New IBM BladeCenter E Chassis models provide higher power and performance for multiple blades servers and blade options than previous BladeCenter E Chassis

Table of contents

1 At a glance
2 Overview
3 Key prerequisites
4 Planned availability date
5 Description
6 Product positioning
7 Product number
8 Publications
9 Services
10 Technical information
11 IBM Electronic Services
12 Terms and conditions
12 Pricing
12 Announcement countries

At a glance

These new BladeCenter® Chassis models can help reduce the cost of doing business.

They feature:

- Two 2,000-watt power supplies for power redundancy on the 8677-3S model and two 2,320-watt power supplies on the 8677-4S model for high-performance blades; two power supply options available for each model
- Two hot-swap blowers on models
- One Advanced Management Module (AMM) with built-in KVM support
- Ability to integrate Ethernet networking
- Ultra-slim Enhanced SATA Multi-Burner DVD standard
- Support matrix for BladeCenter blades, featuring Intel® Xeon® DP and MP, AMD Opteron, and PowerPC® processors
Overview

A rock-solid foundation for business-critical applications

With today’s data centers growing and becoming more complex than ever before, enterprise organizations look for innovative answers that combine extreme density with energy efficiency for productive, low-cost solutions. IBM® BladeCenter E delivers a powerful platform to meet these requirements; it integrates servers, storage, networking, and applications so organizations can build robust IT infrastructures. The result is a data center packed with more operating horsepower that helps leave a smaller carbon footprint.

Two new BladeCenter E (BCE) models offer dense, power-efficient, and cost-efficient enterprise chassis. Upgraded power supplies and thermal capabilities support higher power levels and higher performance than previous models, extending support to a wider range of blades.

Features include:

• A rack-optimized, 7 U modular design enclosure for up to 14 hot-swap blades
• High-availability mid-plane that supports hot-swap of individual blades
• For 8677-3SX, two 2,000-watt, hot-swap power modules and support for two optional 2,000-watt power modules, offering redundancy and power for robust configurations
• For 8677-4SX, two 2,320-watt, hot-swap modules and support for two optional 2,320-watt power modules, offering higher power and performance than previous models, extending support to a wider range of blades
• Real-time chassis power usage statistics (8677-4SX)
• Two hot-swap blowers
• An Advanced Management Module that provides chassis-level solutions -- simplifying installation and management of your installation
• Support for up to four network or storage switches or pass-through modules
• A light path diagnostic panel, and USB 2.0 port
• Support for UltraSlim Enhanced SATA DVD-ROM and Multi-Burner Drives
• IBM Director and Remote Deployment Manager™ for easy installation and management
• Energy-efficient design and innovative features to maximize productivity and reduce power usage
• Extreme density and integration to ease data center space constraints
• Help in protecting your IT investment through IBM BladeCenter family longevity, compatibility, and innovation leadership in blades
• Support for the latest generation of IBM BladeCenter blades, helping provide investment protection

IBM services and support

• ServerProven® compatibility testing and Web support
• Three-year, customer replaceable unit (CRU) and on-site¹ service, limited warranty²; optional warranty service upgrades available

¹IBM sends a technician after attempting to diagnose and resolve the problem remotely.

²For information on the IBM Statement of Limited Warranty, contact your IBM representative or reseller. Copies are available upon request.

Key prerequisites

• BladeCenter blades
• Power source
- Monitor, USB keyboard, and USB mouse
- Network switch module
- Rack

**Planned availability date**

March 31, 2009

**Description**

**Related options**

- IBM BladeCenter E 2,320 W AC Power Supply Option (46M0508)

**Accessibility by people with disabilities**

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at


**Product positioning**

The most energy-efficient, high density chassis - ideal for space and power constrained data centers. BladeCenter E Chassis offers 31% more density than blade competitors, and up to two times the density of rack servers. Additionally, it is up to 19% more energy efficient than blade competitors, and up to 35% more energy efficient compared to rack servers. With these advantages, organizations can operate at full potential with lower energy costs and can go green and save.

The BladeCenter E Chassis in just 7 U of rack space can hold up to 14 blade servers. It can also include up to four 2,320-watt power supplies to offer the necessary I/O network switching, power, cooling, and control panel information to support the individual servers. When compared to most Intel processor-based 1 U high servers, this BladeCenter E Chassis can support twice the number of processors in the same rack space. BladeCenter E supports the latest generation of IBM BladeCenter blades, and offers a choice of 2000-watt or 2320-watt power supply to meet your IT infrastructure needs.

The IBM BladeCenter E is one of three chassis in the BladeCenter family. The BladeCenter E provides the greatest density and common fabric support, and is the lowest-entry-cost option in the BladeCenter family. The other two members of the family, BladeCenter T and BladeCenter H, provide additional flexibility for difficult environmental needs (BCT) and greater performance levels (BCH). All three chassis share a common set of blades and switches.

**Product number**

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine type</th>
<th>Model</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>BladeCenter E</td>
<td>8677</td>
<td>4SG</td>
<td>86774SG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM BladeCenter E 2,320W AC Power Supply Option</td>
<td>46M0508</td>
</tr>
</tbody>
</table>
An installation and user's guide, and safety and warranty publications are shipped with each BladeCenter E Chassis.

Displayable softcopy publications

Publications are offered in displayable softcopy form.

These displayable manuals can be used with the BookManager® READ licensed programs in any of the supported environments. Terms and conditions for use of the machine-readable files are shipped with the files.

Source file publications

None

Services

Global Technology Services

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit


Select your country, and then select the product as the category.

Technical information

Specified operating environment

Physical specifications

BladeCenter E Chassis

<table>
<thead>
<tr>
<th>EMEA 8677-4Sx=4SG</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blade server bays (type)</td>
<td>High-availability midplane (each model)</td>
<td></td>
</tr>
<tr>
<td>Blades server standard</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Blades server maximum</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>PCI slots</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I/O module bays</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Management modules</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Standard</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Additional</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>UltraSlim Enhanced SATA</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Multi-Burner</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>USB port - Front</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Feature</td>
<td>Value 1</td>
<td>Value 2</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Power supply modules</td>
<td>2x 2,000 W</td>
<td>2x 2,320 W</td>
</tr>
<tr>
<td>Hot-swap</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Redundant power</td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td>Auto restart</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cooling</td>
<td>2 blowers</td>
<td>2 blowers</td>
</tr>
<tr>
<td>Redundant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hot-swap</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Physical specifications**

**BladeCenter E Chassis**

Approximate shipping dimensions and weight:

- Single pack dimensions: L 40.0 x W 24.0 x H 25.5 in
- Single pack weight: 150 to 250 lb
- Quantity per pallet: 2
- Pallet load dimensions: 48 x 40 x 31
- Pallet load weight: 350 to 550 lb
- Estimated safe stacking: 4 high

**Operating environment**

- Temperature:
  - 10.0 to 35.0 degrees C (50 to 95 degrees F) at 0 to 914 m (0 to 3,000 ft)
  - 10.0 to 32.0 degrees C (50 to 90 degrees F) at 914 to 2,133 m (3,000 to 7,000 ft)
- Relative humidity: 8% to 80%
- Maximum altitude: 2,133 m (7,000 ft)

**Hardware requirements**

None

**Programming requirements**

The following network operating systems have been tested for compatibility with the BladeCenter HS20:


For additional information support, certification, and versions information on network operating systems, access:


**Compatibility**

These new model BladeCenter chassis 8677-3Sx and -4Sx support:

- IBM BladeCenter HC10 blades
- IBM BladeCenter HS20 blades
- IBM BladeCenter HS21 blades
- IBM BladeCenter HS21 XM blades
- IBM BladeCenter HS40 blades
- IBM BladeCenter LS20 blades
- IBM BladeCenter LS21/LS41 blades
- IBM BladeCenter JS20 blades
- IBM BladeCenter JS21 blades
• IBM BladeCenter LS22/LS42 blades
• IBM BladeCenter QS20 blades
• IBM BladeCenter QS22 blades
• IBM BladeCenter S Expansion Units - BSE-1, BSE-2
• IBM BladeCenter PCI Expansion Units - PEU-1, PEU-2

Switches (maximum of four):

• Gigabit Ethernet Switch Modules from Cisco or Nortel
• Fibre Channel SAN Switch Modules from QLogic, Brocade, and McData
• Cisco TopSpin InfiniBand Switch Module
• BladeCenter Optical Pass-thru Module
• BladeCenter Copper Pass-thru Module
• Cisco Fibre Switches
• BNT Ethernet Switch

For detailed information about IBM and non-IBM devices, adapters, software, and network operating systems supported with System x® servers, visit


Contact your IBM representative or IBM Business Partner, or refer to the IBM Sales Manual for information on the compatibility of hardware and software for System x servers. The Sales Manual is updated periodically as new features and options are announced that support these servers.

**Limitations**

The BladeCenter E Chassis uses 200 to 240 V ac power.

**Note:** 2320 W power supply requires latest AMM code (version 2.48x or later).

**User group requirements**

This announcement satisfies or partially satisfies requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

**Planning information**

**Customer responsibilities**

**BladeCenter E Chassis**

This product is designated as customer setup. Customer setup instructions are shipped with the product.

**Configuration information**

**BladeCenter E Chassis configuration**

A control panel located on the top left of the unit contains following LEDs:

• Power good
• Blade location
• Over temperature
• Information
• General fault
Two bays and a USB port are located at the top to the right of the control panel. One bay contains a DVD-ROM and the other contains a permanent filler panel. An optional USB-attached 1.44 MB diskette drive is available.

The rear housing contains:

- Two hot-swap, redundant blower assemblies in the center, mounted one on top of the other
- Two standard 2,000-watt power supply modules or two standard 2,320-watt power supply modules, model dependent, and module bays for two optional power supply modules on each side of the blower assemblies
- One standard management module for KVM/Management

**Rack installations**

The BladeCenter E Chassis 7 U rack-drawer enclosure is designed to be installed in a 19-inch rack cabinet designed for 28-inch deep devices, such as the NetBAY42 ER, IBM S2 42U SR, IBM S2 25U SR, or NetBAY11.

If you choose not to use an IBM rack:

- The rack must meet EIA-310-D Standards for mounting flanges and hole locations.
- The front to rear distance of the mounting flanges must be between 698.5 mm and 762 mm (27.5 and 30 inches).
- The thickness of the mounting flanges must be between 1.9-3.3 mm.
- The mounting flanges must have either 7.1-mm (.28-in) diameter holes or 9.6-mm (.38-in) square holes on the standard EIA hole spacing.
- The rack must have a minimum depth of 70 mm (2.76 in) between the front mounting flange and inside of the front door for appropriate cooling.
- The rack must have a minimum depth of 157 mm (6.2 in) between the rear mounting flange and inside of the rear door to install the server and make space for cable management.
- The minimum side-to-side clearance in the rack between the front and rear mounting flanges must be 467 mm (18.2 in) to accommodate the width of the server and the slide mounting brackets.
- The minimum side-to-side clearance in the rack between each door and the mounting flanges must be 484 mm (19.1 in) to accommodate the slide mounting brackets.
- The rack should include perforated front and rear doors and must not prevent the flow of cool air into the front or out of the rack and hot air out the rear of the rack (front and rear doors, if present, must be perforated).
  - Stand-alone racks must have side and top panels to prevent the flow of air from the sides, top, or bottom of the rack.
  - All empty EIA space in the rack must be closed off with filler panels to prevent the recirculation of air within the rack.
- The weight-handling capacity of the rack must be able to support the maximum rack configuration, including all servers, external cables, and PDUs.
- The rack must provide proper stabilization so that the rack does not become unstable when servers are pulled out for service.

**Power considerations**

BladeCenter E Chassis comes with two 2,000-watt 200 to 240 V ac power modules or two 2,320-watt 200 to 240 V ac power modules, model dependent. The standard power modules support blade server bays one through six with power redundancy.

**Cable orders**

Each BladeCenter E Chassis can contain several Gigabit Ethernet connections. The RJ-45 connectors provide a 10/100/1000 Base-T interface (either at half or full duplex) for connecting twisted-pair cable to the Ethernet network. Cabling is not included with the server. To connect the Ethernet controller to a repeater or switch, use a UTP cable with RJ-45 connectors at both ends. For 100 Mbps or higher operation, Category 5 cabling must be used. For 10 Mbps operation, Category 3, or better, cabling must be used.
Installability
The BladeCenter E Chassis requires approximately 30 minutes for installation. Installation includes unpacking, setting up, and powering on the system. Additional time is required to install an operating system, additional options, or features.

Packaging

BladeCenter E Chassis

<table>
<thead>
<tr>
<th>Product</th>
<th>Shipment group</th>
<th>Number of boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BladeCenter</td>
<td>System Unit Carton</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Contents:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BladeCenter Unit</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Publications/CD Package</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Rack kit:</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Rails</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cable management hardware</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9-foot 200–240 V intra-rack cables</td>
<td>2</td>
</tr>
<tr>
<td>BladeCenter</td>
<td>Publications/CD Package</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Contents:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation Guide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety, Contents, and About Your Documentation Flyers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ServerGuide™ Coupon</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Documentation CD-ROM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Device driver CD-ROM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation Template</td>
<td></td>
</tr>
</tbody>
</table>

Supplies
For end users: IBM BladeCenter can be purchased through dealers.

Security, auditability, and control
This product uses the security and auditability features of host hardware, host software, application software.

The BladeCenter E Chassis has no security intrusion detection; therefore, it should be installed in a rack environment that provides security through lockable doors or other security measures. It is a customer’s responsibility to ensure that the server is secure to protect sensitive data.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Global Technology Services
Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

General product/system description

BladeCenter E Chassis
These entry model BladeCenter 8677-3Sx and -4Sx models are a 7 U high, rack optimized cabinet designed to support extremely high-density blade servers. It contains the following standard features:

- 14 hot-swap blade server bays
- Two standard 2,000-watt power modules or two standard 2,320-watt power modules, model dependent; two additional 2,000-watt or 2,320-watt power modules can be optionally installed for configurations using more than six blade server bays
- Two hot-swap blowers - Support cooling requirements for full configurations
- Advanced management module:
  - Controls systems management of the enclosure and installed blades
  - Interface to control KVM activity for each blade server
- Four network switch module bays - Supports installation of Ethernet or Copper Pass-through Module
- Control panel - Contains USB 2.0 port and status LEDs

**AP, LA, CAN, Europe considerations**

NLS support is not provided for any of the BladeCenter E Chassis components.

**IBM Electronic Services**

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

http://www.ibm.com/support/electronic

**Terms and conditions**

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or IBM.

**Warranty period**

- Three years
- Optional features - One year

Optional IBM features initially installed in an IBM machine carry the same warranty period as the machine. If installed after the initial machine installation, they carry the balance of the machine warranty or the optional feature warranty, whichever is greater.
Warranty service

If required, IBM provides repair or exchange service, depending on the type of warranty service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country- and location-specific information.

The type of service is Customer Replaceable Unit (for example, keyboard, mouse, speaker, memory, or hard disk drive) Service and On-site Service.

Customer Replaceable Unit (CRU) Service

IBM provides a replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request. A CRU is designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU. Installation of Tier 1 CRUs, as specified in this announcement, is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service specified below, On-site Service.

Based upon availability, a CRU will be shipped for next business day (NBD) delivery. IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

The following parts have been designated as Tier 1 CRUs:

- Blank filler
- Cable-management arm
- Hard disk drive
- Hot-swap fan
- Hot-swap power supply
- Lift handle kit
- Memory DIMM
- Memory expansion card
- Optical drive
- PCI adapter
- PCI divider
- Power cord
- Service label
- Service processor
- System label
- Top cover
- Voltage regulator module

On-site Service

This provides On-site Repair, 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM or your reseller will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well lit, and suitable for the purpose. On-site Service
is not available in all countries, and some countries have kilometer or mileage limitations from an IBM service center. In those locations where On-site Service is not available, the normal in-country service delivery is used.

**International Warranty Service**

International Warranty Service (IWS) is available in selected countries or regions.

The warranty service type and the service level provided in the servicing country may be different from that provided in the country in which the machine was purchased.

Under IWS, warranty service will be provided with the prevailing warranty service type and service level available for the IWS-eligible machine type in the servicing country, and the warranty period observed will be that of the country in which the machine was purchased.

To determine the eligibility of your machine and to view a list of countries where service is available, visit


For more information on IWS, refer to Services Announcement ZS01-0168, dated September 25, 2001.

**Licensing**

Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.

**IBM hourly service rate classification**

Two

**Field-installable features**

Yes

**Model conversions**

No

**Machine installation**

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

**Licensed internal code**

IBM Licensed Internal Code (LIC) is licensed for use by a customer on a specific machine, designated by serial number, under the terms and conditions of the IBM Agreement for Licensed Internal Code, to enable a specific machine to function in accordance with its specifications, and only for the capacity authorized by IBM and acquired by the customer. You can obtain the agreement by contacting your IBM representative or visiting

http://www-1.ibm.com/servers/support/machine_warranties/licensed_internal_code.html

IBM may release changes to the Licensed Internal Code. IBM plans to make the Licensed Internal Code changes available for download from the IBM BladeCenter technical support Web site

http://www.ibm.com/support

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Licensed Internal Code, you are responsible for downloading and installing these designated Licensed Internal Code changes as IBM specifies. If you would
prefer, you may request IBM to install the downloadable Licensed Internal Code changes; however, you may be charged for that service.

**Pricing**

For all local charges, contact your IBM representative.

**IBM Global Financing**

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit

http://www.ibm.com/financing

IBM Global Financing offerings are provided through IBM Credit LLC in the United States, and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Rates are based on a customer's credit rating, financing terms, offering type, equipment type, and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

Financing solutions from IBM Global Financing can help you stretch your budget and affordably acquire the new product. But beyond the initial acquisition, our end-to-end approach to IT management can also help keep your technologies current, reduce costs, minimize risk, and preserve your ability to make flexible equipment decisions throughout the entire technology life cycle.

**Announcement countries**

All European, Middle Eastern, and African countries.

**Trademarks**

ServerGuide and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

BladeCenter, PowerPC, IBM, ServerProven, BookManager and System x are registered trademarks of IBM Corporation in the United States, other countries, or both.

Intel and Xeon are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Remote Deployment Manager is a trademark of Lenovo Corporation in the United States, other countries, or both.

Microsoft and Windows are registered 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.

**Terms of use**

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Reference to other products in this announcement does not necessarily imply those products are announced, or intend to be announced, in your country. Additional terms of use are located at:

For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

http://www.ibm.com/planetwide/