

SharePoint Portal Server 2003 Advanced Migration Scenarios

White Paper

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White Paper

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For the latest information, please see SharePoint Portal Server on Office Online.

Introduction

Microsoft® Windows® SharePoint™ Services and Microsoft Office SharePoint Portal Server 2003, the next versions of SharePoint Team Services and SharePoint Portal Server 2001, respectively, provide easy-to-use collaboration tools for your organization. Windows SharePoint Services is a set of services that you can use to create and maintain many team sites, and SharePoint Portal Server 2003 is a server product that adds features you can use to build and manage integrated, enterprise-scale portal solutions.

This white paper describes the most common scenarios that IT professionals encounter when migrating from SharePoint Portal Server 2001 to SharePoint Portal Server 2003. Each scenario is accompanied by a recommended migration approach. This white paper also introduces two new Microsoft migration utilities: the Document Library Export Tool (Spout.exe) and the Document Library Import Tool (Spin.exe).

The migration scenarios covered by this white paper include migrating the following configurations to SharePoint Portal Server 2003:

- 1. Multiple departmental workspaces per server
- 2. Single workspace with complex document libraries
- 3. Single workspace with multiple personal dashboards
- 4. Corporate search site with multiple indexing servers
- Migrating between different languages

In addition, sample code is included in the appendixes for:

- Enumerating SharePoint Portal Server 2001 personal dashboards
- Creating SharePoint Portal Server 2003 user profiles
- Creating SharePoint Portal Server 2003 personal sites

It is assumed that the reader has previous experience designing and implementing one or more of the preceding scenarios using SharePoint Portal Server 2001 and a basic understanding of SharePoint Portal Server 2003.

Related White Papers

This white paper is part of a series designed to help Microsoft customers understand, plan, and implement the changes required to migrate from SharePoint Team Services

and SharePoint Portal Server 2001 to Windows SharePoint Services and SharePoint Portal Server 2003.

This series includes the following related white papers:

- Microsoft SharePoint Products and Technologies: Technical Overview
- Migrating from SharePoint Team Services and SharePoint Portal Server 2001 to Microsoft SharePoint Products and Technologies
- Developing Web Parts for Microsoft SharePoint Products and Technologies

Background

Early in 2004, Microsoft released the first version of the SharePoint Portal Server 2003 Document Library Migration Tools to assist customers migrating from the Web Storage System-based document libraries in SharePoint Portal Server 2001 and the backward-compatible document libraries in SharePoint Portal Server 2003 to the SharePoint document libraries (based on Microsoft SQL Server™) found in Windows SharePoint Services and SharePoint Portal Server 2003.

SharePoint Portal Server 2003 Document Library Migration Tools

The SharePoint Portal Server 2003 Document Library Migration Tools are a set of utility programs developed by Microsoft for migrating documents and associated descriptive information ("metadata") from SharePoint Portal Server Web Storage System-based document libraries to SharePoint Portal Server 2003 SQL Server-based document libraries. The tools can export documents and associated descriptive information from SharePoint Portal Server 2001 document libraries as well as SharePoint Portal Server 2003 backward-compatible document libraries—both of which are based on Microsoft Web Storage System technology. The content exported by the tools can be imported into SharePoint Portal Server 2003 document libraries that reside on a SharePoint Portal Server 2003 portal site, team site, My Site personal site, or SharePoint Portal Server 2003 portal area.

The two document library migration tools developed by Microsoft are Spout.exe and Spin.exe. Spout.exe, the Document Library Export Tool, is a Microsoft Windows program that reads Web Storage System-based document libraries and exports (or outputs) the selected content as a collection of files in a format that is understood by the import program. Spin.exe, the Document Library Import Tool, is a Windows command-line program that reads the collection of files created by Spout.exe and adds the documents and associated descriptive information to the selected portal area, portal site, team site, or personal Web site on the server running SharePoint Portal Server 2003.

The Document Library Migration Tools can be used alone or in conjunction with other Microsoft tools to assist in the following migration scenarios.

Migration Scenarios

Multiple Departmental Workspaces Per Server

SharePoint Portal Server 2001 Scenario

In this common scenario, a single server running SharePoint Portal Server 2001 was used to deploy multiple departmental or team-based workspaces.

Migrating to SharePoint Portal Server 2003

To migrate this scenario to SharePoint Portal Server 2003, use Spout.exe to export the content of each workspace to a file share on the destination server running SharePoint Portal Server 2003. Then use Spin.exe to import the exported content.

The Spout.exe user interface includes settings for general configuration, version handling, and profiles and security that control how the content is stored when it is imported into SharePoint Portal Server 2003.

Spin.exe imports the content and associated descriptive information and must be executed on the same server as the destination SQL Server–based SharePoint Portal Server 2003 document libraries. The exported XML manifest file and content files must also be available on this server.

After they are imported, each SharePoint Portal Server 2001 workspace is represented as a SharePoint site or one or more areas.

Single Workspace with Complex Document Libraries

SharePoint Portal Server 2001 Scenario

This scenario is based on a single workspace that uses two levels of document library folders to store a large collection of Microsoft Word documents as well as to control which users have access to specific groups of documents. A two-level category hierarchy is also used to provide an alternate way of navigating through the document collection. A single document profile is used to store additional information about each document.

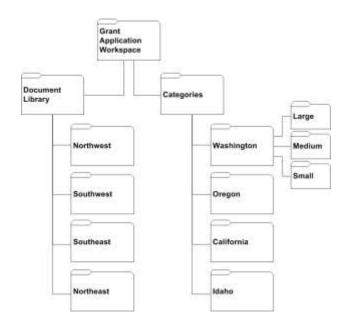


Figure 1. Grant application document library and category hierarchy

In more detail, this scenario is based on a single workspace that holds a large collection of grant applications that have been stored as Microsoft Word documents (depicted in Figure 1). Each document has the following properties associated with it: province/state and grant size (small, medium, and large). Access control to the documents is based on a grant reviewer's membership in one or more regional grant review teams.

Each review team is represented by an Active Directory® global group. For each team a grant reviewer belongs to, his or her Windows account is a member of the corresponding global group.

The Categories folder contains a subfolder for each province/state; each of these folders contains a subfolder for each grant size.

The goal is to replicate this solution in SharePoint Portal Server 2003.

Migrating to SharePoint Portal Server 2003

In SharePoint Portal Server 2003, access control can be managed at the site level. To migrate this scenario to SharePoint Portal Server 2003, a separate SharePoint site can be used to manage access permissions for each subfolder of documents. (Alternatively, access permissions can be assigned multiple document libraries, on a library-by-library basis within a single SharePoint site.) The SharePoint Portal Server 2001 document category information is used to link each document to the corresponding SharePoint Portal Server 2003 area.

Areas are the SharePoint Portal Server 2003 equivalent of categories in SharePoint Portal Server 2001. Areas typically contain links to documents, user profiles, internal and external Web sites, other SharePoint sites and lists, etc. An area can contain subareas, used to group content and provide an alternative structure for organizing and navigating all types of content, including other SharePoint sites, documents, employee contact information, and personal sites. A document can appear in several different areas.

For this scenario, run Spout.exe to export the content from each SharePoint Portal Server 2001 document library subfolder. You can run Spout.exe from the SharePoint

Portal Server 2001 or SharePoint Portal Server 2003 server, and the exported documents and associated descriptive information must be saved to an NTFS file system that is accessible from the SharePoint Portal Server 2003 front-end server.

Security Note Ensure that you specify the appropriate security settings on the folder to which you export the content. The folder security settings will control file systembased access to the exported content until it is imported into the target site and the content in the export folder is deleted.

Spin.exe must run, locally on the SharePoint Portal Server 2003 front-end server, once for the content exported from each subfolder. The content from each subfolder is automatically imported into its own site. This insures that the access controls in the original SharePoint Portal Server 2001 workspace are preserved in SharePoint Portal Server 2003. The sequence of spin.exe commands would be similar to

```
spin.exe http://psn-w23-012c/sites/grantapps/northeast Northeast.xml spin.exe http://psn-w23-012c/sites/grantapps/northwest Northwest.xml spin.exe http://psn-w23-012c/sites/grantapps/southeast Southeast.xml spin.exe http://psn-w23-012c/sites/grantapps/southwest Southwest.xml where the first parameter is the URL of the four different SharePoint sites and the second parameter is the name of the XML manifest file exported by Spout.exe.
```

Support Note To import a document collection into a subsite of a SharePoint site, make sure that you have downloaded the latest hotfix for Spin.exe. For more information about how to download the required Spin.exe hotfix, refer to Microsoft Knowledge Base article 839797. This article can be found at http://support.microsoft.com/.

If the SharePoint Portal Server 2001 workspace category information was previously imported as areas during the Upgrade.exe installation process and the document profiles include the Category property, Spin.exe automatically links each document to the areas that correspond to the document's SharePoint Portal Server 2001 category metadata. The category metadata is also stored as a column in each document library.

Additional Considerations

SharePoint Portal Server 2001 document libraries support the use of multiple document profiles per document folder. The document profiles are defined at the workspace level. SharePoint Portal Server 2003, in effect, supports only one document profile per list or document library. Spout.exe provides the option of exporting the properties of one workspace document profile or a merge of the properties from all available document profiles.

Single Workspace with Multiple Personal Dashboards

SharePoint Portal Server 2001 Scenario

In this scenario, a workspace is used to group a collection of personal dashboards, and little, if any, use is made of the top-level workspace dashboard. Each personal dashboard site consists of the Home dashboard page and an additional Reports subdashboard page.

Migrating to SharePoint Portal Server 2003

No in-the-box support is available for migrating personal dashboards from SharePoint Portal Server 2001 to SharePoint Portal Server 2003 My Sites.

By default, in SharePoint Portal Server 2003, all users in the Member site group or with the Create Sites and Create Personal Site rights automatically have a personal site created for them when they click the **My Site** link on the portal site home page.

My Site is a personal SharePoint site created on the portal site that provides personalized and customized information for each user. Your personal site consists of two views: A private view for personal information that only you can see, and a public view seen by everyone else. The private view is shown by default when you view your personal site.

Site administrators can determine the level of My Site personalization granted to users. Administrators can modify the shared view of My Site to customize the default appearance of personal sites.

Tip The SharePoint Portal Server 2001 Upgrade Tool (Upgrade.exe) is used to upgrade the SharePoint Portal Server 2001 Web Storage System-based document libraries to a new version that is compatible with Microsoft Windows Server™ 2003 and SharePoint Portal Server 2003. After Upgrade.exe is complete, all of the original Web Storage System data is available in the backward-compatible document library (including the Dashboards folder where the data that represents the personal dashboards are stored by SharePoint Portal Server 2001). A script or Microsoft Visual Studio® .NET application can be written to assist the migration process by scanning SharePoint Portal Server 2001 for existing personal dashboards and use the SharePoint Portal Server 2003 object model to pre-create My Site personal sites for each user.

Corporate Search Site with Multiple Indexing Servers

SharePoint Portal Server 2001 Scenario

This scenario is based on the highly scalable Search and Aggregated Document Management scenario described in the SharePoint Portal Server 2001 Planning and Installation Guide. The server configuration usually consists of two or more dedicated servers running SharePoint Portal Server 2001 that are dedicated to indexing several content sources inside an organization or on the Internet. The dedicated index servers in turn propagate their index catalog databases to a server running SharePoint Portal Server 2001 that is devoted to processing end user search requests. The search requests may originate from a search Web page in a dashboard page or a Web page on the organization's intranet.

The goal is to re-create the equivalent highly scalable, multiple-server indexing and search solution using SharePoint Portal Server 2003 server farms.

Migrating to SharePoint Portal Server 2003

SharePoint Portal Server 2003 provides support for single-server installations up to very large server farm deployments supporting hundreds of thousands of users and millions of documents.

Figure 2 depicts a medium size SharePoint Portal Server 2003 server farm. One server is primarily dedicated to content indexing (while also serving as the job server), and two other servers are dedicated to providing search services to the employee-facing portal

site. Alternatively, content searching can be moved to the portal site front-end servers, freeing the original search servers to act as dedicated content indexing servers.

The trade-off between the two solutions would depend on the amount of new and changed content to be indexed relative to amount of the average number of search queries that need to be executed. If the amount of new and changed content is small and the number of portal site users is high, a single-index server (shared with the role of job server) and more dedicated search servers would suffice. If the amount of new and changed content is high (such as with indexing of several external Web sites) with relatively few queries being issues (such as with a small competitive intelligence team), more, dedicated index servers and shared search servers would be the best combination.

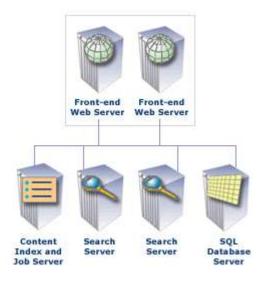


Figure 2. SharePoint Portal Server 2003: medium size server farm

Additional Considerations

- All servers in a SharePoint Portal Server 2003 server farm must be running Windows Server 2003 and the same version and language of SharePoint Portal Server. SharePoint Portal Server 2001 dedicated index servers cannot propagate their index catalog databases to a server running SharePoint Portal Server 2003.
- The SharePoint Point Portal Server Upgrade Tool (Upgrade.exe) cannot be used to export configuration from a SharePoint Portal Server 2001 dedicated index server.

Migrating Between Different Languages

SharePoint Portal Server 2001 Scenario

SharePoint Portal Server 2001 supported six languages: English, French, German, Italian, Japanese, and Spanish. SharePoint Portal Server 2003 provides support for a total of 25 languages (including English).

When a SharePoint Portal Server 2001 administrator needs to support users with a language other than the original six supported languages, he or she usually installs the English language version of SharePoint Portal Server, and users use the local language version of Microsoft Office to create documents in their local language.

This scenario assumes there is an existing SharePoint Portal Server 2001 server installation and the workspace's document library is used to store Microsoft Word documents primarily written in a language other than English (such as Korean). The language used on the workspace's dashboard is English.

The goal of this scenario is to move the English workspace containing Korean Word documents to a SharePoint Portal Server 2003 solution that is entirely in Korean.

Migrating to SharePoint Portal Server 2003

Spout.exe and Spin.exe can be used to export and import the documents and associated descriptive information from the Web Storage System-based document library on the server running English SharePoint Portal Server 2001 to a document library on a Korean language version of SharePoint Portal Server 2003 (on a Korean version of Windows Server 2003).

Additional Considerations

- In a SharePoint Portal Server 2003 server farm, the operating system language versions must be identical. In addition, the language version of all the server farm SharePoint Portal Server installations must be identical (but they can be different from the operating system language version).
- Using the SharePoint Portal Server 2003 upgrade feature included with setup, the
 original six language versions of SharePoint Portal Server 2001 can only be upgraded
 to the same language version of SharePoint Portal Server 2003; for example, English
 to Korean upgrades are not supported.
- The names and values of custom properties used in document profiles remain unchanged. In most customer scenarios, the names and values of these document profile properties were already using the native language of the region.
- Site names, similarly, remain unchanged after migrating to SharePoint Portal Server 2003.
- Predefined, default properties in document profiles appear in the language version of the SharePoint Portal Server 2003 installation after migration is completed.
- The migration tool, Spout.exe, uses the same language version of the SharePoint Portal Server 2001 installation when exporting the content of the server.
- The setup program for the backward-compatible document library component of SharePoint Portal Server 2003 is only available in English. However, after this component is installed, the backward-compatible document library Web pages are displayed using the same language as that selected for the SharePoint Portal Server 2003 server installation.
- Custom digital dashboard Web Parts, whether localized or not, are not automatically moved to SharePoint Portal Server 2003.

Migration Resources

Migration resources for SharePoint Products and Technologies include services, features, and tools that that are included with SharePoint Products and Technologies. Additional resources will be included with the Microsoft SharePoint Products and Technologies

Resource Kit. Additional tools are also available from the Microsoft Download Center: http://www.microsoft.com/downloads.

Document Library Migration Tools

The SharePoint Portal Server 2003 Document Library Migration Tools are a set of utility programs developed by Microsoft for migrating documents and associated descriptive information ("metadata") from SharePoint Portal Server Web Storage System-based document libraries to SQL Server-based SharePoint Portal Server 2003 document libraries. The tools can export documents and associated descriptive information from SharePoint Portal Server 2001 document libraries as well as SharePoint Portal Server 2003 backward-compatible document libraries—both of which are based on Microsoft Web Storage System technology. The content exported by the tools can be imported into SharePoint Portal Server 2003 document libraries that reside on a SharePoint Portal Server 2003 portal site, team site, My Site personal site, or SharePoint Portal Server 2003 portal area.

The two Microsoft-developed document library migration tools are Spout.exe and Spin.exe.

Spout.exe Document Library Export Tool

Spout.exe, the Document Library Export Tool, is a Windows program that reads Web Storage System-based document libraries and exports (or outputs) the selected content as a collection of files in a format that is understood by the import program.

Spout.exe exports workspace document library content as an XML manifest file and a collection of individual content files. The XML schema used to structure the manifest file represents the objects and properties found in SharePoint Portal Server 2003. The XML manifest file stores the descriptive information associated with each exported document.

The descriptive information includes the names and values of the document profile properties, security settings, and version information associated with each document. SharePoint Portal Server 2001 routing and approval workflow settings are not exported.

Spin.exe Document Library Import Tool

Spin.exe, the Document Library Import Tool, is a Windows console application that reads the XML manifest file and the documents exported by a previous execution of Spout.exe. Spin.exe then imports the documents and their associated descriptive information into a SharePoint Portal Server document library and/or areas. The descriptive information includes the names and values of the document profile properties, security settings, and version information associated with each document. SharePoint Portal Server 2001 routing and approval workflow settings are not imported.

Additional Considerations

- Spout.exe is a Microsoft .NET application and requires installation of the latest version of the Microsoft .NET Framework on the SharePoint Portal Server 2001 server. Optionally, Spout.exe can be run on a remote server, eliminating the need to install the .NET Framework on the server running SharePoint Portal Server 2001.
- The Spout.exe and Spin.exe migration tools are not supported for SharePoint Portal Server 2001 workspaces created by customers and partners who developed their own localized versions of SharePoint Portal Server 2001.

 The initial release of Spout.exe supports exporting content from SharePoint Portal Server 2001 document libraries and not from SharePoint Portal Server 2003 SQL content stores. To move content from SharePoint Portal Server 2003 to SharePoint Portal Server 2001, contact Microsoft Consulting Services or a Microsoft Certified Solution Partner.

Conclusion

Windows SharePoint Services and SharePoint Portal Server 2003 provide easy-to-use collaboration tools for your organization. You can use Windows SharePoint Services to create and maintain many team sites, and you can use SharePoint Portal Server 2003 to build and manage integrated, enterprise-scale portal site solutions.

To achieve this significant increase in capability, performance, stability, and security, the overall architecture of Microsoft SharePoint Products and Technologies includes many significant changes. The most important of these changes are the use of the .NET Framework, Windows Server 2003, and Microsoft SQL Server for content storage.

Migrating to the next generation of Microsoft SharePoint Products and Technologies is a straightforward process of identifying your organization's needs, planning your migration appropriately, and making the best use of migration resources.

Organizations that use many custom dashboard Web Parts or that have made extensive use of the multiple document profile features or the routing and approval features in SharePoint Portal Server 2001 require more planning and effort. Migration assistance is available from Microsoft Consulting Services and from Microsoft Certified Solution Partners.

For more information, visit the SharePoint Products and Technologies Web site.

Appendix A: Personal Dashboard Enumeration Sample Code

The following two Visual Studio .NET C# functions can be used to enumerate the list of personal dashboards found in all of the workspaces on a particular server running SharePoint Portal Server 2001 as well as the SharePoint Portal Server 2003 backward-compatible document store. The list of personal dashboard sites can be used to create SharePoint Portal Server 2003 sites (see Appendix B).

Note When the SharePoint Portal Server 2001 document libraries are upgrade to the SharePoint Portal Server 2003 backward-compatible document libraries, all of the original workspace folders and content can be found in the upgraded document libraries (includes the Dashboards personal dashboard folders). While the original content is available, the digital dashboard portal site technology is not.

How to Enumerate SharePoint Portal Server 2001 Personal Dashboards

```
void EnumerateSPS2001Workspaces( string urlServer )
{
   PKMCDO.KnowledgeServer kServer = new PKMCDO.KnowledgeServer();
   Object oNull = null;
```

```
ADODB.Recordset rsWorkspaces = new ADODB.Recordset();
   string urlWorkspaceFolder = urlServer
            + "/Sharepoint Portal Server/workspaces/";
   Console.WriteLine("urlWorkspaceFolder: " + urlWorkspaceFolder);
   kServer.DataSource.Open(urlWorkspaceFolder,
      oNull,
      PKMCDO.ConnectModeEnum.adModeReadWrite,
      PKMCDO.RecordCreateOptionsEnum.adFailIfNotExists,
      (PKMCDO.RecordOpenOptionsEnum) 0,
      "Administrator", "" );
   rsWorkspaces = (ADODB.Recordset) kServer.Workspaces;
   rsWorkspaces.MoveFirst();
   while(!rsWorkspaces.EOF)
      string sWorkspace = (string)rsWorkspaces.Fields[0].Value;
      Console.WriteLine("Workspace: " + sWorkspace );
      string urlPersonalDashboard = urlServer + "/"
            + sWorkspace + "/Dashboards";
      Console.WriteLine("Dashboards Folder: " + urlPersonalDashboard );
      EnumerateSPS2001PersonalDashboards(urlPersonalDashboard);
      rsWorkspaces.MoveNext();
   rsWorkspaces.Close();
void EnumerateSPS2001PersonalDashboards( string urlPersonalDashboard )
   PKMCDO.KnowledgeFolder kFolder = new PKMCDO.KnowledgeFolder();
   ADODB.Recordset rsPersonalDashboards = new ADODB.Recordset();
   Object oNull = null;
   kFolder.DataSource.Open(urlPersonalDashboard,
      oNull,
      PKMCDO.ConnectModeEnum.adModeReadWrite,
      PKMCDO.RecordCreateOptionsEnum.adFailIfNotExists,
      (PKMCDO.RecordOpenOptionsEnum)0,
      "Administrator", "" );
```

}

Appendix B: My Site Personal Site Creation Sample Code

The following two C# functions are useful code samples for 1) creating a SharePoint Portal Server 2003 user profile for an existing Active Directory domain user and 2) creating a personal site (a "My Site") after the user profile for the user has been created.

How to Create SharePoint Portal Server 2003 User Profiles

```
public void UserProfileSample()
   //get portal site context from topology
   string strUrl = "http://myserver";
   TopologyManager tm = new TopologyManager();
   PortalSite ps = tm.PortalSites[new Uri(strUrl)];
   PortalContext pc = PortalApplication.GetContext(ps);
   //initialize user profile config manager object
   UserProfileManager upm = new UserProfileManager(pc);
   //create user sample
   string sAccount = "mydomain\\myalias";
   if (!upm.UserExists(sAccount))
      upm.CreateUserProfile(sAccount);
   //to set prop values on user profile
   UserProfile u = upm.GetUserProfile(sAccount);
   string sPropName = "PreferredName";
   u[sPropName] = sAccount;
```

```
u.Commit();
}
```

How to Create SharePoint Portal Server 2003 Personal Sites

```
public void CreatePersonalSiteSample()
{
    //get portal site context from topology
    string strUrl = "http://myserver";
    TopologyManager tm = new TopologyManager();
    PortalSite ps = tm.PortalSites[new Uri(strUrl)];
    PortalContext pc = PortalApplication.GetContext(ps);

    //initialize user profile config manager object
    UserProfileManager upm = new UserProfileManager(pc);
    string sAccount = "mydomain\\myalias";
    UserProfile u = upm.GetUserProfile(sAccount);
    u.CreatePersonalSite();
    SPSite mysite = u.PersonalSite;
    string myurl = u.PersonalUrl;
}
```

*** * * ***

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