

# Nine Key Features of SharePoint 2010 that Simplify SharePoint Administration

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# Abstract

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SharePoint 2010 will offer a lot of new services and features, but there's a lot of confusion about how they will affect day-to-day administrative tasks. In this new white paper, Joel Oleson, Quest senior architect and SharePoint expert, explains how nine key new features of SharePoint 2010 will simplify the life of a SharePoint administrator.

# Introduction

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SharePoint administrators are asking, “How will my life change when we move to SharePoint 2010?” SharePoint 2010 offers many new services and features, so I’ve put together a list of the nine features that I think can simplify the life of a SharePoint 2010 administrator. I’ve broken these things into four categories:

- **Planning:** architecture, selecting services, and authentication.
- **Operation:** throttling, reporting, and managing through Central Admin and PowerShell.
- **Maintenance:** PowerShell, as well as import/export functions and recovery.
- **Optimization:** performance, health rules and the Developer Dashboard.

# Planning

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## #1: Search Architecture

In SharePoint 2010, redundant indexing allows multiple index servers to crawl different sets of content and then merge those indexes. This enables you to search through hundreds of millions of items (in SharePoint 2007, the recommended maximum was 50 million items). This makes indexing and searching much faster, and the speed is directly based on your hardware rather than the limitations of SharePoint.

This new search architecture will make your life easier because search is now fast and much more scalable. Plus, with the new options available in SharePoint 2010, search can be optimized for your environment's size and budget, from the simplest single-server installation, up to a dedicated search farm that can crawl multiple SharePoint environments and provide consolidated search services for large environments.

## #2: Service Applications across Farms

In 2010, you can choose which services you bring into each farm. Here's a list:

- Search
  - Search\_Service\_Application
  - Crawlstore
  - SearchDB
  - PropertyStore
  - WSS\_Search
- People
  - SocialDB
  - ProfileDB
  - SyncDB
    - Service
    - Sync
- BDC\_Service\_DB
- Word Conversion Service Application
- Performance\_Point

Also, you can use services from other farms rather than having every service in each farm. This streamlines farm architecture and allows you to minimize certain services across the entire SharePoint environment.

This feature will make your life easier because you have a lot of flexibility in deployment, and the following new scenarios are now possible:

- **Geographically distributed multi-farm deployments.** Cross-farm services can work over the WAN, so different regions can have local SharePoint farms for faster content access. However, certain services can be shared and centralized, such as search, including people/expertise search, metadata management, etc.

- **Isolated farms.** Organizations may choose isolated farms for security needs (for example, a publishing farm in a DMZ, or a collaboration farm on an intranet) or to meet specific requirements (such as compliance regulations that require isolating specific data or departments).
- **Cross-organizational deployments.** SharePoint 2010 provides new and simpler ways to collaborate outside an organization. Those using SharePoint to work with partners and/or external customers via extranet sites can leverage these new services to improve user experience across farms.

# Operation

## #3 Improved Central Administration User Interface

In SharePoint 2010, Central Administration is laid out in a more logical way. The left-hand menu shows the major categories, which are also listed in the main section. The ribbon at the top provides contextual menus (such as the Site Actions drop-down shown below) for taking action within each administration area. The new UI is similar to Windows Server 2008, so folks that are already familiar with Windows will have an easy transition. This UI is also security-trimmed: you have access to only the services required, based on your permissions.

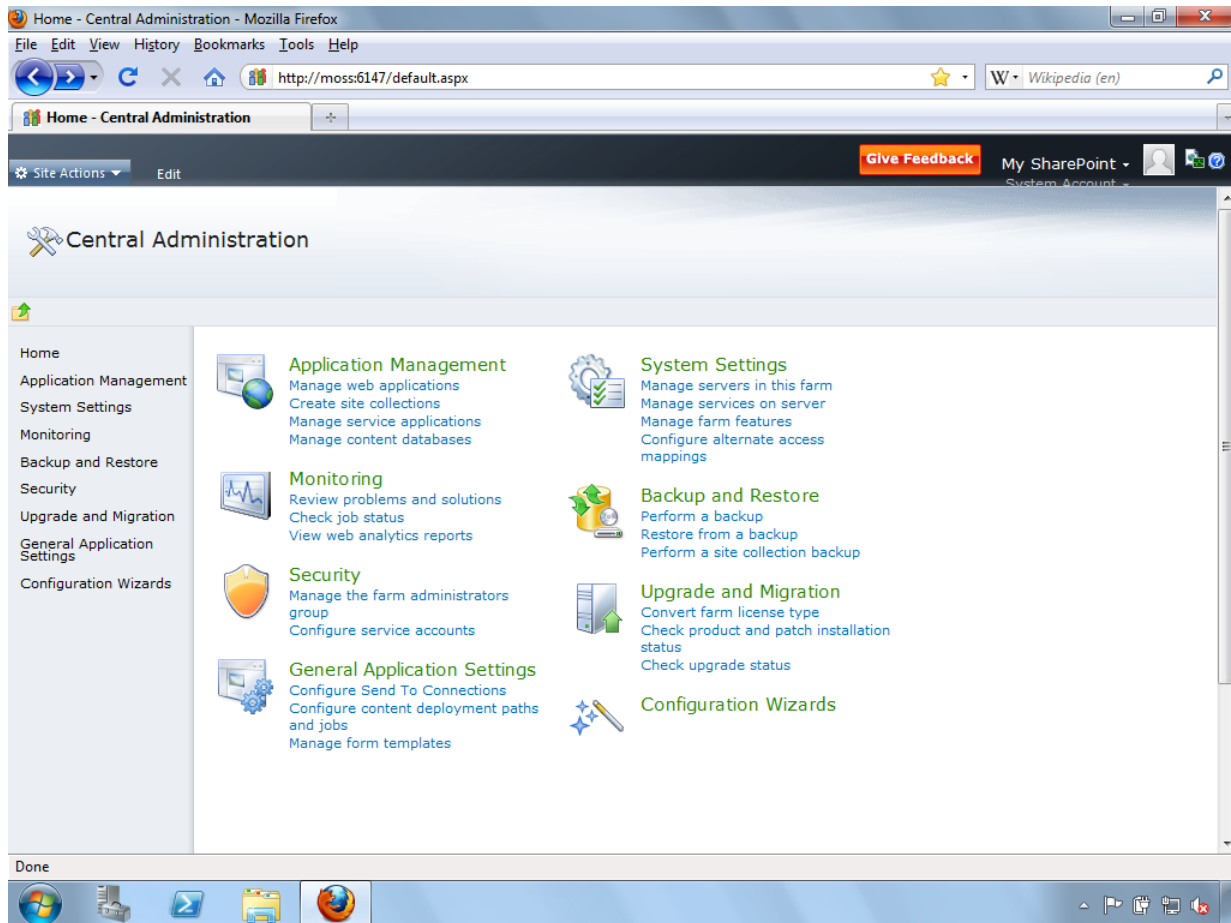


Figure 1. Central Administration user interface

With the new Central Administration interface, performing management functions should take less time.



## #4 Health Monitoring

SharePoint 2010 includes a new health analyzer that runs timer-based checks based on rules in a variety of categories, such as security and performance. You can create your own new rules, and we expect more rules to be added to future SharePoint 2010 service packs.

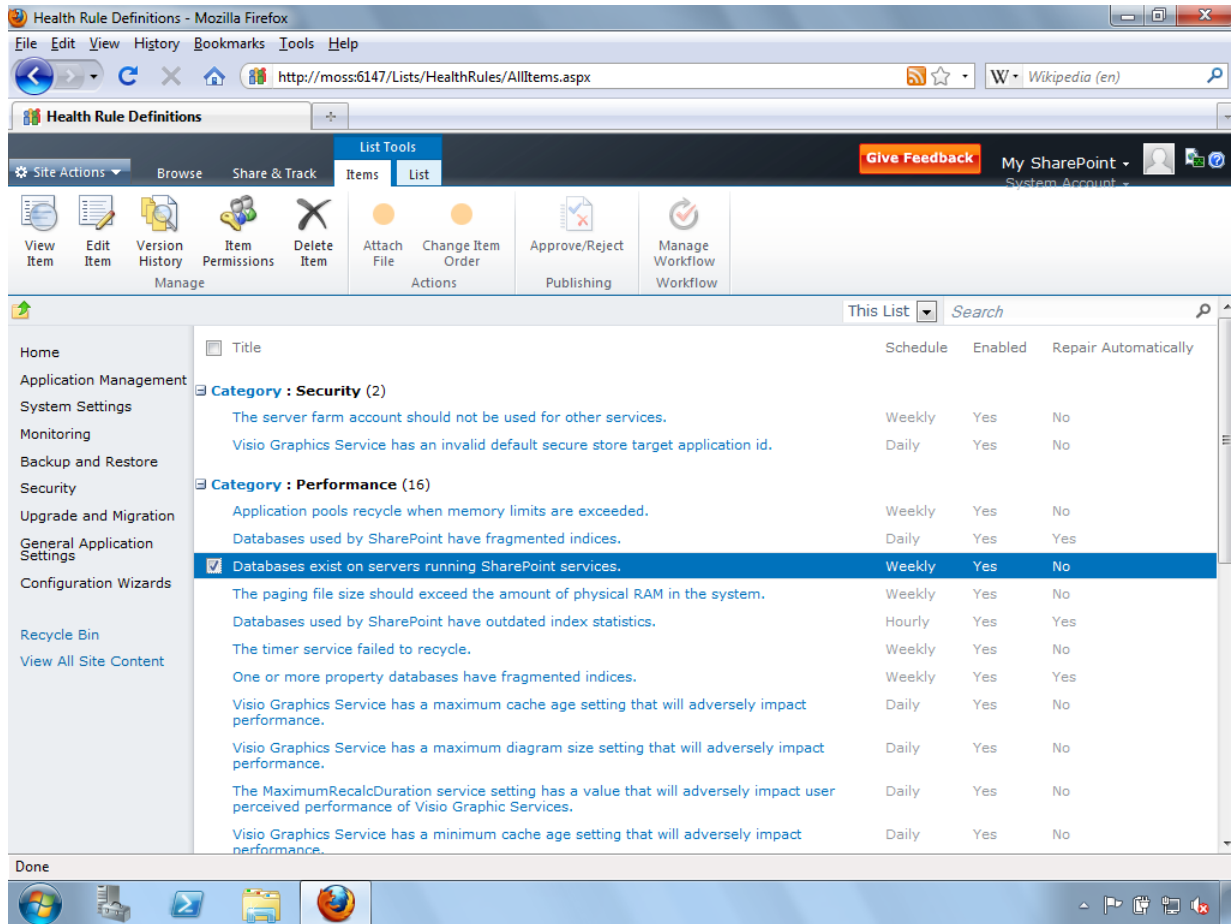


Figure 2. New Health Analyzer

This health analyzer will make your life easier because you can set these checks to automatically run on a schedule as well as fix issues if any are found. A word of caution, though: fixing all issues automatically can cause problems in your system. For example, fixing fragmented database indexes may impact SQL performance, and auto-fixing security-related issues can make some functionality or content unavailable. Therefore, you want to be careful to select "Repair" only for those items that won't negatively affect availability and performance if auto-corrected.

# Maintenance

## #5 Import/Export Options and Granular Restore

Updated tools in 2010 make it much easier to move lists, items, sites and site collections without losing data by creating .cmp packages. You can export more granular data through Central Admin, STSADM and PowerShell (that is, you have multiple options to execute the same task).

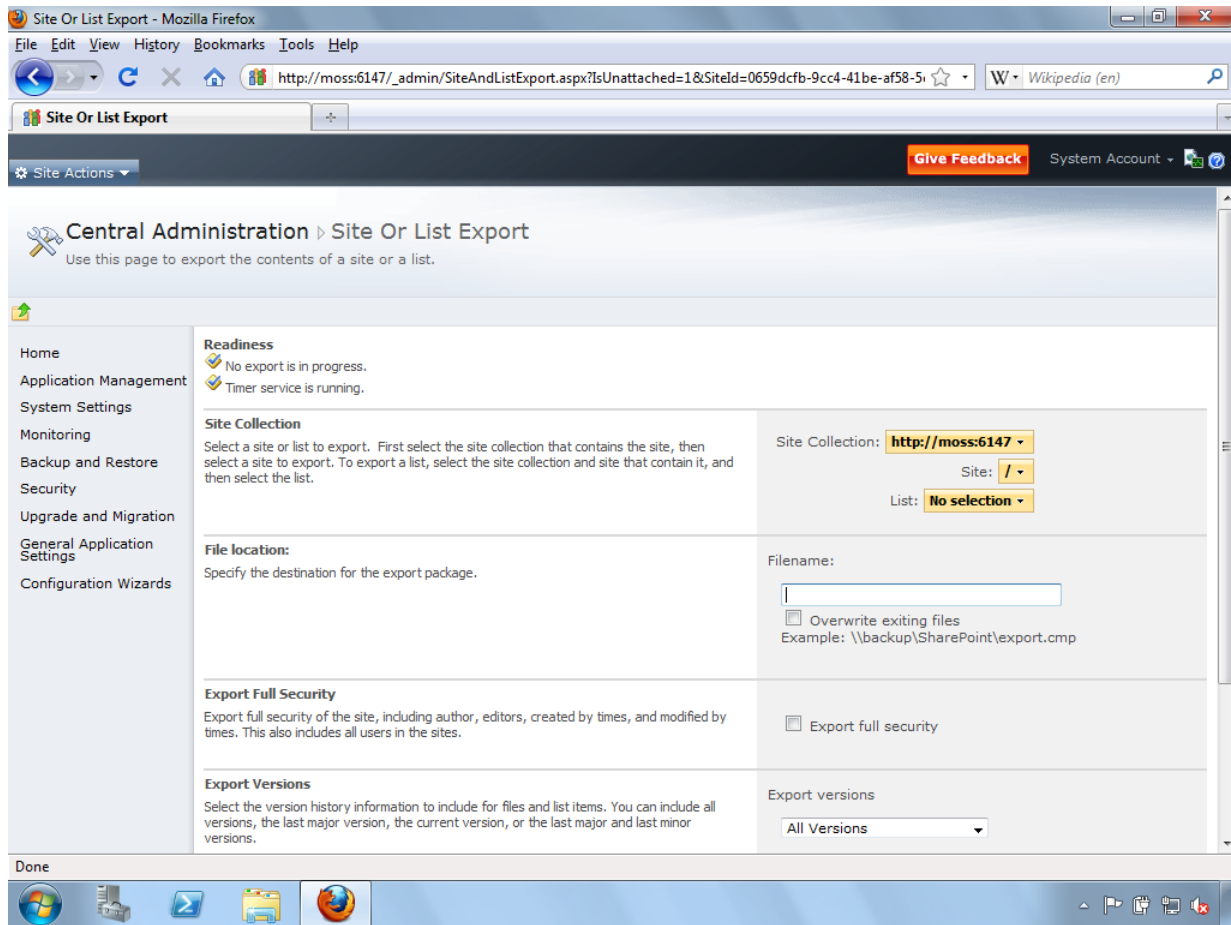


Figure 3. Exporting the contents of a site or list

This simplified data export and import makes it easier to perform a variety of tasks from simple site restructuring to building QA environments with real data.

You can also temporarily attach a content database to browse the list of sites and restore SharePoint data. This tool allows you to create a .cmp package from a database, so the metadata is included with the data you're restoring (in SharePoint 2007 this option was not available or would require a separate farm). However, this tool is a limited solution for granular recovery because it does not provide any search capability: if you don't know exactly what you need and where it is located in the content database, this feature can't help you.

Because of this, many environments won't be able to completely eliminate the requirement to maintain a recovery SharePoint farm for granular content restoration, and will continue to rely on additional products such as Microsoft's Data Protection Manager and Quest Recovery Manager.

## #6 400+ PowerShell CMDLETs

SharePoint 2010 PowerShell CMDLETs can do essentially anything, and are extensible for future functions. A ton of documentation is built into these CMDLETs, making them simple to learn and use. The functionality is similar to what we've been used to in STSADM, but the CMDLETs provide more granular scripts to many different tasks within sites.

Here are a couple sites to visit to get more information about PowerShell and SharePoint 2010:

- [SharePoint 2010 Quick Start Guide for PowerShell](#)
- [492 SharePoint 2010 PowerShell CMDLETs by Dmitry Sotnikov](#)

SharePoint 2010 PowerShell CMDLETs will make life easier for those who like working in PowerShell, and PowerShell has strong community support. Power users like to share their knowledge and experience in automating tasks by publishing their PowerShell scripts or PowerGUI PowerPacks.

Scripting the install and creation of sites and lists, including full access to the object model, is now possible with PowerShell. While these tasks may seem daunting, the ability to support both STSADM and PowerShell will make the transition easier. I do encourage people use PowerShell cmdlets to manage repetitive management tasks; it will make life easier in the long run.

One of the strengths of PowerShell is its ability to span an entire application. This enables interesting scenarios like creating sites based on a list. The possibilities are almost endless—we've only begun to see how PowerShell will be used with SharePoint.

# Performance

## #7 Large List Throttling

Large list throttling in SharePoint 2010 provides Web application-level control over how users query and view data. You can set throttle controls on the number of items returned, which forces end users to create more efficient views, and set “happy hour” times when you expect heavier loads. These throttling controls enable you to control performance hits on your SharePoint servers. Microsoft has done away with the 2,000 item recommendations and leaves it up to the server administrators to throttle as needed in SharePoint 2010.

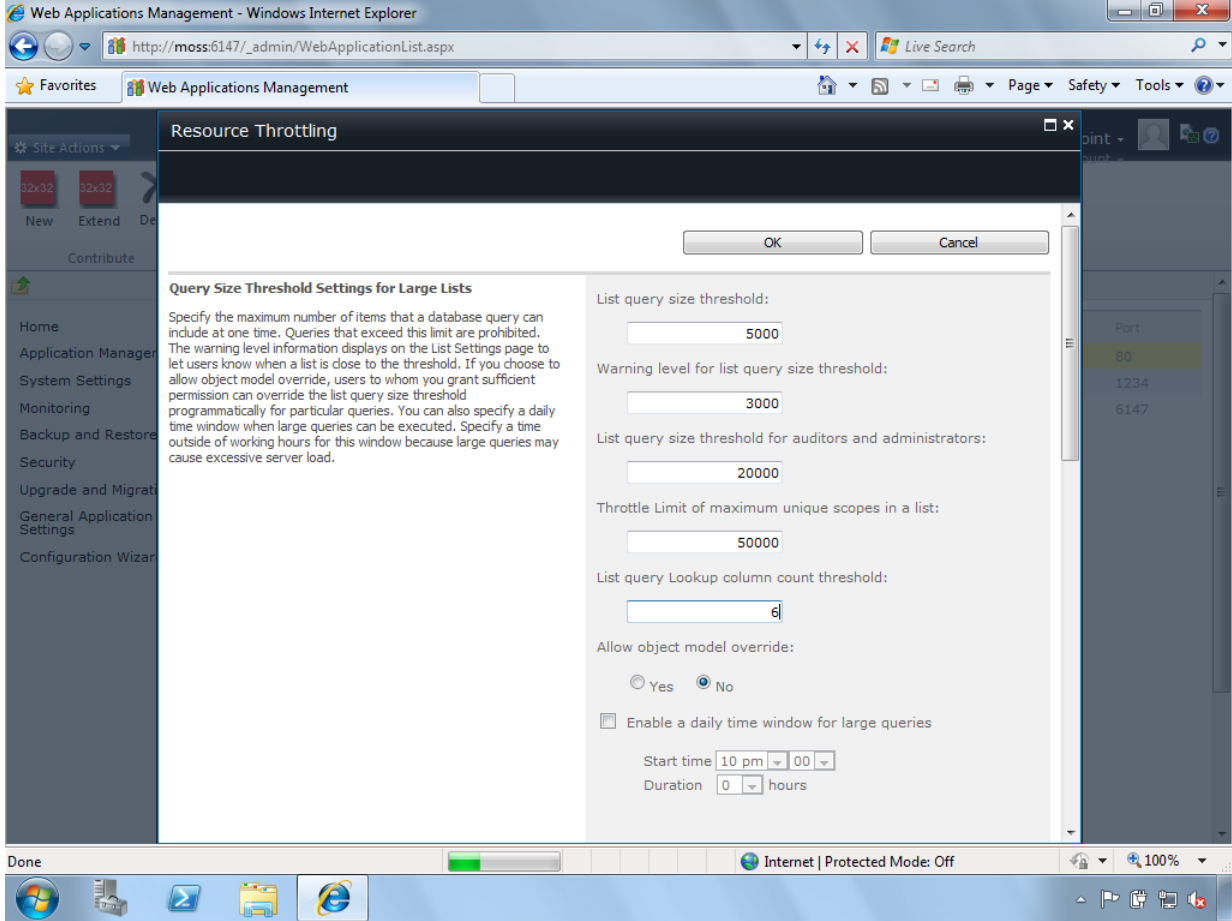


Figure 4. Large list throttling in SharePoint 2010

In addition to helping you better manage system resources every day, this feature is a must-have safety net that prevents custom Web parts and features from running excessive queries that may impact SharePoint performance. For solutions that might require large queries, SharePoint 2010 allows the “happy hour” windows, when the thresholds can be bypassed to run large queries during off hours, as determined by the server admin.

## #8 The Developer Dashboard

The Developer Dashboard shows what's going on behind the scenes with a set of performance categories that make it easy to identify slow processing, whether it is in the front end, the SQL Server, or code that was added to the page in a web part. The Developer Dashboard identifies slow and resource-intensive components on any page or helps you identify a slow list based on poor performing queries against SQL. The Developer Dashboard is off by default, but a simple STSADM command can turn it on for troubleshooting. Another option is to set it to "on-demand"— a button will appear on each page so you can access the tool when you need it. I recommend having it on-demand for intranet environments to make support much easier so when troubleshooting needs to occur, it can happen on the fly.

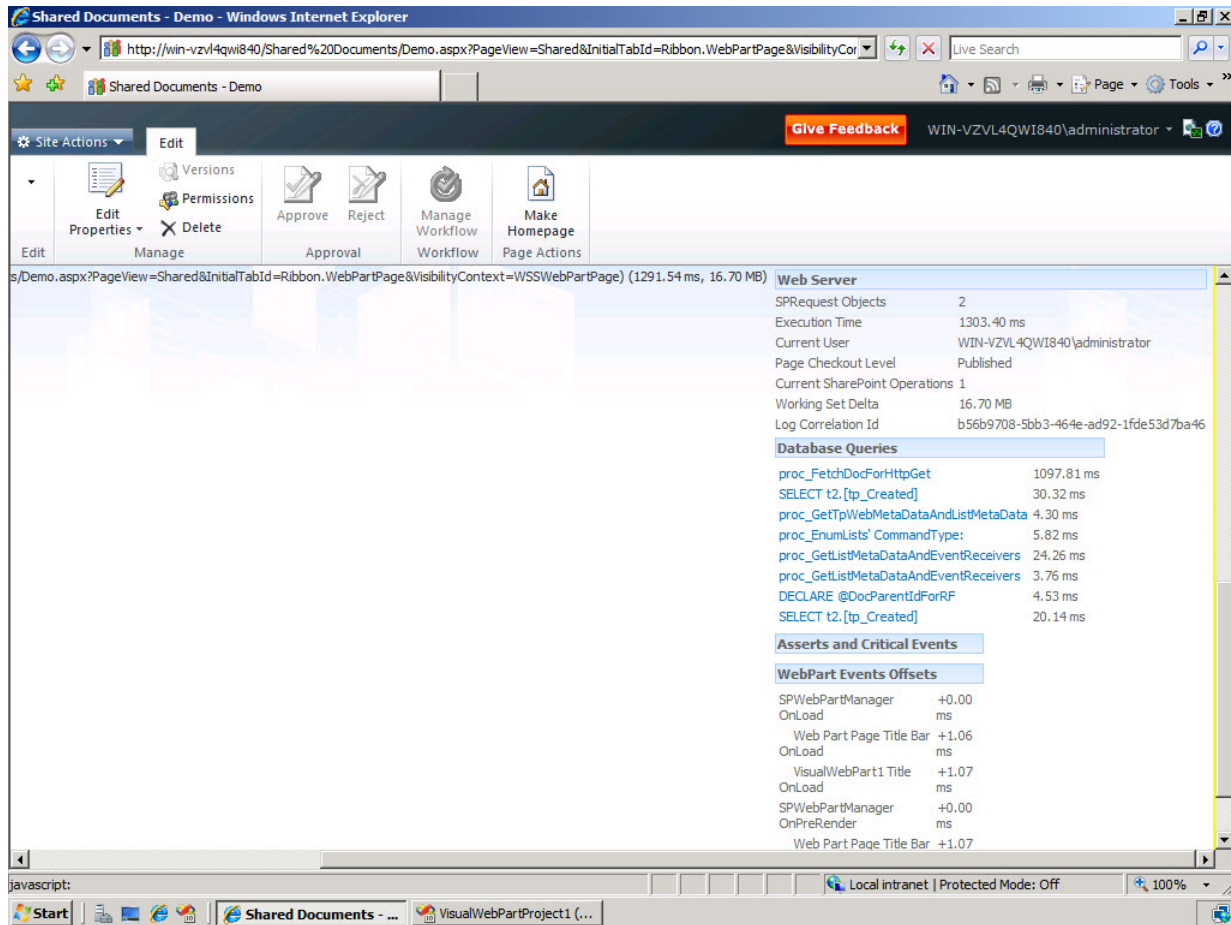


Figure 5. The Developer Dashboard

The Developer Dashboard will make your life easier because you can see which components are slowing SharePoint performance. Performance diagnostics that previously required hours of page behavior analysis can now be done with a single glance at the Developer Dashboard. The Developer Dashboard can also significantly shorten QA cycles for reviewing customizations before release to production deployments. A correlation ID is rendered with the page when the developer dashboard is enabled. This will help you keep track of activity in the new logging database.

## #9 Reporting and Troubleshooting

The new logging database in SharePoint 2010 provides a central repository for usage and health information. Because this log is now stored in a content database instead of on the file system, administrators can be much more proactive about keeping on top of issues that crop up. For example, two reports are available out of the box: Slowest Pages and Top Active Users. These reports can alert you to pages that are causing issues for your users. You'll know if it's a crawler or a rouge developer app that's causing havoc, before it's reported by your users. Also, the active user report can help you discover users that are abusing their rights.

View Health Report - Mozilla Firefox  
http://moss6147/\_admin/HealthReport.aspx?HealthReportType=0

Central Administration > Slowest Pages

Slowest Pages  
Top Active Users

25 items returned. Server: **Show All** Web Application: **http://moss.contoso.com/** Show Items: 25 Range: Last week

URL	Average Duration(ms)	Minimum Duration(ms)	Maximum Duration(ms)	Maximum Number of Database Queries	Number of
http://moss.contoso.com/_layouts/user.aspx?...	91285	91285	91285	13	
http://moss.contoso.com/_layouts/reghost.aspx	81300	937	226262	720	
http://moss.contoso.com/_vti_bin/client.svc/processquery	57228	19	178424	185	
http://moss.contoso.com/_layouts/docdatahandler.ashx?...	19770	19770	19770	11	
http://moss.contoso.com/lists/list2/newform.aspx?...	9711	2633	16789	24	
http://moss.contoso.com/sitepages/home.aspx	9115	88	284705	73	
http://moss.contoso.com/_layouts/flidnewex.aspx?...	8970	63	25430	54	
http://moss.contoso.com/lists/largelist/allitems.aspx	7861	179	55361	66	
http://moss.contoso.com/shared/documents/webpartdemopage.aspx?...	7555	267	100142	16	
http://moss.contoso.com/bcsdemo_layouts/new.aspx	6815	6815	6815	54	

Figure 6. Slowest Pages report

Because the logging database and reporting are extensible, organizations can build custom reports on demand. You can also expect tools from third-party vendors, which will make SharePoint usage and health analysis simpler than ever.

# Need for Third-Party Administration Tools

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While significant improvements have been made in SharePoint 2010 to simplify management tasks, you will still need some functionality that is available only in third-party tools. Here's a quick list of management tasks that may require third-party tools:

- Reporting
  - SharePoint environment usage, storage and growth
  - Auditing reporting including permissions changes and file deletions
  - Enterprise-level reports that allow you to identify issues and drill into specific site details
- Permissions management across the environment through a single interface
- Configuration management for managing granular changes environment wide, such as managing master pages across web applications or the farm.
- Policy management to enforce settings and configuration
- Granular recovery when you didn't know where the item originally existed
- Snapshot/backup and disaster recovery management tools
- Front end load balancing management
- Storage management for very large environments

Third-party tools can also enable you to offload some recovery, management and report-generation tasks from the IT group to the help desk or even business users. This helps IT to concentrate on maintaining service levels and building new applications on the SharePoint platform.

# Conclusion

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SharePoint administrators have asked for a number of improvements in the latest release of the platform, including:

- The ability to recover a file from the database
- Control over list sizes to maximize performance and health
- Better disaster recovery
- Better management tools
- More insight and extensible reporting
- Health management tools

While SharePoint 2010 provides some new tools to support these requests, don't overlook the possibility of saving time as well as improving SLAs and auditing capability with the help of Microsoft's partners. Third-party tools will still be needed to help manage this growing platform to ensure it meets organizational needs and provides the collaboration technology that end users require.



# About the Author

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Joel Oleson is a senior architect and SharePoint evangelist at Quest, where he is responsible for product direction and strategy. He is well known in the SharePoint community as an enthusiastic trainer and architect, and he maintains a popular blog. Joel is a frequent speaker at technical conferences such as Microsoft TechEd, and often presents to local SharePoint user groups.

Prior to joining Quest, Joel worked at Microsoft, where he was a part of the first Microsoft global deployment of SharePoint, helping customers achieve the critical governance they needed to upgrade and achieve scale with SharePoint solutions since SharePoint 2001. He was part of the Technical Product Management team that launched SharePoint 2007.

*Special thanks to Henry Ong for screenshot contributions.*

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