# SHAREPOINT

PRACTICAL IT STRATEGIES FOR ENTERPRISE COLLABORATION /// NOVEMBER 2008

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Giving SharePoint site owners the power to manage their own part of the site map frees up SharePoint administrators to manage more critical areas of the SharePoint environment. BY PAUL GALVIN



### »EDITOR'S NOTE

# **Bringing order to anarchy**

**BY CHRISTINE CASATELLI** 

Editor's note



M Does your SQL Server improve SharePoint Server performance?



**ARE YOU IN** the midst of SharePoint anarchy? One way to recognize it is when your SharePoint search returns junk as relevant. When that happens, you're in trouble.

The problem could be your governance plan—or your lack of one. SharePoint expert Joel Oleson spells out how to bring order to the anarchy by putting in place service models and rules for IT governance in this month's "Balancing SharePoint governance." Choose a framework and fit it to your company culture. That should go a long way toward getting control back in your hands.

But who should control what, and where do you draw that line? Giving Share-Point site owners the power to manage their own site maps can free up admins to take care of the really important stuff. In fact, SharePoint has built-in features that allow site owners to create site maps without any custom coding at all. SharePoint MVP Paul Galvin walks you through the process in "Creating a SharePoint site map using out-of-the-box features."

SharePoint performance is a different story. Designing a highly scalable SQL Server to run your SharePoint environment can be a real challenge. One rule of thumb is that a well-performing SQL database server needs adequate storage, so avoid cutting corners there. Learn how to tweak your system for a better SharePoint experience in "Does your SQL Server improve SharePoint server performance?" by SQL Server guru Denny Cherry.

Do you have a SharePoint tool that you can't live without? Submit it to <u>SearchWinIT.com's New Product Showcase</u>, so we can spread the word.



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# Balancing SharePoint governance

Service models work hand in hand with governance to shape each SharePoint deployment into a unique installation that meets business needs. **BY JOEL OLESON** 

Editor's note



Does your SQL Server improve SharePoint Server performance?



**THINK OF SHAREPOINT** Server as plastic. If you have a vision for what you want SharePoint to become and you carefully define that mold based on features in the product, then you can mold SharePoint into virtually anything you want.

But what happens if you don't have a mold? It turns into goo.

Think of SharePoint service models as the molds. IT shops have turned to service models to give SharePoint consistency and standards. Service models work hand in hand with governance to shape each SharePoint deployment into a unique installation that meets business needs.

And what happens if you have no service models for SharePoint or rules for IT governance in place? You will likely experience "SharePoint anarchy."

The problem lies with those who underestimate the power of a Share-Point deployment and its influence on an organization. They plan their entire deployment as if it's another one of those wizard-based click, click, next, next and finish. There are many systems integrators there to help, but a lot of times IT shops don't even realize that they need help.

The easiest way to recognize chaos is when your users start complaining about junk. When search returns junk

## IT shops have turned to service models to give SharePoint consistency and standards.

as relevant, you know you have problems. The way to bring it back is to analyze your provisioning. Ask yourself whether it's too hard or too easy. Take a look at your information architecture. Can people browse and find information they seek? How about

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your storage allocation? Are sites too small or too big? And life cycle management—is the data part of old files that should be archived or deleted?

IT managers once empowered with reports and metrics can react better to their environments. This data can help improve the service offering. If the chaos involves poor custom coding practices, then starting from a clean environment and moving over only what's required, tested and signed off on can help IT better manage the solution.

When the IT staff thinks of Share-Point as a service, then they can begin to decide whether they need things like quotas, whether they plan to support self service or if they intend to charge back for site collections. IT may decide to host a portal with sites for each of the business units—not for content storage or collaboration but for publishing. Types of deployment vary so much in both information architectures and in security levels and self-service provisioned objects. Choices will be different in each situation and based on individual needs.

To simplify these choices, I've put together the cheat sheet below.

FIGURE 1

## SHAREPOINT HOSTING CHEAT SHEET FOR IT SERVICE OFFERINGS

Site collection	<ul> <li>Supports 100s to 100K+ sites</li> <li>Ideal for blogs and collaborative environments</li> </ul>
Sites	<ul> <li>Information and aggregation portals, such as intranets</li> <li>Internet sites with page libraries</li> </ul>
Web apps	<ul> <li>Ideal for point solutions, departments and groups of site collections</li> <li>Namespace and relationship autonomy</li> </ul>
Dedicated farms	<ul> <li>Ideal for applications built on SharePoint</li> <li>Great for staged deployments, i.e., authoring to production</li> </ul>

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Now that you've begun defining a service offering, and IT is listening to the business side of the house while it gathers requirements, there will be times when two different business units will not agree on what this SharePoint service offering needs to provide.

Ask yourself: Are we saving money and going with a single server? Or

are we going for high availability with load-balanced Web front-end servers and a clustered or mirrored set of SQL servers? The difference in cost is easily evident, and the complexity of support and operations for the staff just jumped in magnitude. The importance of the service has become apparent, and the business now shares in a significant investment in

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IT to house corporate assets like no previous deployment.

When the finance department gets excited about Excel Services and HR is looking for integration with a legacy information store using the Business Data Catalog, it will be the service owner or service manager who helps provide answers based on a governance plan. A service offering that has clear policies on customization, provisioning and development is the key to a successful deployment.

You'll also need change advisory boards and a true staged deployment that includes development and a production environment with testing and validation for infrequent changes that have impact, such as solution deployments and service packs. These help the various support teams that are responsible for the reliability and availability of a SharePoint deployment.

Choose a framework and fit it to your company culture. Microsoft Operations Framework 4.0 supports both development lifecycle and IT service management. It's a great place to start. It doesn't need to dictate your every move, but it can help you establish valuable IT assurance. Setting up a governance plan that

A service offering that has clear policies on customization, provisioning and development is the key to a successful deployment.

supports your objectives for a Share-Point service offering will help you achieve a balance between users and business units while helping you mold what SharePoint can do.

Achieving balance through governance is the goal. Balance means providing for the growing needs of the business while bringing about economies of scale with IT. The bottom line is to do more with less.



#### **ABOUT THE AUTHOR**

**Joel Oleson** is an independent consultant involved in training, speaking, technical evangelism and product management for a variety of companies including Bamboo Solutions, Colligo and Quest Software. As former senior technical product manager for Microsoft Office SharePoint Server, Oleson focused on topics related to enterprise deployments of SharePoint, such as performance, scale, backup/restore and high availability. His blog is <u>SharePoint Joel's SharePoint Land</u>.

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# Does your SQL Server improve SharePoint Server Performance?

Growing your SQL Server installation beyond a single server and maintaining proper storage levels can greatly improve SharePoint Server performance. **BY DENNY CHERRY** 

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Does your SQL Server improve SharePoint Server performance?



**SHAREPOINT LIVES AND** breathes by its SQL Server databases. With the introduction of Windows SharePoint Server, even a small company can end up with a database that is quite large. And a large company can end up with a database that quickly approaches a ridiculous size.

Every page that the SharePoint portal displays is saved into a SQL database. So is every document uploaded into the document repository? SharePoint doesn't necessarily follow the SQL Server table design best practices. That, in addition to having these large databases, can mean that designing a highly scalable SQL Server to run your SharePoint environment can be a challenge.

Smaller systems can work nicely on your existing SQL Server hardware. This doesn't change if your current environment is running on the x86 hardware platform. Larger systems will want to move into the x64 hardware platform. Note: In this article, x64 refers to both x64 and Itanium platforms. That will give you the ability to allow SQL Server to access more memory and install more physical CPUs than in an x86 server. Moving into a 64-bit platform changes the way SQL Server allocates memory internally. On large SharePoint installations, the different allocation can be important.

With SQL Server, it's easy to figure out memory requirements get as much as you can afford. If you don't think that's enough, get the budget increased. These days a small SQL Server will have 4 GB in it. SQL Servers with 16+ GB of RAM are no longer an oddity. Your limiting factor is going to be that Windows Server 2003 Enterprise and Windows Server

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2008 Enterprise support only up to 64 GB of RAM. Beyond that, you need to get Windows Server 2003 Datacenter edition or Windows Server 2008 Datacenter edition.

## SELECTING STORAGE FOR SHAREPOINT

Storage is another place to avoid cutting corners because it's the key to a well-performing SQL database server. It is highly recommended that you use several different RAID arrays when configuring your SQL Server.

You'll want to place your data files and log files on separate RAID arrays and put your tempdb database on a separate RAID. These RAID arrays can each be RAID 10, but if your environment has a large amount of write cache, you may be able to use RAID 5 for the database files and RAID 10 for the log files and tempdb database. Each of these three arrays should be a separate RAID array, not just a logical partition of the same RAID.

When configuring your system to ensure that you are getting the maxi-

More on SQL Server performance tuning:

- <u>SQL Server memory configurations</u> for procedure cache and buffer cache
- Optimize disk configuration in SQL Server

mum performance out of your storage, be sure to correctly align your partitions when you create them. When working in a SAN environment, all volumes on the RAID group must have the correct alignment to get the most benefit.

## MORE DATA FILES FOR BETTER OPTIMIZATION

On higher-end systems, adding data files can increase your database performance. It is recommended that you have one data file per four physical cores. So if you have a quad core, quad chip machine—16 total cores you will want to have four physical database files. For optimum performance, each database file should be on its own RAID array.

For your tempdb database, you should have even more physical files. The recommended configuration for the tempdb database is to have one tempdb database file per physical core on the server. On the same 16core server, you will want to configure 16 tempdb database files, ideally with each one on its own RAID array. In reality, you aren't going to have 16 RAID arrays to dedicate to the tempdb database, so configure as many as you can and balance the physical files across the RAID arrays.

When configuring each of these additional database files, start each of the additional files at the same size as

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the current file and make the growth settings the same. This forces SQL Server to use the most optimum method to stripe the data across the database files, which will force SQL Server to keep the data balanced across all of the database files.

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## MAINTENANCE IS KEY TO PEAK SHAREPOINT PERFORMANCE

Contrary to popular belief, Microsoft SQL Server is not a self-healing system. Proper and regular database maintenance is key to keeping it running at peak performance. Larger shops will probably have a SQL Server DBA who already has his or her own custom scripts that will handle that. Smaller Windows shops or larger Oracle shops that do not have these scripts ready-made—do not fear. Microsoft has not forgotten about you. SQL Server 2005 and SQL Server 2008 have an easy-to-use GUI that can be used to set up your database maintenance plans with no coding required.

In order to create your SharePoint maintenance plan, connect to the

SQL Server using the SQL Server Management Studio and bring up the object explorer. Under the Management Folder you will see Maintenance Plans. Right-clicking on Maintenance Plans and selecting New Maintenance Plan will bring up the editor.

When setting up a basic maintenance plan, two objects will give you the most bang for the buck: the Reorganize Index Task and Update Statistics Task. Add those into your Share-Point maintenance plan and set up the Reorganize Index Task to run first by dragging the green arrow from that object to the Update Statistics Task object. Fix the settings within the objects to your server and instance, as well as your SharePoint database or databases. It's easier to simply select All User Databases and schedule the maintenance plan to run weekly or monthly as you see fit.

Don't be afraid to grow your Share-Point environment beyond a single server and scale it over several servers. As with any high-end system, proper design is the key to any successful deployment and will keep it stable for several years.



#### **ABOUT THE AUTHOR**

**Denny Cherry** has more than a decade of experience managing SQL Server installations, including one of the largest in the world at MySpace.com with 175 million users. Cherry is a senior database administrator and architect at Awareness Technologies, where his areas of expertise include systems architecture, performance tuning, replication and troubleshooting. He holds several Microsoft certifications related to SQL Server and is a Microsoft MVP. Read his IT

Knowledge Exchange blog at <u>SQL Server with Mr. Denny</u>.

# **Creating a SharePoint site map using out-of-the-box features**

Giving SharePoint site owners the power to manage their own part of the site map frees up SharePoint administrators to manage more critical areas of the SharePoint environment. **BY PAUL GALVIN** 

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**AS THE SCOPE** and user community grow for SharePoint, so does its intricacies. One complex problem for SharePoint administrators is how to maintain a clean site map.

Out-of-the-box SharePoint provides a kind of site map known as the Site Directory. This type of site directory has several disadvantages:

**No room for error.** SharePoint gives site administrators only one chance to get it right when the site is created. If the site creator makes a mistake like failing to categorize the site or categorizing it incorrectly—it's relatively difficult to correct. Even if it is done right the first time, it's hard to update the Site Directory to reflect changes in the organization after the fact.

**No security trimming.** SharePoint normally shows information to users only when they pass a security test. If

SharePoint determines that a user should not be able to see a particular piece of information, it trims the data from the display—hence, security trimming. Although the Site Directory can be security-trimmed, this does not happen out of the box and requires too much care and feeding for a typically overburdened Share-Point farm administrator to manage properly.

## Site Directory is centrally located.

Although this is a good thing in some respects, it means that it must be "opened up" to allow access to any site administrator. Many organizations consider this an unacceptable security configuration. As a result, Site Directory maintenance adds an additional burden onto the shoulders of overworked SharePoint farm administrators.

Some companies can live with

those restrictions. However, many enterprises would like a site map with a little more flexibility. For example, you might not want to show a user a link to a site to which the user does not have access. Again, this type of security-trimming feature can require extra work.

You might also be in favor of a proper division of labor. That means pushing site map maintenance off the SharePoint administrator's shoulders and onto the site administrator's shoulders where it belongs.

How about easier administration? For instance, allow typical CRUD operations—known as CReate/ Update/Delete. With that flexibility, site administrators can create, update and delete their own piece of the site map.

So how can you meet your Share-Point objectives? Here is an overview of its features:

## Content type and site columns:

Defines a site name, site group and a link to the site.

**Custom lists:** Site administrators, not SharePoint farm administrators, create custom lists associated with that content type. They populate the list with links to their site and any subsites for which they are responsible.

**SharePoint security:** Enable itemlevel security on the list. For each site in the list, configure security to allow read-only access for each user, Share-Point group and Active Directory group to which the site should be available.

## Content Query Web Part: Use

the web part to produce the securitytrimmed site map.

Now you're ready to create your own site columns and site content types. The following is a detailed walk-through on how to do it:

At the root site of the site collection, create a site column named Site Group:

- 1. Go to Site Actions.
- 2. Select Site Settings.
- 3. Under Galleries, select Site Columns.
- 4. Click Create.
- 5. For Column Name, enter **Site Group**.
- 6. For "The type of information in this column is:" select Single line of text.
- 7. Create a new group named **Secure SiteMap**.
- 8. Leave all other values at default and click OK.

Create another Site Column named Site Map Link. For type of information, select Hyperlink or Picture. It's located near the middle of the choices. Add this to the Secure

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PERFORM

#### WHAT HAPPENS WHEN SHAREPOINT GOES DOWN?

You rely on MOSS to communicate, to action immediate service and to collaborate across the organization.

PREDICT · PROTECT

Without MOSS everything stops. Productivity dies, employees are isolated and information flow ends.

#### **KEEP LINES OF COMMUNICATION OPEN**

The ability to collaborate within teams across geographic dispersion is vital. There is no acceptable downtime window for SharePoint, it must be available 24x7.

Planned maintenance, storage failures, power outages and user errors are all reasons for downtime. Factor these into service continuity plans.Service continuity plans should have protection of MOSS as a high priority. Projects and information sharing may depend on it.

#### **KEEPING SHAREPOINT AVAILABLE**

Neverfail is an award winning solution to keep users connected to MOSS. Disaster recovery, high availability and data protection comes as standard. Out-of-the box your entire SharePoint farm is protected. Predictive monitoring ensures best practice. Replication ensures data is always protected. Automated failover keeps SharePoint available when things go wrong.

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Site Map group.

FIGURE 1

Go back to Site Settings and this time select Site Content Types under Galleries and create a content type as shown in FIGURE 1.

Next, add the Site Group column to the site content type:

1. Under **Columns**, click Add from

New Site Content Type

existing site columns.

- 2. Locate the Site Group column.
- Keep "Update all content types..." as its default value of Yes. In this case, it does not matter what you choose.
- 4. Click OK.

Repeat above by adding the second column, "Site Map Link."

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Name and Description	Name:
Type a name and description for this content type. The description will be shown on the new button.	Secured Site Map Description:
	Parent Content Type: Select parent content type from: List Content Types Parent Content Type: Item Description: Create a new list item.
Group Specify a site content type group. Categorizing content types into groups will make it easier for users to find them.	Put this site content type into:  C Existing group: Custom Content Types New group: Site Map

Now create a place to test what you have done. In a sandbox environment, create three sites under the site collection root site as shown in FIGURE 2.

At each site, create a custom list using the Site Map content type described above. Here's how:

- 1. Go to site settings and click Create.
- 2. Under Custom Lists, select Custom List.
- 3. Name the list "Site Map" and click OK.
- 4. Go to the list's advanced settings and mark yes to "Allow management of content types?"
- 5. Click "Add from existing site content types" and add the Secured

FIGURE 3

<u>Creating a</u> <u>SharePoint site</u> <u>map using out-of-</u> <u>the-box features</u>



Site Map content type to the list.

6. Finally, remove the Item content type from the list of managed content types.

Now populate the custom list. In each site map custom list, create entries as shown in **FIGURE 3**.

SHAREPOINT SITE: Manufacturing
TITLE: Manufacturing Home
SITE GROUP: Manufacturing
LINK: http://win2003srv/sites/magazine/manufacturing/default.aspx

**SHAREPOINT SITE:** Manufacturing **TITLE:** Quality Control **SITE GROUP:** Manufacturing **LINK:** http://win2003srv/sites/magazine/manufacturing/qualitycontrol/ default.aspx

sharepoint site: Finance
title: Finance Home
site group: Finance
LINK: http://win2003srv/sites/magazine/finance/default.aspx

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Use this page to give new permissions.

Add Users	Users/Groups:	
You can enter user names, group names, or e-mail addresses. Separate them with semicolons.	WIN2003SRV\pagalvin	
Add all authenticated users		<b>%</b> ∕ ∰
Give Permission	Give Permission	
Choose the permissions you	C Add users to a SharePoint group	
You can add users to a	Magazine Members [Contribute] 💌	
SharePoint group (which is	View permissions this group has on sites, lists, and items	
already assigned to a permission level), or you can	<ul> <li>Give users permission directly</li> </ul>	
add users individually and	🔽 Full Control - Has full control.	
assign them to a specific	Design - Can view, add, undate, delete, approve, and	

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Remember that the Site Map Link will vary based on your environment and the actual location of your sandbox.

Now it's time to manage the Quality Control permissions. In order to demonstrate the secured part of the Site Map, we need to use SharePoint's item-level security. Via the dropdown over the Title column of the item, Quality Control, select Manage Permissions. From there, make the changes as shown in **FIGURE 4**. Here are the steps involved:

- 1. Actions  $\rightarrow$  Edit Permissions.
- 2. Click OK when it warns you about creating unique permissions.
- 3. New  $\rightarrow$  Add users.
- 4. Add yourself and give yourself full control.

Remove all other user profiles with the result, as shown in FIGURE 5. Now you are finally ready to create

Use t	his page to assign users and g	roups permis	sion to this list item. This list iter	n does not inherit permissions from its parent folder or list
New	<ul> <li>Actions</li> </ul>			
	O Users/Groups	Туре	User Name	Permissions
-				

the Site Map. At the site collection's root site page, add a Content Query Web Part. Note: CQWP shows up only in the web part gallery when the publishing feature is installed. Edit the page, add a web part and select the Content Query Web Part. Modify the COWP's properties as follows:

- List Type: Custom List
- Show items of this content type group: Site Map
- Show items of this content type: Secured Site Map

Under Grouping and Sorting:

• Group items by Site Group

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View the results. First, log in as a test user. FIGURE 6 shows what the results look like.

Next, log in as yourself. Click on the Quality Control link, and the results are shown in FIGURE 7.

This approach does have certain limitations. First of all, you must have Microsoft Office SharePoint Server 2007 for this particular approach because it relies on the Content Query Web Part, which is a feature that's not available in Windows SharePoint Services.

Another issue is that the COWP does not span site collections, and this approach does not allow you to

	FIGURE 6 Welcome WIN2003SRV\pegalvin •   My Site	My Links 🔻   🔞
<u>Creating a</u> <u>SharePoint site</u> <u>map using out-of-</u> <u>the-box features</u>	This Site: Magazine   e   Manufacturing   Finance Home   Manufacturing Home	Services

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	Site Group	Manufacturing	
	Site Map Link	Quality Control (QC Members only)	
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	Last modified at 10/5/2008	8:54 PM by System Account	

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create a farm-level site map. The latter can be overcome using Search instead.

At a high level, site administrators would create site content types and custom lists to manage site map data exactly as described above. However, use a Core Search Results Web Part with a fixed keyword query instead of the CQWP to create the site map. This method would require editing XSLT.

Contrary to popular belief, enter-

prises can create site maps using outof-the-box SharePoint features that require no custom coding of any kind. This approach results in a security trimmed site map, which is managed by site owners.

It's all about flexibility. Empowering site owners to manage their own part of the site map puts the responsibility where it belongs and frees up Share-Point farm administrators to manage more critical aspects of the Share-Point environment.



#### **ABOUT THE AUTHOR**

**Paul Galvin** is a Microsoft SharePoint MVP and a SharePoint solutions architect at EMC Corp. Galvin has worked in the IT industry for more than 15 years in areas such as software development, consulting and SharePoint solutions design, where he works with clients to create business solutions using the SharePoint platform. He contributes to the SharePoint community through MSDN forums and <u>his blog</u>.

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- Neverfail for SharePoint
- Neverfail's Vital Role in Server Virtualization
- Business Continuity: Choosing the Right Technology Solution

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