

# CaminoSoft

## Managed Server HSM™ for Windows 2000/2003

### Infinite Storage for Enterprise Data

Nearly all companies are experiencing an explosion in the demand for storage, driven particularly by space hungry applications like CAD, multimedia, computer graphics, document imaging, email and, last but not least, user-controlled directories. Meeting the demand for increased storage is only one aspect of this problem. Managing the data intelligently, growing the storage infrastructure cost-effectively and providing users with immediate access to all of their files are the real challenges.

### CaminoSoft Managed Server HSM Offers a Solution

Managed Server HSM™ provides a simple, cost-effective solution for managing the complexities of data storage management. Combine Managed Server HSM with your production servers and a host of off-the-shelf storage devices: NAS appliances, general purpose servers, etc. The result is a finely tuned data storage resource that enables virtually infinite storage growth, increased data availability, with a minimal amount of effort and expense. As storage requirements increase, additional storage devices can be simply added to the pool.

### CaminoSoft Managed Server HSM How it Works

Managed Server HSM enables the administrator to configure usage of the “virtual” Central Storage Pool behind the scenes of the users. Users continue to read and write files to the same servers, volumes and folders as they always have. In the background, Managed Server HSM, based on policies set by its administrators, monitors volume watermarks and dynamically compares against real-time storage utilization to make decisions about migrating files that are infrequently accessed. Migrated file candidates are transparently relocated to the Central Storage Pool (usually in off-peak hours)

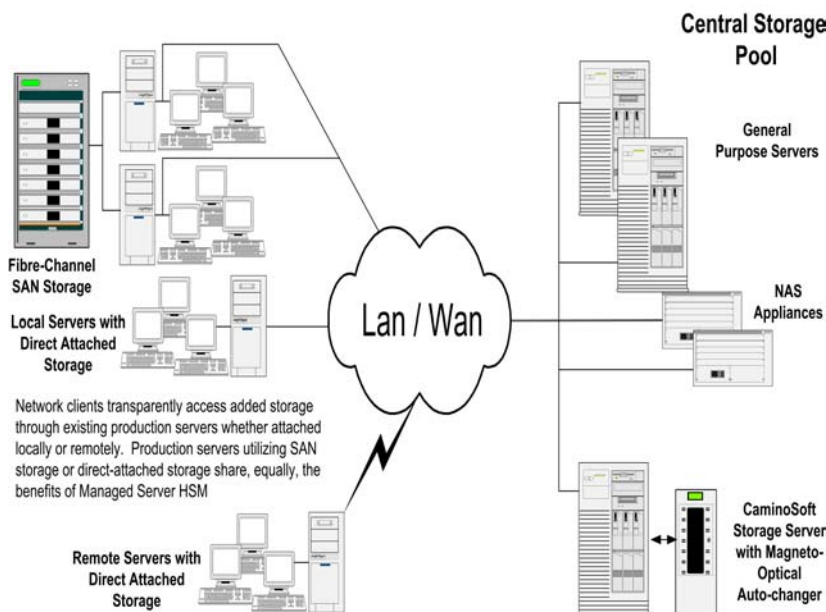
leaving behind just the directory entries and some reference information used in their retrieval process. Subsequent requests to open the migrated files are performed seamlessly in the background and the process is normally undetectable by the users. The policy-driven engine provides for “lights-out” operation, reduces the time and space to make backups of the files that are actually changing day-to-day, while providing complete, transparent access by users to all of their data.

### CaminoSoft Managed Server HSM Benefits

In addition to leveraging existing storage resources by migrating seldom accessed files, Managed Server HSM enables administrators to increase their storage capacity in an intelligent, cost-effective manner – thereby lowering the total cost of ownership of mission-critical data. *Managed Server HSM is easy to install and configure, enabling fast deployment without overloading your IT resources.*

### Managed Server HSM™ Key Features

- Aggregates multiple storage resources (general purpose servers, NAS devices, etc.) into one “virtual” Central Storage Pool
- Automates file migration and retrieval
- Provides immediate and seamless access to migrated files
- Installs easily and quickly with no required server downtime
- Requires minimal IT intervention allowing for easy implementation
- Enables full administrative control over migration activity via comprehensive policy maintenance



Managed Server HSM™, running on your existing Windows 2000/2003 server, uses automated management policies to aggregate Central Storage resources into pools, allowing network clients to transparently access their data, regardless of location.

# Data Sheet: Managed Server HSM™ for Windows 2000/2003

Today's IT Reality and Challenges	Managed Server HSM Solves Business Problems
<ul style="list-style-type: none"> <li>Simply adding new storage (disks, servers, NAS devices, volumes, etc.) creates more "islands" of distributed data storage</li> <li>Storage "islands" create a fragmented view (more mapped drives) of storage making it more difficult and time-consuming for users to store and find their files</li> </ul>	<ul style="list-style-type: none"> <li>Consolidates available storage across multiple network servers into a "virtual" Central Storage Pool to provide a host for infrequently accessed files; leaving space available for the applications and users who need it most</li> <li>Provides a consistent, single view of storage to applications and users, regardless of their files' physical locations</li> </ul>
<ul style="list-style-type: none"> <li>Newly deployed storage cannot be dynamically utilized by users and applications. Files must be manually transferred to newly deployed storage, creating new network shares/volumes requiring further administrative time to employ security</li> <li>Additional storage is difficult and expensive to manage. According to recent industry estimates, management of storage costs 8 times the hardware cost</li> </ul>	<ul style="list-style-type: none"> <li>Makes any storage capacity added to the Central Storage Pool automatically available to all production servers running Managed Server HSM. Users/applications store and retrieve their files from the same network shares/volumes as they always have</li> <li>Manages data storage in an automated, intelligent manner based on administrator-defined policies – reducing manual management overhead and providing lower total cost of ownership</li> </ul>
<ul style="list-style-type: none"> <li>Increased time and space necessary to make routine backups increases the likelihood of backup failure (it is estimated that 40% of all backups are aborted), potentially leaving critical production files unprotected</li> <li>Full server (disaster) recovery takes longer by restoring all files regardless of their current relevance, creating unnecessary, extended periods of downtime</li> </ul>	<ul style="list-style-type: none"> <li>Enables backup solutions to focus on active, production files by protecting only the reference information for the files that were migrated to the Central Storage Pool (as much as 80% or more of the total volume of data)</li> <li>Shortens time required to perform full server (disaster) recovery - minimizing downtime - by restoring only relevant, production files in full while restoring just the reference information for the infrequently accessed files</li> </ul>
<ul style="list-style-type: none"> <li>Lack of a persistent storage "watchdog" exposes organizations to unnecessary and costly downtime when servers run out of storage space. Manual monitoring of space availability by administrators requires valuable time better spent on productive tasks</li> </ul>	<ul style="list-style-type: none"> <li>Automatically monitors storage status and migrates files to Central Storage Pool devices – both routinely and on an emergency basis – freeing up space on overloaded servers before critical levels are reached, reducing management costs, downtime and other associated costs; with no administrator intervention</li> </ul>
<ul style="list-style-type: none"> <li>Companies are generating more and more data, with no end to growth in sight. It is estimated that the average annual storage growth rate now exceeds 75%. Reacting to this growth by simply adding/upgrading storage resources creates more downtime and the costly administrative overhead to install, configure and manage the additional storage</li> <li>There is no mechanism in place to avoid "reactive" early retirement of server/storage assets simply because of the lack of available space</li> </ul>	<ul style="list-style-type: none"> <li>Provides scalability by allowing administrators to simply add servers/devices to the Central Storage Pool as storage requirements increase. Servers running Managed Server HSM gain access to the additional storage without the need for costly downtime</li> <li>Enables policies to be adjusted to further extend the life of existing storage resources by migrating additional files to the Central Storage Pool when true production file usage approaches current capacity</li> </ul>
<ul style="list-style-type: none"> <li>End users demand timely access to stored data without having to search or burden IT resources to find their files</li> </ul>	<ul style="list-style-type: none"> <li>Provides end users immediate and transparent access to all their stored files in their existing directory structures; without administrator intervention</li> </ul>
<ul style="list-style-type: none"> <li>SANs provide centralized administration and storage pooling, but at a significant cost</li> <li>SANs are subject to the same out-of-control growth that plagues conventional, direct-attached storage environments and must accommodate infrequently accessed files along with active production files</li> </ul>	<ul style="list-style-type: none"> <li>Enables IT to purchase a smaller amount of expensive, SAN disk storage by pooling and utilizing inexpensive disk resources (e.g. IDE RAID, NAS, etc.) to store infrequently accessed files</li> <li>Minimizes SAN storage growth by constantly differentiating infrequently accessed files from active production files, and migrating them to less expensive storage</li> </ul>

## Benefits With CaminoSoft Managed Server HSM™

- Extends the life of existing IT storage investment by postponing the necessity for expensive server/storage upgrade decisions
- Prevents costly downtime related to "out of disk space" conditions
- Increases data availability by migrating infrequently accessed files where they remain available; instead of users or administrators deleting or archiving them
- Reduces the time to backup production files and, more importantly, reduces the time needed to recover a failed server; once again preventing costly downtime
- Installs and configures quickly and easily without overloading IT resources

### System Requirements

- Server running Windows 2000/2003 Server
- Pentium Processor or higher
- 512 MB RAM or greater
- NTFS volumes
- CaminoSoft Managed Server HSM software
- Central Storage Pool comprised of one or more off-the-shelf hardware configurations of network attached storage (NAS) devices, general purpose file servers, or combinations of the above (see our website for a list of approved, compatible Central Storage Pool devices)

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