Quest® Migration Manager for Exchange 8.14

Source Exchange 2013 Environment Preparation

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Legend

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

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

Migration Manager Source Exchange 2013 Environment Preparation
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Source Exchange 2013 Environment Preparation

Follow the steps that are described in the Preparation Overview topic to prepare your Exchange 2013 organization and its environment for being the source organization in the Exchange migration process conducted by Migration Manager for Exchange. For more information about Migration Manager for Exchange refer to the *Migration Manager for Exchange Overview*.

On some of steps you may need to coordinate the setup process with the administrator of the target Exchange organization.

Preparation Overview

This section provides a short overview of the main steps that should be performed to set up your source Exchange 2013organization and its environment for migration using Migration Manager for Exchange. These steps are described in detail in the related subtopics.

Setting up the source Exchange 2013organization consists of four main steps:

Checking the System Requirements

On this step make sure that your environment meets the minimal system requirements for Migration Agent for Exchange. For more details, see Checking System Requirements.

Setting Up Accounts and Required Permissions

On this step you should set up the accounts and required permissions for Exchange migration. There are four main types of accounts used by Migration Manager for Exchange agents:

- Source Active Directory Synchronization Account

- Source Exchange Account

- Source Active Directory Account

- Source Agent Host Account

You can simplify the setup by using a single account for all Migration Manager for Exchange processes. This account should have the permissions that are required for Migration Manager for Exchange console and all agents on every server that is involved in the migration.

For more details, see Setting Up Accounts and Required Permissions.

Preparing the Source Exchange Environment for Exchange Migration

On this step you should perform common environment preparations for mailbox and calendar synchronizations:

- Back up Exchange

- Install Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 version 6.5.8353.0 or later on agent hosts

- Create custom throttling policies
- Set Exchange Autodiscover URL (Optional)

On this step you should perform common environment preparations for public folder synchronization:

- Configure administrator mailboxes for public folder synchronization
- Create Aelita EMW Recycle Bin public folder (optional)
- Prepare public folder mailboxes for public folder synchronization
- Configure the NSPI connection limit
- Fine-Tuning the Public Folder Synchronization Agents to use Kerberos authentication (Optional)

For more details, see Preparing the Source Exchange Environment for Exchange Migration.

Setting Up Connection with the Target Exchange Organization Using SMTP Connectors

On this step you should set up the connection with the target Exchange organization using SMTP connectors. This task consists of three subtasks given below:

1. Setting up the source Exchange organization for Internet mail flow between source and target Exchange organizations
2. Configuring source DNS server for mail forwarding
3. Testing the SMTP connectors (optional)

For more details, see Setting Up Connection with the Target Exchange Organization Using SMTP Connectors.

Preparation Checklist

This checklist will help you set up your source Exchange 2013 organization and its environment properly. Make sure you have done all the steps below before completing the preparation.

Check	Step
□	Check the system requirements
□	Set up the Source Active Directory Synchronization Account
□	Set up the Source Exchange Account
□	Set up the Source Active Directory Account
□	Set up the Source Agent Host Account
□	Back up Exchange
□	Create Aelita EMW Recycle Bin public folder (optional)
□	Install Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 version 6.5.8353.0 or later on agent hosts
□	Configure administrator mailboxes for public folder synchronization
□	Prepare public folder mailboxes for public folder synchronization
□	Create custom throttling policies

Check	Step
☐	Configure the NSPI connection limit
☐	Set Exchange Autodiscover URL (Optional)
☐	Set up the source Exchange organization for Internet mail flow between source and target Exchange organizations
☐	Configure the source DNS server for mail forwarding
☐	Test the SMTP connectors (optional)

Prerequisites

Before starting the preparation of the source Exchange 2013 organization and its environment, make sure that you have the privileges to grant all of the following permissions to accounts.

> **i** | **NOTE:** The list of permissions given below contains all required permissions for the accounts. However some of the permissions can be replaced with their equivalents. For more information, see the corresponding steps for each account.

Source Active Directory Synchronization Account

- Membership in the **Administrators** or **Domain Admins** group of the source domain

Source Exchange Account

- Read access to the source domain

- Full Control permission on Exchange 2013 mailboxes

- The **Mail Enabled Public Folders** management role

- Membership in the local **Administrators** group on all source Exchange servers involved in the public folder synchronization. If a server is a domain controller, the account should be added to the domain local **Administrators** group of the domain.

- Membership in the **Recipient Management** group

- The **ApplicationImpersonation** management role for migration to Exchange 2013 (or higher) or Office 365

Source Active Directory Account

- Read access to the source domain

- Read permission for the Microsoft Exchange container in the source Active Directory

- Write permission on the Microsoft Exchange System Objects organizational unit in all domains in which source Exchange 2013 servers involved in public folder synchronization reside

Source Agent Host Account

- Local **Administrator** permissions on the agent host server where the corresponding MAgE instance is installed.

- The **db_owner** role on the SQL server where the database resides

- Permission to create, read and write SCP in domain where agent host resides. The SCP object is located in the *CN=Exchange Migration Project,CN=QmmEx,CN=Migration Manager,CN=Quest Software,CN=System,DC=eternity,DC=<...>,DC=<...>* Active Directory container.

Checking System Requirements

> ! **CAUTION: Any computer that does not meet the requirements should be upgraded before installing Migration Manager for Exchange components.**

Migration Manager for Exchange uses the following Exchange-specific agents involved in the process of migration from Exchange 2013 organization:

- Public Folder Source Agent (PFSA)
- Public Folder Target Agent (PFTA)
- Transmission Agent (NTA)
- Migration Agent for Exchange

Agents work on agent host servers. Agent host is a stand-alone server. It can be located in another forest.

> **i** **NOTE:** Agent hosts for mail and public folder synchronization must be different as additional software required for MAgE and for PFSA/PFTA to perform those synchronization types cannot be installed on the same computer.

For detailed information about system requirements for agent hosts, see the *Exchange Migration Agents* section of the System Requirements and Access Rights.

Source Exchange 2013 Organization Considerations

- The Exchange Autodiscover service must be properly configured and run in your Exchange organization. For information on Autodiscover for Exchange, go to https://msdn.microsoft.com/en-us/library/office/jj900169(v=exchg.150).aspx. Note that you may also need to manually configure the Autodiscover URLs for the migration project as described in Setting Exchange Autodiscover URL (Optional)
- SSL certificates enabled on Exchange Client Access Servers of the source organization should be signed by a trusted publisher. If you use self-signed certificates, you need to log on to each agent host under the Agent Host Account and add the certificate from CAS to the Trusted Root Certification Authorities and Trusted Publisher lists.

Setting Up Accounts and Required Permissions

This section describes requirements for accounts working with the source Exchange servers. Migration Manager for Exchange allows you to use different administrative accounts for different purposes. The following accounts are used by Migration Manager:

- Source Active Directory Synchronization Account
  This account is used by the Directory Synchronization Agent (DSA) to access the source Active Directory domain

For more details, see Setting Up the Source Active Directory Synchronization Account.

- Source Exchange Account

  For configuration details, see Setting Up the Source Exchange Account.

- Source Active Directory Account

  For configuration details, see Setting Up the Source Active Directory Account.

- Source Agent Host Account

  For configuration details, see Setting Up Source Agent Host Account.

Setting Up the Source Active Directory Synchronization Account

This section describes how to set the required permissions for the Source Active Directory Synchronization Account. This account is used by the Directory Synchronization Agent (DSA) to access the source Active Directory domain

The required privilege level for the Source Active Directory Synchronization Account is membership in the **Domain Admins** group of the source domain.

> ❗ **CAUTION: If for some reason you cannot grant such privileges to the Source Active Directory Synchronization Account, then refer to the *System Requirements and Access Rights* document for the list of minimal required permissions.**

To grant the necessary permission to the Source Active Directory Synchronization Account, perform the following:

1. On the source domain controller in the **Active Directory Users and Computers** snap-in, click **Users**, then in the right pane right-click **Domain Admins** and click **Properties**.

2. Go to the **Members** tab, click **Add** and select the Source Active Directory Synchronization Account.

3. Close the dialog boxes by clicking **OK**.

Setting Up the Source Exchange Account

This section describes how to set the required permissions for the Source Exchange Account used by Migration Agent for Exchange. This account is used for the following:

- Work with source Exchange mailboxes and public folders (used by the Migration Agent for Exchange, Public Folder Source Agent, and Public Folder Target Agent)

- Mail-enable the newly-created public folders (used by the public folder agents only: Public Folder Source Agent and Public Folder Target Agent)

- Move mailboxes

The required privileges for the Source Exchange Account are as follows:

- Read access to the source domain

- Full Control permission on Exchange 2013 mailboxes

- The **Mail Enabled Public Folders** management role

- Membership in the local **Administrators** group on all source Exchange servers involved in the public folder synchronization. If a server is a domain controller, the account should be added to the domain local **Administrators** group of the domain.

- Membership in the **Recipient Management** group

- The **ApplicationImpersonation** management role for migration to Exchange 2013 (or higher) or Office 365

To set up the Source Exchange Account, perform the steps described in the related subtopics.

i | **NOTE:** Note that the steps are given only as an example of a possible Source Exchange Account setup.

Changing Default Exchange Account

To go on using the default Exchange Account for Exchange migration, grant the permissions required for Exchange migration to this account (see the next steps).

Granting Read Access to the Source Active Directory Domain

The account should have **Read** access to the source Active Directory.

To grant this permission to the account, complete the following steps:

1. In the **Active Directory Users and Computers** snap-in, right-click the source domain name, and then click **Properties**.
2. On the **Security** tab, click **Add** and select the account.
3. Select the Source Exchange Account, and then check the **Allow** box for the **Read** permission in the **Permissions** box.
4. Click the **Advanced** button. In the **Advanced Security Settings** dialog box, select the account you specified on step 2, and click **Edit**.
5. In the **Permission Entry** dialog box, select **This object and all descendant (child) objects** from the **Apply to** drop-down list.
6. Close the dialog boxes by clicking **OK**.

Granting Full Control on Exchange 2013 Mailboxes

The Source Exchange Account used by Migration Manager for Exchange agents needs the **Full Control** permission on each mailbox database involved in migration.

To grant the required permissions to the *<User>*, run the following cmdlets in Exchange Management Shell:

```
Get-MailboxDatabase | Add-ADPermission -User <User> -AccessRights GenericAll -
ExtendedRights Receive-As
```

To verify that all permissions for the Source Exchange Account are set correctly, select any mailbox involved in the migration in the Migration Manager Console and check that the Source Exchange Account has **Full Access** permissions for the mailbox.

Granting the Mail Enabled Public Folders Management Role

The account used by Migration Manager for Exchange agents needs the **Mail Enabled Public Folders** management role in the Exchange organization to be able to create mail-enabled public folders in case of two-way public folder synchronization.

To grant the required permission to the <User> (in our example, LA\QMM_Src_Ex), run the following cmdlet in Exchange Management Shell:

```
New-ManagementRoleAssignment -Role "Mail Enabled Public Folders" -User LA\QMM_Src_Ex
```

Granting Membership in Server Local Administrators Group

The Source Exchange Account used by Migration Manager for Exchange agents should be a member of the local **Administrators** group on each source Exchange server involved in the migration.

> ❗ **CAUTION:** **If the Exchange server is a domain controller, the account should be added to the domain local Administrators group of the domain.**

To add the Source Exchange Account to the local **Administrators** group on each source Exchange server involved in the migration, perform the following:

1. Open the Computer Management snap-in (Click **Start** | **Run**, enter **compmgmt.msc** and then click **OK**).
2. In the left pane click **System Tools** | **Local Users and Groups** | **Groups**.
3. Right-click the **Administrators** group and click **Add to Group**.
4. Click **Add** and select the Source Exchange Account (in our example, **QMM_Src_Ex**).

5. Close the dialog boxes by clicking **OK**.

Granting Membership in Recipient Management Group

To perform **Move mailbox** operations, the Source Exchange Account needs to be assigned permissions to run the following cmdlets:

- **New-MoveRequest**
- **Get-MoveRequest**
- **Resume-MoveRequest**
- **Remove-MoveRequest**
- **Get-MoveRequestStatistics**

To grant these permissions, add the account to the **Recipient Management** group in the source Exchange 2013 organization, as follows:

1. In the **Active Directory Users and Computers** snap-in select the **Microsoft Exchange Security Groups** node.

2. In the right pane, right-click **Recipient Management** group and select **Properties** from the shortcut menu.

3. On the **Members** tab click **Add** and select the Source Exchange Account.

4. Close the dialog boxes by clicking **OK**.

Granting ApplicationImpersonation Management Role

To grant the **ApplicationImpersonation** management role to the *<User>* (in our example, *LA\JohnSmith*), run the following cmdlet in Exchange Management Shell:

```
New-ManagementRoleAssignment -Role ApplicationImpersonation -User LA\JohnSmith
```

Setting Up the Source Active Directory Account

This section describes how to set the required permissions for the Source Active Directory Account used by Migration Agent for Exchange. This account is used for the following:

- Working with the source Active Directory

The required permissions for the Source Active Directory Account are as follows:

- **Read** access to the source domain
- **Read** permission for the **Microsoft Exchange** container in the source Active Directory
- **Write** permission on the Microsoft Exchange System Objects organizational unit in all domains in which source Exchange 2013 servers involved in public folder synchronization reside

Changing Default Active Directory Account

! **CAUTION:** This section is relevant to the public folder synchronization only. Active Directory Account for mailbox or calendar synchronization is specified during corresponding job configuration.

The default Source or Target Active Directory Account (initially displayed on the Associated domain controller page of the Exchange server's properties) is set when you add the source or target organization to the migration project (see the *Registering Source and Target Organizations* section of the **Migration Manager for Exchange User Guide** for details).

To change the Source or Target Active Directory Account, click **Modify** on the **General | Associated domain controller** page of the corresponding source (target) server properties in the Migration Manager for Exchange Console.

To go on using the default Source (Target) Active Directory Account for Exchange migration, grant the permissions required for Exchange migration to this account (see the next steps).

Granting Read Access to the Source Active Directory Domain

The account should have **Read** access to the source Active Directory.

To grant this permission to the account, complete the following steps:

1. In the **Active Directory Users and Computers** snap-in, right-click the source domain name, and then click **Properties**.

2. On the **Security** tab, click **Add** and select the account.

3. Select the Source Exchange Account, and then check the **Allow** box for the **Read** permission in the **Permissions** box.

4. Click the **Advanced** button. In the **Advanced Security Settings** dialog box, select the account you specified on step 2, and click **Edit**.

5. In the **Permission Entry** dialog box, select **This object and all descendant (child) objects** from the **Apply to** drop-down list.

6. Close the dialog boxes by clicking **OK**.

Granting Read Permission for the Microsoft Exchange Container

In the source Exchange 2013 organization, the Source Active Directory Account requires the **Read** permission on the **Microsoft Exchange** container in the source Active Directory.

To grant this permission, take the following steps:

1. From the **Start** menu, select **Run**. In the **Run** dialog box, type **ADSIEdit.msc**. Click **OK**.

2. In the **ADSIEdit** snap-in, open the **CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=<…>,DC=<…>** container.

3. Right-click the **Microsoft Exchange** container and select **Properties**.

4. In the **Properties** dialog box, click the **Security** tab.

5. On the **Security** tab, click **Add** and select the account to which you wish to assign permissions.

6. Select the account name, and then enable the **Allow** option for the **Read** permission in the **Permissions** box.

7. Click the **Advanced** button. In the **Advanced Security Settings** dialog box, select the account you specified on step 5 and click **Edit**.

8. In the **Permission Entry** dialog box, select **This object and all child (descendant) objects** from the **Apply onto** drop-down list.

9. Close the dialog boxes by clicking **OK**.

Granting Write permission on the Microsoft Exchange System Objects Organizational Unit

The account needs the Write permission on the Microsoft Exchange System Objects organizational unit (OU) in all domains in which Exchange servers involved in public folder synchronization reside.

1. In the **Active Directory Users and Computers** snap-in, right-click the **Microsoft Exchange System Objects** OU and click **Properties**.

   > **i** | **NOTE:** If there is no Microsoft Exchange System Objects OU, you should select View | Advanced Features in the Active Directory Users and Computers snap-in.

2. On the **Security** tab, click **Add**, and select the account.

3. Select the account name, and then enable the **Allow** option for the **Write** permission in the **Permissions** box.

4. Click the **Advanced** button. In the **Advanced Security Settings** dialog box, select the account you specified on step 2, and click **Edit**.

5. In the **Permission Entry** dialog box, select **This object and all child (descendant) object**s from the **Apply onto** drop-down list.

6. Close the dialog boxes by clicking **OK**.

Setting Up Source Agent Host Account

This section describes how to set the required permissions for the Source Agent Host Account used by Migration Agent for Exchange (MAgE) instances. The required privileges for the Source Agent Host Account are as follows:

- Local **Administrator** permissions on the agent host server where the corresponding MAgE instance is installed.
- The **db_owner** role on the SQL server where the database resides
- Permission to create, read,and write SCP in domain where agent host resides. The SCP object is located in the *CN=Exchange Migration Project,CN=QmmEx,CN=Migration Manager,CN=Quest Software,CN=System,DC=eternity,DC=<...>,DC=<...>* Active Directory container.

To set up the Source Agent Host Account, perform the steps described in the related subtopics.

> **i** | **NOTE:** Note that the steps are given only as an example of a possible Source Agent Host Account setup.

Changing the Default Source Agent Host Account

The default Source Agents Host Account (initially displayed on the **Default Agent Host** page of the Exchange server **Properties**) is set when you add the source organization to migration project (see the *Registering Source and Target Organizations* section of the *Migration Manager for Exchange User Guide* for details).

If necessary, you can change the default Source Agent Host Account by clicking **Modify** on the **General | Default Agent Host** page of the corresponding source server properties in the Migration Manager for Exchange Console.

To go on using the default Source Agent Host Account for Exchange migration, grant the permissions required for Exchange migration to this account (see the next steps).

Granting Membership in the Local Administrators Group

The Agent Host Account should be a member of the local **Administrators** group on the agent host server.

To add the Agent Host Account to the local **Administrators** group on a server perform the following:

1. Open the **Computer Management** snap-in (Click **Start | Run**, enter **compmgmt.msc** and then click **OK**).

2. In the left pane click **System Tools | Local Users and Groups | Groups**.

3. Right-click the **Administrators** group and click **Add to Group**.

4. Click **Add** and select the Source Agent Host Account.

5. Close the dialog boxes by clicking **OK**.

Granting db_owner Role on SQL Server

To grant the **db_owner** role on the SQL Server for the Agent Host Account, take the following steps:

1. In **SQL Server Management Studio**, browse to the server that will be used by Migration Manager for Exchange, and select **Logins** from the server **Security** node.

2. Right-click Logins and click **New Login**.

3. On the General page of the **Login - New** dialog box, specify the account in the **Login** name field and select the Windows Authentication method.

4. On the **User Mapping** page of the **Login - New** dialog box, select the migration project database and then select **db_owner** database role for that database.

5. Close the dialog boxes by clicking **OK**.

Granting SCP Create, Read and Write Permissions

Grant the Agent Host Account permissions to **Create**, **Read** and **Write** Service Connection Point (SCP) object located in the **CN=Exchange Migration Project,CN=QmmEx,CN=Migration Manager,CN=Quest Software,CN=System,DC=eternity,DC=<...>,DC=<...>** container:

1. From the **Start** menu, select **Run**. In the **Run** dialog box, type **ADSIEdit.msc**. Click **OK**.

   > **i** | **NOTE:** If you have a Windows 2003 domain controller, the ADSIEdit utility, which is part of the Windows 2003 Support Tools, may not be installed. In this case install the Support Tools by running the **Support\Tools\Suptools.msi** file located on the Windows 2003 CD.

2. In the ADSIEdit snap-in, open the **CN=Exchange Migration Project,CN=QmmEx,CN=Migration Manager,CN=Quest Software,CN=System,DC=eternity,DC=<...>,DC=<...>** container

3. Right-click the SCP object and click **Properties**.

4. In the **Properties** dialog box, click the **Security** tab.

5. On the Security tab, click **Advanced**.

6. In the **Advanced Security Settings** dialog box, click **Add**.

7. In the **Select User**, **Computer**, or **Group** (or similar) dialog box, select the administrative account and click **OK**.

8. In the **Permission Entry** for dialog box, select **This object and all descendant (child) objects** from the **Apply onto** drop-down list.

9. Allow **Create**, **Read**and **Write** permissions for the Agent Host Account.

10. Close the dialog boxes by clicking **OK**.

Preparing the Source Exchange Environment for Exchange Migration

Perform the steps described in the related subtopics to ensure that your Exchange environment is ready for migration:

- Backing Up Exchange
- Creating Aelita EMW Recycle Bin Public Folder (Optional)
- Installing the Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1
- Configuring Administrator Mailboxes for Public Folder Synchronization
- Preparing Public Folder Mailboxes for Public Folder Synchronization
- Creating Custom Throttling Policies
- Configuring the NSPI Connection Limit
- Setting Exchange Autodiscover URL (Optional)

Backing Up Exchange

Before implementing Migration Manager for Exchange in your production environment, back up your Exchange infrastructure. We recommend that Active Directory data be backed up at least twice a day during migration.

Transaction Log File Cleanup

When Migration Manager for Exchange synchronizes mail, for every megabyte of data migrated from the source to the target, a transaction log file of equal size is generated on the target Exchange server. Exchange-aware backup applications purge the transaction logs after the backup completes. By the time the backup finishes, all logged transactions have already been applied to the store and backed up to tape, making log cleaning safe.

Large transaction logs that are generated during mailbox migration quickly occupy free disk space. To work around this problem, perform one of the following:

- If a full backup strategy is implemented in the organization or there is no backup strategy at all, then circular logging may be enabled for unattended log deletion.
- If an incremental or differential backup strategy is already implemented in the organization, then make sure that logs are cleared automatically when backup process is finished. Do not enable circular logging in this case.

Note also that Microsoft recommends turning OFF circular logging on the Exchange server. For more information, refer to Microsoft Knowledge Base article 147524: XADM: How Circular Logging Affects the Use of Transaction Logs.

Creating Aelita EMW Recycle Bin Public Folder (Optional)

> **i** **NOTE:** If you skip this step, the **Aelita EMW Recycle Bin** folder will be created automatically by PFTA during public folder synchronization.

If you plan to perform public folder synchronization using Migration Manager Public Folder agents, you should create a special public folder called **Aelita EMW Recycle Bin.**

This folder will help prevent data loss in case of accidental public folder deletion. When a public folder is deleted in one of the environments, the public folder synchronization agents move the corresponding folder in the other environment to the **Aelita EMW Recycle Bin** folder, if it exists, instead of permanently deleting the folder. You can use this folder to check whether important information has been deleted, and restore any data deleted by mistake.

> ! **CAUTION: Only deleted public folders will be put into the Aelita EMW Recycle Bin. If you delete a message from a public folder, it will be destroyed permanently in both the Source and Target Exchange organizations.**

Installing the Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1

Migration Manager for Exchange also requires Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 version 6.5.8353.0 or later to be installed on all computers where Migration Agent for Exchange instances will run.

Since the MAPI CDO setup package is not available for distribution, you should download it from the Microsoft Web site. At the moment of the last document update, the download link is http://www.microsoft.com/en-us/download/details.aspx?id=42040.

After installing the API, restart the computer.

Configuring Administrator Mailboxes for Public Folder Synchronization

Public folder migration administrator mailboxes should be created on all Exchange 2013 servers involved in public folder synchronization. These mailboxes will be used to access the public folder tree when creating public folder synchronization jobs.

> ! **CAUTION: The administrator mailbox specified for the synchronization job should not be changed during the synchronization process.**
>
> **The administrator mailboxes should not be included in mailbox or calendar synchronization jobs.**

After you created public folder migration administrator mailboxes, take the following steps:

1. Ensure that the Exchange 2013 organization has primary hierarchy mailbox (which is the first created public folder mailbox in organization). If there are no public folder mailboxes yet, create one. It will automatically become primary hierarchy mailbox.

2. After that associate public folder migration administrator mailbox specified for the public folder synchronization with the primary hierarchy mailbox. To do this, run the following cmdlet in Exchange Management Shell:

```
Set-Mailbox –Identity <Public_Folder_Migration_Administrator_Mailboxes> -
DefaultPublicFolderMailbox <Primary_Hierarchy_Mailbox>
```

> ! **CAUTION: The mailbox database and root public folder specified for the synchronization job should not be renamed during the synchronization process.**

Preparing Public Folder Mailboxes for Public Folder Synchronization

In case of two-way public folder synchronization, the source Exchange organization will act as a migration destination during reverse synchronization (from target to source). You need to prepare public folder mailboxes for a successful public folder synchronization as follows:

1. Ensure that the size of public folder data to be migrated does not exceed the size limit for the primary hierarchy mailbox. If public folder content in the target organization is larger than the limit in the source organization, to migrate it you will need to perform specific steps including creation of additional secondary hierarchy mailboxes in your source Exchange 2013 organization. For detailed instructions, see *Appendix B. Migrating Large Public Folders to Exchange 2013 or Higher* of *Migration Manager for Exchange User Guide* keeping in mind that the *target* of reverse public folder synchronization is your source Exchange organization.
   TIP: For general information on public folders in Exchange 2013, see http://technet.microsoft.com/en-us/library/jj150538(v=exchg.150).aspx.

2. For each public folder mailbox consider adjusting the *Recoverable Items* quota according to the needs of your Exchange 2013 organization (by default, the limit is 30 GB per mailbox). If the quota limit is exceeded for a public folder mailbox, deletions of content in the target public folders will not be synced back to that source public folder mailbox anymore.
   To change the quota value for a public folder mailbox, invoke the following cmdlet:

   ```
   Set-Mailbox -Identity PFMailbox -RecoverableItemsQuota 50GB
   ```

Creating Custom Throttling Policies

To prevent possible issues in an Exchange 2013 organization, you should create custom throttling policies, apply them to the Source Exchange Accounts and then restart the Microsoft Exchange Throttling Service. To do this, run the following cmdlets in Exchange Management Shell for each Source Exchange Account:

```
New-ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name>

Set-ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name> -RcaMaxConcurrency
Unlimited -RcaMaxBurst Unlimited -RcaRechargeRate Unlimited -RcaCutoffBalance
Unlimited -PowerShellMaxConcurrency Unlimited

Set-ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name> -
PowerShellMaxConcurrency Unlimited

Set-ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name> -EWSMaxConcurrency
Unlimited -EWSMaxSubscriptions Unlimited -EwsCutoffBalance Unlimited -EwsMaxBurst
Unlimited -EwsRechargeRate Unlimited -CPAMaxConcurrency Unlimited

Set-ThrottlingPolicyAssociation -Identity <QMM_Exchange_Account_Name> -
ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name>

Restart-Service -Name MSExchangeThrottling
```

i **IMPORTANT:** Described script creates universal custom throttling policies regardless of whether communication with the source Exchange server is performed through MAPI or EWS protocol (used by default). If you migrate to Exchange 2013 (or higher) or Office 365 and the `UseEwsProtocolForSourceIfAvailable` parameter value is not changed, you can skip creation of throttling policies for MAPI by omitting the following line:

```
Set-ThrottlingPolicy <QMM_Exchange_Account_Throttling_Policy_Name> -
RCAMaxConcurrency 10000 -RCAPercentTimeInAD $null -RCAPercentTimeInCAS $null -
RCAPercentTimeInMailboxRPC $null
```

For details about the `UseEwsProtocolForSourceIfAvailable` parameter, see Configuring Migration Using PowerShell.

Configuring the NSPI Connection Limit

i **IMPORTANT:** This step must be performed only if you have any Windows Server 2008 or later domain controllers acting as Global Catalog.

By default, the maximum number of simultaneous Name Service Provider Interface (NSPI) connections equals to 50 per user for Windows Server 2008 or later domain controllers. Therefore, to avoid possible issues related to exceeding that value, you may need to increase the NSPI connection limit on all Windows Server 2008 or later domain controllers acting as Global Catalog. The recommended limit value equals the number of agent instances working simultaneously multiplied by 5.

To change the default connection limit for a domain controller, take the following steps:

1. Click **Start**, click **Run**, type **regedit**, and then click **OK**.

2. Locate and then click the following registry subkey:
    `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\NTDS`

3. Click the **Parameters** key.

4. On the **Edit** menu, point to **New**, and then click **DWORD Value**.

5. Type **NSPI max sessions per user**, and then press **Enter**.

6. Double-click **NSPI max sessions per user**, type the appropriate maximum number of the NSPI connections, and then click **OK**.

7. Restart the computer or restart Active Directory Domain Services.

For additional information, see the following Microsoft Support articles:

- Error: "Trying to connect to Microsoft Exchange Server" results in MAPI_E_LOGON_FAILED

- NSPI connection to a Windows-based domain controller causes MAPI client applications to fail and returns a "MAPI_E_LOGON_FAILED" error message

Setting Exchange Autodiscover URL (Optional)

Migration Agent for Exchange uses the Exchange Autodiscover service to query certain properties of mailboxes being migrated. In order to submit queries to the Autodiscover service, MAgE needs to know its URL. In most cases, the agent automatically gets the Autodiscover URLs for both the source and target organizations.

However, you may experience situations when automatically discovering the URL fails or returns the incorrect URL.

When the correct URL cannot be obtained, an error will be generated causing the synchronization job to fail. Errors in the log file with the following exceptions indicate problems with obtaining the proper Autodiscover URL:

- **AutodiscoverLocalException**: The Autodiscover service couldn't be located.
- **ServiceRequestException**: The request failed. The remote server returned an error: (401) Unauthorized.
- **ServiceRemoteException**: Invalid user: 'Joe.User@contoso.com'.
- **AutodiscoverDeploymentIdMismatchException**: The User Deployment ID returned from Autodiscover does not match the expected value.

If you encounter any of the above exceptions, you need to manually configure the Autodiscover URL for the source or target organizations (or both) . The Autodiscover URL can be configured using the Set-MMExOrganizationProperties cmdlet from the MMExPowerShell module. Below is an example how to use the cmdlet:

```
Set-MMExOrganizationProperties -FQDN source.contoso.com -AutodiscoverUrl
https://autodiscover.source.contoso.com/autodiscover/autodiscover.svc
```

> **i** **TIP:** For information how to use the MMExPowerShell.psm1 module, see Configuring Migration Project Settings Using PowerShell.

Setting Up Connection with the Target Exchange Organization Using SMTP Connectors

This section describes how to set up a connection with the target Exchange organization using SMTP connectors. On this step you may need to coordinate with the administrator of the target Exchange organization to set up the connection properly.

For more details, see the related topics:

- Setting up Source Exchange Organization for Internet Mail Flow between Source and Target Exchange Organizations
- Configuring Source DNS Server for Mail Forwarding
- Testing the SMTP Connectors (Optional)

Setting up Source Exchange Organization for Internet Mail Flow between Source and Target Exchange Organizations

You need to establish Internet mail flow between the source and the target Exchange organizations. For that, you need to create an **Internet Send** connector and **Receive** connector on an Exchange Mailbox server that

can be directly reached through the Internet.

To establish mail flow to and from the Internet through a Mailbox server, follow these steps:

1. Create a Send connector (to send email from source Exchange organization to the Internet) on the Mailbox server.

2. Modify the default Receive connector for the source domain to accept anonymous e-mail from the Internet

3. Add the e-mail domain used for redirection to the list of accepted domains.

Each step is explained in further detail in the related subtopics.

Creating Send Connector

To create a Send connector, you can use either Exchange Admin Center (EAC) or Exchange Management Shell.

i | **NOTE:** For additional information, refer to the Create a Send Connector for Email Sent to the Internet TechNet article.

To create a Send connector using Exchange Admin Center

1. In the **Exchange Admin Center**, navigate to **Mail flow > Send** connectors, and then click **Add +.**

2. In the **New send connector** wizard, specify a name for the send connector, for example, *QMM Send Connector*, and then select **Custom** for the **Type**. Click **Next**.

3. Verify that MX record associated with recipient domain is selected. Then select the Use the external DNS lookup settings on servers with transport roles. Click Next.

4. Under **Address** space, click **Add +**. In the **Add domain** window, make sure SMTP is listed as the **Type**. For **Fully Qualified Domain Name (FQDN)**, specify the address space you want to use for mail redirection from source to target organization (for example, **.target.local*). Click **Save**.

5. Make sure **Scoped send connector** is not selected, and then click **Next**.

6. For **Source server**, click **Add +**. In the S**elect a Server** window, select one or more Mailbox servers in your organization and click **Add**. After you've selected the server, click **OK**.

7. Click **Finish**.

To create a Send connector using Exchange Management Shell
Run the following command:

```
new-SendConnector -Name 'QMM Send Connector' -Usage 'Custom' -AddressSpaces
'SMTP:*.target.local;1' -IsScopedConnector $false -DNSRoutingEnabled $true -
UseExternalDNSServersEnabled $true -SourceTransportServers 'ServerName'
```

where:

- **.target.local* is the address space you want to use for mail redirection from source to target organization.

- *ServerName* is the Mailbox server name.

Modifying Default Receive Connector

To modify the default Receive connector for the source Exchange organization to receive mail from the Internet, you can use either Exchange Admin Center or Exchange Management Shell.

To modify the default Receive connector using Exchange Admin Center

1. In the Exchange Admin Center, navigate to **Mail flow > Receive connectors**.

2. Select the appropriate Mailbox server from the list of servers.

3. Then select the **Default <Server Name>** connector and click **Edit**.

4. In the **Default <Server Name>** window, go to **Security**.

5. In **Permission groups**, select **Anonymous users** to add anonymous permissions.

6. Click **Save**.

To modify the default Receive connector using Exchange Management Shell

Run the following command:

```
Set-ReceiveConnector -PermissionGroups 'AnonymousUsers, ExchangeUsers,
ExchangeServers, ExchangeLegacyServers' -Identity 'ServerName\Default ServerName'
```

Where *ServerName* is the Mailbox server name.

Adding E-mail Domain Used for Redirection to the List of Accepted Domains

To add a new Accepted domain, you can use either Exchange Admin Center or Exchange Management Shell.

To add a domain to Accepted Domains list using Exchange Admin Center

1. In the Exchange Admin Center, navigate to **Mail flow > Accepted domains**, and then click **Add +**.

2. In the **Name** field, specify the accepted domain, such as *source.local*.

3. In the **Accepted domain** field, specify the SMTP namespace for which the Exchange organization will accept e-mail messages, such as **.source.local*.

4. Then select the **Authoritative Domain. E-mail is delivered to a recipient in this Exchange organization** option.

5. Click **Save**.

To add a domain to Accepted Domains list using Exchange Management Shell

Run the following command:

```
new-AcceptedDomain -Name 'source.local' -DomainName '*.source.local' -DomainType
'Authoritative'
```

where **.source.local* is the address space you want to use for mail redirection from the target to the source organization.

Configuring Source DNS Server for Mail Forwarding

After you have completed setting up the source Exchange 2013 organization for Internet mail flow between source and target Exchange organizations, you should also add the Mail Exchanger (MX) record for the source domain to the DNS server. This is necessary to forward the mail (redirected to the additional SMTP addresses added by the Directory Synchronization Agent) to the source Exchange server.

We will use the following additional address space given as example on the previous steps:

- *@source.local*—to redirect mail from target to source mailboxes. A secondary SMTP address will be added to each source mailbox by the Directory Synchronization Agent according to this template.

To set MX record for the source domain

1. In the DNS snap-in, connect to the target DNS server and browse to the **Forward Lookup Zones** container.

2. Right-click the **Forward Lookup Zones** and select **New Zone**

3. In the **New Zone** wizard, select the **Primary zone** to be created.

4. Type local for the Zone name and complete the wizard.

5. Right-click the zone object local again, and click **New Mail Exchanger** on the shortcut menu.

6. In the **New Resource Record** dialog box, type **target** for the **Host or child domain**.

7. Click **Browse** and select the **Exchange server** in the source domain to which mail sent to the *@source.local* domain will be redirected.

8. Click **OK**.

Testing the SMTP Connectors (Optional)

After both source and target Exchange organizations have been set up for Internet mail flow as well as both source and target DNS servers have been configured for mail forwarding, it is recommended to test the connection between the source and the target organizations.

> **!** **CAUTION: This step should be performed in coordination with the administrator of the Exchange organization.**

To test the SMTP connectors:

1. Create test mailboxes on the source and target Exchange servers. In this example, both mailboxes will be called **mbx1**.

2. Set the same primary SMTP address for both mailboxes.

3. In this example the primary address for both mailboxes will be **mbx1@Westland.Exchange.com**.

4. Set additional addresses for both mailboxes.

5. In this example additional address for the source mailbox will be **mbx1@source.local**, and **mbx1@target.local** for the target mailbox.

6. Create a contact on the source Exchange server and point it to the additional SMTP address of the target Exchange mailbox (**mbx1@target.local**).

7. Create a contact on the target Exchange server and point it to the additional SMTP address of the source mailbox (*mbx1@source.local*).

8. Open the test source mailbox and send a message to the source contact.

9. Open the test target mailbox and make sure that the message has arrived.

10. From the test target mailbox, send a message to the target contact, and make sure the e-mail has reached the source test mailbox.

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