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

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.

6. 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.
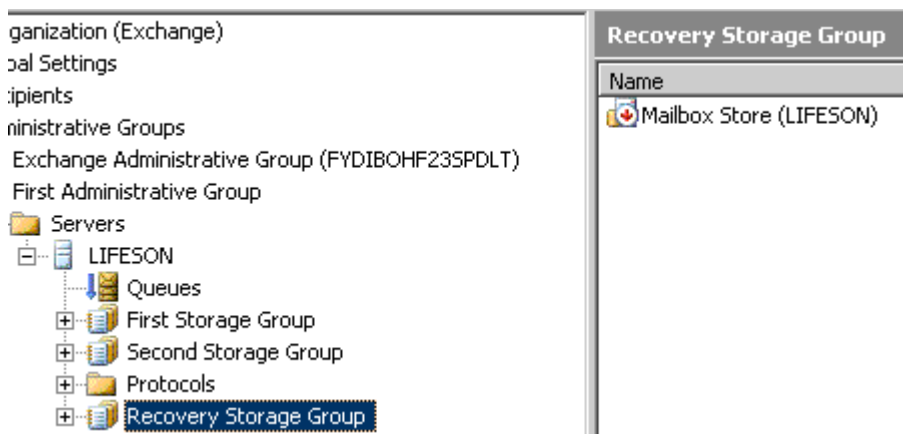

10. Close Exchange System Manager.

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 which you specified in step 8 of Creating a Recovery Storage Group (**Select database to recover).**
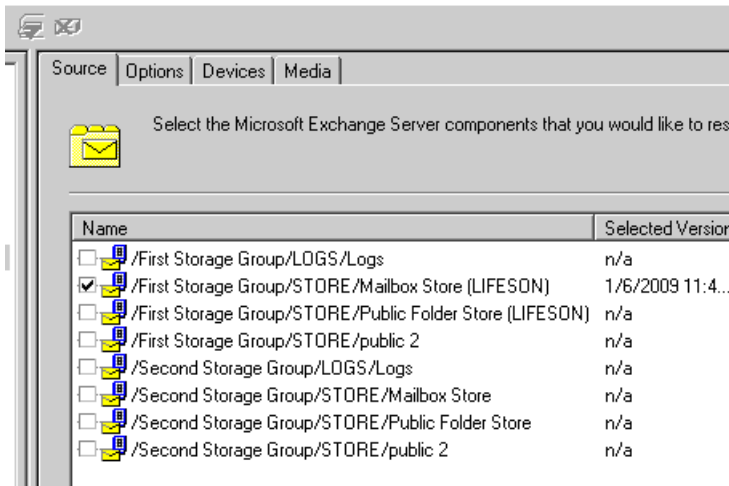
7. Select the Options tab and define the directory for temporary log files. Select the check boxes **Last restore set, Mount databases after recovery, and Last consistent state**.
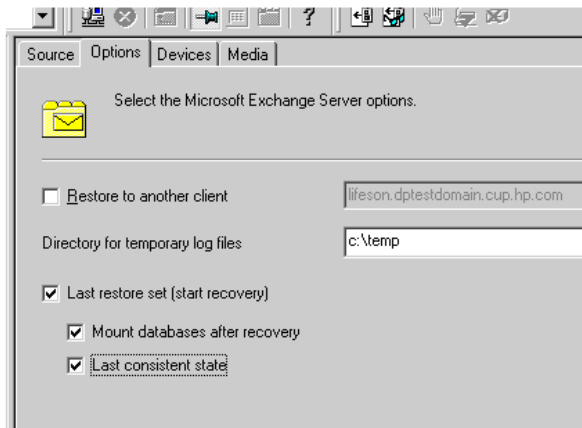
8. Click on the Action Menu Bar and select **Start Restore**.

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)/Third Storag

[Normal] From: OB2BAR_Mailbox Store@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)/Third Stora

[Normal] From: 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)/Third Storag

[Normal] From: OB2BAR_Third Storage Group@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)/Third Stora

[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 mounted if recovery completes successfully.

[Normal] From: OB2BAR_Third Storage Group@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 ""  Time: 9/12/2009 2:22:24 AM
        OB2BAR application on "lifeson.dptestdomain.cup.hp.com" disconnected.

[Normal] From: RMA@lifeson.dptestdomain.cup.hp.com "HP:C1537A_lifeson"  Time: 9/12/2009 2:22:46 AM
        COMPLETED Media Agent "HP:C1537A_lifeson"


==============================================================================
                   Session completed successfully!
==============================================================================
```
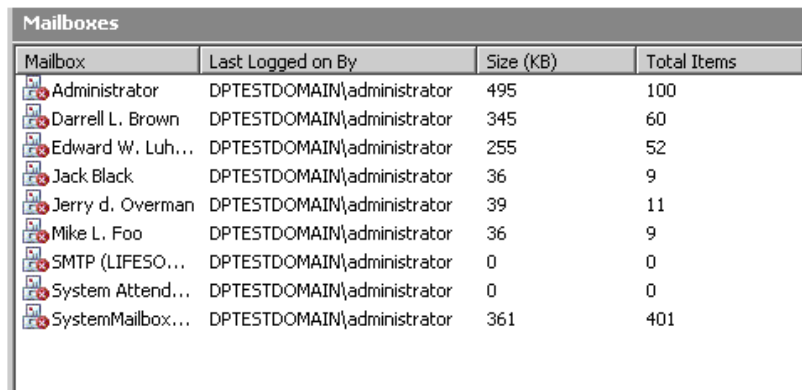
11. After the Data Protector Restore has completed successfully, start the Exchange System Manager. Close the Data Protector Manager.

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.

Mailboxes			
Mailbox	Last Logged on By	Size (KB)	Total Items
Administrator	DPTESTDOMAIN\administrator	495	100
Darrell L. Brown	DPTESTDOMAIN\administrator	345	60
Edward 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
SMTP (LIFESO...	DPTESTDOMAIN\administrator	0	0
System Attend...	DPTESTDOMAIN\administrator	0	0
SystemMailbox...	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:
   http://www.microsoft.com/downloads/details.aspx?familyid=429163EC-DCDF-47DC-96DA-1C12D67327D5&displaylang=en.

   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**.

9. Examine the next screen and troubleshoot accordingly if there are errors.
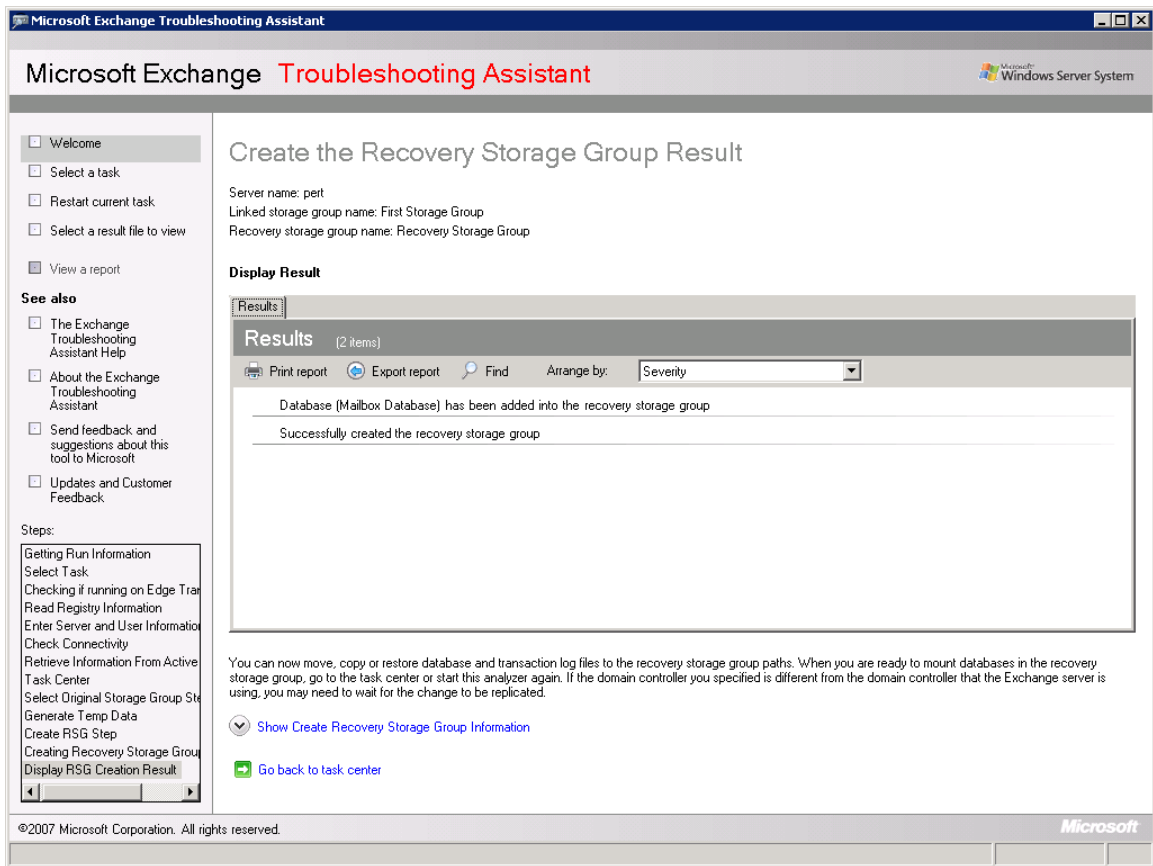
10. Close the Exchange Management Console.

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.
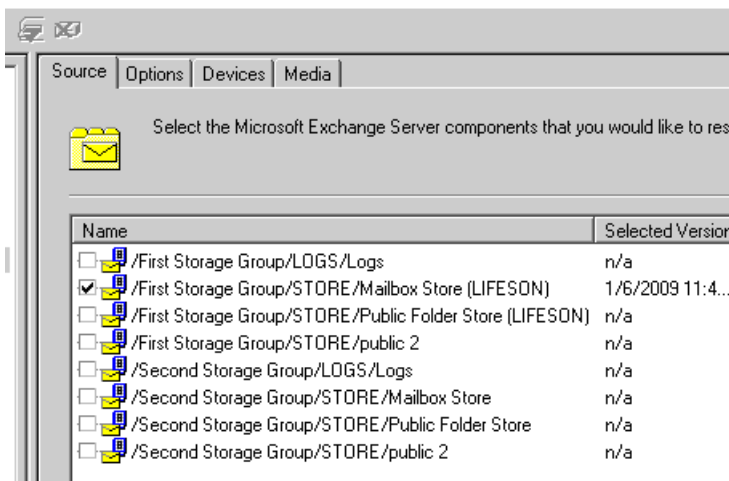
7. Select the Options tab and define the directory for temporary log files. Select the check boxes **Last restore set, Mount databases after recovery, and Last consistent state**.
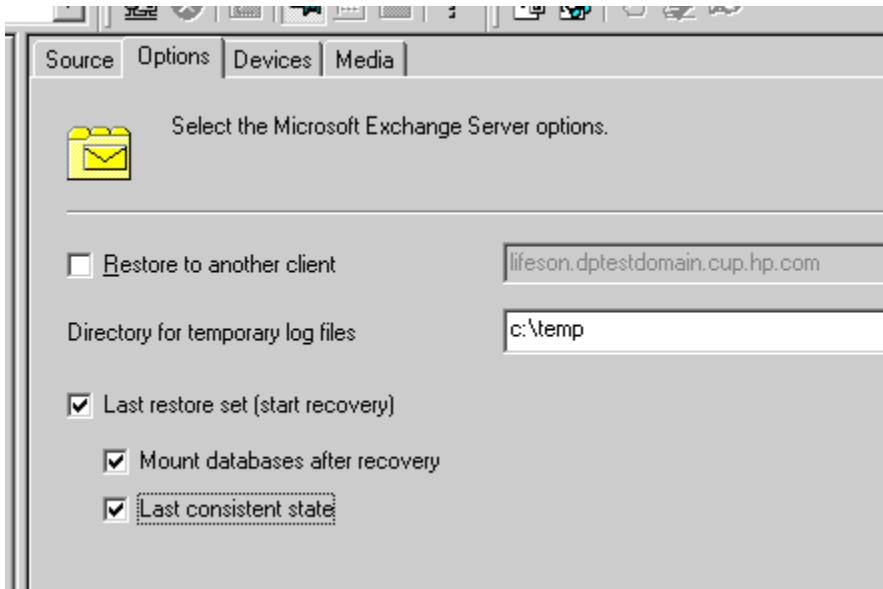
8. Click on the Action Menu Bar and select **Start Restore**.

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.[i]

```
[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)/Third Storag

[Normal] From: OB2BAR_Mailbox Store@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)/Third Stora

[Normal] From: 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)/Third Storag

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[Normal] From: OB2BAR_Third Storage Group@lifeson.dptestdomain.cup.hp.com "Microsoft Exchange Server (Microsoft Information Store)"
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        OB2BAR application on "lifeson.dptestdomain.cup.hp.com" disconnected.

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        COMPLETED Media Agent "HP:C1537A_lifeson"


===============================================================================
                     Session completed successfully!
===============================================================================
```

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**.

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.

9. Click **Perform merge actions**.

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

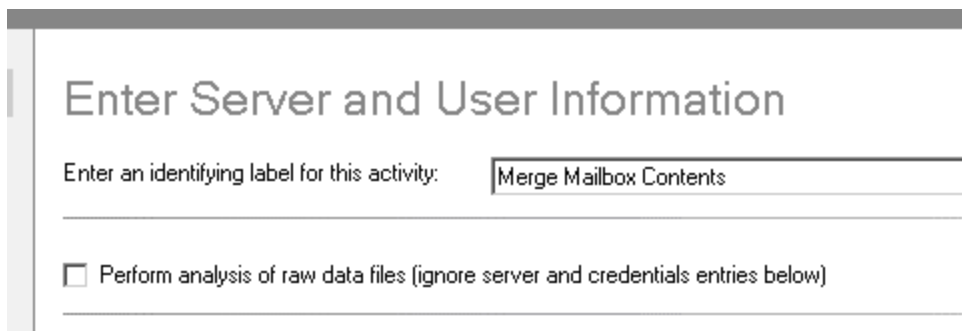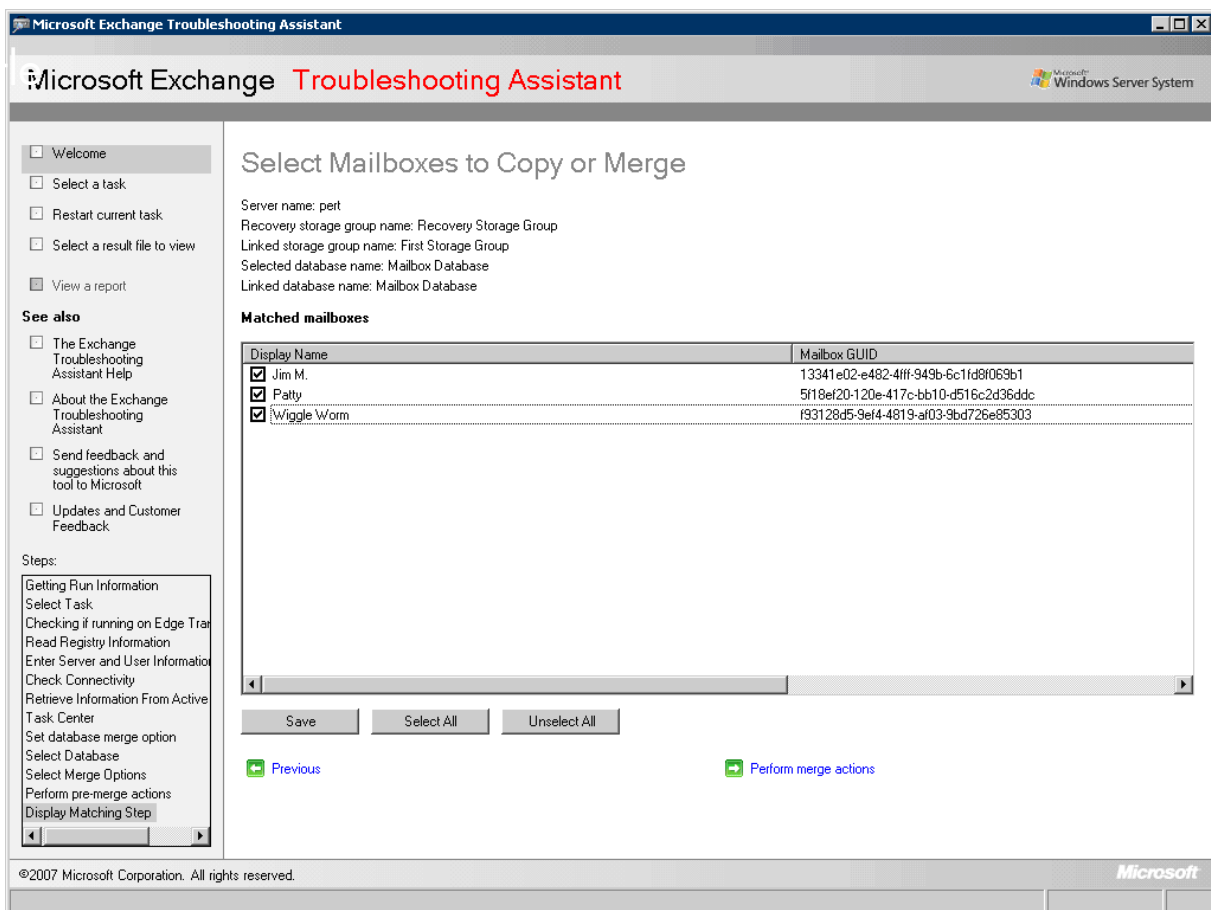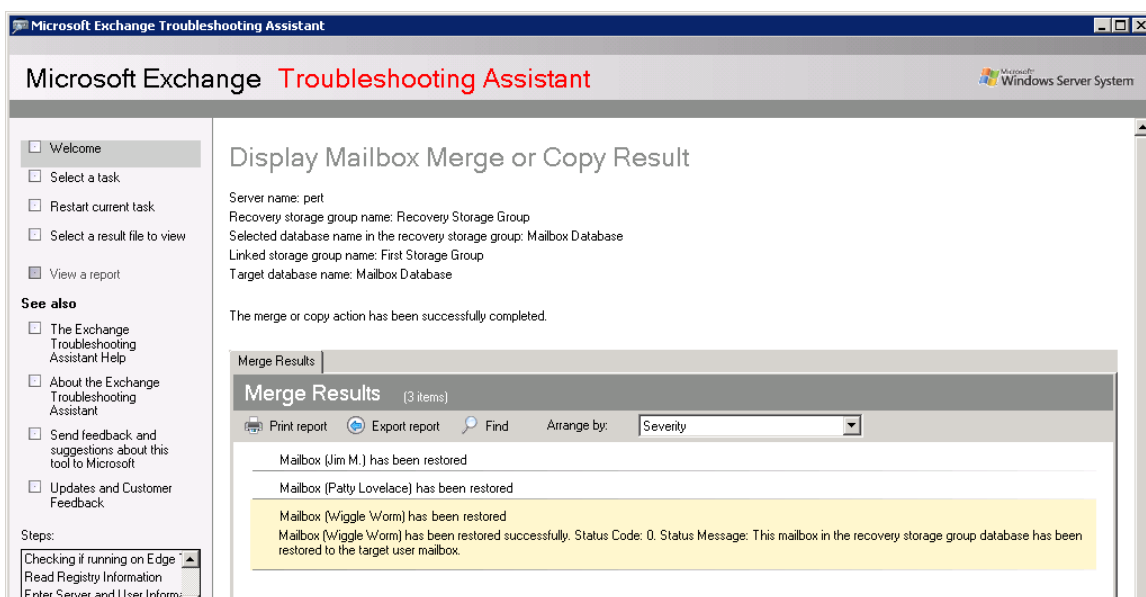11. Close the Exchange Management Console.

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.

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[i] While performing a restore operation on Data Protector 6.1 on Exchange 2007 you may get the following error:

"[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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