

# PRACTICING SHAREPOINT 2007



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**Microsoft Office SharePoint Server (MOSS) 2007 Backup and Recovery Strategies by James Joyce**

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# Practicing SharePoint 2007

## MICROSOFT OFFICE SHAREPOINT SERVER (MOSS) 2007 BACKUP & RECOVERY STRATEGIES

### BACKGROUND

The three main scenarios to consider when discussing the topic of backup and recovery for Microsoft Office SharePoint Server (MOSS) 2007 are content recovery, disaster recovery, and high availability. This article addresses and offers recommended best practices for each.

### CONTENT RECOVERY

The content level problems that occur most frequently are usually end user driven, e.g. a user accidentally updates or deletes a document. These issues typically happen on a much smaller scale, but they are significantly more likely to occur than a full disaster. In Windows SharePoint Services 2003, a restore of an entire content database was required to bring back a single deleted item. MOSS 2007 provides a number of tools that can be used to tackle this issue:

1. Recycle Bin
2. Versioning
3. Web Delete Event

### MOSS 2007 Recycle Bin

One of the most welcome enhancements to MOSS 2007 is the addition of the Recycle Bin. The Recycle Bin allows end-users to recover accidentally deleted files, documents, list items, lists and document libraries.

The MOSS 2007 Recycle Bin is a two-stage recycle bin strategy designed to capture deletion events and allow for some retention of content before it is discarded. The first stage of the Recycle Bin is the user level or site level Recycle Bin. It is accessible by users and contains all items deleted from a particular site.

The second stage of the Recycle Bin is the administrator level or Site Collection Recycle Bin. It is only accessible by the administrator and presents a site collection view of deleted content. When an item is deleted from a SharePoint site, it is moved to the first stage Recycle Bin. It is held there and visible to the end user for the retention time specified by the administrator. During this time, it is also visible to the administrator in the Site Collection Recycle Bin. A user with permission to that item can delete it from the first stage Recycle Bin. If this occurs, the item is still recoverable from the second stage, Site Collection Recycle Bin by the administrator.

### Versioning

The one major weakness in the MOSS 2007 Recycle Bin as a complete content recovery solution is that it only captures deletion events. Accidental overwrites of documents are not recoverable. This issue is addressed by Versioning. End users can retrieve earlier versions of list items or documents which are versioned in MOSS 2007. Note: The Versioning functionality needs to be turned on per list, as the default setting is no versioning.

## Web Delete Event

The Recycle Bin allows end-users to recover accidentally deleted files, documents, list items, lists and document libraries. The Recycle Bin will not recover an entire site that is accidentally deleted by the site owner. The SharePoint Object Model for 2007 allows a developer to custom build a backup solution by detecting and acting on the “web delete” event. The downside of course is that this is not an “out of the box” solution and code must be written.

## DISASTER RECOVERY

Complete hardware failure or similar disaster is an area of high concern for administrators. There are a number of tools available to address this issue. MOSS 2007 provides some native out of the box tools, e.g. Central Administration Backup, Site Collection Backup and Restore (STSADM). A Disaster Recovery solution based on these native tools is the recommended solution for small to medium deployments. For deployments in larger organizations with SQL Server tools already implemented, Microsoft SQL Server Backup and Restore is typically used. Another option is the use of third-party tools. Each of these is discussed in more detail below.

### Central Administration Backup

This tool is accessible through the Central Administration site and provides a user interface through which an administrator can configure a backup job. Using this tool, a backup can be performed at various levels, the highest being the entire SharePoint farm and the lowest level being an entire content database. It also lets you choose a full or differential backup. A differential backup only captures data that has been modified or added since the last backup (either full or differential).

Microsoft best practices recommend a differential backup of all databases (including third-party databases) after the first full backup is performed. Perform a full backup of all databases within the farm (including third-party databases) on a weekly basis. And as needed, perform monthly full-farm backups and restore to an offline data source such as a mirror server or disk. This enables you to validate the integrity of the data that is backed up, ensuring your backup procedures are working correctly.

For restore actions, the Central Administration Backup tool walks you through a four step process, which includes choosing the location of the backup files, choosing which backup file to perform the restore from, selecting the content of the backup file to be restored and choosing the Restore Options (Create New or Overwrite). It backs up the search index and hooks up the SharePoint databases and search index upon restore.

A shortcoming of the Central Administration Backup tool is that it does not natively contain any scheduling options. Thus an administrator would have to manually kickoff the backup process each time it needs to be run. A solution to this problem is to develop a script to call Windows Scheduled Tasks to run the operation. Other limitations include the need to manually backup front end files (it is recommended to keep images of your web front end) and a long restore time (which results in low availability).

### Site Collection Backup and Restore (STSADM)

This command-line utility allows the Office SharePoint Server administrator to run periodic full-fidelity backups at the site collection level. STSADM will backup site collections, sub-sites, pages in the sites, files in documents libraries or lists, security and permission settings and feature settings. To restore these items that are contained

in the site collection, you restore the site collection to a different site and then manually copy the lost data to the original location. You can use STSADM from a command line or in a batch file so that you can schedule backups.

### SQL Server Backup and Restore

In this solution, the person responsible for the databases is typically a DBA rather than the administrator of the Office SharePoint Server. The main benefits to using SQL Server Backup and Restore are that backing up and restoring SQL databases is already a familiar task for database administrators, and this process can be automated by scheduling backup tasks. The backups can be verified that they are physically intact either through Enterprise Manager by selecting the “Verify backup upon completion” option or by using the “RESTORE VERIFYONLY” T-SQL command. Additionally, differential backups can be utilized to minimize the amount of time needed to backup frequently modified databases. Because the backup is non-application specific, the search index must be backed up separately via SharePoint backup.

### Third-Party Tools

A third-party MOSS 2007 backup and restore solution that is currently available is DocAve 4.0 by AvePoint, which is described as a “fully integrated item-level backup, recovery, staging, migration, content management, archiving, and disaster recovery solution”. Third-party tools address the automation and granularity issues that exist with native backup tools in MOSS 2007. See

[http://www.avepoint.com/download/MOSS\\_2007\\_Backup\\_Strategies.pdf](http://www.avepoint.com/download/MOSS_2007_Backup_Strategies.pdf) for more information.

## HIGH AVAILABILITY

Two solutions available to minimize downtime of a SharePoint Server are Log-Shipping with a Mirrored Farm and SQL Clustering.

### Log-Shipping with a Mirrored Farm

In this solution, SQL Server Log Shipping continually backs up the transaction logs from a source database and restores the logs to a destination, read-only database. This minimizes the performance hit generated during backup and restore operations. It also allows for data analysis on production data without impacting the production environment. In the case of a disaster, a router will switch traffic in minutes.

### SQL Clustering

A SQL Clustering provides an automatic failover capability without administrator intervention. The following table compares the SQL-Clustering solution to the Log-Shipping solution.

SQL FAILOVER CLUSTERING	LOG SHIPPING
The secondary node takes over immediately (hot)	A delay occurs before the secondary node takes over (warm); some manual intervention
Failure is automatically detected	Failure not detected automatically
Failover is automatic	Failover is not automatic
Protects against failed service	Protects against failed service
Does not protect against failed storage	Protects against failed storage
All databases protected	Only log-shipped databases are protected
Transactionally consistent	Transactionally consistent
Transactionally concurrent	Not transactionally concurrent
Limited distance	Unlimited distance
Short time to recovery (seconds/minutes)	Longer time to recover

## REFERENCES

1. Using Backup and Restore, Office SharePoint Server 2007  
<http://technet2.microsoft.com/Office/f/?en-us/library/1b73497a-5812-4ffc-b94f-c8b2c0715ace1033.mspx>
2. Office SharePoint Server 2007 Backup and Restore (Microsoft Visio download)  
<http://officebeta.iponet.net/download/afile.aspx?AssetID=AM101638901033>
3. Disaster Recovery for SharePoint Technologies  
<http://sharepointmvps.officeisp.net/spc2006/default.aspx>  
Document named ADM205\_Ohri\_051806.ppt, located under Breakouts.

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