



Complete and Integrated Data Protection for SharePoint 2007

DocAve® 4.5 Software Platform

“Backup and Recovery” & “High Availability” Modules

Microsoft® SharePoint® has become a vital platform for organizations seeking effective information sharing and efficient team-based collaboration. As a result, robust protection of SharePoint data and rapid recoverability from disasters are now a requirement, not an option. Diverse business functions and complex distributed architecture require a new approach to SharePoint platform and document recovery. Using only native SharePoint tools and SQL backups, organizations will experience continued exposure to risk of business-critical information loss. This brief is intended for IT Professionals responsible for the evaluation, planning and execution of SharePoint data protection policies, and will review effective strategies for achieving this protection.

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Introduction

Use of Microsoft Office SharePoint Server 2007 (MOSS 2007) is growing rapidly. Powerful features previously accessible only through other business-critical applications are now readily available to the average user via the SharePoint platform. Equipped with new features for enterprise content management, and wholly integrated with key business applications, MOSS 2007 is becoming a primary productivity tool for organizations across all verticals.

Tight integration of MOSS 2007 with other Microsoft Office applications has led to measurable increases in productivity and operations efficacy, portending SharePoint as destined to become the de facto platform for information access and user collaboration. An important consequence of this trend is the increased demand for a robust, reliable and secure SharePoint platform.

SharePoint from the Administrator's Perspective

Growth of a SharePoint environment is usually the result of rapidly changing customer usage patterns, leading to significant data expansion and a growing complexity of accessibility protocols. For SharePoint Administrators, meeting a certain service level agreement (SLA) is often difficult for myriad reasons:

- Distributed server farm architecture
- Content locked down in a SQL database
- Complex or heterogeneous platform configuration
- Various user features, components, and content with critical metadata
- Compliance regulations requirements

As enterprise SharePoint environments expand to multi-server distributed farms, each farm can contain a growing number of Front End Web Servers, application servers, index and search servers, and back-end (SQL) Servers. Each one of these individual SharePoint server components will have configurations stored in various locations, including databases, file systems, and/or SharePoint Solutions/Features repositories. The task of identifying and protecting the files and configurations necessary to recover these SharePoint environments grows increasingly difficult. AvePoint's DocAve Software addresses these important issues.

DocAve Data Protection Modules

AvePoint’s DocAve software platform offers two powerful data protection modules for MOSS 2007: *DocAve Backup and Recovery* and *DocAve High Availability*. With a truly centralized, browser-based management interface, potent backup and restoration tools and a straightforward, hassle-free installation process, Administrators can be certain SharePoint content and infrastructure are diligently protected and easily recovered in case of disaster.

DOCAVE BACKUP AND RECOVERY	DOCAVE HIGH AVAILABILITY
<p>Full Fidelity Item-level through Platform-level Recovery</p> <ul style="list-style-type: none">• Granular, scheduled and on-demand backups with full fidelity restoration of any content, including item, site, subsite, or site collection.• Quick, one-step full system backup of all SharePoint server components and point-in-time granular recovery of your entire SharePoint environment.	<p>Continuous Data Availability with Real-time Synchronization</p> <ul style="list-style-type: none">• Selective or complete content synchronization to a stand-by SharePoint environment.• Instant return to full-function productivity with a simple DNS switch.
<p>True Restoration with No Metadata Left Behind <i>Full Fidelity restore with metadata, security, and version preservation of any SharePoint site, sub-site, list, or item.</i></p> <p>Flexible “Business-Rule Aware” Scheduling <i>Granular Full, Differential, and Incremental backup options provide flexible content protection with varying schedules and storage/device mapping schemes dependent upon criticality and update-frequency.</i></p> <p>End-user Transparency and Minimal Work-loss <i>Minimal performance degradation during backups allows for production-hour backups without productivity loss.</i></p> <p>Downtime Reduced and SLA’s Maintained <i>Quick and easy full platform recovery reinstates all or selected databases, indexes, and settings.</i></p> <p>Data Loss Eliminated <i>Point-in-time restores provide for zero data loss during disaster recovery process.</i></p> <p>Simplified Full System Backup <i>Backup of all SharePoint components regardless of server residence, and flexible scheduling, storage, and retention policies make full-system protection hassle-free.</i></p>	<p>Maximum Uptime During Disaster <i>Switch to a stand-by environment instantly, from anywhere, and redirect users through a simple DNS flip.</i></p> <p>Disaster-related Data Loss Eliminated <i>Continuous or scheduled data synchronization for complete mirroring of the environment means disasters are disaster-free.</i></p> <p>Flexible Disaster Preparation <i>With no special hardware requirements or distance limitations, replication of selective content databases or whole farms is simple and barrier-free.</i></p>

Understanding Your Unique Needs

Each organization's SharePoint deployment is unique. Many organizations implement internal or external one or more Service Level Agreements (SLA); a contract between users and system architects and Administrators to define and deliver appropriate service for internal infrastructure, including SharePoint.

Addressing Your SLA Requirements with DocAve

Two of the most relevant components of an SLA are the Recovery Point Objective (RPO) and Recovery Time Objective (RTO). Both are critical to data protection and disaster recovery planning.

Recovery Point Objectives (RPO)

This objective denotes the age of files that must be recovered from backup storage to resume normal operations in case of site, system, or network failure. The RPO is retroactive from the moment of an actual failure. It can be set in seconds, minutes, hours, or days, and corresponds to the level of tolerable data loss.

Simply put, RPO represents a minimum frequency with which backups must be made.



*For example, if the RPO is one (1) day, backup must be performed at least once per day, while an RPO of one (1) hour requires hourly backups. Using **DocAve Backup & Recovery** - with its granular backup and scheduling capabilities - Administrators can differentiate data based on RPO-requirements and execute backups on a variety of customizable schedules. The "up-to-the-minute" recovery capabilities of **DocAve Backup & Recovery** and/or the synchronized mirroring of **DocAve High Availability** may also be required if the RPO is much lower, five minutes, for example.*

Here is how DocAve data protection modules address RPO needs:

DocAve Backup and Recovery

- Flexible scheduling allows Administrators to set frequency and type of backups to meet predefined RPOs for different business units.
- Point-in-time recovery for minimal data loss.
- Most suitable solution for minimizing **system wide** data loss due to corruption or hardware failure.

DocAve High Availability

- Constant mirroring to a stand-by environment protects against data loss due to disasters such as data center destruction (not for data recovery due to corruption).

Recovery Time Objectives (RTO)

This objective denotes the maximum acceptable downtime of a site, system, network, or application following a failure or disaster. The RTO is usually based on lost revenue or productivity measured in seconds, minutes, hours, or days relative to the measurable uptime (99.999% etc.) within an SLA.

It is difficult to determine the downtime cost for Enterprise portal applications, especially SharePoint, since the cost usually includes long-term and intangible effects in addition to short-term work-stoppage, or other tangible measurements. SharePoint usage within various business units results in different measurement strategies. After the RTO for an application is defined, Administrators can decide which DocAve data protection module(s) are appropriate.



*For example, if the RTO for a given application is one (1) day, **DocAve Backup & Recovery** would likely be sufficient to ensure a tolerable restoration time. However, if the RTO is 10 minutes, **DocAve High Availability** - with its off-site stand-by environment - is recommended in addition to **DocAve Backup & Recovery** (for primary system restoration). If data corruption is a concern, **DocAve Backup & Recovery** can also be leveraged to recover specific documents, lists, or sites quickly.*

Here is how DocAve data protection modules address RTO needs:

DocAve Backup and Recovery

- Minimizes downtime by delivering shortest recovery time for individual items/sites.
- Minimizes downtime by delivering shortest recovery time **for full system recovery.**

DocAve High Availability

- Minimizes downtime (nearly instantaneous) with simple DNS-switch **for full standby-system access.**

Summary

DocAve's data protection modules complement each other and respond to different SLA requirements. Understanding these SLA requirements will help you choose an optimal data protection solution for your business.

DocAve Backup & Recovery is the essential module, allowing for both granular backup/full fidelity restore of items, sites and site collections, and "point-in-time" restoration of your entire primary SharePoint environment. In the case of disaster or complete system failure, DocAve High Availability provides near instantaneous up-time delivery with a simple quick-switch to stand-by SharePoint environment(s).

Ask yourself: *How much downtime will your users tolerate without losing trust in SharePoint, when 24x7 availability is essential for high productivity? How much lost data is acceptable during failure? Can you offer different SLAs for different user groups or departments?*

DocAve Backup & Recovery Module

DocAve's item-level backup and restore functionality lets Administrators backup their SharePoint environment at any level, from an entire server farm down to a specific list item or document version.

Upon restore, utilizing an intuitive keyword/criteria-based search engine, Administrators can navigate to a specific folder/list to locate an exact item – whether an attachment, a single document, or even a single version of a document.

Key business-requirements addressed by *Backup & Recovery* include:

Full Fidelity of Original Data

In a collaborative environment, data only makes sense when all its associated metadata (e.g. last time of modification, original author, etc.) is fully preserved. DocAve ensures that restored data retains **both the original data and all metadata**.

Granularity of Backup and Restore

Granular backup lets Administrators take advantage of **existing tiered storage capabilities** in an organization. Business criticality of data should determine the appropriate usage across storage tiers. Granular recovery allows restoration of individual items, directly into its original location without the need to restore the complete database.

Flexibility of Schedules

Different parts of a SharePoint environment can vary in business importance, which means their frequency of modification will be vastly different. DocAve lets Administrators perform backups on different components (i.e. site, sub-site, folder, document library, etc.) of the environment at **customizable frequencies/schedules**, based on business importance and frequency of modifications/access.

When it comes to recovering from a disaster, there are simply no native backup solutions for SharePoint platform recovery. If a component fails, Administrators must reconfigure it manually. **Most components have numerous configurable parameters, requiring a very time-consuming manual reconfiguration** during disaster recovery. (That is...if the configurations have been saved at all.)

With DocAve *Backup & Recovery*, Administrators utilize a simple “point-and-click” approach to recover all relevant SharePoint data and configurations.

All Servers, All File Systems, All Configurations

SQL Server backups only cover databases, and will not protect items such as Shared Service Provider (SSP) applications, the Search Index, or File System Resources such as Web Parts, Solutions, Features, and other configurations.

SharePoint-centric Logic Ensures Consistent Backup

SQL backups **do not have any SharePoint-centric logic** to avoid inconsistencies during backup. Each individual database backup can be consistent atomically, but if configuration changes are introduced between backups, the farm backup will not be consistent, thereby invalidating the entire backup image. *DocAve Backup & Recovery*, on the other hand, maintains database configuration consistency.

In-Place and Out-of-Place Restore for Flexible Platform Recovery

DocAve Backup & Recovery allows migration of an entire Web Application to a different farm. This is a unique feature that is not supported by any other tool, native or otherwise.

Native Backup Tools vs. DocAve *Backup & Recovery*

The native backup & restoration tools included with MOSS 2007 have very limited capabilities. Below we'll summarize the attributes and shortcomings of two native tools: *Recycle Bin* and *Backup*:

MOSS 2007 Recycle Bin

The MOSS Recycle Bin incorporates a two stage recycling strategy designed to capture deletion events and allow for some retention of content before it is discarded. Because the Recycle Bin is a Web Application setting, it can only be enabled or disabled for all of the site collections served by the Web Application. The first stage of the Recycle Bin is the user level (or site level) Recycle Bin. The second stage of the Recycle Bin is the Administrator level (or Site Collection) Recycle Bin.

One critical shortcoming with the Recycle Bin solution is that it does not allow for any granular restoration. If a user deletes an entire document library, but only a single document needs to be restored, the entire document library must be restored. Furthermore, **Recycle Bin cannot handle large SharePoint objects and cannot restore anything above the List level.**

Recycle Bin is not considered a true backup solution. Because it only captures deletion events, it will not be an effective tool in the case of human error, data corruption, or disasters. (i.e. a corrupted file will remain so in the Recycle Bin.) These issues can occur at the entire farm level, or at the individual item level, and will not be covered by Recycle Bin. **To address these issues, robust backup with granular coverage down to the individual item level while preserving full fidelity metadata is required. DocAve *Backup & Recovery* provides these robust capabilities.**

Native Backup

Native backups **are limited to two options: Differential and Full.** Without the option of Incremental backups, databases must run under "Simple Recovery" mode, dramatically increasing the risk of data loss during a Database failure.

Native backups also have **significant performance impact on SharePoint production environments** and therefore execution is not recommend during production hours.

Performing restorations with the native tool, Administrators must first restore the document to a non-production server and then manually copy it back to the original location. **This process translates into a loss of all related metadata, including version histories, and securities/permissions.**

In contrast, not only can DocAve *Backup & Recovery* processes be performed during production hours, but it also allows for Full, Differential, and Incremental backups with flexible scheduling options free from database level lockups. Performing restorations with DocAve *Backup & Recovery* not only maintains all metadata, version histories and securities, but also provides Administrators out-of-place restoration capacity (placing the document anywhere in the environment from server to server, farm to farm, or site to site).

SQL and Native Backups vs. DocAve Backup & Recovery Module

FEATURES	SQL Backup	Native Backup	DocAve Backup & Recovery
Granular Item-Level Backup <i>Allows for flexible frequency of backups to various media storage devices based on business importance of content.</i>	NO	NO	✓ YES
Granular Item-Level Restore <i>Allows for quick recovery of all lists, libraries, objects and items including events, links, tasks, calendars, contacts, wikis, announcements, discussion boards, surveys, issues, customer lists, areas, sub areas, portal links, layout templates etc.</i>	NO	NO	✓ YES
Full Fidelity Restore with All Metadata <i>Restores items preserving all metadata, including securities, version histories, authors, time stamps etc.</i>	NO	NO	✓ YES
Site Collection-level Backup & Restore	NO	✓ YES	✓ YES
Site-level Backup & Restore	NO	NO	✓ YES
Folder-level Backup & Restore	NO	NO	✓ YES
Content Database Recovery	✓ YES	✓ YES	✓ YES
Configuration Database Recovery	✓ YES	NO	✓ YES
SSP Database Recovery	✓ YES	✓ YES	✓ YES
Project Server DB Recovery	✓ YES	NO	✓ YES
Search Database Recovery	✓ YES	✓ YES	✓ YES
SSO Database Recovery	✓ YES	✓ YES	✓ YES
Search Index Files Recovery	NO	NO	✓ YES
IIS Settings Recovery	NO	NO	✓ YES
File System Resources Recovery	NO	NO	✓ YES
Template Files Recovery	NO	NO	✓ YES
Web-parts (no external connections) Recovery	NO	NO	✓ YES
Site Definitions Recovery	NO	NO	✓ YES
Custom Templates Recovery	NO	NO	✓ YES
Full backup	✓ YES	✓ YES	✓ YES
Differential Backup	✓ YES	✓ YES	✓ YES
Incremental Backup	✓ YES	NO	✓ YES
Backup Different Sites to Different Destination and “Logical Drives” (a group of predefined drives)	NO	NO	✓ YES

Restore to an Alternate (out-of-place) Location	NO	NO	✓ YES
Restore Using Keyword and Wild Card Search	NO	NO	✓ YES
Ability to Set Data Retention Policies (Data Pruning)	✓ YES	NO	✓ YES
“On Demand” Backup	✓ YES	✓ YES	✓ YES
Self-running Job Scheduling	✓ YES	NO	✓ YES
Auto-generated Backup Status Reports Sent via E-mail to Customizable User Groups	NO (optional)	NO	✓ YES
Does Not Lock Index File During Backup	N/A	NO	✓ YES
Can Run Backup During Production Hours	Not recommended	Not recommended	✓ YES
128-bit Encryption	NO (optional)	NO	✓ YES
Backup Content Coalescing	NO	NO	✓ YES
Enterprise-strength Data Compression	NO (optional)	NO	✓ YES
24x7 Remote Restore Access	NO	NO	✓ YES
Managing Multiple SharePoint Instances from a Single Browser-based Interface	N/A	NO	✓ YES
Intuitive, Tree mode, SharePoint-centric GUI	NO	NO	✓ YES
Solution Framework Backup & Restore <i>Solution-based customization with the set of features and site definitions, templates, web parts and assemblies.</i>	NO	NO	✓ YES
SharePoint <i>Features</i> Backup & Restore	NO	NO	✓ YES
Direct Data Streaming to Backup	✓ YES	NO	✓ YES
Flexible Selection of Components	NO	NO	✓ YES

DocAve High Availability Module

The DocAve High Availability module is a “one-switch” disaster recovery solution for MOSS 2007 which ensures business continuity of key enterprise assets. High Availability enables selective SQL database replication to a standby environment, minimizing downtime and getting organizations back to work fast. There are simply no native tools that provide this functionality. Key business-requirements addressed by Backup & Recovery include:

Business Continuity Ensured

DocAve High Availability provides full-function access to replicated Content databases, SSO databases, and SSP databases with a simple DNS switch.

Scheduled, On-Demand, and Up-To-The-Minute Replication

Content databases mirror to a standby SQL Server or production SQL Server for a different farm at a minute-by-minute capacity.

Industrial-Strength Data-Packet Level Fault Tolerance

Byte-level differencing ensures full fidelity data replication over any network.

“Point & Click” Simplicity for Administration and Disaster Recovery

Experience truly centralized administration of all tasks, including database replication, scheduling/monitoring/reporting, software patch and license management, user account management, and software agent management across multiple SharePoint servers, with DocAve’s award-winning single-pane browser-based user interface.

DocAve High Availability Module vs. SQL Mirroring:

FEATURES	SQL Mirroring	DocAve High Availability
Replicate Transactions from Production SQL Server to a Warm Stand-by in Real Time	✓ YES	✓ YES
Easy-to-use, Tree-mode, SharePoint-centric GUI	NO	✓ YES
Auto-generated Backup Status Reports Sent by E-mail to Selected User Groups	NO	✓ YES
Auto-Discovery of Farm Components	NO	✓ YES
Multi Farm Control From Single Pane of Glass	NO	✓ YES
Selective Replicated Databases	NO	✓ YES
1-Click Failover Process	NO	✓ YES
Mirroring Feature (SQL Server 2005 or later)	✓ YES	✓ YES
Advanced Fault Tolerance During Replication (for synchronization over slow or noisy channels)	NO	✓ YES
SQL Server Cluster-aware	NO	✓ YES

DocAve: A SharePoint-Specific Approach to Backup and Recovery

The DocAve software platform is a “best-in-class” solution for complete SharePoint back-end protection and management. Here are some unique capabilities that differentiate DocAve from other SharePoint data protection and management solutions:

 **DocAve is the only truly integrated, complete back-end data protection and management tool for SharePoint**

Scalability allows seamless expansion from individual modules without need for reinstallation on the current infrastructure. Truly centralized management of all components is easily handled via a single, use-friendly, browser-based GUI. Integration of all components (Administration, Backup and Recovery, Archiving, Migration, Replication, and Compliance) results in the most complete and potent set of SharePoint solutions available.

 **DocAve utilizes a business-centric approach to data protection, utilizing granularity and hierarchical storage**

Protection granularity (site, sub-site, item, object, etc.) allows for classification of data based on importance and utilization of different mediums and schedules to backup and restore information. DocAve allows for granular backup and does not require backing up the entire SQL database every instance. With DocAve, critical areas can be backed up with greater frequency, allowing for optimal leveraging of existing tiered storage capabilities within an organization.

 **DocAve preserves the integrity of restored data**

Many documents stored in SharePoint go through an intense document management cycle and might involve many participants that generate and store critical metadata. DocAve retains not only the original data and restores it to the original meta-location, but also preserves full metadata information, including all securities.

 **DocAve uses a business-centric approach to features management**

DocAve modules allow backup schedules and management to correspond to your specific SharePoint environment:

- *Unlimited Backup schedules/plans can be created for individual site collections, single folders, or items.*
- *Reports and instant-alerts can be sent to the appropriate SharePoint Administrators, site owners, or customizable user groups.*

- *Meta-enabled, keyword, and versioning filtering allows for fully customizable backup/restoration exclusions.*
- *128-bit Encryption and Enterprise-level compression are controlled granularly, ensuring sensitive data is protected without affecting overall performance.*

Planning and implementing a comprehensive SharePoint data protection strategy will ensure an enterprise's uninterrupted operations and services. It allows users to work with the confidence of knowing their data will be secure and disaster-related interruptions will be minimized.

Ask yourself:

- *How easy is it to identify/target various components of your SharePoint environment? How about the configuration of each? What if they change?*
- *Can you recover a single or a combination of components (data and configuration)? How quickly? How much data would be lost?*
- *Do you have a stand-by environment for business continuity? What about after the switch-over? Do you have a plan to switch back to production? What happens to all of the updated data?*
- *Do you presently have a tool that can help you achieve all of the above?*

Without a proper data protection strategy, organizations expose themselves to unnecessary downtime and lowered productivity. AvePoint's DocAve Backup & Recovery and High Availability Modules are designed to help enterprises address these crucial issues.

How to Buy DocAve

AvePoint offers two powerful data protection Modules as part of its integrated DocAve Software Platform: *Backup & Recovery* and *High Availability*. Though all DocAve modules function within an integrated platform and unified interface, they can be purchased and deployed individually.

Free 30-Day Evaluation Download

Start using DocAve software immediately with a simple, wizard-driven installation into your existing SharePoint environment. Please note that some functionality of the DocAve *Backup & Recovery* and *High Availability* modules might be limited, based upon environmental restrictions. Download your copy today at www.avepoint.com/download

Purchase DocAve Data Protection Modules

Please contact one of our Sales Executives to discuss your deployment requirements or receive a sales quote.

Call 1-800-661-6588 (US/Canada), 1-201-793-1111 Option 1 or e-mail sales@avepoint.com.

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