

IBM Tivoli Storage Manager for Space Management

Highlights

- ***Enable virtually unlimited online data storage***
- ***Coordinate with IBM Tivoli Storage Manager for data backups***
- ***Trigger on maximum and minimum total file system sizes***
- ***Provide for adjustable stub file sizes***
- ***Improved scalability for large HSM implementations***
- ***Pre-migrate data files for faster data transfers***

IBM® Tivoli® Storage Manager for Space Management uses hierarchical storage management (HSM) techniques to automatically and transparently migrate infrequently accessed or unused data files off a computer's local online storage to the offline storage managed by a Tivoli Storage Manager server. By automatically migrating rarely accessed files to offline storage, Tivoli Storage Manager for Space Management can help free administrators and users from time-consuming manual file-pruning tasks, stretch the usability of a given amount of online storage space for a longer time and reduce the overall cost of retaining large numbers of easily retrievable data files for long periods.

Enable virtually unlimited online data storage

Receiving an out-of-space error means old or large files must be deleted or moved to other storage media. Tivoli Storage Manager for Space Management can automatically send the data files that meet user-definable, policy-based migration criteria to the Tivoli Storage Manager

server for offline storage. After the file is migrated, a stub file replaces the original file on the client computer's online storage. The stub file retains the original file attribute information, making it appear that the original file still resides on that online storage; this facilitates the automatic recall of the file from offline storage when a user or application tries to read or write the file.

These space-managed files held on offline storage are an integral part of the Tivoli Storage Manager server's functionality. Centralized lifetime management of the data files held on offline storage is a primary task of Tivoli Storage Manager. The files from Tivoli Storage Manager for Space Management clients are retained and managed along with files that have been backed up or archived from other client computers. Just as with other backup client computers, if a Space Management client computer suffers a disk crash or accidental file deletion, Tivoli Storage Manager can restore just the stub files or the entire files to the client computer.

Coordinate with Tivoli Storage Manager for data backups

Through Tivoli Storage Manager, data backups and file migrations coordinate in two ways. First, an option setting allows a migration to occur only if a data backup of that file has already been performed. Second, if a file was previously migrated, the Tivoli Storage Manager server can clone the migrated file and move it to the data backup storage pool as a backup copy. This technique avoids the need to first recall and then re-send files from the client to the server.

Trigger on maximum and minimum total file system sizes

Tivoli Storage Manager for Space Management works only with administrator-specified file systems. The administrator specifies what amount of local online storage must be filled with data before migrations occur and what amount should remain before they stop. When a file system crosses this maximum space-utilization threshold, the Tivoli Storage Manager for Space Management client selects

the files to migrate to the server based on the include/exclude list and the priorities assigned to file size and age.

Provide for adjustable stub file sizes

The administrator also can specify various stub file sizes. A larger stub file size means more data is kept locally on the client's storage. Because a portion of the complete data file remains in the stub file, when some applications read the stub file, there may be no need to recall the entire file from offline storage.

Improved scalability for large HSM implementations

Tivoli Storage Manager for Space Management 4.2 increases the scalability and processing performance over the previous version. These enhancements allow the system to handle large numbers of files being HSM-managed. These enhancements separate the candidate search from the optimized reconciliation process that keeps the HSM client and the Tivoli Storage Manager server synchronized. This can provide better scalability for

large numbers of files in an HSM-managed file system, because the candidate search can be performed continuously in the background while the synchronization process can be independently run or scheduled.

Pre-migrate data files for faster data transfers

Pre-migration moves a copy of the selected file to the Tivoli Storage Manager server's offline storage, leaving the entire original file on the client's online storage. The space manager client software can then quickly and easily convert the original client copy of the file into just a stub file, freeing its space when needed—with no further data transfers required. Pre-migration helps increase network efficiency by allowing the administrator to schedule pre-migration for times when either the network or the client is less active.

Tivoli Storage Manager for Space Management requires that the client software for Tivoli Storage Manager or Tivoli Storage Manager Extended

Edition also run on the same computer and that a Tivoli Storage Manager server be connected to the same network for storing the migrated data files. Tivoli Storage Manager for Space Management supports the client/server data backups of Tivoli Storage Manager and is managed by the same server policies and storage classes.

Benefits

Tivoli Storage Manager for Space Management can help provide the following benefits:

- *Frees administrators and users from time-consuming manual file-pruning tasks*
- *Stretches the usability of a given amount of online storage space for longer periods*
- *Helps reduce the need to purchase increasing amounts of online storage as online data grows*
- *Automatically integrates and coordinates with Tivoli Storage Manager for comprehensive data protection*
- *Helps reduce the overall cost of retaining large numbers of easily retrievable data files for long periods*

Tivoli software from IBM

An integral part of the comprehensive IBM e-business infrastructure solution, Tivoli technology management software helps traditional enterprises, emerging e-businesses and Internet businesses worldwide maximize their existing and future technology investments. Backed by world-class IBM services, support and research, Tivoli software provides a seamlessly integrated and flexible e-business infrastructure management solution that uses robust security to connect employees, business partners and customers.

To learn more

For information on IBM Tivoli Storage Manager for Space Management and integrated solutions from IBM, contact your IBM sales representative or visit **info.tivoli.com/storageforsuccess**



IBM Tivoli Storage Manager for Space Management technical requirements

Supported server platforms

- IBM® AIX®
- Sun™ Solaris™ operating system

IBM AIX client

- 256MB of RAM minimum
- IBM AIX, version 4.3.2 or 4.3.3, and 5.1 in 32-bit mode operating system
- X Windows® system, X11R6
- Motif 1.2 or Motif 2.0
- Common desktop environment (CDE)
- JFS or GPFS v 1.3, v1.4
- HACMP for AIX supported

Communication protocol (one of the following)

- TCP/IP, which comes standard with IBM AIX and IBM RS/6000®
- Shared memory (Tivoli Storage Manager for AIX server only)

Sun Solaris client

- A SPARCstation or compatible workstation
- 256MB of RAM minimum
- Sun Solaris 2.6, and 7 in 32-bit mode operating system
- Sun Solaris 8 in 64-bit mode operating system
- Veritas File System (VxFS) 3.4
- X Windows System, X11R6
- Motif 2.0
- Common desktop environment (CDE)
- Communication protocol
- TCP/IP, which comes standard with Sun Solaris
- Shared memory (Tivoli Storage Manager for Sun Solaris server only)

Interfaces

- IBM AIX client and Sun Solaris client
- Graphical user interface or client command-line interface

Supported languages

English, German, Spanish, French, Italian, Japanese, Korean, Simplified Chinese, Traditional Chinese

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