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Marketplace Update

IBM's Bladecenter S Sharpening Blade Servers for Small Businesses

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IBM's BladeCenter S – Sharpening Blade Servers for Small Businesses

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Introduction

Small- to medium-sized businesses (SMBs) are important customers for virtually every information technology (IT) vendor, and with good reason. While Wall Street and the major financial markets avidly follow the exploits of large enterprises, smaller businesses represent the entrepreneurial engine of the U.S. economy. According to the U.S. Small Business Administration (SBA), small businesses represent 99.7 percent of all employer firms, employ half of all private-sector employees, and generated 60 to 80 percent of net new jobs annually over the last decade. Small companies also drive business and technical innovation, producing 13 to 14 times more patents per employee than large patenting firms and employing 41 percent of high-tech workers including scientists, engineers, and computer technicians (See: <http://app1.sba.gov/faqs/faqIndexAll.cfm?areaid=24>).

Given the sheer diversity and widely varying levels of expertise among IT small businesses, considering them a unified class is a dangerous oversimplification. But that is precisely what many in the technology industry do. Spend time reviewing vendors' small business' IT solutions, and you will typically find a homogeneous array of simplistic products. In reality, SMBs suffer many of the same IT ills as larger organizations. They must contend with rapidly expanding complexity, shrinking budgets, and the need to make every IT dollar count. Yes, small firms with limited technical experience need entry-level products, but vital, sophisticated SMBs require innovative computing solutions to get ahead and stay ahead of the game. IBM's new BladeCenter S (BladeCenter S) is one such technology, tailoring the company's battle-tested blade server architecture with new features and options designed to help meet the specific critical business and technical needs of smaller companies.

Modern Small Businesses – The only rule is no rules

In considering the SMB sector, the immediate issue that jumps to mind is how ludicrously limited the "sector" concept is for such a diverse environment. Traditional notions of small business rest almost entirely on size; either of a company's number of employees or its annual revenues. Using common "old math" measurements, companies with roughly 1 to 99 employees or \$100,000 to \$10 million in annual revenues qualified as small businesses. But how accurate is this?

Not very. Size does matter to a degree, though some models, which peg small businesses as having roughly 26-200 employees and \$5-\$50 million in annual revenues, offer more accurate insights on modern small-business behavior. But that does not tell the whole SMB story. Small businesses inhabit and compete in virtually every industry and global region, and share most of the same inherent challenges and enjoy most of the same potential opportunities as larger organizations in those markets. In essence, a small retail player typically has far more in common with larger retail companies than it does with small businesses in other industries.

This point also extends to IT issues, where applications and business processes offer a better measure of a smaller organization's IT requirements and capabilities than does the

scope of its efforts. That being the case, are there any IT-related points of commonality that most SMBs share? Actually, yes. Small companies of every size employ IT solutions to enhance processes and increase competitive advantage. In addition, most small businesses utilize inexpensive, x86-based PCs and servers, as well as direct attached (DAS) and network attached storage (NAS) systems.

The continuing evolution of industry-standard IT solutions means that small businesses have access to better, more powerful technologies than ever before, but they also face numerous challenges related to these investments. The biggest technology problem for small companies is one of habit; the tendency to purchase and deploy tactical IT solutions individually rather than with an eye on longer-term strategic goals and results. This “organic accumulation” approach tends to fuel overall IT complexity, driving up longer-term management and maintenance costs and lowering overall return on investment (ROI). In time, as a company’s use of technology matures, it is more likely to recognize the value strategic IT deployment offers over organic accumulation.

In addition, while the increasing capabilities of technology products deliver better hardware and software performance, they also expand the overlap between smaller and larger organizations’ IT usage. In other words, smaller businesses are dealing increasingly with IT products and challenges that, not so long ago, qualified as “enterprise-class” solutions. While this issue affects nearly every small business, it does not do so equally. Many small organizations employ only the most basic IT products but technically adept businesses are capable of gaining maximum benefits and returns from their IT investments by embracing strategic IT methodologies.

Small Business IT Challenges and Opportunities

Like most other companies, smaller organizations want to do more with less. So far as IT is concerned, this translates to lowering technology costs, maximizing returns and improving business performance. Such hopes are entirely understandable and human, if not particularly realistic. For example, enhancing technical performance typically requires skills that are beyond many SMBs, particularly those whose experience is limited to entry-level products. Not only does this leave them unprepared for the challenges of evolving IT complexity, but such companies also typically trail in the adoption of computing solutions that could help them overcome these challenges.

That said, many sophisticated technologies, particularly those with integrated, streamlined installation and management features, can be used quite successfully by small businesses. By systematically taking the “pain” out of deployment and administration processes, IT vendors can help smaller customers better and more easily realize measurable gains via improved business processes, increased computing asset performance, and enhanced ROI. The key points for organizations to assess are 1) When the IT solutions they depend on become more hindrance than help, and 2) Whether or not more sophisticated solutions are appropriate to their business and technical needs.

While simply upgrading IT assets may be adequate for some small businesses, a number of existing and emerging solutions are well worth their consideration. We believe that the following are particularly intriguing, potentially valuable options for SMBs to consider as they move ahead:

- **Voice over IP (VoIP)** – Initially aimed at consumers through service providers, such as Skype, VoIP allows conventional telephone calls and related processes to be converted to

Internet Protocol (IP) and channeled through conventional networks, resulting in dramatically reduced telephony expenses. A number of vendors, including IBM, have developed integrated, VoIP-in-a-box solutions that are easy to deploy and maintain. Such solutions can be valuable for businesses with high phone usage (especially long distance and overseas calls) and those looking to expand operations or opportunities in distant markets.

- **Data Back-Up** – Data back-up may seem like old news, considering the venerable place it has long held as an essential IT process. But data back-up is more common in absence than practice among small businesses, continually inhabiting the “to do” list of all too many companies. Quite simply, this is a bad habit that IT-reliant businesses need to correct. Evolving eDiscovery requirements make seamless access to saved email and other business documents important for every business and critical for companies in compliance-sensitive sectors such as healthcare, banking, and financial services.
- **Business Continuity** – Business continuity should be the ultimate goal of any company’s IT operations. An organization’s ability to assure safe access to both mundane and critical business processes and information can spell the difference between a company being in or out of business. Though business continuity was once considered an enterprise-class solution, IT-reliant smaller organizations need these services just as badly. Fortunately, a growing number of vendors deliver business continuity offerings designed and priced for their SMB customers.
- **Collaboration** – IT collaboration typically involves software and services that enhance efforts of an organization’s employees whether they work in the same facility or from multiple locations. Collaboration applications, such as Lotus Notes and Microsoft Exchange can be used to handle employees’ email, allow them to share calendars, and provide common access to and replication of work documents and files. Some programs also support online meetings, messaging, and integrated VoIP calling. Collaborative solutions are critical tools for smaller organizations particularly those with employees working from remote locations including home offices.
- **Server Virtualization** – Virtualization is a cause célèbre in the IT industry, and with good reason. Popular x86-based virtualization solutions, such as VMware ESX, can allow businesses to consolidate workloads and applications onto far fewer numbers of servers. This can help solve some central IT challenges for smaller organizations – curbing server “sprawl,” easing overall IT complexity, and lessening the impact of IT on facilities expenses including power consumption and cooling demand.

IBM’s BladeCenter – An Integrated Platform for Business IT

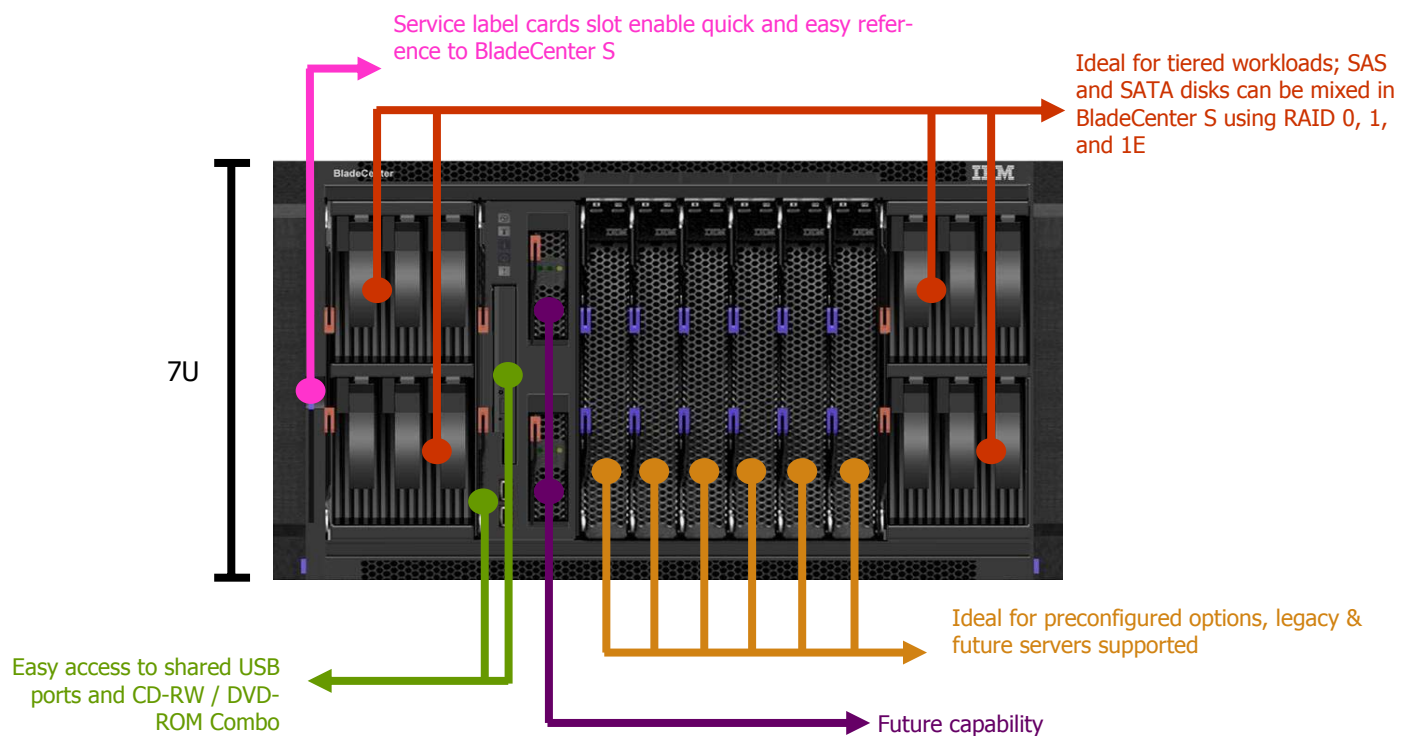
When IBM introduced BladeCenter in 2002, the company said the platform would help increase server performance and density, reduce cost and complexity, appeal to a broad business audience, and also be appropriate for specialized and edge applications. Overall, IBM has delivered on its promises, providing customers the widest and deepest range of integrated blade options including servers and associated storage and networking solutions. In addition, IBM offers strong investment protection via its backward- and forward-compatible BladeCenter architecture. This compares with other vendors who have “corrected” earlier missteps and mistakes by replacing outmoded blade technologies with entirely new products, leaving customers and partners in the lurch.

IBM continues to build on the promises it enumerated in 2002 by focusing its current BladeCenter efforts on a quartet of new goals. According to the company, these solutions will be:

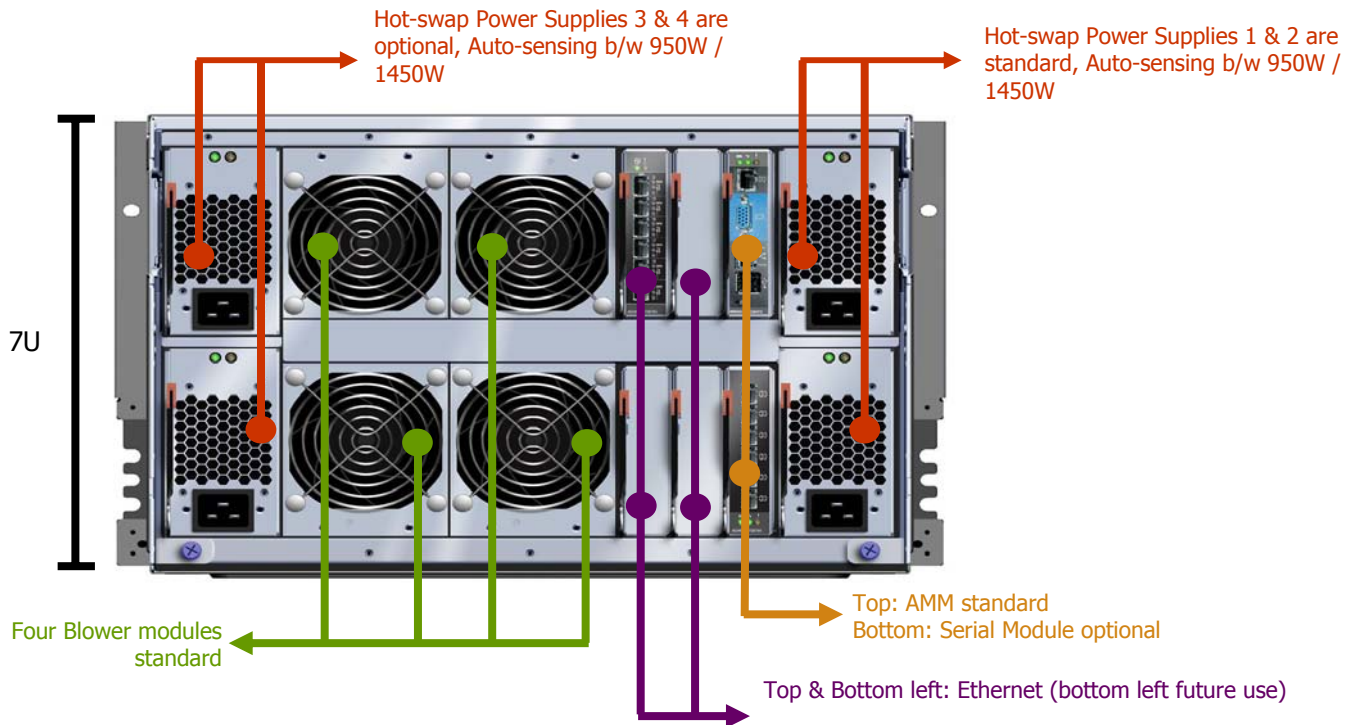
1. **Right** – BladeCenter’s modular architecture and robust, reliable performance can be tailored to fill a wide variety of IT needs ranging from basic to critical company processes to integrated SMB offerings to cutting edge supercomputers.
2. **Open** – IBM’s Open Fabric architecture allows BladeCenter customers to easily choose and configure the network and storage options that best fit their requirements. In addition, many of the nearly 100 vendor and developer members of the blade.org community leverage IBM’s Open Fabric to develop BladeCenter solutions.
3. **Easy** – BladeCenter’s design simplifies the deployment of blade servers and ancillary devices, making it easy for customers to add, replace, or upgrade systems. IBM’s integrated BladeCenter management applications and tools can also be used across numerous installation and administration tasks.
4. **Green** – BladeCenter provides IBM clients powerful options for consolidating server and network infrastructures, helping to reduce overall energy consumption from individual systems to entire datacenters. IBM also offers a variety of additional tools and services to help further assess and reduce IT infrastructure energy usage.

IBM’s BladeCenter S – Right-Sized Solutions for Every Size of Business

With the new BladeCenter S platform, IBM has extended the BladeCenter value proposition to smaller businesses and organizations in a compact, affordable package. The BladeCenter S incorporates powerful, integrated features that are critical for these businesses. First, as a packaged all-in-one style solution, the BladeCenter S can be easily set-up and configured via a new, simplified wizard-based interface, a key feature for small businesses with limited IT skills or assets. Like other IBM BladeCenter systems, BladeCenter S is a highly flexible and scalable offering with multiple server, storage, and networking options available from IBM and other blade.org members.



BladeCenter S also features some remarkable small business-friendly attributes, a critical point for companies with limited space. The BladeCenter S is able to auto-sense both 110V and 220V power inputs, meaning it can be plugged into virtually any standard wall outlet and thus avoids costly electrical service upgrades. Like other BladeCenter solutions, the new system's integrated cabling reduces clutter, enhancing its anywhere-style deployment. Finally, IBM offers a pair of options that can further simplify life for some BladeCenter S customers: IBM Express model solutions are available with the most popular options designed for SMBs. For larger businesses that want BladeCenter S for branch or remote office environments, systems can also be customized at IBM for plug-and-play installation.



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The number of hardware choices available for BladeCenter S is testimony to the breadth of the new system's flexibility and the depth of IBM's blade offerings. These include:

- **Servers** – IBM's Intel-based HC10 (Core Duo), HS20 (Xeon), and HS21 (dual and quad core Xeon) blades come in a variety of 1 to 4 processor configurations. The company's AMD Opteron-based blades include the LS20 and LS21 (multiple 1-2 processor options), and LS41 (multiple 1-4 processor options). IBM is also offering its Workstation Blade for the BladeCenter S, a particularly valuable option for businesses considering desktop consolidation for work groups or branch offices. While Power processor-based blades are not initially available for the BladeCenter S, we believe that future versions are likely to leverage IBM's Power architecture to support the company's AIX and i5/OS environments and Linux on Power offerings.
- **Storage** – The BladeCenter S offers both integrated Serial ATA (SATA) and Serial-Attached SCSI (SAS) disk drive packages. The new systems support up to 9 terabytes (TB) of SATA disks and up to 3.6 TB of SAS disks. The two drive technologies can also be mixed for tiered storage applications using RAID 0, 1, and 1E. Finally, with the addition of the

BladeCenter SAS Controller Module, SAS storage for BladeCenter S also supports battery back-up for business continuity solutions.

- **Networking** – BladeCenter S offers a variety of networking solutions aimed at SMBs including server connectivity modules and system-focused products. Blade.org member Nortel offers solutions for the new platform such as a 10 GB Ethernet module for essential network connectivity and Layer 2/3 and optical GbE switch modules for applications that demand higher performance. IBM offers its own high performance solutions including BladeCenter copper and optical pass through modules. Over time, networking options for BladeCenter S may expand significantly as other blade.org members set their sights on the small business market.

Changing the Channel – BladeCenter S Opportunities for IBM Business Partners

Like other IBM BladeCenter offerings, BladeCenter S is a comprehensive platform that enables a wide range of business IT solutions. As a result, the new platform provides ample opportunities for the company's channel to develop value-added offerings and services. These IBM Business Partners play a particularly important role in IBM's success among small business customers, many of whom assume that the company's efforts among large enterprises places IBM solutions out of reach for SMBs. Nothing could be further from the truth, but that issue is often best addressed by the channel members who work directly with smaller business organizations.

In which areas are IBM's Business Partners likely to shine? The following are a few scenarios where we believe channel partners could find BladeCenter S opportunities:

- **Preconfigured stacks** – Such offerings combine IBM hardware and middleware and solutions from the company's ISV partners into offerings preconfigured for specific industries and business applications. One solution targeted at retail stores is available for BladeCenter S, incorporating IBM's Store Integration Framework (SIF) and solutions available from 65 ISVs that can be optimized for numerous retail business processes and needs. We expect IBM and its ISV partners to deliver additional preconfigured BladeCenter S solutions in other areas of opportunity including healthcare, banking, insurance, media and entertainment, and trading floor applications.
- **Virtualized desktop computing** – In addition to consolidating servers, virtualization can also be used to consolidate workstations, simplifying infrastructures and IT management processes. IBM offers BladeCenter-based desktop consolidation solutions leveraging hardware including Intel-based HC10 "workstation" blades and technologies from IBM Business Partners such as Citrix and VMware. The BladeCenter S should make this a particularly intriguing option for IBM Business Partners focused on solutions for regional and remote offices, work groups, and smaller companies that leverage demanding workstation applications including computer-aided design (CAD).
- **Value-Added Resellers (VARs)** – The BladeCenter S can be used to leverage numerous value-added hardware, middleware, and software solutions from both IBM and others. Give its capabilities as a highly flexible IT platform, the BladeCenter S provides VARs an ideal platform for enabling offerings, ranging from turn-key solutions with pre-loaded applications and tools to tailored professional services. There are obvious opportunities here for VARs already focused on small business clientele, but the highly integrated nature of the BladeCenter S platform provides other VARs a chance to become key enablers of strategic small businesses IT solutions.

- **Value-Added Distributions** – These products are usually developed by OEMs that package their own software and service offerings with hardware manufactured by third-party vendors. This is not a huge part of IBM's BladeCenter business, but it could become larger over time, particularly given the value that the platform's open ecosystem offers. The flexibility and affordability of the BladeCenter S should make it an attractive option for SMB-focused OEMs and also offers intriguing opportunities for supporting industry-specific solutions.
- **Regional ISVs and Systems Integrators** – Just as OEMs enjoy IBM's BladeCenter open ecosystem, regional ISVs stand to reap similar benefits from leveraging it to enable their own applications and solutions. The same is true for systems integrators who stand to gain significantly from the highly flexible platform. The BladeCenter S is likely to find a home in numerous regionally-established businesses and industries, particularly those where IBM's SMB-focused PartnerWorld members have strong positions, and could also become a valuable option and development platform for IBM Business Partners in rapidly expanding markets including India and China.

These areas offer significant potential for developing future business opportunities, but IBM is working hard to help allow IBM Business Partners to be ready and able to take advantage of BladeCenter S deals whenever and wherever they arise. To that end, the company recently announced a number of initiatives and efforts aimed at helping IBM Business Partners. New IBM Blade and Storage Solution Centers provide facilities where SMB partners and clients can see BladeCenter S technologies in action and learn more about their benefits. The company also plans to highlight the new platform with in-depth education sessions at three IBM Systems Connect Tech Events in Europe, Asia, and the U.S.

Additionally, IBM works directly with IBM Business Partners to finely hone BladeCenter S solutions and help expand business opportunities for the platform. The company provided beta units to its six top distributors and will also offer marketing funds to support business partner workshops on BladeCenter S. IBM also elicits feedback on the platform from select clients, IBM Business Partners, and ISVs on final product development plans. Finally, IBM said it will include BladeCenter S in its Vertical Industry Program (VIP), which aims to address the needs of clients in specific industry segments by working with ISVs and IBM Business Partners focused on those industries.

When BladeCenter Migrations Make Sense

The integrated design of IBM's BladeCenter S supports numerous, inherent benefits. But any time a company adopts a new server platform, new challenges and costs are likely to result. To help with the success of BladeCenter S migrations, organizations need to consider the driving forces behind and strategic impacts of their decision. Among the questions they should ponder:

1. Is increasing IT complexity affecting the way we do business?
2. Are lowering the costs and increasing the efficiency of IT assets among our primary objectives?
3. How can we simplify the deployment, use, and maintenance of our server assets?
4. Will strategically designed "total" solutions deliver better value for our organization than the tactical products we typically purchase?

One of the most critical issues for companies considering IT purchases is calculating the return on investment (ROI) offered by new assets. However, integrated IT solutions, such as BladeCenter S, offer potential benefits whose impact tends to be cumulative rather than monolithic. As a result, the ROI of BladeCenter S varies according to customer deployments and the specific solutions involved.

That said, there are numerous areas where small businesses potentially stand to gain significant measurable returns from their BladeCenter S purchases:

- **Virtualization and consolidation** – In a way, BladeCenter S was made for consolidation – of servers, server appliances, and workstations. Not only does IBM's new platform deliver all the benefits common to other virtualization solutions but the variety of the company's and IBM Business Partners' hardware options means that businesses can finely tune BladeCenter S components for specific virtualized business and technical requirements. The result? Measurably better business and IT performance. Overall, BladeCenter S can be a valuable virtualization and consolidation choice for SMBs, branch office environments, and work group applications.
- **Integrated systems management** – If IT managers and administrators feel constantly harried and under the gun, the centralized server management features of an integrated total solution like BladeCenter S can help lessen the strain. BladeCenter S ease of management begins with the initial deployment and carries on through system administration, maintenance, and upgrade processes. Since it supports most x86 Windows and Linux applications or tools, BladeCenter S also provides quick time to value. In essence, BladeCenter S offers a solid solution for numerous small businesses IT complexity issues and for larger companies whose remote office locations are straining IT management resources.
- **Improved system scalability, resilience, and efficiency** – BladeCenter S is built to grow easily, with a flexible design that blows away conventional rack server solutions when it comes to adding, changing, and upgrading servers and other components. In addition, the platform's SATA and SAS drives can be configured for tiered storage and enhanced with battery back-up options. This provides both tactical and strategic benefits including enhancing IT staff efficiency and supporting essential processes like data back-up that all too many companies postpone or leave half-done due to lack of time and resources. Bottom line? BladeCenter S can be valuable for smaller businesses that are rapidly growing, need integrated back-up, wish to improve staff efficiency, or require enhanced business resilience and availability.
- **Simplified IT infrastructure** – IBM's BladeCenter S may be the first fully integrated x86 total solution for SMBs from a tier one vendor, but its compact size makes particularly valuable for smaller organizations. The platform's relatively miniscule footprint, ability to run on 110V power, and integrated cabling means that BladeCenter S can be installed virtually anywhere there is a standard electrical outlet. The system also features minimal cooling requirements and noise generation, both of which lessen its overall impact on office environments. Most importantly, though BladeCenter S is designed to fill the needs of smaller organizations it does not sacrifice system performance to achieve that end. Overall, the platform represents a valuable option for small businesses and remote offices with restricted IT space.
- **Open platform** – Like other IBM server products, BladeCenter S serves as a testimony to the company's dedication to delivering open platform solutions. IBM offers customers the widest range of server hardware, middleware, and operating environment options of any tier one vendor, a point underscored by the company's deep relationships with channel members including ISVs, OEMs and VARs, many of whom will or plan to deliver solution-building blocks for BladeCenter S. In essence, BladeCenter S qualifies as a prime enabler of

an ecosystem of SMB business and technical solutions that will become wider and deeper over time. As in virtually every other IBM offering, the company's channel members will play critical roles in the success of the new platform and its customers.

Mission Accomplished?

Given their position as the entrepreneurial engine of the U.S. economy, SMBs are critical customers for virtually every IT vendor. The sheer variety of experience and expertise among small businesses makes considering SMBs a unified class a dangerous oversimplification, but that is precisely what many in the IT industry do. Contrary to this view, SMBs suffer many of the same technology ills as any larger organization, facing rapidly expanding complexity, shrinking budgets, and a need to make every computing investment dollar count. In addition, though smaller firms with limited technical experience may require entry-level products, many other SMBs understand that innovative solutions, such as IBM's new BladeCenter S, can help them get ahead and stay ahead of the game.

BladeCenter S delivers on the Right, Open, Easy, and Green value propositions of IBM's larger BladeCenter offerings, but it does so in a highly flexible package designed for smaller organizations. Options such as Intel- and AMD-based servers, SATA and SAS storage, and networking solutions from IBM and leading vendors such as Nortel mean that BladeCenter S can be finely tuned to fit customers' specific business and technical needs. In addition, these options make the new system an ideal platform for supporting key solutions including business continuity, collaboration, data back-up, server and desktop virtualization, and VoIP. BladeCenter S is a particularly valuable enablement platform for IBM channel members such as OEMs, ISVs, VARs and systems integrators, and those in rapidly developing global markets. IBM recognizes the value of these collaborative efforts and has created a host of new initiatives aimed at helping them create and deliver new BladeCenter S solutions.

The bottom line? IBM's BladeCenter S is designed to help meet the critical requirements of smaller companies and similar environments, such as the branch offices of larger organizations. The platform's highly flexible integrated components, combined with offerings and options provided by IBM's myriad collaborators, qualify the BladeCenter S as a total solution capable of supporting virtually any smaller organization. Overall, SMB's facing IT challenges including increasing complexity, decreasing efficiency, and the need to maximize IT investments would be wise to consider IBM's new BladeCenter S solutions.

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