

Leverage the IBM Tivoli advantages in storage management

IBM Tivoli storage management solutions outperform the competition



Contents

- 2 Understand the current storage management landscape
- 3 Legacy solutions do not address many storage management challenges
- 3 Proliferation of duplicate data and increased costs
- 5 Lengthy restore times and unmet service goals
- 5 Unreliable backup and increased risk
- 6 Address additional storage management challenges
- 7 For more information
- 7 About Tivoli software from IBM

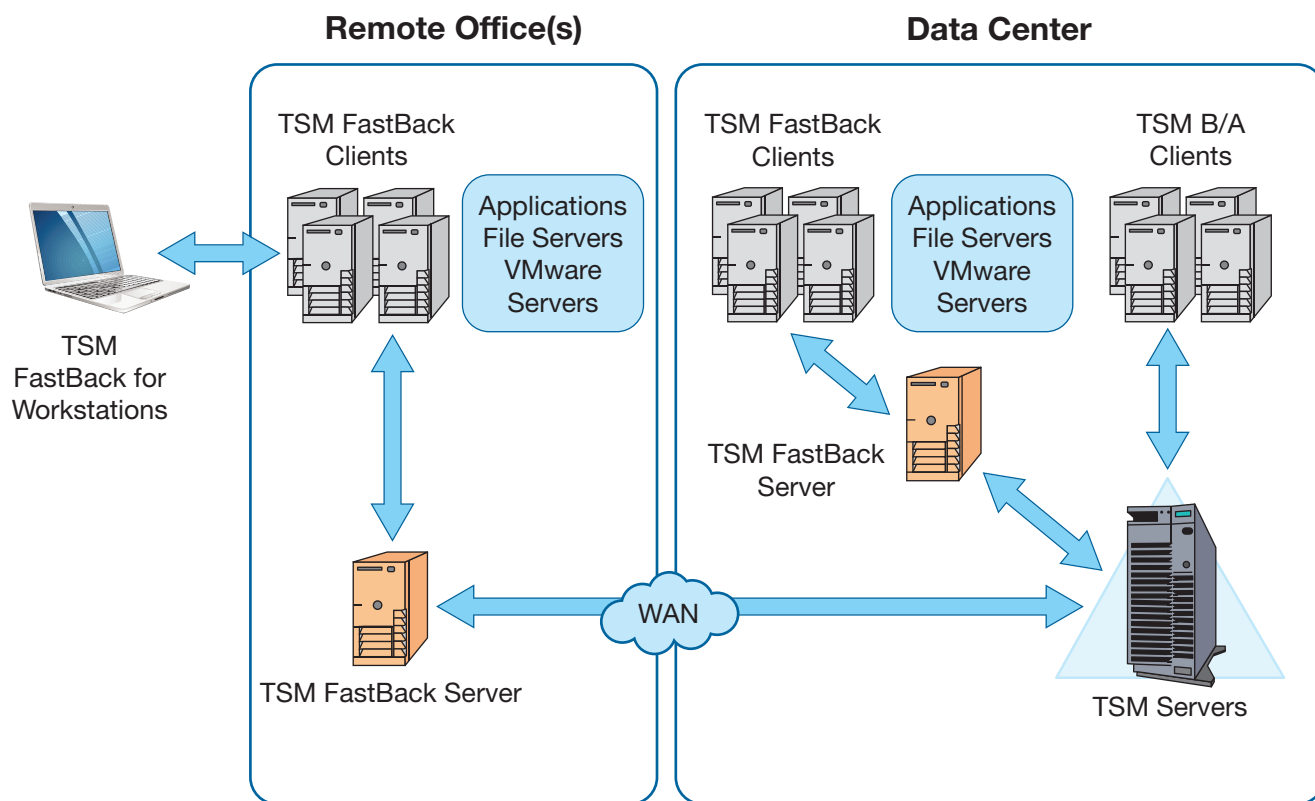
Understand the current storage management landscape

Despite economic uncertainty, unabated data growth continues, which translates into a wide range of increasing management challenges. At the same time, organizations are struggling to reduce costs and adhere to higher service level agreements, including higher availability and zero data loss requirements. Many also face the challenges of integrating disparate systems and processes due to ongoing mergers and acquisitions.

When it comes to managing this tidal wave of data and its associated challenges, there exist many products and approaches from which to choose. But most of these offerings have not kept pace with the many new and highly complex requirements of storage. The failure to address these requirements can result in a number of significant challenges for businesses.

But while traditional storage management solutions lag behind the requirements being placed on the storage environment, IBM Tivoli® storage management solutions have evolved to meet these needs. IBM solutions help organizations not only manage the enormous volume of data, but also optimize performance and reduce expenditures. Four key, integrated solutions can help you accomplish these goals:

- IBM Tivoli Storage Manager, which enables the fast backup and recovery of a broad range of systems through comprehensive, unified data management and advanced data reduction capabilities.
- IBM Tivoli Storage Manager FastBack®, a near-instant recovery solution, which helps mid- and large-sized organizations establish continuous data protection of business-critical applications in data centers and remote offices.
- IBM Tivoli Storage FlashCopy® Manager, which enables organizations to perform and manage frequent, near-instant, non-disruptive, application-aware backups and restores, leveraging advanced FlashCopy snapshot technologies in IBM storage systems.
- IBM Tivoli Storage Productivity Center, a storage resource management solution that provides superior control through a single interface to manage your entire storage infrastructure, including mixed-vendor storage systems. Advanced modules such as IBM Tivoli Storage Productivity Center for Disk helps optimize capacity utilization with over 400 reports, monitoring and alerts, policy-based action and file-system capacity automation.



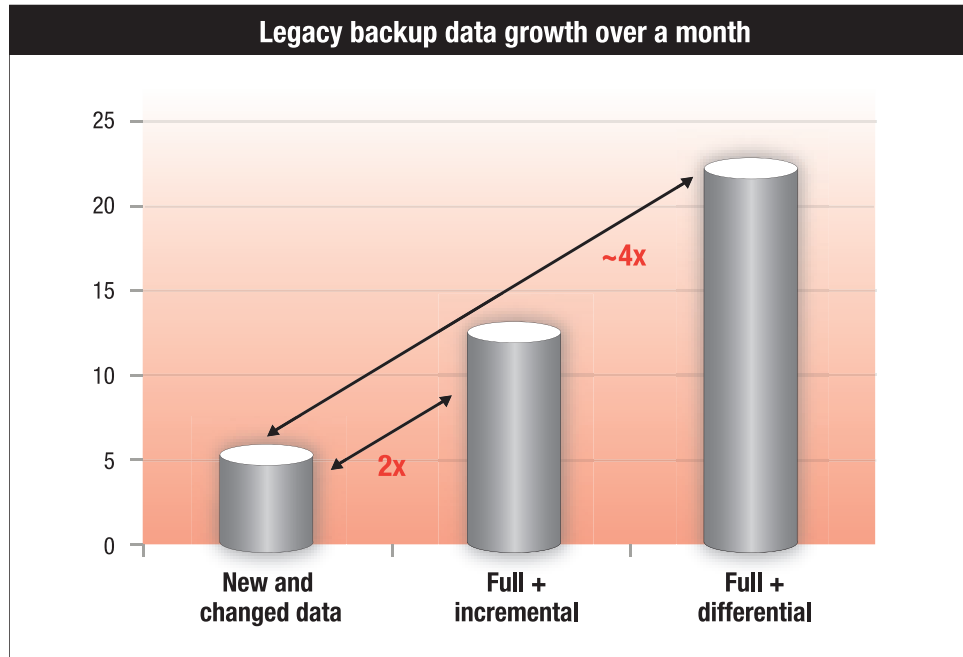
IBM provides a unified recovery management solution set for the entire distributed enterprise.

Legacy solutions do not address many storage management challenges

Though there are numerous traditional storage management solutions, a gap exists between the increasing demand for data availability and the ability of these traditional methods to efficiently manage and recover data. This gap translates into a great many potential problems for businesses, including increased costs, unmet service levels and increased risk. But Tivoli storage management solutions are optimized to close this gap. They help provide greater efficiency that reduces costs, improves performance, delivers unmatched scalability and offers a higher level of reliability to mitigate risk.

Proliferation of duplicate data and increased costs

With ever more data to back up, data duplication becomes increasingly difficult to combat. But many traditional storage management solutions do not address this problem; instead, their requirements to perform periodic full backups create a proliferation of duplicate data, which in turn increases both operational and capital costs, makes recovery more difficult and increases risk.



Legacy backup data growth over a month

In contrast, you can keep your data footprint to a minimum—and reduce expenditures—with Tivoli storage management solutions. The Tivoli Storage Manager family features a data management lifecycle model that can enable you to identify, protect, securely move, archive and delete data as appropriate. The progressive incremental methodology used by Tivoli Storage Manager only backs up new or changed versions of files. This greatly reduces data redundancy, network bandwidth requirements and storage pool consumption as compared to traditional methodologies that are based on periodic full backups.

Data deduplication is also built-in across the family to further reduce capacity requirements. Tivoli Storage Manager also provides other data reduction techniques such as subfile backup, tape reclamation and data compression.

Tivoli Storage Manager FastBack also works to conserve resources. Its block-level incremental backup capabilities send only changed data to help save CPU, disk and network resources while eliminating the need for traditional backup windows. And

it centralizes control of remote and branch office data protection and recovery. By blending continuous, frequent and scheduled protection engines, Tivoli Storage Manager FastBack helps to reduce the amount of data at risk, and built-in data deduplication at the FastBack Server and across locations help to maximize storage resources and reduce impact on the network.

To facilitate additional reduction of data, Tivoli Storage Productivity Center for Data features robust functions that enable you to conserve disk space by identifying duplicate data, orphan data, temporary data, nonbusiness data and infrequently accessed data that can be migrated to less-expensive, secondary storage platforms—or deleted from the environment.

Lengthy restore times and unmet service goals

Businesses can no longer afford to be without access to information and they have a low tolerance for any data loss. Consequently, companies need more reliable backup and faster recovery. The recovery processes of traditional storage management solutions require hours or days, resulting in increased downtime and failure to meet crucial service goals.

You can improve service levels by shortening backup and recovery times and maximizing application availability with advanced data recovery management technologies through Tivoli solutions. Tivoli Storage Manager optimizes the speed of backup and recovery through its disk staging capabilities and allows you to back up more systems concurrently. Tivoli Storage FlashCopy Manager leverages hardware-based snapshot technologies to protect your critical applications more often, and without disruption.

For your most important Microsoft® Windows® and Linux® applications, Tivoli Storage Manager FastBack is key to improving service levels because it provides near-instant recovery from almost any type of data loss, including user error (deleted files or folders), software errors and virus attacks (corrupted databases), hardware failure (disk or system crash) and disasters (lost local or regional facilities). Through the use of patented recovery techniques, complete data and application availability can be restored within a couple of minutes, no matter how much data was affected. When an entire system is lost and an OS-level restore is required, the Tivoli Storage Manager FastBack for Bare Machine Recovery option provides recovery of a system typically within an hour, even onto dissimilar or virtual hardware.

Tivoli Storage Productivity Center also delivers solutions for meeting service goals. Its performance analytics technology and customization features enable IT administrators to manage large-scale, mixed-vendor storage environments with ease while increasing overall system performance and availability. Tivoli Storage Productivity Center is designed to provide the foundation for storage service level management and enables you to identify hot spots for problem determination and quick tuning to improve performance and storage utilization—and thereby help increase service levels and efficiency.

Unreliable backup and increased risk

Traditionally, data loss has been a result of hardware failure and disasters. Today, however, most data loss can be attributed to human error, software corruption and virus attacks. Your data is especially vulnerable when it is only backed up once a day or when data is compromised by low levels of infrastructure integrity, as is the case with traditional storage management products.

You can better manage risk through Tivoli storage management solutions, with features such as continuous capture of data, simplified management and built-in encryption. Tivoli Storage Manager enables you to protect your organization's data from failures and other errors by storing backup, archive, space management and bare-metal restore data—as well as compliance and disaster-recovery data—in a hierarchy of secondary storage.

Because it is highly scalable, managing up to 2 billion data objects in a single Tivoli Storage Manager server, it can help protect computers running a variety of different operating systems, on hardware ranging from notebooks to mainframe computers that connect together through the Internet, wide area networks (WANs), local area networks (LANs) or storage area networks (SANs). Its unified management, intelligent data move-and-store techniques and comprehensive policy-based automation work together to help increase data protection and potentially decrease time and administration costs.

Finally, Tivoli Storage Manager provides transaction logs with roll-forward recovery mode plus automatically generated disaster recovery plans and detailed tracking of offsite volumes for greater infrastructure integrity. Tivoli Storage Manager also includes a comprehensive set of reporting and monitoring capabilities to help you make smarter, faster decisions following events and changes in your IT environment.

Rather than offer the traditional once-a-day backup, Tivoli Storage Manager FastBack features continuous data protection (CDP), which protects data as it is created, without impacting operations. Tivoli Storage Manager FastBack also eliminates the

need to move tapes from a remote office to a central vault by efficiently replicating deduplicated copies of your data over the wire to a central Tivoli Storage Manager server for backup consolidation and disaster recovery capabilities. As a result, you can reduce the risks of data loss from lost or stolen tapes, as well as from errors during manual data protection operations.

The Tivoli Storage Productivity Center suite supports extended heterogeneous platforms with advanced reporting and security features for your storage environments. IBM Tivoli Storage Productivity Center for Data is designed to add intelligence to data protection and retention practices. IBM Tivoli Storage Productivity Center for Replication allows you to control and monitor copy services operations (like IBM FlashCopy, Metro Mirror and Global Mirror) and use data replication for data protection and disaster recovery.

Address additional storage management challenges

Many additional factors provide challenges to the storage management environment:

- A growing number of systems, storage devices and applications from multiple vendors
- Complicated management of virtual servers and point solutions that address specific challenges
- Changing regulatory and corporate governance mandates
- System and process integration driven by reorganizations, mergers and acquisitions

Traditional storage management solutions are not intended for stressful environments that can pose challenges to performance and scalability, such as large databases, virtualized workloads and encrypted data. Also critical is organizational growth and change, which generally create more data. With traditional solutions, more data means longer backups and missed backup windows. As a result, some data may not be protected at all.

The Tivoli Storage Manager family offers dramatically increased scalability and performance over competitive offerings. A single Tivoli Storage Manager server can manage up to two billion data objects, which can be files, databases and images of entire volumes. Additionally, Tivoli Storage Manager can run a larger number of concurrent operations than ever before. And it dramatically simplifies management by eliminating virtually all database administration tasks and unifying the management of Tivoli Storage Manager, Tivoli Storage Manager FastBack and Tivoli Storage Manager FastBack for Workstations under a single admin console. It can also easily transfer work between backup servers to accommodate acquisitions, consolidations, reorganizations and growth.

Tivoli Storage Manager FastBack also contributes to storage management simplification through full automation that features a “set it and forget it” policy engine. Additionally, its self-managing repository always has a set number of data iterations on hand for easy rollback and fast recovery. Tivoli Storage Manager FastBack also features integrated support for all Microsoft Windows and Linux-based applications, including Microsoft Exchange, SQL, Oracle and SAP. An optional IBM Tivoli Storage Manager FastBack for Microsoft Exchange component recovers granular e-mail data objects quickly.

Tivoli Storage Productivity Center can also help reduce storage complexity with storage reporting across host file systems, databases and storage. It provides correlation between host usage and storage assets as well as comprehensive reporting on virtualized environments.

For more information

IBM is uniquely positioned to provide a wide range of storage management solutions, even for mixed-vendor environments. We can help you implement a smarter storage infrastructure that scales to meet your changing business requirements. To learn more about how IBM Tivoli solutions can help you address data and storage management concerns in your environment, contact your IBM sales representative or IBM Business Partner, or visit ibm.com/tivoli/storage

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, IBM Global Financing can tailor financing solutions to your specific IT needs. For more information on great rates, flexible payment plans and loans, and asset buyback and disposal, visit: ibm.com/financing



© Copyright IBM Corporation 2010

IBM Corporation
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States
December 2010
All Rights Reserved

IBM, the IBM logo, ibm.com and Tivoli are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at ibm.com/legal/copytrade.shtml

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks or service marks of others.

References in this publication to IBM products and services do not imply that IBM intends to make them available in all countries in which IBM operates.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. IBM products are warranted according to the terms and conditions of the agreements (e.g. IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided.

The customer is responsible for ensuring compliance with legal requirements. It is the customer's sole responsibility to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the customer may need to take to comply with such laws. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the customer is in compliance with any law or regulation.



Please Recycle