

How to use Data Protector 6.0 or 6.10 with Exchange Recovery Storage Groups to restore a single mailbox



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### Introduction

Being able to backup and restore Exchange individual mailboxes is a high priority in many environments. Data Protector provides this functionality in the "Single Mailbox Backup/Restore" feature.

The Single Mailbox Backup/Restore feature uses the Microsoft MAPI protocol, which has limitations regarding performance. For best performance, you need either to select a relatively small number of mailboxes to be backed up, or use the feature in smaller Exchange environments.

For many customers, the ability to be able to recover every mailbox individually is a high priority. Performance limitations of Single Mailbox Backup/Restore in large environments present significant challenges to backup administrators.

However, beginning with Exchange 2003, Microsoft introduced the "Recovery Storage Group" feature. This enables you to recover individual mailboxes without sacrificing backup performance speeds. This paper describes how to use this feature.

This document has been written to encompass Data Protector 6.0, 6.10 and Exchange 2003, 2007.

# Exchange 2003

### Creating a Recovery Storage Group

To create a Recovery Storage Group:

- 1. Start Exchange System Manager.
- 2. Expand Administrative Groups (if appropriate), expand AdministrativeGroupName (if appropriate), and then expand Servers.
- 3. Right-click ServerName, point to New, and then click Recovery Storage Group.
- 4. In the **Name** box, type a name for the Recovery Storage Group.

Try to use the same name that you used for the original storage group. If you receive an error message similar to the following, use a different name for the Recovery Storage Group:

The object StorageGroupName already exists. Enter a unique directory name for this object.

- 5. Fill in the Transaction log location and in the System path location boxes. Make sure that the location you specify for the transaction log files for the Recovery Storage Group is different from the location specified for the transaction log for the original storage group.
- Click OK.
- 7. Right-click the Recovery Storage Group that you created, and click Add Database to Recover.
- 8. In the Select database to recover dialog box, click the mailbox store that you want to add to the Recovery Storage Group, and click **OK**.
- 9. In the Mailbox Store Properties dialog box, review the properties of the mailbox store, and then click OK.

In the example below note that the Mailbox Store is dismounted. Leave it dismounted.



Name
🐼 Mailbox Store (LIFESON)

10. Close Exchange System Manager.

#### Restoring the Information Store using Data Protector

- 1. Start the Data Protector Manager GUI.
- Select the **Restore** context.
- 3. Expand MS Exchange Server.
- 4. Expand the Exchange Server Name you wish to recover to.
- 5. Double-click MS Exchange Server [Microsoft Exchange Server (Microsoft Information Store)].
- 6. Select the Mailbox Store which you specified in step 8 of Creating a Recovery Storage Group (Select database to recover).



7. Select the Options tab and define the directory for temporary log files. Select the check boxes **Last** restore set, Mount databases after recovery, and Last consistent state.

Source Options Devices Media	
Select the Microsoft Exchange S	Server options.
<u>R</u> estore to another client	lifeson, dptestdomain, cup, hp, com
Directory for temporary log files	c:\temp
Last restore set (start recovery)	
Mount databases after recovery	
Last consistent state	

- 8. Click on the Action Menu Bar and select Start Restore.
- 9. Respond to the Restore wizard if appropriate and then click **Finish**.
- 10. Observe the restore progress and address any error messages as appropriate.

[Normal] From: RMA@lifeson.dptestdomain.cup.hp.com "HP:C1537A\_lifeson" Time: 9/12/2009 2:20:22 AM STARTING Media Agent "HP:C1537A\_lifeson"

[Normal] From: OB2BAR\_Mailbox Store@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Time: Starting OB2BAR Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Time: Completed OB2BAR Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Time: Completed OB2BAR Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Starting OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Starting OB2BAR Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Waiting for recovery to complete for Third Storage Group. Normal] From: OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Databases will be mounted if recovery completes successfully.
[Normal] From: OB2BAR Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Databases will be restored to the last consistent state.
[Normal] From: SEM@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Database will be restored to the last consistent state.
[Normal] From: RSM@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Database will be restored to the last consistent state.
[Normal] From: R

- 11. After the Data Protector Restore has completed successfully, start the Exchange System Manager. Close the Data Protector Manager.
- 12. Expand Administrative Groups (if appropriate), expand AdministrativeGroupName (if appropriate), and then expand Servers.
- 13.Expand the appropriate *Server*, expand **Recovery Storage Group**, expand **Mailbox Store**, expand **Mailboxes**.

Observe the existence of user mailboxes.

Initiation         Description         Dist English of type         Dist English of type <thdist english="" of="" th="" type<=""> <thdist english="" of="" th="" type<=""></thdist></thdist>	12
Image: Constraint of the second se	
Image: State	
Bedward W. Luh       DPTESTDOMAIN\administrator       255       52         Jack Black       DPTESTDOMAIN\administrator       36       9         Jerry d. Overman       DPTESTDOMAIN\administrator       39       11         Mike L. Foo       DPTESTDOMAIN\administrator       36       9	
International Content         Internatinternat         International Content <thi< td=""><td></td></thi<>	
Borry d. Overman DPTESTDOMAIN\administrator 39 11 BoMike L. Foo DPTESTDOMAIN\administrator 36 9	
📸 Mike L. Foo DPTESTDOMAIN\administrator 36 9	
💑 SMTP (LIFESO DPTESTDOMAIN\administrator 0 0	
Bystem Attend DPTESTDOMAIN\administrator 0 0	
BystemMailbox DPTESTDOMAIN\administrator 361 401	

14.Close the Exchange System Manager.

### Using EXMERGE to recover a single mailbox

1. You may need to download exmerge.exe from the Microsoft Web site: <u>http://www.microsoft.com/downloads/details.aspx?familyid=429163EC-DCDF-47DC-96DA-1C12D67327D5&displaylang=en</u>.

Be sure that you download the correct version of exmerge for your version of Exchange.

- 2. Execute exmerge.exe to start the Mailbox Merge wizard. Follow the instructions on screen.
- 3. Start Outlook and open the PST file to find the emails you are interested in recovering.

# Exchange 2007

#### Creating a Recovery Storage Group

To create a Recovery Storage Group:

- 1. Start the Exchange Management Console.
- 2. Double-click on the Toolbox.
- 3. Double-click on Database Recovery Management.
- 4. Enter an identifying label for this activity and click **Next**.
- 5. Click Create a recovery storage group.
- 6. Select the Storage Group you want to link with the Recovery Storage Group.
- 7. Click Next.

**Note:** After you have linked the Recovery Storage Group to the Storage Group you intend to restore, the restore will write the data to the Recovery Storage Group instead of overwriting the regular Storage Group.

8. Review the paths in the fields below and click Create the recovery storage group.

🗯 Microsoft Exchange Troubles	hooting Assistant		
Microcoft Evolo	ngo Troublochooting	Accident	Wernet
MICIOSOIL EXCITA	nge noubleshooting	Assistant	windows server system
Welcome	Create the Recovery	Storage Group	
Select a task	0.0010 1.000.00101.)	eterage areap	
Restart current task	Server name: pert Linked storage group: First Storage Group		
Select a result file to view			
View a report	Recovery storage group name:	Recovery Storage Group	
See also	Transaction log file folder		
	Original storage group (Enn.log) log path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group	
Troubleshooting Assistant Help	Recovery storage group (R00.log) log path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group\R	Browse
About the Exchange Troubleshooting	System folder and checkpoint file fold	er	
Assistant	Original storage group (Enn.chk) path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group	
Send feedback and suggestions about this	Recovery storage group (R00.chk) path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group\R	Browse
tool to Microsoft	Database folders and file names		
<ul> <li>Updates and Customer Feedback</li> </ul>	Database name:	Mailbox Database	
	Database path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group\M	
Steps:	Recovery database path:	C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group\R	Browse
Getting Hun Information Select Task Checking if running on Edge Tran	Previous	Create the recovery storage group	

9. Examine the next screen and troubleshoot accordingly if there are errors.

Microsoft Exchange Troubles	hooting Assistant
Microsoft Excha	nge Troubleshooting Assistant
Welcome     Select a task     Restart current task     Select a result file to view	Create the Recovery Storage Group Result Server name: pert Linked storage group name: First Storage Group Recovery storage group name: Recovery Storage Group
View a report	Display Result
See also The Exchange Troubleshooting Assistant Help About the Exchange Troubleshooting Assistant Send feedback and suggestions about this tool to Microsoft Updates and Customer Feedback Steps: Desting buy leformation	Results       Print report       Find       Arrange by:       Severity         Database (Mailbox Database) has been added into the recovery storage group       Successfully created the recovery storage group
Letting Hun Information Select Task Checking if running on Edge Tran Read Registry Information Enter Server and User Informatio Check Connectivity Retrieve Information From Active Task Center Select Original Storage Group Str Generate Temp Data Create RS Step Creating Recovery Storage Group Display RSG Creation Result	You can now move, copy or restore database and transaction log files to the recovery storage group paths. When you are ready to mount databases in the recovery storage group, go to the task center or start this analyzer again. If the domain controller you specified is different from the domain controller that the Exchange server is using, you may need to wait for the change to be replicated.           Image: Show Create Recovery Storage Group Information           Image: Go back to task center
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10.Close the Exchange Management Console.

### Restoring the Information Store using Data Protector

- 1. Start the Data Protector Manager GUI.
- 2. Select the **Restore** context.
- 3. Expand MS Exchange Server.
- 4. Expand the Exchange Server Name you wish to recover to.
- 5. Double-click MS Exchange Server [Microsoft Exchange Server (Microsoft Information Store)].
- 6. Select the Mailbox Store to which you linked the Recovery Storage Group earlier.



7. Select the Options tab and define the directory for temporary log files. Select the check boxes **Last** restore set, Mount databases after recovery, and Last consistent state.

Source Options Devices Media	
Select the Microsoft Exchange Se	erver options.
<u>R</u> estore to another client	lifeson.dptestdomain.cup.hp.com
Directory for temporary log files	c:\temp
<ul> <li>Last restore set (start recovery)</li> <li>Mount databases after recovery</li> <li>Last consistent state</li> </ul>	

- 8. Click on the Action Menu Bar and select **Start Restore**.
- 9. Respond to the Restore wizard if appropriate when necessary and then click Finish.
- 10. Observe the restore progress and address any error messages as appropriate.<sup>i</sup>

[Normal] From: RNA@lifeson.dptestdomain.cup.hp.com "HP:C1537A\_lifeson" Time: 9/12/2009 2:20:22 AM STARTING Media Agent "HP:C1537A\_lifeson"
[Normal] From: OB2BAR Mestore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)/Third Storag Starting OB2BAR Mestore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)/Third Storag [Normal] From: OB2BAR\_Mailbox Store@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)/Third Storag [Normal] From: OB2BAR\_Mailbox Store@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)/Third Storag [Normal] From: OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)/Third Storag [Normal] From: OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Grantlo DB2BAR\_Restore: lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Completed OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Waiting for recovery to complete for Third Storage Group.
[Normal] From: OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Waiting for recovery to complete for Third Storage Group.
[Normal] From: OB2BAR\_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Databases will be nounted if recovery completes successfully.
[Normal] From: CMM@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)" Databases will be

11. After the Data Protector restore has completed successfully, close the Data Protector Manager.

Using the Exchange Management Console to recover a single mailbox

- 1. Start the Exchange Management Console.
- 2. Double-click on **Toolbox**.
- 3. Double-click on Database Recovery Management.
- 4. Enter an identifying label and click **Next**.

Enter Server and U	ser information
Enter an identifying label for this activity:	Merge Mailbox Contents

- 5. Click Merge or copy mailbox contents.
- 6. Click Gather merge information.
- 7. Click Perform pre-merge tasks.
- 8. Select the mailboxes that you would like to recover.

97 Microsoft Exchange Troubles	shooting Assistant	
Microsoft Excha	nge Troubleshooting Assistant	Windows Server System
Welcome     Select a task     Restart current task     Select a result file to view     View a report	Select Mailboxes to Copy or Merge Server name: pert Recovery storage group name: Recovery Storage Group Linked storage group name: First Storage Group Selected database name: Mailbox Database Linked database name: Mailbox Database	
See also	Matched mailboxes	
The Exchange Troubleshooting Assistant Help About the Exchange Troubleshooting Assistant Send feedback and suggestions about this tool to Microsoft Updates and Customer Feedback Steps: Getting Run Information Select Task	Display Name ☑ Jim M. ☑ Paty ☑ [Wiggle Worm	Mailbox GUID           13341e02-e482-4ff;949b-6c1fd8069b1           5f19ef20120e-417c-bb10-d516c2d36dc           (93128d5-9ef4-4819-a/03-9bd726e85303
Checking if running on Edge Tra- Read Registry Information Enter Server and User Information Check Connectivity Retrieve Information From Active Task Center Set database merge option Select Database Select Merge Options Perform pre-merge actions Display Matching Step	Save Select All Unselect All  Previous	Perform merge actions

#### 9. Click **Perform merge actions**.

10.Examine the next screen and troubleshoot accordingly if there are errors.

🗯 Microsoft Exchange Troublesh	ooting Assistant	
Microsoft Exchar	nge Troubleshooting Assistant	Windows Server System
Welcome Select a task Restart current task Select a result file to view View a report See also Toubleshooting Assistant Help About the Exchange Troubleshooting Assistant Help About the Exchange Troubleshooting Assistant Send feedback and suggestions about this tool to Microsoft Updates and Customer Feedback Steps: Checking if running on Edge	Display Mailbox Merge or Copy Result         Server name: pert         Recovery storage group name: Recovery Storage Group         Selected database name in the recovery storage Group         Target database name: Mailbox Database         The merge or copy action has been successfully completed.         Merge Results         Merge Results         (a) Export report         (a) Export report         (b) Export report         (c) Maibox (Jim M.) has been restored         Maibox (Vriggle Worm) has been restored	▲ wp database has been

11.Close the Exchange Management Console.

### Notes

- The user mailboxes in a Recovery Storage Group cannot be connected to user accounts in the Active Directory. The only supported method that can be used to access mailboxes in a Recovery Storage Group is by using the Exchange Server 2003 version of the Exmerge.exe tool or the Exchange troubleshooting assistant in the Exchange 2007 Server.
- In Exchange 2007, Recovery Storage Groups can no longer be managed using the Exchange Management Console (formerly known as the Exchange System Manager). Instead, use the Exchange Troubleshooting Assistant (ExTRA) or the Exchange Management Shell (EMS).
- The databases in a Recovery Storage Group must be manually mounted. The databases cannot be configured to be automatically mounted.
- Only mailbox stores can be restored to a Recovery Storage Group. A public folder store cannot be restored to a Recovery Storage Group as that operation is not supported.
- The exmerge.exe tool can move or copy mailbox data between servers regardless of the version of Exchange Server that is running on the computers.
- When the exmerge.exe tool is used with a Recovery Storage Group, the original mailbox must still be present in the original database and must still be connected to an Active Directory user account.

"[151:214] Recovery SG 'Recovery Storage Group' is configured on the Microsoft Exchange Server"

To resolve this issue, install the Site Specific Patch - SSPNT610\_004.

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<sup>&</sup>lt;sup>i</sup> While performing a restore operation on Data Protector 6.1 on Exchange 2007 you may get the following error: