



CopyMove for SharePoint 2010 Administrators Guide

Applies to product version 2.3.0

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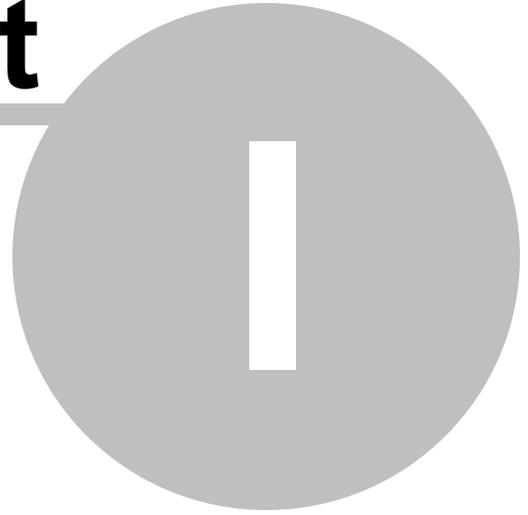
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Part



Introduction

1 Introduction

CopyMove for SharePoint 2010 is a commercial add-on for Microsoft SharePoint Foundation 2010 and Microsoft SharePoint Server 2010. It enables end-users to easily and safely copy and move files, list items and folders with full fidelity. That is, CopyMove will preserve timestamps, author information, meta data, version history and item level permissions. There is also an export and import function that enables them to export content from one SharePoint farm and import it to another farm.

The product is primarily designed for end-users who need to migrate smaller amounts of content at a time. It can of course also be used by administrators - but should not be confused with a full blown migration tool to migrate large volumes of content.

Technically, CopyMove performs all the work through the official SharePoint server side .NET API. All copy and move transactions follow the procedure outlined below:

1. User selects the items to copy or move.
2. User selects the target location where the selected items should be copied or moved to.
3. CopyMove validates the requested transaction and reports any errors and warnings before the transaction is initiated. Errors will abort the transaction while warnings must be confirmed by the user to initiate the transaction.
4. CopyMove exports the selected items to disk on the SharePoint Web front-end server handling the request.
5. CopyMove imports the items again from disk to the selected target location.
6. If it is a move transaction and the import operation was successful, CopyMove then deletes the selected items in the source location.
7. CopyMove logs the transaction to the SharePoint audit log if enabled.
8. CopyMove deletes the exported items on disk.

1.1 Audience

This product manual is intended for SharePoint server administrators who need to install and maintain CopyMove for SharePoint 2010. Secondly, it also targets SharePoint developers who need to extend CopyMove programmatically. The chapters **Installation & Setup** and **Administration** are written for the SharePoint administrator while the **Extending CopyMove** chapter is designated to the SharePoint developer.

1.2 Product history

The first version of CopyMove for SharePoint 2007 was developed early 2008 for one specific client who had long sought a good and user friendly tool for copying and moving documents in SharePoint. It was deployed to their production environment in the autumn of 2008 and is still pleasing the end-users there. The product then received some more work to take it from a single-client product to a shrink-wrap product, which is quite a different world in terms of product completeness and stability. The first shrink-wrap version was released to Web on www.sharepointproducts.com in March 2009.

In the following years CopyMove was downloaded and evaluated by thousands of registered users and was in turn also purchased by many. The product now has a strong customer base and we have listened to a lot of feedback over the years and improved the product accordingly. The constant improvements has turned it into a very usable and stable product that will work in almost any SharePoint environment. CopyMove has been deployed by customers to single-server SharePoint farms and up to SharePoint farms consisting of 10+ servers.

In May 2010 a new major version of SharePoint from Microsoft hit the market, and it quickly became evident that CopyMove was still needed to fill the gap of a safe, fast and user friendly way to copy and move content. SharePoint 2010 did not bring any improvements over SharePoint 2007 in this respect. Consequently, we decided to invest our efforts in developing a major upgrade of CopyMove to provide support for SP2010 as well. Much work was required to support the new SharePoint user interface and new functionality like document sets and managed Metadata. Finally, late 2010 we released the first version of CopyMove for SharePoint 2010.

One should think that developing a tool for copying and moving stuff in SharePoint is a simple endeavor - but it's not! We first tried to rely on the SharePoint migration framework (the SPEXport and SPIImport classes) - but that quickly turned out to be a dead end as this framework is seriously flawed for use in end-user Web requests. Instead, we had to invest in the development of our own migration framework on top of the SharePoint object model. It was a big investment but worth it today. It is very flexible, extensible and stable and serves as a good engine for CopyMove. Let's for a moment go back to why SharePoint does not make it easy to copy and move content. First of all it is difficult because documents and list items can be associated with a huge array of different artifacts that can take a lot of work to recreate programmatically in a new location. The list of possible artifacts include timestamps, user information, version history, content types, Web parts, properties in a property bag, 10+ types of different Metadata columns, content approval, ratings, work flows, item permissions, unique document ids and barcodes. Next, there are several types of documents that all work through different parts of the SharePoint API and in very different ways. Types of documents include regular document files, Web part pages, Wiki pages, Publishing pages and document sets. Next, it takes a lot of time to perfect a migration framework like the one we built because of the complexity involved in supporting all the different formats and artifacts in SharePoint. Also, integrating so wide and deeply with the SharePoint API inevitably gets you into corners where SharePoint has unexpected and undocumented behavior. Finally, CopyMove has also grown into a complex product under the hood because it uses a lot of effort to validate each transaction to guide and protect users from loosing data. In other words, creating a fool-proof tool is also a complex task. See the section Product Features for more details on transaction validation.

1.3 Product Features

CopyMove 2010 was designed with the following mindset:

- It must be easy to install, upgrade and uninstall the product.
- It must look nice and be easy to use.
- It must provide seamless integration with the SharePoint Web user interface.
- It must work exclusively through the official SharePoint object model (.NET API).
- It must work fast and perform copy and move tasks without making the user wait longer than necessary.
- It must never alter any configuration settings in document libraries and lists like adding a new content type because it is missing in the target.
- It must be extensible.

The following table outlines the features included in the product.

Feature	Description
Copy and Move documents	Enables users to copy and move selected documents across folders, lists, sites and site collections within the same farm.
Copy and Move list items	Enables users to copy and move selected list items across folders, lists, sites and site collections within the same farm.
Copy and Move folders	Enables users to copy and move complete folder structures including all content. However, users are prevented from performing a move in the event that the folder contains one or more items and/or sub-folders with unique permissions preventing the current user from deleting them.
Copy and Move Web part pages	Enables users to copy and move Web part pages including any Web parts.
Copy and Move Wiki pages	Enables users to copy and move Wiki pages including contents and Web parts.
Copy and Move publishing pages	Enables users to copy and move Publishing pages including contents and Web parts.
Copy and Move document sets	Enables users to copy and move complete document sets.
Copy and Move across site collections	Enables users to copy and move content across any accessible site collections within the same farm.
Export and Import documents	Enables users to export documents to a ZIP archive and import them again to a new location in any SharePoint farm with CopyMove installed. The document version history, Meta data and item permissions are all recorded to a file named manifest.xml on export. The import function relies on this manifest.xml file to import the documents again with full fidelity. However, the import function also recognizes plain ZIP archives that was not created by the CopyMove export function. This is handy to quickly import multiple new documents and folders to SharePoint from a local hard drive or a shared folder.

Feature	Description
Export and Import list items	Enables users to export list items to a ZIP archive and import them again to a new location in any SharePoint farm with CopyMove installed.
Export and Import folders	Enables users to export and import complete folder structures.
Export and Import document sets	Enables users to export and import complete document sets.
Version history preservation	CopyMove can preserve the full version history for files, folders and list items unless version history has not been enabled for the target location.
Meta data preservation	CopyMove preserves all Meta data for files, folders and list items including the created date, last modified date, created by user, last modified by user, content type, other system properties as well as all custom properties. Managed Meta data is also supported.
Item permissions preservation	Unique permissions on files, folders and list items can also be preserved .
Unique Document ID preservation	Move operations will preserve any assigned document id's while copy operations will assign new id's to the document copies.
Limit access by permissions	Site collection administrators and site owners can limit access to the CopyMove functions using the standard permissions model in SharePoint.
Enforce required fields	CopyMove will enforce required fields when copying or moving items to another library or list with additional required meta data columns. The user is in case asked to supply values for the missing columns on the source items.
Warning on file overwrite	Warns users if they are about to overwrite any files in the target location.
Warning on loss of version history	Copying, moving and importing files and list items from lists with version history enabled to another list without versioning, implies that the version history is lost. In this situation, CopyMove issues a warning to the user before the transaction is started.
Warning on loss of Content Type information	Copying, moving and importing files and list items associated with Content Types that do not exist in the target list, implies that this information is lost. In this situation CopyMove issues a warning to the user before the transaction is started.
Warning on loss of Metadata	Copying, moving and importing files and list items associated with custom Meta data in list columns that do not exist in the target list, implies that this information is lost. In this situation CopyMove issues a warning to the user before the transaction is started.
Cross browser support	CopyMove has been tested with Internet Explorer 7, 8 and 9 plus FireFox and Google Chrome.
Seamless integration	In SharePoint Server 2010 it is necessary to navigate to the "Manage Content and Structure" page to access the Copy and Move actions. With CopyMove, users can access the Copy, Move, Export and Import functions directly from the Ribbon in list views.
Administrators can configure transaction limits	Moving and copying large volumes of data in one transaction can be very time consuming and resource intensive leading users to believe that the application has entered a deadlock. Consequently, CopyMove enforces a limit on the number of files and the total MB that each user is allowed to select for one

Feature	Description
	transaction. The limit can be configured by SharePoint administrators from SharePoint Central Administration - but only up a ceiling of 2000 files / 2 GB for users and 10000 files / 10 GB for site collection administrators.
Administrators can configure farm wide settings for CopyMove	CopyMove has several configuration options that SharePoint administrators can configure for CopyMove throughout a SharePoint farm.
Site collection administrators can override farm settings	By default CopyMove operates with the farm wide settings. But site collection administrators can choose to override most of these settings for anyone or their site collections. However, the transaction limits cannot be overridden by site collections - the limits specified by the SharePoint administrator always applies to CopyMove throughout the farm.
User profile integration	For SharePoint Server 2010, CopyMove includes special support for My Sites and Membership Sites in the target selection tree.
Workflow integration	CopyMove 2010 also installs a custom workflow action to enable workflow designers to use the Copy function in SharePoint Designer workflows.
.NET API	For server-side programmatic access to the Copy and Move functions.
WCF Service API	For remote programmatic access to the Copy and Move functions.
Logs transactions to the Audit log	CopyMove automatically logs all transactions to the SharePoint audit log if it has been enabled for the site collection in question.
Support for custom list templates	All versions of CopyMove 2010 before version 2.1.0 does not support custom list templates out-of-the-box. That is, the Copy and Move actions only shows in lists created from one of the standard SharePoint list templates. Custom list templates required some customization to include CopyMove in the list menus. From version 2.1.0 and on CopyMove also supports custom list templates that leverages the Ribbon control. That is the CopyMove actions are now registered for specific Ribbon locations regardless of list type.
Support for SP2007 list templates	The CopyMove actions are still available on sites that are still using the SharePoint 2007 site template after the farm has been upgraded to SharePoint 2010.

Some of the features mention that CopyMove validates Copy and Move transactions before executing them and this is indeed true. The pre-validation protects users from inadvertent loss of data and it also minimizes the risk that the transaction will fail half-way. CopyMove specifically issues a warning when it finds one or more of the following conditions to be true:

- The user copies, moves or imports a file that already exists in the selected target folder. The file will on approval of the warning, be overwritten.
- The user copies, moves or imports items from a list with version history enabled to another list where version history is not enabled. The version history will on approval of the warning, be lost in the transaction.
- The user copies, moves or imports items associated with a content type that does not exist in the target list. The items will on approval of the warning be associated with the default content type in the target list.

-
- The user copies, moves or imports items with custom Metadata columns that are not present in the target list. The items will on approval of the warning loose all Metadata values for the missing columns.

Then there are also the conditions where CopyMove simply aborts the transaction with a validation error:

- The user copies, moves or imports a file that already exists in the selected target folder and is checked out.
- The user copies, moves or imports a file that already exists in the selected target folder and the file has special permissions that does not allow the user to overwrite it.
- The user moves a folder that contains one or more files or sub folders that the user is not allowed to delete.
- The user copies or moves items to a location where the resulting URL would exceed 256 characters. SharePoint does not support longer URLs than that.
- The user is trying to initiate a transaction larger than the administrative limit, which is by default 250 items or 250 MB. SharePoint administrators can increase the limit to a maximum of 2000 items and 2000 MB.

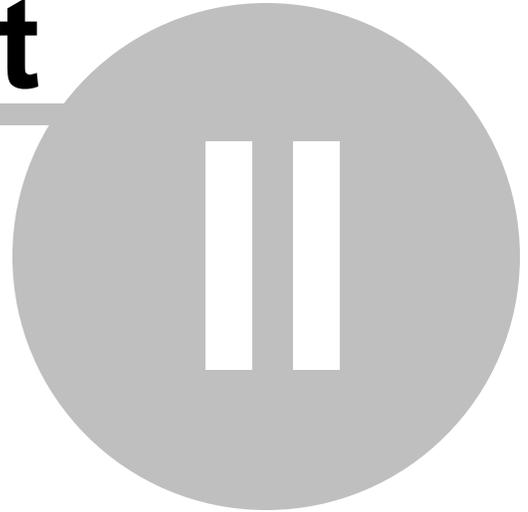
1.4 Supported List Types

The product does out-of-the-box integrate with all SharePoint document libraries and lists that leverage the new Ribbon control in SharePoint 2010. That is, a new Ribbon group named CopyMove will appear in the ribbon for all libraries and lists in site collections where CopyMove is enabled. However, for the item drop-down menu in libraries and lists and for SharePoint 2007 style document libraries and lists, CopyMove will out-of-the-box only integrate with the libraries and lists created from the SharePoint list templates shown in the table below.

List Template ID	List Template Name
201	Agenda list
104	Announcement list
301	Blog Posts list
106	Calendar list
105	Contacts list
100	Custom list
204	Decision list
108	Discussion board
101	Document library
151	Help library
1100	Issue Tracking list
103	Links list
202	Meeting Attendee list
207	Meeting Objective list
109	Picture library
150	Project tasks list
850	Publishing page library
107	Tasks list
211	Things to Bring list
119	Web page library
119	Wiki page library

SharePoint 2007 style libraries and lists created from other templates including custom ones are not supported out-of-the-box by CopyMove. Nor will the item drop-down menu in SharePoint 2010 style libraries and lists, created a custom list template, include the Copy and Move actions. However, it is possible to add support for such libraries and lists by developing and deploying a custom SharePoint feature that registers the CopyMove menu actions with the custom list template. For more information, see the **Custom Lists** section in the chapter named **Extending CopyMove**.

Part



Installation & Setup

2 Installation & Setup

CopyMove is implemented according to Microsoft and SharePoint Community guidelines and best practices. It is packaged as a standard SharePoint solution, which means that it is easy to install and deploy in any SharePoint 2010 server farm using standard SharePoint knowledge and tools. But CopyMove also ships with a PowerShell script that automates the entire installation and deployment process. The installation script must run locally on the SharePoint server. If you have a multi-server SharePoint farm then CopyMove will automatically be deployed to the other servers as needed via the standard SharePoint solution mechanism. Hereafter, you can activate and configure CopyMove as described in this manual.

In the event of a problem installing or using CopyMove, consult the **Troubleshooting** section, which provides answers to known problems. If that does not prove to be the case then contact support@sharepointproducts.com for assistance.

2.1 Product Files

CopyMove for SharePoint 2010 is available for download as a ZIP file from www.sharepointproducts.com. The ZIP file contains the following files:

Path	Description
EULA.rtf	The CopyMove End-User-License-Agreement.
GetLogFile.cmd	Launches the PowerShell script PS\GetLogFile.ps1
Install.cmd	Launches the PowerShell script PS\Install.ps1
ReadMe.htm	HTML document with brief product information and version history
Reset.cmd	Resets the Internet Information Server (IIS) and the SharePoint Timer Service on the local server
Uninstall.cmd	Launches the PowerShell script PS\Uninstall.ps1
Upgrade.cmd	Launches the PowerShell script PS\Upgrade.ps1
CopyMove 2010 - Administrators Guide.c	Administrators guide for CopyMove 2010 in Windows Help format.
CopyMove 2010 - Administrators Guide.g	Administrators guide for CopyMove 2010 in PDF format.
PS\Functions.ps1	Shared PowerShell methods
PS\GetLogFile.ps1	Retrieves all recent CopyMove events from the SharePoint diagnostic logs on all servers in the farm and writes them to a file named spp.log
PS\Install.ps1	PowerShell script that installs and deploys the WSP solution packages to the SharePoint farm
PS\Launch.cmd	Windows batch file for launching a specified PowerShell script
PS\Uninstall.cmd	PowerShell script that retracts and removes the WSP solution packages from the SharePoint farm

Path	Description
PS\Upgrade.ps1	PowerShell script that upgrades the WSP solution packages in the SharePoint farm
Samples\API Sample	Folder containing a Visual Studio 2010 C# solution demonstrating how to work with the CopyMove .NET API
Samples\Custom List Sample	Folder containing a Visual Studio 2010 C# solution demonstrating how to integrate CopyMove with document libraries and lists created from a custom list template.
Samples\WCF Sample	Folder containing a Visual Studio 2010 C# solution demonstrating how to work with the CopyMove WCF Service.
WSP\sharepointproducts_copymove.wsp	SharePoint solution package containing CopyMove specific files and resources
WSP\sharepointproducts_platform.wsp	SharePoint solution package containing cross product files and resources

2.2 System Requirements

CopyMove requires the following to install and operate as expected:

Server Requirements

- Microsoft Windows Server 2008 or later
- Microsoft .NET Framework 3.5
- Microsoft PowerShell 2.0
- SharePoint Foundation 2010 / SharePoint Server 2010
- 3 GB free disk space in the temporary files location. Default location is LOGS\SharePointProducts relative to the SharePoint root folder.

Client Requirements

- Microsoft Internet Explorer 7 or later.
- Mozilla FireFox
- Google Chrome

2.3 Making CopyMove Available

Complete the following steps to make CopyMove available to end-users:

1. Read and accept the End-User License Agreement

The CopyMove EULA file is included in the product download as EULA.rtf

2. Install and deploy the WSP solutions

Add the solutions *sharepointproducts_platform.wsp* and *sharepointproducts_copymove.wsp* to the SharePoint solution store and deploy them to all Web applications including SharePoint Central Administration. See the section **Scripted Installation** for detailed instructions.

3. Deploy CopyMove to all relevant Web applications

This is automatically done by the scripted installation, but if you create new Web applications or choose not to deploy automatically, then you may need to do so manually. See the section **Manual Installation** for instructions.

4. Activate the CopyMove farm feature

See the section **Activating CopyMove at the Farm level** for instructions.

5. Activate CopyMove for all relevant site collections

The CopyMove menu actions only appear in document libraries and lists in site collections where the CopyMove site collection feature is activated. See the section **Activating CopyMove for selected Site Collections** for instructions.

6. Purchase and install a CopyMove license

CopyMove is not a free product but you may evaluate it for free before buying. You are automatically granted a 30 day evaluation period counting from the day it was first installed. The product blocks all functionality once the evaluation period has expired. If you wish to continue using CopyMove in your SharePoint farm then you will need to purchase a license from www.sharepointproducts.com. See the section **License Management** for instructions how to install a license file received from the SharePoint Products sales team.

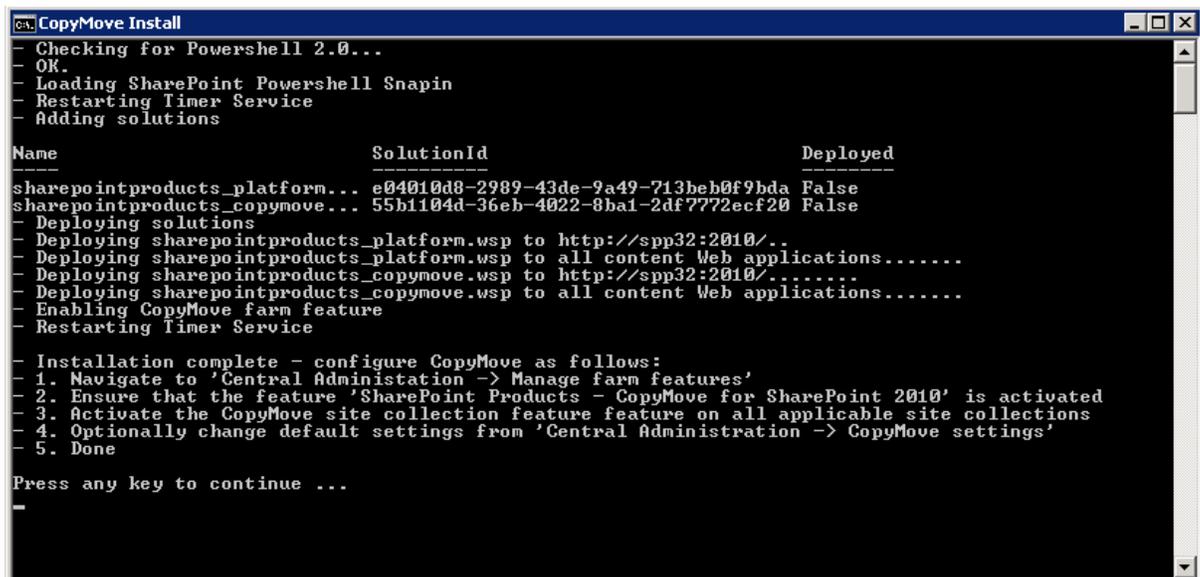
2.4 Scripted Installation

Follow the steps below to install CopyMove using the PowerShell installation script included in the product download:

1. Login to the SharePoint server with a local administrator account that have also been granted the `db_owner` role on the SharePoint configuration database and the SharePoint administration content database. If your SharePoint installation is a multi-server farm then you can install on just one server after which the CopyMove files are automatically propagated to the other servers in the farm.

TIP: Login as domain administrator or login using the same account used by the IIS application pool for the SharePoint Central Administration Web site.

2. Download the latest version of CopyMove 2010 from www.sharepointproducts.com. It is distributed as a ZIP archive.
3. Extract the CopyMove ZIP archive to a local folder on the SharePoint server.
4. Run the `Install.cmd` script from the local folder that the CopyMove files were extracted to, and wait for it to complete. The screen shot below illustrates how a successful installation should look like.



```
CopyMove Install
- Checking for Powershell 2.0...
- OK.
- Loading SharePoint Powershell Snapin
- Restarting Timer Service
- Adding solutions

Name                SolutionId            Deployed
-----                -
sharepointproducts_platform... e04010d8-2989-43de-9a49-713beb0f9bda False
sharepointproducts_copymove... 55b1104d-36eb-4022-8ba1-2df7772ecf20 False
- Deploying solutions
- Deploying sharepointproducts_platform.wsp to http://spp32:2010/..
- Deploying sharepointproducts_platform.wsp to all content Web applications.....
- Deploying sharepointproducts_copymove.wsp to http://spp32:2010/.....
- Deploying sharepointproducts_copymove.wsp to all content Web applications.....
- Enabling CopyMove farm feature
- Restarting Timer Service

- Installation complete - configure CopyMove as follows:
- 1. Navigate to 'Central Administration -> Manage farm features'
- 2. Ensure that the feature 'SharePoint Products - CopyMove for SharePoint 2010' is activated
- 3. Activate the CopyMove site collection feature on all applicable site collections
- 4. Optionally change default settings from 'Central Administration -> CopyMove settings'
- 5. Done

Press any key to continue ...
```

5. CopyMove is now installed and deployed to all Web applications. But it is not yet available to any users. For that you need to activate the CopyMove features as described in the next section.

2.5 Activating the CopyMove Features

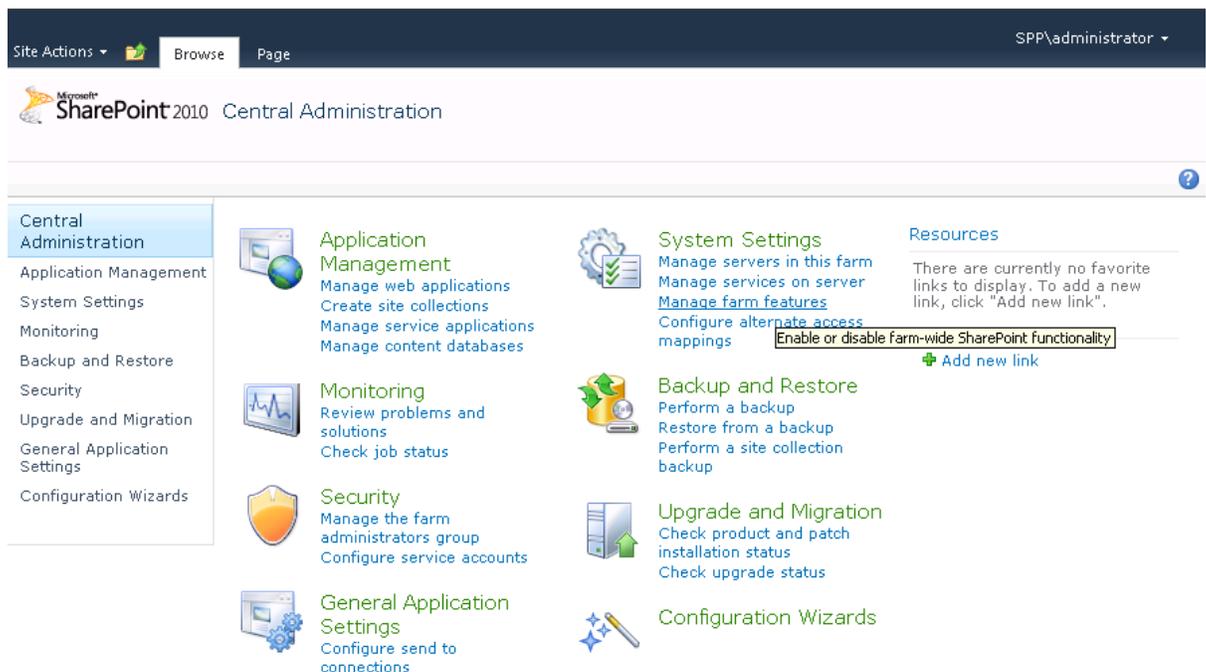
The CopyMove product is enabled through a regular SharePoint "Feature", which means it can easily be activated or deactivated by SharePoint administrators and site collection owners. The product ships with the following two features:

- Farm Feature.** This feature adds a group of CopyMove related administration links to SharePoint Central Administration. The feature must also be enabled prior to activating the Site Collection feature described below. When deactivated the administration links are again removed from Central Administration. It will also prevent further activations of the Site Collection feature. However, CopyMove will continue to be available in site collections for which one of these two features are already activated. The feature XML files are deployed to the folder `TEMPLATE\FEATURES\SPPCopyMoveFarm` relative to the SharePoint root folder.
- Site Collection Feature.** Activating this feature registers the CopyMove menu actions with all supported document libraries and lists in the site collection. It also adds a link to the CopyMove site settings page on the SharePoint site settings page. Deactivating the feature removes the menu actions and the site settings link again. The feature XML files are deployed to the folder `TEMPLATE\FEATURES\SPPCopyMoveSite` relative to the SharePoint root folder.

2.5.1 Activating CopyMove at the Farm level

To activate or deactivate the CopyMove farm feature, follow the steps listed below:

1. Open the SharePoint 2010 Central Administration site.
2. Click the *Manage farm features* link as shown in the following screen shot.



3. On the *Manage Farm Features* page, locate the feature entitled *SharePoint Products - CopyMove for*

SharePoint 2010 and click the *Activate* button. If the feature is already activated then you will get the option to deactivate the feature again.

Site Actions SPP\Administrator

Microsoft SharePoint 2010 Central Administration > Manage Farm Features
This page allows you to manage SharePoint-wide features.

Name	Status
Office.com Entry Points from SharePoint This feature enables entry points from the SharePoint user interface that allow users to browse SharePoint solutions from Office.com	<input type="button" value="Deactivate"/> <input checked="" type="button" value="Active"/>
SharePoint Products - CopyMove for SharePoint 2010 Enables end-users to copy and move files, folders and list items with full fidelity. See www.sharepointproducts.com for more information about this product. NOTE: This feature must be activated in order to activate the CopyMove feature at the level of the Web Application or Site Collection.	<input type="button" value="Activate"/>

4. Activating the feature will reveal a new administration group named *SharePoint Products* as shown below. See the **Administration** section for more information about the administration links in this group.

Site Actions Browse Page SPP\Administrator

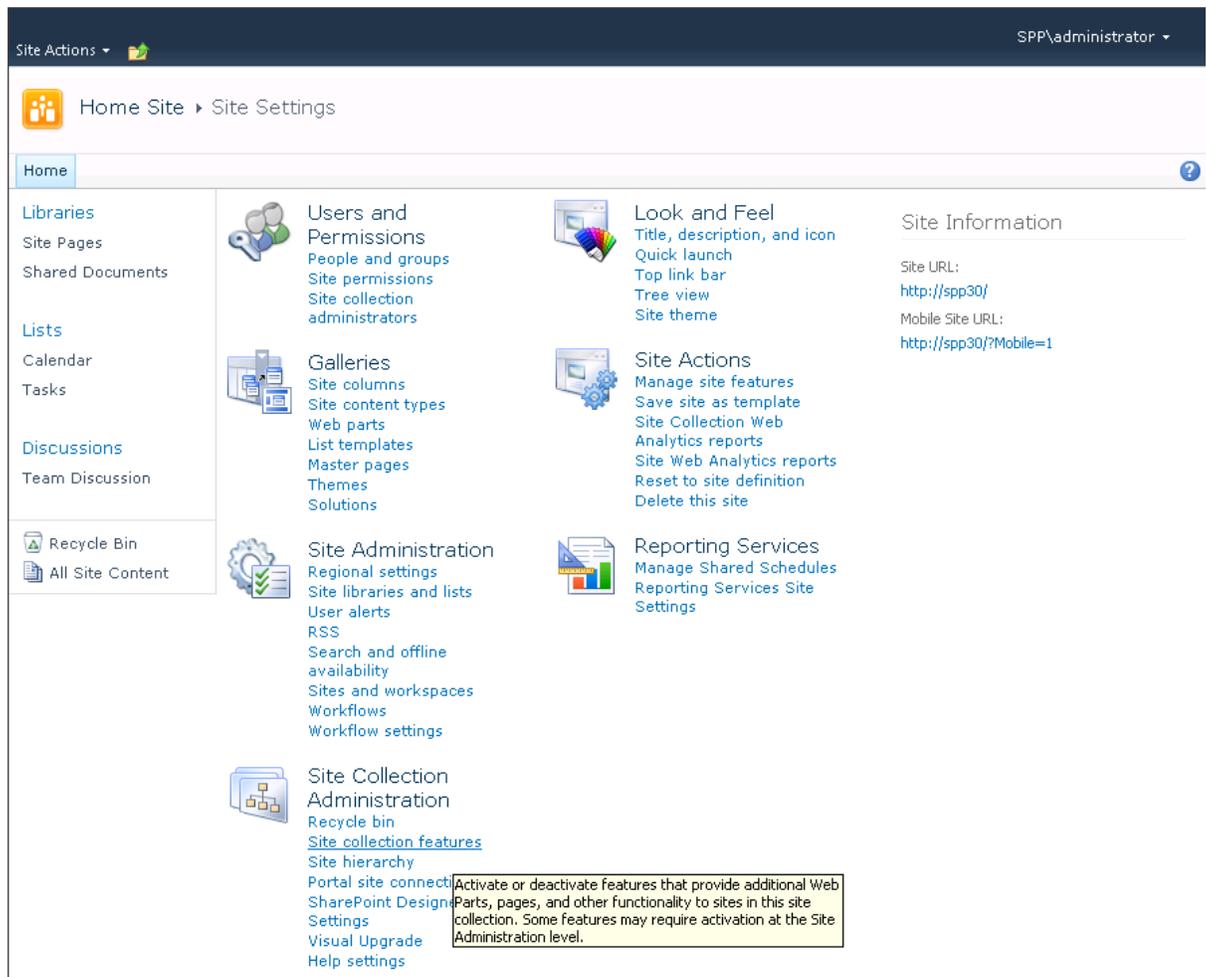
Microsoft SharePoint 2010 Central Administration

Central Administration Application Management System Settings Monitoring Backup and Restore Security Upgrade and Migration General Application Settings Configuration Wizards	Application Management Manage web applications Create site collections Manage service applications Manage content databases	System Settings Manage servers in this farm Manage services on server Manage farm features Configure alternate access mappings	Resources There are currently no favorite links to display. To add a new link, click "Add new link". <input type="button" value="Add new link"/>
	Monitoring Review problems and solutions Check job status	Backup and Restore Perform a backup Restore from a backup Perform a site collection backup	
	Security Manage the farm administrators group Configure service accounts	Upgrade and Migration Check product and patch installation status Check upgrade status	
	General Application Settings Configure send to connections	SharePoint Products Manage license CopyMove settings	
	Configuration Wizards		

2.5.2 Activating CopyMove for selected Site Collections

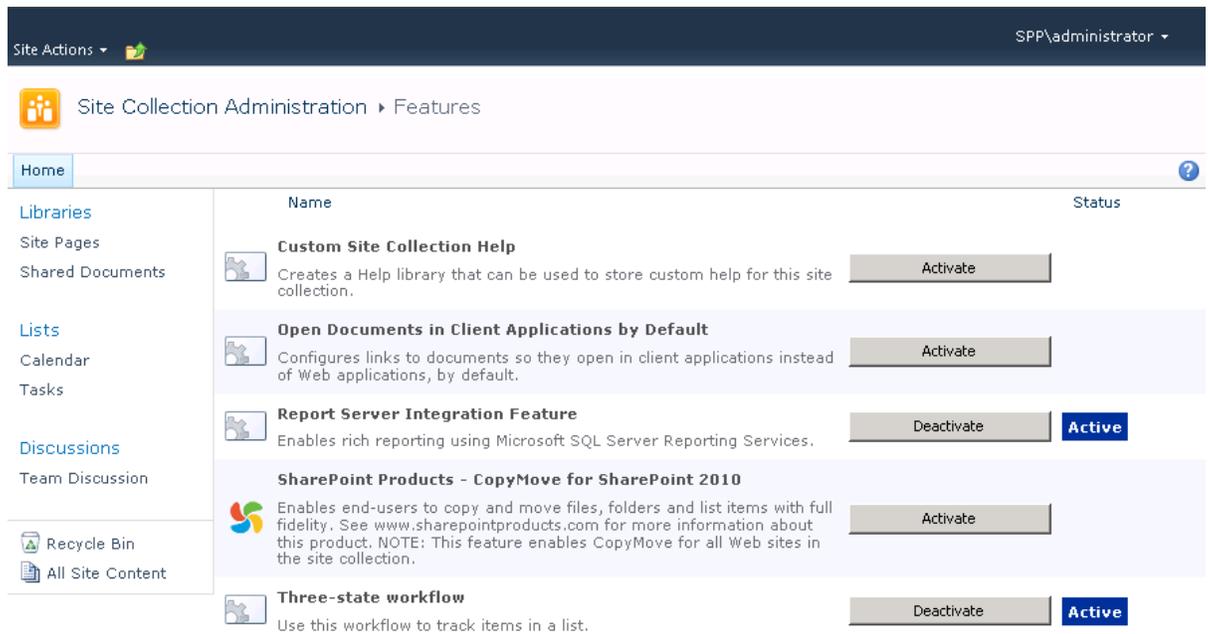
To activate or deactivate the CopyMove feature at the level of the site collection, follow these steps:

1. Open the root site of the site collection for which to activate or deactivate CopyMove.
2. Select *Site Settings* in the *Site Actions* menu to bring up the *Site Settings* page shown below.



The screenshot shows the SharePoint 2010 Site Settings page for a site collection. The page is titled "Home Site > Site Settings". The left sidebar contains navigation options: Libraries (Site Pages, Shared Documents), Lists (Calendar, Tasks), Discussions (Team Discussion), Recycle Bin, and All Site Content. The main content area is divided into several sections: Users and Permissions, Galleries, Site Administration, Site Collection Administration, Look and Feel, Site Actions, and Reporting Services. A tooltip is visible over the "Site collection features" link in the Site Collection Administration section, stating: "Activate or deactivate features that provide additional Web Parts, pages, and other functionality to sites in this site collection. Some features may require activation at the Site Administration level."

3. Click the *Site collection features* link in the *Site Collection Administration* group. This brings up the site collection features page where the activation status of each installed feature is shown.



Site Actions  SPP\administrator

Site Collection Administration > Features

Home 

Name	Status
 Custom Site Collection Help Creates a Help library that can be used to store custom help for this site collection.	Activate
 Open Documents in Client Applications by Default Configures links to documents so they open in client applications instead of Web applications, by default.	Activate
 Report Server Integration Feature Enables rich reporting using Microsoft SQL Server Reporting Services.	Deactivate Active
 SharePoint Products - CopyMove for SharePoint 2010 Enables end-users to copy and move files, folders and list items with full fidelity. See www.sharepointproducts.com for more information about this product. NOTE: This feature enables CopyMove for all Web sites in the site collection.	Activate
 Three-state workflow Use this workflow to track items in a list.	Deactivate Active

Libraries
Site Pages
Shared Documents

Lists
Calendar
Tasks

Discussions
Team Discussion

Recycle Bin
All Site Content

4. To toggle the activation status of CopyMove, click the *Activate/Deactivate* button for the feature labeled *SharePoint Products - CopyMove for SharePoint 2010*.

2.6 Upgrading CopyMove

We at SharePoint Products are continuously improving CopyMove based on customer feedback and own ideas. CopyMove receives a major upgrade with every new version of SharePoint and minor upgrades when we are adding new features. Finally we also do maintenance releases with minor improvements and bug fixes. We typically make 1-2 minor releases a year and 6-10 maintenance releases a year. The complete change history can be studied in the ReadMe.htm file included in the distribution.

Consequently, you should periodically watch out for new releases of CopyMove and upgrade whenever the changes can add more value to your SharePoint installation. Follow the steps below to upgrade from earlier versions of CopyMove:

1. Login to the SharePoint server with a local administrator account that have also been granted the `db_owner` role on the SharePoint configuration database and the SharePoint administration content database. If your SharePoint installation is a multi-server farm then you can upgrade on just one server after which the CopyMove files are automatically upgraded on the other servers in the farm.
2. Download the latest version of CopyMove 2010 from www.sharepointproducts.com. It is distributed as a ZIP archive.
3. Extract the CopyMove ZIP archive to a local folder on the SharePoint server.
4. Run the `Upgrade.cmd` script from the local folder that the CopyMove files were extracted to, and wait for it to complete. The screen shot below illustrates how a successful upgrade should look like.

```

CopyMove Upgrade
- Checking for Powershell 2.0...
- OK.
- Loading SharePoint Powershell Snapin
- Restarting IIS
- Restarting Timer Service
- Retracting Solutions
- Retracting sharepointproducts_copymove.wsp from all content Web applications..
- Retracting sharepointproducts_copymove.wsp from http://spp32:2010/...
- Retracting sharepointproducts_platform.wsp from all content Web applications.....
- Retracting sharepointproducts_platform.wsp from http://spp32:2010/.....
- Removing Solutions
- Removing solution sharepointproducts_copymove.wsp
- Removing solution sharepointproducts_platform.wsp
- Restarting Timer Service
- Adding solutions

Name                SolutionId                Deployed
-----
sharepointproducts_platform... e04010d8-2989-43de-9a49-713beb0f9bda False
sharepointproducts_copymove... 55b1104d-36eh-4022-8ba1-2df7772ecf20 False
- Deploying solutions
- Deploying sharepointproducts_platform.wsp to http://spp32:2010/....
- Deploying sharepointproducts_platform.wsp to all content Web applications.....
- Deploying sharepointproducts_copymove.wsp to http://spp32:2010/.....
- Deploying sharepointproducts_copymove.wsp to all content Web applications.....
- Enabling CopyMove farm feature
- Restarting Timer Service

Upgrade complete - configure CopyMove as follows:
1. Navigate to 'Central Administration -> Manage farm features'
2. Ensure that the feature 'SharePoint Products - CopyMove for SharePoint 2010' is activated
3. Activate the CopyMove site collection feature on all applicable site collections
4. Optionally change default settings from 'Central Administration -> CopyMove settings'
5. Done

Press any key to continue ...

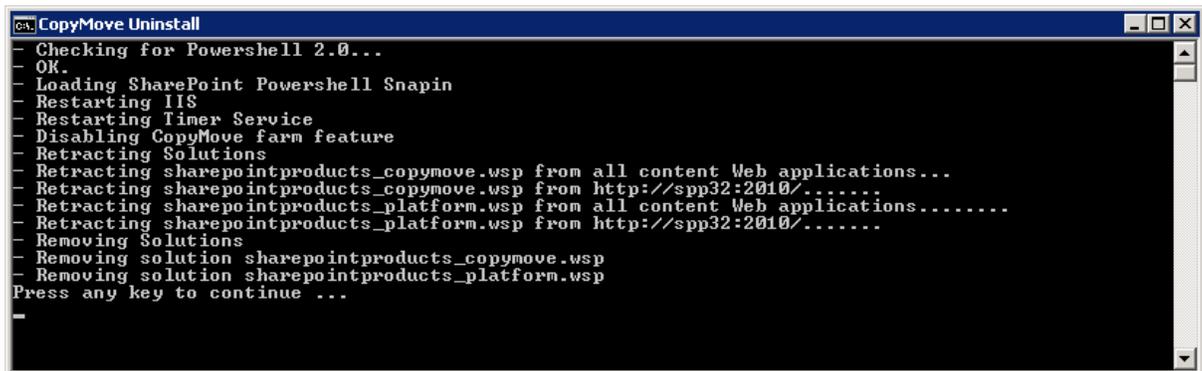
```

5. CopyMove is now upgraded for the entire SharePoint farm.

2.7 Uninstalling CopyMove

Removing CopyMove from a farm is of course also possible and it is just as simple as installing it. Simply follow the steps below to uninstall CopyMove:

1. Login to the SharePoint server with a local administrator account that have also been granted the `db_owner` role on the SharePoint configuration database and the SharePoint administration content database. If your SharePoint installation is a multi-server farm then you can uninstall on just one server after which the CopyMove files are automatically removed from the other servers in the farm.
2. Run the `Uninstall.cmd` script from the local folder that the CopyMove files were extracted to, and wait for it to complete. The screen shot below illustrates how a successful uninstall should look like.



```
CopyMove Uninstall
- Checking for Powershell 2.0...
- OK.
- Loading SharePoint Powershell Snapin
- Restarting IIS
- Restarting Timer Service
- Disabling CopyMove farm feature
- Retracting Solutions
- Retracting sharepointproducts_copymove.wsp from all content Web applications...
- Retracting sharepointproducts_copymove.wsp from http://spp32:2010/...
- Retracting sharepointproducts_platform.wsp from all content Web applications...
- Retracting sharepointproducts_platform.wsp from http://spp32:2010/...
- Removing Solutions
- Removing solution sharepointproducts_copymove.wsp
- Removing solution sharepointproducts_platform.wsp
Press any key to continue ...
```

3. CopyMove is now retracted from all Web applications and the WSP solutions have been removed from the SharePoint solution store.

2.8 Manual Installation

CopyMove can also be installed and deployed manually to a SharePoint farm. You can use this approach if you are experiencing any problems with the supplied PowerShell scripts for installing, upgrading and uninstalling CopyMove. To manually install and deploy CopyMove, follow the steps below:

1. Login to the SharePoint server with a local administrator account that have also been granted the `db_owner` role on the SharePoint configuration database and the SharePoint administration content database. If your SharePoint installation is a multi-server farm then you can install on just one server after which the CopyMove files are automatically propagated to the other servers in the farm.

TIP: Login as domain administrator or login using the same account used by the IIS application pool for the SharePoint Central Administration Web site.

2. Download the latest version of CopyMove 2010 from www.sharepointproducts.com. It is distributed as a ZIP archive.
3. Extract the CopyMove ZIP archive to a local folder on the SharePoint server.
4. From the Windows Server start menu, launch the *SharePoint 2010 Management Shell*.

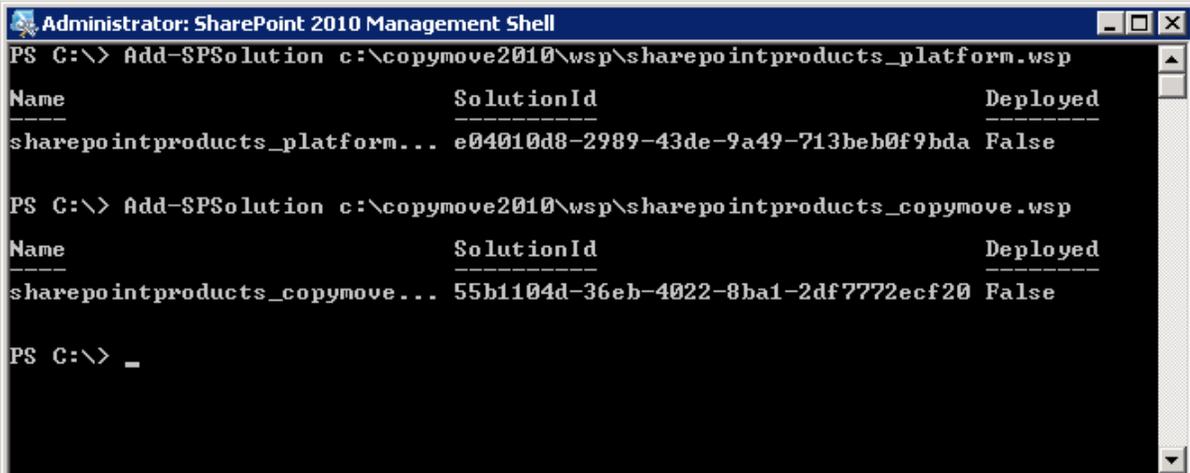
5. Add the two solution packages `sharepointproducts_platform.wsp` and `sharepointproducts_copymove.wsp` to the SharePoint farm using the PowerShell `Add-SPSolution` command:

```
Add-SPSolution <Full path to the sharepointproducts_platform.wsp file>
Add-SPSolution <Full path to the sharepointproducts_copymove.wsp file>
```

For example:

```
Add-SPSolution C:\CopyMove2010\WSP\sharepointproducts_platform.wsp
Add-SPSolution C:\CopyMove2010\WSP\sharepointproducts_copymove.wsp
```

In the management shell it looks like this:



```
Administrator: SharePoint 2010 Management Shell
PS C:\> Add-SPSolution c:\copymove2010\wsp\sharepointproducts_platform.wsp
Name                SolutionId                Deployed
-----                -
sharepointproducts_platform... e04010d8-2989-43de-9a49-713beb0f9bda False

PS C:\> Add-SPSolution c:\copymove2010\wsp\sharepointproducts_copymove.wsp
Name                SolutionId                Deployed
-----                -
sharepointproducts_copymove... 55b1104d-36eb-4022-8ba1-2df7772ecf20 False

PS C:\> _
```

6. Open the SharePoint 2010 Central Administration site.
7. Navigate to *System Settings* and click the *Manage farm solutions* link to open the *Solution Management* page shown in the following screen shot:

Site Actions SPP\administrator

Microsoft SharePoint 2010 Central Administration > Solution Management
This page has a list of the Solutions in the farm.

Name	Status	Deployed To
sharepointproducts_copymove.wsp	Not Deployed	None
sharepointproducts_platform.wsp	Not Deployed	None

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Configuration Wizards

8. Click the *sharepointproducts_platform.wsp* link to open the *Solution Properties* page for the clicked solution.

Site Actions SPP\administrator

Microsoft SharePoint 2010 Central Administration > Solution Properties

Deploy Solution | Remove Solution | Back to Solutions

Name:	sharepointproducts_platform.wsp
Type:	Core Solution
Contains Web Application Resource:	Yes
Contains Global Assembly:	Yes
Contains Code Access Security Policy:	No
Deployment Server Type:	Front-end Web server
Deployment Status:	Not Deployed
Deployed To:	None
Last Operation Result:	No operation has been performed on the solution.

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Configuration Wizards

9. Click the *Deploy Solution* link to open the following page from where a solution deployment job can be created.

Site Actions SPP\administrator

Microsoft SharePoint 2010 Central Administration > Deploy Solution
Use this page to deploy the solution.

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Configuration Wizards

Solution Information
Information on the solution you have chosen to deploy.

Name: sharepointproducts_platform.wsp
Locale: 0
Deployed To: None
Deployment Status:

Deploy When?
A timer job is created to deploy this solution. Please specify the time at which you want this solution to be deployed.

Choose when to deploy the solution:
 Now
 At a specified time:
 5/2/2011 4 PM 00

Deploy To?
The solution contains Web application scoped resources and should be deployed to specific Web applications. Please choose the Web application where you want the solution to be deployed.

Choose a Web application to deploy this solution:
 All content Web applications
 All content Web applications
 http://spp30/
 http://spp30:2010/

will place assemblies in the assemblies full trust. Do not proceed unless you trust the solution provider.

OK Cancel

10. Now, create a deployment job that deploys the solution to all content Web applications in the farm. To do this, select *All content Web applications* in the *Deploy To* drop-down and click the *OK* button.
11. Next, create a deployment job that deploys the solution to the Web application hosting SharePoint Central Administration. To do this, select the URL of SharePoint Central Administration in the *Deploy To* drop-down and click the *OK* button.
12. Use the *Solution Properties* page to verify that the solution was deployed without errors. The *Deployment Status* row must say *Deployed*, the *Deployed To* row should include the URLs of all Web applications in the farm and the *Last Operation Result* row should say *The solution was successfully deployed*.

The screenshot shows the SharePoint 2010 Central Administration interface. At the top, there is a navigation bar with 'Site Actions' and 'SPP\administrator'. Below this, the breadcrumb path is 'Central Administration > Solution Properties'. A left-hand navigation pane lists various administrative tasks such as 'Application Management', 'System Settings', and 'Monitoring'. The main content area displays the properties for a solution named 'sharepointproducts_platform.wsp'. At the top of this area are two links: 'Retract Solution' and 'Back to Solutions'. Below these links is a table of properties.

Name:	sharepointproducts_platform.wsp
Type:	Core Solution
Contains Web Application Resource:	Yes
Contains Global Assembly:	Yes
Contains Code Access Security Policy:	No
Deployment Server Type:	Front-end Web server
Deployment Status:	Deployed
Deployed To:	http://spp30:2010/; http://spp30/
Last Operation Result:	The solution was successfully deployed.
Last Operation Details:	SPP30 : http://spp30:2010/ : The solution was successfully deployed.
Last Operation Time:	5/2/2011 3:33 PM

13. Repeat steps 7 to 12 for the *sharepointproducts_copymove.wsp* solution package.

14. Finally, activate the necessary features as previously discussed in the **Activating the CopyMove Features** section.

Part



Administration

3 Administration

Like CopyMove is easy to install it is also easy to administrate through the SharePoint Web administration user interface that CopyMove also integrates with. Two roles in SharePoint has the permission to activate CopyMove and to change the CopyMove configuration settings; the SharePoint farm administrator and the site collection administrator. The options for both roles are outlined below.

SharePoint Farm Administrator

This role can activate and deactivate the CopyMove features at all levels including the farm level and the site collection level. See the **Activating the CopyMove Features** section for more information. Next, the role can also configure the global CopyMove settings available from the SharePoint Central Administration site as shown in the screen shot below. The available settings are outlined and described in detail in the **Global Settings** section.

The screenshot shows the SharePoint 2010 Central Administration interface. At the top, there is a navigation bar with 'Site Actions', 'Browse', and 'Page' buttons, and a user profile 'SPP\administrator'. Below the navigation bar is the 'Microsoft SharePoint 2010 Central Administration' header. A left-hand navigation pane lists various administrative tasks. The main content area is organized into several functional tiles, each with an icon and a list of sub-tasks. A 'Resources' section on the right provides information about favorite links.

Finally, the role can also apply CopyMove license keys by clicking the *Manage license* link. See the **License Management** section for more information on applying a license key received from SharePoint Products.

SharePoint Site Collection Administrator

This role can activate and deactivate CopyMove for the site collections they own - see the section **Activating CopyMove for selected Site Collections** for details. Next, the role can also configure special settings for site collections by overriding the global settings managed by the farm administrator. The following screen shot shows the SharePoint site settings page with a link to the CopyMove site collection settings page. The available settings are outlined and described in detail in the **Site Collection Settings** section.

Site Actions  Lars Fastrup

Test Site > Site Settings

Home

Libraries

Site Pages

Shared Documents

Lists

Calendar

Tasks

Discussions

Team Discussion

 Recycle Bin

 All Site Content

 **Users and Permissions**

People and groups

Site permissions

Site collection administrators

 **Galleries**

Site columns

Site content types

Web parts

List templates

Master pages

Themes

Solutions

 **Site Administration**

Regional settings

Site libraries and lists

User alerts

RSS

Search and offline availability

Sites and workspaces

Workflows

Workflow settings

 **Site Collection Administration**

Recycle bin

Site collection features

Site hierarchy

Portal site connection

Storage Metrics

SharePoint Designer Settings

Visual Upgrade

Help settings

 **Look and Feel**

Title, description, and icon

Quick launch

Top link bar

Tree view

Site theme

 **Site Actions**

Manage site features

Save site as template

Site Collection Web Analytics reports

Site Web Analytics reports

Reset to site definition

Delete this site

 **Reporting Services**

Manage Shared Schedules

Reporting Services Site Settings

 **SharePoint Products**

CopyMove settings

Site Information

Site URL:

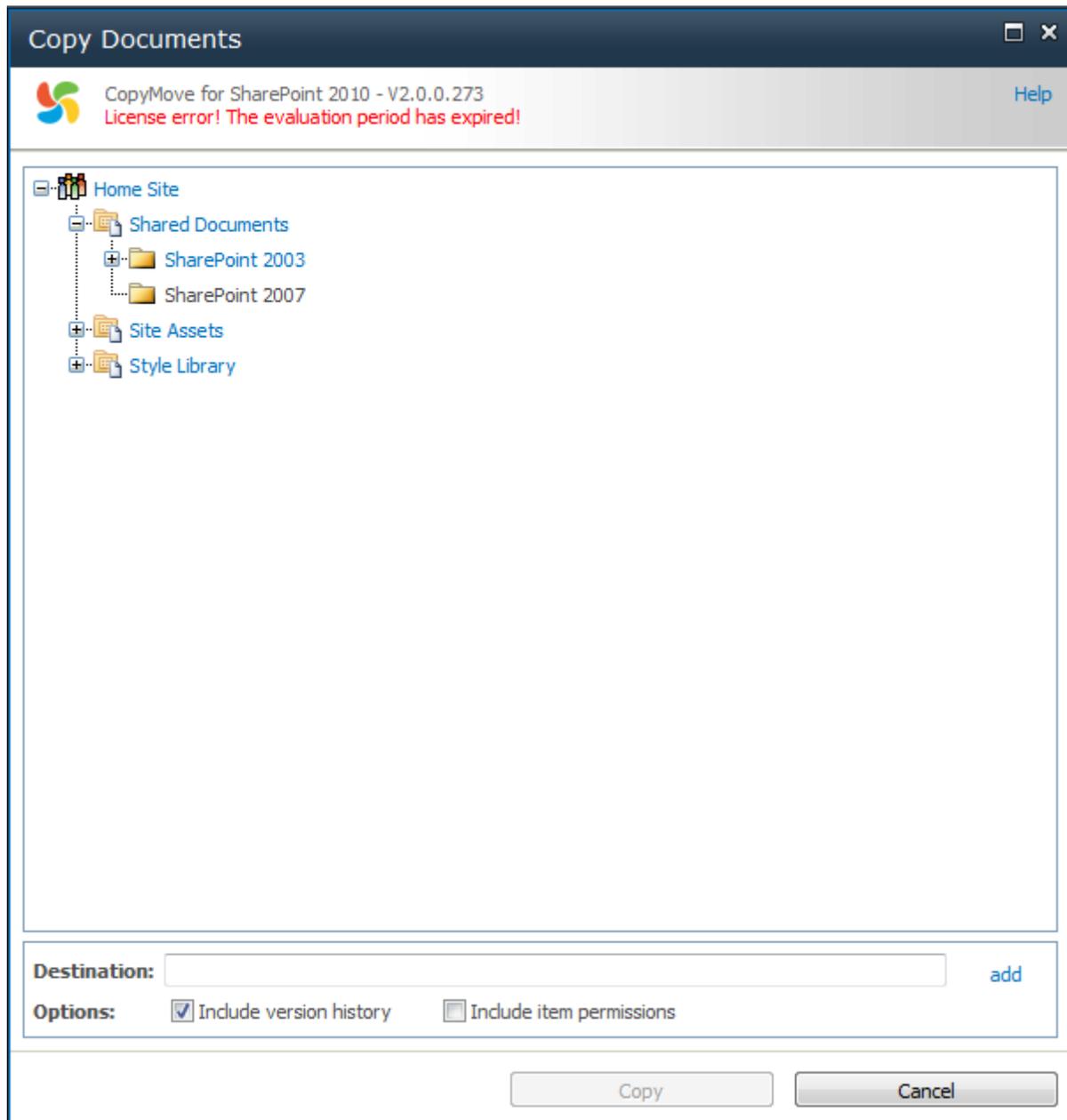
<https://spp32.sharepointproducts.com/>

Mobile Site URL:

<https://spp32.sharepointproducts.com/?Mobile=1>

3.1 License Management

CopyMove requires customers to purchase and install a license from SharePoint Products to continue using the product beyond the 30 day trial period. Users will otherwise receive the message; *License Error! The evaluation period has expired!* as shown in the screen shot below. Selecting a target folder and pressing the *Copy* button will yield the same error.



The license for unlocking CopyMove is just a simple text file in the following format:

```
SharePoint Products License
Generated on 2011-05-02 14:04:07Z
```

```

Id: 2d34f79f-a3f0-4d4f-9f31-70e2342c7a9e
Customer: Demo Customer
Contact: John Doe, jdoe@democustomer.com
Issuer: Lars Fastrup, lars@sharepointproducts.com
Products: CopyMove
Edition: Standard
Expiration Date: Never
SU Expiration Date: 2012-05-02
Servers: 2
Clients: Unlimited
Evaluation: No
Comment: Production license.

```

```

-----
ClNQUExpY2Vuc2WAAAAAYC1+BMQfMvH3boR8prD/mztTHyeSqa0RHwo6Q0RS
U+8SWKmjxGBJ8cGp+2fSQ/FFEEA2Aa2FhT8sCuFZWnIP1jc/SRZcdAVZ2Bo8
J8rjOWXwoALGMTySf9gb/0S3rI62+fxYQOq2mMEUdw+vpB091lwMVvcqzheq
SOIQHdwHbGUMAAJZJAaf9zQt9KNPTZ8xcOI0LHqeCEN1c3RvbWVyCw1EZW1v
IEN1c3RvbWVyB0NvbRy3QLH0pvaG5gRG91LCBqZG91QGR1bW9jdXN0b211
ci5jb20GSXNzdWVyCylMYXJzIEZhc1RydXAsIGxhcNNAc2hhcmVwb21udHB5
b2R1Y3RzLmNvbQcm9kdWN0cwELAQAAAAhDb3B5TW92ZQdFZG10aW9uCWht
dGFuZGFyZA9FeHBpcmF0aW9uIERhdGUF/z839HUoyisSU1UgRXhwaXJhdGlv
biBEYXRlBQAA2KYN9s4IB1N1cnZ2cnMIAgAAAAdDbG1bnRzCAAAAAAKRXZh
bHVhdGlvbGIAB0NvbW11bnQLE1Byb2R1Y3Rpb24gbG1jZW5zZS4=

```

The license includes a number of properties in clear text for informational purposes. The same properties are also embedded in the encrypted section below the dashed line. CopyMove reads and verifies the properties from the encrypted section. Modifying the properties in clear text has no effect. Modifying the encrypted section will invalidate the license. The following table describes the purpose of the different license properties.

License Property	Description
Id	Globally Unique ID of the license.
Customer	Company name of the customer.
Contact	Name and email of the person who purchased the license.
Issuer	Name and email of the person who issued the license.
Products	List of products supported by the license.
Edition	Product edition supported by the license. Currently ignored by CopyMove.
Expiration Date	The date after which the license is no longer valid. Used for trial licenses and temporary production licenses. Permanent license will not have an expiration date.
SU Expiration Date	The date when the support and upgrade contract expires. New versions of CopyMove released after this date will not work with the license. But versions released within the support and upgrade contract will continue to work as long as the Expiration Date property above is not violated.
Servers	The number of Web Front-End servers supported by the license. CopyMove will fail with a license error if this number is exceeded.
Clients	The number of named users supported by the license. If this number is not

License Property	Description
	unlimited then CopyMove tracks the login name of each unique user that accesses CopyMove. Users that exceed the limit will receive a license error.
Evaluation	Specifies if the license is for evaluation purposes or not.
Comment	Additional license information shown on the <i>License Information</i> page shown in the screen shot below.

The status of the current license installed can be viewed by clicking the *Manage license* link in the *SharePoint Products* group on the SharePoint Central Administration site. Clicking this link opens the *License Information* page shown below.

Use the *Reset License* button to revert to using the built-in license in CopyMove. Click the *Upload License* button to install a new license from the *Upload License* page shown below.

Site Actions SPP\administrator

Microsoft **SharePoint** 2010 Central Administration > SharePoint Products - Upload License
Use this page to upload a new license file issued by SharePoint Products

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Configuration Wizards

Upload License
Upload a new license from a license file or from pasting the text from a license file

Specify the license file to upload:

-or- paste the license file text here:

Specify the path to the license file to upload to the SharePoint server or simply copy and paste the contents of the license file into the large text box. Click the *OK* button to validate and install the license. Note: The sample license file shown earlier has been invalidated and will not upload without errors. A valid production license will look as follows on the *License Information* page.

Site Actions SPP\administrator

Microsoft **SharePoint** 2010 Central Administration > SharePoint Products - License Information
Use this page to view the existing license from SharePoint Products or to upload a new license file

Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Security
Upgrade and Migration
General Application Settings
Configuration Wizards

License Information
Information about the coverage of the current license issued by SharePoint Products

Found a valid license.

License id : 2d34f79f-a3f0-4d4f-9f31-70e2342c7a9e
Issued by : Lars Fastrup, lars@sharepointproducts.com
Licensed to : Demo Customer
License contact : John Doe, jdoe@democustomer.com
Supported products : CopyMove
Edition : Standard
Servers : 2
Users : unlimited
Expiration date : never
SU expiration date : 5/2/2012 (366 days left)

Production license.

3.2 Global Settings

The CopyMove Settings page shown below is accessible from the SharePoint Central administration site when the CopyMove farm feature is activated. The page surfaces the global configuration settings available in CopyMove. The settings will apply throughout the farm where CopyMove is activated and available to users.

Site Actions Lars Fastrup

Microsoft SharePoint 2010 Central Administration > CopyMove Settings
Use this page to configure farm wide settings for the CopyMove product.

I Like It Tags & Notes

Central Administration

- Application Management
- System Settings
- Monitoring
- Backup and Restore
- Security
- Upgrade and Migration
- General Application Settings
- Configuration Wizards

Enabled Actions

Specify the CopyMove actions that should be enabled for use by authorized users. Disabling actions will also remove them from the Ribbon control. It may take up to a minute for changes to take effect.

Target Selection Tree

Specify the list template ids for compatible lists and libraries to configure the visible target list types and target library types in the target selection tree. For document libraries, CopyMove does by default allow copying and moving across all library types. To limit this to selected document library templates, simply add a line of comma separated template ids for every group of compatible templates. For example, to only allow copying and moving items between document libraries and picture libraries, add the following line to the text box:

101,109

where 101 is the template id for a standard document library and 109 is the template id for a standard picture library.

Next, specify the absolute URL of the sites and site collections to include by default in the CopyMove target selection tree. The current site and the current site collection is always included regardless of the settings here. You can also include parameters as in the following examples:

`http://server/personal/{username}`
`http://server/personal/{domain}_{username}`

Default Options

Specify the default options for Copy and Move transactions. By default a move transaction preserves authors, dates and version history whereas a copy transaction does not. Users can change the options for each transaction in the target selection dialog.

Available CopyMove actions:

- Copy
- Move
- Export
- Import

Compatible Lists and Libraries:

101,109
107,150
850

Target site urls:

http://intranetportal

- Include My Site
- Include Membership sites
- Allow users to add additional sites

Default copy options:

- Include authors and dates
- Include versions
- Include permissions

Default move options:

- Include authors and dates
- Include versions
- Include permissions

<p>Warnings</p> <p>Specify which warnings CopyMove should check for and display to users.</p>	<input checked="" type="checkbox"/> Show warning on loss of item version history <input checked="" type="checkbox"/> Show warning on loss of item Content Type <input checked="" type="checkbox"/> Show warning on loss of item Metadata
<p>Permissions</p> <p>Restricting CopyMove to authorized users adds the permission levels <i>CopyMove User</i> and <i>CopyMove Power User</i> to all site collections where the CopyMove site collection feature is currently activated. Next, the CopyMove permission levels must be granted to the appropriate users and groups in each site collection. Otherwise, CopyMove will only be available to users with <i>Full Control</i> to lists and libraries.</p>	<input checked="" type="checkbox"/> Restrict CopyMove usage to authorized users
<p>Recycle Bin</p> <p>Specify if CopyMove shall push source items to the recycle bin on move operations. CopyMove will otherwise permanently delete all source items on a move.</p>	<input type="checkbox"/> Leave source items in the Recycle Bin on moves
<p>Transaction Limits</p> <p>Specify the maximum number of items and the maximum size in MB that site collection administrators and end-users are allowed to copy and move in one transaction. Please be aware that large transactions can take a long time to complete.</p>	<p>Transaction limit for administrators: Max. <input type="text" value="2000"/> items and <input type="text" value="2000"/> MB</p> <p>Transaction limit for users: Max. <input type="text" value="250"/> items and <input type="text" value="250"/> MB</p>
<p>Temporary Files Location</p> <p>Specify the absolute path of a file folder on the Web front-end servers where CopyMove may store intermediate files during copy and move operations. Leave blank to revert to the default location. Also, make sure the application pool account(s) have full access to the folder.</p>	<p>Temporary files location: <input type="text" value="C:\Program Files\Common Files\Microsoft Shared\Web"/></p>
<input type="button" value="Reset"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	

The following sub sections document the effect of the options available in each configuration section on the settings page.

Enabled Actions

Uncheck these check boxes to remove the corresponding buttons from the SharePoint user interface. For example, uncheck the Export and Import check boxes to hide the corresponding Export and Import buttons from all users. To show the buttons for selected users only, enable CopyMove permissions in the Permissions section and grant permissions accordingly in each site collection.

Target Selection Page - Compatible Lists and Libraries

The target selection tree in the CopyMove target selection dialog shown above does by default only show compatible lists and libraries. For example if you select to copy a document in a standard SharePoint document library then the tree will only suggest other standard SharePoint document libraries as a possible target location. It will not show picture libraries, page libraries or other libraries created from a different list template. The same goes for lists like a task list; if you select to copy a task item the tree will only suggest other task lists as a possible target location. It does not make much sense to copy a task item to a links list or a document library.

However, there are scenarios where it is required to let CopyMove work across list templates. One scenario could be where you have created one or more custom document libraries from custom list templates. By default CopyMove will not think of these document libraries to be compatible. If they are compatible just specify the list templates ids separated by comma in the text box labeled *Compatible Lists and Libraries*. Use one line for each group of compatible lists and libraries. For example, to allow copying and moving items from picture libraries to document libraries and vice versa simply specify the line *101,109* where *101* represents the document library template id and *109* represents the picture library template id.

Target Selection Page - Target site urls

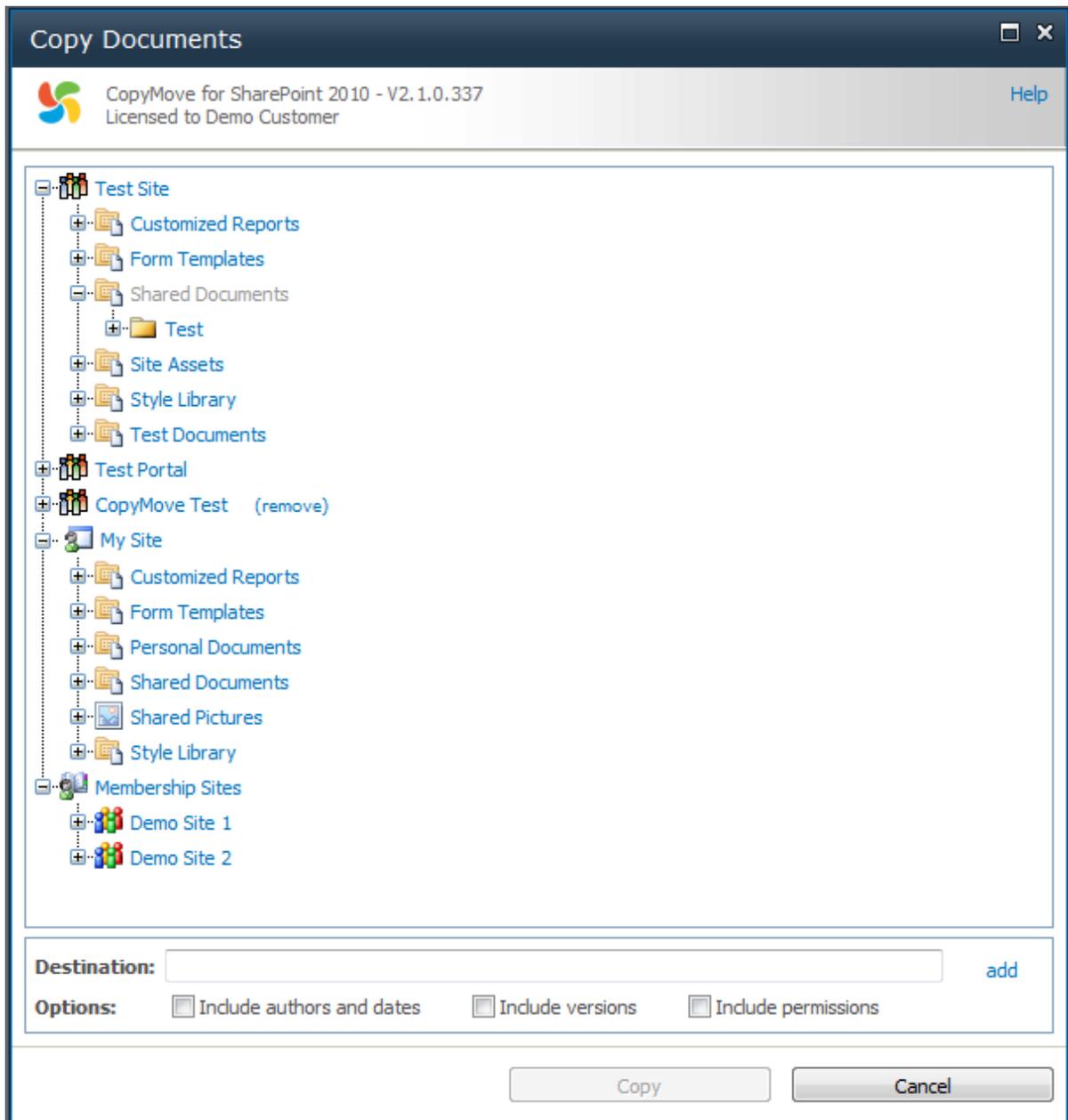
The text box labeled *Target site urls* is linked to the target selection tree in the CopyMove target selection dialog seen by end-users. The tree will by default only show the context site collection, the

users My Site and Membership sites but not other site collections that may exist in the farm. This is by design to avoid performance problems when loading the tree, as a farm can potentially contain thousands of site collections. CopyMove does instead allow administrators and end-users to specify relevant site collections and sub-sites for the tree.

Administrators can use the *Target site urls* text box to specify one or more site collections or sub-sites in a site collection that should always show in the target tree for all users. One example is the site collection(s) that make up the corporate intranet to make it easy for users to copy and move content from other site collections to the corporate intranet site collection(s). End-users can also add sites to the tree by specifying the absolute site URL. They can do so from the target dialog itself shown in the screen shot below. They simply have to type or copy & paste the site url into the *Destination* text box and click the *add* link. Sites added by end-users are persisted in a cookie and can be removed from the tree again by pressing the small (*remove*) link next to the site root node. Sites specified by administrators on the CopyMove settings page cannot be removed from the tree by end-users. Administrators can also prevent users from adding sites to tree by unchecking the check box labeled *Allow users to specify additional target sites*

Finally, administrators can also specify if the target tree should show the personal site (*Include My Site* check box) and the membership sites (*Include Membership sites* check box) for the current user. These options are only available with SharePoint Server 2010 - they do not show in SharePoint Foundation 2010 deployments. The CopyMove target selection dialog shown below illustrates the target selection tree with six site collections:

1. **Test Site** - the context site collection.
2. **Test Portal** - a specific site collection configured by an administrator on the CopyMove settings page.
3. CopyMove Test - a site collection added by the current user.
4. **My Site** - the personal site of the current user.
5. **Demo Site 1+2** - site collections that the current user is a member of.



Default Options

The CopyMove target selection page illustrated in the above screen shot, include the three checkable options *Include authors and dates*, *Include versions* and *Include permissions*. The default state (checked/unchecked) of the check boxes can be configured independently for copy operations and move operations by corresponding check boxes in the *Default Options* section on the CopyMove settings page. They are by default unchecked for copy operations and checked for move operations.

Warnings

CopyMove is always validating all transactions to detect errors and warnings before executing any content changes. Errors will cancel the transaction while warnings will only pause it and ask the user for approval to continue despite the warnings. Administrators have the option to turn off the following

warnings:

- **Warning on loss of version history.** Users receive a warning when trying to copy, move or import items from a list or library with version history enabled to another list or library where version history is not enabled.
- **Warning on loss of content type.** Users receive a warning when trying to copy, move or import items associated with a Content Type that does not exist in the target list or library.
- **Warning on loss of Metadata.** Users receive a warning when trying to copy, move or import items associated with a list columns that do not exist in the target list or library.

Permissions

The CopyMove actions copy, move, export and import in the SharePoint list ribbon are by default visible and accessible for all users with read access to the list. To restrict access to selected users or selected groups, check *Restrict CopyMove usage to authorized users* and save the change by clicking the *OK* button. Hereafter, CopyMove is only available to users with Full Control and users who have been granted access. See the section Permissions Management for detailed information on configuring CopyMove permissions for users and groups.

Recycle Bin

The check box in this configuration section controls whether CopyMove should delete or recycle source items in move transactions. The default and recommended value is recycle, i.e. the check box is checked. Recycled source items can be recovered from the Recycle Bin within a window of 30 days whereas deleted items cannot be recovered that easily again. Deleted items can only be recovered from a SharePoint backup. Now, when would you need to change this setting to delete then? The setting is provided to support scenarios where documents are assigned a unique ID. Here it is not desirable to have two documents with the same ID, which would be the case if you move a document and leave a copy in the recycle bin that is later restored by another user.

Transaction Limits

CopyMove does for performance reasons limit transactions by the number of files and by the total size of files. The default setting is a maximum of 250 items and 250 MB for normal users and 2000 items and 2000 MB for site collection administrators. Farm administrators can increase these limits to 2000 items and 2000 MB for normal users and 10000 items and 10000 MB for site collection administrators. But no higher as these are upper hard limits enforced by CopyMove. The transaction limits prevents users from (accidentally) creating long running and resource intensive transactions, which could otherwise happen by copying or moving a folder containing thousands of large documents. CopyMove should not be confused with a migration tool - it is primarily a tool for end-users who need to copy or move a few documents and folders at a time.

Temporary Files Location

CopyMove needs a temporary location on the Windows server file system for storing documents during transactions. This is because of the way it works internally, which is that it first exports all selected content from the source location and then it imports it again to the selected target location. The exported content is stored on disk where it is in turn imported from again. The content files are deleted again as soon as the transaction completes or fails. The default location for the content files is the following folder on each Web Front-End server(s) in the farm:

```
C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14
\LOGS\SharePointProducts
```

The LOGS folder is ideal for CopyMove as the IIS application pool account(s) of the SharePoint Web

applications has full access to this folder. Changing the temporary files location should be followed with a check to ensure that the application pool account(s) also have full access there.

3.3 Site Collection Settings

The CopyMove Settings page shown below is available to site collection administrators in site collections where the CopyMove site collection feature is activated. The page is accessible through a link on the site settings page as shown in the Administration section. Site collection administrators can leverage the page to override the global settings for the context site collection. However, the transaction limits and the temporary files location cannot be overridden. These settings are only available to the farm administrator. The default behavior of all site collections is to inherit the global settings. To override the settings, simply check the *Override global settings* check box and all available options become enabled as illustrated by the following screen shot.

Site Actions ▾ Lars Fastrup ▾

Site Collection Administration > CopyMove Settings I Like It Tags & Notes

Home Search this site...

Libraries
Site Pages
Shared Documents

Lists
Calendar
Tasks

Discussions
Team Discussion

Recycle Bin
All Site Content

Site Settings
Specify if this site collection should override the global CopyMove settings defined at the level of the farm.

Override global settings

Enabled Actions
Specify the CopyMove actions that should be enabled for use by authorized users. Disabling actions will also remove them from the Ribbon control. It may take up to a minute for changes to take effect.

Available CopyMove actions:

Copy Export
 Move Import

Target Selection Tree
Specify the list template ids for compatible lists and libraries to configure the visible target list types and target library types in the target selection tree. For document libraries, CopyMove does by default allow copying and moving across all library types. To limit this to selected document library templates, simply add a line of comma separated template ids for every group of compatible templates. For example, to only allow copying and moving items between document libraries and picture libraries, add the following line to the text box:

101,109

where 101 is the template id for a standard document library and 109 is the template id for a standard picture library.

Next, specify the absolute URL of the sites and site collections to include by default in the CopyMove target selection tree. The current site and the current site collection is always included regardless of the settings here. You can also include parameters as in the following examples:

```
http://server/personal/{username}
http://server/personal/{domain}_{username}
```

Compatible Lists and Libraries:
101,109
107,150
850

Target site urls:

Include My Site
 Include Membership sites
 Allow users to add additional sites

Default Options
Specify the default options for Copy and Move transactions. By default a move transaction preserves authors, dates and version history whereas a copy transaction does not. Users can change the options for each transaction in the target selection dialog.

Default copy options:
 Include authors and dates
 Include versions
 Include permissions

Default move options:
 Include authors and dates
 Include versions
 Include permissions

Warnings
Specify which warnings CopyMove should check for and display to users.

Show warning on loss of item version history
 Show warning on loss of item Content Type
 Show warning on loss of item Metadata

Permissions
Restricting CopyMove to authorized users adds the permission levels *CopyMove User* and *CopyMove Power User* to the site collection. Next, the CopyMove permission levels must be granted to the appropriate users and groups in the site collection. Otherwise, CopyMove will only be available to users with *Full Control* to lists and libraries.

Restrict CopyMove usage to authorized users

Recycle Bin
Specify if CopyMove shall push source items to the recycle bin on move operations. CopyMove will otherwise permanently delete all source items on a move.

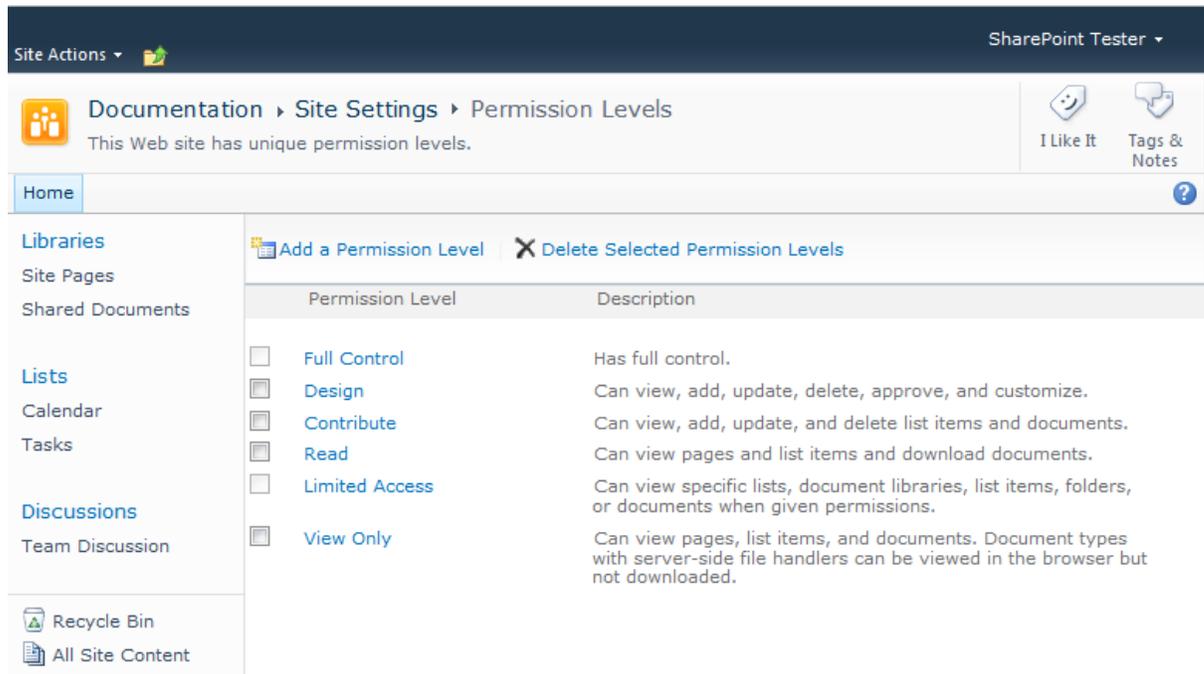
Leave source items in the Recycle Bin on moves

All the options on the page have identical effects as the options on the global settings page described in the Global Settings section. The only difference is that the effects are obviously limited to the site collection.

3.4 Permissions Management

Site collection administrators, site owners or other users that can manage permissions in SharePoint also have the power to limit access to the CopyMove functionality. However, not before CopyMove has been configured to use permissions as described in the sections Global Settings and Site Collection Settings. Otherwise the CopyMove buttons are available to anyone with access to the SharePoint sites where the CopyMove site collection feature is enabled. CopyMove will of course always respect regular SharePoint permissions in terms of sufficient privileges to view, add and delete items in lists.

Users and groups with the *Full Control* permission level will always have access to CopyMove in site collections where the CopyMove feature is activated. But other users and groups will need to be granted permission to the appropriate CopyMove actions through SharePoint permission levels. The following screen shot shows the available permission levels in a default SharePoint Foundation 2010 team site.



The screenshot shows the SharePoint 2010 interface for managing permission levels. The breadcrumb path is 'Documentation > Site Settings > Permission Levels'. Below the breadcrumb, there are two buttons: 'Add a Permission Level' and 'Delete Selected Permission Levels'. A table lists the available permission levels with their descriptions. The table has two columns: 'Permission Level' and 'Description'.

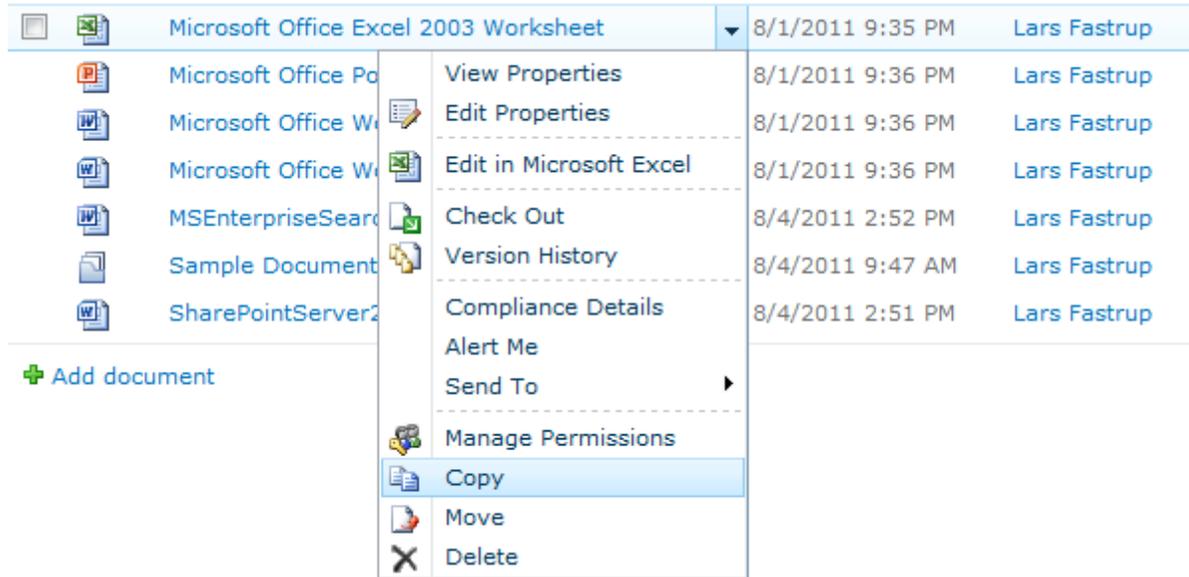
Permission Level	Description
<input type="checkbox"/> Full Control	Has full control.
<input checked="" type="checkbox"/> Design	Can view, add, update, delete, approve, and customize.
<input checked="" type="checkbox"/> Contribute	Can view, add, update, and delete list items and documents.
<input checked="" type="checkbox"/> Read	Can view pages and list items and download documents.
<input type="checkbox"/> Limited Access	Can view specific lists, document libraries, list items, folders, or documents when given permissions.
<input checked="" type="checkbox"/> View Only	Can view pages, list items, and documents. Document types with server-side file handlers can be viewed in the browser but not downloaded.

You basically have the following two ways of granting user permissions to CopyMove:

1. Add a new permission level for CopyMove and grant it to all appropriate users and groups.
2. Edit an existing permission level like *Contribute* and check the CopyMove permissions that apply to the level. Existing users who have already been granted the *Contribute* permission level, will in turn also get access to using CopyMove.

CopyMove also adds a Copy action and a Move action to the item-drop down menu in document libraries and lists. However, these actions are only visible to users and groups who have been granted access to

using the Copy and Move actions. This is regardless whether the setting *Restrict CopyMove usage to authorized users* is checked on the CopyMove Site Collection Settings page. This is by design due to technical limitations in trimming the menu on the fly according to permissions.



3.4.1 Granting access with a new CopyMove permission level

1. On the *Permission Levels* page shown above, click the link *Add a Permission Level*.
2. Next on the *Add a Permission Level* page, specify a name and a description for the new permission level - for example:

The screenshot shows the 'Add a Permission Level' page in SharePoint. The breadcrumb trail is 'Documentation > Site Settings > Add a Permission Level'. The page is titled 'SharePoint Tester'. The left navigation pane includes 'Libraries' (Site Pages, Shared Documents), 'Lists' (Calendar, Tasks), 'Discussions' (Team Discussion), and 'Recycle Bin' and 'All Site Content' at the bottom. The main content area has two sections: 'Name and Description' and 'Permissions'. In the 'Name and Description' section, the name is 'CopyMove' and the description is 'Can copy and move documents and items'. In the 'Permissions' section, the 'Select All' checkbox is checked, and the 'List Permissions' section has three unchecked checkboxes: 'Manage Lists', 'Override Check Out', and 'Add Items'.

3. Then scroll down to the bottom of the page and specify the appropriate CopyMove permissions for the new permission level. The following screen shot shows an example of a new permission level that will include access to the *Copy* and *Move* functions but not the *Export* and *Import* functions.

Site Actions  SharePoint Tester

his or her own user information, such as adding a picture.

Personal Permissions

Manage Personal Views - Create, change, and delete personal views of lists.

Add/Remove Personal Web Parts - Add or remove personal Web Parts on a Web Part Page.

Update Personal Web Parts - Update Web Parts to display personalized information.

CopyMove Permissions

Copy - Users can copy files, folders and items.

Move - Users can move files, folders and items.

Export - Users can export content to a ZIP file.

Import - Users can import content from a ZIP file.

Create Cancel

NOTE: If the *CopyMove Permissions* section is not shown then verify that the CopyMove site collection feature is activated and that the check box *Restrict CopyMove usage to authorized users* is checked on the CopyMove Site Collection Settings page.

- Click the *Create* button to create the new CopyMove permission level. The list of permission levels now like this:

Site Actions  SharePoint Tester

Documentation > Site Settings > Permission Levels
This Web site has unique permission levels.

I Like It Tags & Notes

Home

Libraries
Site Pages
Shared Documents

Lists
Calendar
Tasks

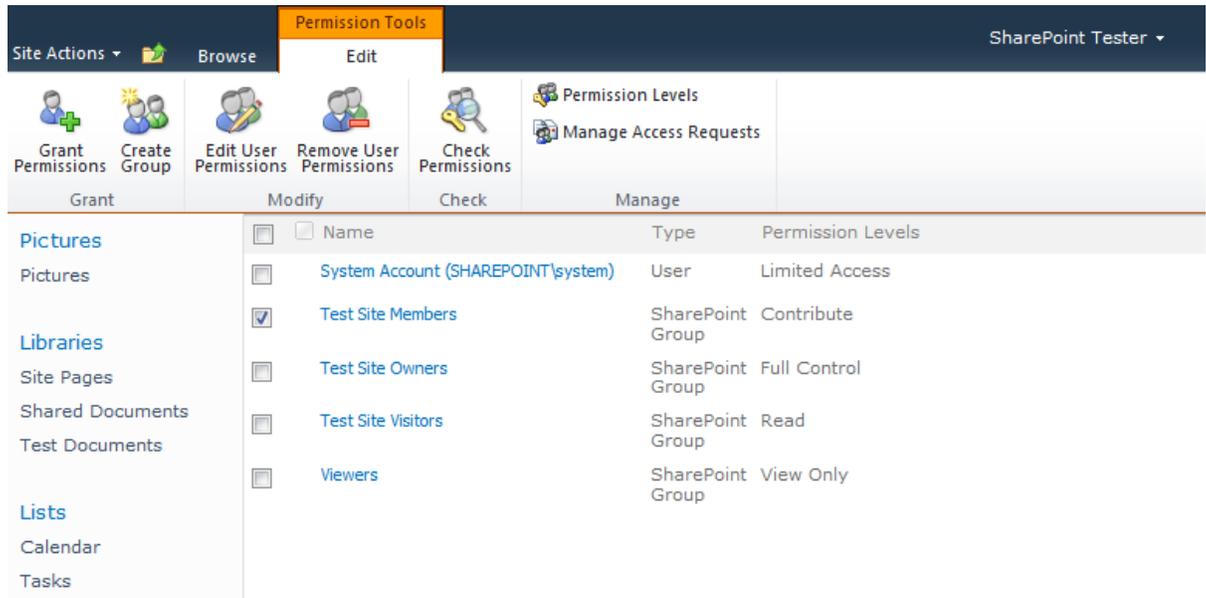
Discussions
Team Discussion

Recycle Bin
All Site Content

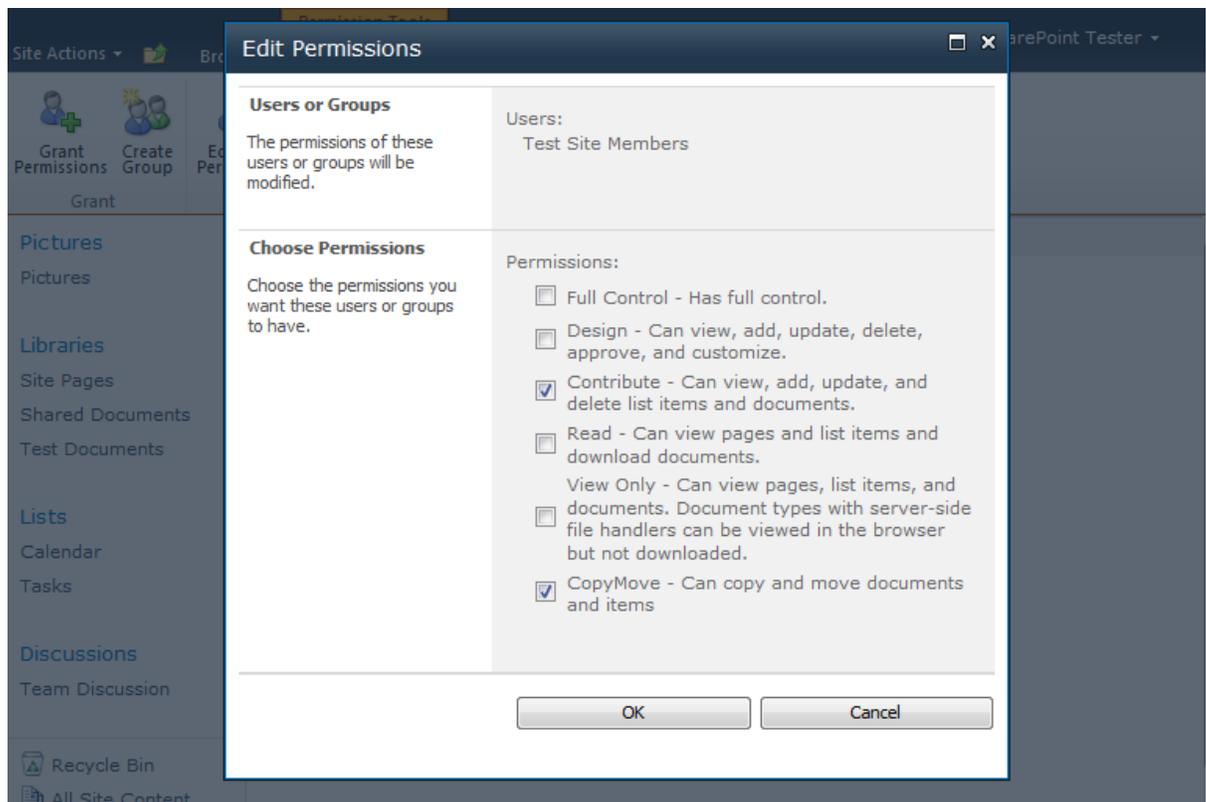
 Add a Permission Level |  Delete Selected Permission Levels

Permission Level	Description
<input type="checkbox"/> Full Control	Has full control.
<input type="checkbox"/> Design	Can view, add, update, delete, approve, and customize.
<input type="checkbox"/> Contribute	Can view, add, update, and delete list items and documents.
<input type="checkbox"/> Read	Can view pages and list items and download documents.
<input type="checkbox"/> Limited Access	Can view specific lists, document libraries, list items, folders, or documents when given permissions.
<input type="checkbox"/> View Only	Can view pages, list items, and documents. Document types with server-side file handlers can be viewed in the browser but not downloaded.
<input type="checkbox"/> CopyMove	Can copy and move documents and items

5. To grant permissions, manage permissions as usual in SharePoint and select the users or groups for which to change the permissions as shown in the screen shot below.



6. Click the *Edit User Permissions* button to edit the permissions for the selected users and groups. This opens the standard SharePoint permissions dialog as shown in this screen shot:



7. Check the appropriate permissions and click the *OK* button to apply the change. It may take up to one minute for CopyMove to pick up the new permissions and apply them to the CopyMove buttons in the ribbon.
8. Done

3.4.2 Granting access through an existing permission level

1. On the *Permission Levels* page shown above, click the *Permission Level* to use for CopyMove access.
2. Scroll down to the bottom of the page and specify the appropriate CopyMove permissions for the new permission level. The following example will include access to the *Copy* and *Move* functions but not the *Export* and *Import* functions.

Site Actions SharePoint Tester ▾

Personal Permissions

- Manage Personal Views - Create, change, and delete personal views of lists.
- Add/Remove Personal Web Parts - Add or remove personal Web Parts on a Web Part Page.
- Update Personal Web Parts - Update Web Parts to display personalized information.

CopyMove Permissions

- Copy - Users can copy files, folders and items.
- Move - Users can move files, folders and items.
- Export - Users can export content to a ZIP file.
- Import - Users can import content from a ZIP file.

Copy Permission Level Submit Cancel

NOTE: If the *CopyMove Permissions* section is not shown then verify that the CopyMove site collection feature is activated and that the check box *Restrict CopyMove usage to authorized users* is checked on the CopyMove Site Collection Settings page.

3. Click the *Submit* button to update the permission level with the selected CopyMove permissions.
4. Done. Existing users and groups who have been granted the selected permission level will now have access to CopyMove as well.

3.5 Auditing Copy and Move events

Companies and government agencies often have policies and regulations that require them to track what documents users are accessing and when. For this reason, CopyMove is also integrated with the built-in auditing facilities in SharePoint 2010. When auditing is enabled for copy and move events then CopyMove will log the following information to the SharePoint audit log for each item that is copied or moved:

- The date and time of the event.
- The id of the user who triggered the event.
- The id and the location URL of the item that was copied or moved.
- The type of the event (Copy or Move)
- The id and the location URL of the target folder where the item was copied or moved to.

Again, note that this information is logged per item and not per transaction. To enable CopyMove auditing for a site collection, follow these steps:

1. Open the root site of the site collection for which to configure auditing.
2. Select *Site Settings* in the *Site Actions* menu.
3. On the *Site Settings* page, click the *Site collection audit settings* link in the *Site Collection Administration* group. This brings up the *Configure Audit Settings* page shown below.

Site Actions spp\laf

Site Collection Administration > Configure Audit Settings

Home Search this site...

Libraries
Site Pages
Shared Documents

Lists
Calendar
Tasks

Discussions
Team Discussion

Recycle Bin
All Site Content

Audit Log Trimming
Specify whether the audit log for this site should be automatically trimmed and optionally store all of the current audit data in a document library. The schedule for audit log trimming is configured by your server administrator. [Learn more about audit log trimming.](#)

Automatically trim the audit log for this site?
 Yes No

Optionally, specify the number of days of audit log data to retain:
30

Optionally, specify a location to store audit reports before trimming the audit log:
 Browse...

Documents and Items
Specify the events that should be audited for documents and items within this site collection.

Specify the events to audit:

- Opening or downloading documents, viewing items in lists, or viewing item properties
- Editing items
- Checking out or checking in items
- Moving or copying items to another location in the site
- Deleting or restoring items

Lists, Libraries, and Sites
Specify the events that should be audited for lists, libraries, and sites within this site collection.

Specify the events to audit:

- Editing content types and columns
- Searching site content
- Editing users and permissions

OK Cancel

4. Check the check box labeled *Moving or copying items to another location in the site* to include CopyMove events in the audit log.
5. Click the OK button to save the change.

Entries in the SharePoint audit log can in turn be viewed and analyzed using the built-in audit log report generator in SharePoint or any other tool capable of mining the SharePoint audit log. To generate a report for Copy and Move events in a site collection, follow the steps below:

1. Open the root site of the site collection for which to configure auditing.
2. Select *Site Settings* in the *Site Actions* menu.
3. On the *Site Settings* page, click the *Audit log reports* link in the *Site Collection Administration* group.
4. On the *View Auditing Reports* page, select *Run a custom report*. This brings up the page shown below.

Site Actions spp\laf

Site Collection Administration > Run a custom report > Customize
Manually specify the filters for your Audit Report.

I Like It Tags & Notes

Home Search this site...

Libraries
Site Pages
Shared Documents

Lists
Calendar
Tasks

Discussions
Team Discussion

Recycle Bin
All Site Content

File Location
Specify where to save the report once it has been generated.

Save location:
/sites/demoteam/Shared Documents

Location
Specify whether this report should be restricted to a particular list in this Site Collection.

Restrict this report to:
All Lists

Date Range
Specify a start date and/or end date that this report should be restricted to. If you specify only a start date, the report will include all events that occur after that date. If you specify only an end date, the report will include all events that occur before that date.

Start Date:
5/1/2011 12 AM 00

End Date:
5/31/2011 11 PM 55

Users
Specify which user this report should be restricted to.

Users:

Events
Specify whether this report should be restricted to particular events. If no event filters are specified, the report will include all events matching the other restrictions.

Opening or downloading documents, viewing items in lists, or viewing item properties
 Editing items
 Checking out or checking in items
 Moving or copying items to another location in the site
 Deleting or restoring items
 Editing content types and columns
 Searching site content
 Editing users and permissions
 Editing auditing settings and deleting audit log events
 Workflow events
 Custom events

5. Select a document library in the site collection where to save the report to.
6. Optionally, specify a data range.
7. Optionally, limit the report to one or more users.
8. Check the event labeled *Moving or copying items to another location in the site*.
9. Click the *OK* button to generate the report.
10. Open the resulting Excel document to view the result.

On a final note, make sure to trim the audit log in order to prevent it from growing into an unmanageable size. You can for instance limit the log to only retain events for the last 30 days as shown in the first

screen shot in this section.

3.6 Diagnostic Logging

CopyMove logs detailed information about every copy and move transaction triggered by the users. Errors and warnings are by default logged to the Windows Event log as well as to the SharePoint trace log stored in the following folder (with default configuration) on each server:

```
C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14
\LOGS
```

But the detailed trace information is by default only logged to the SharePoint trace log in order not to flood the Windows Event log. Viewing the trace log files is possible with Notepad or any other text editor - but they are best examined with a dedicated tool like the free ULS Viewer available here:

<http://archive.msdn.microsoft.com/ULSViewer>

Just remember that each server in the farm has its own trace log file. They can, however, easily be merged into a single file using the PowerShell cmdlet `Merge-SPLLogFile`. The CopyMove product download includes the PowerShell script `GetLogFile.ps1` that extracts all recent CopyMove events from all servers in the farm into a single file named `spp.log`. The script can also be launched using the Windows batch file `GetLogFile.cmd`. Recent events are defined as all the events produced within the past hour.

The detail level of the CopyMove diagnostics logging can be configured by SharePoint administrators from *Central Administration > Diagnostic Logging* as shown in the screen shot below.

Site Actions SPP\Administrator

Microsoft SharePoint 2010 Central Administration > Diagnostic Logging

Central Administration

- Application Management
- System Settings
- Monitoring
- Backup and Restore
- Security
- Upgrade and Migration
- General Application Settings
- Configuration Wizards

Event Throttling

Use these settings to control the severity of events captured in the Windows event log and the trace logs. As the severity decreases, the number of events logged will increase.

You can change the settings for any single category, or for all categories. Updating all categories will lose the changes to individual categories.

Select a category

Category	Event Level	Trace Level
<input type="checkbox"/> All Categories		
<input type="checkbox"/> Business Connectivity Services		
<input type="checkbox"/> SharePoint Foundation		
<input type="checkbox"/> SharePoint Foundation Search		
<input checked="" type="checkbox"/> SharePoint Products		
<input checked="" type="checkbox"/> CopyMove	Error	Medium
<input checked="" type="checkbox"/> DataWarehouse	Error	Medium
<input checked="" type="checkbox"/> Other	Error	Medium
<input checked="" type="checkbox"/> Platform	Error	Medium
<input type="checkbox"/> SQL Server Reporting Services		

Least critical event to report to the event log

Least critical event to report to the trace log

Event Log Flood Protection

Enabling this setting allows detection of repeating events in the Windows event log. When the same event is being logged repeatedly, the repeating events are detected and suppressed until conditions return to normal.

Enable Event Log Flood Protection

Trace Log

When tracing is enabled you may want the trace log to go to a certain location. Note: The location you specify must exist on all servers in the farm.

Additionally, you may set the maximum number of days to store log files and restrict the maximum amount of storage to use for logging. [Learn about using the trace log.](#)

Path

 Example: C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\LOGS

Number of days to store log files

Restrict Trace Log disk space usage
 Restrict Trace Log disk space usage
 Maximum storage space for Trace Logs (GB)

OK Cancel

Four diagnostic logging categories are registered for SharePoint Products; *CopyMove*, *Platform*, *DataWarehouse* and *Other*. However, CopyMove is only logging events to the *CopyMove* and *Platform* categories. To enable verbose trace logging for CopyMove:

1. Select the categories *CopyMove* and *Platform* or simply select the parent category *SharePoint Products* to select all four categories.
2. Select the *Verbose* option in the drop-down box labeled *Least critical event to report to the trace log*.
3. Click the *OK* button to save the change.

CopyMove will in turn start logging more details about each transaction.

Part



IV

Extending CopyMove

4 Extending CopyMove

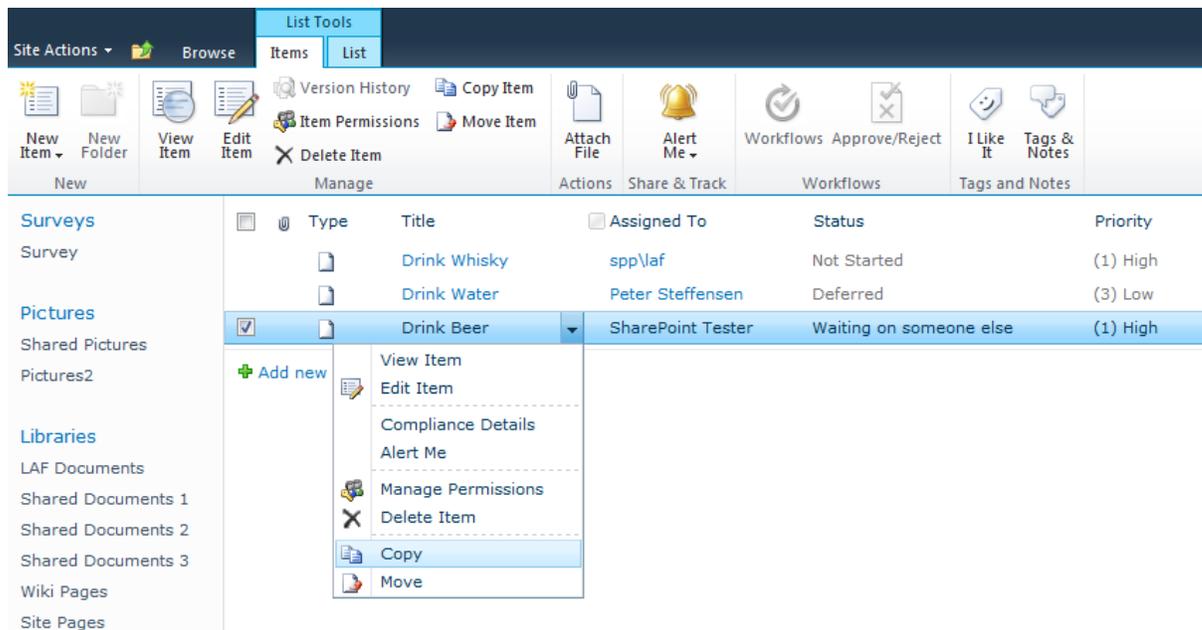
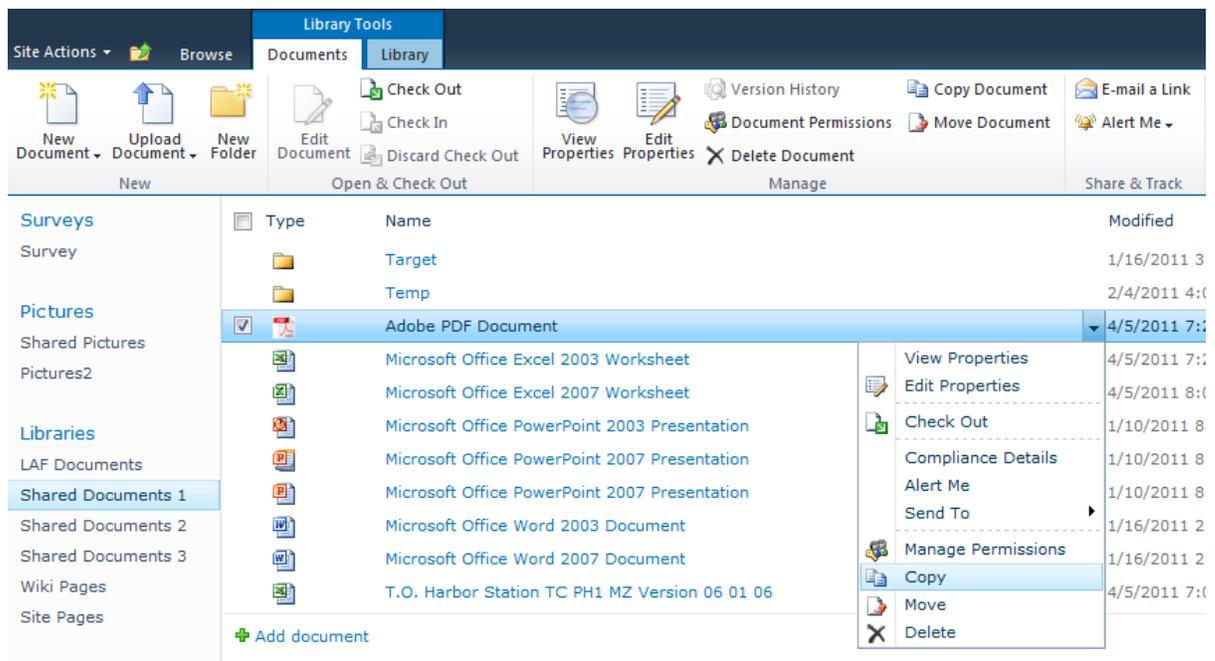
CopyMove can be extended by SharePoint developers to accommodate special business requirements like support for custom list templates and integration with list event handlers. Developers can also invoke CopyMove from custom code locally through the available .NET API or remotely through the built-in WCF service. Finally, workflow designers can also leverage CopyMove in workflows created with Visual Studio or SharePoint Designer 2010. The following sections in this chapter documents the different ways by which it is possible to extend CopyMove.

4.1 Registering CopyMove with Custom Lists

Activating the CopyMove feature as described in the section **Activating the CopyMove Features** registers the Copy and Move actions with document libraries and lists created from standard SharePoint list templates. See the section **Supported List Types** for a complete overview of the list types that CopyMove support out of the box.

Document libraries and lists created from custom list templates will not integrate with CopyMove without some customization as outlined in this section. This is by design as SharePoint requires custom UI actions in a list view to be registered independently for each list type. It is simply not possible to register custom actions in one go for all list types. Consequently, you will need to register the CopyMove UI actions for each custom list template that CopyMove must also integrate with. The recommended way to do this is to register the actions via a custom SharePoint feature deployed through a SharePoint 2010 solution package created with Visual Studio 2010. The CopyMove product download includes a sample Visual Studio project named *Custom List Template* that registers CopyMove with a custom document library template and a custom list template.

The *Custom List Template* sample demonstrates how to register CopyMove with a custom document library template and a custom list template as illustrated by the following two screen shots respectively. The sample registers a *Copy* action and a *Move* action with the ribbon and with the item drop-down menu.



To register the *Copy* action with a custom document library template, simply reference the XML snippet below in a SharePoint feature as shown by the *Custom List Template* sample project. The `<CustomAction>` element registers the *Copy* action with the ribbon in two locations; the first `<CommandUIDefinition>` element registers it with the ribbon in the *View Item* form and the second `<CommandUIDefinition>` element registers it with the ribbon in document library views.

```
<CustomAction
  Id="CustomDocumentLibrary.Ribbon.Copy"
  RegistrationId="101" RegistrationType="List"
  Location="CommandUI.Ribbon" Sequence="5"
  Rights="ViewListItems" UIVersion="4">
```

```

<CommandUIExtension>
  <CommandUIDefinitions>
    <CommandUIDefinition
      Location="Ribbon.ListForm.Display.Manage.Controls._children">
      <Button
        Id="SCustomDocumentLibrary.DispForm.CopyButton"
        Command="CustomDocumentLibrary.CopyDocument"
        Image32by32="/_layouts/spp/Copy32.gif"
        Image16by16="/_layouts/images/copy16.gif"
        LabelText="Copy Item" ToolTipTitle="Copy Item"
        ToolTipDescription="Copy the selected items."
        Sequence="100" TemplateAlias="o2" />
      </CommandUIDefinition>
    <CommandUIDefinition
      Location="Ribbon.Documents.Manage.Controls._children">
      <Button
        Id="CustomDocumentLibrary.AllItems.CopyButton"
        Command="SharePointProducts.CopyMove.CustomDocumentLibrary.CopyDocuments"
        Image32by32="/_layouts/spp/Copy32.gif"
        Image16by16="/_layouts/images/copy16.gif"
        LabelText="Copy Document" ToolTipTitle="Copy Document"
        ToolTipDescription="Copy the selected documents."
        Sequence="100" TemplateAlias="o2" />
      </CommandUIDefinition>
    </CommandUIDefinitions>
  <CommandUIHandlers>
    <CommandUIHandler
      Command="CustomDocumentLibrary.CopyDocument"
      CommandAction="javascript:SPP_CopyItem('{SiteUrl}','Copy Document')" />
    <CommandUIHandler
      Command="CustomDocumentLibrary.CopyDocuments"
      CommandAction="javascript:SPP_CopyItems('{SiteUrl}','Copy Documents')"
      EnabledScript="javascript:SPP_EnableCopyCommand()" />
    </CommandUIHandlers>
  </CommandUIExtension>
</CustomAction>

```

Similarly, use the following XML to register the *Move* action:

```

<CustomAction
  Id="CustomDocumentLibrary.Ribbon.Move"
  RegistrationId="101" RegistrationType="List"
  Location="CommandUI.Ribbon" Sequence="5"
  Rights="ViewListItems" UIVersion="4">
  <CommandUIExtension>
    <CommandUIDefinitions>
      <CommandUIDefinition
        Location="Ribbon.ListForm.Display.Manage.Controls._children">
        <Button
          Id="CustomDocumentLibrary.DispForm.MoveButton"
          Command="CustomDocumentLibrary.MoveDocument"
          Image32by32="/_layouts/spp/Move32.gif"
          Image16by16="/_layouts/images/upload.gif"
          LabelText="Move Item" ToolTipTitle="Move Item"
          ToolTipDescription="Move the selected items."
          Sequence="101" TemplateAlias="o2" />
        </CommandUIDefinition>
      </CommandUIDefinitions>
    </CommandUIExtension>
  </CustomAction>

```

```

<CommandUIDefinition
  Location="Ribbon.Documents.Manage.Controls._children">
  <Button
    Id="CustomDocumentLibrary.AllItems.MoveButton"
    Command="CustomDocumentLibrary.MoveDocuments"
    Image32by32="/_layouts/spp/Move32.gif"
    Image16by16="/_layouts/images/upload.gif"
    LabelText="Move Document" ToolTipTitle="Move Document"
    ToolTipDescription="Move the selected documents."
    Sequence="101" TemplateAlias="o2" />
  </CommandUIDefinition>
</CommandUIDefinitions>
<CommandUIHandlers>
<CommandUIHandler
  Command="CustomDocumentLibrary.MoveDocument"
  CommandAction="javascript:SPP_MoveItem('{SiteUrl}','Move Document')"/>
<CommandUIHandler
  Command="CustomDocumentLibrary.MoveDocuments"
  CommandAction="javascript:SPP_MoveItems('{SiteUrl}','Move Documents')"
  EnabledScript="javascript:SPP_EnableMoveCommand()" />
</CommandUIHandlers>
</CommandUIExtension>
</CustomAction>

```

Adapt the XML as follows for each custom document library template that you need to support:

1. Update the *RegistrationId* attribute to match the template id of your custom document library template.
2. Update the *Id* attributes with unique values across templates.
3. Update the *Command* attributes with unique values across templates.

Finally, be aware that the custom actions outlined above rely on the availability of several Javascript methods including; *SPP_CopyItem*, *SPP_CopyItems*, *SPP_MoveItem*, *SPP_MoveItems*, *SPP_EnableCopyCommand* and *SPP_EnableMoveCommand*. The methods will be available if you have activated the CopyMove site collection feature or the CopyMove Web application feature. But should you decide to only activate CopyMove through a custom feature then the following XML must also be referenced in the feature to include the CopyMove Javascript in Web pages.

```

<CustomAction ScriptSrc="SPP/Platform.js" Location="ScriptLink" Sequence="100">
</CustomAction>
<CustomAction ScriptSrc="SPP/CopyMove.js" Location="ScriptLink" Sequence="200">
</CustomAction>

```

A good source for further inspiration is the feature XML files deployed by CopyMove to the following locations on each farm server:

```

C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14
\TEMPLATE\FEATURES\SPPCopyMoveSite
C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14
\TEMPLATE\FEATURES\SPPCopyMoveWebApp

```

Here you can see exactly how CopyMove registers with all the list types listed in the **Supported List Types** section.

4.2 API

The Application Programming Interface for CopyMove enables SharePoint software developers to integrate CopyMove with their own SharePoint applications. Basically, the API supports the operations; copy, move, export and import. They can respectively be leveraged to copy, move, export and import one or more folders, documents and list items at a time. The items are handled with full fidelity including Metadata, version history and item level permissions. In this context, the Metadata includes the created and modified timestamps, the created by and modified by users, other system Metadata and custom Metadata.

The API is exposed as a .NET object model for use in server side code and as a WCF service for remote use. The .NET API exposes the following methods:

```
CopyMoveResult Copy(CopyMoveItemTransaction transaction);  
CopyMoveResult Move(CopyMoveItemTransaction transaction);  
CopyMoveResult Export(CopyMoveItemTransaction transaction);  
CopyMoveResult Import(CopyMoveItemTransaction transaction);  
CopyMoveStatus GetStatus(string transactionId);
```

where the WCF service is currently only exposing the Copy, Move and GetStatus methods. There are also some differences with respect to asynchronous invocation of the operations - but more about this later.

The *Copy*, *Move*, *Export* and *Import* methods all take an instance of the *CopyMoveItemTransaction* class as input and returns an instance of the *CopyMoveResult* class when the transaction is completed or aborted by errors or warnings. Larger transactions can take some time to complete and the *GetStatus* method can then be used to track the progress from another thread or from the same thread if the operations are invoked asynchronously as demonstrated later in this chapter. The following class diagram outlines the details of the input and output parameter classes in the API. The facade classes are documented in the next two sections.



The following tables documents each class and its properties shown in the class diagram above.

CopyMoveStatus		
An instance of this class is returned by the <i>GetStatus</i> method and it contains progress information for the specified transaction.		
Property	Type	Description
Message	string	Gets a textual message about the current progress of the copy or move transaction. The value of this property is designed to be used directly in a user interface. CopyMove displays the message together with the progress bar during a transaction.
ProgressByteCount	long	Gets the number of bytes copied or moved so far. Only document library files and list item attachments count.
ProgressFileCount	int	Gets the number of files copied or moved so far by the transaction.
ProgressFolderCount	int	Gets the number of folders copied or moved so far by the transaction.
ProgressItemCount	int	Gets the number of list items copied or moved so far by the transaction.

CopyMoveStatus		
An instance of this class is returned by the <i>GetStatus</i> method and it contains progress information for the specified transaction.		
ProgressPct	int	Gets the progress in percent.
ProgressTime	int	Gets the number of miliseconds that the transaction has been working.
State	int	Gets the current state of the transaction.
TotalByteCount	long	Gets the total number of bytes to be copied or moved. Only document library files and list item attachments count.
TotalFileCount	int	Gets the total number of files to be copied or moved by the transaction.
TotalFolderCount	int	Gets the total number of folders to be copied or moved by the transaction.
TotalItemCount	int	Gets the total number of list items to be copied or moved by the transaction.

CopyMoveTransaction		
The base class for all CopyMove transaction types. Currently there is only one type but future versions of CopyMove might include a site and a list transaction type as well.		
Property	Type	Description
Id	string	Gets or sets the transaction id.
IncludeTimestamps	bool	Gets or sets a value indicating whether to include and preserve the created time and modified time on items. The default value is true .
IncludeUserInfo	bool	Gets or sets a value indicating whether to include and preserve the created by user and the last modified by user. The default value is true .
IncludeVersions	bool	Gets or sets a value indicating whether to include and preserve version history, if any. The default value is true .
IncludeSecurity	bool	Gets or sets a value indicating whether to include item level permissions or not. The default value is false .
IncludeFolders	bool	Gets or sets a value indicating whether to include sub-folders when copying, moving, exporting or importing selected content. The default value is true .
ExcludeProperties	string[]	Optional. Gets or sets an array of Metadata property names to exclude. To exclude values for a specific list column, include the internal name of that column here.
OverwriteFiles	bool	Gets or sets a value indicating whether to overwrite existing files.
ExportFilter	string	Optional. Get or sets a SharePoint CAML query to only export matching items. Applies to exports only.
HaltOnNonFatalError	bool	Gets or sets a value indicating if the transaction should abort on non fatal errors. The default is true .
HaltOnWarning	bool	Gets or sets a value indicating if the transaction should abort on warnings. A typical warning is when copying or moving a file and it already exists in the target. The CopyMove UI always starts with this property set to true . Any warnings will abort the transaction and CopyMove displays them to the user for confirmation. If the user confirms the warnings then CopyMove restarts the transaction with the

CopyMoveTransaction		
The base class for all CopyMove transaction types. Currently there is only one type but future versions of CopyMove might include a site and a list transaction type as well.		
		HaltOnWarning property set to false . The default value is true .
SourceUrl	string	Gets or sets the absolute URL of the source list or the source folder in SharePoint. For import transactions this property must specify the Windows server file path to the ZIP archive or file system folder containing the content to import.
TargetUrl	string	Gets or sets the absolute URL of the target list or the target folder in SharePoint. For export transactions this property must specify the Windows server path to a folder where the resulting ZIP archive should be saved to.

CopyMoveItemTransaction		
Specifies a transaction for one or more folders, documents or list items.		
Property	Type	Description
Items	string[]	Gets or sets an array of the folders, documents or items to include in the transaction. Each item can be specified by its absolute URL, server relative URL, filename, list item GUID or list item ID. However, all items must exist in the source folder specified on the SourceFolder property.
SourceFolder	string	Obsolete. Gets or sets the absolute URL of the source list or source folder.
TargetFolder	string	Obsolete. Gets or sets the absolute URL of the target list or source folder. It can be any compatible folder in the SharePoint farm.

CopyMoveResult		
An instance of this class is returned by the Copy and Move methods when the transaction ends.		
Property	Type	Description
ByteCount	long	Gets the total number of bytes copied or moved. Only document library files and list item attachments count.
ErrorCode	int	Gets the overall status of the completed transaction. Possible values are: 0 = Ok 1 = Ok with warnings 2 = Error
Errors	CopyMoveMessage[]	Gets an array of detailed error messages if the ErrorCode=2
ExecutionTime	int	Gets the total number of milliseconds it took to execute the transaction.
FileCount	int	Gets the total number of files that were copied or moved by the transaction.
FileVersionCount	int	Gets the total number of file versions that were copied or moved by the transaction.
FolderCount	int	Gets the total number of folders that were copied or moved by the transaction.

CopyMoveResult		
An instance of this class is returned by the Copy and Move methods when the transaction ends.		
ItemCount	int	Gets the total number of list items that were copied or moved by the transaction.
ItemVersionCount	int	Gets the total number of list item versions that were copied or moved by the transaction.
Message	string	Gets a textual message describing the outcome of the transaction. The value of this property is designed to be used directly in a user interface. CopyMove displays this message to the user when a transaction completes.
TransactionId	string	Gets the id of the transaction that produced the result.
Warnings	CopyMoveMessage[]	Gets an array of detailed warning messages if the ErrorCode=1

CopyMoveMessage		
Represents a message from CopyMove.		
Property	Type	Description
Exception	Exception	If the message represents an error then this property contains the Exception that triggered it.
Id	int	Gets the message id, which can be any of the following values defined as public constants in the class: Warning_FileExist = 101 Warning_LossOfMajorVersionHistory = 110 Warning_LossOfMinorVersionHistory = 111 Warning_LossOfContentType = 112 Warning_LossOfListFieldValue = 113 Warning_LossOfPageLayout = 115 Error_SiteNotFound = 201 Error_ListNotFound = 202 Error_FolderNotFound = 203 Error_ItemNotFound = 204 Error_SourceNotFound = 205 Error_InvalidSource = 206 Error_MissingManifest = 207 Error_AccessDenied_OpenSite = 210 Error_AccessDenied_CopySourceItem = 211 Error_AccessDenied_MoveSourceItem = 212 Error_AccessDenied_CopyTargetItem = 213 Error_AccessDenied_MoveTargetItem = 214 Error_AccessDenied_ExportItem = 215 Error_AccessDenied_ImportItem = 216 Error_AccessDenied_SourceList = 217 Error_AccessDenied_SourceFolder = 218 Error_AccessDenied_TargetList = 219 Error_AccessDenied_TargetFolder = 220 Error_AccessDenied_OverwriteTargetItem = 221

CopyMoveMessage		
Represents a message from CopyMove.		
		Error_FileTargetUrlTooLong = 230 Error_FolderTargetUrlTooLong = 231 Error_IncompatibleTargetList = 232 Error_TransactionFileCountExceeded = 235 Error_TransactionFolderCountExceeded = 236 Error_TransactionFileSizeExceeded = 237 Error_OverwriteCheckedOutFile = 240 Error_OverwriteLockedFile = 241 Error_OverwriteInPlaceRecord = 242 Error_MoveCheckedOutFile = 243 Error_MoveLockedFile = 244 Error_MoveInPlaceRecord = 245 Error_MoveFolderToSelf = 246 Error_CannotDeleteSourceItems = 250 Error_TargetSiteNoPublishing = 260
Text	string	Gets the message text.

4.2.1 Using the CopyMove .NET API

Integrating server side code with CopyMove is best done using the CopyMove .NET API, which is exposed through the *SharePointProducts.CopyMove.CopyMoveProcessor* class in addition to the input and output parameter classes outlined in the previous section. To work with the API in Visual Studio it is necessary to add a reference to the following .NET assemblies located in the Global Assembly Cache:

- SharePointProducts.Common.dll
- SharePointProducts.Platform.dll
- SharePointProducts.CopyMove.dll

The *CopyMoveProcessor* class contains the public methods listed below. The *Copy*, *Move*, *Export* and *Import* methods are synchronous and will not return before the transaction completes whereas the *CopyAsync*, *MoveAsync*, *ExportAsync* and *ImportAsync* methods are asynchronous. The latter methods launches a background worker thread and returns to the caller with the transaction id. The method *GetStatus* can in turn be used to track the progress of a specific transaction without blocking the caller. Finally, the *GetResult* method is used to obtain the result of an asynchronous transaction. Calling the method before the worker thread has completed the transaction blocks the caller until the transaction has completed and an instance of the *CopyMoveResult* class is ready to return.

```
public CopyMoveResult Copy(CopyMoveItemTransaction transaction)
public string CopyAsync(CopyMoveItemTransaction transaction)

public CopyMoveResult Move(CopyMoveItemTransaction transaction)
public string MoveAsync(CopyMoveItemTransaction transaction)

public CopyMoveResult Export(CopyMoveItemTransaction transaction)
public CopyMoveResult Export(CopyMoveListTransaction transaction)
public string ExportAsync(CopyMoveItemTransaction transaction)
public string ExportAsync(CopyMoveListTransaction transaction)

public CopyMoveResult Import(CopyMoveItemTransaction transaction)
public string ImportAsync(CopyMoveItemTransaction transaction)

public CopyMoveStatus GetStatus(string transactionId)
public CopyMoveResult GetResult(string transactionId)
```

The following example demonstrates how to use the .NET API to move a folder and two documents from one document library to another document library within the same SharePoint farm.

```
// Create a new instance of the CopyMove API facade class
var processor = new CopyMoveProcessor();

// Prepare new CopyMove item transaction
var transaction = new CopyMoveItemTransaction();
transaction.OverwriteFiles = true;
transaction.IncludeTimestamps = true;
transaction.IncludeUserInfo = true;
transaction.IncludeVersions = true;
transaction.IncludeSecurity = false;
transaction.HaltOnWarning = false;
```

```
// The absolute URL of the source folder or source list
transaction.SourceFolder = "http://server/sites/site1/doclib/folder";

// The absolute URL of the target folder or target list
transaction.TargetFolder = "http://server/sites/site2/doclib/folder";

// The source items to copy. Each item can be specified by its
// absolute URL, server relative URL, filename, list item GUID or list item ID.
// In this example, we just specify the filenames of a folder and two documents
// in the source folder specified above.
transaction.Items = new string[]
{
    "Test Folder", "Test Document.doc", "Test Document.pdf",
};

// Optional: Exclude one or more list columns
transaction.ExcludeProperties = new string[] { "FieldName1", "FieldName2" };

// Start the Move process in a separate thread. The MoveAsync method returns
// immediately after launching the background thread that does the actual
// copying of items.
string transactionId = processor.MoveAsync(transaction);

// CopyMove keeps track of the progress in the worker thread
// and you can optionally ask for it using the GetStatus method.
while (true)
{
    Thread.Sleep(500);
    CopyMoveStatus status = processor.GetStatus(transactionId);

    // TODO: Display progress to user

    if (status.ProgressPct == 100) break;
}

// Get the final result of the transaction. The GetResult
// method blocks until the transaction has completed or
// was aborted by an error
CopyMoveResult result = processor.GetResult(transactionId);

if (result.ErrorCode == 0)
{
    // Success - the transaction completed without errors or warnings
} else if (result.ErrorCode == 1)
{
    // Warning - the transaction completed with warnings
} else if (result.ErrorCode == 2)
{
    // Error - the transaction was aborted with errors
}
```

The sample code shown above can also be found in the `Form1.cs` file of the Visual Studio project named *API Sample*. It is included in the CopyMove product download.

4.2.2 Using the CopyMove WCF Service

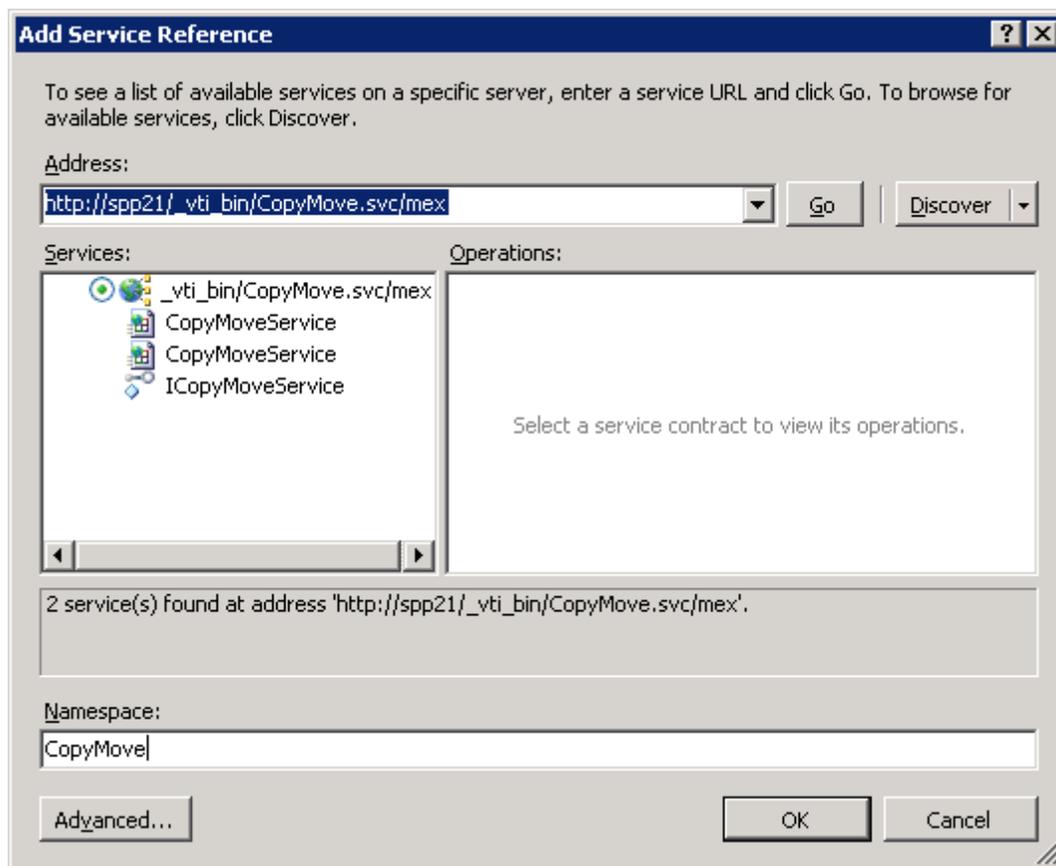
Remote clients can also leverage CopyMove through its integrated WCF Service that wraps the .NET API. The service is available at URLs constructed from the following pattern:

```
<protocol>://<Web application>/<Context Site>/_vti_bin/CopyMove.svc
```

where the protocol can be HTTP or HTTPS depending on the Web application setup. For example:

```
http://server/_vti_bin/CopyMove.svc or http://server/sites/site/_vti_bin/CopyMove.svc
```

The service is sensitive to the SharePoint site context and it is therefore important to always connect with the proper SharePoint site URL. From Visual Studio 2010 it is easy to connect to the service and build the required client classes. Just note that you need to add /mex to the service URL as shown in the screen shot below.



Once Visual Studio has successfully connected to the service, click *OK* to generate the WCF client code that can be used to invoke the service. To include support for asynchronous invocation, first click the *Advanced* button and check the *Generate asynchronous operations* check box. Visual Studio will in turn generate a class named *CopyMoveServiceClient* with the following methods:

```
CopyMoveResult Copy(CopyMoveItemTransaction transaction);
```

```
IAsyncResult BeginCopy(CopyMoveItemTransaction transaction, AsyncCallback callback,
object asyncState);

CopyMoveResult EndCopy(IAsyncResult result);

CopyMoveResult Move(CopyMoveItemTransaction transaction);

IAsyncResult BeginMove(CopyMoveItemTransaction transaction, AsyncCallback callback,
object asyncState);

CopyMoveResult EndMove(IAsyncResult result);

CopyMoveStatus GetStatus(string transactionId);

string GetVersion();
```

See <http://msdn.microsoft.com/en-us/library/ms734691.aspx> for more information about accessing WCF services. Connecting to the CopyMove WCF service in code goes as in the following example with NTLM authentication. For other types of supported authentication schemes, please refer to the Microsoft WCF documentation on MSDN.

```
//
// Create proxy that connects to the service and authenticates with current user.
//
var binding = new BasicHttpBinding();
binding.Security.Mode = BasicHttpSecurityMode.TransportCredentialOnly;
binding.Security.Transport.ClientCredentialType = HttpClientCredentialType.Ntlm;
var endpoint = new EndpointAddress("http://server/sites/site/_vti_bin/CopyMove.svc");
CopyMove.CopyMoveServiceClient proxy = new CopyMove.CopyMoveServiceClient(binding,
endpoint);
proxy.ClientCredentials.Windows.AllowedImpersonationLevel = System.Security.Principal.
TokenImpersonationLevel.Impersonation;

//
// Get the CopyMove version number. This service call will fail if a
// connection to the WCF Service cannot be established.
//
string version = proxy.GetVersion();
```

From here the code is virtually identical to that of the .NET API. The following example moves a folder and two documents from one document library to another document library within the same SharePoint farm.

```
// Prepare new CopyMove item transaction
var transaction = new CopyMoveItemTransaction();
transaction.OverwriteFiles = true;
transaction.IncludeTimestamps = true;
transaction.IncludeUserInfo = true;
transaction.IncludeVersions = true;
transaction.IncludeSecurity = false;
transaction.HaltOnWarning = false;
```

```
// The absolute URL of the source folder or source list
transaction.SourceFolder = "http://server/sites/site1/doclib/folder";

// The absolute URL of the target folder or target list
transaction.TargetFolder = "http://server/sites/site2/doclib/folder";

// The source items to copy. Each item can be specified by its
// absolute URL, server relative URL, filename, list item GUID or list item ID.
// In this example, we just specify the filenames of a folder and two documents
// in the source folder specified above.
transaction.Items = new string[]
{
    "Test Folder", "Test Document.doc", "Test Document.pdf",
};

// Optional: Exclude one or more list columns
transaction.ExcludeProperties = new string[] { "FieldName1", "FieldName2" };

// Run the specified move transaction.
CopyMoveResult result = proxy.Move(transaction);

if (result.ErrorCode == 0)
{
    // Success - the transaction completed without errors or warnings
} else if (result.ErrorCode == 1)
{
    // Warning - the transaction completed with warnings
} else if (result.ErrorCode == 2)
{
    // Error - the transaction was aborted with errors
}
```

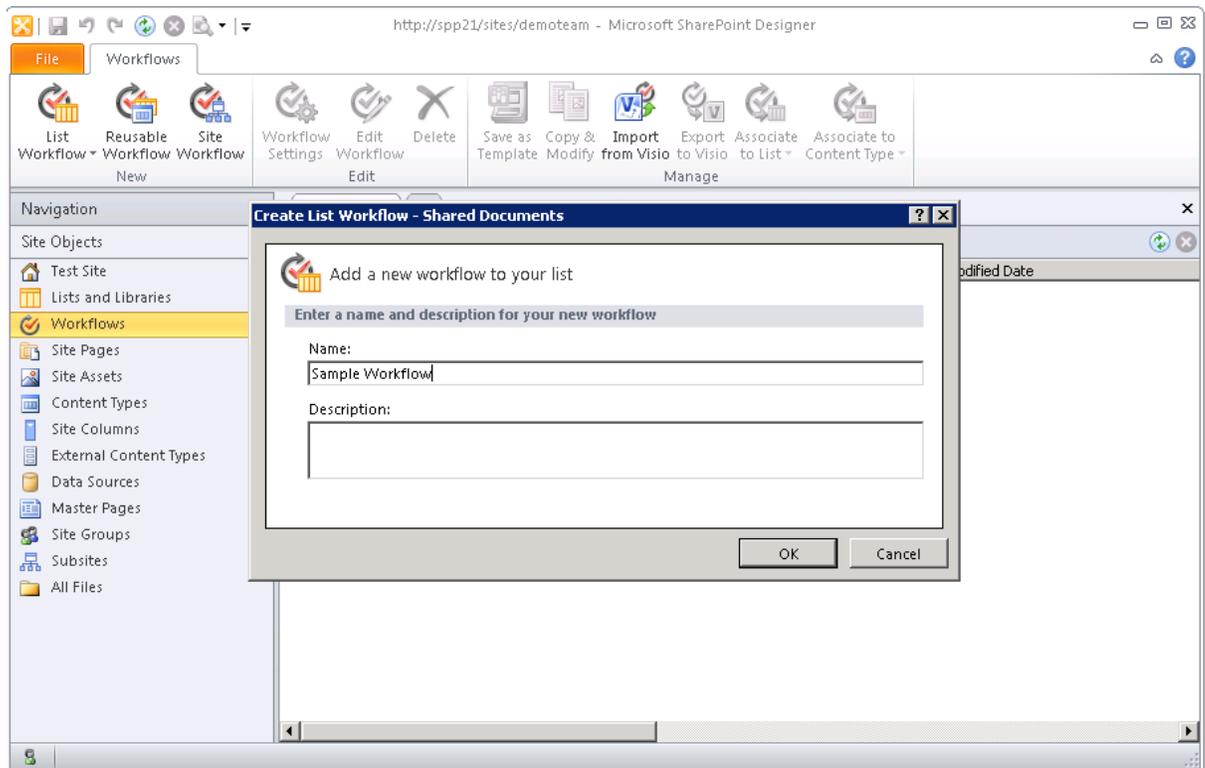
The sample code shown above can also be found in the `Form1.cs` file of the Visual Studio project named *WCF Sample*. It is included in the CopyMove product download.

4.3 Using CopyMove in Workflows

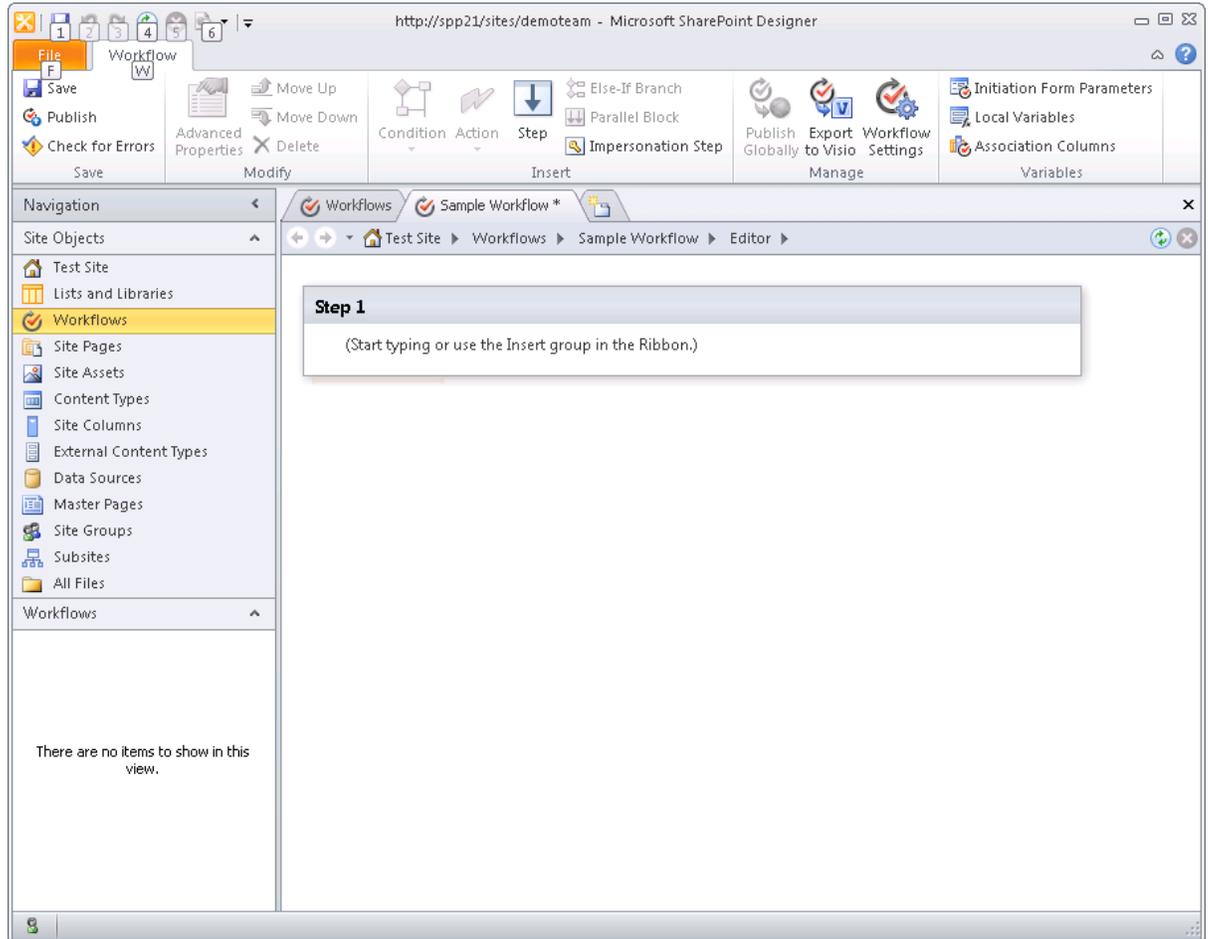
SharePoint software developers building workflows with Visual Studio, can simply leverage the CopyMove .NET API to execute copy, move, export and import transactions.

Workflows created with SharePoint Designer 2010 can to some degree also leverage CopyMove out-of-the-box. Here CopyMove installs two custom workflow actions for the Copy and Move operations. It is in other words possible to build a no-code workflow that copies or moves documents, items and folders with will fidelity. Let us start SharePoint Designer and create a simple workflow that copies the current item to another location.

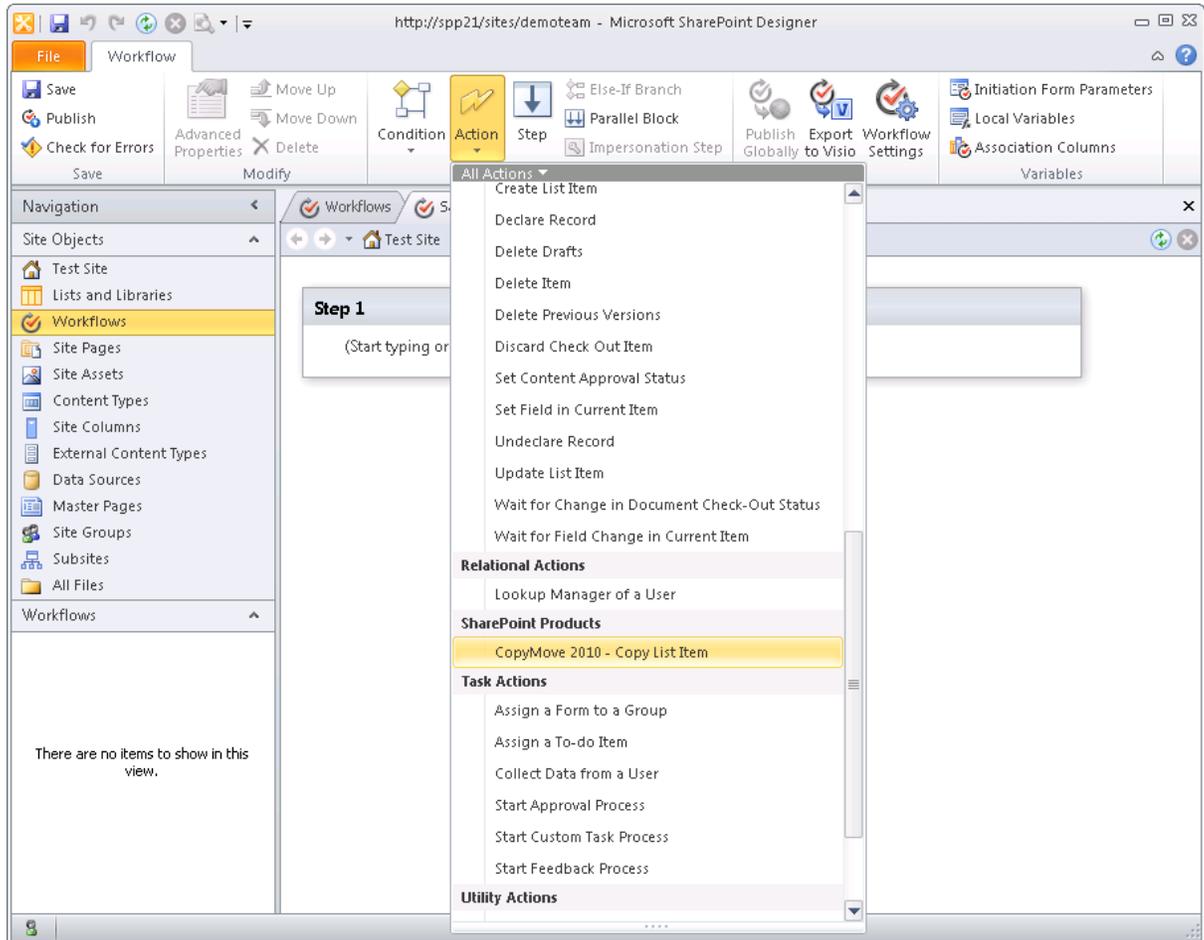
1. Open a SharePoint site with SharePoint Designer 2010.
2. Select the *Workflows* node in the left hand navigation pane.
3. Select a document library or list from the *List Workflow* button in the ribbon. This opens the *Create List Workflow* dialog as shown in the following screen shot:



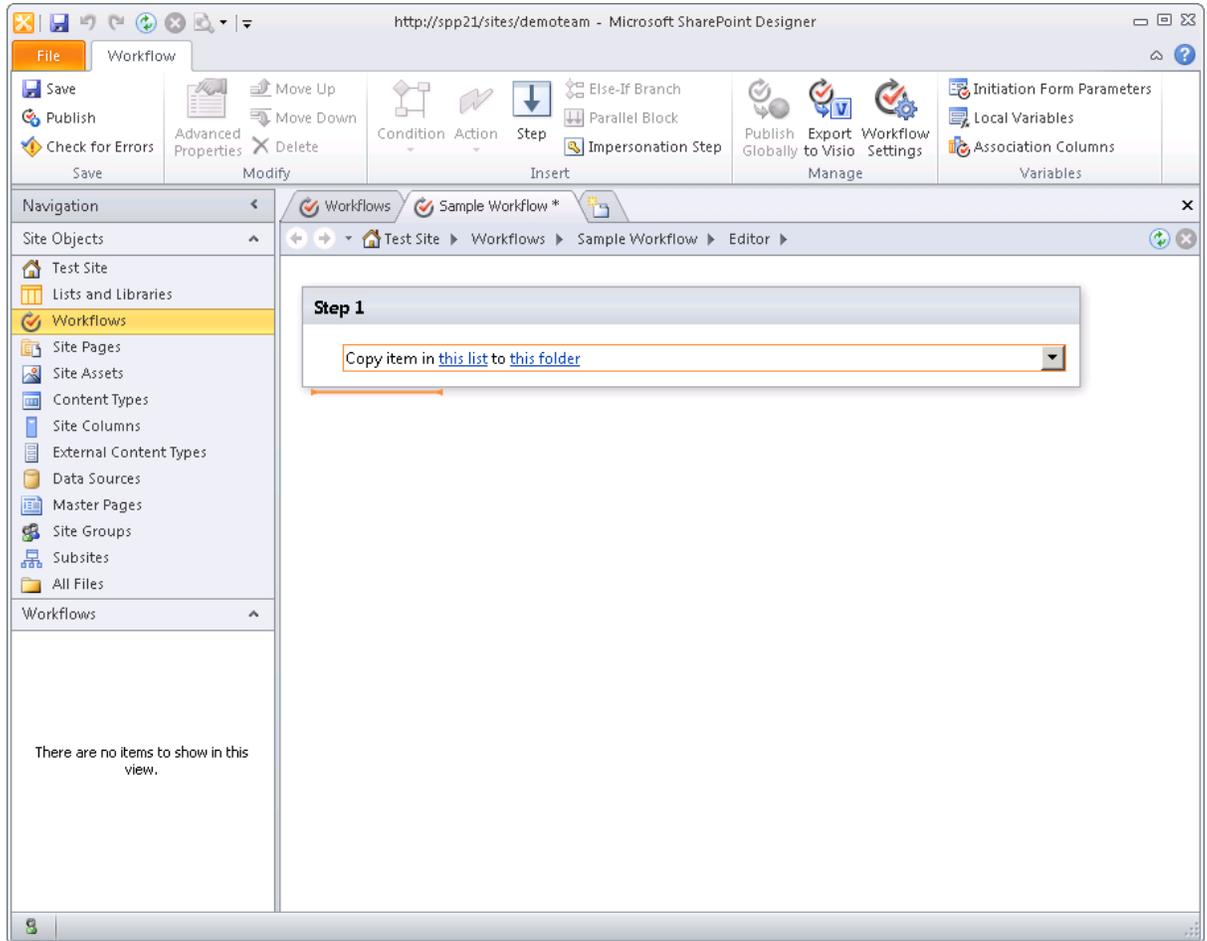
4. Specify a name for the workflow, e.g. Sample Workflow and click the *OK* button. We now have a blank workflow as shown below and are ready to design it.



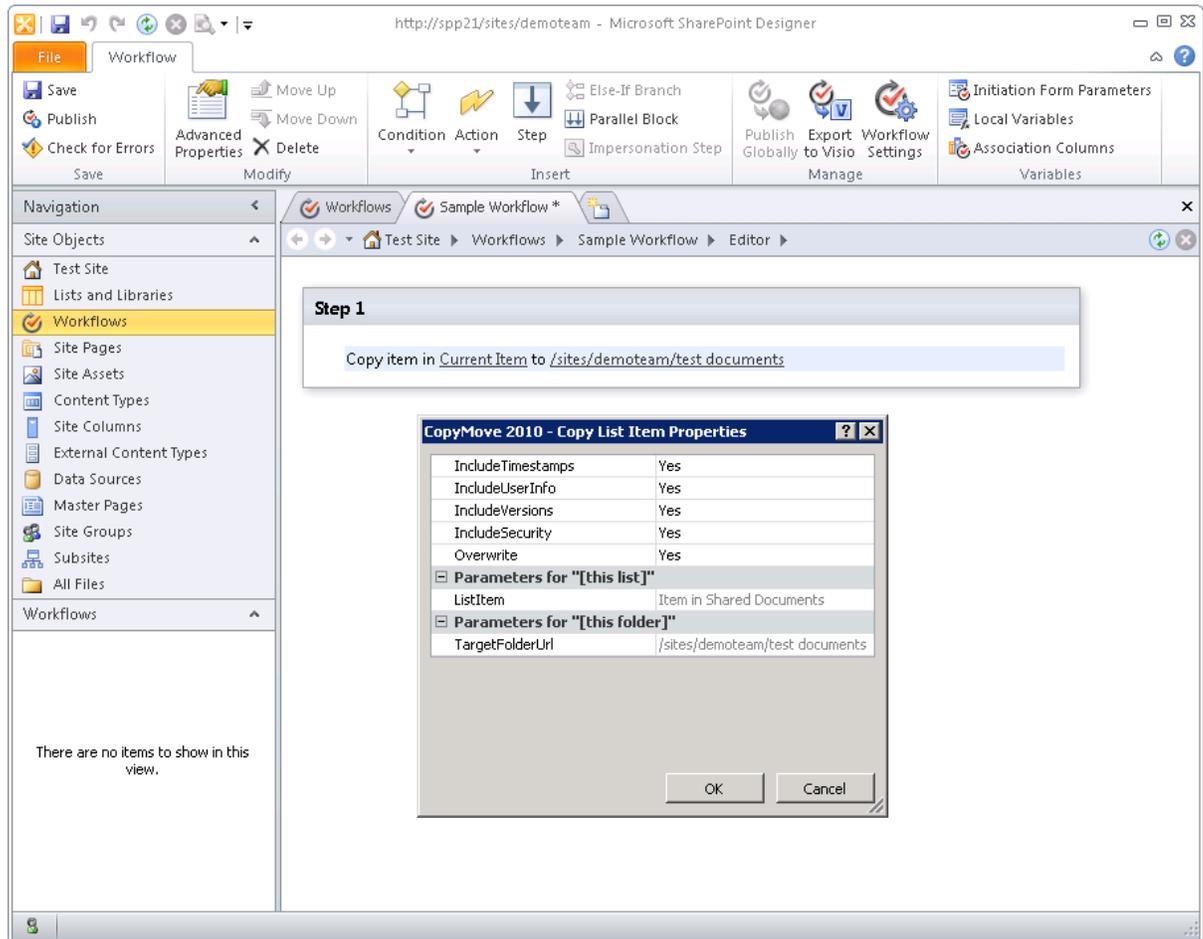
5. We will keep the workflow simple and just design a one that copies the current item as soon as the workflow is started. Select *Step 1* to enable the *Action* button in the Ribbon. Then select the action named *CopyMove 2010 - Copy List Item* to add it to *Step 1* in the workflow.



6. The CopyMove action is now added to the workflow and is ready to be configured.



- Configure the workflow action to copy the *Current Item* to another list or another folder in the same list. Specify the server relative url of the list or folder, e.g. /sites/demoteam/test documents. Finally, open the properties dialog of the CopyMove workflow action and configure the properties; *IncludeTimestamps*, *IncludeUserInfo*, *IncludeVersions*, *IncludeSecurity* and *Overwrite*.



Specify *IncludeTimestamps=Yes* to preserve the created timestamp and the last modified timestamp of the item.

Specify *IncludeUserInfo=Yes* to preserve the created by user and the modified by user.

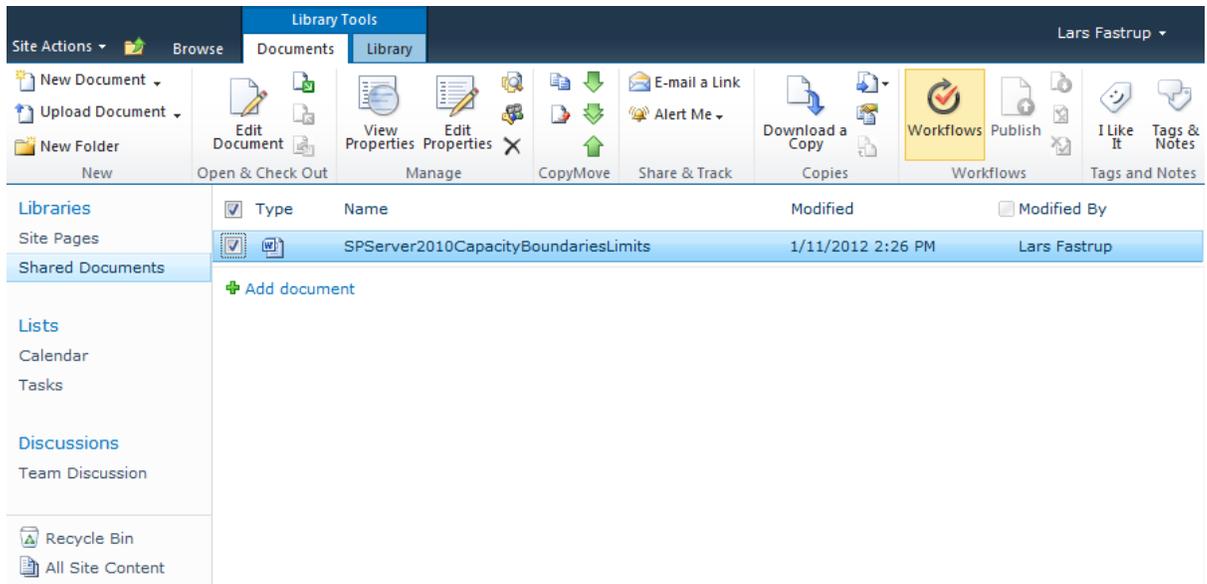
Specify *IncludeVersions=Yes* to preserve the complete version history of the item.

Specify *IncludeSecurity=Yes* to preserve any item level permissions.

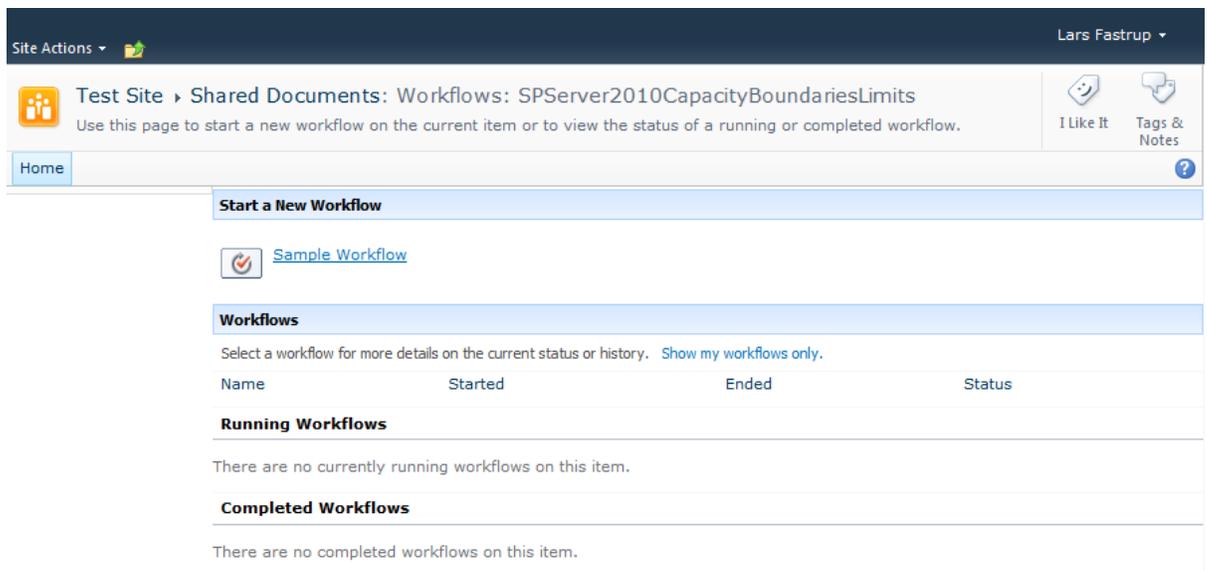
Specify *Overwrite=Yes* to allow existing documents to be overwritten in document libraries.

- The workflow is now ready to be deployed to SharePoint. Verify that it does not contain any errors by clicking the *Check for Errors* button in the ribbon. Then click the *Publish* button to deploy it to SharePoint.

9. Open the SharePoint site and navigate to the document library or list that the workflow was created for. Then select the item and click the Workflows button in the ribbon as shown below.



10. Start the workflow by clicking the link the section *Start a New Workflow*.



11. The workflow copies the selected document to the target location specified for the workflow action in SharePoint Designer. Once the workflow completes, it adds a new status column to the document library as shown in the following screen shot.

The screenshot shows a SharePoint document library interface. At the top, there is a navigation bar with 'Site Actions', 'Browse', 'Documents', and 'Library' tabs. The current view is 'All Documents' under 'Shared Documents'. Below the navigation bar, there is a search box and a 'Search this site...' button. The main content area displays a table with the following data:

Type	Name	Modified	Modified By	Sample Workflow
	SPServer2010CapacityBoundariesLimits	1/11/2012 2:26 PM	Lars Fastrup	Completed

Below the table, there is a green plus icon and the text 'Add document'. On the left side, there is a sidebar with navigation options: 'Libraries', 'Site Pages', 'Shared Documents', 'Lists', 'Calendar', 'Tasks', 'Discussions', 'Team Discussion', 'Recycle Bin', and 'All Site Content'.

12.Done

Part



Troubleshooting

5 Troubleshooting

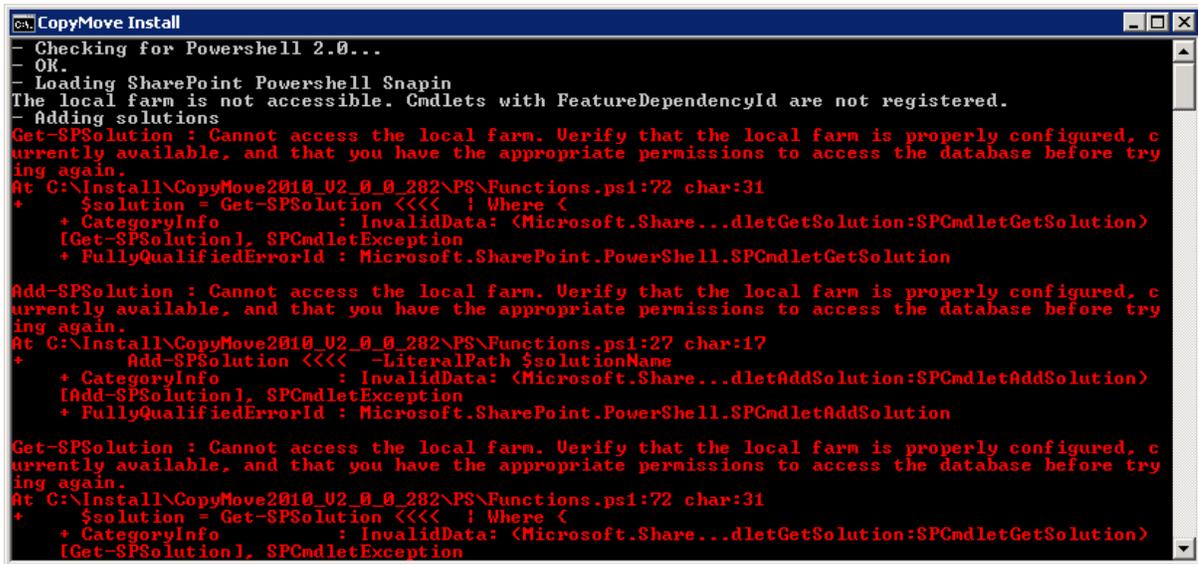
SharePoint is a very complex platform to setup and operate as well as it is a complex platform to develop applications for. CopyMove for SharePoint 2010 has been tested rigorously with SharePoint Foundation 2010 and SharePoint Server 2010 in different configurations. But this does unfortunately not mean that you will never encounter any problems when installing and using CopyMove. Most problems are related to the way SharePoint is configured as well as lack of technical insight into the SharePoint product (it simply takes time, skill and effort to really understand and master SharePoint). On rare occasions, you might encounter a genuine bug in CopyMove when it is faced with special conditions that we have not tested for. In this case, please report the problem and we will do our best to understand, reproduce and fix the problem for you.

For the reasons above, we strongly recommend to evaluate and test CopyMove in a test environment before deploying it to a production environment. The test environment should be a separate SharePoint farm in a configuration that resembles that of the production farm.

This chapter seeks to help you understand and correct common problems. It also provides a guideline for reporting problems to our support team when you encounter a problem that you cannot resolve yourself.

5.1 Installation Error - Cannot access the local farm

The error *Cannot access the local farm* shows when trying to install CopyMove to a SharePoint farm. The error causes the installation script to abort as shown in the screen shot below.



```
ca. CopyMove Install
- Checking for Powershell 2.0...
- OK.
- Loading SharePoint Powershell Snapin
The local farm is not accessible. Cmdlets with FeatureDependencyId are not registered.
- Adding solutions
Get-SPSolution : Cannot access the local farm. Verify that the local farm is properly configured, c
urrently available, and that you have the appropriate permissions to access the database before try
ing again.
At C:\Install\CopyMove2010_U2_0_0_282\PS\Functions.ps1:72 char:31
+ $solution = Get-SPSolution <<<< ! Where <
+ CategoryInfo          : InvalidData: (Microsoft.Share...dletGetSolution:SPCmdletGetSolution)
+ FullyQualifiedErrorId : Microsoft.SharePoint.PowerShell.SPCmdletGetSolution

Add-SPSolution : Cannot access the local farm. Verify that the local farm is properly configured, c
urrently available, and that you have the appropriate permissions to access the database before try
ing again.
At C:\Install\CopyMove2010_U2_0_0_282\PS\Functions.ps1:27 char:17
+ Add-SPSolution <<<< -LiteralPath $solutionName
+ CategoryInfo          : InvalidData: (Microsoft.Share...dletAddSolution:SPCmdletAddSolution)
+ FullyQualifiedErrorId : Microsoft.SharePoint.PowerShell.SPCmdletAddSolution

Get-SPSolution : Cannot access the local farm. Verify that the local farm is properly configured, c
urrently available, and that you have the appropriate permissions to access the database before try
ing again.
At C:\Install\CopyMove2010_U2_0_0_282\PS\Functions.ps1:72 char:31
+ $solution = Get-SPSolution <<<< ! Where <
+ CategoryInfo          : InvalidData: (Microsoft.Share...dletGetSolution:SPCmdletGetSolution)
+ FullyQualifiedErrorId : Microsoft.SharePoint.PowerShell.SPCmdletGetSolution
```

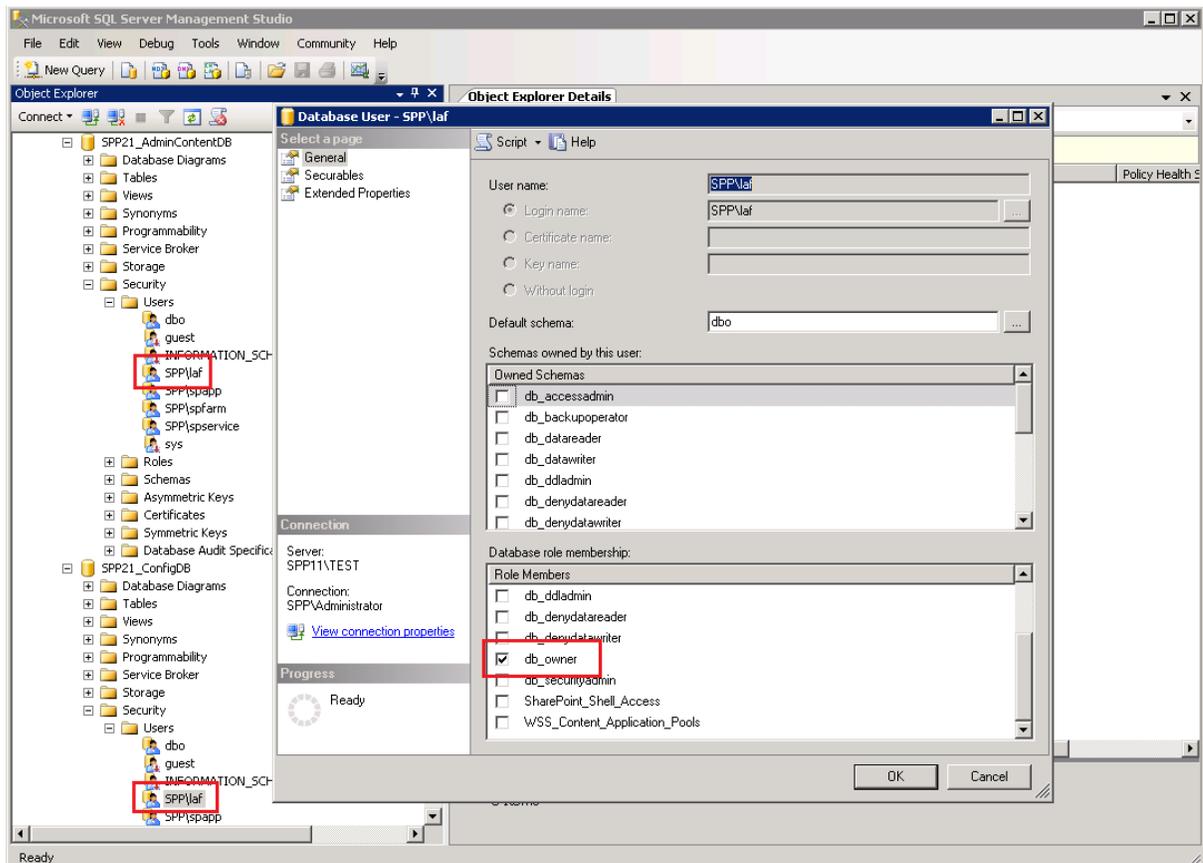
CAUSE

You have logged in to the SharePoint server with a Windows account that does not have full access to the SharePoint configuration database and the SharePoint administration content database. This is required by SharePoint in order to add and deploy solution packages in the farm.

RESOLUTION

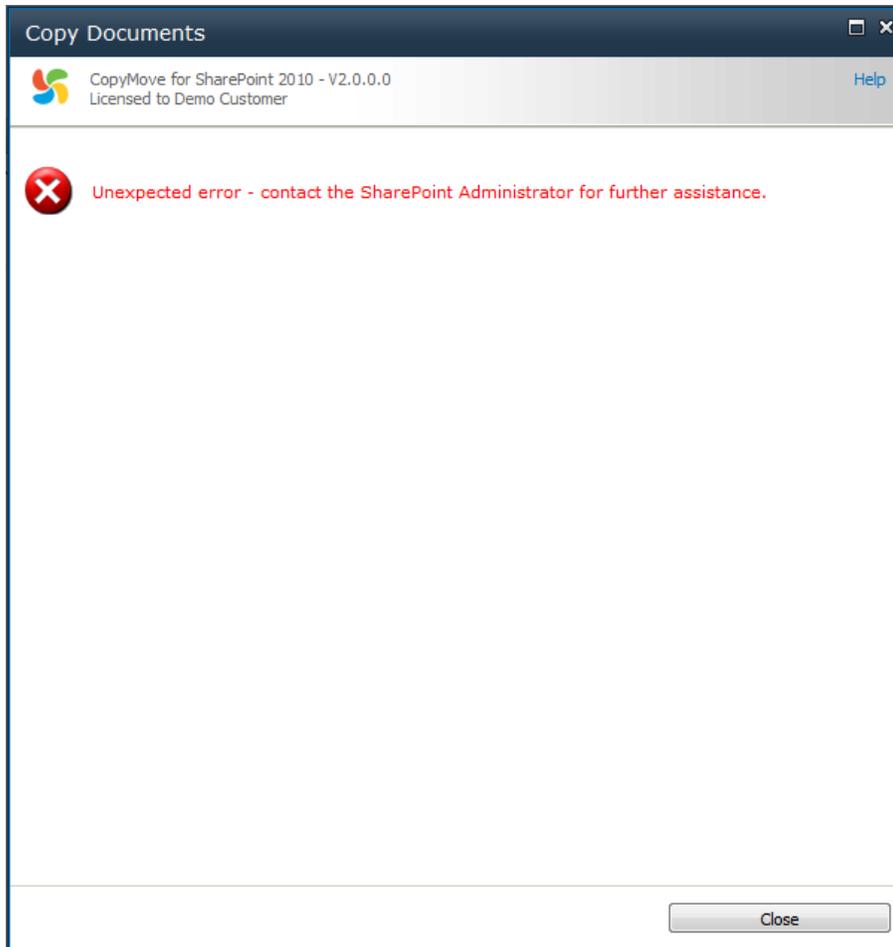
Log out from the SharePoint server and log in again with the credentials of a user having full access to the SharePoint configuration database and the SharePoint administration content database. If possible, use the same account as used by the IIS application pool account for the SharePoint Central Administration Web site. Alternatively, login as domain administrator if you have the password to this account.

Finally, you can also grant access to the appropriate account using the Microsoft SQL Server Management Studio as illustrated below. However, this operation requires administrative access to the SharePoint databases on the SQL Server. Add the account to the list of users in each of the two databases and grant it the *db_owner* role.



5.2 Unexpected error in the CopyMove dialog

Users experience the following error when trying to copy or more one or more selected items.



CAUSE

This is an unexpected error and could be caused by a SharePoint configuration problem or by a bug in CopyMove. The error message does for security concerns not reveal system details to end users.

RESOLUTION

Inspect the SharePoint diagnostics log or the Windows event log for more details about the error. See the **Diagnostic Logging** section for more information how to configure and inspect the log. You can also update the web.config file as follows to get CopyMove to display the detailed error directly in the dialog instead of the general error message.

1. Open the web.config file for the affected Web application.
2. Change the attribute **CallStack="false"** to **CallStack="true"** on the **<SafeMode>** element.
3. Change **<customErrors mode="On" />** to **<customErrors mode="Off" />**

If the detailed error information cannot help you understand and resolve the problem then contact CopyMove support for assistance. See the section **How to report a problem to the CopyMove support team**.

5.3 How to report a problem to the CopyMove support team

If you as a SharePoint administrator encounter any undocumented problems with CopyMove then you can report it to our support team who will do their best to help you. New support cases can be opened by email to support@sharepointproducts.com or by submitting the support form at www.sharepointproducts.com/support. We do not offer phone support and conference calls with desktop sharing before strictly necessary. All support cases must start with a written description of the problem.

To help us understand and reproduce the problem, please provide as much relevant information as possible. Please do not just state that it does not work or that you get this and that error message. We will in turn just ask you for more information causing a delay in the resolution process. Study the following check list to see what kind of information you can include in the support email:

1. Description of the expected behavior.
2. Description and screen shots of the unexpected behavior.
3. Answer to the question: "Can you reproduce the problem anywhere else in SharePoint or is it restricted to a specific site, file, list or document library?"
4. Answer to the question: "Can you reproduce the problem in all your SharePoint environments including Development, Test and Production?"
5. Description of all the steps required to reproduce the problem.
6. Description and screen shots of relevant configuration settings, like Content Types and Columns in a document library.
7. If possible and relevant, a copy of the document library or list where CopyMove fails to copy or move one or more items. Save the list as a template and include the .STP file in the support email.
8. If the error looks like a bug in CopyMove then we also need a copy of the CopyMove diagnostics log file. See the section **Diagnostic Logging** to learn how to produce a diagnostics file using the `GetLogFile.cmd` script included in the product download.

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