

IBM Tivoli Storage Manager Suite for Unified Recovery



A bundled offering delivering comprehensive data protection with simplified licensing and management

Highlights

- Simplify procurement and deployment with per-terabyte capacity licensing
 - Use the right data protection and recovery tool for each requirement
 - Scale to meet the recovery needs of any size organization
 - Manage it all from a single user console
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Protecting and ensuring the recoverability of data across today's diverse and distributed enterprises can be complex and costly, and often involves deploying numerous unintegrated point solutions from several vendors to meet the wide range of application service levels. Examples of these point solutions include different backup products for different operating systems and virtual machines, snapshots, continuous data protection, replication and archiving.

However, this proliferation of data protection and recovery solutions can introduce its own risks to the organization, as the procurement, licensing and ongoing management of all these different systems becomes increasingly complex and disjointed. Taking a more comprehensive, unified approach to managing data—recovering any data, anywhere in the organization, from laptop to mainframe, from a single console—can not only reduce your capital and operating costs, but also provide enhanced application availability, leading to improved IT service levels.

The IBM Tivoli® Storage Manager family of products has long been recognized as a leader in unified recovery management, providing the ability to protect a wide range of systems including virtual machines, file servers, email, databases, mainframes and even desktops from a single administration interface.

The IBM Tivoli Storage Manager Suite for Unified Recovery provides storage and backup administrators with a simplified, alternative method for procuring and deploying the data protection and recovery solutions, throughout the infrastructure, that meet the needs for their particular



environment. With this bundled offering, you can deploy any of ten different solution components, in any location and quantity, with a simplified license that measures only the amount of data being managed. License costs can be reduced through the use of built-in source and target data deduplication, and there is no charge for duplicate copies of the data.

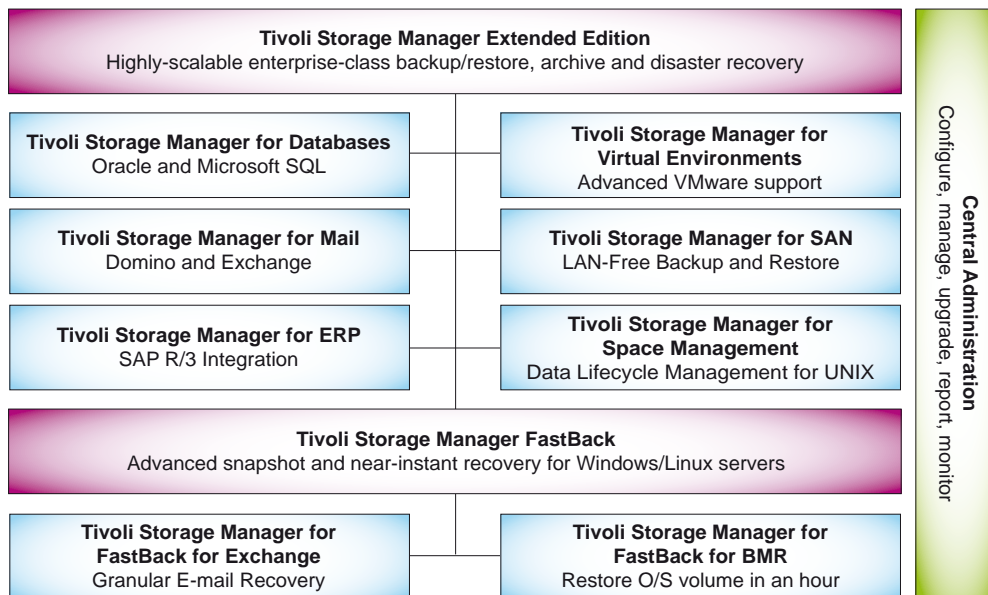
IBM Tivoli Storage Manager Suite for Unified Recovery helps you to answer, in the affirmative, this important question: “In a data disaster emergency, where downtime may be costing you tens of thousands of dollars per minute, are you confident that the right person, with the right training and password, will access the right system to restore the right data, to the right place, without breaking anything else, in a timely manner?”

IBM Tivoli Storage Manager Suite for Unified Recovery is a bundle of 10 proven data protection and recovery software products. Each component can be deployed as needed, in any quantity, to meet specific service level requirements with no per-product licensing charges.

This advanced, highly scalable suite helps increase the efficiency of your IT operations and helps cut costs related to storage management by providing a wide range of data protection, recovery management, and monitoring capabilities using policy-based automation, including:

- Backup and recovery; archive and retrieval.
- Snapshots for online database and application protection.
- Disaster recovery and bare machine recovery.
- Data deduplication and space management.

Tivoli Storage Manager Suite for Unified Recovery



The IBM Tivoli Storage Manager family of products provides the ability to protect a wide range of systems including virtual machines, file servers, email, databases, mainframes and even desktops from a single administration interface.

The individual products included in this comprehensive package are:

Tivoli Storage Manager Extended Edition: Provides core backup/restore for a wide range of operating systems; broad support for tiers of storage; NDMP, IBM DB2® and Informix® support; source and target deduplication; advanced disaster recovery planning; and much more.

Tivoli Storage Manager for Databases: Performs online, consistent and centralized backups for Oracle and SQL to avoid downtime; protect vital enterprise data infrastructure and minimize operation costs.

Tivoli Storage Manager for Enterprise Resource Planning: Performs online, consistent and centralized backups for SAP environments.

Tivoli Storage Manager for Mail: Protects data on email servers running Lotus® Domino® or Microsoft® Exchange, with granular restore of Exchange email objects.

Tivoli Storage Manager for Virtual Environments: Automatically discovers and protects VMware virtual machines; offloads backup workloads to a centralized server and enables flexible, near-instant recovery.

Tivoli Storage Manager for Space Management: Moves inactive data to reclaim online disk space for important active data; frees administrators from manual file system pruning tasks; and defers the need to purchase additional disk storage.

Tivoli Storage Manager for Storage Area Networks: Provides high-performance backup/restore by removing data transfer from the LAN

Tivoli Storage Manager FastBack: Provides efficient block-level incremental backup and near-instant restore for critical Microsoft Windows® and Linux® servers and applications, in the data center and in remote offices.

Tivoli Storage Manager FastBack for Microsoft Exchange: Provides the ability to recover individual Microsoft Exchange objects such as email, attachments, calendar entries, contacts and tasks.

Tivoli Storage Manager FastBack for Bare Machine Recovery: Provides operating system volume recovery following a disaster or catastrophic server failure, fully restoring Windows and Linux systems within an hour.

Tivoli Storage Manager Suite for Unified Recovery delivers centralized administration and intelligent data move-and-store techniques to help ease storage management. The product scales from small to very large installations—managing up to 2 billion data objects in a single server—and supports more than 50 operating system versions and hundreds of server and storage devices. It also facilitates a multitude of connections, including Internet, wide area networks (WAN), local area networks (LAN) and storage area networks (SAN).

Tivoli Storage Manager Suite for Unified Recovery helps organizations improve business continuity, and reduce the risks of data loss, minimize complexity, better manage costs and address strict compliance requirements. Through progressive incremental backups, data compression and built-in data deduplication, the amount of backup data being stored is significantly reduced, thereby reducing the cost of the per terabyte license. With this comprehensive solution set, you can also:

- Efficiently manage multilocation backups.
- Automate data migration between storage tiers and the retention of archives.
- Generate daily-updated disaster recovery plans and replicate the Tivoli Storage Manager database off-site.
- Implement retroactive policy changes.
- Automatically distribute upgrades to Microsoft Windows client agents.

Leverage an advanced architecture for robust functionality

Tivoli Storage Manager Suite for Unified Recovery provides superior functionality, performance and reliability because it utilizes a fully integrated enterprise-class IBM DB2 relational database and transaction log to track the managed data's metadata. No DB2 database administration skills are required.

Other storage optimization features help reduce capacity requirements, speed installations, and automate backup and recovery processes.

Unified Recovery Management

One of the major costs of storage management is the administration of many different data protection solutions, and especially reacting to restore requests involving multiple tools. Tivoli Storage Manager Suite for Unified Recovery brings together into a single user interface the management of backup and restore from across:

- System and application types—virtual servers, file servers, databases, email
- Locations—data centers, headquarters and remote/branch offices, disaster recovery sites
- Service level requirements (recovery point and recovery time objectives)
- Types of failures—lost files/messages, data corruption, hardware failures, natural disasters

From the Tivoli Storage Manager Administration Center, you can configure and set policies for each protected system, monitor and report on both client and server operations, schedule and push upgrades for Microsoft Windows client agents, and execute backup and restore operations.

Reduce your data storage footprint

Tivoli Storage Manager Suite for Unified Recovery helps you address the relentless growth of data being created and retained through a number of leading-edge data reduction capabilities, including:

- Progressive incremental backups that eliminate the need for redundant periodic full backups—the biggest source of data duplication in the backup environment.
- Built-in data deduplication can eliminate redundant files and subfiles. Source-side data deduplication reduces the amount of data sent from client systems to the Tivoli Storage Manager Server. Target-side data deduplication eliminates redundant data stored by the Tivoli Storage Manager Server. Combined, these advanced features reduce bandwidth and storage requirements.
- Seamless integration with popular Virtual Tape Library systems, such as the IBM ProtecTIER® Deduplication Solutions, that employ in-line data deduplication for long-term retention of large data sets.
- Policy based migration of data to less expensive tiers of storage, and automated expiration at the end of the data lifecycle help to reduce overall storage costs.

Advanced support for virtual server environments

IBM Tivoli Storage Manager Suite for Unified Recovery can eliminate the burden of running backups on a virtual machine by leveraging VMware's vStorage APIs for Data Protection. This software solution takes full and incremental snapshots of virtual machines at a block level, processes the backups and sends the results to an IBM Tivoli Storage Manager server.

The Tivoli Storage Manager for Virtual Environments software provides customers with flexible recovery options: restore individual files, disk volumes or entire virtual machine images from a single-pass backup. Access to full Microsoft Windows and Linux disk volumes can be restored in just a few minutes while the data is copied in the background, reducing downtime by hours or days. New virtual machines are automatically discovered and protected, solving a major headache for storage and backup administrators.

Additionally, Tivoli Storage Manager supports the Microsoft Volume Shadow Copy Service to perform full-image snapshots of virtual machines in Microsoft Hyper-V environments. Tivoli Storage Manager FastBack® is an excellent solution for in-guest backup of Windows and Linux virtual machines, given its low processor overhead and block-level incremental snapshot and near-instant restore capabilities.

Enterprise-class backup and recovery features

- Built-in and automated disaster recovery planning tools.
- Offsite copying of data and replication of the internal database for disaster recovery purposes.
- Advanced integration with VMware vStorage APIs for Data Protection and Changed Block Tracking.
- Nondisruptive online image backup and restore for most virtual server systems.
- Automated backup schedules.
- Intelligent, high-speed data protection features for popular email, database and enterprise resource planning applications, including DB2, Oracle, SAP, Microsoft Exchange, SQL, Lotus Domino, etc.
- Progressive-incremental backup of Microsoft Windows System Writer.
- Efficient backup of very large SAP databases.
- Individual item-level recovery for Microsoft Exchange databases.
- Individual object recovery for Microsoft Active Directory environments.
- File-level recovery for IBM System Storage® N series and NetApp NAS environments.
- Restartable backup and restore for interrupted operations.
- Better tape utilization through automated reclamation and migration.
- Journal-based backups to expedite the process and minimize processing overhead.
- Tape collocation to dedicate a set of tapes to a single client or group of clients for faster recovery.
- Rapid recovery by creating backup sets that consolidate files onto portable media.

Increase efficiency with a hierarchy of storage

In most storage management environments, managed data is trapped on the media to which it was originally backed up. Tivoli Storage Manager Suite for Unified Recovery manages data stored in a hierarchy of lower-cost storage, which helps conserve resources as automated policies migrate data to the appropriate media type, based on data value, access and retention requirements.

Tivoli Storage Manager automatically manages the movement of the data onto new storage technology when introduced into the hierarchy, allowing you to remove old technology from the IT center. In addition to this storage hierarchy, the open application programming interface (API) of Tivoli Storage Manager provides the ability to seamlessly manage many types of data. As soon as data is in the hierarchy, it can easily be moved from one storage device to another. Use Tivoli Storage Manager for:

- Backup—Backup and maintain numerous file versions to enable point-in-time recovery in the event of production storage device failure, data errors or accidental file deletions.
- Archive—Archive files to the hierarchy of storage for a specified amount of time, after which they automatically expire, based on policies set for each data type.

- Space management—For UNIX® and Linux systems, Tivoli Storage Manager for Space Management identifies and moves less-frequently accessed and inactive files to the hierarchy of storage. IBM Tivoli Storage Manager HSM for Windows is an optional add-on product that enables you to migrate lesser-used Windows files without disrupting your end users.

Storage management features

- Intelligent data movement to save tapes, processing cycles and network bandwidth.
- Flexible storage pools to migrate data from one storage pool to another based on policies set up to reflect business needs.
- Synchronous and asynchronous duplication of backup data via copy pools.
- SAN exploitation for sharing of storage resources.
- Direct-to-disk storage so the number of client machines moving data is not controlled by how many tape drives are available, nor is the data fragmented by cumbersome multiplexing techniques.
- Reclamation of space to free up partially used tapes by moving active files to other tape volumes.
- Seamless scalability—up to 2 billion data objects—to support the growing data protection and recovery management needs of almost any organization.

Helps enhance data security

Storage administrators must ensure that data is backed up and secure, regardless of location, and that purposely erased data is irrecoverable. To help meet compliance requirements while

maintaining productivity of personnel, Tivoli Storage Manager Suite for Unified Recovery compresses and encrypts data that is being moved into the hierarchy of storage, and stores and manages encryption keys for Tivoli Storage Manager clients and application protection modules. Enhanced security features include:

- Automated data security encryption key management to help relieve the burden of manually tracking encryption keys and passwords.
- In-flight 256-bit AES data encryption between client and server using Secure Socket Layer (SSL).
- Leverage tape-drive encryption to offload encryption from the system to the tape drive for faster backups and restores.
- Shredding of data on disk, or the overwriting of deleted data, helps to prevent future discovery.

Increase visibility into the data protection environment

Tivoli Storage Manager Suite for Unified Recovery provides advanced features for operational monitoring and historical trends reporting. A customizable dashboard provides graphical views, while reports can be created in multiple formats such as HTML, Adobe® Portable Document Formatting (PDF) and comma-separated values (CSV). Based on open source Eclipse Business Intelligence Reporting Tools (BIRT), this feature allows administrators to define their own customized reports.

For more information

To learn more about IBM Tivoli Storage Manager Suite for Unified Recovery, please contact your IBM sales representative or IBM Business Partner, or visit the following website:

ibm.com/software/tivoli/products/storage-mgr-unified/

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage IT resources, tasks and processes to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while helping to reduce costs. The Tivoli portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT lifecycle management, and is backed by world-class IBM services, support and research.

Additionally, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Also, our Global Asset Recovery Services help address environmental concerns with new, more energy-efficient solutions. For more information on IBM Global Financing, visit: ibm.com/financing



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