

IBM Systems



IBM Systems

Technology and expertise for your business advantage





Today's marketplace is changing, with open, pervasive technologies as a driving force. The spread of computing to virtually every aspect of our lives has led to explosions in worldwide information volume and energy demand. In a world where nearly everything is connected via the Internet and businesses must adapt in real time to remain competitive, your company must leverage technology in ways that deliver solid business results—maximizing return on IT investments, improving responsiveness of systems and people and driving innovation with technology advancements.

Innovate for business advantage

As the marketplace has changed, the role of the IT executive has evolved as well. The need to bring technology to the forefront has never been more pressing—but only if that technology drives true business results. IT executives must take a comprehensive view of IT operations so they can manage growth as well as the complexity and risk that often accompany business expansion.

IBM Systems can help your company address these challenges with servers, storage, middleware and financing that incorporate innovative technologies to enable an optimized

IT platform for business applications. Because the real business of IT is to use technology to meet the changing business demands that companies will face in the future—and to help ensure that it can deliver on its promise to help drive business results today—it is critical that companies work together with a trusted technology partner. The right partner can provide guidance regarding when and how to leverage the advancements in technology to differentiate your business from competition.

Across a wide spectrum of industries, business leaders are making innovation a top priority. IBM is uniquely positioned to help clients unleash innovation—not just in their products



and services but also throughout their companies. With a broad understanding of innovation today and outstanding capabilities in technology, systems, software and services, IBM can help your company transform itself into a highly responsive, open, integrated and flexible business with the potential to drive greater levels of innovation and growth.

IBM Systems: Helping you achieve business breakthroughs with a wide portfolio of technology solutions

IBM Systems can help provide the essential technology your organization needs to help you build a highly efficient, scalable, secure and dynamic IT infrastructure. This infrastructure, in turn, can support and drive innovation in your business.

IBM Systems can enable your company to build on its IT investments while helping you to reduce total cost of ownership (TCO) and also help you to achieve a high return on investment (ROI). With a choice of IT deployment and financing options and documented roadmaps, IBM offers the flexibility for your company to acquire the right systems as your business and application needs evolve.

IBM can help enable your business by allowing you to achieve three critical goals:

- **Go green and save:** IBM consolidation and virtualization solutions, together with enhanced energy-efficient technologies and tiered storage offerings, are designed to help your company maximize return on your IT investments. So think “green”—and start saving—not just on energy, but also on facilities, floor space, labor and overall operational costs.
- **Manage growth, complexity and risk:** IBM Systems can help companies manage growth, complexity and risk with flexible platforms that are designed to work with what you have today and scale as your requirements change. Integrated systems management across heterogeneous systems also helps to ensure business resiliency, availability and security across the environment—helping to improve the responsiveness of your systems—and your people.
- **Realize innovation:** IBM Systems can help you drive innovation with technology advancements so you can realize innovation in your day-to-day business. Not just in using technology to make things run faster—but in truly changing how you run your business.



IBM System z mainframe technology: The power of many, the efficiency of One

Built upon a heritage of more than 40 years of large-scale data and transaction serving, the IBM System z™ platform further extends the mainframe's ability to deploy multiple mission critical workloads to support today's on demand businesses. Featuring leadership capabilities for virtualization, security and resiliency, the System z platform supports large-scale server consolidation, helps minimize risk and redundancy and is well suited for the hub of an enterprise infrastructure—providing the dependability your business needs in today's always-connected, 24/7 world.

Rapidly climbing costs are a key concern for data centers today. With vast numbers of servers adding complexity and increasing energy demands in many IT infrastructures, data center costs can spiral out of control. Expanding energy requirements may even test the limits of the power supply for the data center.

The System z platform is ideal for consolidating the workloads of large server farms, often managing the workload of tens or hundreds of distributed servers. With advanced virtualization and workload management capabilities built in,

the System z platform can help you reduce operating overheads through lower energy, facility, labor and software costs while also helping you to improve the responsiveness and productivity of your systems and your people.

With support for many open and industry standards, an expanding application portfolio and scalability and flexibility built in, the System z platform is designed to help you respond to the changing demands of today's business environment. The System z platform also offers an impressive record of protecting clients' investments in technology, skills and applications. This makes it a strategic choice both for today and for the future—helping to address business and IT challenges while also enabling your business to realize innovation now.

IBM System p servers: Realize innovation and gain business advantage

IBM System p™ servers are designed to help companies better leverage their IT investments by significantly increasing the utilization of their systems. Advanced virtualization technologies such as IBM Micro-Partitioning™ and Live Partition Mobility help reduce the number of systems your



company needs while improving application availability. IBM POWER™ technology with simultaneous multi-threading and the choice of proven IBM Dual Core or IBM Quad Core technology also helps to provide a stable roadmap for bringing innovation to bear on business problems. These technologies can help companies spend less on software, energy and space, manage growth and complexity and respond nimbly to changing business requirements.

The System p platform supports IBM AIX®, Linux®, or both. These operating systems can run simultaneously, on the same server, in separate, secure partitions using as little as one tenth of a processor. The Web-based Integrated Virtualization Manager helps to simplify consolidation and management of multiple workloads on a single system. Capacity on Demand features are designed to give you instant access to system resources when your business needs it most. In addition, all System p platforms offer innovative reliability, availability and serviceability features with extensive error-detection and correction capabilities.

More than 8,000 solutions from leading independent software vendors have been pre-tested on System p servers. Preconfigured AIX Editions and IBM OpenPower® Editions

for Linux help make these proven technologies easy to buy and install, while AIX binary compatibility across the entire system family enables easy application migration to new systems.

IBM System x and BladeCenter servers: Diverse offerings for innovation in the industry-standard marketplace

IBM System x™ and BladeCenter® servers are robust yet efficient servers built on IBM X-Architecture® technology—our blueprint for bringing innovation to x86 systems. The result is open, industry-standard servers on which you can feel confident running your business-critical workloads.

Managing energy in the data center is a growing concern for many businesses. With System x and BladeCenter servers, IBM delivers technologies that not only increase performance per watt, but also help you budget, plan and



control your power usage. Consolidating and virtualizing on IBM System x and BladeCenter servers can help you increase hardware utilization and decrease the number of physical assets under management. The IBM PowerExecutive™ tool also helps optimize energy efficiency so you can be more responsive to energy needs and costs.

Server proliferation, management and asset control can make it difficult to manage a data center and focus on growing your business. System x and BladeCenter servers can help you manage growth and complexity with intelligent, open management tools designed to simplify IT and help reduce costs by increasing availability, tracking and deploying assets, optimizing performance and enabling remote maintenance. Most System x and BladeCenter servers also come standard with a drop-down light path panel for quick diagnostics.

Built with powerful Intel® and AMD processors, IBM System x tower and rack servers give you the flexibility to choose from the largest variety of scale-up and scale-out

solutions in the industry-standard environment. You can pay as you grow all the way up to 32 sockets—a capability not currently available from any other tier-one vendor.

System x servers help provide increased uptime and exceptional dependability via built-in availability and reliability features such as three levels of memory protection, redundant hot-swap power and cooling, support for large-capacity I/O and storage and remote management.

By integrating servers, storage, memory, I/O and networking, the IBM BladeCenter system helps companies sweep complexity aside. The chassis contains shared redundant power, shared hot-swap cooling, DVD, integrated Ethernet, storage, switching and consolidated powerful management—features that provide a true alternative to today's sprawling racks and overheated server rooms.

IBM System i with i5/OS: Simple for SMBs, efficient for large enterprises

As businesses grow, their computing needs increase—leaving many small and mid-sized companies with overly complex IT environments. Implementing new applications



may mean adding more servers, which can increase spending and staffing requirements. To respond to these challenges, companies need business systems that can help them become more responsive to customers, improve productivity, operate without interruption and secure critical data and systems—all without making large up-front investments in time, skills or money.

By integrating multiple functions within a single system, the IBM System i™ family with the IBM i5/OS® integrated operating environment can deliver the power and capacity to run multiple business applications on a single cost-effective platform.

By design, the System i family is simple to deploy, highly secure and resistant to viruses. It helps manage growth, complexity and risk by supporting proven, industry-specific solutions from IBM Business Partners with innovative IBM technology and the capability to run numerous popular operating systems and application environments on one system. Many large enterprises also rely on the System i platform with i5/OS to help them meet the highest service levels defined by their business units and to adapt quickly to handle every new business opportunity.

The System i platform with i5/OS provides flexible pricing with a focus on delivering value in your business. The result is a simple, affordable, highly capable solution featuring outstanding price/performance, reliability and manageability, legendary security and the flexibility to start small and grow to meet new business demands.

Linux and IBM Systems: Enabling a greener, more open world

Regardless of where your company fits into the spectrum of open source adoption, it is clear that there is great value in open source software. Linux and supported software solutions from IBM have expanded to every part of the

enterprise, from the edge of the network to the core of the data center. Offering both open-source and mixed-source environments, IBM Systems support a wide range of Linux-based solutions that can help clients address rising energy and management costs in today's data center. In addition to supporting our own Lotus®, Tivoli®, Information Management, WebSphere® and Rational® brands, IBM has over 6,000 Business Partners supporting more than 10,000 Linux-based industry customer solutions.

For clients focused on managing costs, growth and complexity by striving for a more efficient and scalable infrastructure, IBM offers a wide range of virtualization solutions running Linux. Virtualization has long been used to increase capacity utilization while reducing floorspace and energy costs. IBM aggressively supports Linux virtualization across our IBM Systems portfolio, from the embedded hypervisor on select System x offerings to the grid-enabled Information Server blade, and from Advanced POWER Virtualization (APV) on System p and System i offerings to the advanced Integrated Facility for Linux (IFL) available for the System z mainframe.

IBM is enabling companies to take advantage of the significant cost savings and infrastructure simplification opportunities offered by running Linux on a virtualized solution. Because Linux is certified across all IBM Systems, you can choose the architecture that best suits your needs with the energy and management profile you want, knowing that Linux is fully supported. In fact, for an excellent example of a company using Linux to further a green agenda, one need look no further than IBM. Throughout 2008, IBM will continue plans to consolidate 3,900 servers onto about 30 mainframes running Linux, saving enough energy to power a small town.

IBM System Storage products

Featuring advanced disk systems, tape systems, storage software and storage networking systems, the IBM System Storage™ product line takes a flexible approach to heterogeneous storage environments—providing storage solutions designed to help organizations of all sizes manage growth, complexity and risk as well as tiered storage offerings designed to create a cost-effective storage environment.

IBM offers a broad range of disk, tape and storage networking options that are compatible with each server family. For more information on compatibility between specific products, please visit ibm.com/systems/support/storage/systems.html.

Reduce your storage infrastructure complexity

IBM offers storage management software delivered as modular, integrated solutions for both active and inactive data. Automated tools designed to manage heterogeneous storage infrastructures can help storage administrators do more with less.

- **IBM TotalStorage® Productivity Center** can help centralize the management, monitoring and configuration of heterogeneous storage devices and automate many of the manual tasks involved in managing SANs.
- **The IBM Tivoli Storage Manager** family of offerings provides centralized, automated data management that can help reduce the complexity of data retention while also helping to manage costs and address compliance requirements.



- **IBM Tivoli Continuous Data Protection for Files** is a real-time, continuous data protection solution for file servers and user end points. Instead of waiting for a scheduled interval, Tivoli Continuous Data Protection for Files is designed to back up your important files the moment they are saved. Furthermore, it can do this automatically and transparently—in some cases, eliminating the backup window.

Provide scalability for your business

IBM System Storage disk storage systems—built to handle the interoperability, scalability and reliability requirements of a highly responsive and collaborative business—can provide some of the fastest and most cost-effective storage media available.

- **IBM System Storage SAN Volume Controller** is designed to help companies virtualize multiple heterogeneous disk storage controllers in a SAN environment, which can insulate servers from storage infrastructure changes to help reduce downtime and increase utilization.
- **IBM System Storage DS8000™ series** sets new standards in functionality, scalability, performance and investment protection for enterprise-class disk systems.
- **IBM System Storage DS6000™ series** offers enterprise-class functionality with a dramatically reduced size and price and can share copy services with DS8000 systems.

- **IBM System Storage N series products** are designed to provide an outstanding solution for data center, distributed, branch and regional office locations. They are designed to support customers that need multi-protocol heterogeneous storage access (NFS, CIFS, iSCSI and/or Fibre Channel). IBM N series Gateway systems are designed to provide servers and clients using IP protocols access to SAN resources. IBM System Storage DS4000™ series is designed to deliver attractively priced storage systems for heterogeneous UNIX®, Linux and Microsoft® Windows® environments.

- **IBM System Storage DS3000 series** is designed to provide organizations an affordable, reliable and scalable storage solution for Linux and Windows environments.

Maintain cost-effective long-term storage

In today's on demand world, automated tape backup is an important element of any business continuance plan. Maintaining long-term access to stored data is a key objective and tape technology continues to be the cornerstone of low-cost, highly reliable, scalable and intelligent backup and restore solutions. IBM tape solutions also support encryption to help protect data from loss or compromise.

- **IBM System Storage TS1120 Tape Drives** with enterprise-class 3592 tape cartridges can help businesses consolidate their storage footprint by standardizing on a single tape technology—helping to reduce complexity, enhance manageability and lower TCO.
- **IBM Linear Tape-Open™ (LTO™)** products—including tape drives and tape automation solutions—leverage the high-capacity Ultrium™ recording formats. They are well suited for backup, restore and archive applications in a range of environments.



- **The IBM System Storage TS3500 Tape Library** provides enterprise-class support for backup, archive and hierarchical storage management processes.
- **The IBM Virtualization Engine™ TS7700** (for mainframe systems) and the **IBM Virtualization Engine TS7520 Tape Library** (for UNIX, Linux and Windows systems) are designed to provide tape virtualization to help improve performance and simplify the information lifecycle management process.

Help ensure long-term retention of critical data

- **The IBM System Storage DR550** offering is designed to help customers address emerging industry and corporate requirements for data retention by providing quick access and write once, read many (WORM) data protection for information stored on disk media and tiered storage with attached optical or tape.
- **The IBM System Storage DR550 Express** offering provides a preconfigured, integrated offering to help store, retrieve, manage, share and retain regulated and non-regulated data.

IBM storage networking solutions support highly responsive connectivity

As the backbone of any complete storage solution, storage networking products can help facilitate connectivity to scalable, reliable storage for organizations of all types and sizes. SAN solutions can help your enterprise address the demands of rapid and unpredictable growth by connecting servers and storage devices to high-availability storage networks.

IBM Global Engineering Solutions help clients meet real-world requirements

Designed to help transform the way clients innovate, develop and deliver their products and services, IBM Global Engineering Solutions is a new business unit in the IBM Systems and Technology Group. By bringing together the expertise of specialists from a wide range of divisions within IBM, this group can help companies improve their products by matching IBM resources with real-world requirements.

Industry-leading business consulting and technology services

IBM has made major investments in its services organization—IBM Global Services—to create one of the broadest services portfolios in the industry. IBM can help you solve real business challenges with end-to-end support and services for virtualization, openness and collaboration.

With a strong focus on IBM Business Partner solutions and IBM integrated solutions, IBM Global Services offers strategic outsourcing services, integrated technology services and business innovation services. More than 130,000 service professionals at 60 integration and testing centers and 14 International Standards Organization (ISO)-certified IBM Help Centers in 160 countries stand ready to help companies maintain continuity and meet their unique business needs. At IBM Proof of Concept Centers, IBM professionals work with clients to provide hands-on demonstrations of the capabilities of the IBM server, storage and software portfolio.

Financing that supports your strategy

IBM Global Financing offers flexible project financing solutions, enabling you to affordably acquire the IBM hardware, software and services your organization needs.

From acquisition through daily use, buyback and disposal, our end-to-end offerings form the foundation of a cohesive technology management strategy that can help reduce total cost of ownership, prevent technology obsolescence, improve asset management and increase your flexibility in small and large IT projects.

A broad range of available software

IBM works closely with leading independent software vendors (ISVs) from around the world to help ensure that their software offerings run smoothly across the IBM Systems. In addition, the IBM ServerProven® program offers easy access to third-party software that has been installed on an IBM System in an IBM client environment.



For more information

To learn more about IBM products, services and financing alternatives, please visit

ibm.com/products/us



© Copyright IBM Corporation 2007

IBM Systems Group
Route 100
Somers, NY 10589

Produced in the United States
November 2007
All Rights Reserved

IBM, the IBM logo, AIX, BladeCenter, DS4000, DS6000, DS8000, i5/OS, Lotus, Micro-Partitioning, OpenPower, POWER, PowerExecutive, Rational, ServerProven, System i, System p, System Storage, System x, System z, TotalStorage, Tivoli, Virtualization Engine, WebSphere and X-Architecture are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries or both.

Linear Tape-Open, LTO and Ultrium are trademarks of International Business Machines Corporation, Hewlett-Packard and Certance.

Intel is a registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.

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.

UNIX is a registered trademark of The Open Group in the United States and other countries.

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

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may not be new and may have been previously installed. Regardless, IBM warranty terms apply.

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

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.