



Trying to Collaborate Outside Your Four Walls? SharePoint Might Not Be the Best Choice.

When it comes to file and document collaboration, many IT pros automatically assume that Microsoft SharePoint 2010 is the best solution available. While there is no denying that SharePoint is a top-notch platform for collaboration, it is important to realize that SharePoint is better suited for some collaborative tasks than others. This white paper discusses when it makes the most sense for organizations to adopt SharePoint, as well as the types of situations in which a third-party solution may be more effective and less expensive.

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The Scope of This Paper

SharePoint 2010 is a high-end collaborative solution that attempts to be all things to all people. As such, it contains hundreds, if not thousands, of features. Rather than attempting to address all of these features (many of which are relatively obscure), this paper focuses solely on collaboration as it relates to document and file management.

For the purposes of this paper, collaboration refers to file sharing. File sharing is a very common requirement in many organizations. Whether it is used by a globally dispersed team of engineers

working on design plans or a decentralized sales group updating a forecast, file sharing and collaboration is nearly a universal need across organizations. When it comes to file and document collaboration, many IT pros instinctively turn to SharePoint. However, SharePoint might not be the best choice in every situation.

When Does It Make Sense to Use Sharepoint?

Creating User Privileges to Files

One situation in which it makes sense to use SharePoint is when you need to be able to off-load some administrative responsibilities to end users without giving them the keys to the kingdom. Oftentimes users need to collaborate with others on a project, which means giving everyone involved access to the various project-related resources.

In a file server environment, this type of business need would require an administrator to create a folder for storing project-related documents and an Active Directory security group containing each user who is working on the project, and to then grant rights to the new folder to the security group. Although this is a simple task, the administrator would likely have to perform ongoing maintenance tasks, such as adding or removing users from the security group, creating additional project folders and security groups, and removing project-related folders and groups when a project is complete.

In a SharePoint environment, this task is greatly simplified. SharePoint administrators can grant specific users the ability to create their own team sites. Those users can then create SharePoint sites that are dedicated to the project that they are working on. They can create their own document libraries, manage access rights to the site that they have created and add any extra site elements that might be needed, such as project calendars or team contact lists.

Workflows

SharePoint adoption may also make sense when an organization has a legitimate need for more advanced document management features. For example, SharePoint 2010 supports workflows that can be used for document approval routing. Such a workflow might ensure that a document has been approved by an editor, a manager and the company's legal department before being released to the public. Workflows are not something that can be easily created on a basic file server, so if you need automated document workflows, SharePoint probably is the right choice for your organization.

Document Versioning

SharePoint may also make sense if you need document versioning capabilities. Keep in mind that this means more than just the ability to revert to a previous version of a document. In fact, users can recover a previous version of a document without SharePoint. Windows 7 allows users to restore a previous version of a document simply by right-clicking on a file, choosing the Restore Previous Version option from the shortcut menu, and then picking the version of the file that they want to restore.

SharePoint not only makes it possible to revert to a previous version of a document, but it also provides very rich versioning capabilities that allow you to keep track of when documents were

changed and by whom. There are even controls that can limit the number of document versions that are retained and that generate email or text message alerts when document versions are updated. If you require these types of capabilities, a SharePoint deployment probably makes sense. It is worth noting, however, that versioning is not enabled for document libraries by default. If you want to retain multiple document versions in SharePoint 2010, some configuration and capacity planning work must be done.

Additional Capabilities

Finally, SharePoint is an effective solution if you require access to non-document-related features. The platform offers features such as task lists, calendars and team discussions, which can prove useful in collaborative environments.

When SharePoint Makes Sense

Some organizations have a legitimate business need for SharePoint. It makes sense to use SharePoint if your organization needs some of the platform's advanced features that cannot be mimicked through other Windows features or through lower cost third-party software. For example, SharePoint would likely be effective in organizations in which users need to be able to build custom document libraries and control the permissions within those libraries. In addition, SharePoint is probably a good choice for organizations requiring advanced versioning capabilities or automated workflow management.

When SharePoint Doesn't Make Sense

Cost and Complexity is Overkill

Although it is easy to think of SharePoint as a be-all and end-all solution, there are situations in which it does not make sense. For example, given the cost and complexity of SharePoint, it does not make sense to deploy SharePoint if you plan to take advantage of only a small subset of its features. For instance, it was once common practice for organizations to deploy SharePoint if they needed document indexing and search capabilities. However, if these are the only SharePoint capabilities required, it can be much more cost-effective to either rely on the native Windows Indexing Service or to implement indexing on an a la carte basis through a third-party solution.

Other Related Microsoft Technologies

Unfortunately, SharePoint 2010 lacks the ability to replicate document libraries to SharePoint servers in remote sites. That isn't to say that there isn't any way to conserve bandwidth — there is. However, Microsoft's solutions are only marginally effective.

One of Microsoft's solutions to bandwidth constraints is to provide all users with Microsoft Office 2010. Office 2010 is equipped with a local file cache that caches data downloaded from SharePoint. That way, if a user opens a previously opened document, it is read from the cache.

There are two main reasons why this approach is relatively ineffective for conserving WAN bandwidth. First, this approach does nothing to conserve bandwidth if a different user opens

a previously downloaded document from a different computer. Second, it works only for Microsoft Office documents. Other types of data, such as PDF and CAD files, are not cached. Besides being ineffective, this approach can also be expensive if the organization does not already have the required Microsoft Office 2010 licenses.

Microsoft's other recommendation is to implement BranchCache, which requires Windows Server 2008 R2 to be deployed in the remote office (unless Distributed Cache Mode is being used). BranchCache caches all of the data that is downloaded from SharePoint, and the cache is shared by all of the users in the remote office.

Although using BranchCache is more effective than using Office 2010 alone, this solution is far from ideal. The cache contents are read-only and relatively short-lived. Furthermore, BranchCache is compatible only with Windows 7 clients.

If your goal is to provide file data to users in local and remote offices without saturating your WAN connection or running the risk of isolating users in the remote office during a WAN failure, you are better off using Microsoft's Distributed File System Replication (DFS). DFS is a native Windows Server feature that replicates a file server's contents to other file servers in a way that provides redundancy and fault tolerance. In doing so, DFS creates decentralized file storage so that each office has its own local copy of file server data.

DFS is clearly a better solution than SharePoint for organizations that need to make documents accessible to users in remote offices, but that also need to conserve WAN bandwidth. However, DFS isn't a perfect solution, either.

The biggest drawback to relying on DFS is that it lacks adequate version conflict controls. Because DFS is decentralized, it is very possible that two different users in two different offices could simultaneously make contradictory changes to the same file. Likewise, it is possible for version conflicts to occur if a user in a remote office modifies a file before the most recent changes have been replicated throughout the organization. When this occurs, these files will be marked and found in the Conflicts and Deleted folder.

Microsoft's solution to this problem is to implement a "most recent change wins" approach. In other words, if two users change the same file at the same time, DFS will look at the time stamps on the file and accept the file that was modified most recently. This could be especially problematic if the rejected version contained a major document update while the accepted version contained a minor grammatical fix.

When SharePoint Doesn't Make Sense

Perhaps the situation in which SharePoint makes the least sense is when multiple offices are connected by a WAN link. The problem with this situation is that when users in a remote office access documents from a SharePoint server, the document must be downloaded across the WAN connection. When the user saves changes to the document, those changes must be sent back across the WAN connection and saved to the SharePoint server. This can be especially concerning if the organization is charged for the volume of traffic that flows across the WAN link.

The Peer Software Solution

Peer Software (www.peersoftware.com) adds to the concept of DFSR with its PeerLink Server product, which provides fast file access performance through local mirrored copies of files while at the same time preventing version conflicts. PeerLink Server is a real-time file-locking and synchronization technology.

When a user opens a file for editing, PeerLink locks the file on all of the DFS replicas so that no other users can modify the file. When the user saves the file, the deltas are synchronized to all of the other DFS replicas. This approach consumes less bandwidth than would be used if the entire file was synchronized.

Once the deltas have been synchronized, the lock is released. This process ensures that when users open a document, they are always opening the most recent version and that no version conflicts can be introduced while the document is being edited.

PeerLink offers better file system performance than SharePoint or BranchCache. Through real-time file replication, it is possible to place file server replicas in each branch office. This allows users to access content much more quickly and reduces WAN bandwidth consumption, since the content is being retrieved from a local server.

When users make changes to files, those changes are replicated to all of the other branch office servers. PeerLink takes measures to prevent the replication process from consuming excessive WAN bandwidth. As previously noted, when a file is modified, PeerLink replicates only the deltas — not the entire file. The software also makes use of a multithreaded replication engine that is designed for optimum deployment.

PeerLink is easy to deploy and administer, providing fast ROI. The software can be deployed in less than an hour and features a centralized management console and offers robust enterprise logging. Moreover, PeerLink uses intelligent management for high-latency WANs and unstable WAN environments. This ensures that files are properly replicated, regardless of the current network conditions.

From the end-user's perspective, nothing changes except for the network's performance. Users continue to create and access files in the same way that they always have, which means that no user retraining is required, as is the case with SharePoint.

ROI Benefits

When deciding whether or not to deploy SharePoint, it is important to look at the overall total cost of deployment, rather than just at the price of the required licenses, as well as the ROI. Microsoft generally recommends deploying SharePoint farms in a fault tolerant configuration. This type of deployment requires a significant investment in hardware as well as several SharePoint licenses, and yet does not adequately address the issue of file system performance for branch offices. The bottom line is that before purchasing a file sharing solution it is important to consider both the total cost of ownership and how well your investment will meet the organization's needs.