

Deltek Vision™ Document Management Module Technical White Paper

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Important Note: As changes in Document Management and Microsoft Windows® SharePoint® Services occur, we will update this white paper. Therefore, please check the Deltek Vision e-support site periodically to be sure you have the latest version of this document.

OVERVIEW

Now more than ever, professional services firms are comprised of geographically dispersed team members. Employees are working 24/ 7 and relying on Internet-based technologies to keep in sync. Effective collaboration is more challenging and more important than ever before. Deltek Vision Document Management fosters information sharing by providing a Web-based document collaboration platform for your team to share. Team members from around the firm and around the world can upload, share, review, and edit documents from within Vision, using a Web browser.

With Vision Document Management, you can store, share and collaborate on a set of documents for every project, employee, client, contact, opportunity or other key Vision record. You can link a single document to just one record, or to multiple records in multiple Info Centers. Find documents easily using full text document searching capabilities, combined with powerful search options found within Vision.

Vision Document Management provides:

- Web-based access to all documents.
- Ability to link documents to specific Info Center records.
- Ability to organize documents into libraries and folders.
- Ability to store photos, graphics and other digital assets.
- Check-in/ check-out capabilities, so that multiple users do not update a document at the same time.
- Document changes that are tracked and assigned different version numbers for auditing and rollback.
- Cross-document text searches spanning various formats, including Microsoft® Word, Excel, and Adobe® PDF.
- Security settings to control document access and editing.
- Ability to share documents with clients, partners, and suppliers by creating outwardfacing portals.

Vision Document Management employs Microsoft Windows SharePoint Services (WSS), a leading collaboration platform in use by many professional services firms. To take advantage of the performance, stability, and security features of the Microsoft .NET Framework, SharePoint is tightly integrated with Windows Server™ 2003. Documents are stored in a scalable Microsoft SQL Server™ 2000 or MSDE 2000 database. Furthermore, Vision Document Management was designed to integrate with existing deployments of Microsoft Windows SharePoint Services.

Any user with Microsoft Internet Explorer and an Internet connection can enjoy global access to Deltek Vision, including Vision Document Management, 24 hours a day. Other than a Web browser, the user needs no additional software installed on his or her workstation.

Document Management is one component of the Deltek VisionXtend™ platform, based on Microsoft .NET architecture. VisionXtend gives users the power to extend the reach of Deltek Vision — by developing applications that integrate with Vision, calling Web services from within Vision, and communicating with Vision through mobile devices.

WHAT IS SHAREPOINT?

SharePoint, also known as Microsoft SharePoint Products and Technologies, is the cornerstone of Microsoft's collaboration platform. It enables organizations to facilitate easy, connected collaboration across an organization.

The overall design goal for SharePoint® Products and Technologies was to unify and integrate Windows SharePoint Services as a technology platform on which to extend applications such as Deltek Vision. This goal of unification and integration was divided into four areas:

- Consistent Windows SharePoint Services experience for users, developers, and IT professionals.
- Consistency and integration with the .NET Framework.
- Integrated storage strategy.
- Trustworthy Computing Initiative: security and reliability.

Consistent Experience for Users, Developers, and IT Professionals

Solution developers who use Windows SharePoint Services now need to know only one user-interface technology (ASP.NET Web pages and controls), one data storage technology (Microsoft SQL Server), and one Windows SharePoint Services object model to create advanced sharing solutions. Developers can use their choice of .NET Framework development and database tools to develop, test, and tune their Windows SharePoint Services solutions. Similarly, network administrators can take advantage of their existing knowledge by using well-known tools and procedures based on Windows Server 2003 and SQL Server to deploy and manage Windows SharePoint Services.

Consistency and Integration with the .NET Framework

The strategy of using the .NET Framework, Web services, Microsoft Visual Studio .NET, and Windows Server 2003 to build Windows SharePoint Services is part of Microsoft's technology strategy for connecting people, information, applications, and devices. The first advantage of using the .NET Framework in building Windows SharePoint Services is that it is the most scalable, flexible, and secure foundation for building, deploying, and managing enterprise Web applications. Windows SharePoint Services workspaces and portal sites share these attributes as a result of this integration with the .NET Framework. Additionally, integrating Windows SharePoint Services with information from virtually any enterprise application is easy with the support for Web services included in the .NET Framework.

Integrated Storage Strategy

The long-term strategy for storage technology at Microsoft is for SQL Server technology to become the single repository for absolutely everything. Except for the full-text search indices created by Microsoft Search technologies, and certain pages that are stored in the files system on front-end Web servers as a performance enhancement; all content, configuration information, and other Windows SharePoint Services data is stored in SQL Server databases. Using a single, consistent, integrated data storage platform creates significant advantages for IT professionals and developers. It increases their productivity and reduces their day-to-day development, deployment, and management costs.

Trustworthy Computing Initiative: Security and Reliability

The secure, reliable operation of everyday computer systems is at the heart of the Trustworthy Computing Initiative at Microsoft. All new Microsoft products, including Windows SharePoint Services, adhere to these Trustworthy Computing initiatives. Developers at Microsoft have extensive software security training and apply their knowledge by performing security audits of each Microsoft software component that they are responsible for. Furthermore, the development teams for Windows SharePoint Services groups took advantage of the built-in security and reliability of Windows Server 2003 and the .NET Framework when they designed, implemented, and tested the new version of Windows SharePoint Services.

Windows SharePoint Services is the platform Deltek Vision uses to enable Document Management, collaboration, and information sharing, thereby helping to increase individual and team productivity.

Windows SharePoint Services takes file storage to a new level, from saving files to sharing information. Windows SharePoint Services sites provide communities for team collaboration -- empowering users to collaborate on documents, tasks, contacts, events, and other information. They enable team and site managers to easily manage site content and activity in an environment designed for easy and flexible deployment, administration, and application integration.

Microsoft SharePoint Products and Technologies deliver highly scalable collaboration solutions with flexible deployment and management tools. Microsoft SharePoint Products and Technologies immediately provide a high level of value while serving up an accessible, deployment-friendly, highly scalable platform for developing extended applications.

HOW ARE SHAREPOINT PORTAL SERVER AND WINDOWS SHAREPOINT SERVICES RELATED?

Windows SharePoint Services delivers sites for team collaboration and productivity, facilitating large numbers of smart places. Smart places are Web sites devoted to document or project collaboration and can include documents, lists, tasks, etc. Microsoft Office SharePoint Portal Server 2003 is the scalable portal server that connects these places, people, knowledge, and business processes, facilitating smart organizations. Deltek Vision document management can be deployed in either model.

Microsoft Office SharePoint Portal Server 2003 provides a secure enterprise business solution by:

- Integrating information from various systems into one solution through single sign-on and enterprise application integration capabilities.
- Providing flexible deployment and management tools.
- Facilitating end-to-end collaboration by enabling aggregation, organization, and searching for people, teams, and information.
- Enabling portal users to quickly find relevant information through customization and personalization of content and layout in the portal.

Microsoft Office SharePoint Portal Server requires Windows SharePoint Services. For more information, see the following links.

To review the benefits of Microsoft Office SharePoint Portal Server 2003: <http://www.microsoft.com/office/sharepoint/prodinfo/benefits.msp>

To decide whether to deploy Windows SharePoint Services alone or with Microsoft Office SharePoint Portal Server 2003: <http://www.microsoft.com/sharepoint/evaluationoverview.asp>

WHY DID DELTEK CHOOSE MICROSOFT SHAREPOINT PRODUCTS AND TECHNOLOGIES FOR ITS DOCUMENT MANAGEMENT PLATFORM?

- It complements the existing (and future) Deltek Vision technical application architecture.
- It has the ability to integrate and extend. Deltek was able to take advantage of Windows SharePoint Services as a platform to extend Deltek Vision functionality while seamlessly integrating with it.
- It has a low cost of entry for clients.
- Microsoft is investing a large amount of resources and money to enhance SharePoint technologies.

DEPLOYMENT AND INSTALLATION

There are a number of important decisions that need to be made before deploying Microsoft SharePoint Products and Technologies within your organization and linking them with your Deltek Vision deployment:

- What types of documents do you plan to store and maintain?
- Do you plan to provide your clients access to any of the documents?
- Do you have remote users accessing the documents?
- Does your IT department need additional training?
- What is your training plan for your end-users?

Because of these decisions and factors, Deltek recommends a phased approach to your deployment. There are four phases to this approach:

- Discovery and Design
- Proof of Concept/Prototype
- Test
- Deploy

Discovery and Design are very important with SharePoint, as implementations involve "everyone." During this phase, the goals need to be clearly defined by talking to all the different parts of the organization. There are many new concepts involved, so the design may go through several iterations and need modifications along the way. Use the Design phase to educate the stakeholders and move quickly into the Proof of Concept or Prototype phase. In this phase, build a test environment and expand the testing group. Pick two to four key business processes or challenges to test in the Proof of Concepts phase.

Benefits of a Phased Approach

A phased approach gives you the opportunity to:

- Educate admin staff on the skills needed to support the new environment.
- Educate site administrators on the skills needed to manage their sites.
- Educate select end-users about the new features.
- Obtain champions of the solution, who will then generate enthusiasm (the wave effect).
- Test the portal structure.
- Determine if the areas make sense and are useful. An area simply meaning a collection of common data. An example of an area might a project, a client, or an opportunity.
- Determine if appropriate top-level sites are in place and organized properly.
- Ensure that the right site templates and list templates are available.
- Ensure that the right site groups are in place.
- Train in phases so more advanced users can train the new users.
- Cut over certain business processes to force users to adopt and understand the new technology -- "tough love."

SEARCHING

Natively, Microsoft SharePoint Products and Technologies searches the content of Microsoft Office documents and plain text files. If you want to add the capability of being able to search other types of documents (such as PDFs), you will need to download and install (and in some cases purchase) the appropriate iFilter.

iFilters are the technology developed to index the content of documents. There are a number of iFilters available for the most common document types such as Microsoft Office documents, PDF documents, and RTF, HTML, and Zip files.

- PDF - <http://www.adobe.com/support/downloads/detail.jsp?ftpID=2611>
- AutoCad (DWG) - <http://www.cad-company.nl/Producten/Producenten/CADCompany/DWG+iFilter/default.asp>
- Others - <http://www.ifiltershop.com>

HARDWARE REQUIREMENTS

These recommendations are based on sample deployment models. Requirements for your firm may vary.

For organizations who plan to use Microsoft Windows SharePoint Services exclusively for Deltek Vision...

- Depending on your firm size and existing hardware, you may or may not need an additional, dedicated WSS front-end Web/ application server.
- Depending on your firm size, existing hardware, and content you plan on storing, you may or may not need an additional, dedicated WSS back-end (such as Microsoft SQL Server 2000) database server.

For organizations who plan to use Microsoft Windows SharePoint Services inside and outside of Deltek Vision...

- You will need an additional, dedicated WSS front-end Web/ application server.
- Depending on your firm size, existing hardware, and content you plan on storing, you may or may not need an additional, dedicated WSS back-end (such as Microsoft SQL Server 2000) database server.

Front-End (Web/ Application Server)

- Windows Server 2003 Standard (configured as an Application Server)
- Single or Dual Xeon Processors
- 2 – 4GB GB RAM
- 8GB disk drive, and twice the estimated required storage space for data
- SharePoint compatible antivirus software

Back-End (Database Server)

- Windows Server 2003 Standard
- Single or Dual Xeon Processors
- 2 – 4GB GB RAM
- 8GB disk drive, and twice the estimated required storage space for data
- Microsoft SQL Server 2000
- Backup software
- SharePoint 2003 is supported only on servers that are members of a Microsoft Windows 2000 or Windows Server 2003 domain

Database Options

- WMSDE 2000 (Not recommended)
 - No storage or connection throttling for a single server
 - Can't be used with SPS, just WSS
 - Tied directly to WSS (i.e. when you install SPS, MSDE 2000 limitations go into effect)
- MSDE 2000 (Not recommended)
 - Storage limitation – 2GB/ database
 - Connection throttling – 5 simultaneous connections
 - Single Web front-end
 - Can have up to 16 MSDE DBs/ server -- Can store more information but requires increased administration, maintenance, etc.
 - Limited toolbox
 - SQL Server 2000 (Recommended)
 - Highly scalable and robust
 - More secure
 - Large number of built-in management tools
 - Required for server farms
 - Recommended with SPS when two or more servers are used

Each Windows SharePoint Services implementation has at least two databases. The Configuration database contains global settings, topology information, virtual server settings, etc. The Content database contains all of the documents, lists, and metadata. You can have one or more content databases.

Note: Content databases cannot be distributed among multiple locations. If you have multiple locations with document needs across locations, there are third party hardware and software solutions that can assist with this requirement.

You should contact Deltek PSA Technical Services to have a conversation about your hardware plans prior to implementation.

Additional Considerations

Some other factors that should be considered when planning your deployment are the number of users, user locations (geography, mobility, connection speeds, etc.), user expectations, maintenance, service levels and availability, length of work day (hours), determining and consolidating data resources and locations, integration with outside sources, number of documents being stored, average number of versions being maintained, and the size of the documents.

- Estimate initial storage requirements and growth patterns. (Do this during the planning stage.) For example, the amount of disk space is not simply the number and size of documents. You need to consider document versioning and the metadata associated with each document and document library.
- Transaction log requirements - Up to 53% of content size but averages <13% of what?
- Network and server bandwidth requirements
- Search content - Stored locally \approx 25% of content size.
- Indexed content - Stored locally \approx 50% of content size
- Anticipated content growth.
- Data scrubbing/ house cleaning – What documents will you migrate into the Document Management system?
- Number of sites and their storage requirements.
- Limiting content with site quotas.
- Developing and implementing maintenance procedures (defrag, backup, managing indexes, etc.).
- Setting database size limitations.
- Monitoring the environment (e.g. MOM Management Pack).
- Optimizing disk subsystem.
- Optimizing or disabling document versioning.
- Optimizing metadata requirements.
- Maintaining? Setting up? Configuration Database.

Some other components that you may want to deploy in your document management configuration are the following:

- E-mail servers
 - Alerts for document changes, quotas, and dead-web cleanup.
 - E-mail attachments added to document libraries.
 - Requires outbound SMTP server to support anonymous connections.
- Load balancers -- WSS/SPS is load balancer agnostic. Options:
 - Software - NLB: inexpensive, limited scalability, bad for proxy servers.
 - Round Robin - Primitive load balancing, have to configure DNS.
 - Hardware - Expensive but most scalable.

USER WORKSTATION REQUIREMENTS

- Microsoft Windows 2000 or XP preferred
- Microsoft Internet Explorer 6.0 or later
- Microsoft Office Integration (Optional), using Office 2003, Office 2000, or Office XP? <--to introduce lists below
 - Office 2003
 - Provides the Shared Workspace Task Pane in Word 2003, Excel 2003, Project 2003, Vision 2003.
 - Excel 2003 allows the use of datasheet view in lists and libraries.
 - Outlook 2003 allows creation of meeting workspaces.
 - Allows multiple file uploads to document libraries.
 - Office XP (limitations)
 - Multiple file upload and datasheet views are NOT visible/ available.
 - Can't create meeting workplaces (with Outlook).
 - Can't create document workspaces when saving a document in Word/Excel.
 - Can't save an Outlook attachment in WSS.
 - Lack of synchronization.
 - No user presence context – just a hyperlink.
 - Office 2000
 - Only able to edit documents.

LICENSING

DELTEK VISION

Document Management is a separately licensed module. Please contact your sales associate for pricing.

MICROSOFT - WINDOWS® SHAREPOINT® SERVICES (REQUIRED)

Front-End (Web/ Application Server)

Windows SharePoint Services conforms to the Windows Server 2003 licensing model, which means that each user or device connecting to a Windows SharePoint Services server must have a Windows Server 2003 CAL (Client Access License).

Notes:

- If your organization already is licensed in perseat mode for Windows Server 2003, then no additional licenses are required.
- If you are using Microsoft Windows Server 2003, Web Edition, use of Windows SharePoint Services on Windows Server 2003, Web Edition, is limited to front-end Web serving tasks. The data storage portion of Windows SharePoint Services may not be installed or used. on Windows Server 2003, Web Edition.

External Connector License Option

The new External Connector (EC) license can be purchased to enable access to your servers instead of buying individual Windows CALs for external users (or their devices). The EC license is purchased for every copy of the Windows server software that is accessible to the external user. An example of an external user is a person who is not an employee or similar personnel of the company or its affiliates.

Back-End (Database Server)

Depending on the size of your firm and the number/ size of documents you plan to store, you may be able to use your existing database server (and therefore, your existing Microsoft SQL Server 2000 license). If it is determined that your firm needs a dedicated database server for Document Management, an additional Microsoft SQL Server 2000 license will be required.

For more information about Microsoft licensing, please visit: <http://www.microsoft.com/windowsserver2003/howtobuy/licensing/sharepoint.mspx>

OFFICE SHAREPOINT PORTAL SERVER 2003 (OPTIONAL)

If your firm has determined that it wants to take advantage of the added functionality of Office SharePoint Portal Server 2003, there are additional Microsoft licensing requirements. There is a server license and a CAL (Client Access License) requirement.

Microsoft pricing information can be found at: <http://www.microsoft.com/office/sharepoint/howtobuy/default.mspx>

TIPS AND TRICKS

- Deploy Deltek Vision using integrated security.
- Install and configure Windows SharePoint Services onto a test server to learn and understand its terminology and capabilities before deploying Deltek Vision Document Management.

FAQ

Q. Will Deltek Vision Document Management work with SharePoint Team Services and/or SharePoint Portal Server 2001?

A. No.

RESOURCES

- Microsoft SharePoint Site - <http://www.microsoft.com/sharepoint>
- <http://www.microsoft.com/windowsserver2003/technologies/sharepoint/default.aspx>
- <http://www.sharepointcommunity.com>
- http://www.ms2d.com/default_section.aspx?section=sharepoint
- <http://www.spsfaq.com>
- Blogs - <http://www.spsfaq.com/blogs.htm>
- <http://msdn.microsoft.com/library/default.asp?url=/library/enus/dnanchor/html/Sharepoint.asp>
- Windows SharePoint Services Administration Guide - <http://www.microsoft.com/downloads/details.aspx?FamilyID=a637eff6-8224-4b19-a6a4-3e33fa13d230&DisplayLang=en>
- Windows SharePoint Services SDK

MORE INFORMATION

For more information about the Document Management module, please contact Vision Sales at:

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Deltek® is a leading provider of enterprise applications software designed specifically for project-focused businesses. For more than two decades, our software applications have enabled organisations to automate mission-critical business processes around the engagement, execution and delivery of projects. More than 12,000 customers worldwide rely on Deltek to measure business results, optimise performance, streamline

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