IBM storage offerings

Flexible, scalable storage solutions designed to take your business the distance in the on demand world
Demand the most from your storage provider

Your business faces unrelenting pressure to do more with less, improve results and deal with IT complexity — all with tighter budgets than ever before. In addition, the amount of data that the typical organization manages is increasing rapidly, which presents additional business challenges.

Make no mistake about it — there is a strong correlation between your storage environment and the performance of your business. The IT solutions that you have now and might deploy in the future will most likely be storage-intensive, which could result in the growth and complexity of your storage environment. And that's where IBM can help. IBM is an industry leader in innovative storage solutions that can help simplify IT environments so CIOs and IT managers can focus on other tasks, including:

- Increasing efficiency and utilization
- Managing costs
- Improving reliability
- Competing more effectively

IBM and IBM Business Partners deliver resilient, modular, scalable hardware and software storage solutions along with worldwide services and support that allow you to demand the most from your storage provider.

Leverage IBM technology

IBM can help you manage costs and compete more effectively with a more-efficient storage infrastructure. That's because IBM storage products feature open standards for easy integration into your infrastructure and compatibility with solutions from IBM and many other vendors. IBM can help you to deploy and maintain your storage infrastructures, providing solutions designed for high availability while enhancing productivity through automation.
IBM TotalStorage® and IBM Tivoli® solutions can help address some of your business issues and help you to:

### Lower or manage costs

Regardless of your company’s size, IBM can help simplify your storage infrastructure and help automate, consolidate and centralize your storage efforts. Autonomic solutions — solutions that are self-managing and self-healing — are designed to help reduce the amount of personnel effort it takes to manage your systems, helping to lower costs and provide more reliability.

### Cut or eliminate planned and unplanned downtime

IBM offers storage products that can allow administrators to reallocate and scale storage capacity and upgrade hardware and software without disrupting applications. These products are designed to help you improve application availability by reducing or eliminating application downtime for storage and data management tasks.

### Manage your infrastructure and growth

IBM storage virtualization, combined with IBM Tivoli software management solutions, can help you manage storage across your entire enterprise and get the most out of your IT infrastructure.

### Reduce complexity

Storage has gotten so complex and unwieldy that simplifying it is critical to business success. IBM storage products are designed to help reduce complexity, and many of them offer a single point of control for disparate storage components. This can help improve storage utilization.

### Take advantage of highly accessible support teams

IBM has a worldwide team of local experts through IBM Global Services (IGS) and IBM Business Partners. They can work with you on issues including consulting, design and integration, storage consolidation, data migration, testing and implementation, performance management, maintenance, and storage management. Additionally, there are more than 150 IBM TotalStorage Solution Centers (TSSCs) around the world where you can take advantage of “one-stop shopping” for storage hardware, software and consulting services.

In short, IBM is a world leader in storage technology, services and support that can help you build a competitive edge. IBM is continually delivering new technologies to help improve the way that you acquire and manage your storage infrastructure. We can help you to improve your business’s efficiency and continuity.
Choose one company for the answers you need

Let’s face it: there is not a “one-size-fits-all” solution for your storage environment. The performance and availability of your storage environment can either enhance or hamper your business processes. That’s where IBM comes in. We can handle the challenges that your network or company as a whole encounters. What’s the IBM advantage? You get industry-leading storage products, technologies, services and solutions without the complexity of dealing with different hardware and software vendors and system integrators. Do you have other vendors’ products installed? No problem. Many of IBM’s solutions employ open standards and can integrate with many other vendors’ offerings. IGS and IBM Business Partners can bring the entire spectrum of skills, from consulting through implementation and operations, to help you develop a solution tailored to your unique business demands and budget. These services, coupled with a broad portfolio of skills and experience, can help make your ownership experience complete.
Select the right solution from diverse offerings
Regardless of your business size or what your current storage infrastructure looks like, IBM can provide a solution to help address your unique storage requirements today—and well into the future. Solutions range from affordable, stand-alone tape drives to others designed for e-business on demand™ and applications with unpredictable growth requirements.

### Storage software

#### Storage virtualization
- IBM TotalStorage SAN Volume Controller
- IBM TotalStorage SAN File System

#### Storage management
- IBM Tivoli Storage Resource Manager
- IBM Tivoli Storage Manager
- IBM Tivoli Storage Area Network Manager and IBM Tivoli Bonus Pack for SAN management
- IBM Tivoli Storage Area Management Toolkit
- DFSMS
- DFSORT™

### Tape storage

#### Tape libraries and autoloaders
- IBM TotalStorage Virtual Tape Servers
- IBM TotalStorage Enterprise Tape Library 3494
- IBM TotalStorage Ultrascalable Tape Library 3584
- IBM TotalStorage Ultrium® Scalable Tape Library 3583
- IBM TotalStorage Ultrium Tape Library 3582
- IBM TotalStorage Ultrium Tape Autoloader 3581

#### Tape drives
- IBM TotalStorage Enterprise Tape Drive 3592
- IBM TotalStorage Enterprise Tape Drive 3590
- IBM TotalStorage Ultrium Tape Drive 3580
- IBM 7208 External Tape Drive
- IBM 7207 External Tape Drive
- IBM 7206 External Tape Drive
- IBM 7205 External Tape Drive

#### Tape management
- IBM TotalStorage ETL Expert
- IBM TotalStorage Ultrascalable Library Specialist

### Disk storage

#### Disk systems
- IBM TotalStorage Enterprise Storage Server®
- IBM TotalStorage SAN Integration Server
- IBM TotalStorage FAST Storage Servers
- IBM TotalStorage 7133 Serial Disk System
- IBM TotalStorage Expandable Plus 2104

#### Disk management
- IBM TotalStorage Expert

### Storage area networking (SAN) and network-attached storage (NAS)

#### SAN fabric switches and directors
- IBM TotalStorage SAN switch family
- Cisco MDS 9000 family
- McDATA Enterprise-to-Edge SAN solutions
- CNT FC/9000 directors

#### NAS
- IBM TotalStorage NAS Gateway 300
**IBM TotalStorage virtualization software**

The IBM TotalStorage virtualization software products are designed to help reduce SAN complexity by providing a single common pool of storage. This can help reduce costs and increase efficiency.

*IBM TotalStorage SAN Volume Controller*

is designed to help reduce the complexity and costs of managing disparate storage controllers in a SAN environment. It allows users to virtualize their storage to help increase the utilization of existing capacity and centralize the management of multiple storage controllers in an open-system SAN environment. The SAN Volume Controller storage software can be delivered as an appliance within the SAN Volume Controller, as part of the SAN Integration Server or embedded within the Caching Services Module of the Cisco MDS 9000 Switch.

*IBM TotalStorage SAN File System (based on IBM Storage Tank™ technology)*

is designed as a network-based heterogeneous file system for file aggregation and data sharing in an open environment. The SAN File System can help lower the cost of storage management and enhance productivity by providing centralized file system management, higher storage utilization and improved application availability.

**IBM storage management software**

Today’s storage management needs go beyond traditional backup and recovery solutions. Data is the currency of today’s e-business economy. Planning to store this data should encompass data reliability, solution scalability, disaster planning and recovery considerations.

*IBM DFSMS*

is a software suite that automatically helps manage data from creation to expiration. DFSMS is designed to provide allocation control for availability and performance, backup and recovery, and disaster-recovery services. It is also designed to offer space management, tape management, and reporting and simulation for performance and configuration tuning.

*IBM DFSORT*

is a high-performance sort, merge, copy, analysis and reporting product. DFSORT is an optional feature of the IBM z/OS® and OS/390® operating systems.
IBM Tivoli Storage Resource Manager

serves as an active, intelligent console for the storage environment. It is designed to provide a set of policy-driven, automated tools for managing storage capacity, availability, events, performance and assets in the enterprise environment, including direct-attached storage (DAS), NAS and SAN technologies. Tivoli Storage Resource Manager provides up to 300 comprehensive reports, monitoring and alerts, policy-based management, database support, chargeback, and more. IBM Tivoli Storage Resource Manager is designed to be installed quickly and can help improve storage utilization, reduce storage costs, manage more data with the same staff and support application availability.

IBM Tivoli Storage Area Network Manger and IBM Tivoli Bonus Pack for SAN Management

are state-of-the-art solutions for managing heterogeneous enterprise SANs. They are designed to work with a broad range of devices so that your enterprise can leverage and better use its existing technology investments. They are designed to provide comprehensive management of the physical and logical configurations for multivendor SANs with automatic resource discovery, event monitoring and alerting, zone control, and SAN error-prediction capabilities.

IBM Tivoli Storage Manager

can help protect your organization’s data from hardware failures and other errors by storing backup and archive copies of data in offline storage. Scalable so that it can help protect hundreds of computers and running on more than a dozen different operating systems, its intelligent data move-and-store techniques and policy-based automation work together to help increase data protection and potentially decrease time and administration costs.
Disk storage

IBM TotalStorage disk storage systems

Disk is still one of the fastest and most economical storage mediums available for interactive production databases. High-performance IBM TotalStorage disk solutions are also among the most reliable, scalable and interoperable in the industry.

**IBM TotalStorage Enterprise Storage Server**

Helps deliver the superior performance and high-availability functions required for your critical business applications across multiple platforms, including the IBM @server® zSeries® and IBM S/390® servers. It also supports many advanced copy functions, which can be critical for increasing data availability during planned outages and for protecting data from planned and unplanned outages. These advanced functions are designed to provide important disaster-recovery and backup protection.

**IBM TotalStorage SAN Integration Server**

Is designed to help integrate IBM virtualization technology, fibre-channel switches and storage Redundant Array of Independent Disks (RAID) technologies provided by FASTT Storage Servers into a preconfigured, comprehensive solution. Delivered and installed as a single system, it features hardware redundancy and elements of IBM advanced autonomic computing technologies to help minimize downtime and improve availability.
IBM TotalStorage FASTT Storage Servers can help handle the growing storage requirements of today’s on demand era. The IBM FASTT family uses common storage management software and high-performance hardware design, helping to provide customers with enterprise-like capabilities at a lower cost. High-availability, multiplatform support, a broad range of open operating system support and comprehensive management tools all help you adjust to changing storage requirements and challenges.

7133 Serial Disk System is well-suited for fast-growing UNIX® server environments requiring high availability and performance requirements. With Serial Storage Architecture (SSA) dual data paths to disks, redundant power and cooling, host bypass features, and the ability to connect to multiple servers, the 7133 is well-suited for multihost attachments to IBM @server pSeries® and RS/6000® servers.

IBM TotalStorage Expandable Storage Plus is well-suited for small- and medium-scale IBM AIX® environments requiring the latest Small Computer System Interface (SCSI) Ultra 320 technology. It is designed to handle either dual-host attachment with a single SCSI bus for nonconcurrent, high-availability configurations with High Availability Cluster Multi-processing (HACMP) failover software, or dual-host attachment with two SCSI buses. The 2104 is well-suited for multihost attachments to IBM @server pSeries and RS/6000 servers.
IBM TotalStorage tape storage systems

When it comes to storage retention, nobody goes to greater lengths to help you store, archive and retrieve your data than IBM with a complete line of tape products.

Tape libraries and autoloaders

**IBM TotalStorage Virtual Tape Server (VTS)**

is designed to virtualize tape and utilize the full capacity of cartridges to help provide excellent performance, reduce tape processing costs, and reduce the floor space and environmental requirements. A fully redundant peer-to-peer VTS configuration installed in two separate sites can help facilitate the resumption of normal operations after a system failure, or a natural or man-made disaster.

**IBM TotalStorage Ultrascalable Tape Library 3584**

is an excellent choice for cost-effectively handling a wide range of backup, archive and disaster-recovery data storage needs. The reliability, capacity and performance of LTO offers an excellent alternative to digital linear tape (DLT), 8-mm, 4-mm or ¼-inch tape drives for streaming data applications such as backup.

**IBM TotalStorage Enterprise Tape Library 3494**

is an excellent solution for large datacenters that include IBM @server and open-system platforms. It features a modular design that can be configured to help meet customer requirements, attach to supported servers and help support business continuance. The 3494 tape library supports the VTS and is designed to scale to help meet future storage requirements. It also provides high availability and support for future tape technologies.

**IBM TotalStorage Ultrium Scalable Tape Library 3583**

is designed as a high-performance, reliable, scalable tape subsystem for tape automation. The 3583 features the patented IBM Multi-Path architecture, designed to allow you to define multiple logical libraries within a single physical library and allowing heterogeneous applications to simultaneously share a single physical library. Control-path failover adds additional autonomic capability.
IBM TotalStorage Ultrium Tape Library 3582

is extremely compact with its 4U height, yet holds up to 24 LTO cartridges and one or two drives. This library supports up to two heterogeneous servers sharing it simultaneously without any additional hardware or software. A bar-code reader is standard as is a single-cartridge input/output door. An optional Web interface allows users to monitor the library status with a Web browser. The 3582 is superb for addressing the growing storage requirements of small to medium-sized businesses.

IBM TotalStorage Ultrium Tape Autoloader 3581

is an external stand-alone or rack-mounted drive, using a single IBM LTO Ultrium tape drive. It is a good choice for customers who use tape and require a larger-capacity or higher-performance tape backup—with or without random access—than is provided by their current tape system. If bar-code label scanning is required, an optional barcode-reader can be added to one of the existing cartridge slots. This is designed to provide automated storage management software the ability to select the required cartridge.
### Tape drives

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<tr>
<th><strong>IBM TotalStorage Enterprise Tape Drive 3592</strong></th>
<th><strong>IBM TotalStorage Ultrium Tape Drive 3580</strong></th>
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<td>is designed to provide fast performance and high capacity to help reduce customer resource requirements in heterogeneous server environments. The 3592 is designed to provide both fast access to data and the high capacity necessary to back up large databases, thus allowing the adoption of a single tape technology. This can help reduce costs and allow data to be consolidated onto fewer footprints, which, in turn, can help reduce the complexity of the storage environment and management overhead.</td>
<td>provides convenience for existing Linear Tape Open (LTO) tape cartridge users or users who typically store less than 200 GB of data on a single tape cartridge. This self-contained single drive can be rack-mounted or simply sit on the desktop, and is an excellent alternative to S-DLT, DLT, 1⁄4-inch, 4-mm or 8-mm tapes drives.</td>
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<th><strong>IBM TotalStorage Enterprise Tape System 3590</strong></th>
<th><strong>Complementary tape storage product</strong></th>
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<td>offers configuration flexibility with models for large, scalable automation solutions to small auto cartridge loaders. The 3590 is designed to provide high performance for backup window management and productivity. It supports enhanced tape sharing with cross-enterprise attachment and flexible implementation with support for multiple attachments. The 3590 supports data integrity and reliability for mission-critical data.</td>
<td>offerings, the 7205 (SDLT format), 7206 (VXA-2 format), 7207 (SLR formats) and 7208 (8-mm format), help you protect, access and manage mission-critical data—regardless of the size of your organization.</td>
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IBM storage networking

These solutions are the backbone of any complete storage solution. They facilitate connectivity to scalable, reliable storage for businesses of all types and sizes.

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<th>SAN</th>
<th>IBM NAS Gateway</th>
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<td>solutions provide the necessary infrastructure to help you keep your enterprise nimble and agile enough to address the constant flux, high pressure and rapidly changing scenarios of an on demand business. IBM offers a wide variety of SAN infrastructure products from our SAN Fabric vendors—Brocade (IBM TotalStorage SAN switches), Cisco, CNT and McDATA. These products provide the connection of servers and storage devices into high-availability storage networks, supporting scalability to address the demands of rapid and unpredictable growth.</td>
<td>is designed to bring NAS capabilities to IBM disk storage products like the IBM TotalStorage FAST family and the IBM TotalStorage Enterprise Storage Server. The IBM NAS Gateway allows users to converge their NAS and SAN environments, giving them greater flexibility to provide storage resources to applications as needed. These gateways are designed for high-availability and high file-transfer performance.</td>
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IBM TotalStorage NAS Gateway 300
**Tap into the power**
A worldwide network of top-notch sales and technical support services backs every IBM storage product. IBM offers local, focused support capabilities to help expedite system development at all stages, from conception to warranty repair. In addition to customer support, qualification and integration assistance, IBM offers a wide range of financing options and education and consulting services designed to provide complete data storage solutions.

IBM works with IBM Business Partners and other leading technology companies to deliver the right storage solutions to help your business to succeed in today’s dynamic marketplace. You also can visit an IBM TotalStorage Solutions Center for a hands-on test drive of IBM storage solutions. With IBM as your technology provider, you can take full advantage of the new and emerging technologies that can be critical to business success.

**Start today**
It’s an easy decision. Why keep searching for multiple vendors to duplicate what a single, global end-to-end storage solution provider can do for your organization? Insist on exceptional storage solutions, products and services from an industry leader.

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<tr>
<th>Storage management software</th>
<th>System management software</th>
<th>Virtualization offerings</th>
<th>Disk storage</th>
<th>Tape storage</th>
<th>SAN/NAS</th>
<th>Business Partner solution centers</th>
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*IBM storage offerings compared with other vendor’s offering*
Rely on IBM for the help you need

IBM offers:

• A full menu of customizable, open IT storage solutions to meet your specific business needs and budgets
• A broad portfolio of modular hardware and software offerings
• Outstanding warranty support
• International service and support
• Flexible financing options

For more information
IBM and IBM Business Partners can offer clear guidance and a broad portfolio of skills and products to help you create an open, on demand business environment today. Go to ibm.com/totalsecurity or ibm.com/Tivoli to read about our most-recent offerings.