



## A Solution to Extract Mailbox from Exchange 2010 EDB via Recovery Database

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With Exchange 2010, administrators are gifted with Recovery Database (RDB) feature that allows mounting restored-backup on it and then data can be extracted from them. Data after extraction can be merged with mailbox of production or some different Server or moved to a folder. The reason why RDBs are of great help to the admins is they give a platform to extract mailbox from Exchange 2010 EDB backup or its copy without causing any disturbance to original database. This option is used in situations when any mailbox or its item is deleted and has passed retention period also. Moreover, if a single mailbox has to be recovered without interrupting production Server, then concept of RDB works in favor.

Recovery Database (RDB) is different from a normal mailbox database in various aspects. Here are some basic differences between both the databases:

### **Difference Between RDB and Normal Mailbox DB**

- ➔ Recovery Databases are created using Exchange Management Shell.
- ➔ Emails cannot be sent or received through Recovery Database.
- ➔ No information to Exchange environ can be added using RDB.
- ➔ There are no system or mailbox policies for Recovery Database.
- ➔ No backup can be performed against RDB like normal mailbox.
- ➔ Recovery Database (RDB) cannot be connected with normal mailbox.

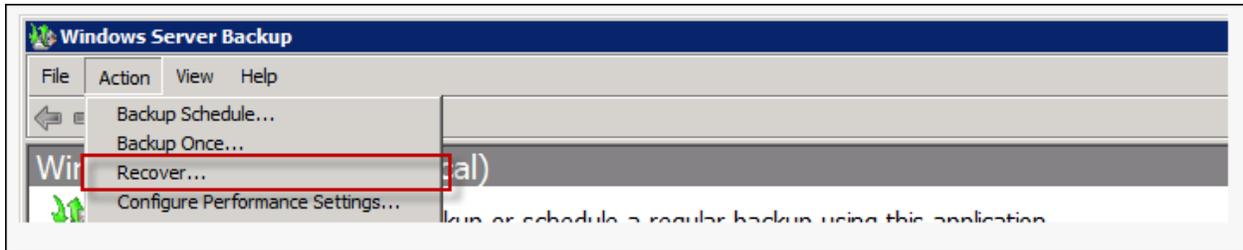
## Recovery Steps Using Recovery Database (RDB)

### Step1) Restore Backup (Here Illustrated using Windows Server Backup)

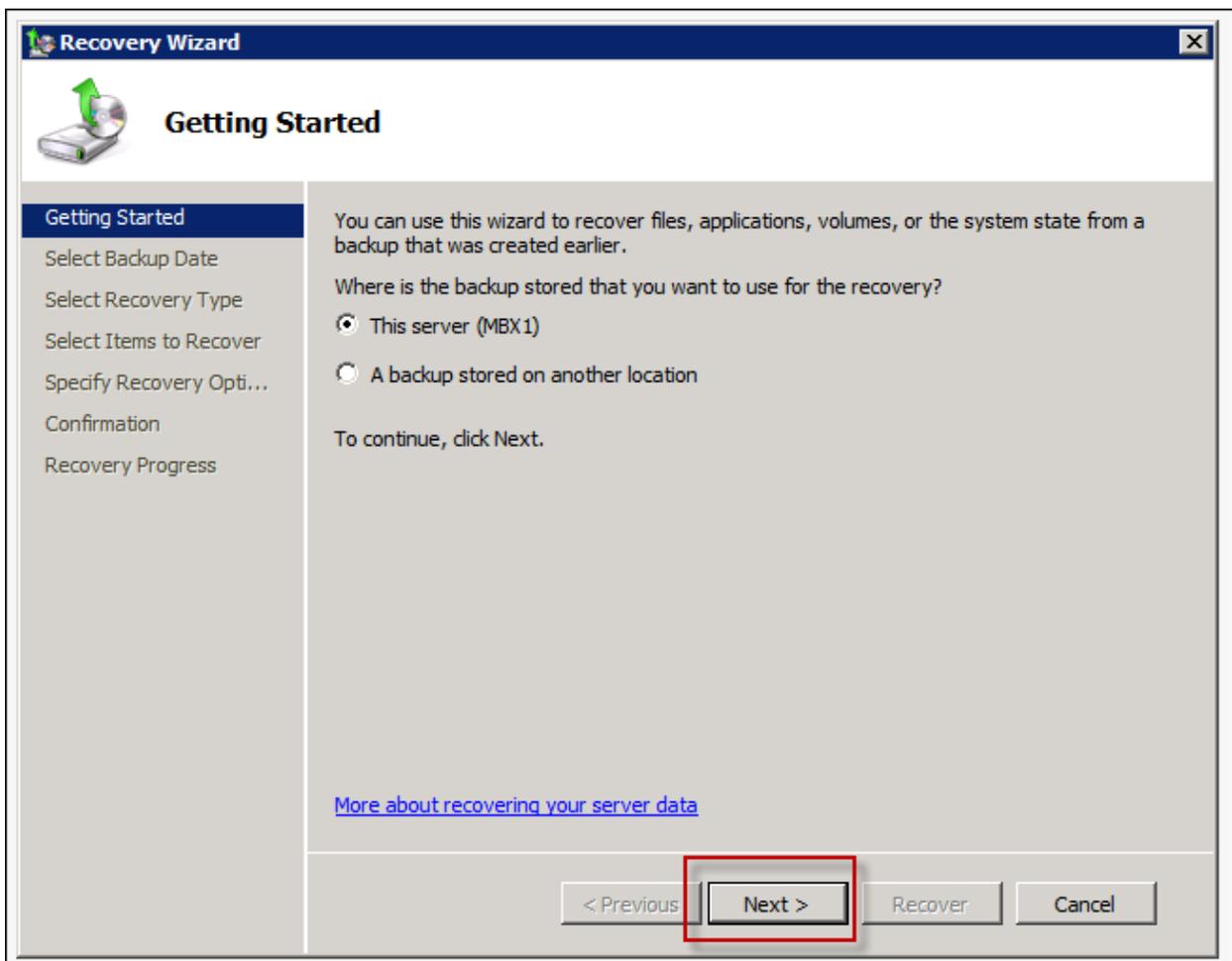
Consideration:

- Database = E:\Drive
- Backups = F:\ Drive
- Database Name = DB01 on Server MBX1

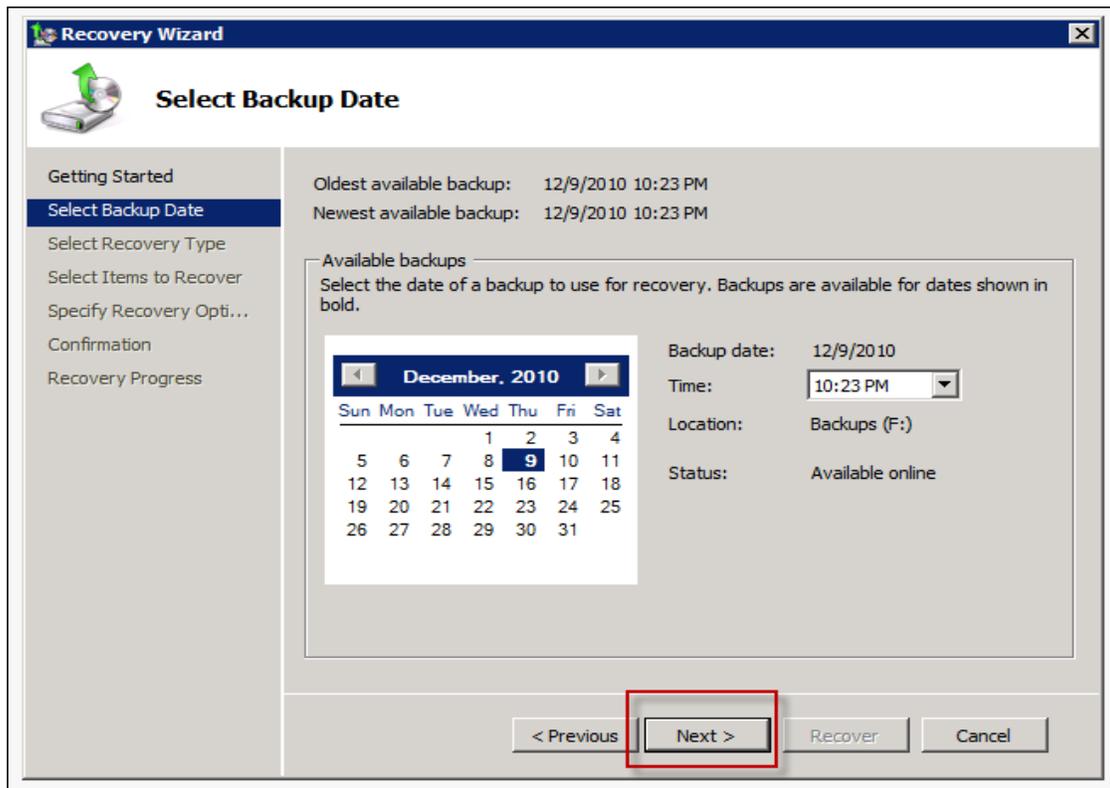
Open Windows Server Backup and in the *Actions* Pane, select *Recover* Task.



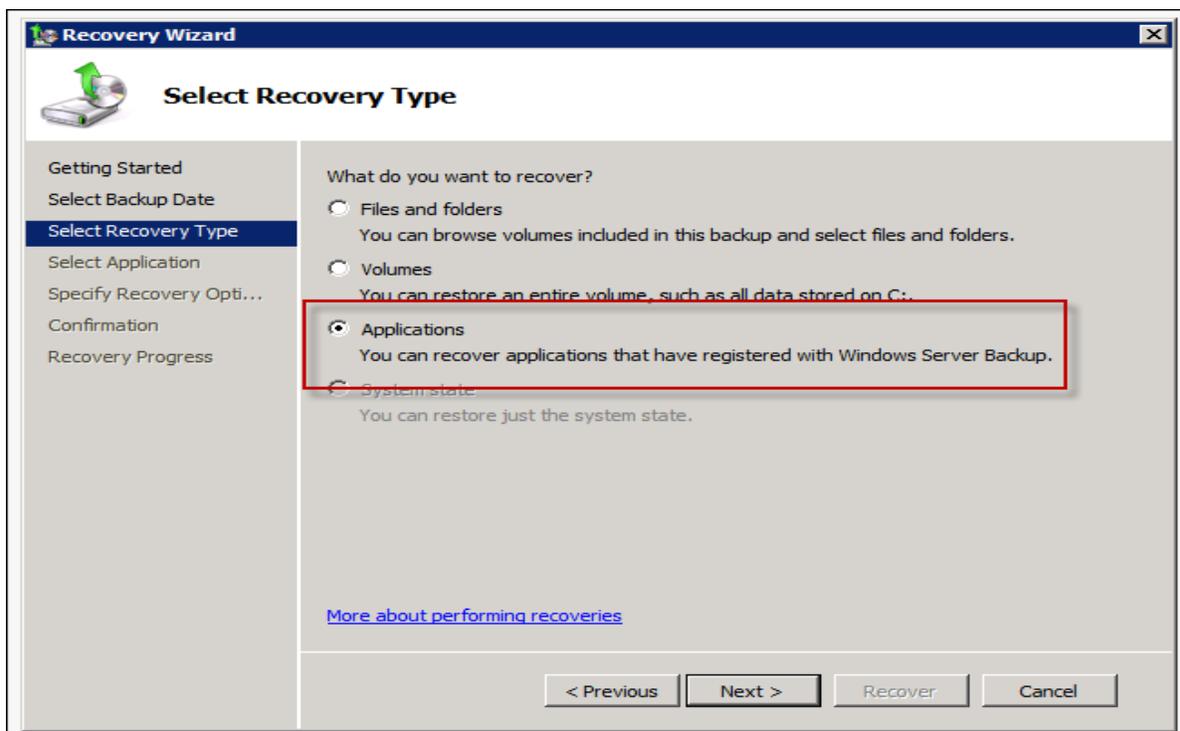
- a) Getting Started: In this window, define the location where backup to be restored is saved.



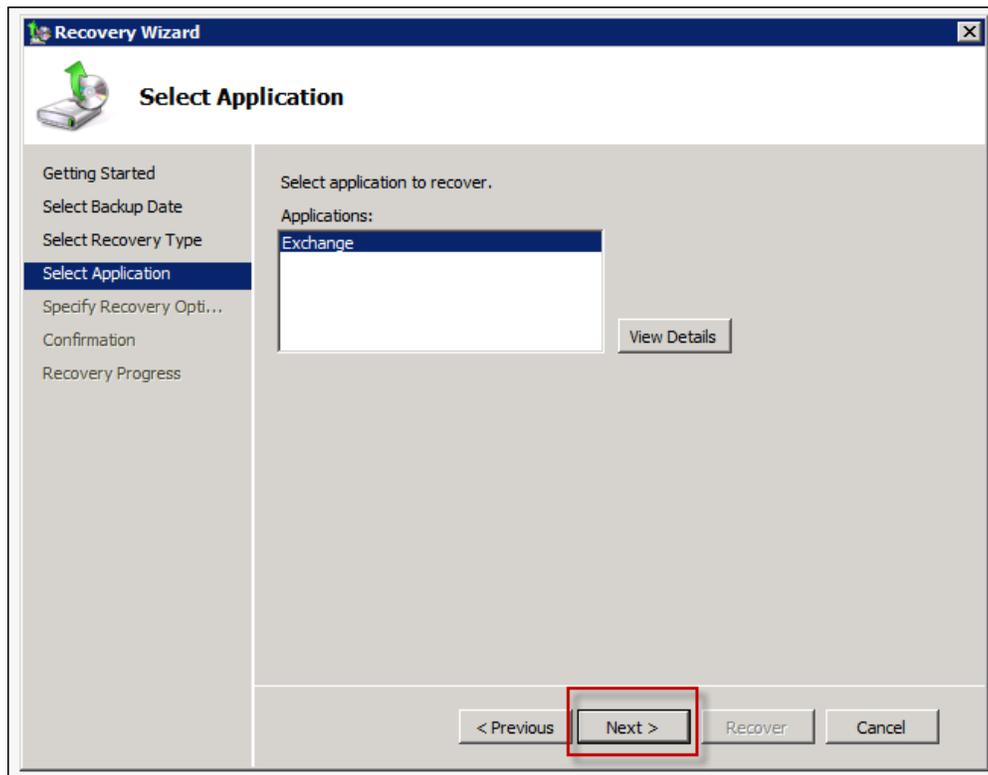
- b) Select Backup Date: Now, using the calendar control, define a date from which you want the restoration should start.



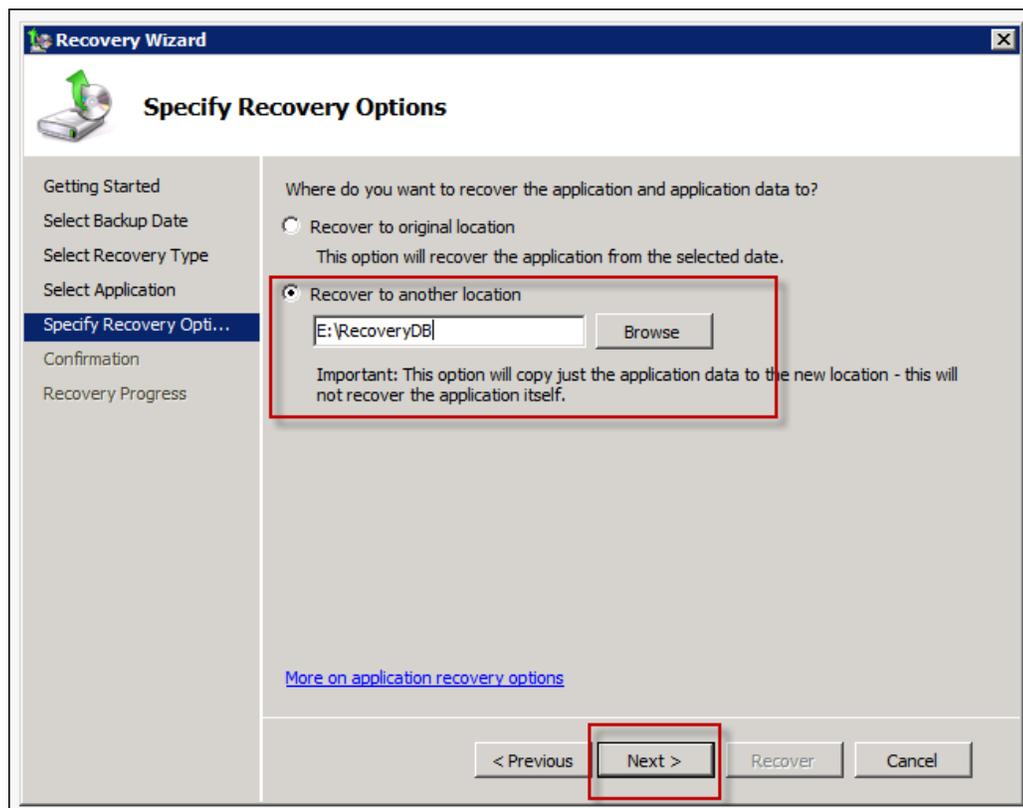
- c) Select Recovery Type: Now, chose the type of data has to be restored:



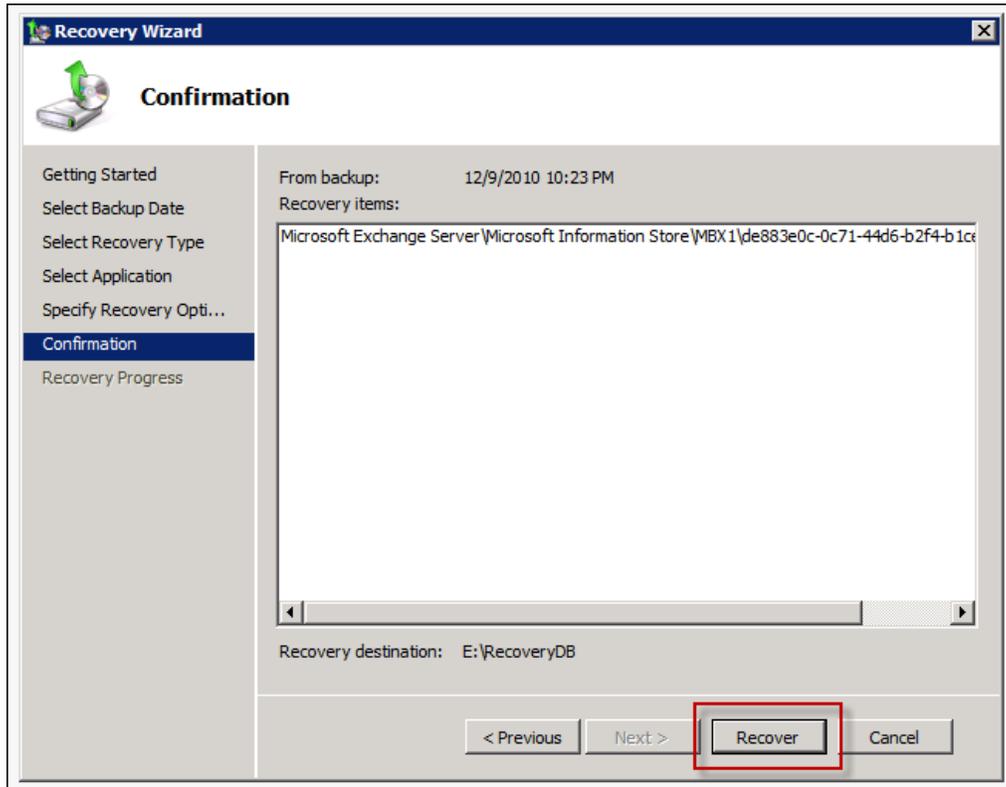
- d) Select Application: Since I have to restore database of Exchange Server, I will enter Exchange Server in the text box.



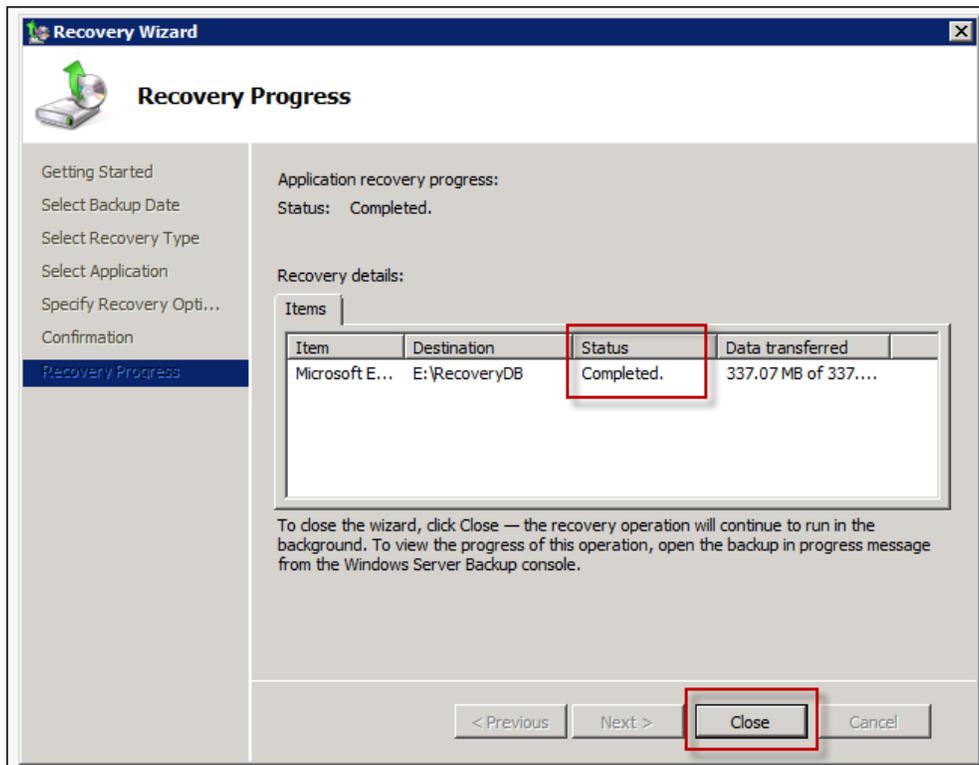
- e) Specify Recovery Options: Define a location where the backup data will be restored.



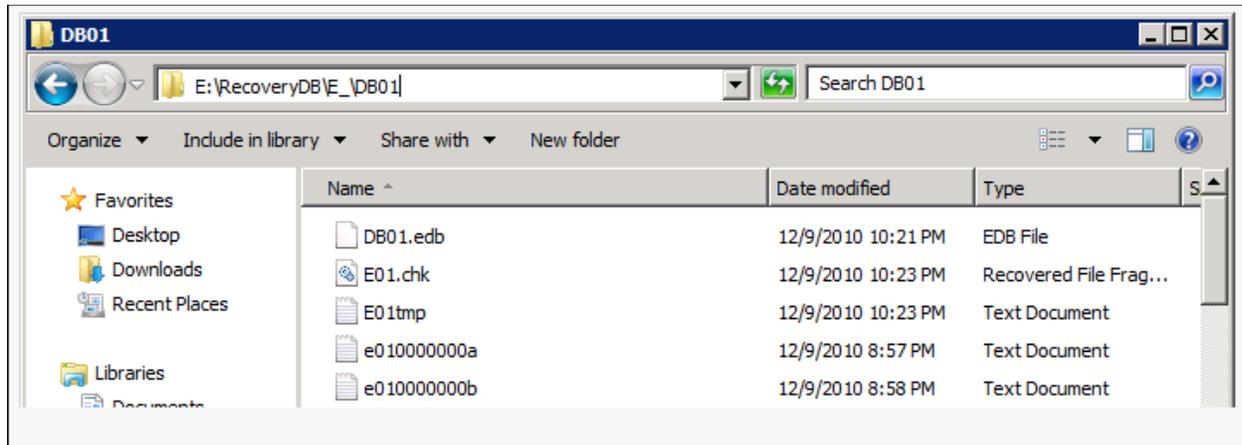
- f) Confirmation: Information that has been provided for data restoration will be shown on screen. Verify and click *Recover* option.



- g) Recovery Progress: Status of restoration process can be checked out in this window. If Status=Completed, it means the restoration is complete.

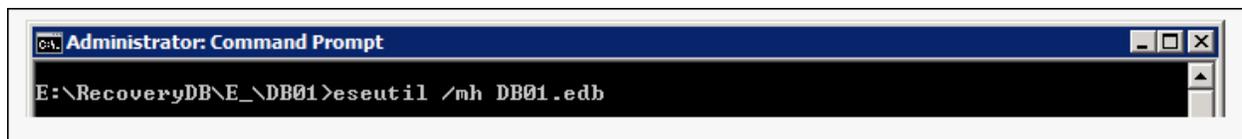


Restoration Result will be like this:

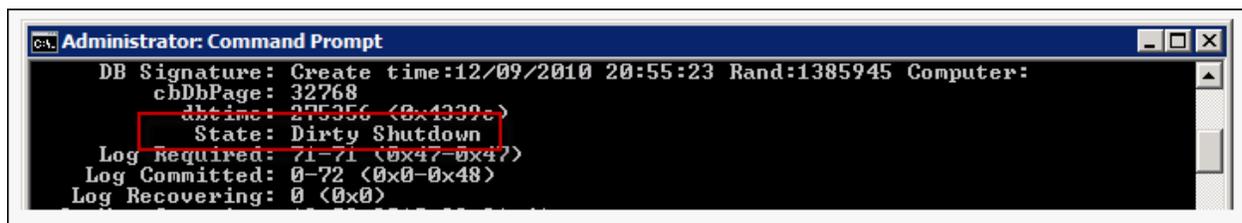


## Step2) Bring Database to Clean Shutdown State

Now, the next step is to mount the recovered database to RDB but before that it is necessary that it is brought to clean shutdown state. To test state of DB in command prompt, the syntax is: `C:\program files\exchsrvr\bin>eseutil /mh "drive:\program files\exchsrvr\mdbdata\priv1.edb"`



If the results of DB state verification are viewed, it will be Dirty Shutdown:



The transaction logs have to be replayed (through the process 'Soft Recovery') with following syntax in order to bring database to consistent state: `ESEUTIL /r enn /L[path to log files] /s[path to checkpoint file] /d[path to database file] /i`

```

Administrator: Command Prompt
E:\RecoveryDB\E\DB01>eseutil /r e01 /d

Extensible Storage Engine Utilities for Microsoft(R) Exchange Server
Version 14.01
Copyright (C) Microsoft Corporation. All Rights Reserved.

Initiating RECOVERY mode...
  Logfile base name: e01
    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 5.813 seconds.

```

Now again test state of DB using /mh switch (syntax shared above) and it will probably be in consistent state:

```

Administrator: Command Prompt
DB Signature: Create time:12/09/2010 20:55:23 Rand:1385945 Computer:
cbDbPage: 32768
dhtime: 281051 (0x449dh)
State: Clean Shutdown
Log Required: 0-0 (0x0-0x0)
Log Committed: 0-0 (0x0-0x0)
Log Recovering: 0 (0x0)

```

**Step3) Create Recovery Database and Mount Restored DB to It**

For creating Recovery Database (RDB), PowerShell Cmdlet *New-MailboxDatabase* can be used: `New-MailboxDatabase -Recovery -Name Recovery -Server <servername> -edbfilepath <databasepath\database.edb> -logfolderpath <logpath>`

```

Machine: mbx1.uss.local
[PS] C:\>New-MailboxDatabase -Name RecoveryDB -EdbFilePath E:\RecoveryDB\E\DB01\DB01
.edb -LogFolderPath E:\RecoveryDB\E\DB01 -Recovery -Server mbx1
WARNING: Recovery database 'RecoveryDB' was created using existing file
E:\RecoveryDB\E\DB01\DB01.edb. The database must be brought into a clean shutdown
state before it can be mounted.

Name                Server      Recovery    ReplicationType
----                -
RecoveryDB          MBX1       True        None

```

Now when the RDB is created, restored database from backup can be mounted on it:

```
Machine: mbx1.uss.local
[PS] C:\>Mount-Database RecoveryDB
[PS] C:\>
```

#### Step4) Extract Mailbox from RDB and Merge it

The RDB is now online and to check out status of mailboxes on it, use the *Get-MailboxRestoreRequest* cmdlet. - **Get-MailboxStatistics -Database 'DatabaseName - Recovery'**

```
Machine: mbx1.uss.local
[PS] C:\>Get-MailboxStatistics -Database RecoveryDB

DisplayName                ItemCount  StorageLimitStatus  LastLogonTime
-----
Microsoft Exchange         3          NoChecking
Constance Malina           3          BelowLimit
Peggy Wilson               3          BelowLimit
Walter Strong              4          BelowLimit
```

To extract mailbox from Exchange 2010 EDB from RDB, use the *New-MailboxRestore* cmdlet that requires *DisplayName* and *Mailbox GUID* parameter. In order have GUID names of mailboxes on RDB, use the command:

```
Get-MailboxStatistics -Database 'DatabaseName - Recovery' | Format-List DisplayName, MailboxGUID
```

In order to restore Recover Database mailboxes on target Server, following command in EMS can be used:

Here alias name of mailbox on target Server and GUID name of mailboxes on RDB will be required.

```
New-MailboxRestoreRequest -SourceDatabase 'DatabaseName - Recovery' -SourceStoreMailbox MailboxGUID -
TargetMailbox TargetMailboxAlias -AllowLegacyDNMismatch
```

```
Machine: mbx1.uss.local
[PS] C:\>New-MailboxRestoreRequest -SourceDatabase RecoveryDB -SourceStoreMailbox 'Mi
ke Pfeiffer' -TargetMailbox administrator -TargetRootFolder Restore -AllowLegacyDNMis
match

Name                TargetMailbox                Status
-----
MailboxRestore3    uss.local/Users/Administr... Queued
```

### ***What if Backup is not available or is inconsistent?***

There could be situations where a backup could be inconsistent or it is not available and to extract mailbox from Exchange 2010 EDB file in such scenarios, a third party tool could be adopted. [Exchange Recovery software](#) is a trustable name that allows extracting public and private folder data from EDB file and exports them to PST, EML, MSG, and to live Exchange Server.

