

DigiVault

DigiVault Online Backup Manager

Microsoft Exchange Backup/Restore Guide



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1 Backup/Restore Microsoft Exchange Server 2000/3

This chapter will describe in details how to use DigiVault Backup Manager to backup your Microsoft Exchange Server 2000 /2003 and how you can restore your Microsoft Exchange Server 2000/2003 from the backup files.

1.1 Requirements

- i. Microsoft Exchange Server 2000 with Services Pack 3 and post-SP3 update rollup installed. Please refer to <http://www.microsoft.com/exchange/> for more information.

or

Microsoft Exchange Server 2003.
- ii. DigiVault Backup Manager must be installed onto the computer running Microsoft Exchange Server 2000/2003.
- iii. Data from Microsoft Exchange Server will be backed up to a temporary directory before they are sent to DigiVault's Backup Servers. Please make sure you have sufficient space on your computer to store these data when you run the backup job.

1.2 Overview

A Microsoft Exchange Server 2000/2003 stores its data in Windows Active Directory as well as in its databases. To fully backup a Microsoft Exchange Server 2000/2003, you need to backup the following components:

- i. Windows System State

The Windows System State contains the information about your Windows system, including Windows Active Directory. A Microsoft Exchange Server 2000 / 2003 stores some of its configuration, e.g. email accounts and mailbox properties, inside Windows Active Directory. It is important that Windows Active Directory is running correctly when backing up a Microsoft Exchange Server.

Active Directory is stored inside a Windows Server running as Windows domain controller. If your Exchange Server is a domain controller, you can simply backup the Windows System State of your Exchange Server. If your Exchange Server is running as a member server, you will need to install another copy of DigiVault Backup Manager onto the domain controller to backup the Windows System State of inside the domain controller.

For more information on Active Directory, please refer to <http://www.microsoft.com/windows2000/technologies/directory/ad/default.asp>

- ii. Microsoft Information Store

Exchange Server stores all emails and documents inside its databases, which are grouped together as storage groups inside Microsoft Information Store. It is important that Microsoft Information Store is fully operational when backing your Exchange Server.

- iii. Microsoft Site Replication Service

Microsoft Site Replication Service is installed automatically when exchange server site replication feature is enabled. Microsoft Site Replication stores its runtime and configuration information inside its own database. If you are running your Exchange Server with Site Replication Service enabled, please make sure that you backup the site replication database as well.

- iv. Microsoft Key Management Service (Exchange 2000 only)

Similarly, if you have setup your Exchange Server with Key Management Services enabled, please make sure that you backup the key management database as well.

DigiVault Backup Manager will backup your Microsoft Exchange Server by taking the following steps:

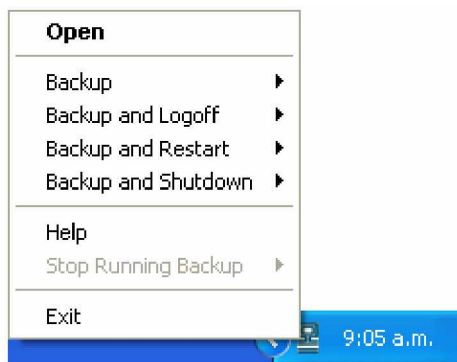
- i. Run all Pre-Commands of this backup set
- ii. If the backup type to run is [Database Backup type],
 - a. Windows System State will be backed up to a temporary directory specified in its backup set
 - b. All exchange database(s) selected are backed up to a temporary directory specified in its backup set
- iii. If the backup type to run is [Transaction Log Backup type],
 - a. New transaction log extents generated since last backup will be copied to the temporary directory
- iv. Remove transaction log extents backed up from the Exchange Server
- v. Run all Post-Commands of this backup set
- vi. Upload all backup files from the temporary directory to an Offsite Backup Server

1.3 How to backup Microsoft Exchange Server 2000 / 2003

Please follow the instructions below to backup your Microsoft Exchange Server 2000 / 2003 using DigiVault Backup Manager:

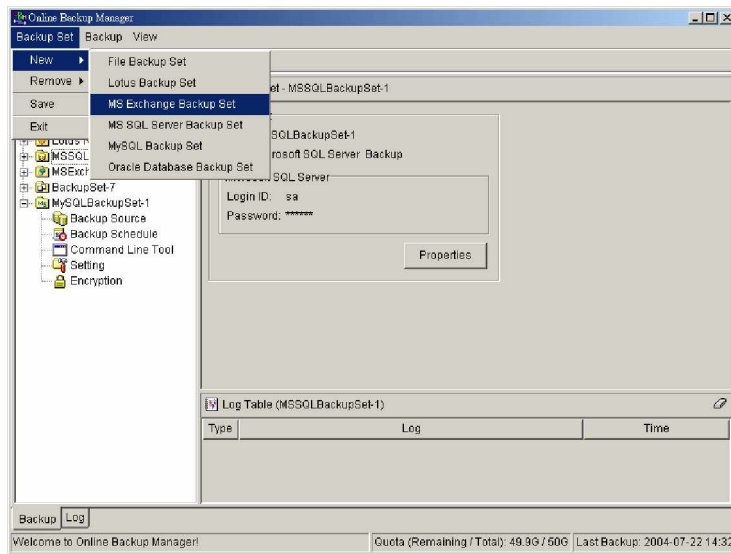
- i. Open DigiVault Backup Manager

Right click DigiVault Backup Manager icon available in the system tray and choose [Open]

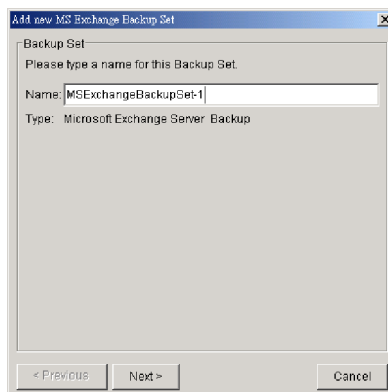


- ii. From the Menu, Choose [Backup Set] -> [New] -> [MS Exchange Backup Set] Create a backup set

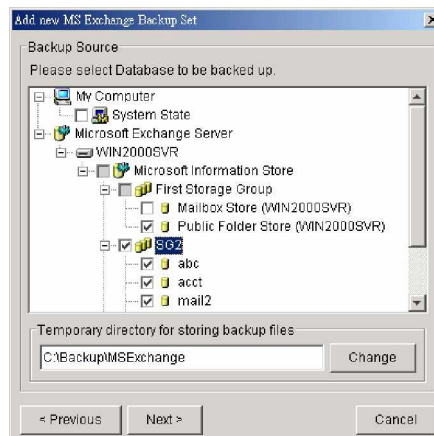
- a. From the Menu, Choose [Backup Set] -> [New] -> [MS Exchange Backup Set]



- b. Enter a name for your backup set

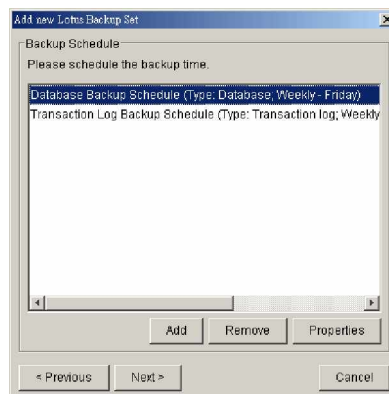


- c. Select the database(s) to be backed up

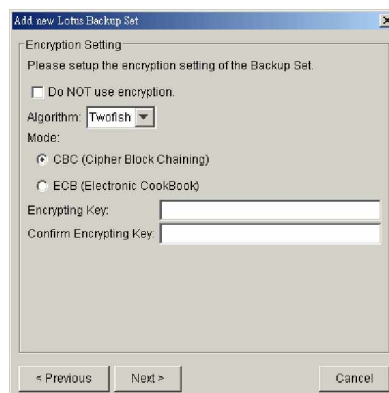


If this Exchange Server is also a domain controller of this Active Directory, select the [System State] checkbox as well. Otherwise, please install DigiVault Backup Manager to the domain controller of this Active Directory and select the [System State] checkbox on that computer

- d. Enter a temporary directory for storing the backup files before they are sent to DigiVault's Backup Servers
- e. Set the backup schedule for Database Backup

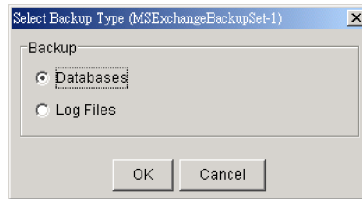


- f. Set the backup schedule for Transaction Log Backup (for Domino server only) (Note: You can have more than one schedule in a backup set, i.e. you can perform intra-day transaction log backup by adding more than one daily transaction log backup schedule to your backup set)
- g. Set the encryption algorithm, encryption mode and encrypting key for this backup set

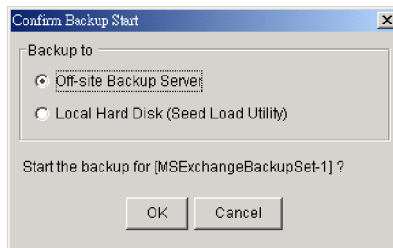


(Hint: For maximum security, please select AES (Advanced Encryption Standard) Algorithm, CBC (Cipher Block Chaining) mode and use an encrypting key with more than 8 characters.)

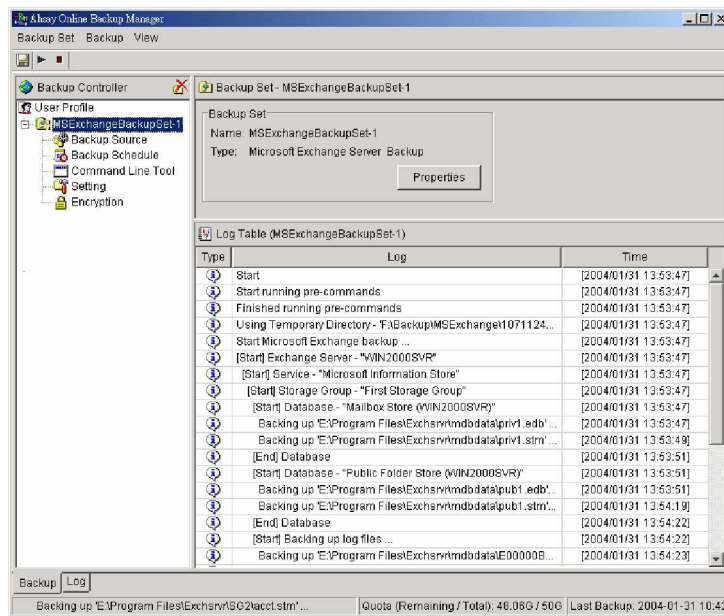
- iii. Run Backup
 - a. Select the backup set you want to run on the left panel and click the [Start Backup] button ()
 - b. Select the backup type (e.g. Database, Log Files) you would like to perform



- c. Select [Off-site Backup Server] to start backing up your files to DigiVault's Backup Servers and click the [OK] button



- d. You should get something similar to the screen shot below.



1.4 How to restore Microsoft Exchange Server 2000/2003

Please follow the instructions below to restore Microsoft Exchange Server 2000/2003 from DigiVault's Backup Servers.

- i. Prepare the system for your Exchange Server (if required)

Install the original version of Windows and Exchange Server (with the same level of service pack installed as in the original system) back to your computer

- ii. Restore Windows Active Directory (if required)

If you have re-installed Windows, please download the Windows System State backup file, named [SystemState.bkf], from DigiVault's Backup Servers and then use [NTBackup.exe] to restore your Windows System State to its backup time from the backup file by following the instructions below:

- a. Run [NTBackup.exe] from [Start] -> [Run]
 - b. Click the [Restore Wizard] button and then click the [Next] button
 - c. Click the [Import] button and use the [Browse] button to select the backup file [SystemState.bkf] downloaded
 - d. Select the checkbox next to the description that matches your backup file
 - e. Click the [Next] button and then the [Finish] button
- iii. Install DigiVault Backup Manager (if required, refer to the Installation Guide)
 - iv. Startup the [Microsoft Information Store] services from Windows Services
 - v. Restore exchange database(s) from backup:
 - a. Download the database backup files to be restored from the Offsite Backup Server (or find the cached copy available in the temporary directory defined in your backup set) and save them to your hard disk (please make sure the directory structure is the same as it appears on the browser)
 - b. If the database to be restored exists on your computer already, please dismount it from the services using [Start] -> [Program] -> [Microsoft Exchange] -> [System Manager]

- c. Use [ExchangeRestore.exe] from the [bin] directory under the installation directory of DigiVault Backup Manager (e.g. C:\Program Files\DigiVault Backup Manager\bin\ExchangeRestore.exe) to restore the exchange database(s).

Simply run [ExchangeRestore.exe] to print the usage

```

ExchangeRestore.exe Usage
C:\Program Files\DigiVault Backup Manager\bin> ExchangeRestore.exe

Microsoft Exchange Server 2000/2003 Backup Recovery Utility

Usage:
ExchangeRestore DIR=path SERVER=server TEMP=tempDir [SERVICE=service [STORAGE=storage
[DATABASE=database]]]

DIR                Directory containing all backup files
SERVER             Name of Exchange Server to be restored
TEMP              Temporary directory to be used during restore
                  Please specify a path with plenty of free space
SERVICE          Name of Exchange Service to be restored. It must be either
                  "Microsoft Information Store", "Microsoft Key Management Service" or
                  "Microsoft Site Replication Service"
STORAGE           Name of storage group to be restored
DATABASE          Name of database to be restored

Examples:
1. To restore an exchange server:
ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"

2. To restore the information store:
ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
SERVICE="Microsoft Information Store"

3. To restore an exchange storage group:
ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
SERVICE="Microsoft Information Store" STORAGE="StorageGroup1"

4. To restore an exchange database:
ExchangeRestore DIR="C:\Backup" SERVER="ExchangeServer" TEMP="C:\Temp"
SERVICE="Microsoft Information Store" STORAGE="StorageGroup1"
DATABASE="Database1"

Where

"C:\Backup"       is the directory containing all backup files
"ExchangeServer" is the server name of an exchange server
"C:\Temp"        is the temporary directory to be used
"StorageGroup1"  is the name of a storage group
"Database1"      is the name of a database

```

- d. (Example 1) To restore all databases from backup available in [F:\Backup] to an exchange server named [WIN2000SVR] using the temporary directory [F:\Temp], you can use this command:

```
E:\Program Files\DigiVault Backup Manager\bin> ExchangeRestore DIR="F:\Backup"
TEMP="F:\Temp" SERVER="WIN2000SVR"
```

Exchange Server Recovery Example
<pre>E:\Program Files\DigiVault Backup Manager\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp" SERVER="WIN2000SVR" Microsoft Exchange Server 2000/2003 Backup Recovery Utility [Start] Exchange Server - 'WIN2000SVR' [Start] Service - 'Microsoft Information Store' [Start] Storage Group - 'First Storage Group' [Start] Database - 'Mailbox Store (WIN2000SVR)' Restoring file 'E:\Program Files\Exchsrvr\mdbdata\priv1.edb' ... Restoring file 'E:\Program Files\Exchsrvr\mdbdata\priv1.stm' ... [End] Database - 'Mailbox Store (WIN2000SVR)' [Start] Database - 'Public Folder Store (WIN2000SVR)' Restoring file 'E:\Program Files\Exchsrvr\mdbdata\pub1.edb' ... Restoring file 'E:\Program Files\Exchsrvr\mdbdata\pub1.stm' ... [End] Database - 'Public Folder Store (WIN2000SVR)' [Start] Restoring transaction log - 'First Storage Group' Restoring Log File 'F:\Temp\restore.tmp\First Storage Group\E00000B3.log' ... Restoring Log File 'F:\Temp\restore.tmp\First Storage Group\E00000B4.log' ... [End] Restoring transaction log - 'First Storage Group' [Start] Applying transaction log ... [End] Applying transaction log [End] Storage Group - 'First Storage Group' [Start] Storage Group - 'SG2' [Start] Database - 'acct' Restoring file 'E:\Program Files\Exchsrvr\SG2\acct.edb' ... Restoring file 'E:\Program Files\Exchsrvr\SG2\acct.stm' ... [End] Database - 'acct' [Start] Restoring transaction log - 'SG2' Restoring Log File 'F:\Temp\restore.tmp\SG2\E0100072.log' ... Restoring Log File 'F:\Temp\restore.tmp\SG2\E0100073.log' ... [End] Restoring transaction log - 'SG2' [Start] Applying transaction log ... [End] Applying transaction log [End] Storage Group - 'SG2' [End] Exchange Server - 'WIN2000SVR' E:\Program Files\DigiVault Backup Manager\bin></pre>

- e. (Example 2) To restore the database named [mail] in storage group [SG5] from backup available in [F:\Backup] to an exchange server named [WIN2000SVR] using the temporary directory [F:\Temp], you can use this command:

```
E:\Program Files\DigiVault Backup Manager\bin> ExchangeRestore DIR="F:\Backup"
TEMP="F:\Temp" SERVER="WIN2000SVR" SERVICE="Microsoft Information Store" STORAGE="SG5"
DATABASE="mail1"
```

Exchange Server Recovery Example
<pre>E:\Program Files\DigiVault Backup Manager\bin> ExchangeRestore DIR="F:\Backup" TEMP="F:\Temp" SERVER="WIN2000SVR" SERVICE="Microsoft Information Store" STORAGE="SG5" DATABASE="mail1" Microsoft Exchange Server 2000/2003 Backup Recovery Utility [Start] Storage Group - 'SG5' [Start] Database - 'mail' Restoring file 'E:\Program Files\Exchsrvr\SG5\mail.edb' ... Restoring file 'E:\Program Files\Exchsrvr\SG5\mail.stm' ... [End] Database - 'mail' [Start] Restoring transaction log - 'SG5' Restoring Log File 'F:\Temp\restore.tmp\SG5\E0300012.log' ... Restoring Log File 'F:\Temp\restore.tmp\SG5\E0300013.log' ... [End] Restoring transaction log - 'SG5' [Start] Applying transaction log ... [End] Applying transaction log ... [End] Storage Group - 'SG5' E:\Program Files\DigiVault Backup Manager\bin></pre>

- f. Repeat the same procedure for each database to be restored to the Exchange Server.
- g. You can use [Start] -> [Program] -> [Administrative Tools] -> [Event Viewer] to check if there are any errors generated from the exchange databases restoring activities.
- vi. Completed

2 Further Information

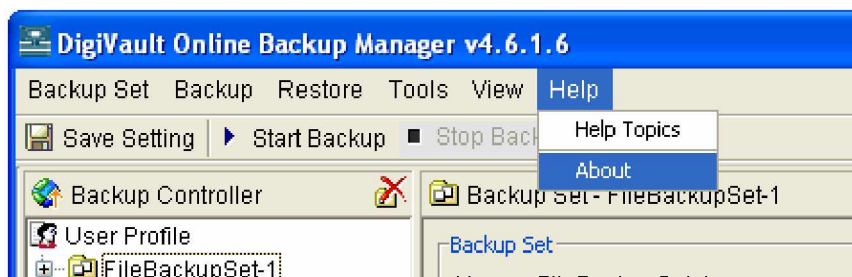
2.1 FAQ's

Please see if your question has already been answered in our FAQs available on our website.

2.2 Contact Us

Should you need to contact us, you can go to <http://www.digivault.co.nz> or, alternatively, follow the instructions below to find our contact details:

- i. Open DigiVault Backup Manager from the system tray
- ii. Choose [Help] -> [About] from the top menu



- iii. Contact DigiVault using the information shown in the [About] dialog box

