

Disaster Recovery in Sharepoint

This is a good question to start with. What data do you need to back up in order to be sure that you can survive a catastrophic situation? The answer is that the information that relates to SharePoint is stored in a lot of places, not only the databases as one may at first assume. This section will describe what you need to know in order to protect the SharePoint environment. There is one golden rule when it comes to SharePoint backups: In other words, if you make a backup of a site, you will be able to restore that site, and nothing but that site. For example, you will not be able to restore a list or a single document in that site. The consequence is that you will most likely develop a strategy consisting of several backup procedures that all work together, in order to make it possible to restore whatever data has been lost.

Important Rule #1: What you back up is what you can restore!

The SharePoint Database

All information in all SharePoint sites is stored in the SQL database, including data, configurations, and customizations. SharePoint will use the types of databases in the following table, depending on whether you are using MOSS or WSS.

Open table as spreadsheet Database	Content
Content Databases (MOSS and WSS)	All documents, news, links, contacts, calendars, and so on. All Web Parts and their settings. All customization of sites done with SharePoint Designer.
Config Database (MOSS and WSS)	All team site names and their configuration properties. All site collections. All portal sites, including portal areas. All general configuration settings of the SharePoint server.
SSP Content Database (MOSS Only)	Excel service settings, Audience groups, User Profile database with all user properties entered manually or imported from AD, LDAP, or BDC sources. Indexing and search settings.
My Site Content Database (MOSS Only)	All content stored in the personal part of users' My Sites.

Note that SharePoint may have more than one content database, so make sure that all of these databases will be backed up by your procedure, if you perform pure SQL-based backup procedures instead of using any of the special backup tools that exist for SharePoint.

Important Rule #2: Make sure that all of SharePoint's databases are backed up.

SharePoint Files

If all your databases are backed up, you will be able to restore all data and configurations, as listed in the table in the [previous section](#). But in the event of a total server disaster, you will still lose SharePoint information, since some of it is stored in the file system on the SharePoint server. There are different types of SharePoint servers, with different roles:

- **Front-End Server:** A SharePoint server responsible for one or more roles; see the following table.
- **Back-End Server:** The server running the MS SQL database (SQL Express or MS SQL Server).

If you are using separate front-end and back-end servers, you will have to take steps to back up both of them, since both contain vital SharePoint information. The [previous section](#) described the information stored on the back-end server (the SQL server). The front-end sever may also contain information regarding what role it has in the SharePoint farm, as listed in the following table.

Open table as spreadsheet Front-End Role	Data Stored in the File System of This Server
Web	General SharePoint binary files Default site definitions, CSS files and WSS themes Customized site definitions Customized CSS files Customized WSS themes Customized Web Part files Customized IIS Metabase settings, including virtual servers
Search	General SharePoint binary files Copy of Index files (used by the search engine)
Index	General SharePoint binary files Index files generated by the crawler process
Excel Services	General SharePoint binary files
Central Administration	General SharePoint binary files

Important

In a Single-Server or Small Farm scenario all these roles run on the same SharePoint server.

The conclusion is that the SharePoint server running the Web role is very important, if you have customized your environment. If this information is lost, you will have to redo all branding and customization, and this requires that all these changes have been documented. (I am still waiting to see a SharePoint environment that is completely documented, including the IIS settings. Promise me that you will take the first approach, okay?)

If the Search server crashes, there is no real worry; just reinstall the SharePoint binaries, and the index files will be copied from the Index server again.

If the Index server crashes, it may be a problem, depending on how important the search process is for your users. The solution if there is no backup is to rescan all data sources. This may take a long time, if there is a large data volume, and during this time users cannot trust that the search results they get are complete, since all data may not yet have been crawled.

If the server running Excel Services or Central Administration crashes, just reinstall the SharePoint binaries; there is no specific data stored on this server.

Important Rule #3: Make sure to back up the file system and the IIS Metabase on the front-end servers.

Backup Options

As you should understand from the previous sections, you should think carefully about how to design your backup plan. It is may be more complicated than you at first may expect, especially if you want to have multiple options for the restore process. Still, it is a very easy and manageable task when you know how to do it and what tools to use. SharePoint comes with several tools that you can use for backing up the most important SharePoint information:

- **q STSADM:** Will do backup and restore complete site collections, plus single subsites.
- **q SharePoint Central Administration's backup tool:** Will do backup and restore of complete SharePoint environment or single web applications

Important SMIGRATE, which was used in SharePoint 2003 for backing up single sites, has now been replaced by new commands in the STSADM tool.

You should learn to use these two tools, since they are focused on different backup scenarios, but remember that they will only serve to back up SharePoint data in the SQL database, plus in the case of the Backup feature in the Central Administration tool also the index files. Besides these tools that come with SharePoint, there are also several commercial backup solutions for both WSS and MOSS.

Moving and Copying Information

Sometimes you need to move or copy information, such as a site, a list or a single document. For example, say that you are developing a team site on a test server and after determining that it works as expected, you want to move it to the production environment. Another example is when you want to restore a single document that was accidentally deleted. There are several methods to do that, and almost all of them use these backup and restore procedures.

The exceptions are when you want to move or copy a list or library, a list item, or a single document between two sites. In this case, you have these options:

- q Move/Copy single documents, for example, a MS Word file. Use any of these methods:
 - q Using the Explorer View, you can right-click a document and select Copy, then open the destination library in an Explorer View and select Paste.
 - q Use web folders mapped to each library, then copy and paste between those folders like any standard file folders.
 - q Open the document in MS Word, then save it in the destination library.

Important Rule #4: You can only copy the latest version of a document, not its complete version history.

- q Move/Copy single list items, for example a customer contact:
 - q Open the Contact list using the Datasheet view, right-click the contact and select Save, then open the destination list in the Datasheet view, right-click, and select Paste.
 - q Open the Contact list using the Datasheet view, right-click the contact, and select Save, then open the destination list in the Datasheet view, right-click on the last line (marked with an asterisk), and select Paste.
- q Move/Copy a complete library, for example a document library:
 - q To another site in the *same site collection*: Click Modify settings and columns for the library to be moved, then select Save document library as template, and give it a name and a description, make sure to check Include Content, and click OK. Open site to which the library will be copied; click Create in the top menu bar, select the template, and give it a new name.
 - q To *another site collection*: Click Modify settings and columns for the library to be moved, select Save document library as template, give it a name and a description, make sure to check Include Content, and click OK. On the following page, click on the link List Template Gallery, then click the template name for the list, and select Save. Next, open the top-level site for the site collection the list will be copied to: Click Site Settings Go to Site Administration Manage List Template Gallery and click Upload Template. Select the previously saved file, and click Save and Close. Then go to the site where you want to place

the library and click Create. Your copied library is listed in the Document Library section.

- q Moving a library with more than 500 MB of content: Save the library as a template as described above, but do not check Include Content. Continue to import that template into the other site collection. Now use the previous technique to move single documents and move (or copy) all documents from the old library to the new one.

Important Rule #5: A template for a list or library can only contain up to 500 MB of content.

- q Move/Copy a complete list, for example a Task list:
 - q For lists with less than 500 MB of content, use either of the first two options for moving and copying a complete library.
 - q Moving a list with *more than 500 MB* of content: Create a view that shows all the columns you want to move with the list, and then open the list using that new view. Click the Actions button, and click Export to Spreadsheet. In Excel save the list as an Excel file. Go to the site where you want to place the list. Click Create in the top menu, and then select Import Spreadsheet. Give the new list a name, and enter saved file in the File Location and click Import. In Excel, use the Range Type "List Range," and for the Select Range field pick the only option available, then click Import. The complete list, including column definitions, will be copied. Note that this method will not copy any special views; you will have to recreate them (or save the list as an empty template and create the new list using that template, then use Excel to export and import the list content).

Important Rule #6: Use Excel for moving or copying lists greater than 500 MB.

There are also third-party tools that may help you move single documents and lists; for example, DocAve from AvePoint (<http://www.avepoint.com>) and SPManager from NSE (<http://www.tnse.com>).