 3 Select the Migrator for Notes to Exchange product name, and click Next.
- 4 Read and accept the license agreement.
- 5 Follow the instructions in the MNE Installation Wizard.
- i IMPORTANT: If your setup includes the Microsoft redistributables, you may install them on your migration server. You must have a Microsoft SQL Server installed in your migration environment in order to use Migrator for Notes to Exchange.
- i NOTE: Quest Migrator for Notes to Exchange requires access to the SQL 2012 Native Client. If you have Microsoft SQL Server 2012 installed on your migration server then you already have the Native Client installed.

If you do not have the Native Client installed, you can use the download button in the Autorun utility to download the software.

6 Follow the remaining instructions and prompts in the MNE Installer.

**i IMPORTANT:** MNE includes a wizard for scanning the environment and determining whether it conforms to the system requirements for the MNE applications. The MNE Prerequisites Checker looks for required software and settings, connectivity, permissions, and access rights. The wizard can be launched automatically from the exit page of the MNE installer, by marking a checkbox before clicking **Finish**:

[] Launch the Prerequisites Checker when setup exits

The checker can also be run independently from your Windows **Start** menu, in the **Quest | Migrator for Notes to Exchange** group. The Prerequisites Checker log file is written to <code>%SystemDrive%\ProgramData\Quest\Prerequisites Checker</code>.

- 7 Click **Finish** from the last screen to complete the installation. The MNE Installer then exits, and returns you to the *Autorun* utility, on the **Install** tab. If you have marked the **Prerequisites Checker** checkbox, that wizard now runs (in a separate window).
- 8 If you like, you may browse the other Autorun tabs.
- 9 When you are finished browsing other *Autorun* tabs, click the **Close** box ([X] in the top-right corner of the window) to close the *Autorun* utility.

### Post upgrade steps

Be sure to see Product licensing above before trying to configure or run any MNE component.

i IMPORTANT: Locale-specific configuration: If you are migrating from a non-English Lotus Notes environment, you must also configure both the Data Migration Wizard and the SSDM with the appropriate non-English values for certain display elements. See "Appendix A" of the *MNE Administration Guide* for instructions, under "How Do I Configure MNE for My Non-English Notes Locales?"

#### Configuring the SSDM Scheduling Administration utility

The SSDM Scheduling Administration utility must be configured after upgrade.

1 Prior to upgrade, you made a copy of the SSDM Scheduling Administration utility configuration files. Restore the files to the following directory paths.

C:\Program Files (x86)\Quest\Migrator for Notes to Exchange\SSDM Scheduling Web Service\Bin\SchedulingGlobals.config

C:\Program Files (x86)\Quest\Migrator for Notes to Exchange\SSDM Scheduling Administration\AdminConfigPaths.xml

2 Point to the new physical path.

In the Administration Guide, in the chapter "SSDM Scheduling Administration utility" see the section "Before you can use the SSDM Scheduling Administration utility".

Follow the steps to add the new Virtual Directory:

C:\Program Files (x86)\Quest\Migrator for Notes to Exchange\SSDM Scheduling Web Service

#### Configuring the Task Scheduler

If you plan to use the optional MNE task scheduling features, make sure the MNE Task Scheduler is configured by following the instructions in Appendix A of the *MNE Administration Guide*, in the section "How Do I Schedule Tasks?"

### More resources

Information about MNE, including all product documentation, is available from the Quest Support Portal at https://support.quest.com/.

## Migrator for Notes to Exchange and Coexistence Manager for Notes community

The Migrator for Notes to Exchange and Coexistence manager for Notes community is an interactive online community dedicated to issues relating to:

- Migration of email, identity and applications to the Windows Exchange platform, either on-premises or hosted Exchange platforms like Office 365—including migrations from Exchange, GroupWise, and Notes.
- Active Directory migrations.
- Migrations from Notes application and Exchange public folders to Sharepoint.
- Coexistence strategies and tools.

The community is designed to foster collaboration between Quest Migration experts and users. It's a place where you can:

- · Learn about product releases and betas before anyone else.
- · Get access to Quest product leaders and subject matter experts on migration and coexistence.
- Participate in discussion forums, share insights and ideas, and get common questions answered.

You can browse around the forums and the library, but to take full advantage of the community, post new threads, respond to messages from others, and rate our documents and downloads, you must **Join** the community. If you already have a Quest account or are a member of another Quest community, simply **Sign in**. The **Sign in** and **Join** features are both available from links near the top-right corner of the page.

# Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan. The release supports Complex Script (Central Asia – India, Thailand).

The SSDM user interface is available in English and French. The SSDM User Guide is available in English, French and Japanese.

# About us

### We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build communitydriven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation.

### Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

## **Contacting Quest**

For sales or other inquiries, visit http://quest.com/company/contact-us.aspx or call +1-949-754-8000.

### **Technical support resources**

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

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

### **Third-party contributions**

This product contains the following third-party components. For third-party license information, go to https://www.quest.com/legal/third-party-licenses.aspx.

Component	License or acknowledgment
7-Zip 9.2.0	Use of this component is governed by the 7-Zip license.
AutoMapper 2.2	Copyright Jimmy Bogard 2008-2012. Use of this component is governed by the MIT 1.0 license.
	Use of this component is governed by the Wirt 1.0 license.

Component	License or acknowledgment
CommandLineParser 1.9	Copyright 2005-2012 Giacomo Stelluti Scala.
	Use of this component is governed by the MIT 1.0 license.
Crypto++ 5.6.1	Compilation Copyright © 1995-2009 by Wei Dai. All rights reserved. Portions contributed by Wei Dai.
	Use of this component is governed by the Crypto 5.6.0 license.
Entity Framework 5.0	Use of this component is governed by the Apache 2.0 license.
EWS Managed API 2.2.1.0	Copyright (c) Microsoft Corporation. All rights reserved.
	Use of this component is governed by the MIT 1.0 license.
CU4C 57.1	Copyright (c) 1995-2014 International Business Machines Corporation and others.
	Use of this component is governed by the MIT 1.0 license.
JQuery 1.9.1	Copyright 2012 jQuery Foundation and other contributors.
	Use of this component is governed by the MIT 1.0 license.
JQuery UI 1.10.0	Copyright 2010 John Resig. http://jquery.com/.
	Use of this component is governed by the MIT 1.0 license.
Query Validation 1.11	Use of this component is governed by the MIT 1.0 license.
_og4Net 2.0.0	Copyright 2001-2006 The Apache Software Foundation.
	Use of this component is governed by the Apache 2.0 license.
LumenWorks 3.8.0	LumenWorks.Framework.IO.CSV.CachedCsvReader Copyright (c) 2005 Sébastien Lorion.
	Use of this component is governed by the MIT 1.0 license.
Aicrosoft.IdentityModel.	Copyright (c) Microsoft Corporation.
Clients.ActiveDirectory 3.19.8	Use of this component is governed by the MIT 1.0 license.
Microsoft.IdentityModeI.J sonWebTokens 5.3.0	Copyright (c) Microsoft Corporation.
	Use of this component is governed by the MIT 1.0 license.
	Copyright (c) Microsoft Corporation.
ogging 5.3.0	Use of this component is governed by the MIT 1.0 license.
-	Copyright (c) Microsoft Corporation.
okens 5.3.0	Use of this component is governed by the MIT 1.0 license.
Modernizr 2.6.2	Use of this component is governed by the MIT 1.0 license.
System.IdentityModel.To	Copyright (c) Microsoft Corporation. All rights reserved.
kens.Jwt 5.3.0	Use of this component is governed by the MIT 1.0 license.
lib 1.2.3	Copyright ©1995-2005 Jean-loup Gailly and Mark Adler.
	Use of this component is governed by the Zlib 1.2.3 license.

#### <sup>©</sup> 2018 Quest Software Inc.

#### ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Quest Software Inc.

The information in this document is provided in connection with Quest Software products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Quest Software products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST SOFTWARE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUEST SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF QUEST SOFTWARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest Software makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Quest Software does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

Quest Software Inc. Attn: LEGAL Dept. 4 Polaris Way Aliso Viejo, CA 92656

Refer to our website (www.quest.com) for regional and international office information.

#### Patents

Quest Software is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at www.quest.com/legal.

#### Trademarks

Quest and the Quest logo are trademarks and registered trademarks of Quest Software Inc. in the U.S.A. and other countries. For a complete list of Quest Software trademarks, please visit our website at www.quest.com/legal. All other trademarks, servicemarks, registered trademarks, and registered servicemarks are the property of their respective owners.

#### Legend

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

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