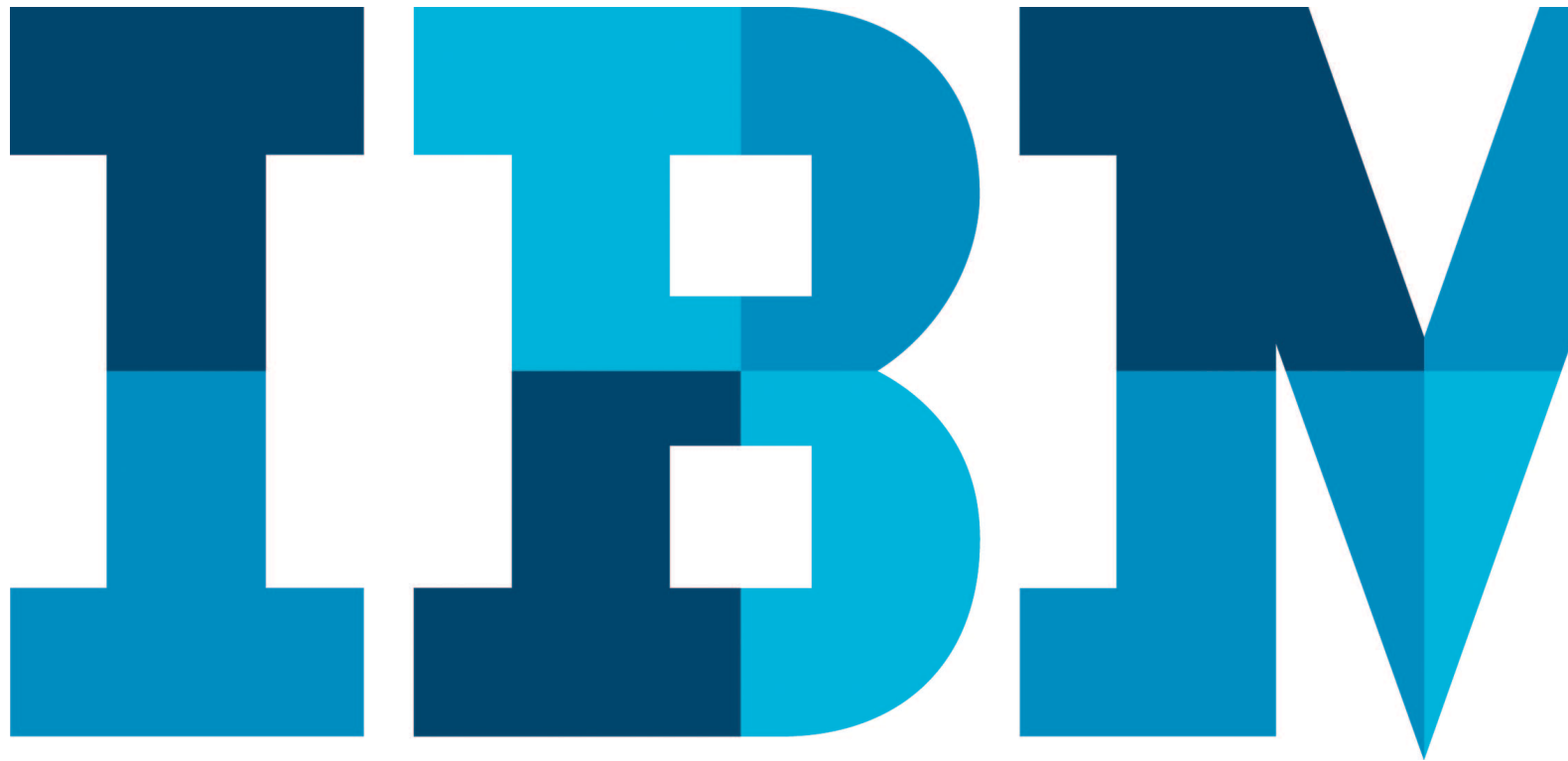


IBM System Storage interactive product guide

Intelligent, efficient and automated storage for your IT infrastructure



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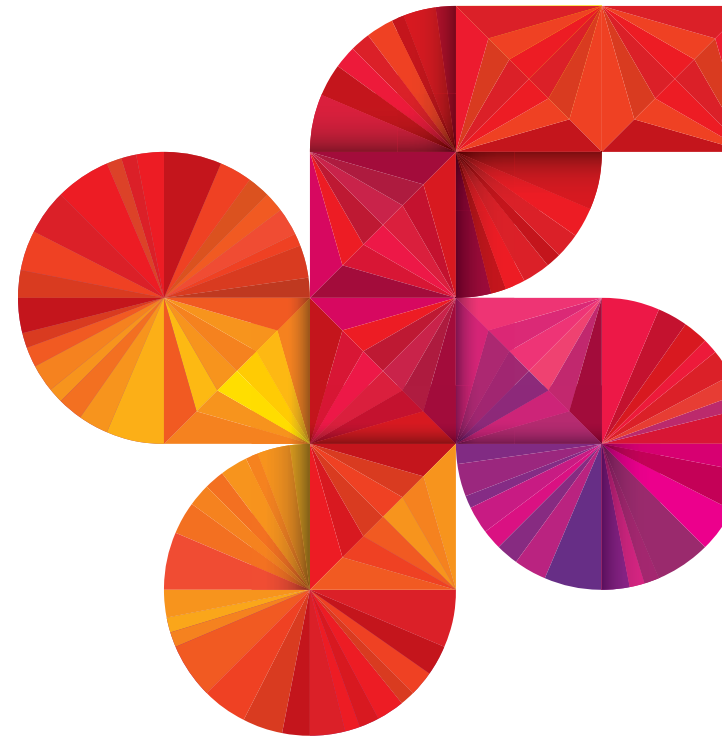
Introduction

The emergence of social, mobile, cloud, big data and analytics is fundamentally changing how we live, work and interact. As a consequence, these trends are also changing what organizations and consumers expect — and demand — from businesses of all sizes. Data is now coming from everywhere, including sensors, social media and the mobile world, as well as from traditional applications. This mountain of data, if properly leveraged, can create tremendous competitive advantage.

Different data has different economic characteristics, depending on the business scenario. For example, in the case of business-critical data, the economic focus is on the business impact if data is not available or adequately protected. For data-intensive business solutions, the economic focus is primarily

on gaining a competitive advantage and increasing revenues and profits. In still other scenarios, the key economic objective is to provide quick access to data, get a new application up and running fast, and to evolve as needed — focusing on speed, agility and labor costs.

Whether your business is focused on gaining competitive advantage, mitigating risk or controlling IT costs, your storage infrastructure matters — a lot. IBM Smarter Storage is an intelligent, efficient, automated approach to the design and deployment of storage systems. This approach enables organizations like yours to take control of their storage so they can focus on gaining more valuable insight from their data — and delivering greater value to the business.



IBM Storwize family

Innovative, virtualized storage for software-defined environments

Family features

- Gain flexibility with IBM® Easy Tier® and up to three times improved performance using only five percent flash storage¹
- Transform the economics of data storage using hardware-accelerated IBM Real-time Compression™²
- Reduce management effort with an advanced graphical user interface and a wide range of affordable, easy-to-deploy storage systems
- Experience rapid, flexible provisioning and simple configuration changes with internal virtualization and thin provisioning
- Integrate with IBM Cloud Storage Access to quickly implement private cloud storage services
- Enable near-continuous application availability through dynamic migration
- Improve network utilization for remote mirroring using innovative replication technology



IBM SAN Volume Controller

SAN Volume Controller (SVC) is designed to deliver the benefits of storage virtualization to large enterprises, small businesses and midmarket companies. Learn more [on the web](#) or download the [data sheet](#).



IBM Storwize V5000

This highly flexible, easy-to-use, virtualized storage system provides high performance and advanced functionality for midsized organizations. Learn more [on the web](#) or download the [data sheet](#).



IBM Storwize V7000 Unified and IBM Storwize V7000

These virtualized systems can simplify storage by consolidating workloads into a single storage system. Learn more [on the web](#) or download the [data sheet](#).



IBM Storwize V3700

This affordable, easy-to-use, self-optimizing disk system is designed for small and midsized organizations. Learn more [on the web](#) or download the [data sheet](#).

IBM FlashSystem family

High-performance, low-latency storage systems to turbocharge your IT infrastructure

Family features

- Accelerate business insight with extreme performance and Tier 1 storage management features
- Deliver all-flash storage for less than the cost of disk and more than five times the performance³
- Operate at peak efficiency with IBM MicroLatency™, high bandwidth, flexible connectivity and low wattage—all in a small footprint
- Improve business agility with scalable, extreme-performance flash storage that accelerates low latency, I/O-intensive applications, including online-transaction processing (OLTP) and online-analytical processing (OLAP)
- Easily integrate with existing infrastructure to maximize total cost of ownership and return on investment
- Leverage high availability and hot-swappable components to lower mean time to repair



IBM FlashSystem V840

IBM FlashSystem™ V840 provides software-defined flash storage that accelerates critical business applications and, through the use of Tier 1 storage management features such as Real-time Compression, delivers flash technology for less than the cost of disk. Learn more [on the web](#) or download the [data sheet](#).



IBM FlashSystem 840

IBM FlashSystem 840 is data-center optimized to accelerate business with extreme performance, flexible capacity and total system protection, empowering enterprise organizations to build a compelling and sustainable competitive advantage. Learn more [on the web](#) or download the [data sheet](#).

Disk storage systems

Delivering efficient, agile storage for a demanding world

Family features

- Help simplify storage administration with automated tasks, an intuitive user experience and centralized management of the broad scope of workloads running in today's data centers
- Boost storage efficiency and performance—from entry- to enterprise-level—using features such as automated tiering, virtualization, remote replication and thin provisioning
- Add flexibility with flash drive support from most systems
- Achieve agility in cloud environments with high scalability; consistent, high service levels for dynamic, heterogeneous workloads; and products designed for virtualized environments
- Leverage extreme scalability to accommodate capacity growth, satisfying bandwidth-hungry applications with scale-out performance for both random access and streaming workloads
- Support disk-based backup and recovery using point-in-time copy and remote replication software

Block storage systems

- **Enterprise**
 - [IBM DS8870](#)
 - [IBM XIV® Storage System](#)
- **Midrange**
 - [IBM DCS3700](#)
- **Midrange and entry expansion units**
 - [IBM EXP2500 express](#)

Network-attached storage (NAS)

- **Enterprise**
 - [IBM Scale Out Network Attached Storage \(SONAS\)](#)



Block storage systems

These disk storage systems are designed to meet a full range of needs, from entry-level storage to high-end, enterprise-class storage.



Enterprise IBM DS8870

DS8870 is a highly scalable, self-tuning, high-end disk system designed to support your critical enterprise workloads with extreme performance, reliability and agility—including advanced optimization for traditional disk, next-generation all-flash and hybrid-flash configurations. Learn more [on the web](#) or download the [data sheet](#).



Enterprise IBM XIV Storage System

XIV Storage System is a high-end, flash-optimized storage system designed to support the diverse and dynamic workloads of open systems with simplicity, resiliency and predictability, making it ideal for cloud and big-data analytics environments. An edition for cloud providers also delivers outstanding flexibility and cloud economics. Learn more [on the web](#) or download the [data sheet](#).



Midrange [IBM DCS3700](#)



Midrange and entry expansion units [IBM EXP2500 express](#)

Network-attached storage (NAS)

IBM combines massive scalability with automated file management to meet the growing storage needs of today's dynamic enterprises.



Enterprise

IBM Scale Out Network Attached Storage (SONAS)

SONAS embraces and delivers cloud storage in the petabyte age, meeting today's storage challenges with quick and cost-effective IT-enabled business enhancements designed to grow with unprecedented scale. Learn more [on the web](#) or download the [data sheet](#).

Tape storage

Tape storage for reliable data protection and long-term retention

Family features

- Provide high-capacity storage backup for IT infrastructures and low total cost of ownership
- Store removable cartridges to protect them from viruses, sabotage and corruption
- Support scalability by simply adding more tape cartridges, versus drives
- Add data protection by moving portable media offsite
- Shorten backup windows and enable rapid data restores with virtual tape
- Address security compliance requirements using encryption and Write Once Read Many (WORM) technologies

Enterprise

- [IBM TS1150 tape drive](#)
- [IBM TS1140 tape drive](#)
- [IBM TS1130 tape drive](#)
- [IBM TS4500 tape library⁴](#)
- [IBM TS3500 tape library⁴](#)
- [IBM Tape Controller for IBM System z®](#)
- [IBM TS7650G ProtecTIER® Deduplication Gateway](#)
- [IBM Virtualization Engine TS7740 and TS7720](#)

Midrange

- [IBM TS7620 ProtecTIER Deduplication Appliance Express](#)
- [IBM TS4500 tape library⁴](#)
- [IBM TS3500 tape library⁴](#)
- [IBM TS3310 tape library](#)

Entry

- [IBM TS2360 tape drive express](#)
- [IBM TS2260 tape drive express](#)
- [IBM TS2350 tape drive express](#)
- [IBM TS2250 tape drive express](#)
- [IBM TS2340 tape drive express](#)
- [IBM TS2240 tape drive express](#)
- [IBM TS2900 tape autoloader express](#)
- [IBM TS3200 tape library express](#)
- [IBM TS3100 tape library express](#)

IBM tape storage media

- [IBM 3592 tape cartridges](#)
- [IBM Linear Tape-Open \(LTO\) Ultrium tape cartridges](#)
- [IBM DAT/DDS tape cartridges](#)



Enterprise

IBM enterprise-class tape storage products are designed to offer the high performance, availability, reliability and capacity needed to provide enterprise-class solutions for mass storage, data archiving, enterprise backup and disaster recovery.



[IBM TS1150 tape drive](#)

[IBM TS1140 tape drive](#)

[IBM TS1130 tape drive](#)

[IBM TS4500 tape library⁴](#)

[IBM TS3500 tape library⁴](#)

[IBM Tape Controller for IBM System z](#)

[IBM TS7650G ProtecTIER Deduplication Gateway](#)

[IBM Virtualization Engine TS7740 and TS7720](#)

Midrange

IBM midrange tape storage products are designed to provide reliable and flexible data backup, archiving and management—for today and into the future.



[IBM TS7620 ProtecTIER Deduplication Appliance Express](#)

[IBM TS4500 tape library⁴](#)

[IBM TS3500 tape library⁴](#)

[IBM TS3310 tape library](#)

Entry

IBM entry-level tape products provide reliable, affordable data backup and protection.



[IBM TS2360 tape drive express](#)

[IBM TS2260 tape drive express](#)

[IBM TS2350 tape drive express](#)

[IBM TS2250 tape drive express](#)

[IBM TS2340 tape drive express](#)

[IBM TS2240 tape drive express](#)

[IBM TS2900 tape autoloader express](#)

[IBM TS3200 tape library express](#)

[IBM TS3100 tape library express](#)

IBM tape storage media

Today's data centers must satisfy increasing demands for data retention, security and availability—while contending with reduced budgets. IBM tape storage media solutions have been developed to help you address these challenges.



[IBM 3592 tape cartridges](#)

[IBM Linear Tape-Open \(LTO\) Ultrium tape cartridges](#)

[LTO Ultrium 6 cartridges](#)

[LTO Ultrium 5 cartridges](#)

[LTO Ultrium 4 cartridges](#)

[LTO Ultrium 3 cartridges](#)

[LTO Ultrium 2 cartridges](#)

[LTO Ultrium 1 cartridges](#)

[IBM DAT160, DAT72 and DDS-4 cartridges](#)

Storage area networks (SANs)

Flexible, scalable, open standards-based business- and enterprise-class solutions

Family features

- Choose from a comprehensive portfolio of SAN switches, storage, software and solutions
- Capitalize on enterprise-wide data sharing and collaboration with Fibre Channel connectivity
- Connect servers and storage systems in local, campus, metro and global infrastructures using intelligent SAN switches, directors and routers
- Help drive innovation and create a dynamic, scalable infrastructure
- Access information cost-effectively

Enterprise SAN directors

- [IBM System Storage® SAN768B-2 and SAN384B-2](#)
- [Cisco MDS 9710 Multilayer Director for IBM System Networking](#)
- [Cisco MDS 9500 Series Multilayer Directors for IBM System Storage](#)

Midrange SAN switches

- [IBM System Networking SAN96B-5](#)
- [IBM System Storage SAN48B-5](#)
- [Cisco MDS 9148 for IBM System Storage](#)

Entry SAN switches

- [IBM System Networking SAN24B-5](#)
- [IBM System Storage SAN24B-4 Express](#)

SAN specialty switches

- [Cisco MDS 9250i Multiservice Fabric Switch for IBM System Storage](#)
- [IBM System Storage SAN06B-R extension switch](#)
- [Cisco MDS 9222i for IBM System Storage](#)
- [IBM System Storage SAN32B-E4 Encryption Switch](#)
- [Brocade VDX 6730 Converged Switch for IBM](#)

IBM System Networking Ethernet and converged switches

- **Ethernet switch and interconnect modules for IBM Flex System**
 - [IBM Flex System Fabric SI4093 System Interconnect Module](#)
 - [IBM Flex System Fabric EN4093R 10 Gb Scalable Switch](#)
 - [IBM Flex System Fabric CN4093 10 Gb Converged Scalable Switch](#)
 - [IBM Flex System EN2092 1 Gb Ethernet Scalable Switch](#)
- **Ethernet switch modules for IBM BladeCenter®**
 - [IBM BladeCenter Virtual Fabric 10G Ethernet Switch Module](#)
 - [IBM BladeCenter 1/10G Uplink Ethernet Switch Module](#)
 - [IBM BladeCenter Layer 2/3 Copper and Fiber Gb Ethernet Switch Modules](#)
- **Ethernet and converged top-of-rack switches**
 - [IBM System Networking RackSwitch™ G8264](#)
 - [IBM System Networking RackSwitch G8124E](#)
 - [IBM System Networking RackSwitch G8052](#)
 - [IBM System Networking RackSwitch G7028](#)



[Enterprise SAN directors](#)

Enterprise SAN directors provide metro and global connectivity in addition to high availability, scalability and performance between sites over different networking protocols.



[IBM System Storage SAN768B-2 and SAN384B-2](#)

[Cisco MDS 9710 Multilayer Director for IBM System Networking](#)

[Cisco MDS 9500 Series Multilayer Directors for IBM System Storage](#)

[Midrange SAN switches](#)

Midrange SAN switches can scale to provide solutions for small and midsize businesses up to large enterprises.



[IBM System Networking SAN96B-5](#)

[IBM System Storage SAN48B-5](#)

[Cisco MDS 9148 for IBM System Storage](#)

[Entry SAN switches](#)

These entry-level SAN switches are designed to provide easy-to-use, affordable solutions for small and midsize businesses.



[IBM System Networking SAN24B-5](#)

[IBM System Storage SAN24B-4 Express](#)

[SAN specialty switches](#)

These SAN specialty switches deliver capabilities ranging from connecting heterogeneous SAN fabrics, to enabling distance extension using Fibre Channel over IP, to converging SAN and Ethernet traffic on a single platform.



[Cisco MDS 9250i Multiservice Fabric Switch for IBM System Storage](#)

[IBM System Storage SAN06B-R extension switch](#)

[Cisco MDS 9222i for IBM System Storage](#)

[IBM System Storage SAN32B-E4 Encryption Switch](#)

[Brocade VDX 6730 Converged Switch for IBM](#)

[IBM System Networking Ethernet and converged switches](#)

IBM System Networking switches are designed to increase ease of use and management, help scale-out architectures, reduce power consumption and cost, and provide high-performance and virtualization-aware networking for next-generation data center networks.



[Ethernet switch and interconnect modules for IBM Flex System](#)

These switch and interconnect modules provide extreme flexibility, scalability and performance while delivering networking innovations to help address current — and future — converged networking needs and requirements. Learn more [on the web](#).

[IBM Flex System Fabric SI4093 System Interconnect Module](#)

[IBM Flex System Fabric EN4093R 10 Gb Scalable Switch](#)

[IBM Flex System Fabric CN4093 10 Gb Converged Scalable Switch](#)

[IBM Flex System EN2092 1 Gb Ethernet Scalable Switch](#)



[Ethernet switch modules for IBM BladeCenter](#)

These switch modules offer a simple way to manage high-performance Ethernet networking capabilities for BladeCenter systems. Learn more [on the web](#).

[IBM BladeCenter Virtual Fabric 10G Ethernet Switch Module](#)

[IBM BladeCenter 1/10G Uplink Ethernet Switch Module](#)

[IBM BladeCenter Layer 2/3 Copper and Fiber Gb Ethernet Switch Modules](#)

[IBM System Networking Ethernet and converged switches](#) *(continued)*



Ethernet and converged top-of-rack switches

These switches are designed for file-based or block-based switching in IP storage and converged data center environments. Learn more [on the web](#).

[IBM System Networking RackSwitch G8264](#)

[IBM System Networking RackSwitch G8124E](#)

[IBM System Networking RackSwitch G8052](#)

[IBM System Networking RackSwitch G7028](#)

IBM storage software

Powerful features and superior value for all business levels

Family features

- Reduce data risks and simplify administration
- Improve storage infrastructure optimization and performance
- Reduce backup and archive storage footprint by 95 percent or more⁵
- Virtualize and manage heterogeneous resources
- Mitigate risk of data loss and downtime through the use of snapshots, mirroring and continuous data protection
- Reduce per-terabyte cost of storage with analytics-based tiered storage
- Improve management of data throughout its useful lifetime
- Reduce backup storage space requirements by up to 90 percent after just six incremental backups⁶
- Increase storage administrator productivity by up to 40 percent⁷
- Reduce time spent on problem, configuration and capacity management by up to 60 percent⁷

IBM Tivoli

- **IBM Tivoli® Storage FlashCopy® Manager**
- **IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition**
 - [IBM Tivoli Storage Manager FastBack®](#)
 - [IBM Tivoli Storage Manager FastBack for Microsoft Exchange](#)
 - [IBM Tivoli Storage Manager FastBack for Bare Machine Recovery](#)
 - [IBM Tivoli Storage Manager FastBack Center](#)
 - [IBM Tivoli Storage Manager FastBack for Workstations](#)
 - [IBM Tivoli Storage Manager FastBack for Storwize V7000](#)
 - [IBM Tivoli Storage Manager for Enterprise Resource Planning](#)
 - [IBM Tivoli Storage Manager for Mail](#)
 - [IBM Tivoli Storage Manager for Space Management](#)
 - [IBM Tivoli Storage Manager for Storage Area Networks](#)
 - [IBM Tivoli Storage Manager for System Backup and Recovery](#)
 - [IBM Tivoli Storage Manager for Virtual Environments](#)

- [IBM Tivoli Storage Manager HSM for Windows](#)
- [IBM Tivoli Storage Manager Suite for Unified Recovery](#)
- [IBM Tivoli Storage Manager Suite for Unified Recovery Entry](#)
- [IBM Tivoli Storage Manager for Databases](#)

- **IBM Tivoli Continuous Data Protection for Files**
- **IBM Tivoli Cristie Bare Machine Recovery**
- **IBM Tivoli Storage Productivity Center**

IBM SmartCloud

- **IBM Cloud Storage Access**
- **IBM SmartCloud® Virtual Storage Center**

IBM Linear Tape File System

- **IBM Linear Tape File System™ Enterprise Edition**
- **IBM Linear Tape File System Library Edition**
- **IBM Linear Tape File System Single Drive Edition**
- **IBM Linear Tape File System Storage Manager**



IBM Tivoli

Tivoli storage management solutions can help you guard against data loss, ensure compliance, streamline storage management and reduce storage costs—while simultaneously helping your organization to grow its capacity and revenue.

IBM Tivoli Storage FlashCopy Manager

IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition

- [IBM Tivoli Storage Manager FastBack](#)
- [IBM Tivoli Storage Manager FastBack for Microsoft Exchange](#)
- [IBM Tivoli Storage Manager FastBack for Bare Machine Recovery](#)
- [IBM Tivoli Storage Manager FastBack Center](#)
- [IBM Tivoli Storage Manager FastBack for Workstations](#)
- [IBM Tivoli Storage Manager FastBack for Storwize V7000](#)
- [IBM Tivoli Storage Manager for Enterprise Resource Planning](#)
- [IBM Tivoli Storage Manager for Mail](#)
- [IBM Tivoli Storage Manager for Space Management](#)
- [IBM Tivoli Storage Manager for Storage Area Networks](#)
- [IBM Tivoli Storage Manager for System Backup and Recovery](#)
- [IBM Tivoli Storage Manager for Virtual Environments](#)
- [IBM Tivoli Storage Manager HSM for Windows](#)
- [IBM Tivoli Storage Manager Suite for Unified Recovery](#)
- [IBM Tivoli Storage Manager Suite for Unified Recovery Entry](#)
- [IBM Tivoli Storage Manager for Databases](#)

IBM Tivoli Continuous Data Protection for Files

IBM Tivoli Cristie Bare Machine Recovery

IBM Tivoli Storage Productivity Center



IBM SmartCloud

To gain the full benefits of cloud computing, organizations must improve their storage agility. Cloud storage solutions from IBM enable efficient virtualization and cloud-agile features, without needing to rip and replace your existing storage.

IBM Cloud Storage Access

IBM SmartCloud Virtual Storage Center

IBM Linear Tape File System

Linear Tape File System sets a new standard for ease of use and portability for open-systems tape storage—making data access from IBM tape cartridges as easy and intuitive as using a USB flash drive.

IBM Linear Tape File System Enterprise Edition

IBM Linear Tape File System Single Drive Edition

IBM Linear Tape File System Library Edition

IBM Linear Tape File System Storage Manager



IBM storage services

End-to-end offerings that form the foundation of a cohesive technology management strategy

Family features

- Enable business growth and innovation with efficient storage and data services
- Help address storage needs by proactively establishing a well-organized approach to your storage and data environment
- Simplify the management of storage and data environments
- Provide insight into how your business is using existing storage assets
- Improve the value of key data by helping to reduce storage risks

IBM Global Technology Services

IBM delivers deep technological expertise and rich industry insight to help you align your IT and business objectives—designing a transparent, agile value chain that supports current requirements while enabling you to chart a path to innovation and growth. Learn more [on the web](#).

[IBM SmartCloud Enterprise – object storage](#)

IBM Global Financing

Solutions from IBM Global Financing can help accelerate your acquisitions of the latest technologies and services and make your infrastructure more affordable by providing competitive, customized financing of storage, server, PC, software and services investments. IBM Global Financing also enables effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Learn more [on the web](#).

[IBM Global Asset Recovery Services](#)

IBM Storage and Data Services

Storage and Data Services from IBM can help you achieve business objectives by creating cost-effective data storage solutions that address the requirements of key business applications—while reducing management costs. Learn more [on the web](#).

IBM Technical Support Services

These services can help you get the most out of your IT investments by reducing support costs, increasing availability and simplifying management with integrated support for your storage environment. Learn more [on the web](#).



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For more information

To learn more about IBM System Storage offerings, please contact your IBM representative or IBM Business Partner, or visit: ibm.com/systems/storage/



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Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.

¹ IBM lab measurements – August 2010.

² Compression data based on IBM measurements; compression rates vary by data type and content. Not available on IBM Storwize V3700 or IBM Storwize V5000.

³ Compression data based on IBM measurements. Compression rates vary by data type and content.

⁴ IBM TS4500 and TS3500 tape libraries can be used in midrange and enterprise environments.

⁵ IBM white paper, "Combining IBM Real-time Compression and IBM ProtecTIER Deduplication," *IBM Systems and Technology*, July 2011.

⁶ ESG Lab Validation Report, "IBM Tivoli Storage Manager 6.3: Deduplication, Remote Site Recovery, and Scalability," November 16, 2012.

⁷ Edison Group white paper, "Competitive Management Cost Study: IBM Storwize V7000 vs. EMC VNX5500 Storage Systems," April 2012.



Please Recycle

