



Tivoli® Storage Manager

Highlights

Tivoli Storage Manager is a full-function storage software product that addresses the challenges of complex storage management across distributed environments. It protects and manages a broad range of data, from the workstation to the corporate server environment. Over 35 different operating platforms are supported—many include a consistent graphical user interface (GUI). Tivoli Storage Manager provides:

- *Centralized administration for data and storage management*
- *Efficient management of information growth*
- *High-speed automated data recovery*
- *Compatibility with hundreds of storage devices, as well as local area network (LAN), wide area network (WAN), and emerging storage area network (SAN) infrastructures*
- *Customized backup solutions for major groupware, enterprise resource planning (ERP) applications, and database products*

Protecting Stored Information and e-business Strategies Globally

Tivoli Storage Manager is a premier choice for complete storage management in mixed platform environments. It is used by more than 80 of the Fortune 100 companies, and it protects more than one million systems around the world. Today, Tivoli Storage Manager features are more powerful, modular, flexible, and easier to use than ever before.

Features of Tivoli Storage Manager

- **Progressive backup methodology.**
Saves time and disk space by backing up only new files and modified files. The progressive backup feature uses its own relational database to track data wherever it's stored, delivering direct one-step file restore. The database eliminates the need for base-plus-incremental file restores, commonly used for restore procedures in other storage management

products. This reduces the amount of data sent across the network.

- **Tape resource sharing.**
Allows multiple Tivoli Storage Manager servers to use the same tape library and drives. This improves backup, recovery performance, and tape library and drive asset utilization.
- **Network-free rapid recovery.**
Supports high-speed client data recovery directly from a tape or CD-ROM. This minimizes recovery time by eliminating the use of network and central server resources. This also improves availability in case the Tivoli Storage Manager Server is unavailable.
- **LAN-free data transfer.**
Effectively exploits SAN environments by moving back-end office and IT data transfers from the communication network to a dedicated data network or SAN. Internet Protocol (IP) communication

bandwidth can then be used to improve service levels for end users and customers.

- **Dynamic multi-threaded transfer.**

Permits a client to simultaneously transfer data using multiple sessions to and from the same Tivoli Storage Manager server. This new feature boosts performance of backups to more than three times faster than the rate of a single-threaded session. This speed is achieved because the number of Tivoli Storage Manager data transfer sessions is transparently optimized based on available system resources.

- **Adaptive differencing technology.**

Changes the way data is backed up. These changes accommodate mobile computer users and other users with a need to minimize backup data transmitted over the network and the need to minimize the time it takes to complete a backup. Adaptive subfile differencing backs up only the changed piece of the file after an initial full-base

back up is done, instead of having to backup the entire file each time the file changes.

- **Enterprise administration.** Simplifies centralized control across multiple Tivoli Storage Manager implementations, without sacrificing network performance.

Optional Complementary Products that Enhance Your Storage Management Solution

Tivoli Storage Manager can be integrated with several optional applications that together form a powerful integrated storage management solution. These include: Tivoli Disaster Recovery Manager, Tivoli Space Manager, and Tivoli Data Protection for databases, applications, and groupware.

Tivoli Disaster Recovery Manager

Tivoli Disaster Recovery Manager protects against hardware failure, user error, and natural disasters that can result in data being lost forever. Integration with Tivoli Storage Manager automates much of the business continuity planning needed to ensure recovery in the event of disaster.

Tivoli Space Manager

Tivoli Space Manager provides hierarchical storage management to automatically migrate rarely accessed files to alternate storage, without disrupting the most frequently used files in local storage. Migrated files are automatically and transparently recalled to primary storage when needed by applications or users, freeing administrators and users from manual filing tasks.

Tivoli Data Protection Product Family

Using Tivoli Data Protection products, Tivoli Storage Manager provides data protection for a wide variety of applications, databases, and groupware, ensuring that data is safe and secure no matter where it is located or how it is stored. These products interface directly with the applications using their backup APIs, simplifying online backup and restore procedures.

- Tivoli Data Protection for Lotus Notes®
- Tivoli Data Protection for Lotus® Domino™
- Tivoli Data Protection for SAP R/3
- Tivoli Data Protection for Microsoft® SQL server
- Tivoli Data Protection for Microsoft Exchange

- Tivoli Data Protection for Informix
- Tivoli Data Protection for Oracle
- Tivoli Data Protection for EMC Symmetrix for Oracle DB

Integration with Complementary Tivoli Offerings

Tivoli Storage Manager integrates with several Tivoli offerings to provide scalable, customizable solutions that grow with your organizational needs.

These include:

- Tivoli SANergy™ File Sharing
- Tivoli Removable Media Manager
- Tivoli Enterprise Console®
- Tivoli Service Desk
- Tivoli Workload Scheduler
- Tivoli Decision Support

Tivoli Decision Support for Storage Management Analysis

Tivoli Decision Support for Storage Management Analysis provides reporting and analysis on events (health of and summary of operations), performance (client and

server operations), and capacity (storage pools). The Tivoli Decision Support for Storage Management Analysis guide is now bundled with Tivoli Storage Manager, Version 4.1. A prerequisite is the purchase of the Tivoli Decision Support product.

Supported Platforms

Tivoli Storage Manager supports multiple platforms.

Supported Server Platforms for Desktop and Server Class

IBM® OS/2®, Version 2.1; Microsoft Windows NT®, Version 4.1; Windows® 2000, Version 4.1

Midrange

IBM AS/400®, Version 3.1.2

UNIX®

HP-UX, Version 4.1; IBM AIX®, Version 4.1, Sun Solaris™, Version 4.1

Mainframes

IBM OS/390®, Version 4.1; IBM VM/ESA®, Version 3.1.2

Supported Applications and Databases

IBM DB2®, Informix, Lotus Notes, Lotus Domino, Microsoft Exchange Server, SQL Server, Oracle, R/3, Sybase (requires BMC SQL Backtrack)

Supported Client Environments

IBM AIX, OS/390, AS/400, OS/2; Apple Macintosh; Digital Open VMS; UNIX®Tru64; HP; Linux®; Microsoft Windows NT 4.0 on DEC Alpha, Windows 32-bit Intel Pentium, Windows 95, Windows 98, Windows 2000, Windows NT 4.0; Novell NetWare; SCO UnixWare; Sun Solaris; NUMA-Q; SGI 6.5; Cray UNICOS; Fujitsu UXP/V and UXP/M

For more information and currently supported platforms and operating systems, visit www.tivoli.com/storage.

Management Service	What It Does	What It Means To You
Adaptive Differencing	Backs up just the delta of a file after the initial base file backup.	Reduces the amount of data sent over the network and the amount of time needed to do a remote backup. Ideal for mobile clients backing up over a WAN.
Progressive backup methodology	Backs up only new and changed files after the initial full backup. Enables the one-step recovery of files. Note support for IBM DB2 is included with Tivoli Storage Manager.	Shortens backup and recovery windows and minimizes the amount of data that must be backed up. Reduces network traffic and enables fast recovery of files.
Point-in-time restore	Restores a file system to a previous point in time.	Quickly and easily restores a system to a point in time prior to data corruption.
Rapid recovery	Creates copies of backed up data and enables high-speed LAN-free/Server-free restores.	Allows for the recovery of a client's files even if the network or Tivoli Storage Manager Server is down.
LAN-free backup	Enables movement of data across SAN (backup/restore, archive/retrieve, and migrate/recall).	Provides high-performance backup/restore. Minimizes network traffic, improving application and transaction response times.
Tape pooling	Allows for library and dynamic drive sharing among Tivoli Storage Manager Servers	Improves usage of existing storage peripherals by pooling and sharing library and drives among multiple servers over fibre channel networks.
Instant archive	Creates archival data image based on file backups already stored on the storage management server.	Offers high-performance methodology for creating archives. Minimizes network traffic. Improves application and transaction response time.
Policy management	Ensure storage policies are aligned with business policies.	Reduces overall storage costs and coordinates data types with different backup requirements. Ensures business policies are aligned with storage policies.
Point-in-time backup	Automatically restarts backup process from the point of failure.	Improves system performance and eliminates the need to redo backup or restore operations that have already been completed.
Fault tolerance	Provides mirrored relational database with roll-back capabilities	Ensures 100% data integrity and availability of critical-business application data.

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