Exchange 2010/2013/2017 restore guide with TSM (Spectrum Protect)

team.blue

Contents

Restore

Restore into a recovery database

In most cases, a restore of a mail or a mailbox is done with the use of a recovery database. This will assure that the restored data is restored outside of the production environment, and does affect the running exchange server.

Prerequisites:

Enough space on a local drive, to hold the restored mailbox database. This should be the size of the existing .edb file + additional space to the restored logfiles. The restore will fail, of the Exchange server is unable to allocate the needed diskspace.

Knowledge of which mailbox database the users is/was located in.

Create a recovery database

The Recovery database must be created with the “Exchange Management Shell”:

New-mailboxdatabase –Name 'RDB1' –Server Exch2013 –EdbFilePath 'E:\restore\rdb1.edb' –LogFolderPath 'E:\restore' –Recovery

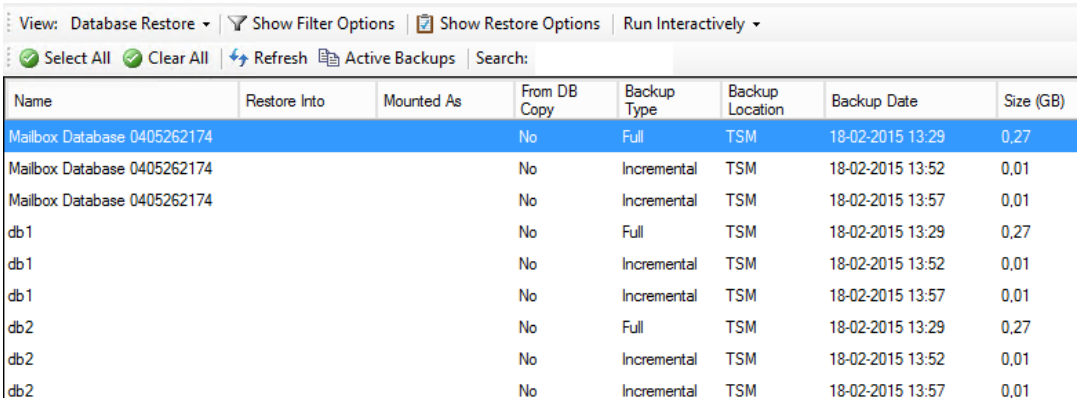
The line above will create a recovery database with the name of “RDB1” on the exchange called “Exch2013”. It will use the drive and folder called “E:\restore” and an edbfile name called “rdb1.edb”

The names and paths should be changed to match the current environment.

Select the data for restore

Start “DP for Exchange Management Console” and go to the “recover” tab:

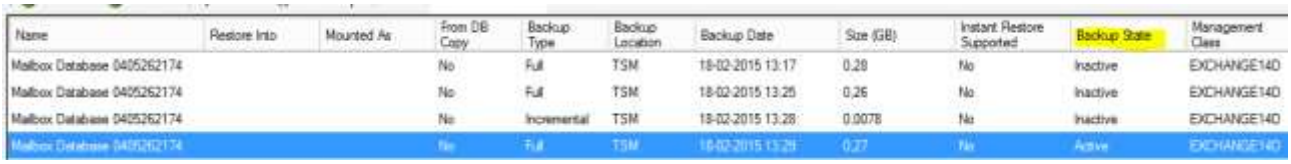
The default view will list all database’s active backup:



Name	Restore Into	Mounted As	From DB Copy	Backup Type	Backup Location	Backup Date	Size (GB)
Mailbox Database 0405262174			No	Full	TSM	18-02-2015 13:29	0,27
Mailbox Database 0405262174			No	Incremental	TSM	18-02-2015 13:52	0,01
Mailbox Database 0405262174			No	Incremental	TSM	18-02-2015 13:57	0,01
db1			No	Full	TSM	18-02-2015 13:29	0,27
db1			No	Incremental	TSM	18-02-2015 13:52	0,01
db1			No	Incremental	TSM	18-02-2015 13:57	0,01
db2			No	Full	TSM	18-02-2015 13:29	0,27
db2			No	Incremental	TSM	18-02-2015 13:52	0,01
db2			No	Incremental	TSM	18-02-2015 13:57	0,01

This will be the latest full, followed by one or more incremental backup. If an older copy is needed, select the “Active Backups” button. This will list all backups of all databases:

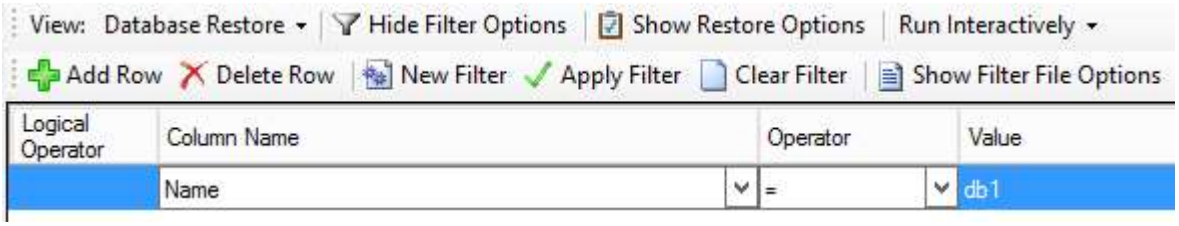
Notice the “backup state” section, some will be listed as inactive, as they are an older version of the one called “active”.



Name	Restore Into	Mounted As	From DB Copy	Backup Type	Backup Location	Backup Date	Size (GB)	Instant Restore Supported	Backup State	Management Class
Mailbox Database 0405262174			No	Full	TSM	18-02-2015 13:17	0.28	No	Inactive	EXCHANGE14D
Mailbox Database 0405262174			No	Full	TSM	18-02-2015 13:25	0.26	No	Inactive	EXCHANGE14D
Mailbox Database 0405262174			No	Incremental	TSM	18-02-2015 13:28	0.0078	No	Inactive	EXCHANGE14D
Mailbox Database 0405262174			No	Full	TSM	18-02-2015 13:29	0.27	No	Active	EXCHANGE14D

The general rule is, that when a new full backup is being performed, the existing full (plus incremental) will be marked as “inactive”. When an object is marked as “inactive” the “management class” will apply, and determine when it will be deleted. As shown above, the default management class is called “exchange14d” that will keep inactive backups for 14 days.

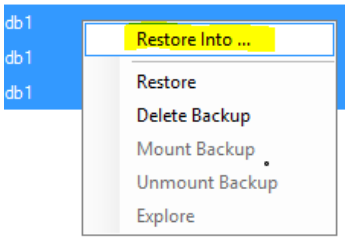
If needed a filter can be applied to the view, to limit the amount of data being displayed. Select “show filter options” and fill out the filter as required:



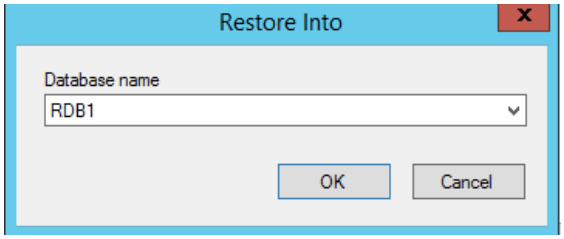
There are several ways of using it, depending on the need. Click “apply filter” in order to apply it.

Start the restore

When data the data has been found and marked, it is very important, that the recovery database is selected as target for the restore. Right on the objects and choose “restore into”:



Choose the previously created recovery database in the box:

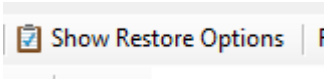


And click “ok”

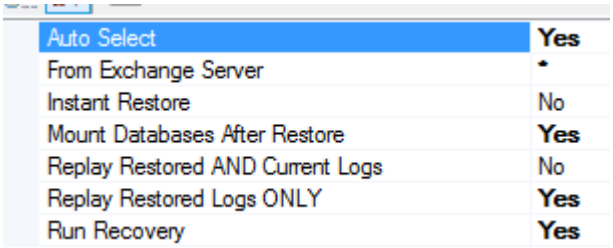
Make sure all of the selected objects is target for the same recovery database:

Name	Restore Into	Mounted As	From DB Copy	Backup Type
db1			No	Full
db1			No	Full
db1			No	Incremental
db1	RDB1		No	Full
db1	RDB1		No	Incremental
db1	RDB1		No	Incremental

Now click the “show restore options” button:

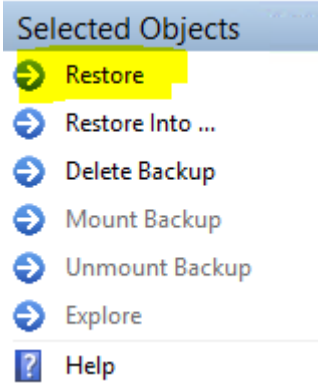


In the case a recovery database, as this one, is being used, make sure the settings are as so:



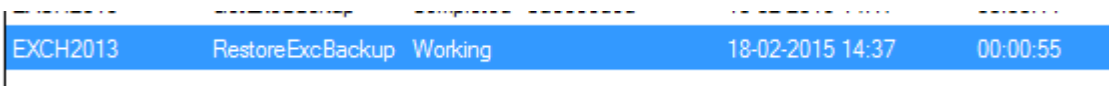
This will make sure, that only the restored logs is applied, and are being used to bring the database ahead in time. When it is done, the database will automatically be mounted.

Now select “restore”:

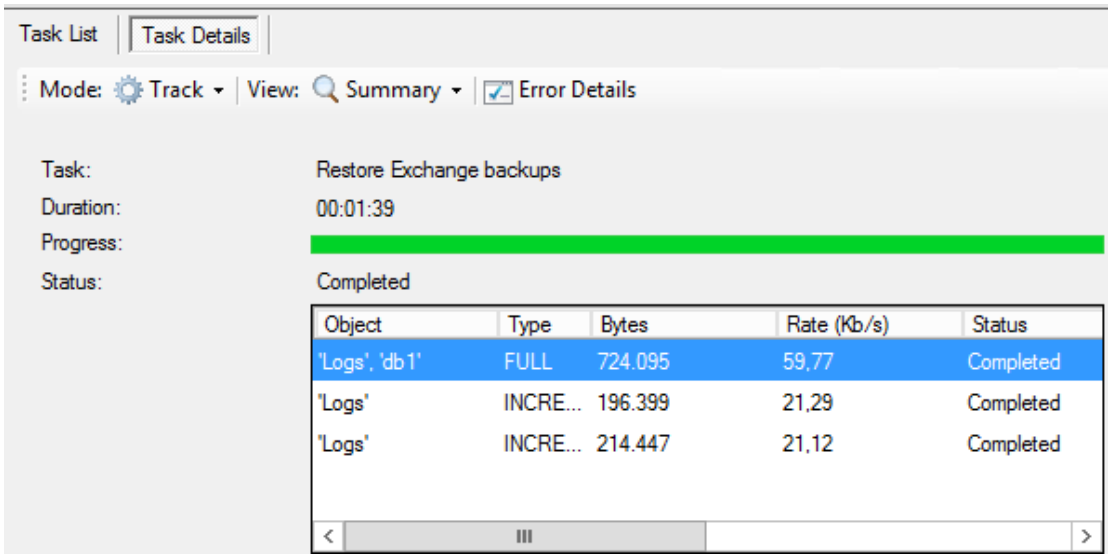


A warning will be displayed, accept this one, as no local vss backups is being used.

The restore will start, and is listed in the task view:



When it's done, it can be found in the "task details" view:



The database is now restored and mounted on the exchange server.

Extract data from a recovery database

When a mailbox database has been restored into a recovery database, it will contain a copy of the original mailbox database.

In order to merge or extract data from the recovery database into the current mailbox database, the Exchange Management Console must be used.

To view all the mailboxes in the restored recovery database, use:

Get-MailboxStatistics -Database RDB1

In our case this will display:

```
[PS] C:\Windows\system32>Get-MailboxStatistics -Database RDB1

DisplayName                ItemCount    StorageLimitStatus
-----------                ---------    ------------------
SystemMailbox{e0a9c644...  1
Personal Archive - Hea...  0
HealthMailbox4fd10d2b8...  29
Personal Archive - Hea...  0
HealthMailboxe0a9c644d...  1
jens jensen.               6
```

To search for a specific display name, use:

Get-MailboxStatistics -Database RDB1 | ?{$_.DisplayName -like 'jens'}*

And only the "jens jensen" will be listed. This can be helpful of the mailbox database contains many users.

More information can be found at: https://technet.microsoft.com/en-us/library/bb124612

We will now restore the entire mailbox from the user:

New-MailboxRestoreRequest -SourceDatabase RDB1 -SourceStoreMailbox 'jens Jensen.' -TargetMailbox db1test

```
[PS] C:\Windows\system32>New-MailboxRestoreRequest -SourceDatabase RDB1 -SourceStoreMailbox 'jens jensen.' -TargetMailbo
x dbitest

Name                                               TargetMailbox                                      Status
----                                               -------------                                      ------
MailboxRestore                                     half.local/Users/jens jensen.                      Queued

[PS] C:\Windows\system32>_
```

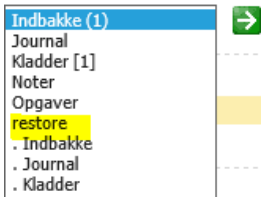
To verify the process, run:

Get-MailboxRestoreRequest | Get-MailboxRestoreRequestStatistics

```
[PS] C:\Windows\system32>Get-MailboxRestoreRequest | Get-MailboxRestoreRequestStatistics

Name                                               StatusDetail                                       TargetAlias                                        PercentComplete
----                                               ------------                                       -----------                                        ---------------
MailboxRestore                                     Completed                                          dbitest                                            100

[PS] C:\Windows\system32>
```

If the inbox should be restore to another user, but into a subfolder, it can be done like so:

New-MailboxRestoreRequest -SourceDatabase RDB1 -SourceStoreMailbox 'jens jensen.' -TargetMailbox db2test -TargetRootFolder Restore –AllowLegacyDNMismatch



More information can be found at

https://technet.microsoft.com/en-us/library/ff829875%28v=exchg.150%29.aspx

It is also possible to restore a single folder, including well-know folders like:

- Inbox
- SentItems
- DeletedItems
- Calendar
- Contacts
- Drafts
- Journal
- Tasks
- Notes
- JunkEmail
- CommunicationHistory
- Voicemail
- Fax
- Conflicts
- SyncIssues
- LocalFailures
- ServerFailures

If they are restored with “#Inbox#” , localization will not apply meaning “inbox” will be equal to “indbakke”

It could be made like so:

New-MailboxRestoreRequest -SourceDatabase RDB1 -SourceStoreMailbox test -TargetMailbox administrator -IncludeFolders '#Inbox#'

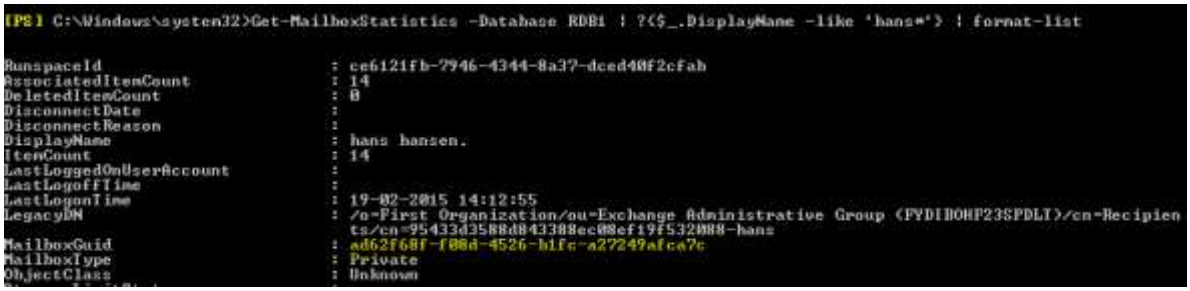
If needed, there is also an "*ExcludeFolders*" that works in the same way.

Please notice the difference between the "DisplayName" and "Mailbox" when using the "New-MailboxRestoreRequest".

If it's not done in the correct way, it may report that the mailbox is missing. A more detailed search can be made like so:

Get-MailboxStatistics -Database RDB1 | ?{$_.DisplayName -like 'hans*'} | Format-List

It will output information like so:

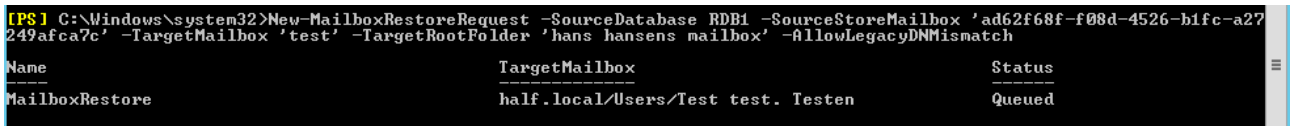


The MailboxGuid can be usefull as this is accepted in the *SourceStoreMailbox parameter:*

The *SourceStoreMailbox* parameter specifies the identity of the mailbox from which you want to restore content. This parameter accepts the following values:

- MailboxGUID
- LegacyExchangeDN
- DisplayName

This means it can be done like so:



The *TargetMailbox* is different:

The *TargetMailbox* parameter specifies the identity of the mailbox or mail user to which you want to restore content. The target mailbox or mail user needs to exist before you can run this command successfully. This parameter accepts the following values:

- GUID
- Alias
- LegacyExchangeDN
- *Domain\Account Name*
- SMTP address

Normally the Alias is used, as this would the logon name.

A reverse search can be made with “get-mailbox” like:

Get-mailbox –anr db2test

```
[PS] C:\Windows\system32>Get-Mailbox -anr db2test

Name                      Alias                ServerName       ProhibitSendQuota
----                      -----                ----------       -----------------
hans hansen.              db2test              exch2013         Unlimited
```

The “-anr” is used to search across multiple attributes:

The *Anr* parameter specifies a string on which to perform an ambiguous name resolution (ANR) search. You can specify a partial string and search for objects with an attribute that matches that string. The default attributes searched are:

- **CommonName (CN)**
- **DisplayName**
- **FirstName**
- **LastName**
- **Alias**

When the restore is complete, the recovery database can be removed:

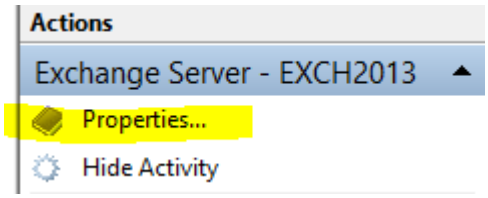
```
Remove-MailboxDatabase -Identity RDB1
```

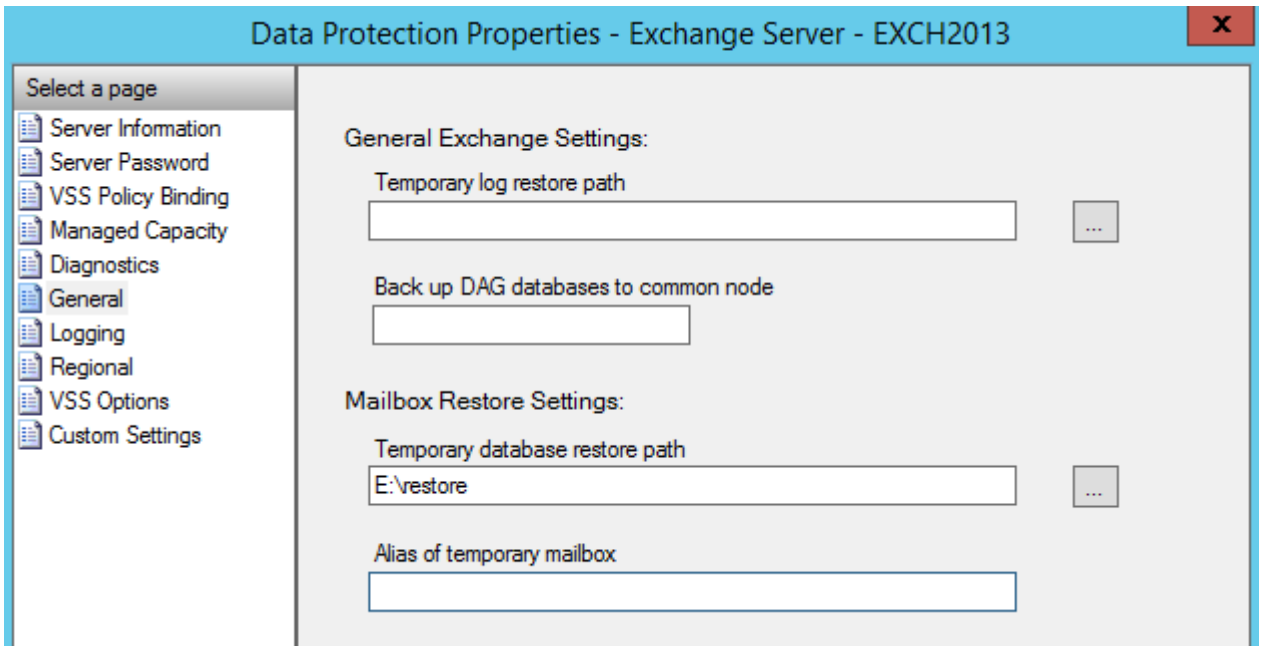
```
[PS] C:\Windows\system32>Remove-MailboxDatabase -Identity RDB1

Confirm
Are you sure you want to perform this action?
Removing mailbox database "RDB1".
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [?] Help (default is "Y"): y
WARNING: The specified database has been removed. You must remove the database file located in E:\restore\rdb1.edb from
 your computer manually if it exists. Specified database: RDB1
[PS] C:\Windows\system32>
```

Mailbox database browser:

Prerequisite

Set the temporary database restore path:

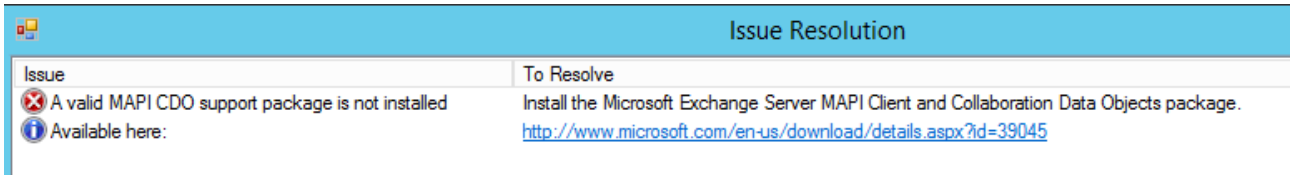




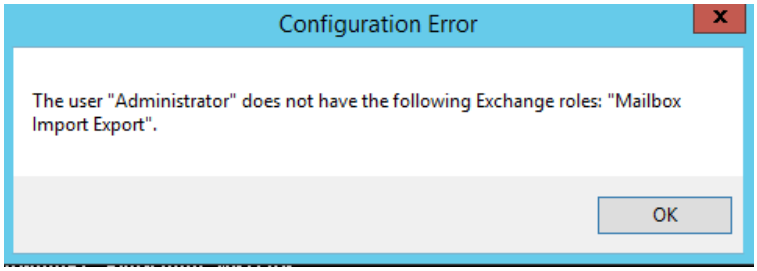
It is very important that the location can hold the size of any existing databases, as the entire database will be restored into this location. There should be some overhead available to the restored logs also.

Alias of temporary mailbox Specifies the alias of a mailbox to use as a temporary storage location during mailbox restore operations. The temporary mailbox is used during restore operations of mailboxes that were deleted, re-created, or moved since the time of the backup**. By default, the mailbox restore operation uses the administrator user's mailbox as a temporary storage location.**

Make sure CDO packages is installed:



The user running the restore needs the Exchange roles: “Mail Import Export”



It can be added like so: Create a role group:

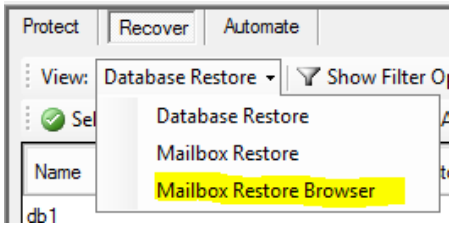
New-RoleGroup "Mailbox Import-Export Management" -Roles "Mailbox Import Export"

Add the user:

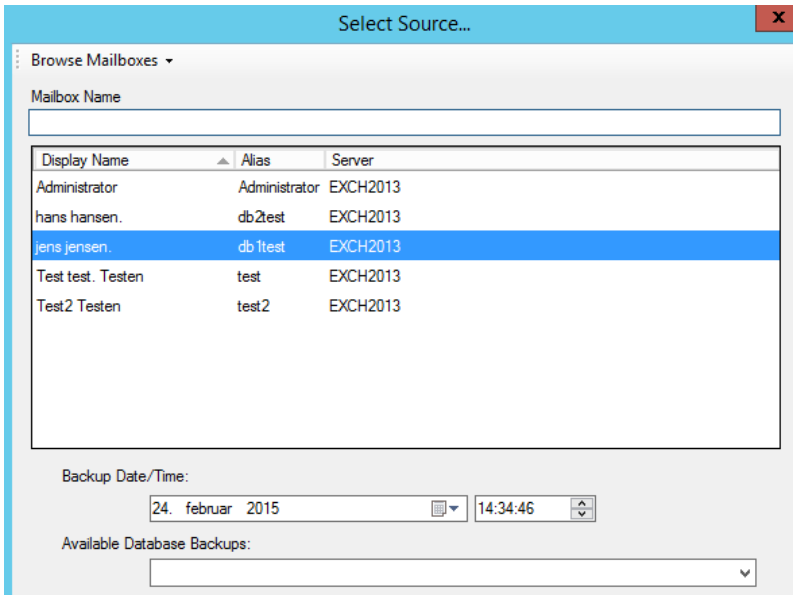
Add-RoleGroupMember "Mailbox Import-Export Management" -Member <user account>

```
[PS] C:\Windows\system32>New-RoleGroup "Mailbox Import-Export Management" -Roles "mailbox Import Export"

Name                           AssignedRoles               RoleAssignments             ManagedBy
----                           -------------               ---------------             ---------
Mailbox Import-Export Mana...  {Mailbox Import Export}      {Mailbox Import Export-Mai... {half.local/Microsoft Exch...

[PS] C:\Windows\system32>Add-RoleGroupMember "Mailbox Import-Export Management" -Member half\administrator
[PS] C:\Windows\system32>
```

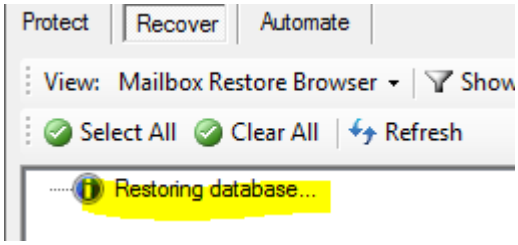
Start the restore:



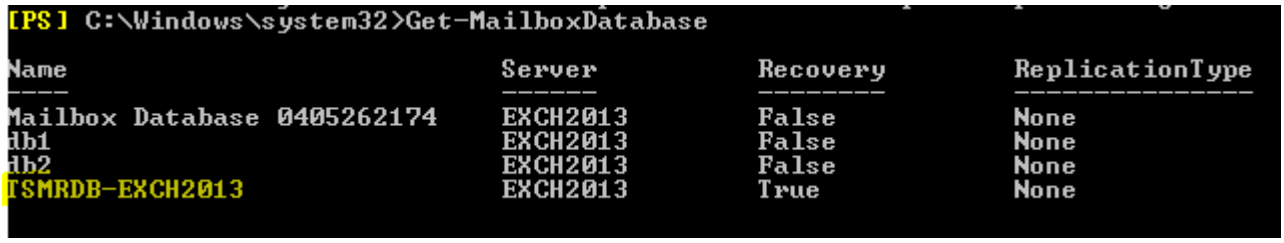
Specify the user and the data wanted for restore:



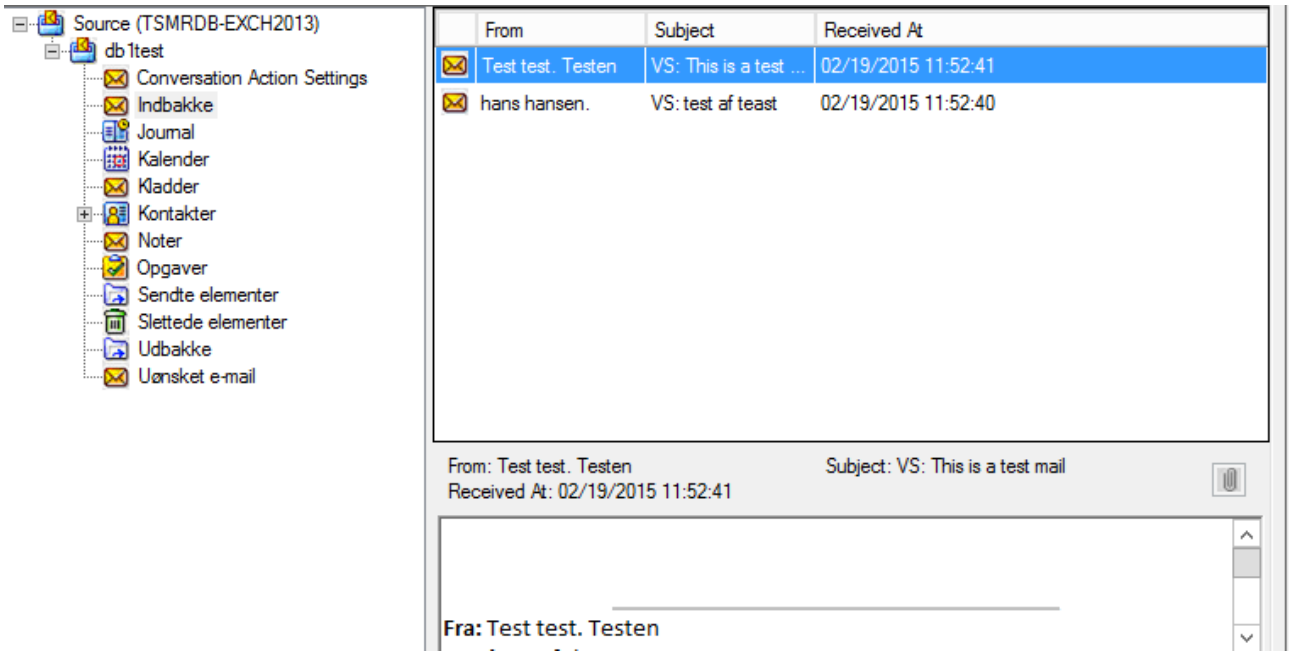
The DP client will now restore the mailboxdatabase from the tsm server, this make take several hours depending on the size and the connection available:



The client will make a recovery mailboxdatabase that is used for the restore:

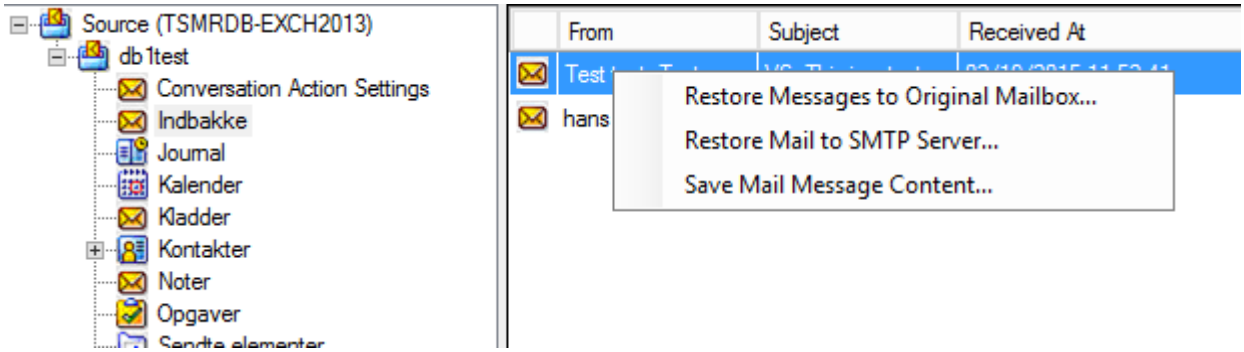


When the restore is complete, the mailbox selected previously will be opened:



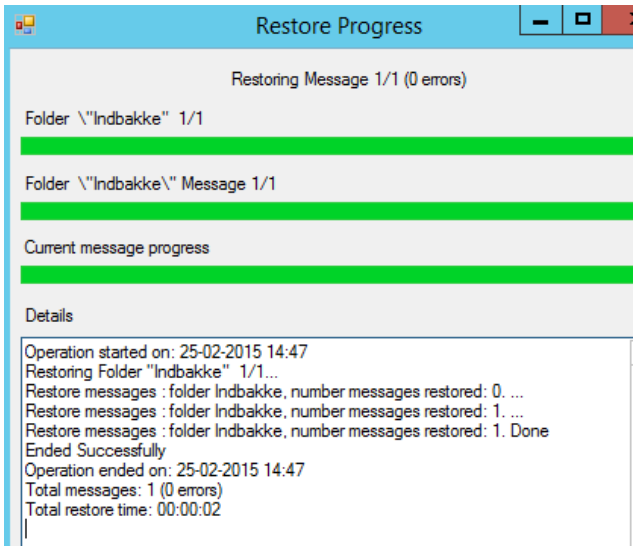
Folders and mails, including attachments can be browsed.

When the item has been located, it can be restored in few different ways:

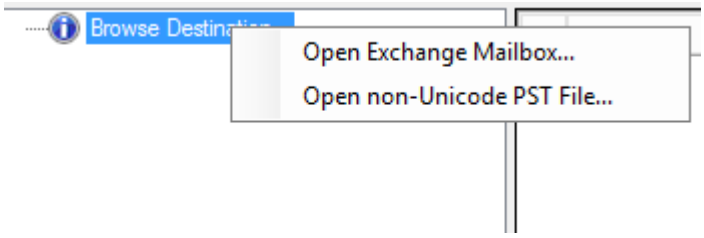


The “save mail message content” will just save the mail to a local destination.

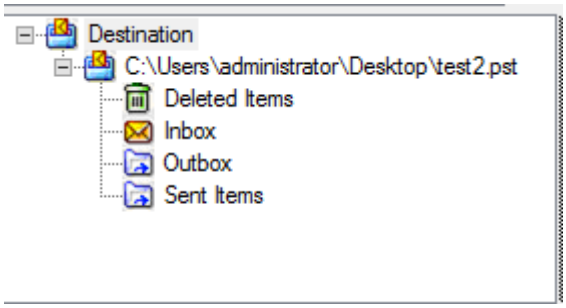
The “restore to Original Mailbox” will use MAPI to restore it directly into the exchange database:



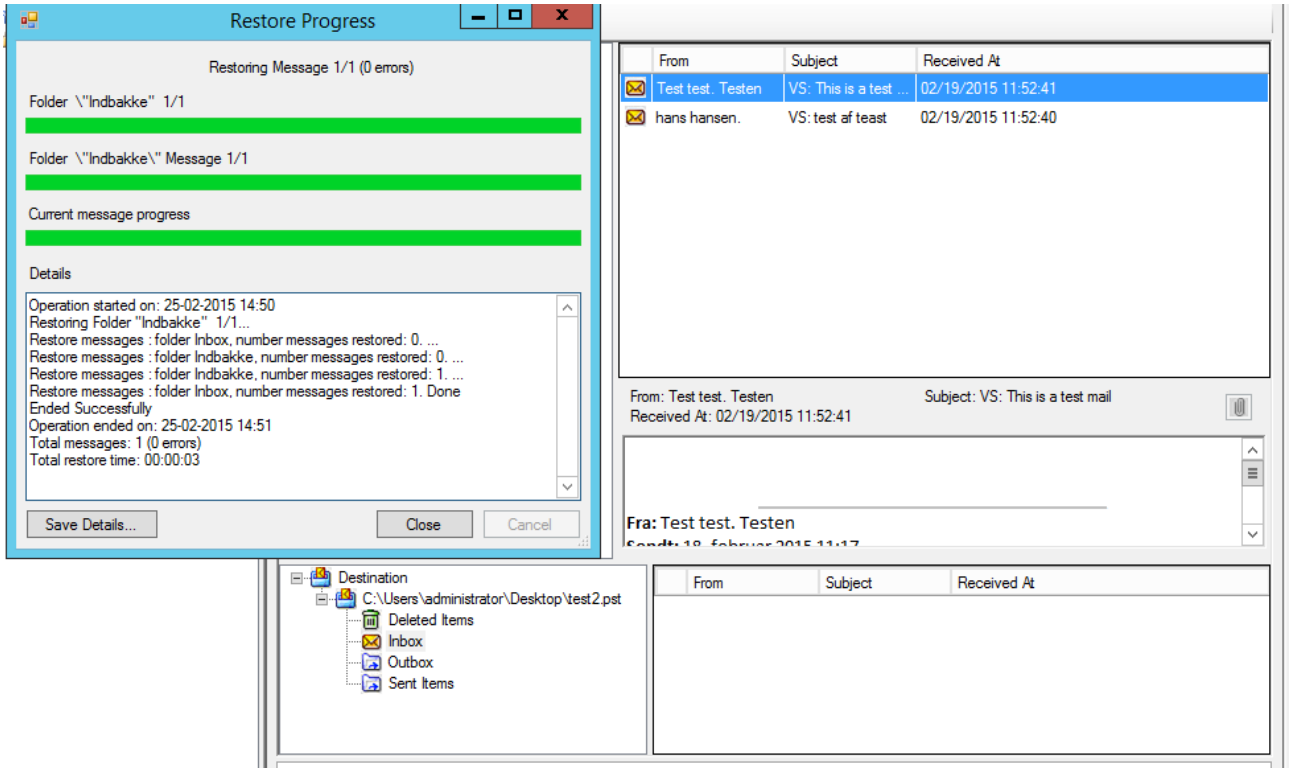
It’s also possible to restore it into a local PST file:



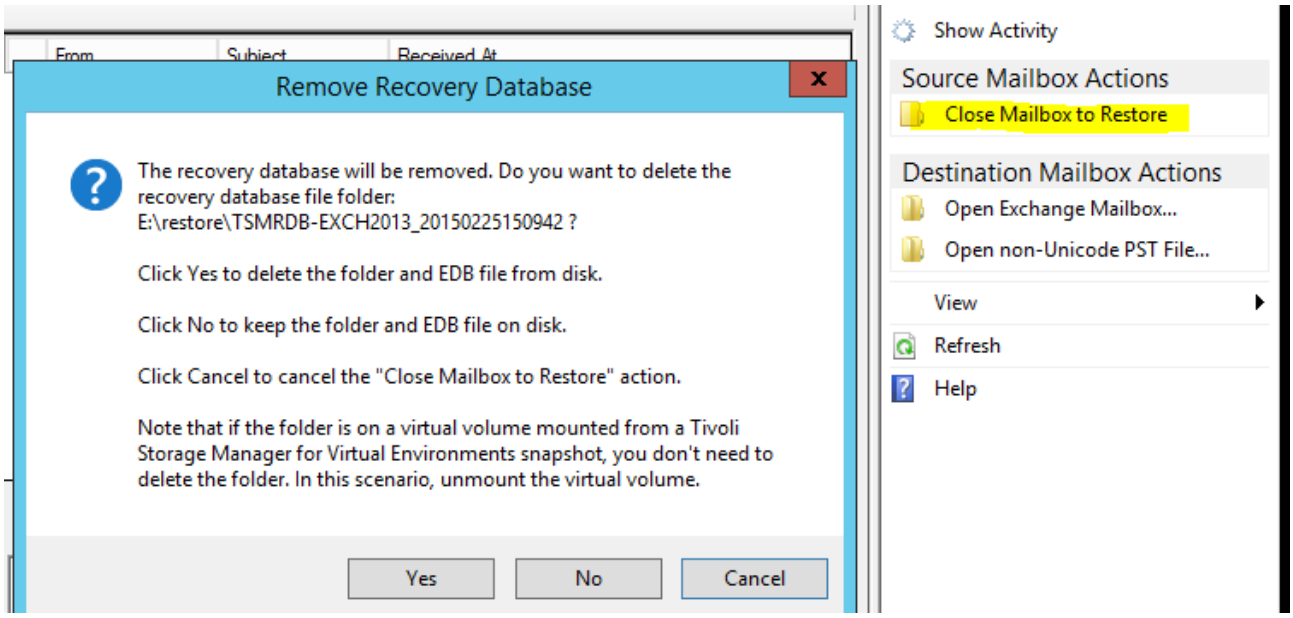
Select “open non-unicode PST file” and select where to save it. This will create a PST file:



Then items can be dragged into the folder in the section below:



When the restore is done, the recovery database can med closed:



But the recovery database can be kept for further restores or be deleted.