



Secure Online Backup for Businesses



Microsoft Exchange Server 2003 & SQL Disaster Recovery Plan

Data backup and restoration with MozyPro

Introduction

A successful backup of Microsoft Exchange 2003 and Microsoft SQL is critical and should not interrupt regular business operations. Keeping your Exchange and SQL servers online is only one part of the equation. MozyPro also minimizes the backup window to maintain performance, and provides faster restores.

With MozyPro as a key component to your disaster recovery plan, you can keep your Exchange and SQL servers running, maintain performance during backup, and manage all the necessary components of Exchange and SQL. MozyPro's Exchange and SQL backup sets and support for Volume Shadow Copy Service (VSS) make this kind of disaster recovery feasible.

MozyPro's backup sets for Microsoft Exchange Server 2003 and Microsoft SQL are dynamically created by the Exchange writer and SQL writer, so MozyPro knows exactly what files need to be backed up and where to find them regardless of their configuration.

MozyPro support for VSS keeps your Exchange and SQL servers online, freezing I/O write requests, while preparing an accurate snapshot of your data before encrypting and transferring it to secure data centers.

MozyPro Support for Volume Shadow Copy Service (VSS)

1. MozyPro communicates with the VSS to gather metadata from the MS Exchange writer and SQL writer and prepare them for shadow copy creation.
2. The VSS receives metadata, in XML format, which describes the backup components and defines the restore method. MS Exchange writer and SQL writer then begin preparing data for shadow copy.
3. MS Exchange writer and SQL writer complete all open transactions, rolling transaction logs, and flushing caches, and notify the VSS.
4. The VSS freezes I/O write requests, flushes the file system buffer, and then freezes the file system to ensure file system metadata is written correctly.
5. The VSS then initiates the provider to create the shadow copy.
6. The VSS thaws the file system, MS Exchange writer and SQL writer, from its inactive state.
7. The VSS confirms with the MS Exchange writer and SQL writer that I/O writes were inactive while the shadow copy was being created.
 - a. If the I/O writes were active, MozyPro is notified for potential data inconsistencies.
 - b. MozyPro continues MS Exchange and SQL backups in a crash-consistent state* only if the I/O writers were active.
8. MozyPro initiates checksum to validate data.
9. The data is backed up from the shadow volume, which is a snapshot of the live volume at a point in time.

*The state of disks equivalent to what would be found following a catastrophic failure that abruptly shuts down the system. A restore from such a shadow copy set would be equivalent to a reboot following an abrupt shutdown. This is the default state of data that has been shadow copied without the support of writers. (MSDN - library/aa384653)

Mozy Advantage

MozyPro makes configuration simple for IT Administrators. After you have installed MozyPro, you can select the Exchange and SQL backup sets from the configuration panel's backup set tab.

Maintain server performance during backup by using MozyPro's bandwidth throttling to use more or less upload bandwidth. MozyPro takes advantage of block-level incremental backups to save bandwidth and processing time.

Mozy provides a variety of ways to restore your data, including:

- Through the Restore tab on the MozyPro client
- Via the web management console
- Right-click restore from the destination folder you are choosing to restore data from.

In addition, Mozy offers DVD or Direct Attached Storage (DAS) device restore from the web to avoid large file downloads, and for quick response.

Restoring Microsoft Exchange Server 2003

Before you restore the Microsoft Exchange data, you must dismount all Mailbox Stores.

To dismount all Mailbox Stores:

1. Open the Microsoft Exchange System Manager and navigate to the Servers folder.
2. Expand each storage group.
3. For each mailbox store, right-click the mailbox store, then click *Dismount Store*.

Once each mailbox store has been successfully dismounted, you are ready to perform the restore.

1. Right-click the *MozyPro* icon in the system tray, then click Status.

The Status window appears.

2. Click *Restore Files*.

The MozyPro Configuration window appears.

3. Click *VSS Restore*.

4. Select the VSS: MS Exchange Server backup set.

Warning: Selecting the Authoritative Restore forces the restored directory database to be replicated to other servers on the domain after the backups have been restored.

5. Select the method used to access the backup set:

- a. Download files from *MozyPro* Remote Backup Server
- b. Use previously downloaded web restore or files copied from DVD restore

6. If you select to use a previously downloaded restore, browse to the location where either the files or the DVD is stored.

7. Click *Next*. The VSS downloading window appears.

8. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.

Once the restore has been completed, all mailbox stores need to be mounted.

To mount the mailbox stores:

1. Open the Microsoft Exchange System Manager and navigate to the Servers folder.
2. Expand each storage group.
3. For each mailbox store, right-click the mailbox store, then click *Mount Store*.

Important: If configuring MozyPro to back up a Microsoft Exchange Server residing on the same hardware as the domain controller, it is important to select the corresponding check boxes for VSS Active Directory and Windows File Replication Service (SYSVOL) backup sets from the configuration module.

See <http://support.microsoft.com/kb/216243/> and <http://support.microsoft.com/kb/241594> for more information.

Restoring Microsoft Exchange Server 2003

Before restoring data to Active Directory and SYSVOL, you must restart the server in Directory Service Restore mode.

To restart the server in Directory Service Restore mode:

1. Reboot the server.
2. During the reboot process press and hold the *F8* key on the keyboard.
3. When the Windows Advanced Options menu displays, select *Directory Services Restore Mode*, then *press Enter*.
4. When the Authentication window appears, log in as the local administrator.

Once you have restarted the server in Directory Services Repair mode, you are ready to begin the restoration process.

1. Click *Start > All Programs > MozyPro > MozyPro Status*.
2. Click *Restore Files*.

The MozyPro Configuration window appears.

3. Click *VSS Restore*.
4. Select *VSS Active Directory* and *SYSVOL*.

Warning: Selecting the Authoritative Restore forces the restored directory database to be replicated to other servers on the domain after the backups have been restored.

5. Select the method used to access the backup sets
 1. Download files from the MozyPro Remote Backup Server
 2. Use previously downloaded Web restore or files copied from DVD restore
6. If you select to use a previously downloaded restore, browse to the location where either the files or the DVD is stored.
7. Click *Next*.

The VSS downloading window appears.

8. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.

After successfully restoring Active Directory and SYSVOL, restart Windows Server in normal mode, then log in as the domain controller Admin.

Restoring Microsoft Exchange Server 2003

To restore the Microsoft SQL Server data:

1. Click *Start > Run*, type *Service.msc*, then click *OK*.

2. Right-click the *SQL Server service*, then click *Stop*.

Note: Do not stop the SQL Server VSS writer process.

3. Right-click the *MozyPro* icon in the system tray, then click *Status*.
4. Click *Restore Files*.

The MozyPro Configuration window appears.

5. Click *VSS Restore*.
6. Select the VSS: MS SQL Server backup sets that need to be restored.
7. Select the method used to access the backup set:
 - Download files from MozyPro Remote Backup Server
 - Use previously downloaded a Web restore or files copied from DVD restore
8. If you select to use a previously downloaded restore, browse to the location where either the files or the DVD is stored.
9. Click *Next*. The VSS downloading window appears.
10. Once the data has been downloaded, the VSS writer automatically copies the files to the correct locations.
11. Click *Start > Run*, type *Service.msc*, then click *OK*.
12. Right-click the *SQL Server service*, then click *Start*.