

# **Exchange Management Shell: TFM™**

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# **Exchange Management Shell: TFM**

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*forthcoming*

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## Chapter 2

# Managing Public Folders

Even though Public Folders have been branded as a de-emphasized feature in Exchange Server 2007, they can still be created, managed, and used. With the release of Service Pack 1, they can be managed again using a GUI, by opening the Public Folder management console. In this chapter we will dive into the EMS cmdlets that allow you to manage every manageable aspect of public folders.

### Public Folder cmdlets

By running the cmdlet *Get-Command*, we can see that there are in total 23 cmdlets available to manage public folders.

```
[PS] C:\>Get-Command -Noun *publicfolder* | Measure-Object
```

```
Count : 23
Average :
Sum :
Maximum :
Minimum :
Property :
```

```
[PS] C:\>
```

To get an overview of all these cmdlets, we just change the previous line to pipe the output of *Get-Command* to a table that only lists the name of the cmdlets that have publicfolder in the noun.

```
[PS] C:\>Get-Command -Noun *publicfolder* | Format-Table Name
```

```
Name
----
Add-PublicFolderAdministrativePermission
Add-PublicFolderClientPermission
Disable-MailPublicFolder
Enable-MailbPublicFolder
Get-MailPublicFolder
Get-PublicFolder
Get-PublicFolderAdministrativePermission
Get-PublicFolderClientPermission
Get-PublicFolderDatabase
Get-PublicFolderStatistics
New-PublicFolder
New-PublicFolderDatabase
Remove-PublicFolder
Remove-PublicFolderAdministrativePermission
Remove-PublicFolderClientPermission
Remove-PublicFolderDatabase
Resume-PublicFolderReplication
Set-MailPublicFolder
Set-PublicFolder
Set-PublicFolderDatabase
Suspend-PublicFolderReplication
Update-PublicFolder
Update-PublicFolderHierarchy
```

```
[PS] C:\>
```

## Managing a Public Folder Database

Public Folders are stored in a public folder database. When you deploy your first Exchange Server 2007 in a brand new organization, you are prompted with the question if you would like to support clients older than Microsoft Office Outlook 2007. If you select *No*, the Exchange mailbox server will be deployed without a public folder database. On the other hand, if you say *Yes*, you will automatically have a public folder database in your Exchange organization. If you are transitioning from Exchange 2000 or Exchange 2003 to Exchange 2007, you will notice that the first Exchange 2007 Mailbox Server role you deploy, also has a public folder database, named *Public Folder Database*, created in a storage group called *Second Storage Group*.

```
[PS] C:\>Get-PublicFolderDatabase
```

Name	Server	StorageGroup
Public Folder Database	EX2007	Second Storage Group

```
[PS] C:\>
```

## Creating a Public Folder Database: New-PublicFolderDatabase

When you decide to create a new public folder database, you need to keep in mind the following considerations:

- You can only have one public folder database per Exchange 2007 mailbox server;
- You cannot deploy a public folder database on a CCR clustered mailbox server, unless

it's the only public folder database in your Exchange organization;

- You cannot enable LCR on a storage group that contains a public folder database, unless it's the only public folder database in your Exchange organization;
- You cannot enable SCR on a storage group that contains a public folder database, unless it's the only public folder database in your Exchange organization.

Every public folder database that you choose to create inside your Exchange organization will own the default public folder tree. It is not supported within Exchange Server 2007 to create a new application public folder tree. When you create a new public folder using EMS, you need to specify which public folder database will home the content of that public folder.

```
[PS] C:\>New-PublicFolder -Database "ex2007\second storage group\public folder database" -Name
Projects
```

```
Name          Parent Path
----          -
Projects      \
```

```
[PS] C:\>
```

Whenever a user creates a public folder using Outlook or Outlook Web Access, the public folder will be created in the public folder database that is configured for the mailbox database too which the user's mailbox belongs.

```
[PS] C:\>Get-MailboxDatabase -Identity "ex2007\first storage group\mailbox database" | Format-List
Name,PublicFolderDatabase
```

```
Name          : Mailbox Database
PublicFolderDatabase : EX2007\Second Storage Group\Public Folder Database
```

```
[PS] C:\>
```

The public folder hierarchy is replicated automatically using SMTP between all Exchange mailbox servers that have a public folder database. The content of a public folder can be configured to replicate to some or all public folder databases in your Exchange organization.

To create a new public folder database, you need to use the cmdlet *New-PublicFolderDatabase*. Table 1 lists the parameters you can use with this cmdlet.

*Table 1: New-PublicFolderDatabase -Parameters*

Parameter	Required	Description
-Name	YES	Used to specify the name of the public folder database
-StorageGroup	YES	Used to specify the storage group too which the public folder database will belong. Following values can be used:  Name  GUID

-EdbFilePath	NO	Used to specify the path and the database file name for the public folder database. If not added, EMS will create the database file in the storage group folder and will use the specified name as database file name.
-HasLocalCopy	NO	If the public folder database is created in a storage group for which LCR is enabled, you can use this parameter to configure LCR for the database.
-CopyEdbFilePath	NO	If the public folder database is created in a storage group for which LCR is enabled, you can use this parameter to specify the location for the passive copy of the public folder database. Can only be used if -HasLocalCopy is set to \$True.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-TemplateInstance	NO	Used to specify a source public folder database, from which the configuration will be cloned to the public folder database that will be created.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

The following single-line EMS command will create a new public folder database on the server *EX2007bis*. The new public folder database will be configured with the same settings as the public folder database that belongs to another Exchange Mailbox server in your organization named *EX2007*.

```
[PS] C:\>New-PublicFolderDatabase -Name "Public Folder Database" -StorageGroup "EX2007bis\Public Folder Storage Group" -TemplateInstance (Get-PublicFolderDatabase -Identity "ex2007\second storage group\public folder database")
```

Name	Server	StorageGroup	ReplicationMode
----	-----	-----	-----
Public Folder Database		EX2007bis	Public Folder Storage Group

```
[PS] C:\>
```

To set this new public folder database as default public folder database for all mailbox databases located on the same mailbox server, you can use the EMS cmdlet *Set-MailboxDatabase*.

```
[PS] C:\>Get-MailboxDatabase -Server ex2007bis | Set-MailboxDatabase -PublicFolderDatabase "ex2007bis\Public Folder Storage Group\Public Folder Database"
```

```
[PS] C:\>Get-MailboxDatabase -Server ex2007bis | Format-Table Name,PublicFolderDatabase
```

Name	PublicFolderDatabase
----	-----
Mailbox Database Management	EX2007bis\Public Folder Storage Group\Public Folder Database

```
[PS] C:\>
```

## Getting an overview of a Public Folder Database: Get-PublicFolderDatabase

If you want to have a look at the properties of a Public Folder database, you can use the cmdlet *Get-PublicFolderDatabase*.

```
[PS] C:\>Get-PublicFolderDatabase -StorageGroup "Second Storage Group"
```

Name	Server	StorageGroup
----	-----	-----
Public Folder Database	EX2007	Second Storage Group

```
[PS] C:\>
```

The following list of settings is returned:

- Alias
- FirstInstance
- MaxItemSize
- ItemRetentionPeriod
- ReplicationPeriod
- ProhibitPostQuota
- PublicFolderHierarchy
- ReplicationMessageSize
- ReplicationSchedule
- UseCustomReferralServerList
- AdministrativeGroup
- AllowFileRestore
- BackupInProgress
- CopyEdbFilePath
- DatabaseCreated
- Description
- EdbFilePath
- ExchangeLegacyDN
- HasLocalCopy
- DeletedItemRetention
- SnapshotLastFullBackup
- SnapshotLastIncrementalBackup
- SnapshotLastDifferentialBackup
- SnapShotLastCopyBackup
- LastFullBackup
- LastIncrementalBackup
- LastDifferentialBackup
- LastCopyBackup
- MaintenanceSchedule

- MountAtStartup
- Mounted
- Organization
- QuotaNotificiationSchedule
- RetainDeletedItemsUntilBackup
- Server
- ServerName
- StorageGroup
- StorageGroupName
- IssueWarningQuota
- EventHistoryRententionPeriod
- Name
- AdminDisplayName
- ExchangeVersion
- DistinguishedName
- Identity
- Guid
- ObjectCategory
- ObjectClass
- WhenChanged
- WhenCreatd
- OriginatingServer
- IsValid

If you would like to get an overview of all Public Folder databases in your Exchange organization, including the ones located on Exchange 2000 Servers or Exchange Servers 2003, you can add the parameter *-IncludePreExchange2007*.

## Changing settings of a Public Folder Database: Set-PublicFolderDatabase

To make changes to the settings of one or more Public Folder databases, you can use the cmdlet *Set-PublicFolderDatabase*.

```
[PS] C:\>Get-PublicFolderDatabase -StorageGroup "Second Storage Group" | Set-PublicFolderDatabase
-ItemRetentionPeriod 24 -IssueWarningQuota 50Mb
[PS] C:\>Get-PublicFolderDatabase -StorageGroup "Second Storage Group" | Format-
List Name,ItemRetentionPeriod,IssueWarningQuota

Name                : Public Folder Database
ItemRetentionPeriod : 24.00:00:00
IssueWarningQuota   : 50MB
```

[PS] C:\>

Here's a list of settings you can change using the cmdlet *Set-PublicFolderDatabase*.

- UseCustomReferralServerList
- CustomReferralServerList
- MaxItemSize
- ItemRetentionPeriod
- ReplicationPeriod
- ProhibitPostQuota
- ReplicationMessageSize
- ReplicationSchedule
- AllowFileRestore
- DeletedItemRetention
- MaintenanceSchedule
- MountAtStartup
- QuotaNotificationSchedule
- RetainDeletedItemsUntilBackup
- IssueWarningQuota
- EventHistoryRetentionPeriod

### **Set-PublicFolderDatabase -MaintenanceSchedule**

You can use the *Set-PublicFolderDatabase* cmdlet with the parameter *-MaintenanceSchedule* to change the period during which you allow Exchange to perform its online maintenance against the public folder database. There are a few built-in schedules you can use:

- Never
- Always
- Daily10PM
- Daily11PM
- Daily12PM
- DailyAtMidnight
- Daily1AM
- Daily2AM
- Daily3AM
- Daily4AM
- Daily5AM

- `DailyFrom11PMTo3AM`
- `DailyFrom1AMTo5AM`
- `DailyFrom2AMTo6AM`
- `DailyFromMidnightTo4AM`
- `EveryFourHours`
- `EveryHour`
- `EveryTwoHours`
- `FridayAtMidnight`
- `SaturdayAtMidnight`
- `SundayAtMidnight`
- `DailyFrom8AMTo5PMAtWeekDays`
- `DailyFrom9AMTo5PMAtWeekDays`
- `DailyFrom9AMTo6PMAtWeekDays`
- `DailyFrom8AMTo12PMAnd1PMTo5PMAtWeekDays`
- `DailyFrom9AMTo12PMAnd1PMTo6PMAtWeekDays`

Or you can use your own custom schedule.

```
[PS] C:\>Get-PublicFolderDatabase -StorageGroup "Second Storage Group" | Set-PublicFolderDatabase
-MaintenanceSchedule "mon.10:00-mon.12:00, wed.10:00-wed.12:00"
```

```
[PS] C:\>Get-PublicFolderDatabase -StorageGroup "Second Storage Group" | Format-
List Name,MaintenanceSchedule
```

```
Name                : Public Folder Database
MaintenanceSchedule : {mon.10:00-mon.12:00, wed.10:00-wed.12:00}
```

```
[PS] C:\>
```

## Get overview of Public Folder Statistics: `Get-PublicFolderStatistics`

The cmdlet *Get-PublicFolderStatistics* allows you to get an overview of one or more public folders in your Exchange organization or on just one Exchange mailbox server.

In the following example we would like to know more information about the public folder statistics for all public folders that are names "General Info". Below you can find the single line that we used to retrieve the requested information.

```
[PS] C:\>Get-PublicFolder \ -Recurse | Where {$_.Name -ilike "General Info"} | Get-
PublicFolderStatistics
```

Name	ItemCount	LastAccessTime
----	-----	-----
General Info	898	1/10/2007 14:19:45
General Info	763	25/9/2007 10:36:45

```
[PS] C:\>
```

Here's all the information you can access by using the cmdlet *Get-PublicFolderStatistics*.

```
[PS] C:\>Get-PublicFolderStatistics -Identity "\Marketing\General Info" | Format-List
```

```
AdminDisplayName           : General Info
AssociatedItemCount         : 898
ContactCount               : 1
CreationTime               : 1/10/2007 13:19:32
DeletedItemCount           : 0
EntryID                    : 00000000001A477390AA6611CD9BC8000AA002FC45A62E1524287B
ExpiryTime                 :
FolderPath                 : Marketing\General Info
IsDeletePending           : False
ItemCount                  : 898
LastAccessTime             : 1/10/2007 14:19:45
LastModificationTime       : 1/10/2007 13:29:12
Name                       : General Info
OwnerCount                 : 3
TotalAssociatedItemSize    : 1450B
TotalDeletedItemSize      : 0B
TotalItemSize              : 1450B
ServerName                 : ex2007
StorageGroupName          : Second Storage Group
DatabaseName               : Public Folder Database
Identity                   : 00000000001A477390AA6611CD9BC8000AA002FC45A62E1524287B
IsValid                    : True
Originating Server        : ex2007.proexchange.local
```

```
[PS] C:\>
```

## Suspend Public Folder Replication: Suspend-PublicFolderReplication

As we have already seen in this chapter, Public Folder databases share the same Public Folder hierarchy in an Exchange organization. Whenever a new Public Folder is created in any Public Folder database in the Exchange organization, its existence will be replicated automatically to all other public folder databases in your Exchange organization. You cannot suspend Public Folder Hierarchy replication.

You can choose to replicate the content of a public folder to one or more public folder databases in your Exchange organization, using SMTP mail flow. You can control when the replication should occur, and how big the replication message may be in size. It is also possible in Exchange 2007 to suspend replication of public folder content, by using the EMS cmdlet *Suspend-PublicFolderReplication*.

```
[PS] C:\>Suspend-PublicFolderReplication
```

```
Confirm
```

```
Are you sure you want to perform this action?
```

```
Suspending public folder replication.
```

```
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help
```

```
(default is "Y"):y
```

```
[PS] C:\>
```

If you do not wish to confirm your action, you can add the parameter *-Confirm* and set it to `False`. You can also choose to specify against which domain controller the configuration change should be made, by adding the parameter *-DomainController*.

```
[PS] C:\>Suspend-PublicFolderReplication -DomainController DCWSS.Proexchange.Local -Confirm:$False
```

```
[PS] C:\>
```

## Resume Public Folder Replication: Resume-PublicFolderReplication

After suspending public folder replication, you will need to resume public folder replication by using the EMS cmdlet *Resume-PublicFolderReplication*. As with *Suspend-PublicFolderReplication*, you can specify against which domain controller you want the configuration change to be done.

```
[PS] C:\>Resume-PublicFolderReplication -DomainController DCWSS.Proexchange.Local
[PS] C:\>
```

## Updating Public Folders

### Update-PublicFolderHierarchy

If you would like to update the Public Folder Hierarchy, you can use the cmdlet *Update-PublicFolderHierarchy*.

### Update-PublicFolder

In order to update the content of a public folder in reference to its replica-public folders stored on other public folder databases in the exchange organization, you can use the EMS cmdlet *Update-PublicFolder*.

## Removing a Public Folder Database: Remove-PublicFolderDatabase

When you decide to remove a public folder database, you need to keep in mind the following considerations:

- You cannot remove a public folder database that contains public folder replicas.
- You cannot remove a public folder database that contains an offline address book.

### Remove a Public Folder Database

Before you can remove a public folder database, you will need to make sure that you replicate all public folders to a new public folder database in the same Exchange organization, and remove all public folder replicas from the public folder database.

```
[PS] C:\>Get-PublicFolderDatabase -Server ex2007bis | Remove-PublicFolderDatabase
Remove-PublicFolderDatabase : The public folder database "EX2007bis\Public Folder Storage Group\
Public Folder Database" contains folder replicas. Before deleting the public folder database,
remove the folders or move the replicas to another public folder database.
At line:1 char:69
+ Get-PublicFolderDatabase -Server ex2007bis | Remove-PublicFolderDatabase
[PS] C:\>
```

When you remove a public folder database, remember that you will have to remove the database file yourself.

To replicate all public folders to another public folder database in the same organization, you can use the script *MoveAllReplicas.ps1* that you can find on your Exchange Mailbox server under the directory *Scripts*.

```
[PS] C:\Program Files\Microsoft\Exchange Server\Scripts\>MoveAllReplicas.ps1 -Server EX2007bis
-NewServer EX2007
[PS] C:\Program Files\Microsoft\Exchange Server\Scripts\>
```

To remove all public folders from the public folder database, you can use the cmdlet *Remove-PublicFolder*.

```
[PS] C:\>Get-PublicFolderStatistics -Server ex2007bis | Remove-PublicFolder -Confirm:$False
[PS] C:\>
```

## Remove the last Public Folder Database

If there is no other public folder database in your Exchange organization, you will need to remove all public folder replicas from the public folder database, and you will need to move any existing offline address book to a Web distribution point. To remove the last public folder database in an Exchange organization, you will need to use the cmdlet *Remove-PublicFolderDatabase* with the parameter *-RemoveLastAllowed*.

```
[PS] C:\>Get-PublicFolderDatabase -Server ex2007 | Remove-PublicFolderDatabase -RemoveLastAllowed
Remove-PublicFolderDatabase : The public folder database "EX2007bis\Public Folder Storage Group\
Public Folder Database" contains the following offline address book(s):\Default Offline Address Book
Before deleting the public folder database, move the offline address book(s) to a Web distribution
point.
At line:1 char:69
+ Get-PublicFolderDatabase -Server ex2007 | Remove-PublicFolderDatabase <<<<
[PS] C:\>Get-OfflineAddressBook | Set-OfflineAddressBook -PublicFolderDistributionEnabled:$False
-Versions version4
[PS] C:\>Get-PublicFolder -Server EX2007 "\" -Recurse -ResultSize:Unlimited | Remove-PublicFolder
-Server EX2007 -Recurse -ErrorAction:SilentlyContinue
```

Confirm

Are you sure you want to perform this action?

Removing public folder "\".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help

(default is "Y"):y

```
[PS] C:\> Get-PublicFolder -Server EX2007 "Non_Ipm_Subtree" -Recurse -ResultSize:Unlimited |
Remove-PublicFolder -Server EX2007 -Recurse -ErrorAction:SilentlyContinue
```

Confirm

Are you sure you want to perform this action?

Removing public folder "NON\_IPM\_SUBTREE".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help

(default is "Y"):A

```
[PS] C:\>Get-PublicFolderDatabase -Server ex2007 | Remove-PublicFolderDatabase -RemoveLastAllowed
```

Confirm

Are you sure you want to perform this action?

Removing Public Folder Database "EX2007\Second Storage Group\Public Folder Database".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help

(default is "Y"):Y

WARNING: The specified database has been removed. You must remove the database file located in C:\Program Files\Microsoft\Exchange Server\Mailbox\Second Storage Group\Public Folder Database.edb from your computer manually if it exists. Specified database: Public Folder Database

```
[PS] C:\>
```

**Outlook may need Public Folders!**

Outlook client versions before Microsoft Office Outlook 2007 rely on so-called system Public Folders for being able to retrieve free-and busy information, download Offline Address Books (version 1, 2, and/or 3), and gain access to organization forms libraries. Microsoft Office Outlook 2007 (and later) doesn't rely on public folders anymore, since they can use the Exchange Web Services for gaining access to free-and busy information and for downloading the Offline Address Book. Microsoft urges organizations to use InfoPath instead of organization forms libraries to publish organization forms.

When you remove a public folder database, remember that you will have to remove the database file yourself.

## Managing Public Folders

### Creating a new Public Folder: New-PublicFolder

There are two types of public folders: normal public folders that belong to the `Ipm_Subtree`, and system public folders that belong to the `Non_Ipm_Subtree`. A mailbox-enabled client can only create a public folder in the `Ipm_Subtree` using Outlook and Outlook Web Access. Only normal public folders are visible for Exchange clients when they open their public folders using Outlook or Outlook Web Access. An Exchange Public Folder Administrator can create next to normal public folders, also system public folders using the EMS cmdlet `New-PublicFolder`. An Exchange Public Folder administrator can only create a public folder that will hold mail items using the Exchange Public Folder Management Console or using the EMS. If you want to create a public folder that can hold Calendar items, Contact items, Task items, or Notes items, you will need to use Outlook or Outlook Web Access.

### Create a new system Public Folder: New-SystemPublicFolder -Path Non\_Ipm\_Subtree

System Public Folders are available to provision Microsoft Office Outlook clients older than version 2007 with Offline Address Books, Free-and Busy information, and so on. System public folders are created by default when you create a new public folder database, as can be seen below.

```
[PS] C:\>Get-PublicFolder \Non_Ipm_Subtree -recurse
```

Name	Parent Path
NON_IPM_SUBTREE	
EFORMS REGISTRY	\NON_IPM_SUBTREE
Events Root	\NON_IPM_SUBTREE
OFFLINE ADDRESS BOOK	\NON_IPM_SUBTREE
/o=First Organization/cn=addr...	\NON_IPM_SUBTREE\OFFLINE ADDRESS BOOK
EX: /o=First Organization/ou=...	\NON_IPM_SUBTREE\OFFLINE ADDRESS BOOK
OWAScratchPad{BFF9E08A-1836-4...	\NON_IPM_SUBTREE
SCHEDULE+ FREE BUSY	\NON_IPM_SUBTREE
EX: /o=First Organization/ou=...	\NON_IPM_SUBTREE\SCHEDULE+ FREE BUSY
Schema-root	\NON_IPM_SUBTREE
Default	\NON_IPM_SUBTREE\schema-root
microsoft	\NON_IPM_SUBTREE\schema-root
exchangev1	\NON_IPM_SUBTREE\schema-root\microsoft
StoreEvents(BFF9E08A-1836-401...	\NON_IPM_SUBTREE
globalevents	\NON_IPM_SUBTREE\StoreEvents(BFF9E08A-1836-401...
internal	\NON_IPM_SUBTREE\StoreEvents(BFF9E08A-1836-401...

[PS] C:\>

There is only one system public folder that you might have to create if needed, and that is an organizational forms folder.

The following example shows you how you need to create a new organizational forms system public folder.

```
[PS] C:\>New-PublicFolder -Path "\NON_IPM_SUBTREE\EFORMS_REGISTRY" -Name "Organizational Forms Library"
```

```
Name           Parent Path
----           -
Organizational Forms Library  \NON_IPM_SUBTREE\EFORMS_REGISTRY
```

[PS] C:\>

If there is only one organization forms library, all clients will be able (depending on the client permissions set for the folder) to connect to that forms folder. If you create more than one organization forms library, you will need to define its language by changing the property *PR\_EFORMS\_LOCALE\_ID* to match the locale ID you need. This property cannot be changed by using the EMS, you will need to use a tool like Microsoft Exchange Server MAPI Editor to accomplish this!

### **Create a new public folder: New-PublicFolder**

Table 2 lists all the parameters that can be used to create a new public folder with the cmdlet *New-PublicFolder*.

*Table 2: New-PublicFolder: Parameters*

Parameter	Required	Description
-Name	YES	Used to define a name for the public folder
-Path	NO	Used to define the location of the public folder in the public folder hierarchy, if not added, the public folder will be created as a root public folder
-Server	NO	Can be used to specify in which public folder database the public folder content should be stored
-DomainController	NO	Used to specify against which domain controller this configuration change is written
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered
-Confirm	NO	When added, you will be required to confirm your action

To create a new public folder named *2007* as a subfolder of *Projects*, you can use the following line in EMS:

```
[PS] C:\>New-PublicFolder -Name 2007 -Path \Projects
```

```
Name           Parent Path
----           -
2007           \Projects
```

```
[PS] C:\>
```

## Get an overview of one or more Public Folders: `Get-PublicFolder`

To retrieve attributes of one or more public folders, you can use the cmdlet `Get-PublicFolder`.

```
[PS] C:\>Get-PublicFolder
```

Name	Parent Path
-----	-----
IPM_SUBTREE	

```
[PS] C:\>
```

You can tune the output of the cmdlet by using several parameters.

### `Get-PublicFolder -Identity`

If you don't add the parameter `Identity`, EMS will assume you want to have a look at the public folder tree. You can add the parameter `Identity` to have a look at one particular public folder.

### `Get-PublicFolder -GetChildren`

To retrieve the subfolders of an existing public folder, you can add the parameter `-GetChildren` to the cmdlet `Get-PublicFolder`.

```
[PS] C:\>Get-PublicFolder \ -GetChildren
```

Name	Parent Path
-----	-----
Projects	\
Sapien	\

```
[PS] C:\>
```

### `Get-PublicFolder -Recurse`

If you want to get an overview of a particular public folder and all its subfolders, you need to add the parameter `-Recurse`.

```
[PS] C:\>Get-PublicFolder \ -Recurse
```

Name	Parent Path
-----	-----
IPM_SUBTREE	
Projects	\
2007	\Projects
Sapien	\

```
[PS] C:\>
```

## Get-PublicFolder -ResultSize

By default *Get-PublicFolder* will return a maximum of 10,000 public folders. You can change this value by adding the parameter *-ResultSize*, and setting it to *Unlimited* or any other value. You can only add the parameter *-ResultSize* if you also add the parameter *-Recurse* or *-GetChildren*.

```
[PS] C:\>Get-PublicFolder \ -Recurse -ResultSize 2
```

```
Name           Parent Path
----           -
IPM_SUBTREE
Projects       \
WARNING: There are more results available than are currently displayed. To view them, increase the
value for the ResultSize parameter.
```

```
[PS] C:\>
```

## Get-PublicFolder -Server

You can also choose to get the public folders that are homed on a particular Exchange server, by adding the parameter *-Server*.

## Changing settings of a Public Folder: Set-PublicFolder

You can change settings of a public folder by using the cmdlet *Set-PublicFolder*. The following list shows you what settings you can alter:

- HiddenFromAddressListsEnabled
- Name
- Replicas
- AgeLimit
- UseDatabaseAgeDefaults
- MaxItemSize
- PostStorageQuota
- StorageQuota
- UseDatabaseQuotaDefaults
- ReplicationSchedule
- UseDatabaseReplicationSchedule
- RetainDeletedItemsFor
- UseDatabaseRetentionDefaults

```
[PS] C:\>Get-PublicFolder \ -Recurse | Where-Object {$_.Name -ilike "General Info"} | Set-
PublicFolder -MaxItemSize 2Mb -StorageQuota 120Mb
```

```
[PS] C:\>Get-PublicFolder \ -Recurse | Where-Object {$_.Name -ilike "General Info"} | Format-
List Name, MaxItemSize, StorageQuota
```

```
Name           : General Info
MaxItemSize    : 2MB
```

```
StorageQuota      : 120MB
[PS] C:\>
```

## Mail-enabling a Public Folder: Enable-MailPublicFolder

A Public Folder in Exchange 2007 can be mail-enabled or not. When you create a public folder using the EMS, it will not be mail-enabled, but you can change this by using the cmdlet *Enable-MailPublicFolder*.

Table 3 lists all the parameters you can use with the cmdlet *Enable-MailPublicFolder*, and if they are required or not.

*Table 3: Enable-MailPublicFolder: Parameters*

Parameter	Required	Description
-Identity	YES	Used to identify the public folder that you want to mail-enable
-HiddenFromAddressListsEnabled	NO	A Boolean parameter used to specify if the public folder should be visible in any Exchange address list or not. If not added, it defaults to False.
-Server	NO	Can be used to specify in which public folder database the public folder is located
-DomainController	NO	Used to specify against which domain controller this configuration change is written
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered
-Confirm	NO	When added, you will be required to confirm your action

To mail-enable your public folder called “General Info”, you can use the following line:

```
[PS] C:\>Enable-MailPublicFolder -Identity "\Marketing\General Info"
```

```
Alias      Identity
-----      -
General Info      proexchange.local/Microsoft Exchange System Objects/General Info
```

```
[PS] C:\>
```

## Getting an overview of a mail-enabled Public Folder: Get-MailPublicFolder

You can get an overview of a mail-enabled Public Folder by using the cmdlet *Get-MailPublicFolder*.

The following list of properties is retrieved:

- Contacts
- DeliverToMailboxAndForward
- ExternalEmailAddress

- ForwardingAddress
- PublicFolderType
- PhoneticDisplayName
- RootUrl
- AcceptMessagesOnlyFrom
- AcceptMessagesOnlyFromDLMembers
- AddressListMembership
- Alias
- OrganizationalUnit
- CustomAttributeN (where N has a value between 1 and 15)
- EmailAddresses
- GrantSendOnBehalfTo
- HiddenFromAddressListsEnabled
- LegacyExchangeDN
- MaxSendSize
- MaxReceiveSize
- PoliciesIncluded
- PoliciesExcluded
- EmailAddressPolicyEnabled
- PrimarySmtpAddress
- RecipientType
- RecipientTypeDetails
- RejectMessagesFrom
- RejectMessagesFromDLMembers
- RequireSenderAuthenticationEnabled
- SimpleDisplayName
- UMDtmfMap
- WindowsEmailAddress
- IsValid
- OriginatingServer
- ExchangeVersion
- Name
- DistinguishedName
- Identity

- Guid
- ObjectCategory
- ObjectClass
- WhenChanged
- WhenCreated

## Changing settings of a mail-enabled Public Folder: `Set-MailPublicFolder`

Once you have mail-enabled a public folder you can always change settings, by using the cmdlet *Set-MailPublicFolder*.

You can change any setting listed below using *Set-MailPublicFolder*.

- ForwardingAddress
- AcceptMessagesOnlyFrom
- AcceptMessagesOnlyFromDLMembers
- CustomAttributeN (where N has a value between 1 and 15)
- RejectMessagesFrom
- RejectMessagesFromDLMembers
- PublicFolderType
- GrantSendOnBehalfTo
- CreateDTMFMap
- DeliverToMailboxAndForward
- PhoneticDisplayName
- Alias
- DisplayName
- EmailAddresses
- HiddenFromAddressListsEnabled
- MaxSendSize
- MaxReceiveSize
- EmailAddressPolicyEnabled
- PrimarySmtpAddress
- RequireSenderAuthenticationEnabled
- SimpleDisplayName
- UMDtmfMap
- WindowsEmailAddress

## Mail-disabling a Public Folder: Disable-MailPublicFolder

To mail-disable a Public Folder, you need to use the cmdlet *Disable-MailPublicFolder*. The public folder will still exist, but its mail properties will be removed from Active Directory.

```
[PS] C:\>Disable-MailPublicFolder -Identity "\Marketing\General Info"
```

Confirm

Are you sure you want to perform this action?

Disabling mail public folder "\Marketing\General Info".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help

(default is "Y"):y

```
[PS] C:\>
```

## Managing the right to create a new public folder

As an exchange administrator, you can control who will be able to create a new top level public folder, and other public folders.

To grant a user the right to create a subfolder for an existing public folder, you can use the EMS cmdlet *Add-ClientPublicFolderPermission*, as covered later in this chapter. To give a user the right to create new top level public folders in the public folder hierarchy you can use the EMS cmdlet *Add-ADPermission*, or you can delegate the user the *Public Folder Administrator role*, available since Exchange 2007 Service Pack 1. Both methods are shown in the example below.

```
[PS] C:\>Add-ADPermission -Identity "CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=ProExchange,DC=local" -ExtendedRights "create top level public folder" -user "proexchange\ivancrieking"
```

Identity	User	Deny	Inherited Rights
Microsoft Exchange	PROEXCHANGE\ivanc...	False	False ms-Exch-Create-Top...

```
[PS] C:\>Add-ExchangeAdministrator -Identity 'user1' -Role 'PublicFolderAdmin'
```

Identity	Scope	Role
proexchange.local/Sapien/user1	Organization wide	PublicFolderAdmin

```
[PS] C:\>
```

## Managing Administrative Permission Public Folders

When you create a public folder, you can set administrative permissions on that public folder. You can set administrative permissions on one or more public folders to give administrators the right to modify:

- Public Folder expiry settings
- Public Folder quotas
- Public Folder replica list
- Public Folder Deleted Item Retention time
- Public Folder Administrative Permissions
- Public Folder Client Permissions

- Public Folder Expiry

### Get-PublicFolderAdministrativePermission

To retrieve the current set of administrative permissions set on a public folder, you can use the EMS cmdlet *Get-PublicFolderAdministrativePermission*.

```
[PS] C:\>Get-PublicFolderAdministrativePermission \marketing | Format-Table User,AccessRights,Deny
-
AutoSize
```

User	AccessRights	Deny
----	-----	----
PROEXCHANGE\Exchange Servers	{AllExtendedRights}	False
PROEXCHANGE\Exchange View-Only Administrators	{ViewInformationStore}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderACL}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderAdminACL}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderDeletedItemRetention}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderExpiry}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderQuotas}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderReplicaList}	False
PROEXCHANGE\Exchange Public Folder Administrators	{AdministerInformationStore}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ViewInformationStore}	False
PROEXCHANGE\Administrator	{AllExtendedRights}	False
PROEXCHANGE\Exchange Organization Administrators	{AllExtendedRights}	False
PROEXCHANGE\Enterprise Admins	{AllExtendedRights}	False
PROEXCHANGE\Domain Admins	{AllExtendedRights}	False

```
[PS] C:\>
```

### Add-PublicFolderAdministrativePermission

To give a user a public folder administrative permission, you can use the EMS cmdlet *Add-PublicFolderAdministrativePermission*. You will need to specify the user using the parameter *-User*, and the accessright you would like to set for that user, using the parameter *-AccessRight*. The following access rights are available:

- AllExtendedRights
- ViewInformationStore
- AdministerInformationStore
- ModifyPublicFolderACL
- ModifyPublicFolderAdminACL
- ModifyPublicFolderDeletedItemRetention
- ModifyPublicFolderExpiry
- ModifyPublicFolderQuotas
- ModifyPublicFolderReplicaList

```
[PS] C:\>Add-PublicFolderAdministrativePermission -Identity \marketing -User ivancrieking
-AccessRights ModifyPublicFolderACL
```

```
[PS] C:\>Get-PublicFolderAdministrativePermission \marketing | Format-Table User,AccessRights,Deny
-
```

AutoSize

User	AccessRights	Deny
----	-----	----
PROEXCHANGE\Exchange Servers	{AllExtendedRights}	False
PROEXCHANGE\Exchange View-Only Administrators	{ViewInformationStore}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderACL}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderAdminACL}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderDeletedItemRetention}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderExpiry}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderQuotas}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ModifyPublicFolderReplicaList}	False
PROEXCHANGE\Exchange Public Folder Administrators	{AdministerInformationStore}	False
PROEXCHANGE\Exchange Public Folder Administrators	{ViewInformationStore}	False
PROEXCHANGE\Administrator	{AllExtendedRights}	False
PROEXCHANGE\Exchange Organization Administrators	{AllExtendedRights}	False
PROEXCHANGE\Enterprise Admins	{AllExtendedRights}	False
PROEXCHANGE\Domain Admins	{AllExtendedRights}	False
PROEXCHANGE\ivancrieking	{ModifyPublicFolderACL}	False

[PS] C:\&gt;

### Remove-PublicFolderAdministrativePermission

To remove administrative permissions for a user on a public folder, you can use the EMS cmdlet *Remove-PublicFolderAdministrativePermission*. You can use the EMS, to remove all administrative permissions for one user on any public folder in your Exchange organization, by running a single EMS line. First we need to see how many times our user *ivancrieking* has been granted administrative permissions on a public folder.

```
[PS] C:\>Get-PublicFolder \ -Recurse | Get-PublicFolderAdministrativePermission | Where-Object
{$_.u
ser -ilike "PROEXCHANGE\ivancrieking"} | Format-Table User,AccessRights,Deny
```

User	AccessRights	Deny
----	-----	----
PROEXCHANGE\ivancrieking	{ModifyPublicFolderACL}	False
PROEXCHANGE\ivancrieking	{ModifyPublicFolderACL}	False

[PS] C:\&gt;

The name of the public folder is not visible here, it is just the public folder's Identity that can be shown in this table. But we just want to remove the administrative permissions granted to *ivancrieking*, so we complete our previous line with *Remove-PublicFolderAdministrativePermission*.

```
[PS] C:\>Get-PublicFolder \ -Recurse | Get-PublicFolderAdministrativePermission | Where-Object
{$_.u
ser -ilike "PROEXCHANGE\ivancrieking"} | Remove-PublicFolderAdministrativePermission
-AccessRights
ModifyPublicFolderACL -user PROEXCHANGE\ivancrieking
```

Confirm

Are you sure you want to perform this action?

Removing Administrative Permission of Public Folder

"000000001A447390AA6611CD9BC800AA002FC45A0300BB3D881122E1524287B9E4D01C3770B1015C1ADAE760000" for User "PROEXCHANGE\ivancrieking" with Access Rights "'ModifyPublicFolderACL'".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): a

```
[PS] C:\>Get-PublicFolder \ -Recurse | Get-PublicFolderAdministrativePermission | Where-Object
{$_ .u
ser -ilike "PROEXCHANGE\ivancrieking"} | Format-Table User,AccessRights,Deny
[PS] C:\>
```

## Managing Client Permission Public Folders

Whether or not a client can gain access to a public folder and to what extent is determined by the client permissions set for that public folder. When you create a public folder, these are the default client access rights set for that public folder:

- Anonymous = Create Items
- Default = Author
- Creator of the Public Folder = Owner

### Get-PublicFolderClientPermission

To get an overview of the current client permissions set for a public folder, you can run the EMS cmdlet *Get-PublicFolderClientPermission*.

```
[PS] C:\>Get-PublicFolderClientPermission -id \marketing
```

Identity	User	AccessRights
-----	----	-----
\marketing	Default	{Author}
\marketing	proexchange.local/Users/Admin...	{Owner}
\marketing	Anonymous	{CreateItems}

```
[PS] C:\>
```

### Add-PublicFolderClientPermission

You can give a user access to a public folder, by giving him or her one of these public folder client access rights:

- ReadItems
- CreateItems
- EditOwnedItems
- DeleteOwnedItems
- EditAllItems
- DeleteAllItems
- CreateSubfolders
- FolderOwner
- FolderContact
- FolderVisible

You can also give a user a role for a particular public folder, thereby combining one or more previously

mentioned client access rights:

- None = FolderVisible
- Owner = CreateItems, ReadItems, CreateSubfolders, FolderOwner, FolderContact, FolderVisible, EditOwnedItems, EditAllItems, DeleteOwnedItems, DeleteAllItems
- PublishingEditor = CreateItems, ReadItems, CreateSubfolders, FolderVisible, EditOwnedItems, EditAllItems, DeleteOwnedItems, DeleteAllItems
- Editor = CreateItems, ReadItems, FolderVisible, EditOwnedItems, EditAllItems, DeleteOwnedItems, DeleteAllItems
- PublishingAuthor = CreateItems, ReadItems, CreateSubfolders, FolderVisible, EditOwnedItems, DeleteOwnedItems
- Author = CreateItems, ReadItems, FolderVisible, EditOwnedItems, DeleteOwnedItems
- NonEditingAuthor = CreateItems, ReadItems, FolderVisible
- Reviewer = ReadItems, FolderVisible
- Contributor = CreateItems, FolderVisible

---

### Caution!

Be careful though, you cannot add a right that a user already has! If you would like to upgrade the rights for *ivancrieking* from Reviewer to Author, you would have to specifically grant those additional rights manually, or you would have to remove the existing role of Contributor first, and then add the Authors role.

```
[PS] C:\>get-publicfolder \ -recurse | Get-PublicFolderClientPermission | where {$_.user -like
"proexchange.local/instructors/ilse van crieking"} | Add-PublicFolderClientPermission -user
ivancrieking
e -accessright Author

Add-PublicFolderClientPermission : The user, proexchange.local/Instructors/Ilse Van Crieking,
already has some of the permissions (ReadItems, CreateItems, EditOwnedItems, DeleteOwnedItems,
FolderVisible) specified to be added on the public folder 00000001A447390AA6611CD9BC800AA02FC45A0300BB3D8
81122E1524287B9E4D01C3770B1015C1ADAE760000. You cannot add a right that the user already has.
The current permission for proexchange.local/Instructors/Ilse Van Crieking is "ReadItems,
FolderVisible".
At line:1 char:173
+ get-publicfolder \ -recurse | Get-PublicFolderClientPermission | where {$_.user -like
"proexchange.local/instructors/ilse van crieking"} | Add-PublicFolderClientPermission <<<< -user
ivancrieking
ge -accessright Author
[PS] C:\>get-publicfolder \ -recurse | Get-PublicFolderClientPermission | where {$_.user -like
"proexchange.local/instructors/ilse van crieking"} | Add-PublicFolderClientPermission -user
ivancrieking
e -AccessRights createitems,editowneditems,deleteowneditems
```

Identity

User

AccessRights

```
-----
000000001A447390AA6611CD9BC800... proexchange.local/Instructors... {Author}
```

```
[PS] C:\>
```

### Remove-PublicFolderClientPermission

To remove permissions for a user on a public folder, you can use the EMS cmdlet *Remove-PublicFolderClientPermission*.

```
[PS] C:\>Remove-PublicFolderClientPermission -User ivancrieking -Identity \marketing
```

```
cmdlet Remove-PublicFolderClientPermission at command pipeline position 1
```

```
Supply values for the following parameters:
```

```
AccessRights[0]: createitems
```

```
AccessRights[1]:
```

```
Confirm
```

```
Are you sure you want to perform this action?
```

```
Removing Public Folder Permission on "\marketing" for User "ivancrieking", Access Rights "'CreateItems'".
```

```
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): y
```

```
[PS] C:\>
```

### **Removing a Public Folder: Remove-PublicFolder**

To remove one or more public folders, you need to use the EMS cmdlet *Remove-PublicFolder*. You will need to confirm that you want to remove the public folder(s) unless you have added the parameter *-Confirm* and set it to *\$False*.

```
[PS] C:\>Remove-PublicFolder "\marketing\general info"
```

```
Confirm
```

```
Are you sure you want to perform this action?
```

```
Removing public folder "\marketing\general info".
```

```
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): Y
```

```
[PS] C:\> Remove-PublicFolder "\marketing" -Confirm:$False
```

```
[PS] C:\>
```

## Chapter 3

# Managing Organization Configuration

Every Exchange Server 2007 you deploy, belongs to an Exchange organization. There can only be one Exchange organization per Active Directory Forest. There are some settings that you can configure for the Mailbox Server role, the Client Access Server role, and the Hub Transport Server role that affect all Exchange servers with that role installed in the Exchange organization. In this chapter, we will dive into those features.

## Organization Configuration

There are a few characteristics that can be seen and changed when looking at the organization configuration.

### Overview Organization Configuration: `Get-OrganizationConfig`

Running the cmdlet `Get-OrganizationConfig` will provide you with an overview of the organization configuration for the Exchange organization, as can be seen below.

```
[PS] C:\>Get-OrganizationConfig | Format-List
```

```
Name : First Organization
LegacyExchangeDN : /o=First Organization
Heuristics : None
JournalingReportNdrTo :
ResourceAddressLists : {All Rooms}
IsMixedMode : False
ManagedFolderHomepage :
```

```

ForeignForestFQDN : {}
ForeignForestOrgAdminUSGSid :
ForeignForestRecipientAdminUSGSid :
ForeignForestViewOnlyAdminUSGSid :
ForeignForestPublicFolderAdminUSGSid :
ObjectVersion : 11128
SCLJunkThreshold : 8
MimeTypes : {application/cdf;cdf, application/directx;x,
application/fractals;fff, application/futures
plash;spl, application/hta;hta,
application/i
nternet-property-stream;acx, application/
java
-archive;jar, application/mac-binhex40;hqx,
a
pplication/msaccess;mdb, application/
msaccess
;ade, application/msaccess;adp,
application/m
saccess;mda, application/msaccess;mde,
applic
ation/msaccess;snp, application/
ms-infopath.x
ml;infopathxml, application/
msonenote;one...}
MicrosoftExchangeRecipientEmailAddresses : {SMTP:MicrosoftExchange329e71ec88ae4615bbc3
6a
b6ce41109e@proexchange.local}
MicrosoftExchangeRecipientReplyRecipient :
MicrosoftExchangeRecipientPrimarySmtpAddress :
MicrosoftExchange329e71ec88ae4615bbc36ab6ce41
109e@proexchange.local
MicrosoftExchangeRecipientEmailAddressPolicyEnabled : True
AdminDisplayName : First Organization
ExchangeVersion : 0.0 (6.5.6500.0)
DistinguishedName : CN=First Organization,CN=Microsoft
Exchange,C
N=Services,CN=Configuration,DC=proexchange,DC
=local
Identity : First Organization
Guid : c885fd75-e60c-4d8b-80f7-c60e83ce3e84
ObjectCategory : proexchange.local/Configuration/Schema/ms-Exc
h-Organization-Container
ObjectClass : {top, container,
msExchOrganizationContainer}
WhenChanged : 1/10/2007 14:51:21
WhenCreated : 11/04/2007 14:54:55
OriginatingServer : DCWSS.proexchange.local
IsValid : True

```

```
[PS] C:\>
```

## Changing the Organization Configuration: Set-OrganizationConfig

You can use the EMS cmdlet `Set-OrganizationConfig`, to make some changes to the Exchange organization configuration. There are only three properties you can change/configure using this cmdlet:

- Scl Junk Threshold
- Managed Folder Home Page
- The Microsoft Exchange Recipient

## Set-OrganizationConfig -SclJunkThreshold

When a message is stamped with a Spam Confidence Level, SCL, you can configure on organization level from which value a mail should be stored in a user's junk email folder. By default, this value is set to 8. An email message can have a SCL between 0 and 9. It is possible to overrule this value for a particular user, by setting it higher or lower. If a value isn't specifically set for a user's mailbox, the organization configuration setting is used.

The following EMS lines, show you how to gain access to the current organization configuration in reference to the SclJunkThreshold, and how to change the setting to 6. In addition we will show you how you can change this setting to 7 for all users that are working in the department IT.

```
[PS] C:\>Get-OrganizationConfig | Format-List SclJunkThreshold
```

```
SCLJunkThreshold : 8
```

```
[PS] C:\>Set-OrganizationConfig -SCLJunkThreshold 6
```

```
[PS] C:\>Get-OrganizationConfig | Format-List SclJunkThreshold
```

```
SCLJunkThreshold : 6
```

```
[PS] C:\>Get-User | Where-Object {$_.Department -ilike "IT"} | Set-Mailbox -SCLJunkThreshold 7
```

```
[PS] C:\>Get-User | Where-Object {$_.Department -ilike "IT"} | Get-Mailbox | Format-Table  
Name,SclJunkThreshold,SCLJunkEnabled
```

Name	SCLJunkThreshold	SCLJunkEnabled
User1	7	True
User2	7	True
User3	7	True
User4	7	True

```
[PS] C:\>
```

## Set-OrganizationConfig -ManagedFolderHomePage

By default, when you deploy Managed Folders to your mailbox-enabled users, they will see the picture as you can see below when they click on Managed Folders in Microsoft Office Outlook 2007.

Figure: OrgConfig1.Tif (forthcoming)

Figure 1: Managed Folders in Microsoft Office Outlook 2007

You can configure a web page that should be shown when users click on the Managed Folders link in Outlook. You could use this to refer them to your intranet where you explain to your users the benefits and usability of Managed Folders assigned to them.

In the following example, we will set the Managed Folder Homepage to *http://www.sapien.com*. The result can be seen in Figure 2.

```
[PS] C:\>Get-OrganizationConfig | fl managedfolderhomepage
```

```
ManagedFolderHomePage :
```

```
[PS] C:\>Set-OrganizationConfig -ManagedFolderHomepage http://www.sapien.com
[PS] C:\>Get-OrganizationConfig | fl managedfolderhomepage

ManagedFolderHomepage : http://www.sapien.com

[PS] C:\>
```

Figure: OrgConfig2.Tif (forthcoming)

Figure 2: Managed Folders customized Homepage in Microsoft Office Outlook 2007

### **Set-OrganizationConfig -MicrosoftExchangeRecipientReplyRecipient**

When you deploy an Exchange 2007 organization, you will have one Exchange recipient in that organization. The Microsoft Exchange recipient is used as the sender for system-generated messages that are sent to internal message senders, like journal reports, quota messages, and delivery state notifications. By default, when a user replies to such a message sent by *Microsoft Exchange*, the message will be discarded by Exchange. But you can configure a recipient to receive messages that are sent to the Microsoft Exchange Recipient. You can use any of the following values:

- Distinguished name (DN)
- Canonical name
- GUID
- Name
- Display name
- Alias
- Exchange DN
- Primary SMTP e-mail address

For system-generated messages sent to an external sender, the Microsoft Exchange recipient is not used as the sender of the message. You will need to specify the e-mail address used by configuring the `ExternalPostmasterAddress` parameter in the `Set-TransportServer` cmdlet, as will be covered later in this book.

### **Set-OrganizationConfig -MicrosoftExchangeRecipientEmailAddressPolicyEnabled**

By default, the Microsoft Exchange Recipient will receive an email addresses based on email address policies that you can define as an Exchange administrator. You can disable this process by running `Set-OrganizationConfig -MicrosoftExchangeRecipientEmailAddressPolicyEnabled:$False`. Making this change will not change any existing mail-enabled recipients, it will only prevent recipient policies from being applied to the Microsoft Exchange server recipient!

Once you have set the value of the parameter `MicrosoftExchangeRecipientEmailAddressPolicyEnabled` to `False`, you can control the email addresses handed out to a Microsoft Exchange recipient by configuring the following parameters:

- `MicrosoftExchangeRecipientEmailAddresses`

- MicrosoftExchangeRecipientPrimarySmtpAddress

The following lines in EMS will show you how you can configure Exchange not to distribute email addresses based to the Microsoft Exchange recipient anymore based on recipient policies. Instead, the Microsoft Exchange recipient will receive an emailaddress *My.Exchange.Organization@proexchange.local*, and *Exchange.Organization@proexchange.local*. Since more than one email address is given, you will need to define which one should be treated as the Primary Smtp Address, by using the parameter MicrosoftExchangeRecipientPrimarySmtpAddress.

```
[PS] C:\>Get-OrganizationConfig | Fl MicrosoftExchangeRecipient*
```

```
MicrosoftExchangeRecipientEmailAddresses      : {SMTP:MicrosoftExchange329e71ec88ae4615bbc36a
6a                                             b6ce41109e@proexchange.local}
MicrosoftExchangeRecipientReplyRecipient      :
MicrosoftExchangeRecipientPrimarySmtpAddress  :
MicrosoftExchange329e71ec88ae4615bbc36ab6ce41
                                             109e@proexchange.local
MicrosoftExchangeRecipientEmailAddressPolicyEnabled : True
```

```
[PS] C:\>Set-OrganizationConfig -MicrosoftExchangeRecipientEmailAddressPolicyEnabled:$False
```

```
[PS] C:\>Set-OrganizationConfig -MicrosoftExchangeRecipientEmailAddresses My.Exchange.Organization@proexchange.local,Exchange.Organization@proexchange.local
```

```
[PS] C:\>Set-OrganizationConfig -MicrosoftExchangeRecipientPrimarySmtpAddress My.Exchange.Organization@proexchange.local
```

```
[PS] C:\>Get-OrganizationConfig | Fl MicrosoftExchangeRecipient*
```

```
MicrosoftExchangeRecipientEmailAddresses      : {smtp:Exchange.Organization@proexchange.local,
                                             SMTP: My.Exchange.Organization@proexchange.local}
MicrosoftExchangeRecipientReplyRecipient      :
MicrosoftExchangeRecipientPrimarySmtpAddress  : My.Exchange.Organization@proexchange.local
MicrosoftExchangeRecipientEmailAddressPolicyEnabled : False
```

```
[PS] C:\>
```

---

#### Note

If you set the value of the parameter MicrosoftExchangeRecipientEmailAddressPolicyEnabled back to True, no email addresses will be removed from the Microsoft Exchange recipient, but the PrimarySmtpAddress will be set back to the PrimarySmtpAddress defined in the Recipient policy with the highest priority.

## Licensing Exchange Server

During the installation of Exchange Server 2007, are not prompted to enter a product key code. Once the Exchange Server is installed, you need to make sure that you have a product key ready within 120 days to mark your server as valid Standard or Enterprise Edition. If you want to upgrade from the standard version to the enterprise version, all you have to do is enter a new product key (and yes, restart your Exchange services).

As with previous versions of Exchange, it is not possible to downgrade from enterprise to standard edition.

To enter the product key code you can use the EMS cmdlet *Set-ExchangeServer* with the parameter *-ProductKey*.

```
[PS] C:\>Get-ExchangeServer | Fl Name,IsExchange2007TrialEdition,Edition
Name                : EX2007
IsExchange2007TrialEdition : True
Edition             : StandardEvaluation
[PS] C:\>Set-ExchangeServer -Identity ex2007 -ProductKey ABCDE-ABCDE-ABCDE-ABCDE-ABCDE
[PS] C:\>Get-ExchangeServer | Fl Name,IsExchange2007TrialEdition,Edition
Name                : EX2007
IsExchange2007TrialEdition : False
Edition             : Enterprise
```

## Delegating Administrative Permissions

In an Exchange 2007 organization, you manage permissions by delegating an Exchange administrator role to users. You can use the EMS to get an overview the Exchange administrative permissions set for your Exchange organization, and to add or remove an Exchange administrative role to or from a user.

### Get an overview of Administrative Permissions set for your Exchange organization: *Get-ExchangeAdministrator*

The following EMS output shows you the default permissions set for an Exchange organization during installation.

```
[PS] C:\>Get-ExchangeAdministrator

Identity                Scope                Role
-----                -
proexchange.local/Users/Administrator      Organization wide   OrgAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Organization Administrators Organization wide   RecipientAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Public Folder Administrators Organization wide   ViewOnlyAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Recipient Administrators Organization wide   ViewOnlyAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Organization Administrators Organization wide   PublicFolderAdmin
```

```
[PS] C:\>
```

### Grant a user an Exchange administrative role: *Add-ExchangeAdministrator*

To give one or more users a particular Exchange administrative role, you need to use the cmdlet *Add-ExchangeAdministrator*. Table 1 lists the parameters you can use with this cmdlet.

Table 1: *Add-ExchangeAdministrator -Parameters*

Parameter	Required	Description
-Identity	YES	Used to specify the user that you want to give the exchange administrative role

-Role	YES	Used to specify the exchange administrative role you want to delegate to the given user. Following roles can be delegated:  OrgAdmin  RecipientAdmin  ServerAdmin  ViewOnlyAdmin  PublicFolderAdmin
-Scope	NO	Used to define the name of the server for which the user will have the exchange server administrator role. Is required when delegating the ServerAdmin role to a user.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

The following example shows you how you can grant the Exchange Organization Administrator role to your Windows Security Group called *Global\_Managers\_IT*.

```
[PS] C:\>Add-ExchangeAdministrator -role orgadmin -Identity Global_Managers_IT
```

Identity	Scope	Role
-----	-----	-----
proexchange.local/Instructors/Global_Managers_IT	Organization wide	OrgAdmin

```
[PS] C:\>Get-ExchangeAdministrator
```

Identity	Scope	Role
-----	-----	-----
proexchange.local/Instructors/Global_Managers_IT	Organization wide	OrgAdmin
proexchange.local/Users/Administrato	Organization wide	OrgAdmin
r		
proexchange.local/Microsoft Exchange Security Groups/Exchange Organization Administrators	Organization wide	RecipientAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Public Folder Administrators	Organization wide	ViewOnlyAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Recipient Administrators	Organization wide	ViewOnlyAdmin
proexchange.local/Microsoft Exchange Security Groups/Exchange Organization Administrators	Organization wide	PublicFolderAdmin

## Remove an Exchange administrative role from a user: Remove-ExchangeAdministrator

To take away a particular Exchange administrative role from one or more users, you need to use the

cmdlet *Remove-ExchangeAdministrator*. Table 2 lists the parameters you can use with this cmdlet.

*Table 2: Remove-ExchangeAdministrator -Parameters*

Parameter	Required	Description
-Identity	YES	Used to specify the user from which you want to remove the specified exchange administrative role
-Role	YES	Used to specify which exchange administrative role you want to remove from the given user. Following roles can be removed:  OrgAdmin  RecipientAdmin  ServerAdmin  ViewOnlyAdmin  PublicFolderAdmin
-Scope	NO	Used to define the name of the server for which the user will have the exchange server administrator role removed. Is required when delegating the ServerAdmin role to a user.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

## Managing settings for the Mailbox Server role Organization Wide

### Address Lists

There are two types of address lists you can create in Exchange Server 2007, custom address lists, and global address lists. A mailbox-enabled user in Exchange Server 2007 can gain access to multiple custom address lists, but can only have access to one global address list. When multiple global address lists exist, Exchange will evaluate which Global Address list should be shown to the user, based on the following three criteria:

- Does the user have the permission to open the address list;
- Does the user belong to the address list;
- Does the address list contain the most members?

### Custom Address List: New-AddressList

When creating a new address list, you can create a filter based on the value of any of the following values: Company, Department, State or Province, Included Recipients (None, UserMail, Resources, MailGroups, MailContacts, or AllRecipients). Or you can choose to create your own custom Recipient

Filter, that will make everyone a member of the address list that has any of the following values set to a predefined value, as shown in Appendix B.

In the following example we will make a new address list that will contain all recipients in your Exchange organization that have a custom attribute 1 set to a value *Blue*.

```
[PS] C:\>New-AddressList -Name "Everybody with a blue car" -IncludedRecipients allrecipients
-ConditionalCustomAttribute1 blue
```

Name	DisplayName	RecipientFilter
-----	-----	-----
Everybody with a blue car	Everybody with a blue car	(CustomAttribute1 -eq 'blue' -and Alias -ne \$null)

```
[PS] C:\>
```

If you would like to retrieve the recipients that belong to an address list, you can use the cmdlet *Get-Recipient* together with the parameter *-Filter*. You will need to know the distinguished name of the address list, and then you can complete the EMS line, as can be seen in the following example. First we will update the address list to make sure that all members are included in the address list. Then we will retrieve the distinguished name of the address list and store it as a variable called *dnaddresslist*, which we will then use to run our filter against.

```
[PS] C:\>Update-AddressList -Identity "everybody with a blue car"
[PS] C:\>Get-AddressList -Identity "everybody with a blue car" | Format-List distinguishedName
```

```
DistinguishedName : CN=Everybody with a blue car,CN=All Address Lists,CN=Address Lists Container,CN=First Organization,CN=Microsoft Exchange,
CN=Services,CN=Configuration,DC=proexchange,DC=local
```

```
[PS] C:\>$dnaddresslist = (get-addresslist -identity "everybody with a blue car").
distinguishedname
[PS] C:\>Get-Recipient -Filter {AddressListMembership -eq $dnaddresslist}
```

Name	RecipientType
-----	-----
Administrator	UserMailbox
user1	UserMailbox
user10	UserMailbox
user2	UserMailbox
user3	UserMailbox
user4	UserMailbox

```
[PS] C:\>
```

In the following example we will create a new address list, that will contain all mailbox-enabled users in your Exchange organization, for which you have propagated their safe senders to Active Directory.

```
[PS] C:\>New-AddressList -Name "Safe Senders Populated" -RecipientFilter {SafeSendersHash -ne $null}
```

Name	DisplayName	RecipientFilter
-----	-----	-----
Safe Senders Populated	Safe Senders Populated	SafeSendersHash -ne \$null

```
[PS] C:\>
```

### Global Address List: New-GlobalAddressList

To create a new Global Address list, you use the cmdlet `New-GlobalAddressList`. All parameters are the same as the ones used for creating a new custom address list.

### Update membership address lists: Update-Addresslist & Update-GlobalAddressList

Recipients will not be shown in an address list (custom or global) until you have updated the address list by running the EMS cmdlet `Update-Addresslist` for a custom address list, or `Update-GlobalAddressList` for a Global Address List.

You will also need to remember to update the address lists every time you edit an address list. Since that will make sure that the address list will include new recipients and will remove those who no longer meet the filtering criteria.

To update an address list, you only need to specify the name of the address list.

### Editing address lists: Set-AddressList & Set-GlobalAddressList

To make changes to an existing addresslist, you can use the cmdlet `Set-Addresslist` for a custom address list, and `Set-GlobalAddressList` for changing settings of a Global Address List.

In the following example we will change the recipientfilter of the address list “Safe Senders populated”, to make sure that only users are included that have their safe senders list populated in Active Directory, and have a custom attribute 1 value of *Blue*.

```
[PS] C:\>Set-AddressList -Identity "safe senders populated" -RecipientFilter {(safesendershash -ne $null) -and (customattribute1 -eq "blue")}
```

```
[PS] C:\>Get-AddressList -Identity "safe senders populated" | fl name,recipientfilter
```

```
Name           : Safe Senders Populated
RecipientFilter : (SafeSendersHash -ne $null -and CustomAttribute1 -eq 'blue')
```

```
[PS] C:\>
```

Be careful, it is not possible to use `Set-AddressList` to filter on recipients using `-ConditionalCompany` or any other, if the original address list was created based on a recipient filter, as can be seen below in the example.

```
[PS] C:\>New-AddressList -Name "safe senders populated" -RecipientFilter {(safesendershash -ne $null) -and (customattribute1 -eq "blue")}
```

```
[PS] C:\>Set-AddressList -Identity "safe senders populated" -ConditionalCustomAttribute1 "red"
Set-AddressList : Property "IncludedRecipients" can not be none when any other pre-canned filter related properties are set.
```

```
At line:1 char:16
```

```
+ Set-AddressList <<<< -Identity "safe senders populated" -ConditionalCustomAttribute1 "red"
```

```
[PS] C:\>
```

### Removing an address list: Remove-AddressList & Remove-GlobalAddressList

To remove an existing address list, you can use the cmdlets `Remove-AddressList` or `Remove-`

*GlobalAddressList*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the address list.

```
[PS] C:\>Remove-AddressList -Identity "safe senders populated"
```

Confirm

Are you sure you want to perform this action?

Removing Address List "safe senders populated" and updating all recipients that fall under its recipient filter. This action may take a long time to complete.

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help

(default is "Y"):y

```
[PS] C:\>
```

## Offline Address Book

Offline Address Books are address books a Microsoft Office Outlook user can download and use when he or she is not connected to his or her Microsoft Exchange server. The following EMS cmdlets are available in reference to Offline Address Books:

- `Get-OfflineAddressBook`
- `Move-OfflineAddressBook`
- `New-OfflineAddressBook`
- `Remove-OfflineAddressBook`
- `Set-OfflineAddressBook`
- `Update-OfflineAddressBook`

### Get-OfflineAddressBook

To get an overview of one or more offline address books that are created in your Exchange organization, you can use the EMS cmdlet *Get-OfflineAddressBook*. When you install your first Exchange Server 2007 mailbox server role a default offline address book is created that will contain the default Global Address List. The properties of this offline address book can be seen below.

```
[PS] C:\>Get-OfflineAddressBook | Format-List
```

```
Server                : EX2007
AddressLists          : {Default Global Address List}
Versions              : {Version3, Version4}
IsDefault             : True
PublicFolderDatabase : EX2007\Second Storage Group\Public Folder Database
PublicFolderDistributionEnabled : True
WebDistributionEnabled : True
DiffRetentionPeriod  : 30
Schedule              : {zo.5:00-zo.5:15, ma.5:00-ma.5:15, di.5:00-di.5:15,
wo.5:00-wo.5:15,
                        15, do.5:00-do.5:15, vr.5:00-vr.5:15, za.5:00-za.5:15}
VirtualDirectories   : {OAB (Default Web Site)}
ExchangeVersion       : 0.1 (8.0.535.0)
AdminDisplayName      :
Name                  : Default Offline Address Book
DistinguishedName     : CN=Default Offline Address Book,CN=Offline Address Lists,CN=Addre
                        ss Lists Container,CN=First Organization,CN=Microsoft
Exchange,CN
```

```

=Services,CN=Configuration,DC=proexchange,DC=local
Identity : \Default Offline Address Book
Guid : 8f856869-6e21-4bdd-8f8a-c3ef21a212d8
ObjectCategory : proexchange.local/Configuration/Schema/ms-Exch-OAB
ObjectClass : {top, msExchOAB}
WhenChanged : 11/04/2007 15:13:14
WhenCreated : 11/04/2007 15:13:14
OriginatingServer : DCWSS.proexchange.local
IsValid : True

```

[PS] C:\>

There are some important features that can be seen in this overview:

- `AddressLists` shows you which address lists (custom and/or global) are included in this offline address list;
- `PublicFolderDistributionEnabled` will reveal if the Offline Address book is made available to clients older than Microsoft Office Outlook 2007, since they will download the offline address book by connecting to a system public folder;
- `WebDistributionEnabled` will reveal if the Offline Address book can be downloaded by Microsoft Office Outlook 2007 and later clients using the Exchange 2007 Web Services provided by a Client Access Server in the Exchange organization;
- `Versions` will show you which versions of this Offline Address Book can be downloaded and used by Microsoft Office Outlook clients.

### Move-OfflineAddressBook

An Offline Address Book is generated by an Exchange Server 2007 mailbox server. If you want to change the server that is responsible for generating the offline address book, you can use the EMS cmdlet *Move-OfflineAddressBook*.

When using the cmdlet *Move-OfflineAddressBook* you only need to specify the offline address list that you want to generate on another server, and you need to identify the server that you want to move the generation of the Offline Address book to, by using the parameter *-Server*.

### New-OfflineAddressBook

To create a new offline address book, you can use the cmdlet *New-OfflineAddressBook*. Table 3 shows the parameters you can use with this cmdlet.

Table 3: *New-OfflineAddressBook -Parameters*

Parameter	Required	Description
<code>-Name</code>	YES	Used to specify a name for the offline address book
<code>-Server</code>	YES	Used to specify which Exchange 2007 Mailbox Server should generate the offline address book
<code>-AddressList</code>	YES	Used to define the address lists (custom and/or global) that will be included in the offline address list

-DiffRetentionPeriod	NO	Used to define the length of time, in days, that the OAB difference files are retained on the OAB-generating server and the Client Access server
-IsDefault	NO	Can be used to set the offline address book as the default address book that will be automatically used for any new mailbox database that is created
-PublicFolderDatabase	NO	Used to define in which public folder database the offline address book should be created
-PublicFolderDistributionEnabled	NO	Can be used to define that the offline address book will be made available to users via public folders
-Schedule	NO	Used to define the schedule used to generate the offline address book
-TemplateInstance	NO	Used to define a template to be used when creating the offline address book
-Versions	NO	Used to define which Offline Address book versions will be created. Possible versions are version 1, version 2, version 3, and version 4
-VirtualDirectories	NO	Used to define which virtual directories will home the offline address book. Be careful, only version 4 offline address books can be distributed via web.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

```
[PS] C:\>New-OfflineAddressBook
```

```
cmdlet New-OfflineAddressBook at command pipeline position 1
```

```
Supply values for the following parameters:
AddressLists[0]: Default Global Address List
AddressLists[1]:
Server: ex2007
Name: Ilse OAL
```

```
WARNING: The offline address book has not been enabled for public folder distribution or web
distribution. Users will not be able to download the content of the offline address book.
```

```
Name                Server                Versions                AddressLists
----                -
Ilse OAL            EX2007                {Version4}              {Default Global
Addre...
```

```
[PS] C:\>Get-OfflineAddressBook "ilse oal" | fl
```

```

Server : EX2007
AddressLists : {Default Global Address List}
Versions : {Version4}
IsDefault : False
PublicFolderDatabase :
PublicFolderDistributionEnabled : False
WebDistributionEnabled : False
DiffRetentionPeriod : 30
Schedule : {zo.5:00-zo.5:15, ma.5:00-ma.5:15, di.5:00-di.5:15,
wo.5:00-wo.5:
          15, do.5:00-do.5:15, vr.5:00-vr.5:15, za.5:00-za.5:15}
VirtualDirectories : {}
ExchangeVersion : 0.1 (8.0.535.0)
AdminDisplayName :
Name : Ilse OAL
DistinguishedName : CN=Ilse OAL,CN=Offline Address Lists,CN=Address Lists Container,C
N=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configu
ration,DC=proexchange,DC=local
Identity : \Ilse OAL
Guid : d4a6ef4d-6574-42e7-a426-2fb32c4bf152
ObjectCategory : proexchange.local/Configuration/Schema/ms-Exch-OAB
ObjectClass : {top, msExchOAB}
WhenChanged : 12/10/2007 21:48:46
WhenCreated : 12/10/2007 21:48:46
OriginatingServer : DCWSS.proexchange.local
IsValid : True

```

[PS] C:\>

## Remove-OfflineAddressBook

To remove an existing address list, you can use the cmdlets *Remove-OfflineAddressBook*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the address list.

## Set-OfflineAddressBook

You can use the EMS cmdlet *Set-OfflineAddressBook* to change any of the following settings of an existing offline address book:

- Addresslists
- VirtualDirectories
- Versions
- IsDefault
- PublicFolderDistributionEnabled
- DiffRetentionPeriod
- Schedule
- Name

You can also use the cmdlet *Set-OfflineAddressBook* to convert a legacy Offline Address Book, created using Exchange Server 2003 System Manager, into a valid Exchange 2007 Offline Address Book. To

accomplish this you will need to use the parameter *ApplyMandatoryProperties*.

```
[PS] C:\>Get-OfflineAddressBook "OAB ProExchange" | fl

Server                : DC2003
AddressLists          : {Default Global Address List}
Versions              : {Version2, Version3, Version4}
IsDefault             : False
PublicFolderDatabase : Public Folder Store (DC2003)
PublicFolderDistributionEnabled : True
WebDistributionEnabled : False
DiffRetentionPeriod  :
Schedule              : {Sun.5:00 AM-Sun.5:15 AM, Mon.5:00 AM-Mon.5:15 AM, Tue.5:00 AM-Tue.5:15 AM, Wed.5:00 AM-Wed.5:15 AM, Thu.5:00 AM-Thu.5:15 AM, Fri.5:00 AM-Fri.5:15 AM, Sat.5:00 AM-Sat.5:15 AM}
VirtualDirectories   : {}
ExchangeVersion      : 0.0 (6.5.6500.0)
MinAdminVersion      :
AdminDisplayName     :
Name                 : OAB ProExchange
DistinguishedName    : CN=OAB ProExchange,CN=Offline Address Lists,CN=Address Lists Container,CN=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=Knowledge,DC=Global

Identity             : \OAB ProExchange
Guid                 : 30e715ad-a2f4-4af7-8c9d-28e12971d90d
ObjectCategory       : Knowledge.Global/Configuration/Schema/ms-Exchange-OAB
ObjectClass          : {top, msExchOAB}
WhenChanged          : 10/13/2007 2:43:40 PM
WhenCreated          : 10/13/2007 2:43:40 PM
OriginatingServer    : DC2003.Knowledge.Global
IsValid              : True
[PS] C:\>Set-OfflineAddressBook "OAB ProExchange" -ApplyMandatoryProperties
```

## Update-OfflineAddressBook

Recipients will not be shown in an offline address list until you have updated the address list by running the EMS cmdlet *Update-OfflineAddresslist* or until the schedule set on the offline address book for updating the Offline Address Book has run.

You will also need to remember to update the offline address book every time you edit an offline address book, to make sure that users always have access to an up-to-date offline address book. Since that will make sure that the address book will include new recipients and will remove those who no longer meet the filtering criteria.

To update an offline address book, you only need to specify the name of the address book.

```
[PS] C:\>Update-OfflineAddressBook "Ilse OAL"
[PS] C:\>
```

## Message Records Management

Microsoft has incorporated several opportunities in Exchange Server 2007 to allow an administrator to control mail flow both inbound and outbound, and to manage the content of

mailboxes stored in an Exchange database.

To control mail flow, Microsoft has introduced transport rules, that allow administrators for example to add a disclaimer to mails leaving the Exchange organization. Journaling rules on the other hand, enable administrators to keep track of mails sent and/or received by one or more users in the Exchange organization. Messaging Records Management policies enable the administrator to manage mailbox items stored in its databases.

### **Defining Managed Folders & Managed Folder Mailbox Policies**

With messaging records management policies, you can control the way messages are stored inside mailboxes in your mail organization. As an administrator, you can create policies that apply to the default mail folders, or you can choose to create custom managed folders and define managed content settings for them.

If you want to deploy message records management settings to control the mail as it is stored in a user's mailbox, there are a few steps you need to follow:

1. Create required managed default folders, and/or custom managed folders, by using the EMS cmdlet *New-ManagedFolder*;
2. Create a managed mailbox folder policy that includes all managed folders you want to deploy to a user, by using the EMS cmdlet *New-ManagedFolderPolicy*;
3. Set the managed mailbox folder policy for a user, by using the EMS cmdlet *Set-Mailbox*;
4. Define the required managed content settings for all managed folders, by using the EMS cmdlet *New-ManagedContentSettings*.

### **Managed Folder**

There are four EMS cmdlets available for creating, managing, and removing managed folders:

- Get-ManagedFolder
- New-ManagedFolder
- Remove-ManagedFolder
- Set-ManagedFolder

Table 4 lists all parameters you can use with the cmdlet *New-ManagedFolder*.

*Table 4: New-ManagedFolder -Parameters*

Parameter	Required	Description
-FolderName	YES	Used to specify the name of the managed folder as it will be visible for mailbox-enabled users
-Name	YES	Used to specify a name for the managed folder as it will be used by you as an Exchange administrator

-DefaultFolderType	NO	<p>Used to define the type of the managed folder. You can specify any of the following values:</p> <p>All</p> <p>Calendar</p> <p>Contacts</p> <p>ConversationHistory</p> <p>DeletedItems</p> <p>Drafts</p> <p>Inbox</p> <p>Journal</p> <p>JunkEmail</p> <p>ManagedCustomFolder</p> <p>Notes</p> <p>Outbox</p> <p>RssSubscriptions</p> <p>SentItems</p> <p>SyncIssues</p> <p>Tasks</p> <p>If you do not specify a folder type, the managed folder will be created as a managedcustomfolder.</p>
-Comment	NO	Used to define a description of the managed folder that will be visible for mailbox-enabled users
-LocalizedComment	NO	Can be used to define a custom comment that will be shown when a mailbox-enabled user connects to his or her mailbox with a language for which a localizedcomment is defined.
-LocalizedFolderName	NO	Can be used to define a folder name that will be shown for a mailbox-enabled user when he or she connect to his or her mailbox with Outlook or OWA in a language for which a localizedfoldername is defined.
- MustDisplayCommentEnabled	NO	Can be used to prohibit users from not displaying the comment configured for the managed folder.

-StorageQuota	NO	Used to specify a maximum size for the managed folder.
-TemplateInstance	NO	Used to define a template to be used when creating the managed folder
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

To get an overview of the properties of a managed folder, you can use the cmdlet *Get-ManagedFolder*.

```
[PS] C:\>New-ManagedFolder -FolderName "Suppliers" -LocalizedFolderName fr-FR:"Fournisseurs"
-Comment "Please store all messages with reference to your suppliers in this folder"
-LocalizedComment fr-FR:"Archivez tous les messages concernant vos fournisseurs dans ce fichier"
-MustDisplayCommentEnable
d:$True -StorageQuota 50MB -Name "Suppliers managed folder"
```

```
Name                FolderName          Description
----                -
Suppliers managed folder Suppliers           ManagedCustomFolder
```

```
[PS] C:\>Get-ManagedFolder "Suppliers managed folder" | Fl
```

```
FolderType          : ManagedCustomFolder
Description          : ManagedCustomFolder
FolderName           : Suppliers
LocalizedFolderName : {fr-FR:Fournisseurs}
StorageQuota        : 50MB
Comment              : Please store all messages with reference to your suppliers in this
                        fold
                        er
LocalizedComment     : {fr-FR:Archivez tous les messages concernant vos fournisseurs dans ce
                        f
                        ichier}
MustDisplayCommentEnabled : True
TemplateIds          : {}
AdminDisplayName     :
ExchangeVersion      : 0.1 (8.0.535.0)
Name                 : Suppliers managed folder
DistinguishedName    : CN=Suppliers managed folder,CN=ELC Folders Container,CN=First
OrganizationalName   : ion,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=proexchange,D
                        C=local
Identity             : Suppliers managed folder
Guid                 : b9beed8d-2ee2-4ffa-a8e9-a5b598b4f771
ObjectCategory       : proexchange.local/Configuration/Schema/ms-Exch-ELC-Folder
ObjectClass          : {top, msExchELCFolder}
WhenChanged          : 14/10/2007 20:15:23
WhenCreated          : 14/10/2007 20:15:23
OriginatingServer    : DCWSS.proexchange.local
IsValid              : True
```

```
[PS] C:\>
```

To make changes to a managed folder, you can use the EMS cmdlet *Set-ManagedFolder*. You can change any of the following properties:

- FolderName
- LocalizedFolderName
- StorageQuota
- Comment
- Comment
- LocalizedComment
- MustDisplayCommentEnabled
- Name

Next to changing these properties, you can also use the *Set-ManagedFolder* cmdlet together with the parameter *-Instance*, to pass an object to the command to be processed, as can be seen in the example here:

```
[PS] C:\>Get-ManagedFolder 'Suppliers managed folder' | Fl Name,StorageQuota
```

```
Name           : Suppliers managed folder
```

```
StorageQuota  : 50MB
```

```
[PS] C:\>$mf = Get-ManagedFolder "Suppliers managed folder"
```

```
[PS] C:\>$mf.StorageQuota = 70MB
```

```
[PS] C:\>Set-ManagedFolder -Instance $mf
```

```
[PS] C:\>Get-ManagedFolder 'Suppliers managed folder' | Fl Name,StorageQuota
```

```
Name           : Suppliers managed folder
```

```
StorageQuota  : 70MB
```

```
[PS] C:\>
```

To remove an existing managed folder, you can use the EMS cmdlet *Remove-ManagedFolder*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the managed folder.

## **Managed Folder Mailbox Policy**

There are four EMS cmdlets available for creating, managing, and removing managed folders mailbox policies:

- Get-ManagedFolderMailboxPolicy
- New-ManagedFolderMailboxPolicy
- Remove-ManagedFolderMailboxPolicy
- Set-ManagedFolderMailboxPolicy

Table 5 lists all parameters you can use with the cmdlet *New-ManagedFolderMailboxPolicy*.

*Table 5: New-ManagedFolderMailboxPolicy -Parameters*

Parameter	Required	Description
-Name	YES	Used to specify a name for the managed folder policy
-ManagedFolderLinks	NO	Used to specify which managed folders this managed folder policy applies to

-TemplateInstance	NO	Used to define a template to be used when creating the managed folder policy
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

To get an overview of the properties of a managed folder mailbox policy, you can use the cmdlet *Get-ManagedFolderMailboxPolicy*.

```
[PS] C:\>New-ManagedFolderMailboxPolicy -ManagedFolderLinks "Suppliers managed folder" -Name
"Policy
Suppliers"
```

```
Name                ManagedFolderLinks                MailboxPolicyFlags
----                -
Policy Suppliers    {Suppliers managed folder}        0
```

```
[PS] C:\>Get-ManagedFolderMailboxPolicy "Policy Suppliers" | Fl
```

```
ManagedFolderLinks : {Suppliers managed folder}
MailboxPolicyFlags  : 0
AdminDisplayName    :
ExchangeVersion     : 0.1 (8.0.535.0)
Name                 : Policy Suppliers
DistinguishedName   : CN=Policy Suppliers,CN=ELC Mailbox Policies,CN=First
Organization,CN=Microsoft
                    Exchange,CN=Services,CN=Configuration,DC=proexchange,DC=local
Identity            : Policy Suppliers
Guid                : ec0707a6-c69c-428a-9daa-7c1c6f5defd8
ObjectCategory      : proexchange.local/Configuration/Schema/ms-Exch-Mailbox-Recipient-Template
ObjectClass         : {top, msExchRecipientTemplate, msExchMailboxRecipientTemplate}
WhenChanged         : 14/10/2007 20:34:12
WhenCreated         : 14/10/2007 20:34:12
OriginatingServer   : DCWSS.proexchange.local
IsValid             : True
```

```
[PS] C:\>
```

To make changes to a managed folder mailbox policy, you can use the EMS cmdlet *Set-ManagedFolderMailboxPolicy*. You can change any of the following properties:

- ManagedFolderLinks
- Name

To remove an existing managed folder mailbox policy, you can use the EMS cmdlet *Remove-ManagedFolderMailboxPolicy*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the managed folder mailbox policy.

## Managed Content Settings

There are four EMS cmdlets available for creating, managing, and removing managed content settings:

- Get-ManagedContentSettings
- New-ManagedContentSettings

- Remove-ManagedContentSettings
- Set-ManagedContentSettings

Table 6 lists all parameters you can use with the cmdlet *New-ManagedContentSettings*.

*Table 6: New-ManagedContentSettings -Parameters*

Parameter	Required	Description
-Name	YES	Used to specify a name for the managed content settings
-FolderName	YES	Used to specify too which managed folder the content settings will be applied
-MessageClass	YES	Used to specify the message type to which any expiration and journaling configuration settings within these managed content settings apply.  Values that can be used:  All Mailbox Content  Calendar Items  Contacts  Documents  Faxes  Journal items  Meeting Requests, Responses, and Cancellations  Notes  Posts  RSS Items  Tasks  Voicemail
-AgeLimitForRetention	NO	Used to specify the age at which retention is enforced on an item. The age limit corresponds to the number of days from the date the item was delivered, or the date an item was created if it was not delivered. This is determined by the parameter TriggerForRetention.
-TriggerForRetention	NO	Used to specify the start date that will be used as the start of the retention period, this can be the date the item was delivered, or the date the item was moved to the managed folder

-JournalingEnabled	NO	Can be used to enable journaling on the managed folder
-LabelForJournaling	NO	Can be used to specify a label for journaling if enabled for the managed folder
-AddressForJournaling	NO	Should be used when journaling is enabled to define the journal recipient for the managed folder
-MessageFormatForJournaling	NO	Should be used when journaling is enabled to define the message format for journaling. Options here are the Microsoft Outlook .msg format or the traditional Outlook MAPI format
-MoveToDestinationFolder	NO	Should be used if the retention action defined for the managed folder is to move the item to another folder
-RetentionEnabled	NO	Can be used to enable retention for the managed folder, if set to true, you need to define a retentionaction
-RetentionAction	NO	Used to define the action that should be taken:  Mark as past retention limit  Move to a managed custom folder  Move to the Deleted Items folder  Delete and allow recovery  Permanently delete
-TemplateInstance	NO	Used to define a template to be used when creating the managed content settings
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

To get an overview of the properties of managed content settings, you can use the cmdlet *Get-ManagedContentSettings*.

```
[PS] C:\>new-ManagedContentSettings -Name 'Suppliers Managed Content' -FolderName 'Suppliers
managed
folder' -RetentionAction 'DeleteAndAllowRecovery' -AddressForJournaling 'proexchange.local/
Microsoft
Exchange System Objects/Community Events' -AgeLimitForRetention '15.00:00:00' -JournalingEnabled
$
true -MessageFormatForJournaling 'UseTnef' -RetentionEnabled $true -LabelForJournaling ''
-MessageCl
ass '*' -MoveToDestinationFolder $null -TriggerForRetention 'WhenMoved'
```

```
Name                MessageClass        ManagedFolderName
----                -
Suppliers Managed Content *        Suppliers managed folder
```

```
[PS] C:\>Get-ManagedContentSettings "Suppliers Managed Content" | Fl
```

```

MessageClassDisplayName      : All Mailbox Content
MessageClass                  : *
Description                   : Managed Content Settings
RetentionEnabled              : True
RetentionAction               : DeleteAndAllowRecovery
AgeLimitForRetention         : 15.00:00:00
MoveToDestinationFolder      :
TriggerForRetention           : WhenMoved
MessageFormatForJournaling   : UseTnef
JournalingEnabled            : True
AddressForJournaling         : proexchange.local/Microsoft Exchange System Objects/Community Events
LabelForJournaling           :
ManagedFolder                : Suppliers managed folder
ManagedFolderName           : Suppliers managed folder
AdminDisplayName              :
ExchangeVersion               : 0.1 (8.0.535.0)
Name                           : Suppliers Managed Content
DistinguishedName            : CN=Suppliers Managed Content,CN=Suppliers managed folder,CN=ELC
Folder                         s Container,CN=First Organization,CN=Microsoft
Exchange,CN=Services,CN      =Configuration,DC=proexchange,DC=local
Identity                       : Suppliers Managed Content
Guid                           : cb3cce49-fc43-469e-8c1d-d7a961d8da3f
ObjectCategory                 : proexchange.local/Configuration/Schema/ms-Exch-ELC-Content-Settings
ObjectClass                    : {top, msExchELCContentSettings}
WhenChanged                    : 14/10/2007 21:02:30
WhenCreated                    : 14/10/2007 21:02:30
OriginatingServer              : DCWSS.proexchange.local
IsValid                         : True

```

```
[PS] C:\>
```

To make changes to managed content settings of a managed folder, you can use the EMS cmdlet *Set-ManagedContentSettings*.

To remove managed content settings, you can use the EMS cmdlet *Remove-ManagedContentSettings*. If you do not include the parameter *-Confirm* and set it to False, you will need to acknowledge that you want to remove the managed folder mailbox policy.

## **Running the Managed Folder Assistant**

Implementing managed folders and message records management settings for managed folders require Exchange to run a scheduled crawl of the database to make sure that all content in the database is like it is supposed to be according to the specified settings. This crawl can be scheduled by you as an exchange administrator, by scheduling the Exchange Managed Folder Assistant on the properties of your Exchange 2007 mailbox server role, as can be seen below.

```
[PS] C:\>Get-MailboxServer | fl name,managedfolderassistantschedule
```

```

Name                           : EX2007
ManagedFolderAssistantSchedule : {zo.1:00-ma.0:00, ma.1:00-di.0:00, di.1:00-wo.0:00,
wo.1:00-do.0:00, do.1:00-vr.0:00, vr.1:00-za.0:00, za.1:00-zo.0:00}

```

```
[PS] C:\>
```

If you want to force Exchange to run the crawl you can either choose to restart the Windows service “Microsoft Exchange Mailbox Assistants”, or you can run the following two cmdlets in EMS: Stop-ManagedFolderAssistant, followed by Start-ManagedFolderAssistant.

```
[PS] C:\>Stop-ManagedFolderAssistant
```

Confirm

Are you sure you want to perform this action?

Stopping the managed folder assistant.

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is “Y”): y

```
[PS] C:\>Start-ManagedFolderAssistant
```

## Managing settings for the Client Access Server role Organization Wide

### Exchange ActiveSync Mailbox Policies

Exchange ActiveSync Mailbox policies can be created to configure additional security settings for users when they connect to their mailbox using a Personal Digital Assistant (PDA) equipped with Windows Mobile 5.0 or Windows Mobile 6.0.

Exchange ActiveSync Mailbox Policies can be created organization-wide, and applied to one or more users in the Exchange organization.

The following cmdlets are available to manage Exchange ActiveSync Mailbox policies:

- Get-ActiveSyncMailboxPolicy
- New-ActiveSyncMailboxPolicy
- Remove-ActiveSyncMailboxPolicy
- Set-ActiveSyncMailboxPolicy

### New-ActiveSyncMailboxPolicy

To create a new active sync mailbox policy, you can use the EMS cmdlet *New-ActiveSyncMailboxPolicy*.

Be careful though, not all settings you can configure using this cmdlet, can be enforced on all mobile devices. To allow a policy to be applicable even if not all settings can be applied to a mobile device used by the user, you need to include the parameter *AllowNonProvisionableDevices* and set its value to True. You can set one ActiveSync mailbox policy as default policy, which will be the policy that will be applied to any user by default once the user is allowed to use ActiveSync against his or her mailbox. Next to a name, you can specify any of the following attributes:

- AllowBluetooth
- AllowBrowser
- AllowCamera
- AllowConsumerEmail
- AllowDesktopSync
- AllowExternalDeviceManagement

- AllowHTMLEmail
- AllowInternetSharing
- AllowIrDA
- AllowNonProvisionableDevices
- AllowPOPIMAPEmail
- AllowRemoteDesktop
- AllowSimpleDevicePassword
- AllowSMIMEEncryptionAlgorithmNegotiation
- AllowSMIMESoftCerts
- AllowStorageCard
- AllowTextMessaging
- AllowUnsignedApplications
- AllowUnsignedInstallationPackages
- AllowWiFi
- AlphanumericDevicePasswordRequired
- ApprovedApplicationList
- AttachmentsEnabled
- Confirm
- DeviceEncryptionEnabled
- DevicePasswordEnabled
- DevicePasswordExpiration
- DevicePasswordHistory
- DomainController
- IsDefaultPolicy
- MaxAttachmentSize
- MaxCalendarAgeFilter
- MaxDevicePasswordFailedAttempts
- MaxInactivityTimeDeviceLock
- MinDevicePasswordLength
- MaxEmailAgeFilter
- MaxEmailBodyTruncationSize
- MaxEmailHTMLBodyTruncationSize
- MinDevicePasswordComplexCharacters
- PasswordRecoveryEnabled

- RequireDeviceEncryption
- RequireEncryptedSMIMEMessages
- RequireEncryptionSMIMEAlgorithm
- RequireManualSyncWhenRoaming
- RequireSignedSMIMEAlgorithm
- RequireSignedSMIMEMessages
- RequireStorageCardEncryption
- TemplateInstance
- UnapprovedInROMApplicationList
- UNCAccessEnabled
- WhatIf
- WSSAccessEnabled

If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to create the ActiveSync mailbox policy.

```
[PS] C:\>New-ActiveSyncMailboxPolicy -Name "BlueTooth Devices" -AllowBluetooth:handsfreeonly
```

Confirm

Are you sure you want to perform this action?

Microsoft Exchange ActiveSync mailbox policy "BlueTooth Devices" is being created.

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help  
(default is "Y"):y

```
AllowNonProvisionableDevices           : False
AlphanumericDevicePasswordRequired     : False
AttachmentsEnabled                      : True
DeviceEncryptionEnabled                 : False
RequireStorageCardEncryption           : False
DevicePasswordEnabled                  : False
PasswordRecoveryEnabled                 : False
DevicePolicyRefreshInterval            : unlimited
AllowSimpleDevicePassword               : True
MaxAttachmentSize                      : unlimited
WSSAccessEnabled                       : True
UNCAccessEnabled                       : True
MinDevicePasswordLength                 : 4
MaxInactivityTimeDeviceLock            : 00:15:00
MaxDevicePasswordFailedAttempts        : 8
DevicePasswordExpiration                : unlimited
DevicePasswordHistory                  : 0
IsDefaultPolicy                        : False
AllowStorageCard                       : True
AllowCamera                            : True
RequireDeviceEncryption                 : False
AllowUnsignedApplications               : True
AllowUnsignedInstallationPackages      : True
AllowWiFi                               : True
AllowTextMessaging                     : True
AllowPOPIMAPEmail                      : True
AllowIrDA                              : True
```

```

RequireManualSyncWhenRoaming      : False
AllowDesktopSync                  : True
AllowHTMLEmail                    : True
RequireSignedSMIMEMessages        : False
RequireEncryptedSMIMEMessages     : False
AllowSMIMESoftCerts               : True
AllowBrowser                      : True
AllowConsumerEmail                : True
AllowRemoteDesktop                : True
AllowInternetSharing              : True
AllowBluetooth                    : HandsfreeOnly
MaxCalendarAgeFilter              : All
MaxEmailAgeFilter                 : All
RequireSignedSMIMEAlgorithm        : SHA1
RequireEncryptionSMIMEAlgorithm    : TripleDES
AllowSMIMEEncryptionAlgorithmNegotiation : AllowAnyAlgorithmNegotiation
MinDevicePasswordComplexCharacters : 3
MaxEmailBodyTruncationSize        : unlimited
MaxEmailHTMLBodyTruncationSize    : unlimited
UnapprovedInROMApplicationList    : {}
ApprovedApplicationList           : {}
ExternallyDeviceManaged          : False
MailboxPolicyFlags                : 0
AdminDisplayName                  :
ExchangeVersion                   : 0.1 (8.0.535.0)
Name                              : BlueTooth Devices
DistinguishedName                  : CN=BlueTooth Devices,CN=Mobile Mailbox Policies,CN=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=proexchange,DC=local

Identity                          : BlueTooth Devices
Guid                              : 4f72dfb0-869d-40a2-acb9-0258776aa081
ObjectCategory                     : proexchange.local/Configuration/Schema/ms-Exch-Mobile-Mailbox-Policy
ObjectClass                        : {top, msExchRecipientTemplate, msExchangeMobileMailboxPolicy}
WhenChanged                       : 12/10/2007 15:45:27
WhenCreated                       : 12/10/2007 15:45:27
OriginatingServer                  : DCWSS.proexchange.local
IsValid                            : True

```

[PS] C:\>

### Get-ActiveSyncMailboxPolicy

To review settings of a created ActiveSync mailbox policy, you can use the cmdlet `Get-ActiveSyncMailboxPolicy`.

### Set-ActiveSyncMailboxPolicy

To change settings of an existing ActiveSync mailbox policy, you can use the cmdlet `Set-ActiveSyncMailboxPolicy`. If you do not include the parameter `-Confirm` and set it to `False`, you will need to acknowledge that you want to make changes to the ActiveSync mailbox policy.

```
[PS] C:\>Get-ActiveSyncMailboxPolicy "bluetooth devices" | Set-ActiveSyncMailboxPolicy -AllowNonProvisionableDevices:$True
```

Confirm

Are you sure you want to perform this action?

Setting Exchange ActiveSync mailbox policy "BlueTooth Devices".

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help  
(default is "Y"):y

## Remove-ActiveSyncMailboxPolicy

To remove an ActiveSync mailbox policy object, you can use the cmdlet `Remove-ActiveSyncMailboxPolicy`. If you do not include the parameter `-Confirm` and set it to `False`, you will need to acknowledge that you want to remove the ActiveSync mailbox policy.

If the `ActiveSyncMailboxPolicy` was applied to a mailbox-enabled user within your Exchange organization, that user will automatically receive the ActiveSync mailbox policy that is set to be the default one, as can be seen below. If you don't want a user to have a ActiveSync mailbox policy, you can use the cmdlet `Set-CASMailbox` to remove the ActiveSync mailbox policy.

```
[PS] C:\>Get-CASMailbox ivancriekinge | Set-CASMailbox -ActiveSyncMailboxPolicy "Bluetooth Devices"
```

```
[PS] C:\>Get-CASMailbox ivancriekinge | Fl ActiveSync*
```

```
ActiveSyncAllowedDeviceIDs      : {}
ActiveSyncMailboxPolicy         : bluetooth devices
ActiveSyncMailboxPolicyIsDefaulted : False
ActiveSyncDebugLogging         :
ActiveSyncEnabled               : True
[PS] C:\>Remove-ActiveSyncMailboxPolicy "Bluetooth Devices" -Confirm:$False
[PS] C:\>Get-CASMailbox ivancriekinge | Fl ActiveSync*
```

```
ActiveSyncAllowedDeviceIDs      : {}
ActiveSyncMailboxPolicy         : Default
ActiveSyncMailboxPolicyIsDefaulted : True
ActiveSyncDebugLogging         :
ActiveSyncEnabled               : True
[PS] C:\>Get-CASMailbox ivancriekinge | Set-CASMailbox -ActiveSyncMailboxPolicy $Null
[PS] C:\>Get-CASMailbox ivancriekinge | Fl ActiveSync*
```

```
ActiveSyncAllowedDeviceIDs      : {}
ActiveSyncMailboxPolicy         :
ActiveSyncMailboxPolicyIsDefaulted : False
ActiveSyncDebugLogging         :
ActiveSyncEnabled               : True
```

```
[PS] C:\>
```

## Managing settings for the Hub Transport Server role Organization Wide

### Remote Domains

In Exchange 2007 you can configure how Exchange should respond to mails received from external domains. You can control if and what kind of Out-of-Office messages are sent outbound in response to a message received from that "Remote Domain".

By default, all remote domains receive the settings received for the default domain \*, but you can configure different settings for one or more remote domains.

```
[PS] C:\>Get-RemoteDomain |fl
```

```

DomainName                : *
CharacterSet              : iso-8859-1
NonMimeCharacterSet       : iso-8859-1
AllowedOOFType            : External
AutoReplyEnabled          : False
AutoForwardEnabled        : False
DeliveryReportEnabled     : True
NDREnabled                : True
MeetingForwardNotificationEnabled : False
ContentType               : MimeHtmlText
DisplaySenderName         : True
TNEFEnabled               :
LineWrapSize              : unlimited
AdminDisplayName          :
ExchangeVersion           : 0.1 (8.0.535.0)
Name                      : Default
DistinguishedName         : CN=Default,CN=Internet Message Formats,CN=Global
Settings,CN=Fi

                                rst Organization,CN=Microsoft Exchange,CN=Services,CN=Configura
                                tion,DC=proexchange,DC=local
Identity                  : Default
Guid                     : 5a681fa8-ffec-4ea0-b4e4-8e8b31229745
ObjectCategory            : proexchange.local/Configuration/Schema/ms-Exch-Domain-Content-C
                                onfig
ObjectClass               : {top, msExchDomainContentConfig}
WhenChanged               : 11/04/2007 14:55:41
WhenCreated               : 11/04/2007 14:55:09
OriginatingServer        : DCWSS.proexchange.local
IsValid                   : True

```

```
[PS] C:\>
```

### **Create a new Remote Domain: New-RemoteDomain**

To create settings for one or more Remote Domains, you can use the EMS cmdlet *New-RemoteDomain*.

Table 7 lists all parameters you can use with the cmdlet *New-RemoteDomain*.

*Table 7: New-RemoteDomain -Parameters*

Parameter	Required	Description
-Name	YES	Used to specify a name for the remote domain configuration settings
-DomainName	YES	Used to specify the SMTP domain that you want to establish as a remote domain
-TemplateInstance	NO	Used to define a template to be used when creating the the new remote domain
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

When creating a new Remote Domain, Exchange will take default configuration settings, you can change afterwards by using the EMS cmdlet *Set-RemoteDomain*.

**Make changes to a defined Remote Domain: Set-RemoteDomain**

To change the configuration of a defined Remote Domain, you can use the EMS cmdlet *Set-RemoteDomain*. The following features can be changed:

- CharacterSet
- NonMimeCharacterSet
- AllowedOOFTType (Possible values are External, ExternalLegacy, None, InternalLegacy)
- AutoReplyEnabled
- AutoForwardEnabled
- DeliveryReportEnabled
- NDREnabled
- MeetingForwardNotificationEnabled
- ContentType (Possible values are MimeHtmlText, MimeText, MimeHtml)
- DisplaySenderName
- TNEFEnabled
- LineWrapSize
- Name

The following example shows you how you can create a new remote domain, and in addition configure some of its settings using the EMS cmdlet *Set-RemoteDomain*.

```
[PS] C:\>Get-RemoteDomain
```

Name	DomainName	AllowedOOFTType
Default	*	External

```
[PS] C:\>New-RemoteDomain -Name Sapien -DomainName Sapien.Com
```

Name	DomainName	AllowedOOFTType
Sapien	Sapien.Com	External

```
[PS] C:\>Get-RemoteDomain -Identity Sapien | Fl
```

```
DomainName           : Sapien.Com
CharacterSet         :
NonMimeCharacterSet  :
AllowedOOFTType      : External
AutoReplyEnabled     : True
AutoForwardEnabled   : True
DeliveryReportEnabled : True
NDREnabled           : True
MeetingForwardNotificationEnabled : False
ContentType           : MimeHtmlText
DisplaySenderName    : True
TNEFEnabled          :
LineWrapSize         : unlimited
```

Exchange Management Shell: TFM

```
AdminDisplayName           :
ExchangeVersion           : 0.1 (8.0.535.0)
Name                       : Sapien
DistinguishedName         : CN=Sapien,CN=Internet Message Formats,CN=Global
                             Settings,CN=Fir
                             st Organization,CN=Microsoft Exchange,CN=Services,CN=Configurat
                             ion,DC=proexchange,DC=local
Identity                   : Sapien
Guid                       : 0c52674a-afc2-454a-a1a5-d9f66e6a093d
ObjectCategory             : proexchange.local/Configuration/Schema/ms-Exch-Domain-Content-C
                             onfig
ObjectClass                 : {top, msExchDomainContentConfig}
WhenChanged                : 16/10/2007 21:30:16
WhenCreated                : 16/10/2007 21:30:16
OriginatingServer         : DCWSS.proexchange.local
IsValid                    : True
[PS] C:\>Get-RemoteDomain -Identity Sapien | Set-RemoteDomain -AllowedOOFTType None -ContentType
Mime
Html
[PS] C:\>Get-RemoteDomain -Identity Sapien | Fl
```

```
DomainName                 : Sapien.Com
CharacterSet               :
NonMimeCharacterSet       :
AllowedOOFTType           : None
AutoReplyEnabled          : True
AutoForwardEnabled        : True
DeliveryReportEnabled     : True
NDREnabled                : True
MeetingForwardNotificationEnabled : False
ContentType                : MimeHtml
DisplaySenderName         : True
TNEFEnabled               :
LineWrapSize              : unlimited
AdminDisplayName           :
ExchangeVersion           : 0.1 (8.0.535.0)
Name                       : Sapien
DistinguishedName         : CN=Sapien,CN=Internet Message Formats,CN=Global
                             Settings,CN=Fir
                             st Organization,CN=Microsoft Exchange,CN=Services,CN=Configurat
                             ion,DC=proexchange,DC=local
Identity                   : Sapien
Guid                       : 0c52674a-afc2-454a-a1a5-d9f66e6a093d
ObjectCategory             : proexchange.local/Configuration/Schema/ms-Exch-Domain-Content-C
                             onfig
ObjectClass                 : {top, msExchDomainContentConfig}
WhenChanged                : 16/10/2007 21:34:30
WhenCreated                : 16/10/2007 21:30:16
OriginatingServer         : DCWSS.proexchange.local
IsValid                    : True
[PS] C:\>
```

## Remove a Remote Domain: Remove-RemoteDomain

To remove the configuration defined for a Remote Domain, you can use the cmdlet *Remove-RemoteDomain*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the configured Remote Domain settings.

```
[PS] C:\>Remove-RemoteDomain -Identity Sapien -Confirm:$False
[PS] C:\>Get-RemoteDomain
```

```

Name                               DomainName                         AllowedOOFType
----                               -
Default                             *                                  External

```

```
[PS] C:\>
```

## Accepted Domains

Exchange Hub Transport servers can be configured to accept mails sent to so-called accepted domains. To create, configure, and manage domains for which your exchange organization will be responsible, the following EMS cmdlets are available:

- Get-AcceptedDomain
- New-AcceptedDomain
- Remove-AcceptedDomain
- Set-AcceptedDomain

### Create a new Accepted Domain: New-AcceptedDomain

Table 8 lists all parameters you can use with the cmdlet *New-RemoteDomain*.

*Table 8: New-AcceptedDomain -Parameters*

Parameter	Required	Description
-Name	YES	Used to specify a unique name for the accepted domain configuration settings
-DomainName	YES	Used to specify the SMTP domain that you want to establish as an accepted domain
-DomainType	YES	Used to specify the type of accepted domain . Possible values are: <ul style="list-style-type: none"> <li>• Authoritative</li> <li>• InternalRelay</li> <li>• ExternalRelay</li> </ul> If you do not specify a value, Authoritative will be set as default.
-TemplateInstance	NO	Used to define a template to be used when creating the new accepted domain
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

```
[PS] C:\>Get-AcceptedDomain
```

```

Name                               DomainName                         DomainType                         Default
----                               -
proexchange.local                  proexchange.local                  Authoritative                       True

```

```
[PS] C:\>New-AcceptedDomain -Name "Subsidiary domains" -DomainName *.proexchange.edu -DomainType InternalRelay
```

Name	DomainName	DomainType	Default
Subsidiary domains	*.proexchange.edu	InternalRelay	False

```
[PS] C:\>Get-AcceptedDomain
```

Name	DomainName	DomainType	Default
proexchange.local	proexchange.local	Authoritative	True
Subsidiary domains	*.proexchange.edu	InternalRelay	False

```
[PS] C:\>
```

## Review settings of a defined Accepted Domain: Get-AcceptedDomain

To get an overview of one, multiple or all AcceptedDomains you can use the EMS cmdlet *Get-AcceptedDomain*.

```
[PS] C:\>Get-AcceptedDomain -Identity "Subsidiary domains" | FL
```

```
DomainName       : *.proexchange.edu
DomainType       : InternalRelay
AddressBookEnabled : False
Default         : False
AdminDisplayName :
ExchangeVersion : 0.1 (8.0.535.0)
Name            : Subsidiary domains
DistinguishedName : CN=Subsidiary domains,CN=Accepted Domains,CN=Transport Settings,CN=First
Organizational  : CN=Subsidiary domains,CN=Accepted Domains,CN=Transport Settings,CN=First
Identity        : Subsidiary domains
Guid            : 9736ee20-1a08-4c16-a7c1-faebb2ecd9f2
ObjectCategory  : proexchange.local/Configuration/Schema/ms-Exch-Accepted-Domain
ObjectClass     : {top, msExchAcceptedDomain}
WhenChanged    : 17/10/2007 21:25:05
WhenCreated    : 17/10/2007 21:25:05
OriginatingServer : DCWSS.proexchange.local
IsValid        : True
```

```
[PS] C:\>
```

## Making changes to a configured Accepted Domain: Set-AcceptedDomain

You can change the configuration of one, multiple, or all Accepted Domains, by using the EMS cmdlet *Set-AcceptedDomain*.

You can make changes to any of the following properties of an Accepted Domain:

- **AddressBookEnabled:** Can be used to enable or disable recipient filtering on the Edge Transport server role that accepts mail for this accepted domain. Be careful, only set this parameter to \$true if all the recipients in this accepted domain are replicated to the Edge Active Directory Application Mode (ADAM) instance. For authoritative

domains the value is default set to \$true, for internal relay domains also \$true, and for external relay domains the value takes a default setting of \$false

- `DomainType` : To change the accepted domain to authoritative, externalrelay, or internalrelay
- `MakeDefault` to specify whether the accepted domain is the default domain

### **Remove an Accepted Domain: Remove-AcceptedDomain**

To remove the configuration defined for an Accepted Domain, you can use the cmdlet *Remove-AcceptedDomain*. If you do not include the parameter *-Confirm* and set it to `False`, you will need to acknowledge that you want to remove the configured Accepted Domain settings.

## Global Settings

There are two EMS cmdlets built-in to provide an overview and change the overall transport settings: *Get-TransportConfig*, and *Set-TransportConfig*.

```
[PS] C:\>Get-Transportconfig
```

```
ClearCategories           : True
GenerateCopyOfDSNFor     : {5.4.8, 5.4.6, 5.4.4, 5.2.4, 5.2.0, 5.1.4}
InternalSMTPServers      : {}
JournalingReportNdrTo    : <>
MaxDumpsterSizePerStorageGroup : 18MB
MaxDumpsterTime          : 7.00:00:00
MaxReceiveSize           : unlimited
MaxRecipientEnvelopeLimit : unlimited
MaxSendSize              : unlimited
TLSReceiveDomainSecureList : {}
TLSSendDomainSecureList  : {}
VerifySecureSubmitEnabled : False
VoicemailJournalingEnabled : True
Xexch50Enabled           : True
```

```
[PS] C:\>
```

You can change any of the settings using the EMS cmdlet *Set-TransportConfig*. You can for example set the e-mail address to which journal reports should be sent if the journaling mailbox is unreachable. By default, this parameter (*-JournalingReportNdr*) is left empty, meaning Exchange will continue trying to deliver the journal report to the journaling mailbox.

Another interesting parameter you can change using the *Set-TransportConfig* cmdlet, is *-GenerateCopyOfDSNFor*, which controls the non-delivery reports (NDRs) that are copied to a mailbox by specifying the delivery status notification (DSN) codes that you want to monitor. You must configure the list of monitored DSNs on one Hub Transport server and locally on each Edge Transport server in your Exchange 2007 organization. On a Hub Transport server, NDRs are copied to the mailbox that is assigned to the Microsoft Exchange Recipient. On Edge Transport servers, NDRs are copied to the mailbox that is assigned to external postmaster address. We have seen in the previously in this chapter how you can assign a mailbox to the Microsoft Exchange Recipient (using the EMS cmdlet *Set-OrganizationConfig*).

Whenever you have configured the Sender ID and/or connection Filtering agent on one or more of your Hub Transport servers, you should make sure that you specify the list of IP addresses that must be ignored by Sender ID and connection filtering. You can do so by adding the parameter

-InternalSMTPServers.

```
[PS] C:\>Set-TransportConfig -GenerateCopyOfDSNFor 5.7.1,5.7.2,5.7.3 -JournalingReportNdrTo
MailAdministrator@ProExchange.Local
[PS] C:\>Get-TransportConfig
```

```
ClearCategories           : True
GenerateCopyOfDSNFor     : {5.7.3, 5.7.2, 5.7.1}
InternalSMTPServers      : {}
JournalingReportNdrTo    : MailAdministrator@ProExchange.Local
MaxDumpsterSizePerStorageGroup : 18MB
MaxDumpsterTime          : 7.00:00:00
MaxReceiveSize           : unlimited
MaxRecipientEnvelopeLimit : unlimited
MaxSendSize              : unlimited
TLSReceiveDomainSecureList : {}
TLSSendDomainSecureList  : {}
VerifySecureSubmitEnabled : False
VoicemailJournalingEnabled : True
Xexch50Enabled           : True
```

```
[PS] C:\>
```

## Edge Subscriptions

In Exchange 2007 you have the possibility to configure edge synchronization between one or more Edge servers and your internal Exchange organization. Once you have established edge synchronization, you will be sure that configuration information and recipient information is replicated (read-only) from Active Directory to your Edge server configuration database via a Hub transport server located in the connected Active Directory site.

To create, manage, and remove edge synchronization, there are five EMS cmdlets available:

- New-EdgeSubscription
- Get-EdgeSubscription
- Remove-EdgeSubscription
- Start-EdgeSynchronization
- Test-EdgeSynchronization

### New-EdgeSubscription

Table 9 lists all parameters you can use with the cmdlet *New-EdgeSubscription* when it is run to set up an edge subscription on the inside of your exchange organization, on a Hub Transport server.

Table 9: *New-EdgeSubscription -Parameters*

Parameter	Required	Description
-FileName	YES	Used to specify the full path of the Edge Subscription file that was created on the Edge server.
-Site	YES	Used to specify the Active Directory site that contains the Hub Transport servers with which the Edge Transport servers will be associated

- CreateInboundSendConnector	NO	Used to specify whether to create the Send connector from the Edge Transport server to the Hub Transport servers. If not added, the default value of \$True is used.
-CreateInternetSendConnector	NO	Used to specify whether to create the Send connector to the Internet where the Edge server will be set as Source server, and DNS will be disabled. If not added, the default value of \$True is used.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.

### **Get-EdgeSubscription**

To review the settings of a configured Edge subscription, you can use the EMS cmdlet *Get-EdgeSubscription*.

### **Remove-EdgeSubscription**

To remove a configured Edge subscription, you can use the EMS cmdlet *Remove-EdgeSubscription*. If you don't add the parameter *-Confirm* and set it to *\$False*, you will need to confirm that you want to remove the Edge subscription.

### **Start-EdgeSynchronization**

By default, an Edge synchronization will sync configuration information every hour, and recipient information every four hours. To force configuration and recipient information to be synced, you can run the EMS cmdlet *Start-EdgeSynchronization*.

### **Test-EdgeSynchronization**

Once you have created and configured an edge subscription, you can test the edge synchronization by running the EMS cmdlet *Test-EdgeSynchronization*.

For more information about Edge subscriptions, and Edge synchronization, please refer to chapter x, Managing the Edge server role.

## **Send Connectors**

You can create and configure Send connectors in Exchange Server to enable connectivity between Exchange 2007 Hub Transport Servers and other messaging systems.

Send connectors use the Simple Mail Transfer Protocol (SMTP) to transport messages to the Internet. But you can also configure a Send connector to send mail to non-SMTP address spaces, like Lotus Notes.

In Exchange 2007 you have three types of connectors for sending mail outbound:

- Send connector

- Linked connector
- Foreign connector

## Send connector

Send Connectors can be created using the EMS cmdlet *New-SendConnector*. Send connectors can be only be created on Exchange servers deployed with the Hub Transport server role or Edge Transport server role.

Table 10 lists all parameters that can be used to create a new Send Connector:

*Table 10: New-SendConnector -Parameters*

Parameter	Required	Description
-Name	YES	Used to define a unique name for the Send Connector
-AddressSpaces	YES	Used to define the address space type, the address space itself, and the address space cost. Syntax to be used is: <AddressSpaceType>:<AddressSpace>;<AddressSpaceCost>  Possible values for AddressSpaceType on a Hub Transport server are X400, and SMTP. If no AddressSpaceType is added, SMTP will be taken by default. You can specify a cost of 1 to 100.
-AuthenticationCredential	NO	Can be used to require the creation and passing of a credential object by using the EMS cmdlet <i>Get-Credential</i>
- Comment	NO	
-ConnectionInactivityTimeOut	NO	Can be used to define a different maximum time that an idle connection can remain open than the default value of 10 minutes. To specify a value, enter the value using the following format: dd.hh:mm:ss,
-Custom	NO	Used specify this connector will be used to connect with systems that are not Exchange servers. You need to use -Custom, -Internet, Intranet, or -Partner.
-DNSRoutingEnabled	NO	By default set to \$True to use DNS MX Records to route mail automatically
-DomainSecureEnabled	NO	Can be used to set up mutual Transport Layer Security (TLS) authentication for the domains that are serviced by this Send connector. To complete the configuration of mutual TLS you need to make sure that:  DomainSecureEnabled parameter = \$True  DNSRoutingEnabled parameter = \$True  IgnoreStartTLS parameter = \$False.
-Enabled	NO	By default this value is set to \$True, to enable the Send connector

-Force	NO	Used to suppress warning messages during configuration changes to the Send connector
-ForceHelo	NO	Used to enforce the Send connector to issue Helo instead of Ehlo when setting up an SMTP connection
-Fqdn	NO	Can be used to set the FQDN that is used as the source server for connected messaging servers that use the Send connector to receive outgoing messages. As discussed below, parameter is only useful when the Hub Transport server role is not deployed together with Mailbox server role on an Exchange box!
-IgnoreSTARTTLS	NO	Can be used to specify if the StartTLS option that is offered by a remote sending server can be ignored. This parameter is used with remote domains. This parameter must be set to <i>\$False</i> if the RequireTLS parameter is set to <i>\$True</i> .
-Internal	NO	Used to configure to connector to route e-mail to your internal Exchange servers as smart hosts
-Internet	NO	Used to send e-mail to the Internet
-IsScopedConnector	NO	Can be used to limit the usage of the Send connector to Hub Transport servers in the same Active Directory site. Default values is <i>\$False</i>
-LinkedReceiverConnector	NO	Can be used to configure the Send connector as a linked connector, as discussed next in this chapter
-MaxMessageSize	NO	Can be used to set a different maximum size of a message that can pass through the connector, than the default value of 10MB. You can enter a value in bytes (B), kilobytes (KB), megabytes (MB), or gigabytes (GB). If you do not want to set a limit, you can specify a value of <i>Unlimited</i> .
-Partner	NO	Used to configure the connector to only allow connections to servers that authenticate with Transport Layer Security (TLS) certificates for Simple Mail Transfer Protocol (SMTP) domains that are included in the list of domain-secured domains
-Port	NO	By default the port used is port 25, but you can set it to any integer between 0 and 65535.
-ProtocolLoggingLevel	NO	To enable protocol logging for this Send connector, you need to set this parameter to <i>Verbose</i> . To disable protocol logging, you can omit the parameter, since its default value is <i>None</i> . To change the settings (like location of the log files) you need to use the EMS cmdlet <i>Set-TransportServer</i> .
-RequireTLS	NO	Used to specify whether all messages that are sent through this connector must be transmitted by using Transport Layer Security (TLS). By default this parameter is set to <i>\$False</i> .

- SmartHostAuthMechanism	NO	Used to specify the authentication mechanism used by the smart host. Possible values are:  None  BasicAuth  BasicAuthRequireTLS + BasicAuth  ExchangeServer  ExternalAuthoritative
-SmartHosts	NO	If you have disabled DNSRouting, you can specify one or more smart hosts too which mails will be forwarded went destined for the defined address space.
-SourceIPAddress	NO	Parameter is only valid for Send connectors created on an Edge transport server, where it specifies the local IP address that has to be used as the endpoint for an SMTP connection to a remote messaging server. The default IP address is 0.0.0.0., thereby allowing the server to use any available local IP address.
-SourceTransportServers	NO	Used to specify one or more Hub Transport servers that can use this Send connector. If more Hub Transport servers are listed, they should be separated by commas. Parameter can not be used when creating and configuring Send connectors on Edge transport servers.
-Usage	NO	Can be used to specify the default permissions and authentication methods that are assigned to the Send connector. Possible values are: Custom, Internal, Internet, or Partner. Default value is <i>Custom</i> .  If you use the Usage parameter, you can't use any of the following parameters: Custom, Internal, Internet, or Partner.
- UseExternalDNSServersEnabled	NO	Can be used to force the Send connector to query DNS servers listed as External DNS Servers for a Hub Transport server. To retrieve the list of External DNS Servers for a Hub transport server, you can use the cmdlet <i>Get-TransportServer   Format-List Name,ExternalDNSServers</i>
-TemplateInstance	NO	Used to define a template Send connector to be used when creating the Send connector
-DomainController	NO	Used to specify against which domain controller this configuration change is written.
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.

-Confirm	NO	When added, you will be required to confirm your action.
----------	----	--

The following example shows you how to create a new Send connector that will create a new Send connector to deliver messages sent to the internet by using the DNS server configured as External DNS Server on the Hub Transport Server. The usage of the Send connector will also be limited to the Hub transport servers in the same site as the source Hub transport server EX2007. Message size is set to unlimited.

```
[PS] C:\>ipconfig /all
```

Windows IP Configuration

```
Host Name . . . . . : EX2007
Primary Dns Suffix . . . . . : proexchange.local
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : proexchange.local
```

Ethernet adapter Local Area Connection:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Intel 21140-Based PCI Fast Ethernet Adapter (Generic)
Physical Address. . . . . : 00-03-FF-E0-6C-7D
DHCP Enabled. . . . . : No
IP Address. . . . . : 10.10.10.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 10.10.10.10
DNS Servers . . . . . : 10.10.10.10
```

```
[PS] C:\>Get-TransportServer -Identity EX2007 | fl Name,ExternalDNSServers
```

```
Name : EX2007
ExternalDNSServers : {194.7.15.70}
```

```
[PS] C:\>New-SendConnector -Name "SMTP Connector to the internet for site Belgium" -Internet -AddressSpaces "SMTP:*;1" -IsScopedConnector:$True -MaxMessageSize unlimited -UseExternalDNSServersEnabled:$True -SourceTransportServers EX2007
```

```
Identity AddressSpaces Enabled
-----
SMTP Connector to the internet for site Belgium {SMTP:*;1} True
```

To retrieve all settings of an existing Send connector, you can use the EMS cmdlet *Get-SendConnector*.

```
[PS] C:\>Get-SendConnector -Id "SMTP Connector to the internet for site Belgium" | fl
```

```
AddressSpaces : {SMTP:*;1}
AuthenticationCredential :
Comment :
ConnectedDomains : {}
ConnectionInactivityTimeout : 00:10:00
DNSRoutingEnabled : True
DomainSecureEnabled : False
Enabled : True
ForceHELO : False
Fqdn :
HomeMTA : Microsoft MTA
HomeMtaServerId : EX2007
```

Exchange Management Shell: TFM

```
Identity           : SMTP Connector to the internet for site Belgium
IgnoreSTARTTLS    : False
IsScopedConnector : True
IsSmtplibConnector : True
LinkedReceiveConnector :
MaxMessageSize    : unlimited
Name              : SMTP Connector to the internet for site Belgium
Port              : 25
ProtocolLoggingLevel : None
RequireTLS        : False
SmartHostAuthMechanism : None
SmartHosts        : {}
SmartHostsString  :
SourceIPAddress    : 0.0.0.0
SourceRoutingGroup : Exchange Routing Group (DWBGZMFD01QNBJR)
SourceTransportServers : {EX2007}
UseExternalDNSServersEnabled : True
```

[PS] C:\>

To change settings of the Send connector, you can use the EMS cmdlet *Set-SendConnector*. You can change any of the following values:

- `LinkedReceiveConnector`
- `SourceTransportServers`
- `DNSRoutingEnabled`
- `SmartHosts`
- `Port`
- `ConnectionInactivityTimeout`
- `ForceHELO`
- `IgnoreSTARTTLS`
- `Fqdn`
- `RequireTLS`
- `Enabled`
- `ProtocolLoggingLevel`
- `SmartHostAuthMechanism`
- `AuthenticationCredential`
- `UseExternalDNSServersEnabled`
- `DomainSecureEnabled`
- `SourceIPAddress`
- `AddressSpaces`
- `IsScopedConnector`
- `Comment`
- `MaxMessageSize`

- Name

---

### Note

When you create a new Send connector, you can use the parameter *-Fqdn* to set the Fully Qualified Domain Name that is used as the source server for connected messaging servers that use the Send connector to receive outgoing messages. But, this is only valid when you do not have a Hub Transport server on which also the Mailbox server role is deployed! When you have an Exchange server 2007 with both Hub transport server role, and Mailbox server role installed, the FQDN of the server that is displayed by using the *Get-ExchangeServer* cmdlet is always used. The only way to remove the server name from the Received: headers of the outgoing message is to use the *Remove-ADPermission* cmdlet to remove the *Ms-Exch-Send-Headers-Routing* permission from the security principals that use the connector. You should not remove the Received: headers for internal messages, because the Received: headers are used for maximum hop count calculations.

To remove a Send connector, you can use the EMS cmdlet *Remove-SendConnector*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the configured Send connector.

```
[PS] C:\>Remove-SendConnector -Id "SMTP Connector to the internet for site Belgium" -Confirm:$False
[PS] C:\>
```

### Linked connector

You can create or configure an existing Send connector as a so-called linked connector. By configuring a Send connector as a linked connector, you actually configure that connector to forward every mail that is received by the linked receive connector to a specified smart host.

Linked connectors are often used to make sure that every mail that is received from the Internet, is forwarded by Exchange first to an anti-spam and antivirus device, before it is delivered back to Exchange and delivered in the mailbox store.

```
[PS] C:\>New-SendConnector "To Anti-Spam and Antivirus Service" -LinkedReceiveConnector
"Default EX2007" -SmartHosts hygiene.bubbels.xyz -SmartHostAuthMechanism ExternalAuthoritative
-DNSRoutingEnabled $False -MaxMessageSize Unlimited
```

Identity	AddressSpaces	Enabled
-----	-----	-----
To Anti-Spam and Antivirus Service	{}	True

```
[PS] C:\>
```

If you choose to create a new send connector is linked connector, you are obliged to add the following parameters:

- *DNSRoutingEnabled* and set it to *\$False*
- *MaxMessageSize* and set it to unlimited
- *Smarthosts*
- *SmarthostAuthMechanism*

You cannot specify an address space, since this will always be set to \$null for a linked connector!

```
[PS] C:\>Get-SendConnector "To Anti-Spam and Antivirus service" | fl
```

```
AddressSpaces           : {}
AuthenticationCredential :
Comment                 :
ConnectedDomains        : {}
ConnectionInactivityTimeout : 00:10:00
DNSRoutingEnabled       : False
DomainSecureEnabled     : False
Enabled                  : True
ForceHELO                : False
Fqdn                     :
HomeMTA                  : Microsoft MTA
HomeMtaServerId         : EX2007
Identity                 : To Anti-Spam and Antivirus Service
IgnoreSTARTTLS          : False
IsScopedConnector       : False
IsSmtplibConnector      : True
LinkedReceiveConnector  : EX2007\Default EX2007
MaxMessageSize          : unlimited
Name                     : To Anti-Spam and Antivirus Service
Port                     : 25
ProtocolLoggingLevel    : None
RequireTLS               : False
SmartHostAuthMechanism  : ExternalAuthoritative
SmartHosts               : {hygiene.bubbels.xyz}
SmartHostsString        : hygiene.bubbels.xyz
SourceIPAddress          : 0.0.0.0
SourceRoutingGroup      : Exchange Routing Group (DWBGMFD01QNBJR)
SourceTransportServers  : {EX2007}
UseExternalDNSServersEnabled : False
```

```
[PS] C:\>
```

## Foreign connector

Foreign connectors transport messages from Hub Transport servers to local messaging servers that do not use SMTP to transport messages. Foreign connectors can be configured to send mail to SMTP or non-SMTP address spaces, such as X.400. Foreign Connectors are most commonly used to connect with Lotus Notes messaging environments.

A Foreign connector controls outbound connections from the Hub Transport to the foreign gateway server. The outbound messages are put in a Drop directory on the Hub Transport server or in a network file share on a remote server. Each Foreign connector uses its own Drop directory. The foreign gateway server must be configured to obtain messages from the Drop directory that is specified for that Foreign connector.

To create a Foreign Connector, you need to use the Exchange Management Shell cmdlet *New-ForeignConnector*.

Table 11 lists all parameters that can be used to create a new Send Connector:

Table 11: *New-ForeignConnector -Parameters*

Parameter	Required	Description
-Name	YES	Used to define a unique name for the Foreign Connector
-AddressSpaces	YES	Used to define the address space type, the address space itself, and the address space cost. Syntax to be used is: <ConnectorScope>: <AddressSpaceType>: <AddressSpace>; <AddressSpaceCost>  If you do not specify a connectorscope, the connector can be used by all Hub transport servers in the Exchange organization. If you set it to local, the connector can only be used by Hub transport servers in the same sit as the source Hub transport server.  Possible values for AddressSpaceType SMTP or any descriptive text string for non-SMTP address spaces.
-SourceTransportServers	NO	Used to specify one or more Hub Transport servers that can use this Send connector. If more Hub Transport servers are listed, they should be separated by commas.
-TemplateInstance	NO	Used to define a template foreign connector to be used when creating the Send connector
-DomainController	NO	Used to specify against which domain controller this configuration change is written.

To list one or more foreign connectors, you can use the EMS cmdlet *Get-ForeignConnector*. To make changes to an existing foreign connector, you have the EMS cmdlet *Set-ForeignConnector*. To remove a foreign connector you can use the EMS cmdlet *Remove-ForeignConnector*.

## E-Mail Address Policies

When you create a new Exchange recipient, that mailbox-enabled user, mail-enabled user, resource mailbox, mail-enabled contact, mail-enabled group, or mail-enabled public folder will get e-mail addresses by default based on E-Mail Address policies that you can create. If multiple E-Mail address policies exist and apply to an object, Exchange will only apply the settings defined in the policy with the highest priority to the object! When you remove an E-Mail Address policy, you will not remove any e-mail addresses handed out because of that policy.

The following five EMS cmdlets are available in reference to E-Mail Address policies:

- *New-EmailAddressPolicy*
- *Get-EmailAddressPolicy*
- *Set-EmailAddressPolicy*
- *Update-EmailAddressPolicy*
- *Remove-EmailAddressPolicy*

### Creating a new E-Mail Address policy: *New-EmailAddressPolicy*

Table 12 lists all parameters that can be used to create a new E-Mail Address policy.

Table 12: New-EMailAddressPolicy -Parameters

Parameter	Required	Description
-Name	YES	Used to define a unique name for the E-Mail Address policy
-EnabledPrimarySMTPAddressTemplate	YES	Used to specify the primary SMTP address that is enabled and included in an e-mail address policy. The domain part of each proxy address needs to match an existing accepted domain (internal or authoritative accepted domain).
-IncludedRecipients	NO	Used to specify to what recipients the policy should be applied. Possible values are:  None  MailboxUsers  Resources  MailContacts  MailGroups,  MailUsers  AllRecipients  It is required to use either this parameter (along with ConditionalCompany, ConditionalDepartment, and /or ConditionalStateOrProvince) or the parameter <i>-RecipientFilter!</i>
-EnabledEmailAddressTemplates	NO	Can be used to define additional proxy addresses that are included in an e-mail address policy and are enabled. Remember, the domain part of each proxy address needs to match an existing accepted domain (internal or authoritative accepted domain).
-RecipientFilter	NO	Used to specify a filter for recipients to include in the e-mail address policy, for more information please refer to Appendix B.
- ConditionalCompany	NO	Used to filter recipients by company. Multiple values can be listed, separated by commas.
- ConditionalCustomAttributex (where x has a value between 1 and 15)	NO	Used to filter recipients by custom attribute value(s)
- ConditionalDepartment	NO	Used to filter recipients by department. Multiple values can be listed, separated by commas.

- ConditionalStateOrProvince	NO	Used to filter recipients by state or province. Multiple values can be listed, separated by commas.
-DisabledEmailAddressTemplates	NO	Used to specify the proxy addresses that are included in an e-mail address policy and are disabled.
-Priority	NO	Used to make the current priority higher than the priority specified as an argument for this parameter
-TemplateInstance	NO	Used to define a template-mail address policy to be used when creating the Send connector
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.
-DomainController	NO	Used to specify against which domain controller this configuration change is written.

The following example shows you the way to create a new e-mail address policy that will give every mailbox-enabled user in your Exchange organization that is working for the department “Marketing”, an e-mail address *<first name>.<last name>@proexchange.be*.

```
[PS] C:\>Get-User | Where-Object {$_.Department -eq "Marketing"} | Ft Name,Department,WindowsEmailAddress
```

Name	Department	WindowsEmailAddress
-----	-----	-----
Ilse Van Criekinge	Marketing	ivancriekinge@proexchange.local
Darwin Leungh	Marketing	dleung@proexchange.local
Sergei Horshmans	Marketing	shorshmans@proexchange.local
Marcus Mertenz	Marketing	mmertenz@proexchange.local

```
[PS] C:\>New-EmailAddressPolicy -IncludedRecipients Mailboxusers -ConditionalDepartment Marketing
-EnabledPrimarySMTPAddressTemplate %g.%s@ProExchange.Local -Name "E-Mail Address Policy Marketing
Department" -Priority 1
```

Name	Priority	RecipientFilter
-----	-----	-----
E-Mail Address Policy Ma 1	1	(Department -eq 'Marketing' -and RecipientType -eq 'UserMailbox')

```
[PS] C:\>Get-EmailAddressPolicy
```

Name	Priority	RecipientFilter
-----	-----	-----
Default Policy	Lowest	Alias -ne \$null
E-Mail Address Policy Ma 1	1	(Department -eq 'Marketing' -and RecipientType -eq 'UserMailbox')

```
[PS] C:\>Update-EmailAddressPolicy "E-Mail Address Policy Marketing Department"
```

```
[PS] C:\>Get-User | Where-Object {$_.Department -eq "Marketing"} | Ft Name,Department,WindowsEmailAddress
```

Name	Department	WindowsEmailAddress
-----	-----	-----
Ilse Van Criekinge	Marketing	Ilse.VanCriekinge@ProExchange.local
Darwin Leungh	Marketing	Darwin.Leungh@ProExchange.local
Sergei Horshmans	Marketing	Sergei.Horshmans@ProExchange.local

Marcus Mertenz

Marketing

Marcus.Mertenz@ProExchange.local

[PS] C:\&gt;

**Listing settings of one or more E-Mail Address policies: Get-EmailAddressPolicy**

To retrieve the properties of one or more E-Mail address policies you can use the EMS cmdlet *Get-EmailAddressPolicy*.

[PS] C:\&gt;Get-EmailAddressPolicy "E-Mail Address Policy Marketing Department" | Fl

```

RecipientFilter                : (Department -eq 'Marketing' -and RecipientType -eq 'UserMailbox')
LdapRecipientFilter            : (&(department=Marketing)(objectClass=user)(objectCategory=person)(mailNickname=*)(msExchHomeServerName=*))
LastUpdatedRecipientFilter     : (Department -eq 'Marketing' -and RecipientType -eq 'UserMailbox')
RecipientFilterApplied        : True
IncludedRecipients             : MailboxUsers
ConditionalDepartment          : {Marketing}
ConditionalCompany              : {}
ConditionalStateOrProvince     : {}
ConditionalCustomAttribute1    : {}
ConditionalCustomAttribute2    : {}
ConditionalCustomAttribute3    : {}
ConditionalCustomAttribute4    : {}
ConditionalCustomAttribute5    : {}
ConditionalCustomAttribute6    : {}
ConditionalCustomAttribute7    : {}
ConditionalCustomAttribute8    : {}
ConditionalCustomAttribute9    : {}
ConditionalCustomAttribute10   : {}
ConditionalCustomAttribute11   : {}
ConditionalCustomAttribute12   : {}
ConditionalCustomAttribute13   : {}
ConditionalCustomAttribute14   : {}
ConditionalCustomAttribute15   : {}
RecipientFilterType            : Precanned
Priority                        : 1
EnabledPrimarySMTPAddressTemplate : %g.%s@ProExchange.Local
EnabledEmailAddressTemplates   : {SMTP:%g.%s@ProExchange.Local}
DisabledEmailAddressTemplates  : {}
Enabled                        : False
HasEmailAddressSetting         : True
HasMailboxManagerSetting       : False
NonAuthoritativeDomains        : {}
AdminDescription                :
AdminDisplayName                :
ExchangeVersion                : 0.1 (8.0.535.0)
Name                            : E-Mail Address Policy Marketing Department
DistinguishedName               : CN=E-Mail Address Policy Marketing Department,CN=Recipient Policies,CN=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=proexchange,DC=local
Identity                        : E-Mail Address Policy Marketing Department
Guid                            : 8afbb48d-91f5-4823-9f17-12f828ba3111
ObjectCategory                  : proexchange.local/Configuration/Schema

```

Exchange Management Shell: TFM

```
ObjectClass          : /ms-Exch-Recipient-Policy
                     : {top, msExchGenericPolicy, msExchRecip
                     :   ientPolicy}
WhenChanged          : 21/10/2007 16:10:15
WhenCreated          : 21/10/2007 16:04:15
OriginatingServer    : DCWSS.proexchange.local
IsValid              : True
```

[PS] C:\>

### **Changing settings of one or more E-Mail Address policies: Set-EmailAddressPolicy**

You can change any of the following settings by using the cmdlet *Set-EmailAddressPolicy*:

- RecipientFilter
- IncludedRecipients
- ConditionalDepartment
- ConditionalStateorProvince
- ConditionalCompany
- ConditionalCustomAttributex (Where x is a value between 1 and 15)
- Priority
- EnabledPrimarySMTPAddressTemplate
- EnabledEmailAddressTemplates
- DisabledEmailAddressTemplates
- Name

Be careful, as with Address Lists, it is not possible to use Set-EMailAddressPolicy to filter on recipients using -ConditionalCompany or any other, if the original e-mail address policy was created based on a recipient filter.

There is one parameter that you might have to use during a transitioning process from Exchange 2000 Server or Exchange Server 2003 to Exchange Server 2007, and that's the parameter *-ForceUpgrade*. The ForceUpgrade parameter suppresses the following confirmation: "To save changes on object, the object must be upgraded to the current Exchange version. After upgrade, this object cannot be managed by a previous version of Exchange System Manager. Do you want to continue to upgrade and save the object?" You cannot manage an Exchange 2003 or Exchange 2000 e-mail address policy by using the Exchange Management Console until you update the object's version and change the recipient filter by using either the RecipientFilter, or the IncludedRecipients parameters.

### **Forcing one or more E-Mail Address policy to be applied: Update-EmailAddressPolicy**

To apply an e-mail address policy to all recipients, you can use the EMS cmdlet *Update-EmailAddressPolicy*.

**Removing one or more E-Mail Address policies: Remove-EmailAddressPolicy**

To remove an E-Mail Address Policy Send connector, you can use the EMS cmdlet *Remove-EmailAddressPolicy*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the configured e-mail address policy. Once you have removed an e-mail address policy, all recipients that fall under that recipient filter will be updated. But, no e-mail address will be removed!

```
[PS] C:\>Remove-EmailAddressPolicy "E-Mail Address Policy Marketing Department"
```

Confirm

Are you sure you want to perform this action?

Removing the e-mail address policy "E-Mail Address Policy Marketing Department" and updating all recipients that fall under its recipient filter. This action may take a long time to complete.

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"):y

```
[PS] C:\>Get-User | Where-Object {$_.Department -eq "Marketing"} | Ft Name, Department,WindowsEmailAddress
```

Name	Department	WindowsEmailAddress
Ilse Van Criekinge	Marketing	ivancriekinge@proexchange.local
Darwin Leung	Marketing	dleung@proexchange.local
Sergei Horshmans	Marketing	shorshmans@proexchange.local
Marcus Mertenz	Marketing	mmertenz@proexchange.local

```
[PS] C:\>Get-Mailbox ivancriekinge | Fl name,*email*
```

```
Name           : Ilse Van Criekinge
EmailAddresses : {smtp:Ilse.VanCriekinge@ProExchange.Local, SMT
                  P:ivancriekinge@proexchange.local}
EmailAddressPolicyEnabled : True
WindowsEmailAddress : ivancriekinge@proexchange.local
[PS] C:\>
```

**Transport Rules**

Transport rules allow an Exchange administrator to easily control mail flow both inbound and outbound. The most typical usage of a transport rule is to add automatically a disclaimer to all messages that leave the Exchange organization. Transport rules can be created on a Hub transport server or on an Edge transport server. There are a few minor differences in actions and conditions between the two Exchange server roles. In this chapter we investigate transport rules as they can be created on a Hub Transport server.

There are quite a few EMS cmdlets available to manage transport rules in an Exchange 2007 organization:

- New-TransportRule
- Get-TransportRule
- Set-TransportRule
- Enable-TransportRule
- Disable-TransportRule
- Remove-TransportRule

- `Get-TransportRuleAction`
- `Get-TransportRulePredicate`
- `Import-TransportRuleCollection`
- `Export-TransportRuleCollection`

Because of the complex nature of the conditions, exceptions, and actions that are available for use with the commands, you must use variables and arrays to create a new transport rule using this EMS cmdlet *New-TransportRule*. We will first go through all cmdlets available for creating, configuring, and removing transport rules, and then we will have a look at an example.

## New-TransportRule

Table 13 lists all parameters that can be used to create a new transport rule.

*Table 13: New-TransportRule -Parameters*

Parameter	Required	Description
<code>-Name</code>	YES	Used to define a unique name for the transport rule
<code>-Actions</code>	YES	Used to define the action that should be performed when the transport rule has to be executed
<code>-Comments</code>	NO	Used to add informative comments to the transport rule
<code>-Conditions</code>	NO	Use to define conditions that have to be met before the transport rule is applied to an e-mail message when submitted to the Transport Rules agent.
<code>-Enabled</code>	NO	By default set to <code>\$True</code> , this parameter can be used to create a disabled transport rule.
<code>-Exceptions</code>	NO	Used to define exceptions when the transport rule should not be applied.
<code>-Priority</code>	NO	Used to set the priority for this transport rule. All transport rules are checked and executed when conditions are met, but in order of priority.
<code>-DomainController</code>	NO	Used to specify against which domain controller the configuration change should be written
<code>-TemplateInstance</code>	NO	Used to define a template-mail address policy to be used when creating the Send connector

## Get-TransportRule

To retrieve one or more transport rules, you can use the EMS cmdlet *Get-TransportRule*.

## Set-TransportRule

To make configuration changes to one or more transport rules, you can use the EMS cmdlet *Set-TransportRule*.

You can change any of the following properties of a transport rule:

- Name
- Priority
- Comments

- Conditions
- Exceptions
- Actions

### Enable-TransportRule/Disable-TransportRule

You can choose to disable a transport rule, by using the EMS cmdlet *Disable-TransportRule*, and enable it again when required by running *Enable-TransportRule*.

### Remove-TransportRule

To remove a transport rule, you can use the EMS cmdlet *Remove-TransportRule*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the configured transport rule.

### Get-TransportRuleAction

When you create a new transport rule, you need to specify an action that has to be taken by the transport rule agent when all conditions are met, and no exception rules are valid. You can get an overview of these actions by running the EMS cmdlet *Get-TransportRuleAction*, as can be seen below.

```
[PS] C:\>Get-TransportRuleAction | fl
```

```

EventMessage      :
Name              : LogEvent
Rank              : 0
LinkedDisplayText : log an event with <a id="EventMessage">message</a>

Prefix            :
Name              : PrependSubject
Rank              : 1
LinkedDisplayText : prepend the subject with <a id="Prefix">string</a>

Classification    :
Name              : ApplyClassification
Rank              : 2
LinkedDisplayText : apply <a id="Classification">message classification</a>
                  >

Location          : Append
Text              :
Font              : Arial
FontSize          : Smallest
FontColor         : Gray
FallbackAction    : Wrap
Separator         : WithSeparator
Name              : ApplyDisclaimer
Rank              : 3
LinkedDisplayText : <a id="Location">append</a> <a id="Text">disclaimer te
                  xt</a> using <a id="Font">font</a>, <a id="FontSize">s
                  ize</a>, <a id="FontColor">color</a>, <a id="Separator
                  ">with separator</a> and fallback to <a id="FallbackAc
                  tion">action</a> if unable to apply.

SciValue          : 0
Name              : SetSCL
Rank              : 4

```

```

LinkedDisplayText : set the spam confidence level to <a id="SclValue">value</a>
MessageHeader    :
HeaderValue      :
Name             : SetHeader
Rank            : 5
LinkedDisplayText : set <a id="MessageHeader">header</a> with <a id="HeaderValue">value</a>
MessageHeader    :
Name             : RemoveHeader
Rank            : 6
LinkedDisplayText : remove <a id="MessageHeader">header</a>
Addresses        :
Name             : AddToRecipient
Rank            : 7
LinkedDisplayText : add a recipient in the To field <a id="Addresses">addresses</a>
Addresses        :
Name             : CopyTo
Rank            : 8
LinkedDisplayText : copy the message to <a id="Addresses">addresses</a>
Addresses        :
Name             : BlindCopyTo
Rank            : 9
LinkedDisplayText : Blind carbon copy (Bcc) the message to <a id="Addresses">addresses</a>
Addresses        :
Name             : RedirectMessage
Rank            : 10
LinkedDisplayText : redirect the message to <a id="Addresses">addresses</a>
RejectReason     : Delivery not authorized, message refused
EnhancedStatusCode : 5.7.1
Name             : RejectMessage
Rank            : 11
LinkedDisplayText : send <a id="RejectReason">bounce message</a> to sender with <a id="EnhancedStatusCode">enhanced status code</a>
Name             : DeleteMessage
Rank            : 12
LinkedDisplayText : silently drop the message

```

[PS] C:\>

### Get-TransportRulePredicate

You can use the EMS cmdlet *Get-TransportRulePredicate* to display a list of available conditions and/or exceptions that you can use in transport.

[PS] C:\>Get-TransportRulePredicate | Ft Name,LinkedDisplayText -wrap

```

Name                               LinkedDisplayText
----                               -

```

## Exchange Management Shell: TFM

From	from <a id="Addresses">people</a>
FromMemberOf	from a member of <a id="Addresses">distribution list</a>
FromScope	from users <a id="Scope">inside or outside</a> the organization
SentTo	sent to <a id="Addresses">people</a>
SentToMemberOf	sent to a member of <a id="Addresses">distribution list</a>
SentToScope	sent to users <a id="Scope">inside or outside</a> the organization
BetweenMemberOf	between members of <a id="Addresses">distribution list</a> and <a id="Addresses2">distribution list</a>
AnyOfToHeader	when any of the recipients in the To field is <a id="Addresses">people</a>
AnyOfToHeaderMemberOf	when any of the recipients in the To field is a member of <a id="Addresses">distribution list</a>
AnyOfCcHeader	when any of the recipients in the Cc field is <a id="Addresses">people</a>
AnyOfCcHeaderMemberOf	when any of the recipients in the Cc field is a member of <a id="Addresses">distribution list</a>
AnyOfToCcHeader	when any of the recipients in the To or Cc fields are <a id="Addresses">people</a>
AnyOfToCcHeaderMemberOf	when any of the recipients in the To or Cc fields is a member of <a id="Addresses">distribution list</a>
HasClassification	marked with <a id="Classification">classification</a>
SubjectContains	when the Subject field contains <a id="Words">specific words</a>
SubjectOrBodyContains	when the Subject field or the body of the message contains <a id="Words">specific words</a>
HeaderContains	when a <a id="MessageHeader">message header</a> contains <a id="Words">specific words</a>
FromAddressContains	when the From address contains <a id="Words">specific words</a>
SubjectMatches	when the Subject field contains <a id="Patterns">text patterns</a>
SubjectOrBodyMatches	when the Subject field or the body of the message contains <a id="Patterns">text patterns</a>
HeaderMatches	when the <a id="MessageHeader">message header</a> contains <a id="Patterns">text patterns</a>
FromAddressMatches	when the From address contains <a id="Patterns">text patterns</a>
AttachmentNameMatches	when any attachment file name contains <a id="Patterns">text patterns</a>
SCLOver	with a spam confidence level (SCL) rating that is greater than or equal to <a id="SclValue">limit</a>
AttachmentSizeOver	when the size of any attachment is greater than or equal to <a id="Size">limit</a>
WithImportance	marked with <a id="Importance">importance</a>

[PS] C:\&gt;

## Import-TransportRuleCollection/Export-TransportRuleCollection

You can export all transport rules that are created on a Hub or an Edge transport server by using the cmdlet *Export-TransportRuleCollection*. All transport rules will be exported to an .XML file, that you can import again using the EMS cmdlet *Import-TransportRuleCollection*.

Be careful though, importing a transport rule collection from an XML file removes or overwrites all preexisting transport rules that were defined for the Transport Rules agent. Make sure that you have a backup of your current transport rule collection before you decide to import a transport rule collection!

## Example TransportRule

In the following example we are going to create a new transport rule that will make sure that all subjects of messages that have a Spam Confidence Level of 6 or higher, are prepended with “SPAM: “, except when the message is sent to either *Ilse Van Criekinge*, or *Robin Marstboom*.

First, we set the condition, that all messages with a SCL value of 6 or higher should be treated by this transport rule:

```
[PS] C:\>$condition=Get-TransportRulePredicate SclOver
[PS] C:\>$condition.SclValue=6
```

Then we specify the action that the subject should be prepended with the words “SPAM: “

```
[PS] C:\>$action=Get-TransportRuleAction PrependSubject
[PS] C:\>$action.set_prefix(“SPAM: “)
```

No we specify the exception that the transport rule shouldn’t be applied when the message is sent to either *Ilse Van Criekinge* or *Robin Marstboom*.

```
[PS] C:\>$exception=Get-TransportRulePredicate AnyOfToHeader
[PS] C:\>$exception.addresses = @((Get-Mailbox “Ilse Van Criekinge”),(Get-Mailbox “Robin
Marstboom”))
```

And now we create the transport rule using the variable we just defined:

```
[PS] C:\>New-TransportRule -name “Prepend Subject with Spam if Scl Value is larger than 6” -condition @($condition) -exception @($exception) -action @($action)
```

Name	State	Priority	Comments
Prepend Subject with Spam i...	Enabled	1	

```
[PS] C:\>Get-TransportRule “Prepend Subject with Spam if Scl Value is larger than 6” | Fl
```

```
Priority      : 1
Comments     :
ManuallyModified : False
Conditions   : {SCLover}
Exceptions   : {AnyOfToHeader}
Actions      : {PrependSubject}
State        : Enabled
Identity     : Prepend Subject with Spam if Scl Value is larger than 6
Guid         : e9ec8f59-3b4a-4fab-9a78-6be4f498aadb
Name         : Prepend Subject with Spam if Scl Value is larger than 6
IsValid      : True
```

```
WhenChanged      : 22/10/2007 10:49:23
ExchangeVersion  : 0.1 (8.0.535.0)
```

```
[PS] C:\>
```

Transport rules can only be applied by a Hub transport server, if the Transport Rule Agent is enabled on that Hub Transport server. To check if the Transport Rule Agent is enabled, you can issue the EMS cmdlet *Get-TransportAgent*, as seen below:

```
[PS] C:\>Get-TransportAgent -Id "Transport Rule Agent" | Fl
```

```
Identity          : Transport Rule Agent
Enabled           : True
Priority          : 1
TransportAgentFactory : Microsoft.Exchange.MessagingPolicies.TransportRuleAgent
                  .TransportRuleAgentFactory
AssemblyPath      : E:\Program Files\Microsoft\Exchange Server\TransportRoles\agents\Rule\Microsoft.Exchange.MessagingPolicies.TransportRuleAgent.dll
```

```
[PS] C:\>
```

If it wouldn't be enabled, or if you want to disable it on specific Hub transport servers in your exchange organization, you can use the EMS cmdlets *Disable-TransportAgent* and *Enable-TransportAgent*.

```
[PS] C:\>Disable-TransportAgent -id "Transport Rule Agent"
```

Confirm

Are you sure you want to perform this action?

Disabling Transport agent "Transport Rule Agent". A service restart is required for the change to take effect.

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help  
(default is "Y"):y

WARNING: The following service restart is required for the change(s) to take effect :

MSExchangeTransport

```
[PS] C:\>Enable-TransportAgent -id "Transport Rule Agent"
```

WARNING: The following service restart is required for the change(s) to take effect :

MSExchangeTransport

```
[PS] C:\>
```

## Journaling

In Exchange 2007, you can enable journaling for a user or a subset of users, in addition to enabling journaling for a mailbox store. This type of journaling is also referred to as Premium journaling.

The following EMS cmdlets are available to manage per-user and per-group journaling:

- New-JournalRule
- Get-JournalRule
- Set-JournalRule
- Remove-JournalRule
- Disable-JournalRule

- Enable-JournalRule

To use Premium Journaling, you must have an Exchange Enterprise Client Access License!

## New-JournalRule

Table 14 lists all parameters that can be used to create a new transport rule.

*Table 14: New-JournalRule -Parameters*

Parameter	Required	Description
-Name	YES	Used to define a unique name for the journal rule
-JournalEmailAddress	YES	Used to define the journal mailbox that will receive the journal report
-Recipient	NO	Used to specify the SMTP address of a mailbox, contact, or distribution group to journal.
-Scope	NO	Used to specify the e-mail messages to which the journal rule is applied. Possible values are:  Global: all e-mail messages that pass through the Hub Transport server are journalled. Is the default value.  Internal: only e-mail messages that are sent and received by recipients in the Exchange Server 2007 organization will be journalled.  External: only e-mail messages that are sent to recipients or from senders outside the Exchange Server 2007 organization will be journalled.
-Enabled	NO	By default set to \$True, this parameter can be used to create a disabled journal rule.
-DomainController	NO	Used to specify against which domain controller the configuration change should be written
-Whatif	NO	When added, you will be given an overview what would happen if you actually executed the cmdlet as entered.
-Confirm	NO	When added, you will be required to confirm your action.
-TemplateInstance	NO	Used to define a template-mail journal rule to be used when creating the journal rule

To make sure that all messages sent and received by users that belong to the Universal Security group *U\_Marketing* are journalled to a mailbox called *Journaling Marketing*, you could use the following EMS line:

```
[PS] C:\>New-JournalRule -Name "Journal Rule for the Marketing Department" -JournalEmailAddress journaling.marketing@proexchange.local -Scope "Global" -Enabled:$True -Recipient U_Marketing@proexchange.local
```

```
Name           Recipient           JournalEmailAddress  Scope  Enabled
----           -
Journal R...  U_Marketing@proexchan... journaling.marketing@... Global  True
```

[PS] C:\>

### Get-JournalRule

To review the settings of a journal rule, you can use the EMS cmdlet *Get-JournalRule*.

[PS] C:\>Get-JournalRule "Journal Rule for the Marketing Department" | Fl

```
Recipient           : U_Marketing@proexchange.local
JournalEmailAddress : Journaling Marketing
Scope               : Global
Enabled             : True
Identity            : Journal Rule for the Marketing Department
Guid                : e0388802-a7e6-4ef0-bf62-7c914b39b598
Name                : Journal Rule for the Marketing Department
IsValid             : True
WhenChanged         : 22/10/2007 17:02:11
ExchangeVersion     : 0.1 (8.0.535.0)
```

[PS] C:\>

### Set-JournalRule

To change settings of a journal rule, you can use the EMS cmdlet *Set-JournalRule*.

You can change any of the following settings:

- JournalEmailAddress
- Name
- Recipient
- Scope

### Remove-JournalRule

To remove a journal rule, you can use the EMS cmdlet *Remove-JournalRule*. If you do not include the parameter *-Confirm* and set it to *False*, you will need to acknowledge that you want to remove the configured journal rule.

### Disable-JournalRule/Enable-JournalRule

You can choose to disable a journal rule, by using the EMS cmdlet *Disable-JournalRule*, and enable it again when required by running *Enable-JournalRule*.

