

Restoring a MS Exchange 2010 Mailbox

This article describes how to restore a MS Exchange previously backed up by R1Soft CDP.

Tip

Exchange 2010 no longer includes the concept of storage groups. In earlier versions of Exchange, one or more Exchange store databases can be grouped into a storage group, which can then be managed as a unit. Because storage groups were removed from Exchange Server 2010, a recovery database can be used.

CDP provides the ability to take a snapshot of the Microsoft Exchange. Since CDP is using the VSS Exchange writer, it ensures data integrity and consistency during the backup operation.

[1. Using CDP to Restore Database Data and Log Files](#) | [2. Using Eseutil to Replay Log Files](#) | [3. Restoring a Mailbox Using Exchange Management Shell](#)

1. Using CDP to Restore Database Data and Log Files

In order to restore a database, follow the instructions below.

1. Click on "Recovery Points" in the Main Menu to open the "Recovery Points" window.

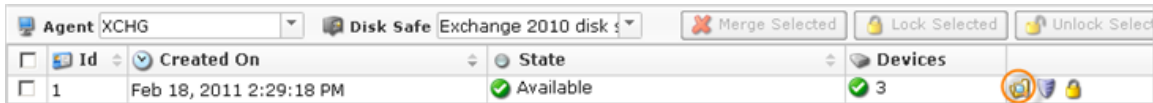
Standard Edition	Enterprise Edition	Advanced Edition
 <ul style="list-style-type: none"> Dashboard Disk Safes Policy Recovery Points Task History Reporting Configuration 	 <ul style="list-style-type: none"> Dashboard Volumes Agents Groups Users Disk Safes Policy Recovery Points Task History Reporting Configuration 	 <ul style="list-style-type: none"> Dashboard Users Disk Safes Policy Recovery Points Task History Reporting Configuration

2. In the "Recovery Points" list, from the horizontal menu select the Agent where MS Exchange is

installed and the appropriate Disk Safe to restore from.



3. Then select a Recovery Point to restore from and click on the "Browse" icon in the "Actions" column for this Recovery Point.



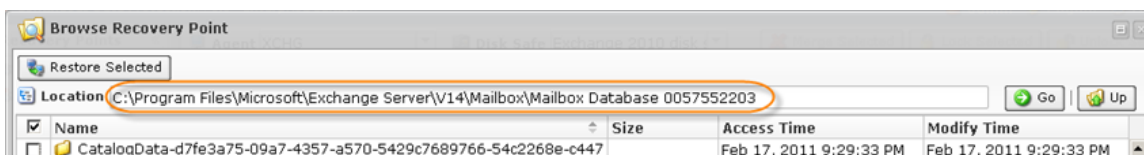
Tip
To find a Recovery Point, you can use the Basic and Advanced List Filters. See [Customizing the Recovery Points List](#).

4. The "Browse Recovery Point" window opens.

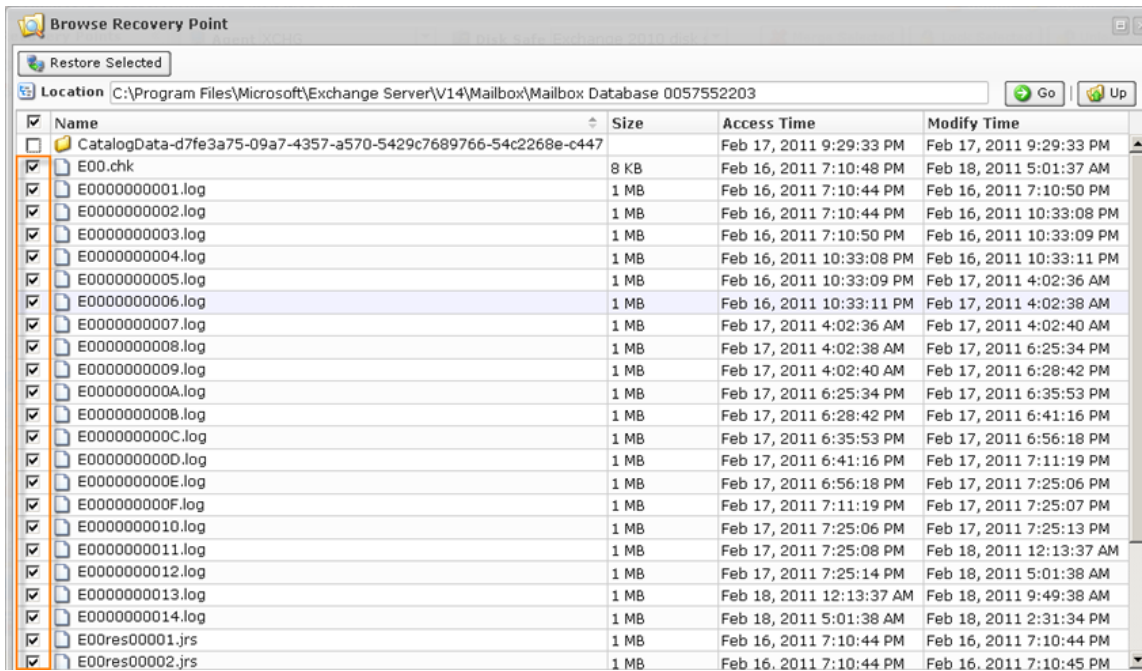


See also: [Browsing Recovery Points](#).

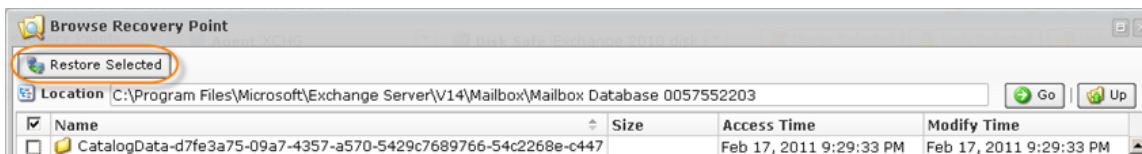
5. Browse to locate the SQL check point file, data and log files (Enn.chk, .mdf & .ldf).



Select the checkboxes next to the files and folders to restore.



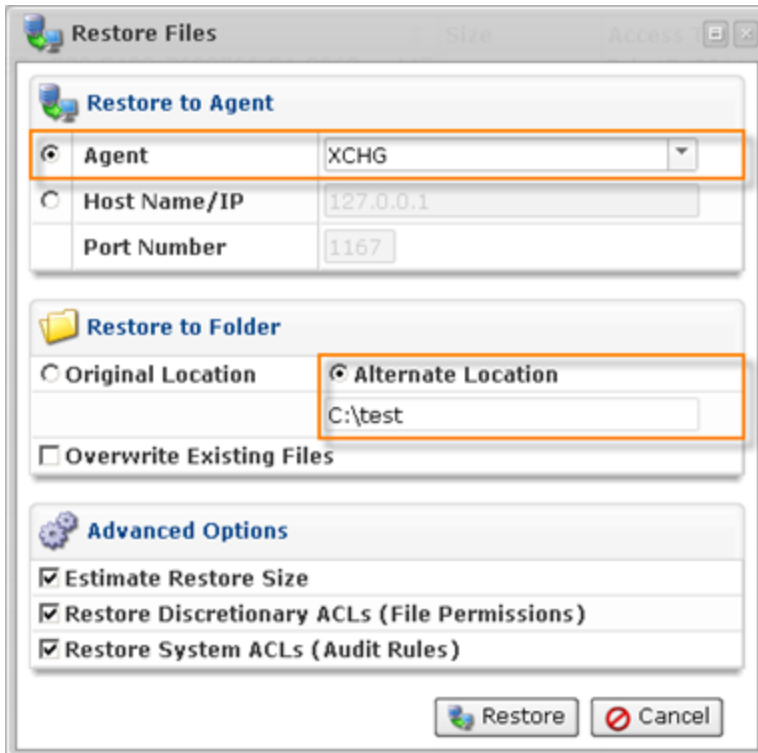
6. Once the files and folders are selected, click on "Restore Selected."



7. The "Restore Files" window will open.

8. Select the Agent where the MS Exchange is installed.

Specify to restore the files to an alternate location as we are later going to attach them to an Exchange Recovery Group.



9. Click "Restore."



10. You can view the Restore Task results in the "Task History."



11. In the "Task History" list, find the Task you want to view the summary for and click it. The "Summary" tab located on the bottom area accumulates general information about the task.

State	Alert	Type	Name	Agent Name	Scheduled	Run Time
✓				XCHG	2/18/11 3:54 PM	39s
✓			Backup Exchange 2	XCHG	2/18/11 2:29 PM	37m 6s
✓			Backup Exchange 2		2/11/11 3:40 PM	1m 29s
✓			Backup Exchange 2		2/9/11 7:23 PM	13m 19s

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Summary Files Restored Alerts Logs Restore Settings Task

File Restore Summary

Success
File restore completed successfully

Files Restored: 33 / 34
Files Failed: 0

Progress

Average Speed: 4.6 MB/s (peak 11.2 MB/s) Current Speed:
Time Remaining: 0s Time Elapsed: 36s (size calculation 0s)

167.1 MB / 175.1 MB

Verbose Status:

2. Using Eseutil to Replay Log Files

Once the files have been restored, it is time to run Eseutil to get the data files into a clean shutdown state so that they can be attached to a recovery storage group, and have the log files played into the backup.

On the Exchange server where the files were restored, open up the command prompt and change the directory to the location where you restored the .chk, .edb, and .ldf files. Operating inside of the directory, where the data and log files exist, eliminates misspelling and incorrect paths, etc.

For example, the files were restored to the `c:\test` directory, but since the original files were located under

`C:\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group`,

The restore directory path will be:

`C:\test\Program Files\Microsoft\Exchange Server\Mailbox\First Storage Group`.

From this directory run the following command:

```
Eseutil /R Enn /I /D
```

For example:

Eseutil /R E00 /I /D

```
C:\test>Eseutil /R E00 /I /D
Extensible Storage Engine Utilities for Microsoft® Exchange Server
Version 14.01
Copyright (C) Microsoft Corporation. All Rights Reserved.

Initiating RECOVERY mode...
  Logfile base name: E00
  Log files: <current directory>
  System files: <current directory>
  Database Directory: <current directory>

Performing soft recovery...
  Restore Status (% complete)

  0   10  20  30  40  50  60  70  80  90 100
  |---|---|---|---|---|---|---|---|---|---|
  .....

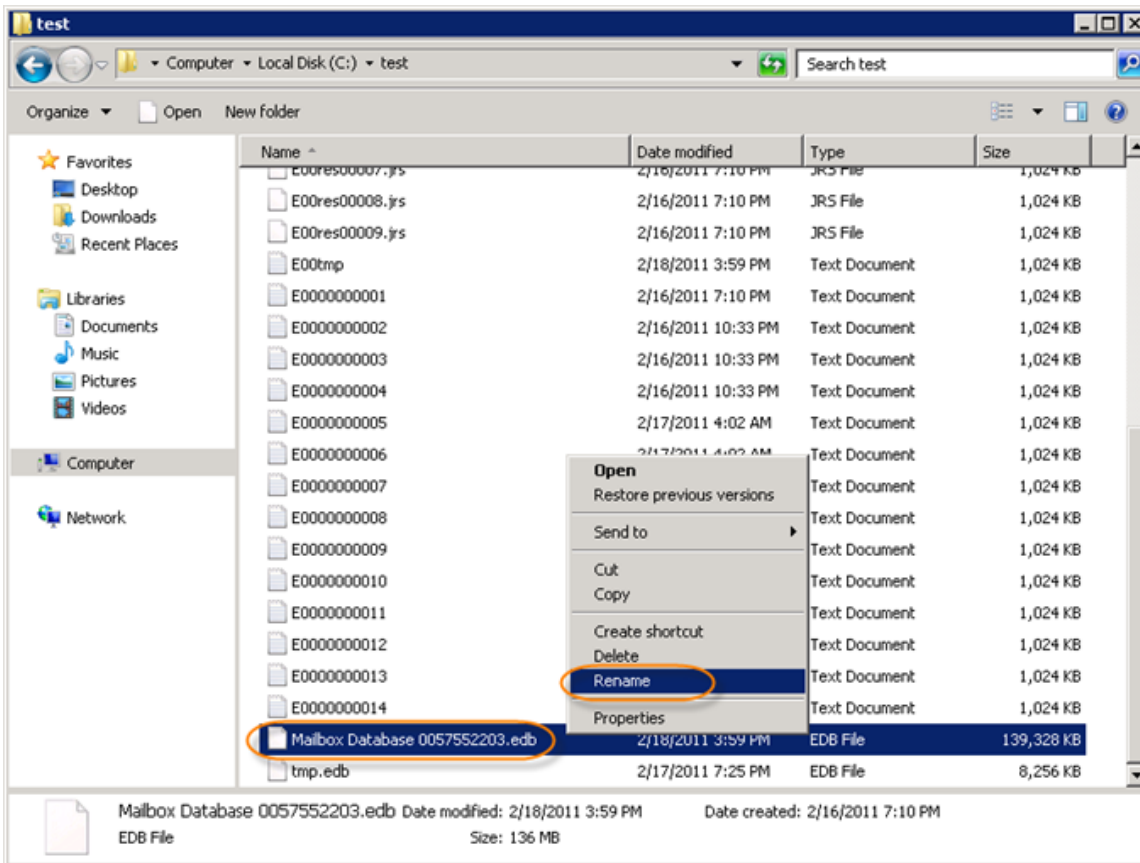
Operation completed successfully in 10.15 seconds.
```

For more information on using Eseutil and the different commands, see the following technet article:

[http://technet.microsoft.com/en-us/library/bb123479\(EXCHG.80\).aspx](http://technet.microsoft.com/en-us/library/bb123479(EXCHG.80).aspx)

3. Restoring a Mailbox Using Exchange Management Shell

1. Find the Exchange server database (.edb) file you have just restored. In our example, we rename this file to "RecoveryDB.edb."

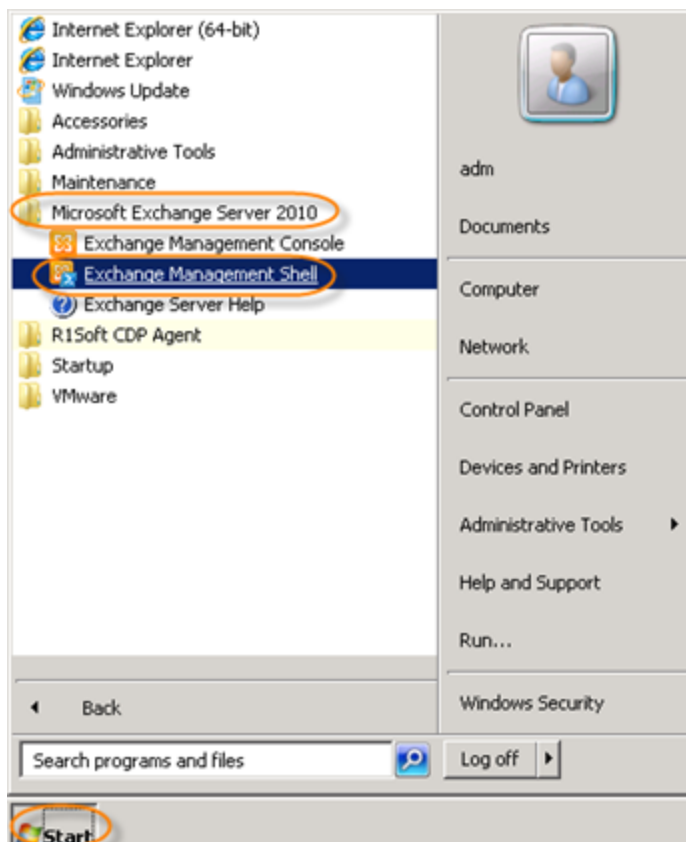


E0000000013	2/18/2011 9:49 AM	Text Document	1,024 KB
E0000000014	2/18/2011 2:31 PM	Text Document	1,024 KB
RecoveryDB.edb	2/18/2011 3:59 PM	EDB File	139,328 KB
tmp.edb	2/17/2011 7:25 PM	EDB File	8,256 KB

2. Create a folder for log files.

Name	Date modified	Type	Size
logs	2/18/2011 6:00 PM	File folder	
E000000000A	2/17/2011 6:35 PM	Text Document	1,024 KB
E000000000B	2/17/2011 6:41 PM	Text Document	1,024 KB

3. Now we are going to launch the Exchange Management Shell to restore the mailbox. Go to Start > (All) Programs > Microsoft Exchange Server 2010 Exchange Management Shell.



4. The Exchange Management Shell screen will open.

```

Welcome to the Exchange Management Shell!
Full list of cmdlets: Get-Command
Only Exchange cmdlets: Get-ExCommand
Cmdlets that match a specific string: Help *(<string>)*
Get general help: Help
Get help for a cmdlet: Help <cmdlet name> or <cmdlet name> -?
Show quick reference guide: QuickRef
Exchange team blog: Get-ExBlog
Show full output for a command: <command> ; Format-List

Tip of the day #74:
Exchange 2010 uses management role groups and management role assignment policies to manage permissions.
Role groups enable you to grant permissions to groups of administrators and specialist end users. These are people who manage your organization or perform special tasks, like mailbox searches for compliance reasons.
Role assignment policies enable you to grant permissions to your end users. These permissions include whether users can manage their own distribution groups, edit their own profile information, access voice mail, and more.

VERBOSE: Connecting to XCHG.theimpsons.us
VERBOSE: Connected to XCHG.theimpsons.us.
  
```

5. Use the New-MailboxDatabase command to create a mailbox database object in the database container in Active Directory. For detailed syntax and parameter information, see [http://msdn.microsoft.com/en-us/library/aa997976\(v=EXCHG.140\).aspx](http://msdn.microsoft.com/en-us/library/aa997976(v=EXCHG.140).aspx)

In our example, we restore the C:\test\RecoveryDB.edb file using the following command:

```
New-MailboxDatabase -Recovery -Name RecoveryDB -Server XCHG -EdbFilePath C:\test\RecoveryDB.edb -LogFolderPath C:\test\logs
```

```
[PS] C:\Windows\system32>New-MailboxDatabase -Recovery -Name RecoveryDB -Server XCHG -EDBFilePath C:\test\RecoveryDB.edb
-LogFolderPath C:\test\logs
WARNING: Recovery database 'RecoveryDB' was created using existing file C:\test\RecoveryDB.edb. The database must be
brought into a clean shutdown state before it can be mounted.
```

Name	Server	Recovery	ReplicationType
RecoveryDB	XCHG	True	None

6. Mount the newly created database RecoveryDB using the `Mount-Database` command. For detailed syntax and parameter information, see [http://msdn.microsoft.com/en-us/library/aa998871\(v=EXCHG.140\).aspx](http://msdn.microsoft.com/en-us/library/aa998871(v=EXCHG.140).aspx). In our example we use the following command:

```
Mount-Database "RecoveryDB"
```

```
[PS] C:\Windows\system32>Mount-Database "RecoveryDB"
```

7. Use the `Get-MailboxStatistics` command to obtain information about a mailbox, such as the size of the mailbox, the number of messages it contains, and the last time it was accessed. For detailed syntax and parameter information, see <http://msdn.microsoft.com/en-us/library/bb124612%28ru-ru,EXCHG.140%29.aspx>.

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

DisplayName	ItemCount	StorageLimitStatus	LastLogonTime
Homer J. Simpson	9	BelowLimit	2/17/2011 6:32:51 PM
SystemMailbox{d7fe3a75...	1	BelowLimit	
Marge Simpson	11	BelowLimit	2/17/2011 6:28:04 PM
Bart Simpson	11	BelowLimit	2/17/2011 6:36:54 PM
Lisa Simpson	9	BelowLimit	2/17/2011 6:39:35 PM
Microsoft Exchange	2	NoChecking	

8. Extract mailbox content from a restored database using the `Restore-Mailbox` command. The `-RecoveryDatabase` parameter specifies the recovery database from which you are restoring the mailbox. In the following example, we restore a "MargeSimpson" mailbox. More parameters for `Restore-Mailbox` can be found here: <http://msdn.microsoft.com/en-us/library/bb125218.aspx>

```
Restore-Mailbox -Identity MargeSimpson -RecoveryDatabase RecoveryDB
```

```

[PS] C:\Windows\system32>Restore-Mailbox -Identity MargeSimpson -RecoveryDatabase RecoveryDB
Confirm
Are you sure you want to perform this action?
Recovering mailbox content from mailbox 'Marge Simpson' in the recovery database 'RecoveryDB' to the mailbox for 'Marge Simpson (MargeSimpson@thesimpsons.us)'. This operation may take a long time to complete.
[Y] Yes [A] Yes to All [N] No [L] No to All [?] Help (default is "Y"):

RunspaceId          : 3c398258-d268-47b9-b987-9ed8d96323f0
Identity            : thesimpsons.us/Users/Marge Simpson
DistinguishedName   : CN=Marge Simpson,CN=Users,DC=thesimpsons,DC=us
DisplayName          : Marge Simpson
Alias               : MargeSimpson
LegacyExchangeDN    : /o=Springfield/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=Marge Simpson
PrimarySmtpAddress  : MargeSimpson@thesimpsons.us
SourceServer        : XCHG.thesimpsons.us
SourceDatabase      : RecoveryDB
SourceGlobalCatalog : ADC
SourceDomainController :
TargetGlobalCatalog : ADC
TargetDomainController :
TargetMailbox       : thesimpsons.us/Users/Marge Simpson
SourceForestCredential :
TargetForestCredential :
TargetFolder       :
PS1FilePath        :
RecoveryMailboxGuid : aa9de695-c54b-4589-82f5-645887adc2a4
RecoveryMailboxLegacyExchangeDN : /o=SPRINGFIELD/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MARGE SIMPSON
RecoveryMailboxDisplayName : Marge Simpson
RecoveryDatabaseGuid : 859452dd-f5ec-45bd-8765-415f24d6708c
StandardMessagesDeleted : 0
AssociatedMessagesDeleted : 0
DumpsterMessagesDeleted : 0
MoveType            : Restore
MoveStage           : Completed
StartTime           : 2/18/2011 6:08:05 PM
EndTime             : 2/18/2011 6:08:07 PM
StatusCode          : 0
StatusMessage       : This mailbox in the recovery database has been restored to the target user mailbox.
ReportFile          : C:\Program Files\Microsoft\Exchange Server\U14\Logging\MigrationLogs\restore-Mailbox 20110218-180800-8313482.xml
ServerName          : XCHG.thesimpsons.us

```

9. Confirm your request to recover the mailbox content by clicking "Y."

```

Are you sure you want to perform this action?
Recovering mailbox content from mailbox 'Marge Simpson' in the recovery database 'RDB' to the mailbox for 'Marge Simpson (MargeSimpson@sin
[Y] Yes [A] Yes to All [N] No [L] No to All [?] Help (default is "Y"):

```

More useful commands while restoring a user mailbox

1. To check the database user content, run the following command:

```
Get-MailboxStatistics -Database "RecoveryDB"
```

2. To check the state of the database, run the following command:

```
eseutil /mh '.\Mailbox Database 0091898942.edb'
```

3. Bulk restore for all mailboxes:

```
Get-Mailbox -Database "SourceDB" | Restore-Mailbox -RecoveryDatabase "RecoveryDB"
```

This command restores all mailboxes in the mailbox database SourceDB that are also present in the recovery database RecoveryDB.