

Quest® Migration Manager for Active Directory
8.14

Granular Account Permissions



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Legend

-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
-  **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

Migration Manager for Active Directory Granular Account Permissions

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Overview

To synchronize or migrate objects with their attributes from source to target Active Directory domain, Directory Synchronization Agent works with source and target domains using accounts specified during [domain pair creation](#). Those accounts must have a specific set of rights in order to access the domain objects and perform directory migration or synchronization. A generalized set of permissions suitable for most migration scenarios is described in [Accounts Used by the Directory Synchronization Agent](#). It is the most easy and efficient way to grant all necessary permissions for source and target accounts. However, if the requirements are too excessive and for security reasons you cannot grant such high privileges to the accounts, this document provides the minimum required set of rights that the source and target accounts must have.

This document also describes minimum required permissions for accounts used by [Active Directory Processing Wizard \(ADPW\)](#) and [Exchange Processing Wizard \(EPW\)](#).

Account Migration and Directory Synchronization

During account migration or directory synchronization DSA connects to the source and target Active Directory domains and to the source and target Microsoft Exchange information stores (if necessary). For that it uses source and target Active Directory accounts. These accounts are specified on the **Select Source Domain** and the **Select Target Domain** tab in the **Domain Pair Properties** dialog. The following sections provide minimum required permissions for the source and target Active Directory accounts.

i **IMPORTANT:** The minimum permissions listed in this document are not valid if you plan to perform the following:

- Migration of passwords
- Undo of changes made by migration sessions

If you need to perform these operations, grant source and target accounts permissions according to [Accounts Used by the Directory Synchronization Agent](#).

i **TIP:** SID history adding requires membership in the **Administrators** group either for source or for target DSA account depending on the SID history adding method. For details, see [Adding SID History](#) topic of the *Migration Manager for Active Directory User Guide*.

[Source Active Directory Synchronization Account Permissions](#)

[Target Active Directory Synchronization Account Permissions](#)

Source Active Directory Synchronization Account Permissions

Source Active Directory synchronization account must have the following permissions in the source domain:

1. The **Replicate Directory Changes** permission on a domain naming context in case you perform directory synchronization from a Windows 2000 domain.
2. If you plan to merge or replace security descriptors, the **Manage auditing and security log** privilege must be granted for the source account in the source Domain Controllers Policy. This privilege is not required if security descriptors configured to be skipped.

i **TIP:** Alternatively, if you perform migration (but not the synchronization), you can set the **SDFlagsSearch** registry parameter instead of granting the **Manage auditing and security log** privilege. For more information on the **SDFlagsSearch**, see the following KB articles: [KB Article 59357](#), [KB Article 78252](#) and [KB Article 26334](#).

Caution: Setting this registry parameter will cause SACL to be wiped out for target objects after migration.

3. If you plan to create mail- or mailbox-enabled objects on target, source account must have the **Write proxyAddresses** permission on source objects. For details on types of target objects, see *Specify Exchange Options* in [Configuring the Synchronization Job](#).

4. For performing mailbox switch using Migration Manager for Exchange, source account must have the **Write proxyAddresses** and **Write targetAddress** permissions on source objects.

5. If you plan to disable source user mailboxes or reconnect them to disabled target accounts, grant source account the following permissions:

- Permissions to **Write** the **msExchMasterAccountSid**, **msExchUserAccountControl**, **msExchRecipientDisplayType** and **msExchRecipientTypeDetails** attributes
- The **Manage auditing and security log** and **Restore files and directories** privileges in the source Domain Controllers Policy
- The **Modify permissions** and **Modify owner** permissions on the source objects
- The **Read All Properties** and **List content** permissions on the Exchange organization using the following script in Exchange Management Shell:

```
Get-OrganizationConfig | Add-ADPermission -User <SourceAccount> -AccessRights "ListChildren, ReadProperty"
```
- The **Modify permissions** and **Administer Information Store** permissions on the Exchange mailbox store where mailboxes reside using the following script in Exchange Management Shell:

```
Get-MailboxDatabase | Add-ADPermission -User <SourceAccount> -ExtendedRights ms-Exch-Store-Admin -AccessRights WriteDacl
```

i | **NOTE:** The **Administer Information Store** permission is required only for Microsoft Exchange 2010 or lower.

For more details on disabling source accounts, see *Specify Object Processing Options* of [Creating a Migration Session](#).

Target Active Directory Synchronization Account Permissions

Target Active Directory synchronization account must have the following permissions in the target domain:

1. The **Create all child objects** (if during migration or synchronization any objects are planned to be created) and **Write all properties** permissions on the target domain (or specifically on the OUs where objects reside or will be created) for all objects included in the migration or synchronization process.

If you want more granular permission assignment, grant the **Write** permissions to all non-skipped attributes as well as the following permissions:

i | **IMPORTANT:** The following attributes must not be skipped for directory synchronization: **name**, **cn**, **ou**, **displayName**, **objectCategory**, **objectSID**, **msExchMasterAccountSid**, **nTSecurityDescriptor**, and **msExchMailboxSecurityDescriptor**.

1.1. Grant target account the **Create** permission for types of objects (for instance, users) you plan to create on target (if any).

1.2. The permission to **Write** service attributes specified on the **Object Matching** tab of the domain pair properties. By default, service attributes are **adminDescription**, **adminDisplayName**, **extensionAttribute14** and **extensionAttribute15**. For more details, see *Service Attributes* in [Configuring a Domain Pair](#).

1.3. The **Write userAccountControl** permission for user, inetOrgPerson or computer objects and the **Write groupType** permission for group objects.

1.4. If you plan to create mail- or mailbox-enabled objects on target then target account must have permissions to **Write** attributes from the table below in the target domain when synchronizing objects of the user, inetOrgPerson, contact or group classes, regardless of whether those attributes are included or skipped.

| OBJECT TYPE → ATTRIBUTE NAME ↓ | user (inetOrgPerson) | contact | group |
|---|---------------------------------------|----------------|--------------|
| homeMDB | X* | | |
| homeMTA | X* | | |
| legacyExchangeDN | X | X | X |
| mail | X | X | X |
| mailNickname | X | X | X |
| msExchGroupDepartRestriction | | | X |
| msExchGroupJoinRestriction | | | X |
| msExchHomeServerName | X* | | |
| msExchMailboxGuid | X** | | |
| msExchMDBRulesQuota | X | | |
| msExchModerationFlags | | | X |
| msExchPoliciesExcluded | X | X | X |
| msExchPoliciesIncluded | X | X | X |
| msExchProvisioningFlags | | | X |
| msExchRBACPolicyLink | X*** | | |
| msExchRecipientDisplayType | X | X | X |
| msExchRecipientTypeDetails | X | X | X |
| msExchResourceDisplay | X* | | |
| msExchResourceMetaData | X* | | |
| msExchResourceSearchProperties | X* | | |
| msExchTransportRecipientSettingsFlags | | | X |
| msExchUMEnabledFlags2 | X* | | |
| msExchUserAccountControl | X* | | |
| msExchVersion | X | X | X |
| protocolSettings | X* | | |
| proxyAddresses | X | X | X |
| showInAddressBook | X | X | X |
| targetAddress | X | X | |
| textEncodedOrAddress | X | X | X |

The following notation is used in the table:

X — any option except for **Users without mail options** is selected in **Exchange Options**

X* — only if **Mailbox-enabled users** option is selected in **Exchange Options** and source user is mailbox-enabled

X** — only if either **Mailbox-enabled users** or **Mail-enabled users for Native Move** option is selected in **Exchange Options**, and source user is mailbox-enabled

X*** — only if source user is mail-enabled, or the **Mailbox-enabled users** option is selected in **Exchange Options** and source user is mailbox-enabled

For details on possible Exchange options, see *Specify Exchange Options* in [Configuring the Synchronization Job](#).

i **NOTE:** If you plan to select the **Merge objects with corresponding contacts** option available on the **Specify Exchange Options** step, grant target account permission to delete corresponding contacts and to add objects to groups those contacts are members of.

1.5. If you plan to enable target accounts that are mailbox-enabled, grant target account permissions to **Write** the **msExchMasterAccountSid**, **msExchUserAccountControl**, **msExchRecipientDisplayType** and **msExchRecipientTypeDetails** attributes. For more details on enabling target accounts, see *Specify Object Processing Options* of [Creating a Migration Session](#).

2. If you use the **Synchronize object deletions** option, grant target account permission to delete corresponding objects .

3. For updating security descriptors, the following permissions must be granted to the target account:

- The **Manage auditing and security log** and **Restore files and directories** privileges in the target Domain Controllers Policy
- The **Modify permissions** and **Modify owner** permissions on the target objects

4. For updating Microsoft Exchange mailbox permissions, the target account must have the following permissions:

- The **Read All Properties** and **List content** permissions on the Exchange organization using the following script in Exchange Management Shell:

```
Get-OrganizationConfig | Add-ADPermission -User <TargetAccount> -AccessRights "ListChildren, ReadProperty"
```

- The **Modify permissions** and **Administer Information Store** permissions on the Exchange mailbox store where mailboxes reside using the following script in Exchange Management Shell:

```
Get-MailboxDatabase | Add-ADPermission -User <TargetAccount> -ExtendedRights ms-Exch-Store-Admin -AccessRights WriteDacl
```

i **NOTE:** The **Administer Information Store** permission is required only for Microsoft Exchange 2010 or lower.

Active Directory Processing

Account under which Active Directory Processing Wizard (ADPW) performs Active Directory processing must have the following permissions:

1. For processing Group membership grant account the **Write Members** permission on group objects.
 2. For processing Linked attributes grant account permissions to **Write** corresponding linked attributes for processed objects.
 3. For processing Active Directory permissions, the following permissions must be granted to the account:
 - The **Manage auditing and security log** and **Restore files and directories** privileges in the Domain Controllers Policy
 - The **Modify permissions** and **Modify owner** permissions on processed objects
 4. For processing Default schema permissions grant account the **Write defaultSecurityDescriptor** permission on **classSchema** objects inside schema naming context.
 5. For processing Exchange mailbox permissions, the account must have the following permissions:
 - The **Write msExchMailboxSecurityDescriptor** and **Write msExchMasterAccountSid** permissions on processed objects.
 - The **Read All Properties** and **List content** permissions on the Exchange organization using the following script in Exchange Management Shell:

```
Get-OrganizationConfig | Add-ADPermission -User <ServiceAccount> -AccessRights "ListChildren, ReadProperty"
```
 - The **Administer Information Store** and **Modify** permissions on the Exchange mailbox store where mailboxes reside using the following script in Exchange Management Shell:

```
Get-MailboxDatabase | Add-ADPermission -User <ServiceAccount> -ExtendedRights ms-Exch-Store-Admin -AccessRights WriteDacl
```
- i** | **NOTE:** The **Administer Information Store** permission is required only for Microsoft Exchange 2010 or lower.
6. For processing the Other Exchange permissions, the following permissions must be granted to the account:
 - The **Manage auditing and security log** and **Restore files and directories** privileges in the Domain Controllers Policy
 - The **Read permissions**, **Modify permissions** and **Modify owner** permissions on objects inside the Exchange configuration container
 - The **Read All Properties** and **List content** permissions on the Exchange configuration container using the following script in Exchange Management Shell:

```
Add-ADPermission -Identity (Get-OrganizationConfig).Identity.Parent -User <ServiceAccount> -AccessRights "ListChildren, ReadProperty"
```

- The **Write msExchAdmins** permission for **msExchOrganizationContainer** and **msExchAdminGroup** objects
- The **Write msExchChatAccess** permission for **msExchChatChannel**, **msExchChatNetwork** and **msExchChatProtocol** objects
- The **Write msExchUserLink** permission for **msExchRoleAssignment** objects

Exchange Server Processing

Account under which Exchange Processing Wizard performs Exchange servers processing must have the following permissions:

1. **Read All Properties** and **List content** permissions on the Exchange organization. To grant these permissions to the account, use the following script in Exchange Management Shell:

```
Get-OrganizationConfig | Add-ADPermission -User <ServiceAccount> -AccessRights "ListChildren, ReadProperty"
```

2. To process client permissions of mailboxes, grant the **ApplicationImpersonation** management role.

3. To perform public folder processing:

- The account must be mailbox-enabled
- For Exchange 2010 servers:
 - Grant membership in the **Public Folder Management role** group (Mail Enabled Public Folders, Public Folders roles) for processing client and administrative permissions of public folders
- For Exchange 2013 or later servers:
 - Account must have the **ReadItems**, **EditOwnedItems**, **EditAllItems**, **FolderOwner**, **FolderContact**, and **FolderVisible** on the public folders to be processed.

-OR-

- Grant **FullAccess** on a mailbox where public folders are located using the following script:

```
Get-Mailbox "PublicFolderMailbox" -PublicFolder | Add-MailboxPermission -User "ServiceAccount" -AccessRights "FullAccess"
```

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